



3P Technik UK
WATER MANAGEMENT

UK Catalogue
2025

STEELPUMPS



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01236 623506



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WATER MANAGEMENT

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SteelPumps feature a unique and distinctive design. From the beginning, they were created to set a high standard for reliability and performance, as well as ease of ownership.

Ease of Maintenance

Many pumps are designed to last only through their warranty period and be thrown away. These often contain plastic motor housings, are difficult to disassemble, and include corrodible fastenings. In contrast, SteelPumps are built to be serviceable for years to come, with commonly used components that are easy to replace. Elements such as the capacitor, pressure switch, flow sensor, and control unit are all readily accessible.

Disassembly of the entire pump is straightforward using basic tools. ALL parts, including nuts and bolts are readily available in the UK. There are no corrodible mechanical parts within our pumps, no potted electronics or sealed wiring (everything unplugs). Service diagrams and information are freely available. While other brands are "production engineered" to be assembled fast and never taken apart, SteelPumps can be maintained indefinitely.

UK Support

SteelPumps is supported by our UK technical department. We can diagnose, repair and recondition from our workshop and are just as content to supply parts, information and advice. We hold most spare parts in stock here in the UK. We operate a class-leading Returns system in the event of a pump needing to be returned to us.

Troubleshooting Guides

Troubleshooting guides for Approved Service Agents, technicians and other competent persons are available in various formats at: <https://steelpumps.co.uk/support/troubleshooting-guide/>



STEELPUMPS
E V O L U T I O N



UNTELLY
INVISIBLE INVERTER BY STEELPUMPS

For all orders we require

Full address
Contact name
Contact telephone number

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SteelPumps catalogue 2025



IP68 automatic electropumps for domestic and industrial use
Page **3**



IP68 electropumps with integrated inverter control
Page **40**

- **ACCESSORIES**64
- **CONVERSION DATA**66
- **IP PROTECTION RATING**67
- **PRESSURE LOSS INFO**68
- **SYSTEM DESIGN NOTES**70
- **GLOSSARY**71
- **GENERAL SALES CONDITIONS**73

STEELPUMPS

We provide our customers with straightforward solutions through a diverse range of innovative pumps.

Our aim is to achieve the customer's objectives by delivering effective solutions to meet their various needs.

"SteelPumps Evolution, the different pump"



- **AUTOMATIC PUMPS**

Self-priming JE	14
Multistage	22
Single impeller Centrifugal pumps	36



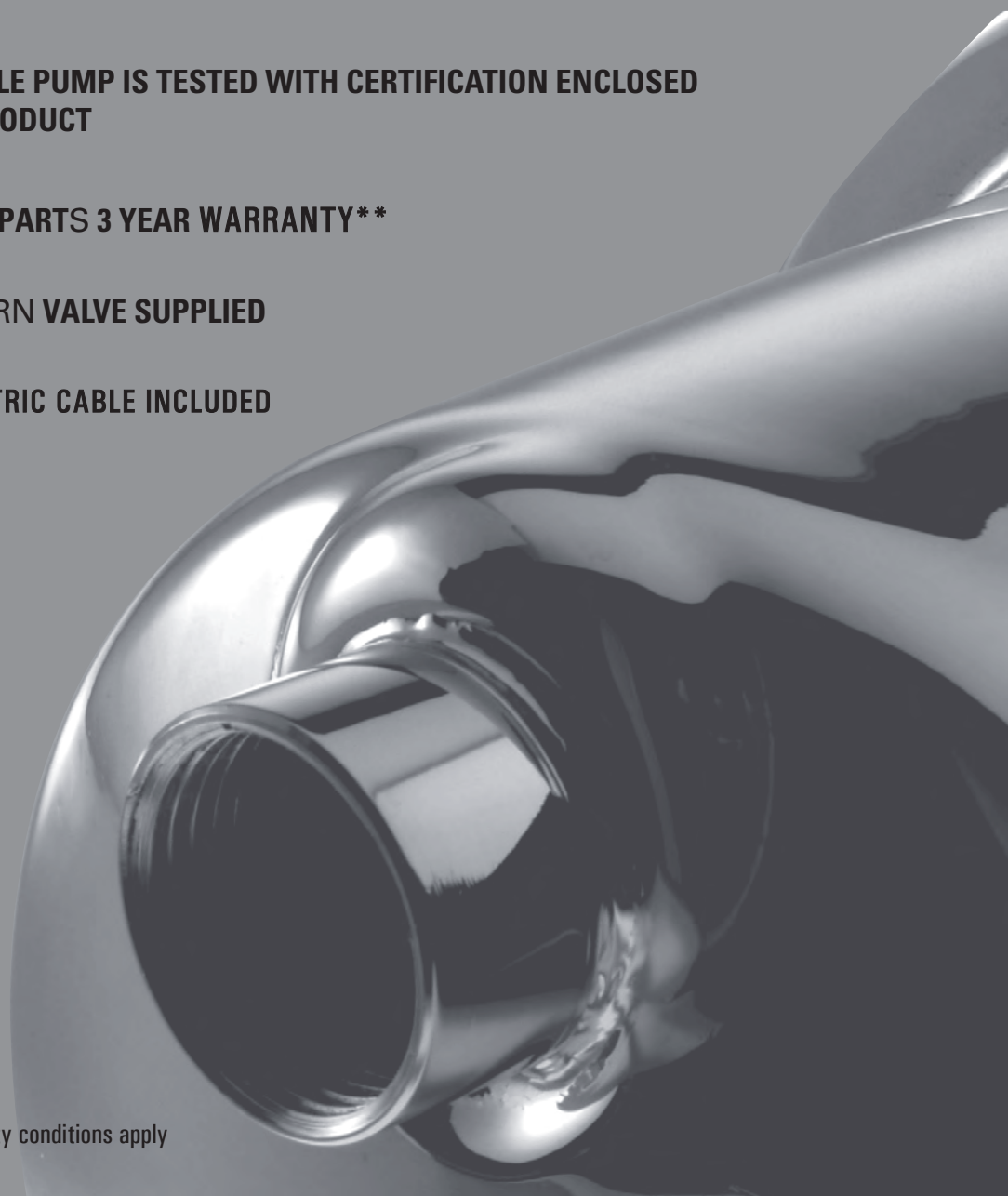
STEEL

the **6** THINGS THAT MAKE US DIFFERENT

- **MECHANICAL SEAL WITH OIL CHAMBER***
- **EXTREMELY QUIET WATER COOLED MOTOR**
- **EVERY SINGLE PUMP IS TESTED WITH CERTIFICATION ENCLOSED WITH THE PRODUCT**
- **ELECTRONIC PARTS 3 YEAR WARRANTY****
- **NON-RETURN VALVE SUPPLIED**
- **10m OF ELECTRIC CABLE INCLUDED**

* Pro series only

** Intelly Controller Only - Warranty conditions apply



PUMPS

the **6** THINGS THAT MAKE US CONVENIENT

- NO NEED FOR A SEPARATE PRESSURE SWITCH
- SIMPLIFIED INSTALLATION
- NO CONTROL EQUIPMENT FOR DRY RUNNING REQUIRED
- AUTOMATIC ANTI-BLOCKING CYCLE PREVENTS MOTOR SEIZURE DURING PERIODS OF INACTIVITY
- FULLY WATERPROOF. NO NEED TO PURCHASE AND INSTALL A PROTECTIVE BOX FOR THE PUMP
- SUITABLE FOR SURFACE OR SUBMERGED INSTALLATION



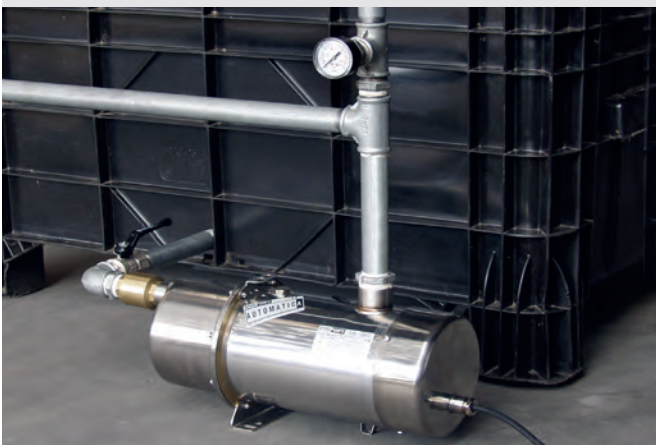
STEELPUMPS
EVOLUTION

Applications

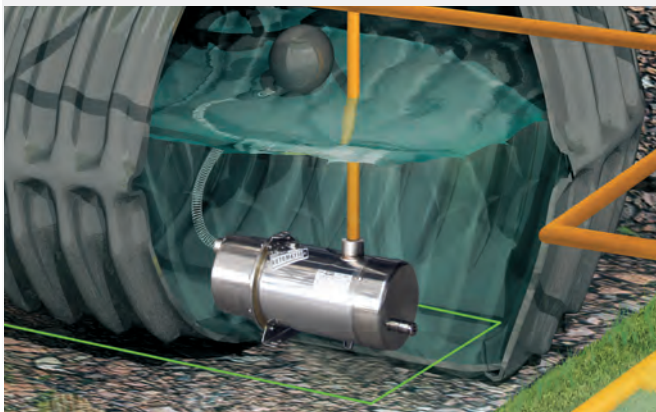
SteelPumps are suitable for surface or submerged installation (**IP68**) without modification.



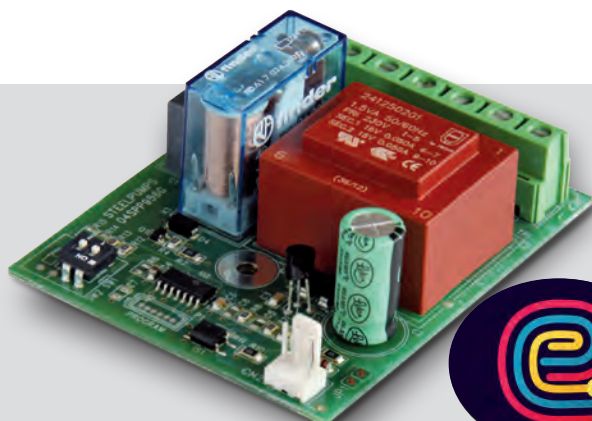
Garden



Surface



Submerged



ELECTRONIC SYSTEM



AS

Antiblocking system
after 72 hours of
inactivity



Dry run protection



Automatic restore after
dry-run alarm



Fast ON-OFF switching

Configuration

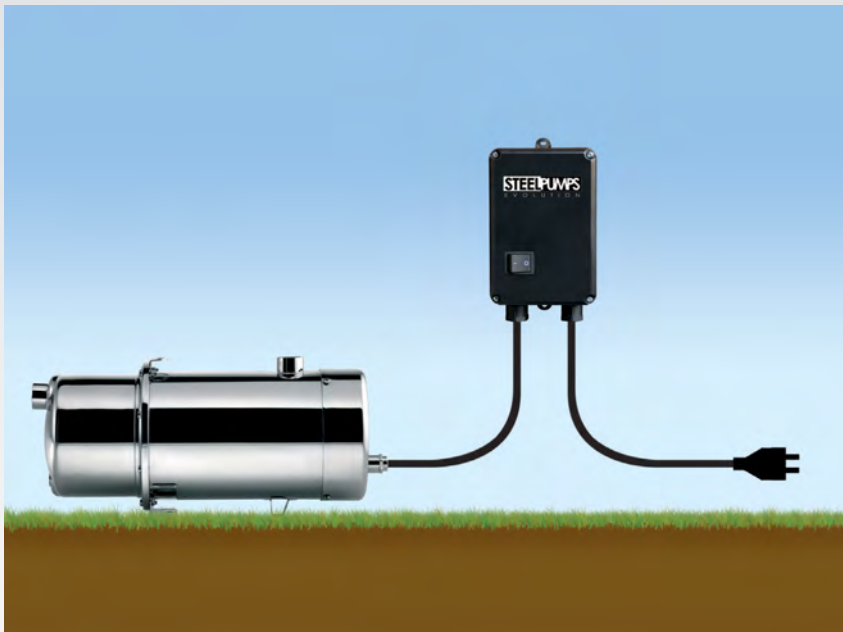
Optional

SteelPumps can be supplied with different configurations making them unique, exceedingly flexible and suitable for many different types of installation.



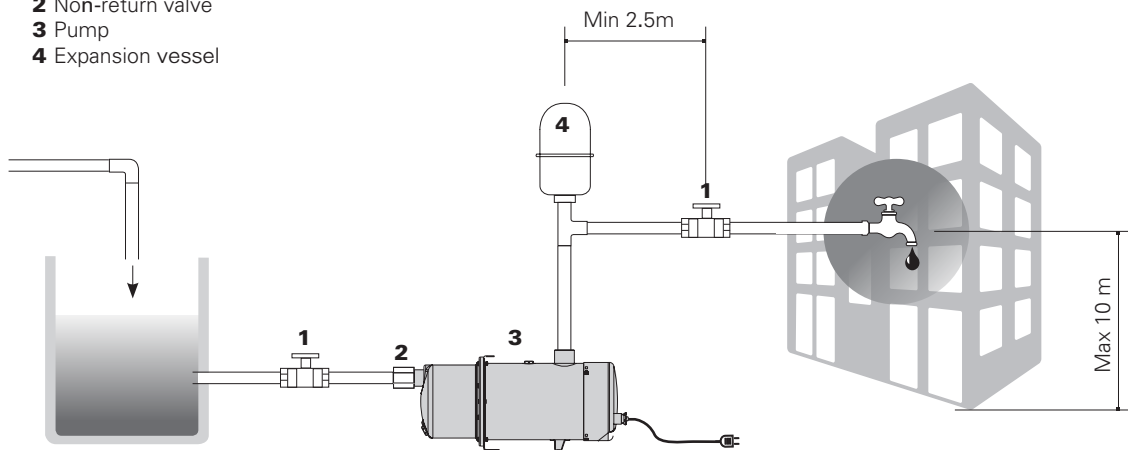
External capacitor system

Pump with external capacitor, ON-OFF switch and 9m of electrical cable with plug.



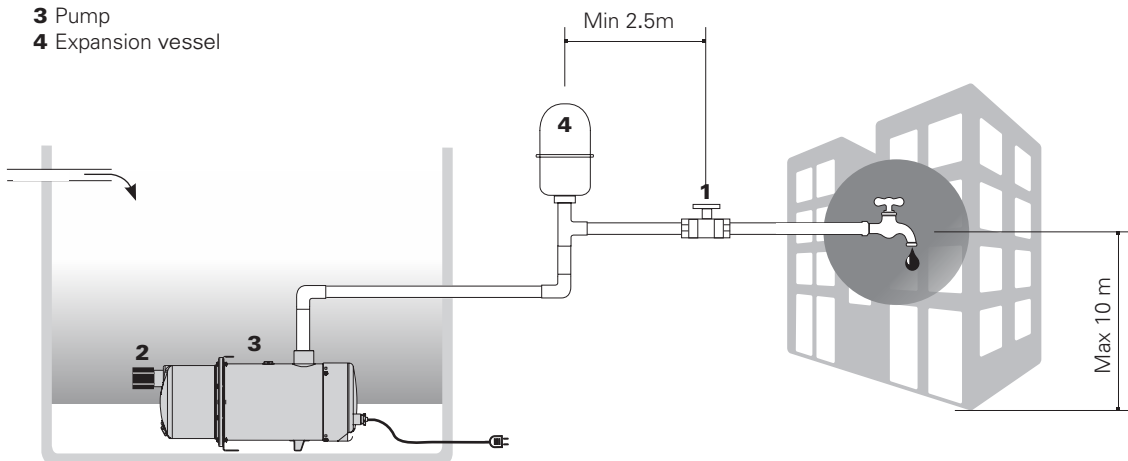
Pump at surface, suction from tank

- 1 Isolation valve
- 2 Non-return valve
- 3 Pump
- 4 Expansion vessel



Pump submersed in a tank

- 1 Isolation valve
- 2 Non-return valve
- 3 Pump
- 4 Expansion vessel



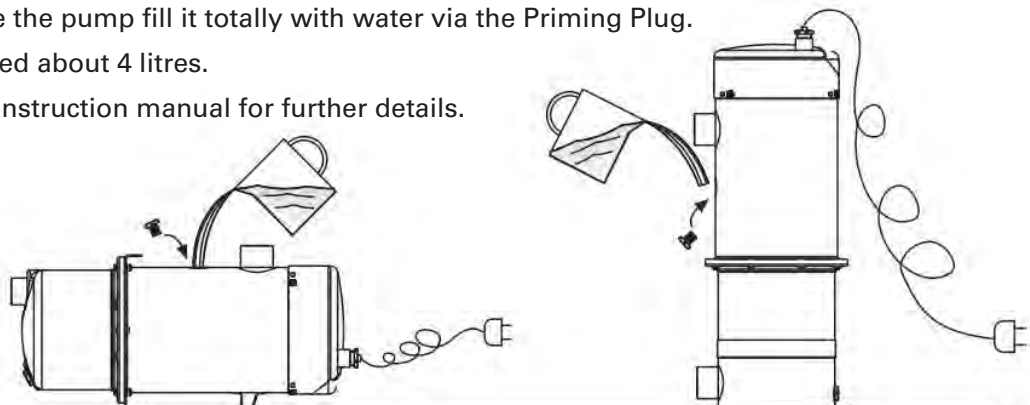
Priming the pump

Before using the pump it is essential to prime it. This will ensure that it does not dry-run on it's first use. Dry running the pump repeatedly can cause damage.

To prime the pump fill it totally with water via the Priming Plug.

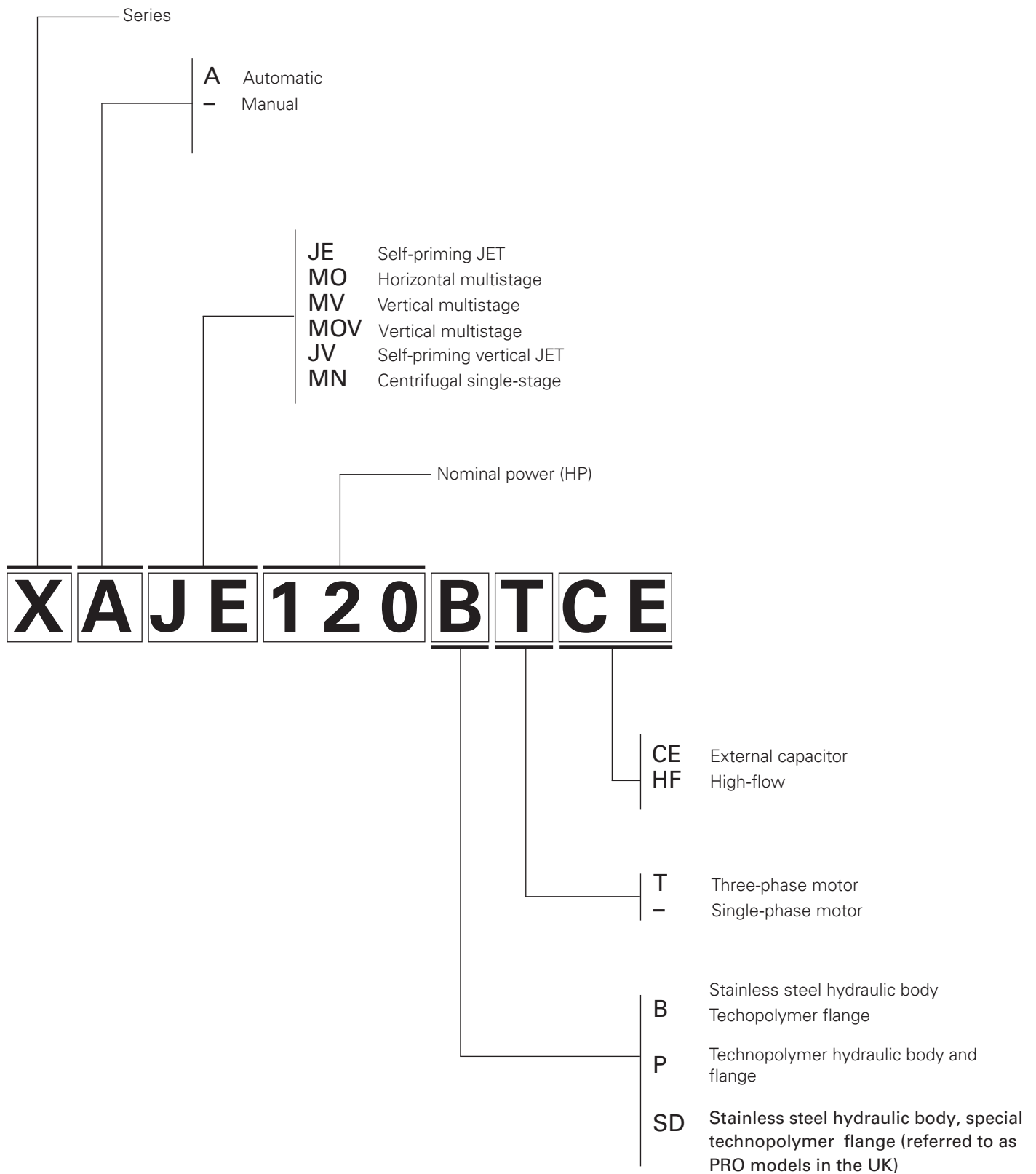
It will need about 4 litres.

See the instruction manual for further details.



Product identity

Model Type



Individually Tested

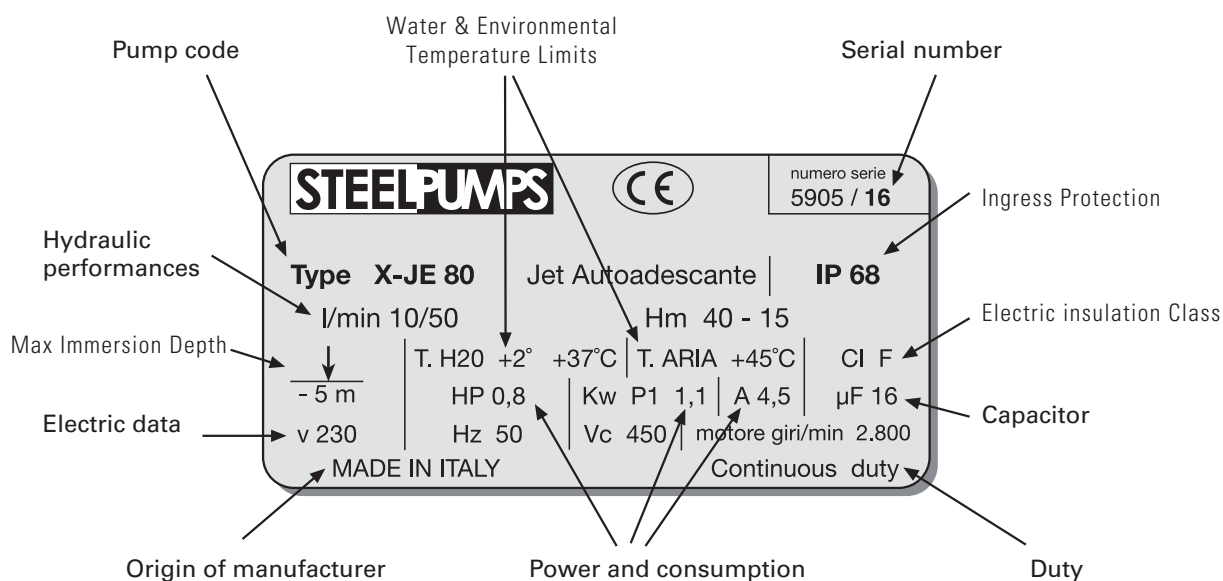
All SteelPumps are thoroughly tested before shipping. The resulting test certificate is included in the box with the pump.

Tests applied:

- Pressure test and flow rate (hydraulic characteristics)
- Pressure switch test (calibration of the starting pressure)
- Air sealed test (IP68)
- Electrical test (motor / electronic board)

STEELPUMPS CE		OPERATORE / OPERATOR / BEARBEITER :	MARCO
EVOLUTION		DATA COLLAUDO / TESTED DATE / TESTDATUM :	03/10/2016 11:46
CERTIFICATO DI COLLAUDO / TESTED CERTIFIED / PRUEFZEUGNIS			
MODELLO / MODEL / MODELL :		X-JE 80	
NUMERO SERIALE / SERIAL NUMBER / SERIENNUMMER:		5905 / 16	
ISOLAMENTO / INSULATION / ERDUNG :		OK	
PORTATA / FLOW / DURCHFLOSS :		OK min-max. lt/ ' "	
PRESSIONE / PRESSURE / LUFTDRUCK :		OK max bar	
PROVA PRESSOSTATO / PRESSURE SWITCH SET / DRUCKWACHER EINSTELLEN :		OK min-max bar	
TENUTA ARIA / AIR / LECKAGETEST :		OK max mbar	
ESITO COLLAUDO / TEST RESPONSE / TESTERGEBNIS : POSITIVO / OK			

Pump identification



The range

Applications table

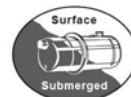
Legend	
	Water supply
	Rainwater harvesters
	Irrigation and water features
	Water supply from tanks and wells
	Boiler pressurisation
	Booster sets
	Car wash
	Industrial use
	Sea water application

Model	Main features			Installation			
	Jet Pump (Self-priming)	Standard priming	Automatic*	Submerged	Outdoor	Garden	Underground
XAJE	•		•	•	•	•	•
XAJVP	•		•	•	•	•	
XAJE24	•		•	•	•	•	•
XMN		•		•	•		•
XAM0		•	•	•	•	•	•
XAMV		•	•	•	•		
XAM0VB		•	•	•	•	•	
XAMVHFPRO		•	•	•	•		
XAM0HFPRO		•	•	•	•		

* There are also manual versions of all the automatic SteelPumps.

