

Компактные самовсасывающие насосы с покрытием для бассейнов herborner.XS-PM

Технические характеристики



По вопросам продаж и поддержки обращайтесь:

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Use

The unique HPC coating seals and protects metal surfaces which are at risk corrosion that come into contact with the pumped medium.

As a self-priming swimming pool pump with integrated hair and fibre catcher, the herborner.XS-PM is particularly suitable for pumping and filtering pool water, fresh water, sea water, industrial water, and other liquids contaminated by coarse particles.

It is used in private, indoor, outdoor, and adventure swimming pools, water parks, and ice sports, recreation, and hotel facilities for water slides, attractions, water treatment systems, fountains, heat recovery systems, and industrial facilities.

Impellers

Dynamically balanced impellers ensure vibration-free running and contribute significantly to the long service life of the pump.



Closed multi-vane impellers made of high-alloyed aluminium bronze (CuAl10Fe5Ni5) are used for clean to slightly contaminated pumped media.

Construction

Ideal material combination thanks to hybrid type of construction. Easy-to-install and readily serviceable compact design.

High circulation rates are achieved thanks to minimum space requirements and an easy-to-install and readily serviceable compact design.

Filter casing

The filter casing made of durable grey cast iron is completely coated with the unique HPC coating. This reliably protects against negative influences of the pumped medium on the material, thereby effectively extending the lifetime of the pump.

The filter strainer with a mesh specially designed for hair and fibre enables a high degree of filtration. The generous volume of the filter strainer (2,400 cm³) ensures reduced maintenance.

The self-priming function of the pump is guaranteed after the pump casing has been filled.



Motor shaft

The rigid motor shaft made from high-alloy stainless steel ensures minimal deflection.

Shaft seal

The shaft sealing on the pump side is effected in all models via a maintenance-free mechanical seal, which is independent of the direction of rotation and made from wear-resistant high-performance materials. All motors are equipped with a special seal for splash-proofing on the pump side.

By-pass channel

The mechanical seal is flushed optimally by the pumped medium through this channel. This gives the sliding surfaces the required lubricating and cooling medium thereby, extending the lifetime of the mechanical seal.

Installation

The pumps are to be used in a horizontal installation.



Output range

A complete performance range with many steep pump characteristic curves guarantees consistent pump power output, even when the filter is dirty. Even in parallel operation, they ensure a low change in delivery rate with high filter resistance and friction loss.

Speed	$Q_{\max}$ [m ³ /h]	$H_{\max}$ [m]
3,000 rpm	53.0	9.6
3,000 rpm	7.0	20.9

The maximum energy efficiency (efficiencies of IE5) is achieved using a permanent magnet motor (PM).

Noise

Noise emission is determined by complex influencing factors such as size, materials, operating and installation conditions. As early as the development stage, hydraulic measures and solid construction are used to reduce noise emission. The maximum sound pressure level is generally determined by air, magnetic and bearing noise from the drive motors. Noise levels are below the permissible limit curves specified for electrical motors as defined by DIN EN 60034-9. noise emission during operation close to Q_{optimal} (optimal efficiency) is minimal.

Motor

Various drive options are available. The standard version is a surface-cooled three-phase motor with squirrel cage corresponding to efficiency class IE3. Additionally the pumps can be equipped with a permanent magnet motor IE5. The motor is optionally available with an integrated or external frequency converter. The use of a frequency converter is recommended, but not compulsory. You can find further details about motors and frequency converters on page 13.

Design	IM B5
Protection type	IP 55
Speed	3,000 rpm
Frequency	50 Hz
Connection	▲ 300 - 400 V
Insulation class EN 60034-1 F (155° C)	

The motors are fitted with a PTC thermistor as standard.

The motor can be supplied with an integrated or external frequency converter.

The frequency regulation of pumps is available and depends upon the operating conditions.

