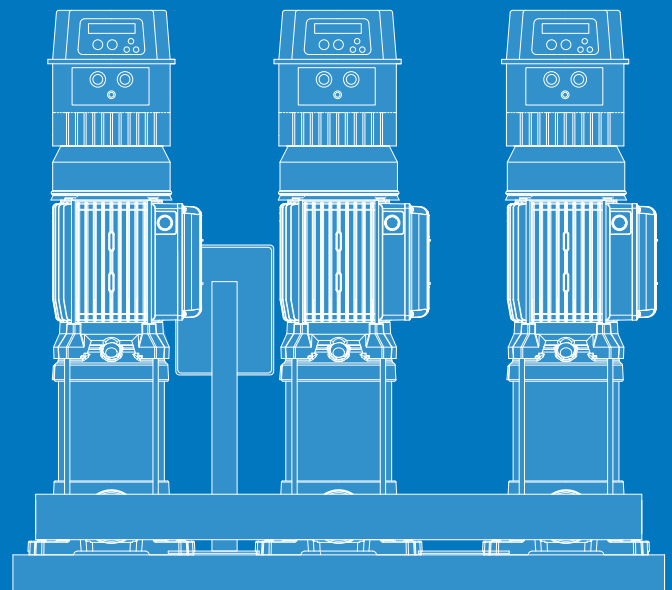
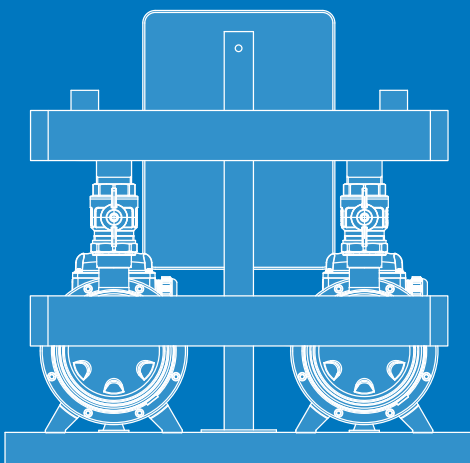




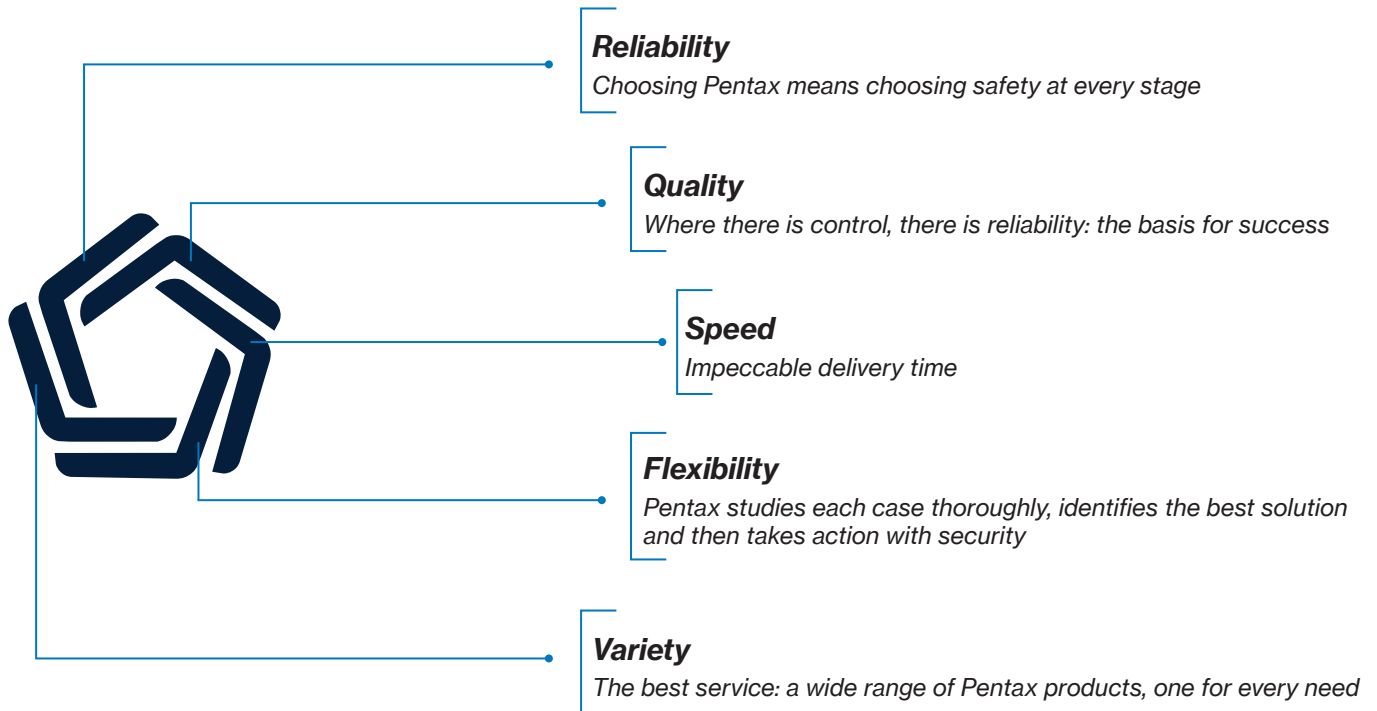
2-3 UNITS BOOSTER SETS

50Hz

Technical Catalogue



VALUES



COMPANY WITH QUALITY, ENVIRONMENT, HEALTH AND SAFETY MANAGEMENT SYSTEMS

UNI EN ISO 9001: Certificate No. 50 100 3634

UNI EN ISO 14001: Certificate No. 50 100 12552

UNI ISO 45001: Certificate No. 50 100 14960

Where there's water there's Pentax

30 years of made in Italy



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BOOSTING SYSTEMS

High performance pressure-boosting systems

Control panel or variable speed drives

All pumps are set and controlled by a control panel and pressure switches or by frequency drivers.

Suction and delivery manifolds

The pumps are connected in parallel through manifolds with shut-off-valves and check valves.

In the standard version, the manifolds are made of galvanized steel. They can be supplied in AISI 304 on request.



VERSION

- Fixed speed
- Variable speed

Pump specification	
Flow	up to 345 m ³ /h
Head	up to 240 m
Start up	direct, star/delta, inverter
Power supply voltage	1- 230V 50Hz 3- 400V 50Hz
Ambient temperature at nominal load	max 40° C
Type of pumped liquid	clean, free of solids and abrasive substances, non-viscous and non-aggressive
Temperature of pumped liquid	-15° C to +120° C (depends on the pump model)



Suitable for various application



Domestic, industrial systems



Irrigation, gardening, sprinklers



Water distribution, pressure boosting



Industrial cooling HVAC systems



Easy installation

All booster sets are hydraulically and electrically assembled, tested and pre-set ready to install for fast and easy commissioning.

In the standard version, check valves are mounted on the suction manifold. On request, they can be installed on the delivery manifold.

Common skid

The pumps are fixed on a galvanized steel base.

BOOSTER SETS

- Two or three identical electric pumps coupled in parallel by manifolds, shut-off valves, check valves and fixed on a single base
- The pumps are controlled by an electronic or electromechanical panel which automatically starts and stops the electric pumps based on the pressures set on the pressure switches

BOOSTER SETS + VSD

- Two or three identical electric pumps coupled in parallel by manifold, shut-off valves, check valves and fixed on a single base
- The pumps are controlled by variable speed drives EPIC, EPIC-A or IPFC
- The variable speed drives, one installed on each pump, modulate the operating frequency in order to maintain the set pressure constant

Basics

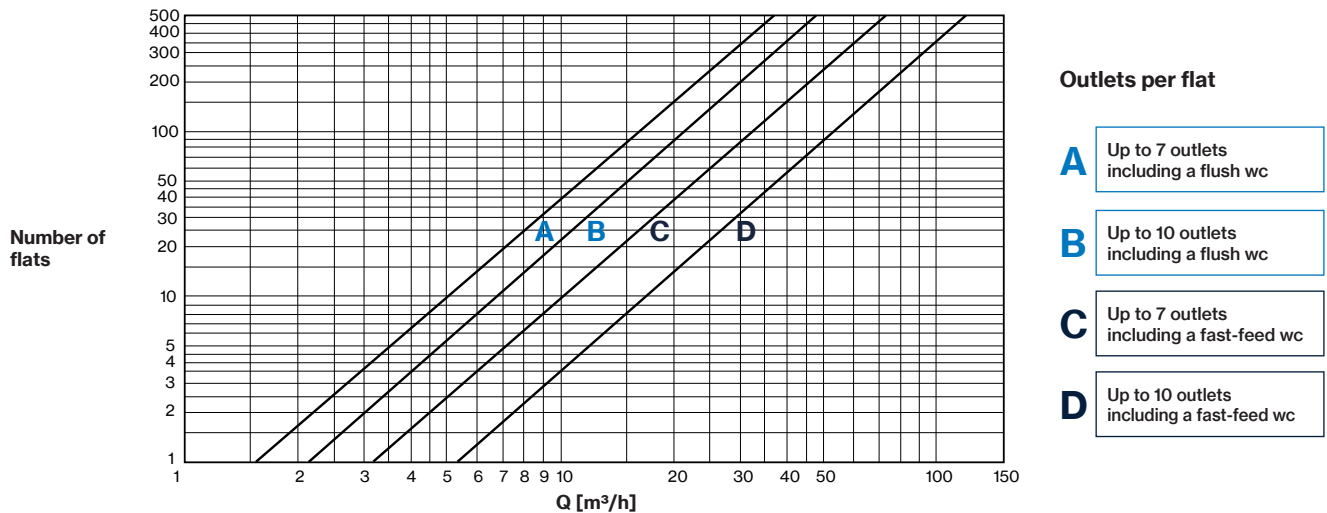
Booster systems may be designed in several different ways depending on local legislation, traditional practices, requirements, etc. For example, for a high-rise building a "zone-divided booster system" would be more efficient than other systems. See the most common booster *System layout* in the appendix of this catalogue.

Our fixed speed BOOSTER SET and variable speed BOOSTER SET+VSD are the ideal solution to ensure automatic pressure boosting in many applications, in particular for residential and commercial installations where the mains water pressure is not sufficient to cover top floors. The normal specifications are that the pressure on each floor does not fall below 1.5 bar and does not exceed 4.5 bar. To equalize pressure on all floors, pressure reduction valves are often used in the lower part of the systems in multistory buildings. In some countries, it is not permitted to install booster sets directly on the public water supply: a storage tank must be placed upstream the booster set to ensure a regular supply to the pumps and to prevent water from being pressed back to the water main.

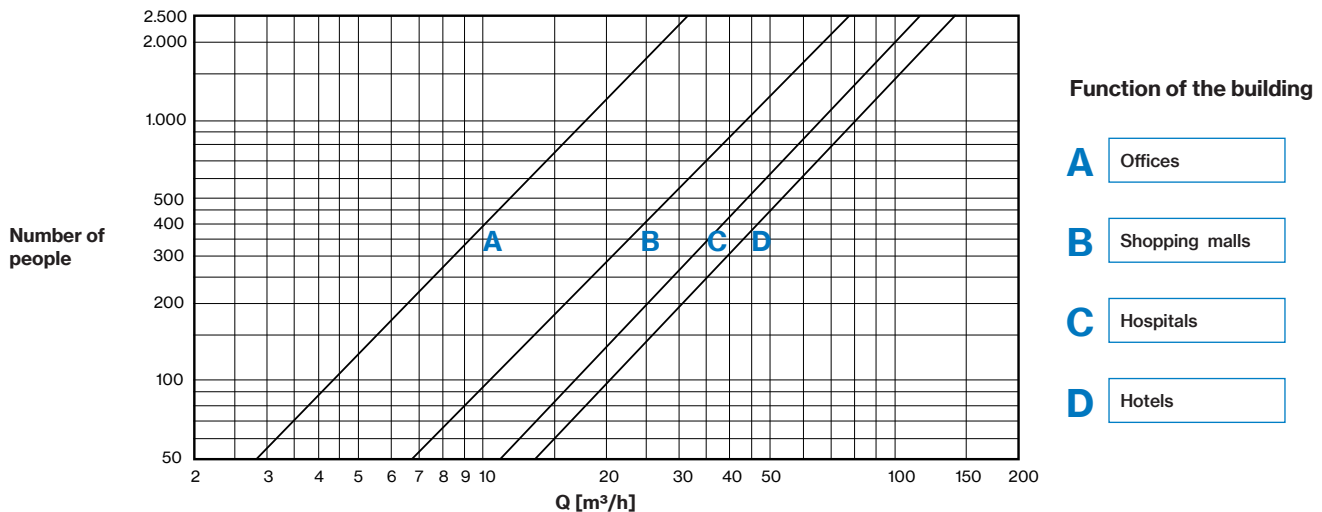
When sizing a booster set the following basic hydraulic elements and fundamental calculations need to be taken into consideration.

The flow rate Q required in the system

For residential buildings the flow rate can be estimated by the number of flats and outlets.

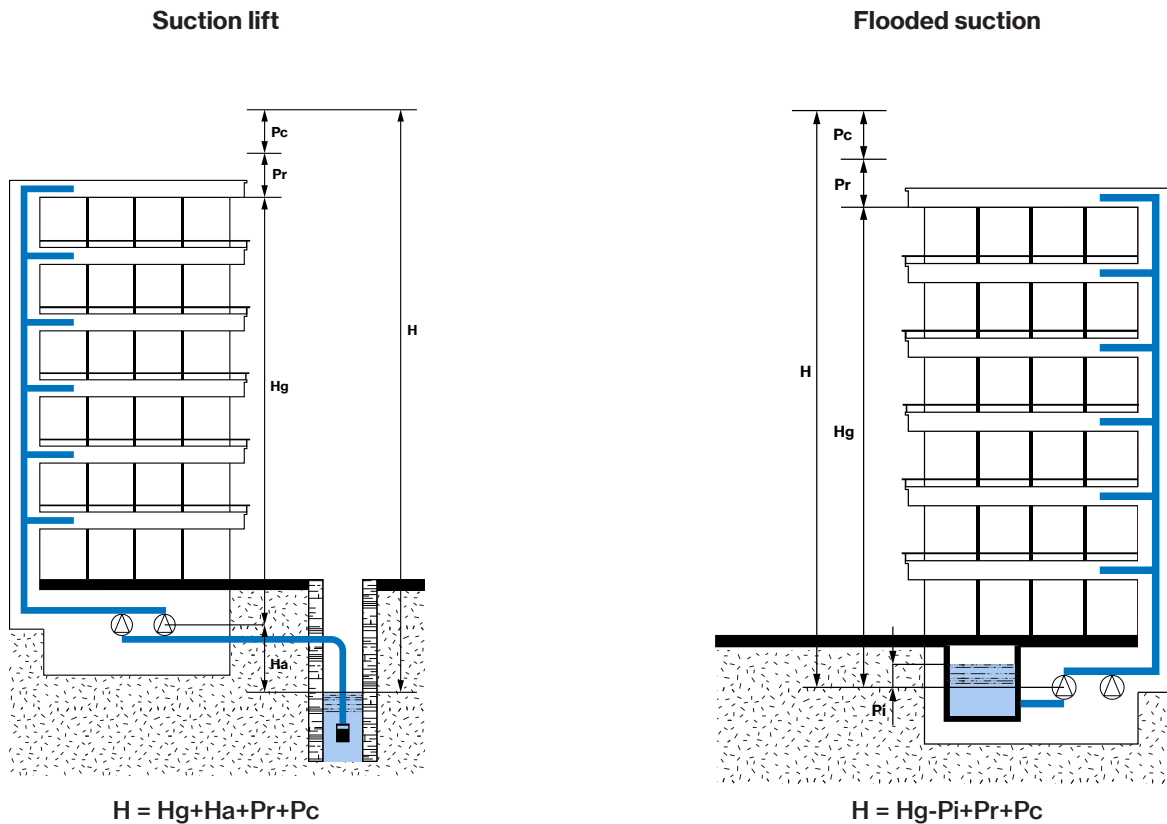


For other buildings the flow rate is based on the average number of people and the intended function of the building.



The pressure required H (head) in the system

There are a few factors that go into the determination of the pressure required from a booster set and the formula to calculate it depends on whether we have suction lift or flooded suction.



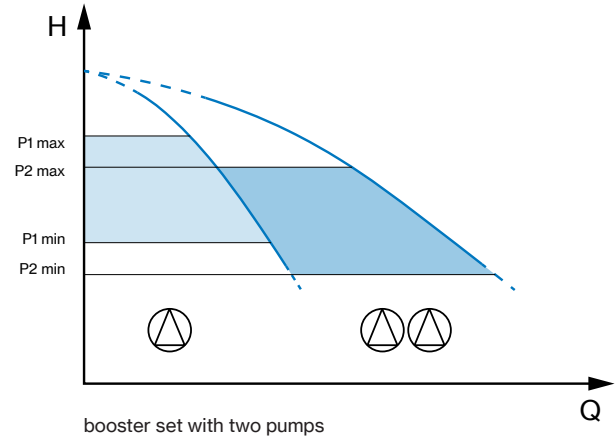
- [H] total head (m)
- [H_g] geodetic head to the highest outlet (m)
- [H_a] suction lift (m)
- [P_i] initial pressure (m)
- [P_r] residual pressure at the highest outlet (not less than 15m)
- [P_c] head loss (can be assumed 20% of H_g, or 0.5 m per floor for new systems and 1.5 m per floor for old systems)

Number of pumps required

An opportunity to achieve an energy cost saving is by splitting the flow rate between two or more pumps instead of installing a single pump. For example, this is recommended for residential buildings with demand spikes in the morning and evening: when services are used the most, all the pumps in the booster set will turn on. During quiet period only one pump is activated instead. A backup pump can be added to ensure continuity of water service either for maintenance or failure of the duty pumps.

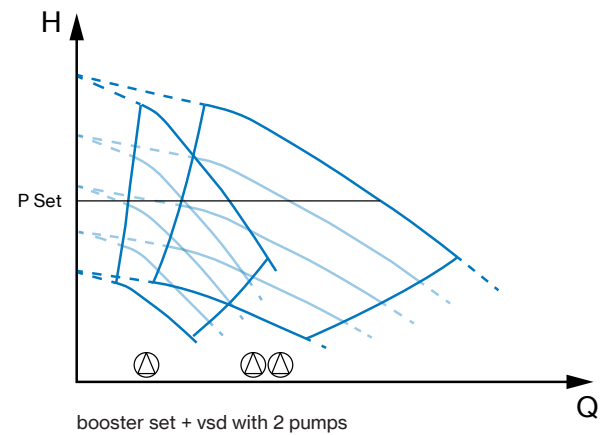
Type of control required

The fixed speed booster set is available for specific applications such as filling a water tank at a constant rate. The recommendation is to select a pump model where the maximum pressure required is slightly left-hand side in the pump curve.



The variable speed booster set has been designed as a cost effective solution for residential properties and commercial applications in order to keep the pressure constant and to minimize the power consumption during periods of reduced demands. The pressure is detected by the sensors and continuously transmitted to the variable speed drives (VSD).

When selecting a BOOSTER SET+VSD a pump should be chosen such that the flow rate required is slightly to the right-hand side of the pump curve.



For operation principal of fixed and variable speed control mode check the technical appendix at page 148

Pressure tank

In water systems the function of the pressure tank is to compensate for small water consumption or leakages and maintain pressure when the pump is stopped, thus avoiding excessively frequent start/stop cycles. It is of fundamental importance to correctly choose the volume and the pre-charge pressure of the pressure tank, as they are different between constant-speed and variable-speed booster sets.

For volume and pre-charge pressure check the technical appendix at page 149



Control panels and variable speed drives

EQ2SM(T)-EQ3SM(T)

Fixed speed 2-3 pumps DOL



Electronic control panel for two pumps DOL (1~ up to 2.2kW or 3~ up to 15kW).

TYPE		VERSION	A	POWER	
2 pumps	3 pumps			HP	kW
EQ2SM	EQ3SM	1~	0-18	0,5-3	0,37-2,2
EQ2SMT 10	EQ3SMT 10	3~	0-18	0,75-10	0,55-7,5
EQ2SMT 15	EQ3SMT 15	3~	16-25	10-15	7,5-11
EQ2SMT 20	EQ3SMT 20	3~	16-32	15-20	11-15

FEATURES

- Single-phase version 100-240Vac 50/60Hz
- Three-phase version 310-450Vac 50/60Hz
- LCD display for voltage, current, power factor, hours of operation, number of starts, motor status, alarms, analogue signal and thresholds
- AUTOMATIC - 0 - MANUAL operation buttons
- Voltage and current minimum and maximum electronic control, failure or incorrect phase sequence control on power supply input
- Programmable anti-seize autotest
- Dry running protection through level probes/ floats/ pressure switches and minimum current
- Up to 6 control inputs: floats/pressure switches
- Input for 4-20 mA or 0-10V analogue signal
- Analogue signal cm - m - bar
- Emergency start and stop inputs with analogue signal
- Clickson thermal pad inputs with automatic reset
- Inversion of inputs (from normally open to normally closed)
- Activation delay from mains return
- Manual button operation (fixed or pulse)
- Programmable alarms for voltage, levels, motor overload, minimum motor current, clicson, output contacts, starts/hour
- Automatic reset for minimum current alarm with 4 programmable times
- Auxiliary and motor protection fuses, isolator protection, duty standby protection
- ABS box IP55. Metallic box IP55 for EQ3SMT
- Duty-standby and motor changeover in the case of a fault for two-pump and three-pump control panels
- Capacitors included for single-phase version



Electronic-mechanical control panel for star-delta start-up of two or three pumps (3- from 2.2kW to 220kW).

TYPE		A	POWER	
2 pumps	3 pumps		HP	kW
Q2ST 3	Q3ST 3	8,5	3	2,2
Q2ST 5	Q3ST 5	13	5,5	4
Q2ST 7	Q3ST 7	15	7,5	5,5
Q2ST 10	Q3ST 10	17	10	7,5
Q2ST 15	Q3ST 15	24	15	11
Q2ST 20	Q3ST 20	31	20	15
Q2ST 25	Q3ST 25	38	25	18,5
Q2ST 30	Q3ST 30	50	30	22
Q2ST 40	Q3ST 40	60	40	30
Q2ST 50	Q3ST 50	75	50	37
Q2ST 60	Q3ST 60	100	60	45
Q2ST 75	Q3ST 75	124	75	55
Q2ST 100	Q3ST 100	135	100	75
Q2ST 125	Q3ST 125	155	125	92
Q2ST 150	Q3ST 150	200	150	110
Q2ST 180	Q3ST 180	241	180	132
Q2ST 220	Q3ST 220	300	220	162
Q2ST 300	Q3ST 300	410	300	220

FEATURES

- Power supply 3×400V - 50/60Hz
- 24V transformer for auxiliary circuit
- Low voltage inputs and circuits
- Blue mains supply LED
- Green motor running LED
- Red motor overload alarm LED
- Star/delta line contactors in AC3
- Auxiliary and motor protective devices with fuses
- Main door interlock switch disconnecter
- Metal box (whole range)

Q2ST VERSION

- 2 Normally open contacts for start
- 2 Normally open contacts for minimum level/pressure contact
- 2 Selectors for Auto-Off-Manual (stable) operation:
 - Manual: direct operation without controls
 - Automatic: operation controlled by min input and start input
- 2 Green led indicating motor running
- 2 Red led indicating motor overload
- 2 Line, star and delta contactors in AC3
- 2 Overload thermal relays internally restorable
- 2 Adjustable star/delta timers

Q3ST VERSION

- 3 Normally open contacts for start
- 3 Normally open contacts for minimum level/pressure contact
- 3 Selectors for Auto-Off-Manual (stable) operation:
 - Manual: direct operation without controls
 - Automatic: operation controlled by min input and start input
- 3 Green led indicating motor running
- 3 Red led indicating motor overload
- 3 Line, star and delta contactors in AC3
- 3 Overload thermal relays internally restorable
- 3 Adjustable star/delta timers



EPIC is a single-phase variable speed drive for horizontal and vertical three-phase pumps, designed to maintain the set pressure and protect a pumping system against dry running, over/under voltage and overcurrent.

It is possible to realize a booster set up to 2 pumps in parallel, using 2 EPIC connected together.

FEATURES

- Constant pressure control
- Easy initial configuration
- Installed directly on motor terminal box of horizontal or vertical pumps
- Soft start and soft stop
- Alternance for uniform pump wearing when connected to another EPIC
- Protection against dry running (adjustable power factor $\cos\phi$), overload, overcurrent
- Automatic restart in case of stop for dry running
- Fuse for input protection of the device
- Led indicator for standby, run and alarm conditions
- Compatibility for residential environment thanks to an integrated electronic power factor corrector in compliance to EN61000-3-2
- 2 digital inputs (N.O. or N.C.) for motor run/stop
- 2 analog inputs: 4-20 mA and 0-10 VDC
- 1 digital output (N.O. or N.C.) for alarm signal

Input rated voltage	Output rated voltage	Output rated current	Max electric pump current	Weight
1 × 230 V	3 × 230 V	7,5 A	6,8 A	2,5 Kg





EPIC-A (Advanced) is a three-phase variable speed drive for horizontal and vertical three-phase pumps designed to maintain the set pressure and protect a pumping system against dry running, over/under voltage and overcurrent. It is possible to realize a booster set up to 8 pumps in parallel.

FEATURES

- Constant pressure control
- Easy initial configuration
- Simplified installation on motor terminal box of horizontal or vertical pumps
- Soft start and soft stop
- Alternance for uniform pump wearing when connected to others EPIC-A
- Built-in protections against overvoltage and undervoltage, overcurrent and no load, dry running, overtemperature
- Led indicator for standby, run and alarm conditions
- Compatibility for residential environment thanks to an integrated electronic power factor corrector in compliance to EN61000-3-2
- Integrated input filter for category C2 (EN61800-3), class A (EN55011)
- 4 digital inputs (N.O. or N.C.) for motor run/stop
- 4 analog inputs: two 4-20 mA and two 0-10 VDC
- 2 digital outputs (N.O. or N.C.) for alarm signal



Structure in aluminium with IP66 protection, for installation on humid and dusty environments



Independent ventilation



Built-in Bluetooth for complete programming through Pentax IPFC App for smartphone



Control panel for setting and pressure regulation, with graphic OLED display and led indication for stand-by, run and alarm conditions



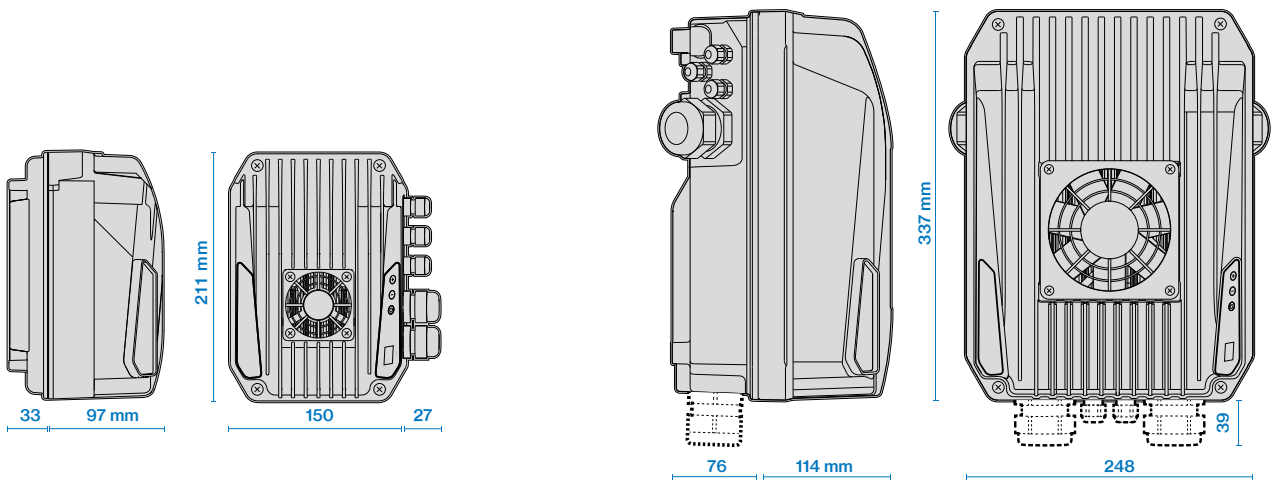
Cable glands



TECHNICAL SPECIFICATIONS

EPIC-A	304	306	309	314	318	325	330	338	344
Input rated voltage	3 × 400 V ± 15%								
Output rated voltage	3 × 400 V								
Output rated current	4 A	6 A	9 A	14 A	18 A	25 A	30 A	38 A	44 A
Max electric pump current	3,6 A	5,4 A	8,1 A	12,6 A	16,2 A	22,5 A	27 A	34,2 A	39,6 A

DIMENSIONS AND WEIGHT



EPIC-A 304 - 306 - 309
max weight 2,5 kg

EPIC-A 314 - 318 - 325 - 330 - 338 - 344
max weight 10 kg

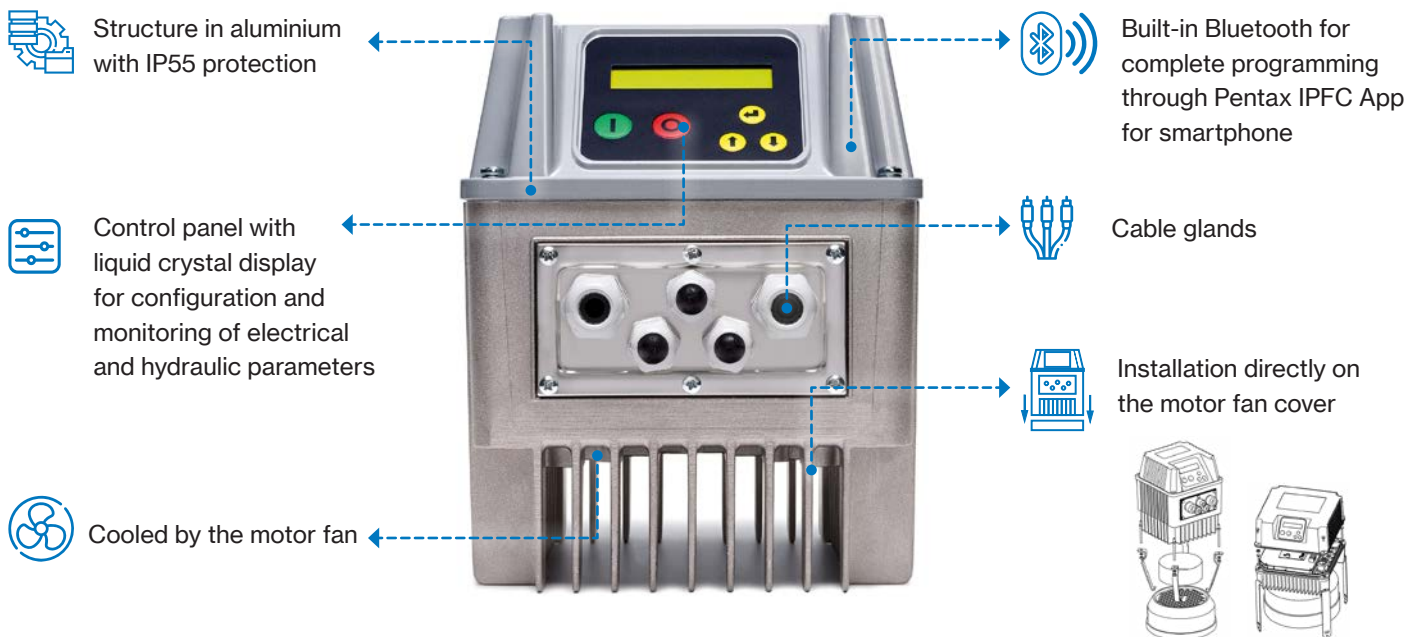


FEATURES

- Constant pressure control
- Energy and cost saving
- Protection against overload and dry running
- Greater reliability and longevity of pumping system
- Installed directly on the motor fan cover of vertical pumps
- Indication of input current and supply voltage
- Soft start and soft stop
- Recording running hours and loggings errors and alarms reported by the system
- Connect to other devices to get combined operation with cascade control and pump alteration
- Illuminated liquid crystal display
- Settable digital outputs, N.O. or N.C.
- Protection and analog/digital inputs

IPFC is a variable speed drive for vertical pumps designed to control and protect pumping systems up to 8 pumps connected in parallel.

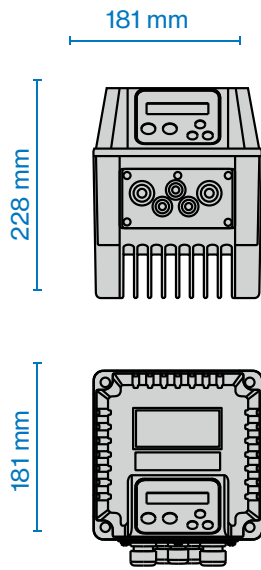
IPFC maintains the set pressure ensuring energy savings and extended lifespan of the system.



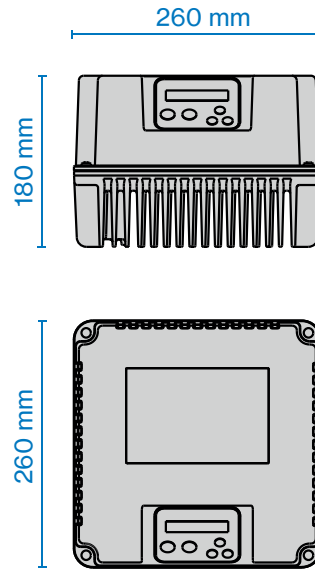
TECHNICAL SPECIFICATIONS

IPFC	109	114	306	309	311	314	318	325	330
Input rated voltage	1 × 230 V ± 15%		3 × 400 V ± 15%						
Output rated voltage	3 × 230 V		3 × 400 V						
Output rated current	9 A 1- 7 A 3-	9 A 3- 11 A 3-	6 A	9 A	11 A	14 A	18 A	25 A	30 A
Max electric pump current	7,2 A 1- 6,3 A 3-	7,2 A 1- 9,9 A 3-	5,4 A	8,1 A	9,9 A	12,6 A	16,2 A	22,5 A	27 A

DIMENSIONS AND WEIGHT



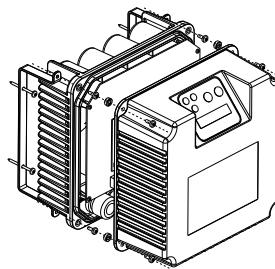
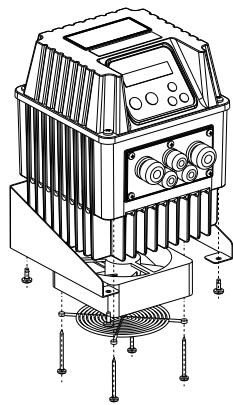
IPFC 109 - 114 - 306 - 309 - 311
max weight 5 kg



IPFC 314 - 318 - 325 - 330
max weight 9 kg

OPTIONAL INSTALLATION

Variable speed drives IPFC for horizontal pumps will be installed to the skid rod of the booster set. An external cooling fan connected to the radiator of the IPFC will provide the necessary cooling.





IPFC additional models available for bracket installation only.

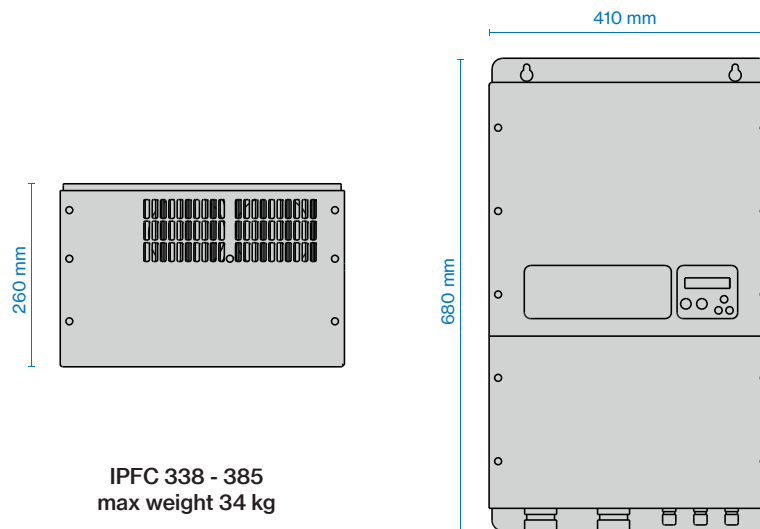
FEATURES

- Constant pressure control
- Energy and cost saving
- Protection against overload and dry running
- Greater reliability and longevity of pumping system
- Installed directly on the motor fan cover of vertical pumps
- Indication of input current and supply voltage
- Soft start and soft stop
- Recording running hours and loggings errors and alarms reported by the system
- Connect to other devices to get combined operation with cascade control and pump alteration
- Illuminated liquid crystal display
- Settable digital outputs, N.O. or N.C.
- Protection and analog/digital inputs

TECHNICAL SPECIFICATIONS

IPFC	338	348	365	375	385
Input rated voltage	3 × 400 V ± 15%				
Output rated voltage	3 × 400 V				
Output rated current	38 A	48 A	65 A	75 A	85 A
Max electric pump current	34,2 A	43,2 A	58,5 A	67,5 A	76,5 A

DIMENSIONS AND WEIGHT



Dedicated APP for control and programming of EPIC-A and IPFC variable speed drives:

Pentax IPFC

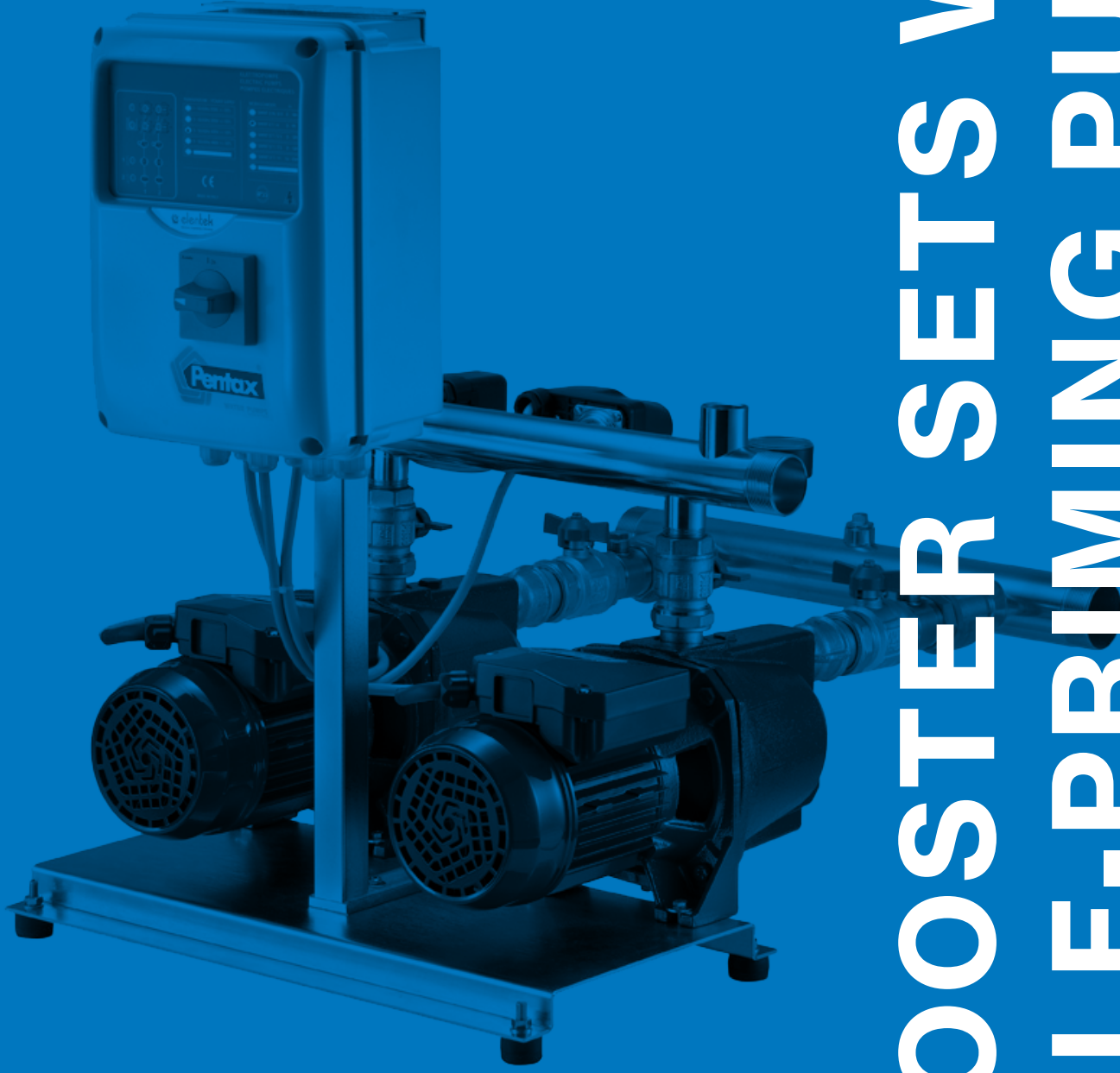


APP FUNCTIONALITY

- **Monitor:** monitoring several operative parameters. Obtaining energy consumption statistics and check alarm history
- **Program:** create programs, save them in the archive, copy them to other devices and share them among multiple users
- **Archive:** create reports with the ability to insert notes, images and send them by e-mail or keep them in the digital archive
- **Remote:** remotely control the EPIC-A and IPFC via wi-fi or GSM by using a nearby smartphone as a modem
- **Manuals:** access manuals and supplementary technical documentation
- **Guide:** receive online assistance on parameters and alarms







BOOSTER SETS WITH SELF-PRIMING PUMPS

SELF-PRIMING BOOSTER SETS



Fixed speed and variable speed booster sets with two self-priming pumps

DESCRIPTION

Pressurisation units with 2 self-priming horizontal axis pumps fitted on a single skid and connected in parallel by suction and delivery manifolds. These systems are specifically designed for domestic use as well as small civil or industrial applications. They can be equipped with EPIC inverters, which ensures that they can meet the constant pressure demands for modern systems. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. To ensure proper operation of the booster set, pressure tanks of adequate capacity are required depending on constant or variable speed, pumps type, and applications.

FEATURES

- Two self-priming horizontal axis pumps
- Cast iron pump body for CAM and CAB pumps series
- Stainless steel pump body for INOX, ULTRA A, ULTRA SA series
- Suction manifold in galvanized steel with non-return and isolation valves
- Delivery manifold in galvanized steel with pressure gauge and isolation valves
- Base frame in galvanized steel
- Electronic control panel EQ2SM(T) and two pressure switches for fixed speed version
- Inverter EPIC on each pump and two pressure sensors for the variable speed version
- Pressure tanks available on request, as accessory

FUNCTIONING

In the fixed speed version as soon as pressure drops below the minimum set value on the pressure switch the first pump starts automatically. If water demand further increases, the second pump will run until the pressure rises above the maximum set value. When demand ends, the last pump turns off. All the pumps follow cycling changeover for equal work distribution. In case of one pump failure, the other pumps would continue to operate.

In the variable speed version when the system pressure drops below the desired level, the sensors detect it giving an input to the inverter to start the first pump at controlled speed. If the flow rate is not sufficient, the pressure continues to drop causing the second pump to start. As soon as the flow demand decreases, the pressure rises again and the second pump stop. The first pump continues to modulate its speed in order to regulate and maintain the set pressure until it turns off when the flow demand ends. Based on working hours, the inverters will alternate the starting order of pumps to ensure better wear distribution. Continuity of operation is ensured in the event of one pump or one inverter failure.



Self-priming pumps



ULTRA A/ULTRA SA

P2	0,9+1,5 [HP]
Q max	7,8 [m ³ /h]
H max	53 [m]



Self-priming horizontal multistage stainless steel pumps suitable for domestic use, also in combination with autoclave tank. Suitable for drinking water or glycol, for water treatment, heating, air conditioning and washing systems.



CAM

P2	1+3 [HP]
Q max	7,2 [m ³ /h]
H max	59,5 [m]



Self-priming centrifugal pumps for water supply (even if mixed with air) connected to autoclave tanks. Suitable for domestic installations, liquid transfer and tank emptying; also used for garden irrigation.



INOX

P2	1+1,5 [HP]
Q max	3,8 [m ³ /h]
H max	53,6 [m]



Self-priming centrifugal pumps for domestic applications such as domestic systems where air is mixed with water. Recommended in combination with pressure set for water transfer, rainwater harvesting and garden irrigation systems.



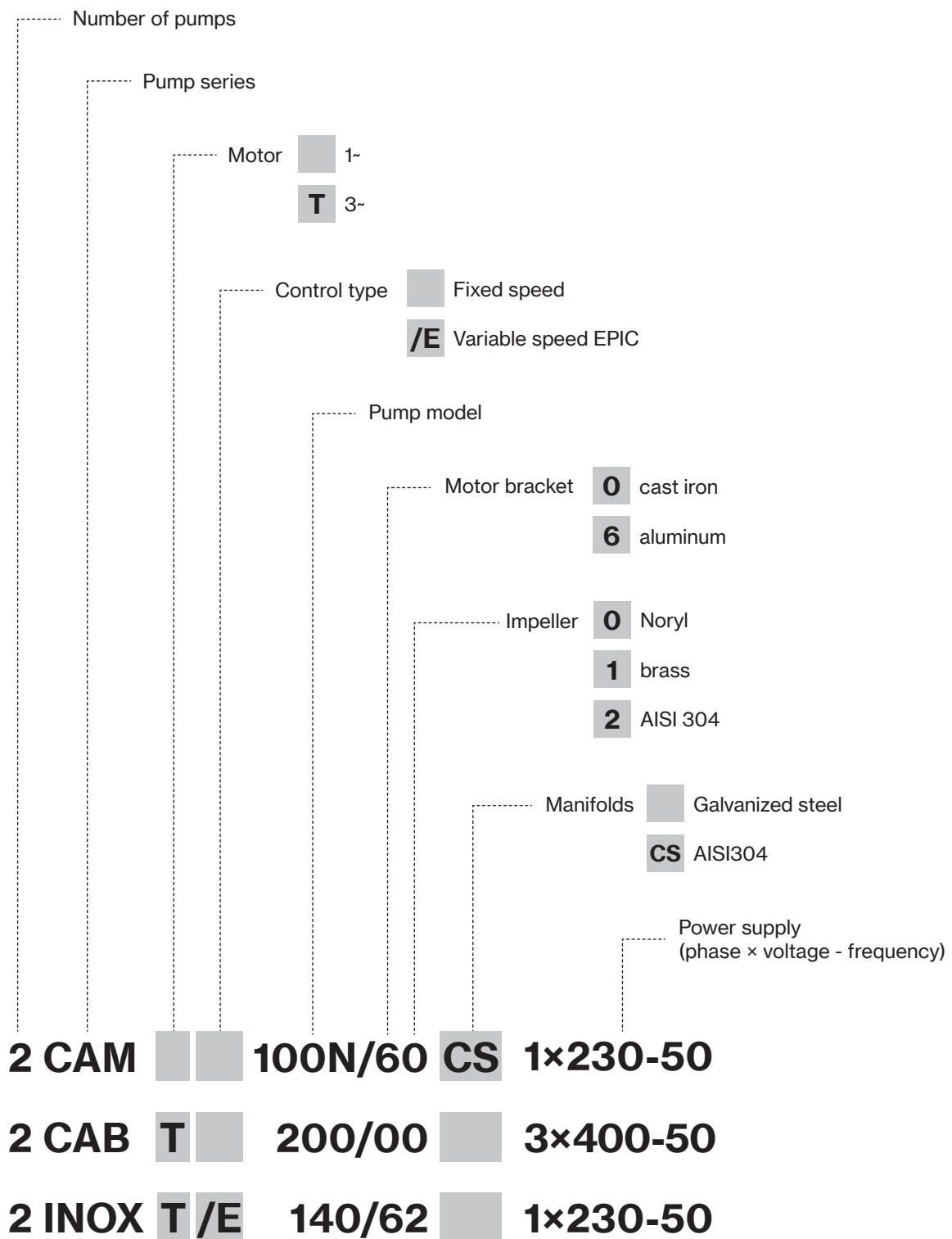
CAB

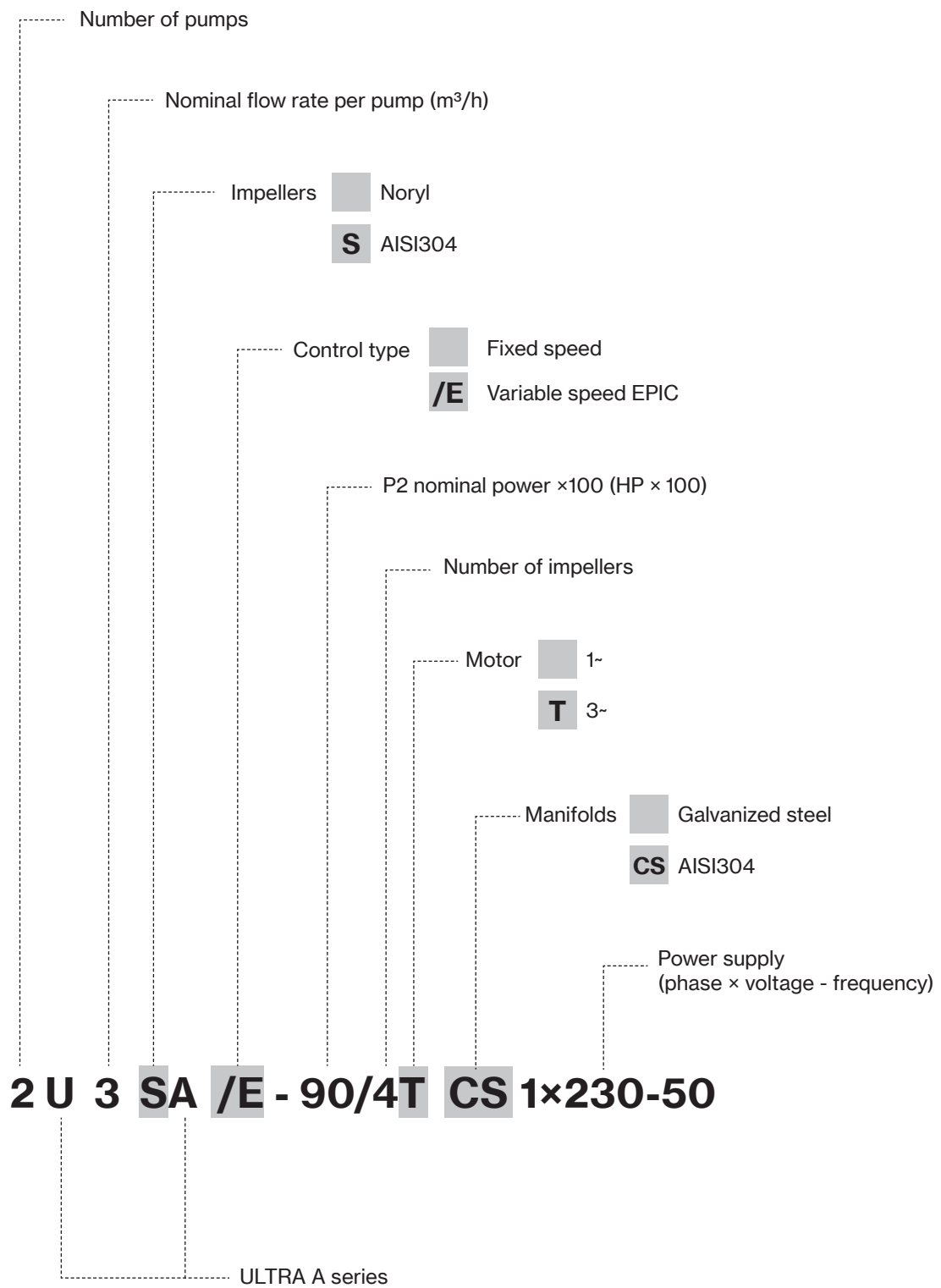
P2	1,5+3 [HP]
Q max	8,4 [m ³ /h]
H max	62 [m]



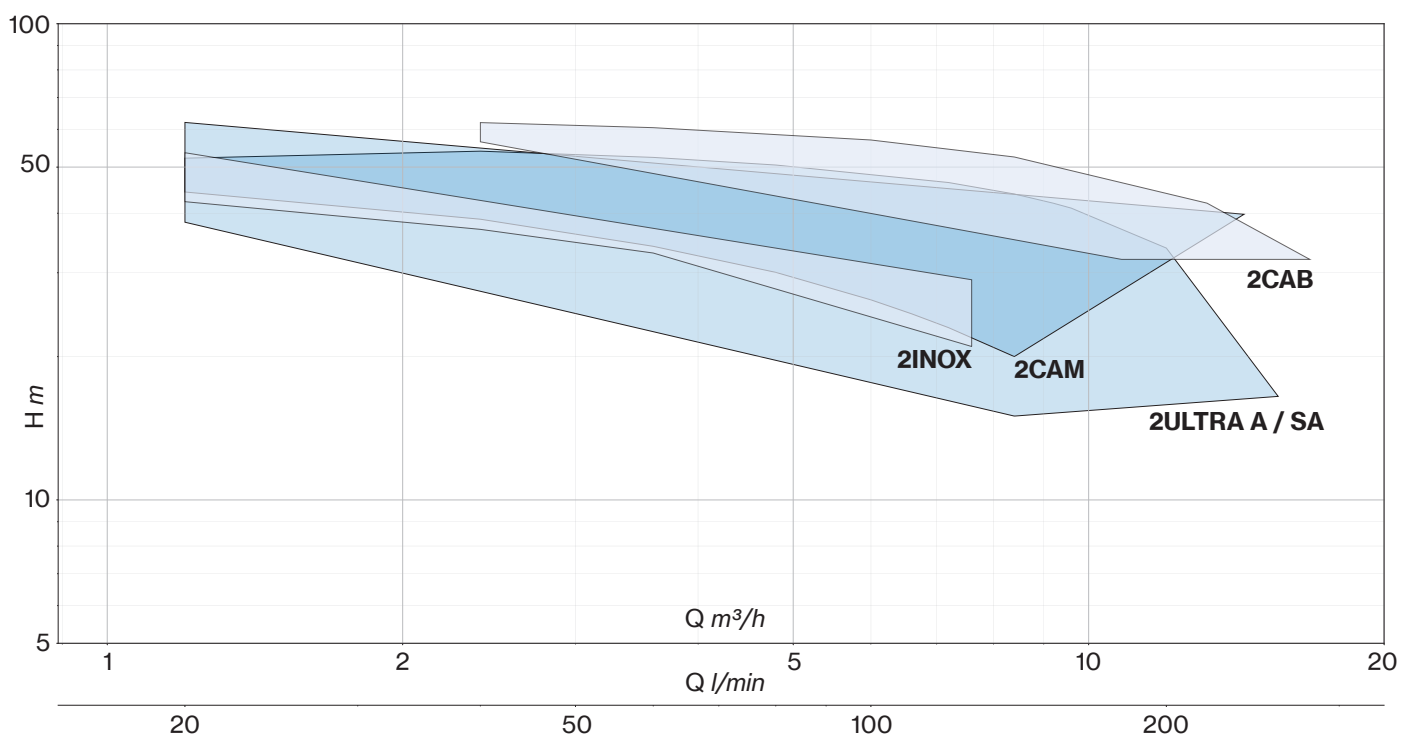
Self-priming centrifugal pumps for water supply (also mixed with air) of small and medium domestic and civil installations, that can be connected to an autoclave tank.

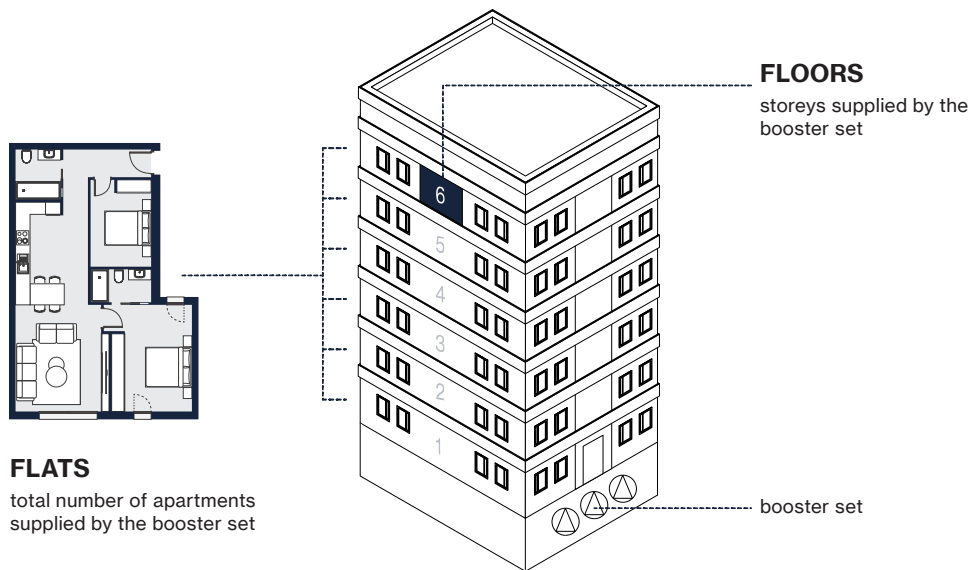
Name key





Performance data and curves





FLATS		FLOORS	ULTRA A series	ULTRA SA series	CAM series	INOX series	CAB series
1 duty and 1 standby pumps	2 duty pumps						
1	1-2	1-2	2U3A_-90/4_	2U3SA_-90/4_	2CAM_100N	2INOX_100N	-
		3	-	2U3SA_-90/4_	2CAM_100N	-	-
2	3-4	1-2	2U3A_-100/5_	2U3SA_-90/4_	2CAM_120	2INOX_120	-
		3	2U3A_-100/5_	2U3SA_-100/5_	2CAM_140	2INOX_140	-
		4	-	2U3SA_-100/5_	2CAM_140	-	-
		5	-	-	-	-	2CAB_150
3-4	5-8	1-2	2U5A_-120/4_	2U5SA_-120/4_	2CAM_140	2INOX_140	-
		3	2U5A_-120/4_	2U5SA_-120/4_	2CAM_150	-	-
		4	2U5A_-150/5_	2U5SA_-150/5_	2CAM_200	-	2CAB_150
		5	2U5A_-150/5_	2U5SA_-150/5_	2CAM_200	-	2CAB_150
		6	2U5A_-150/5_	2U5SA_-150/5_	2CAM_300	-	2CAB_200
		7	-	-	2CAM_300	-	2CAB_200
		8	-	-	-	-	2CAB_300

2ULTRA A / SA



Pressurisation units with 2 self-priming pumps of ULTRA A or ULTRA SA series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

Booster set features

Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) and two pressure switches
Variable speed	inverter EPIC on each pump and two pressure sensors
Pressure tanks	available on request as accessories

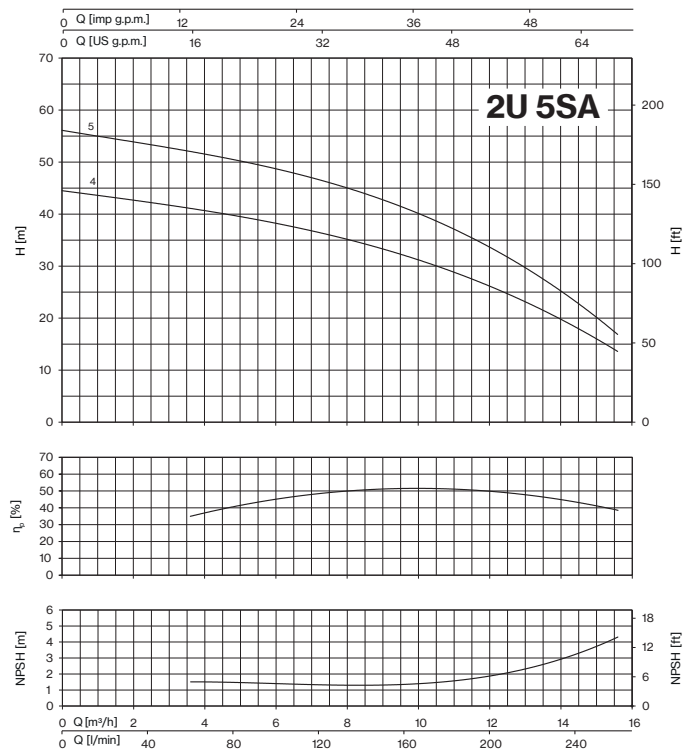
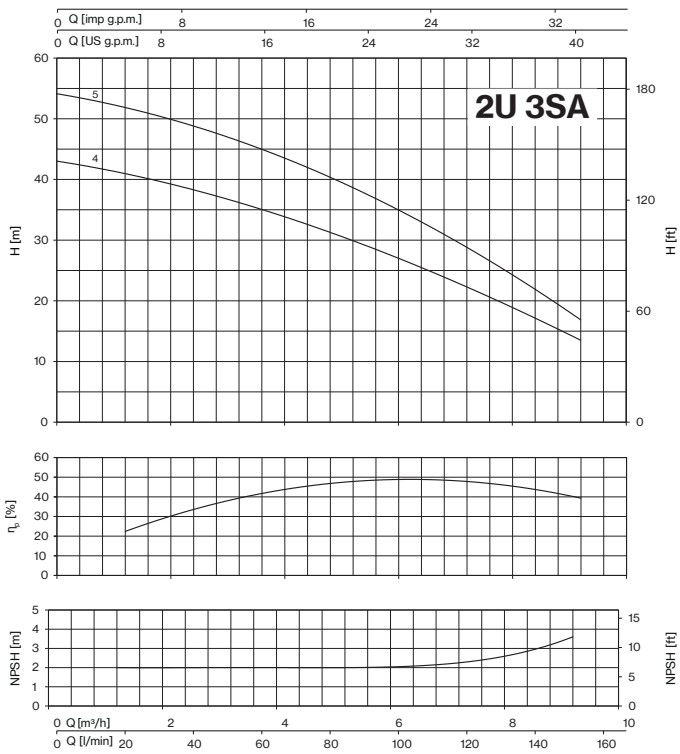
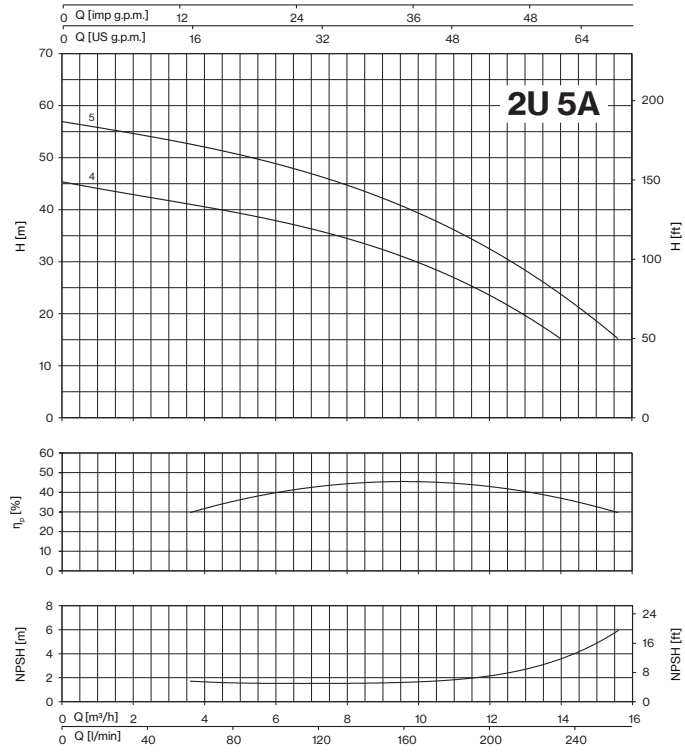
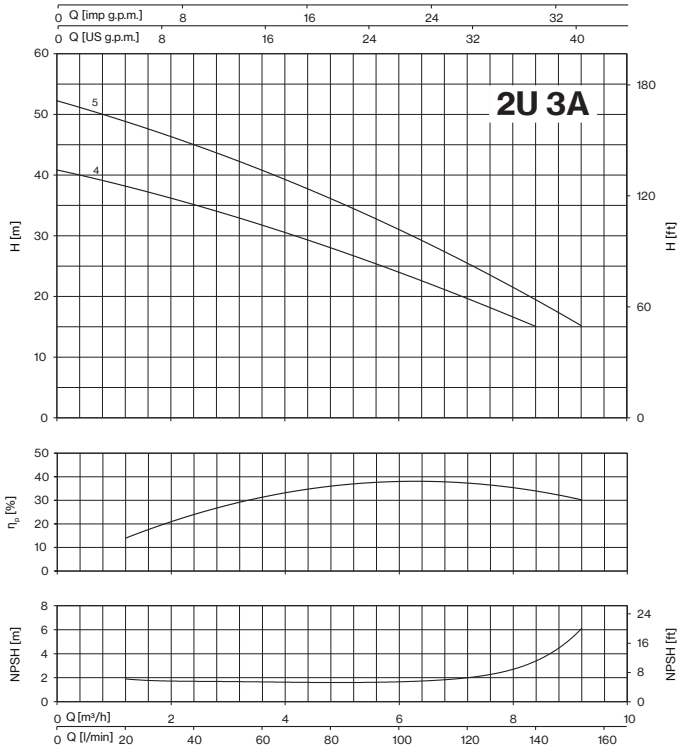
Pump features

Pump body, mechanical seal housing	stainless steel AISI 304
Motor bracket	aluminum
Impellers, diffusers	Noryl®
Mechanical seal	ceramic-graphite-EPDM
Motor shaft	stainless steel AISI 303
Liquid temperature	-5 ÷ +35 °C
Operating pressure	max 7 bar
2 poles induction motor	3~ 230/400V - 50Hz 1~ 230V - 50Hz
Motor insulation class	F
Motor protection degree	IPX4

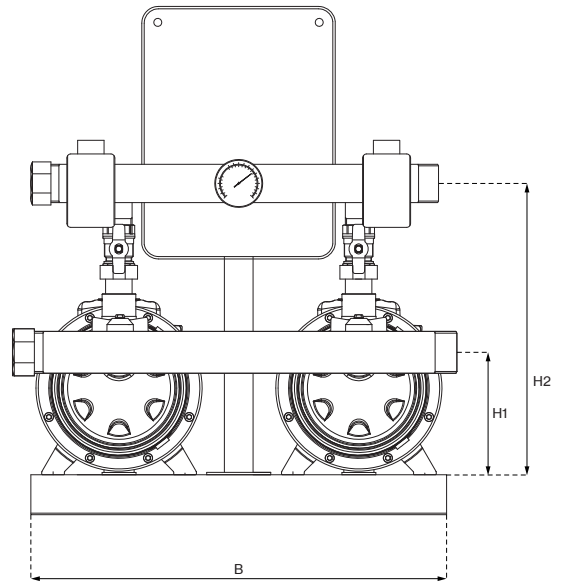
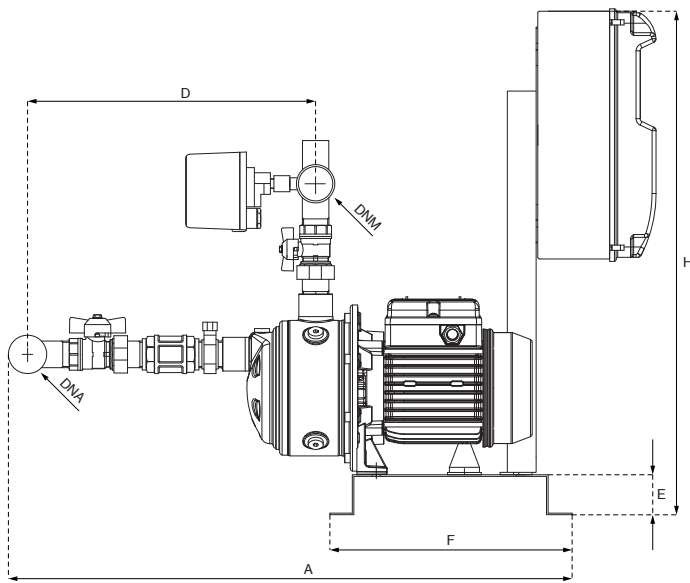
PERFORMANCE

TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)																	
		FIXED SPEED		VARIABLE SPEED			0	1,2	2,4	3,6	4,8	7,2	8,4	9,2	9,6	12,0	14	15,6						
l/min	bar	1- 230V	3- 400V	1- 230V-in 3- 230V-out	HP (x2)	kW (x2)	H (m)																	
		80	3	2U 3A-90/4			2U 3A-90/4T	2U 3A/E-90/4T	0,9	0,66	40,8	38,3	35,1	31,8	29,9	19,8	15,0							
2U 3SA-90/4	2U 3SA-90/4T			2U 3SA/E-90/4T	43,0	41,0	38,3	35,0			31,3	22,3	17,2	13,5										
100	2U 3A-100/5	2U 3A-100/5T		2U 3A/E-100/5T	1	0,75	52,2	48,9	45,1	40,8	36,0	25,4	19,8	15,0										
	2U 3SA-100/5	2U 3SA-100/5T		2U 3SA/E-100/5T			54,0	52,1	48,8	44,9	40,2	29,0	22,0	16,8										
160	2U 5A-120/4	2U 5A-120/4T		2U 5A/E-120/4T	1,2	0,9	45,3	44,2	42,8	41,3	39,6	35,6	33,4	31,7	30,8	24,0	15,0							
	2U 5SA-120/4	2U 5SA-120/4T		2U 5SA/E-120/4T			44,5	43,3	42,1	41,0	40,0	36,4	34,3	32,8	32,0	26,2	18,5	13,5						
200	2U 5A-150/5	2U 5A-150/5T	2U 5A/E-150/5T	1,5	1,1	56,8	55,9	54,6	53,0	51,0	46,1	43,2	41,2	40,1	33,0	24,0	15,0							
	2U 5SA-150/5	2U 5SA-150/5T	2U 5SA/E-150/5T			56,0	52,2	54,0	52,4	50,5	46,4	43,9	42,0	41,0	33,8	23,8	16,5							





2U A / SA



MODEL			P1		In			Required tank for v.s.	DIMENSIONS										WEIGHT	
FIXED SPEED		VARIABLE SPEED	1~	3~	1~ 230V	3~ 400V	3~ 230V		A	B	D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.
1- 230V	3- 400V	1- 230V-in 3- 230V-out	kW (x2)		A (x2)			Lt	mm										Kg	
2U 3A-90/4	2U 3A-90/4T	2U 3A/E-90/4T	0,9	0,88	4	1,8	3,1	2x 8	829	560	453	40	350	545	128	333	2" G	1" 1/2 G	41	46
2U 3SA-90/4	2U 3SA-90/4T	2U 3SA/E-90/4T	0,83	0,8	3,6	1,7	2,9	2x 8	853	560	477	40	350	545	128	333			46	51
2U 3A-100/5	2U 3A-100/5T	2U 3A/E-100/5T	1,06	1,01	4,8	1,9	3,3	2x 8	853	560	477	40	350	545	128	333			46	51
2U 3SA-100/5	2U 3SA-100/5T	2U 3SA/E-100/5T	0,99	0,92	4,4	1,7	2,9	2x 20	829	560	453	40	350	545	128	333			46	51
2U 5A-120/4	2U 5A-120/4T	2U 5A/E-120/4T	1,13	1,13	5,2	2,5	4,3	2x 20	829	560	453	40	350	545	128	333			46	51
2U 5SA-120/4	2U 5SA-120/4T	2U 5SA/E-120/4T	1,09	1,08	4,9	2,4	4,2	2x 20	853	560	477	40	350	545	134	339			52	57
2U 5A-150/5	2U 5A-150/5T	2U 5A/E-150/5T	1,47	1,39	6,8	2,8	4,9	2x 20	853	560	477	40	350	545	134	339			52	57
2U 5SA-150/5	2U 5SA-150/5T	2U 5SA/E-150/5T	1,39	1,31	6,5	2,7	4,7	2x 20	853	560	477	40	350	545	134	339			52	57

f.s. : fixed speed
v.s. : variable speed



2CAM



Pressurisation units with 2 self-priming pumps of CAM series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

Booster set features

Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) and two pressure switches
Variable speed	inverter EPIC on each pump and two pressure sensors
Pressure tanks	available on request as accessories

