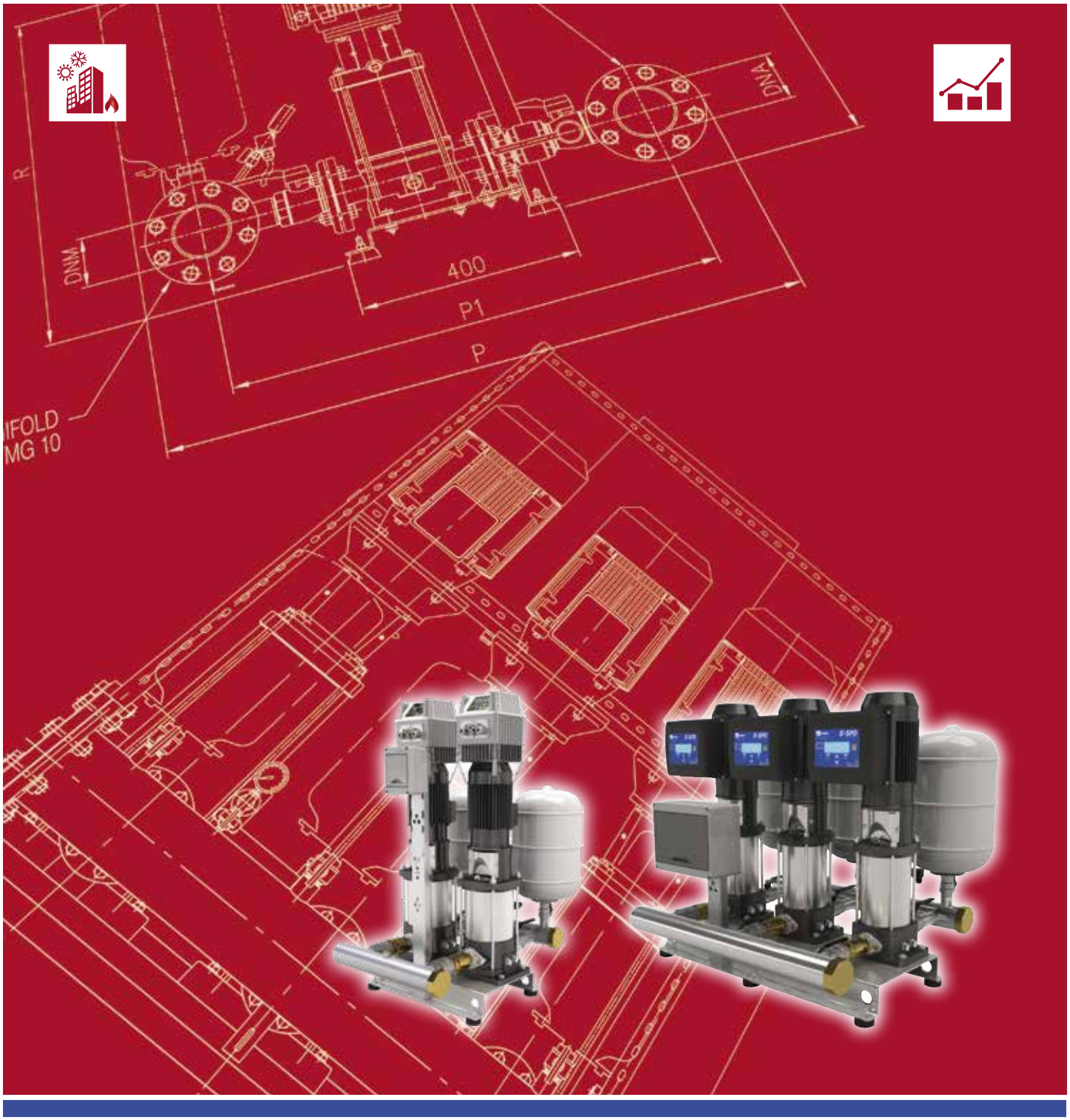
EBARA

Japanese Technology since 1912

GP - GPE EVMS - EVM

Data Book 50Hz



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CONTENTS

DEFINITION AND USE OF PRESSURISATION UNITS

In situations in which a municipal water mains is lacking or insufficient for the proper operation of the services, one must install a pressurization unit to provide acceptable pressure and flow rates to even in the most unfavourable services. Pressurisation units are used wherever there is a need to increase the pressure, or to pressurise a water circuit. **EBARA GP pressurisation units** are automatic systems with 2 or more pumps operating in parallel, designed to provide a simple and reliable solution to the most common requirements for maintenance of water supply pressure for apartment buildings, hotels, centres, offices and schools as well as providing auxiliary service in industrial and agricultural applications. They stand out for their robust construction, compact size, excellent efficiency and silent operation. GP units are equipped for connection to membrane and air cushion autoclaves. They are controlled by pressure switches or, for units with INVERTER control, by the signal from a pressure transmitter.

TYPICAL APPLICATIONS

INDUSTRY	BUILDING SERVICE	WATER SUPPLY
		

PRINCIPLE OF OPERATION OF GP PRESSURISATION UNITS

When water is demanded, it is first drawn from the autoclave tank (if present). This demand for water, with the pumps stopped, lowers the pressure until the first pressure switch (for EP version) or the pressure transmitter (for EP-E version) starts the first electropump. If the output flow is greater than the delivery capacity of a single pump, the pressure continues falling until the second pressure switch (for EP version) or the pressure transmitter (for EP-E version), thus starting the second pump. This happens for all pumps in the unit. When the water demand stops or reduces, the system pressure rises, the pressure switches (for EP version) or the pressure transmitter (for EP-E version) shutting off the pumps one by one. This is done in inverse order to that in which the motors were started up, the number of hourly starts per pump is reduced and they are all used to the same extent.

NB: By connecting a float switch or minimum pressure switch to the control panel (both for demand from the first accumulation tank and from the water circuit itself) one can prevent the most frequent cause of pump failure: dry running

PRINCIPLE OF OPERATION OF GPE PRESSURISATION UNITS

GPE units are designed to operate with a pump controlled by an **INVERTER** in the control panel, on board the motor, or in-line. The unit thus maintains constant pressure in the water circuit.
There are various versions of GPE unit:

- With INVERTER in the control panel (Standard **EFC** version)
  With a single INVERTER controlling a single pump which is alternated with the others at each start up (MFC version, on request, in which each pump is INVERTER controlled).
- With multiple INVERTERS, each pump controlled by its own INVERTER (**MFC versions**, versions with INVERTER on board motor or in-line INVERTER)

OPERATING CONDITIONS

EBARA GP-GPE pressurisation units can be used, in their standard versions, for civil, industrial and agricultural applications, as follows:
• building service
• water lifting and handling
• A/C
• heating
• irrigation
• washing systems
The conveyed fluid must be: clean, potable, ground or mixed water, free of solid or fibrous suspensions and aggressive chemical substances.
The units must be installed under cover, protected from the weather and freezing.
• Conveyed water temperature 0 - 50°C (depending on pumps).
• Ambient operating temperature 0 - 40°C, no higher than 1000 m above sea level.
• Max relative humidity 50% at +40°C.
NB: The system available NPSH must be greater than the NPSH demanded from the pump. For applications with different technical specifications, uses and climatic conditions (type of vector fluid, marine and aggressive industrial conditions), please contact our sales network.

TESTS AND TRIALS

Before shipping, all EBARA pressurisation units are subject to hydraulic, mechanical and electrical testing.

MECHANICAL AND HYDRAULIC TESTS

• Pressure switch calibration
• Pump direction of rotation
• Mechanical testing of moving parts and running noise (on each pump)
• Tightness test with delivery port closed and nameplate rating tests
• MANUAL trials (using button on control panel) for each pump
• AUTOMATIC trials (using switch on control panel) for unit

ELECTRICAL TESTS

• Earthing system continuity
• Applied voltage (dielectric rigidity)
• Insulation resistance

Principle of Operation of GPE Pressurisation UNITS with E-drive and E-SPD

GPE units with E-drive and E-SPD are designed to operate with each pumps controlled by an INVERTER installed on board its motor, E-drive up the fan cover, E-SPD on the terminal box. The system is controlled by an MASTER INVERTER in relation to the reference signal supply by a pressure transmitters (4 - 20 mA passive). As the system pressure varies, the MASTER pump varies its rotary speed to restore it to the setpoint. If the water demand exceeds the capacity of the pump, the second variable speed pump cuts in and, pump goes into regulation mode to maintain the pressure setpoint; this happens for all the pumps in the unit. If the water demand drops off, the pressure tends to increase and the latest pump gradually reduces its speed to restore the correct operating pressure. This results in the regulation of the speed of the other pumps, until they gradually turn off. Once the system pressure has been restored and the water demand is 0, the MASTER pump switches off automatically.

Principle of Operation of GPE Pressurisation UNITS with an EFC control panel

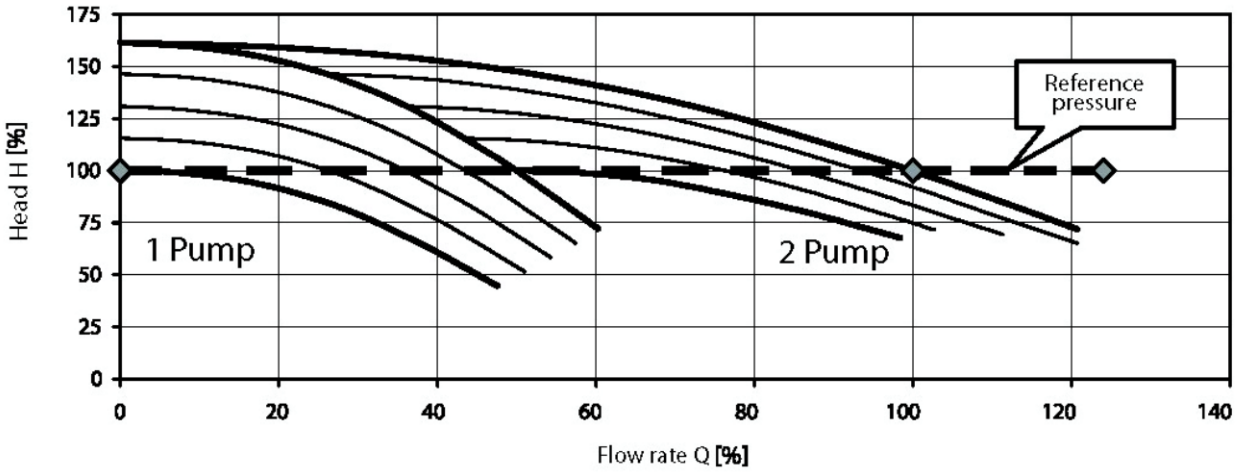
EFC multiple pump control units power pump n. 1 with the INVERTER to modulate system performance in relation to the reference signal while the other pumps are run at maximum nominal speed (around 2900 rpm) and started and stopped in relation to demand. These means there are two distinct primary electrical circuits:
n. 1 - INVERTER startup/control of a single pump,
n. 2 - contactor startup (direct or star/delta) of the other pumps.

The system is controlled by an electronic controller in relation to the reference signal supply by a pressure transmitter, flow meter or other unified control signal (4 - 20 mA passive).
If the electronic controller or pressure transmitter fails, a system of pressure switches controls the pumps directly (if present).

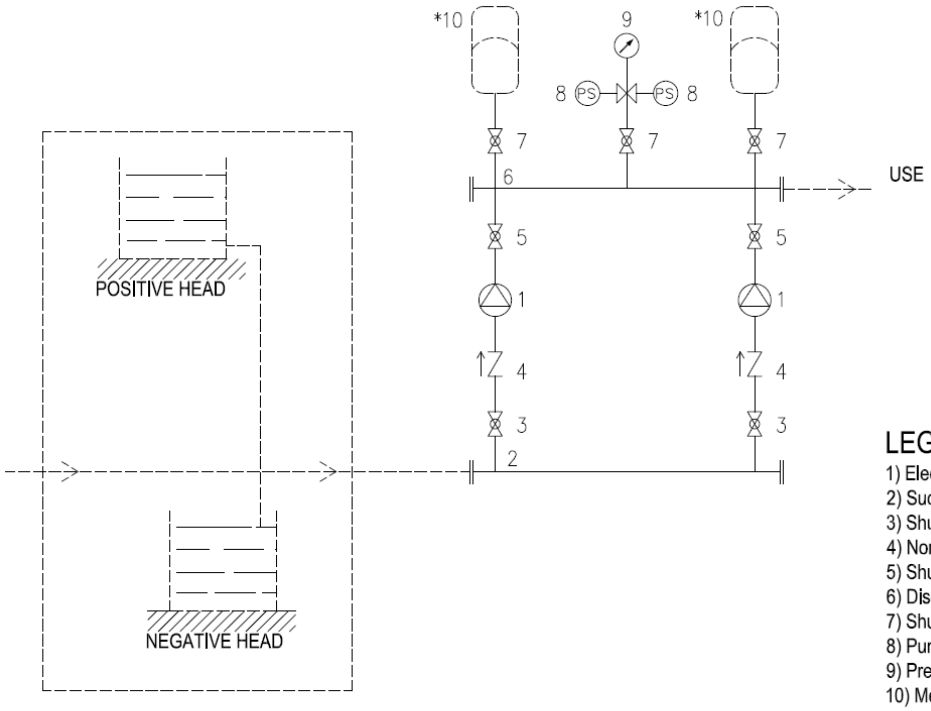
• In case of water distribution at constant pressure (Fig.1), the electronic controller is connected to the pressure transmitter on the units' delivery manifold, which outputs a signal proportional to the circuit pressure. When the pressure drops due to water demand, the pressure transmitter signal also drops and the controller starts and controls the speed of the first pump with the INVERTER to restore the reference/ operating pressure. If the pump's flow rate is lower than demand, the circuit pressure will continue to drop and the system responds by increasing the pump's speed. Once pump n. 1 reaches its maximum speed and demand is still in excess of its delivery, the controller will start pump n. 2 at maximum speed. The speed of pump n. 1 is immediately modulated so as to establish the operating pressure. If the pressure drops even further and pump n. 1 is once again running at maximum speed, the controller starts up pump n. 3, and so on for all pumps in the unit. If the water demand drops off, the pressure tends to increase and the controller reduces the speed of pump n. 1 to restore the correct operating pressure. At this point, the controller will stop one of the pumps running at maximum speed, while the speed of pump n. 1 is modulated to maintain the reference pressure. As the pressure continues to increase due to reduced demand, once the minimum speed of pump n. 1 is reached once more the controller will stop pump n. 3 and then pump n. 2. Once the demand for water has completely ceased, the controller reduces the speed of pump n. 1 to its minimum and after a set delay (around 1 minute) stops this pump too. The next time the system is started up, the INVERTER controlled pump will no longer be pump n. 1, but n. 2. The INVERTER controlled pump thus rotates through all pumps in sequence.

Principle of Operation of GPE Pressurisation UNITS with an MFC control panel
MFC multiple pump control panels power each pump with an INVERTER to modulate system performance in relation to the reference signal. MFC controllers differ from EFC controller from the point of view of their construction, since instead of having a single INVERTER to control all the pumps, each pump has its own INVERTER. The two types of control panel differ in construction, but they have the same type of operation by the controller, which responds to the reference signal output by a pressure transmitter or other unified control (4 - 20 mA passive). If the electronic controller or pressure transmitter fails, a system of pressure switches controls the INVERTERS directly.
• In case of water distribution at constant starting pressure (Fig.1), the electronic controller is connected to the pressure transmitter on the units' delivery manifold, which outputs a signal proportional to the circuit pressure. When the pressure drops due to water demand, the pressure transmitter signal also drops and the controller starts and controls the speed of the first pump with the INVERTER to restore the reference/ operating pressure. If the pump's flow rate is lower than demand, the circuit pressure will continue to drop and the system responds by increasing the pump's speed. Once pump n. 1 reaches its maximum speed and demand is still in excess of its delivery, the controller will start pump n. 2, also at variable synchronous speed. The controller will modulate the speed of the two pumps to restore the operating pressure; the modulating frequency is the same for both pumps. If the pressure drops even further and pumps n. 1 and 2 are once again running at maximum speed, the controller starts up pump n. 3, and then pump n. 4, if present. When the water demand is reduced the pressure will end to increase, as does the pressure transmitter output value. The controller thus reduces the speed of pumps n. 1, 2, 3 and 4 (they are all controlled at the same speed) to restore the reference/ operating pressure. If the pumps' flow rate is greater than demand, the circuit pressure will continue to increase and the system responds by decreasing the speed of the pumps until it reaches the minimum speed setting. At this point, the controller will stop pump n. 4, while the speed of pumps n. 1, 2 and 3 is modulated to maintain the reference pressure. As the pressure continues to increase due to reduced demand, once the minimum speed setting is reached again, the controller will stop pump n. 3 and modulate the speed of pumps n. 1 and 2. This continues in sequence as the demand continues to fall, until the unit is completely stopped.

Fig. 1 - TWO PUMP UNIT WITH CONSTANT PRESSURE REGULATION



PRESSURISATION UNIT WATER CIRCUIT DIAGRAM

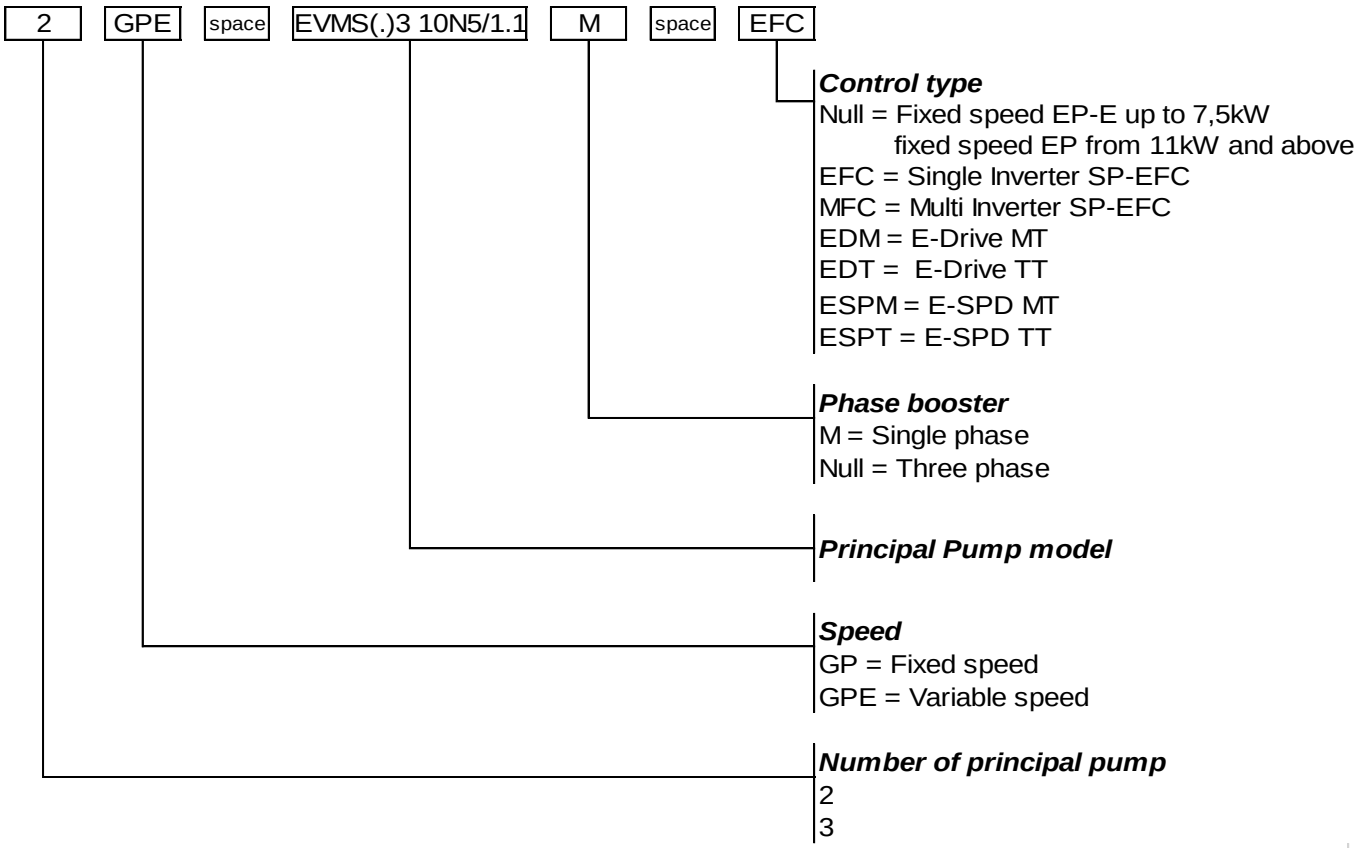


SUPPLY SYSTEM UPSTREAM FROM UNIT AT THE DISCRETION OF THE CUSTOMER OF THE SYSTEM DESIGNER

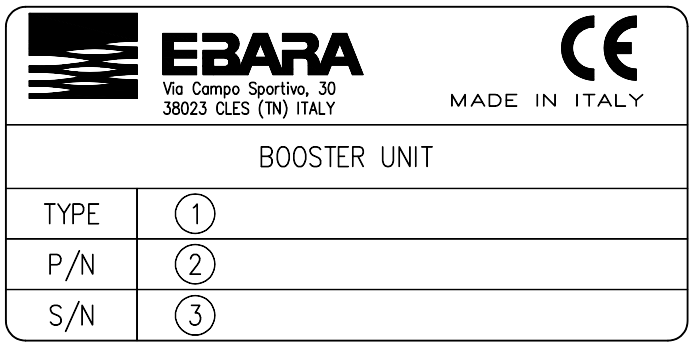
LEGEND
1) Electric Pump
2) Suction manifold
3) Shut-off valve in suction
4) Non-return valve
5) Shut-off valve in discharge
6) Discharge manifold
7) Shut-off valve
8) Pump control/regulation pressure switches
9) Pressure gauge
10) Membrane vessel (Optional*)

TYPE KEY

2-3GP(E) EVMS - EVM



NAME PLATE



1) "TYPE" booster model
2) "P/N" booster item number
3) "S/N" booster serial number

PRODUCT SPECIFICATIONS

HYDRAULIC COMPONENTS AND CONTROL

BOOSTER SET											
Version			EVMS					EVM			
Operating range	Nominal flow rate (m3/h)	Single pump	3	5	10	15	20	32	45	64	
		2GP(E)	6	10	20	30	40	64	90	128	
		3GP(E)	9	15	30	45	60	96	135	192	
	Maximum working pressure		16 bar								
	Liquid temperature range		0÷50°C								
	Ambient operating temperature (no higher than 1000 m above sea level)		0÷40°C								
Hydraulic components	Frame		omega sheet (up to 5.5 kW) UPN channel (from 7.5kW)					UPN channel			
			Galvanized steel								
	Manifold suction / discharge		Threaded / Flanged manifold					Flanged manifold			
			AISI 304					Galvanized steel			
	Closing manifold	2GP(E)	Female cap for EVMS 3-5-10-15 Counterflange kit for EVMS 20					Counterflange kit			
		3GP(E)	Female cap for EVMS 3-5-10 Counterflange kit for EVMS 15-20								
		material	Brass for female caps up to DN65 AISI 304 for female caps DN80 and counterflange kit					Galvanized steel			
	Check valve		Threaded check valve					Flanged clapet valve			
			Brass / NBR					Painted cast iron			
	Ball valve		Threaded ball valve					Butterfly valve (Lug)			
			Brass / PTFE					Painted cast iron			
	Socket for air feeders (only for "GP" version)		Threaded socket					Flanged socket			
			Brass					Galvanized steel			
Control	Pressure gauge		M3A-ABS 50/FR / plastic-copper alloy								
	Pressure switches		2-3GP version with EP panel fixed speed from 11 kW and above 4GP version with EP panel fixed speed GPE version with SP EFC / MFC panel with inverter XMP/ -25°C…+70°C								
	Pressure transmitter		2-3GP version up to 7.5 kW GPE version with SP EFC / MFC panel GPE version with E-drive and with E-SPD EN 10088-1.4301 (AISI 304) / 1.4404 (AISI 316L)								

ELECTRIC PANEL

BOOSTER SET										
Version			EVMS					EVM		
Operating range	Nominal flow rate (m3/h)	Single pump	3	5	10	15	20	32	45	64
		2GP(E)	6	10	20	30	40	64	90	128
		3GP(E)	9	15	30	45	60	96	135	192
	Maximum working pressure		16 bar							
	Liquid temperature range		0÷50°C							
	Ambient operating temperature (no higher than 1000 m above sea level)		0÷40°C							
Control panel	Principal Electric panel	**EP-E** up to 7.5Kw fixed speed **EP** from 11Kw up to 22 Kw fixed speed (only for GP)	●	●	●	●	●	●	●	●
		SP EFC/MFC variable speed from 4 kW to 22 kW (only for GPE)	○	○	○	○	○	●	●	●
	E-drive [1]	EDM single-phase supply (only for 2GPE up to 1.5 kW)	●	●	●	○	○	-	-	-
		EDT three-phase supply (only for GPE up to 15 kW)	●	●	●	●	●	●	●	●
	E-SPD [1]	single-phase supply inverter (only GPE up to 2.2 kW)	●	●	●	●	○	-	-	-
		three-phase supply inverter (only GPE up to 4 kW)	●	●	●	●	○	-	-	-

● : Standard ○ : Optional

[1] To be assemble with protection panel (to see “PROTECTION PANEL” section)

TECHNICAL PUMP DATA

EVMS(.) 3-5-10-15-20

PUMP																	
Version			**EVMSG**					**EVMS**					**EVMSL**				
Operating range	Nominal flow rate (m3/h)		3	5	10	15	20	3	5	10	15	20	3	5	10	15	20
	Maximum working pressure		16 bar / 25 bar														
	Liquid temperature range		-30℃ to 140℃														
Liquid handled	Liquid type		Clean water, water contains glycol and moderately aggressive fluids					Drinking water, clean water, water contains glycol and moderately aggressive fluids					Water and moderately aggressive fluids				
Key components material	Impeller		EN 1.4301 (AISI 304)										EN 1.4401 (AISI 316)				
	Intermediate casin		EN 1.4301 (AISI 304)										EN 1.4401 (AISI 316)				
	Liner ring		EN 1.4301 (AISI 304) + PPS										EN 1.4401 (AISI 316) + PPS				
	Bottom casing		Cast Iron					EN 1.4301 (AISI 304)					EN 1.4401 (AISI 316)				
	Casing cover		EN 1.4301 (AISI 304)										EN 1.4401 (AISI 316)				
	Shaft		EN 1.4301 (AISI 304) EVMSG / EVMS -3-10 , EVMSG / EVMS 5-15-20 (depend on models)														
			EN 1.4404 (AISI 316L) EVMSL -3-10 , EVMSL 5-15-20 (depend on models)														
			EN 1.4462 (AISI 329A) EVMSG / EVMS / EVMSL 5-15-20 (depend on models)														
	Shaft seal		See the shaft seal options														
	O-ring	EPDM	●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
		FPM	○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
	Outer casing		EN 1.4301 (AISI 304)										EN 1.4404 (AISI 316L)				
	Motor bracket		Cast iron														
	Base		Cast iron					Die cast aluminium									
Pipe connection	Oval flange		●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
			up to 16 bar														
	Round flange (DIN)		○	○	○	○	○	○	○	○	○	○	○	○	○	○	○
			up to 16 bar														
			●	●	●	●	●	●	●	●	●	●	●	●	●	●	●
			From 16 bar a 25 bar														

● : Standard ○ : Optional

EVM(.) 32-45-64

PUMP												
Version			**EVMG**			**EVM**			**EVML**		
Operating range	Nominal flow rate (m^3/h)		32	45	64	32	45	64	32	45	64
	Maximum Working pressure		16 bar / 30 bar								
	Liquid Temperature range		-15℃ to 120℃								
Liquid handled	Type of Liquid		Clean water, water contains glycol and moderately aggressive fluids						Water and moderately aggressive fluids		
	Max solid content		50 ppm								
	Max chlorine iron density		500 ppm								
Key components material	Impeller		EN 1.4301 (AISI 304)						EN 1.4401 (AISI 316)		
	Intermediate casing		EN 1.4301 (AISI 304)						EN 1.4401 (AISI 316)		
	Liner ring	EVM 32	EN 1.4301 (AISI 304) + PTFE						EN 1.4401 (AISI 316) + PTFE		
		EVM 45-64	EN 1.4401 (AISI 316) + PTFE								
	Bottom casing		Cast Iron			ASTMCF8			ASTMCF8M		
	Casing cover		Cast Iron			Cast Iron + EN 1.4301 (AISI 304)			Cast Iron + EN 1.4401 (AISI 316)		
	Shaft	EN 1.4301 (AISI 304)	●	●	●	●	●	●	-	-	-
		EN 1.4404 (AISI 316L)	-	-	-	-	-	-	●	●	●
	Shaft sleeve bearing		Tungstene carbide								
	Shaft Seal	type	Cartridge mechanical seal								
		material	Silicon Carbide / Carbon / FPM								
	O-ring		EPDM						FPM		
	Outer casing		EN 1.4301 (AISI 304)						EN 1.4404 (AISI 316L)		
	Motor Bracket		Cast Iron								
	Tie rod		Carbon Steel								
	Coupling		Carbon Steel								
	Base		Cast Iron								
Pipe connection	Round Flange (DIN)		●	●	●	●	●	●	●	●	●

TECHNICAL MOTOR DATA

ETM MOTOR

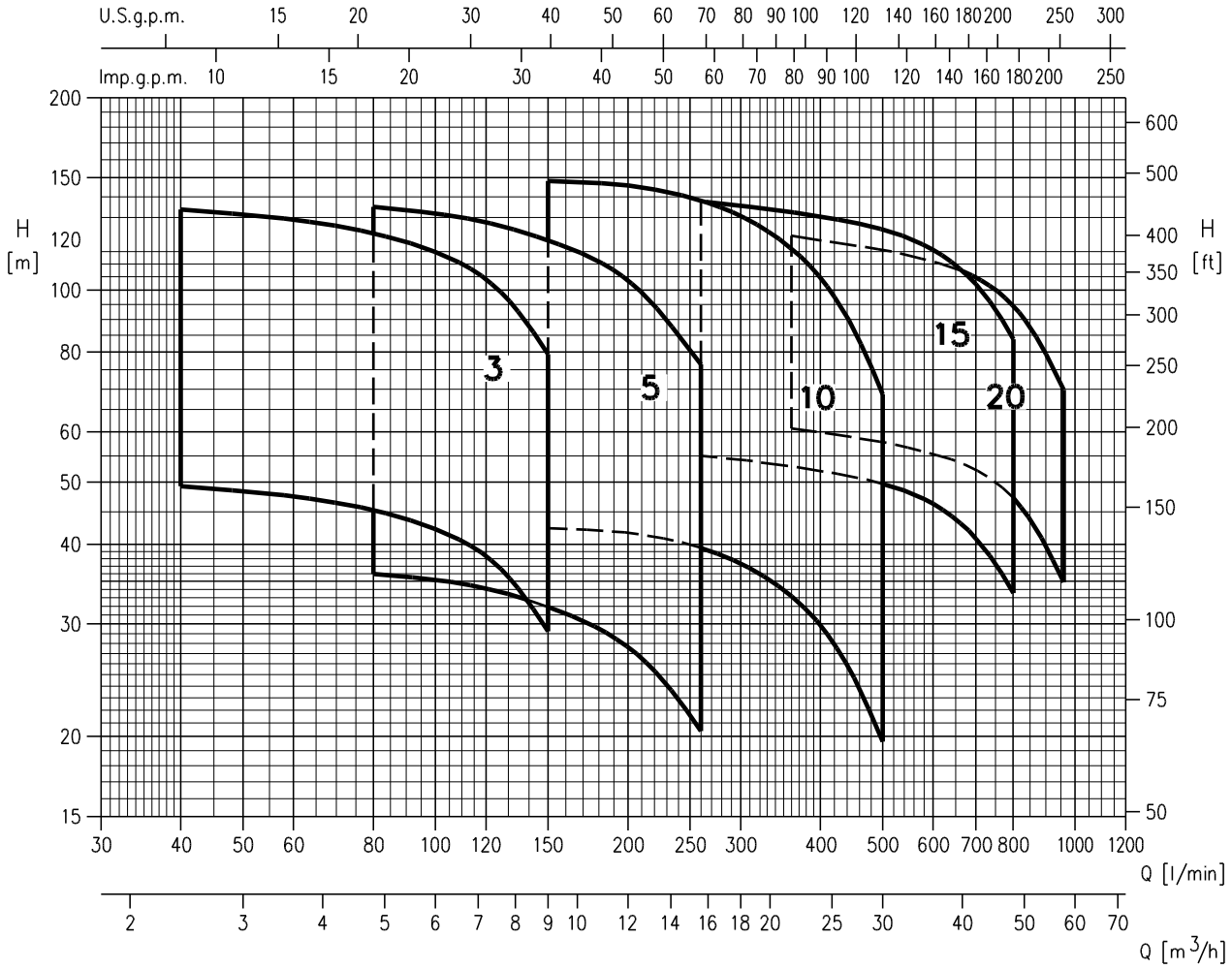
ETM MOTOR		
Version		**EVMS**
Power source	Frequency	50 Hz
	Phase	Three-phase
	Rotation speed	2900 min-1
	Power rating	0.75 ÷ 11 kW
		1.0 ÷ 15 HP
	Voltage	230/400 ± 10% V (up to 4 kW)
		400/690 ± 10% V (from 5.5 kW)
Type	Type	Electric - TEFC
	Efficiency level	IE3
	N°of poles	2
	Protection degree	IP 55
	Insulation class	F (temperature rise class B)
Others	Thermal Protection	PTC is available for the above 1.5 kW
	Casing Material	Aluminium
	Flange mount (IEC motor)	IM B14 (up to 4 kW)
		IM B5 (from 5.5 kW)

OTHER MOTOR

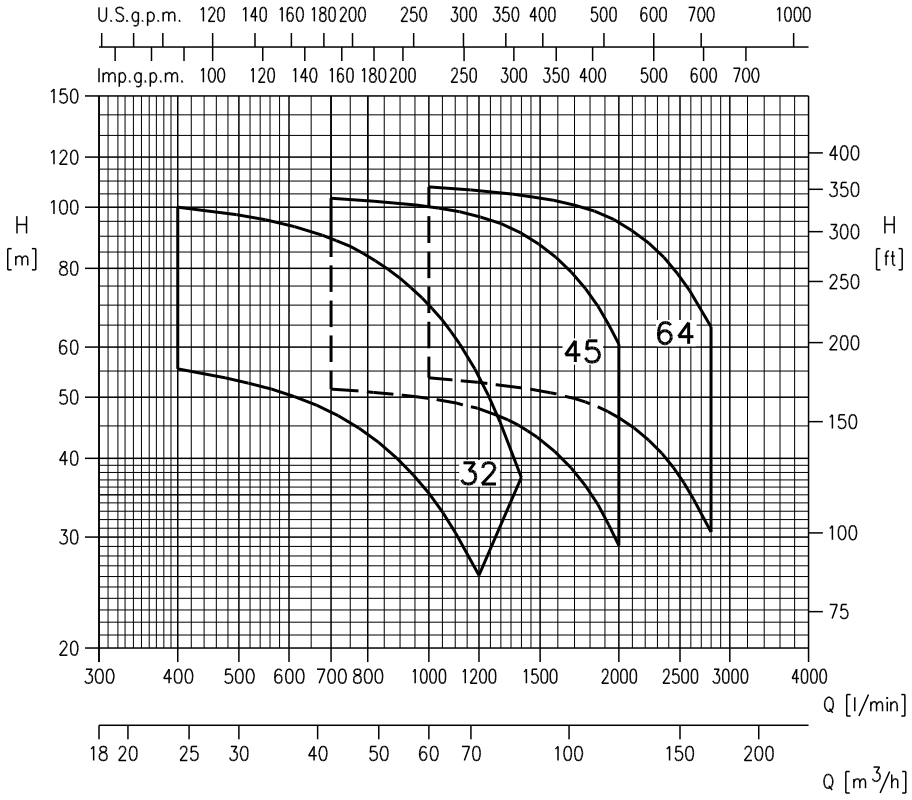
OTHER MOTOR			
Version		**EVMS**	**EVM**
Power source	Frequency	50 Hz	
	Phase	Single-phase	Three-phase
	Rotation speed	2900 min-1	
	Power rating	0.75 ÷ 2.2 kW	5.5 ÷ 22 kW
		1.0 ÷ 3.0 HP	7.5 ÷ 30 HP
	Voltage	230 ± 10% V	400/690 ± 10% V
Type	Type	Electric - TEFC	
	Efficiency level	-	IE3
	N°of poles	2	
	Protection degree	IP 55	
	Insulation class	F (temperature rise class B)	
Others	Thermal Protection	PTC is available for the above 1.5 kW	
	Casing Material	Aluminium	
	Flange mount (IEC motor)	IM B14	IM B5

PERFORMANCE RANGE

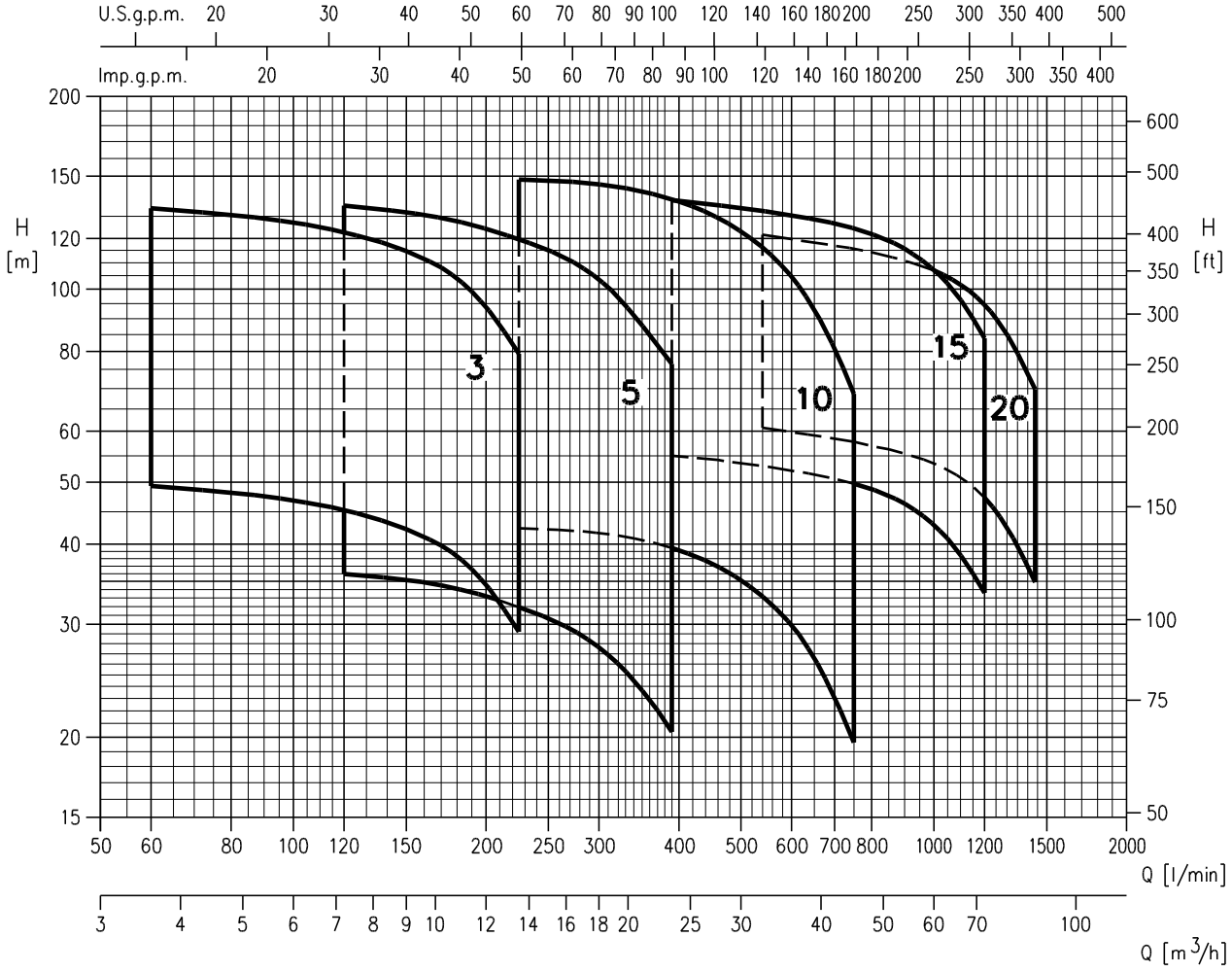
RESEAU BOOSTER SET 2GP(E) EVMS(.) 3-5-10-15-20



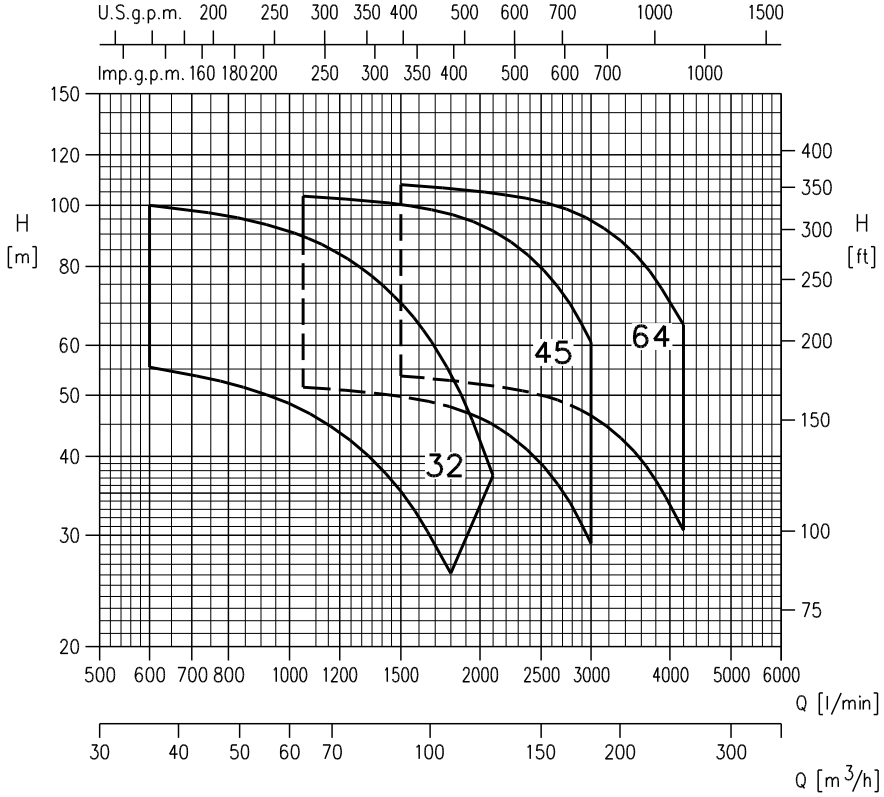
RESEAU BOOSTER SET 2GP(E) EVM(.) 32-45-64



RESEAU BOOSTER SET 3GP(E) EVMS(.) 3-5-10-15-20



RESEAU BOOSTER SET 3GP(E) EVM(.) 32-45-64



CURVE SPECIFICATION

MINIMUN EFFICENCY INDEX (MEI)

The specifications below qualify the curves shown on the following pages.