General data

- Pump colour RAL 5010 (standard)
- Media temperature range from -5 to +60 °C
- Ambient temperature range from -5 to +40 °C
- Performance verification in conformity with DIN EN ISO 9906, Class 2
- Max. density of the pumped medium 1,050 kg/m³
- Max. viscosity of the pumped medium 1.75 mm²/s

In case of deviating application conditions, the output is corrected in accordance with customer-specific requirements.

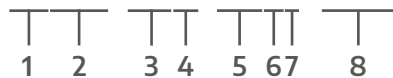
Special configurations

- Different voltage and/or mains frequency
- Different insulation class
- Heightened ambient temperature
- Higher protection type
- Enhanced tropical and moisture protection
- Special materials
- Special paint finish for all uncoated components
- Customer-specific solutions
- Asynchronous motor with energy class IE3 (herborner.XS)
- Heat exchanger motor with transfer of the waste heat to the swimming pool water (herborner.XS-C)

TECHNICAL DESCRIPTION

Model designation

XS050-130A-0152P-W2B



Number	Designation	Type code marking	Meaning
1	Design	XS	herborner.XS
2	Nominal diameter of pressure flange	040	DN 40
		050	DN 50
3	Construction dimensions	130	Centring diameter
4	Version	A-Z	Design version
5	Motor rating	007	0.75 kW
		011	1.1 kW
		015	1.5 kW
		022	2.2 kW
		030	3.0 kW
6	Speed	2	3,000 rpm
7	Motor model	P	Permanent magnet motor
8	Materials	W2B / W30	See materials

Materials

1)	Part	W2B	W30	W2E
001	Filter casing	EN-GJL-250 ²⁾ (EN-JL1040)	CuSn12-C (CC483K)	EN-GJL-250 ²⁾ (EN-JL1040)
002	Filter strainer	FPP 20 T	FPP 20 T	FPP 20 T
003	Filter cover	PMMA	PMMA	PMMA
025	Impeller protector	POM/FKM	POM/FKM	POM/FKM
032	control vane ring	CuSn12-C (CC483K)	CuSn12-C (CC483K)	CuSn12-C (CC483K)
101	Pump casing	EN-GJL-250 ²⁾ (EN-JL1040)	CuSn12-C (CC483K)	EN-GJL-250 ²⁾ (EN-JL1040)

