

# Surface pumps



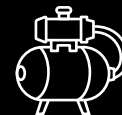
AJ 50/60	MULTI 1300 INOX
BJ 45/75	MULTI-GARDEN
WZI   QB	MHI
JET 100A   JET 100L	MH
JSW	CPM INOX
DP	HP INOX
PJ 65/45   GARDEN	E-HP 1300
JSW 150 GARDEN	

## Swimming pool pumps



SWIM  
JA 50  
FON

## Booster sets



AJ 50/60 – PC-59	JET 100 LONG – 50L
AJ 50/60 – 24 c.w.	GARDEN
AJ 50/60 – 24	PJ
WZCH with fittings	MULTI 1300
WZI 750/750 – 24	MULTIGARDEN
JET 100 – 24 c.w.	BJ75/45 – 50
JET 100 – 24	HP1500 INOX – 80
DP 355	IWH2-03 – 24
JSW 150 ITALY – 50	MH 1300
JSW 150 ITALY – 24	

# AJ 50/60



Single-stage self-priming centrifugal surface pump equipped with the Venturi tube system for increased suction capacity, designed for pumping of clean cold water from own intakes and for increasing pressure. Sections of pump body and shaft that come in contact with water are made of stainless steel (INOX design). The pump has a power cable with a plug. The pump motor is provided with thermal protection.

## Application:

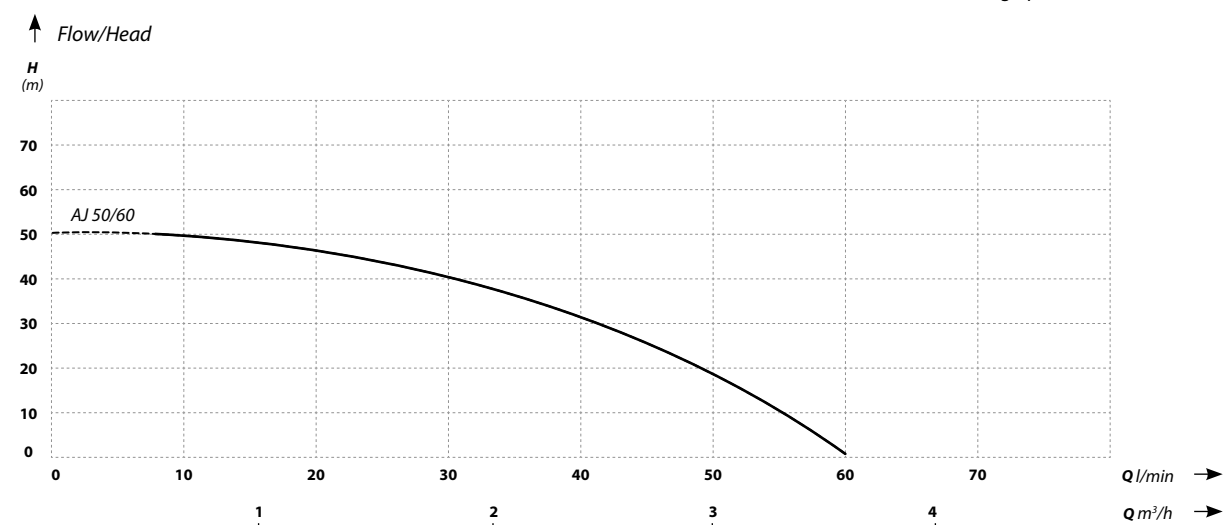
- Supply of water to houses, holiday houses, allotments and gardens.
- When combined with pressure tanks, the pumps can be used in single- and multi-family residential housing, in industrial applications and for irrigation purposes

## Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection: - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl (stainless steel AISI 304)
- Frame: cast iron
- Pump end plate: stainless steel AISI 304
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
AJ 50/60	50	60	1100	230	8	3,2	1 × 1	37/21/20	10,5

# BJ 45/75



The pump for pumping of clean cold water from own intakes and for increasing pressure. BJ 45/75 is a single-stage self-priming centrifugal surface pump equipped with the Venturi tube system for increased suction capacity. Sections of pump body and shaft coming in contact with water are made of stainless steel (INOX design). The pump is manufactured to the highest quality standards in terms of the design and materials used. The pump has a power cable with a plug, and the pump motor is provided with thermal protection

## Application:

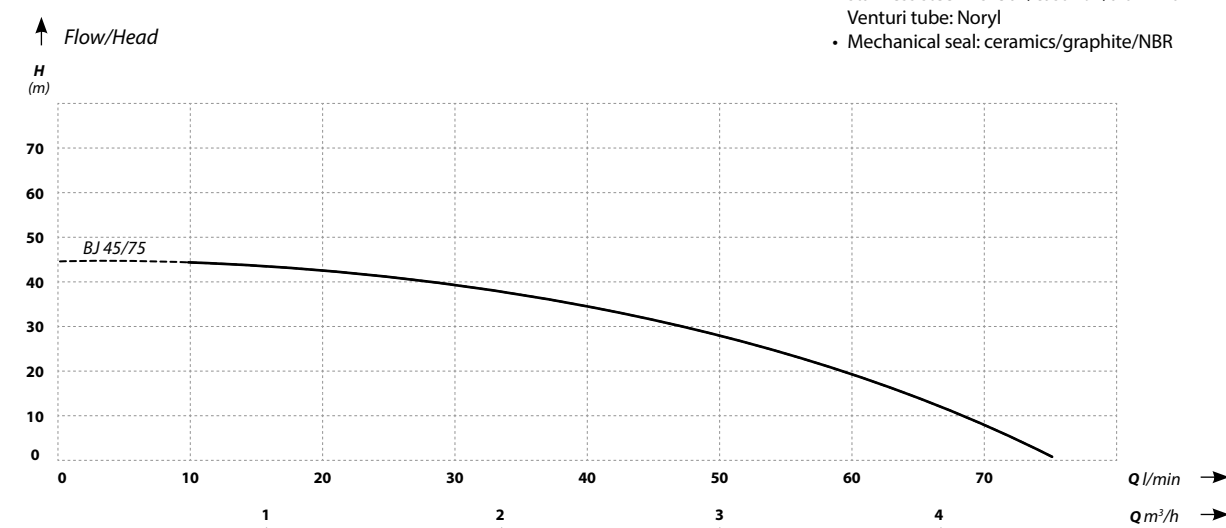
- Supply of water to houses, holiday houses, allotments and gardens.
- When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing and in industrial applications.

## Operating conditions:

- Maximum liquid temperature: 50°C
- Maximum ambient temperature: 50°C
- Class F Insulation
- Tryb pracy: ciągły
- Operating mode - continuous
- Protection: IP55
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: stainless steel AISI 304/cast iron/aluminium
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
BJ 45/75	45	75	1100	230	8	3,9	1¼ × 1	36/25/18	8,5

# WZI | QB



WZI 850



WZI 750

Single-stage self-priming peripheral surface pumps for pumping of clean cold water from own intakes and for increasing pressure. Pump impellers are made of brass. The pump body is made of durable cast iron with the built-in non-return valve. The pump motor is provided with thermal protection. The pumps have a power cable with a plug.

## Application:

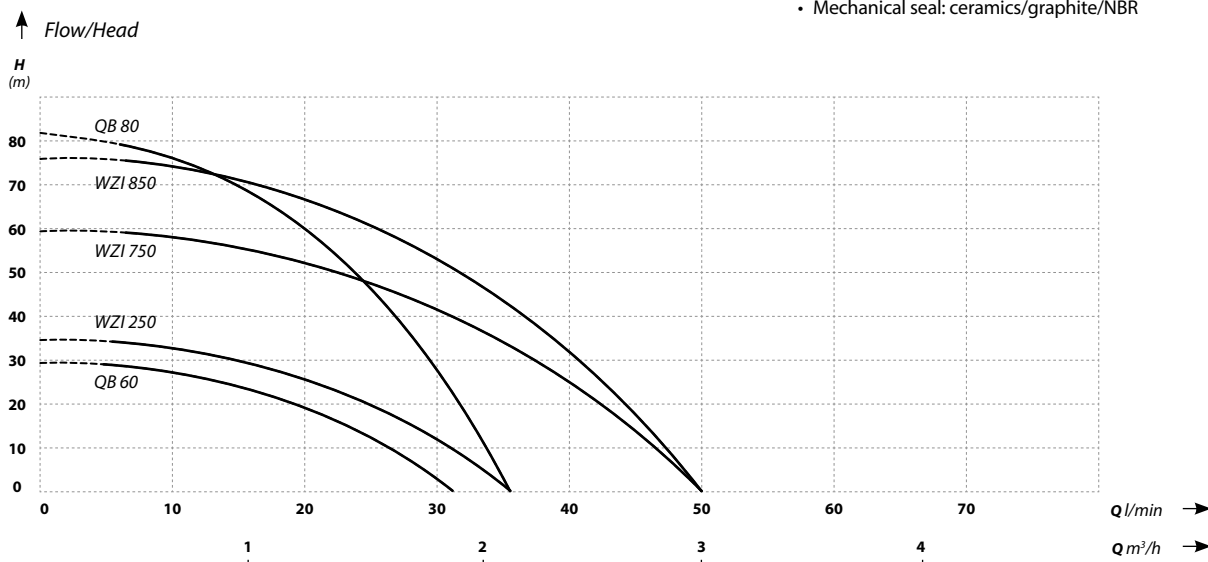
- Supply of water to holiday houses, allotments and gardens.
- When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, in industrial applications and for irrigation purposes.

## Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: brass
- Pump end plate: cast iron
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
Qb 60	30	32	370	230	6	2,8	1 × 1	21/17/17	4
Qb 80	83	35	750	230	8	4	1 × 1	27/20/18	9,8
wzi 250	35	35	250	230	8	1,6	1 × 1	25/21/16	7,5
wzi 750	60	50	750	230	8	5	1 × 1	26/21/18	9,3
wzi 850	78	50	850	230	8	4	1 × 1	28/23/19	10,8



# JET 100A | JET 100L



JET 100A



JET 100A WITH ACCESSORIES

Single-stage self-priming centrifugal surface pump equipped with the Venturi tube system for increased suction capacity, designed for pumping of clean cold water from own intakes and for increasing pressure. The pump body is made of durable cast iron, and the pump motor is provided with thermal protection. The pump has a power cable with a plug. The pump is available with accessories or in the booster set.

## Application:

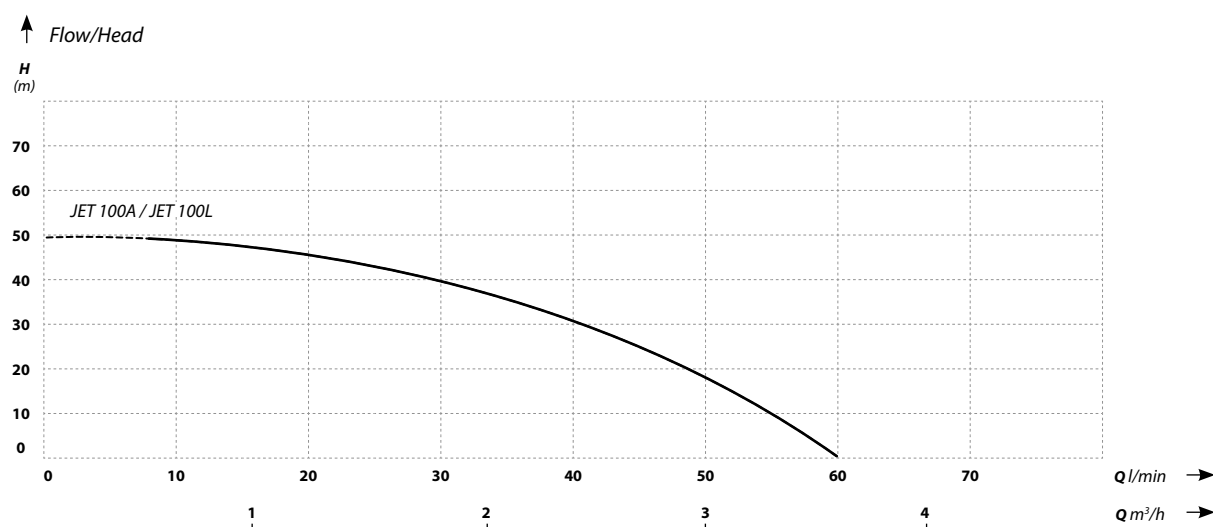
- Supply of water to houses, holiday houses, allotments and gardens.
- When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, in industrial applications and for irrigation purposes.

## Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: cast iron
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
JET 100A	50	60	1100	230	8	3,2	1 × 1	39/20/18	11,5
JET 100A LONG	50	60	1100	230	8	3,6	1 × 1	44/21/18	12,5

# JSW



JSW 100



JSW 150

Single-stage, self-priming, centrifugal surface pump, equipped with a system that increases the suction capacity thanks to the use of a Venturi tube. Designed for pumping clean, cold water from own intakes and increasing pressure. The pumps are used to supply water to houses, recreational plots and irrigation.

## Characteristics:

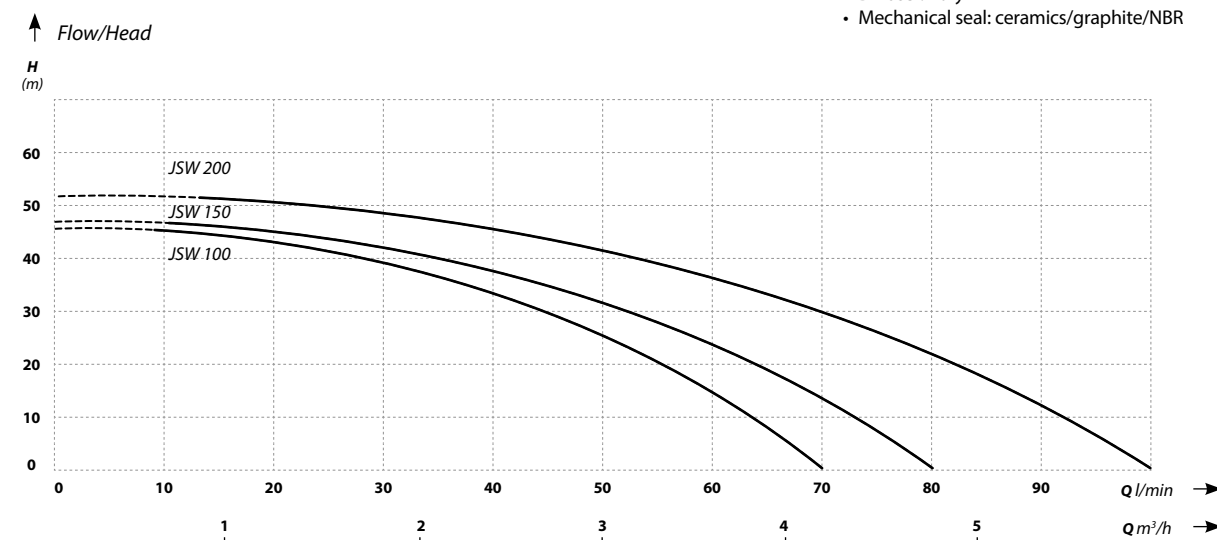
- Suction capacity from a depth of up to 8 m
- High performance
- Small dimensions of the pump
- Ability to work with a tank or hydrophore machines (e.g. PC, SK)
- Thermal protection built into the motor winding
- Warranty 24 months
- Warranty and post-warranty service

## Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: noryl/brass (JSW 200)
- Pump end plate / Frame: stainless steel AISI 304 / aluminium
- Diffuser: noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
JSW 100	45	70	1100	230	8	3,2	1 × 1	39/21/19	11
JSW 150	46	80	1500	230	8	5,6	1 × 1	41/21/19	11,5
JSW 200	53	100	1800	230	8	8,2	1x1¼	52/25/22	17

# DP



DP370



DP355P370

Single-stage, self-priming, centrifugal surface pump, equipped with a system that increases the suction capacity thanks to the use of a Venturi tube. Designed for pumping clean, cold water from own intakes and for increasing pressure. The pumps are used to supply water to houses, recreational plots and irrigation.

## Characteristics:

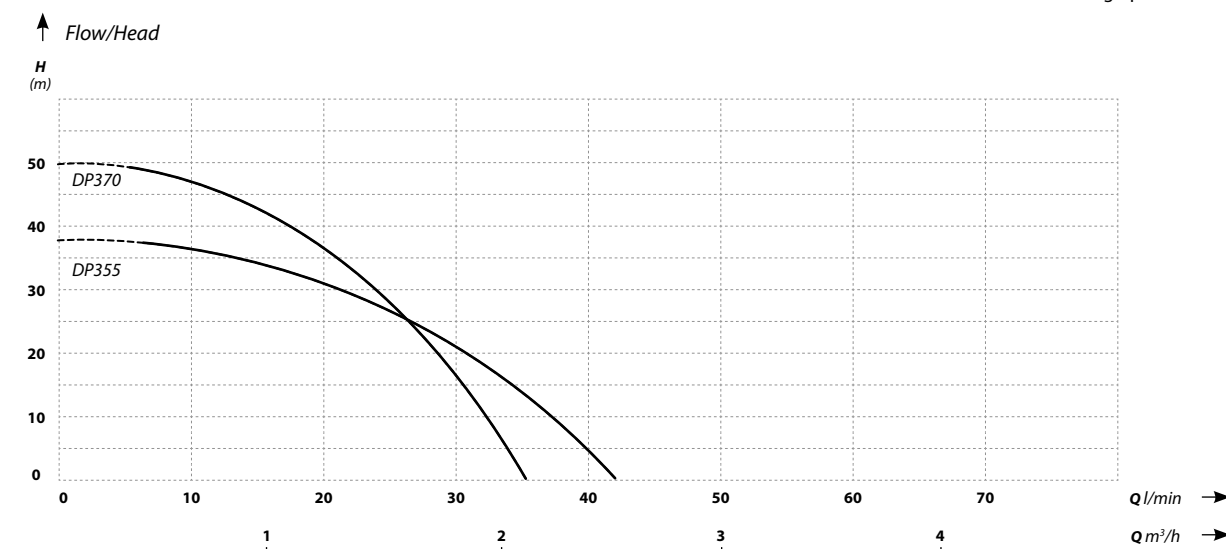
- suction capacity from a depth of max. 23 m
- small dimensions of the pump
- the ability to work with a tank or hydrophore machines (e.g. PC, SK)
- thermal protection built into the motor windings
- Warranty 24 months
- Warranty and post-warranty service

## Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Korpus pompy: żeliwo
- Wał i rotor: stal nierdzewna AISI 304
- Impeller: noryl
- Pump end plate / Frame: cast iron
- Diffuser: noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
DP355	38	42	1100	230	23	3,2	1 × 1	40/18/18	14,5
DP370	50	35	1100	230	23	3,6	1 × 1	39/21/19	15

# PJ 65/45 | GARDEN | JSW 150 GARDEN



PJ 65/45



GARDEN



JSW 150 GARDEN

Self-priming centrifugal garden pumps equipped with the Venturi tube system for increased suction capacity. The pump body is made of a high quality material. Pumps are equipped with a switch integrated into the housing and a carrying handle. The pump motor is provided with thermal protection. The pump is available with fittings, booster sets and intelligent pump controllers.

## Application:

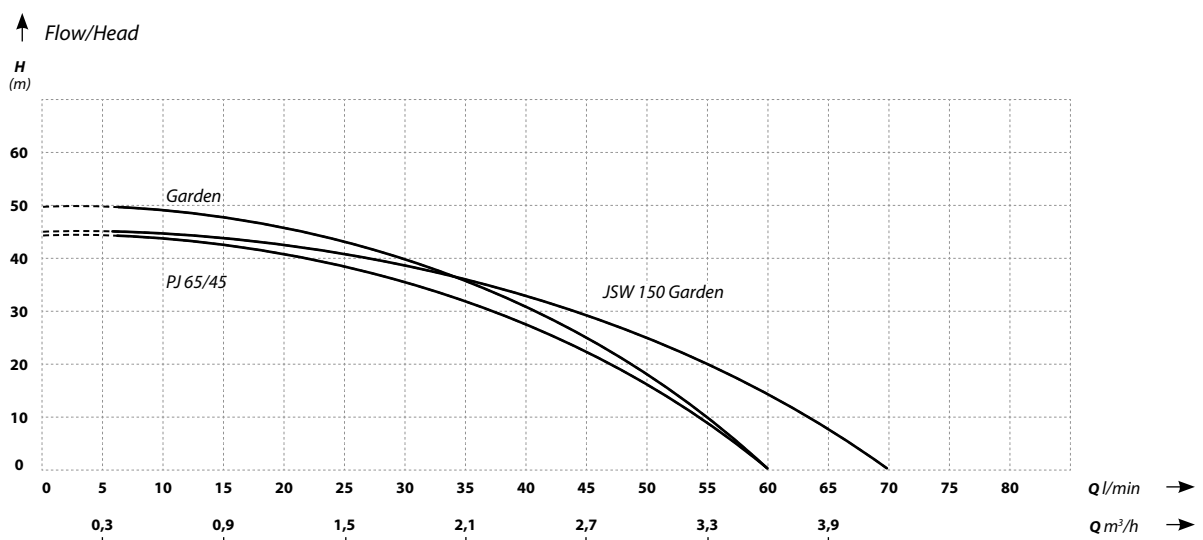
- Supply of water to houses, holiday houses, allotments and gardens, as well as for irrigation purposes.
- When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, agricultural holdings and in industrial applications

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304 technopolimer
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: polypropylene/aluminium
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
PJ 65/45	45	60	1100	230	8	3,6	1 × 1	39/25/18	9,5
Garden	50	60	1500	230	8	3,8	1 × 1	39/27/19	10
JSW 150 Garden	46	70	1500	230	8	5,6	1 × 1	41/21/19	9,5

# MULTI 1300 INOX | MULTI-GARDEN

Self-priming centrifugal pump with the built-in screen filter, equipped with the Venturi tube system for increased suction capacity.

The pump body is made of a high quality material and stainless steel. The pump is equipped with a switch integrated into the housing and a carrying handle. The pump motor is provided with thermal protection. The pump is available with fittings, booster sets and intelligent pump controllers

## Application:

- Supply of water to houses, holiday houses, allotments and gardens, as well as for irrigation purposes.
- When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing, agricultural holdings and in industrial applications

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: technopolymer/ stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Pump end plate / Frame: polipropylene/aluminium
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Filter: screen



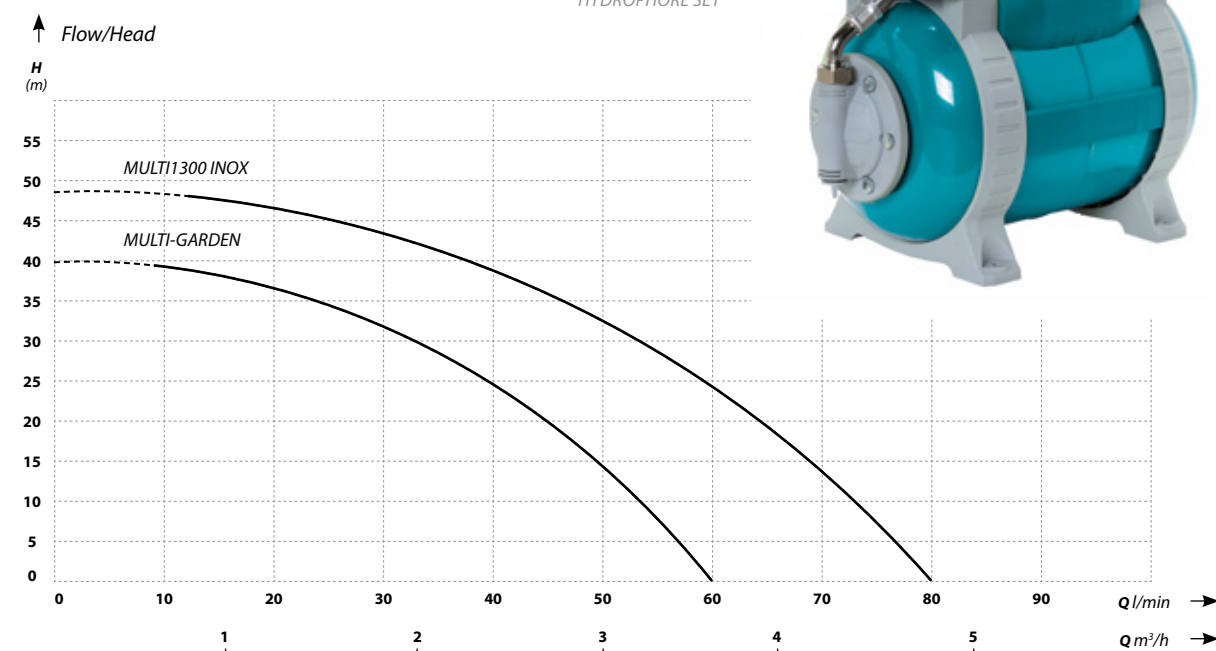
MULTI 1300 INOX



FILTR



MULTI GARDEN  
COMPLETE  
HYDROPHORE SET



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MULTI1300 INOX	48	80	1300	230	8	6	1 × 1	44/28/23	11
MULTI-GARDEN	40	60	1100	230	8	3	1 × 1	65/55/30	19

# MHI



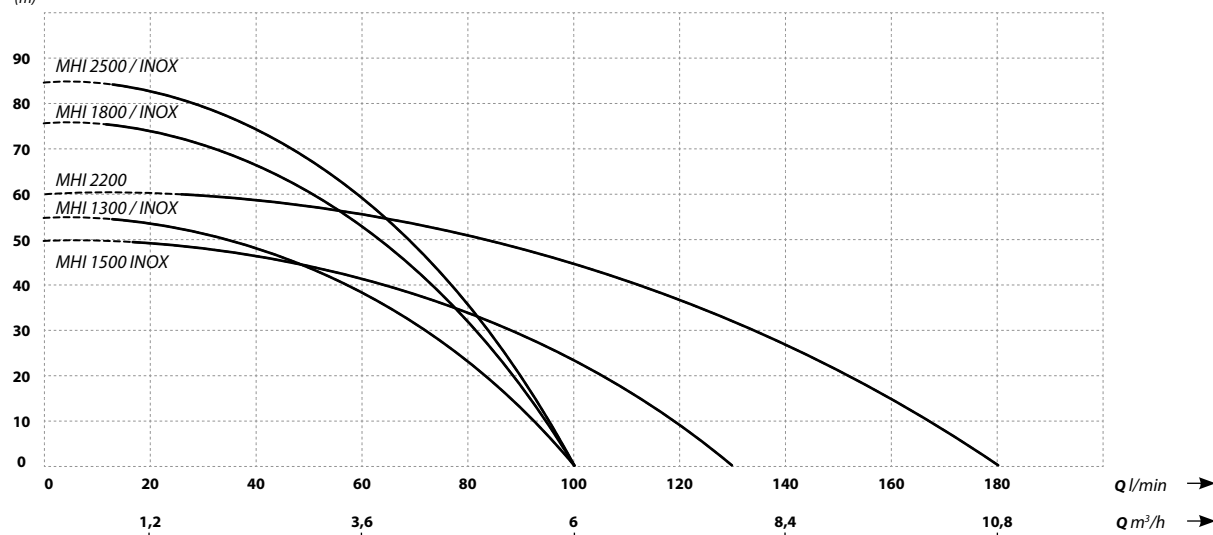
Group of multi-stage self-priming centrifugal pumps designed for pumping of clean cold water from own intakes and for increasing pressure. The pumps are equipped with the Venturi tube system for increased suction capacity. MHI pumps are available in two variants: with stainless steel impellers (INOX design) or with noryl impellers. All pumps have a stainless steel body. Due to low-noise operation, the pumps can be installed inside the houses. The pumps are equipped with thermal protection mounted in the motor winding.

## Characteristics:

- Suction capacity from a depth of up to 8 m
- High efficiency and high pressure
- Quiet operation
- Ability to work with a tank or hydrophore machines (e.g. PC, SK)
- Thermal protection built into the motor winding
- Warranty 24 months
- Warranty and post-warranty service

↑ Flow/Head

H  
(m)



## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature: 40°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Impeller: AISI 304 (INOX design)
- Pump end plate / Frame: cast iron
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR
- Dławica mechaniczna: ceramika/grafit/NBR

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MHI 1300 / INOX	55	100	1300	230	8	7	1x1	42/15/19	13,5
MHI 1500 INOX	50	130	1500	230	8	7,5	1x1	44/16/20	15
MHI 1800 / INOX	76	100	1800	230	8	8,8	1x1	48/18/20	17
MHI 2200	60	180	2200	230	8	10,5	1x1¼	46/18/21	18,5
MHI 2500 / INOX	85	100	2500	230	8	11	1x1	55/21/18	24



# MH



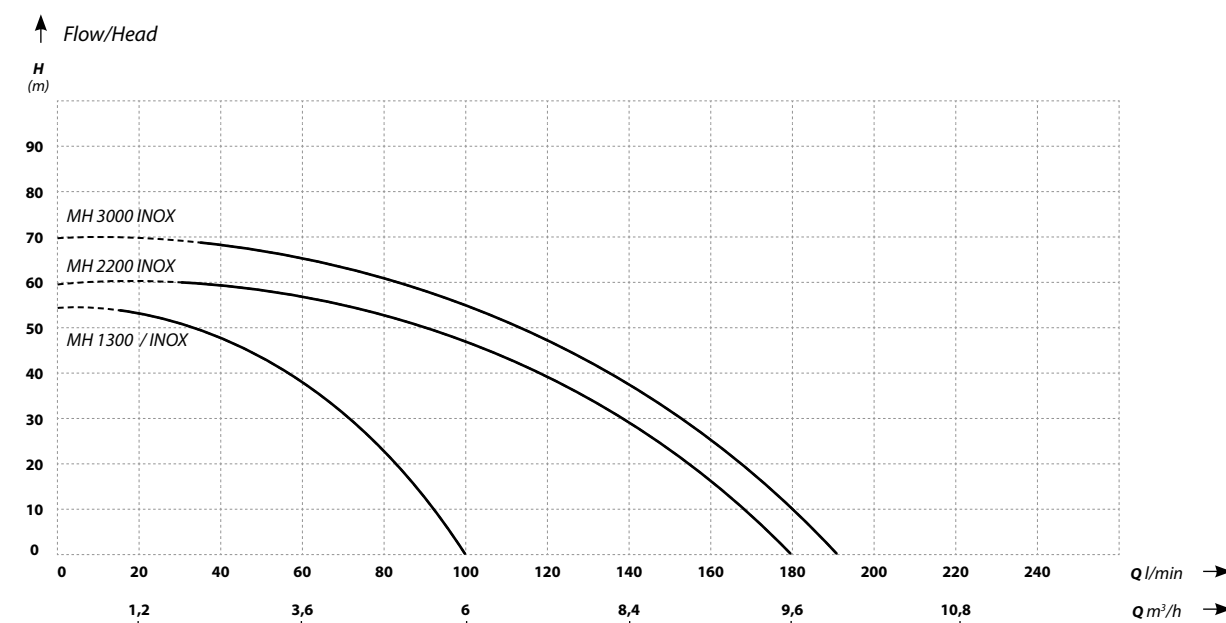
Group of multi-stage self-priming centrifugal pumps designed for pumping of clean cold water from own intakes and for increasing pressure. The pumps are equipped with the Venturi tube system for increased suction capacity. MH pumps are available in two variants: with stainless steel impellers (INOX design) or with noryl impellers. All pumps have a stainless steel body. Due to their high performance, efficiency and parameters, the pumps are often used to supply water to houses and agricultural holdings. Due to low-noise operation, the pumps can be installed inside the houses. The pumps are equipped with thermal protection mounted in the motor winding. All MH pumps are available in 230 V ~ / 50 Hz version. MH 1300 / INOX and MH 2200 INOX pumps are additionally available in the 400 V ~ 3/50 Hz version. MH pumps are also available with booster sets and with PC intelligent pump controllers (PC15, PC16, PC10P, PC59).

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V or 400 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Impeller: AISI 304 (INOX design)
- Pump end plate / Frame: cast iron
- Venturi tube: Noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MH 1300 / INOX	55	100	1300	230/400	8	6	1x1	43/15/18	13,5
MH 2200 INOX	60	180	2200	230/400	8	10	1x1¼	46/18/21	20
MH 3000 INOX	70	190	3000	230	8	12,5	1x1¼	47/19/22	26



# CPM INOX



Single-stage non-self-priming centrifugal pumps designed for pumping non-aggressive liquids with non-abrasive and non-absorbent solids content of 0.27 kg/m<sup>3</sup>. The maximum temperature of the pumped liquid is up to 60°C. The pump motor is provided with thermal protection mounted in the motor winding. Hydraulic parts that come in contact with water are made entirely of stainless steel

## Application:

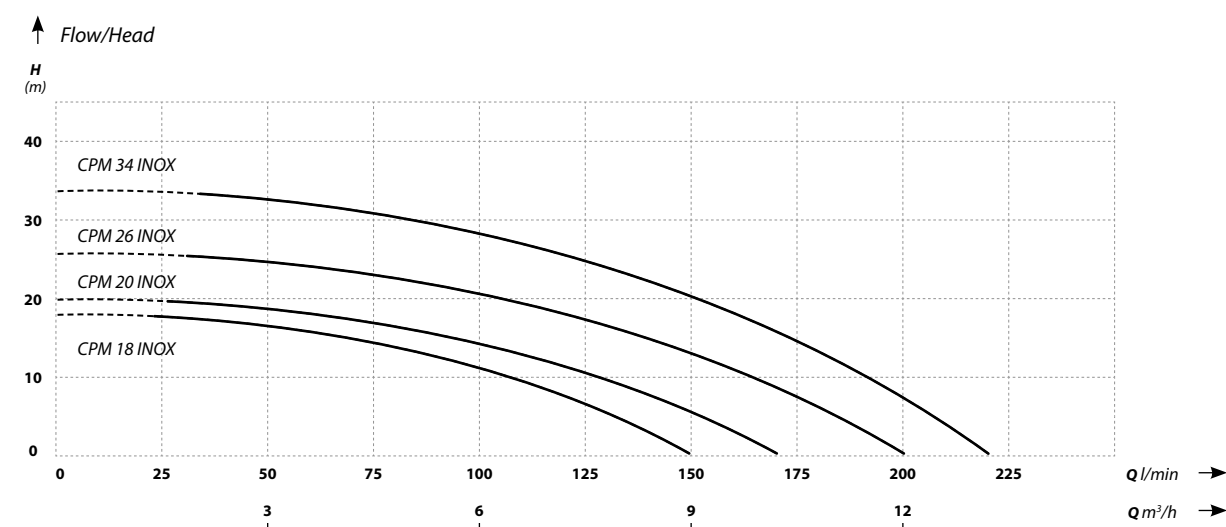
- Agriculture: irrigation, drainage, water supply, pumping liquid fertilizers (not corrosive to AISI 304 steel).
- Industrial applications: supply of water, pumping liquids that are not corrosive to AISI 304 steel and non-explosive liquids, jet washing.
- Air conditioning: heating, cooling. Household applications: supply of water, increasing pressure. The pumps is designed for continuous operation

## Operating conditions:

- Maksymalna temperatura cieczy 60°C
- Maksymalna temperatura otoczenia 50°C
- Class B Insulation
- Operating mode - continuous
- Protection - IP44
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Pump end plate: stainless steel AISI 304
- Frame: Aluminium
- Mechanical seal: carbon/ceramics/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
CPM 18 INOX	18	150	550	230	7	2,5	1 × 1¼	31/23/21	9,1
CPM 20 INOX	20	170	800	230	7	3,8	1 × 1¼	31/23/21	9,8
CPM 26 INOX	26	200	1100	230	7	5,2	1 × 1¼	31/23/21	10,9
CPM 34 INOX	34	220	1500	230	7	7	1 × 1¼	36/25/24	16,4

# HP INOX



The pump for pumping of clean cold water from own intakes and for increasing pressure. HP Series are multi-stage self-priming centrifugal surface pumps equipped with the Venturi tube system for increased suction capacity. Sections of pump body and shaft that come in contact with water are made of stainless steel (INOX). The pump is manufactured to the highest quality standards in terms of the design and materials used. The pump has a power cable with a plug, and the pump motor is provided with thermal protection

## Application:

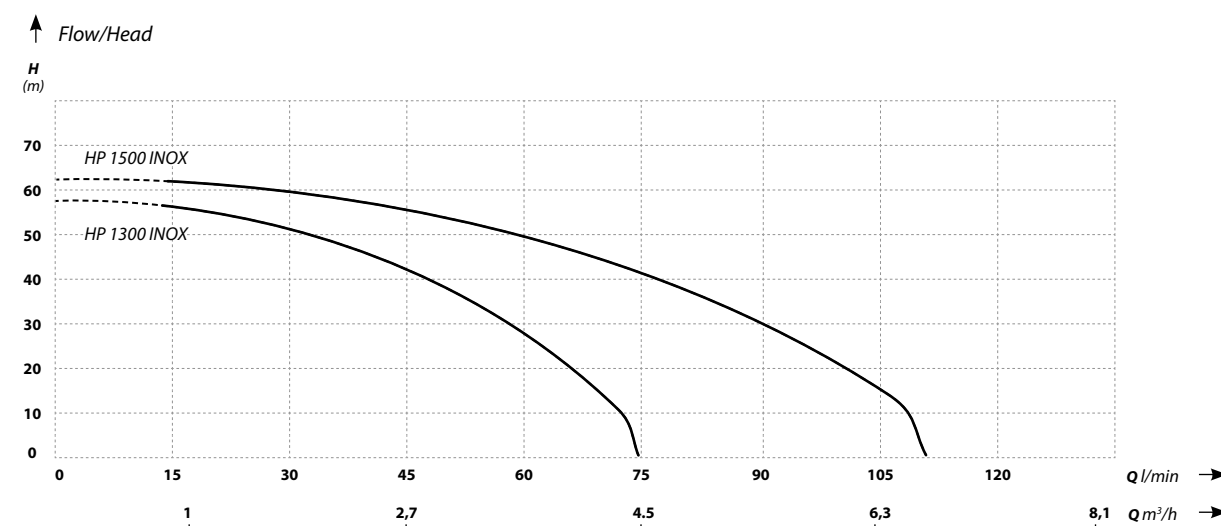
- Supply of water to houses, gardens, industrial washing facilities, air conditioning and cooling systems.
- When combined with pressure tanks, the pumps can be used for single- and multi-family residential housing and in industrial applications. Serwis gwarancyjny oraz pogwarancyjny

## Operating conditions:

- Maximum liquid temperature 70°C
- Maximum ambient temperature: 40°C
- Zasilanie: 230 V
- Class F Insulation
- Operating mode - continuous
- Protection - IP55
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Pump end plate: stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
HP 1300 INOX	58	75	1300	230	8	6,2	1 × 1	47/27/20	13,1
HP 1500 INOX	62	110	1500	230	8	9,6	1 × 1	48/20/23	15,5

## E-HP 1300



The pump used for clean, cold water from own intakes and for pressure boosting. The HP pumps are multistage, self-sucking surface pumps with increased suction capacity provided by a Venturi tube. The pump shaft is made of stainless steel (INOX). The pump is top quality in terms of workmanship and materials. It features a power cable with a plug, and the motor has integrated thermal protection

### Application:

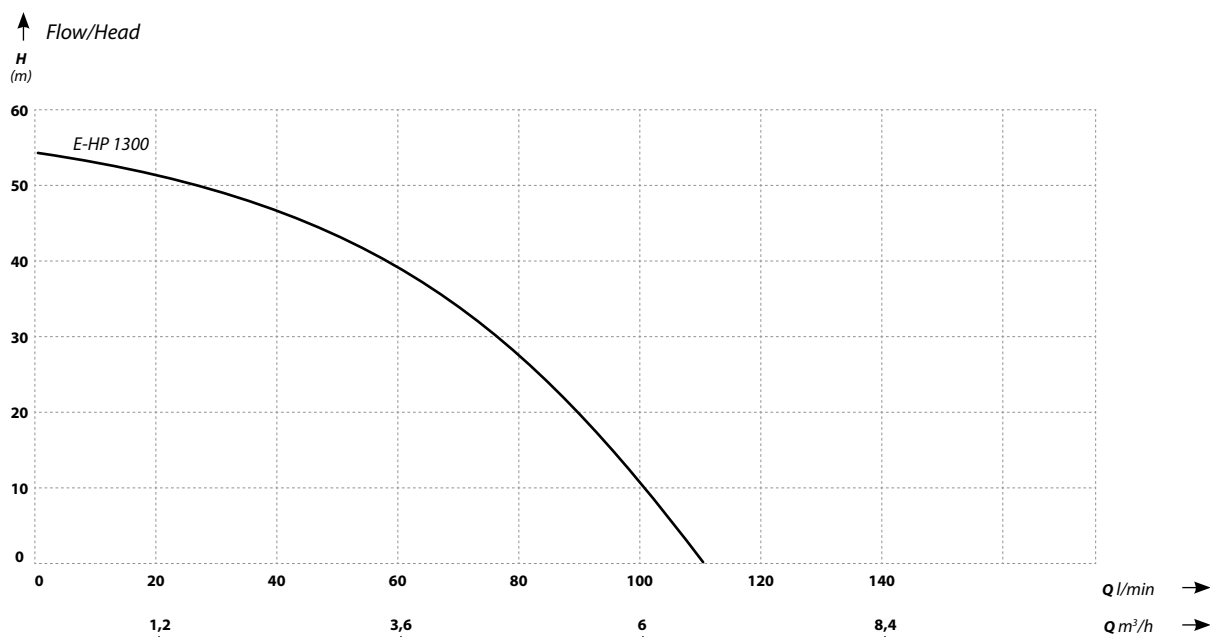
- Water supply to homes and gardens.
- In combination with membrane tanks can be used for single- and multi-family houses and in industry

### Operating conditions:

- Maximum liquid temperature 50°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class F
- Operation mode – continuous
- Degree of protection - IP55
- Motor speed: 2850 RPM

### Materials:

- Housing: AISI 304
- Shaft and rotor: AISI 304
- Impeller: Noryl
- Diffuser: Noryl
- Partition: AISI 304
- Mechanical gland: ceramic/ graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
E-HP 1300	54	110	1300	230	8	6,2	1 × 1	41/20/18	11,1

# SWIM

## Self-priming swimming pool pump with pre-filter.

Designed for maximum efficiency of filtration and circulation of water with chlorine content. It can operate with sea water. The pump is made of plastic materials, with a catcher for leaves and larger impurities, including fibrous ones. Available with Ø 50 mm or Ø 48.5 mm inlets/outlets.

### Motor:

- Asynchronous squirrel-cage with external ventilation
- Supply voltage 220-240 V/ 50 Hz.
- IP55 Ingress Protection
- Insulation Class F
- Single-phase motor with built-in capacitor and thermal protection
- Self-lubricating ball bearings
- Rotational speed 2850 RPM
- Designed for continuous operation

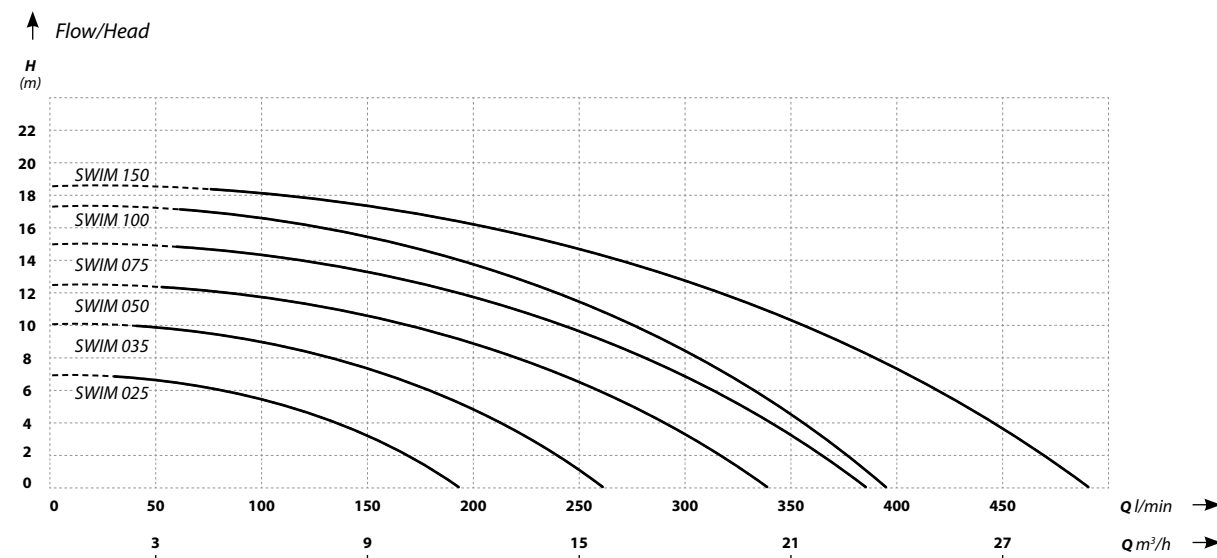
### Operating conditions:

- Water temperature: 5-50°C
- Ambient temperature: max. 50°C
- Max. working pressure: 0.3 MPa
- Insulation class: F
- Working mode: continuous
- Ingress protection: IP55
- Motor: squirrel cage asynchronous with external ventilation



### Materials:

- Pump housing: ABS
- Pre-filter: ABS
- Inlet/outlet: ABS/PVC
- Access plate: Polyethylene HD
- Impeller: Glass fibre reinforced LEXAN (resistant to abrasion by sand)
- Venturi tube: Glass fibre reinforced LEXAN (resistant to abrasion by sand)
- Mechanical seal: SiC/C
- Shaft: Stainless steel SUS 316
- Base: Polypropylene



Name	Head (m)	Flow (l/min)	Motor power		Amperage (A)	Weight (kg)
			(kW)	(HP)		
SWIM 025	7	195	0,37	0,50	1,9	9,3
SWIM 035	10	255	0,50	0,75	2,7	9,5
SWIM 050	12,5	340	0,75	1,0	3,8	9,7
SWIM 075	15	370	0,9	1,2	4,6	10,5
SWIM 100	17,5	390	1,1	1,5	5,8	10,9
SWIM 150	18,5	470	1,5	2,0	7,0	11,5

## JA50

The SPA pump is designed for circulation or filtration of swimming pools, spas, whirlpool bathtubs and hot tub spas. The JA pump can also be used in pools containing sea water, e.g. fish farms. The SPA pump is designed for circulation or filtration of swimming pools, spas, whirlpool bathtubs and hot tub spas. The JA pump can also be used in pools containing sea water, e.g. fish farms. The pump motor is equipped with thermal protection and provides exceptionally low-noise operation and low vibrations. The JA50 pumps are widely used by SPA manufacturers.

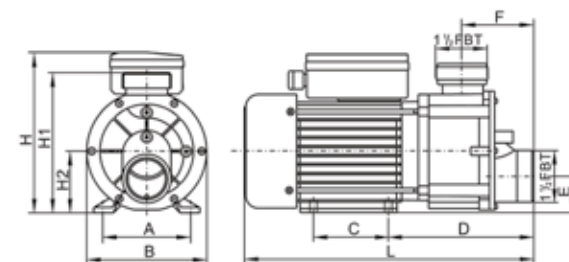


### Operating conditions:

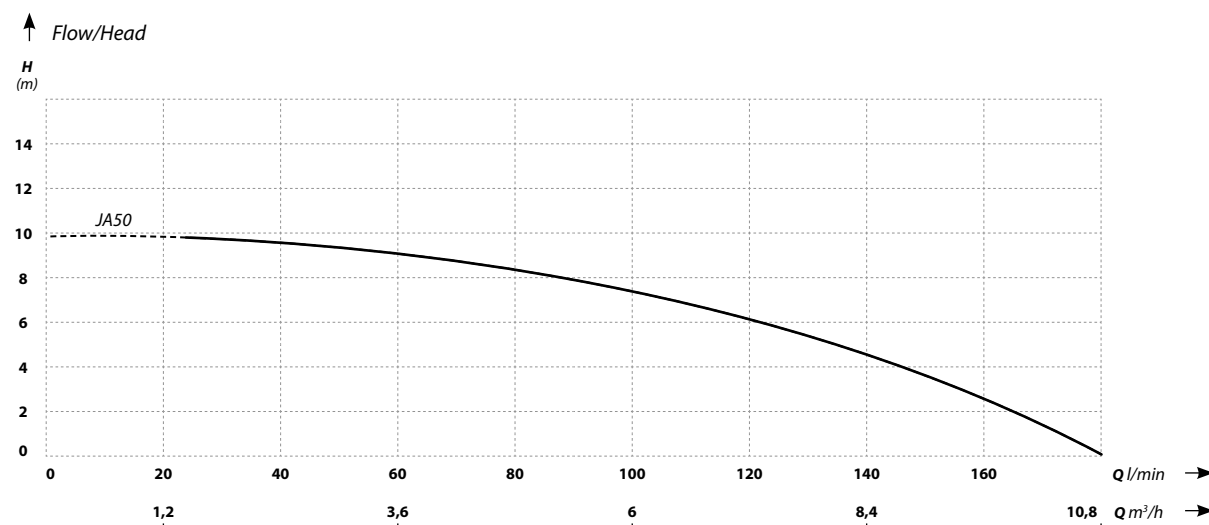
- Liquid temperature 5-50°C
- Maximum ambient temperature ≤ 50°C
- Maximum humidity - 95%
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP55
- Rotational speed of the electric motor: 2850 RPM
- Motor is equipped with thermal protection and provides exceptionally low-noise operation and low vibrations. The JA50 pumps are widely used by SPA manufacturers.

### Materials:

- Housing: plastic
- Shaft and rotor: stainless steel AISI 304
- Impeller: plastic
- Mechanical seal: ceramics/graphite/NBR



Name	Dimensions (mm)									
	A	B	C	D	E	F	G	H	H1	H2
JA50	100	153	80	164	33	89	317	191	168	63



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
JA50	10	180	370	230	8	2	48,5 lub 50	34/24/16	6

## FON

### Submersible fountain pumps.

The pumps are used to supply water to fountains, waterfalls, streams, ponds, decorative parts and features that using the effect of flowing water, as well as in food processing plants and agricultural production for draining ponds and fields. The pumps have a high efficiency motor and built-in thermal protection.

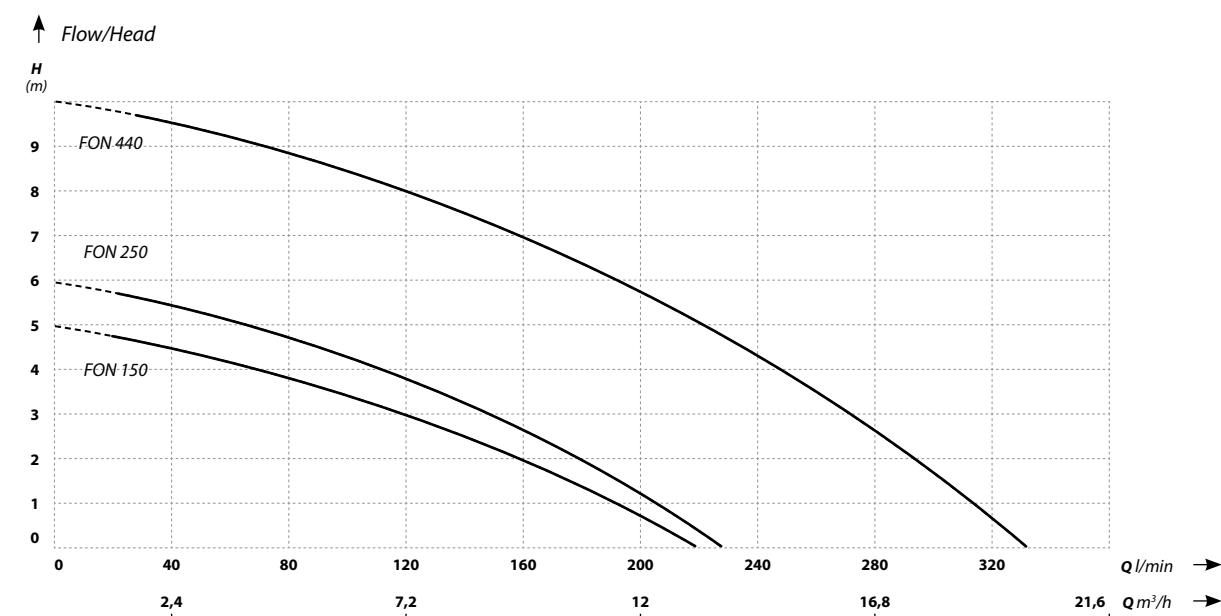


### Operating conditions:

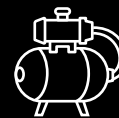
- Maximum liquid temperature 40°C
- Liquid type: water with small amount of sand
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Immersion depth - ≤5m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Housing: stainless steel AISI 304 / plastic
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/graphite/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
FON 150	5	220	150	230	20	1,6	1½ × 1	35/18/22	7
FON 250	6	230	250	230	20	2,4	1½ × 1	35/18/22	7,5
FON 400	10	330	400	230	20	3,5	1½ × 1	35/18/22	8



## BOOSTER SETS



IMAGE: PUMP AJ50/60  
WITH FITTINGS



IMAGE: PUMP AJ50/60  
WITH FITTINGS + TANK 24



IMAGE: PUMP AJ50/60  
WITH FITTINGS + TANK 24

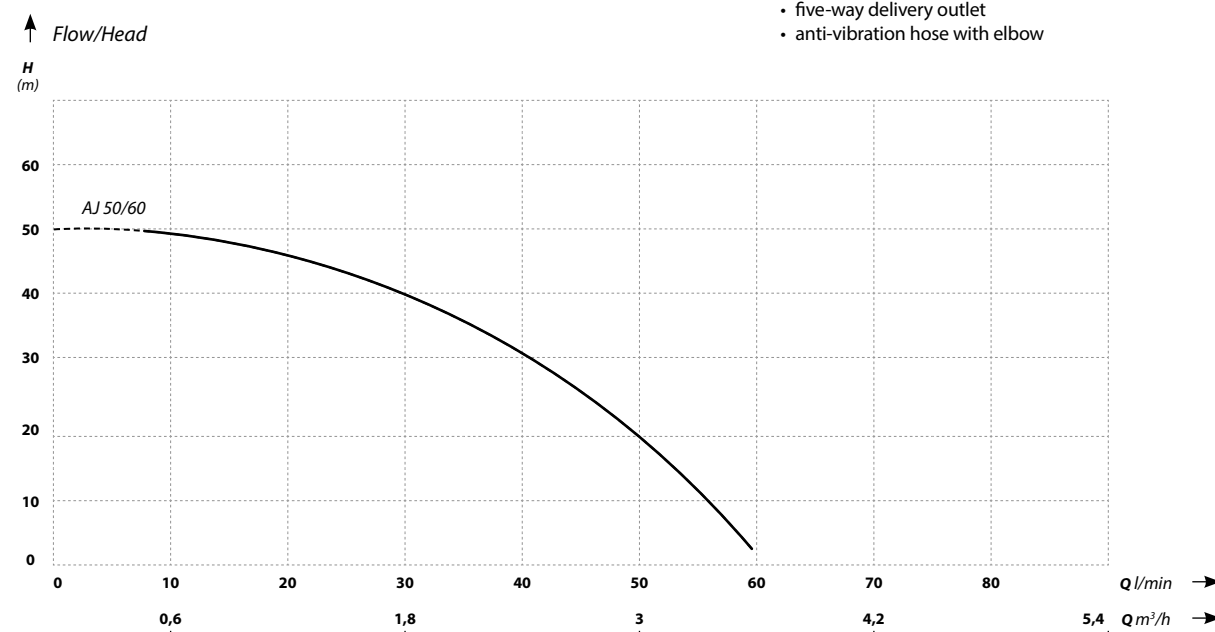
The booster set is a proven solution for automatic supply of water to households. Each of the IBO surface pumps can be combined in any booster set. The size of the tank is selected according to individual needs and requirements of clients. In addition to the classic sets of pump + tank, it is possible to configure the pump with intelligent controllers such as: PC (PC-10P/ PC-13 / PC-15/PC-16/ PC-59), SK (SK15) and IVR-02 frequency converters. The controllers are equipped with an additional dry-running protection. The set's operation is fully automatic - it starts the pump when the water is turned on and stops it when the water is turned off.

### Tanks that can be selected:

- IBO POZIOM
- IPO PION POZIOM
- IBO INOX / IBO ITALY
- IBO ITALY FIX.

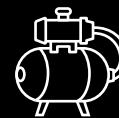
### The set includes:

- pump,
- pressure tank,
- pressure switch,
- pressure gauge,
- five-way delivery outlet
- anti-vibration hose with elbow



Name	Zalecany model zbiornika	Zalecany model automatu
AJ 50/60	24 / 50 / 80 / 100L / 150	PC15 / PC16 / PC59 / PC10P





## BOOSTER SETS



IMAGE: WZCH 250/750 PUMP  
WITH FITTINGS



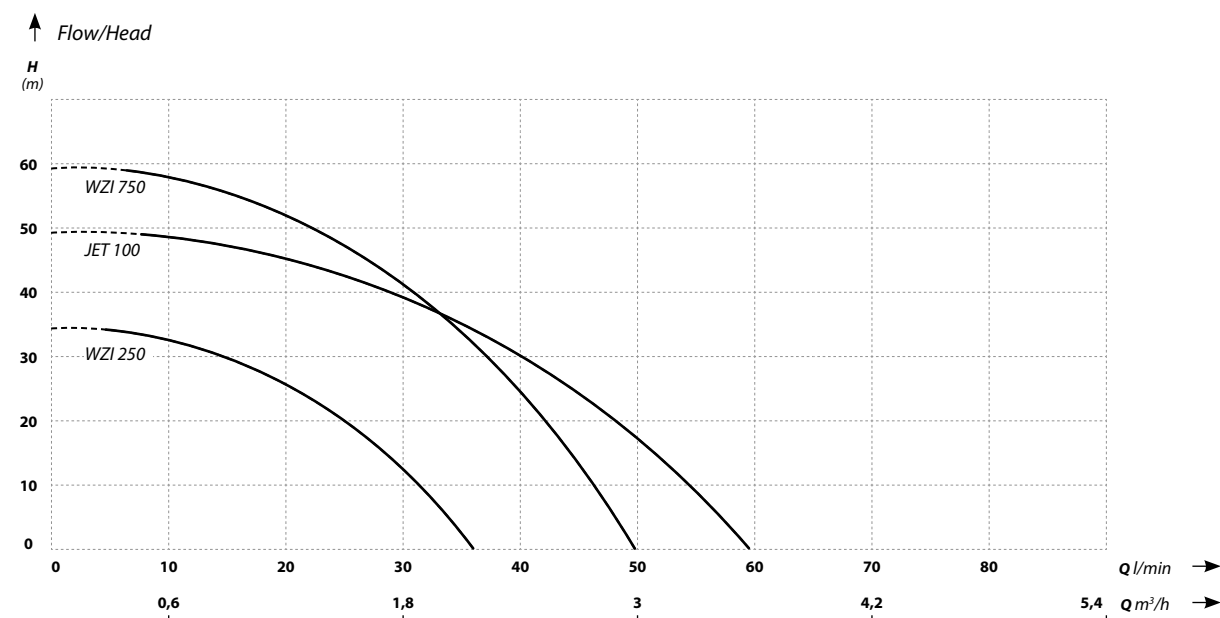
IMAGE: WZI 750/750 PUMP  
WITH FITTINGS + TANK 24



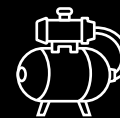
IMAGE: JET 100 PUMP  
WITH FITTINGS + TANK 24



IMAGE: JET 100 PUMP  
WITH FITTINGS + TANK 24



Name	Zalecany model zbiornika	Zalecany model automatu
JET 100	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
WZI 250	2 / 24 / 50 / 80 / 100	PC15 / PC16 / PC59 / PC10P
WZI 750	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P



## BOOSTER SETS

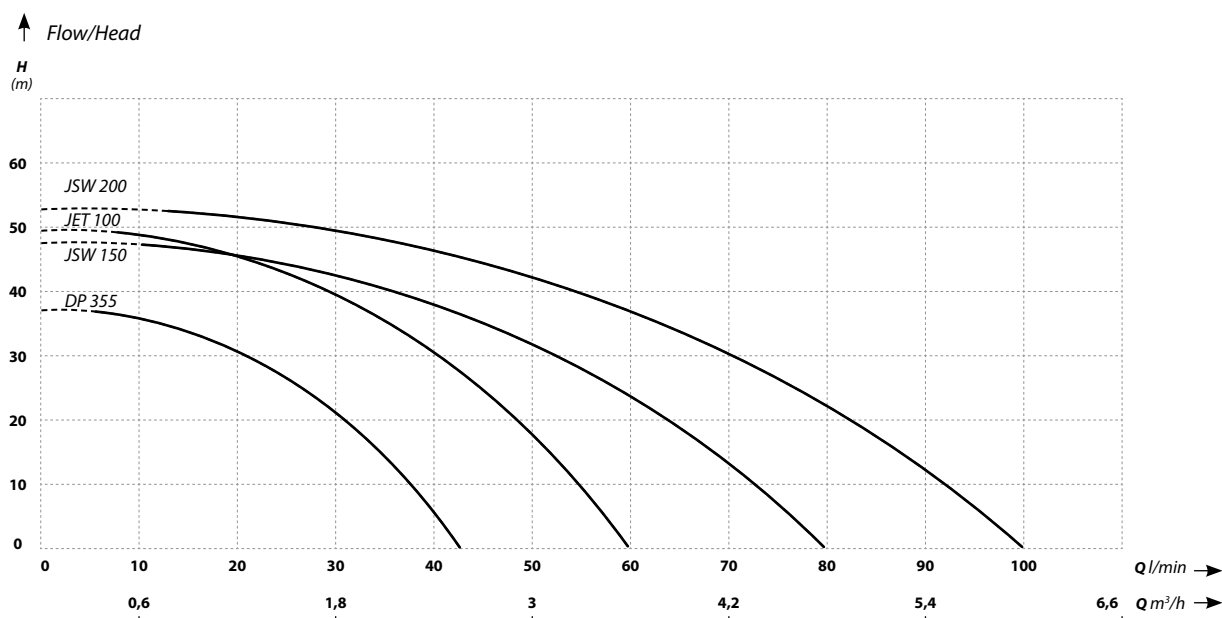


IMAGE: DP 355 PUMP  
WITH FITTINGS

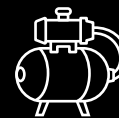
IMAGE: JSW 150 ITALY PUMP  
WITH FITTINGS + TANK 50

IMAGE: JSW 150 ITALY PUMP  
WITH FITTINGS + TANK 24

IMAGE: JET 100 LONG PUMP  
WITH FITTINGS + TANK 50



Name	Zalecany model zbiornika	Zalecany model automatu
DP 355	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
JSW 150	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
JSW 200	50 / 80 / 100 / 150	PC16 / PC20P
JET 100 A LONG	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P



## BOOSTER SETS



IMAGE: GARDEN PUMP  
WITH FITTINGS



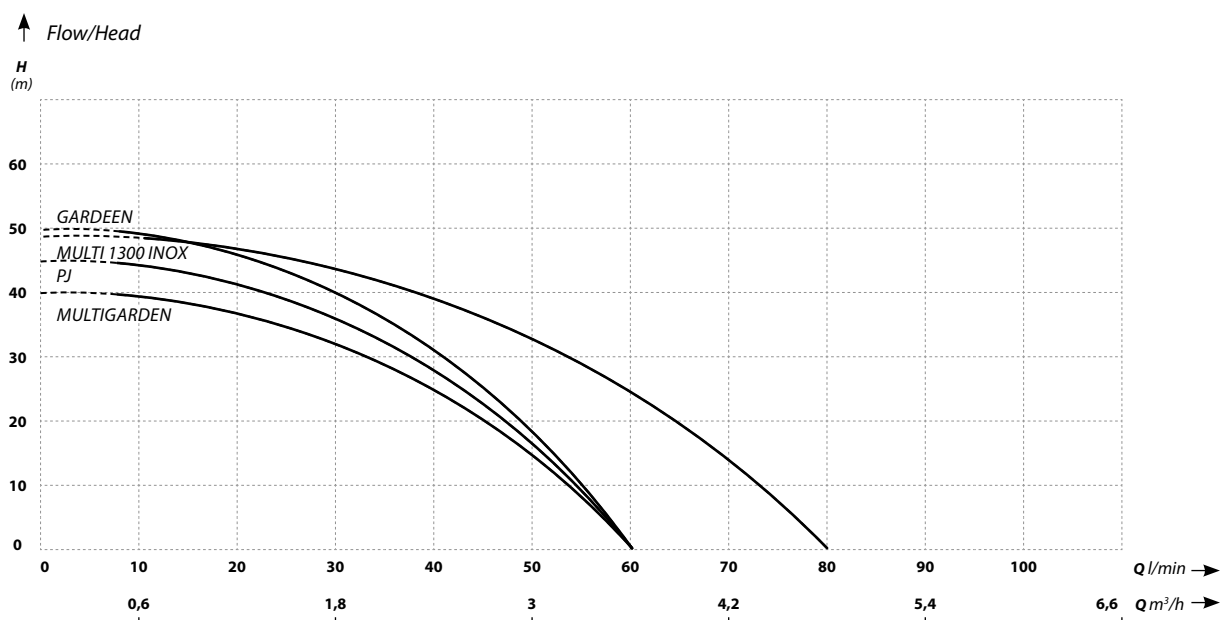
IMAGE: PJ PUMP  
WITH FITTINGS



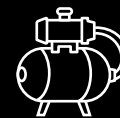
IMAGE: MULTI 1300 PUMP  
WITH FITTINGS



IMAGE: MULTIGARDEN PUMP  
WITH FITTINGS



Name	Zalecany model zbiornika	Zalecany model automatu
Garden	24 / 50	PC15 / PC59 / PC13
MULTI 1300 INOX	24 / 50 / 80 / 100 / 150	PC15 / PC16 / PC59 / PC10P
Multigarden	24 – w komplecie	–
PJ	24 / 50	PC15 / PC59 / PC13



## BOOSTER SETS

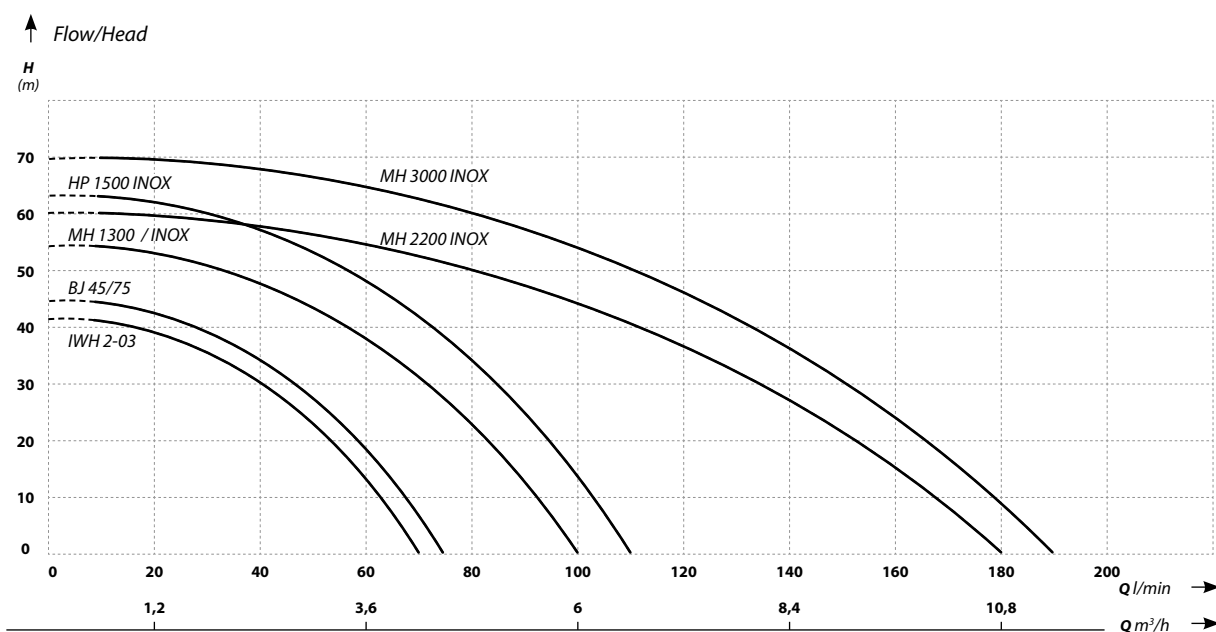


BJ 75/45  
WITH IBO TANK TYPE: 50

HP1500INOX  
WITH IBO TANK TYPE: 80

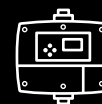
EHP 1300  
WITH TANK 24

MH 1300  
WITH FITTINGS + TANK 24



Name	Zalecany model zbiornika	Zalecany model automatu
HP1500 INOX	50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P
BJ 45/75	24 / 50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P / PC-13 / SK-15
IWH 2-03	24 / 50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P / PC-13 / SK-15
MH/MHI1300	50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P / PC-13 / SK-15
MH/MHI1500	50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P / PC-20P / SK-15
MH/MHI1800	50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P / PC-20P / SK-15
MH/MHI2200	50 / 80 / 100 / 150	PC-10P / PC-20P
MH/MHI2500	50 / 80 / 100 / 150	PC-10P / PC-20P
MH3000	50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P / PC-13 / SK-15
EHP	50 / 80 / 100 / 150	PC-16 / PC-59 / PC-10P / PC-13 / SK-15

# Inverters



AUTOIBO

WZI-AUTO 900

HOME 1

IQ-AUTO 750

MAGNET-AUTO 750

MCI 4 AUTO

INVERTER SYSTEM – IVR-02

INVERTER SYSTEM – IV-03

INVERTER SYSTEM – IVR-05

INVERTER SYSTEM – IVR-10 S/T | IVR-20 | 30 | 40

INVERTER SYSTEM – IVR-09T

INVERTER SYSTEM – IVR-09T

MULTI SET IVR-09

# AUTOIBO

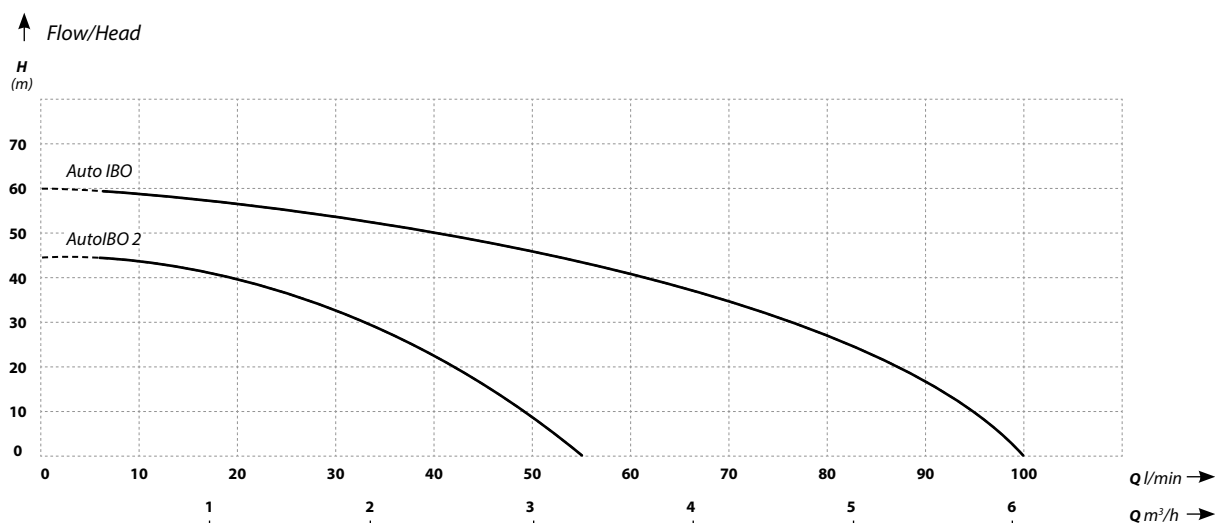


The AUTOIBO series pumps are equipped with a high performance frequency converter. Pumps equipped with frequency converters create seamless system to keep water supply system pressure constant regardless of the water demand. The frequency converter integrated into the pump will allow to reduce electricity consumption. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 60% of energy. The pump motor speed is adjusted to the various operating conditions of the water supply system.

A pump with an inverter is an easy-to-use control and protection device that maintains a constant, set water pressure by changing the rotational speed of the pump motor.

## Advantages:

- Low-noise operation: can be installed in the house.
- Simple operation: easy to use, all functions can be terminated by pressing a button.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Suction capacity (m)	Rational speed range (RPM)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
AUTOIBO	45	55	800	230	3,6	8	0-3450	1 × 1	31,5 × 21 × 30,5	14
AUTOIBO 2	60	100	1500	230	10	8	0-3450	1½ × 1½	34,5 × 24 × 32	26



# WZI-AUTO 900

WZI-AUTO 900 is a compact device designed to provide households with clean water from their own water intakes (wells) or to increase pressure from the water supply network. The pumps are equipped with a frequency inverter that guarantees constant pressure in all water taps, soft starts of the motor and lower current consumption compared to classical pressure boosting plants. The pumps with an integrated frequency inverter are state-of-the-art and energy efficient devices characterised by their silent operation, ease of installation and use, integrated protection against dry running, water hammer, pressure decrease or increase, or motor overload.

A very important characteristic of the IBO pumps with an integrated frequency inverter is their ease of use. Starting up and configuring the pump does not require the presence of an automation specialist - the user only has to set the operating pressure of the device using two buttons (+ and -).

Despite utilising a small 900w motor, the wzi-auto 900 pump achieves very good parameters: flow rate of 75l/min and head of 43m. These parameters are sufficient to satisfy the needs of a single-family home or commercial premises. Additionally, the device is classified as S1, which means it has been designed for continuous duty.

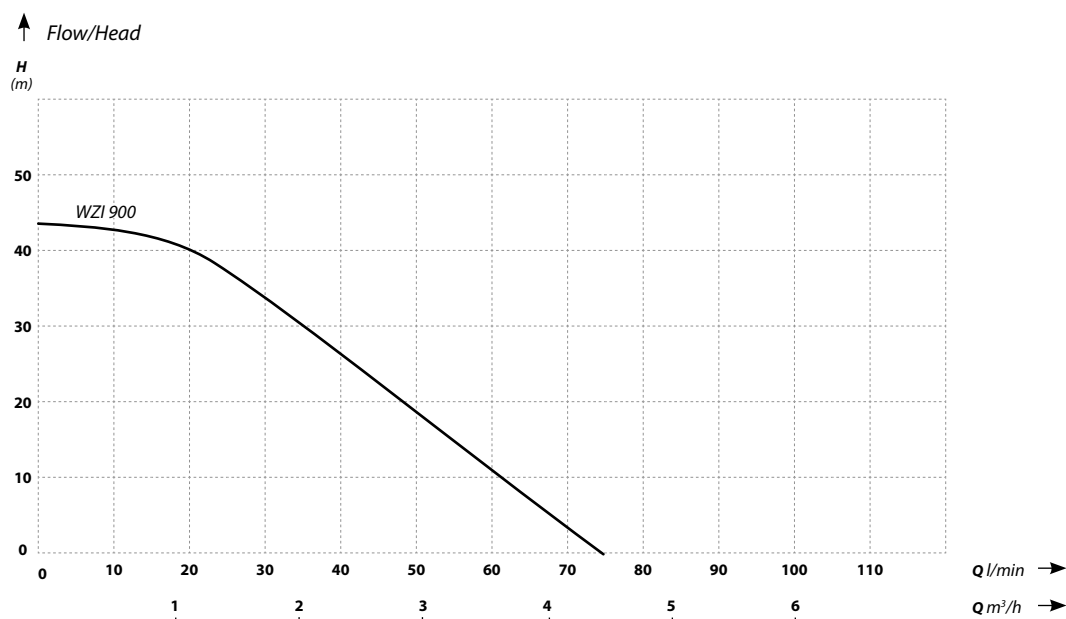


## Advantages:

- High efficiency despite utilising a small 900W motor
- Silent operation allowing the device to be installed even in usable rooms
- Ease of use and convenient operation
- Lower motor and hydraulic part wear thanks to an integrated "motor soft start"
- Constant pressure guarantee
- Protective functions: against dry running, overload, overvoltage/undervoltage, motor overload, water hammer

## Materials:

- Housing: plastic
- Impeller: Brass
- Diffuser: Cast iron
- Shaft and rotor: stainless steel AISI 304
- Inverter display: LED
- Mechanical sealing: Ceramics/graphite
- Motor rotational speed: 0-4000RPM
- Frequency range: 30-50hz



Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Rational speed range (RPM)	Dimensions L/H/W (cm)	Weight (kg)
WZI 900	43	75	900	230	8	4,8/7,5	4000	26/23/25	10,1



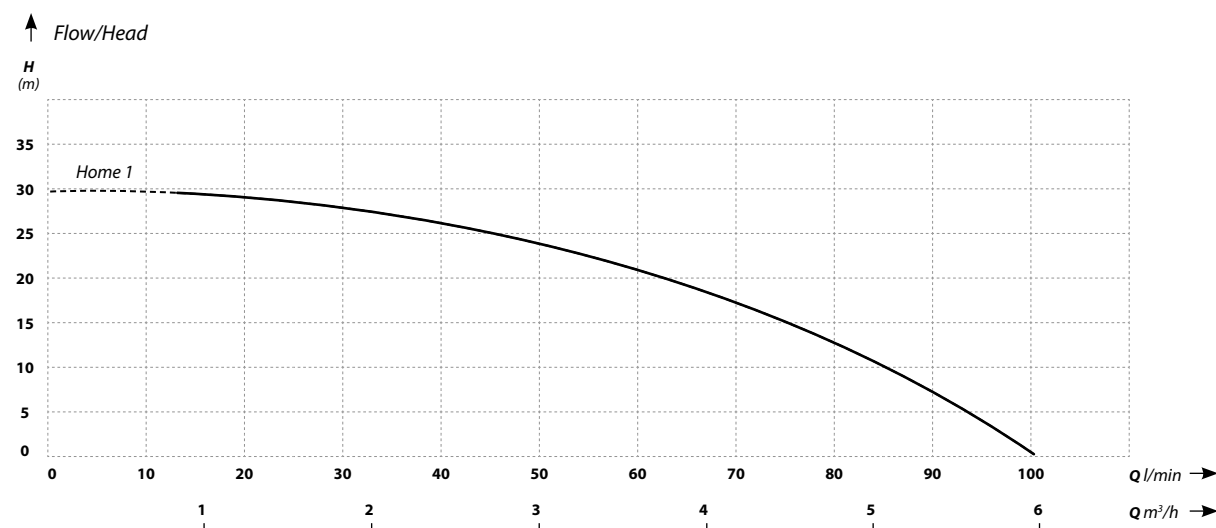
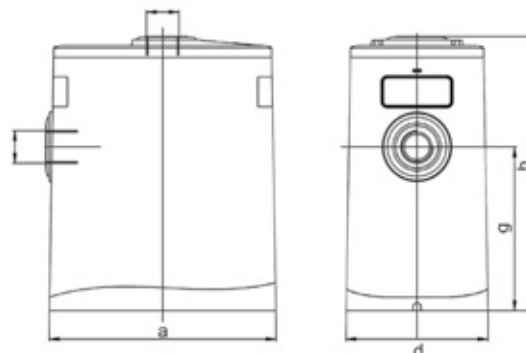
# HOME 1

The HOME 1 series pumps are equipped with a high performance frequency converter. Pumps equipped with frequency converters create seamless system to keep water supply system pressure constant regardless of the water demand. The frequency converter integrated into the pump will allow to reduce electricity consumption. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 60% of energy. The pump motor speed is adjusted to the various operating conditions of the water supply system.

A pump with an inverter is an easy-to-use control and protection device that maintains a constant, set water pressure by changing the rotational speed of the pump motor.

## Advantages:

- Low-noise operation: can be installed in the house.
- Simple operation: easy to use, all functions can be terminated by pressing a button.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m.)	Rational speed range (RPM)	Inlet/outlet (inch)	Dimensions (mm)				Weight (kg)
								a	d	h	h	
HOME 1	30	100	750	230	8	0-3000	1 × 1	230	144	166	278	7

# IQ-AUTO 750

IQ-AUTO 750 is a compact device designed to provide households with clean water from their own water intakes (wells) or to increase pressure from the water supply network. The pumps are equipped with a frequency inverter that guarantees constant pressure in all water taps, soft starts of the motor and lower current consumption compared to classical pressure boosting plants. The pumps with an integrated frequency inverter are state-of-the-art and energy efficient devices characterised by their silent operation, ease of installation and use, integrated protection against dry running, water hammer, pressure decrease or increase, or motor overload.

A very important characteristic of the IBO pumps with an integrated frequency inverter is their ease of use. Starting up and configuring the pump does not require the presence of an automation specialist - the user only has to set the operating pressure of the device using two buttons (+ and -).

Despite utilising a small 750W motor, the IQ-AUTO 750 pump achieves a very high maximum flow rate of up to 130l /min. These parameters are sufficient to satisfy the needs of a large single-family home, including garden watering or of several commercial premises. Additionally, the device is classified as S1, which means it has been designed for continuous duty.

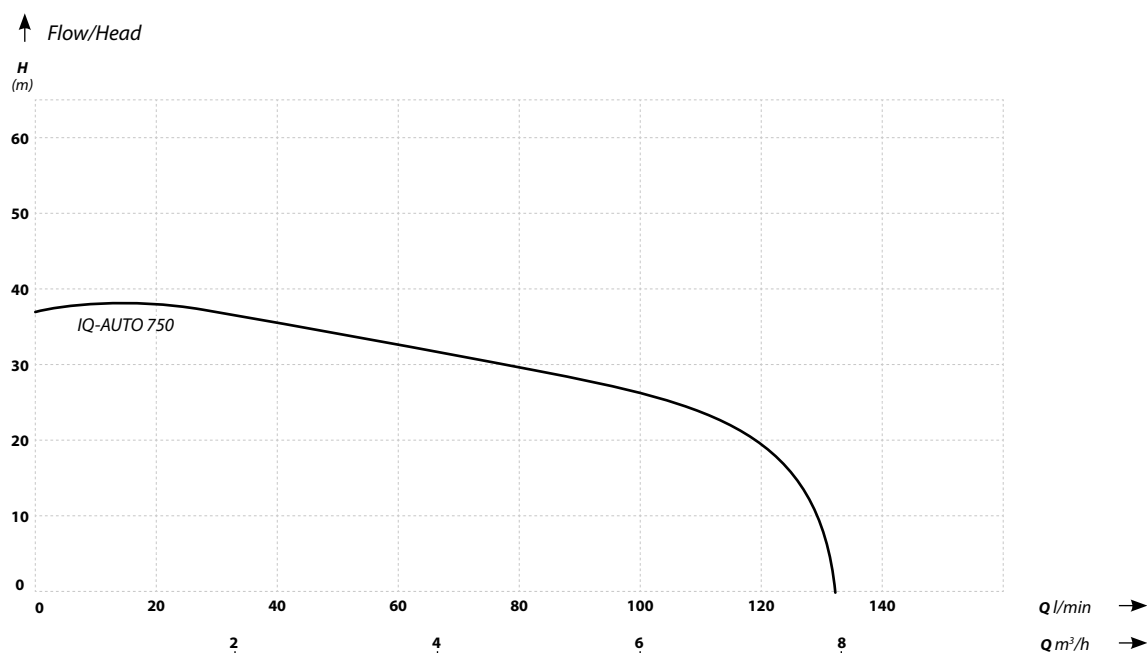


## Advantages:

- Very high efficiency despite utilising a small 750W motor
- Silent operation allowing the device to be installed even in usable rooms
- Ease of use and convenient operation
- Lower motor and hydraulic part wear thanks to an integrated 'motor soft start'
- Constant pressure guarantee
- Protective functions: against dry running, overload, overvoltage/undervoltage, motor overload, water hammer

## Materials:

- Housing: plastic
- Impeller: Stainless steel AISI 304
- Diffuser: Stainless steel AISI 304
- Shaft and rotor: AISI 304 stainless steel
- Inverter display: LED
- Mechanical sealing: Ceramics/graphite
- Motor rotational speed: 0-4000 RPM
- Frequency range: 30-50Hz



Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Rational speed range (RPM)	Dimensions L/H/W (cm)	Weight (kg)
IQ-AUTO 750	37	130	750	230	8	5/8	4000	47/27/28	10,9

# MAGNET-AUTO 750

MAGNET-AUTO 750 is a compact device designed to provide households with clean water from their own water intakes (wells) or to increase pressure from the water supply network. The pumps are equipped with a frequency inverter that guarantees constant pressure in all water taps, soft starts of the motor and lower current consumption compared to classical pressure boosting plants. The pumps with an integrated frequency inverter are state-of-the-art and energy efficient devices characterised by their silent operation, ease of installation and use, integrated protection against dry running, water hammer, pressure decrease or increase, or motor overload.

A very important characteristic of the IBO pumps with an integrated frequency inverter is their ease of use. Starting up and configuring the pump does not require the presence of an automation specialist - the user only has to set the operating pressure of the device using two buttons (+ and -)

Despite utilising a small 750W motor, the MAGNET-AUTO 750 pump achieves a very high maximum flow rate of up to 115l/min. These parameters are sufficient to satisfy the needs of a large single-family home, including garden watering or of several commercial premises. Additionally, the device is classified as S1, which means it has been designed for continuous duty.