Tolerances according to ISO 9906 Annex A
The curves refer to effective speed of asynchronous motors at 50 Hz
Measurements were carried out with clean water at 20°C of temperature and with a kinematic viscosity of ν = 1 mm2/s (1 cSt)
The NPSH curve is an average curve obtained in the same conditions of performance curves.
The continuous curves indicate the recommended working range. The dotted curve is only a guide.
In order to avoid the risk of over-heating, the pumps should not be used at a flow rate below 10% of best efficiency point.

Symbols explanation:

Q = volume flow rate
H = total head
P2 = pump power input (shaft power)
η = pump efficiency
NPSH = net positive suction head required by the pump
MEI = minimum efficiency index

The minimum efficiency index (MEI) is a misure of the quality of a pump size respect to its mean efficiency.
The minimum efficiency index is based on the hydraulic efficiency and on the head at the best efficiency point.

Minimum efficiency index (MEI)

Pump Type	MEI *
EVMS(.)3	> 0.70
EVMS(.)5	> 0.70
EVMS(.)10	> 0.70
EVMS(.)15	> 0.70
EVMS(.)20	> 0.70
EVM(.)32	> 0.40
EVM(.)45	> 0.70
EVM(.)64	> 0.70

The values refer to the individual pumps

SELECTION CHART 2GP(E) EVMS(.) 3-5

Model	Supply		Motor		Maximum working pressure (MPa)	Q=Capacity							
						l/min 0	40	60	80	120	150	200	260
	Single phase	Three phase	kW	HP		m³/h 0	2.4	3.6	4.8	7.2	9.0	12.0	15.6
						H=Total manometric head in meters							
2GP(E) EVMS(.)3 7/0.75 (M)	●	○	0.75 + 0.75	1 + 1	1.6	51.5	49.5	47.5	45	38.3	29.2	-	-
2GP(E) EVMS(.)3 8/0.75	○	●	0.75 + 0.75	1 + 1		59	56.5	54.5	51.5	44	33.4	-	-
2GP(E) EVMS(.)3 9/1.1 (M)	●	●	1.1 + 1.1	1.5 + 1.5		66.5	63.5	61	58	49	37.6	-	-
2GP(E) EVMS(.)3 10/1.1	○	●	1.1 + 1.1	1.5 + 1.5		73.5	70.5	68	64.5	54.5	41.5	-	-
2GP(E) EVMS(.)3 16/1.5 (M)	●	●	1.5 + 1.5	2 + 2		118	113	109	103	87.5	67	-	-
2GP(E) EVMS(.)3 19/2.2	○	●	2.2 + 2.2	3 + 3		140	134	129	123	104	79.5	-	-
2GP(E) EVMS(.)5 4/0.75	○	●	0.75 + 0.75	1 + 1		37.9	-	-	35.9	34.1	31.9	27.6	20.4
2GP(E) EVMS(.)5 5/1.1	○	●	1.1 + 1.1	1.5 + 1.5		47.5	-	-	45	42.5	39.9	34.5	25.5
2GP(E) EVMS(.)5 6/1.5 (M)	●	●	1.5 + 1.5	2 + 2		57	-	-	54	51	48	41.5	30.6
2GP(E) EVMS(.)5 7/1.5 (M)	●	●	1.5 + 1.5	2 + 2		66.5	-	-	63	59.5	56	48.5	35.7
2GP(E) EVMS(.)5 8/2.2	○	●	2.2 + 2.2	3 + 3		76	-	-	72	68	64	55	41
2GP(E) EVMS(.)5 9/2.2 (M)	●	●	2.2 + 2.2	3 + 3		85.5	-	-	81	77	72	62	46
2GP(E) EVMS(.)5 11/2.2	○	●	2.2 + 2.2	3 + 3		104	-	-	98.5	94	87.5	76	56
2GP(E) EVMS(.)5 15/3.0	-	●	3.0 + 3.0	4 + 4		142	-	-	135	128	120	104	76.5

SELECTION CHART 2GP(E) EVMS(.) 10-15-20

Model	Supply		Motor		Maximum working pressure (MPa)	Q=Capacity												
						l/min 0	150	200	260	300	360	400	500	600	700	800	900	960
	Single phase	Three phase	kW	HP		m³/h 0	9,0	12,0	15,6	18,0	21,6	24,0	30,0	36,0	42,0	48,0	54,0	57,6
						H=Total manometric head in meters												
2GP(E) EVMS(.)10 4/2.2 (M)	●	●	2.2 + 2.2	3 + 3	1,6	43,6	42,4	41,7	39,5	37,3	33,2	29,8	19,6	-	-	-	-	-
2GP(E) EVMS(.)10 6/2.2 (M)	●	●	2.2 + 2.2	3 + 3		65,5	63,5	62,5	59	56	50	45	29,5	-	-	-	-	-
2GP(E) EVMS(.)10 7/3.0	-	●	3.0 + 3.0	4 + 4		76,5	74	73	69	65,5	58	52	34,4	-	-	-	-	-
2GP(E) EVMS(.)10 8/3.0	-	●	3.0 + 3.0	4 + 4		87,0	84,5	83,5	79	74,5	66,5	59,5	39,3	-	-	-	-	-
2GP(E) EVMS(.)10 11/4.0	-	●	4.0 + 4.0	5.5 + 5.5		120	116	115	109	103	91,5	82	54	-	-	-	-	-
2GP(E) EVMS(.)10 14/5.5	-	●	5.5 + 5.5	7.5 + 7.5		153	148	146	138	131	116	104	68,5	-	-	-	-	-
2GP(E) EVMS(.)15 4/4.0	-	●	4.0 + 4.0	5.5 + 5.5		59	-	-	55	54,5	53	52	50	46,5	41	33,6	-	-
2GP(E) EVMS(.)15 5/5.5	-	●	5.5 + 5.5	7.5 + 7.5		73,5	-	-	69	68	66	65	62	58	51	42	-	-
2GP(E) EVMS(.)15 6/5.5	-	●	5.5 + 5.5	7.5 + 7.5		88,5	-	-	82,5	81,5	79,5	78	74,5	69,5	61	50,5	-	-
2GP(E) EVMS(.)15 7/7.5	-	●	7.5 + 7.5	10 + 10		103	-	-	96,5	95	92,5	91	87	81	71,5	58,5	-	-
2GP(E) EVMS(.)15 8/7.5	-	●	7.5 + 7.5	10 + 10		118	-	-	110	109	106	104	99,5	92,5	81,5	67	-	-
2GP(E) EVMS(.)15 9/11	-	●	11 + 11	15 + 15		133	-	-	124	122	119	117	112	104	92	75,5	-	-
2GP(E) EVMS(.)15 10/11	-	●	11 + 11	15 + 15		147	-	-	138	136	132	130	124	116	102	84	-	-
2GP(E) EVMS(.)20 4/5.5	-	●	5.5 + 5.5	7.5 + 7.5		67,4	-	-	-	-	61	60	58	55,4	52,3	47,3	39,8	34,9
2GP(E) EVMS(.)20 6/7.5	-	●	7.5 + 7.5	10 + 10		101	-	-	-	-	91,2	90	87	83,1	78,5	71	59,7	52,3
2GP(E) EVMS(.)20 8/11	-	●	11 + 11	15 + 15		135	-	-	-	-	122	120	116	111	105	95	80	70

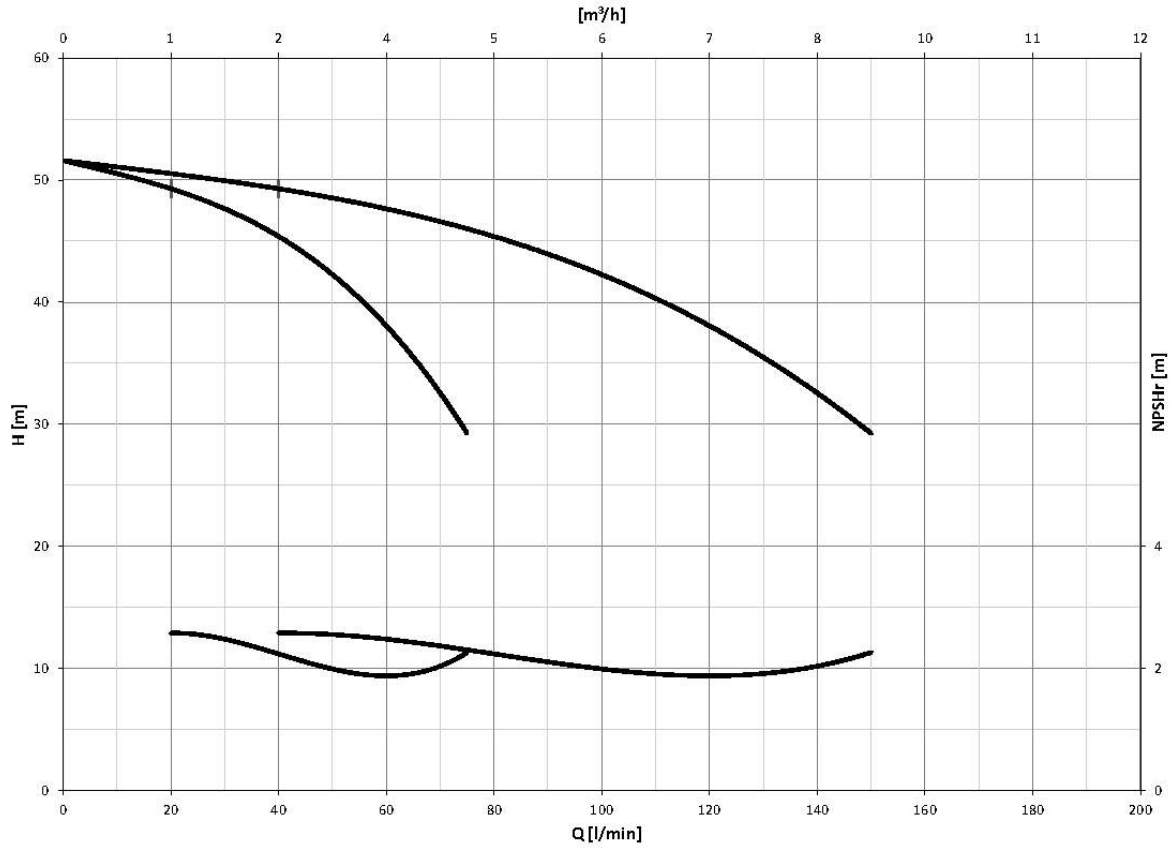
● : Standard ○ : On request

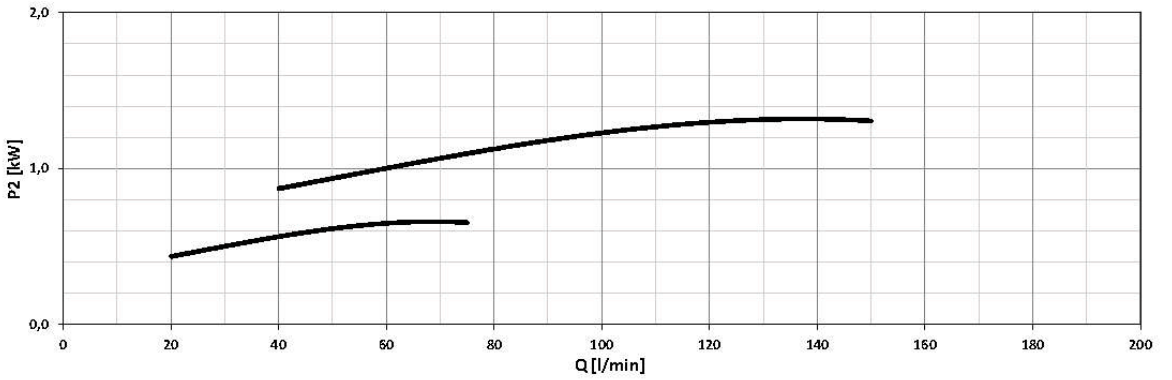
SELECTION CHART 2GP(E) EVM(.) 32-45-64

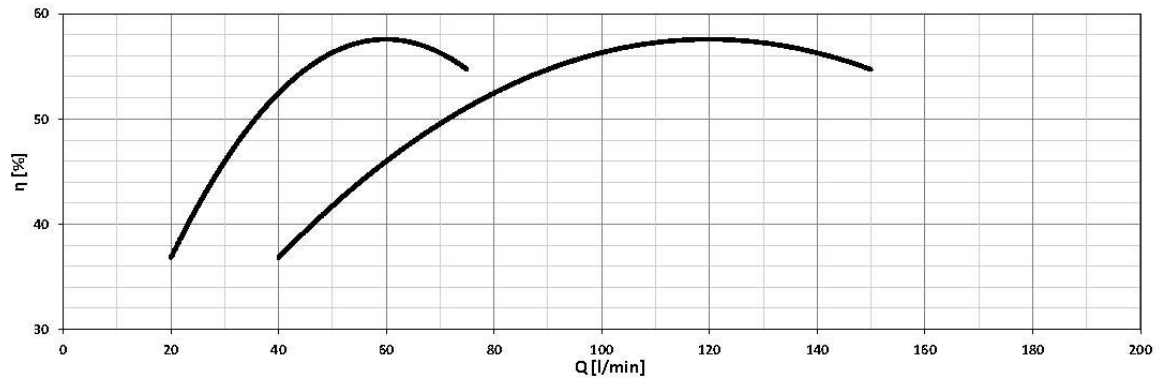
Model	Motor		Maximum working pressure [Mpa]	Q=Capacity									
				l/min 0	400	700	1000	1200	1400	1800	2000	2400	2800
	kW	HP		m³/h 0	24	42	60	72	84	108	120	144	168
				H=Total manometric head in meters									
2GP(E) EVM(.)32 3-3/5.5	5.5 + 5.5	7.5 + 7.5	1.6	59.5	55.5	47.5	35.2	26.1	-	-	-	-	-
2GP(E) EVM(.)32 3-1/5.5	5.5 + 5.5	7.5 + 7.5		68	62	55	44.5	35.2	24.5	-	-	-	-
2GP(E) EVM(.)32 4-3/7.5	7.5 + 7.5	10 + 10		84	77	67	51.5	39.4	-	-	-	-	-
2GP(E) EVM(.)32 4-1/7.5	7.5 + 7.5	10 + 10		92	83.5	74.5	61	48.5	34.2	-	-	-	-
2GP(E) EVM(.)32 5-3/11	11 + 11	15 + 15		106	100	89	70	54	37.3	-	-	-	-
2GP(E) EVM(.)45 2-0/7.5	7.5 + 7.5	10 + 10		54	-	51.5	50	48	45	35.4	29.1	-	-
2GP(E) EVM(.)45 3-2/11	11 + 11	15 + 15		69	-	64	61	58	53	37.3	-	-	-
2GP(E) EVM(.)45 3-0/11	11 + 11	15 + 15		81	-	77.5	75	72.5	68	54	45	-	-
2GP(E) EVM(.)45 4-2/15	15 + 15	20 + 20		96	-	90	86	82	76	56	43	-	-
2GP(E) EVM(.)45 4-0/15	15 + 15	20 + 20		108	-	103	100	96.5	91	73	60.5	-	-
2GP(E) EVM(.)64 2-0/11	11 + 11	15 + 15		58.5	-	-	53.5	53	52	49	46.5	39.5	30.6
2GP(E) EVM(.)64 3-3/15	15 + 15	20 + 20		71	-	-	64	62.5	61	55.5	51	39.3	-
2GP(E) EVM(.)64 3-2/15	15 + 15	20 + 20		76.5	-	-	69.5	68	66.5	61.5	57.5	46.5	32.5
2GP(E) EVM(.)64 3-1/15	15 + 15	20 + 20		82.5	-	-	75	74	72.5	68	64	53.5	40
2GP(E) EVM(.)64 3-0/18.5	18.5 + 18.5	25 + 25		88	-	-	80.5	79.5	78	74	70.5	60.5	47.5
2GP(E) EVM(.)64 4-3/18.5	18.5 + 18.5	25 + 25		100	-	-	91	89	87	80.5	75.5	60.5	42
2GP(E) EVM(.)64 4-1/22	22 + 22	30 + 30		112	-	-	102	101	98.5	93	88	74.5	57
2GP(E) EVM(.)64 4-0/22	22 + 22	30 + 30		117	-	-	108	106	104	99	94.5	81.5	64.5

PERFORMANCE CURVE 2GP(E)