Main applications								
								
•	•	•	•		•	•		
•	•	•	•			•		
								•
•								
•	•	•	•			•	•	
•	•	•	•			•	•	
•	•	•	•			•	•	
•	•	•	•			•	•	
•	•	•	•			•	•	

XAJE SERIES



Self-priming Jet centrifugal pump with electronic system

XAJE P



Materials

- Motor body: Stainless steel AISI 304
- Technopolymer flanges and pump body
- Shaft: Stainless steel AISI 420
- Diffuser, impeller and venturi Jet: Noryl
- Rear cap: Polypropylene
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m Electric cable with plug**
- **Tropicalized circuit board in compliance with RoHS regulations**
- Class F insulated motors

XAJE B



Materials

- Motor body and pump body: Stainless steel AISI 304
- Technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser, impeller and venturi Jet: Noryl
- Rear cap: Polypropylene
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m Electric cable with plug**
- **Tropicalized circuit board in compliance with RoHS regulations**
- Class F insulated motors

XAJE PRO



Materials

- Motor body and pump body: Stainless steel AISI 304
- Special technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser, impeller and venturi Jet: Noryl
- Rear cap: Stainless steel AISI 304
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic
- Oil chamber on the mechanical seal
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m Electric cable with plug**
- **Tropicalized circuit board in compliance with RoHS regulations**
- Class F insulated motors

Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).

XJE versions are manual pumps requiring a separate controller.

Applications

- Domestic boosting
- Medium sprinkling and surface irrigations
- Tank drainage and transfers

Pumped liquid:

- Clean water with no abrasive or suspended solids
- Liquid temperature +2°C to +40°C
- Air temperature max +45°C
- Depth max 5m
- Starting pressure 1.6 bar

All pumps complete with



External non-return valve for easy maintenance.



Technopolymer impeller for all models



Technopolymer motor supports for models XAJE P & XAJE B

Available on request

External Capacitor (EC) versions

With external capacitor kit for all models



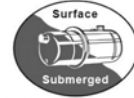
- Electric cable H05VV-F length 9m Pump / box
- Electric cable H05VV-F length 1m with plug
- Capacitor box with IP 55 protection class

110V versions

Available for all models



XAJE SERIES

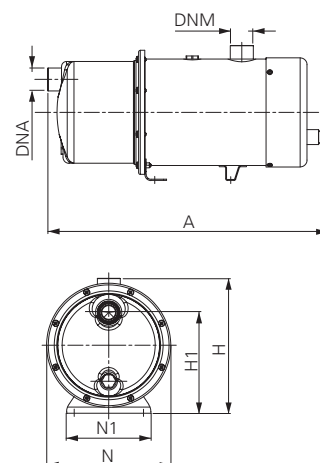
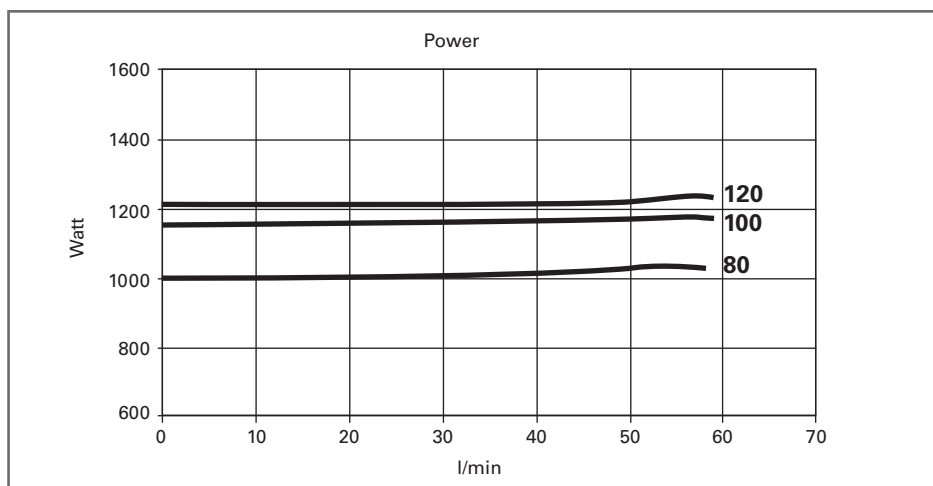
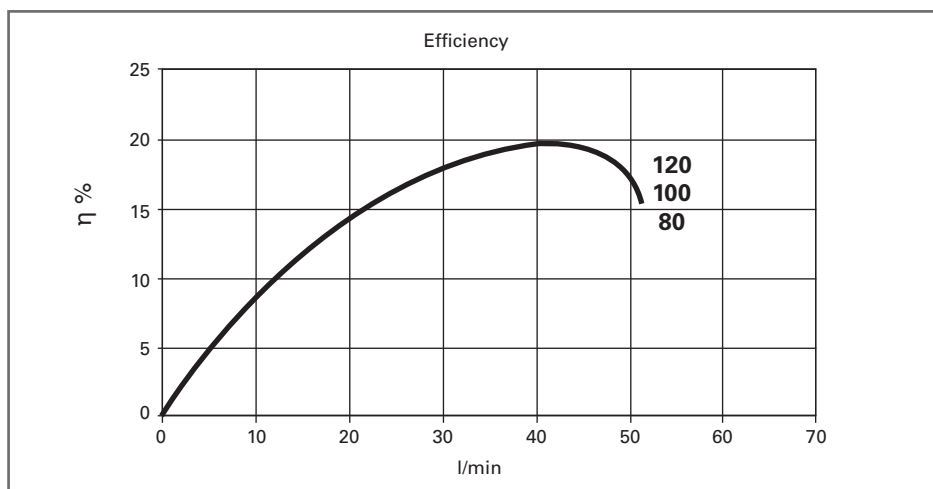
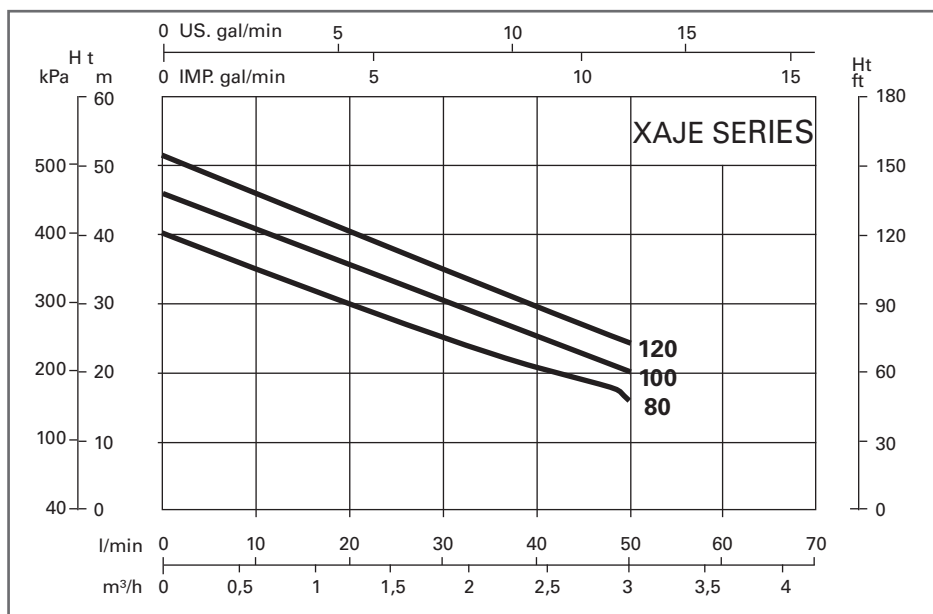


	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Q (lt/m) Flow							Stocked	Dimensions mm								Wgt. kg
		kW	Hp	230 V	400 V	230 V		0	10	20	30	40	50	60		A	N	H	H1	N1	DNM	DNA		
								Q (lt/m) Flow																
AUTO MONO	XAJE80P	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	YES	447	204	226	163	136	1"¼	1"	11,5	
	XAJE100P	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	204	226	163	136	1"¼	1"	12	
	XAJE120P	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	YES	477	204	226	163	136	1"¼	1"	13	
	XAJE80PCE	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	To order	447	204	226	163	136	1"¼	1"	11,5	
	XAJE100PCE	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	204	226	163	136	1"¼	1"	12	
	XAJE120PCE	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	To order	477	204	226	163	136	1"¼	1"	13	
MAN MONO	XJE80P	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	YES	447	204	226	163	136	1"¼	1"	11,5	
	XJE100P	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	204	226	163	136	1"¼	1"	12	
	XJE120P	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	YES	477	204	226	163	136	1"¼	1"	13	
MAN THR	XJE80PT	0,60	0,8	2,2	1,5	-	-	40	33	30	24	20	15	-	To order	447	204	226	163	136	1"¼	1"	11,5	
	XJE100PT	0,75	1	3	1,9	-	-	47	40	35	30	25	20	5	To order	477	204	226	163	136	1"¼	1"	12	
	XJE120PT	0,90	1,2	3,6	2,3	-	-	51	45	40	34	30	24	8	To order	477	204	226	163	136	1"¼	1"	13	

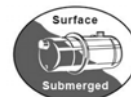
	Code	P2 Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Q (lt/m) Flow							Stocked	Dimensions mm								Wgt. kg
		kW	Hp	230 V	400 V	230 V		0	10	20	30	40	50	60		A	N	H	H1	N1	DNM	DNA		
								Q (lt/m) Flow																
AUTO MONO	XAJE80B	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	YES	447	200	226	163	136	1"¼	1"	14,5	
	XAJE100B	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	15	
	XAJE120B	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	YES	477	200	226	163	136	1"¼	1"	16	
	XAJE80BCE	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	11,5	
	XAJE100BCE	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	12	
	XAJE120BCE	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	13	
MAN MONO	XJE80B	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	14,5	
	XJE100B	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	15	
	XJE120B	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	16	
MAN THR	XJE80BT	0,60	0,8	2,2	1,5	-	-	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	14,5	
	XJE100BT	0,75	1	3	1,9	-	-	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	15	
	XJE120BT	0,90	1,2	3,6	2,3	-	-	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	16	

	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Q (lt/m) Flow							Stocked	Dimensions mm								Wgt. kg
		kW	Hp	230 V	400 V	230 V		0	10	20	30	40	50	60		A	N	H	H1	N1	DNM	DNA		
								Q (lt/m) Flow																
AUTO MONO	XAJE80PRO	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	14,5	
	XAJE100PRO	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	15	
	XAJE120PRO	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	16	
	XAJE80CEPRO	0,60	0,8			4,5	16	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	11,5	
	XAJE100CEPRO	0,75	1			5,3	16	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	12	
	XAJE120CEPRO	0,90	1,2			5,9	18	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	13	
MAN MONO	XJE80PRO	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	14,5	
	XJE100PRO	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	15	
	XJE120PRO	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	16	
MAN THR	XJE80TPRO	0,60	0,8	2,2	1,5	-	-	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	14,5	
	XJE100TPRO	0,75	1	3	1,9	-	-	47	40	35	30	25	20	5	To order	477	200	226	163	136	1"¼	1"	15	
	XJE120TPRO	0,90	1,2	3,6	2,3	-	-	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	16	

Curves and performance $\eta = 2900 \text{ 1/min}$



XAJE 10024 PRO CE



Self-priming Jet centrifugal pump with electronic system 24V



External non-return valve for easy maintenance.

Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).

Materials

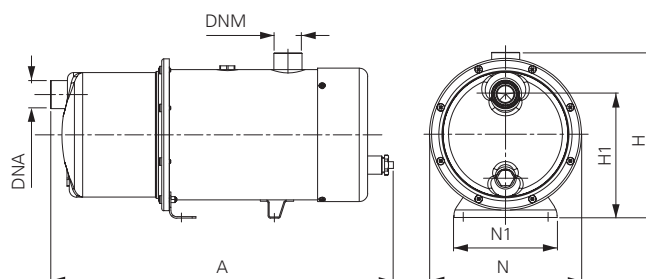
- Motor body and pump body: Stainless steel AISI 304
- Special technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser, impeller and venturi Jet: Noryl
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic and oil chamber
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F Electric cable 2x6 mm² 5 m**
- Tropicalized circuit board in compliance with the RoHS standard
- Class F insulated motors
- DC motors / permanent magnets

Applications

- Marine water supply
- Vehicle mounted
- Tank transfer
- Solar powered water supplies
- Temporary site use

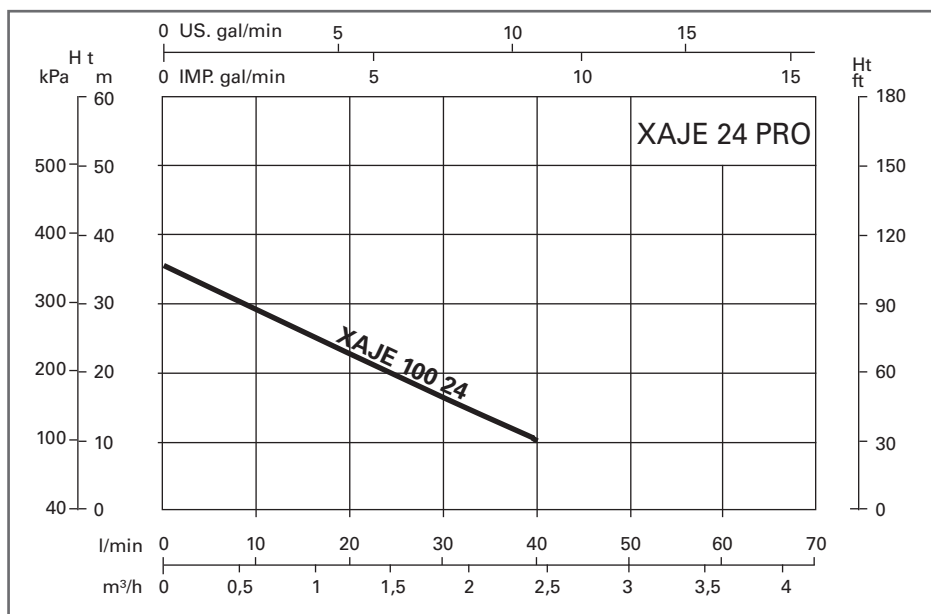
Pumped liquid:

- Clean water with no abrasive or suspended solids
- Liquid temperature +2°C to +40°C
- Air temperature max +45°C
- Depth max 5m
- Starting pressure 1.6 bar

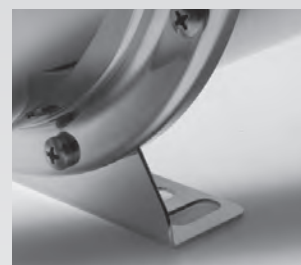


AUTO MONO	Code	P2 Nom.		Low voltage 24 V		Q (lt/m) Flow						Stocked	Dimensions mm								Wgt. kg
		kW	Hp	Volt	Amp	0	10	20	30	40	50		60	A	N	H	H1	N1	DNM	DNA	
						Total Hm in CA															
	XAJE10024PRO	0,45	0,6	24	29	40	33	30	24	20	15	-	To order	447	200	226	163	136	1"¼	1"	15

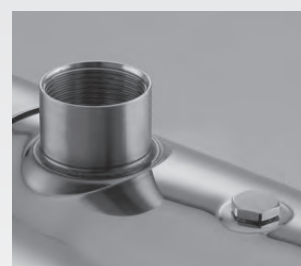
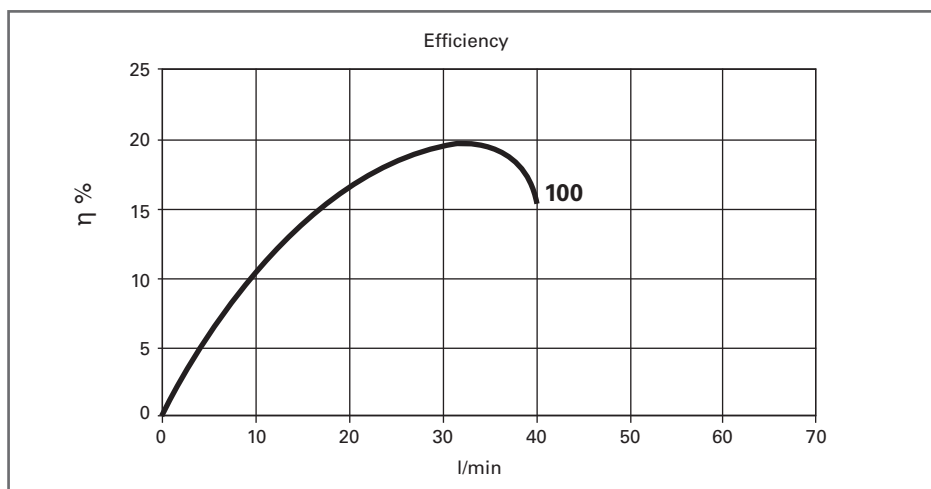
Curves and performance $\eta = 2900 \text{ 1/min}$



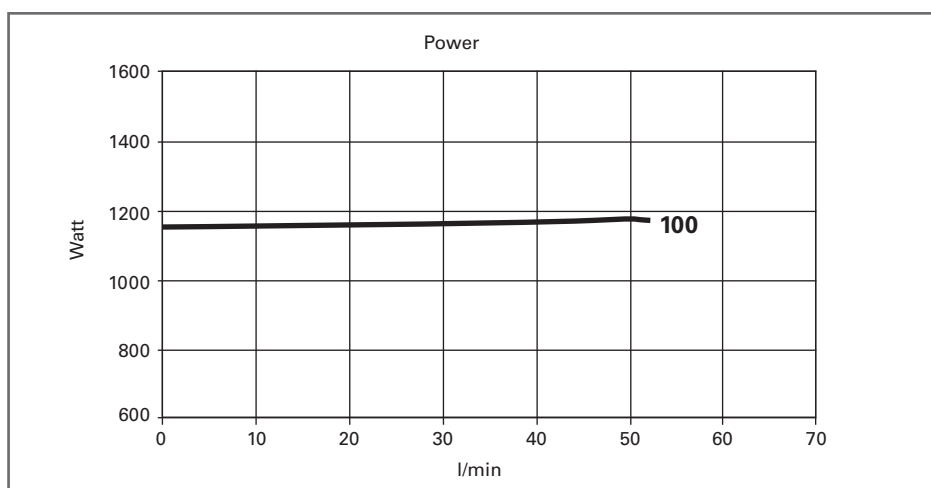
Technopolymer impeller



Front foot



Motor body with outlet



Special technopolymer motor support

Self-priming Jet centrifugal pump with electronic system

Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).



External non-return valve for easy maintenance.

Materials

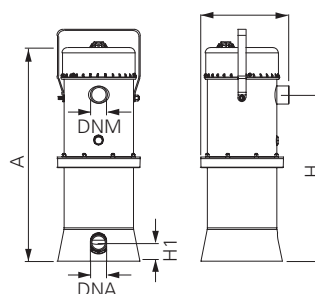
- Motor body: Stainless steel AISI 304
- Technopolymer flange and pump body
- Shaft: Stainless steel AISI 420
- Diffuser, impeller and venturi Jet: Noryl
- Rear cap: Polypropylene
- Basis: Stainless steel AISI 304
- Mechanical seal: Graphite / ceramic
- A2 Stainless steel bolts
- NBR70 O-ring
- H05VV-F 10m Electric cable with plug
- Class F insulated motors
- Tropicalized circuit board in compliance with RoHS regulations

Applications

- Domestic boosting
- Medium sprinkling and surface irrigations
- Tank drainage and transfers
- Industrial washing
- Systems for potable water treatment

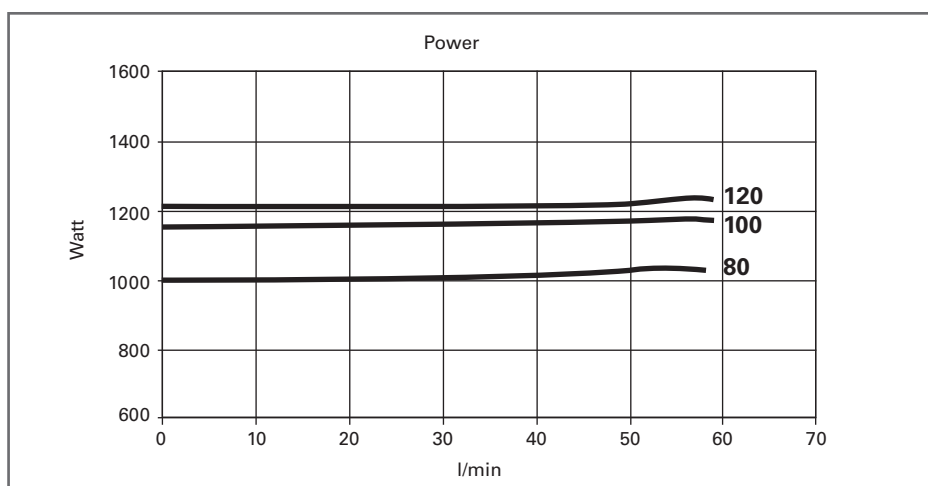
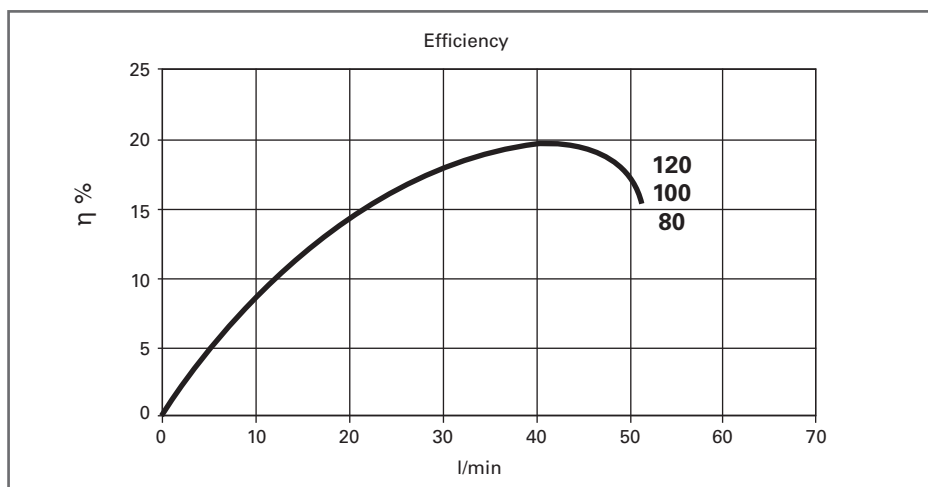
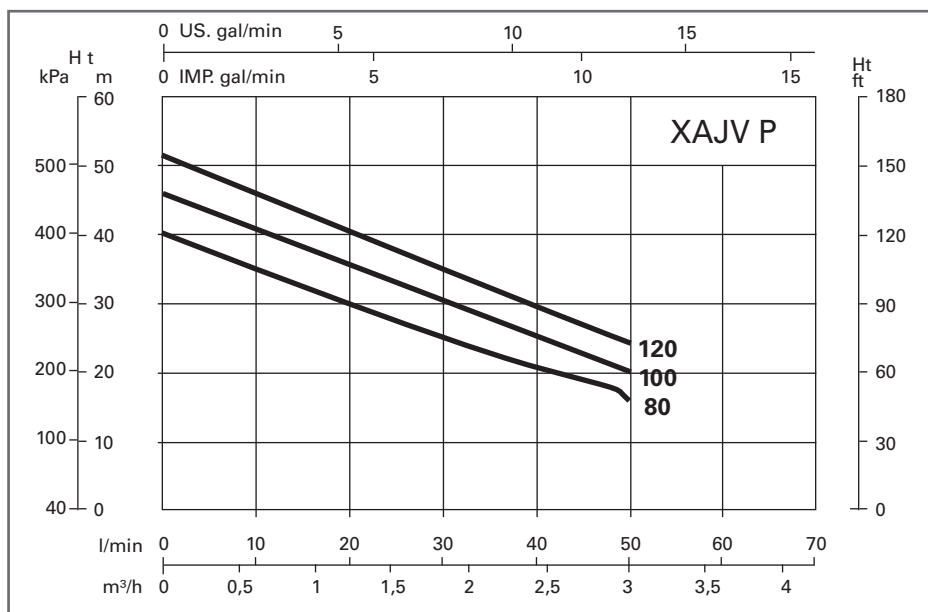
Pumped liquid:

- Clean water with no abrasive or suspended solids
- Liquid temperature +2°C to +40°C
- Air temperature max +45°C
- Depth max 5m
- Starting pressure 1.6 bar



	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Q (lt/m) Flow							Stocked	Dimensions mm						Wgt. kg
		kW	Hp	230 V	400 V	230 V		0	10	20	30	40	50	60		A	N	H	H1	DNM	DNA	
								Total Hm in CA														
AUTO MONO	XAJV80P	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	To order	505	218	420	46	1"¼	1"	12
	XAJV100P	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	535	218	420	46	1"¼	1"	12,5
	XAJV120P	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	To order	535	218	420	46	1"¼	1"	13,5
MAN MONO	XJV80P	0,60	0,8	-	-	4,5	16	40	33	30	24	20	15	-	To order	505	218	420	46	1"¼	1"	12
	XJV100P	0,75	1	-	-	5,3	16	47	40	35	30	25	20	5	To order	535	218	420	46	1"¼	1"	12,5
	XJV120P	0,90	1,2	-	-	5,9	18	51	45	40	34	30	24	8	To order	535	218	420	46	1"¼	1"	13,5
MAN THR	XJV80PT	0,60	0,8	2,2	1,5	-	-	40	33	30	24	20	15	-	To order	505	218	420	46	1"¼	1"	12
	XJV100PT	0,75	1	3	1,9	-	-	47	40	35	30	25	20	5	To order	535	218	420	46	1"¼	1"	12,5
	XJV120PT	0,90	1,2	3,6	2,3	-	-	51	45	40	34	30	24	8	To order	535	218	420	46	1"¼	1"	13,5
AUTO MONO	XAJV80PCE	0,60	0,8	4,5	16	40	33	30	24	20	15	-	-	To order	505	218	420	46	1"¼	1"	12	
	XAJV100PCE	0,75	1	5,3	16	47	40	35	30	25	20	5	-	To order	535	218	420	46	1"¼	1"	12,5	
	XAJV120PCE	0,90	1,2	5,9	18	51	45	40	34	30	24	8	-	To order	535	218	420	46	1"¼	1"	13,5	

Curves and performance $\eta = 2900 \text{ 1/min}$



External Capacitor (EC) Versions

with external capacitor kit



- Electric cable H05VV-F length 9m Pump / box
- Electric cable H05VV-F length 1m with plug
- Capacitor box with IP 55 protection class



Woltmann flow sensor



Technopolymer impeller



Technopolymer motor supports

Horizontal multistage pump with electronic system

XAMO B



Materials

- Motor body, impellers and pump body: Stainless steel AISI 304
- Technopolymer flange
- Shaft: Stainless steel AISI 420
- Diffuser: Noryl
- Rear cap: Polypropylene
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m** Electric cable with plug
- Tropicalized circuit board in compliance with RoHS regulations
- Class F insulated motors

XAMO PRO



Materials

- Motor body, impellers and pump body: Stainless steel AISI 304
- Special technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser: Noryl
- Rear cap: Stainless steel AISI 304
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic
- Oil chamber on the mechanical seal
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m** Electric cable with plug
- Tropicalized circuit board in compliance with RoHS regulations
- Class F insulated motors

Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).

