Close at hand

Pumps for Hygienic Fluid Handling Equipment,
May 2023

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Pumps

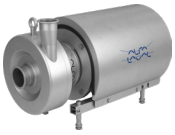
Centrifugal pumps


LKH


LKH UltraPure


LKHex

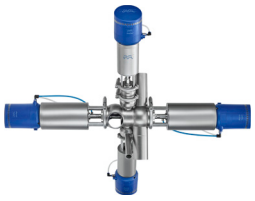

LKH Evap


LKHPF


LKHI

Valves

Double seat valves


Aseptic Mixproof


Unique Mixproof


Unique Mixproof 3-body


Unique Mixproof UltraPure


Unique Mixproof Large Particle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Diaphragm valves


Unique DV-ST UltraPure


DV-ST Multiport

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SBV Sanitary

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Koltek Valves

Regulating valves


Unique RV-ST


Unique RV-P


CPM-2

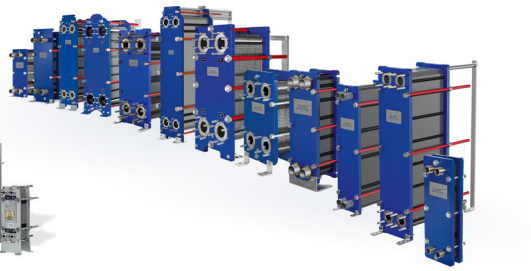
Heat transfer

Gasketed plate heat exchangers


Hygienic line


FrontLine


BaseLine


Industrial line

Tank equipment

Tank cleaning machines


SaniJet 25 UltraPure


SaniJet 20 UltraPure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Tubes and tube support

UltraPure tubes and fittings

UltraPure tubes and fittings

Filters and strainers

Strainers

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LKH Multistage


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LKC UltraPure


Unique Vacuum Breaker

Safety valves


LKUV-2 Air-Relief

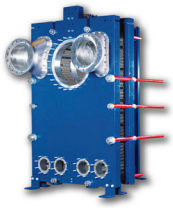

LKBV Air-Blow


Safety Valve


SB Anti Vacuum House


TS-series


AlfaCond


AlfaVap

Fusion-bonded plate heat exchangers


AlfaNova

Brazed plate heat exchangers


Brazed PHE

Static spray balls


MultiJet 45


GJ 4


SaniMicro


SaniMidget


SaniMagnum


SaniMidget SB


SaniMagnum SB


SaniMega SB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LeviMag® UltraPure


LKDC-LP


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SRU


SX


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DuraCirc


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Twin screw pumps


Twin Screw


Unique SSV Tank Outlet

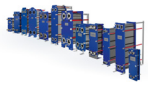

Unique SSV Manual


Unique SSSV Small Single Seat


LKAP Air-Operated

Butterfly valves


LKB


LKB-F


LKB UltraPure

Sampling valves


SB Anti Vacuum Valve


SB Pressure Relief Valve


Unique Sampling Valve


SB Membrane Sample Valve

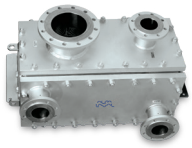

SB Micro Sample Port


SB Micro Sample Port Type M

Welded spiral heat exchangers


Spiral Heat Exchangers

Welded plate and block heat exchangers


Combabloc Free Flow

Scraped surface heat exchangers


Contherm

Tubular heat exchangers


Pharma-line S and P


Pharma-line Point of Use

Wall mounted cleaning nozzles


PlusClean®/PlusClean® UltraPure

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ThinkTop® V50


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ThinkTop® Basic Intrinsically Safe


IndiTop


Unique Control LKB

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Condition monitoring


CM Connect


CM

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Service kits

Service tools


Service tools valves


Service tools mixing and blending

Service tools tank cleaning

Service tools pumps

Alfa Laval Stainless Steel and Rubber Materials

Technical Information

Stainless Steel

Our stainless steel material have the following demands to the contents of the most essential alloys:

Descriptions	Standard	Chrome Cr%	Nickel Ni%	Molybdenum Mo%	Carbon C%
AISI 304	ASTM A270	18.0-20.0	8.0-10.5	0.0	≤ 0.08
AISI 304L	ASTM A270	18.0-20.0	8.0-12.0	0.0	≤ 0.03
AISI 316L	ASTM A270	16.0-18.0	10.0-14.0	2.0-3.0	≤ 0.03
1.4301 (304)	EN 10088-1 (X 5CrNi18-10)	17.0-19.5	8.0-10.5	0.0	≤ 0.07
1.4307 (304L)	EN 10088-1 (X 2CrNi18-9)	17.5-19.5	8.0-10.0	0.0	≤ 0.03
1.4401 (316)	EN 10088-1 (X 5CrNiMo17-12-2)	16.5-18.5	10.0-13.0	2.0-2.5	≤ 0.07
1.4404 (316L)	EN 10088-1 (X 2CrNiMo17-12-2)	16.5-18.5	10.0-13.0	2.0-2.5	≤ 0.03
1.4435 (316L)	EN 10088-1 (X 2CrNiMo18-14-3)	17.0-19.0	12.5-15.0	2.5-3.0	≤ 0.03
1.4571 (316TI)	EN 10088-1 (X6CrNiMoTi17-12-2)	16.5-18.5	10.5-13.5	2.0-2.5	≤ 0.08

Rubber Materials

In order to obtain the longest possible lifetime for rubber seals it is essential to choose the right quality for the actual duty. Consequently when choosing rubber quality, the characteristics of the different rubber types should be considered. All product wetted rubber material are in conformity of FDA.

EPDM Rubber (Ethylene Propylene)

EPDM rubber is widely used within the food industry as it is resistant to most products used in this sector. Another advantage is that it may be used to a recommend max. temperatures of 140°C (244°F). However, there is one essential limitation, EPDM is not resistant to organic and non-organic oils and fats.

Actylonitrile Butadiene Rubber, NBR

NBR is the rubber type most frequently used for technical purposes. It is quite resistant to most hydrocarbons, e.g oil, grease and fat. It is sufficiently resistant to diluted lye and nitric acid and may be used to a recommended max. 95°C (203°F). As NBR is attacked by ozone it may not be exposed to ultraviolet rays and should thus consequently be stored so that this is avoided.

Silicone rubber, Q

The most significant quality of silicone rubber is that it can be applied from temperatures below -50°C (-58°F) to approx. + 180°C (356°F) and still keep its elasticity. The chemical resistance is satisfactory to most products. However, undiluted lye and acids as well as hot water and steam may destroy silicone rubber. The resistance to ozone is good.

Fluorine rubber, FPM

FPM is often used when other rubber types are unsuited, especially at high temperatures up to approx. 180°C (356°F). The chemical resistance is good to most products, however hot water, steam, lye, acid and alcohol should be avoided. The resistance to ozone is good.

Hydrogenated actylonitrileButadiene Rubber, HNBR

Mechanically strong and normally resistant to ozone and strong oxidizers, animal and vegetable fats, nonpolar solvents, oils and lubricants, water and aqueous solutions. The recommend max. temperature is 130°C (266°F).

Perfluoroalkoxy polymer, PFA

PFA is very similar to PTFE, but opposite to those PFA is thermo plastic and has minimal porosity. PFA has a very high mechanical strength which makes it a perfect choice when dealing with abbrasive products. The PFA seal offers longer service intervals. The recommended max. temperature for the PFA seal is 90°C (194°F).

Product and chemical resistance of flexible rubber materials

The information below is intended as an aid in selecting the best rubber quality for an actual application. It is not possible to state any general lifetime of rubber seals as many factors influence it: chemical attack, temperature, mechanical wear etc. Extreme temperatures, even within the generally accepted limits, may worsen other kinds of attack and thus reduce the lifetime.

Ratings

1 = Unsuitable.

2 = Limited suitability.

3 = Normal suitability.

4 = High suitability.

- = Not recommended for other reasons.

The table contains data which have been compiled from the results of our own tests and the recommendations of our raw material suppliers. The data should be considered as recommendations only and will be brought up-to-date from time to time. They are based on constant contact with the specified product.

In case of doubt or lack of information it would be advisable to consult us directly, which will enable us to investigate specific applications.

Product or process	NBR [1]	HNBR [2]	EPDM [3]	Q [4]	FPM [5]	PTFE [6]
Dairy products (milk, cream)	3	3-4	3-4	3-4	-	3-4
Dairy products (sour milk products)	3	3-4	3-4	3-4	-	3-4
Brewery products (beer, hops etc.)	3	3-4	3-4	1-2	2-3	3-4
Wine and yeast	3	3-4	4	4	2-3	3-4
Animal and vegetable fats: 100°C	3	4	1–2	3	4	3-4
Water and water solutions < 70°C	3	4	4	3	2-4	3-4
Hot water and steam < 130°C	1	4	4	2	-	3-4
Concentrated fruit juices and etheral oils < 100°C	1	-	1	1	3	3-4
Non-oxydising acids < 80°C	1-2	2	3	1–2	2	3-4
Oxydising acids < 80°C	-	2	3	1	2	3-4
Weak concentrate of lye < 100°C	2	3-4	4	2	2	3-4
Strong concentrate of lye < 100°C	1	2-3	3	1	1	3-4
Mineral oils < 110°C	3	4	-	-	4	3-4
Aliphatic carburetted hydrogen (hexane)	3	3	1	1	4	3-4
Aromatic carburetted hydrogen (benzole)	1	2	1	1	3	3-4
Alcohols	1–3	2-3	2-3	3-4	3-4	3-4
Ester and ketones	1-2	1-2	1-2	1-2	3-4	3-4
Ether	1	2	1	1-3	3-4	3-4
Methylene chloride	1	2	1	2-3	3-4	3-4
Ozone and atmospheric conditions	1-2	3	4	4	3-4	3-4

International designation of flexible rubber materials according to ISO R 1629.

ISO = International standard.

Notes

	Designation of flexible rubber materials	Abbreviation symbol
[1]	Nitrile rubber	N
[2]	Hydrogenated actylonitrile rubber	H
[3]	Ethylene propylene rubber	E
[4]	Silicone rubber	Q
[5]	Fluorinated rubber	F
[6]	Polytetraflour ethylene	

Compliance and certification

We can provide documented and certified compliance with a broad spectrum of relevant international and local hygiene standards, worldwide. This helps you significantly reduce the engineering costs of setting up and operating standard-compliant processing plants around the world.

Please find below some examples of regulations, standards, and guidelines applicable to our products used in hygienic applications.

More information can be found in Instruction Manuals on alfalaval.com page.

For special requests please contact your local Alfa Laval organization.

Authorized to carry the 3A symbol

The mission of 3-A SSI is to enhance product safety for consumers of food, beverages, and pharmaceutical products through the development and use of 3-A Sanitary Standards and 3-A Accepted Practices. The 3-A symbol is a registered mark used to identify equipment that meets 3-A Sanitary Standards for design and fabrication.

ATEX-directive is the popular name for the European Directive 2014/34/EU setting the rules for equipment and protective systems intended for use in potentially explosive atmospheres.

Compliance to the Regulation (EC) No. 1935/2004.

The framework regulation (EC) No. 1935/2004 regulates food contact materials and articles within EU. It includes several requirements for materials and articles intended to come into contact with food to ensure material safety.The glass and fork symbol may be used to indicate that the relevant requirements stated in (EC) No. 1935/2004 are met.

CE marking is a mandatory conformity mark for products placed on the market in the European Economic Area (EEA). With the CE marking on a product the manufacturer ensures that the product conforms with the essential requirements of the applicable EC directives. The letters "CE" stand for "Conformité Européenne" ("European Conformity").

UKCA marking is a mandatory conformity mark for products placed on the market in Great Britain (England, Scotland, and Wales). With the UKCA marking the manufacturer ensures that the product conforms with the relevant requirements of the applicable legislations.

Within United States, requirements for food contact materials and articles are specified by the Food and Drug Administration (FDA) and are regulated under the Code of Federal Regulations, Title 21 “Food and drugs”, Parts 170-199 “Food for human consumption”.

USP Class VI / ISO 10993

The United States Pharmacopeia (USP) standards, chapter 87 and 88, and International Organization for Standardization (ISO) standard 10993, sections 5, 6,10 and 11, specifies requirements to ensure biocompatibility of product contact parts intended to be used in pharma applications.

BPE

The American Society of Mechanical Engineers Bioprocessing Equipment (ASME BPE) is the Bioprocess Equipment group of the ASME that provides engineers and quality control professionals a measurable way to specify and purchase equipment for the Biotechnology, Pharmaceutical and Personal Care Products industries.

Alfa Laval hygienic product animations

Pump animations

Get a look inside our products and see how they work. Mouse over the image and click to see animations. See more at: Alfa Laval - hygienic product animations

Alfa Laval LKH Centrifugal pumps

Alfa Laval LKH Prime Centrifugal pumps

Alfa Laval SolidC Centrifugal pumps

Alfa Laval SRU Rotary lobe pump

Alfa Laval SX Rotary lobe pump

Alfa Laval OptiLobe Rotary lobe pump

Alfa Laval DuraCirc® Circumferential piston pump

Alfa Laval twin screw pumps

Pumps

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Centrifugal pumps

Product leaflet

Performance Curve

Alfa Laval LKH

Centrifugal Pumps

Introduction

The Alfa Laval LKH Centrifugal Pump is a premium pump for use in hygienic applications. To increase process productivity, it is distinguished by high efficiency, gentle product treatment, chemical resistance, and a wide range of flow rates, pressures and options.

Precision-engineered, the LKH pump delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Application

Designed for Cleaning-in-Place (CIP), the Alfa Laval LKH is ideal for hygienic applications within the dairy, food, beverage and personal care industries that require gentle product treatment and reliable operation.

The LKH pump is available in 13 sizes to handle capacities up to 500 m3/hour and differential pressures up to 11 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified, effective CIP cleanability.
- Wide performance envelope: reduce need for parallel and serial pump installations and ensure pump operating with high efficiency.
- Maximized uptime and reduced maintenance costs: robust mechanical design and ease of maintenance with modular front-loading seals.

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKH pump is equipped with a single mechanical shaft seal but is also available with a single flushed or a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L)
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Rotary seal face:	Carbon
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, 4 poles = 1500/1800 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	0.75 - 110 kW
60Hz:	0.75 - 110 kW

Min/max motor speed	
2 poles: 0.75 - 45 kW:	900 - 4000 rpm
2 poles: 55 - 110 kW:	900 - 3600 rpm
4 poles: 0.75 - 75 kW:	900 - 2200 rpm

Warranty
Extended 3-years warranty on LKH pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

Max inlet pressure	
LKH-5:	600 kPa (6 bar)
LKH-10 - 70:	1000kPa (10 bar)
LKH-70, 60Hz:	500kPa (5 bar)
LKH-85 - 90:	500kPa (5 bar)

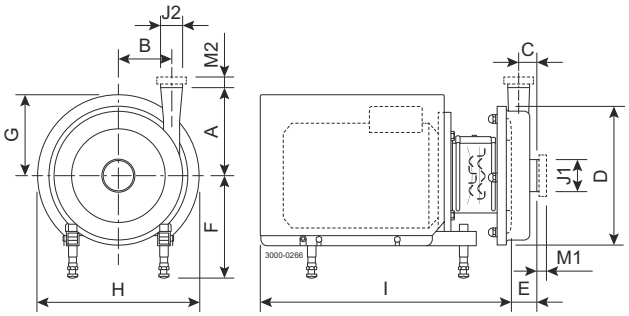
Temperature	
Temperature range:	-10°C to +140°C (EPDM)
Flush media:	Max 70°C
Flush housing sterilization (pump not in operation):	Max 125°C

Flushed shaft seal	
Water pressure inlet:	Max. 1 bar
Water consumption:	0.25 - 0.5 l/min

Double mechanical shaft seal	
Water pressure inlet, LKH-5 to -60:	Max. 500 kPa (5 bar)
Water pressure inlet, LKH-70 to -90:	Max. 300 kPa (3 bar)
Water consumption:	0.25 - 0.5 l/min

Connections for flushed and double mechanical shaft seal	
LKH-5 - 70, LKH-90:	1/8" G
LKH-85:	Ø6 tube

Dimensions



Pump specific measures (mm)

Pump Model	LKH-5	LKH-10	LKH-15	LKH-20	LKH-25	LKH-35	LKH-40	LKH-45	LKH-50	LKH-60	LKH-70	LKH-85	LKH-90
A	158	142	166	180	193	193	212	193	205	261	254	229	310
B	70	87	66	88	106	119	126	97	118	102	147	220	250
C	22	23	43	27	32	23	28	41	35	62	25	65	65
D	189	247	247	253	303	303	329	329	329	329	408	438	504
E	42	51	87	63	69	54	64	64	77	106	76	97	95

Motor specific measures (mm)

Motor IEC	IEC80	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250	IEC280
Motor kW	0.75/1.1	1.5/2.2	3.0	4.0	5.5/7.5	11/15/18.5	22	30/37/45	55/75	90/110
F(max) [1]	262	262	282	285	304	332	352	372	446	496
G	125	157	185	198	196	262	286	399	394	584
H	250	288	325	359	383	485	533	670	738	960
I (LKH-5)	400	441	-	-	-	-	-	-	-	-
I (LKH-10 to -60)	-	434	516	497	597	791	842	980	-	-
I (LKH-70 to -90)	-	-	-	-	-	804	855	993	1051	1271

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	LKH-5	LKH-10	LKH-15	LKH-20	LKH-25	LKH-35	LKH-40	LKH-45	LKH-50	LKH-60	LKH-70	LKH-85	LKH-90
Motor range (IEC)	IEC80-IEC90	IEC90-IEC160	IEC90-IEC160	IEC90-IEC160	IEC90-IEC200	IEC90-IEC180	IEC90-IEC200	IEC100-IEC180	IEC100-IEC200	IEC112-IEC200	IEC160-IEC250	IEC200-IEC280	IEC180-IEC250

From LKH-5 to LKH-85 dimensional data are based on 2 pole, ABB motors.
For LKH-90 dimensional data are based on 4 pole, ABB motors.

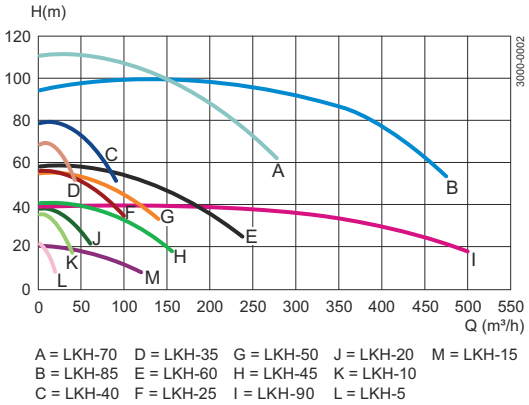
Connections (mm)

Pump Model		LKH-5	LKH-10 LKH-20 LKH-35	LKH-15 LKH-45 LKH-50 LKH-70	LKH-25	LKH-40	LKH-60	LKH-85 LKH-90
Clamp ISO 2037	M1	21	21	21	21	21	21	-
	M2	21	21	21	21	12	21	-
Union ISO(IDF)	M1	21	21	21	21	21	21	-
	M2	21	21	21	21	21	21	-
Union DIN/ISO	M1	22	25	30	30	30	30	-
	M2	22	22	30	25	27	30	-
Union SMS	M1	20	24	35	24	24	35	-
	M2	20	20	24	24	24	35	-
Union (BS)RJT	M1	27	27	32	27	27	32	-
	M2	27	27	27	27	22	32	-
Union DS	M1	20	24	24	24	24	24	-
	M2	20	20	24	24	21	24	-
Union DIN/DIN	M1	22	25	30	30	30	30	50
	M2	22	22	30	25	27	30	50
Clamp ASME BPE	M1	-	-	-	-	-	-	38
	M2	-	-	-	-	-	-	38
J1 [1]		51 / 2"	63,5 / 2,5"	101,6 / 4"	76,1 / 3"	76,1 / 3"	101,6 / 4"	152,5 / 6"
J2 [2]		38 / 1,5"	51 / 2"	76,1 / 3"	63,5 / 2,5"	63,5 / 2,5"	101,6 / 4"	152,5 / 6"

[1] Other dimensions available on request.

[2] Other dimensions available on request. ESE00263/7

Flow chart



A = LKH-70 D = LKH-35 G = LKH-50 J = LKH-20 M = LKH-15
B = LKH-85 E = LKH-60 H = LKH-45 K = LKH-10
C = LKH-40 F = LKH-25 I = LKH-90 L = LKH-5

Frequency: 50 Hz Speed (synchr): 3000 rpm

Options

- Impeller with reduced diameter.
- Flushed shaft seal.
- Double mechanical shaft seal.
- Rotating seal face of Silicon Carbide.
- Product wetted elastomers NBR, FPM or FEP.
- ½" vertical drain connection.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Surface finish measurement with certificate (Ra ≤ 0.8 µm).
- Inducer (LKH-10 to -50).
- Adjustable pads.
- Motor for other voltage and/or frequency.
- Half speed motor.
- Motor with increased safety/flame proof motor.
- ATEX approved execution (LKHex).

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Note! For further details, see also ESE00698.

Alfa Laval LKHex

Centrifugal pumps

Introduction

The Alfa Laval LKHex Centrifugal Pump is a premium pump for use in hygienic applications which must meet the requirements of the ATEX directive 2014/34/EU group II, category 2G, temperature class T3 and T4. To increase process productivity, it is distinguished by high efficiency, gentle product treatment, chemical resistance, and a wide range of flow rates, pressures and options.

Precision-engineered, the LKHex pump delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Applications

The LKHex is engineered for use in potentially explosive environments and conforms to the provisions of the ATEX directive 2014/34/EU group II, category 2G, temperature class T3 and T4. With verified effective CIP cleanability, it is ideal for hygienic applications within the dairy, food, beverage and personal care industries that require gentle product treatment and reliable operation.

The Alfa Laval LKHex pump is available in 10 sizes to handle capacities up to 250 m3/h and differential pressures up to 11 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified effective CIP cleanability.
- Maximized uptime and reduced maintenance costs: robust mechanical design and ease of maintenance with modular front-loading seals.
- Conforms to the provisions of ATEX directive: can be used in potentially explosive environments.

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the explosion proof motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKHex pump is equipped with a single mechanical shaft seal, but is also available with a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

Certificates

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L)
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Ratary seal face:	Carbon
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged ATEX approved motor according to the IEC metric standard, 2 poles = 3000/3600 rpm. at 50/60 Hz.

Motor sizes	
50Hz:	1.5 - 75 kW
60Hz:	1.5 - 75 kW

Warranty
Extended 3-years warranty on LKHex pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

Max inlet pressure	
LKHex 10 - 70:	500kPa (5 bar)

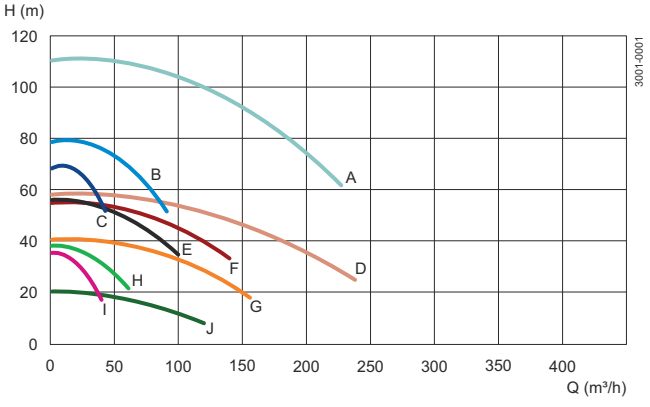
Temperature, Class T4	
Product temperature, NBR:	-10°C to +80°C
Product temperature, EPDM, FPM, FEP:	-10°C to +100°C
Ambient temperature, without shroud:	-20°C to +40°C
Ambient temperature, with shroud (<18.5kW):	-20°C to +35°C

Temperature, Class T3	
Product temperature, NBR:	-10°C to +80°C
Product temperature, EPDM:	-10°C to +130°C
Product temperature, FPM, FEP:	-10°C to +140°C
Ambient temperature:	-20°C to +40°C

Double mechanical shaft seal	
Water pressure inlet, LKHex 10 - 60:	Max. 500 kPa (5 bar)
Water pressure inlet, LKHex 70:	Max. 300 kPa (3 bar)
Water consumption:	0.5 l/min

Connections for double mechanical shaft seal	
LKHex 10 - 70:	1/8" G

Flow chart



A = LKHex-70 D = LKHex-60 G = LKHex-45 J = LKHex-15
B = LKHex-40 E = LKHex-25 H = LKHex-20
C = LKHex-35 F = LKHex-50 I = LKHex-10

Frequency 50 Hz, Speed (Synchr): 3000 rpm

Options

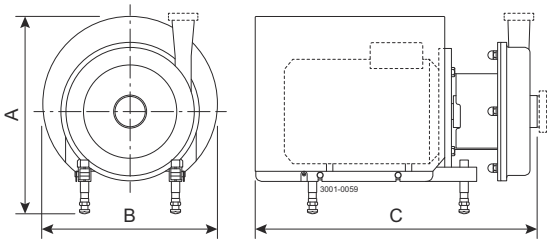
- Impeller with reduced diameter.
- Double mechanical shaft seal.
- Rotating seal ring of Silicon Carbide.
- No motor shroud.
- Adjustable pads.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Product wetted elastomers FPM, NBR or FEP.
- 1/2" drain connection.
- Hydrostatic testing with certificate.
- Surface finish measurement with certificate.

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure, ambient and media temperature.
- Group, category and temperature class.
- Density and viscosity of the product.
- Options.

Dimensions (mm)



Note! Most of the dimensions depend on motor supplier and motor size. Non-dependent dimensions are equal to the dimensions for LKH.

	LKH10 Exe				LKH15 Exe		LKH20 Exe					LKH25 Exe		
	1.85kW	2.5kW	3.3kW	4.6kW	3.3kW	4.6-5.5kW	1.85kW	2.5kW	3.3kW	4.6-5.5kW	7.5kW	4.6-5.5kW	7.5-12.5kW	15kW
A min	413	418	392	432	392	432	413	418	392	432	532	432	532	581
A max	499	528	505	565	505	565	499	528	505	565	649	565	649	618
B	290	325	360	425	360	425	290	325	360	425	510	425	510	553
C	532	561	591	685	627	716	545	573	603	692	853	698	859	908

	LKH35 Exe			LKH40 Exe			LKH45 Exe			LKH50 Exe			
	4.6-5.5kW	7.5-12.5kW	15kW	7.5-12.5kW	15kW	20kW	4.6-5.5kW	7.5-12.5kW	15kW	5.5kW	7.5-12.5kW	15kW	20kW
A min	432	532	549	532	581	661	432	532	581	432	532	581	661
A max	565	649	666	649	686	786	565	649	686	565	649	686	786
B	425	510	553	510	553	673	425	510	553	425	510	553	673
C	683	844	888	854	899	989	712	873	917	706	867	911	1005

	LKH60 Exe				LKH70 Exe				
	5.5kW	7.5-12.5kW	15kW	20-24kW	12.5kW	15kW	20-24kW	36kW	47-58kW
A min	432	532	581	661	532	581	661	881	
A max	565	649	686	786	669	686	786	942	
B	425	510	553	673	510	425	673	800	
C NW 150	785	946	990	1084	969	1014	1108	1296	
C 4"	735	896	940	1034	879	924	1018	1206	
C 6"	775	936	980	1074	969	1014	1108	1296	

	LKH10 Exd , Exde			LKH15 Exd , Exde			LKH20 Exd , Exde				LKH25 Exd , Exde		
	1.5-2.2 kW	3kW	4kW	3kW	4kW	5.5kW	1.5-2.2 kW	3kW	4kW	5.5-7.5kW	4kW	5.5-7.5kW	11-15kW
A min	413	418	438	418	438	483	413	418	438	483	438	483	573
A max	499	528	551	528	551	616	499	528	551	616	551	616	690
B	290	325	360	325	360	425	290	325	360	425	360	425	510
C	532	561	591	546	627	716	545	573	603	692	608	698	537

	LKH35 Exd , Exde			LKH40 Exd , Exde			LKH45 Exd , Exde			LKH50 Exd , Exde		
	4kW	5.5-7.5kW	11-15kW	7.5kW	11-18.5kW	22kW	4kW	5.5-7.5kW	11-15kW	5.5-7.5kW	11-15kW	22kW
A min	438	483	573	483	573	625	438	483	573	483	573	625
A max	551	616	690	616	690	730	551	616	690	616	690	730
B	360	425	510	425	510	553	360	425	510	425	510	553
C	594	785	948	693	856	870	623	712	875	706	869	882

	LKH60 Exd , Exde				LKH70 Exd , Exde			
	5.5-7.5kW	11-18.5kW	22kW	30kW	11-18.5kW	22kW	30-37kW	55-75kW
A min	483	573	625	661	573	625	661	881
A max	616	690	730	786	710	730	786	942
B	425	510	553	673	510	553	673	800
C NW 150	785	948	991	1084	971	1015	1108	1296
C 4"	735	898	941	1034	881	925	1018	1206
C 6"	775	938	981	1074	971	1015	1108	1296

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Alfa Laval LKH Multistage

Centrifugal pumps

Introduction

The Alfa Laval LKH-110, LKH-110P and LKH-120P pumps are highly efficient multistage centrifugal pumps for use in hygienic applications. Precision-engineered and available with up to four stages, these LKH Multistage Pumps deliver high energy efficiency. Their optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Applications

Available in two-, three or four-stage models, the LKH Multistage Pumps save space and energy by replacing up to three booster pumps in a line. Used primarily in high-pressure applications with low capacity, they withstand system pressures up to 40 bar and deliver differential pressures up to 19 bar at 50 Hz. Designed for Cleaning-in-Place (CIP), the pumps are suitable for, but not limited to, many types of filtration applications across the food, beverage, home-personal care, biotechnology and pharmaceutical industries.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified effective CIP cleanability.
- High inlet pressure: designed for inlet pressures up to 40 bar and can therefore be used in the most demanding applications within filtration.
- High differential pressure: reduced need for serial pump installations saves space and energy.

Standard design

All media contacting steel components like pump casing parts, impellers, and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

As standard, the LKH multistage pump is equipped with an internal single mechanical shaft seal but is also available with a flushed shaft seal. The secondary seal of the flushed seal is a long-lasting lip seal. The front-loading shaft seal makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced

design minimizes the risk of seal opening during unforeseen pressure shock.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L) and duplex steel
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Ratary seal face:	Carbon
Stationary seal face:	Silicon Carbide

Motor

Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F. Standard motors with a fixed ball bearing on drive side are fitted to LKH-110 pumps whereas special motors with special bearings are required for LKH-110P and LKH-120P pumps.

Motor sizes	
50Hz:	2.2 - 75 kW
60Hz:	2.5 - 80 kW

Min/max motor speed	
2 poles: 2.2 - 75 kW:	900 - 3600 rpm

Warranty

Extended 3-years warranty on LKH Multistage pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

Connections for FSS:

6mm tube/Rp 1/8"

OPERATING DATA

Temperature	
Temperature range:	-10°C to +140°C (EPDM)
Flush media:	Max 70°C

Flushed shaft seal	
Water pressure inlet:	Max. 1 bar
Water consumption:	0.25 - 0.5 l/min

Connections for flushed and double mechanical shaft seal	
LKHPF 10 - 70:	1/8" G

Max inlet pressure

(Temperature < 40°C)

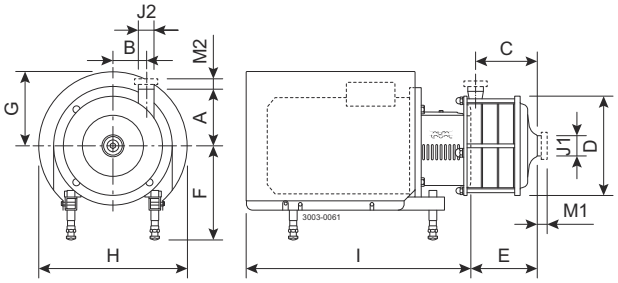
Pump size	Speed and shaft seal material								Motor	Backplate
	Max 50Hz				Max 60Hz					
	C/SiC		SiC/SiC		C/SiC		SiC/SiC			
	Max inlet pressure									
	bar	psi	bar	psi	bar	psi	bar	psi		
LKH-112	10	145	10	145	10	145	10	145	Std.	Std.
LKH-113	10	145	10	145	10	145	10	145	Std.	Std.
LKH-114	10	145	10	145	10	145	10	145	Std.	Std.
LKH-112P	N/A	N/A	30	435	N/A	N/A	30	435	Special	Reinforced
LKH-113P	N/A	N/A	30	435	N/A	N/A	30	435	Special	Reinforced
LKH-114P	N/A	N/A	25	363	N/A	N/A	25	363	Special	Reinforced
LKH-122P	10	145	30	435	N/A	N/A	30	435	Special	Std.
LKH-123P	10	145	30	435	N/A	N/A	30	435	Special	Std.
LKH-124P	N/A	N/A	25	363	N/A	N/A	20	290	Special	Std.

(Temperature > 40°C)

Pump size	Speed and shaft seal material								Motor	Backplate
	Max 50Hz				Max 60Hz					
	C/SiC		SiC/SiC		C/SiC		SiC/SiC			
	Max inlet pressure									
	bar	psi	bar	psi	bar	psi	bar	psi		
LKH-112	10	145	10	145	10	145	10	145	Std.	Std.
LKH-113	10	145	10	145	10	145	10	145	Std.	Std.
LKH-114	10	145	10	145	10	145	10	145	Std.	Std.
LKH-112P	N/A	N/A	20	290	N/A	N/A	15	218	Special	Reinforced
LKH-113P	N/A	N/A	20	290	N/A	N/A	20	290	Special	Reinforced
LKH-114P	N/A	N/A	20	290	N/A	N/A	20	290	Special	Reinforced
LKH-122P	10	145	30	435	N/A	N/A	30	435	Special	Std.
LKH-123P	10	145	30	435	N/A	N/A	30	435	Special	Std.
LKH-124P	N/A	N/A	25	363	N/A	N/A	20	290	Special	Std.

Dimensions

(mm)



Pump specific measures

Pump Model	LKH-112	LKH-113	LKH-114	LKH-122	LKH-123	LKH-124
A	140	140	140	265	265	265
B	86	86	86	112	112	112
C	76	115	155	85	142	200
D	256	256	256	335	335	335
E	108	138	178	112	169	226

Motor specific measures

Motor IEC Motor kW	IEC90 2.2	IEC100 3.0	IEC112 4.0	IEC132 5.5/7.5	IEC160 11/15/18.5	IEC180 22	IEC200 30/37/45	IEC250 55/75
F(max)[1]	262	282	285	304	332	352	372	446
G	157	185	198	196	262	286	399	394
H	288	325	359	383	485	533	670	738
I	434	556	497	607	789	842	980	1051

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	LKH-112	LKH-113	LKH-114	LKH-122	LKH-123	LKH-124
Moter range (IEC)	IEC90-IEC132	IEC112-IEC160	IEC132-IEC180	IEC180-IEC200	IEC180-IEC250	IEC200-IEC250
Dimensional data are based on 2 pole, ABB motors.						

Connections

Pump Model		LKH-112 LKH-113 LKH-114	LKH-112P LKH-113P LKH-114P	LKH-122 LKH-123 LKH-124
Clamp ISO 2037	M1	21		
	M2	21		
Union ISO(IDF)	M1	21		
	M2	21		
Union DIN/ISO	M1	22		
	M2	22		

[1] Other dimensions available on request.

Pump Model		LKH-112 LKH-113 LKH-114	LKH-112P LKH-113P LKH-114P	LKH-122 LKH-123 LKH-124
Union SMS	M1	20		
	M2	20		
Union (BS)RJT	M1	27		
	M2	27		
Union DS	M1	20		
	M2	20		
Union DIN/DIN	M1	22		
	M2	22		
Clamp ASME BPE	M1	-		
	M2	-		
Heavy duty clamp	M1		29	29
	M2		29	29
Flange acc. to EN1092	M1		-	56
	M2		-	56
J1[1]		51 / 2"	51 / 2"	76.5 / 3"
J2[1]		38 / 1.5"	38 / 1.5"	63.8 / 2.5 "

[1] Other dimensions available on request.

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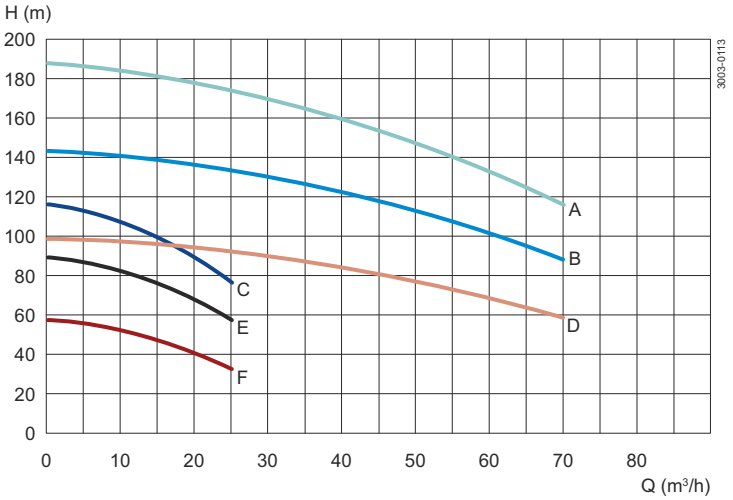
Flow chart



A = LKH-124P
B = LKH-123P
C = LKH-114 -114P
D = LKH-122P
E = LKH-113 -113P
F = LKH-112 -112P

Frequency: 50Hz - Speed (synchr): 3000 rpm

Options

- Impeller with reduced diameter.
- Flushed shaft seal.
- Rotating seal face of Silicon Carbide.
- Product wetted elastomers NBR or FPM (FPM only with LKH-110).
- Adjustable pads.

Ordering

Please state the following when ordering:

If the inlet pressure is higher than 10 bar it is necessary to order a special version with a modified motor and a stronger backplate:

For exact specification, please use the Anytime Configurator.

Use the following designation:

- Pump size.
- Version, hygienic or industrial.
- Connections.
- Impeller diameter.

- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Alfa Laval LKHPF

Centrifugal pumps

Introduction

The Alfa Laval LKHPF Centrifugal Pump for High Inlet Pressure is a high-pressure, high-efficiency centrifugal pump suited for high-pressure filtration applications. To increase process productivity, it is distinguished by high efficiency, low energy consumption, gentle product treatment, chemical resistance, and a wide range of flow rates, pressures and options.

Precision-engineered, the LKHP Filtration pump delivers greater energy efficiency than similar premium pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Applications

Designed for inlet pressures up to 40 bar and for Cleaning-in-Place (CIP), the Alfa Laval LKHPF pump is ideal for use in filtration systems across the food, beverage, home-personal care, biotechnology and pharmaceutical industries. Tough under pressure, the LKHPF is ideal for demanding nanofiltration and reverse osmosis filtration installations.

The LKHPF pump is available in nine sizes to handle capacities up to 280 m3/h and differential pressures up to 11 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified, effective CIP cleanability.
- Wide performance envelope: reduce need for parallel and serial pump installations and ensure pump operating with high efficiency.
- High inlet pressure: designed for inlet pressures up to 40 bar and can therefore be used in the most demanding applications within filtration.

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKHPF pump is equipped with an internal single mechanical shaft seal but is also available with a flushed shaft seal. The secondary seal of the flushed seal is a long-lasting lip seal. The front-loading shaft seal makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

With heavy-duty pump casing and backplate, high-pressure internal seals and multiple heavy-duty studs, the pump is capable of handling very high inlet pressures.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L)
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	2.2 - 75 kW
60Hz:	2.5 - 80 kW

Min/max motor speed	
2 poles: 2.2 - 45 kW:	900 - 4000 rpm
2 poles: 55 - 75 kW:	900 - 3600 rpm

Warranty
Extended 3-years warranty on LKHPF pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

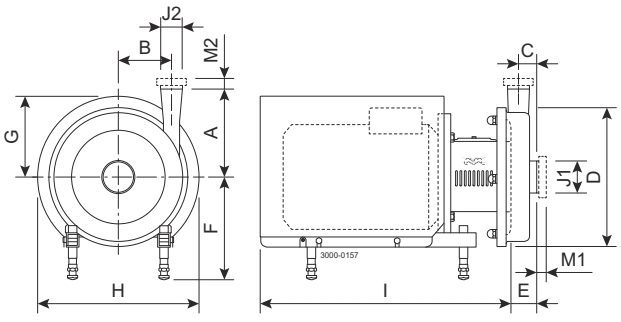
Max inlet pressure	
LKHPF 10 - 70:	4000kPa (40 bar)

Temperature	
Temperature range:	-10°C to +140°C (EPDM)
Flush media:	Max 70°C

Flushed shaft seal	
Water pressure inlet:	Max. 1 bar
Water consumption:	0.25 - 0.5 l/min

Connections for flushed and double mechanical shaft seal	
LKHPF 10 - 70:	1/8" G

Dimensions (mm)



Pump specific measures

Pump Model	LKHPF-10	LKHPF-20	LKHPF-25	LKHPF-35	LKHPF-40	LKHPF-45	LKHPF-50	LKHPF-60	LKHPF-70
A	142	180	193	193	212	193	205	262	254
B	87	87	106	119	126	97	118	102	147
C	29	43	38	28	34	43	42	42	28
D	247	253	303	303	329	303	329	329	408
E	64	78	82	66	77	93	91	93	93

Motor specific measures

Motor IEC	IEC90	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250
Motor kW	1.5/2.2	4.0	5.5/7.5	11/15/18.5	22	30/37/45	55/75
F(max) [1]	262	285	304	332	352	372	446
G	157	198	196	262	286	399	394
H	288	359	383	485	533	670	738
I (LKHPF-10 to -60)	434	497	597	791	842	980	-
I (LKHPF-70)	-	-	-	804	855	993	1051

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	LKHPF-10	LKHPF-20	LKHPF-25	LKHPF-35	LKHPF-40	LKHPF-45	LKHPF-50	LKHPF-60	LKHPF-70
Motor range (IEC)	IEC90-IEC112	IEC90-IEC132	IEC132-IEC160	IEC112-IEC160	IEC132-IEC180	IEC112-IEC160	IEC132-IEC180	IEC132-IEC200	IEC180-IEC250

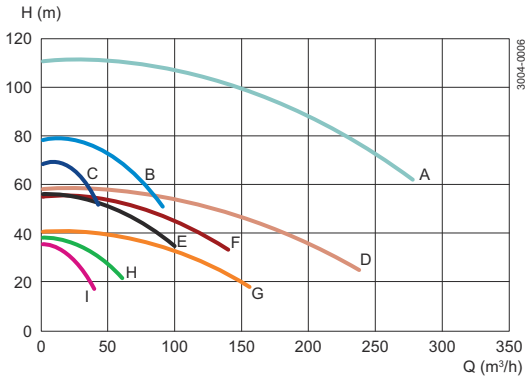
Note! Dimensional data are based on 2 pole, ABB motors.

Connections

Pump Model		LKHPF-10 LKHPF-20 LKHPF-35	LKHPF-25	LKHPF-40	LKHPF-45 LKHPF-50 LKHPF-70	LKHPF-60
Clamp (Heavy Duty)	M1	29	29	29	29	29
	M2	29	29	12	29	29
Flange EN 1092-1 Type 11	M1	56	56	56	65	65
	M2	48	56	56	56	65
J1 [1]		63.5 / 2.5"	76.1 / 3"	76.1 / 3"	101.6 / 4"	101,6 / 4"
J2 [1]		51 / 2"	63,5 / 2.5"	63.5 / 2.5"	76.1 / 3"	101,6 / 4"

[1] Other dimensions available on request.

Flow chart



A = LKHPF - 70
B = LKHPF - 40
C = LKHPF - 35
D = LKHPF - 60
E = LKHPF - 25
F = LKHPF - 50
G = LKHPF - 45
H = LKHPF - 20
I = LKHPF - 10

Figure 1. Frequency: 50 Hz, Speed (Synchr.): 3000 rpm

Options

- Impeller with reduced diameter.
- Flushed shaft seal.
- Product wetted elastomers NBR or FEP.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Surface finish measurement with certificate (Ra ≤ 0.8 µm).
- Adjustable pads.
- Motor for other voltage and/or frequency.

Ordering

Please state the following when ordering:

- Pump size.
- Connections.

- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Note!

- The curves for LKHPF are identical to those for LKH.
- For further details, see also ESE01950.

Alfa Laval LKHI

Centrifugal pumps

Introduction

The Alfa Laval LKHI Centrifugal Pump for 16 bar Inlet Pressure is a is a premium pump for use in hygienic applications with inlet pressures up to 16 bar. To increase process productivity, it is distinguished by high efficiency, gentle product treatment, chemical resistance, and a wide range of flow rates, pressures and options.

Precision-engineered, the LKHI pump delivers greater energy efficiency than similar premium pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Applications

Designed for inlet pressures up to 16 bar and for Cleaning-in-Place (CIP), the Alfa Laval LKHI is ideal for higher pressure hygienic applications within the dairy, food, beverage and personal care industries that require gentle product treatment and reliable operation.

The LKHI pump is available in nine sizes to handle capacities up to 240 m3/h and provide differential pressures up to 8 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified effective CIP cleanability.
- Wide performance envelope: reduce need for parallel and serial pump installations and ensure pump operating with high efficiency.
- High inlet pressure: designed for inlet pressures up to 16 bar and can therefore be used in systems with higher pressure rating.

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open

impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKHI pump is equipped with an internal single mechanical shaft seal but is also available with a flushed shaft seal. The secondary seal of the flushed seal is a long-lasting lip seal. The front-loading shaft seal makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L)
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Rotary seal face:	Carbon
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class. F.

Motor sizes	
50Hz:	1.5 - 30 kW
60Hz:	1.2 - 34 kW

Min/max motor speed	
2 poles: 1.5 - 30 kW:	900 - 4000 rpm

Warranty
Extended 3-years warranty on LKHI pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

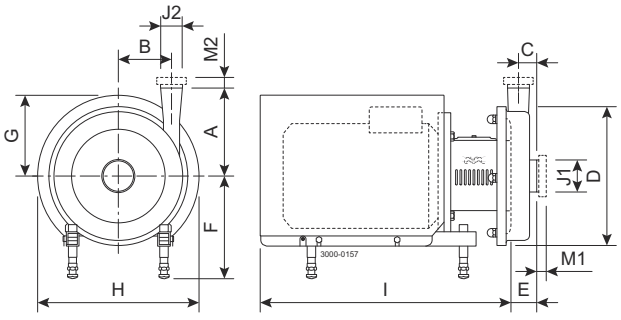
Max inlet pressure	
LKHI 10 - 60:	1600kPa (16 bar)

Temperature	
Temperature range:	-10°C to +140°C (EPDM)
Flush media:	Max 70°C

Flushed shaft seal	
Water pressure inlet:	Max. 1 bar
Water consumption:	0.25 - 0.5 l/min

Connections for flushed mechanical shaft seal	
LKHI 10 - 60:	1/8" G

Dimensions (mm)



Pump specific measures

Pump Model	LKHI-10	LKHI-15	LKHI-20	LKHI-25	LKHI-35	LKHI-40	LKHI-45	LKHI-50	LKHI-60
A	142	166	180	193	193	212	212	205	261
B	87	66	88	106	119	126	126	118	102
C	23	43	27	32	23	28	28	35	62
D	247	247	253	303	303	329	329	329	329
E	51	87	63	69	54	64	64	77	106

Moter specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200
Motor kW	1.5/2.2	3.0	4.0	5.5/7.5	11/15/18.5	22	30
F(max) [1]	262	282	285	304	332	352	372
G	157	185	198	196	262	286	399
H	288	325	359	383	485	533	670
I	434	516	497	597	791	842	980

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	LKHI-10	LKHI-15	LKHI-20	LKHI-25	LKHI-35	LKHI-40	LKHI-45	LKHI-50	LKHI-60
Motor range (IEC)	IEC90-IEC112	IEC100-IEC132	IEC90-IEC132	IEC132-IEC160	IEC112-IEC160	IEC132-IEC180	IEC112-IEC160	IEC132-IEC180	IEC132-IEC200

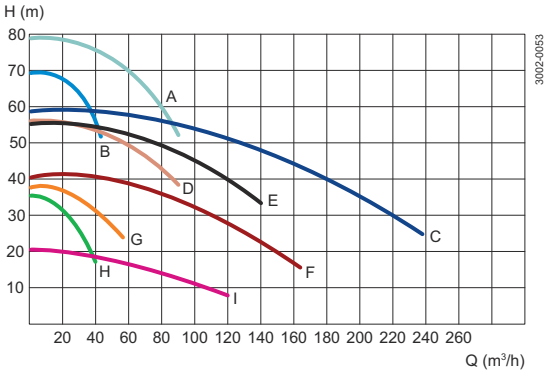
Note! Dimensional data are based on 2 pole, ABB motors.

Connections

Pump Model		LKHI-10 LKHI-20 LKHI-35	LKHI-15 LKHI-45 LKHI-50	LKHI-25	LKHI-40	LKHI-60
Clamp ISO 2037	M1	21	21	21	21	21
	M2	21	21	21	12	21
Union ISO(IDF)	M1	21	21	21	21	21
	M2	21	21	21	21	21
Union DIN/ISO	M1	25	30	30	30	30
	M2	22	30	25	27	30
Union SMS	M1	24	35	24	24	35
	M2	20	24	24	24	35
Union (BS)RJT	M1	27	32	27	27	32
	M2	27	27	27	22	32
Union DS	M1	24	24	24	24	24
	M2	20	24	24	21	24
J1*		63.5 / 2.5"	101.6 / 4"	76.1 / 3"	76.1 / 3"	101.6 / 4"
J2*		51 / 2"	76.1 / 3"	63.5 / 2.5"	63.5 / 2.5"	101.6 / 4"

***Note!** Other dimensions available on request.[ESE00268/9]

Flow chart



A = LKHI - 40
B = LKHI - 35
C = LKHI - 60
D = LKHI - 25
E = LKHI - 50
F = LKHI - 45
G = LKHI - 20
H = LKHI - 10
I = LKHI - 15

Options

- Impeller with reduced diameter.
- Flushed shaft seal.
- Rotating seal face of Silicon Carbide.
- Product wetted elastomers NBR or FPM.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Surface finish measurement with certificate (Ra ≤ 0.8 µm).

- Adjustable pads.
- Motor for other voltage and/or frequency.

Ordering

Please state the following when ordering:

- Pump size.
- Pressure.
- Connections.
- Impeller diameter.
- Motor size.
- Single or flushed shaft seal.
- Optional extras.

Note! The curves for LKHI are the same as those for LKH.- For further details, see also Instruction Manual, ESE00700.

Alfa Laval LKH UltraPure

Centrifugal pumps

Introduction

The Alfa Laval LKH UltraPure Centrifugal Pump is designed for use in high-purity applications where high efficiency, exceptional cleanability, contamination safety, robust design and low maintenance are of paramount importance. With verified cleanability, these pumps provide unobstructed product flow, very low NPSH requirements and excellent hydraulic efficiency.

Precision-engineered, the LKH UltraPure pump delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Applications

The Alfa Laval LKH UltraPure pump is designed to meet the stringent demands and regulations of high-purity applications across the biotechnology and pharmaceutical industries which require equipment with the highest material integrity.

All pumps are delivered with a complete Alfa Laval Q-doc package. Q-doc provides easier validation, proof of origin and compliance for inspection according to Good Manufacturing Practice (GMP) and ASME BPE requirements.

The LKH UltraPure pump is available in eight sizes to handle capacities up to 275 m3/h and differential pressures up to 10 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Maximized uptime and reduced maintenance costs: robust mechanical design and ease of maintenance with modular front-loading seals.
- Low contamination risk: comes with full material traceability and USP Class VI elastomers to reduce risk of process contamination from extractables.
- Smooth qualification, validation and process control: material traceability, and pump supplied with the Alfa Laval Q-doc package in line with Good Documentation Practice (GDP).

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L) with material traceability 3.1 according to EN 10204. Product wetted elastomers are specified to USP Class VI, 121°C, Chapter 88 and Chapter 87. A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKH UltraPure pump is equipped with a single mechanical shaft seal but is also available with a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L) with material traceability 3.1 according to EN 10204
Other steel parts:	Stainless steel
Inside surface finish:	Mech Ra ≤ 0.5
External finish:	Fiber brushed
Product wetted elastomers:	EPDM - USP Class VI, 121°C. Chapter 88, and Chapter 87
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, 4 poles = 1500/1800 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	1.5 - 75 kW
60Hz:	1.2 - 80 kW

Min./max. motor speed	
2 poles: 1.2 - 45 kW:	900 - 4000 rpm
2 poles: 55 - 80 kW:	900 - 3600 rpm
4 poles: 1.6 - 75 kW:	900 - 2200 rpm

Warranty
Extended 3-years warranty on LKH pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

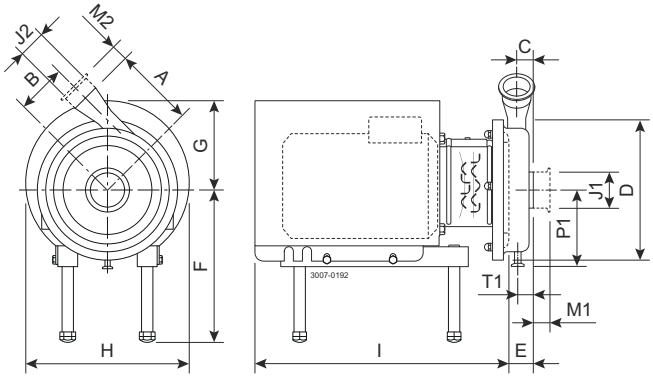
Max. inlet pressure	
LKH UltraPure 10 - 70:	500kPa (5 bar)

Temperature	
Temperature range:	-10°C to +140°C (EPDM)
Flush media:	Max. 70°C
Flush housing sterilization (pump not in operation):	Max. 125°C

Double mechanical shaft seal	
Water pressure inlet, LKH UltraPure 10 - 60:	Max. 500 kPa (5 bar)
Water pressure inlet, LKH UltraPure 70:	Max. 300 kPa (3 bar)
Water consumption:	0.25 - 0.5 l./min.

Connections for double mechanical shaft seal	
LKH UltraPure 10 - 70:	1/8" G

Dimensions (mm)



Pump specific measures

Pump Model	LKH UltraPure-10	LKH UltraPure-20	LKH UltraPure-25	LKH UltraPure-35	LKH UltraPure-40	LKH UltraPure-45	LKH UltraPure-60	LKH UltraPure-70
A	142	180	193	193	212	193	261	254
B	87	88	106	119	126	97	102	147
C	23	27	32	23	28	41	62	25
D	247	253	303	303	329	329	329	408
E	51	63	69	54	64	64	106	76
P1	123	129	153	153	166	153	165	206
T1	23	23	24	26	24	28	47	11

Motor specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250
Motor kW	**1.5/2.2**	**3.0**	**4.0**	**5.5/7.5**	**11/15/18.5**	**22**	**30/37**	**55/75**
F(max.)[1]	316	336	339	358	386	406	372	500
G	157	185	198	196	262	286	399	394
H	288	325	359	383	485	533	670	738
I (LKH-10 to LKH-60)	434	516	497	597	791	842	980	-
I (LKH-70)	-	-	-	-	804	855	993	1051

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Frame overview

Pump Model	LKH UltraPure-10	LKH UltraPure-20	LKH UltraPure-25	LKH UltraPure-35	LKH UltraPure-40	LKH UltraPure-45	LKH UltraPure-60	LKH UltraPure-70
Motor range (IEC)	**IEC90-IEC160**	**IEC90-IEC160**	**IEC90-IEC200**	**IEC90-IEC180**	**IEC90-IEC200**	**IEC100-IEC180**	**IEC112-IEC200**	**IEC160-IEC250**
Motor range (kW)	1.5-11	1.5-18.5	1.5-30	1.5-22	1.5-30	3-22	4-45	11-75

Note! Dimensional data are based on 2 pole, ABB motors.

Drain diameter

	ISO 1127	TC
	Clamp	Clamp
1/2"	13.5	12.7
3/4"	17.2	19

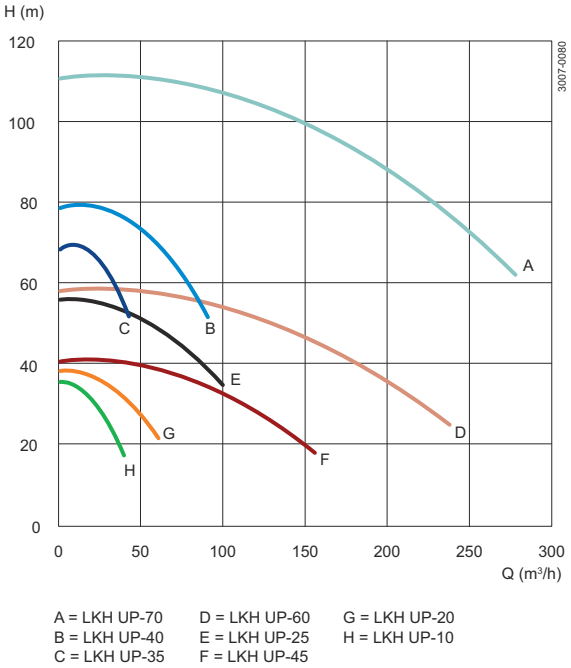
Note! Dimensions are for guidance only. For exact measures of specific pump specifications, please refer to Anytime Configurator.

Connections

Pump Model		LKH UltraPure-10 LKH UltraPure-20 LKH UltraPure-35	LKH UltraPure-25	LKH UltraPure-40	LKH UltraPure-45 LKH UltraPure-70	LKH UltraPure-60
Clamp ISO 1127	M1	36	48	48	92	92
	M2	36	36	36	48	92
Clamp ASME BPE	M1	29	29	29	29	29
	M2	29	29	29	29	29
Clamp ISO 2037	M1	21	21	21	21	21
	M2	21	21	21	21	21
Clamp DIN 32676	M1	64	64	64	92	92
	M2	21	64	21	64	92
Flange Asept. A for DIN	M1	64	96	96	60	60
	M2	47	64	47	96	60
Flange Asept. A for ASME	M1	56	58	58	60	60
	M2	47	56	47	58	60
Union Asept. A for DIN	M1	100	100	100	64	64
	M2	48	100	48	100	64
Union Asept. A for ASME	M1	60	54	54	64	64
	M2	48	60	48	54	64
J1[1]		63.5 / 2.5"	76.1 / 3"	76.1 / 3"	101.6 / 4"	101.6 / 4"
J2[1]		51 / 2"	63.5 / 2.5"	51 / 2"	76.1 / 3"	101.6 / 4"

[1] Other dimensions might be available upon request. ESE00269/9

Flow chart



A = LKH UP-70
B = LKH UP-40
C = LKH UP-35
D = LKH UP-60
E = LKH UP-25
F = LKH UP-45
G = LKH UP-20
H = LKH UP-10

Figure 1. Frequency: 50Hz - Speed (synchr): 3000 rpm

Q-doc

Standard documentation package:

- Declaration of compliance with Regulation (EC) No.: 1935/2004.
- Declaration of compliance to EN 10204 type 3.1 (MTR).
- Declaration of compliance to the U.S. Food & Drug Administration CFR 21 (non-metallic parts).
- Declaration of compliance to the U.S. Pharmacopeia (Elastomers and polymers).
- TSE (Transmissible Spongiform Encephalopathy) / ADI (Animal Derivative Ingredient) declaration.
- Declaration of surface finish compliance.
- Declaration of passivation and electro polishing (if specified).
- 3.1 certification in accordance to EN10204.
- Pump performance test certificate.

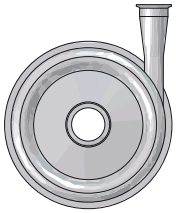
Optional documentation:

- Hydrostatic test certificate.
- Surface measurement report.
- Delta ferrite report (impeller).

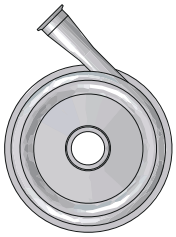
Options

- Impeller with reduced diameter.
- Impeller with delta ferrite max. 1%.
- Motor for other voltage and/or frequency.
- Half speed motor.
- Motor with increased safety/flame proof motor.
- ATEX approved execution (LKHex UltraPure).
- Double mechanical shaft seal.
- Adjustable pads.
- Horizontal drain connection, see illustration below.
- Drain with 1/2" Alfa Laval Unique DVST UltraPure valve welded directly to casing, see illustration below.
- Special flush arrangement with 1/2" Alfa Laval Unique DVST UltraPure diaphragm valve, needle valve and flow meter, see illustration below.
- No drain.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Product wetted surface finish electropolished to Ra ≤ 0.4 µm.
- Passivated surface.
- Product wetted elastomers FPM or FEP to USP Class VI, 121°C Chapter 88, and Chapter 87.
- Hydrostatic testing with certificate.
- Surface finish measurement with certificate.
- 0°, 90° or 270° outlet, see illustration below.

Available outlet positions

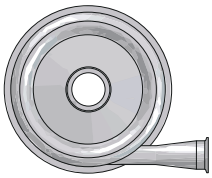


0°



45°

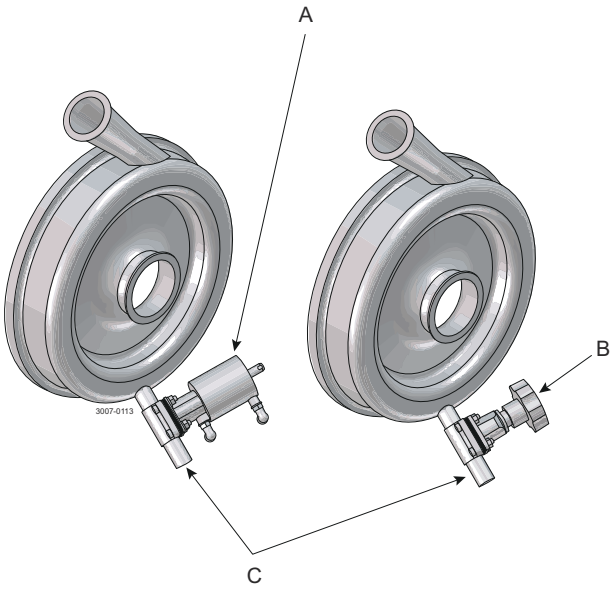
90°



270°

1/2" Alfa Laval Unique DVST UltraPure valve

- Welded directly to casing.
- Inside finish electropolished to Ra ≤ 0.4 µm.
- PTFE diaphragm conforming to USP Class VI.



A = Pneumatic actuator.

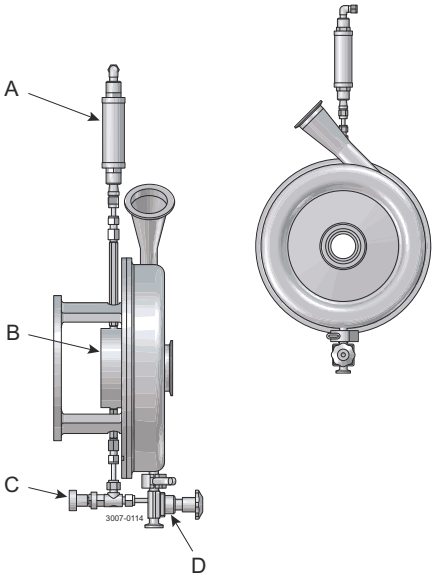
B = Manual handle.

C = Available tube standards:

- ISO1127.
- DIN11850.
- ASME-BPE.
- ISO2037

Flush arrangement

With the flush kit arrangement some process fluid is passing through the flush housing of the double mechanical seal, creating a barrier from the atmosphere to avoid potential process contamination across the seal face.



A = Flow meter

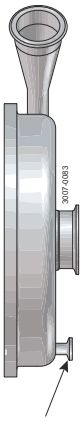
B = Flush Housing

C = Flow control needle valve

D = Alfa Laval Unique DVST UltraPure valve

Available drain connections

½" or ¾" vertical drain:
- Tri-clamp for ASME.
- Clamp for ISO 1127.



½" or ¾" horizontal drain:
- Tri-clamp for ASME.
- Clamp for ISO 1127.
- Clamp for DIN 11864-3.

Ordering

Please state the following when ordering:
- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Note! For further details, see also Instruction manual ESE01703. This product has EHEDG certificate.

Alfa Laval LKHex UltraPure

Centrifugal pumps

Introduction

The Alfa Laval LKHex UltraPure Centrifugal Pump is a premium pump for use in high-purity applications which meets the requirements of the ATEX directive 2014/34/EU group II, category 2G, temperature class T3 and T4. To increase process productivity, it is distinguished by high efficiency, gentle product treatment, chemical resistance, and a wide range of flow rates, pressures and options.

Precision-engineered, the LKHex UltraPure pump delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Applications

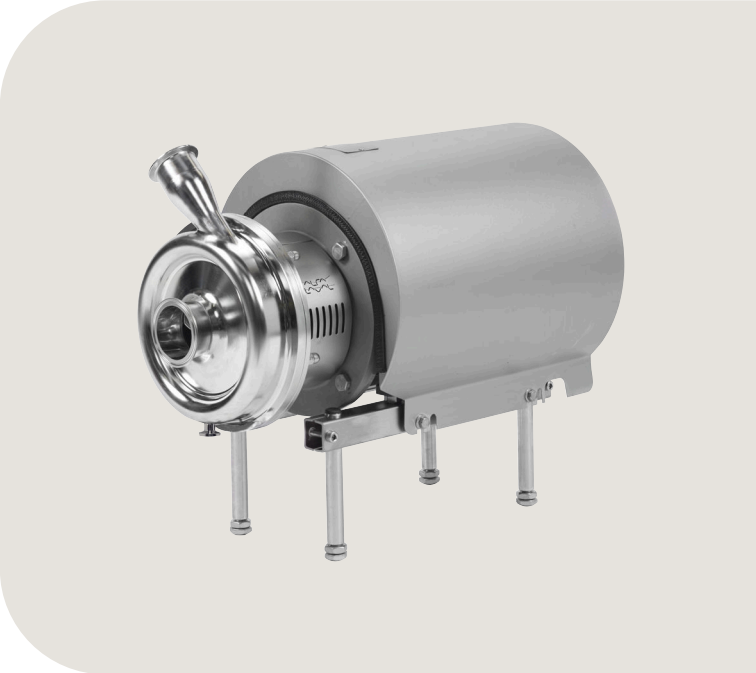
The LKHex UltraPure is engineered for use in potentially explosive environments and conforms to the provisions of ATEX directive 2014/34/EU group II, category 2G, temperature class T3 and T4. Furthermore, the pump is designed to meet the stringent demands and regulations of high-purity applications across the biotechnology and pharmaceutical industries that require equipment with the highest material integrity.

All pumps are delivered with a complete Alfa Laval Q-doc package. Q-doc provides easier validation, proof of origin and compliance for inspection according to Good Manufacturing Practice (GMP) and ASME BPE requirements.

The LKH UltraPure pump is available in eight sizes to handle capacities up to 250 m3/h and differential pressures up to 10 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Low contamination risk: comes with full material traceability and USP Class VI elastomers to reduce risk of process contamination from extractables.
- Conforms to the provisions of ATEX directive: can be used in potentially explosive environments.
- Smooth qualification, validation and process control: material traceability, and pump supplied with the Alfa Laval Q-doc package in line with Good Documentation Practices (GDP).



Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L) with material traceability 3.1 according to EN 10204. Product wetted elastomers are specified to USP Class VI, 121°C, Chapter 88 and Chapter 87. A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKHex UltraPure pump is equipped with a single mechanical shaft seal, but is also available with a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

Certificates

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L) with material traceability 3.1 according to EN 10204
Other steel parts:	Stainless steel
Inside surface finish:	Mech Ra ≤ 0.5
External finish:	Fiber brushed
Product wetted elastomers:	EPDM - USP Class VI, 121°C. Chapter 88, and Chapter 87
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged ATEX approved motor according to the IEC metric standard, 2 poles = 3000/3600 rpm. at 50/60 Hz.

Motor sizes	
50Hz:	1.5 - 75 kW
60Hz:	1.5 - 75 kW

Warranty
Extended 3-years warranty on LKHex UltraPure pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

Max. inlet pressure	
LKHex UltraPure 10 - 70:	500kPa (5 bar)

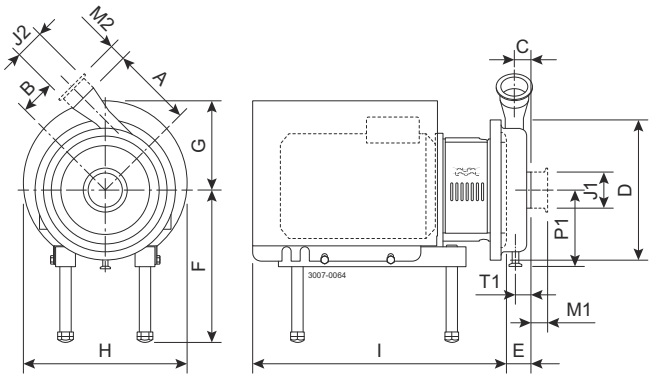
Temperature, Class T4	
Product temperature:	-10°C to +100°C (EPDM; FPM, FEP)
Ambient temperature, without shroud:	-20°C to +40°C
Ambient temperature, with shroud (<18.5kW):	-20°C to +35°C

Temperature, Class T3	
Product temperature:	-10°C to +130°C (EPDM) / -10°C to +140°C (FPM, FEP)
Ambient temperature:	-20°C to +40°C

Double mechanical shaft seal	
Water pressure inlet, LKHex UltraPure 10 - 60:	Max. 500 kPa (5 bar)
Water pressure inlet, LKHex UltraPure 70:	Max. 300 kPa (3 bar)
Water consumption:	0.5 l/min.

Connections for double mechanical shaft seal	
LKHex UltraPure 10 - 70:	1/8" G

Dimensions (mm)



Pump specific measures

Pump Model	LKHex UltraPure-10	LKHex UltraPure-20	LKHex UltraPure-25	LKHex UltraPure-35	LKHex UltraPure-40	LKHex UltraPure-45	LKHex UltraPure-60	LKHex UltraPure-70
A	142	180	193	193	212	193	261	254
B	87	88	106	119	126	97	102	147
C	23	27	32	23	28	41	62	25
D	247	253	303	303	329	329	329	408
E	51	63	69	54	64	64	106	76
P1	123	129	153	153	166	153	165	206
T1	23	23	24	26	24	28	47	11

Motor specific measures Exd/Exde

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250
Motor kW	1.85kW	2.5kW	3.3kW	4.6kW	7.5-12.5kW	15kW	20-24kW	36kW
F(max.)[1]	262	282	285	304	332	352	372	446
G	243	242	198	196	262	286	399	394
H	365	383	359	383	485	533	670	738
I (LKHex Ultra Pure-10 to LKHex Ultra Pure-60)	445	493	497	597	791	842	980	-
I (LKHex Ultrapure-70)	-	-	-	-	804	855	993	1051

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview Exe

Pump Model	LKHex UltraPure-10	LKHex UltraPure-20	LKHex UltraPure-25	LKHex UltraPure-35	LKHex UltraPure-40	LKHex UltraPure-45	LKHex UltraPure-60	LKHex UltraPure-70
Motor range (IEC)	IEC90-IEC132	IEC90-IEC160	IEC132-IEC180	IEC112-IEC160	IEC132-IEC180	IEC132-IEC180	IEC132-IEC200	IEC160-IEC280

Motor overview Exd/Exde

Pump Model	LKHex UltraPure-10	LKHex UltraPure-20	LKHex UltraPure-25	LKHex UltraPure-35	LKHex UltraPure-40	LKHex UltraPure-45	LKHex UltraPure-60	LKHex UltraPure-70
Motor range (IEC)	IEC90-IEC112	IEC90-IEC132	IEC112-IEC160	IEC132-IEC180	IEC160-IEC200	IEC112-IEC160	IEC132-IEC200	IEC160-IEC250

Note! Dimensional data are based on 2 pole, ABB motors.

Connections

Pump Model		LKHex UltraPure-10 LKHex UltraPure-20 LKHex UltraPure-35	LKHex UltraPure-25	LKHex UltraPure-40	LKHex UltraPure-45 LKHex UltraPure-70	LKHex UltraPure-60
Clamp ISO 1127	M1	36	48	48	92	92
	M2	36	36	36	48	92
Clamp ASME BPE	M1	29	29	29	29	29
	M2	29	29	29	29	29
Clamp ISO 2037	M1	21	21	21	21	21
	M2	21	21	21	21	21

[1] Other dimensions available on request.

Pump Model		LKHex UltraPure-10 LKHex UltraPure-20 LKHex UltraPure-35	LKHex UltraPure-25	LKHex UltraPure-40	LKHex UltraPure-45 LKHex UltraPure-70	LKHex UltraPure-60
Clamp DIN 32676	M1	64	64	64	92	92
	M2	21	64	21	64	92
Flange Asept. A for DIN	M1	64	96	96	60	60
	M2	47	64	47	96	60
Flange Asept. A for ASME	M1	56	58	58	60	60
	M2	47	56	47	58	60
Union Asept. A for DIN	M1	100	100	100	64	64
	M2	48	100	48	100	64
Union Asept. A for ASME	M1	60	54	54	64	64
	M2	48	60	48	54	64
J1[1]		63,5 / 2,5"	76,1 / 3"	76,1 / 3"	101,6 / 4"	101,6 / 4"
J2[1]		51 / 2"	63,5 / 2,5"	51 / 2"	76,1 / 3"	101,6 / 4"

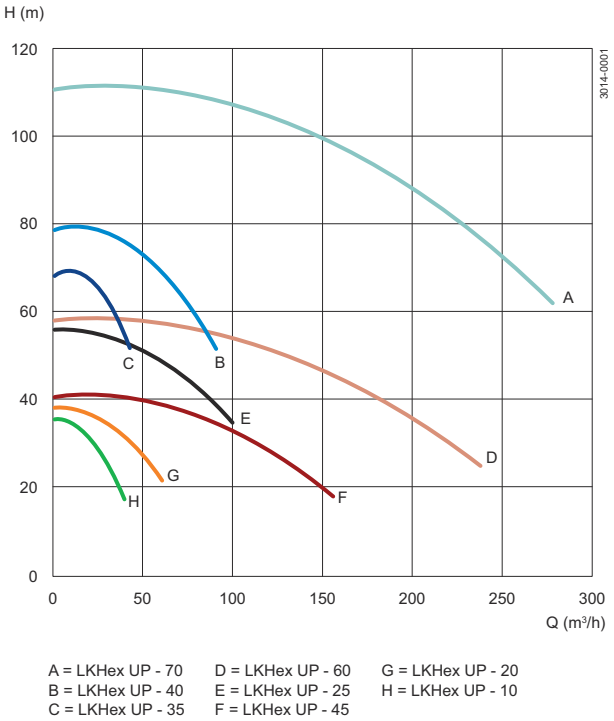
[1] Other dimensions available on request.

Drain diameter

	ISO 1127 Clamp	TC Clamp
1/2"	13.5	12.7
3/4"	17.2	19

Note! Dimensions are for guidance only. For exact measures of specific pump specifications, please refer to Anytime Configurator. 900717/1

Flow chart



A = LKHex UP - 70
B = LKHex UP - 40
C = LKHex UP - 35
D = LKHex UP - 60
E = LKHex UP - 25
F = LKHex UP - 45
G = LKHex UP - 20
H = LKHex UP - 10

Figure 1. Frequency: 50Hz - Speed (synchr): 3000 rpm

Q-doc

Standard documentation package:

- Declaration of compliance with Regulation (EC) No.: 1935/2004.
- Declaration of compliance to EN 10204 type 3.1 (MTR).
- Declaration of compliance to the U.S. Food & Drug Administration CFR 21 (non-metallic parts).
- Declaration of compliance to the U.S. Pharmacopeia (Elastomers and polymers).
- TSE (Transmissible Spongiform Encephalopathy) / ADI (Animal Derivative Ingredient) declaration.
- Declaration of surface finish compliance.

- Declaration of passivation and electro polishing (if specified).
- 3.1 certification in accordance to EN10204.
- Pump performance test certificate.

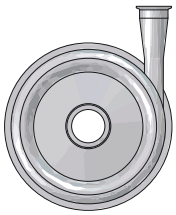
Optional documentation:

- Hydrostatic test certificate.
- Surface measurement report.
- Delta ferrite report (impeller).

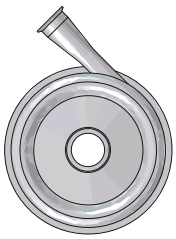
Options

- Impeller with reduced diameter.
- Impeller with delta ferrite max. 1%.
- Double mechanical shaft seal.
- Adjustable pads.
- Horizontal drain connection, see illustration below.
- No drain.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Product wetted surface finish electropolished to Ra ≤ 0.4 µm.
- Passivated surface.
- Product wetted elastomers FPM or FEP to USP Class VI, 121°C Chapter 88, and Chapter 87.
- Hydrostatic testing with certificate.
- Surface finish measurement with certificate.
- 0°, 90° or 270° outlet, see illustration below.

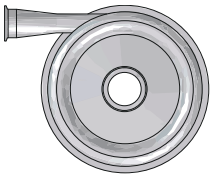
Available outlet positions



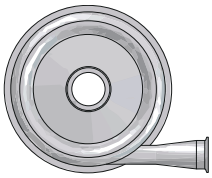
0°



45°



90°



270°

Available drain connections

½" or ¾" vertical drain:

- Tri-clamp for ASME
- Clamp for ISO 1127

½" or ¾" horizontal drain:

- Tri-clamp for ASME
- Clamp for ISO 1127
- Clamp for DIN 11864-3

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Note! For further details, see also instruction manual 100000157. This product has EHEDG certificate.

Alfa Laval LKH Prime

Centrifugal pumps

Introduction

Based on the market-leading Alfa Laval LKH pump, the Alfa Laval LKH Prime Centrifugal Pump is a versatile, highly efficient self-priming pump for use in hygienic applications, especially tank emptying and CIP return applications. With its combination of air-screw technology and advanced design, the pump can remove air from the suction pipe.

Precision-engineered, the LKH Prime delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller and airscrew design minimize recirculation and reduce energy consumption.

Application

The LKH Prime pump is designed to meet the stringent hygienic requirements across the food, dairy, beverage, and home-personal care industries. It is ideal for tank emptying and CIP return applications. With verified and effective CIP cleanability, the LKH Prime can be used as a product pump as well.

The LKH Prime is available in three sizes to handle capacities up to 100 m3/h and differential pressures up to 7.5 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified and effective CIP cleanability.
- Quiet: operates very quietly compared to other self-priming pumps improving the working environment.
- Reduced capital investment: designed for Cleaning-in-Place (CIP) duties containing entrained air but can also pump product reducing need for additional pump.

Standard design

All media contacting steel components like pump casing, impeller, airscrew, front cover, recirculation pipe and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open

impeller with a special vane design ensures efficient handling of the product as it moves through the pump.

As standard, the LKH prime pump is equipped with a single mechanical shaft seal but is also available with a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

Working principle

On applications where the pumped media contains a mixture of air and liquid in the suction line, airscrew rotation causes the formation of a continuous liquid ring within the canister. Due to the eccentric position of the canister relative to the airscrew, an air chamber forms between the liquid ring and the airscrew, which separates into air pockets between the air-screw vanes.

The continuous rotation of the air-screw forces air pockets through the canister into the suction stage of the impeller which are then pumped out via the discharge.

Liquid is returned from the discharge via the recirculation pipe into the canister to ensure the liquid ring is maintained at all times. When there is no air present, the canister and recirculation loop have no function and are fully filled with liquid. The liquid passes through the canister into the suction stage of the impeller, allowing the pump to act as a traditional centrifugal pump.