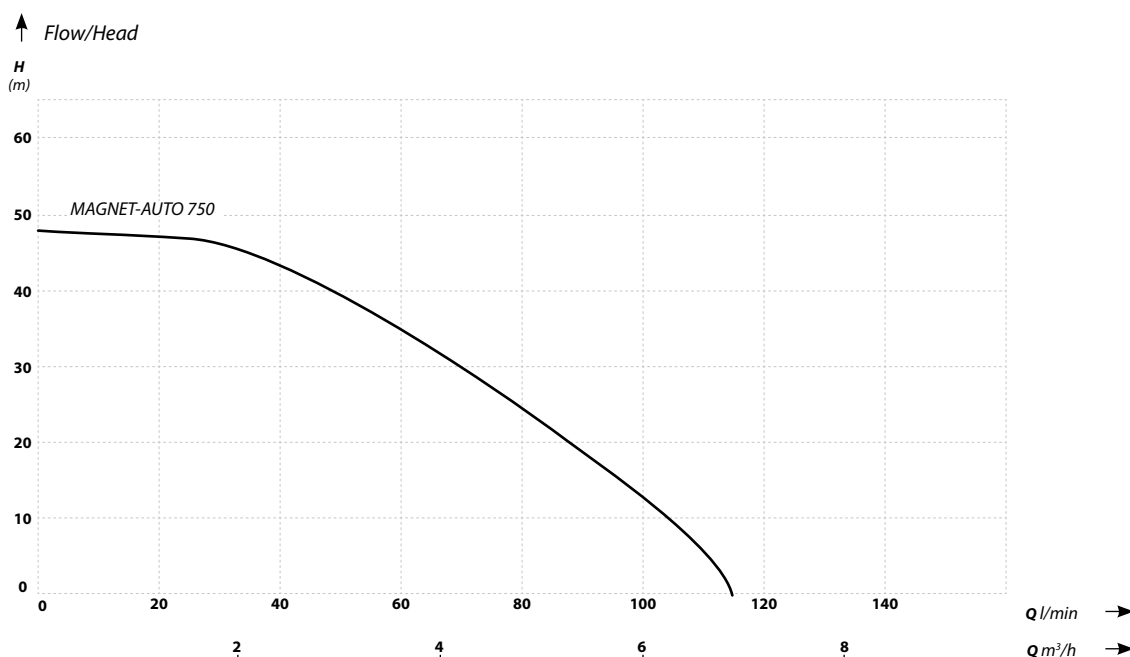


## Advantages:

- Very high efficiency despite utilising a small 750W motor
- Silent operation allowing the device to be installed even in usable rooms
- Ease of use and convenient operation
- Lower motor and hydraulic part wear thanks to an integrated "motor soft start"
- Constant pressure guarantee
- Protective functions: against dry running, overload, overvoltage/undervoltage, motor overload, water hammer

## Materials:

- Housing: plastic
- Impeller: PPO
- Diffuser: PPO
- Shaft and rotor: stainless steel AISI 304
- Inverter display: ?LED
- Mechanical sealing: Ceramics/graphite
- Motor rotational speed: 0-4000 RPM
- Frequency range: 30-50Hz



Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Amperage (A)	Rational speed range (RPM)	Dimensions L/H/W (cm)	Weight (kg)
MAGNET-AUTO 750	48	115	750	230	8	5/8	4000	42/22/28	10

# MCI 4 AUTO

MCI series pumps are characterized by high quality of workmanship, additionally the AUTO version is equipped with a high-efficiency frequency converter. Pumps equipped with frequency converters form a well-tuned system that allows the system pressure to be kept at a constant level, regardless of the water demand. A frequency converter integrated with the pump will reduce electricity consumption. Compared to the traditional water supply, the onstant pressure water supply system with frequency converter saves energy up to 60%. The speed of the pump motor is adapted to the different operating conditions of the installation. In order to maintain smooth operation, the pump is equipped with a diaphragm vessel.

The pump equipped with an inverter is an easy-to-use control and safety device, maintaining a constant set water pressure. Support the change of the pump motor rotational speed.

## Advantages:

- Quiet operation: can be installed at home
- Simple operation: easy operation, all functions can be finished by pressing a button.
- Reliability for many years of associated pumps: the average torque and the shaft abrasion are reduced due to the decrease in the average speed, which ensures a longer service life of the pump. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
- Comprehensive protection: the system has the most comprehensive protection technology of overcurrent, overvoltage, undervoltage, short circuit, locked rotors, the ability to protect the pump against dry running without the need to install probes / sensors in the well.
- The kit is equipped with a check valve.
- Economical: by using an inverter, the pump consumes much less electricity compared to sets without an inverter.

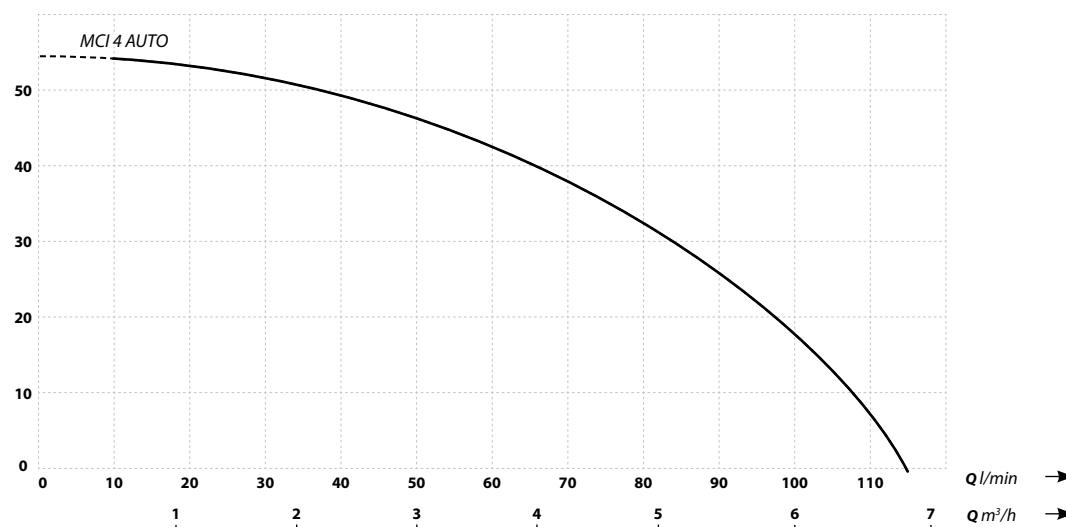


## Working conditions:

- Liquid temperature:  $\leq 70^{\circ}\text{C}$
- Ambient temperature:  $\leq 50^{\circ}\text{C}$
- Maximum pressure in the installation: up to 10 bar
- Degree of protection: IP55
- Insulation class: F

## Materials:

- Body - AISI 304 stainless steel.
- Shaft - AISI 304 stainless steel.
- Mechanical stuffing box - SIC / SIC / EPDM
- Connectors: stainless AISI 304
- Impellers, diffusers, diffuser covers - AISI 304 stainless steel.
- Inter-wall: AISI 304 stainless steel
- Base: Steel
- Motor: closed-frame asynchronous cage motor, aluminum housing, external ventilation



Model	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Suction capacity (m)	Rational speed range (RPM)	Inlet/outlet (inch)	Dimensions L/H/W (cm)	Weight (kg)
MCI AUTO	54	115	1200	230	8	0-3500	1 1/4 x 1	350/430/165	15,5

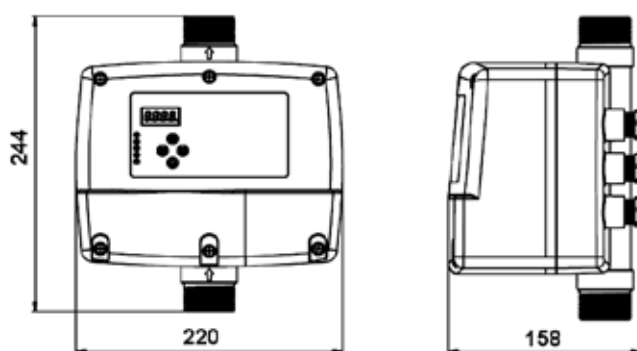
# INVERTER SYSTEM – IVR-02

IVR-02M Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of 0.75 KW to 1.5 KW (from 1 HP to 2 HP) single-phase submersible pumps, surface pumps, deep well pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor.

The IVR-02M model provides many operating modes by adapting to various electrical systems.

## System advantages:

- **Energy efficiency:** Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 30%-60% of energy.
- **Fully protected:** the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- **Simple operation:** easy to use, all functions can be terminated by pressing a button, without the need to hire programming specialists.
- **Long-term reliability of the co-operating pumps:** the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.) The ability to control the operation of two pumps supplying the system.



## Application:

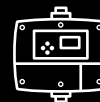
IVR-02M can be used in all applications where maintaining a constant water pressure in the system and control and protection of a pump or a set of two pumps is required.

IVR-02M controls automatic switching on and off, and adapts the motor speed to the requirements of the water supply system.

## Typical application:

- houses
- apartments
- holiday houses
- agricultural holdings
- supply of water from the well
- irrigation of growing houses, gardens, agricultural land collecting and using rainwater

Installation data	
Permissible ambient temperature	-10°C – +40°C
Permissible ambient humidity	20%–90% RH
Permissible liquid temperature	0°C – +50°C
Ingress Protection	IP 55
Mounting orientation	Vertical
Unit dimensions (L/W/H)	244/220/158 mm
Inlet/outlet	G 1 1/4" / G 1 1/4"
Minimum capacity of pressure tank	2 L



# INVERTER SYSTEM – IVR-02

Main Technical Data	
Rated output power	0,37 KW – 1,5 KW (0,5 HP – 2 HP)
Rated input voltage	AC160–250 V / 50–60 HZ (single-phase)
Pump max. amp rating	12 A
Rated output voltage	AC 230 V / 20–60 Hz (single-phase)
Additional pump rated output voltage	AC 230 V / 50 Hz (single-phase)
Response time under overload condition	5 s – 5 min.
Pressure setting range	1–9 bar
Response time under open phase condition	< 5 s
Response time under short-circuit condition	< 0,1 s
Response time under overvoltage/undervoltage condition	< 5 s
Response time under dry-run condition	6 s
Time to activation after overload condition	30 min.
Time to activation after overvoltage/undervoltage condition	5 min.
Time to self-activation after dry-run condition	8s, 1 min, 10 min, 30 min, 1 h, 2 h...
Deactivation limit at overvoltage	270 V
Deactivation limit at undervoltage	100 V
Horizontal distance	≤ 1000 m
Protections	Dry-run Short-circuit Overload Pump overloaded Voltagespike Undervoltage Overvoltage

Main Technical Specification	
Control specification	double flow control
	pressure control
Liquid flow control specification	Manual / Automatic
Pressure control specification	probe electrode pulse and flow switch
Charakterystyka kontroli ciśnienia	Pressure sensor 24 V, 4–20 mA

# INVERTER SYSTEM – IVR-03

Can be arranged in pump groups

IVR-03 Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of deep-well pumps, surface pumps, submersible pumps, etc., maintaining a constant, preset water pressure by varying the pump motor speed. The IVR-03 inverter utilises SPWM (sinusoidal pulse width modulation) technology and high efficiency space vector technology, with V/F VVVF (variable speed, variable frequency) control.

With real-time pressure analysis, the inverter adjusts the pump speed to the current system demand. Variable speed pump stabilizes pressure and saves water and electricity.

## Advantages:

Important features that distinguish IVR-03 from popular on/off control devices:

- Energy efficiency. The water supply system with frequency converter saves 30%-60% of energy compared to a traditional set-up.
- Simple operation: easy to use, all functions can be terminated by pressing a button without the need to hire programming specialists.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer means a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- Ability to control the operation of several pumps supplying the system.

## Application:

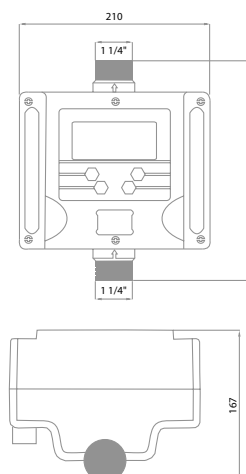
IVR-03 can be used to increase the water pressure in various installations such as residential, commercial, industrial, water treatment plants, agriculture, etc. Ease of installation and operation. No need to hire a qualified service technician to connect the unit. Advanced technology, PID algorithm control, technology addressed for pump drive control

Reliable and fail-safe. The unit has various built-in protections. Dry-running protection, short-circuit protection, overload protection, under-voltage protection, over-voltage protection, rotor lockout protection, etc.

Energy-saving. The controller effectively saves between 30% and 60% of electrical energy. Complies with CE product safety requirements, and meets environmental protection requirements.

The device improves the quality of life.

Industrial design No. Rp.27368



Model	1,1 KW	1,1 KW	1,5 KW	1,5 KW	2,2 KW	2,2 KW
Max. admissible motor current consumption	230 V–9 A	400 V–4,5 A	230 V–11 A	400 V–5,5 A	230 V–12 A	400 V–7 A
Input power	Single-phase or three-phase power supply					
Input voltage	230 V lub 400 V					
Allowed range voltage supply	160 V–260 V (230 V) lub 300 V–450 V (400 V)					
Current frequency power	50 Hz					
Output voltage	1~AC 230 V lub 3~AC 400 V					
Controlled device	Pump					
frequency range output	20~50 Hz					
Pressure sensor	24 V, 4 ÷ 20 mA					
Pressure range	0,5 ÷ 9,0 bar					
Installation required – pressure vessel	Tank with a volume of not less than 2L					
Ambient temperature range	0~+40°C					
Medium	Clean water at a temperature of 0 to +100°C					
Pressure required for automatic start	0.3 bar lower than the set operating pressure, but not lower than 0.5 bar					
Electric installation	Absolutely effectively grounded					
Control characteristics	Dual flow control					
Fluid flow control characteristics	Sampler electrode pulse and flow switch					



# INVERTER SYSTEM – IVR-05

Our Intelligent Pump Controller, IVR-05 model, is an easy-to-use control and protection device for direct connection of deep-well pumps, surface pumps, submersible pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor. The IVR-05 inverter utilises the SPWM technology (sinusoidal pulse width modulation) and a highly-efficient spatial vector, using V/F VVVF control (variable velocity, variable frequency)

## Application:

The IVR-05 can be used to increase water pressure in various systems such as residential houses, commercial premises, industry, water treatment stations, agriculture etc. Ease of installation and use. No need to have the device connected by a qualified service technician  
Advanced technology, PID algorithm control, technology dedicated to pump drive control  
Trustworthy and reliable. The device has various integrated protection features. Protection against dry running, short-circuit, overload, undervoltage, overvoltage, impeller blocking etc. Energy efficient. The controller effectively saves 20% - 60% of electric energy.  
It meets the requirements regarding CE product safety and fulfils the environmental protection requirements.

Thanks to real-time pressure analysis, the inverter adjusts the rotational speed of a pump to system's demand at a given time. Variable rotational speed of the pump stabilises pressure, thus reducing water and current consumption.

## Advantages:

Its important feature that distinguishes the controller from popular on/off control devices is:

- Energy efficiency. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves 30%-60% of energy.
- Simple operation: easy to use, all functions can be terminated by pressing a button without the need to hire programming specialists.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- Possibility of controlling several pumps supplying the system



Model	Motor power (W)	Input voltage Frequency (V/Hz)	Output load (A)	Output voltage (V)	Output frequency (Hz)
IVR-05	750-2200	1 phase 230 V 50/60 Hz	10,5	3 phases 3 × 230 V	20-50 Hz

# INVERTER SYSTEM – IVR-10 S/T

## IVR – 20 | 30 | 40

Can be arranged in pump groups

IVR-10 S/T Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of 1.1 KW do 2.2 KW (from 1.5 HP to 2.5 HP) single-phase (IVR-10S) or 3-phase (IVR-10T) deep well pumps, surface pumps, submersible pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor. The IVR-10 S/T model provides many operating modes by adapting to various electrical systems.

### Advantages:

- Energy efficiency. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 30%-60% of energy.
- Simple operation: easy to use, all functions can be terminated by pressing a button, without the need to hire programming specialists.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- The controllers can be combined into pump groups of up to 6 pumps. The group is controlled by one main controller selected by the user while other controllers adjust the operation to the system requirements. The set is very easily programmable and does not require the assistance of the programmer

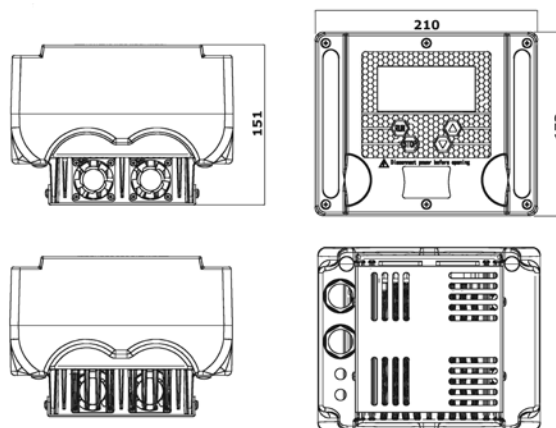
### Application:

IVR-10S/T can be used in all applications where maintaining a constant water pressure in the system, as well as control and protection of a single pump that controls automatic switching on and off by various electrical systems is required.

### Typical application:

- houses / apartments / holiday houses,
- agricultural holdings,
- supply of water from the well,
- irrigation of growing houses, gardens, agricultural land,
- collecting and using rainwater,
- industrial equipment.

PATENT no. 007724539-0001



Name	Pump power (kW)	Dimensions (mm)	Pressure setting range (bar)	Operating current (A)	Input voltage (V)	Output voltage (V)	Output voltage frequency (Hz)	Częstotliwość prądu na wyjściu (Hz)	Pressure sensor
IVR-10S	1,1 kW	210 × 173 × 124 mm	0,5–9 bar	9 A	1 × 230 V (Permissible range 160–260 V)	1 × 230 V	50/60 Hz	20–50/60Hz	4 ÷ 20 mA + 24 V 10 bar
	1,5 kW			11 A					
	2,2 kW			12 A					
IVR-10T	2,2 kW	210 × 173 × 124 mm	0,5–9 bar	7 A	3 × 400 V (Permissible range 320–450V)	3 × 400 V	50/60 Hz	20–50/60Hz	4 ÷ 20 mA + 24 V 10 bar
	3/4 kW			10 A					
	5,5/7,5 kW			18 A					

# INVERTER SYSTEM – IVR-09T

Can be arranged in pump groups

IVR-09T Intelligent Pump Controller is an easy-to-use control and protection device for direct connection of 0.75 KW to 7.5 KW (from 1 HP to 10 HP) 3-phase deep well pumps, surface pumps, submersible pumps, etc., maintaining a constant, set water pressure by changing the rotational speed of the pump motor. The IVR-09T model provides many operating modes by adapting to various electrical systems. The IVR-09 series controllers can be used in pump groups of up to 6 pumps. Its important feature that distinguishes it from popular on/off control devices is:

## Advantages:

- Energy efficiency. Compared to the traditional water supply method, the constant pressure water supply system with frequency converter saves up to 30%-60% of energy.
- Simple operation: easy to use, all functions can be terminated by pressing a button, without the need to hire programming specialists.
- Long-term reliability of the co-operating pumps: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer. (the water hammer is a sudden pressure increase that occurs at rapid stopping or starting of liquid flow.)
- Fully protected: the system incorporates the most versatile overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- The controllers can be combined into pump groups of up to 6 pumps. The group is controlled by one main controller selected by the user while other controllers adjust the operation to the system requirements. The set is very easily programmable and does not require the assistance of the programmer.

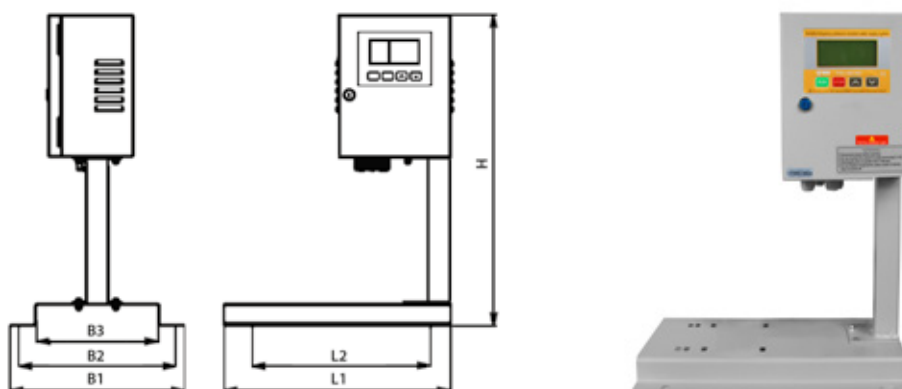


## Application:

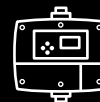
IVR-09t can be used in all applications where maintaining a constant water pressure in the system and control and protection of a pump or a set of two pumps is required.

## Typical application:

- houses / apartments / holiday houses
- agricultural holdings
- supply of water from the well
- irrigation of growing houses, gardens, agricultural land
- collecting and using rainwater
- industrial equipment



Motor power	Dimensions (mm)					
	B1	B2	B3	L1	L2	H
1.1 kW i mniej	306	276	214	400	314	546
1.5 kW do 2,2 kW	306	276	214	430	314	576
4 kW do 7.5 kW	360	320	270	520	350	710



# INVERTER SYSTEM – IVR-09T cont.

Main Technical Data	
Rated output power	0,37 KW – 7,5 KW (0,5 HP – 10 HP)
Rated input voltage	AC~3 × 400 V / 50–60 HZ (3-phase)
Rated output voltage	AC ~3 × 400V / 20–60 Hz (3-phase)
Response time under overload condition	5 s – 5 min.
Pressure setting range	1–9 bar
Response time under open phase condition	< 5 s
Response time under short-circuit condition	< 0,1 s
Response time under overvoltage/ undervoltage condition	< 5 s.
Response time under dry-run condition	6 s
Time to activation after overload condition	30 min.
Time to activation after overvoltage/ undervoltage condition	5 min.
Time to self-activation after dry-run condition	8s, 1 min, 10 min, 30 min, 1 h, 2 h ...
Deactivation limit at overvoltage	418 V
Deactivation limit at undervoltage	324 V
Horizontal distance	≤ 1000 m
Protections	Dry-run Short-circuit Overload Pump overloaded Voltagespike Undervoltage Overvoltage

Main Technical Specification	
Control specification	Double flow control
	Pressure control
Control method	Manual / Automatic
Liquid flow control specification	Probe electrode pulse and flow switch
Pressure control specification	Pressure sensor 24 V, 4–20 mA
Installation Conditions	
Permissible ambient temperature	–10°C – +40°C
Permissible ambient humidity	20%–90% RH
Permissible liquid temperature	0°C – +100°C
Ingress Protection	IP 54
Mounting orientation	Vertical
Minimum pressure tank capacity	4 L
Motor power	Max. Motor Current
0,75-1.5 kW / 1-2 HP	4.3 A
2.2 kW / 3 HP	6.1 A
3.0-4.0 kW / 4-5,5 HP	9.7 A
5.5 kW / 7.5 HP	14 A
7.5 kW / 10 HP	18 A

# MULTI SET IVR-02

The set is equipped with the IVR-02 (230V) frequency converter and the set of HP 1500 INOX or MH 1300 INOX pumps. Multi-Set is an easy-to-use device designed for pumping of clean water in order to increase pressure in water supply systems, maintaining a constant, set water pressure by changing the rotational speed of the pump motor, with additional control and protection features

## Advantages:

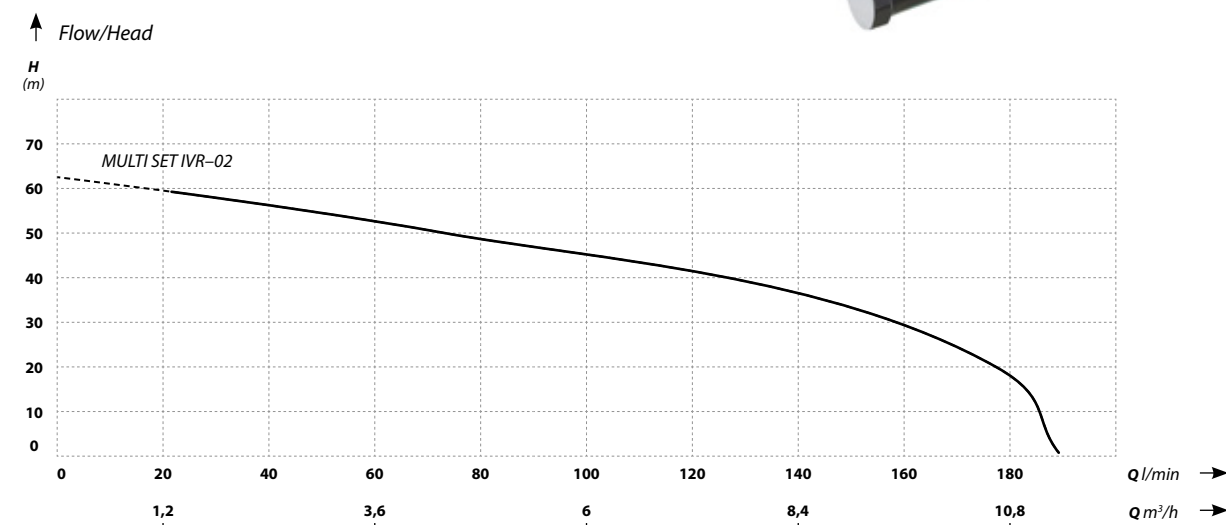
- Energy efficiency: reduction of energy consumption by 30%–60%.
- Simple operation: all functions can be terminated by pressing a button.
- Reliability: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime.
- Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
- Fully protected: the system incorporates the overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- The ability to control the operation of two pumps that supply the system.
- Low-noise operation.

## Technical data:

- Pumps x 2 - HP 1500INOX (MH 1300INOX)
- Frequency converter - IVR-02 (230V)
- IBO ITALY steel fittings
- Check and water stop valves and fittings
- 8L IBO ITALY pressure vessel

## Application:

- Houses
- Apartments
- Holiday houses
- Agricultural holdings
- Supply of water from the well
- Irrigation of growing houses, gardens, agricultural land
- Collecting and using rainwater
- Industrial equipment



Name	Head (m)	Flow (l/min)	Pressure (bar)	Water temp. (°C)	Ambient temp. (°C)	Inlet (mm)	Outlet (mm)
MULTI SET IVR-02/HP	62 (*55)	190 (*160)	9	+50	+40	40	40

\*Details for MH pumps

# MULTI SET IVR-09

The set is equipped with the IVR-09 (400V) / IVR-11 (400V) frequency converter and the CV series pump/pumps. Multi-Set is an easy-to-use device designed for pumping of clean water in order to increase pressure in water supply systems, maintaining a constant, set water pressure by changing the rotational speed of the pump motor, with additional control and protection features.

## Advantages:

- Energy efficiency: reduction of energy consumption by 30%–60%.
- Simple operation: all functions can be terminated by pressing a button.
- Reliability: the average torque and shaft wear are reduced due to decreasing the average rotational speed, which increases the pump operational lifetime. Due to the built-in soft start and stop function, the device allows to eliminate the water hammer.
- Fully protected: the system incorporates the overcurrent, overvoltage, undervoltage, short-circuit, impeller blocking and dry-running protection technology without the need to install probes/sensors in the well.
- The ability to control the operation of two pumps that supply the system.
- Low-noise operation.

## Technical data:

- Pumps x 1/x 2/x 3/x 4/x 5/x 6 - (CV3 – Cv15)
- Frequency converter - IVR-09 (400V) / IVR-11 (400V)
- IBO ITALY steel fittings
- Check and water stop valves and fittings
- IBO ITALY pressure vessel

## Application:

- Houses
- Apartments
- Holiday houses
- Agricultural holdings
- Supply of water from the well
- Irrigation of growing houses, gardens, agricultural land
- Collecting and using rainwater



Name	Head (m)	Flow (l/min)	Pressure (bar/z)	Water temp. (°C)	Ambient temp. (°C)	Inlet (mm)	Outlet (mm)
MULTI SET IVR-09	220	5–84	16	+90	+40	40–50	40–50

# Submersible pumps



IP	Big
IPE	SWQ PRO
IPK	WQ PRO
IPC 550	WQ Professional
Flow Low	75-FWQ-1,5 INOX
Nemo   VM 60	WQ-65-1,5
Multi IP 800 INOX	WQ-80-3   WQ-65-4
Multi IP auto	VX-80-1,5   VX-80-2,2
Multi IP INOX 1000/1200	50-KBFU-0,40 INOX
Multi IP 1000 Auto	50-KBFU-0,75 inox
Multi IP 1200 Auto	25-KBFU-0,45
Multi IP 1200 Auto Rain	50-KBFU-0,45
H-SWQ	50-KBFU-0,80
SWQ / F-SWQ	50-KBFU-0,55
75-Faxial-0,25 INOX	KBFU 230 V/400 V
WQX	80-KBFU-4,0-4p
Magnum	KBFU-CFA
WQF	IBX CFA
SN-450	7 IBX
SWQ Septic	

## Pumps with cutting system



CTR	Kraken 1800
Furiatka	Kraken 1800 DF
V	UP 60/80
SWQ	ZWQ
WQI	MWQ
Kraken	Guide rail system



# IP



IP INOX



IP



IP 400 MINI



IP RAIN

IP submersible plastic pumps designed for pumping clean and slightly contaminated water. The pumps have an outlet connection to which discharge hoses of different diameters can be connected depending on the user's requirements. Small size and light weight make the pumps exceptionally easy to operate and maintain. The pumps are equipped with float switches for automatic pump control. All pumps are supplied with thermal protection mounted in the motor winding.

### Application:

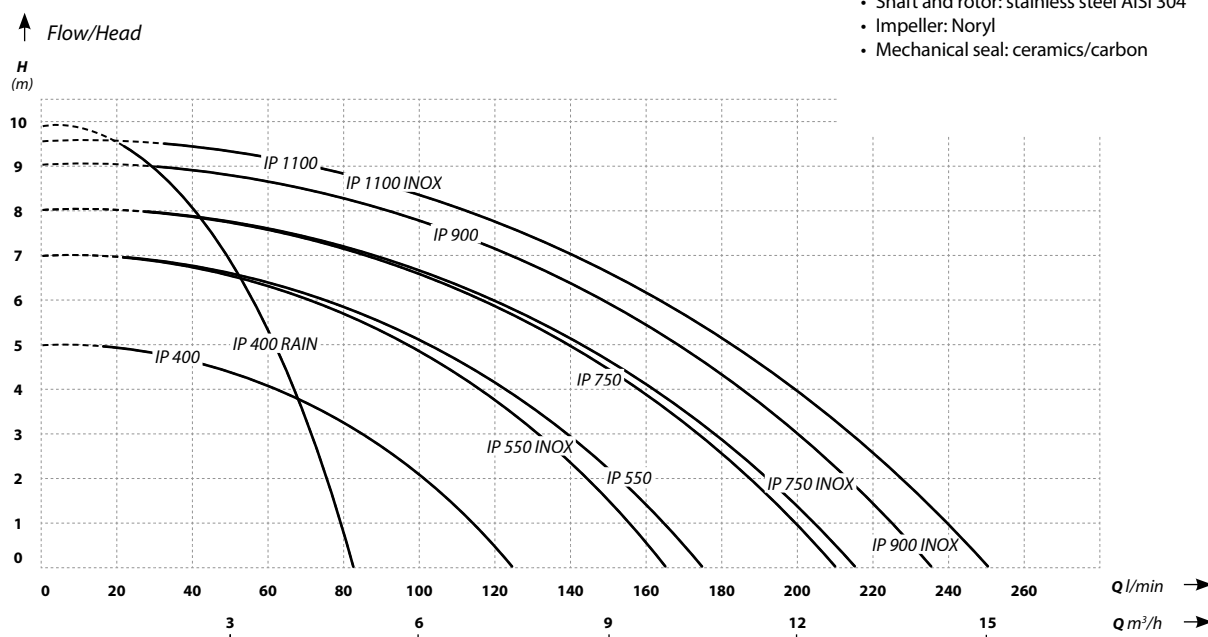
Draining flooded rooms, swimming pools, wells. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level. The pumps can also be used for pumping rainwater.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- IP - Housing: Technopolymer
- IP INOX - Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
IP 400	5	125	400	230	30	1,25	1-1½	23/31	3,8
IP 400 RAIN	10	83	400	230	1	1,30	0,75-1	17/28 b. złącza	4,1
IP 550	7	175	550	230	30	1,6	1-1½	23/31	4
IP 750	8	210	750	230	30	2,15	1-1½	23/33	4,3
IP 900	9	235	900	230	30	2,5	1-1½	23/34	4,6
IP 1100	9,5	250	1100	230	30	2,75	1-1½	23/33	5
IP 550 INOX	7	165	550	230	30	1,6	1-1½	23/34	5,4
IP 750 INOX	8	215	750	230	30	2,15	1-1½	23/36	5,8
IP 900 INOX	9	235	900	230	30	2,5	1-1½	23/37	6,1
IP 1100 INOX	9,5	250	1100	230	30	2,75	1-1½	23/38	6,3



## IPE | IPK



IPE 400



IPK 400

IPE 400 - a submersible plastic pump designed for pumping clean and slightly contaminated water. The pumps have an outlet connection to which discharge hoses of different diameters can be connected. IPE400 is equipped with an electronic float/probe so the pump can be used in narrow wells. Small size and light weight make the pumps exceptionally easy to operate and maintain. All pumps are supplied with thermal protection mounted in the motor winding.

IPK 400 - the pump has a similar design to IPE pumps but the switch is not based on the probes but on the float operating in a vertical position inside a special channel. Like IPE pump, it can be placed in a narrow well, which may not be possible with IP pumps due to a float switch connected with a 30 cm cable, which increases the diameter of the pump.

### Application:

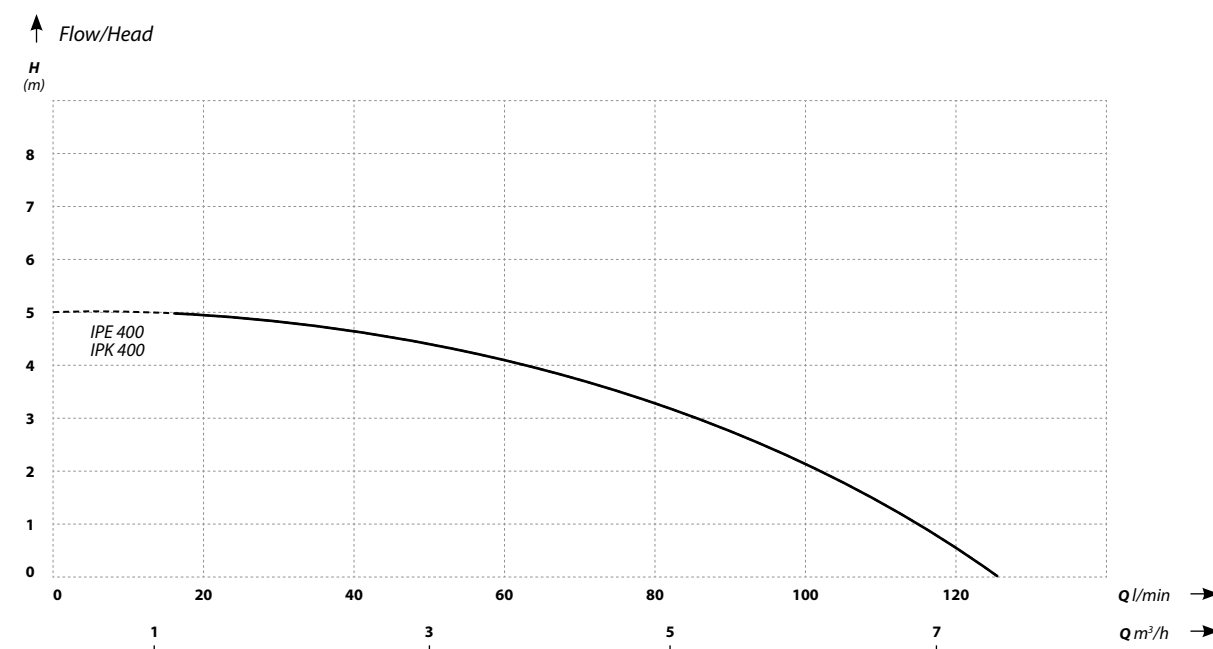
Draining flooded rooms, swimming pools, wells. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level. The pumps can also be used for pumping rainwater.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress Protection - IP68
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Housing: Technopolymer
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
IPE 400	5	125	400	230	30	3	1-1½	23/39	4
IPK 400	5	125	400	230	30	3	1-1½	26/39	4,5



# IPC 550



Adapter 1



Adapter 2



Adapter 3



A submersible plastic pump designed for pumping clean and slightly contaminated water. IPC 550 pump has a threaded outlet connection with a built-in non-return valve to which 3 different adapters can be attached in order to adapt the outlet diameter to individual requirements. The pumps have a cooling jacket so they do not have to be fully submerged. After removing the suction filter, water can be pumped-off down to 1 mm. Pumping can start at above 5 mm water level. Like IPE and IPK pumps, the IPC 550 pump is equipped with an integrated switch so it can be used in narrow wells. An additional advantage is the option to select the automatic or manual operating mode. Like IPE and IPK pumps, all pumps are supplied with thermal protection mounted in the motor winding.



## Application:

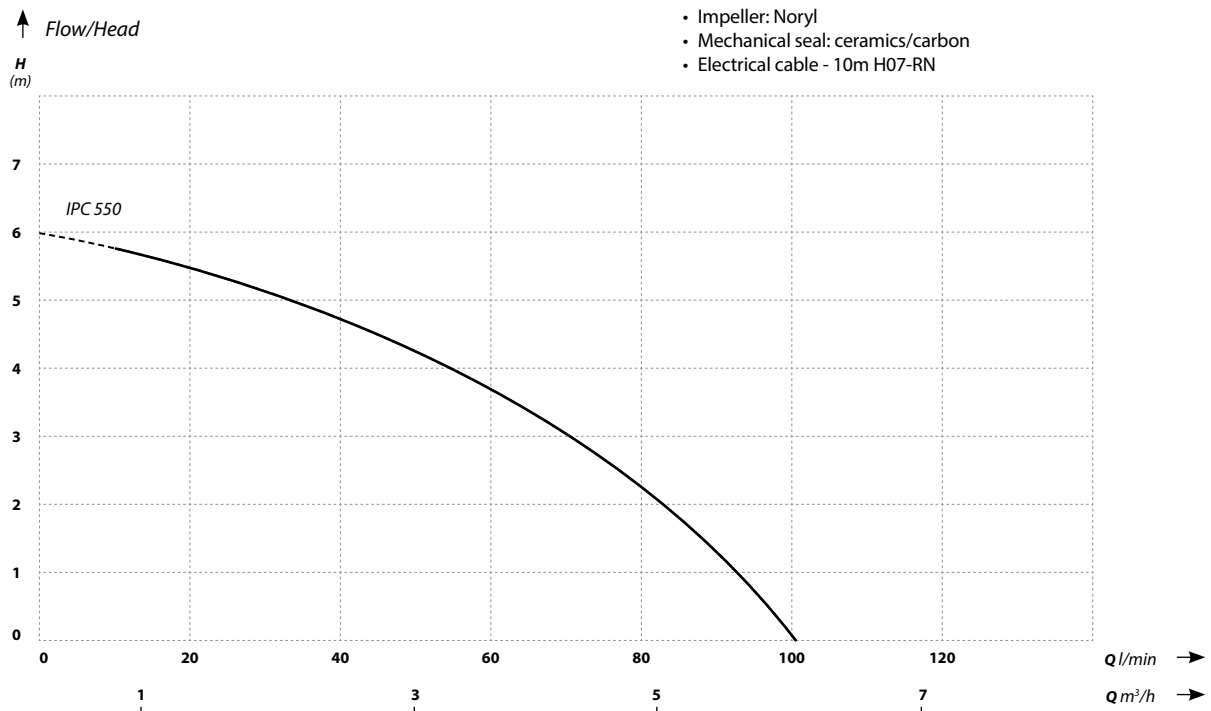
Draining flooded rooms, swimming pools, wells. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level. The pumps can also be used for pumping rainwater.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress Protection - IP68
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- IP - Housing: Technopolymer
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon
- Electrical cable - 10m H07-RN



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
IPC 550	6	100	550	230	5	2.4	1½	20/31	4



# FLOW LOW

Flowlow - 0,25INOX series are designed for clean and slightly polluted water, where water must be pumped out to a low level. The pumps are used for draining flooded rooms, swimming pools and sumps. They can also pump water from ponds, rivers, reservoirs and shallow wells.

## Characteristics:

- The pump can pump out water to a level of about 5cm
- Pole float switch
- Threaded discharge port for easy connection of discharge hose using a hose clamp or quick release coupling
- Top quality materials
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service
- Impeller: Plastic

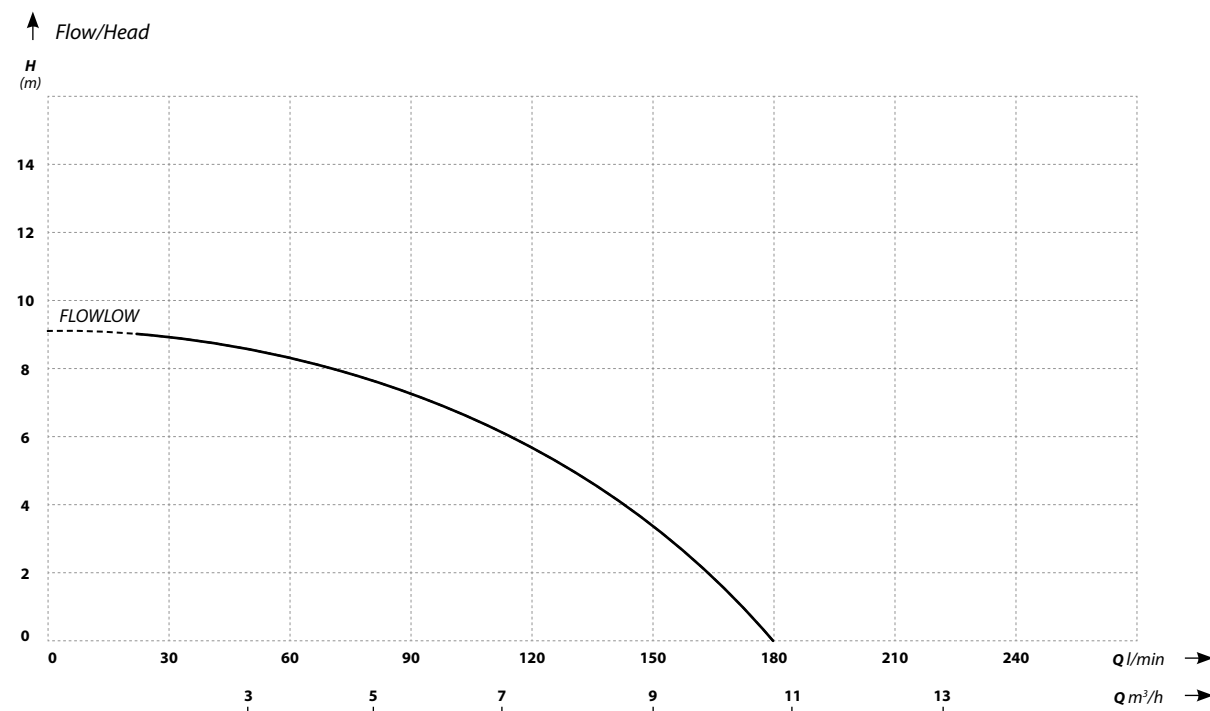
## Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Insulation: B Class
- Operating mode - continuous
- Ingress protection: IP68
- Electrical cable: 8 m
- Working position: vertical
- Impeller passage: 8 mm
- Rotational speed of the electric motor: 2850 RPM



## Materials:

- Housing: stainless steel AISI 316
- Impeller: plastic
- Shaft and rotor: stainless steel AISI 304
- Mechanical seal: ceramics/carbon/NBR (ITALY)



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
FLOW LOW 0,25	9	180	250	230	2	1,5"	25,1/30,3	6

# NEMO | VM60

## Vibration pumps

105 mm diameter vibration pumps for irrigation. Due to their high efficiency, NEMO and VM60 submersible vibration pumps are perfect for irrigation with clean water. Despite the small size, the pump design based on solenoids allows creating high pressure required for irrigation. Due to their compact size and low weight, vibration pumps are very popular among allotment gardeners. Pumps are equipped with a 10 m power cable. Pump housing is made of aluminium. Compact-size Nemo and VM60 pumps can operate even in small wells. The minimum diameter of a drilled well in which the pump can be used is 120 mm.

### Application:

Supply of water to small holiday houses and irrigation of gardens.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: no
- Class B Insulation
- Operating mode - in 30 min. cycles
- Protection - IP68
- Rotational speed of the electric motor: 2850RPM
- Electrical cable - 10m H07-RNF

### Materials:

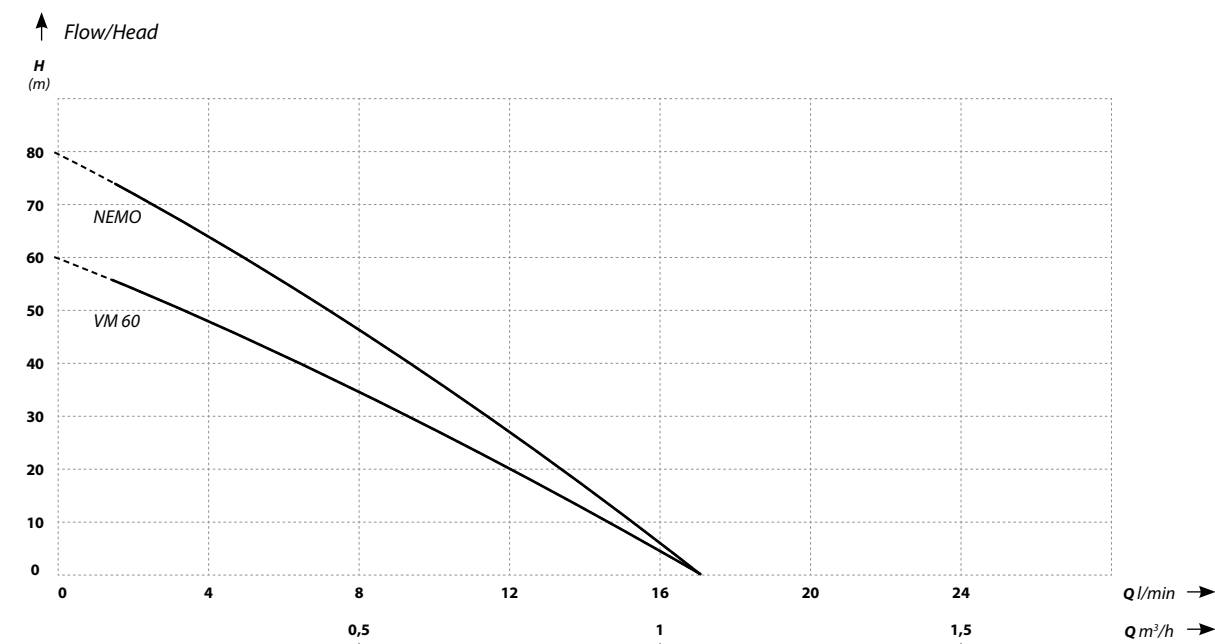
- Housing: Aluminium



NEMO



VM60



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
VM 60	60	17	250	230	3,5	3/8	105/180	4
NEMO	80	17	250	230	3,5	1/2	105/180	4



# Multi IP 800 INOX

A series of high pressure submersible pumps for irrigation. The pumps have a stainless steel housing and multi-stage hydraulics. The pumps have a cooling jacket so that they do not have to be fully submerged. A filter screen fitted in the bottom of the pump allows water to be pumped down to 10 cm. Both Multi IP INOX pumps are equipped with a float switch for automatic pump control. Like IPE and IPK pumps, all pumps are supplied with thermal protection mounted in the motor winding.

## Application:

Supplying houses with water from ring wells and for garden irrigation systems.

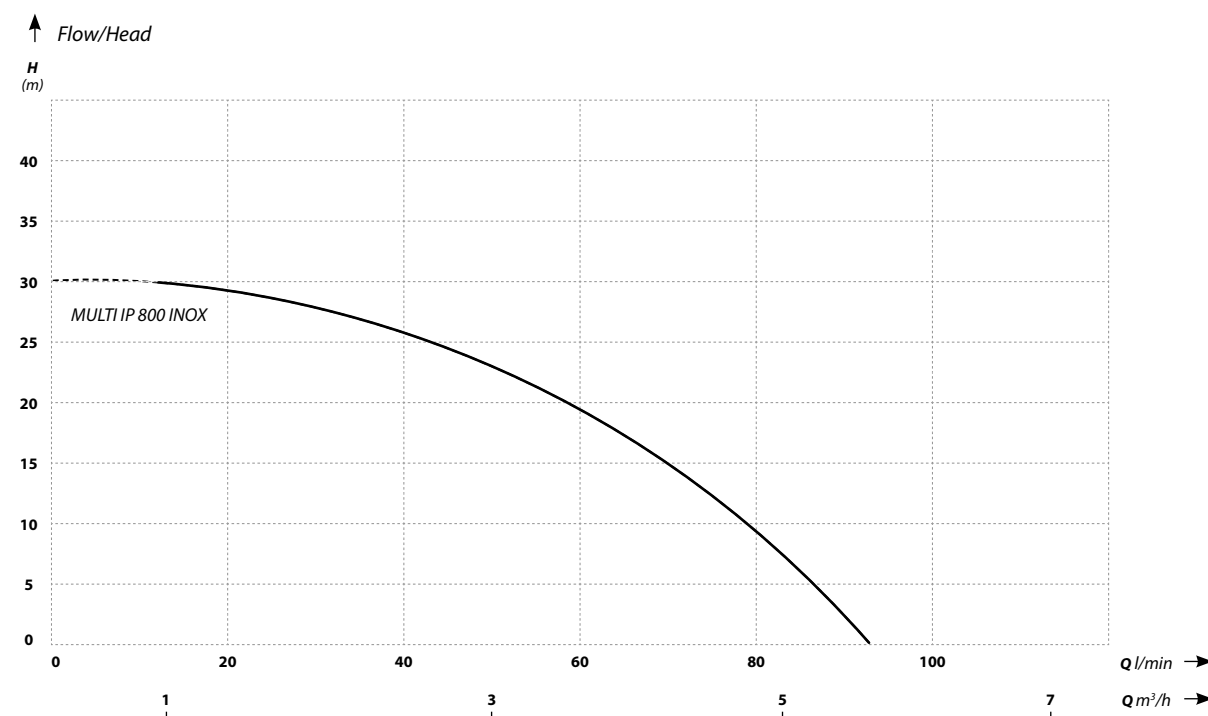
The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon/NBR
- Electrical cable - 10m H07-RNF



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
MULTI IP 800 INOX	30	92	800	230	0,5	3,5	1 / 1 ½	17/36	8,25

# Multi IP INOX 1000 | 1200

A series of high pressure submersible pumps for irrigation. The pumps have a stainless steel housing and multi-stage hydraulics. The pumps have a cooling jacket so that they do not have to be fully submerged. A filter screen fitted in the bottom of the pump allows water to be pumped down to 10 cm. Both Multi IP INOX pumps are equipped with a float switch for automatic pump control. Like IPE and IPK pumps, all pumps are supplied with thermal protection mounted in the motor winding

## Application:

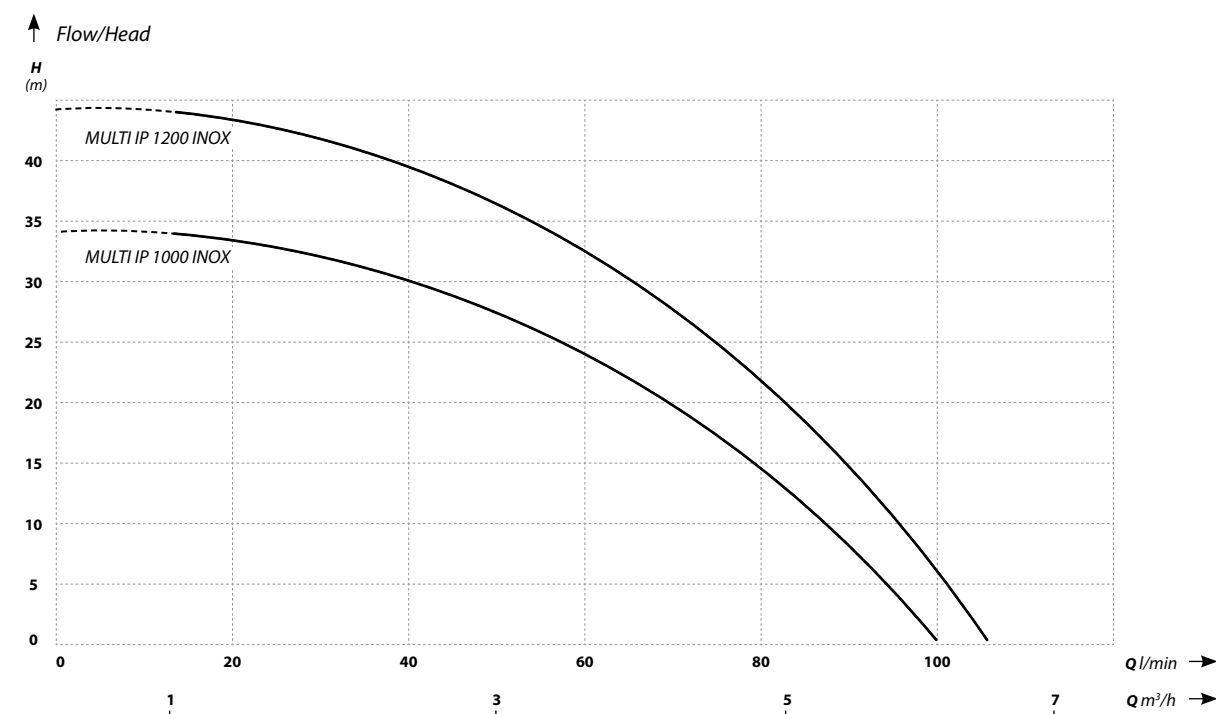
Supplying houses with water from ring wells and for garden irrigation systems. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon/NBR
- Electrical cable - 10m H07-RNF



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
Multi IP 1000 INOX	34	100	1000	230	0,5	3,7	1½	18/41	10
Multi IP 1200 INOX	44	105	1200	230	0,5	4,8	1½	18/41	11





# MULTI IP 1000 AUTO

Pumps with the same hydraulic components as Multi IP 800 INOX but with the built-in pump operation controller instead of the float switch. When the outlet valve is closed, the pump is stopped and goes into standby mode maintaining a constant pressure in the system. When the outlet valve is opened, the pump will automatically start.

## Application:

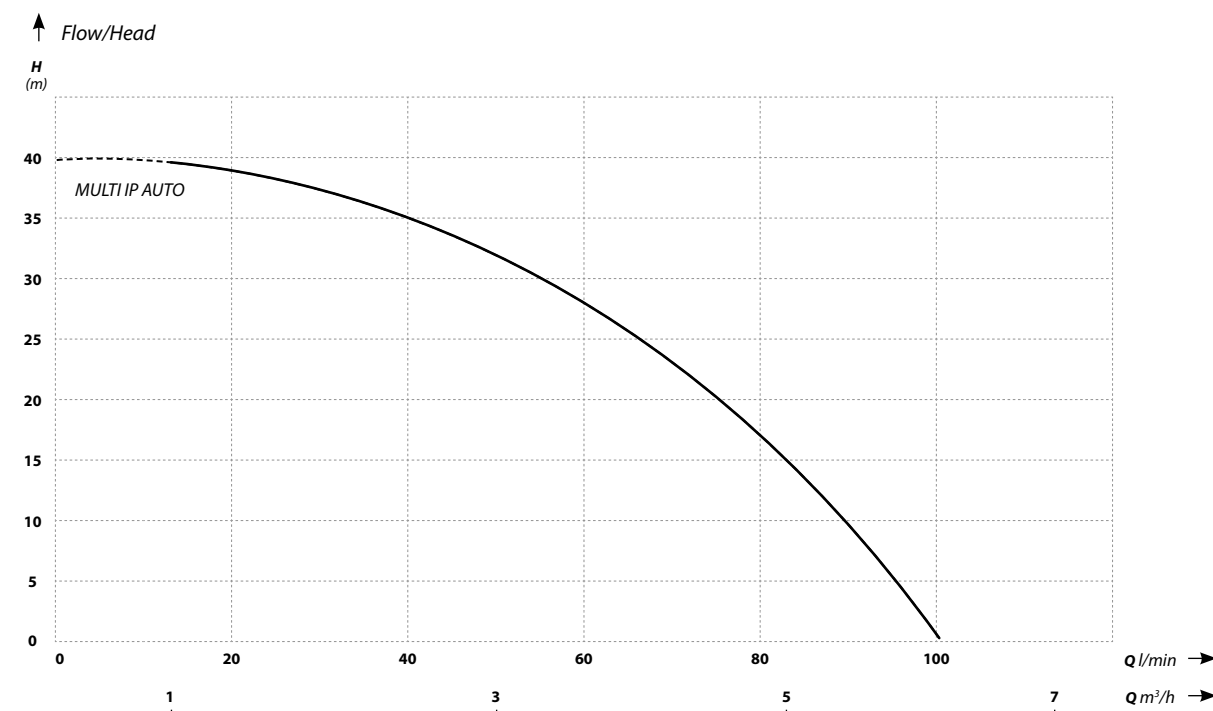
Supplying houses with water from ring wells and for garden irrigation systems. The pumps can be used in waterholes and for obtaining water from intakes with water surface close to the ground level.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Mechanical seal: ceramics/carbon/NBR
- Electrical cable - 10m H07-RNF



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
MULTI IP 1000 AUTO	40	100	1000	230	0,5	5,2	1 / 1 ½	17/53	10

# MULTI IP 1200 AUTO

# MULTI IP 1200 AUTO RAIN

A series of high-pressure submersible pumps designed for pumping clean and slightly polluted water not containing grinding elements (e.g. sand). These pumps are mainly used for watering and supplying houses with water from ring wells. They can also be used to pump out clean water from flooded rooms. Multi IP pumps can be used in ponds and to obtain water from sources whose water table is near the surface.

## Application:

In rainwater tanks for watering gardens. Water supply to homes from wells and garden watering systems. The pumps can be used in ornamental ponds and for taking water from springs in which the water level is near the surface.

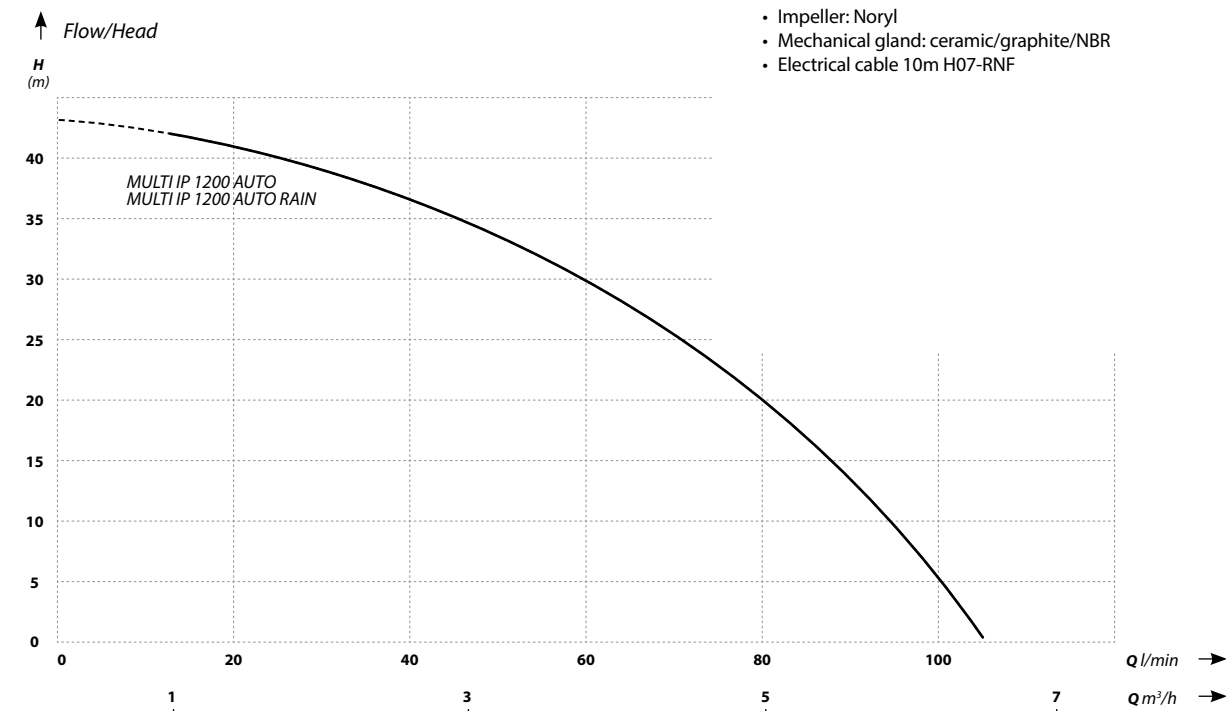
## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Insulation class B
- Operation mode – continuous
- Ingress protection - IP68
- Motor speed: 2850 RPM



## Materials:

- Motor housing: AISI 304 stainless steel
- Shaft and rotor: AISI 304 stainless steel
- Impeller: Noryl
- Mechanical gland: ceramic/graphite/NBR
- Electrical cable 10m H07-RNF



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
MULTI IP 1200 AUTO	44	105	1200	230	9	3,5	1 × 1½	18/45	11
MULTI IP 1200 RAIN	44	105	1200	230	9	5,2	1 × 1½	20/45	11,5



# H-SWQ



Impeller H-SWQ  
1500



H-SWQ 1500



H-SWQ 2200



H-SWQ 1800

High-pressure submersible pumps for pumping clean and slightly polluted water containing no abrasive particles (e.g. sand). Due to their high lifting height, they are used in agriculture for irrigation and drainage, domestic and agricultural water supply from wells, lakes and rivers. They can also be used for draining flooded rooms, garages and premises.

## Features:

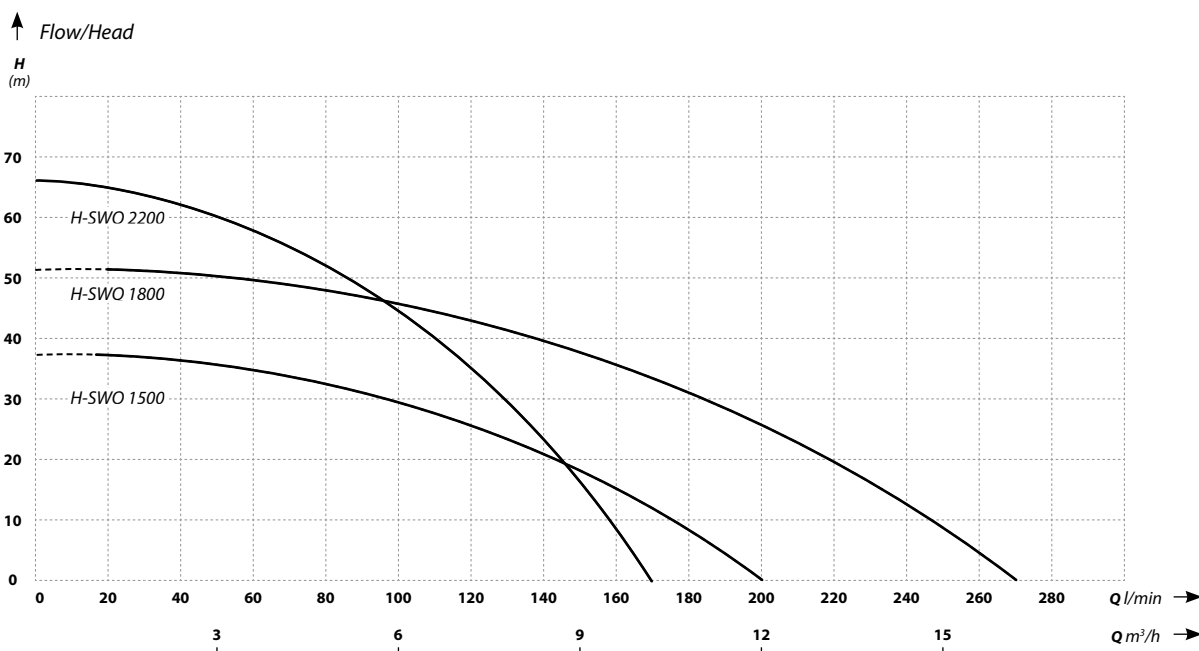
- Produce high water pressure, needed for watering
- With a float switch controlling the pump operation and protecting it against running dry
- The design incorporates a cooling jacket so that the pumps do not have to be completely submerged
- 8 m power cable with plug
- Thermal protection built into the motor winding
- Warranty 24 months
- Warranty and post-warranty service

## Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: B (F - HSWQ 1800)
- Operating mode: continuous
- Ingress protection: IP68
- Power supply cable length: 8 m
- Working position: vertical
- Motor speed: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304 (HSWQ 1500 and HSWQ 1800) / noryl (HSWQ 1800)
- Mechanical seal: ceramic/carbon/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
H-SWQ 1500	38	200	1500	230	5	7,7	1½	18/47	15,5
H-SWQ 1800	53	270	1800	230	2	12	2	27/66	27
H-SWQ 2200	66	170	2200	230	2	15,5	2	19,5/74	29

# SWQ / F-SWQ



SWQ



F-SWQ

Submersible pumps designed for pumping clean and slightly contaminated water. Due to the top quality stainless steel design, the pumps ensure long-term and reliable operation. The motor is equipped with thermal protection mounted in the winding. The pumps have a cooling jacket so that they do not have to be fully submerged. Compared to other SWQ pumps, the F marked pump provides a very high flow of up to 830 l/min. All pumps except the SWQ180 have impellers made of stainless steel and are equipped with float switches for operation control. Due to small size (12 cm diameter), the SWQ180 pumps can be used to extract water from small, narrow wells. The pumps do not have a float.

## Application:

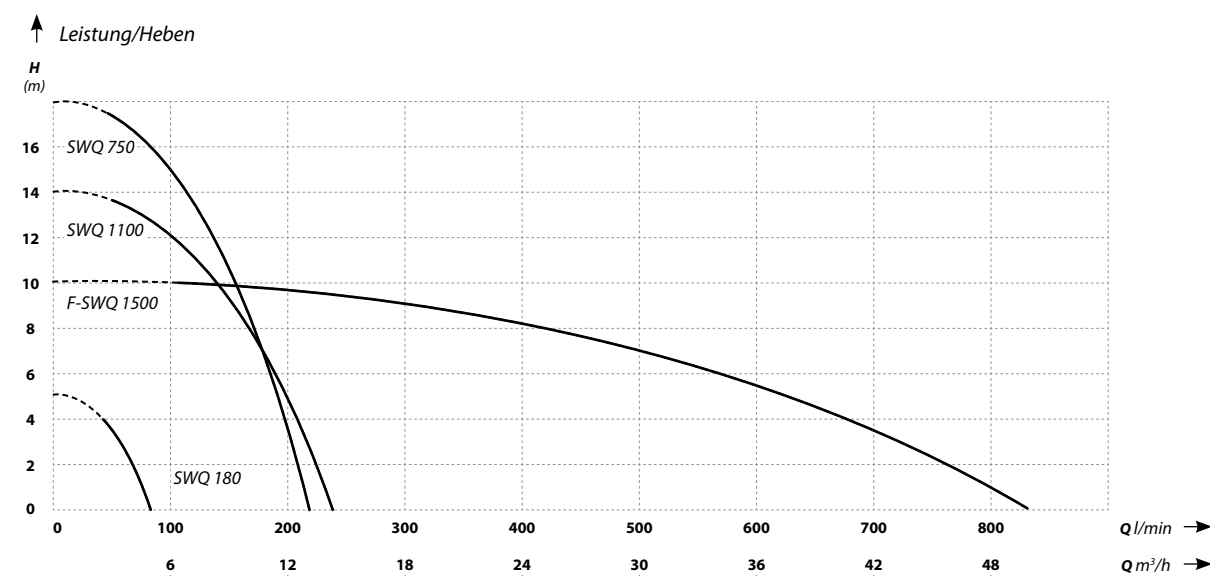
Pumping rainwater and surface water from ponds, lakes and rivers, supply of water to waterholes. Draining flooded rooms, houses, garages and premises, management of fish farms.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 4-10
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Mechanical seal: ceramics/carbon/NBR



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SWQ 180	5,5	70	180	230	2	0,7	¾	12/16	3,5
SWQ 750	18	220	750	230	5	4,6	2	18/38	12,5
SWQ 1100	14	235	1100	230	5	6	2	17/40	13
F-SWQ 1500	10	830	1500	230	5	7,7	2	19/41	15

# 75-FAXIAL-0,25 INOX

75-FAXIAL-0,25 series pumps are designed for pumping clean cold water. Due to their high performance, they can be applied in aeration of fishing ponds and in irrigation for transporting large volumes of water.

## Features:

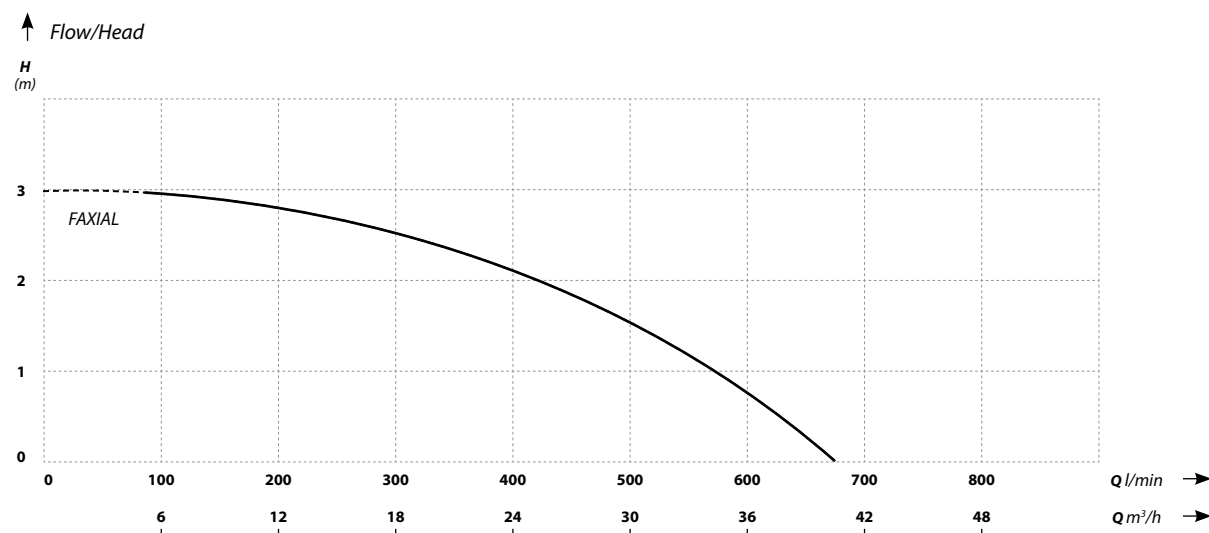
- High efficiency
- High performance with low current consumption
- Compact dimensions
- Top quality materials
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service.

## Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230V
- Insulation class: B
- Operating mode: continuous
- Ingress protection: IP68
- Power cable length: 8 m terminated with a plug
- Working position: vertical
- Motor speed: 2850 RPM

## Materials:

- Motor housing: AISI 316 stainless steel
- Rotor housing: AISI 316 stainless steel
- Rotor: AISI 316
- Shaft and rotor: AISI 316 stainless steel
- Mechanical gland: Double: ceramics/carbon/NBR (ITALY)



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
FAXIAL	3,3	670	250	230	2,3	3"	19,4/42	11,2

# WQX

Submersible pumps designed for pumping clean and slightly contaminated water. The motor housing is made of aluminium and the motor is equipped with thermal protection mounted in the winding. High pressure is a special feature of the WQX series pumps. Pump operation is controlled by a float switch. The WQX 250 are available with and without the float switch.

## Application:

Pumping rainwater and surface water from ponds, lakes and rivers, supply of water to waterholes. Draining flooded rooms, houses, garages and premises.

## Operating conditions:

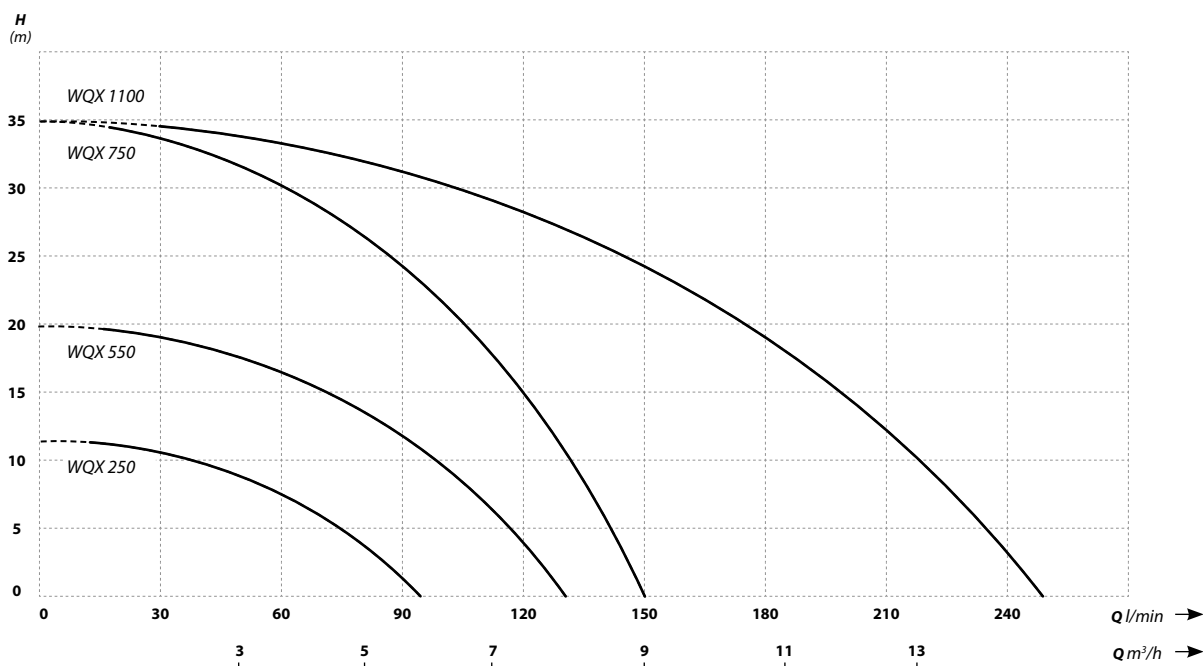
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-8
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: Aluminium
- Shaft and rotor: stainless steel AISI 304
- Impeller: Aluminium
- Mechanical seal: ceramics/carbon/NBR
- Cable length: 10 m.



↑ Flow/Head



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQX 250	12	100	250	230	3	2	1	19/38	6
WQX 550	20	130	550	230	3	3,8	1	20/40	8,5
WQX 750	35	150	750	230	3	5,2	1	24/40	10
WQX 1100	35	250	1100	230	3	6,4	1½	26/45	13

# MAGNUM

Submersible pumps designed for pumping sewage and water from flooded premises. The pump is available with a float switch for automatic operation control or without the float switch. Threaded outlet connection and a set of adapters provide connection of the discharge hose with a hose clamp or fast-connection coupling. Magnum pumps are equipped with thermal protection mounted in the motor winding. The motor housing is made of aluminium and the impeller is made of cast iron. Magnum 2500 and 2900 pumps are available with and without the float switch.

## Application:

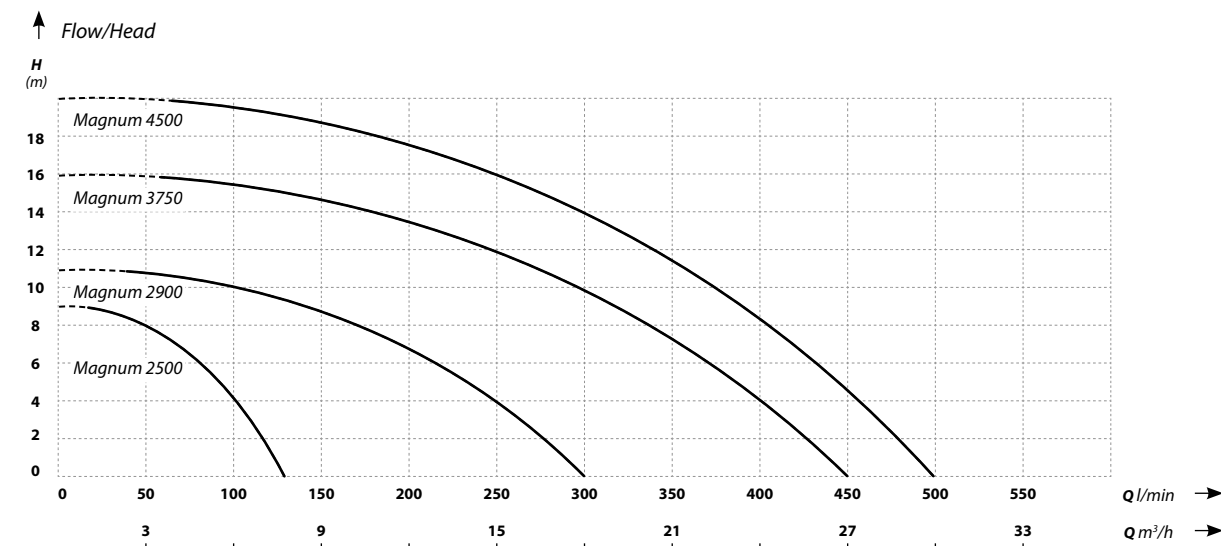
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-8
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: Aluminium
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
Magnum 2500	9	135	250	230	30	3,0	1½	23/36	6
Magnum 2900	11	300	550	230	35	4,2	2	26/40	12
Magnum 3750	16	450	750	230	35	6,1	2	26/41	14
Magnum 4500	20	500	1500	230	40	10	2	26/47	18



# WQF

Submersible pumps designed for pumping sewage, dirty water, and water from flooded premises. The pumps are equipped with float switches for automatic pump control. Threaded outlet connection and a set of adapters provide connection of the discharge hose with a hose clamp or fast-connection coupling. WQF pumps are equipped with thermal protection mounted in the motor winding. The motor housing is made of AISI304 stainless steel, and the impeller is made of grey cast iron.

## Application:

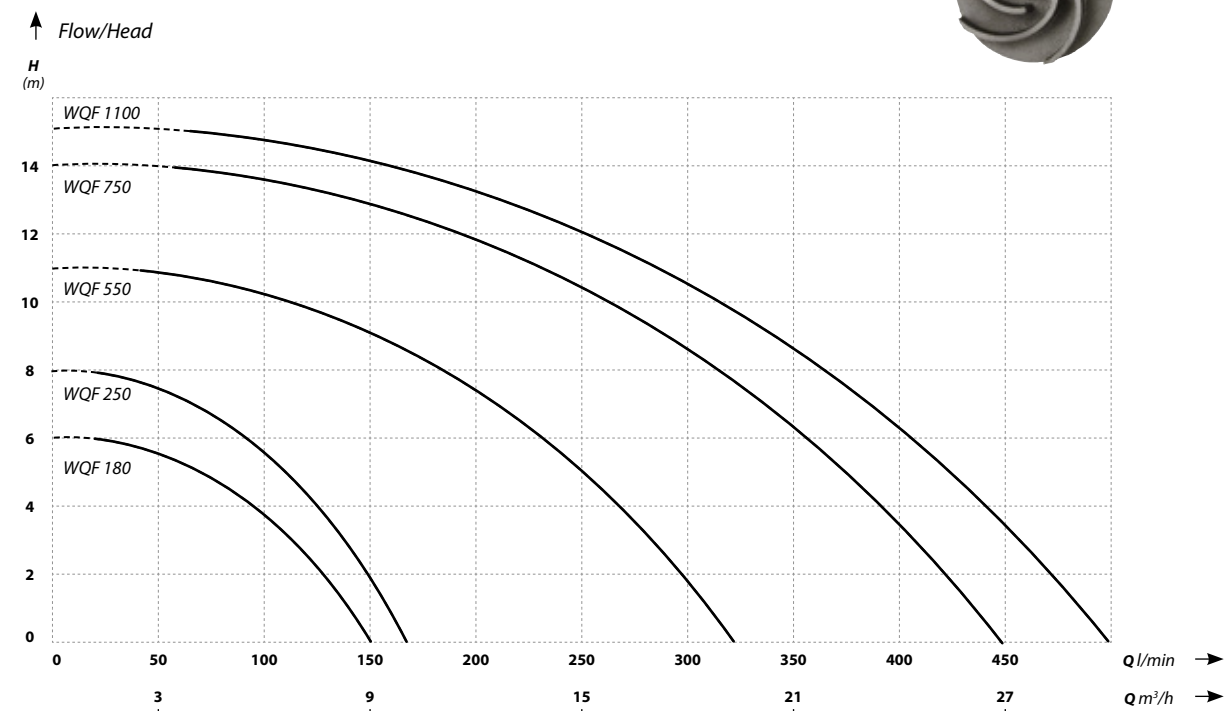
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-9
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQF 180	6	150	180	230	20	1,75	1	17/37	8
WQF 250	8	170	250	230	20	2,6	1	17/39	9
WQF 550	11	320	550	230	35	4,6	2	25/45	15
WQF 750	14	450	750	230	35	6,7	2	25/47	18,1
WQF 1100	15	500	1100	230	35	9,1	2	26/48	21



## SN-450

Submersible pumps designed for pumping sewage, dirty water, and water from flooded premises. SN-450 pump is made of cast iron with VORTEX-type impeller. It can pump water with mechanical impurities with particle diameter of up to 20 mm. The pump is equipped with a vertical float switch for easy automatic operation in 25 cm diameter wells. SN-450 pump is equipped with thermal protection mounted in the motor winding.

### Application:

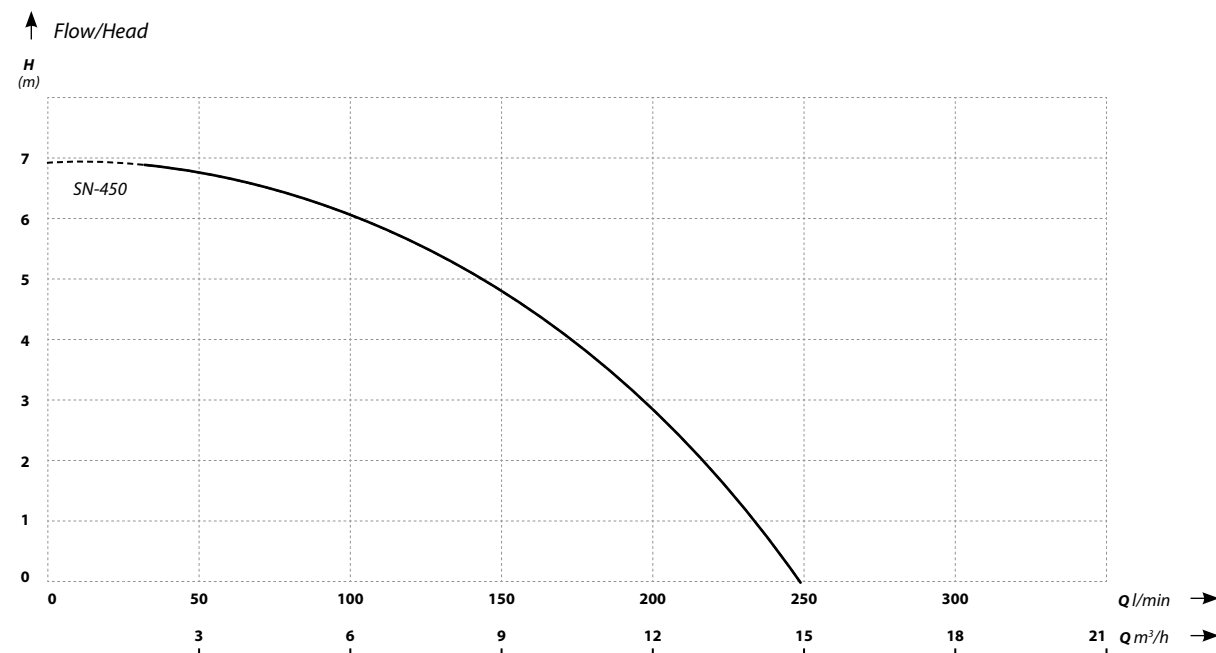
Pumping sewage from domestic septic tanks, draining flooded rooms, houses, garages and premises and pumping water from narrow well and canals. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-8
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SN- 450	7	250	450	230	20	2,5	2	23/40	11,5

# SWQ SEPTIC

Submersible pump with a 40mm passage Vortex impeller for pumping sewage, dirty water and water from flooded rooms. SWQ SEPTIC pumps are made of stainless steel and cast iron in order to withstand the adverse sewage environment. Pump outlet connection provides connection of the discharge hose with a hose clamp or fast-connection coupling. These pumps are widely used in agriculture. The SWQ SEPTIC pump is equipped with thermal protection mounted in the motor winding and a float switch for operation control.