Pump features

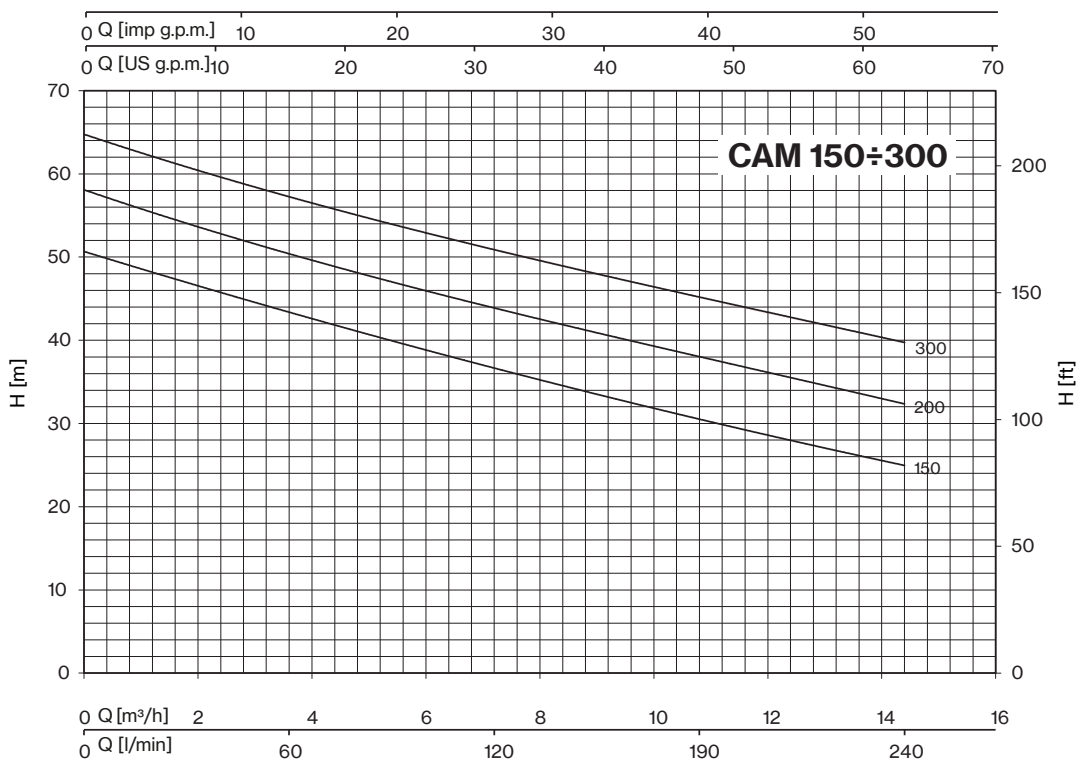
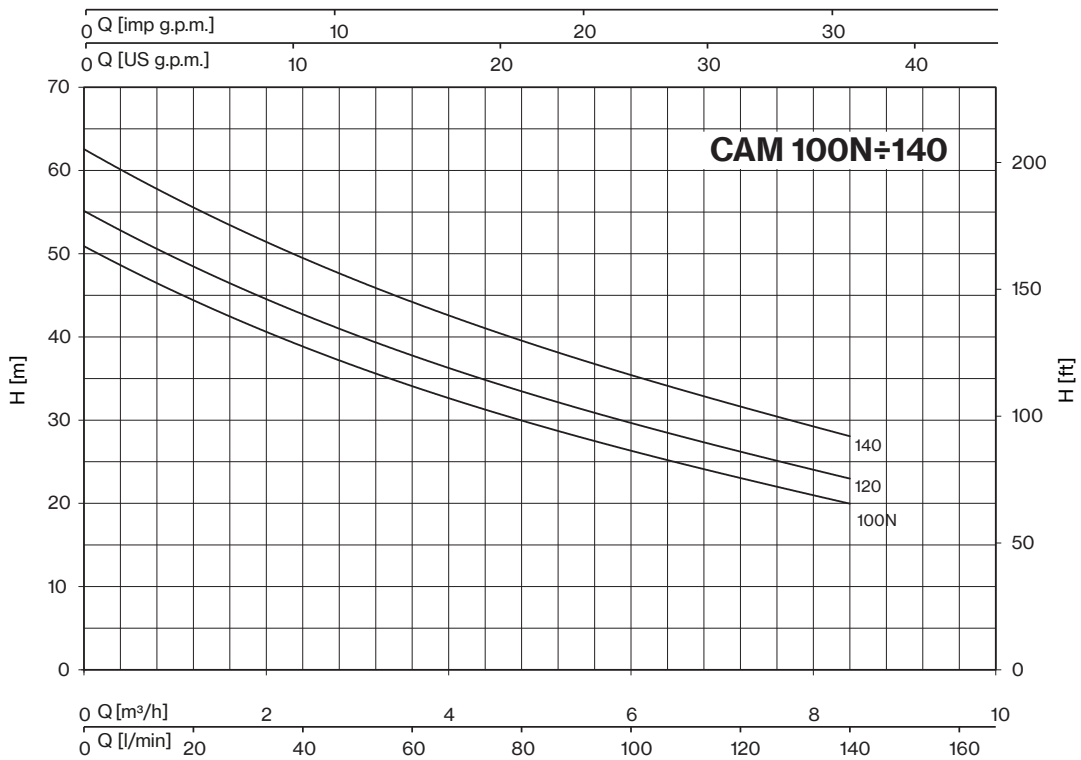
Pump body, mechanical seal housing	cast iron
Motor bracket	aluminum (100N÷140) cast iron (150÷300)
Impellers, diffusers	Noryl®, brass, inox for 100N÷140
Mechanical seal	ceramic-graphite-NBR
Motor shaft	stainless steel AISI 416
Liquid temperature	0 - 50 °C
Operating pressure	max 7 bar (100N÷140) max 8 bar (150÷300)
2 poles induction motor	3~ 230/400V - 50Hz 1~ 230V - 50Hz
Motor insulation class	F
Motor protection degree	IPX4

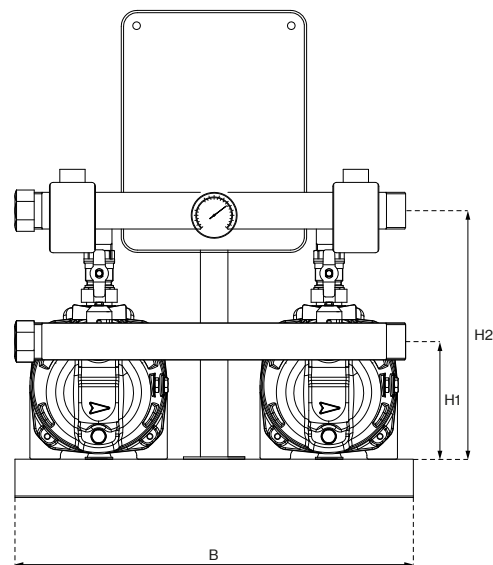
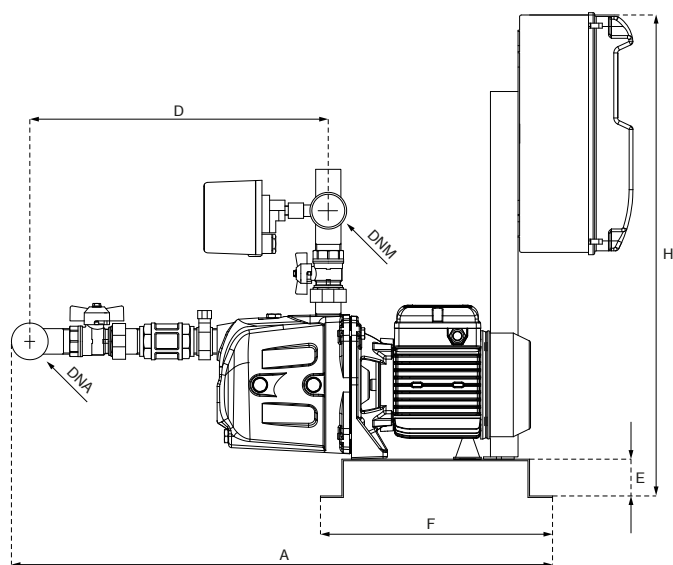
PERFORMANCE

TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)											
		FIXED SPEED		VARIABLE SPEED			0	1,2	2,4	3,6	4,8	6	6,6	7,2	8,4	9,6	12	14,4
l/min	bar	1- 230V	3- 400V	1- 230V-in 3- 230V-out	HP (x2)	kW (x2)	0	20	40	60	80	100	110	120	140	160	200	240
		H (m)																
80	3	2CAM 100N	2CAMT 100N	2CAMT/E 100N	1	0,74	50,9	44,3	38,9	34,1	30,1	26,3	24,6	23,0	20,0			
100	3	2CAM 120	2CAMT 120	2CAMT/E 120	1,2	0,88	55,1	48,5	42,6	37,8	33,5	29,7	27,9	26,2	23,0			
120	3	2CAM 140	2CAMT 140	2CAMT/E 140	1,5	1,1	62,5	55,7	49,4	44,2	39,5	35,5	33,5	31,6	28,1			
140	3,5	2CAM 150	2CAMT 150	2CAMT/E 150	1,5	1,1	50,7	48,2	45,7	43,3	41,0	38,9	37,8	36,8	34,6	32,5	28,5	25,0
160	4	2CAM 200	2CAMT 200	2CAMT/E 200	2	1,5	58,1	55,4	52,8	50,3	48,0	46,0	45,0	44,0	42,0	40,0	36,0	32,4
180	4,5	-	2CAMT 300	-	3	2,2	64,8	62,1	59,5	57,2	55,0	53,0	52,0	51,0	49,0	47,1	43,2	39,8



2CAM





MODEL			P1		In			Required tank for v.s.	DIMENSIONS										WEIGHT		
FIXED SPEED		VARIABLE SPEED	1~	3~	1~ 230V	3~ 400V	3~ 230V		Lt	A	B	D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.
1- 230V	3- 400V	1- 230V-in 3- 230V-out	kW (x2)		A (x2)		mm										Kg				
2CAM 100N	2CAMT 100N	2CAMT/E 100N	1,04	0,92	4,7	1,7	2,9	2× 8	745	520	383	50	300	650	150	325	1" ½ G	1" ½ G	49	54	
2CAM 120	2CAMT 120	2CAMT/E 120	1,14	1,07	5,2	1,9	3,3	2× 8	745	520	383	50	300	650	150	325			50	55	
2CAM 140	2CAMT 140	2CAMT/E 140	1,3	1,25	6	2,5	4,3	2× 8	745	520	383	50	300	650	150	325			51	56	
2CAM 150	2CAMT 150	2CAMT/E 150	1,9	1,8	8,2	3,4	5,9	2× 20	850	615	474	60	380	650	175	360	2" G		76	81	
2CAM 200	2CAMT 200	2CAMT/E 200	2,2	2,1	9,8	3,9	6,8	2× 20	850	615	474	60	380	650	175	360			78	83	
-	2CAMT 300	-	-	2,5	-	4,8	-	-	850	615	474	60	380	650	175	360			77	-	

f.s. : fixed speed
v.s. : variable speed



2INOX



Pressurisation units with 2 self-priming pumps of INOX series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

Booster set features

Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) and two pressure switches
Variable speed	inverter EPIC on each pump and two pressure sensors
Pressure tanks	available on request as accessories

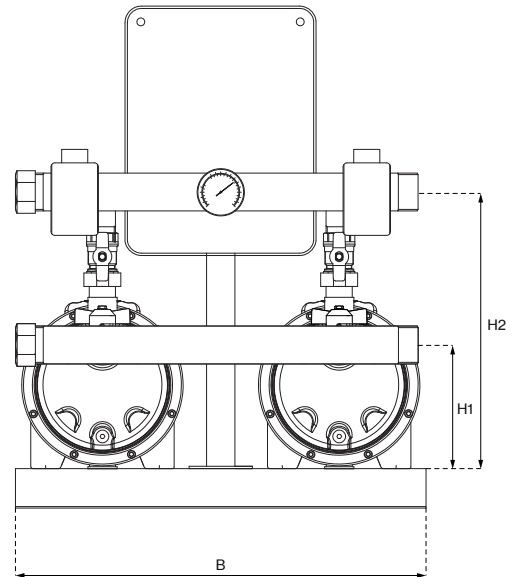
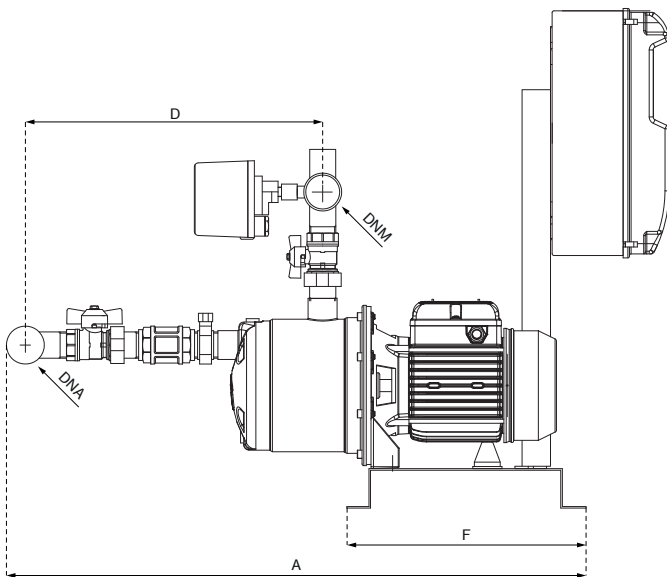
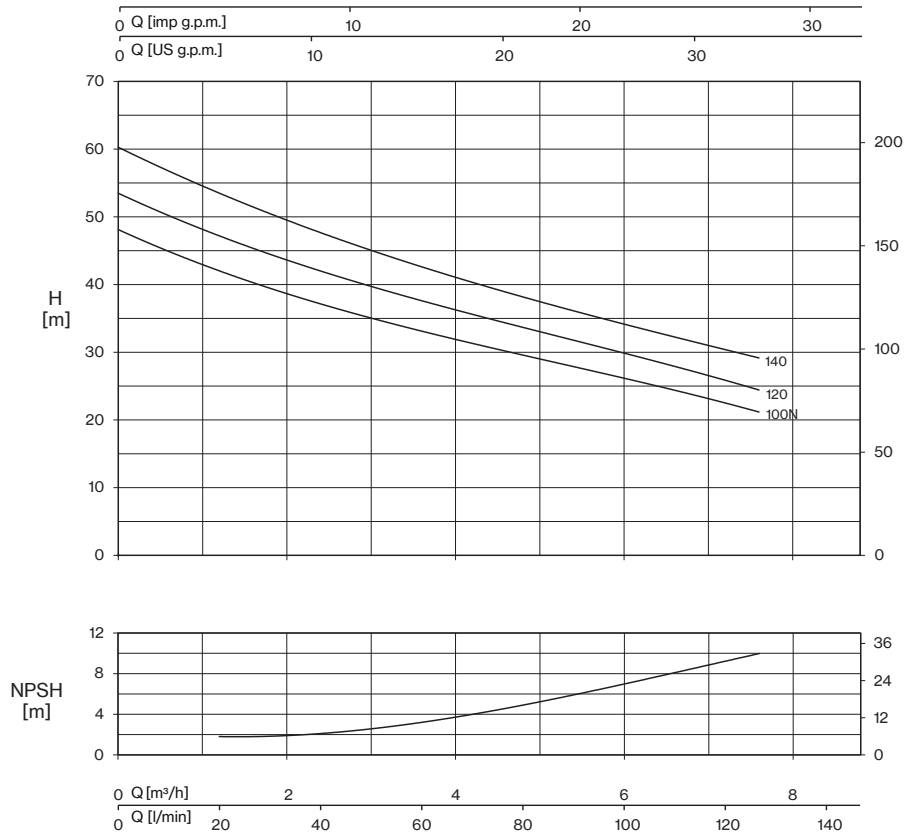
Pump features

Pump body	stainless steel AISI 304
Motor bracket	aluminum
Impeller	Noryl®, steel AISI 304
Mechanical seal	ceramic-graphite-NBR
Motor shaft	stainless steel AISI 416
Liquid temperature	0 - 50 °C
Operating pressure	max 8 bar
2 Poles induction motor	3- 230/400V - 50Hz 1- 230V - 50Hz
Motor insulation class	F
Motor protection degree	IPX4

PERFORMANCE

TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)							
		FIXED SPEED		VARIABLE SPEED			0	1,2	2,4	3,6	4,8	6	7,2	7,6
l/min	bar	1- 230V	3- 400V	1- 230V-in 3- 230V-out	HP (x2)	kW (x2)	0	20	40	60	80	100	120	126,6
							H (m)							
80	3	2INOX 100N	2INOXT 100N	2INOXT/E 100N	1	0,74	48,0	42,3	37,0	33,0	29,6	26,2	22,7	21,0
100		2INOX 120	2INOXT 120	2INOXT/E 120	1,2	0,88	53,4	47,4	41,9	37,5	33,7	29,9	26,0	24,3
120		2INOX 140	2INOXT 140	2INOXT/E 140	1,5	1,1	60,2	53,6	47,8	42,4	38,0	34,4	30,5	29,0





MODEL			P1		In			Required tank for v.s. Lt	DIMENSIONS										WEIGHT	
FIXED SPEED		VARIABLE SPEED	1-	3-	1- 230V	3- 400V	3- 230V		A	B	D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.
1- 230V	3- 400V	1- 230V-in 3- 230V-out	kW (x2)		A (x2)				mm										Kg	
2INOX 100N	2INOXT 100N	2INOXT/E 100N	1,04	0,95	4,7	1,7	2,9	2 x 8	740	520	392	50	300	650	153	350	1" 1/2 G	1" 1/2 G	42	47
2INOX 120	2INOXT 120	2INOXT/E 120	1,14	1,03	5,2	1,9	3,3	2 x 8	740	520	392	50	300	650	153	350	1" 1/2 G	1" 1/2 G	43	48
2INOX 140	2INOXT 140	2INOXT/E 140	1,3	1,23	6	2,5	4,3	2 x 8	740	520	392	50	300	650	153	350	1" 1/2 G	1" 1/2 G	44	49

f.s. : fixed speed
v.s. : variable speed



Dimensions and weights may differ slightly and therefore should be considered as indicative

2CAB



Pressurisation units with 2 self-priming pumps of CAB series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

Booster set features

Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) and two pressure switches
Variable speed	inverter EPIC on each pump and two pressure sensors
Pressure tanks	available on request as accessories

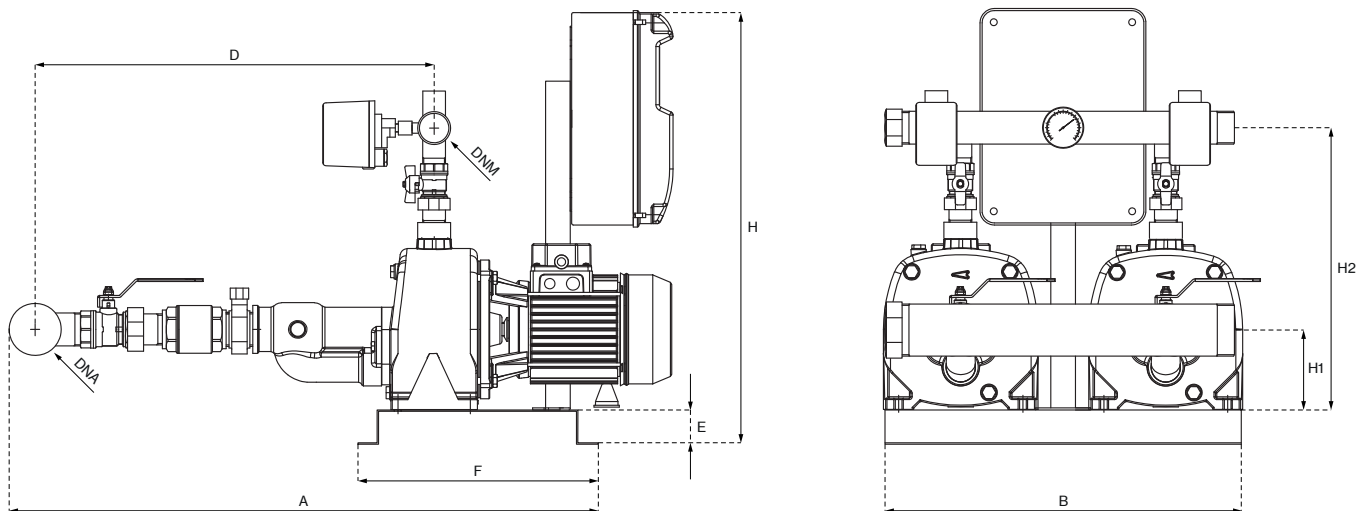
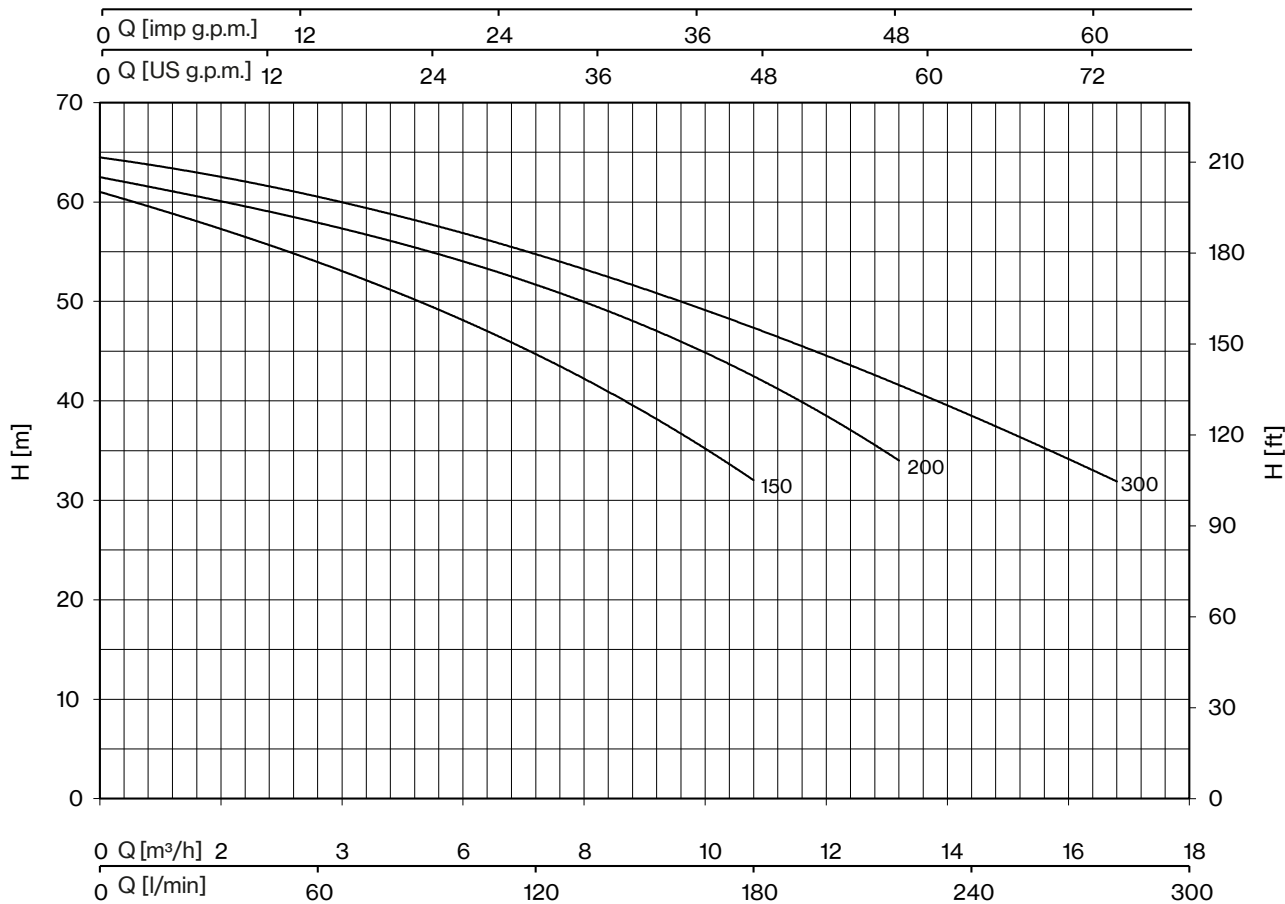
Pump construction features

Pump body	cast iron
Motor bracket	cast iron
Impeller	Noryl® or brass
Mechanical seal	ceramic-graphite-NBR
Motor shaft	stainless steel AISI 303 hydraulic side
Liquid temperature	0 - 50 °C
Operating pressure	max 8 bar
2 Poles induction motor	3- 230/400V - 50Hz 1- 230V - 50Hz
Motor insulation class	F
Motor protection degree	IPX4

PERFORMANCE

TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)									
		FIXED SPEED		VARIABLE SPEED			0	2,4	3,6	6,0	8,4	10,8	13,2	15,6	16,8	
l/min	bar	1- 230V	3- 400V	1- 230V-in 3- 230V-out	HP (x2)	kW (x2)	0	40	60	100	140	180	220	260,0	280	
140	4	2CAB 150	2CABT 150	2CABT/E 150	1,5	1,1	61,0	56,5	54,0	48,0	41,0	32,0				
180		2CAB 200	2CABT 200	2CABT/E 200	2	1,5	62,5	59,5	58,0	54,0	49,0	42,5	34,0			
220		2CAB 300	2CABT 300	-	3	2,2	64,5	62,0	60,5	57,0	52,5	47,0	42,0	35,0	32,0	





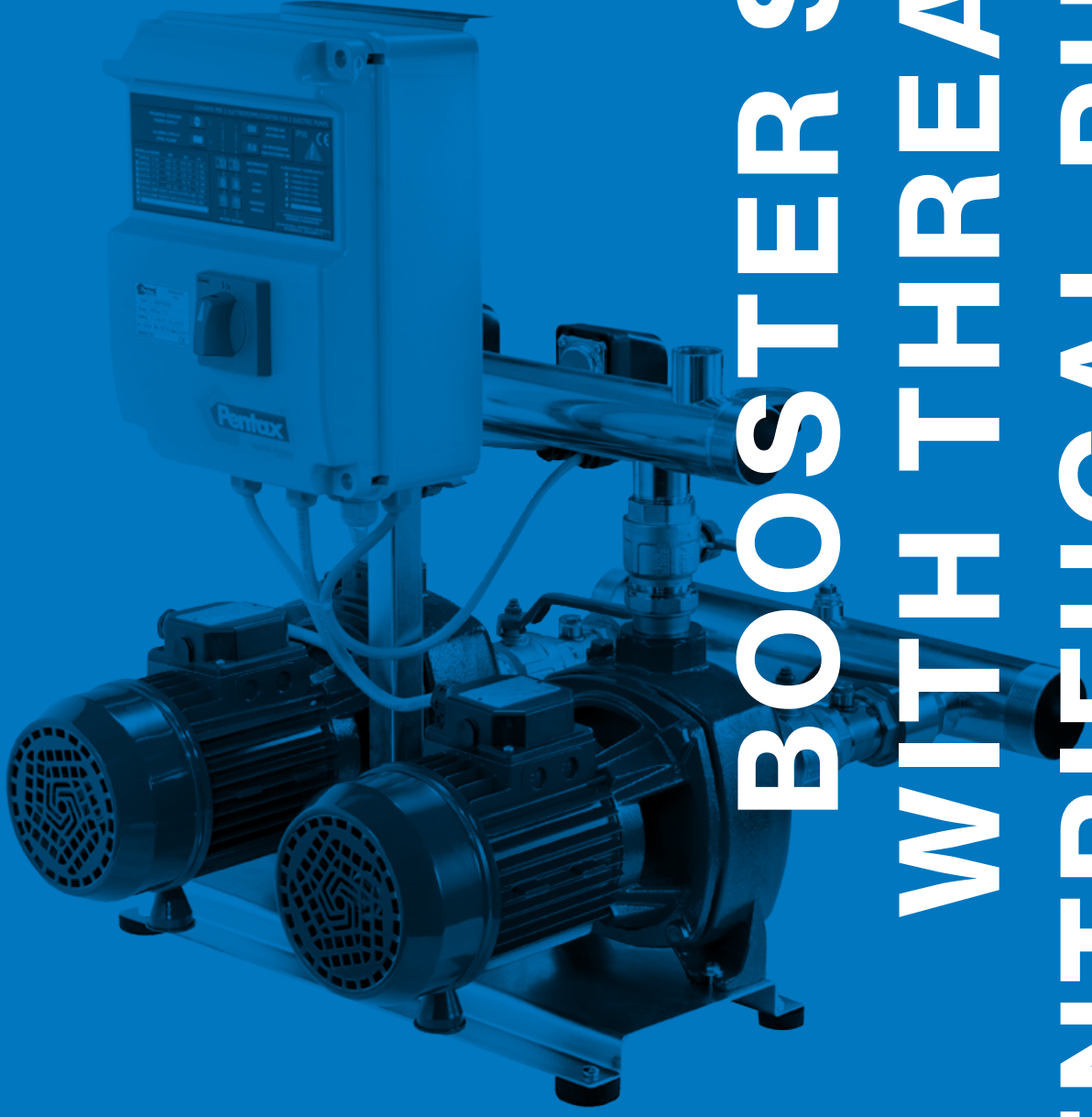
MODEL			P1		In			Required tank for v.s.	DIMENSIONS										WEIGHT	
FIXED SPEED		VARIABLE SPEED	1~	3~	1- 230V	3- 400V	3- 230V		A	B	D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.
1- 230V	3- 400V	1- 230V-in 3- 230V-out	kW (x2)		A (x2)			Lt	mm										Kg	
2CAB 150	2CABT 150	2CABT/E 150	1,74	1,68	7,9	3,3	5,7	2 x 20	940	615	564	60	380	650	112	380			78	83
2CAB 200	2CABT 200	2CABT/E 200	2,22	2,1	10,3	3,9	6,8	2 x 20	940	615	564	60	380	650	112	380	2" G	1" ½ G	80	85
2CAB 300	2CABT 300	-	2,65	2,5	11,8	4,9	-	-	940	615	564	60	380	650	112	380			82	-

f.s. : fixed speed
v.s. : variable speed



Dimensions and weights may differ slightly and therefore should be considered as indicative





BOOSTER SETS WITH THREADED CENTRIFUGAL PUMPS

THREADED CENTRIFUGAL BOOSTER SETS



Fixed speed and variable speed booster sets with two threaded centrifugal pumps

DESCRIPTION

Pressurisation units with 2 horizontal centrifugal pumps fitted on a single skid and connected in parallel by suction and delivery manifolds. These systems are extremely silent and designed for water supply, pressurization, heating and air conditioning and liquid transfer. They can be equipped with EPIC and EPIC-A inverters, which ensures that they can meet the constant pressure demands for modern systems. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. To ensure proper operation of the booster set, pressure tanks of adequate capacity are required depending on constant or variable speed, pumps type, and applications.

FEATURES

- Two horizontal axis pumps with single or double impeller
- Cast iron pump body
- Suction manifold in galvanized steel with non-return and isolation valves
- Delivery manifold in galvanized steel with pressure gauge and isolation valves
- Base frame in galvanized steel
- Electronic control panel EQ2SM(T) and two pressure switches for fixed speed version
- Inverter EPIC or EPIC-A on each pump and two pressure sensors for the variable speed version
- Pressure tanks available on request, as accessory

FUNCTIONING

In the fixed speed version as soon as pressure drops below the minimum set value on the pressure switch the first pump starts automatically. If water demand further increases, the second pump will run until the pressure rises above the maximum set value. When demand ends, the last pump turns off. All the pumps follow cycling changeover for equal work distribution. In case of one pump failure, the other pumps would continue to operate.

In the variable speed version when the system pressure drops below the desired level, the sensors detect it giving an input to the inverter to start the first pump at controlled speed. If the flow rate is not sufficient, the pressure continues to drop causing the second pump to start. As soon as the flow demand decreases, the pressure rises again and the second pump stop. The first pump continues to modulate its speed in order to regulate and maintain the set pressure until it turns off when the flow demand ends. Based on working hours, the inverters will alternate the starting order of pumps to ensure better wear distribution. Continuity of operation is ensured in the event of one pump or one inverter failure.

Threaded centrifugal pumps



CM	
P2	1÷5,5 [HP]
Q max	21 [m³/h]
H max	54,5 [m]



Single-impeller centrifugal pumps, extremely quiet, suitable for domestic, civil and industrial applications. The pumps guarantee constant pressure at the variation of flow rates.



MB	
P2	1,5÷3 [HP]
Q max	10,8 [m³/h]
H max	45,9 [m]



Two impeller compact centrifugal pumps for constructing pressurisation systems for civil and industrial plant: guarantee good ratio between pressure and flow rate.

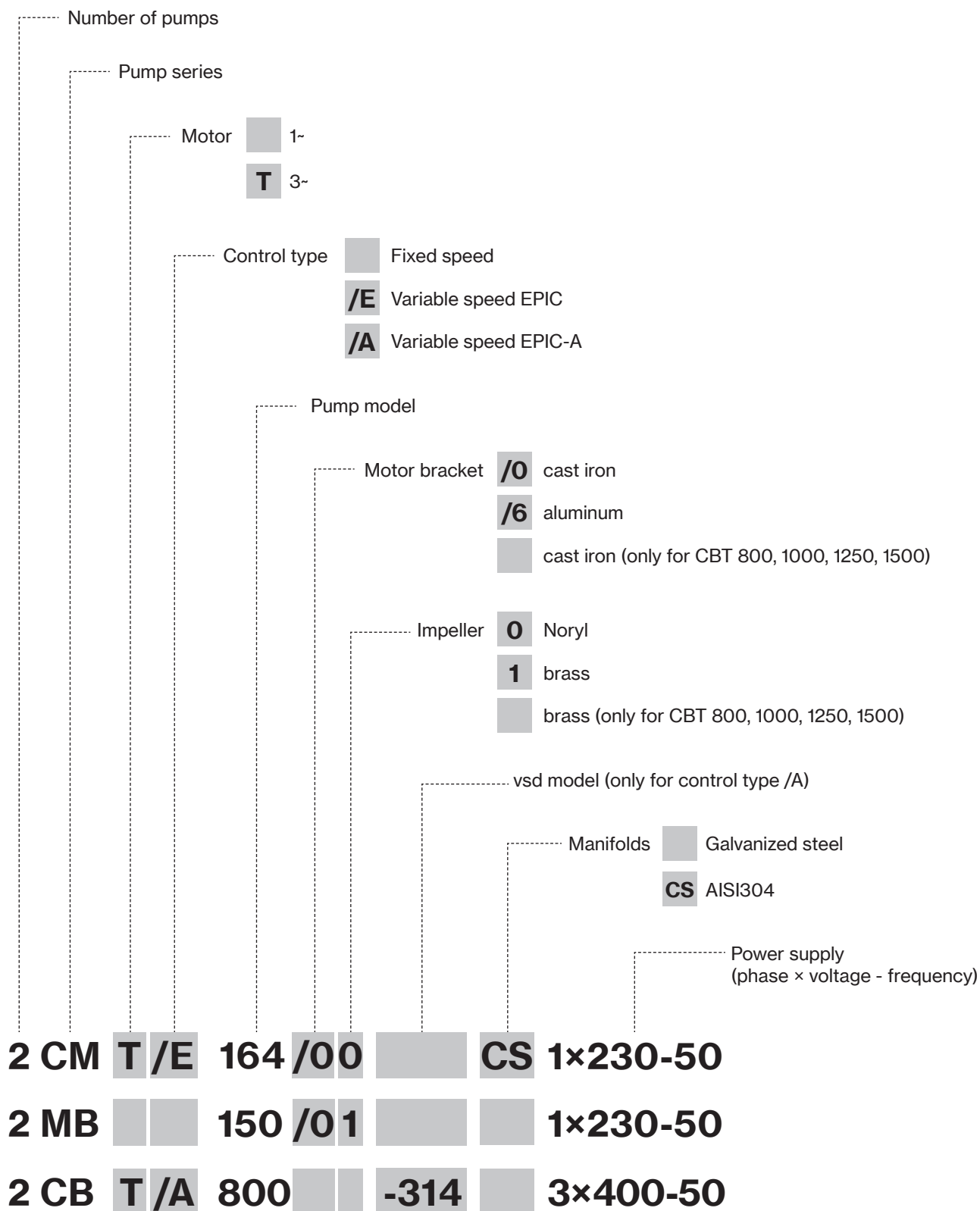


CB	
P2	1÷15 [HP]
Q max	33 [m³/h]
H max	97,8 [m]

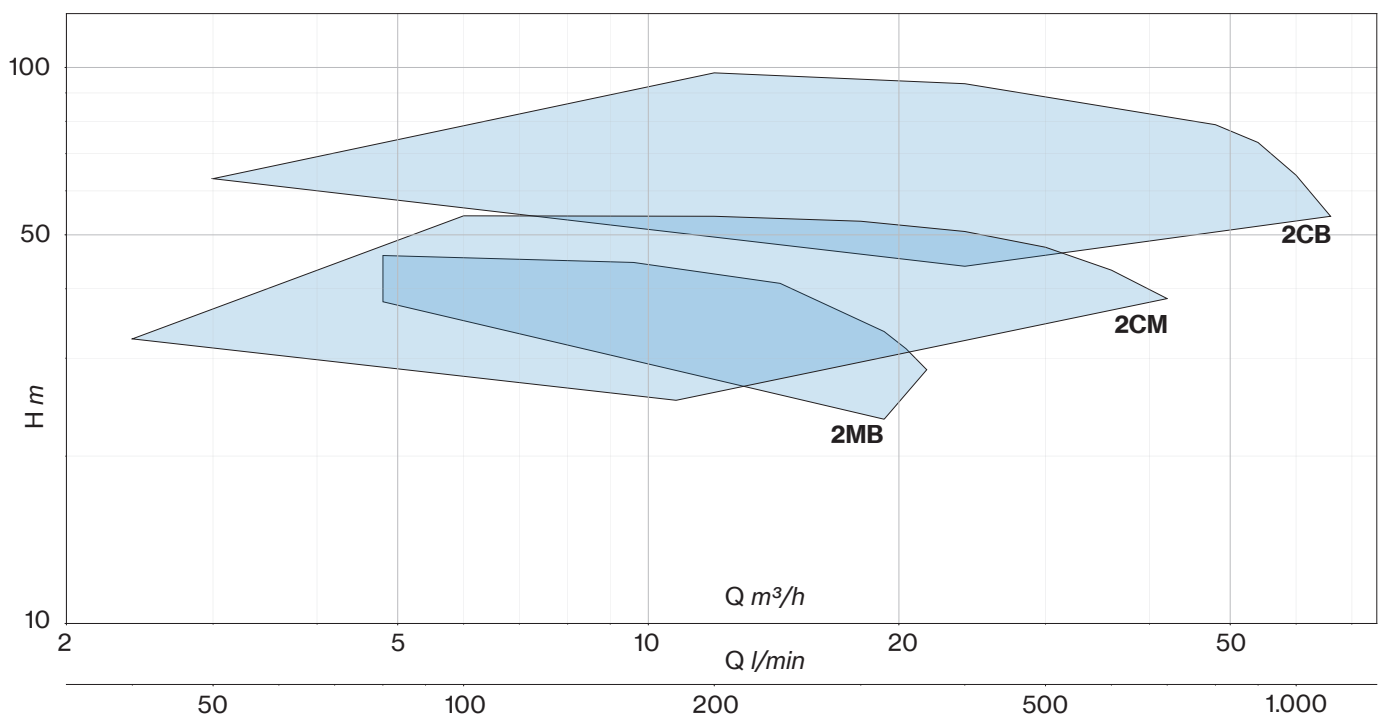


Two impeller centrifugal pumps for constructing pressurisation systems for civil and industrial plant; the two counterposed impellers guarantee high head and flow rate.

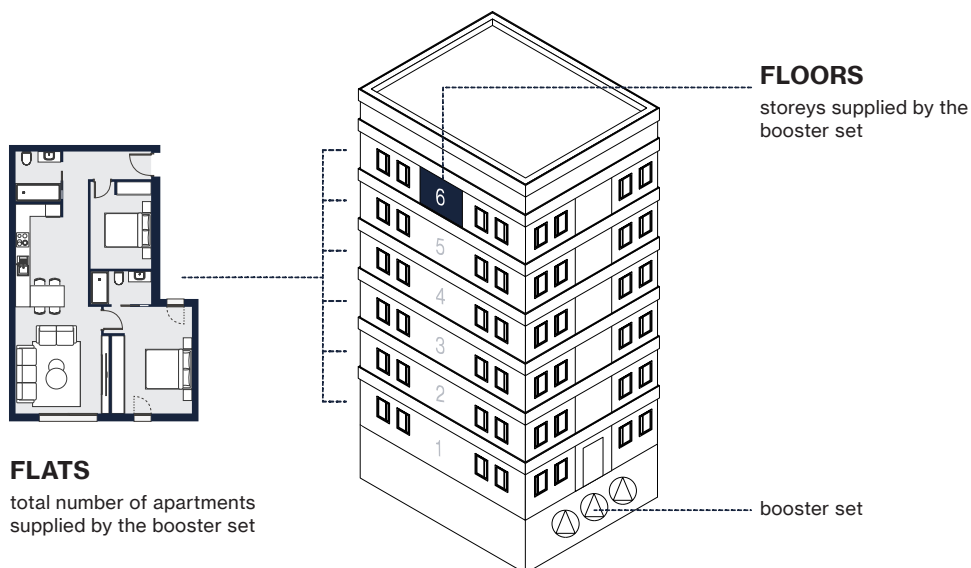
Name key



Performance data and curves



QUICK SELECTION



FLATS		FLOORS	CM series	MB series	CB series
1 duty and 1 standby pumps	2 duty pumps				
1	2-3	1-2 3	2CM_100_ -	-	- 2CB_100_
2-3	4-6	1-2	2CM_164_	-	2CB_100_
		3	2CM_164_	-	2CB_160_
		4-5	2CM_214_	-	2CB_160_
		6	2CM_314_	-	2CB_210_
4-5	7-13	7	-	-	2CB_310_
		1-3	2CM_164_	2MB_150_	2CB_160_
		4	2CM_214_	2MB_200_	2CB_160_
		5	2CM_214_	2MB_300_	2CB_210_
6-8	14-20	6	2CM_314_	-	2CB_310_
		1-2	2CM_214_	2MB_150_	2CB_160_
		3	2CM_214_	2MB_200_	2CB_160_
		4	2CM_214_	2MB_300_	2CB_210_
9-14	21-32	5	2CM_314_	-	2CB_310_
		1-2	-	2MB_200_	2CB_210_
		3-4	-	2MB_300_	2CB_210_
		5-6	-	-	2CB_310_
15-28	33-56	7-9	-	-	2CBT_400_
		10-12	-	-	2CBT_600_
		1-4	2CMT_400_	2MB_300_	-
		5-6	2CMT_550_	-	-
		7-8	-	-	2CBT_600_
		9-11	-	-	2CBT_751_
		12-13	-	-	2CBT_900_



2CM



Pressurisation units with 2 threaded centrifugal pumps of CM series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC and EPIC-A inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

Booster set features

Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) and two pressure switches
Variable speed	inverter EPIC or EPIC-A on each pump and two pressure sensors
Pressure tanks	available on request as accessories

Pump features

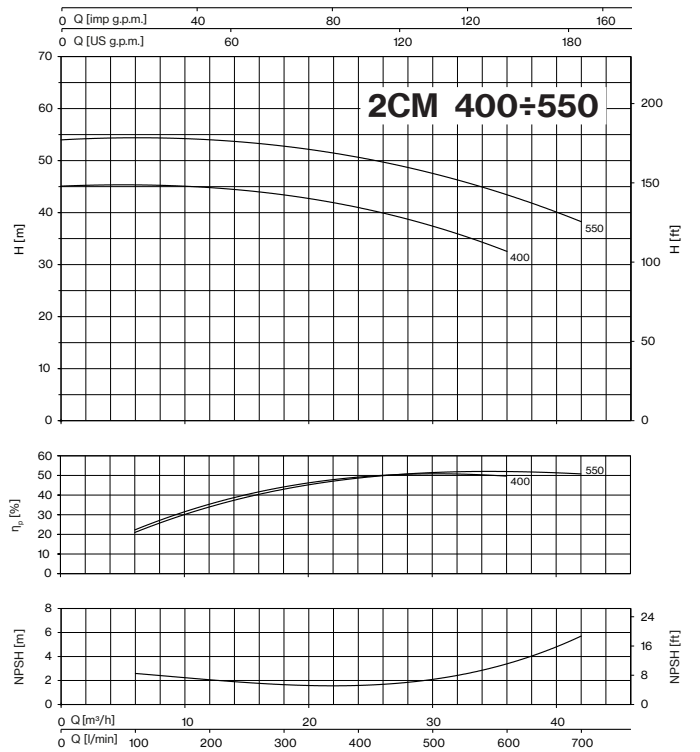
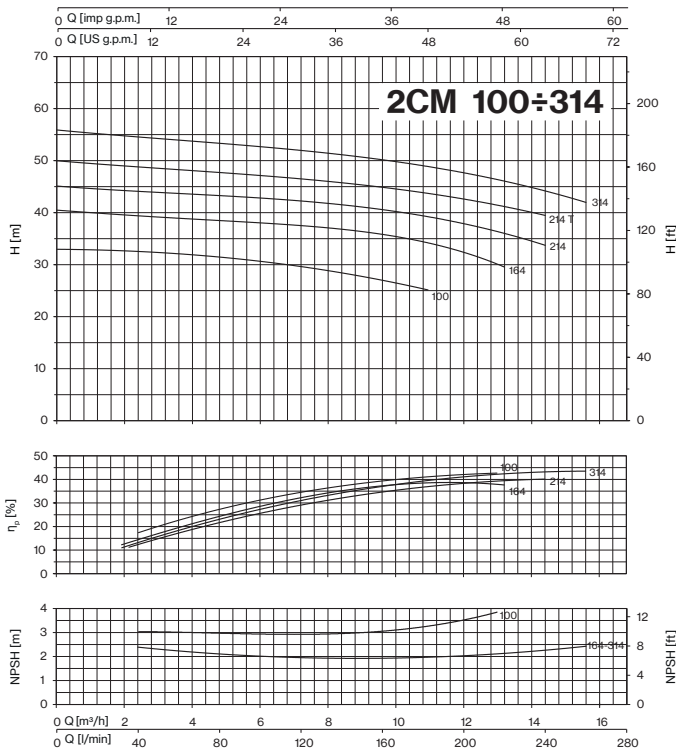
Pump body	cast iron
Motor bracket	cast iron (164÷550); aluminum (100)
Impeller	Noryl® or brass (100÷314), brass (400÷550)
Mechanical seal	ceramic-graphite-NBR
Motor shaft	stainless steel AISI 416 (100) stainless steel AISI 303 (164÷550)
Liquid temperature	Noryl® impeller: 0 - 50 °C brass impeller: 0 - 90 °C
Operating pressure	max 6 bar (100) max 8 bar (164÷550)
2 Poles induction motor	3~ 230/400V - 50Hz 1~ 230V - 50Hz
Motor insulation class	F
Motor protection degree	IPX4

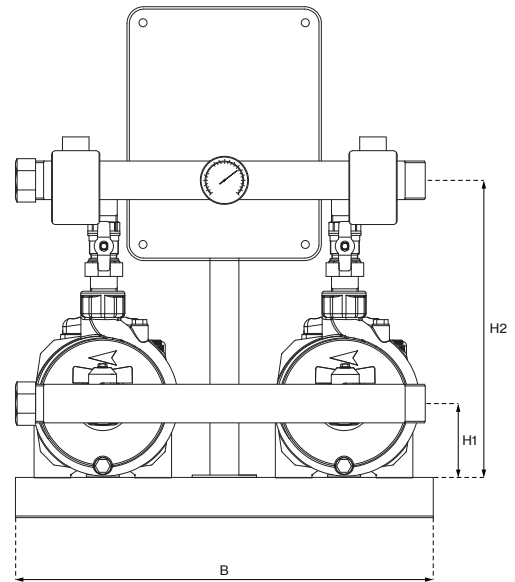
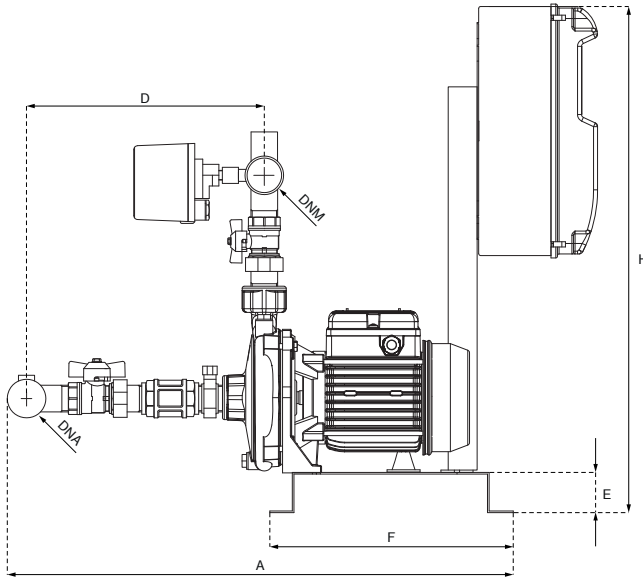
2CM

PERFORMANCE

TARGET (2 pumps)		MODEL				P2 NOMINAL		Q (m³/h - l/min)											
		FIXED SPEED		VARIABLE SPEED				0 2,4 4,8 7,2 9,6 10,8 13,2 14,4 15,6											
		1- 230V	3- 400V	EPIC				0 40 80 120 160 180 220 240 260											
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out			H (m)															
l/min	bar					HP (×2)	kW (×2)												
100	3	-	-	2CMT/E 100	2CMT/A100-304	1	0,74	33,0	32,5	31,5	29,6	26,8	25,2						
150	3,5	2CM 164	2CMT 164	2CMT/E 164	2CMT/A164-304	1,5	1,1	40,5	39,3	38,6	37,5	35,6	34,6	29,5					
200	3,5	2CM 214	-	-	-	2	1,5	45,1	44,1	43,3	42,3	40,5	39,2	36,4	33,5				
	4	-	2CMT 214	-	2CMT/A214-306	2	1,5	50,0	48,7	47,8	46,5	44,9	43,7	41,3	39,4				
	4,5	2CM 314	2CMT 314	-	2CMT/A314-306	3	2,2	55,9	54,5	53,4	52,0	50,1	48,9	46,2	44,2	41,9			

TARGET (2 pumps)		MODEL				P2 NOMINAL		Q (m³/h - l/min)											
		FIXED SPEED		VARIABLE SPEED				0 6 12 18 24 30 36 42											
		1- 230V	3- 400V	EPIC				0 100 200 300 400 500 600 700											
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out			H (m)															
l/min	bar					HP (×2)	kW (×2)												
400	4	-	2CMT400	-	2CMT/A400-309	4	3	45,1	45,2	44,9	43,4	40,9	37,4	32,5					
500	4,5	-	2CMT550	-	2CMT/A550-314	5,5	4	54,1	54,1	54,0	52,9	50,7	47,5	43,2	38,4				





MODEL				P1		In			Required tank for v.s.	DIMENSIONS								WEIGHT			
FIXED SPEED		VARIABLE SPEED		1~	3~	1~ 230V	3~ 400V	3~ 230V		A	B	D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.
1~	3~	EPIC 1- in 230V 3-out 230V	EPIC-A 3- 400V-in 3- 400V-out	kW (x2)		A (x2)				Lt	mm								Kg		
-	-	2CMT/E100	2CMT/A100-304	-	1,17	-	2	3,5	2x 8	641	520	311	50	300	633	97	372	1" 1/2 G	-	49	54
2CM164	2CMT164	2CMT/E164	2CMT/A164-304	1,9	1,8	8,5	3,4	5,9	2x 8	648	520	325	50	300	633	115	423	1" 1/2 G	-	65	70
2CM214	2CMT214	-	2CMT/A214-306	2,2	2,43	10,3	4,9	-	2x 8	648	520	325	50	300	633	115	423	2" G	-	67	72
2CM314	2CMT314	-	2CMT/A314-306	2,85	2,67	13,5	5,1	-	2x 8	648	520	325	50	300	633	115	423	2" G	-	68	73
-	2CMT400	-	2CMT/A400-309	-	3,7	-	6,7	-	2x 20	849	615	378	60	380	633	133	515	3" G	2" 1/2 G	115	120
-	2CMT550	-	2CMT/A550-314	-	4,9	-	9	-	2x 20	849	615	378	60	380	633	133	515	3" G	2" 1/2 G	116	136

f.s. : fixed speed
v.s. : variable speed



2MB



Pressurisation units with 2 threaded centrifugal pumps of MB series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC and EPIC-A inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

Booster set features

Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) and two pressure switches
Variable speed	inverter EPIC or EPIC-A on each pump and two pressure sensors
Pressure tanks	available on request as accessories

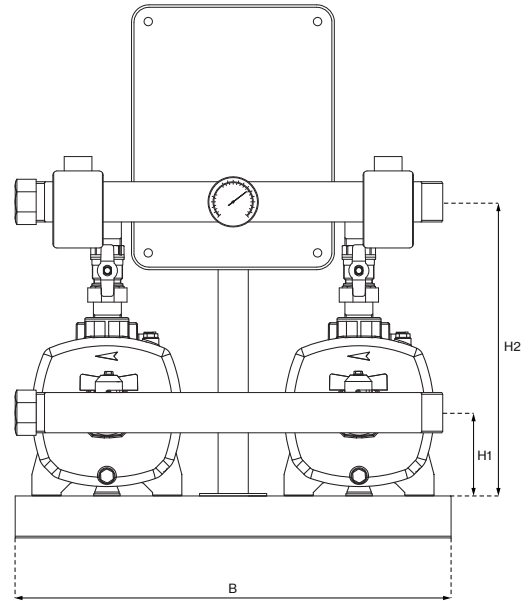
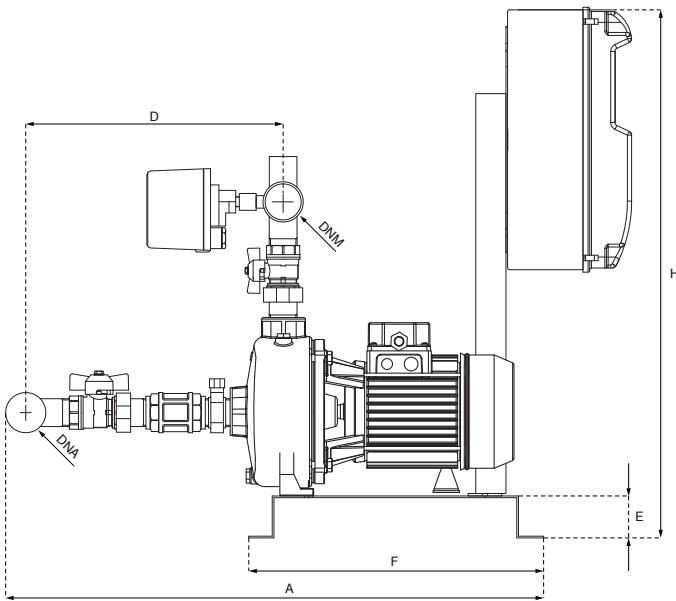
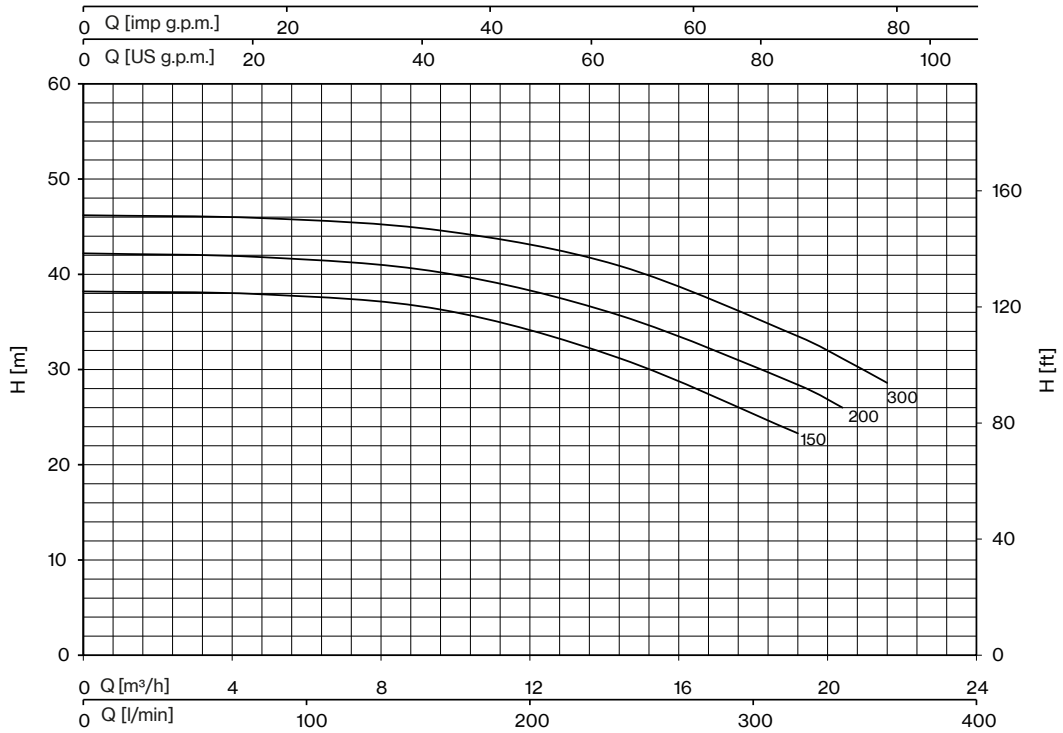
Pump features

Pump body	cast iron
Motor bracket	cast iron
Impeller	Noryl® or brass
Mechanical seal	ceramic-graphite-NBR
Motor shaft	stainless steel AISI 303
Liquid temperature	0 - 50 °C
Operating pressure	max 8 bar
2 Poles induction motor	3~ 230/400V - 50Hz 1~ 230V - 50Hz
Motor insulation class	F
Motor protection degree	IPX4

PERFORMANCE

TARGET (2 pumps)		MODEL				P2 NOMINAL		Q (m³/h - l/min)						
		FIXED SPEED		VARIABLE SPEED				0	4,8	9,6	14,4	19,2	20	21,6
l/min	bar	1- 230V	3- 400V	EPIC	EPIC-A	HP (x2)	kW (x2)	0	80	160	240	320	340	360
				1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out			H (m)						
160	3,5	2MB150	2MBT150	2MBT/E150	2MBT/A150-304	1,5	1,1	38,2	37,9	36,3	31,2	23,3		
240		2MB200	2MBT200	2MBT/E200	2MBT/A200-304	2	1,5	42,2	41,8	40,2	35,7	28,4	26,0	
300		2MB300	2MBT300	-	2MBT/A300-306	3	2,2	46,2	45,9	44,6	40,9	33,5	31,2	28,6





MODEL				P1		In			Required tank for v.s.	DIMENSIONS								WEIGHT				
FIXED SPEED		VARIABLE SPEED		1-	3-	1- 230V	3- 400V	3- 230V		A	B	D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.	
1-	3-	EPIC	EPIC-A	kW (x2)	A (x2)	Lt	mm													Kg		
		1- in 230V 3-out 230V	3- 400V-in 3- 400V-out				A	B		D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.			
2MB150	2MBT150	2MBT/E150	2MBT/A150-304	1,6	1,5	7,2	3,1	5,4	2x 20	740	615	390	60	380	633	115	401			70	75	
2MB200	2MBT200	2MBT/E200	2MBT/A200-304	1,85	1,75	8,4	3,4	5,9	2x 20	740	615	390	60	380	633	115	401	2" ½ G	2" G	71	76	
2MB300	2MBT300	-	2MBT/A300-306	2,15	2,05	9,7	4,3	-	2x 20	740	615	390	60	380	633	115	401			73	79	

f.s. : fixed speed
v.s. : variable speed



Dimensions and weights may differ slightly and therefore should be considered as indicative

2CB



Pressurisation units with 2 threaded centrifugal pumps of CB series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC and EPIC-A inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

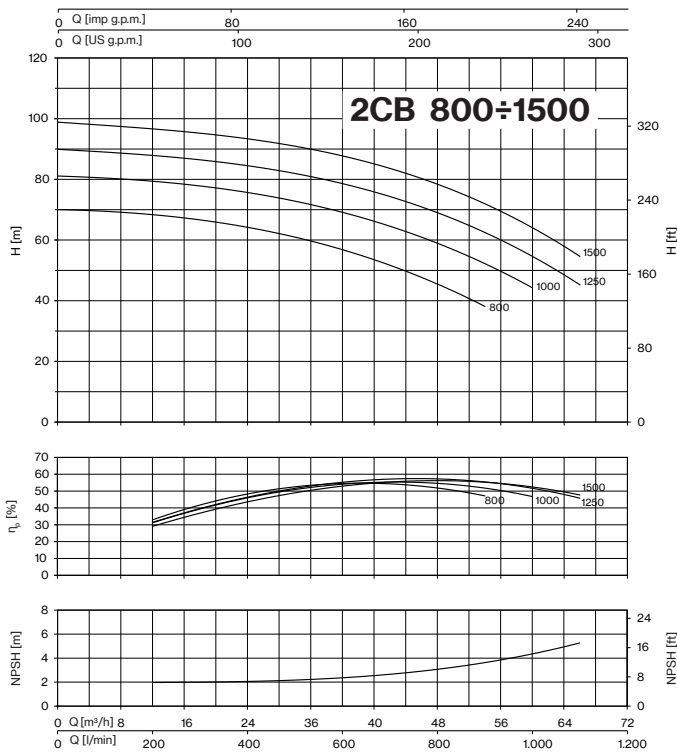
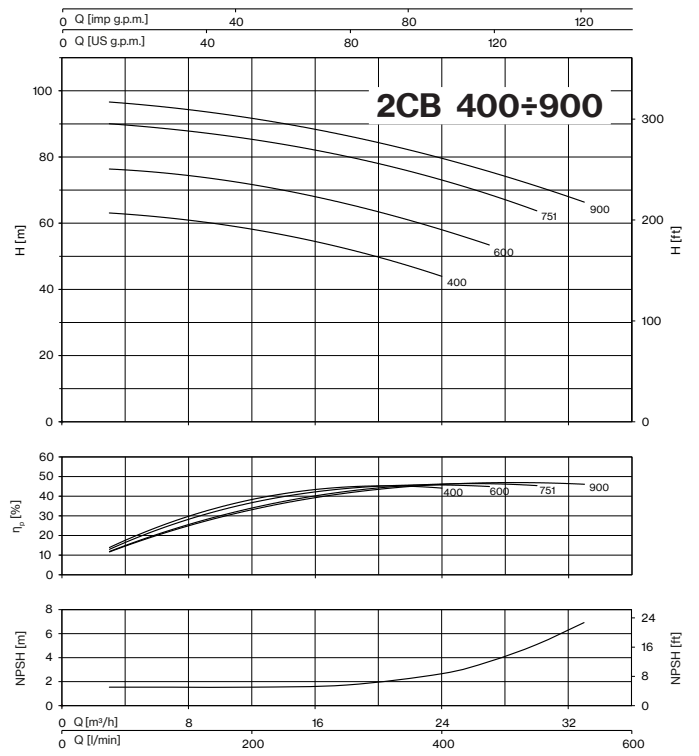
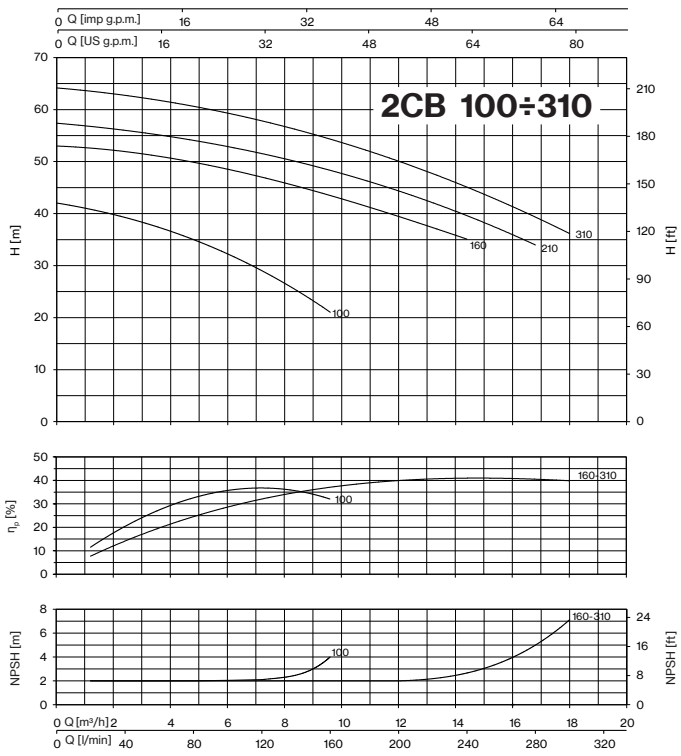
Booster set features

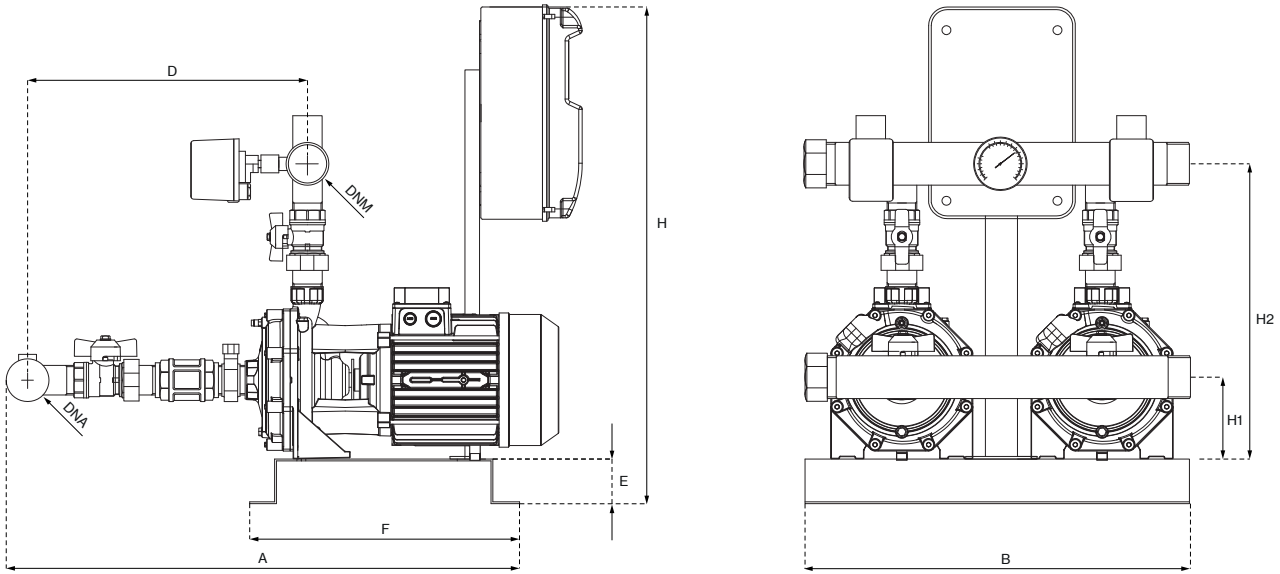
Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) and two pressure switches
Variable speed	inverter EPIC or EPIC-A on each pump and two pressure sensors
Pressure tanks	available on request as accessories

Pump features

Pump body	cast iron
Motor bracket	cast iron
Impeller	Noryl® or brass (100÷900) brass (800÷1500)
Mechanical seal	ceramic-graphite-NBR
Motor shaft	stainless steel AISI 303 stainless steel AISI 416 (100)
Liquid temperature	Noryl® impeller: 0 - 50 °C brass impeller: 0 - 90 °C
Operating pressure	max 6 bar (100) max 11 bar (160÷1500)
2 Poles induction motor	3~ 230/400V - 50Hz P ≤ 4kW 3~ 400/690V - 50Hz P > 4kW 1~ 230V - 50Hz
Motor insulation class	F
Motor protection degree	IPX4 IPX5 (800÷1500)

2CB



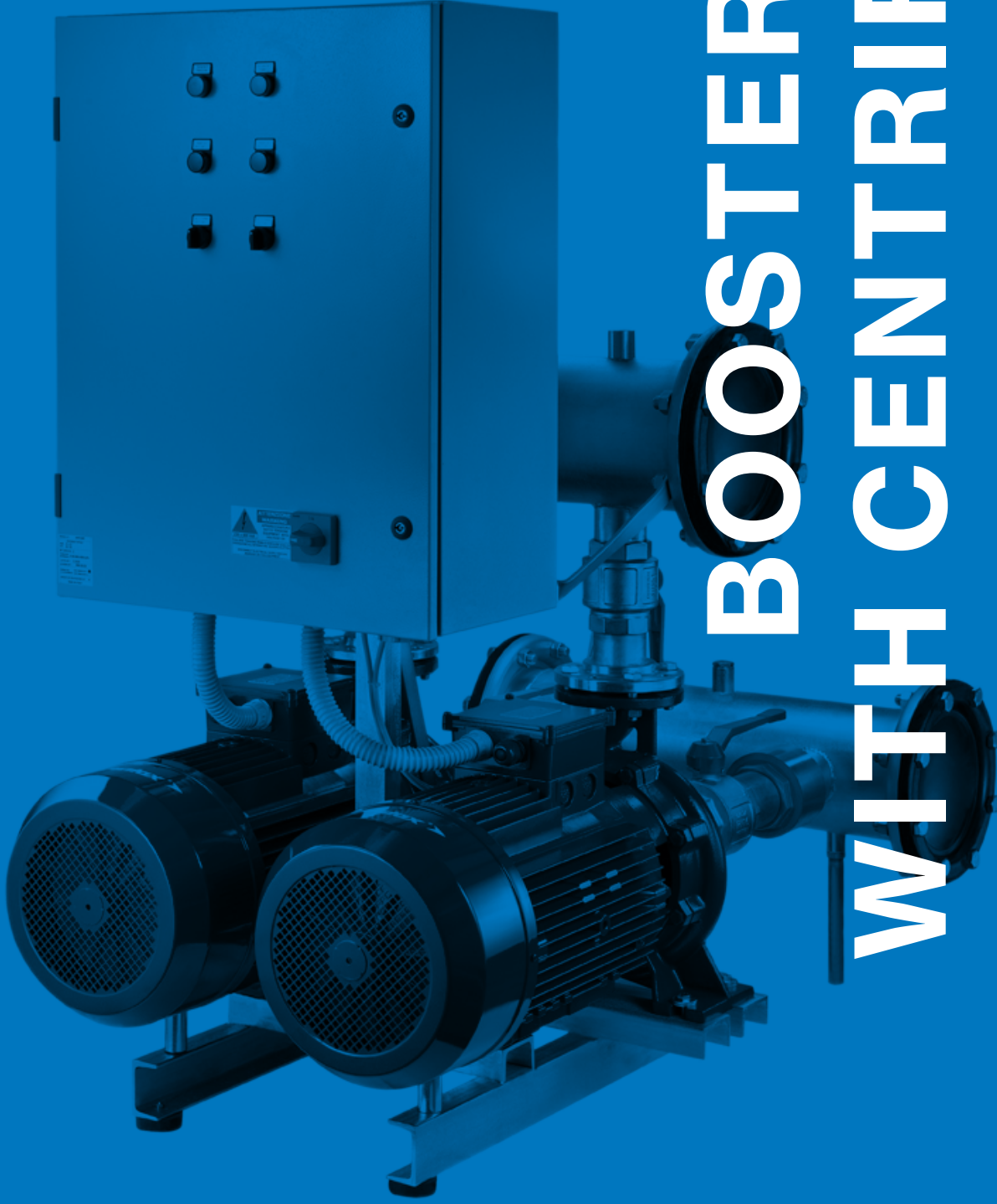


MODEL				P1		In			Required tank for v.s.	DIMENSIONS								WEIGHT			
FIXED SPEED		VARIABLE SPEED		1-	3-	1- 230V	3- 400V	3- 230V		A	B	D	E	F	H	H1	H2	DNA	DNM	f.s.	v.s.
1-	3-	EPIC 1- in 230V 3-out 230V	EPIC-A 3- 400V-in 3- 400V-out	kW (x2)		A (x2)				Lt	mm								Kg		
2CB100	2CBT100	2CBT/E100	2CBT/A100-304	1,17	1,15	5,4	2,4	4,2	2x 8	653	520	351	50	300	633	98	366	2" G	1" 1/2 G	49	54
2CB160	2CBT160	2CBT/E160	2CBT/A160-306	2,3	2,2	10,2	4,1	7,1	2x 20	646	520	361	50	300	633	110	403			65	70
2CB210	2CBT210	-	2CBT/A210-306	2,6	2,45	11,5	4,8	-	2x 20	646	520	361	50	300	633	110	403			66	71
2CB310	2CBT310	-	2CBT/A310-306	2,9	2,8	13,2	5,2	-	2x 20	646	520	361	50	300	633	110	403	2" 1/2 G	2" G	67	72
-	2CBT400	-	2CBT/A400-309	-	3,8	-	6,7	-	2x 20	777	615	462	60	380	633	135	464			108	113
-	2CBT600	-	2CBT/A600-314	-	5	-	9,1	-	1x 50	777	615	462	60	380	633	135	464			116	136
-	2CBT751	-	2CBT/A751-314	-	6,5	-	11,5	-	1x 50	777	615	462	60	380	633	135	464			132	152
-	2CBT900	-	2CBT/A900-318	-	7,3	-	13,3	-	1x 50	777	615	462	60	380	633	135	464	144	164		
-	2CBT800	-	2CBT/A800-314	-	6,7	-	11,1	-	1x 100	1050	840	470	60	380	920	150	650	DN100	DN80	237	257
-	2CBT1000	-	2CBT/A1000-318	-	8,5	-	13,9	-	1x 100	1050	840	470	60	380	920	150	650			247	267
-	2CBT1250	-	2CBT/A1250-318	-	9,8	-	16,3	-	1x 100	1050	840	470	60	380	920	150	650			264	284
-	2CBT1500	-	2CBT/A1500-325	-	11,2	-	18,6	-	1x 100	1050	900	470	60	380	920	150	650			272	292

f.s. : fixed speed
v.s. : variable speed

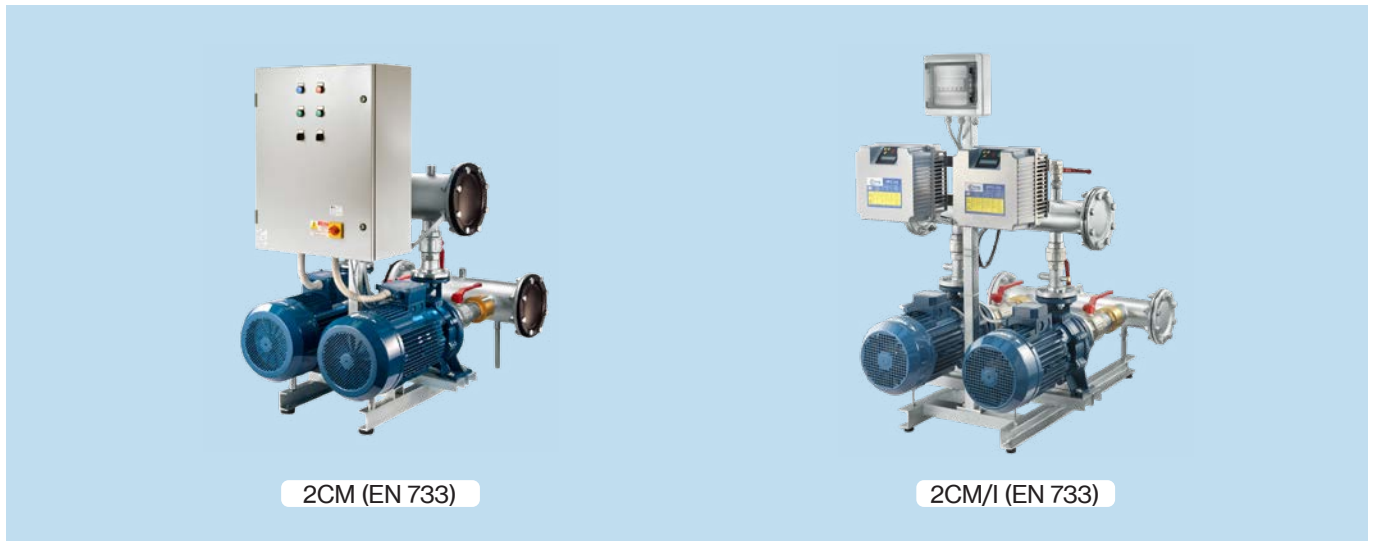






BOOSTER SETS WITH CENTRIFUGAL FLANGED PUMPS

CENTRIFUGAL FLANGED BOOSTER SETS



Fixed speed and variable speed booster sets with two monobloc centrifugal flanged pumps

DESCRIPTION

Booster units with 2 monobloc horizontal centrifugal pumps of CM (EN 733) series, set on a single skid and connected in parallel by suction and delivery manifolds. These systems are widely used in water supplies, pressurization and fire-fighting systems, cooling, heating, irrigation, industrial and agricultural applications. To ensure a constant pressure to the system these booster sets can be equipped with EPIC-A or IPFC inverters.