Certificates

Authorized to carry the 3A symbol

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L)
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Rotary seal face:	Carbon
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	1.5 - 45 kW
60Hz:	1.8 - 45 kW

Min/max motor speed	
Air evacuation:	2800 - 3600 rpm
Pumping product (no air):	900 - 3600 rpm

Warranty
Extended 3-years warranty on LKH Prime pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

Max. inlet pressure	
LKH Prime 10 - 40:	500 kPa (5 bar)

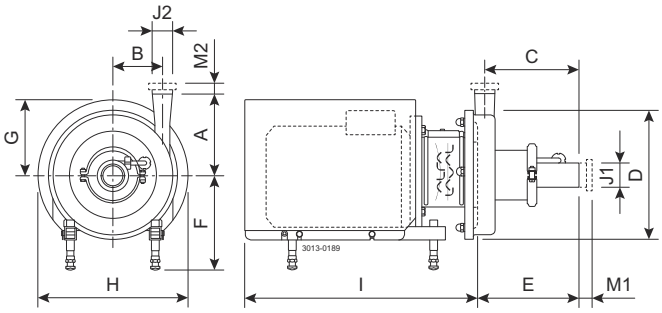
Air release time	
LKH Prime 10 - 40:	Max. 15 min.

Temperature	
Temperature range:	-10 °C to +140 °C (EPDM)
Flush media:	Max. 70 °C

Double mechanical shaft seal	
Water pressure inlet, LKH Prime 10 - 40:	Max. 500 kPa (5 bar)
Water consumption:	0.25 - 0.5 l/min

Connections for flushed and double mechanical shaft seal	
LKH Prime 10 - 40:	1/8" G

Dimensions (mm)



Pump specific measures

Pump Model	LKH Prime 10	LKH Prime 20	LKH Prime 40
A	174	187	259
B	85	92	126
C	222	248	271
D	247	253	329
E	245	280	301

Motor specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200
Motor kW	**1.5/2.2**	**3.0**	**4.0**	**5.5/7.5**	**11-18.kW**	**22**	**30/37/45**
F(max.)[1]	262	282	285	304	332	352	372
G	157	185	198	196	262	286	399
H	288	325	359	383	485	533	670
I	434	516	497	597	791	842	980

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	LKH Prime 10	LKH Prime 20	LKH Prime 40
Motor range (IEC)	IEC90-IEC132	IEC100-IEC160	IEC132-IEC200
Motor range (kW)	1.5-5.5	3.0-11	5.5-45kw

Note! Dimensional data are based on 2 pole, ABB motors.

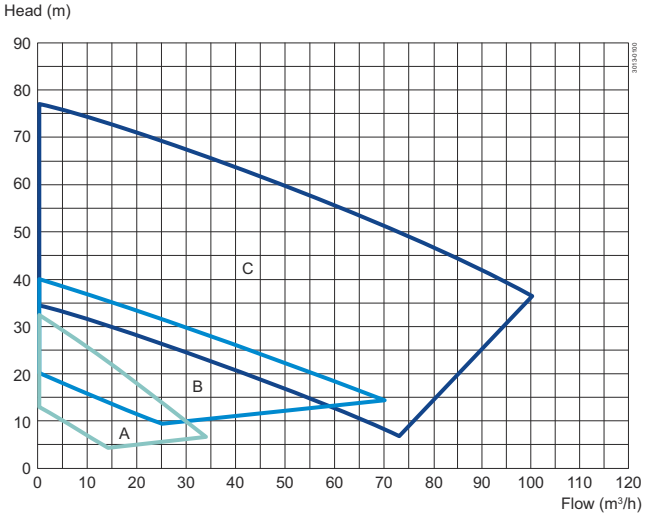
Connections

Pump Model		LKH Prime 10	LKH Prime 20	LKH Prime 40
Clamp ISO 2037	M1	21	21	21
	M2	21	21	12
Union ISO(IDF)	M1	21	21	21
	M2	21	21	21
Union DIN/ISO	M1	22	25	30
	M2	22	22	27
Union SMS	M1	20	24	24
	M2	20	20	24
Union (BS)RJT	M1	27	27	27
	M2	27	27	22
Union DS	M1	20	24	24
	M2	20	20	21
Union DIN/DIN	M1	22	25	30
	M2	22	22	27
J1[1]		51 / 2"	63,5 / 2,5"	76,1 / 3"
J2[2]		51 / 2"	51 / 2"	63,5 / 2,5"

[1] Other dimensions available on request.ESE03123EN/2

[2] Other dimensions available on request. ESE03123EN/2

Flow chart



A = LKH Prime 10
B = LKH Prime 20
C = LKH Prime 40

Figure 1. Frequency: 50Hz - Speed (synchr): 3000 rpm

Options

- Impeller with reduced diameter.
- Double mechanical shaft seal.
- Rotating seal face of Silicon Carbide.
- Product wetted elastomers NBR or FPM.
- ½" vertical drain connections (two connections).
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Adjustable pads.
- Motor for other voltage and/or frequency.
- Motor with increased safety/flame proof motor.

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Alfa Laval LKH Prime UltraPure

Centrifugal pumps

Introduction

The Alfa Laval LKH Prime UltraPure Centrifugal Pump is designed for use in high-purity applications where high efficiency, exceptional cleanability, contamination safety, robust design and low maintenance are of paramount importance.

Precision-engineered, the LKH Prime UltraPure delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller and airscrew design minimize recirculation and reduce energy consumption.

Applications

The Alfa Laval LKH Prime UltraPure is designed to meet the stringent demands and regulations of high-purity applications across the biotechnology and pharmaceutical industries that require equipment with the highest material integrity. It is ideal for tank emptying and CIP return applications; it has verified and effective CIP cleanability. The LKH Prime UltraPure can also be used as a product pump.

All pumps are delivered with a complete Alfa Laval Q-doc package. Q-doc provides easier validation, proof of origin and compliance for inspection purposes according to Good Manufacturing Practice (GMP) and ASME BPE requirements.

The LKH Prime UltraPure pump is available in two sizes to handle capacities up to 70 m3/h and differential pressures up to 4 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Quiet: operates very quietly compared to other self-priming pumps, thereby improving the working environment.
- Low contamination risk: comes with full material traceability and USP Class VI elastomers to reduce risk of process contamination from extractables.
- Smooth qualification, validation and process control: material traceability, and pump supplied with the Alfa Laval Q-doc package in line with Good Documentation Practices (GDP).

Standard design

All media contacting steel components like pump casing, impeller, airscrew, front cover, recirculation pipe and backplate are in W. 1.4404 (AISI 316L) with material traceability 3.1 according to EN 10204. Product wetted elastomers are specified to USP Class VI, 121°C, Chapter 88 and Chapter 87. A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient handling of the product as it moves through the pump.

As standard, the LKH prime pump is equipped with a single mechanical shaft seal but is also available with a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

Working principle

On applications where the pumped media contains a mixture of air and liquid in the suction line, airscrew rotation causes the formation of a continuous liquid ring within the canister.

Due to the eccentric position of the canister relative to the airscrew, an air chamber forms between the liquid ring and the airscrew, which separates into air pockets between the air-screw vanes.

The continuous rotation of the airscrew forces air pockets through the canister into the suction stage of the impeller which are then pumped out via the discharge.

Liquid is returned from the discharge via the recirculation pipe into the canister to ensure the liquid ring is maintained at all times. When there is no air present, the canister and recirculation loop have no function and are fully filled with liquid. The liquid passes through the canister into the suction stage of the impeller, allowing the pump to act as a traditional centrifugal pump.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L) with material traceability 3.1 according to EN 10204
Other steel parts:	Stainless steel
Inside surface finish:	Mech Ra ≤ 0.5
Product wetted elastomers:	EPDM - USP Class VI, 121°C. Chapter 88, and Chapter 87
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	1.5 - 18.5kW
60Hz:	2.5 - 21 kW

Min/max motor speed	
Air evacuation:	2800 - 3600 rpm.
Pumping product (no air):	900 - 3600 rpm.

Warranty
Extended 3-years warranty on LKH Prime UltraPure pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

Max inlet pressure	
LKH Prime UltraPure 10 - 20:	500kPa (5 bar)

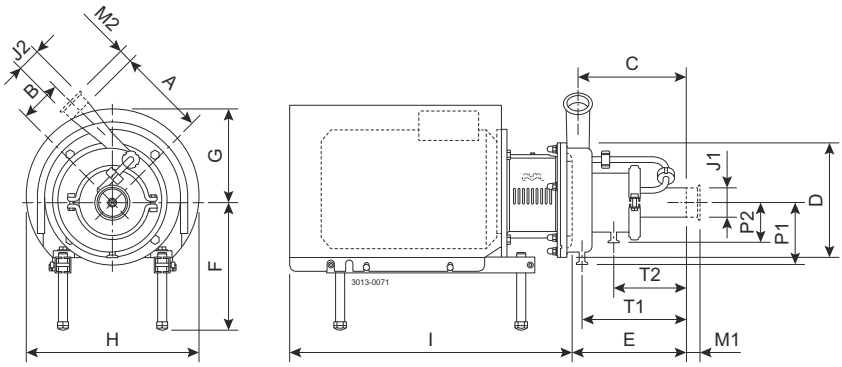
Air release time	
LKH Prime UltraPure 10 - 20:	Max 15 min

Temperature	
Temperature range:	-10°C to +140°C (EPDM)
Flush media:	Max 70°C

Double mechanical shaft seal	
Water pressure inlet, LKH Prime UltraPure 10 - 20:	Max. 500 kPa (5 bar)
Water consumption:	0.25 - 0.5 l/min

Connections for flushed and double mechanical shaft seal	
LKH Prime UltraPure 10 - 20:	1/8" G

Dimensions



Pump specific measures

Pump Model	LKH Prime UltraPure 10	LKH Prime UltraPure 20
A	174	187
B	85	88
C	222	248
D	247	253
E	245	280
P1	116	123
P2	82	83
T1	219	239
T2	161	170

Motor specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160
Motor kW	**1.5/2.2**	**3.0**	**4.0**	**5.5/7.5**	**11/15/18.5**
F(max)[1]	316	336	339	358	386
G	126	137	136	164	208
H	200	250	250	300	351
I	386	454	453	547	642

[1] Possible to reduce dimension F by min. 59 mm for all pump models.

Motor overview

Pump Model	LKH Prime UP 10	LKH Prime UP 20
Motor range (IEC)	IEC90-IEC132	IEC100-IEC160

Note! Dimensional data are based on 2 pole, ABB motors.

Connections

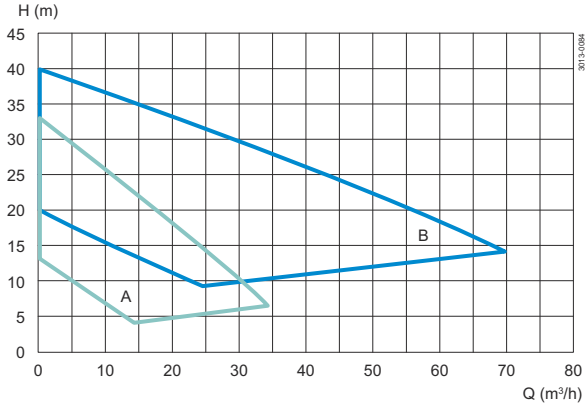
Pump Model		LKH Prime UltraPure 10	LKH Prime UltraPure 20
Clamp ISO 1127	M1	36	36
	M2	36	36
Clamp ASME BPE	M1	29	29
	M2	29	29
Clamp ISO 2037	M1	21	21
	M2	21	21
Clamp DIN 32676	M1	21	64
	M2	21	21
Flange Asept. A for DIN	M1	47	56
	M2	47	47
Flange Asept. A for ASME	M1	47	56
	M2	47	47
Union Asept. A for DIN	M1	48	100
	M2	48	48
Union Asept. A for ASME	M1	48	60
	M2	48	48
J1[1]		51 / 2"	63,5 / 2,5"
J2[1]		51 / 2"	51 / 2"

[1] Other dimensions available on request.

Drain diameter

	TC Clamp
1/2"	12.7

Flow chart



A = LKH Prime UP 10
B = LKH Prime UP 20

Figure 1. Frequency: 50Hz - Speed (synchr): 3000 rpm

Options

- Impeller with reduced diameter.
- Motor for other voltage and/or frequency.
- Motor with increased safety/flame proof motor.
- Double mechanical shaft seal.
- Adjustable pads.
- No drain.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Product wetted surface finish electropolished to Ra ≤ 0.4 µm.
- Passivated surface.
- Product wetted elastomers FPM or FEP to USP Class VI, 121°C Chapter 88, and Chapter 87.
- Hydrostatic testing with certificate.
- Surface finish measurement with certificate.
- 0° outlet.

Q-doc

Standard documentation package:

- Declaration of compliance with Regulation (EC) No.: 1935/2004.
- Declaration of compliance to EN 10204 type 3.1 (MTR).
- Declaration of compliance to the U.S. Food & Drug Administration CFR 21 (non-metallic parts).
- Declaration of compliance to the U.S. Pharmacopeia (Elastomers and polymers).
- TSE (Transmissible Spongiform Encephalopathy) / ADI (Animal Derivative Ingredient) declaration.
- Declaration of surface finish compliance.
- Declaration of passivation and electro polishing (if specified).
- 3.1 certification in accordance to EN10204.
- Pump performance test certificate.

Optional documentation:

- Hydrostatic test certificate.
- Surface measurement report.

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.

- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Alfa Laval LKH Evap

Centrifugal pumps

Introduction

The Alfa Laval LKH Evap Centrifugal Pump is a premium pump for use in hygienic applications. As a low-NPSHr, high-efficiency centrifugal pump, the LKH Evap is a tailored evaporator pump supported by strong and extensive documentation, including a comprehensive vacuum curve package. It features a special scraper impeller, ClearFlow, that solves the product buildup problem in high solids applications, which can prolong production time between cleaning.

Precision-engineered, the LKH Evap pump delivers greater energy efficiency than similar pumps. Its optimized design, premium motor, tight tolerances and advanced impeller design minimize recirculation and reduce energy consumption.

Applications

The LKH Evap Centrifugal Pump is designed for hygienic applications across the dairy, food, beverage, brewery, alcohol, ethanol, starch and chemical industries. It is ideal for use in evaporation duties for applications, such as liquid concentration and powder processing as well as plant and equipment dewatering.

The LKH Evap pump is available in 10 sizes to handle capacities up to 280 m3/h and differential pressures up to 11 bar at 50 Hz.

Benefits

- Energy efficient: superior efficiency resulting in reduced energy consumption and CO2 footprint.
- Hygienic: designed according to the most stringent hygienic design standards and with verified and effective Cleaning-in-Place.
- Low NPSHr: reduced NPSHr enables optimized system designs.
- Maximized uptime and reduced maintenance costs: robust mechanical design and ease of maintenance with modular front-loading seals.

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

A compression coupling securely attaches the stub shaft to the motor shaft with precision alignment, and the semi-open impeller with a special vane design ensures efficient and gentle handling of the product as it moves through the pump.

As standard, the LKH Evap pump is equipped with a single mechanical shaft seal but is also available with a single flushed or a double mechanical shaft seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

LKH Evap is available with the Clear Flow Impeller which is to be used in applications where there is a risk of building up a hard layer of product between impeller and backplate.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L)
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Ratary seal face:	Carbon
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, 4 poles = 1500/1800 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	1.5 - 75 kW
60Hz:	1.2 - 80 kW

Min/max motor speed	
2 poles: 1.5 - 45 kW:	900 - 4000 rpm
2 poles: 55 - 75 kW:	900 - 3600 rpm
4 poles: 1.5 - 75 kW:	900 - 2200 rpm

Warranty
Extended 3-years warranty on LKH Evap pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

Max inlet pressure	
LKH Evap 10 - 70:	1000kPa (10 bar)
LKH Evap 70, 60Hz:	500kPa (5 bar)

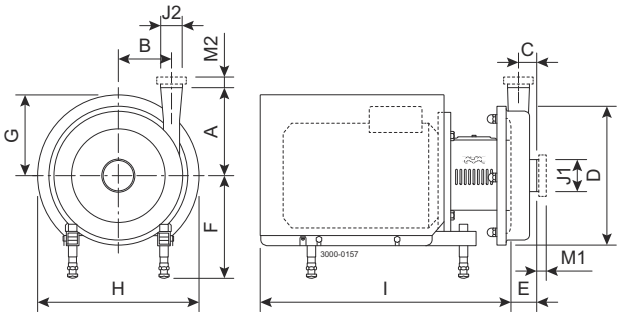
Temperature	
Temperature range:	-10°C to +140°C (EPDM)
Flush media:	Max 70°C

Flushed shaft seal	
Water pressure inlet:	Max. 1 bar
Water consumption:	0.25 - 0.5 l/min

Double mechanical shaft seal	
Water pressure inlet, LKH Evap 10 to 60:	Max. 500 kPa (5 bar)
Water pressure inlet, LKH Evap 70:	Max. 300 kPa (3 bar)
Water consumption:	0.25 - 0.5 l/min

Connections for flushed and double mechanical shaft seal	
LKH Evap 10 - 70:	1/8" G

Dimensions



Pump specific measures (mm)

Pump Model	LKHevap-10	LKHevap-15	LKHevap-20	LKHevap-25	LKHevap-35	LKHevap-40	LKHevap-45	LKHevap-50	LKHevap-60	LKHevap-70
A	142	166	180	193	193	212	212	205	261	254
B	87	66	88	106	119	126	126	118	102	147
C	23	43	27	32	23	28	28	35	62	25
D	247	247	253	303	303	329	329	329	329	408
E	51	87	63	69	54	64	64	77	106	76

Motor specific measures (mm)

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160	IEC180	IEC200	IEC250
Motor kW	**1.5/2.2**	**3.0**	**4.0**	**5.5/7.5**	**11/15/18.5**	**22**	**30/37/45**	**55/75**
F(max)[1]	262	282	285	304	332	352	372	446
G	157	185	198	196	262	286	399	394
H	288	325	359	383	485	533	670	738
I (LKHevap-10 to LKHevap-60)	434	556	497	607	789	842	980	-
I (LKHevap-70)	-	-	-	-	804	855	993	1051

[1] Possible to reduce dimension F by min. 59 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	LKHevap-10	LKHevap-15	LKHevap-20	LKHevap-25	LKHevap-35	LKHevap-40	LKHevap-45	LKHevap-50	LKHevap-60	LKHevap-70
Motor range (IEC)	IEC90-IEC112	IEC100-IEC132	IEC90-IEC132	IEC132-IEC160	IEC112-IEC160	IEC132-IEC180	IEC112-IEC160	IEC132-IEC180	IEC132-IEC200	IEC132-IEC250

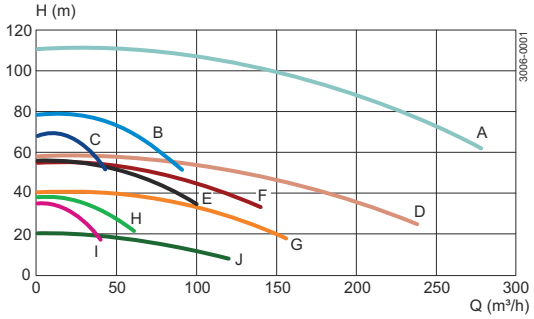
Note! Dimensional data are based on 2 pole, ABB motors.

Connections (mm)

Pump Model		LKHevap-10 LKHevap-20 LKHevap-35	LKHevap-15 LKHevap-45 LKHevap-50 LKHevap-70	LKHevap-15 LKHevap-45 LKHevap-50	LKHevap-25	LKHevap-40	LKHevap-60	LKHevap-60
Clamp ISO 2037	M1	21	21	102	21	21	21	102
	M2	21	21	21	21	12	21	21
Union ISO(IDF)	M1	21	21	102	21	21	21	102
	M2	21	21	21	21	21	21	21
Union DIN/ISO	M1	25	30	111	30	30	30	111
	M2	22	30	30	25	27	30	30
Union SMS	M1	24	35	105	24	24	35	105
	M2	20	24	24	24	24	35	35
Union (BS)RJT	M1	27	32	108	27	27	32	108
	M2	27	27	27	27	22	32	32
Union DS	M1	24	24	105	24	24	24	105
	M2	20	24	24	24	21	24	24
Union DIN/DIN	M1	25	30	111	30	30	30	111
	M2	22	30	30	25	27	30	30
J1 [1]		63,5 / 2,5"	101,6 / 4"	76,1 / 3"	76,1 / 3"	76,1 / 3"	101,6 / 4"	76,1 / 3"
J2 [1]		51 / 2"	76,1 / 3"	76,1 / 3"	63,5 / 2,5"	63,5 / 2,5"	101,6 / 4"	101,6 / 4"

[1] Other dimensions available on request. ESE01863/8

Flow chart



A = LKH Evap-70 D = LKH Evap-60 G = LKH Evap-45 J = LKH Evap-15
B = LKH Evap-40 E = LKH Evap-25 H = LKH Evap-20
C = LKH Evap-35 F = LKH Evap-50 I = LKH Evap-10

Note! If Clear Flow impeller is mounted the performance can be up to 10% lower than shown on the curves above

Options

- Impeller with reduced diameter.
- Flushed shaft seal.
- Double mechanical shaft seal.
- Rotating seal face of Silicon Carbide.
- Product wetted elastomers NBR, FPM or FEP.
- ½" vertical drain connection.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Surface finish measurement with certificate (Ra ≤ 0.8 µm).
- Inducer (LKH Evap 10 to 50).
- Adjustable pads.
- Motor for other voltage and/or frequency.
- Half speed motor.
- Motor with increased safety/flame proof motor.

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Note! For further details, see also instruction manual.

Alfa Laval SolidC

Centrifugal pumps

Introduction

The Alfa Laval SolidC Centrifugal Pump is designed for basic transport of fluids in hygienic applications. It provides reliable, low-maintenance operation. With its hygienic design, cost-effective operation and quick, easy maintenance, the SolidC offers excellent value for money.

Applications

Designed for Cleaning-in-Place (CIP), the Alfa Laval SolidC is ideal for basic duties across the dairy, food, beverage and personal care industries in which hygienic treatment is required. Typical applications are pumping of CIP solutions, utilities, cooling or heating water, and other simple transport duties.

The SolidC pump is available in four sizes to handle capacities up to 75 m3/hour and differential pressures up to 8 bar at 50Hz.

Benefits

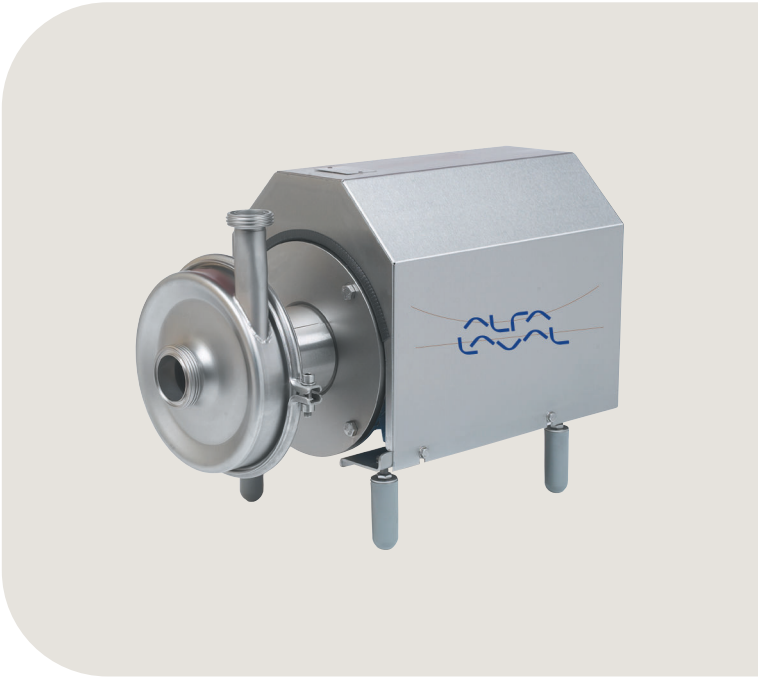
- Hygienic: designed according to international hygienic design standards and with verified effective CIP cleanability.
- Cost-effective operation: consistent performance ensured.
- Quick and easy maintenance: wear parts changed in just a few minutes.

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L). A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

The semi-open impeller with a special vane design and balance holes enhance circulation around the shaft seal and reduce axial forces. This maximizes cleanability while minimizing wear on the shaft seal and motor bearings.

As standard, the SolidC pump is equipped with a single mechanical shaft seal, but is also available with a single flushed mechanical shaft seal. The secondary seal of the flushed seal is a long-lasting lip seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.



TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L)
Other steel parts:	Stainless steel
Inside surface finish:	Standard blasted
Product wetted elastomers:	EPDM
Rotary seal face:	Carbon
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, 4 poles = 1500/1800 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	1.5 - 22 kW
60Hz:	1.5 - 22 kW

Min/max motor speed	
2 poles:	900 - 4000 rpm
4 poles:	900 - 2200 rpm

Warranty
Extended 3-years warranty on SolidC pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

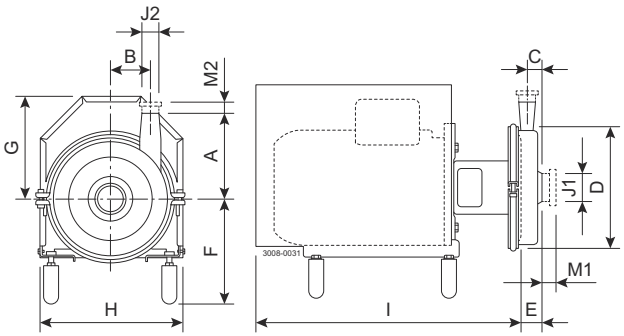
Max inlet pressure	
SolidC 1 - 4:	400kPa (4 bar)

Temperature	
Temperature range:	-10°C to +120°C (EPDM)
Flush media:	Max 70°C

Flushed shaft seal	
Water pressure inlet:	Max. 1 bar
Water consumption:	0.25 -0.5 l/min

Connections for flushed shaft seal	
SolidC 1 - 4:	1/8" G

Dimensions (mm)



Pump specific measures (mm)

Pump Model	SolidC-1	SolidC-2	SolidC-3	SolidC-4
A	180	200	210	230
B	67	94	121	120
C	28	35	31	27
D	238	227	311	333
E	40	47	44	44

Motor specific measures (mm)

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160
Motor kW	**1.5/2.2**	**3.0**	**4.0**	**5.5/7.5**	**11/15/18.5/22**
F(max)[1]	246	256	259	279	307
G	197	200	229	240	292
H	235	285	284	334	384
I	490	528	511	643	771

[1] Possible to reduce dimension F by min. 15 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	SolidC-1	SolidC-2	SolidC-3	SolidC-4
Moter range (IEC)	IEC90-IEC112	IEC100-IEC160	IEC132-IEC160	IEC132-IEC160

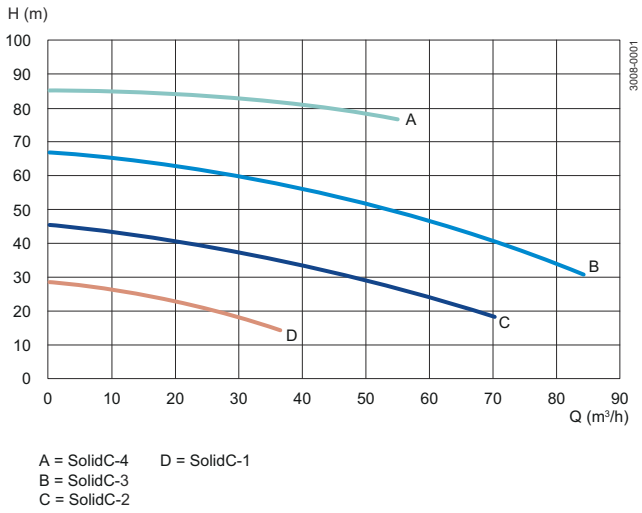
Note! Dimensional data are based on 2 pole, WEGmotors.

Connections (mm)

Pump Model		SolidC-1	SolidC-2	SolidC-3	SolidC-4
Clamp ISO 2037	M1	21	21	21	21
	M2	21	21	21	21
Union ISO(IDF)	M1	21	21	21	21
	M2	21	21	21	21
Union DIN/ISO	M1	23	61	61	61
	M2	22	22	22	23
Union SMS	M1	20	24	24	24
	M2	20	20	20	20
Union (BS) RJT	M1	27	27	27	27
	M2	27	27	27	27
Union DS	M1	20	24	24	24
	M2	20	20	20	20
J1[1]		51 / 2"	63.5 / 2.5"	76.1 / 3"	76.1 / 3"
J2[1]		38 / 1.5"	38 / 1.5"	38 / 1.5"	51 / 2"

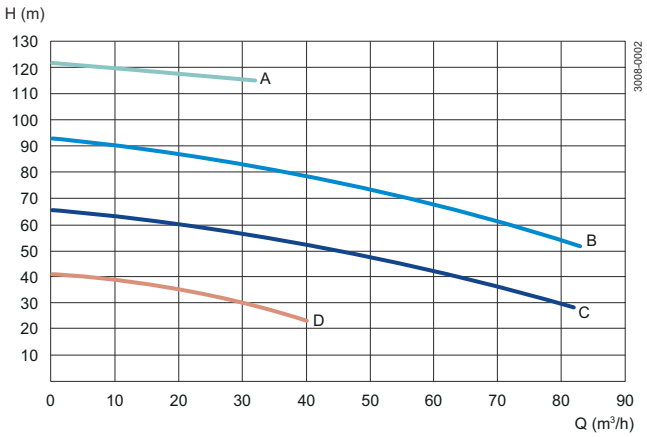
[1] Other dimensions available on request. ESE00265/13

Flow chart



A = SolidC-4 D = SolidC-1
B = SolidC-3
C = SolidC-2

Figure 1. Frequency: 50 Hz Speed (synchr): 3000 rpm



A = SolidC-4 D = SolidC-1
B = SolidC-3
C = SolidC-2

Figure 2. Frequency: 60 Hz Speed (synchr): 3600 rpm

Options

- Impeller with reduced diameter.
- Flushed shaft seal.
- Rotating seal face of Silicon Carbide.
- Product wetted elastomers NBR or FPM.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Surface finish measurement with certificate (Ra ≤ 0.8 µm).

- Motor for other voltage and/or frequency.
- Half speed motor.

Ordering

Please state the following when ordering:

- Pump size.
- Connections.
- Impeller diameter.
- Motor size.
- Voltage and frequency.
- Flow, pressure and temperature.
- Density and viscosity of the product.
- Options.

Note! For further details, see also ESE00797.

Alfa Laval SolidC UltraPure

Centrifugal pumps

Introduction

The Alfa Laval SolidC UltraPure Centrifugal Pump is designed for basic transport of fluids in high-purity applications where contamination safety is of paramount importance. With its hygienic design, cost-effective operation and quick, easy maintenance, the SolidC UltraPure offers excellent value for money.

Applications

The Alfa Laval SolidC UltraPure pump is designed to meet the stringent demands and regulations of high-purity applications across the biotechnology and pharmaceutical industries, which require equipment with the highest material integrity.

All pumps are delivered with a complete Alfa Laval Q-doc package for easier validation and provide proof of origin and compliance for inspection purposes according to Good Manufacturing Practice (GMP) and ASME BPE requirements.

The SolidC UltraPure pump is available in four sizes to handle capacities up to 75 m^3/h and differential pressures up to 8 bar at 50Hz.

Benefits

- Low contamination risk: comes with full material traceability and USP Class VI elastomers to reduce the risk of process contamination from extractables.
- Cost-effective operation: consistent performance ensured.
- Quick and easy maintenance: wear parts changed in just a few minutes.
- Smooth qualification, validation and process control: material traceability, and pump supplied with Alfa Laval's Q-Doc package in line with Good Documentation Practices (GDP).

Standard design

All media contacting steel components like pump casing, impeller, impeller nut and backplate are in W. 1.4404 (AISI 316L) with material traceability 3.1 according to EN 10204. Product wetted elastomers are specified to USP Class VI, 121°C Chapter 88, and Chapter 87. A stainless steel shroud protects the motor and four adjustable stainless steel legs support the complete unit.

The semi-open impeller with a special vane design and balance holes enhance circulation around the shaft seal and reduce axial forces. This maximizes cleanability while minimizing wear on the shaft seal and motor bearings.

As standard the SolidC UltraPure pump is equipped with a single mechanical shaft seal, but also is available with a single flushed mechanical shaft seal. The secondary seal of the flushed seal is a long-lasting lip seal. The front-loading shaft seal, with the spring and washers mounted on the atmospheric side, makes maintenance fast, easy and inexpensive. It takes just a few minutes to replace the shaft seal. In addition, the balanced design minimizes the risk of seal opening during unforeseen pressure shock.

TECHNICAL DATA

Materials	
Product wetted steel parts:	W. 1.4404 (316L) with material traceability 3.1 according to EN 10204
Other steel parts:	Stainless steel
Inside surface finish:	Mech Ra ≤ 0.5
External finish:	Fiber brushed
Product wetted elastomers:	EPDM - USP Class VI, 121°C. Chapter 88, and Chapter 87
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide

Motor
Foot-flanged motor according to the IEC metric standard, 2 poles = 3000/3600 rpm at 50/60 Hz, 4 poles = 1500/1800 rpm at 50/60 Hz, IP 55 (with drain hole with labyrinth plug), insulation class F.

Motor sizes	
50Hz:	1.5 - 22 kW
60Hz:	1.5 - 22 kW

Min/max motor speed	
2 poles:	900 - 4000 rpm
4 poles:	900 - 2200 rpm

Warranty
Extended 3-years warranty on SolidC UltraPure pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

OPERATING DATA

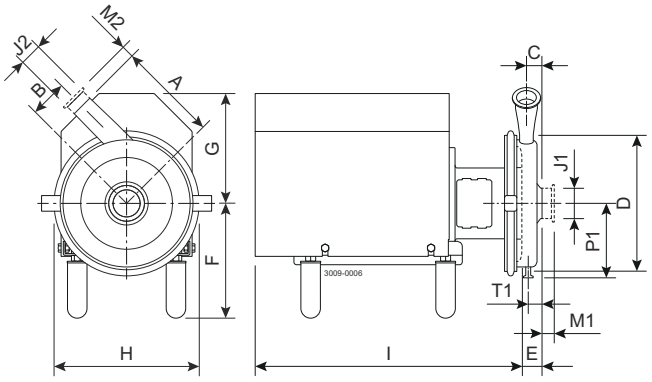
Max inlet pressure	
SolidC UltraPure 1 - 4:	400kPa (4 bar)

Temperature	
Temperature range:	-10°C to +120°C (EPDM)
Flush media:	Max 70°C

Flushed shaft seal	
Water pressure inlet:	Max. 1 bar
Water consumption:	0.25 - 0.5 l/min

Connections for flushed shaft seal	
SolidC UltraPure 1 - 4:	1/8" G

Dimensions (mm)



Pump specific measures

Pump Model	SolidC-1 UltraPure	SolidC-2 UltraPure	SolidC-3 UltraPure	SolidC-4 UltraPure
A	180	200	210	230
B	67	94	121	120
C	28	35	31	27
D	238	227	311	333

Pump Model	SolidC-1 UltraPure	SolidC-2 UltraPure	SolidC-3 UltraPure	SolidC-4 UltraPure
E	40	47	44	44
P1	130	150	164	175
T1	21	27	23	21

Motor specific measures

Motor IEC	IEC90	IEC100	IEC112	IEC132	IEC160
Motor kW	**1.5/2.2**	**3.0**	**4.0**	**5.5/7.5**	**11/15/18.5/22**
F(max) [1]	246	256	259	279	307
G	126	137	136	164	208
H	227	278	277	327	377
I	405	469	468	543	651

[1] Possible to reduce dimension F by min. 15 mm for all pump models. For smaller models it will be possible to reduce dimension F even further.

Motor overview

Pump Model	SolidC-1 UltraPure	SolidC-2 UltraPure	SolidC-3 UltraPure	SolidC-4 UltraPure
Motor range (IEC)	IEC90-IEC112	IEC100-IEC160	IEC132-IEC160	IEC132-IEC160

Note! Dimensional data are based on 2 pole, WEG motors.

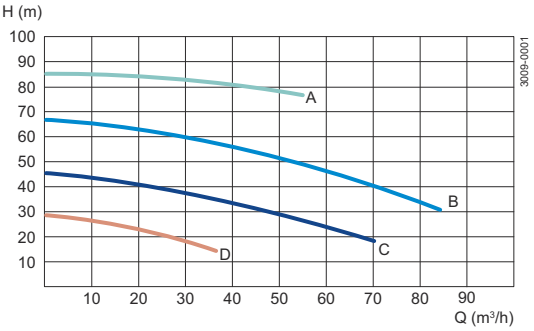
Connections

Pump Model		SolidC-1 UltraPure	SolidC-2 UltraPure	SolidC-3 UltraPure	SolidC-4 UltraPure
Clamp ISO 2037	M1	21	21	21	21
	M2	21	21	21	21
Clamp ASME BPE	M1	13	13	13	29
	M2	13	13	13	13
Clamp for ISO-1127	M1	36	36	48	48
	M2	36	36	36	36
Clamp DIN 32676	M1	21	64	64	64
	M2	21	21	21	21
J1[1]		51 / 2"	63.5 / 2.5"	76.1 / 3"	76.1 / 3"
J2[1]		38 / 1.5"	38 / 1.5"	38 / 1,5"	51 / 2"

[1] Other dimensions available on request. ESE00678/1

	TC Clamp	ISO 2037 Clamp
1/2"	12.7	12.7

Flow chart



A = SolidC-4 UltraPure
B = SolidC-3 UltraPure
C = SolidC-2 UltraPure
D = SolidC-1 UltraPure

Figure 1. Frequency: 50 Hz. Speed /synchr.): 3000 rpm

Q-doc

Standard documentation package:

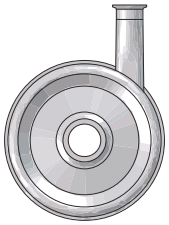
- Declaration of compliance with Regulation (EC) No.: 1935/2004
- Declaration of compliance to EN 10204 type 3.1 (MTR)
- Declaration of compliance to the U.S. Food & Drug Administration CFR 21 (non-metallic parts)
- Declaration of compliance to the U.S. Pharmacopeia (Elastomers and polymers) - EPDM only

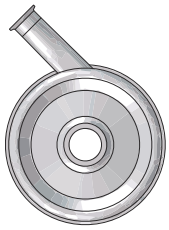
- TSE (Transmissible Spongiform Encephalopathy) / ADI (Animal Derivative Ingredient) Declaration
- Declaration of surface finish compliance
- Declaration of passivation and electro polishing (if specified)
- 3.1 certification in accordance to EN10204
- Pump performance test certificate

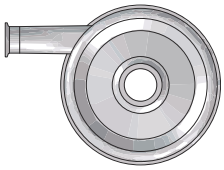
Optional documentation:
- Hydrostatic test certificate
- Surface measurement report

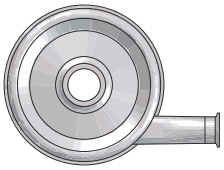
Options
- Impeller with reduced diameter.
- Motor for other voltage and/or frequency.
- Half speed motor.
- Flushed shaft seal.
- Horizontal drain connection.
- No drain.
- Product wetted surface finish mechanically polished to Ra ≤ 0.8 µm.
- Product wetted surface finish electropolished to Ra ≤ 0.4 µm.
- Product wetted elastomers FPM or FEP.
- Hydrostatic testing with certificate.
- Surface finish measurement with certificate.
- 0°, 90° or 270° outlet, see illustration below.

Available outlet positions

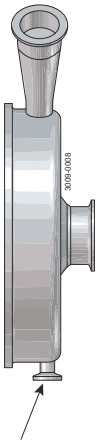

0°


45°


90°

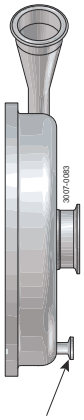

270°

Available drain connections



Availble connections:
- Tri-clamp for ASME
- Clamp for ISO 1127

1/2" vertical drain



Availble connections:
- Tri-clamp for ASME
- Clamp for ISO 1127

1/2" horizontal drain

Alfa Laval FM-OS

Centrifugal pumps

Introduction

The Alfa Laval FM-OS Centrifugal Pump is a small, economical pump engineered to handle low volumes in hygienic applications.

Applications

The FM-OS Centrifugal Pump is designed for use in processes that require the use of acid-resistant steel in hygienic applications across the food, dairy, beverage and other industries.

The FM-OS pump can handle capacities up to 30 m^3/h and differential pressures up to 2 bar at 50Hz.

Benefits

- Reliable and cost-effective transfer of acidic products.
- Handles low capacities with ease.
- Corrosion resistance for use in aggressive environments.

Standard design

The Alfa Laval FM-OS Centrifugal Pump consists of a W. 1.4404 (AISI 316L) pump casing, shaft and impeller; stainless steel screws, nuts, yoke and adapter for pump casing.

As standard, the FM-OS pump is equipped with a single mechanical shaft seal, but is also available with a single flushed mechanical shaft seal.

TECHNICAL DATA

Motor
Standard foot-flanged motor acc. to IEC metric standard, 2 pol = 3000/3600 rpm. at 50/60 Hz, IP55 (with drain holes with labyrinth plug), insulation class F.

Motor size	
50 Hz:	1.1 kW.
60 Hz:	1.1 kW.

OPERATING DATA

Pressure	
Max. inlet pressure:	400kPa (4 bar).
Max. outlet pressure:	700kPa (7 bar).
Max. water pressure, (flushed seal):	Normally atmospheric (max. 1 bar).

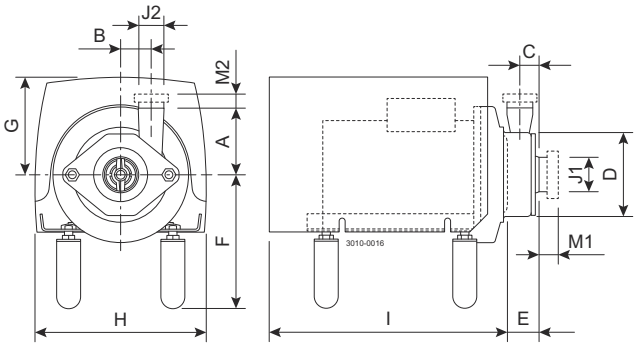
Temperature	
Temperature range:	-10°C to +140°C (EPDM).

Water consumption	
Flushed seal:	0.25 - 0.5 l/min.

Impeller diameter	
Impeller diameter:	115 mm.

Weight	
Weight:	20 kg.

Dimensions (mm)



Pump specific measures

Pump Model	FM0S
A	98
B	45
C	28
D	140
E	54

Motor specific measures

Motor IEC	IEC80
Motor kW	**1.1**
F(max)[1]	212
G	144
H	252
I	341

[1] Possible to reduce dimension F by min. 30 mm for all pump models.

Motor overview

Pump Model	FM0S
Motor range (IEC)	IEC80

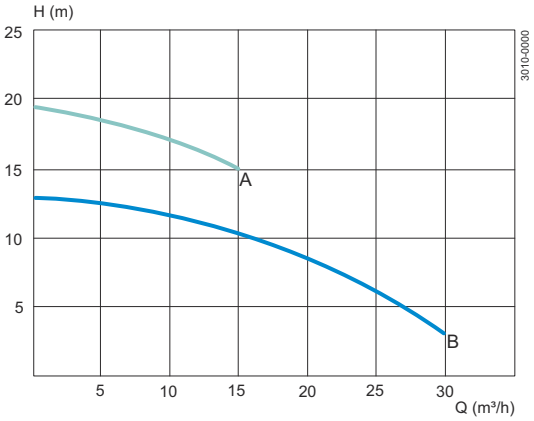
Note! Possible to reduce dimension F by min. 30 mm for all pump models.

Connections

Pump Model		FM0S
Clamp ISO 2037	M1	21
	M2	21
Union ISO (IDF)	M1	21
	M2	21
Union DIN/ISO	M1	22
	M2	22
Union SMS	M1	20
	M2	20
Union (BS) RJT	M1	22
	M2	22
J1 [1]		51 / 2"
J2 [1]		51 / 2"

[1] Other dimensions available on request.ESE00271/4

Volumetric flow



A = FM-OS/115
B = FM-OS/95

Options

- Impeller with reduced diameter.
- Flushed shaft seal.
- Other voltage or frequency.
- Inlet and outlet with flanges.
- Product wetted seals of EPDM, FPM or FEP.
- Rotating seal ring of Silicon Carbide.

Ordering

Please state the following when ordering:

- Pump type.
- Voltage and frequency.
- Flow rate, pressure and temperature.
- Density and viscosity of product.
- Options.

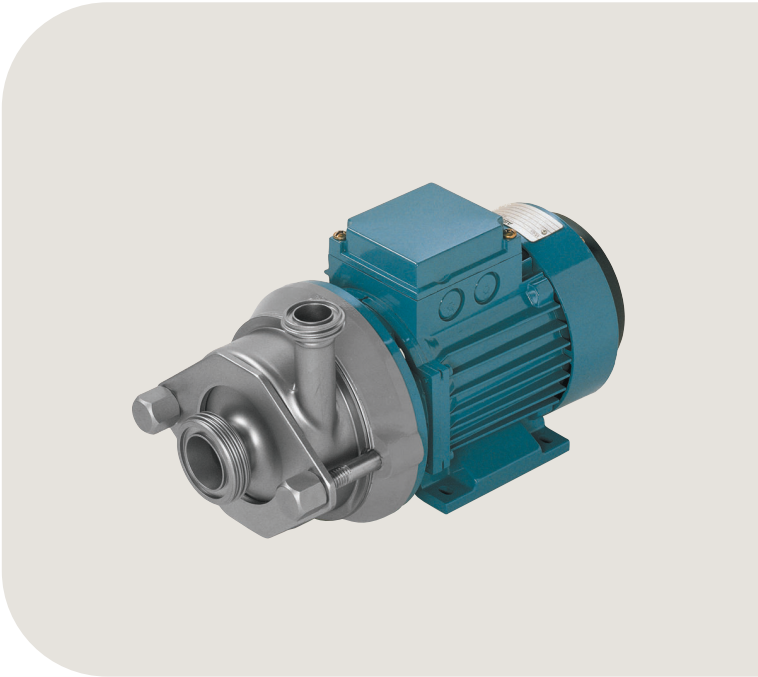
Note!
For further details, see also instruction IM 70344.
Inlet and outlet: 51 mm

Alfa Laval GM and GM-A

Centrifugal pumps

Introduction

The Alfa Laval GM and GM-A Centrifugal Pumps are small, economical pumps engineered to handle low volumes in hygienic applications.



Applications

The GM and GM-A Centrifugal Pumps are designed for use in processes that require the use of acid-resistant steel in hygienic applications across the food, dairy, beverage and other industries.

The GM and GM-A pumps can handle capacities up to 15 m^3/h and differential pressures up to 2 bar at 50Hz.

Benefits

- Reliable and cost-effective transfer of acidic products.
- Handles low capacities with ease.
- Corrosion-resistant for use in aggressive environments.

Standard design

The GM centrifugal pump consists of a W. 1.4404 (AISI 316L) pump casing and shaft; glass fibre-reinforced nylon impeller; stainless steel stud bolts and nuts for pump casing; and, plastic adapter and collets.

The GM-A centrifugal pump consists of a W. 1.4404 (AISI 316L) pump casing, shaft and impeller, stainless steel nuts, yoke and adapter for pump casing.

Both are equipped with a single mechanical seal.

TECHNICAL DATA

Motor
Standard foot-flanged motor acc. to IEC metric standard, 2 pol = 3000/3600 rpm. at 50/60 Hz, IP55 (with drain holes with labyrinth plug), insulation class F.

Motor size	
50 Hz:	0.55 kW.

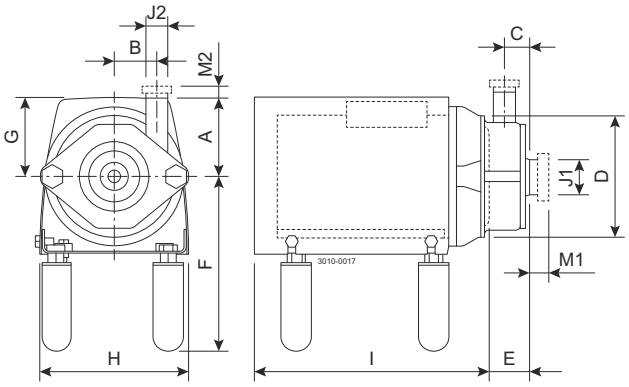
OPERATING DATA

Pressure	
Max. inlet pressure:	400 kPa (4 bar)

Temperature range	
GM:	-10°C to +80°C
GM-A:	-10°C to +140°C (EPDM)

Impeller diameter	
Impeller diameter:	115 mm

Dimensions (mm)



Pump specific measures

Pump Model	GM
A	90
B	49
C	31
D	140
E	58

Motor specific measures

Motor IEC	IEC71
Motor kW	0.55
F(max) [1]	202
G	111
H	173
I	256

[1] Possible to reduce dimension F by min. 30 mm for all pump models.

Motor overview

Pump Model	GM
Motor range (IEC)	IEC71

Note! Dimensional data are based on 2 pole, ABB motors.

Connections

Pump Model		GM
Clamp ISO 2037	M1	12
	M2	12
Union ISO(IDF)	M1	23
	M2	21

[1] Other dimensions available on request. ESE00272/5

Pump Model		GM
Union DIN/ISO	M1	22
	M2	22
Union SMS	M1	23
	M2	20
Union (BS)RJT	M1	19
	M2	19
J1 [1]		38 / 1.5"
J2 [1]		38 / 1.5"

[1] Other dimensions available on request. ESE00272/5

Options

- Impeller with reduced diameter.
- Inlet and outlet with flanges.
- Product wetted seals of EPDM, FPM or NBR.
- Rotating seal ring of Silicon Carbide.

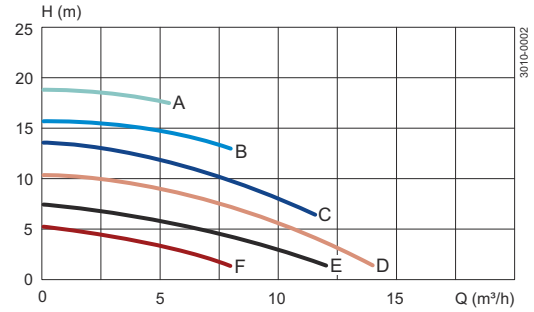
Ordering

Please state the following when ordering:

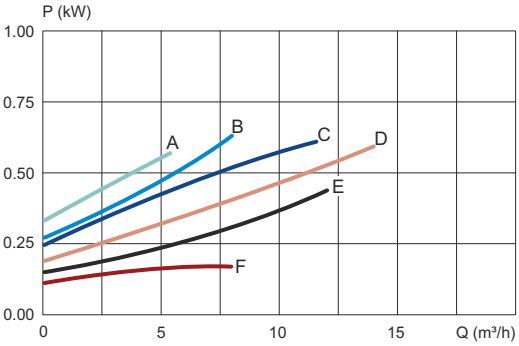
- Pump type.
- Connections.
- Voltage and frequency.
- Flow rate, pressure and temperature.
- Density and viscosity of product.
- Options.

Note! For further details see also instruction ESE02002.

Volumetric flow



A = 115 D = 85
B = 105 E = 75
C = 95 F = 65



A = 115 D = 85
B = 105 E = 75
C = 95 F = 65

Alfa Laval Centrifugal Pumps

Preventive maintenance guidelines

Plan your budget and your downtime

A production stop caused by poor operation or breakdown is costly. Both due to lost product and expensive service.

The most cost-effective way to ensure product safety and production reliability, is to plan and carry out service at scheduled intervals.

Using the Alfa Laval guidelines it is easy to plan the relevant maintenance intervals. You are able to plan your operating budget and the risk of breakdowns is virtually eliminated. Financially, preventive maintenance makes sense.

Instruction manuals and service videos

Detailed manuals are supplied with every product. Service and maintenance videos have been created to enable you to service Alfa Laval products in a correct and efficient way. Scan the QR code to access the service videos.

Genuine spare parts and service kits

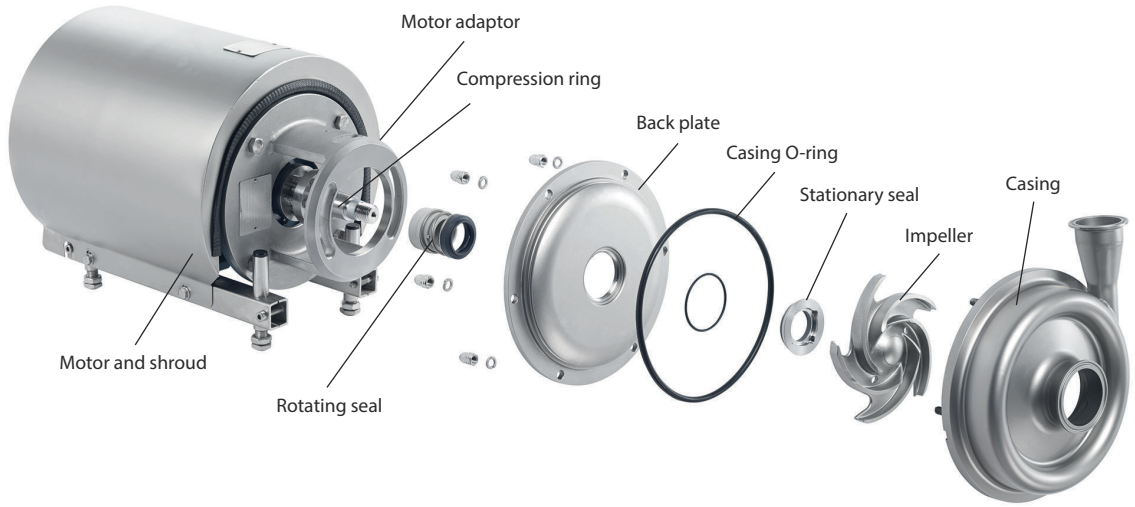
Alfa Laval Service Kits are available for scheduled maintenance. They contain all the relevant parts needed for general service. Using genuine Alfa Laval spare parts guarantees the right quality and composition of materials. They of course come with full traceability. Scan the QR code to access the spare parts catalogue.

Alfa Laval service tools

Alfa Laval has the specific tools required to service Alfa Laval hygienic equipment. These include tools for installing, operating and maintaining our hygienic equipment.

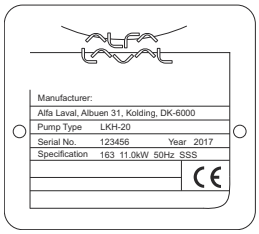
Using genuine spare parts ensures your certicates are still valid.

Example of exploded view - LKH Pumps



Inspect the pump regularly

The Alfa Laval pumps are available in various configurations to fit specific applications. To inspect the pump you need to know the type of pump and which type of seal is used. This information is available on the name plate of your pump. Further information can be obtained online by using the serial number. Preventive maintenance aims to prevent failure of equipment by doing e.g. regular inspection and lubrication.Based on experience and knowledge about the running conditions it is also possible to replace wear parts before they fail. Keeping a maintenance log is a good way to build experience.



Keep a record of the pump, use the statistics for inspection planning		Inspect / Clean / Lubricate		
LKH, LKH Evap, LKHI, LKHPF, LKHM, LKHex, SolidC, i-CP, FM-OS, GM, LKH Prime, MR	**Supplier instruction**	**Weekly**	**Monthly**	**Half-yearly**
Over all pump				
Keep pump clean and protected from environment		X		
Listen for unusual noise		X		
Keep a record of the pump		X		
Use the statistics for inspection planning				
Shaft seal				
Inspection for leakage (* SSS; FSS; DMSS/DSS)		X		
Flow rate of flushing (* FSS, DMSS/DSS)		X		
Motor	X			
Motor surface temperature			X	
Bearing temperatures			X	
Bearing vibration			X	
Inspection Motor bearings				X
Pump head				
Check pump head and flow rate			X	
Check for internal wear and pitting				X

* SSS=Single shaft seal, FSS= Flushed single shaft seal, DMSS/DSS= Double mechanical shaft seal.

** During replacing shaft seals, service kit contains all necessary parts.

Scheduled maintenance intervals

To ensure that your pumps operate efficiently, it is essential to follow a simple preventive maintenance programme, which will keep your machine in good working condition. Good maintenance requires careful attention at regular intervals. For pump lubrication please always refer to the manual for specific information on oil/grease types and required maintenance. **Alfa Laval recommend**:

- Service kit should be replaced after 12 months. Always replace shaft seal and o-rings at the same time.
- Inspect motor bearings yearly, replace complete bearing if worn, ensure that the bearing is axially locked (See motor instructions)

After commissioning, when it is ensured, that the pump is installed stress free and running without cavitation, the vibrations should be measured and recorded. Excessive vibrations will reduce the life span of the bearings. An increase in vibrations may indicate that the bearings should be replaced.

Bearing temperatures depend on several factors incl. the temperature of the surroundings. Consequently it is not possible to state an absolute temperature. If however an increase in temperature above that of normal recorded takes place, it may be an indication that the bearings should be replaced. Temperatures above 100°C will significantly reduce the life span of the grease. Please notice that some motor bearings are permanently greased whilst others need regular relubrication. Please always refer to the manual for specific information on bearing types and required maintenance.

The above guidelines may not apply in all working conditions. Please contact Alfa Laval for information relating to specific applications.

Alfa Laval LKH

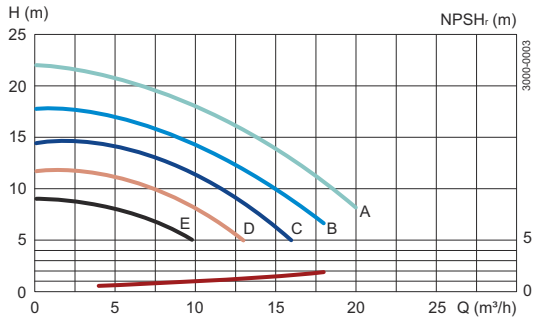
Performance curves

LKH-5, 50 Hz

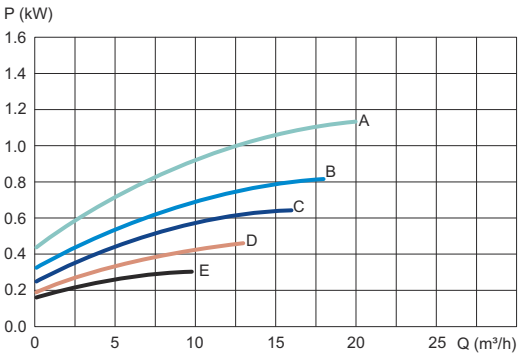
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	132 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 132 D = 100
B = 120 E = 90
C = 110

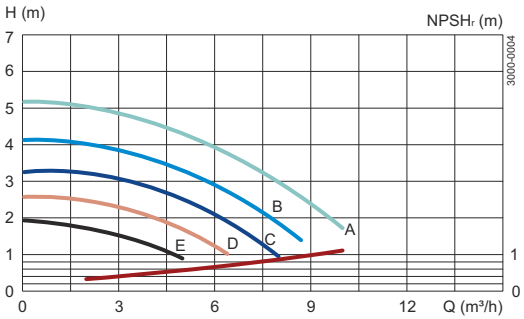


A = 132 D = 100
B = 120 E = 90
C = 110

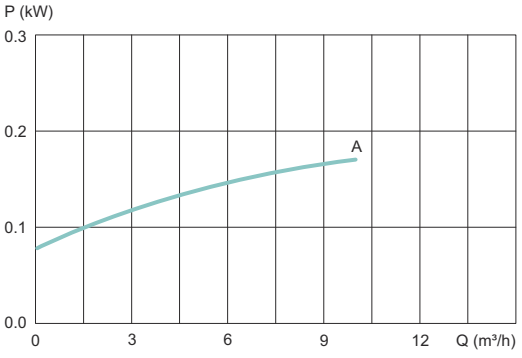
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	132 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.1 kW, 1410 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 132 D = 100
B = 120 E = 90
C = 110



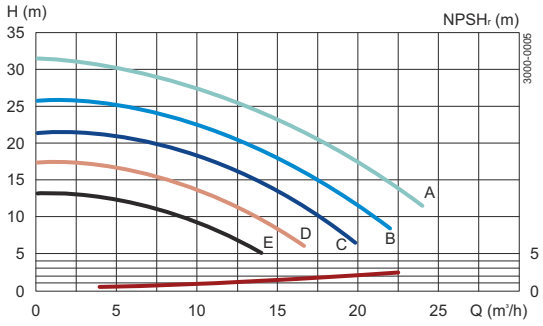
A = 132

LKH-5, 60 Hz

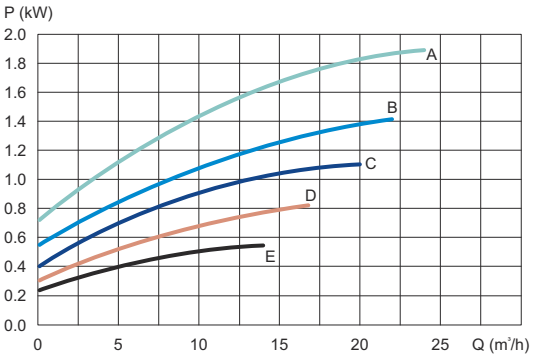
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	132 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 3460 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 132 D = 100
B = 120 E = 90
C = 110

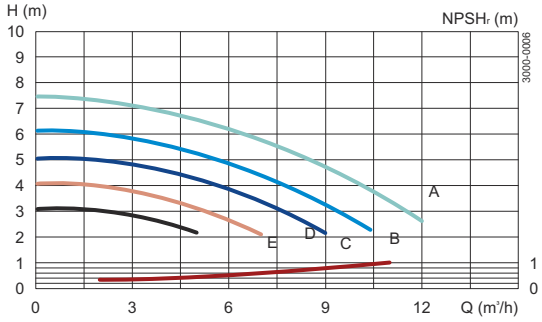


A = 132 D = 100
B = 120 E = 90
C = 110

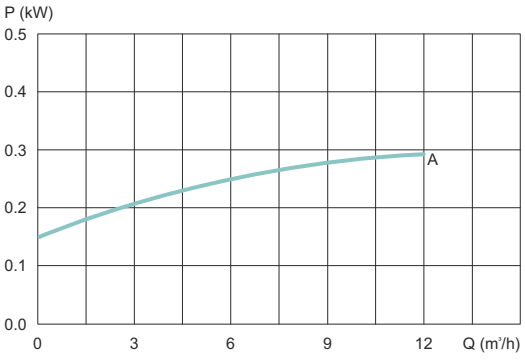
Motor:	**1800 rpm. synchr**
Tolerance:	±5%
Impeller, Max. dia.:	132 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.3 kW, 1700 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 132 D = 100
B = 120 E = 90
C = 110



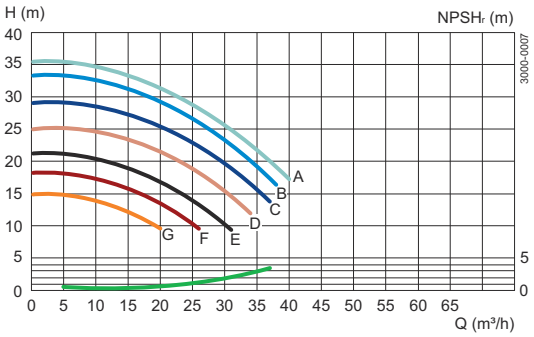
A = 132

LKH-10, 50 Hz

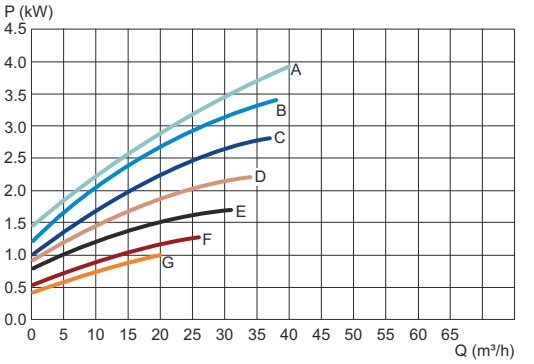
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2840 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

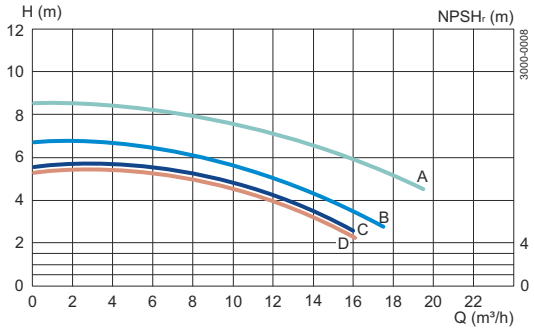


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

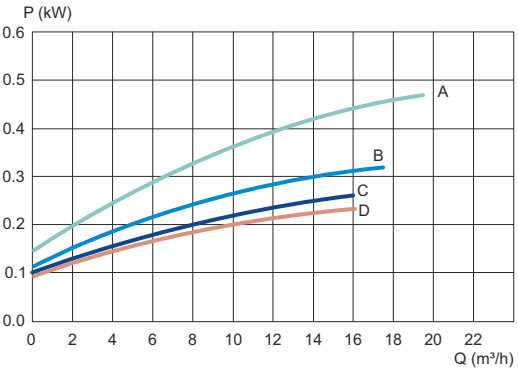
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	130 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 C = 140
B = 150 D = 130



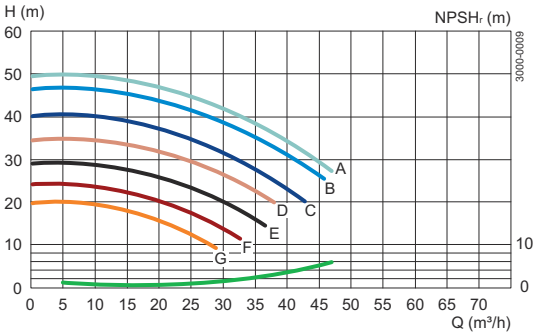
A = 163 C = 140
B = 150 D = 130

LKH-10, 60Hz

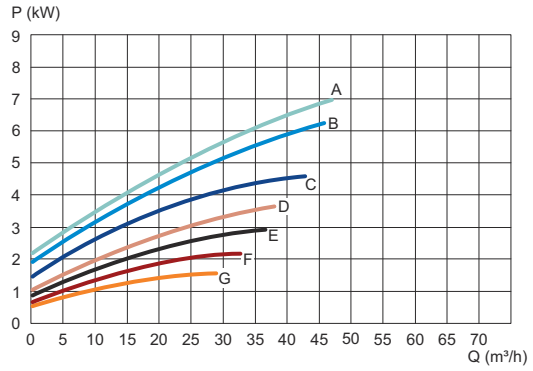
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 8.6 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

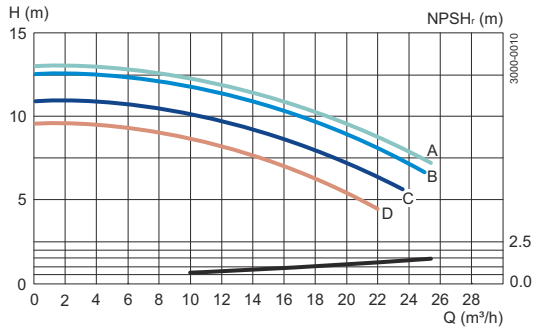


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

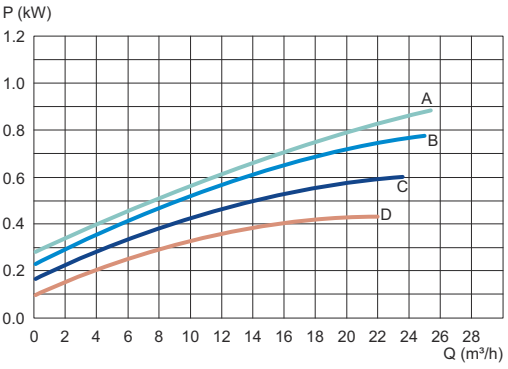
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140
B = 160
C = 150



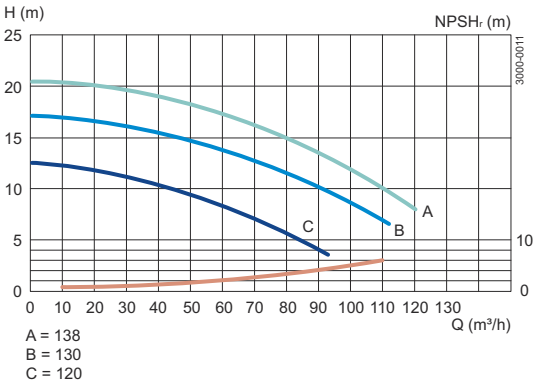
A = 163 D = 140
B = 160
C = 150

LKH-15, 50 Hz

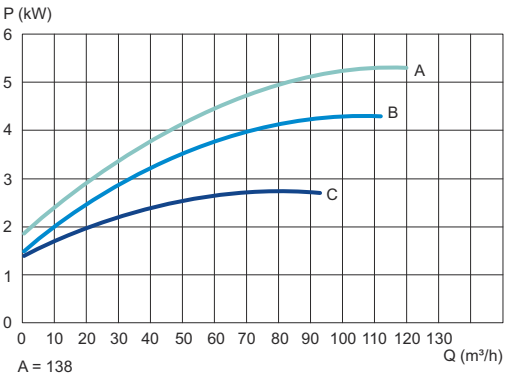
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2865 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120

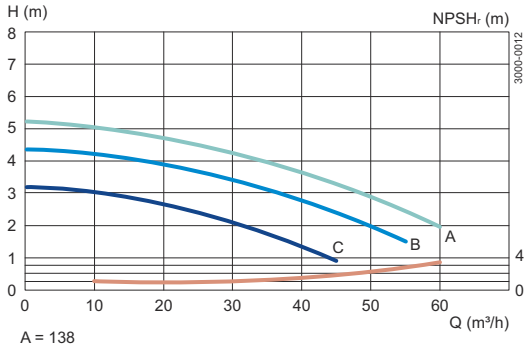


A = 138
B = 130
C = 120

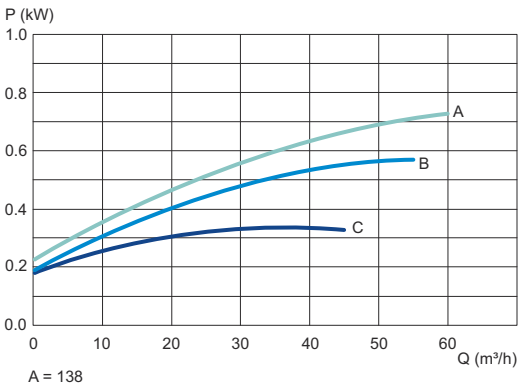
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120



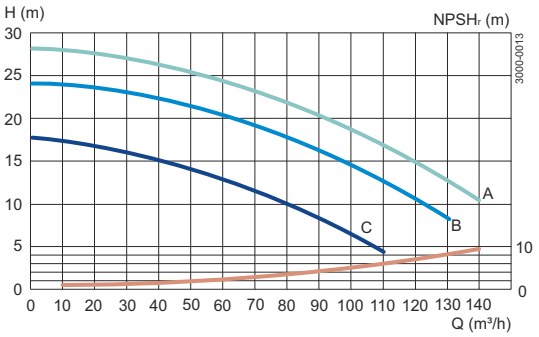
A = 138
B = 130
C = 120

LKH-15, 60 HZ

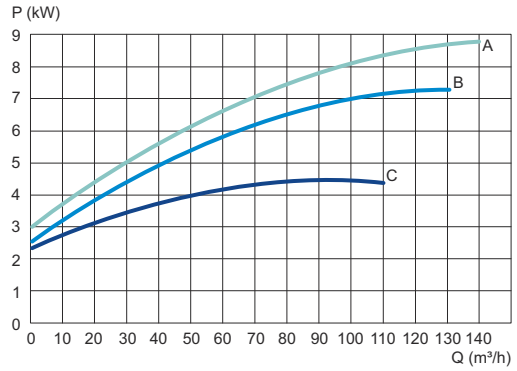
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2865 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120

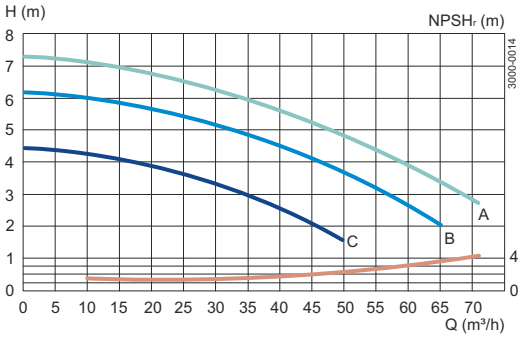


A = 138
B = 130
C = 120

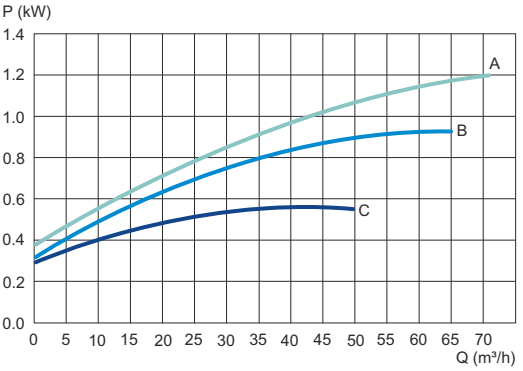
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120



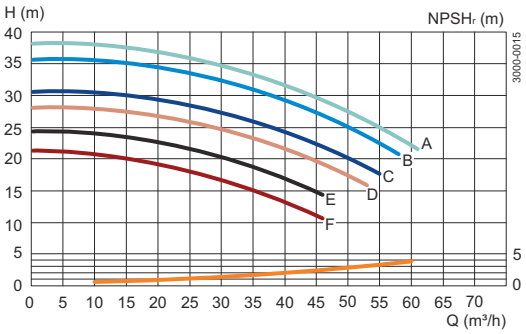
A = 138
B = 130
C = 120

LKH-20, 50 Hz

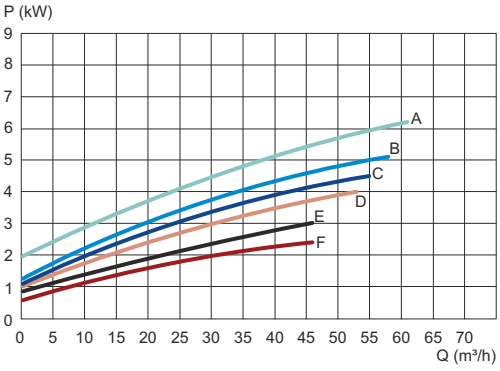
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

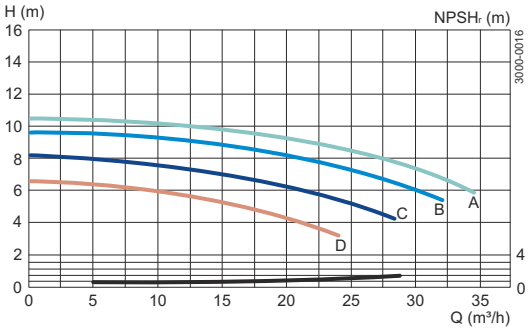


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

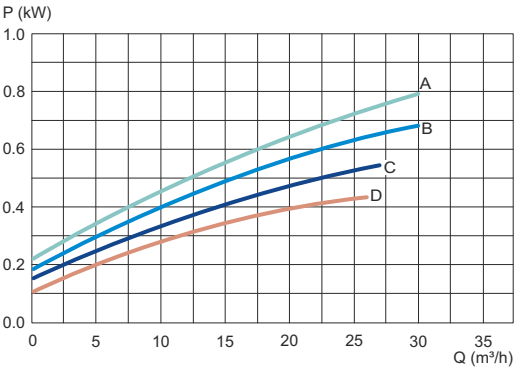
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



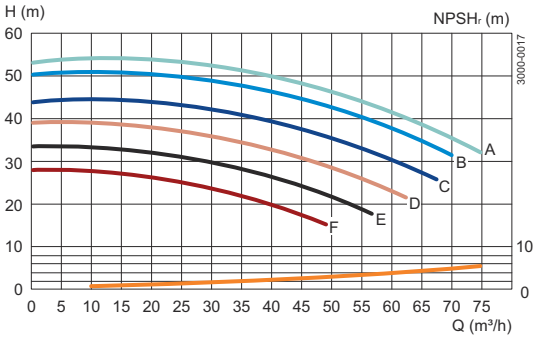
A = 165 D = 140
B = 160
C = 150

LKH-20, 60 Hz

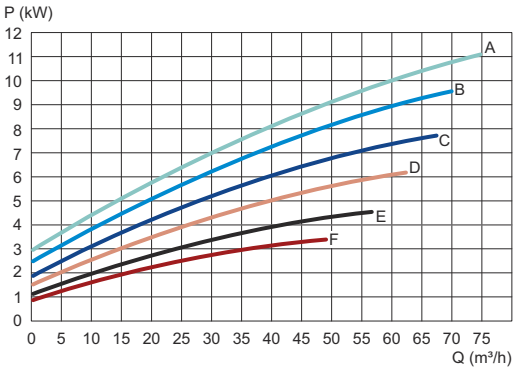
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 12.5 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

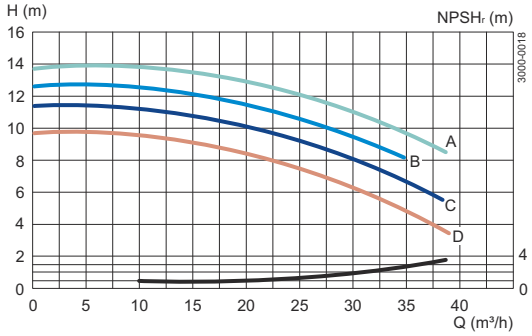


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

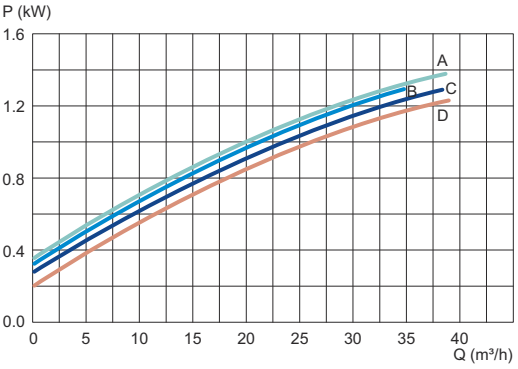
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



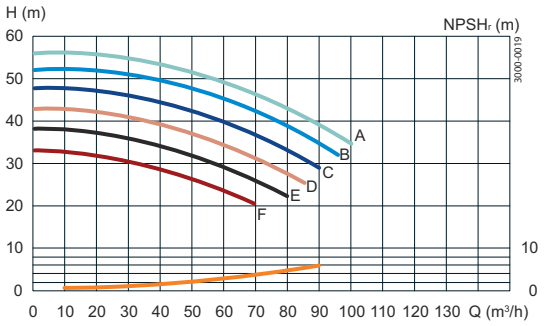
A = 165 D = 140
B = 160
C = 150

LKH-25, 50 Hz

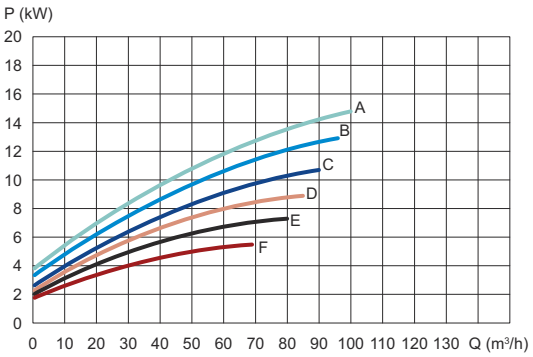
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20°C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with 3%