## Application:

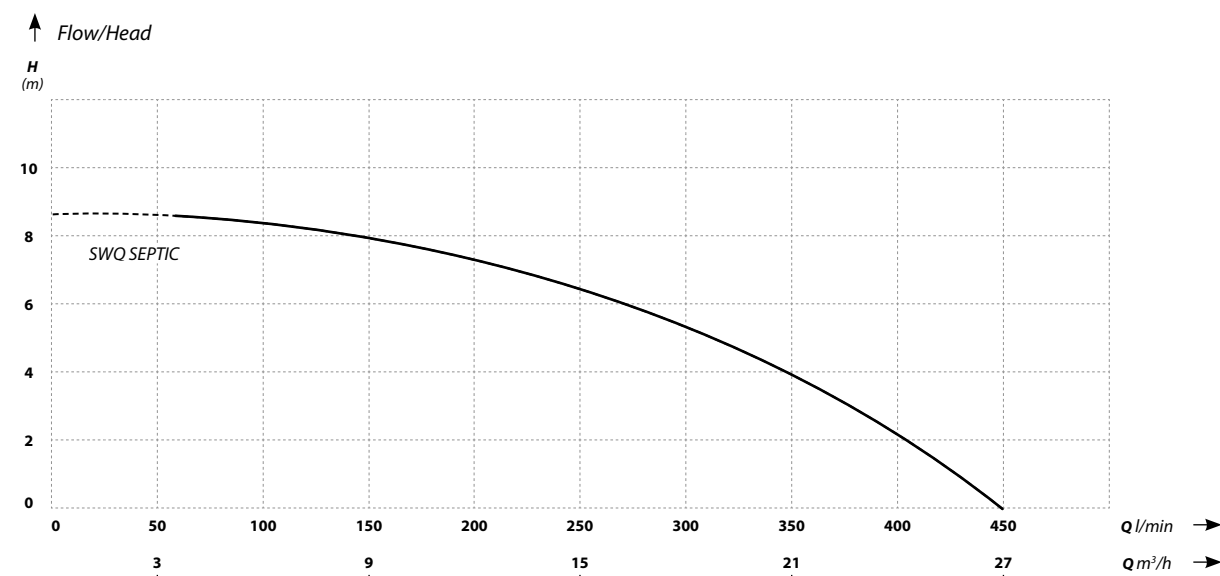
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 4-10
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SWQ SEPTIC	9	450	1100	230	40	7,7	2	30/48	25



# BIG

Professional submersible sewage pumps with two-channel impeller. The BIG 1500 pump is available as 230 V ~/50 Hz version, BIG 2200 - as 400 V ~ 3 / 50 Hz. The impeller design reduces the risk of its clogging and ensures pumping of medium containing solids with maximum particle diameter of 50 mm. The BIG 1500 pump is equipped with a float switch for operation control. Single-phase pumps are supplied with thermal protection mounted in the motor winding. Due to the high quality materials used and the durable design, the pumps can be used in industrial applications.

## Application:

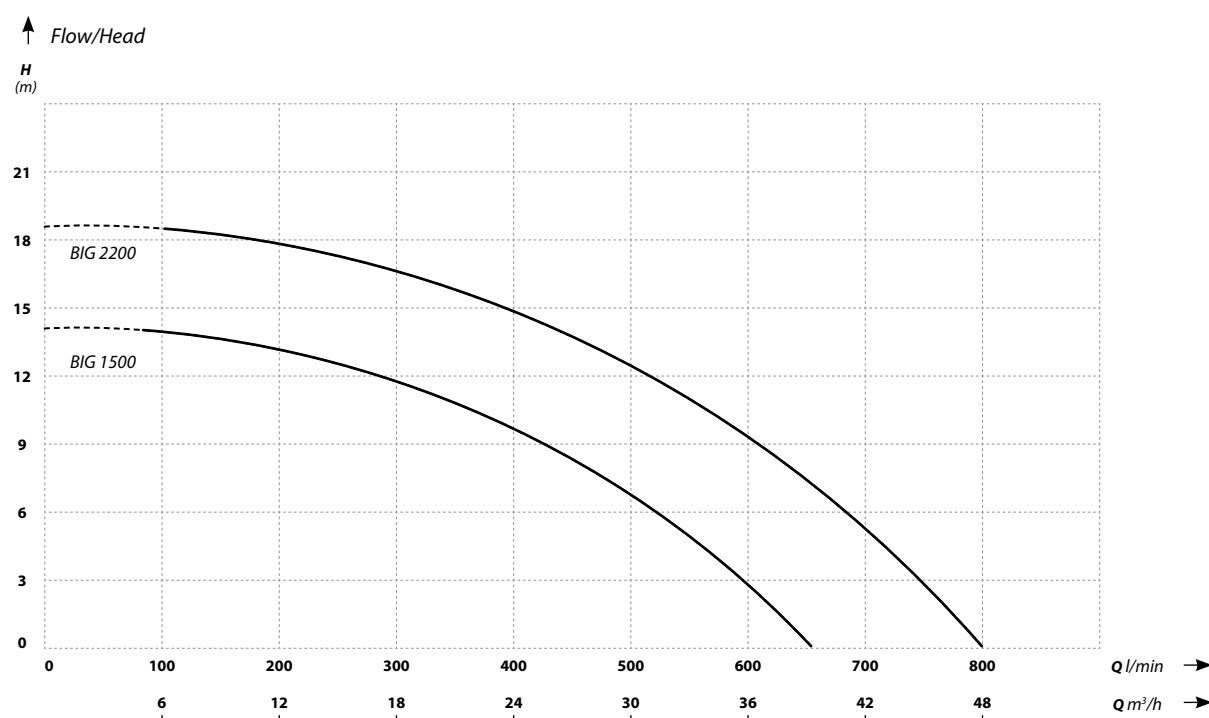
Pumping rainwater and surface water. Draining sewage in buildings, retail facilities and manufacturing plants, in industrial cooling or process water systems. Used in agriculture for draining and irrigation.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IPX8
- Water PH: 5-9
- Liquid density: 1200 kg/m<sup>3</sup>
- Rotational speed of the electric motor: 2850RPM

## Materials:

- Motor housing: grey cast iron
- Body: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Mechanical seal: ceramics/graphite/ NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions (cm)			Weight (kg)
								A	B	C	
BIG 1500	14	666	1500	230	50	8,8	75	349	270	520	37
BIG 2200	19	800	2200	400	50	5,4	80	349	270	520	43

# SWQ PRO

## Flood pump

Professional submersible pump compliant with the most demanding European standards, intended for customers using drainage pumps in their professional work. Due to the use of a closed impeller, the pump can pump clean and slightly contaminated water.

With its 1500 W motor, 3-inch outlet, and maximum flow of up to 1400l/min, as well as a relatively low weight, the pump can be used to drain flooded houses, premises and garages during minor and major flooding. The pump is equipped with a float switch for operation control and thermal protection mounted in the motor winding.

### Application:

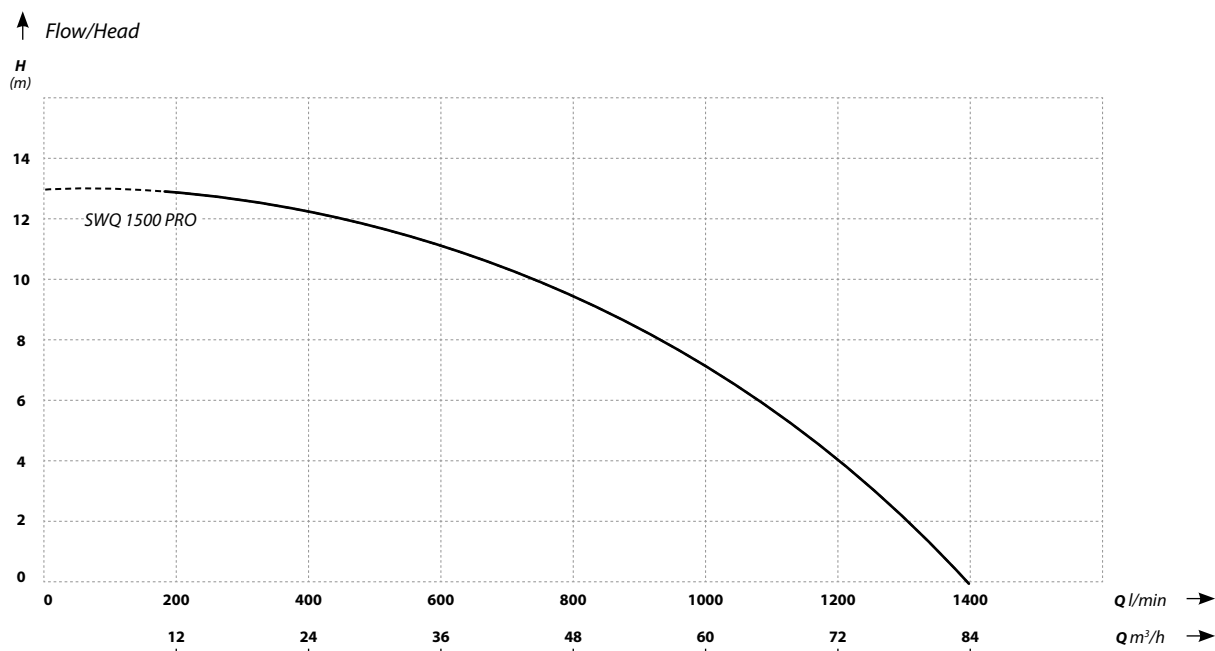
Pumping rainwater and surface water. Drainage of flooded households, agriculture farms, premises and garages. Pumping cooling or process water in industrial systems. Used in agriculture for draining and irrigation. The pump can be used in fish farms.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-9
- Liquid density: 1200 kg/m<sup>3</sup>
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
SWQ 1500 PRO	13,5	1400	1500	230	3	9,5	3	29/54	25

# WQ PRO

## Construction pump

Submersible pump with a 40mm passage Vortex impeller for pumping sewage, dirty water and water from flooded rooms. The pump is compliant with the most demanding European standards, therefore it is intended for customers using such products in their professional work. WQ PRO pumps are made of cast iron in order to withstand the adverse sewage environment. Pump outlet connection provides connection of the discharge hose with a hose clamp or fast-connection coupling. These pumps are widely used in agriculture. The WQ PRO pump is equipped with thermal protection mounted in the motor winding and a float switch for operation control. The WQ 1500 PRO pump is mainly intended for customers in the civil engineering industry, where the top quality and high performance is required. It can also be used in industrial applications.

### Application:

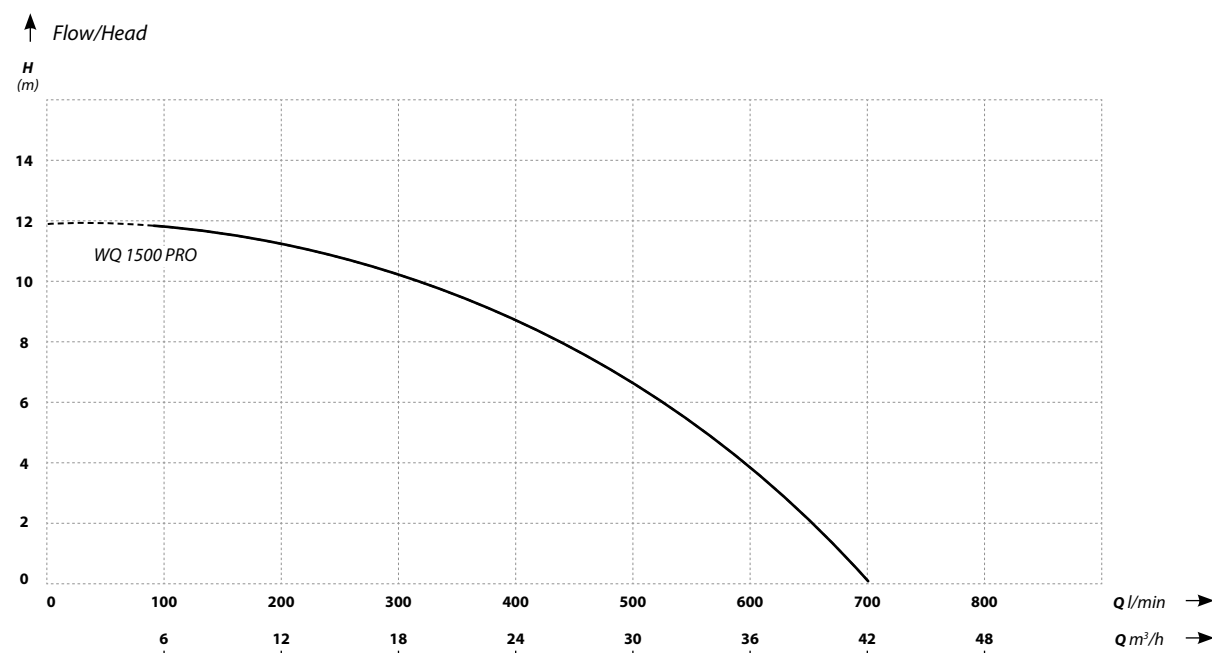
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-9
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Motor housing: stainless steel AISI 304
- Body: alloy
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQ 1500 PRO	12	700	1500	230	5	7,8	3	32/50	27

# WQ PROFESSIONAL

Professional submersible pumps intended for customers who need strong and durable product in their professional work. Due to the top quality materials used, such as stainless steel and cast iron, and very high performance, WQ PROFESSIONAL pumps can operate in demanding conditions and withstand the adverse sewage environment. The pumps are widely used in sewage pumping stations. All pumps feature a factory-mounted float switch for operation control and thermal protection mounted in the motor winding. Additionally, the WQ Professional 1500 pump is equipped with a cutting impeller with 50 mm passage. Discharge hose can be connected to the pump outlet with a hose clamp or fast-connection coupling.

## Application:

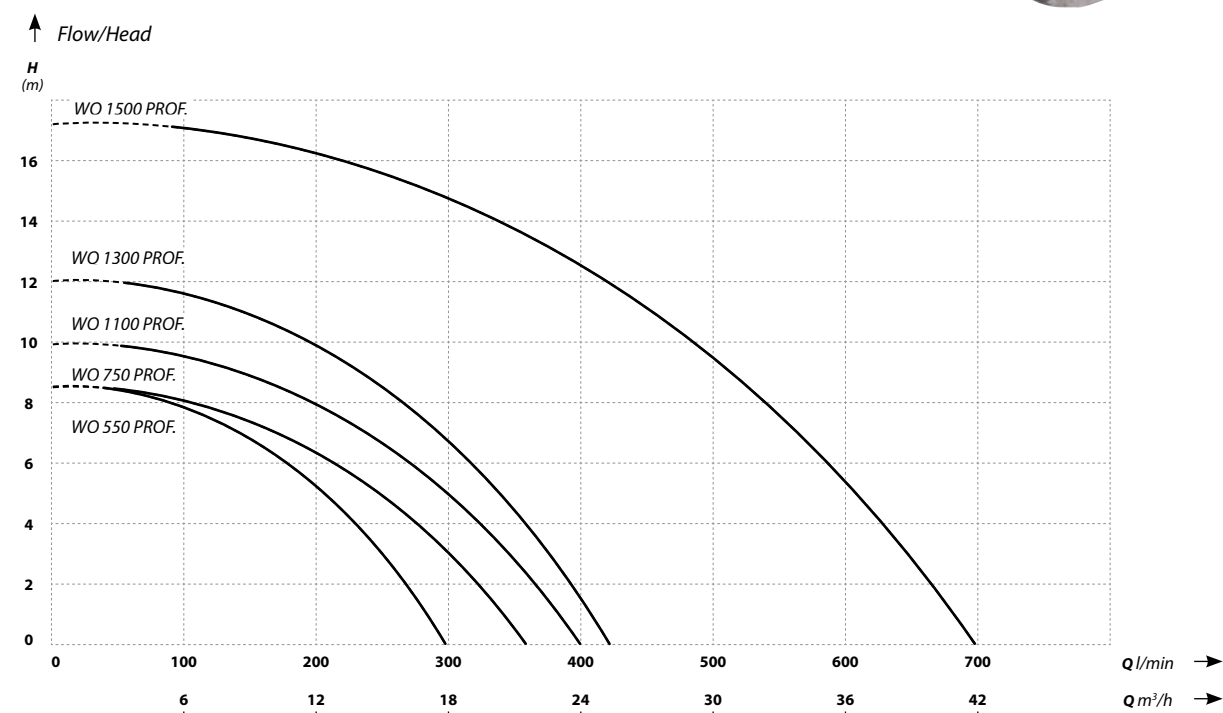
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Occasional renovation works. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 4-10
- Liquid density: 1200 kg/m<sup>3</sup>
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQ 550 PROFESSIONAL	8,5	300	550	230	35	2	2	24/42	15
WQ 750 PROFESSIONAL	8,5	350	750	230	35	4	2	26/52	25,2
WQ 1100 PROFESSIONAL	10	400	1100	230	35	5,2	2	26/54	26,9
WQ 1300 PROFESSIONAL	12	420	1300	230	35	7	2	27/55	29,3
WQ 1500 PROFESSIONAL	17	700	1500	230	50	9,4	2	31/57	32,6





## 75-FWQ-1,5 INOX

75-FWQ-1,5 pumps are designed for pumping sewage, dirty water and water from flooded rooms. The pumps are used to pump sewage from domestic sump pits and to drain flooded rooms, houses, garages and premises. They are also used in pumping rainwater and surface water from ponds, lakes and rivers, and for feeding ponds.

### Characteristics:

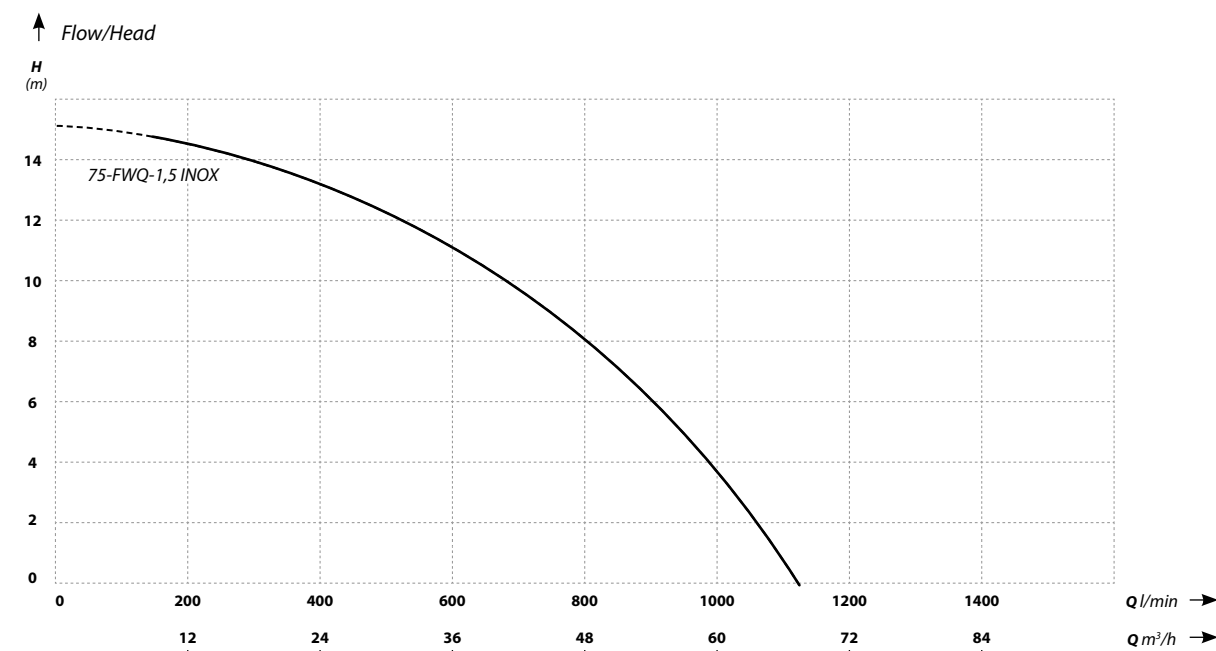
- High efficiency with low motor power
- Rotor blades allow for breaking up the pumped elements
- Threaded discharge port for easy connection of discharge hose using a hose clamp or quick release coupling
- Top quality materials
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service.

### Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230V
- Insulation Class: B
- Working mode: continuous
- Ingress protection: IP68
- Power cable length: 8m with a plug
- Working position: vertical
- Engine speed: 2850 RPM

### Materials:

- Motor housing: AISI 316 stainless steel
- Rotor housing: Gray cast iron
- Shaft and rotor: AISI 304 stainless steel
- Impeller: Cast Iron / Tungsten
- Mechanical gland: Double: ceramic/carbon/NBR (ITALY)



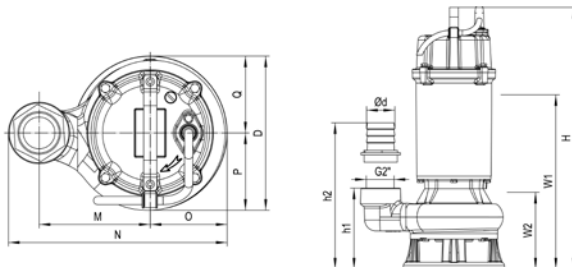
Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
75 FWQ 1,5	15	1170	1500	230	15	8	3	52/32	26,5

# WQ-65-1,5

## Submersible pumps with cutting system

Professional submersible pumps for pumping domestic sewage and for draining flooded rooms. To ensure trouble-free operation, the pumps are equipped with overload protection mounted in the motor winding. If there is a risk of overloading the motor, the protection will switch off the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pump impeller has a single-channel design, resulting in high efficiency. The pumps are fitted with a threaded discharge port which allows the discharge hose to be connected by means of a hose clamp or quick coupling.

The pumps are used for pumping sewage from domestic and agricultural septic tanks and for draining flooded premises, houses, garages and apartments. Pumping rainwater and surface water from ponds, lakes and rivers, feeding ponds. Domestic wastewater treatment plants.



Nazwa	Wymiary (mm)					
	d	h1	h2	W1	W2	H
WQ-65-1,5	65	142	210	120	345	485
	M	N	O	P	Q	D
	130	253	90	90	90	180



### Features:

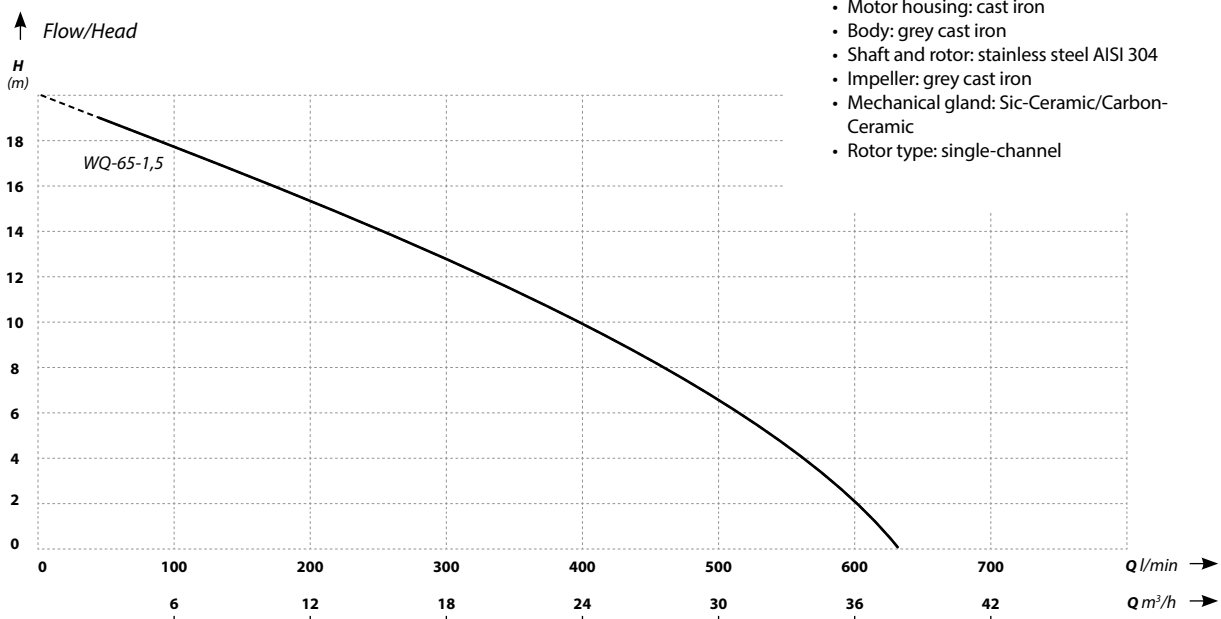
- Top quality materials
- 24 months warranty
- Warranty and aftermarket service

### Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: B
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 8 m
- Motor speed: 2850 RPM
- Water PH: 6-10

### Materials:

- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical gland: Sic-Ceramic/Carbon-Ceramic
- Rotor type: single-channel



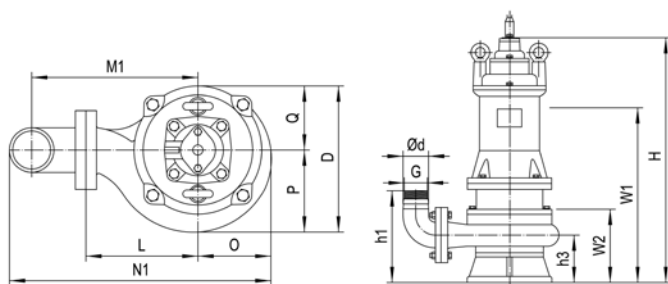
Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQ-65-1,5	20	630	1500	400	3,2	2½	25	23,5



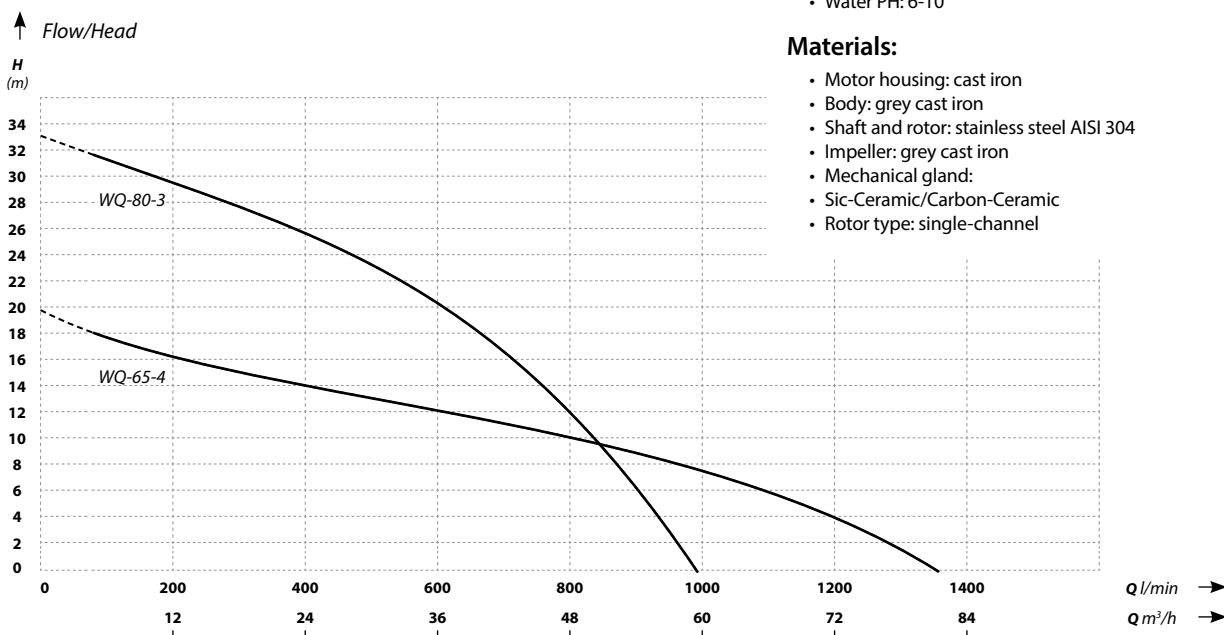
## WQ-80-3 | WQ-65-4

Professional submersible pumps for pumping domestic sewage and for draining flooded rooms. To ensure trouble-free operation, the pumps are equipped with overload protection mounted in the motor winding. If there is a risk of overloading the motor, the protection will switch off the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pump impeller has a single-channel design, resulting in high efficiency. The pump orifice allows the pump to be mounted on a coupling foot. The termination of the orifice is an elbow steel pipe ending in a thread or orifice.

The pumps are used for pumping sewage from domestic and agricultural septic tanks and for draining flooded premises, houses, garages and apartments. Pumping rainwater and surface water from ponds, lakes and rivers, feeding ponds. Domestic wastewater treatment plants.



Model	Ød	h1	h3	W1	W2	H	O	P	Q	L	D	M1	N1
WQ-80-3	80	270	125	450	170	630	107	115	100	153	215	245	390
WQ-65-4	65	240	120	455	160	650	115	115	115	180	230	250	397



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQ-80-3	20	1360	3,0	400	6,5	3	30	55
WQ-65-4	33	1000	4,0	400	8,9	2½	20	61

### Submersible pumps with cutting system



#### Features:

- Top quality materials
- 24 months warranty
- Warranty and aftermarket service

#### Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: B
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 8 m
- Motor speed: 2850 RPM
- Water PH: 6-10

#### Materials:

- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical gland:
- Sic-Ceramic/Carbon-Ceramic
- Rotor type: single-channel

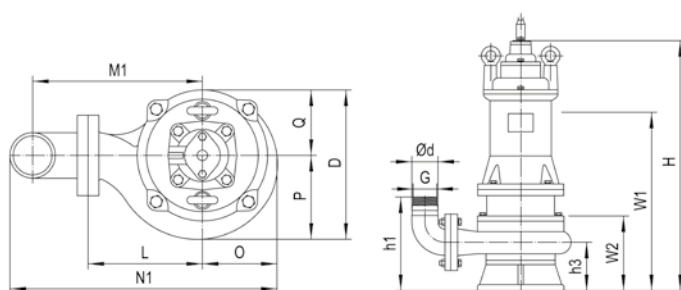


# VX-80-1,5 | VX-80-2,2

Professional submersible pumps fitted with VORTEX open rotors for pumping domestic sewage and for draining flooded rooms. If there is a risk of overloading the motor, the protection will switch off the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pump impeller has a single-channel design, resulting in high efficiency.

The pump orifice allows the pump to be mounted on a coupling foot. The termination of the orifice is an elbow steel pipe ending in a thread or orifice.

The pumps are used for pumping sewage from domestic and agricultural septic tanks and for draining flooded premises, houses, garages and apartments. Pumping rainwater and surface water from ponds, lakes and rivers, feeding ponds. Domestic wastewater treatment plants.



Model	Ød	h1	h3	W1	W2	H	O	P	Q	L	D	M1	N1
VX-80-1,5	80	255	110	420	170	585	107	110	107	165	217	255	400
XV-80-2,2	80	255	110	400	170	565	107	110	107	165	217	255	400

## Submersible pumps with cutting system



### Features:

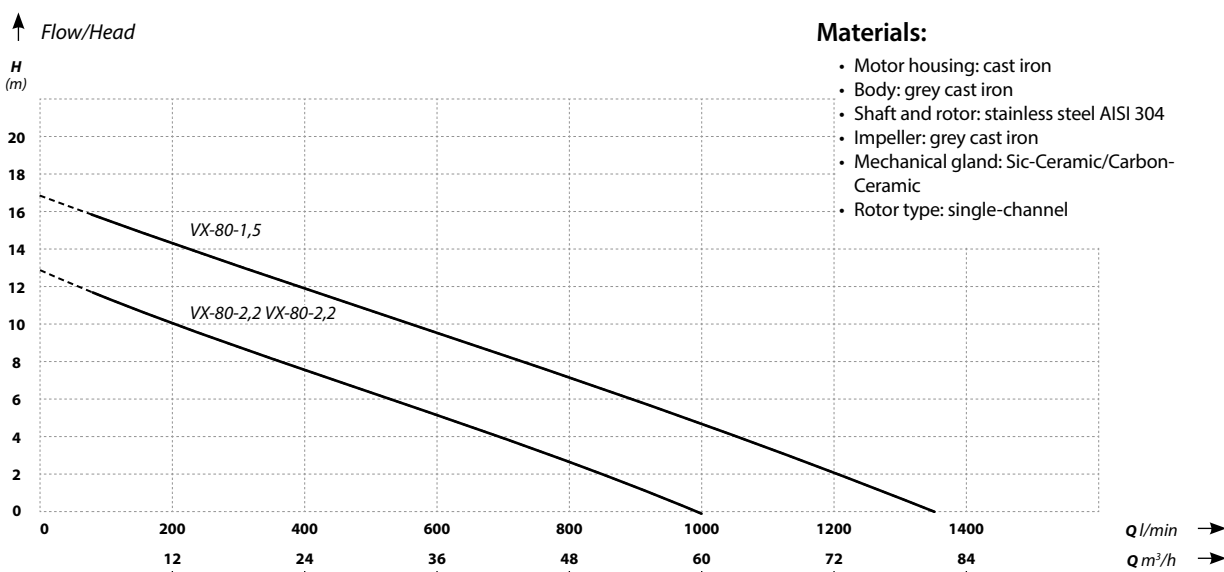
- Top quality materials
- 24 months warranty
- Warranty and aftermarket service

### Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 400 V
- Insulation class: B
- Operating mode: continuous
- Ingress protection: IP 68
- Length of power cable: 8 m
- Motor speed: 2850 RPM
- Water PH: 6-10
- Liquid density:  $1,3 \times 10^3 \text{ kg/m}^3$

### Materials:

- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical gland: Sic-Ceramic/Carbon-Ceramic
- Rotor type: single-channel



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
VX-80-1,5	13	1000	1,5	400	3,2	3	40	44
VX-80-2,2	17	1360	2,2	400	5,0	3	40	46



# 50-KBFU-0,40 INOX 50-KBFU-0,75 INOX

KBFU series submersible pumps are designed for professional draining works and for applications where there is a risk that pumped water contains sand or sludge. The pumps are intended for removal of water from flooded rooms, houses, garages and premises, and construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries.

## Characteristics:

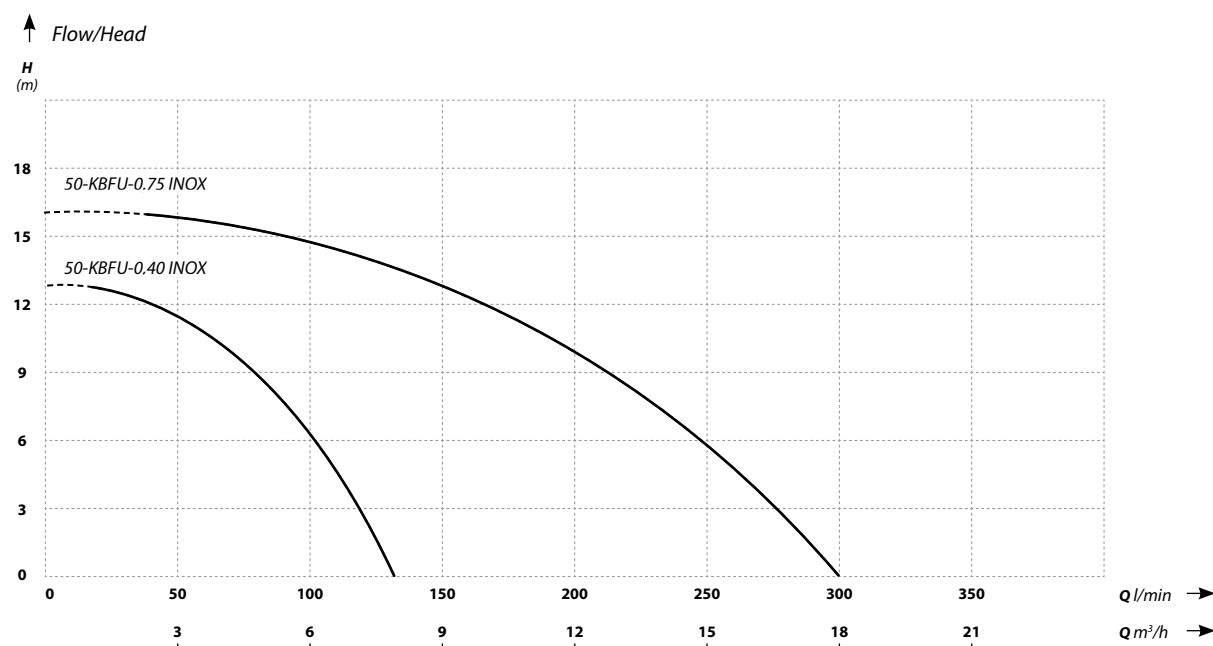
- Suitable for pumping water with sand
- Capable of pumping water to a low level of 5 mm
- Column float switch (50-KBFU-0.75 INOX)
- Top quality materials
- Threaded discharge port for easy connection of discharge hose using a hose clamp or quick release coupling
- 8m power cable with a plug
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and post-warranty service

## Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: B
- Operating mode: continuous
- Ingress protection: IP68
- Length of power supply cable: 8m with a plug
- Working position: vertical
- Motor speed: 2850 RPM

## Materials:

- Motor housing: AISI 316 stainless steel
- Impeller housing: Grey cast iron
- Shaft and rotor: AISI 316 stainless steel
- Impeller: Steel / glass fibre reinforced PA
- Mechanical seal: Double: ceramic/carbon/NBR (ITALY)
- Dimensions 40cmx24cm
- weight 12.4 kg



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
50-KBFU-0,40 INOX	13	130	400	230	2	3	2"	40 × 24	12,4
50-KBFU-0,75 INOX	16	300	750	230	7	4,8	2"	44 × 24	13,8



# 25-KBFU-0,45 50-KBFU-0,45

KBFU submersible pumps are designed for professional drainage works and everywhere where there is a risk that pumped water contains sand or sludge. The pumps are used for draining flooded rooms, houses, garages, apartments or construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries.

## Features:

- Suitable for pumping water with sand
- Post float switch (50-KBFU-0,45)
- Capable of pumping water to a low level of 3 mm (25-KBFU-0,45)
- Top quality materials
- Thermal protection built into the motor winding
- The pump motors are from the Japanese company NSK
- 24 months warranty
- Warranty and aftermarket service

## Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Water PH: 5-9
- Liquid density: 1200 kg/m<sup>3</sup>

## Materials:

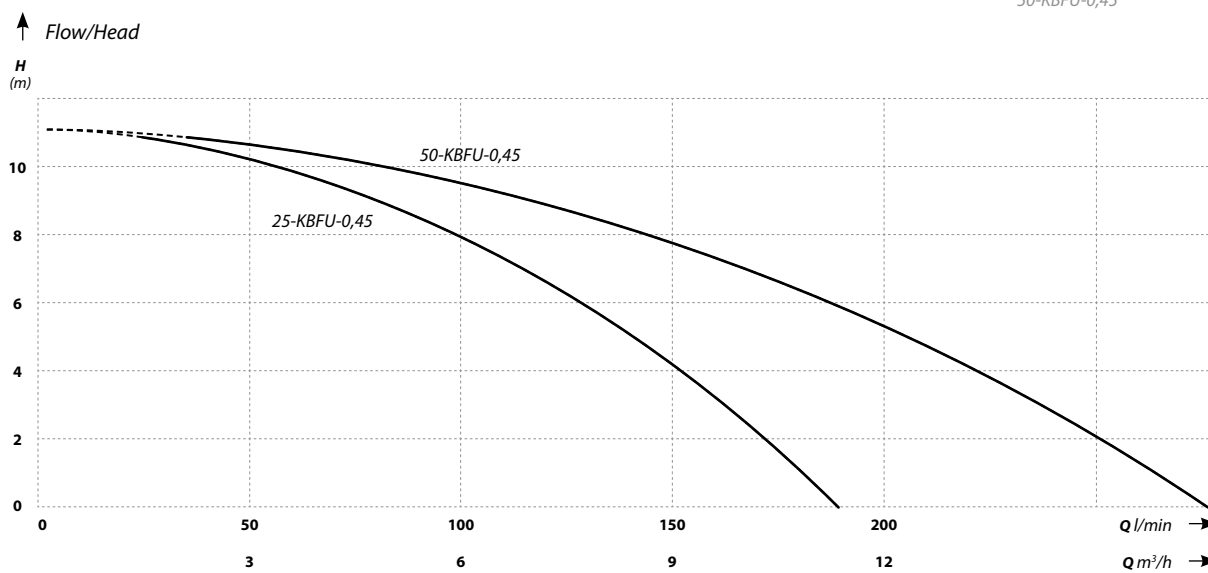
- Motor housing: stainless steel AISI 304
- Impeller housing: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron with heavy wear coating / chromium alloy
- Mechanical gland: Sic-Sic / Carbon-Sic
- Bearings: NSK



25-KBFU-0,45

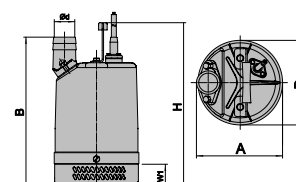


50-KBFU-0,45



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
25-KBFU-0,45	15	750	1,5	400	3,5	3	37
50-KBFU-0,45	26	600	2,2	400	5,0	2	39

Name	Dimensions (mm)					
	d	A	B	D	H	W
25-KBFU-0,45	25	230	340	220	340	60
50-KBFU-0,45	50	230	360	220	340	60





## 50-KBFU-0,80

The small submersible pumps of the KBFU series are suitable wherever there is a risk that the pumped water contains sand or sludge. The pumps are used for draining flooded rooms, houses, garages or apartments. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering.

### Features:

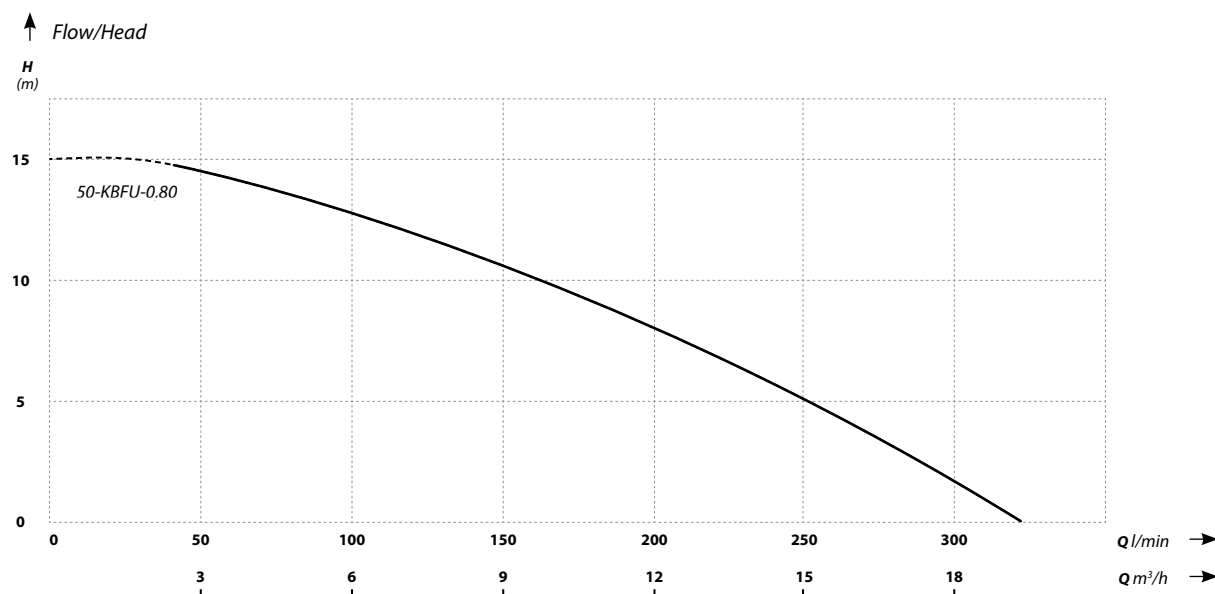
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- The discharge spigot can be mounted either vertically or horizontally
- 24 months warranty
- Warranty and aftermarket service

### Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Water PH: 6.5-8.5
- Liquid density: 1200 kg/m<sup>3</sup>
- Maximum draught 7 m

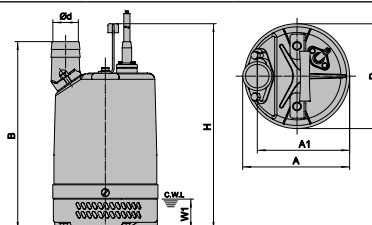
### Materials:

- Motor housing: aluminium alloy
- Body: aluminium alloy
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: AISI201SS stainless steel with heavy wear coating (TPU)
- Bearings: NSK
- Mechanical gland: Ceramic-Sic / Carbon-Ceramic



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
50-KBFU-0,80	15	320	0,80	230	5	2	14,1

Name	Dimensions (mm)					
	d	A	B	D	H	W
50-KBFU-0,80	50	190	336	187	368	50





# 50-KBFU-0,55

The small submersible pumps of the KBFU series are suitable wherever there is a risk that the pumped water contains sand or sludge. The pumps are used for draining flooded rooms, houses, garages or apartments. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering.

## Features:

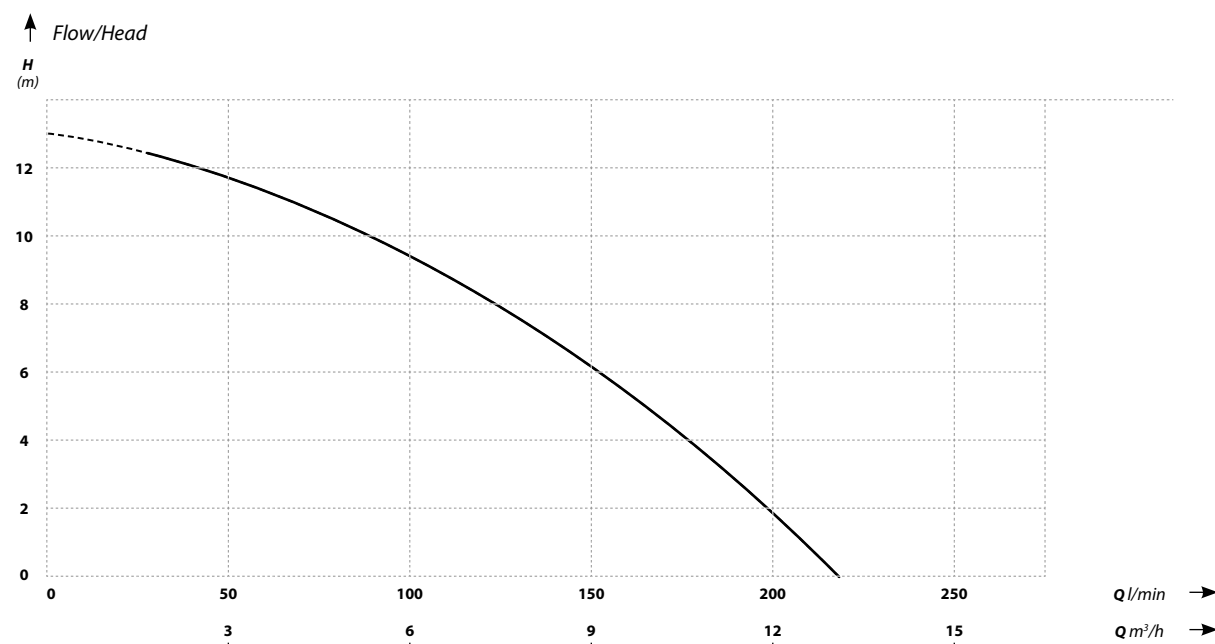
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

## Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Water PH: 6.5-8.5
- Liquid density: 1200 kg/m<sup>3</sup>
- Maximum draught 7 m

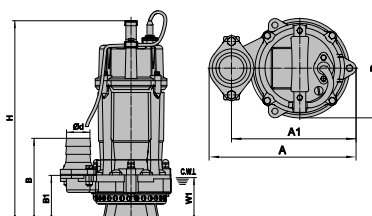
## Materials:

- Motor housing: aluminium
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: chrome alloy
- Agitator: chrome alloy
- Bearings: NSK
- Mechanical gland: Ceramic-Sic / Carbon-Ceramic



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
50-KBFU-0,55	13	220	0,55	230	4	2	15,8

Name	Dimensions (mm)					
	d	A	B	D	H	W
50-KBFU-0,55	50	237	168	160	405	95



## KBFU

KBFU submersible pumps are designed for professional drainage works and everywhere where there is a risk that the pumped water a lot of sand or sludge. The pumps are used for draining flooded rooms, houses, garages, apartments or construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries.

### Features:

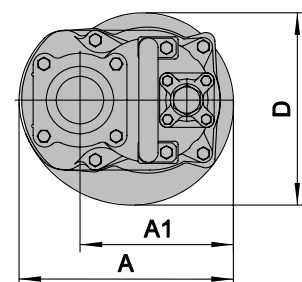
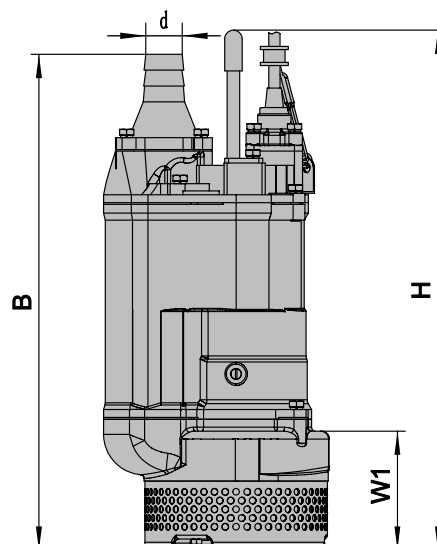
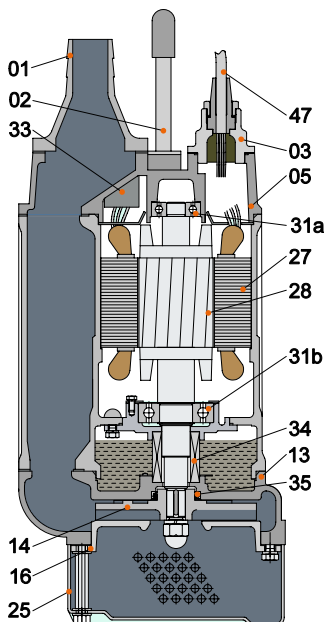
- Suitable for pumping water with sand
- The design incorporates a cooling jacket so that the pumps do not have to be completely submerged
- Top quality materials
- Pumping of medium up to 3 mm (25 KBFU 0.45)
- Threaded discharge port for easy connection of the discharge hose with a hose clamp or quick coupling
- Float switch for pump control and protection against dry running
- (50 KBFU 0.45)
- 8 m power cable with plug
- Thermal protection built into the motor winding
- 24 months warranty
- Warranty and aftermarket service

### Operating conditions:

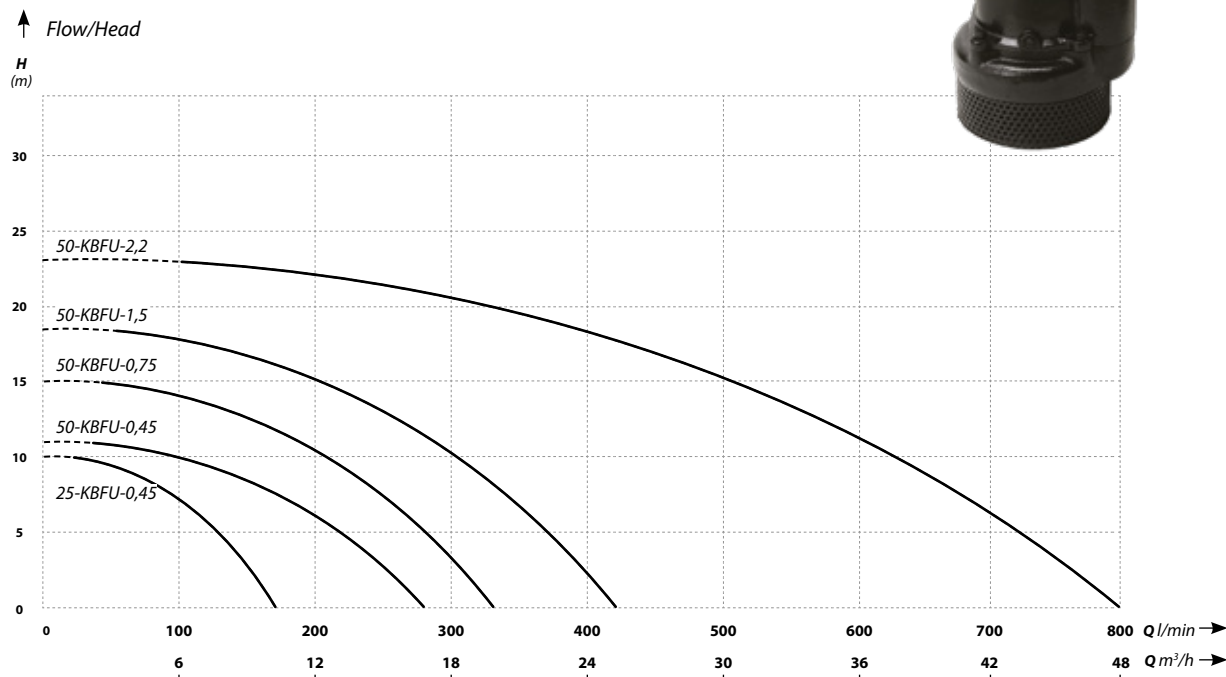
- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Power supply: 230 V
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 10 m
- Working position: vertical
- Motor speed: 2850 RPM

### Materials:

- Motor housing: grey cast iron alloy
- Impeller: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron with heavy wear coating / chromium alloy
- Mechanical gland:  $\leq 2.2$  kW: Sic-Sic /
- Carbon-Sic;  $\geq 3.7$  kW: Sic-Sic / Sic-Sic
- Bearings: NSK

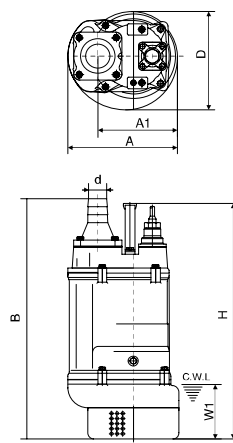


# KBFU 230 V



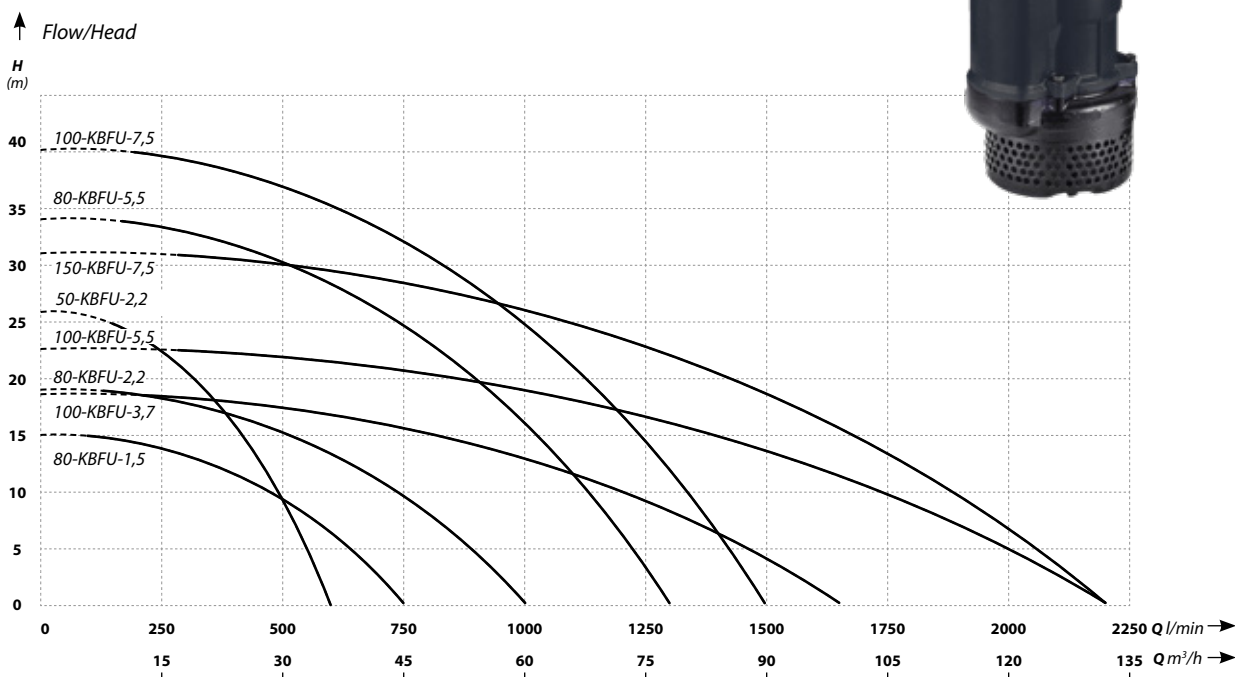
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
25-KBFU-0,45	10	170	0,45	230	2,3	1	11,8
50-KBFU-0,45	11	280	0,45	230	2,3	2	12
50-KBFU-0,75	15	330	0,75	230	5,8	2	39
50-KBFU-1,5	18,5	420	1,5	230	11,4	2	44
50-KBFU-2,2	23	800	2,2	230	14	2	46

Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
25-KBFU-0,45	25	230	173	340	220	340	60
50-KBFU-0,45	50	230	173	360	220	340	60
50-KBFU-0,75	50	273	225	508	220	488	150
50-KBFU-1,5	50	273	225	533	220	513	150
50-KBFU-2,2	50	273	225	558	220	538	150



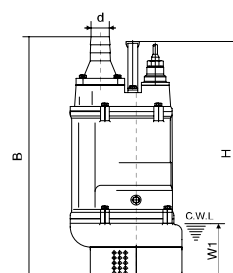
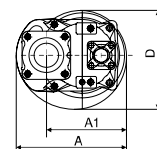


# KBFU 400V



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
80-KBFU-1,5	15	750	1,5	400	3,5	3	37
50-KBFU-2,2	26	600	2,2	400	5,0	2	39
80-KBFU-2,2	19	1000	2,2	400	5,0	3	39
100-KBFU-3,7	18,5	1650	3,7	400	7,7	4	63
80-KBFU-5,5	34	1300	5,5	400	11,4	3	77
100-KBFU-5,5	23	2200	5,5	400	11,4	4	77
100-KBFU-7,5	40	1500	7,5	400	15	4	106
150-KBFU-7,5	31	2200	7,5	400	15	6	108

Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
80-KBFU-1,5	80	235	173	535	216	505	120
50-KBFU-2,2	50	235	173	535	216	505	120
80-KBFU-2,2	80	235	173	535	216	505	120
100-KBFU-3,7	100	283	208	642	252	629	150
80-KBFU-5,5	80	283	208	671	252	590	150
100-KBFU-5,5	100	283	208	686	252	590	150
100-KBFU-7,5	100	330	240	764	314	676	190
150-KBFU-7,5	150	330	240	790	314	676	190



# 80-KBFU-4,0-4P

KBFU-4P series submersible pumps are designed for heavier dewatering work in mines, quarries and construction.

Characterised by a durable and robust design, the 4P series pump motors feature 4 poles, effecting in significant extension of the life of the equipment in relation to its 2-pole counterparts. In addition, the rotor and the external agitator are made of chrome alloy, enabling operation under severe conditions. Thanks to the casing in the form of a cooling jacket, they can operate only partially submerged.

The pumps are used for draining flooded areas, pumping raw sewage, dewatering construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries. Where there is a risk of bentonite or a significant sand content in the pumped water

## Features:

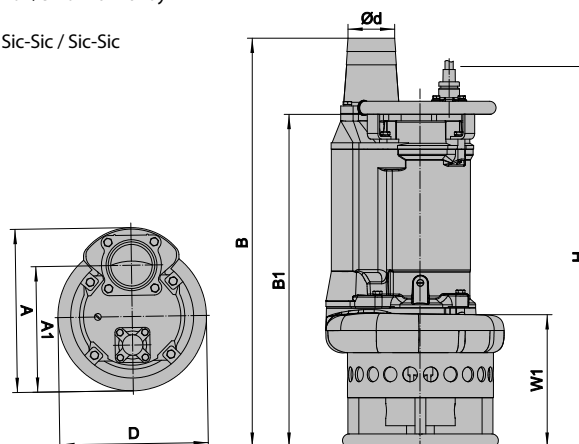
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

## Materials:

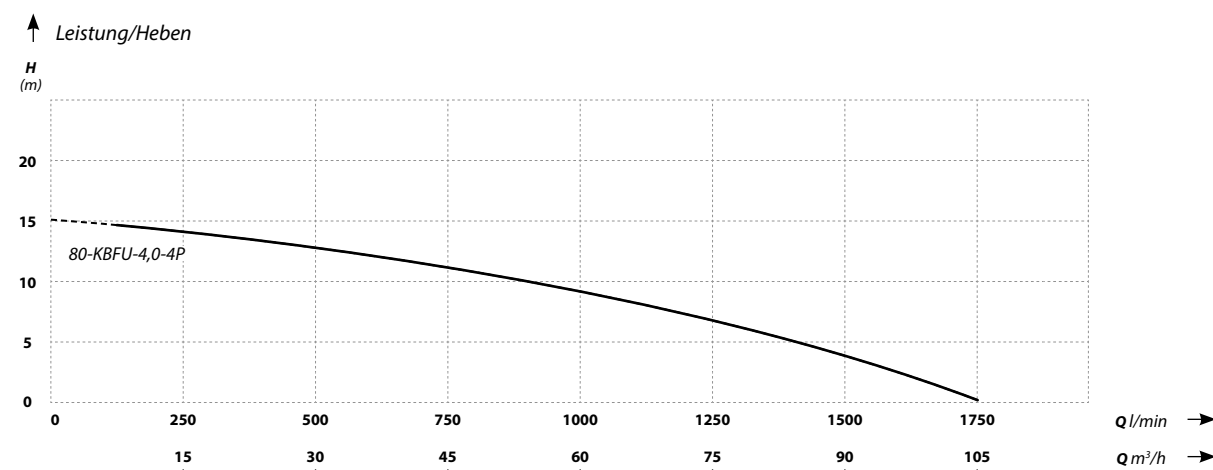
- Motor housing: grey cast iron alloy
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: grey cast iron/chromium alloy
- Agitator: grey cast iron/chromium alloy
- Bearings: NSK
- Mechanical gland: Sic-Sic / Sic-Sic

## Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 400 V
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 10m
- Motor speed: 1450 RPM
- Motor type: 4-pole
- Water PH: 5-9
- Liquid density: 1200 kg/m<sup>3</sup>
- Maximum draught 7 m



Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
80-KBFU-4,0-4P	80	350	261	816	326	730	250



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)	Rational speed range (RPM)
80-KBFU-4,0-4P	15	1750	4,0	400	30	10,2	3	109	1450



## 7 IBX

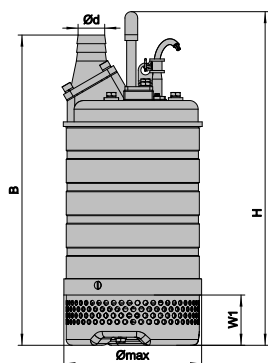
IBX series submersible pumps are designed for pumping water contaminated by abrasive materials such as sand and silt, while maintaining a compact design. Mainly used in single-family construction for trench dewatering. Thanks to the casing in the form of a cooling jacket they can operate only partially submerged. A double mechanical gland resistant to high pressure is used to ensure guaranteed tightness.

Semi-open impeller made of high chromium alloy with wear plate (ductile iron) provides excellent durability. The pumps feature thermal protection installed in the winding.

For draining flooded rooms, houses, garages or apartments. Watering. Drainage of construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Anywhere where there is a risk of significant sand and sludge content in the pumped water.



Name	Dimensions (mm)			
	d	B	H	W1
50-IBX-1,5	50	590	613	87
80-IBX-1,5	80	597	613	87



### Features:

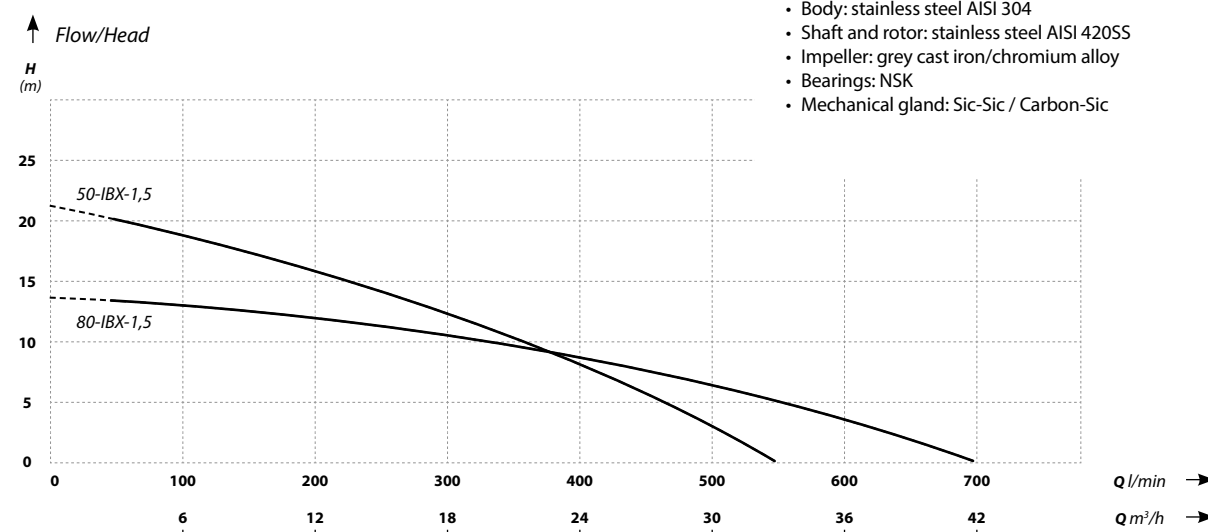
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

### Operating conditions:

- Maximum liquid temperature: 40
- Maximum ambient temperature: 40°C
- Power supply: 400 V
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Motor type: 4-pole
- Water PH: 5-9
- Liquid density: 1200 kg/m<sup>3</sup>
- Maximum draught 7 m

### Materials:

- Motor housing: stainless steel AISI 304
- Body: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: grey cast iron/chromium alloy
- Bearings: NSK
- Mechanical gland: Sic-Sic / Carbon-Sic



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
50-IBX-1,5	21	560	1,5	230	8	10	2	37
80-IBX-1,5	14	700	1,5	230	8	10	3	37

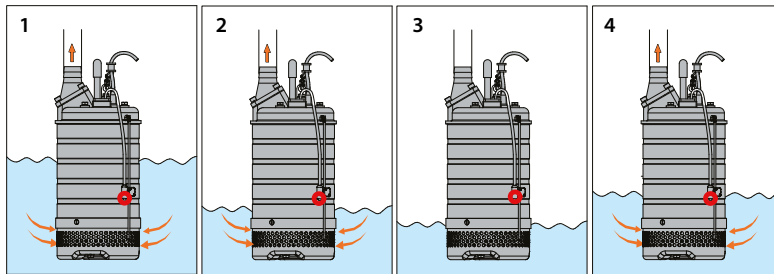


# IBX-AUTO

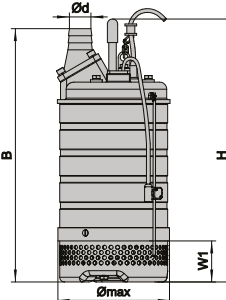
IBX series submersible pumps are designed for pumping water contaminated by abrasive materials such as sand and silt, while maintaining a compact design. Mainly used in single-family construction for trench dewatering. Thanks to the casing in the form of a cooling jacket they can operate only partially submerged. Unlike the KBFU series, the pumps feature a control unit that acts as a safety device.

A double mechanical gland resistant to high pressure is used to ensure guaranteed tightness. Semi-open impeller made of high-chromium alloy with wear plate (ductile iron), provides excellent durability. The pumps feature thermal protection installed in the winding.

For draining flooded rooms, houses, garages or apartments. Watering. Drainage of construction sites. Pumping rainwater and surface water from ponds, lakes and rivers. Civil engineering. Anywhere where there is a risk of significant sand and sludge content in the pumped water.



Name	Dimensions (mm)				
	d	B	H	W1	Ø maks.
50-IBX-2,2-CFA	50	590	613	87	260
80-IBX-3,7-CFA	80	641	565	87	320



## Features:

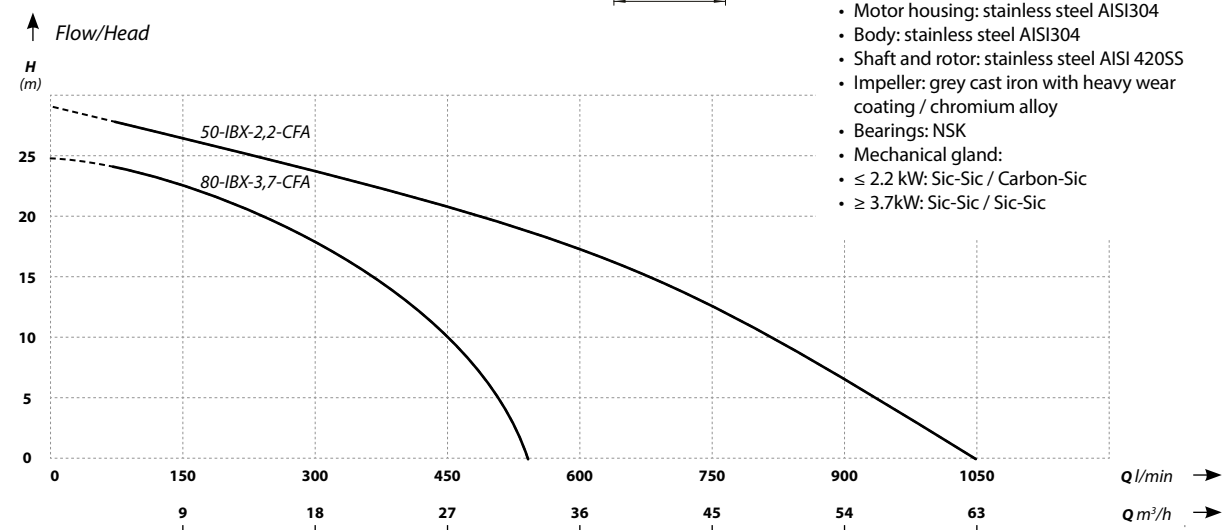
- Suitable for pumping water with sand
- Top quality materials
- Double thermal protection embedded in the motor winding
- 24 months warranty
- Warranty and aftermarket service

## Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Power supply: 400 V
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Length of power cable: 10m
- Motor speed: 2850 RPM
- Motor type: 4-pole
- Water PH: 5-9
- Liquid density: 1200 kg/m³
- Maximum draught 7 m

## Materials:

- Motor housing: stainless steel AISI304
- Body: stainless steel AISI304
- Shaft and rotor: stainless steel AISI 420SS
- Impeller: grey cast iron with heavy wear coating / chromium alloy
- Bearings: NSK
- Mechanical gland:
  - ≤ 2.2 kW: Sic-Sic / Carbon-Sic
  - ≥ 3.7kW: Sic-Sic / Sic-Sic



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
50-IBX-2,2-CFA	25	550	2,2	400	8	5,1	2	42
80-IBX-3,7-CFA	29	1050	3,7	400	8	7,7	3	60



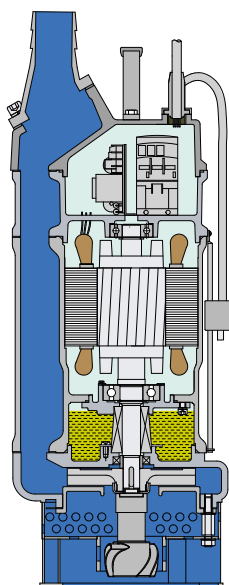


## KBFU-AUTO

Submersible pumps of the KBFU-AUTO series are designed for professional dewatering works, based on the KBFU series. Mainly used in the construction industry for drainage of excavations. In contrast to the KBFU series, the pumps are equipped with a control unit and an external agitator to increase the life of the pumps in more severe conditions. The pumps are characterised by their durable and robust construction. Thanks to the automatic control, the pumps require virtually no manual operation and additionally have a number of safety features. Thanks to the cooling jacket enclosure they can operate only partially submerged. A double mechanical gland is used to ensure guaranteed tightness. The pumps are used for the drainage of flooded rooms, garages and premises. Pumping of rainwater and surface water from ponds, lakes and rivers. Civil engineering. Mines and quarries. Wherever there is a risk of bentonite or significant sand and sludge content in the pumped water.

### Features:

- Suitable for pumping water with sand
- Top quality materials
- Thermal protection built into the motor winding
- Warranty 24 months
- Warranty and post-warranty service



### Operating conditions:

- Maximum liquid temperature: 40°C
- Maximum ambient temperature: 40°C
- Thermal protection: 230 V - yes / 400 V no
- Insulation class: F
- Operating mode: continuous
- Ingress protection: IP68
- Power supply cable length: 8 m
- Motor speed: 2850 RMP
- Liquid density: 1200 kg/m³
- Maximum submersion 7 m

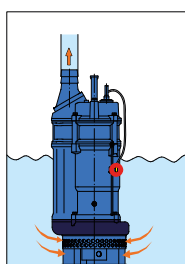
### Materials:

- Motor housing: alloy/grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron with heavy wear coating/chromium alloy
- Bearings: NSK
- Mechanical gland:
  - ≤ 2.2 kW: Sic-Sic / Carbon-Sic
  - ≥ 3.7 kW: Sic-Sic / Sic-Sic

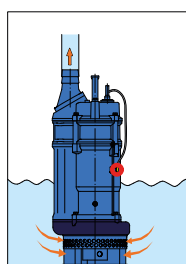
### Control module - functions:

- Phase reversal protection to ensure correct rotation of the rotor;
- Automatic pump stop in the event of overload (e.g. by blocked rotor) and incorrect voltage: after an emergency stop of the pump, a starting test is carried out within 5 minutes.
- Overheating protection: if the temperature is too high, the pump switches off and automatically restarts after cooling down.
- Adjustable fluid sensor level.

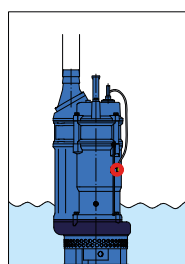
### Automatic control



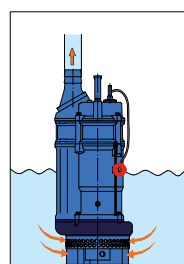
The pump runs as long as the sensor is submerged



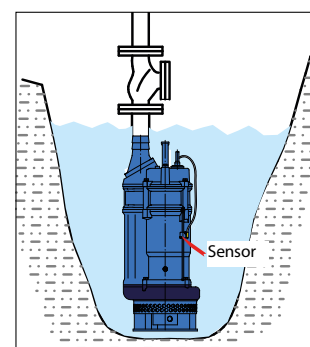
Within 1 minute of the fluid sensor being exposed, the pump will shut down



The pump remains off until the sensor is re-submerged



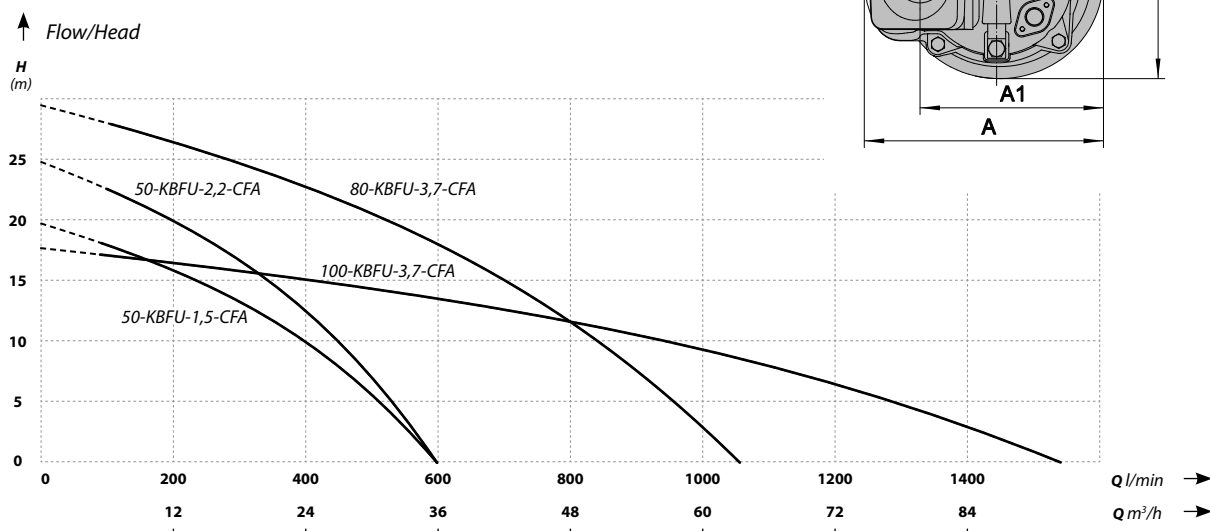
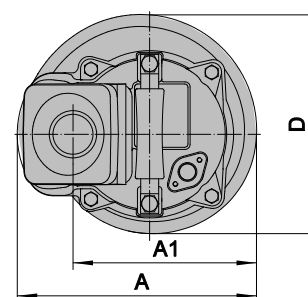
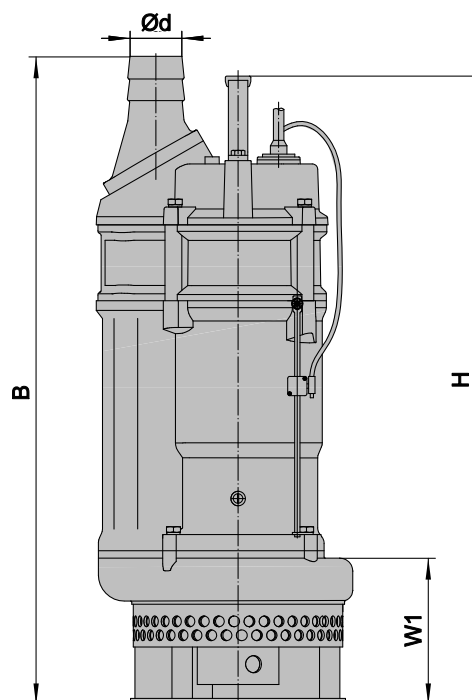
When the sensor is submerged, the pump will start automatically



If the inflow of water is small, it is recommended to install a non-return valve (so that the pump does not start too often) and move the sensor upwards

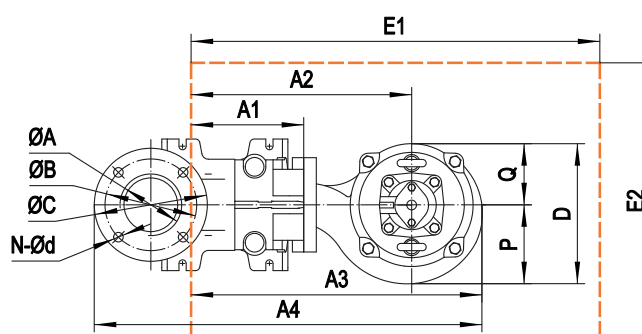
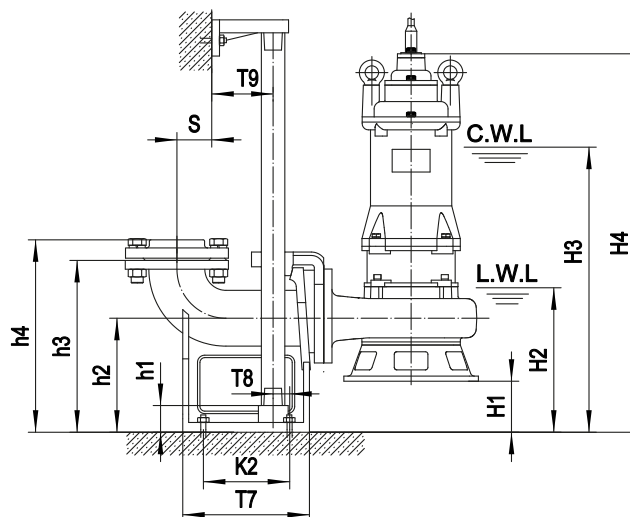
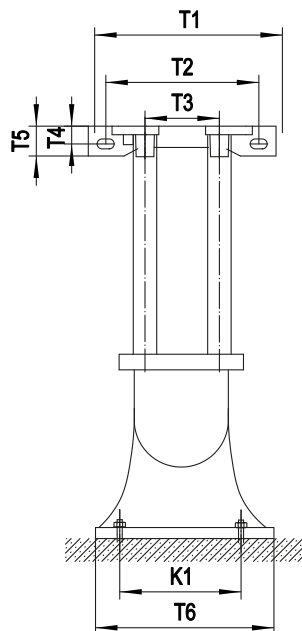
# KBFU-AUTO cd.

Name	Dimensions (mm)						
	d	A	A1	B	D	H	W1
50-KBFU-1,5-CFA	50	235	173	629	216	594	135
50-KBFU-2,2-CFA	50	235	173	629	216	594	135
80-KBFU-3,7-CFA	80	283	208	714	252	720	165
100-KBFU-3,7-CFA	100	283	208	739	252	720	165



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
50-KBFU-1,5-CFA	20	600	1,5	400	10	3,5	2	43
50-KBFU-2,2-CFA	25	600	2,2	400	10	5,1	2	46
80-KBFU-3,7-CFA	30	1050	3,7	400	10	8,0	3	46
100-KBFU-3,7-CFA	18	1550	3,7	400	10	8,0	4	46

# KBFU-AUTO cd.



Foot coupling fits to:  
65-WQ-4,0 / 80-WQ-3,0  
80-VX-1,5 / 80-VX-2,2

Name	Guide rail system	H1	H2	H3	H4	A1	A2	A3	A4	P	Q	D	E1 × E2	N.W.
WQ-80-3	80-80	68	235	515	695	176	329	436	608	115	100	215	650 × 550	50
WQ-65-4	65-65	45	205	500	695	155	333	448	619	115	115	230	650 × 550	58
VX-80-1,5	80-80	80	250	480	645	176	340	447	620	110	107	217	650 × 550	39
VX-80-2,2	80-80	80	250	500	665	176	340	447	620	110	107	217	650 × 550	41

Guide rail system	ØA	ØB	ØC	N-Ød	T1	T2	T3	T4	T5	T6	T7	T8	T9	K1	K2	S	h1	h2	h3	h4
50-50	Ø50 / G2"	110	140	4-Ø14	265	215	105	25	42	200	215	15	67	165	135	63	25	160	250	280
65-65	Ø65 / G2,5"	130	160	4-Ø14	280	260	125	30	50	230	235	20	70	190	155	90	25	165	265	295
80-80	Ø80 / G3"	150	190	4-Ø18	315	265	145	27	50	255	225	30	78	215	155	77	25	190	305	335
100-100	Ø100 / G4"	170	210	4-Ø18	365	305	170	32	55	295	260	35	95	265	175	100	25	230	350	380



## CTR

A series of submersible pumps with cutting system designed for pumping domestic sewage. In case of flooding, they can be used for draining rooms. The robust construction of the pump made of durable cast iron, the cutting system with a cutting knife and very reasonable price have made the pumps very popular among individual customers. The pumps are equipped with a float switch for automatic operation. To ensure reliable operation, the pumps are equipped with overload protection mounted on the cable. Pump outlet provides connection of the discharge hose with a hose clamp or fast-connection.

### Application:

Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5 - 9
- Rotational speed of the electric motor: 2850 RPM

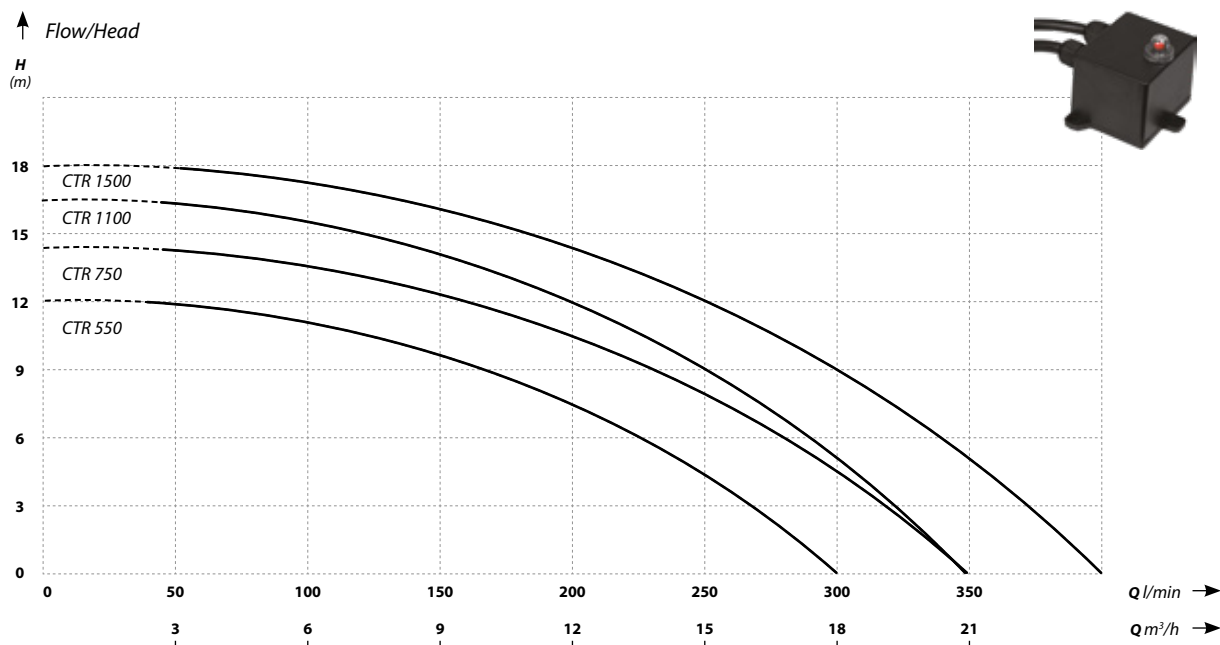


Cutter



### Materials:

- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
CTR 550	12	300	550	230	4,8	2	25/42	17
CTR 750	14	350	750	230	6,4	2	25/44	18
CTR 1100	16	350	1100	230	9	2	26/44	20
CTR 1500	18	400	1500	230	11	2	26/46	22



# FURIATKA

Submersible cast iron pumps with cutting system. The pumps are designed for pumping domestic sewage and draining flooded rooms. In order to minimize the risk of clogging, the pumps are equipped with an exceptionally effective "screw" cutting system. To ensure reliable operation, the pumps have overload protection mounted on the cable. To prevent motor overloading, the protection will stop the pump. The cast iron construction makes the pumps resistant to mechanical damage and chemical corrosion. The pumps are equipped with a float switch for automatic operation control, and the pump outlet provides connection of the discharge hose with a hose clamp or fast-connection. Their robust design and exceptionally effective cutting system have made the Furiatka series one of the most popular pumps with cutting system on the market in Poland.