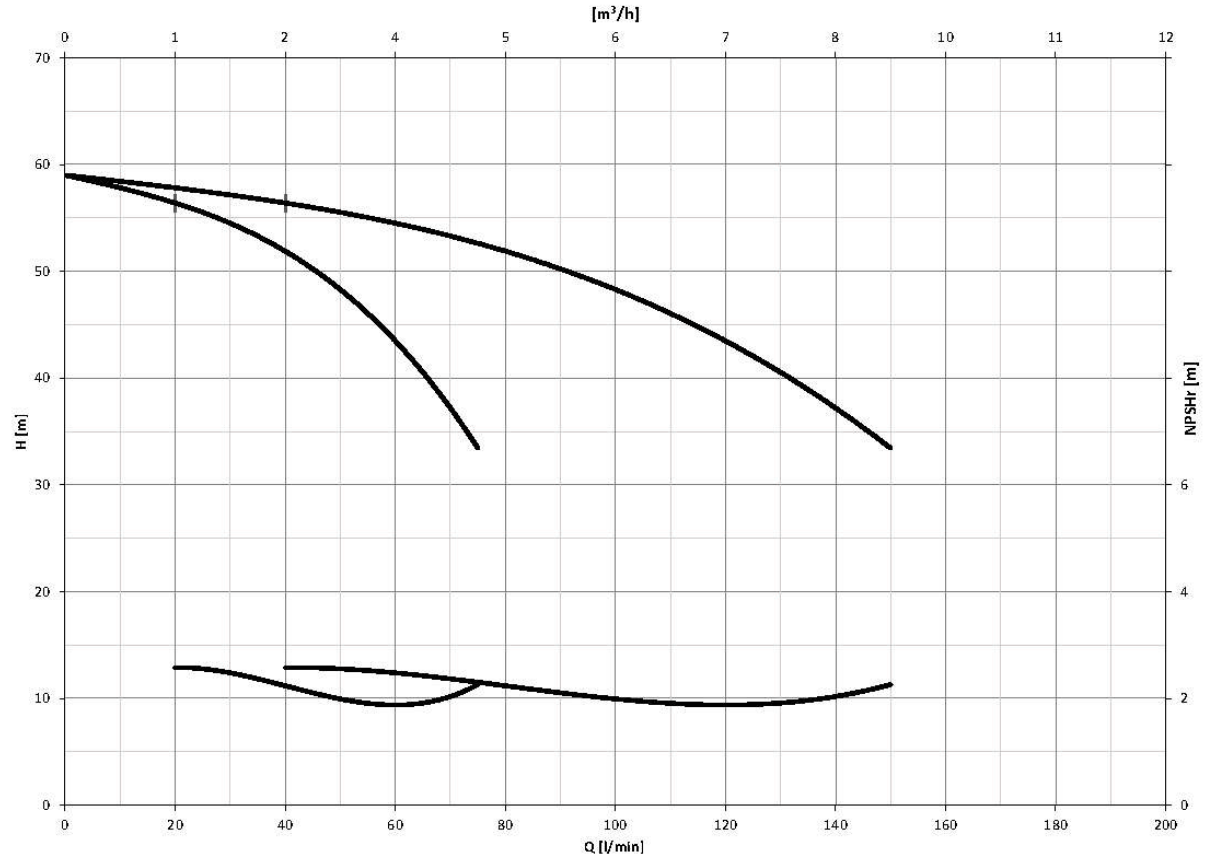
2GP(E) EVMS 3-7/0.75

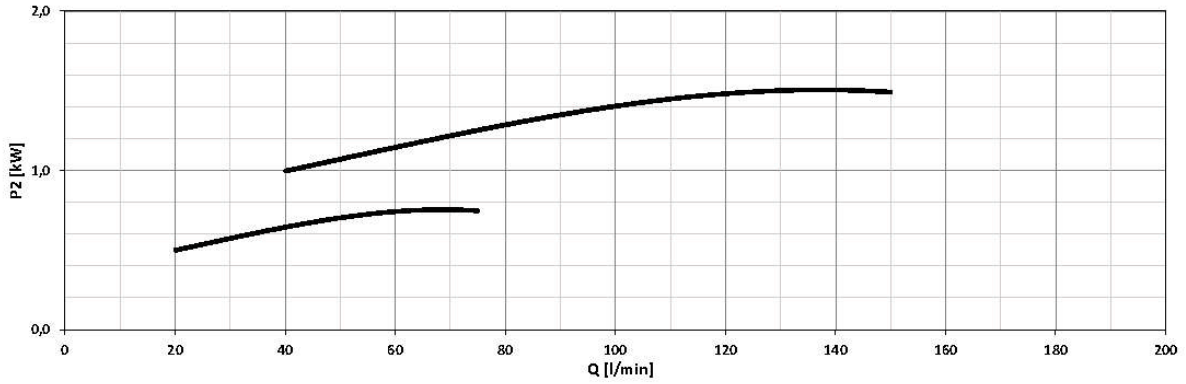


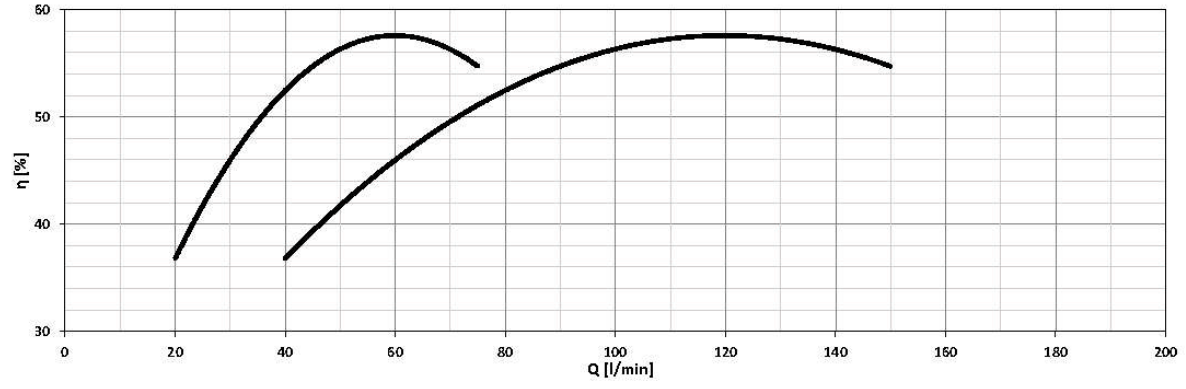




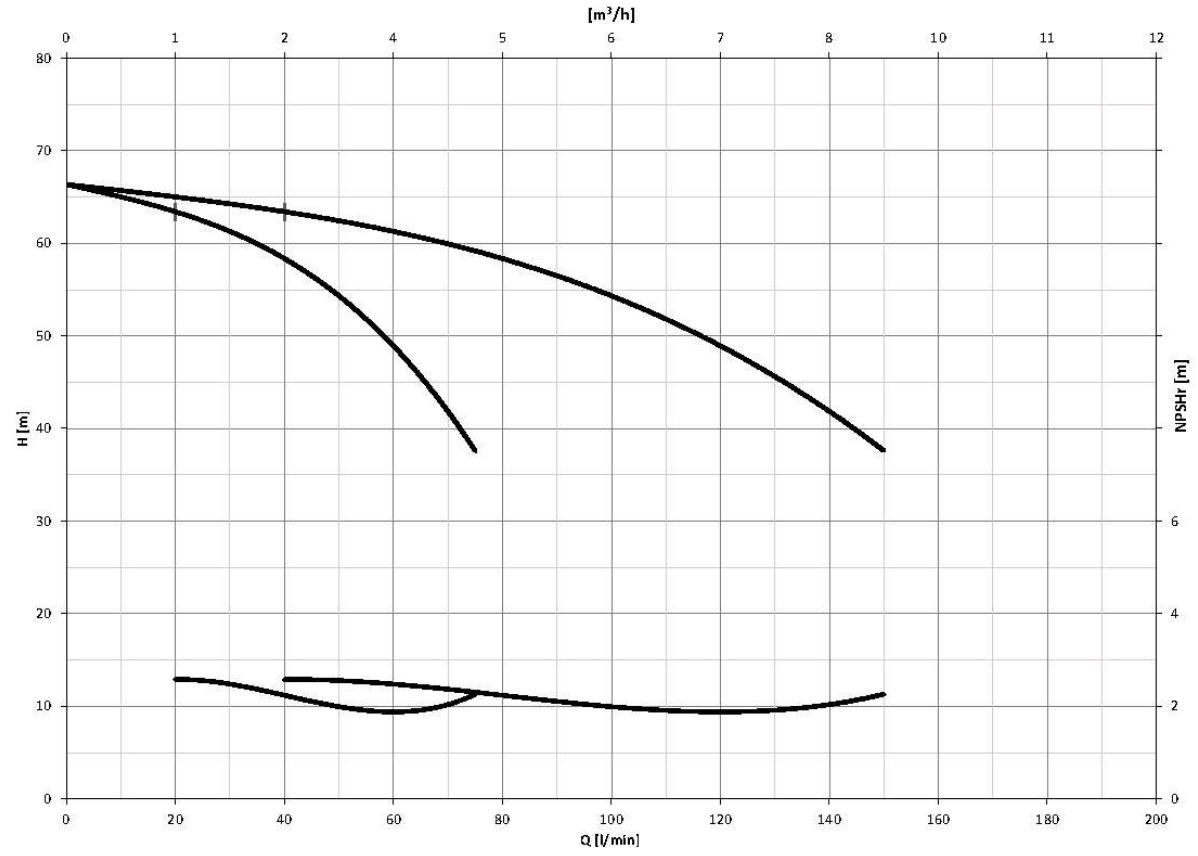
2GP(E) EVMS 3-8/0.75

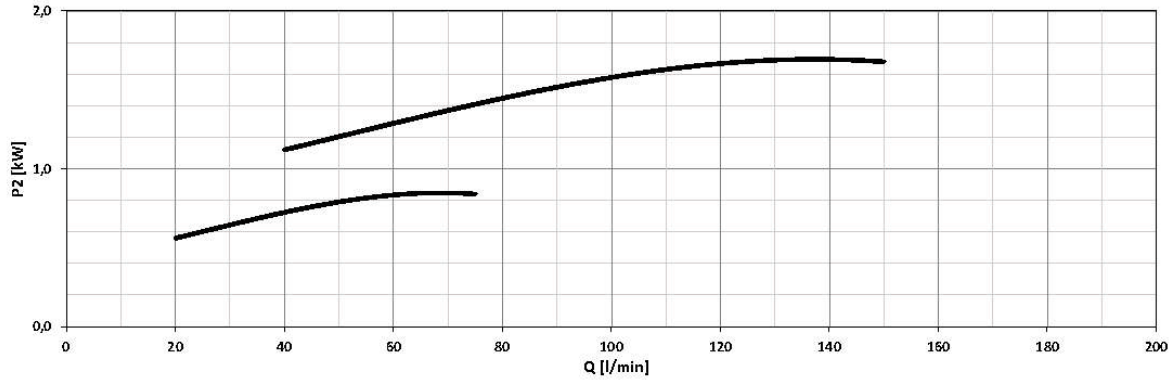


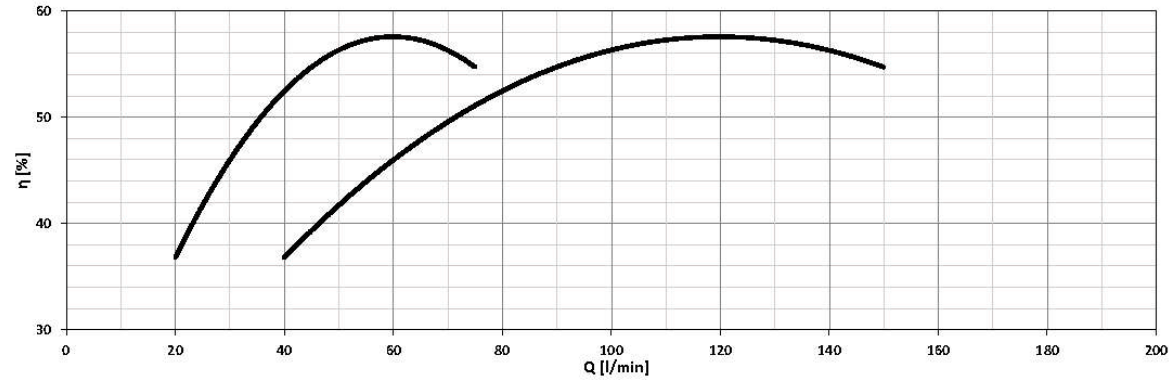




2GP(E) EVMS 3-9/1.1



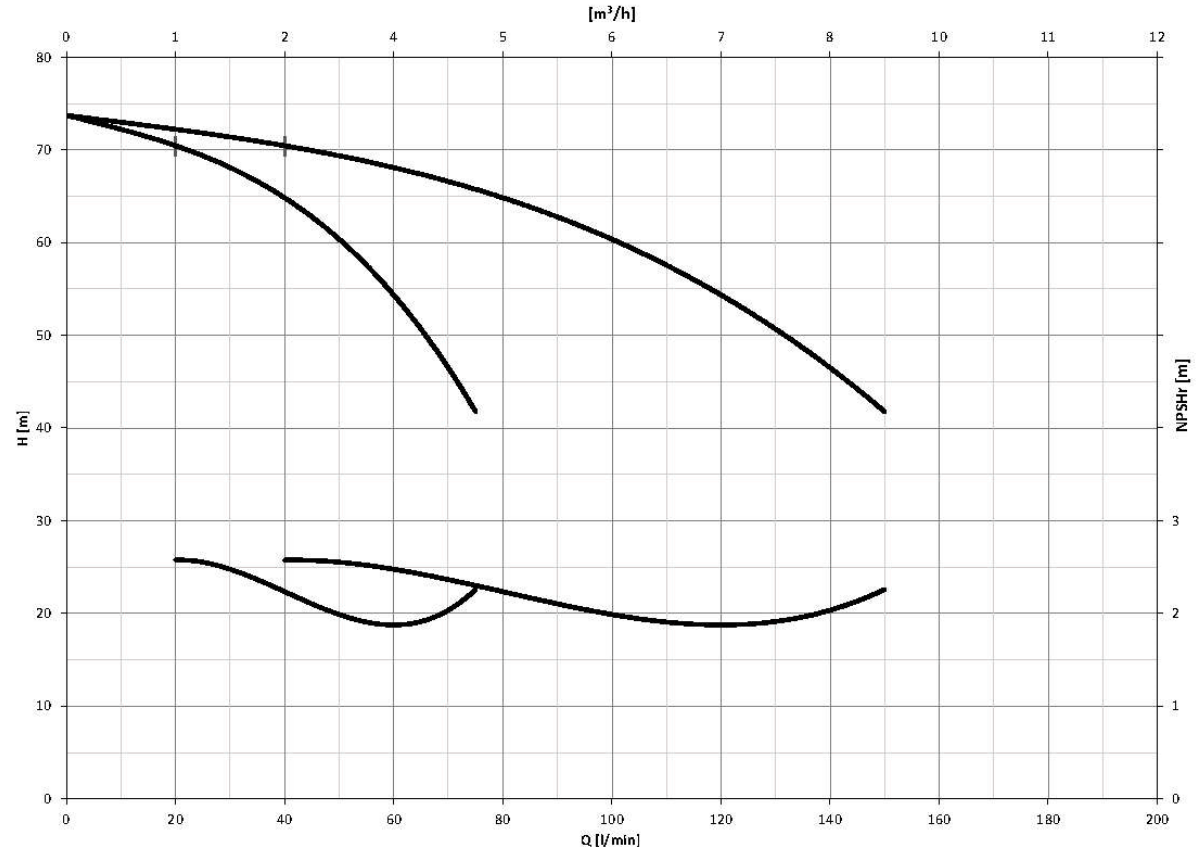


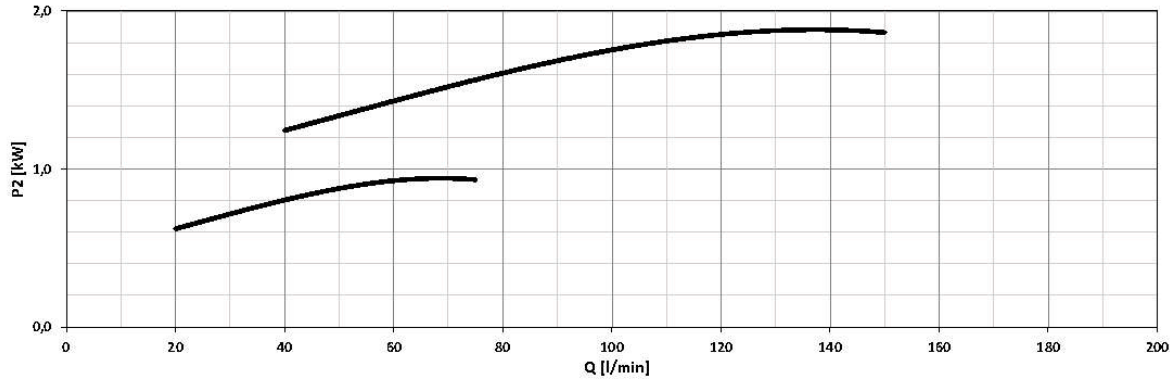


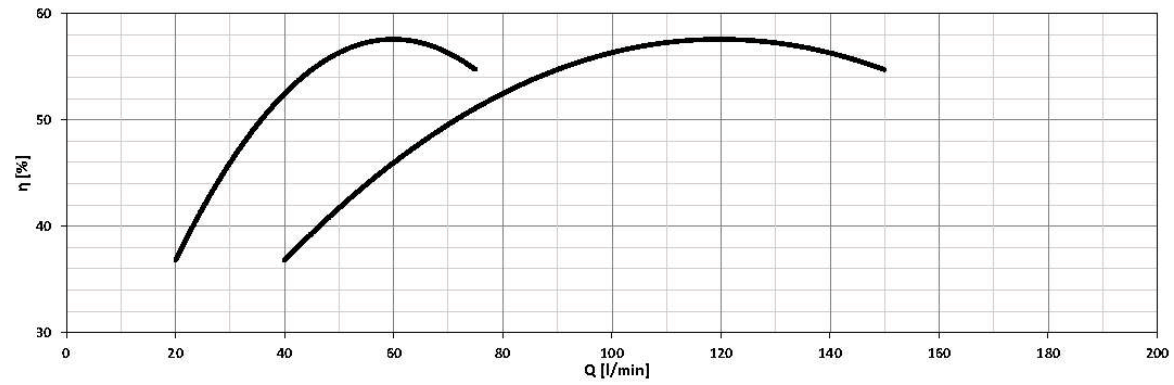
GP-GPE

PERFORMANCE CURVE

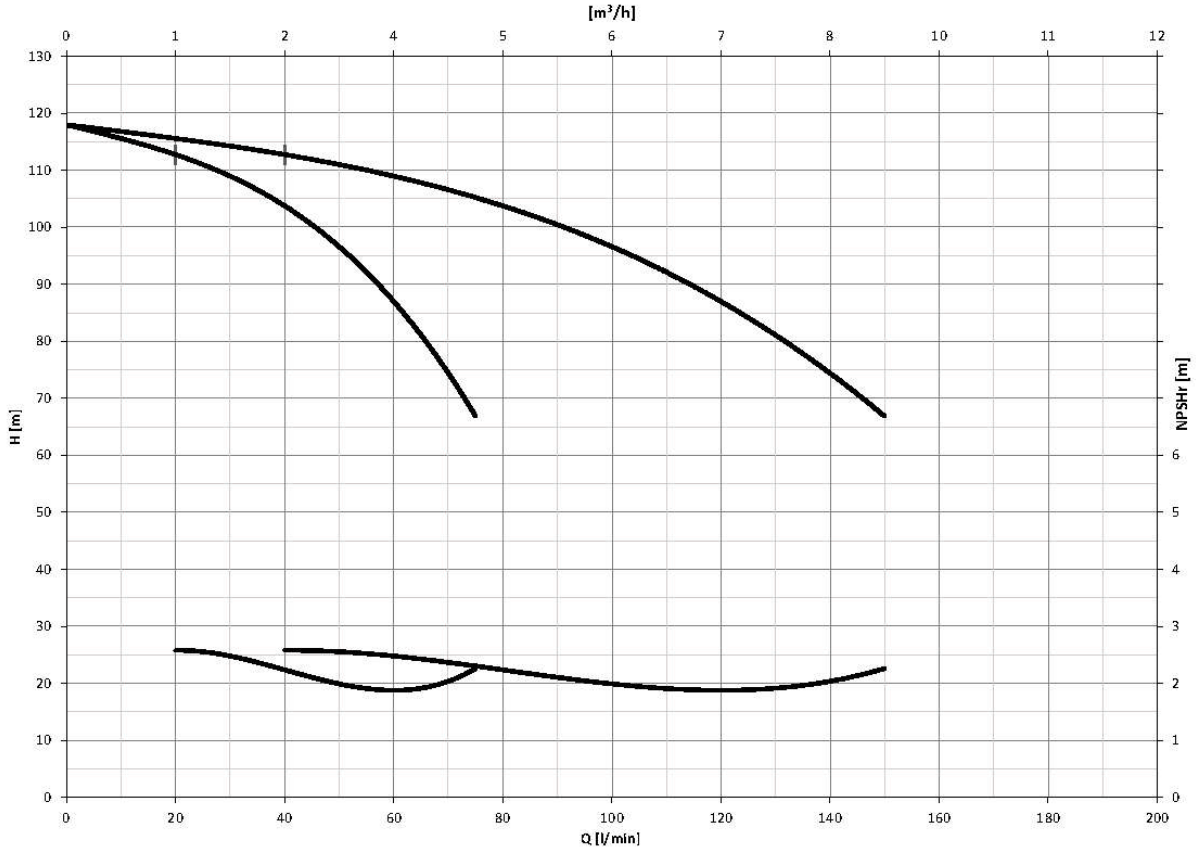
2GP(E) EVMS 3-10/1.1

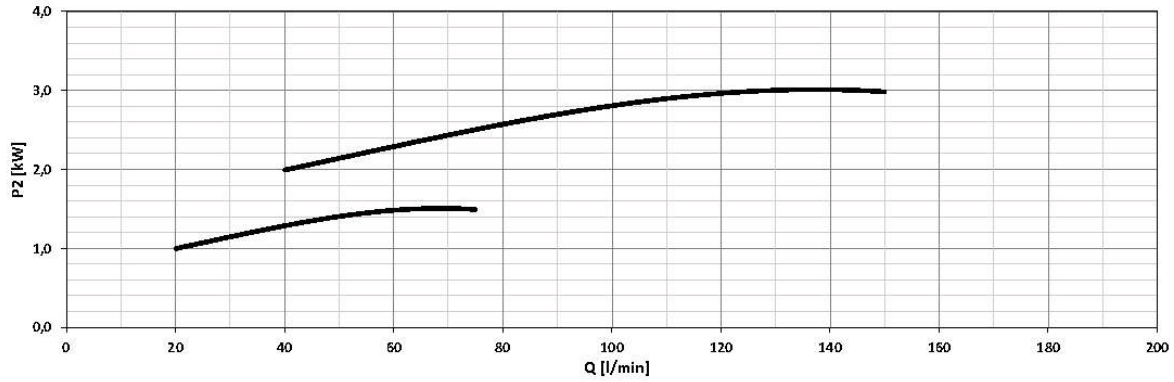


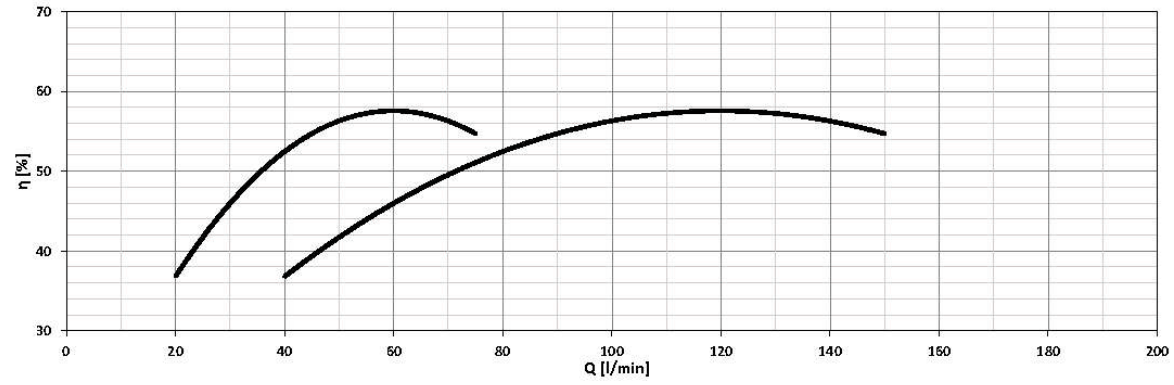




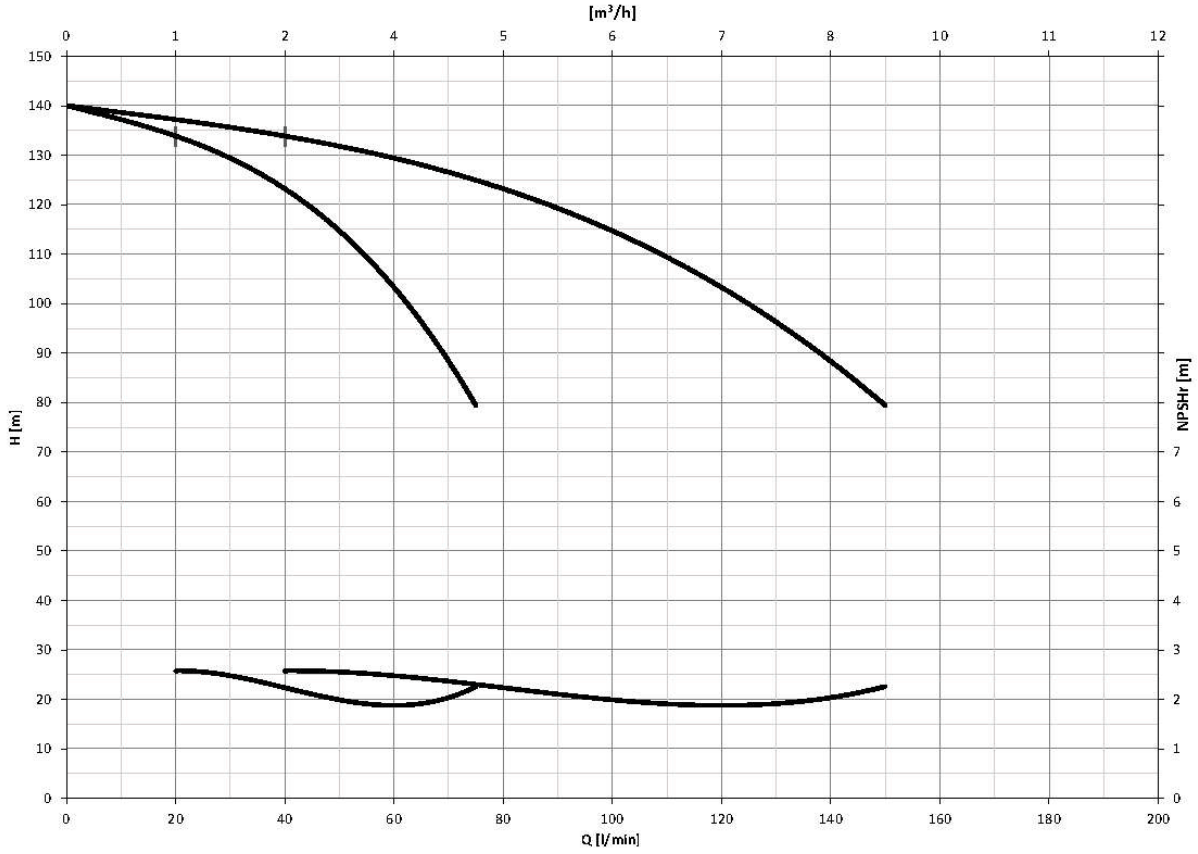
2GP(E) EVMS 3-16/1.5

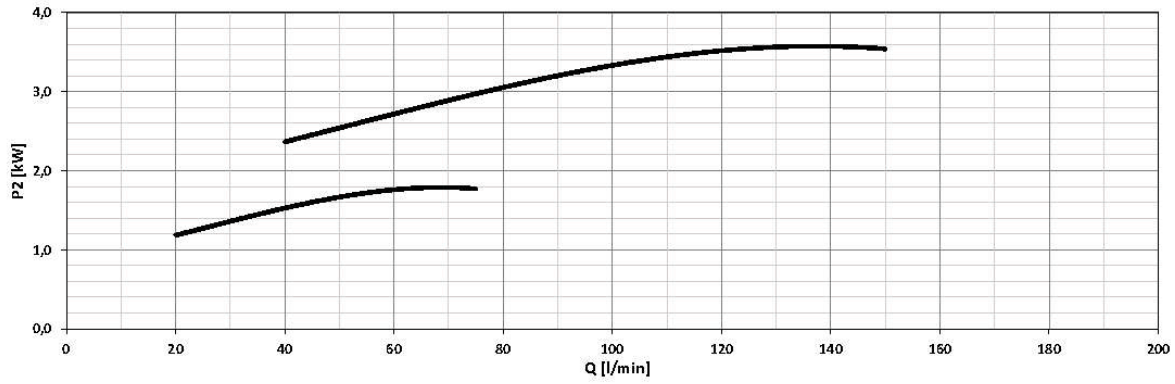


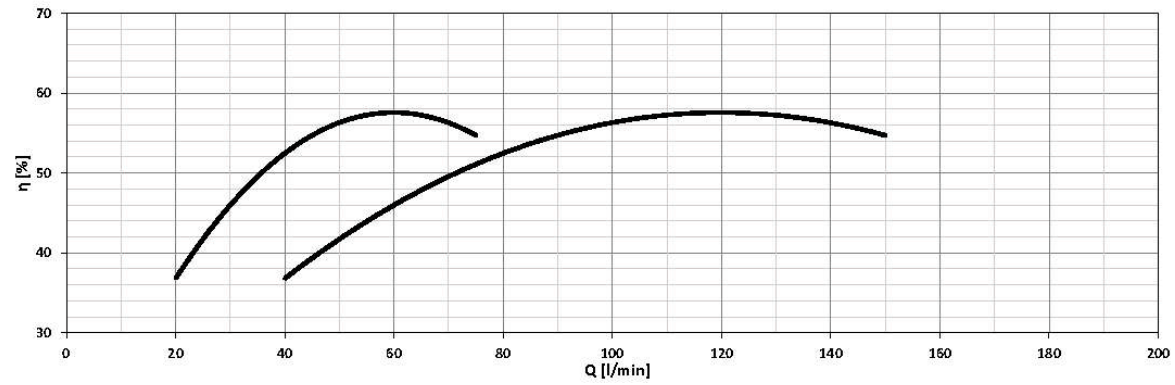




2GP(E) EVMS 3-19/2.2



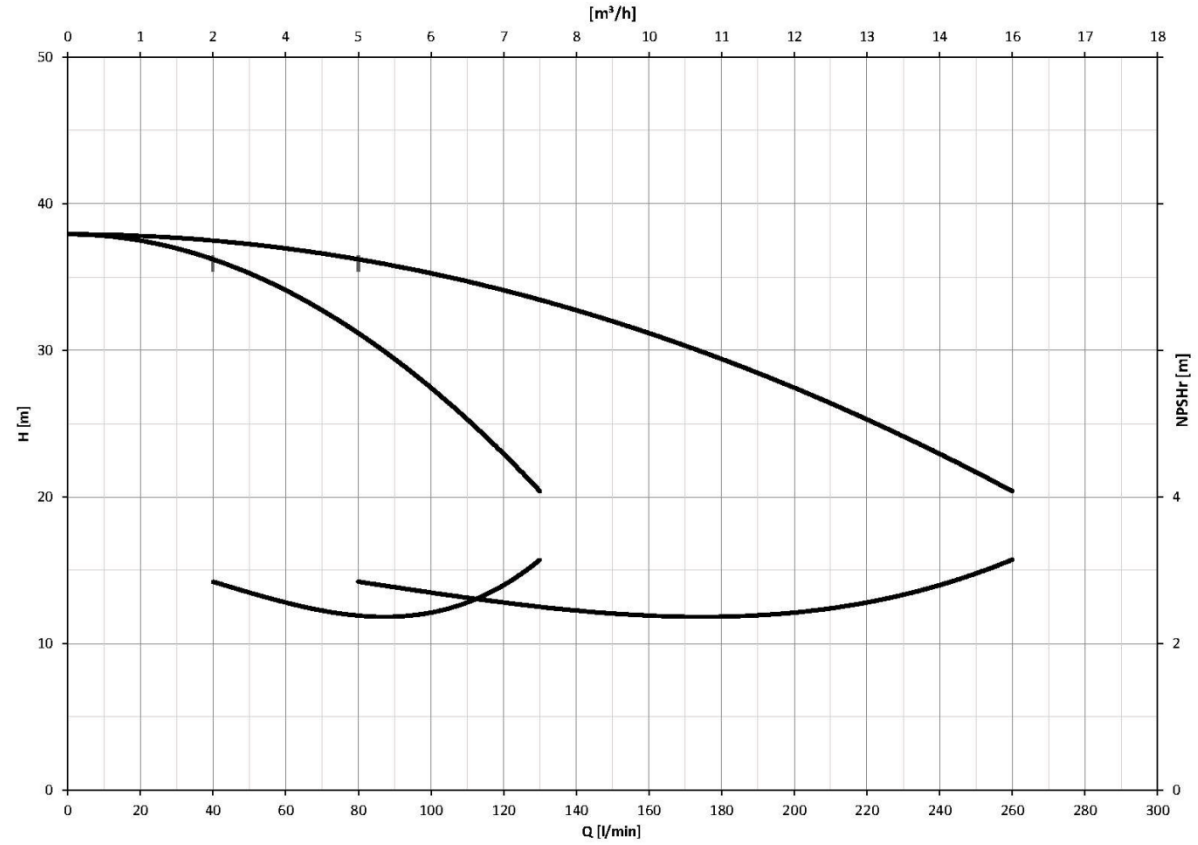


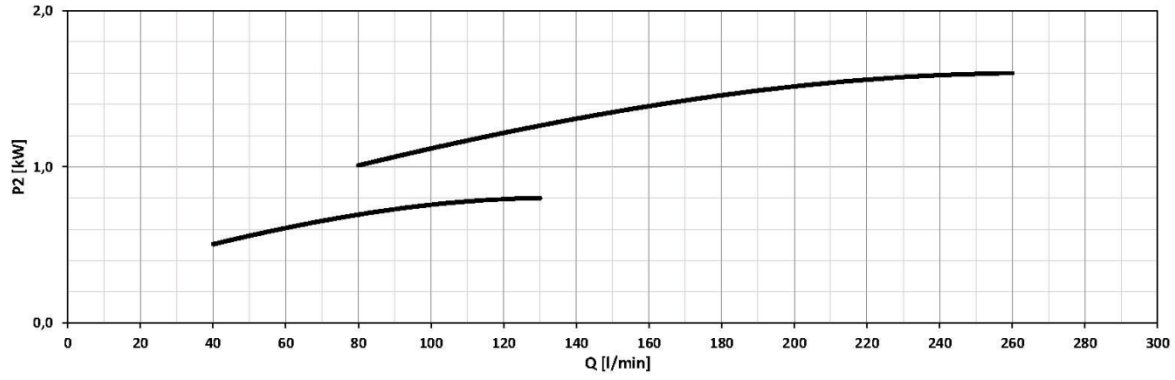


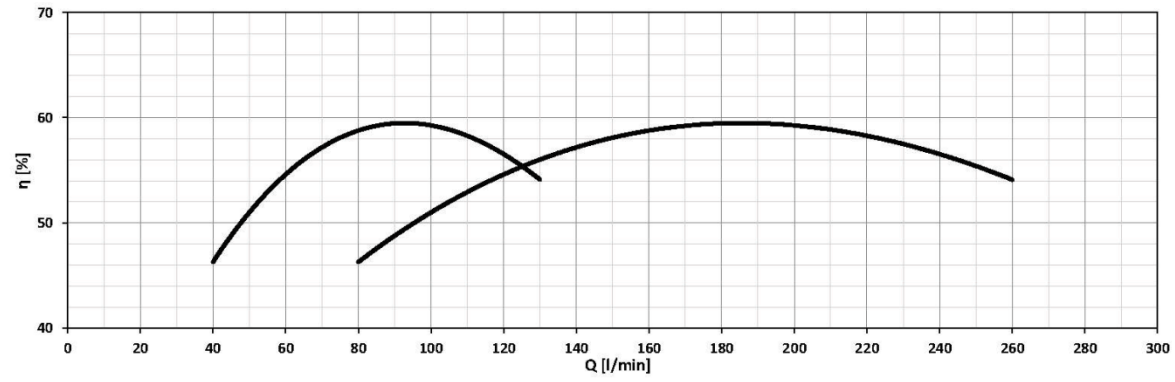
GP-GPE

PERFORMANCE CURVE

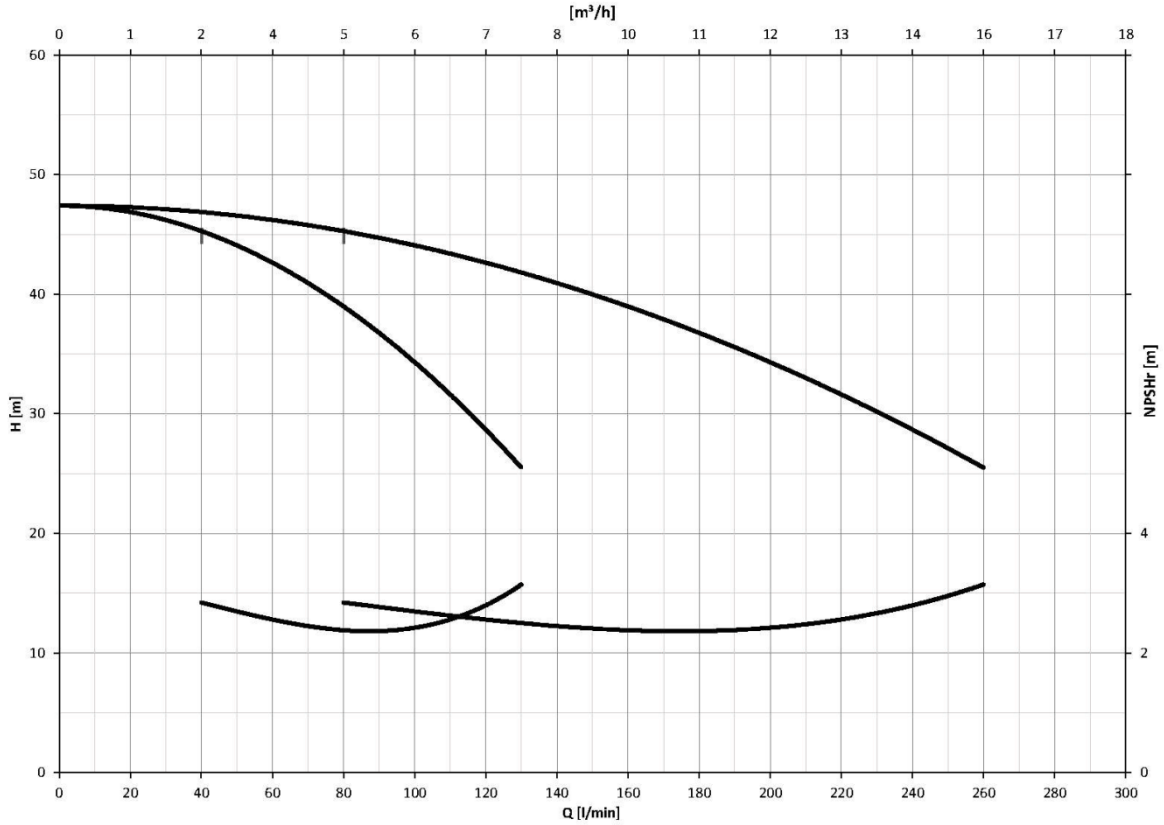
2GP(E) EVMS 5-4/0.75

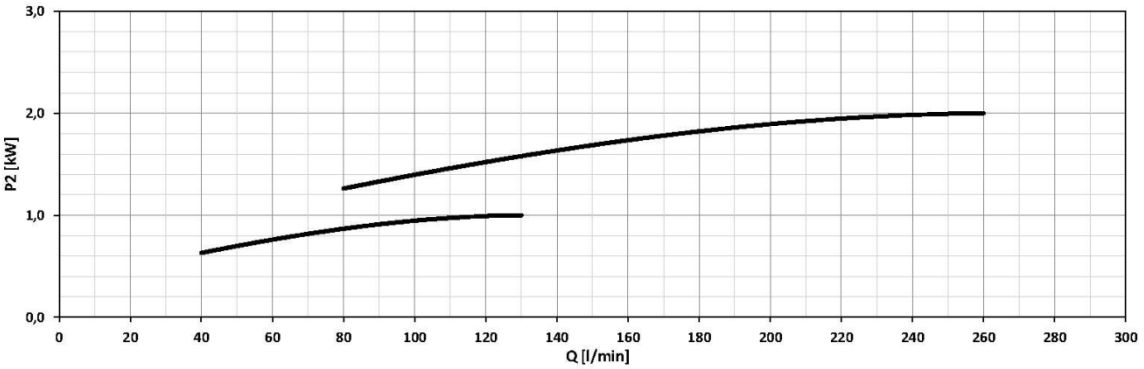


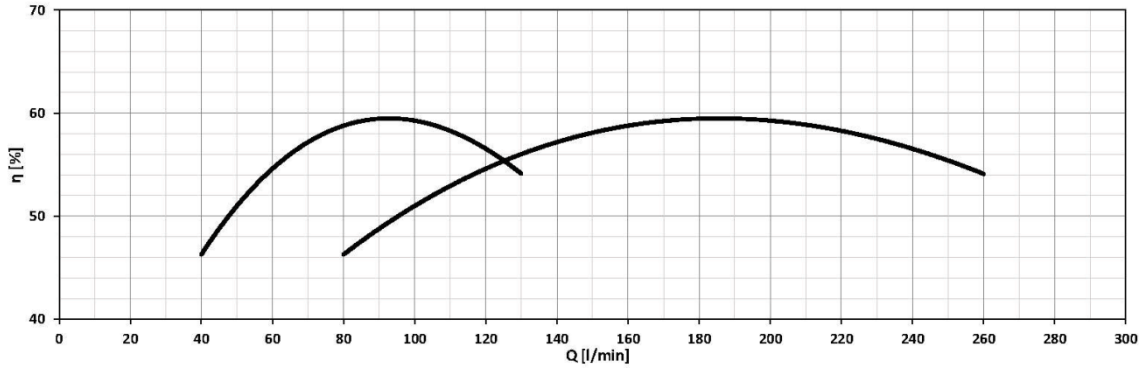




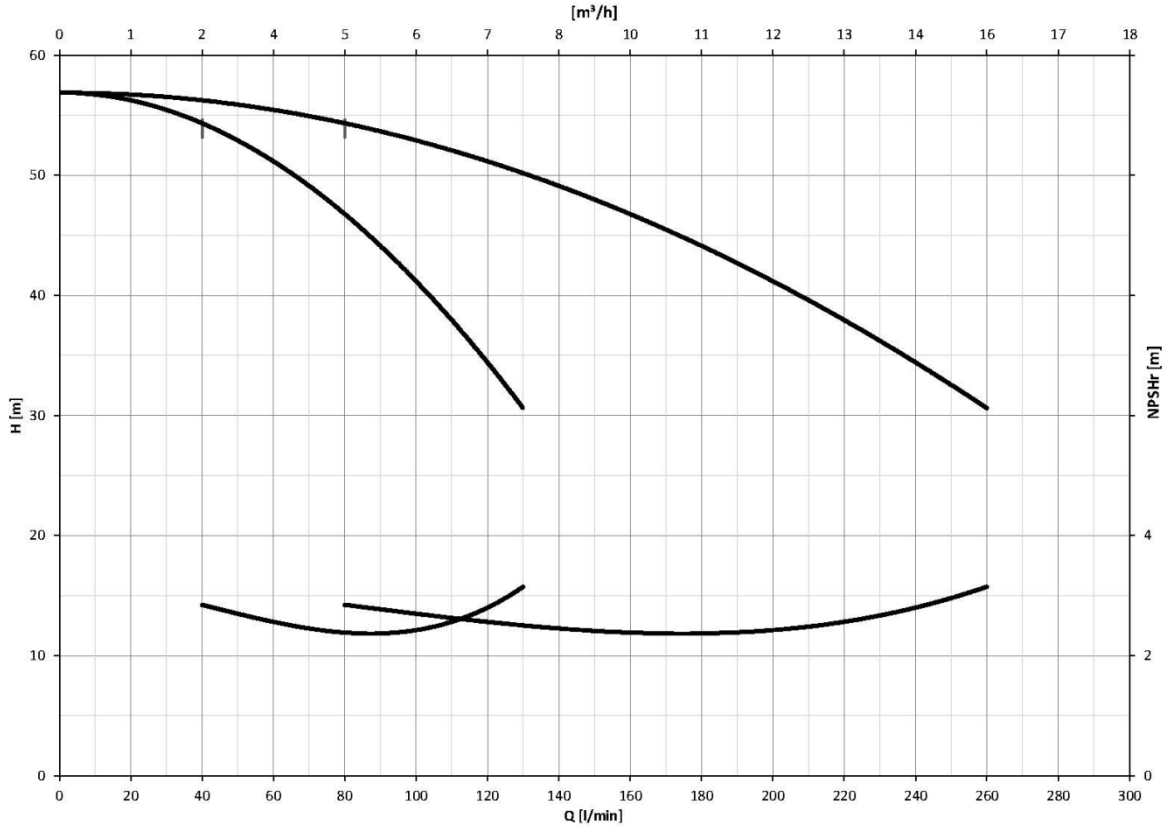
2GP(E) EVMS 5-5/1.1

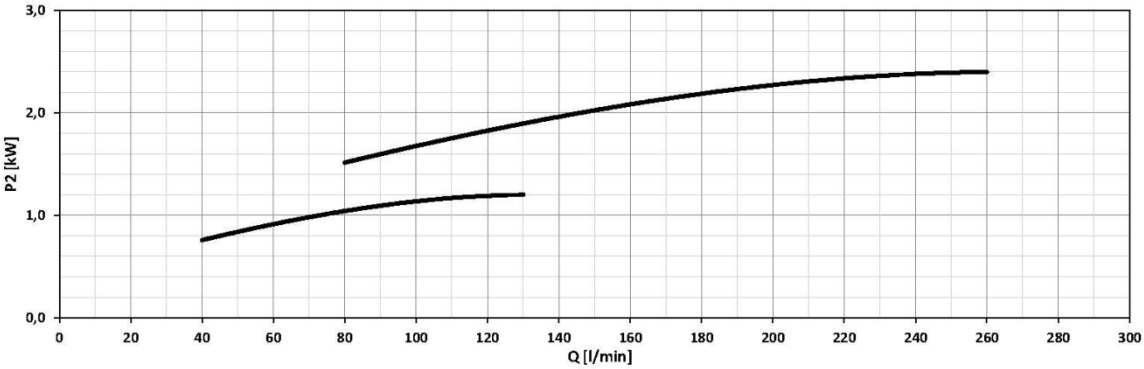


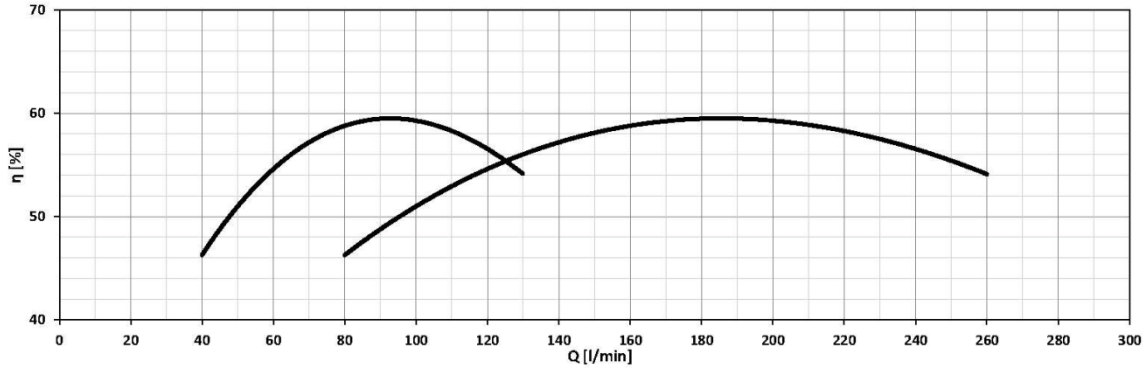




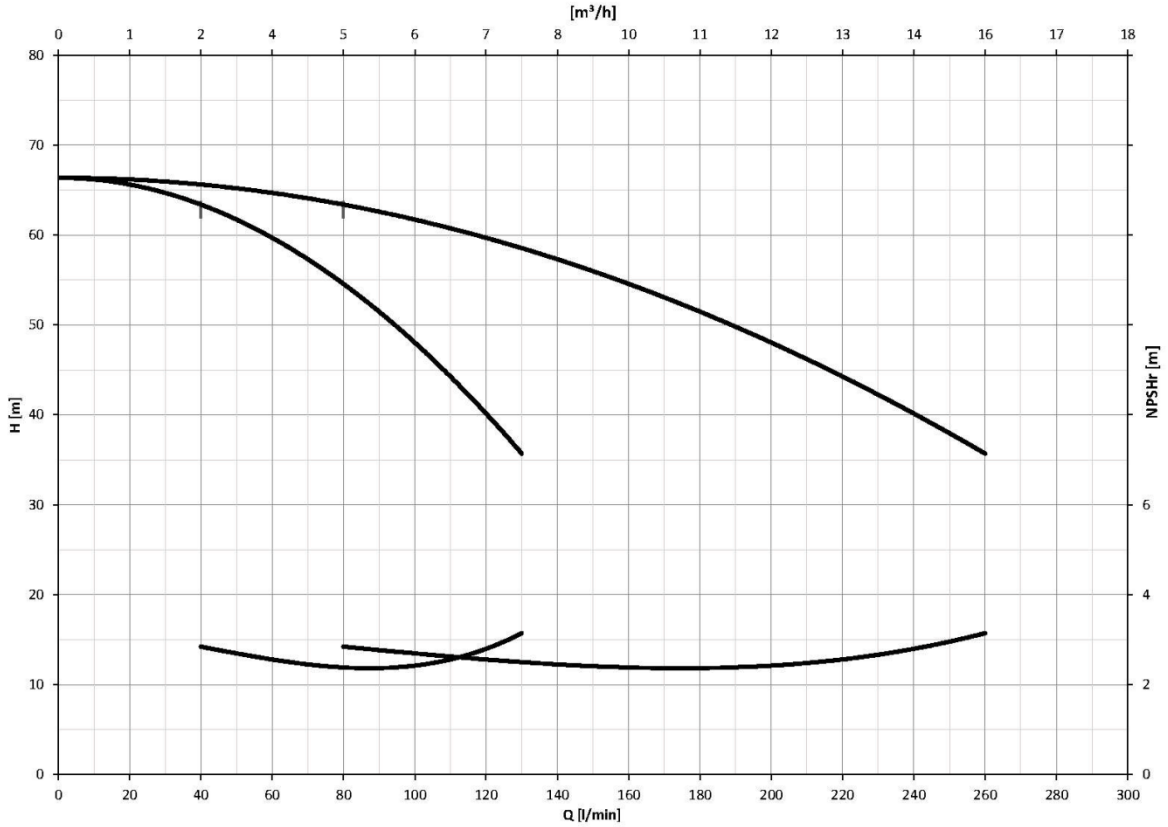
2GP(E) EVMS 5-6/1.5

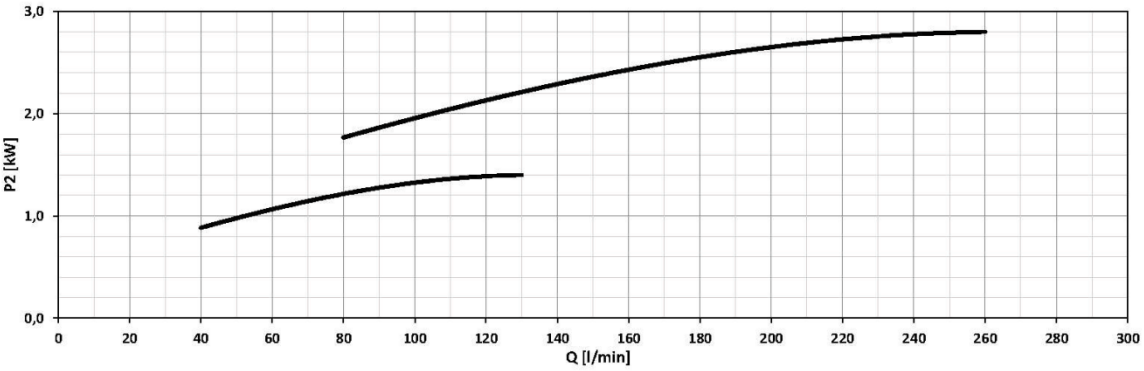


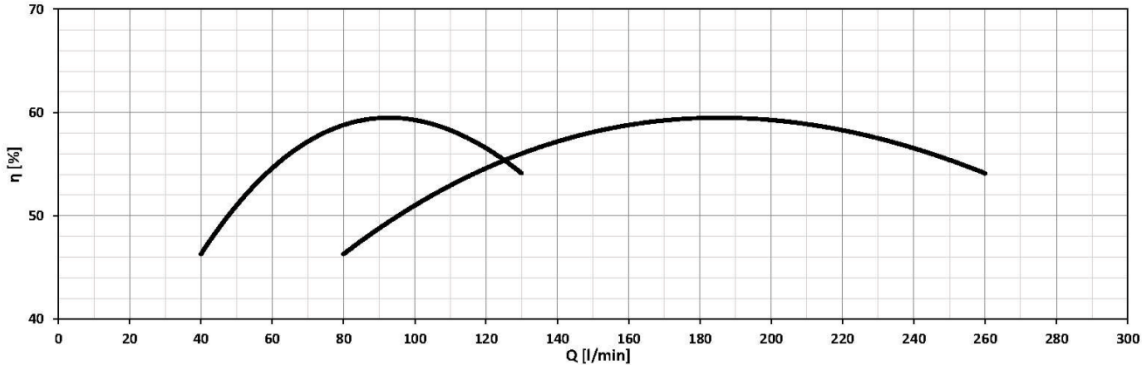