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

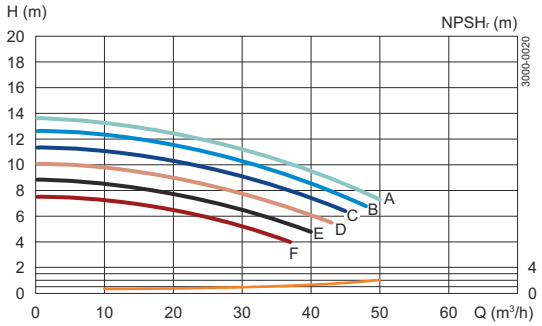


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

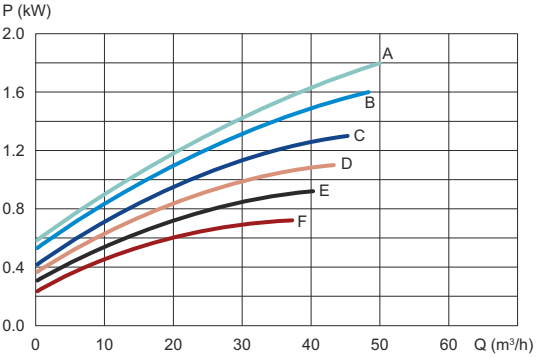
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.2 kW, 1430 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



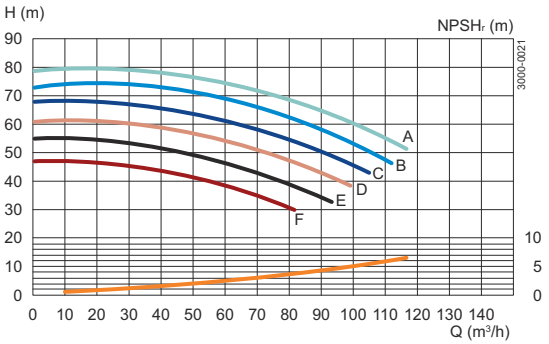
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKH-25, 60 Hz

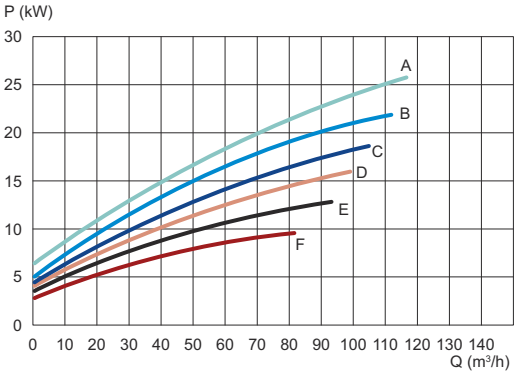
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

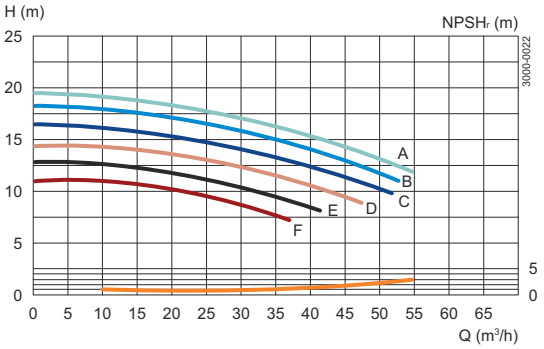


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

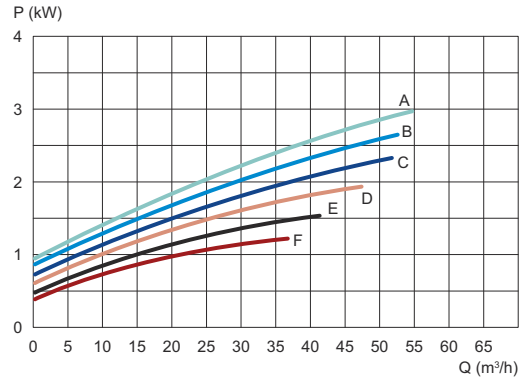
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



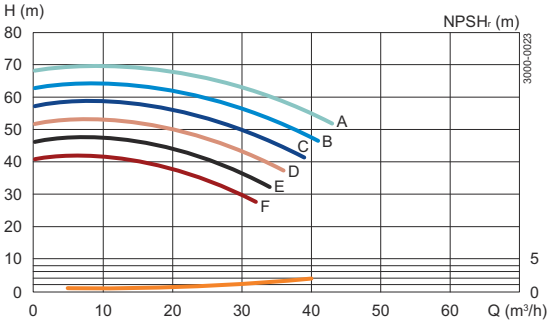
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKH-35, 50 Hz

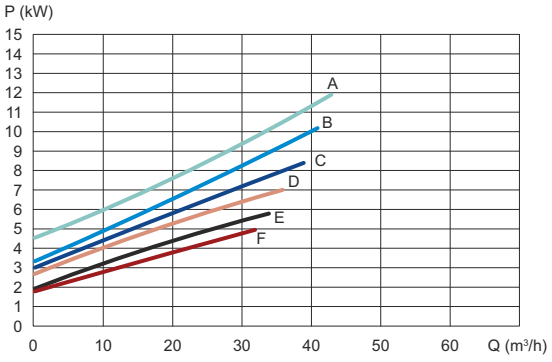
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

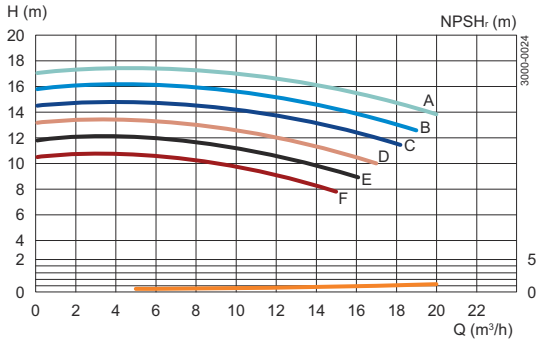


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

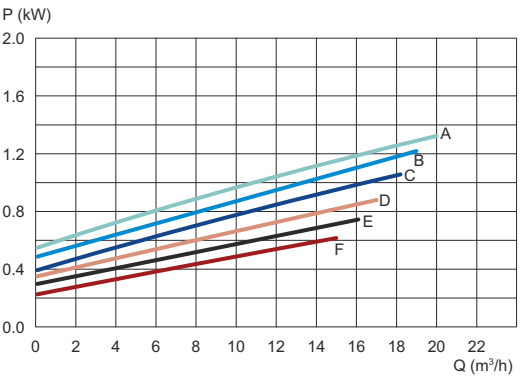
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



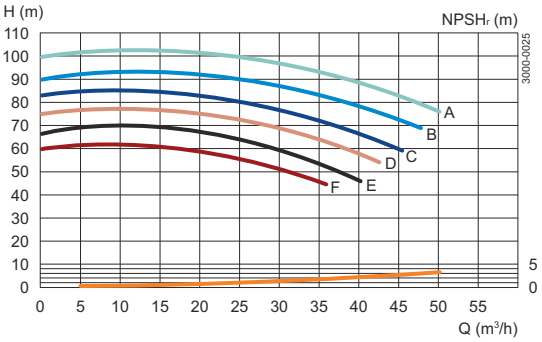
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKH-35, 60 Hz

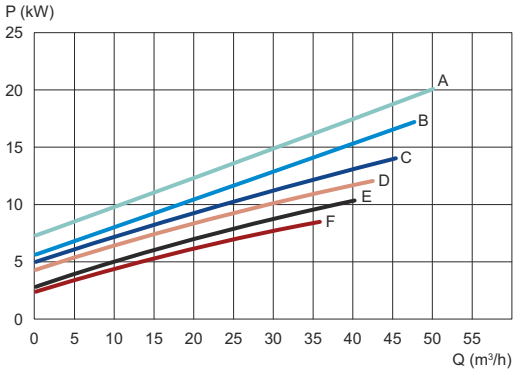
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 21 kW, 3535 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-17kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

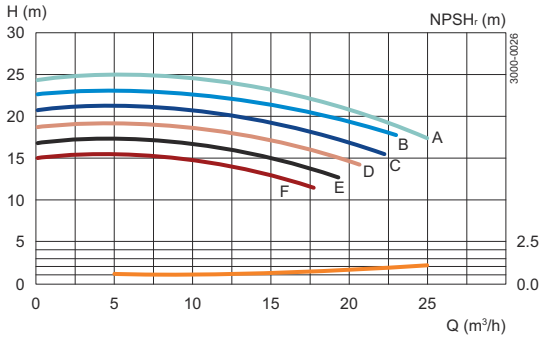


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

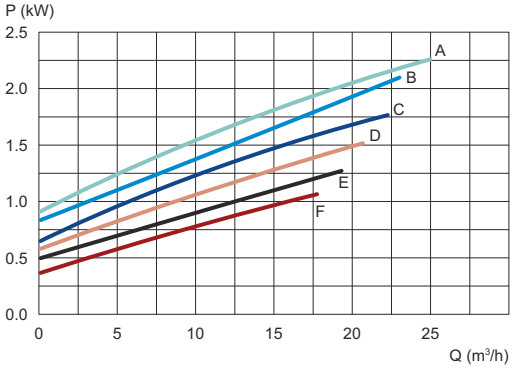
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



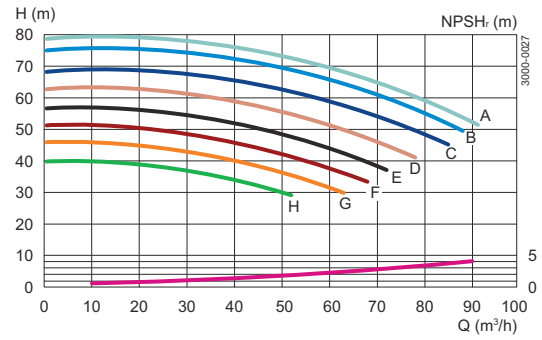
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKH-40, 50 Hz

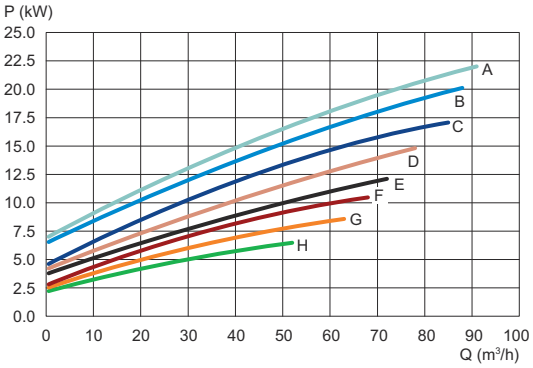
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with:
- 3% for 11–18.5 kW
- 5% for 7.5 kW

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

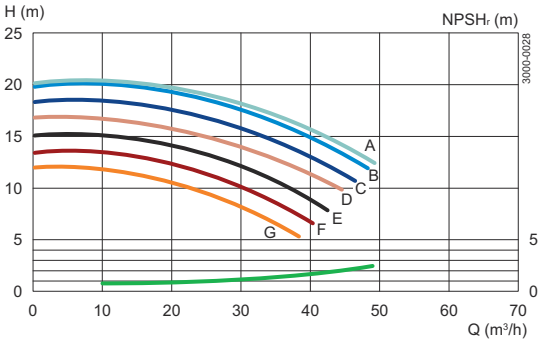


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

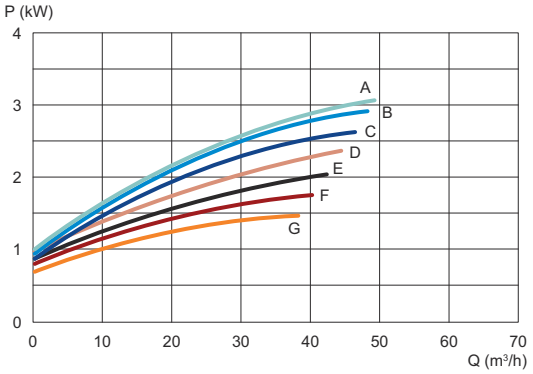
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	180 mm
Pump inlet, dia.:	Dia.: 76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz. For smaller motors,reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190



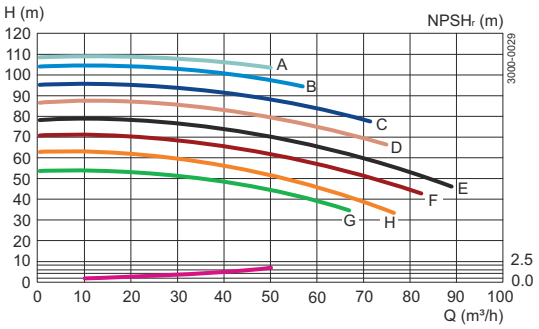
A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190

LKH-40, 60 Hz

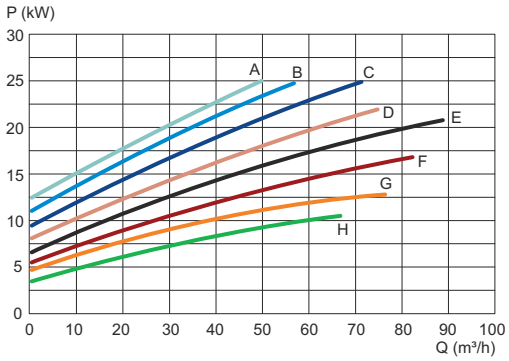
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

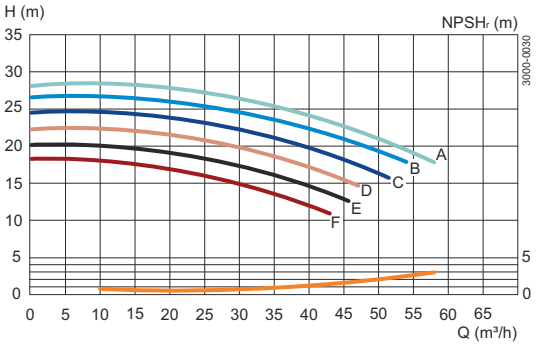


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

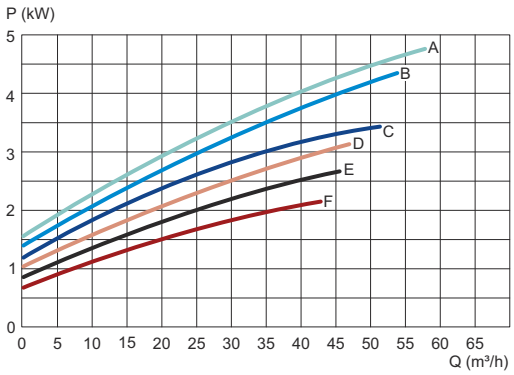
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	190 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190



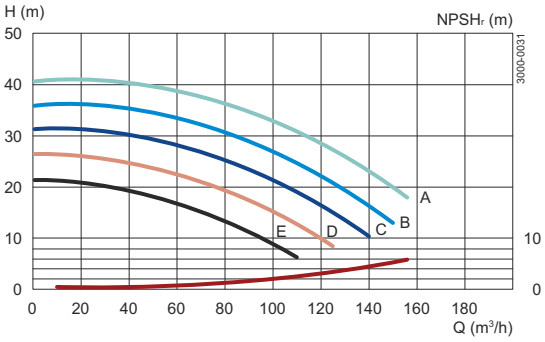
A = 235 D = 210
B = 230 E = 200
C = 220 F = 190

LKH-45, 50 Hz

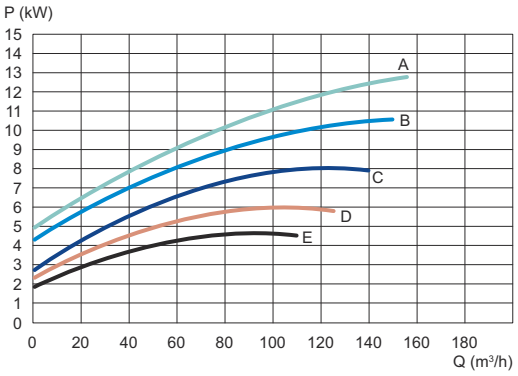
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

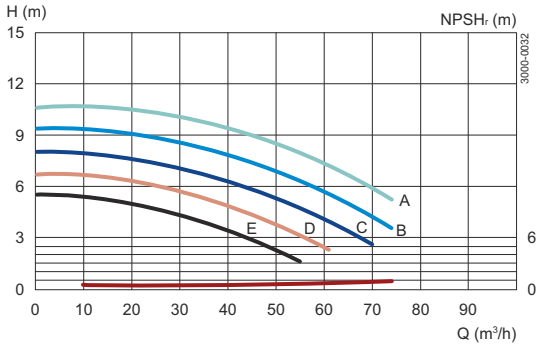


A = 178 D = 150
B = 170 E = 140
C = 160

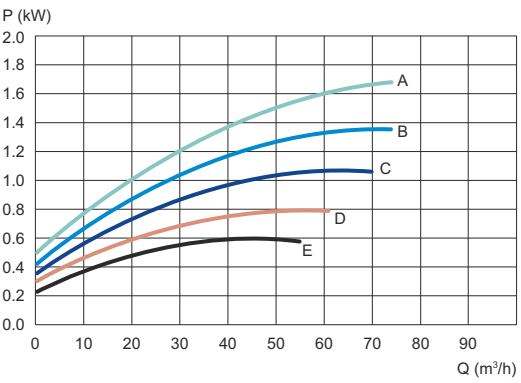
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



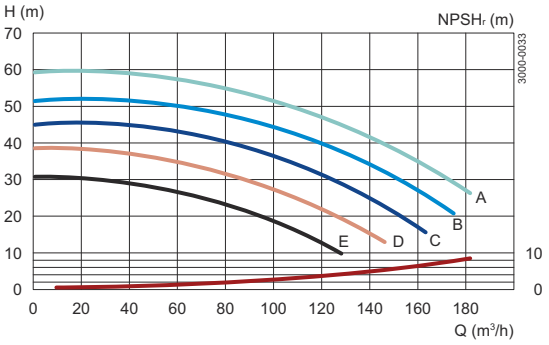
A = 178 D = 150
B = 170 E = 140
C = 160

LKH-45, 60Hz

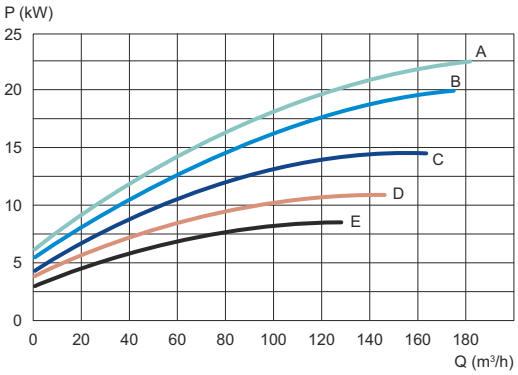
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

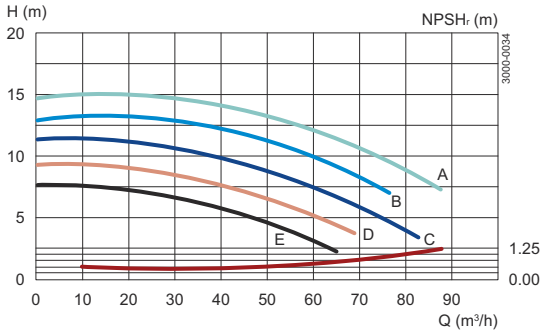


A = 178 D = 150
B = 170 E = 140
C = 160

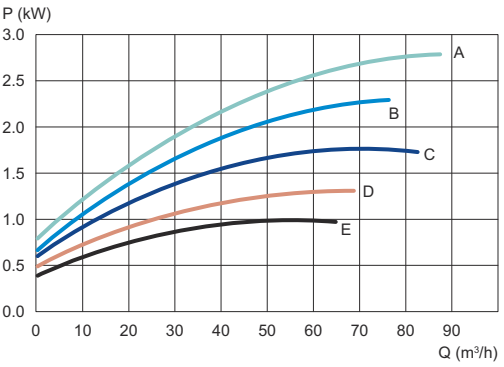
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



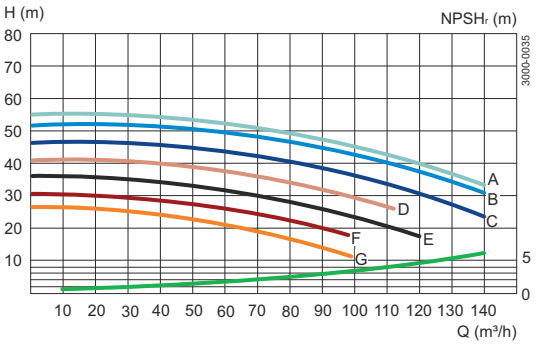
A = 178 D = 150
B = 170 E = 140
C = 160

LKH-50, 50 Hz

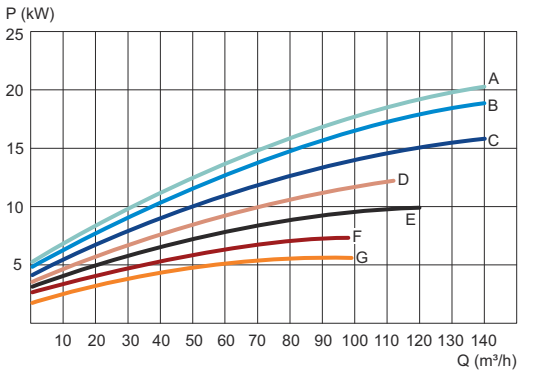
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3% for 11 - 18.5 kW.
- 5% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

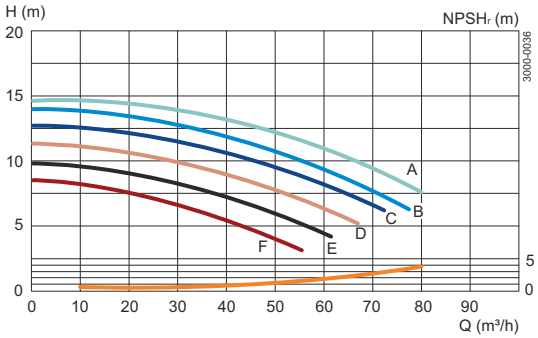


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

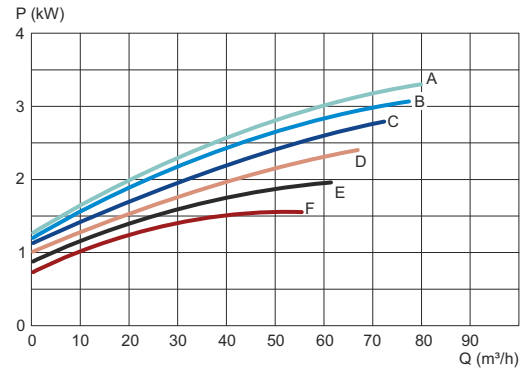
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



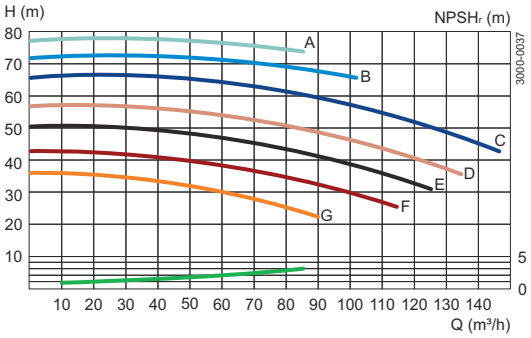
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKH-50, 60Hz

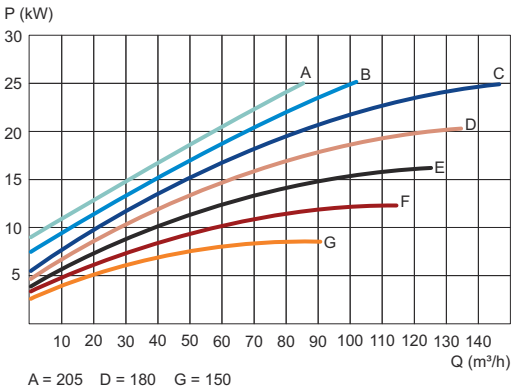
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	150 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

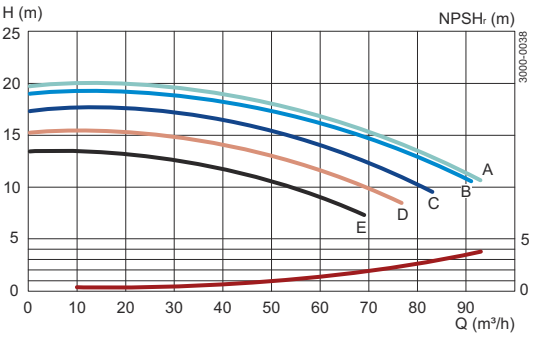


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

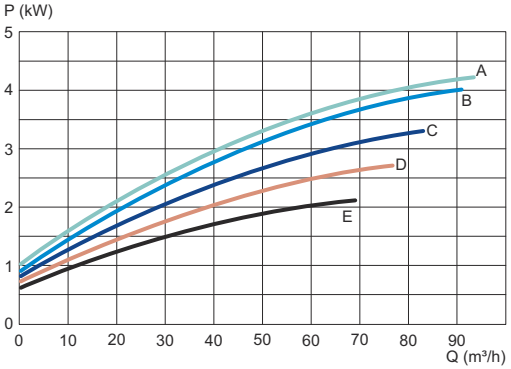
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4.5 kW, 1750 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190



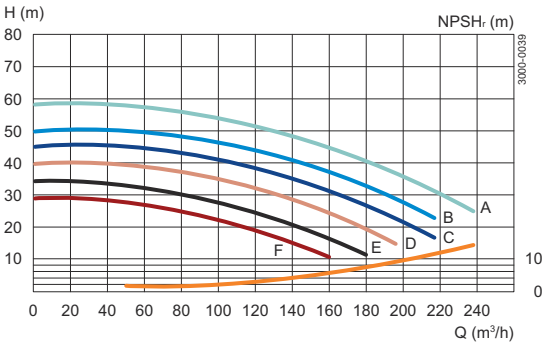
A = 205 D = 180
B = 200 E = 170
C = 190

LKH-60, 50 Hz

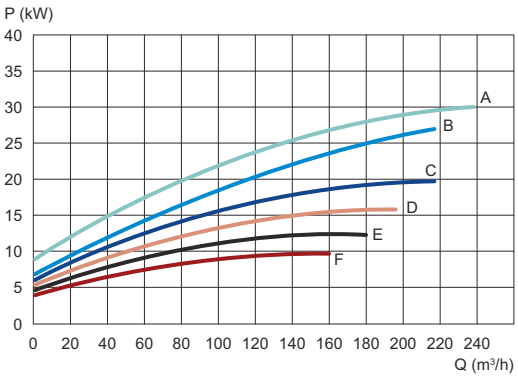
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 30 kW, 2955 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
3% for 11 - 22 kW.
6% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

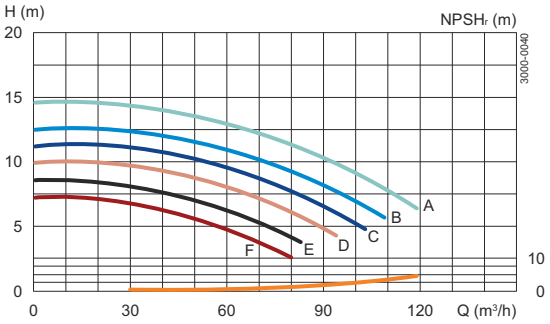


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

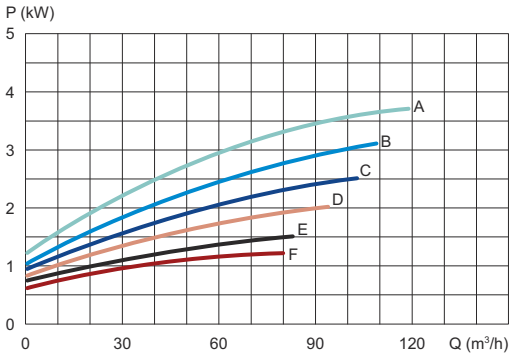
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



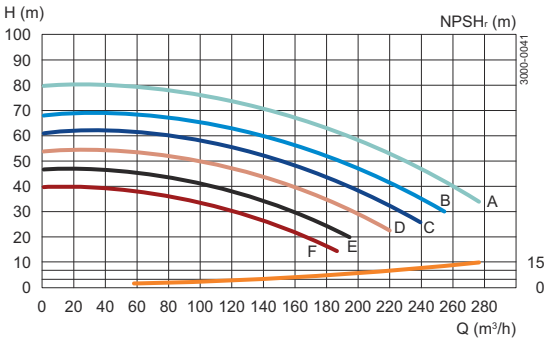
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKH-60, 60Hz

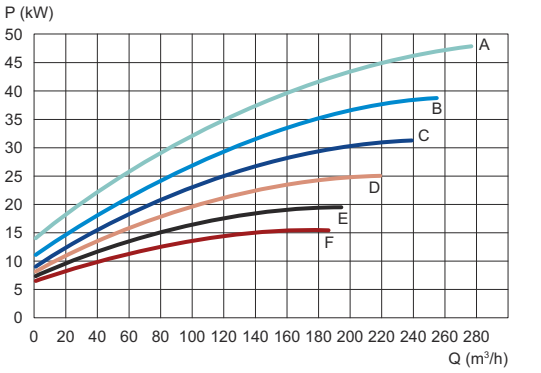
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 35 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

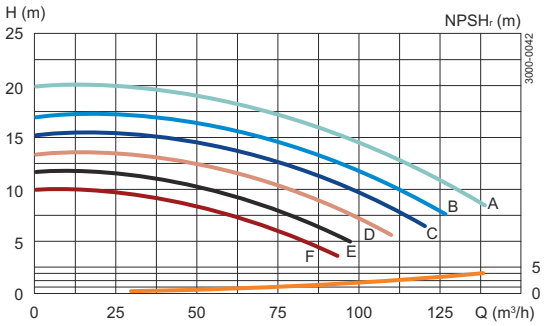


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

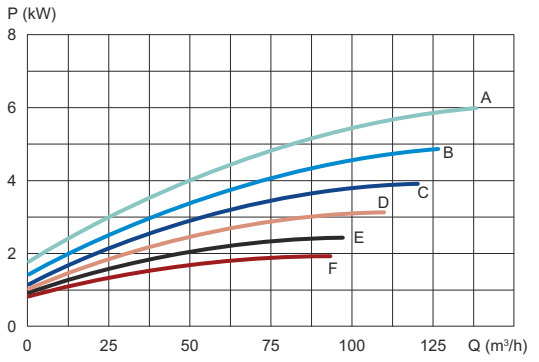
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



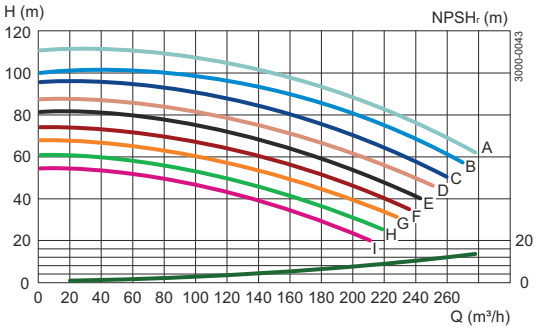
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKH-70, 50 Hz

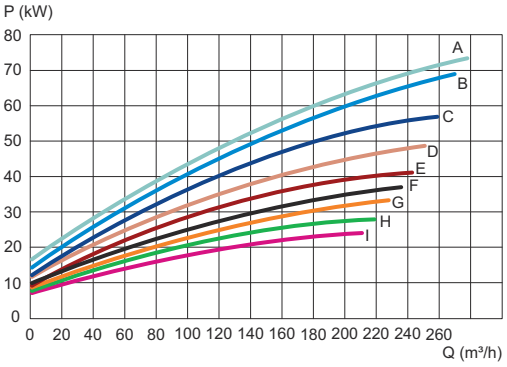
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 2%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

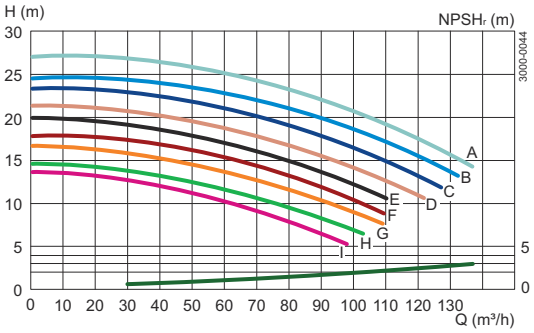


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

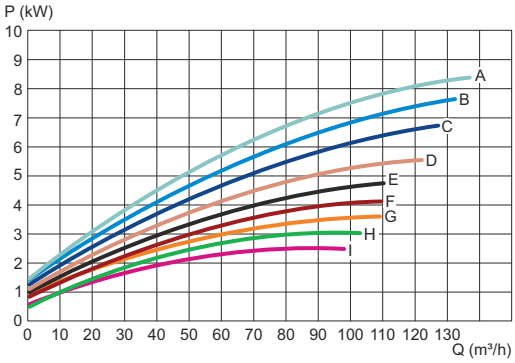
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 1460 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200



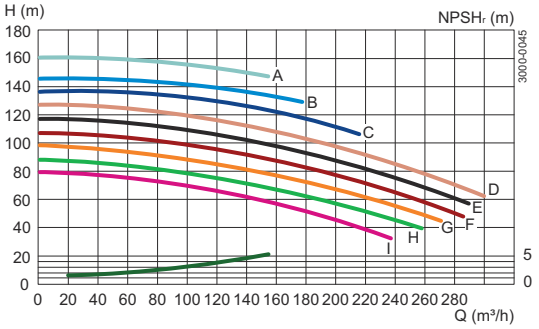
A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

LKH-70, 60 Hz

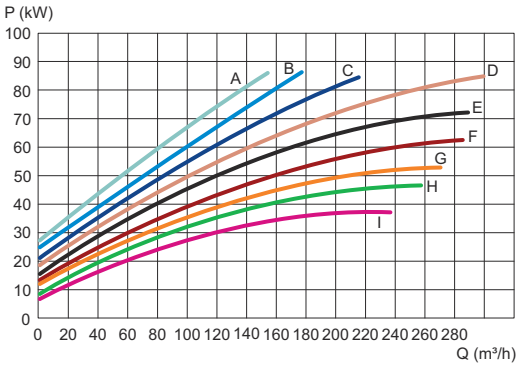
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 86 kW, 3565 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

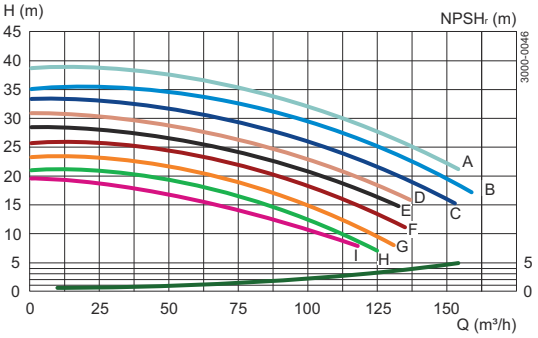


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

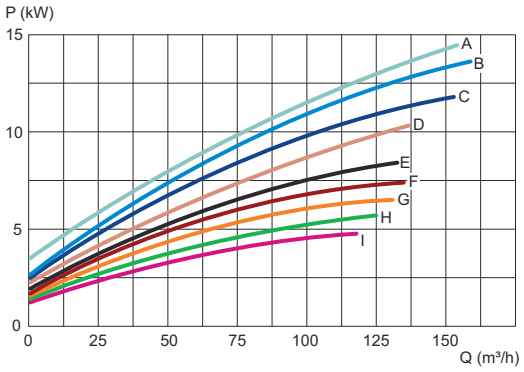
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 17 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200



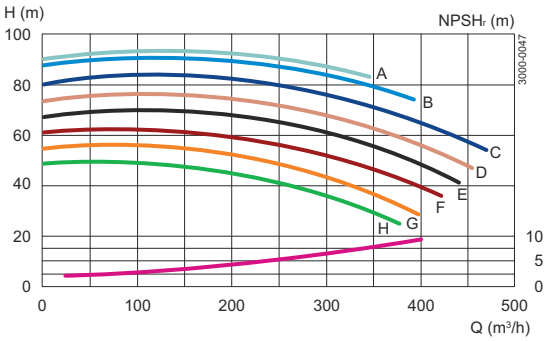
A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200

LKH-85, 50/60 Hz

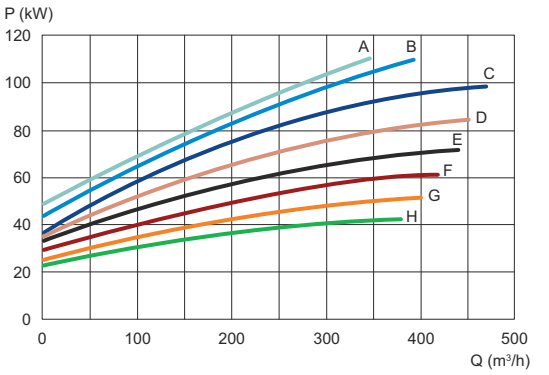
	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	276 mm
Impeller, Min. dia.:	210 mm
Pump inlet, dia.:	154 mm, DN 150
Pump outlet, dia.:	154 mm, DN 150
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 276 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230

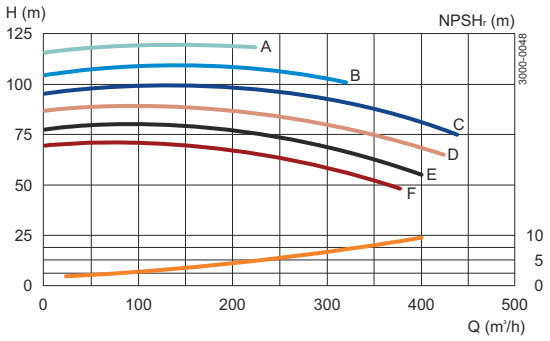


A = 276 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230

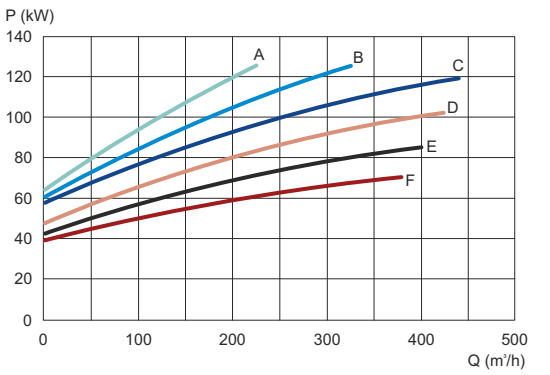
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	260 mm
Impeller, Min. dia.:	210 mm
Pump inlet, dia.:	154 mm, DN 150
Pump outlet, dia.:	154 mm, DN 150
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 86 kW, 3570 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 260 D = 230
B = 250 E = 220
C = 240 F = 210



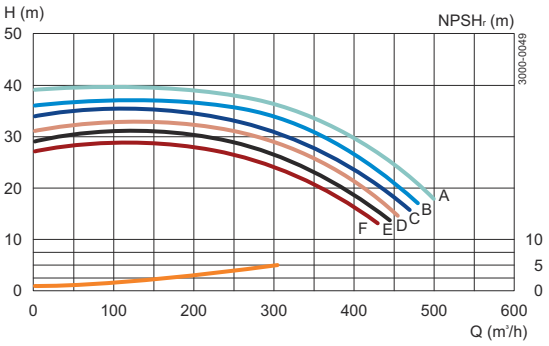
A = 260 D = 230
B = 250 E = 220
C = 240 F = 210

LKH-90, 50/60 Hz

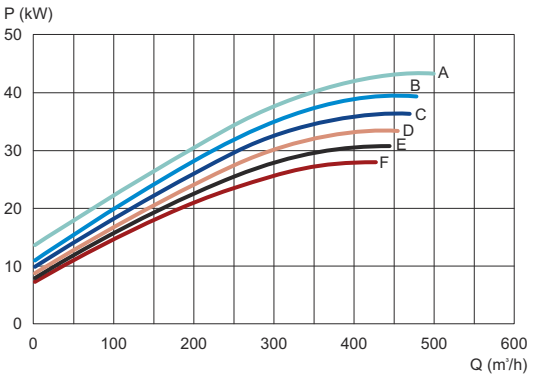
	50 Hz
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	348 mm
Impeller, Min. dia.:	300 mm
Pump inlet, dia.:	154 mm, DN 150
Pump outlet, dia.:	154 mm, DN 150
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 1490 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 348 D = 320
B = 340 E = 310
C = 330 F = 300

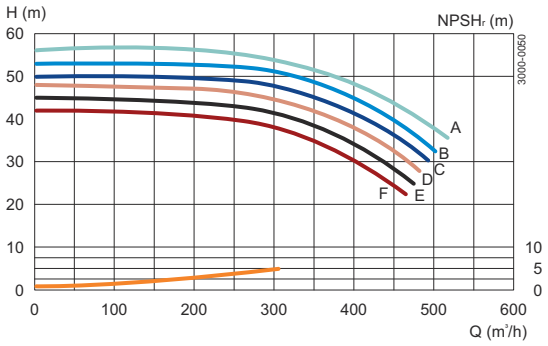


A = 348 D = 320
B = 340 E = 310
C = 330 F = 300

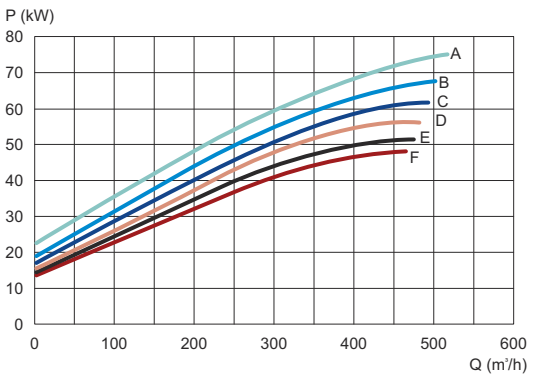
	60 Hz
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	348 mm
Impeller, Min. dia.:	300 mm
Pump inlet, dia.:	154 mm, DN 150
Pump outlet, dia.:	154 mm, DN 150
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 1775 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 348 D = 320
B = 340 E = 310
C = 330 F = 300



A = 348 D = 320
B = 340 E = 310
C = 330 F = 300

Alfa Laval LKHex / LKHex UltraPure

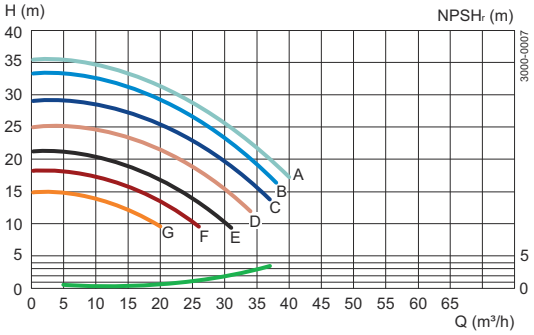
Performance curves

LKHex / LKHex UltraPure-10, 50 Hz

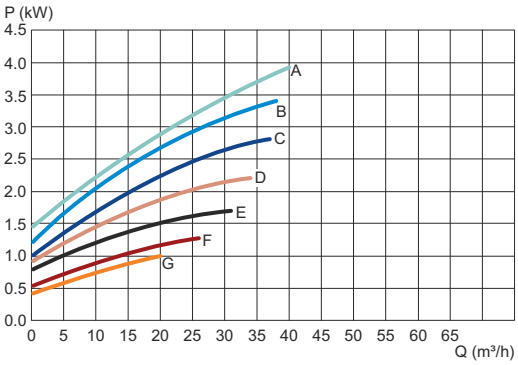
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2840 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

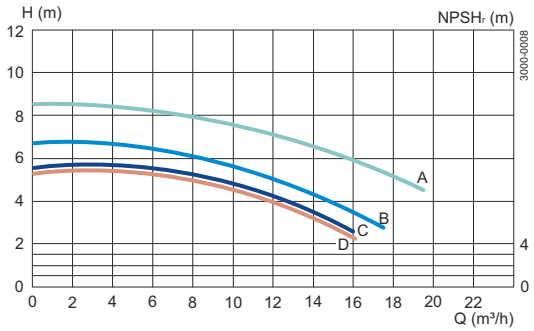


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

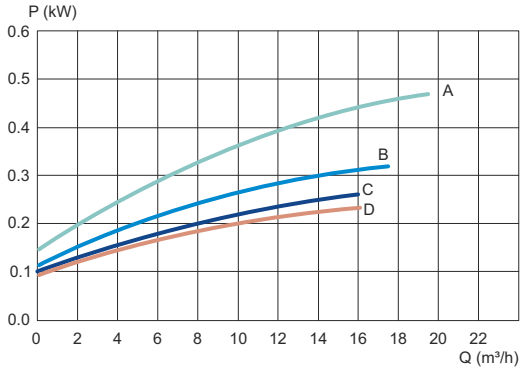
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	130 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 C = 140
B = 150 D = 130



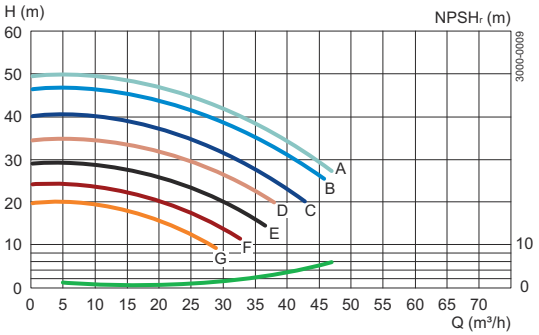
A = 163 C = 140
B = 150 D = 130

LKHex / LKHex UltraPure-10, 60Hz

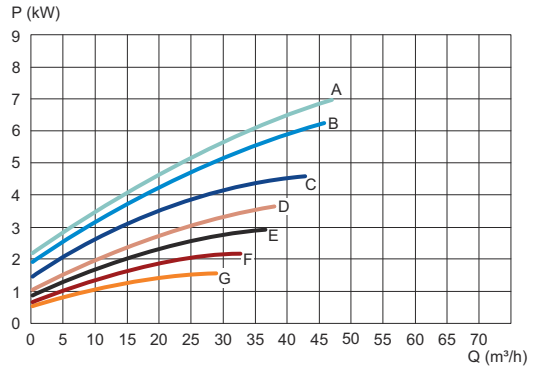
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 8.6 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

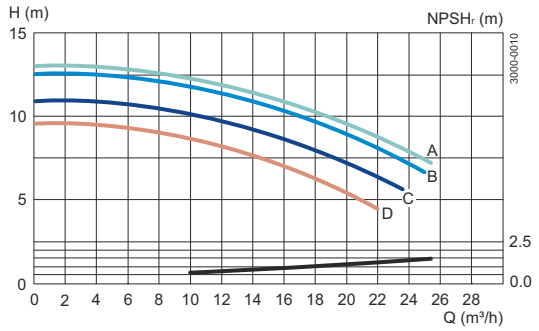


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

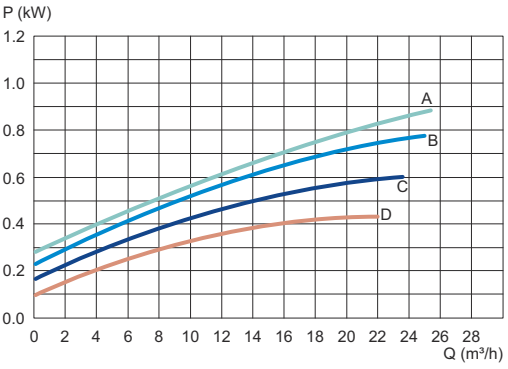
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140
B = 160
C = 150



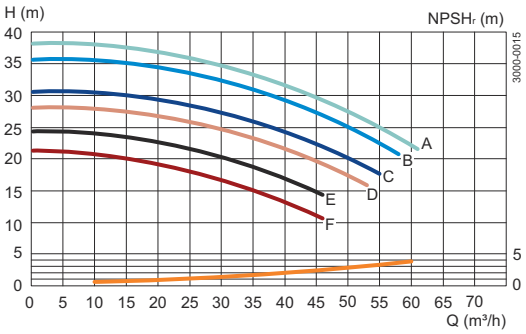
A = 163 D = 140
B = 160
C = 150

LKHex / LKHex UltraPure-20, 50 Hz

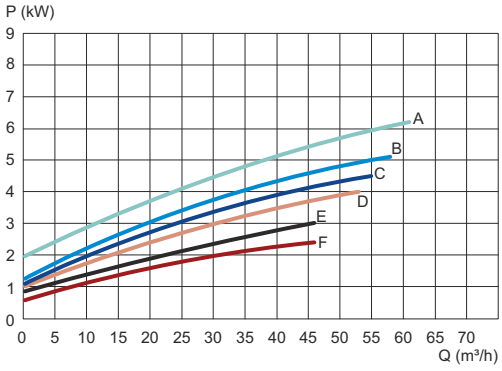
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

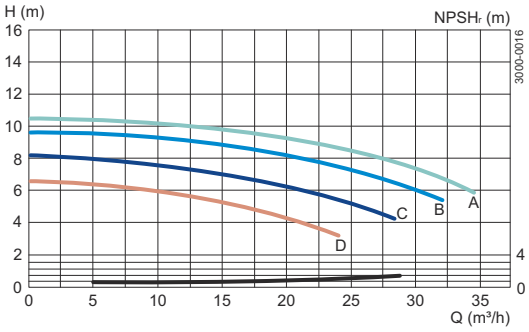


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

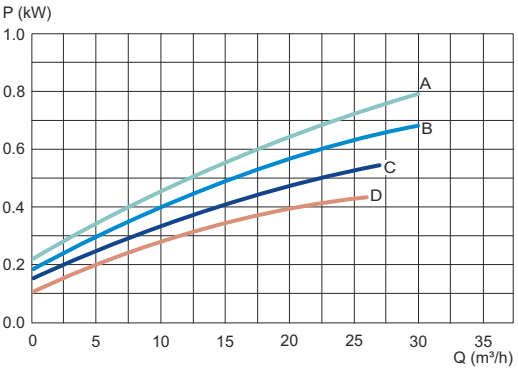
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



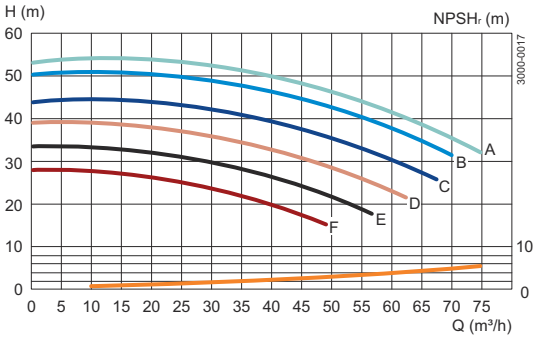
A = 165 D = 140
B = 160
C = 150

LKHex / LKHex UltraPure-20, 60 Hz

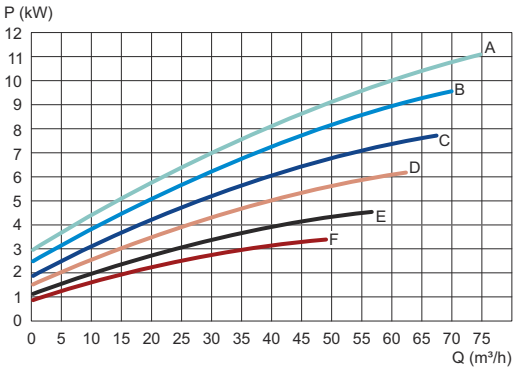
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 12.5 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

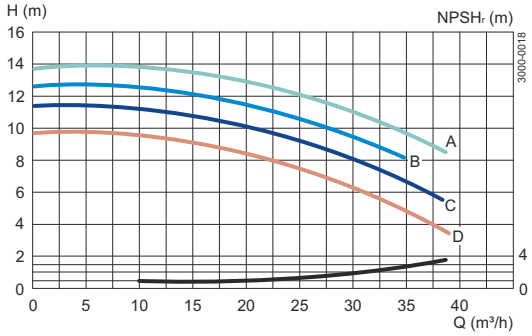


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

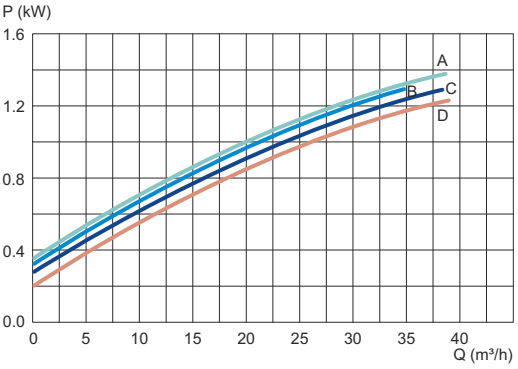
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



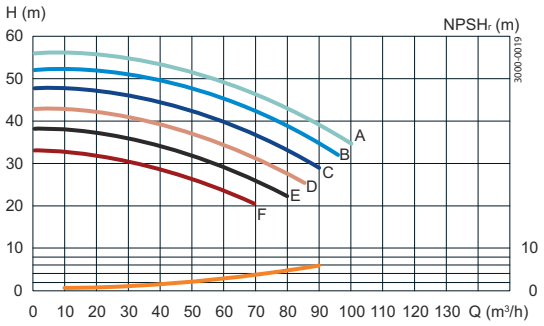
A = 165 D = 140
B = 160
C = 150

LKHex / LKHex UltraPure-25, 50 Hz

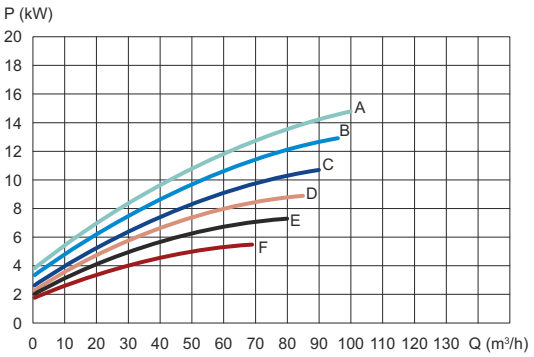
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20°C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

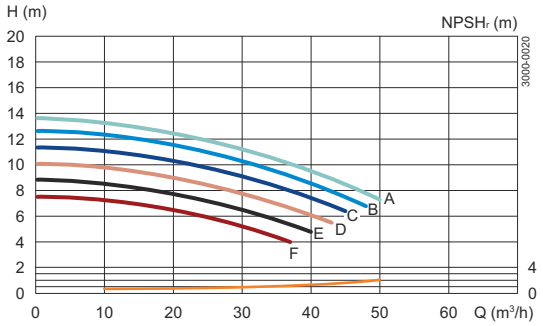


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

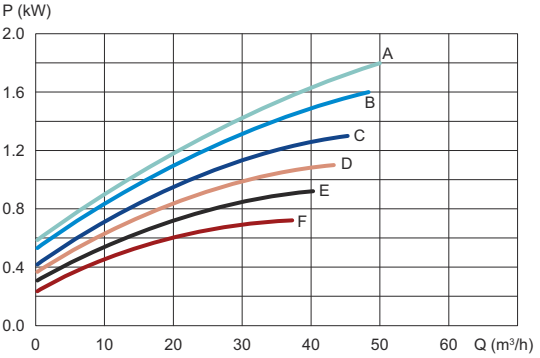
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.2 kW, 1430 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



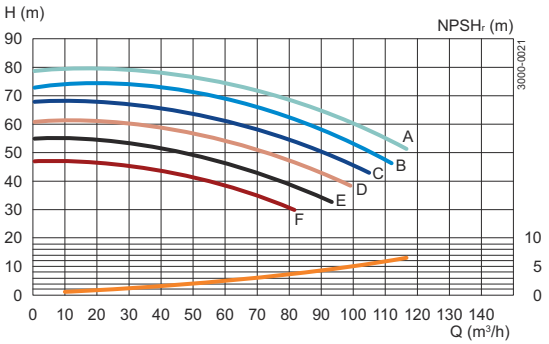
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-25, 60 Hz

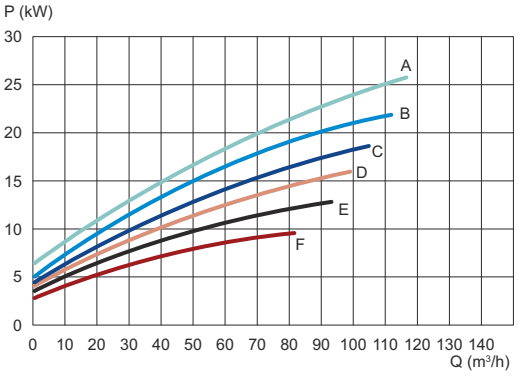
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

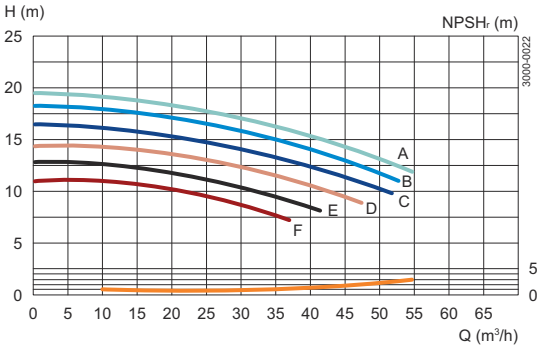


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

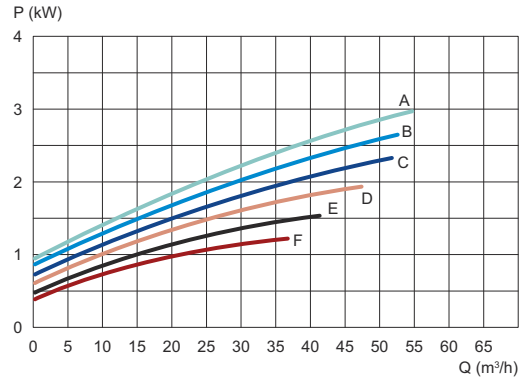
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



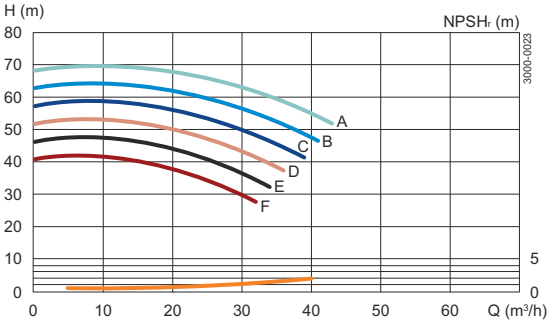
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-35, 50 Hz

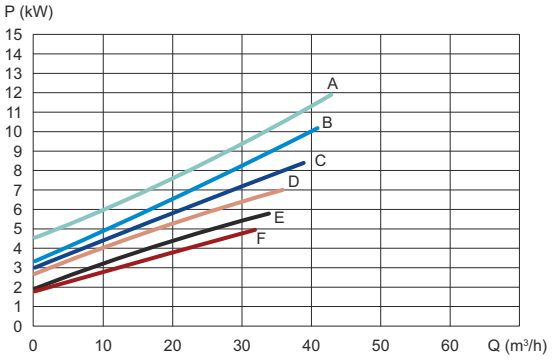
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

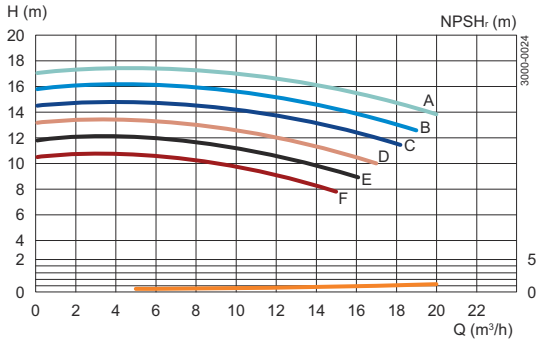


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

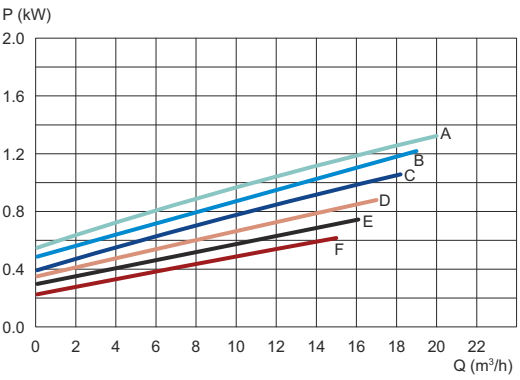
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



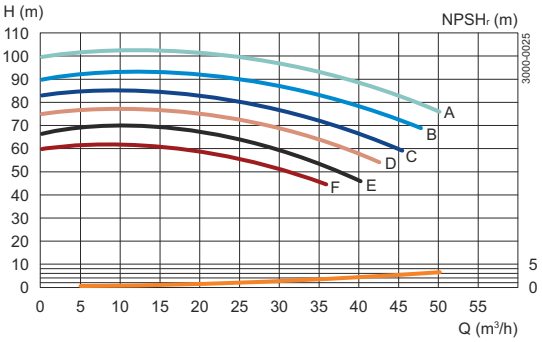
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHex / LKHex UltraPure-35, 60 Hz

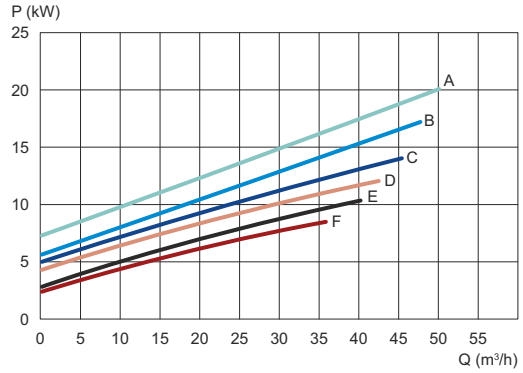
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 21 kW, 3535 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-17kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

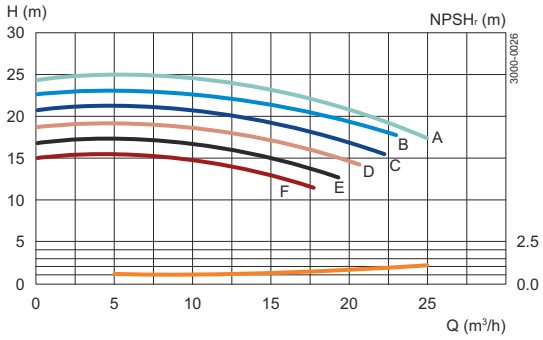


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

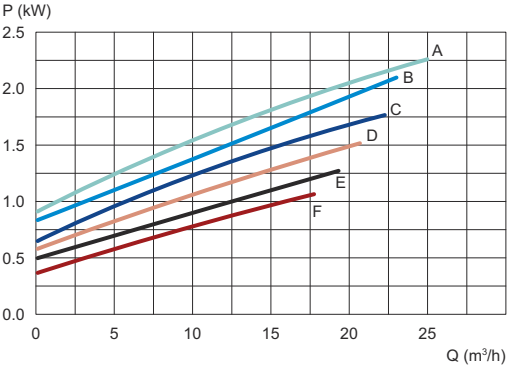
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



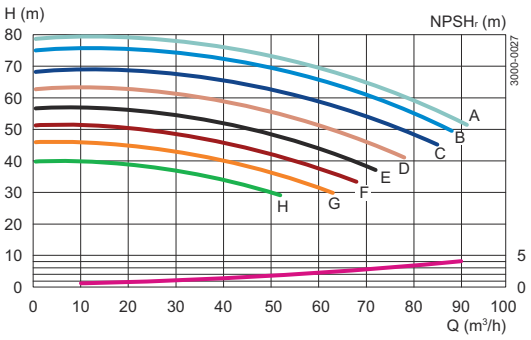
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHex / LKHex UltraPure-40, 50 Hz

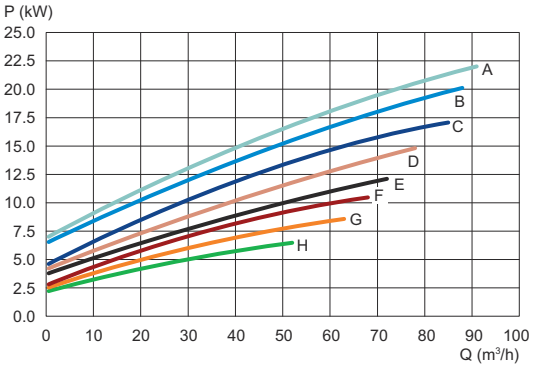
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with:
- 3% for 11–18.5 kW
- 5% for 7.5 kW

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

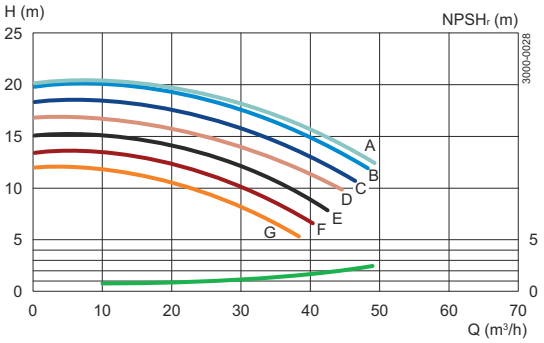


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

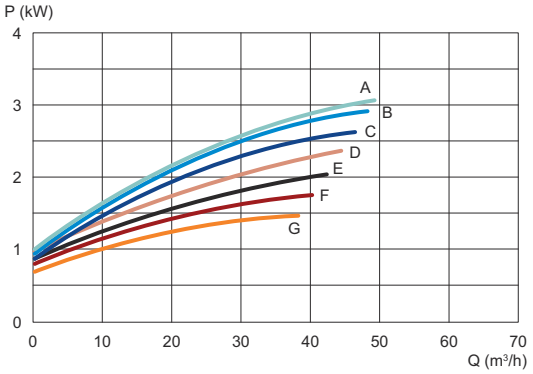
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	180 mm
Pump inlet, dia.:	Dia.: 76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz. For smaller motors,reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190



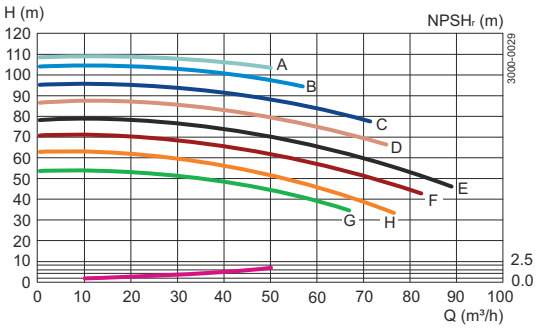
A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190

LKHex / LKHex UltraPure-40, 60 Hz

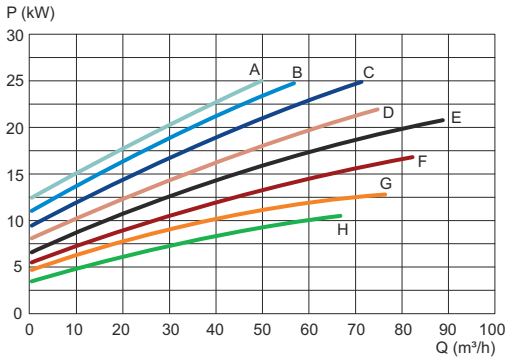
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

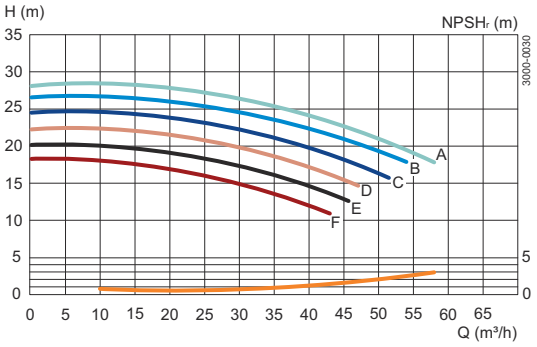


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

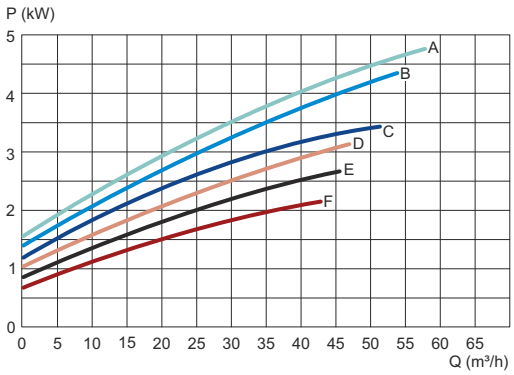
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	190 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190



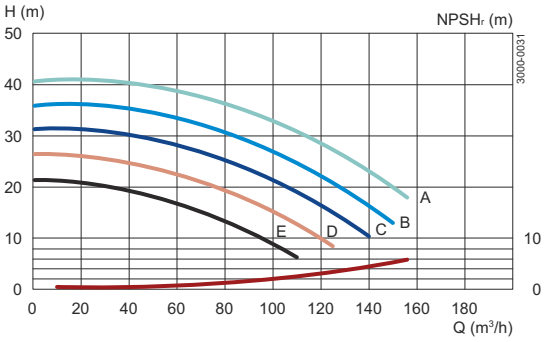
A = 235 D = 210
B = 230 E = 200
C = 220 F = 190

LKHex / LKHex UltraPure-45, 50 Hz

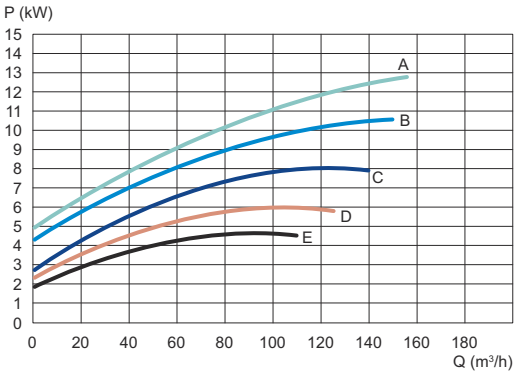
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

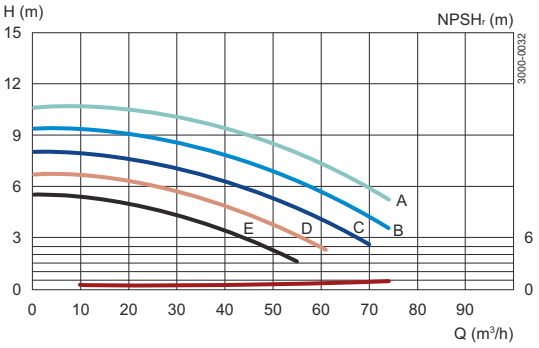


A = 178 D = 150
B = 170 E = 140
C = 160

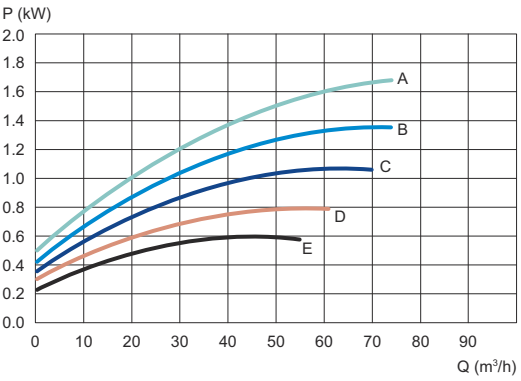
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



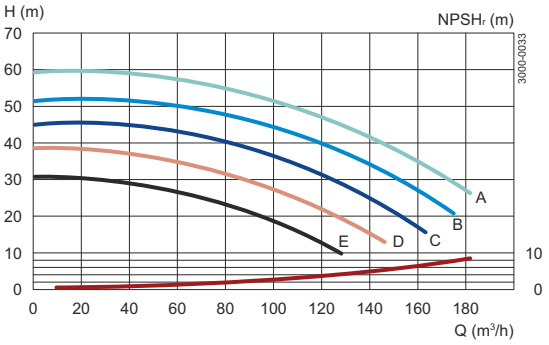
A = 178 D = 150
B = 170 E = 140
C = 160

LKHex / LKHex UltraPure-45, 60Hz

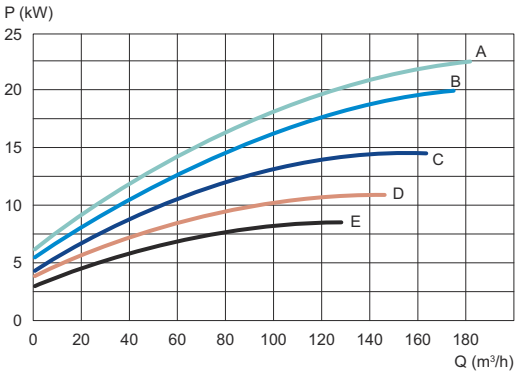
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

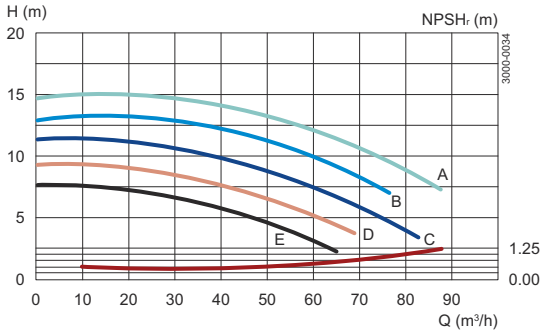


A = 178 D = 150
B = 170 E = 140
C = 160

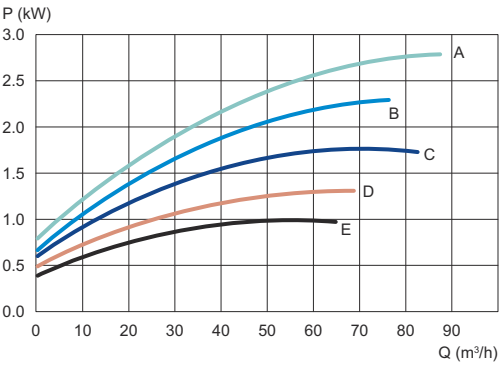
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



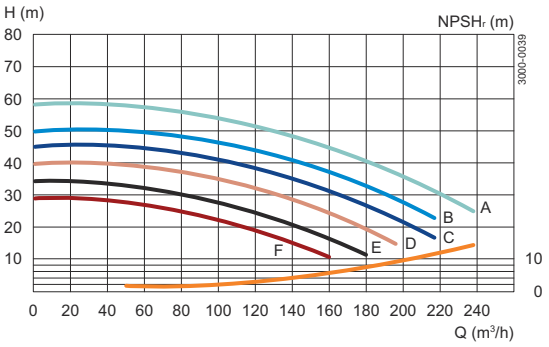
A = 178 D = 150
B = 170 E = 140
C = 160

LKHex / LKHex UltraPure-60, 50 Hz

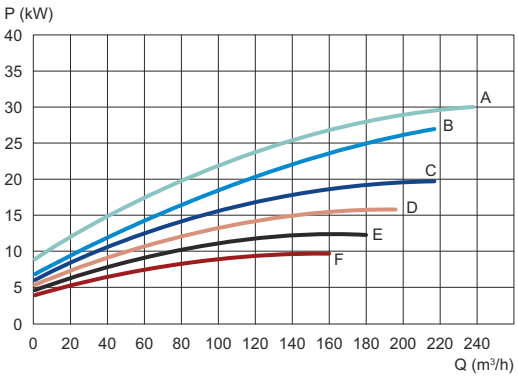
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 30 kW, 2955 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
3% for 11 - 22 kW.
6% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

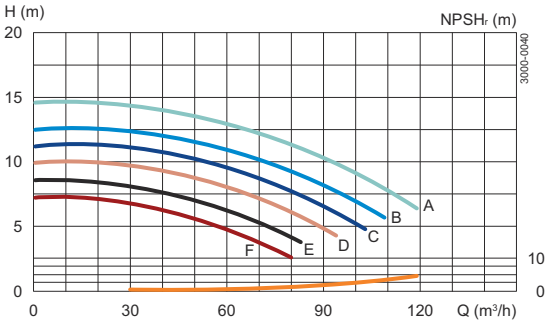


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

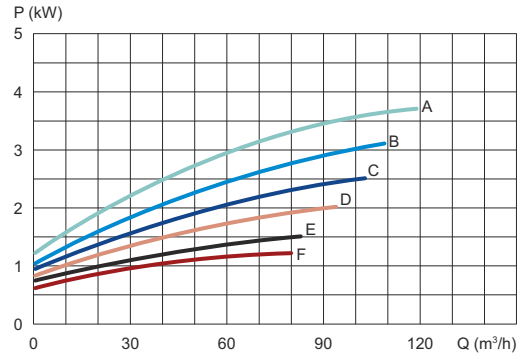
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



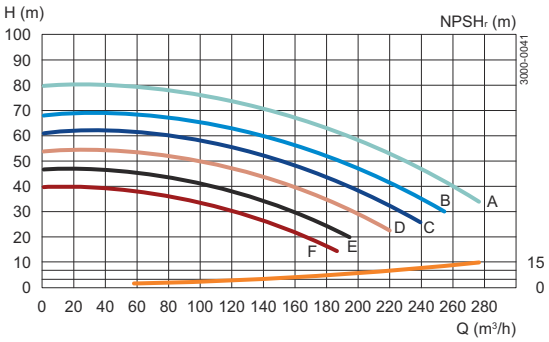
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-60, 60Hz

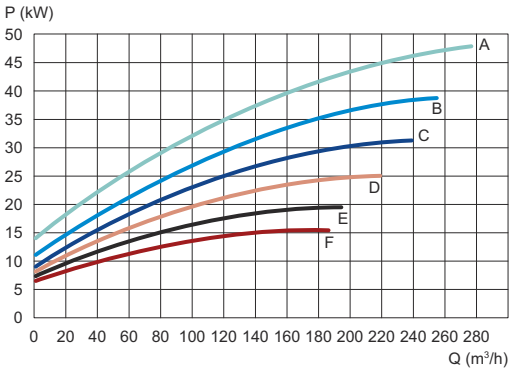
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 35 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

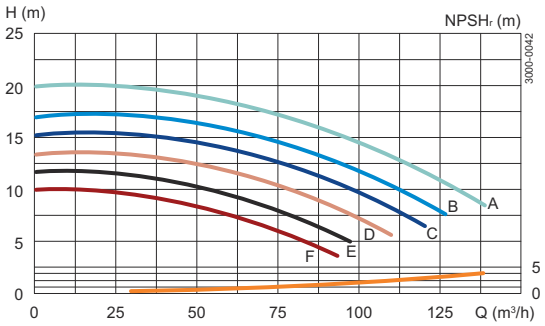


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

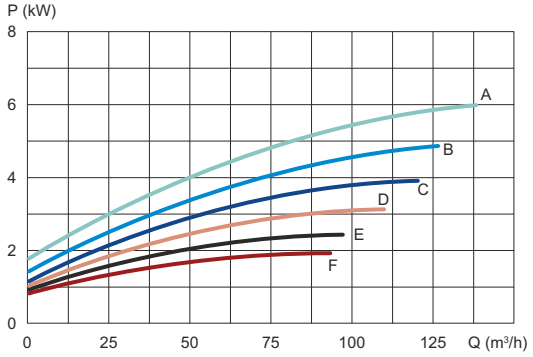
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



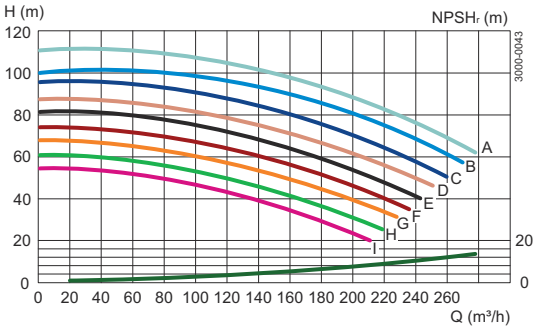
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-70, 50 Hz