1) See exploded view

2) With thick coating

TECHNICAL DESCRIPTION

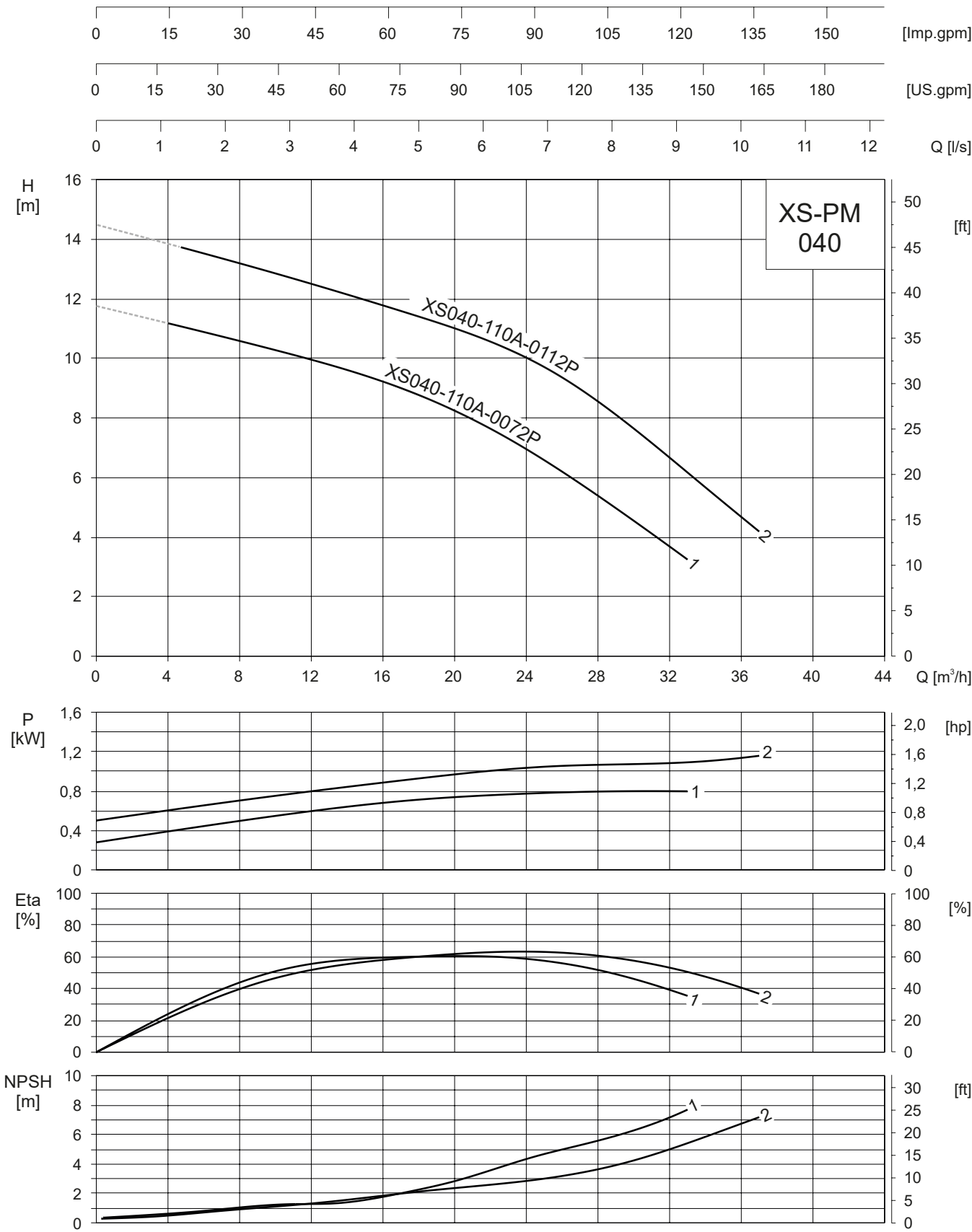
1)	Part	W2B	W30	W2E
113	Intermediate casing	EN-GJL-250 ²⁾ (EN-JL1040)	CuSn12-C (CC483K)	EN-GJL-250 ²⁾ (EN-JL1040)
230	Impeller	CuAl10Fe5Ni5-C (CC333G)	CuAl10Fe5Ni5-C (CC333G)	CuAl10Fe5Ni5-C (CC333G)
433	Mechanical seal	SiC/SiC/FKM	SiC/SiC/FKM	SiC/SiC/FKM
819	Motor shaft	X9CrNiMoTi17-12-2 (1.4571)	X9CrNiMoTi17-12-2 (1.4571)	X9CrNiMoTi17-12-2 (1.4571)
	Mechanical seal protector	CuSn12-C (CC483K)	CuSn12-C (CC483K)	X2CrNiMoN22-5-3 (1.4462)
	X-Lock-Sleeve	CuSn12-C (CC483K)	- -	X2CrNiMoN22-5-3 (1.4462)