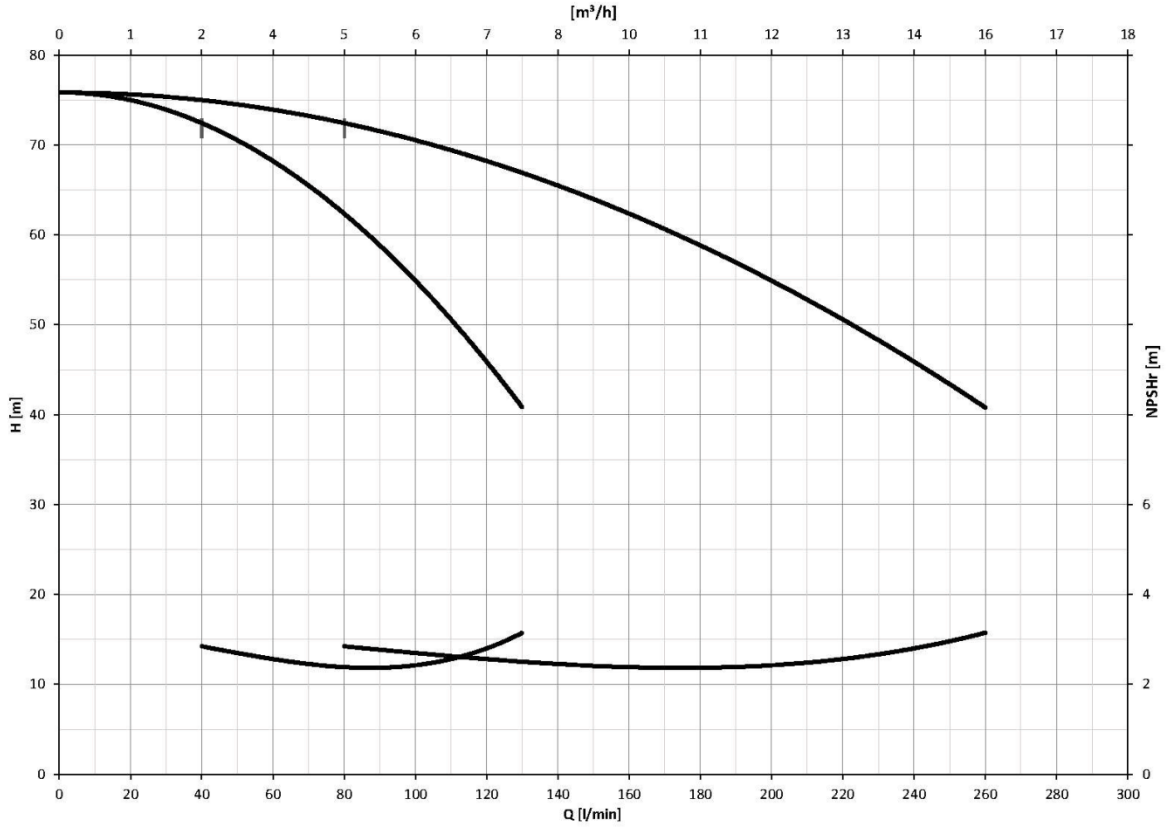
2GP(E) EVMS 5-7/1.5

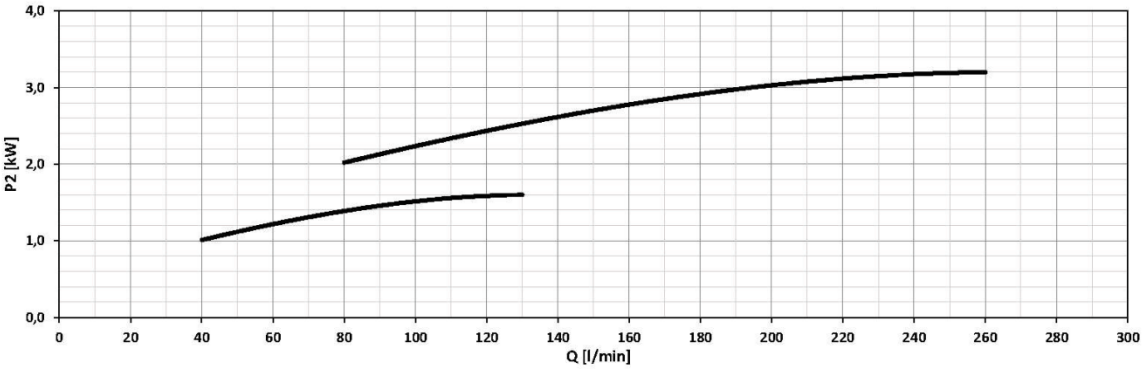


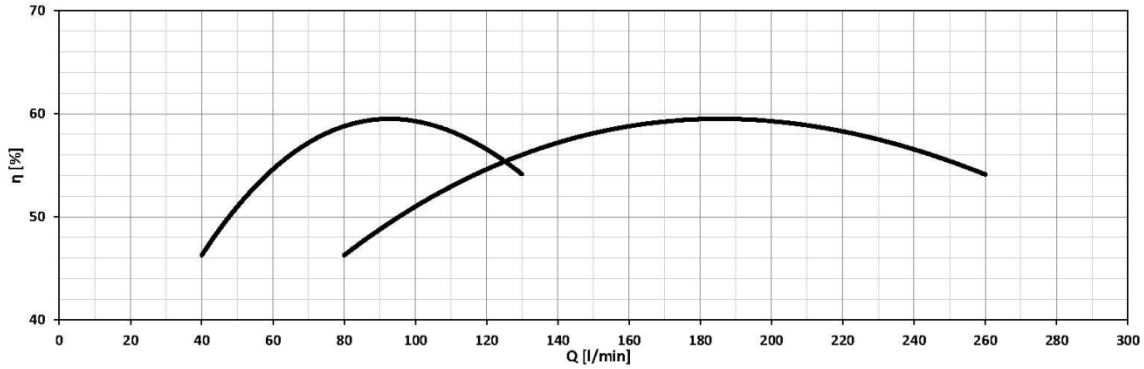




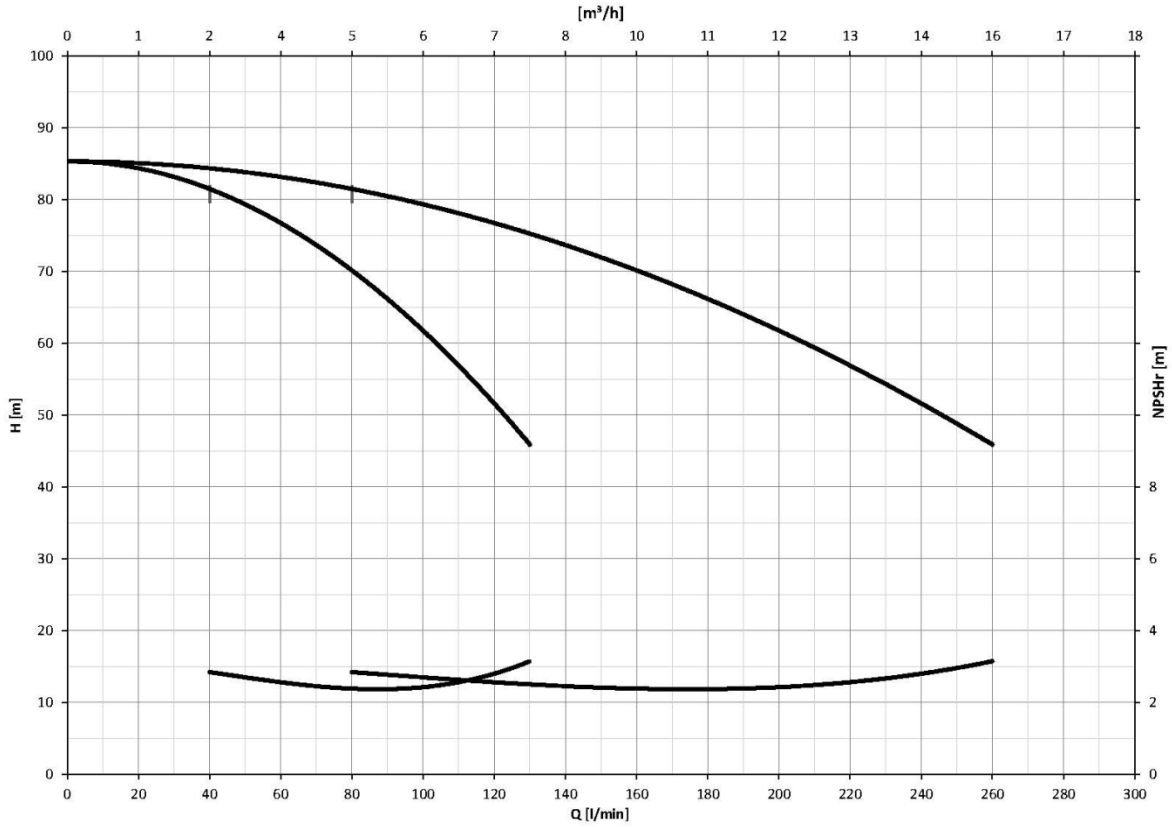
2GP(E) EVMS 5-8/2.2

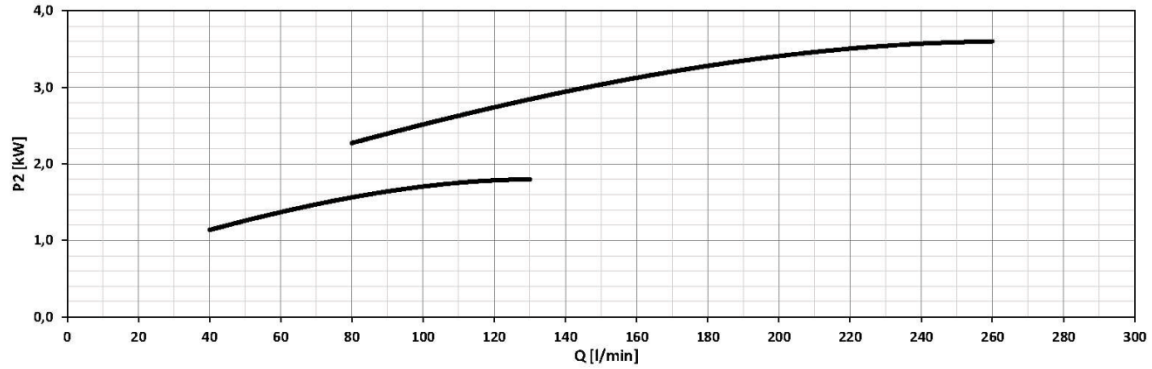


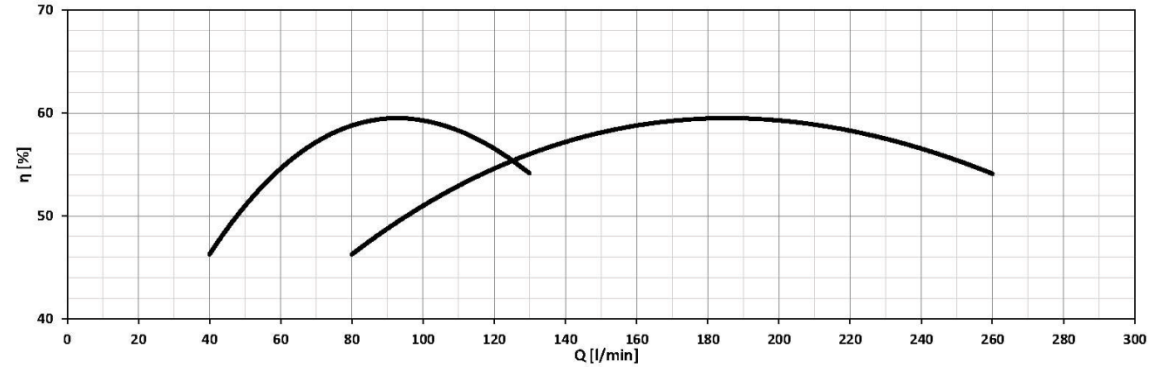




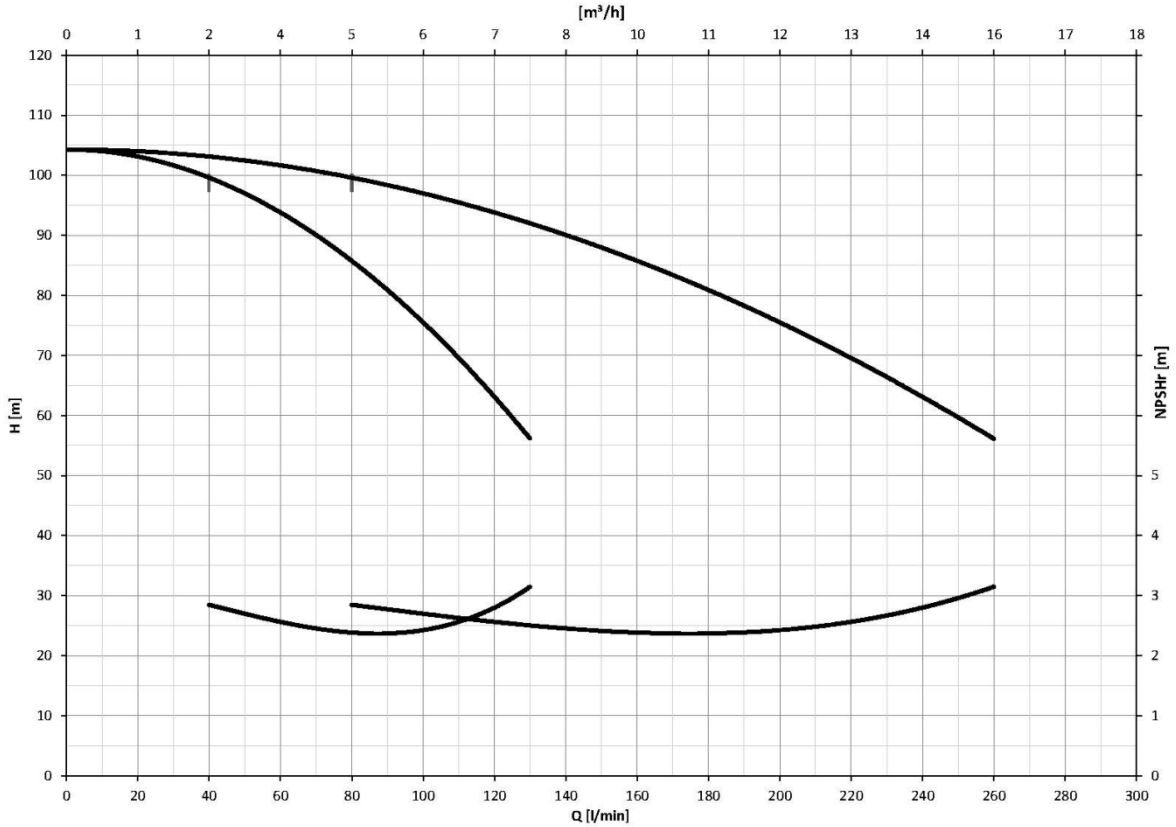
2GP(E) EVMS 5-9/2.2

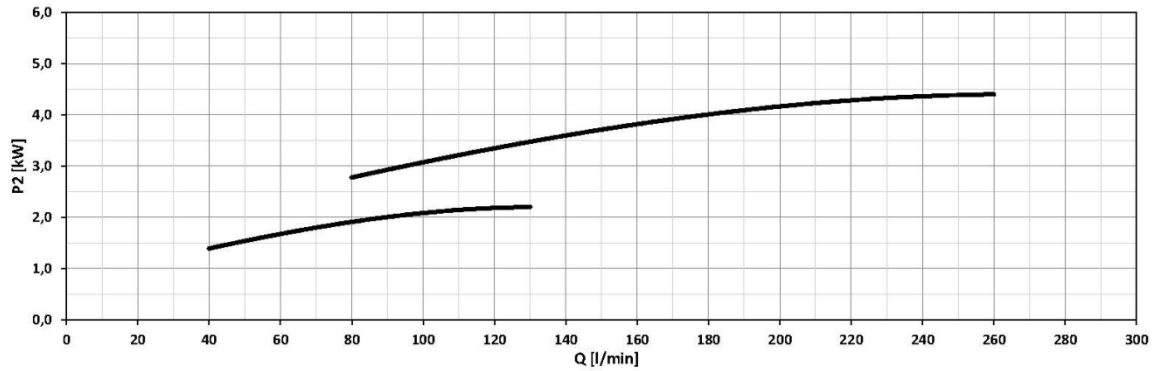


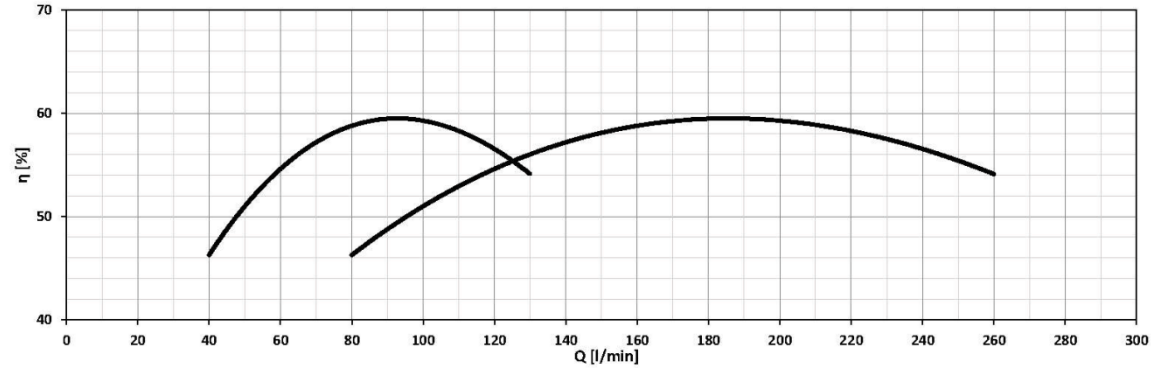




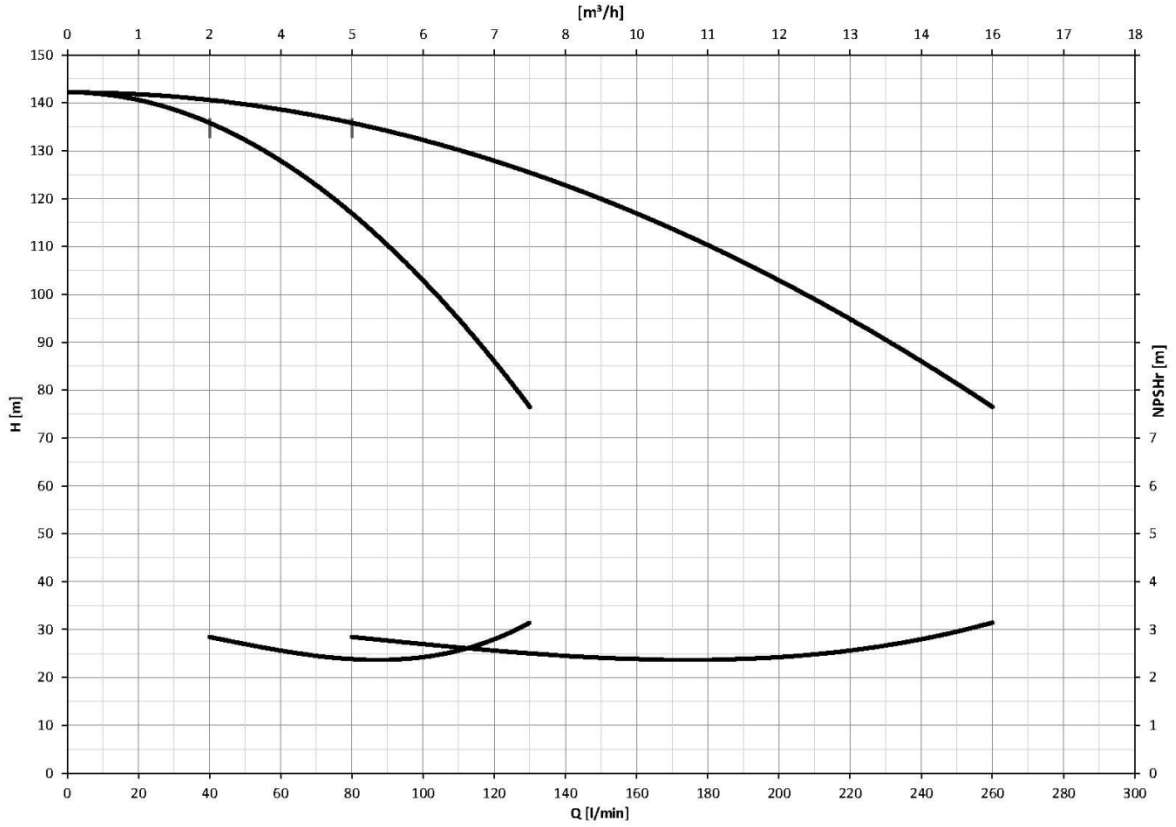
2GP(E) EVMS 5-11/2.2

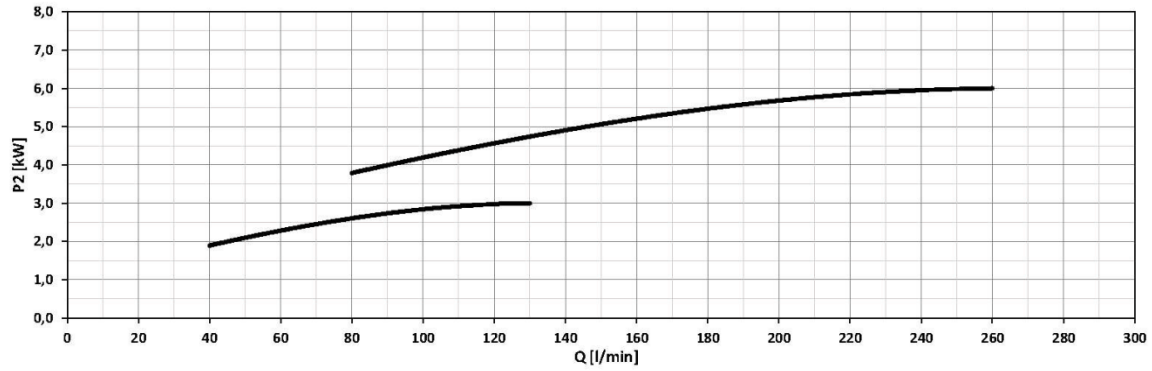


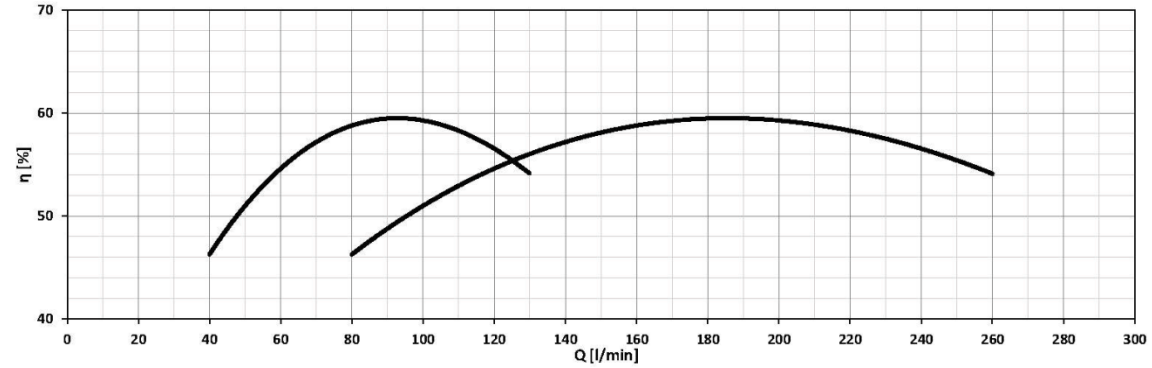




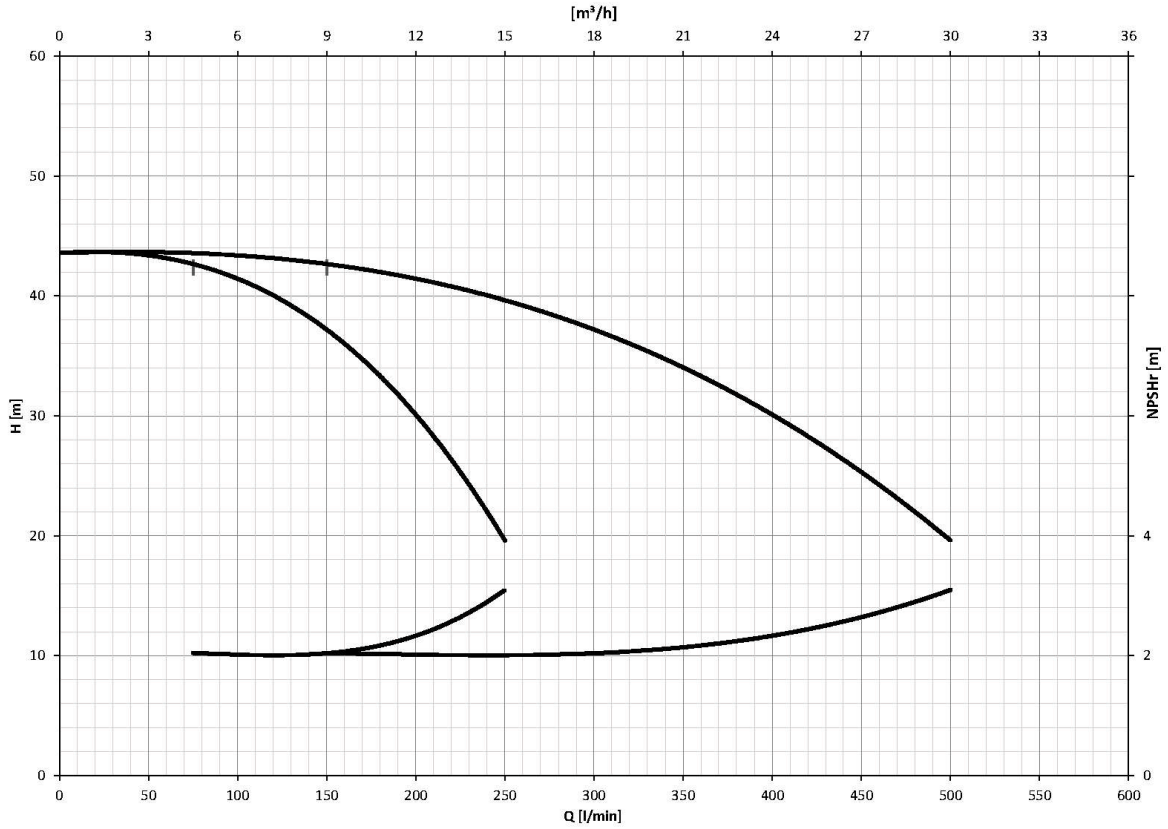
2GP(E) EVMS 5-15/3.0

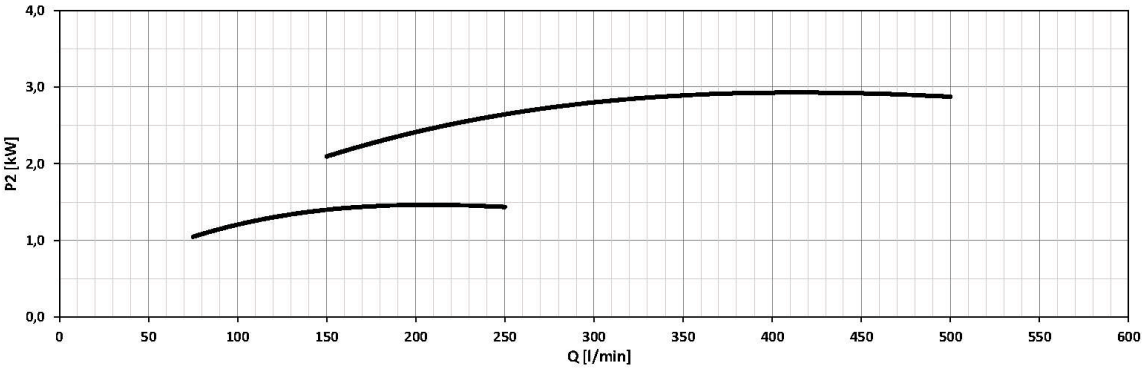


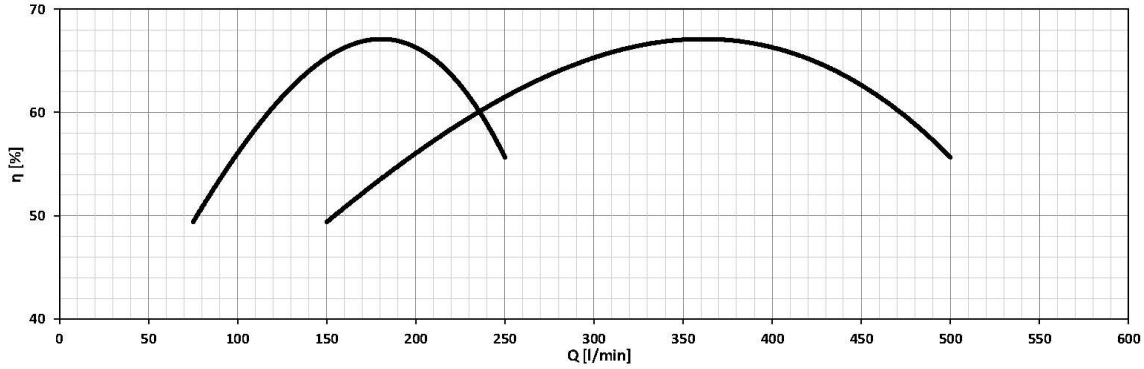




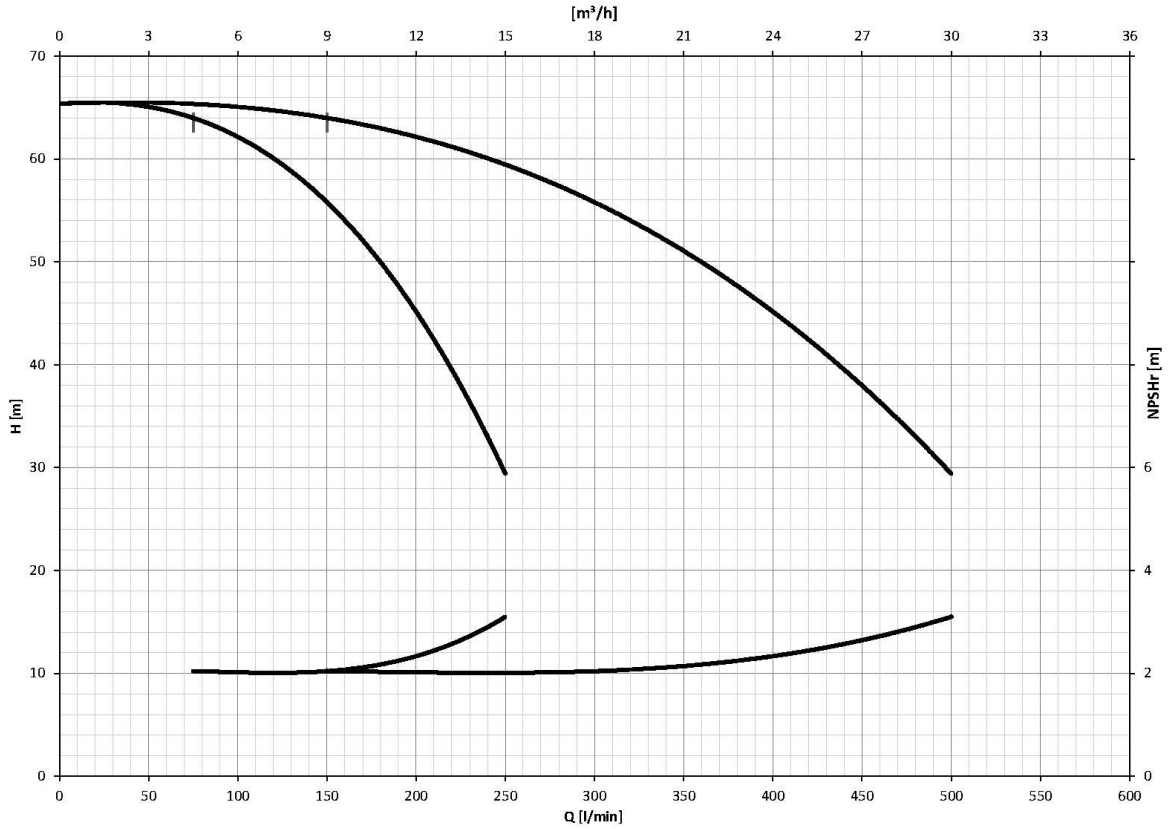
2GP(E) EVMS 10-4/2.2

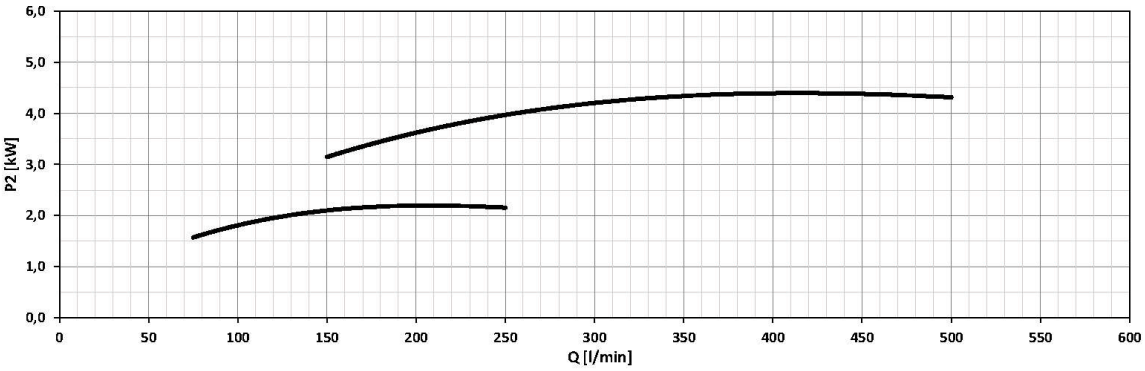


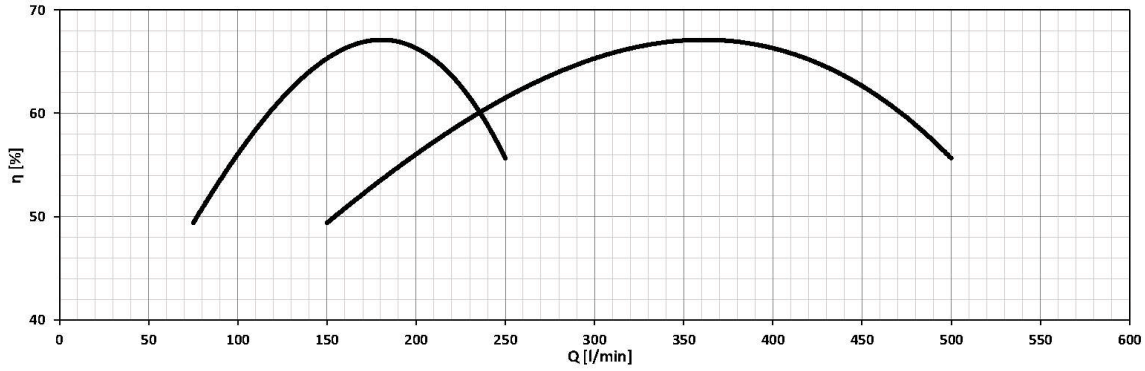




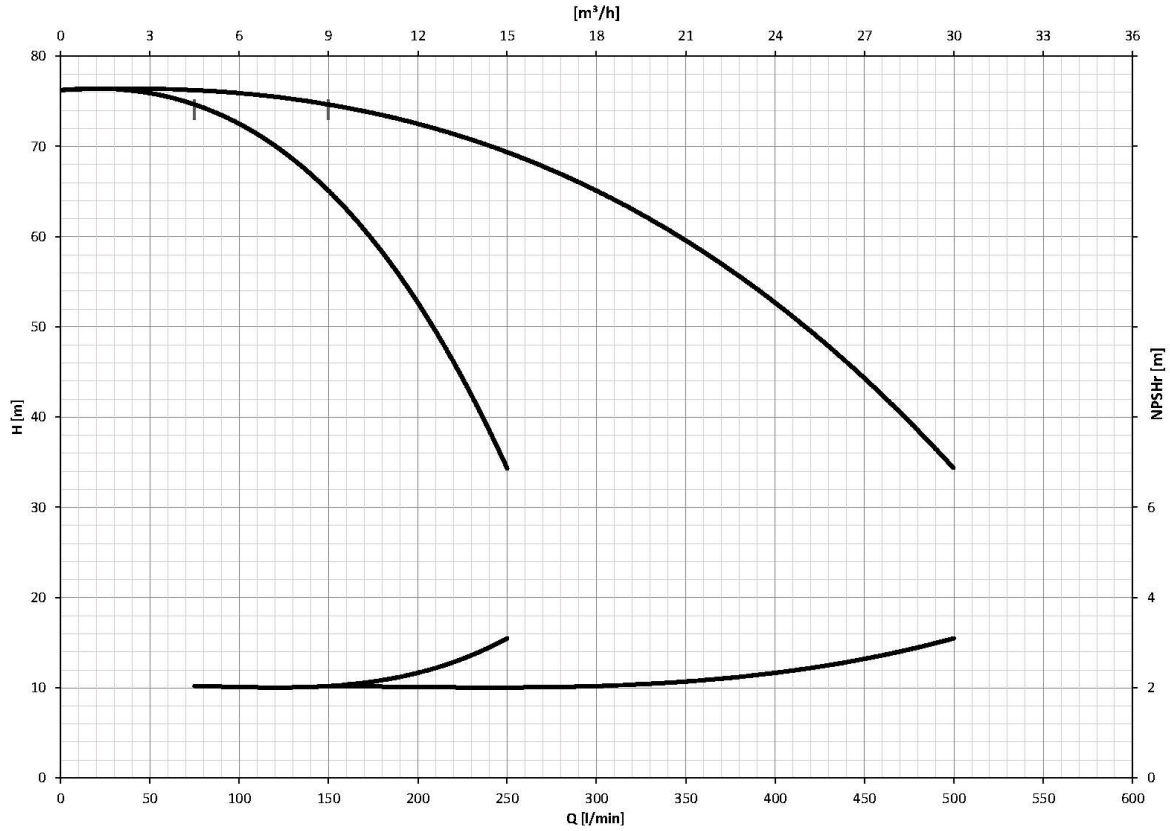
2GP(E) EVMS 10-6/2.2

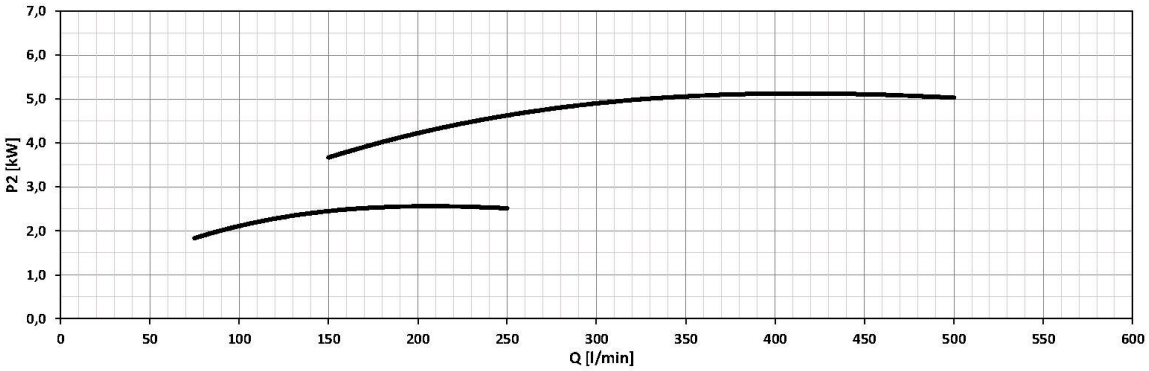


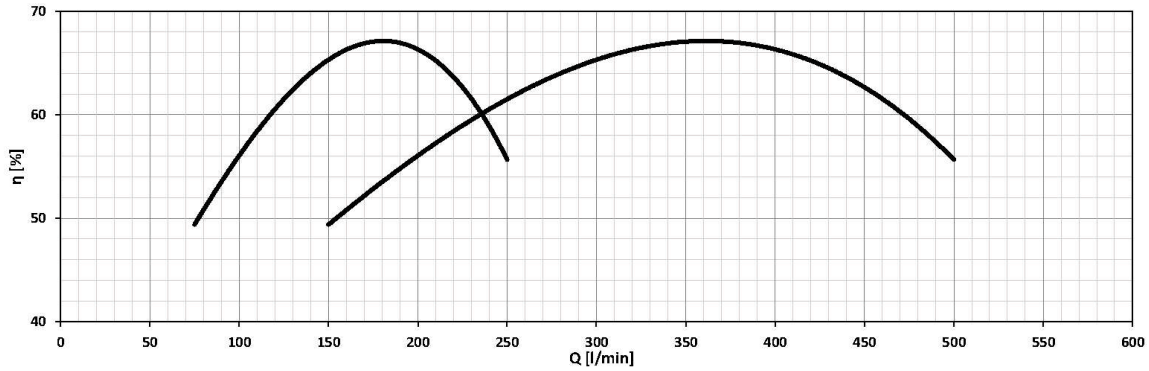




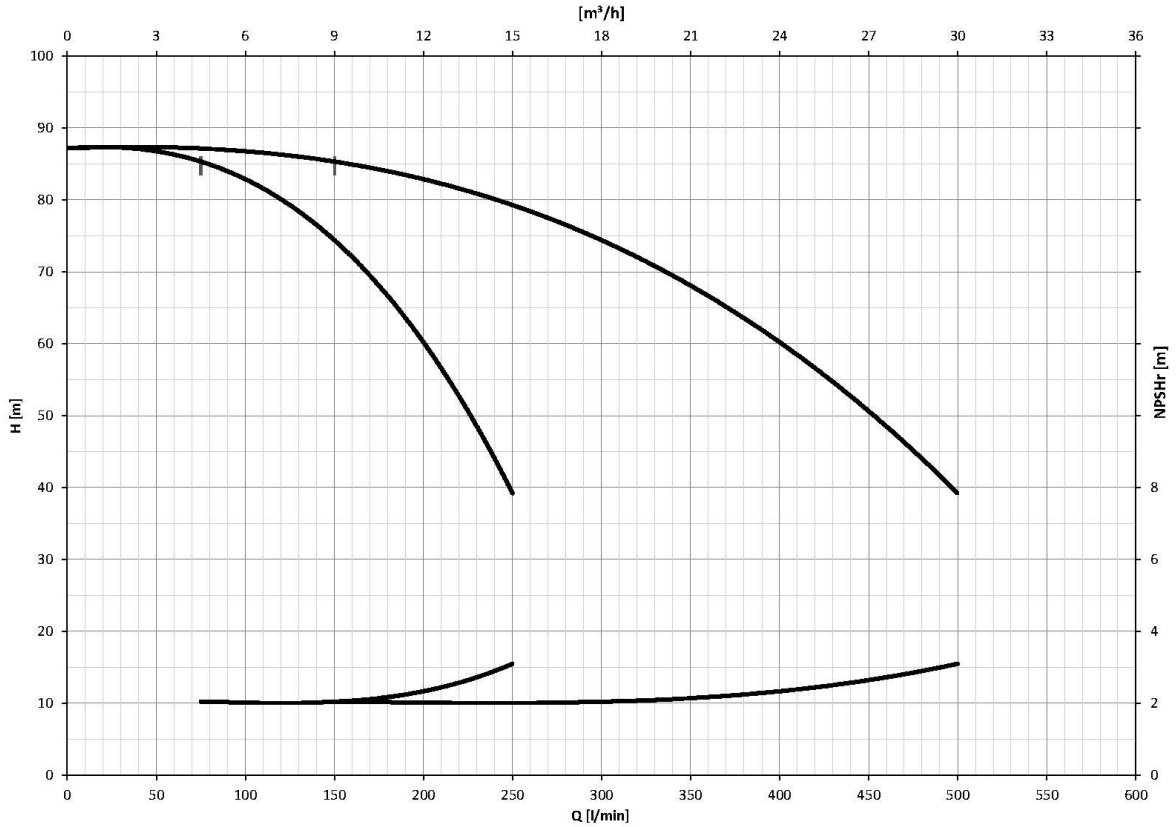
2GP(E) EVMS 10-7/3.0

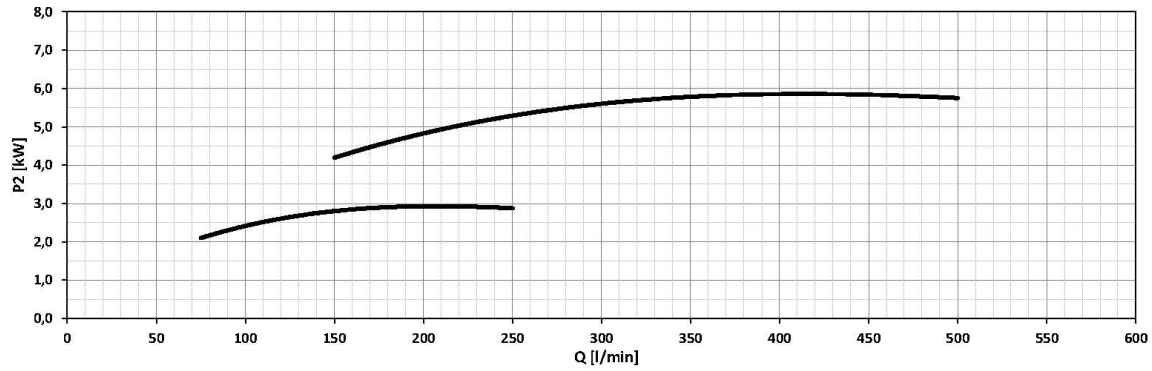


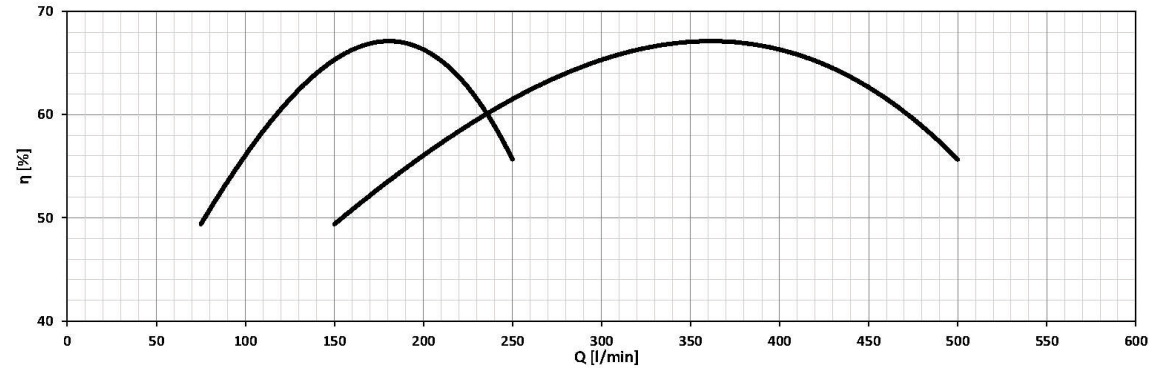




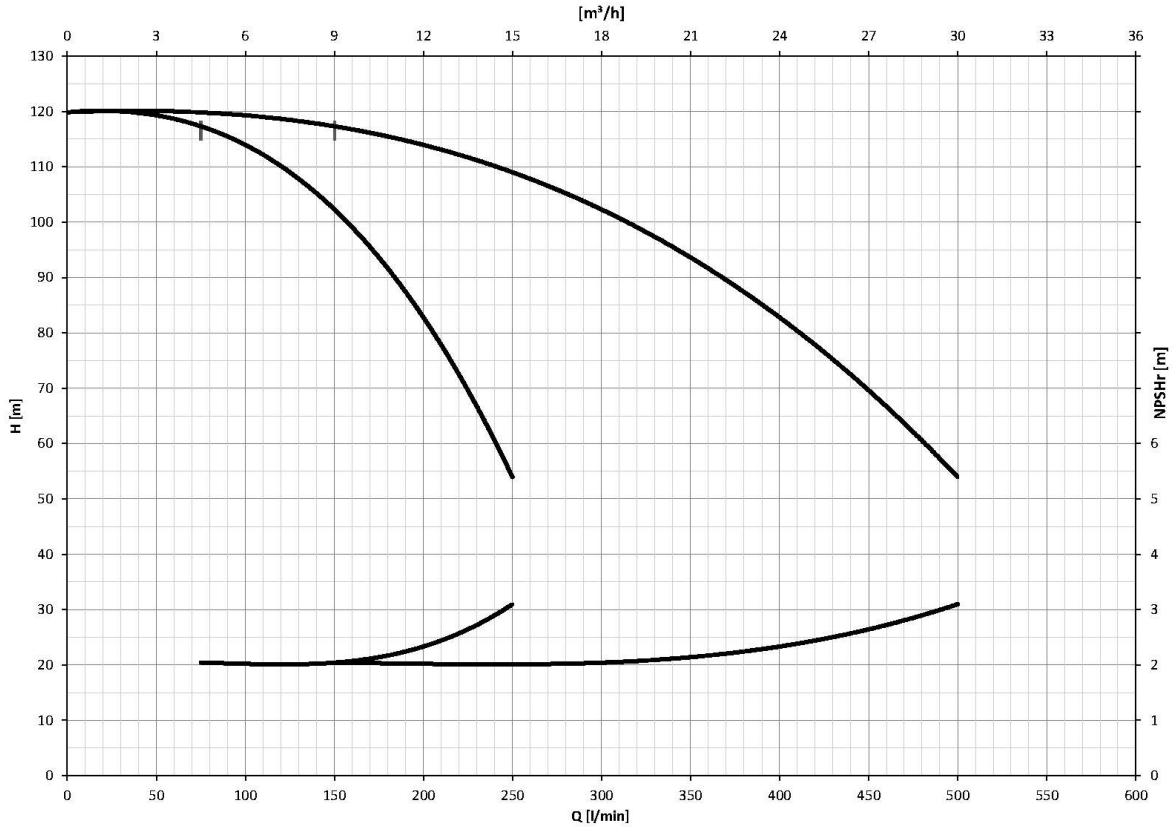
2GP(E) EVMS 10-8/3.0

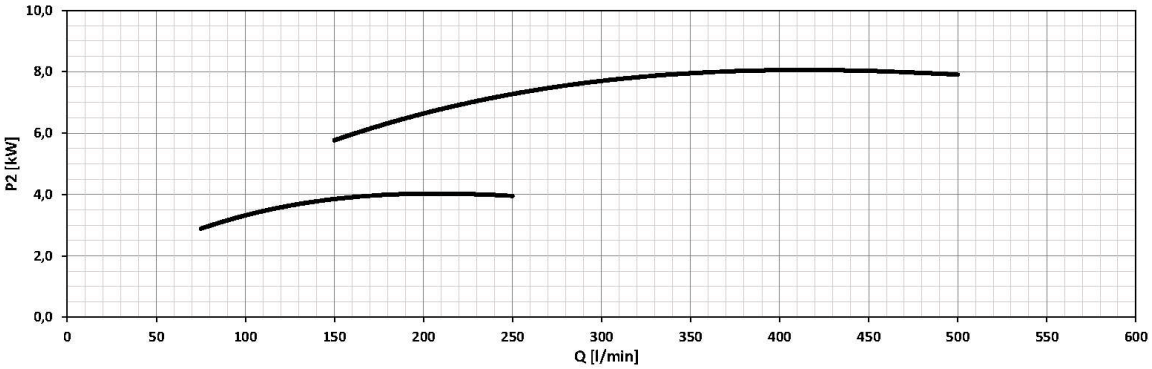


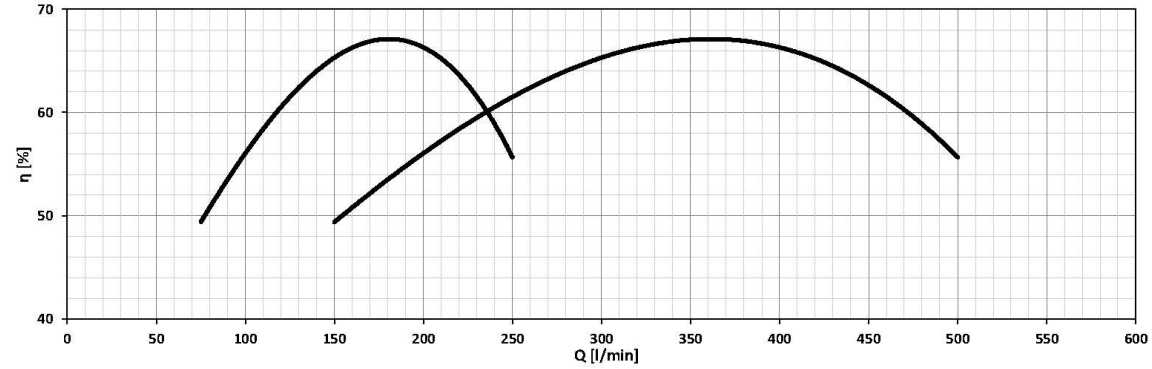




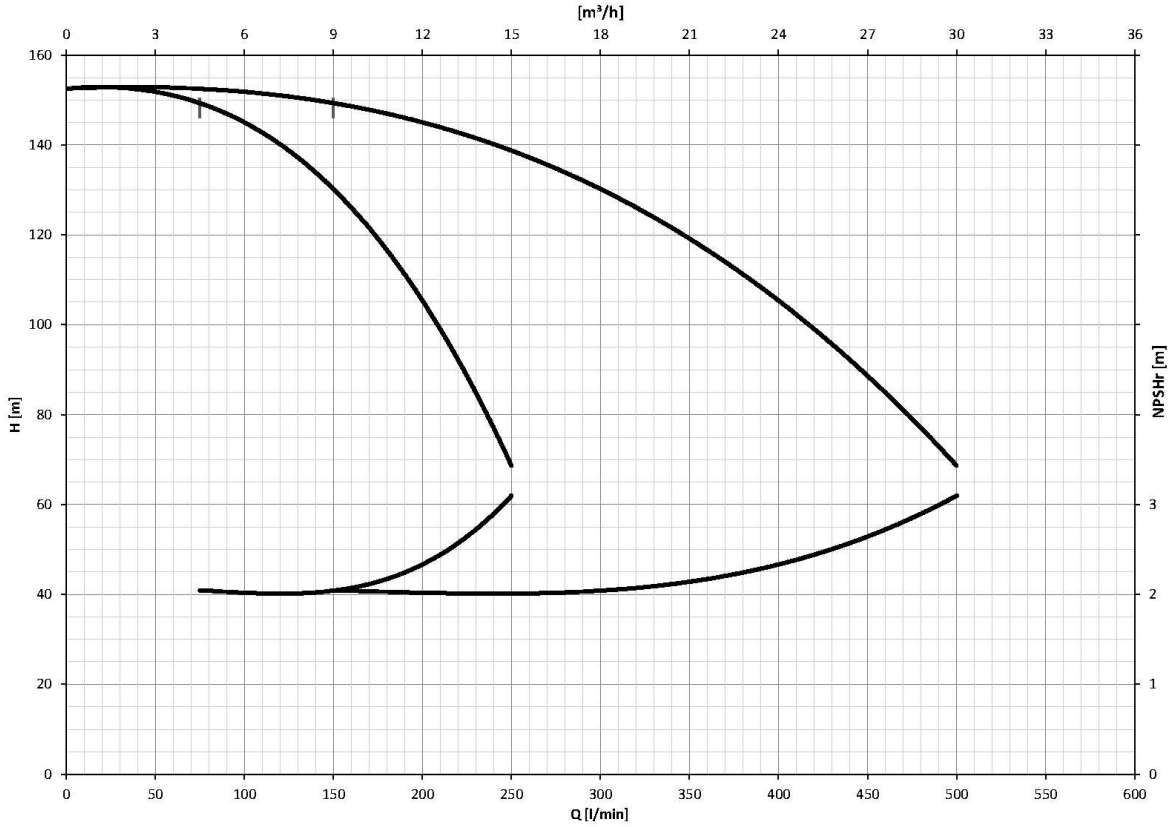
2GP(E) EVMS 10-11/4.0