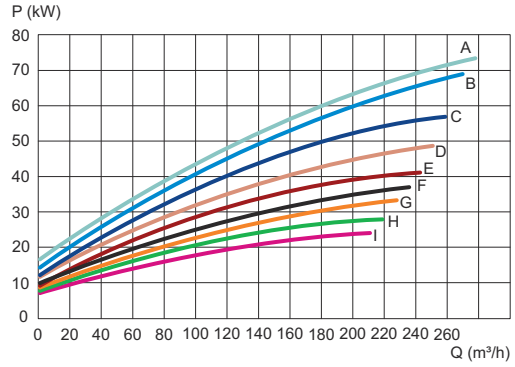
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 2%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

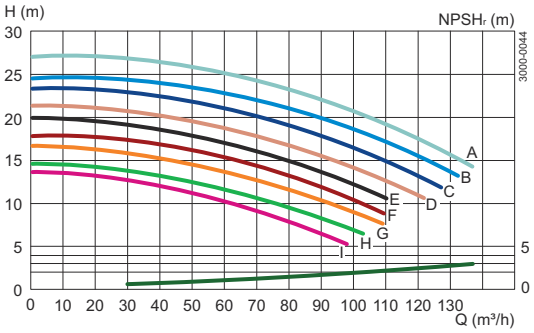


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

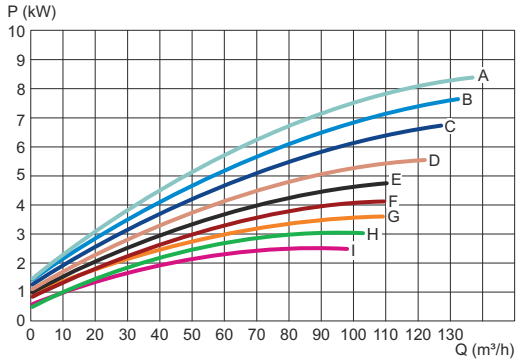
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 1460 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200



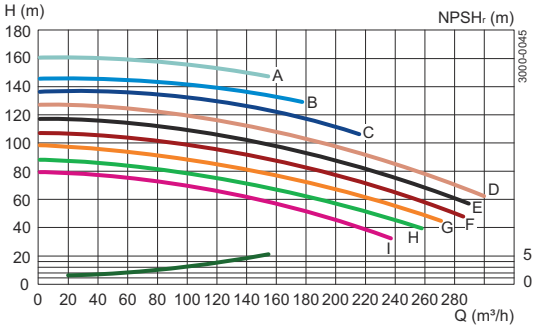
A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

LKHex / LKHex UltraPure-70, 60 Hz

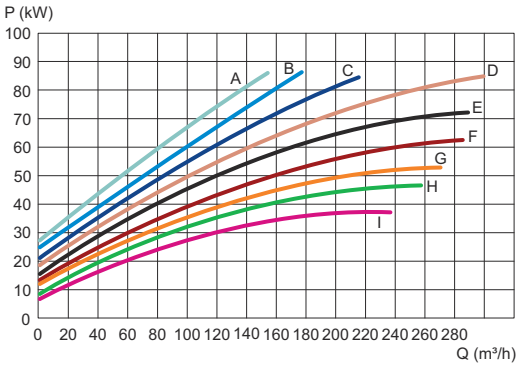
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 86 kW, 3565 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

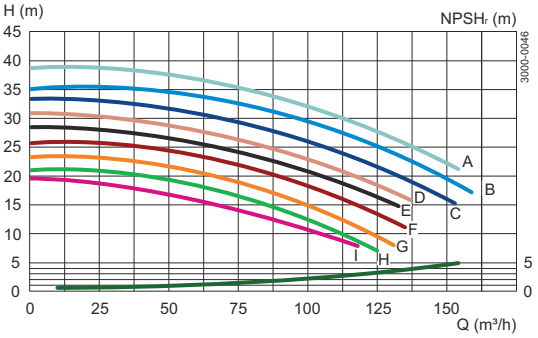


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

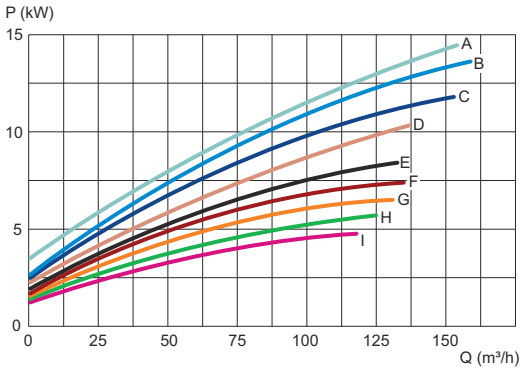
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 17 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200

Alfa Laval LKHex / LKHex UltraPure

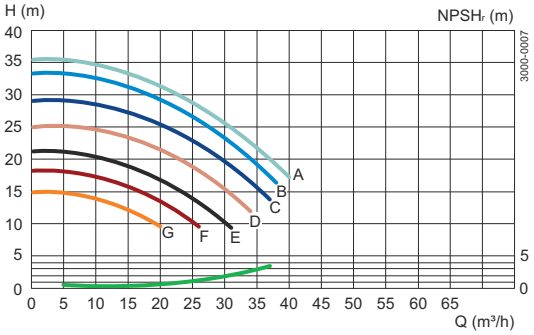
Performance curves

LKHex / LKHex UltraPure-10, 50 Hz

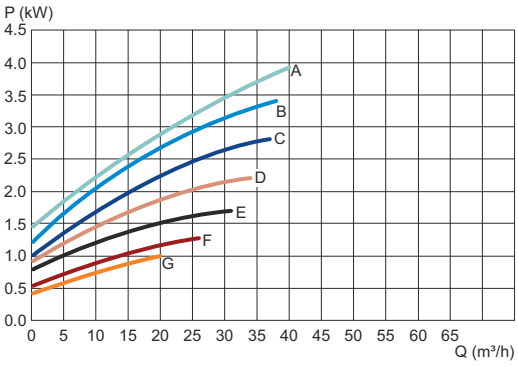
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2840 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

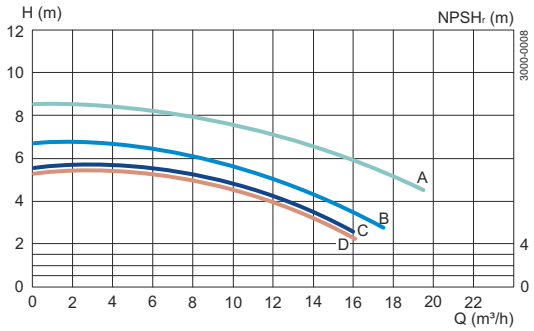


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

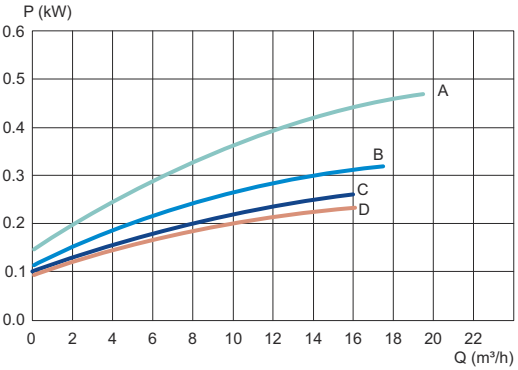
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	130 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 C = 140
B = 150 D = 130



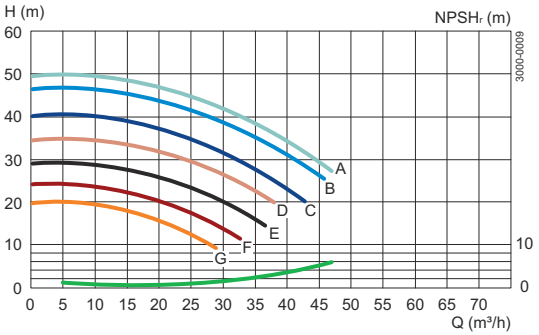
A = 163 C = 140
B = 150 D = 130

LKHex / LKHex UltraPure-10, 60Hz

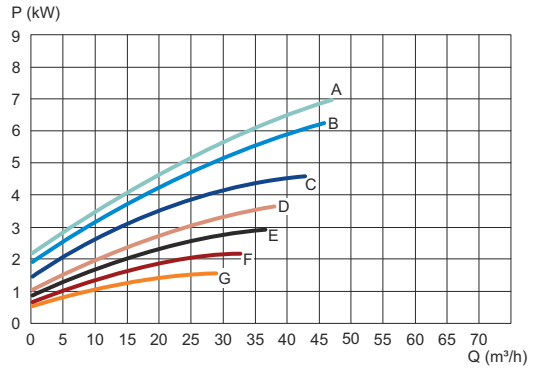
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 8.6 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

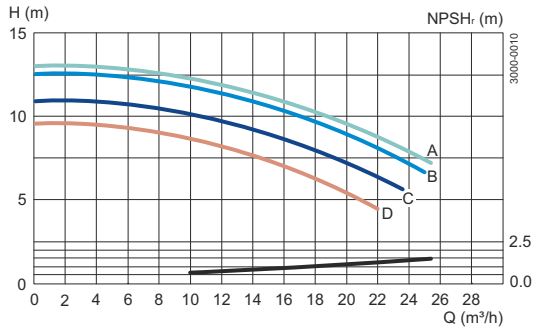


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

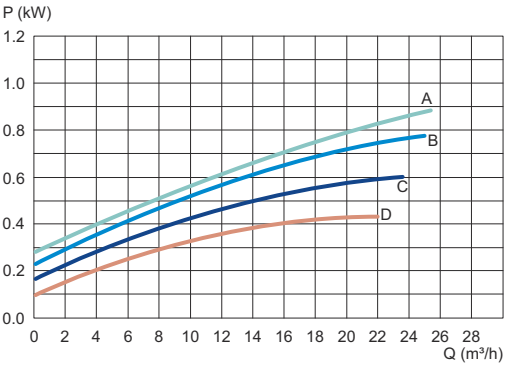
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140
B = 160
C = 150



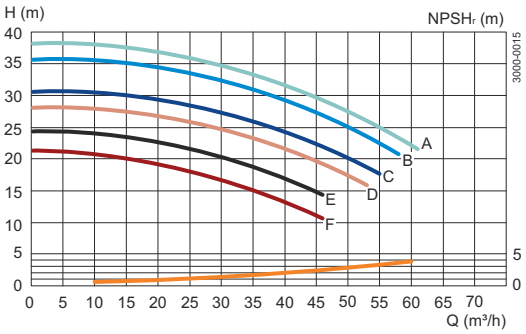
A = 163 D = 140
B = 160
C = 150

LKHex / LKHex UltraPure-20, 50 Hz

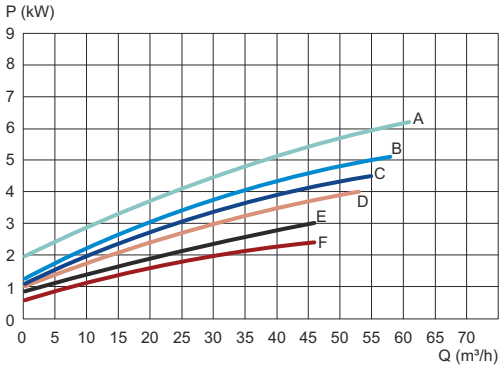
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

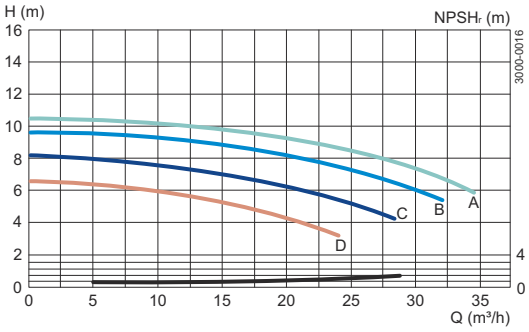


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

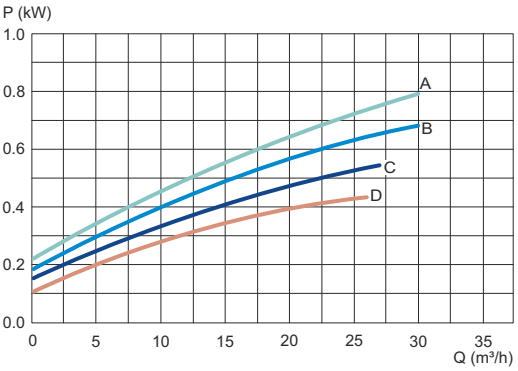
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



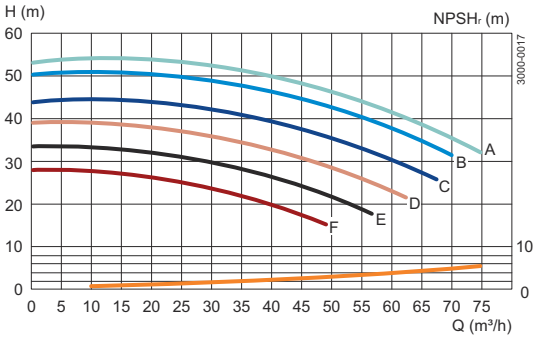
A = 165 D = 140
B = 160
C = 150

LKHex / LKHex UltraPure-20, 60 Hz

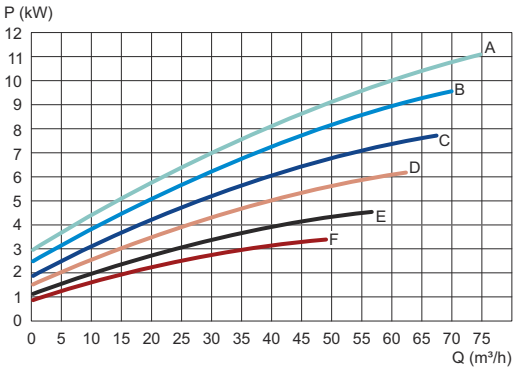
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 12.5 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

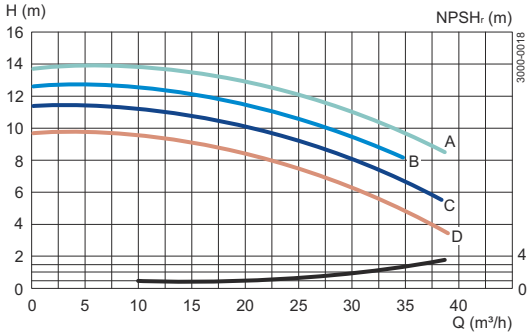


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

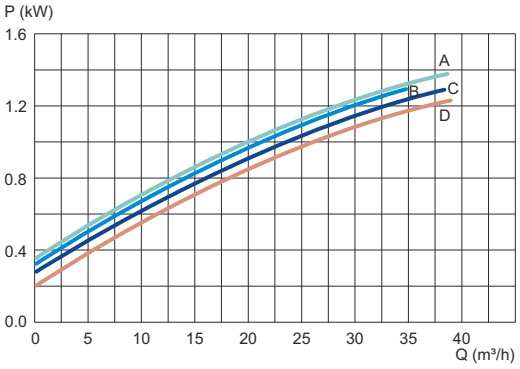
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



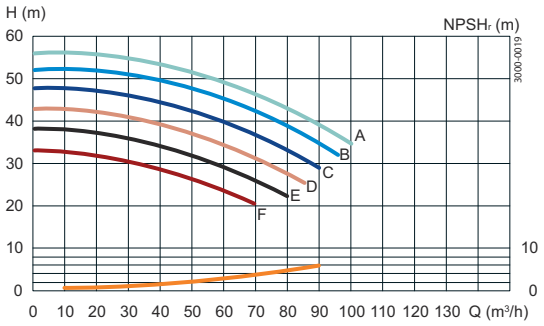
A = 165 D = 140
B = 160
C = 150

LKHex / LKHex UltraPure-25, 50 Hz

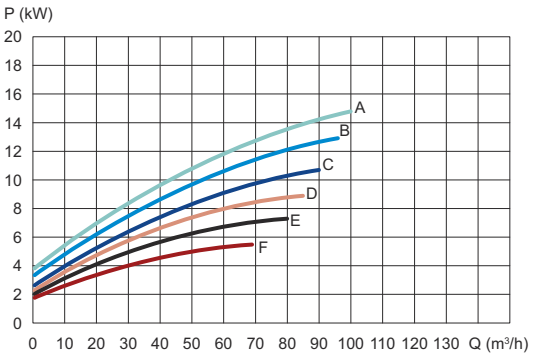
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20°C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

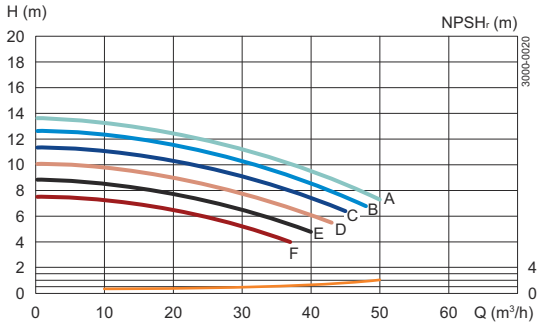


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

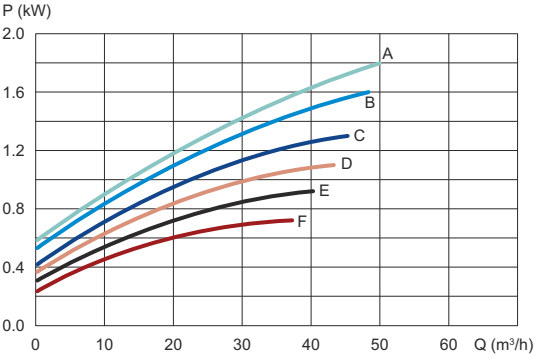
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.2 kW, 1430 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



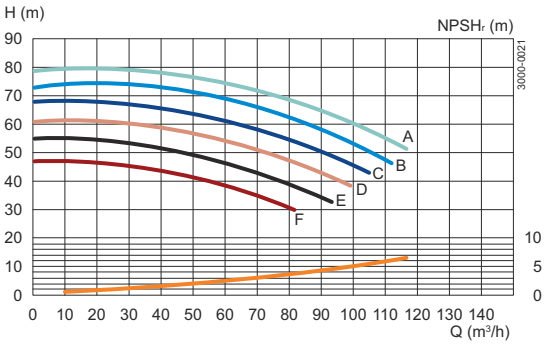
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-25, 60 Hz

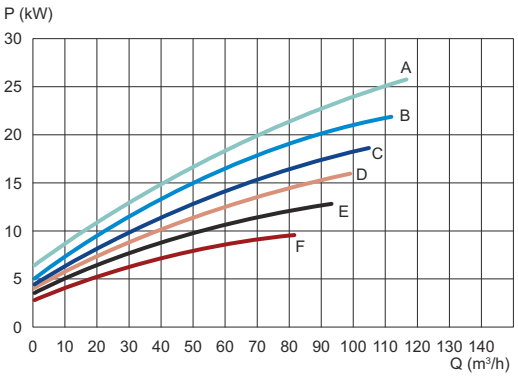
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

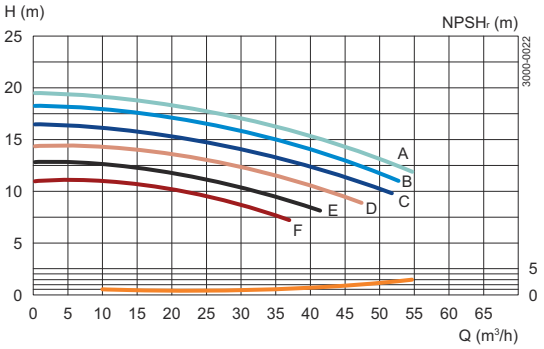


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

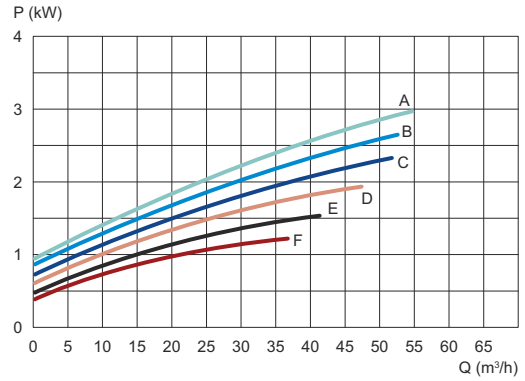
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



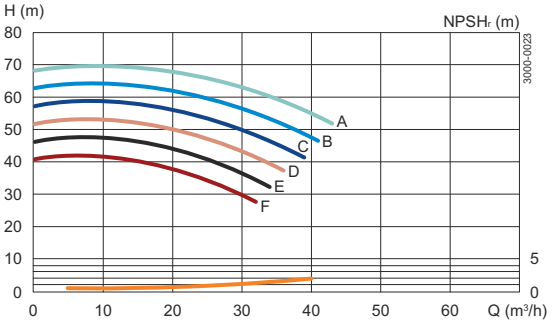
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-35, 50 Hz

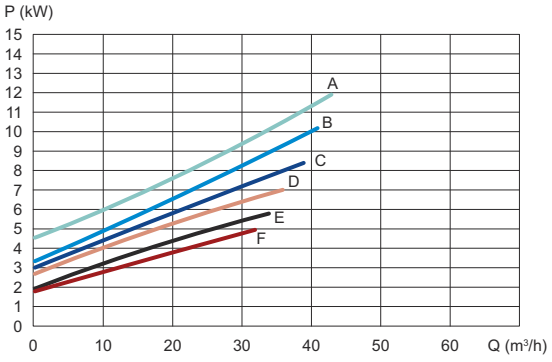
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

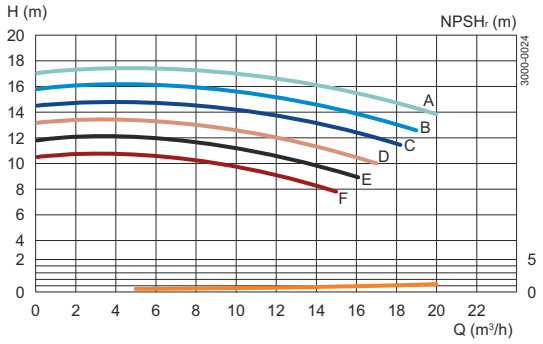


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

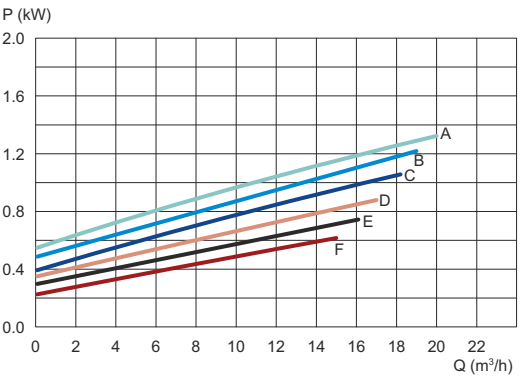
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



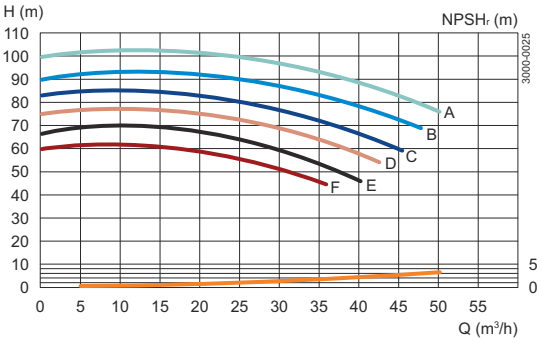
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHex / LKHex UltraPure-35, 60 Hz

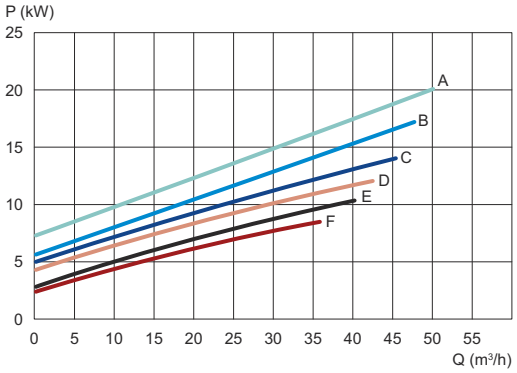
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 21 kW, 3535 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-17kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

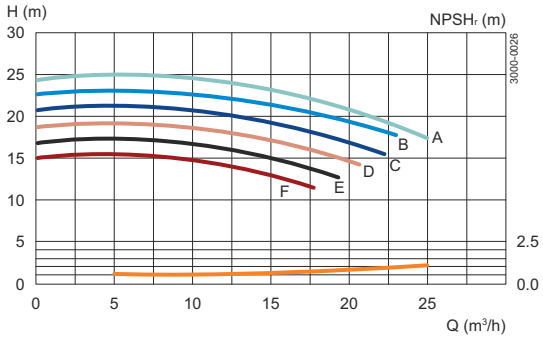


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

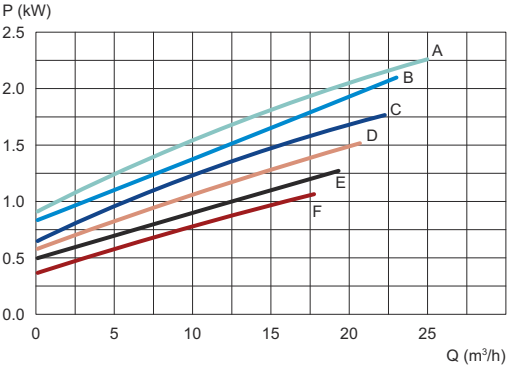
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



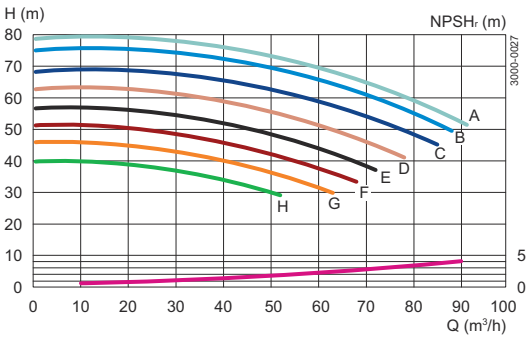
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHex / LKHex UltraPure-40, 50 Hz

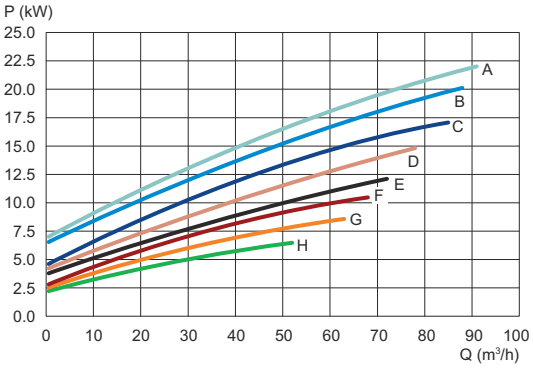
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with:
- 3% for 11–18.5 kW
- 5% for 7.5 kW

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

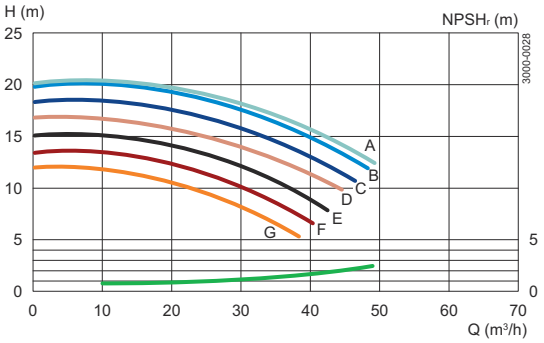


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

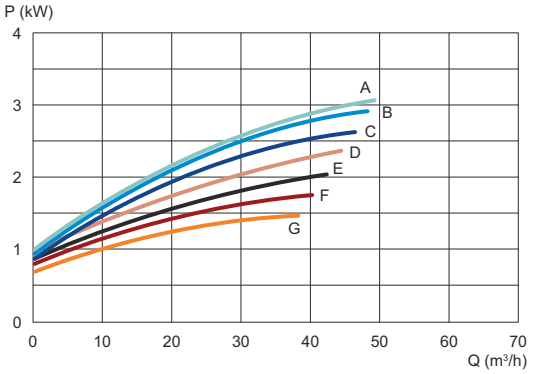
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	180 mm
Pump inlet, dia.:	Dia.: 76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz. For smaller motors,reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190



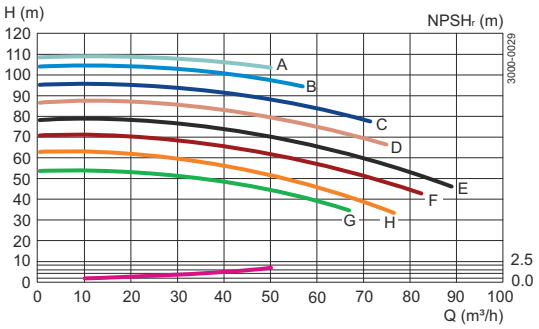
A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190

LKHex / LKHex UltraPure-40, 60 Hz

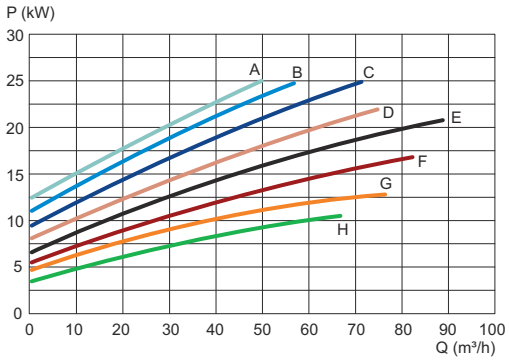
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

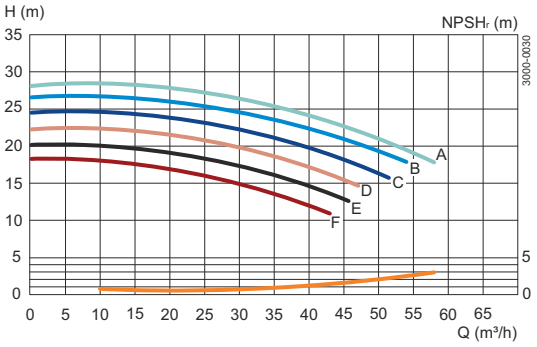


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

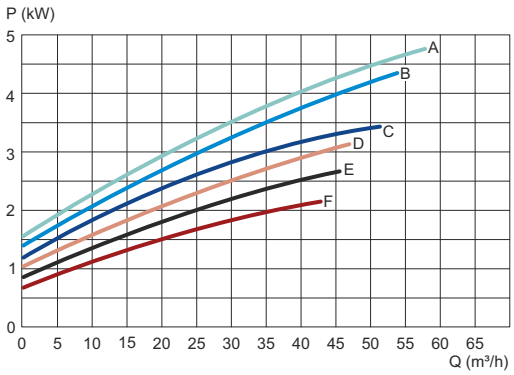
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	190 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190



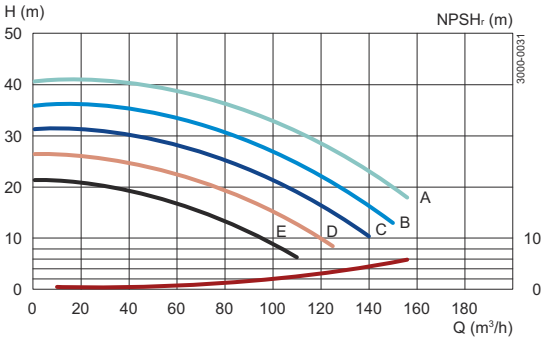
A = 235 D = 210
B = 230 E = 200
C = 220 F = 190

LKHex / LKHex UltraPure-45, 50 Hz

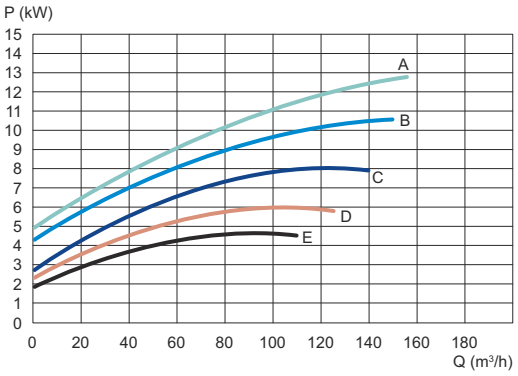
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

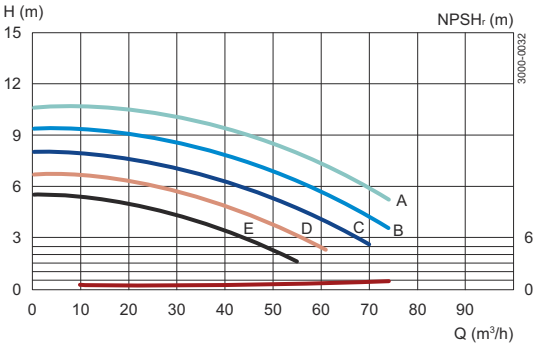


A = 178 D = 150
B = 170 E = 140
C = 160

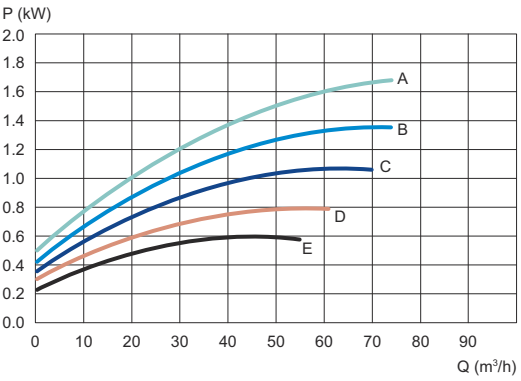
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



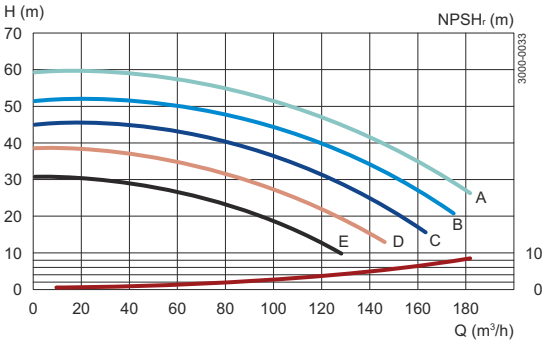
A = 178 D = 150
B = 170 E = 140
C = 160

LKHex / LKHex UltraPure-45, 60Hz

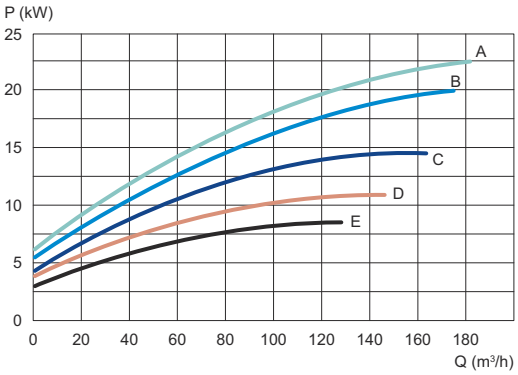
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

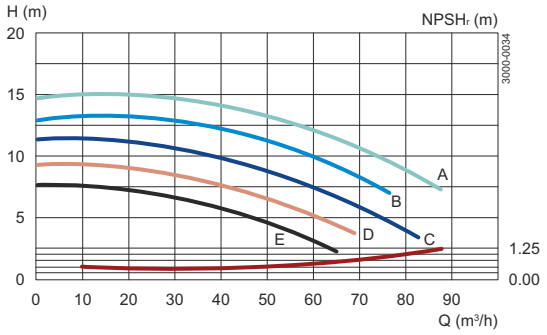


A = 178 D = 150
B = 170 E = 140
C = 160

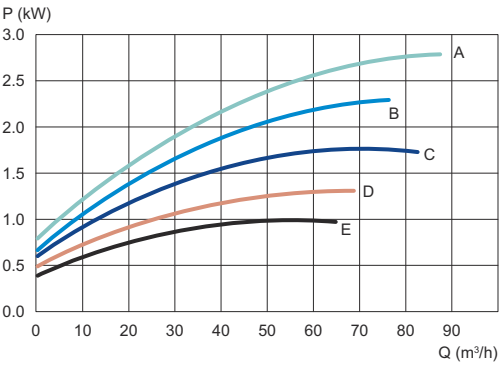
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



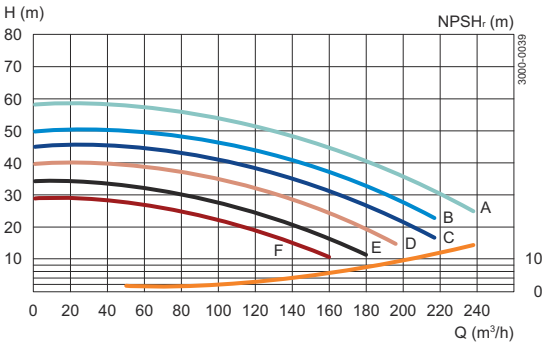
A = 178 D = 150
B = 170 E = 140
C = 160

LKHex / LKHex UltraPure-60, 50 Hz

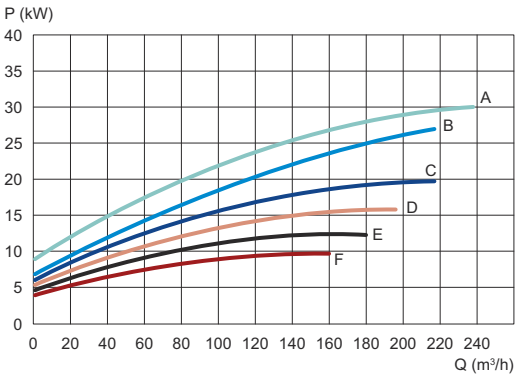
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 30 kW, 2955 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
3% for 11 - 22 kW.
6% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

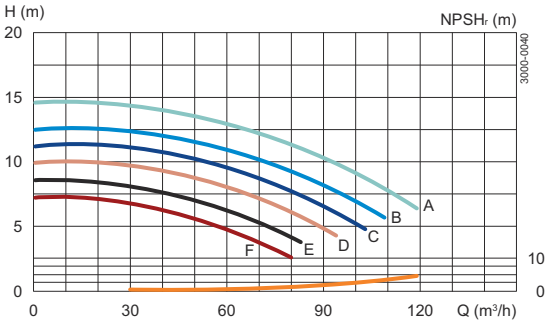


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

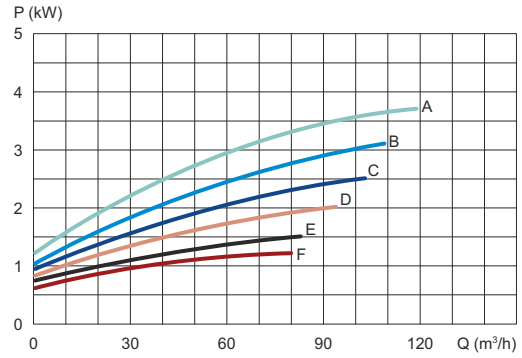
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



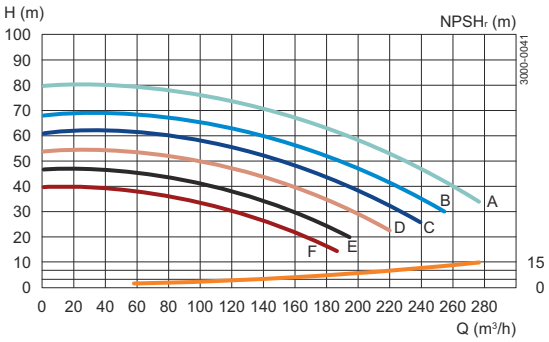
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-60, 60Hz

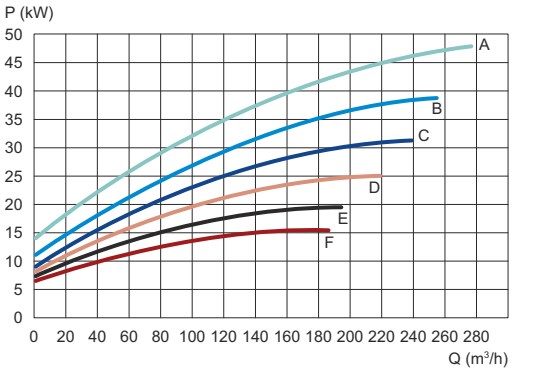
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 35 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

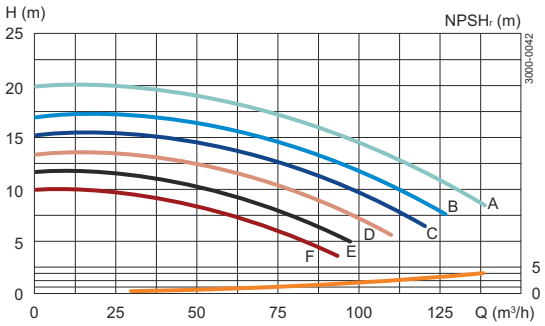


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

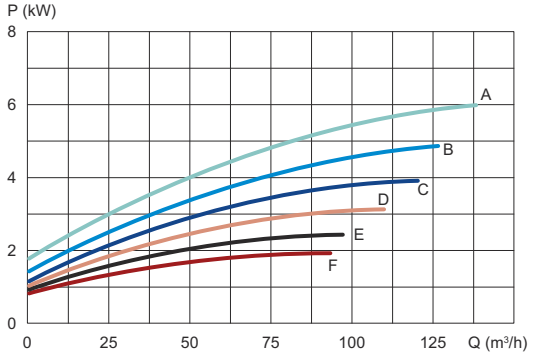
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



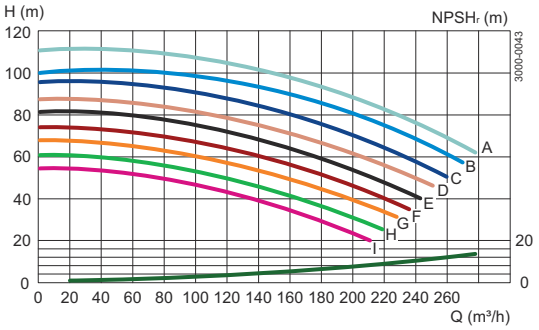
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHex / LKHex UltraPure-70, 50 Hz

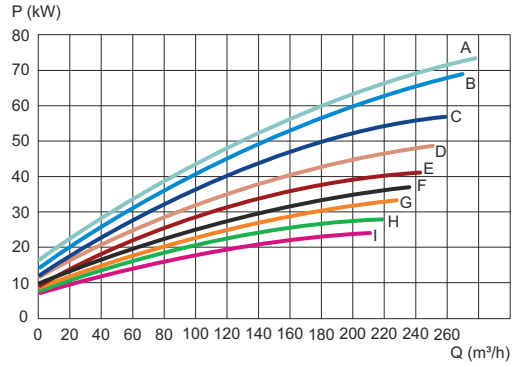
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 2%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

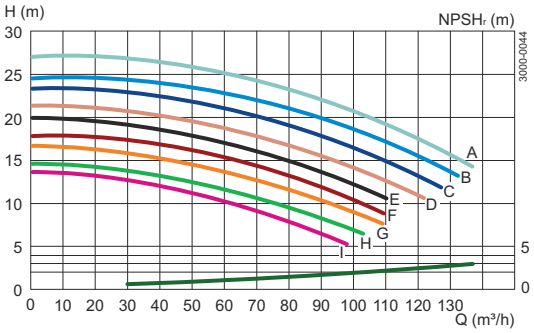


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

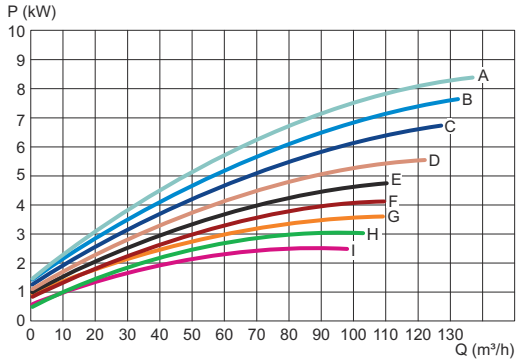
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 1460 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200



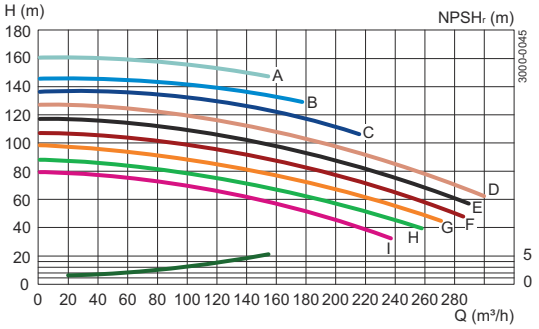
A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

LKHex / LKHex UltraPure-70, 60 Hz

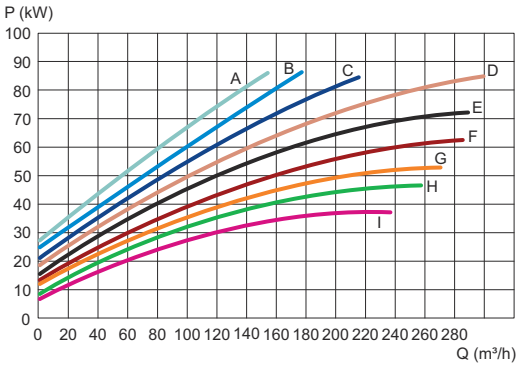
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 86 kW, 3565 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

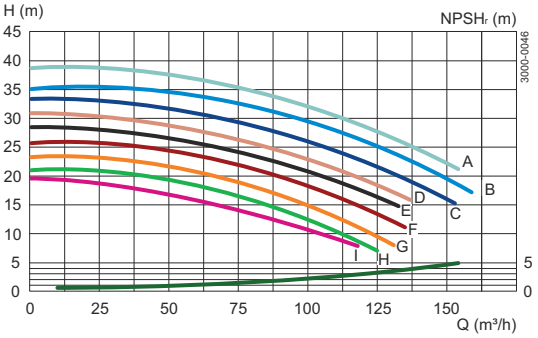


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

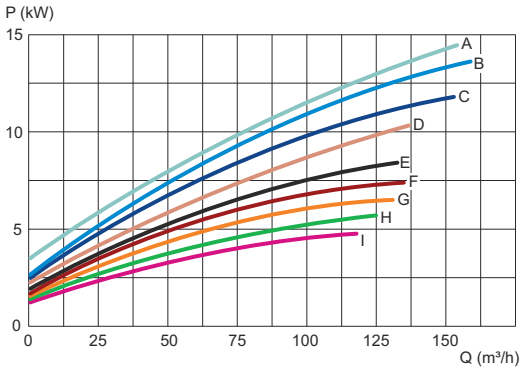
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 17 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200

Alfa Laval LKH Multi—Stage

Performance curves

LKH-110 Multi-Stage, 50 Hz/60 Hz

	50Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%.
Impeller, LKH-112:	2 x dia.: 163 mm
Impeller, LKH-113:	3 x dia.: 163 mm
Impeller, LKH-114:	4 x dia.: 163 mm
Pump inlet, Dia.:	51 mm, DN 50
Pump outlet, Dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

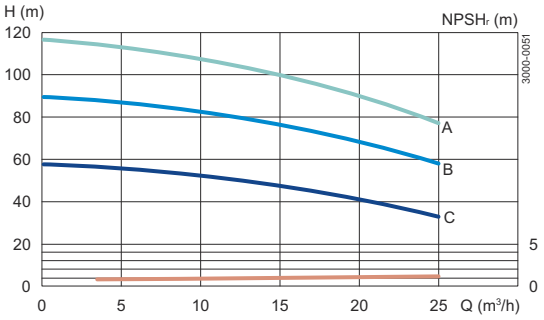
Note! The curves refer to max. motor:
LKH-112, 5.5 kW 2855 rpm. asynchr, 50 Hz.
LKH-113, 11 kW 2930 rpm. asynchr, 50 Hz.
LKH-114, 18.5 kW 2920 rpm. asynchr, 50 Hz.
For smaller motors, reduce head (H) by: 3%.

DO NOT FORGET THE SAFETY FACTOR

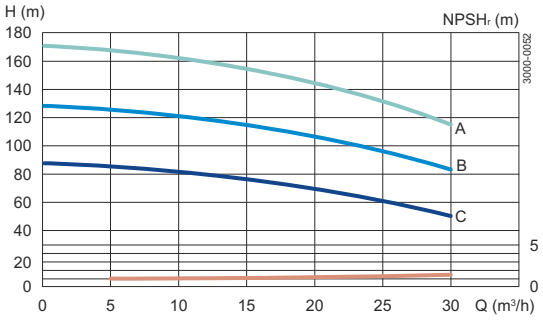
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%.
LKH-112:	2 x dia.: 163 mm
LKH-113:	3 x dia.: 163 mm
LKH-114:	4 x dia.: 163 mm
Pump inlet, Dia.:	51 mm, DN 50
Pump outlet, Dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor:
LKH-112, 12.5 kW 3515 rpm. asynchr, 60 Hz.
LKH-113, 17 kW 3505 rpm. asynchr, 60 Hz.
LKH-114, 21 kW 3510 rpm. asynchr, 60 Hz.
For smaller motors, reduce head (H) by: 3%

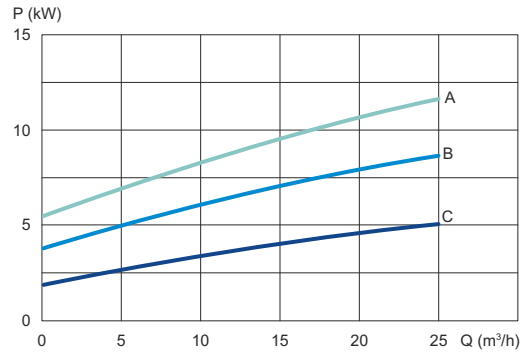
DO NOT FORGET THE SAFETY FACTOR



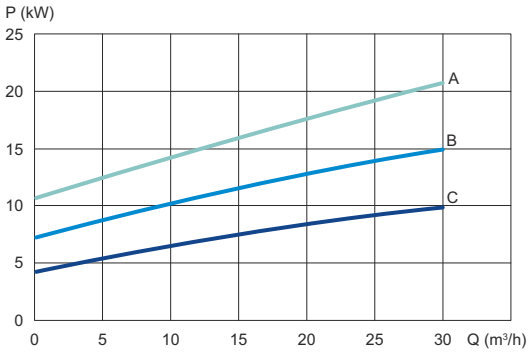
A = LKH-114
B = LKH-113
C = LKH-112



A = LKH-114
B = LKH-113
C = LKH-112



A = LKH-114
B = LKH-113
C = LKH-112



A = LKH-114
B = LKH-113
C = LKH-112

LKH-120/P Multi-Stage, 50/60 Hz

	50Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%.
Impeller, LKH-122/P:	206 mm
Impeller, LKH-123/P:	206 mm
Impeller, LKH-124/P:	206 mm
Pump inlet, Dia.:	76 mm, DN 80
Pump outlet, Dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

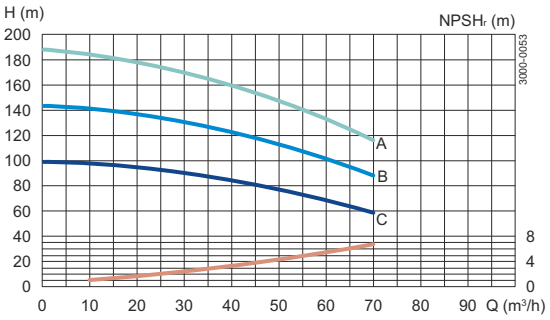
Note! The curves refer to max. motor:
LKH-122/P, 22 kW, 2950 rpm. asynchr., 50 Hz
LKH-123/P, 37 kW 2940 rpm. asynchr., 50 Hz
LKH-124/P, 45 kW 2955 rpm. aysnchr., 50 Hz
For smaller motors, reduce head (H) by 3%
For inlet pressure > 10 bar, reduce head (H) by 5%

DO NOT FORGET THE SAFETY FACTOR

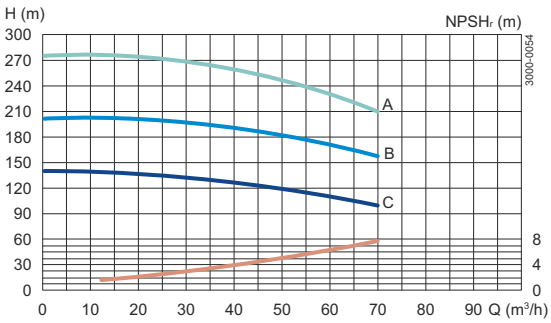
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%.
LKH-112:	206 mm
LKH-113:	206 mm
LKH-114:	206 mm
Pump inlet, Dia.:	76 mm, DN 80
Pump outlet, Dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor:
LKH-122/P, 37 kW, 3510 rpm. asynchr., 60 Hz
LKH-123/P, 55 kW, 3540 rpm. asynchr., 60 Hz
LKH-124/P, 75 kW 3570 rpm. aysnchr., 60 Hz
For smaller motors, reduce head (H) by: 3%
For inlet pressure > 10 bar, reduce head (H) by 5%

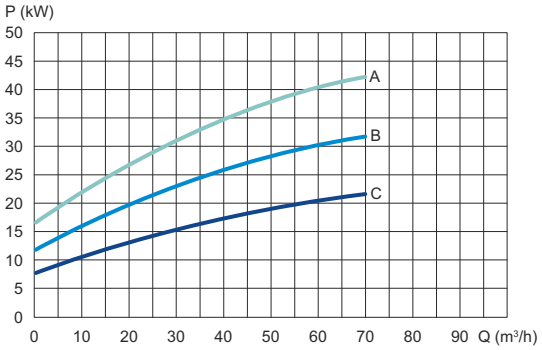
DO NOT FORGET THE SAFETY FACTOR



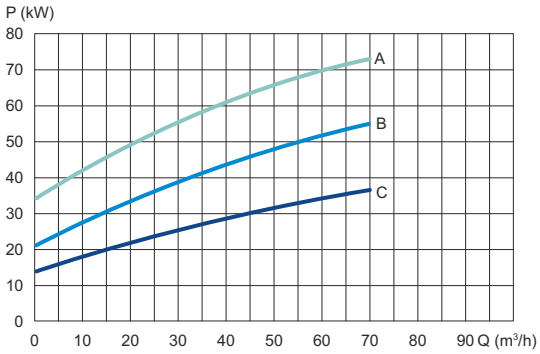
A = LKH-124/P
B = LKH-123/P
C = LKH-122/P



A = LKH-124/P
B = LKH-123/P
C = LKH-122/P



A = LKH-124/P
B = LKH-123/P
C = LKH-122/P



A = LKH-124/P
B = LKH-123/P
C = LKH-122/P

Alfa Laval LKHPF

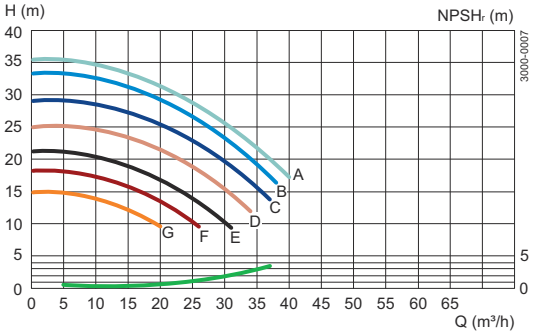
Performance curves

LKHPF-10, 50 Hz

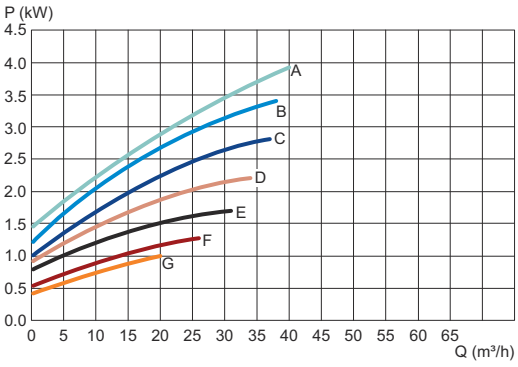
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2840 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

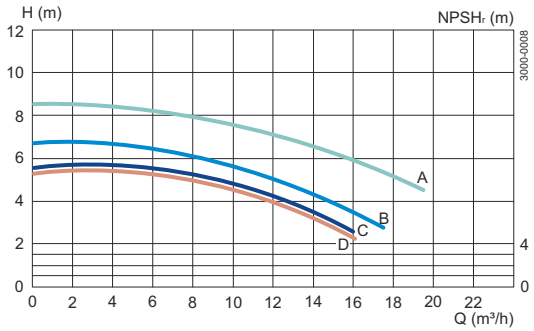


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

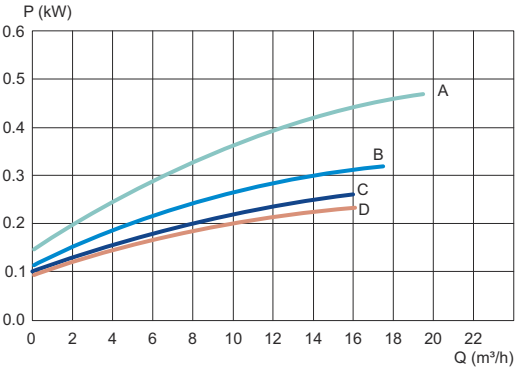
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	130 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 C = 140
B = 150 D = 130



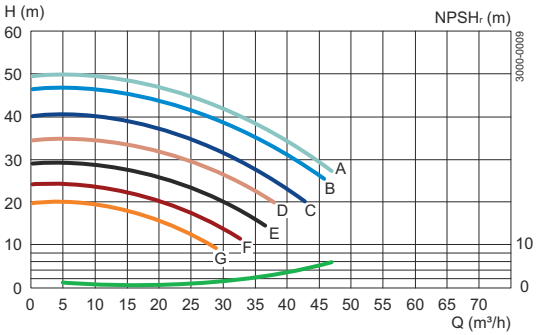
A = 163 C = 140
B = 150 D = 130

LKHPF-10, 60Hz

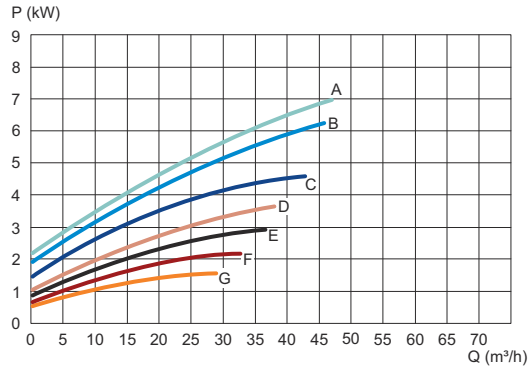
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 8.6 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

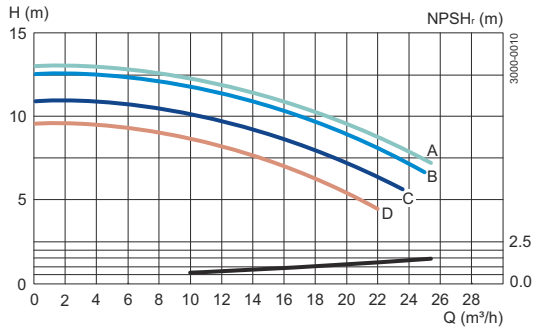


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

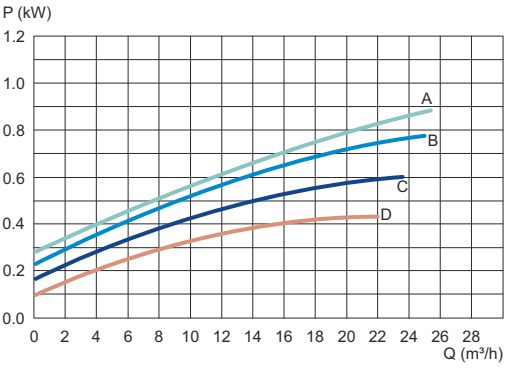
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140
B = 160
C = 150



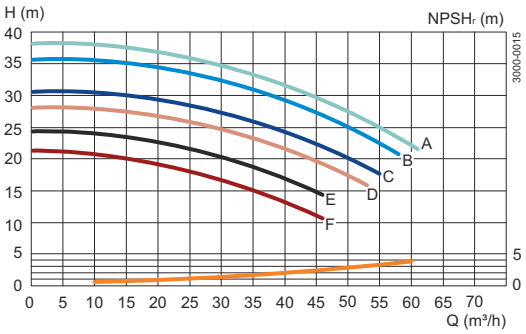
A = 163 D = 140
B = 160
C = 150

LKHPF-20, 50 Hz

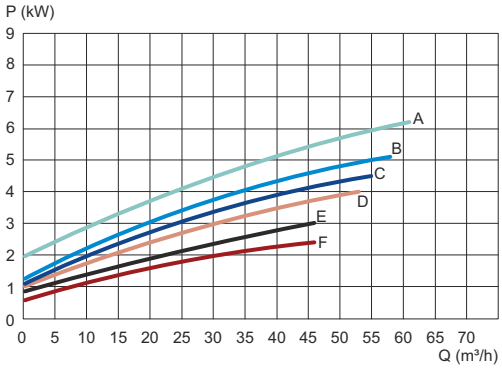
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

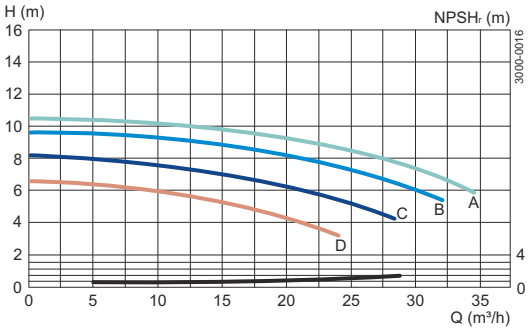


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

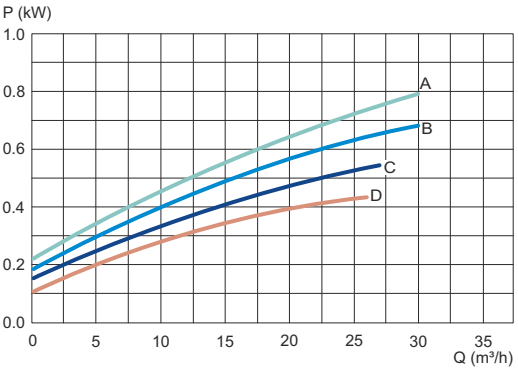
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



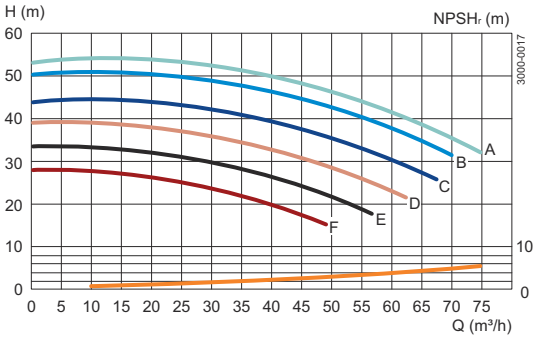
A = 165 D = 140
B = 160
C = 150

LKHPF-20, 60 Hz

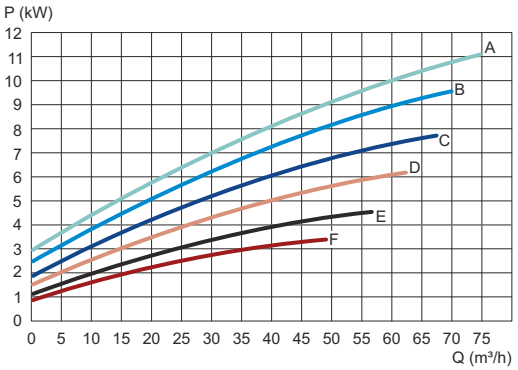
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 12.5 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

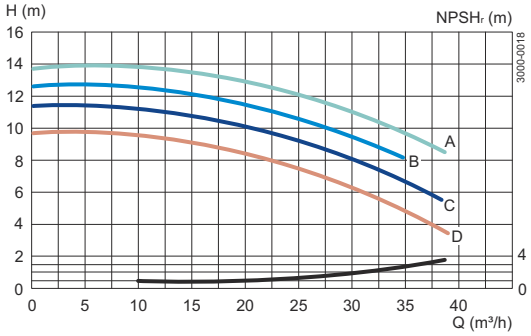


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

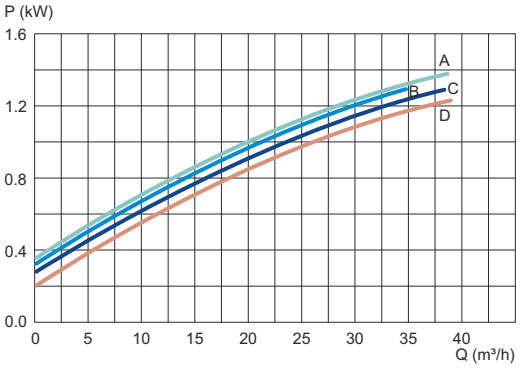
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



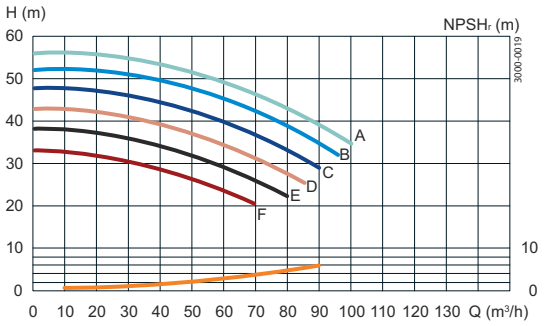
A = 165 D = 140
B = 160
C = 150

LKHPF-25, 50 Hz

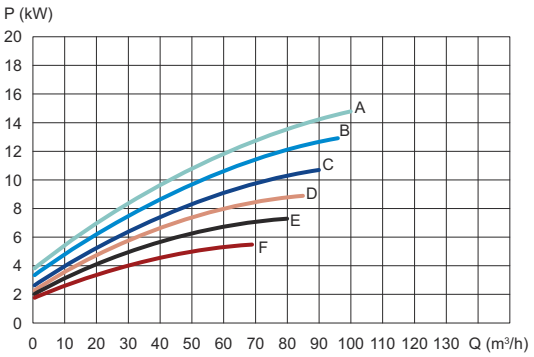
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20°C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with 3%

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

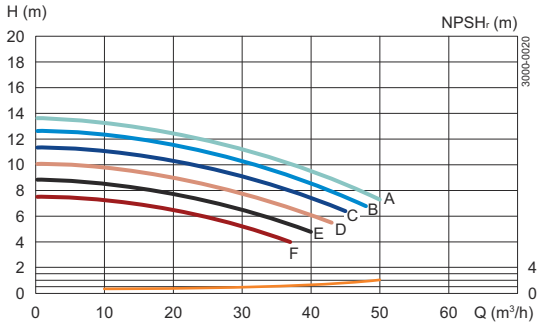


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

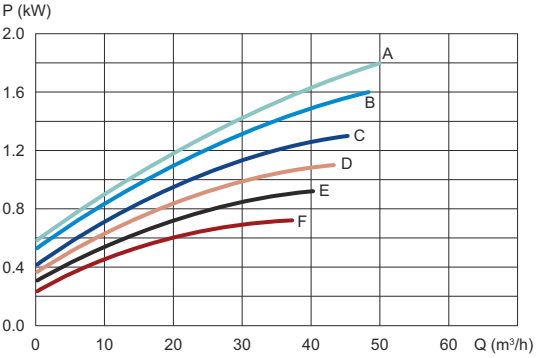
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.2 kW, 1430 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



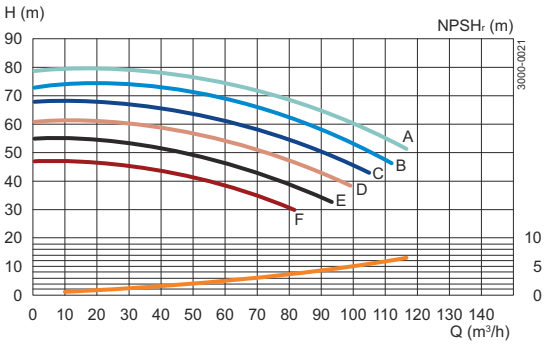
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHPF-25, 60 Hz

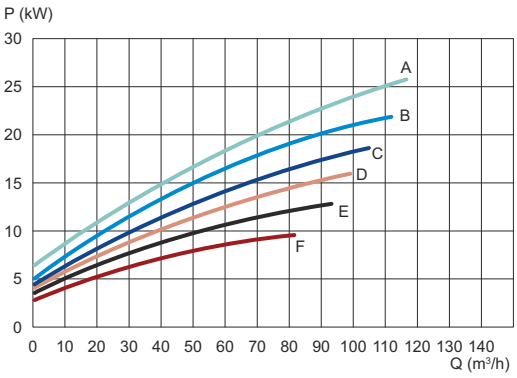
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

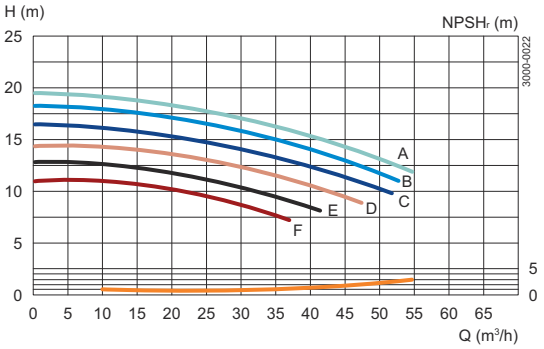


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

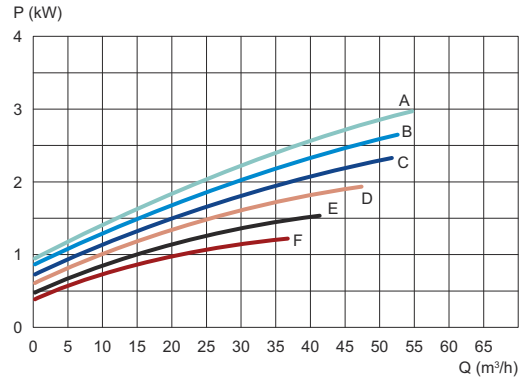
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



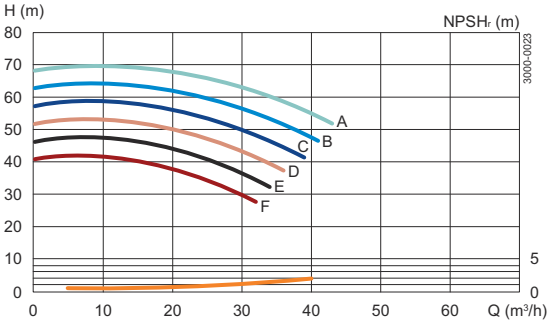
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHPF-35, 50 Hz

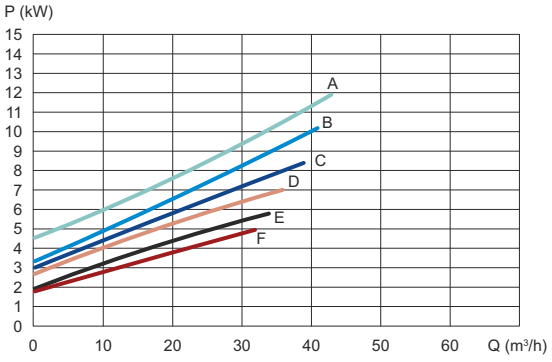
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

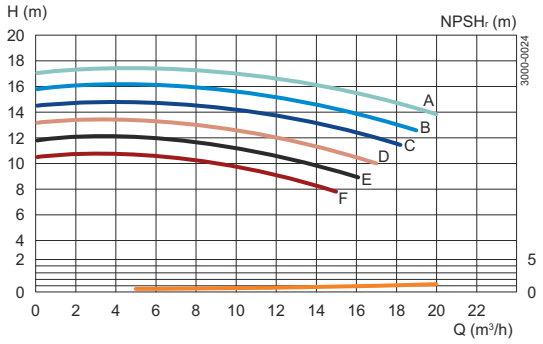


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

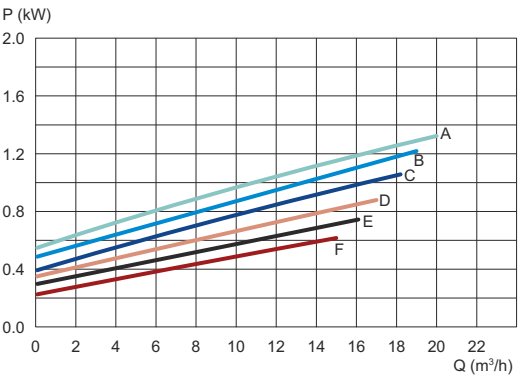
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



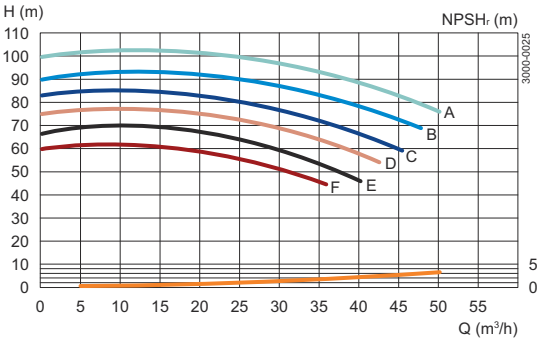
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHPF-35, 60 Hz

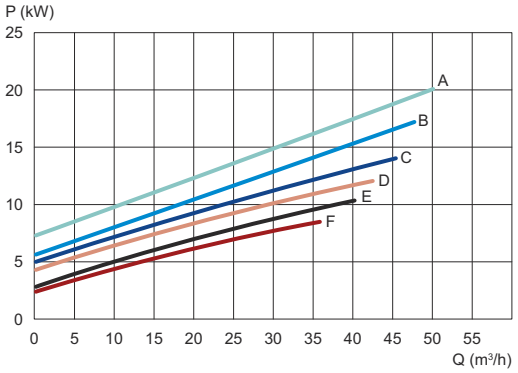
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 21 kW, 3535 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-17kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

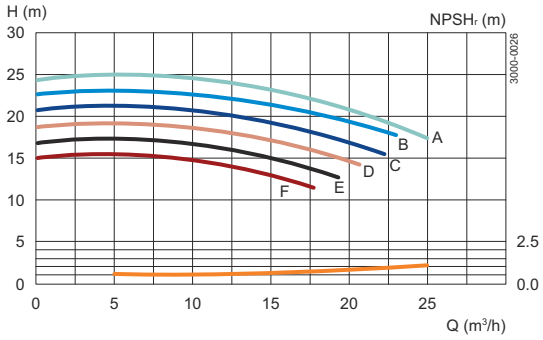


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

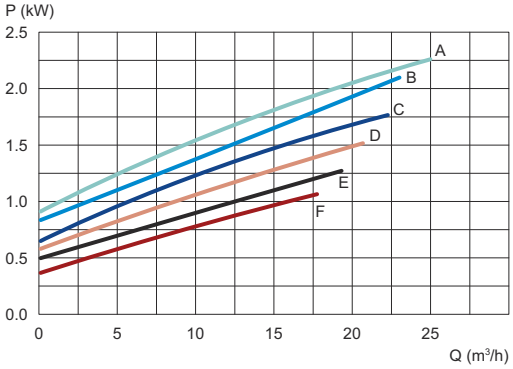
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



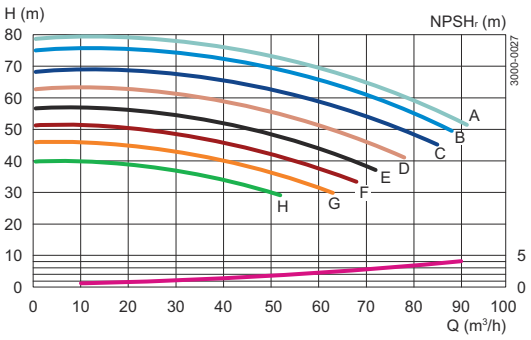
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHPF-40, 50 Hz

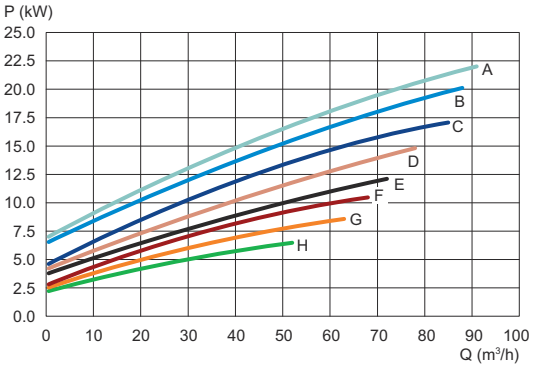
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with:
- 3% for 11–18.5 kW
- 5% for 7.5 kW

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

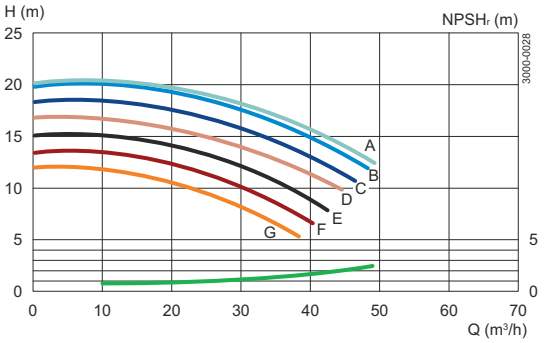


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

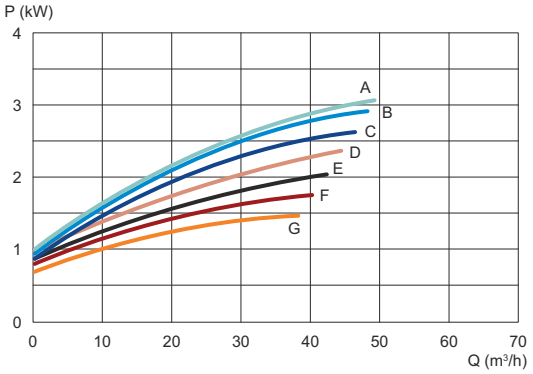
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	180 mm
Pump inlet, dia.:	Dia.: 76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz. For smaller motors,reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190



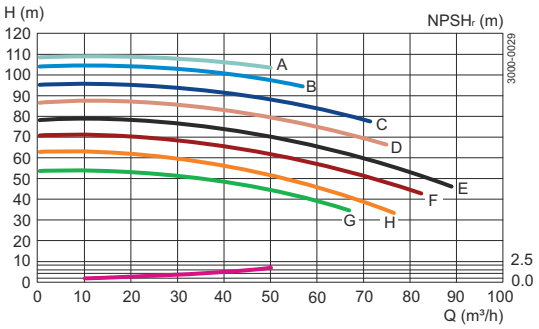
A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190

LKHPF-40, 60 Hz

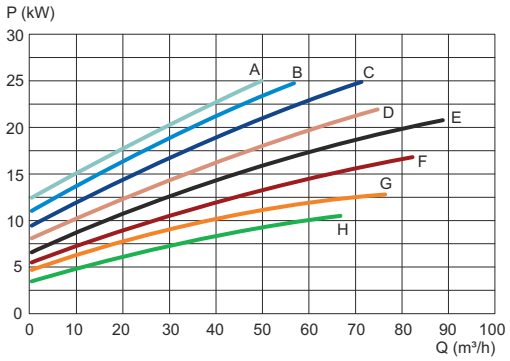
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

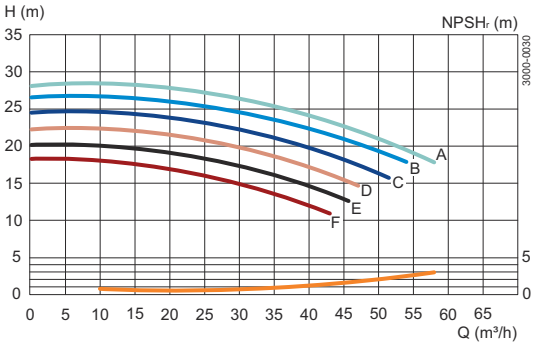


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

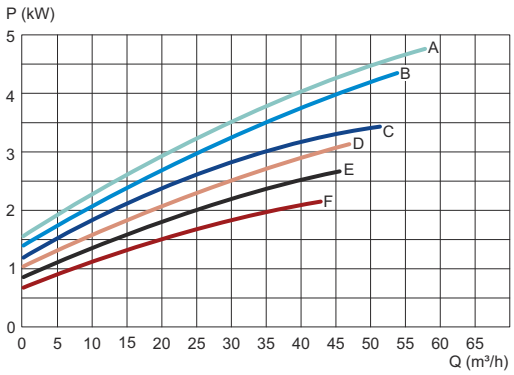
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	190 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190