XMO versions are manual pumps requiring a separate controller.

Applications

- Domestic boosting
- Medium sprinkling and surface irrigations
- Tank drainage and transfers
- Industrial washing
- Systems for water treatment

Pumped liquid:

- Clean water with no abrasive or suspended solids
- Liquid temperature +2°C to +40°C
- Air temperature max +45°C
- Depth max 5m
- Starting pressure 1.6 bar

All pumps complete with



External non-return valve for easy maintenance.



Technopolymer impeller for all models



Technopolymer motor supports for models XAJE P & XAJE B

Available on request

External Capacitor (EC) versions

With external capacitor kit for all models



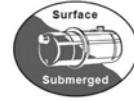
- Electric cable H05VV-F length 9m Pump / box
- Electric cable H05VV-F length 1m with plug
- Capacitor box with IP 55 protection class

110V versions

Available for all models

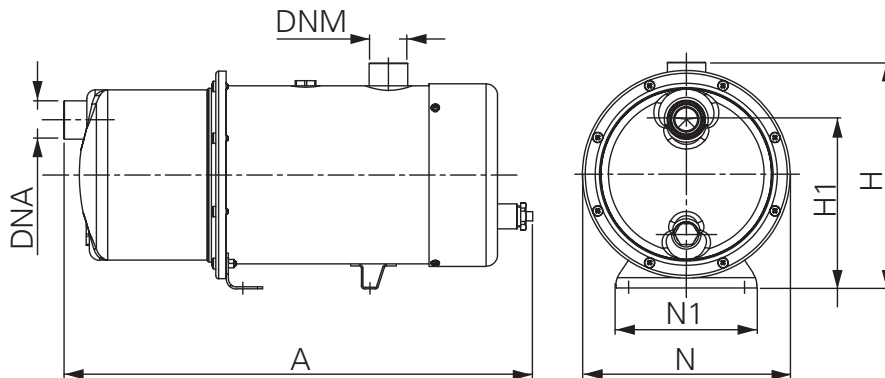


XAMO SERIES

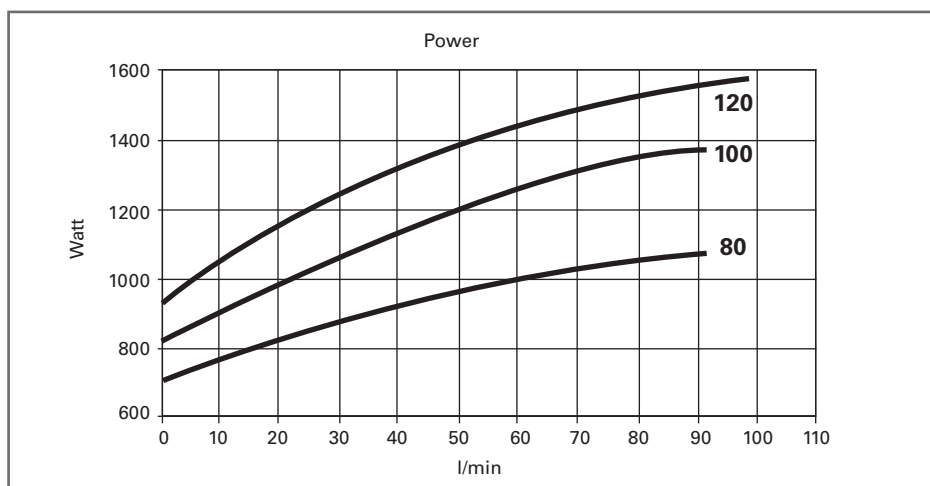
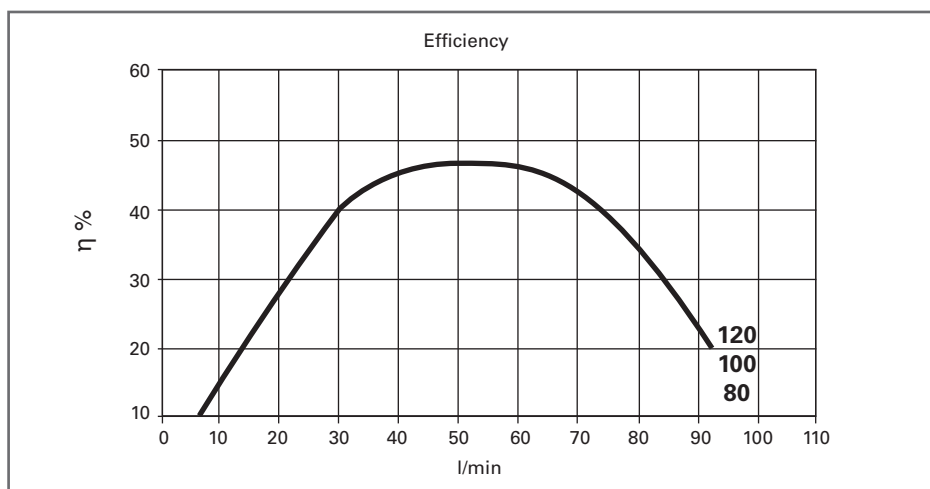
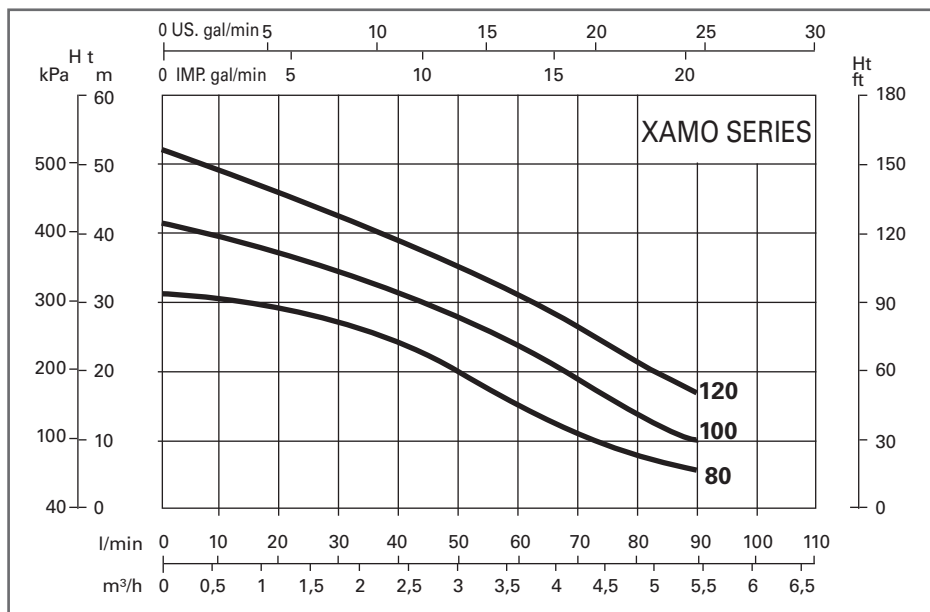


AUTO MONO	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap μF	Stages	Q (lt/m) Flow								Stocked	Dimensions mm							Wgt. Kg
		kW	Hp	230 V	400 V	230 V			0	30	40	50	60	70	80	90		A	N	H	H1	N1	DNM	DNA	
									Total Hm in CA																
	XAM0100B	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
XAM0120B	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	YES	477	200	226	163	136	1"¼	1"	16	
MAN MONO	XMO80B	0,60	0,8	-	-	5,15	16	3	33	28	23	20	18	13	10	7	To order	447	200	226	163	136	1"¼	1"	14,5
	XMO100B	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
	XMO120B	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	477	200	226	163	136	1"¼	1"	16
MAN THR	XMO80BT	0,60	0,8	2,4	1,6	-	-	3	33	28	23	20	18	13	10	7	To order	447	200	226	163	136	1"¼	1"	14,5
	XMO100BT	0,75	1	3	2	-	-	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
	XMO120BT	0,90	1,2	3,3	2,5	-	-	5	52	43	40	35	30	25	20	15	To order	477	200	226	163	136	1"¼	1"	16
AUTO MONO	XAM0100BCE	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
	XAM0120BCE	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	477	200	226	163	136	1"¼	1"	16

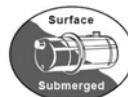
AUTO MONO	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Stages	Q (lt/m) Flow								Stocked	Dimensions mm							Wgt. Kg
		kW	Hp	230 V	400 V	230 V			0	30	40	50	60	70	80	90		A	N	H	H1	N1	DNM	DNA	
									Total Hm in CA																
	XAM0100PRO	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
	XAM0120PRO	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	477	200	226	163	136	1"¼	1"	16
MAN MONO	XMO80PRO	0,60	0,8	-	-	5,15	16	3	33	28	23	20	18	13	10	7	To order	447	200	226	163	136	1"¼	1"	14,5
	XMO100PRO	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
	XMO120PRO	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	477	200	226	163	136	1"¼	1"	16
MAN THR	XMO80TPRO	0,60	0,8	2,4	1,6	-	-	3	33	28	23	20	18	13	10	7	To order	447	200	226	163	136	1"¼	1"	14,5
	XMO100TPRO	0,75	1	3	2	-	-	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
	XMO120TPRO	0,90	1,2	3,3	2,5	-	-	5	52	43	40	35	30	25	20	15	YES	477	200	226	163	136	1"¼	1"	16
AUTO MONO	XAM0100CEPRO	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	477	200	226	163	136	1"¼	1"	15
	XAM0120CEPRO	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	477	200	226	163	136	1"¼	1"	16



Curves and performance $\eta = 2900 \text{ 1/min}$



XAMO HF PRO HIGH-FLOW CE



Horizontal multistage pump with electronic system HIGH-FLOW



External non-return
valve for easy
maintenance.

Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).

Materials

- Motor body and pump body:
Stainless steel AISI 304
- Special technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser and impellers: Noryl
- Rear cap: Stainless steel AISI 304
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic
- Oil chamber on the mechanical seal
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m** Electric cable with plug
- Tropicalized circuit board in compliance with RoHS regulations
- Class F insulated motors

Applications

- Domestic boosting
- Medium sprinkling and surface irrigations
- Industrial washing
- Systems for potable water treatment

Pumped liquid:

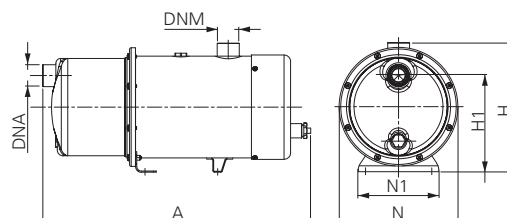
Clean water with no abrasive or suspended solids

Liquid temperature +2°C to +40°C

Air temperature max +45°C

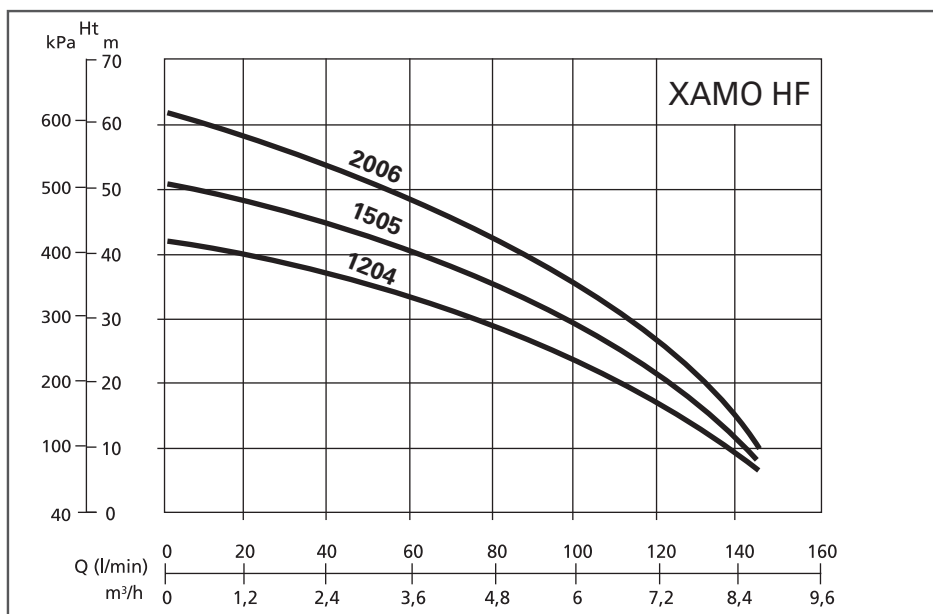
Depth max 5 m

Calibrating pressure rate switch 1.6 bar



AUTO MONO	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Stages	Q (lt/m) Flow								Stocked	Dimensions mm								Wgt. kg
		kW	Hp	230 V	400 V	230 V			0	30	50	70	100	120	145	A		H1	H	N	N1	DNM	DNA			
									Total Hm in CA																	
	XAMO1204HFPRO	0,90	1,2	-	-	6,4	25	4	43	38	34	30	24	16	6	To order	560	165	226	200	136	1"¼	1"¼	19,5		
XAMO1505HFPRO	1,10	1,5	-	-	7,3	30	5	51	46	43	38	30	21	9	To order	715	165	226	200	136	1"¼	1"¼	21,5			
XAMO2006HFPRO	1,50	2,0	-	-	10,1	40	6	62	55	51	45	34	24	10	To order	715	165	226	200	136	1"¼	1"¼	23			
MAN MONO	XMO1204HFPRO	0,90	1,2	-	-	6,4	25	4	43	38	34	30	24	16	6	To order	560	165	226	200	136	1"¼	1"¼	19,5		
	XMO1505HFPRO	1,10	1,5	-	-	7,3	30	5	51	46	43	38	30	21	9	To order	715	165	226	200	136	1"¼	1"¼	21,5		
	XMO2006HFPRO	1,50	2,0	-	-	10,1	40	6	62	55	51	45	34	24	10	To order	715	165	226	200	136	1"¼	1"¼	23		
MAN THR	XMO1204THFPRO	0,90	1,2	3,1	2,2	-	-	4	43	38	34	30	24	16	6	To order	560	165	226	200	136	1"¼	1"¼	19,5		
	XMO1505THFPRO	1,10	1,5	3,5	2,5	-	-	5	51	46	43	38	30	21	9	To order	715	165	226	200	136	1"¼	1"¼	21,5		
	XMO2006THFPRO	1,50	2,0	4,2	3,0	-	-	6	62	55	51	45	34	24	10	To order	715	165	226	200	136	1"¼	1"¼	23		

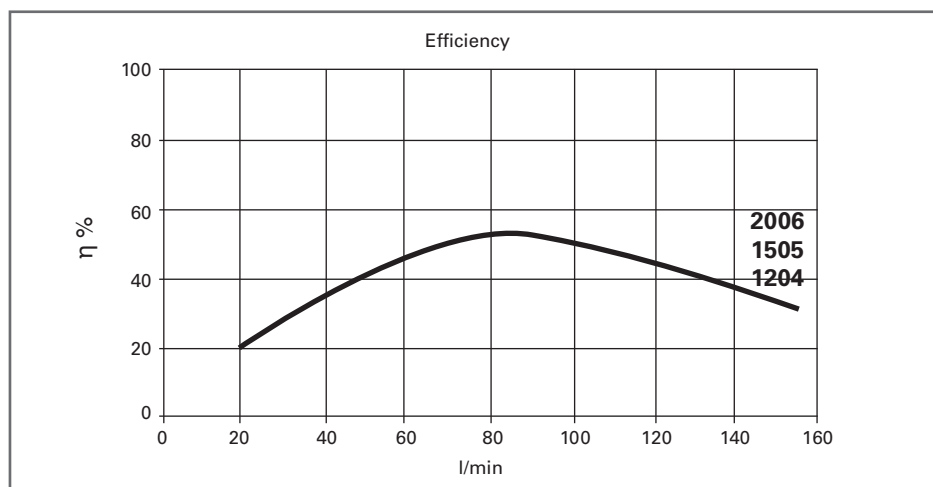
Curves and performance $n = 2900 \text{ 1/min}$



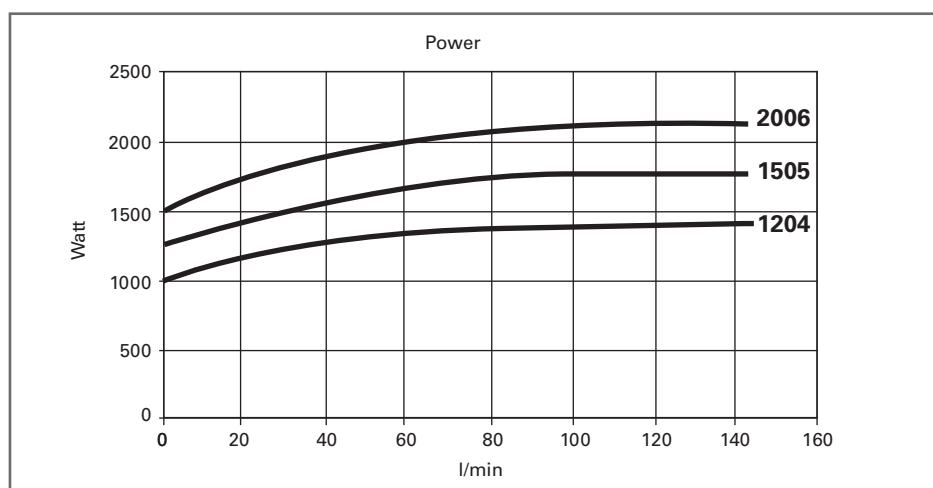
Technopolymer impeller



Technopolymer motor supports

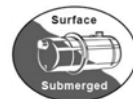


Motor body with outlet



Apartments		
Code	n°	meters
XAMO1204HFPRO	6 - 8	4
XAMO1505HFPRO	6 - 8	8
XAMO2006HFPRO	6 - 8	11

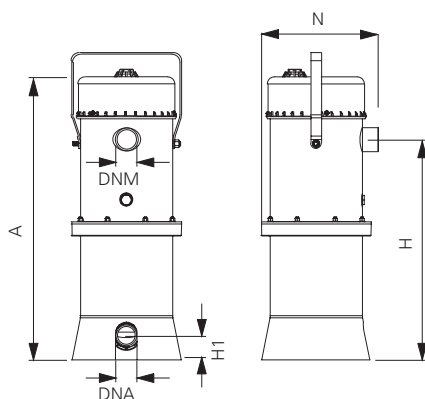
XAMOV B



Vertical multistage pump with electronic system



External non-return valve for easy maintenance.



Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).