1) See exploded view

2) With thick coating

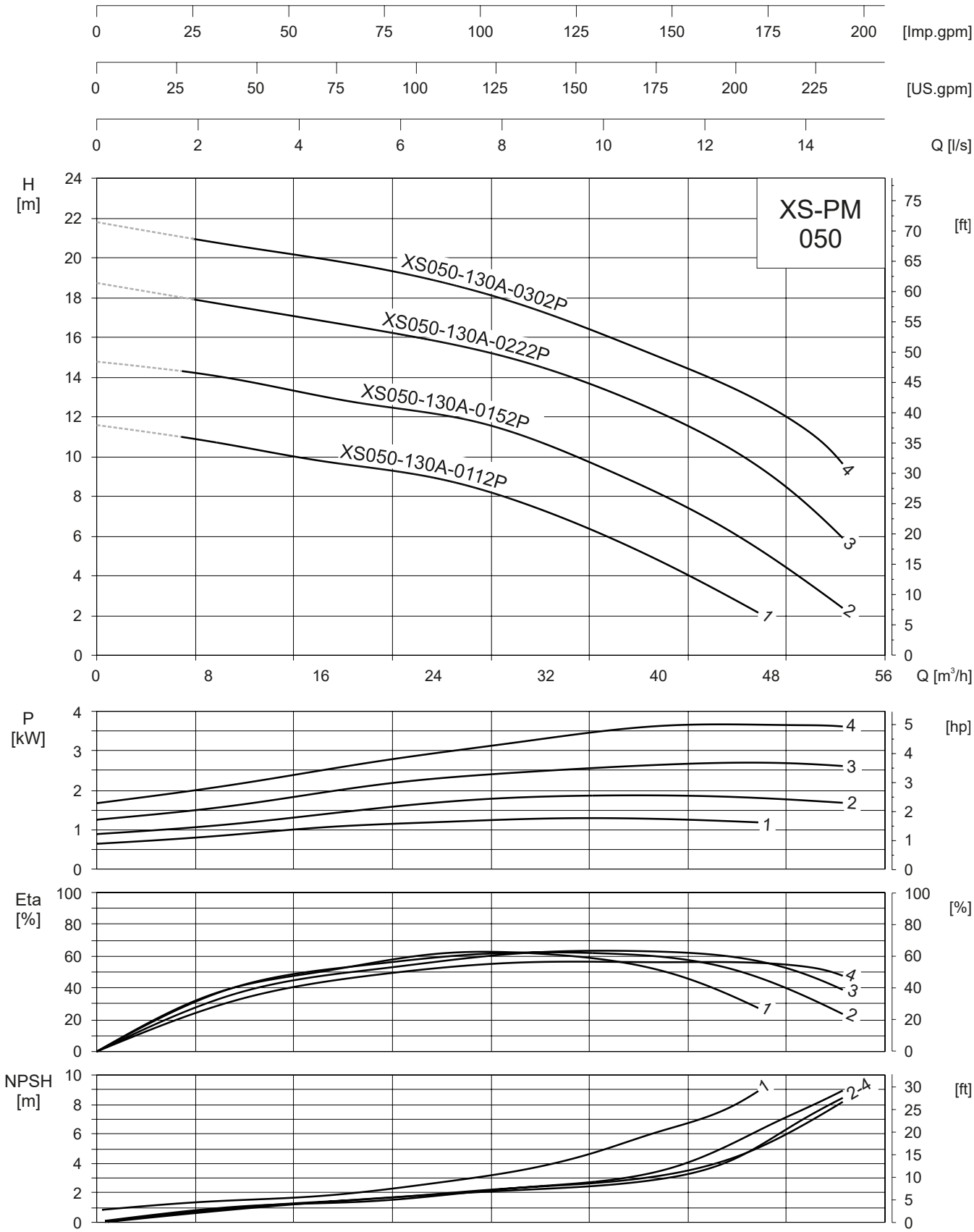
CHARACTERISTIC CURVES 3,000 rpm

DN 40

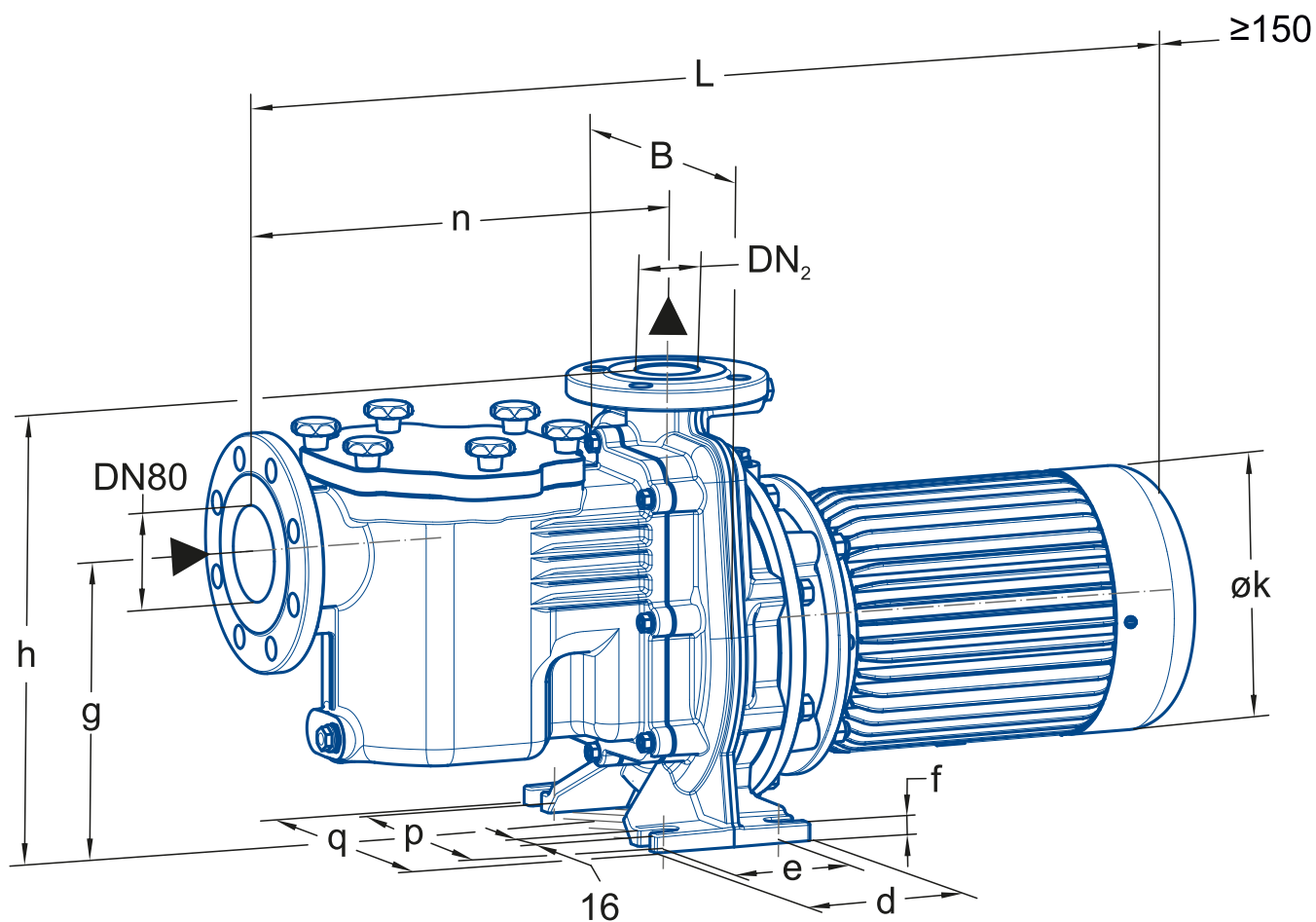


CHARACTERISTIC CURVES 3,000 rpm

DN 50



DIMENSIONS • WEIGHTS



3,000 rpm

	P ₂	DN ₂	DN ₁	B	≤ L	d	e	f	g	h	≤ Ø k	n	p	q	s	≥ x	m ¹⁾
	kW	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	mm	kg
XS040-110A-0072P	0.75	40	80	284	716	140	100	15	250	376	156	373	210	260	18	150	64
XS040-110A-0112P	1.1	40	80	284	716	140	100	15	250	376	156	373	210	260	18	150	65
XS050-130A-0112P	1.1	50	80	284	721	140	100	15	250	376	156	373	210	260	18	150	65
XS050-130A-0152P	1.5	50	80	284	751	140	100	15	250	376	157	373	210	260	18	150	69
XS050-130A-0222P	2.2	50	80	284	766	140	100	15	250	376	176	373	210	260	18	150	71
XS050-130A-0302P	3	50	80	284	781	140	100	15	250	376	177	373	210	260	18	150	81