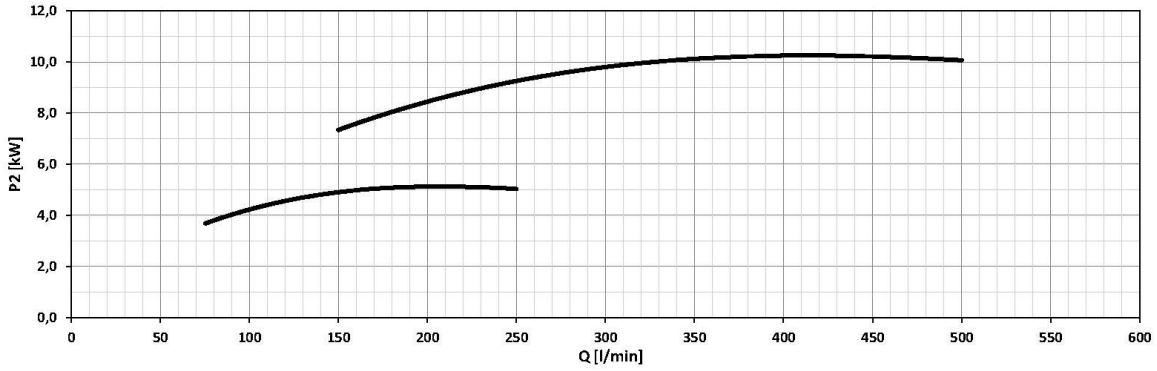


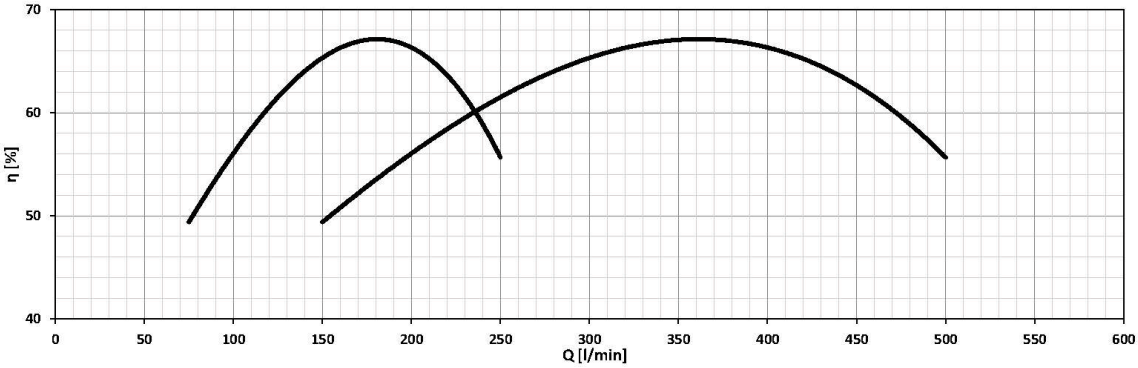




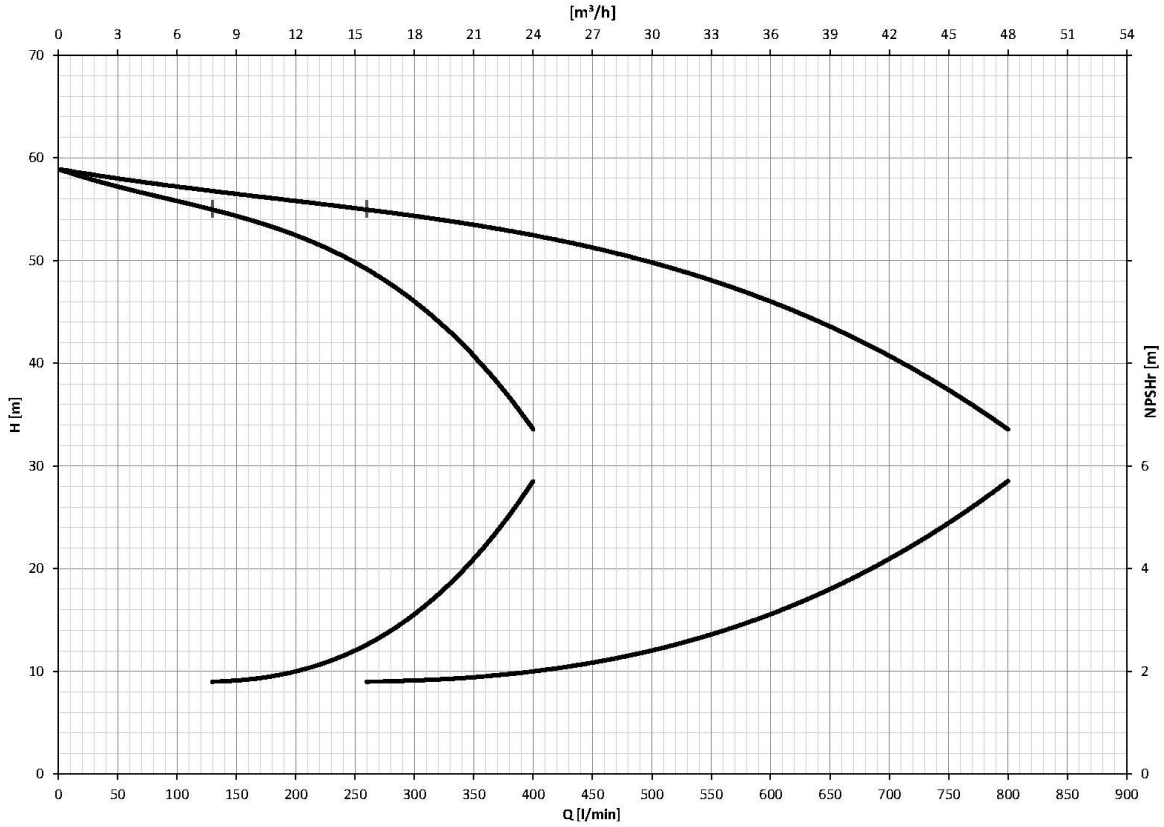
2GP(E) EVMS 10-14/5.5

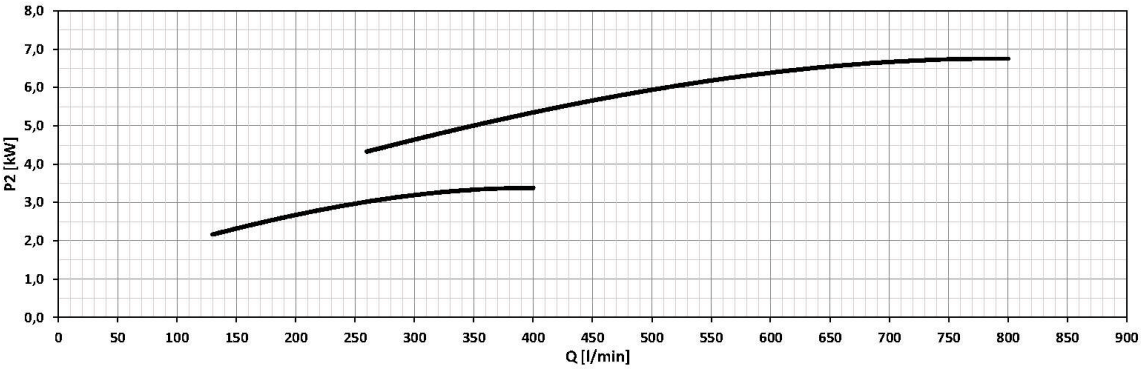


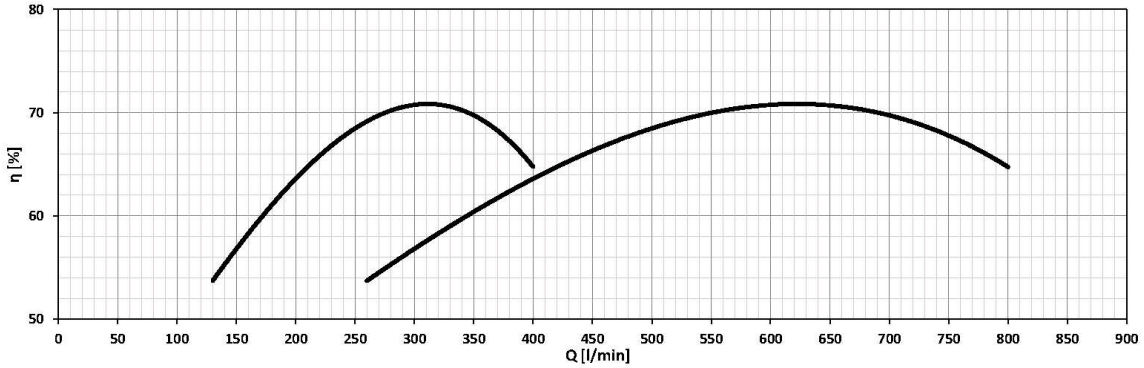




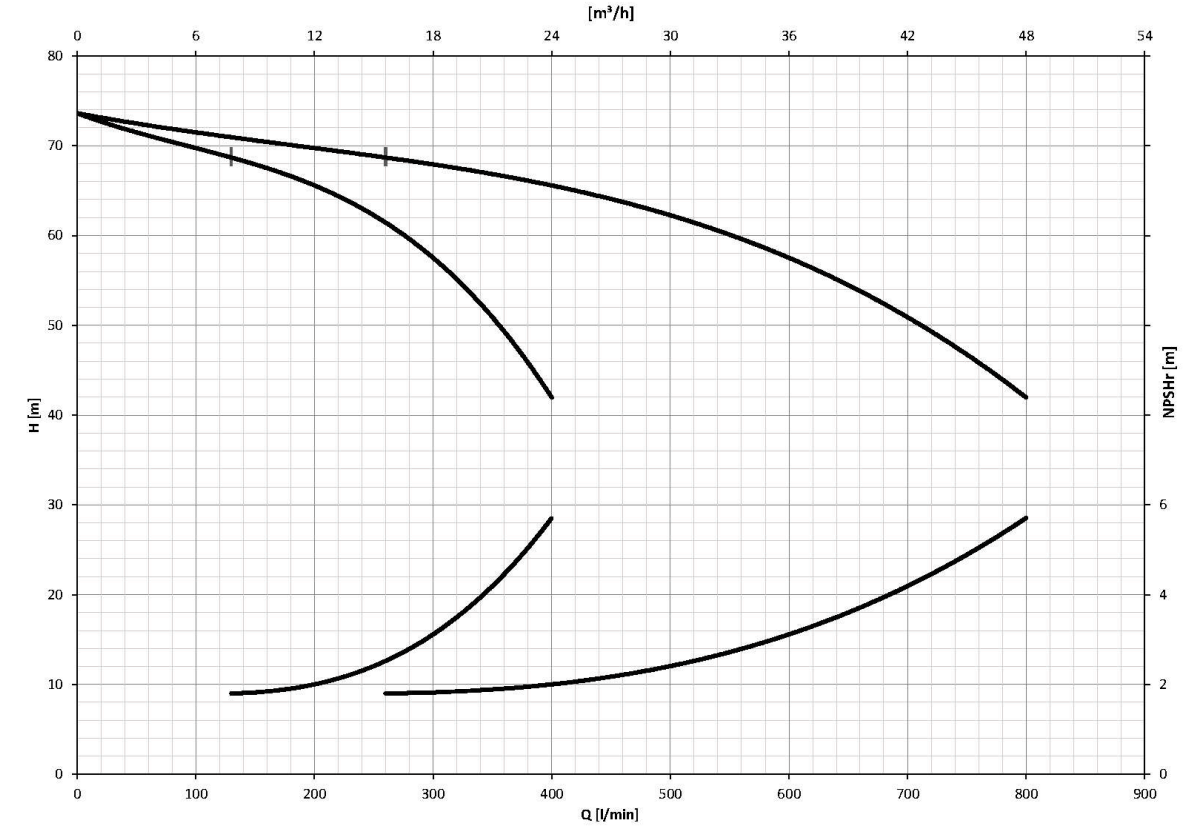
2GP(E) EVMS 15-4/4.0

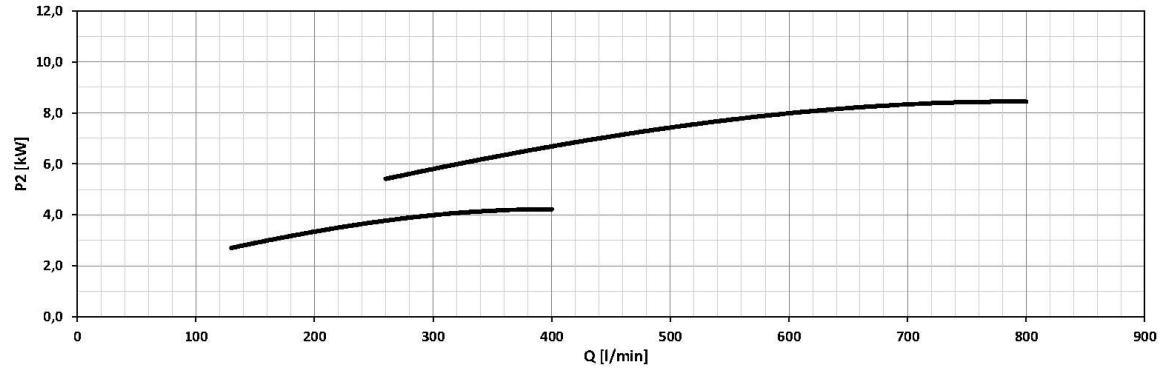


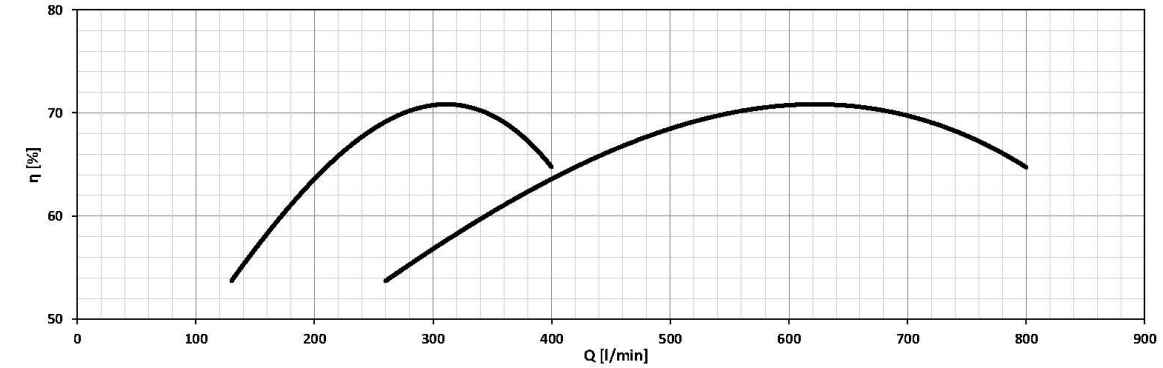




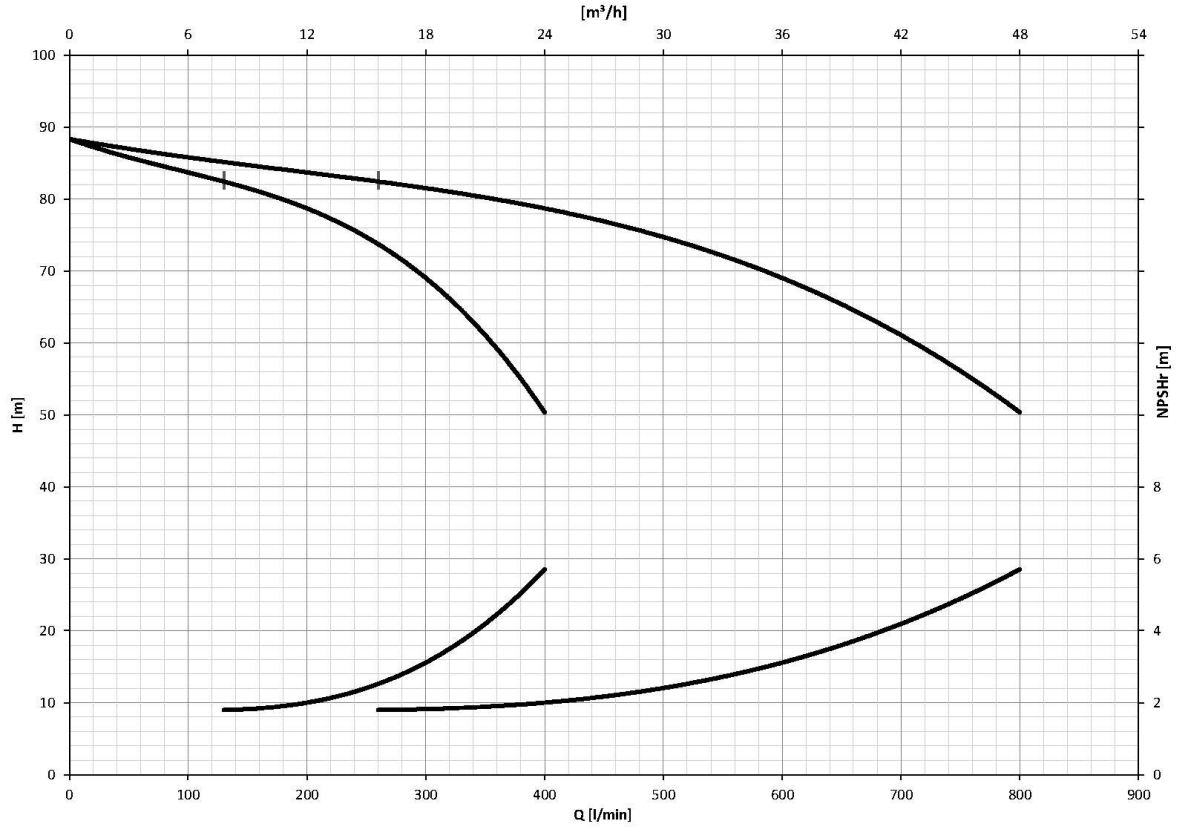
2GP(E) EVMS 15-5/5.5

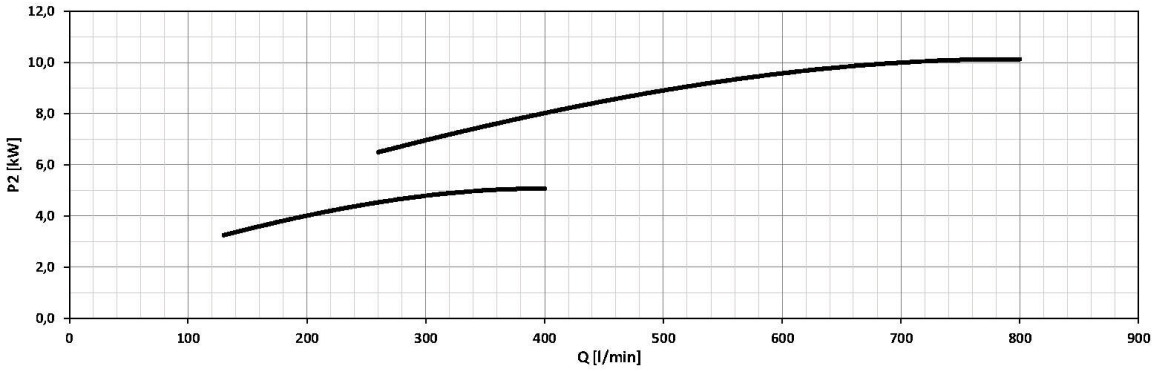


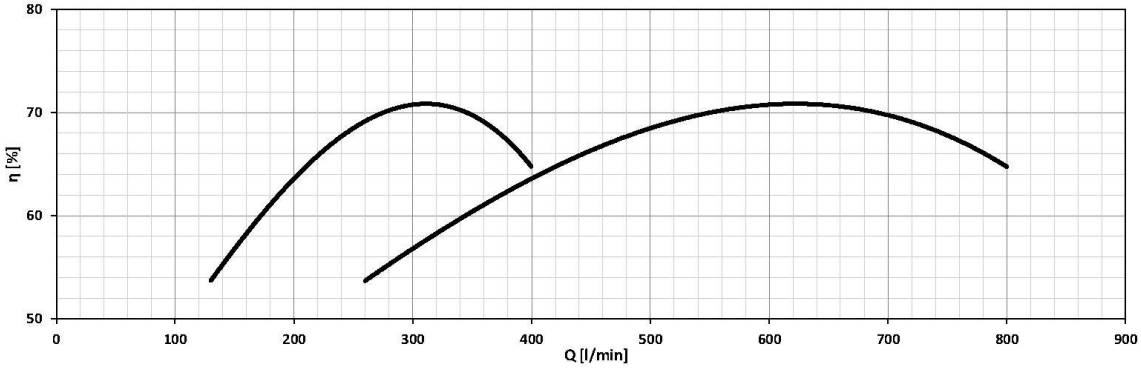




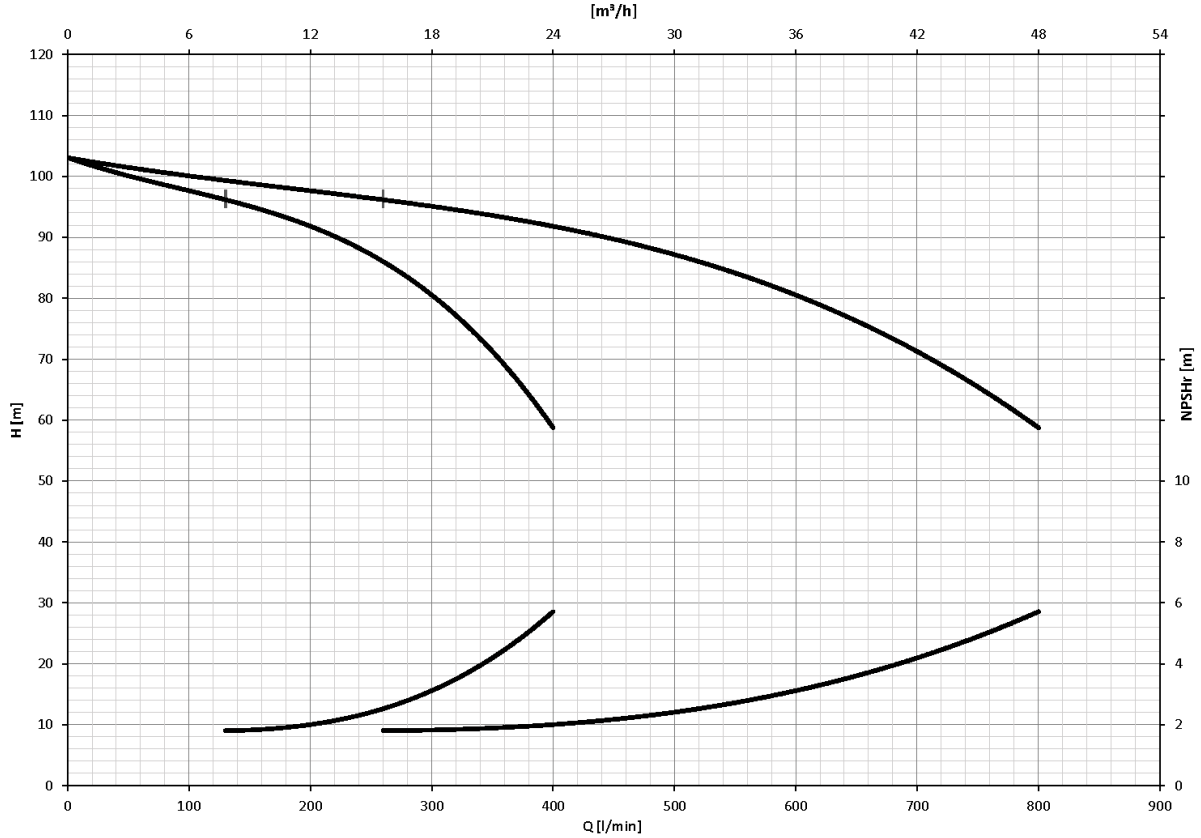
2GP(E) EVMS 15-6/5.5

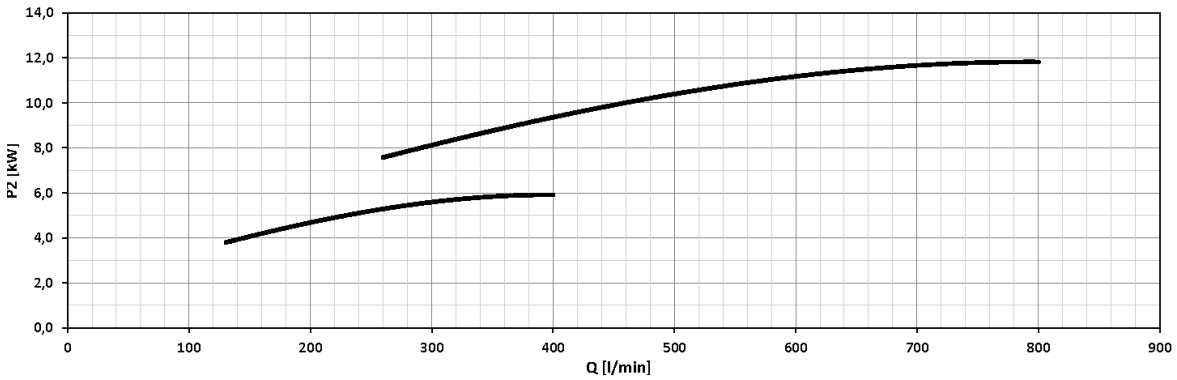


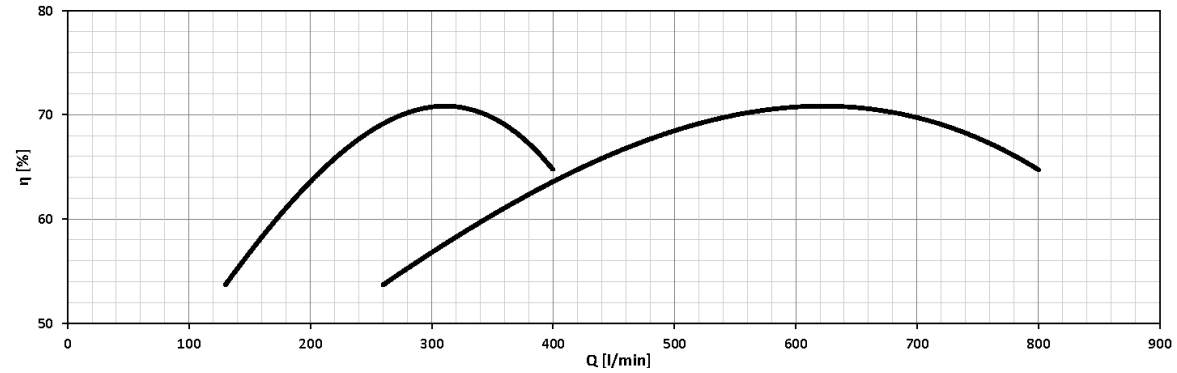




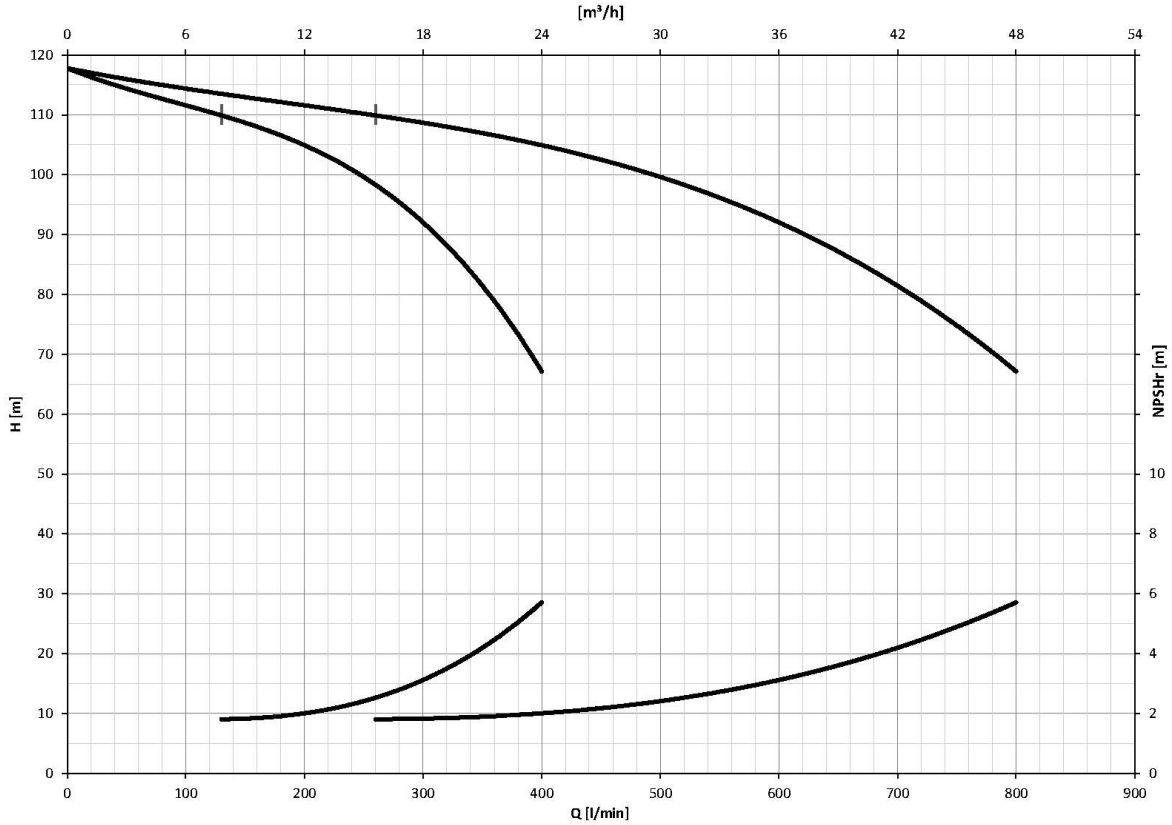
2GP(E) EVMS 15-7/7.5

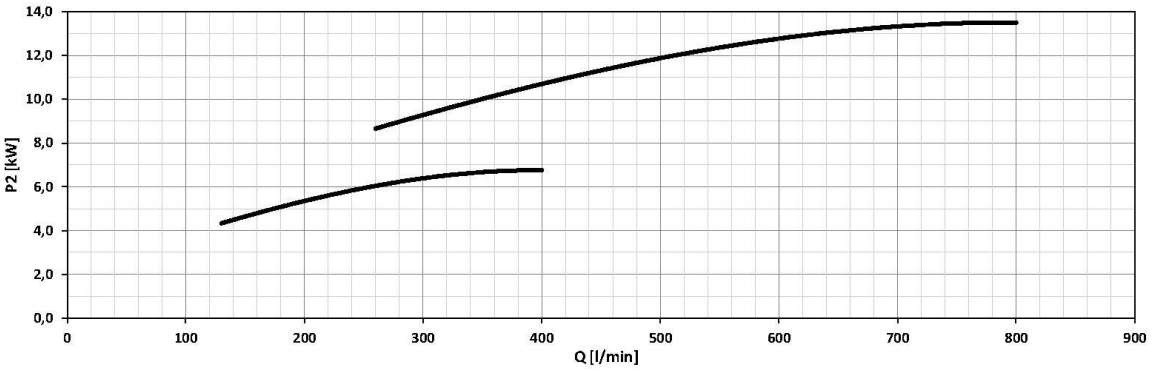


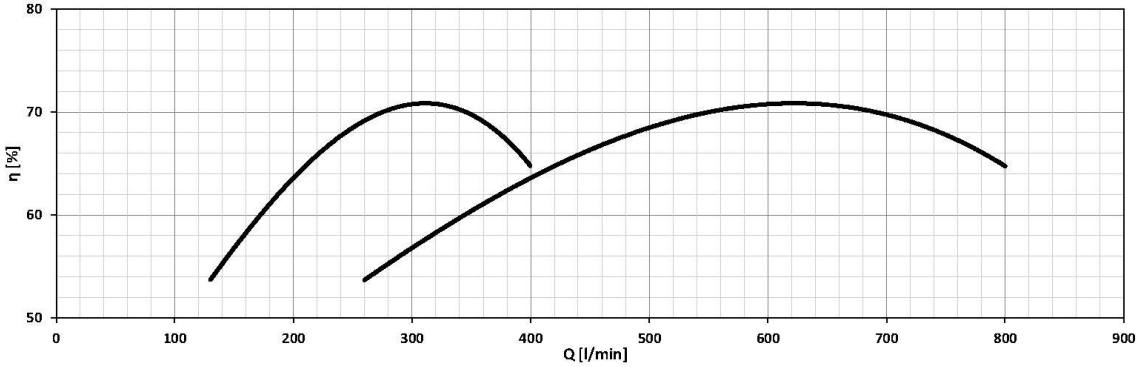




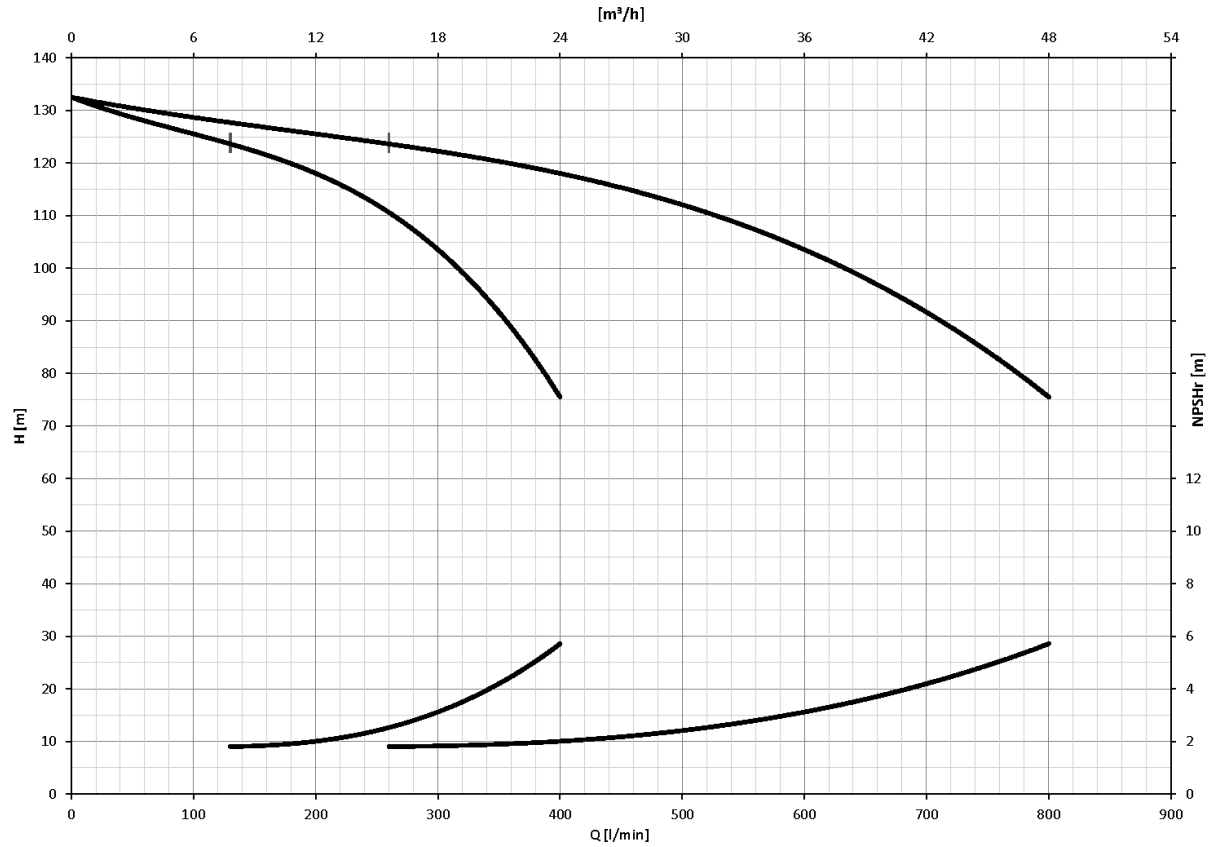
2GP(E) EVMS 15-8/7.5

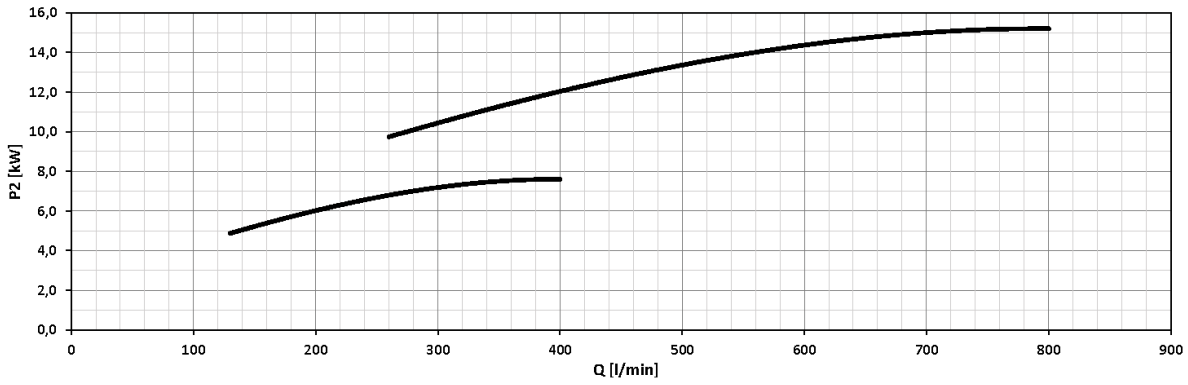


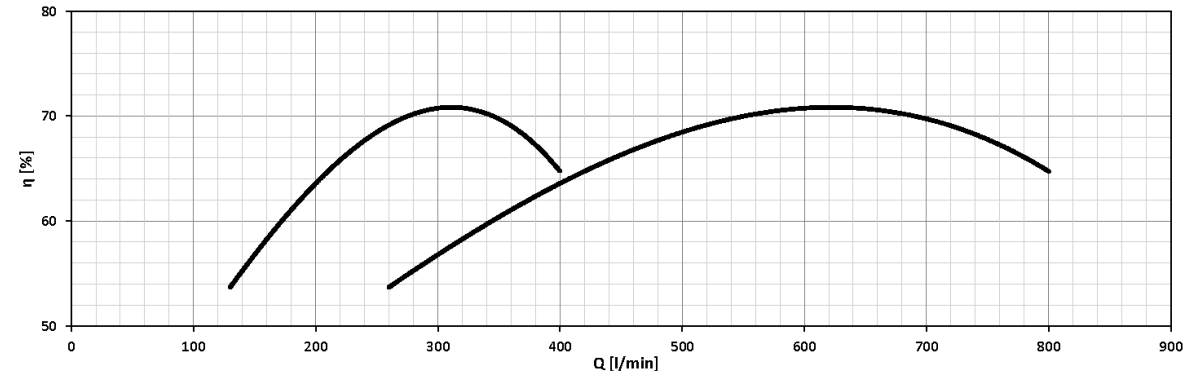




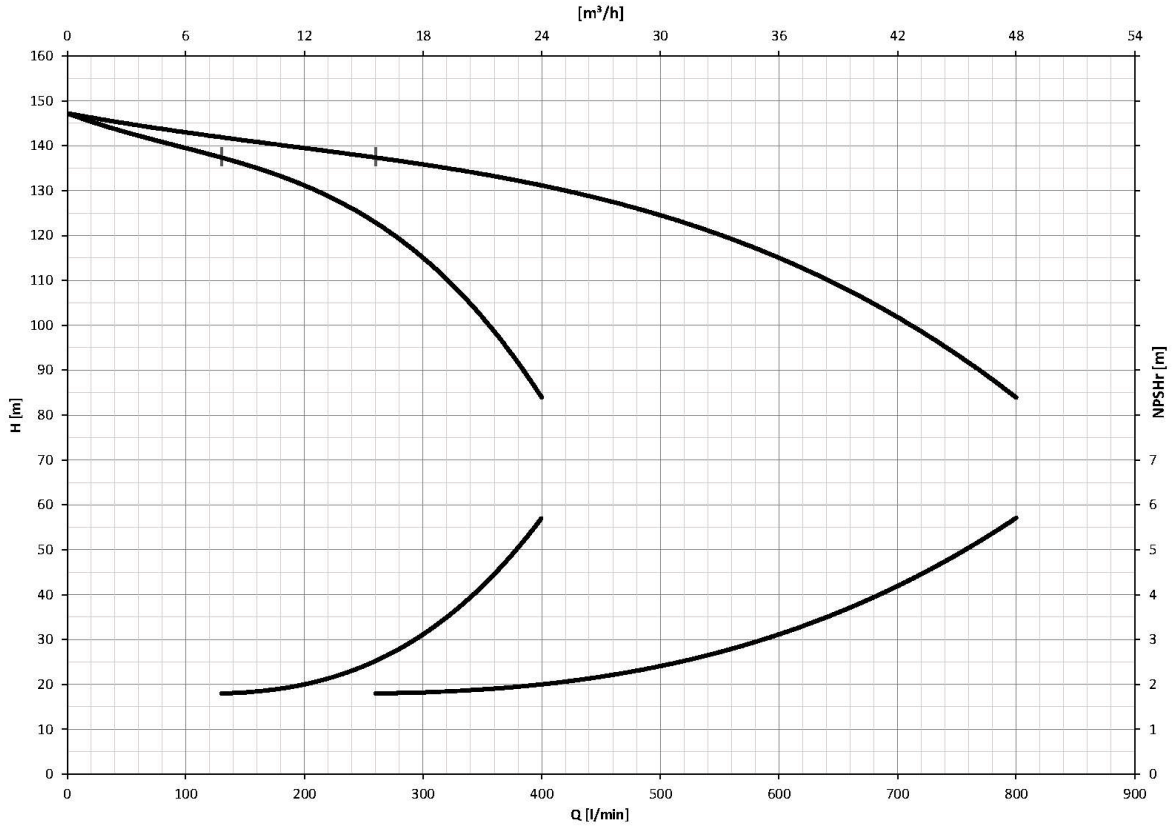
2GP(E) EVMS 15-9/11

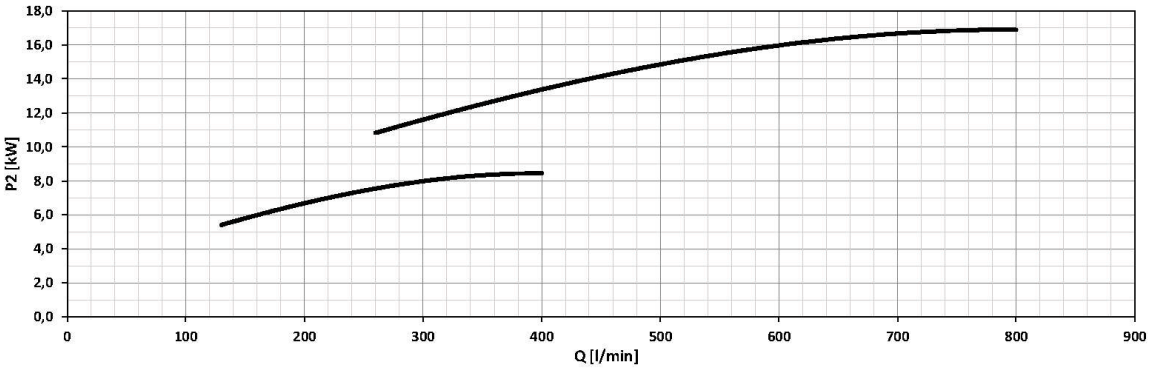


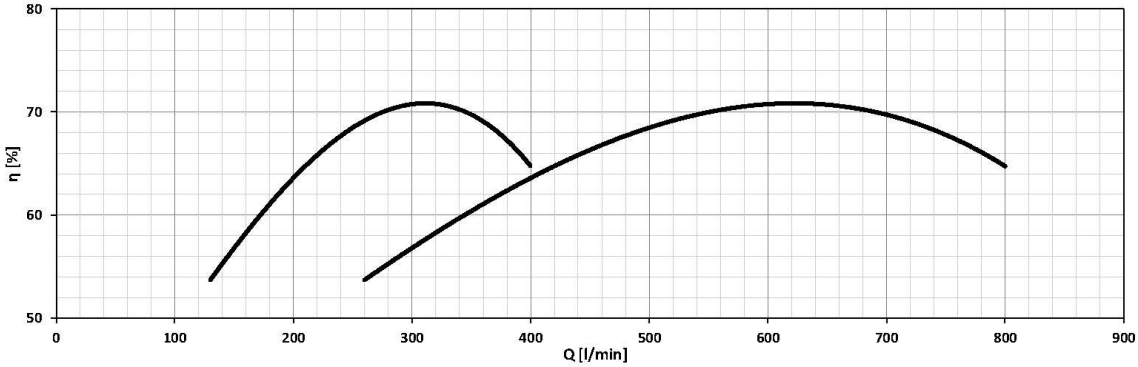




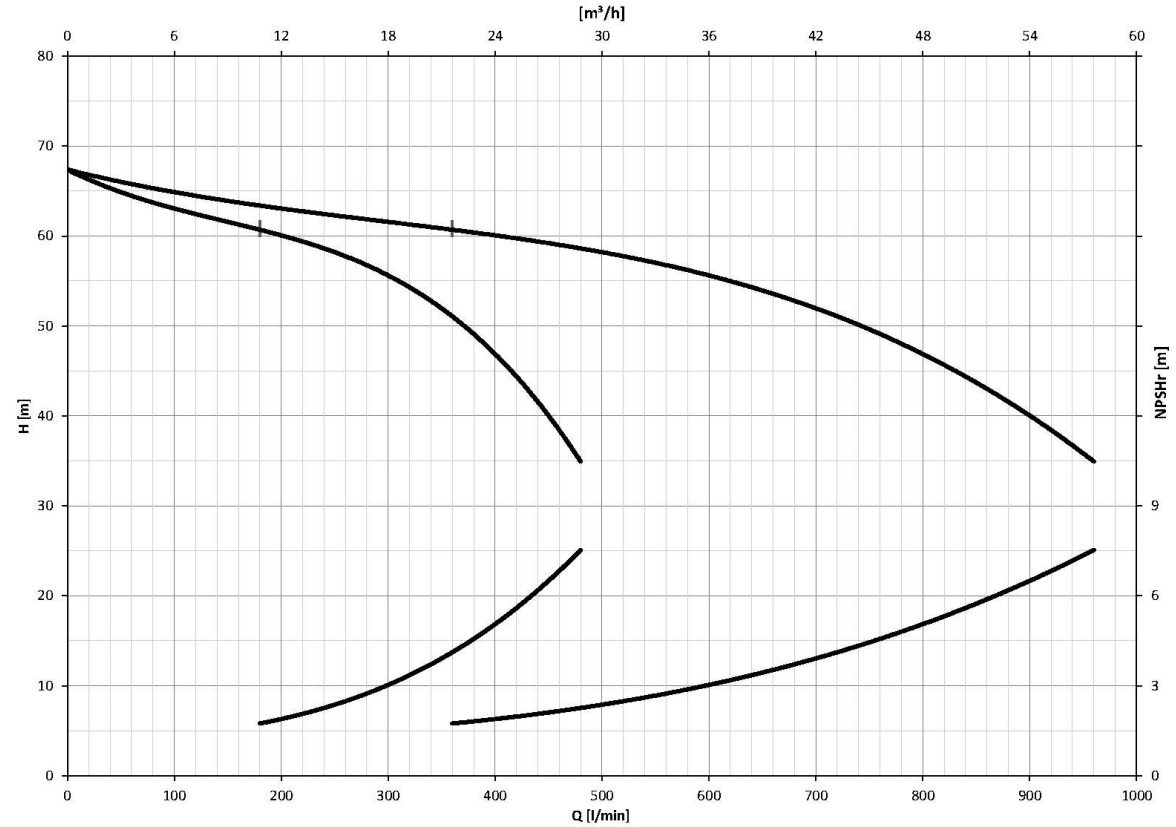
2GP(E) EVMS 15-10/11

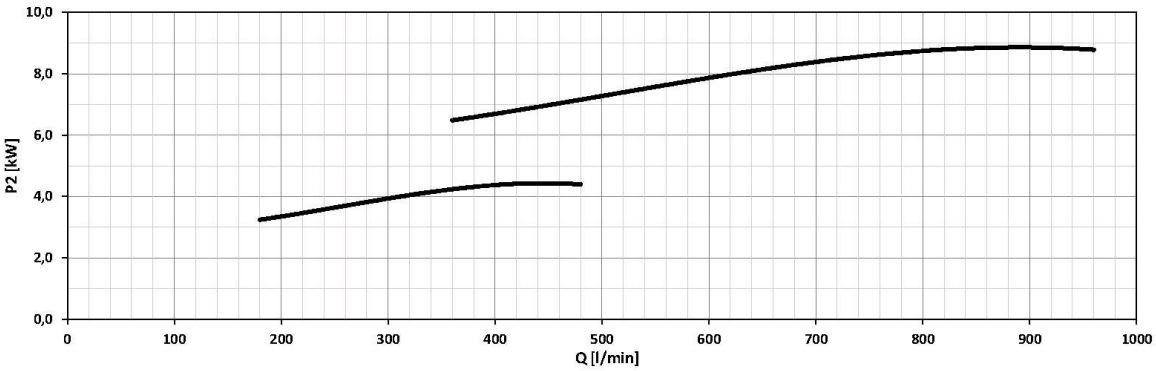


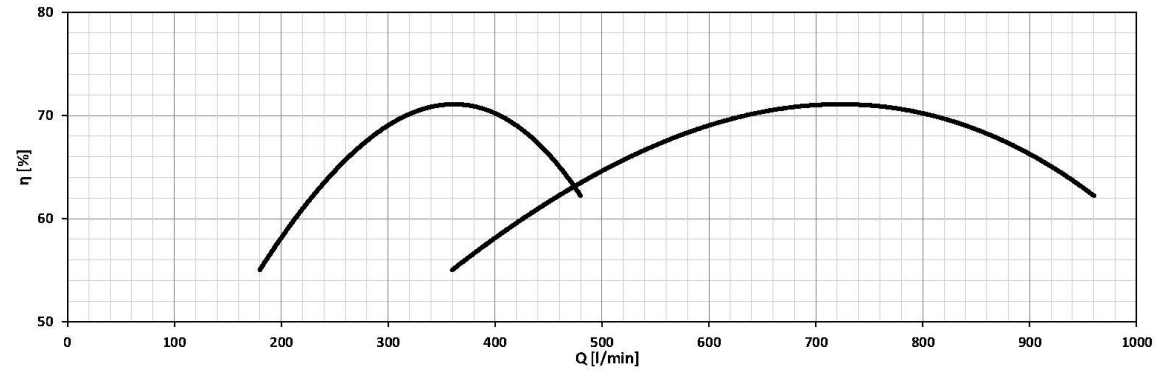




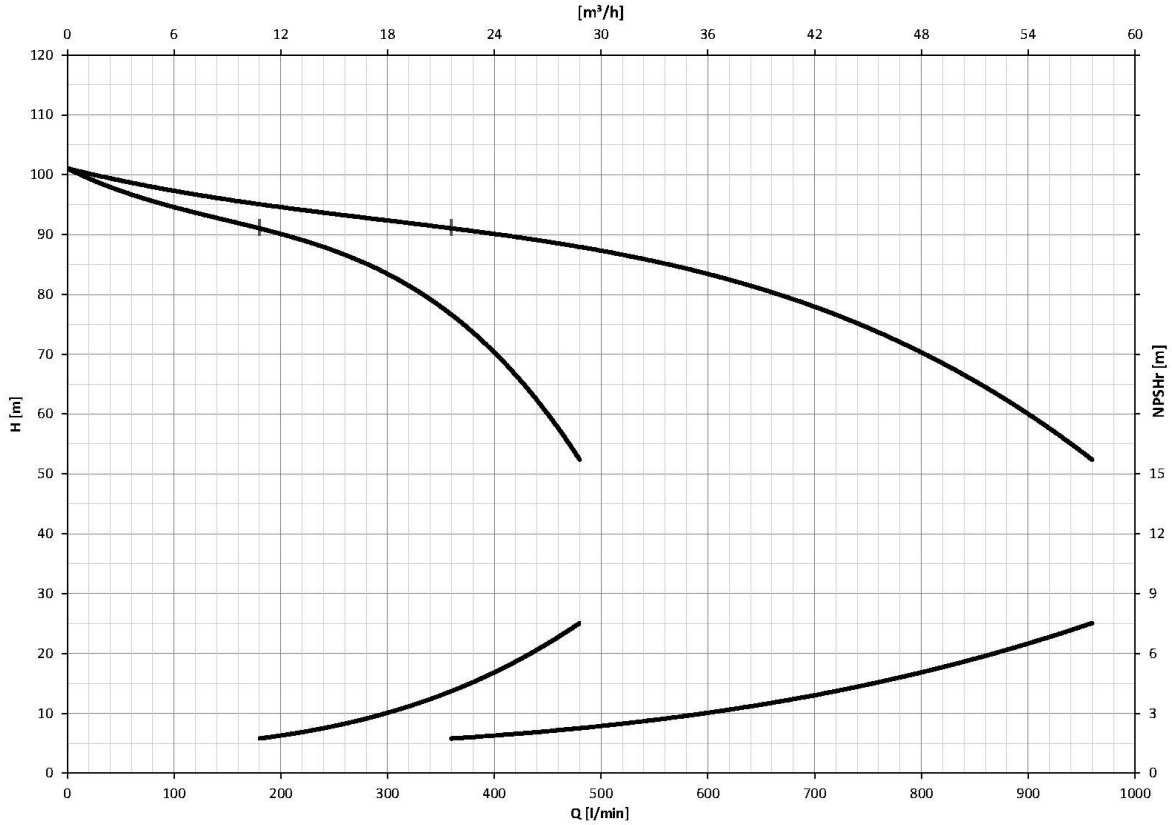
2GP(E) EVMS 20-4/5.5

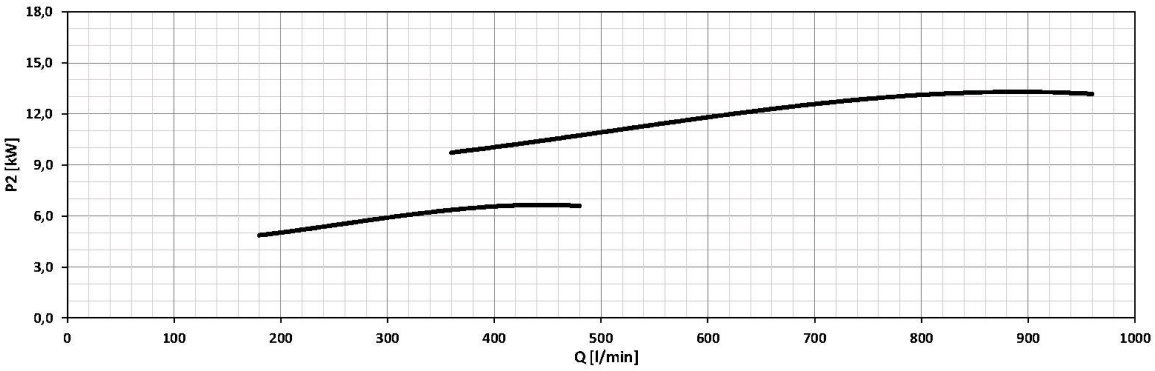