PUMP TEST: <https://youtu.be/25uq0YBlw78>

## Application:

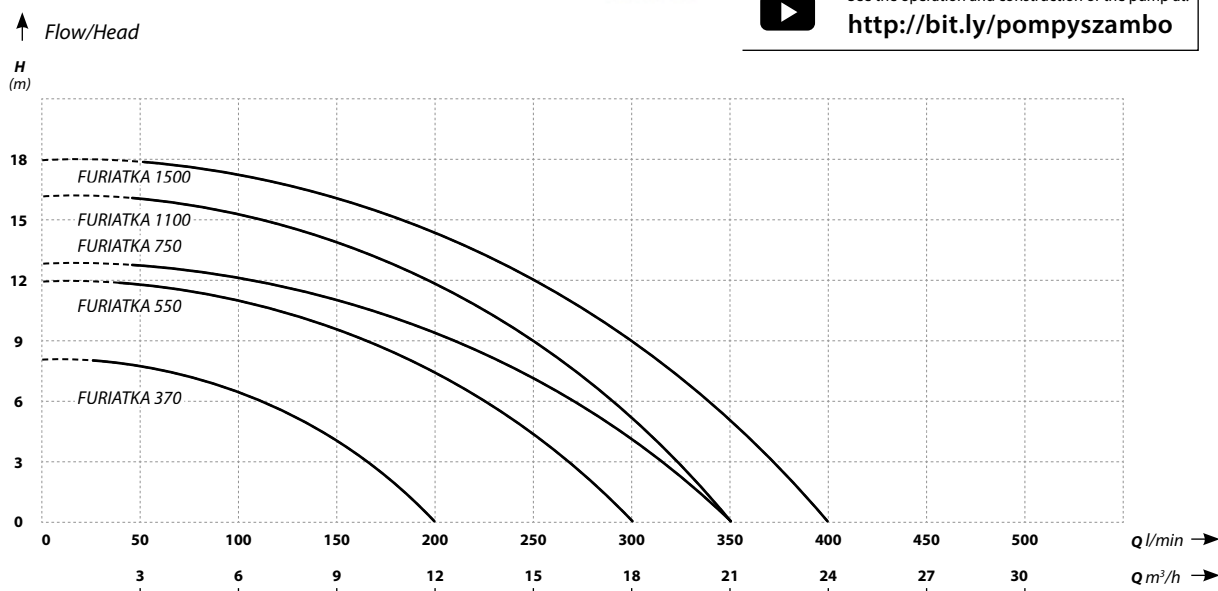
Pumping sewage from domestic and agricultural septic tanks, and draining flooded rooms, houses and garages. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes. Domestic sewage treatment plants.

## Operating conditions:

- Maximum liquid temperature : 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-9
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Rotational speed of the electric motor: 2850RMP
- Cable length: 10 m



See the operation and construction of the pump at:  
<http://bit.ly/pompyszambo>

Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
FURIATKA 370	8	200	370	230	3	1½	21/40	10
FURIATKA 550	12	300	550	230	5,5	2	25/46	19
FURIATKA 750	13	350	750	230	6,5	2	26/47	19,6
FURIATKA 1100	16	350	1100	230	10	2	25/47	22,9
FURIATKA 1500	18	400	1500	230	12	2	26/48	23,1

# V

Submersible pumps with cutting system designed for pumping domestic sewage. In case of flooding, they can be used for draining rooms. Their robust design and quality materials used (stainless steel, cast iron), the cutting system with a cutting knife, and very reasonable price have made the pumps very popular among individual customers.

The pumps are equipped with a float switch for automatic operation. To ensure reliable operation, the pumps have overload protection mounted on the cable. V 550, V1500 and V2200 pumps incorporate the high efficiency "screw" cutting system. Pump outlet provides connection of the discharge hose with a hose clamp or fast-connection.

### Application:

Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

### Operating conditions:

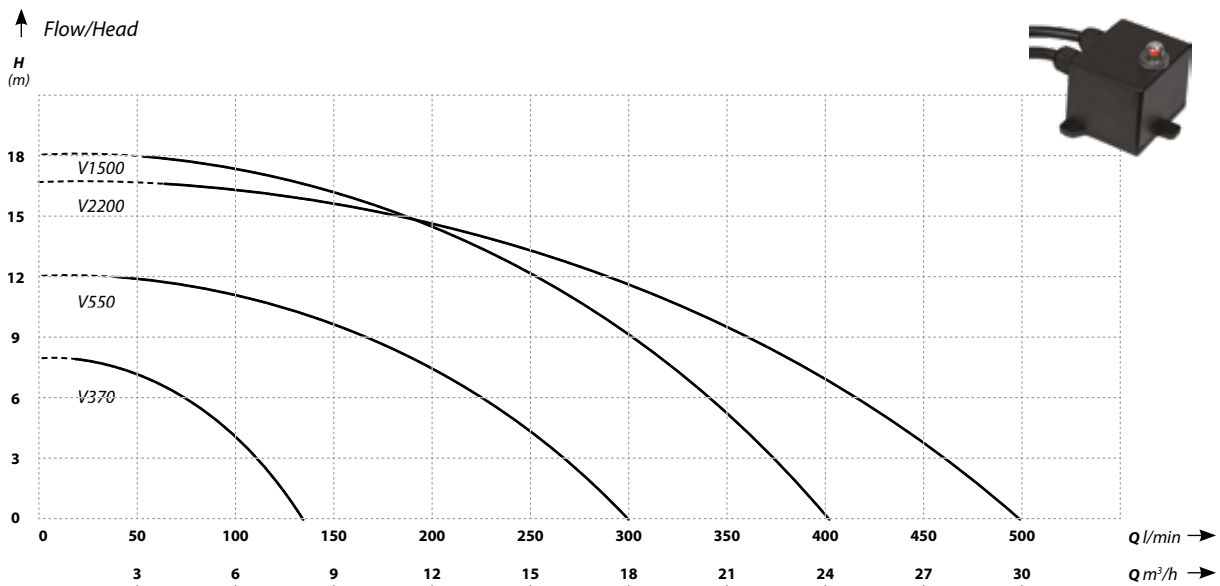
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5 - 9
- Rotational speed of the electric motor RPM

### Materials:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Cutter



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
V370	7,5	130	370	230	3,8	1¼	17/40	10,8
V550	12	300	550	230	5,7	2	25/44	17,5
V1500	18	400	1500	230	12,5	2	26/50	23
V 2200	16	500	1500	230	12	2	26/50	25,2



## SWQ

Stainless steel submersible pumps with cutting system Designed for pumping dirty water and domestic sewage. The risk of clogging has been minimized due to open cutting system. The top quality stainless steel design ensures long-term and reliable operation of the pumps. The motor is equipped with thermal protection mounted in the winding. In addition, the pumps have a float switch for automatic operation control.

### Application:

Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

### Operating conditions:

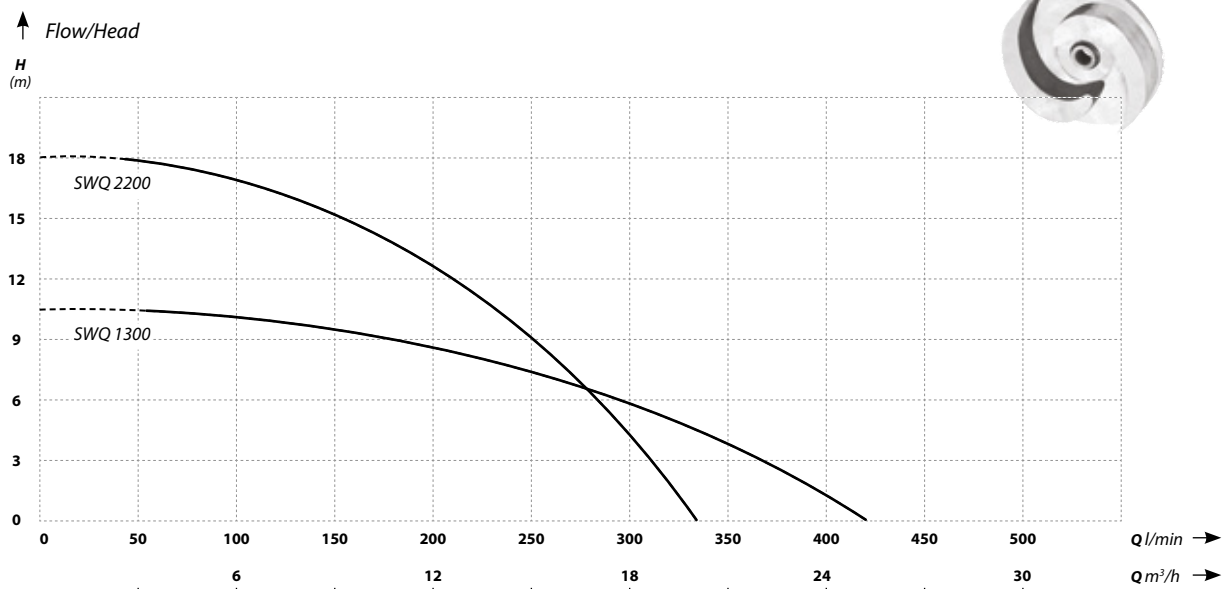
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 4 - 10
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Motor housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller/cutting system: stainless steel AISI 304
- Mechanical seal: ceramics/carbon/NBR
- Cable length: 10 m



Cutter



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Impeller passage (mm)	Amperage (A)	Inlet/outlet (inch)	Dimensions (mm)		Weight (kg)
								H	B	
SWQ 1300	10	417	1300	230	25	7	2	480	250	12,5
SWQ 2200	18	333	2200	230	25	9	2	600	320	14,5





## WQI

Professional submersible pump with cutting system. The pumps are designed for pumping domestic sewage and draining flooded rooms. In order to minimize the risk of clogging, the pumps are equipped with an exceptionally effective three-channel "screw" cutting system. To ensure reliable operation, the pumps have overload protection mounted in the motor winding. To prevent motor overloading, the protection will stop the pump. The construction made of cast iron, alloy and stainless steel makes the pumps resistant to mechanical damage and chemical corrosion. The pumps are equipped with a float switch for automatic operation control, and the pump outlet provides connection of the discharge hose with a hose clamp or fast-connection.

### Application:

Pumping sewage from domestic and agricultural septic tanks, and draining flooded rooms, houses, garages and premises. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes. Domestic sewage treatment plants.

### Operating conditions:

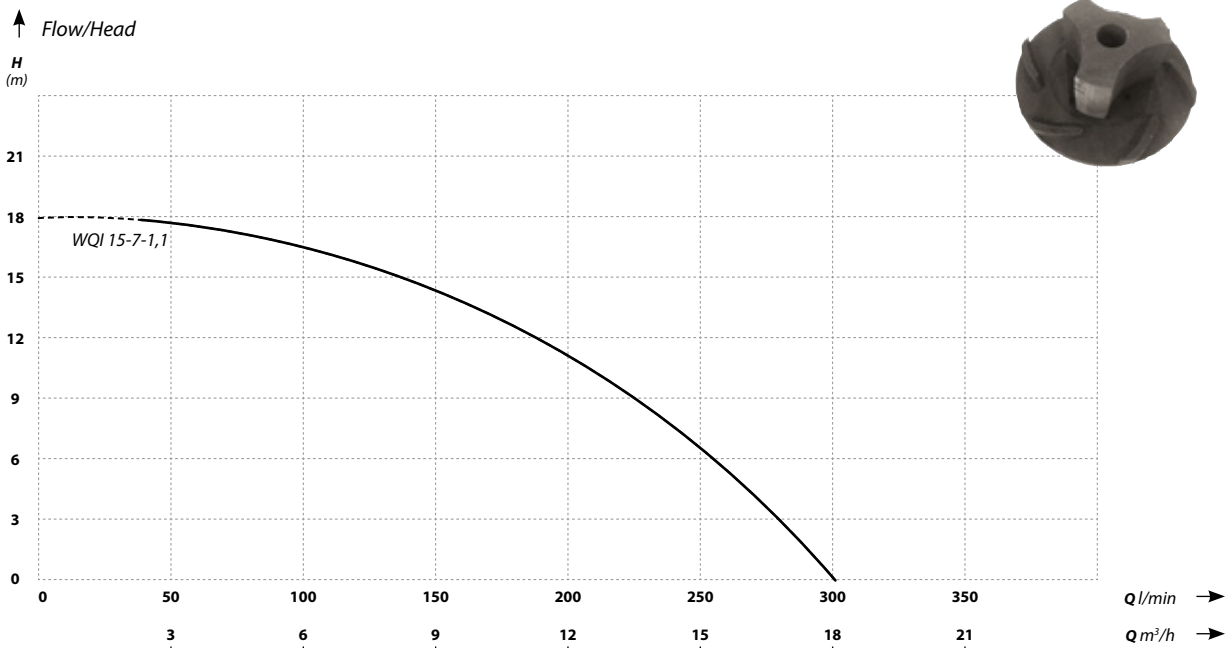
- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class B Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 5-9
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Cutting knife: grey cast iron/stainless steel AISI 304
- Mechanical seal: ceramics/graphite/NBR
- Cable length: 10 m



Cutter



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (cm)	Weight (kg)
WQI 15-7-1,1	18	300	1100	230	6	2	27/51	23,7



# Kraken

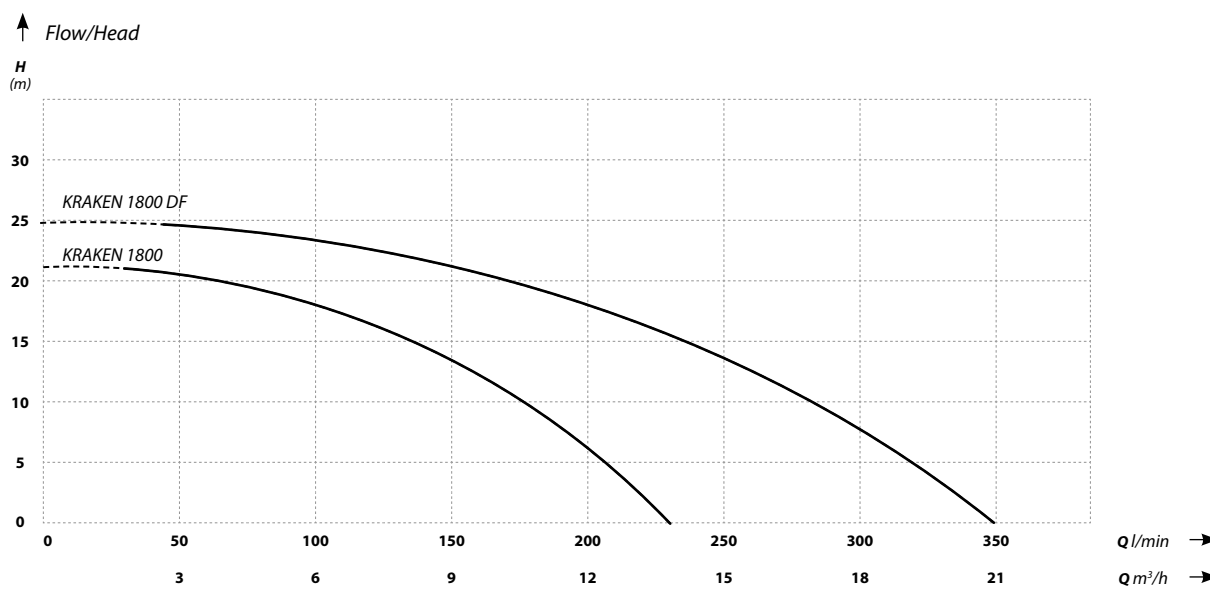
A series of professional submersible pumps with cutting system designed for customers who need a strong and reliable product in their professional work. The top quality materials used and very high performance makes KRAKEN 1800 pumps suitable for operation in harsh conditions - stainless steel and cast iron design ensures the pumps withstand the adverse sewage environment. These pumps are widely used in sewage pumping stations. Pump operation is controlled by the factory-mounted float switch. KRAKEN 1800 is equipped with a multi-channel disk cutting system in order to minimize the risk of clogging. KRAKEN 1800 DF has an exceptionally effective two-channel screw cutting system. The motors with Class F winding insulation are additionally equipped with thermal protection mounted in the winding. Both models are supplied with flanges for connecting pipes or fast-connection, and an adapter for connecting 2" discharge hose with a hose clamp. The pumps are available as single-phase 230 V ~ / 50 Hz versions, with a float switch, and 3-phase 400 V ~ 3 / 50Hz version.

KRAKEN DF can be supplied with a guide rail system for installation in pump stations. The guide rail system is sold separately.

PUMP TEST: <https://youtu.be/srPLsalkSqM>

## Application:

Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes



## Kraken 1800 cd.

### Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 4-10
- Liquid density: 1200 kg/m<sup>3</sup>
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cutting knives: grey cast iron/stainless steel AISI 304
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions (cm)			Weight (kg)
							Depth	Width	Height	
KRAKEN 1800	21	233	1800	230/400	9,5/4,2	2	317	190	513	34

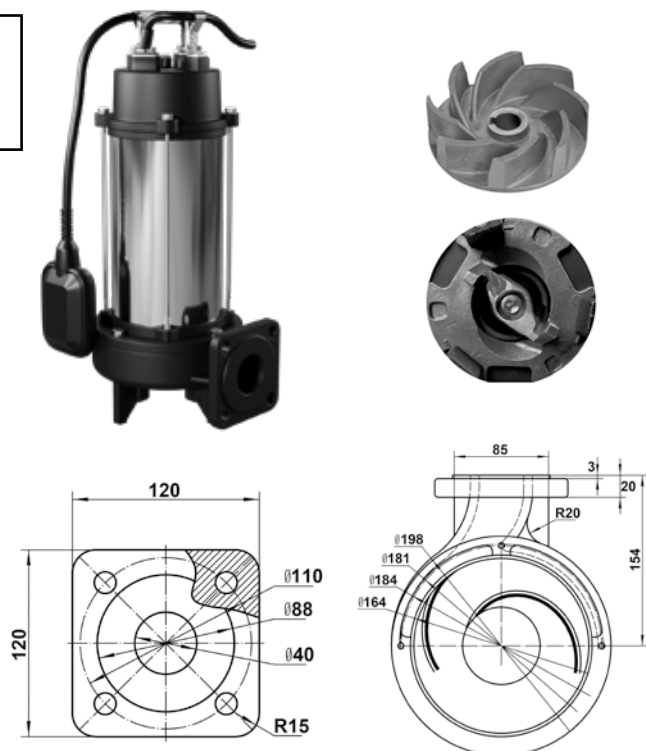
## Kraken 1800 DF

### Operating conditions:

- Maximum liquid temperature 40°C
- Maximum ambient temperature 40°C
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Ingress protection - IP68
- Water PH: 4-10
- Liquid density: 1200 kg/m<sup>3</sup>
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Motor housing: stainless steel AISI 304
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cutting knives: grey cast iron/stainless steel AISI 304
- Cable length: 10 m



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions (cm)			Weight (kg)
							Depth	Width	Height	
KRAKEN 1800 DF	25	350	1800	230/400	9,5/4,2	2	343	198	500	35



# UP 60/80

**High-pressure submersible sewage pump with cutting system**

High-pressure submersible sewage pump with cutting system

The UP60/80 pumps are equipped with a two-stage hydraulics to increase the maximum pressure. An important feature of KRAKEN 1800 is a multi-channel disk cutting system designed to minimize the risk of clogging. In addition, the outlet is threaded in order to connect a pipeline or fast connection. The pump is supplied with thermal protection mounted in the motor winding.

## Application:

The pump is designed for operating in pressure sewage systems.

## Operating conditions:

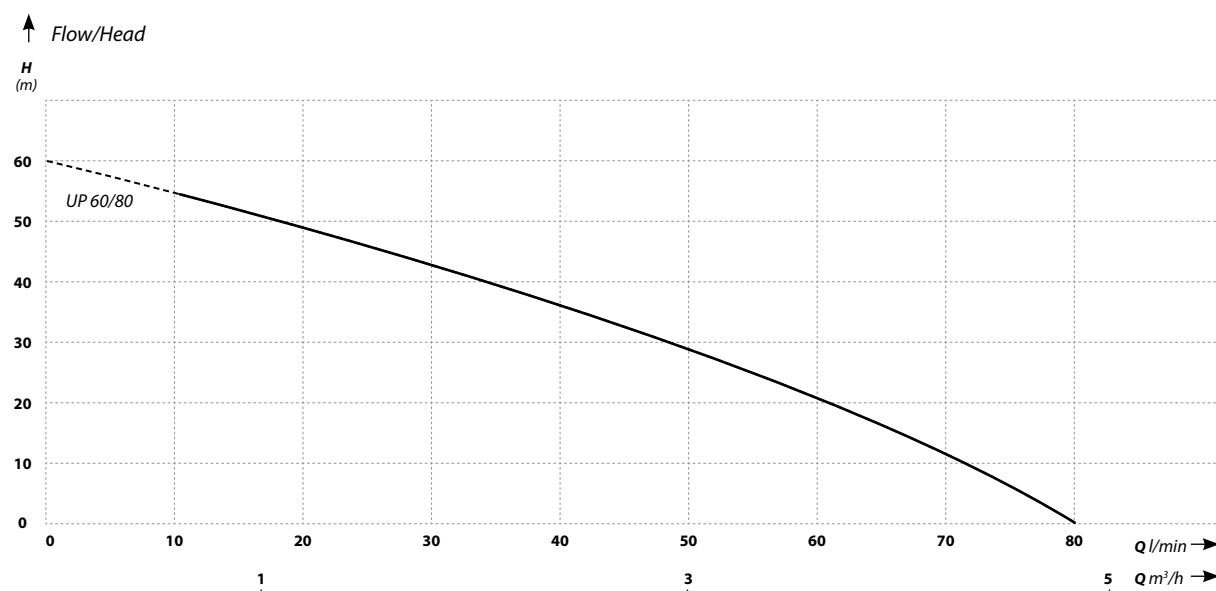
- Maximum liquid temperature 50°C (60)
- Maximum ambient temperature 40°C
- Power: 230 V / 400 V
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Maximum liquid temperature: - IP68
- Water PH: 4-10
- Liquid density: 1200 kg/m<sup>3</sup>
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Motor housing: stainless steel AISI 304
- Body: ASTM cast iron
- Shaft and rotor: stainless steel AISI 420
- Impeller: Stainless steel AISI 440
- Mechanical seal: SiC-SiC
- Cutting knives: Stainless steel AISI 440
- Cable length: 10 m



Cutter



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions (mm)		Weight (kg)
							Height	Base	
UP 60/80	60	80	1500	230	12	1¼	550	250	31,5



## ZWQ

A series of professional submersible pumps with cutting system, designed for customers who need a strong and reliable product in their professional work. The top quality materials used and very high performance makes ZWQ pumps suitable for operation in harsh conditions. These pumps are widely used in sewage pumping stations. Single-phase pumps have a float switch for operation control. All pumps are equipped with a three-channel cutting system integrated with the impeller in order to minimize the risk of clogging. All ZWQ pumps are suitable for installation with a guide rail system. The motors have Class F winding insulation and single-phase versions are additionally equipped with thermal protection mounted in the winding. Flanges for connecting pipes or fast-connection. The pumps are available as single-phase 230 V ~ / 50 Hz versions with a float switch, and 3-phase 400 V ~ 3 / 50 Hz version.

The pumps have bearings manufactured by NSK in Japan.

The pumps can be supplied with guide rail systems for installation in pump stations. The guide rail system is sold separately.

### Application:

Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes.

### Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 40°C
- Power: 230 V / 400 V
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Maximum liquid temperature: - IP68
- Water PH: 4-10
- Rotational speed of the electric motor: 2850 RPM

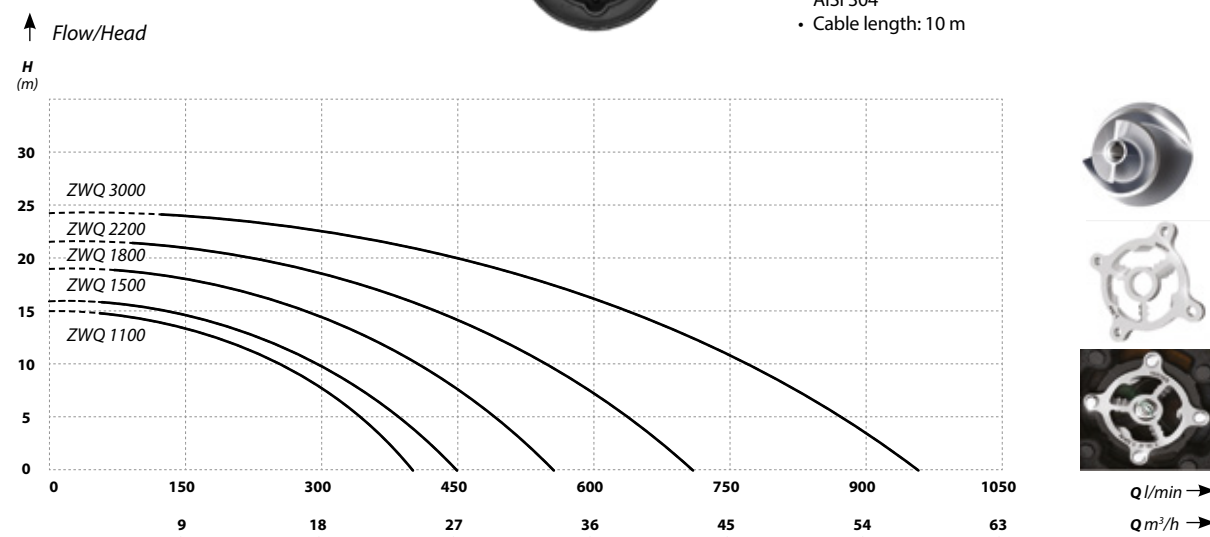


Zobacz działanie i budowę pompy na:  
<http://bit.ly/pompazwq>



### Materials:

- Motor housing: cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: grey cast iron
- Mechanical seal: ceramics/graphite/NBR
- Cutting knives: grey cast iron/stainless steel AISI 304
- Cable length: 10 m

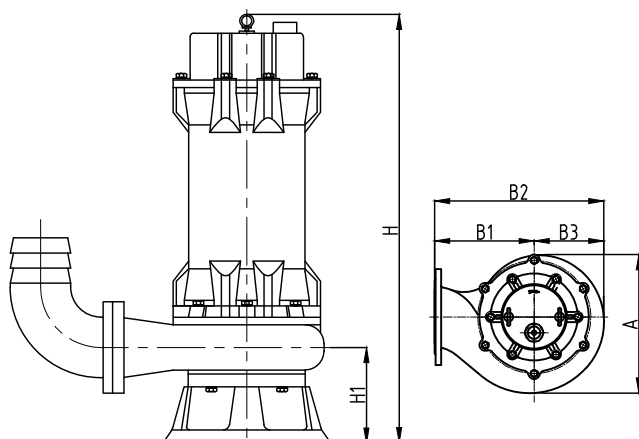


Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
ZWQ 1100	15	400	1,1	230	6,5	2	23
ZWQ 1500	16	450	1,5	230/400	8,5/3,8	2	26
ZWQ 1800	18	550	1,8	230/400	8,6/3,9	2½	27
ZWQ 2200	22	700	2,2	400	4,5	2½	38
ZWQ 3000	24	950	3,0	400	6,3	3	49



## ZWQ cd.

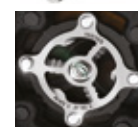
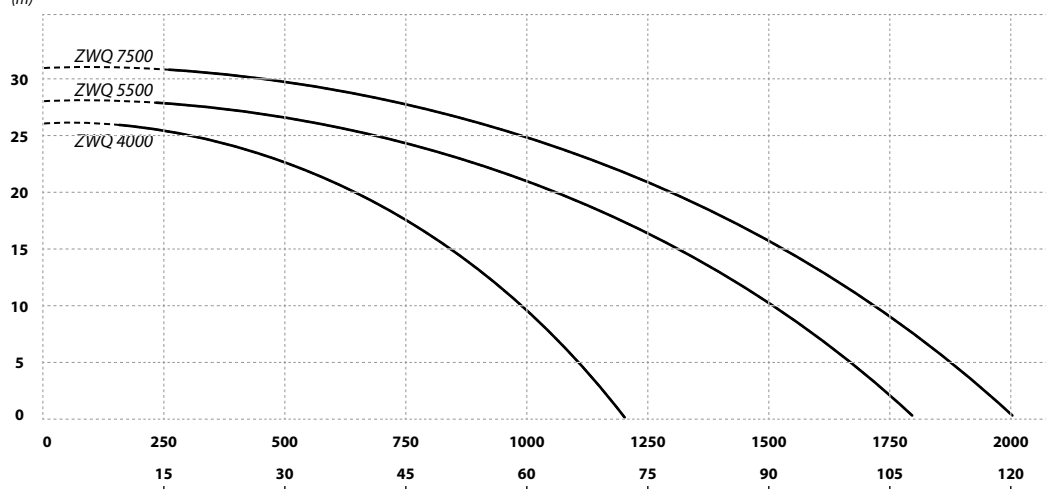
Name	Dimensions (mm)						
	A	B	C	D	E	F	G
ZWQ 1500	50	250	568	240	117	110	15
ZWQ 1800	65	250	568	240	117	110	15
ZWQ 2200	65	295	585	265	127	130	15
ZWQ 3000	80	280	575	240	123	110	15
ZWQ 4000	80	315	590	265	127	130	15
ZWQ 5500	100	325	650	268	131	160	18
ZWQ 7500	100	335	660	285	137	160	18



Zobacz działanie i budowę pompy na:  
<http://bit.ly/pompazwq>

↑ Flow/Head

H  
(m)



Q l/min →

Q m³/h →

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Weight (kg)
ZWQ 4000	26	1200	4,0	400	8,5	3	54
ZWQ 5500	28	1800	5,5	400	11	4	70
ZWQ 7500	31	2000	7,5	400	14,8	4	77



# MWQ

## Submersible sewage pumps with agitator (mixer)

A series of professional submersible pumps with mixing system, designed for customers who need a strong and reliable product in their professional work. These pumps are widely used in sewage pumping stations. MWQ pumps are designed for pumping raw sewage from pumping stations where dense sludge may be deposited. The pumps have a special additional external rotor (agitator) for mixing and splitting heavy sludge. Materials used guarantee long-term and faultless operation. Motor shaft is made of stainless steel. Motor chamber is sealed with a double SiC/ SiC mechanical seal. The pump uses a multi-channel impeller for pumping large diameter impurities. All MWQ pumps are suitable for installation with a guide rail system. The motors have Class F winding insulation and single-phase versions are additionally equipped with thermal protection mounted in the winding. The pumps have bearings manufactured by NSK in Japan. Flanges for connecting pipes or fast-connection. The pumps are available as single-phase 230V ~/ 50 Hz versions with a float switch, and 3-phase 400 V ~ 3 / 50 Hz version. The pumps can be supplied with guide rail systems for installation in pump stations. The guide rail system is sold separately.

### Application:

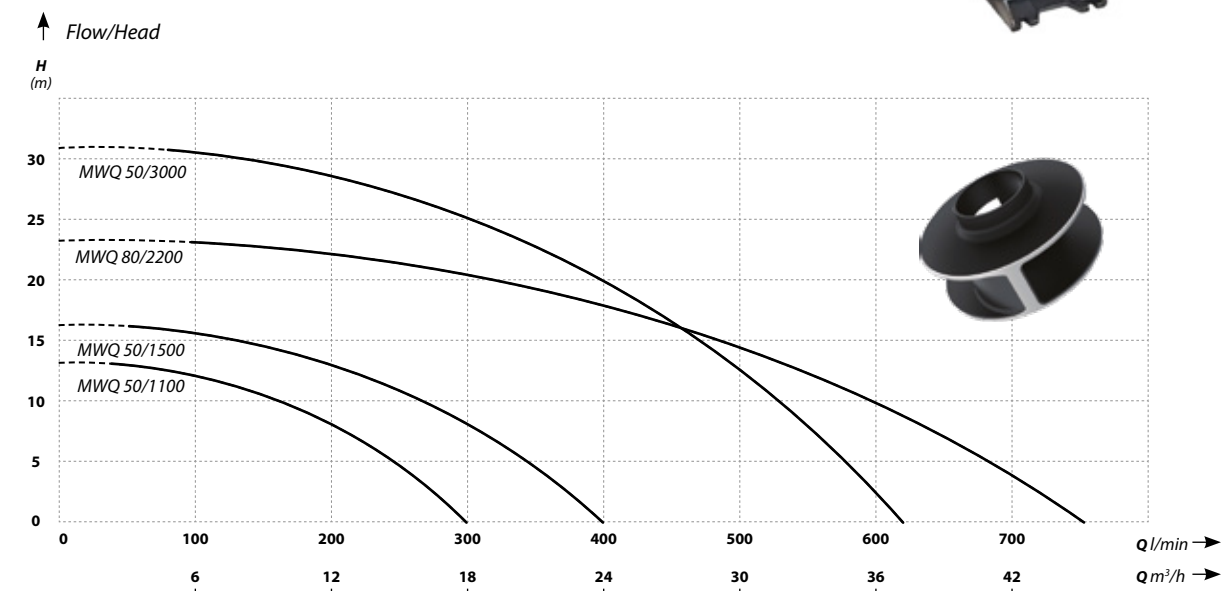
Pumping sewage from domestic septic tanks and draining flooded rooms, houses, garages and premises. Sewage treatment plants. Pumping rainwater and surface water from ponds, lakes and rivers, supplying water to waterholes

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 40°C
- Zasilanie: 230 V / 400 V
- Thermal protection: yes
- Class F Insulation
- Operating mode - continuous
- Maximum liquid temperature: - IP68
- Water PH: 5-10
- Liquid density: 1200 kg/m<sup>3</sup>
- Rotational speed of the electric motor:
- 2850 RPM

### Materials:

- Motor housing: grey cast iron
- Body: grey cast iron
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Agitator: Grey cast iron
- Bearings: NSK
- Mechanical seal: Double, ceramics/ graphite/NBR
- Cable length: 10 m

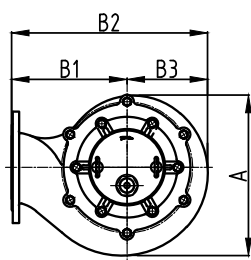
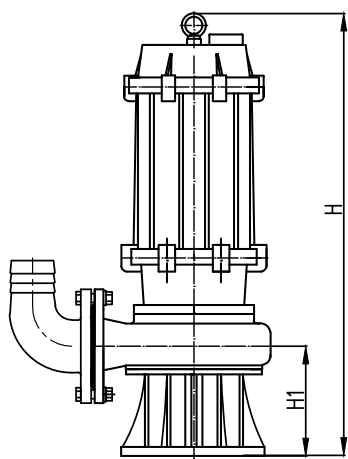


Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Agitator working range (mm)	Weight (kg)
MWQ 50/1100	13	300	1,1	230/400	6,5/2,2	50	1200	23
MWQ 50/1500	16	400	1,5	230/400	7,5/2,5	50	1200	27
MWQ 80/2200	22,5	750	2,2	400	4,5	80	1600	37
MWQ 50/3000	31	620	3,0	400	6,1	50	1200	43



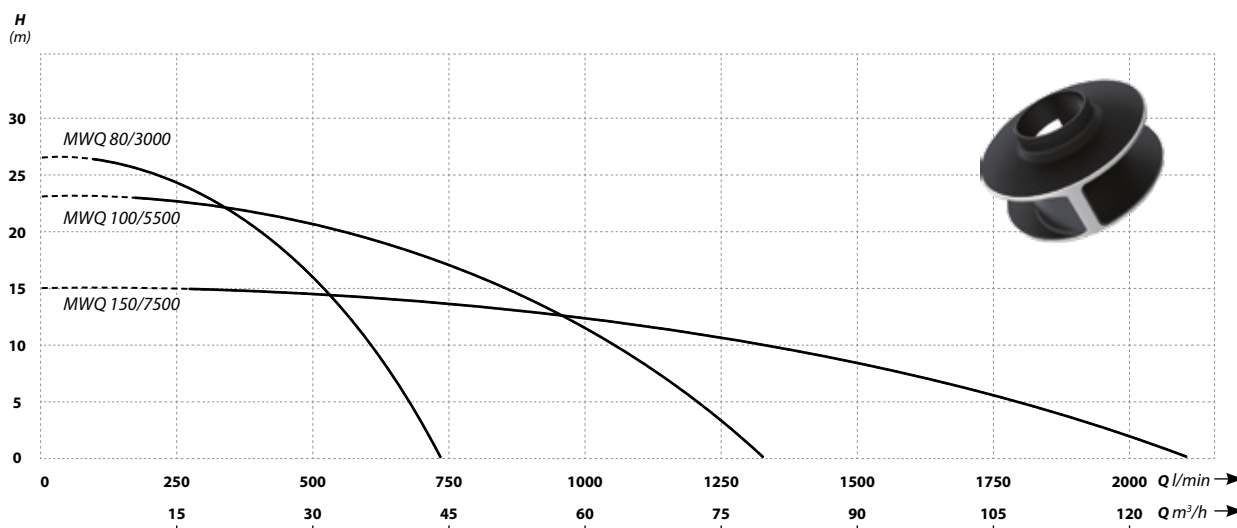


# MWQ



Name	Dimensions (mm)					
	H	H1	A	B1	B2	B3
MWQ 50/1100	471	104	187	137	230	190
MWQ 50/1500	491	117	208	143	238	230
MWQ 80/2200	551/544	128	230	167	278	230
MWQ 50/3000	556/559	120	215	151	258	230
MWQ 80/3000	559/562	122	220	152	260	230
MWQ 100/5500	660	146	258	180	310	260
MWQ 150/7500	730	175	300	198	330	320

↑ Leistung/Heben



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Agitator working range (mm)	Weight (kg)
MWQ 80/3000	26,5	740	3,0	400	6,1	80	1600	43
MWQ 100/5500	23	1320	5,5	400	9,5	100	2000	73
MWQ 150/7500	15	2100	7,5	400	15,4	150	2500	105



## GUIDE RAIL SYSTEM

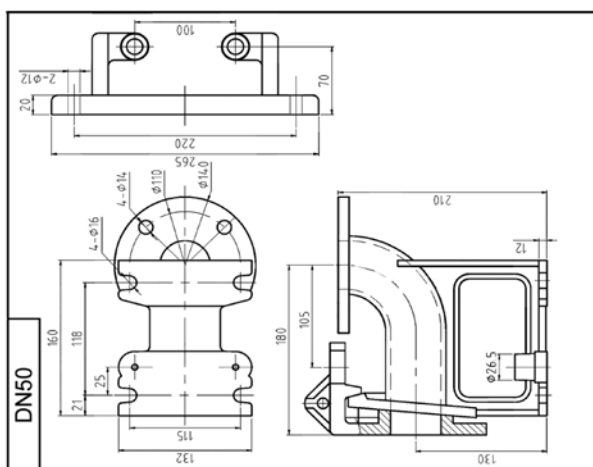
It is a device for mounting submersible pumps in sewage treatment plants on a so-called "rail". In order to mount the pump, it must be equipped with a horizontal flange. The set includes:

- Adapter
- Guide rail saddle
- Upper guide rail bracket

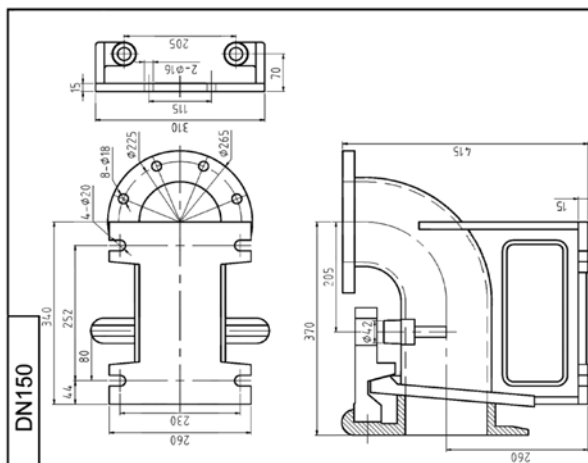
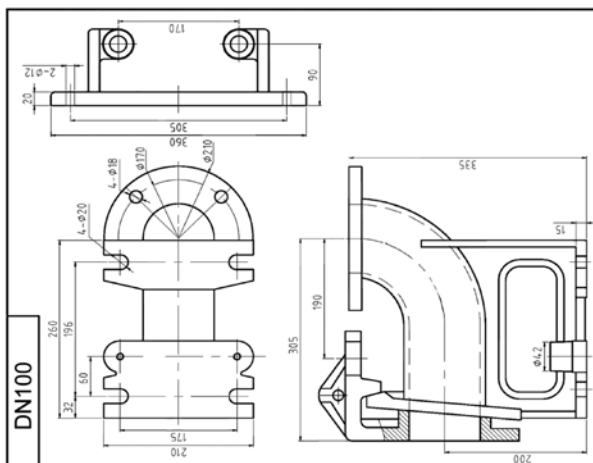
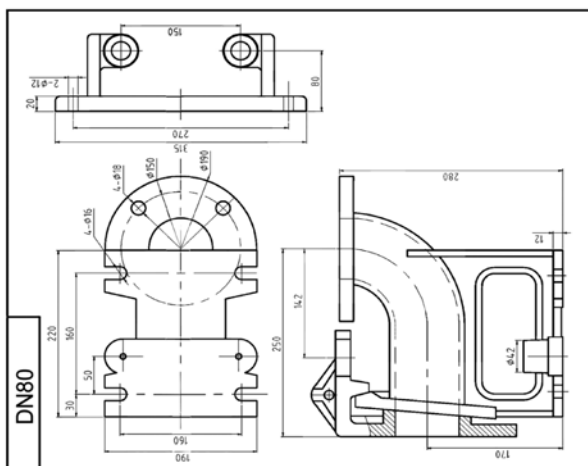
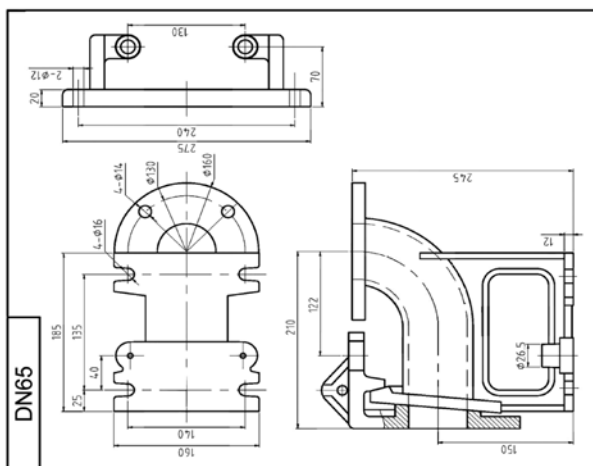
Using guide rail system connection - the lifting system allows to remove the pump without disassembling the entire pipeline. It is particularly important in case of heavy pumps, such as ZWQ or MWQ.

Suitable for:

- ZWQ
- MWQ
- Kraken 1800 DF



Stopa sprzęgająca



# AERAT 1

Hydrotechnical device - Aerator is mainly used in professional aeration applications for marine and freshwater aquaculture. It creates mixtures with a high percentage of dissolved oxygen and has a large area of oxygen aeration, which improves water quality on agriculture farms and supports growth. The device consists of a motor with impeller and a triangular baseplate.

Aerat 1 is designed for clean water from ponds, lakes and other bodies of water without the content of abrasive solids

## Description:

- Advanced technology: a unique air intake chamber and a star-shaped impeller design provide high oxidation capacity and accurate gas and water mixing. Compared to other devices, the amount of oxygen supplied is up to 30% higher, which translates into lower farming costs.
- Many small air bubbles are created on the contact surface of the impeller and the surrounding water. A rotating impeller creates water flow extending horizontally at a certain speed and flowing upwards, stirring the water below and thus increasing the range of oxygenation. This solution eliminates a dead angle effect creating a large gas-water intersection area, which increases the oxygen dissolution.
- A large number of small air bubbles increases the contact surface of water and gas as well as the rate of oxygen dissolution, and as a result, water is more effectively saturated with dissolved oxygen and many harmful substances are removed. Improving water quality directly affects the health of cultured organisms and accelerates the growth rate.
- The equipment is compact, flexible, easy to install and use, which saves installation time and costs.



Model	Voltage (V)	Motor power (kW)	Napowietrznie (m <sup>3</sup> /h)	Natlenianie (kg (O <sub>2</sub> ) / h)	Maks. temperatura (°C)	Głębokość zanurzenia (m)	Obszar aktywnego działania (m <sup>2</sup> )
AERAT 1	400	1,5	10-320	2,5	35	3-5	2000-4000

# Deep well pumps



2" STING	3,5" SDM
3" SQIBO   SCR	4" SD   4" SDM
3" SKM   4" SKM	4" ISP   4" ISPM
OLA INOX   AUTO	3" IBQ
2,5" STM	4" IBQ
3" TI	5" SD
3" SDM	6" SD
3" STM	6" ISP
3" ISP	6" ISP
3,5" SCM   3,5" SC	

## Italian deep well pumps



IBO ITALY FP4	IBO ITALY FP4 Q
IBO ITALY FP4 A	IBO ITALY AP6 F
IBO ITALY FP4 B	IBO ITALY AP6 E
IBO ITALY FP4 D	IBO ITALY AP6 F
IBO ITALY FP4 E	IBO ITALY AP6 H
IBO ITALY FP4 F	IBO ITALY AP6 L
IBO ITALY FP4 H	IBO ITALY FX6   FX8   FX10
IBO ITALY FP4 L	

## Deep well motors



Silniki IBO 3" | 4" | 6"

## Italian deep well motors



4" IOM ITALY	8" IMW ITALY
6" IOM ITALY	10" IMW ITALY
6" IMW ITALY	



## 2" STING

2" STING is the first and at the moment the only IBO 2" deep well displacement pump. The diameter of the pump does not exceed 53 mm and the hydraulic section consists of the stator, rotor and clutch. The pump is mainly made of stainless steel. The pump is equipped with a 14 m cable terminated with a plug and the capacitor is built into the motor so that pump is ready for installation immediately after unpacking. The pump is equipped with thermal protection mounted in the motor winding.

### Application:

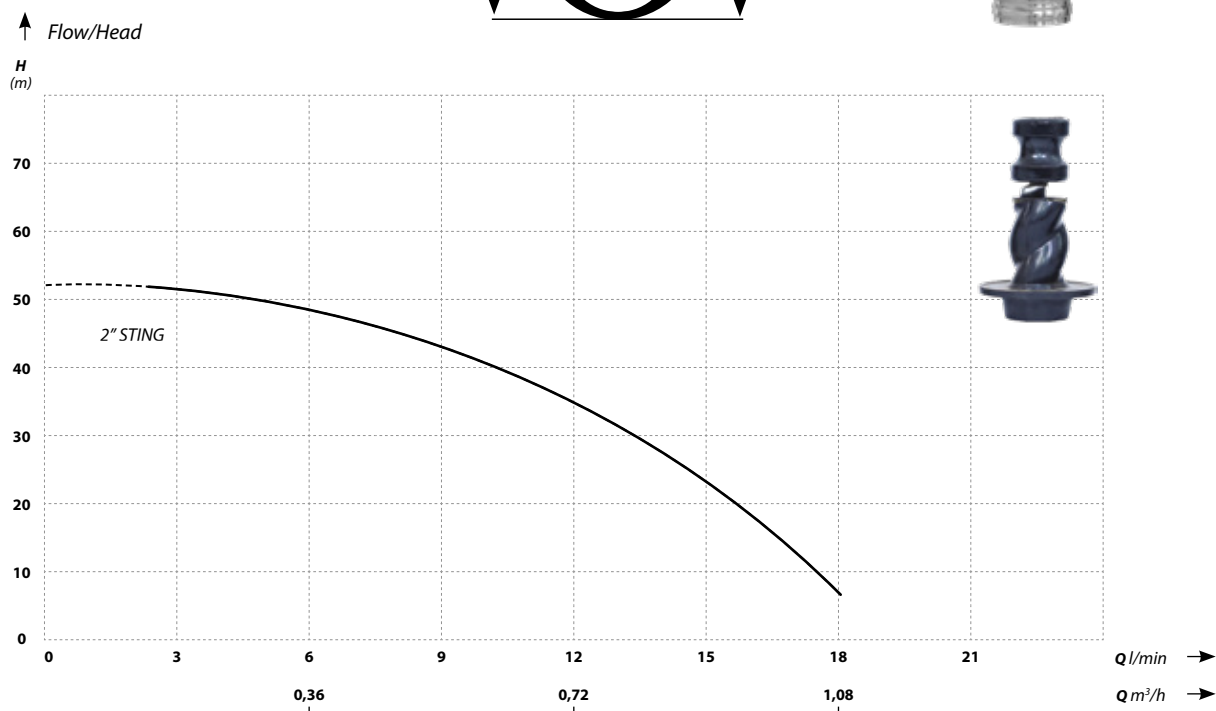
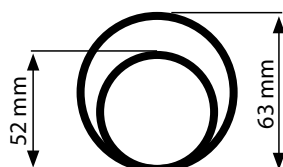
Supply of water from deep wells to small single-family houses and recreational plots. The pump can be used by companies providing hydro-geological services

### Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 35°C
- Voltage: 230 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 14 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 80 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Screw: stainless steel AISI 304
- Stator: NBR
- Rotor: stainless steel AISI 304
- Mechanical seal: ceramics/Sic
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
2"STING	50	18	370	230	1,8	½	52/690	11



## 3" SQIBO | SCR

75 mm deep well displacement pumps (SQIBO/3"SCR). The pump is mainly made of stainless steel, e.g. housing, bolts, inlet/outlet and rotor. Depending on the customer's requirements, the pumps are equipped with power cables of varying lengths terminated with a plug. Due to the capacitor built into the motor, the pump is ready for installation immediately after unpacking. The pump is equipped with thermal protection mounted in the motor winding. SQIBO and SCR pumps are among the most popular screw pumps available on the Polish market. The pumps are recognized by customers for their robust design and attractive price.

### Application:

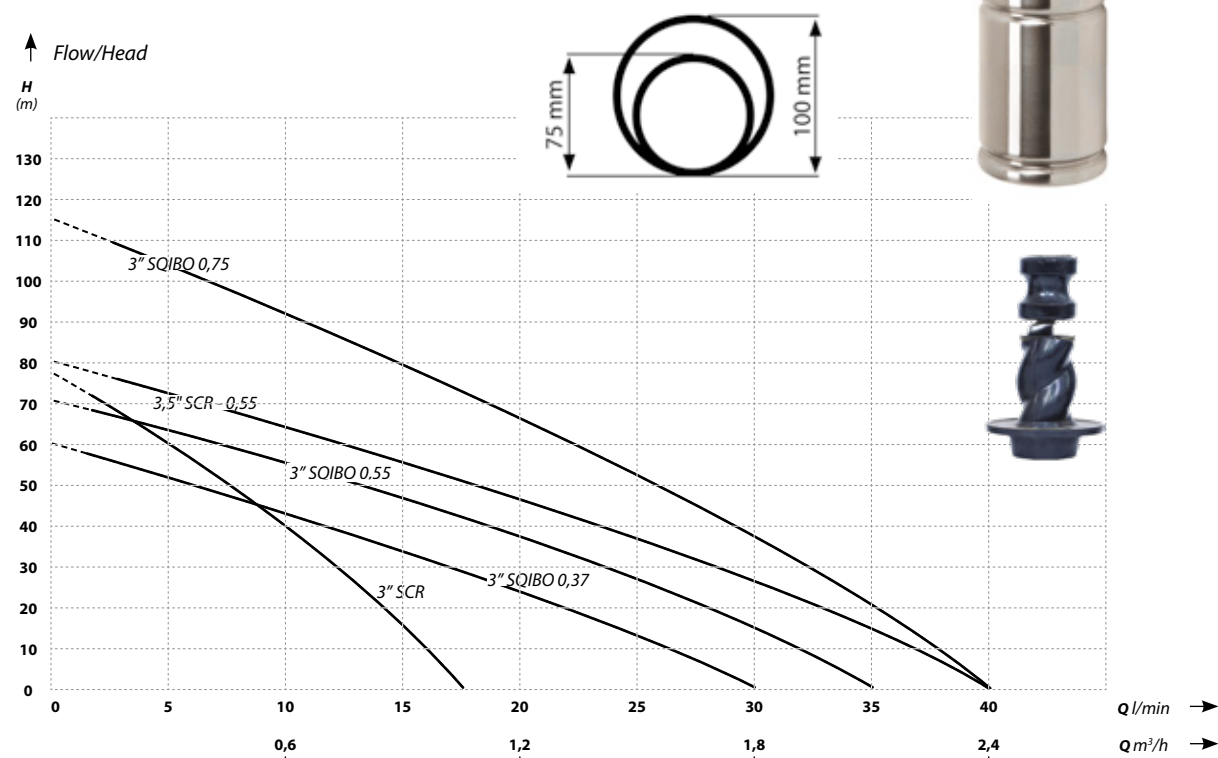
Supply of water to single-family houses and holiday houses.

### Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 35°C
- Voltage: 230 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 15 m, 20 m lub 25 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 80 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Suction/pressure connection: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Stator: NBR
- Rotor: stainless steel AISI 304
- Mechanical seal: ceramics/Sic
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Cable length (m)	Dimensions Dia/H (mm)	Weight (kg)
3" SCR	77	17	250	230	2,5	¾	14	75/550	10
3" SQIBO 0,37	60	30	370	230	3,4	1	15	75/580	7,5
3" SQIBO 0,55	70	35	550	230	4	1	15/20	75/610	9
3" SQIBO 0,75	115	40	750	230	6,5	1	15/25	75/650	10,5
3,5" SCR - 0,55	80	40	550	230	5,2	1	14	90/600	11





## 3" SKM | 4" SKM

Multi-stage deep well peripheral pumps.

Due to the capacitor built into the motor, pumps are ready for installation immediately after unpacking. The pumps are supplied with thermal protection mounted in the motor winding.

Pumps are used to supply water to single and multi-family houses and holiday houses, irrigating gardens.

### Characteristics:

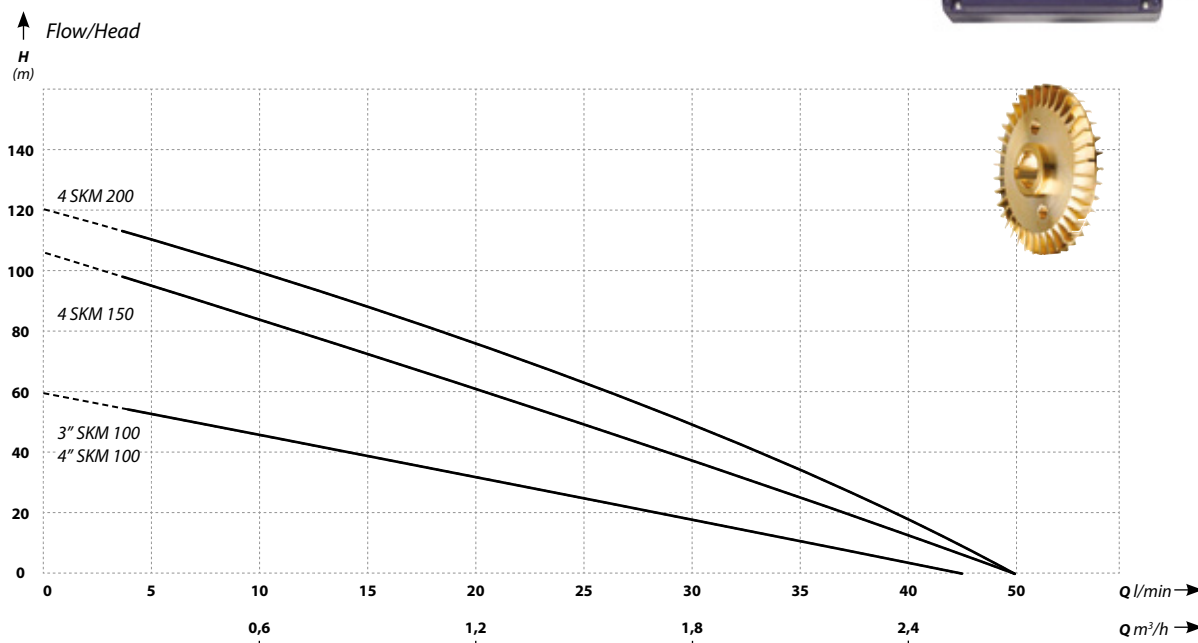
- Monobloc design (small pump height)
- Brass impellers
- 4"SKM (230V) pumps have a power cable with a plug, 20m long for pumps with a starting box and 15m for pumps with a built-in capacitor, 3"SKM have a built-in capacitor and a 15m or 20m cable
- SKT pumps (400 V) have a 15 cm long power cable
- Thermal protection built into the motor winding
- Circuit breaker for the version with a starting box
- Warranty 24 months
- Warranty and post-warranty service

### Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 35°C
- Power supply: 230 V or 400 V
- Insulation Class: B
- Working mode: continuous
- Security: IP68
- Power cable length: 15 m or 20 m
- Working position: vertical
- number of starts per hour: 20
- immersion depth: 80 m
- Engine speed: 2850 RPM

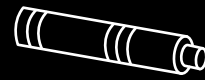
### Materials:

- Suction/pressure connection: brass
- Housing: AISI 304 stainless steel
- Shaft and rotor: AISI 304 stainless steel
- Impeller: brass
- Mechanical gland: Carbon-Sic/Sic
- Engine: oil cooled



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3" SKM 100	60	45	750	230	5	1	75/590	12
4" SKM 100	60	45	750	230	5,8	1	98/530	16
4" SKM 150/SKT 150	107	50	1100	230/400	10	1	98/530	16
4" SKM 200/SKT 200	120	50	1500	230/400	11	1	98/540	17





# OLA INOX | AUTO

## OLA / OLA INOX

Wielostopniowe pompy głębinowe, o średnicy 98mm do studni kręgowych i wierconych 98 mm diameter multi-stage deep well pumps for minimum 4" diameter ring and drilled wells. The pumps have a motor cooling jacket so they do not have to be completely submerged, and there is no need for a jacket tube, which is required for classic multi-stage pumps. Due to the capacitor built into the motor, the pump is ready for installation immediately after unpacking. The pumps are equipped with thermal protection mounted in the motor winding.

## OLA AUTO

The OLA AUTO pumps are equipped with automatic pump control so there is no need to install additional equipment such as a pressure switch or external PC or SK control. The principle of the sensor operation is based on the flow rate monitoring. When the pump is connected to the electrical or hydraulic system, opening the tap will start the pump, and closing it will stop the pump within a few seconds. The pump has a built-in non-return valve that limits the return of water from the system.

Both Ola 60/60 and OLA AUTO pumps can be installed together with a pressure tank, however, it should be remembered that an additional pressure switch does not need to be installed with OLA AUTO pumps.

## Application:

Pumping water from ring wells, deep water wells, lakes and rivers. Supply of utility (tap) water to holiday houses and single-family houses. Irrigating gardens.



OLA INOX    OLA    OLA AUTO

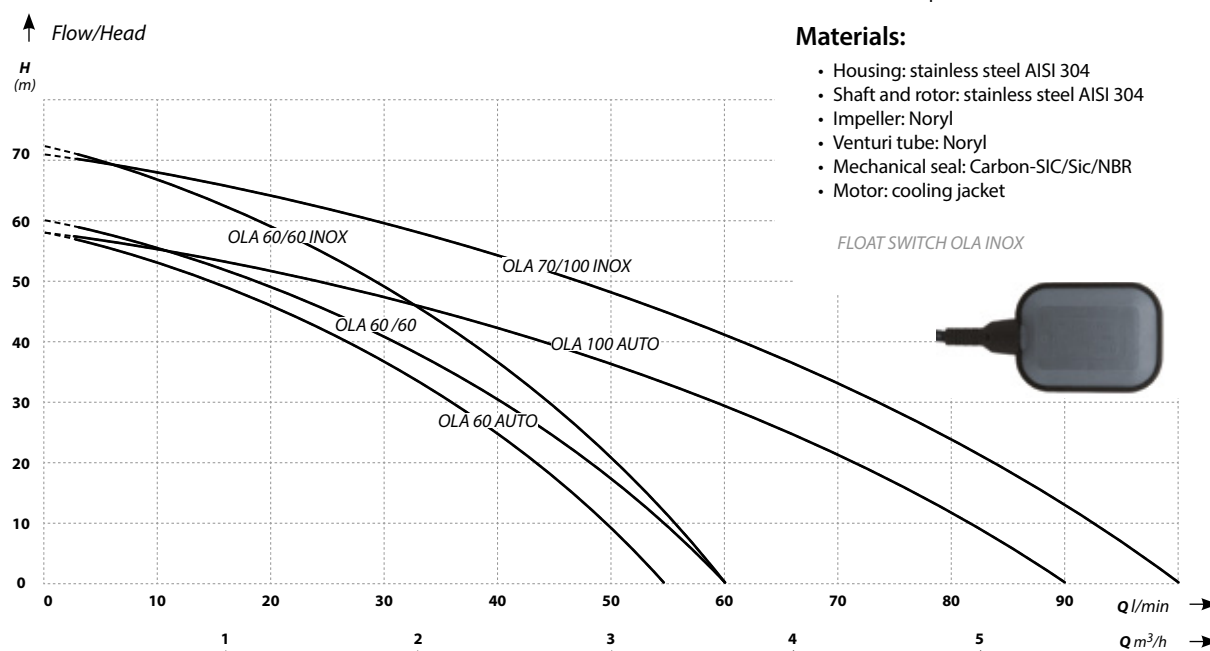
## Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 35°C
- Voltage: 230 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m
- Workplace: vertical
- Max. liczba uruchomień na 1 h: 20
- Max. głębokość zanurzenia: 80 m
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Carbon-SiC/SiC/NBR
- Motor: cooling jacket

FLOAT SWITCH OLA INOX



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Cable length (m)	Dimensions Dia/H (mm)	Weight (kg)
OLA 60 / 60	60	60	1000	230	5,2	1¼	20	69/630	10,75
OLA 60 AUTO	58	55	450	230	4,1	1	20	98/890	11
OLA 100 AUTO	58	90	800	230	5,0	1	20	98/920	14
OLA 60/60 INOX	72	60	800	230	4,6	1	20	98/680	11,5
OLA 70/100 INOX	71	100	1100	230	6,9	1	20	98/770	13,4



## 2,5" STM



Increased resistance to sand

2.5" (66 mm diameter) multi-stage deep well pumps with increased resistance to sand. The 2.5 STM pumps were the first multi-stage pumps available on the Polish market with a diameter of less than 3". The pump capacitor is built into the motor. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials. The pumps are equipped with thermal protection mounted in the motor winding.

### Application:

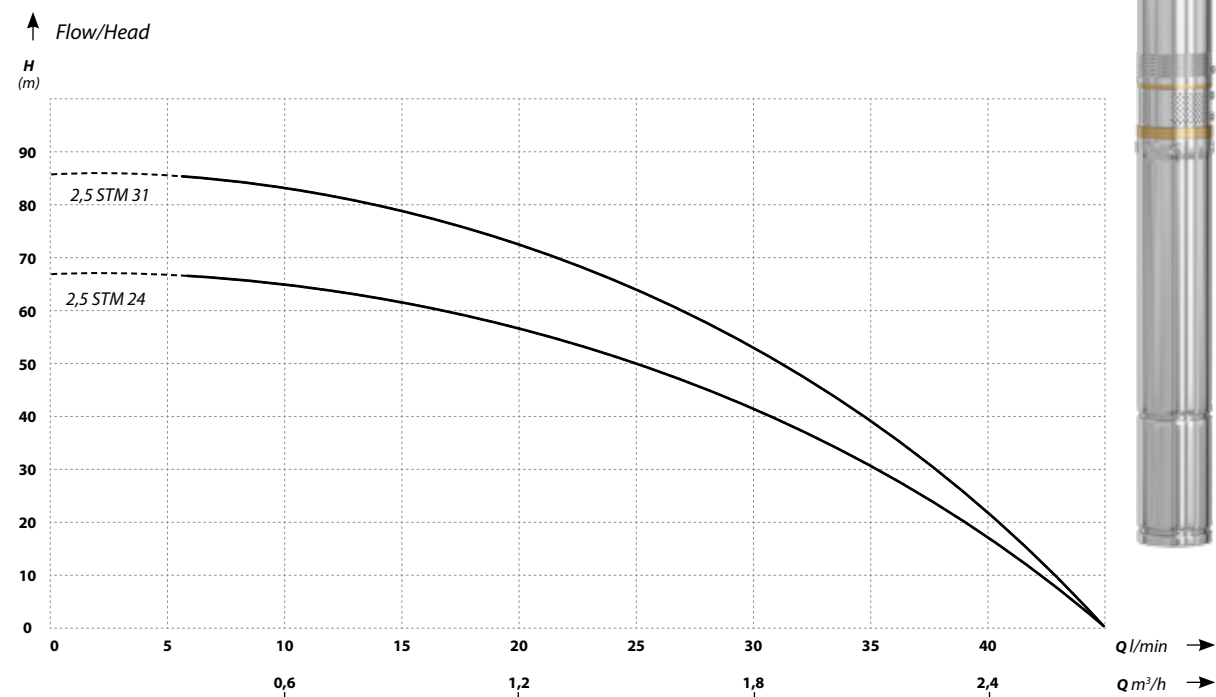
Supply of water to single-family houses and holiday houses. Irrigating small gardens.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m lub 1,5 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: steel Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
2,5 STM 24	66	45	370	230	2,8	1	66/1305	7,8
2,5 STM 31	85	45	550	230	4,2	1	66/1565	9,5



## 3" TI



**Increased resistance to sand  
Floating impellers**

3 inch (74 mm diameter) multi-stage deep well pumps with increased resistance to sand, intended for 3 and 4 inch wells. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials: brass, AISI 304 stainless steel, and high quality plastic materials. The pump capacitor is built into the motor so the electrical system is much simpler than in case of pumps with a control box. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug. The pumps are equipped with thermal protection mounted in the motor winding. Due to their reliable operation and high performance, the 3" TI pumps are among the most often installed 3" pumps in Poland.

### Application:

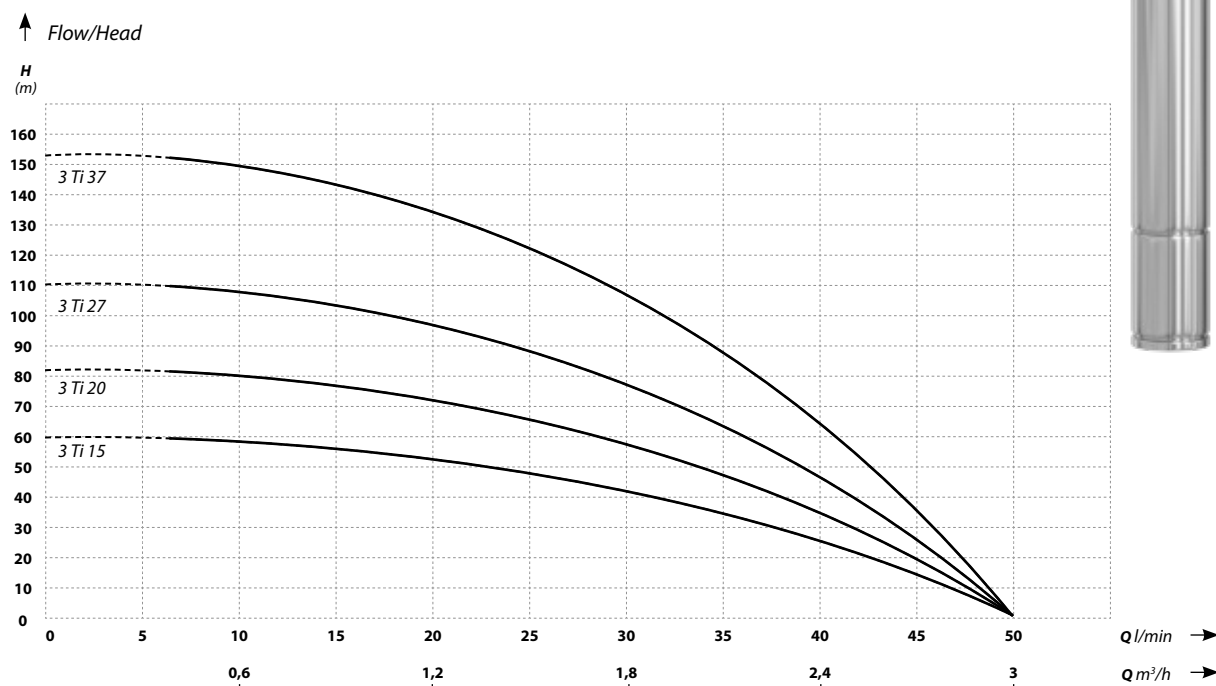
Supply of water to single-family houses and holiday houses. Irrigating gardens

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V or 400 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m lub 1,5 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3 Ti 15	60	50	370	230	3,2	1	75/1035	10
3 Ti 20	82	50	550	230	4,2	1	75/1210	12
3 Ti 27	110	50	750	230	5,2	1	75/1470	14
3 Ti 37	152	50	1100	230	6,7	1	75/1810	18



## 3" SDM



**Increased resistance to sand  
Floating impellers**

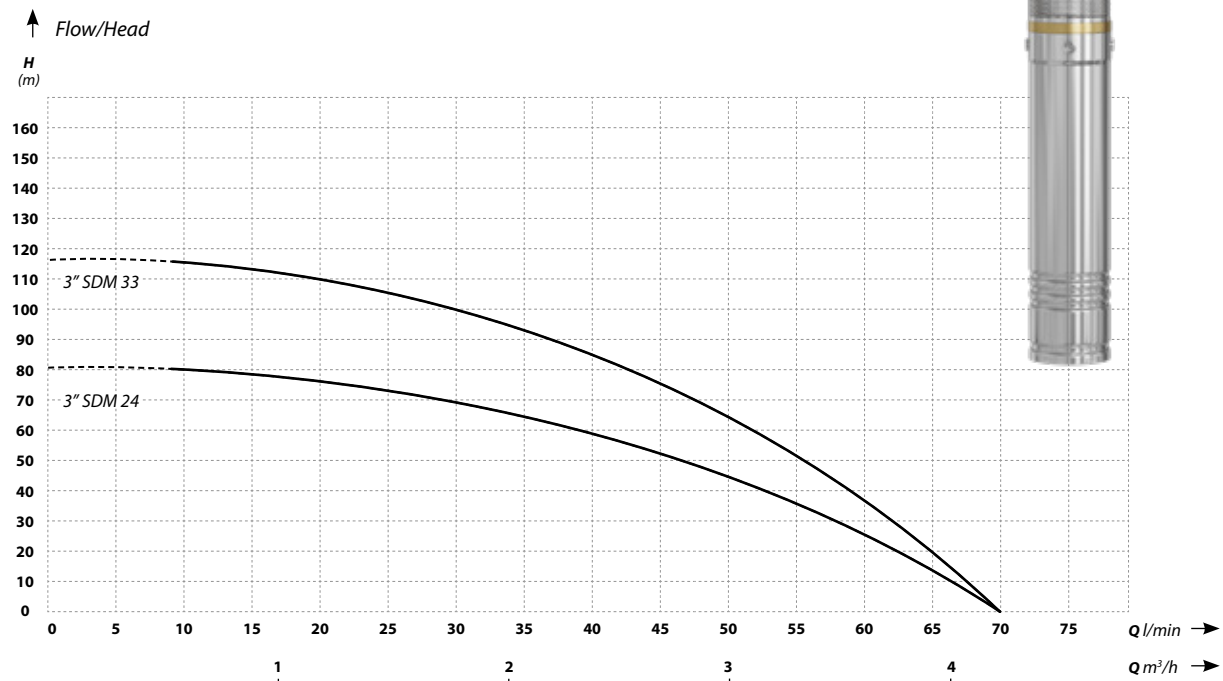
3 inch (74 mm diameter) multi-stage deep well pumps, with increased resistance to sand, intended for 3 and 4 inch wells. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials. The pump capacitor is built into the motor so the electrical system is much simpler than in case of pumps with a control box. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug. The pumps are equipped with thermal protection mounted in the motor winding. The pumps design is the same as 3"Ti pumps but they provide higher flow of up to 70l/min.

### Application:

Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V or 400 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m lub 1,5 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM
- Materials:
- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3" SDM 24	80	70	750	230	6,5	1¼	75/1320	11
3" SDM 33	117	70	1100	230	7,2	1¼	75/1660	13



## 3" STM



**Increased resistance to sand  
Floating impellers**

75 mm diameter multi-stage deep well pumps with increased resistance to sand, intended for 3 and 4 inch wells. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials. The pump capacitor is built into the motor so the electrical system is much simpler than in case of pumps with a control box. The pumps are equipped with thermal protection mounted in the motor winding. The pumps are available with 1.5 m long cable section or 20 m long stock cable terminated with a plug.

The main advantage of the 3STM pumps is their up to 100l/min. flow, exceptionally high as for 3" pumps

### Application:

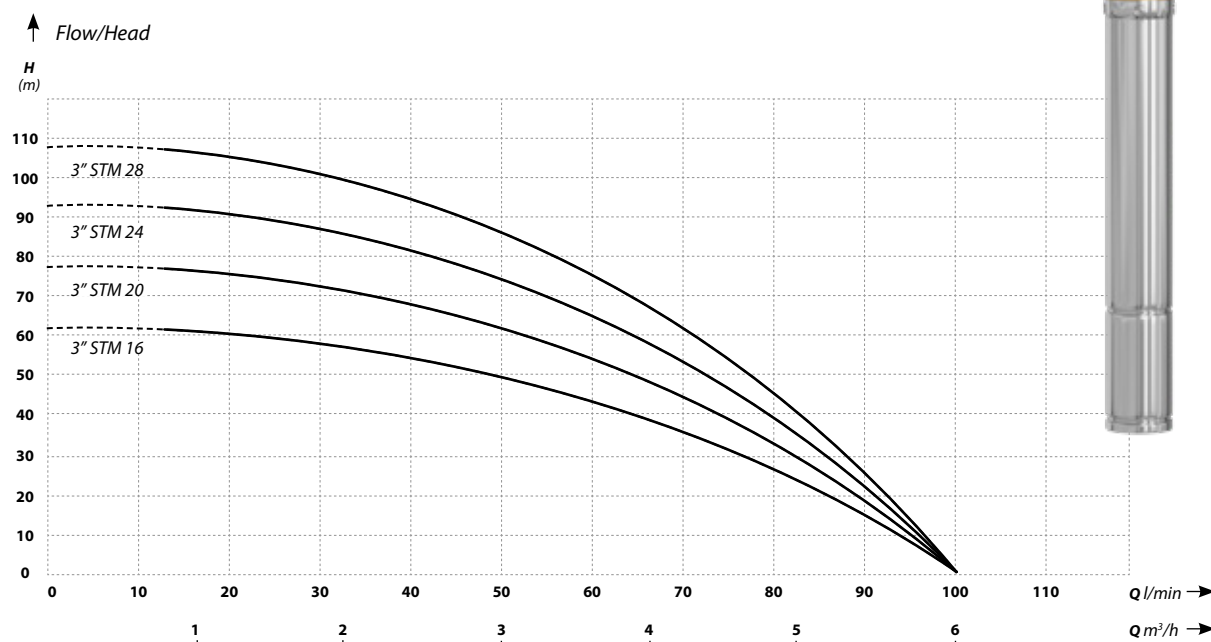
Supply of water to single-family houses and holiday houses. Irrigating gardens.  
Drainage/dewatering.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 1,5m lub 20 m
- Workplace: vertical
- Max. number of starts per hour: 30
- Max. immersion depth: 80 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3" STM 16	62	100	750	230	5,5	1¼	75/1260	10
3" STM 20	77	100	1100	230	6,7	1¼	75/1480	12
3" STM 24	93	100	1100	230	6,7	1¼	75/1580	14
3" STM 28	108	100	1500	230	9,7	1¼	75/1760	16



## 3,5" SCM | 3,5" SC

90 mm diameter multi-stage deep well pumps. Due to the proven design, it is the most economical solution for single-family houses and farms. With its small diameter, the capacitor built into the motor and the factory-mounted 18 m long cable, the pump is ready for installation immediately after unpacking. Pumps are available as 230 V ~ /50 Hz and 400 V ~ 3/50 Hz versions. Single-phase pumps are equipped with thermal protection mounted in the motor winding.

### Application:

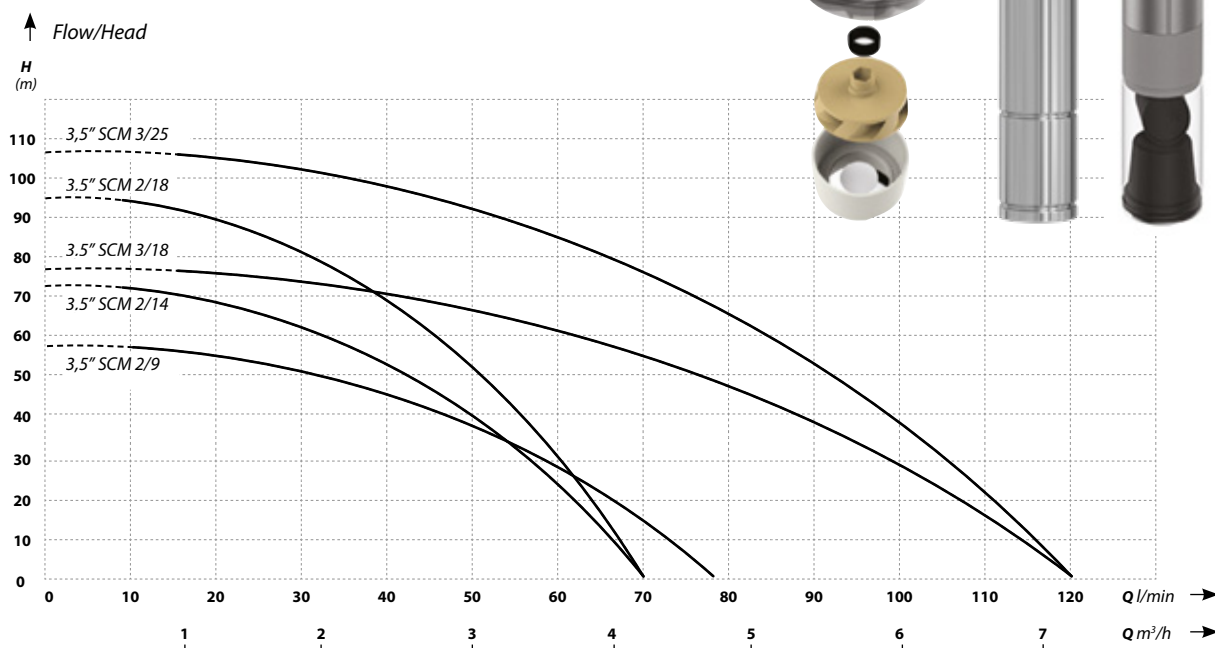
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V or 400 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Inlet/outlet: grey cast iron
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Nazwa	Podnoszenie (m)	Wydajność (l/min)	Moc silnika (W)	Zasilanie (V)	Pobór prądu (A)	Króciec (cale)	Wymiary śr/wys (mm)	Waga (kg)
3,5" SCM 2/9	58	78	550	230	4	1 ½	90/790	13
3,5" SCM 2/14	74	70	1100	230/400	5,8 / 2,8	1½	90/1010	16
3,5" SCM 2/18	95	70	1500	230/400	7,3 / 3,5	1½	90/1160	18
3,5" SCM 3/18	78	120	1500	230/400	7,3 / 3,5	1½	90/1410	19
3,5" SCM 3/25	108	120	1800	230/400	10 / 4,2	1½	90/1780	27



# 3,5" SDM



**Increased resistance to sand  
Floating impellers**

90 mm diameter multi-stage deep well pumps with increased resistance to sand. Power supply 230 V~ /50 Hz. The IBO SDM series were the first pumps on the market to be known as "sand resistant". Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials: brass, AISI 304 stainless steel, and high quality plastic materials.

The pumps are equipped with thermal protection mounted in the motor winding. With its small diameter, the capacitor built into the motor and the factory-mounted 20 m long cable, the pump is ready for installation immediately after unpacking.

The 3.5SDM pumps were the first 90 mm diameter pumps in Poland and are currently among the most often installed pumps by installation services.

## Application:

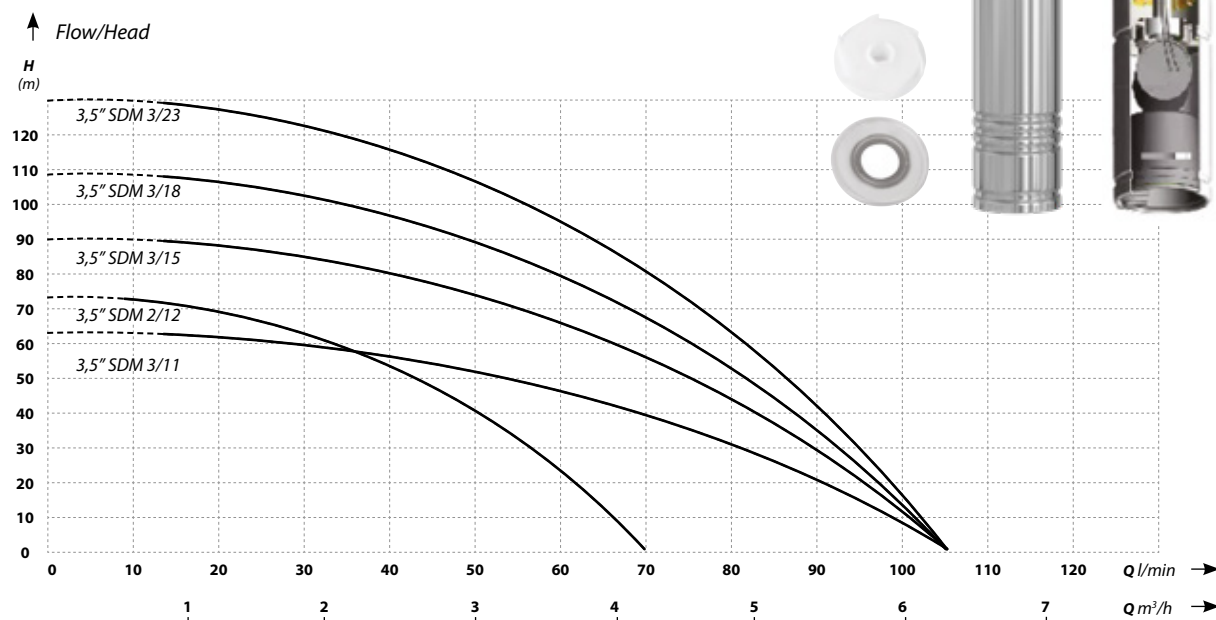
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100
- Rotational speed of the electric motor: 2850 RPM

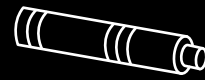
## Materials:

- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3,5" SDM 2/12	73	70	800	230	5,5	1¼	90/920	11,5
3,5" SDM 3/11	63	105	800	230	5,5	1½	90/1020	11
3,5" SDM 3/15	90	105	1100	230	7,5	1½	90/1260	17
3,5" SDM 3/18	109	105	1500	230	9,9	1½	90/1410	18
3,5" SDM 3/23	130	105	1800	230	11,9	1½	90/1670	23





## 4" SD | 4" SDM



**Increased resistance to sand  
Floating impellers**

98 mm diameter multi-stage deep well pumps with increased resistance to sand, intended for minimum 4 inch diameter wells.

All SD pumps have PZH (National Institute of Hygiene) approval. 4SD/4SDM pumps are available with IBO and IBO ITALY motors as 400V~3 / 50Hz and 230V / 50Hz versions. Increased resistance to sand is achieved by using "floating impellers" and the selection of wear-resistant materials: brass inlet and outlet, AISI 304 stainless steel housing, shaft and filter screen, and the impellers made of high quality plastic materials. Pumps with 230 V ~ / 50 Hz motors are equipped with a control box with built-in capacitor and overcurrent protection. Pumps with 0.75 kW to 2.2 kW motors are available with 1.5 m or 20 m long cable. 4SD 2/12 pumps have 20 m power cable.

Pumps with 3 kW to 4 kW motors are available with 2 m long cable. Pumps with 5.5 kW do 7.5 kW motors are available with 3 m long cable. Upon request, the cable can be extended by any length. The IBO 4SD series were the first pumps on the market to be known as "sand resistant". Currently, they are among the few on the market to provide such high sand resistance. Maximum sand content in water is up to 5%.