1) Total weight of the pump

Flange connection dimensions according to DIN 2501 PN 10

TECHNICAL DATA

IE5 - PM: 3,000 rpm

P ₂ [kW]	I [A]	I _A /I _N	dB(A)
0.75	0.87	1.51	66
1.1	1.25	2.15	66
1.5	1.69	3.15	66
2.2	2.41	5.0	70
3	3.24	6.0	70

Legend:

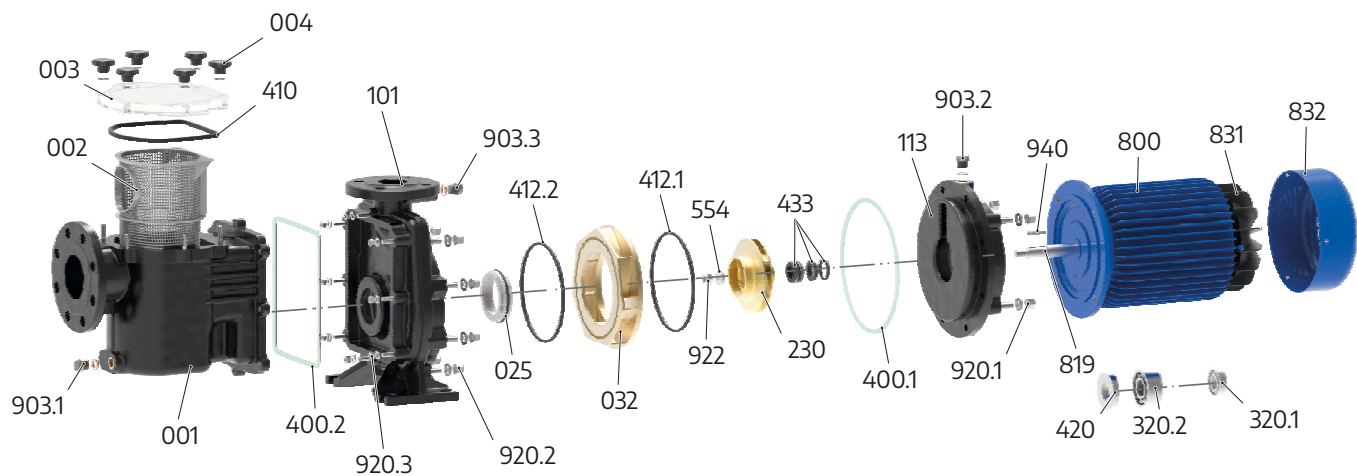
P₂: Rated power

I: Rated current

I_A /I_N: Locked-rotor current to rated current

dB(A): Sound pressure level of the entire pump. Tolerance ± 3 dB(A)

EXPLODED VIEW



Individual components

001	Filter casing	420	Shaft seal ring
002	Filter strainer	433	Mechanical seal
003	Filter cover	554	Washer
004	Star handle	800	Motor
025	Impeller protector	819	Motor shaft
032	control vane ring	831	Fan
101	Pump casing	832	Fan hood
113	Intermediate casing	903.1	Screwed plug
230	Impeller	903.2	Screwed plug
320.1	Anti-friction bearing (non-drive side)	903.3	Screwed plug
320.2	Anti-friction bearing (drive side)	920.1	Nut
400.1	Gasket	920.2	Nut
400.2	Gasket	920.3	Nut
410	Profile seal	922	Impeller nut
412.1	O-ring	940	Key
412.2	O-ring		

Frequency converter

Frequency converters are used for the electronic regulation of motor speed which saves a significant quantity of energy. They also extend the service life of the system and reduce repair and maintenance costs.

Their main advantage is that through pump speed regulation the duty point can be adapted to the system requirements (e.g. night-time energy reduction in swimming pools), which compared to previous technical solutions and possibilities brings significant improvements for saving energy.

Frequency converters are used for direct installation (power up to 22 kW) and for installation in wall or switch cabinets (all ratings).



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