Applications

- Domestic boosting
- Medium sprinkling and surface irrigations
- Tank drainage and transfers
- Industrial washing
- Systems for water treatment

Pumped liquid:

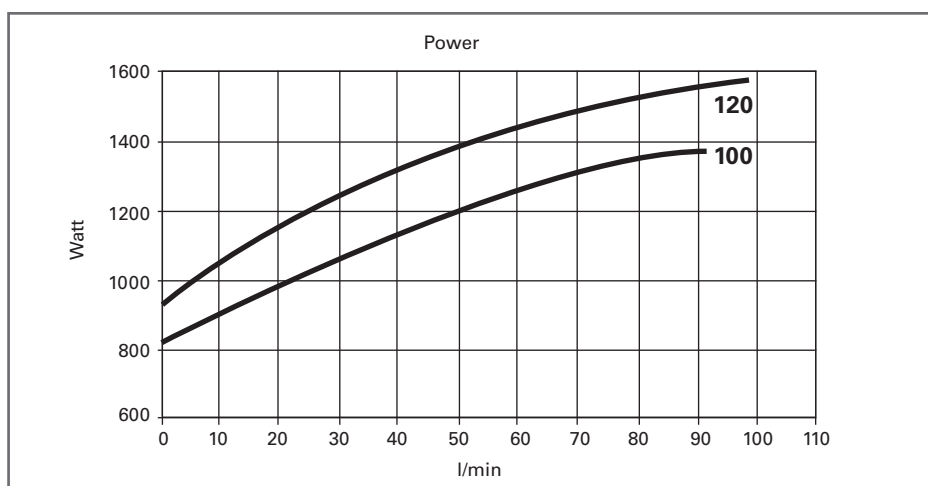
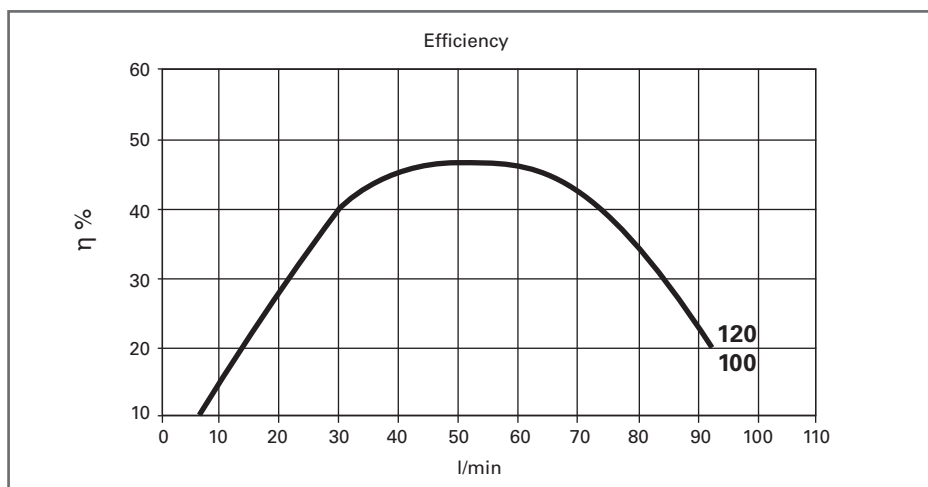
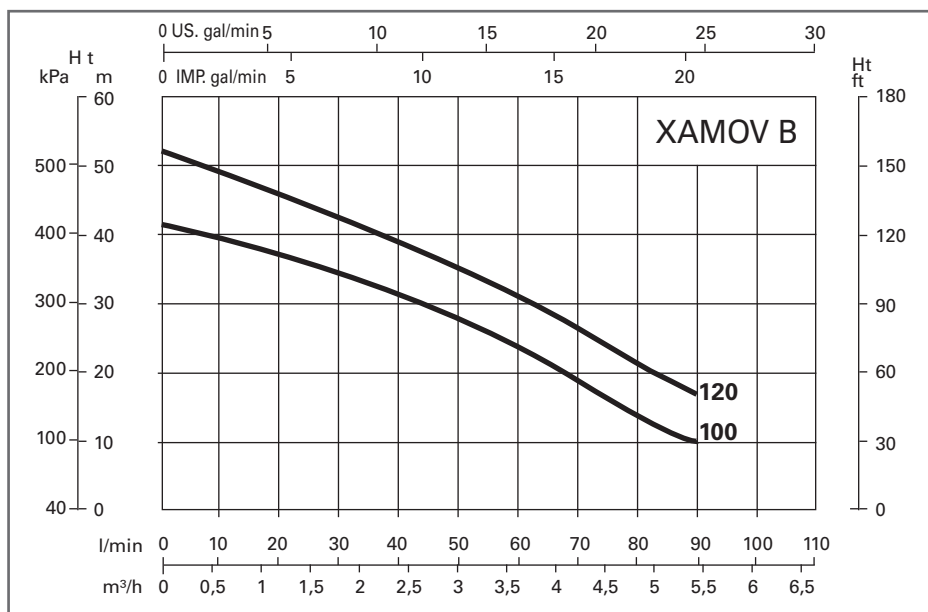
- Clean water with no abrasive or suspended solids
- Liquid temperature +2°C to +40°C
- Air temperature max +45°C
- Depth max 5m
- Starting pressure 1.6 bar

Materials

- Motor body, impellers and pump body: Stainless steel AISI 304
- Technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser: Noryl
- Rear cap: Polypropylene
- Basis: Stainless steel AISI 304
- Mechanical seal: Graphite / ceramic
- A2 Stainless steel bolts
- NBR70 O-ring
- H05VV-F 10m Electric cable with plug
- Tropicalized circuit board in compliance with RoHS regulations
- Class F insulated motors

	Code	P2 Nom.		1 ~ 50Hz Amp.	Cap µF	Stages	Q (lt/m) Flow								Stocked	Dimensions mm						Wgt. kg
		kW	Hp	230 V			0	30	40	50	60	70	80	90		A	N	H	H1	DNM	DNA	
							Total Hm in CA															
AUTO MONO	XAMOV100B	0,75	1	6,0	18	4	42	35	34	30	28	24	18	15	To order	545	218	420	46	1"¼	1"	13
	XAMOV120B	0,9	1,2	7,2	20	5	52	43	43	40	35	30	25	20	To order	545	218	420	46	1"¼	1"	14
	XAMOV100BCE	0,75	1	6,0	18	4	42	35	34	30	28	24	18	15	To order	545	218	420	46	1"¼	1"	13
	XAMOV120BCE	0,9	1,2	7,2	20	5	52	43	43	40	35	30	25	20	To order	545	218	420	46	1"¼	1"	14

Curves and performance $n = 2900 \text{ 1/min}$

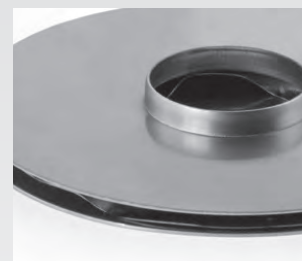


External Capacitor (EC) Versions

with external capacitor kit



- Electric cable H05VV-F length 9m Pump / box
- Electric cable H05VV-F length 1m with plug
- Capacitor box with IP 55 protection class



Stainless steel AISI 304 impeller



Woltmann flow sensor



Technopolymer motor supports

Vertical multistage pump with electronic system



XAMV B

Materials

- Motor body, impellers and pump body: Stainless steel AISI 304
- Technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser: Noryl
- Rear cap: Polypropilene
- Basis: Stainless steel AISI 304
- Mechanical seal: Graphite / ceramic
- A2 Stainless steel bolts
- NBR70 O-ring
- H05VV-F 10m Electric cable with plug
- Tropicalized circuit board in compliance with RoHS regulations
- Class F insulated motors



XAMV PRO

Materials

- Motor body, impellers and pump body: Stainless steel AISI 304
- Special technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser: Noryl
- Rear cap: Stainless steel AISI 304
- Mechanical seal: Graphite / ceramic
- Oil chamber on the mechanical seal
- A2 Stainless steel bolts
- NBR70 O-ring
- H05VV-F 10m Electric cable with plug
- Tropicalized circuit board in compliance with RoHS regulations
- Class F insulated motors

Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).

XMV versions are manual pumps requiring a separate controller.

Applications

- Domestic boosting
- Medium sprinkling and surface irrigations
- Tank drainage and transfers
- Industrial washing
- Systems for water treatment

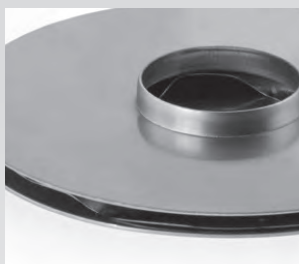
Pumped liquid:

- Clean water with no abrasive or suspended solids
- Liquid temperature +2°C to +40°C
- Air temperature max +45°C
- Depth max 5m
- Starting pressure 1.6 bar

All pumps complete with



External non-return valve for easy maintenance.



Stainless steel AISI 304 impellers



Special technopolymer motor supports for PRO models

Available on request

External Capacitor (EC) versions

With external capacitor kit for all models



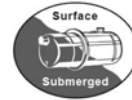
- Electric cable H05VV-F length 9m Pump / box
- Electric cable H05VV-F length 1m with plug
- Capacitor box with IP 55 protection class

110V versions

Available for all models

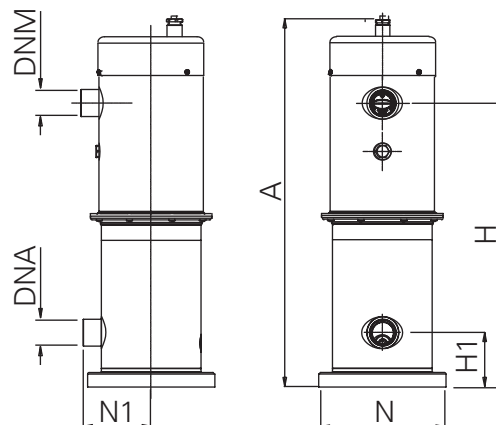


XAMV SERIES

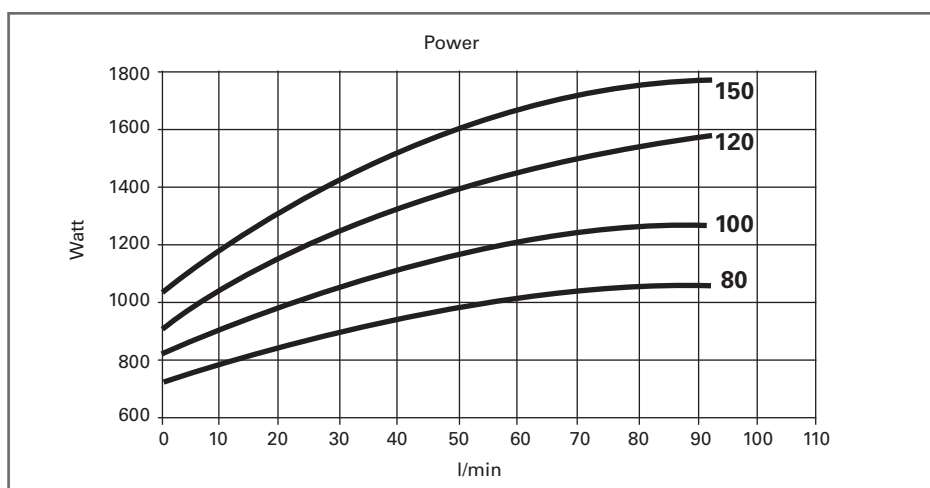
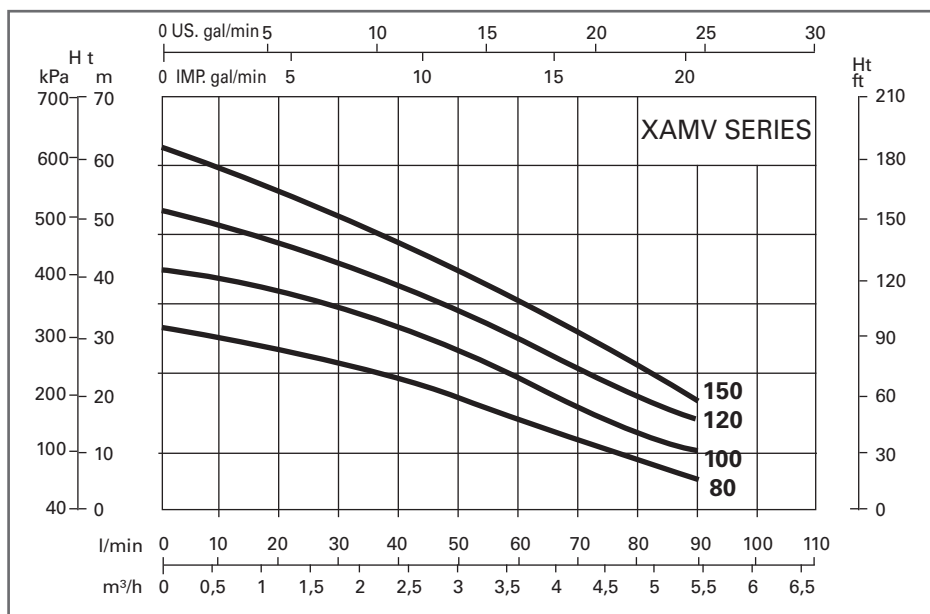


AUTO MONO	Code	P2 Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Stages	Q (lt/m) Flow								Stocked	Dimensions mm							Wgt. Kg
		kW	Hp	230 V	400 V	230 V			0	30	40	50	60	70	80	90		A	N	H	H1	N1	DNM	DNA	
									Total Hm in CA																
	XAMV100B	0,75	1	-	-	6	18	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"	13,5
XAMV120B	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"	15	
MAN MONO	XMV80B	0,60	0,8	-	-	4,5	16	3	33	28	23	20	18	13	10	7	To order	570	210	394	90	112	1"¼	1"	13,5
	XMV100B	0,75	1	-	-	6	16	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"	14
	XMV120B	0,90	1,2	-	-	7,2	18	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"	15
MAN THR	XMV80BT	0,60	0,8	2,2	1,5	-	-	3	33	28	23	20	18	13	10	7	To order	570	210	394	90	112	1"¼	1"	13,5
	XMV100BT	0,75	1	3	2	-	-	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"	14
	XMV120BT	0,90	1,2	3,6	2,5	-	-	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"	15
AUTO MONO	XAMV100BCE	0,75	1	6	6	6	18	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"¼	14
	XAMV120BCE	0,90	1,2	7,2	7,2	7,2	20	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"¼	15

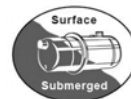
AUTO MONO	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap μ F	Stages	Q (lt/m) Flow								Stocked	Dimensions mm							Wgt. Kg
		kW	Hp	230 V	400 V	230 V			0	30	40	50	60	70	80	90		A	N	H	H1	N1	DNM	DNA	
									Total Hm in CA																
	XAMV100PRO	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"¼	17
XAMV120PRO	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"¼	18	
XAMV150PRO	1,10	1,5	-	-	8,4	20	6	63	48	45	41	36	31	25	12	To order	570	210	394	90	116	1"¼	1"¼	19	
MAN MONO	XMV80PRO	0,60	0,8	-	-	5,15	16	3	33	28	23	20	18	13	10	7	To order	570	210	394	90	112	1"¼	1"¼	16,5
	XMV100PRO	0,75	1	-	-	6,0	18	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"¼	17
	XMV120PRO	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"¼	18
	XMV150PRO	1,10	1,5	-	-	8,4	20	6	63	48	45	41	36	31	25	12	To order	570	210	394	90	116	1"¼	1"¼	19
MAN THR	XMV80TPRO	0,60	0,8	2,4	1,6	-	-	3	33	28	23	20	18	13	10	7	To order	570	210	394	90	112	1"¼	1"¼	16,5
	XMV100TPRO	0,75	1	3	2	-	-	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"¼	17
	XMV120TPRO	0,90	1,2	3,3	2,5	-	-	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"¼	18
	XMV150TPRO	1,10	1,5	3,6	2,7	-	-	6	63	48	45	41	36	31	25	12	To order	570	210	394	90	116	1"¼	1"¼	19
MAN MONO	XAMV100CEPRO	0,75	1	-	-	6	18	4	42	35	30	28	24	18	15	10	To order	570	210	394	90	112	1"¼	1"¼	14
	XAMV120CEPRO	0,90	1,2	-	-	7,2	20	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"¼	15
	XAMV150CEPRO	1,10	1,5	-	-	8,4	20	6	63	48	45	41	36	31	25	12	To order	570	210	394	90	112	1"¼	1"¼	19



Curves and performance $\eta = 2900 \text{ 1/min}$



XAMV HF PRO HIGH-FLOW



Vertical multistage pump with electronic system HIGH-FLOW



Description

Can be used surface mounted or fully submerged up to 5 metres.

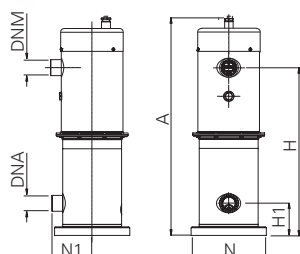
Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).



External non-return valve for easy maintenance.



Applications

- Domestic boosting
- Medium sprinkling and surface irrigations
- Industrial washing
- Systems for potable water treatment

Pumped liquid:

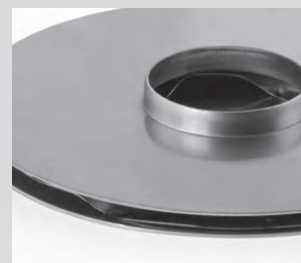
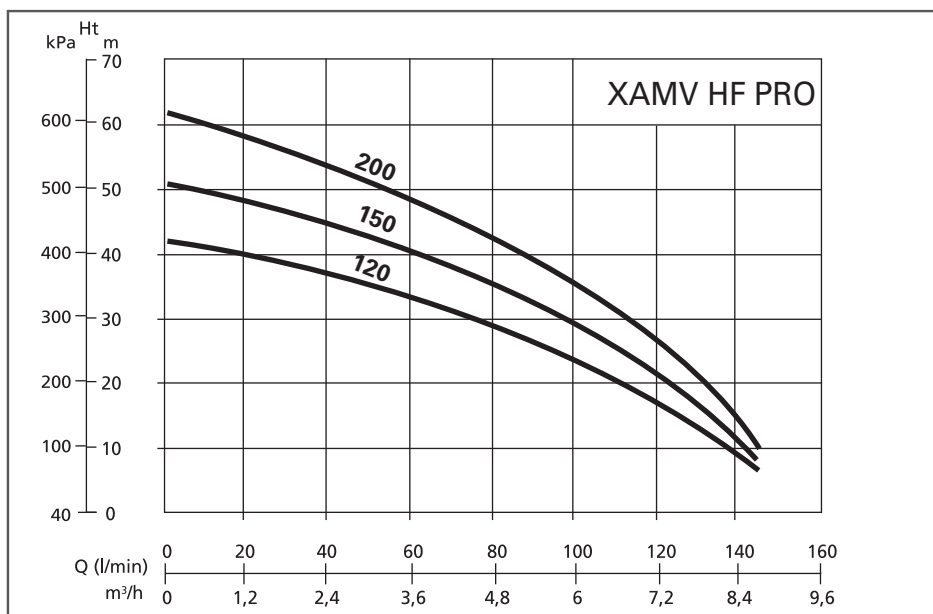
- Clean water with no abrasive or suspended solids
- Liquid temperature +2°C to +40°C
- Air temperature max +45°C
- Depth max 5m
- Starting pressure 1.6 bar

Materials

- Motor body and pump body: Stainless steel AISI 304
- Special technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser and impellers: Noryl
- Rear cap: Stainless steel AISI 304
- Mechanical seal: Graphite / ceramic
- Oil chamber on the mechanical seal
- A2 Stainless steel bolts
- NBR70 O-ring
- H05VV-F 10m Electric cable with plug
- Tropicalized circuit board in compliance with RoHS regulations
- Class F insulated motors

AUTO MONO	Code	P ₂ Nom.		3 ~ 50Hz Amp.		1 ~ 50Hz Amp.	Cap µF	Stages	Q (lt/m) Flow							Stocked	Dimensions mm						Wgt. kg
		kW	Hp	230 V	400 V	230 V			0	30	50	70	100	120	145		A	H1	H	N	DNM	DNA	
									Total Hm in CA														
	XAMV1204HFPRO	0,90	1,2	-	-	6,4	25	4	43	38	34	30	24	16	6	To order	560	95	226	200	1"¼	1"¼	19,5
XAMV1505HFPRO	1,10	1,5	-	-	7,3	30	5	51	46	43	38	30	21	9	To order	715	95	226	200	1"¼	1"¼	21,5	
XAMV2006HFPRO	1,50	2,0	-	-	10,1	40	6	62	55	51	45	34	24	10	To order	715	95	226	200	1"¼	1"¼	23	
MAN MONO	XMV1204HFPRO	0,90	1,2	-	-	6,4	25	4	43	38	34	30	24	16	6	To order	560	95	226	200	1"¼	1"¼	19,5
	XMV1505HFPRO	1,10	1,5	-	-	7,3	30	5	51	46	43	38	30	21	9	To order	715	95	226	200	1"¼	1"¼	21,5
	XMV2006HFPRO	1,50	2,0	-	-	10,1	40	6	62	55	51	45	34	24	10	To order	715	95	226	200	1"¼	1"¼	23
MAN THR	XMV1204THFPRO	0,90	1,2	3,1	2,2	-	-	4	43	38	34	30	24	16	6	To order	560	95	226	200	1"¼	1"¼	19,5
	XMV1505THFPRO	1,10	1,5	3,5	2,5	-	-	5	51	46	43	38	30	21	9	To order	715	95	226	200	1"¼	1"¼	21,5
	XMV2006THFPRO	1,50	2,0	4,2	3,0	-	-	6	62	55	51	45	34	24	10	To order	715	95	226	200	1"¼	1"¼	23

Curves and performance $n = 2900 \text{ 1/min}$



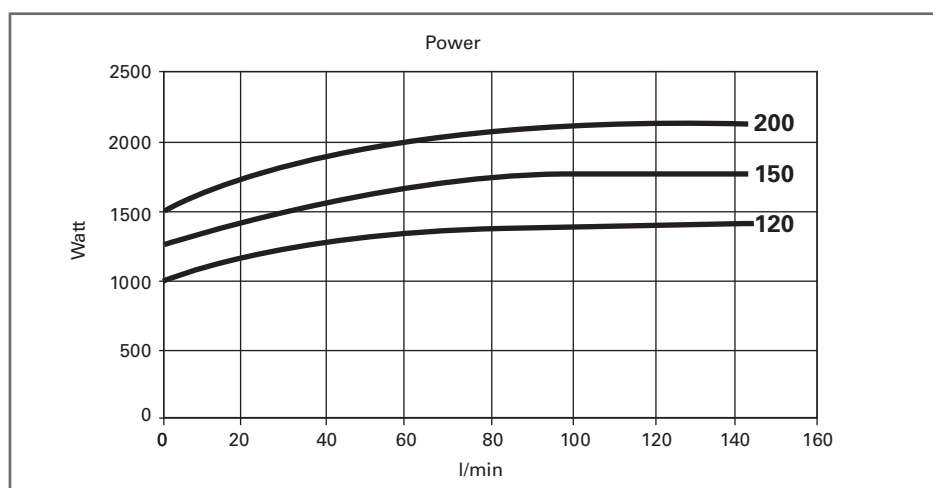
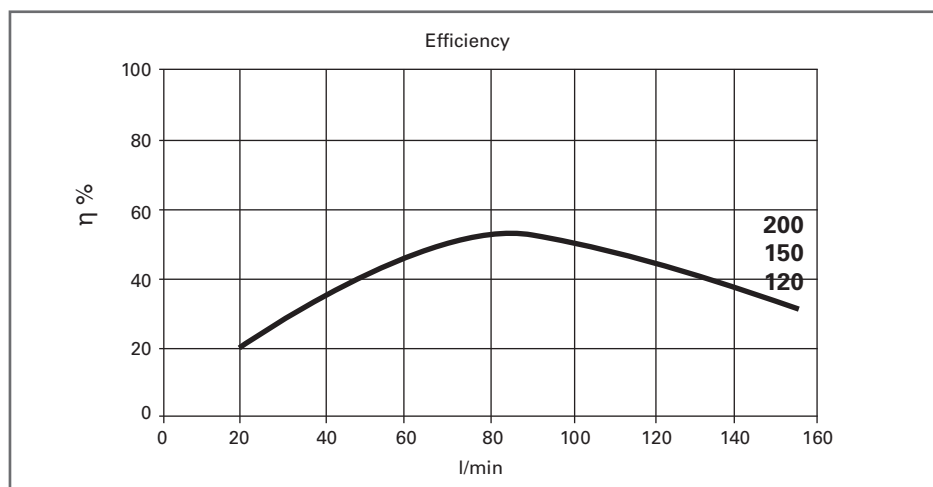
Stainless steel AISI 304 impeller



Special technopolymer motor supports

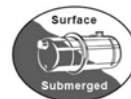


Motor body with outlet



Apartments		
Code	n°	meters
XAMV1204HFPRO	6 - 8	4
XAMV1505HFPRO	6 - 8	8
XAMV2006HFPRO	6 - 8	11

XMN SERIES



Single impeller centrifugal pump

XMN B



Materials

- Motor body and pump body: Stainless steel AISI 304
- Technopolymer flanges
- Shaft: Stainless steel AISI 420
- Diffuser and impeller: Noryl
- Rear cap: Polypropylene
- Basis: Stainless steel AISI 304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: Graphite / ceramic
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m** Electric cable with plug
- Class F insulated motors

XMN PRO



Materials

- Motor body and pump body: Stainless steel AISI 304
- Brass flanges
- Shaft: Stainless steel AISI 420
- Diffuser and impeller: Noryl
- Rear cap: Stainless steel AISI 304
- Basis: Stainless steel AISI 304
- Mechanical seal: Graphite / ceramic
- Oil chamber on the mechanical seal
- A2 Stainless steel bolts
- NBR70 O-ring
- **H05VV-F 10m** Electric cable with **plug**
- Class F insulated motors

Description

Can be used surface mounted or fully submerged up to 5 metres.

Automatic pressure activated with dry-run protection.

Anti-blocking cycle every 72 hours of pump inactivity.

IP68 Ingress Protection (fully submersible).

Applications

- Medium sprinkling and surface irrigations
- Tank drainage and transfers

Pumped liquid:

Clean water with no abrasive or suspended solids

Liquid temperature +2°C to +40°C

Air temperature max +45°C

Depth max 5 m

All pumps complete with



External non-return valve for easy maintenance.