### Application:

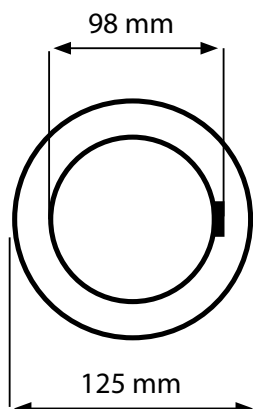
Supply of water to single-family houses and farms from deep well intakes. Irrigating gardens and orchards. Land drainage/dewatering. Water supply systems. Industrial applications.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V or 400 V
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m lub 1,5 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Inlet/outlet: brass
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling





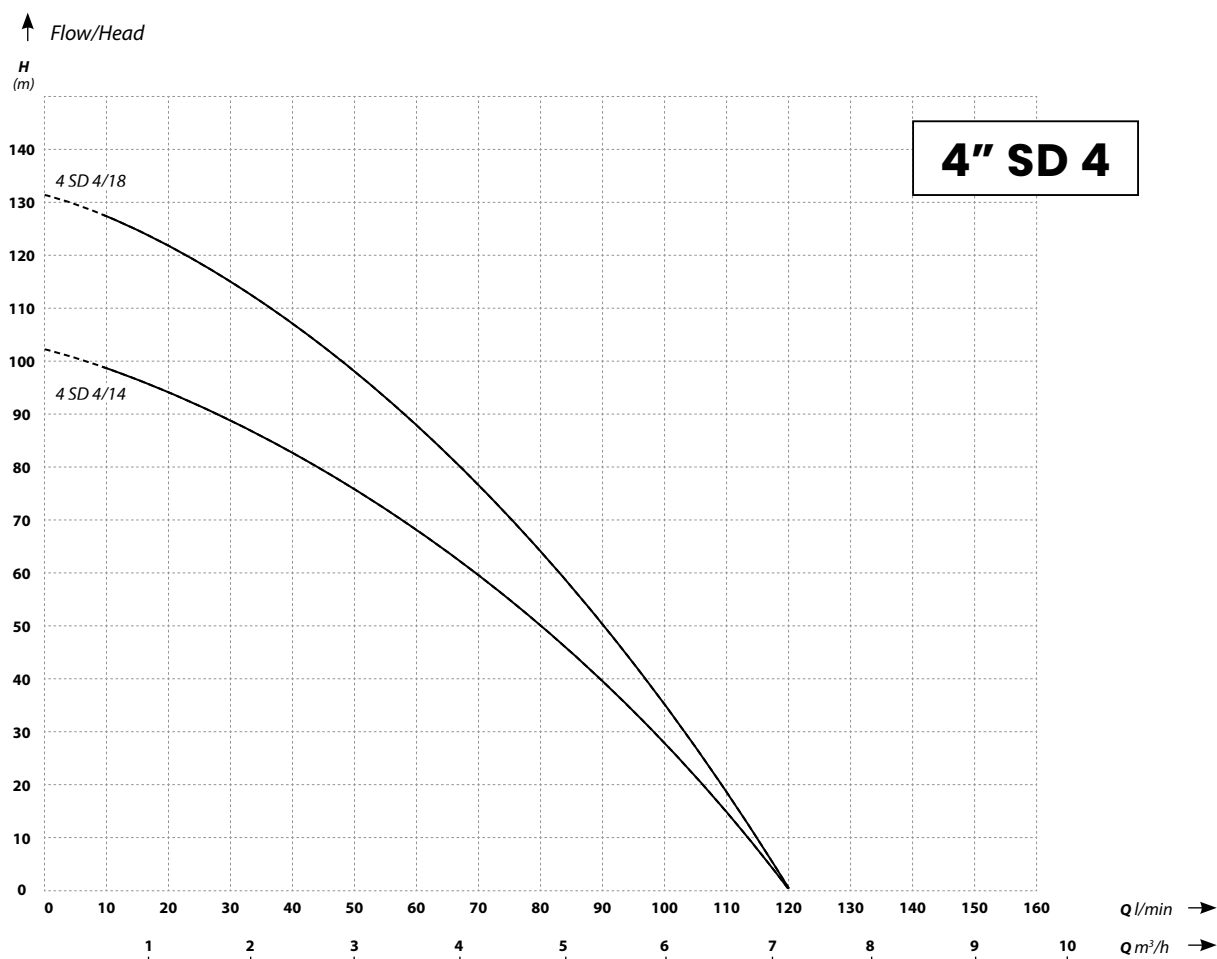
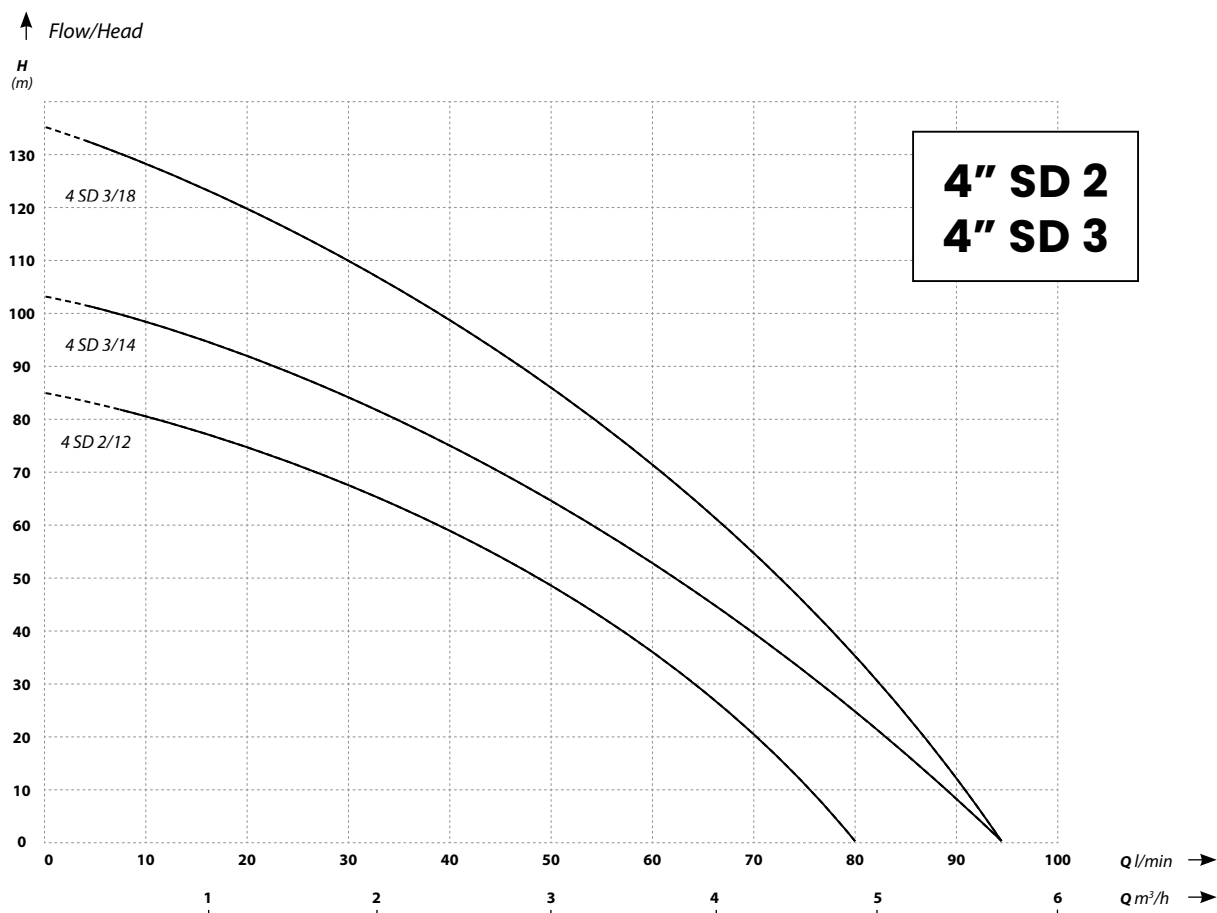
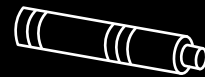
# 4" SD cd.

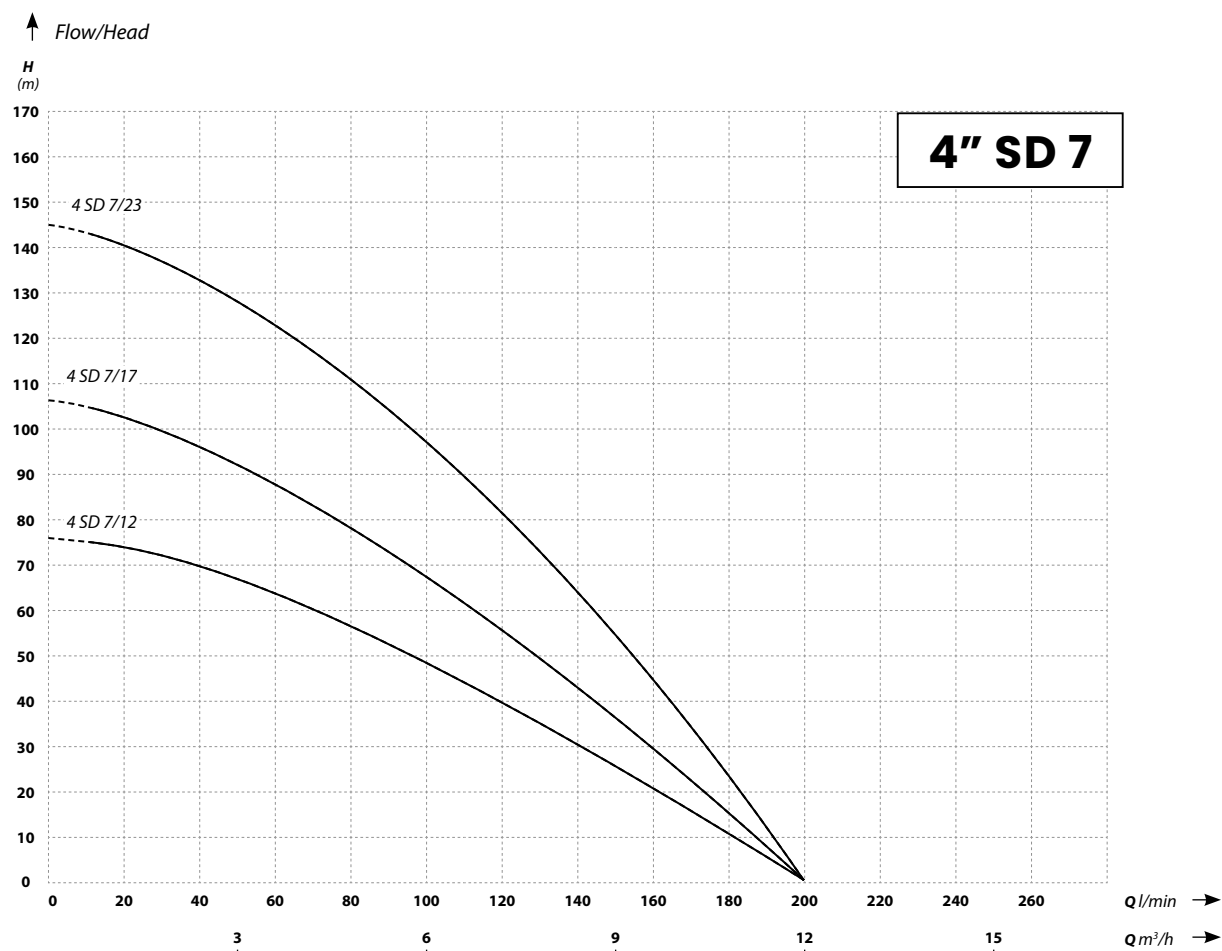
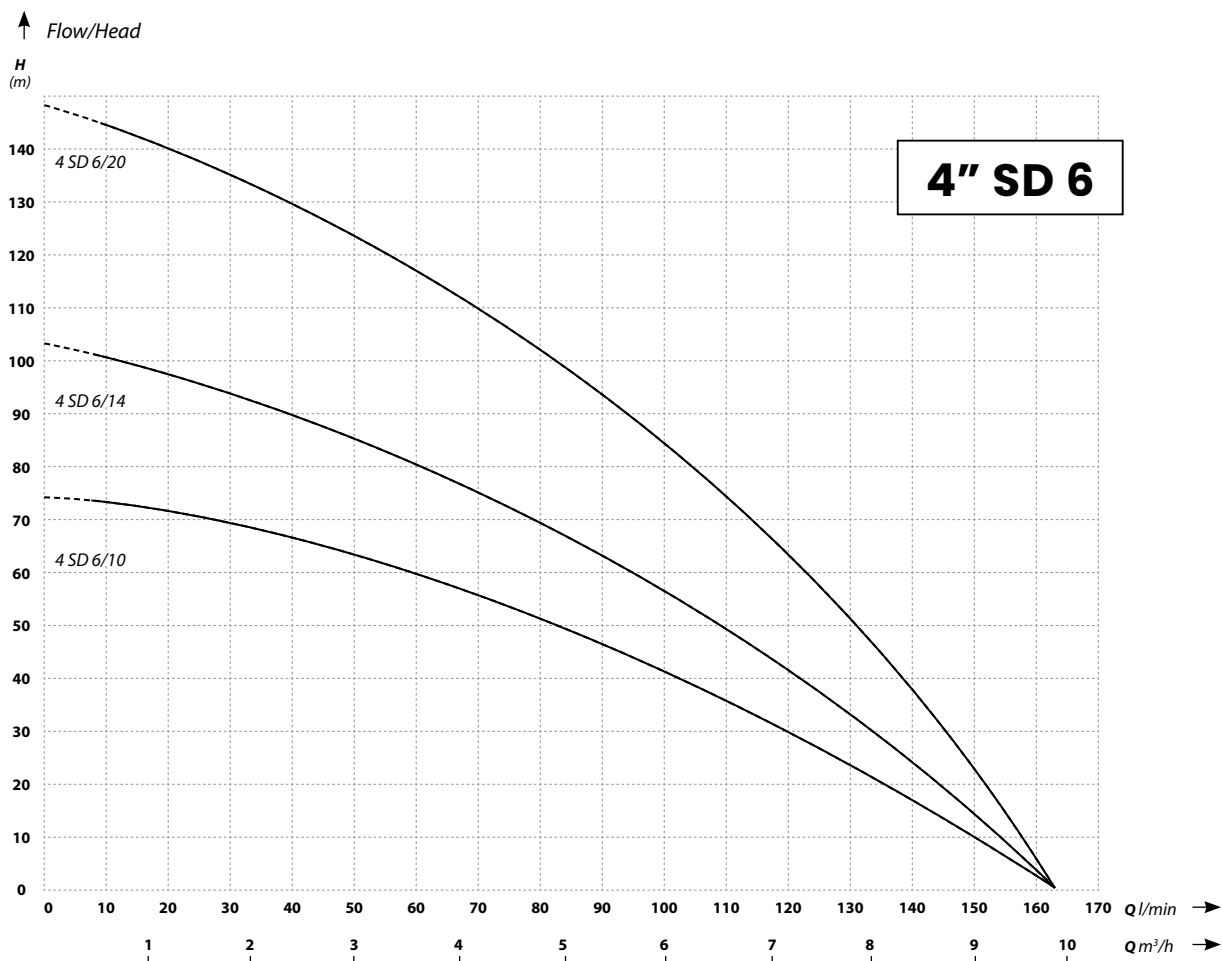
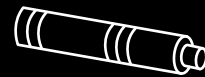


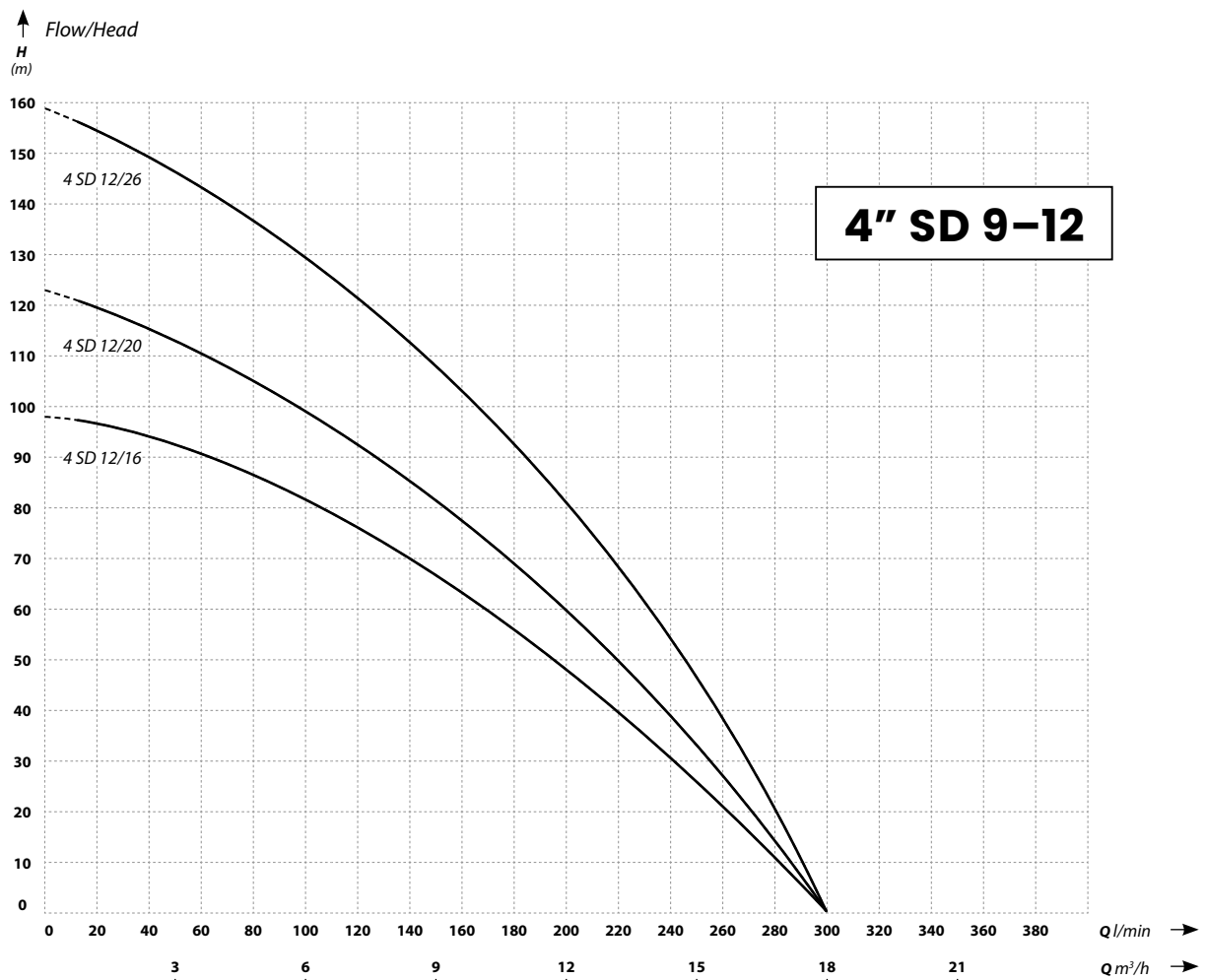
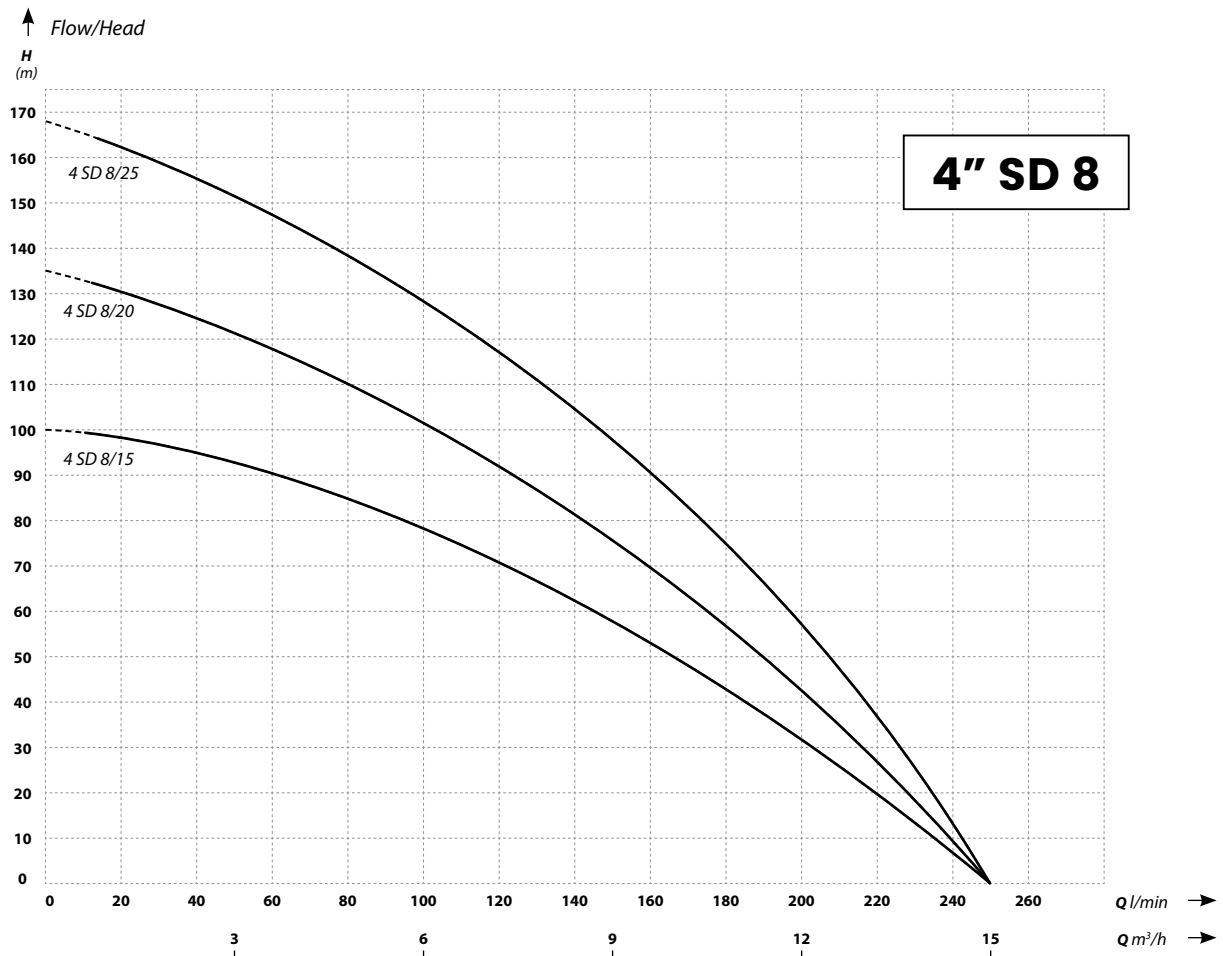
Increased resistance to sand  
Floating impellers

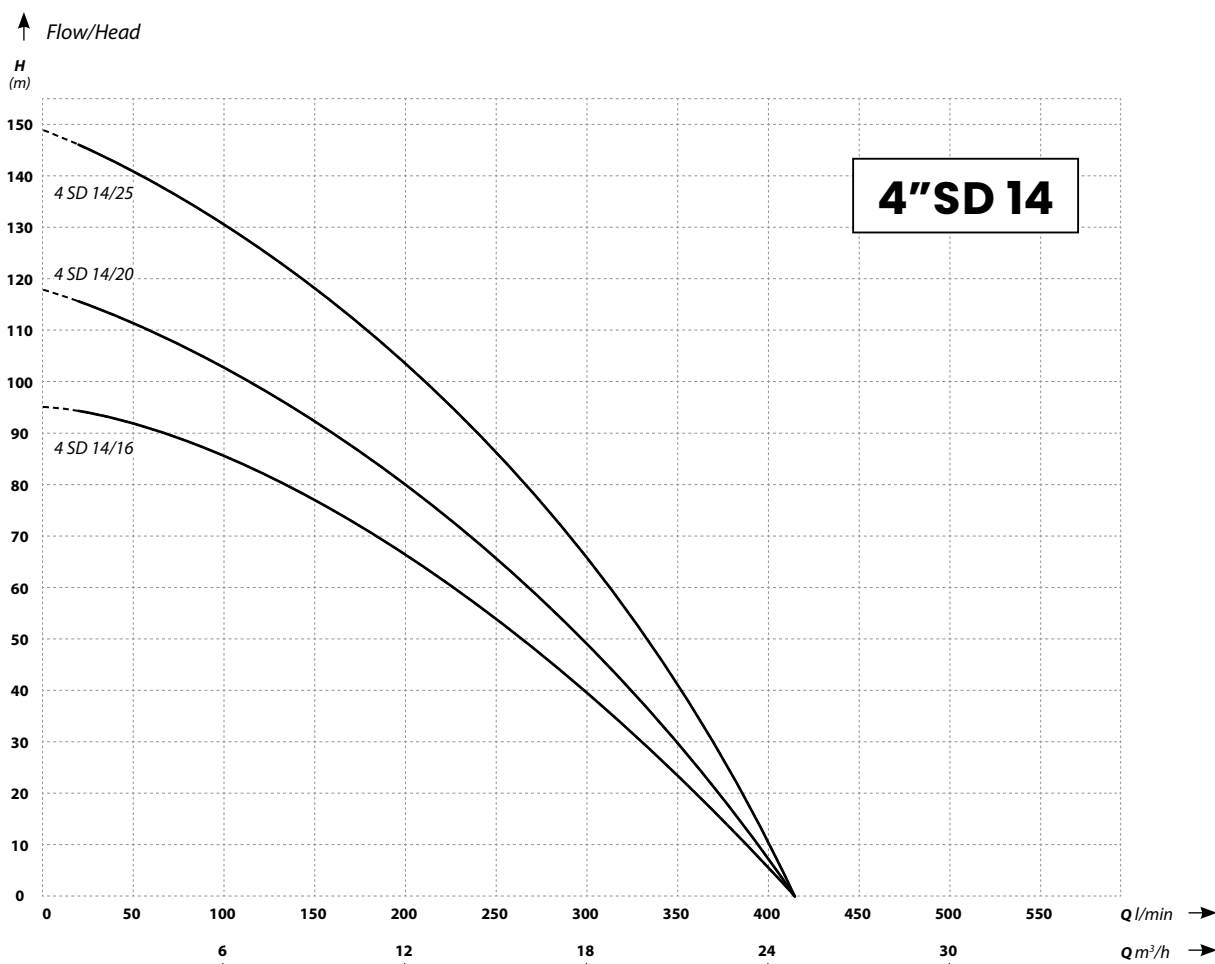
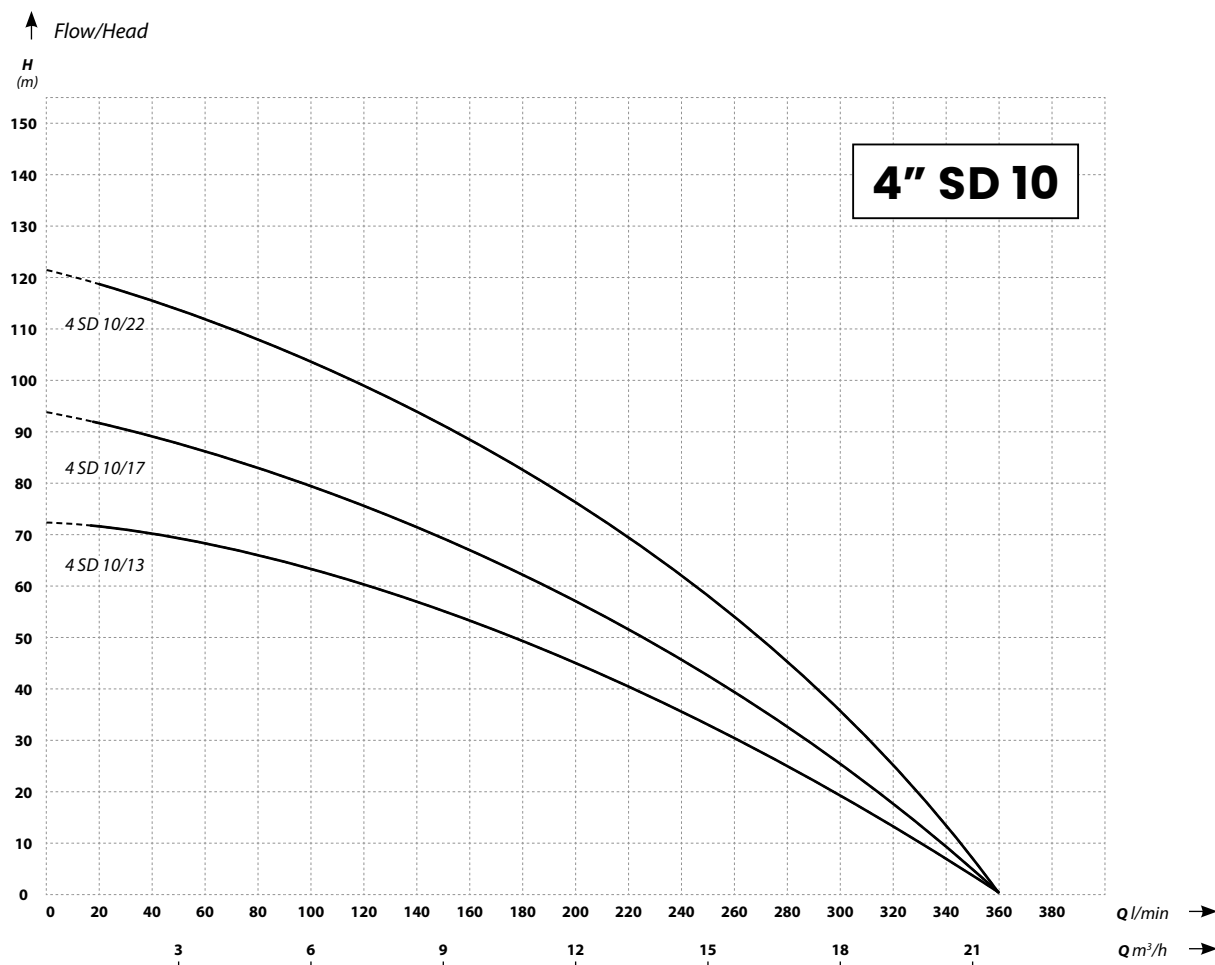
Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
4 SD 2/12	85	80	0,75	230	6,3	1¼	98/930	16
4 SD 3/14	103	94	1,1	230/400	8,5/4,0	1½	98/1050	17
4 SD 3/18	135	94	1,5	230/400	10,5/5,0	1½	98/1260	19
4SD 4/14	102	120	1,1	230/400	8,5/4,0	1½	98/1010	14,7
4SD 4/18	131	120	1,5	230/400	10,5/5,0	1½	98/1210	17,5
4 SD 6/10	74	162	1,5	230/400	10,5/5,0	2	98/1100	18
4 SD 6/14	103	162	2,2	230/400	15,5/6,3	2	98/1340	21
4 SD 6/20	148	162	3	400	7,2	2	98/1580	23
4SD 7/12	76	200	1,5	230/400	10,5/5,1	2	98/1150	16,5
4SD 7/17	107	200	2,2	230/400	15,5/6,3	2	98/1435	21,5
4SD 7/23	145	200	3	400	7,20	2	98/1740	27,5
4 SD 8/15	100	250	3	400	7,2	2	98/1640	23
4 SD 8/20	135	250	4	400	9,2	2	98/1970	30
4 SD 8/25	169	250	5,5	400	12,9	2	98/2430	35
4SD 9–12/16	98	300	3	400	7,20	2	98/1760	26,9
4SD 9–12/20	123	300	4	400	9,20	2	98/2115	32
4SD 9–12/26	159	300	5,5	400	12,90	2	98/2545	38,5
4 SD 10/13	72	360	3	400	7,2	2	98/1650	26
4 SD 10/17	94	360	4	400	9,2	2	98/2010	31
4 SD 10/22	121	360	5,5	400	12,9	2	98/2460	38
4SD 14/16	95	415	4	400	9,20	2	98/2095	32
4SD 14/20	118	415	5,5	400	12,90	2	98/2450	37,9
4SD 14/25	149	415	7,5	400	18,50	2	98/2950	44,5
4 SD 16/14	75	435	4	400	9,2	2	98/1800	30
4 SD 16/18	99	435	5,5	400	12,9	2	98/2250	37
4 SD 16/28	153	435	7,5	400	18,5	2	98/3000	47
4SD 20/15	90	500	4	400	9,2	2	98/2120	29
4SD 20/20	125	500	5,5	400	12,9	2	98/2360	37
4SD 20/25	150	500	7,5	400	18,5	2	98/2840	46

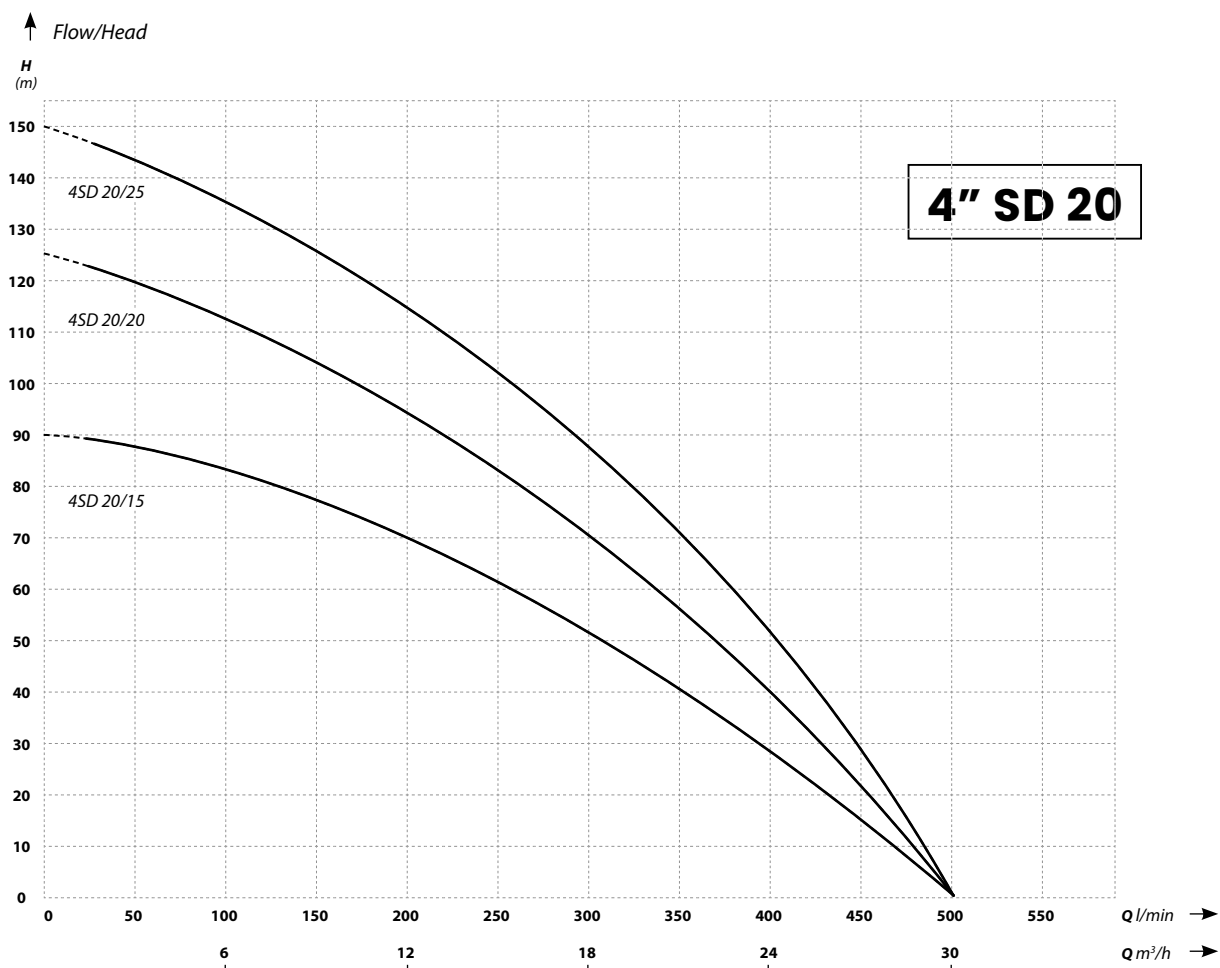
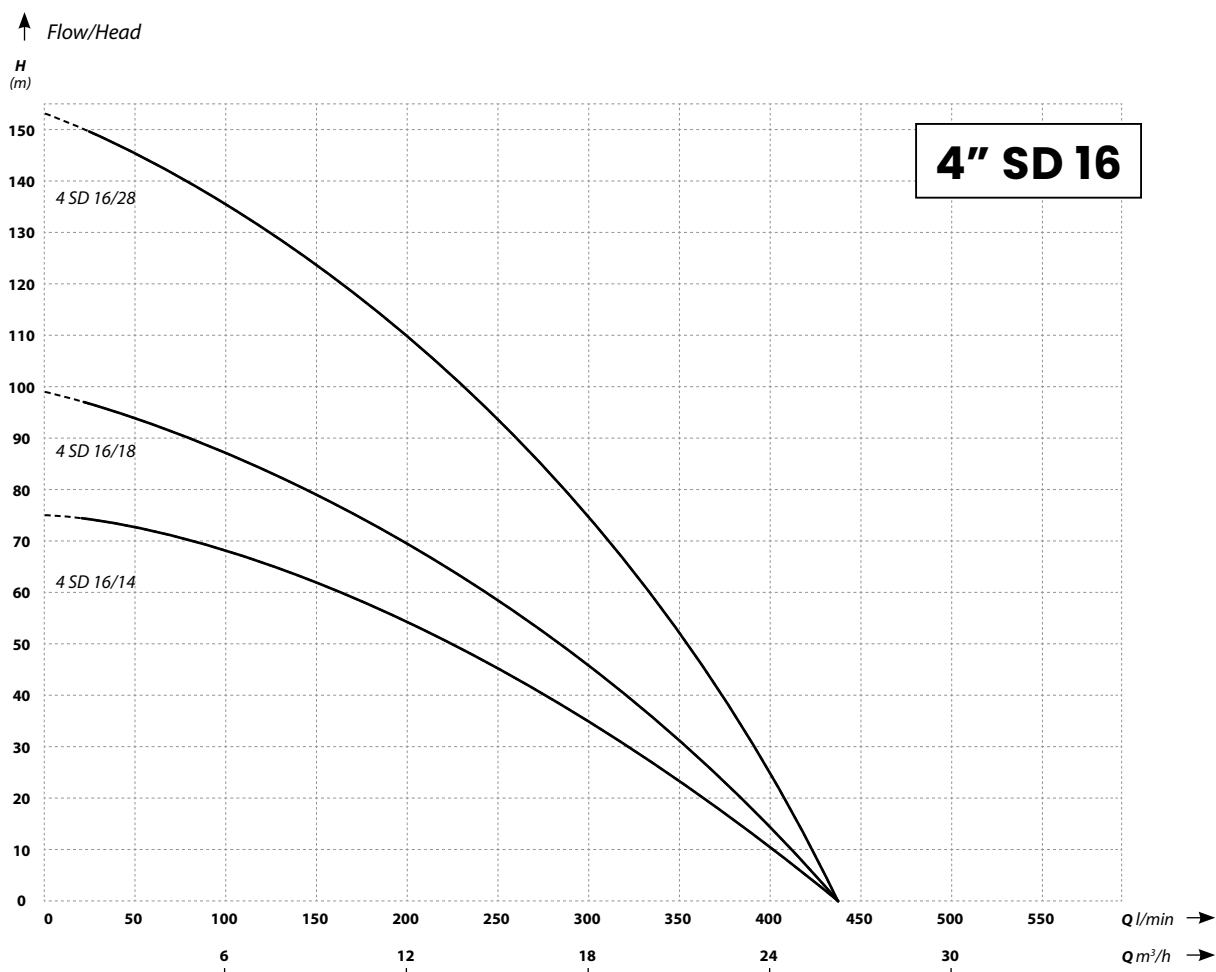
Depending on the production batch, the device parameters may differ from the data provided in the table.















## 5" SD



**Increased resistance to sand  
Floating impellers**

127 mm diameter multi-stage deep well pumps with increased resistance to sand, intended for minimum 5" wells. The IBO SD series were the first pumps on the market to be known as "sand resistant". The "sand resistance" is the unquestionable advantage of IBO pumps over competing products due their innovative and rare design with increased resistance to sand, unusual in 3-inch pumps. For 5SD 25 pumps, the maximum sand content in water is 5%. Increased resistance to sand is achieved by using "floating impellers".

Increased resistance to sand is achieved by using "floating impellers".  
Upon request, the cable of any length can be installed.

### Application:

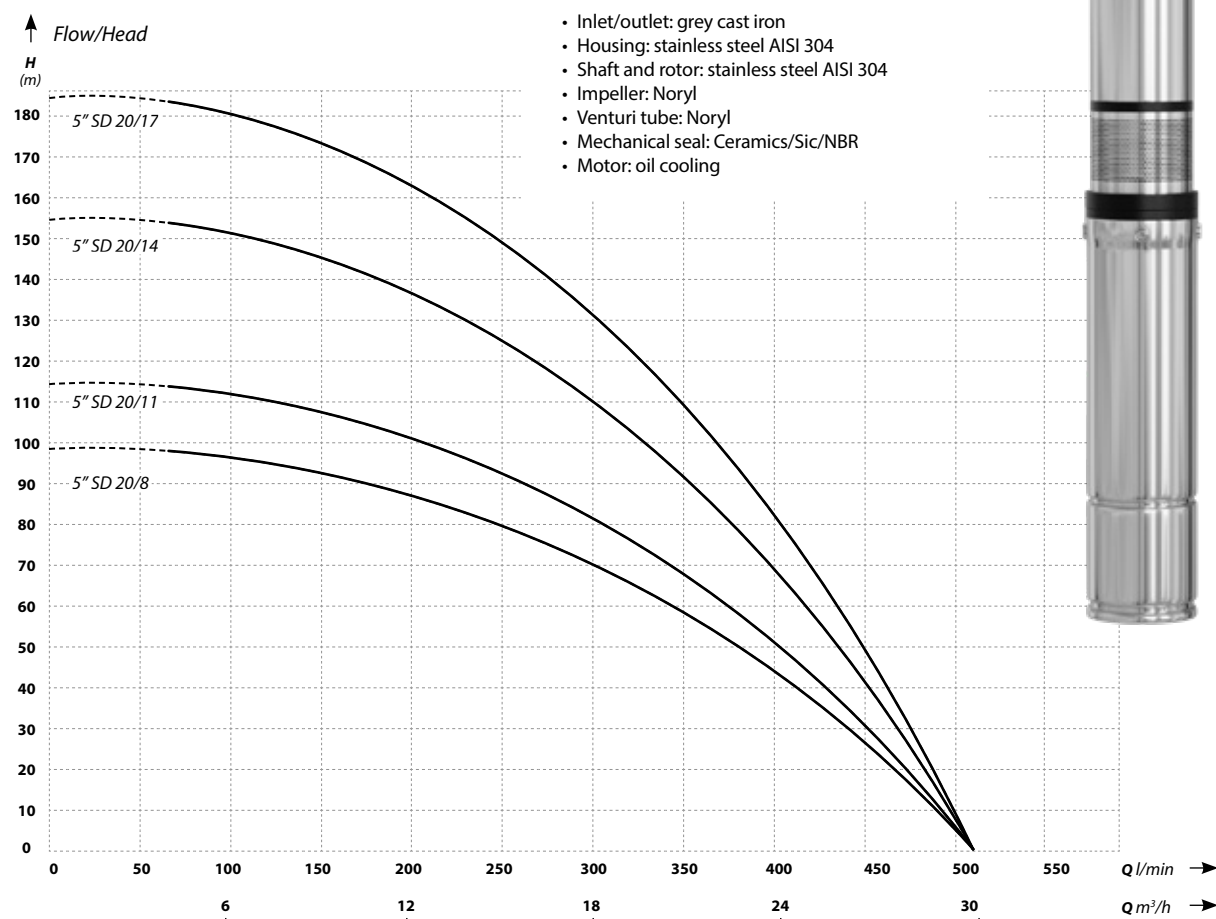
Supply of water to large farms from deep water intakes, garden and orchard irrigation, shrubs and tree nurseries, land drainage/dewatering. Water supply systems, industrial applications.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V or 400 V
- Klasa izolacji: B Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 2 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Inlet/outlet: grey cast iron
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
5" SD 20/8	99	500	4	400	10,4	3	127/1440	34
5" SD 20/11	115	500	5,5	400	14	3	127/1640	42
5" SD 20/14	155	500	7,5	400	17,5	3	127/1880	50
5" SD 20/17	185	500	9,2	400	21,5	3	127/2040	58

Depending on the production batch, the device parameters may differ from the data provided in the table.



## 6" SD



**Increased resistance to sand  
Floating impellers**

146 mm multi-stage deep well pumps with increased resistance to sand, intended for minimum 6" wells. The IBO SD series were the first pumps on the market to be known as "sand resistant".

The "sand resistance" is the unquestionable advantage of IBO pumps over competing products due their innovative and rare design with increased resistance to sand, unusual in 6-inch pumps.

For 6SD 25 pumps, the maximum sand content in water is 5%. Increased resistance to sand is achieved by using "floating impellers". The pumps are available with 6 inch IBO or IBO ITALY motors.

Upon request, the cable of any length can be installed.

### Application:

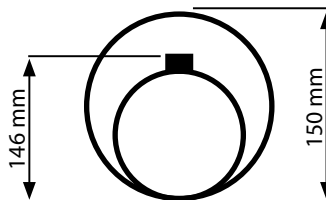
Supply of water to large farms from deep water intakes, garden and orchard irrigation, shrubs and tree nurseries, land drainage/dewatering, water supply systems, industrial applications.

### Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V or 400 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 2 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

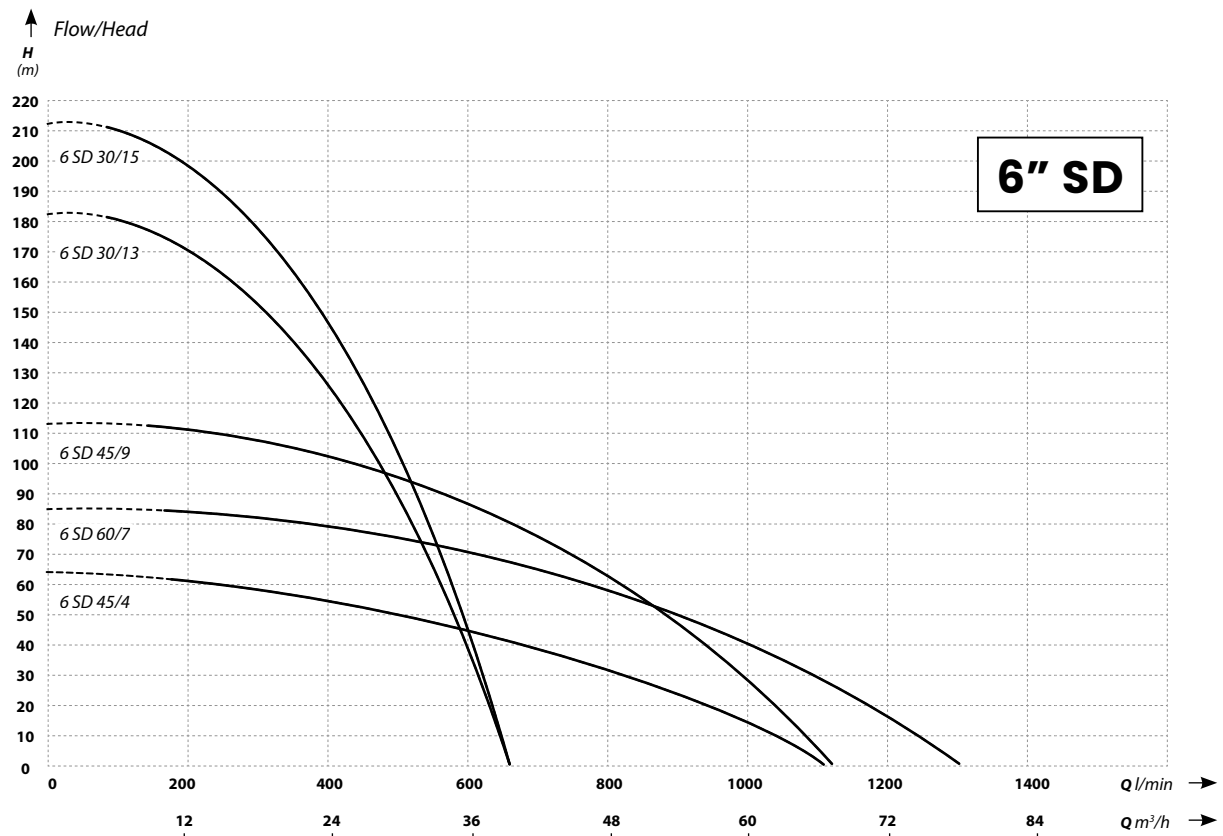
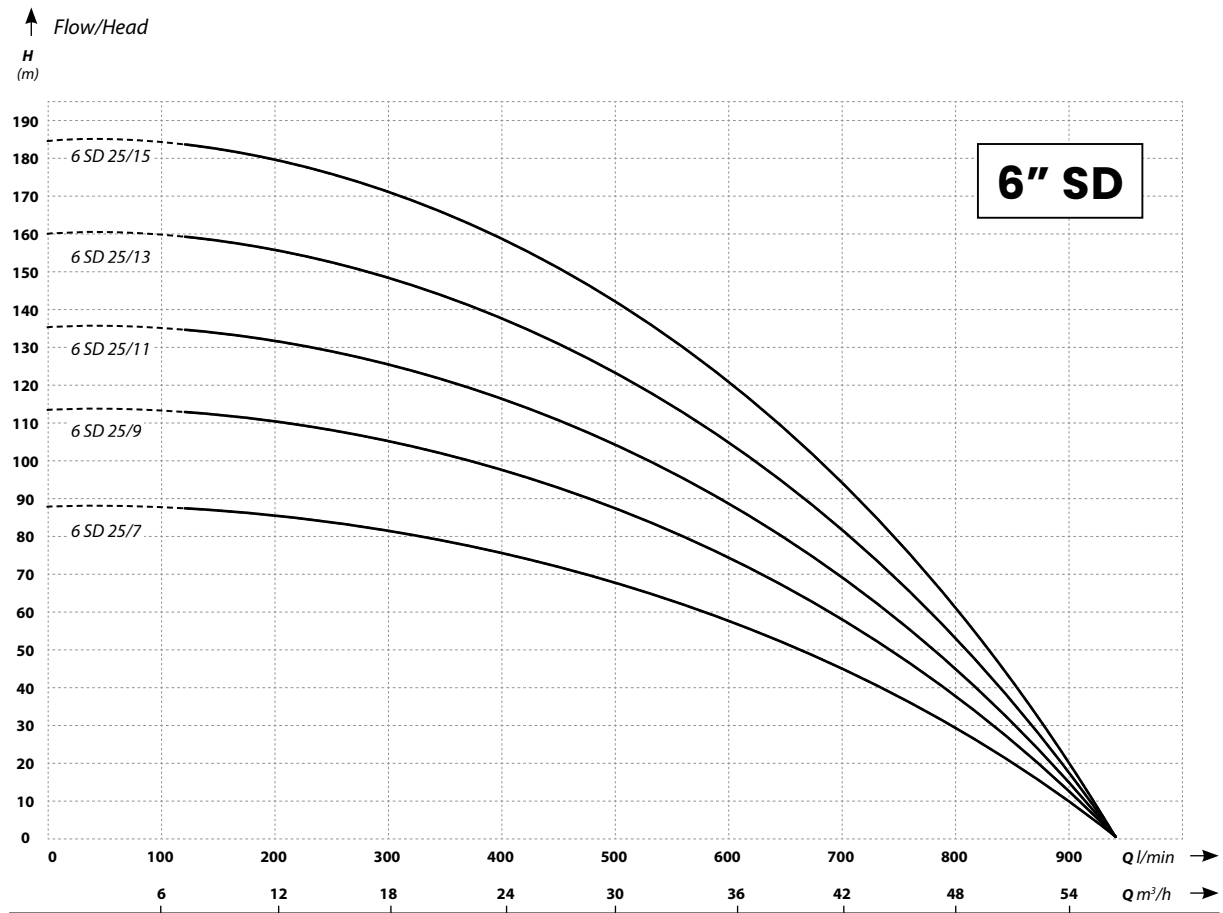
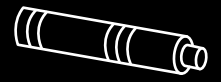
### Materials:

- Inlet/outlet: grey cast iron
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: Noryl
- Venturi tube: Noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
6 SD 25/7	89	920	7,5	400	17,5	3	146/1440	52
6 SD 25/9	113	920	9,2	400	21,5	3	146/1650	59
6 SD 25/11	135	920	11	400	24,5	3	146/1880	67
6 SD 25/13	160	920	13	400	27,5	3	146/2090	73
6 SD 25/15	185	920	15	400	31,5	3	146/2300	82
6 SD 30/13	183	650	13	400	27,5	3	146/2150	73
6 SD 30/15	211	650	15	400	31,5	3	146/2400	83
6 SD 45/4	64	1150	5,5	400	19,3	3	146/1390	43
6 SD 45/9	112	1150	15	400	31,5	3	146/1818	81
6 SD 60/7	85	1300	15	400	31,5	3	146/1784	83

Depending on the production batch, the device parameters may differ from the data provided in the table.





# 3" ISP

Stainless steel

76 mm diameter stainless steel multi-stage deep well pumps intended for wells with 4" minimum diameter. Maximum sand content in water is up to 3%. Due to the materials used, the ISP pumps are among the most durable deep well pumps. Inlet, outlet, housing, shaft and impeller are made entirely of stainless steel. The pumps are supplied with 3" oil-cooled motors.

The 3" ISP series are the first pumps made entirely of stainless steel available on the Polish market. The pumps have a 2 m long power cable that can be extended. Upon request, the cable can be extended by any length.

## Application:

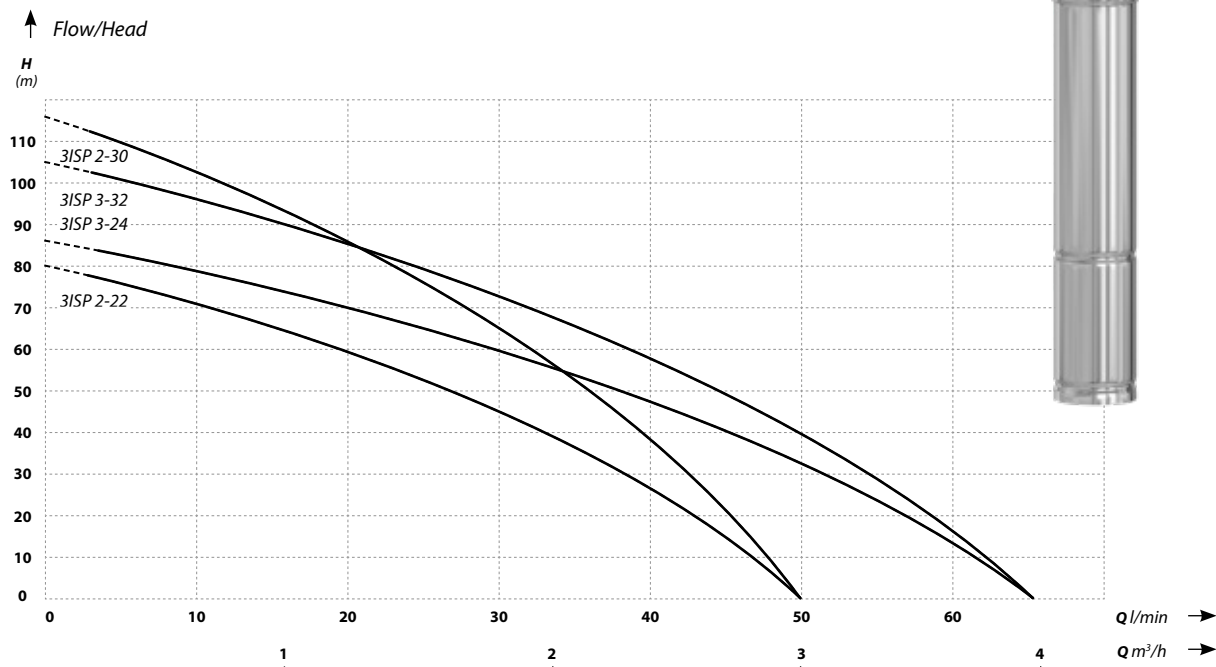
Supply of water to single-family houses and holiday houses. Irrigating gardens. Drainage/dewatering.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Inlet/outlet: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Venturi tube: stainless steel AISI 304
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
3ISP 2-22	80	50	550	230	5,7	1 1/4"	75/1150	12
3ISP 2-30	115	50	750	230	7,3	1 1/4"	75/1350	14
3ISP 3-24	85	65	750	230	7,9	1 1/4"	75/1290	16
3ISP 3-32	105	65	1100	230	9,7	1 1/4"	75/1630	18



# 4" ISP / 4" ISPM

Stainless steel

98 mm diameter stainless steel multi-stage deep well pumps intended for minimum 4" diameter wells. Maximum sand content in water is up to 0.3%.

Due to the materials used, the ISP pumps are among the most durable deep well pumps. Inlet, outlet, housing, shaft and impellers are made entirely of stainless steel.

4 ISPM pumps are available with IBO and IBO ITALY 230 V ~ / 50Hz motors. 4 ISP pumps are available with IBO and IBO ITALY 400 V ~ / 50Hz motors.

Pumps with 230 V ~ / 50 Hz motors are equipped with a control box with built-in capacitor and overcurrent protection.

Pumps with 0.75 kW to 2.2 kW motors are available with 1.5 m or 20 m long cable. Upon request, the cable can be extended by any length.

## Application:

Supply of water to single-family houses and farms from deep well intakes. Irrigating gardens and orchards. Land drainage/dewatering. Water supply systems. Industrial applications.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V
- Class B/F Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 20 m lub 1,5 m
- Workplace: vertical
- Max. number of starts per hour: 30
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

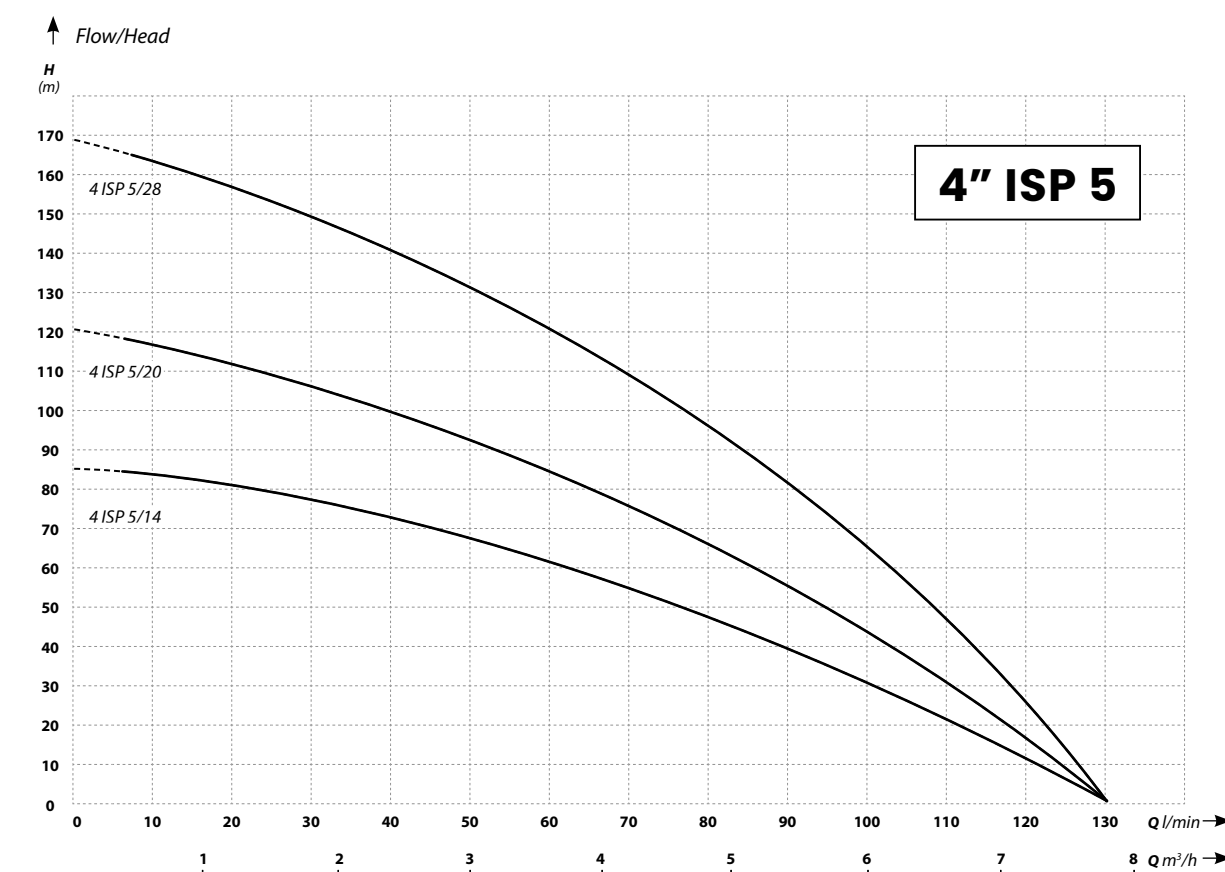
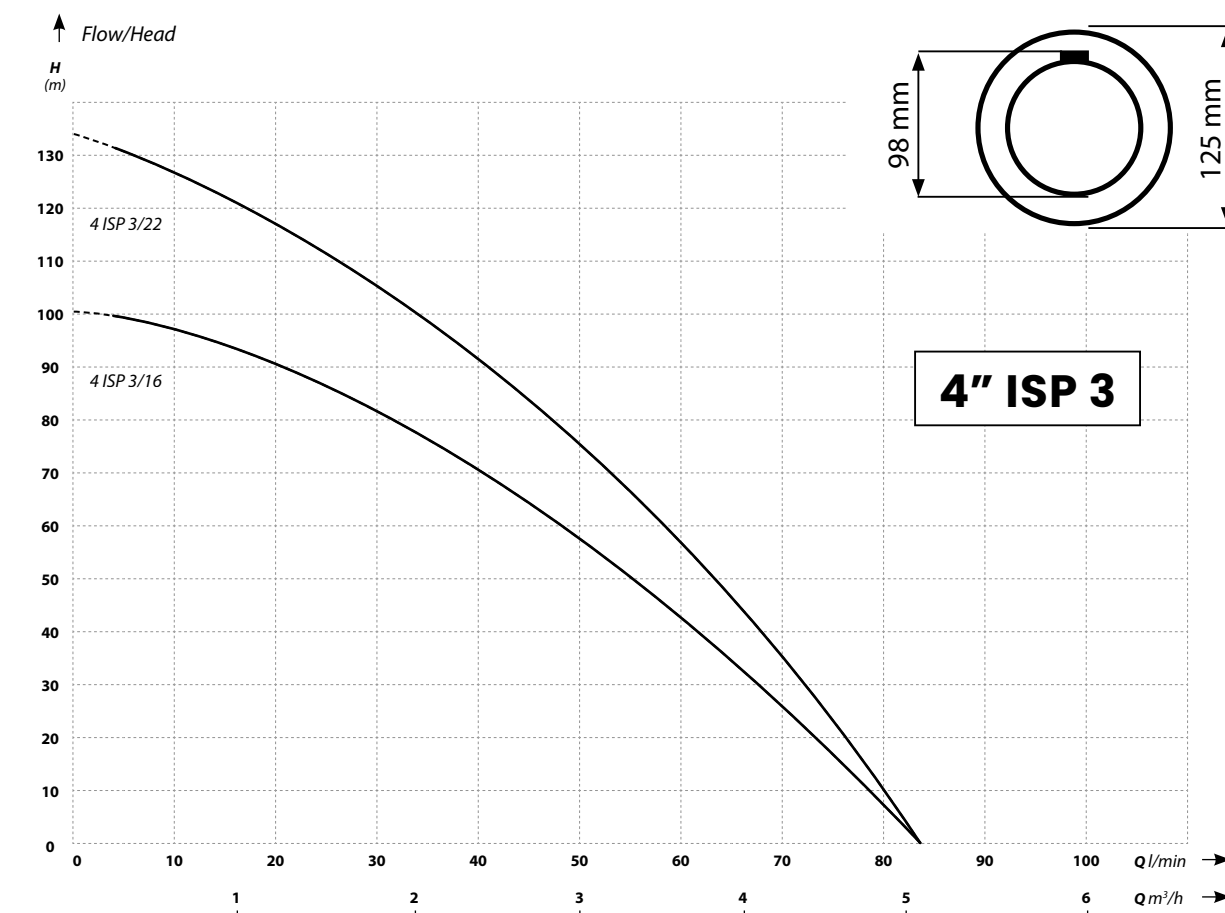
## Materials:

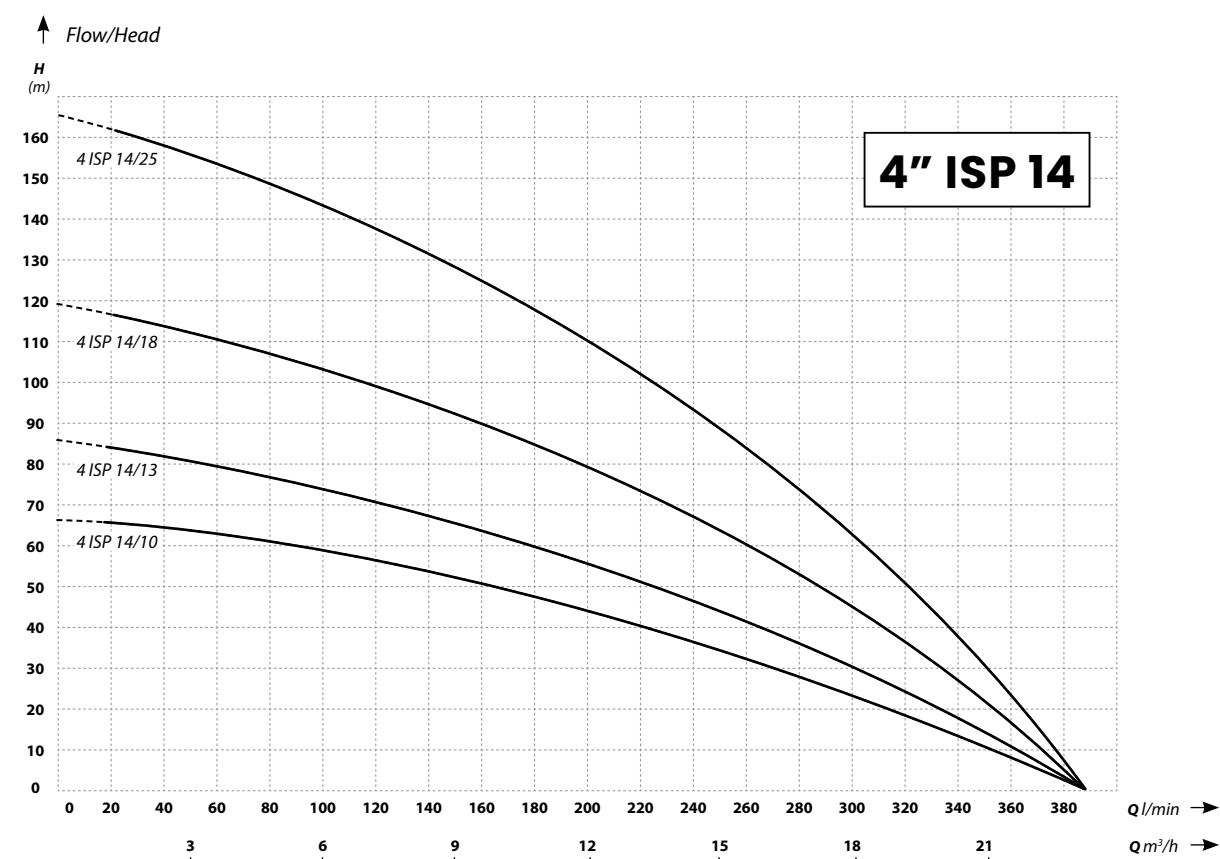
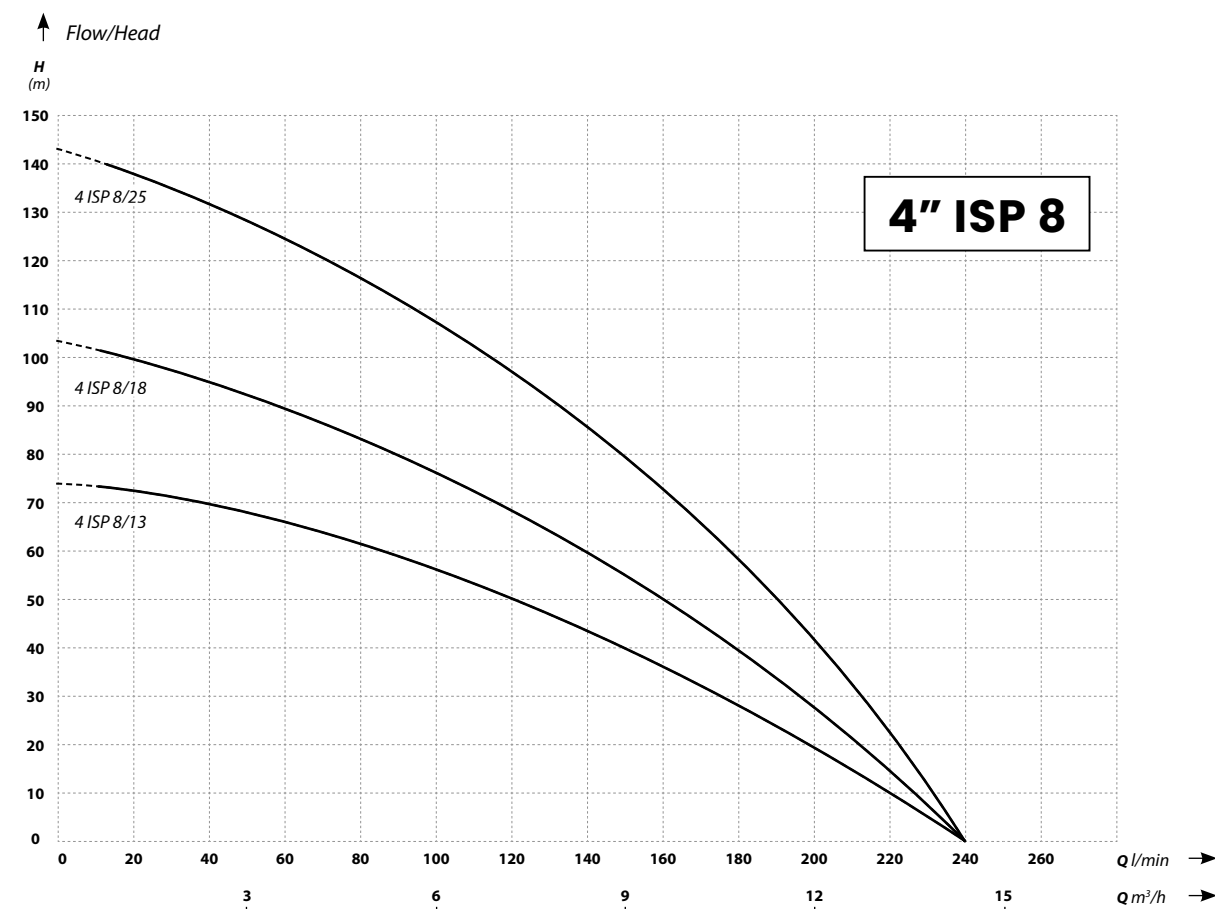
- Inlet/outlet: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Venturi tube: stainless steel AISI 304
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
4 ISP 3/16	100	83	1,1	230/400	8,5/4,0	1¼	98/950	16
4 ISP 3/22	134	83	1,5	230/400	10,5/5,0	1¼	98/1100	20
4 ISP 5/14	85	130	1,5	230/400	10,5/5,0	1½	98/950	19
4 ISP 5/20	120	130	2,2	230/400	15,5/6,3	1½	98/1140	22
4 ISP 5/28	169	130	3	400	7,2	1½	98/1340	25
4 ISP 8/13	74	240	2,2	230/400	15,5/6,3	2	98/1150	23
4 ISP 8/18	103	240	3	400	7,2	2	98/1400	26
4 ISP 8/25	143	240	4	400	9,2	2	98/1780	32
4 ISP 14/10	66	383	3	400	7,2	2	98/1150	22
4 ISP 14/13	86	383	4	400	9,2	2	98/1350	27
4 ISP 14/18	119	383	5,5	400	12,9	2	98/1670	33
4 ISP 14/25	165	383	7,5	400	18,5	2	98/2160	44

Depending on the production batch, the device parameters may differ from the data provided in the table.









# 6" ISP

Stainless steel

Stainless steel multi-stage deep well pumps with diameters of up to 145 mm, designed for pumping water with up to 0.3% sand content from a minimum 6"(150 mm) wells. Robust stainless steel design provides long-term and reliable operation.

The pumps are available with 4 and 6 inch IBO or IBO ITALY motors.  
Depending on customer requirements, connected IBO ITALY motors can be oil- or water-cooled.

Due to the proven design and very high parameters compared to the diameter of the pumps, they can be used in a very wide range of applications, from supplying water to large farms to industrial solutions.

## Application:

Supply of water to large farms from deep water intakes, garden and orchard irrigation, shrubs and tree nurseries, land drainage/dewatering, water supply systems, industrial applications.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V
- Class B Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 2 m
- Workplace: vertical
- Max. number of starts per hour: 20
- Max. immersion depth: 100 m
- Rotational speed of the electric motor: 2850 RPM

## Materials:

- Inlet/outlet: stainless steel AISI 304
- Clutch, tie rods and cable protector: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: stainless steel AISI 304
- Venturi tube: stainless steel AISI 304
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling

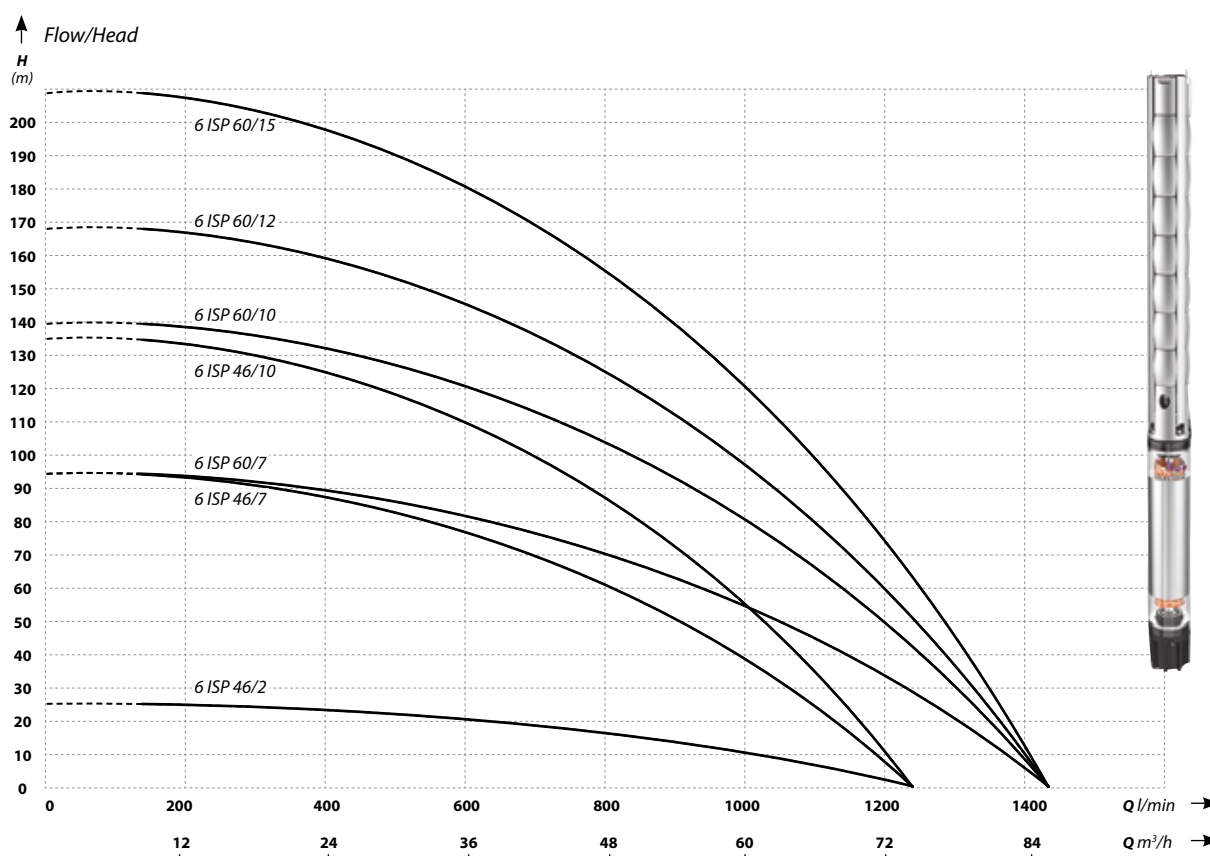
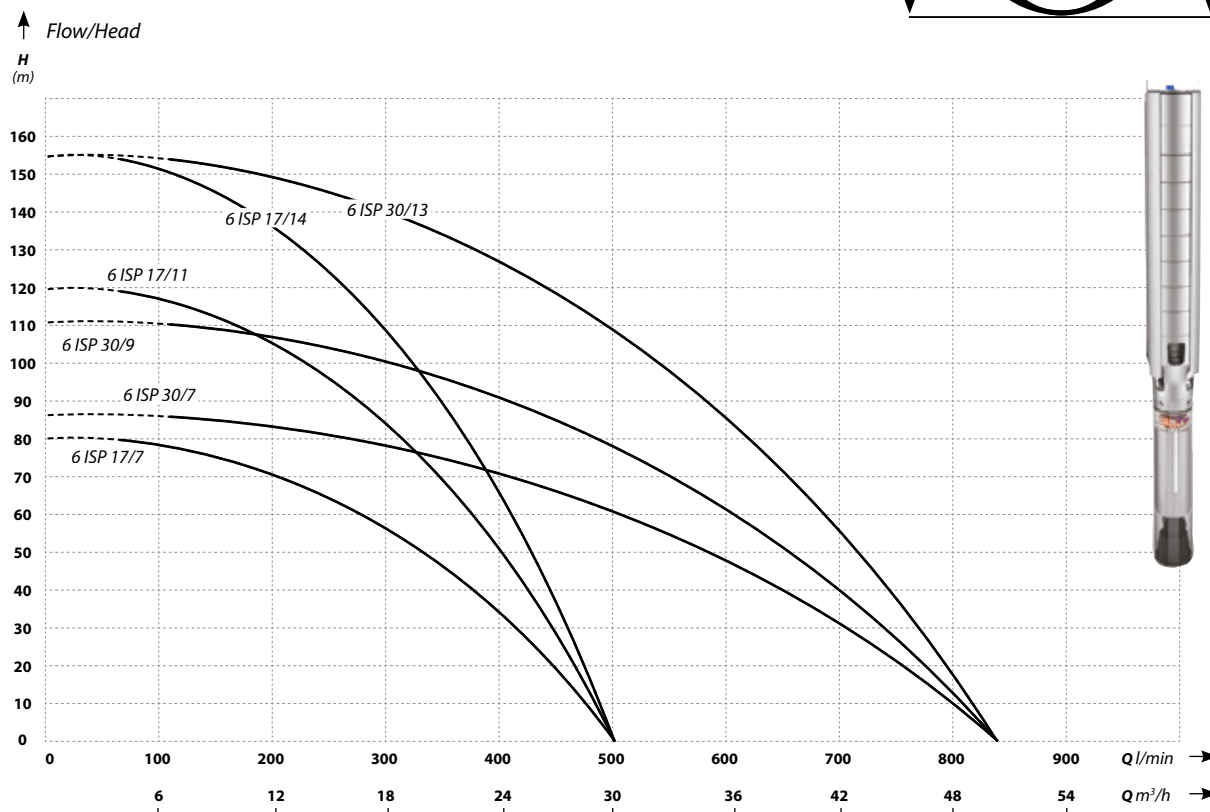
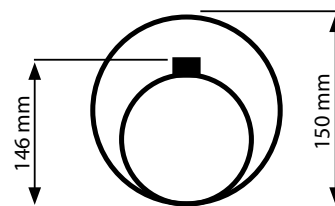


Name	Head (m)	Flow (l/min)	Motor power (kW)	Motor diameter (cale)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Dimensions Dia/H (mm)	Weight (kg)
6 ISP 17/7	80	500	4	4	400	10,2	2½	145/1220	29
6 ISP 17/11	120	500	5,5	4	400	14	2½	145/1480	37
6 ISP 17/14	155	500	7,5	4	400	17,5	2½	145/1770	47
6 ISP 30/7	85	833	7,5	4/6	400	17,5	3	145/1500	56
6 ISP 30/9	110	833	9,2	6	400	21,5	3	145/1720	66
6 ISP 30/13	155	833	13	6	400	27,5	3	145/1920	70
6 ISP 46/2	25	1250	3	4	400	8,2	3	145/960	22
6 ISP 46/7	95	1250	11	6	400	24,5	3	145/1950	65
6 ISP 46/10	135	1250	15	6	400	31,5	3	145/2380	83
6 ISP 60/7	95	1420	15	6	400	31,5	3	145/2040	75
6 ISP 60/10	140	1420	18,5	6	400	37,9	3	145/2328	88
6 ISP 60/12	168	1420	22	6	400	47,1	3	145/2632	99
6 ISP 60/15	210	1420	26	6	400	58,3	3	145/3031	119

Depending on the production batch, the device parameters may differ from the data provided in the table.



# 6" ISP cd.





# IBQ high speed Deep well pumps

6000 RPM

IBQ multi-stage centrifugal deep well pumps are designed for operation in drilled wells and open water reservoirs. Unlike other deep well pumps, the IBQ have advanced energy-saving motors with permanent magnets and a frequency converter. As a result, the motor achieves 6000 rpm and a very high performance.

Motor design with permanent magnets and an inverter has many advantages over traditional pumps. These include:

- Energy saving due to high performance of the motor and pump. By achieving the same hydraulic parameters of pressure and performance, the IBQ pumps can be used with motor that are approximately 15-20% smaller than motors used in traditional pumps.
- Dry-running protection. The inverter electronics control the motor current draw. When dry run specific draw is detected, the motor is stopped. After a certain period of time, the pump tries to automatically restart, and its operation will continue after inflow is restored.
- Soft start resulting in no negative effect of hydraulic shock on the hydraulic system, significantly reduced mechanical wear of the motor and pump, no impact of inrush current on the electricity network.
- In traditional solutions, in order to achieve constant motor operating parameters, rapid starting is required. During starting, the motor draws a multiple of normal operating current during the first few seconds of operation (inrush current). This may result in voltage fluctuations in the electricity network affecting operation of other devices connected to this network, blown fuses, and burning of electrical connections in control units. Usually, hydraulic parameters of the pump are during starting instantaneously higher than nominal, which means that in the first seconds of operation water with higher parameters (pressure, flow) than nominal, designed for a given network is pumped into the system. This is called hydraulic shock. Repeated hydraulic shock leads to excessive wear of hydraulic components of the water supply system. Another disadvantage eliminated by soft start is the wear and tear of motor's mechanical and electrical components. Hydraulic shocks increase the mechanical load on the motor and pump, and the high inrush current weakens the internal insulation of the motor.

- The motors can operate with relatively high voltage fluctuations 160-250V for single-phase motors, 320-450V for three-phase motors.
- Due to the smaller size of IBQ pumps compared to traditional pumps, drilling and installation costs are considerably lower.

3"IBQ pumps - equipped with a box with current protection;

4"IBQ pumps - the user should secure the pump on their own.

## Application:

Supply of water to single-family houses and farms from deep well intakes. Irrigating gardens and orchards. Land drainage/dewatering. Water supply systems. Industrial applications..

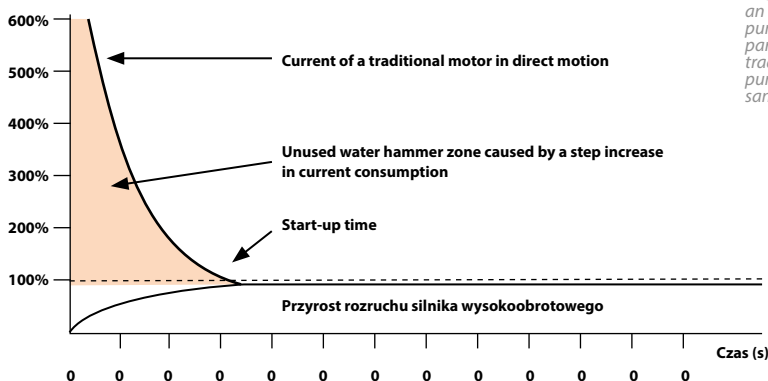
## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Class F Insulation
- Operating mode - continuous
- Protection - IP68

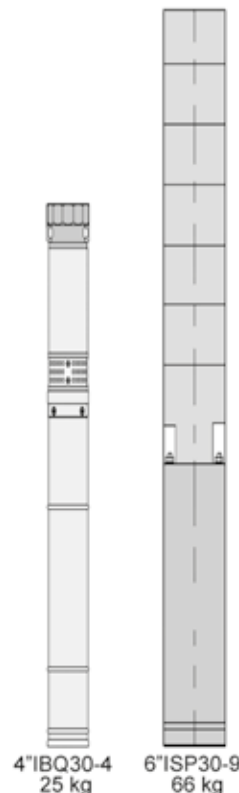
## Materials:

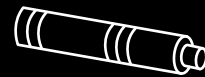
- Inlet/outlet: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Impeller: noryl
- Venturi tube: noryl
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling / with inverter
- Rotational speed of the electric motor: 6000 RPM

Electric current increase



The picture shows an example of two pumps with the same parameters - IBQ and traditional ISP. Both pumps are drawn to the same scale.