To ensure proper operation of the booster set, pressure tanks of adequate capacity are required depending on constant or variable speed, pumps type, and applications.

FEATURES

- Two monobloc horizontal centrifugal flanged pumps of CM (EN 733) series
- Cast iron pump body
- Suction manifold in galvanized steel with non-return and isolation valves
- Delivery manifold in galvanized steel with pressure gauge and isolation valves
- Base frame in galvanized steel
- EQ2SM(T) electronic or Q2ST electromechanical control panel with pressure switches for fixed speed version
- Inverter EPIC-A or IPFC, connected on each pump with pressure sensors, for variable speed version
- Pressure tanks, available on request, as accessory

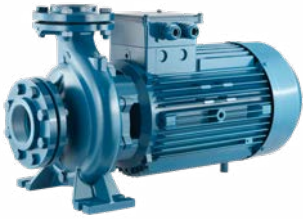
FUNCTIONING

In the fixed speed version as soon as pressure drops below the minimum set value on the pressure switch the first pump starts automatically. If water demand further increases, the second pump will run until the pressure rises above the maximum set value. When demand ends, the last pump turns off. All the pumps follow cycling changeover for equal work distribution. In case of one pump failure, the other pumps would continue to operate.

In the variable speed version when the system pressure drops below the desired level, the sensors detect it giving an input to the inverter to start the first pump at controlled speed. If the flow rate is not sufficient, the pressure continues to drop causing the second pump to start. As soon as the flow demand decreases, the pressure rises again and the second pump stop. The first pump continues to modulate its speed in order to regulate and maintain the set pressure until it turns off when the flow demand ends. Based on working hours, the inverters will alternate the starting order of pumps to ensure better wear distribution. Continuity of operation is ensured in the event of one pump or one inverter failure.



Threaded centrifugal pumps



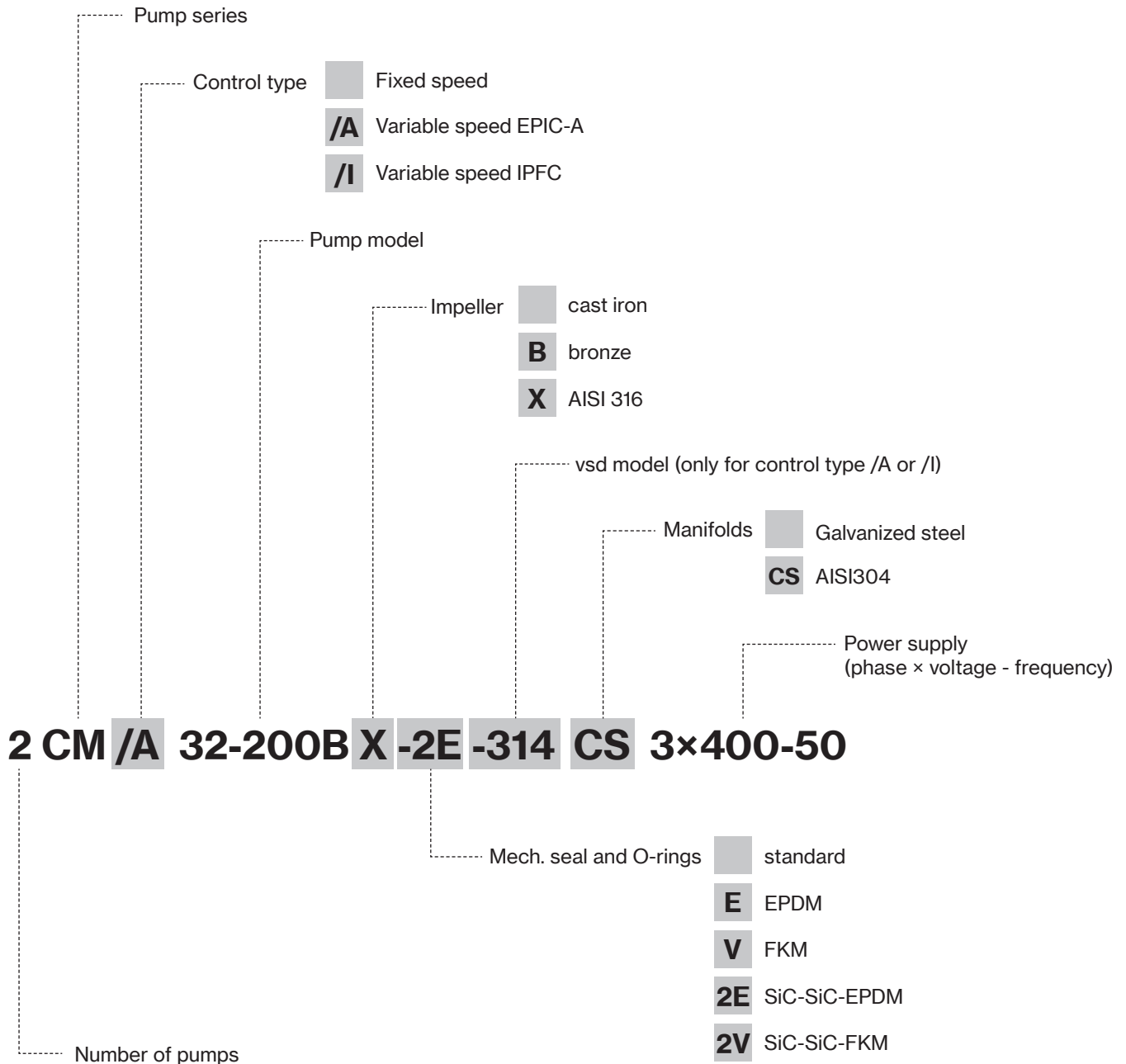
CM EN 733

P2	4+50 [HP]
Q max	150 [m³/h]
H max	93,6 [m]

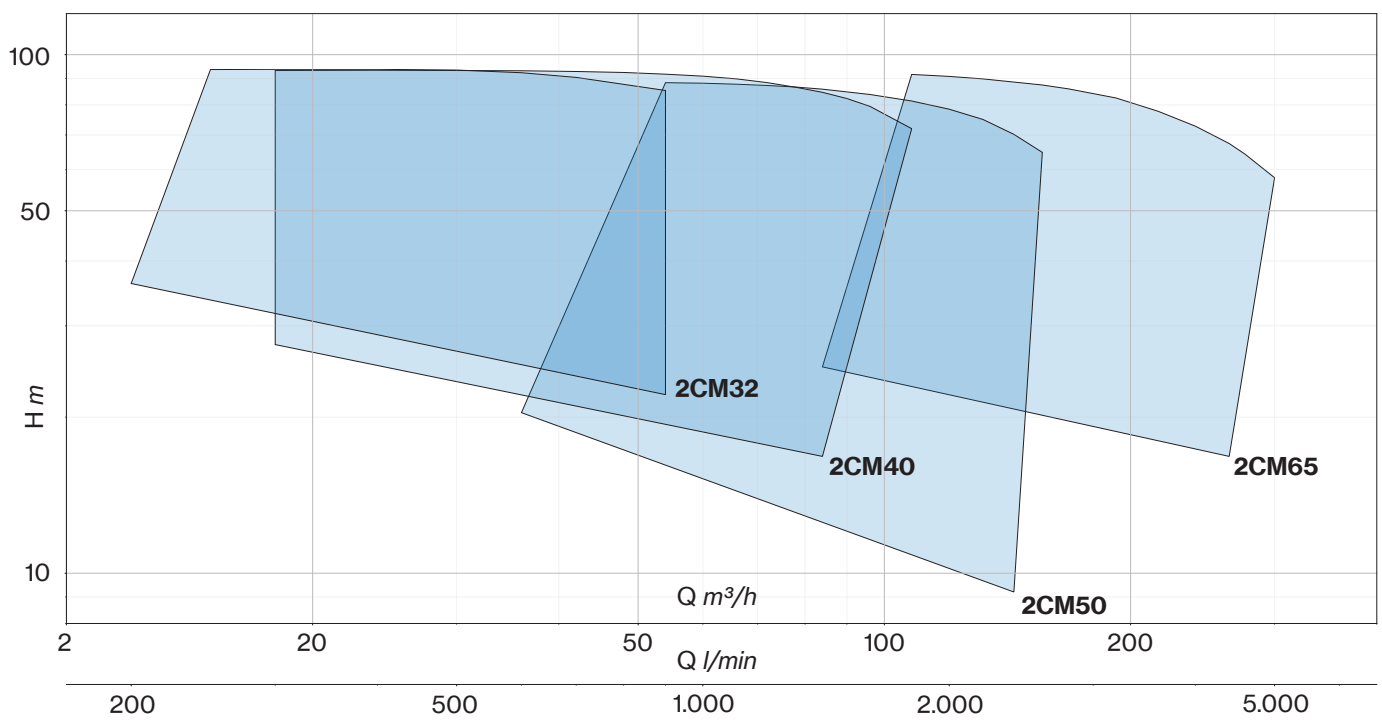


Monobloc horizontal centrifugal pumps, constructed in compliance with EN 733 standards; widely used in water supplies, pressurisation and fire-fighting systems, cooling, heating, irrigation, industrial and agricultural applications; standard supply with counter-flange.

Name key



Performance data and curves



2CM (EN 733)



Pressurisation units with 2 centrifugal flanged pumps of CM EN733 series on a single skid, connected in parallel by suction and delivery manifolds.

They are available in fixed speed version with electronic control panel or in variable speed version with EPIC-A or IPFC inverters for constant pressure. The key characteristics of these systems are their reliability, user-friendly operation, and low maintenance needs. Installation of a pressure tank is required.

Booster set features

Suction manifold	galvanized steel with non-return and isolation valves
Delivery manifold	galvanized steel with pressure gauge and isolation valves, two connectors in the delivery manifold for direct installation of pressure tanks up to 24 lt
Base frame	galvanized steel
Fixed speed	electronic control panel EQ2SM(T) (3~ up to 15kW), electromechanical control panel Q2ST (3~ from 18,5kW to 37kW) and two pressure switches
Variable speed	inverter EPIC-A or IPFC on each pump and two pressure sensors
Pressure tanks	available on request as accessories

Pump features

Pump body	cast iron
Motor bracket	cast iron
Impeller	cast iron, bronze or stainless steel
Mechanical seal	ceramic-graphite-NBR
Pump shaft end	stainless steel AISI 304
Liquid temperature	-10 ÷ +90 °C
Operating pressure	max 10 bar
2 Poles induction motor	3~ 230/400V - 50Hz P ≤ 4kW 3~ 400/690V - 50Hz P > 4kW 1~ 230V-50Hz
Motor insulation class	F
Motor protection degree	IPX5

2CM (EN 733)

PERFORMANCE

TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)												
		FIXED SPEED	VARIABLE SPEED				0	12	15	18	24	30	36	42	48	54	60	66	
m³/h	bar	3-400V	EPIC-A	IPFC	HP (x2)	kW (x2)	H (m)												
			3-400V-in 3-400V-out				0	200	250	300	400	500	600	700	800	900	1000	1100	
36	3	2CM32-160A	2CM/A32-160A-309	2CM/I 32-160A-309	4	3	36,1	36,2	36,0	35,6	34,6	33,2	31,4	28,9	25,7	22,1			
	3,5	2CM32-200C	2CM/A32-200C-314	2CM/I 32-200C-311	5,5	4	40,2	40,3	40,1	39,8	38,9	37,7	36,1	34,2	31,6	28,7			
42	4	2CM32-200B	2CM/A32-200B-314	2CM/I 32-200B-314	7,5	5,5	48,3	48,0	47,9	47,6	46,7	45,5	44,2	42,6	40,5	37,9	35,4		
	5	2CM32-200A	2CM/A32-200A-318	2CM/I 32-200A-318	10	7,5	57,9	58,3	58,4	58,4	58,0	57,1	55,6	53,8	51,4	49,2	46,6	44,3	
	6,5	2CM32-250C	2CM/A32-250C-318	2CM/I 32-250C-318	12,5	9,2	74,6		72,8	72,5	71,9	70,5	68,8	66,6	64,1	61,3			
	7,5	2CM32-250B	2CM/A32-250B-325	2CM/I 32-250B-325	15	11	84,8		84,0	83,9	83,6	82,7	81,1	78,6	75,4	73,2			
	8,5	2CM32-250A	2CM/A32-250A-330	2CM/I 32-250A-330	20	15	93,5		93,6	93,7	93,7	93,4	92,3	90,4	87,7	85,3			

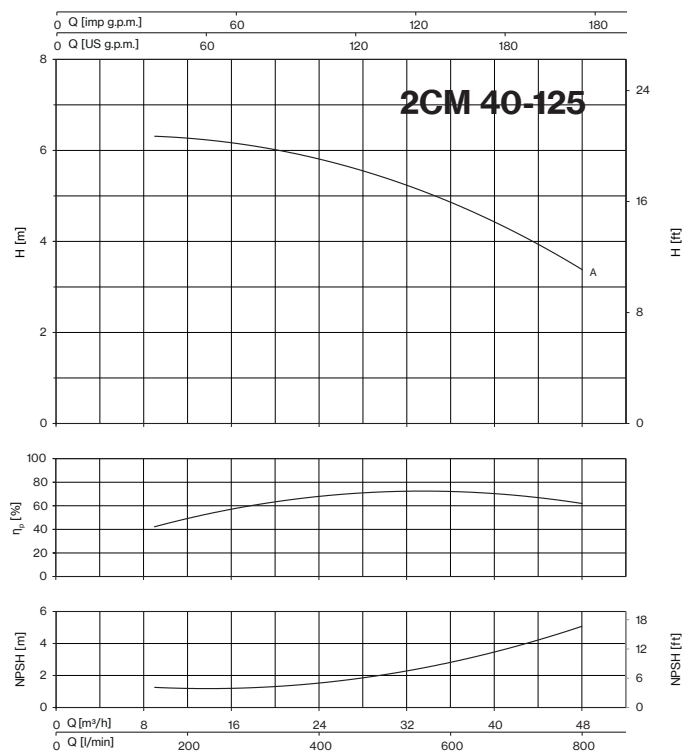
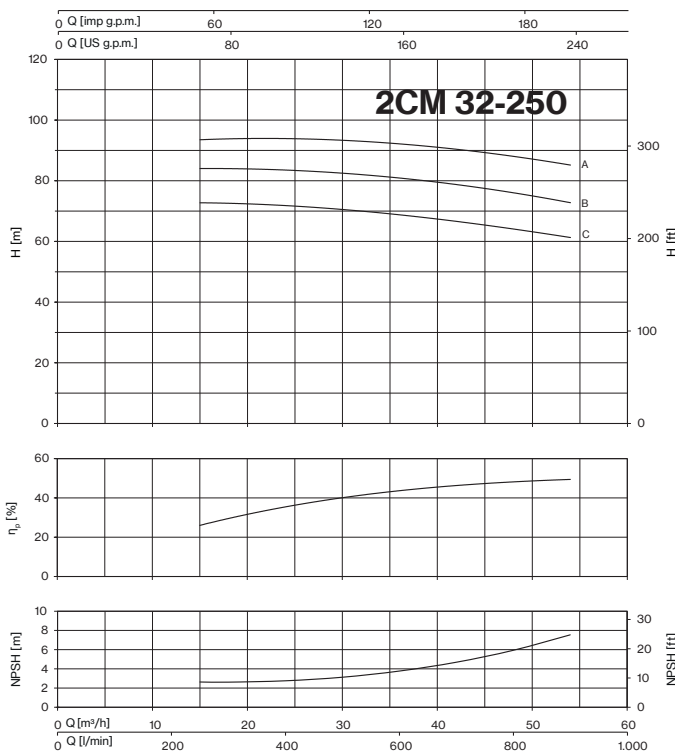
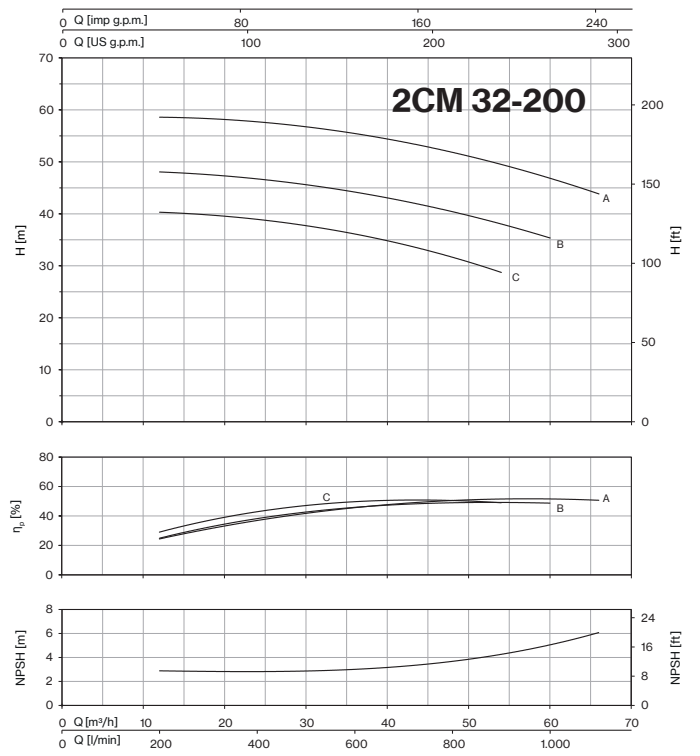
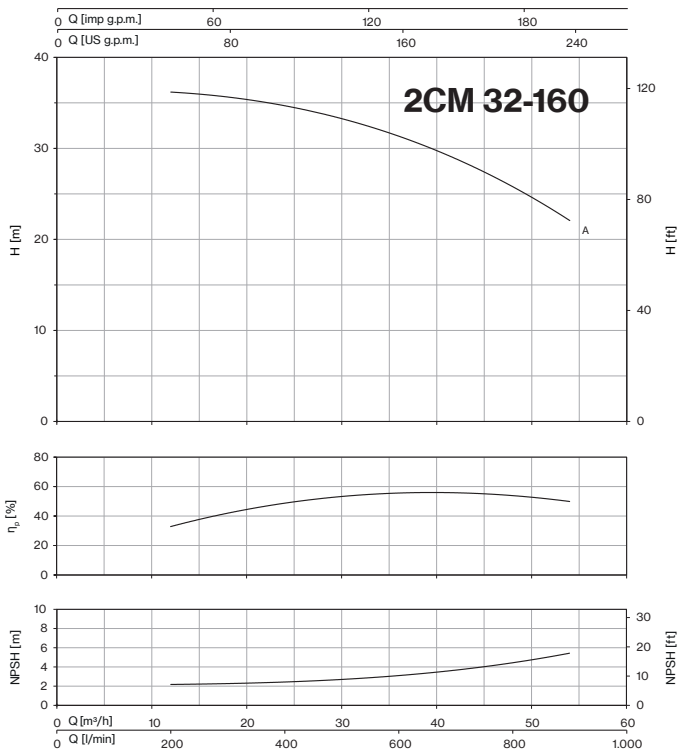
TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)													
		FIXED SPEED	VARIABLE SPEED				0	18	36	42	48	54	60	66	72	78	84	90	96	108
m³/h	bar	3-400V	EPIC-A	IPFC	HP (x2)	kW (x2)	H (m)													
			3-400V-in 3-400V-out				0	300	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1800
54	2	2CM40-125A	2CM/A40-125A-309	2CM/I 40-125A-309	4	3	26,8	27,6	27,2	26,5	25,7	24,6	23,4	22,0	20,3	18,5	16,8			
	3	2CM40-160A	2CM/A40-160A-314	2CM/I 40-160A-311	5,5	4	38,8	34,9	33,9	33,2	32,4	31,3	30,0	28,5	26,9	25,2	23,4			
	4	2CM40-200B	2CM/A40-200B-314	2CM/I 40-200B-314	7,5	5,5	44,6	45,5	44,5	43,5	42,3	41,0	39,3	37,2	34,9	32,3	29,4			
	5	2CM40-200A	2CM/A40-200A-318	2CM/I 40-200A-318	10	7,5	56,2	56,5	55,9	55,1	54,1	52,8	51,2	49,3	47,0	44,4	41,6			
66	5	2CM40-200AP	2CM/A40-200AP-318	2CM/I 40-200AP-318	12,5	9,2	61,7	61,4	60,0	59,1	57,9	56,4	54,7	53,1	51,1	48,5	45,5	42,2		
	6,5	2CM40-250B	2CM/A40-250B-325	2CM/I 40-250B-325	15	11	73,7	73,9	71,9	71,1	70,2	69,2	68,1	66,7	64,7	62,1				
72	7,5	2CM40-250A	2CM/A40-250A-330	2CM/I 40-250A-330	20	15	82,6	84,6	84,3	83,4	82,4	81,3	80,0	78,5	76,9	75,4	72,8	69,0		
84	8,5	2CM40-250BM	2CM/A40-250BM-338	2CM/I 40-250BM-338	25	18,5	92,6	93,2	93,1	92,8	92,4	91,7	90,9	89,8	88,3	86,5	84,6	82,3	79,5	72,0

TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)													
		FIXED SPEED	VARIABLE SPEED				0	36	42	48	54	60	72	84	96	108	120	132	144	156
m³/h	bar	3-400V	EPIC-A	IPFC	HP (x2)	kW (x2)	H (m)													
			3-400V-in 3-400V-out				0	600	700	800	900	1000	1200	1400	1600	1800	2000	2200	2400	2600
96	1,5	2CM50-125B	2CM/A50-125B-309	2CM/I 50-125B-309	4	3	20,0	20,4	20,3	20,1	19,9	19,6	18,7	17,6	16,4	15,0	13,2	11,3	9,2	
	2	2CM50-125A	2CM/A50-125A-314	2CM/I 50-125A-311	5,5	4	23,7	24,2	24,1	23,9	23,7	23,3	22,6	21,7	20,7	19,6	18,2	16,4	14,2	
108	2,5	2CM50-160B	2CM/A50-160B-314	2CM/I 50-160B-314	7,5	5,5	32,1		33,5	33,4	33,1	32,7	31,6	30,2	28,3	26,2	23,9	21,5	18,9	
120	3	2CM50-160A	2CM/A50-160A-318	2CM/I 50-160A-318	10	7,5	38,1		39,8	39,8	39,8	39,6	38,8	37,7	36,1	34,1	32,1	29,9	27,6	25,4
	3,5	2CM50-200C	2CM/A50-200C-325	2CM/I 50-200C-325	12,5	9,2	48,2			49,7	49,2	48,5	46,9	44,9	42,6	40,0	36,0	32,3	28,9	
	4	2CM50-200B	2CM/A50-200B-325	2CM/I 50-200B-325	15	11	53,1			54,6	54,1	53,5	52,2	50,4	48,1	45,1	42,7	38,8	35,0	
	5	2CM50-200A	2CM/A50-200A-330	2CM/I 50-200A-330	20	15	59,9			61,8	61,5	61,0	59,7	58,0	56,0	53,6	50,8	47,8	44,4	39,8
	6,5	2CM50-250B	2CM/A50-250B-338	2CM/I 50-250B-338	25	18,5	78,8				78,4	78,0	77,0	75,1	72,9	70,3	66,9	62,9	58,5	
	7,5	2CM50-250A	2CM/A50-250A-344	2CM/I 50-250A-348	30	22	88,5				88,3	88,1	87,2	85,8	83,8	81,4	78,5	75,0	70,2	64,8

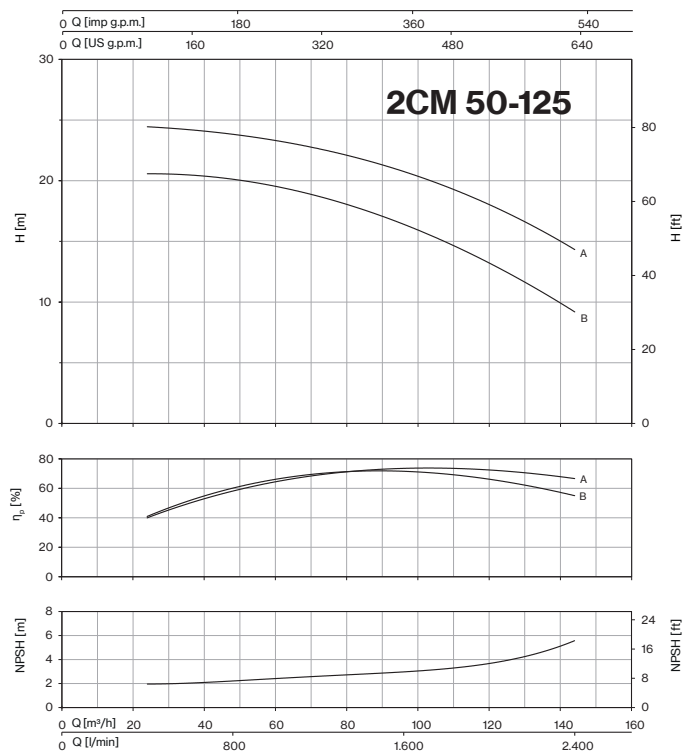
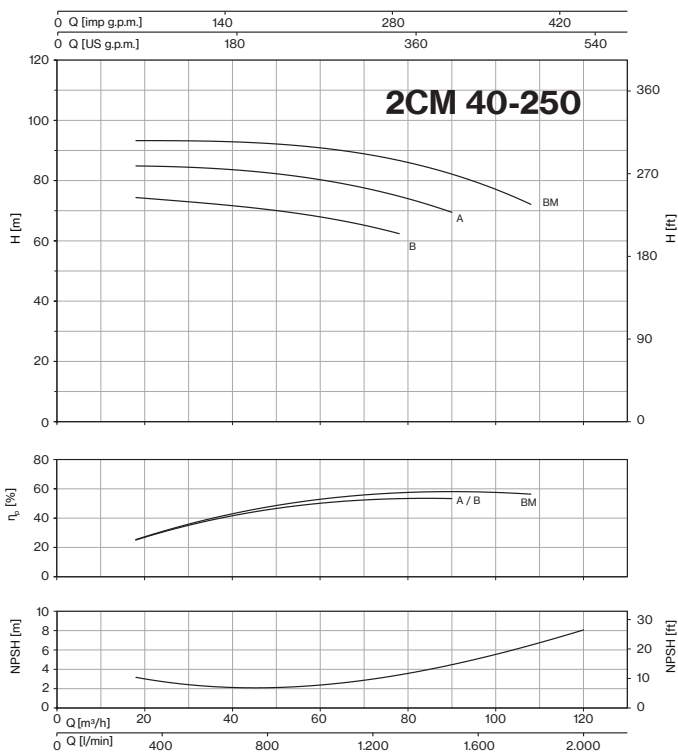
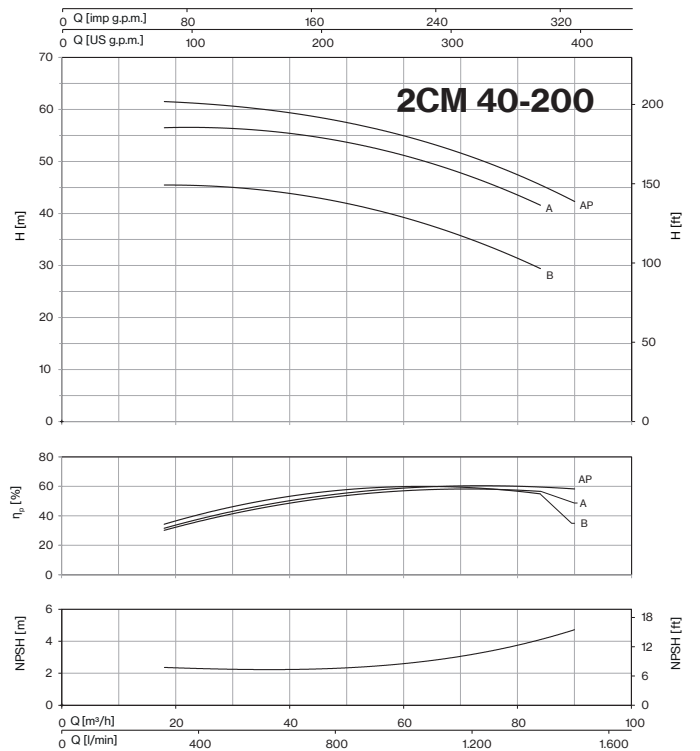
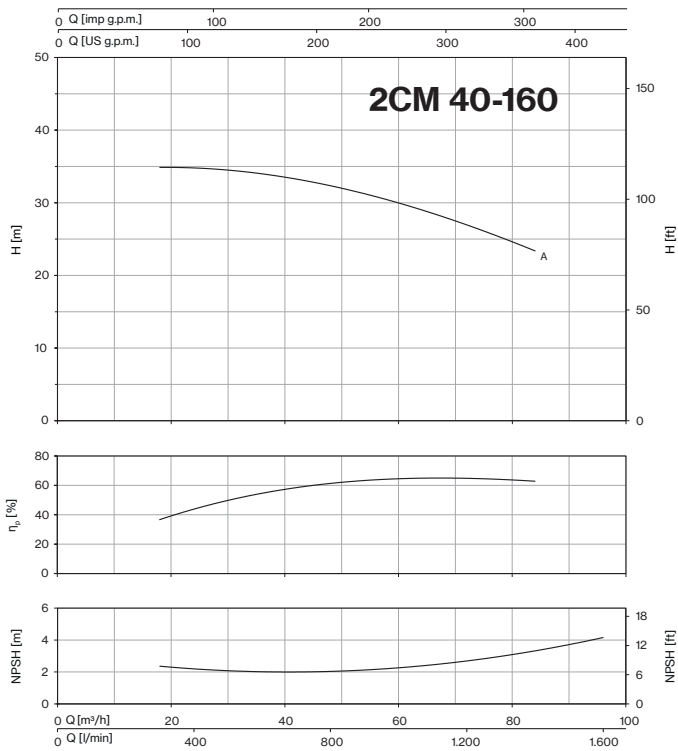
TARGET (2 pumps)		MODEL			P2 NOMINAL		Q (m³/h - l/min)													
		FIXED SPEED	VARIABLE SPEED				0	84	90	108	132	156	168	192	216	240	264	276	288	300
m³/h	bar	3-400V	EPIC-A	IPFC	HP (x2)	kW (x2)	H (m)													
			3-400V-in 3-400V-out				0	1400	1500	1800	2200	2600	2800	3200	3600	4000	4400	4600	4800	5000
192	2	2CM65-125A	2CM/A65-125A-318	2CM/I 65-125A-318	10	7,5	24,6	25,0	24,9	24,7	24,2	23,5	23,0	22,0	20,6	18,8	16,8			
	2,5	2CM65-160C	2CM/A65-160C-318	2CM/I 65-160C-318	12,5	9,2	28,9	30,6	30,5	30,0	29,1	27,9	27,2	25,3	22,9	20,2	17,5	16,0	13,9	
	3	2CM65-160B	2CM/A65-160B-325	2CM/I 65-160B-325	15	11	33,2	35,1	35,0	34,6	33,8	32,8	32,1	30,4	28,2	25,5	22,5	21,4	20,4	
	3,5	2CM65-160A	2CM/A65-160A-338	2CM/I 65-160A-338	20	15	40,1	42,5	42,5	42,3	41,8	41,0	40,4	38,9	37,1	35,3	32,8	31,7	30,9	
240	3	2CM65-200C	2CM/A65-200C-338	2CM/I 65-200C-338	20	15	44,4			46,1	44,7	43,2	42,4	40,3	37,5	33,7	28,9	26,8		
	4	2CM65-200B	2CM/A65-200B-338	2CM/I 65-200B-338	25	18,5	51,7			53,9	52,7	51,3	50,4	48,6	45,9	43,0	39,4	37,1	34,6	
	5	2CM65-200A	2CM/A65-200A-344	2CM/I 65-200A-348	30	22	60,3			61,8	61,0	59,8	59,1	57,1	54,6	51,6	48,3	46,5	44,4	
	6	2CM65-250B	-	2CM/I 65-250B-365	40	30	80,6			80,6	78,4	75,7	74,1	70,4	66,1	61,0	54,7	51,0	47,3	
		7	2CM65-250A	-	2CM/I 65-250A-375	50	37	91,6			91,6	89,8	87,4	85,9	82,5	77,8	72,8	67,4	60,8	57,9



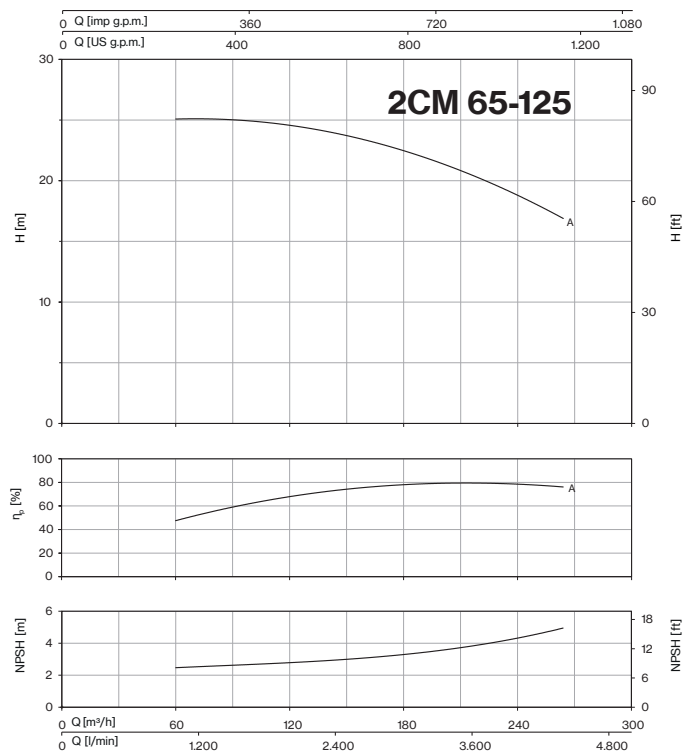
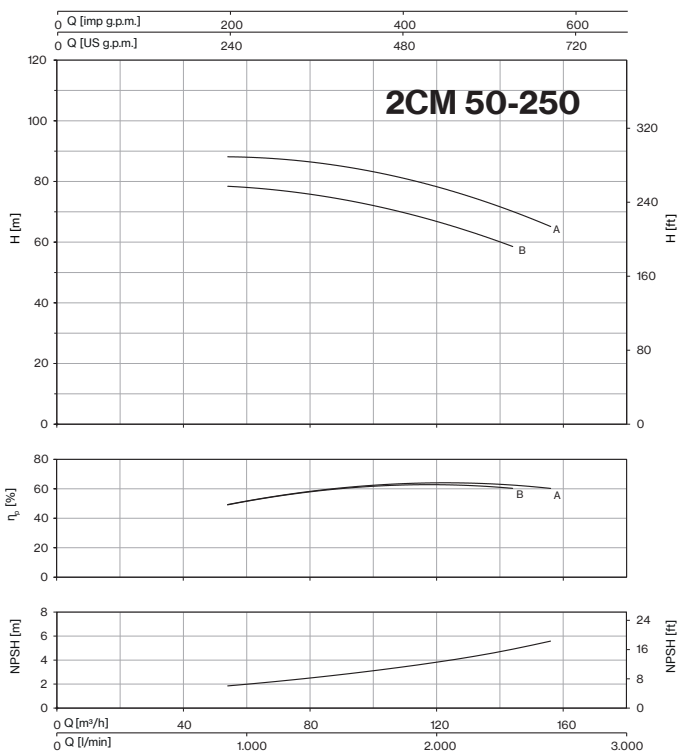
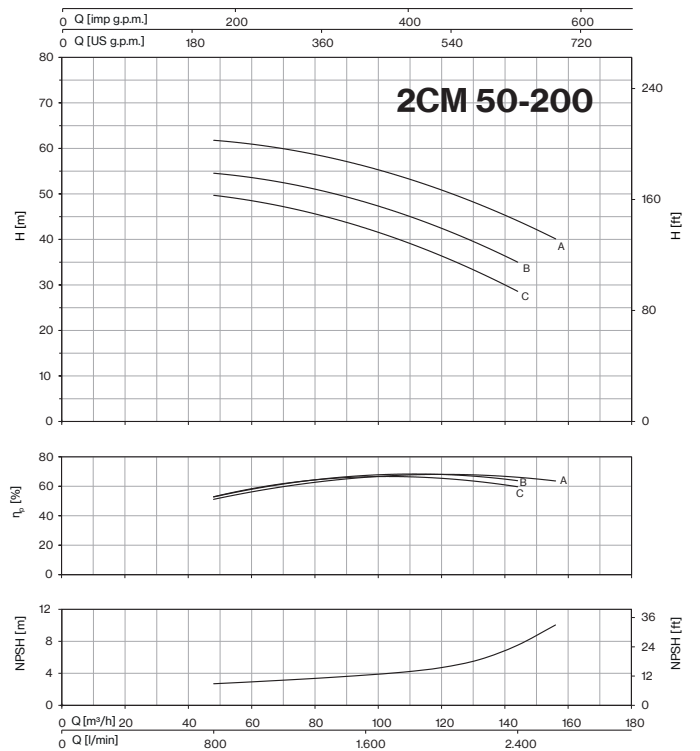
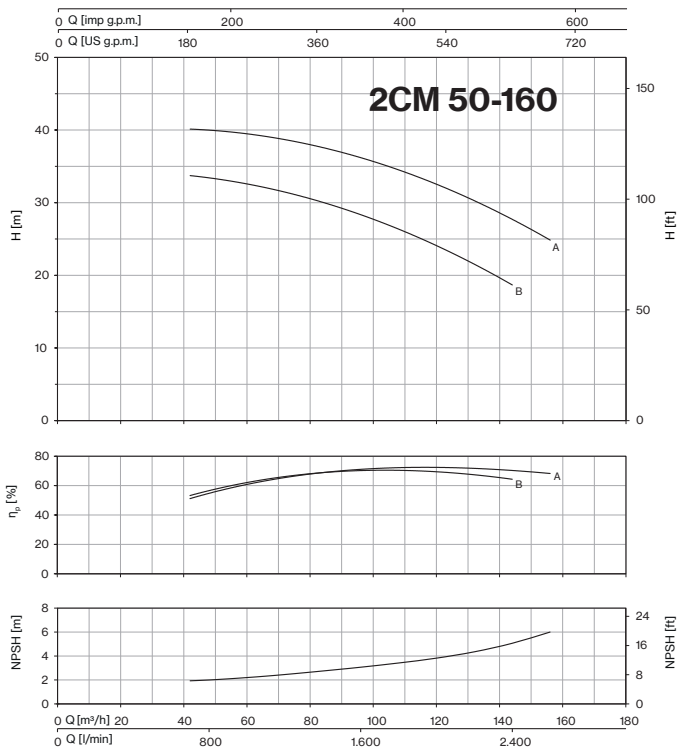
2CM (EN 733)



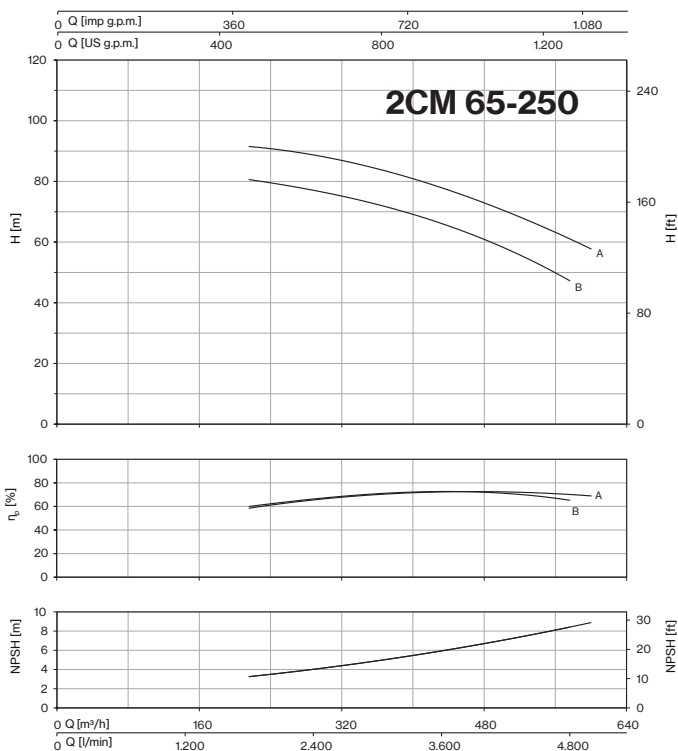
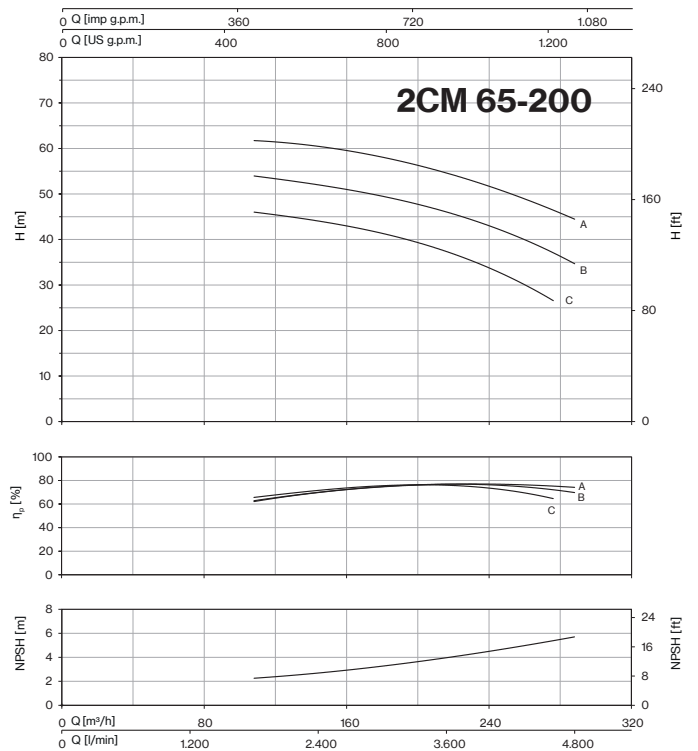
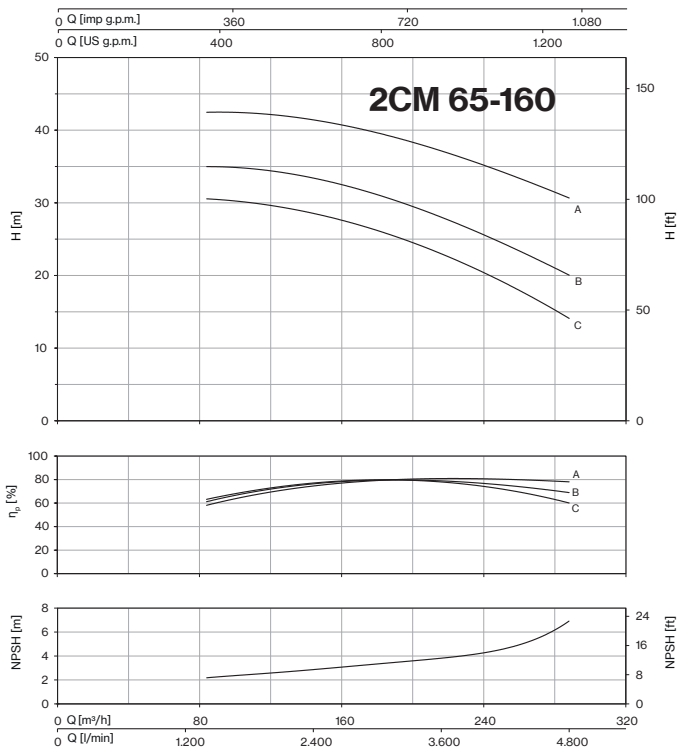
2CM (EN 733)



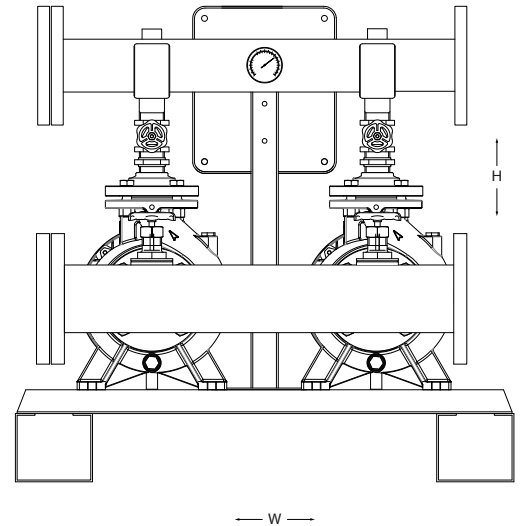
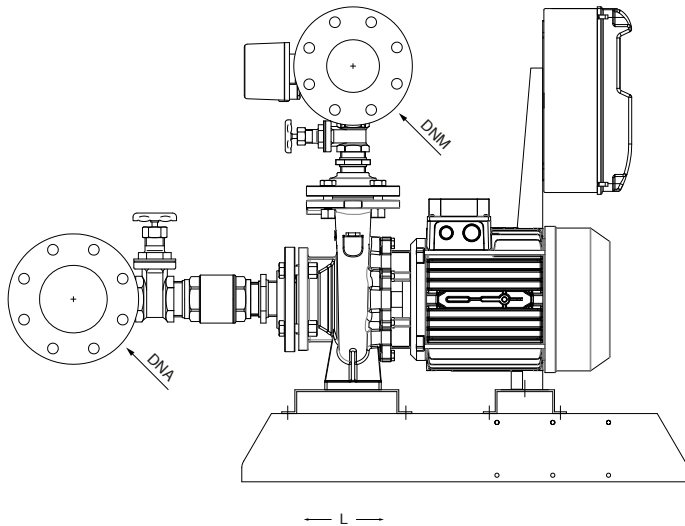
2CM (EN 733)



2CM (EN 733)



2CM (EN 733)



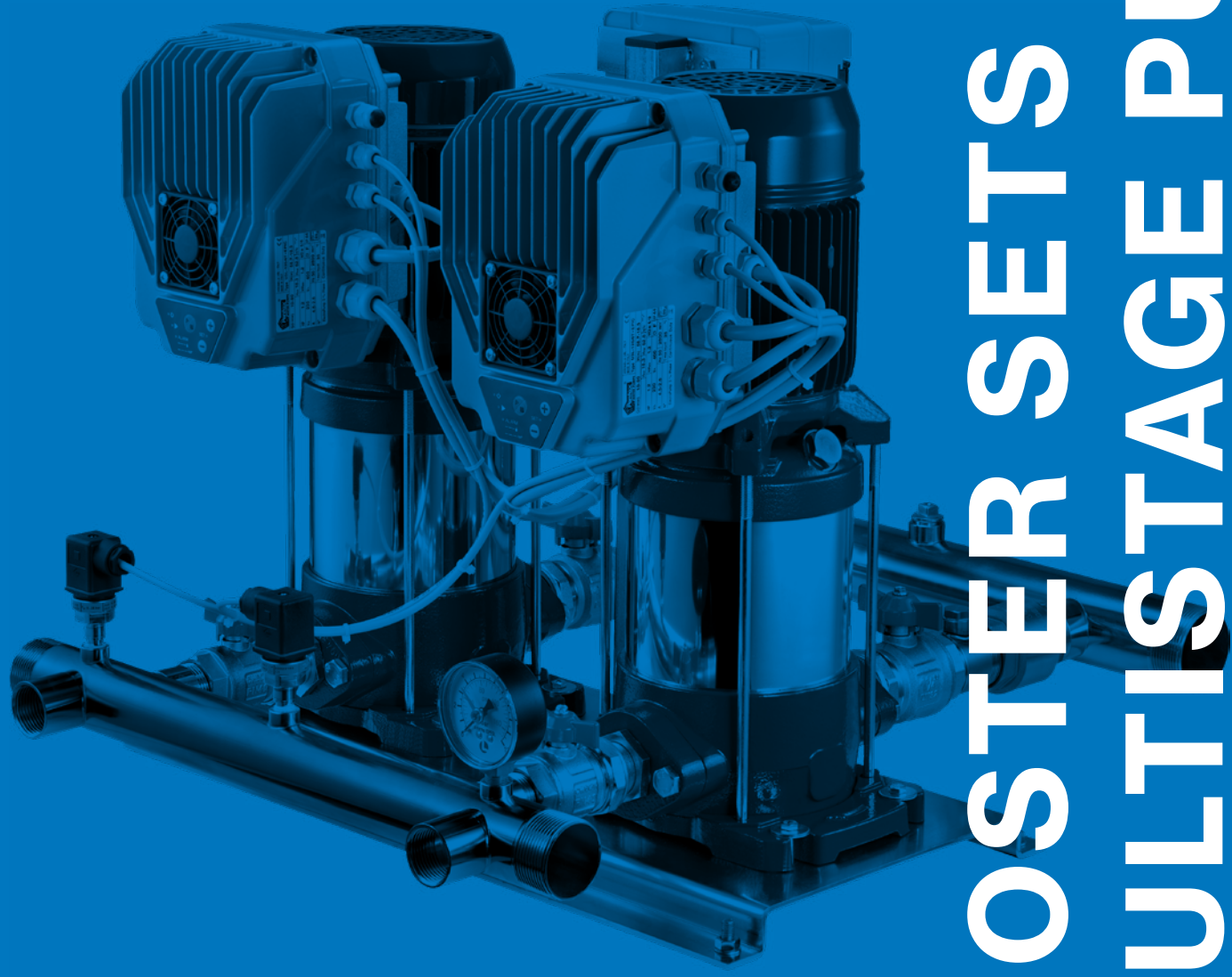
MODEL			P1	In	Required tank for v.s.	DIMENSIONS					WEIGHT			
FIXED SPEED	VARIABLE SPEED					3- 400V		L	W	H	DNA	DNM	f.s	v.s.
3- 400V	EPIC-A	IPFC	kW (x2)	A (x2)	Lt	mm	mm	mm	mm	mm	Kg	/A	/I	
	3- 400V-in 3- 400V-out	3- 400V-in 3- 400V-out										/A	/I	
2CM32-160A	2CM/A32-160A-309	2CM/I 32-160A-309	3,8	6,8	1x60	110	840	920	DN100	DN80	164	169	174	
2CM32-200C	2CM/A32-200C-314	2CM/I 32-200C-311	4,9	8,9		110	840	920			183	203	193	
2CM32-200B	2CM/A32-200B-314	2CM/I 32-200B-314	6,7	11,1	1x 80	110	840	920			220	240	238	
2CM32-200A	2CM/A32-200A-318	2CM/I 32-200A-318	8,6	14,1		110	840	920			203	223	221	
2CM32-250C	2CM/A32-250C-318	2CM/I 32-250C-318	10	16,8	1x 80	1130	840	920			259	279	277	
2CM32-250B	2CM/A32-250B-325	2CM/I 32-250B-325	12,2	20		1130	900	1580			305	325	323	
2CM32-250A	2CM/A32-250A-330	2CM/I 32-250A-330	13,5	23,2	1x 100	1280	900	1580			381	401	399	
2CM40-125A	2CM/A40-125A-309	2CM/I 40-125A-309	3,6	6,5		1130	840	920			174	179	192	
2CM40-160A	2CM/A40-160A-314	2CM/I 40-160A-311	4,9	8,8		1130	840	920			183	203	201	
2CM40-200B	2CM/A40-200B-314	2CM/I 40-200B-314	6,9	11,4		1160	840	920			195	215	213	
2CM40-200A	2CM/A40-200A-318	2CM/I 40-200A-318	9,3	15,1		1x 100	1160	840			920	208	228	226
2CM40-200AP	2CM/A40-200AP-318	2CM/I 40-200AP-318	10,2	16,8			1190	900			1570	312	332	330
2CM40-250B	2CM/A40-250B-325	2CM/I 40-250B-325	13,8	22,3		1x 100	1370	900	1570	353	373	371		
2CM40-250A	2CM/A40-250A-330	2CM/I 40-250A-330	17,5	29,1			1370	900	1570	413	433	431		
2CM40-250BM	2CM/A40-250BM-338	2CM/I 40-250BM-338	20,6	34,1		1x 200	1370	900	1570	471	491	539		
2CM50-125B	2CM/A50-125B-309	2CM/I 50-125B-309	3,8	6,8			1220	840	920	182	187	192		
2CM50-125A	2CM/A50-125A-314	2CM/I 50-125A-311	4,8	8,8			1x 200	1220	840	920	190	210	200	
2CM50-160B	2CM/A50-160B-314	2CM/I 50-160B-314	6,5	10,9				1220	840	930	215	235	233	
2CM50-160A	2CM/A50-160A-318	2CM/I 50-160A-318	8,8	14,4	1x 200		1220	840	930	205	225	223		
2CM50-200C	2CM/A50-200C-325	2CM/I 50-200C-325	10,4	17,2			1220	900	955	248	268	266		
2CM50-200B	2CM/A50-200B-325	2CM/I 50-200B-325	11,9	19,5	1x 200		1220	900	1560	315	335	333		
2CM50-200A	2CM/A50-200A-330	2CM/I 50-200A-330	14,6	24,7			1390	900	1560	405	425	423		
2CM50-250B	2CM/A50-250B-338	2CM/I 50-250B-338	20,7	34,3	1x 200		1370	900	1560	473	493	541		
2CM50-250A	2CM/A50-250A-344	2CM/I 50-250A-348	24,8	40,9			1370	900	1560	493	513	561		
2CM65-125A	2CM/A65-125A-318	2CM/I 65-125A-318	8,8	14,4	1x 300		1390	1030	920	DN200	DN150	302	322	320
2CM65-160C	2CM/A65-160C-318	2CM/I 65-160C-318	10,1	16,8			1390	1030	920			353	373	371
2CM65-160B	2CM/A65-160B-325	2CM/I 65-160B-325	12,7	20,6	1x 300	1550	1030	1540	378			398	396	
2CM65-160A	2CM/A65-160A-338	2CM/I 65-160A-338	17,1	28,5		1550	1030	1540	452			472	520	
2CM65-200C	2CM/A65-200C-338	2CM/I 65-200C-338	17	28,3	1x 300	1550	1030	1540	495			515	563	
2CM65-200B	2CM/A65-200B-338	2CM/I 65-200B-338	21,2	34,8		1550	1030	1540	526			546	594	
2CM65-200A	2CM/A65-200A-344	2CM/I 65-200A-348	25,4	41,7	1x 500	1550	1030	1540	547			567	615	
2CM65-250B	-	2CM/I 65-250B-365	30,8	55,3		1550	1030	1540	817			-	885	
2CM65-250A	-	2CM/I 65-250A-375	37	69,2	1550	1030	1540	862	-			930		

f.s. : fixed speed
v.s. : variable speed



Dimensions and weights may differ slightly and therefore should be considered as indicative





BOOSTER SETS WITH MULTISTAGE PUMPS

MULTISTAGE BOOSTER SETS



Fixed speed booster sets with two or three pumps

DESCRIPTION

Fully automatic booster sets for water supply consisting of two (2U) or three (3U) fixed speed multistage pumps, control panel, pressure switches, all fixed on a single frame for easy installation. These booster sets are suitable for water network supply in housing complexes, offices, hotels, shopping centers, industrial plants and for irrigation. It is recommended the installation of a pressure tank.

FEATURES

- Horizontal or vertical multistage pumps of ULTRA series
- Suction galvanized steel manifold with non-return and isolation valves
- Delivery galvanized steel manifold with pressure gauge, isolation valves and pressure switches
- Base frame in galvanized steel
- Electronic or electromechanical panels for pump's control and protection
- Two pressure switches
- Pressure tanks available on request, as accessory

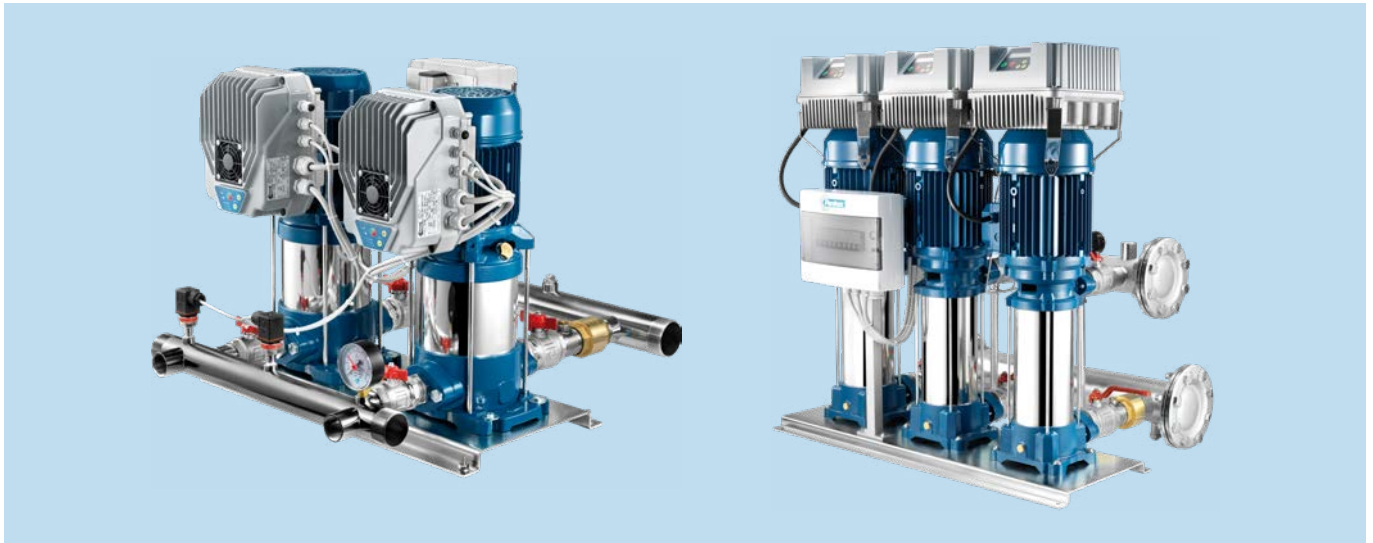
FUNCTIONING

As soon as pressure drops below the minimum set value on a pressure switch, the first pump starts automatically. If water demand further increases, the second pump (and third if present) will run until the pressure rises above the maximum set value. When demand ends, the last pump fills up the membrane tank and then turns off. All the pumps follow cycling changeover for equal work distribution. In case of one pump failure, the other pumps would continue to operate.

CONTROL PANELS

- EQ2SM-EQ3SM electronic control panel (1- up to 2,2kW)
- EQ2SMT-EQ3SMT electronic control panel (3- up to 15kW)
- Q2ST-Q3ST star-delta electromechanical control panel (3- from 18,5kW to 37kW)

MULTISTAGE BOOSTER SETS + VSD



Variable speed booster sets with two or three pumps

DESCRIPTION

The booster sets + VSD are fully automatic systems consisting of two (2U+VSD) or three (3U+VSD) speed-controlled multistage pumps. The booster sets + VSD deliver the highest comfort level on domestic, agricultural and industrial applications ensuring constant pressure, low energy consumption and protection against overload and dry running. It is required the installation of a pressure tank.

FEATURES

- Horizontal or vertical multistage pumps of ULTRA series
- Inlet and outlet galvanized steel manifolds (inox as option)
- Base frame in galvanized steel
- Non-return valves on suction side, one per pump
- Isolating valves, two per pump
- Pressure gauge
- Variable speed drive, one per pump
- Outlet-pressure sensors, one per pump
- Breaker box
- On request membrane tanks (not connected)

FUNCTIONING

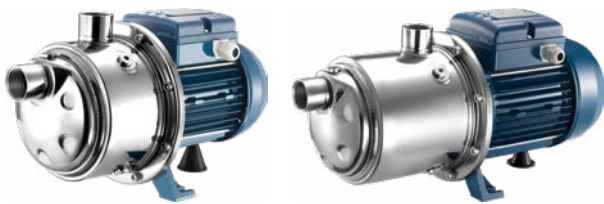
When the system pressure drops below the desired level, the sensors detect it giving an input to the VSD to start the first pump at controlled speed. If the flow rate is not sufficient, the pressure continues to drop causing the second and the third pump to start. As soon as the flow demand decreases, the pressure rises again and the second and third pumps stop. The first pump continues to modulate its speed in order to regulate and maintain the set pressure until it turns off when the flow demand ends. Based on working hours, VSDs will alternate the starting order of pumps to ensure better wear distribution. Continuity of operation is ensured in the event of one pump or one VSD failure.

VARIABLE SPEED DRIVES

- EPIC with single-phase input up to 7,5 A
- IPFC with single-phase input up to 9,9 A
- EPIC-A with three-phase input up to 42 A
- IPFC with three-phase input up to 27 A



Multistage horizontal



ULTRA/ULTRA S

P2	0,8÷4 [HP]
Q max	25,2 [m³/h]
H max	83,3 [m]

Stainless steel multistage horizontal pumps. Pumping of clean non-loaded fluids, pressurizing system, irrigation, drinking and glycol water, water treatment, heating and air conditioning, washing system.



Multistage vertical



ULTRA V-L/ ULTRA LG

P2	1÷10 [HP]
Q max	24 [m³/h]
H max	129 [m]

Stainless steel multistage vertical pumps. Pumping of clean non-loaded fluids, pressurizing system, irrigation, drinking and glycol water, water treatment, food industry, heating and air conditioning, washing system.



ULTRA SV-SL-SLX

P2	1÷10 [HP]
Q max	24 [m³/h]
H max	133,2 [m]

Stainless steel multistage vertical pumps. Pumping of clean non-loaded fluids, pressurizing system, irrigation, drinking and glycol water, water treatment, food industry, heating and air conditioning, washing system.



ULTRA SLG-SLXG

P2	3÷10 [HP]
Q max	14,4 [m³/h]
H max	240,9 [m]

Stainless steel multistage vertical pumps. For non-loaded clean fluids, pressurizing system, irrigation, drinking and glycol water, water treatment, food industry, heating and air conditioning, washing system.



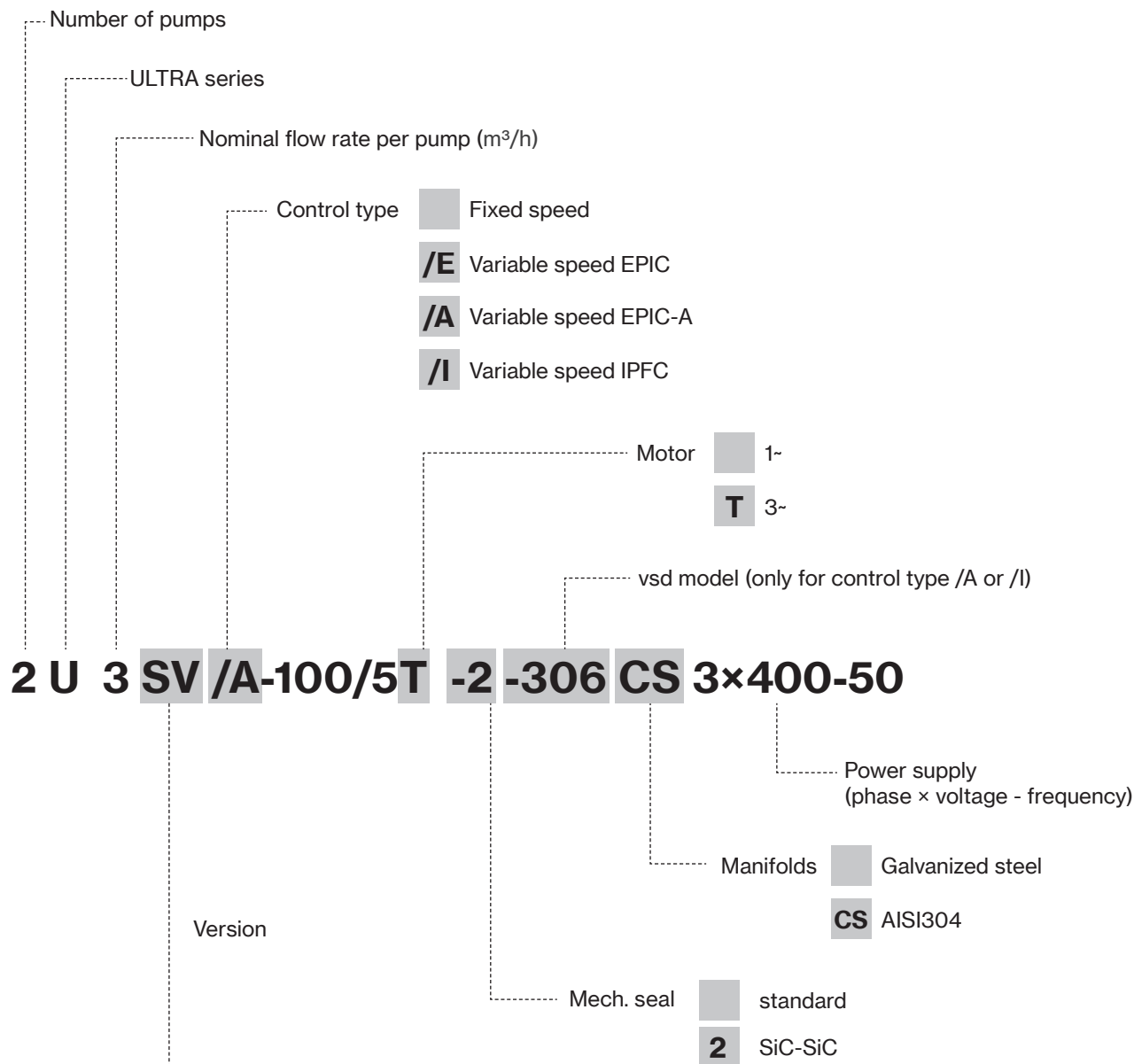
ULTRA HS-HX

P2	3÷50 [HP]
Q max	115 [m³/h]
H max	141,6 [m]

Stainless steel multistage vertical pumps. Suitable for clean non-loaded fluids, pressurizing system, irrigation, drinking and glycol water, water treatment, food industry, heating and air conditioning, washing system.