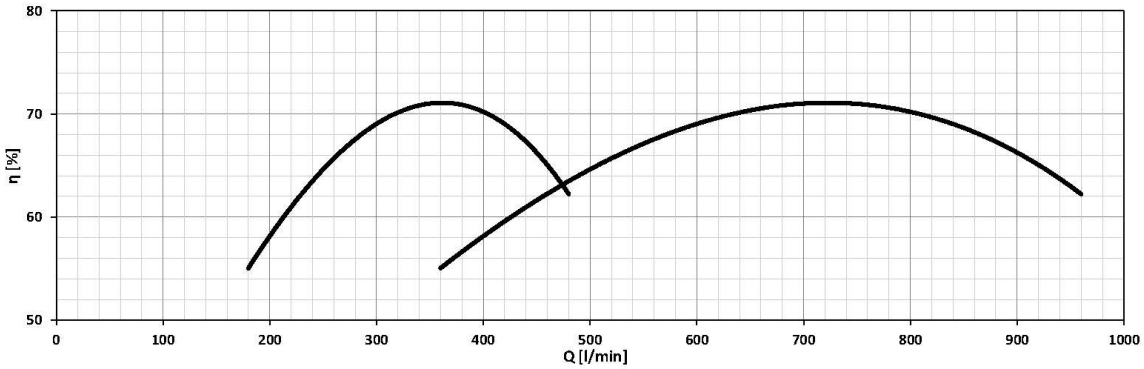




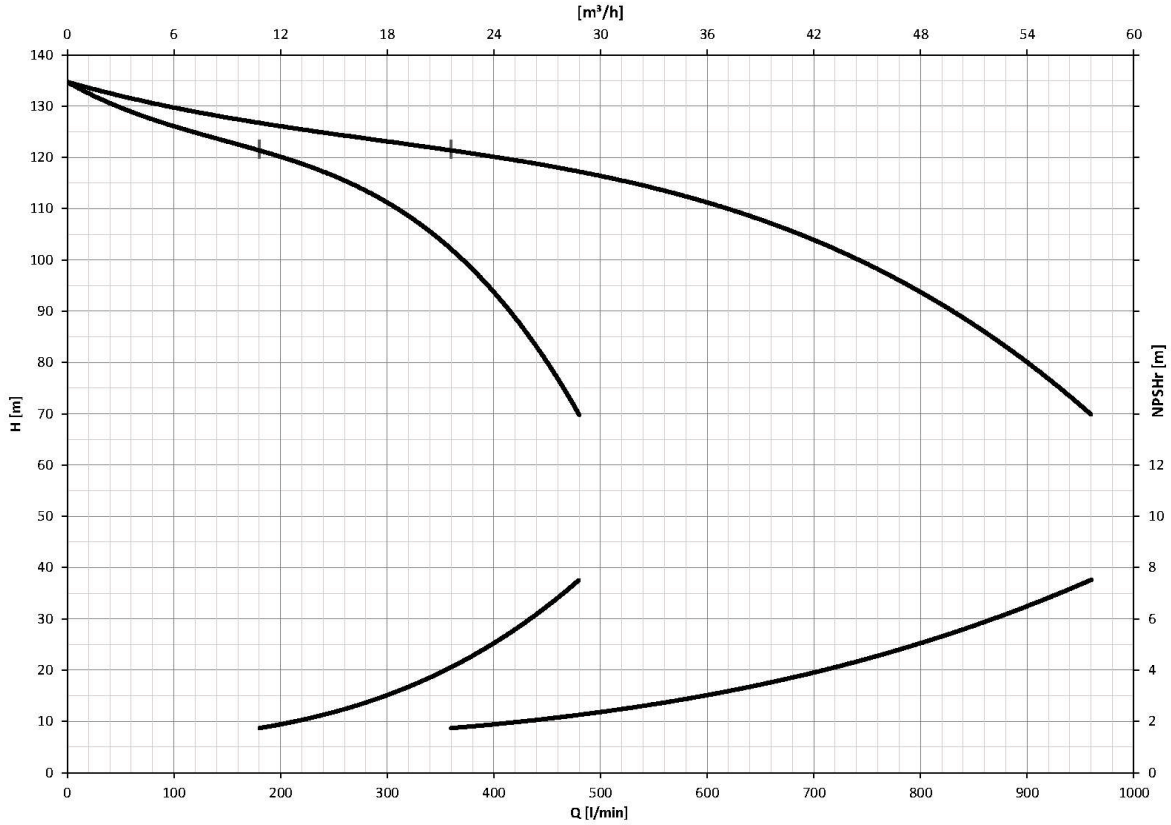
2GP(E) EVMS 20-6/7.5

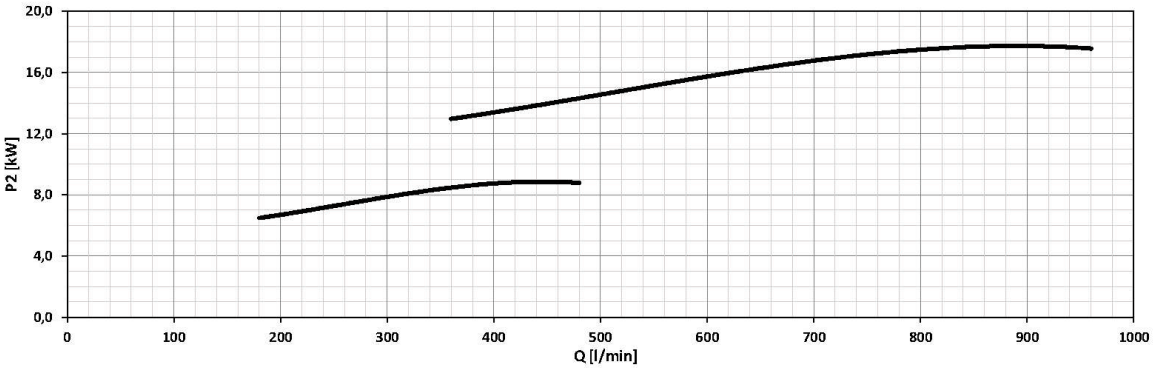


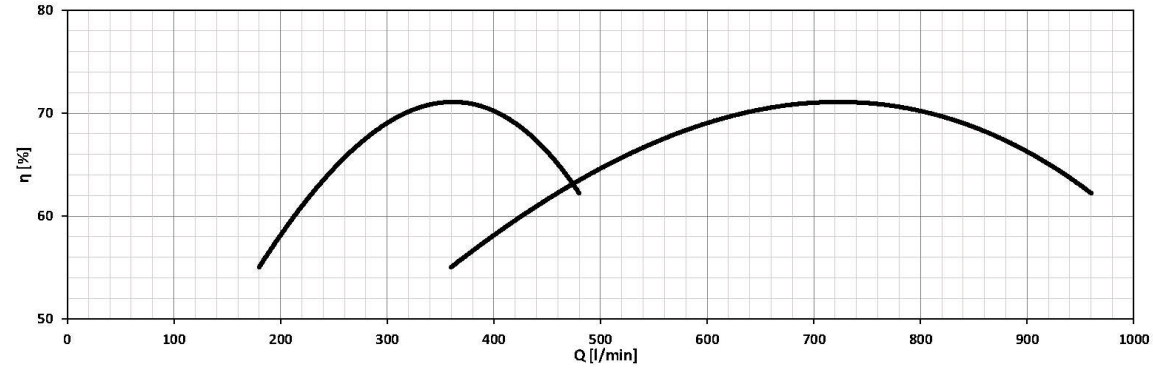




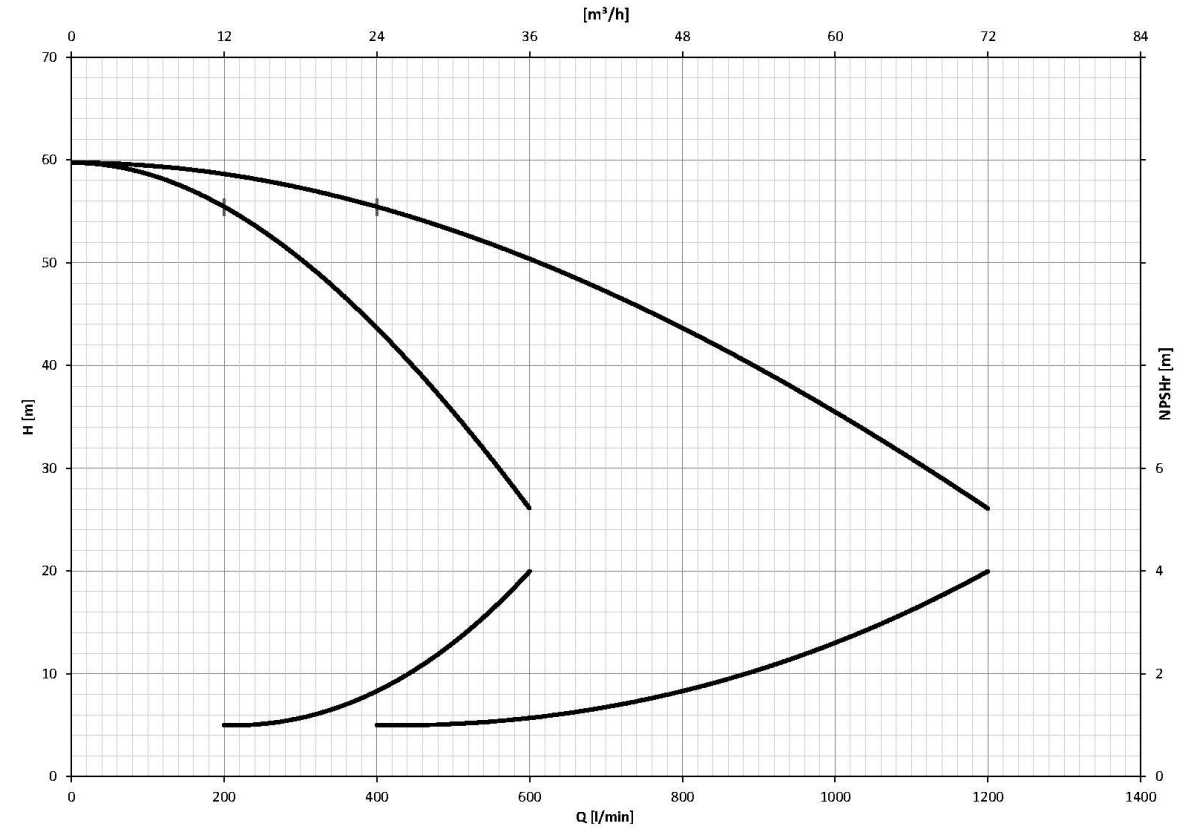
2GP(E) EVMS 20-8/11

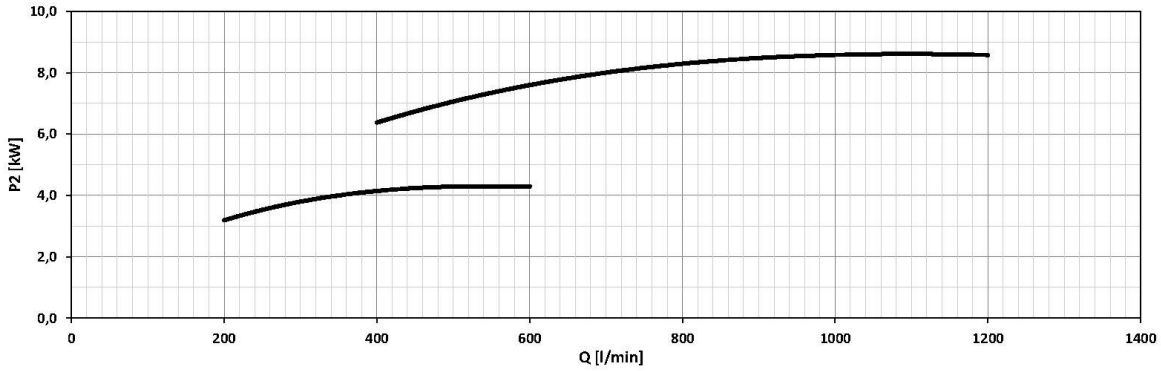


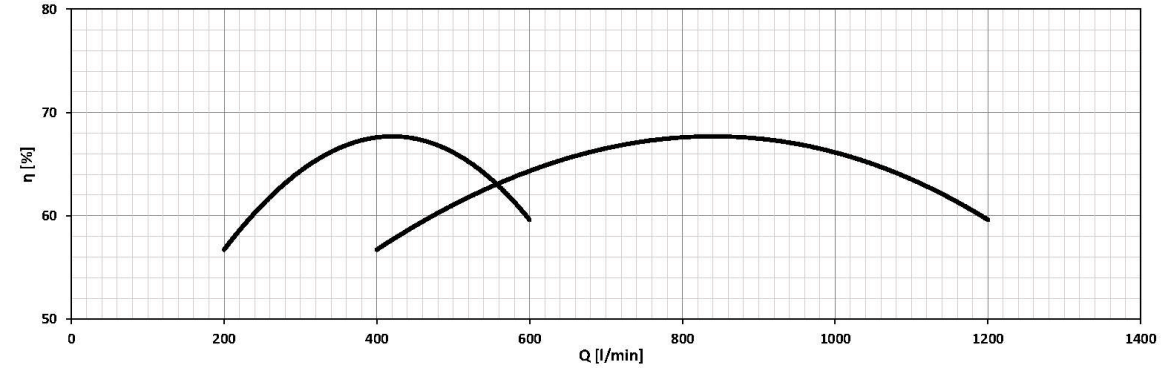




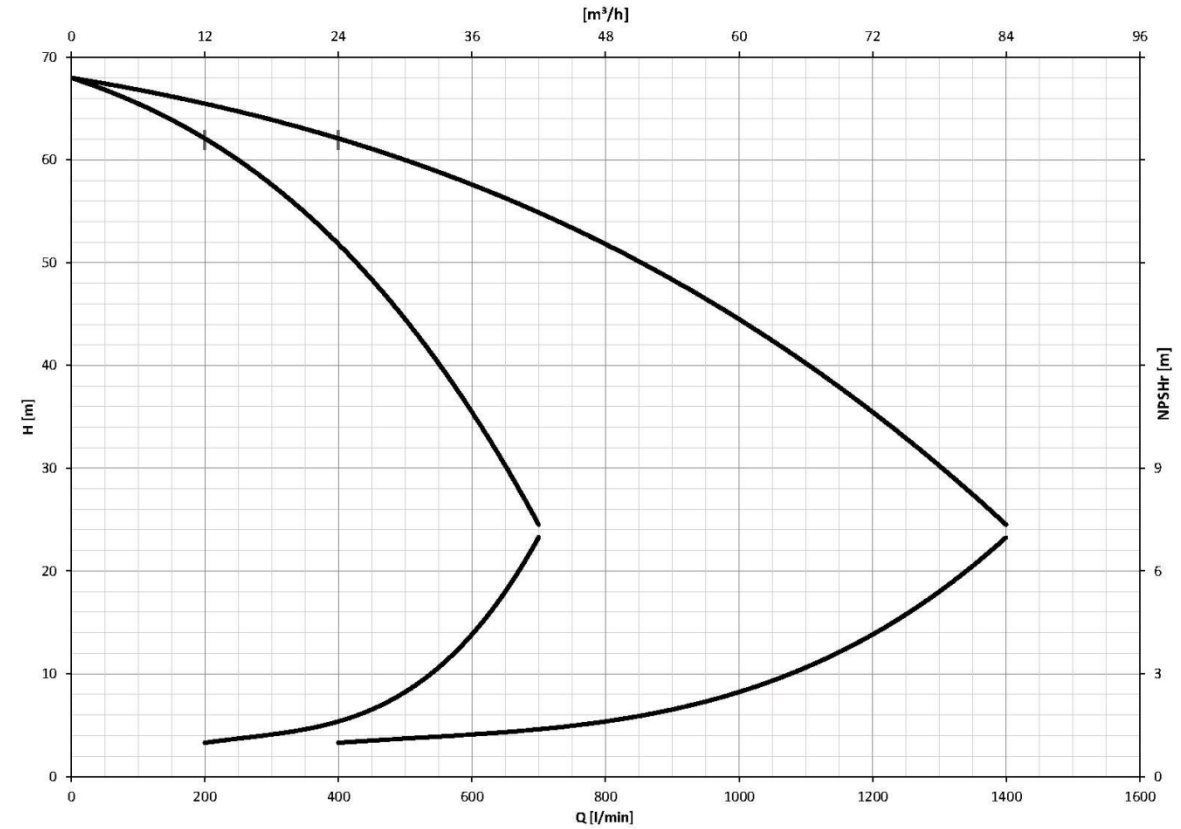
2GP(E) EVM 32 3-3/5.5

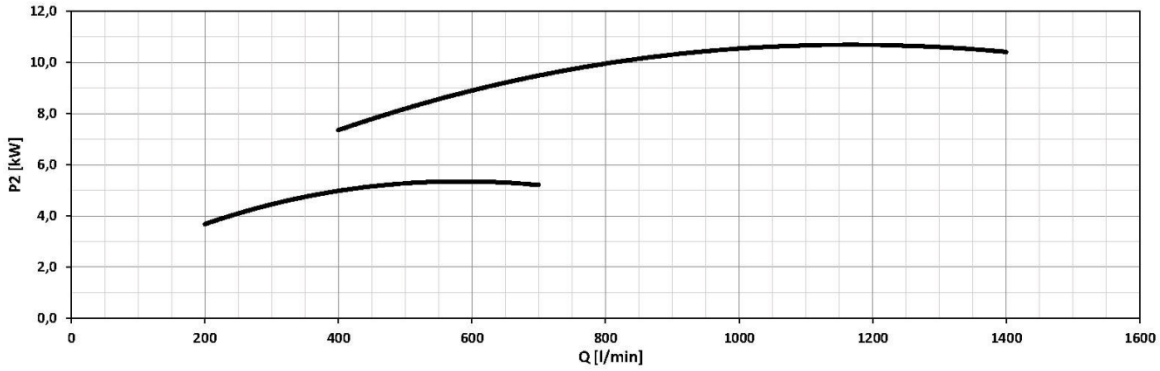


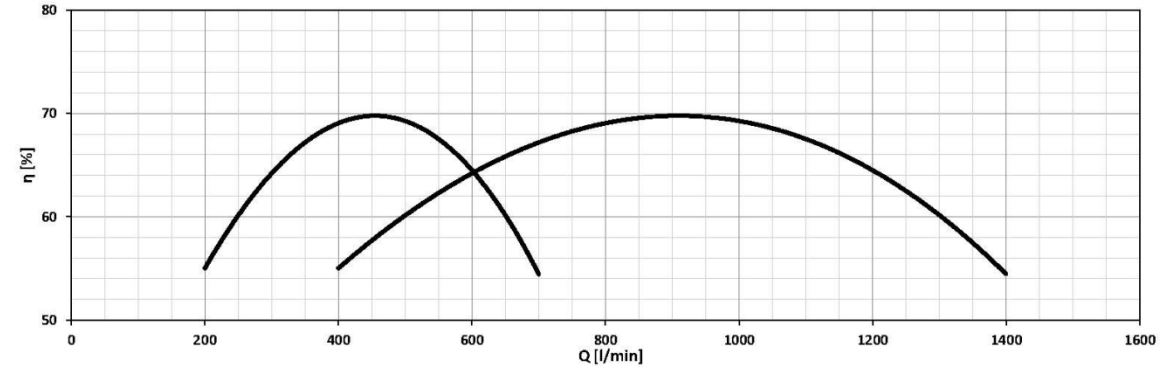




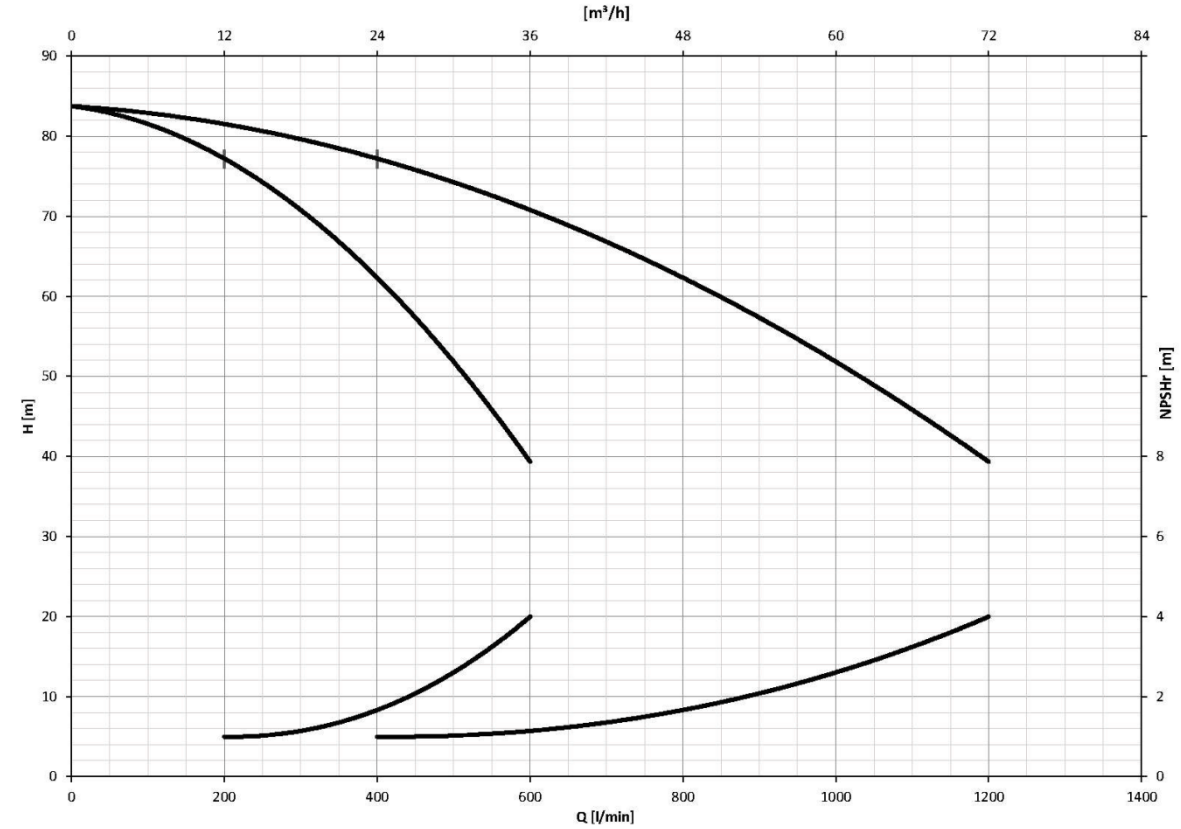
2GP(E) EVM 32 3-1/5.5

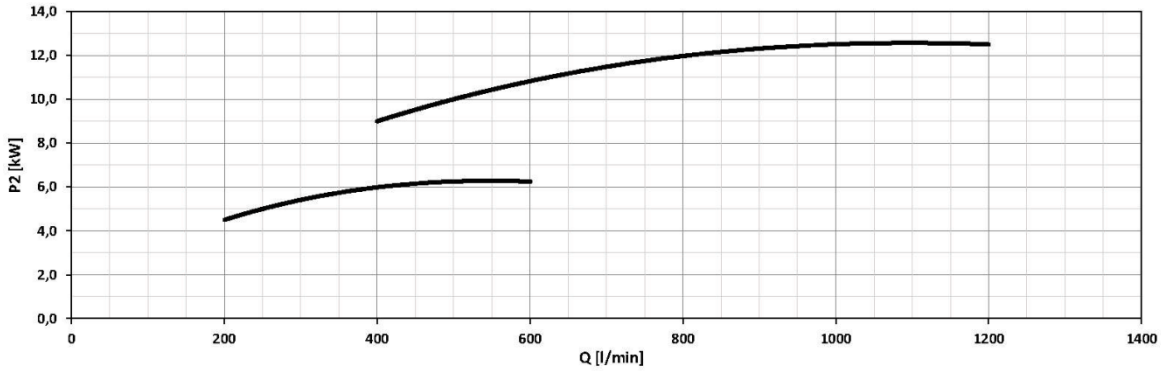


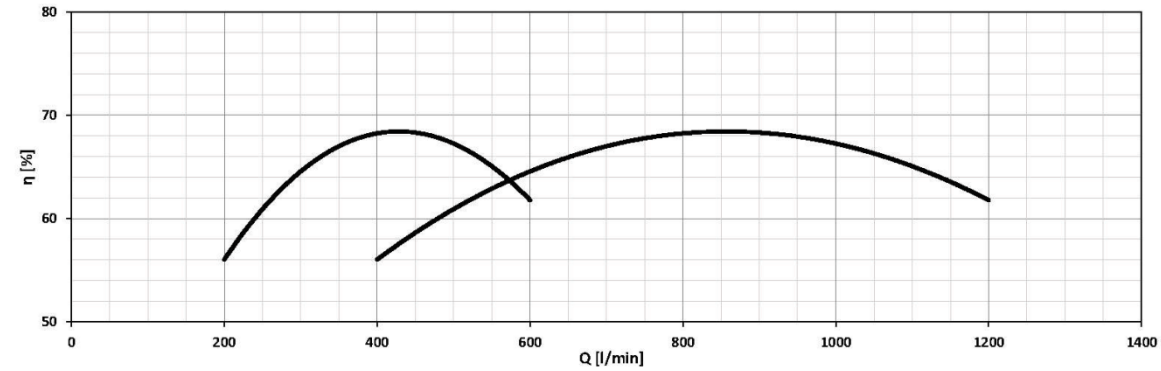




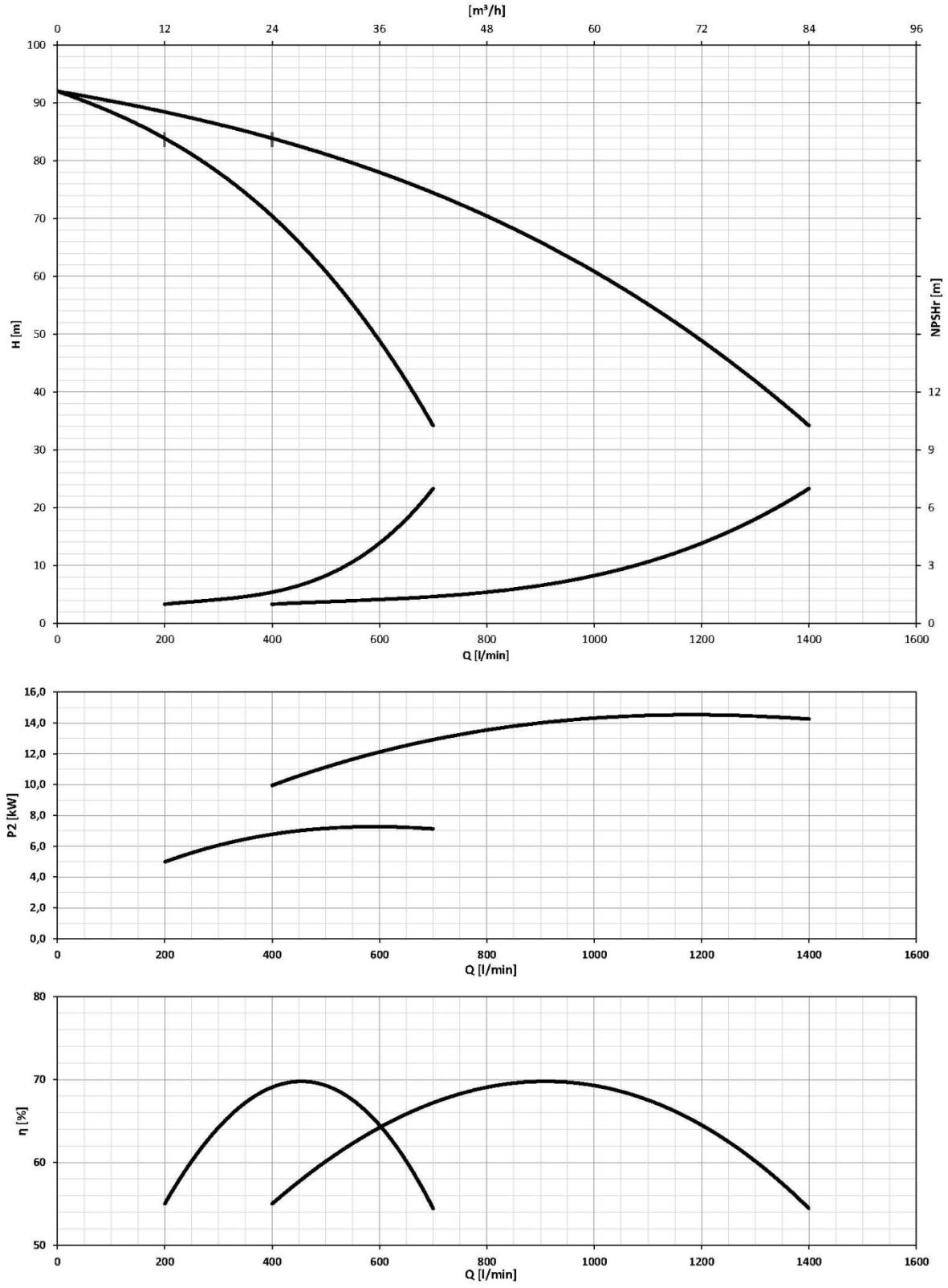
2GP(E) EVM 32 4-3/7.5



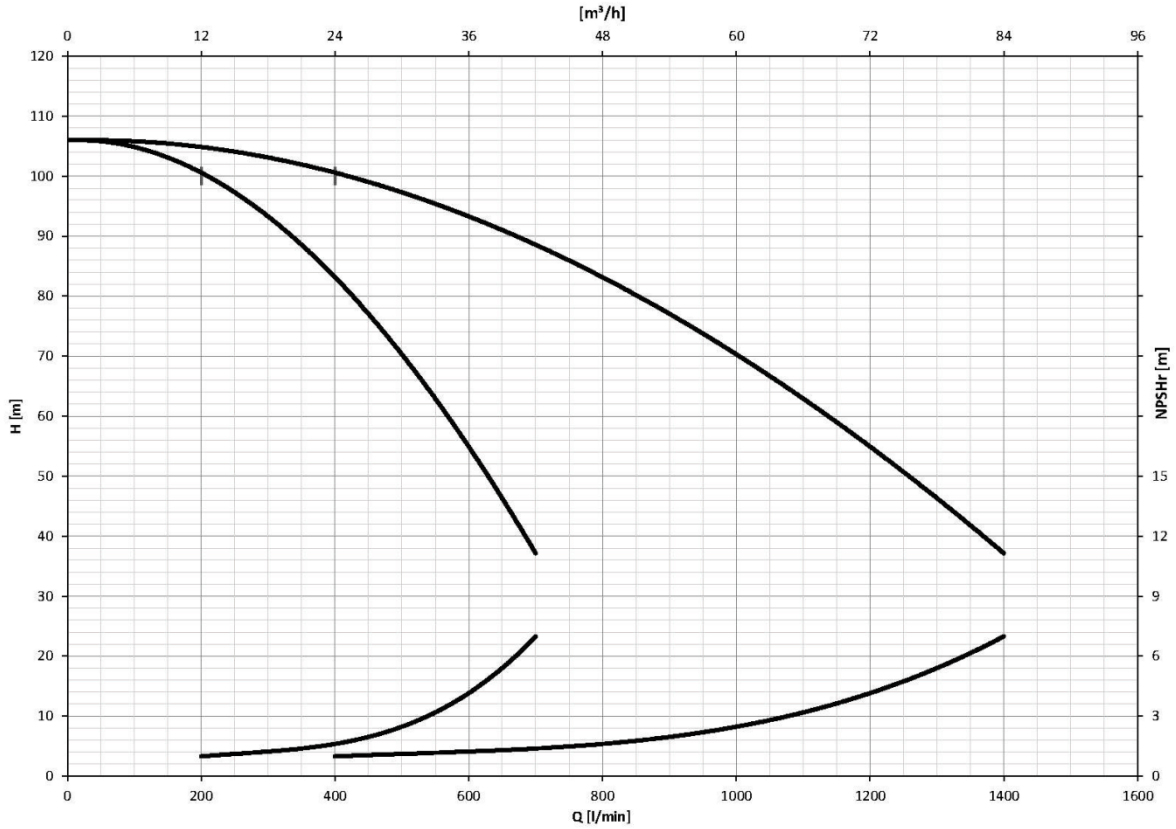


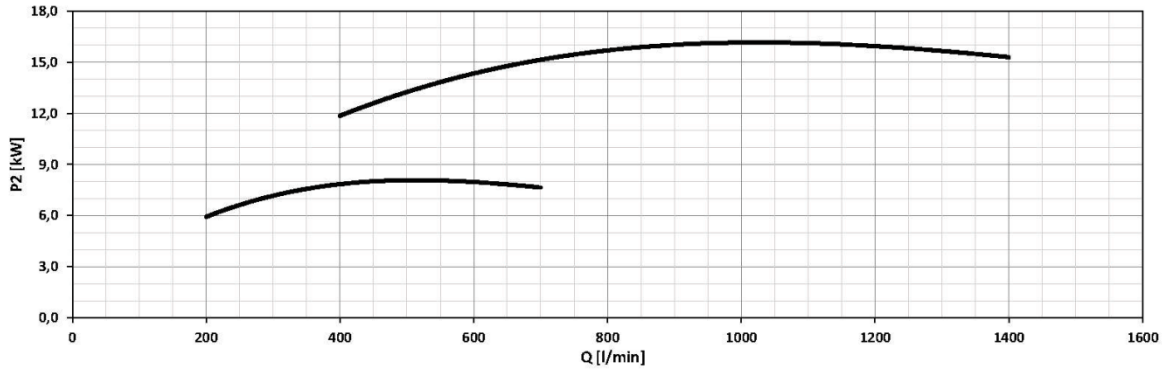


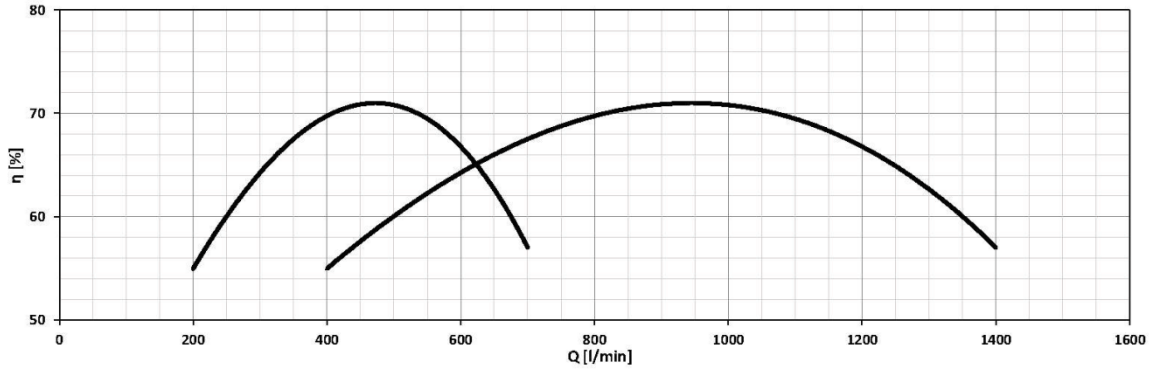
2GP(E) EVM 32 4-1/7.5



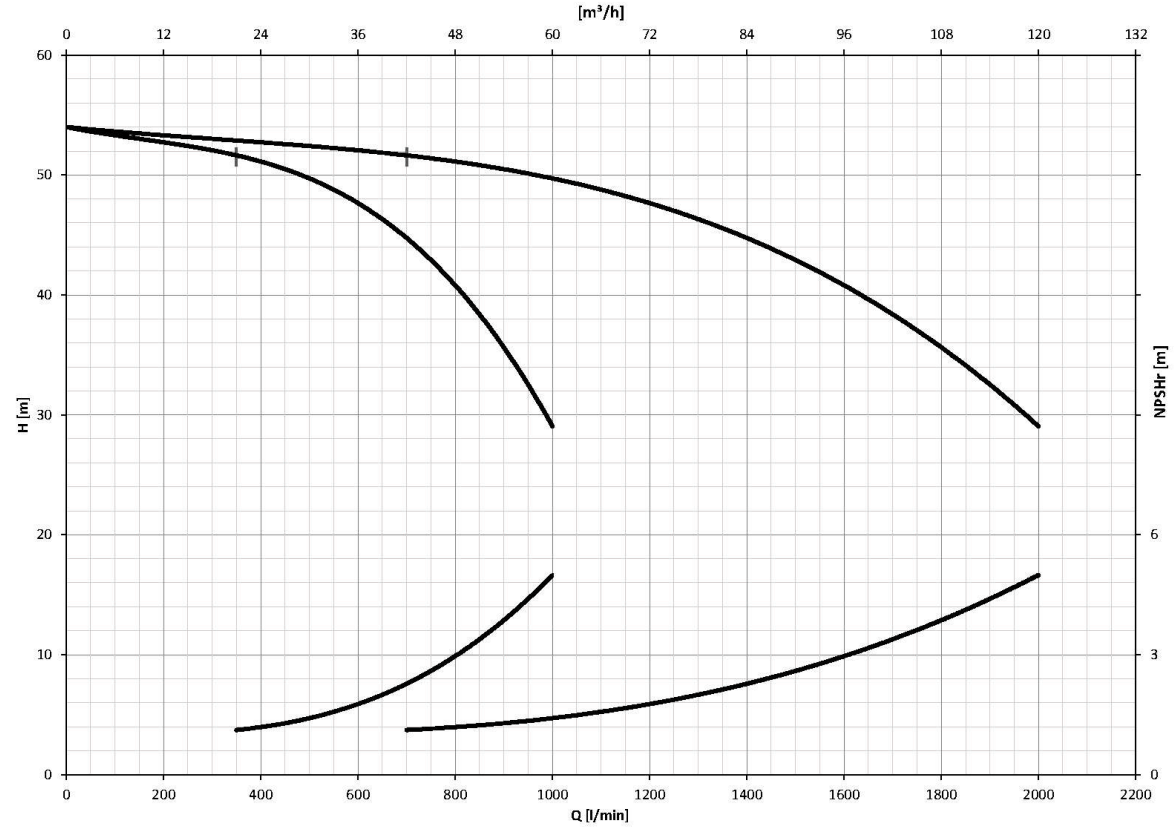
2GP(E) EVM 32 5-3/11

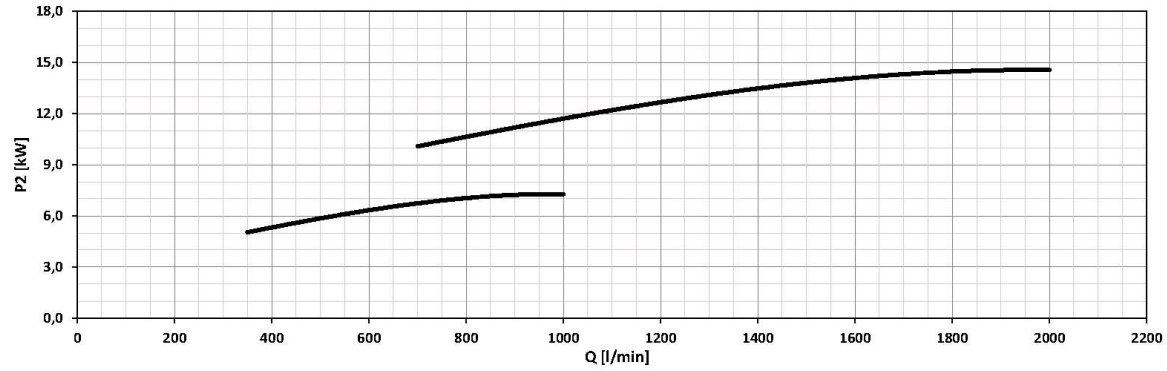


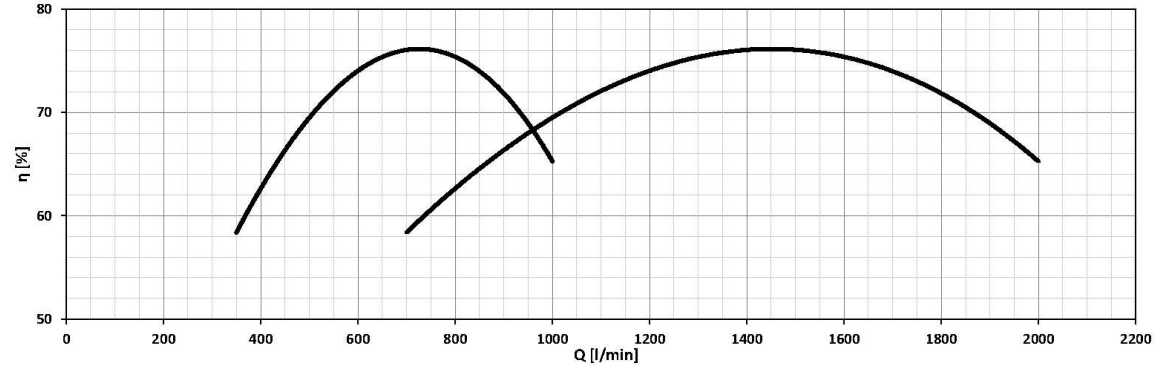




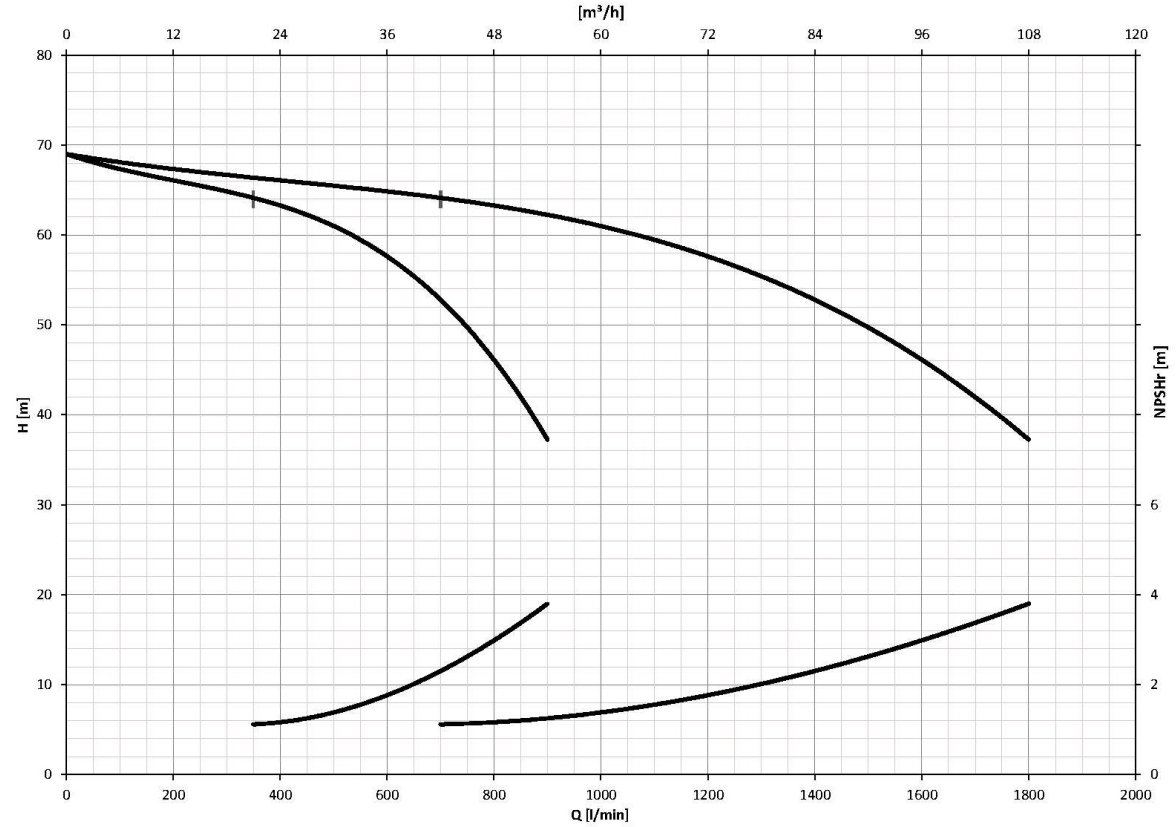
2GP(E) EVM 45 2-0/7.5

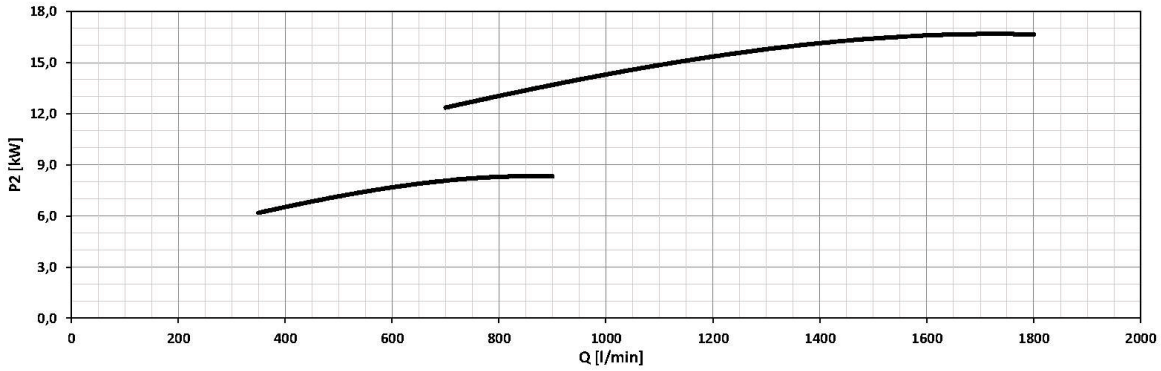


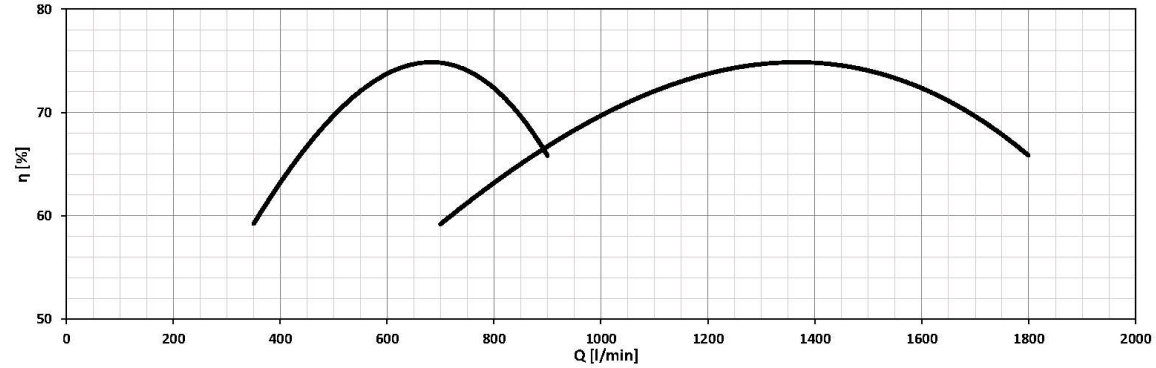




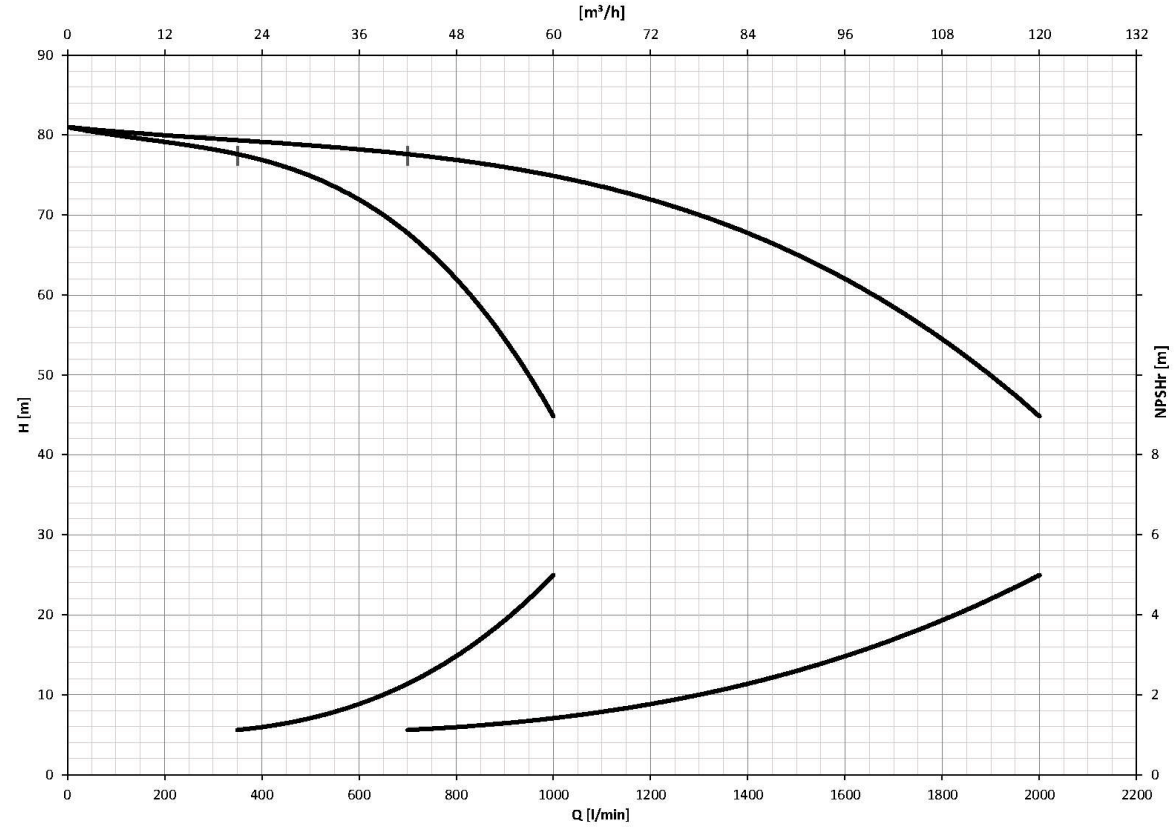
2GP(E) EVM 45 3-2/11

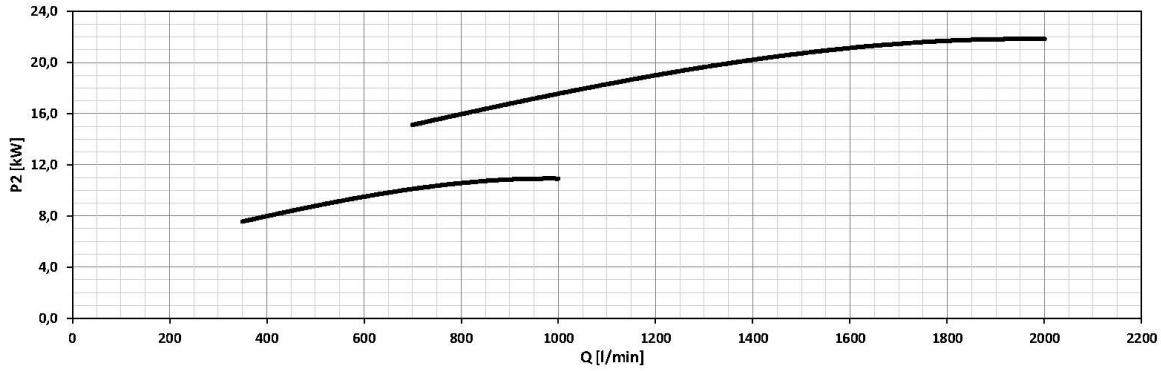


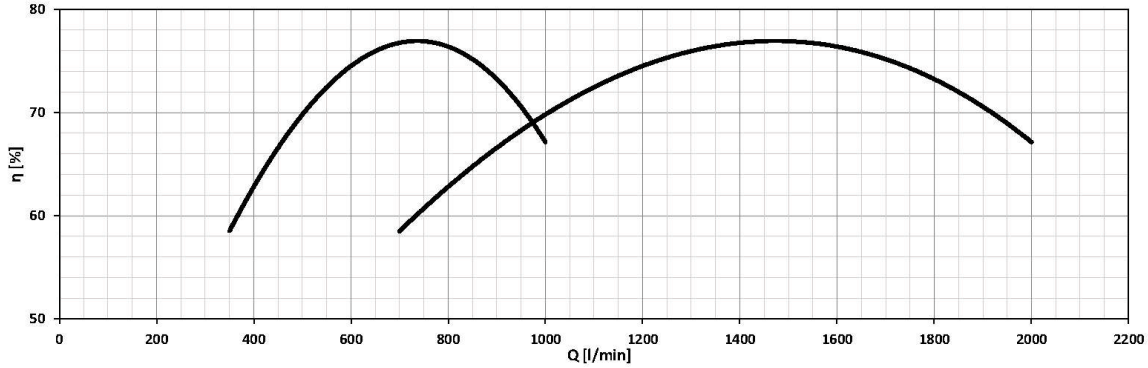




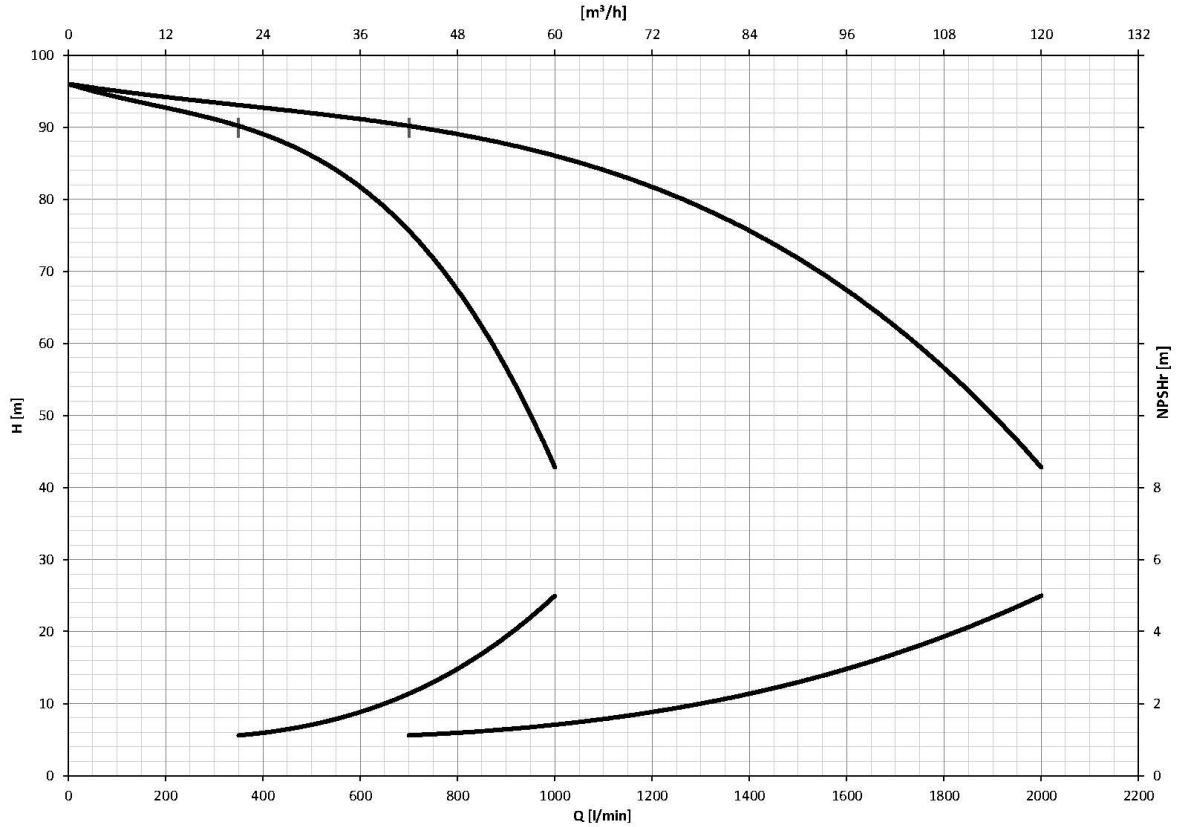
2GP(E) EVM 45 3-0/11

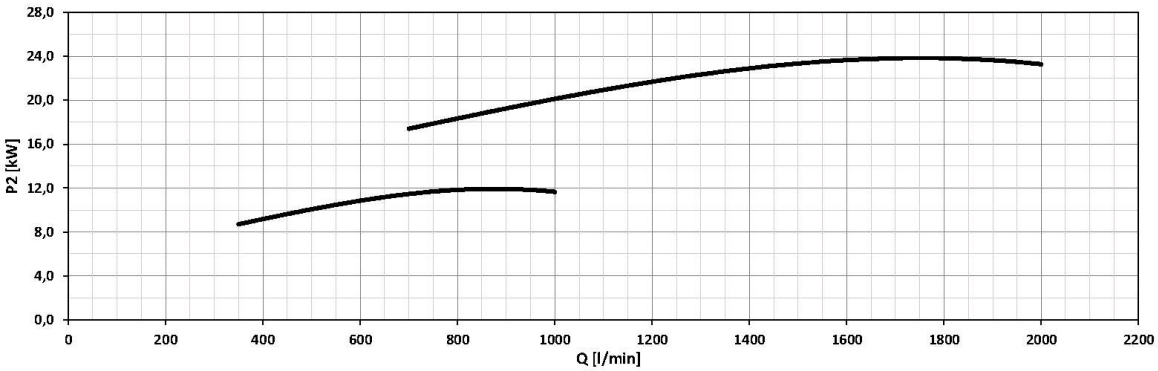