LKHPF-45, 50 Hz

Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

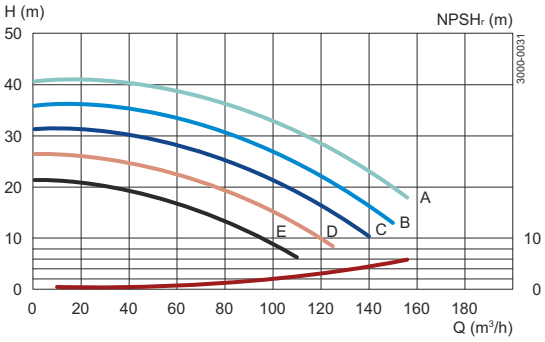
Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR

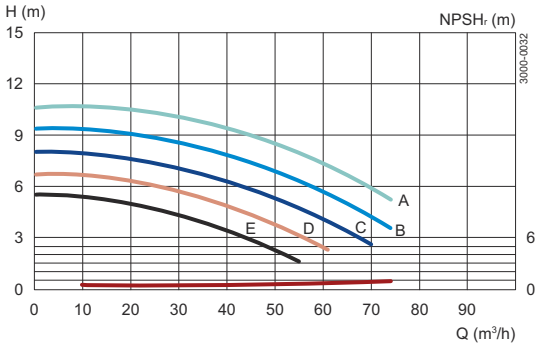
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

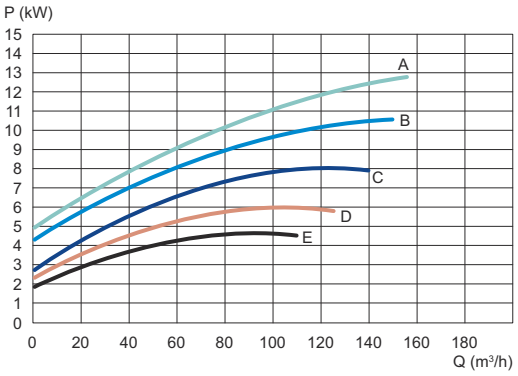
DO NOT FORGET THE SAFETY FACTOR



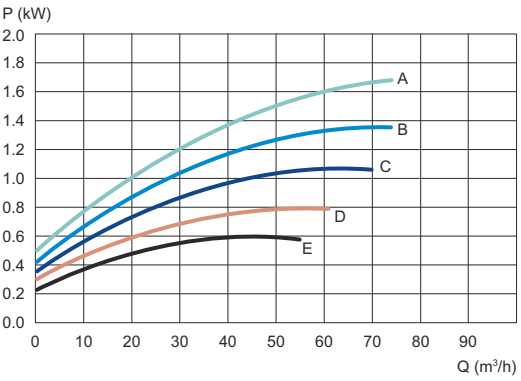
A = 178 D = 150
B = 170 E = 140
C = 160



A = 178 D = 150
B = 170 E = 140
C = 160



A = 178 D = 150
B = 170 E = 140
C = 160



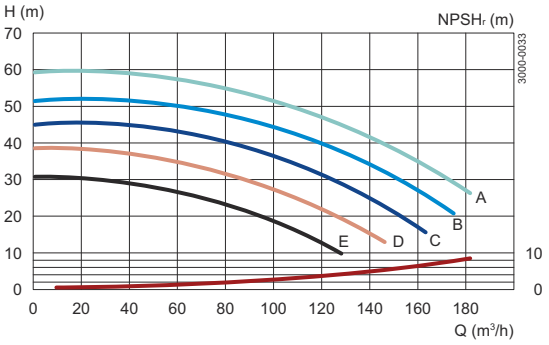
A = 178 D = 150
B = 170 E = 140
C = 160

LKHPF-45, 60Hz

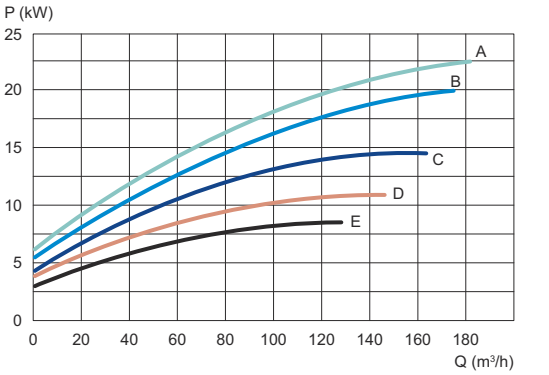
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

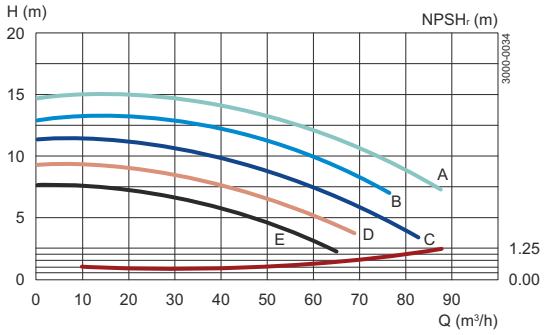


A = 178 D = 150
B = 170 E = 140
C = 160

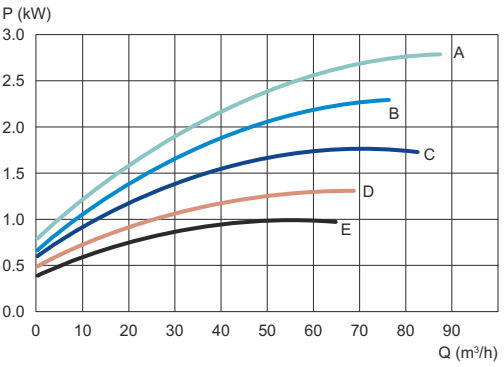
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



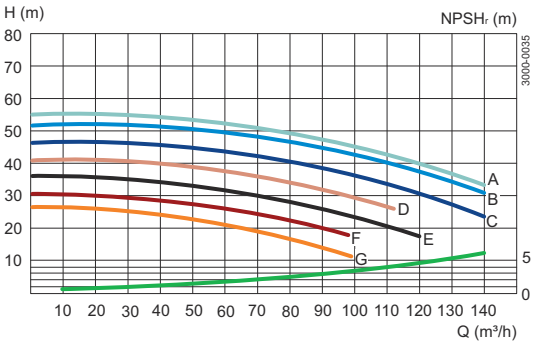
A = 178 D = 150
B = 170 E = 140
C = 160

LKHPF-50, 50 Hz

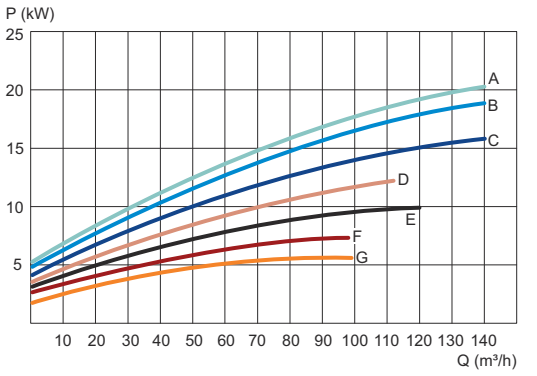
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3% for 11 - 18.5 kW.
- 5% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

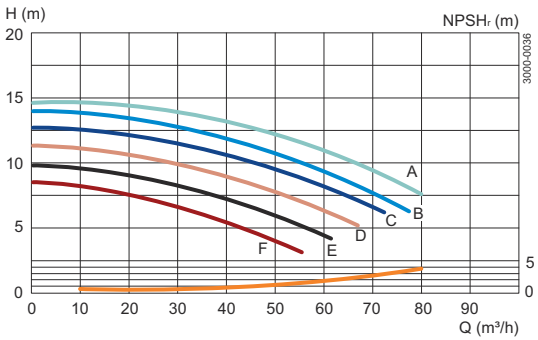


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

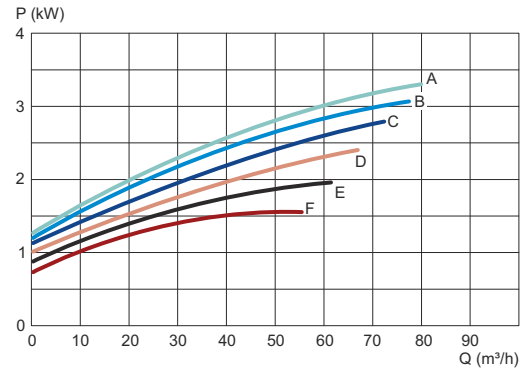
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



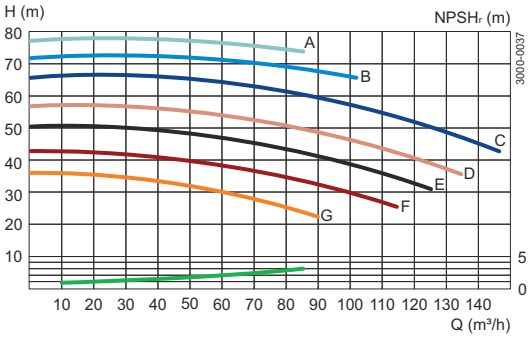
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHPF-50, 60Hz

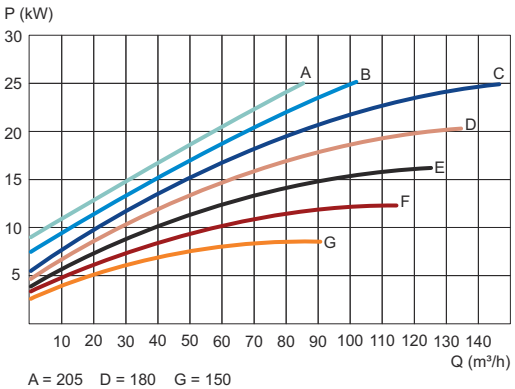
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	150 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

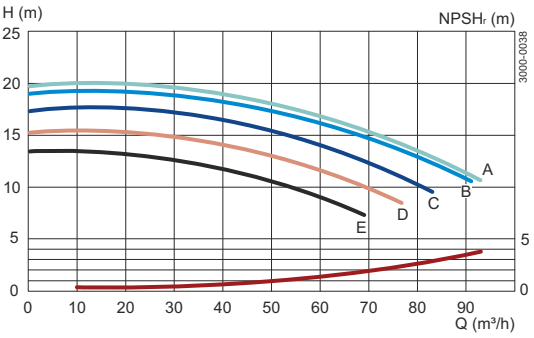


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

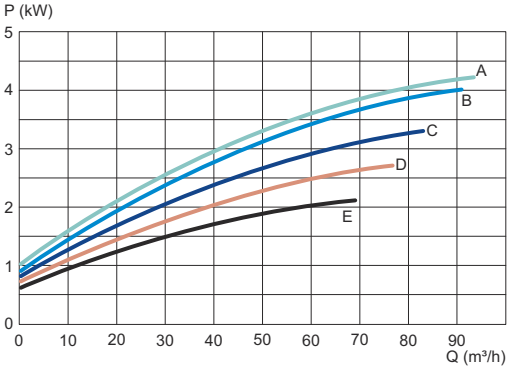
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4.5 kW, 1750 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190



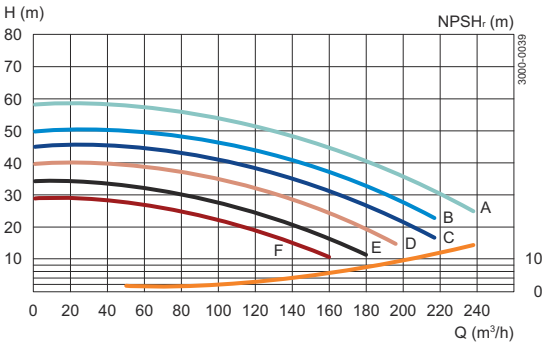
A = 205 D = 180
B = 200 E = 170
C = 190

LKHPF-60, 50 Hz

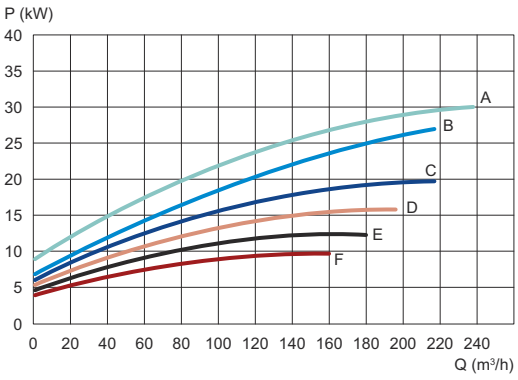
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 30 kW, 2955 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
3% for 11 - 22 kW.
6% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

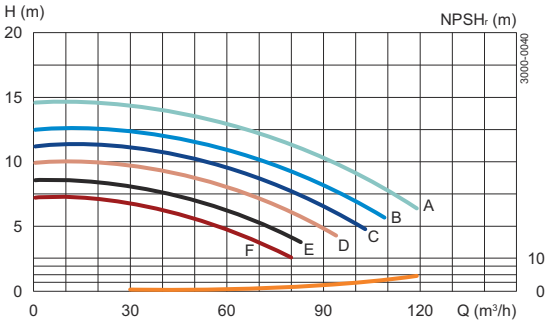


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

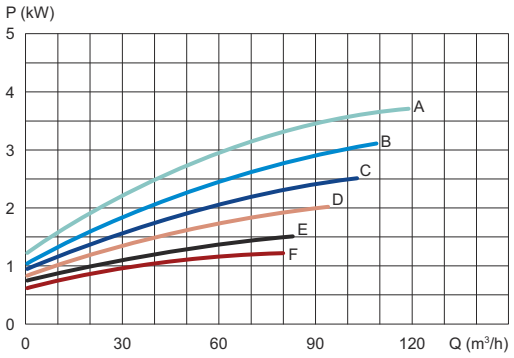
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



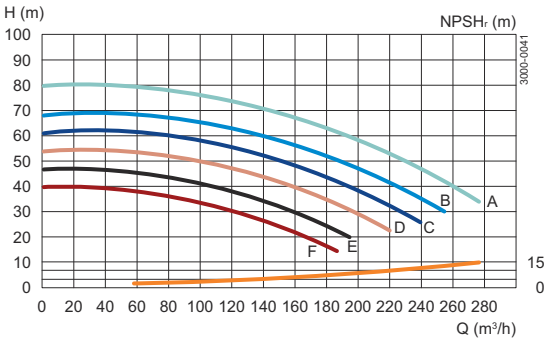
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHPF-60, 60Hz

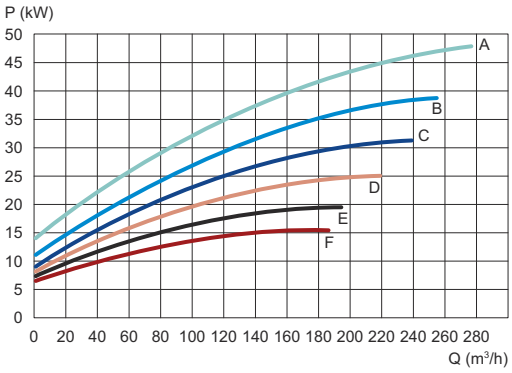
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 35 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

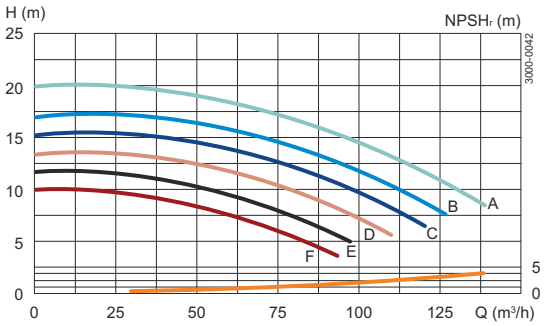


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

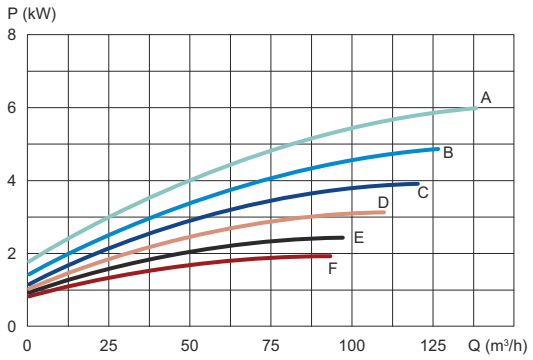
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



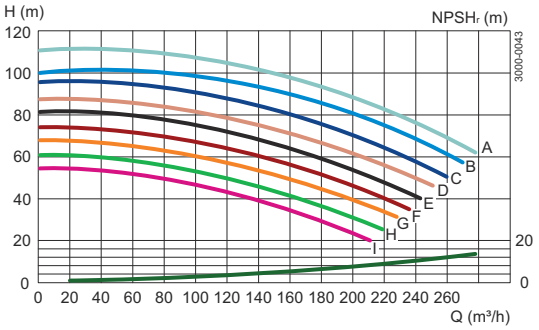
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHPF-70, 50 Hz

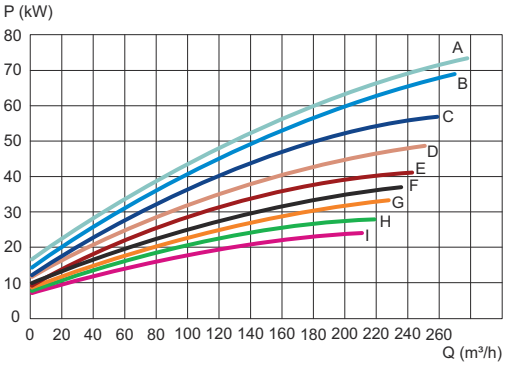
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 2%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

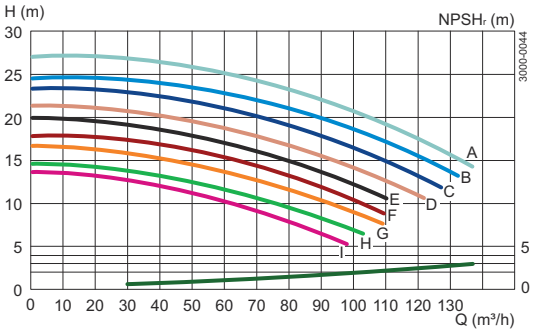


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

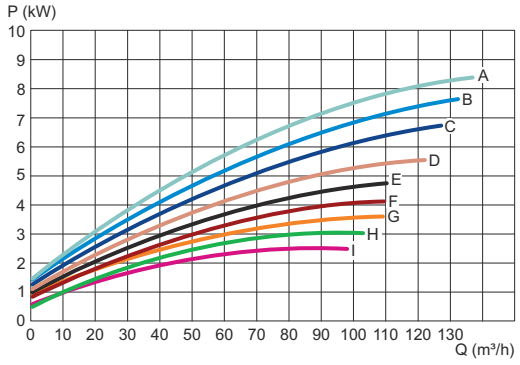
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 1460 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200



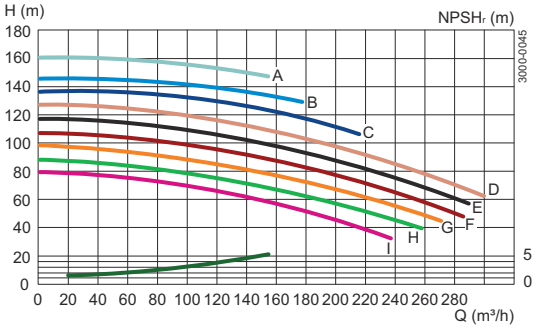
A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

LKHPF-70, 60 Hz

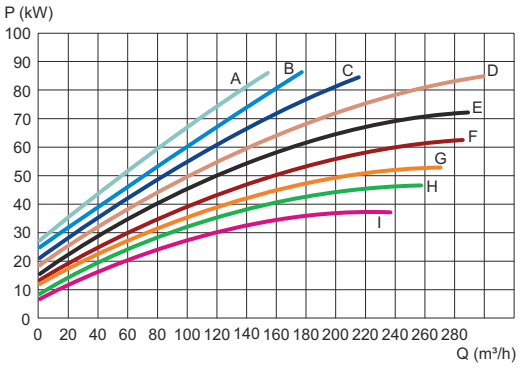
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 86 kW, 3565 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

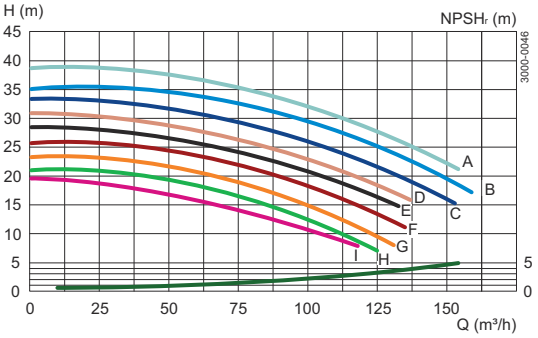


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

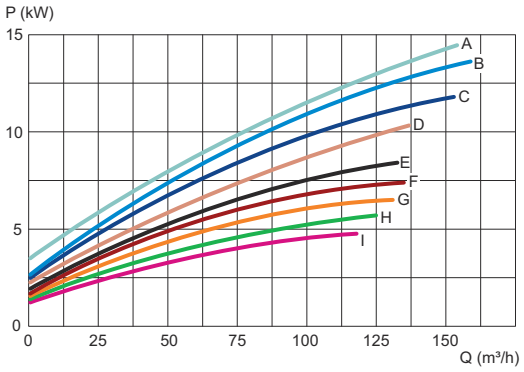
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 17 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200

Alfa Laval LKHI

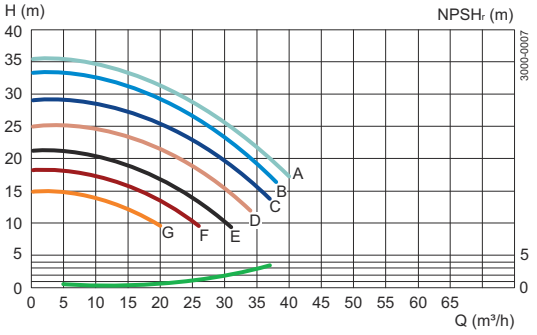
Performance curves

LKHI-10, 50 Hz

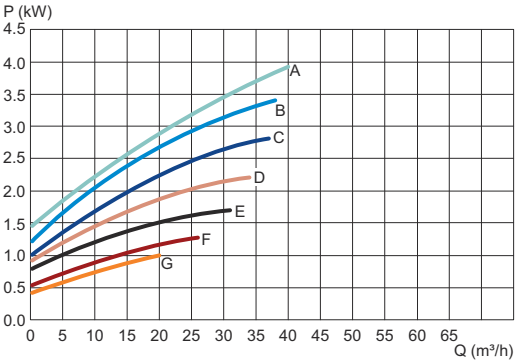
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2840 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

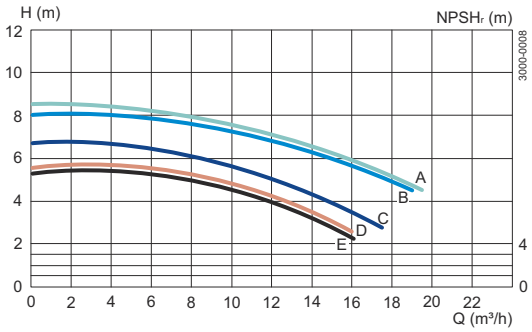


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

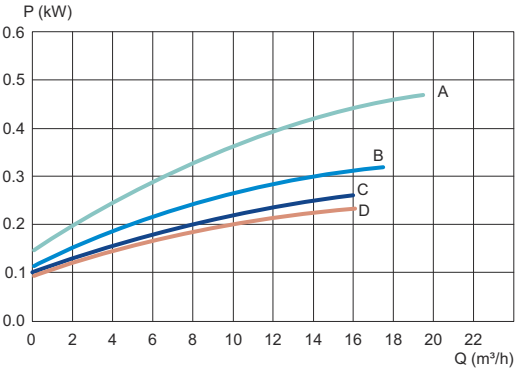
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	130 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 C = 140
B = 150 D = 130



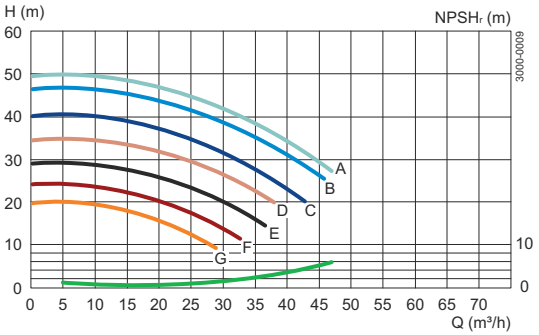
A = 163 C = 140
B = 150 D = 130

LKHI-10, 60Hz

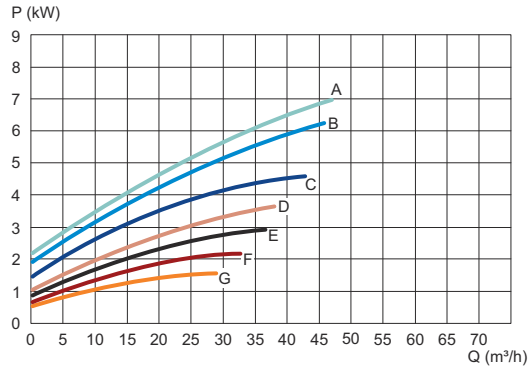
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 8.6 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

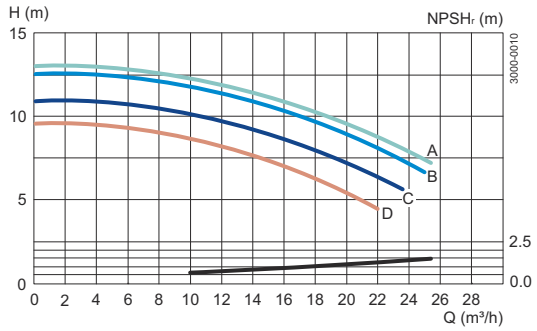


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

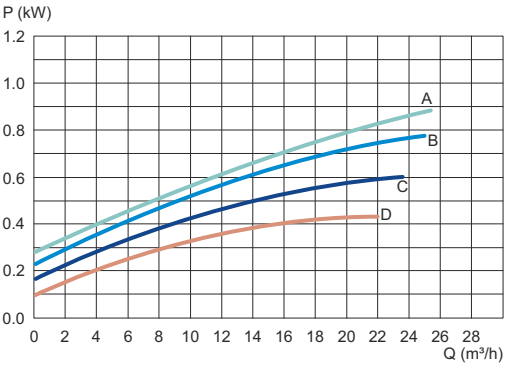
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140
B = 160
C = 150



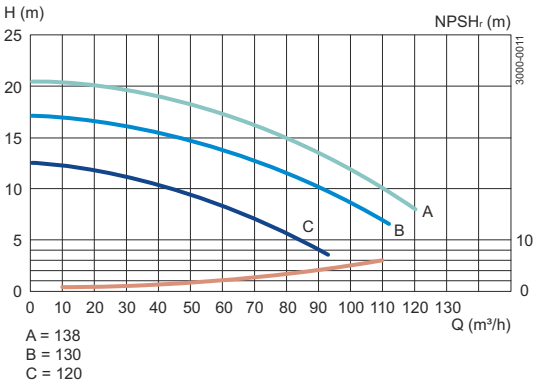
A = 163 D = 140
B = 160
C = 150

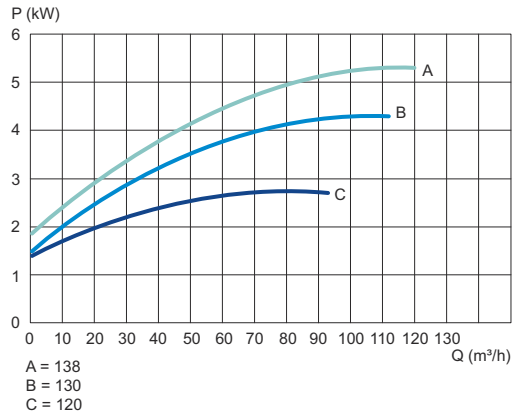
LKHI-15, 50 Hz

Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2865 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR

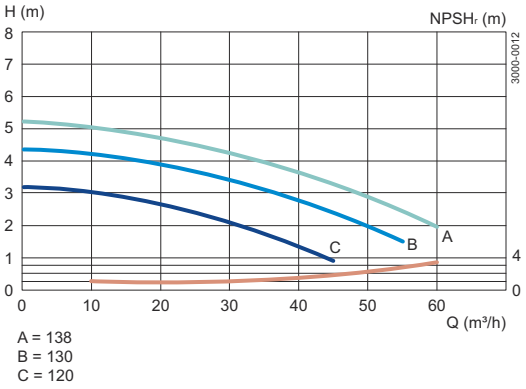


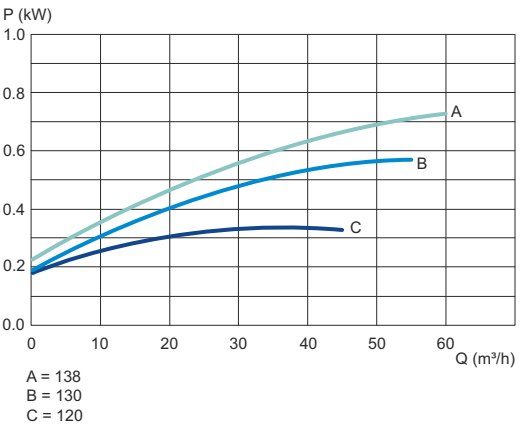


Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



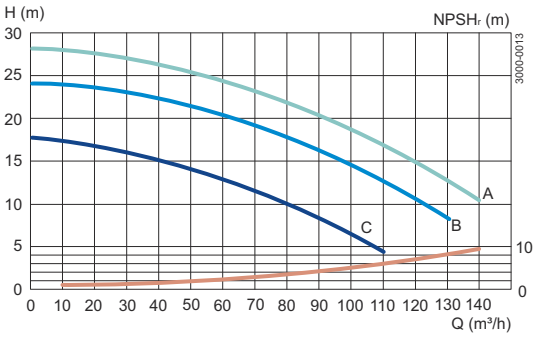


LKHI-15, 60 HZ

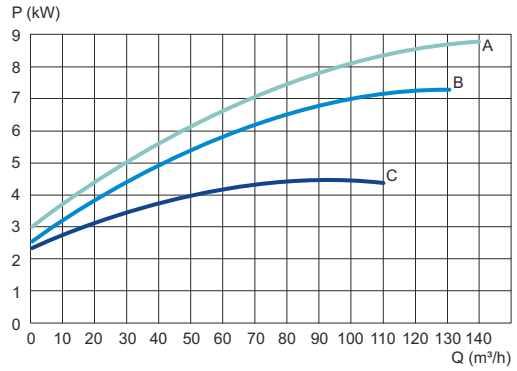
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2865 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120

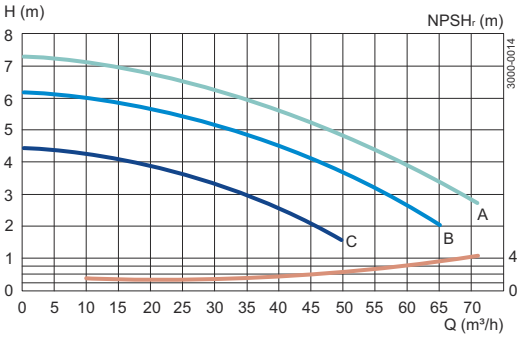


A = 138
B = 130
C = 120

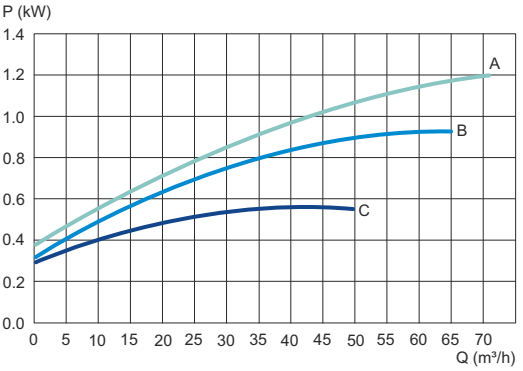
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120



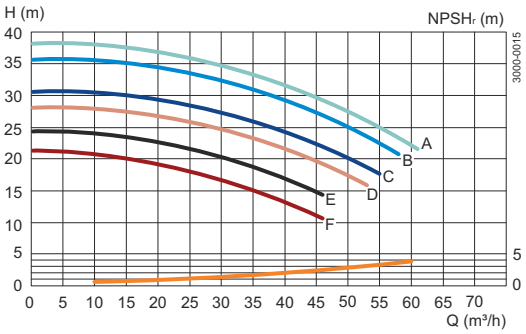
A = 138
B = 130
C = 120

LKHI-20, 50 Hz

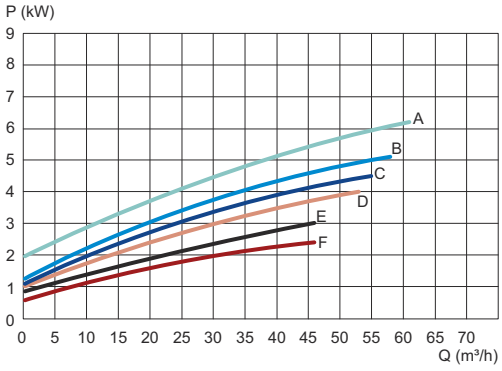
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

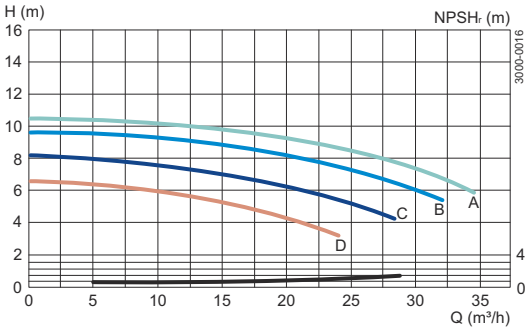


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

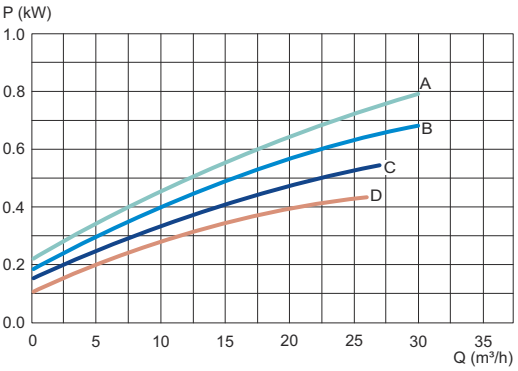
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



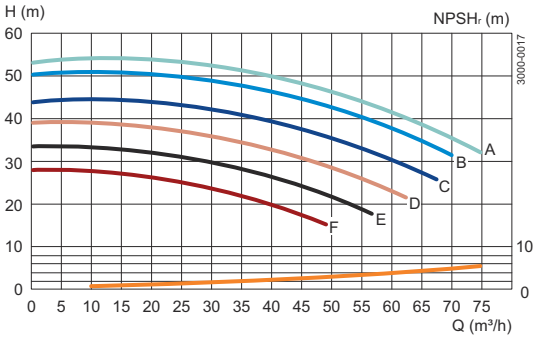
A = 165 D = 140
B = 160
C = 150

LKHI-20, 60 Hz

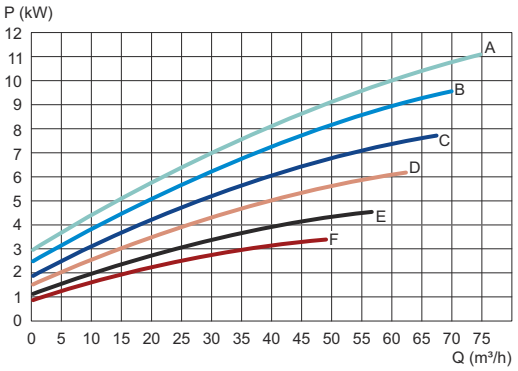
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 12.5 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

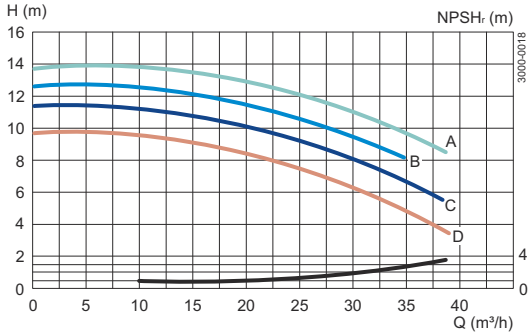


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

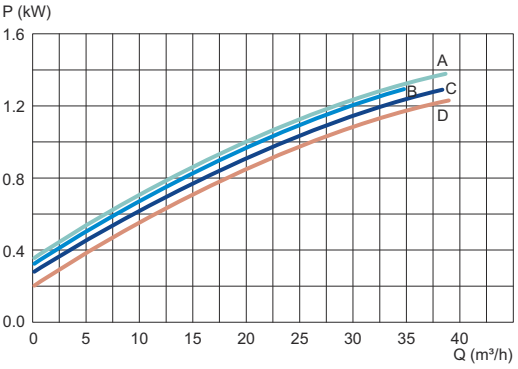
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



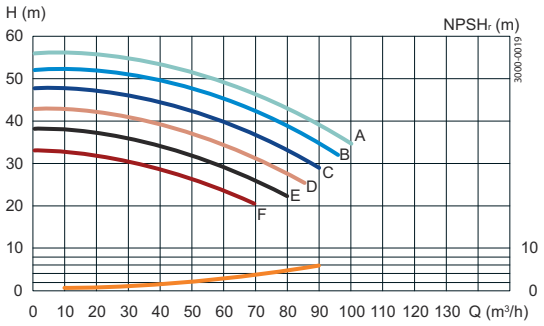
A = 165 D = 140
B = 160
C = 150

LKHI-25, 50 Hz

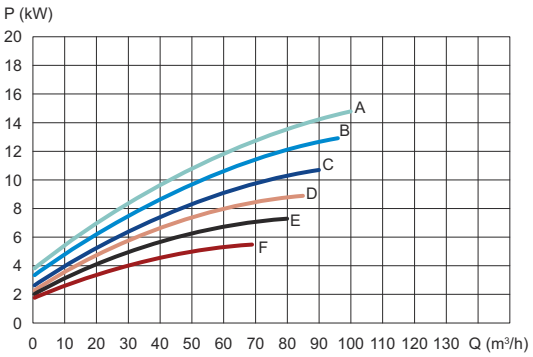
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20°C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with 3%

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

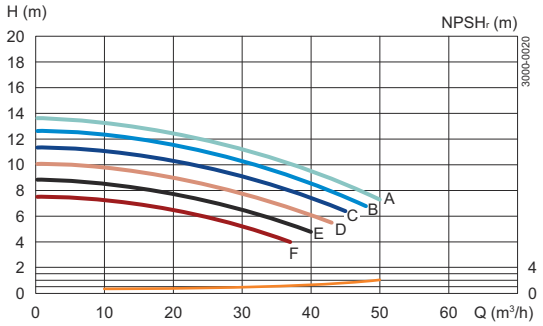


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

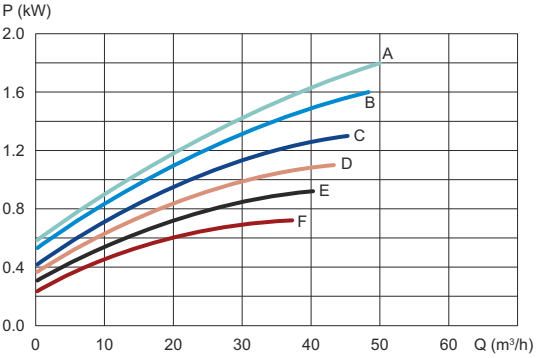
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.2 kW, 1430 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



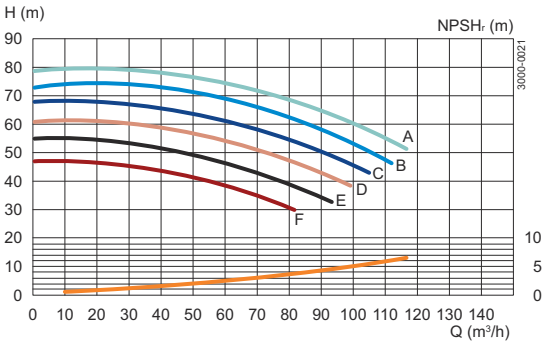
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHI-25, 60 Hz

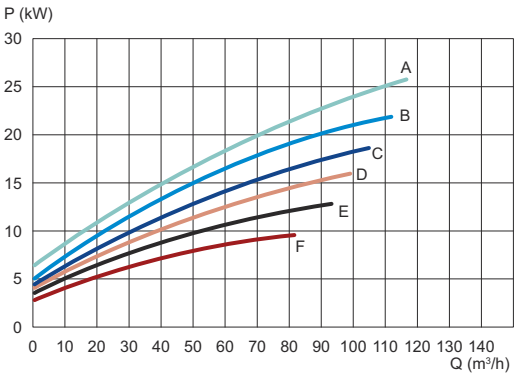
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

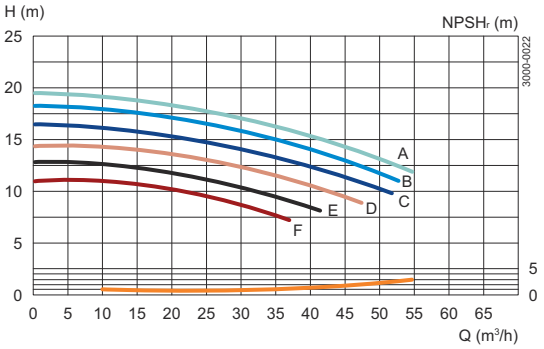


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

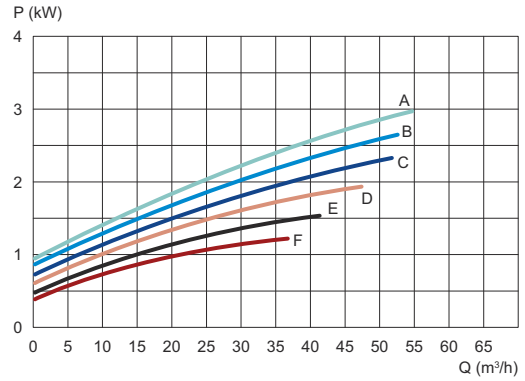
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



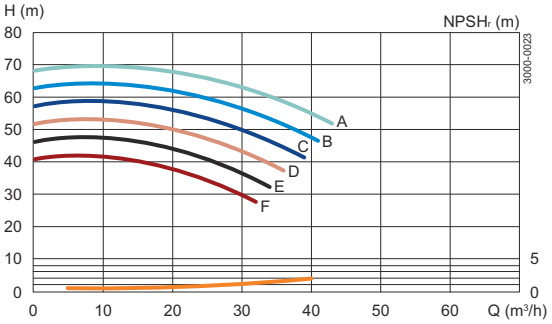
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHI-35, 50 Hz

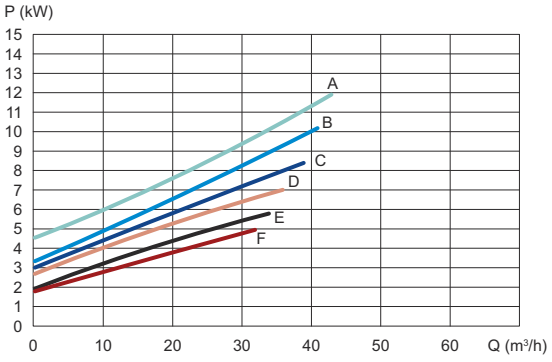
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

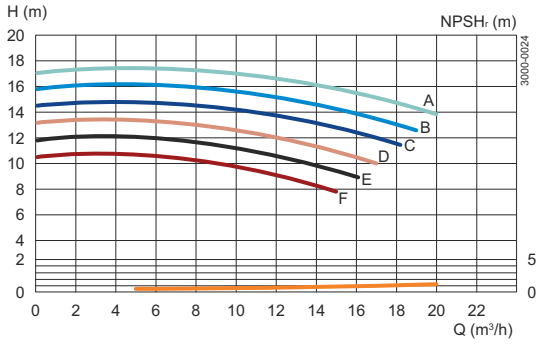


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

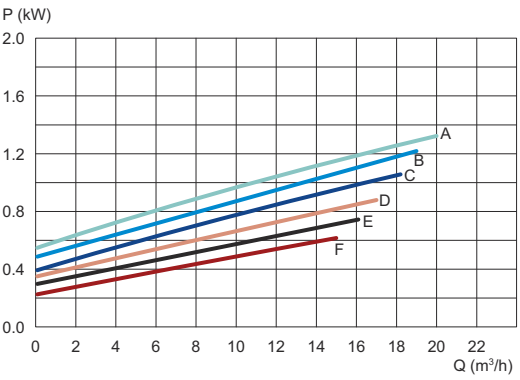
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



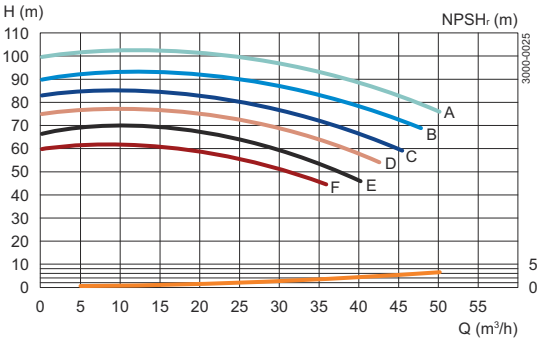
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHI-35, 60 Hz

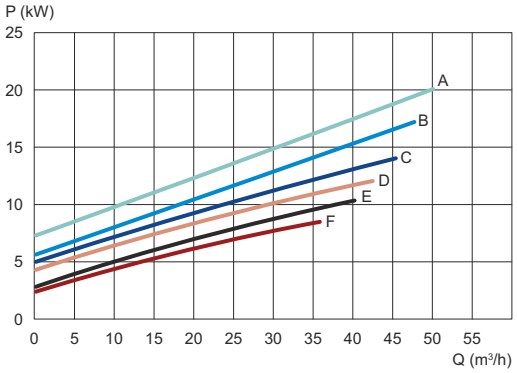
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 21 kW, 3535 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-17kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

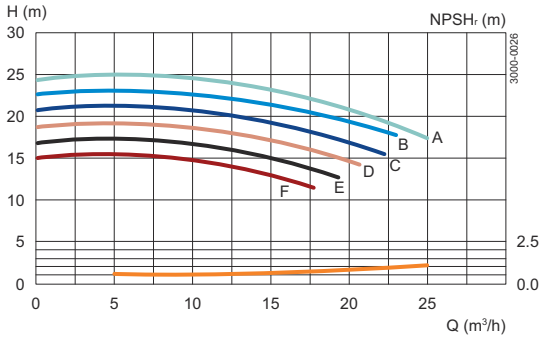


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

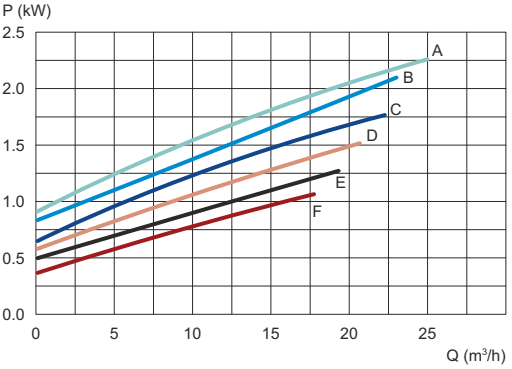
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



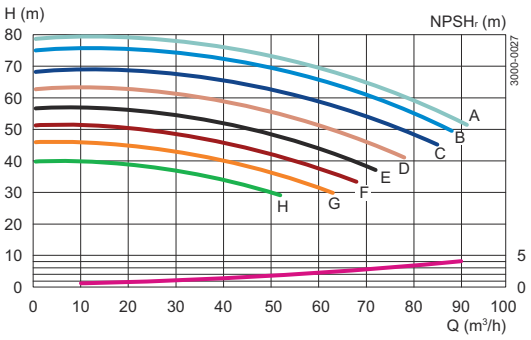
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHI-40, 50 Hz

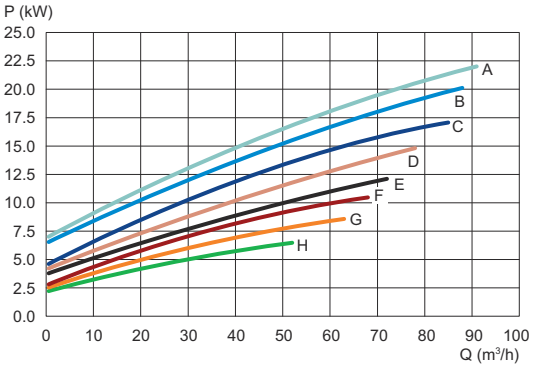
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with:
- 3% for 11–18.5 kW
- 5% for 7.5 kW

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

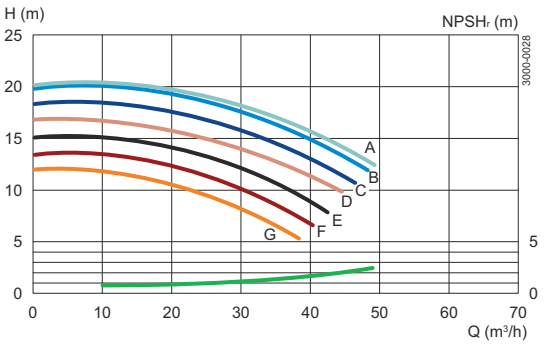


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

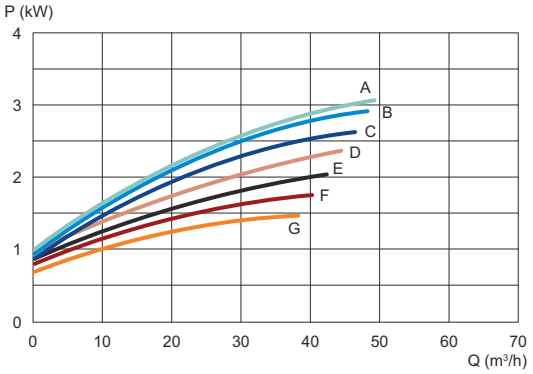
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	180 mm
Pump inlet, dia.:	Dia.: 76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz. For smaller motors,reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190



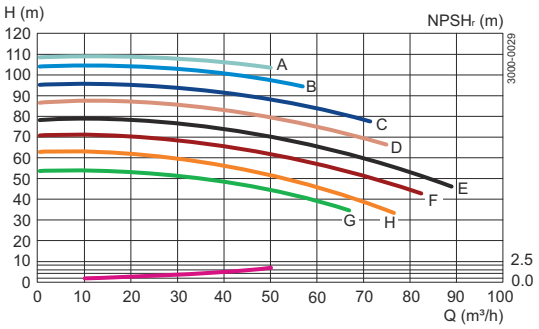
A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190

LKHI-40, 60 Hz

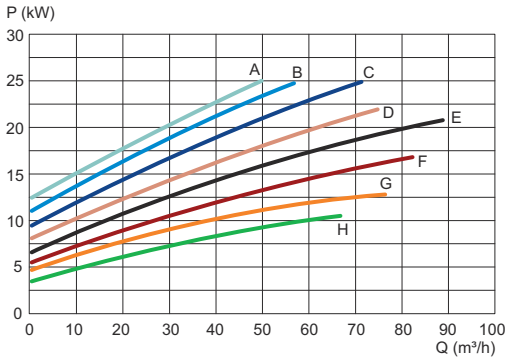
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

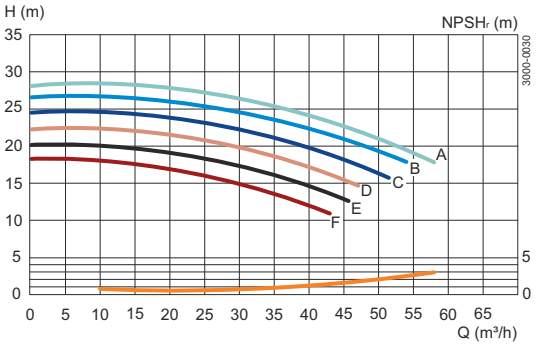


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

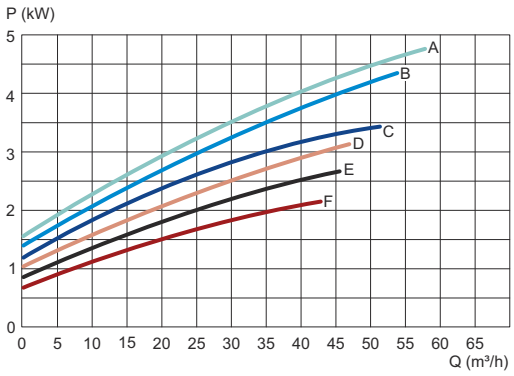
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	190 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190



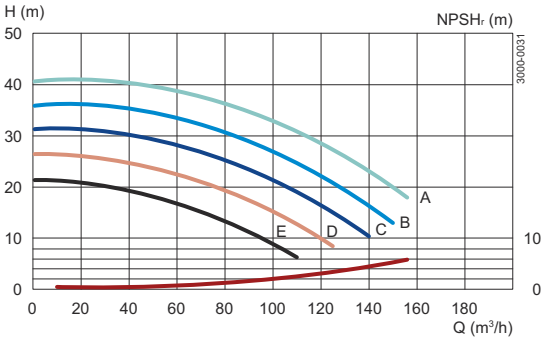
A = 235 D = 210
B = 230 E = 200
C = 220 F = 190

LKHI-45, 50 Hz

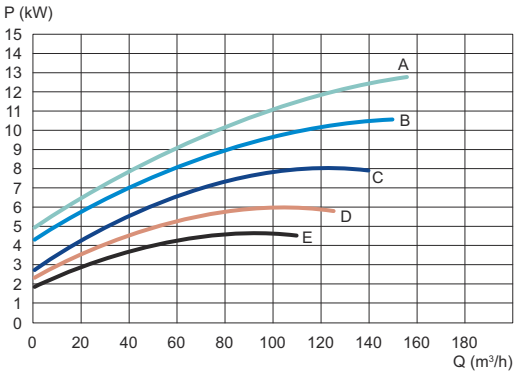
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

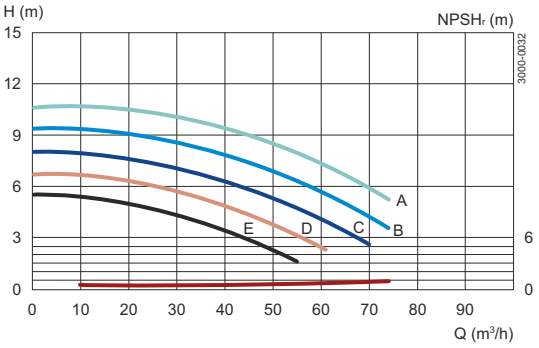


A = 178 D = 150
B = 170 E = 140
C = 160

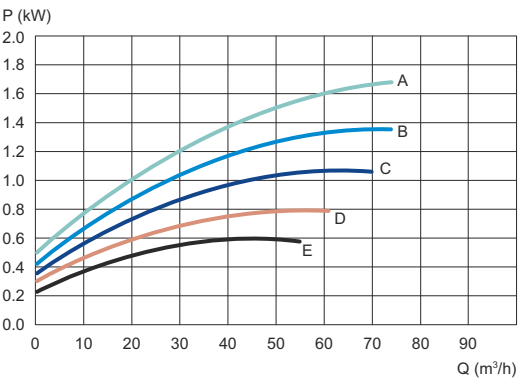
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



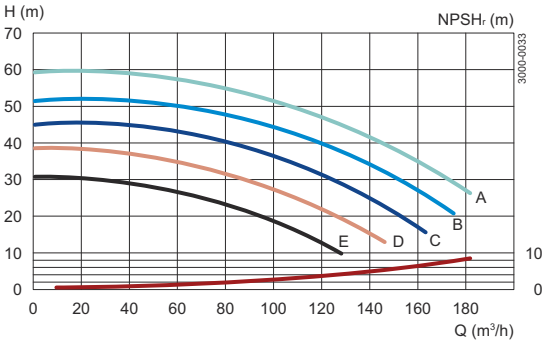
A = 178 D = 150
B = 170 E = 140
C = 160

LKHI-45, 60Hz

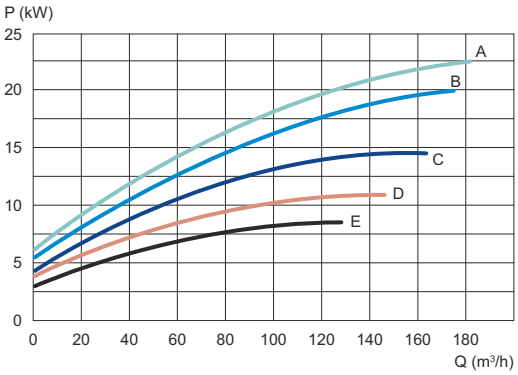
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

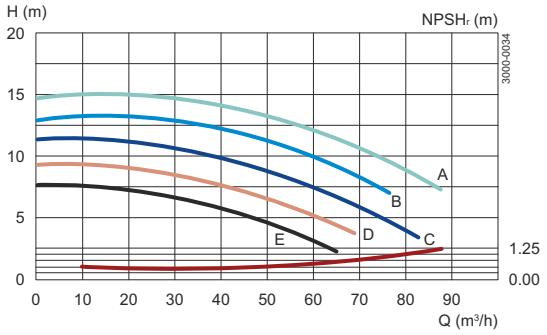


A = 178 D = 150
B = 170 E = 140
C = 160

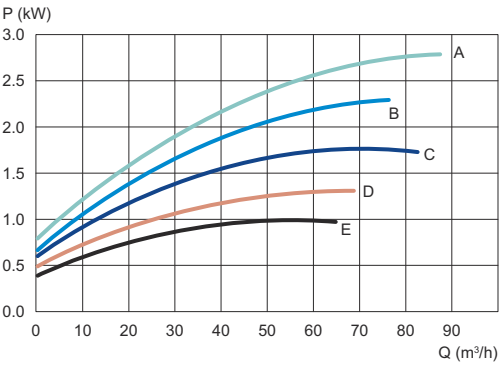
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



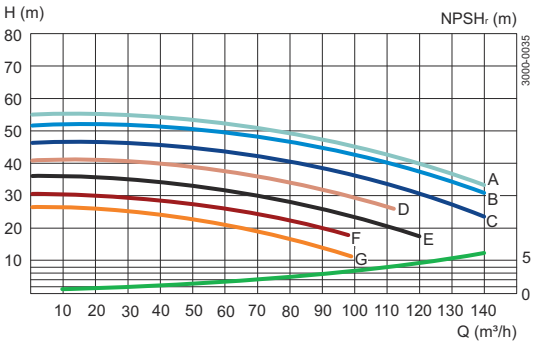
A = 178 D = 150
B = 170 E = 140
C = 160

LKHI-50, 50 Hz

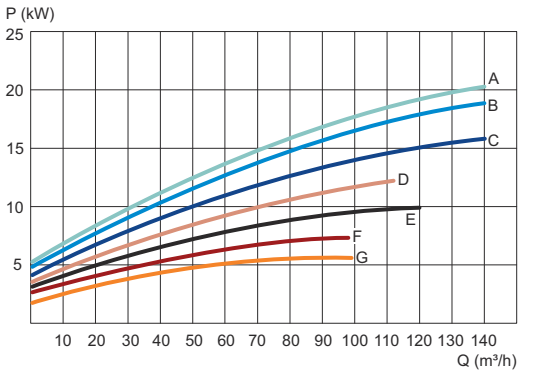
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3% for 11 - 18.5 kW.
- 5% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

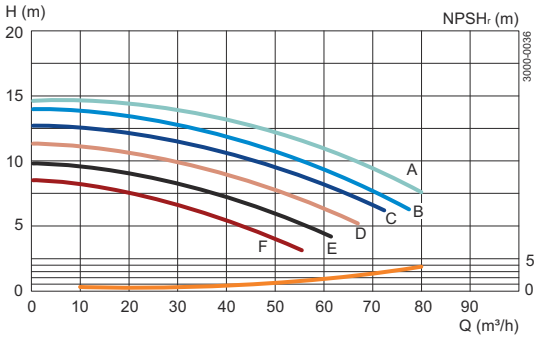


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

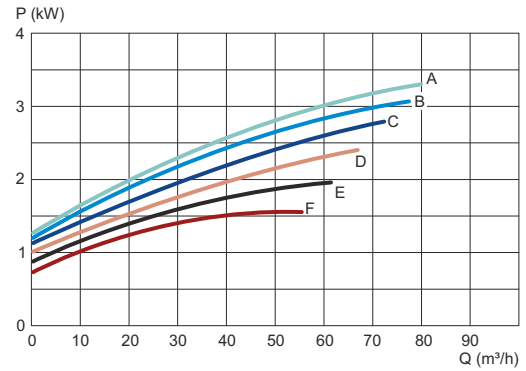
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



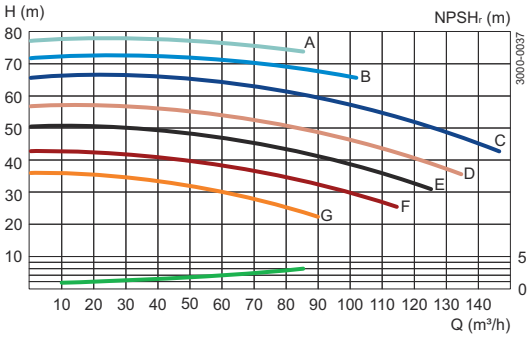
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHI-50, 60Hz

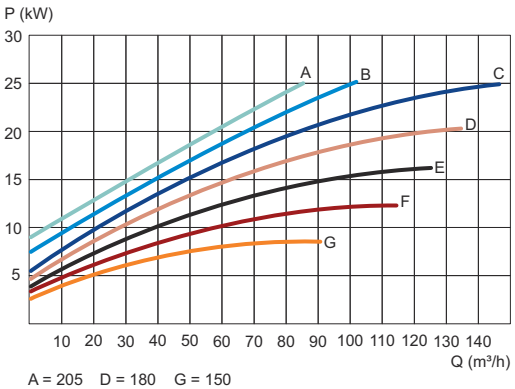
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	150 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

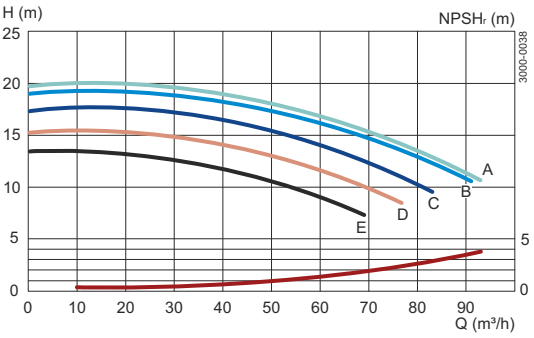


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

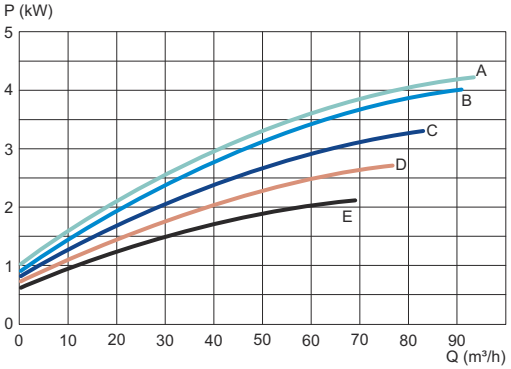
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4.5 kW, 1750 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190



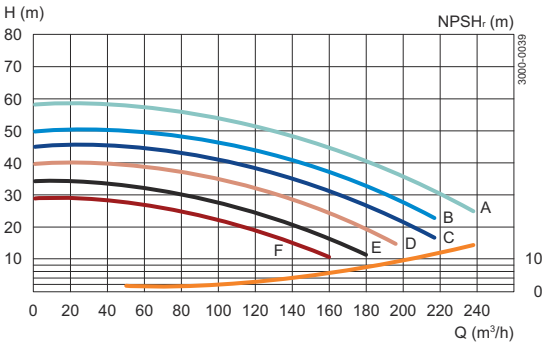
A = 205 D = 180
B = 200 E = 170
C = 190

LKHI-60, 50 Hz

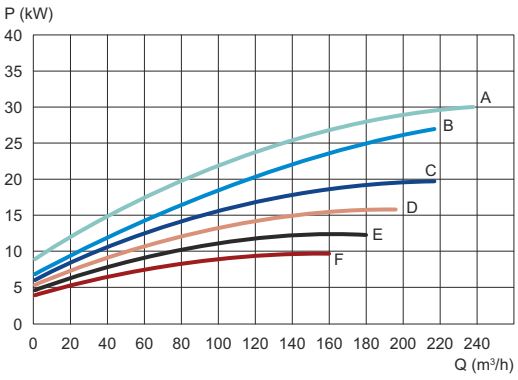
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 30 kW, 2955 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
3% for 11 - 22 kW.
6% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

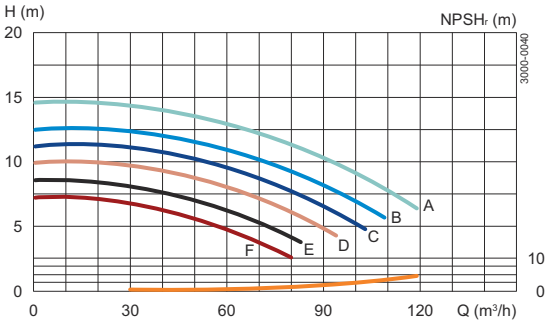


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

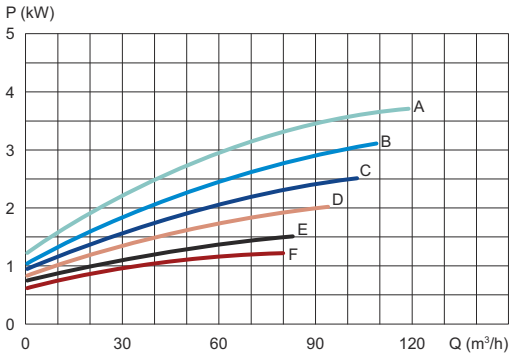
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



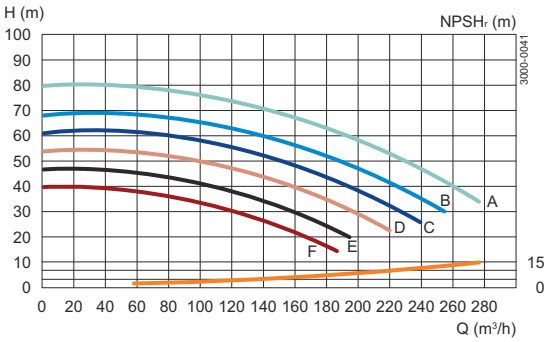
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHI-60, 60Hz

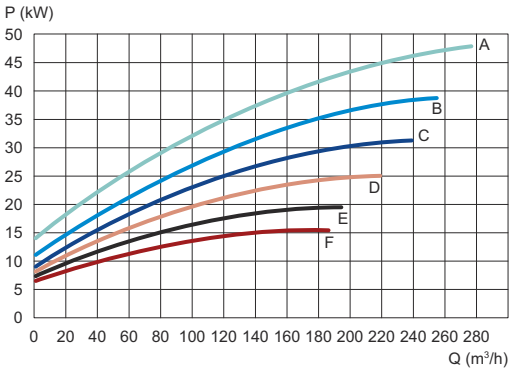
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 35 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

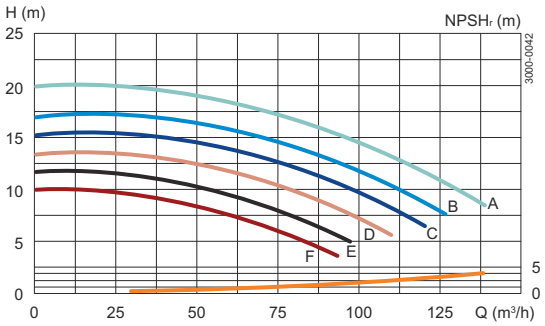


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

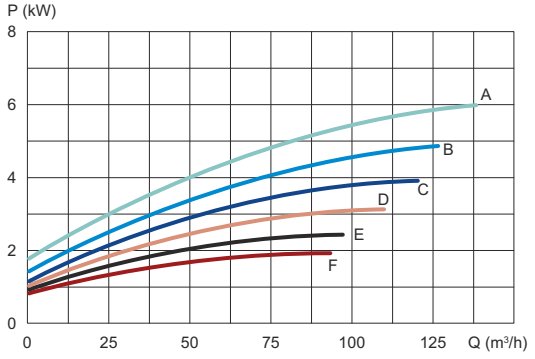
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



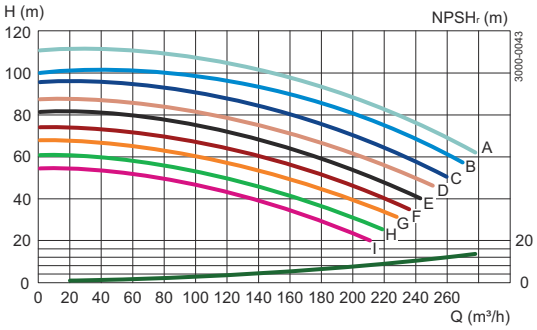
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHI-70, 50 Hz

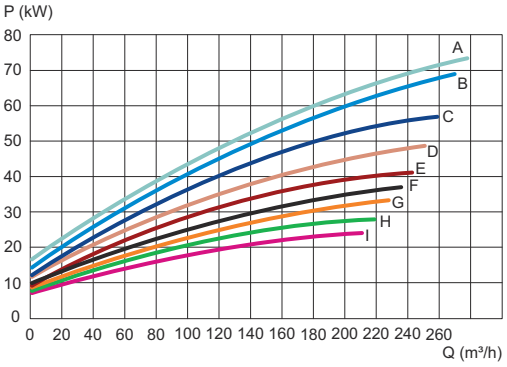
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 2%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

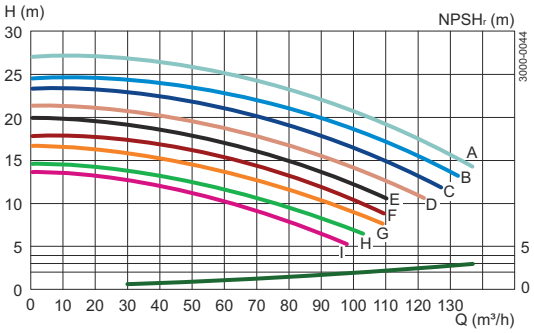


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

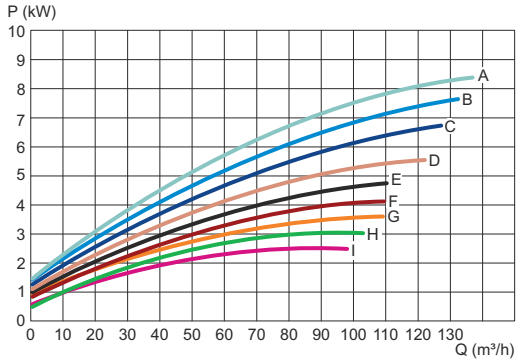
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 1460 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200



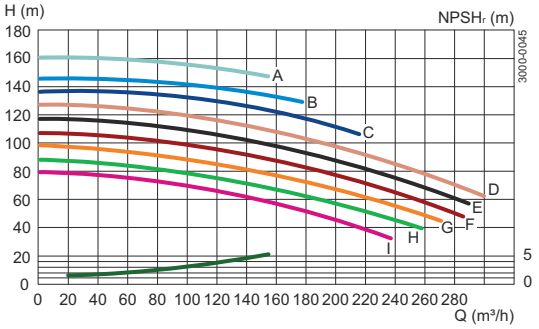
A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

LKHI-70, 60 Hz

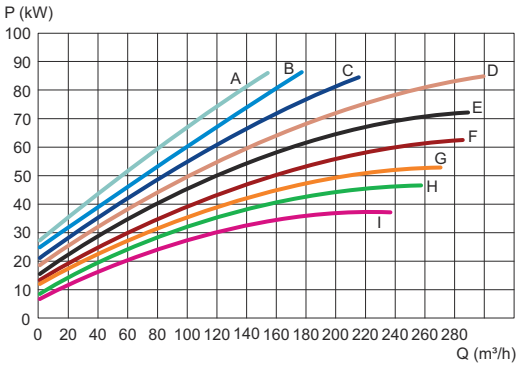
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 86 kW, 3565 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

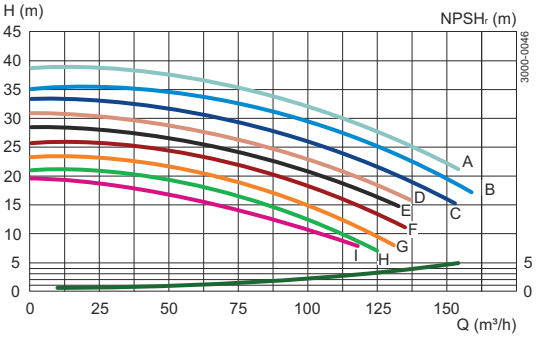


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

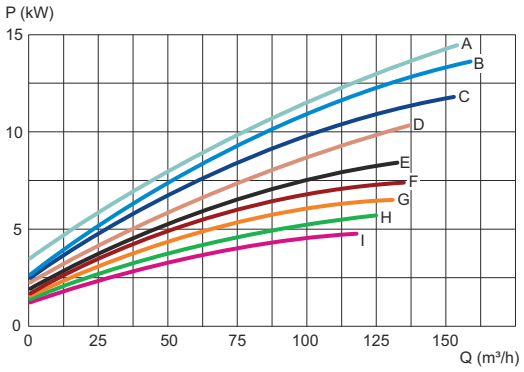
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 17 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200

Alfa Laval LKH UltraPure

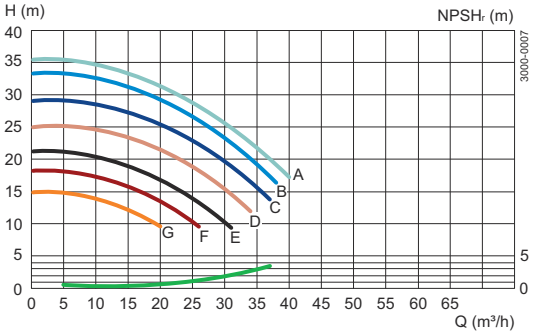
Performance curves

LKHUP-10, 50 Hz

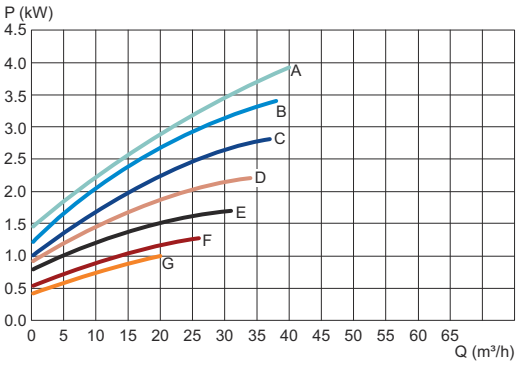
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2840 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

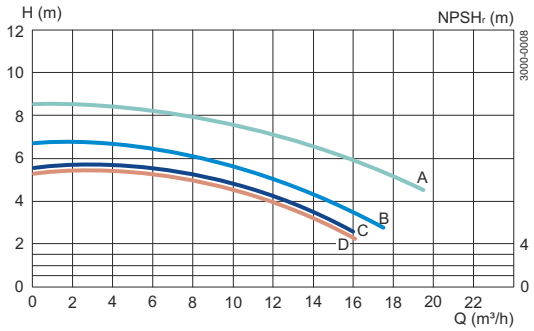


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

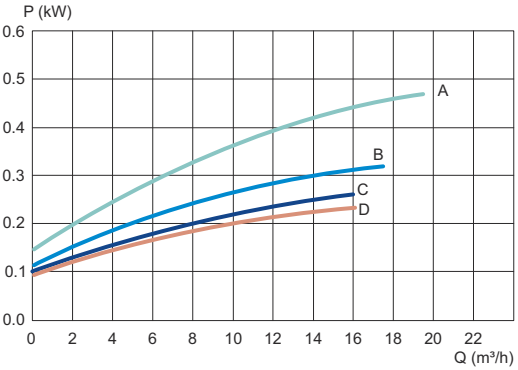
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	130 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 C = 140
B = 150 D = 130



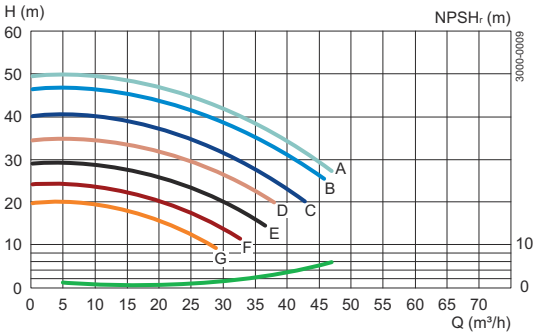
A = 163 C = 140
B = 150 D = 130

LKHUP-10, 60Hz

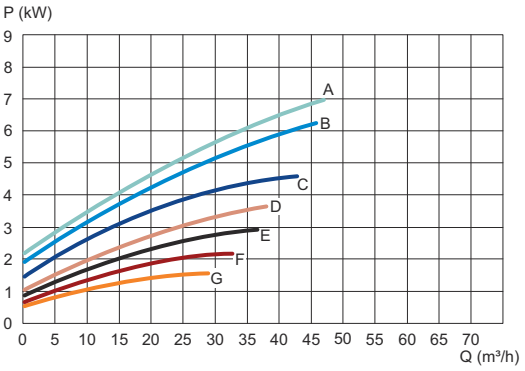
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 8.6 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

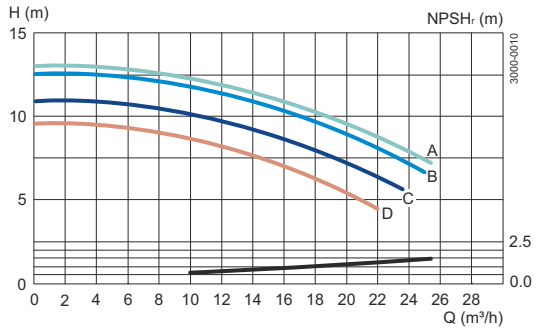


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

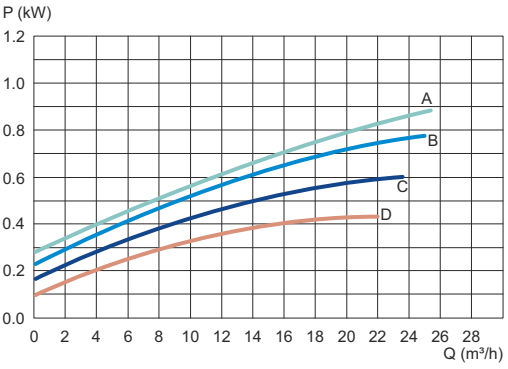
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140
B = 160
C = 150