Name key

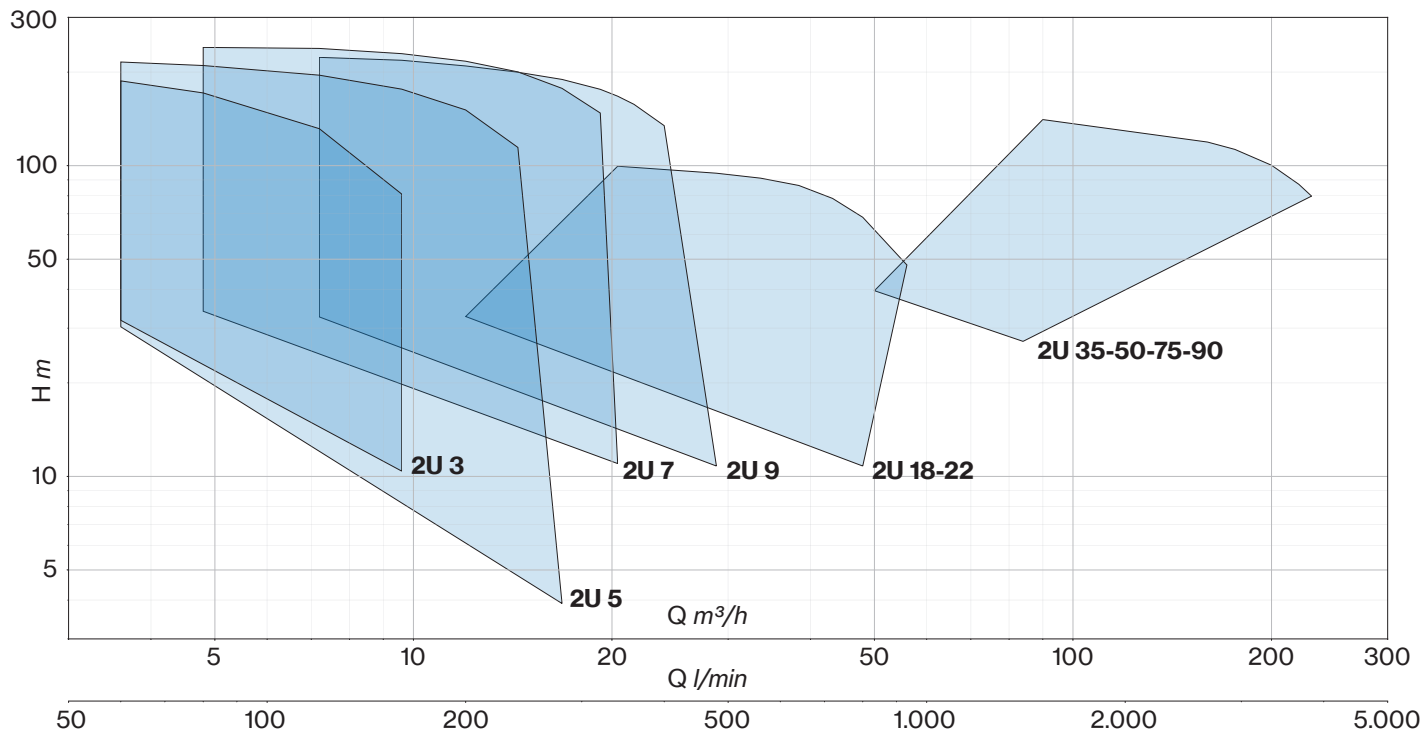


	PUMP TYPE	MAX LIQUID TEMPERATURE	IMPELLERS MATERIAL	PUMP SHELL AND BODY MATERIAL	PUMP AND MOTOR SHAFT	
S	Horizontal multistage	35° C	Noryl®	AISI 304	monoblock	
		110° C	AISI 304	AISI 304		
V	Vertical multistage, overlapped ports	35° C	Noryl®	AISI 304 / cast iron		
		90° C	AISI 304	AISI 304 / cast iron		
L	Vertical multistage, inline ports	35° C	Noryl®	AISI 304 / cast iron		with coupling
		35° C	Noryl®	AISI 304 / cast iron		monoblock
		110° C	AISI 304	AISI 304 / cast iron		monoblock
		110° C	AISI 304	AISI 304		with coupling
		110° C	AISI 304	AISI 304 / cast iron		
		110° C	AISI 304	AISI 304		
		120° C	AISI 304	AISI 304 / cast iron		
		HS		120° C	AISI 304	AISI 316
HX		120° C	AISI 316	AISI 316		

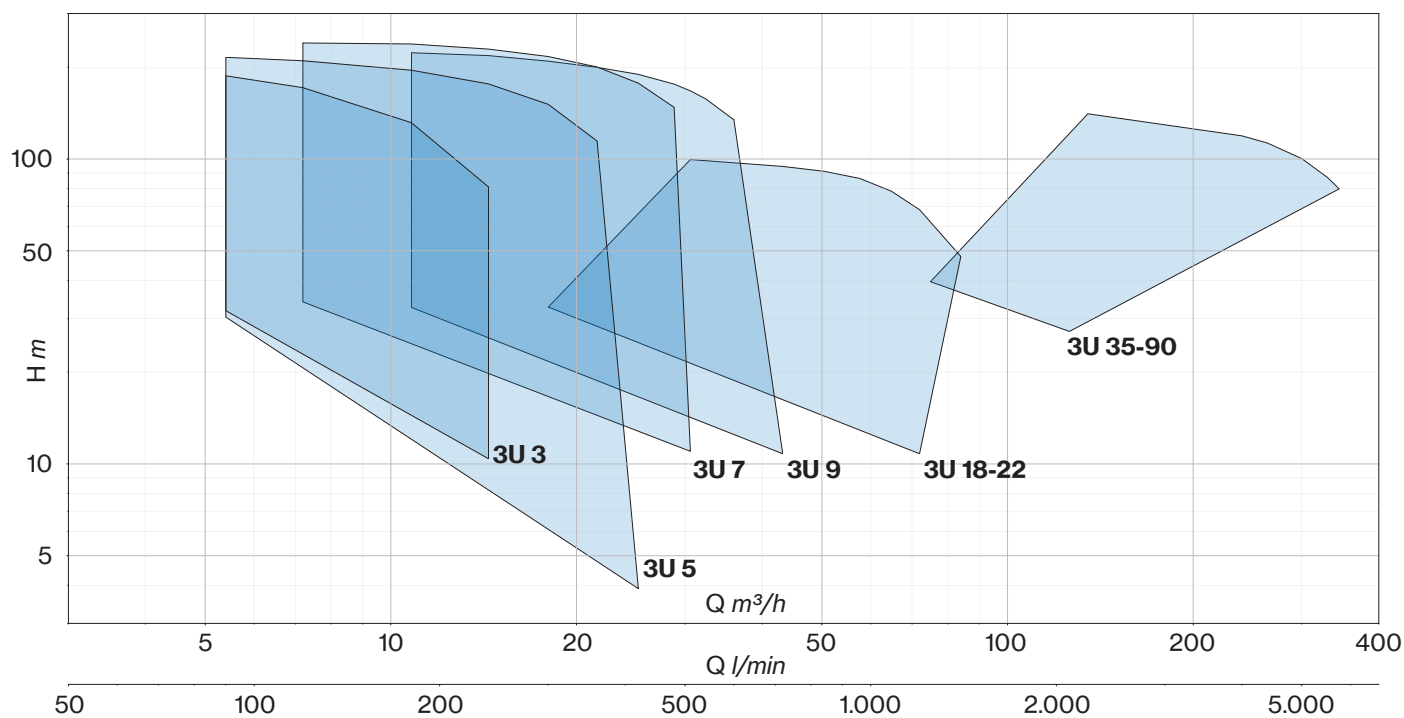


Performance data and curves

2U



3U

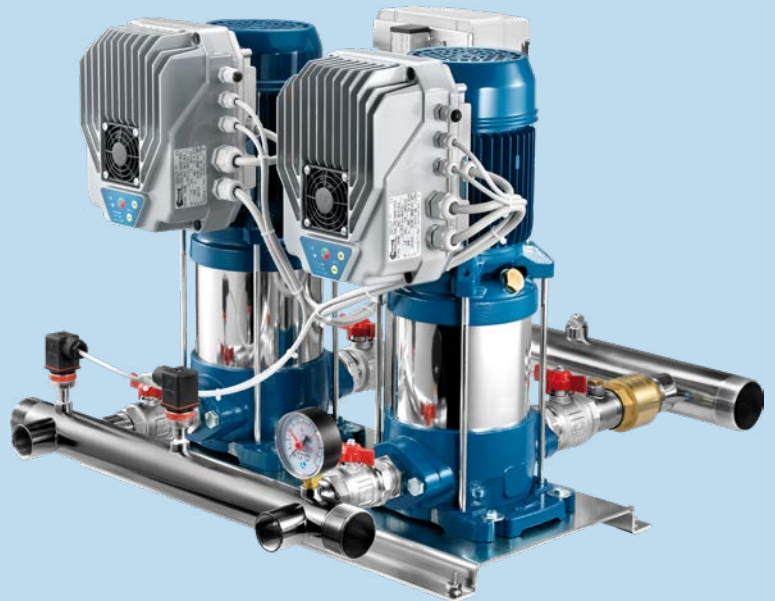


2U



FIXED SPEED PUMPS

VARIABLE SPEED PUMPS



Pump specification

Flow up to 230 m³/h

Head up to 240 m

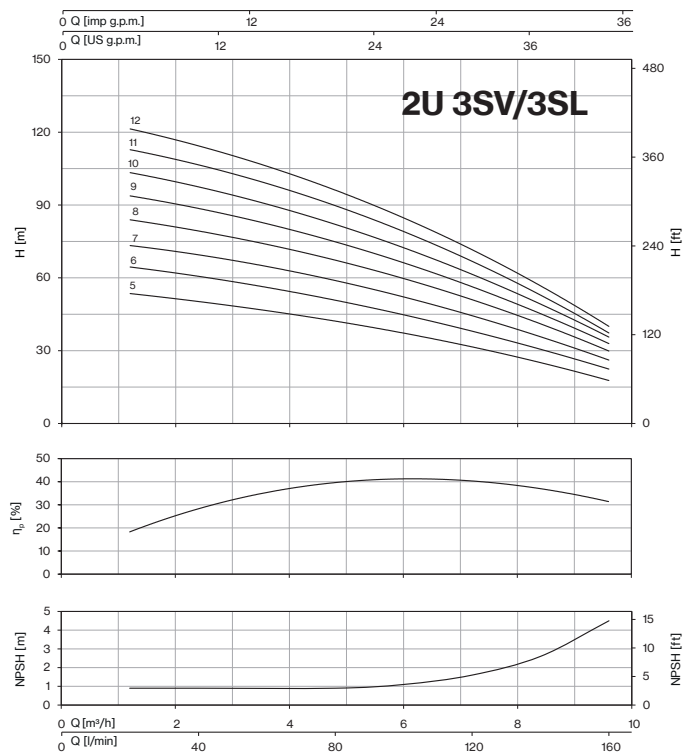
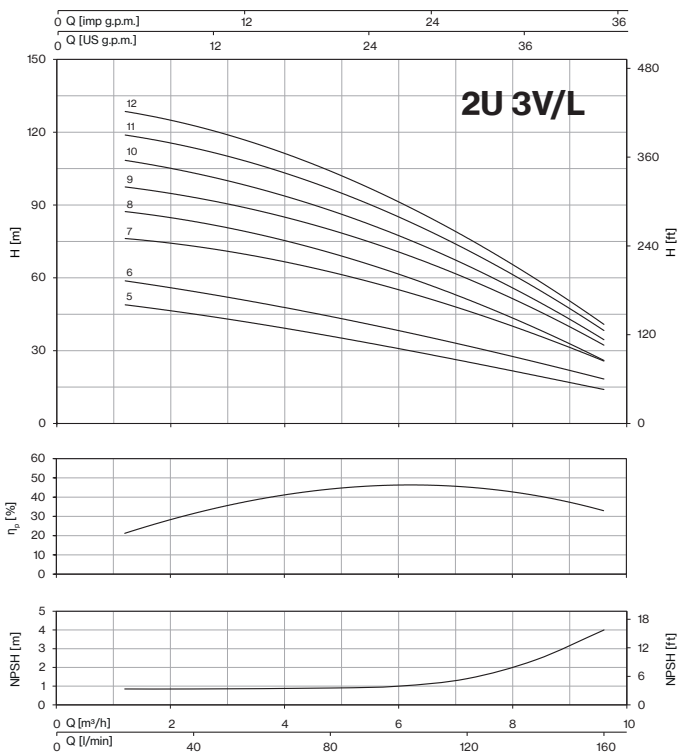
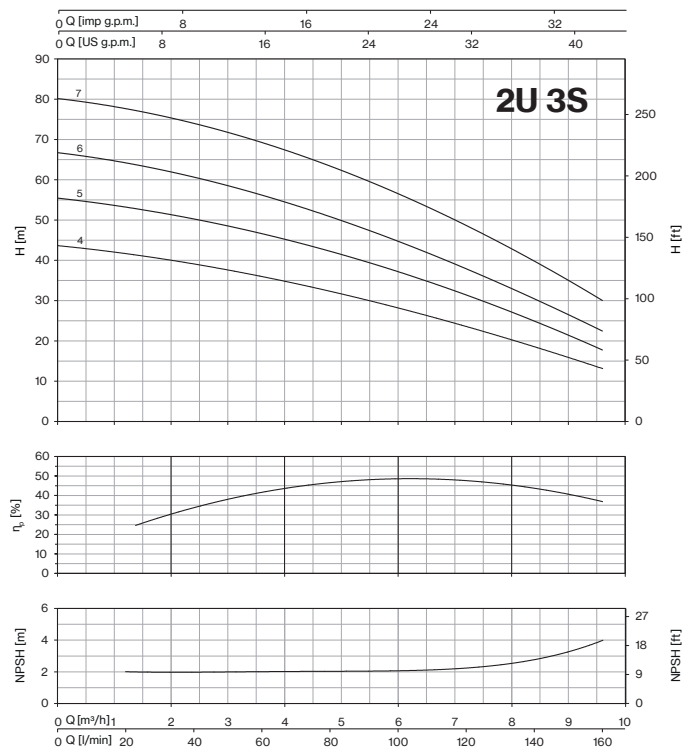
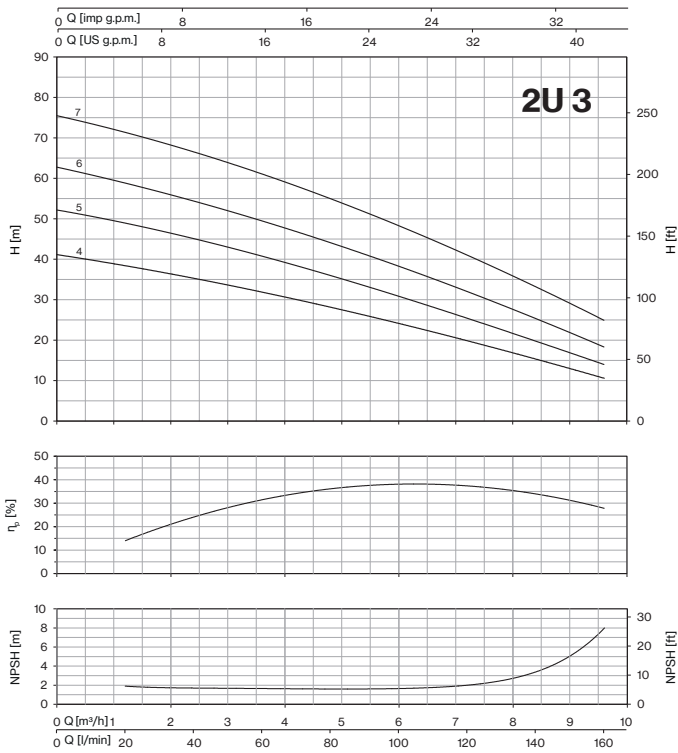
Start up direct, star/delta, inverter

Power supply voltage 1- 230V - 50Hz
3- 400V - 50Hz

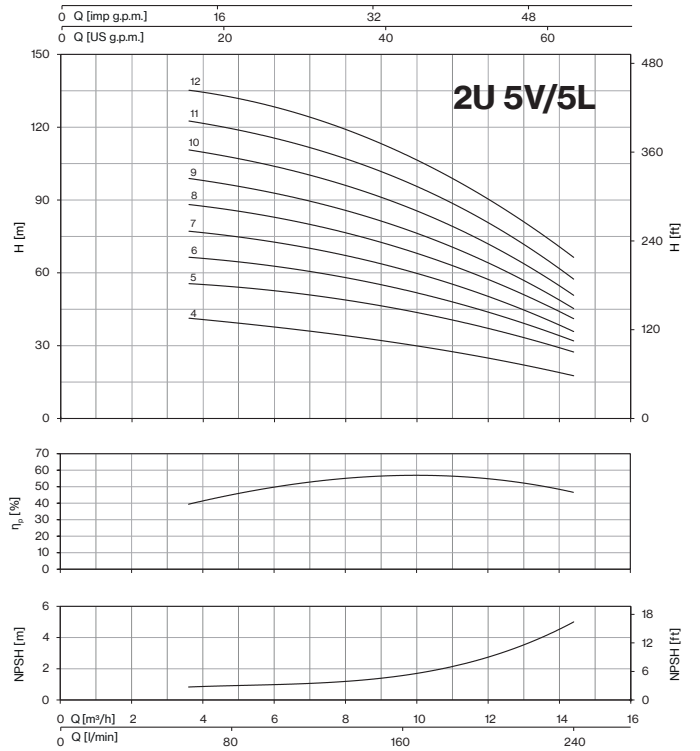
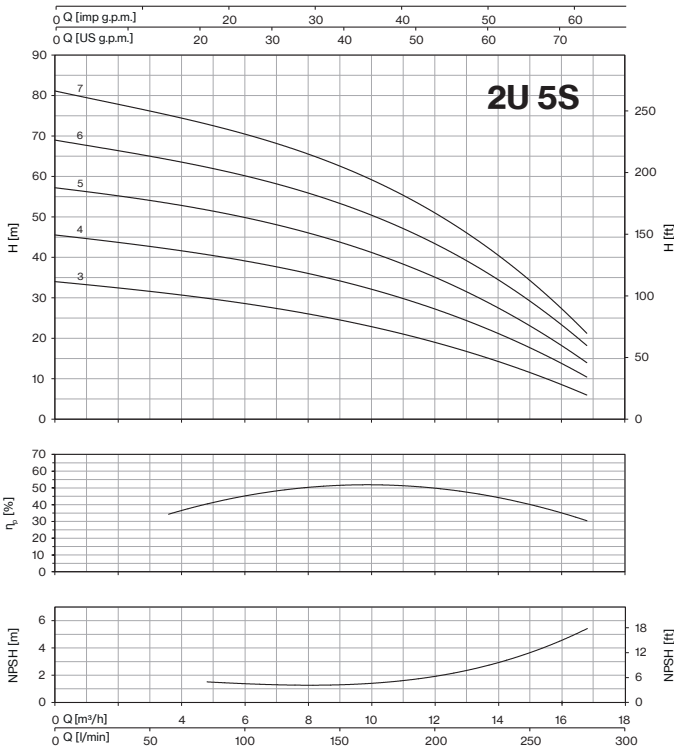
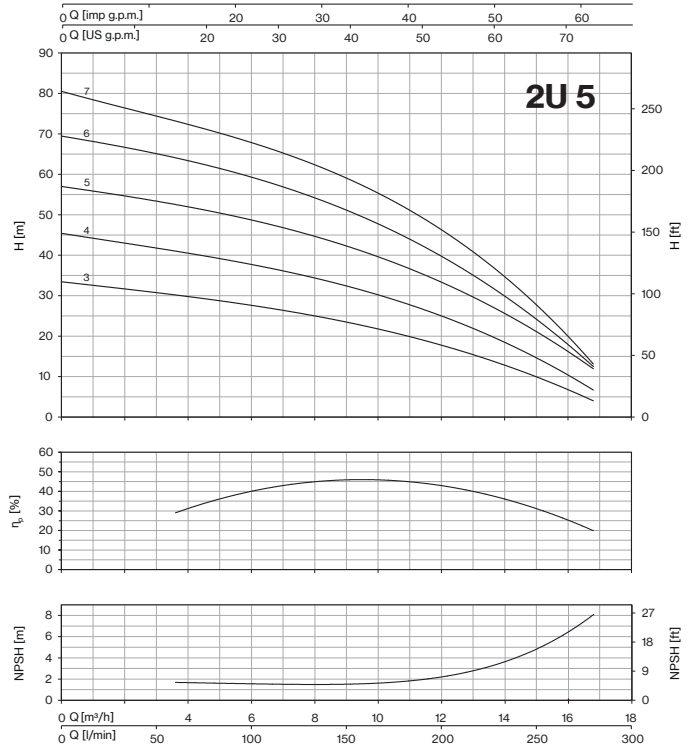
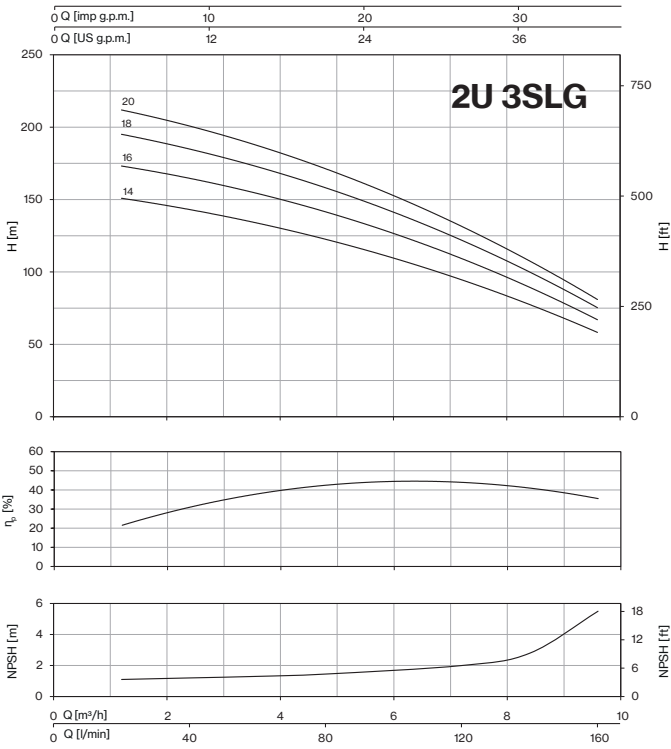
Ambient temperature at nominal load max 40° C

Temperature of pumped liquid -5° C to +35° C (Horizontal pumps with Noryl impellers)
-5° C to +35° C (V-L-LG version)
-15° C to +90° C (SV version)
-15° C to +110° C (S-SL-SLX-SLG-SLXG version)
-15° C to +120° C (HS-HX version)

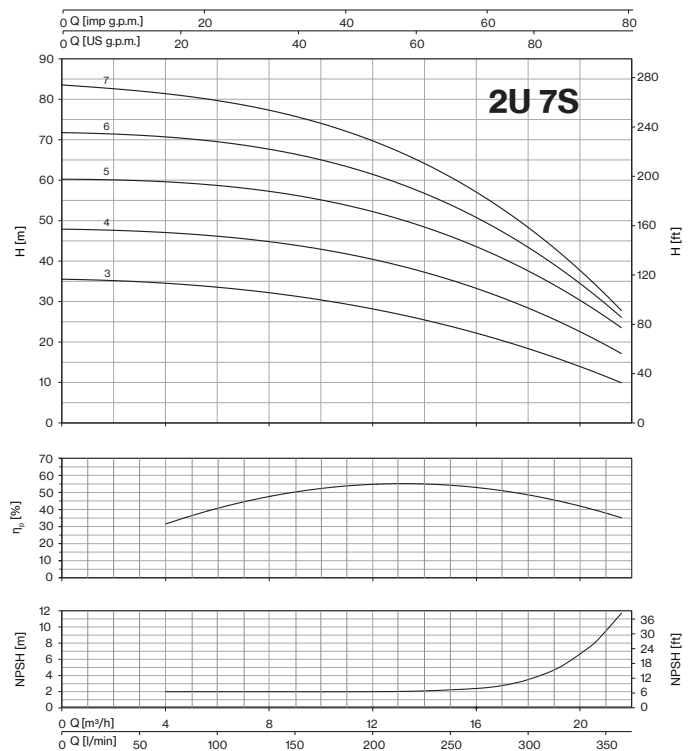
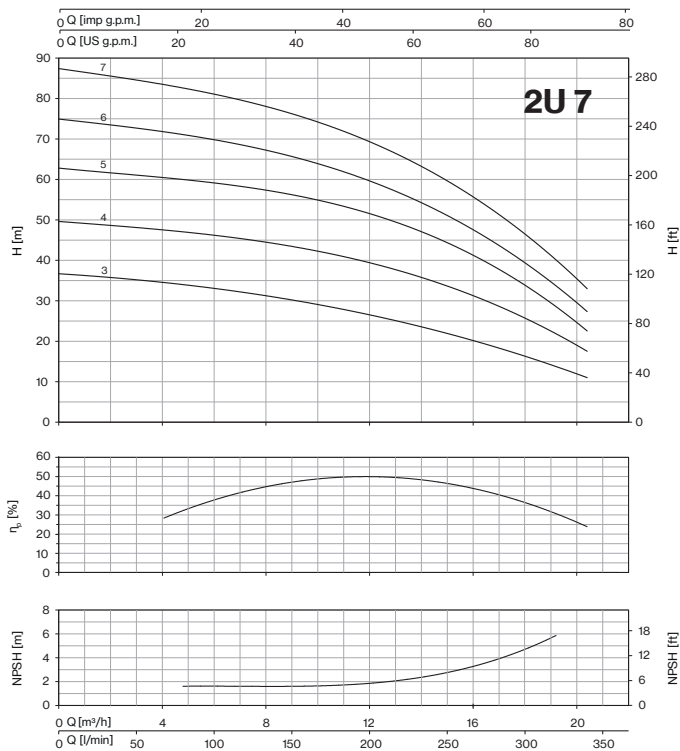
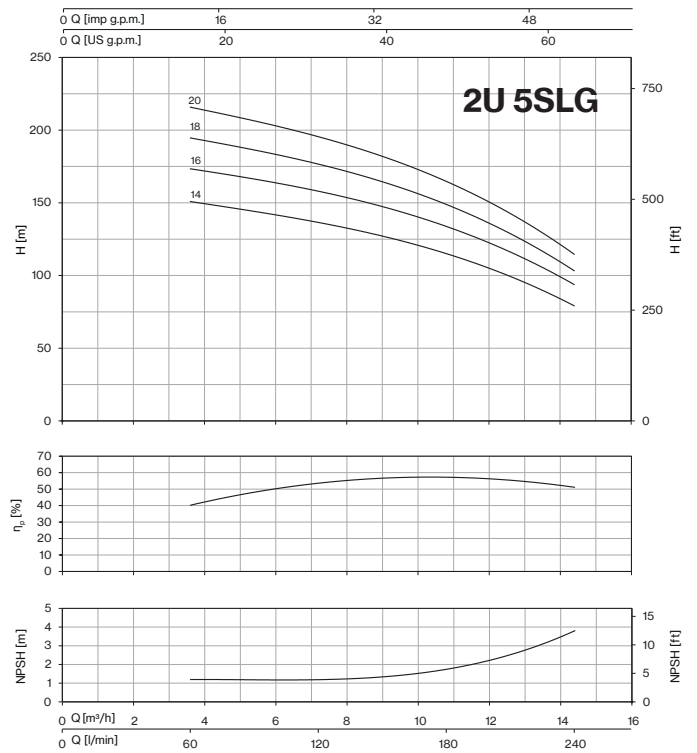
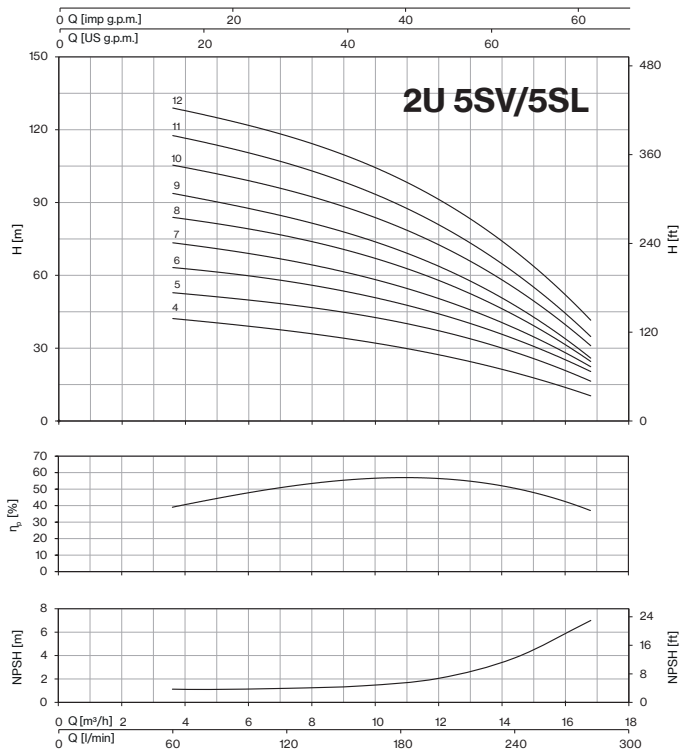
CURVES 2U



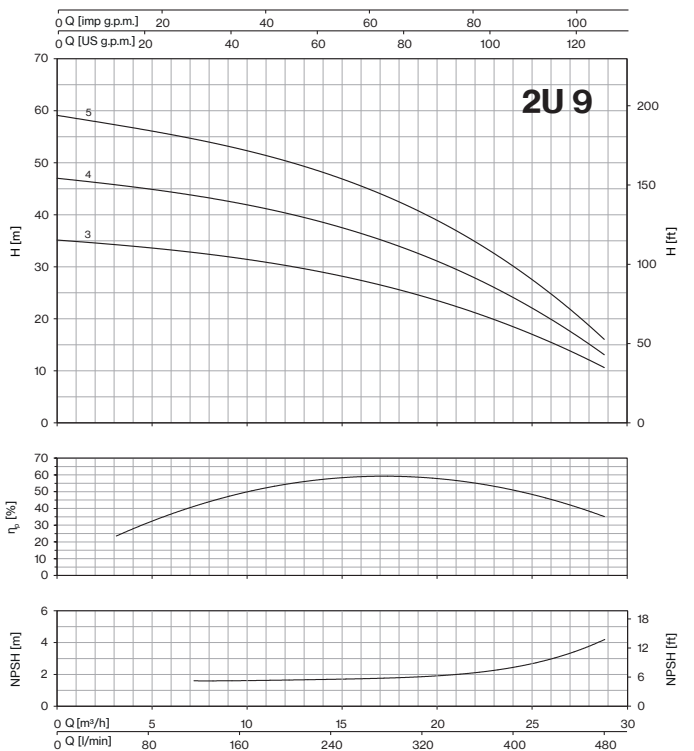
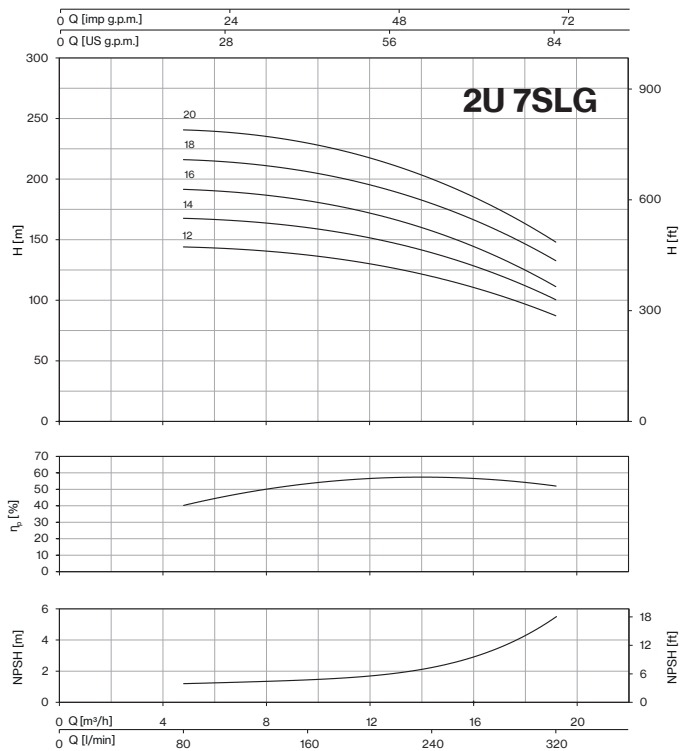
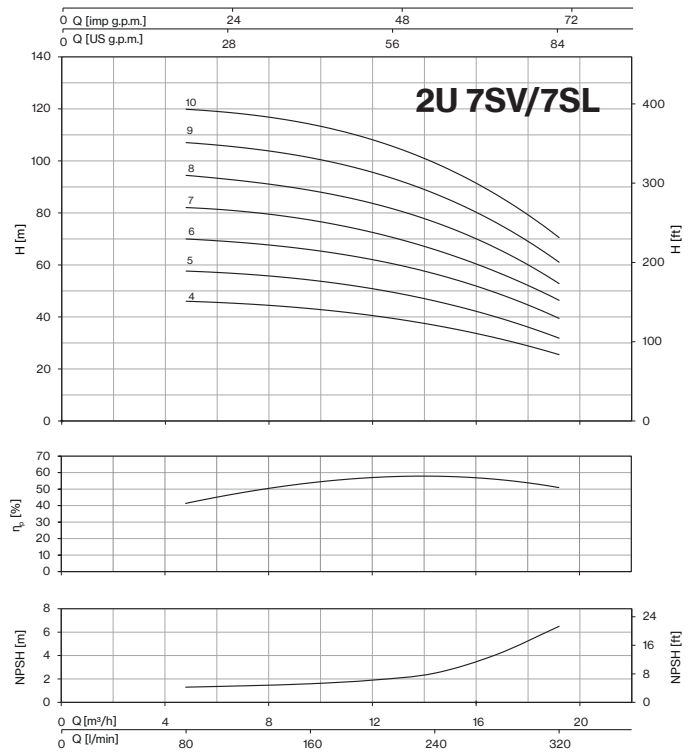
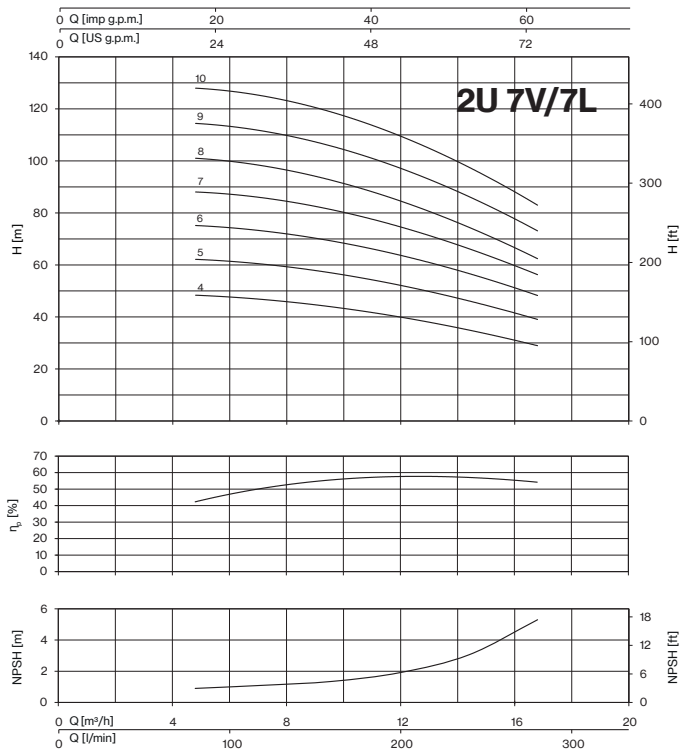
CURVES 2U



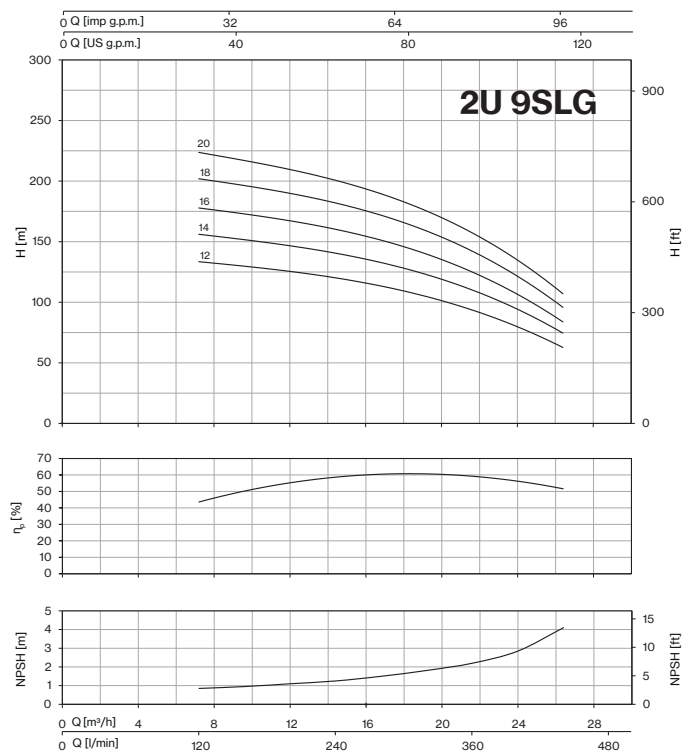
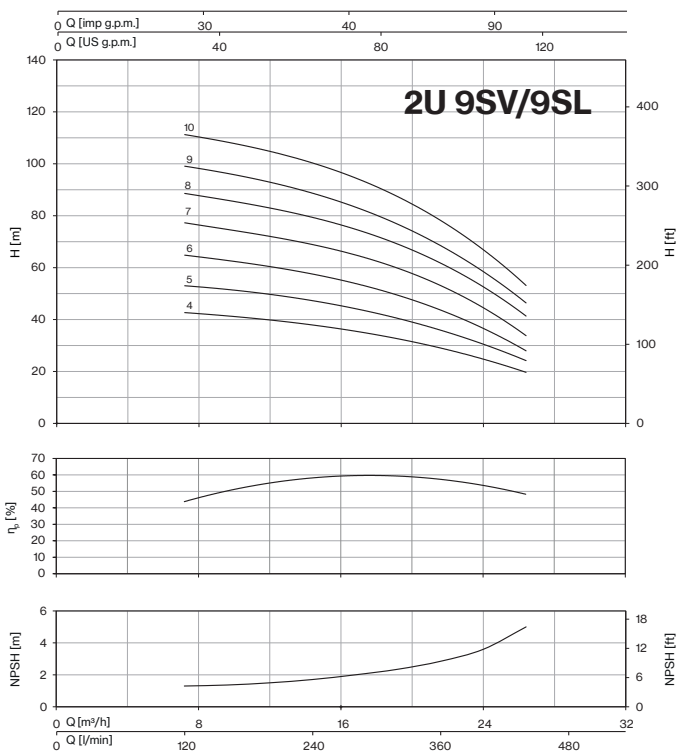
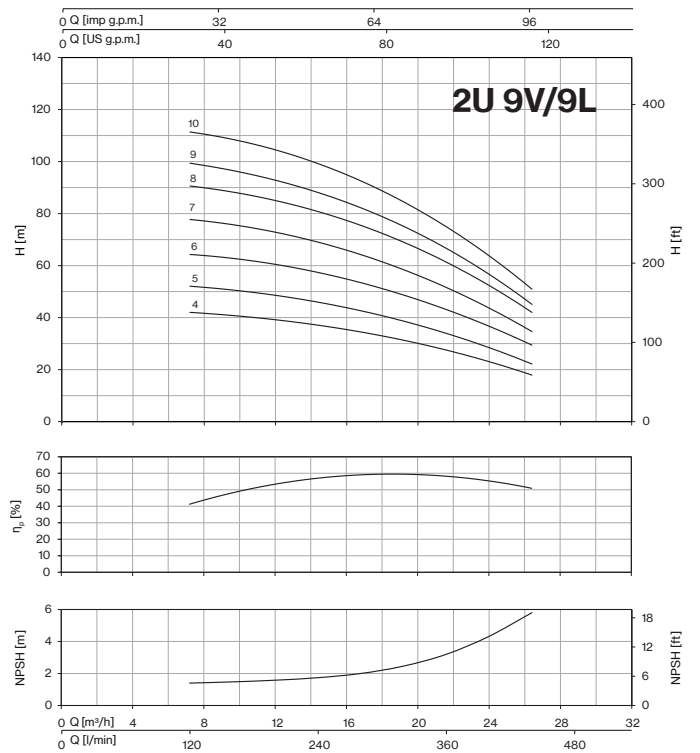
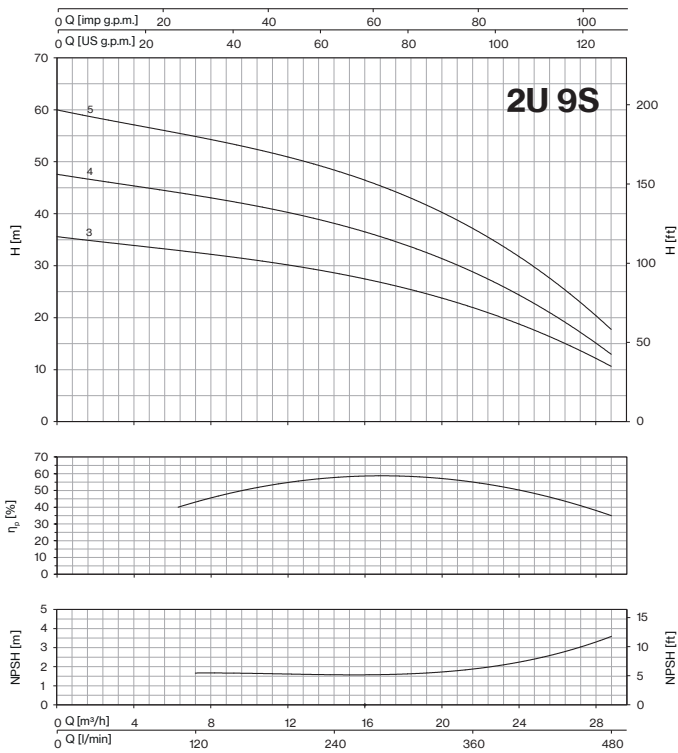
CURVES 2U



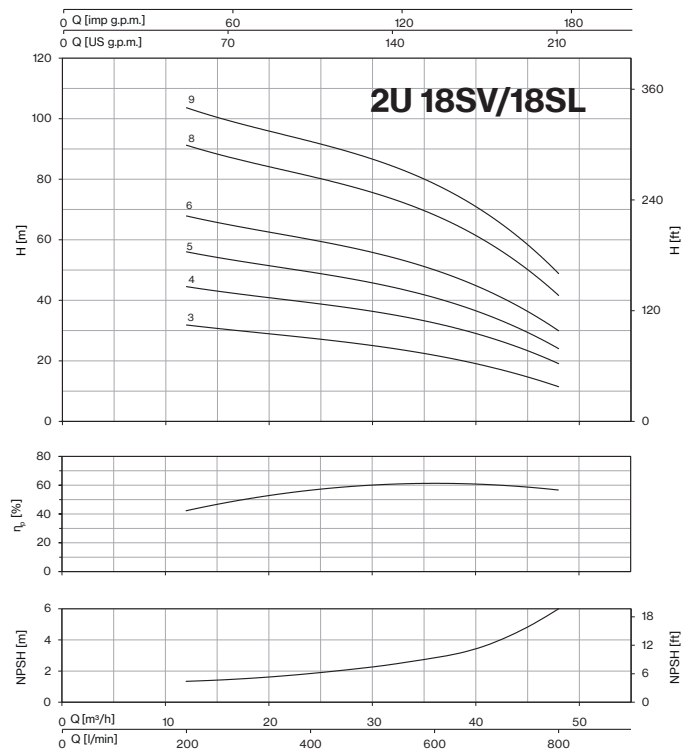
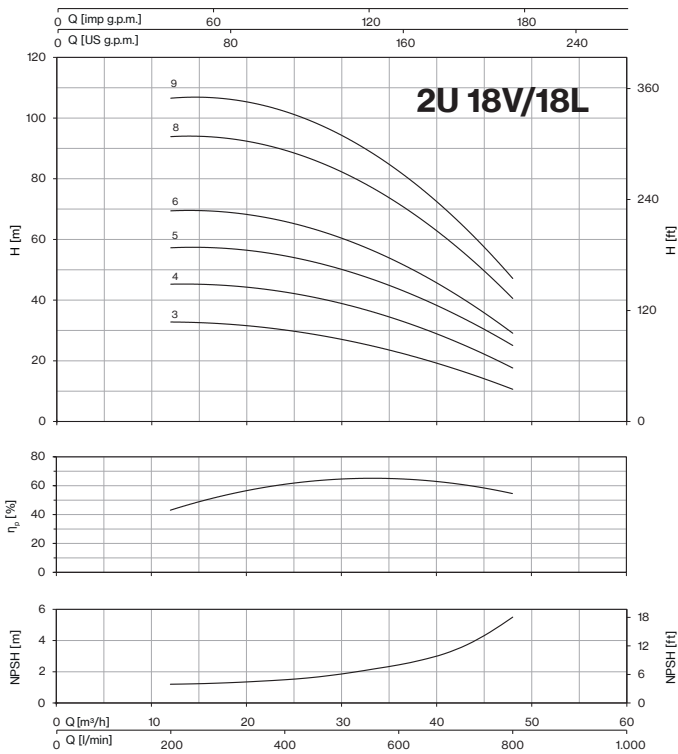
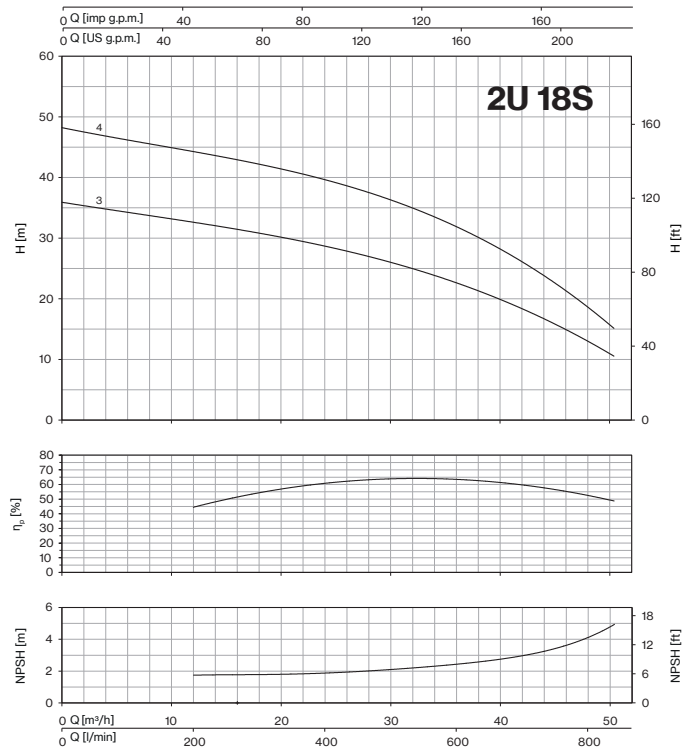
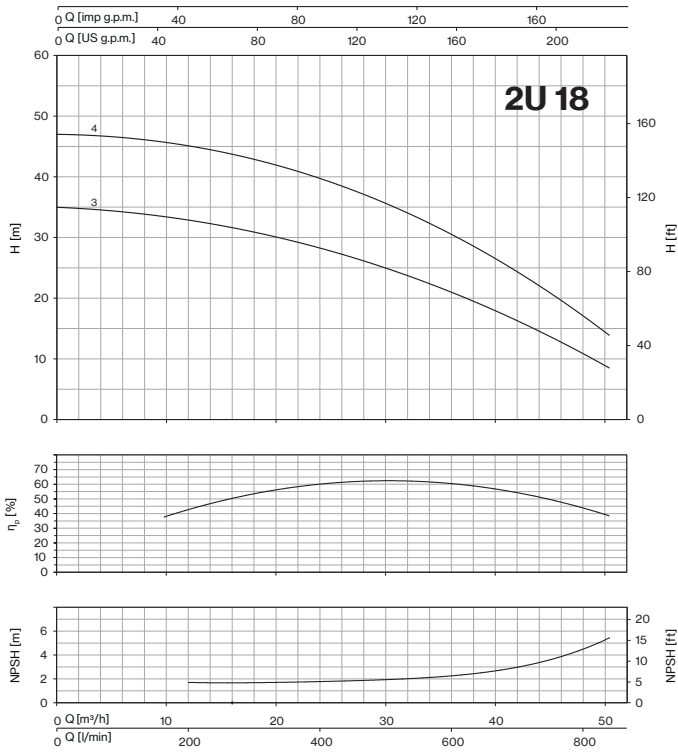
CURVES 2U



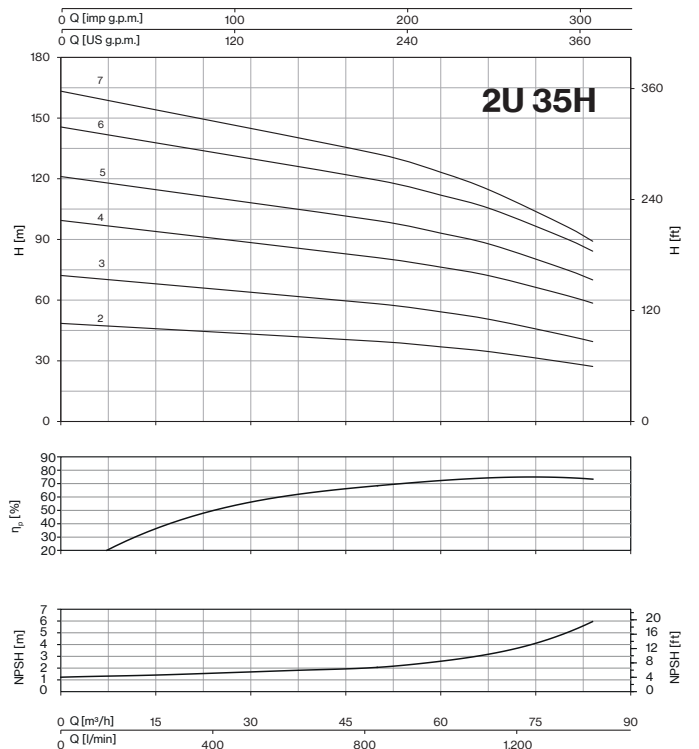
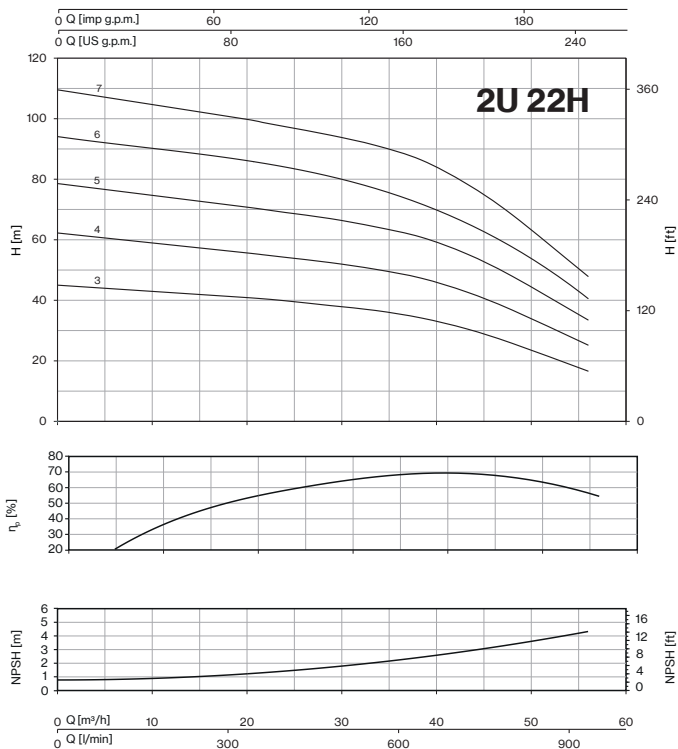
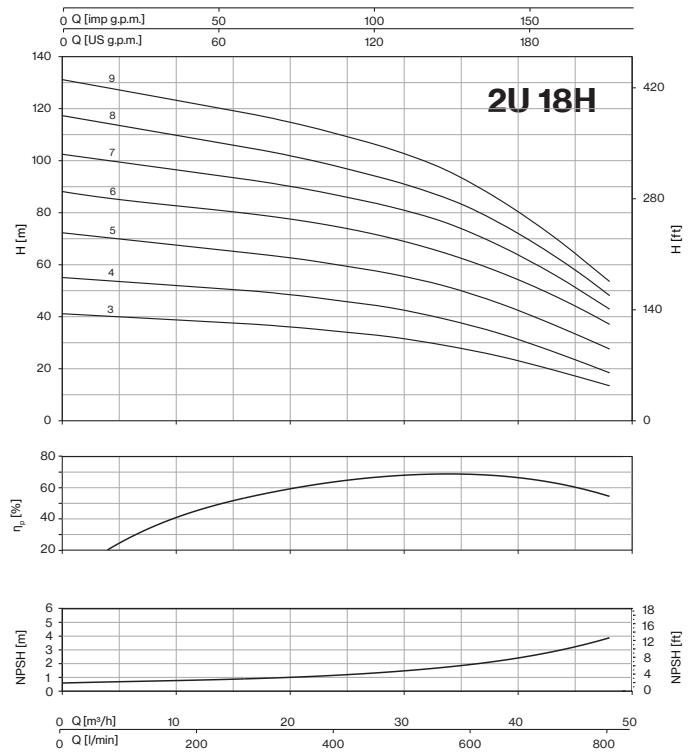
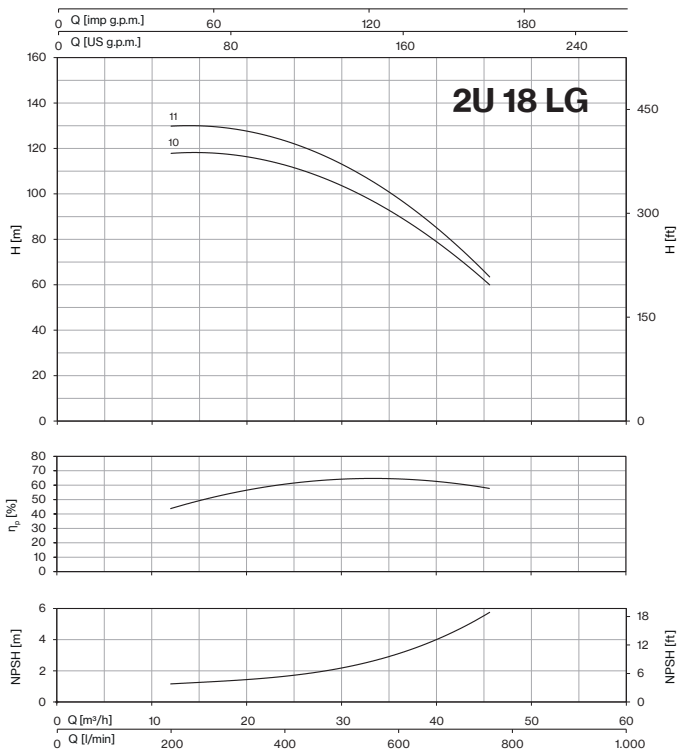
CURVES 2U



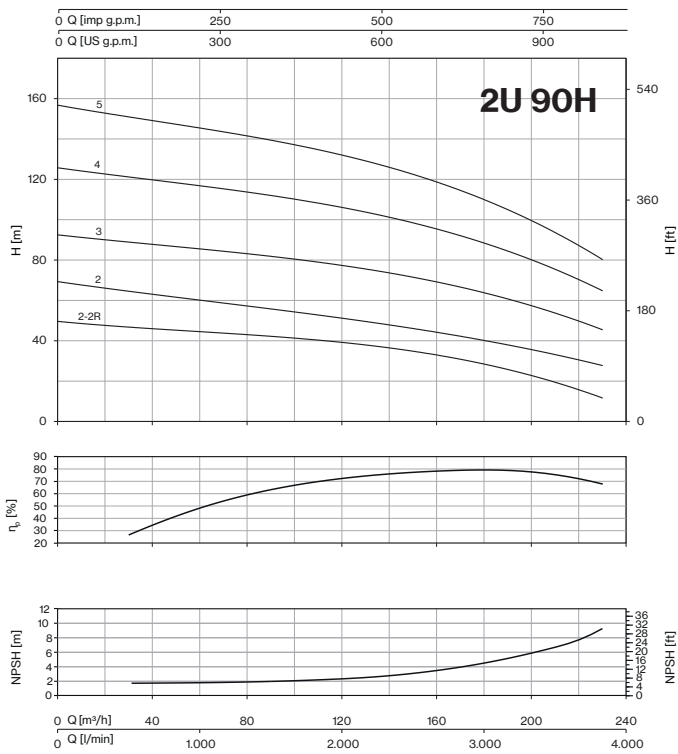
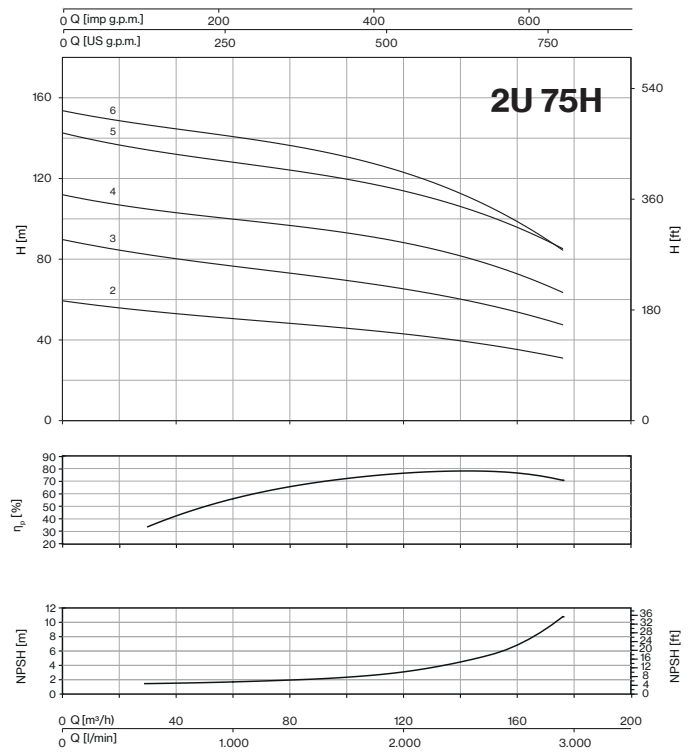
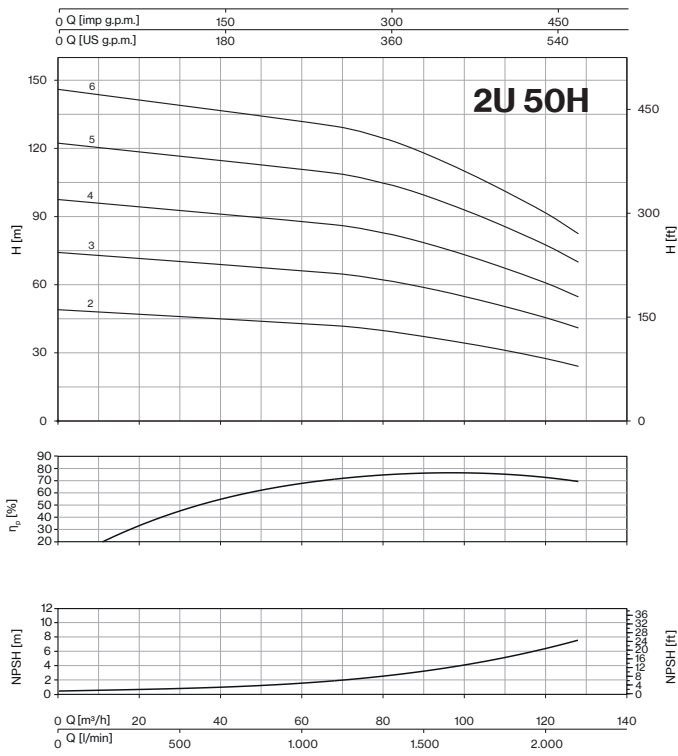
CURVES 2U

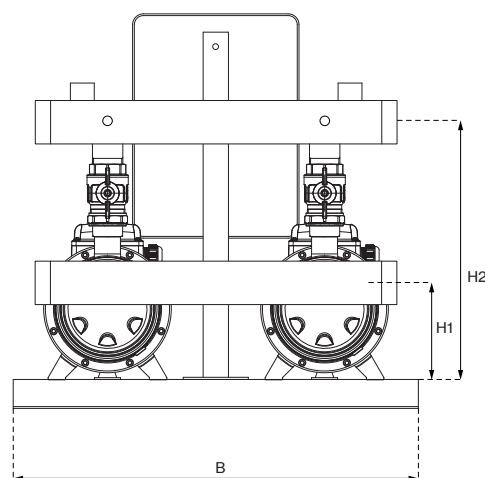
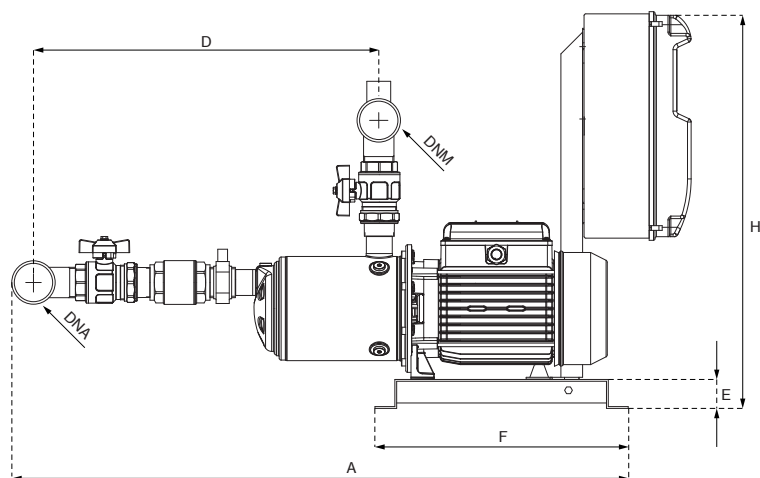


CURVES 2U



CURVES 2U





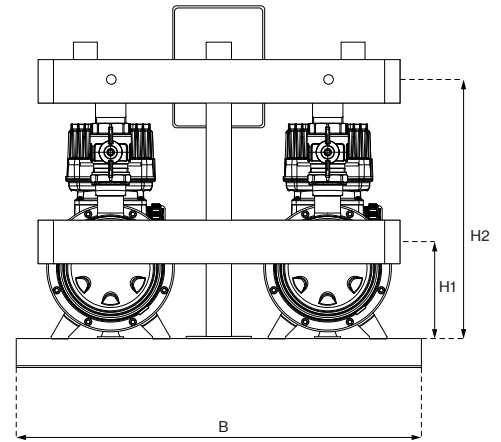
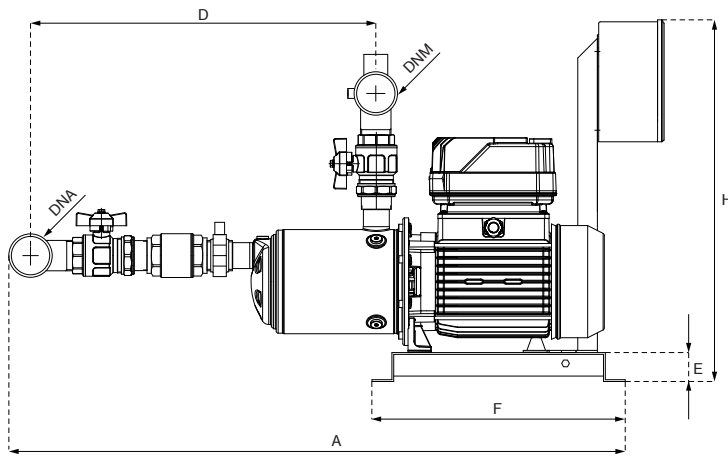
HORIZONTAL MODEL		P1		In		DIMENSIONS										DNA	DNM	Kg
		1~	3~	1~	3~	A	B	D	E	F	H	H1	H2					
1- 230V	3- 400V	kW (x2)		A (x2)		mm												
2U 3-90/4	2U 3-90/4T	0,9	0,88	4,0	1,8	781	560	405	40	350	545	128	352	2" G	1" ½ G	41		
2U 3S-90/4	2U 3S-90/4T	0,83	0,8	3,6	1,7													
2U 3-100/5	2U 3-100/5T	1,06	1,01	4,8	1,9	805	560	429	40	350	545	128	352					45
2U 3S-100/5	2U 3S-100/5T	0,99	0,92	4,4	1,7													
2U 3-120/6	2U 3-120/6T	1,23	1,23	5,6	2,6	829	560	453	40	350	545	128	352					48
2U 3S-120/6	2U 3S-120/6T	1,11	1,11	5,1	2,5													
2U 3-150/7	2U 3-150/7T	1,54	1,45	7,1	2,9	853	560	477	40	350	545	128	358					52
2U 3S-150/7	2U 3S-150/7T	1,38	1,31	6,4	2,7													
2U 5-80/3	2U 5-80/3T	0,86	0,79	3,9	1,5	757	560	381	40	350	545	128	352	2" G	1" ½ G	43		
2U 5S-80/3	2U 5S-80/3T	0,8	0,75	3,8	1,4													
2U 5-120/4	2U 5-120/4T	1,13	1,13	5,2	2,5	781	560	405	40	350	545	128	352					45
2U 5S-120/4	2U 5S-120/4T	1,09	1,08	4,9	2,4													
2U 5-150/5	2U 5-150/5T	1,47	1,39	6,8	2,8	805	560	429	40	350	545	134	358					50
2U 5S-150/5	2U 5S-150/5T	1,39	1,31	6,5	2,7													
2U 5-180/6	2U 5-180/6T	1,7	1,62	7,7	3	829	560	453	40	350	545	134	358					43
2U 5S-180/6	2U 5S-180/6T	1,63	1,55	7,3	3													
2U 5-200/7	2U 5-200/7T	2	1,86	9	3,4	853	560	477	40	350	545	134	358			55		
2U 5S-200/7	2U 5S-200/7T	1,94	1,77	8,7	3,3													
2U 7-120/3	2U 7-120/3T	1,32	1,3	5,9	2,6	799	560	414	40	350	545	92	350	2" ½ G	2" G	55		
2U 7S-120/3	2U 7S-120/3T	1,23	1,22	5,6	2,5													
2U 7-180/4	2U 7-180/4T	1,83	1,71	8,3	3,2	823	560	438	40	350	545	98	356					57
2U 7S-180/4	2U 7S-180/4T	1,69	1,62	7,7	3,1													
2U 7-250/5	2U 7-250/5T	2,39	2,15	10,9	4,2	847	560	462	40	350	545	98	356					62
2U 7S-250/5	2U 7S-250/5T	2,19	2,05	10,2	4,1													
2U 7-300/6	2U 7-300/6T	2,68	2,63	12,2	5	871	560	486	40	350	545	103 / 98T	316 / 356T					64
2U 7S-300/6	2U 7S-300/6T	2,53	2,44	11,4	4,8													
-	2U 7-350/7T	-	2,8	-	5,1	895	560	510	40	350	545	103	361			66		
-	2U 7S-350/7T	-	2,9	-	5,3													
2U 9-150/3	2U 9-150/3T	1,43	1,38	6,7	2,8	818	560	433	40	350	545	98	356	2" ½ G	2" G	55		
2U 9S-150/3	2U 9S-150/3T	1,47	1,45	6,8	3,1													
2U 9-200/4	2U 9-200/4T	1,88	1,77	8,4	3,3	848	560	463	40	350	545	98	356					56
2U 9S-200/4	2U 9S-200/4T	1,88	1,77	8,4	3,3													
2U 9-250/5	2U 9-250/5T	2,32	2,18	10,6	4,3	878	560	493	40	350	545	98	356					61
2U 9S-250/5	2U 9S-250/5T	2,36	2,23	10,8	4,3													
-	2U 18-250/3T	-	2,19	-	4,3	889	620	465	40	350	545	98	390					72
-	2U 18S-250/3T	-	2,29	-	4,4									3" G	2" ½ G			
-	2U 18-400/4T	-	3	-	5,8	926	620	502	40	350	545	103	395					88
-	2U 18S-400/4T	-	3,1	-	5,9													

Dimensions and weights may differ slightly and therefore should be considered as indicative



2U

Variable speed EPIC and EPIC-A



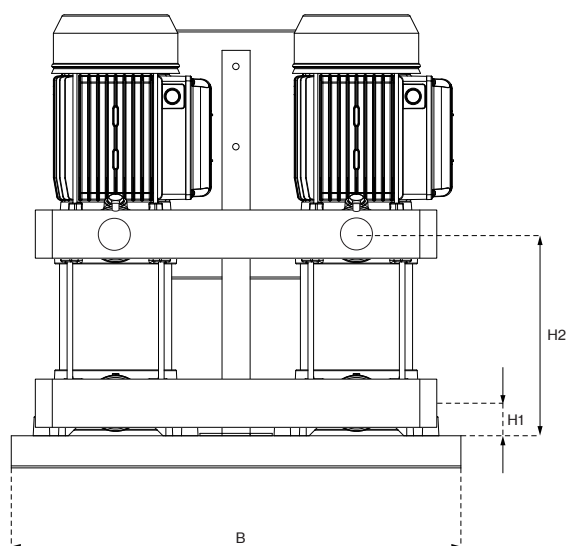
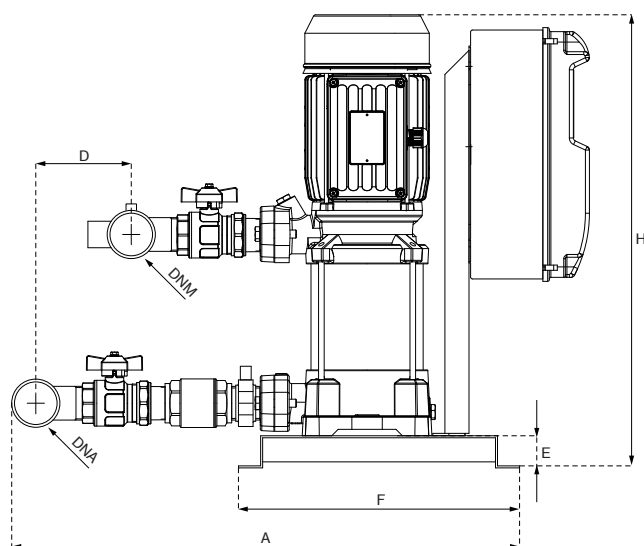
HORIZONTAL MODEL		P1	In		Required tank Lt	DIMENSIONS										Kg		
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM			
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out		A (x2)			mm												
2U 3/E-90/4T	2U 3/A-90/4T-304	0,88	3,1	1,8	2x 8	781	560	405	40	350	545	128	352	2" G	1" 1/2 G	46		
2U 3S/E-90/4T	2U 3S/A-90/4T-304	0,8	2,9	1,7	2x 8	805	560	429	40	350	545	128	352			50		
2U 3/E-100/5T	2U 3/A-100/5T-304	1,01	3,3	1,9	2x 8	829	560	453	40	350	545	128	352			53		
2U 3S/E-100/5T	2U 3S/A-100/5T-304	0,92	2,9	1,7	2x 8	853	560	477	40	350	545	134	358			57		
2U 3/E-120/6T	2U 3/A-120/6T-304	1,23	4,5	2,6	2x 8	757	560	381	40	350	545	128	352			2" G	1" 1/2 G	48
2U 3S/E-120/6T	2U 3S/A-120/6T-304	1,11	4,3	2,5	2x 20	781	560	405	40	350	545	128	352					50
2U 3/E-150/7T	2U 3/A-150/7T-304	1,45	5	2,9	2x 20	805	560	429	40	350	545	134	358	55				
2U 3S/E-150/7T	2U 3S/A-150/7T-304	1,31	4,7	2,7	2x 20	829	560	453	40	350	545	134	358	58				
2U 5/E-80/3T	2U 5/A-80/3T-304	0,79	2,6	1,5	2x 20	853	560	477	40	350	545	134	358	60				
2U 5S/E-80/3T	2U 5S/A-80/3T-304	0,75	2,4	1,4	2x 20	799	560	414	40	350	545	92	350	2" 1/2 G	2" G			60
2U 5/E-120/4T	2U 5/A-120/4T-304	1,13	4,3	2,5	2x 20	823	560	438	40	350	545	98	356			62		
2U 5S/E-120/4T	2U 5S/A-120/4T-304	1,08	4,2	2,4	2x 20	847	560	462	40	350	545	98	356			67		
2U 5/E-150/5T	2U 5/A-150/5T-304	1,39	4,9	2,8	2x 20	871	560	486	40	350	545	98	356			69		
2U 5S/E-150/5T	2U 5S/A-150/5T-304	1,31	4,7	2,7	2x 20	895	560	510	40	350	545	103	361			72		
2U 5/E-180/6T	2U 5/A-180/6T-304	1,62	5,2	3	2x 20	818	560	433	40	350	545	98	356			2" 1/2 G	2" G	60
2U 5S/E-180/6T	2U 5S/A-180/6T-304	1,55	5,2	3	2x 20	848	560	463	40	350	545	98	356	61				
2U 5/E-200/7T	2U 5/A-200/7T-304	1,86	5,9	3,4	2x 20	878	560	493	40	350	545	98	356	66				
2U 5S/E-200/7T	2U 5S/A-200/7T-304	1,77	5,7	3,3	2x 20	889	620	465	40	350	545	98	390	77				
2U 7/E-120/3T	2U 7/A-120/3T-304	1,3	4,5	2,6	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 7S/E-120/3T	2U 7S/A-120/3T-304	1,22	4,3	2,5	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 7/E-180/4T	2U 7/A-180/4T-304	1,71	5,5	3,2	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 7S/E-180/4T	2U 7S/A-180/4T-304	1,62	5,4	3,1	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 7/E-250/5T	2U 7/A-250/5T-306	2,15	7,3	4,2	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 7S/E-250/5T	2U 7S/A-250/5T-306	2,05	7,1	4,1	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 7/A-300/6T-306	2,63	-	5	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 7S/A-300/6T-306	2,44	-	4,8	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 7/A-350/7T-306	2,8	-	5,1	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 7S/A-350/7T-306	2,9	-	5,3	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 9/E-150/3T	2U 9/A-150/3T-304	1,38	4,9	2,8	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 9S/E-150/3T	2U 9S/A-150/3T-304	1,45	5,4	3,1	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 9/E-200/4T	2U 9/A-200/4T-306	1,77	5,7	3,3	1x 80	927	620	502,5	40	350	545	103	395	93				
2U 9S/E-200/4T	2U 9S/A-200/4T-306	1,77	5,7	3,3	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 9/A-250/5T-306	2,18	-	4,3	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 9S/A-250/5T-306	2,23	-	4,3	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 18/A-250/3T-306	2,19	-	4,3	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 18S/A-250/3T-306	2,29	-	4,4	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 18/A-400/4T-309	3,0	-	5,8	1x 80	927	620	502,5	40	350	545	103	395	93				
-	2U 18S/A-400/4T-309	3,1	-	5,9	1x 80	927	620	502,5	40	350	545	103	395	93				

Dimensions and weights may differ slightly and therefore should be considered as indicative



2U V

Fixed speed



VERTICAL MODEL V		P1		In		DIMENSIONS										DNA	DNM	Kg
		1~	3~	1~	3~	A	B	D	E	F	H	H1	H2					
1- 230V	3- 400V	kW (x2)		A (x2)		mm												
2U 3V-100/5	2U 3V-100/5T	1,06	1,01	4,8	1,9	633	560	100	40	350	453	40	178	2" G	1" 1/2 G	56		
2U 3SV-100/5	2U 3SV-100/5T	0,99	0,92	4,4	1,7											58		
2U 3V-120/6	2U 3V-120/6T	1,23	1,23	5,6	2,6	633	560	100	40	350	477	40	202			63		
2U 3SV-120/6	2U 3SV-120/6T	1,11	1,11	5,1	2,5											64		
2U 3V-150/7	2U 3V-150/7T	1,54	1,45	7,1	2,9	633	560	100	40	350	561	40	226			67		
2U 3SV-150/7	2U 3SV-150/7T	1,38	1,31	6,4	2,7											70		
2U 3V-180/8	2U 3V-180/8T	1,7	1,6	7,5	3	633	560	100	40	350	585	40	250			72		
2U 3SV-180/8	2U 3SV-180/8T	1,6	1,55	6,9	2,7											73		
2U 3V-200/9	2U 3V-200/9T	1,9	1,8	8,4	3,3	633	560	100	40	350	609	40	274			2" G	1" 1/2 G	70
2U 3SV-200/9	2U 3SV-200/9T	1,7	1,6	7,7	3													72
2U 3V-250/10	2U 3V-250/10T	2,1	2	10	4,1	633	560	100	40	350	633	40	298					73
2U 3SV-250/10	2U 3SV-250/10T	1,9	1,8	9,2	3,7													
2U 3V-280/11	2U 3V-280/11T	2,3	2,2	10,5	4,3	633	560	100	40	350	657	40	322					
2U 3SV-280/11	2U 3SV-280/11T	2,1	2	9,7	3,9													
2U 3V-300/12	2U 3V-300/12T	2,5	2,44	11,2	4,7	633	560	100	40	350	681	40	346					
2U 3SV-300/12	2U 3SV-300/12T	2,3	2,2	10,3	4,3													
2U 5V-120/4	2U 5V-120/4T	1,13	1,13	5,2	2,5	633	560	100	40	350	429	40	178	2" G	1" 1/2 G	59		
2U 5SV-120/4	2U 5SV-120/4T	1,09	1,08	4,9	2,4											62		
2U 5V-150/5	2U 5V-150/5T	1,47	1,39	6,8	2,8	633	560	100	40	350	513	40	202			63		
2U 5SV-150/5	2U 5SV-150/5T	1,39	1,31	6,5	2,7											65		
2U 5V-180/6	2U 5V-180/6T	1,7	1,62	7,7	3	633	560	100	40	350	537	40	226			68		
2U 5SV-180/6	2U 5SV-180/6T	1,63	1,55	7,3	3											69		
2U 5V-200/7	2U 5V-200/7T	2	1,86	9	3,4	633	560	100	40	350	561	40	250			71		
2U 5SV-200/7	2U 5SV-200/7T	1,94	1,77	8,7	3,3											75		
2U 5V-250/8	2U 5V-250/8T	2,37	2,17	10,7	4,1	633	560	100	40	350	585	40	274			88		
2U 5SV-250/8	2U 5SV-250/8T	2,2	2,07	10,1	4													
2U 5V-280/9	2U 5V-280/9T	2,6	2,4	11,7	4,4	633	560	100	40	350	609	40	298					
2U 5SV-280/9	2U 5SV-280/9T	2,45	2,27	11	4,2													
2U 5V-300/10	2U 5V-300/10T	2,84	2,73	12,8	4,9	633	560	100	40	350	633	40	322					
2U 5SV-300/10	2U 5SV-300/10T	2,67	2,57	11,9	4,7													
-	2U 5V-350/11T	-	2,9	-	5,3	633	560	100	40	350	712	40	346					
-	2U 5SV-350/11T	-	2,9	-	5,3													
-	2U 5V-380/12T	-	3,2	-	6	633	560	100	40	350	736	40	370					
-	2U 5SV-380/12T	-	3,2	-	6													



Dimensions and weights may differ slightly and therefore should be considered as indicative

2U V

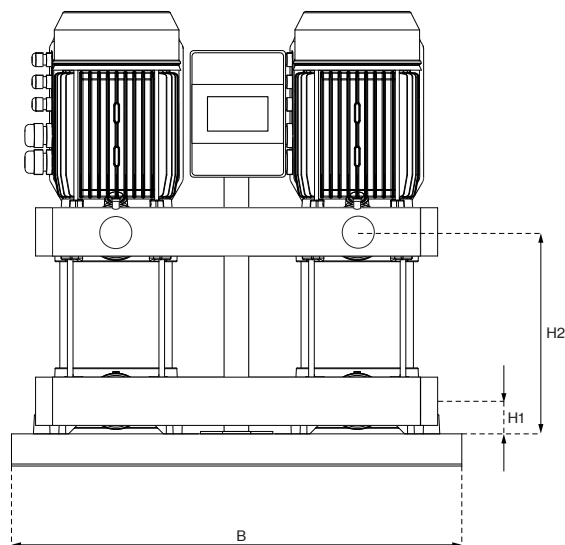
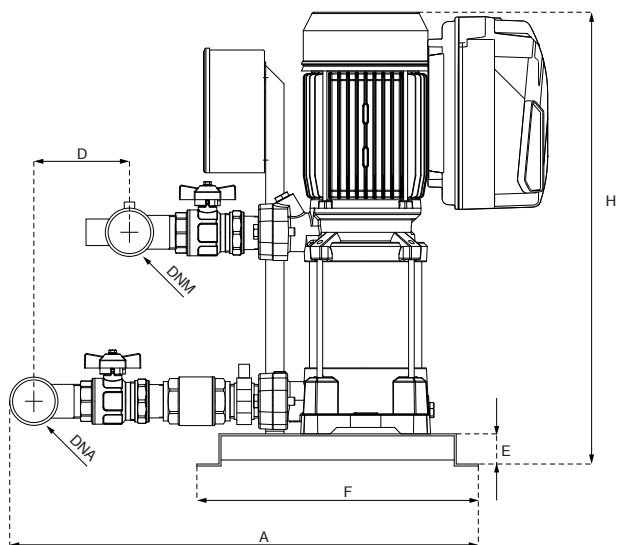
Fixed speed