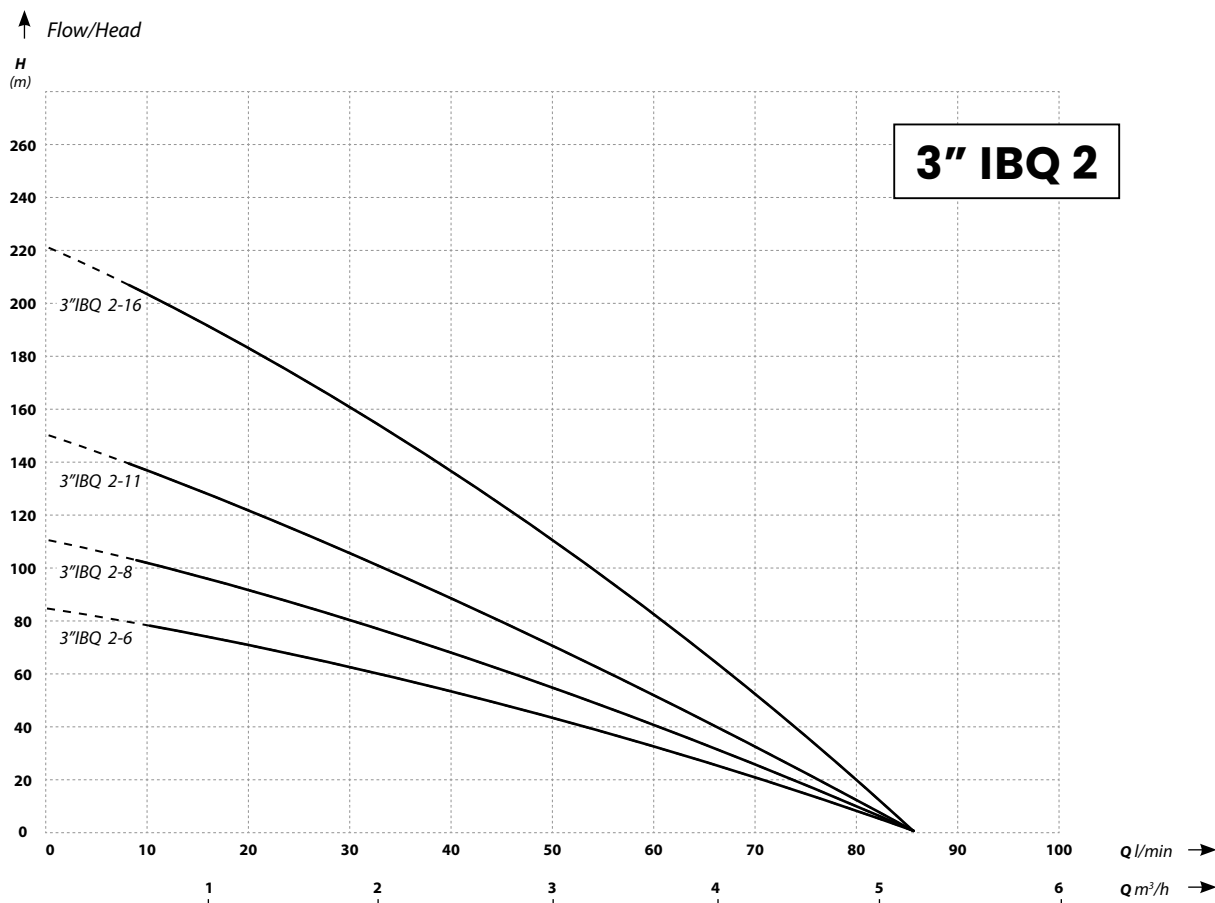
# 3" IBQ

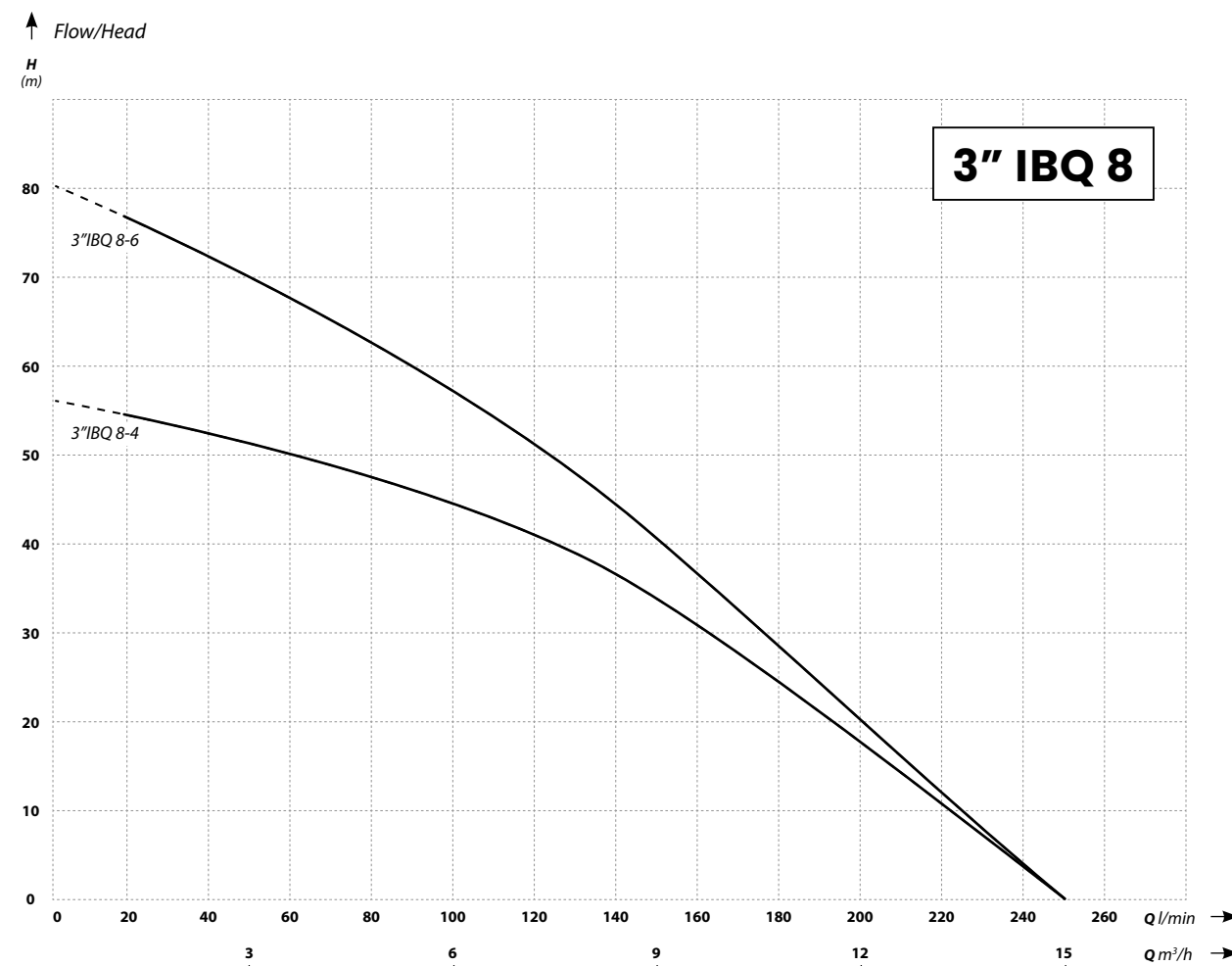
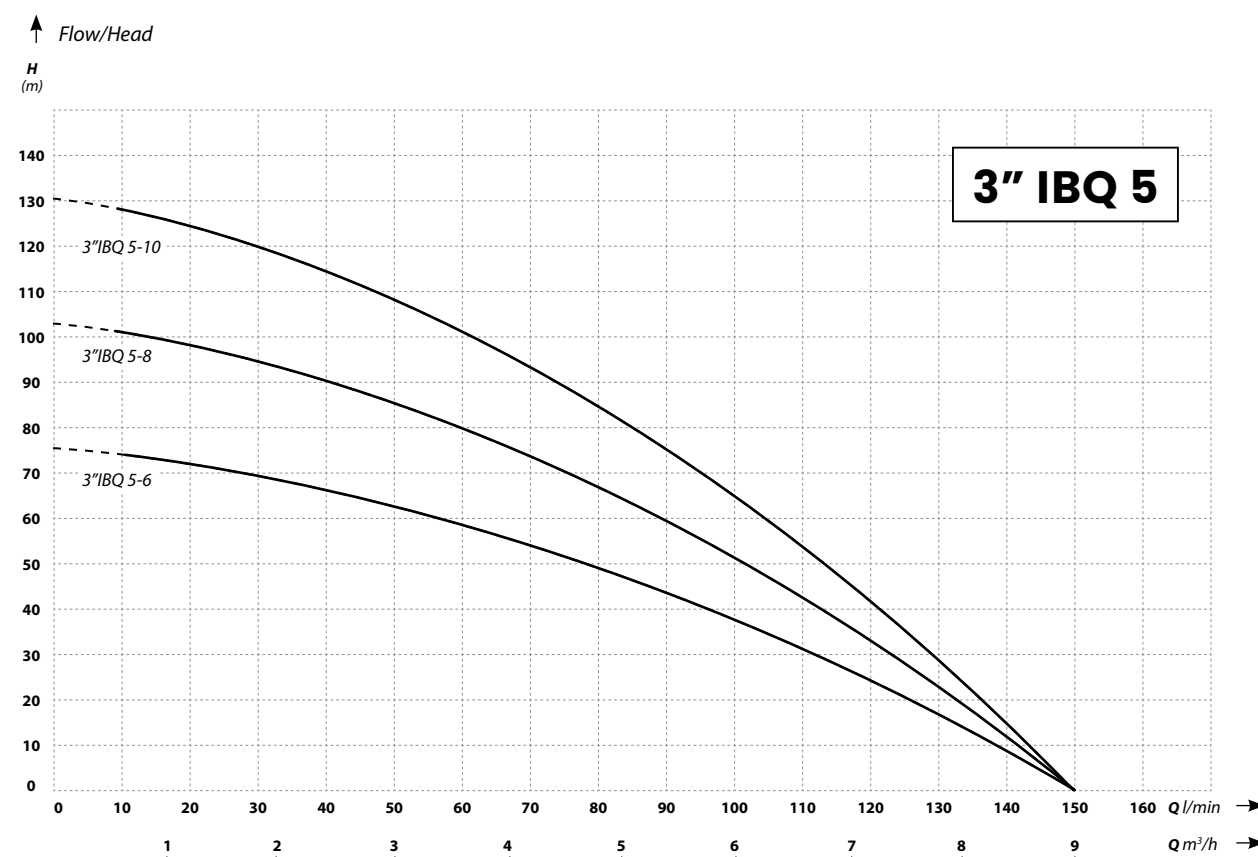
**6000 RPM**  
Maximum pump diameter 78 mm

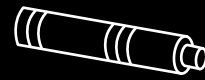
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) one phase	Inlet/outlet (inch)	Pump height (cm)	Weight(kg) (without cable)
3"IBQ 2-6	85	85	0,8	160 - 250	1¼	109	9,3
3"IBQ 2-8	110	85	1,1	160-250	1¼	112	10,3
3"IBQ 2-11	150	85	1,5	160-250	1¼	117	12,5
3"IBQ 2-16	220	85	2,2	160-250	1¼	130	14,2

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) one phase	Inlet/outlet (inch)	Pump height (cm)	Weight(kg) (without cable)
3"IBQ 5-6	75	150	1,1	160-250	1¼	108	10,3
3"IBQ 5-8	102	150	1,5	160-250	1¼	120	13,3
3"IBQ 5-10	130	150	2,2	160-250	1¼	131	13,8

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) one phase	Inlet/outlet (inch)	Pump height (cm)	Weight(kg) (without cable)
3"IBQ 8-4	56	250	1,5	160-250	1½	101	12,1
3"IBQ 8-6	80	250	2,2	160-250	1½	113	13,6







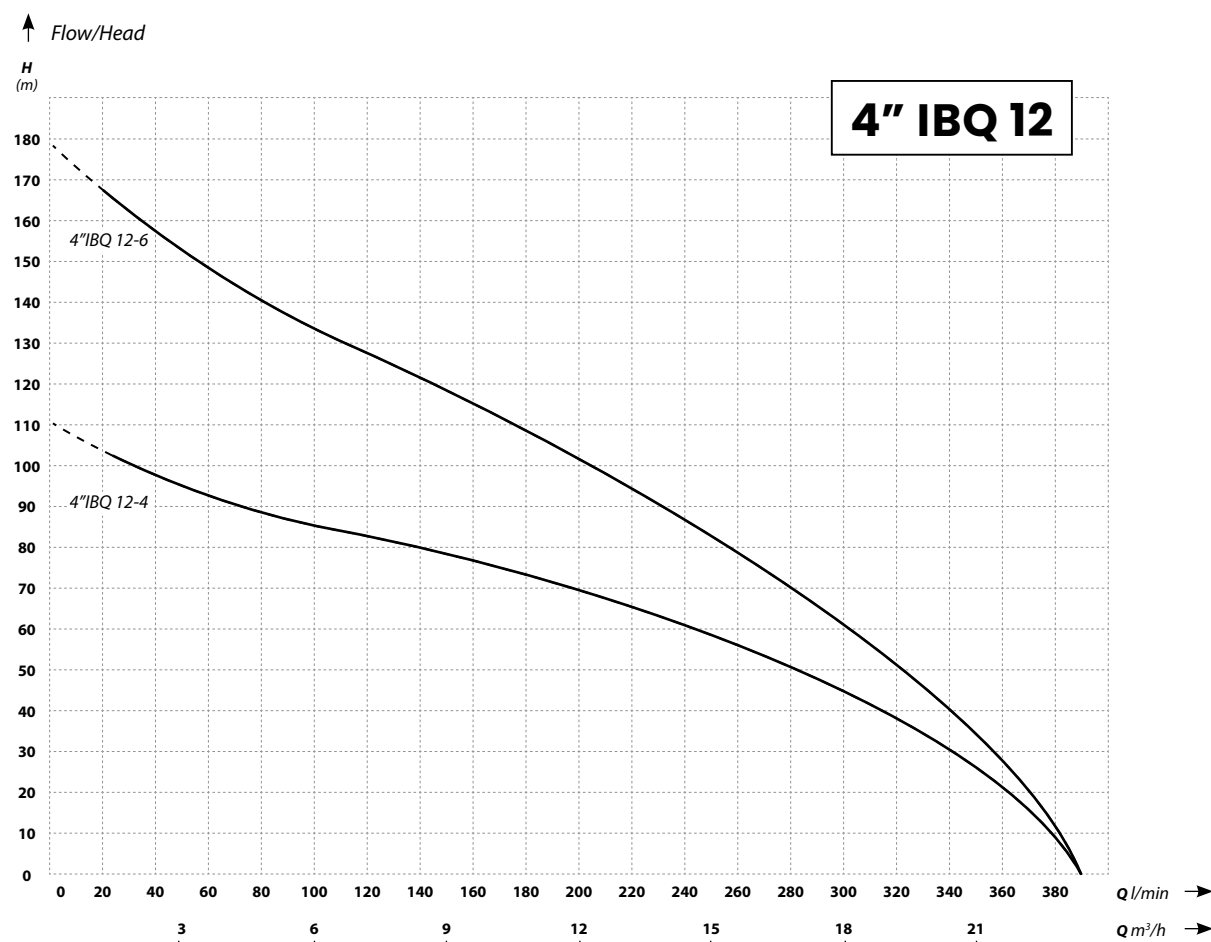
# 4" IBQ

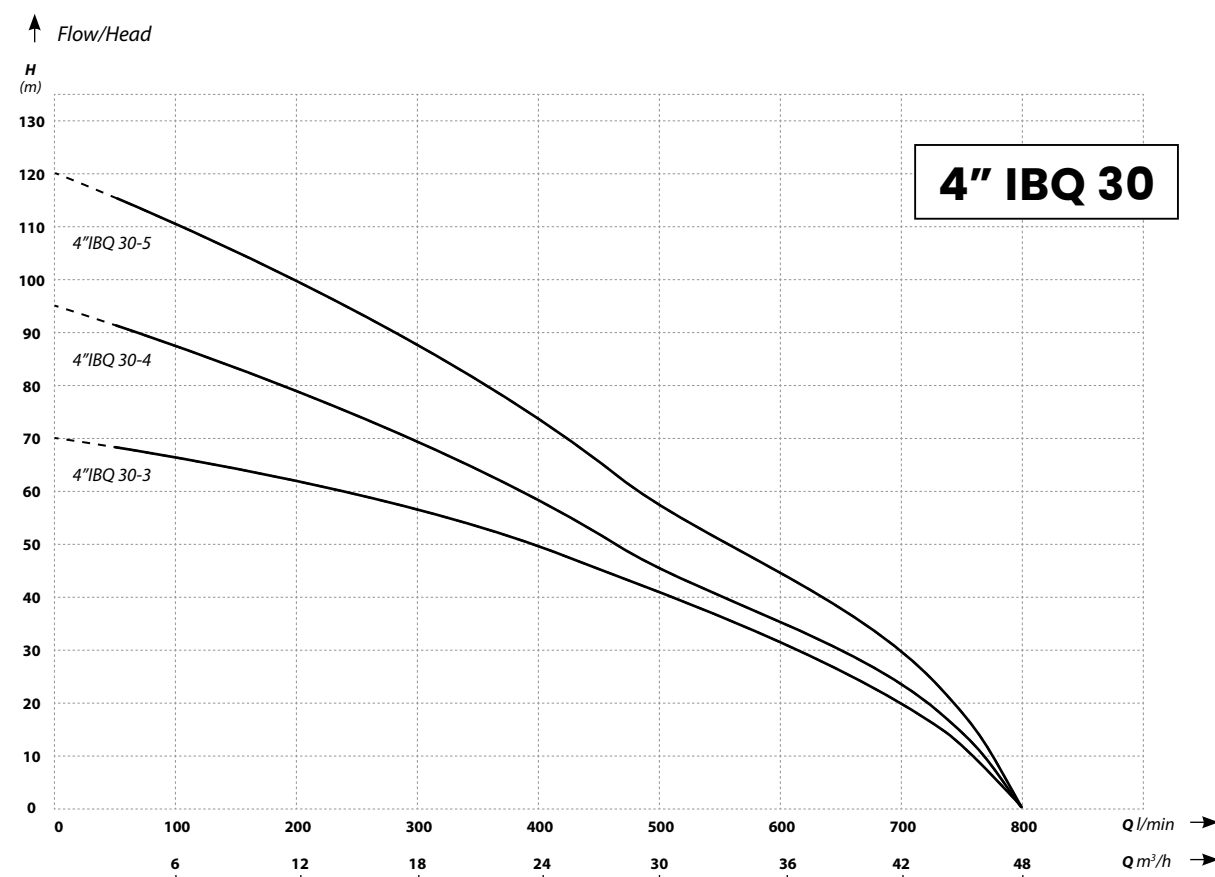
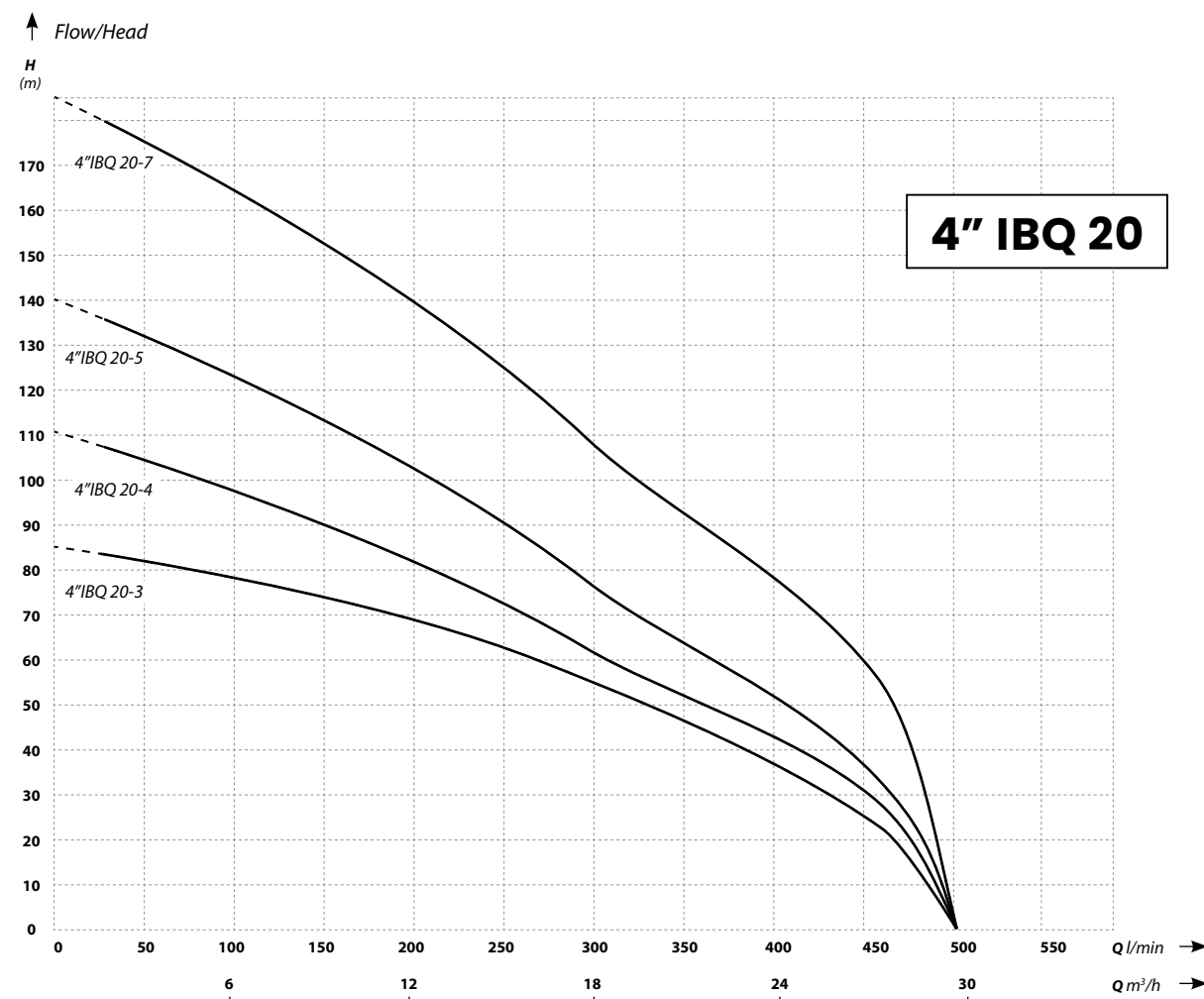
Maximum pump diameter 98 mm

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) three phases	Inlet/outlet (inch)	Pump height (cm)	Weight(kg) (without cable)
4"IBQ 12-4	110	390	4	320-450	2	104	20,2
4"IBQ 12-6	178	390	5,5	320-450	2	114	22,2

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) three phases	Inlet/outlet (inch)	Pump height (cm)	Weight(kg) (without cable)
4"IBQ 20-3	85	500	4	320-450	2	104	20,2
4"IBQ 20-4	110	500	5,5	320-450	2	114	20,7
4"IBQ 20-5	140	500	7,5	320-450	2	124	25,1
4"IBQ 20-7	185	500	11	320-450	2	144	29

Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V) three phases	Inlet/outlet (inch)	Pump height (cm)	Weight(kg) (without cable)
4"IBQ 30-3	70	800	5,5	320-450	3	115	22,5
4"IBQ 30-4	95	800	7,5	320-450	3	126	25,3
4"IBQ 30-5	120	800	11	320-450	3	140	28,7







# IBO ITALY FP4

**Stainless steel**  
**With DRY RUN PRO technology**

Due to the DRY RUN PRO technology, the FP4 pumps have increased resistance to seizure in case of dry running operation. The design and materials used make the pump suitable for pumping water for food processing purposes. The pump has been properly certified. Pumps in A, B, D, E sizes are equipped with radial impellers and 1¼" outlets while pumps in F, H, L sizes have semi-axial impellers and 2" outlets.

All pumps are supplied with built-in check valves. The maximum outer diameter of the pump including cable protector is 98 mm. The pump is suitable for vertical and horizontal operation.

The FP4 pumps can be used in households and on farms, in water supply systems, irrigation systems, fire extinguishing systems and industrial applications.

The FP4 deep well pumps has been manufactured in the innovative DRY RUN PRO technology by the leading Italian manufacturer of deep well pumps. They are very robust, compact and reliable. The inlet and outlet body sections are made of AISI 304 stainless steel made by lost-wax technique, which guarantees high chemical resistance in contact with water, as well as product reliability. The pumps design is based on floating rotors moving independently in the Venturi tube chambers.

Due to the innovative design, it is protected by a European patent. This solution guarantees that pumps have unique properties, such as reliable operation in dry running conditions.

## Operating conditions:

- Maximum liquid temperature 35°C
- Maximum ambient temperature 35°C
- Voltage: 230 V or 400 V
- Class F Insulation
- Operating mode - continuous
- Protection - IP68
- Power cable length: 1,5 m
- Workplace: vertical/horizontal
- Maks. liczba uruchomień na 1 h: 30
- Rotational speed of the electric motor: 2850 RPM

## Materials:

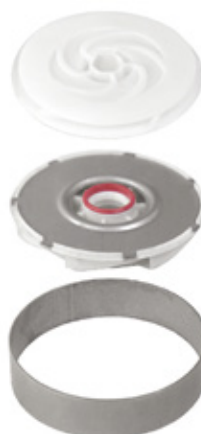
- Inlet/outlet: stainless steel AISI 304
- Non-return valve: stainless steel AISI 304
- Housing: stainless steel AISI 304
- Shaft and rotor: stainless steel AISI 304
- Venturi tube cover: stainless steel AISI 304
- Venturi tube: PA
- Impeller: PA
- Sliding sleeve: Al203
- Clutch: stainless steel AISI 316L
- Mechanical seal: Ceramics/Sic/NBR
- Motor: oil cooling



Watch the pump operation and design on:  
<http://bit.ly/>



**Increased resistance to sand**  
**Floating impellers**



Name	Head (m)	Efficiency (m³/h)	Motor power (kW)	Sand content g/m³	Max. number of cycles on-off /h	Work possibility in a horizontal position
IBO ITALY FP4	340	30	7,5	185	30	✓

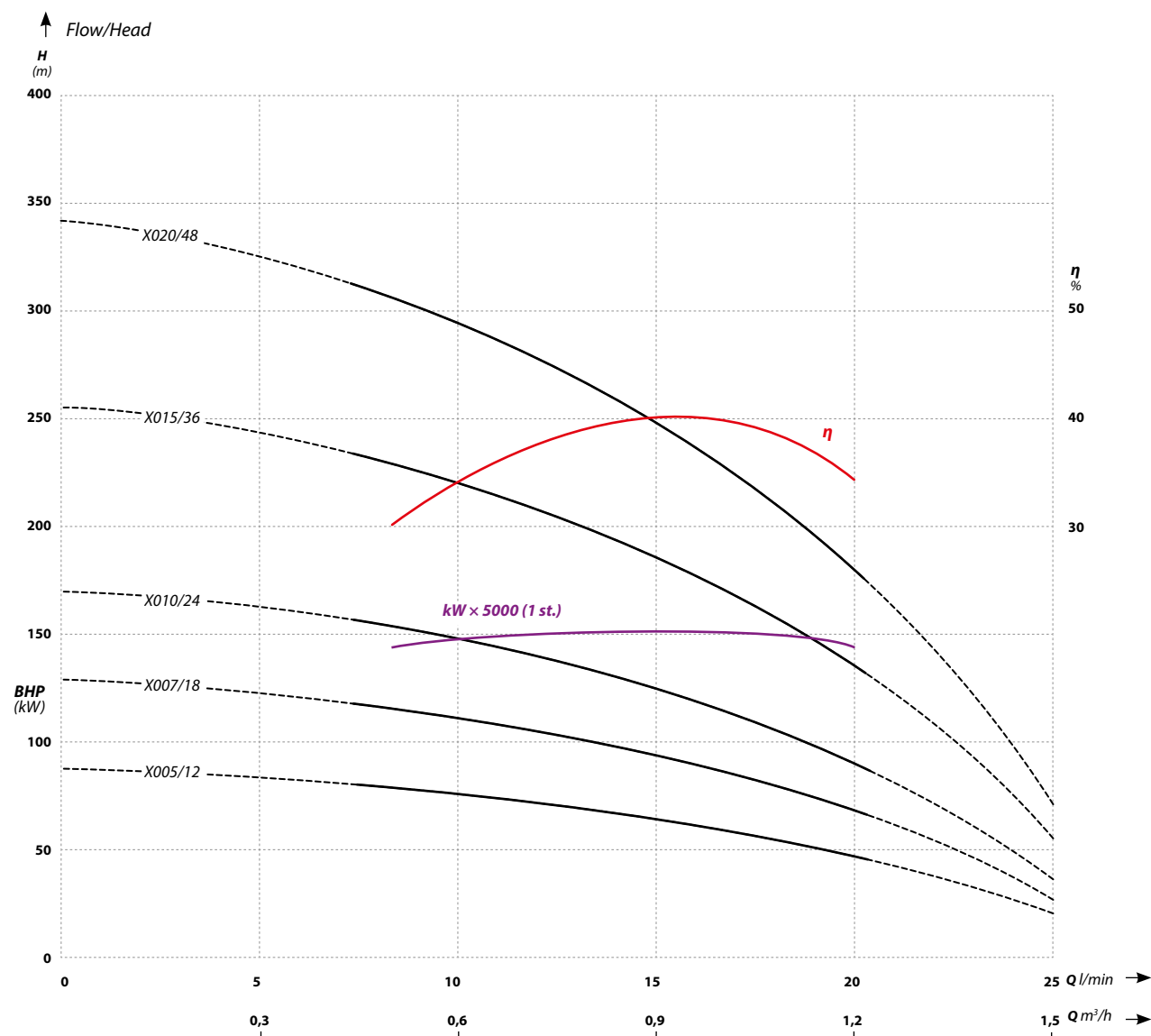
# IBO ITALY FP4 cd.

Tolerance according to ISO 9906 ann.A gr.2

TYP	kW	m³/h	0	0,6	0,9	1,2	1,5	1,8	2,1	2,4	2,7	3	3,6	4,2	4,8	5,4	6	6,6	7,2	8,4	9,6	10,8	12	13,5	15	16,5	18	19,5	21	22,5	24	25,5	27
		l/min	0	10	15	20	25	30	35	40	45	50	60	70	80	90	100	110	120	140	160	180	200	225	250	275	300	325	350	375	400	425	450
		l/sec	0	0,17	0,25	0,33	0,42	0,50	0,58	0,67	0,75	0,83	1,00	1,17	1,33	1,50	1,67	1,83	2,00	2,33	2,67	3,00	3,33	3,75	4,17	4,58	5,00	5,42	5,83	6,25	6,67	7,08	7,50
FP4 X005	0,37		87	73	62	45	18																										
FP4 X007	0,55		128	109	92	68	27																										
FP4 X010	0,75		170	145	123	90	36																										
FP4 X015	1,1		255	218	185	136	53																										
FP4 X020	1,5		340	290	246	180	71																										
FP4 A005	0,37		63	59	55	50	43	35	26	15																							
FP4 A007	0,55		90	85	80	72	62	51	37	20																							
FP4 A010	0,75		124	117	109	99	86	70	50	28																							
FP4 A015	1,1		181	171	159	144	125	101	73	41																							
FP4 A020	1,5		237	224	209	189	163	133	96	54																							
FP4 A030	2,2		356	336	313	283	245	199	144	81																							
FP4 B005	0,37		47	44	42	39	36	33	28	23	18																						
FP4 B007	0,55		70	65	63	59	54	49	43	35	27																						
FP4 B010	0,75		96	89	85	80	74	67	58	48	37																						
FP4 B015	1,1		140	129	124	117	107	96	83	68	50																						
FP4 B020	1,5		187	174	166	155	142	126	109	87	64																						
FP4 B030	2,2		274	254	243	227	208	185	159	128	94																						
FP4 B040	3		373	346	331	310	284	253	217	175	128																						
FP4 D005	0,37		33			31	30	30	29	27	26	23	18	13																			
FP4 D007	0,55		46			44	43	42	40	38	36	32	25	18																			
FP4 D010	0,75		65			62	61	59	57	55	52	45	36	25																			
FP4 D015	1,1		97			91	89	87	83	80	76	65	52	36																			
FP4 D020	1,5		129			121	119	116	111	106	101	87	69	48																			
FP4 D030	2,2		193			182	178	173	167	160	151	130	103	71																			
FP4 D040	3		257			241	235	228	220	209	198	170	134	90																			
FP4 D055	4		346			325	318	307	296	282	267	229	181	122																			
FP4 E005	0,37		27					26	25	25	24	22	20	17	13	9	5	1															
FP4 E007	0,55		41					38	38	37	36	33	30	25	20	14	8	2															
FP4 E010	0,75		54					51	50	49	48	44	40	33	26	19	11	2															
FP4 E015	1,1		82					77	75	74	72	67	60	50	39	28	16	4															
FP4 E020	1,5		109					102	101	98	96	89	79	67	53	38	22	5															
FP4 E030	2,2		163					154	151	148	144	133	119	100	79	56	32	7															
FP4 E040	3		218					205	201	197	191	178	159	134	105	75	43	10															
FP4 E055	4		299					282	277	271	263	245	218	184	145	103	59	13															
FP4 F007	0,55		27						23	22	22	21	20	19	18	17	16	12	8	4													
FP4 F010	0,75		40						34	34	33	32	30	29	28	26	24	18	12	6													
FP4 F015	1,1		60						51	51	49	47	46	44	41	39	35	28	19	9													
FP4 F020	1,5		77						67	66	64	63	60	58	55	52	47	37	25	12													
FP4 F030	2,2		116						101	100	97	94	91	87	83	77	71	55	37	18													
FP4 F040	3		154						135	133	129	125	121	115	110	103	95	74	50	24													
FP4 F055	4		210						187	184	178	173	166	159	150	140	129	101	67	27													
FP4 F075	5,5		266						241	238	232	224	215	203	190	176	160	124	79	31													
FP4 F100	7,5		370						330	325	315	305	294	280	265	248	227	179	118	47													
FP4 H010	0,75		26										24	23	23	22	21	20	18	15	12	8	4										
FP4 H015	1,1		39										35	35	34	33	32	30	27	23	18	12	5										
FP4 H020	1,5		52										47	46	45	44	43	40	36	30	24	16	7										
FP4 H030	2,2		78										71	69	68	67	64	60	53	46	37	23	11										
FP4 H040	3		104										94	93	91	89	86	80	71	61	49	31	14										
FP4 H055	4		144										129	127	125	123	121	113	102	88	69	44	16										
FP4 H075	5,5		197										176	174	171	168	164	154	139	120	94	60	22										
FP4 H100	7,5		262										235	231	228	224	219	206	185	159	126	80	30										
FP4 L020	1,5		36														30	28	27	25	23	21	18	16	13	11	8	4	1				
FP4 L030	2,2		50																														

# IBO ITALY FP4 X

Stainless steel  
With DRY RUN PRO technology



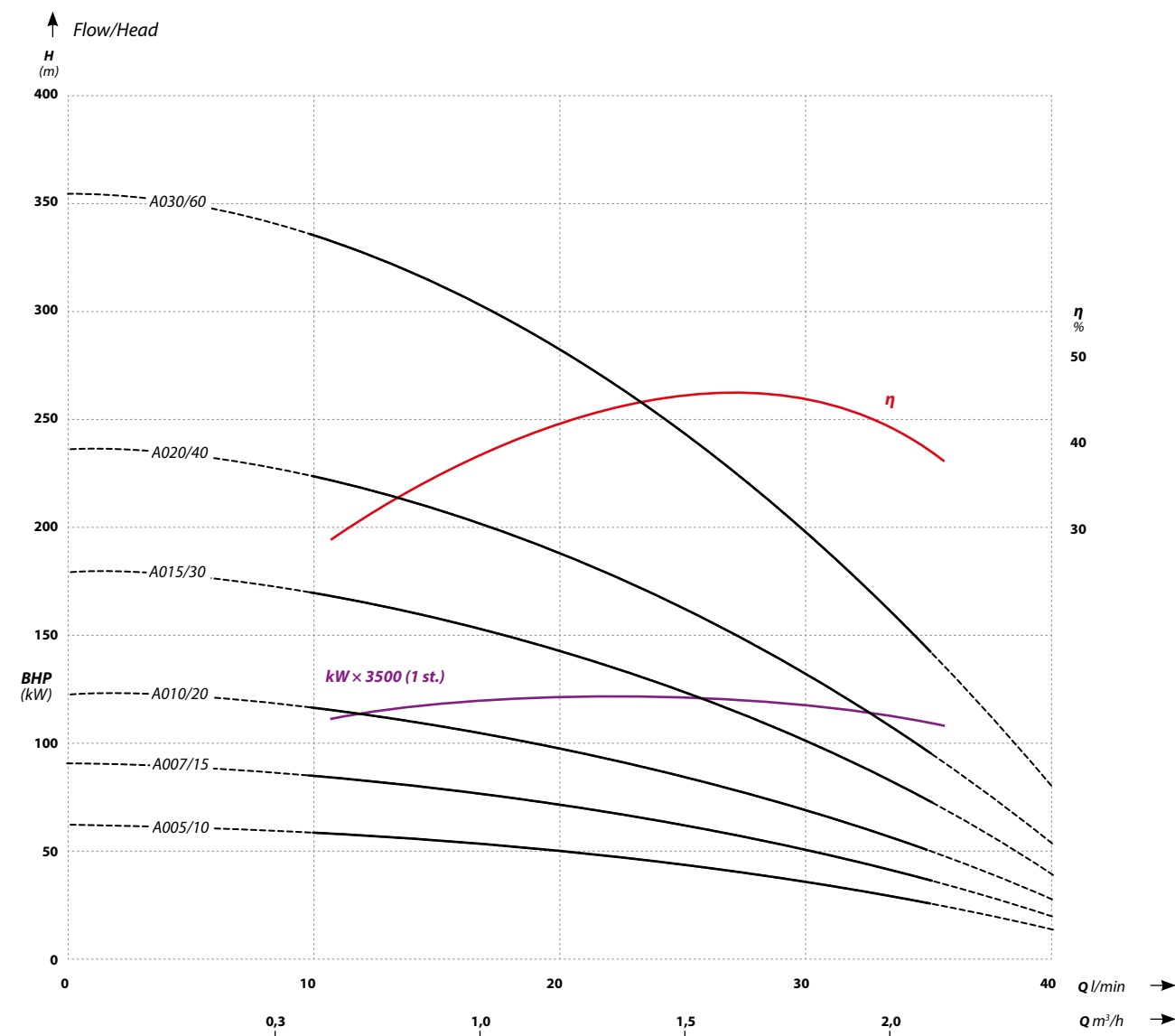
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V	Dimensions Dia/H (mm)	Weight (kg) 230V/400V
X 005	87	25	0,37	230/400	1¼	3,5 1,35	98/732	11,6 10,9
X 007	128	25	0,55	230/400	1¼	4,7 1,85	98/924	14,1 12,9
X 010	170	25	0,75	230/400	1¼	5,9 2,20	98/1002	16,4 14,9
X 015	255	25	1,1	230/400	1¼	8,6 3,00	98/1217	19,7 18,9
X 020	340	25	1,5	230/400	1¼	10,7 4,10	98/1470	23,7 21,7

## IBO ITALY FP4 A

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



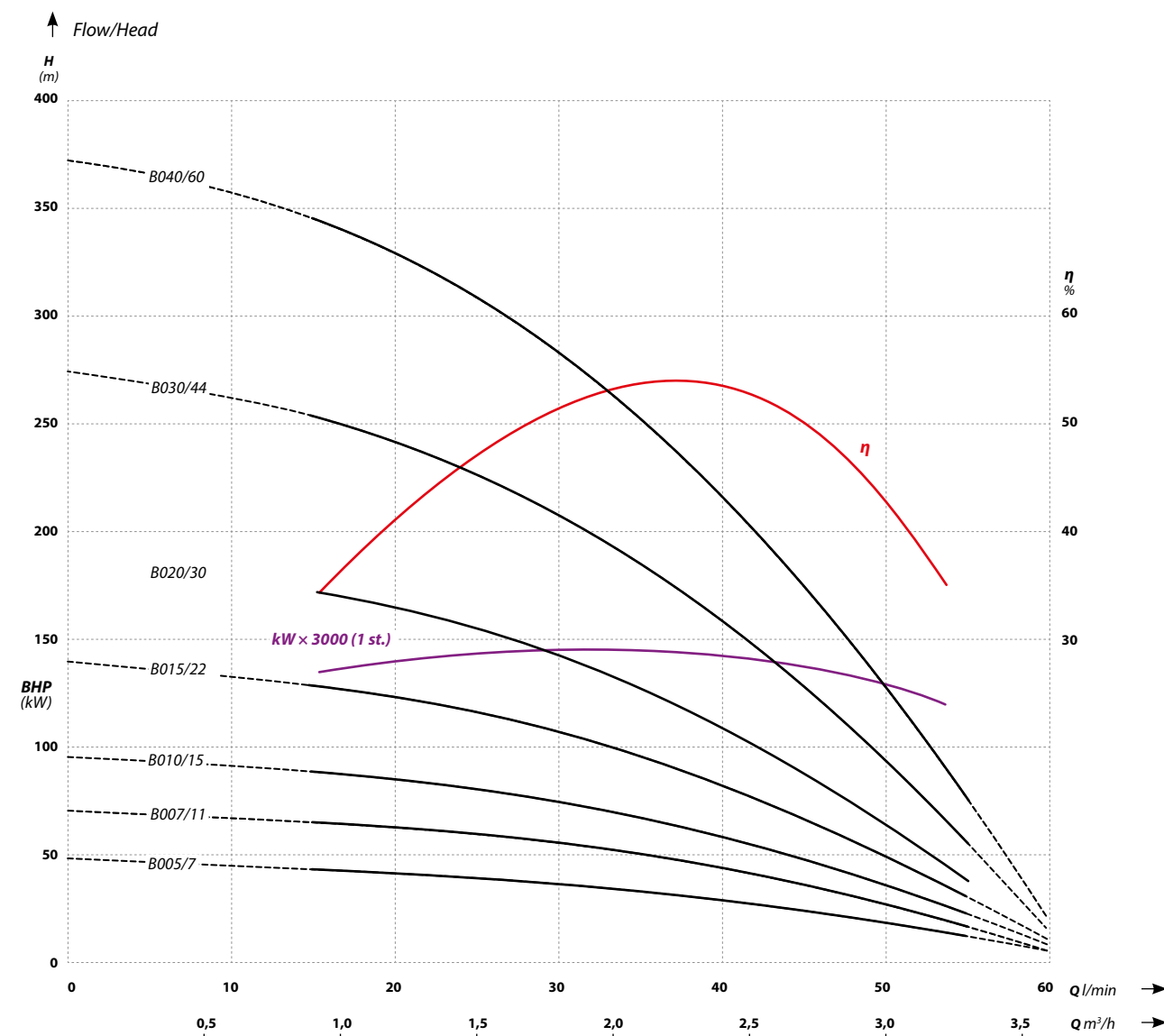
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (mm)	Weight (kg) 230V/400V	
A 005	63	40	0,37	230/400	1¼	3,5	1,36	98/710	11,5	10,8
A 007	91	40	0,55	230/400	1¼	4,7	1,85	98/835	13,6	12,4
A 010	128	40	0,75	230/400	1¼	5,9	2,20	98/977	15,9	14,4
A 015	185	40	1,1	230/400	1¼	8,6	3,00	98/1231	19,3	18,5
A 020	240	40	1,5	230/400	1¼	10,7	4,10	98/1464	22,7	20,7
A 030	348	40	2,2	230/400	1¼	14,8	5,6	98/2013	31,8	26,9

## IBO ITALY FP4 B

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



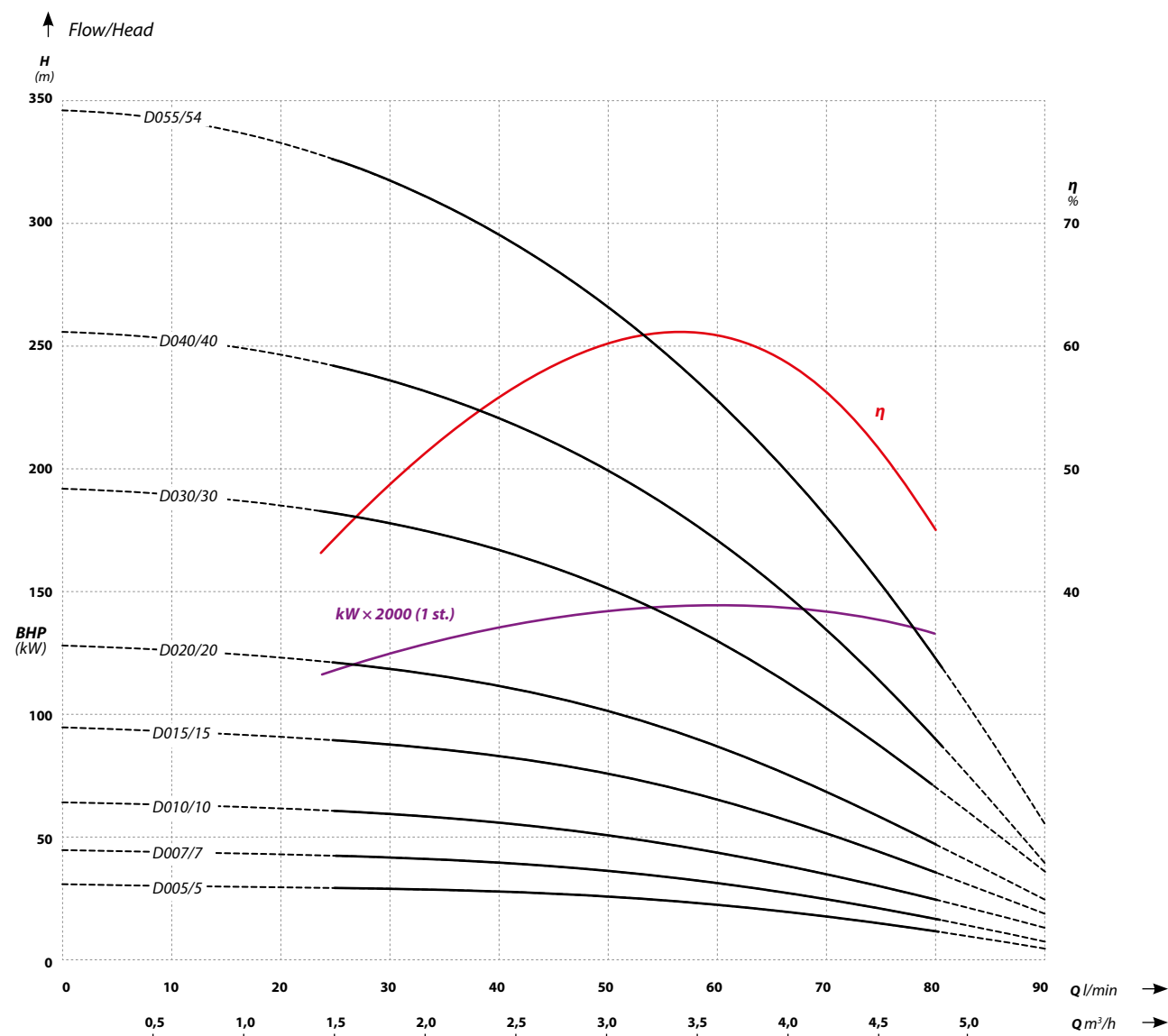
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (mm)	Weight (kg) 230V/400V	
B 005	43	60	0,37	230/400	1¼	3,5	1,5	98/631	10,8	10,1
B 007	70	60	0,55	230/400	1¼	4,7	1,85	98/735	12,7	11,5
B 010	95	60	0,75	230/400	1¼	5,9	2,20	98/838	14,7	13,2
B 015	139	60	1,1	230/400	1¼	8,6	3,00	98/1000	17,2	16,4
B 020	182	60	1,5	230/400	1¼	10,7	4,10	98/1192	20,2	18,2
B 030	260	60	2,2	230/400	1¼	14,8	5,60	98/1602	28,1	23,2
B 040	342	60	3	400	1¼	–	7,50	98/1910	–	7,5

## IBO ITALY FP4 D

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



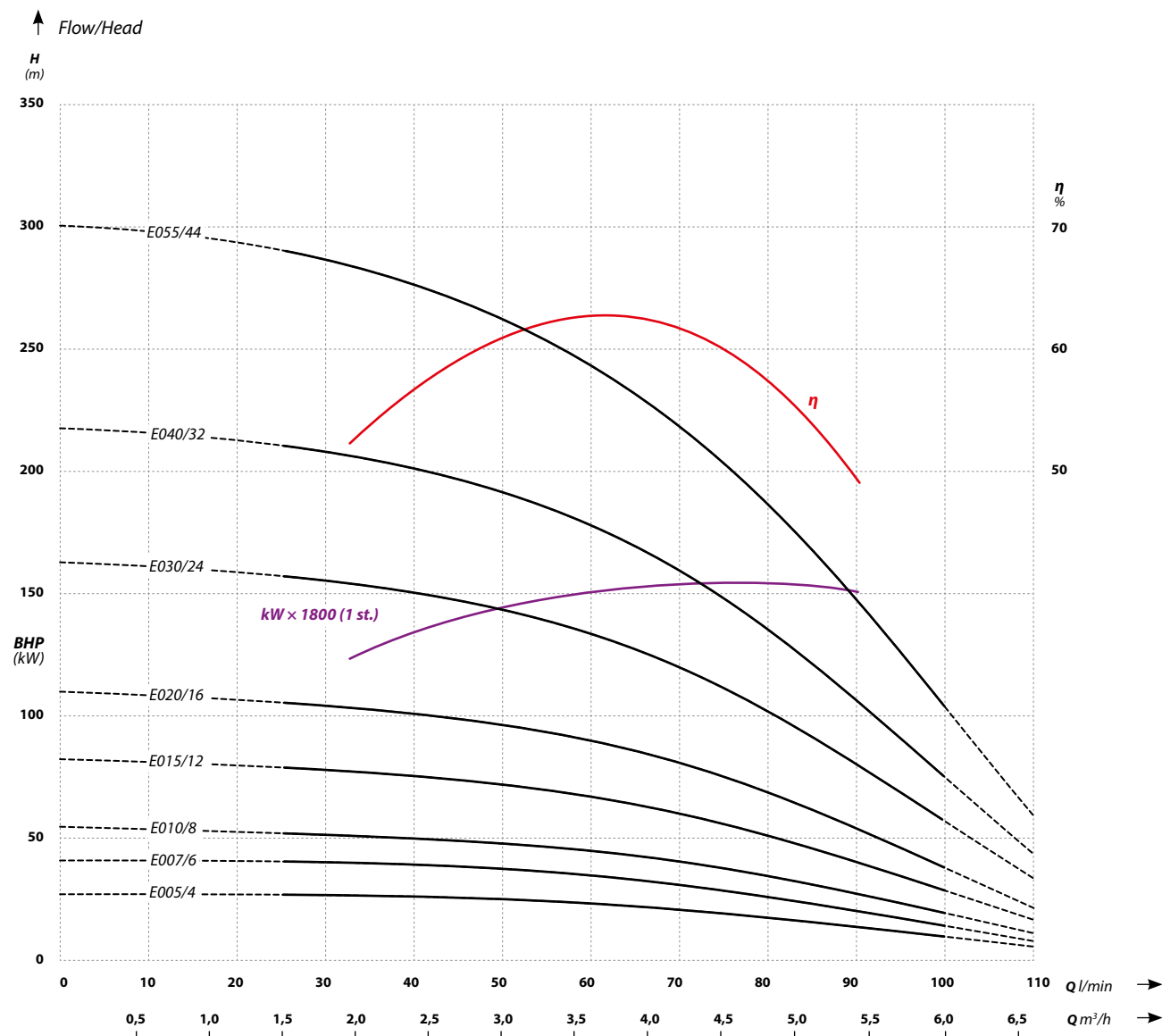
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (mm)	Weight (kg) 230V/400V	
D 005	33	90	0,37	230/400	1¼	3,5	1,35	98/591	10,4	9,7
D 007	46	90	0,55	230/400	1¼	4,7	1,85	98/656	11,9	10,7
D 010	68	90	0,75	230/400	1¼	5,9	2,20	98/738	13,6	12,1
D 015	100	90	1,1	230/400	1¼	8,6	3,00	98/861	15,7	14,9
D 020	133	90	1,5	230/400	1¼	10,7	4,10	98/993	18,1	16,1
D 030	194	90	2,2	230/400	1¼	14,8	5,60	98/1290	24,7	19,8
D 040	261	90	3	400	1¼	–	7,50	98/1479	–	24,8
D 055	338	90	4	400	1¼	–	9,80	98/1824	–	30,9

## IBO ITALY FP4 E

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (mm)	Weight (kg) 230V/400V	
E 005	29	110	0,37	230/400	1¼	3,5	1,35	98/579	10,3	9,6
E 007	44	110	0,55	230/400	1¼	4,7	1,85	98/648	11,8	10,6
E 010	58	110	0,75	230/400	1¼	5,9	2,20	98/714	13,3	11,8
E 015	85	110	1,1	230/400	1¼	8,6	3,00	98/824	15,2	14,4
E 020	114	110	1,5	230/400	1¼	10,7	4,10	98/945	17,5	15,5
E 030	170	110	2,2	230/400	1¼	14,8	5,60	98/1219	23,8	18,9
E 040	225	110	3	400	1¼	–	7,50	98/1383	–	23,5
E 055	303	110	4	400	1¼	–	9,80	98/1712	–	29,3

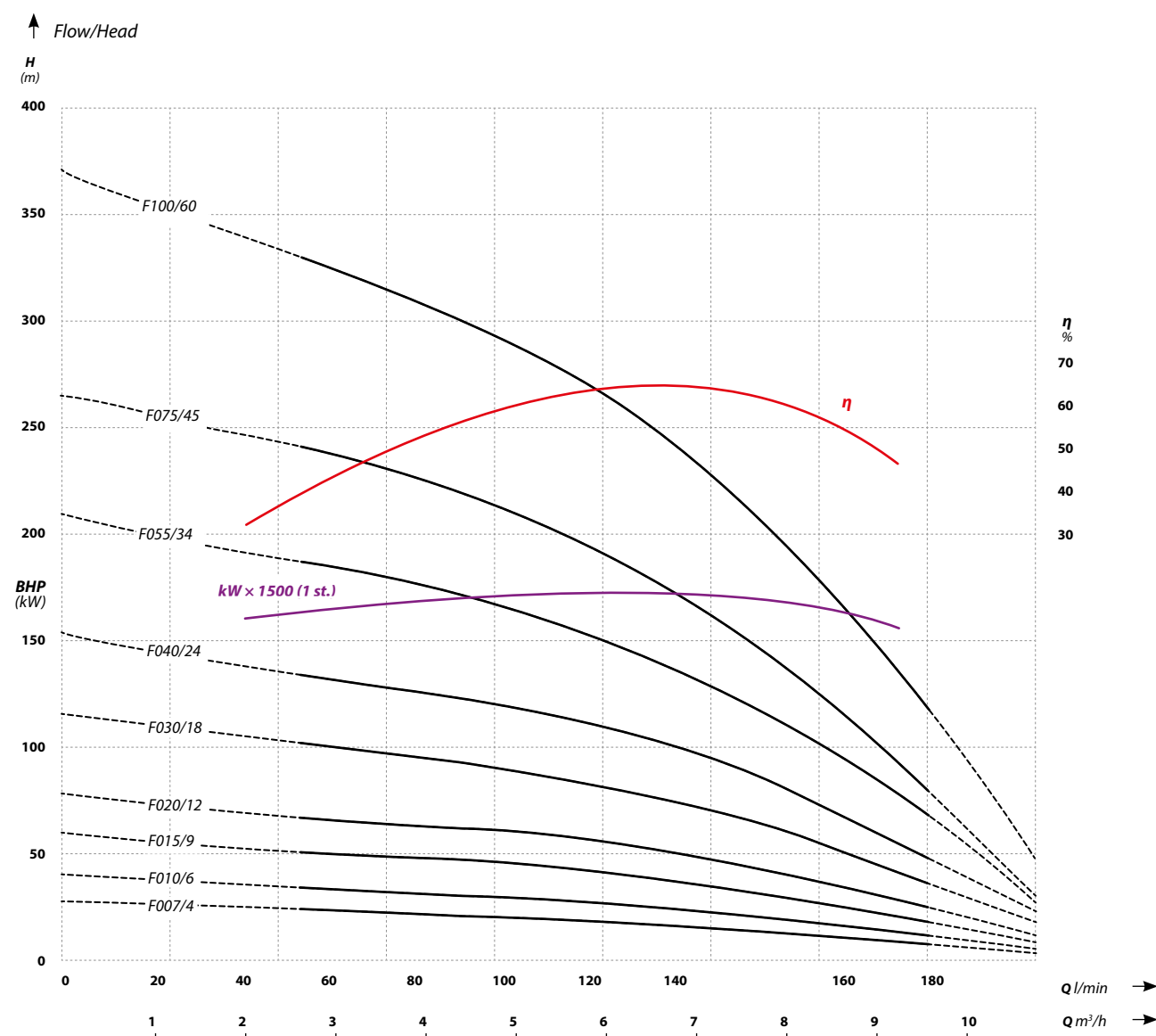


## IBO ITALY FP4 F

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



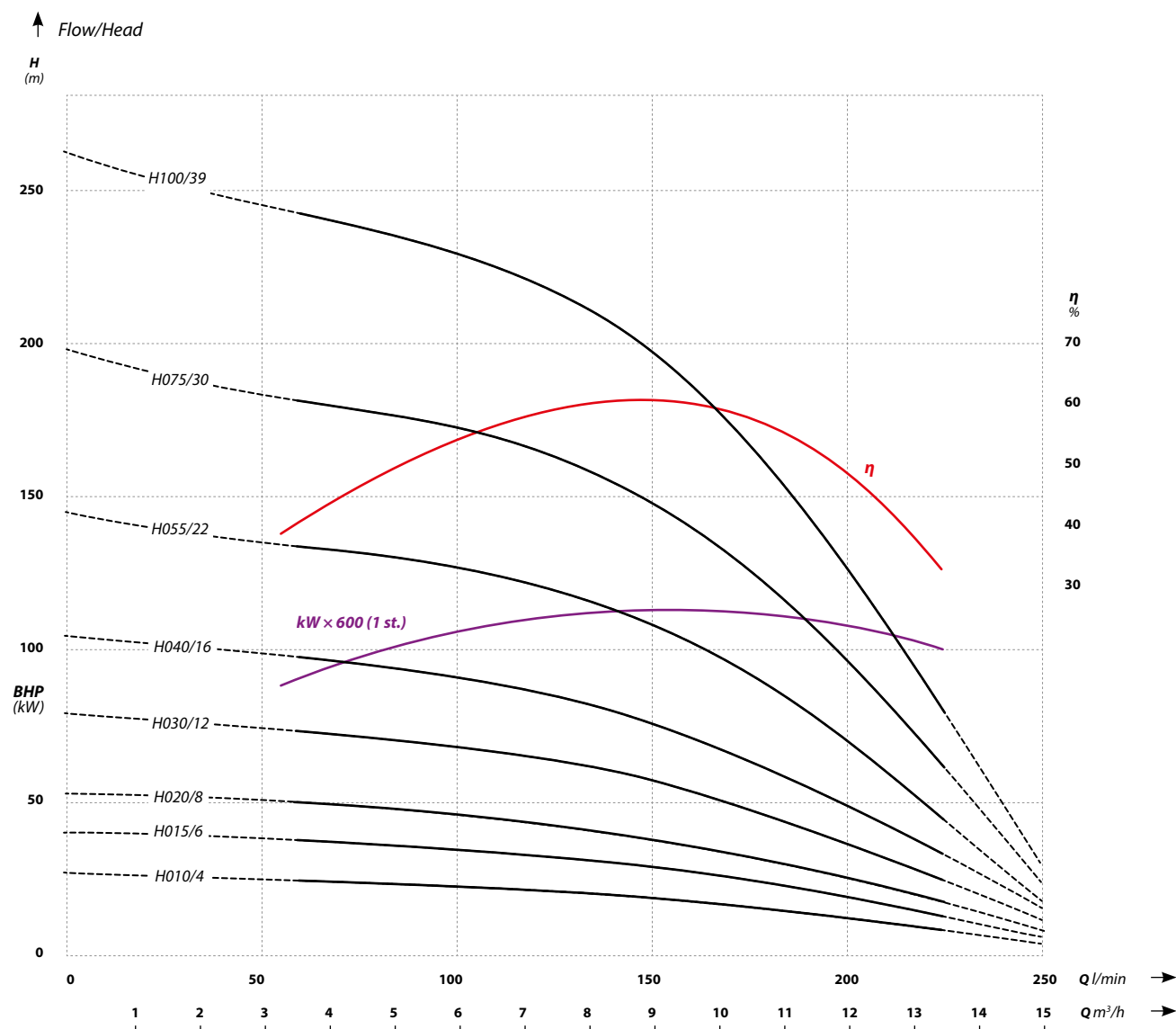
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (mm)	Weight (kg) 230V/400V	
F 007	27	180	0,55	230/400	2	4,7	1,85	98/664	11,9	10,7
F 010	40	180	0,75	230/400	2	5,9	2,20	98/760	13,6	12,1
F 015	60	180	1,1	230/400	2	8,6	3,00	98/894	15,7	14,9
F 020	77	180	1,5	230/400	2	10,7	4,10	98/1037	18,1	16,1
F 030	116	180	2,2	230/400	2	14,8	5,60	98/1356	24,7	19,8
F 040	154	180	3	400	2	–	7,50	98/1567	–	24,8
F 055	210	180	4	400	2	–	9,80	98/2000	–	31,4
F 075	266	180	5,5	400	2	–	12,7	98/2537	–	41,5
F 100	370	180	7,5	400	2	–	16,9	98/3176	–	50,5

## IBO ITALY FP4 H

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



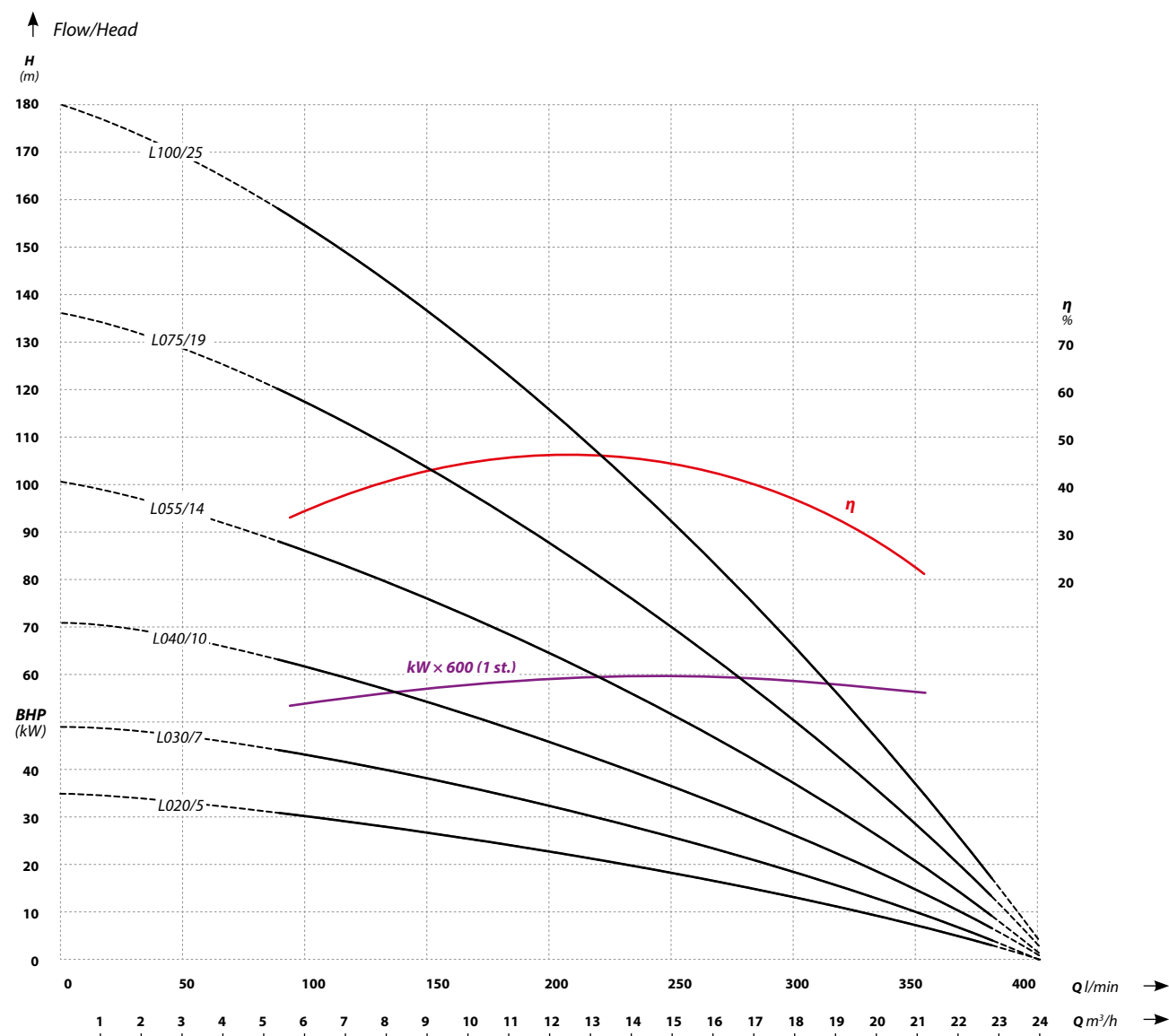
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V		Dimensions Dia/H (mm)	Weight (kg) 230V/400V	
H 010	21	250	0,75	230/400	2	5,9	2,20	98/698	13,0	11,5
H 015	35	250	1,1	230/400	2	8,6	3,00	98/801	14,8	14,0
H 020	50	250	1,5	230/400	2	10,7	4,10	98/914	16,9	14,9
H 030	71	250	2,2	230/400	2	14,8	5,60	98/1171	22,9	18,8
H 040	100	250	3	400	2	–	7,50	98/1288	–	21,9
H 055	135	250	4	400	2	–	9,80	98/1624	–	27,7
H 075	192	250	5,5	400	2	–	12,7	98/2044	–	36,4
H 100	251	250	7,5	400	2	–	16,9	98/2523	–	43,9

## IBO ITALY FP4 L

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



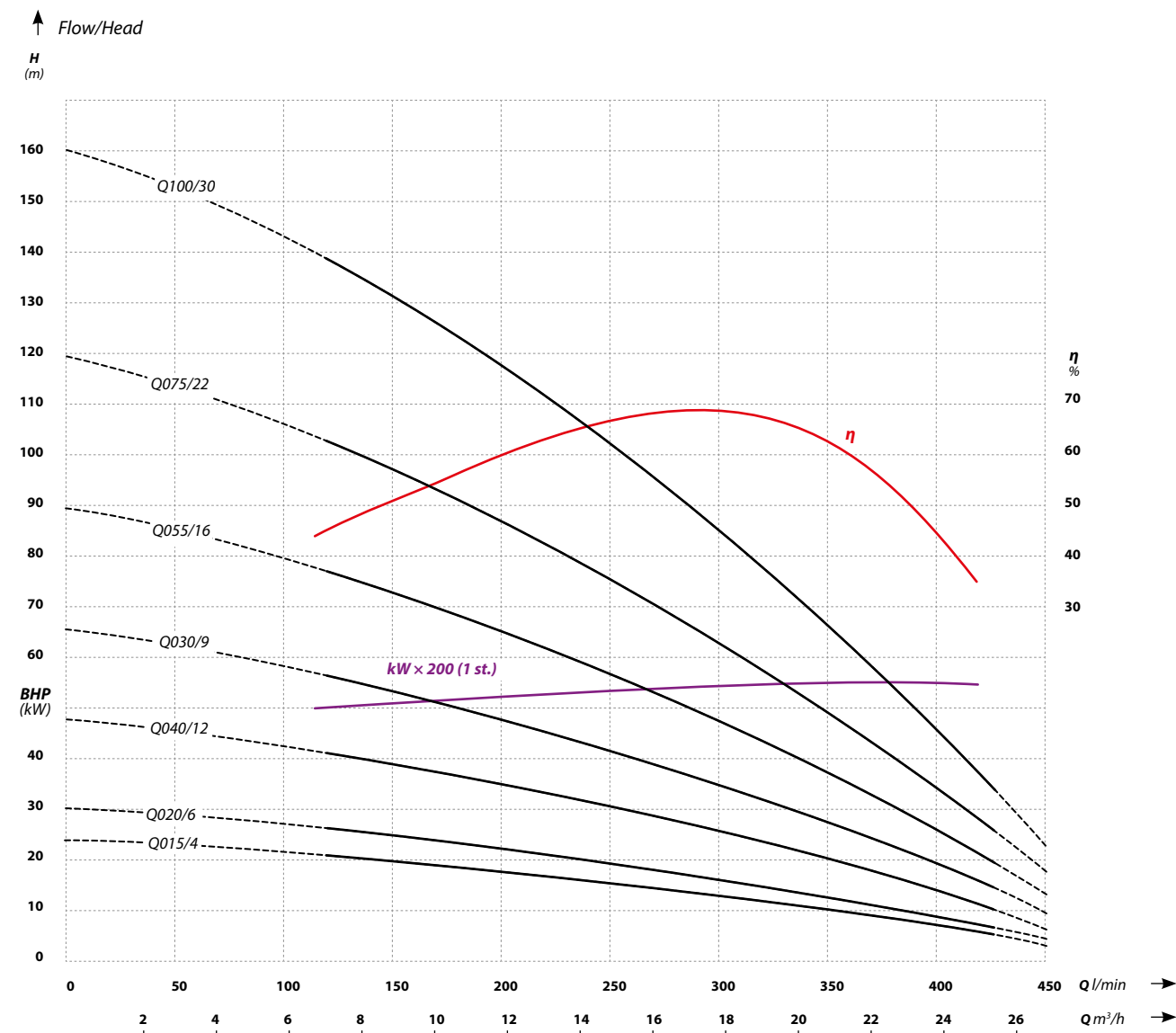
Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V	Dimensions Dia/H (mm)	Weight (kg) 230V/400V
L 020	36	400	1,5	230/400	2	10,7 4,10	98/889	16,3 14,3
L 030	50	400	2,2	230/400	2	14,8 5,60	98/1119	21,8 16,9
L 040	72	400	3	400	2	– 7,50	98/1259	– 20,7
L 055	100	400	4	400	2	– 9,80	98/1567	– 25,8
L 075	137	400	5,5	400	2	– 12,7	98/1971	– 34,0
L 100	180	400	7,5	400	2	– 16,9	98/2417	– 40,7

## IBO ITALY FP4 Q

Stainless steel  
With DRY RUN PRO  
technology



Increased  
resistance to sand.  
Floating impellers



Name	Head (m)	Flow (l/min)	Motor power (kW)	Voltage (V)	Inlet/outlet (inch)	Amperage (A) 230V/400V	Dimensions Dia/H (mm)	Weight (kg) 230V/400V
Q15	24	500	1,1	230/400	2	8,6 3,00	98/833	14,8 14,0
Q20	30	500	1,5	230/400	2	10,7 4,10	98/934	16,7 14,7
Q30	48	500	2,2	230/400	2	14,8 5,60	98/1236	22,8 17,9
Q40	65	500	3	230/400	2	– 7,50	98/1396	– 22,0
Q55	89	500	4	400	2	– 9,80	98/1766	– 27,8
Q75	119	500	5,5	400	2	– 12,7	98/2204	– 36,3
Q100	161	500	7,5	400	2	– 16,9	98/2693	– 43,4

# IBO ITALY AP6 F

Stainless steel

The multistage Italian submersible pumps of the AP6 series, which, after the FP4 series, are another very successful design of the leading Italian pump manufacturer, were designed for boreholes with a minimum internal diameter of 180 mm. They are characterized by high quality workmanship, and their reliable design, developed by Italian engineers, allows for many years of trouble-free use. The pumps are used to supply water to single- and multi-family houses, farms, as well as to supply irrigation systems (sprinklers, drip lines). The pumps are also used in industry, fire protection installations and drainage systems.

### Characteristics:

- Increased resistance to sand  
Built-in check valve
- Top quality materials
- Long trouble-free operation based on Italian manufacturing technology
- Available with IBO Italy motors
- Possibility of connecting a cable of a certain length (in multiples of 5 m)

- Thermal protection built into the motor winding (230 V version)
- Warranty 24 months
- Warranty and post-warranty service

### Operating conditions:

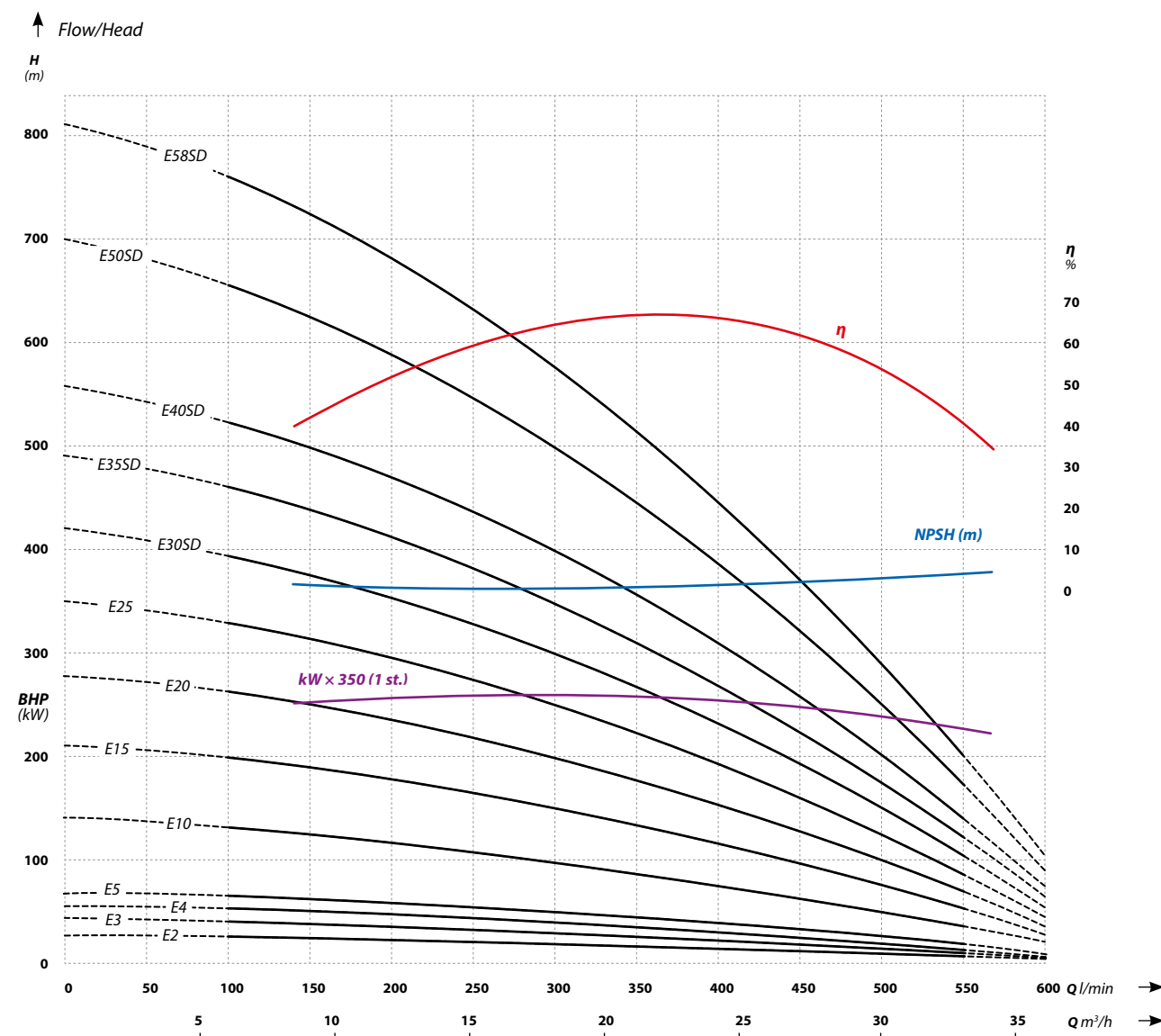
- Maximum liquid temperature: 35°C
- Maximum ambient temperature 35°C
- Voltage: 400 V
- Security: F
- Working mode: continuous
- Security: IP68
- Power cable length: 1,5 m
- Workplace: vertical/horizontal
- Max. number of starts per hour: 30
- Rotational speed of the electric motor: 2850 RPM



TYP	kW	m3/h l/min l/sec	3 50 0,83	4,5 75 1,25	6 100 1,67	7,5 125 2,08	9 150 2,50	10,5 175 2,92	12 200 3,33	13,5 225 3,75	15 250 4,17	16,5 275 4,58	18 300 5,00	21 350 5,83	24 400 6,67	27 450 7,50	30 500 8,33	33 550 9,17	36 600 10,0	39 650 10,8	42 700 11,7	45 750 12,5	48 800 13,3	51 850 14,2	54 900 15,0	57 950 15,8	60 1000 16,7	63 1050 17,5	66 1100 18,3	
AP6 E2	1,5						25	24	24	23	22	21	20	18	15	13	10	7	4											
AP6 E3	2,2						38	37	35	34	33	32	30	27	23	19	15	10	5											
AP6 E4	3						50	49	47	46	44	42	40	36	31	26	20	14	7											
AP6 E5	4						63	61	59	57	55	53	50	45	39	32	25	17	9											
AP6 E10	7,5						125	122	118	114	110	105	100	89	77	64	50	34	18											
AP6 E15	11						188	183	177	171	164	158	150	134	116	96	75	51	27											
AP6 E20	15						251	244	236	228	219	210	200	178	154	128	100	69	36											
AP6 E25	18,5						314	305	296	285	274	263	250	223	193	160	125	86	45											
AP6 E30SD	22						376	366	355	342	329	315	300	268	232	192	149	103	54											
AP6 E35SD	26						439	427	414	399	383	368	350	312	270	224	174	120	63											
AP6 E40SD	30						502	488	473	456	438	420	400	357	309	256	199	137	72											
AP6 E50SD	37						627	610	591	571	548	525	500	446	386	320	249	172	90											
AP6 E58ST	45						727	707	686	662	635	609	579	517	448	371	289	199	104											
AP6 F3	3									40	39	38	36	35	32	29	25	21	16	10	4									
AP6 F4	4									53	52	50	49	47	43	39	33	27	21	13	5									
AP6 F6	5,5									79	77	75	73	70	65	58	50	41	31	20	8									
AP6 F8	7,5									106	103	100	97	94	86	77	67	55	42	27	11									
AP6 F10	9,2									132	129	125	121	117	108	97	84	69	52	34	14									
AP6 F12	11									159	155	150	146	141	129	116	100	82	63	40	16									
AP6 F14	13									185	180	175	170	164	151	135	117	96	73	47	19									
AP6 F16	15									212	206	200	194	187	172	154	134	110	83	54	22									
AP6 F20	18,5									264	258	251	243	234	215	193	167	137	104	67	27									
AP6 F24	22									317	309	301	291	281	258	232	200	164	125	81	32									
AP6 F28SD	26									370	361	351	340	328	301	270	234	192	146	94	38									
AP6 F32SD	30									423	412	401	388	375	344	309	267	219	167	108	43									
AP6 F40SD	37									529	515	501	486	468	430	386	334	274	208	134	54									
AP6 F46SD	45									608	592	576	558	539	495	444	384	315	240	155	62									
AP6 H2	3													28	27	26	25	23	21	19	16	13	10	7	3					
AP6 H3	4													42	40	39	37	35	32	28	24	20	15	10	4					
AP6 H4	5,5													55	54	52	49	46	42	38	32	26	20	13	6					
AP6 H5	7,5													69	67	65	62	58	53	47	40	33	25	17	7					
AP6 H6	9,2													83	81	78	74	70	64	57	48	39	30	20	8					
AP6 H8	11													111	108	104	99	93	85	76	65	53	40	26	11					
AP6 H9	13													125	121	117	111	104	96	85	73	59	45	30	13					
AP6 H10	15													139	135	130	124	116	106	95	81	66	50	33	14					
AP6 H13	18,5													180	175	169	161	151	138	123	105	86	64	43	18					
AP6 H16	22													222	216	208	198	186	170	151	129	105	79	53	22					
AP6 H19	26													264	256	246	235	220	202	180	154	125	94	63	27					
AP6 H22	30													305	296	285	272	255	234	208	178	145	109	73	31					
AP6 H27SD	37													374	364	350	334	313	287	255	218	178	134	89	38					
AP6 H32SD	45													444	431	415	396	371	340	302	259	211	158	106	45					
AP6 L4	7,5														47	45	42	39	36	33	31	28	26	24	21	18	14	9	4	
AP6 L6	9,2														70	68	63	58	54	50	46	43	39	36	32	27	21	14	6	
AP6 L7	11														82	79	74	68	63	58	54	50	46	42	37	32	25	16	7	
AP6 L8	13														93	90	84	78	72	66	61	57	53	48	43	36	28	18	8	
AP6 L9	15														105	101	95	88	81	75	69	64	59	54	48	41	32	21	9	
AP6 L12	18,5														140	135	126	117	107	99	92	85	79	72	64	54	42	28	12	
AP6 L14	22														163	158	147	136	125	116	108	100	92	84	74	63	49	32	14	
AP6 L17	26														198	191	179	165	152	141	131	121	112	102	90	77	60	39	17	
AP6 L19	30														221	214	200	185	170	157	146	135	125	114	101	86	67	44	19	
AP6 L24S	37														280	270	252	234	215	199	184	171	158	144	128	108	84	55	24	
AP6 L28SD	45														326	315	294	272	251	232	215	199	184	168	149	126	98	64	28	

# IBO ITALY AP6 E

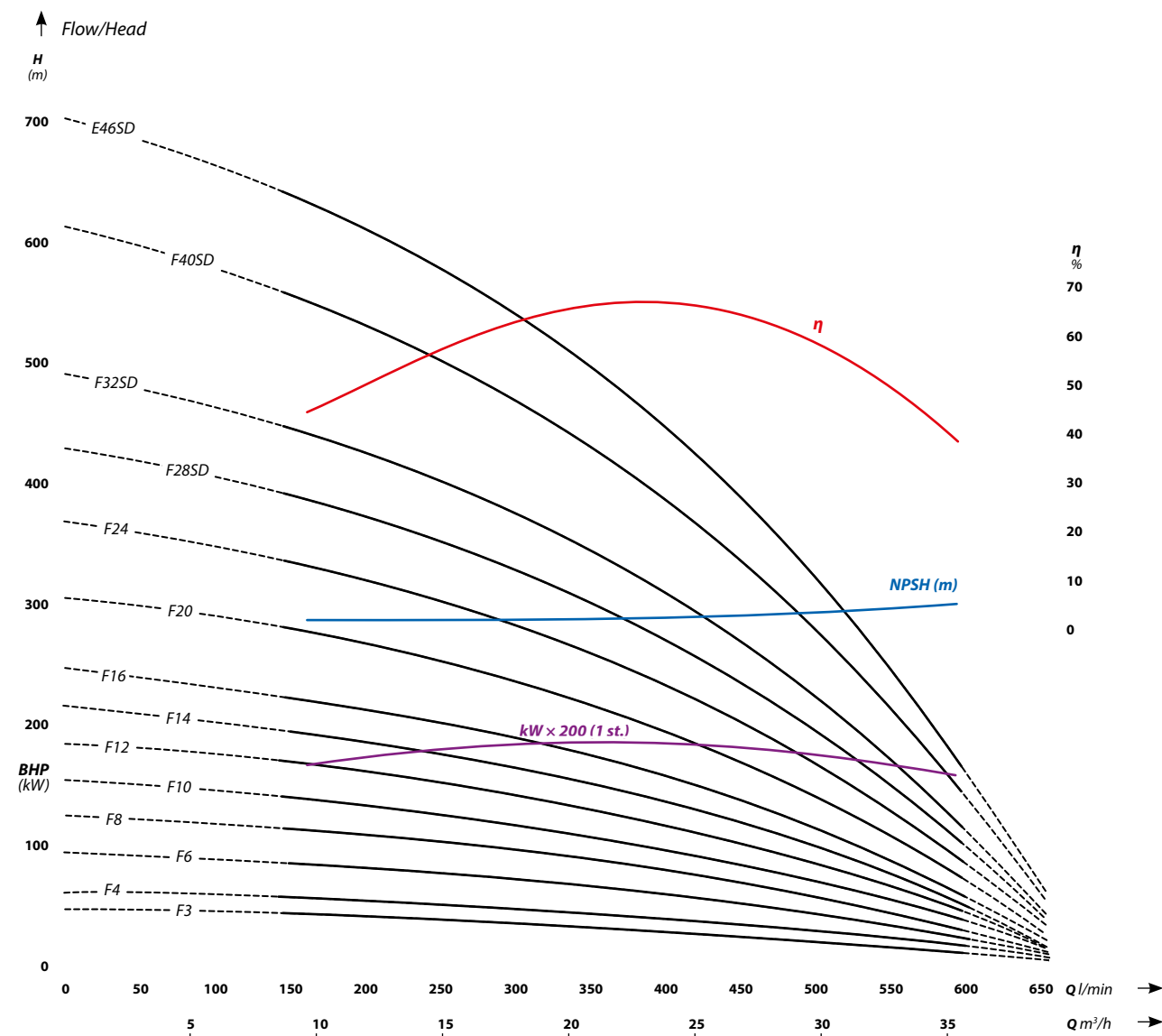
Stainless steel



Name	Head (m)	Flow (l/min)	Motor power (kW)	Inlet/outlet (inch)	Amperage (A) 400V	Motor diameter (inch)	L1 (mm)	Weight (kg)
AP6 E2	28	600	1,5	3	4,6	4	787	19
AP6 E3	42	600	2,2	3	6,2	4	879	22
AP6 E4	56	600	3	3	7,8	4	934	24
AP6 E5	70	600	3,7	3	9,8	4	1.041	26
AP6 E10	140	600	7,5	3	18	6	1.542	74
AP6 E15	210	600	11	3	26	6	1.912	90
AP6 E20	280	600	15	3	34	6	2.339	99
AP6 E25	350	600	18,5	3	41	6	2.713	120
AP6 E30SD	420	600	22	3	49	6	3.221	145
AP6 E35SD	490	600	26	3	57	6	3.601	161
AP6 E40SD	560	600	30	3	67	6	4.030	173
AP6 E50SD	700	600	37	3	74	6	4.632	190
AP6 E58SD	812	600	45	3	95	6	5.048	196

# IBO ITALY AP6 F

Stainless steel

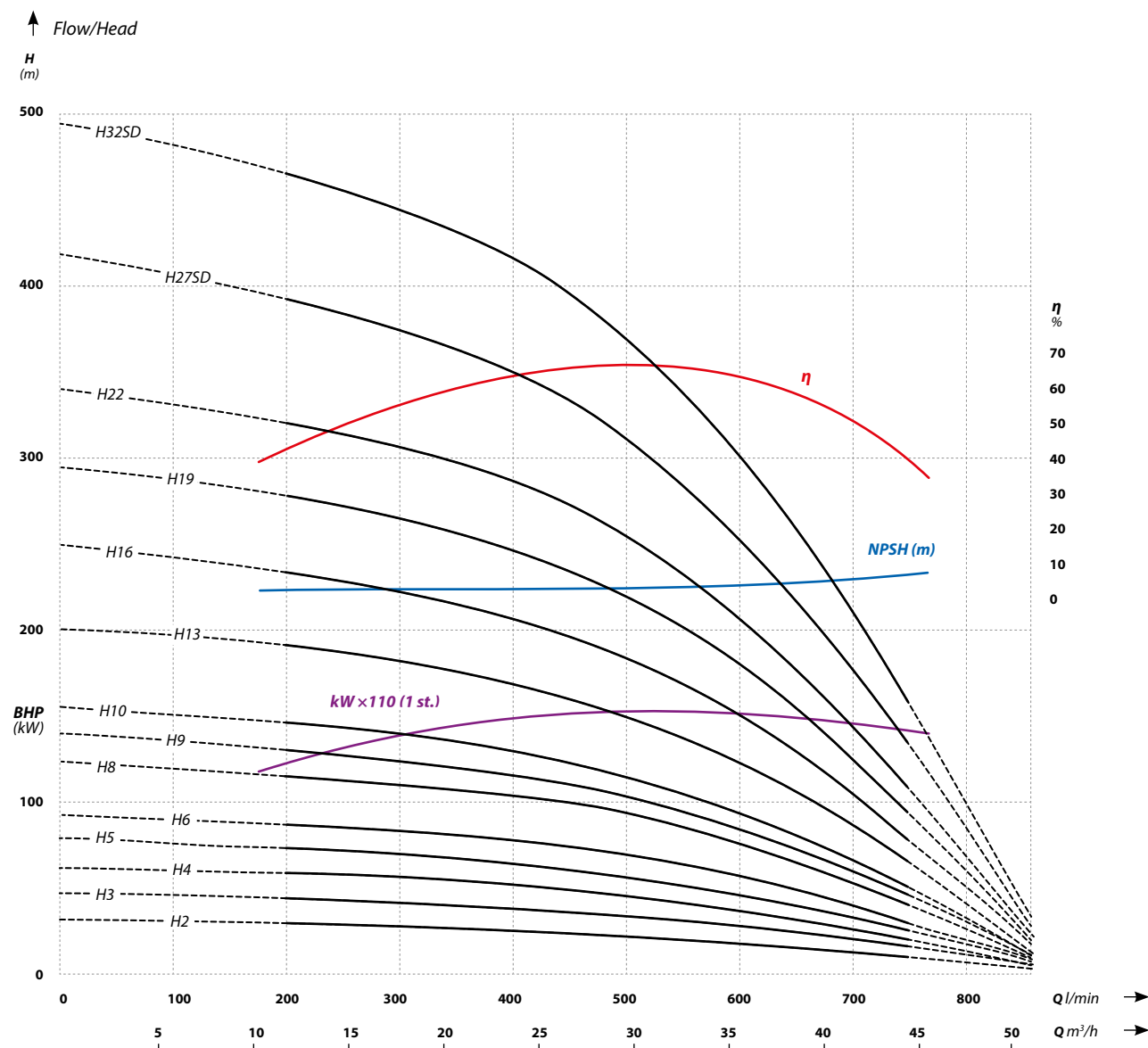


Name	Head (m)	Flow (l/min)	Motor power (kW)	Amperage (A) 400V	Motor diameter (inch)	L1 (mm)	Weight (kg)	Waga (kg)
AP6 F3	46	650	3	3	7,8	4"	879	23
AP6 F4	61	650	4	3	9,8	4"	984	26
AP6 F6	92	650	5,5	3	13,8	4"	1.168	32
AP6 F8	122	650	7,5	3	18	6"	1.428	72
AP6 F10	153	650	9,2	3	22	6"	1.582	79
AP6 F12	184	650	11	3	26	6"	1.741	86
AP6 F14	214	650	13	3	30	6"	1.900	93
AP6 F16	245	650	15	3	34	6"	2.059	99
AP6 E20	306	650	18,5	3	41	6"	2.429	115
AP6 E24	367	650	22	3	49	6"	2.741	128
AP6 F28SD	428	650	26	3	57	6"	3.202	153
AP6 F32SD	490	650	30	3	67	6"	3.470	161
AP6 F40SD	612	650	37	3	74	6"	3.958	196
AP6 F46SD	704	650	45	3	95	6"	4.374	182



# IBO ITALY AP6 H

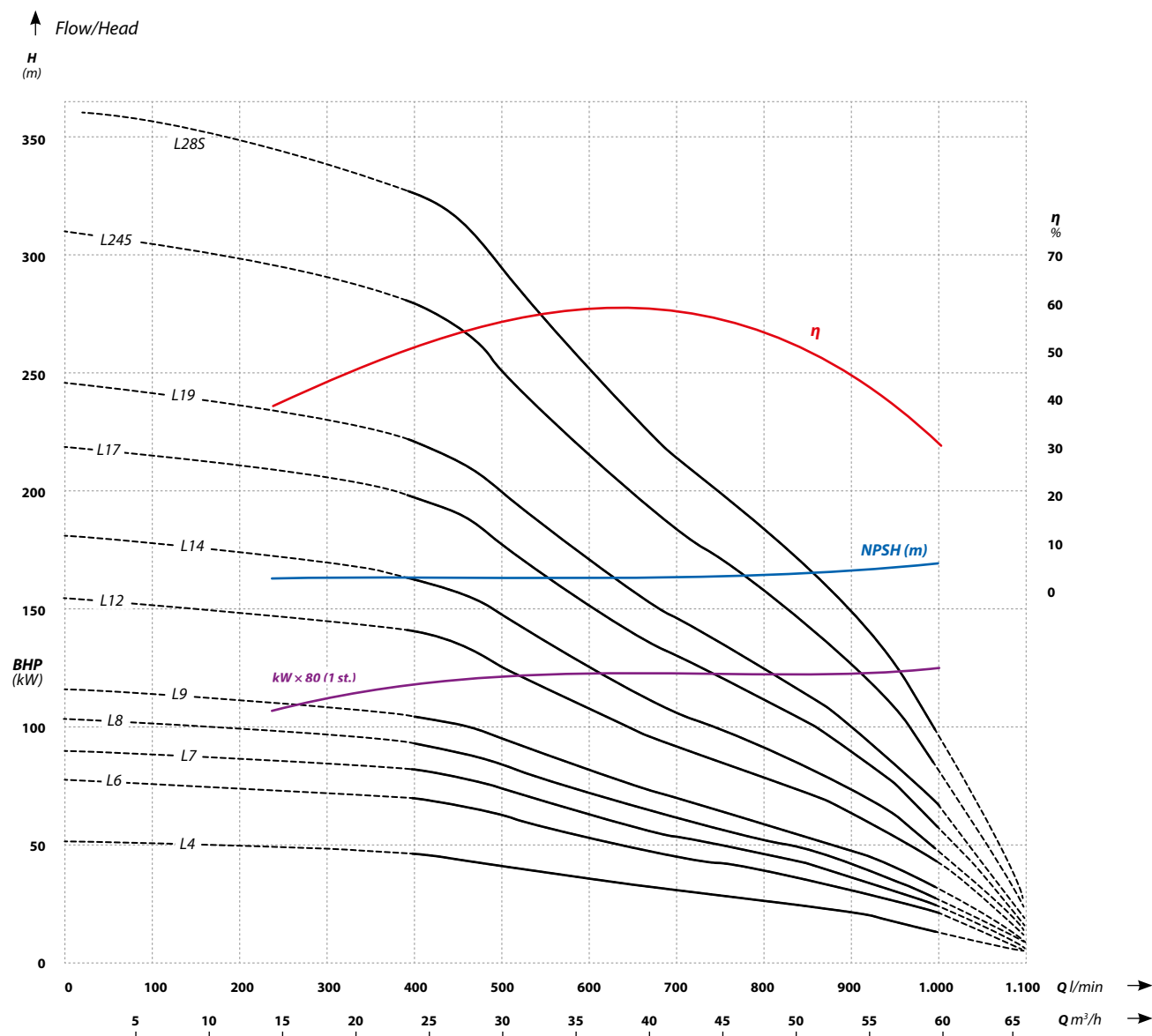
Stainless steel



Name	Head (m)	Flow (l/min)	Motor power (kW)	Inlet/outlet (inch)	Amperage (A) 400V	Motor diameter (inch)	L1 (mm)	Weight (kg)
AP6 H2	31	850	3	3	7,8	4	828	21
AP6 H3	47	850	4	3	9,8	4	936	25
AP6 H4	62	850	5,5	3	13,8	4	1.066	29
AP6 H5	78	850	7,5	3	18	6	1.272	68
AP6 H6	93	850	9,2	3	22	6	1.372	74
AP6 H8	124	850	11	3	26	6	1.537	81
AP6 H9	140	850	13	3	30	6	1.642	87
AP6 H10	155	850	15	3	34	6	1.747	92
AP6 H13	202	850	18,5	3	41	6	2.017	106
AP6 H16	248	850	22	3	49	6	2.282	118
AP6 H19	295	850	26	3	57	6	2.609	134
AP6 H22	341	850	30	3	67	6	2.829	141
AP6 H27S	419	850	37	3	74	6	3.160	157
AP6 H32SD	496	850	45	3	95	6	3.672	169

# IBO ITALY AP6 L

Stainless steel



Name	Head (m)	Flow (l/min)	Motor power (kW)	Amperage (A) 400V	Motor diameter (inch)	L1 (mm)	Weight (kg)
AP6 L4	52	1100	7,5	18	6	528	67
AP6 L6	77	1100	9,2	22	6	648	74
AP6 L7	90	1100	11	26	6	708	80
AP6 L8	103	1100	13	30	6	768	86
AP6 L9	116	1100	15	34	6	828	91
AP6 L12	155	1100	18,5	41	6	1.008	103
AP6 L14	181	1100	22	49	6	1.128	114
AP6 L17	219	1100	26	57	6	1.308	128
AP6 L19	245	1100	30	67	6	1.480	137
AP6 L245	310	1100	37	74	6	1.779	153
AP6 L285	361	1100	45	95	6	1.959	158

## IBO ITALY FX6 | FX8 | FX10

Top quality cast iron deep well pumps made in Italy. Pump hydraulic components are made of cast iron, and upon customer's request brass impellers can be installed. The pump has 5" diameter outlet (DN 125), and depending on the user's requirements, it can be threaded or flanged. For pumps up to 26 kW, 6" (144 mm) motors are mounted, for 8" pumps over 26 kW, 8" (193 mm) motors are mounted. Maximum pump diameter including cable protector is: for 6" pumps - 153 mm, 8" pumps - 193 mm, 10" pumps - 245 mm.