Technopolymer impeller for all models



Special technopolymer motor supports for PRO models

Available on request

External Capacitor (EC) versions

With external capacitor kit for all models



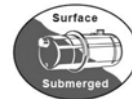
- Electric cable H05VV-F length 9m Pump / box
- Electric cable H05VV-F length 1m with plug
- Capacitor box with IP 55 protection class

110V versions

Available for all models



XMN SERIES

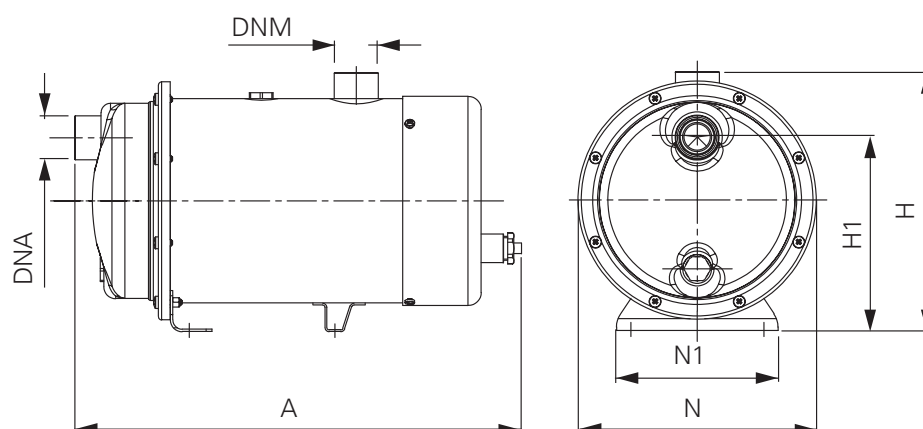


MAN MONO	Code	P2 Nom.		1 ~ 50Hz Amp.	Cap μF	Q (lt/m) Flow						Stocked	Dimensions mm							Wgt Kg
		0	20			40	60	80	100	A	N		H	H1	N1	DNM	DNA			
		kW	Hp	230 V		Total Hm in CA														
	XMN80B	0,60	0,8	4,8	16	21	16	14	15	8	3	To order	396	200	226	163	136	1"¼	1"	12

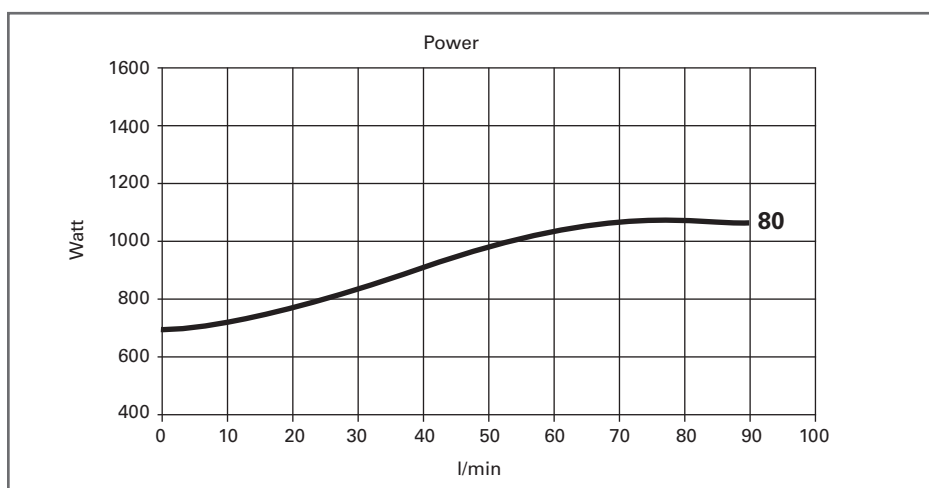
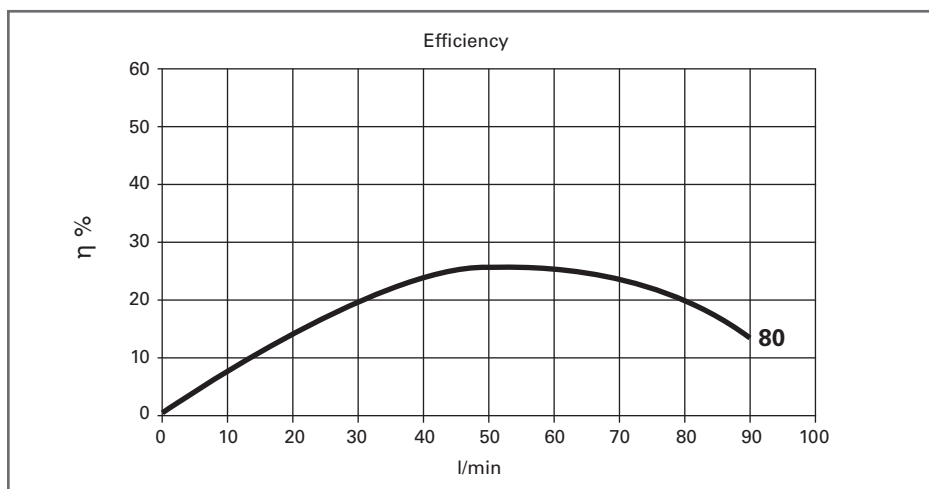
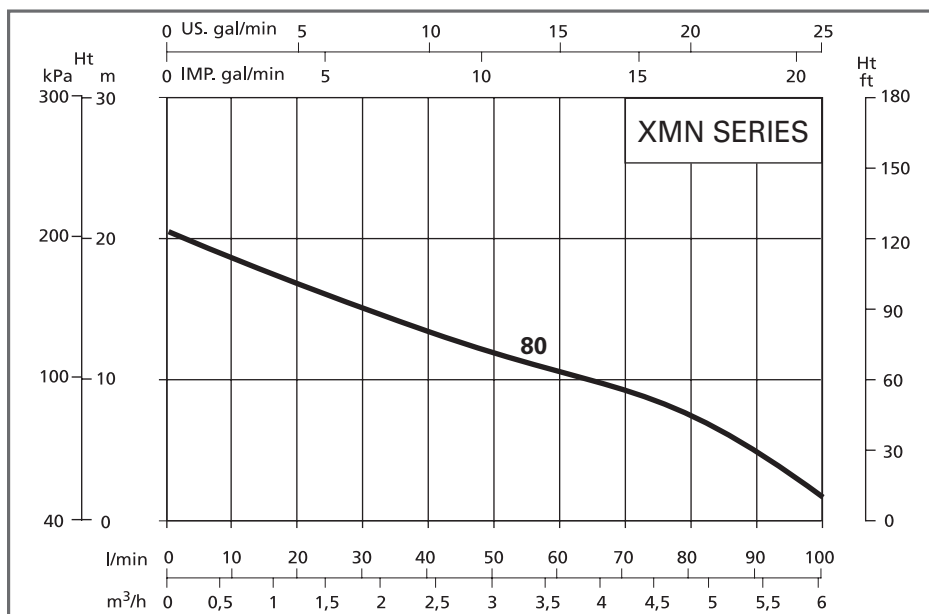
MAN THR	Code	P ₂ Nom.		3 ~ 50Hz Amp.		Q (lt/m) Flow						Stocked	Dimensions mm								Wgt. Kg
		kW	Hp	230 V	400 V	0	20	40	60	80	100		A	N	H	H1	N1	DNM	DNA		
	Total Hm in CA																				
	XMN80BT	0,60	0,8	2,4	1,6	21	16	14	15	8	3	To order	396	200	226	163	136	1"¼	1"	12	

MAN MONO	Code	P ₂ Nom.		1 ~ 50Hz Amp.	Cap μF	Q (lt/m) Flow						Stocked	Dimensions mm							Wgt. Kg	
		kW	Hp			230 V	0	20	40	60	80		100	A	N	H	H1	N1	DNM		DNA
	Total Hm in CA																				
	XMN80PRO	0,60	0,8	4,8	16	21	16	14	15	8	3	To order	396	200	226	163	136	1"¼	1"	12	

MAN THR	Code	P ₂ Nom.		3 ~ 50Hz Amp.		Q (lt/m) Flow						Stocked	Dimensions mm							Wgt Kg
		kW	Hp	230 V	400 V	0	20	40	60	80	100		A	N	H	H1	N1	DNM	DNA	
	Total Hm in CA																			
	XMN80TPRO	0,60	0,8	2,4	1,6	21	16	14	15	8	3	To order	396	200	226	163	136	1"¼	1"	12



Curves and performance $n = 2900 \text{ 1/min}$





INTELLY, the SteelPumps inverter...
That you can't see,
The first in the world.

Invisible

Minimal space:
No visible inverter



Integrated

INTELLY is perfectly integrated
into our pumps.



Intelligent

The Control Panel manages the
numerous INTELLY functions, thanks to
powerful patented software.



IP68 ELECTROPUMPS WITH INVERTER 30-50 Hz

• AUTOMATIC PUMP

Self-priming JET	50
Multistage	54

The INTELLY family is the new generation of SteelPumps.

INTELLY pumps are built to satisfy domestic and industrial applications.

Our objective is to simplify installation and commissioning of the inverter system.

The inverter controller is located inside the INTELLY pump itself, making it unobtrusive, simple to install, simple to program and simple to use.

The INTELLY family combines comfort and savings to satisfy the needs of the user.



Applications

INTELLY pumps are suitable for surface or submersed installation (**IP68**).

Always constant pressure

INTELLY ensures constant pressure at any time



Energy saving

INTELLY technology saves energy



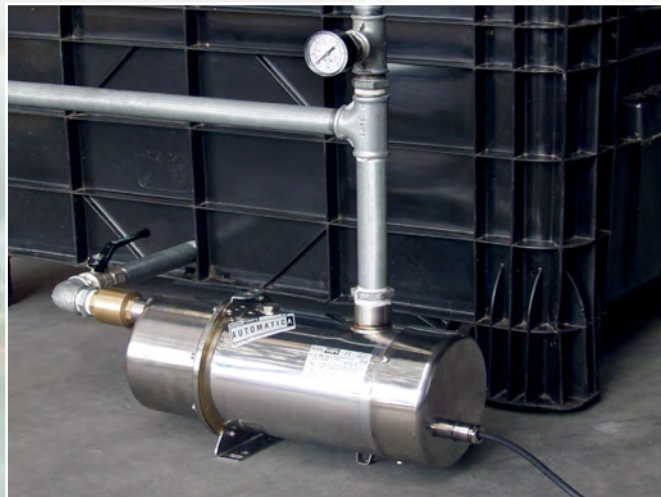
Low Noise

INTELLY technology ensures silence and comfort



Boosting and domestic irrigation

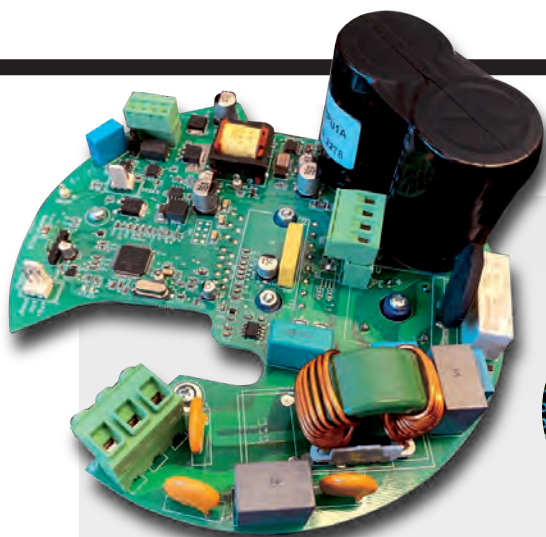
Surface pump



Feeding and emptying / boosting

Submerged pump





INTELLY SYSTEM



AS

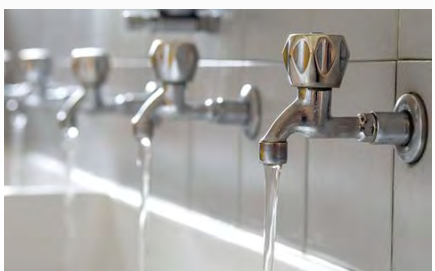
Anti blocking cycle
every 72 hours



Dry-run protection



Automatic retries after
Dry-run alarm



Reacts immediately to changes
in water demand by adjusting
pump speed to maintain constant
pressure.

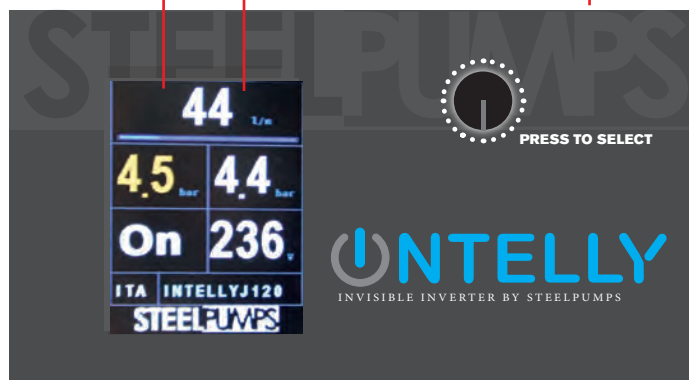
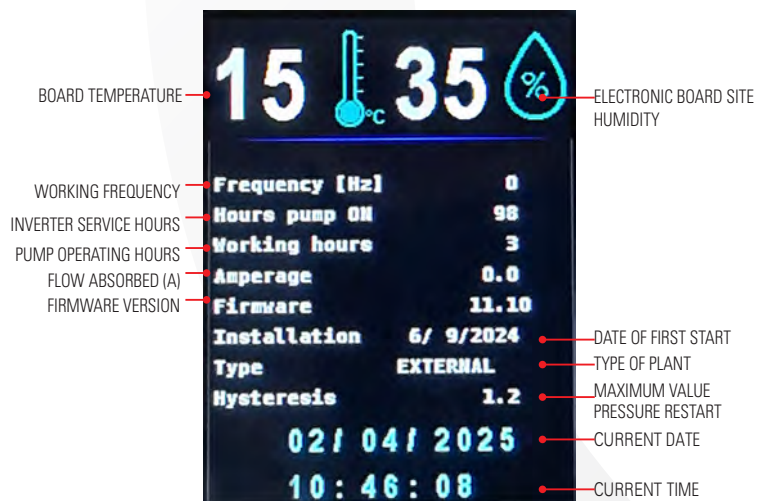
Control panel

THE CONTROL PANEL MANAGES THE USER-FRIENDLY OPERATION OF INTELLY, THANKS TO ITS POWERFUL PATENTED SOFTWARE.

STATUS DISPLAY



FURTHER SCREENS



NETWORK PORT
REMOTE CONTROL FOR SERVICE



INTELLY, the SteelPumps inverter equipped with a Control Panel for system monitoring



- **ADJUSTABLE PRESSURE** with pressure and flow rate displayed
- **SYSTEM DIAGNOSTIC**
- **HISTORICAL MEMORY**
- **MONITORING**



Fast connection
(10m data cable)

Energy saving

A reduction in pump speed can lead to a significant reduction in electricity consumption. Flow rate is proportional to motor speed, while consumed power is proportional to the cube of shaft speed. For example, if a pump usually runs at 2950 rpm at 50Hz, when slowed to 40 Hz it will subsequently rotate at 2360 rpm (20% slower) which will result in a power saving of 40%.

The reduction of pump speed also greatly increases the lifespan of the pump.

Pump performance with varying speed.

The relationship between pump speed and performance is expressed by the Pump Affinity Laws, as shown in Equation 1

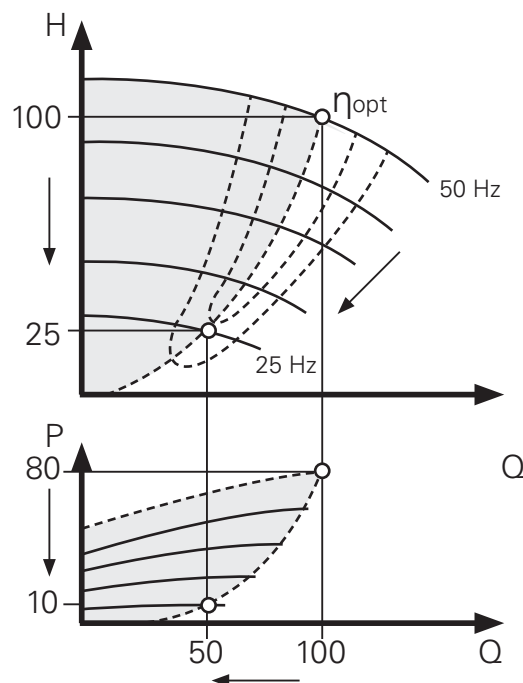
- The flow changes linearly with speed variation (RPM).
- The pressure changes follows a quadratic law with the speed changes (RPM)
- Power follows a cubic law with the speed changes (RPM)
- A small change of speed (RPM) results in a huge change in terms of power.

Equation 1

$$Q_x = Q \times \frac{n_x}{n}$$

$$H_x = H \times \left(\frac{n_x}{n} \right)^2$$

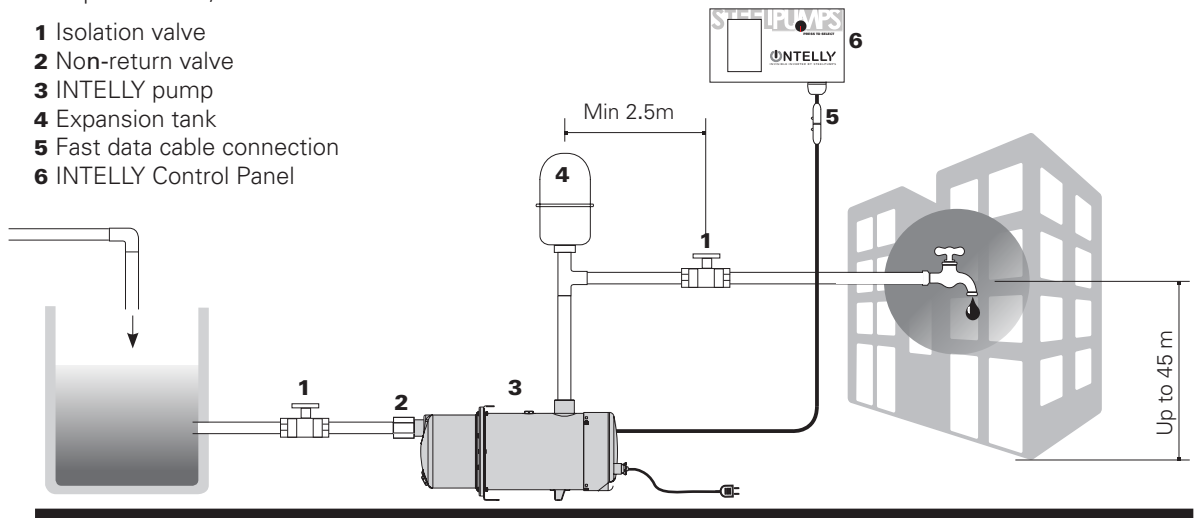
$$P_x = P \times \left(\frac{n_x}{n} \right)^3$$



- The flow variation is proportional to motor speed.
- The pressure variation is proportional to the square of motor speed
- The power variation is proportional to the cube of motor speed

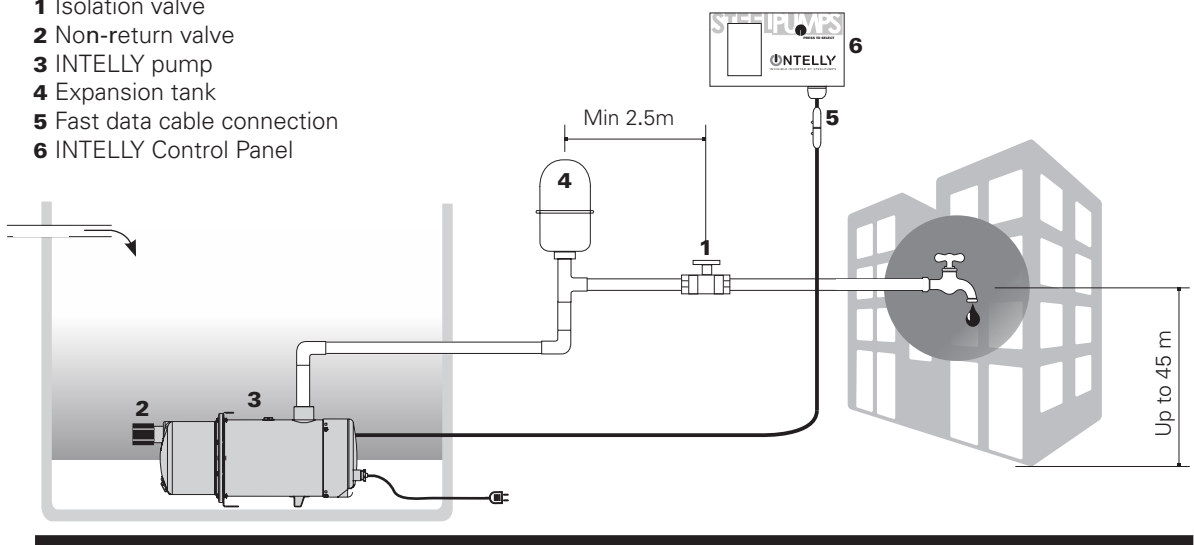
Pump at surface, suction from tank

- 1 Isolation valve
- 2 Non-return valve
- 3 INTELLY pump
- 4 Expansion tank
- 5 Fast data cable connection
- 6 INTELLY Control Panel



Submerged pump in a tank

- 1 Isolation valve
- 2 Non-return valve
- 3 INTELLY pump
- 4 Expansion tank
- 5 Fast data cable connection
- 6 INTELLY Control Panel



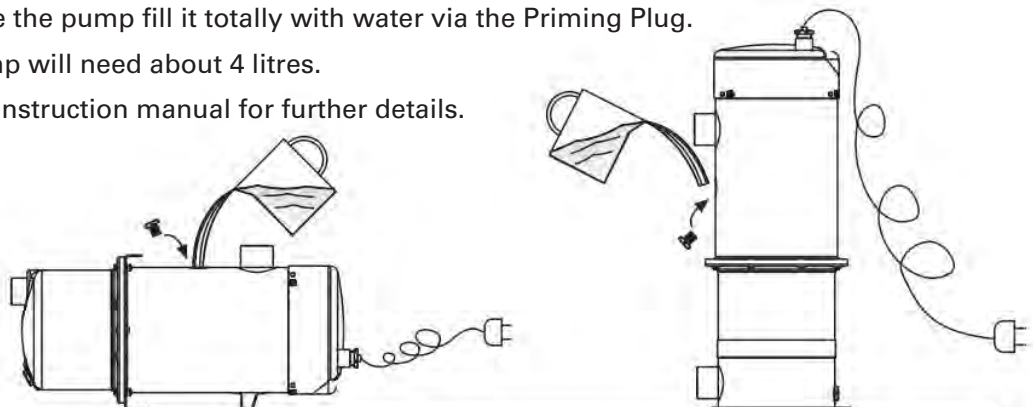
Priming the INTELLY pump

Before using the pump it is essential to prime the pump. This will ensure that it does not dry-run on it's first use. Dry running the pump could damage the pump.

To prime the pump fill it totally with water via the Priming Plug.

The pump will need about 4 litres.

See the instruction manual for further details.



The range

Applications table

LEGEND	
	Water supply
	Rainwater harvesting
	Irrigation and water features
	Water supply from tank and well
	Booster sets
	Car Wash
	Industrial use
	Well suction

Model	Main features			Installation		
	Jet Pump (Self-priming)	Standard priming	Automatic	Submerged	Surface	Underground
INTELLY		●	●	●	●	●
INTELLY V		●	●	●	●	●
INTELLY J	●	●	●	●	●	●

All Intelly Pumps are also available in 110v (to order).

Main Applications							
							
•	•	•	•	•		•	
•	•	•	•	•		•	
•	•	•	•	•			•



INTELLY J120

Self-priming JET pump with integrated inverter control



External non-return valve
for easy maintenance.

Applications

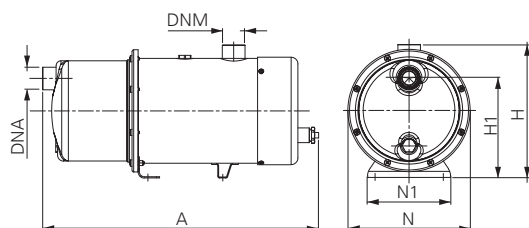
- Domestic boosting
- Irrigation
- Use of rainwater
- Depth max 5 m

Pumped liquid:

Clean water without any abrasive or suspended solids

Liquid temperature +2°C to +40°C

Air temperature Max +45°C



Description

INTELLY uses inverter technology, adjusting the speed of the pump motor to maintain a set pressure in the system even if the flow rate and water demand vary.

Reducing the motor speed also reduces power consumption and noise levels.

The pre-set pressure of the pump is adjusted on the intuitive and user-friendly display of the control unit.

If the pump is inactive for 72 hours, an anti-blocking cycle briefly runs to prevent any possible effects of long-term inactivity.