VERTICAL MODEL V		P1		In		DIMENSIONS								DNA	DNM	Kg		
		1-	3-	1-	3-	A	B	D	E	F	H	H1	H2					
1-	3-	kW (x2)		A (x2)		mm												
2U 7V-180/4	2U 7V-180/4T	1,83	1,71	8,3	3,2	673	560	152	40	350	462	40	178	2" ½ G	2" G	69		
2U 7SV-180/4	2U 7SV-180/4T	1,69	1,62	7,7	3,1													
2U 7V-250/5	2U 7V-250/5T	2,39	2,15	10,9	4,2	673	560	152	40	350	513	40	202					74
2U 7SV-250/5	2U 7SV-250/5T	2,19	2,05	10,2	4,1													
2U 7V-300/6	2U 7V-300/6T	2,68	2,63	12,2	5	673	560	152	40	350	537	40	226					76
2U 7SV-300/6	2U 7SV-300/6T	2,53	2,44	11,4	4,8													
-	2U 7V-350/7T	-	2,8	-	5,1	673	560	152	40	350	615	40	250					89
-	2U 7SV-350/7T	-	2,9	-	5,3													
-	2U 7V-400/8T	-	3,1	-	5,9	673	560	152	40	350	640	40	274					92
-	2U 7SV-400/8T	-	3,3	-	6,1													
-	2U 7V-450/9T	-	3,6	-	6,5	673	560	152	40	350	693	40	301			101		
-	2U 7SV-450/9T	-	3,7	-	6,7													
-	2U 7V-550/10T	-	4	-	7,7	673	560	152	40	350	716	40	325			114		
-	2U 7SV-550/10T	-	4,1	-	7,9													
2U 9V-200/4	2U 9V-200/4T	1,88	1,77	8,4	3,3	673	560	152	40	350	513	40	202	2" ½ G	2" G	69		
2U 9SV-200/4	2U 9SV-200/4T	1,88	1,77	8,4	3,3													
2U 9V-250/5	2U 9V-250/5T	2,32	2,18	10,6	4,3	673	560	152	40	350	543	40	232					72
2U 9SV-250/5	2U 9SV-250/5T	2,36	2,23	10,8	4,3													
2U 9V-300/6	2U 9V-300/6T	2,74	2,64	12,2	4,8	673	560	152	40	350	573	40	262					74
2U 9SV-300/6	2U 9SV-300/6T	2,78	2,58	12,5	4,9													
-	2U 9V-400/7T	-	3	-	5,8	673	560	152	40	350	657	40	292					92
-	2U 9SV-400/7T	-	3,1	-	5,9													
-	2U 9V-450/8T	-	3,5	-	6,4	673	560	152	40	350	717	40	325					100
-	2U 9SV-450/8T	-	3,6	-	6,5													
-	2U 9V-500/9T	-	3,9	-	6,9	673	560	152	40	350	747	40	355			103		
-	2U 9SV-500/9T	-	4	-	7													
-	2U 9V-550/10T	-	4,3	-	8,1	673	560	152	40	350	777	40	385			112		
-	2U 9SV-550/10T	-	4,4	-	8,2													
-	2U 18V-250/3T	-	2,19	-	4,3	720	620	133	40	350	521	50	211	3" G	2" ½ G	83		
-	2U 18SV-250/3T	-	2,29	-	4,4													
-	2U 18V-400/4T	-	3	-	5,8	720	620	133	40	350	613	50	248					99
-	2U 18SV-400/4T	-	3,1	-	5,9													
-	2U 18V-450/5T	-	3,9	-	6,9	720	620	133	40	350	680	50	289					110
-	2U 18SV-450/5T	-	3,9	-	6,9													
-	2U 18V-550/6T	-	4,6	-	8,4	720	620	133	40	350	718	50	326					120
-	2U 18SV-550/6T	-	4,7	-	8,5													
-	2U 18V-750/8T	-	6,2	-	11,2	720	620	133	40	350	855	50	401					143
-	2U 18SV-750/8T	-	6,2	-	11,2													
-	2U 18V-900/9T	-	6,9	-	12,8	720	620	133	40	350	892	50	439			154		
-	2U 18SV-900/9T	-	7	-	12,9													



2U V

Variable speed EPIC and EPIC-A




VERTICAL MODEL V		P1	In		Required tank Lt	DIMENSIONS										Kg		
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM			
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out		A (x2)			mm												
		kW (x2)																
2U 3V/E-100/5T	2U 3V/A-100/5T-304	1,01	3,3	1,9	2x 8	633	560	100	40	350	453	40	178	2" G	1" 1/2 G	61		
2U 3SV/E-100/5T	2U 3SV/A-100/5T-304	0,92	2,9	1,7														
2U 3V/E-120/6T	2U 3V/A-120/6T-304	1,23	4,5	2,6	2x 8	633	560	100	40	350	477	40	202					63
2U 3SV/E-120/6T	2U 3SV/A-120/6T-304	1,11	4,3	2,5														
2U 3V/E-150/7T	2U 3V/A-150/7T-304	1,45	5	2,9	2x 8	633	560	100	40	350	561	40	226					68
2U 3SV/E-150/7T	2U 3SV/A-150/7T-304	1,31	4,7	2,7														
2U 3V/E-180/8T	2U 3V/A-180/8T-304	1,6	5,2	3	2x 8	633	560	100	40	350	585	40	250					69
2U 3SV/E-180/8T	2U 3SV/A-180/8T-304	1,55	4,7	2,7														
2U 3V/E-200/9T	2U 3V/A-200/9T-304	1,8	5,7	3,3	2x 8	633	560	100	40	350	609	40	274					72
2U 3SV/E-200/9T	2U 3SV/A-200/9T-304	1,6	5,2	3														
2U 3V/E-250/10T	2U 3V/A-250/10T-306	2	7,1	4,1	2x 8	633	560	100	40	350	633	40	298					75
2U 3SV/E-250/10T	2U 3SV/A-250/10T-306	1,8	6,4	3,7														
-	2U 3V/A-280/11T-306	2,2	-	4,3	2x 8	633	560	100	40	350	657	40	322					77
2U 3SV/E-280/11T	2U 3SV/A-280/11T-306	2	6,8	3,9														
-	2U 3V/A-300/12T-306	2,44	-	4,7	2x 8	633	560	100	40	350	681	40	346			78		
-	2U 3SV/A-300/12T-306	2,2	-	4,3														
2U 5V/E-120/4T	2U 5V/A-120/4T-304	1,13	4,3	2,5	2x 20	633	560	100	40	350	429	40	178	2" G	1" 1/2 G	64		
2U 5SV/E-120/4T	2U 5SV/A-120/4T-304	1,08	4,2	2,4														
2U 5V/E-150/5T	2U 5V/A-150/5T-304	1,39	4,9	2,8	2x 20	633	560	100	40	350	513	40	202					67
2U 5SV/E-150/5T	2U 5SV/A-150/5T-304	1,31	4,7	2,7														
2U 5V/E-180/6T	2U 5V/A-180/6T-304	1,62	5,2	3	2x 20	633	560	100	40	350	537	40	226					68
2U 5SV/E-180/6T	2U 5SV/A-180/6T-304	1,55	5,2	3														
2U 5V/E-200/7T	2U 5V/A-200/7T-304	1,86	5,9	3,4	2x 20	633	560	100	40	350	561	40	250					70
2U 5SV/E-200/7T	2U 5SV/A-200/7T-304	1,77	5,7	3,3														
2U 5V/E-250/8T	2U 5V/A-250/8T-306	2,17	7,1	4,1	2x 20	633	560	100	40	350	585	40	274					73
2U 5SV/E-250/8T	2U 5SV/A-250/8T-306	2,07	6,9	4														
-	2U 5V/A-280/9T-306	2,4	-	4,4	2x 20	633	560	100	40	350	609	40	298					74
2U 5SV/E-280/9T	2U 5SV/A-280/9T-306	2,27	7,3	4,2														
-	2U 5V/A-300/10T-306	2,73	-	4,9	2x 20	633	560	100	40	350	633	40	322					76
-	2U 5SV/A-300/10T-306	2,57	-	4,7														
-	2U 5V/A-350/11T-306	2,9	-	5,3	2x 20	633	560	100	40	350	712	40	346			80		
-	2U 5SV/A-350/11T-306	2,9	-	5,3														
-	2U 5V/A-380/12T-309	3,2	-	6	2x 20	633	560	100	40	350	736	40	370			93		
-	2U 5SV/A-380/12T-309	3,2	-	6														



Dimensions and weights may differ slightly and therefore should be considered as indicative

2U V

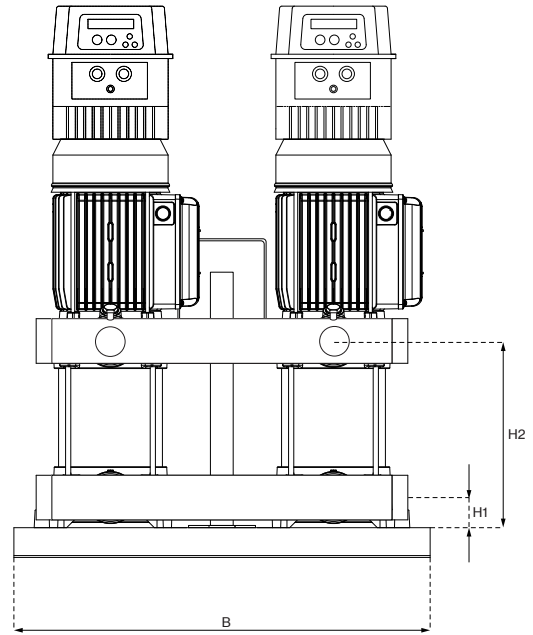
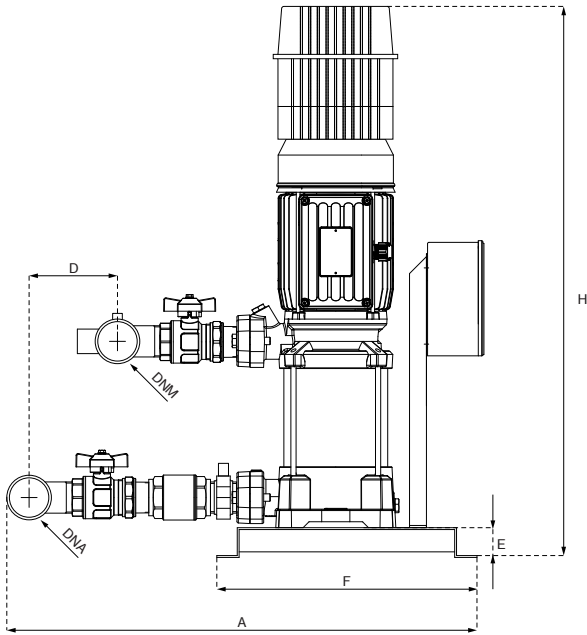
Variable speed EPIC and EPIC-A

VERTICAL MODEL V		P1	In		Required tank	DIMENSIONS										
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out	kW (x2)	A (x2)		Lt	mm										
2U 7V/E-180/4T	2U 7V/A-180/4T-304	1,71	5,5	3,2	2x 20	673	560	152	40	350	462	40	178			74
2U 7SV/E-180/4T	2U 7SV/A-180/4T-304	1,62	5,4	3,1												
2U 7V/E-250/5T	2U 7V/A-250/5T-306	2,15	7,3	4,2	2x 20	673	560	152	40	350	513	40	202			79
2U 7SV/E-250/5T	2U 7SV/A-250/5T-306	2,05	7,1	4,1												
-	2U 7V/A-300/6T-306	2,63	-	5	2x 20	673	560	152	40	350	537	40	226			81
-	2U 7SV/A-300/6T-306	2,44	-	4,8												
-	2U 7V/A-350/7T-306	2,8	-	5,1	2x 20	673	560	152	40	350	615	40	250	2" ½ G	2" G	94
-	2U 7SV/A-350/7T-306	2,9	-	5,3												
-	2U 7V/A-400/8T-309	3,1	-	5,9	2x 20	673	560	152	40	350	640	40	274			97
-	2U 7SV/A-400/8T-309	3,3	-	6,1												
-	2U 7V/A-450/9T-309	3,6	-	6,5	2x 20	673	560	152	40	350	693	40	301			106
-	2U 7SV/A-450/9T-309	3,7	-	6,7												
-	2U 7V/A-550/10T-309	4	-	7,7	2x 20	673	560	152	40	350	716	40	325			123
-	2U 7SV/A-550/10T-309	4,1	-	7,9												
2U 9V/E-200/4T	2U 9V/A-200/4T-304	1,77	5,7	3,3	2x 20	673	560	152	40	350	513	40	202			74
2U 9SV/E-200/4T	2U 9SV/A-200/4T-304	1,77	5,7	3,3												
-	2U 9V/A-250/5T-306	2,18	-	4,3	2x 20	673	560	152	40	350	543	40	232			77
-	2U 9SV/A-250/5T-306	2,23	-	4,3												
-	2U 9V/A-300/6T-306	2,64	-	4,8	2x 20	673	560	152	40	350	573	40	262			79
-	2U 9SV/A-300/6T-306	2,58	-	4,9												
-	2U 9V/A-400/7T-309	3	-	5,8	2x 20	673	560	152	40	350	657	40	292	2" ½ G	2" G	97
-	2U 9SV/A-400/7T-309	3,1	-	5,9												
-	2U 9V/A-450/8T-309	3,5	-	6,4	2x 20	673	560	152	40	350	717	40	325			105
-	2U 9SV/A-450/8T-309	3,6	-	6,5												
-	2U 9V/A-500/9T-309	3,9	-	6,9	2x 20	673	560	152	40	350	747	40	355			108
-	2U 9SV/A-500/9T-309	4	-	7												
-	2U 9V/A-550/10T-309	4,3	-	8,1	2x 20	673	560	152	40	350	777	40	385			132
-	2U 9SV/A-550/10T-314	4,4	-	8,2												
-	2U 18V/A-250/3T-306	2,19	-	4,3	1x 80	720	620	133	40	350	521	50	211			88
-	2U 18SV/A-250/3T-306	2,29	-	4,4												
-	2U 18V/A-400/4T-309	3	-	5,8	1x 80	720	620	133	40	350	613	50	248			104
-	2U 18SV/A-400/4T-309	3,1	-	5,9												
-	2U 18V/A-450/5T-309	3,9	-	6,9	1x 80	720	620	133	40	350	680	50	289	3" G	2" ½ G	115
-	2U 18SV/A-450/5T-309	3,9	-	6,9												
-	2U 18V/A-550/6T-314	4,6	-	8,4	1x 80	720	620	133	40	350	718	50	326			140
-	2U 18SV/A-550/6T-314	4,7	-	8,5												
-	2U 18V/A-750/8T-314	6,2	-	11,2	1x 80	720	620	133	40	350	855	50	401			155
-	2U 18SV/A-750/8T-314	6,2	-	11,2												
-	2U 18V/A-900/9T-318	6,9	-	12,8	1x 80	720	620	133	40	350	892	50	439			166
-	2U 18SV/A-900/9T-318	7	-	12,9												



2U V

Variable speed IPFC



VERTICAL MODEL V		P1	In		Required tank	DIMENSIONS										Kg		
IPFC			3- 230V	3- 400V		A (x2)	Lt	A	B	D	E	F	H	H1	H2		DNA	DNM
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out	kW (x2)			mm													
2U 3V/I-100/5T-109	2U 3V/I-100/5T-306	1,01	3,3	1,9	2 x 8	633	560	100	40	350	663	40	178	2" G	1" 1/2 G	66		
2U 3SV/I-100/5T-109	2U 3SV/I-100/5T-306	0,92	2,9	1,7														
2U 3V/I-120/6T-109	2U 3V/I-120/6T-306	1,23	4,5	2,6	2 x 8	633	560	100	40	350	687	40	202					68
2U 3SV/I-120/6T-109	2U 3SV/I-120/6T-306	1,11	4,3	2,5														
2U 3V/I-150/7T-109	2U 3V/I-150/7T-306	1,45	5	2,9	2 x 8	633	560	100	40	350	771	40	226					73
2U 3SV/I-150/7T-109	2U 3SV/I-150/7T-306	1,31	4,7	2,7														
2U 3V/I-180/8T-109	2U 3V/I-180/8T-306	1,6	5,2	3	2 x 8	633	560	100	40	350	795	40	250					74
2U 3SV/I-180/8T-109	2U 3SV/I-180/8T-306	1,55	4,7	2,7														
2U 3V/I-200/9T-109	2U 3V/I-200/9T-306	1,8	5,7	3,3	2 x 8	633	560	100	40	350	819	40	274					77
2U 3SV/I-200/9T-109	2U 3SV/I-200/9T-306	1,6	5,2	3														
2U 3V/I-250/10T-114	2U 3V/I-250/10T-306	2	7,1	4,1	2 x 8	633	560	100	40	350	843	40	298					80
2U 3SV/I-250/10T-114	2U 3SV/I-250/10T-306	1,8	6,4	3,7														
2U 3V/I-280/11T-114	2U 3V/I-280/11T-306	2,2	7,4	4,3	2 x 8	633	560	100	40	350	867	40	322					82
2U 3SV/I-280/11T-114	2U 3SV/I-280/11T-306	2	6,8	3,9														
2U 3V/I-300/12T-114	2U 3V/I-300/12T-306	2,44	8,1	4,7	2 x 8	633	560	100	40	350	891	40	346			83		
2U 3SV/I-300/12T-114	2U 3SV/I-300/12T-306	2,2	7,4	4,3														
2U 5V/I-120/4T-109	2U 5V/I-120/4T-306	1,13	4,3	2,5	2 x 20	633	560	100	40	350	639	40	178	2" G	1" 1/2 G	69		
2U 5SV/I-120/4T-109	2U 5SV/I-120/4T-306	1,08	4,2	2,4														
2U 5V/I-150/5T-109	2U 5V/I-150/5T-306	1,39	4,9	2,8	2 x 20	633	560	100	40	350	723	40	202					72
2U 5SV/I-150/5T-109	2U 5SV/I-150/5T-306	1,31	4,7	2,7														
2U 5V/I-180/6T-109	2U 5V/I-180/6T-306	1,62	5,2	3	2 x 20	633	560	100	40	350	747	40	226					73
2U 5SV/I-180/6T-109	2U 5SV/I-180/6T-306	1,55	5,2	3														
2U 5V/I-200/7T-109	2U 5V/I-200/7T-306	1,86	5,9	3,4	2 x 20	633	560	100	40	350	771	40	250					75
2U 5SV/I-200/7T-109	2U 5SV/I-200/7T-306	1,77	5,7	3,3														
2U 5V/I-250/8T-114	2U 5V/I-250/8T-306	2,17	7,1	4,1	2 x 20	633	560	100	40	350	795	40	274					78
2U 5SV/I-250/8T-114	2U 5SV/I-250/8T-306	2,07	6,9	4														
2U 5V/I-280/9T-114	2U 5V/I-280/9T-306	2,4	7,6	4,4	2 x 20	633	560	100	40	350	819	40	298					79
2U 5SV/I-280/9T-114	2U 5SV/I-280/9T-306	2,27	7,3	4,2														
2U 5V/I-300/10T-114	2U 5V/I-300/10T-306	2,73	8,5	4,9	2 x 20	633	560	100	40	350	843	40	322					81
2U 5SV/I-300/10T-114	2U 5SV/I-300/10T-306	2,57	8,1	4,7														
2U 5V/I-350/11T-114	2U 5V/I-350/11T-306	2,9	9,2	5,3	2 x 20	633	560	100	40	350	922	40	346			85		
2U 5SV/I-350/11T-114	2U 5SV/I-350/11T-306	2,9	9,2	5,3														
-	2U 5V/I-380/12T-309	3,2	-	6	2 x 20	633	560	100	40	350	946	40	370			98		
-	2U 5SV/I-380/12T-309	3,2	-	6														

Dimensions and weights may differ slightly and therefore should be considered as indicative



2U V

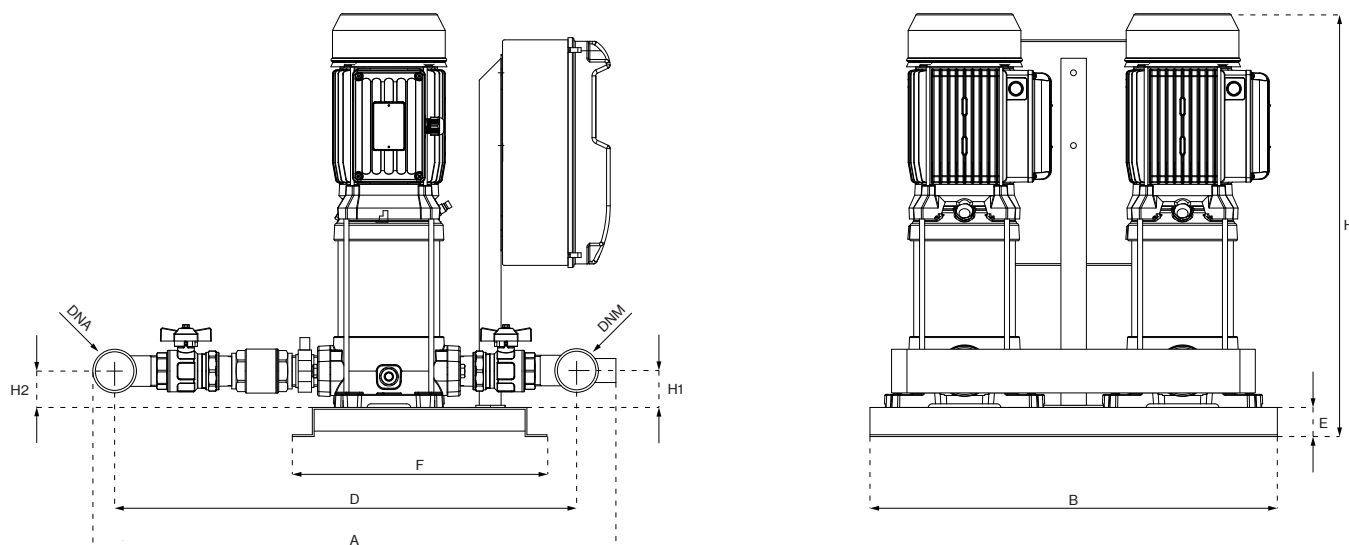
Variable speed IPFC

VERTICAL MODEL V		P1	In		Required tank	DIMENSIONS										Kg																					
IPFC			3- 230V	3- 400V		Lt	A	B	D	E	F	H	H1	H2	DNA		DNM																				
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out	kW (x2)			A (x2)		mm																														
2U 7V/I-180/4T-109	2U 7V/I-180/4T-306	1,71	5,5	3,2	2x 20	673	560	152	40	350	672	40	178	2" ½ G	2" G	79																					
2U 7SV/I-180/4T-109	2U 7SV/I-180/4T-306	1,62	5,4	3,1	2x 20	673	560	152	40	350	723	40	202			79																					
2U 7V/I-250/5T-114	2U 7V/I-250/5T-306	2,15	7,3	4,2													84																				
2U 7SV/I-250/5T-114	2U 7SV/I-250/5T-306	2,05	7,1	4,1													86																				
2U 7V/I-300/6T-114	2U 7V/I-300/6T-306	2,63	8,7	5													99																				
2U 7SV/I-300/6T-114	2U 7SV/I-300/6T-306	2,44	8,3	4,8													102																				
2U 7V/I-350/7T-114	2U 7V/I-350/7T-306	2,8	8,8	5,1													111																				
2U 7SV/I-350/7T-114	2U 7SV/I-350/7T-306	2,9	9,2	5,3													128																				
-	2U 7V/I-400/8T-309	3,1	-	5,9													2x 20	673	560	152	40	350	850	40	274	79											
-	2U 7SV/I-400/8T-309	3,3	-	6,1																							82										
-	2U 7V/I-450/9T-309	3,6	-	6,5																							84										
-	2U 7SV/I-450/9T-309	3,7	-	6,7																							110										
-	2U 7V/I-550/10T-309	4	-	7,7										128																							
-	2U 7SV/I-550/10T-309	4,1	-	7,9	2x 20	673	560	152	40	350	723	40	202	79																							
2U 9V/I-200/4T-109	2U 9V/I-200/4T-306	1,77	5,7	3,3											82																						
2U 9SV/I-200/4T-109	2U 9SV/I-200/4T-306	1,77	5,7	3,3											84																						
2U 9V/I-250/5T-114	2U 9V/I-250/5T-306	2,18	7,5	4,3											102																						
2U 9SV/I-250/5T-114	2U 9SV/I-250/5T-306	2,23	7,5	4,3											110																						
2U 9V/I-300/6T-114	2U 9V/I-300/6T-306	2,64	8,3	4,8											113																						
2U 9SV/I-300/6T-114	2U 9SV/I-300/6T-306	2,58	8,5	4,9											122																						
-	2U 9V/I-400/7T-309	3	-	5,8											2x 20	673	560	152	40	350	867	40	292	2" ½ G	2" G												
-	2U 9SV/I-400/7T-309	3,1	-	5,9																						109											
-	2U 9V/I-450/8T-309	3,5	-	6,4																						120											
-	2U 9SV/I-450/8T-309	3,6	-	6,5																						130											
-	2U 9V/I-500/9T-309	3,9	-	6,9																						153											
-	2U 9SV/I-500/9T-309	4	-	7	164																																
-	2U 9V/I-550/10T-309	4,3	-	8,1	2x 20	673	560	152	40	350	987	40	385	93																							
-	2U 9SV/I-550/10T-311	4,4	-	8,2																						109											
2U 18V/I-250/3T-114	2U 18V/I-250/3T-306	2,19	7,5	4,3																						1x 80	720	620	133	40	350	731	50	211	3" G	2" ½ G	
2U 18SV/I-250/3T-114	2U 18SV/I-250/3T-306	2,29	7,6	4,4																																	120
-	2U 18V/I-400/4T-309	3	-	5,8																																	130
-	2U 18SV/I-400/4T-309	3,1	-	5,9																																	153
-	2U 18V/I-450/5T-309	3,9	-	6,9											164																						
-	2U 18SV/I-450/5T-309	3,9	-	6,9											1x 80	720	620	133	40	350	928	50	326	93													
-	2U 18V/I-550/6T-311	4,6	-	8,4																					109												
-	2U 18SV/I-550/6T-311	4,7	-	8,5																					120												
-	2U 18V/I-750/8T-314	6,2	-	11,2																					130												
-	2U 18SV/I-750/8T-314	6,2	-	11,2																					153												
-	2U 18V/I-900/9T-318	6,9	-	12,8	164																																
-	2U 18SV/I-900/9T-318	7	-	12,9	1x 80	720	620	133	40	350	1072	50	439	93																							



2U L

Fixed speed



VERTICAL MODEL L		P1		In		DIMENSIONS										DNA	DNM	Kg
		1~	3~	1~	3~	A	B	D	E	F	H	H1	H2					
1~ 230V	3~ 400V	kW (x2)		A (x2)		mm												
2U 3L-100/5	2U 3L-100/5T	1,06	1,01	4,8	1,9	700	560	615	40	350	469	50	50	2" G	1" ½ G	57		
2U 3SL-100/5	2U 3SL-100/5T	0,99	0,92	4,4	1,7	700	560	615	40	350	493	50	50					
2U 3L-120/6	2U 3L-120/6T	1,23	1,23	5,6	2,6	700	560	615	40	350	577	50	50					
2U 3SL-120/6	2U 3SL-120/6T	1,11	1,11	5,1	2,5	700	560	615	40	350	601	50	50					
2U 3L-150/7	2U 3L-150/7T	1,54	1,45	7,1	2,9	700	560	615	40	350	625	50	50					
2U 3SL-150/7	2U 3SL-150/7T	1,38	1,31	6,4	2,7	700	560	615	40	350	649	50	50					
2U 3L-180/8	2U 3L-180/8T	1,7	1,6	7,5	3	700	560	615	40	350	673	50	50					
2U 3SL-180/8	2U 3SL-180/8T	1,6	1,55	6,9	2,7	700	560	615	40	350	697	50	50					
2U 3L-200/9	2U 3L-200/9T	1,9	1,8	8,4	3,3	700	560	615	40	350	972	75	75					
2U 3SL-200/9	2U 3SL-200/9T	1,7	1,6	7,7	3	700	560	615	40	350	1017	75	75					
2U 3L-250/10	2U 3L-250/10T	2,1	2	10	4,1	700	560	615	40	350	1065	75	75					
2U 3SL-250/10	2U 3SL-250/10T	1,9	1,8	9,2	3,7	700	560	615	40	350	1138	75	75					
2U 3L-280/11	2U 3L-280/11T	2,3	2,2	10,5	4,3	700	560	615	40	350								
2U 3SL-280/11	2U 3SL-280/11T	2,1	2	9,7	3,9	700	560	615	40	350								
2U 3L-300/12	2U 3L-300/12T	2,5	2,44	11,2	4,7	700	560	615	40	350								
2U 3SL-300/12	2U 3SL-300/12T	2,3	2,2	10,3	4,3	700	560	615	40	350								
-	2U 3SLG-350/14T	-	2,5	-	4,7	815	560	730	40	350								
-	2U 3SLG-380/16T	-	2,9	-	5,5	815	560	730	40	350								
-	2U 3SLG-400/18T	-	3,2	-	6	815	560	730	40	350								
-	2U 3SLG-450/20T	-	3,6	-	6,5	815	560	730	40	350								
2U 5L-120/4	2U 5L-120/4T	1,13	1,13	5,2	2,5	700	560	615	40	350	445	50	50	2" G	1" ½ G	62		
2U 5SL-120/4	2U 5SL-120/4T	1,09	1,08	4,9	2,4	700	560	615	40	350	529	50	50					
2U 5L-150/5	2U 5L-150/5T	1,47	1,39	6,8	2,8	700	560	615	40	350	553	50	50					
2U 5SL-150/5	2U 5SL-150/5T	1,39	1,31	6,5	2,7	700	560	615	40	350	577	50	50					
2U 5L-180/6	2U 5L-180/6T	1,7	1,62	7,7	3	700	560	615	40	350	601	50	50					
2U 5SL-180/6	2U 5SL-180/6T	1,63	1,55	7,3	3	700	560	615	40	350	625	50	50					
2U 5L-200/7	2U 5L-200/7T	2	1,86	9	3,4	700	560	615	40	350	649	50	50					
2U 5SL-200/7	2U 5SL-200/7T	1,94	1,77	8,7	3,3	700	560	615	40	350	673	50	50					
2U 5L-250/8	2U 5L-250/8T	2,37	2,17	10,7	4,1	700	560	615	40	350	697	50	50					
2U 5SL-250/8	2U 5SL-250/8T	2,2	2,07	10,1	4	700	560	615	40	350								
2U 5L-280/9	2U 5L-280/9T	2,6	2,4	11,7	4,4	700	560	615	40	350								
2U 5SL-280/9	2U 5SL-280/9T	2,45	2,27	11	4,2	700	560	615	40	350								
2U 5L-300/10	2U 5L-300/10T	2,84	2,73	12,8	4,9	700	560	615	40	350								
2U 5SL-300/10	2U 5SL-300/10T	2,67	2,57	11,9	4,7	700	560	615	40	350								
-	2U 5L-350/11T	-	2,9	-	5,3	700	560	615	40	350								
-	2U 5SL-350/11T	-	2,9	-	5,3	700	560	615	40	350								

Dimensions and weights may differ slightly and therefore should be considered as indicative

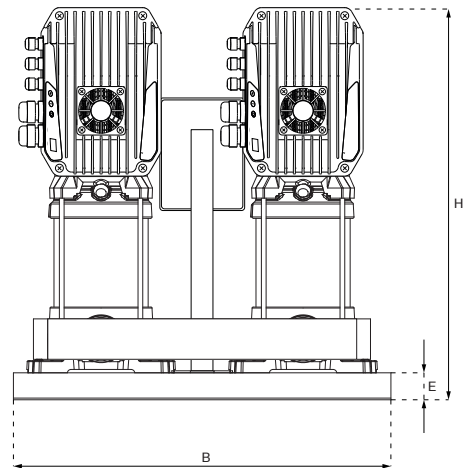
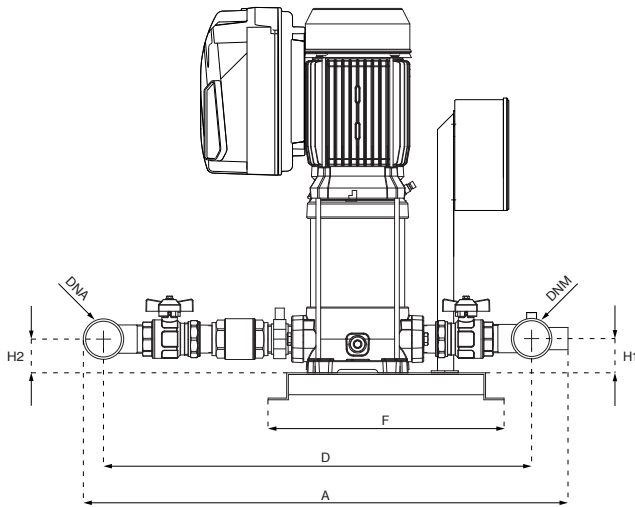


2U L

Fixed speed

VERTICAL MODEL L		P1 pumps		In pumps		DIMENSIONS								DNA	DNM	Kg		
		1-	3-	1-	3-	A	B	D	E	F	H	H1	H2					
1-	3-	kW		A		mm												
-	2U 5L-380/12T	-	3,2	-	6	700	560	615	40	350	751	50	50	2" G	1" ½ G	93		
-	2U 5SL-380/12T	-	3,2	-	6													120
-	2U 5SLG-400/14T	-	3,5	-	6,3	815	560	730	40	350	972	75	75					144
-	2U 5SLG-450/16T	-	4,1	-	7,9	815	560	730	40	350	1040	75	75					148
-	2U 5SLG-550/18T	-	4,5	-	8,3	815	560	730	40	350	1088	75	75					151
-	2U 5SLG-600/20T	-	5	-	8,9	815	560	730	40	350	1138	75	75					
2U 7L-180/4	2U 7L-180/4T	1,83	1,71	8,3	3,2	760	560	670	40	350	505	50	50	2" ½ G	2" G	73		
2U 7SL-180/4	2U 7SL-180/4T	1,69	1,62	7,7	3,1													
2U 7L-250/5	2U 7L-250/5T	2,39	2,15	10,9	4,2	760	560	670	40	350	529	50	50					78
2U 7SL-250/5	2U 7SL-250/5T	2,19	2,05	10,2	4,1													
2U 7L-300/6	2U 7L-300/6T	2,68	2,63	12,2	5	760	560	670	40	350	553	50	50					80
2U 7SL-300/6	2U 7SL-300/6T	2,53	2,44	11,4	4,8													
-	2U 7L-350/7T	-	2,8	-	5,1	760	560	670	40	350	630	50	50					93
-	2U 7SL-350/7T	-	2,9	-	5,3													
-	2U 7L-400/8T	-	3,1	-	5,9	760	560	670	40	350	654	50	50					97
-	2U 7SL-400/8T	-	3,3	-	6,1													
-	2U 7L-450/9T	-	3,6	-	6,5	760	560	670	40	350	708	50	50					106
-	2U 7SL-450/9T	-	3,7	-	6,7													
-	2U 7L-550/10T	-	4	-	7,7	760	560	670	40	350	732	50	50					125
-	2U 7SL-550/10T	-	4,1	-	7,9													
-	2U 7SLG-750/12T	-	5,1	-	9,9	875	560	785	40	350	980	75	75					162
-	2U 7SLG-800/14T	-	5,9	-	10,9	875	560	785	40	350	1028	75	75			165		
-	2U 7SLG-900/16T	-	6,7	-	12	875	560	785	40	350	1076	75	75			179		
-	2U 7SLG-950/18T	-	7,4	-	12,4	875	560	785	40	350	1121	75	75			196		
-	2U 7SLG-1000/20T	-	8,2	-	13,5	875	560	785	40	350	1168	75	75			198		
2U 9L-200/4	2U 9L-200/4T	1,88	1,77	8,4	3,3	780	560	670	40	350	560	80	80	2" ½ G	2" G	80		
2U 9SL-200/4	2U 9SL-200/4T	1,88	1,77	8,4	3,3													
2U 9L-250/5	2U 9L-250/5T	2,32	2,18	10,6	4,3	780	560	670	40	350	590	80	80					83
2U 9SL-250/5	2U 9SL-250/5T	2,36	2,23	10,8	4,3													
2U 9L-300/6	2U 9L-300/6T	2,74	2,64	12,2	4,8	780	560	670	40	350	620	80	80					85
2U 9SL-300/6	2U 9SL-300/6T	2,78	2,58	12,5	4,9													
-	2U 9L-400/7T	-	3	-	5,8	780	560	670	40	350	703	80	80					105
-	2U 9SL-400/7T	-	3,1	-	5,9													
-	2U 9L-450/8T	-	3,5	-	6,4	780	560	670	40	350	763	80	80					113
-	2U 9SL-450/8T	-	3,6	-	6,5													
-	2U 9L-500/9T	-	3,9	-	6,9	780	560	670	40	350	803	80	80					116
-	2U 9SL-500/9T	-	4	-	7													
-	2U 9L-550/10T	-	4,3	-	8,1	780	560	670	40	350	823	80	80					128
-	2U 9SL-550/10T	-	4,4	-	8,2													
-	2U 9SLG-750/12T	-	5,3	-	10,1	885	560	795	40	350	1067	80	80					169
-	2U 9SLG-800/14T	-	6,1	-	11,1	885	560	795	40	350	1128	80	80			172		
-	2U 9SLG-900/16T	-	6,9	-	12,8	885	560	795	40	350	1187	80	80			187		
-	2U 9SLG-950/18T	-	7,6	-	12,7	885	560	795	40	350	1245	80	80			203		
-	2U 9SLG-1000/20T	-	8,5	-	13,9	885	560	795	40	350	1303	80	80			207		
-	2U 18L-250/3T	-	2,19	-	4,3	850	620	750	40	350	522	90	90	3" G	2" ½ G	94		
-	2U 18SL-250/3T	-	2,29	-	4,4													
-	2U 18L-400/4T	-	3	-	5,8	850	620	750	40	350	643	90	90					110
-	2U 18SL-400/4T	-	3,1	-	5,9													
-	2U 18L-450/5T	-	3,9	-	6,9	850	620	750	40	350	720	90	90					121
-	2U 18SL-450/5T	-	3,9	-	6,9													
-	2U 18L-550/6T	-	4,6	-	8,4	850	620	750	40	350	758	90	90					134
-	2U 18SL-550/6T	-	4,7	-	8,5													
-	2U 18L-750/8T	-	6,2	-	11,2	850	620	750	40	350	895	90	90					152
-	2U 18SL-750/8T	-	6,2	-	11,2													
-	2U 18L-900/9T	-	6,9	-	12,8	850	620	750	40	350	933	90	90					163
-	2U 18SL-900/9T	-	7	-	12,9													
-	2U 18LG-920/10T	-	7,7	-	14	850	620	750	40	350	1059	90	90			168		
-	2U 18LG-1000/11T	-	8,3	-	13,6	850	620	750	40	350	1097	90	90			184		





VERTICAL MODEL L		P1	In		Required tank	DIMENSIONS										Kg		
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM			
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out	kW (x2)	A (x2)		Lt	mm												
2U 3L/E-100/5T	2U 3L/A-100/5T-304	1,01	3,3	1,9	2x 8	700	560	615	40	350	469	50	50	2" G	1" 1/2 G	62		
2U 3SL/E-100/5T	2U 3SL/A-100/5T-304	0,92	2,9	1,7														
2U 3L/E-120/6T	2U 3L/A-120/6T-304	1,23	4,5	2,6	2x 8	700	560	615	40	350	493	50	50					67
2U 3SL/E-120/6T	2U 3SL/A-120/6T-304	1,11	4,3	2,5														
2U 3L/E-150/7T	2U 3L/A-150/7T-304	1,45	5	2,9	2x 8	700	560	615	40	350	577	50	50					71
2U 3SL/E-150/7T	2U 3SL/A-150/7T-304	1,31	4,7	2,7														
2U 3L/E-180/8T	2U 3L/A-180/8T-304	1,6	5,2	3	2x 8	700	560	615	40	350	601	50	50					72
2U 3SL/E-180/8T	2U 3SL/A-180/8T-304	1,55	4,7	2,7														
2U 3L/E-200/9T	2U 3L/A-200/9T-304	1,8	5,7	3,3	2x 8	700	560	615	40	350	625	50	50					73
2U 3SL/E-200/9T	2U 3SL/A-200/9T-304	1,6	5,2	3														
2U 3L/E-250/10T	2U 3L/A-250/10T-306	2	7,1	4,1	2x 8	700	560	615	40	350	649	50	50					80
2U 3SL/E-250/10T	2U 3SL/A-250/10T-306	1,8	6,4	3,7														
-	2U 3L/A-280/11T-306	2,2	-	4,3	2x 8	700	560	615	40	350	673	50	50					81
2U 3SL/E-280/11T	2U 3SL/A-280/11T-306	2	6,8	3,9														
-	2U 3L/A-300/12T-306	2,44	-	4,7	2x 8	700	560	615	40	350	697	50	50			83		
-	2U 3SL/A-300/12T-306	2,2	-	4,3														
-	2U 3SLG/A-350/14T-306	2,5	-	4,7	2x 8	815	560	730	40	350	972	75	75			120		
-	2U 3SLG/A-380/16T-309	2,9	-	5,5	2x 8	815	560	730	40	350	1017	75	75			128		
-	2U 3SLG/A-400/18T-309	3,2	-	6	2x 8	815	560	730	40	350	1065	75	75			132		
-	2U 3SLG/A-450/20T-309	3,6	-	6,5	2x 8	815	560	730	40	350	1138	75	75			148		
2U 5L/E-120/4T	2U 5L/A-120/4T-304	1,13	4,3	2,5	2x 20	700	560	615	40	350	445	50	50	2" G	1" 1/2 G	67		
2U 5SL/E-120/4T	2U 5SL/A-120/4T-304	1,08	4,2	2,4														
2U 5L/E-150/5T	2U 5L/A-150/5T-304	1,39	4,9	2,8	2x 20	700	560	615	40	350	529	50	50					71
2U 5SL/E-150/5T	2U 5SL/A-150/5T-304	1,31	4,7	2,7														
2U 5L/E-180/6T	2U 5L/A-180/6T-304	1,62	5,2	3	2x 20	700	560	615	40	350	553	50	50					72
2U 5SL/E-180/6T	2U 5SL/A-180/6T-304	1,55	5,2	3														
2U 5L/E-200/7T	2U 5L/A-200/7T-304	1,86	5,9	3,4	2x 20	700	560	615	40	350	577	50	50					74
2U 5SL/E-200/7T	2U 5SL/A-200/7T-304	1,77	5,7	3,3														
2U 5L/E-250/8T	2U 5L/A-250/8T-306	2,17	7,1	4,1	2x 20	700	560	615	40	350	601	50	50					77
2U 5SL/E-250/8T	2U 5SL/A-250/8T-306	2,07	6,9	4														
-	2U 5L/A-280/9T-306	2,4	-	4,4	2x 20	700	560	615	40	350	625	50	50					79
2U 5SL/E-280/9T	2U 5SL/A-280/9T-306	2,27	7,3	4,2														
-	2U 5L/A-300/10T-306	2,73	-	4,9	2x 20	700	560	615	40	350	649	50	50					81
-	2U 5SL/A-300/10T-306	2,57	-	4,7														
-	2U 5L/A-350/11T-306	2,9	-	5,3	2x 20	700	560	615	40	350	727	50	50			85		
-	2U 5SL/A-350/11T-306	2,9	-	5,3														

Dimensions and weights may differ slightly and therefore should be considered as indicative

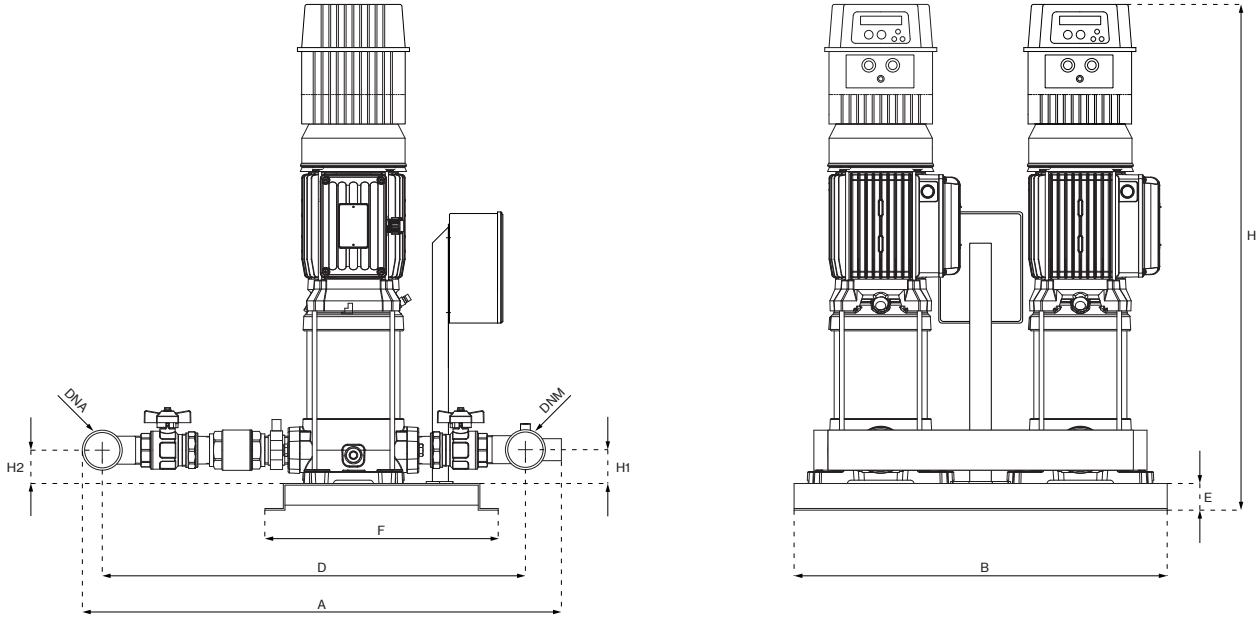


2U L

Variable speed EPIC and EPIC-A

VERTICAL MODEL L		P1	In		Required tank	DIMENSIONS											Kg
EPIC	EPIC-A		3~ 230V	3~ 400V		A	B	D	E	F	H	H1	H2	DNA	DNM		
1~ 230V-in 3~ 230V-out	3~ 400V-in 3~ 400V-out															kW (x2)	
-	2U 5L/A-380/12T-309	3,2	-	6	2x 20	700	560	615	40	350	751	50	50	2" G	1" 1/2 G	98	
-	2U 5SL/A-380/12T-309	3,2	-	6	2x 20	700	560	615	40	350	751	50	50			125	
-	2U 5SLG/A-400/14T-309	3,5	-	6,3	2x 20	815	560	730	40	350	972	75	75			149	
-	2U 5SLG/A-450/16T-309	4,1	-	7,9	2x 20	815	560	730	40	350	1040	75	75			170	
-	2U 5SLG/A-550/18T-314	4,5	-	8,3	2x 20	815	560	730	40	350	1088	75	75			173	
-	2U 5SLG/A-600/20T-314	5	-	8,9	2x 20	815	560	730	40	350	1138	75	75			173	
2U 7L/E-180/4T	2U 7L/A-180/4T-304	1,71	5,5	3,2	2x 20	760	560	670	40	350	505	50	50	2" 1/2 G	2" G	78	
2U 7SL/E-180/4T	2U 7SL/A-180/4T-304	1,62	5,4	3,1	2x 20	760	560	670	40	350	505	50	50			83	
2U 7L/E-250/5T	2U 7L/A-250/5T-306	2,15	7,3	4,2	2x 20	760	560	670	40	350	529	50	50			85	
2U 7L/E-250/5T	2U 7L/A-250/5T-306	2,05	7,1	4,1	2x 20	760	560	670	40	350	529	50	50			98	
-	2U 7L/A-300/6T-306	2,63	-	5	2x 20	760	560	670	40	350	553	50	50			102	
-	2U 7SL/A-300/6T-306	2,44	-	4,8	2x 20	760	560	670	40	350	553	50	50			111	
-	2U 7L/A-350/7T-306	2,8	-	5,1	2x 20	760	560	670	40	350	630	50	50			130	
-	2U 7SL/A-350/7T-306	2,9	-	5,3	2x 20	760	560	670	40	350	630	50	50			187	
-	2U 7L/A-400/8T-309	3,1	-	5,9	2x 20	760	560	670	40	350	654	50	50			185	
-	2U 7SL/A-400/8T-309	3,3	-	6,1	2x 20	760	560	670	40	350	654	50	50			199	
-	2U 7L/A-450/9T-309	3,6	-	6,5	2x 20	760	560	670	40	350	708	50	50			216	
-	2U 7SL/A-450/9T-309	3,7	-	6,7	2x 20	760	560	670	40	350	708	50	50			216	
-	2U 7L/A-550/10T-309	4	-	7,7	2x 20	760	560	670	40	350	732	50	50			218	
-	2U 7SL/A-550/10T-309	4,1	-	7,9	2x 20	760	560	670	40	350	732	50	50				
-	2U 7SLG/A-750/12T-314	5,1	-	9,9	2x 20	875	560	785	40	350	980	75	75				
-	2U 7SLG/A-800/14T-314	5,9	-	10,9	2x 20	875	560	785	40	350	1028	75	75				
-	2U 7SLG/A-900/16T-314	6,7	-	12	2x 20	875	560	785	40	350	1076	75	75				
-	2U 7SLG/A-950/18T-314	7,4	-	12,4	2x 20	875	560	785	40	350	1121	75	75				
-	2U 7SLG/A-1000/20T-318	8,2	-	13,5	2x 20	875	560	785	40	350	1168	75	75				
2U 9L/E-200/4T	2U 9L/A-200/4T-304	1,77	5,7	3,3	2x 20	780	560	670	40	350	560	80	80			2" 1/2 G	2" G
2U 9SL/E-200/4T	2U 9SL/A-200/4T-304	1,77	5,7	3,3	2x 20	780	560	670	40	350	560	80	80	88			
-	2U 9L/A-250/5T-306	2,18	-	4,3	2x 20	780	560	670	40	350	590	80	80	90			
-	2U 9SL/A-250/5T-306	2,23	-	4,3	2x 20	780	560	670	40	350	590	80	80	110			
-	2U 9L/A-300/6T-306	2,64	-	4,8	2x 20	780	560	670	40	350	620	80	80	118			
-	2U 9SL/A-300/6T-306	2,58	-	4,9	2x 20	780	560	670	40	350	620	80	80	121			
-	2U 9L/A-400/7T-309	3	-	5,8	2x 20	780	560	670	40	350	703	80	80	148			
-	2U 9SL/A-400/7T-309	3,1	-	5,9	2x 20	780	560	670	40	350	703	80	80	185			
-	2U 9L/A-450/8T-309	3,5	-	6,4	2x 20	780	560	670	40	350	763	80	80	192			
-	2U 9SL/A-450/8T-309	3,6	-	6,5	2x 20	780	560	670	40	350	763	80	80	207			
-	2U 9L/A-500/9T-309	3,9	-	6,9	2x 20	780	560	670	40	350	803	80	80	223			
-	2U 9SL/A-500/9T-309	4	-	7	2x 20	780	560	670	40	350	803	80	80	227			
-	2U 9L/A-550/10T-309	4,3	-	8,1	2x 20	780	560	670	40	350	823	80	80				
-	2U 9SL/A-550/10T-314	4,4	-	8,2	2x 20	780	560	670	40	350	823	80	80				
-	2U 9SLG/A-750/12T-314	5,3	-	10,1	2x 20	885	560	795	40	350	1067	80	80				
-	2U 9SLG/A-800/14T-314	6,1	-	11,1	2x 20	885	560	795	40	350	1128	80	80				
-	2U 9SLG/A-900/16T-318	6,9	-	12,8	2x 20	885	560	795	40	350	1187	80	80				
-	2U 9SLG/A-950/18T-318	7,6	-	12,7	2x 20	885	560	795	40	350	1245	80	80				
-	2U 9SLG/A-1000/20T-318	8,5	-	13,9	2x 20	885	560	795	40	350	1303	80	80				
-	2U 18L/A-250/3T-306	2,19	7,5	4,3	1x 80	850	620	750	40	350	522	90	90	3" G	2" 1/2 G		
-	2U 18SL/A-250/3T-306	2,29	7,6	4,4	1x 80	850	620	750	40	350	522	90	90			115	
-	2U 18L/A-400/4T-309	3	-	5,8	1x 80	850	620	750	40	350	643	90	90			126	
-	2U 18SL/A-400/4T-309	3,1	-	5,9	1x 80	850	620	750	40	350	643	90	90			154	
-	2U 18L/A-450/5T-309	3,9	-	6,9	1x 80	850	620	750	40	350	720	90	90			172	
-	2U 18SL/A-450/5T-309	3,9	-	6,9	1x 80	850	620	750	40	350	720	90	90			183	
-	2U 18L/A-550/6T-314	4,6	-	8,4	1x 80	850	620	750	40	350	758	90	90			188	
-	2U 18SL/A-550/6T-314	4,7	-	8,5	1x 80	850	620	750	40	350	758	90	90			204	
-	2U 18L/A-750/8T-314	6,2	-	11,2	1x 80	850	620	750	40	350	895	90	90				
-	2U 18SL/A-750/8T-314	6,2	-	11,2	1x 80	850	620	750	40	350	895	90	90				
-	2U 18L/A-900/9T-318	6,9	-	12,8	1x 80	850	620	750	40	350	933	90	90				
-	2U 18SL/A-900/9T-318	7	-	12,9	1x 80	850	620	750	40	350	933	90	90				
-	2U 18LG/A-920/10T-318	7,7	-	14	1x 80	850	620	750	40	350	1059	90	90				
-	2U 18LG/A-1000/11T-318	8,3	-	13,6	1x 80	850	620	750	40	350	1097	90	90				





VERTICAL MODEL L		P1	In		Required tank	DIMENSIONS										Kg		
IPFC			3~ 230V-in 3~ 230V-out	3~ 400V-in 3~ 400V-out		Lt	A	B	D	E	F	H	H1	H2	DNA		DNM	
		kW (x2)			A (x2)		mm											
2U 3L/I-100/5T-109	2U 3L/I-100/5T-306	1,01	3,3	1,9	2x 8	700	560	615	40	350	679	50	50	2" G	1" 1/2 G	67		
2U 3SL/I-100/5T-109	2U 3SL/I-100/5T-306	0,92	2,9	1,7														
2U 3L/I-120/6T-109	2U 3L/I-120/6T-306	1,23	4,5	2,6	2x 8	700	560	615	40	350	703	50	50					72
2U 3SL/I-120/6T-109	2U 3SL/I-120/6T-306	1,11	4,3	2,5														
2U 3L/I-150/7T-109	2U 3L/I-150/7T-306	1,45	5	2,9	2x 8	700	560	615	40	350	787	50	50					76
2U 3SL/I-150/7T-109	2U 3SL/I-150/7T-306	1,31	4,7	2,7														
2U 3L/I-180/8T-109	2U 3L/I-180/8T-306	1,6	5,2	3	2x 8	700	560	615	40	350	811	50	50					77
2U 3SL/I-180/8T-109	2U 3SL/I-180/8T-306	1,55	4,7	2,7														
2U 3L/I-200/9T-109	2U 3L/I-200/9T-306	1,8	5,7	3,3	2x 8	700	560	615	40	350	835	50	50					78
2U 3SL/I-200/9T-109	2U 3SL/I-200/9T-306	1,6	5,2	3														
2U 3L/I-250/10T-114	2U 3L/I-250/10T-306	2	7,1	4,1	2x 8	700	560	615	40	350	859	50	50					85
2U 3SL/I-250/10T-114	2U 3SL/I-250/10T-306	1,8	6,4	3,7														
2U 3L/I-280/11T-114	2U 3L/I-280/11T-306	2,2	7,4	4,3	2x 8	700	560	615	40	350	883	50	50					86
2U 3SL/I-280/11T-114	2U 3SL/I-280/11T-306	2	6,8	3,9														
2U 3L/I-300/12T-114	2U 3L/I-300/12T-306	2,44	8,1	4,7	2x 8	700	560	615	40	350	907	50	50					87
2U 3SL/I-300/12T-114	2U 3SL/I-300/12T-306	2,2	7,4	4,3														
2U 3SLG/I-350/14T-114	2U 3SLG/I-350/14T-306	2,5	8,1	4,7	2x 8	815	560	730	40	350	1182	75	75			125		
2U 3SLG/I-380/16T-114	2U 3SLG/I-380/16T-309	2,9	9,5	5,5	2x 8	815	560	730	40	350	1227	75	75			133		
-	2U 3SLG/I-400/18T-309	3,2	-	6	2x 8	815	560	730	40	350	1275	75	75			137		
-	2U 3SLG/I-450/20T-309	3,6	-	6,5	2x 8	815	560	730	40	350	1348	75	75			153		
2U 5L/I-120/4T-109	2U 5L/I-120/4T-306	1,13	4,3	2,5	2x 20	700	560	615	40	350	655	50	50	2" G	1" 1/2 G	72		
2U 5SL/I-120/4T-109	2U 5SL/I-120/4T-306	1,08	4,2	2,4														
2U 5L/I-150/5T-109	2U 5L/I-150/5T-306	1,39	4,9	2,8	2x 20	700	560	615	40	350	739	50	50					76
2U 5SL/I-150/5T-109	2U 5SL/I-150/5T-306	1,31	4,7	2,7														
2U 5L/I-180/6T-109	2U 5L/I-180/6T-306	1,62	5,2	3	2x 20	700	560	615	40	350	763	50	50					77
2U 5SL/I-180/6T-109	2U 5SL/I-180/6T-306	1,55	5,2	3														
2U 5L/I-200/7T-109	2U 5L/I-200/7T-306	1,86	5,9	3,4	2x 20	700	560	615	40	350	787	50	50					79
2U 5SL/I-200/7T-109	2U 5SL/I-200/7T-306	1,77	5,7	3,3														
2U 5L/I-250/8T-114	2U 5L/I-250/8T-306	2,17	7,1	4,1	2x 20	700	560	615	40	350	811	50	50					82
2U 5SL/I-250/8T-114	2U 5SL/I-250/8T-306	2,07	6,9	4														
2U 5L/I-280/9T-114	2U 5L/I-280/9T-306	2,4	7,6	4,4	2x 20	700	560	615	40	350	835	50	50					84
2U 5SL/I-280/9T-114	2U 5SL/I-280/9T-306	2,27	7,3	4,2														
2U 5L/I-300/10T-114	2U 5L/I-300/10T-306	2,73	8,5	4,9	2x 20	700	560	615	40	350	859	50	50					86
2U 5SL/I-300/10T-114	2U 5SL/I-300/10T-306	2,57	8,1	4,7														
2U 5L/I-350/11T-114	2U 5L/I-350/11T-306	2,9	9,2	5,3	2x 20	700	560	615	40	350	937	50	50					90
2U 5SL/I-350/11T-114	2U 5SL/I-350/11T-306	2,9	9,2	5,3														

Dimensions and weights may differ slightly and therefore should be considered as indicative



2U L

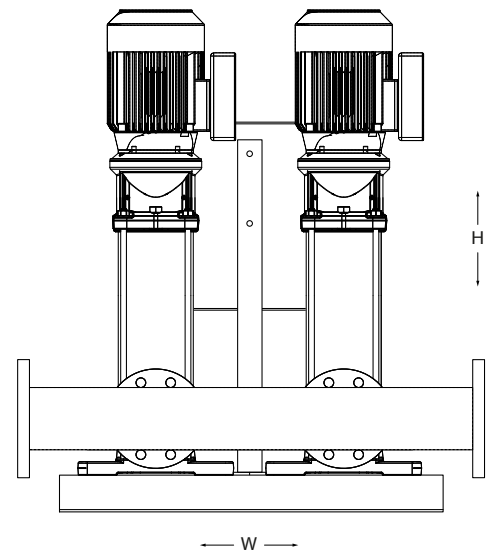
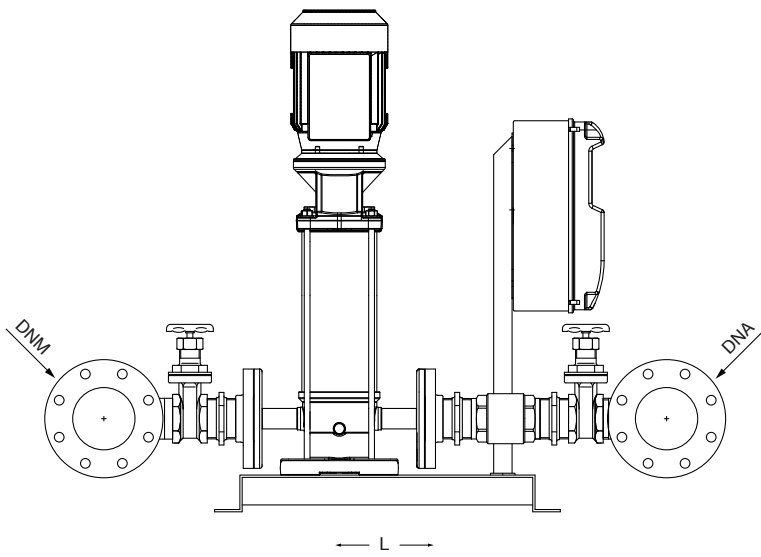
Variable speed IPFC

VERTICAL MODEL L		P1	In		Required tank	DIMENSIONS										Kg		
IPFC			3- 230V	3- 400V		Lt	A	B	D	E	F	H	H1	H2	DNA		DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out	kW (x2)			A (x2)		mm											
-	2U 5L/I-380/12T-309	3,2	-	6	2x 20	700	560	615	40	350	961	50	50	2" G	1" ½ G	103		
-	2U 5SL/I-380/12T-309	3,2	-	6														
-	2U 5SLG/I-400/14T-309	3,5	-	6,3	2x 20	815	560	730	40	350	1182	75	75					130
-	2U 5SLG/I-450/16T-309	4,1	-	7,9	2x 20	815	560	730	40	350	1250	75	75					154
-	2U 5SLG/I-550/18T-311	4,5	-	8,3	2x 20	815	560	730	40	350	1298	75	75					158
-	2U 5SLG/I-600/20T-311	5	-	8,9	2x 20	815	560	730	40	350	1348	75	75			161		
2U 7L/I-180/4T-109	2U 7L/I-180/4T-306	1,71	5,5	3,2	2x 20	760	560	670	40	350	715	50	50	2" ½ G	2" G	83		
2U 7SL/I-180/4T-109	2U 7SL/I-180/4T-306	1,62	5,4	3,1														
2U 7L/I-250/5T-114	2U 7L/I-250/5T-306	2,15	7,3	4,2	2x 20	760	560	670	40	350	739	50	50					88
2U 7SL/I-250/5T-114	2U 7SL/I-250/5T-306	2,05	7,1	4,1														
2U 7L/I-300/6T-114	2U 7L/I-300/6T-306	2,63	8,7	5	2x 20	760	560	670	40	350	763	50	50					90
2U 7SL/I-300/6T-114	2U 7SL/I-300/6T-306	2,44	8,3	4,8														
2U 7L/I-350/7T-114	2U 7L/I-350/7T-306	2,8	8,8	5,1	2x 20	760	560	670	40	350	840	50	50					103
2U 7SL/I-350/7T-114	2U 7SL/I-350/7T-306	2,9	9,2	5,3														
-	2U 7L/I-400/8T-309	3,1	-	5,9	2x 20	760	560	670	40	350	864	50	50					107
-	2U 7SL/I-400/8T-309	3,3	-	6,1														
-	2U 7L/I-450/9T-309	3,6	-	6,5	2x 20	760	560	670	40	350	918	50	50					116
-	2U 7SL/I-450/9T-309	3,7	-	6,7														
-	2U 7L/I-550/10T-309	4	-	7,7	2x 20	760	560	670	40	350	942	50	50					135
-	2U 7SL/I-550/10T-309	4,1	-	7,9														
-	2U 7SLG/I-750/12T-311	5,1	-	9,9	2x 20	875	560	785	40	350	1190	75	75					172
-	2U 7SLG/I-800/14T-314	5,9	-	10,9	2x 20	875	560	785	40	350	1208	75	75					183
-	2U 7SLG/I-900/16T-314	6,7	-	12	2x 20	875	560	785	40	350	1256	75	75					197
-	2U 7SLG/I-950/18T-314	7,4	-	12,4	2x 20	875	560	785	40	350	1301	75	75					214
-	2U 7SLG/I-1000/20T-318	8,2	-	13,5	2x 20	875	560	785	40	350	1378	75	75					216
2U 9L/I-200/4T-109	2U 9L/I-200/4T-306	1,77	5,7	3,3	2x 20	780	560	670	40	350	770	80	80			2" ½ G	2" G	90
2U 9SL/I-200/4T-109	2U 9SL/I-200/4T-306	1,77	5,7	3,3														
2U 9L/I-250/5T-114	2U 9L/I-250/5T-306	2,18	7,5	4,3	2x 20	780	560	670	40	350	800	80	80					93
2U 9SL/I-250/5T-114	2U 9SL/I-250/5T-306	2,23	7,5	4,3														
2U 9L/I-300/6T-114	2U 9L/I-300/6T-306	2,64	8,3	4,8	2x 20	780	560	670	40	350	830	80	80					95
2U 9SL/I-300/6T-114	2U 9SL/I-300/6T-306	2,58	8,5	4,9														
-	2U 9L/I-400/7T-309	3	-	5,8	2x 20	780	560	670	40	350	913	80	80					115
-	2U 9SL/I-400/7T-309	3,1	-	5,9														
-	2U 9L/I-450/8T-309	3,5	-	6,4	2x 20	780	560	670	40	350	973	80	80					123
-	2U 9SL/I-450/8T-309	3,6	-	6,5														
-	2U 9L/I-500/9T-309	3,9	-	6,9	2x 20	780	560	670	40	350	1013	80	80					126
-	2U 9SL/I-500/9T-309	4	-	7														
-	2U 9L/I-550/10T-309	4,3	-	8,1	2x 20	780	560	670	40	350	1033	80	80					138
-	2U 9SL/I-550/10T-311	4,4	-	8,2														
-	2U 9SLG/I-750/12T-314	5,3	-	10,1	2x 20	885	560	795	40	350	1247	80	80					183
-	2U 9SLG/I-800/14T-314	6,1	-	11,1	2x 20	885	560	795	40	350	1308	80	80					190
-	2U 9SLG/I-900/16T-318	6,9	-	12,8	2x 20	885	560	795	40	350	1367	80	80					205
-	2U 9SLG/I-950/18T-318	7,6	-	12,7	2x 20	885	560	795	40	350	1425	80	80					221
-	2U 9SLG/I-1000/20T-318	8,5	-	13,9	2x 20	885	560	795	40	350	1483	80	80					225
2U 18L/I-250/3T-114	2U 18L/I-250/3T-306	2,19	7,5	4,3	1x 80	850	620	750	40	350	732	90	90	3" G	2" ½ G			104
2U 18SL/I-250/3T-114	2U 18SL/I-250/3T-306	2,29	7,6	4,4														
-	2U 18L/I-400/4T-309	3	-	5,8	1x 80	850	620	750	40	350	853	90	90					120
-	2U 18SL/I-400/4T-309	3,1	-	5,9														
-	2U 18L/I-450/5T-309	3,9	-	6,9	1x 80	850	620	750	40	350	930	90	90					131
-	2U 18SL/I-450/5T-309	3,9	-	6,9														
-	2U 18L/I-550/6T-311	4,6	-	8,4	1x 80	850	620	750	40	350	968	90	90					144
-	2U 18SL/I-550/6T-311	4,7	-	8,5														
-	2U 18L/I-750/8T-314	6,2	-	11,2	1x 80	850	620	750	40	350	1075	90	90					170
-	2U 18SL/I-750/8T-314	6,2	-	11,2														
-	2U 18L/I-900/9T-318	6,9	-	12,8	1x 80	850	620	750	40	350	1113	90	90			181		
-	2U 18SL/I-900/9T-318	7	-	12,9														
-	2U 18LG/I-920/10T-318	7,7	-	14	1x 80	850	620	750	40	350	1239	90	90			186		
-	2U 18LG/I-1000/11T-318	8,3	-	13,6	1x 80	850	620	750	40	350	1277	90	90			202		



2U H (18-22)

Fixed speed

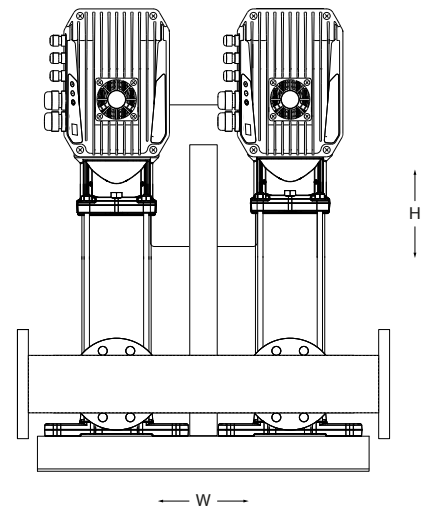
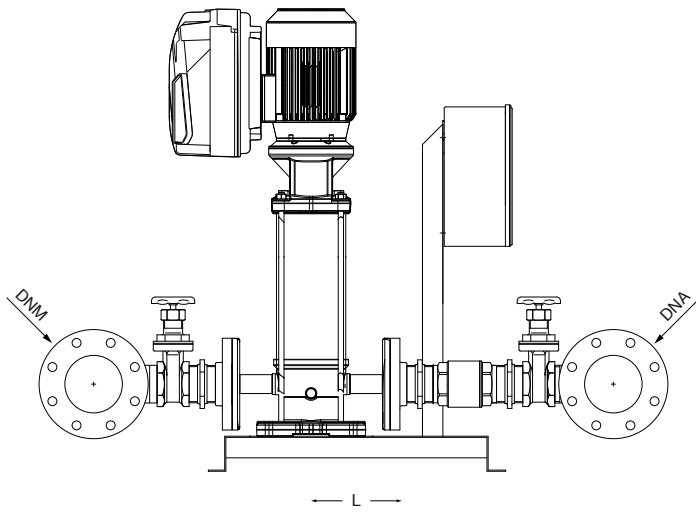


VERTICAL MODEL H (18-22)		P1		In		DIMENSIONS					Kg
		1-	3-	1-	3-	L	W	H	DNA	DNM	
1- 230	3- 400	kW (x2)		A (x2)		mm					
-	2U 18HX-300/3T	-	2,31	-	4,2	1000	700	800	3" G	2" ½ G	128
-	2U 18HX-400/4T	-	3,2	-	5,1	1000	700	890			148
-	2U 18HX-550/5T	-	4,3	-	7,6	1000	700	980			167
-	2U 18HX-750/6T	-	5	-	8,4	1000	700	1070			256
-	2U 18HX-750/7T	-	5,8	-	9,5	1000	700	1120			258
-	2U 18HX-1000/8T	-	6,5	-	11,3	1000	700	1200			275
-	2U 18HX-1000/9T	-	7,3	-	12,3	1000	700	1250	278		
-	2U 22HX-400/3T	-	3,3	-	5,3	1000	800	1000	DN100	DN80	146
-	2U 22HX-550/4T	-	4,6	-	8,1	1000	800	1050			164
-	2U 22HX-750/5T	-	5,9	-	9,5	1000	800	1190			253
-	2U 22HX-1000/6T	-	6,7	-	11,4	1000	800	1250			270
-	2U 22HX-1000/7T	-	7,7	-	12,8	1000	800	1290			272



2U H (18-22)

Variable speed EPIC-A

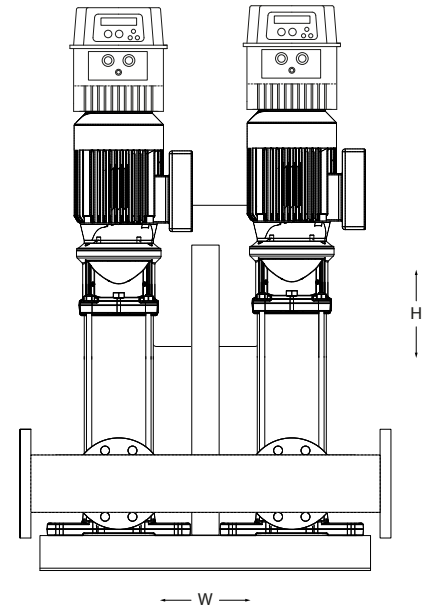
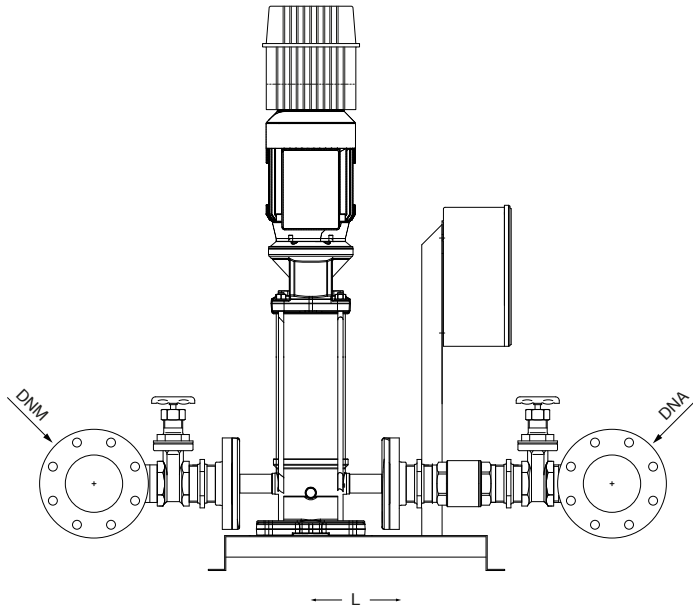