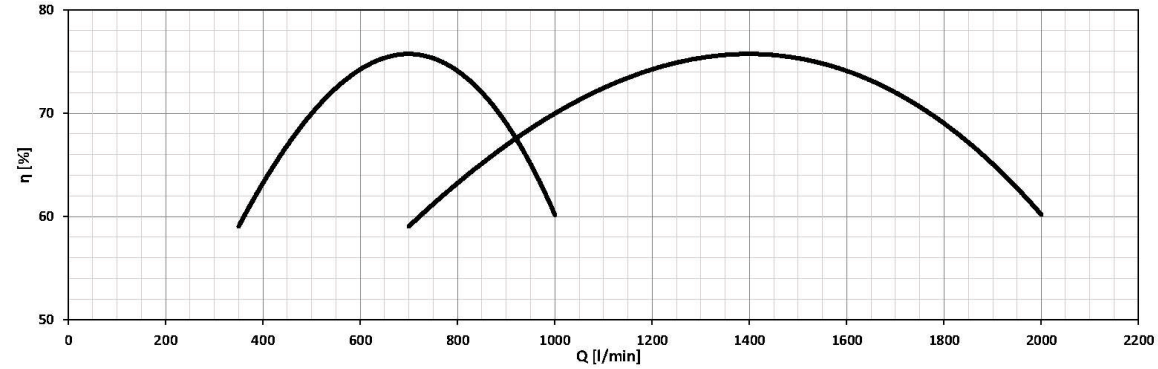




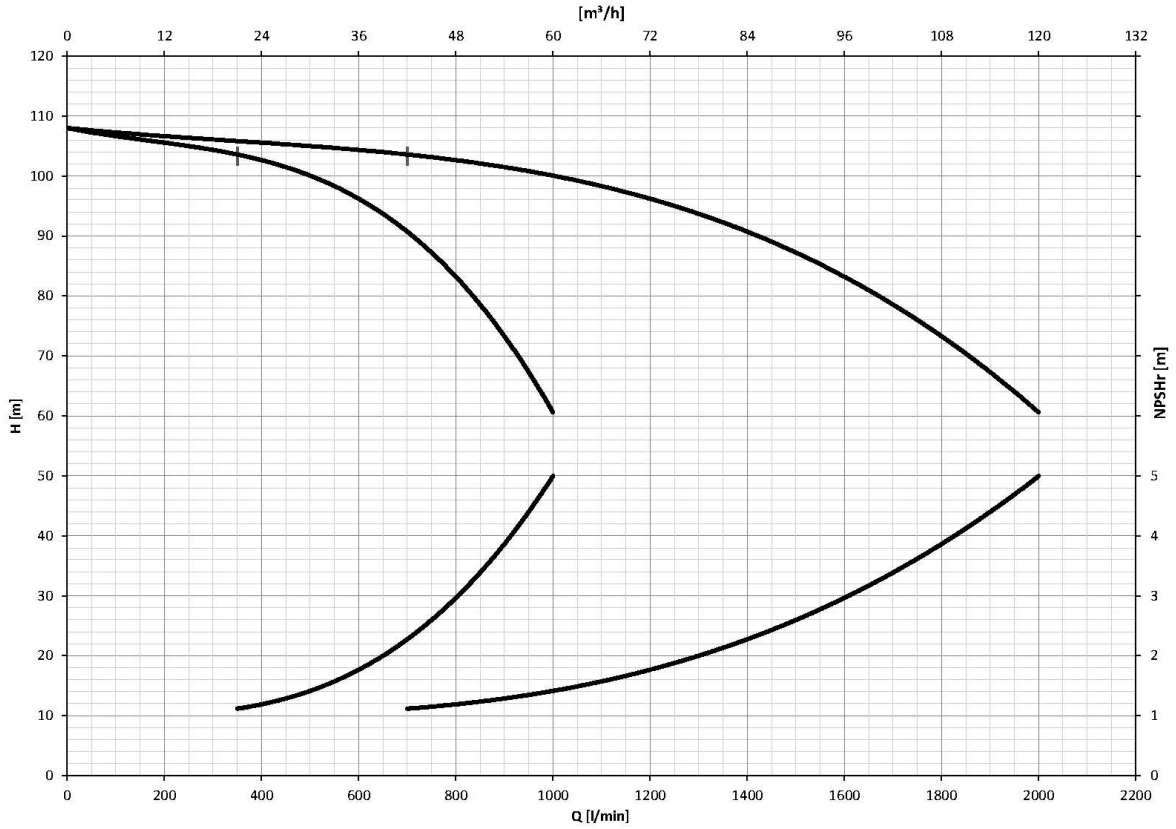
2GP(E) EVM 45 4-2/15

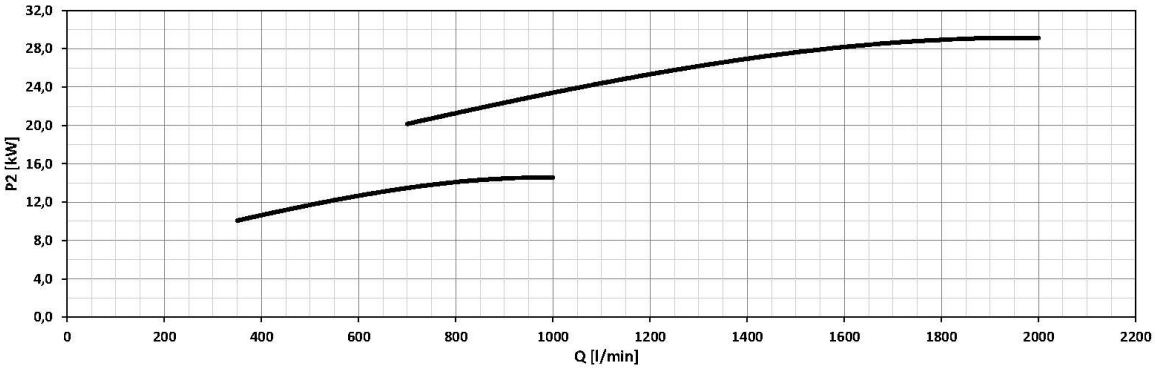


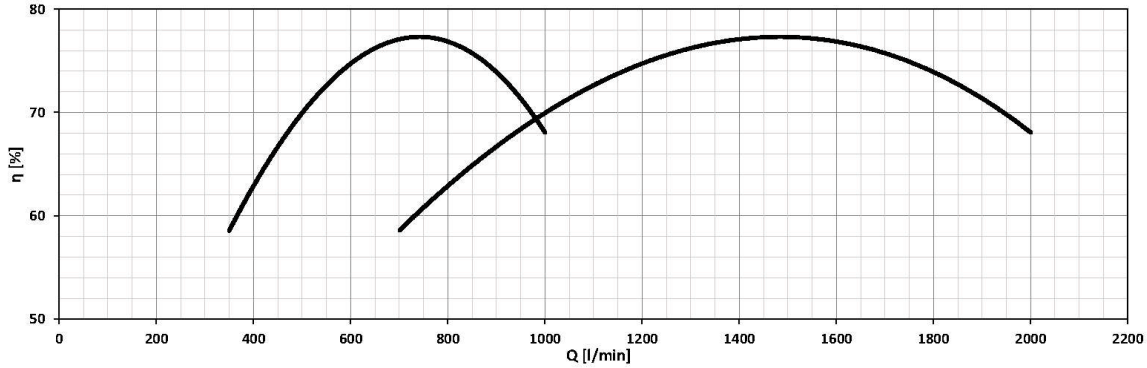




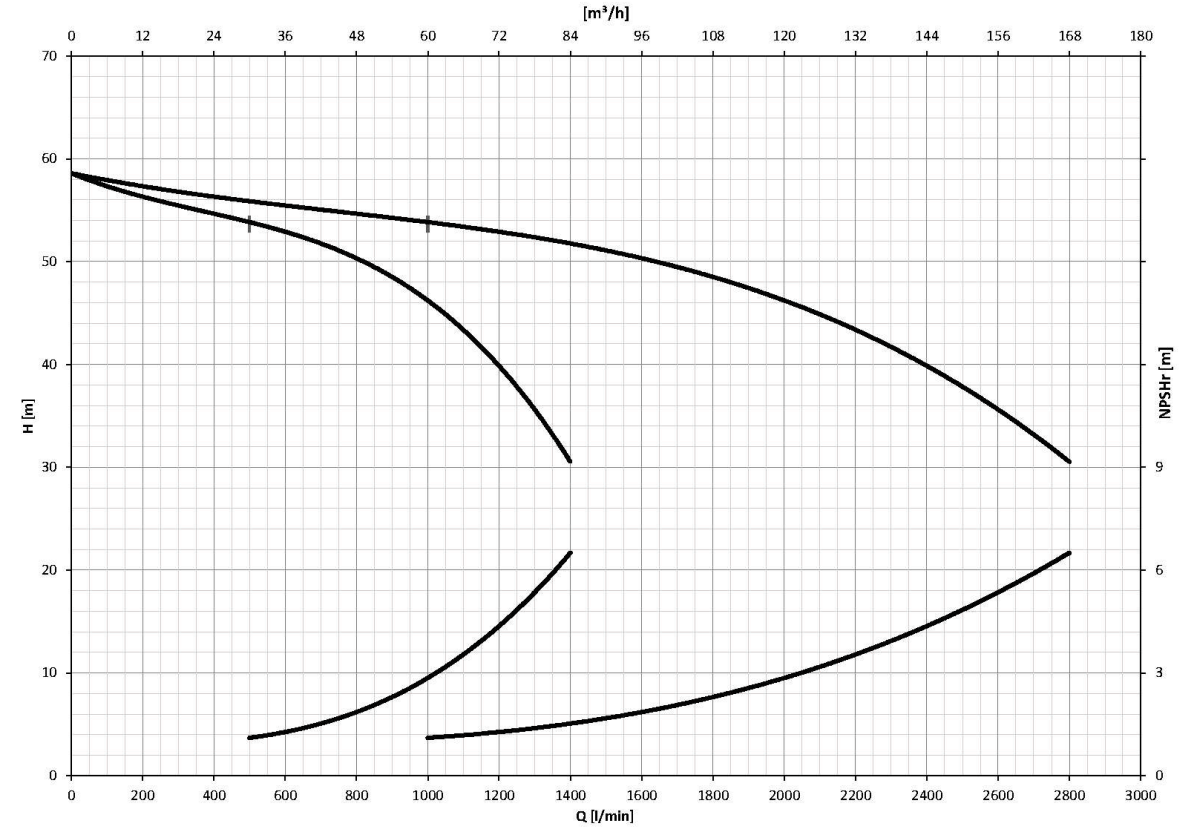
2GP(E) EVM 45 4-0/15

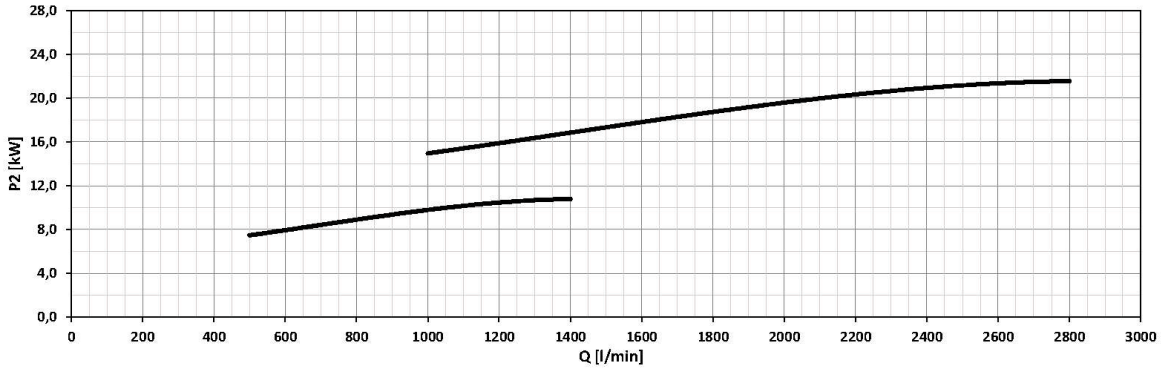


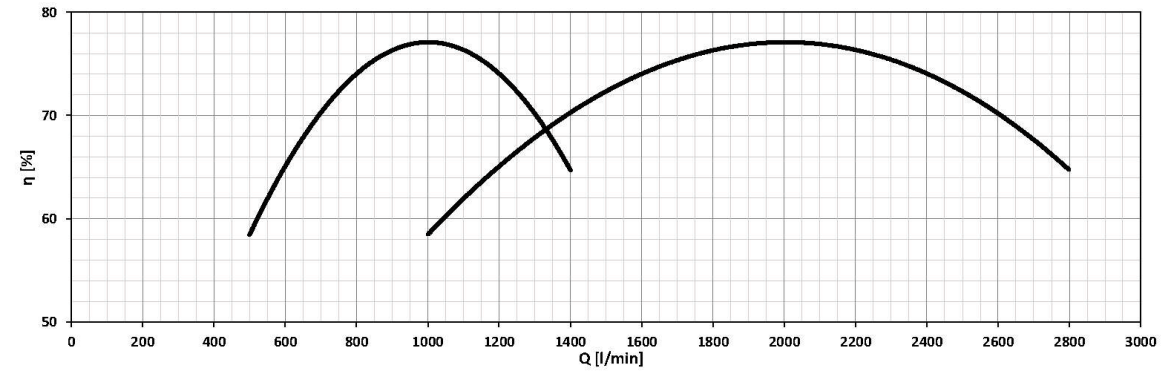




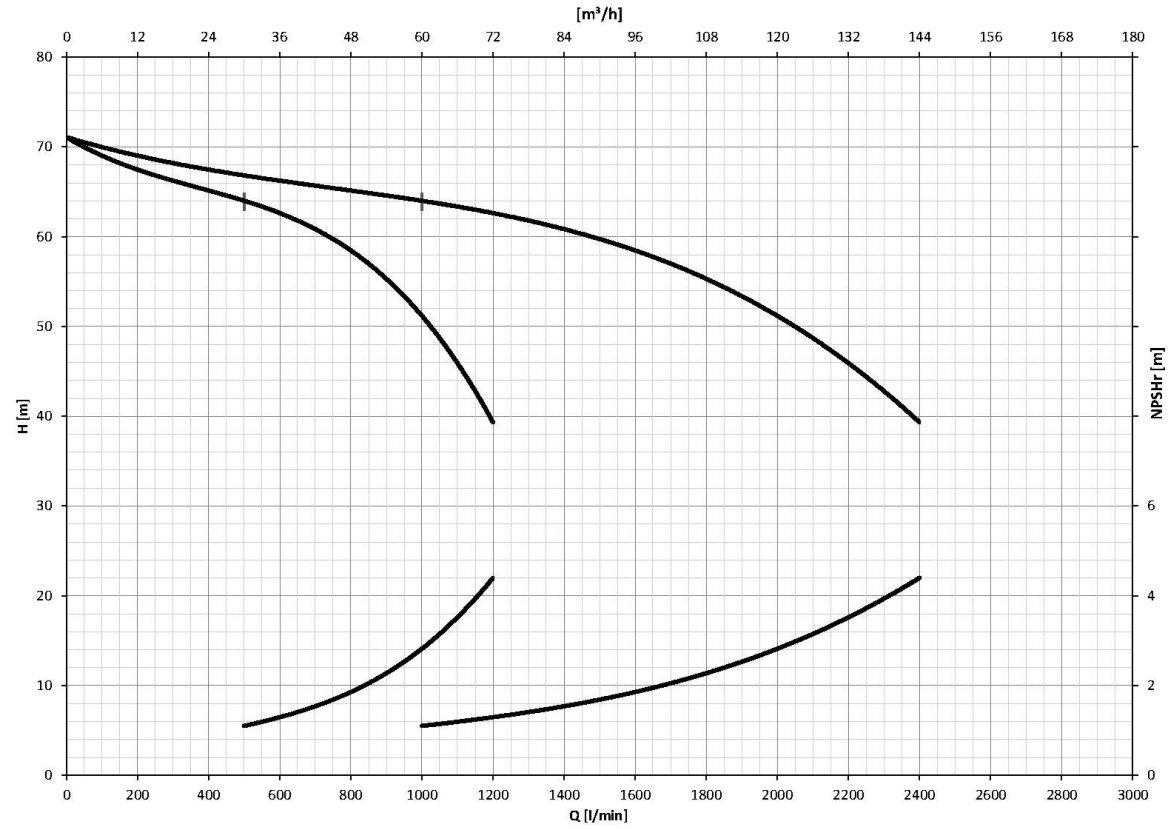
2GP(E) EVM 64 2-0/11

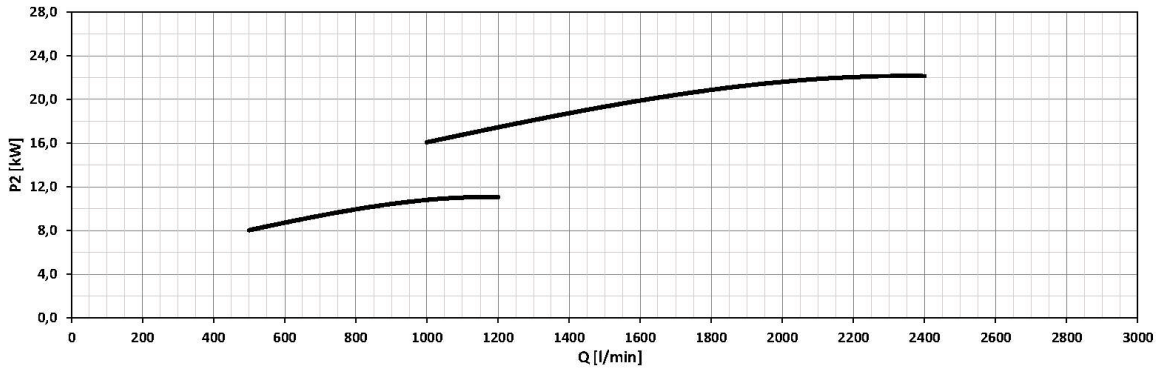


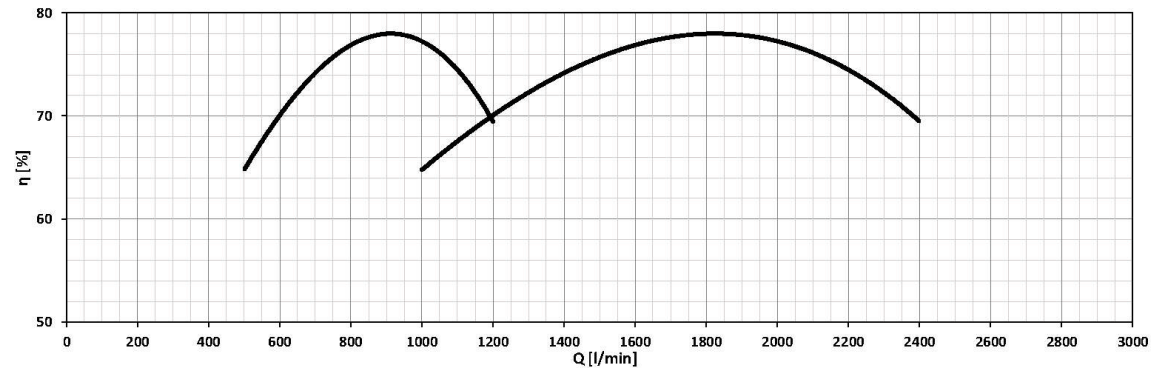




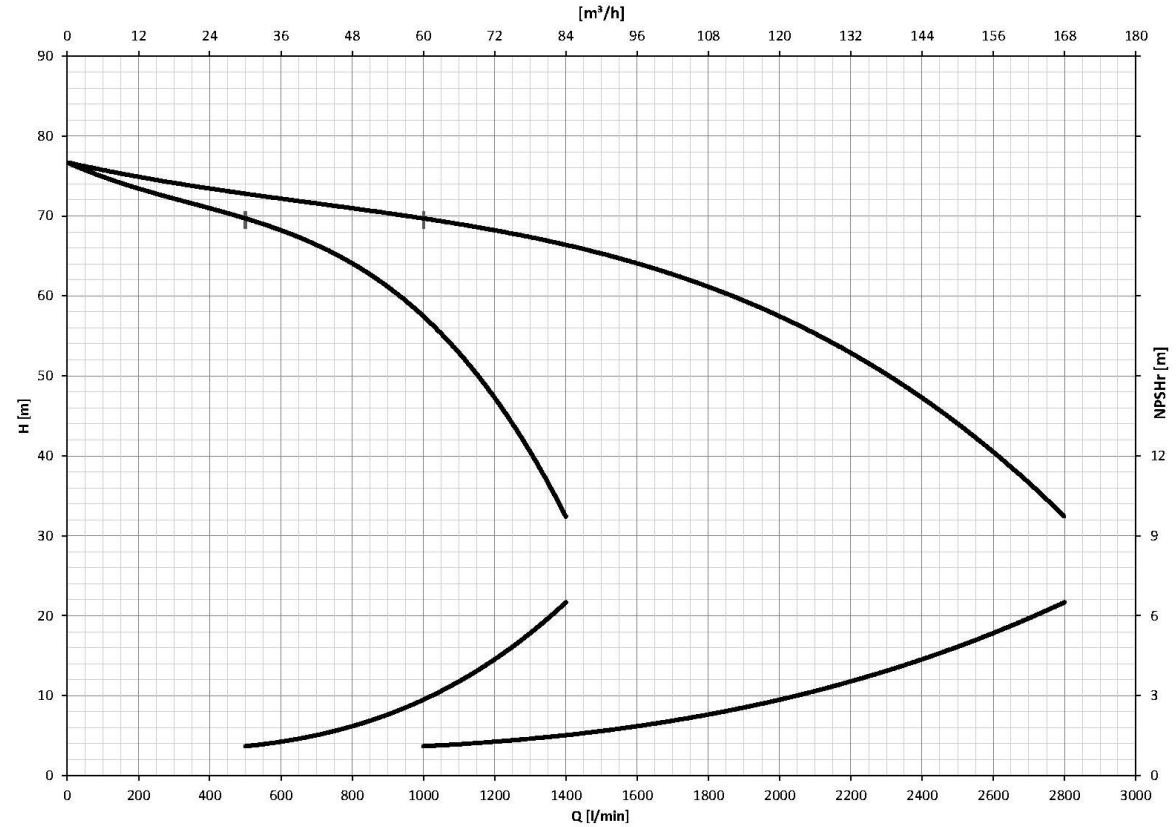
2GP(E) EVM 64 3-3/15

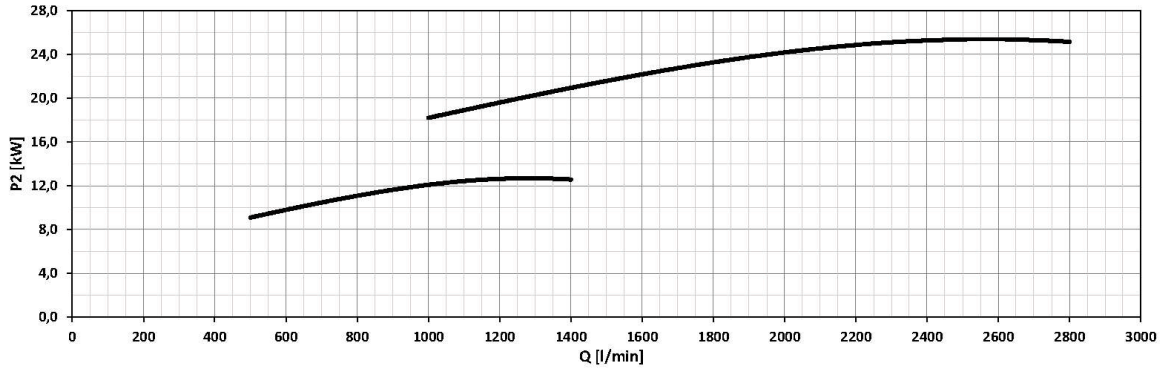


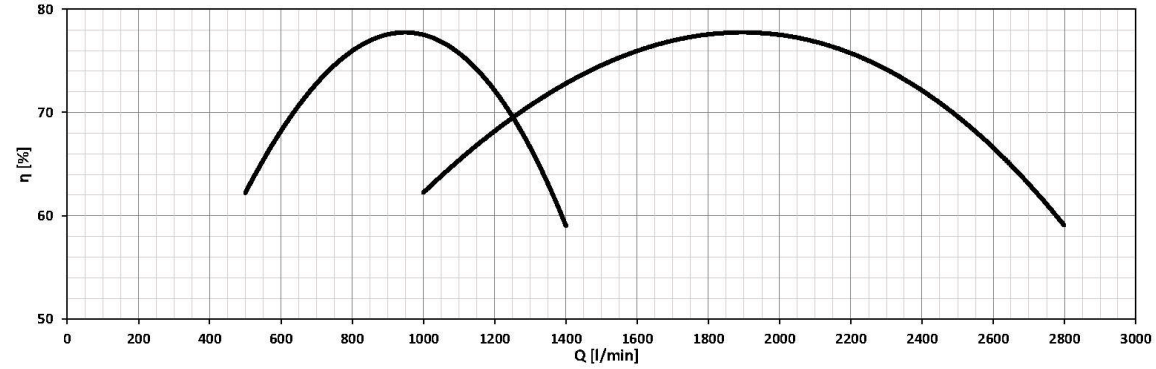




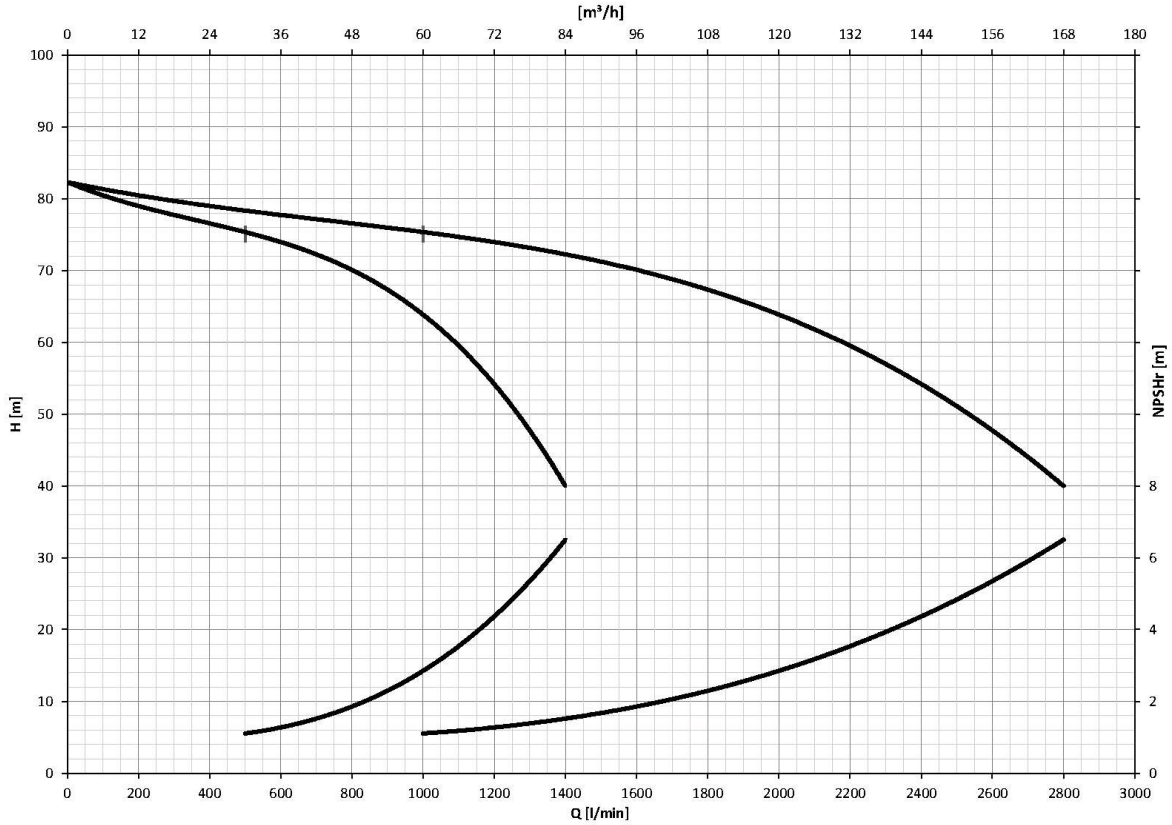
2GP(E) EVM 64 3-2/15

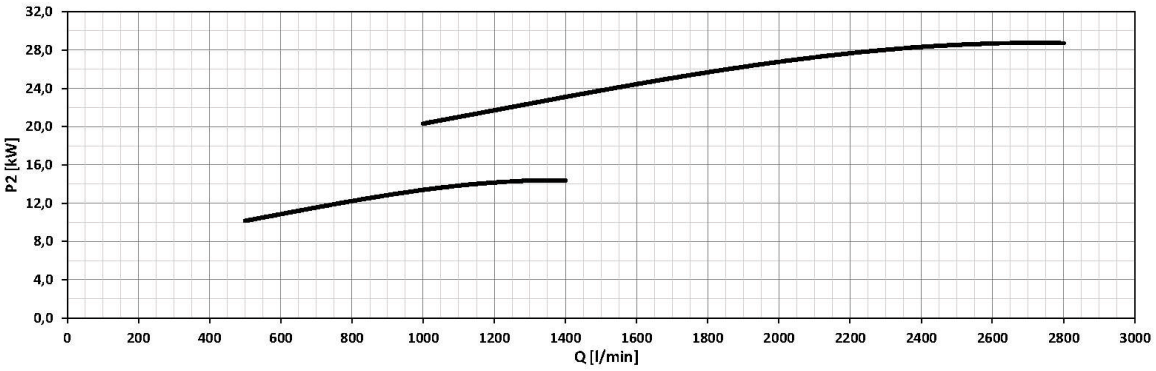


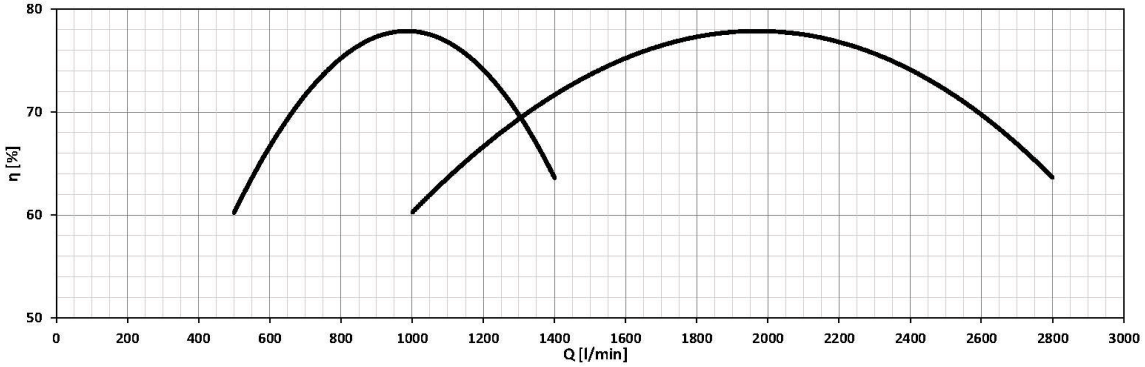




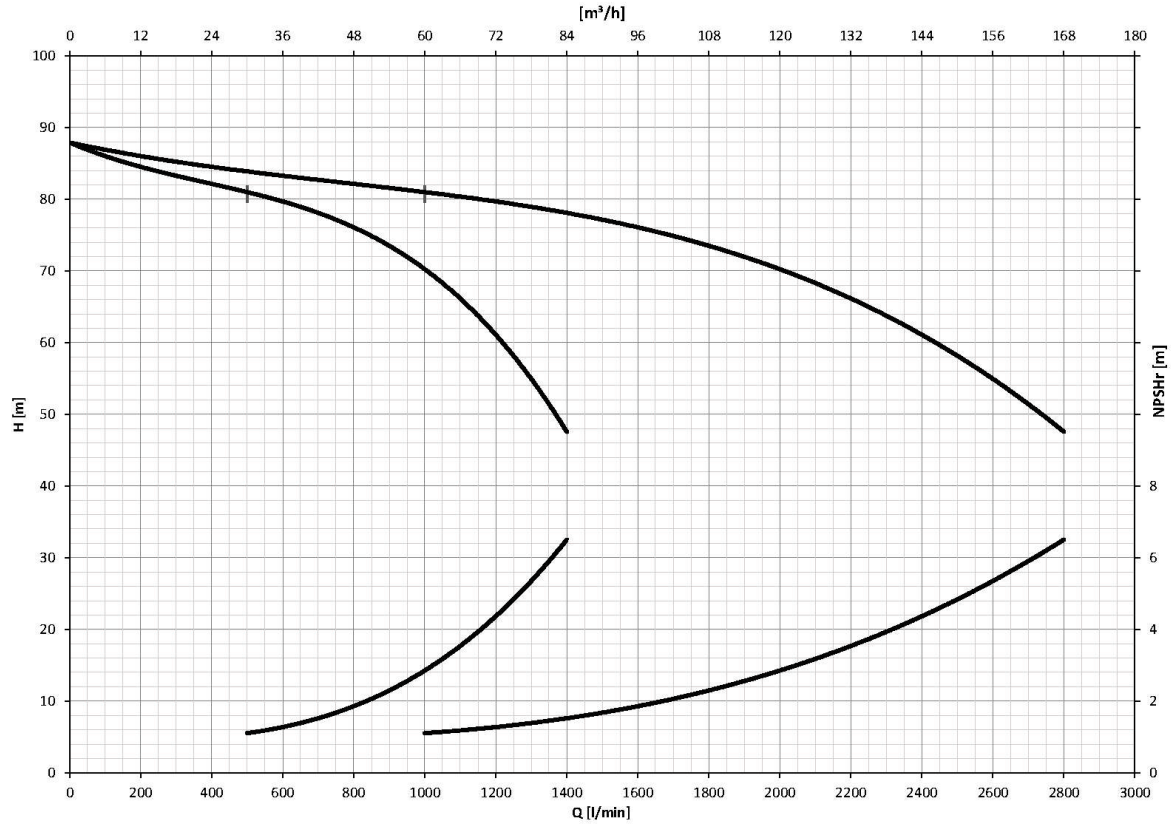
2GP(E) EVM 64 3-1/15

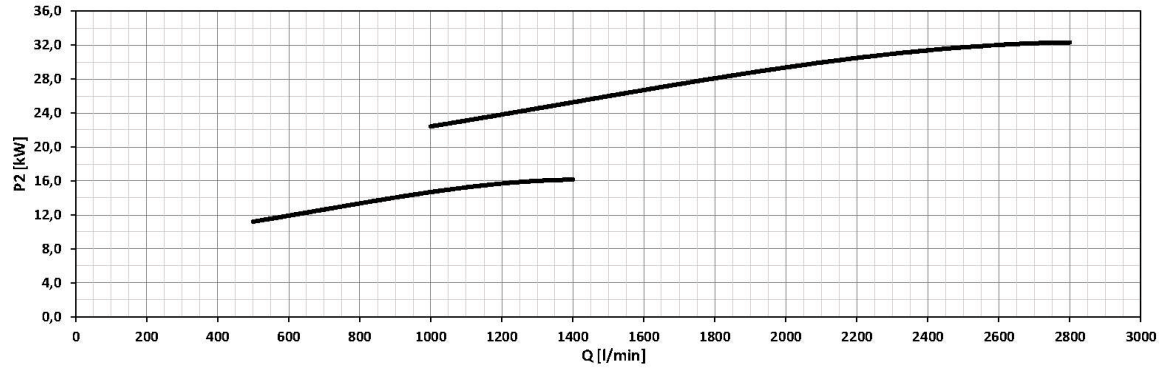


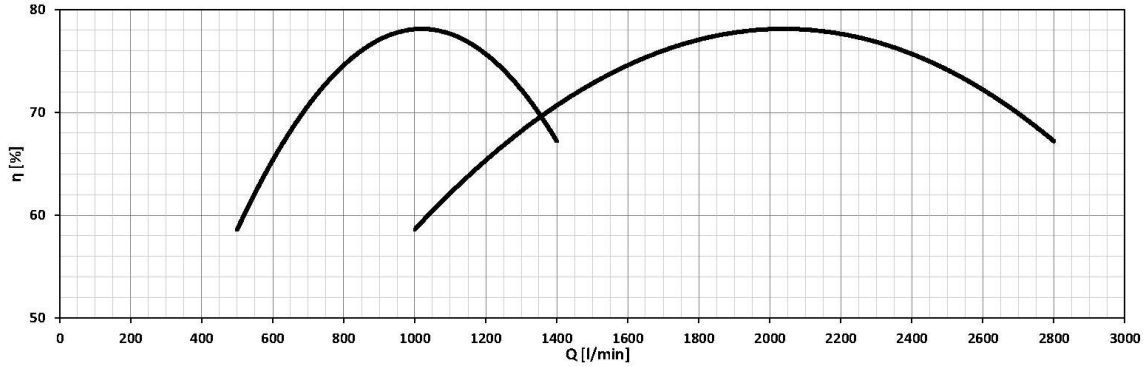




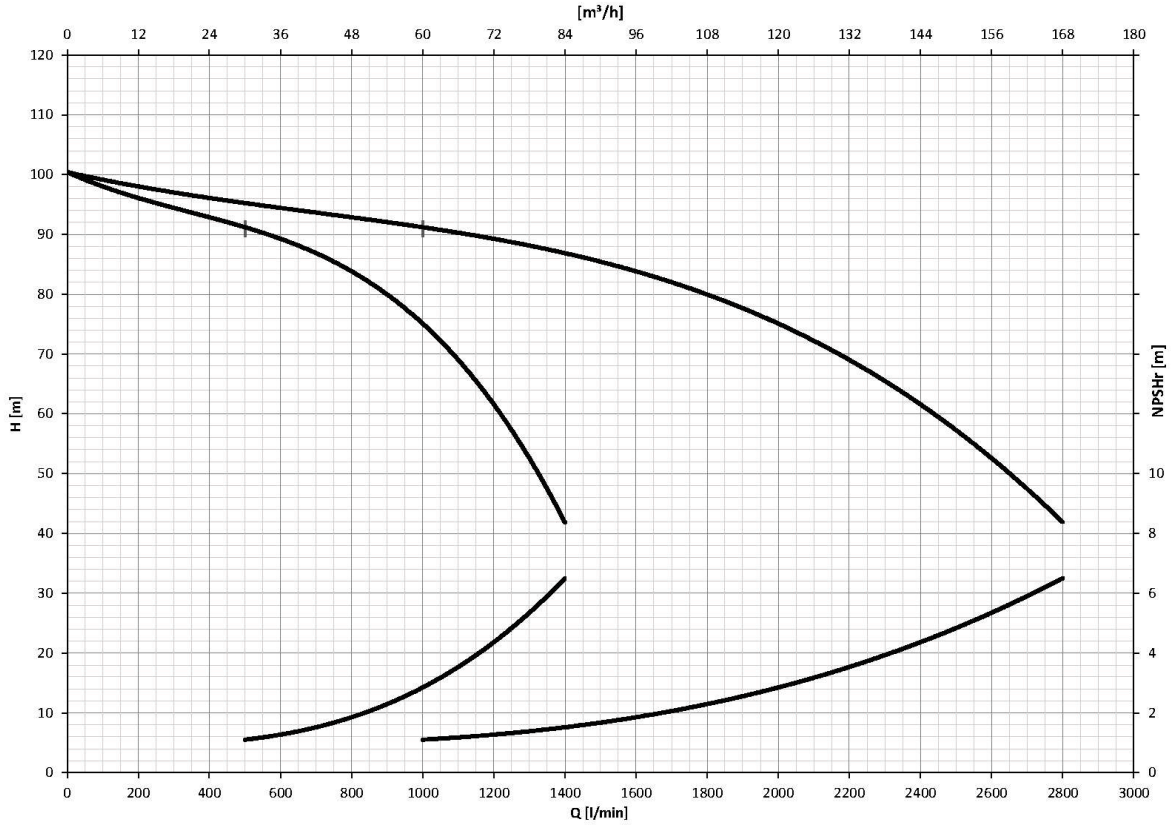
2GP(E) EVM 64 3-0/18.5

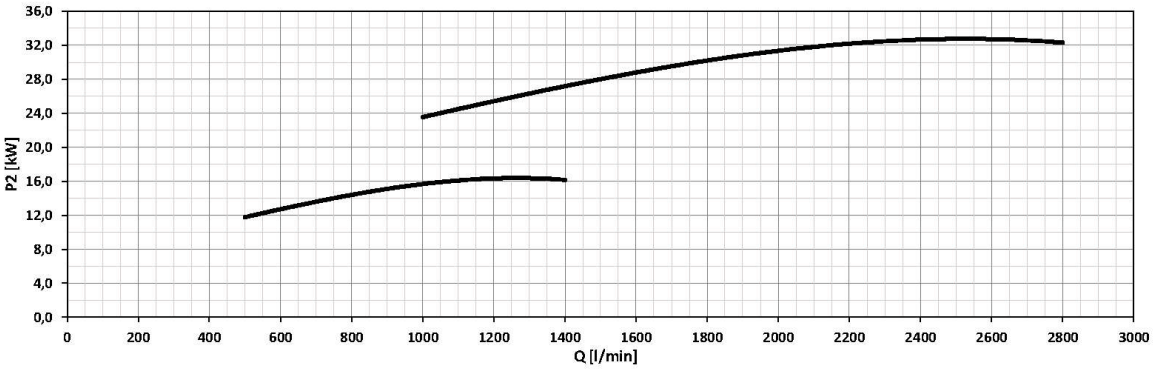


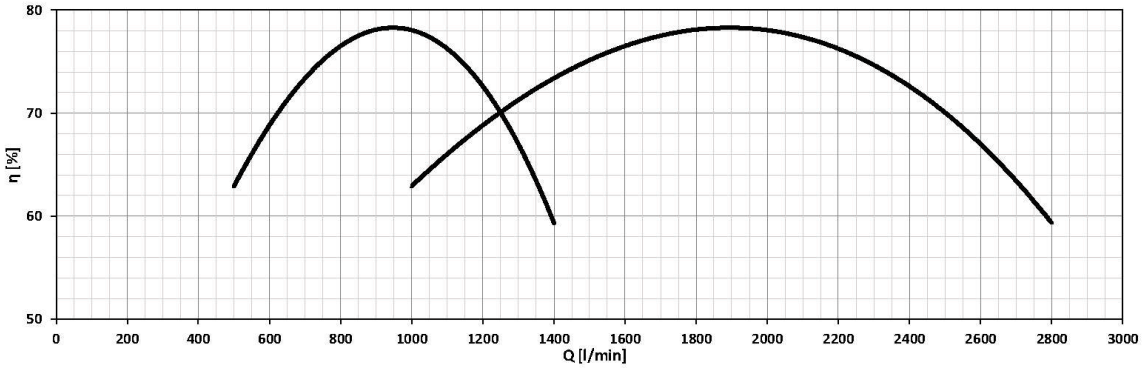




2GP(E) EVM 64 4-3/18.5



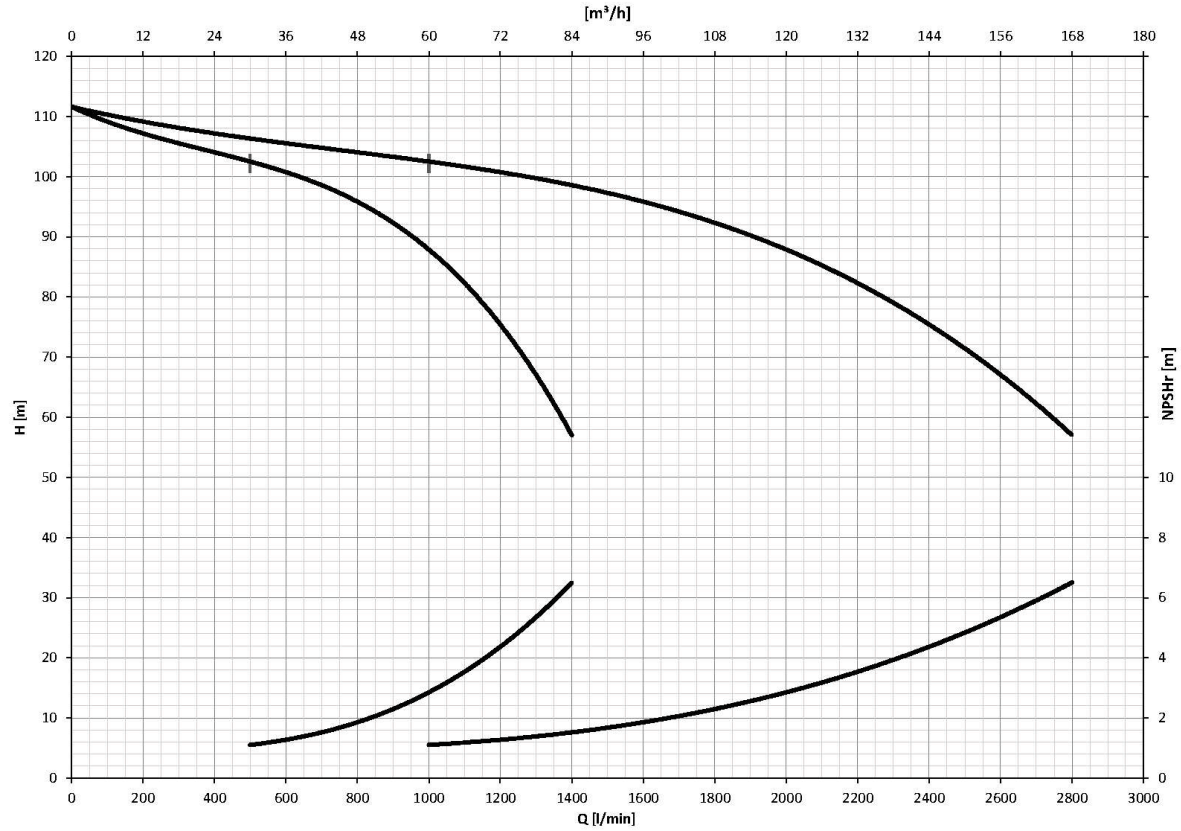


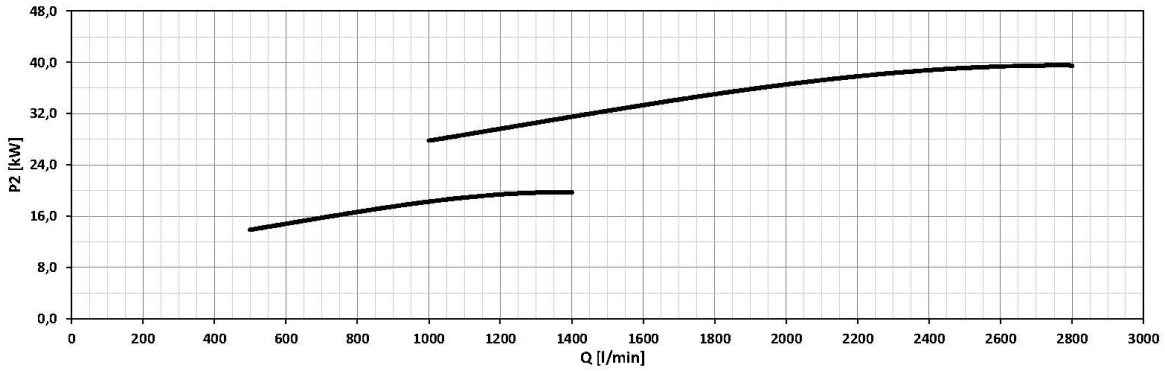


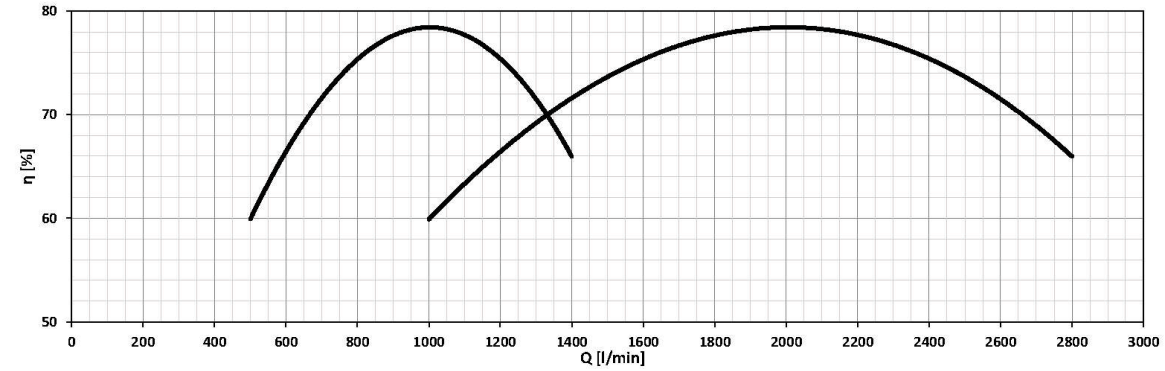
GP-GPE

PERFORMANCE CURVE

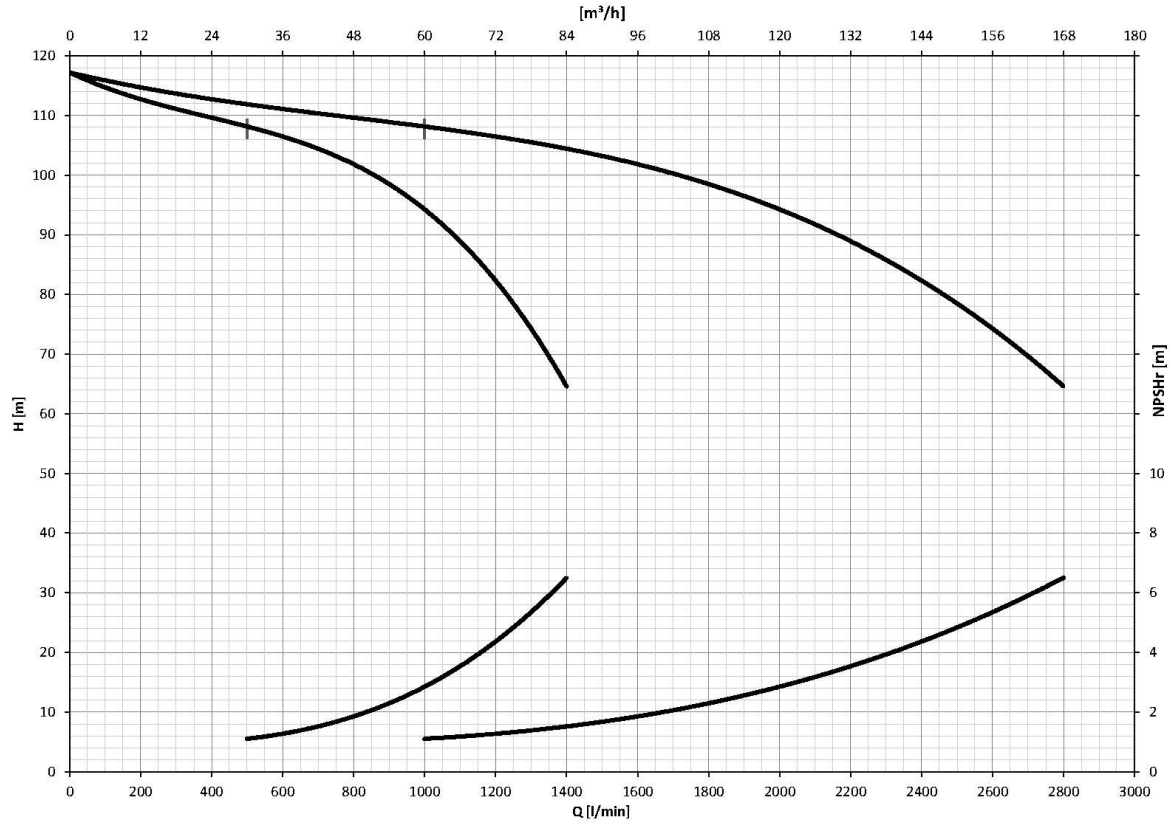
2GP(E) EVM 64 4-1/22

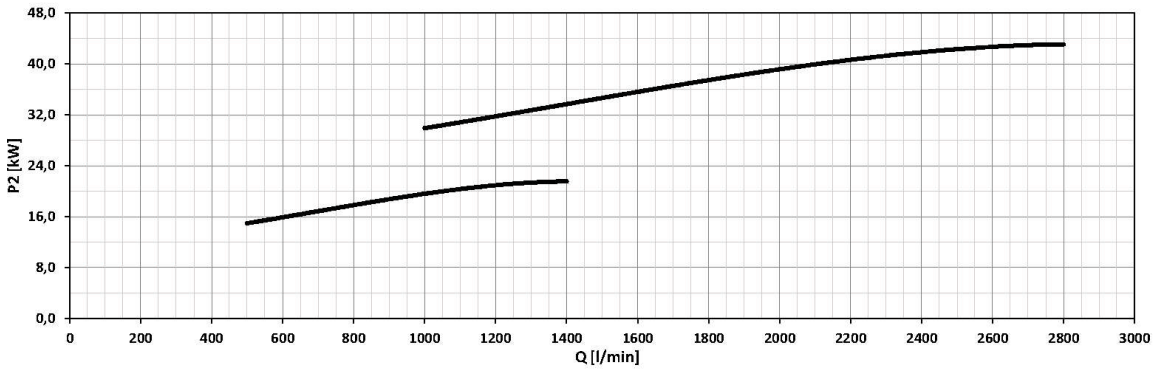