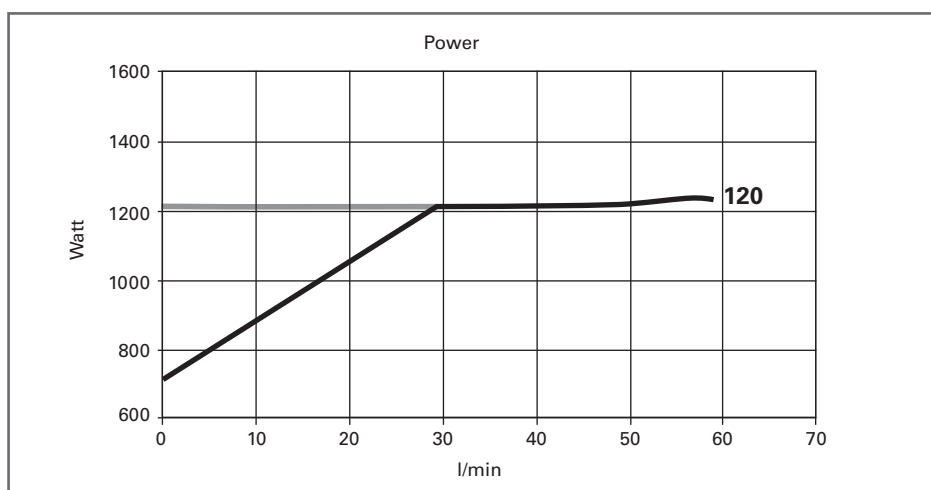
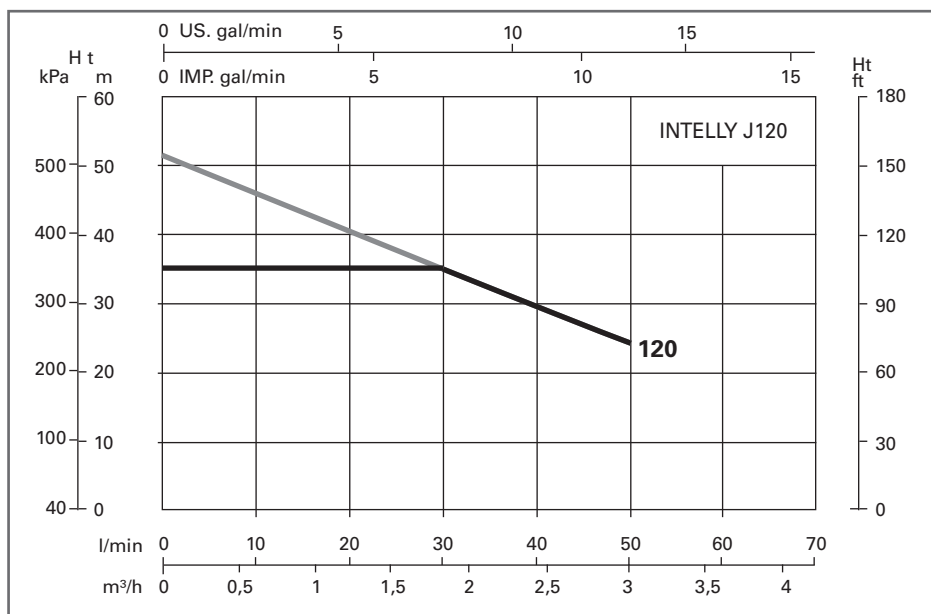
Accurate pressure and flow sensing allows INTELLY to rapidly detect and protect against dry-running.

Materials

- Pump body and motor in AISI 304
- Brass and technopolymer motor support (flanges)
- Shaft in AISI 420
- Diffuser, impeller and venturi jet in Noryl
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: ceramic / graphite
- A2 Bolts
- NBR70 O-ring
- ADB LIYY-HZO 10m Electric cable
- Inverter electronic board according to RoHS regulations
- Class F insulated motor
- Control box with display
- Plastic flow sensor
- Oil chamber on the mechanical seal

Code	P ₂ Nom.		1 ~ 50Hz Amp.	Q (l/m) FLOW							Stocked	Dimensions mm							Weight Kg
	kW	Hp		230 V	0	10	20	30	40	50		60	A	N	H	H1	N1	DNM	
			Total Hm in CA																
INTELLY J120	0,90	1,2	7,2	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	16,5

Curves and performance $\eta = 2900 \text{ 1/min}$



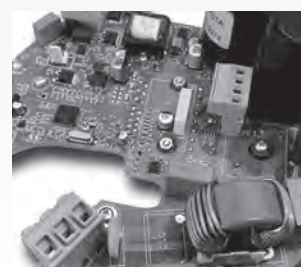
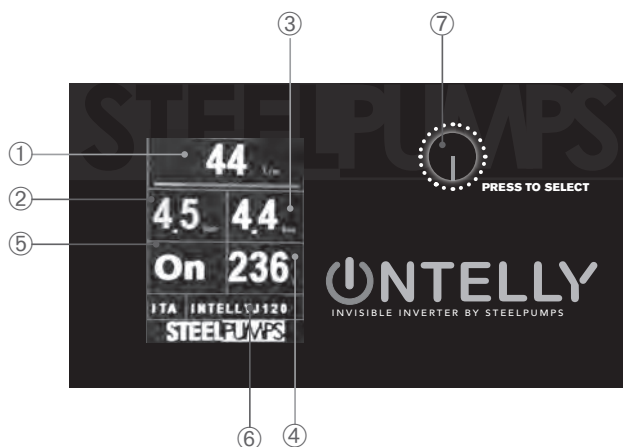
- Work value setting
- System diagnostic
- Historical memory
- Monitoring



Technopolymer impeller



Technopolymer motor support



Electronic board

INTELLY J120 V

Self-priming JET pump with integrated inverter control



Description

INTELLY uses inverter technology, adjusting the speed of the pump motor to maintain a set pressure in the system even if the flow rate and water demand vary.

Reducing the motor speed also reduces power consumption and noise levels.

The pre-set pressure of the pump is adjusted on the intuitive and user-friendly display of the control unit.

If the pump is inactive for 72 hours, an anti-blocking cycle briefly runs to prevent any possible effects of long-term inactivity.

Accurate pressure and flow sensing allows INTELLY to rapidly detect and protect against dry-running.

Applications

- Domestic boosting
- Irrigation
- Use of rainwater
- Depth max 5 m

Pumped liquid:

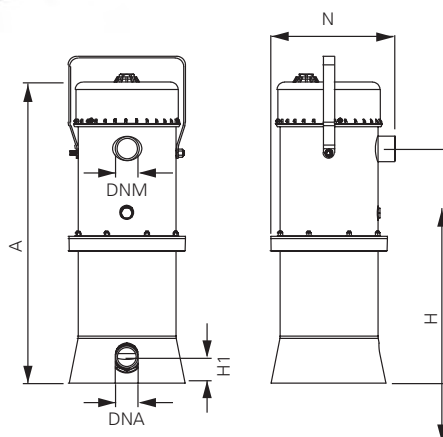
Clean water without any abrasive or suspended solids

Liquid temperature +2°C to +40°C

Air temperature Max +45°C

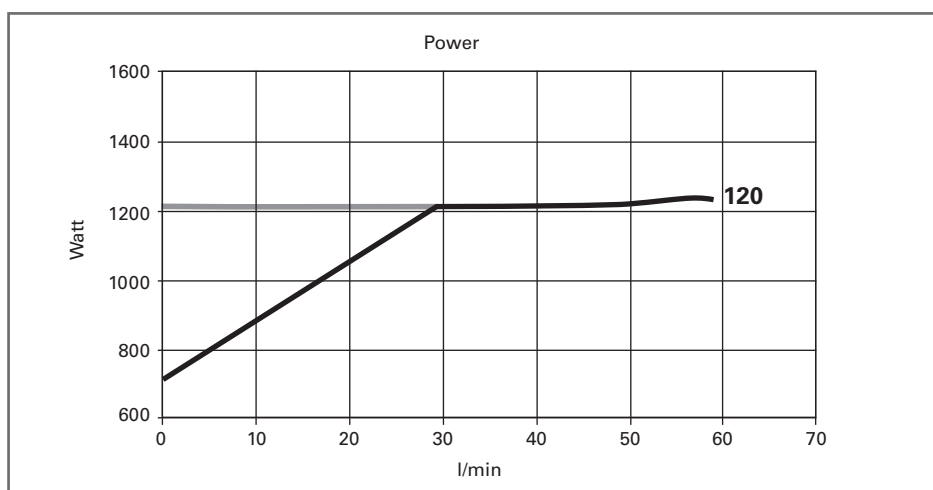
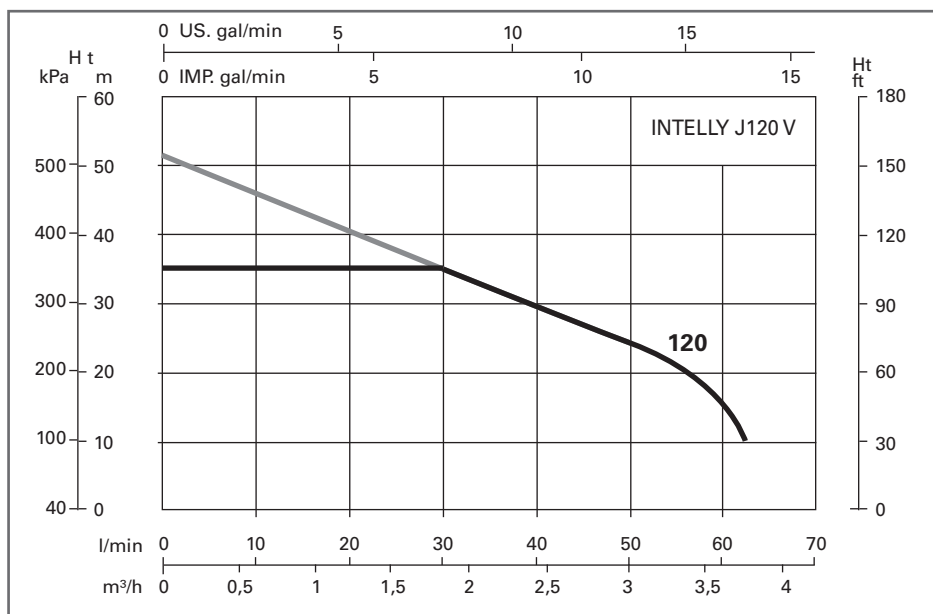
Materials

- Pump body and motor in AISI 304
- Brass and technopolymer motor support (flanges)
- Shaft in AISI 420
- Diffuser, impeller and venturi jet in Noryl
- Mechanical seal: ceramic / graphite
- A2 Bolts
- NBR70 O-ring
- ADB LIYY-HZO 10m Electric cable
- Inverter electronic board according to RoHS regulations
- Class F insulated motor
- Control box with display
- Plastic flow sensor
- Oil chamber on the mechanical seal



Code	P ₂ Nom.		1 ~ 50Hz Amp.	Q (l/m) FLOW								Stocked	Dimensions mm							Weight Kg
	kW	Hp		230 V	0	10	20	30	40	50	60		A	N	H	H1	N1	DNM	DNA	
			Total Hm in CA																	
INTELLY J120 V	0,90	1,2	7,2	51	45	40	34	30	24	8	To order	477	200	226	163	136	1"¼	1"	17	

Curves and performance $\eta = 2900 \text{ 1/min}$



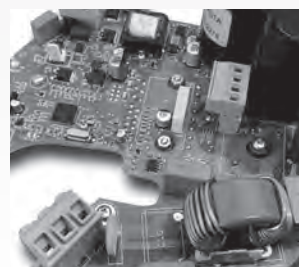
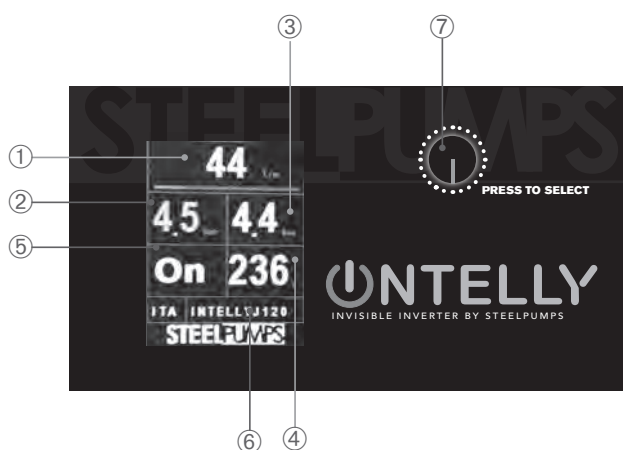
- Work value setting
- System diagnostic
- Historical memory
- Monitoring



Technopolymer impeller



Technopolymer motor support



Electronic board

INTELLY 120

Horizontal multistage pump with integrated inverter control



External non-return valve
for easy maintenance.

Applications

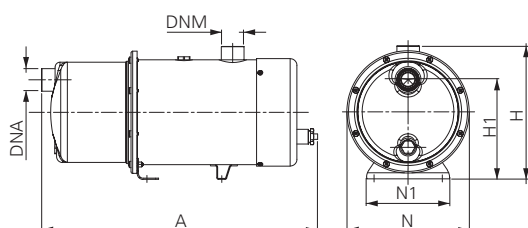
- Domestic boosting
- Irrigation
- Water treatment plants
- Industrial washing
- Use of rainwater
- Depth max 5 m

Pumped liquid:

Clean water without any abrasive or suspended solids

Liquid temperature +2°C to +40°C

Air temperature Max +45°C



Description

INTELLY uses inverter technology, adjusting the speed of the pump motor to maintain a set pressure in the system even if the flow rate and water demand vary.

Reducing the motor speed also reduces power consumption and noise levels.

The pre-set pressure of the pump is adjusted on the intuitive and user-friendly display of the control unit.

If the pump is inactive for 72 hours, an anti-blocking cycle briefly runs to prevent any possible effects of long-term inactivity.

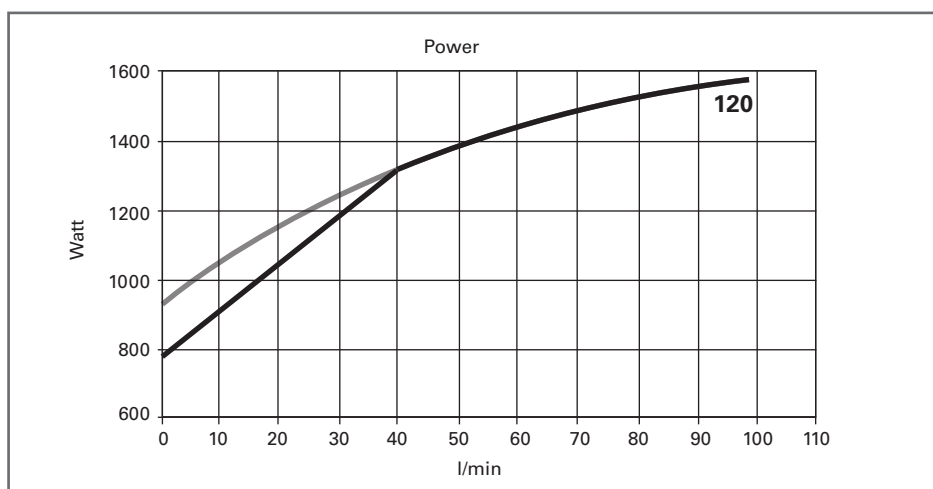
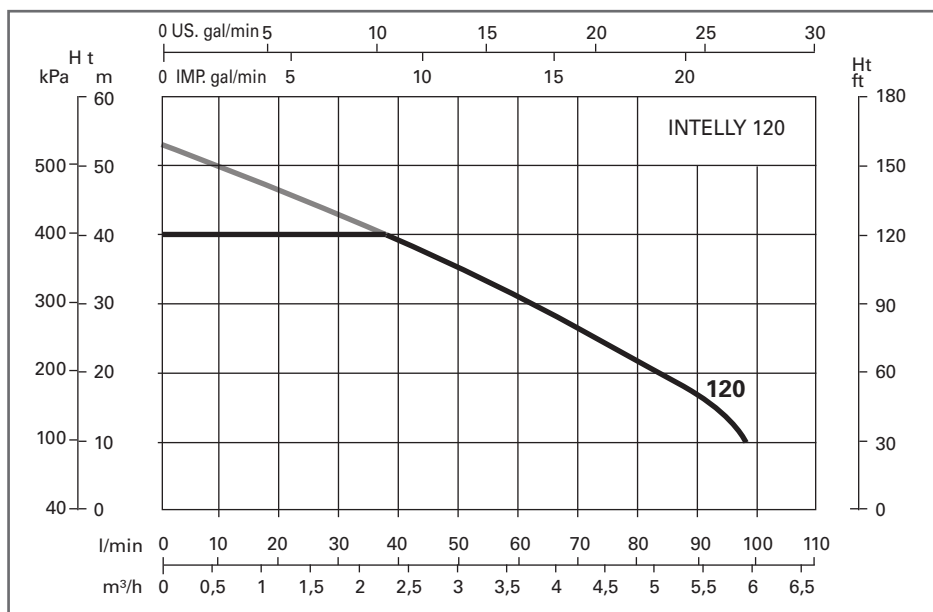
Accurate pressure and flow sensing allows INTELLY to rapidly detect and protect against dry-running.

Materials

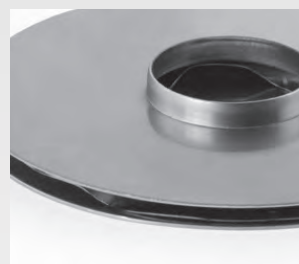
- Pump body and motor in AISI 304
- Brass and technopolymer motor support (flanges)
- Shaft in AISI 420
- Diffuser: Technopolymer Noryl
- Impeller: Stainless Steel AISI304
- **Shock absorbing feet (portable use): Rubber**
- Mechanical seal: ceramic / graphite
- A2 Bolts
- NBR70 O-ring
- ADB LIYY-HZO 10m Electric cable
- Inverter electronic board according to RoHS regulations
- Class F insulated motor
- Control box with display
- Plastic flow sensor
- Oil chamber on the mechanical seal

Code	P ₂ Nom.		1 ~ 50Hz Amp.	Stadi	Q (l/m) FLOW								Stocked	Dimensions mm							Weight Kg
	kW	Hp			230 V	0	30	40	50	60	70	80		90	A	N	H	H1	N1	DNM	
			Total Hm in CA																		
INTELLY 120	0,90	1,2	8,8	5	52	43	40	35	30	25	20	15	To order	477	200	226	163	136	1"¼	1"	17,5

Curves and performance $\eta = 2900 \text{ 1/min}$



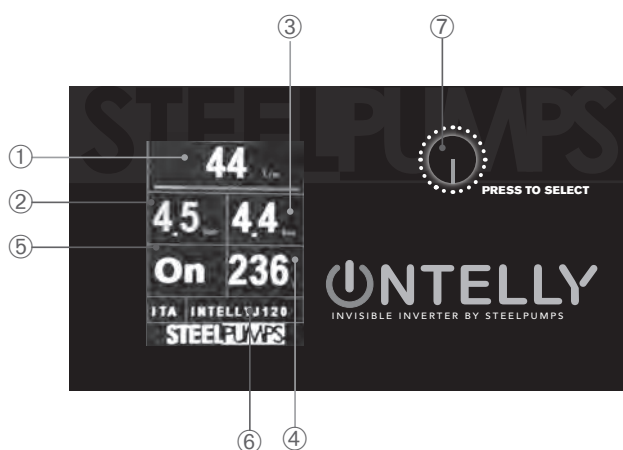
- Work value setting
- System diagnostic
- Historical memory
- Monitoring



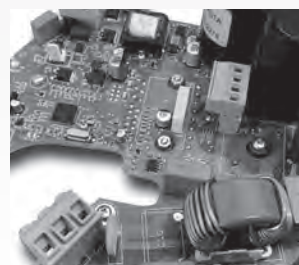
Impeller Stainless Steel AISI 304



Technopolymer motor support



- 1 - Flow detected
- 2 - Pressure detected
- 3 - Set pressure (Fail Safe)
- 4 - Supply voltage
- 5 - Pump status
- 6 - Pump model
- 7 - Programming button



Electronic board

INTELLY 1204 - 1505 - 2006

Horizontal multistage pump with integrated inverter control HIGH FLOW



External non-return valve
for easy maintenance.

Description

INTELLY uses inverter technology, adjusting the speed of the pump motor to maintain a set pressure in the system even if the flow rate and water demand vary.

Reducing the motor speed also reduces power consumption and noise levels.

The pre-set pressure of the pump is adjusted on the intuitive and user-friendly display of the control unit.

If the pump is inactive for 72 hours, an anti-blocking cycle briefly runs to prevent any possible effects of long-term inactivity.

Accurate pressure and flow sensing allows INTELLY to rapidly detect and protect against dry-running.

Materials

- Pump body and motor in AISI 304
- Brass and technopolymer motor support (flanges)
- Shaft in AISI 420
- Diffuser: Technopolymer Noryl
- Impeller: Noryl
- Shock absorbing feet (portable use): Rubber
- Mechanical seal: ceramic / graphite
- A2 Bolts
- NBR70 O-ring
- ADB LIYY-HZO 10m Electric cable
- Inverter electronic board according to RoHS regulations
- Class F insulated motor
- Control box with display
- Plastic flow sensor
- Oil chamber on the mechanical seal

Applications

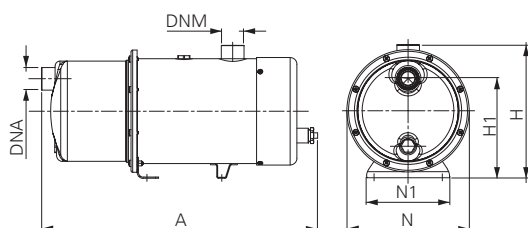
- Domestic boosting
- Irrigation
- Water treatment plants
- Industrial washing
- Use of rainwater
- Depth max 5 m

Pumped liquid:

Clean water without any abrasive or suspended solids

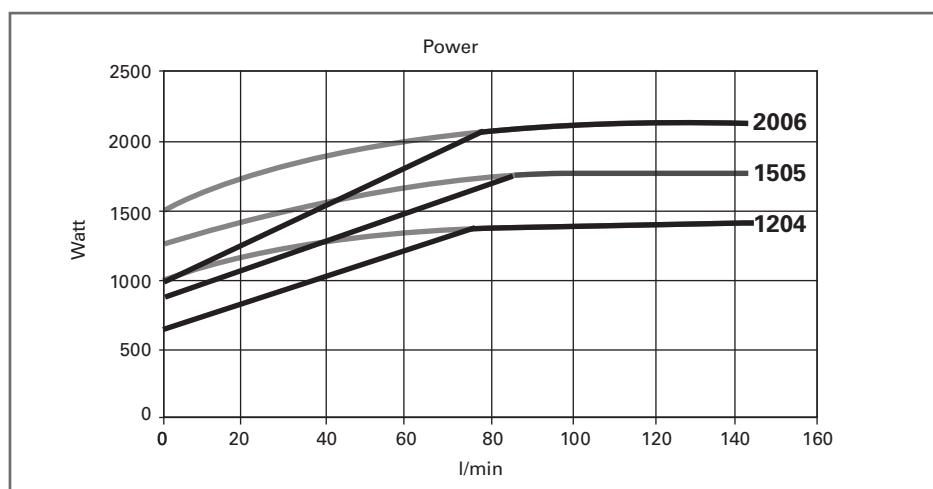
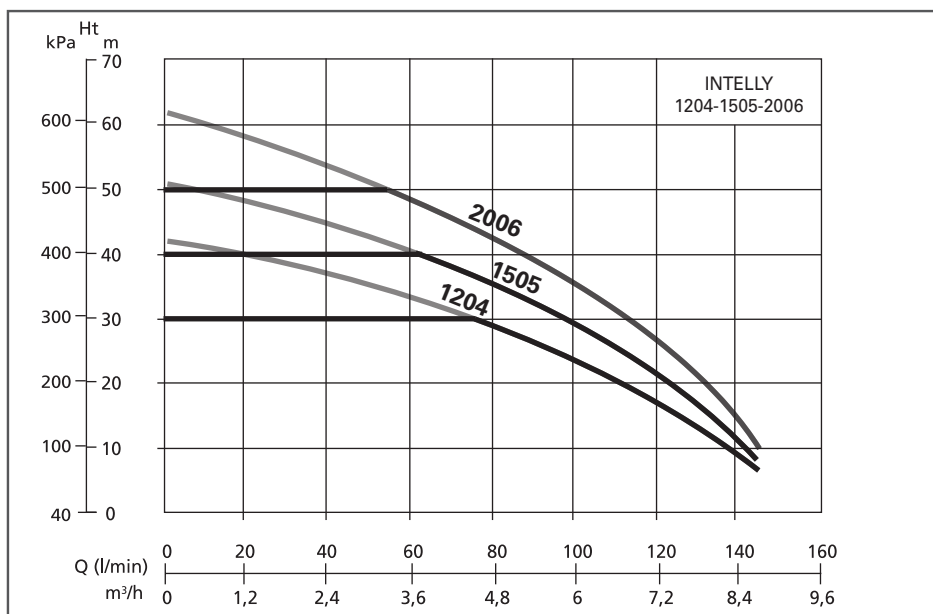
Liquid temperature +2°C to +40°C

Air temperature Max +45°C

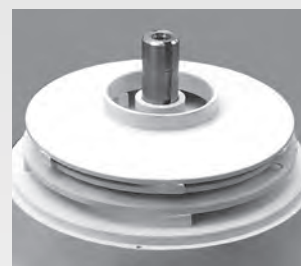


Code	P ₂ Nom.		1 ~ 50Hz Amp.	Stages	Q (l/m) FLOW							Stocked	Dimensions mm							Weight Kg
	kW	Hp			230 V	0	30	50	70	100	120		145	A	H1	H	N	N1	DNM	
			Total Hm in CA																	
INTELLY 1204	0,90	1,2	8,8	4	43	38	34	30	24	16	6	To order	560	165	226	200	136	1"¼	1"¼	21
INTELLY 1505	1,10	1,5	9,8	5	51	46	43	38	30	21	9	To order	715	165	226	200	136	1"¼	1"¼	23
INTELLY 2006	1,50	2,0	12,5	6	62	55	51	45	34	24	10	To order	715	165	226	200	136	1"¼	1"¼	24

Curves and performance $n = 2900 \text{ 1/min}$



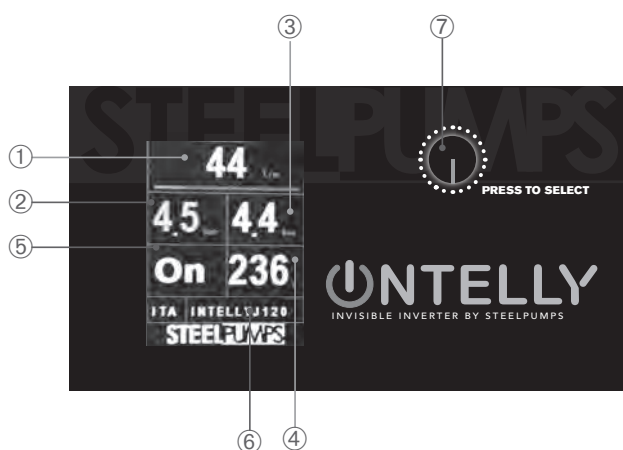
- Work value setting
- System diagnostic
- Historical memory
- Monitoring



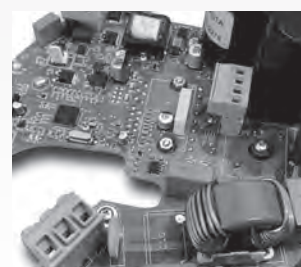
Technopolymer impeller



Technopolymer motor support



- 1 - Flow detected
- 2 - Pressure detected
- 3 - Set pressure (Fail Safe)
- 4 - Supply voltage
- 5 - Pump status
- 6 - Pump model
- 7 - Programming button



Electronic board

INTELLY V 120H

Vertical multistage pump with integrated inverter control



Description

INTELLY uses inverter technology, adjusting the speed of the pump motor to maintain a set pressure in the system even if the flow rate and water demand vary.