VERTICAL MODEL H (18-22) EPIC-A 3~ 400V-in 3~ 400V-out	P1	In	Required tank	DIMENSIONS					Kg
				L	W	H	DNA	DNM	
				mm					
2U 18HX/A-300/3T-306	2,31	4,2	1× 80	1000	700	800	3" G	2" ½ G	139
2U 18HX/A-400/4T-306	3,2	5,1	1× 80	1000	700	890			159
2U 18HX/A-550/5T-309	4,3	7,6	1× 80	1000	700	980			178
2U 18HX/A-750/6T-314	5	8,4	1× 80	1000	700	1070			282
2U 18HX/A-750/7T-314	5,8	9,5	1× 80	1000	700	1120			284
2U 18HX/A-1000/8T-314	6,5	11,3	1× 80	1000	700	1200			293
2U 18HX/A-1000/9T-314	7,3	12,3	1× 80	1000	700	1250	296		
2U 22HX/A-400/3T-306	3,3	5,3	1× 80	1000	800	1000	DN100	DN80	157
2U 22HX/A-550/4T-309	4,6	8,1	1× 80	1000	800	1050			175
2U 22HX/A-750/5T-314	5,9	9,5	1× 80	1000	800	1190			279
2U 22HX/A-1000/6T-314	6,7	11,4	1× 80	1000	800	1250			288
2U 22HX/A-1000/7T-318	7,7	12,8	1× 80	1000	800	1290			290



2U H (18-22)

Variable speed IPFC

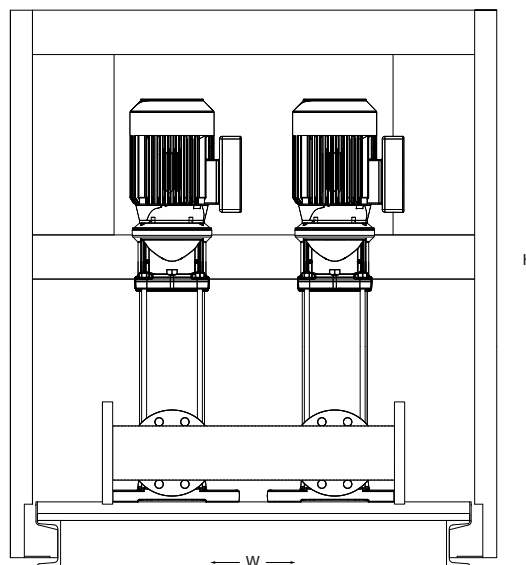
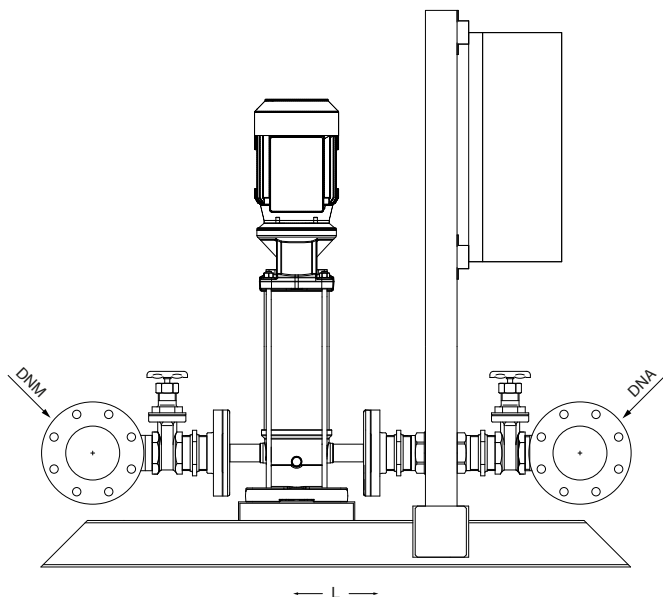


VERTICAL MODEL H (18-22)		P1	In		Required tank Lt	DIMENSIONS					Kg
IPFC			3- 230V	3- 400V		L	W	H	DNA	DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out	kW (x2)			A (x2)						mm
2U 18HX/I-300/3T-114	2U 18HX/I-300/3T-306	2,31	7,3	4,2	1x 80	1000	700	1100	3" G	2" 1/2 G	144
2U 18HX/I-400/4T-114	2U 18HX/I-400/4T-306	3,2	8,8	5,1	1x 80	1000	700	1190			164
-	2U 18HX/I-550/5T-309	4,3	-	7,6	1x 80	1000	700	1280			183
-	2U 18HX/I-750/6T-311	5	-	8,4	1x 80	1000	700	1370			272
-	2U 18HX/I-750/7T-311	5,8	-	9,5	1x 80	1000	700	1420			274
-	2U 18HX/I-1000/8T-314	6,5	-	11,3	1x 80	1000	700	1500			291
-	2U 18HX/I-1000/9T-314	7,3	-	12,3	1x 80	1000	700	1550	294		
2U 22HX/I-400/3T-114	2U 22HX/I-400/3T-306	3,3	9,2	5,3	1x 80	1000	800	1300	DN100	DN80	162
-	2U 22HX/I-550/4T-309	4,6	-	8,1	1x 80	1000	800	1350			180
-	2U 22HX/I-750/5T-311	5,9	-	9,5	1x 80	1000	800	1490			269
-	2U 22HX/I-1000/6T-314	6,7	-	11,4	1x 80	1000	800	1540			286
-	2U 22HX/I-1000/7T-318	7,7	-	12,8	1x 80	1000	800	1590			288



2U H (35-50-75-90)

Fixed speed

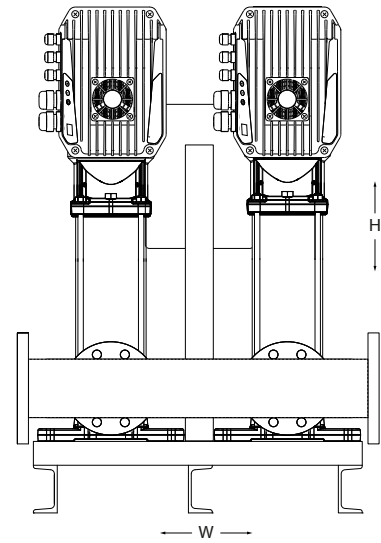
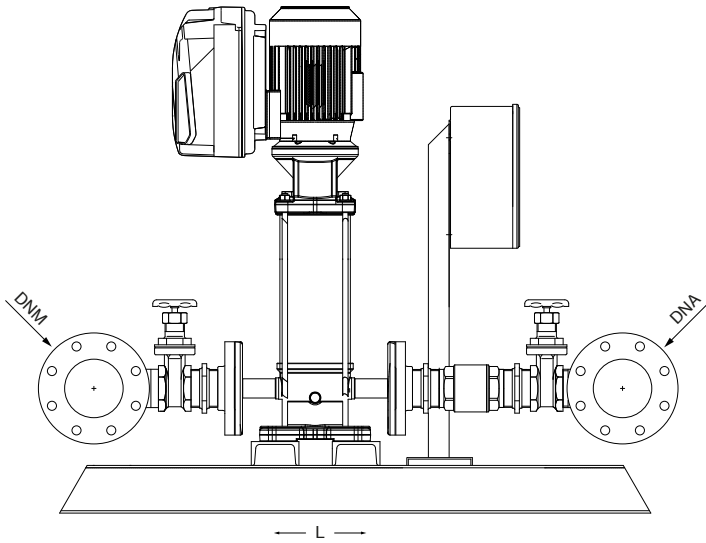


VERTICAL MODEL H (35÷90)		P1		In		DIMENSIONS			DNA	DNM	Kg
		1~	3~	1~	3~	L	W	H			
1- 230V	3- 400V	kW (x2)		A (x2)		mm					
-	2U 35HS-750/2T	-	5,0	-	8,3	1150	820	1550	DN100	DN100	450
-	2U 35HS-1000/3T	-	7,2	-	12,2	1150	820	1550			480
-	2U 35HS-1000/4-2RT	-	8,5	-	13,7	1150	820	1550			490
-	2U 35HS-1500/4-1RT	-	9,4	-	15,5	1150	820	1550			500
-	2U 35HS-1500/4T	-	10,1	-	16,6	1150	820	1550			500
-	2U 35HS-2000/5T	-	12,1	-	19,4	1150	820	1669			540
-	2U 35HS-2000/6T	-	14,4	-	24,0	1150	820	1760			580
-	2U 35HS-2000/7-1RT	-	16,1	-	26,4	1150	820	1860			600
-	2U 50HS-1000/2T	-	7,7	-	12,7	1450	900	1520	DN125	DN125	480
-	2U 50HS-1500/3T	-	11,5	-	18,6	1450	900	1520			500
-	2U 50HS-2000/4T	-	15,1	-	24,9	1450	900	1520			580
-	2U 50HS-2500/5T	-	19,0	-	31,7	1450	900	1700			600
-	2U 50HS-3000/6T	-	22,4	-	37,0	1450	900	1790			650
-	2U 75HS-1500/2T	-	11,6	-	18,7	1450	900	1520	DN150	DN150	530
-	2U 75HS-2500/3T	-	17,4	-	29,4	1450	900	1520			540
-	2U 75HS-3000/4T	-	22,7	-	37,5	1450	900	1690			560
-	2U 75HS-4000/5T	-	29,3	-	47,7	1450	900	1790			930
-	2U 75HS-4000/6-2RT	-	31,0	-	50,2	1450	900	1890			950
-	2U 90HS-1500/2-2RT	-	11,0	-	17,9	1640	950	1530	DN200	DN200	550
-	2U 90HS-2000/2T	-	15,4	-	25,4	1640	950	1530			570
-	2U 90HS-3000/3T	-	22,9	-	37,8	1640	950	1650			800
-	2U 90HS-4000/4T	-	31,6	-	51,2	1640	950	1870			1150
-	2U 90HS-5000/5T	-	39,4	-	63,2	1640	950	1970			1170



2U H (35-50-75-90)

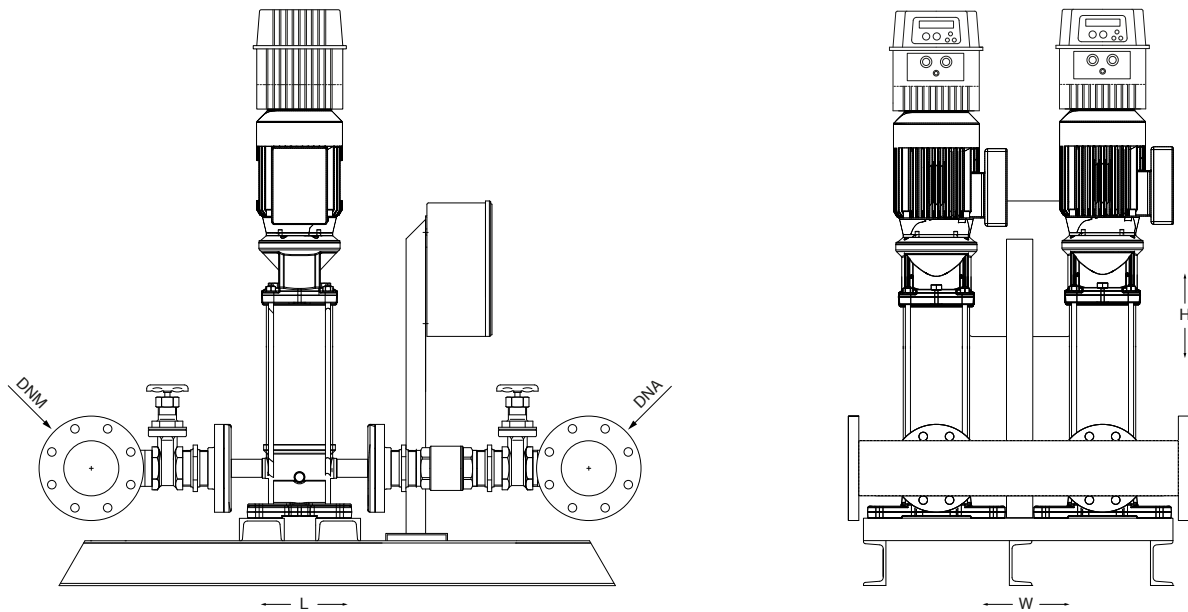
Variable speed EPIC-A



VERTICAL MODEL H (35÷90) EPIC-A 3~ 400V-in 3~ 400V-out	P1	In 3- 230V	Required tank Lt	DIMENSIONS					Kg
				L	W	H	DNA	DNM	
	kW (x2)	A (x2)	mm						
2U 35HS/A-750/2T-314	5,0	8,3	1× 100	1150	820	1550	DN100	DN100	477
2U 35HS/A-1000/3T-314	7,2	12,2	1× 100	1150	820	1550			498
2U 35HS/A-1000/4-2RT-318	8,5	13,7	1× 100	1150	820	1550			508
2U 35HS/A-1200/4-1RT-318	9,4	15,5	1× 100	1150	820	1550			518
2U 35HS/A-1500/4T-325	10,1	16,6	1× 100	1150	820	1550			518
2U 35HS/A-2000/5T-325	12,1	19,4	1× 100	1150	820	1669			558
2U 35HS/A-2000/6T-330	14,4	24,0	1× 100	1150	820	1760			598
2U 35HS/A-2000/7-1RT-330	16,1	26,4	1× 100	1150	820	1860	618		
2U 50HS/A-1000/2T-318	7,7	12,7	1× 200	1450	900	1520	DN125	DN125	498
2U 50HS/A-1500/3T-325	11,5	18,6	1× 200	1450	900	1520			518
2U 50HS/A-2000/4T-330	15,1	24,9	1× 200	1450	900	1520			598
2U 50HS/A-2500/5T-338	19	31,7	1× 200	1450	900	1700			620
2U 50HS/A-3000/6T-344	22,4	37,0	1× 200	1450	900	1790			670
2U 75HS/A-1500/2T-325	11,6	18,7	1× 200	1450	900	1520	DN150	DN150	550
2U 75HS/A-2500/3T-338	17,4	29,4	1× 200	1450	900	1520			560
2U 75HS/A-3000/4T-344	22,7	37,5	1× 200	1450	900	1690			580
2U 90HS/A-1500/2-2RT-325	11,0	17,9	1× 300	1640	950	1530	DN200	DN200	570
2U 90HS/A-2000/2T-330	15,4	25,4	1× 300	1640	950	1530			590
2U 90HS/A-3000/3T-344	22,9	37,8	1× 300	1640	950	1650			820

2U H (35-50-75-90)

Variable speed IPFC



VERTICAL MODEL H (35÷90) IPFC 3- 400V-in 3- 400V-out	P1 kW (×2)	In 3- 400V A (×2)	Required tank Lt	DIMENSIONS					Kg
				L	W	H	DNA	DNM	
				mm					
2U 35HS/I-750/2T-311	5,0	8,3	1× 100	1150	820	1850	DN100	DN100	466
2U 35HS/I-1000/3T-314	7,2	12,2	1× 100	1150	820	1850			496
2U 35HS/I-1000/4-2RT-318	8,5	13,7	1× 100	1150	820	1850			506
2U 35HS/I-1500/4-1RT-318	9,4	15,5	1× 100	1150	820	1850			516
2U 35HS/I-1500/4T-325	10,1	16,6	1× 100	1150	820	1850			516
2U 35HS/I-2000/5T-325	12,1	19,4	1× 100	1150	820	1960			556
2U 35HS/I-2000/6T-330	14,4	24,0	1× 100	1150	820	2060			596
2U 35HS/I-2000/7-1RT-330	16,1	26,4	1× 100	1150	820	2160	616		
2U 50HS/I-1000/2T-318	7,7	12,7	1× 200	1450	900	1820	DN125	DN125	496
2U 50HS/I-1500/3T-325	11,5	18,6	1× 200	1450	900	1820			516
2U 50HS/I-2000/4T-330	15,1	24,9	1× 200	1450	900	1820			596
2U 75HS/I-1500/2T-325	11,6	18,7	1× 200	1450	900	1820	DN150	DN150	548
2U 90HS/I-1500/2-2RT-325	11,0	17,9	1× 300	1640	950	1830	DN200	DN200	568
2U 90HS/I-2000/2T-330	15,4	25,4	1× 300	1640	950	1830			588



3U



FIXED SPEED PUMPS

VARIABLE SPEED PUMPS



Pump specification

Flow up to 345 m³/h

Head up to 240 m

Start up direct, star/delta, inverter

Power supply voltage 1- 230V 50Hz
3- 400V 50Hz

Ambient temperature at nominal load max 40° C

Temperature of pumped liquid -5° C to +35° C (Horizontal pumps with Noryl impellers)
-5° C to +35° C (V-L-LG version)
-15° C to +90° C (SV version)
-15° C to +110° C (S-SL-SLX-SLG-SLXG-HS-HX version)

PERFORMANCE

TARGET (3 pumps)		VERSION			TYPE	P2 NOMINAL		Q (m³/h - l/min)																FIXED SPEED		VARIABLE SPEED				
		HORIZ.	VERT. OVERLAP	VERT. INLINE				0	5,4	7,2	10,8	14,4	18	21,6	25,2	28,8	30,6	32,4	36	43,2	50,4	1-	3-	1-	3-					
m³/h	bar				HP (x3)	kW (x3)	H (m)																		/E	/I	/A	/I		
9	3	-	3U 3V	3U 3L	100/5	1	0,75	52,2	40,8	36,0	25,4	14,0												■	■	-	■	■	■	
		-	3U 3SV	3U 3SL				55,3	46,5	42,1	31,6	17,7															■	■	-	■
	4	-	3U 3V	3U 3L	120/6	1,2	0,9	62,8	49,6	43,9	32,1	18,3													■	■	-	■	■	■
			-	3U 3SV				3U 3SL	66,6	56,0	50,7	38,1	22,4															■	■	-
	5	-	3U 3V	3U 3L	150/7	1,5	1,1	75,5	61,2	54,8	41,1	24,9													■	■	-	■	■	■
			-	3U 3SV				3U 3SL	80,1	69,1	63,3	48,8	30,0															■	■	-
	6	-	3U 3V	3U 3L	180/8	1,8	1,3	85,2	69,3	61,9	45,2	26,9													■	■	-	■	■	■
			-	3U 3SV				3U 3SL	91,5	79,0	72,3	55,8	34,3															■	■	-
	7	-	3U 3V	3U 3L	200/9	2	1,5	95,8	78,9	70,7	52,7	30,8													■	■	-	■	■	■
			-	3U 3SV				3U 3SL	103,0	88,8	81,4	62,7	38,6															■	■	-
	8	-	3U 3V	3U 3L	250/10	2,5	1,8	108,4	88,2	79,7	58,3	34,1													■	■	-	■	■	■
			-	3U 3SV				3U 3SL	114,4	98,7	90,4	69,7	42,9															■	■	-
	9	-	3U 3V	3U 3L	280/11	2,8	2,1	119,0	95,3	85,6	62,7	37,3													■	■	-	■	■	■
			-	3U 3SV				3U 3SL	125,9	108,6	99,5	76,7	47,1															■	■	-
	10	-	3U 3V	3U 3L	300/12	3	2,2	128,9	103,5	92,2	67,9	40,5													■	■	-	■	■	■
			-	3U 3SV				3U 3SL	137,3	118,5	108,5	83,7	51,4															■	■	-
12	-	-	3U 3SLG	350/14	3	2,2	154,8	133,7	122,5	97,4	58,2												-	■	-	■	■	■		
14	-	-	3U 3SLG	380/16	4	3	177,5	154,5	141,3	109,4	67,0												-	■	-	■	■	■		
15	-	-	3U 3SLG	400/18	4	3	195,1	172,8	158,0	122,1	75,3												-	■	-	■	■	■		
16	-	-	3U 3SLG	450/20	4	3	218,3	187,4	171,4	131,5	81,0												-	■	-	■	■	■		
15	3	-	3U 5V	3U 5L	120/4	1,2	0,9	45,3	41,3	39,6	35,6	30,8	24,9	17,6	6,4									■	■	-	■	■	■	
		-	3U 5SV	3U 5SL				45,5	42,2	40,7	37,2	32,9	27,4	19,8	10,4												■	■	-	■
	3	-	3U 5V	3U 5L	150/5	1,2	0,9	45,3	41,3	39,6	35,6	30,8	24,9	17,6	6,4									■	■	-	■	■	■	
			-	3U 5SV				3U 5SL	45,5	42,2	40,7	37,2	32,9	27,4	19,8	10,4											■	■	-	■
	5	-	3U 5V	3U 5L	180/6	1,8	1,3	69,3	64,4	62,0	55,6	48,2	39,6	28,8	12,0									■	■	-	■	■	■	
			-	3U 5SV				3U 5SL	68,9	64,4	62,3	57,5	51,5	43,5	32,6	18,1											■	■	-	■
	5,5	-	3U 5V	3U 5L	200/7	2	1,5	80,3	73,6	71,0	61,5	56,1	46,0	33,4	12,5									■	■	-	■	■	■	
			-	3U 5SV				3U 5SL	81,0	75,5	73,0	67,4	60,3	51,0	38,6	21,0											■	■	-	■
	6,5	-	3U 5V	3U 5L	250/8	2,5	1,87	91,4	85,0	81,8	74,3	65,5	54,7	40,4	19,1									■	■	-	■	■	■	
			-	3U 5SV				3U 5SL	92,1	86,5	84,0	77,8	70,1	60,0	45,5	26,0											■	■	-	■
	7	-	3U 5V	3U 5L	280/9	2,8	2,1	102,1	94,6	90,7	81,6	71,0	58,5	42,3	20,1									■	■	-	■	■	■	
			-	3U 5SV				3U 5SL	103,4	96,7	93,5	86,0	77,1	65,6	48,7	27,6											■	■	-	■
	8	-	3U 5V	3U 5L	300/10	3	2,2	112,7	103,9	99,9	89,8	78,2	64,0	46,4	21,0									■	■	-	■	■	■	
			-	3U 5SV				3U 5SL	114,2	106,4	102,9	95,2	85,2	72,0	53,3	30,0											■	■	-	■
	9	-	3U 5V	3U 5L	350/11	3,5	2,57	127,6	122,5	119,4	110,8	98,0	80,8	57,4										-	■	-	■	■	■	
			-	3U 5SV				3U 5SL	125,1	117,6	114,3	106,1	95,5	80,9	60,9	34,8											-	■	-	■
	10	-	3U 5V	3U 5L	380/12	4	3	140,3	135,4	132,1	123,2	109,5	90,1	66,5										-	■	-	■	■	■	
			-	3U 5SV				3U 5SL	135,7	128,9	125,6	117,7	106,3	91,3	70,2	41,5											-	■	-	■
12	-	-	3U 5SLG	400/14	4	3	159,2	150,7	146,7	136,6	122,9	105,5	79,0										-	■	-	■	■	■		
14	-	-	3U 5SLG	450/16	5,5	4	182,0	173,2	169,1	158,0	142,9	122,9	93,6										-	■	-	■	■	■		
16	-	-	3U 5SLG	550/18	5,5	4	204,4	194,4	189,5	176,5	159,6	136,3	103,2										-	■	-	■	■	■		
18	-	-	3U 5SLG	600/20	5,5	4	226,7	215,5	210,0	195,5	176,3	151,1	114,5										-	■	-	■	■	■		

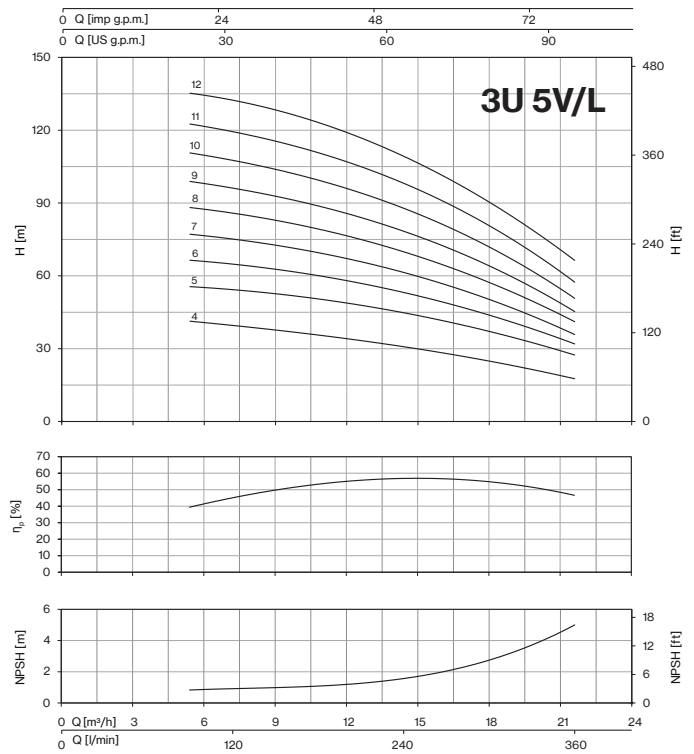
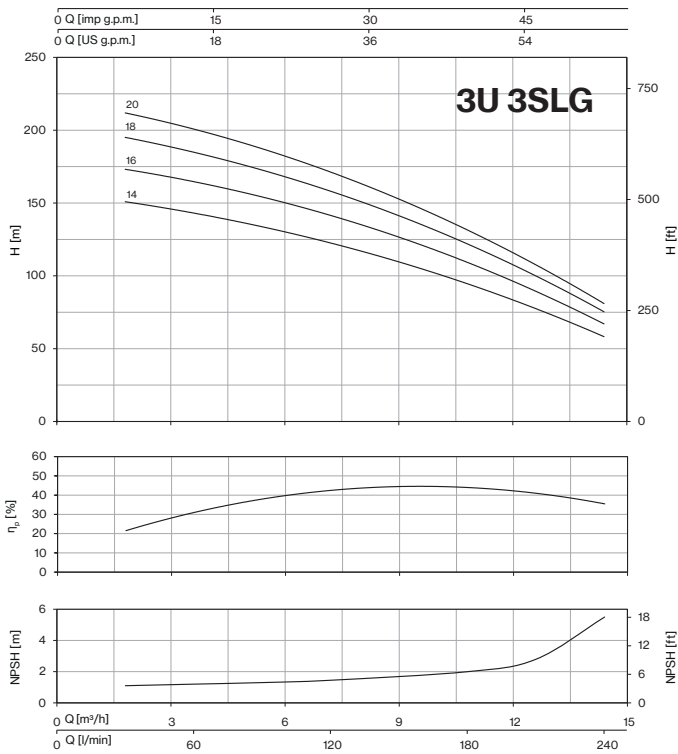
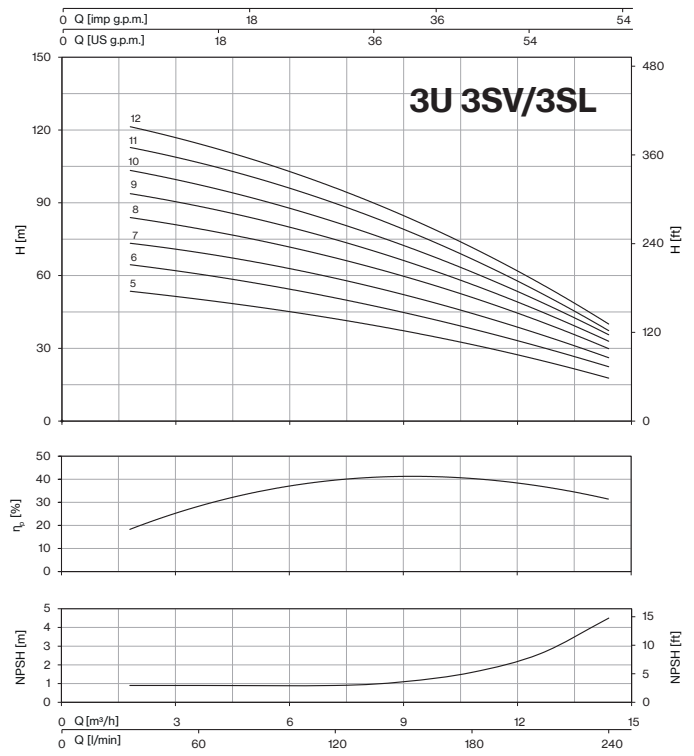
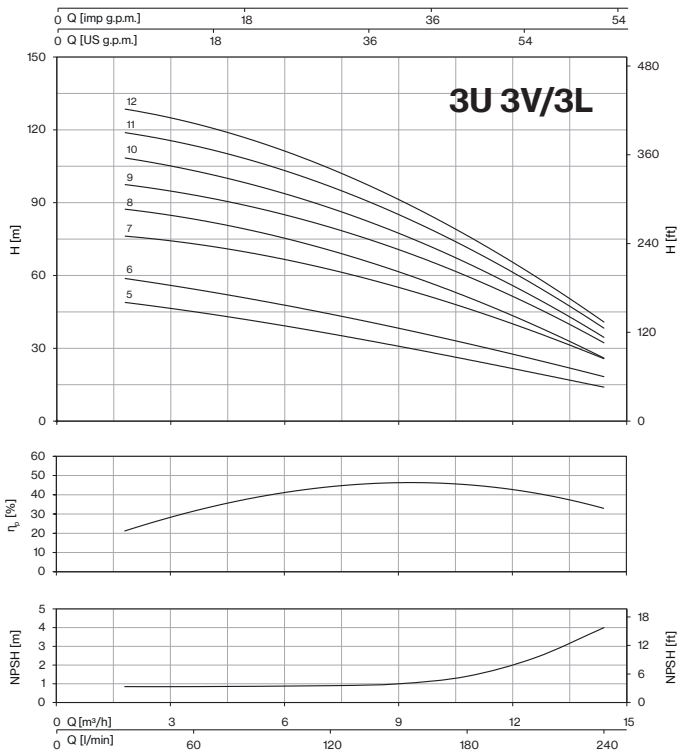


PERFORMANCE

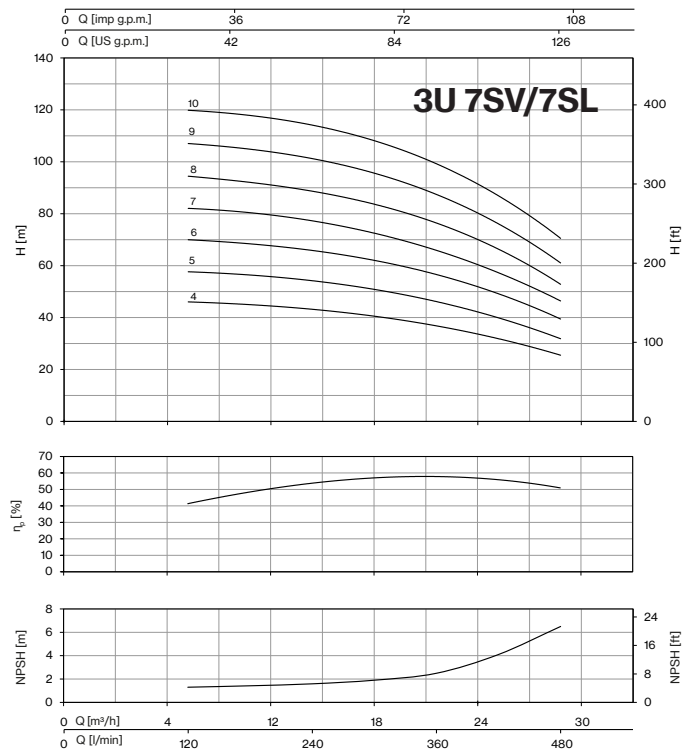
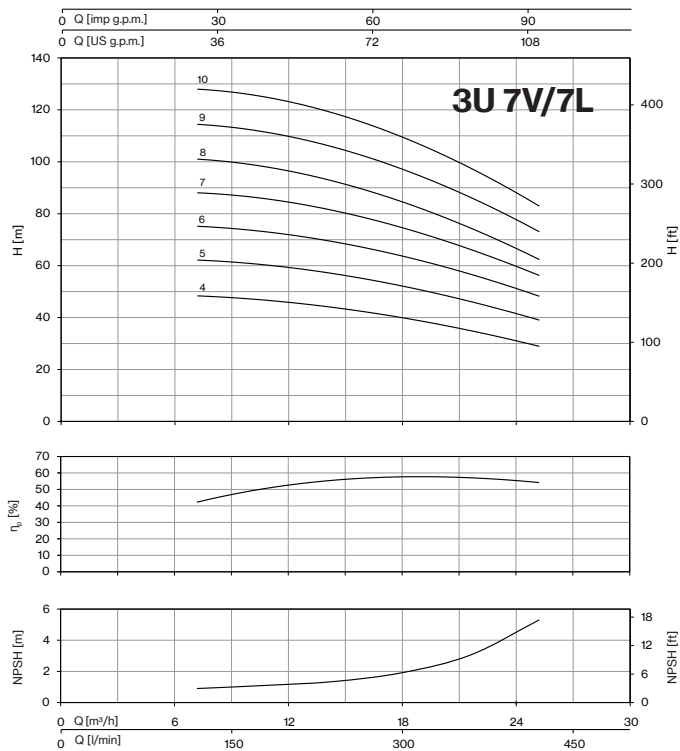
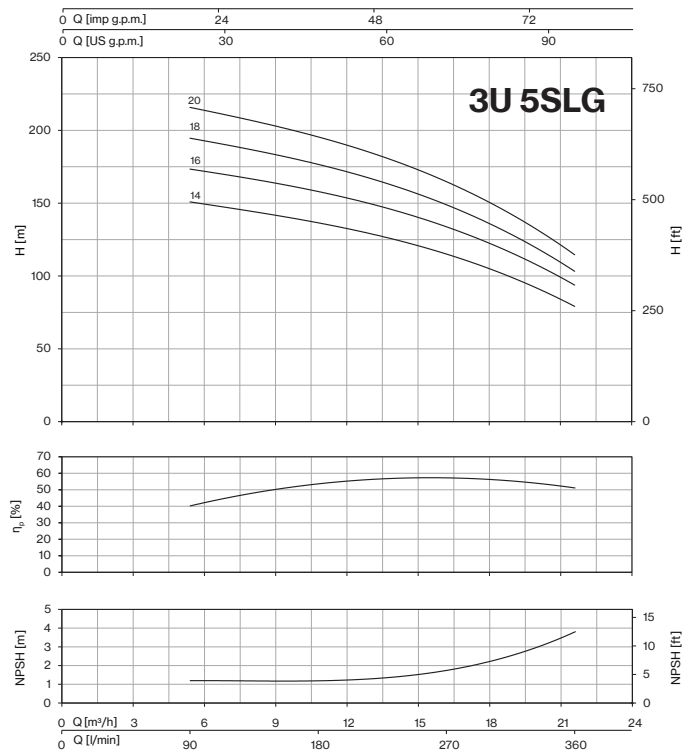
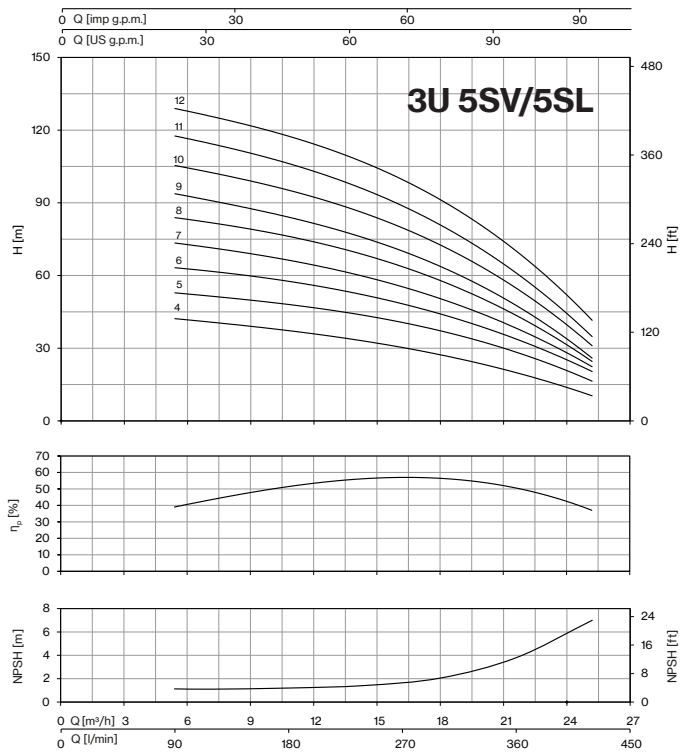
TARGET (3 pumps)		VERSION			TYPE	P2 NOMINAL		Q (m³/h - l/min)																FIXED SPEED		VARIABLE SPEED			
		HORIZ.	VERT. OVERLAP	VERT. INLINE		HP (x3)	kW (x3)	0	5,4	7,2	10,8	14,4	18	21,6	25,2	28,8	30,6	32,4	36	43,2	50,4	1-	3-	1-	3-				
m³/h	bar				0			90	120	180	240	300	360	420	480	510	540	600	720	840	/E	/I	/A	/I					
21	3	-	3U 7V	3U 7L	180/4	1,8	1,3	49,5		47,4	45,3	42,5	39,2	34,8	29,4	22,6	16,9					■	■	-	■	■	■		
		-	3U 7SV	3U 7SL				48,0		46,3	45,7	43,6	40,4	36,4	31,3	25,0	21,3	17,2							■	■	-	■	■
	4	-	3U 7V	3U 7L	250/5	2,5	1,85	62,6		60,6	58,2	55,1	51,1	45,8	39,0	29,8	21,5						■	■	-	■	■	■	
		-	3U 7SV	3U 7SL				60,3		59,0	58,2	55,7	52,2	47,4	41,6	33,5	28,1	22,0							■	■	-	■	■
	5	-	3U 7V	3U 7L	300/6	3	2,2	74,8		71,5	68,3	64,5	59,3	53,0	44,6	34,5	26,7						■	■	-	■	■	■	
		-	3U 7SV	3U 7SL				72,5		70,5	69,2	66,0	61,5	55,7	48,0	37,8	31,6	24,7							■	■	-	■	■
	6	-	3U 7V	3U 7L	350/7	3,5	2,57	89,0		88,0	85,8	81,2	74,5	66,3	56,2								-	■	-	■	■	■	
		-	3U 7SV	3U 7SL				82,8		82,0	80,6	77,2	72,3	66,0	57,4	46,4									-	■	-	■	■
	7	-	3U 7V	3U 7L	400/8	4	3	102,3		101,0	98,2	92,4	84,4	74,6	62,4								-	■	-	-	■	■	
		-	3U 7SV	3U 7SL				94,8		94,3	92,5	88,6	83,2	76,4	66,2	52,6									-	■	-	-	■
	8	-	3U 7V	3U 7L	450/9	4,5	3,37	115,2		114,4	111,4	105,6	97,1	86,3	73,1								-	■	-	-	■	■	
		-	3U 7SV	3U 7SL				107,4		106,9	105,2	101,1	95,3	87,7	76,3	61,0									-	■	-	-	■
	9	-	3U 7V	3U 7L	550/10	5,5	4	128,1		128,0	124,9	118,7	109,4	97,6	83,0								-	■	-	-	■	■	
		-	3U 7SV	3U 7SL				119,8		119,6	118,4	113,9	107,7	99,4	87,0	70,4									-	■	-	-	■
	11	-	-	3U 7SLG	750/12	7,5	5,5	143,7		143,7	142,6	137,0	129,6	119,8	105,6	87,0							-	■	-	-	■	■	
	13	-	-	3U 7SLG	800/14	7,5	5,5	167,6		167,3	165,9	159,6	151,0	139,5	122,6	100,3							-	■	-	-	■	■	
	15	-	-	3U 7SLG	900/16	7,5	5,5	191,5		191,2	189,3	181,7	171,5	157,7	137,6	111,1							-	■	-	-	■	■	
	17	-	-	3U 7SLG	950/18	10	7,5	215,5		215,7	213,9	205,8	194,7	179,8	159,0	132,3							-	■	-	-	■	■	
	19	-	-	3U 7SLG	1000/20	10	7,5	240,3		240,2	238,4	229,3	216,8	200,3	177,3	147,7							-	■	-	-	■	■	
27	3	-	3U 9V	3U 9L	200/4	2	1,5	47,1		43,5	42,0	40,5	38,3	35,7	32,4	30,5	28,4	23,8	13,3			■	■	-	■	■	■		
		-	3U 9SV	3U 9SL				47,6		43,5	42,1	40,1	38,1	35,7	32,7	30,9	28,9	24,2	13,1						■	■	-	■	■
	3,5	-	3U 9V	3U 9L	250/5	2,5	1,85	59,2		54,4	52,4	50,4	47,9	44,8	40,5	38,1	35,5	29,8	16,3			■	■	-	■	■	■		
		-	3U 9SV	3U 9SL				60,0		54,8	53,0	51,0	48,2	45,4	42,0	39,8	37,3	31,6	18,0						■	■	-	■	■
	4	-	3U 9V	3U 9L	300/6	3	2,2	69,4		63,7	61,4	58,8	55,6	51,6	46,5	43,5	40,3	33,5	17,0			■	■	-	■	■	■		
		-	3U 9SV	3U 9SL				71,8		64,9	63,0	59,9	57,0	53,7	49,7	47,2	44,3	37,0	20,8						■	■	-	■	■
	5,5	-	3U 9V	3U 9L	400/7	4	3	83,3		77,8	75,7	72,7	68,9	64,2	58,5	55,2	51,6	43,6				-	■	-	-	■	■		
		-	3U 9SV	3U 9SL				82,0		77,2	74,9	72,0	68,7	64,9	59,9	56,6	52,9	44,2						-	■	-	-	■	■
	6,5	-	3U 9V	3U 9L	450/8	4,5	3,37	96,7		90,7	88,2	84,8	80,6	75,5	69,2	65,4	61,3	52,2				-	■	-	-	■	■		
		-	3U 9SV	3U 9SL				93,5		88,5	86,3	82,6	79,0	74,9	69,5	65,8	61,5	52,0						-	■	-	-	■	■
	7	-	3U 9V	3U 9L	500/9	4,5	3,37	107,1		99,5	96,4	92,8	88,3	82,4	75,2	71,0	66,4	56,4				-	■	-	-	■	■		
		-	3U 9SV	3U 9SL				105,4		99,1	96,5	92,5	88,3	83,5	77,3	73,0	68,1	57,5						-	■	-	-	■	■
	8	-	3U 9V	3U 9L	550/10	5,5	4	119,5		111,6	108,2	104,3	99,3	92,7	84,6	79,9	74,8	63,5				-	■	-	-	■	■		
		-	3U 9SV	3U 9SL				117,6		111,2	108,7	104,5	99,9	94,7	87,8	83,2	77,9	66,2						-	■	-	-	■	■
	10	-	-	3U 9SLG	750/12	7,5	5,5	141,3		133,2	130,4	125,4	119,7	113,4	105,1	99,7	93,7	79,6				-	■	-	-	■	■		
	12	-	-	3U 9SLG	800/14	7,5	5,5	165,5		155,7	152,6	146,5	139,9	132,7	123,4	117,3	110,3	94,0				-	■	-	-	■	■		
	13	-	-	3U 9SLG	900/16	10	7,5	188,7		177,6	173,6	167,1	159,7	151,4	140,4	133,3	125,1	106,2				-	■	-	-	■	■		
15	-	-	3U 9SLG	950/18	10	7,5	213,8		201,6	197,3	189,6	181,2	172,0	159,9	151,8	142,5	121,0				-	■	-	-	■	■			
17	-	-	3U 9SLG	1000/20	10	7,5	236,7		223,1	218,3	209,3	199,8	189,5	176,1	167,3	157,5	134,5				-	■	-	-	■	■			



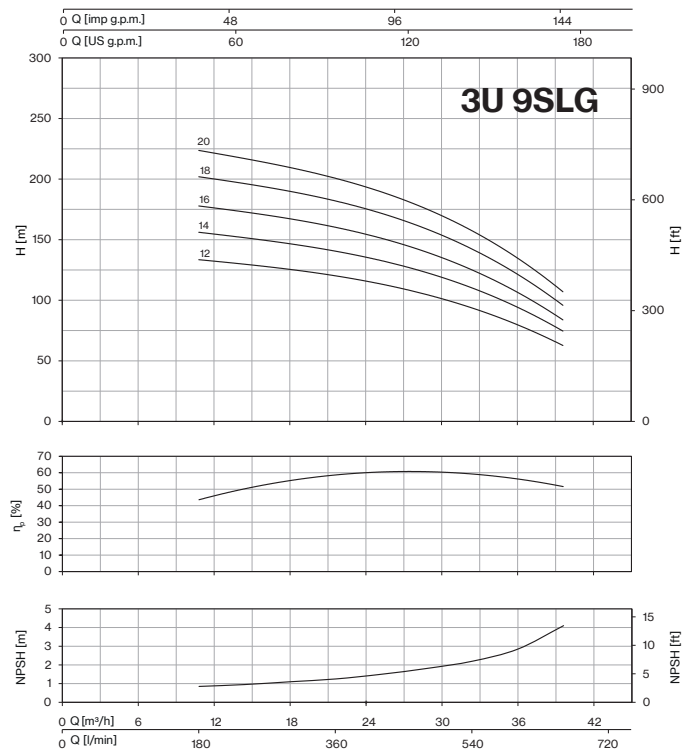
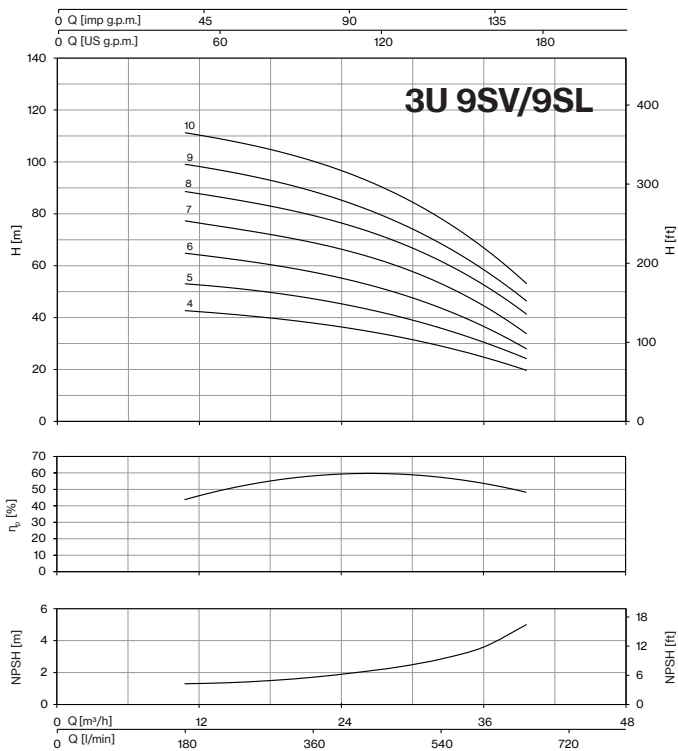
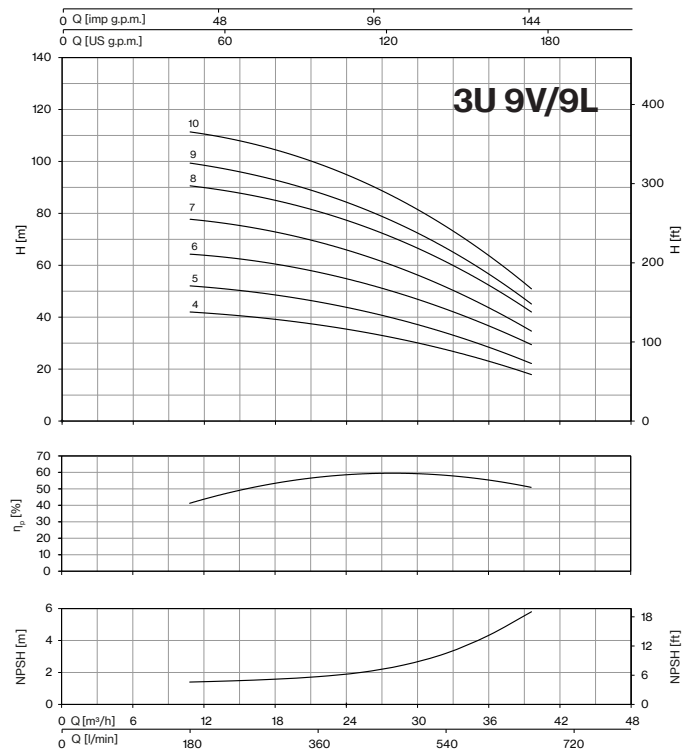
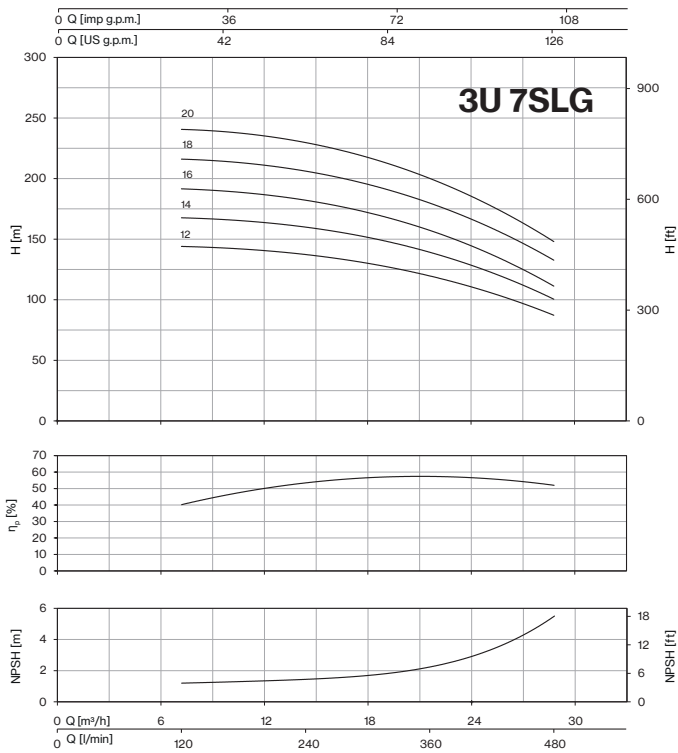
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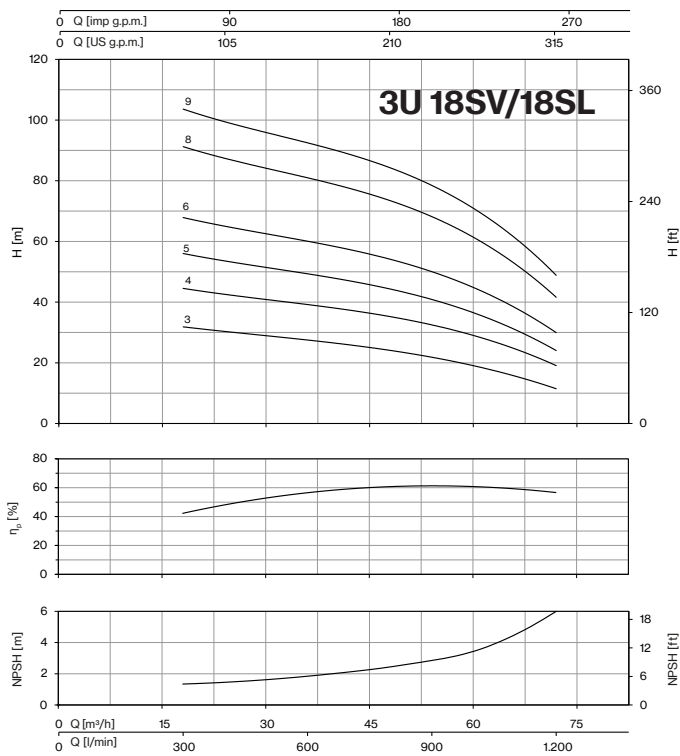
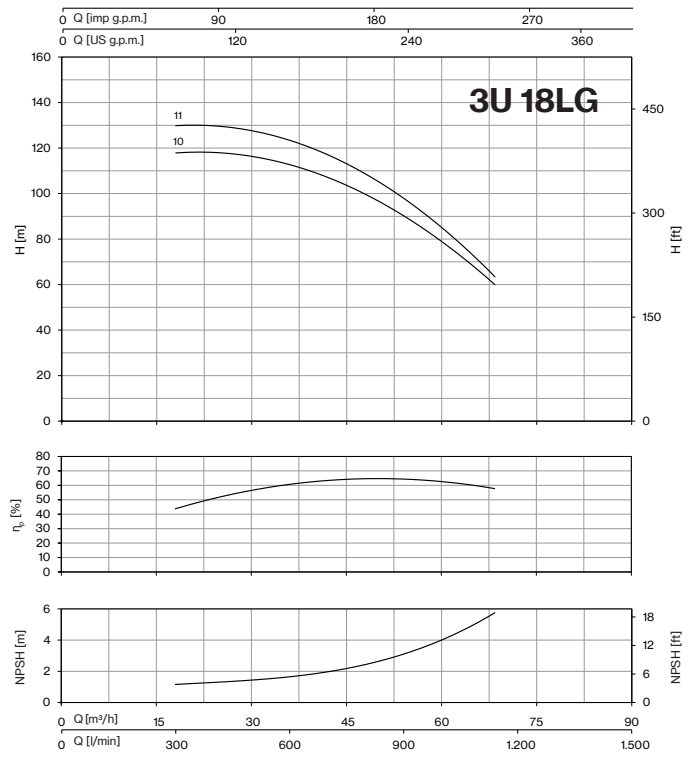
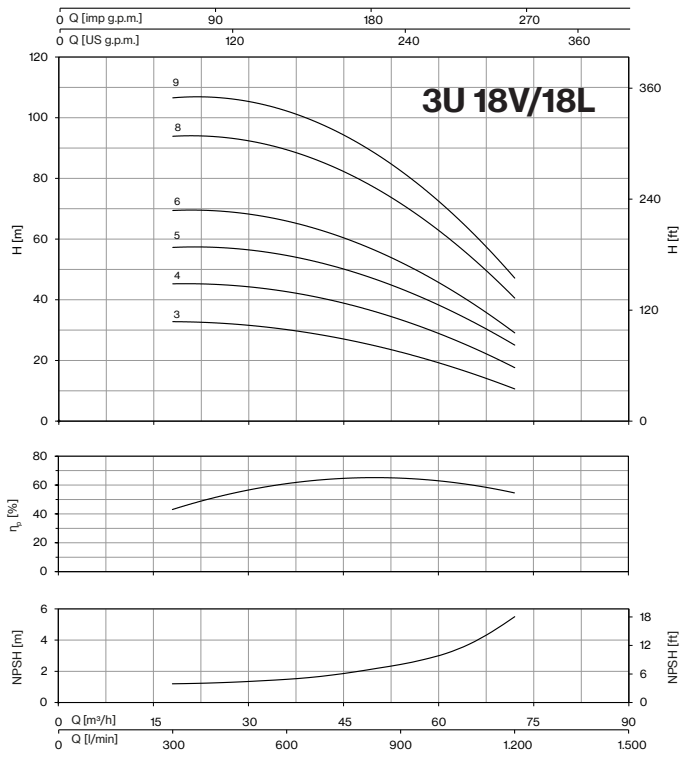
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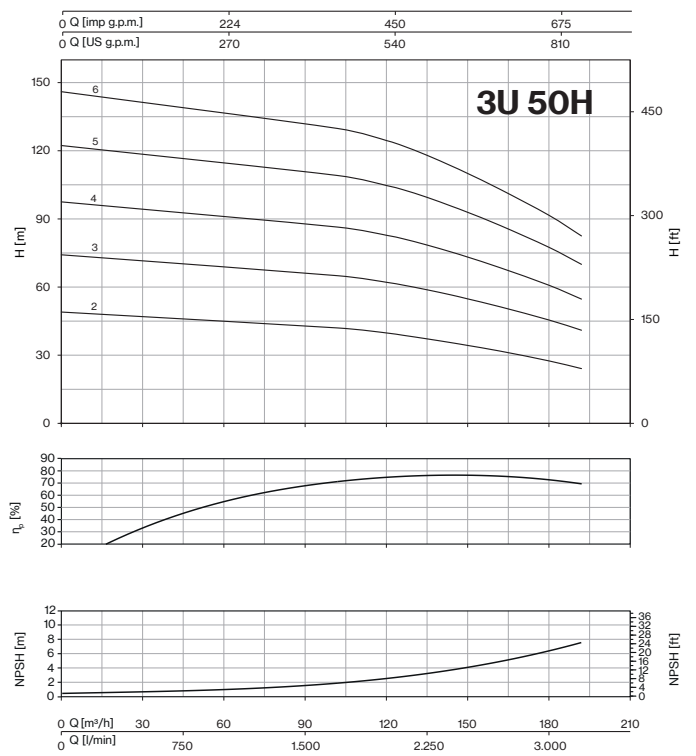
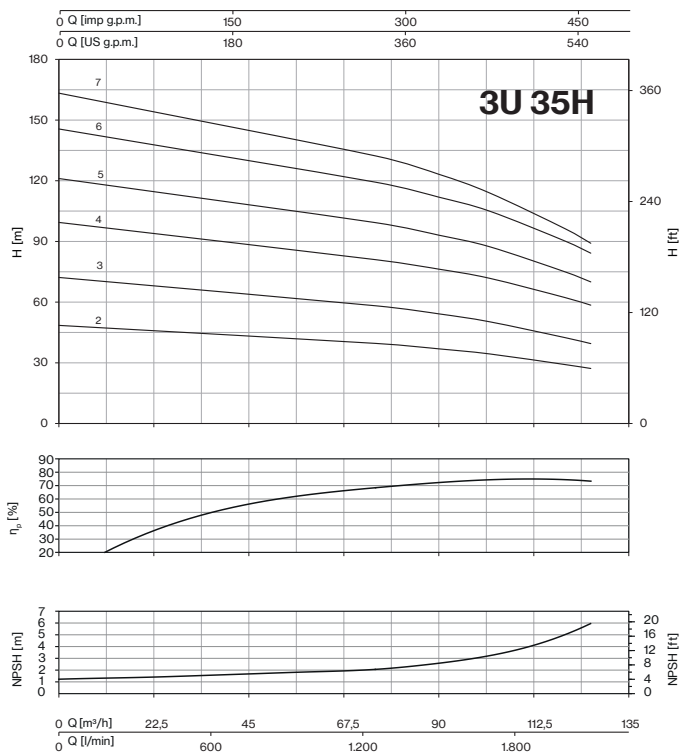
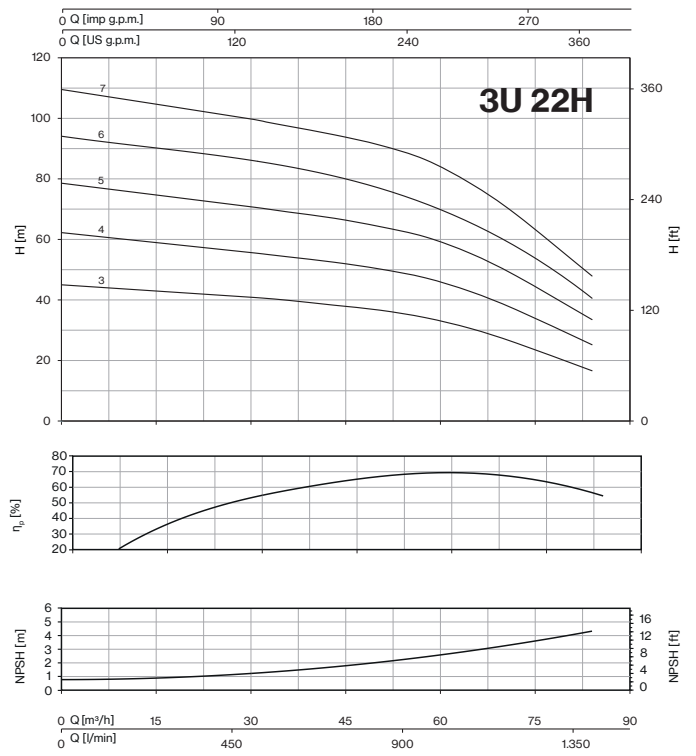
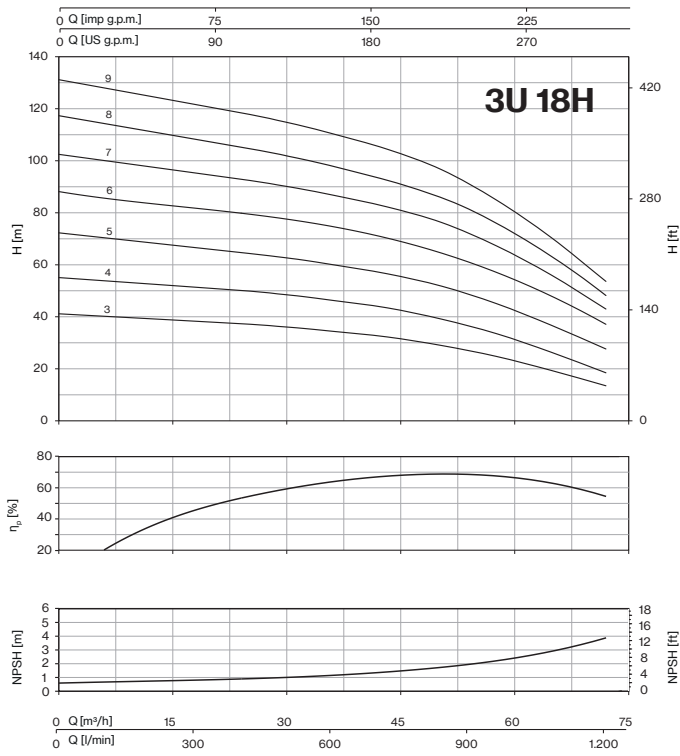
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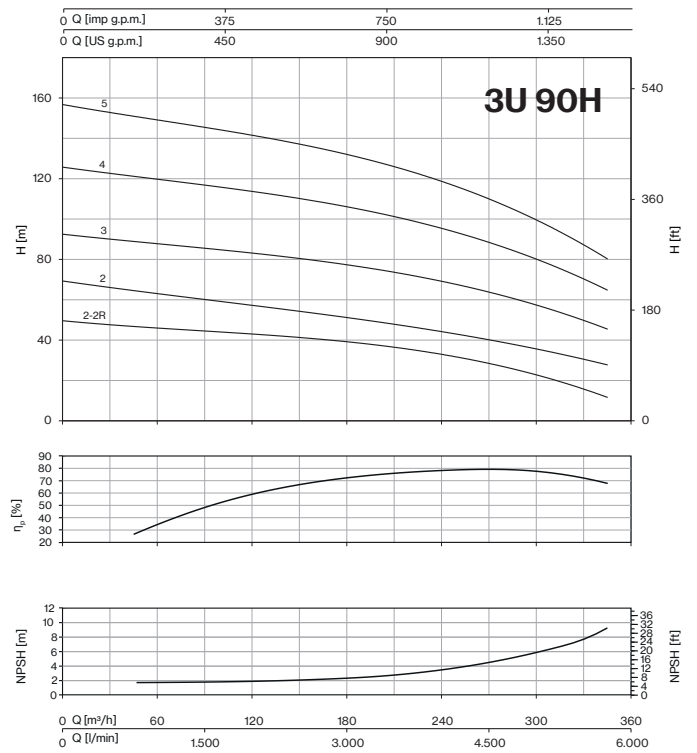
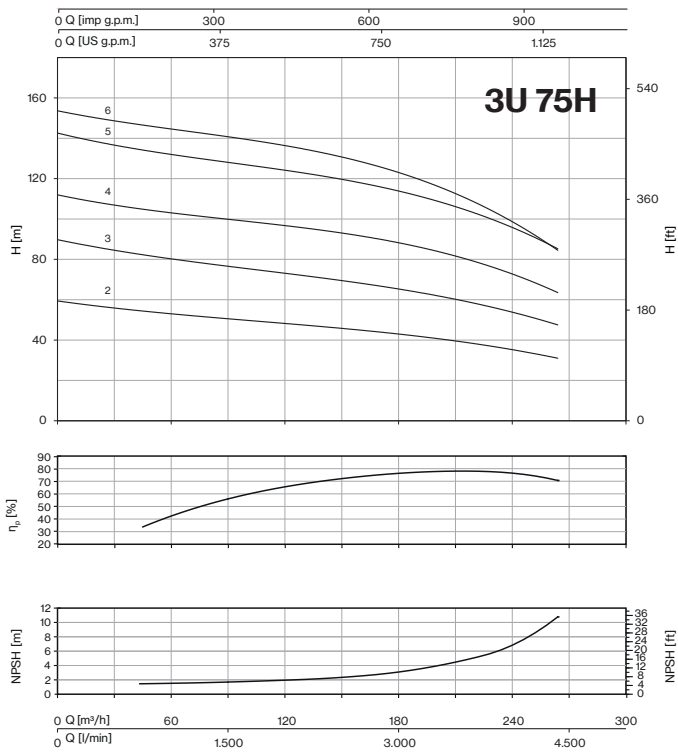
CURVES 3U



CURVES 3U

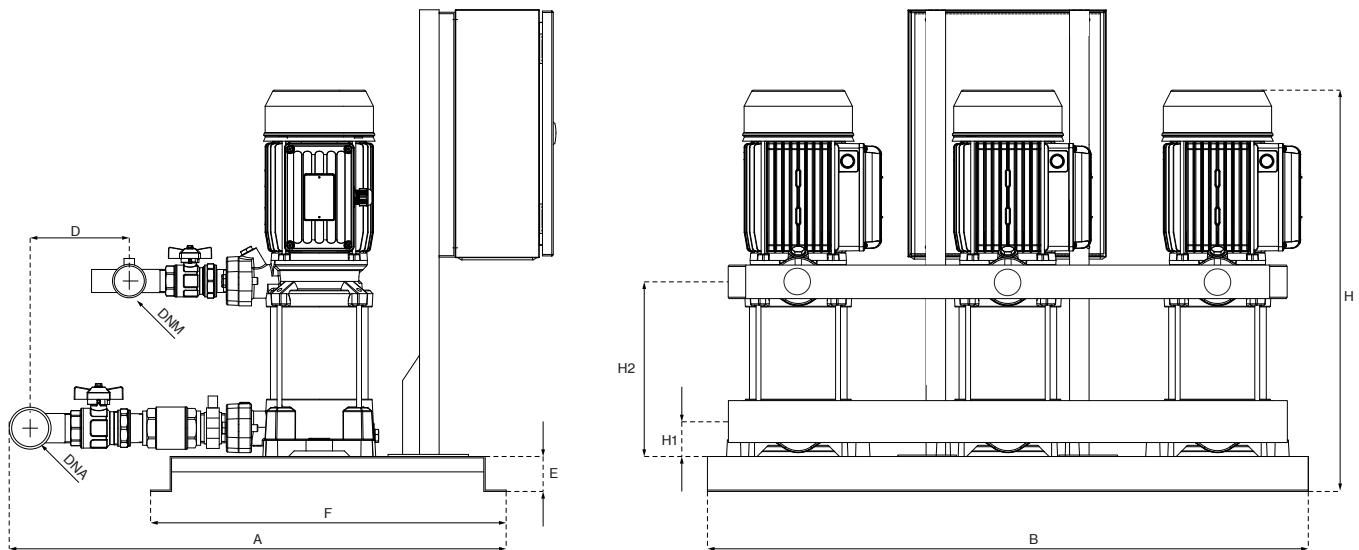


CURVES 3U



3U V (3-5-7-9)

Fixed speed



VERTICAL MODEL V (3-5)		P1		In		DIMENSIONS								DNA	DNM	Kg		
		1-	3-	1-	3-	A	B	D	E	F	H	H1	H2					
1- 230V	3- 400V	kW (x3)		A (x3)		mm												
3U 3V-100/5	3U 3V-100/5T	1,06	1,01	4,8	1,9	711	860	141	50	509	463	40	178	2" G	1" 1/2 G	86		
3U 3SV-100/5	3U 3SV-100/5T	0,99	0,92	4,4	1,7	711	860	141	50	509	487	40	202			89		
3U 3V-120/6	3U 3V-120/6T	1,23	1,23	5,6	2,6	711	860	141	50	509	571	40	226			98		
3U 3SV-120/6	3U 3SV-120/6T	1,11	1,11	5,1	2,5	711	860	141	50	509	595	40	250			99		
3U 3V-150/7	3U 3V-150/7T	1,54	1,45	7,1	2,9	711	860	141	50	509	619	40	274			104		
3U 3SV-150/7	3U 3SV-150/7T	1,38	1,31	6,4	2,7	711	860	141	50	509	643	40	298			105		
3U 3V-180/8	3U 3V-180/8T	1,7	1,6	7,5	3	711	860	141	50	509	667	40	322			110		
3U 3SV-180/8	3U 3SV-180/8T	1,6	1,55	6,9	2,7	711	860	141	50	509	691	40	346			114		
3U 3V-200/9	3U 3V-200/9T	1,9	1,8	8,4	3,3	711	860	155	50	509	439	40	178			2" 1/2 G	2" G	86
3U 3SV-200/9	3U 3SV-200/9T	1,7	1,6	7,7	3	740	860	155	50	509	523	40	202					95
3U 3V-250/10	3U 3V-250/10T	2,1	2	10	4,1	740	860	155	50	509	547	40	226					96
3U 3SV-250/10	3U 3SV-250/10T	1,9	1,8	9,2	3,7	740	860	155	50	509	571	40	250					101
3U 3V-280/11	3U 3V-280/11T	2,3	2,2	10,5	4,3	740	860	155	50	509	595	40	274					104
3U 3SV-280/11	3U 3SV-280/11T	2,1	2	9,7	3,9	740	860	155	50	509	619	40	298					105
3U 3V-300/12	3U 3V-300/12T	2,5	2,44	11,2	4,7	740	860	155	50	509	643	40	322	110				
3U 3SV-300/12	3U 3SV-300/12T	2,3	2,2	10,3	4,3	740	860	155	50	509	667	40	346	117				
3U 5V-120/4	3U 5V-120/4T	1,13	1,13	5,2	2,5	740	860	155	50	509	722	40	346	117				
3U 5SV-120/4	3U 5SV-120/4T	1,09	1,08	4,9	2,4	740	860	155	50	509	746	40	370	137				
3U 5V-150/5	3U 5V-150/5T	1,47	1,39	6,8	2,8	740	860	155	50	509								
3U 5SV-150/5	3U 5SV-150/5T	1,39	1,31	6,5	2,7	740	860	155	50	509								
3U 5V-180/6	3U 5V-180/6T	1,7	1,62	7,7	3	740	860	155	50	509								
3U 5SV-180/6	3U 5SV-180/6T	1,63	1,55	7,3	3	740	860	155	50	509								
3U 5V-200/7	3U 5V-200/7T	2	1,86	9	3,4	740	860	155	50	509								
3U 5SV-200/7	3U 5SV-200/7T	1,94	1,77	8,7	3,3	740	860	155	50	509								
3U 5V-250/8	3U 5V-250/8T	2,37	2,17	10,7	4,1	740	860	155	50	509								
3U 5SV-250/8	3U 5SV-250/8T	2,2	2,07	10,1	4	740	860	155	50	509								
3U 5V-280/9	3U 5V-280/9T	2,6	2,4	11,7	4,4	740	860	155	50	509								
3U 5SV-280/9	3U 5SV-280/9T	2,45	2,27	11	4,2	740	860	155	50	509								
3U 5V-300/10	3U 5V-300/10T	2,84	2,73	12,8	4,9	740	860	155	50	509								
3U 5SV-300/10	3U 5SV-300/10T	2,67	2,57	11,9	4,7	740	860	155	50	509								
-	3U 5V-350/11T	-	2,9	-	5,3	740	860	155	50	509								
-	3U 5SV-350/11T	-	2,9	-	5,3	740	860	155	50	509								
-	3U 5V-380/12T	-	3,2	-	6	740	860	155	50	509								
-	3U 5SV-380/12T	-	3,2	-	6	740	860	155	50	509								



Dimensions and weights may differ slightly and therefore should be considered as indicative

3U V (3-5-7-9)

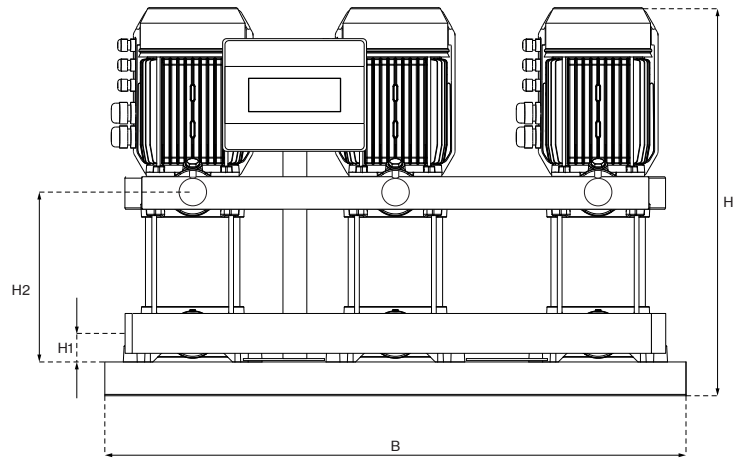
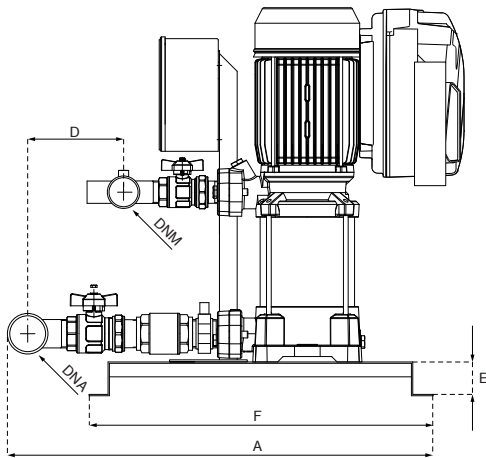
Fixed speed