Pumps are available on request, delivery time from 7 to 21 days.

### Application:

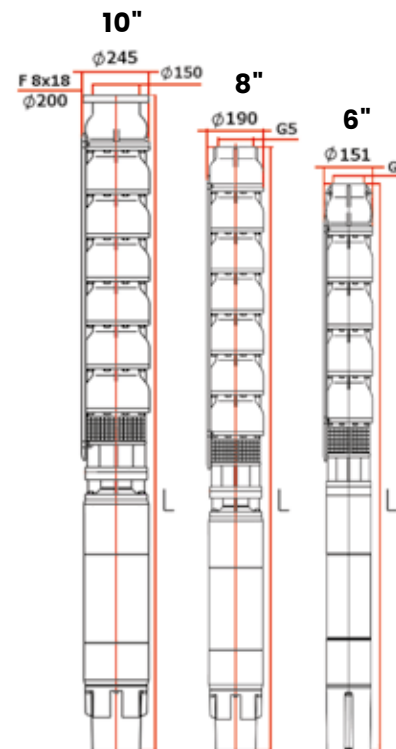
- farms,
- water supply systems,
- irrigation systems,
- fire extinguishing systems,
- industrial applications

### Operating conditions:

- Maximum liquid temperature: 35°C
- Maximum ambient temperature: 35°C
- Voltage: 400 V
- Insulation class: F
- Working mode: continuous
- Security: IP68
- Power cable length: 1,5 m
- Workplace: vertical/horizontal
- Max. number of starts per hour: 30
- Rotational speed of the electric motor: 2850 RPM

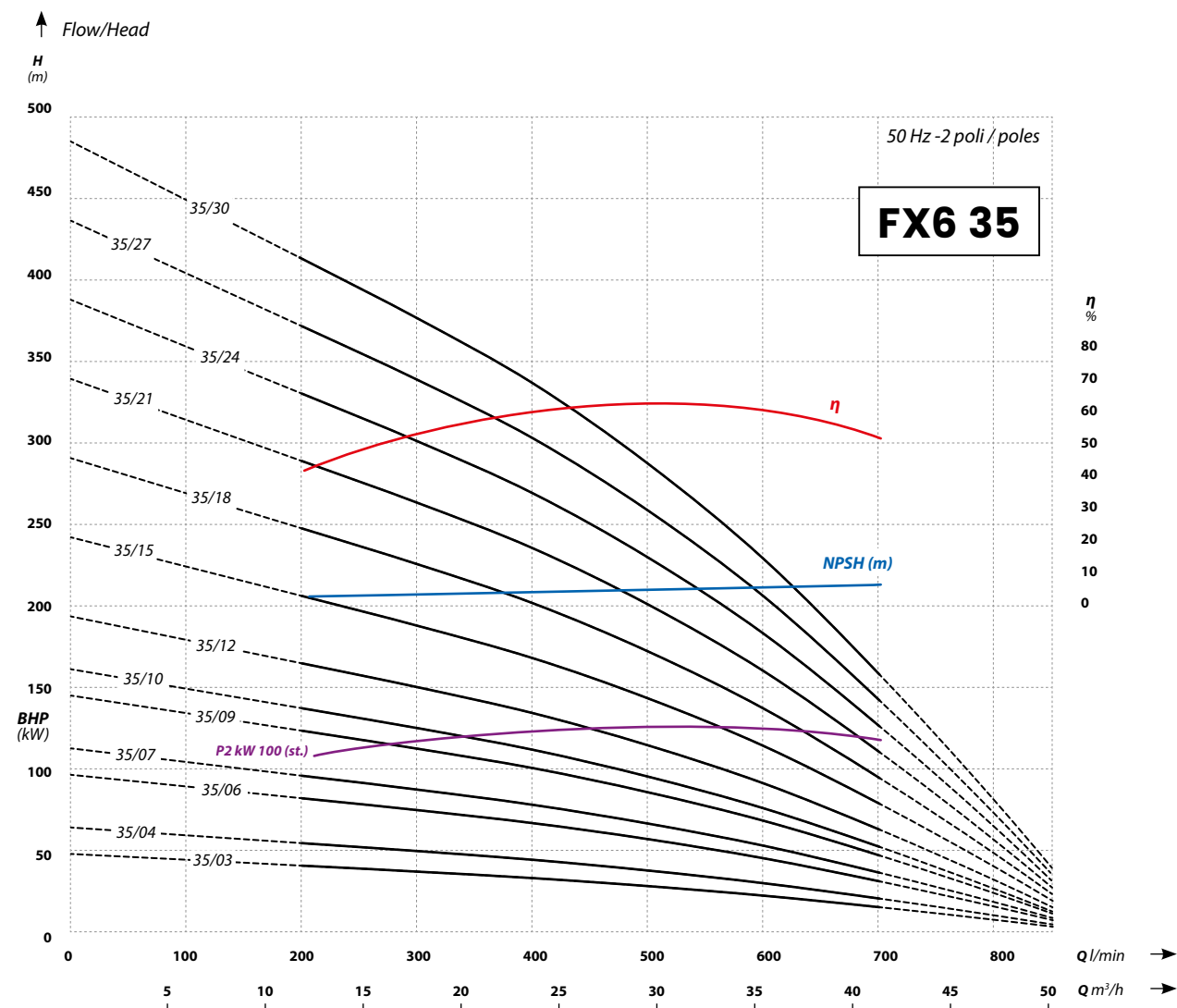
### Materials:

- Suction/pressure connection: cast iron
- Housing: cast iron
- Shaft: stainless steel AISI 420
- Impeller: cast iron
- Venturi tube: cast iron
- Mechanical seal: Carbon-SIC/Sic/NBR



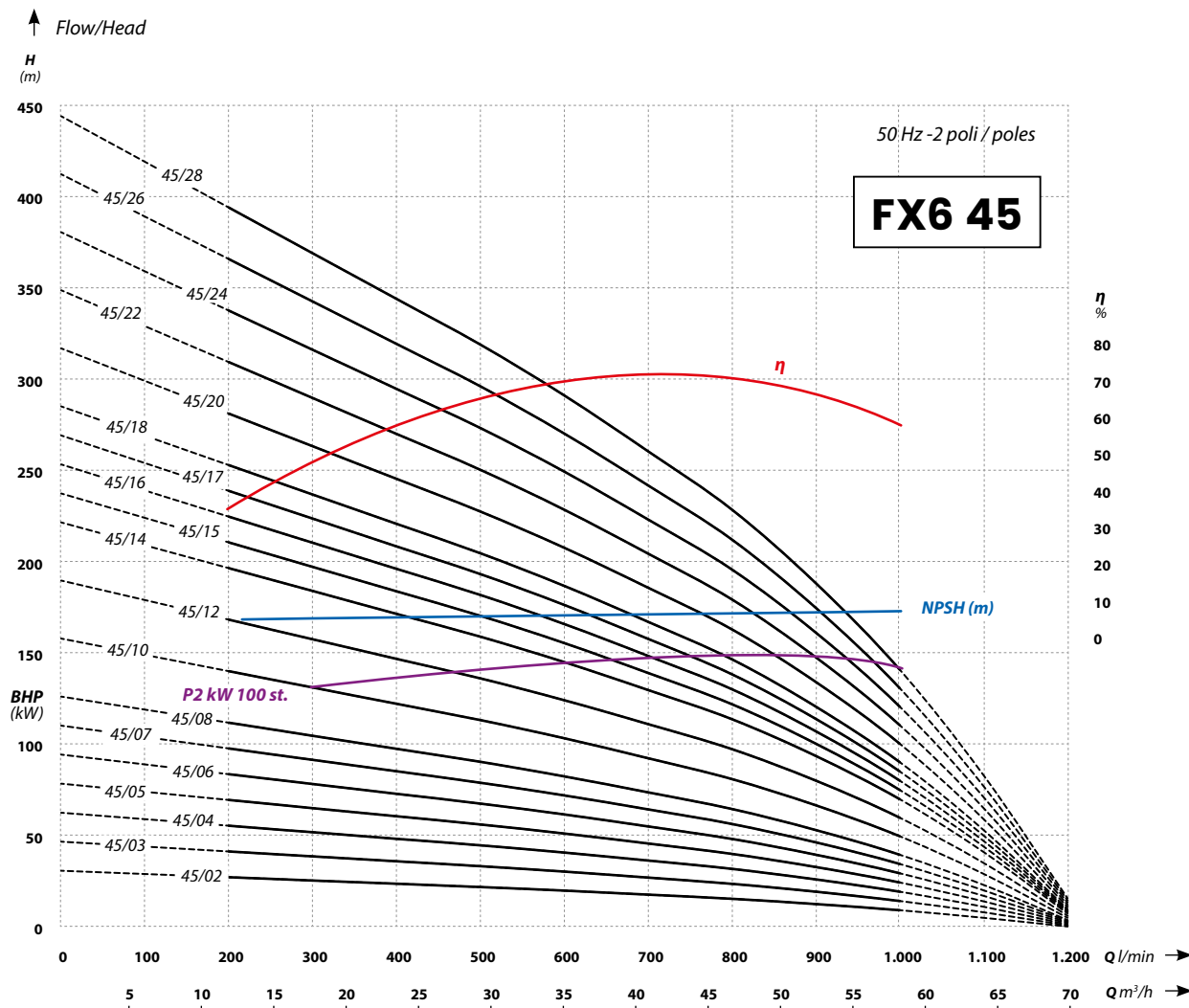
Number	Part Name	Material
1130	suction body	cast iron G25
1170	venturi tube	cast iron G25
1500	sealing ring	PU 45 shD / (FX10 bz.B8)
1610	diffuser sleeve	PU 45 shD
2110	shaft	AISI 420
2261	impeller	cast iron G25 / bronz B.0
2410	sliding sleeve	OT58 chrome
2460.1	lower bearing body	AISI 316
2460.2	spacer sleeve	AISI 316
2460.3	upper bearing body	AISI 316
2460.4	spacer	AISI 316
2910	bolt + shaft washer	AISI 304-420
3312	bronze sleeve	bronz. B8
3312.1	sliding sleeve	PU 45 shD
4511	O-ring	NBR
6310	threaded discharge port	cast iron G25
6310*(FX8)	discharge port with a flange	cast iron G25
6320	valve seal	NBR
6330	check valve	cast iron G25 / AISI 304
6340	valve saddle	cast iron G25
6360	spring	AISI 302
6531	filter mesh	AISI 304
6576	screw	AISI 304
7000	clutch	AISI 420
8361	cable cover	AISI 304

# IBO ITALY FX6



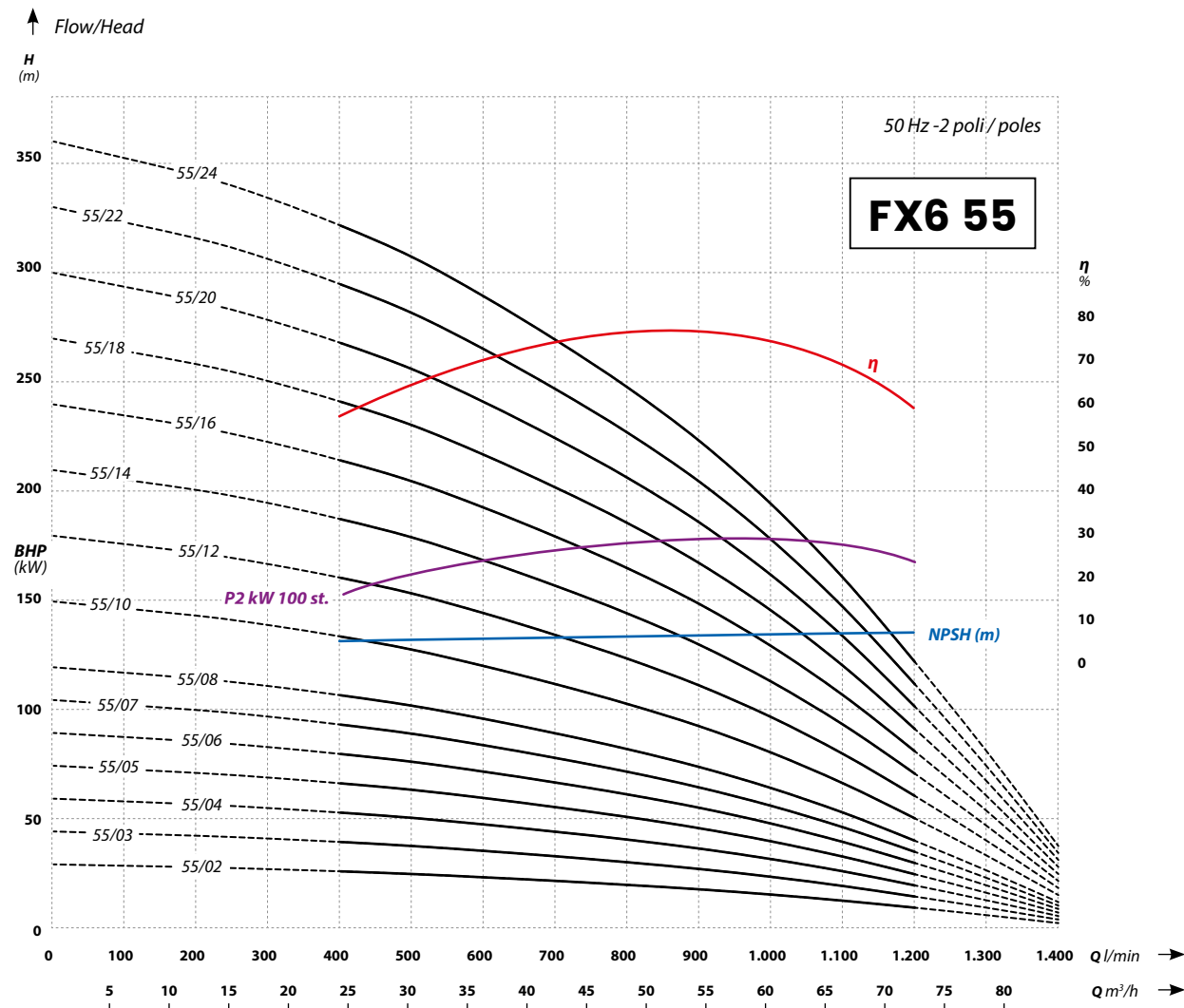
TYP	kW	Motor diameter	Length L(mm)	Weight (kg)	Amperage (A)	H (m)	m³/h																
							0	12	15	18	21	24	27	30	33	36	39	42	45	48			
							l/min	0	200	250	300	350	400	450	500	550	600	650	700	750	800		
							l/sec	0	4,17	5,00	5,83	6,67	6,67	7,50	8,33	9,17	10,0	10,8	11,7	12,5	13,3		
FX6 35/03	4	6"	590	29	12	H (m)	49	41	40	38	36	34	31	29	26	23	19	16	12	8			
FX6 35/04	5,5	6"	698	35	15		65	55	53	50	48	45	42	38	35	31	26	21	16	11			
FX6 35/06	7,5	6"	914	47	18		97	83	79	75	71	68	63	58	52	46	39	32	24	16			
FX6 35/07	9,2	6"	1 022	53	22		113	97	92	88	83	79	73	67	60	54	45	37	28	19			
FX6 35/09	11	6"	1 238	65	26		146	124	119	113	107	101	94	86	78	69	58	48	36	24			
FX6 35/10	13	6"	1 346	71	30		162	138	132	126	119	113	104	96	86	77	65	53	40	27			
FX6 35/12	15	6"	1 562	83	34		194	166	158	151	143	135	125	115	104	92	78	63	48	32			
FX6 35/15	18,5	6"	1 886	101	41		243	207	198	189	179	169	156	144	129	115	97	79	60	41			
FX6 35/18	22	6"	2 210	119	49		292	248	237	226	214	203	188	173	155	138	116	95	72	49			
FX6 35/21	26	6"	2 534	138	57		340	290	277	264	250	236	219	202	181	161	136	111	84	57			
FX6 35/24	30	6"	2 858	156	67		389	331	317	302	286	270	250	230	207	184	155	127	96	65			
FX6 35/27	37	6"	3 182	173	74		437	373	356	340	322	304	281	259	233	207	175	143	108	73			
FX6 35/30	37	6"	3 506	191	74	486	414	396	377	357	338	313	288	259	230	194	159	120	81				

# IBO ITALY FX6 cd.



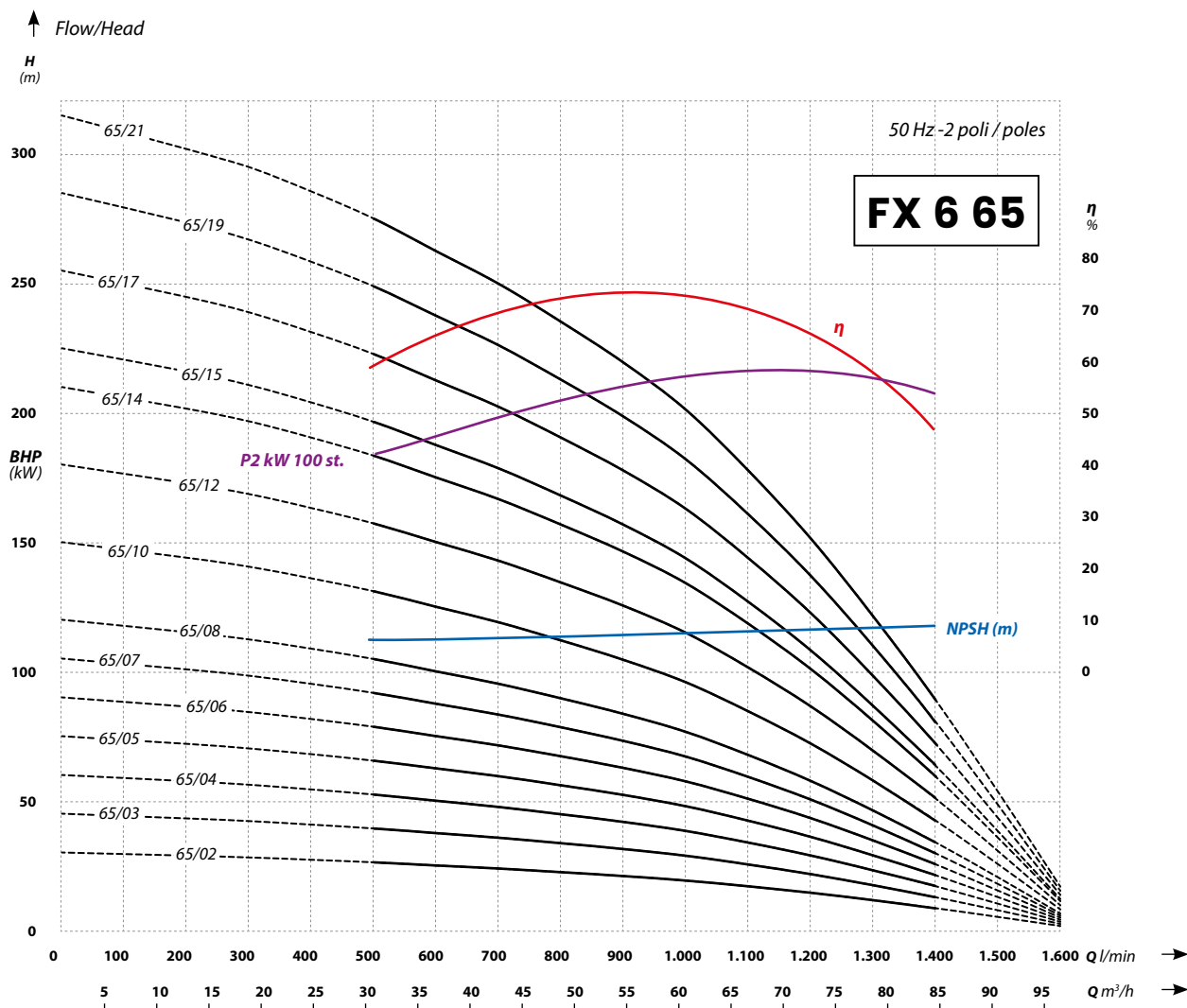
TYP	kW	Motor diameter	Length L (mm)	Weight (kg)	Amperage (A)	m³/h	0	18	21	24	27	30	33	36	39	42	45	48	51	54	60	66
						l/min	0	300	350	400	450	500	550	600	650	700	750	800	850	900	1000	1100
						l/sec	0	5,83	6,67	6,67	7,50	8,33	9,17	10,0	10,8	11,7	12,5	13,3	14,2	15,0	16,7	18,3
FX6 45/02	4	6"	482	23	12	H (m)	32	27	26	25	24	23	22	21	20	19	18	17	15	14	10	6
FX6 45/03	5,5	6"	590	29	15		48	40	39	37	36	35	33	32	30	28	26	25	23	20	15	9
FX6 45/04	7,5	6"	698	35	18		64	53	51	50	48	46	44	42	40	38	35	33	30	27	20	12
FX6 45/05	7,5	6"	806	41	18		80	67	64	62	60	58	55	53	50	47	44	41	38	34	26	15
FX6 45/06	9,2	6"	914	47	22		96	80	77	74	72	69	66	63	60	56	53	50	45	41	31	18
FX6 45/07	11	6"	1022	53	26		112	93	90	87	84	81	77	74	70	66	62	58	53	48	36	21
FX6 45/08	13	6"	1130	59	30		128	106	103	99	96	92	88	84	80	75	71	66	60	54	41	24
FX6 45/10	15	6"	1346	71	34		160	133	129	124	120	115	110	105	100	94	88	83	75	68	51	30
FX6 45/12	18,5	6"	1562	83	41		192	160	154	149	143	138	132	126	119	113	106	99	90	82	61	36
FX6 45/14	22	6"	1778	95	49		224	186	180	174	167	161	154	147	139	132	124	116	105	95	71	42
FX6 45/15	22	6"	1886	101	49		240	200	193	186	179	173	165	158	149	141	132	124	113	102	77	45
FX6 45/16	26	6"	1994	107	57		256	213	206	198	191	184	176	168	159	150	141	132	120	109	82	48
FX6 45/17	26	6"	2102	114	57		272	226	218	211	203	196	187	179	169	160	150	140	128	116	87	51
FX6 45/18	30	6"	2210	119	67		288	239	231	223	215	207	198	189	179	169	159	149	135	122	92	54
FX6 45/20	30	6"	2426	131	67		320	266	257	248	239	230	220	210	199	188	177	165	151	136	102	60
FX6 45/22	37	6"	2642	143	74		352	293	283	273	263	253	242	231	219	207	194	182	166	150	112	66
FX6 45/24	37	6"	2858	156	74		384	319	308	298	287	276	264	252	239	226	212	198	181	163	122	72
FX6 45/26	45	6"	3074	168	95		416	346	334	322	311	299	286	273	259	244	229	215	196	177	133	79
FX6 45/28	45	6"	3290	179	95		448	372	360	347	335	322	308	294	279	263	247	231	211	190	143	85

# IBO ITALY FX6 cd.



TYP	kW	Motor diameter	Length L (mm)	Weight (kg)	Amperage (A)	m³/h																
						0	24	27	30	33	36	39	42	45	48	51	54	60	66	72	78	84
FX6 55/02	4	6"	482	23	12	30	27	26	26	25	24	23	22	22	21	20	19	16	13	10	7	3
FX6 55/03	5,5	6"	590	29	15	45	40	39	38	37	36	35	34	32	31	29	28	24	20	15	10	5
FX6 55/04	7,5	6"	698	35	18	60	54	52	51	50	48	47	45	43	41	39	37	32	27	20	14	6
FX6 55/05	9,2	6"	806	41	22	75	67	66	64	62	60	58	56	54	52	49	47	41	34	26	17	8
FX6 55/06	11	6"	914	47	26	90	80	79	77	75	72	70	67	65	62	59	56	49	40	31	20	10
FX6 55/07	13	6"	1 022	53	30	105	94	92	90	87	84	81	79	75	72	69	65	57	47	36	24	11
FX6 55/08	15	6"	1 130	59	34	120	107	105	102	99	96	93	90	86	83	78	74	65	54	41	27	13
FX6 55/10	18,5	6"	1 346	71	41	150	134	131	128	124	121	116	112	108	103	98	93	81	67	51	34	16
FX6 55/12	22	6"	1 562	83	49	180	161	157	154	149	145	140	135	129	124	118	112	97	80	61	41	19
FX6 55/14	26	6"	1 778	95	57	210	188	183	179	174	169	163	157	151	144	137	130	113	94	71	48	22
FX6 55/16	30	6"	1 994	107	67	240	214	210	205	199	193	186	180	172	165	157	149	130	107	82	54	26
FX6 55/18	37	6"	2 210	119	74	270	241	236	230	224	217	209	202	194	186	177	167	146	121	92	61	29
FX6 55/20	37	6"	2 426	131	74	300	268	262	256	249	241	233	224	215	206	196	186	162	134	102	68	32
FX6 55/22	45	6"	2 642	143	95	330	295	288	282	273	265	256	247	237	227	216	205	178	147	112	75	35
FX6 55/24	45	6"	2 858	156	95	360	322	314	307	298	289	279	269	258	248	235	223	194	161	122	82	38

# IBO ITALY FX6 cd.

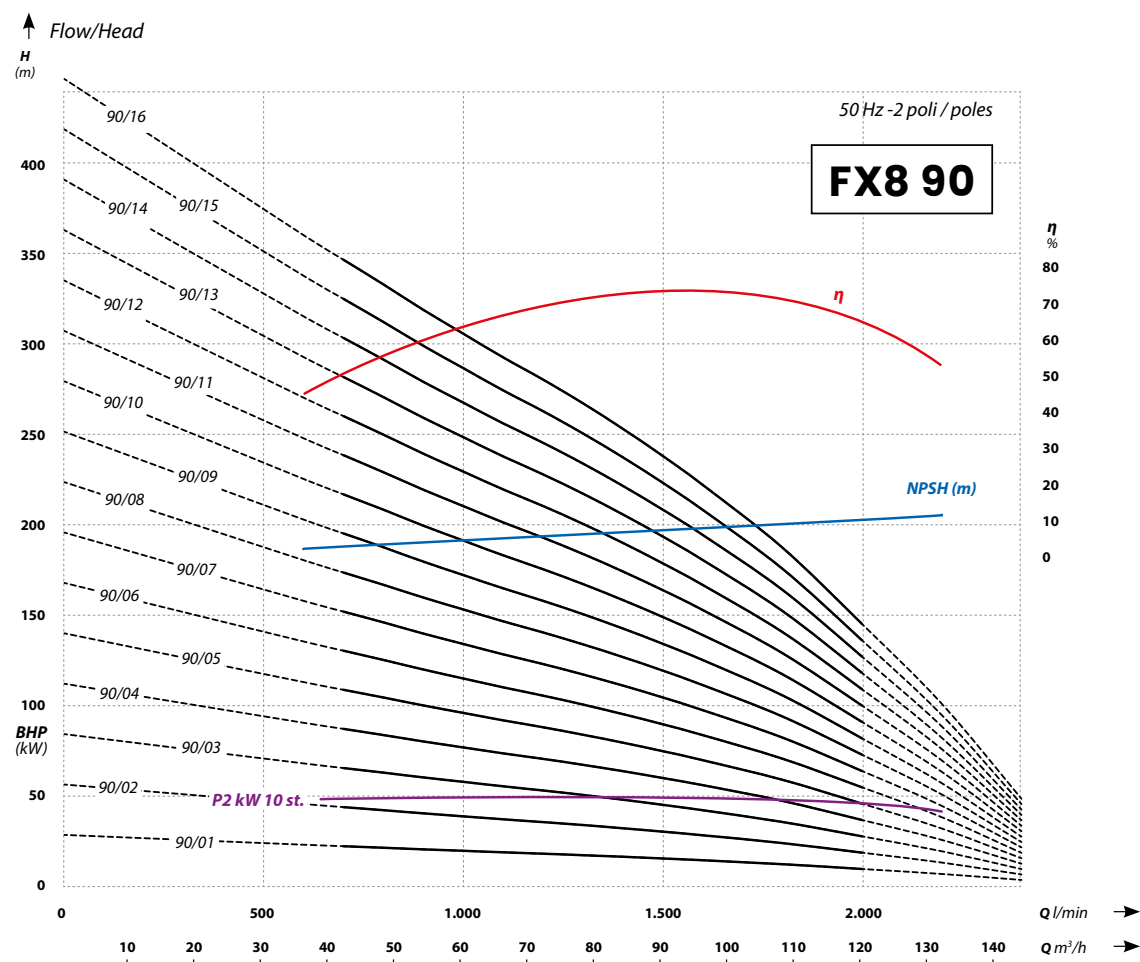
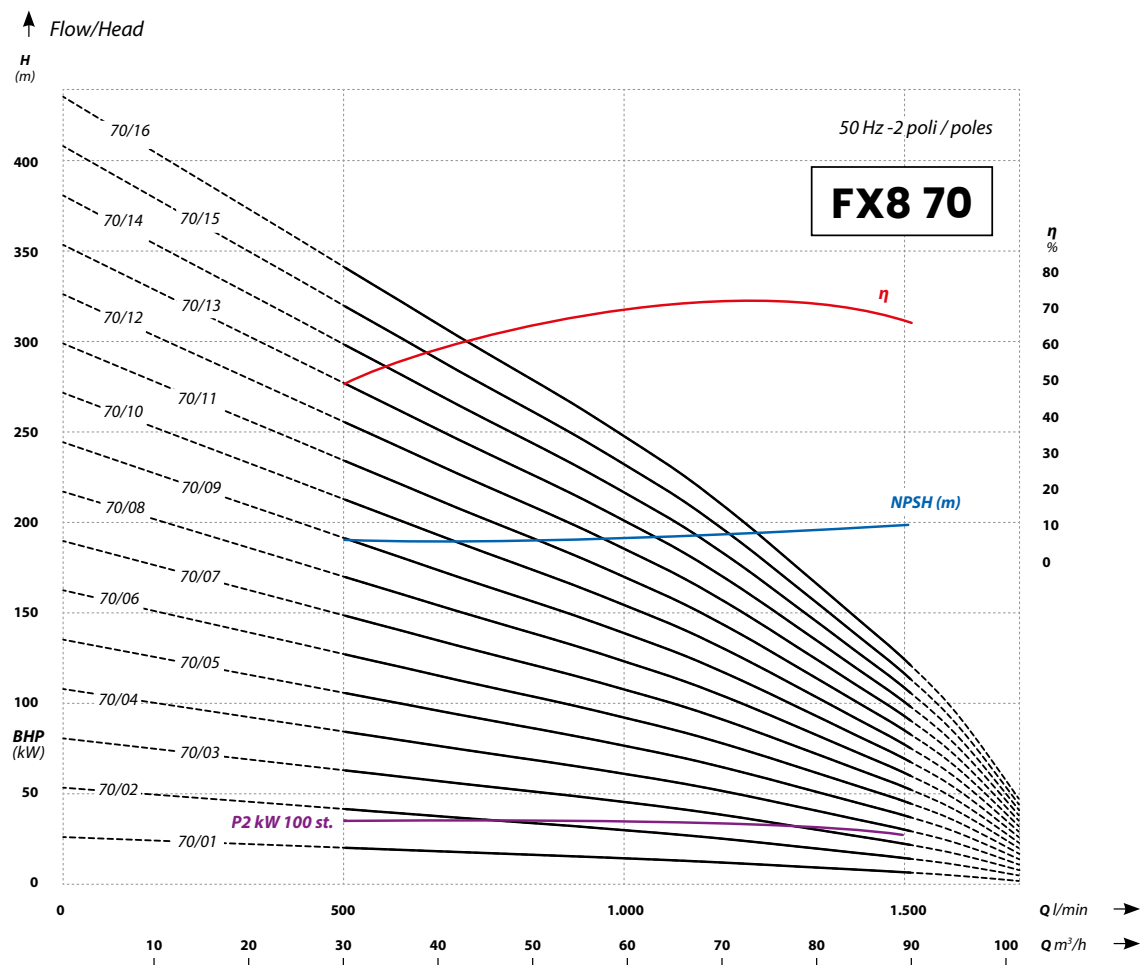


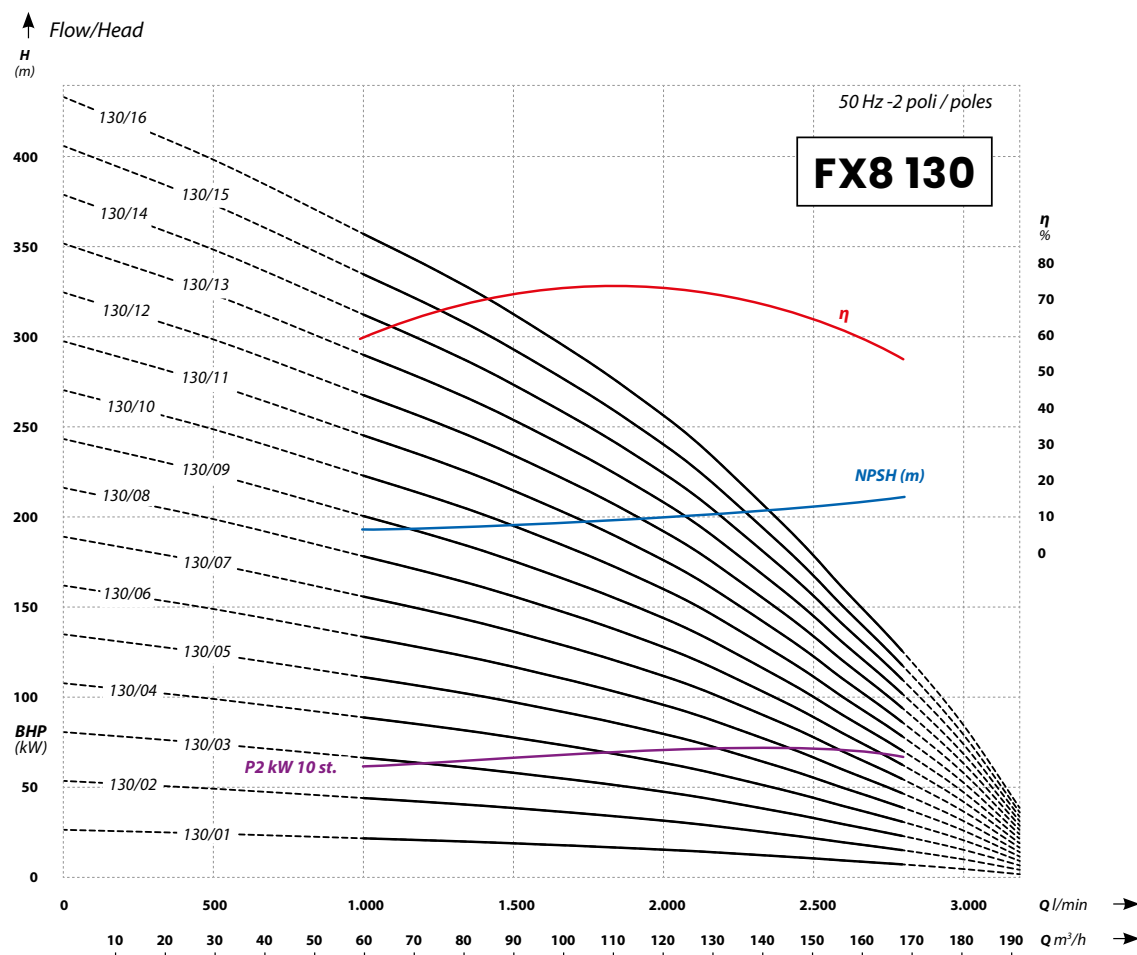
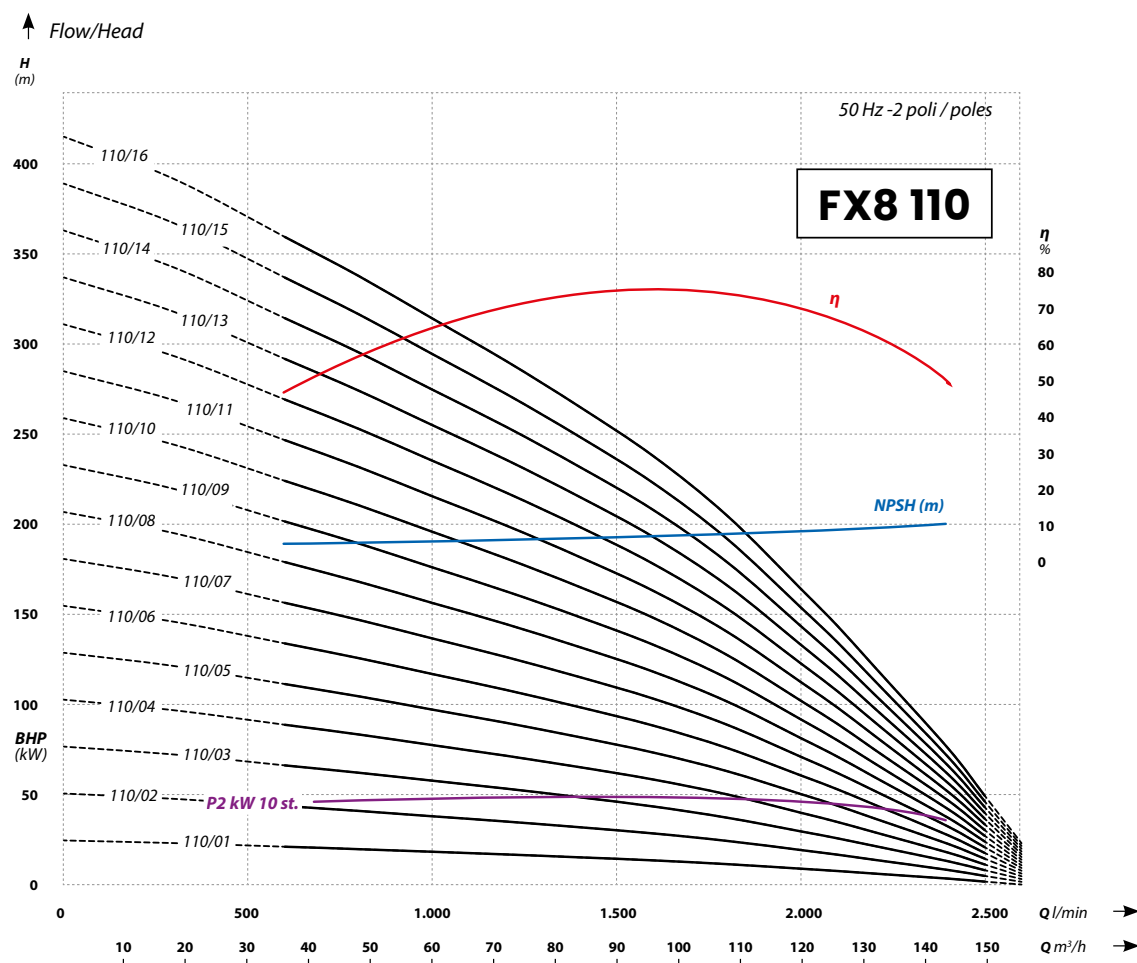
TYP	kW	Motor diameter	Length L (mm)	Weight (kg)	Amperage (A)	m³/h	0	30	33	36	39	42	45	48	51	54	60	66	72	78	84	90	96
						l/min	0	500	550	600	650	700	750	800	850	900	1000	1100	1200	1300	1400	1500	1600
						l/sec	0	8,33	9,17	10,0	10,8	11,7	12,5	13,3	14,2	15,0	16,7	18,3	20,0	21,7	23,3	25,0	26,7
FX6 65/02	4	6"	1076	68	11	H	26	26	25	24	24	23	22	22	21	19	17	14	12	8	5	2	2
FX6 65/03	7,5	6"	1274	86	18		39	38	38	37	36	35	34	32	31	29	25	22	17	13	8	2	2
FX6 65/04	9,2	6"	1422	97	22		52	51	50	49	48	46	45	43	42	38	34	29	23	17	10	3	3
FX6 65/05	11	6"	1575	108	26		66	64	63	61	60	58	56	54	52	48	42	36	29	21	13	4	4
FX6 65/06	13	6"	1728	119	29		79	77	75	73	71	69	67	65	63	57	51	43	35	25	15	5	5
FX6 65/07	15	6"	1881	129	33		92	90	88	85	83	81	78	76	73	67	59	50	40	30	18	6	6
FX6 65/08	18,5	6"	2079,0	146,0	41,0		105	102	100	98	95	92	90	87	84	77	68	58	46	34	20	6	6
FX6 65/10	22	6"	2187,0	152,0	41,0		131	128	125	122	119	116	112	108	105	96	85	72	58	42	26	8	7
FX6 65/12	26	6"	2380	167	49		157	154	150	146	143	139	134	130	125	115	102	87	69	51	31	10	8
FX6 65/14	30	6"	2488	173	49		183	179	175	171	167	162	157	152	146	134	118	101	81	59	36	11	9
FX6 65/15	37	6"	2691	189	57		197	192	188	183	179	173	168	162	157	144	127	108	87	64	38	12	10
FX6 65/17	37	6"	2947	205	67		223	218	213	207	202	196	190	184	178	163	144	123	98	72	43	14	11
FX6 65/19	45	6"	3195	223	74		249	243	238	232	226	219	213	206	199	182	161	137	110	81	48	15	13
FX6 65/21	45	6"	3411	235	74		275	269	263	256	250	243	235	227	219	201	178	151	121	89	54	17	14



## IBO ITALY FX8

TYP	kW	Motor diameter	Length L(mm)	Weight (kg)	Amperage (A)	0	24	30	36	42	48	54	60	66	72	78	84	90	96	108	120	132	144	156	168	180	192
						0	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800	2000	2200	2400	2600	2800	3000	3200
						0	6,70	8,33	10,0	11,7	13,3	15,0	16,7	18,3	20,0	21,7	23,3	25,0	26,7	30,0	33,3	36,7	40,0	43,3	46,7	50,0	53,3
FX8 70/01	4	12	458	32		27	23	21	20	19	18	17	15	14	13	11	9	8	6								
FX8 70/02	7,5	18	592	44		55	45	43	40	38	36	33	31	28	25	22	19	15	11								
FX8 70/03	11	26	726	55		82	68	64	61	57	54	50	46	43	38	33	28	23	17								
FX8 70/04	15	34	860	67		109	90	85	81	76	71	67	62	57	51	44	37	31	22								
FX8 70/05	18,5	41	994	78		136	113	107	101	95	89	84	77	71	63	55	47	38	28								
FX8 70/06	22	49	1 128	90		164	135	128	121	114	107	100	93	85	76	66	56	46	33								
FX8 70/07	26	57	1 262	101		191	158	150	141	133	125	117	108	99	89	77	65	54	39								
FX8 70/08	30	62	1 396	115		218	180	171	162	152	143	134	124	113	101	88	75	61	44								
FX8 70/09	37	77	1 530	126		246	203	192	182	171	161	150	139	128	114	99	84	69	50								
FX8 70/10	37	77	1 664	138		273	226	214	202	190	179	167	155	142	127	110	94	76	55								
FX8 70/11	45	87	1 798	149		300	248	235	222	209	196	184	170	156	139	121	103	84	61								
FX8 70/12	45	87	1 932	161		327	271	256	242	228	214	200	186	170	152	132	112	92	66								
FX8 70/13	52	100	2 066	172		355	293	278	262	247	232	217	201	184	165	143	122	99	72								
FX8 70/14	52	100	2 200	184		382	316	299	283	266	250	234	217	198	177	154	131	107	77								
FX8 70/15	55	110	2 334	195		409	338	321	303	285	268	251	232	213	190	165	140	115	83								
FX8 70/16	59	113	2 468	207		437	361	342	323	304	286	267	248	227	203	176	150	122	89								
FX8 90/01	5,5	15	458	32		28			23	22	21	20	19	18	18	17	16	15	14	12	9	6					
FX8 90/02	9,2	22	592	44		56			45	43	42	40	38	37	35	33	32	30	28	23	18	13					
FX8 90/03	15	34	726	55		84			68	65	62	60	57	55	53	50	47	45	42	35	27	19					
FX8 90/04	18,5	41	860	67		112			90	87	83	80	76	73	70	67	63	60	56	47	36	25					
FX8 90/05	26	57	994	78		140			113	108	104	100	96	91	88	84	79	74	69	59	45	31					
FX8 90/06	30	62	1 128	90		168			135	130	125	120	115	110	105	100	95	89	83	70	54	38					
FX8 90/07	37	77	1 262	101		196			158	152	146	140	134	128	123	117	111	104	97	82	63	44					
FX8 90/08	45	87	1 396	115		224			180	173	167	160	153	146	140	134	127	119	111	94	72	50					
FX8 90/09	45	87	1 530	126		251			203	195	187	179	172	165	158	150	142	134	125	105	82	57					
FX8 90/10	52	100	1 664	138		279			225	217	208	199	191	183	175	167	158	149	139	117	91	63					
FX8 90/11	55	110	1 798	149		307			248	238	229	219	210	201	193	184	174	164	153	129	100	69					
FX8 90/12	59	113	1 932	161		335			270	260	250	239	229	220	210	200	190	179	167	140	109	76					
FX8 90/13	67	130	2 066	172		363			293	282	271	259	249	238	228	217	206	193	180	152	118	82					
FX8 90/14	74	143	2 200	184		391			315	303	292	279	268	256	245	234	222	208	194	164	127	88					
FX8 90/15	74	143	2 334	195		419			338	325	312	299	287	274	263	251	237	223	208	176	136	94					
FX8 90/16	81	158	2 468	207		447			360	347	333	319	306	293	280	267	253	238	222	187	145	101					
FX8 110/01	5,5	15	458	32	H (m)	26				21	20	20	19	18	17	17	16	15	13	10	8	5	2				
FX8 110/02	11	26	592	44		52				42	41	39	38	36	35	33	32	30	26	21	15	10	3				
FX8 110/03	15	34	726	55		78				64	61	59	57	55	52	50	47	45	39	31	23	14	5				
FX8 110/04	22	49	860	67		104				85	82	79	76	73	70	67	63	60	52	41	31	19	6				
FX8 110/05	26	57	994	78		130				106	102	99	95	91	87	83	79	75	64	52	38	24	8				
FX8 110/06	37	77	1 128	90		156				127	123	118	114	109	105	100	95	90	77	62	46	29	9				
FX8 110/07	37	77	1 262	101		182				148	143	138	133	128	122	117	111	105	90	72	54	34	11				
FX8 110/08	45	87	1 396	115		208				169	164	158	152	146	140	133	126	120	103	83	61	39	12				
FX8 110/09	52	100	1 530	126		234				191	184	177	171	164	157	150	142	134	116	93	69	43	14				
FX8 110/10	52	100	1 664	138		260				212	204	197	190	182	174	166	158	149	129	104	76	48	15				
FX8 110/11	59	113	1 798	149		286				233	225	217	209	201	192	183	174	164	142	114	84	53	17				
FX8 110/12	67	130	1 932	161		312				254	245	236	228	219	209	200	190	179	155	124	92	58	18				
FX8 110/13	74	143	2 066	172		338				275	266	256	247	237	227	216	205	194	167	135	99	63	20				
FX8 110/14	74	143	2 200	184		364				296	286	276	266	255	244	233	221	209	180	145	107	68	21				
FX8 110/15	81	158	2 334	195		390				318	307	296	285	274	262	250	237	224	193	155	115	72	23				
FX8 110/16	81	158	2 468	207		416				339	327	315	304	292	279	266	253	239	206	166	122	77	24				
FX8 130/01	7,5	18	458	32		27						22	22	21	21	20	20	19	18	16	14	12	10	8	5	2	
FX8 130/02	15	34	592	44		54						45	44	43	41	40	39	38	35	32	29	25	20	16	11	5	
FX8 130/03	22	49	726	55		81						67	65	64	62	61	59	57	53	48	43	37	30	24	16	7	
FX8 130/04	30	62	860	67		108						89	87	85	83	81	78	76	70	64	57	49	40	32	22	9	
FX8 130/05	37	77	994	78		135						112	109	106	104	101	98	95	88	80	71	61	50	39	27	12	
FX8 130/06	45	87	1 128	90		162						134	131	128	124	121	117	113	105	96	86	74	61	47	32	14	
FX8 130/07	52	100	1 262	101		189						156	153	149	145	141	137	132	123	112	100	86	71	55	38	16	
FX8 130/08	59	113	1 396	115		216						179	174	170	166	161	156	151	141	128	114	98	81	63	43	19	
FX8 130/09	67	130	1 530	126		244						201	196	192	187	182	176	170	158	145	129	111	91	71	49	21	
FX8 130/10	74	143	1 664	138		271						223	218	213	207	202	195	189	176	161	143	123	101	79	54	23	
FX8 130/11	81	158	1 798	149		298						246	240	234	228	222	215	208	193	177	157	135	111	87	59	26	
FX8 130/																											



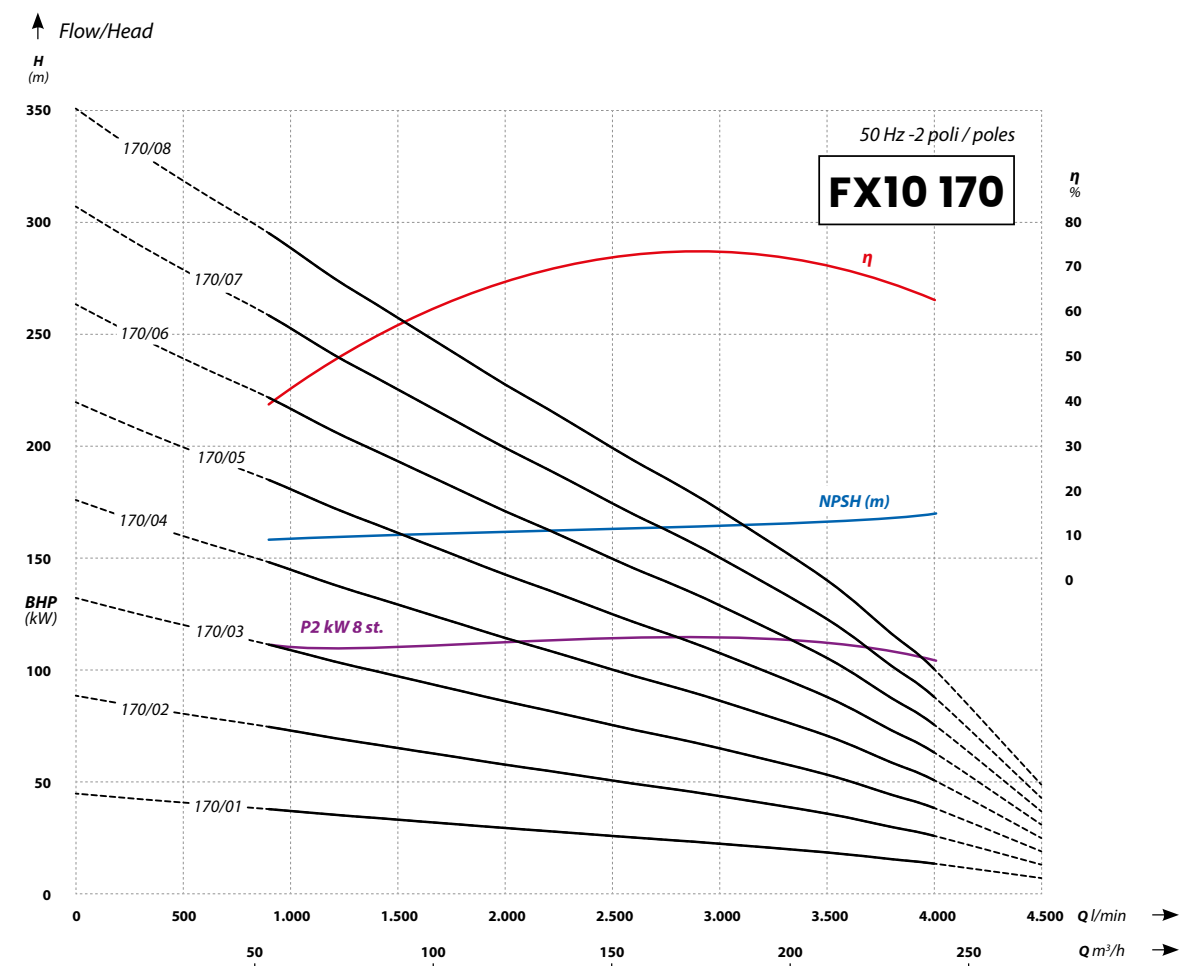
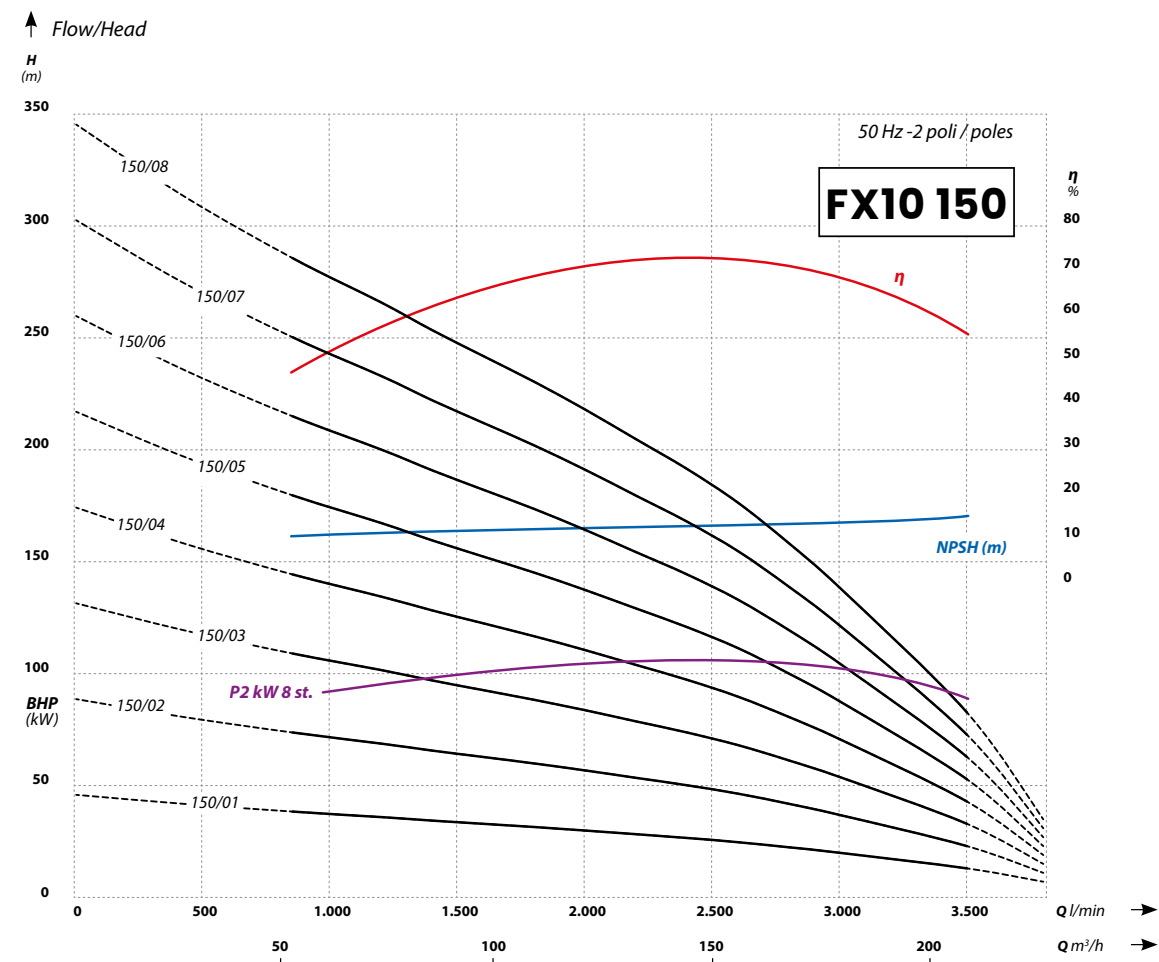


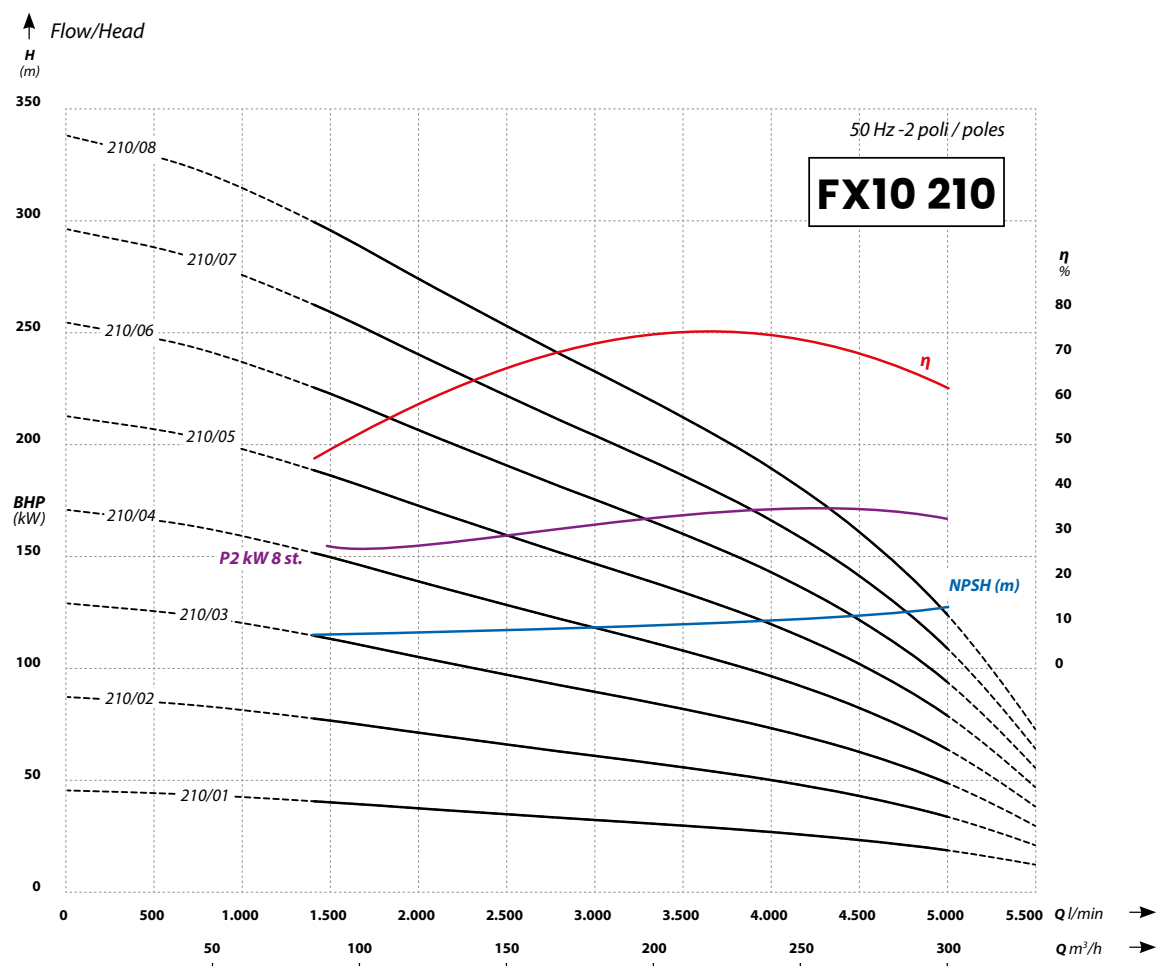
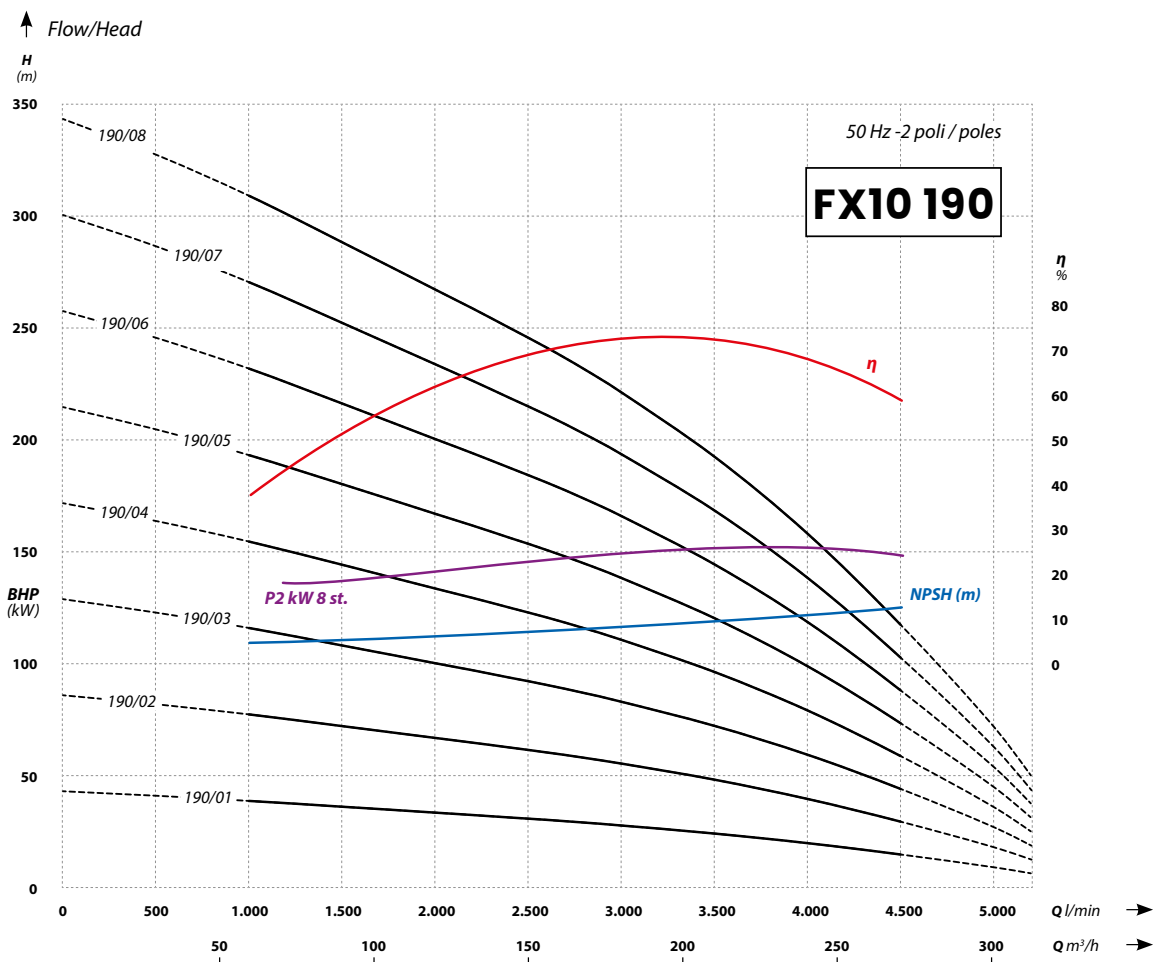
## IBO ITALY FX" 10

TYP	Power (kW)	Power (hp)	Stages	Amperage (A)	Thrust load (N)	Motor diameter (inch)	Height L (mm)	Weight (kg)
FX10 150/01	13	17,5	1	30	5 590	6"	870	59
FX10 150/02	26	35	2	57	11 180	6"	1 040	80
FX10 150/03	45	60	3	87	16 770	8"	1 210	101
FX10 150/04	52	70	4	100	22 360	8"	1 380	122
FX10 150/05	67	90	5	130	27 950	8"	1 550	143
FX10 150/06	85	110	6	158	33 540	8"	1 720	164
FX10 150/07	92	125	7	184	39 130	8"	1 890	185
FX10 150/08	110	150	8	217	44 720	10"	2 060	206
FX10 170/01	15	20	1	34	5 720	6"	870	59
FX10 170/02	30	40	2	62	11 440	8"	1 040	80
FX10 170/03	45	60	3	87	17 160	8"	1 210	101
FX10 170/04	59	80	4	113	22 880	8"	1 380	122
FX10 170/05	75	100	5	143	28 600	8"	1 550	143
FX10 170/06	92	125	6	184	34 320	8"	1 720	164
FX10 170/07	110	150	7	217	40 040	10"	1 890	185
FX10 170/08	132	180	8	257	45 760	10"	2 060	206
FX10 190/01	18,5	25	1	41	5 590	6"	870	59
FX10 190/02	37	50	2	77	11 180	8"	1 040	80
FX10 190/03	59	80	3	113	16 770	8"	1 210	101
FX10 190/04	81	110	4	158	22 360	8"	1 380	122
FX10 190/05	110	150	5	217	27 950	10"	1 550	143
FX10 190/06	132	180	6	257	33 540	10"	1 720	164
FX10 190/07	132	180	7	257	39 130	10"	1 890	185
FX10 190/08	170	230	8	348	44 720	10"	2 060	206
FX10 210/01	22	30	1	57	5 525	6"	870	59
FX10 210/02	45	60	2	87	11 050	8"	1 040	80
FX10 210/03	67	90	3	130	16 575	8"	1 210	101
FX10 210/04	92	125	4	184	22 100	8"	1 380	122
FX10 210/05	110	150	5	217	27 625	10"	1 550	143
FX10 210/06	132	180	6	257	33 150	10"	1 720	164
FX10 210/07	147	200	7	300	38 675	10"	1 890	185
FX10 210/08	184	250	8	405	44 200	10"	2 060	206

# IBO ITALY FX" 10 cd.

TYP	HP	kW	m³/h	0	72	84	96	108	120	132	144	156	168	180	210	240	270	300	330
			l/min	0	1200	1400	1600	1800	2000	2200	2400	2600	2800	3000	3500	4000	4500	5000	5500
			l/sec	0	20,0	23,3	26,7	30,0	33,3	36,7	40,0	43,3	46,7	50,0	58,3	66,7	75,0	83,3	91,7
FX10 150/01	17,5	13		43	33	31	30	29	27	25	24	22	20	17	10				
FX10 150/02	35	13		86	66	63	60	57	54	51	47	44	39	34	20				
FX10 150/03	60	13		129	99	94	90	86	81	76	71	65	59	51	30				
FX10 150/04	70	13		172	132	126	120	114	108	101	95	87	78	68	40				
FX10 150/05	90	13		215	165	157	150	143	135	127	118	109	98	85	50				
FX10 150/06	110	13		258	198	189	180	171	162	152	142	131	117	102	60				
FX10 150/07	125	13		301	231	220	210	200	189	177	166	152	137	119	70				
FX10 150/08	150	13		344	264	252	240	228	216	203	189	174	156	136	80	10	6		
FX10 170/01	20	13		44			32	30	29	27	26	24	23	21	18	13	6		
FX10 170/02	40	13		88			63	60	57	54	51	48	46	43	35	25	12		
FX10 170/03	60	13		132			95	90	86	81	77	73	69	64	53	38	18		
FX10 170/04	80	13		176			126	120	114	108	103	97	92	86	70	50	24		
FX10 170/05	100	13		220			158	150	143	136	128	121	114	107	88	63	30		
FX10 170/06	125	13		264			189	180	171	163	154	145	137	129	105	75	36		
FX10 170/07		13	H (m)	308			221	210	200	190	180	170	160	150	123	88	42		
FX10 170/08	180	13		352			252	240	228	217	205	194	183	172	140	100	48	9	
FX10 190/01	25	13		43					33	32	31	30	29	28	24	20	15	9	
FX10 190/02	50	13		86					67	65	63	60	58	55	48	40	29	18	
FX10 190/03	80	13		129					100	97	94	91	87	83	72	59	44	27	
FX10 190/04	110	13		172					134	130	125	121	116	111	96	79	59	36	
FX10 190/05	150	13		215					167	162	157	151	145	139	121	99	74	45	
FX10 190/06	180	13		258					201	194	188	181	174	166	145	119	88	54	
FX10 190/07	180	13		301					234	227	219	211	203	194	169	139	103	63	9
FX10 190/08	230	13		344					268	259	250	242	232	222	193	158	118	72	18
FX10 210/01	30	13		43							32	31	30	29	27	24	20	15	9
FX10 210/02	60	13		85							64	62	60	58	53	47	40	31	18
FX10 210/03	90	13		128							97	93	90	87	80	71	60	46	26
FX10 210/04	125	13		170							129	124	120	116	106	94	80	61	35
FX10 210/05	150	13		213							161	156	151	146	133	118	100	77	44
FX10 210/06	180	13		255							193	187	181	175	159	142	120	92	53
FX10 210/07	200	13		298							225	218	211	204	186	165	140	107	62
FX10 210/08	250	184		340							258	249	241	233	212	189	160	122	70









# IBO 3" | 4" | 6"

## Oil motors

High quality 3" Italian oil motors for submersible pumps. High-quality original Italian materials, demanding tests at every stage of production and the expertise of Italian engineers ensure high mechanical resistance and very good electrical properties of the product. Durable construction allows you to work for a long time without any maintenance.

### Characteristics:

- Made in NEMA standard
- Top quality materials
- Long trouble-free operation
- Possibility of cooperation with the inverter
- Possibility of connecting a cable of a certain length (in multiples of 5 m)
- Starting box (230 V version) with built-in protection
- overcurrent and capacitor
- Thermal protection built into the motor winding (230 V version)
- Warranty 24 months
- Warranty and post-warranty service

### Operating conditions:

- Maximum liquid temperature: 35°C
- Power supply: 230 V or 400 V
- Insulation class: F
- Working mode: continuous
- Security: IP68
- Power cable length: 1.5 m
- Working position: vertical/horizontal
- number of starts per hour: 30
- immersion depth: 200m
- Min. water flow around the motor: 0.15 m/s
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Coolant: biodegradable oil, non-toxic
- Motor housing: AISI 304 stainless steel
- Shaft: AISI 304 stainless steel
- Mechanical gland: graphite/ceramic

NaME	Power (kW)	Voltage (V/Hz)	Thrust load (N)	Weight (kg)	Amperage (A)
3" 0,55	0,55	1 ~ 230/50	1000	8	4,2
3" 0,75	0,75	1 ~ 230/50	1500	8,5	5,4
3" 1,1	1,1	1 ~ 230/50	1500	9,5	7,7
4" 0,75	0,75	1 ~ 230/50 lub 3 ~ 400/50	1500	9,5	6,5/3,1
4" 1,1	1,1	1 ~ 230/50 lub 3 ~ 400/50	1500	10,8	8,5/4,0
4" 1,5	1,5	1 ~ 230/50 lub 3 ~ 400/50	1500	12,5	10,5/5,0
4" 2,2	2,2	1 ~ 230/50 lub 3 ~ 400/50	1500	13,9	15,5/6,3
4" 3	3	3 ~ 400/50	2500	14,8	7,2
4" 4	4	3 ~ 400/50	2500	18	9,2
4" 5,5	5,5	3 ~ 400/50	2500	22	12,9
4" 7,5	7,5	3 ~ 400/50	2500	28	18,5
6" 7,5	7,5	3 ~ 400/50	5500	38	17,5
6" 9,2	9,2	3 ~ 400/50	5500	42	21,5
6" 11	11	3 ~ 400/50	10000	47	24,5
6" 13	13	3 ~ 400/50	10000	52	27,5
6" 15	15	3 ~ 400/50	10000	58	31,5

Depending on the production batch, the device parameters may differ from the data provided in the table



# 4IOM ITALY – OIL

4"  
Italian deep well motors

High quality 4" Italian oil motors for submersible pumps. High-quality original Italian materials, demanding tests at every stage of production and the expertise of Italian engineers ensure high mechanical resistance and very good electrical properties of the product. Durable construction allows you to work for a long time without any maintenance.

### Characteristics:

- Made in NEMA standard
- Top quality materials
- Long trouble-free operation
- Possibility of cooperation with the inverter
- Possibility of connecting a cable of a certain length (in multiples of 5 m)
- Starting box (230 V version) with built-in protection
- overcurrent and capacitor
- Thermal protection built into the motor winding (230 V version)
- Warranty 36 months
- Warranty and post-warranty service

### Operating conditions:

- Maximum liquid temperature: 35°C
- Power supply: 230 V or 400 V
- Insulation class: F
- Working mode: continuous
- Security: IP68
- Power cable length: 1.5 m
- Working position: vertical/horizontal
- number of starts per hour: 30
- immersion depth: 20 0m
- Min. water flow around the motor: 0.15 m/s
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Coolant: biodegradable oil, non-toxic
- Motor housing: AISI 304 stainless steel
- Shaft: AISI 304 stainless steel
- Mechanical gland: graphite/ceramic



Name	Power (kW)	Voltage (V/Hz)	Thrust load (N)	Height (mm)	Weight (kg)	Amperage [A] 230V/400V	
4 IOM-S/T 050	0,37	1 ~ 230/50 lub 3 ~ 400/50	2000	311,3	6,45	3,6	1,8
4 IOM-S/T 075	0,55	1 ~ 230/50 lub 3 ~ 400/50	2000	331,3	7,2	4,7	2
4 IOM-S/T 100	0,75	1 ~ 230/50 lub 3 ~ 400/50	2000	356,3	8,45	5,9	2,5
4 IOM-S/T 150	1,1	1 ~ 230/50 lub 3 ~ 400/50	2000	386,3/371,1	10,2/9,35	8,3	3,4
4 IOM-S/T 200	1,5	1 ~ 230/50 lub 3 ~ 400/50	2000	436,3/386,3	11,65	10,7	4,8
4 IOM-S/T 300*	2,2	1 ~ 230/50 lub 3 ~ 400/50	2000	481,3/436,3	14,9/11,65	15,2	6,1
4 IOM-S/T 400	3	3 ~ 400/50	3000	481,3	14,9	–	7,1
4 IOM-S/T 550	4	3 ~ 400/50	5000	609,5	20,05	–	9,2
4 IOM-S/T 750	5,5	3 ~ 400/50	5000	699,5	24,65	–	11,7
4 IOM-S/T 1000	7,5	3 ~ 400/50	5000	799,5	28,95	–	16,4

# 6IOM IBO ITALY – OIL

6" Italian deep well motors

High quality 6" Italian oil motors for submersible pumps. High-quality original Italian materials, demanding tests at every stage of production and the expertise of Italian engineers ensure high mechanical resistance and very good electrical properties of the product. Durable construction allows you to work for a long time without any maintenance.