Reducing the motor speed also reduces power consumption and noise levels.

The pre-set pressure of the pump is adjusted on the intuitive and user-friendly display of the control unit.

If the pump is inactive for 72 hours, an anti-blocking cycle briefly runs to prevent any possible effects of long-term inactivity.

Accurate pressure and flow sensing allows INTELLY to rapidly detect and protect against dry-running.

Applications

- Domestic boosting
- Irrigation
- Use of rainwater
- Depth max 5 m

Pumped liquid:

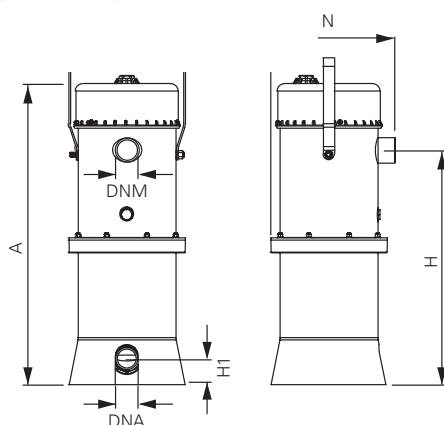
Clean water without any abrasive or suspended solids

Liquid temperature +2°C to +40°C

Air temperature Max +45°C

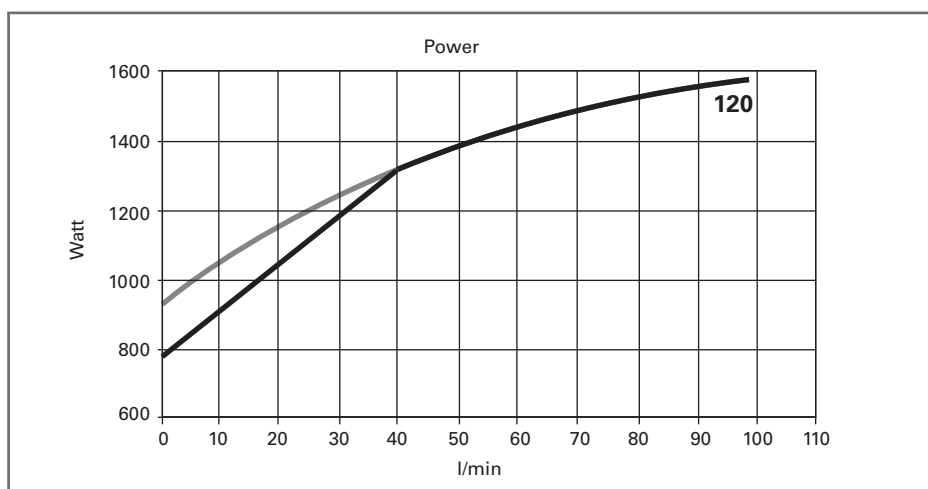
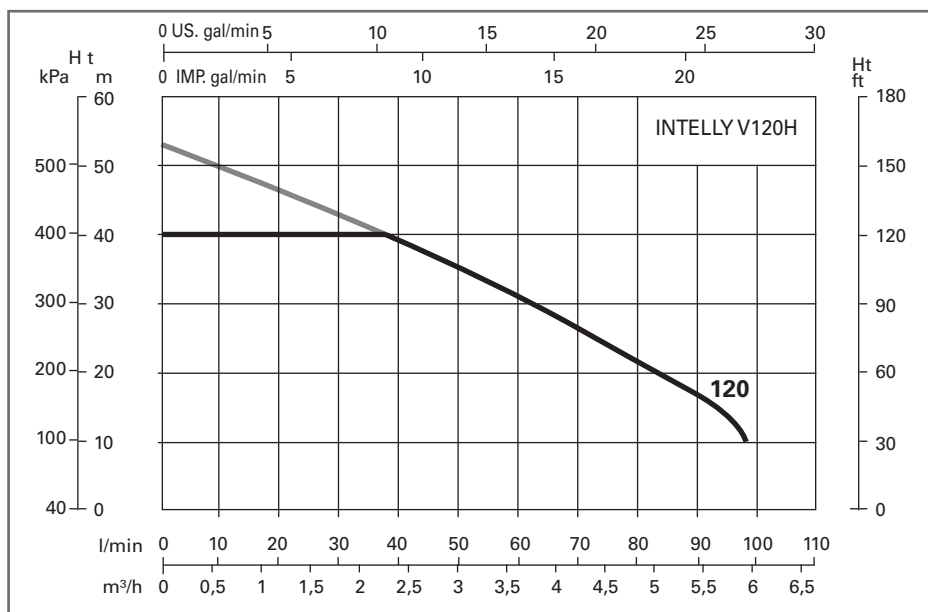
Materials

- Pump body and motor in AISI 304
- Brass and technopolymer motor support (flanges)
- Shaft in AISI 420
- Diffuser: Technopolymer Noryl
- Impeller: Stainless Steel AISI304
- Mechanical seal: ceramic / graphite
- A2 Bolts
- NBR70 O-ring
- ADB LIYY-HZO 10m Electric cable
- Inverter electronic board according to RoHS regulations
- Class F insulated motor
- Control box with display
- Plastic flow sensor
- Oil chamber on the mechanical seal

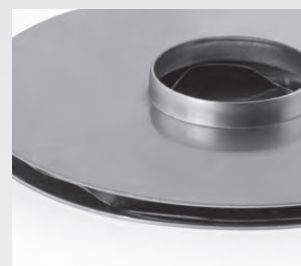


Code	P2 Nom.		1 ~ 50Hz Amp.	Stages	Q (l/m) FLOW								Stocked	Dimensions mm						Wei- ght Kg
	kW	Hp			230 V	0	30	40	50	60	70	80		90	A	N	H	H1	DNM	
			Total Hm in CA																	
INTELLY V 120H	0,9	1,2	8,8	5	52	43	43	40	35	30	25	20	To order	545	218	420	46	1"¼	1"	18

Curves and performance $\eta = 2900 \text{ 1/min}$



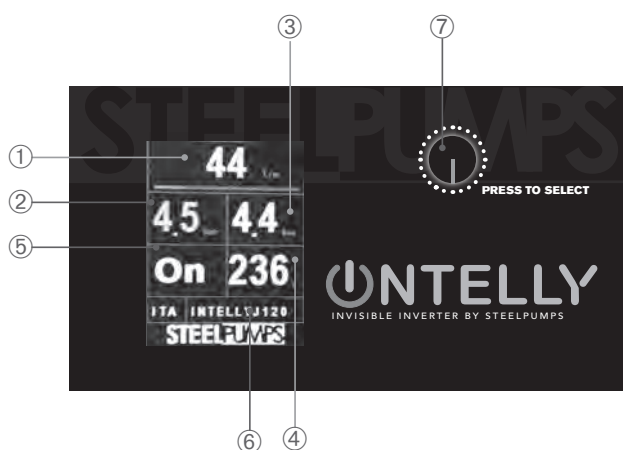
- Work value setting
- System diagnostic
- Historical memory
- Monitoring



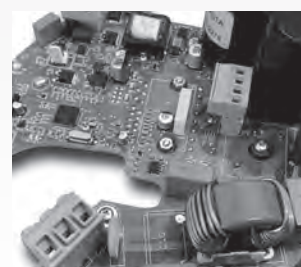
Impeller Stainless Steel AISI 304



Technopolymer motor support



- 1 - Flow detected
- 2 - Pressure detected
- 3 - Set pressure (Fail Safe)
- 4 - Supply voltage
- 5 - Pump status
- 6 - Pump model
- 7 - Programming button



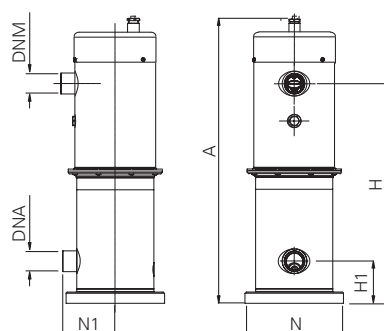
Electronic board

INTELLY 120V - 150 V

Vertical multistage pump with integrated inverter control



External non-return
valve for easy
maintenance.



Description

INTELLY uses inverter technology, adjusting the speed of the pump motor to maintain a set pressure in the system even if the flow rate and water demand vary.

Reducing the motor speed also reduces power consumption and noise levels.

The pre-set pressure of the pump is adjusted on the intuitive and user-friendly display of the control unit.

If the pump is inactive for 72 hours, an anti-blocking cycle briefly runs to prevent any possible effects of long-term inactivity.

Accurate pressure and flow sensing allows INTELLY to rapidly detect and protect against dry-running.

Applications

- Domestic boosting
- Irrigation
- Water treatment plants
- Use of rainwater
- Depth max 5 m

Pumped liquid:

Clean water without any abrasive or suspended solids

Liquid temperature +2°C to +40°C

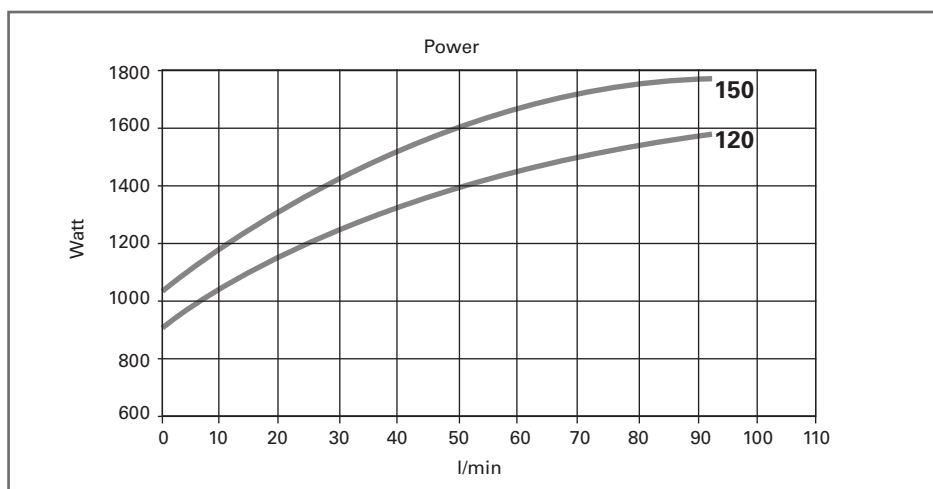
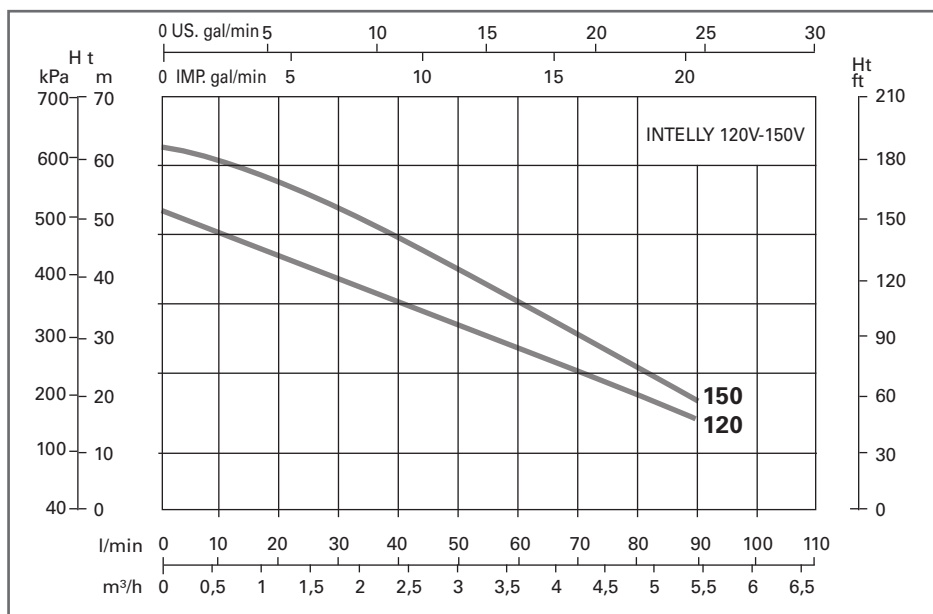
Air temperature Max +45°C

Materials

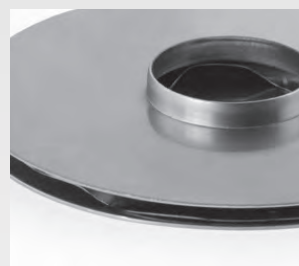
- Pump body and motor in AISI 304
- Brass and technopolymer motor support (flanges)
- Shaft in AISI 420
- Diffuser: Technopolymer Noryl
- Impeller: Stainless steel AISI 304
- Mechanical seal: ceramic / graphite
- A2 Bolts
- NBR70 O-ring
- ADB LIYY-HZO 10m Electric cable
- Inverter electronic board according to RoHS regulations
- Class F insulated motor
- Control box with display
- Plastic flow sensor
- Oil chamber on the mechanical seal

Code	P2 Nom.		1 ~ 50Hz Amp.	Stages	Q (l/m) FLOW								Stocked	Dimensions mm							Weight Kg
	kW	Hp			230 V	0	30	40	50	60	70	80		90	A	N	H	H1	N1	DNM	
			Total Hm in CA																		
INTELLY 120V	0,90	1,2	8,8	5	52	43	40	35	30	25	20	15	To order	570	210	394	90	116	1"¼	1"¼	18
INTELLY 150V	1,1	1,5	9,8	6	63	48	45	41	36	31	25	22	To order	570	210	394	90	116	1"¼	1"¼	19,5

Curves and performance $\eta = 2900 \text{ 1/min}$



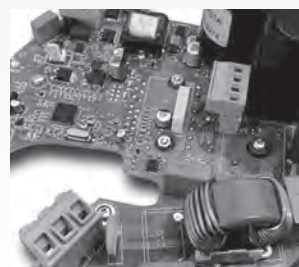
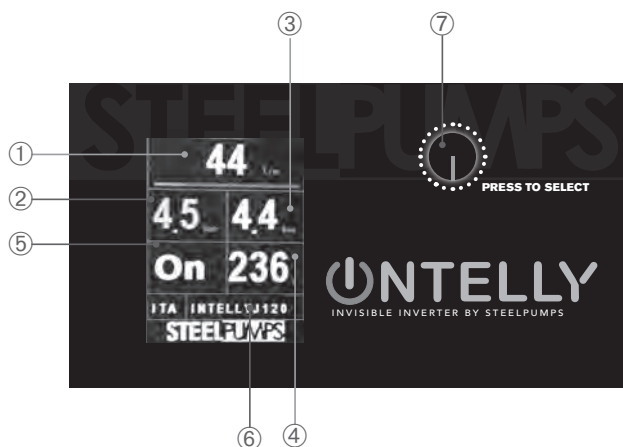
- Work value setting
- System diagnostic
- Historical memory
- Monitoring



Impeller Stainless Steel AISI 304



Technopolymer motor support



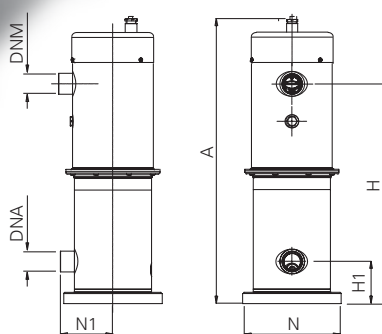
Electronic board

INTELLY 1204 - 1505 - 2006 V

Vertical multistage pump with integrated inverter control HIGH FLOW



External non-return
valve for easy
maintenance.



Description

INTELLY uses inverter technology, adjusting the speed of the pump motor to maintain a set pressure in the system even if the flow rate and water demand vary.

Reducing the motor speed also reduces power consumption and noise levels.

The pre-set pressure of the pump is adjusted on the intuitive and user-friendly display of the control unit.

If the pump is inactive for 72 hours, an anti-blocking cycle briefly runs to prevent any possible effects of long-term inactivity.

Accurate pressure and flow sensing allows INTELLY to rapidly detect and protect against dry-running.

Applications

- Domestic boosting
- Irrigation
- Water treatment plants
- Industrial washing
- Use of rainwater
- Depth max 5 m

Pumped liquid:

Clean water without any abrasive or suspended solids

Liquid temperature +2°C to +40°C

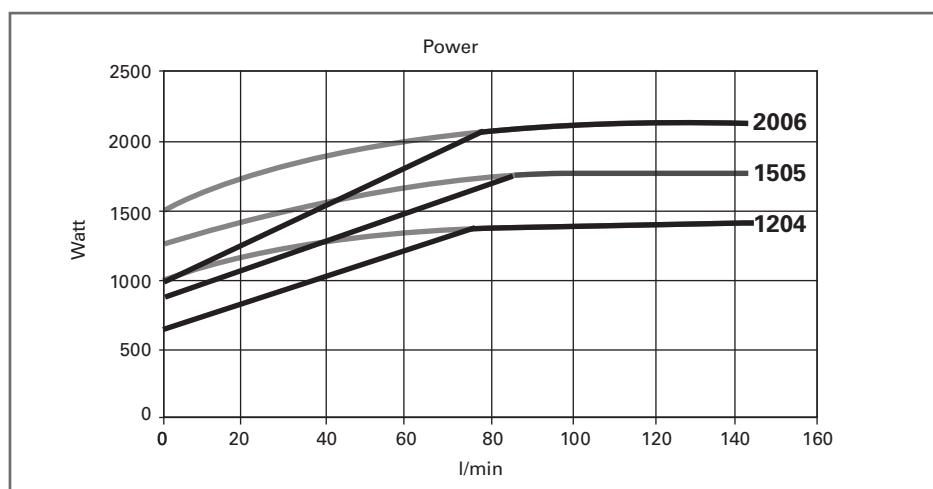
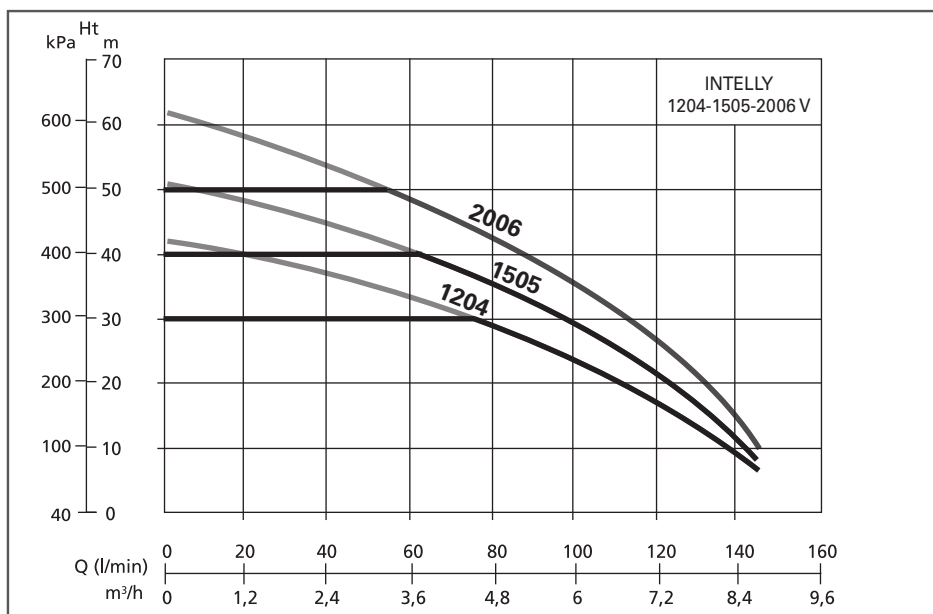
Air temperature Max +45°C

Materials

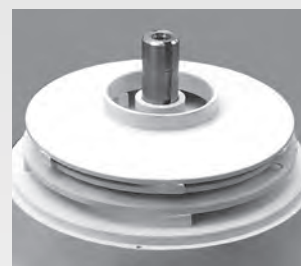
- Pump body and motor in AISI 304
- Brass and technopolymer motor support (flanges)
- Shaft in AISI 420
- Diffuser: Technopolymer Noryl
- Impeller: Technopolymer Noryl
- Mechanical seal: ceramic / graphite
- A2 Bolts
- NBR70 O-ring
- ADB LIYY-HZO 10m Electric cable
- Inverter electronic board according to RoHS regulations
- Class F insulated motor
- Control box with display
- Plastic flow sensor

Code	P ₂ Nom.		1 ~ 50Hz Amp.	Stages	Q (l/m) FLOW							Stocked	Dimensions mm							Weight Kg
	kW	Hp			230 V	0	30	50	70	100	120		145	A	N	H	H1	N1	DNM	
			Total Hm in CA																	
INTELLY 1204 V	0,90	1,2	8,8	4	43	38	34	30	24	16	6	To order	580	200	450	90	120	1"¼	1"¼	21
INTELLY 1505 V	1,10	1,5	9,8	5	51	46	43	38	30	21	9	To order	720	200	575	90	120	1"¼	1"¼	23
INTELLY 2006 V	1,50	2,0	12,5	6	62	55	51	45	34	24	10	To order	720	200	575	90	120	1"¼	1"¼	24

Curves and performance $n = 2900 \text{ 1/min}$



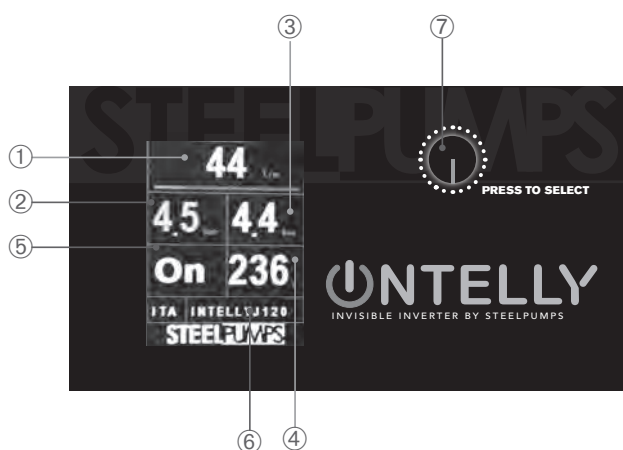
- Work value setting
- System diagnostic
- Historical memory
- Monitoring



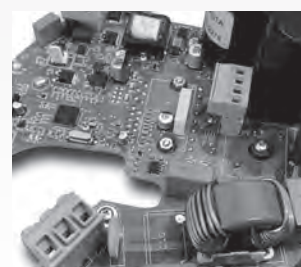
Technopolymer impeller



Technopolymer motor support



- 1 - Flow detected
- 2 - Pressure detected
- 3 - Set pressure (Fail Safe)
- 4 - Supply voltage
- 5 - Pump status
- 6 - Pump model
- 7 - Programming button