VERTICAL MODEL V (7-9)		P1		In		DIMENSIONS								DNA	DNM	Kg		
		1~	3~	1~	3~	A	B	D	E	F	H	H1	H2					
1~ 230V	3~ 400V	kW (x3)		A (x3)		mm												
3U 7V-180/4	3U 7V-180/4T	1,83	1,71	8,3	3,2	770	860	133	50	509	472	40	178	3" G	2" ½ G	100		
3U 7SV-180/4	3U 7SV-180/4T	1,69	1,62	7,7	3,1													
3U 7V-250/5	3U 7V-250/5T	2,39	2,15	10,9	4,2	770	860	133	50	509	523	40	202					106
3U 7SV-250/5	3U 7SV-250/5T	2,19	2,05	10,2	4,1													
3U 7V-300/6	3U 7V-300/6T	2,68	2,63	12,2	5	770	860	133	50	509	547	40	226					111
3U 7SV-300/6	3U 7SV-300/6T	2,53	2,44	11,4	4,8													
-	3U 7V-350/7T	-	2,8	-	5,1	770	860	133	50	509	625	40	250					127
-	3U 7SV-350/7T	-	2,9	-	5,3													
-	3U 7V-400/8T	-	3,1	-	5,9	770	860	133	50	509	650	40	274					138
-	3U 7SV-400/8T	-	3,3	-	6,1													
-	3U 7V-450/9T	-	3,6	-	6,5	770	860	133	50	509	703	40	301			151		
-	3U 7SV-450/9T	-	3,7	-	6,7													
-	3U 7V-550/10T	-	4	-	7,7	770	860	133	50	509	726	40	325			171		
-	3U 7SV-550/10T	-	4,1	-	7,9													
3U 9V-200/4	3U 9V-200/4T	1,88	1,77	8,4	3,3	770	860	133	50	509	523	40	202	3" G	2" ½ G	103		
3U 9SV-200/4	3U 9SV-200/4T	1,88	1,77	8,4	3,3													
3U 9V-250/5	3U 9V-250/5T	2,32	2,18	10,6	4,3	770	860	133	50	509	553	40	232					108
3U 9SV-250/5	3U 9SV-250/5T	2,36	2,23	10,8	4,3													
3U 9V-300/6	3U 9V-300/6T	2,74	2,64	12,2	4,8	770	860	133	50	509	583	40	262					112
3U 9SV-300/6	3U 9SV-300/6T	2,78	2,58	12,5	4,9													
-	3U 9V-400/7T	-	3	-	5,8	770	860	133	50	509	667	40	292					138
-	3U 9SV-400/7T	-	3,1	-	5,9													
-	3U 9V-450/8T	-	3,5	-	6,4	770	860	133	50	509	727	40	325					151
-	3U 9SV-450/8T	-	3,6	-	6,5													
-	3U 9V-500/9T	-	3,9	-	6,9	770	860	133	50	509	757	40	355			154		
-	3U 9SV-500/9T	-	4	-	7													
-	3U 9V-550/10T	-	4,3	-	8,1	770	860	133	50	509	787	40	385			168		
-	3U 9SV-550/10T	-	4,4	-	8,2													



3U V (3-5-7-9)

Variable speed EPIC-A




VERTICAL MODEL V (3-5)		P1	In		Required tank	DIMENSIONS										Kg		
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM			
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out		kW (x3)	A (x3)		Lt	mm											
-	3U 3V/A-100/5T-304	1,01	3,3	1,9	3 × 8	711	860	141	50	509	463	40	178	2" G	1" ½ G	94		
-	3U 3SV/A-100/5T-304	0,92	2,9	1,7														
-	3U 3V/A-120/6T-304	1,23	4,5	2,6	3 × 8	711	860	141	50	509	487	40	202					97
-	3U 3SV/A-120/6T-304	1,11	4,3	2,5														
-	3U 3V/A-150/7T-304	1,45	5	2,9	3 × 8	711	860	141	50	509	571	40	226					106
-	3U 3SV/A-150/7T-304	1,31	4,7	2,7														
-	3U 3V/A-180/8T-304	1,6	5,2	3	3 × 8	711	860	141	50	509	595	40	250					107
-	3U 3SV/A-180/8T-304	1,55	4,7	2,7														
-	3U 3V/A-200/9T-304	1,8	5,7	3,3	3 × 8	711	860	141	50	509	619	40	274					112
-	3U 3SV/A-200/9T-304	1,6	5,2	3														
-	3U 3V/A-250/10T-306	2	7,1	4,1	3 × 8	711	860	141	50	509	643	40	298					113
-	3U 3SV/A-250/10T-306	1,8	6,4	3,7														
-	3U 3V/A-280/11T-306	2,2	-	4,3	3 × 8	711	860	141	50	509	667	40	322					118
-	3U 3SV/A-280/11T-306	2	6,8	3,9														
-	3U 3V/A-300/12T-306	2,44	-	4,7	3 × 8	711	860	141	50	509	691	40	346					120
-	3U 3SV/A-300/12T-306	2,2	-	4,3														
-	3U 5V/A-120/4T-304	1,13	4,3	2,5	3 × 20	740	860	155	50	509	439	40	178	2" ½ G	2" G	94		
-	3U 5SV/A-120/4T-304	1,08	4,2	2,4														
-	3U 5V/A-150/5T-304	1,39	4,9	2,8	3 × 20	740	860	155	50	509	523	40	202					103
-	3U 5SV/A-150/5T-304	1,31	4,7	2,7														
-	3U 5V/A-180/6T-304	1,62	5,2	3	3 × 20	740	860	155	50	509	547	40	226					104
-	3U 5SV/A-180/6T-304	1,55	5,2	3														
-	3U 5V/A-200/7T-304	1,86	5,9	3,4	3 × 20	740	860	155	50	509	571	40	250					109
-	3U 5SV/A-200/7T-304	1,77	5,7	3,3														
-	3U 5V/A-250/8T-306	2,17	7,1	4,1	3 × 20	740	860	155	50	509	595	40	274					112
-	3U 5SV/A-250/8T-306	2,07	6,9	4														
-	3U 5V/A-280/9T-306	2,4	-	4,4	3 × 20	740	860	155	50	509	619	40	298					113
-	3U 5SV/A-280/9T-306	2,27	-	4,2														
-	3U 5V/A-300/10T-306	2,73	-	4,9	3 × 20	740	860	155	50	509	643	40	322					117
-	3U 5SV/A-300/10T-306	2,57	-	4,7														
-	3U 5V/A-350/11T-306	2,9	-	5,3	3 × 20	740	860	155	50	509	722	40	346					125
-	3U 5SV/A-350/11T-306	2,9	-	5,3														
-	3U 5V/A-380/12T-309	3,2	-	6	3 × 20	740	860	155	50	509	746	40	370			144		
-	3U 5SV/A-380/12T-309	3,2	-	6														



3U V (3-5-7-9)

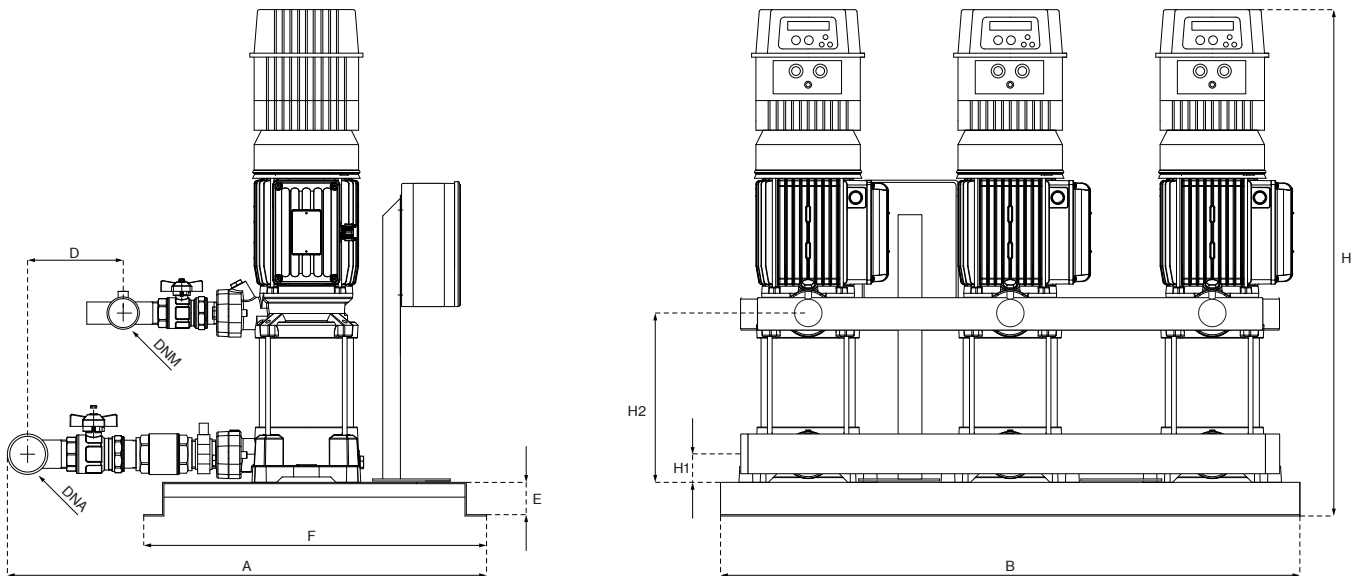
Variable speed EPIC-A

VERTICAL MODEL V (7-9)		P1	In		Required tank Lt	DIMENSIONS												
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM			
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out		kW (x3)	A (x3)		mm												
-	3U 7V/A-180/4T-304	1,71	5,5	3,2	3x 20	770	860	133	50	509	472	40	178	3" G	2" ½ G	108		
-	3U 7SV/A-180/4T-304	1,62	5,4	3,1														
-	3U 7V/A-250/5T-306	2,15	-	4,2	3x 20	770	860	133	50	509	523	40	202					114
-	3U 7SV/A-250/5T-306	2,05	-	4,1														
-	3U 7V/A-300/6T-306	2,63	-	5	3x 20	770	860	133	50	509	547	40	226					119
-	3U 7SV/A-300/6T-306	2,44	-	4,8														
-	3U 7V/A-350/7T-306	2,8	-	5,1	3x 20	770	860	133	50	509	625	40	250					135
-	3U 7SV/A-350/7T-306	2,9	-	5,3														
-	3U 7V/A-400/8T-309	3,1	-	5,9	3x 20	770	860	133	50	509	650	40	274					146
-	3U 7SV/A-400/8T-309	3,3	-	6,1														
-	3U 7V/A-450/9T-309	3,6	-	6,5	3x 20	770	860	133	50	509	703	40	301					159
-	3U 7SV/A-450/9T-309	3,7	-	6,7														
-	3U 7V/A-550/10T-309	4	-	7,7	3x 20	770	860	133	50	509	726	40	325			179		
-	3U 7SV/A-550/10T-309	4,1	-	7,9														
-	3U 9V/A-200/4T-304	1,77	5,7	3,3	3x 20	770	860	133	50	509	523	40	202	3" G	2" ½ G	111		
-	3U 9SV/A-200/4T-304	1,77	5,7	3,3														
-	3U 9V/A-250/5T-306	2,18	-	4,3	3x 20	770	860	133	50	509	553	40	232					116
-	3U 9SV/A-250/5T-306	2,23	-	4,3														
-	3U 9V/A-300/6T-306	2,64	-	4,8	3x 20	770	860	133	50	509	583	40	262					120
-	3U 9SV/A-300/6T-306	2,58	-	4,9														
-	3U 9V/A-400/7T-309	3	-	5,8	3x 20	770	860	133	50	509	667	40	292					146
-	3U 9SV/A-400/7T-309	3,1	-	5,9														
-	3U 9V/A-450/8T-309	3,5	-	6,4	3x 20	770	860	133	50	509	727	40	325					159
-	3U 9SV/A-450/8T-309	3,6	-	6,5														
-	3U 9V/A-500/9T-309	3,9	-	6,9	3x 20	770	860	133	50	509	757	40	355					162
-	3U 9SV/A-500/9T-309	4	-	7														
-	3U 9V/A-550/10T-309	4,3	-	8,1	3x 20	770	860	133	50	509	787	40	385			176		
-	3U 9SV/A-550/10T-314	4,4	-	8,2														



3U V (3-5-7-9)

Variable speed IPFC



VERTICAL MODEL V (3-5)		P1	In		Required tank	DIMENSIONS											Kg
IPFC			kW (x3)	3- 230V		3- 400V	A	B	D	E	F	H	H1	H2	DNA	DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out			A (x3)		Lt											
3U 3V/I-100/5T-109	3U 3V/I-100/5T-306	1,01	3,3	1,9	3x 8	711	860	141	50	509	673	40	178	2" G	1" 1/2 G	101	
3U 3SV/I-100/5T-109	3U 3SV/I-100/5T-306	0,92	2,9	1,7	3x 8	711	860	141	50	509	697	40	202			104	
3U 3V/I-120/6T-109	3U 3V/I-120/6T-306	1,23	4,5	2,6	3x 8	711	860	141	50	509	697	40	202			104	
3U 3SV/I-120/6T-109	3U 3SV/I-120/6T-306	1,11	4,3	2,5	3x 8	711	860	141	50	509	697	40	202			104	
3U 3V/I-150/7T-109	3U 3V/I-150/7T-306	1,45	5	2,9	3x 8	711	860	141	50	509	781	40	226			113	
3U 3SV/I-150/7T-109	3U 3SV/I-150/7T-306	1,31	4,7	2,7	3x 8	711	860	141	50	509	781	40	226			113	
3U 3V/I-180/8T-109	3U 3V/I-180/8T-306	1,6	5,2	3	3x 8	711	860	141	50	509	805	40	250			114	
3U 3SV/I-180/8T-109	3U 3SV/I-180/8T-306	1,55	4,7	2,7	3x 8	711	860	141	50	509	805	40	250			114	
3U 3V/I-200/9T-109	3U 3V/I-200/9T-306	1,8	5,7	3,3	3x 8	711	860	141	50	509	829	40	274			119	
3U 3SV/I-200/9T-109	3U 3SV/I-200/9T-306	1,6	5,2	3	3x 8	711	860	141	50	509	829	40	274			119	
3U 3V/I-250/10T-114	3U 3V/I-250/10T-306	2	7,1	4,1	3x 8	711	860	141	50	509	853	40	298			119	
3U 3SV/I-250/10T-114	3U 3SV/I-250/10T-306	1,8	6,4	3,7	3x 8	711	860	141	50	509	853	40	298			119	
3U 3V/I-280/11T-114	3U 3V/I-280/11T-306	2,2	7,4	4,3	3x 8	711	860	141	50	509	877	40	322	125			
3U 3SV/I-280/11T-114	3U 3SV/I-280/11T-306	2	6,8	3,9	3x 8	711	860	141	50	509	877	40	322	125			
3U 3V/I-300/12T-114	3U 3V/I-300/12T-306	2,44	8,1	4,7	3x 8	711	860	141	50	509	901	40	346	129			
3U 3SV/I-300/12T-114	3U 3SV/I-300/12T-306	2,2	7,4	4,3	3x 8	711	860	141	50	509	901	40	346	129			
3U 5V/I-120/4T-109	3U 5V/I-120/4T-306	1,13	4,3	2,5	3x 20	740	860	155	50	509	649	40	178	2" 1/2 G	2" G	101	
3U 5SV/I-120/4T-109	3U 5SV/I-120/4T-306	1,08	4,2	2,4	3x 20	740	860	155	50	509	649	40	178			101	
3U 5V/I-150/5T-109	3U 5V/I-150/5T-306	1,39	4,9	2,8	3x 20	740	860	155	50	509	733	40	202			110	
3U 5SV/I-150/5T-109	3U 5SV/I-150/5T-306	1,31	4,7	2,7	3x 20	740	860	155	50	509	733	40	202			110	
3U 5V/I-180/6T-109	3U 5V/I-180/6T-306	1,62	5,2	3	3x 20	740	860	155	50	509	757	40	226			111	
3U 5SV/I-180/6T-109	3U 5SV/I-180/6T-306	1,55	5,2	3	3x 20	740	860	155	50	509	757	40	226			111	
3U 5V/I-200/7T-109	3U 5V/I-200/7T-306	1,86	5,9	3,4	3x 20	740	860	155	50	509	781	40	250			116	
3U 5SV/I-200/7T-109	3U 5SV/I-200/7T-306	1,77	5,7	3,3	3x 20	740	860	155	50	509	781	40	250			116	
3U 5V/I-250/8T-114	3U 5V/I-250/8T-306	2,17	7,1	4,1	3x 20	740	860	155	50	509	805	40	274			119	
3U 5SV/I-250/8T-114	3U 5SV/I-250/8T-306	2,07	6,9	4	3x 20	740	860	155	50	509	805	40	274			119	
3U 5V/I-280/9T-114	3U 5V/I-280/9T-306	2,4	7,6	4,4	3x 20	740	860	155	50	509	829	40	298			120	
3U 5SV/I-280/9T-114	3U 5SV/I-280/9T-306	2,27	7,3	4,2	3x 20	740	860	155	50	509	829	40	298			120	
3U 5V/I-300/10T-114	3U 5V/I-300/10T-306	2,73	8,5	4,9	3x 20	740	860	155	50	509	853	40	322	125			
3U 5SV/I-300/10T-114	3U 5SV/I-300/10T-306	2,57	8,1	4,7	3x 20	740	860	155	50	509	853	40	322	125			
3U 5V/I-350/11T-114	3U 5V/I-350/11T-306	2,9	9,2	5,3	3x 20	740	860	155	50	509	932	40	346	132			
3U 5SV/I-350/11T-114	3U 5SV/I-350/11T-306	2,9	9,2	5,3	3x 20	740	860	155	50	509	932	40	346	132			
-	3U 5V/I-380/12T-309	3,2	-	6	3x 20	740	860	155	50	509	956	40	370	152			
-	3U 5SV/I-380/12T-309	3,2	-	6	3x 20	740	860	155	50	509	956	40	370	152			

Dimensions and weights may differ slightly and therefore should be considered as indicative



3U V (3-5-7-9)

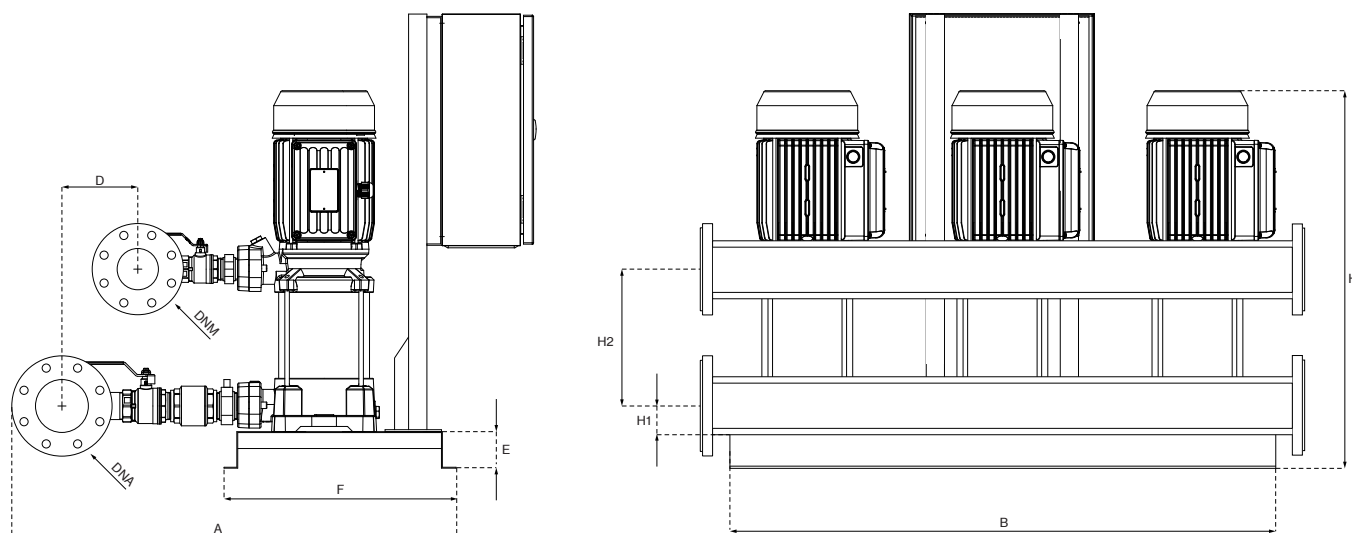
Variable speed IPFC

VERTICAL MODEL V (7-9)		P1	In		Required tank Lt	DIMENSIONS											Kg							
IPFC			3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM									
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out		kW (x3)	A (x3)		mm																		
3U 7V/I-180/4T-109	3U 7V/I-180/4T-306	1,71	5,5	3,2	3x 20	770	860	133	50	509	682	40	178	3" G	2" ½ G	115								
3U 7SV/I-180/4T-109	3U 7SV/I-180/4T-306	1,62	5,4	3,1	3x 20	770	860	133	50	509	733	40	202			121								
3U 7V/I-250/5T-114	3U 7V/I-250/5T-306	2,15	7,3	4,2																				
3U 7SV/I-250/5T-114	3U 7SV/I-250/5T-306	2,05	7,1	4,1	3x 20	770	860	133	50	509	757	40	226			126								
3U 7V/I-300/6T-114	3U 7V/I-300/6T-306	2,63	8,7	5																				
3U 7SV/I-300/6T-114	3U 7SV/I-300/6T-306	2,44	8,3	4,8	3x 20	770	860	133	50	509	835	40	250			142								
3U 7V/I-350/7T-114	3U 7V/I-350/7T-306	2,8	8,8	5,1																				
3U 7SV/I-350/7T-114	3U 7SV/I-350/7T-306	2,9	9,2	5,3	3x 20	770	860	133	50	509	860	40	274			153								
-	3U 7V/I-400/8T-309	3,1	-	5,9																				
-	3U 7SV/I-400/8T-309	3,3	-	6,1	3x 20	770	860	133	50	509	913	40	301			166								
-	3U 7V/I-450/9T-309	3,6	-	6,5																				
-	3U 7SV/I-450/9T-309	3,7	-	6,7	3x 20	770	860	133	50	509	936	40	325	186										
-	3U 7V/I-550/10T-309	4	-	7,7																				
-	3U 7SV/I-550/10T-309	4,1	-	7,9	3x 20	770	860	133	50	509	733	40	202	118										
3U 9V/I-200/4T-109	3U 9V/I-200/4T-306	1,77	5,7	3,3																				
3U 9SV/I-200/4T-109	3U 9SV/I-200/4T-306	1,77	5,7	3,3																				
3U 9V/I-250/5T-114	3U 9V/I-250/5T-306	2,18	7,5	4,3											3x 20	770	860	133	50	509	763	40	232	123
3U 9SV/I-250/5T-114	3U 9SV/I-250/5T-306	2,23	7,5	4,3																				
3U 9V/I-300/6T-114	3U 9V/I-300/6T-306	2,64	8,3	4,8											3x 20	770	860	133	50	509	793	40	262	127
3U 9SV/I-300/6T-114	3U 9SV/I-300/6T-306	2,58	8,5	4,9																				
-	3U 9V/I-400/7T-309	3	-	5,8											3x 20	770	860	133	50	509	877	40	292	153
-	3U 9SV/I-400/7T-309	3,1	-	5,9																				
-	3U 9V/I-450/8T-309	3,5	-	6,4											3x 20	770	860	133	50	509	937	40	325	166
-	3U 9SV/I-450/8T-309	3,6	-	6,5																				
-	3U 9V/I-500/9T-309	3,9	-	6,9	3x 20	770	860	133	50	509	967	40	355	169										
-	3U 9SV/I-500/9T-309	4	-	7																				
-	3U 9V/I-550/10T-309	4,3	-	8,1	3x 20	770	860	133	50	509	997	40	385	183										
-	3U 9SV/I-550/10T-311	4,4	-	8,2																				



3U V (18)

Fixed speed

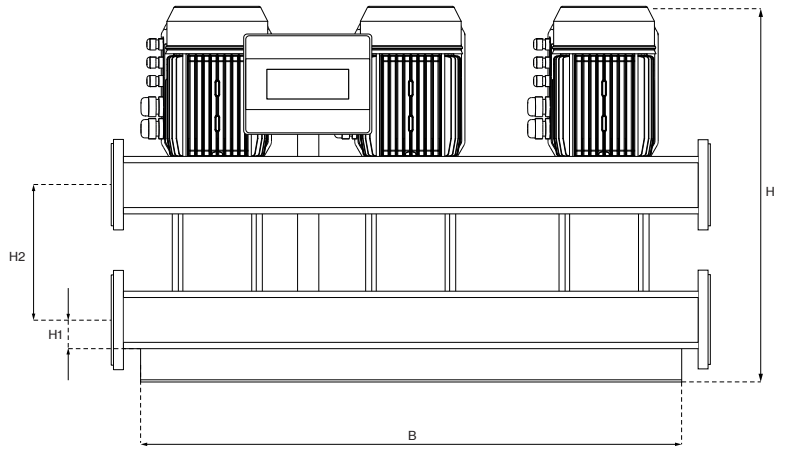
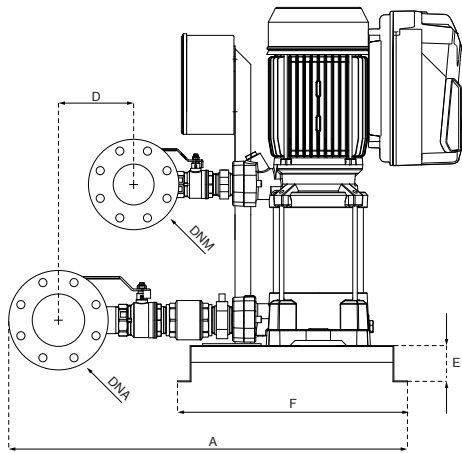


VERTICAL MODEL V (18)		P1		In		DIMENSIONS								DNA	DNM	Kg
		1-	3-	1-	3-	A	B	D	E	F	H	H1	H2			
1- 230V	3- 400V	kW (x3)		A (x3)		mm										
-	3U 18V-250/3T	-	2,19	-	4,3	895	980	166	60	509	541	50	211	DN100	DN80	118
-	3U 18SV-250/3T	-	2,29	-	4,4	895	980	166	60	509	633	50	248			147
-	3U 18V-400/4T	-	3	-	5,8	895	980	166	60	509	700	50	289			162
-	3U 18SV-400/4T	-	3,1	-	5,9	895	980	166	60	509	738	50	326			175
-	3U 18V-450/5T	-	3,9	-	6,9	895	980	166	60	509	875	50	401			210
-	3U 18SV-450/5T	-	3,9	-	6,9	895	980	166	60	509	912	50	439			228
-	3U 18V-550/6T	-	4,6	-	8,4	895	980	166	60	509						
-	3U 18SV-550/6T	-	4,7	-	8,5	895	980	166	60	509						
-	3U 18V-750/8T	-	6,2	-	11,2	895	980	166	60	509						
-	3U 18SV-750/8T	-	6,2	-	11,2	895	980	166	60	509						
-	3U 18V-900/9T	-	6,9	-	12,8	895	980	166	60	509						
-	3U 18SV-900/9T	-	7	-	12,9	895	980	166	60	509						



3U V (18)

Variable speed EPIC-A

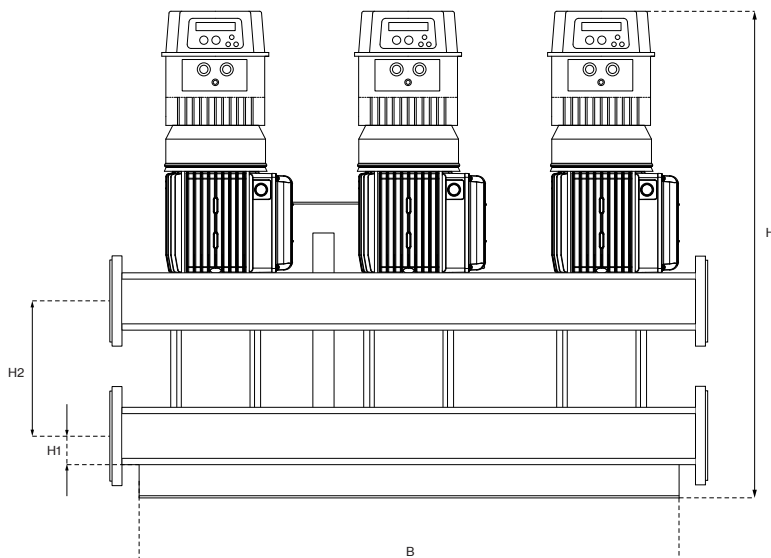
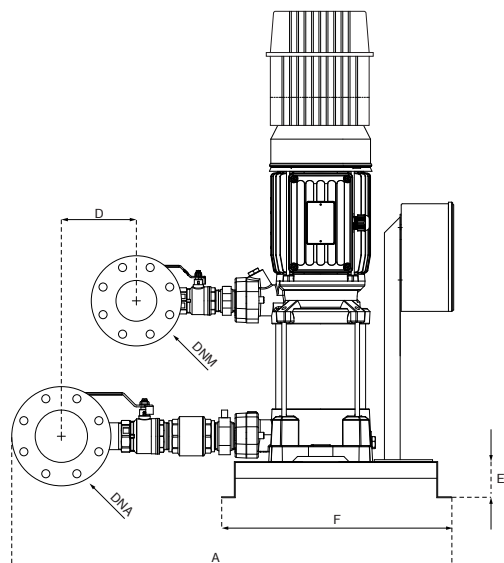


VERTICAL MODEL V (18)		P1	In		Required tank	DIMENSIONS										Kg
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out															
-	3U 18V/A-250/3T-306	2,19	-	4,3	1x 100	895	980	166	60	509	541	50	211	DN100	DN80	126
-	3U 18SV/A-250/3T-306	2,29	-	4,4	1x 100	895	980	166	60	509	633	50	248			155
-	3U 18V/A-400/4T-309	3	-	5,8	1x 100	895	980	166	60	509	700	50	289			170
-	3U 18SV/A-400/4T-309	3,1	-	5,9	1x 100	895	980	166	60	509	738	50	326			183
-	3U 18V/A-450/5T-309	3,9	-	6,9	1x 100	895	980	166	60	509	875	50	401			218
-	3U 18SV/A-450/5T-309	3,9	-	6,9	1x 100	895	980	166	60	509	912	50	439			236
-	3U 18V/A-550/6T-314	4,6	-	8,4	1x 100	895	980	166	60	509						
-	3U 18SV/A-550/6T-314	4,7	-	8,5	1x 100	895	980	166	60	509						
-	3U 18V/A-750/8T-314	6,2	-	11,2	1x 100	895	980	166	60	509						
-	3U 18SV/A-750/8T-314	6,2	-	11,2	1x 100	895	980	166	60	509						
-	3U 18V/A-900/9T-318	6,9	-	12,8	1x 100	895	980	166	60	509						
-	3U 18SV/A-900/9T-318	7	-	12,9	1x 100	895	980	166	60	509						



3U V (18)

Variable speed IPFC

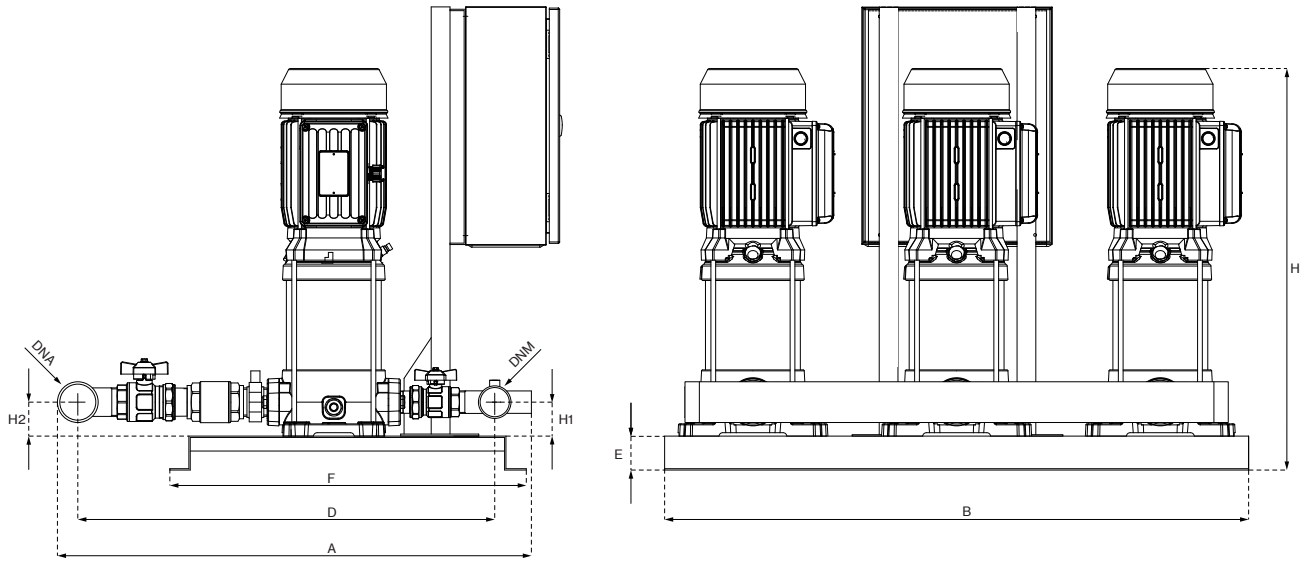


VERTICAL MODEL V (18)		P1	In		Required tank	DIMENSIONS										Kg		
IPFC			3- 230V	3- 400V		Lt	A	B	D	E	F	H	H1	H2	DNA		DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out																	kW (x3)
3U 18V/I-250/3T-114	3U 18V/I-250/3T-306	2,19	7,5	4,3	1x 100	895	980	166	60	509	751	50	211	DN100	DN80	133		
3U 18SV/I-250/3T-114	3U 18SV/I-250/3T-306	2,29	7,6	4,4														
-	3U 18V/I-400/4T-309	3		5,8	1x 100	895	980	166	60	509	843	50	248					162
-	3U 18SV/I-400/4T-309	3,1		5,9														
-	3U 18V/I-450/5T-309	3,9		6,9	1x 100	895	980	166	60	509	910	50	289					177
-	3U 18SV/I-450/5T-309	3,9		6,9														
-	3U 18V/I-550/6T-311	4,6		8,4	1x 100	895	980	166	60	509	948	50	326					190
-	3U 18SV/I-550/6T-311	4,7		8,5														
-	3U 18V/I-750/8T-314	6,2		11,2	1x 100	895	980	166	60	509	1055	50	401					237
-	3U 18SV/I-750/8T-314	6,2		11,2														
-	3U 18V/I-900/9T-318	6,9		12,8	1x 100	895	980	166	60	509	1092	50	439			255		
-	3U 18SV/I-900/9T-318	7		12,9														



3U L (3-5-7-9)

Fixed speed



VERTICAL MODEL L (3-5-7-9)		P1		In		DIMENSIONS										Kg	
		1~	3~	1~	3~	A	B	D	E	F	H	H1	H2	DNA	DNM		
1- 230V	3- 400V	kW (x3)		A (x3)		mm											
3U 3L-100/5	3U 3L-100/5T	1,06	1,01	4,8	1,9	698	860	614	50	509	479	50	50	2" G	1" 1/2 G	87	
3U 3SL-100/5	3U 3SL-100/5T	0,99	0,92	4,4	1,7	698	860	614	50	509	503	50	50			90	
3U 3L-120/6	3U 3L-120/6T	1,23	1,23	5,6	2,6	698	860	614	50	509	587	50	50			101	
3U 3SL-120/6	3U 3SL-120/6T	1,11	1,11	5,1	2,5	698	860	614	50	509	611	50	50			102	
3U 3L-150/7	3U 3L-150/7T	1,54	1,45	7,1	2,9	698	860	614	50	509	635	50	50			103	
3U 3SL-150/7	3U 3SL-150/7T	1,38	1,31	6,4	2,7	698	860	614	50	509	659	50	50			111	
3U 3L-180/8	3U 3L-180/8T	1,7	1,6	7,5	3	698	860	614	50	509	683	50	50			113	
3U 3SL-180/8	3U 3SL-180/8T	1,6	1,55	6,9	2,7	698	860	614	50	509	707	50	50			117	
3U 3L-200/9	3U 3L-200/9T	1,9	1,8	8,4	3,3	698	860	614	50	509	982	50	50			177	
3U 3SL-200/9	3U 3SL-200/9T	1,7	1,6	7,7	3	698	860	614	50	509	1027	50	50			189	
3U 3L-250/10	3U 3L-250/10T	2,1	2	10	4,1	698	860	614	50	509	1075	50	50			195	
3U 3SL-250/10	3U 3SL-250/10T	1,9	1,8	9,2	3,7	698	860	614	50	509	1148	50	50			219	
-	3U 3SLG-350/14T	-	2,5	-	4,7	698	860	614	50	509							
-	3U 3SLG-380/16T	-	2,9	-	5,5	698	860	614	50	509							
-	3U 3SLG-400/18T	-	3,2	-	6	698	860	614	50	509							
-	3U 3SLG-450/20T	-	3,6	-	6,5	698	860	614	50	509							
3U 5L-120/4	3U 5L-120/4T	1,13	1,13	5,2	2,5	759	860	667	50	509	455	50	50	2" 1/2 G	2" G	87	
3U 5SL-120/4	3U 5SL-120/4T	1,09	1,08	4,9	2,4	759	860	667	50	509	539	50	50			96	
3U 5L-150/5	3U 5L-150/5T	1,47	1,39	6,8	2,8	759	860	667	50	509	563	50	50			98	
3U 5SL-150/5	3U 5SL-150/5T	1,39	1,31	6,5	2,7	759	860	667	50	509	587	50	50			102	
3U 5L-180/6	3U 5L-180/6T	1,7	1,62	7,7	3	759	860	667	50	509	611	50	50			107	
3U 5SL-180/6	3U 5SL-180/6T	1,63	1,55	7,3	3	759	860	667	50	509	635	50	50			110	
3U 5L-200/7	3U 5L-200/7T	2	1,86	9	3,4	759	860	667	50	509							
3U 5SL-200/7	3U 5SL-200/7T	1,94	1,77	8,7	3,3	759	860	667	50	509							
3U 5L-250/8	3U 5L-250/8T	2,37	2,17	10,7	4,1	759	860	667	50	509							
3U 5SL-250/8	3U 5SL-250/8T	2,2	2,07	10,1	4	759	860	667	50	509							
3U 5L-280/9	3U 5L-280/9T	2,6	2,4	11,7	4,4	759	860	667	50	509							
3U 5SL-280/9	3U 5SL-280/9T	2,45	2,27	11	4,2	759	860	667	50	509							



3U L (3-5-7-9)

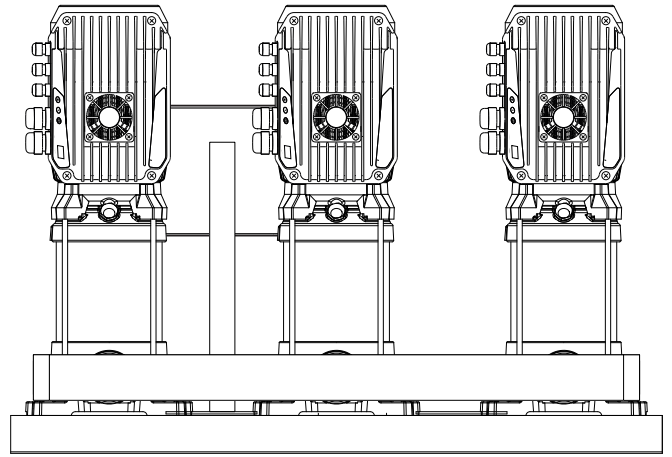
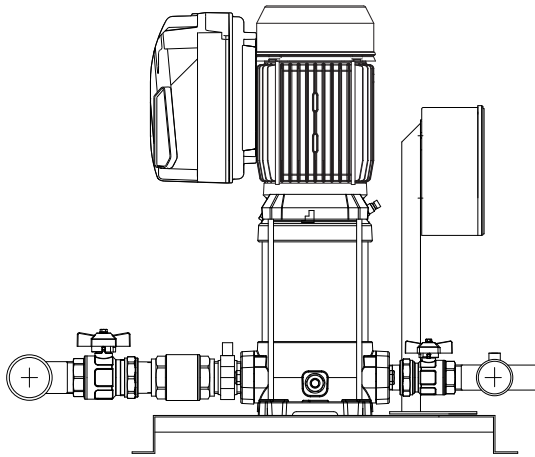
Fixed speed

VERTICAL MODEL L (3-5-7-9)		P1		In		DIMENSIONS								DNA	DNM	Kg				
		1-	3-	1-	3-	A	B	D	E	F	H	H1	H2							
1-	3-	kW (x3)		A (x3)		mm														
3U 5L-300/10	3U 5L-300/10T	2,84	2,73	12,8	4,9	759	860	667	50	509	659	50	50	2" ½ G	2" G	113				
3U 5SL-300/10	3U 5SL-300/10T	2,67	2,57	11,9	4,7															
-	3U 5L-350/11T	-	2,9	-	5,3	759	860	667	50	509	737	50	50					120		
-	3U 5SL-350/11T	-	2,9	-	5,3															
-	3U 5L-380/12T	-	3,2	-	6	759	860	667	50	509	761	50	50					141		
-	3U 5SL-380/12T	-	3,2	-	6															
-	3U 5SLG-400/14T	-	3,5	-	6,3	759	860	667	50	509	982	50	50					185		
-	3U 5SLG-450/16T	-	4,1	-	7,9	759	860	667	50	509	1050	50	50					221		
-	3U 5SLG-550/18T	-	4,5	-	8,3	759	860	667	50	509	1098	50	50			227				
-	3U 5SLG-600/20T	-	5	-	8,9	759	860	667	50	509	1148	50	50			231				
3U 7L-180/4	3U 7L-180/4T	1,83	1,71	8,3	3,2	811	860	712	50	509	515	50	50	3" G	2" ½ G	106				
3U 7SL-180/4	3U 7SL-180/4T	1,69	1,62	7,7	3,1															
3U 7L-250/5	3U 7L-250/5T	2,39	2,15	10,9	4,2	811	860	712	50	509	539	50	50					112		
3U 7SL-250/5	3U 7SL-250/5T	2,19	2,05	10,2	4,1															
3U 7L-300/6	3U 7L-300/6T	2,68	2,63	12,2	5	811	860	712	50	509	563	50	50					117		
3U 7SL-300/6	3U 7SL-300/6T	2,53	2,44	11,4	4,8															
-	3U 7L-350/7T	-	2,8	-	5,1	811	860	712	50	509	640	50	50					133		
-	3U 7SL-350/7T	-	2,9	-	5,3															
-	3U 7L-400/8T	-	3,1	-	5,9	811	860	712	50	509	664	50	50					145		
-	3U 7SL-400/8T	-	3,3	-	6,1															
-	3U 7L-450/9T	-	3,6	-	6,5	811	860	712	50	509	718	50	50					159		
-	3U 7SL-450/9T	-	3,7	-	6,7															
-	3U 7L-550/10T	-	4	-	7,7	811	860	712	50	509	742	50	50					178		
-	3U 7SL-550/10T	-	4,1	-	7,9															
-	3U 7SLG-750/12T	-	5,1	-	9,9	811	860	712	50	509	990	50	50					243		
-	3U 7SLG-800/14T	-	5,9	-	10,9	811	860	712	50	509	1038	50	50					247		
-	3U 7SLG-900/16T	-	6,7	-	12	811	860	712	50	509	1086	50	50					268		
-	3U 7SLG-950/18T	-	7,4	-	12,4	811	860	712	50	509	1131	50	50					294		
-	3U 7SLG-1000/20T	-	8,2	-	13,5	811	860	712	50	509	1178	50	50					297		
3U 9L-200/4	3U 9L-200/4T	1,88	1,77	8,4	3,3	811	860	712	50	509	570	50	50			3" G	2" ½ G	123		
3U 9SL-200/4	3U 9SL-200/4T	1,88	1,77	8,4	3,3															
3U 9L-250/5	3U 9L-250/5T	2,32	2,18	10,6	4,3	811	860	712	50	509	600	50	50							127
3U 9SL-250/5	3U 9SL-250/5T	2,36	2,23	10,8	4,3															
3U 9L-300/6	3U 9L-300/6T	2,74	2,64	12,2	4,8	811	860	712	50	509	630	50	50							132
3U 9SL-300/6	3U 9SL-300/6T	2,78	2,58	12,5	4,9															
-	3U 9L-400/7T	-	3	-	5,8	811	860	712	50	509	713	50	50					157		
-	3U 9SL-400/7T	-	3,1	-	5,9															
-	3U 9L-450/8T	-	3,5	-	6,4	811	860	712	50	509	773	50	50					171		
-	3U 9SL-450/8T	-	3,6	-	6,5															
-	3U 9L-500/9T	-	3,9	-	6,9	811	860	712	50	509	813	50	50					174		
-	3U 9SL-500/9T	-	4	-	7															
-	3U 9L-550/10T	-	4,3	-	8,1	811	860	712	50	509	833	50	50					192		
-	3U 9SL-550/10T	-	4,4	-	8,2															
-	3U 9SLG-750/12T	-	5,3	-	10,1	811	860	712	50	509	1077	50	50					253		
-	3U 9SLG-800/14T	-	6,1	-	11,1	811	860	712	50	509	1138	50	50					258		
-	3U 9SLG-900/16T	-	6,9	-	12,8	811	860	712	50	509	1197	50	50			280				
-	3U 9SLG-950/18T	-	7,6	-	12,7	811	860	712	50	509	1255	50	50			304				
-	3U 9SLG-1000/20T	-	8,5	-	13,9	811	860	712	50	509	1313	50	50			310				



3U L (3-5-7-9)

Variable speed EPIC-A



VERTICAL MODEL L (3÷9)		P1	In		Required tank	DIMENSIONS										Kg	
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM		
1~ 230V-in 3~ 230V-out	3~ 400V-in 3~ 400V-out																kW (×3)
-	3U 3L/A-100/5T-304	1,01	3,3	1,9	3× 8	698	860	614	50	509	479	50	50	2" G	1" ½ G	95	
-	3U 3SL/A-100/5T-304	0,92	2,9	1,7													
-	3U 3L/A-120/6T-304	1,23	4,5	2,6	3× 8	698	860	614	50	509	503	50	50			98	
-	3U 3SL/A-120/6T-304	1,11	4,3	2,5													
-	3U 3L/A-150/7T-304	1,45	5	2,9	3× 8	698	860	614	50	509	587	50	50			109	
-	3U 3SL/A-150/7T-304	1,31	4,7	2,7													
-	3U 3L/A-180/8T-304	1,6	5,2	3	3× 8	698	860	614	50	509	611	50	50			110	
-	3U 3SL/A-180/8T-304	1,55	4,7	2,7													
-	3U 3L/A-200/9T-304	1,8	5,7	3,3	3× 8	698	860	614	50	509	635	50	50			111	
-	3U 3SL/A-200/9T-304	1,6	5,2	3													
-	3U 3L/A-250/10T-306	2	7,1	4,1	3× 8	698	860	614	50	509	659	50	50	119			
-	3U 3SL/A-250/10T-306	1,8	6,4	3,7													
-	3U 3L/A-280/11T-306	2,2	-	4,3	3× 8	698	860	614	50	509	683	50	50	121			
-	3U 3SL/A-280/11T-306	2	6,8	3,9													
-	3U 3L/A-300/12T-306	2,44	-	4,7	3× 8	698	860	614	50	509	707	50	50	125			
-	3U 3SL/A-300/12T-306	2,2	-	4,3													
-	3U 3SLG/A-350/14T-306	2,5	-	4,7	3× 8	698	860	614	50	509	982	50	50	185			
-	3U 3SLG/A-380/16T-309	2,9	-	5,5	3× 8	698	860	614	50	509	1027	50	50	197			
-	3U 3SLG/A-400/18T-309	3,2	-	6	3× 8	698	860	614	50	509	1075	50	50	203			
-	3U 3SLG/A-450/20T-309	3,6	-	6,5	3× 8	698	860	614	50	509	1148	50	50	227			
-	3U 5L/A-120/4T-304	1,13	4,3	2,5	3× 20	759	860	667	50	509	455	50	50	2" ½ G	2" G	95	
-	3U 5SL/A-120/4T-304	1,08	4,2	2,4													
-	3U 5L/A-150/5T-304	1,39	4,9	2,8	3× 20	759	860	667	50	509	539	50	50			104	
-	3U 5SL/A-150/5T-304	1,31	4,7	2,7													
-	3U 5L/A-180/6T-304	1,62	5,2	3	3× 20	759	860	667	50	509	563	50	50			106	
-	3U 5SL/A-180/6T-304	1,55	5,2	3													
-	3U 5L/A-200/7T-304	1,86	5,9	3,4	3× 20	759	860	667	50	509	587	50	50			110	
-	3U 5SL/A-200/7T-304	1,77	5,7	3,3													
-	3U 5L/A-250/8T-306	2,17	7,1	4,1	3× 20	759	860	667	50	509	611	50	50			115	
-	3U 5SL/A-250/8T-306	2,07	6,9	4													
-	3U 5L/A-280/9T-306	2,4	-	4,4	3× 20	759	860	667	50	509	635	50	50	118			
-	3U 5SL/A-280/9T-306	2,27	-	4,2													



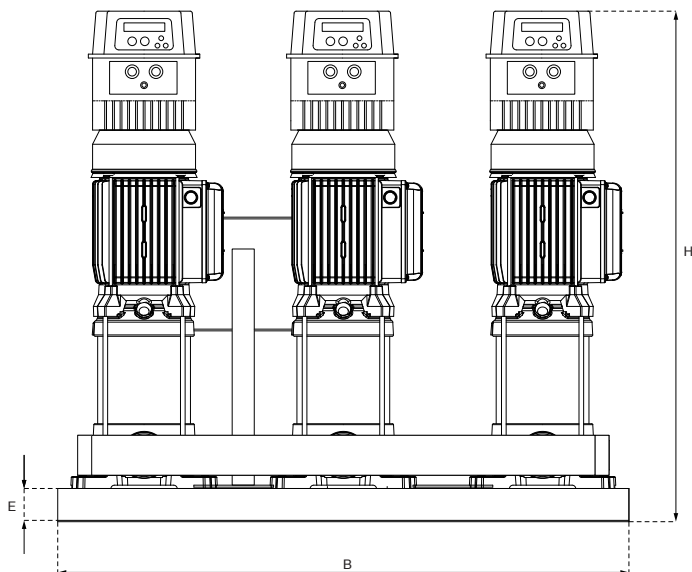
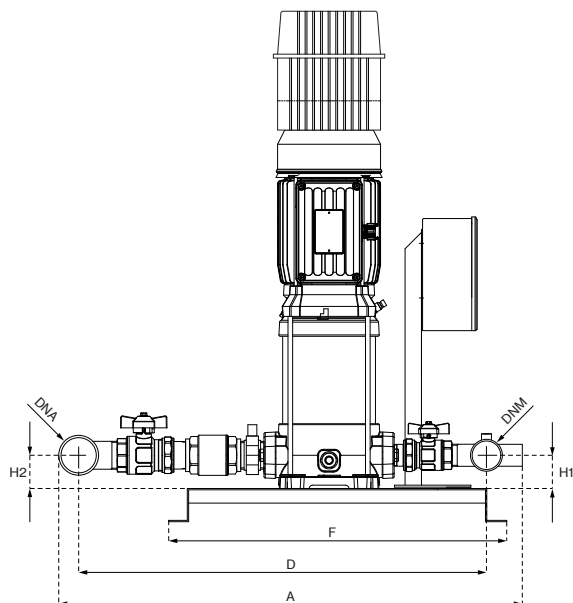
3U L (3-5-7-9) Variable speed EPIC-A

VERTICAL MODEL L (3÷9)		P1	In		Required tank	DIMENSIONS										Kg		
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM			
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out		kW (×3)	A (×3)		Lt	mm											
-	3U 5L/A-300/10T-306	2,73	-	4,9	3× 20	759	860	667	50	509	659	50	50	2" ½ G	2" G	121		
-	3U 5SL/A-300/10T-306	2,57	-	4,7														
-	3U 5L/A-350/11T-306	2,9	-	5,3	3× 20	759	860	667	50	509	737	50	50					12
-	3U 5SL/A-350/11T-306	2,9	-	5,3														
-	3U 5L/A-380/12T-309	3,2	-	6	3× 20	759	860	667	50	509	761	50	50					149
-	3U 5SL/A-380/12T-309	3,2	-	6														
-	3U 5SLG/A-400/14T-309	3,5	-	6,3	3× 20	759	860	667	50	509	982	50	50					193
-	3U 5SLG/A-450/16T-309	4,1	-	7,9	3× 20	759	860	667	50	509	1050	50	50					229
-	3U 5SLG/A-550/18T-314	4,5	-	8,3	3× 20	759	860	667	50	509	1098	50	50					257
-	3U 5SLG/A-600/20T-314	5	-	8,9	3× 20	759	860	667	50	509	1148	50	50					261
-	3U 7L/A-180/4T-304	1,71	5,5	3,2	3× 20	811	860	712	50	509	515	50	50	3" G	2" ½ G	114		
-	3U 7SL/A-180/4T-304	1,62	5,4	3,1														
-	3U 7L/A-250/5T-306	2,15	-	4,2	3× 20	811	860	712	50	509	539	50	50					120
-	3U 7SL/A-250/5T-306	2,05	-	4,1														
-	3U 7L/A-300/6T-306	2,63	-	5	3× 20	811	860	712	50	509	563	50	50					125
-	3U 7SL/A-300/6T-306	2,44	-	4,8														
-	3U 7L/A-350/7T-306	2,8	-	5,1	3× 20	811	860	712	50	509	640	50	50					141
-	3U 7SL/A-350/7T-306	2,9	-	5,3														
-	3U 7L/A-400/8T-309	3,1	-	5,9	3× 20	811	860	712	50	509	664	50	50					153
-	3U 7SL/A-400/8T-309	3,3	-	6,1														
-	3U 7L/A-450/9T-309	3,6	-	6,5	3× 20	811	860	712	50	509	718	50	50			167		
-	3U 7SL/A-450/9T-309	3,7	-	6,7														
-	3U 7L/A-550/10T-309	4	-	7,7	3× 20	811	860	712	50	509	742	50	50			186		
-	3U 7SL/A-550/10T-309	4,1	-	7,9														
-	3U 7SLG/A-750/12T-314	5,1	-	9,9	3× 20	811	860	712	50	509	990	50	50			273		
-	3U 7SLG/A-800/14T-314	5,9	-	10,9	3× 20	811	860	712	50	509	1038	50	50			277		
-	3U 7SLG/A-900/16T-314	6,7	-	12	3× 20	811	860	712	50	509	1086	50	50			298		
-	3U 7SLG/A-950/18T-314	7,4	-	12,4	3× 20	811	860	712	50	509	1131	50	50			324		
-	3U 7SLG/A-1000/20T-318	8,2	-	13,5	3× 20	811	860	712	50	509	1178	50	50			327		
-	3U 9L/A-200/4T-304	1,77	5,7	3,3	3× 20	811	860	712	50	509	570	50	50	3" G	2" ½ G	131		
-	3U 9SL/A-200/4T-304	1,77	5,7	3,3														
-	3U 9L/A-250/5T-306	2,18	-	4,3	3× 20	811	860	712	50	509	600	50	50					135
-	3U 9SL/A-250/5T-306	2,23	-	4,3														
-	3U 9L/A-300/6T-306	2,64	-	4,8	3× 20	811	860	712	50	509	630	50	50					140
-	3U 9SL/A-300/6T-306	2,58	-	4,9														
-	3U 9L/A-400/7T-309	3	-	5,8	3× 20	811	860	712	50	509	713	50	50					165
-	3U 9SL/A-400/7T-309	3,1	-	5,9														
-	3U 9L/A-450/8T-309	3,5	-	6,4	3× 20	811	860	712	50	509	773	50	50					179
-	3U 9SL/A-450/8T-309	3,6	-	6,5														
-	3U 9L/A-500/9T-309	3,9	-	6,9	3× 20	811	860	712	50	509	813	50	50			182		
-	3U 9SL/A-500/9T-309	4	-	7														
-	3U 9L/A-550/10T-309	4,3	-	8,1	3× 20	811	860	712	50	509	833	50	50			222		
-	3U 9SL/A-550/10T-314	4,4	-	8,2														
-	3U 9SLG/A-750/12T-314	5,3	-	10,1	3× 20	811	860	712	50	509	1077	50	50			283		
-	3U 9SLG/A-800/14T-314	6,1	-	11,1	3× 20	811	860	712	50	509	1138	50	50			288		
-	3U 9SLG/A-900/16T-318	6,9	-	12,8	3× 20	811	860	712	50	509	1197	50	50			310		
-	3U 9SLG/A-950/18T-318	7,6	-	12,7	3× 20	811	860	712	50	509	1255	50	50			334		
-	3U 9SLG/A-1000/20T-318	8,5	-	13,9	3× 20	811	860	712	50	509	1313	50	50			340		



3U L (3-5-7-9)

Variable speed IPFC



VERTICAL MODEL L (3÷9)		P1	In		Required tank	DIMENSIONS										Kg		
IPFC			kW (x3)	A (x3)		Lt	A	B	D	E	F	H	H1	H2	DNA		DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out			mm														
3U 3L/I-100/5T-109	3U 3L/I-100/5T-306	1,01	3,3	1,9	3× 8	698	860	614	50	509	689	50	50	2" G	1" ½ G	102		
3U 3SL/I-100/5T-109	3U 3SL/I-100/5T-306	0,92	2,9	1,7	3× 8	698	860	614	50	509	713	50	50			105		
3U 3L/I-120/6T-109	3U 3L/I-120/6T-306	1,23	4,5	2,6	3× 8	698	860	614	50	509	797	50	50			116		
3U 3SL/I-120/6T-109	3U 3SL/I-120/6T-306	1,11	4,3	2,5	3× 8	698	860	614	50	509	821	50	50			117		
3U 3L/I-150/7T-109	3U 3L/I-150/7T-306	1,45	5	2,9	3× 8	698	860	614	50	509	845	50	50			117		
3U 3SL/I-150/7T-109	3U 3SL/I-150/7T-306	1,31	4,7	2,7	3× 8	698	860	614	50	509	869	50	50			126		
3U 3L/I-180/8T-109	3U 3L/I-180/8T-306	1,6	5,2	3	3× 8	698	860	614	50	509	893	50	50			128		
3U 3SL/I-180/8T-109	3U 3SL/I-180/8T-306	1,55	4,7	2,7	3× 8	698	860	614	50	509	917	50	50			132		
3U 3L/I-200/9T-109	3U 3L/I-200/9T-306	1,8	5,7	3,3	3× 8	698	860	614	50	509	1192	50	50			192		
3U 3SL/I-200/9T-109	3U 3SL/I-200/9T-306	1,6	5,2	3	3× 8	698	860	614	50	509	1237	50	50			204		
3U 3L/I-250/10T-114	3U 3L/I-250/10T-306	2	7,1	4,1	3× 8	698	860	614	50	509	1285	50	50			210		
3U 3SL/I-250/10T-114	3U 3SL/I-250/10T-306	1,8	6,4	3,7	3× 8	698	860	614	50	509	1358	50	50			234		
3U 3L/I-280/11T-114	3U 3L/I-280/11T-306	2,2	7,4	4,3	3× 8	698	860	614	50	509								
3U 3SL/I-280/11T-114	3U 3SL/I-280/11T-306	2	6,8	3,9	3× 8	698	860	614	50	509								
3U 3L/I-300/12T-114	3U 3L/I-300/12T-306	2,44	8,1	4,7	3× 8	698	860	614	50	509								
3U 3SL/I-300/12T-114	3U 3SL/I-300/12T-306	2,2	7,4	4,3	3× 8	698	860	614	50	509								
3U 3SLG/I-350/14T-114	3U 3SLG/I-350/14T-306	2,5	8,1	4,7	3× 8	698	860	614	50	509								
3U 3SLG/I-380/16T-114	3U 3SLG/I-380/16T-309	2,9	9,5	5,5	3× 8	698	860	614	50	509								
-	3U 3SLG/I-400/18T-309	3,2	-	6	3× 8	698	860	614	50	509								
-	3U 3SLG/I-450/20T-309	3,6	-	6,5	3× 8	698	860	614	50	509								
3U 5L/I-120/4T-109	3U 5L/I-120/4T-306	1,13	4,3	2,5	3× 20	759	860	667	50	509	665	50	50	2" ½ G	2" G	102		
3U 5SL/I-120/4T-109	3U 5SL/I-120/4T-306	1,08	4,2	2,4	3× 20	759	860	667	50	509	749	50	50			111		
3U 5L/I-150/5T-109	3U 5L/I-150/5T-306	1,39	4,9	2,8	3× 20	759	860	667	50	509	773	50	50			113		
3U 5SL/I-150/5T-109	3U 5SL/I-150/5T-306	1,31	4,7	2,7	3× 20	759	860	667	50	509	797	50	50			117		
3U 5L/I-180/6T-109	3U 5L/I-180/6T-306	1,62	5,2	3	3× 20	759	860	667	50	509	821	50	50			122		
3U 5SL/I-180/6T-109	3U 5SL/I-180/6T-306	1,55	5,2	3	3× 20	759	860	667	50	509	845	50	50			125		
3U 5L/I-200/7T-109	3U 5L/I-200/7T-306	1,86	5,9	3,4	3× 20	759	860	667	50	509	869	50	50			128		
3U 5SL/I-200/7T-109	3U 5SL/I-200/7T-306	1,77	5,7	3,3	3× 20	759	860	667	50	509	947	50	50			135		
3U 5L/I-250/8T-114	3U 5L/I-250/8T-306	2,17	7,1	4,1	3× 20	759	860	667	50	509								
3U 5SL/I-250/8T-114	3U 5SL/I-250/8T-306	2,07	6,9	4	3× 20	759	860	667	50	509								
3U 5L/I-280/9T-114	3U 5L/I-280/9T-306	2,4	7,6	4,4	3× 20	759	860	667	50	509								
3U 5SL/I-280/9T-114	3U 5SL/I-280/9T-306	2,27	7,3	4,2	3× 20	759	860	667	50	509								
3U 5L/I-300/10T-114	3U 5L/I-300/10T-306	2,73	8,5	4,9	3× 20	759	860	667	50	509								
3U 5SL/I-300/10T-114	3U 5SL/I-300/10T-306	2,57	8,1	4,7	3× 20	759	860	667	50	509								
3U 5L/I-350/11T-114	3U 5L/I-350/11T-306	2,9	9,2	5,3	3× 20	759	860	667	50	509								
3U 5SL/I-350/11T-114	3U 5SL/I-350/11T-306	2,9	9,2	5,3	3× 20	759	860	667	50	509								



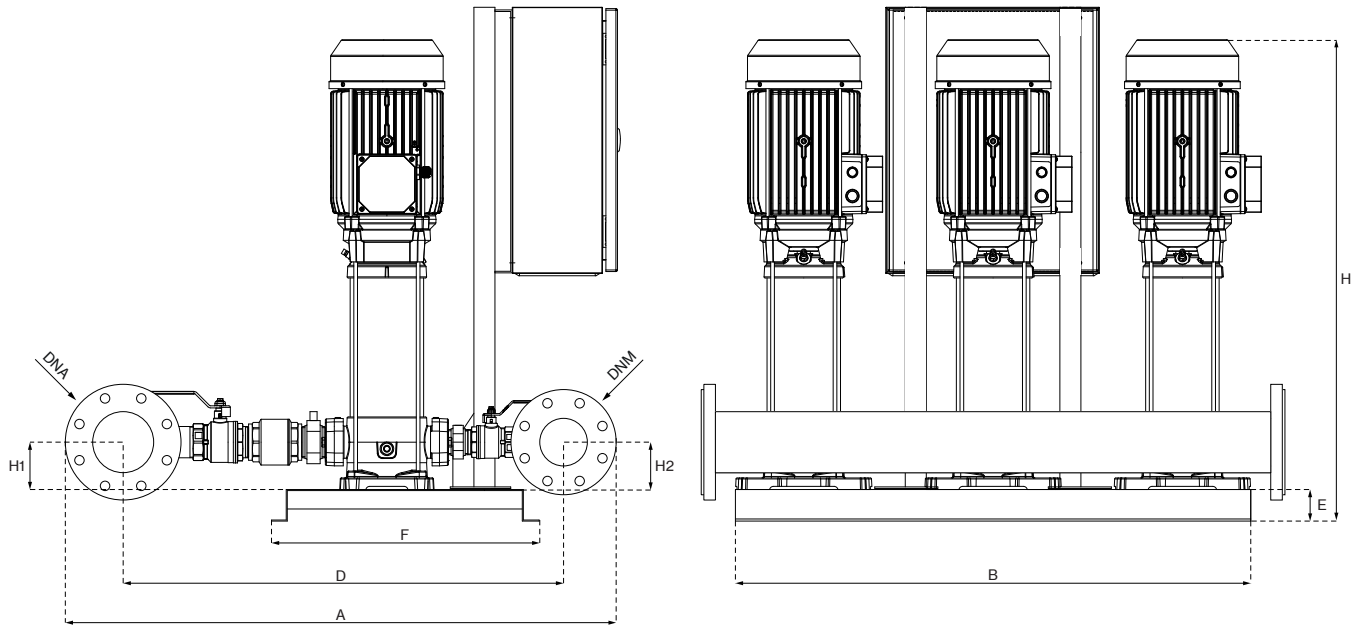
3U L (3-5-7-9) Variable speed IPFC

VERTICAL MODEL L (3÷9)		P1	In		Required tank	DIMENSIONS										Kg	
IPFC			3- 230V	3- 400V		Lt	A	B	D	E	F	H	H1	H2	DNA		DNM
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out																
-	3U 5L/I-380/12T-309	3,2	-	6	3×20	759	860	667	50	509	971	50	50	2" ½ G	2" G	156	
-	3U 5SL/I-380/12T-309	3,2	-	6	3×20	759	860	667	50	509	1192	50	50			200	
-	3U 5SLG/I-400/14T-309	3,5	-	6,3	3×20	759	860	667	50	509	1260	50	50			236	
-	3U 5SLG/I-450/16T-309	4,1	-	7,9	3×20	759	860	667	50	509	1308	50	50			242	
-	3U 5SLG/I-600/20T-311	5	-	8,9	3×20	759	860	667	50	509	1358	50	50			246	
3U 7L/I-180/4T-109	3U 7L/I-180/4T-306	1,71	5,5	3,2	3×20	811	860	712	50	509	725	50	50	3" G	2" ½ G	121	
3U 7SL/I-180/4T-109	3U 7SL/I-180/4T-306	1,62	5,4	3,1	3×20	811	860	712	50	509	749	50	50			127	
3U 7L/I-250/5T-114	3U 7L/I-250/5T-306	2,15	7,3	4,2	3×20	811	860	712	50	509	773	50	50			132	
3U 7SL/I-250/5T-114	3U 7SL/I-250/5T-306	2,05	7,1	4,1	3×20	811	860	712	50	509	850	50	50			148	
3U 7L/I-300/6T-114	3U 7L/I-300/6T-306	2,63	8,7	5	3×20	811	860	712	50	509	874	50	50			160	
3U 7SL/I-300/6T-114	3U 7SL/I-300/6T-306	2,44	8,3	4,8	3×20	811	860	712	50	509	928	50	50			174	
3U 7L/I-350/7T-114	3U 7L/I-350/7T-306	2,8	8,8	5,1	3×20	811	860	712	50	509	952	50	50			193	
3U 7SL/I-350/7T-114	3U 7SL/I-350/7T-306	2,9	9,2	5,3	3×20	811	860	712	50	509	1200	50	50			258	
-	3U 7L/I-400/8T-309	3,1	-	5,9	3×20	811	860	712	50	509	1218	50	50			274	
-	3U 7SL/I-400/8T-309	3,3	-	6,1	3×20	811	860	712	50	509	1266	50	50			295	
-	3U 7L/I-450/9T-309	3,6	-	6,5	3×20	811	860	712	50	509	1311	50	50			321	
-	3U 7SL/I-450/9T-309	3,7	-	6,7	3×20	811	860	712	50	509	1358	50	50			324	
-	3U 7L/I-550/10T-309	4	-	7,7	3×20	811	860	712	50	509	1200	50	50			258	
-	3U 7SL/I-550/10T-309	4,1	-	7,9	3×20	811	860	712	50	509	1218	50	50			274	
-	3U 7SLG/I-750/12T-311	5,1	-	9,9	3×20	811	860	712	50	509	1266	50	50			295	
-	3U 7SLG/I-800/14T-314	5,9	-	10,9	3×20	811	860	712	50	509	1311	50	50	321			
-	3U 7SLG/I-900/16T-314	6,7	-	12	3×20	811	860	712	50	509	1358	50	50	324			
-	3U 7SLG/I-950/18T-314	7,4	-	12,4	3×20	811	860	712	50	509	1358	50	50	324			
-	3U 7SLG/I-1000/20T-318	8,2	-	13,5	3×20	811	860	712	50	509	1358	50	50	324			
3U 9L/I-200/4T-109	3U 9L/I-200/4T-306	1,77	5,7	3,3	3×20	811	860	712	50	509	780	50	50	3" G	2" ½ G	138	
3U 9SL/I-200/4T-109	3U 9SL/I-200/4T-306	1,77	5,7	3,3	3×20	811	860	712	50	509	810	50	50			142	
3U 9L/I-250/5T-114	3U 9L/I-250/5T-306	2,18	7,5	4,3	3×20	811	860	712	50	509	840	50	50			147	
3U 9SL/I-250/5T-114	3U 9SL/I-250/5T-306	2,23	7,5	4,3	3×20	811	860	712	50	509	923	50	50			172	
3U 9L/I-300/6T-114	3U 9L/I-300/6T-306	2,64	8,3	4,8	3×20	811	860	712	50	509	983	50	50			186	
3U 9SL/I-300/6T-114	3U 9SL/I-300/6T-306	2,58	8,5	4,9	3×20	811	860	712	50	509	1023	50	50			189	
-	3U 9L/I-400/7T-309	3	-	5,8	3×20	811	860	712	50	509	1043	50	50			207	
-	3U 9SL/I-400/7T-309	3,1	-	5,9	3×20	811	860	712	50	509	1043	50	50			207	
-	3U 9L/I-450/8T-309	3,5	-	6,4	3×20	811	860	712	50	509	1257	50	50			280	
-	3U 9SL/I-450/8T-309	3,6	-	6,5	3×20	811	860	712	50	509	1318	50	50			285	
-	3U 9L/I-500/9T-309	3,9	-	6,9	3×20	811	860	712	50	509	1377	50	50			307	
-	3U 9SL/I-500/9T-309	4	-	7	3×20	811	860	712	50	509	1435	50	50			331	
-	3U 9L/I-550/10T-309	4,3	-	8,1	3×20	811	860	712	50	509	1435	50	50			331	
-	3U 9SL/I-550/10T-311	4,4	-	8,2	3×20	811	860	712	50	509	1493	50	50			337	
-	3U 9SLG/I-750/12T-314	5,3	-	10,1	3×20	811	860	712	50	509	1493	50	50			337	
-	3U 9SLG/I-800/14T-314	6,1	-	11,1	3×20	811	860	712	50	509	1493	50	50	337			
-	3U 9SLG/I-900/16T-318	6,9	-	12,8	3×20	811	860	712	50	509	1493	50	50	337			
-	3U 9SLG/I-950/18T-318	7,6	-	12,7	3×20	811	860	712	50	509	1493	50	50	337			
-	3U 9SLG/I-1000/20T-318	8,5	-	13,9	3×20	811	860	712	50	509	1493	50	50	337			



3U L (18)

Fixed speed

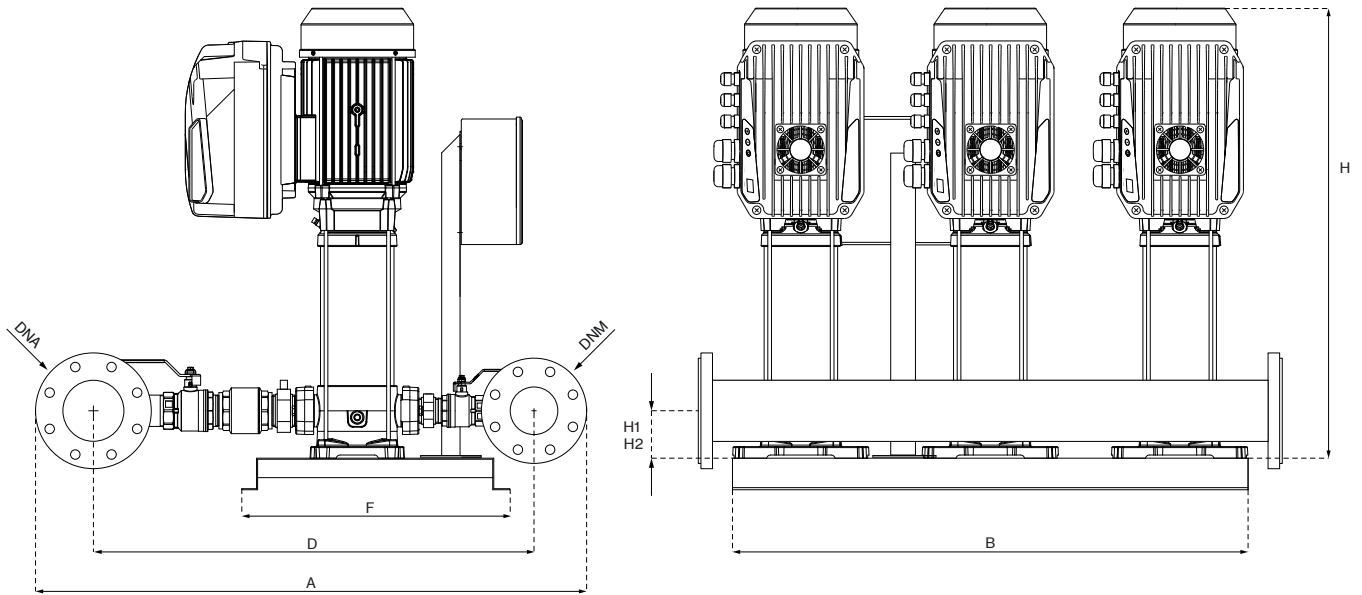


VERTICAL MODEL L (18)		P1		In		DIMENSIONS										DNA	DNM	Kg
		1~	3~	1~	3~	A	B	D	E	F	H	H1	H2					
1- 230V	3- 400V	kW (x3)		A (x3)		mm												
-	3U 18L-250/3T	-	2,19	-	4,3	1048	980	838	60	509	542	90	90			135		
-	3U 18SL-250/3T	-	2,29	-	4,4	1048	980	838	60	509	663	90	90			163		
-	3U 18L-400/4T	-	3	-	5,8	1048	980	838	60	509	740	90	90			178		
-	3U 18SL-400/4T	-	3,1	-	5,9	1048	980	838	60	509	778	90	90	DN100	DN80	196		
-	3U 18L-450/5T	-	3,9	-	6,9	1048	980	838	60	509	915	90	90			223		
-	3U 18SL-450/5T	-	3,9	-	6,9	1048	980	838	60	509	953	90	90			241		
-	3U 18L-550/6T	-	4,6	-	8,4	1048	980	838	60	509	1079	90	90			249		
-	3U 18SL-550/6T	-	4,7	-	8,5	1048	980	838	60	509	1117	90	90			273		
-	3U 18L-750/8T	-	6,2	-	11,2	1048	980	838	60	509		90	90					
-	3U 18SL-750/8T	-	6,2	-	11,2	1048	980	838	60	509		90	90					
-	3U 18L-900/9T	-	6,9	-	12,8	1048	980	838	60	509		90	90					
-	3U 18SL-900/9T	-	7	-	12,9	1048	980	838	60	509		90	90					
-	3U 18LG-920/10T	-	7,7	-	14	1048	980	838	60	509		90	90					
-	3U 18LG-1000/11T	-	8,3	-	13,6	1048	980	838	60	509		90	90					