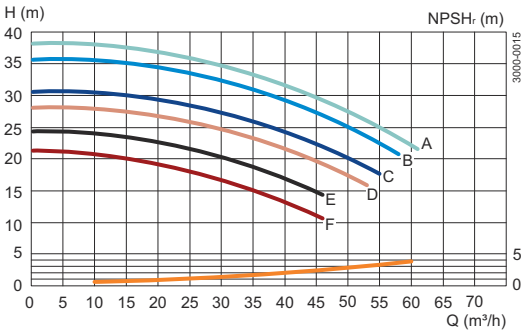
A = 163 D = 140
B = 160
C = 150

LKHUP-20, 50 Hz

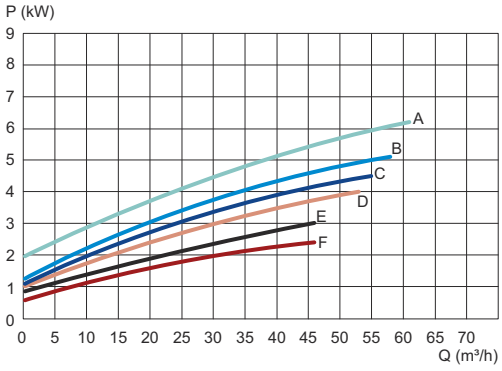
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

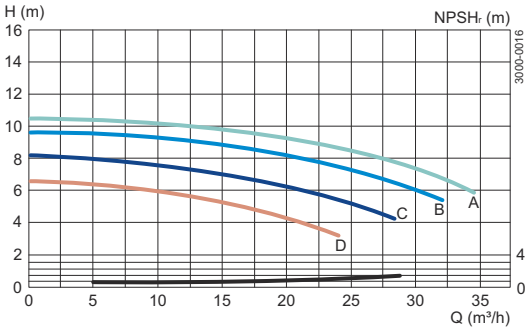


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

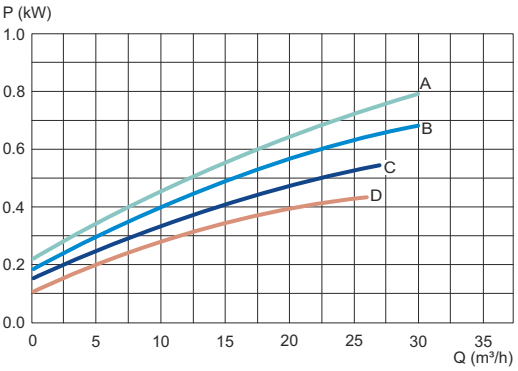
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



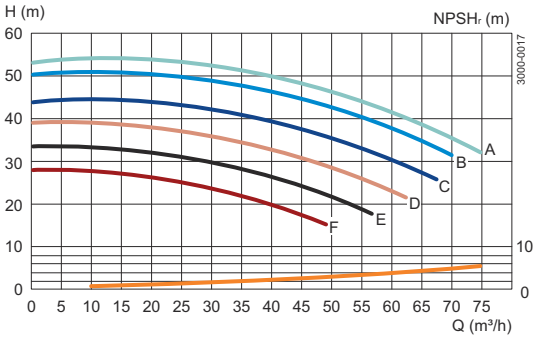
A = 165 D = 140
B = 160
C = 150

LKHUP-20, 60 Hz

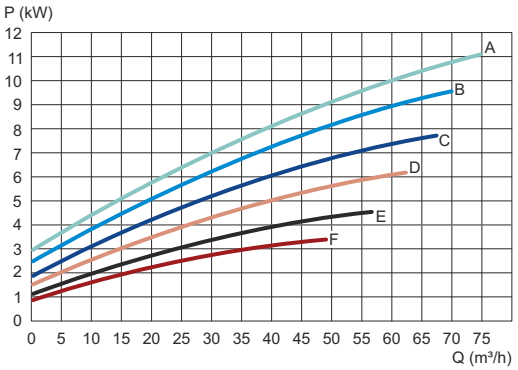
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 12.5 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

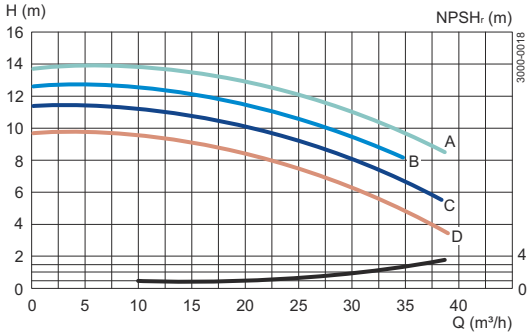


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

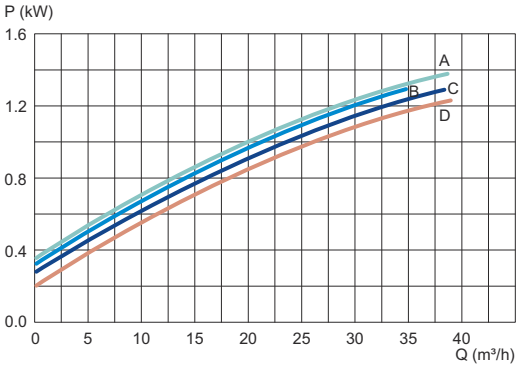
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



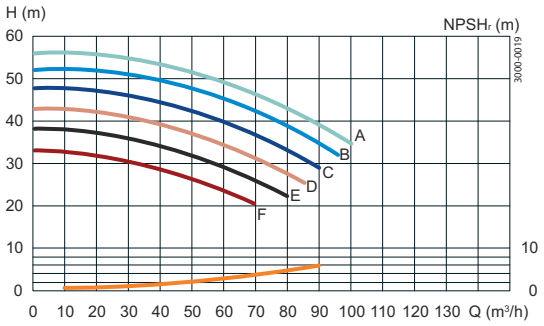
A = 165 D = 140
B = 160
C = 150

LKHUP-25, 50 Hz

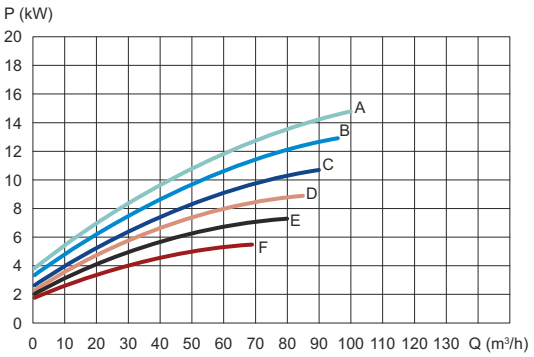
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20°C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with 3%

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

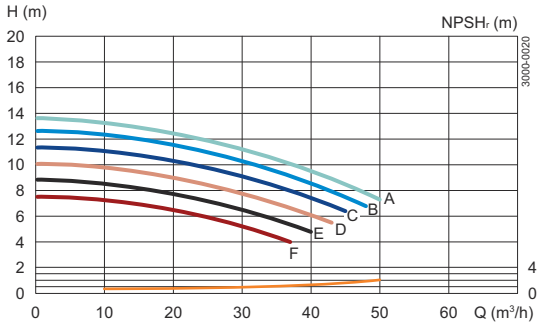


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

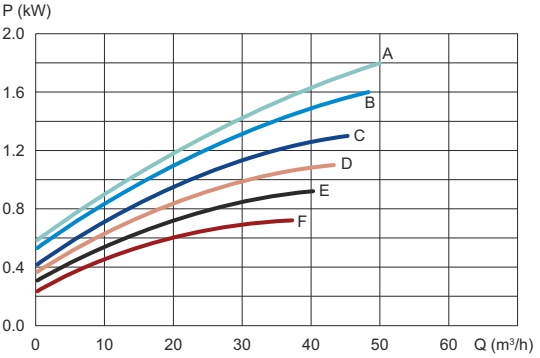
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.2 kW, 1430 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



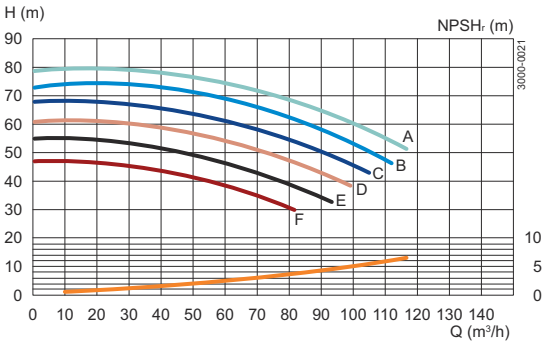
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHUP-25, 60 Hz

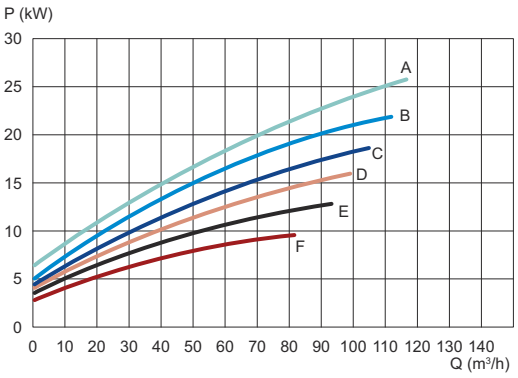
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

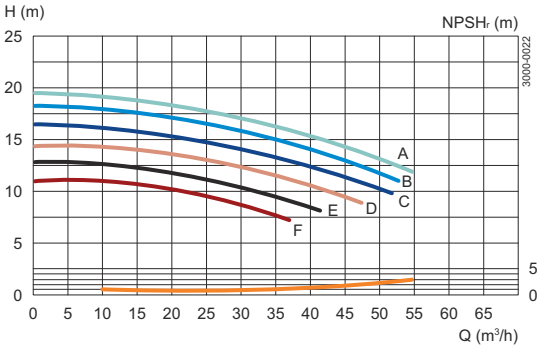


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

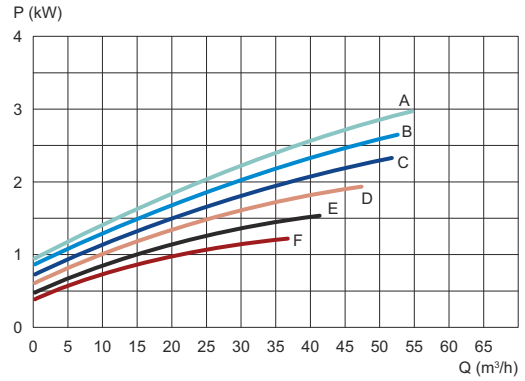
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



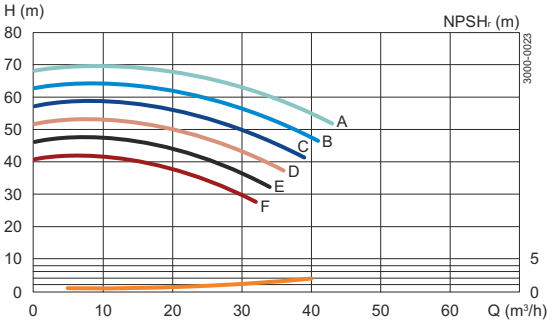
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

LKHUP-35, 50 Hz

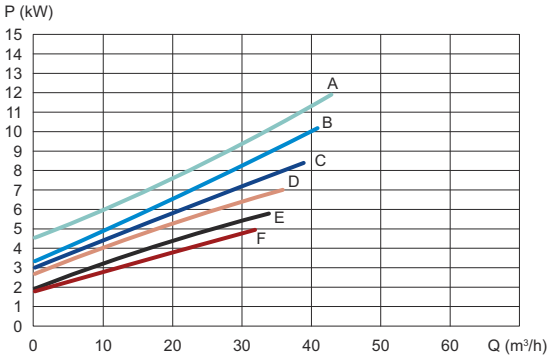
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

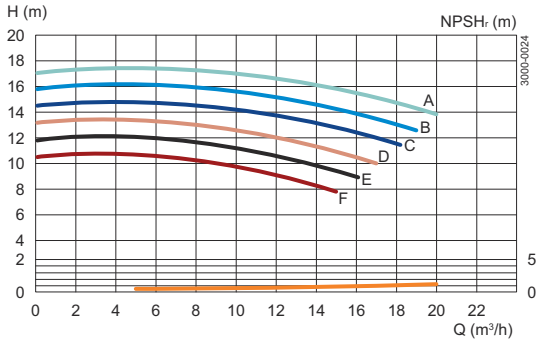


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

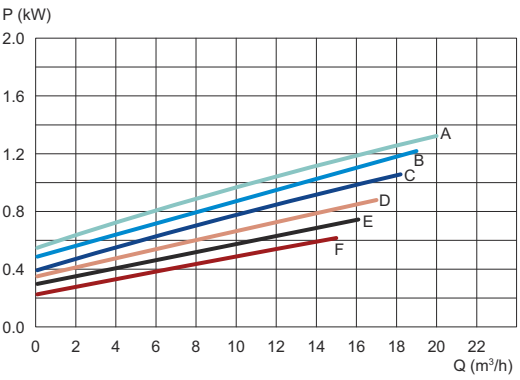
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



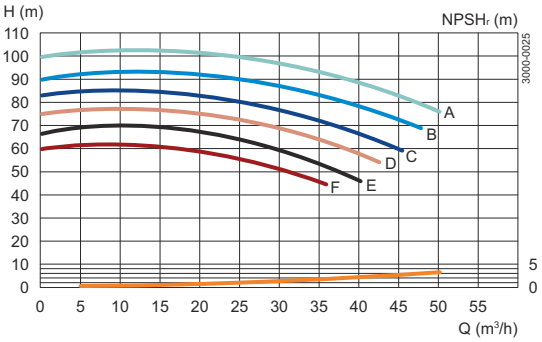
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHUP-35, 60 Hz

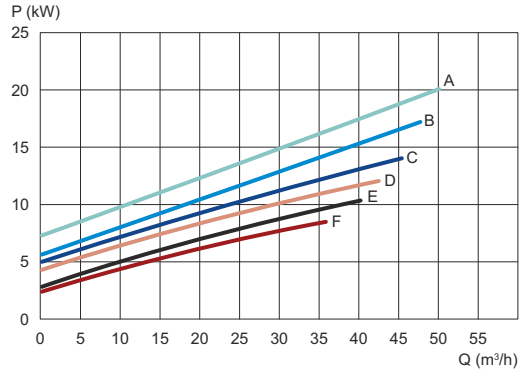
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 21 kW, 3535 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-17kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

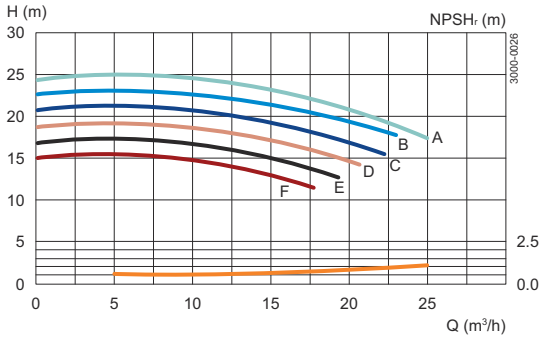


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

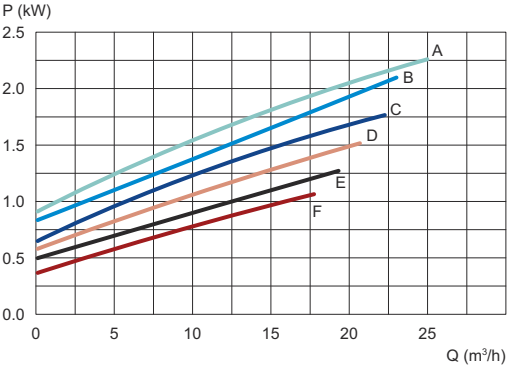
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



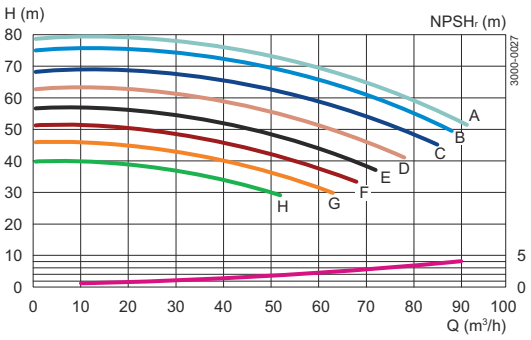
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

LKHUP-40, 50 Hz

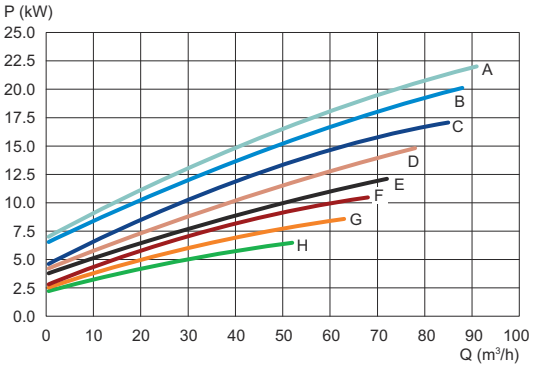
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with:
- 3% for 11–18.5 kW
- 5% for 7.5 kW

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

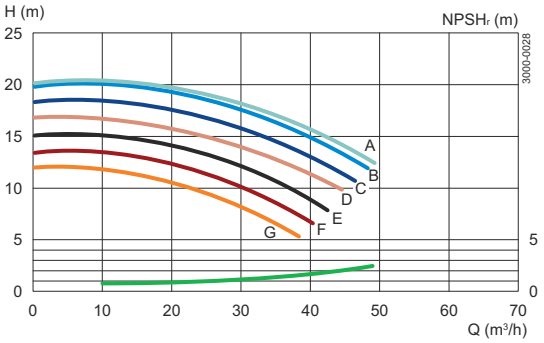


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

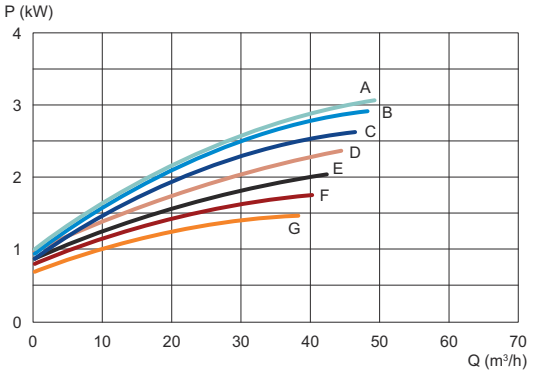
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	180 mm
Pump inlet, dia.:	Dia.: 76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz. For smaller motors,reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190



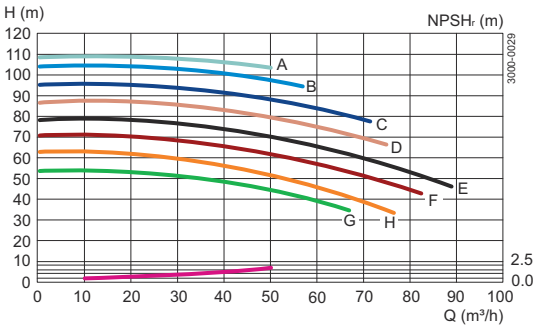
A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190

LKHUP-40, 60 Hz

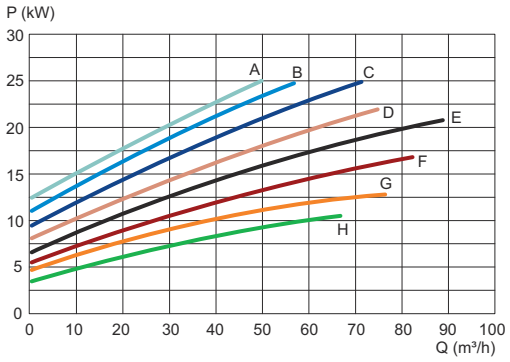
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

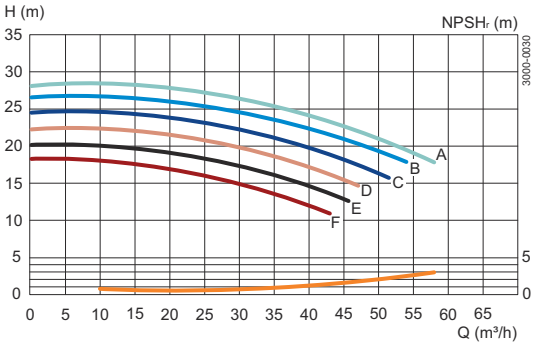


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

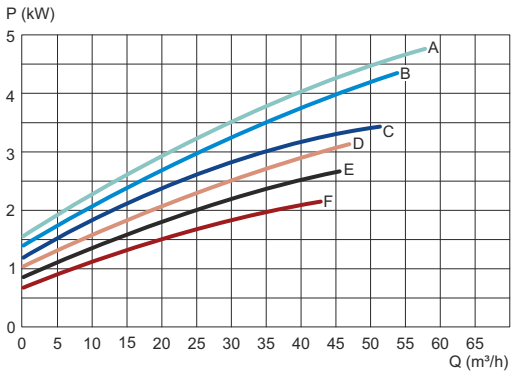
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	190 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190



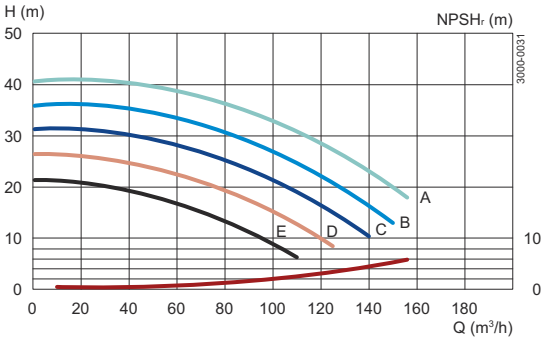
A = 235 D = 210
B = 230 E = 200
C = 220 F = 190

LKHUP-45, 50 Hz

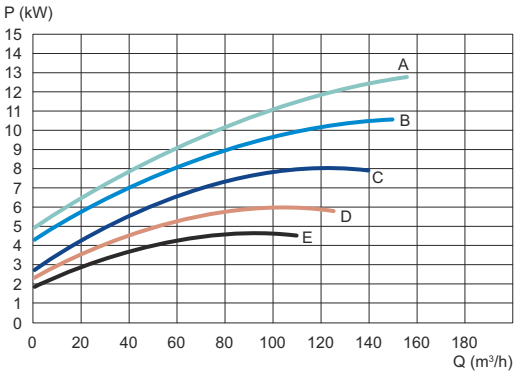
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

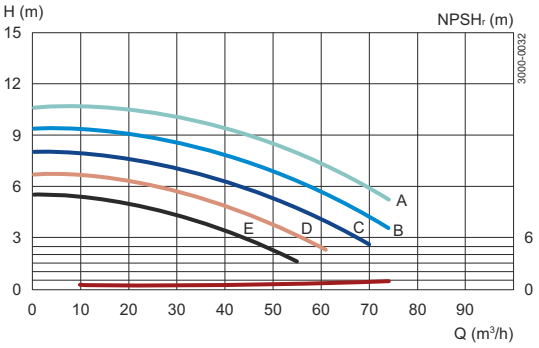


A = 178 D = 150
B = 170 E = 140
C = 160

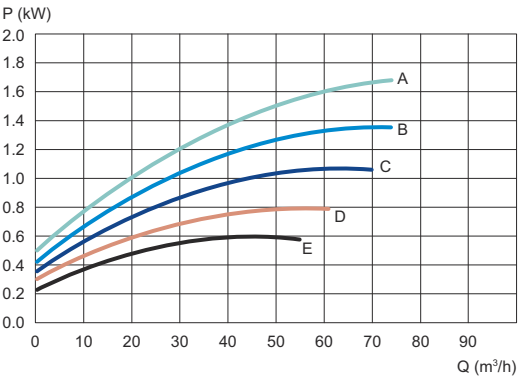
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



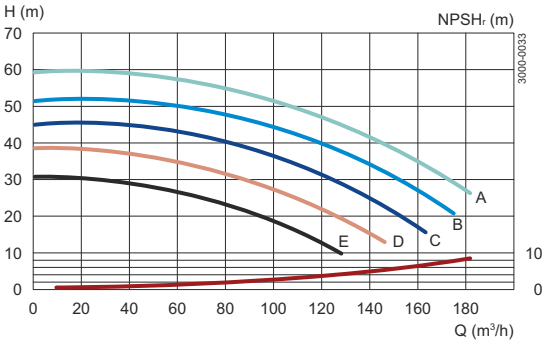
A = 178 D = 150
B = 170 E = 140
C = 160

LKHUP-45, 60Hz

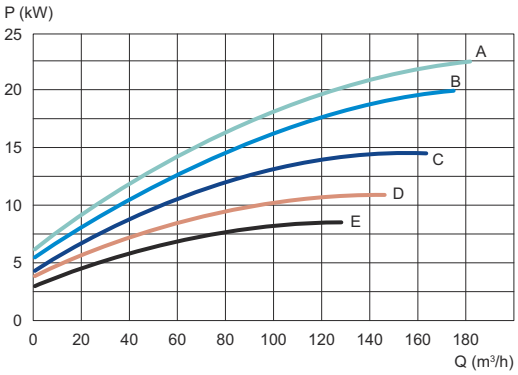
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

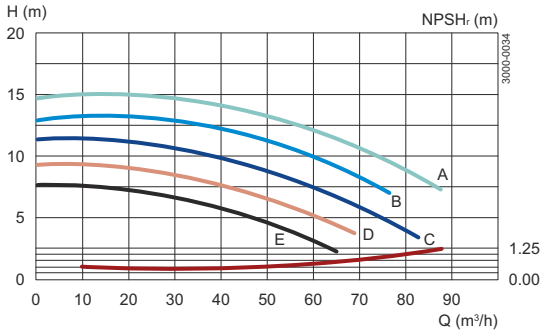


A = 178 D = 150
B = 170 E = 140
C = 160

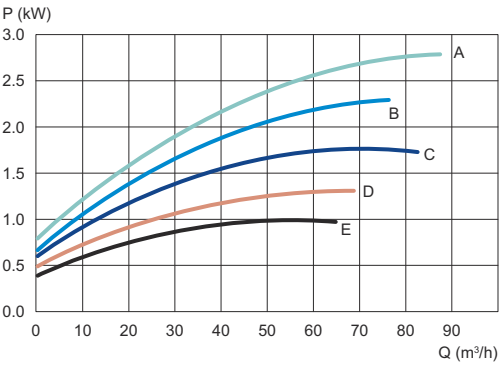
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



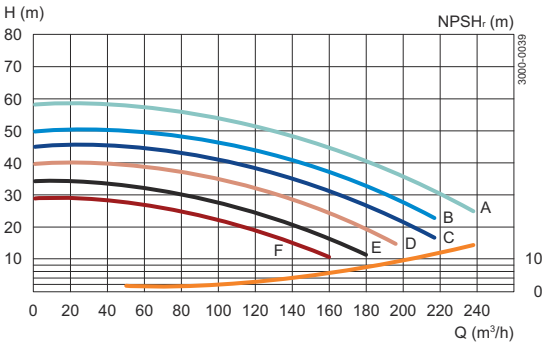
A = 178 D = 150
B = 170 E = 140
C = 160

LKHUP-60, 50 Hz

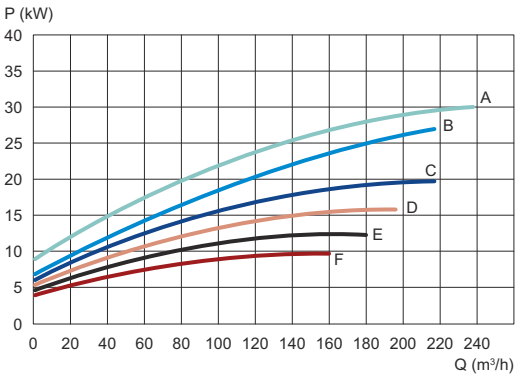
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 30 kW, 2955 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
3% for 11 - 22 kW.
6% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

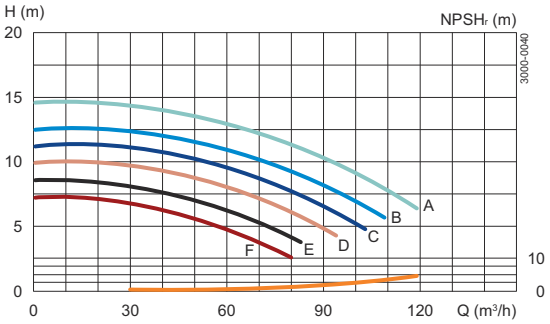


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

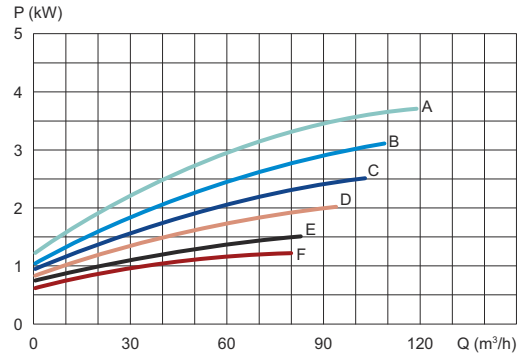
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



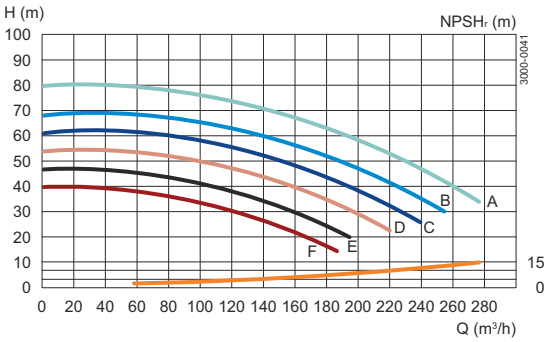
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHUP-60, 60Hz

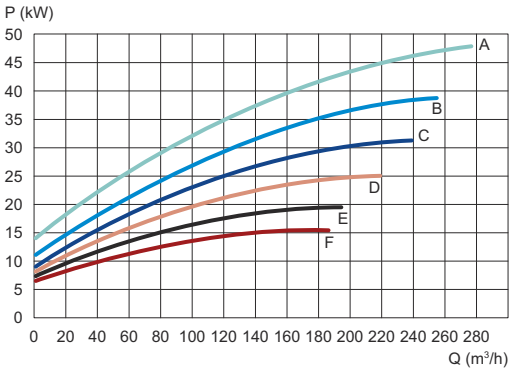
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 35 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

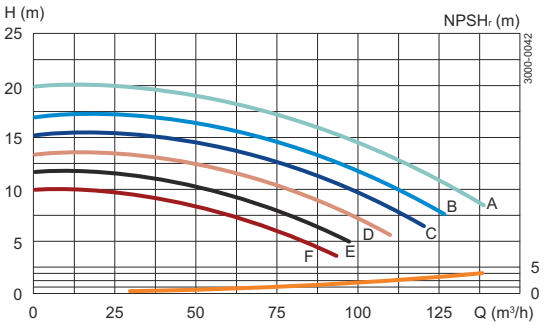


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

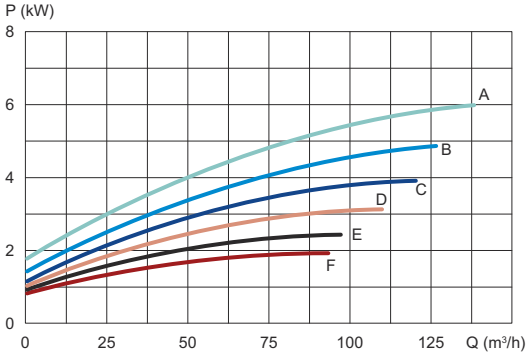
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



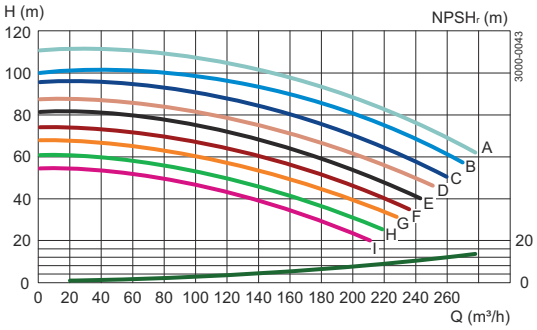
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

LKHUP-70, 50 Hz

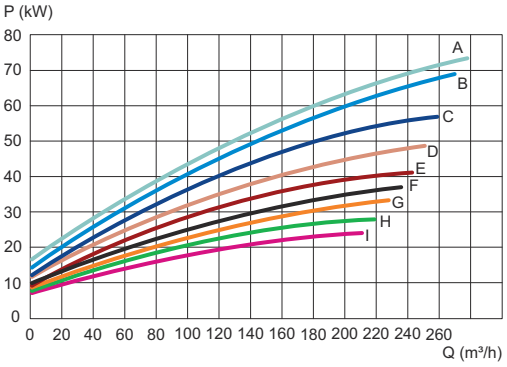
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 2%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

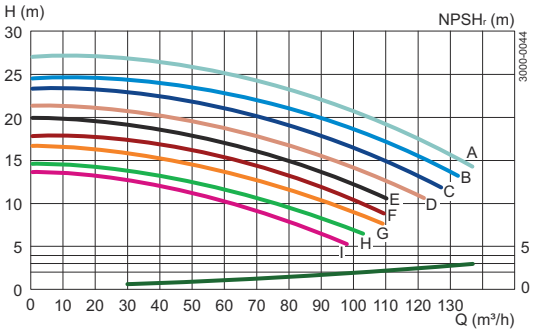


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

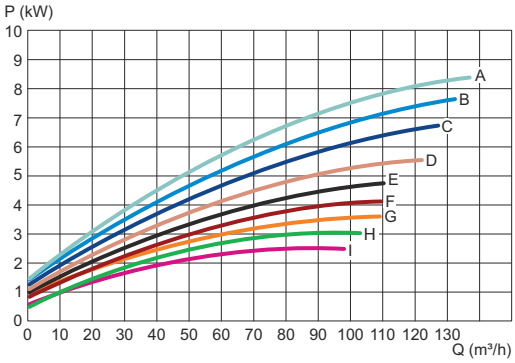
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 1460 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200



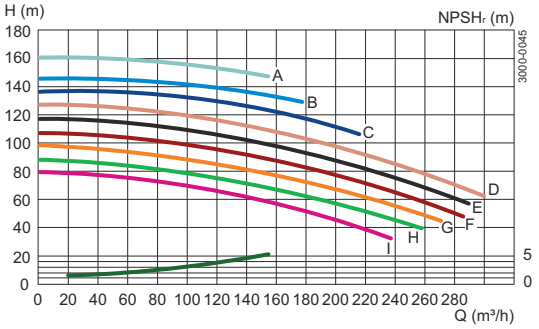
A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

LKHUP-70, 60 Hz

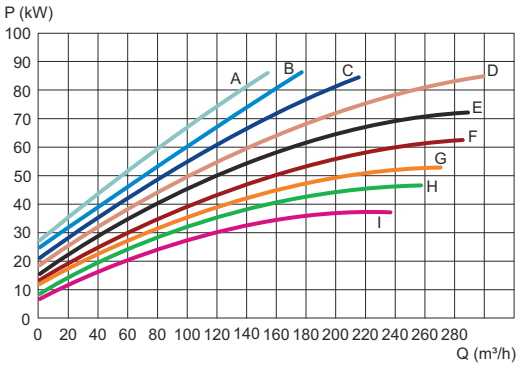
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 86 kW, 3565 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

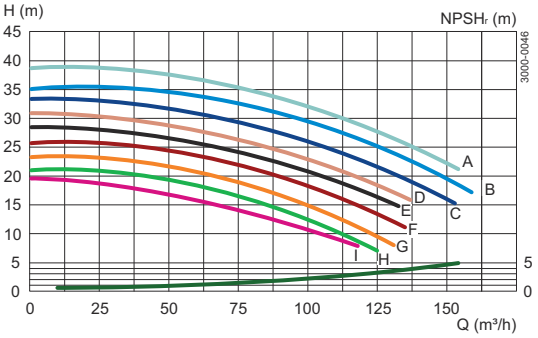


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

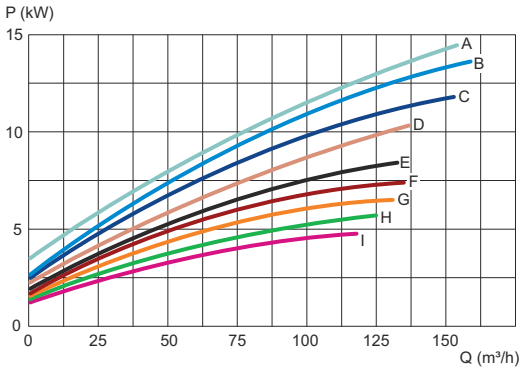
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 17 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200

Alfa Laval LKH Prime

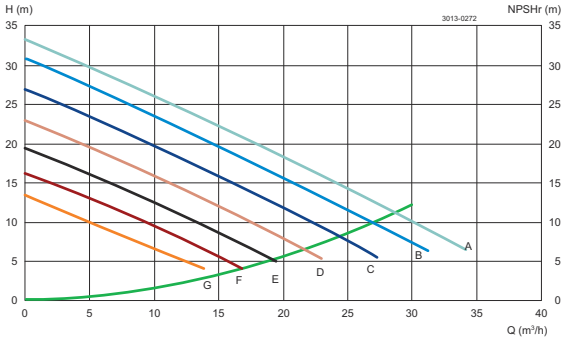
Performance curves

LKH Prime 10

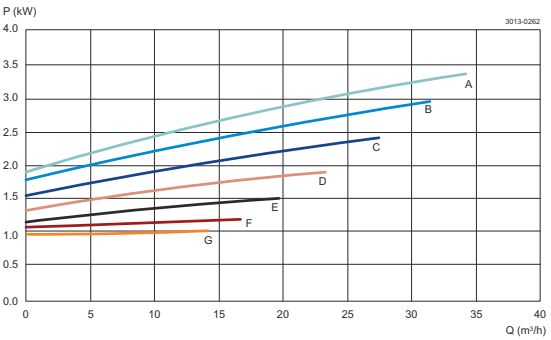
	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	150 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2890 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100

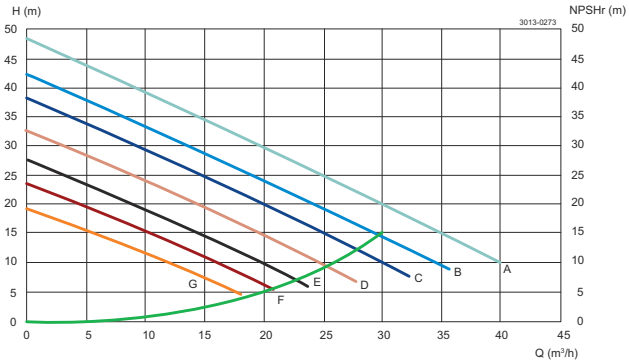


A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100

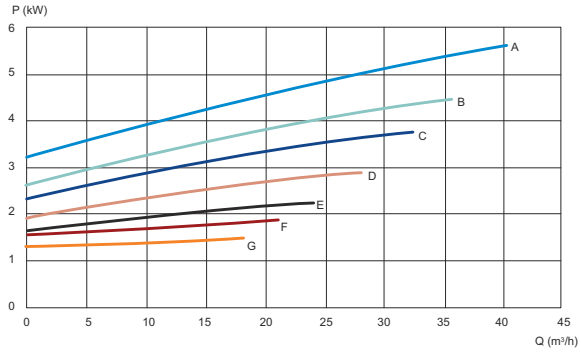
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	150 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 3490 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100



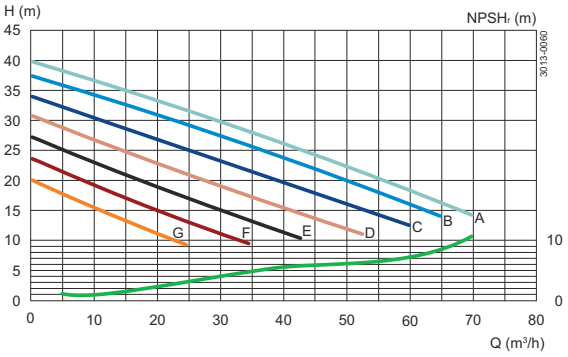
A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100

LKH Prime 20

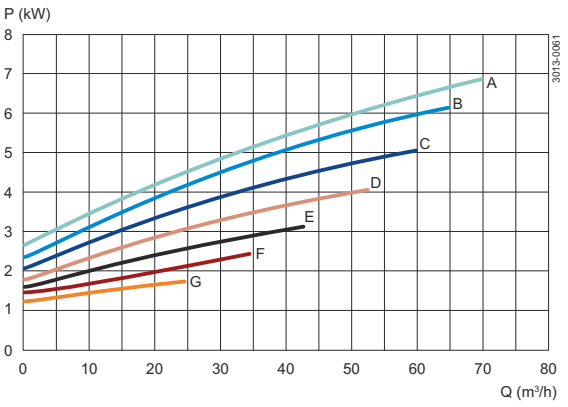
	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2903 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

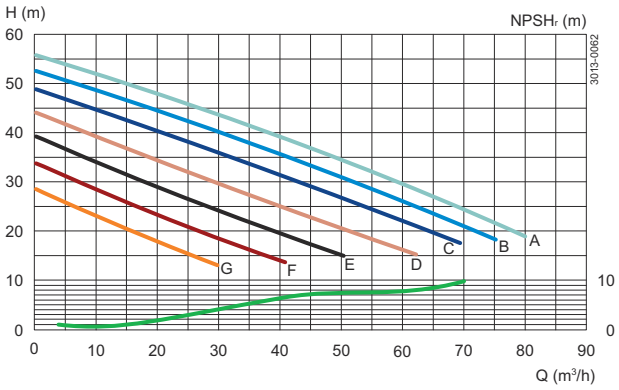


A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

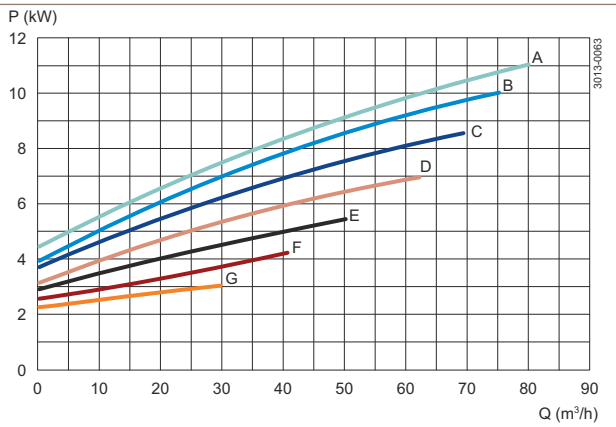
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 13 kW, 3547 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120



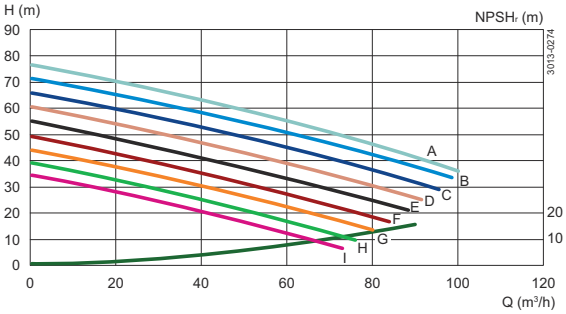
A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

LKH Prime 40

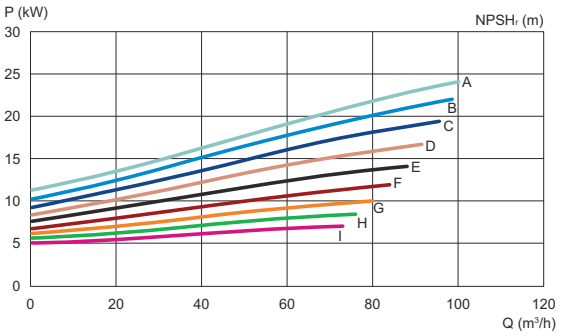
	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76.1mm/ DN80
Pump outlet, dia.:	63.5mm/ DN65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22kW, 2920 Rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190 I = 160

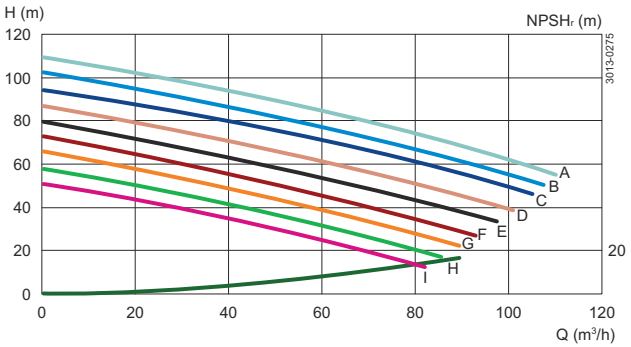


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190 I = 160

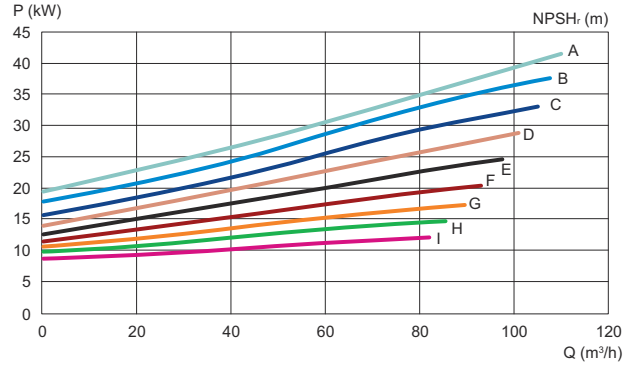
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76.1mm/ DN80
Pump outlet, dia.:	63.5mm/ DN65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 45kW, 3520 Rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190 I = 160



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190 I = 160

Alfa Laval LKH Prime UltraPure

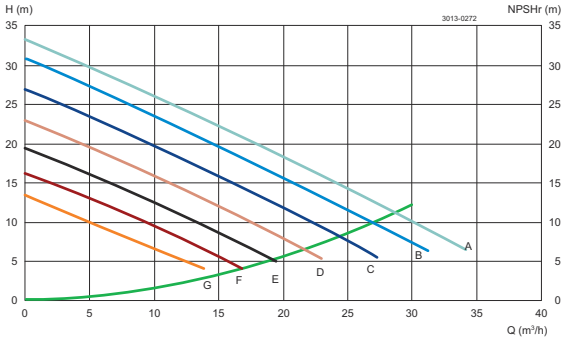
Performance curves

LKH Prime UltraPure 10

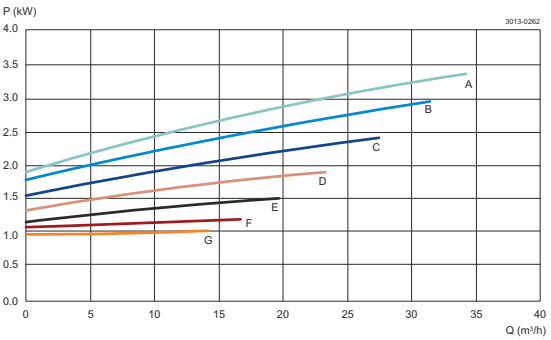
	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	150 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2890 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100

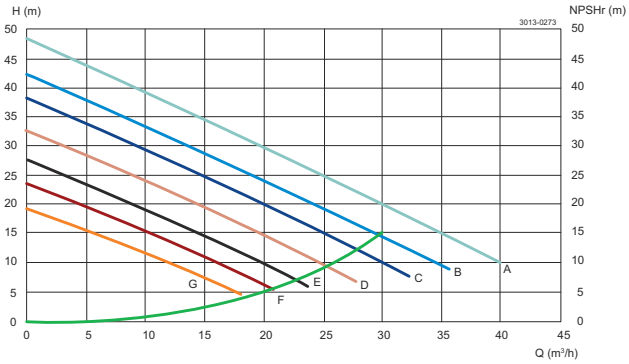


A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100

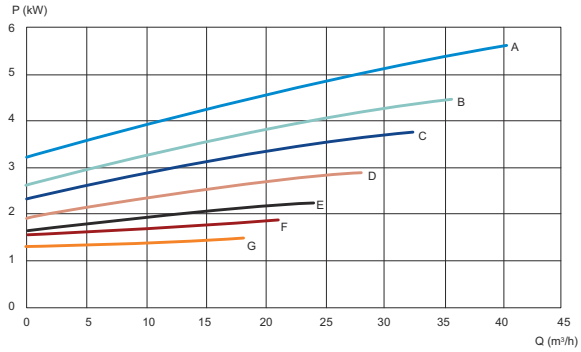
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	150 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 3490 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100



A = 150 D = 120 G = 90
B = 140 E = 110
C = 130 F = 100

LKH Prime UltraPure 20

	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

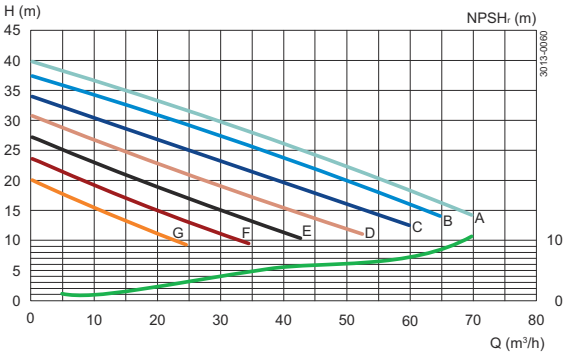
Note! The curves refer to motor: 7.5 kW, 2903 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR

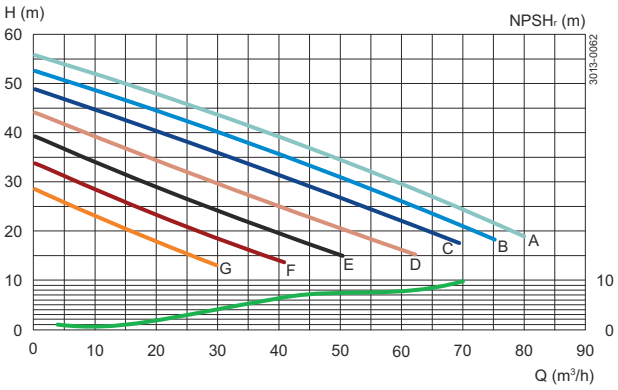
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 13 kW, 3547 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

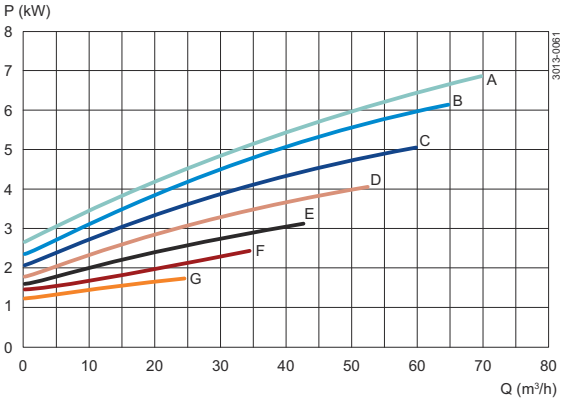
DO NOT FORGET THE SAFETY FACTOR



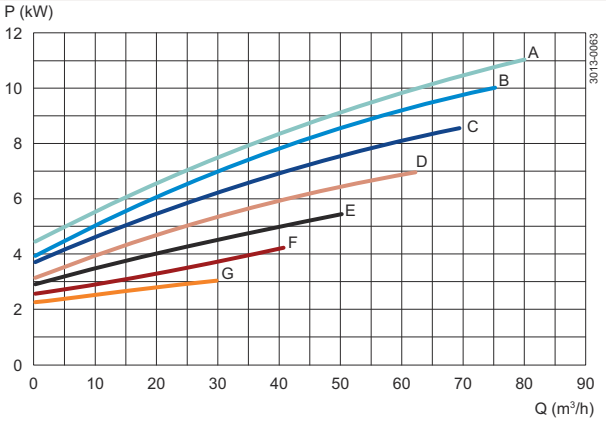
A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120



A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120



A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120



A = 165 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

Alfa Laval LKH evap

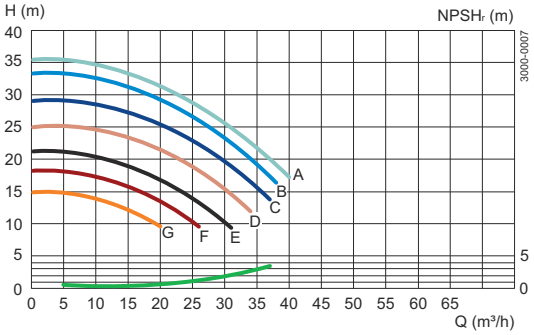
Performance curves

LKHevap-10, 50 Hz

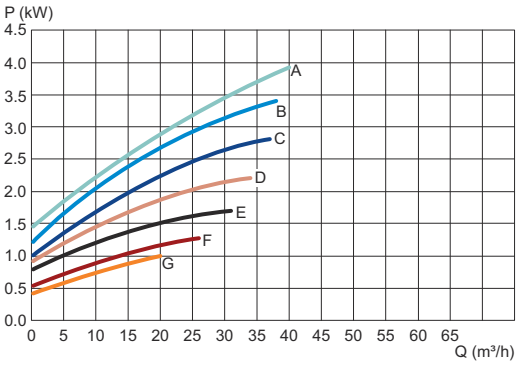
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2840 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

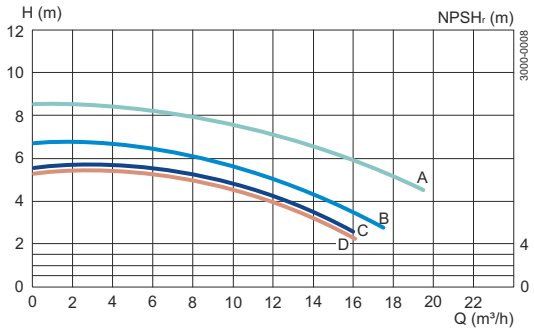


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

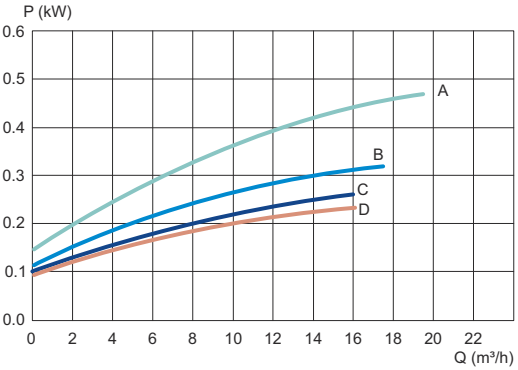
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	130 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 C = 140
B = 150 D = 130



A = 163 C = 140
B = 150 D = 130

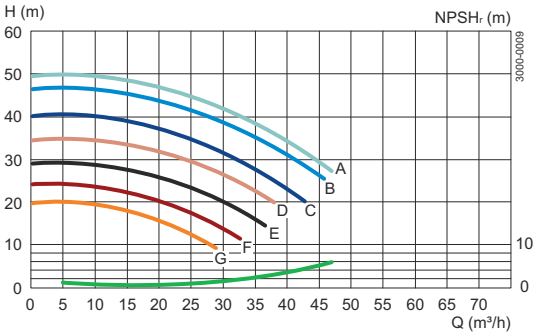
Note: If Clear flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-10, 60Hz

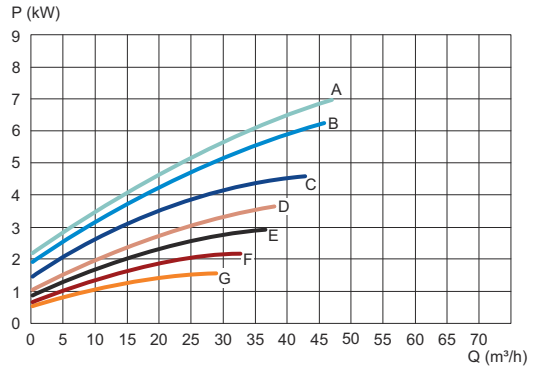
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 8.6 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

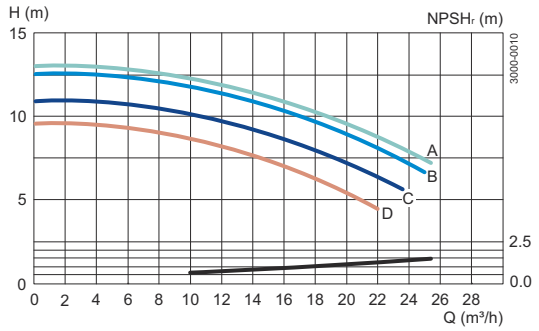


A = 163 D = 140 G = 110
B = 160 E = 130
C = 150 F = 120

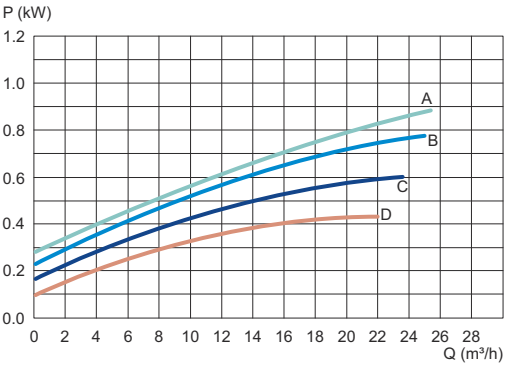
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	163 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 163 D = 140
B = 160
C = 150



A = 163 D = 140
B = 160
C = 150

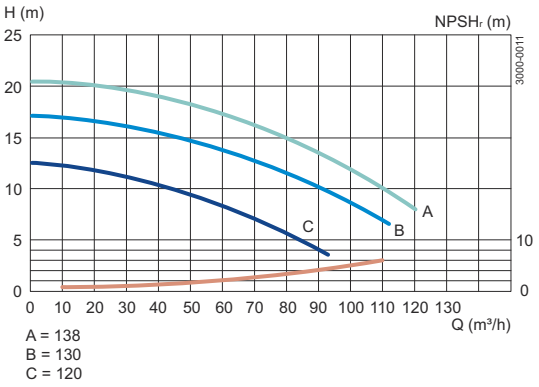
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

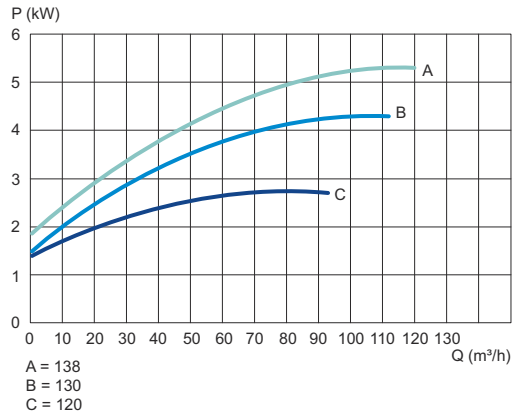
LKHevap-15, 50 Hz

Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2865 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR

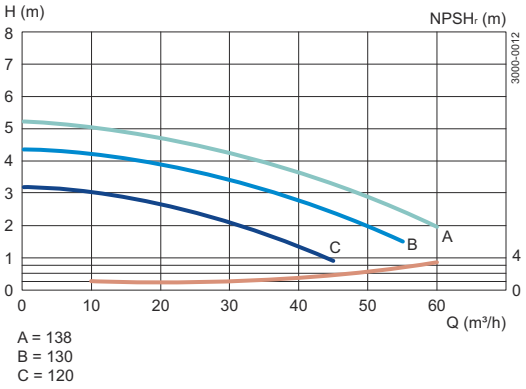


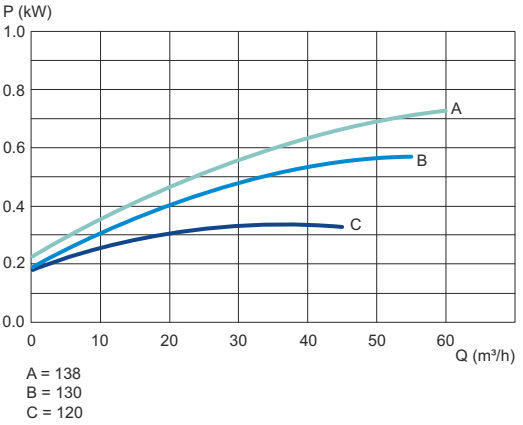


Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR





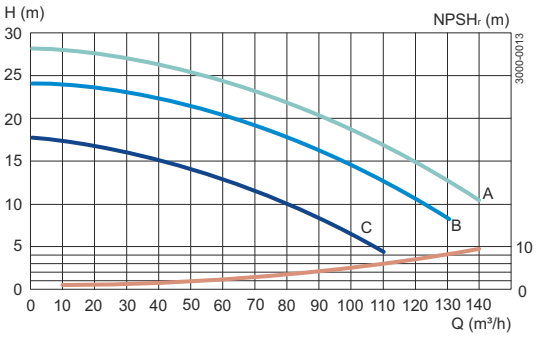
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-15, 60 HZ

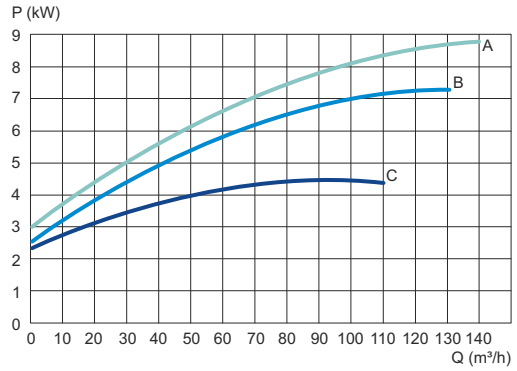
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 5.5 kW, 2865 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120

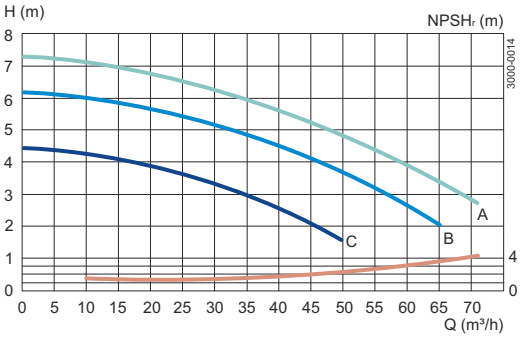


A = 138
B = 130
C = 120

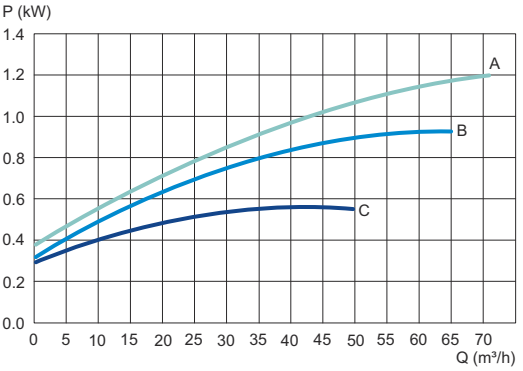
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	138 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 138
B = 130
C = 120



A = 138
B = 130
C = 120

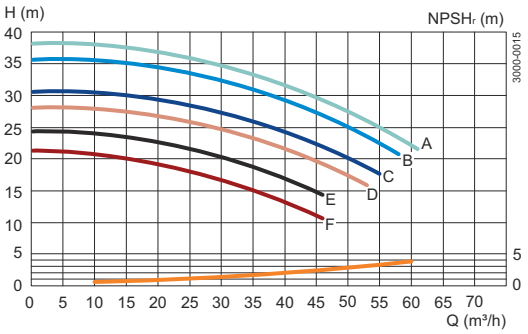
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-20, 50 Hz

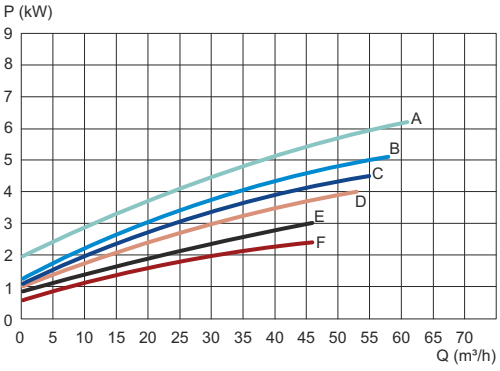
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 7.5 kW, 2870 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

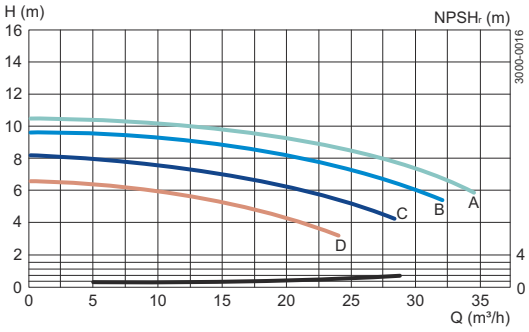


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

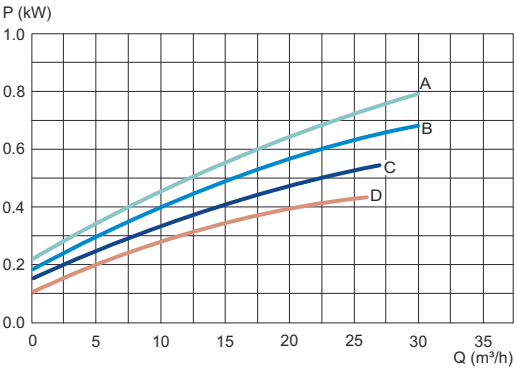
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



A = 165 D = 140
B = 160
C = 150

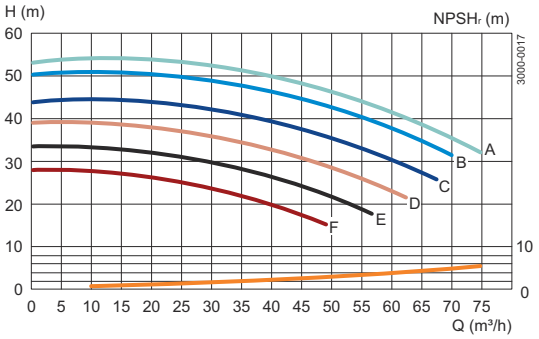
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-20, 60 Hz

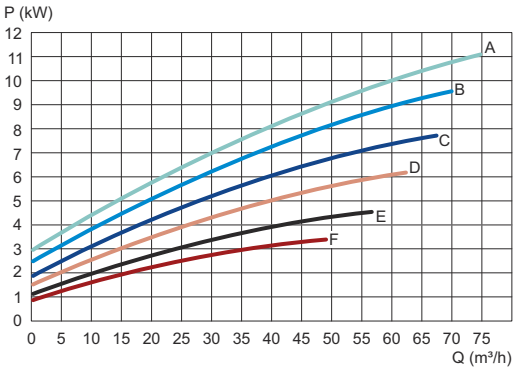
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	120 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 12.5 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

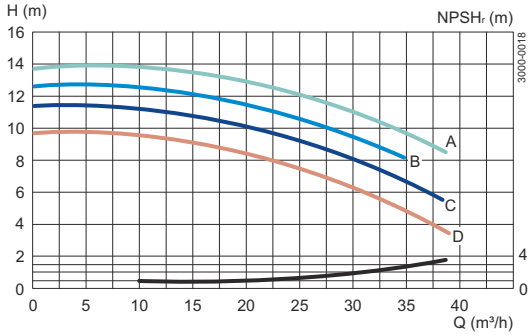


A = 165 D = 140
B = 160 E = 130
C = 150 F = 120

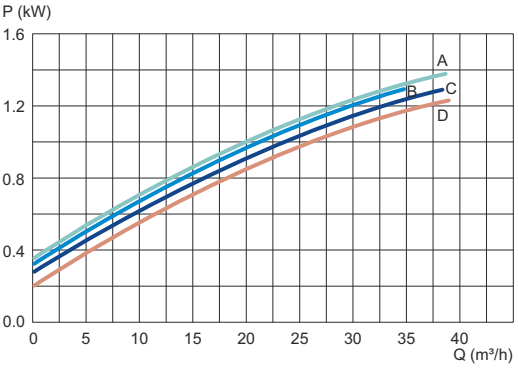
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	165 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.75 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 165 D = 140
B = 160
C = 150



A = 165 D = 140
B = 160
C = 150

Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-25, 50 Hz

Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20°C	

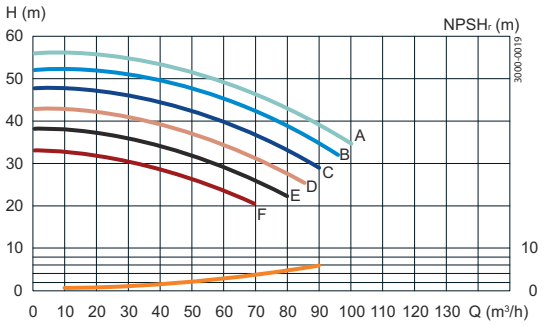
Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with 3%

DO NOT FORGET THE SAFETY FACTOR

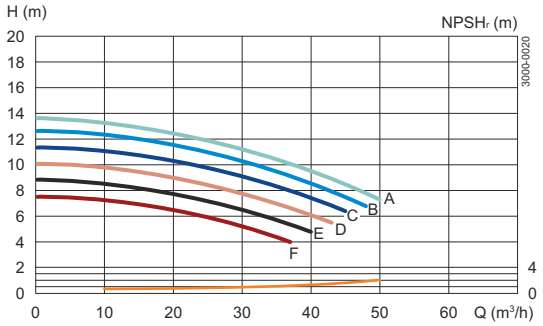
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.2 kW, 1430 rpm. asynchr., 50 Hz.