### Characteristics:

- Made in NEMA standard
- Top quality materials
- Long trouble-free operation
- Possibility of cooperation with the inverter
- Possibility of connecting a cable of a certain length (in multiples of 5 m)
- Warranty 36 months
- Warranty and post-warranty service

### Materials:

- Coolant: biodegradable oil, non-toxic
- Motor housing: AISI 304 stainless steel
- Shaft: AISI 304 stainless steel
- Mechanical gland: graphite/ceramic

### Operating conditions:

- Maximum liquid temperature: 35°C
- Power supply: 230 V or 400 V
- Insulation class: F
- Working mode: continuous
- Security: IP68
- Power cable length: 1.5 m
- Working position: vertical/horizontal
- number of starts per hour: 30
- immersion depth: 20.0m
- Min. water flow around the motor: 0.15 m/s
- Rotational speed of the electric motor: 2850 RPM



*Upon request, 6" 6IOM motors are also available as Y-Δ versions*

Name	Power (kW)	Voltage (V/Hz)	Thrust load (N)	Height (mm)	Weight (kg)	Amperage I <sub>n</sub> (A)	η%	RPM	cos φ	Cord diameter (mm)	Cord length (m)
6 IOM-750	5,5	3 ~ 400/50	10000	698	41	9,1	74	2840	0,86	4 × 4	3
6 IOM-1000	7,5	3 ~ 400/50	10000	733	46	12,8	78	2850	0,83	4 × 4	3
6 IOM-1250	9,2	3 ~ 400/50	10000	773	48	16,8	81	2880	0,77	4 × 4	3
6 IOM-1500	11	3 ~ 400/50	10000	832	52	21,2	85	2850	0,82	4 × 4	3
6 IOM-1750	13	3 ~ 400/50	10000	893	57	22,9	84	2860	0,80	4 × 4	3
6 IOM-2000	15	3 ~ 400/50	10000	893	64	27,6	82	2840	0,86	4 × 8	4
6 IOM-2500	18,5	3 ~ 400/50	20000	956	64	30,7	84	2850	0,84	4 × 8	4
6 IOM-3000	22	3 ~ 400/50	20000	1023	79	38	84	2850	0,83	4 × 8	4
6 IOM-3500	26	3 ~ 400/50	20000	1091	79	52	85	2850	0,85	4 × 8	3
6 IOM-4000	30	3 ~ 400/50	20000	1171	87	61,5	85	2860	0,83	4 × 8	4
6 IOM-5000	37	3 ~ 400/50	20000	1306	99	76	84	2840	0,84	4 × 8	4

## 6IMW IBO ITALY

6"  
Water-cooled motors

High-quality 6" Italian water-cooled submersible pump motors. High-quality original Italian materials, demanding tests at every stage of production and the expertise of Italian engineers ensure high mechanical resistance and very good electrical properties of the product. Durable construction allows you to work for a long time without any maintenance.

### Characteristics:

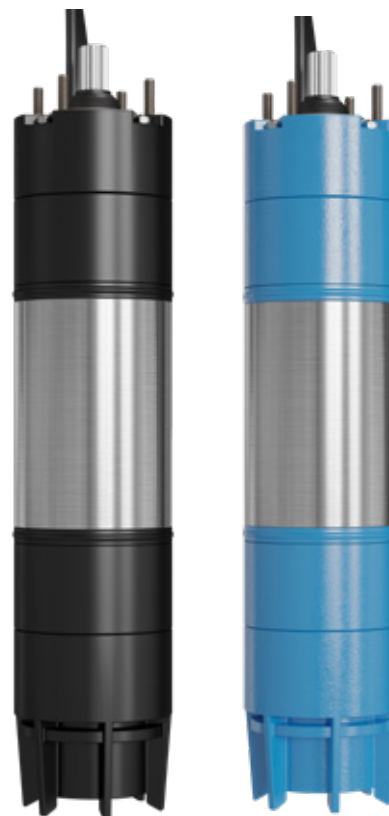
- Made in NEMA standard
- Top quality materials
- Long trouble-free operation
- Possibility of cooperation with the inverter
- Possibility of connecting a cable of a certain length (in multiples of 5m)
- Warranty 24 months
- Warranty and post-warranty service

### Operating conditions:

- Maximum liquid temperature: 35°C
- Power supply: 400V
- Insulation class: F
- Working mode: continuous
- Security: IP68
- Power cable length: 1.5 m
- Working position: vertical/horizontal
- number of starts per hour: 20
- immersion depth: 150 m
- Min. water flow around the motor: 0.5 m/s
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Cooling medium: water
- Motor housing: AISI 304 stainless steel
- Shaft: AISI 304 stainless steel
- Mechanical gland: silicon carbide/carbon



Name	Power (kW)	I <sub>n</sub> (A)	Height (mm)	Weight (kg)	Temperature max. water (C°)	Max. number of starts /h	Thrust load (N)	cos φ	η%
6IWM-550	5,5	10	565	41	30	12	25000	80	79
6IWM-750	7,5	12,5	590	44				81,5	80
6IWM-1000	10	17	620	48				81,5	81
6IWM-1250	12,5	21	670	53				82	82
6IWM-1500	15	24,5	730	60				82	83
6IWM-1750	17,5	28	760	63				82,5	84
6IWM-2000	20	32	850	72				83	84
6IMW-2500	25	40	910	78	30	10	25000	83,5	84
6IWM-3000	30	47,5	990	88				83,5	85
6IWM-3500	35	55	1100	100				84	85
6IMW-4000	40	62,5	1170	107				85	85,5
6IWM-5000	50	78	1260	115				85	85

## 8IWM ITALY

8"  
Water-cooled motors

High-quality 8" Italian water-cooled submersible pump motors. High-quality original Italian materials, demanding tests at every stage of production and the expertise of Italian engineers ensure high mechanical resistance and very good electrical properties of the product. Durable construction allows you to work for a long time without any maintenance.

### Cechy:

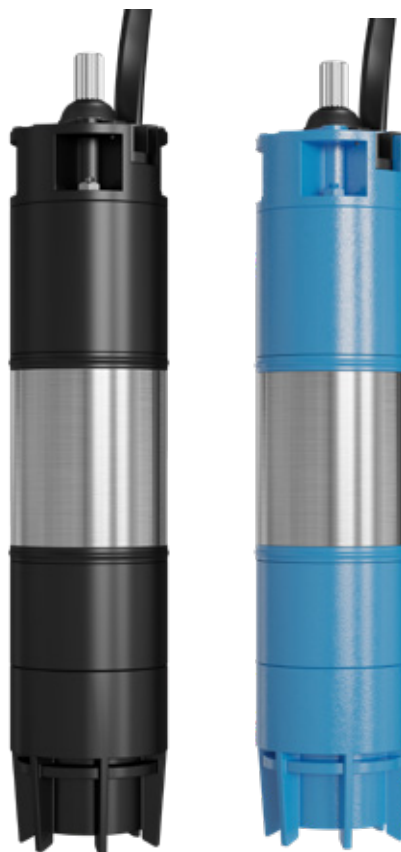
- Made in NEMA standard
- Top quality materials
- Long trouble-free operation
- Possibility of cooperation with the inverter
- Possibility of connecting a cable of a certain length (in multiples of 5m)
- Warranty 24 months
- Warranty and post-warranty service

### Operating conditions:

- Maximum liquid temperature: 35°C
- Power supply: 400V
- Insulation class: Y
- Working mode: continuous
- Security: IP68
- Power cable length: 4 m
- Working position: vertical/horizontal
- number of starts per hour: 7
- immersion depth: 150 m
- Min. water flow around the motor: 0.5 m/s
- Rotational speed of the electric motor: 2850 RPM

### Materials:

- Cooling medium: water
- Motor housing: AISI 304 stainless steel
- Shaft: AISI 304 stainless steel
- Mechanical gland: silicon carbide/carbon



Name	Power (HP)	Power (kW)	Voltage (V)	Thrust load (N)	Height (mm)	Weight (kg)	Amperage I <sub>n</sub> (A)	RPM	cos φ	η%	Cord diameter (mm)	Cord length (m)
8IMW 30	30	22	3~400	38.000	861	121	48	2900	0,85	81	3 × 4	4
8IMW 40	40	30		38.000	1.075	142	62	2925	0,85	85	3 × 10	4
8IMW 50	50	37		38.000	1.102	148	77	2900	0,86	85	3 × 10	4
8IMW 60	60	45		38.000	1.160	159	87	2900	0,87	85	3 × 10	4
8IMW 70	70	52		38.000	1.152	178	100	2915	0,86	86	3 × 16	4
8IMW 75	75	55		38.000	1.282	183	110	2910	0,87	86	3 × 16	4
8IMW 80	80	60		38.000	1.315	188	113	2915	0,88	86	3 × 16	4
8IMW 90	90	66		45.000	1.393	203	130	2910	0,87	86	3 × 25	4
8IMW 100	100	75		45.000	1.464	217	143	2910	0,87	86	3 × 25	4
8IMW 110	110	81		45.000	1.535	232	158	2915	0,86	88	3 × 25	4
8IMW 125	125	92		45.000	1.650	256	184	2930	0,85	86	3 × 25	4
8IMW 150	150	110		45.000	1.845	295	212	2845	0,87	89	3 × 35	4

## 10IWM ITALY

10"  
Water-cooled motors

High-quality 10" Italian water-cooled submersible pump motors. High-quality original Italian materials, demanding tests at every stage of production and the expertise of Italian engineers ensure high mechanical resistance and very good electrical properties of the product. Durable construction allows you to work for a long time without any maintenance.

### Cechy:

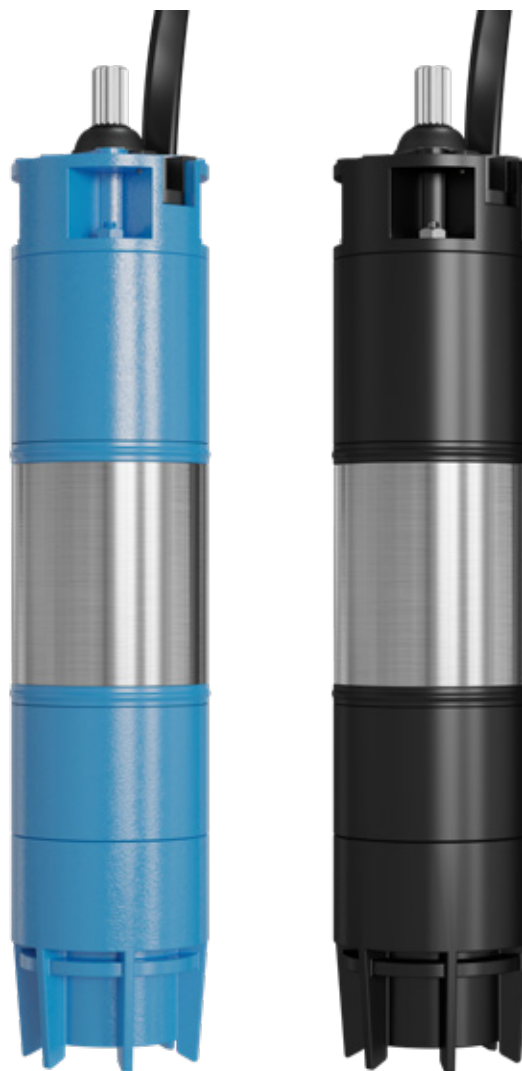
- Made in NEMA standard
- Top quality materials
- Long trouble-free operation
- Possibility of cooperation with the inverter
- Possibility of connecting a cable of a certain length (in multiples of 5m)
- Warranty 24 months
- Warranty and post-warranty service

### Operating conditions:

- Maximum liquid temperature: 25°C
- Power supply: 400 V
- Insulation class: Y
- Tryb pracy: ciągły
- Security: IP68
- Power cable length: 5 m
- Working position: vertical/horizontal
- number of starts per hour: 5
- immersion depth: 150 m
- Min. water flow around the motor: 0.5 m/s
- Rotational speed of the electric motor: 2850 RPM

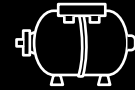
### Materials:

- Cooling medium: water
- Motor housing: AISI 304 stainless steel
- Shaft: AISI 304 stainless steel
- Mechanical gland: silicon carbide/carbon



Name	Power (HP)	Power (kW)	Voltage (V)	Thrust load (N)	Height (mm)	Weight (kg)	Amperage I <sub>n</sub> (A)	RPM	cos φ	η%	Cord diameter (mm)	Cord length (m)
FME 10 125T	125	92	3 ~ 400/50	60000	1316	285	181	2910	0,84	84	3 × 35	5
FME 10 150T	150	110		60000	1446	330	220	2915	0,87	85	3 × 35	5
FME 10 180T	180	132		60000	1546	365	265	2920	0,85	85	3 × 50	5
FME 10 200T	200	147		60000	1682	400	300	2925	0,86	86	3 × 50	5
FME 10 250T	250	185		60000	1880	460	370	2930	0,85	86	3 × 50	5

# Tanks



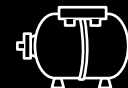
Vertical-horizontal pressure tanks with pressure gauge  
Stainless steel (inox) horizontal pressure tanks  
Galvanized tanks

## Italian tanks



IBO ITALY fix membrane tanks  
Cwu IBO ITALY pressure vessels  
Ibo ITALY FIX membrane pressure vessels  
Co IBO heats pressure vessels





# Pressure tanks horizontal

With pressure gauge

The 24 -150 horizontal pressure tanks for storing water in water supply systems. IBO pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are EPDM rubber diaphragms inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure. By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Additionally, 50 and 100 tank models are available with a built-in pressure gauge. The volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane. The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

## Application:

Connected with surface or deep-well pumps, they create booster sets for supplying water to allotments, single and multi-family houses, farms and enterprises from their own intakes.



MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension W/D (cm)	Dimension H (mm)
Horizontal pressure tank 24	1	0-60	8	1,7 +/-10%	28,7 × 42,5	440
Horizontal pressure tank 50	1	0-60	8	1,7 +/-10%	38 × 55	525
Horizontal pressure tank 50 with pressure gauge	1	0-60	8	1,7 +/-10%	48 × 61	525
Horizontal pressure tank 80	1	0-60	8	1,7 +/-10%	48 × 61	595
Horizontal pressure tank 100	1	0-60	8	1,7 +/-10%	46 × 70	645
Horizontal pressure tank 100 with pressure gauge	1	0-60	8	1,7 +/-10%	64 × 51	645
Horizontal pressure tank 150	1	0-60	8	1,7 +/-10%	85 × 53	870



# Pressure tanks vertical / horizontal

With pressure gauge

The 24–150 horizontal pressure tanks for storing water in water supply systems. IBO pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are EPDM rubber diaphragms inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure. By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Additionally, the 50 and 100 tank models are available with a built-in pressure gauge. The volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

## Application:

W połączeniu z pompami powierzchniowymi lub głębinowymi tworzą zestawy hydroforowe, przeznaczone do zasilania w wodę z ujęć własnych działek, domów jedno- i wielorodzinnych, gospodarstw rolnych oraz przedsiębiorstw.



MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension W/D (cm)	Dimension H (mm)
Vertical/horizontal pressure tank type 50	1	0–60	8	1,7 +/- 10%	38 × 55	620
Vertical/horizontal pressure tank type 80	1	0–60	8	1,7 +/- 10%	48 × 61	680
Vertical/horizontal pressure tank type 100	1	0–60	8	1,7 +/- 10%	46 × 70	760
Vertical/horizontal pressure tank type 150	1	0–60	8	1,7 +/- 10%	85 × 53	1040



# Horizontal pressure tanks Inox

**Stainless steel INOX**

The 24 - 100 horizontal pressure tanks made of AISI 304 stainless steel for storing water in water supply systems. Tank jacket and flange are made of stainless steel. IBO pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. Due to the stainless steel finish, the tanks can be installed in wells and wet rooms without the risk of early corrosion. There are EPDM rubber diaphragms inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure.

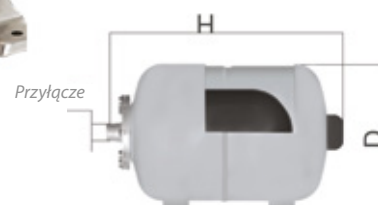
By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Additionally, the 50 and 100 tank models are available with a built-in pressure gauge. The volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

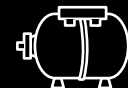
IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

## Application:

Connected with surface or deep-well pumps, they create booster sets for supplying water to allotments, single and multi-family houses, farms and enterprises from their own intakes.



MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension W/D (cm)	Dimension H (mm)
Horizontal inox pressure tank type 24	1	0-60	8	1,7 +/-10%	28,7 × 42,5	450
Horizontal inox pressure tank type 50	1	0-60	8	1,7 +/-10%	38 × 55	530
Horizontal inox pressure tank type 80	1	0-60	8	1,7 +/-10%	48 × 61,5	590
Horizontal inox pressure tank type 100	1	0-60	8	1,7 +/-10%	46 × 70	670

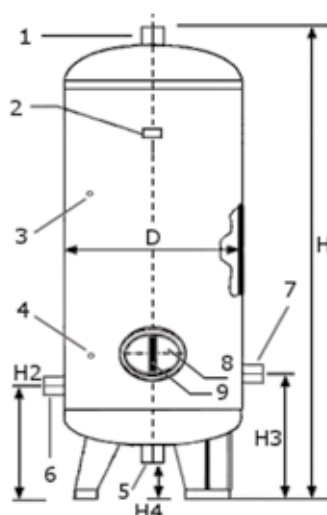


# Galvanized tanks

Corrosion-resistant vertical air-over-water tanks made of zinc-coated low-carbon sheet metal. Tank jacket and flange are made of galvanized steel. Galvanized tanks are designed to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. Due to the galvanized steel finish, the tanks can be installed in wells and wet rooms, and even externally without the risk of early corrosion. The tanks are available in capacity from 100 to 2000 litres. Maximum permissible pressure in the tank is 6 bar. Our offer also includes fittings for galvanized tanks.

## Application:

Water storage. In combination with surface or deep-well pumps used to supply water to single and multi-family houses, farms and in industrial applications. As the only tanks, air-over-water tanks are suitable for installation in water supply systems with block filters and where additional water oxygenation is required.



1. Króciec G 2"
2. Tabliczka znamionowa
3. Króciec wodowskazu G 1/2"
4. Króciec wodowskazu G 1/2"
5. Króciec G 2" dla rozmiarów: 100L, 500L
6. Rura dolotowa (wylotowa) G 1 1/4" (dla 100L – 1")  
dla rozmiarów: 150L, 200L, 300L – Króciec dolotowy G 1 1/4"
7. Rura dolotowa (wylotowa) G 1 1/4" (dla 100L – 1")  
dla rozmiarów: A-1000L, B-1500L, C-2000L – Rura przepływowa z kołnierzem  
A-DN50/B-DN80/C-DN100
8. Wyczystka
9. Strzemię



MODEL	H	H2	H3	H4	D	Operating pressure (bar)	Max. temperature (°C)	Weight (kg)
100 L	767	360	360	78	500	6	20	28
150 L	967	360	360	72	500	6	20	45
200 L	1066	360	360	84	550	6	20	48
300 L	1354	360	360	84	550	6	20	57
500 L	1439	370	360	91	750	6	20	115
1000 L	1952	638	638	202	908	8	20	208
1500 L	2335	700	638	240	1010	8	20	340
2000 L	2200	660	638	160	1210	10	20	435

## IBO ITALY pressure tanks

### Membrantanks

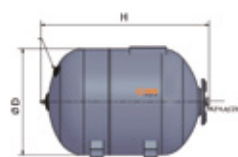
High-quality original materials, demanding tests at every stage of manufacturing process, and the expertise of engineers guarantee high resistance to wear. The 24L - 100L horizontal and 150L - 10000L vertical pressure tanks for storing water in water supply systems. IBO ITALY PRZEPONA pressure vessels are used to stabilize water pressure and increase the live volume of water supply systems. Designed to operate with pumps with parameters matching the tank parameters. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are EPDM rubber diaphragms (manufactured in Italy) inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. Compressed air between the membrane and the tank body releases water from the tank under pressure. By using tanks in booster sets, the number of pump starts in a given period of time can be limited, which results in the extended lifespan of the entire system. Tank volume refers to the body size - the volume of water inside the tank is the difference between the tank body volume and the volume of air around the membrane.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU.

### Application:

Connected with surface or deep-well pumps, they create booster sets for supplying water to allotments, single and multi-family houses, farms and enterprises from their own intakes.



MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. operating pressure (bar)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension D (cm)	Dimension H (mm)
Horizontal 24L	1	-10-100	10	15	2 +/-10%	335	465
Horizontal 50L	1	-10-100	10	15	2 +/-10%	385	590
Horizontal 80L	1	-10-100	10	15	2 +/-10%	445	650
Horizontal 100L	1	-10-100	10	15	2 +/-10%	550	680
Horizontal 150L	1	-10-100	10	15	3 +/-10%	920	500
Vertical 150L	1	-10-100	10	15	3 +/-10%	510	1090
Vertical 200L	1 1/4	-10-100	10	15	3 +/-10%	590	1100
Vertical 300L	1 1/4	-10-100	10	15	4 +/-10%	640	1250
Vertical 500L	1 1/4	-10-100	10	15	4 +/-10%	750	1550
Vertical 1000L	2	-10-100	10	15	4 +/-10%	800	2200
Vertical 1500L	2	-10-100	10	15	4 +/-10%	960	2350
Vertical 2000L	2	-10-100	10	15	4 +/-10%	1100	2450
Vertical 3000L	3	-10-100	10	15	4 +/-10%	1200	2700
Vertical 5000L	3	-10-100	10	15	4 +/-10%	1450	3400
Vertical 10000L	3	-10-100	10	15	4 +/-10%	1600	5900

# CWU IBO ITALY pressure vessels

## Membrantanks

High-quality original materials, demanding tests at every stage of manufacturing process, and the expertise of engineers guarantee high resistance to wear. IBO CWU 8L-50L expansion vessels for hot and cold drinking water supply systems, designed to maintain and stabilize the system pressure changes resulting from the increase in water volume. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. There are rubber diaphragms (manufactured in Italy) inside the tanks creating a membrane between the water inside it and the outer jacket of the tank. The long-lasting maximum liquid operating temperature is 110°C, and up to 130°C for a period of 2 hours.

The tanks are equipped with a special valve for filling or releasing air from the tank - the same valve as the one used in car tyres is located at the rear of the tank, under the cover.

The outer surface is coated with epoxy powder paint.

IBO pressure vessels are pressure equipment compliant with requirements of Directive 2014/68/EU

The vessels can be used with mixtures of ethylene or propylene glycol.

They have very low gas permeability

### Application:

In hot and cold drinking water supply system to maintain and stabilize the system pressure changes resulting from the increase in water volume.



MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. operating pressure (bar)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension D (cm)	Dimension H (mm)
C.W.U ITALY vessel 8L	3/4	0-100 (130)	10	15	2,5 +/- 10%	200	330
C.W.U ITALY vessel 12L	3/4	0-100 (130)	10	15	2,5 +/- 10%	240	360
C.W.U ITALY vessel 19L	3/4	0-100 (130)	10	15	2,5 +/- 10%	300	365
C.W.U ITALY vessel 24L	3/4	0-100 (130)	10	15	2,5 +/- 10%	300	430
C.W.U vessel 36L	3/4	0-100 (130)	10	15	2,5 +/- 10%	350	760
C.W.U vessel 50L	3/4	0-100 (130)	10	15	2,5 +/- 10%	380	870

# IBO ITALY SOLAR vessels

**Diaphragm  
expansion vessels  
Membrantanks**

High-quality original materials, demanding tests at every stage of production and the expertise of engineers ensure high resistance to wear.

IBO Solar diaphragm expansion vessels with capacities of 8L-50L are designed for use in solar installations in order to maintain and equalise pressure in them, changes of which result from an increase in water volume. The tanks are made of thick carbon steel and coated with a special anti-corrosion varnish. Inside the tanks there are rubber diaphragms made of EPDM (made in an Italian factory) forming a membrane between the water inside and the outer shell of the tank.

The long-term maximum working temperature of the fluid is 110°C and up to two hours even 130°C. The tanks use a special valve for adding or draining air from the tank - a valve identical to that in car wheels, located in the rear part of the tank, under the cover.

External surface with epoxy powder paint  
IBO diaphragm expansion vessels are pressure equipment complying with the requirements of Directive 2014/68/EU  
Suitable for use with ethylene or propylene glycol mixtures  
Characterised by very low gas permeability.

## Application:

In hot and cold potable water systems to maintain and equalise the pressure in the water, the variations of which are caused by the increase in water volume.



MODEL	Inlet/outlet (inch)	Operating temperature (°C)	Max. operating pressure (bar)	Max. tested PT pressure (bar)	Precharge pressure (bar)	Dimension D (cm)	Dimension H (mm)
VESSEL IBO SOLAR -8L	3/4	0-100 (130)	10	15	2,5 +/- 10%	200	360
VESSEL IBO SOLAR-12L	3/4	0-100 (130)	10	15	2,5 +/- 10%	240	380
VESSEL IBO SOLAR-19L	3/4	0-100 (130)	10	15	2,5 +/- 10%	270	390
VESSEL IBO SOLAR-24L	3/4	0-100 (130)	10	15	2,5 +/- 10%	300	440
VESSEL IBO SOLAR-36L	3/4	0-100 (130)	10	15	2,5 +/- 10%	350	440
VESSEL IBO SOLAR-50L	3/4	0-100 (130)	10	15	2,5 +/- 10%	350	720



# IBO HEATS pressure vessels

For central heating systems  
Membrantanks

IBO HEATS pressure vessels are designed for heating and solar systems to maintain and stabilize the system pressure changes resulting from the increase in fluid volume and temperature. The main function of pressure vessels is to prevent excessive pressure increase in closed systems.

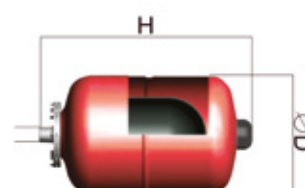
Pressure vessels use air cushion to compensate for changes of the heating medium volume in closed circuits. Inside the steel vessel there is a replaceable EPDM (synthetic rubber) membrane with high tensile strength and high temperature resistance, separating the liquid from the air.

The tanks are equipped with a pressure valve to regulated the pressure inside the vessel and a replaceable flange made of galvanized steel with 3/4" inlet/outlet connection.

The vessels are intended for systems with the maximum 50% glycol content.

Vessels for suspension: 8L / 12L / 19L / 24L  
Free-standing vessels: 36L / 50L / 80L / 100L

IBO HEATS pressure vessel are compliant with the Pressure Equipment Directive (PED) 2014/68/UE of the European Parliament and of the Council, as amended.



Model	Inlet/outlet (inch)	Operating temperature (°C)	Max. operating pressure (bar)	Max. pressure (bar)	Precharge pressure (bar)	Dimension D (cm)	Dimension H (mm)
IBO HEATS 8L	3/4"	0-99	8	12	1,7 +/- 10%	20	33
IBO HEATS 12L	3/4"	0-99	8	12	1,7 +/- 10%	27	31
IBO HEATS 19L	3/4"	0-99	8	12	1,7 +/- 10%	27	40
IBO HEATS 24L	3/4"	0-99	8	12	1,7 +/- 10%	27	46
IBO HEATS 36L	3/4"	0-99	8	12	1,7 +/- 10%	35	44
IBO HEATS 50L	3/4"	0-99	8	12	1,7 +/- 10%	35	55
IBO HEATS 80L	3/4"	0-99	8	12	1,7 +/- 10%	45	59
IBO HEATS 100L	3/4"	0-99	8	12	1,7 +/- 10%	45	65

# Circulator pumps



MAGI 2  
MAGI MAX  
MAGI-H  
AMG

NOVA  
NOVA MAX  
IVO

## Circulations pumps



BETA 2  
OHI PRO  
OHI PRO MAX  
DN25 manifold  
Sprzęgło DN25  
OHI  
OHI MAX  
Magnetic Filter

S-150 Controler  
W15 IH-10  
Cyrkulation pumps BETA BR/  
OHI BR  
CPI 15-15  
E-IBO 15-14  
IPML

# MAGI 2



Energy-saving electronic circulation pumps which meet the requirements of A-rated pumps.

The energy efficiency index of pumps from the MAGI series is:

$$EEI \leq 0,23$$

which according to the Commission Regulation (EU) No. 622/2012 is the reference criterion for: the most energy-efficient circulation pumps.

The MAGI series circulation pump is equipped with a permanent magnet motor and a differential pressure controller which automatically and continuously adjusts the pump performance to meet the actual needs of the system. The pump control panel is placed on the top of the motor, which makes it easy to operate by the user. The current consumption of electricity is displayed on its dial. The pump set includes a set of screw connections with an adapter for connecting the cable.

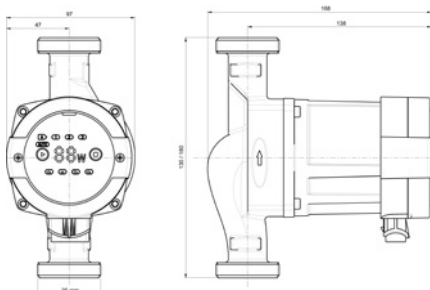
## The pump has 8 operating modes:

- AUTO (factory default) - high to low proportional pressure characteristic curve
- LPP / HPP - Proportional pressure curves
- LCP / HCP - Constant pressure curves
- I/II/III - Constant speed curves

## Application:

The MAGI series circulation pump is best suited for the following systems:  
Equithermic heating systems with variable flow:

- Heating systems with variable pipeline temperature
- Heating systems with night mode
- Air conditioning systems
- Industrial circulation systems
- Home central heating systems and home hot water systems



SPECIFICATIONS		
Electrical supply	1 × 230 V +6%/-10%, 50 Hz	
Motor protection	There is no need for an additional motor protection.	
Ingress Protection Code	IP 44	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum pressure in the central heating system	1 Mpa	
Minimum inlet suction pressure depending on heating medium temperature	Medium temperature	
	≤ 85°C	0,005 MPa
	≤ 90°C	0,028 MPa
	≤ 110°C	0,100 MPa
EMC compliance	EN61000-6-1; EN61000-6-3	
Running pump sound pressure	43 dB (A)	
Allowable ambient temperature	0~+40°C	
Maximum heating medium temperature	TF110	
Maximum heat of pump surface	≤ 115°C	
Fluid temperature range	2~+110°C	

Name	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Dimensions						
							L1	L2	B1	B2	H1	H2	G
MAGI 2 25-40/180	7	4	50	5-22	1½ × 1	180	90	180	52	99	129	169	1½"
MAGI 2 25-60/130	7	6	55	5-45	1½ × 1	130	65	130	52	99	129	169	1½"
MAGI 2 25-60/180						180	90	180	52	99	129	169	
MAGI 2 25-80/180	7	8	90	5-70	1½ × 1	180	90	180	52	99	129	169	1½"
MAGI 2 32-80/180			95		2 × 1½								

# MAGI MAX

Energy-saving electronic circulation pumps with A energy-efficiency rating.

Energy Efficiency Index for MAGI pumps is:

$$EEI \leq 0,23$$

The MAGI circulating pump is equipped with a permanent magnet motor and a pressure differences regulator for automatic and continuous pump capacity adjustment to the actual requirements of the system. The pump control panel is located on top of the motor for easier operation by the user. Current power consumption is displayed on its panel. The pump is supplied with union joints and cable adapter.

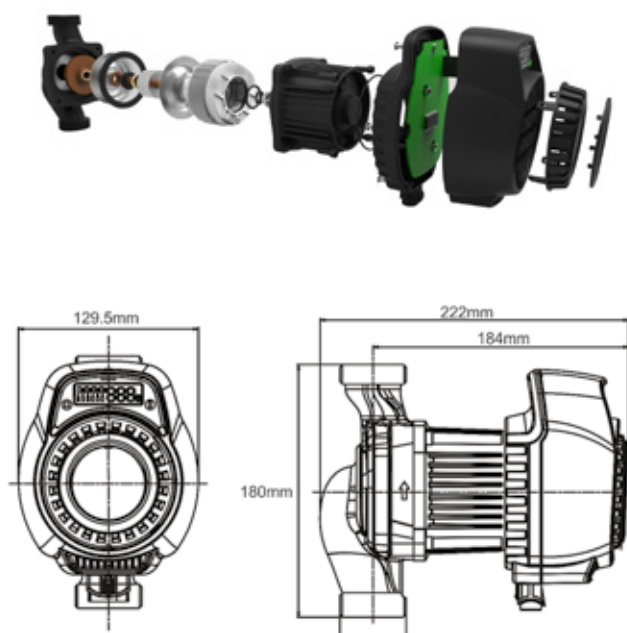
## The pump provides 9 operating modes:

- ECO (factory setting)- From highest to lowest proportional pressure characteristic curve
- PP2/PP3/PP4/PP5 - Proportional pressure curves
- CP2/CP3/CP4/CP5 - Constant pressure curves

## Application:

Magi circulation pump is intended for the following systems:

- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system



SPECIFICATIONS		
Supply voltage	1 × 230 V + 6%/-10%, 50 Hz	
Motor protection	No additional motor protection is required	
Ingress Protection Code	IP 44	
Insulation class	F	
Maximum ambient relative humidity	≤ 95%	
Maximum pressure in the central heating system	1 Mpa	
Minimum inlet suction pressure depending on heating medium temperature	Medium temperature	
	≤ 85°C	0,005 MPa
	≤ 90°C	0,028 MPa
	≤ 95°C	0,100 MPa
EMC compliance	EN61000-6-1; EN61000-6-3	
Running pump sound pressure	43 dB (A)	
Allowable ambient temperature	0~+40°C	
Maximum heating medium temperature	TF110	
Maximum heat of pump surface	≤ 110°C	
Fluid temperature range	2~+95°C	
Automatic venting function	YES	

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Weight (kg)
MAGI 25-100/180	11	10	170	10-180	1½ × 1	180	4,5
MAGI 32-100/180	11	10	180	10-180	2 × 1½	180	4,6

# MAGI-H

Energy-saving electronic circulation pumps  
with A energy-efficiency rating.

Energy Efficiency Index for MAGI pumps is:

$$EEI \leq 0,23$$

The MAGI circulating pump is equipped with a permanent magnet motor and a pressure differences regulator for automatic and continuous pump capacity adjustment to the actual requirements of the system. The pump control panel is located on top of the motor for easier operation by the user. Current power consumption is displayed on its panel.

The pump is supplied with union joints and cable adapter

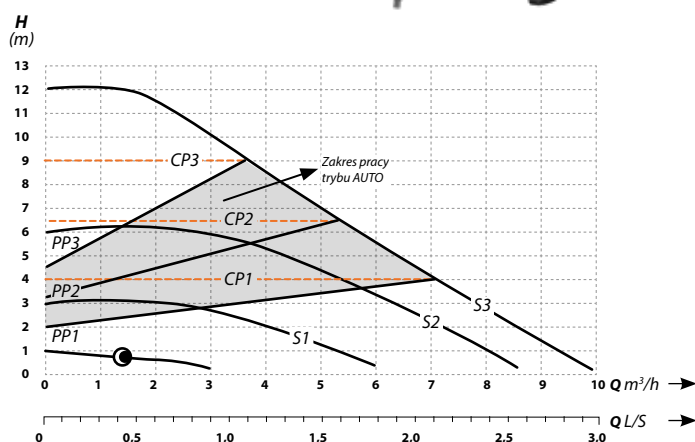
**The pump provides 12 operating modes:**

- AUTO (factory setting)
- - From highest to lowest proportional pressure characteristic curve
- I / II / III - Constant rotational speed curves
- PP1/PP2/PP3/PP4 - Proportional pressure curves
- CP1/CP2/CP3/CP4 - Constant pressure curves.

## Application:

MAGI-H circulation pump is intended for the following systems:

- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system.



SPECIFICATIONS		
Electrical supply	1× 230 V +6%/-10%, 50 Hz	
Motor protection	No additional motor protection is required	
Ingress Protection Code	IP 42	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum pressure in the central heating system	1 Mpa	
Minimum inlet suction pressure depending on heating medium temperature	Medium temperature	
	≤ 75°C	0,005 MPa
	≤ 90°C	0,028 MPa
	≤ 110°C	0,100 MPa
EMC compliance	EN61000-4-4	
Running pump sound pressure	43 dB (A)	
Allowable ambient temperature	0~+40°C	
Maximum heating medium temperature	TF110	
Maximum heat of pump surface	≤ 110°C	
Fluid temperature range	2~+110°C	
Automatic venting function	YES	

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Weight (kg)
MAGI H 25-120/180	11	12	160	14-185	1½ × 1	180	4,9
MAGI H 32-120/180	11	12	160	14-185	2 × 1½	180	5,1

# AMG

## PWM CONTROL

Energy-saving electronic circulation pumps which meet the requirements of A-rated pumps.

PWM CONTROL

The energy efficiency index of pumps from the AMG series is:

$$EEI \leq 0,20$$

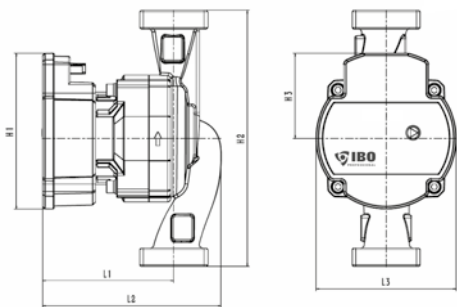
The pumps are designed to force circulation in systems equipped with an electronic processor, which automatically controls the operation of the pumps. This feature, in combination with a frequency converter, allows for significant savings in electricity consumption. This solution is used in central heating and solar installations. The equipped processor enables the pump to choose one of 8 modes of operation as needed per installation. The power consumption is from 1/10 to 1/3 lower than in classic pumps. The pump set includes a set of screw connections and a power cord.



### Application:

The AMG series circulation pump is best suited for the following systems:

- Equithermic heating systems with variable flow
- Heating systems with variable pipeline temperature
- Heating systems with night mode
- Air conditioning systems
- Industrial circulation systems
- Home central heating systems and home hot water systems



Model	Dimensions (mm)					
	L1	L2	L3	H1	H2	H3
AMG XX-XX/130					130	
AMG XX-XX/180	93	126	99	110	180	60

SPECIFICATIONS		
Electrical supply	1 × 230 V + 6%/-10%, 50 Hz	
Motor protection	No additional motor protection is required	
Ingress Protection Code	IP 44	
Insulation class	E	
Maximum ambient relative humidity	≤ 95%	
Maximum pressure in the central heating system	1 Mpa	
Minimum inlet suction pressure depending on heating medium temperature	Medium temperature Min. inlet pressure	
	≤ 85°C	0,005 MPa
	≤ 90°C	0,028 MPa
	≤ 110°C	0,100 MPa
EMC compliance	EN61000-6-1; EN61000-6-3	
Running pump sound pressure	43 dB (A)	
Allowable ambient temperature	0~+40°C	
Maximum heating medium temperature	TF 110	
Maximum heat of pump surface	≤ 125°C	
Fluid temperature range	2~+110°C	

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Weight (kg)
AMG 25-40/180	10	4	42	22	15	180	2,1
AMG 15-60/130	10	6	48	45	158	130	2,0
AMG 25-60/130	10	6	55	45	25	130	2,0
AMG 25-60/180	10	6	55	45	25	180	2,3
AMG 25-80/180	10	8	65	65	25	180	2,8
AMG 32-80/180	10	8	70	65	32	180	2,8





# NOVA

Energy-saving electronic circulation pumps with A energy-efficiency rating.

Energy Efficiency Index for NOVA pumps is:

$$EEI \leq 0,23$$

The NOVA circulating pump is equipped with a permanent magnet motor and a pressure differences regulator for automatic and continuous pump capacity adjustment to the actual requirements of the system. The pump control panel is located on top of the motor for easier operation by the user. Current power consumption is displayed on its panel. The pump is supplied with union joints and cable adapter.

## The pump has 8 operating modes:

- AUTO (factory setting) - From highest to lowest proportional pressure characteristic curve
- BL1 / BL2 - Proportional pressure curves
- HD1 / HD2 - Constant pressure curves
- HS1/HS2/HS3 - Constant rotational speed curves

## Application:

NOVA circulation pump is intended for the following systems:

- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system



SPECIFICATIONS		
Supply voltage	1 × 230V + 6%/-10%, 50 Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 44	
Insulation class	F	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature Min. inlet pressure	
	≤ 85°C	0,005 MPa
	≤ 90°C	0,028 MPa
	≤ 95°C	0,050 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF 95	
Maximum pump surface temperature	≤ 110°C	
Pumped liquid temperature range	2~+95°C	

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Weight (kg)
NOVA 20-40/180	8	4	50	5-22	1½ × 1	180	3
NOVA 25-60/180	8	6	55	5-45	2 × 1½	180	3
NOVA 25-60/130	8	6	55	5-45	1½ × 1	130	2,9



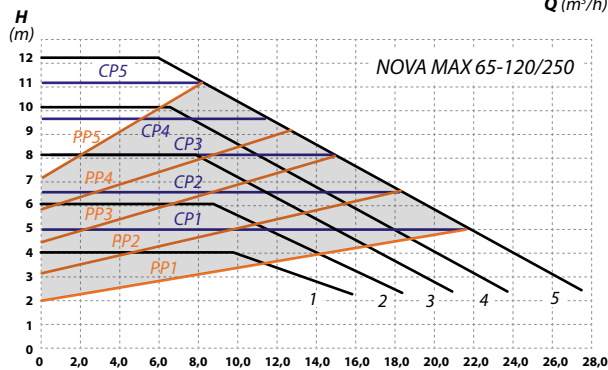
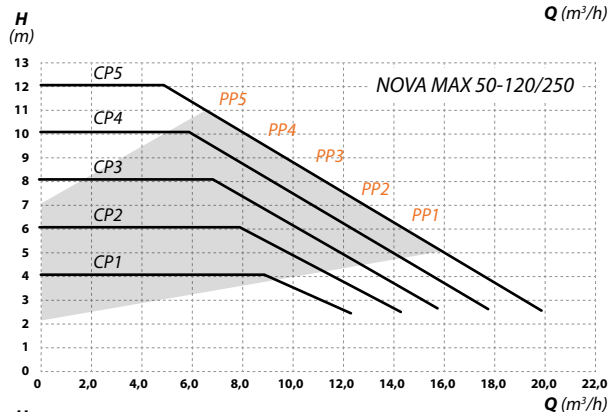
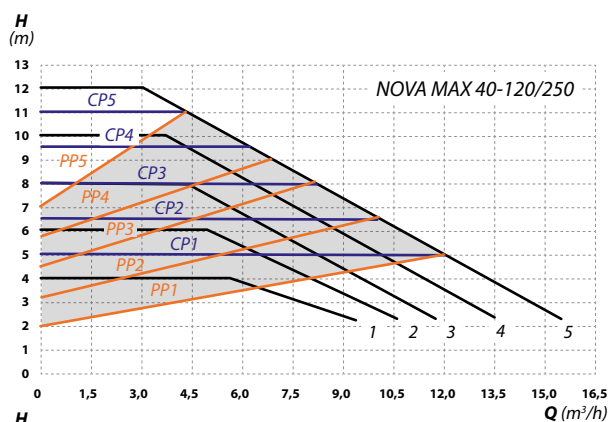
# NOVA MAX

Energy-saving electronic circulation pumps that meet the requirements for A class pumps.

The energy efficiency coefficient for NOVA pumps is:

$$EEI \leq 0,23$$

The NOVA circulation pump is fitted with a permanent magnet motor and differential pressure controller that automatically and continuously adjusts the pump capacity to meet the actual needs of the system. The pump control panel is placed on the top of the motor for easy operation by the user. Its dial displays the current electricity consumption. A set of threaded unions is supplied with the pump, including an adapter for cable connection.



## The pump features 16 operation modes:

- AUTO (factory setting) - The curve of proportional pressure characteristics – from highest to lowest
- PP1 / PP2 / PP3 / PP4 / PP5 - proportional pressure curves
- CP1 / CP2 / CP3 / CP4 / CP5 - constant pressure curves
- I / II / III / IV / V - constant rotational speed curves

## Application:

The NOVA series circulation pump is best suited for the following systems:

- Fixed temperature heating system with variable flow rate
- Heating system with variable pipeline temperature
- Heating system with night mode
- Air-conditioning system
- Industrial circulation system
- CH and DHW systems

SPECIFICATIONS		
Supply voltage	1 × 230 V +6%/-10%, 50 Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 44	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	
	Min. inlet pressure	
	≤ 85°C	0,005 MPa
	≤ 90°C	0,028 MPa
Compliance with the EMC standard	≤ 95°C	1,000 MPa
	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF 95	
Maximum pump surface temperature	≤ 115°C	
Pumped liquid temperature range	2~+110°C	

MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Weight (kg)
NOVA MAX 40-120/250	15	12	275	15-600	1½	250	17,30
NOVA MAX 50-120/250	15	12	350	15-600	2	250	17,75
NOVA MAX 65-120/250	15	12	350	15-600	2½	250	17,95

**IVO**


Energy-saving electronic circulation pumps that meet the requirements for A class pumps.

The energy efficiency coefficient for IVO pumps is:

**EEI ≤ 0,23**

which, according to Commission Regulation (EU) no. 622/2012 is the reference criterion for **the most energy-efficient circulation pumps**

The IVO series circulation pump is equipped with a permanent magnet motor and a differential pressure regulator, which automatically and continuously adjust the pump capacity to meet the actual needs of the system. The pump control panel is placed on the top of the motor for easy operation. Its dial displays the current electricity consumption. The pump is supplied with a set of threaded unions, including an adapter for cable connectionw

#### The pump features 8 operation modes:

- AUTO (factory setting) - The curve of proportional pressure characteristics – from highest to lowest
- LPP / HPP - Proportional pressure curves
- LCP / HCP - Constant pressure curves
- I/II/III - Constant rotational speed curves

#### Application:

IVO series circulation pump is best for the following systems:

- Fixed temperature heating system with variable flow rate
- Heating system with variable pipeline temperature
- Heating system with night mode
- Air-conditioning system
- Industrial circulation system
- Household CH and DHW systems

SPECIFICATIONS		
Supply voltage	1 × 230 V +6%/-10%, 50 Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 44	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature Min. inlet pressure	
	≤ 85°C	0,005 MPa
	≤ 90°C	0,028 MPa
	≤ 110°C	0,050 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temperature	TF 110	
Maximum pump surface temperature	≤ 115°C	
Pumped liquid temperature range	2~+110°C	

Name	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Dimensions						
							L1	L2	B1	B2	H1	H2	G
IVO 25-40/180	7	4	50	5-22	1½ × 1	180	90	180	52	99	129	169	1½"
IVO 25-60/130	7	6	55	5-45	1½ × 1	130	90	180	52	99	129	169	1½"

## BETA 2



Energy-saving electronic circulation pumps with A energy-efficiency rating.

Energy Efficiency Index for BETA 2 pumps is:

$$EEI \leq 0,23$$

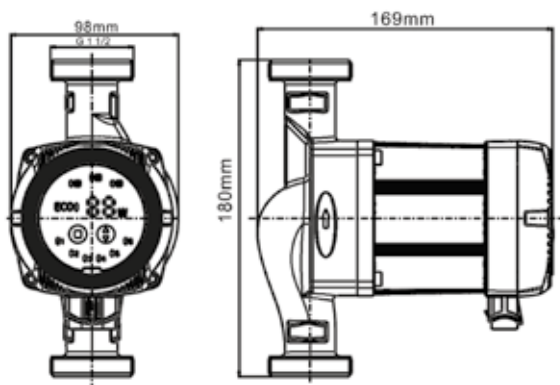
The pumps are designed for forcing circulation in central heating systems and solar systems. The pumps are equipped with an electronic processor for automatic pump control, which together with a frequency converter allows for significant energy savings. The processor provides 11 operating modes depending on the system requirements. The power consumption is from 1/10 to 1/3 of conventional pumps.

The pump is supplied with union joints and power cable.

### Application:

BETA 2 circulation pump is intended for the following systems:

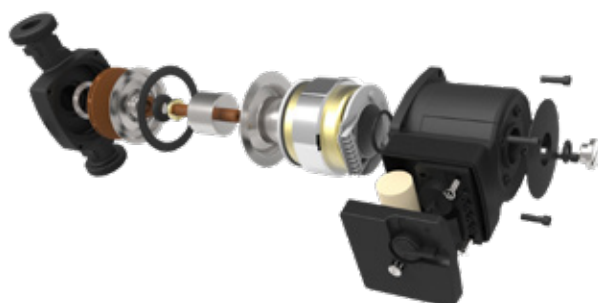
- Constant temperature variable flow heating system
- Variable pipe temperature heating system
- Heating system with night mode
- Air conditioning system
- Industrial circulation system
- Domestic central heating system and domestic hot water system



SPECIFICATIONS		
Supply voltage	1 × 230 V +6%/-10%, 50 Hz	
Motor protection	No additional motor protection is required	
Ingress Protection	IP 42	
Insulation class	H	
Maximum ambient relative humidity	≤ 95%	
Maximum central heating system pressure	1 Mpa	
Maximum suction-side inflow pressure depending on the heating medium temperature	Medium temperature	
	Min. inlet pressure	
	≤ 85°C	0,005 MPa
	≤ 90°C	0,028 MPa
	≤ 110°C	0,100 MPa
Compliance with the EMC standard	EN61000-6-1; EN61000-6-3	
Operating pump sound pressure	43 dB (A)	
Permissible ambient temperature	0~+40°C	
Maximum heating medium temp.	TF 110	
Maximum pump surface temperature	≤ 125°C	
Pumped liquid temperature range	2~+110°C	

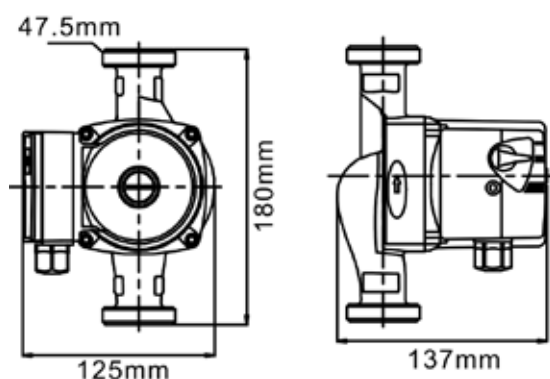
MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter (inch)	Connector spacing (mm)	Weight (kg)
BETA 25-40/180	8	4	48	22	1½ × 1	180	3,1
BETA 25-60/130	8	6	55	45	1½ × 1	130	3,1
BETA 25-60/180	8	6	55	45	1½ × 1	180	3,0

## OHI PRO



OHI PRO series are seal-less circulation pumps with increased durability.

The pumps have a higher density ceramic shaft and plain bearings. Motor durability and better electrical parameters are achieved by using stronger Class F insulation winding. All processes during the manufacture of OHI PRO pumps are carried out by robots. The robots also check the quality of the intermediate products after each stage of production. At the end, the pumps are electrically and hydraulically tested. Due to the automation of the manufacturing process, the final product is of the top quality that is reproducible in every unit. All these actions have allowed us to extend the warranty period to 3 years. The pumps are supplied with union joints and a cable with a plug.



By default, the pumps have 3 speed levels for adjusting operating parameters depending on the user's and system's requirements. Due to the design and high quality materials used, the pumps are very quiet during operation.

The idea behind the creation of the OHI PRO pump was based on the belief that it is necessary to build a device with a more durable and reliable design compared to generally available circulation pumps, as well as a change in the price underselling trends.

All OHI pumps have PZH (National Institute of Hygiene) approval.

Name	Gear	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter pump/ Screw connection diameter (inch)	Connector spacing (mm)
OHI PRO 15-60/130	1	3,7	27	46	1 × ¾	130
	2	5,2	39	63		
	3	5,9	55	93		
OHI PRO 25-40/180	1	2,4	30	38	1½ × 1	180
	2	3,4	43	53		
	3	3,9	54	71		
OHI PRO 25-60/130 OHI PRO 25-60/180	1	3,4	30	46	1½ × 1	130 180
	2	4,9	45	63		
	3	5,7	63	93		
OHI PRO 32-60/180	1	3,7	37	46	2 × 1¼	180
	2	5	56	63		
	3	5,8	75	93		

# OHI PRO MAX



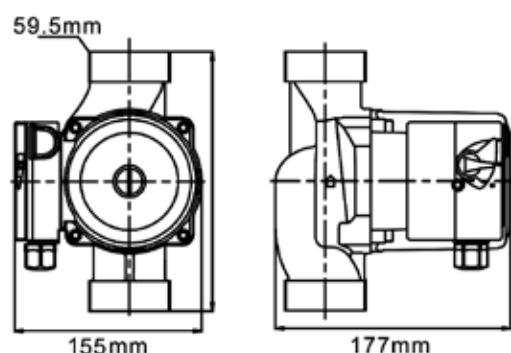
OHI PRO MAX series are seal-less circulating pumps with increased durability. The MAX pumps have higher operating parameters than the OHI PRO pumps.

The pumps have a higher density ceramic shaft and plain bearings. Motor durability and better electrical parameters are achieved by using stronger Class F insulation winding. All processes during the manufacture of OHI PRO pumps are carried out by robots. The robots also check the quality of the intermediate products after each stage of production. At the end, the pumps are electrically and hydraulically tested. Due to the automation of the manufacturing process, the final product is of the top quality that is reproducible in every unit. All these actions have allowed us to extend the warranty period to 3 years.

By default, the pumps have 3 speed levels for adjusting operating parameters depending on the user's and system's requirements. Due to the design and high quality materials used, the pumps are very quiet during operation.

The idea behind the creation of the OHI PRO pump was based on the belief that it is necessary to build a device with a more durable and reliable design compared to generally available circulation pumps, as well as a change in the price underselling trends

All OHI pumps have PZH (National Institute of Hygiene) approval.



Name	Gear	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter pump/ Screw connection diameter (inch)	Connector spacing (mm)
OHI PRO MAX 25-80/180	1	6	59	150	1½ × 1	130
	2	7	89	220		
	3	7,4	102	270		
OHI PRO MAX 32-80/180	1	6	74	150	2 × 1¼	180
	2	7,6	115	220		
	3	8	159	270		





#### PUMP GROUPS

##### GP-SiŁ-DN25 pump group with a 3-way mixing valve

The version without a pump includes an electric actuator.

It is equipped with:

- ball valve integrated with the thermometer (power supply: red)
- ball valve with integrated check valve and thermometer (check: blue)
- adjustable bypass
- EPP insulation

A standard 180 mm long circulation pump can be used.

Irreversible pump group (see: the manual).

SPECIFICATIONS	
Material	steel, brass, EPP insulation
Max. KVS groups with mixer	6,6 m <sup>3</sup> /h
Max. working temp	110°C
Max pressure:	PN 6
Upper connection	G1"
lower connection	female thread GZ 1½"
length (pump connection)	180 mm/GZ (male thread) 1½"



##### GGP-B-DN25 pump group with a direct heating circuit. Version without pump and 3-way mixing valve.

It is equipped with:

- ball valve integrated with the thermometer (power supply: red)
- ball valve with integrated check valve and thermometer (check: blue)
- EPP insulation

A standard 180 mm long circulation pump can be used.

Irreversible pump group (see: the manual).

SPECIFICATIONS	
Material	steel, brass, EPP insulation
Maks. KVS grupy z mieszaczem	6,6 m <sup>3</sup> /h
Maks. temp. pracy	110°C
Maks. ciśnienie	PN 6
PrzylĄcze gÓrne	G1"
PrzylĄcze dolne	female thread GZ 1½"
Długość (przylĄcze pompy)	180 mm/GZ (male thread) 1½"



#### Electric actuator

- 3-point control, 5 or 6 Nm torque, (depending on the model)
- turning time by 90° — 135 s/2 minutes
- power cable: length depends on the model, power supply: 230 V
- Ingress Protection Code IP40

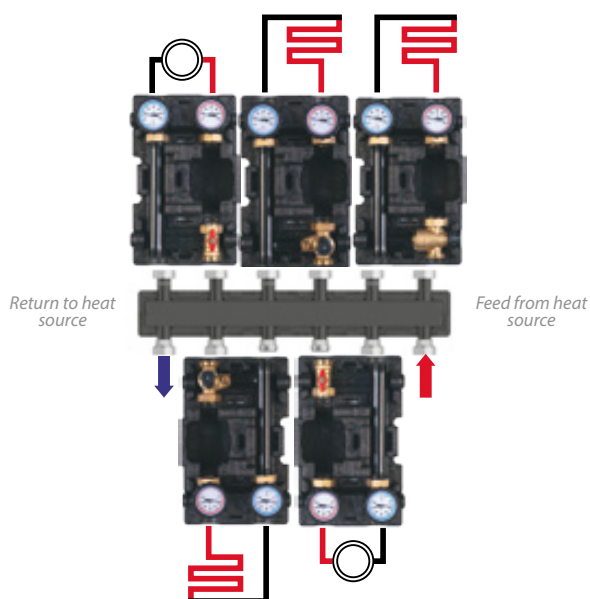
\* The manufacturer's installation, operating, and warranty guidelines apply to the pump (check before installing in the pump group).  
 Verify whether it is possible to correctly install the hydraulic and electrical equipment of a given manufacturer's pump in the pump group.  
 \* The product is not included in the current catalogue price list  
 \* Non-standard goods, made to order  
 \* The photos and diagrams contained in this leaflet are for reference only.



## DN25 MANIFOLD

**DN25 manifold (up to 70 kW) for working with central heating pump groups (standard)**

The manifold is used to expand heating circuits, save space, and quickly build a comfortable heating system. The distributor manifold block has a connector with flat sealing connections.



3-way mixing valves



4-way mixing valves



You can install pump groups in the upper and lower part of the manifold. Wall console included in the price of the manifold. The models of individual manifolds may differ in terms of the pump group assembly method (see the manual).

SPECIFICATIONS	
Power in kW at $\Delta T = 20\text{ K}$	up to 70 kW
Upper connection	½" GW (female thread)
Lower connection	½" GW (female thread)
Pattern	125 mm
Size (including insulation):	
2 + 1 (number of heating circuits)	500 × 178 × 135 mm (W/H/D)
3 + 2 (number of heating circuits)	750 × 178 × 135 mm (W/H/D)
4 + 3 (number of heating circuits)	1000 × 178 × 135 mm (W/H/D)
Materials	brass/steel/EPP
Sealing type	EPDM
Max. operating temperature	up to 110°C
Max. operating pressure	6 bar
Kvs	3 m³/h

### Schematic diagram

#### Note!

The diagram cannot replace the technical design prepared by an authorised designer. Read the instructions and warranty conditions before installation.

TECHNICAL DATA	
Spindle rotation torque	< 1 Nm
Type of fluid	woda, glikol (≤ 50%)
Max. working pressure	1,0 Mpa (10 bar)
Working temperature range	-10°C ÷ 110°C

DN	Kvs
20	6,3 m³/h
25	12 m³/h
32	16 m³/h
40	25 m³/h
50	40 m³/h





## DN25 COUPLING



### DN25 GW vertical hydraulic coupling (up to 70 kW) with EPP insulation

The task of the hydraulic coupling is to separate the boiler circuit from the heating circuit, balance the flows, and keep the pumps running smoothly. Additionally, the coupling protects the boiler against return temperature which is too low.

Chamber with a separation net and welded connectors:

- four 1" connectors for heating circuit pipes
- single 1/2" connector for the temperature sensor
- single 1/2" connector on the top for the air vent
- single 1/2" connector at the bottom to the drain-fill valve

Includes:

- - EPP insulation
- - single 1 1/2" plug
- - single automatic vertical air vent
- - single 1/2" drain-fill valve

SPECIFICATIONS	
Power in kW at $\Delta T = 20\text{ K}$	up to 67 kW
Connections of the heating system	4 × 1" GW (female thread)
Connection to the temperature sensor	1/2" GW (female thread)
Size (including insulation):	368 × 113 × 106 (H/Sz/Gł)
Materials	brass / steel / EPP
Max. operating temperature	do 110°C
Max. operating pressure	6 bar
Max. Kvs	3 m <sup>3</sup> /h

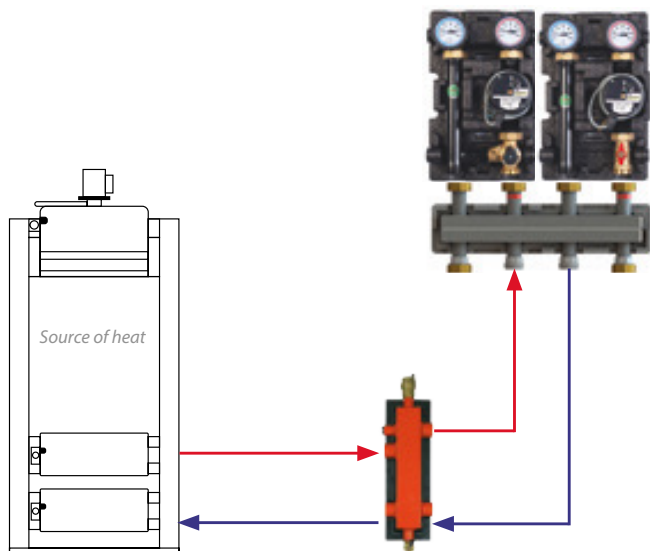
### Schematic diagram

#### Note!

The diagram cannot replace the technical design prepared by an authorised designer. Read the instructions and warranty conditions before installation.

#### Note!

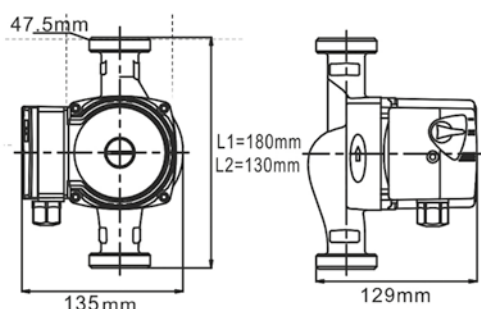
- The coupling can be installed together with the DN25 standard distributor (up to 70 kW)
- The coupling cannot be installed with a decoupling distributor or with an integrated coupling and guard
- The coupling does not contain any mounting elements



# OHI

The pumps have 3-speed motors for adjusting operating parameters depending on the user's requirements. The pumps are available with bodies made of bronze or cast iron. Due to the design and high quality materials used, the pumps are very quiet during operation.

All OHI pumps have PZH (National Institute of Hygiene) approval.

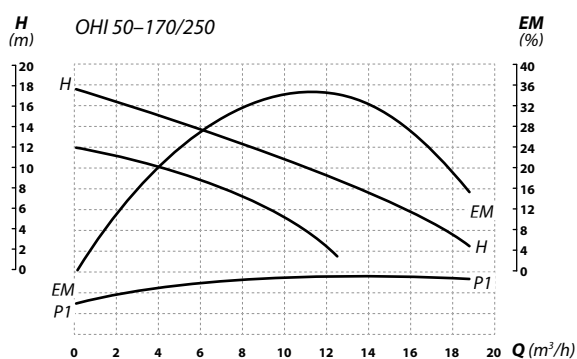
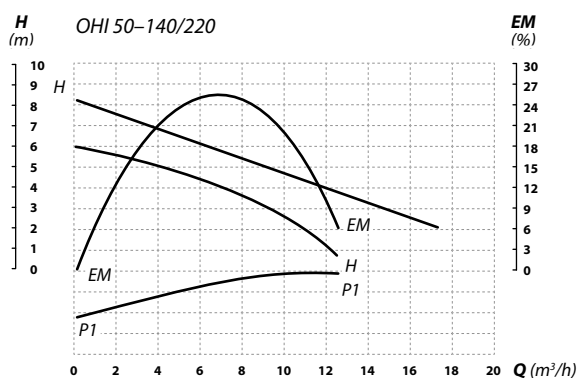
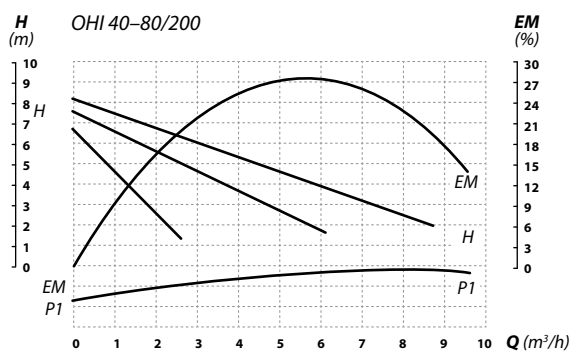


Name	Gear	Lift (m)	Capacity (l/min)	Motor power (W)	Connector diameter pump/ Screw connection diameter (inch)	Connector spacing (mm)
OHI 15-60/130	1	2,2	24	46	1 × ¾	130
	2	3,9	37	63		
	3	5,1	55	93		
OHI 25-40/180	1	2,2	27	38	1½ × 1	180
	2	3,2	38	53		
	3	4	55	71		
OHI 25-60/180	1	2,8	27	38	1½ × 1	180
	2	4,7	39	53		
	3	5,6	57	71		
OHI 32-60/180	1	2,2	31	46	1½ × 1	180
	2	3,9	47	63		
	3	5,4	69	93		
OHI 25-80/180	1	6,5	43	150	1½ × 1	130
	2	7,5	103	220		
	3	8	160	270		
OHI 32-60/180	1	3	22	46	2 × 1¼	180
	2	5	38	63		
	3	6	55	93		
OHI 32-80/180	1	6,5	43	150	2 × 1¼	180
	2	7,5	103	220		
	3	8	160	270		

# OHI MAX

The pumps are made of high quality materials. The pumps are complete with connecting flanges. 550W and 750W seal-less pumps for larger systems.

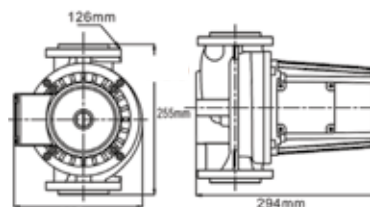
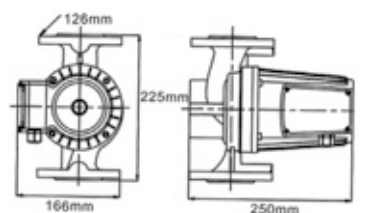
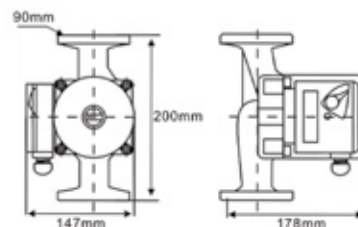
All OHI pumps have PZH (National Institute of Hygiene) approval.



OHI 40-80/200



OHI 50-170/250



MODEL	Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Flange diameter (inch)	Flange spacing (mm)	Weight (kg)
OHI 40-80/200	1/2/3	6,5/7,5/8	43/103/160	150/220/270	1½	200	6
OHI 50-140/220	1	12	210	550	2	220	16
OHI 50-170/250	1	16	320	750	2	250	17

# S-150 CONTROLLER

The S-150 CONTROLLER is designed to control the central heating water pump. The controller is tasked with switching on the pump if the temperature exceeds the set value, and switching it off if it drops below the set value. This prevents unnecessary operation of the pump, which allows you to save electricity (savings depending on the degree of use of the furnace can reach up to 60%) and extends the life of the pump. As a result, its reliability increases and operating costs decrease. The switch-on and switch-off temperature can be set in the range of 0–99°C. Hysteresis has been replaced with the possibility of any switch-off temperature setting.

**Example:** Set temperature of 34°C (lower display), switch-off temperature of 31°C

If the sensor temperature reaches 34°C, the pump turns on at 34°C and continues to work until the sensor temperature drops to 31°C, the controller turns the pump off.

The controller is equipped with 2 LED displays. The current temperature measured by the sensor is displayed as standard on the upper one, while the lower one shows the switch-off temperature. The MENU button toggles the controller into preview mode and switch-on/switch-off temperature settings, as well the anti-stop function setting.



## Thermostat function

The controller has also a built-in thermostat function. It is possible to set the temperature at which the controller turns off the controlled devices, and then, after lowering it to the required value, it starts the device.

## Anti-freeze function

The controller is equipped with the ANTI-FREEZE function, which starts the pump when the ambient temperature drops below 5°C to prevent the controller from freezing.

The controller is equipped with 2 LED displays. The current temperature measured by the sensor is displayed as standard on the upper one, while the lower one shows the switch-off temperature. The MENU button toggles the controller into preview mode and switch-on/switch-off temperature settings, as well the anti-stop function setting.

SPECIFICATIONS	
Temperature adjustment range (set temp)	0°C–99°C
Supply voltage	230 V / 50 Hz ± 10%
Power consumption	< 5 W
Max. operating temperature	-10°C–40°C
Temperature sensor	Resistant
Sensor cable length	ca. 1m
Mains cable length	ca. 1m
Pump power cord length	ca. 1m
Output	230 V / 50 Hz
Max output load current	pump 1A (load resistance)

# MAGNETIC FILTER

The magnetic filter is designed to trap impurities found in central heating systems. Modern systems equipped with highly efficient boiler feed installations are exposed to breakdowns and reduction of performance and efficiency due to contamination with iron oxides, the main component of rust, which are generated by corrosion and deposited in the form of sludge.

Iron oxide particles circulate throughout the heating circuit, depositing in the critical points of the installation and exposing the entire system to the failure of pumps, valves or heat exchangers etc., and the heating efficiency of the boiler is reduced, which translates into increased heating costs.

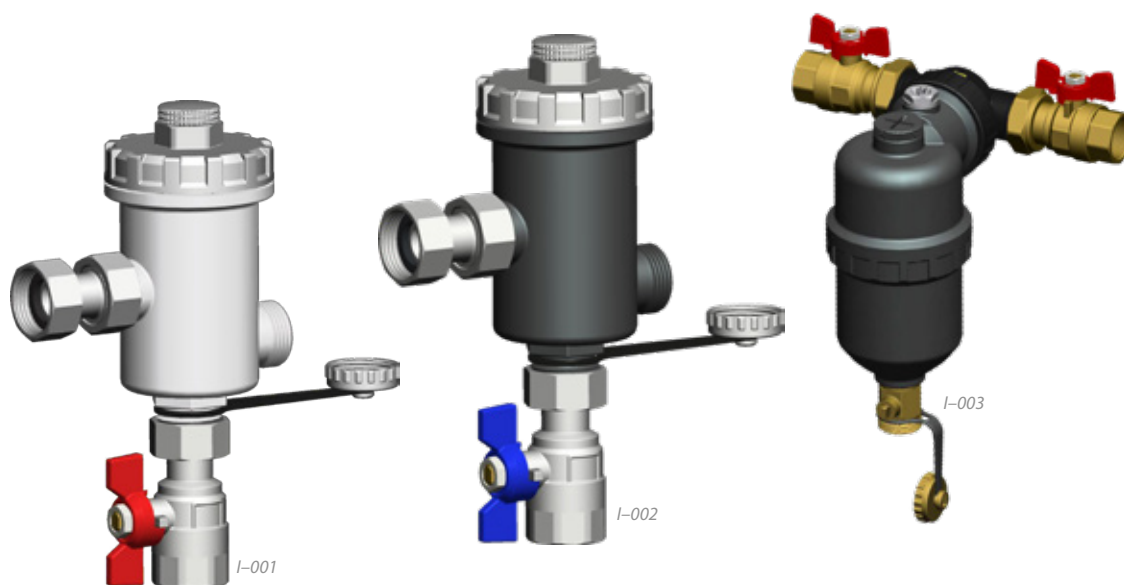
The use of magnetic filters / dirt separators improves the protection of the entire heating system, by removing most of the solid particles, which include iron or iron oxides suspended in the heating system fluid. The filters can be used in systems with continuous circulation of the heating medium. The heating medium may consist of water-glycol solution, with the glycol content not exceeding 50%. The filters can also be used in solar systems and cooling systems, trapping impurities such as sand.

## Characteristics:

- For use in central heating and solar systems
- Double filtration method
- Easy removal of impurities
- High magnetic force
- Top quality materials
- 24 months warranty
- Warranty and post-warranty service

## Technical data:

- Material: PA66 + glass fibre /copper, stainless steel
- Maximum operating pressure 6 bar/ 0,6Mpa
- Maximum liquid temperature 90°C
- Filtration efficiency  $\geq 500\mu\text{m}$
- Maximum flow 100 l/min
- Magnetic force 9000 Gauss
- Connection  $\frac{3}{4}$ " or 1"



MODEL	I-002	I-003
Dimensions	114 × 190 mm	149 × 213 mm
Max. working pressure	6 Bar / 0,8 Mpa	6 Bar / 0,6 Mpa
Max. liquid temperature	90°C	90°C
Filtration	$\geq 500 \mu\text{m}$	$\geq 500 \mu\text{m}$
Maximum flow	30 l/min	100 l/min
The strength of the magnet	9000 Gauss	9000 Gauss
Connections	$\frac{3}{4}$ "	$\frac{3}{4}$ " lub 1"
Material	PA66 + fiberglass/copper stainless steel	PA66 + fiberglass/copper
Weight	750 g /1050g	1480 g



## W15 IH-10



Surface pump designed for increasing pressure in hydraulic systems. The pump can be used as a circulator for some industrial equipment, such as machines, laser devices, injection moulding machines, food processing machinery, and can also supply water to small boilers. The pump is designed to operate with cold and hot water. The set includes an automatic switch for pump operation control. The pump inlet/outlet and impeller are made of brass. An important advantage of the pump is its low-noise operation and compact size, therefore it can be installed in residential premises.

### Application:

- Increasing pressure in systems with water heaters
- Increasing pressure in water supply systems
- By using the pump, regardless of the pressure and its changes in the water supply system, it is possible to increase the pressure and keep it constant
- Increasing pressure in multi-storey water systems
- Aeration and water circulation in fish keeping

MODEL	Max. capacity (l/min)	Max. lift (m)	Motor power (W)	Voltage (V)	Amperage (A)	Inlet/outlet (inch)	Max. temperature (°C)
W15IH-10	20	10	90	230	0,45	¾-½	110
W15IH-10 economy	20	10	90	230	0,45	¾-½	110

## BETA 25-60/130 BR

Circulation pumps  
with brass body



Energy-saving electronic circulation pumps  
with A energy-efficiency rating with brass body.

The pumps are equipped with an electronic processor for automatic pump control, which together with a frequency converter allows for significant energy savings. Energy Efficiency Index for BETA pumps is  $EEL \leq 0.23$ . The pumps are equipped with an electronic display showing current energy consumption.

## OHI 15-60/130 BR | OHI 25-60/130 BR

### Circulation pumps for hot water systems.

Seal-less 3-speed circulation pumps designed for forcing domestic hot water circulation in larger systems.

The pump is usually installed upstream the boiler or hot water tank

The pumps have PZH (National Institute of Hygiene) approval.



Name	Gear / Operation mode (x1)	Lift (m)	Capacity (l/min)	Motor power (W)	Voltage (V)	Connector diameter (inch)	Connector spacing (mm)
BETA 25-60/130 BR	11	6	55	45	230	1½ × 1	130
OHI 15-60/130 BR	1/2/3	3/5/6	22/38/55	46/63/93	230	1 × ¾	130
OHI 25-60/130 BR	1/2/3	3/5/6	22/38/55	46/63/93	230	1½ × 1	130



## CPI 15-15

**Circulation pumps for hot water systems**

Seal-less circulation pumps designed for forcing hot water circulation. In systems without hot water pumps, after opening the tap, before the hot water starts flowing, cool water remaining in the pipeline will flow first. If a hot water pump is installed, hot water will flow almost immediately after opening the tap. The pump is usually installed upstream the boiler or hot water tank. With years of experience, we have been able to improve previous designs and create the top quality pump. Using the latest technology, the efficiency and, consequently, the energy consumption have been improved compared to older designs.

Brass body and ceramic shaft guarantee the pump is almost faultless.

The pumps have PZH (National Institute of Hygiene) approval.

### Advantages:

- Robust design
- Low-noise operation
- Hassle-free control
- Easy installation
- Complete with cable and plug.



SPECIFICATIONS	
TYP:	CPI 15-15
Motor power	28 W
Voltage	230 V~ / 50 Hz
Motor RPM	2600 obr/min
Amperage	0,3 A
Ingress Protection	IP 42
Maximum operating pressure	10 bar (1 000 000 Pa)
Flow (l/min)	7,5
Head (m)	1,7
Liquid temperature	2-95°C
Min. suction pressure	0,4 bar (40 000 Pa) dla 95°C 0,2 bar (20 000 Pa) dla 65°C
Face-to-face length	85 mm
Inlet/outlet (for union joints)	½"

Name	Gear (×1)	Lift (m)	Capacity (l/min)	Motor power (W)	Voltage (V)	Connector diameter (inch)	Connector spacing (mm)
CPI 15-15	1	1,7	7,5	28	230	½	85



## E-IBO 15-14

Compared to traditional circulation pumps, the energy consumption of the E-IBO pumps can be as low as 3W depending on the system.

Energy-saving electronic hot water circulation pumps with A energy-efficiency rating.

The E-IBO 15-14 pumps are designed for continuous operation forcing the hot water circulation, and in small heating systems. The pumps can be used in ventilation and air-conditioning systems. By using circulation pumps, water consumption is significantly reduced.

Compared to traditional circulation pumps, using the permanent magnet motor allows to reduce the energy consumption of the E-IBO pumps to as low as 3W depending on the system. The pumps are equipped with a spherical impeller operating in various planes.

### Features:

- Pump parameters can be automatically or manually adjusted to the system requirements
- A spherical Noryl impeller moves in various planes
- Wear-resistant ceramic shaft
- Stainless steel pump body
- Power cable with a plug

### Advantages:

- Easy installation and start up
- Low power consumption
- High energy efficiency has been achieved by using the permanent magnet motor
- Maximum usability
- Robust design
- Low-noise level of the pump and the entire system



SPECIFICATIONS	
Supply voltage	1×230V +6% / -10%, 50Hz PE
Power consumption	3–9 W
Motor protection	No additional motor protection is required
Ingress protection	IP 44
Insulation class	H
Maximum ambient Relative humidity	≤ 95%
Maximum central Heating system pressure	1 MPa
Maximum suction-side Inflow pressure	2 m H <sub>2</sub> O
Operating pump Sound pressure	43 dB (A)
Permissible ambient Temperature	0 ~ + 40°C
Maximum heating Medium temp.	TF 95
Pumped liquid Temperature range	2 ~ + 95°C
Inlet/outlet	½"
Inlet/outlet spacing	85 mm

Name	Gear (×1)	Lift (m)	Capacity (l/min)	Motor power (W)	Voltage (V)	Connector diameter (inch)	Connector spacing (mm)
E-IBO 15-14	AUTO	1,2	12	9	230	½	85

# IPML

**Industrial circulation pumps**  
For circulating cold and hot water

Pumps designed for constant or variable flow water supply systems with the medium temperature not exceeding 100°C (80°C) and the pressure not exceeding 0.6 MPa. Pumps are most often used in heating and cooling systems. The smallest of the series, the IPML 25/125 pump can also be used to fill solar systems. The IPML 50/1100 and 50/2200 water circulation pumps are intended for water containing non-abrasive and non-absorbent solid impurities of 0,27 kg/m<sup>3</sup>.



## Operating conditions:

- Maximum liquid temperature 80 /100°C
- Maximum ambient temperature 40°C
- Class B/F Insulation
- Operating mode - continuous
- Protection - IP44
- Protection for 230V motors
- Rotational speed of the electric motor: 2850 RPM

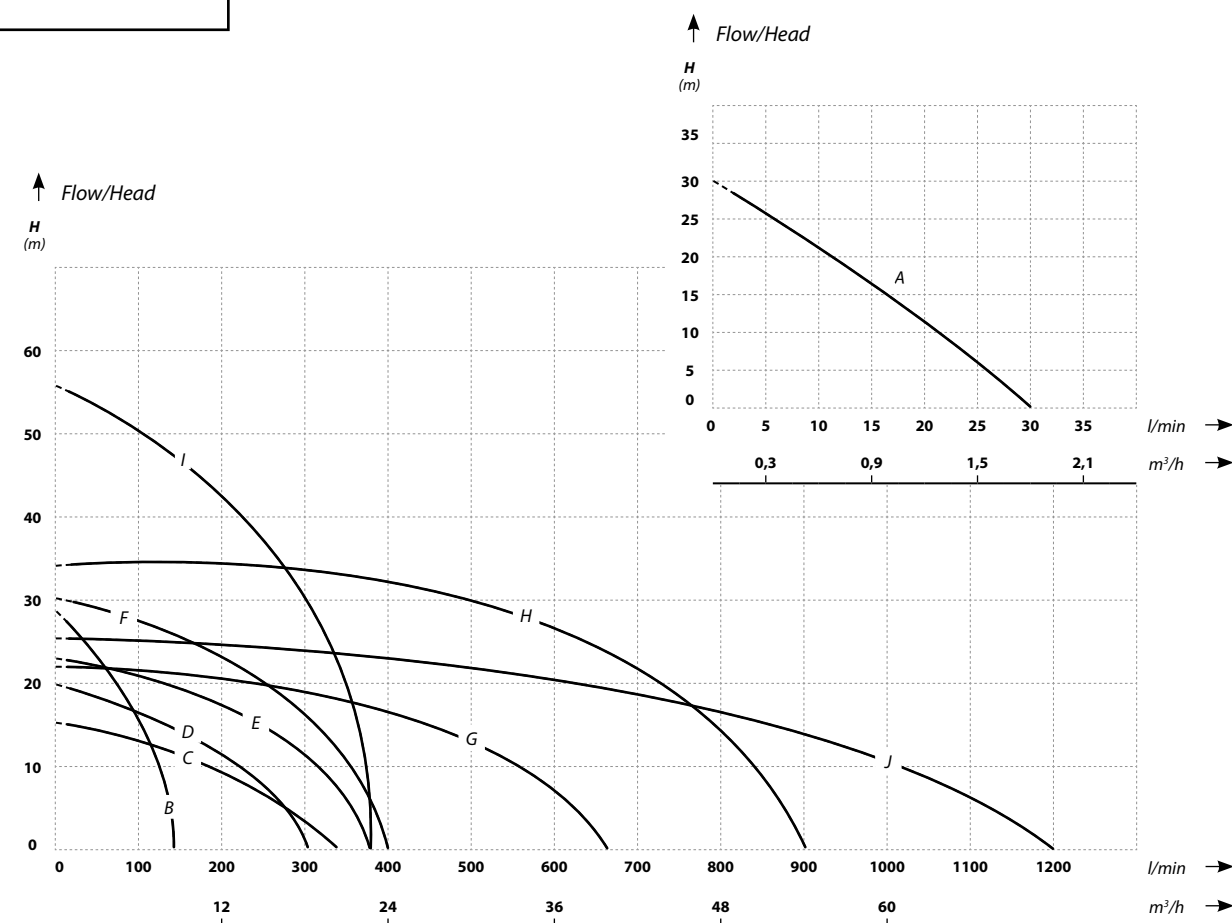
## Materials:

- Pump body: cast iron
- Bearing retainer: cast iron
- Motor housing: aluminium
- Shaft and rotor: stainless steel AISI 304
- Impeller: brass (to IPML 50/1100)
- Impeller: cast iron (from IPML 50/1500))
- Mechanical seal: ceramics/graphite/NBR



Name	Motor power (W)	Head (m)	Flow (l/min)	Voltage (V)	Inlet/outlet (inch)	Connector spacing (mm)	No. chart	Max. temperature medium (°C)
IPML 25/125	125	30	30	230	½	–	A	100
IPML 25/750	750	28	140	230	1	280	B	100
IPML 50/750	750	14	340	230	2	280	C	100
IPML 50/1100	1100	20	300	230	2	280	D	100
IPML 50/1500	1500	22	380	400	2	312	E	80
IPML 50/2200	2200	30	400	400	2	312	F	80
IPML 50/5500	5500	55	380	400	2	343	I	80
IPML 65/3000	3000	22	660	400	2½	343	G	80
IPML 65/4000	4000	34	900	400	2½	343	H	80
IPML 80/5500	5500	25	1200	400	3	343	J	80

# IPML



Name	No. chart	H	H1	L	Weight (kg)
IPML 25/125	A	255	160	219	7,8
IPML 25/750	B	282	141	372	16,1
IPML 50/750	C	280	140	372	20,1
IPML 50/1100	D	280	140	372	29,4
IPML 50/1500	E	312	156	397	34,6
IPML 50/2200	F	312	156	397	36,8
IPML 50/5500	G	360	180	610	58
IPML 63/3000	H	343	171,5	565	66
IPML 65/4000	I	356	178	615	70,5
IPML 80/5500	J	400	200	640	76