3U L (18)

Variable speed EPIC-A

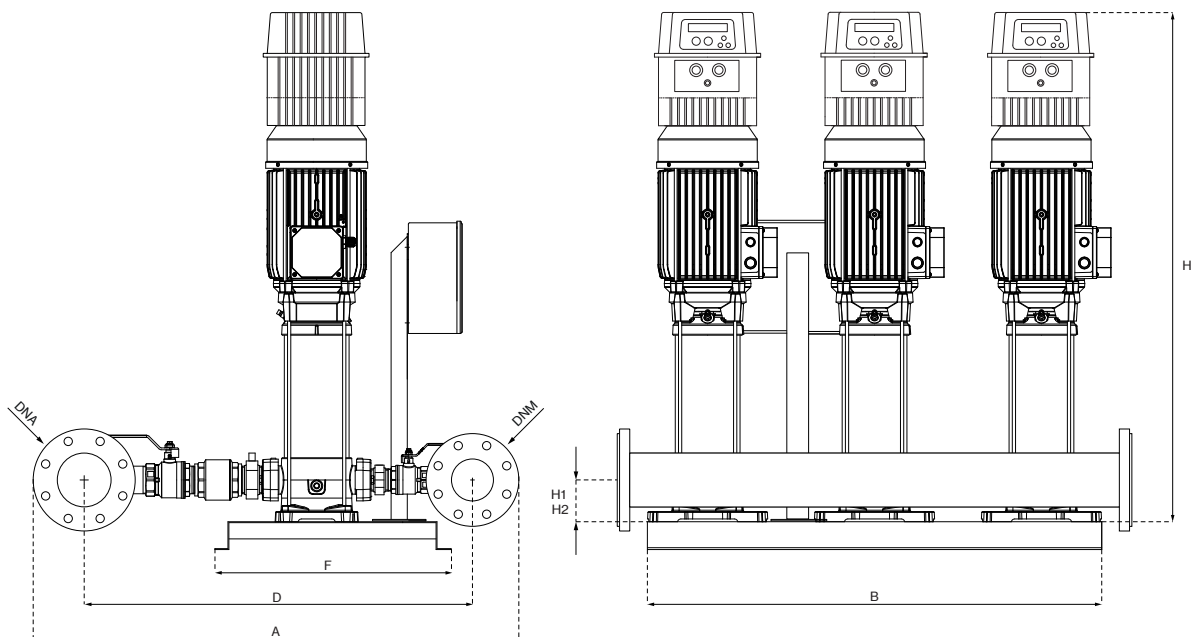


VERTICAL MODEL L (18)		P1	In		Required tank	DIMENSIONS										Kg	
EPIC	EPIC-A		3- 230V	3- 400V		A	B	D	E	F	H	H1	H2	DNA	DNM		
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out	kW (x3)	A (x3)		Lt	mm											
-	3U 18L/A-250/3T-306	2,19	7,5	4,3	1x 100	1048	980	838	60	509	542	90	90			143	
-	3U 18SL/A-250/3T-306	2,29	7,6	4,4													
-	3U 18L/A-400/4T-309	3	-	5,8	1x 100	1048	980	838	60	509	663	90	90			171	
-	3U 18SL/A-400/4T-309	3,1	-	5,9													
-	3U 18L/A-450/5T-309	3,9	-	6,9	1x 100	1048	980	838	60	509	740	90	90			186	
-	3U 18SL/A-450/5T-309	3,9	-	6,9													
-	3U 18L/A-550/6T-314	4,6	-	8,4	1x 100	1048	980	838	60	509	778	90	90	DN100	DN80	226	
-	3U 18SL/A-550/6T-314	4,7	-	8,5													
-	3U 18L/A-750/8T-314	6,2	-	11,2	1x 100	1048	980	838	60	509	915	90	90			253	
-	3U 18SL/A-750/8T-314	6,2	-	11,2													
-	3U 18L/A-900/9T-318	6,9	-	12,8	1x 100	1048	980	838	60	509	953	90	90			271	
-	3U 18SL/A-900/9T-318	7	-	12,9													
-	3U 18LG/A-920/10T-318	7,7	-	14	1x 100	1048	980	838	60	509	1079	90	90			279	
-	3U 18LG/A-1000/11T-318	8,3	-	13,6	1x 100	1048	980	838	60	509	1117	90	90			303	



3U L (18)

Variable speed IPFC

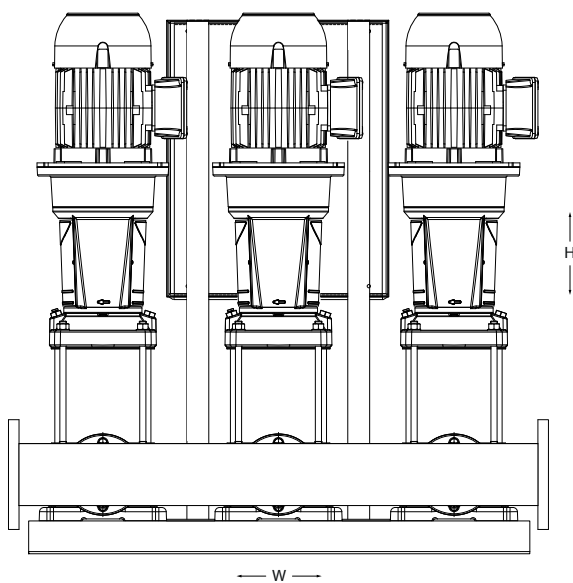
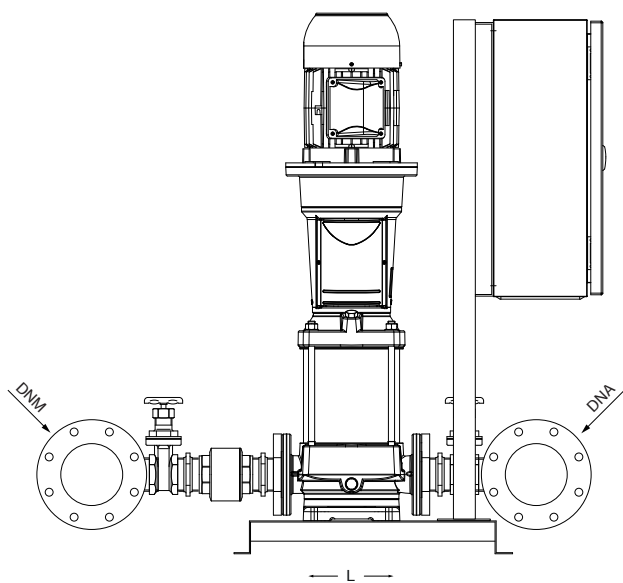


VERTICAL MODEL L (18)		P1	In		Required tank	DIMENSIONS										Kg
IPFC			kW (x3)	3- 230V		3- 400V	Lt	A	B	D	E	F	H	H1	H2	
1~ 230V-in 3~ 230V-out	3~ 400V-in 3~ 400V-out	A (x3)		mm												
3U 18L/I-250/3T-114	3U 18L/I-250/3T-306	2,19	7,5	4,3	1x 100	1048	980	838	60	509	752	90	90	DN100	DN80	150
3U 18SL/I-250/3T-114	3U 18SL/I-250/3T-306	2,29	7,6	4,4	1x 100	1048	980	838	60	509	752	90	90			178
-	3U 18L/I-400/4T-309	3	-	5,8	1x 100	1048	980	838	60	509	873	90	90			193
-	3U 18SL/I-400/4T-309	3,1	-	5,9	1x 100	1048	980	838	60	509	873	90	90			211
-	3U 18L/I-450/5T-309	3,9	-	6,9	1x 100	1048	980	838	60	509	950	90	90			250
-	3U 18SL/I-450/5T-309	3,9	-	6,9	1x 100	1048	980	838	60	509	950	90	90			268
-	3U 18L/I-550/6T-311	4,6	-	8,4	1x 100	1048	980	838	60	509	988	90	90			276
-	3U 18SL/I-550/6T-311	4,7	-	8,5	1x 100	1048	980	838	60	509	988	90	90			300
-	3U 18L/I-750/8T-314	6,2	-	11,2	1x 100	1048	980	838	60	509	1095	90	90			
-	3U 18SL/I-750/8T-314	6,2	-	11,2	1x 100	1048	980	838	60	509	1095	90	90			
-	3U 18L/I-900/9T-318	6,9	-	12,8	1x 100	1048	980	838	60	509	1133	90	90			
-	3U 18SL/I-900/9T-318	7	-	12,9	1x 100	1048	980	838	60	509	1133	90	90			
-	3U 18LG/I-920/10T-318	7,7	-	14	1x 100	1048	980	838	60	509	1259	90	90			
-	3U 18LG/I-1000/11T-318	8,3	-	13,6	1x 100	1048	980	838	60	509	1297	90	90			



3U H (18-22)

Fixed speed

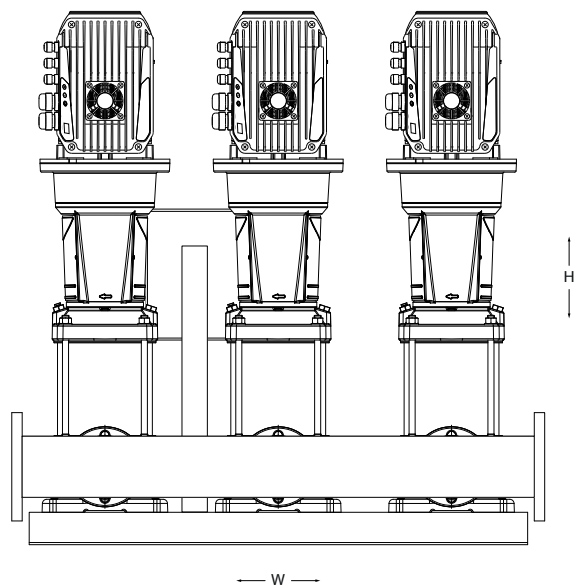
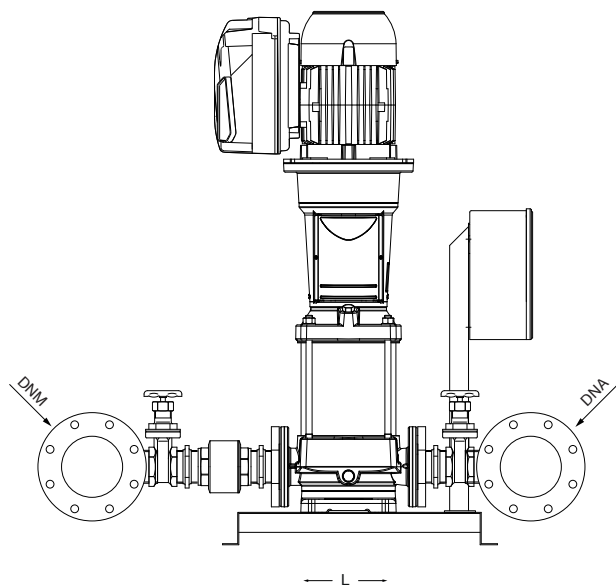


VERTICAL MODEL H (18-22)		P1		In		DIMENSIONS				Kg	
		1~	3~	1~	3~	L	W	H	DNA		DNM
1- 230V	3- 400V	kW (x3)		A (x3)		mm					
-	3U 18HX-300/3T	-	2,31	-	4,2	1000	1110	1260	DN100	DN80	189
-	3U 18HX-400/4T	-	3,2	-	5,1	1000	1110	1260			219
-	3U 18HX-550/5T	-	4,3	-	7,6	1000	1110	1260			247,5
-	3U 18HX-750/6T	-	5	-	8,4	1000	1110	1260			381
-	3U 18HX-750/7T	-	5,8	-	9,5	1000	1110	1260			384
-	3U 18HX-1000/8T	-	6,5	-	11,3	1000	1110	1260			405
-	3U 18HX-1000/9T	-	7,3	-	12,3	1000	1110	1260			409,5
-	3U 22HX-400/3T	-	3,3	-	5,3	1000	1110	1280	DN125	DN100	216
-	3U 22HX-550/4T	-	4,6	-	8,1	1000	1110	1280			243
-	3U 22HX-750/5T	-	5,9	-	9,5	1000	1110	1280			376,5
-	3U 22HX-1000/6T	-	6,7	-	11,4	1000	1110	1280			402
-	3U 22HX-1000/7T	-	7,7	-	12,8	1000	1110	1280			405



3U H (18-22)

Variable speed EPIC-A

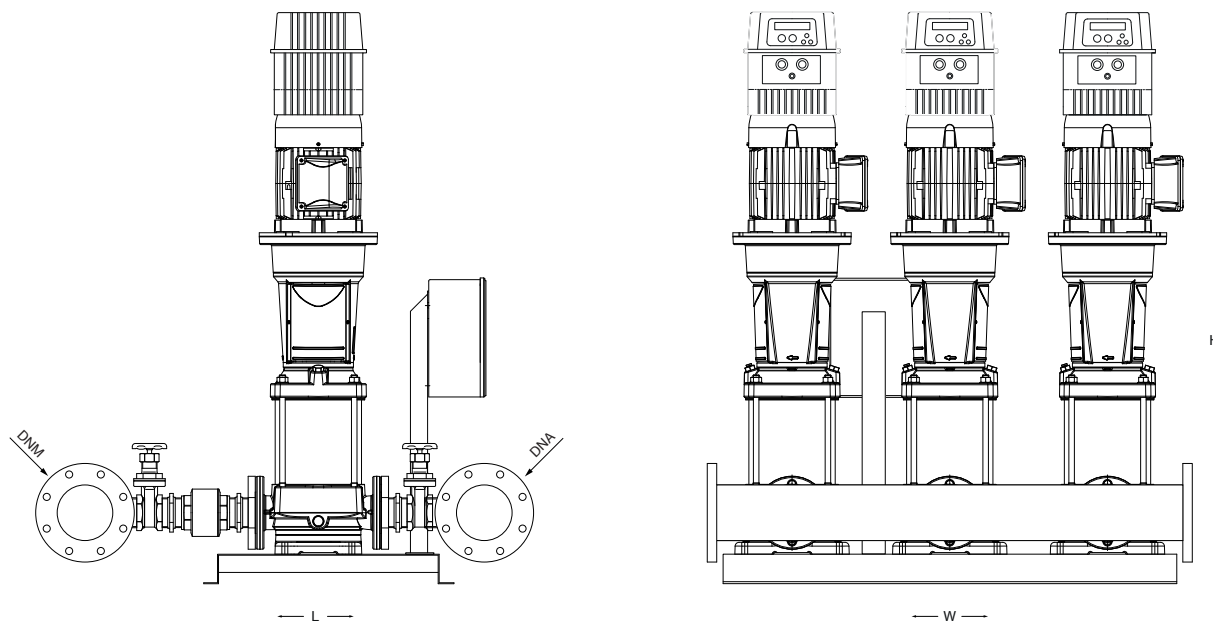


VERTICAL MODEL H (18-22) EPIC-A 3~ 400V-in 3~ 400V-out	P1	In	Required tank	DIMENSIONS					Kg
				L	W	H	DNA	DNM	
	kW (x3)	A (x3)	Lt	mm					
3U 18HX/A-300/3T-306	2,31	4,2	1x 80	1000	1110	800	DN100	DN80	212
3U 18HX/A-400/4T-306	3,2	5,1	1x 80	1000	1110	890			242
3U 18HX/A-550/5T-309	4,3	7,6	1x 80	1000	1110	980			270,5
3U 18HX/A-750/6T-314	5	8,4	1x 80	1000	1110	1070			426
3U 18HX/A-750/7T-314	5,8	9,5	1x 80	1000	1110	1120			429
3U 18HX/A-1000/8T-314	6,5	11,3	1x 80	1000	1110	1200			438
3U 18HX/A-1000/9T-314	7,3	12,3	1x 80	1000	1110	1250			442,5
3U 22HX/A-400/3T-306	3,3	5,3	1x 80	1000	1110	1000	DN125	DN100	239
3U 22HX/A-550/4T-309	4,6	8,1	1x 80	1000	1110	1050			288
3U 22HX/A-750/5T-314	5,9	9,5	1x 80	1000	1110	1190			421,5
3U 22HX/A-1000/6T-314	6,7	11,4	1x 80	1000	1110	1240			435
3U 22HX/A-1000/7T-318	7,7	12,8	1x 80	1000	1110	1290			438



3U H (18-22)

Variable speed IPFC

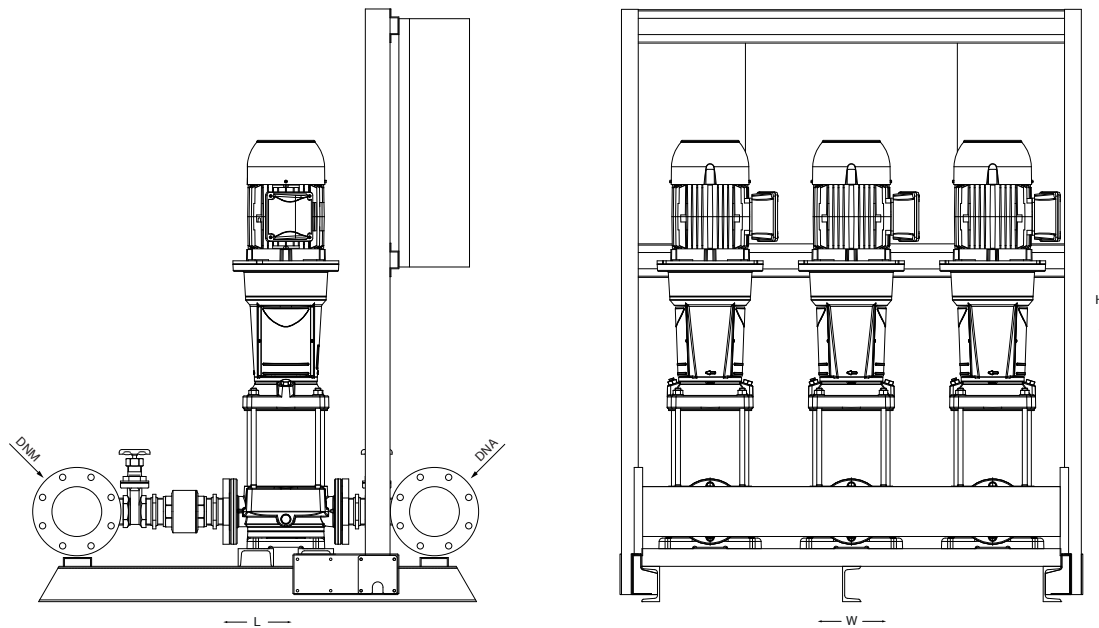


VERTICAL MODEL H (18-22)		P1	In		Required tank Lt	DIMENSIONS					Kg
IPFC			3- 230V	3- 400V		L	W	H	DNA	DNM	
1- 230V-in 3- 230V-out	3- 400V-in 3- 400V-out										
3U 18HX/I-300/3T-114	3U 18HX/I-300/3T-306	2,31	7,3	4,2	1x 80	1000	1110	1100	DN100	DN80	219
3U 18HX/I-400/4T-114	3U 18HX/I-400/4T-306	3,2	8,8	5,1	1x 80	1000	1110	1190			249
-	3U 18HX/I-550/5T-309	4,3	-	7,6	1x 80	1000	1110	1280			277,5
-	3U 18HX/I-750/6T-311	5	-	8,4	1x 80	1000	1110	1370			411
-	3U 18HX/I-750/7T-311	5,8	-	9,5	1x 80	1000	1110	1420			414
-	3U 18HX/I-1000/8T-314	6,5	-	11,3	1x 80	1000	1110	1500			435
-	3U 18HX/I-1000/9T-314	7,3	-	12,3	1x 80	1000	1110	1550	439,5		
3U 22HX/I-400/3T-114	3U 22HX/I-400/3T-306	3,3	9,2	5,3	1x 80	1000	1110	1300	DN125	DN100	246
-	3U 22HX/I-550/4T-309	4,6	-	8,1	1x 80	1000	1110	1350			273
-	3U 22HX/I-750/5T-311	5,9	-	9,5	1x 80	1000	1110	1490			406,5
-	3U 22HX/I-1000/6T-314	6,7	-	11,4	1x 80	1000	1110	1540			432
-	3U 22HX/I-1000/7T-318	7,7	-	12,8	1x 80	1000	1110	1590			435



3U H (35-50-75-90)

Fixed speed

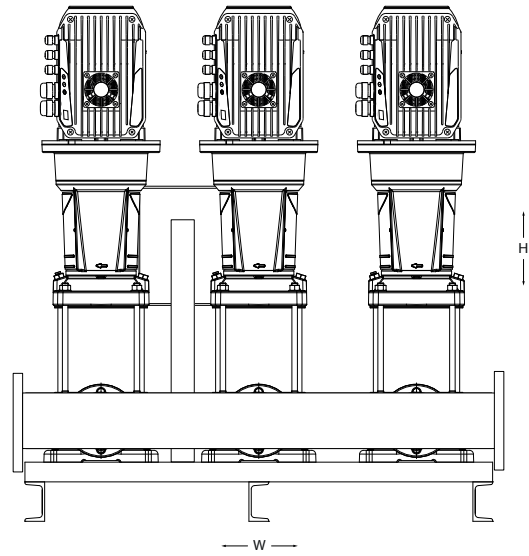
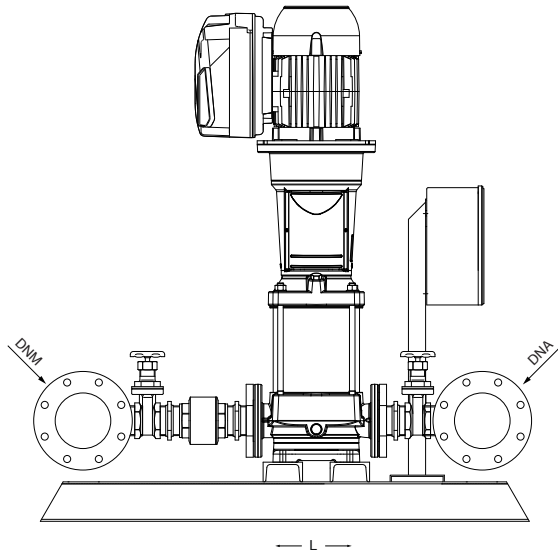


VERTICAL MODEL H (35-90)		P1		In		DIMENSIONS			DNA	DNM	Kg
		1~	3~	1~	3~	L	W	H			
1- 230	3- 400	kW (x3)		A (x3)		mm					
-	3U 35HS-750/2T	-	5,0	-	8,3	1150	1220	1550	DN125	DN125	698
-	3U 35HS-1000/3T	-	7,2	-	12,2	1150	1220	1550			744
-	3U 35HS-1000/4-2RT	-	8,5	-	13,7	1150	1220	1550			759
-	3U 35HS-1500/4-1RT	-	9,4	-	15,5	1150	1220	1550			775
-	3U 35HS-1500/4T	-	10,1	-	16,6	1150	1220	1550			775
-	3U 35HS-2000/5T	-	12,1	-	19,4	1150	1220	1660			837
-	3U 35HS-2000/6T	-	14,4	-	24,0	1150	1220	1760			899
-	3U 35HS-2000/7-1RT	-	16,1	-	26,4	1150	1220	1860			930
-	3U 50HS-1000/2T	-	7,7	-	12,7	1450	1270	1520	DN150	DN150	744
-	3U 50HS-1500/3T	-	11,5	-	18,6	1450	1270	1520			775
-	3U 50HS-2000/4T	-	15,1	-	24,9	1450	1270	1520			899
-	3U 50HS-2500/5T	-	19,0	-	31,7	1450	1270	1700			930
-	3U 50HS-3000/6T	-	22,4	-	37,0	1450	1270	1790			1008
-	3U 75HS-1500/2T	-	11,6	-	18,7	1450	1300	1540	DN200	DN200	822
-	3U 75HS-2500/3T	-	17,4	-	29,4	1450	1300	1540			837
-	3U 75HS-3000/4T	-	22,7	-	37,5	1450	1300	1710			868
-	3U 75HS-4000/5T	-	29,3	-	47,7	1450	1300	1810			1442
-	3U 75HS-4000/6-2RT	-	31,0	-	50,2	1450	1300	1910			1473
-	3U 90HS-1500/2-2RT	-	11,0	-	17,9	1640	1400	1550	DN250	DN250	853
-	3U 90HS-2000/2T	-	15,4	-	25,4	1640	1400	1550			884
-	3U 90HS-3000/3T	-	22,9	-	37,8	1640	1400	1670			1240
-	3U 90HS-4000/4T	-	31,6	-	51,2	1640	1400	1890			1783
-	3U 90HS-5000/5T	-	39,4	-	63,2	1640	1400	2000			1814



3U H (35-50-75-90)

Variable speed EPIC-A

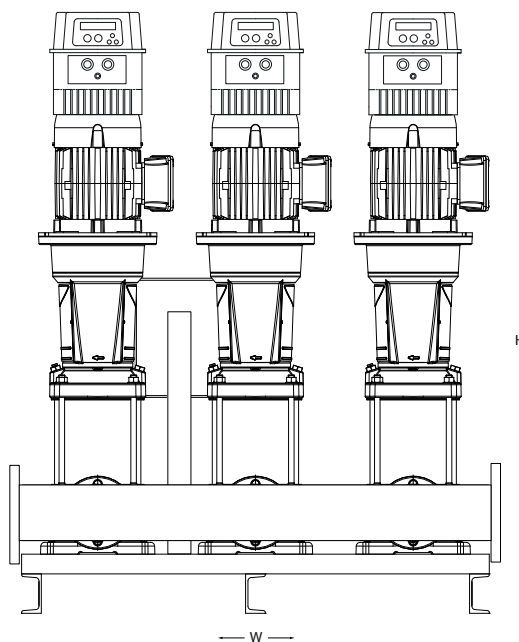
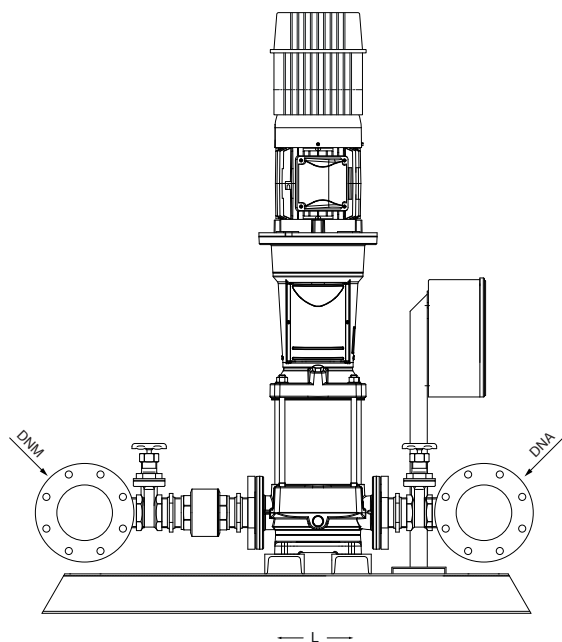


VERTICAL MODEL H (35-90) EPIC-A 3~ 400V-in 3~ 400V-out	P1	In 3~ 400V	Required tank Lt	DIMENSIONS					Kg
				L	W	H	DNA	DNM	
	kW (x3)	A (x3)	mm						
3U 35HS/A-750/2T-314	5,0	8,3	1× 200	1150	1220	1550	DN125	DN125	743
3U 35HS/A-1000/3T-314	7,2	12,2	1× 200	1150	1220	1550			777
3U 35HS/A-1000/4-2RT-318	8,5	13,7	1× 200	1150	1220	1550			792
3U 35HS/A-1500/4-1RT-318	9,4	15,5	1× 200	1150	1220	1550			808
3U 35HS/A-1500/4T-325	10,1	16,6	1× 200	1150	1220	1550			808
3U 35HS/A-2000/5T-325	12,1	19,4	1× 200	1150	1220	1669			870
3U 35HS/A-2000/6T-330	14,4	24,0	1× 200	1150	1220	1760			932
3U 35HS/A-2000/7-1RT-330	16,1	26,4	1× 200	1150	1220	1860	963		
3U 50HS/A-1000/2T-318	7,7	12,7	1× 300	1450	1270	1520	DN150	DN150	777
3U 50HS/A-1500/3T-325	11,5	18,6	1× 300	1450	1270	1520			808
3U 50HS/A-2000/4T-330	15,1	24,9	1× 300	1450	1270	1520			932
3U 50HS/A-2500/5T-338	19	31,7	1× 300	1450	1270	1700			976
3U 50HS/A-3000/6T-344	22,4	37,0	1× 300	1450	1270	1790	1094		
3U 75HS/A-1500/2T-325	11,6	18,7	1× 500	1450	1300	1520	DN200	DN200	855
3U 75HS/A-2500/3T-338	17,4	29,4	1× 500	1450	1300	1520			924
3U 75HS/A-3000/4T-344	22,7	37,5	1× 500	1450	1300	1690			1042
3U 90HS/A-1500/2-2RT-325	11,0	17,9	1× 500	1640	950	1530	DN250	DN250	886
3U 90HS/A-2000/2T-330	15,4	25,4	1× 500	1640	1400	1530			917
3U 90HS/A-3000/3T-344	22,9	37,8	1× 500	1640	1400	1650			1070



3U H (35-50-75-90)

Variable speed IPFC



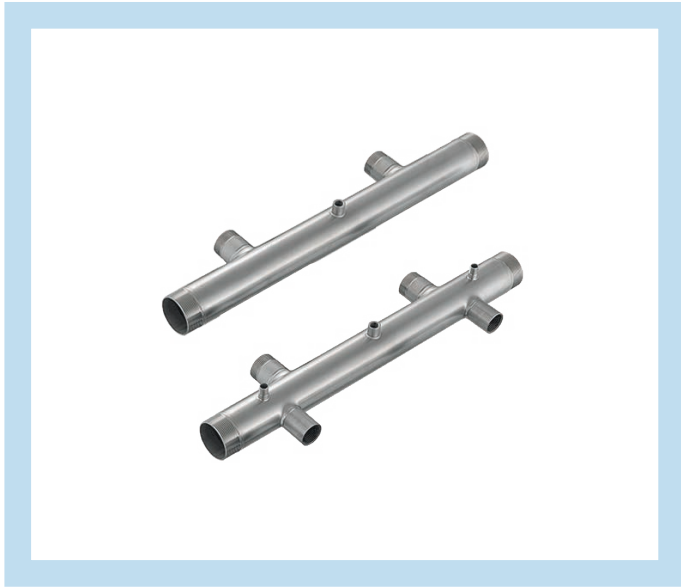
VERTICAL MODEL H (35-90) IPFC 3- 400V-in 3- 400V-out	P1	In	Required tank Lt	DIMENSIONS					Kg
		3- 400V		L	W	H	DNA	DNM	
	kW (x3)	A (x3)	mm						
3U 35HS/I-750/2T-311	5,0	8,3	1x 200	1150	1220	1850	DN125	DN125	728
3U 35HS/I-1000/3T-314	7,2	12,2	1x 200	1150	1220	1850			774
3U 35HS/I-1000/4-2RT-318	8,5	13,7	1x 200	1150	1220	1850			789
3U 35HS/I-1500/4-1RT-318	9,4	15,5	1x 200	1150	1220	1850			805
3U 35HS/I-1500/4T-325	10,1	16,6	1x 200	1150	1220	1850			805
3U 35HS/I-2000/5T-325	12,1	19,4	1x 200	1150	1220	1960			867
3U 35HS/I-2000/6T-330	14,4	24,0	1x 200	1150	1220	2060			929
3U 35HS/I-2000/7-1RT-330	16,1	26,4	1x 200	1150	1220	2160	960		
3U 50HS/I-1000/2T-318	7,7	12,7	1x 300	1450	1270	1820	DN150	DN150	774
3U 50HS/I-1500/3T-325	11,5	18,6	1x 300	1450	1270	1820			805
3U 50HS/I-2000/4T-330	15,1	24,9	1x 300	1450	1270	1820			929
3U 75HS/I-1500/2T-325	11,6	18,7	1x 500	1450	1300	1840	DN200	DN200	852
3U 90HS/I-1500/2-2RT-325	11,0	17,9	1x 500	1640	1400	1850	DN250	DN250	883
3U 90HS/I-2000/2T-330	15,4	25,4	1x 500	1640	1400	1850			914



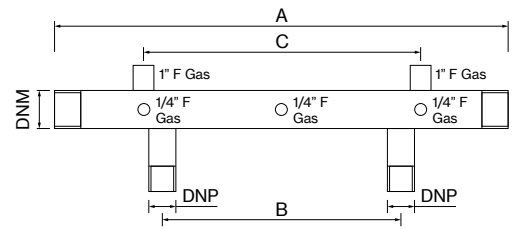


ACCESSORIES

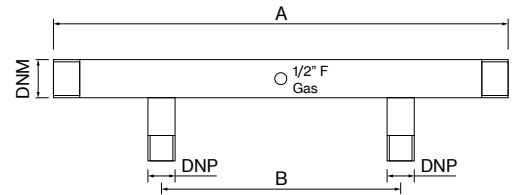
MANIFOLDS



DELIVERY MANIFOLDS



SUCTION MANIFOLDS



GALVANIZED MANIFOLDS

TYPE	MODELS		MEASURES			Kg
	DNM to the pipes	DNP to the pump	A	B	C	
			mm			
DELIVERY 2 pumps	1" ½	1"	500	300	370	2
	2"	1" ¼	500	300	370	2,5
	2" ½	1" ¼	500	300	370	3
	2"	1" ¼	700	360	370	3
	3"	1" ½	700	360	370	13
	2" ½	1" ½	500	300	370	3
SUCTION 2 pumps	1" ½	1"	500	300	-	2
	2"	1" ¼	500	300	-	2
	2" ½	1" ½	500	300	-	3
	3"	2"	700	360	-	5,5
	4"	2"	700	360	-	16

STAINLESS STEEL MANIFOLDS

TYPE	MODELS		MEASURES			Kg
	DNM to the pipes	DNP to the pump	A	B	C	
			mm			
DELIVERY 2 pumps	1" ½	1"	600	300	370	2,4
	2"	1" ¼	600	300	370	3
	2" ½	1" ½	600	300	370	3,6
	3"	2"	700	360	430	4
SUCTION 2 pumps	2"	1" ¼	600	300	-	2,4
	2" ½	1" ½	600	300	-	3,6
	3"	2"	700	360	-	5,5



PRESSURE TANKS




Pressure tanks with replaceable membrane, available in red or blue color.

UTILIZATION

Interchangeable membrane expansion tanks; the pre-charge pressure in the tank guarantees a water reserve but also reduces the number of startups of the connected pump; the membranes are certified for use with foodstuffs; they may be in EPDM or butyl depending on the model.

CONSTRUCTION CHARACTERISTICS

Flanges in galvanised steel or AISI 304 stainless steel. Tanks in carbon steel coated with powder paint or in AISI 304 stainless steel. Pre-charge valve with protective cover.

MODEL	TYPE	Capacity	Max pressure	Connection	Dimensions	Packaging	
		litres	bar	inch	mm	m ³	
STANDARD (CE marked)							
AV8	Vertical	8	8	1"	200×348	0,015	2,5
AV24	Vertical	20	8	1"	250×500	0,038	5
AS24	Spheric	24	8	1"	351×358	0,045	4.5
AV50	Vertical	50	10	1"	379×759	0,126	12,5
AV60	Vertical	60	10	1"	379×825	0,131	15
AV80	Vertical	80	10	1"	450×789	0,170	16
AV100	Vertical	100	10	1"	450×910	0,200	18
AV200	Vertical	200	10	1" ½	554×1250	0,407	44
AV300	Vertical	300	10	1" ½	624×1370	0,596	53
AV500	Vertical	500	10	1" ½	790×1460	0,900	100
AV750	Vertical	750	10	1" ½	786×1925	1,300	215
AV1000	Vertical	1000	9,5	2"	945×1912	1,900	265
AV2000	Vertical	2000	9,5	2"	1280×2080	3,720	395
HIGH PRESSURE (CE marked)							
AV8/16	Vertical	8	16	1"	200×320	0,015	4,5
AV20/16	Vertical	20	16	1"	250×509	0,038	7,5
AV50/16	Vertical	50	16	1"	379×759	0,128	13
AV80/16	Vertical	80	16	1"	450×789	0,170	16,5
AV100/16	Vertical	100	16	1"	450×910	0,200	38
AV200/16	Vertical	200	16	1" ½	554×1250	0,407	58
AV300/14	Vertical	300	14	1" ½	624×1370	0,596	70
AV500/12	Vertical	500	12	1" ½	790×1460	0,900	127
HIGH PRESSURE (not CE marked)							
AV300/16	Vertical	300	16	1" ½	624×1370	0,596	-
AV500/16	Vertical	500	16	1" ½	790×1460	0,900	-
AV750/16	Vertical	750	16	1" ½	790×1925	1,300	-
AV1000/16	Vertical	1000	16	2"	945×1912	1,900	-

MEMBRANES



TYPE	DESCRIPTION
MZ 24	EPDM membrane for ACZ 24 lt.
M 24	membrane for AS 24 - ACV 24
M 50	membrane for AC 50 - AV 50
M 100	membrane for AC 100 - AV 100
M 200	membrane for AC 200 - AV 200
M 300	membrane for AC 300 - AV 300
M 500	membrane for AV 500
M 750 - 2000	membrane for AV 750 - AV 2000

PRESSURE SWITCHES/TRASDUCER



TYPE	DESCRIPTION	RANGE AT RISING PRESSURE (bar)
PP5	1- / 3-	1-5
PP12	1- / 3-	3-12

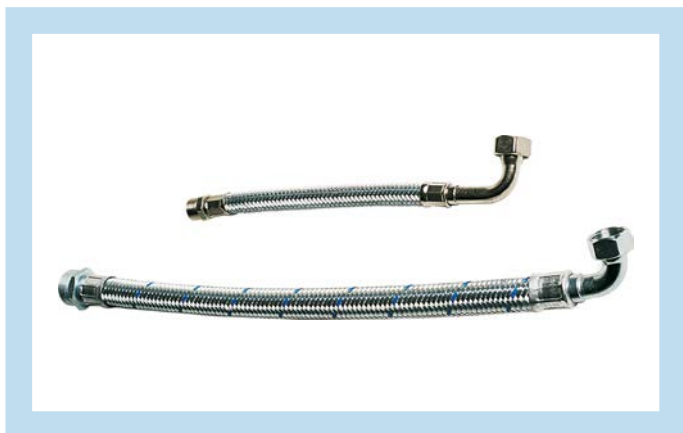
TYPE	Output signal	Input voltage	Working pressure	Maximum pressure
SPD	4... 20 mA	9... 28 V	0-16 bar / 0-25 bar	32 bar

PRESSURE GAUGES



TYPE	PHASE
PR 6	0-6 bar rear connection
PR 6 R	0-6 bar radial connection
PR 12	0-12 bar rear connection
PR 10 G	0-10 bar glycerine
PR 12 G	0-12 bar glycerine

FLEXIBLE HOSES



TYPE	DESCRIPTION
FL 530	Flexible hose with bend 1"×530×1"
FL 600	Flexible hose with bend 1"×600×1"
FL 700	Flexible hose with bend 1"×700×1"
FL 850	Flexible hose with bend 1"×850×1"

VALVES



TYPE	DESCRIPTION
VF 1"	foot valve 1"
VF 1" 1/4	foot valve 1" 1/4
VF 1" 1/2	foot valve 1" 1/2
VF 2"	foot valve 1" 1/2
VR1"	check valve 1"
VR 1" 1/4	check valve 1" 1/4
VR 1" 1/2	check valve 1" 1/2
VR 2"	check valve 1"

CONNECTORS



TYPE	DESCRIPTION
R5X 1"	5 way 1" Aisi 304 connector with built-in no return valve
R5X 1" 1/4	5 way 1" 1/4 Aisi 304 connector with built-in no return valve
R5X 1" 1/2	5 way 1" 1/2 Aisi 304 connector with built-in no return valve



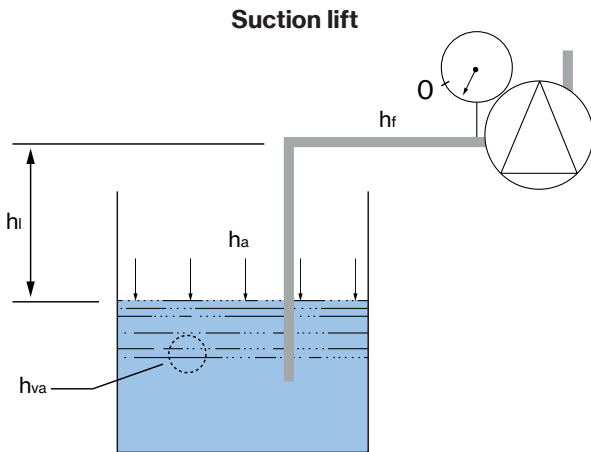


TECHNICAL APPENDIX

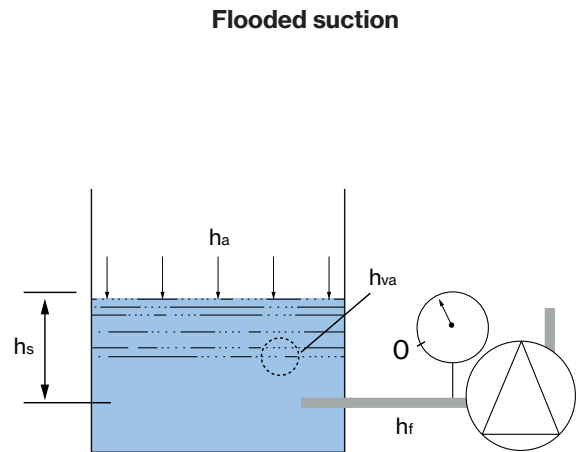
NPSH

The Net Positive Suction Head Available (NPSHA) is a measure of pressure present at the pump suction, while the Net Positive Suction Head Required (NPSHR) represents the minimum pressure necessary in the system for proper pump operation. The higher the NPSHA and the better the pump will operate. To meet the requirements of the pumps it is necessary to ensure that NPSHA exceeds NPSHR by at least 1 meter.

There are three equations to calculate NPSHA in a system depending upon whether the system has suction lift or flooded suction or loaded suction from a pressurized suction tank.



$$\text{NPSHA} = h_a - h_l - h_f - h_{va}$$



$$\text{NPSHA} = h_a + h_s - h_f - h_{va}$$

Where:

h_a = atmospheric pressure head (m)

h_l = liquid level below pump centre line (m)

h_s = liquid level above pump centre line (m)

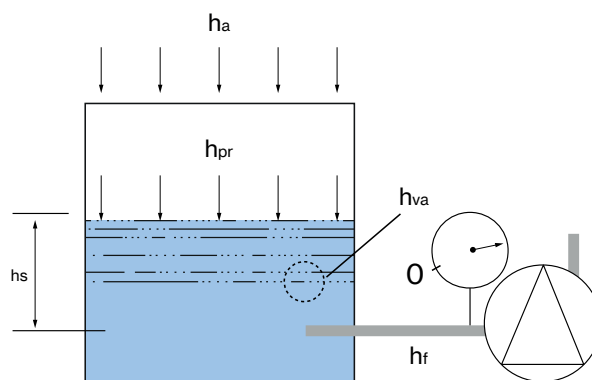
h_f = friction head loss in the suction pipework (m)

h_{va} = vapour pressure according to the liquid temperature (m)

Temperature °C	Water vapour pressure m
25	0
30	0,4
40	0,8
50	1,3
60	2,0
70	3,2
80	4,8
90	7,1

If the suction tank is pressurized, i.e. operates above the atmospheric pressure, then the additional pressure head will have to be added to the suction static head.

Pressurized tank



$$\text{NPSHA} = h_{pr} + h_a + h_s - h_f - h_{va}$$

Where h_{pr} is the additional pressure head on the surface of the liquid in the suction tank.



System layout

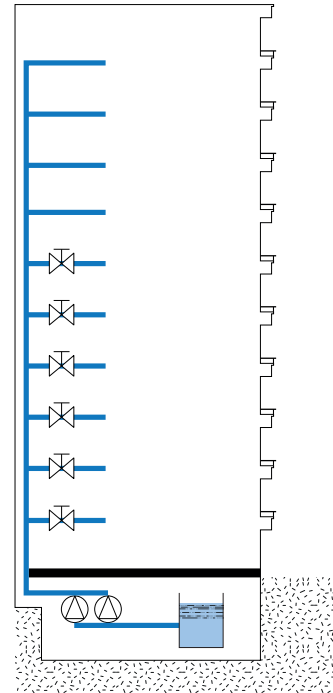
Booster systems may be designed in several different ways depending on local legislation, traditional practices, requirements or possibility for future expansions, etc. Not all system layouts may be ideal for all scenarios: for a high-rise building a properly sized "zone-divided booster system" would be more efficient than other systems.

The most common booster systems are described below including the advantages and disadvantages of each.

Single booster system

It is the simplest booster system available as it relies on a single set of pumps, boosting pressure from the basement to the point farthest away from the booster system. Basically, such systems may be configured with or without a storage tank.

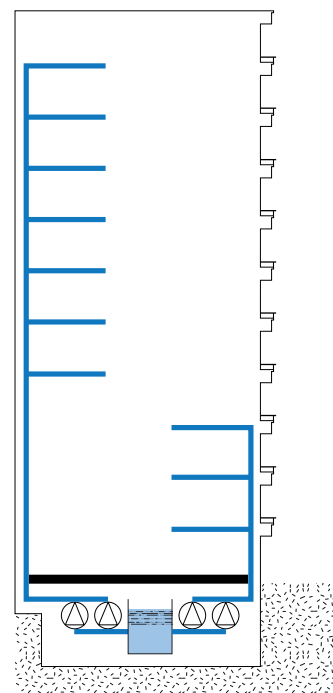
Advantages
Only one riser needed (simple design)
No space required on upper floors
Disadvantages
Excess pressure on lower floors in building exceed ten floors (pressure reduction valves and high pressure graded pipes needed)



Zone-divided booster systems

The building is divided into pressure zones of ten floors or less with a booster supplying each zone from the basement through dedicated risers.

Advantages
Manageable pressure zones
Increased flexibility and security due to zoning
No space required on upper floors
Low-cost operation due to no residual pressure
Disadvantages
Higher initial cost than single-zone systems
Higher static pressure in upper zones (high pressure graded pipes)

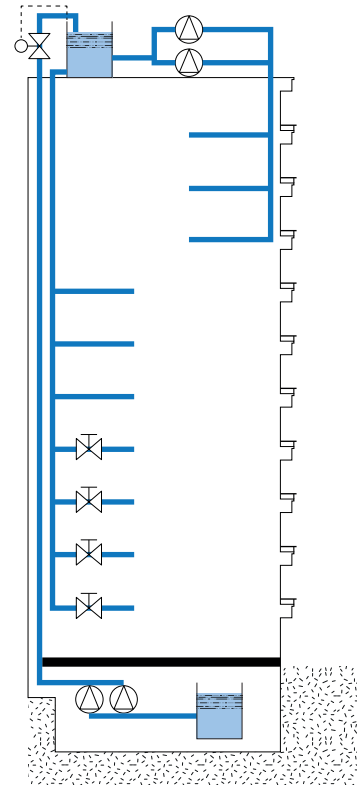


SYSTEM LAYOUT

Overhead tanks systems

Fresh water tanks placed atop high-rise buildings are used in water supply applications mainly due to unstable water mains and unstable power supply. The transfer pumps in the basement fill the roof tank and then water is supplied to the majority of the apartments through gravity. For the apartments on the top floors gravity is not strong enough, so a booster pump (e.g. the Aquadomus or Superdomus) installed on the terrace will provide a proper water pressure. If the buildings exceeds 15 floors it requires pressure reducing valves on the lower floors to avoid too high static pressure at the taps.

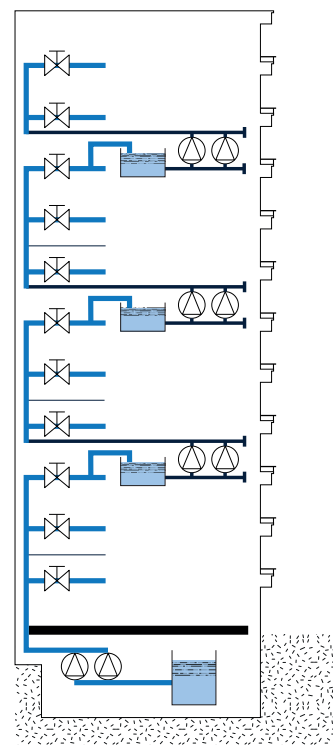
Advantages
Mature technology
Small booster power due to roof tank working as buffer
Reserve capacity in roof tank
Disadvantages
Higher initial cost than single-zone systems
Higher static pressure in upper zones (high pressure graded pipes)



Series-connected systems with intermediate storage tanks

With this system, a building is divided into smaller and more manageable pressure zones. Every zone is then served by its own booster set.

Advantages
Low pressure in each zone (no pressure reduction valves and less pressure-graded pipes needed)
Manageable pressure zones
Easy to size because each zone has its own supply tank
Disadvantages
Higher initial cost than single-zone systems
Higher static pressure in upper zones (high pressure graded pipes)

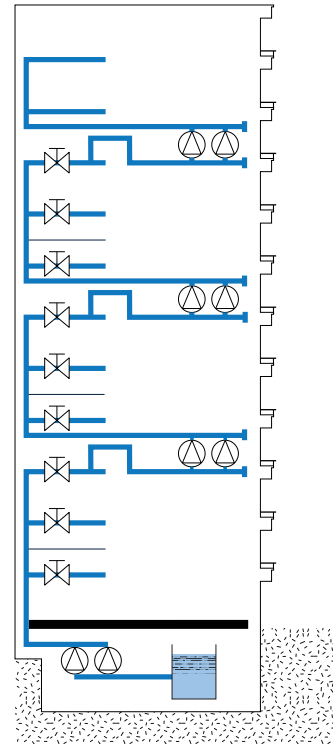


SYSTEM LAYOUT

Series-connected systems without intermediate storage tanks

This enables an effective usage of power as the water is only pumped to the part of the zone where it is used and not past it. However, complete control is very important. When a consumer draws water on the upper floors, the booster systems must be able to deliver the water from the bottom of the building.

Advantages
Low pressure in each zone (no pressure reduction valves and less pressure-graded pipes needed)
Manageable pressure zones
No space required for tanks
Less excess boosting (low operation costs)
Disadvantages
Higher initial cost than single-zone systems
Space required for booster sets and tank on service floors
Complex control



Fixed VS variable speed control modes

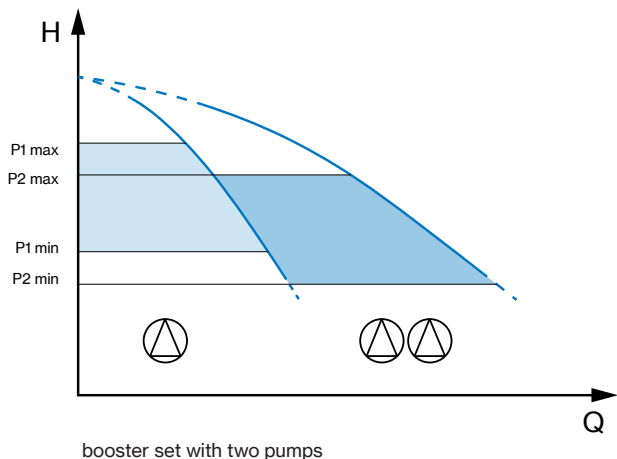
Operation principal of fixed speed control

When a tap is turned on, water is initially drawn from the membrane tank causing a pressure drop in the system. If the pressure falls beyond the "P1 min" level, then the primary pump will turn on to meet the water demand and recharge the membrane tank. The pump will turn off as soon as the pressure is restored to the "P1 max" level.

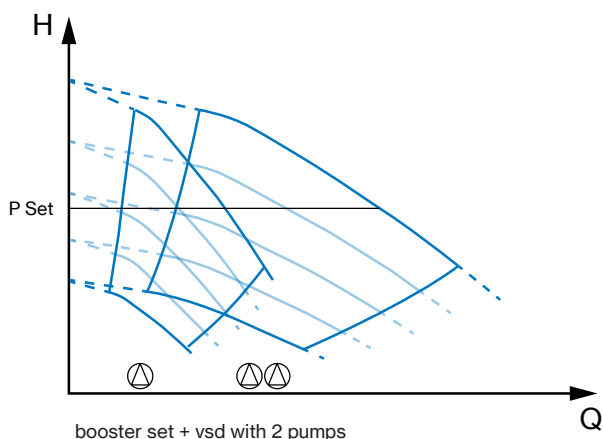
On the other hand, if the pressure in the system falls below "P2 min" the secondary pump is turned on as well to meet the extra water demand.

When the pressure reaches the "P2 max" level then the secondary pump will stop; once the water demand is drastically reduced or ended, such that the pressure rises to the "P1 max" level, then the primary pump will turn off and the membrane tank will be ready to meet next water demand. The pumps will intervene again as soon as the pressure drops below "P1 min" and "P2 min".

Fixed-speed control does not guarantee constant pressure, since the pressure supplied will vary continuously from min to max. For constant pressure, a variable speed booster set should be installed.



booster set with two pumps



booster set + vsd with 2 pumps

Operation principal of VSD control

When the pressure in the system drops, the VSD (master) turns on the primary pump and gradually ramps the motor acceleration to meet the water demand. If the set pressure (P Set) cannot be met by the primary pump, even at full rotation speed, then the other VSD (slave) will bring on the secondary pump in sequence.

Once the set point is met, the VSDs will keep adjusting speed to maintain the set pressure at vary of flow or until they reach a minimum speed and will shut down the pumps.

Pressure tank calculation

MEMBRANE TANK VOLUME CALCULATION	
<p>FIXED SPEED</p> <p>The sizing is determined based on the pump flow rate, the start and stop pressures and the number of starts allowed per hour.</p> <p>V= Volume of the tank (litres) Q= Flow rate (m³/h) S= Start pressure (bar) D= Differential pressure “between stop and start (bar) M= Maximum starts allowed per hour</p> $V = \frac{Q \times 1000 \times S}{4 \times M \times (D + 0,2)}$	<p>VARIABLE SPEED</p> <p>The volume of the tank (litres) should be about 10% of the required flow rate considered in litres/minute.</p> <p><i>E.g.</i> if the maximum flow rate required is 100 litres/min, an 8-litre tank is sufficient.</p>
MEMBRANE TANK PRE-CHARGE PRESSURE	
<p>FIXED SPEED</p> <p>For differential pressure (D) lower than 2 bar, the pre-charge pressure must be 0.2 bar less than the minimum start of the system.</p> <p>For differential pressure (D) greater than 2 bar, the pre-charge pressure must be 65% of the maximum stop pressure of the system.</p>	<p>VARIABLE SPEED</p> <p>80% of the working pressure set in the variable speed drive.</p> <p><i>E.g.</i> if the pressure is set at 3 bar, the pre-charge pressure of the tank must be about 2.4 bar</p>



Load losses

This table relates to losses of PVC, PE or other polymer pipes with internal roughness less than 0.01 mm (smooth pipes). It is advisable to keep the speed of the liquid in the pipe preferably less than or equal to 3 m/s

Pc: Load losses (H, in metres of water column) per 100 m of linear tubing (excluding joints)

V: Average speed (v, in m/s)

Q		U.M.*	Internal diameter in mm and inches											
			15	20	25	32	40	50	65	80	100	125	150	
m ³ /h	l/min		½"	¾"	1"	1" ¼	1" ½	2"	2" ½	3"	4"	5"	6"	
0,3	5	Pc [m]	2,66	0,68	0,24	0,08								
		V [m/s]	0,48	0,27	0,17	0,11								
0,6	10	Pc [m]	8,96	2,26	0,78	0,25	0,09							
		V [m/s]	0,95	0,54	0,34	0,21	0,14							
0,9	15	Pc [m]	18,44	4,6	1,58	0,49	0,17	0,06						
		V [m/s]	1,42	0,8	0,51	0,32	0,2	0,13						
1,2	20	Pc [m]	30,97	7,67	2,62	0,81	0,28	0,1	0,03					
		V [m/s]	1,89	1,07	0,68	0,42	0,27	0,17	0,11					
1,5	25	Pc [m]	46,45	11,44	3,9	1,19	0,41	0,15	0,05					
		V [m/s]	2,36	1,33	0,85	0,52	0,34	0,22	0,13					
1,8	30	Pc [m]	64,83	15,88	5,39	1,65	0,57	0,2	0,06	0,03				
		V [m/s]	2,84	1,6	1,02	0,63	0,4	0,26	0,16	0,1				
2,1	35	Pc [m]	86,08	20,99	7,1	2,16	0,74	0,26	0,08	0,03				
		V [m/s]	3,31	1,86	1,19	0,73	0,47	0,3	0,18	0,12				
2,4	40	Pc [m]	110,18	26,76	9,03	2,74	0,94	0,33	0,1	0,04				
		V [m/s]	3,78	2,13	1,36	0,83	0,54	0,34	0,21	0,14				
2,7	45	Pc [m]	137,09	33,18	11,17	3,38	1,16	0,4	0,12	0,05	0,02			
		V [m/s]	4,25	2,39	1,53	0,94	0,6	0,39	0,23	0,15	0,1			
3	50	Pc [m]	166,82	40,25	13,52	4,08	1,4	0,48	0,14	0,06	0,02			
		V [m/s]	4,72	2,66	1,7	1,04	0,67	0,43	0,26	0,17	0,11			
3,6	60	Pc [m]	234,63	53,3	18,83	5,67	1,93	0,66	0,19	0,07	0,03			
		V [m/s]	5,67	3,19	2,04	1,25	0,8	0,51	0,31	0,2	0,13			
4,2	70	Pc [m]	313,55	74,88	24,96	7,49	2,54	0,87	0,25	0,1	0,04	0,02	0,01	
		V [m/s]	6,61	3,72	2,38	1,46	0,93	0,6	0,36	0,24	0,15	0,1	0,07	
4,8	80	Pc [m]	403,53	95,97	31,89	9,54	3,23	1,1	0,32	0,12	0,04	0,02	0,01	
		V [m/s]	7,55	4,25	2,72	1,66	1,07	0,68	0,41	0,27	0,17	0,11	0,08	
5,4	90	Pc [m]	504,52	119,55	39,62	11,82	3,99	1,36	0,39	0,15	0,05	0,02	0,01	
		V [m/s]	8,5	4,78	3,06	1,87	1,2	0,77	0,46	0,3	0,2	0,13	0,09	
6	100	Pc [m]	616,5	145,63	48,15	14,32	4,83	1,64	0,47	0,18	0,06	0,03	0,01	
		V [m/s]	9,44	5,31	3,4	2,08	1,33	0,85	0,51	0,34	0,22	0,14	0,1	0,07
7,2	120	Pc [m]		205,18	67,55	20,01	6,73	2,28	0,65	0,24	0,09	0,03	0,02	
		V [m/s]		6,37	4,08	2,49	1,6	1,02	0,61	0,4	0,26	0,17	0,12	
8,4	140	Pc [m]		274,57	90,08	26,58	8,91	3,01	0,85	0,32	0,11	0,04	0,02	
		V [m/s]		7,44	4,76	2,91	1,86	1,19	0,71	0,47	0,3	0,2	0,14	
9,6	160	Pc [m]		353,77	115,7	34,02	11,37	3,83	1,08	0,4	0,14	0,05	0,02	
		V [m/s]		8,5	5,44	3,32	2,13	1,36	0,81	0,54	0,34	0,22	0,16	
10,8	180	Pc [m]		442,73	144,41	42,34	14,12	4,75	1,33	0,49	0,17	0,06	0,03	
		V [m/s]		9,56	6,12	3,74	2,39	1,53	0,91	0,6	0,39	0,25	0,17	
12	200	Pc [m]			176,2	51,52	17,14	5,75	1,61	0,59	0,21	0,07	0,03	
		V [m/s]			6,8	4,15	2,66	1,7	1,01	0,67	0,43	0,28	0,19	
14,4	240	Pc [m]			248,94	72,47	24,01	8,03	2,24	0,82	0,28	0,1	0,04	
		V [m/s]			8,16	4,98	3,19	2,04	1,21	0,8	0,51	0,33	0,23	
15,6	260	Pc [m]			289,9	84,22	27,86	9,3	2,59	0,95	0,33	0,12	0,05	
		V [m/s]			8,84	5,4	3,46	2,21	1,31	0,87	0,56	0,36	0,25	
16,8	280	Pc [m]			333,89	96,83	31,97	10,66	2,96	1,09	0,37	0,13	0,06	
		V [m/s]			9,52	5,81	3,72	2,38	1,41	0,93	0,6	0,39	0,27	
18	300	Pc [m]				110,28	36,36	12,11	3,36	1,23	0,42	0,15	0,06	
		V [m/s]				6,23	3,99	2,55	1,51	1	0,64	0,41	0,29	
21	350	Pc [m]				147,63	48,51	16,1	4,45	1,63	0,56	0,19	0,08	
		V [m/s]				7,26	4,65	2,98	1,76	1,17	0,75	0,48	0,34	

Pc values must be multiplied by:
1,5 for steel pipes
2 for cast iron pipes
1,1 for stainless steel pipes



LOAD LOSSES

Q		U.M.*	Internal diameter in mm and inches										
			15	20	25	32	40	50	65	80	100	125	150
m ³ /h	l/min		½"	¾"	1"	1" ¼	1" ½	2"	2" ½	3"	4"	5"	6"
24	400	Pc [m]				190,25	62,33	20,63	5,69	2,07	0,71	0,24	0,1
		V [m/s]				8,3	5,31	3,4	2,02	1,33	0,85	0,55	0,38
27	450	Pc [m]				238,12	77,82	25,69	7,07	2,57	0,87	0,3	0,13
		V [m/s]				9,34	5,98	3,83	2,27	1,5	0,96	0,62	0,43
30	500	Pc [m]					94,97	31,28	8,58	3,11	1,05	0,36	0,15
		V [m/s]					6,64	4,25	2,52	1,66	1,07	0,68	0,48
36	600	Pc [m]					134,22	44,04	12,03	4,35	1,47	0,5	0,21
		V [m/s]					7,97	5,1	3,02	2	1,28	0,82	0,57
42	700	Pc [m]					180,05	58,88	16,02	5,77	1,94	0,66	0,28
		V [m/s]					9,29	5,95	3,52	2,33	1,49	0,96	0,67
48	800	Pc [m]						75,8	20,56	7,39	2,48	0,84	0,35
		V [m/s]						6,8	4,03	2,66	1,7	1,09	0,76
54	900	Pc [m]						94,8	25,64	9,19	3,08	1,04	0,43
		V [m/s]						7,65	4,53	2,99	1,92	1,23	0,85
60	1000	Pc [m]						115,85	31,25	11,18	3,74	1,26	0,52
		V [m/s]						8,5	5,03	5,03	2,13	1,36	0,95
72	1200	Pc [m]							44,08	15,72	5,24	1,76	0,73
		V [m/s]							6,04	3,99	2,55	1,64	1,14
84	1400	Pc [m]							59,03	20,99	6,97	2,34	0,96
		V [m/s]							7,04	4,65	2,98	1,91	1,33
96	1600	Pc [m]							76,09	26,99	8,94	2,99	1,23
		V [m/s]							8,05	5,31	3,4	2,18	1,51
108	1800	Pc [m]							95,26	33,71	11,14	3,72	1,53
		V [m/s]							9,05	5,98	3,83	2,45	1,7
120	2000	Pc [m]								41,16	13,58	4,52	1,85
		V [m/s]								6,64	4,25	2,72	1,89





CONDIZIONI GENERALI DI VENDITA



1) ORDINI: Qualsiasi ordinazione trasmessaci, sia a mezzo di ns/agenti che a mezzo lettera, telefono o fax, si intende definita soltanto dopo ns/regolare accettazione scritta. 2) CONSEGNA: I termini indicati per la consegna non sono impegnativi ma subordinati alle possibilità di fabbricazione o a causa di forza maggiore (agitazioni sindacali, guasti a macchinari, ritardata consegna da parte dei fornitori, situazioni generali di irreperibilità di materie prime, incendi, inondazioni od altre cause di forza maggiore). Un eventuale ritardo non può dar luogo da parte dell'acquirente ad annullamento dell'ordine né a pretesa di rifusione di danni. 3) SPEDIZIONE: La merce viaggia a rischio e pericolo del committente anche se il prezzo è stabilito franco destino. Non si risponde di alcun reclamo per mancanza di peso od avarie di viaggio essendo di ciò responsabile solo ed esclusivamente il vettore al quale il destinatario deve prontamente elevare riserva prima di ritirare la merce e di ciò dare comunicazione scritta anche al cessionario per conoscenza. Trascorsi comunque 8 giorni dalla data di ricevimento della merce non sono più ammessi reclami. 4) PREZZI: I prezzi si intendono al netto degli oneri fiscali, possono essere variati senza obbligo di preavviso. 5) RISERVA DI PROPRIETÀ: La proprietà dei beni consegnati permane al costruttore e non trapassa al cliente se non dopo l'integrale pagamento del prezzo, degli interessi e delle spese dovute. In caso di inadempienza la merce andrà, su espressa richiesta del costruttore, prontamente riconsegnata presso i depositi dal costruttore indicati in porto franco. Il costruttore si riserva comunque la facoltà di addebitare al cliente le spese sostenute per la rigenerazione e messa a nuovo del materiale reso. 6) PAGAMENTI: I pagamenti devono essere effettuati alla scadenza e nei modi convenuti alla ns/sede. Non sono riconosciuti i pagamenti effettuati ad agenti, rappresentanti od altri anche se a mezzo effetti, salvo espressa autorizzazione scritta del costruttore. In caso di pagamento dilazionato, il mancato pagamento anche di una sola rata consente al costruttore di esigere il saldo immediato del rimanente credito aumentato degli interessi maturati al tasso medio in vigore nel periodo. 7) DIVIETO DI AZIONE: Il cliente non può, per nessuna ragione, ritardare o sospendere i pagamenti dovuti a qualunque titolo, anche se fossero insorti reclami o contestazioni, né può promuovere o proseguire azioni giudiziarie di alcun genere se prima non abbia provveduto al pagamento nei termini e nei modi pattuiti. 8) CARATTERISTICHE TECNICHE: I dati e le caratteristiche tecniche citati in tutte le pubblicazioni ufficiali del costruttore fanno riferimento a valori nominali indicativi. Per specifiche necessità e su esplicita richiesta, il costruttore può mettere a disposizione schede tecniche di prodotto più dettagliate da cui si possono altresì dedurre i criteri di accettabilità interna dei prodotti. Il costruttore si riserva il diritto di apportare qualsiasi modifica senza preavviso; pertanto pesi, misure, prestazioni e quanto altro indicato non sono vincolanti ma solo indicativi. 9) GARANZIA: Il costruttore presta le garanzie di legge. La garanzia copre ogni difetto di costruzione del solo materiale prodotto dal costruttore, essa inoltre si limita alla riparazione o sostituzione dell'elettropompa o del pezzo riconosciuti difettosi presso gli stabilimenti del costruttore o quant'altri dallo stesso autorizzati. In nessun caso comunque la garanzia implica la possibilità di richiesta di indennità e si declina ogni responsabilità per danni materiali e corporali che venissero causati dalle macchine prodotte dal costruttore, sia diretti che indiretti. La garanzia decade: - Se la macchina è stata riparata, smontata o manomessa da persone non autorizzate dal costruttore. - Se il guasto è stato provocato da errori di collegamento elettrico od idraulico, da mancata o non adeguata protezione. - Se l'impianto o l'installazione delle macchine non è stato eseguito correttamente. - Se la macchina è stata assoggettata a sovraccarichi oltre i limiti di targa. - Se i materiali sono stati guastati a seguito del contatto con liquidi abrasivi o corrosivi comunque non compatibili con i materiali impiegati nella costruzione delle pompe. - Se i materiali sono avariati a seguito del naturale logoramento. La macchina difettosa dovrà pervenire presso gli stabilimenti del costruttore in porto franco. Il costruttore si riserva l'insindacabile giudizio sulla causa del difetto e se lo stesso rientra nei casi previsti dalla garanzia. A riparazione avvenuta, la macchina sarà restituita in porto assegnato al cliente. 10) FORO COMPETENTE: Per eventuali controversie il foro competente sarà quello di Verona anche se il pagamento è convenuto a mezzo tratta. 11) RICHIAMO AD ALTRE NORME: Per quanto non espressamente stabilito nei punti precedenti, varranno le disposizioni di legge e le norme usuali e consuetudinarie del luogo in cui ha sede il costruttore e vigenti in materia.

Il costruttore non si assume alcuna responsabilità per errori ed omissioni e si riserva il diritto di modifiche senza obbligo di preavviso.

GENERAL SALES CONDITIONS



1) ORDERS: Any order sent to us, whether by our representatives or by letter, telephone or fax, will be considered definite only after our regular acceptance in writing. 2) DELIVERY: The terms indicated for delivery are not binding but subject to manufacturing factors and unforeseeable circumstances (trade unions unrest, breakdown of machinery, late delivery by our suppliers, general unavailability of raw materials, fire, flood or other forces majeure). Any delay which might occur will not give rise on the part of the purchaser of the right to annul the order or to claim damages. 3) TRANSPORT: Goods travel at the customer's risk even if the price is stated as carriage free. The vendor will not be liable for the underweight goods or damage caused during transit as the carrier is exclusively liable in such cases and it is to him that the receiving party must promptly address a right informative notice in writing to this to the dealer. After 8 days have passed from receipt of the goods, no claims are in any case admissible. 4) PRICES: The prices are to be understood as net of tax duties and may be changed without notice. 5) RIGHT OF PROPERTY: The goods property belongs to the manufacturer and it is not acquired by the customer until the complete payment is made for the goods, and for any interest and costs involved. In case of payment not honoured, goods will, on the manufacturer's express request, be promptly sent back to the stores in free port indicated by the manufacturer. In any case the manufacturer reserves the right to charge the customer with the cost of restoration and renewal of returned goods. 6) PAYMENTS: Payments must be effected at due dates and in the terms agreed at our Headquarters. Payments made to agents, representatives or others are not recognized even by bills unless there is an express written authority by the manufacturer. In case of payment by instalments the failure to pay even one instalment allows the manufacturer to require the balance immediately plus the interest accrued at the average rate in force for the period. 7) BLOCKAGE OF CLAIMS: The customer may not, for any reason, delay or suspend payments owed on any account even if claims or disputes have arisen, nor may he start or take legal action of any kind if he has not first paid by the terms and in the terms agreed. 8) TECHNICAL CHARACTERISTICS: The technical data and characteristics stated in all the manufacturer's official publications refer to indicative nominal values. For specific needs and on explicit demand, the manufacturer can provide detailed technical sheets from which the internal acceptance criteria of the product can be deduced. The manufacturer reserves the right to make any modification without prior notice. Therefore weights, dimensions, performances and any other stated issues are indicative only and not binding. 9) GUARANTEE: The manufacturer gives the guarantees provided by the Law. The guarantee covers every manufacturing defect only for the components/parts produced by the manufacturer: the Company also limits itself to the repair or replacement of the electric pump, or of the part recognized as being faulty, at the manufacturer's premises or other authorized premises. In no case however does the guarantee imply the possibility of claiming an indemnity and any liability is denied for damage to things or to the person caused by the manufacturer machines, whether directly or indirectly. The guarantee does not apply: - If the machine has been repaired, dismantled or tampered by persons not authorized by the manufacturer. - If the breakdown has been caused by errors in connecting the electrical or hydraulic systems, or by the failure to provide protection or the provision of inadequate protection. - If the setting up of the machine or its electrical or hydraulic systems has not been correctly carried out. - If the machine has been subject to loads exceeding the ones within the label specifications. - If materials have been damaged due to contact with abrasive or corrosive liquids or which are in any way incompatible with the materials used in the manufacture of the pumps. - If the materials have deteriorated due to natural wear. The defective machine must be taken to the manufacturer's premises in free port. The manufacturer reserves the indisputable right to impute the cause of the defect and to ascertain whether it falls within the warrant cases at his full expences. When the machine has been repaired it will be returned to the customer. 10) COMPETENT COURT: In case of any dispute the competent Court will be the one of Verona even if the payment is by Bill of Exchange. 11) RECOURSE TO OTHER NORMS: As regard to other matters not expressly stated in the above points, the laws, norms and commercial customs in force at the place, where the manufacturer has its premises, will be applied.

The manufacturer assumes no responsibility for errors and omissions and reserves the right of changes without notice.



ALLEGATO II

«L'efficienza di una pompa con girante tornita è generalmente inferiore a quella di una pompa con diametro di girante pieno. La tornitura della girante adegua la pompa a un punto di lavoro fisso, con un conseguente minore consumo di energia. L'indice di efficienza minima (MEI) è basato sul diametro massimo della girante».

«Il funzionamento della presente pompa per acqua con punti di funzionamento variabili può essere più efficiente ed economico se controllato, ad esempio, tramite un motore a velocità variabile che adegua il funzionamento della pompa al sistema».

Le informazioni sull'efficienza di riferimento sono disponibili all'indirizzo:
www.europump.org/efficiencycharts.

ANNEX II

«The efficiency of a pump with a trimmed impeller is usually lower than that of a pump with the full impeller diameter. The trimming of the impeller will adapt the pump to a fixed duty point, leading to reduced energy consumption. The minimum efficiency index (MEI) is based on the full impeller diameter».

«The operation of this water pump with variable duty points may be more efficient and economic when controlled, for example, by the use of a variable speed drive that matches the pump duty to the system».

Information on benchmark efficiency is available at:
www.europump.org/efficiencycharts.

2-3 UNITS BOOSTER SETS

50Hz

Technical Catalogue



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