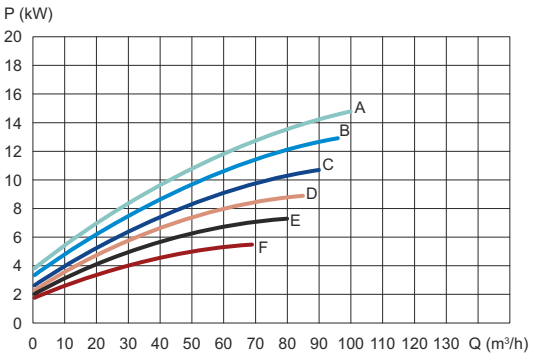
DO NOT FORGET THE SAFETY FACTOR



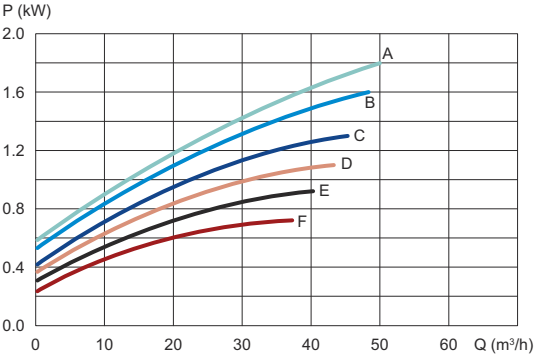
A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

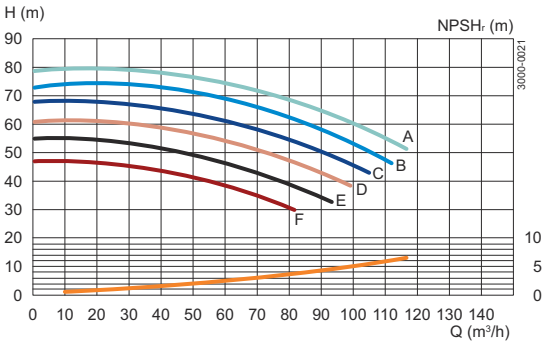
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-25, 60 Hz

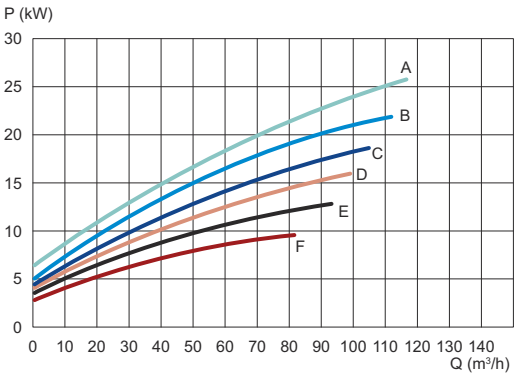
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

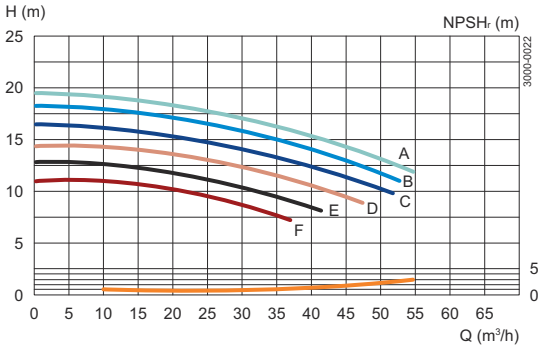


A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

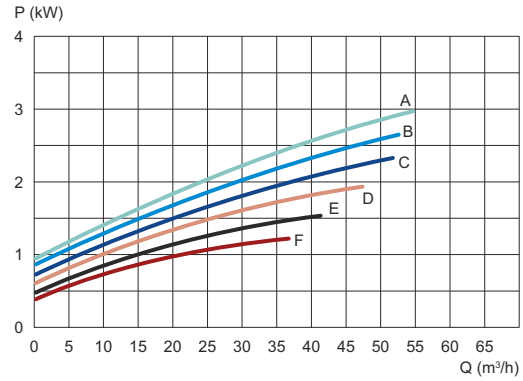
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

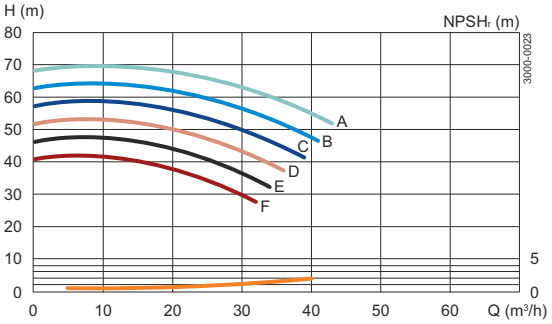
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-35, 50 Hz

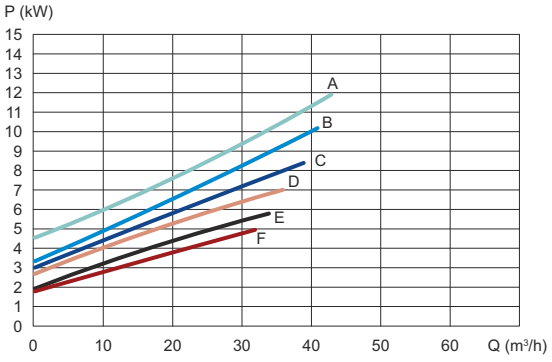
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

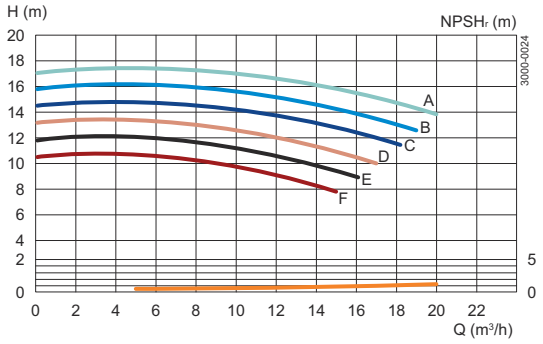


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

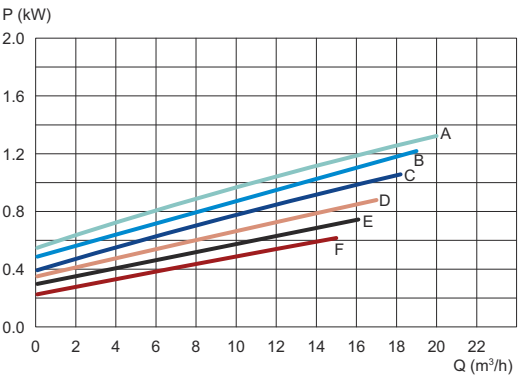
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

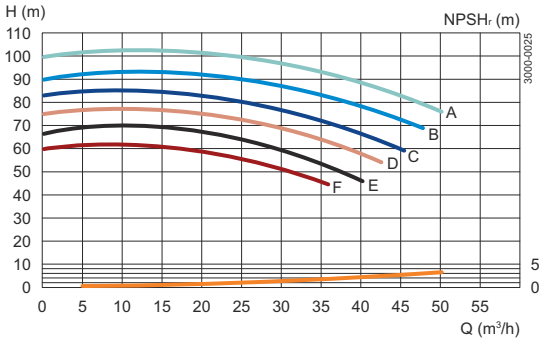
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-35, 60 Hz

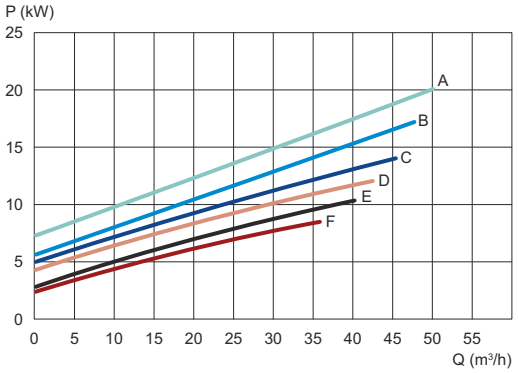
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 21 kW, 3535 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-17kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

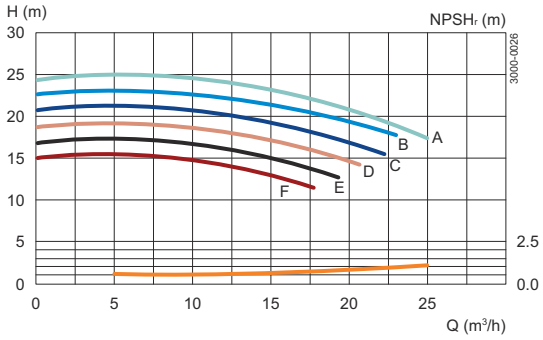


A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

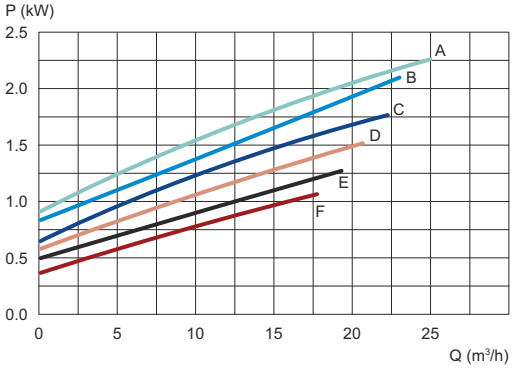
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 2.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

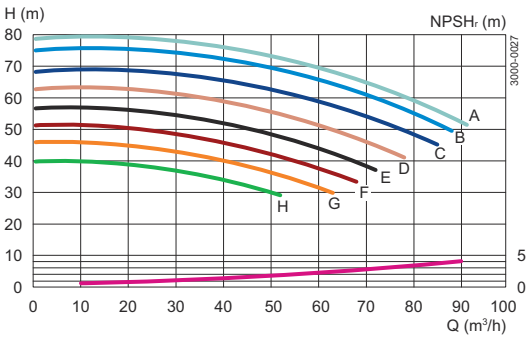
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-40, 50 Hz

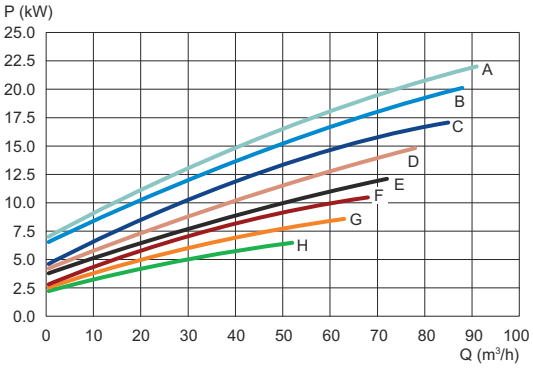
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with:
- 3% for 11–18.5 kW
- 5% for 7.5 kW

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

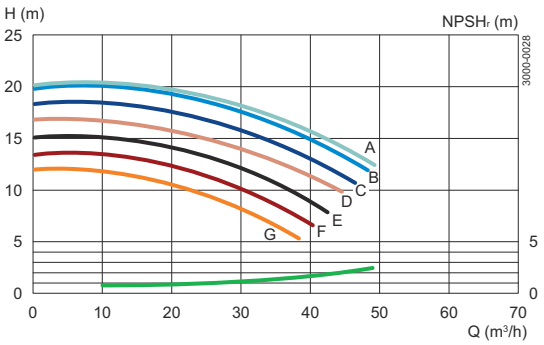


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

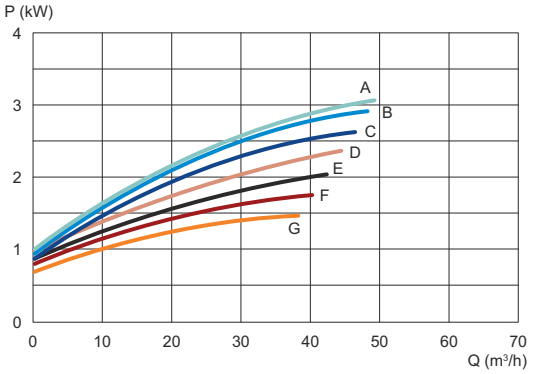
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	180 mm
Pump inlet, dia.:	Dia.: 76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz. For smaller motors,reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190



A = 235 D = 210 G = 180
B = 230 E = 200
C = 220 F = 190

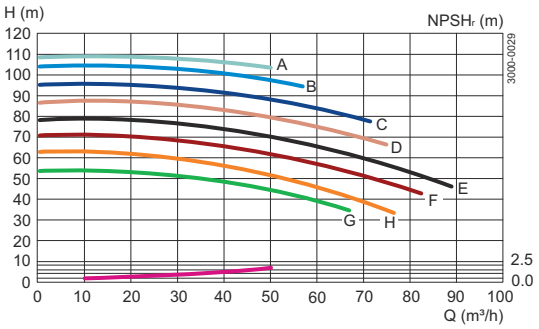
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-40, 60 Hz

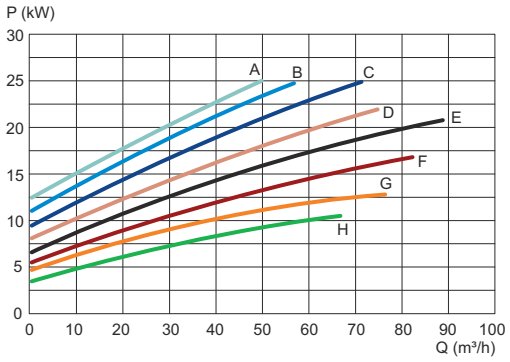
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with:
- 3% for 12.5 - 21 kW.
- 5% for 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

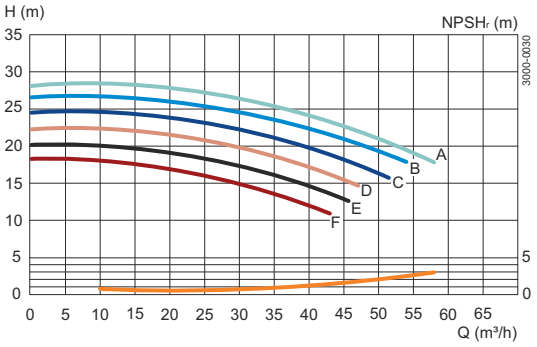


A = 235 D = 210 G = 180
B = 230 E = 200 H = 170
C = 220 F = 190

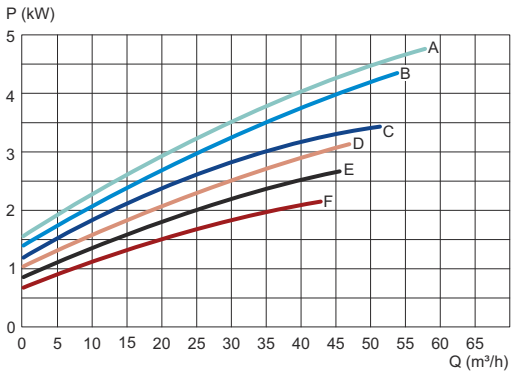
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	235 mm
Impeller, Min. dia.:	190 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	63.5 mm, DN 65
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190



A = 235 D = 210
B = 230 E = 200
C = 220 F = 190

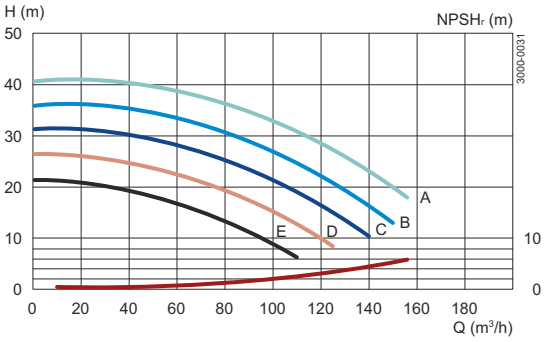
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-45, 50 Hz

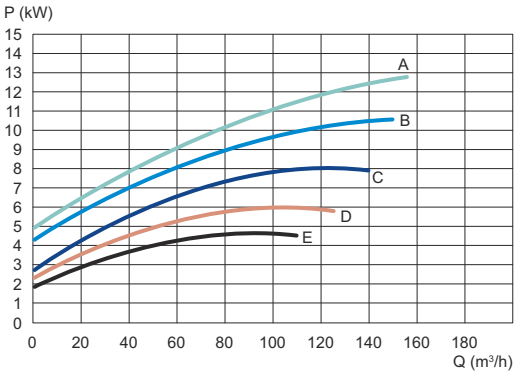
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 15 kW, 2930 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 3%

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

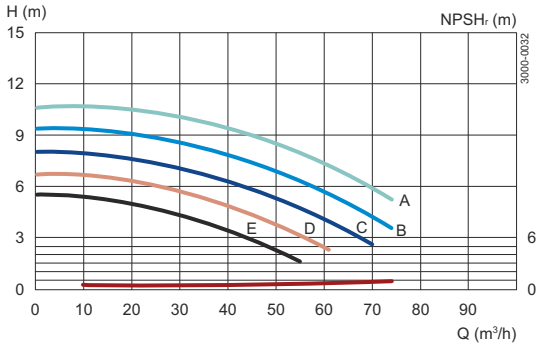


A = 178 D = 150
B = 170 E = 140
C = 160

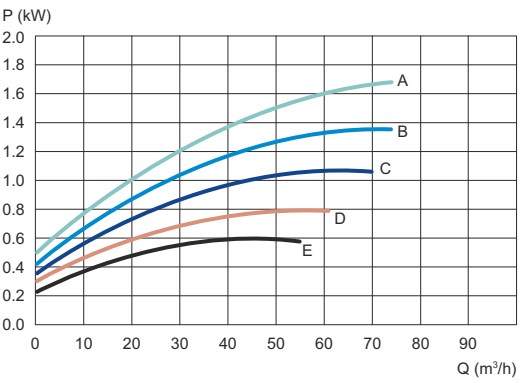
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	- 101.6 mm, DN 100
Pump outlet, dia.:	- 76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



A = 178 D = 150
B = 170 E = 140
C = 160

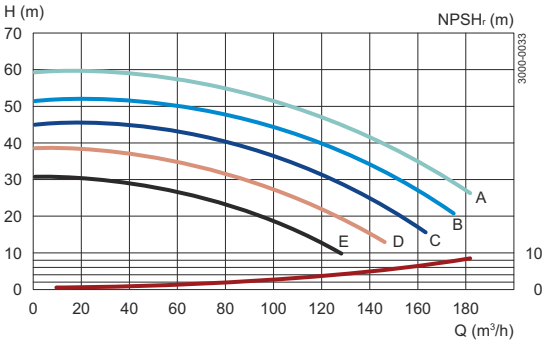
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-45, 60Hz

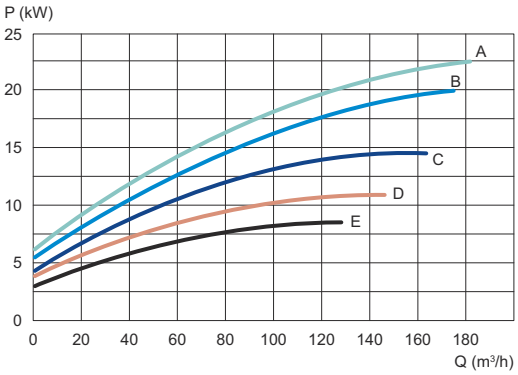
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3545 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with
- 3% for 12.5 - 21 kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160

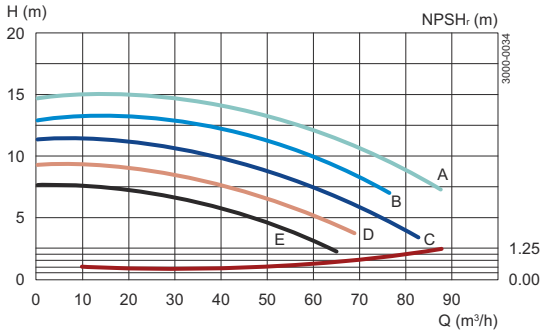


A = 178 D = 150
B = 170 E = 140
C = 160

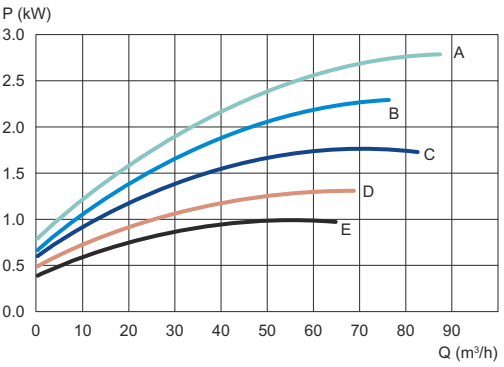
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	178 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 3.5 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 178 D = 150
B = 170 E = 140
C = 160



A = 178 D = 150
B = 170 E = 140
C = 160

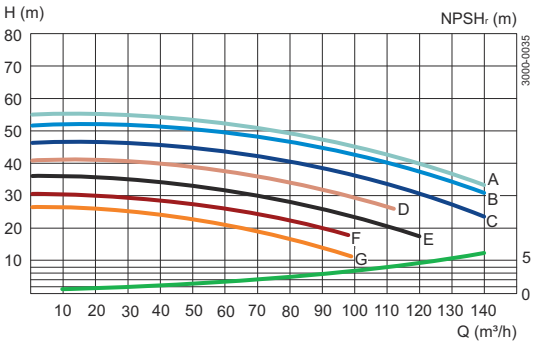
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-50, 50 Hz

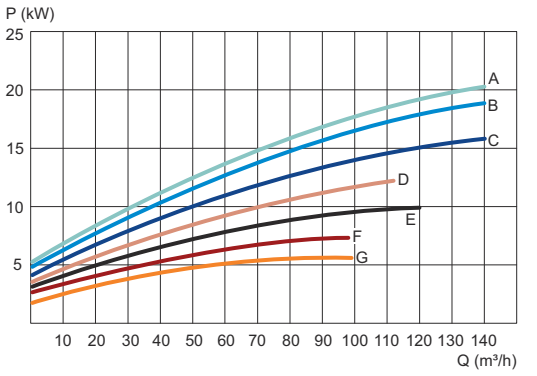
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2940 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
- 3% for 11 - 18.5 kW.
- 5% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

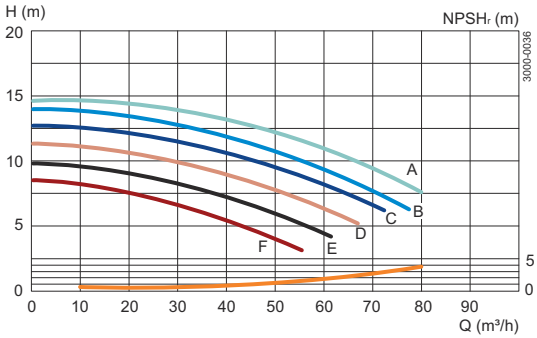


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

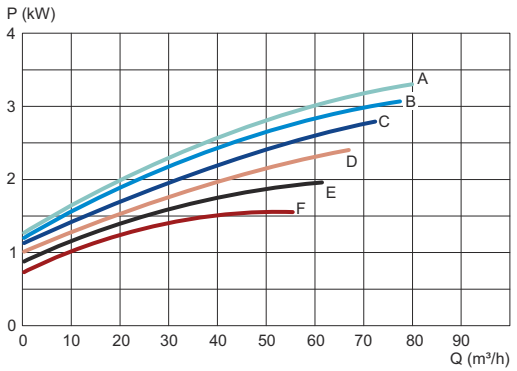
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1430 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160



A = 205 D = 180
B = 200 E = 170
C = 190 F = 160

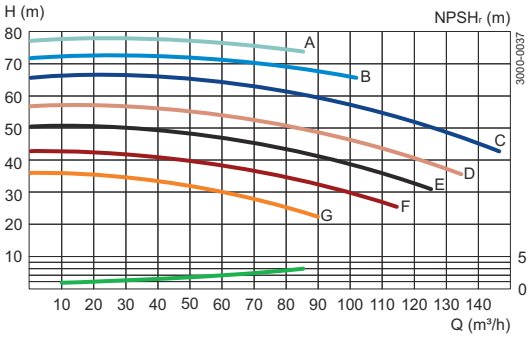
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-50, 60Hz

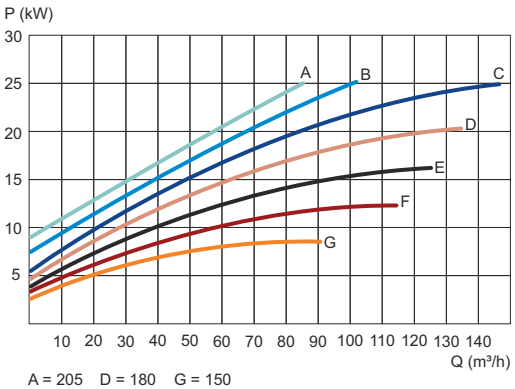
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	150 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

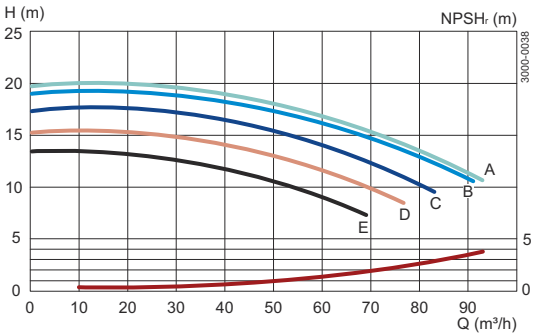


A = 205 D = 180 G = 150
B = 200 E = 170
C = 190 F = 160

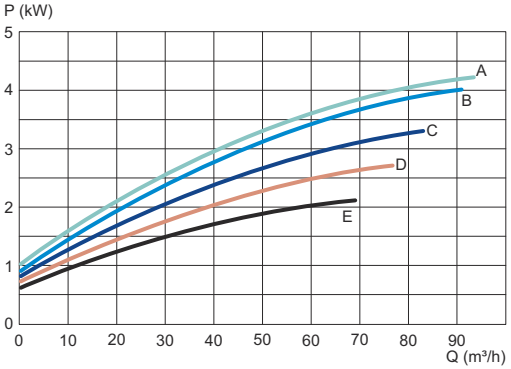
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	205 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4.5 kW, 1750 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 205 D = 180
B = 200 E = 170
C = 190



A = 205 D = 180
B = 200 E = 170
C = 190

Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-60, 50 Hz

Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

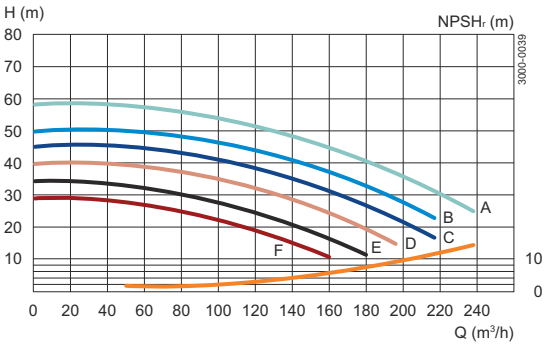
Note! The curves refer to motor: 30 kW, 2955 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with:
3% for 11 - 22 kW.
6% for 5.5 - 7.5 kW.

DO NOT FORGET THE SAFETY FACTOR

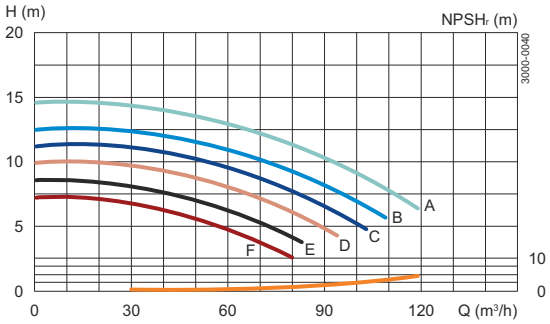
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	- 101.6 mm, DN 100 - DN 150
Pump outlet, dia.:	- 101.6 mm, DN 100 - DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 1425 rpm. asynchr., 50 Hz.
For smaller motors, reduce head (H) with: 5%.

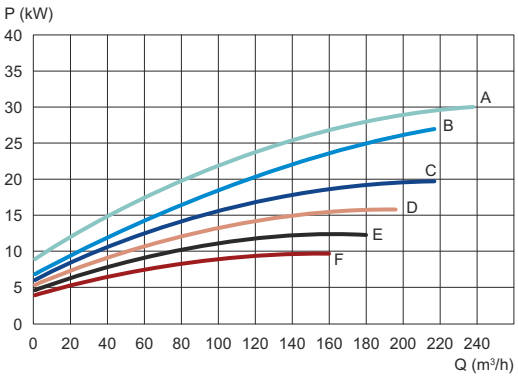
DO NOT FORGET THE SAFETY FACTOR



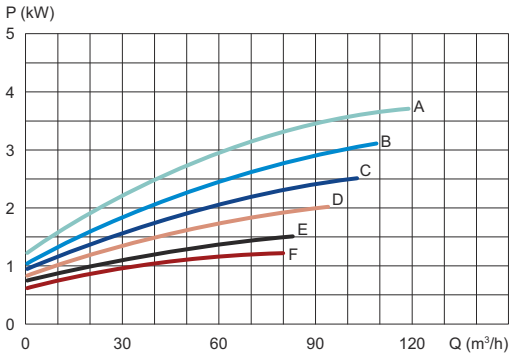
A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

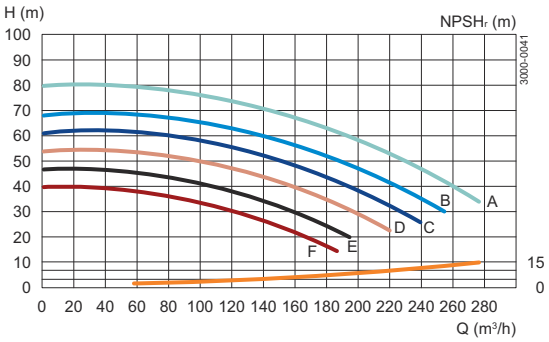
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-60, 60Hz

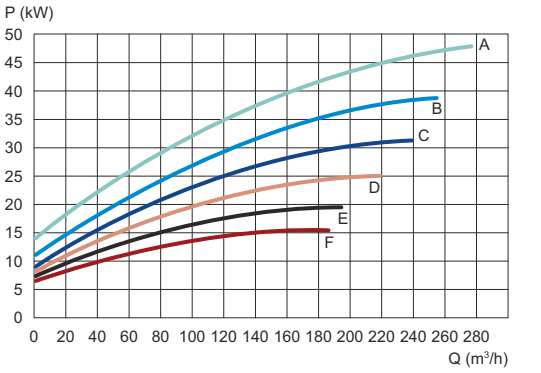
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 35 kW, 3500 rpm. asynchr., 60 Hz.
For smaller motors, reduce head (H) with:
- 3%for12.5-21kW.
- 5% for 6.3 - 8.6 kW.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

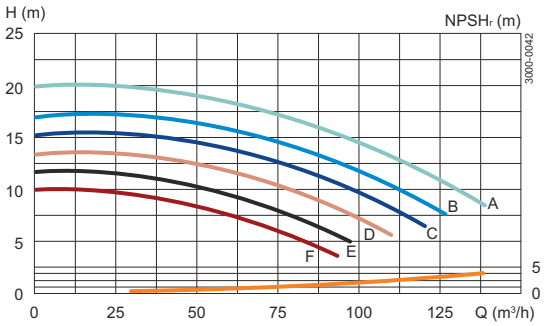


A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

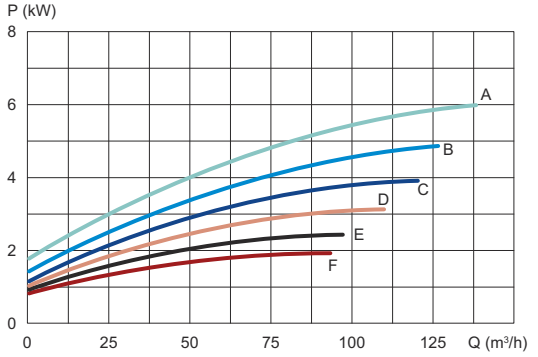
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	210 mm
Impeller, Min. dia.:	160 mm
Pump inlet, dia.:	101.6 mm, DN 100 DN 150
Pump outlet, dia.:	101.6 mm, DN 100 DN 100
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 6.3 kW, 1750 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 5%.

DO NOT FORGET THE SAFETY FACTOR



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160



A = 210 D = 180
B = 200 E = 170
C = 190 F = 160

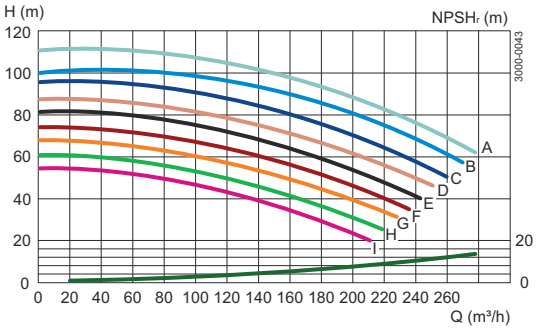
Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-70, 50 Hz

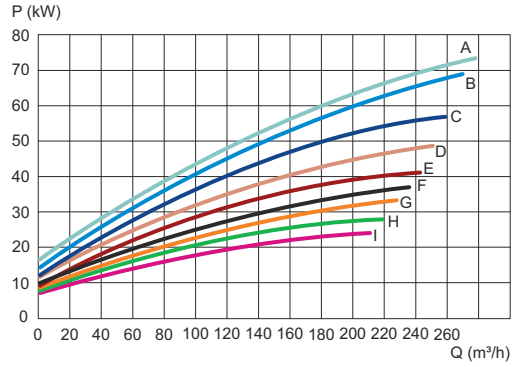
Motor:	**3000 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 75 kW, 2970 rpm. asynchr., 50 Hz. For smaller motors, reduce head (H) with: 2%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

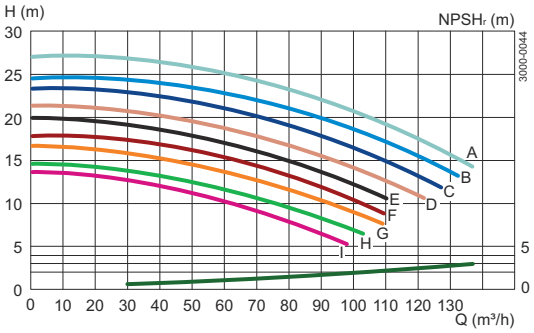


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

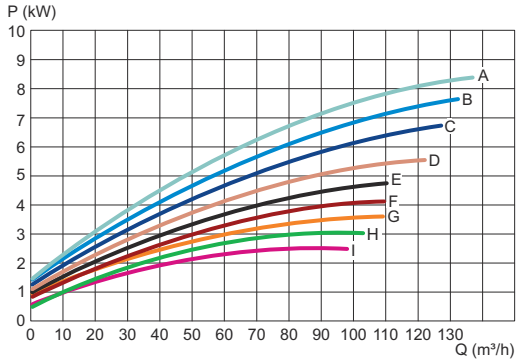
Motor:	**1500 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 1460 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

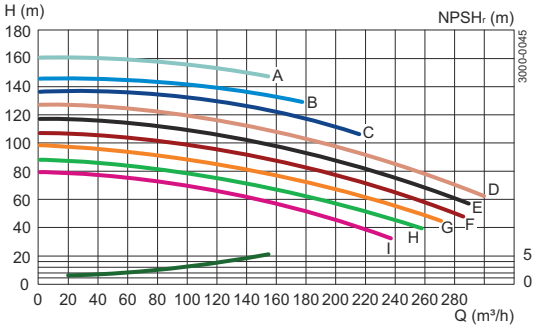
Footnote: Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

LKHevap-70, 60 Hz

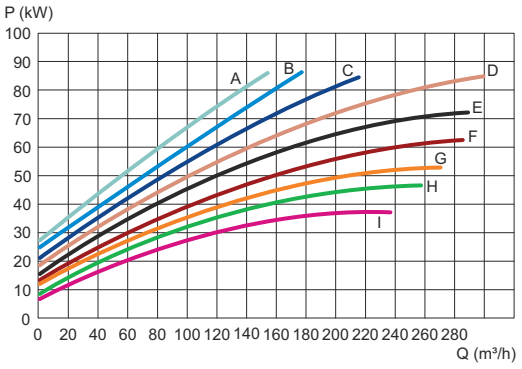
Motor:	**3600 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 86 kW, 3565 rpm. asynchr., 60 Hz. For smaller motors, reduce head (H) with: 3%.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

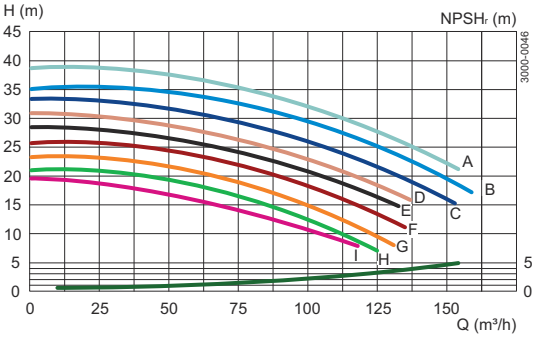


A = 280 D = 250 G = 220
B = 270 E = 240 H = 210
C = 260 F = 230 I = 200

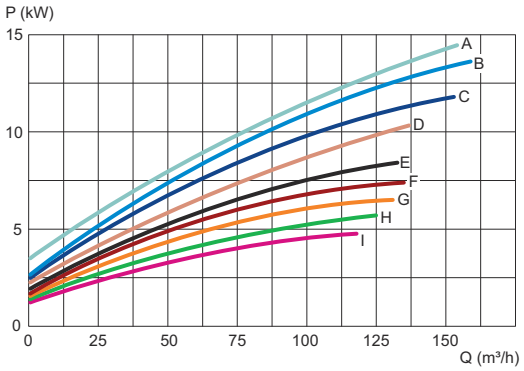
Motor:	**1800 rpm. synchr.**
Tolerance:	±5%
Impeller, Max. dia.:	280 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	101.6 mm, DN 100
Pump outlet, dia.:	76 mm, DN 80
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 17 kW, 1750 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200



A = 280 D = 250 G = 220
B = 280 E = 240 H = 210
C = 260 F = 230 I = 200

Note: If Clear Flow impeller is mounted the performance can be up to 10% lower than on the curves shown.

Alfa Laval SolidC

Performance curves

SolidC-1, 50 Hz

Motor:	**1500 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	160 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

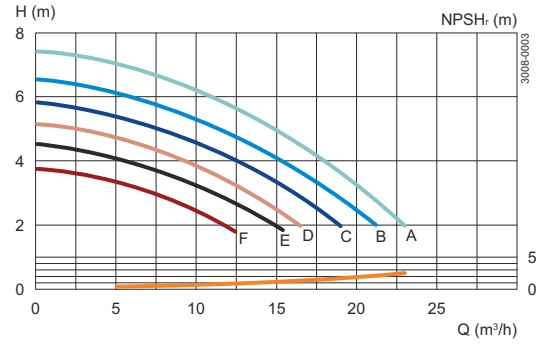
Note! The curves refer to motor: 1.5 kW, 1410 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR

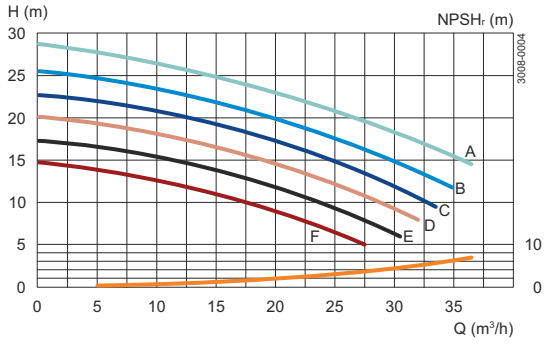
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	160 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	Dia.: 51 mm, DN 50
Pump outlet, dia.:	Dia.: 38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 4 kW, 2890 rpm. asynchr., 50 Hz.

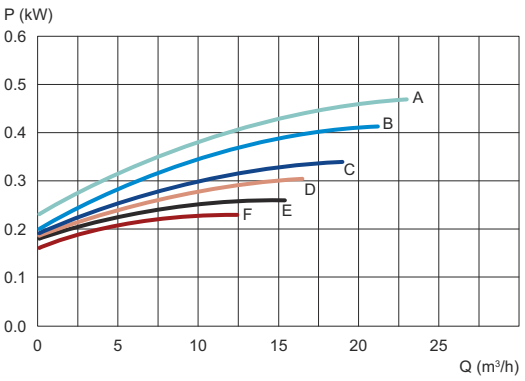
DO NOT FORGET THE SAFETY FACTOR



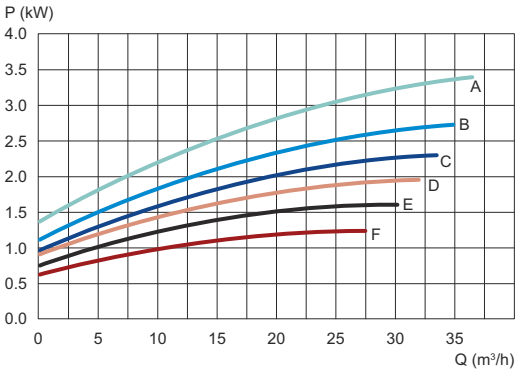
A = 160 D = 130
B = 150 E = 120
C = 140 F = 110



A = 160 D = 130
B = 150 E = 120
C = 140 F = 110



A = 160 D = 130
B = 150 E = 120
C = 140 F = 110



A = 160 D = 130
B = 150 E = 120
C = 140 F = 110

SolidC-1, 60 Hz

Motor:	**1800 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	160 mm
Impeller, Min. dia.:	110 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

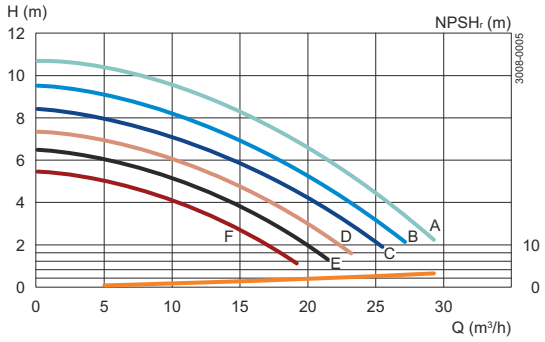
Note! The curves refer to max. motor: 1.8 kW, 1710 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR

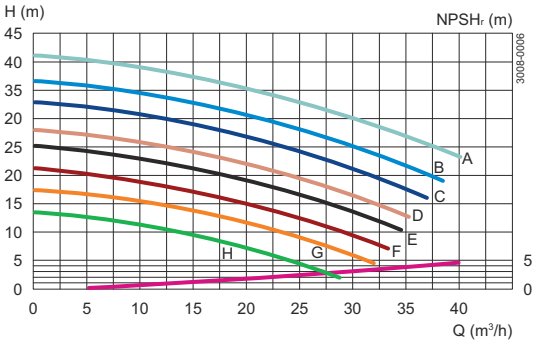
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	160 mm
Impeller, Min. dia.:	90 mm
Pump inlet, dia.:	51 mm, DN 50
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to max. motor: 6.6 kW, 3540 rpm. asynchr., 60 Hz.

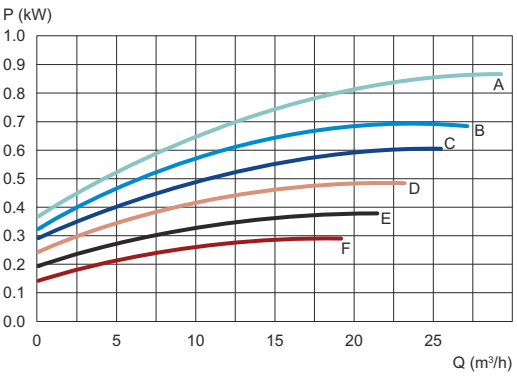
DO NOT FORGET THE SAFETY FACTOR



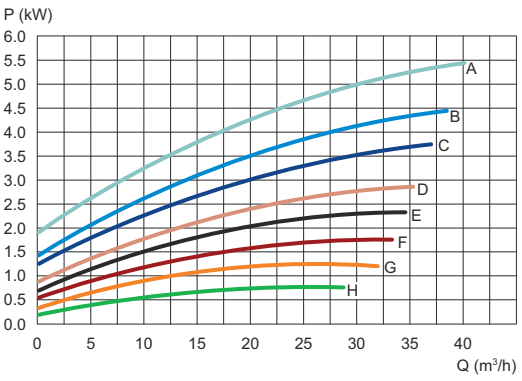
A = 160 D = 130
B = 150 E = 120
C = 140 F = 110



A = 160 D = 130 G = 100
B = 150 E = 120 H = 90
C = 140 F = 110



A = 160 D = 130
B = 150 E = 120
C = 140 F = 110



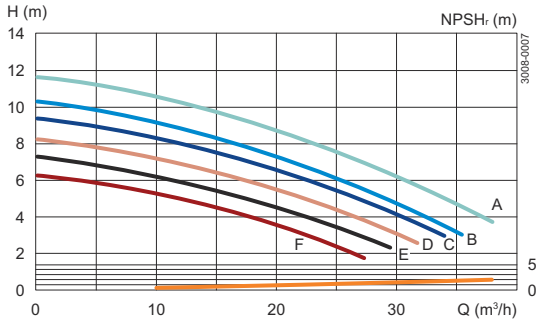
A = 160 D = 130 G = 100
B = 150 E = 120 H = 90
C = 140 F = 110

SolidC-2, 50 Hz

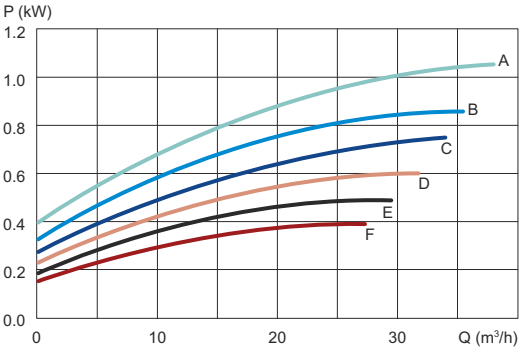
Motor:	**1500 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	190 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 1.5 kW, 1410 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 190 D = 160
B = 180 E = 150
C = 170 F = 140

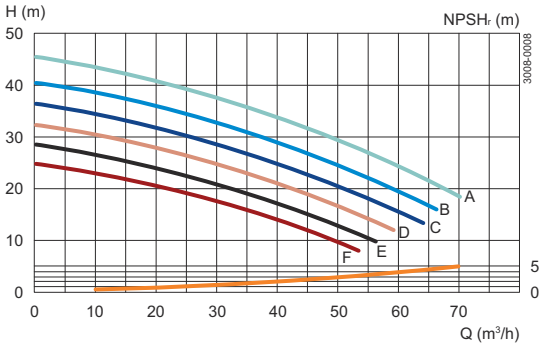


A = 190 D = 160
B = 180 E = 150
C = 170 F = 140

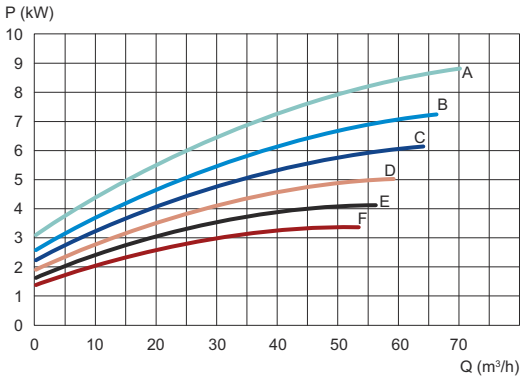
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	190 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 11 kW, 2945 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR



A = 190 D = 160
B = 180 E = 150
C = 170 F = 140



A = 190 D = 160
B = 180 E = 150
C = 170 F = 140

SolidC-2, 60Hz

Motor:	**1800 rpm. synchr**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	190 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

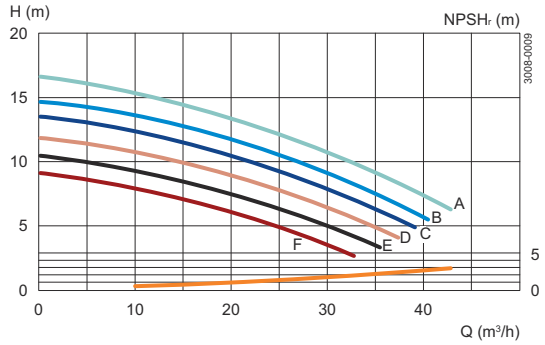
Note! The curves refer to motor: 1.5 kW, 1710 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR

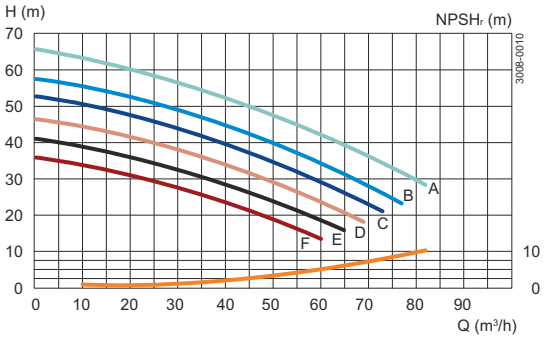
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	190 mm
Impeller, Min. dia.:	140 mm
Pump inlet, dia.:	63.5 mm, DN 65
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 18 kW, 3535 rpm. asynchr., 60 Hz.

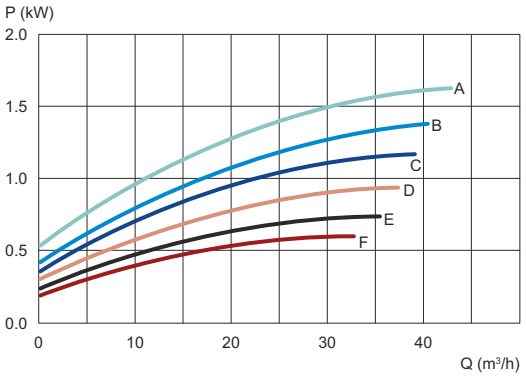
DO NOT FORGET THE SAFETY FACTOR



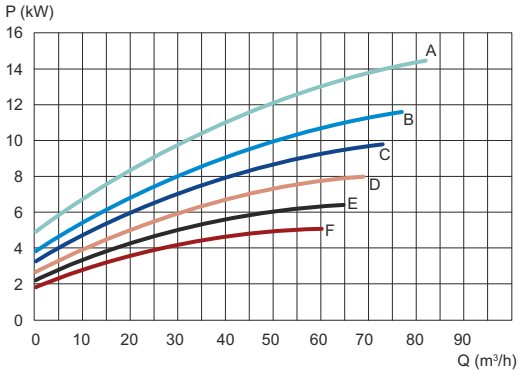
A = 190 D = 160
B = 180 E = 150
C = 170 F = 140



A = 190 D = 160
B = 180 E = 150
C = 170 F = 140



A = 190 D = 160
B = 180 E = 150
C = 170 F = 140



A = 190 D = 160
B = 180 E = 150
C = 170 F = 140

SolidC-3, 50Hz

Motor:	**1500 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

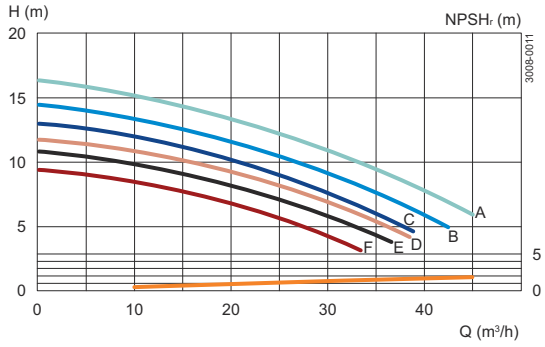
Note! The curves refer to motor: 3 kW, 1420 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR

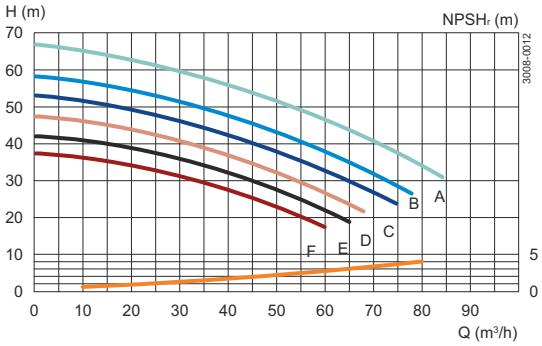
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 18.5 kW, 2960 rpm. asynchr., 50 Hz.

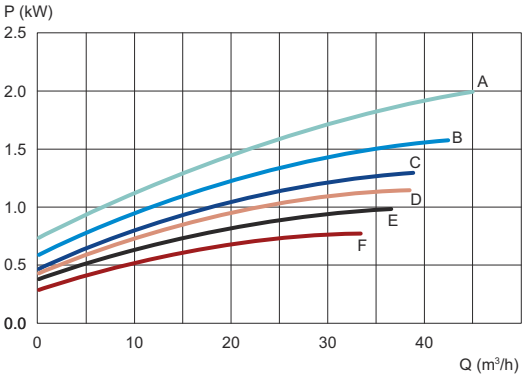
DO NOT FORGET THE SAFETY FACTOR



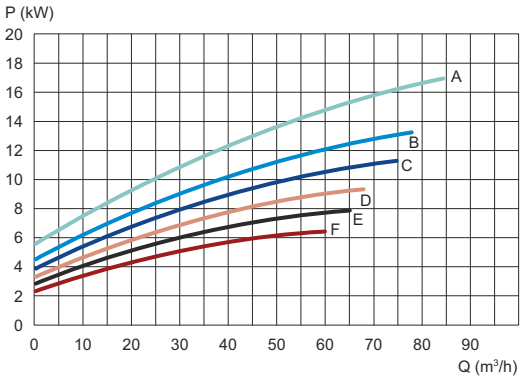
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

SolidC-3, 60Hz

Motor:	**1800 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

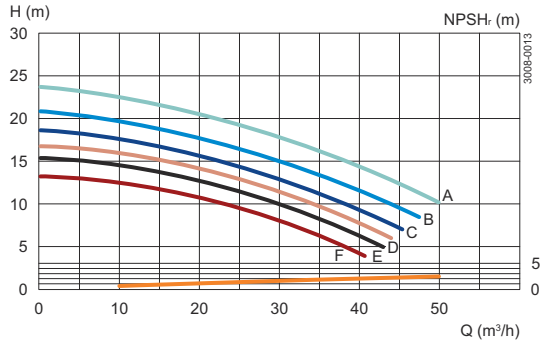
Note! The curves refer to motor: 3.6 kW, 1720 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR

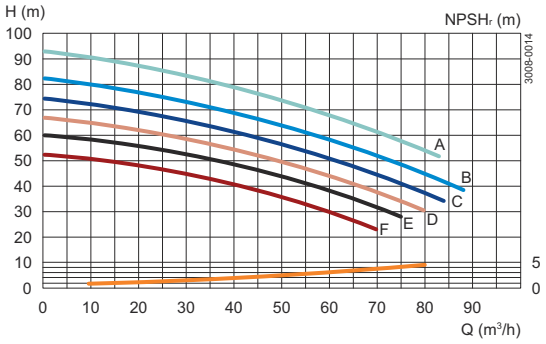
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	220 mm
Impeller, Min. dia.:	170 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	38 mm, DN 40
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3555 rpm. asynchr., 60 Hz.

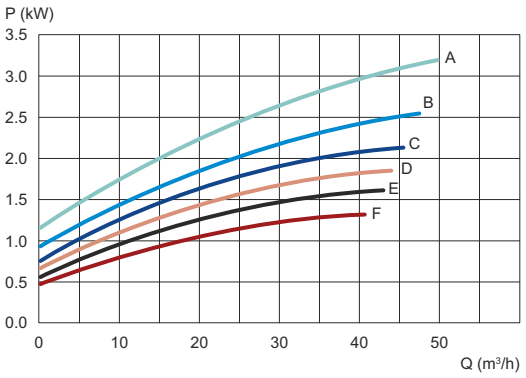
DO NOT FORGET THE SAFETY FACTOR



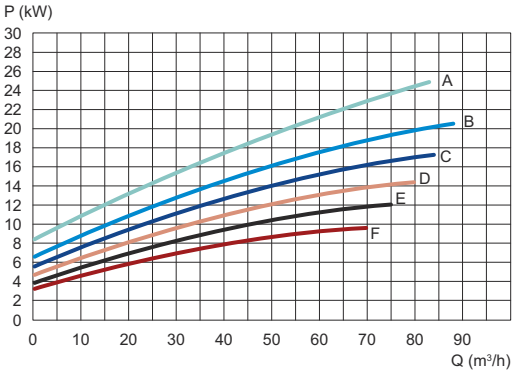
A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170



A = 220 D = 190
B = 210 E = 180
C = 200 F = 170

SolidC-4, 50 Hz

Motor:	**1500 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	250 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

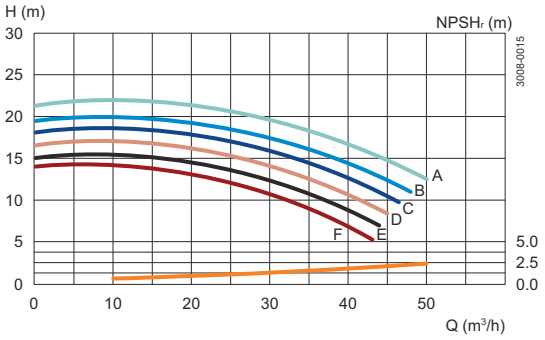
Note! The curves refer to motor: 4 kW, 1455 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR

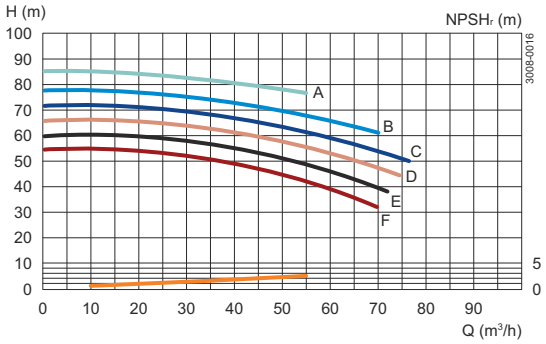
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	250 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 22 kW, 2955 rpm. asynchr., 50 Hz.

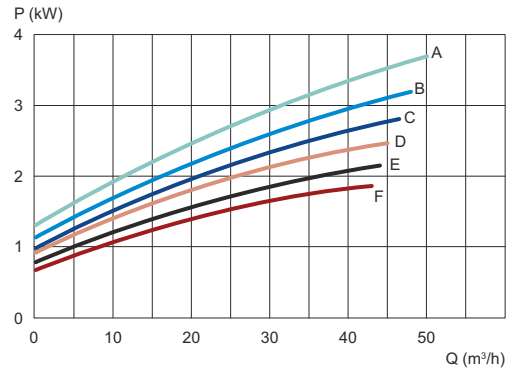
DO NOT FORGET THE SAFETY FACTOR



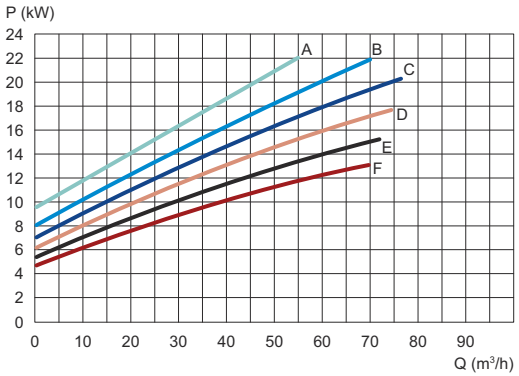
A = 250 D = 220
B = 240 E = 210
C = 230 F = 200



A = 250 D = 220
B = 240 E = 210
C = 230 F = 200



A = 250 D = 220
B = 240 E = 210
C = 230 F = 200



A = 250 D = 220
B = 240 E = 210
C = 230 F = 200

SolidC-4, 60 Hz

Motor:	**1800 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	250 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

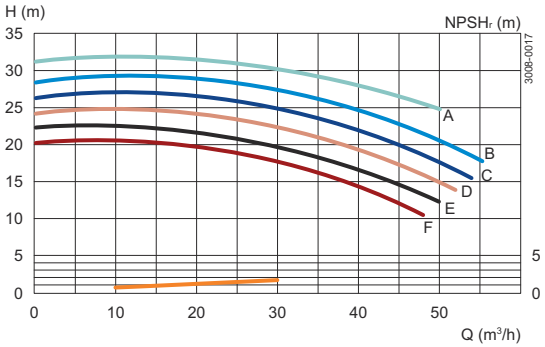
Note! The curves refer to motor: 6.8 kW, 1770 rpm. asynchr., 60 Hz.

DO NOT FORGET THE SAFETY FACTOR

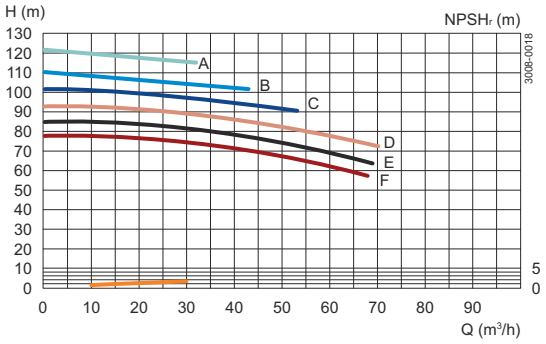
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q ±6% for H
Impeller, Max. dia.:	250 mm
Impeller, Min. dia.:	200 mm
Pump inlet, dia.:	76 mm, DN 80
Pump outlet, dia.:	51 mm, DN 50
Performance data refer to water at 20 °C	

Note! The curves refer to motor: 25 kW, 3555 rpm. asynchr., 60 Hz.

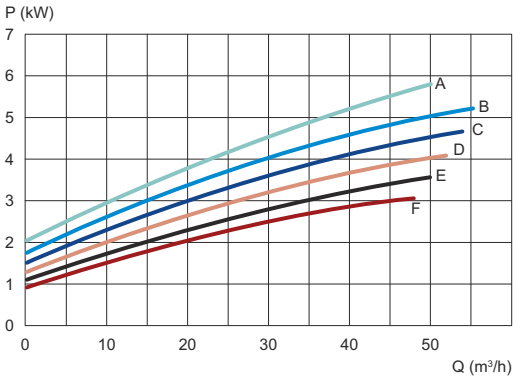
DO NOT FORGET THE SAFETY FACTOR



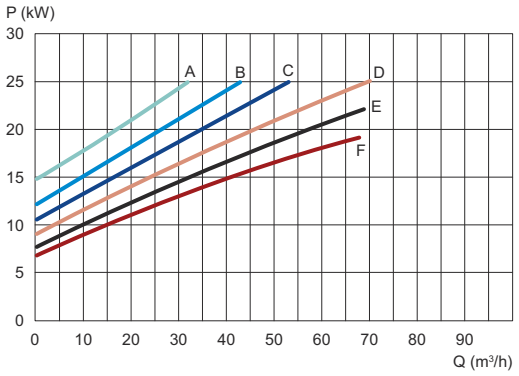
A = 250 D = 220
B = 240 E = 210
C = 230 F = 200



A = 250 D = 220
B = 240 E = 210
C = 230 F = 200



A = 250 D = 220
B = 240 E = 210
C = 230 F = 200



A = 250 D = 220
B = 240 E = 210
C = 230 F = 200

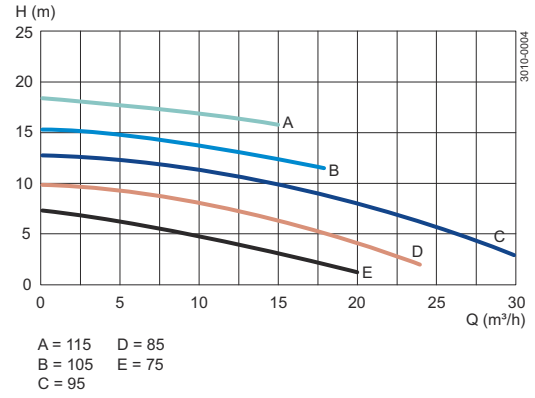
Alfa Laval FM-0S

Performance curves

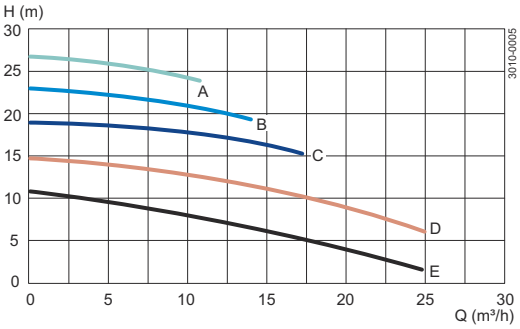
FM-0S

	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q. ±6% for H.
Impeller, Max. dia.:	115 mm
Impeller, Min. dia.:	75 mm
Pump inlet, dia.:	51 mm (2").
Pump outlet, dia.:	51 mm (2").
Performance data refer to water at 20 °C	
Note! The curves refer to motor: 1.1 kW, 2850 rpm. asynchr., 50 Hz.	
DO NOT FORGET THE SAFETY FACTOR	

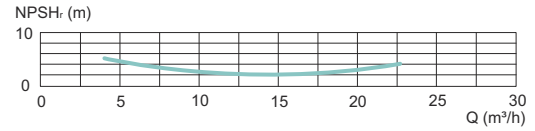
	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q. ±6% for H.
Impeller, Max. dia.:	115 mm
Impeller, Min. dia.:	75 mm
Pump inlet, dia.:	51 mm (2").
Pump outlet, dia.:	51 mm (2").
Performance data refer to water at 20 °C	
Note! The curves refer to motor: 1.3 kW, 3440 rpm. asynchr., 60 Hz.	
DO NOT FORGET THE SAFETY FACTOR	

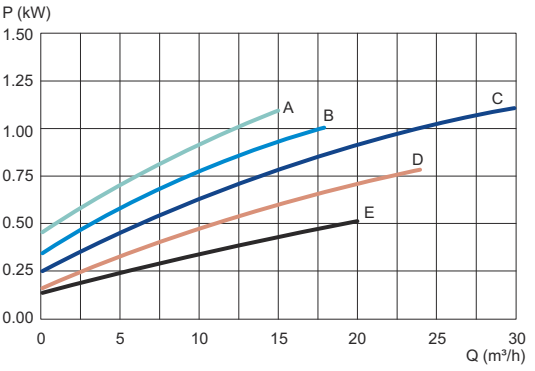


A = 115 D = 85
B = 105 E = 75
C = 95

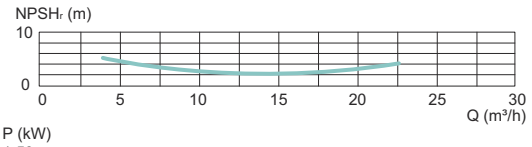


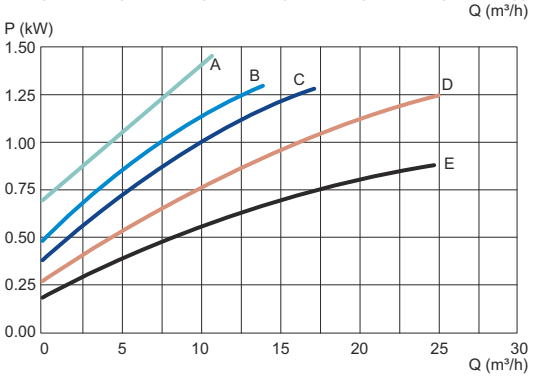
A = 115 D = 85
B = 105 E = 75
C = 95





A = 115 D = 85
B = 105 E = 75
C = 95





A = 115 D = 85
B = 105 E = 75
C = 95

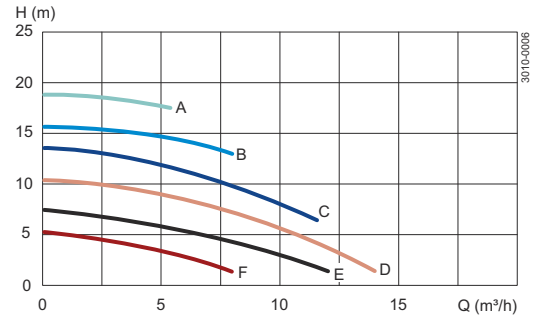
Alfa Laval GM and GM-A

Performance curves

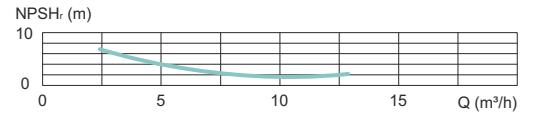
GM and GM-A

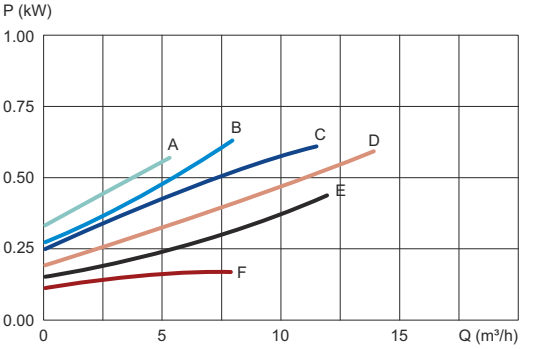
	50 Hz
Motor:	**3000 rpm. synchr.**
Tolerance:	±8% for Q. ±6% for H.
Impeller, Max. dia.:	115 mm
Impeller, Min. dia.:	65 mm
Pump inlet, dia.:	38 mm (1½").
Pump outlet, dia.:	38 mm (1½").
Performance data refer to water at 20 °C	
Note! The curves refer to motor: 0.55 kW, 2820 rpm. asynchr., 50 Hz.	
DO NOT FORGET THE SAFETY FACTOR	

	60 Hz
Motor:	**3600 rpm. synchr.**
Tolerance:	±8% for Q. ±6% for H.
Impeller, Max. dia.:	95 mm
Impeller, Min. dia.:	65 mm
Pump inlet, dia.:	38mm (1½").
Pump outlet, dia.:	38 mm (1½").
Performance data refer to water at 20 °C	
Note! The curves refer to motor: 0.65 kW, 3410 rpm. asynchr., 60 Hz.	
DO NOT FORGET THE SAFETY FACTOR	

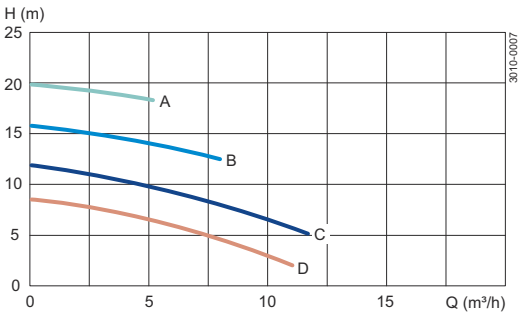


A = 115 D = 85
B = 105 E = 75
C = 95 F = 65

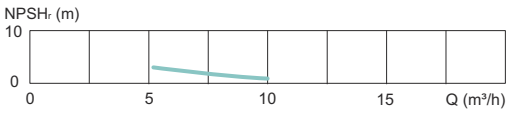


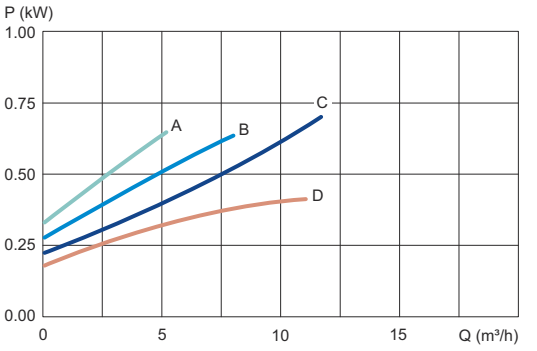


A = 115 D = 85
B = 105 E = 75
C = 95 F = 65



A = 95 D = 65
B = 85
C = 75





A = 95 D = 65
B = 85
C = 75

Alfa Laval MR

Performance curves

MR

	50 Hz		
Motor:	**1500 rpm. synchr.**		
Tolerance:	±5%		
Type:	185S 185US	200S 200US	300
Impeller,:	199 mm	199 mm	240 mm
Pump inlet, Dia.:	76 mm	76 mm	76 mm
Pump outlet, Dia.:	76 mm	76 mm	76 mm
Performance data refer to water at 20 °C			

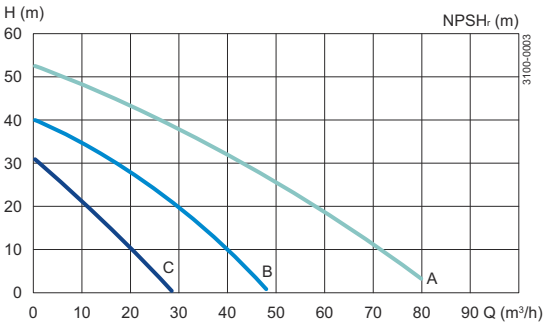
NOTE! The curves refer to motor:
MR-185S: 5.5 kW, 1450 rpm. asynchr., 50 Hz.
MR-200S:7.5 kW, 1790 rpm. asynchr., 50 Hz.
MR-300: 22 kW, 1465 rpm. asynchr., 50 Hz.

DO NOT FORGET THE SAFETY FACTOR

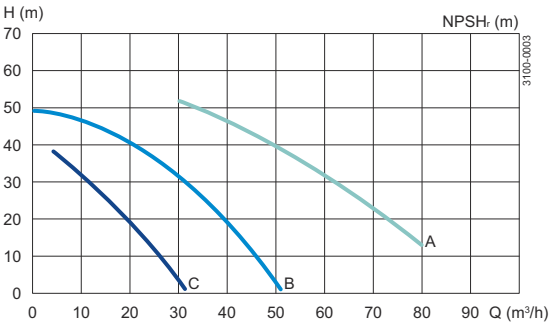
	60 Hz		
Motor:	**1800 rpm. synchr.**		
Tolerance:	±8% for Q. ±6% for H.		
Type:	185S	200S	300
Impeller,:	199 mm	199 mm	240 mm
Pump inlet, Dia.:	76 mm	76 mm	76 mm
Performance data refer to water at 20 °C			

NOTE! The curves refer to motor:
MR-185S: 6.3 kW, 1740 rpm. asynchr., 60 Hz.
MR-200S: 8.6/12.5 kW, 1790 rpm. asynchr., 60 Hz.
MR-300: 25 kW, 1765 rpm. asynchr., 60 Hz.

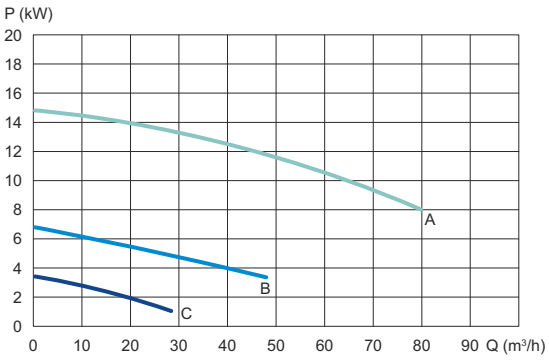
DO NOT FORGET THE SAFETY FACTOR



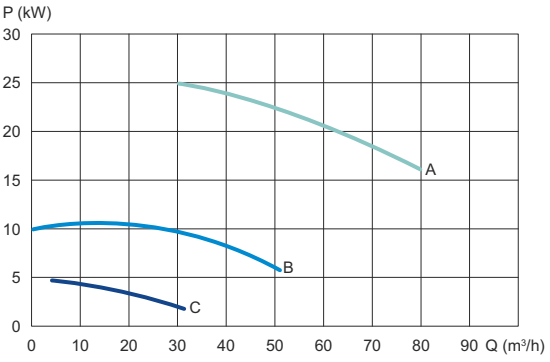
A = MR-300 C = MR-185S
B = MR-200S



A = MR-300 C = MR-185S
B = MR-200S



A = MR-300 C = MR-185S
B = MR-200S



A = MR-300 C = MR-185S
B = MR-200S

Circumferential piston pumps

Product leaflet

Alfa Laval DuraCirc

Circumferential Piston Pump

Introduction

The Alfa Laval DuraCirc delivers the perfect balance of durability, reliability, high efficiency and superior hygienic performance. Combined with design features enabling simple service, the DuraCirc keeps process running. In additional to a class leading range of flow and pressure capabilities, DuraCirc comes with globally recognized hygienic certification. The innovative design also includes features that make cleaning and maintenance faster, easier and more dependable.

Applications

Designed for Cleaning-in-Place (CIP), the Alfa Laval DuraCirc is ideal for hygienic applications within the dairy, food, beverage, home and personal care industries. The highly efficient design is particularly suited to applications that are low in viscosity with medium to high discharge pressures and require equipment that can be cleaned in place.

The DuraCirc Circumferential Piston Pump is available with 13 different pump head displacements to handle flow rates up to 149 m3/h and differential pressures up to 40 bar.

Benefits

- High volumetric efficiency performance allowing for optimized pump selection, reducing capital cost, whilst improving process yield.
- Certified to both EHEDG and 3A, reducing both process cross contamination risk and CIP cycle time, maintaining process yield as well as cutting cleaning costs.
- Truly front-loading single seal, full component interchangeability without complicated maintenance procedures, long life bearing operation and one single long-life lubricant making service faster and easier, increasing process uptime.
- Robust, durable design via strong gearcase incorporating increased diameter shafts and optimally positioned heavy-duty bearings, minimizes risk of pump head contact, reducing service requirement, maintaining process continuity.
- DuraCirc Uni-Fit port option allows easy direct replacement of both Alfa Laval SCPP range and also other major brands into existing process systems, without changing pipework.

Standard design

Twin-wing piston rotors made of special non-galling alloy are standard. All other media contacting steel components, like the rotor case, front cover and rotor nuts are in W. 1.4404 (AISI 316L). With stainless steel gear case and feet, the DuraCirc pump has an all stainless steel exterior, making it exceptional corrosion resistant.

The gearbox is as standard designed with duplex shafts and a strong, long life bearing arrangement. This provides for a very robust and rigid shaft assembly design – a prerequisite for the very high volumetric efficiency achieved.

With profiled defined compression elastomers and an optimised shaft seal location, the DuraCirc is designed according to the most stringent hygienic design standards and with verified and effective CIP cleanability.

The pump features a front-loading single mechanical seal, which allows quick and easy inspection or replacement without the need to disassemble pipework. Single flushed and double mechanical shaft seals as well as O-ring seals are available as options.

The Alfa Laval DuraCirc can be supplied either as a bare shaft pump or mounted on a base plate complete with coupling, guard, gear motor and shroud for easy, plug-and-play installation.

Working principle

The rotor pistons rotate around the circumference of the channel in the pump casing. This continuously generates a partial vacuum at the suction port as the rotors unmesh, causing fluid to enter the pump. The fluid is transported around the channel by the rotor pistons, and is displaced as the rotor pistons re-mesh, generating pressure at the discharge port. The direction of flow is reversible.

Technical data

Standard specification	
Piston rotors:	Non-Galling Alloy
Other product wetted steel parts:	W. 1.4404 (316L)
Inside surface finish:	Mech Ra ≤ 0.8
Shafts:	Duplex 1.4460 (329)
Gear box:	Stainless steel
Base plate:	Stainless steel
Coupling guard:	Stainless steel
Product wetted elastomers:	EPDM
Other elastomers:	FPM
Shaft seal:	Single mechanical
Rotary seal face:	Silicon Carbide
Stationary seal face:	Carbon

Shaft seals	
Single mechanical, single mechanical with flush, double mechanical and single and flushed O-ring seal available.	
Max process pressure, mechanical seal, SiC/Car:	15 bar
Max process pressure, mechanical seal, SiC/SiC:	Max pressure of pump
Max flush pressure, single flush:	0.5 bar
Max flush pressure, double mechanical seal, SiC/Car:	16 bar
Max flush pressure, double mechanical seal, SiC/SiC:	20 bar
Max process pressure, O-ring seal:	7 bar
Max flush pressure, O-ring seal:	0.5 bar
Flush water consumption:	30 l/hr
Flush connections, DuraCirc 32-43:	BSP/G 1/8" or NPT 1/8"
Flush connections, DuraCirc 52-74:	BSP/G 1/4" or NPT 1/4"

Temperature	
Max process and CIP temperature:	150°C

Motors
Gear motor, 4 poles, to IEC metric standard, 50/60 Hz, suitable for frequency conversion, IP55, insulation class F.

Warranty
Extended 3-years warranty on DuraCirc pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

Process data

Pump Model	Displacement			Inlet/Outlet		Diff. Pressure		Max speed
	Litres/rev	Imp gall/100 rev	US gall/100 rev	mm	inch	Bar	PSI	rpm
32	0,03	0.66	0.79	25	1	25	362	1000
33	0,06	1.32	1.58	40	1½	25	362	1000
34	0,12	2.64	3.17	50	2	16	232	1000
42	0,23	5.06	6.07	50	2	20	290	750
43	0,29	6.38	7.66	50	2	13	188	750
52	0,38	8.36	10.03	50	2	37	536	750
53	0,59	12.97	15.57	65	2½	25	362	750
54	0,96	21.12	25.3	80	3	16	232	750
62	1,44	31.67	38.04	80	3	37	536	600
63	1,97	43.33	52.03	100	4	25	362	600
72	1,92	42.23	50.7	100	4	40	580	600
73	2,86	62.91	75.55	150	6	25	362	600
74	4,14	91.1	109.4	150	6	16	232	600

Dimensions

(mm)

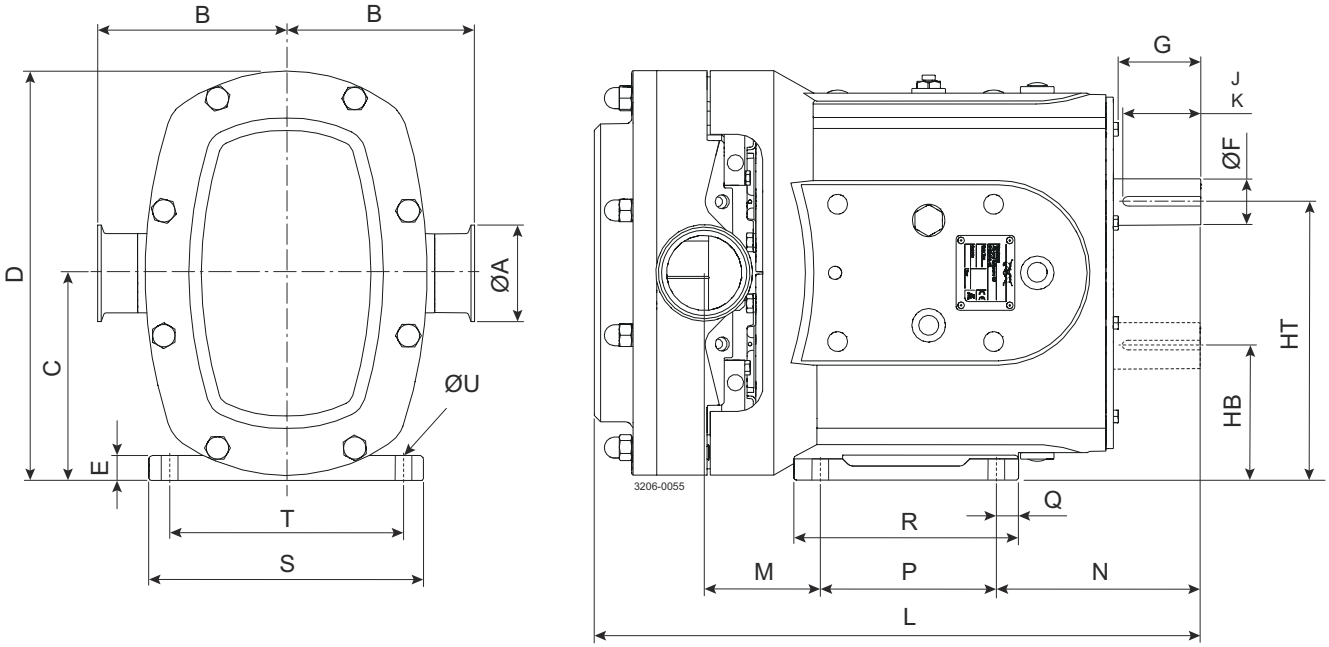


Figure 1. Horizontally ported

ØU = 4 Holes

J = Key Length

K = Key Width

DuraCirc Uni-Fit dimensions

Pump Model	A	B	C	D	E	F	G	HB	HT	J	K	L	M	N	P	Q	R	S	T	U
32	25	89	107	212	12	22	42	73	141	32	6	330	52	124	100	25	140	150	124	12
33	40	89	107	212	12	22	42	73	141	32	6	336	52	124	100	25	140	150	124	12
34	40	89	107	212	12	22	42	73	141	32	6	354	60	124	100	25	140	150	124	12
42	40	108	132	262	10	28	56	88	176	40	8	414	72	139	125	16	158	185	154	14
43	50	109	132	262	10	28	56	88	176	40	8	422	81	139	125	16	158	185	154	14
52	50	136	186	348	40	38	66	129	243	63	10	473	84	168	140	22	180	220	190	14
53	65	136	186	348	40	38	66	129	243	63	10	486	90	168	140	22	180	220	190	14
54	80	136	186	348	40	38	66	129	243	63	10	513	111	168	140	22	180	220	190	14
62	80	168	238	436	59	45	85	163	313	70	14	586	118	199	160	25	223	250	216	14
63	100	168	238	436	59	45	85	163	313	70	14	606	125	199	160	25	223	250	216	14
72	100	187	264	502	44	60	105	175	353	90	18	700	109	246	215	20	276	280	246	14
73	150	203	264	502	44	60	105	175	353	90	18	725	122	246	215	20	276	280	246	14
74	150	216	264	502	44	60	105	175	353	90	18	759	144	246	215	20	276	280	246	14

Note! DuraCirc Uni-Fit is an option to meet port to port and port height dimensions of equivalent SCPP bare shaft pump model.

DuraCirc standard dimensions

Pump Model	A	B	C	D	E	F	G	HB	HT	J	K	L	M	N	P	Q	R	S	T	U
32	25	105	115	220	12	22	42	81	149	32	6	330	52	124	100	25	140	150	124	12
33	40	105	115	220	12	22	42	81	149	32	6	336	52	124	100	25	140	150	124	12
34	50	105	115	220	12	22	42	81	149	32	6	354	60	124	100	25	140	150	124	12
42	50	125	132	262	10	28	56	88	176	40	8	414	72	139	125	16	158	185	154	14
43	50	125	132	262	10	28	56	88	176	40	8	422	81	139	125	16	158	185	154	14
52	50	151	163	325	17	38	66	106	220	63	10	473	84	168	140	22	180	220	190	14
53	65	151	163	325	17	38	66	106	220	63	10	486	90	168	140	22	180	220	190	14
54	80	159	163	325	17	38	66	106	220	63	10	513	111	168	140	22	180	220	190	14
62	80	185	200	398	21	45	85	125	275	70	14	586	118	199	160	25	223	250	216	14
63	100	185	200	398	21	45	85	125	275	70	14	606	125	199	160	25	223	250	216	14
72	100	203	242	480	22	60	105	153	331	90	18	700	109	246	215	20	276	280	246	14
73	150	203	242	480	22	60	105	153	331	90	18	725	122	246	215	20	276	280	246	14
74	150	203	242	480	22	60	105	153	331	90	18	759	144	246	215	20	276	280	246	14

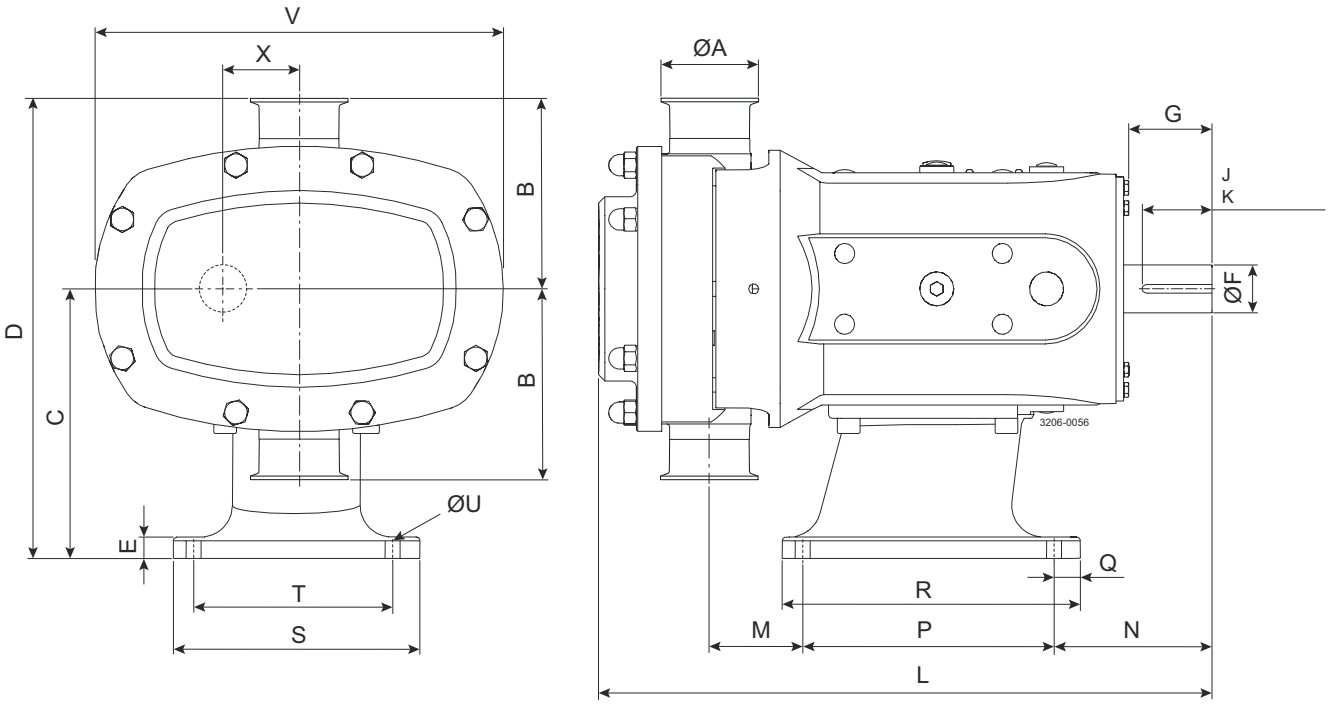


Figure 2. Vertically ported

ØU = 4 Holes

J = Key Length

K = Key Width

DuraCirc standard dimensions

Pump Model	A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	V	X
32	25	105	147	252	12	22	42	32	6	330	52	124	100	41	160	130	100	12	204	34
33	40	105	147	252	12	22	42	32	6	336	52	124	100	41	160	130	100	12	204	34
34	50	105	147	252	12	22	42	32	6	354	60	124	100	41	160	130	100	12	204	34
42	50	125	175	300	15	28	56	40	8	414	51	130	155	48	220	160	125	14	254	44
43	50	125	175	300	15	28	56	40	8	422	60	130	155	48	220	160	125	14	254	44
52	50	151	213	364	17	38	66	63	10	473	61	131	200	17	232	190	150	14	324	57
53	65	151	213	364	17	38	66	63	10	486	67	131	200	17	232	190	150	14	324	57
54	80	159	213	372	17	38	66	63	10	513	88	131	200	17	232	190	150	14	324	57
62	80	185	257	442	18	45	85	70	14	586	85	192	200	43	260	220	180	14	396	75
63	100	185	257	442	18	45	85	70	14	606	92	192	200	43	260	220	180	14	396	75
72	100	203	294	497	20	60	105	90	18	700	97	213	260	30	310	250	210	14	476	89
73	150	203	294	497	20	60	105	90	18	725	110	213	260	30	310	250	210	14	476	89
74	150	203	294	497	20	60	105	90	18	759	132	213	260	30	310	250	210	14	476	89

Options

- Silicon Carbide/Silicon Carbide mechanical seal faces.
- Single mechanical shaft seal with flush.
- Double mechanical shaft seal.
- EDPM or FPM O-ring seal, single and flushed.
- Product wetted elastomers in FPM or FFPM.
- Horizontal or vertical porting.
- DuraCirc Uni-Fit dimensions for retrofit port option.
- Heating and cooling jacket.
- Rectangular inlet.
- Aseptic option (see separate data sheet)
- Stainless steel shroud covering coupling and motor.
- Baseplate fitted with adjustable stainless steel ball feet.