Electronic board

ACCESSORIES



Code	Description	Stocked
X20GYSD	Inline Cable Joiner IP68 (Colour: Grey)	YES



Code	Description	Stocked
X3JOIN	3-Way Cable Joiner IP68	YES



Code	Description	Stocked
0412125	Stainless Steel Mesh Strainer 1"	YES



Code	Description	Stocked
4000610	1" Floating Intake Filter (for submerged use) with 1m hose	YES
4000620	1" Floating Intake Filter (for submerged use) with 2m hose	YES
4000630	1" Floating Intake Filter (for submerged use) with 3m hose	YES

Many other sizes available



Code	Description	Stocked
MPM0206GB0	Float switch with PVC electric cable 2 m	YES
MPM0306GB0	Float switch with PVC electric cable 3 m	To order
MPM0506GB0	Float switch with PVC electric cable 5 m	YES
MPM1006GB0	Float switch with PVC electric cable 10 m	YES
MPM1506GB0	Float switch with PVC electric cable 15 m	YES
MPM2006GB0	Float switch with PVC electric cable 20 m	YES

Other Float switch types and cable types available



Code	Description	Stocked
XNRV	Technopolymer non-return valve 1"	YES
01PCP107C	Technopolymer non-return valve 1" ¼	YES



Code	Description	Stocked
XHANDLE	Technopolymer carrying handle	YES



Code	Description	Stocked
	Pressure Vessels various sizes/orientations	YES

CONVERSION DATA

Reduction of capacity
with temperature

Temperature °C	Head Loss mwc*
20	0.20
30	0.40
40	0.75
50	1.20
60	1.90
70	3.10
80	4.70
90	7.10
100	10.32

Reduction of capacity
with altitude

Altitude (m)	Head Loss mwc*
0	0.00
500	0.60
1000	1.15
1500	1.70
2000	2.20
2500	2.65
3000	3.20
3500	3.60

*mwc - metres water column

Pressure Conversions

Bar	Metres water	Kilopascal kPa	Megapascal mPa	Pounds per square inch psi
1.000	10.200	100.000	0.100	14.504
0.098	1.000	9.804	0.010	1.422
0.010	0.102	1.000	0.001	0.145
10.000	101.998	1000.000	1.000	145.038
0.069	0.703	6.895	0.007	1.000

Volumetric Flow rate

Litres/second l/s	Litres/minute l/m	Cubic metres per hour m ³ /hr	Cubic feet per minute CFM	Gallons per minute (imperial) GPM
1	60	3.6	127.133	13.2
0.017	1	0.06	0.0353	0.22
0.278	16.667	1	0.5886	3.666
0.472	28.317	1.699	1	6.229
0.076	4.546	0.2728	0.1605	1

INGRESS PROTECTION (IP) RATINGS

1st Digit	Definition	Test Requirement	2nd Digit	Definition	Test Requirement
0	No Protection	None	0	No Protection	None
1	Any large surface of the body, such as the back of a hand, but no protection against deliberate contact with a body part	>50 mm	1	Dripping water (vertically falling drops) shall have no harmful effect.	Test duration: 10 minutes Water equivalent to 1 mm rainfall per minute
2	Fingers or similar objects	>12.5 mm	2	Vertically dripping water shall have no harmful effect when the enclosure is tilted at an angle up to 15° from its normal position.	Test duration: 10 minutes Water equivalent to 3 mm rainfall per minute
3	Tools, thick wires, etc.	>2.5 mm	3	Water falling as a spray at any angle up to 60° from the vertical shall have no harmful effect.	Test duration: 5 minutes Water volume: 0.7 litres per minute Pressure: 50–150 kPa
4	Most wires, slender screws, ants etc.	>1 mm	4	Water splashing against the enclosure from any direction shall have no harmful effect.	Test duration: 5 minutes Water volume: 10 litres per minute Pressure: 50–150 kPa
5	Ingress of dust is not entirely prevented, but it must not enter in sufficient quantity to interfere with the satisfactory operation of the equipment.	Dust protected	5	Water projected by a nozzle (6.3 mm) against enclosure from any direction shall have no harmful effects.	Test duration: at least 3 minutes Water volume: 12.5 litres per minute Pressure: 30 kPa at distance of 3 m
6	No ingress of dust; complete protection against contact (dust tight)	Dust tight	6	Water projected in powerful jets (12.5 mm nozzle) against the enclosure from any direction shall have no harmful effects.	Test duration: at least 3 minutes Water volume: 100 litres per minute Pressure: 100 kPa at distance of 3 m
The declared IP rating of a product demonstrates compliance with the standards on this page. Please note the limited time duration of tests below IP68. The suitability of devices with protection level below IP68 for outdoor installation will vary depending on exposure and installed location. Devices and connections installed within tank turrets or in drainage systems (permanent condensing humidity) should be IP68 or higher, the same as for continuous immersion. All submerged devices may be immersed only within the limits stated by the manufacturer.			6K	Water projected in powerful jets (6.3 mm nozzle) against the enclosure from any direction, under elevated pressure, shall have no harmful effects.	Test duration: at least 3 minutes Water volume: 75 litres per minute Pressure: 1000 kPa at distance of 3 m
			7	Ingress of water in harmful quantity shall not be possible when the enclosure is immersed in water under defined conditions of pressure and time (up to 1 m of submersion).	Test duration: 30 minutes Tested with the lowest point of the enclosure 1000 mm below the surface of the water, or the highest point 150 mm below the surface, whichever is deeper.
			8	The equipment is suitable for continuous immersion in water under conditions which shall be specified by the manufacturer. However, with certain types of equipment, it can mean that water can enter but only in such a manner that it produces no harmful effects.	Test duration: continuous immersion in water Depth specified by manufacturer, generally up to 3 m
			9K	Protected against close-range high pressure, high temperature spray downs.	Test duration: - Water volume: 14–16 litres per minute Pressure: [8000–10000 kPa / 80–100 Bar] at distance of 0.1–0.15 m Water temperature: 80 °C

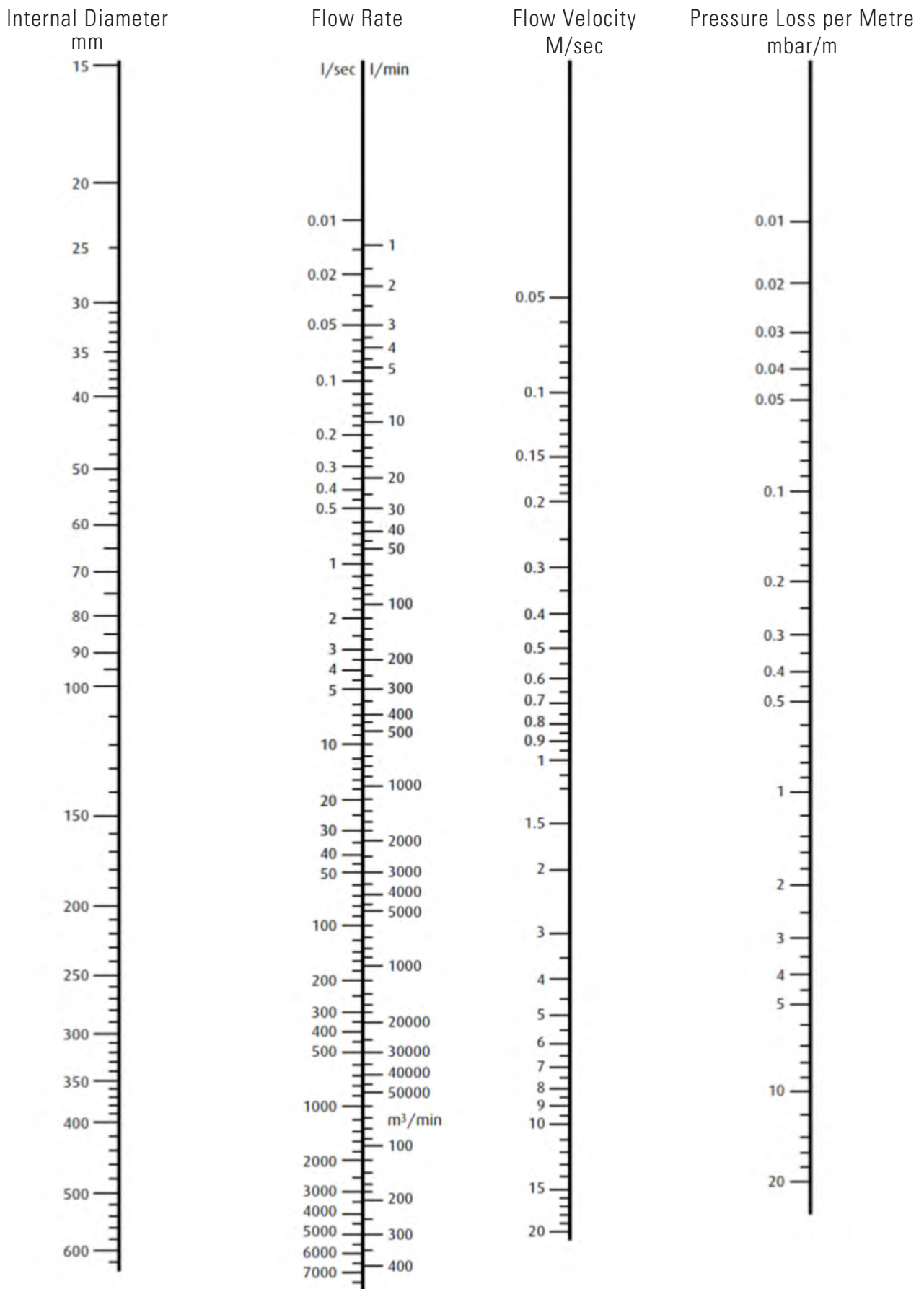
PRESSURE LOSSES

m³/h	l/min	Nominal diameter																	
			1/2"	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	4"	5"	6"	7"	8"	10"	12"	14"	16"
		mm	15,8	21,3	27	35,8	41,3	52,5	68	80,3	105	130	155	175	206	250	300	350	400
0,6	10	v hr	0,86 9,40	0,47 2,19	0,29 0,68	0,17 0,17	0,12 0,09												
0,9	15	v hr	1,28 19,9	0,70 4,63	0,44 1,44	0,25 0,37	0,19 0,18												
1,2	20	v hr	1,71 33,9	0,94 7,88	0,58 2,46	0,33 0,63	0,25 0,31	0,15 0,10											
1,5	25	v hr	2,14 51,2	1,17 11,9	0,73 3,71	0,42 0,95	0,31 0,47	0,19 0,15											
1,8	30	v hr	2,57 71,76	1,41 16,69	0,87 5,20	0,50 1,32	0,37 0,66	0,23 0,20											
2,1	35	v hr	2,99 95,4	1,64 22,2	1,02 6,91	0,58 1,76	0,44 0,88	0,27 0,27											
2,4	40	v hr		1,88 28,4	1,16 8,85	0,66 2,26	0,50 1,12	0,31 0,35	0,18 0,10										
3	50	v hr		2,35 42,9	1,46 13,4	0,83 3,41	0,62 1,70	0,38 0,52	0,23 0,15										
3,6	60	v hr		2,82 60,2	1,75 18,7	1,00 4,78	0,75 2,38	0,46 0,74	0,28 0,21										
4,2	70	v hr		3,29 80,0	2,04 24,9	1,16 6,35	0,87 3,16	0,54 0,98	0,32 0,28										
4,8	80	v hr		3,76 102	2,33 31,9	1,33 8,13	1,00 4,05	0,62 1,25	0,37 0,36										
5,4	90	v hr		2,62 39,7	1,49 10,1	1,12 5,04	0,69 1,56	0,41 0,44	0,30 0,20										
6	100	v hr		2,91 48,2	1,66 12,3	1,25 6,12	0,77 1,89	0,46 0,54	0,33 0,24										
7,5	125	v hr		3,64 72,9	2,08 18,6	1,56 9,25	0,96 2,86	0,57 0,81	0,41 0,36										
9	150	v hr				2,49 26,0	1,87 13,0	1,15 4,00	0,69 1,14	0,49 0,51	0,29 0,14								
10,5	175	v hr				2,91 34,6	2,18 17,2	1,35 5,33	0,80 1,51	0,58 0,67	0,34 0,18								
12	200	v hr				3,32 44,3	2,49 22,1	1,54 6,82	0,92 1,93	0,66 0,86	0,38 0,23								
15	250	v hr				4,15 66,9	3,12 10,3	1,92 2,92	1,15 1,30	0,82 1,30	0,48 0,35	0,31 0,12							
18	300	v hr					3,74 46,7	2,31 14,4	1,38 4,10	0,99 1,83	0,58 0,49	0,38 0,17							
24	400	v hr					4,99 79,6	3,08 24,6	1,84 6,97	1,32 3,11	0,77 0,84	0,50 0,30	0,35 0,13						
30	500	v hr					6,24 120	3,85 37,1	2,29 10,5	1,65 4,70	0,96 1,27	0,63 0,45	0,44 0,19						
36	600	v hr						4,62 52,0	2,75 14,8	1,98 6,59	1,15 1,78	0,75 0,63	0,53 0,27	0,42 0,15					
42	700	v hr						5,39 69,2	3,21 19,60	2,31 8,76	1,35 2,37	0,88 0,84	0,62 0,36	0,49 0,20					
48	800	v hr						6,16 88,6	3,67 25,1	2,64 11,2	1,54 3,03	1,00 1,07	0,71 0,45	0,55 0,25					
54	900	v hr						6,93 110	4,13 31,3	2,97 14,0	1,73 3,77	1,13 1,33	0,79 0,57	0,62 0,31					
60	1000	v hr						4,59 38,0	3,30 17,0	1,92 4,58	1,26 1,62	0,88 0,69	0,69 0,38	0,50 0,17					
75	1250	v hr						5,74 57,4	4,12 25,6	2,41 6,92	1,57 2,45	1,10 1,04	0,87 0,57	0,63 0,26					
90	1500	v hr						6,88 80,4	4,94 35,9	2,89 9,69	1,88 3,43	1,32 1,45	1,04 0,81	0,75 0,36					
105	1750	v hr						8,03 107	5,77 47,7	3,37 12,9	2,20 4,56	1,55 1,93	1,21 1,07	0,88 0,48					
120	2000	v hr						6,59 61,1	3,85 16,5	2,51 5,83	1,77 2,48	1,39 1,37	1,00 0,62	0,68 0,24					
150	2500	v hr						8,24 92,4	4,81 24,9	3,14 8,82	2,21 3,74	1,73 2,07	1,25 0,94	0,85 0,36					
180	3000	v hr							5,77 34,9	3,77 12,4	2,65 5,24	2,08 2,90	1,50 1,31	1,02 0,51	0,71 0,21				
210	3500	v hr							6,74 46,5	4,39 16,4	3,09 6,98	2,43 3,86	1,75 1,75	1,19 0,68	0,83 0,28				
240	4000	v hr							7,70 59,5	5,02 21,0	3,53 8,93	2,77 4,94	2,00 2,23	1,36 0,87	0,94 0,36				
300	5000	v hr							6,28 31,8	4,42 13,5	3,46 7,47	2,50 3,38	1,70 1,32	1,18 0,54					
360	6000	v hr							7,53 44,5	5,30 18,9	4,16 4,73	3,00 2,04	2,04 1,41	1,41 0,76					
420	7000	v hr							6,18 25,1	4,85 13,9	3,50 6,29	2,38 2,45	1,65 1,01	1,21 0,48					
480	8000	v hr							7,07 32,2	5,54 17,8	4,00 8,06	2,72 3,14	1,89 1,29	1,39 0,61					
540	9000	v hr							7,95 40,0	6,24 22,2	4,50 10,0	3,06 3,90	2,12 1,61	1,56 0,76	1,19 0,40				
600	10000	v hr											6,93 26,9	5,00 12,2	3,40 4,74	2,36 1,95	1,73 0,92	1,33 0,48	

For 100 m of straight new galvanized steel piping
 v (m / s) = water speed
 Other materials:
 x1.4 cast iron
 x0.8 stainless steel
 x0.7 aluminum
 x0,65 pvc - pe

m equivalent	Nominal diameter mm											
	25	32	40	50	65	80	100	125	150	200	250	300
Gate valve	-	-	0,3	0,3	0,3	0,6	0,6	0,9	1,2	1,5	1,8	-
Non-return valve	1,5	2,1	2,7	3,3	4,2	4,8	6,6	8,3	10,4	13,5	16,5	19,5
Curve 45°	0,3	0,3	0,6	0,6	0,9	0,9	1,2	1,5	2,1	2,7	3,3	3,9
Curve 90°	0,6	0,9	1,2	1,5	1,8	2,1	3	3,6	4,2	5,4	6,6	8,1

PRESSURE LOSS NONOGRAM



SYSTEM DESIGN NOTES

PRESSURE LOSS IN PIPES

Pipe length, internal diameter, roughness of the pipe surface, number and type of fittings and orifices, and water temperature, all cause friction between the flow medium and the pipe itself. The greater the friction, the more pressure is needed to overcome it in order to maintain the intended flow rate.

Precise calculation of friction loss is usually achieved via software, however in most circumstances an estimation of friction loss will suffice. The chart on the pages 68 and 69 allows for estimation of friction losses in common pipe diameters. Simply place a ruler so that it intersects the pipe diameter and desired flow rate (the first 2 vertical scales), the flow velocity and pressure loss resulting will now be indicated where they intersect the ruler. You can now multiply the pressure loss in mbar by the length of pipe.

Note – remember to also add 0.1 bar of pressure loss per m of vertical lift. If the pump is drawing water from beneath by suction, this is much harder for a centrifugal pump and reduces pump output capacity by roughly 0.5 bar per vertical metre of suction.

Efficiency of Pumps

Automatic pumps are designed to supply pressurised water directly to appliances. Remember that the pump will run at full power until there is no more demand for flow to the outlet. Ideally toilets and header tanks supplied by an automatic pump via a float valve (ballcock) should utilise the more modern diaphragm or 'quick stop' type valves. Old style brass float valves will result in the pump spending most of it's time pumping against an ever decreasing orifice, which is inherently inefficient.

Efficiency and longevity can both be greatly enhanced by the addition of a pressure vessel between the pump and the appliances it is supplying. The larger the vessel the greater the improvement in efficiency.

ELECTRICAL NOTES

Most of our pumps are supplied with a 1mm flex cable, at a length of 10m. If longer cables are to be used, attention must be given to the necessary voltage drop calculations, and the correct cable chosen accordingly.

Electrical junctions, isolators, plugs, and fittings within a water tank, well or other wet area must be suitably protected against water ingress, even if non submerged. The humidity and vapour pressure inside a tank turret are constant, and far exceed the conditions faced by ordinary outdoor enclosures.

Float switches are intended to switch electrical loads near the appliance. Switching of loads over long cable runs can be problematic due to the limited size of the cable supplying most float switches. It is therefore recommended that a relay or contactor be used to switch the load at the point of supply.

During startup, inrush current often exceeds 5x the rated current draw of the pump. Designs for off-grid use systems must take this into account. Additionally a typical power factor of 0.9 should be considered.

Incorrect phase rotation of 3 phase pumps will of course result in their running backwards.

Overcurrent and Residual Current Protection should be used to supply any pump system, ideally on a separate circuit. We recommend Type C overcurrent and 30mA residual current protection. An RCD trip is usually indicative of a phase to earth fault. Circuit protective conductors (earth) must be connected and verified throughout any pump installation (submerged plastic tanks are effectively insulated pools, with no natural fault path to ground).

Remember that outdoor tank and pump installations should be inspected with only correctly rated test equipment due to their position outside of the building envelope.

Anti-Blocking System

Brief periodic activation of pumps, solenoids or motorised valves to prevent either jamming of pump shafts due to lubricant settlement and valves due to limescale, corrosion or contaminants.

Autoclave

Pressure switch (alternative word)

Automatic Pump

Automatic pumps contain their own electronic control system designed to shut off the pump when a tap or outlet valve is closed and restart it when opened. They can be left permanently energised and will pump only when water is required. The control system senses both pressure and flow to control its operation.

Note that this term is also sometimes used to describe a drainage pump with built-in float switch.

Centrifugal Pump

The majority of pumps used for moving water in domestic and commercial buildings are centrifugal, consisting of an induction motor whose rotor shaft is directly fixed to an impeller. Water enters the centre of the impeller and is thrown outwards by shaped vanes causing fluid to exit the pump under flow and pressure. Suction is then created at the inlet by evacuation.

Condenser

Capacitor (alternative word).

Diffuser

A static (non-moving) plate containing steeply angled vanes surrounding the impeller of a pump, altering the flow of water to create increased pressure. The majority of general purpose and pressure boosting centrifugal pumps contain a diffuser.

Duty Assist

An arrangement of 2 or more pumps in which pumps are set to start at different pressures, to enable both pumps to work together when a substantial demand for water (drop in pressure) is detected. Duty Assist systems usually operate a Duty Standby function as well.

Duty Standby

An arrangement of two or more pumps in which only one pump at a time is used. The pump used may alternate by start-up or by timing. In the event of a pump failure the failed pump is isolated and the duty changes over to the remaining pump(s).

Float Switch

An electrical switch which floats on the end of a cable and switches depending on its angle. Often found on drainage pumps to produce automatic operation.

Floating Intake

A short length of intake hose with a strainer and float ball mounted at the far end to suspend the strainer just beneath the surface of the water. A normal fitment in rainwater installations to minimise the intake of debris.

Inox

Stainless Steel (Alternative word – European), as in “Inoxidisable”.

IP Rating

A standard rating for devices specifying ingress protection from dirt, water and objects. The first digit denotes protection from dirt and solid objects, the second digit is the protection against water entry. A full chart of IP ratings is shown at the end of this catalogue.

GLOSSARY

Jet Pump

A jet pump is a centrifugal impeller/diffuser pump which includes a venturi situated within the inlet. Some of the pumped water is recirculated and passes through the venturi at high velocity, creating increased suction. Jet pumps are well suited to surface mounting above a well or water tank.

Leak Detection

Monitoring of the startup intervals of a pump to determine the likely presence of a leak and to effect a subsequent shutdown of the pump, if necessary.

Manometer

Pressure Gauge (Alternative word)

Pressure Vessel/Expansion Vessel

A steel cylinder with a water connection at one, an air valve at the other, and a flexible membrane in between. Pre-charged on one side of the membrane with compressed gas the membrane fills the tank. The other side of membrane fills with water [from the system] and compresses the gas inside. Used with pressure-based pump controllers and automatic pumps to store pressurized water, increasing efficiency, prolonging pump life, and providing smoother and more precise operation.

Self-Priming

Refers either to pumps which are designed so as to automatically evacuate air when submerged (typically vortex drainage pumps) and so can be started without manually filling with water, or pumps with a jet assisted intake providing improved suction. Self-priming does not mean an empty pump will suck water up through the inlet hose, installations of that type will still need to be initially primed.

Single/Multistage

Single stage pumps contain a single impeller/diffuser set, Multistage pumps contain several, each set being a Stage, with the flow exiting the diffuser of one stage and passing into the centre of the impeller of the next stage. Multistage pumps have increased performance.

Technopolymer

Plastic (often polypropylene) mechanically strengthened with fibres. Very strong and able to be moulded precisely. Used to create cost-effective parts where cast metals would otherwise be needed.

NRV

Non-return valve, a.k.a. Backflow valve. Allows water to flow in one direction only, essential to the operation of all automatic pumps and most pressure-based control systems based on centrifugal pumps.

Venturi

A pump inlet component into which a small amount of the pumped water is recirculated, entering in the direction of flow at high velocity creating a venturi effect (suction). Pumps with a venturi are also often known as Jet Pumps.

VFD/VSD/Inverter Drives

A type of multi-point pressure control which varies the speed of the motor by re-inverting the power supply at varying speeds. Variable speed pump controllers provide high efficiency as well as a soft-start function. Losses are incurred by power conversion making these solutions less efficient than other methods at full speed, particular attention should be given to correct sizing of the pump.

GENERAL SALES CONDITIONS

TERMS AND CONDITIONS OF TRADING:

Available on request.

WARRANTY:

SteelPumps are warranted for two years against materials and manufacturing defects from the date of purchase. The warranty is not valid if the pump has been disassembled in any way.

The warranty does not cover malfunctioning due to a failure to properly install and commission the pump in accordance with the installation instructions. Correct installation is vital in the case of automatic pumps which will run excessively if the pressure drops.

The warranty is limited to the repair, replacement or cost of replacement of the product and does not cover inconvenience or consequential losses. We do not guarantee continuity of operation of any product under any circumstances.



3P Technik UK
WATER MANAGEMENT

STORMWATER TREATMENT
RAINWATER HARVESTING
PUMPS & CONTROLLERS
GARDEN TANKS

STEELPUMPS
E V O L U T I O N



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