Pump sizing

In order to correctly size a circumferential piston pump some essential information is required. Provision of this information listed below enables our Technical Support personnel to obtain the optimum pump selection.

Product/Fluid Data

- Fluid to be pumped
- Viscosity
- Pumping temperature, minimum, normal and maximum
- Cleaning in Place temperature(s), minimum, normal and maximum

Performance Data

- Flow rate, minimum, normal and maximum
- Discharge head/pressure (closest to pump outlet)
- Suction condition

Alfa Laval DuraCirc Aseptic

Circumferential Piston Pump

Introduction

The Alfa Laval DuraCirc Aseptic delivers the perfect balance of durability, reliability, high efficiency and superior hygienic performance. Combined with design features enabling simple service, the DuraCirc Aseptic keeps process running. In additional to a class leading range of flow and pressure capabilities and globally recognized hygienic certification, DuraCirc Aseptic specification allows for a sterile environment to be maintained within the pump. The innovative design also includes features that make cleaning and maintenance faster, easier and more dependable.

Applications

Designed for sterile flushing at all product media to atmosphere interfaces, as well as Cleaning-in-Place (CIP), the Alfa Laval DuraCirc Aseptic is ideal for aseptic processing within the dairy, food, beverage, home and personal care industries. The highly efficient design is particularly suited to applications that are low in viscosity with medium to high discharge pressures and require equipment that can be cleaned in place.

The DuraCirc Aseptic Circumferential Piston Pump is available with 5 different pump head displacements to handle flow rates up to 103 m3/h and differential pressures up to 25 bar.

Benefits

- Ability to introduce steam barrier on all media/atmosphere interfaces - front cover, ports and mechanical seals, allows for sterile pump operation.
- High volumetric efficiency performance allowing for optimized pump selection, reducing capital cost, whilst improving process yield.
- Certified to both EHEDG and 3A, reducing both process cross contamination risk and CIP cycle time, maintaining process yield whilst cutting cleaning costs.
- Full component interchangeability without complicated maintenance procedures, long life bearing operation and one single long-life lubricant making service faster and easier, increasing process uptime.
- Robust, durable design via strong gearcase incorporating increased diameter shafts and optimally positioned heavy-duty bearings, minimizes risk of pump head contact, reducing service requirement, maintaining process continuity.

Standard design

Twin-wing piston rotors made of special non-galling alloy are standard. All other media contacting steel components, like the rotor case, front cover and rotor nuts are in W. 1.4404 (AISI 316L). With stainless steel gear case and feet, the DuraCirc pump has an all stainless steel exterior, making it exceptional corrosion resistant.

The gearbox is as standard designed with duplex shafts and a strong, long life bearing arrangement. This provides for a very robust and rigid shaft assembly design – a prerequisite for the very high volumetric efficiency achieved.

With profiled defined compression elastomers and an optimised shaft seal location, the DuraCirc is designed according to the most stringent hygienic design standards and with verified and effective CIP cleanability.

The pump features a double mechanical seal prepared for sterile flushing. Furthermore, with special double sealing designs the pump is prepared for sterile flushing at the port connections and in the front cover.

The Alfa Laval DuraCirc Aseptic can be supplied either as a bare shaft pump or mounted on a base plate complete with

coupling, guard, gear motor and shroud for easy, plug-and-play installation.

Working principle

The rotor pistons rotate around the circumference of the channel in the pump casing. This continuously generates a partial vacuum at the suction port as the rotors unmesh, causing fluid to enter the pump. The fluid is transported around the channel by the rotor pistons, and is displaced as the rotor pistons re-mesh, generating pressure at the discharge port. The direction of flow is reversible.

Technical data

Standard specification	
Piston rotors:	Non-Galling Alloy
Other product wetted steel parts:	W. 1.4404 (316L)
Inside surface finish:	Mech Ra ≤ 0.8
Shafts:	Duplex 1.4460 (329)
Gear box:	Stainless steel
Base plate:	Stainless steel
Coupling guard:	Stainless steel
Product wetted elastomers:	EPDM
Other elastomers:	FPM
Shaft seal:	Double mechanical
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide

Operating data	
Max flush pressure, double mechanical seal:	20 bar
Max flush pressure, port connections and front cover:	4 bar
Flush connections, shaft seal DuraCirc Aseptic 42:	BSP/G 1/8" or NPT 1/8"
Flush connections, shaft seal DuraCirc Aseptic 53-73:	BSP/G 1/4" or NPT 1/4"
Flush connections, port connections and front cover:	BSP/G 1/8" or NPT 1/8"

Temperature	
Max process and CIP temperature:	150°C

Motors
Gear motor, 4 poles, to IEC metric standard, 50/60 Hz, suitable for frequency conversion, IP55, insulation class F.

Warranty
Extended 3-years warranty on DuraCirc pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

Process data

Pump Model	Displacement			Inlet/Outlet		Diff. Pressure		Max speed
	Litres/rev	Imp gall/100 rev	US gall/100 rev	mm	inch	Bar	PSI	rpm
42	0,23	5.06	6.07	50	2	20	290	750
53	0,59	12.97	15.57	65	2½	25	362	750
54	0,96	21.12	25.3	80	3	16	232	750
63	1,97	43.33	52.03	100	4	25	362	600
73	2,86	62.91	75.55	150	6	25	362	600

Dimensions

(mm)

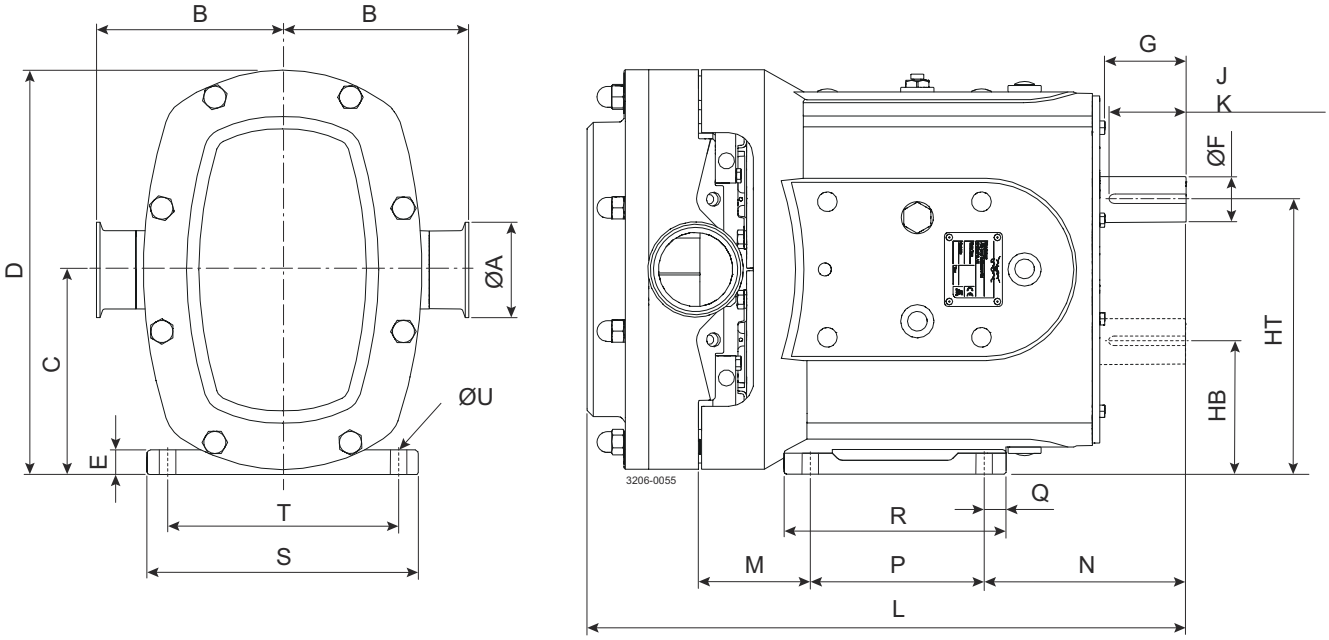


Figure 1. Horizontally ported

ØU = 4 Holes

J = Key Length

K = Key Width

Pump Model	A	B	C	D	E	F	G	HB	HT	J	K	L	M	N	P	Q	R	S	T	U
42	50	125	132	262	10	28	56	88	176	40	8	414	72	139	125	16	158	185	154	14
53	65	151	163	325	17	38	66	106	220	63	10	486	90	168	140	22	180	220	190	14
54	80	159	163	325	17	38	66	106	220	63	10	513	111	168	140	22	180	220	190	14
63	100	185	200	398	21	45	85	125	275	70	14	606	125	199	160	25	223	250	216	14
73	150	203	242	480	22	60	105	153	331	90	18	725	122	246	215	20	276	280	246	14

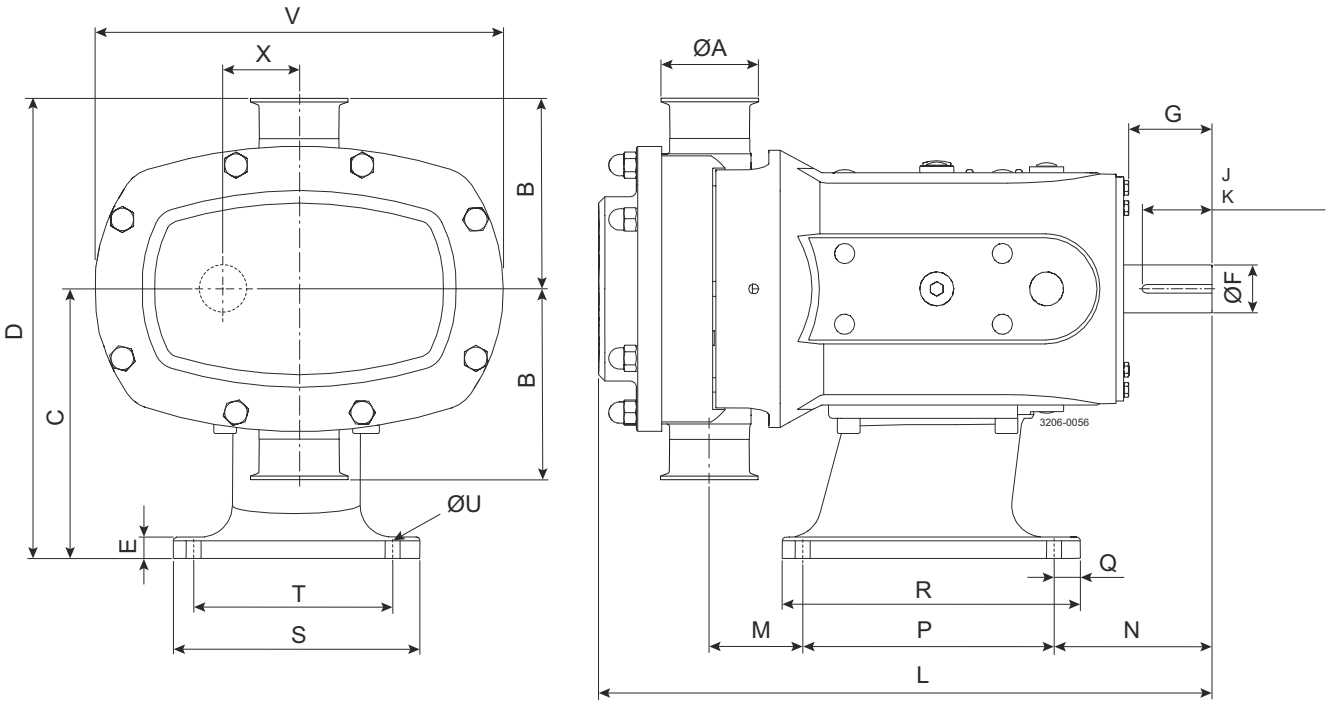


Figure 2. Vertically ported

ØU = 4 Holes

J = Key Length

K = Key Width

Pump Model	A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	V	X
42	50	125	175	300	15	28	56	40	8	414	51	130	155	48	220	160	125	14	254	44
53	65	151	213	364	17	38	66	63	10	486	67	131	200	17	232	190	150	14	324	57
54	80	159	213	372	17	38	66	63	10	513	88	131	200	17	232	190	150	14	324	57
63	100	185	257	442	18	45	85	70	14	606	92	192	200	43	260	220	180	14	396	75
73	150	203	294	497	20	60	105	90	18	725	110	213	260	30	310	250	210	14	476	89

Options

- Product wetted elastomers in FPM
- Horizontal or vertical porting.
- Heating and cooling jacket.
- Stainless steel shroud covering coupling and motor.
- Baseplate fitted with adjustable stainless steel ball feet.

Pump sizing

In order to correctly size a circumferential piston pump some essential information is required. Provision of this information listed below enables our Technical Support personnel to obtain the optimum pump selection.

Product/Fluid Data

- Fluid to be pumped
- Viscosity
- Pumping temperature, minimum, normal and maximum
- Cleaning in Place temperature(s), minimum, normal and maximum

Performance Data

- Flow rate, minimum, normal and maximum
- Discharge head/pressure (closest to pump outlet)
- Suction condition

Rotary lobe pumps

Product leaflet

Alfa Laval OptiLobe

Rotary lobe pumps

Introduction

The Alfa Laval OptiLobe Rotary Lobe Pump is a cost-effective alternative for general applications that require gentle product treatment and easy serviceability. Versatile, dependable and energy efficient, this hygienic positive displacement pump enhances both process flexibility and operational reliability.

The pump is designed according to the most stringent hygienic design standards and with verified, effective Cleaning-in-Place.

Applications

The OptiLobe Rotary Lobe Pump is designed for gentle product treatment in general applications across the dairy, food, beverage, home and personal care industries.

The OptiLobe pump is available with 10 different pump head displacements based on five different gearbox modules to handle flow rates up to 77 m^3/h and differential pressures up to 8 bar.

Benefits

- Cost-effective, hygienic pump.
- Optimal product quality due to gentle, low-shear operation.
- Robust design for long service life.
- Easy maintenance due to self-setting, front-loading seals.
- Low total cost of ownership.

Standard design

All media contacting steel components, like the rotor case, front cover, rotors and rotor nuts, are in W. 1.4404 (AISI 316L). With stainless steel bearing housing, canister and feet, the OptiLobe pump has an all stainless steel exterior, making it corrosion resistant.

The pump features the Alfa Laval EasyFit front-loading seal, which allows quick and easy inspection or replacement without the need to disassemble pipework. Single and single-flushed shaft seals are available as options.

The Alfa Laval OptiLobe can be supplied either as a bare shaft pump or mounted on a base plate complete with coupling, guard, gear motor and shroud for easy, plug-and-play installation.

Working principle

A gear train in the pump gearbox drives the rotors and provides accurate synchronization of the tri-lobe rotors. The movement of the counter-rotating rotors creates a partial vacuum that allows atmospheric pressure or other external pressures to force fluid into the pump chamber. As the rotors revolve, an expanding cavity forms, filling with fluid. As the blades disengage, each dwell forms a cavity. As the rotor blades engage, the cavity diminishes and fluid is displaced into the outlet port.

Certificates

Authorized to carry the 3A symbol

TECHNICAL DATA

Standard specification	
Product wetted steel parts:	W. 1.4404 (316L)
Inside surface finish:	Mech Ra ≤ 0.8
Gear canister:	Stainless steel
Base plate:	Stainless steel
Coupling guard:	Stainless steel
Rotor:	Tri-lobe
Product wetted elastomers:	EPDM
Other elastomers:	NBR
Shaft seal:	Single mechanical EasyFit
Rotary seal face:	Carbon
Stationary seal face:	Stainless steel

Shaft seals	
EasyFit single and single flush available. All options are fully front loading and interchangeable.	
Max flush pressure, single flush:	0.5 bar
Water consumption, single flush:	0.5 l/min
Flush connections:	BSPT or NPT

Temperature	
Max process and CIP temperature (dependent on rotor selection)	130°C

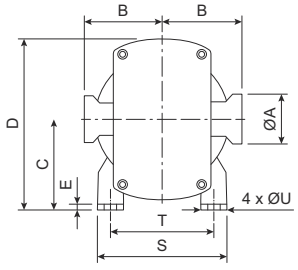
Motor
Gear motor, 4 poles, to IEC metric standard, 50/60 Hz, suitable for frequency conversion, IP55, insulation class F.

Warranty
Extended 3-years warranty on OptiLobe pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

Process data

	Displacement			Inlet/Outlet		Diff. Pressure		Max Speed
	Litres/ rev	Imp gall/ 100 rev	US gall/ 100 rev	mm	inch	bar	psi	rpm
OptiLobe 12	0.06	1.23	1.48	25	1	8	115	1000
OptiLobe 13	0.10	2.18	2.61	40	1.5	8	115	1000
OptiLobe 22	0.17	3.74	4.49	40	1.5	8	115	1000
OptiLobe 23	0.21	4.62	5.55	40	1.5	8	115	1000
OptiLobe 32	0.32	7.04	8.45	50	2	8	115	1000
OptiLobe 33	0.40	8.80	10.57	50	2	8	115	1000
OptiLobe 42	0.64	14.08	16.91	65	2.5	8	115	1000
OptiLobe 43	0.82	18.04	21.66	80	3	8	115	1000
OptiLobe 52	1.17	25.74	30.89	80	3	8	115	750
OptiLobe 53	1.72	37.84	45.41	100	4	8	115	750

Dimensions (mm)



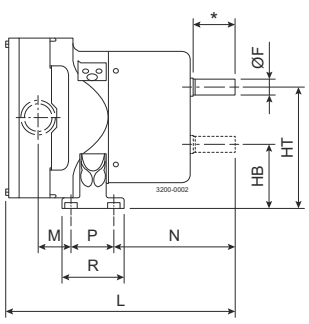
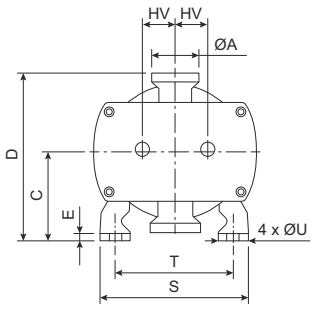


Figure 1. Horizontally Ported



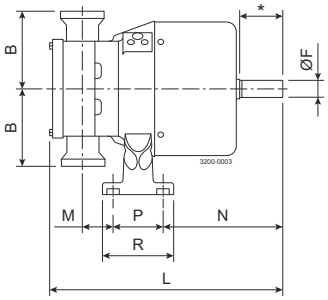


Figure 2. Vertically Ported

* Shaft length G; Key width K; Key length J.

	Pump Model	A (FLANGE <O>)	B (Port Width Dim)	C (Port Height Dim)	D (Overall Height)	E (Foot Thickness)	F (Shaft <O>)	G (Shaft Length)	HB (Btm Shaft Height)	HT (Top Shaft Height)	HV (SHAFT OFFSET)
10	12	25	86	95	171	11.5	16	40	68	122	27
	13	40	86	95	171	11.5	16	40	68	122	27
20	22	40	96	120	215.5	14.5	20	50	84	156	36
	23	40	96	120	215.5	14.5	20	50	84	156	36
30	32	50	120	136	251	14.5	24	50.5	92	180	44
	33	50	120	136	251	14.5	24	50.5	92	180	44
40	42	65	130	159	294	19.5	30	56	106	212	53
	43	80	138	159	294	19.5	30	56	106	212	53
50	52	80	162	196	366	20.5	45	89.5	132	260	64
	53	100	162	196	366	20.5	45	89.5	132	260	64

	Pump Model	J (Key Length)	K (Key Width)	L (Overall Length)	M (Front Bolt Hole to Port)	N (Back Bolt Hole to End of Shaft)	P (Bolt Hole Length)	R (Foot Length)	S (Foot Width)	T (Bolt Hole Width)	U (Bolt Hole <O>)
10	12	30	5	230.5	27.5	107.5	60	84	126	94	10
	13	30	5	243.5	34.5	107.5	60	84	126	94	10
20	22	32	6	277	35	139.5	60	90	162	124	12
	23	32	6	286	44	139.5	60	90	162	124	12
30	32	40	8	304	35	157	64	95	192	150	12
	33	40	8	316	47	157	64	95	192	150	12
40	42	40	8	371	51.3	161	100	145	235	180	14
	43	40	8	387	60.5	161	100	145	235	180	14
50	52	70	14	408.5	62	221	120	170	285	210	14
	53	70	14	508.5	79.5	221	120	170	285	210	14

Options

- Single mechanical shaft seal with flush.
- Silicon Carbide/Carbon seal faces.
- Silicon Carbide/Silicon Carbide seal faces.
- Product wetted elastomers in FPM.
- Heating and cooling front cover.
- Horizontal or vertical porting.
- Stainless steel shroud covering coupling and motor.
- Baseplate fitted with adjustable stainless steel ball feet.

Pump sizing

In order to correctly size a rotary lobe pump some essential information is required. Provision of this information listed below enables our Technical Support personnel to obtain the optimum pump selection.

Product/Fluid Data

- Fluid to be pumped
- Viscosity
- Pumping temperature, minimum, normal and maximum
- Cleaning in Place temperature(s), minimum, normal and maximum

Performance Data

- Flow rate, minimum, normal and maximum
- Discharge head/pressure (closest to pump outlet)
- Suction condition

Alfa Laval SRU

Rotary lobe pump

Introduction

The Alfa Laval SRU Rotary Lobe Pump is a reliable positive displacement pump for the gentle handling of sensitive process fluids. The pump is carefully engineered to provide reliable performance, trouble-free operation and superior energy efficiency for demanding applications. It is an excellent choice for duties that require contamination-proof pumps to meet high standards of hygiene, low-shear and low-pulsation operation.

The pump is designed according to the most stringent hygienic design standards and with verified, effective Cleaning-in-Place.

Applications

The SRU Rotary Lobe Pump is designed for gentle handling of sensitive process fluids across the dairy, food, beverage, brewing, chemical, pharmaceutical, and home and personal care industries.

Its smooth, low-shear pumping action makes the pump suitable for handling media of varying viscosities, whether low or high-from creams, gels, emulsions, and aerated mixtures to delicate cells and organic solids in suspension.

The SRU Rotary Lobe Pump is available with 12 different pump head displacements based on six different gearbox modules to handle flow rates up to 106 m^3/h and differential pressures up to 20 bar.

Benefits

- Consistent performance.
- Minimal risk of contamination.
- Low maintenance, increased process uptime.
- Modular design for greater flexibility to configure exactly the right solution for specific process requirements.

Standard design

All media contacting steel components, like the rotor case, front cover, rotors and rotor nuts, are in W. 1.4404 (AISI 316L). The robust stainless steel gearbox provides maximum shaft rigidity and easy oil seal replacement. The gearbox design is universal, which enables the flexibility of mounting pumps with the inlet and outlet ports in either a vertical or horizontal plane by changing the foot and its position.

The standard Alfa Laval SRU Rotary Lobe Pump has tri-lobe rotors. Optional bi-lobe rotors for handling fluids containing large delicate solids are available. All rotors are available in three temperature ratings enabling the pump to be operated at maximum process temperatures of 70°C, 130°C and 200°C for both fluid pumped and CIP.

Single, single flushed, and double mechanical shaft seals as well as packed gland, unflushed or flushed, are available.

The Alfa Laval SRU can be supplied either as a bare shaft pump or mounted on a base plate complete with coupling, guard, gear motor and shroud for easy, plug-and-play installation.

Working principle

A gear train in the pump gearbox drives the rotors and provides accurate synchronization of the tri-lobe rotors. The movement of the counter-rotating rotors creates a partial vacuum that allows atmospheric pressure or other external pressures to force fluid into the pump chamber. As the rotors revolve, an expanding cavity forms, filling with fluid. As the blades disengage, each dwell forms a cavity. As the rotor blades engage, the cavity diminishes and fluid is displaced into the outlet port.

TECHNICAL DATA

Standard specification	
Product wetted steel parts:	W. 1.4404 (316L)
Inside surface finish:	Mech Ra ≤ 0.8
Gearbox:	Stainless steel
Base plate:	Stainless steel
Coupling guard:	Stainless steel
Rotor:	Tri-lobe, 70°C
Product wetted elastomers:	EPDM
Other elastomers:	NBR
Shaft seal:	Single mechanical (R90)
Rotary seal face:	Carbon
Stationary seal face:	Stainless steel

Shaft seals	
Single, single flush, double mechanical and packed gland, flushed and unflushed, available. For EHEDG compliance Hyclean type must be used.	
Max flush pressure, single flush:	0.5 bar
Max flush pressure, double mechanical:	1 bar over product pressure
Max flush pressure, packed gland, flushed:	1 bar over product pressure
Water consumption, flushed or double mechanical:	0.5 l/min
Flush connections:	BSPT or NPT

Temperature	
Max process and CIP temperature (dependent on rotor selection)	70°C, 130°C or 200°C

Motor
Gear motor, 4 poles, to IEC metric standard, 50/60 Hz, suitable for frequency conversion, IP55, insulation class F.

Warranty
Extended 3-years warranty on SRU pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

Flows/Pressures/Connections

SRU Series	Build Selection			SRU Model	Displacement			Inlet and Outlet Connection Size				Differential Pressure (see note 1)		Maximum Speed
	Pump Head Code	Gear-box	Shaft		Litres/rev	Imp gall/ 100 rev	US gall/ 100 rev	Hygienic		Enlarged		bar	psi	rev/min
								mm	in	mm	in			
1	005	L or H	D	SRU1/005/LD or HD	0.053	1.17	1.4	25	1	-	-	8	115	1000
	008	L or H	D	SRU1/008/LD or HD	0.085	1.87	2.25	25	1	40	1.5	5	75	1000
2	013	L or H	S	SRU2/013/LS or HS	0.128	2.82	3.38	25	1	40	1.5	10	145	1000
	013	L or H	D	SRU2/013/LD or HD	0.128	2.82	3.38	25	1	40	1.5	15	215	1000
	018	L or H	S	SRU2/018/LS or HS	0.181	3.98	4.78	40	1.5	50	2	7	100	1000
	018	L or H	D	SRU2/018/LD or HD	0.181	3.98	4.78	40	1.5	50	2	10	145	1000
3	027	L or H	S	SRU3/027/LS or HS	0.266	5.85	7.03	40	1.5	50	2	10	145	1000
	027	L or H	D	SRU3/027/LD or HD	0.266	5.85	7.03	40	1.5	50	2	15	215	1000
	038	L or H	S	SRU3/038/LS or HS	0.384	8.45	10.15	50	2	65	2.5	7	100	1000
	038	L or H	D	SRU3/038/LD or HD	0.384	8.45	10.15	50	2	65	2.5	10	145	1000
4	055	L or H	S	SRU4/055/LS or HS	0.554	12.19	14.64	50	2	65	2.5	10	145	1000
	055	L or H	D	SRU4/055/LD or HD	0.554	12.19	14.64	50	2	65	2.5	20	290	1000
	079	L or H	S	SRU4/079/LS or HS	0.79	17.38	20.87	65	2.5	80	3	7	100	1000
	079	L or H	D	SRU4/079/LD or HD	0.79	17.38	20.87	65	2.5	80	3	15	215	1000
5	116	L or H	S	SRU5/116/LS or HS	1.16	25.52	30.65	65	2.5	80	3	10	145	600
	116	L or H	D	SRU5/116/LD or HD	1.16	25.52	30.65	65	2.5	80	3	20	290	600
	168	L or H	S	SRU5/168/LS or HS	1.68	36.95	44.39	80	3	100	4	7	100	600
	168	L or H	D	SRU5/168/LD or HD	1.68	36.95	44.39	80	3	100	4	15	215	600
6	260	L or H	S	SRU6/260/LS or HS	2.60	57.20	68.70	100	4	100	4	10	145	600
	260	L or H	D	SRU6/260/LD or HD	2.60	57.20	68.70	100	4	100	4	20	290	600
	353	L or H	S	SRU6/353/LS or HS	3.53	77.65	93.26	100	4	150	6	7	100	600
	353	L or H	D	SRU6/353/LD or HD	3.53	77.65	93.26	100	4	150	6	15	215	600

L - Horizontal Porting
H - Vertical Porting
S - Stainless Steel
D - Duplex Stainless Steel

Note 1. These pressure ratings may vary for pumps with certain threaded connections.

Maximum Solid Size Capability

	Max. size of spherical solids			
	Bi-lobe rotors		Tri-lobe rotors	
	mm	in	mm	in
SRU1/005	8	0.31	6	0.24
SRU1/008	8	0.31	6	0.24
SRU2/013	8	0.31	6	0.24
SRU2/018	13	0.51	9	0.35
SRU3/027	13	0.51	9	0.35
SRU3/038	16	0.63	11	0.43
SRU4/055	16	0.63	11	0.43
SRU4/079	22	0.87	15	0.59
SRU5/116	22	0.87	15	0.59
SRU5/168	27	1.06	18	0.71
SRU6/260	27	1.06	18	0.71
SRU6/353	37	1.46	24	0.94

Weight

	Bare Shaft Pump (kg)	
	Horizontal porting	Vertical porting
SRU1/005	15	16
SRU1/008	17	18
SRU2/013	28	30
SRU2/018	29	31
SRU3/027	53	56
SRU3/038	56	59
SRU4/055	105	111
SRU4/079	110	116
SRU5/116	148	185
SRU5/168	156	193
SRU6/260	228	260
SRU6/353	233	265

Shaft Seal Options

- Single or single flush/quench. R90 or Hyclean type mechanical seals.
- Double R90 type mechanical seal for flush (steam barrier for aseptic application).
- Packed gland (unflushed or flushed versions).

Note! EHEDG compliance only for Hyclean type mechanical seals.

Materials for Mechanical Seals

Carbon/Stainless steel, Tungsten Carbide/Tungsten Carbide, Silicon Carbide/Silicon Carbide or variations of these materials to suit fluid being pumped and/or application requirements. (N.B. Material variants are not available on all R90/Hyclean seal types).

Pump Sizing

In order to correctly size a rotary lobe pump some essential information is required. Provision of this information listed below enables our Technical Support personnel to obtain the optimum pump selection.

Product/Fluid Data

- Fluid to be pumped
- Viscosity
- SG/Density
- Pumping temperature, minimum, normal and maximum
- Cleaning in Place temperature(s), minimum, normal and maximum

Performance Data

- Flow rate, minimum, normal and maximum
- Discharge head/pressure (closest to pump outlet)
- Suction condition

Standard Specification Options

- Specification of inlet and outlet ports (Screwed male to BSP, DIN11851, SMS. ISS/IDF, RJT, or Flanged to EN1092-1 B1 PN16, ASA/ANSI 150, BS10E and other standards).
- Rotorcase Cover with integral Pressure Relief Valve.
- Heating/Cooling Saddle Jackets for Rotorcase and Jacket for Rotorcase Cover (not available when relief valve fitted).
- Bi-lobe Rotors in stainless steel and non-galling alloy.
- Full material traceability on request to BS EN10204 3.1.
- ATEX compliance.
- Complete pump unit comprising: Pump + Baseplate (mild or stainless steel) + coupling with guard + Geared electric motor suitable for (or supplied with) frequency speed control or manual variable speed drive (advise motor enclosure and electrical supply).

Dimensions (mm)

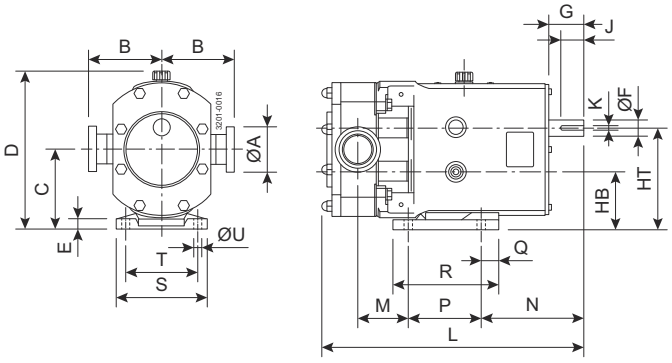


Figure 1. Horizontally ported

A1 — denotes hygienic port dimension

A2 — denotes enlarged port dimension

PUMP	A1	A2	B	C	D	E	F	G	HB	HT	J	K	L	M	N	P	Q	R	S	T	U
SRU1/005/L	25	-	95	90.5	189	10	16	40	68	113	30	5	284	42	124	80	10	100	100	80	10
SRU1/008/L	25	40	95	90.5	189	10	16	40	68	113	30	5	294	48	124	80	10	100	100	80	10
SRU2/013/L	25	40	105	115	233	16	22	50	85	145	32	6	339	60	131	100	19	132	124	100	12
SRU2/018/L	40	50	105	115	233	16	22	50	85	145	32	6	349	63.5	131	100	19	132	124	100	12
SRU3/027/L	40	50	125	137.5	272	18	28	60	100	175	40	8	439	82.5	176	125	30	181	154	125	14
SRU3/038/L	50	65	125	137.5	272	18	28	60	100	175	40	8	452	87	176	125	30	181	154	125	14
SRU4/055/L	50	65	150	163	325	20	38	80	115	211	63	10	541	101	224	150	35	202	184	150	14
SRU4/079/L	65	80	150	163	325	20	38	80	115	211	63	10	558	110	224	150	35	202	184	150	14
SRU5/116/L	65	80	175	195	382	22	45	110	135	255	70	14	629	96.5	279	180	35	240	210	180	14
SRU5/168/L	80	100	175	195	382	22	45	110	135	255	70	14	652	108	279	180	35	240	210	180	14
SRU6/260/L	100	-	190	225	436	22	48	110	155	295	70	14	748	124	267	260	20	300	220	190	14
SRU6/353/L	100	150	190	225	436	22	48	110	155	295	70	14	778	139.5	267	260	20	300	220	190	14

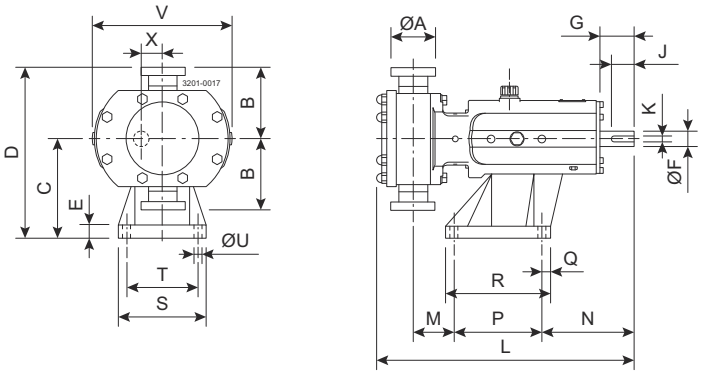


Figure 2. Vertically ported

A1 — denotes hygienic port dimension

A2 — denotes enlarged port dimension

PUMP	A1	A2	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	V	X
SRU1/005/H	25	-	95	113	208	15	16	40	30	5	284	49	117	80	22	114	104	80	10	174	22.5
SRU1/008/H	25	40	95	113	208	15	16	40	30	5	294	55	117	80	22	114	104	80	10	174	22.5

PUMP	A1	A2	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	V	X
SRU2/013/H	25	40	105	147	252	16	22	50	32	6	339	67	124	100	12	124	124	100	12	213	30
SRU2/018/H	40	50	105	147	252	16	22	50	32	6	349	70.5	124	100	12	124	124	100	12	213	30
SRU3/027/H	40	50	125	175	300	22	28	60	40	8	439	67.5	161	155	15	185	155	125	14	246	37.5
SRU3/038/H	50	65	125	175	300	22	28	60	40	8	452	72	161	155	15	185	155	125	14	246	37.5
SRU4/055/H	50	65	150	213	363	25	38	80	63	10	541	78	197	200	17	234	184	150	14	301	48
SRU4/079/H	65	80	150	213	363	25	38	80	63	10	558	87	197	200	17	234	184	150	14	301	48
SRU5/116/H	65	80	175	257	432	27	45	110	70	14	629	91.5	264	200	20	240	220	180	14	351	60
SRU5/168/H	80	100	175	257	432	27	45	110	70	14	652	103	264	200	20	240	220	180	14	351	60
SRU6/260/H	100	-	190	295	485	27	48	110	70	14	748	124	267	260	20	300	250	210	14	400	70
SRU6/353/H	100	150	190	295	485	27	48	110	70	14	778	139.5	267	260	20	300	250	210	14	400	70

Alfa Laval SX

Rotary lobe pumps

Introduction

The Alfa Laval SX Rotary Lobe Pump is designed with optimized pump head geometry and multi-lobe rotors to ensure low-shear operation with minimum pulsation. This makes the SX the best choice for maintaining the integrity of delicate products.

The pump is designed according to the most stringent hygienic design standards and with verified, effective Cleaning-in-Place (CIP) and Sterilization-in-Place (SIP).

Applications

The SX Rotary Lobe pump is designed for gentle transportation of process fluids in hygienic and ultra-clean applications in the biotechnology and pharmaceutical industries, in the home and personal care sector, and for demanding food applications.

The SX Rotary Lobe Pump is available with 14 different pump head displacements based on seven different gearbox modules to handle flow rates up to 115 m^3/h and differential pressures up to 15 bar.

Benefits

- Low pulsation and very gentle pumping, making the pump ideal for sensitive products.
- Minimized shearing for protecting end-product quality.
- Low maintenance, increased process uptime.
- Maximized performance and minimized risk of contamination.

Standard design

All media contacting steel components, like the rotor case, front cover, rotors and rotor nuts, are in W. 1.4404 (AISI 316L). The robust stainless steel gearbox provides maximum shaft rigidity and easy oil seal replacement. The gearbox design is universal which enables the flexibility of mounting pumps with the inlet and outlet ports in either a vertical or horizontal plane by changing the foot and its position.

The standard Alfa Laval SX has four-lobe rotors rated to 150°C, facilitating use with CIP and SIP processes.

Fully front-loading and fully interchangeable single, single flushed, and double mechanical shaft seals are available. All media contacting elastomers are controlled compression joints, the latest technology where static and dynamic

elastomer seals are used to prevent leakage of pumped media to the atmosphere.

The Alfa Laval SX can be supplied either as a bare shaft pump or mounted on a base plate complete with coupling, guard, gear motor and shroud for easy, plug-and-play installation.

Working principle

A gear train in the pump gearbox drives the rotors and provides accurate synchronization of the multi-lobe rotors. The movement of the counter-rotating rotors creates a partial vacuum that allows atmospheric pressure or other external pressures to force fluid into the pump chamber. As the rotors revolve, an expanding cavity forms, filling with fluid. As the blades disengage, each dwell forms a cavity. As the rotor blades engage, the cavity diminishes, and fluid is displaced into the outlet port.

TECHNICAL DATA

Standard specification	
Product wetted steel parts:	W. 1.4404 (316L)
Inside surface finish:	Mech Ra ≤ 0.8
Gearbox:	Stianless steel
Base plate:	Stainless steel
Coupling guard:	Stainless steel
Rotor:	Four-lobe
Product wetted elastomers:	EPDM
Other elastomers:	FPM
Shaft seal:	Single mechanical (R00)
Rotary seal face:	Carbon
Stationary seal face:	Stainless steel

Shaft seals	
Single, single flush and double mechanical available. All options are fully front loading and interchangeable.	
Max flush pressure, single flush:	0.5 bar
Max flush pressure, double mechanical:	1 bar over product pressure
Water consumption, flushed or double mechanical:	0.5 l/min
Flush connections:	BSPT or NPT

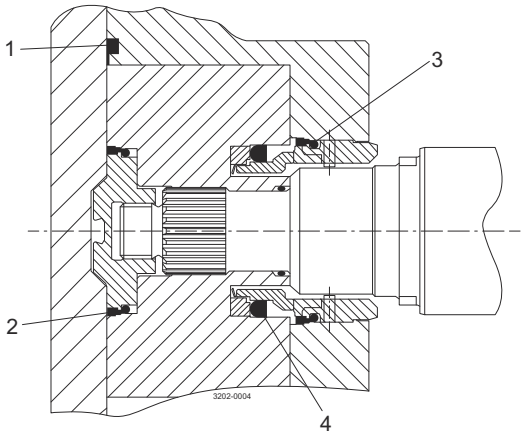
Temperature	
Max process and CIP temperature:	150°C

Motor
Gear motor, 4 poles, to IEC metric standard, 50/60 Hz, suitable for frequency conversion, IP55, insulation class F.

Warranty
Extended 3-years warranty on SX pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

Media contacting elastomers

All media contacting elastomers are controlled compression joints, the latest technology where static and dynamic elastomer seals are used to prevent pumped media leaking to atmosphere.



1. Front cover compression joint
2. Spline sealing cup seal
3. Cup seal
4. Squad ring

Flows/Pressures/Connections

SX Model	Displacement			Inlet and Outlet Connection Size		Differential Pressure (see note 1)		Maximum Speed
	Litre/rev	Imp gall/100 rev	US gall/100 rev	mm	in	bar	psi	rev/min
SX1/005	0.05	1.11	1.32	25	1	12	175	1200
SX1/007	0.07	1.54	1.85	40	1.5	7	100	1200
SX2/013	0.128	2.82	3.38	40	1.5	15	215	1000
SX2/018	0.181	3.98	4.78	50	2	7	100	1000
SX3/027	0.266	5.85	7.03	50	2	15	215	1000
SX3/035	0.35	7.70	9.25	65	2.5	7	100	1000

SX Model	Displacement			Inlet and Outlet Connection Size		Differential Pressure (see note 1)		Maximum Speed
	Litre/rev	Imp gall/100 rev	US gall/100 rev	mm	in	bar	psi	rev/min
SX4/046	0.46	10.12	12.15	50	2	15	215	1000
SX4/063	0.63	13.86	16.65	65	2.5	10	145	1000
SX5/082	0.82	18.04	21.67	65	2.5	15	215	600
SX5/115	1.15	25.30	30.38	80	3	10	145	600
SX6/140	1.40	30.80	36.99	80	3	15	215	500
SX6/190	1.90	41.80	50.20	100	4	10	145	500
SX7/250	2.50	55.00	66.05	100	4	15	215	500
SX7/380	3.80	83.60	100.40	150	6	10	145	500

Note 1. These pressure ratings may vary for pumps with certain threaded connections.

Maximum Solid Size Capability

Pump sizes	Max. size of spherical solids (mm)
SX1	7
SX2	10
SX3	13
SX4	16
SX5	19
SX6	25
SX7	28

Weight

Model	Bare Shaft Pump (kg)	
	Horizontal porting	Vertical porting
SX1/005	15	16
SX1/007	16	17
SX2/013	32	33
SX2/018	33	34
SX3/027	57	59
SX3/035	59	61
SX4/046	107	110
SX4/063	113	116
SX5/082	155	155
SX5/115	165	165
SX6/140	278	278
SX6/190	290	290
SX7/250	336	344
SX7/380	358	366

Shaft Seal Options

- Single or single flush/quench (steam barrier for aseptic application) R00 type mechanical seals.
- Double R00 type mechanical seal for flush.

All sealing options are fully front loading and fully interchangeable without the need for additional housings or pump component changes. Specialised seal setting of the mechanical seal is not required as the seal is dimensionally set on assembly. This feature further enhances fast and efficient on-site seal interchangeability.

Materials for Mechanical Seals

Carbon/Stainless Steel, Silicon Carbide/Silicon Carbide or variations of these materials to suit fluid being pumped and/or application requirements. The seal seat and face material combinations are all EHEDG compliant.

Standard Specification Options

- Screwed male inlet and outlet ports to DIN11851, DIN11864, SMS, ISS/IDF, RJT or Tri-clamp.
- Heating/Cooling Jacket for Rotorcase Cover.
- ATEX compliance.
- Complete pump unit comprising: Pump + Baseplate (mild or stainless steel) + coupling with guard + Geared electric motor suitable for (or supplied with) frequency speed control or manual variable speed drive (advise motor enclosure and electrical supply).

Pump Sizing

In order to correctly size a rotary lobe pump some essential information is required. Provision of this information listed below enables our Technical Support personnel to obtain the optimum pump selection.

Product/Fluid Data

- Fluid to be pumped
- Viscosity
- SG/Density
- Pumping temperature, minimum, normal and maximum
- Cleaning in Place temperature(s), minimum, normal and maximum

Performance Data

- Flow rate, minimum, normal and maximum
- Discharge head/pressure (closest to pump outlet)
- Suction condition

Bareshaft Pump Dimensions

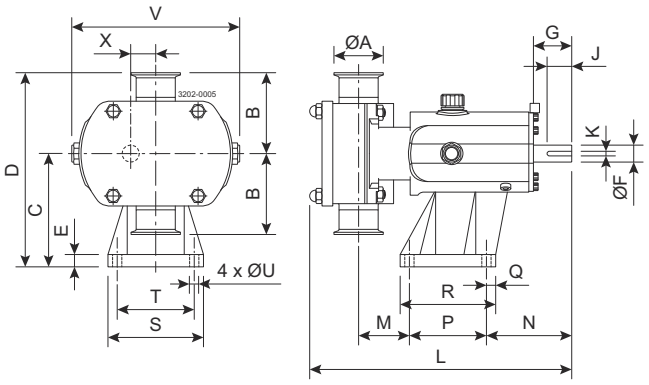


Figure 1. Vertically ported

All dimensions in mm

PUMP	A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	V	X
SX1/005	25	95	113	208	15	16	40	30	5	283	53.5	100	80	22	114	104	80	10	174	23.5
SX1/007	40	95	113	208	15	16	40	30	5	296	60	100	80	22	114	104	80	10	174	23.5
SX2/013	40	105	147	252	16	22	50	32	6	327	58.5	111	100	12	124	124	100	12	213	32.5
SX2/018	50	105	147	252	16	22	50	32	6	343	65.5	111	100	12	124	124	100	12	213	32.5
SX3/027	50	125	175	300	22	28	60	40	8	434	72.5	142	155	15	185	155	125	14	246	37.5
SX3/035	65	125	175	300	22	28	60	40	8	450	78	142	155	15	185	155	125	14	246	37.5
SX4/046	50	150	213	363	25	38	80	63	10	517	75	174	200	17	234	184	150	14	301	49.5
SX4/063	65	150	213	363	25	38	80	63	10	536	81.5	174	200	17	234	184	150	14	301	49.5
SX5/082	65	175	257	432	27	45	110	70	14	602	61	264	200	20	240	220	180	14	351	60
SX5/115	80	175	257	432	27	45	110	70	14	630	80.5	264	200	20	240	220	180	14	351	60
SX6/140	80	190	295	485	27	48	110	70	14	691	78	267	260	20	300	250	210	14	400	70
SX6/190	100	190	295	485	27	48	110	70	14	719	90	267	260	20	300	250	210	14	400	70
SX7/250	100	205	365	570	26	60	110	90	18	767	94	288	280	25	330	290	240	18	475	81.5
SX7/380	150	205	365	570	26	60	110	90	18	821	121	288	280	25	330	290	240	18	475	81.5

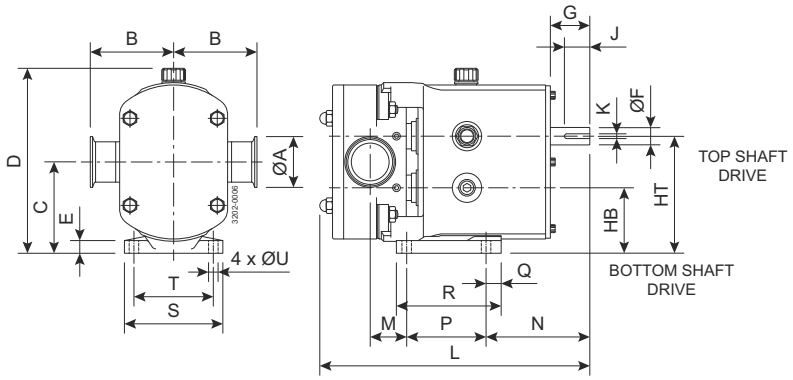


Figure 2. Horizontally ported

All dimensions in mm

PUMP	A	B	C	D	E	F	G	HB	HT	J	K	L	M	N	P	O	R	S	T	U
SX1/005	25	95	90.5	189	10	16	40	67	114	30	5	283	29.5	124	80	10	100	100	80	10
SX1/007	40	95	90.5	189	10	16	40	67	114	30	5	296	36	124	80	10	100	100	80	10
SX2/013	40	105	115	233	16	22	50	82.5	147.5	32	6	327	38.5	131	100	19	132	124	100	12
SX2/018	50	105	115	233	16	22	50	82.5	147.5	32	6	343	45.5	131	100	19	132	124	100	12
SX3/027	50	125	137.5	272	18	28	60	100	175	40	8	434	69.5	175	125	30	181	154	125	14
SX3/035	65	125	137.5	272	18	28	60	100	175	40	8	450	75	175	125	30	181	154	125	14
SX4/046	50	150	163	325	20	38	80	113.5	212.5	63	10	517	75	224	150	35	202	184	150	14
SX4/063	65	150	163	325	20	38	80	113.5	212.5	63	10	536	81.5	224	150	35	202	184	150	14
SX5/082	65	175	195	382	22	45	110	135	255	70	14	602	66	279	180	35	240	210	180	14
SX5/115	80	175	195	382	22	45	110	135	255	70	14	630	85.5	279	180	35	240	210	180	14
SX6/140	80	190	225	436	22	48	110	155	295	70	14	691	78	267	260	20	300	220	190	14
SX6/190	100	190	225	436	22	48	110	155	295	70	14	719	90	267	260	20	300	220	190	14
SX7/250	100	205	276.5	524	27	60	110	195	358	90	18	767	99	273	290	25	340	290	240	18
SX7/380	150	205	276.5	524	27	60	110	195	358	90	18	821	126	273	290	25	340	290	240	18

Alfa Laval SX UltraPure

Rotary lobe pumps

Introduction

The Alfa Laval SX UltraPure Rotary Lobe Pump is designed with optimized pump head geometry and multi-lobe rotors to ensure low-shear operation with minimum pulsation. This makes the SX UltraPure the best choice for maintaining the integrity of delicate products in high-purity applications.

The pump is designed according to the most stringent hygienic design standards and with verified, effective Cleaning-in-Place (CIP) and Sterilization-in-Place (SIP).

Applications

The SX UltraPure Rotary Lobe Pump is designed for gentle transportation of process fluids in high-purity applications across the biotechnology, pharmaceutical, and home and personal care industries.

The SX UltraPure is available with 14 different pump head displacements based on seven different gearbox modules to handle flow rates up to 115 m^3/h and differential pressures up to 15 bar.

Benefits

- Low pulsation and very gentle pumping, making the pump ideal for sensitive products.
- Minimized shearing to protect end-product quality.
- Low maintenance, increased process uptime.
- Low contamination risk due to full material traceability and USP Class VI elastomers that reduce the risk of process contamination from extractables.
- Smooth qualification, validation and process control: material traceability, and pump supplied with the Alfa Laval Q-doc package in line with Good Documentation Practices.

Standard design

All media contacting steel components, like the rotor case, front cover, rotors and rotor nuts, are in W. 1.4404 (AISI 316L). The stainless steel gearbox provides maximum shaft rigidity and easy oil seal replacement. The gearbox design is universal, which enables the flexibility of mounting pumps with the inlet and outlet ports in either a vertical or horizontal plane by changing the foot and its position.

The standard Alfa Laval SX UltraPure has four-lobe rotors rated to 150°C, facilitating use with CIP and SIP processes.

Fully front-loading and fully interchangeable single, single flushed and double mechanical shaft seals are available. All media contacting elastomers are controlled compression joints, the latest technology where static and dynamic elastomer seals are used to prevent leakage of pumped media to the atmosphere.

The Alfa Laval SX UltraPure can be supplied either as a bare shaft pump or mounted on a base plate complete with coupling, guard, gear motor and shroud for easy, plug-and-play installation.

Working principle

A gear train in the pump gearbox drives the rotors and provides accurate synchronization of the multi-lobe rotors. The movement of the counter-rotating rotors creates a partial vacuum that allows atmospheric pressure or other external pressures to force fluid into the pump chamber. As the rotors revolve, an expanding cavity forms, filling with fluid. As the blades disengage, each dwell forms a cavity. As the rotor blades engage, the cavity diminishes and fluid is displaced into the outlet port.

Certificates

Authorized to carry the 3A symbol

TECHNICAL DATA

Standard specification	
Product wetted steel parts:	W. 1.4404 (316L) with material traceability 3.1 according to EN 10204
Inside surface finish:	Mech Ra ≤ 0.8
Gearbox:	Stainless steel
Base plate:	Stainless steel
Coupling guard:	Stainless steel
Rotor:	Four-lobe
Product wetted elastomers:	EPDM - USP Class VI, 249.8°F. Chapter 88, and Chapter 87
Other elastomers:	FPM
Shaft seal:	Single mechanical (R00)
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide

Shaft seals	
Single, single flush and double mechanical available. All options are fully front loading and interchangeable.	
Max. flush pressure, single flush:	Max. 0.5 bar
Max. flush pressure, double mechanical:	Max. 1 bar over product pressure
Water consumption, flushed or double mechanical:	0.5 l/min
Flush connections:	BSPT or NPT

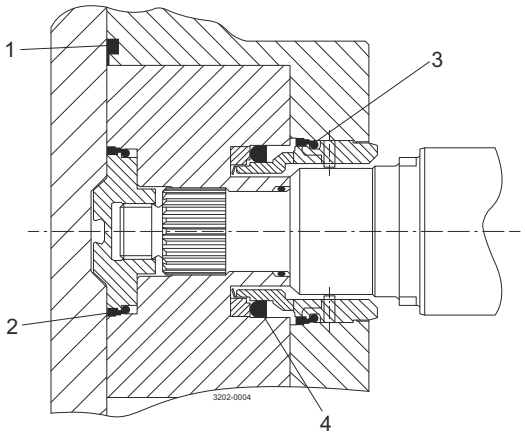
Temperature	
Max. process and CIP temperature:	150ºC

Motor
Gear motor, 4 poles, to IEC metric standard, 50/60 Hz, suitable for frequency conversion, IP55, insulation class F.

Warranty
Extended 3-years warranty on SX UltraPure pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.

Media contacting elastomers

All media contacting elastomers are controlled compression joints, the latest technology where static and dynamic elastomer seals are used to prevent pumped media leaking to atmosphere.



1. Front cover compression joint.
2. Spline sealing cup seal.
3. Cup seal.
4. Squad ring.

Flows/Pressures/Connections

SX Model	Displacement			Inlet and Outlet Connection Size		Differential Pressure [1]		Maximum Speed
	Litre/rev	Imp gall/100 rev	US gall/100 rev	mm	in	bar	psi	rev/min
SX UltraPure 1/005	0.05	1.11	1.32	25	1	12	175	1200
SX UltraPure 1/007	0.07	1.54	1.85	40	1.5	7	100	1200
SX UltraPure 2/013	0.128	2.82	3.38	40	1.5	15	215	1000
SX UltraPure 2/018	0.181	3.98	4.78	50	2	7	100	1000
SX UltraPure 3/027	0.266	5.85	7.03	50	2	15	215	1000
SX UltraPure 3/035	0.35	7.70	9.25	65	2.5	7	100	1000
SX UltraPure 4/046	0.46	10.12	12.15	50	2	15	215	1000
SX UltraPure 4/063	0.63	13.86	16.65	65	2.5	10	145	1000
SX UltraPure 5/082	0.82	18.04	21.67	65	2.5	15	215	600
SX UltraPure 5/115	1.15	25.30	30.38	80	3	10	145	600
SX UltraPure 6/140	1.40	30.80	36.99	80	3	15	215	500
SX UltraPure 6/190	1.90	41.80	50.20	100	4	10	145	500
SX UltraPure 7/250	2.50	55.00	66.05	100	4	15	215	500
SX UltraPure 7/380	3.80	83.60	100.40	150	6	10	145	500

[1] These pressure ratings may vary for pumps with certain threaded connections.

Weight

Model	Bare Shaft Pump (kg)	
	Horizontal porting	Vertical porting
SX UltraPure 1/005	15	16
SX UltraPure 1/007	16	17
SX UltraPure 2/013	32	33
SX UltraPure 2/018	33	34
SX UltraPure 3/027	57	59
SX UltraPure 3/035	59	61
SX UltraPure 4/046	107	110
SX UltraPure 4/063	113	116
SX UltraPure 5/082	155	155
SX UltraPure 5/115	165	165
SX UltraPure 6/140	278	278
SX UltraPure 6/190	290	290
SX UltraPure 7/250	-	340
SX UltraPure 7/380	-	362

Shaft Seal Options

- Single or single flush/quench (steam barrier for aseptic application) R00 type mechanical seals.
- Double R00 type mechanical seal for flush.

All sealing options are fully front loading and fully interchangeable without the need for additional housings or pump component changes. Specialised seal setting of the mechanical seal is not required as the seal is dimensionally set on assembly. This feature further enhances fast and efficient on-site seal interchangeability.

Materials for Mechanical Seals

As standard the SX UltraPure is supplied with EHEDG compliant Silicon Carbide/Silicon Carbide seal faces avoiding any risk of potential extractable contamination.

Standard Specification Options

- Screwed male inlet and outlet ports to DIN11851, SMS, RJT, Triclamp for ASME, DIN 32676 Clamp, DIN 11864-1 (Union) Form A, DIN 11864-2 (Flange) Form A or DIN 11864-3 (Clamp) Form A.
- Heating/Cooling Jacket for Rotorcase Cover.
- Product wetted surface finish electropolished to Ra $\leq$ 0.38 µm.
- Passivated surface.
- Surface finish measurement with certificate.
- Hydrostatic testing with certificate.
- ATEX compliance.
- Complete pump unit comprising: Pump + stainless steel baseplate + coupling with guard + Geared electric motor suitable for (or supplied with) frequency speed control or manual variable speed drive (advise motor enclosure and electrical supply).
- Low delta ferrite material for product wetted components.
- High alloy materials for product wetted components i.e. AL6XN or Titanium.

Q-doc

Standard documentation package:

- Declaration of compliance with Regulation (EC) No.: 1935/2004.
- Declaration of compliance to EN 10204 type 3.1 (MTR).
- Declaration of compliance to the U.S. Food & Drug Administration CFR 21 (non-metallic parts).
- Declaration of compliance to the U.S. Pharmacopeia (Elastomers and polymers).
- TSE (Transmissible Spongiform Encephalopathy) / ADI (Animal Derivative Ingredient) declaration.
- Declaration of surface finish compliance.
- Declaration of passivation and electro polishing (if specified).
- 3.1 certification in accordance to EN10204.
- Pump performance test certificate.

Optional documentation:

- Hydrostatic test certificate.
- Surface measurement report.

Pump Sizing

In order to correctly size a rotary lobe pump some essential information is required. Provision of this information listed below enables our Technical Support personnel to obtain the optimum pump selection.

Product/Fluid Data:

- Fluid to be pumped.
- Viscosity.
- SG/Density.
- Pumping temperature, minimum, normal and maximum.
- Cleaning in Place temperature(s), minimum, normal and maximum.

Performance Data:

- Flow rate, minimum, normal and maximum.
- Discharge head/pressure (closest to pump outlet).
- Suction condition.

Bareshaft Pump Dimensions

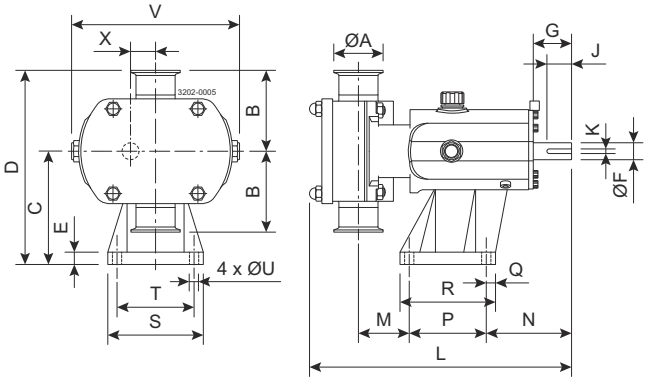


Figure 1. Vertically ported

All dimensions in mm

PUMP	A	B	C	D	E	F	G	J	K	L	M	N	P	Q	R	S	T	U	V	X
SX UltraPure 1/005	25	95	113	208	15	16	40	30	5	281	53	100	80	22	114	104	80	10	174	23.5
SX UltraPure 1/007	40	95	113	208	15	16	40	30	5	294	60	100	80	22	114	104	80	10	174	23.5
SX UltraPure 2/013	40	105	147	252	15	22	50	32	6	325	59	111	100	12	124	124	100	12	213	32.5
SX UltraPure 2/018	50	105	147	252	15	22	50	32	6	341	66	111	100	12	124	124	100	12	213	32.5
SX UltraPure 3/027	50	125	175	300	22	28	61	40	8	431	71	142	155	15	185	155	125	14	246	37.5
SX UltraPure 3/035	65	125	175	300	22	28	61	40	8	447	77	142	155	15	185	155	125	14	246	37.5
SX UltraPure 4/046	50	150	213	363	25	38	80	63	10	514	74	174	200	17	234	184	150	14	301	49.5
SX UltraPure 4/063	65	150	213	363	25	38	80	63	10	533	81	174	200	17	234	184	150	14	301	49.5
SX UltraPure 5/082	65	175	256.5	431.5	30	45	110	70	14	599	61	264	200	20	240	220	180	14	344	60
SX UltraPure 5/115	80	175	256.5	431.5	30	45	110	70	14	629	81	264	200	20	240	220	180	14	344	60
SX UltraPure 6/140	80	190	295	485	30	48	110	70	14	687	77	267	260	20	300	250	210	14	400	70
SX UltraPure 6/190	100	190	295	485	30	48	110	70	14	715	89	267	260	20	300	250	210	14	400	70
SX UltraPure 7/250	100	205	365	570	30	60	110	90	18	763	94	288	280	25	330	290	240	18	475	81.5
SX UltraPure 7/380	150	205	365	570	30	60	110	90	18	817	121	288	280	25	330	290	240	18	475	81.5

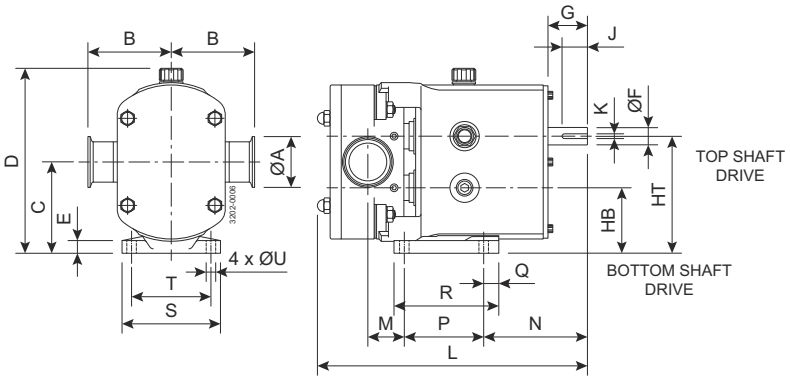


Figure 2. Horizontally ported

All dimensions in mm

PUMP	A	B	C	D	E	F	G	HB	HT	J	K	L	M	N	P	Q	R	S	T	U
SX UltraPure 1/005	25	95	90.5	189	10	16	40	67	114	30	5	281	29	124	80	10	100	100	80	10
SX UltraPure 1/007	40	95	90.5	189	10	16	40	67	114	30	5	294	36	124	80	10	100	100	80	10
SX UltraPure 2/013	40	105	115	233	15	22	50	82.5	147.5	32	6	325	39	131	100	19	132	124	100	12
SX UltraPure 2/018	50	105	115	233	15	22	50	82.5	147.5	32	6	341	46	131	100	19	132	124	100	12
SX UltraPure 3/027	50	125	137.5	272	18	28	60	100	175	40	8	431	68	175	125	30	181	154	125	14
SX UltraPure 3/035	65	125	137.5	272	18	28	60	100	175	40	8	447	74	175	125	30	181	154	125	14
SX UltraPure 4/046	50	150	163	325	20	38	80	113.5	212.5	63	10	514	74	225	150	35	202	184	150	14
SX UltraPure 4/063	65	150	163	325	20	38	80	113.5	212.5	63	10	533	81	225	150	35	202	184	150	14
SX UltraPure 5/082	65	175	195	376	20	45	110	135	255	70	14	599	46	279	180	35	275	210	180	14
SX UltraPure 5/115	80	175	195	376	20	45	110	135	255	70	14	626	66	279	180	35	275	210	180	14
SX UltraPure 6/140	80	190	225	429	20	48	110	155	295	70	14	687	78	266	260	40	370	220	190	14
SX UltraPure 6/190	100	190	225	429	20	48	110	155	295	70	14	715	90	266	260	40	370	220	190	14

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Twin screw pumps

Alfa Laval OS Twin screw

Twin screw pumps

Introduction

The Alfa Laval Twin Screw Pump combines process duties typically handled by positive displacement with Cleaning-in-Place (CIP) duties typically handled by centrifugal pumps. This provides a robust and reliable platform that offers greater process flexibility.

Designed for process flexibility, the Alfa Laval Twin Screw Pump is built on a robust, reliable platform that meets stringent hygienic standards. It is capable of handling both product transfer and CIP. Its low pulsation characteristics and excellent solids-handling capability reduce the risk of product damage, thereby improving product quality.

The pump is designed according to the most stringent hygienic design standards and with verified, effective CIP.

Applications

Designed for handling sensitive, abrasive and high and low viscosity fluids, the Alfa Laval Twin Screw Pump is ideal for use in hygienic applications across the dairy, food, beverage, and home and personal care industries. Quiet and virtually pulse-free, the pump provides smooth and gentle operation, making it an excellent choice for handling sensitive products.

Two-in-one operation provides easy handling of process media of varying viscosities as well as CIP fluids. This simplifies piping and pump control, cutting costs and minimizing contamination risks.

Superior suction performance with excellent lift capability and low NPSHr provides installation flexibility and increases product recovery.

The Alfa Laval Twin Screw Pump is available in sixteen models based on four frame sizes. Each frame is available with an assortment of different screw profiles for varying pressure, flow and solids-handling capabilities.

Benefits

- Greater process flexibility.
- Ease of service, increased process uptime.
- Robust reliable design, reducing cost of ownership and increasing process uptime.
- Improved product quality.
- Exceptional hygiene and cleanability.

Standard design

All media contacting steel components, like pump casing, front cover and feed screws are in W. 1.4404 (AISI 316L). Furthermore, the pump casing is diffusion hardened. A stainless steel gearbox, end cover and foot ensure increased life and assist in washdown.

The gearbox is designed with the timing gears located between the bearing sets, rather than external to them. This allows the bearing location to be optimized in order to provide maximum support to the shaft assembly, thereby providing a robust rigid design. The internal gearcase design optimizes oil circulation to both sets of bearings and the timing gears with an oil sump design. This improves the lubrication effect on both bearings and timing gears, minimizing the energy produced due to friction and thereby reducing heat generation within the pump gearbox.

The front-loading, self-setting cartridge design makes it easy to replace the shaft seal while the pump is in place. Single, single flush and double mechanical cartridge seals are available. All options are fully front-loading and interchangeable.

The Alfa Laval Twin Screw Pump can be supplied either as a bare shaft pump or mounted on a base plate complete with coupling, guard, shroud and a direct coupled motor or a gear motor for easy, plug-and-play installation.

Working principle

The Alfa Laval Twin Screw Pump is a positive displacement pump. As the pump rotates, the intermeshing of the two contra-rotating screws, along with the pump casing, form volumetric chambers. These chambers fill with the pumped fluid and move the fluid axially from the suction side of the pump to the higher pressure discharge side.

Certificates

Authorized to carry the 3A symbol

TECHNICAL DATA

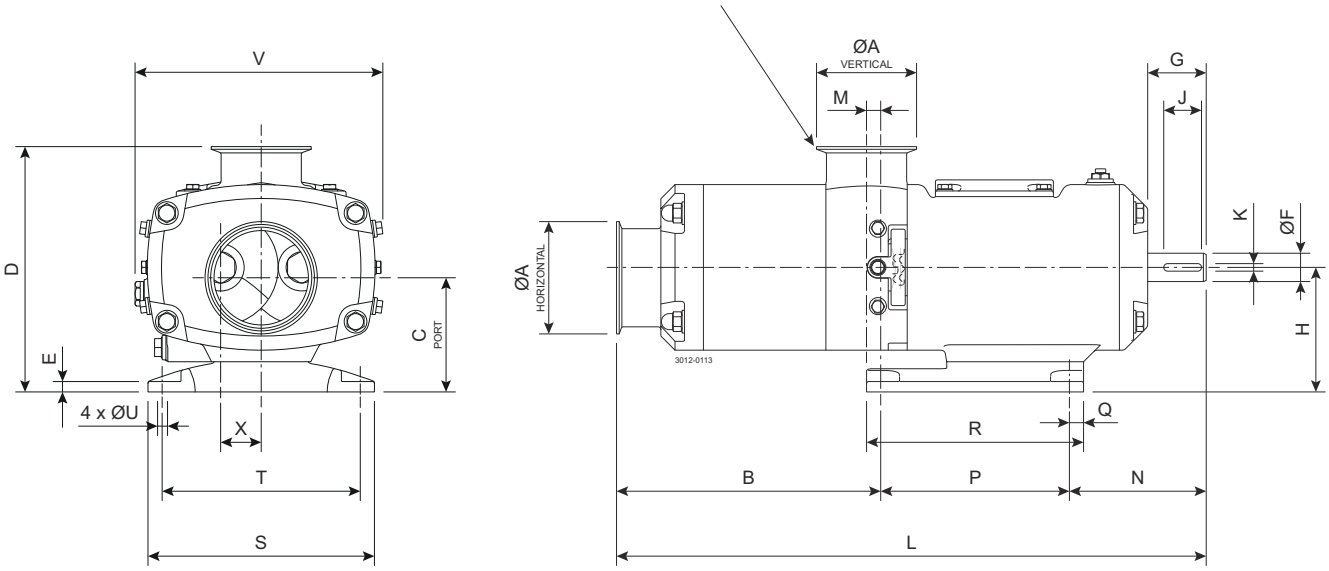
Standard specification	
Pump casing:	W. 1.4404 (316L), diffusion hardened
Screws, front cover, seal housing:	W. 1.4404 (316L)
Inside surface finish:	Mech Ra ≤ 0.8 (≤ 32)
Gear box:	Stainless steel
Base plate:	Stainless steel
Coupling guard:	Stainless steel
Product wetted elastomers:	EPDM
Other elastomers:	FPM
Shaft seal:	Single flush
Rotary seal face:	Silicon Carbide
Stationary seal face:	Silicon Carbide
Shaft seals	
Single, Single flush and double mechanical cartridge seals available. All options are fully front loading and interchangeable.	
Max. flush pressure, single flush:	0.5 bar (7.25 psi)
Max. flush pressure, double mechanical:	16 bar (max. 6 bar over product pressure) (232 psi (max. 87 psi over product pressure))
Water consumption, single flush and double mechanical:	0.5 l/min. (0.13 gallon/min.)
Flush connections, OS10-30:	G 1/4" or NPT 1/4"
Flush connections, OS40-46:	G 1/2" or NPT 1/2"
Pressure	
Max. inlet pressure:	16 bar (232 psi)
Max. discharge pressure:	16 bar (232 psi)
Temperature	
Max. process temperature:	100°C (212°F)
Max. CIP/SIP temperature:	150°C (302°F)
Motor	
Direct coupled motor, 4, 6 or 8 poles, or gear motor, 4 poles, to either IEC metric standard, 50/60 Hz, suitable for frequency conversion, IP55, insulation class F or Nema standard, premium efficiency, suitable for frequency conversion.	
Warranty	
Extended 3-years warranty on Alfa Laval Twin Screw pumps. The warranty covers all non wear parts on the condition that genuine Alfa Laval Spare Parts are used.	

Operating data

Model	Max. Flow		Max. Differential Pressure		Max. speed		Max. Particle Size	
					Process	CIP		
	m3/h	gpm	bar	psi	rpm	rpm	mm	inch
OS12	6.1	27	16	232	2800	3300	6	0.24
OS14	10.4	46	12	174	2800	3300	11	0.43
OS16	16.0	70	8	116	2800	3300	17	0.67
OS22	18.2	80	16	232	2500	3300	12	0.47
OS24	24.3	107	12	174	2500	3300	16	0.63
OS26	36.5	161	8	116	2500	3300	24	0.94
OS27	45.7	201	6	87	2500	3300	15	0.59
OS28	38.7	170	5.5	80	2000	2000	32	1.26
OS32	34.8	153	16	232	2200	3000	16	0.63
OS34	46.6	205	12	174	2200	3000	21	0.83
OS36	69.9	308	8	116	2200	3000	32	1.26
OS37	88.0	387	6	87	2200	3000	20	0.79
OS38	84.8	373	5.5	80	2000	2000	42	1.65
OS42	66.8	294	16	232	1800	2800	21	0.83
OS44	89.5	394	12	174	1800	2800	29	1.14
OS46	134.3	591	8	116	1800	2800	43	1.69

Dimension mm (inch)

PUMP SHOWN WITH TRI-CLAMP, SUCTION AND DISCHARGE CONNECTIONS



Model	ØA Vertical	B	D	E	F	G	H	J	K	L	M	N	P	Q	R	S	T	U	V[1]	X
										mm (inch)										
OS12	25 (1)																			
OS14	40 (1½)	170 (6.69)	180 (7.09)	7 (0.28)	18 (0.71)	50 (1.97)	90 (3.54)	40 (1.57)	6 (0.24)	405 (15.94)	10 (0.39)	110 (4.33	125 (4,92)	10 (0.39)	145 (5.70)	155 (6.10)	135 (5.31)	9 (0.35)	188,5 (7.42)	28 (1.10)
OS16	50 (2)																			
OS22	40 (1½)																			
OS24	50 (2)	222,5 (8.76)	220 (8.66)	9 (0.35)	20 (0.79)	54,5 (21.4 6)	112 (4.41)	40 (1.57)	6 (0.24)	505 (19.88)	12,5 (0.49)	117,5 (4.63)	165 (6.50)	12,5 (0.49)	190 (7.48)	200 (7.87)	175 (6.89)	11 (0.43)	216 (8.50)	33 (1.30)
OS26	65 (2½)																			
OS27	65 (2½)																			
OS28	65 (2½)	252,5 (9.9)	„	„	„	„	„	„	„	535 (21.1)	„	„	„	„	„	„	„	„	„	„
OS32	65 (2½)																			
OS34	65 (2½)	280 (11.02)	260 (10.24)	11 (0.43)	30 (1.18)	62 (2.44)	132 (5.20)	40 (1.57)	8 (0.31)	625 (24.61)	15 (0.59)	145 (5.71)	200 (7.87)	15 (0.59)	230 (9.06)	240 (9.45)	210 (8.27)	13 (0.51)	262,5 (10.33)	43 (1.69)
OS36	80 (3)																			
OS37	80 (3)																			
OS38	80 (3)	320 (12.6)	„	„	„	„	„	„	„	665 (26.2)	„	„	„	„	„	„	„	„	„	„
OS42	80 (3)																			
OS44	80 (3)	360 (14.17)	350 (13.78	15 (0.59)	45 (1.77)	87 (3.43)	180 (5.51)	70 (2.76)	14 (0.55)	790 (31.10)	20 (0.79)	180 (7.09)	250 (9.84)	20 (0.79)	290 (11.42)	320 (12.60)	280 (11.02)	17,5 (0.68)	346 (13.62)	58 (2.28)
OS46	100 (4)																			

[1] Dimension 'V'is with flush plugs installed - NPT adaptors will increase this dimension by ~10mm

Model	ØA Horizontal	C			
		DIN11851 DIN 11864-1-A-A DIN 11864-2-A-A	SMS	Tri-Clamp DIN 11864-1-A-C DIN 11864-2-A-C	BS 4825-4 (IDF) BS 4825-5 (RJT)
	mm (inch)	mm	mm	mm (inch)	mm
OS12	40 (1.5)	72	70.75	70.4 (2.77)	70.45
OS14	50 (2)	78	77.25	76.75 (3.02)	76.8
OS16	65 (2.5)	86	83.15	83.1 (3.27)	83.15
OS22	50 (2)	90	89.3	88.75 (3.49)	88.8
OS24	65 (2.5)	98	95.15	95.10 (3.74)	95.15
OS26 OS27 OS28	80 (3)	105.5	101.45	101.45 (4.00)	101.5
OS32 OS34	80 (3)	111.5	107.45	107.45 (4.23)	107.5
OS36 OS37 OS38	100 (4)	121	119.8	119.7 (4.71)	119.8
OS42 OS44	100 (4)	148.5	147.3	147.2 (5.80)	147.3
OS46	150 (6)	173.5	-	171.93 (6.77)	-

Options

- Single mechanical shaft seal
- Double mechanical shaft seal
- Silicon Carbide/Carbon seal faces
- Product wetted elastomers in FPM or FFPM
- Diffusion hardened screws
- Heating jacket
- Rectangular inlet
- Hydrostatic testing with certificate
- Reversed flow
- Bottom inlet or outlet
- Stainless steel shroud covering coupling and motor
- Baseplate fitted with adjustable stainless steel ball feet
- ATEX / Ex-proof approval

Pump sizing

In order to correctly size a twin screw pump some essential information is required. Provision of this information listed below enables our Technical Support personnel to obtain the optimum pump selection. Specific CIP data are important as well.

Product/Fluid Data:

- Fluid to be pumped.
- Viscosity.
- Pumping temperature, minimum, normal and maximum.
- Cleaning in Place temperature(s), minimum, normal and maximum.

Performance Data:

- Flow rate, minimum, normal and maximum.
- Discharge head/pressure (closest to pump outlet).
- Suction condition.

Note!
For further details, see also 100000817.
This product has EHEDG certificate.

This is Alfa Laval

Alfa Laval is active in the areas of Energy, Marine, and Food & Water, offering its expertise, products, and service to a wide range of industries in some 100 countries. The company is committed to optimizing processes, creating responsible growth, and driving progress – always going the extra mile to support customers in achieving their business goals and sustainability targets.

Alfa Laval's innovative technologies are dedicated to purifying, refining, and reusing materials, promoting more responsible use of natural resources. They contribute to improved energy efficiency and heat recovery, better water treatment, and reduced emissions. Thereby, Alfa Laval is not only accelerating success for its customers, but also for people and the planet. Making the world better, every day. It's all about Advancing better™.

How to contact Alfa Laval

Contact details for all countries are continually updated on our web site. Please visit www.alfalaval.com to access the information.

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