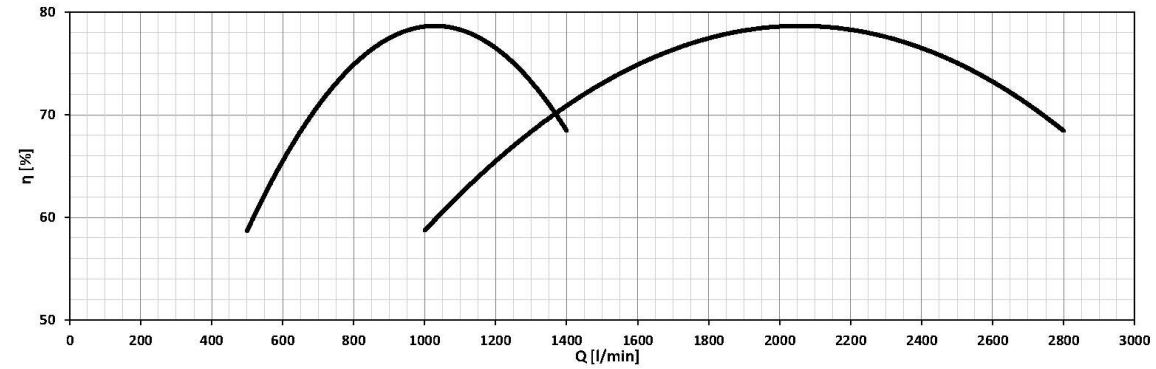




2GP(E) EVM 64 4-0/22







SELECTION CHART 3GP(E) EVMS(.) 3-5

Model	Motor		Maximum working pressure (MPa)	Q=Capacity							
				l/min 0	60	90	120	180	225	300	390
	kW	HP		m³/h 0	3.6	5.4	7.2	10.8	13.5	18.0	23.4
				H=Total manometric head in meters							
3GP(E) EVMS(.)3 7/0.75	0.75 + 0.75 + 0.75	1 + 1 + 1	1.6	51.5	49.5	47.5	45	38.3	29.2	-	-
3GP(E) EVMS(.)3 9/1.1	1.1 + 1.1 + 1.1	1.5 + 1.5 + 1.5		66.5	63.5	61	58	49	37.6	-	-
3GP(E) EVMS(.)3 10/1.1	1.1 + 1.1 + 1.1	1.5 + 1.5 + 1.5		73.5	70.5	68.0	64.5	54.5	41.5	-	-
3GP(E) EVMS(.)3 16/1.5	1.5 + 1.5 + 1.5	2 + 2 + 2		118.0	113.0	109	103.0	87.5	67.0	-	-
3GP(E) EVMS(.)3 19/2.2	2.2 + 2.2 + 2.2	3 + 3 + 3		140.0	134.0	129	123.0	104.0	79.5	-	-
3GP(E) EVMS(.)5 4/0,75	0.75 + 0.75 + 0.75	1 + 1 + 1		37.9	-	-	35.9	34.1	31.9	27.6	20.4
3GP(E) EVMS(.)5 5/1,1	1.1 + 1.1 + 1.1	1.5 + 1.5 + 1.5		47.5	-	-	45.0	42.5	39.9	34.5	25.5
3GP(E) EVMS(.)5 6/1,5	1.5 + 1.5 + 1.5	2 + 2 + 2		57.0	-	-	54.0	51.0	48.0	41.5	30.6
3GP(E) EVMS(.)5 7/1.5	1.5 + 1.5 + 1.5	2 + 2 + 2		66.5	-	-	63	59.5	56	48.5	35.7
3GP(E) EVMS(.)5 8/2.2	2.2 + 2.2 + 2.2	3 + 3 + 3		76	-	-	72	68	64	55	41
3GP(E) EVMS(.)5 9/2.2	2.2 + 2.2 + 2.2	3 + 3 + 3		85.5	-	-	81	77	72	62	46
3GP(E) EVMS(.)5 11/2,2	2.2 + 2.2 + 2.2	3 + 3 + 3		104.0	-	-	99	94	88	76	56
3GP(E) EVMS(.)5 15/3,0	3.0 + 3.0 + 3.0	4 + 4 + 4		142.0	-	-	135	128	120	104	77

SELECTION CHART 3GP(E) EVMS(.) 10-15-20

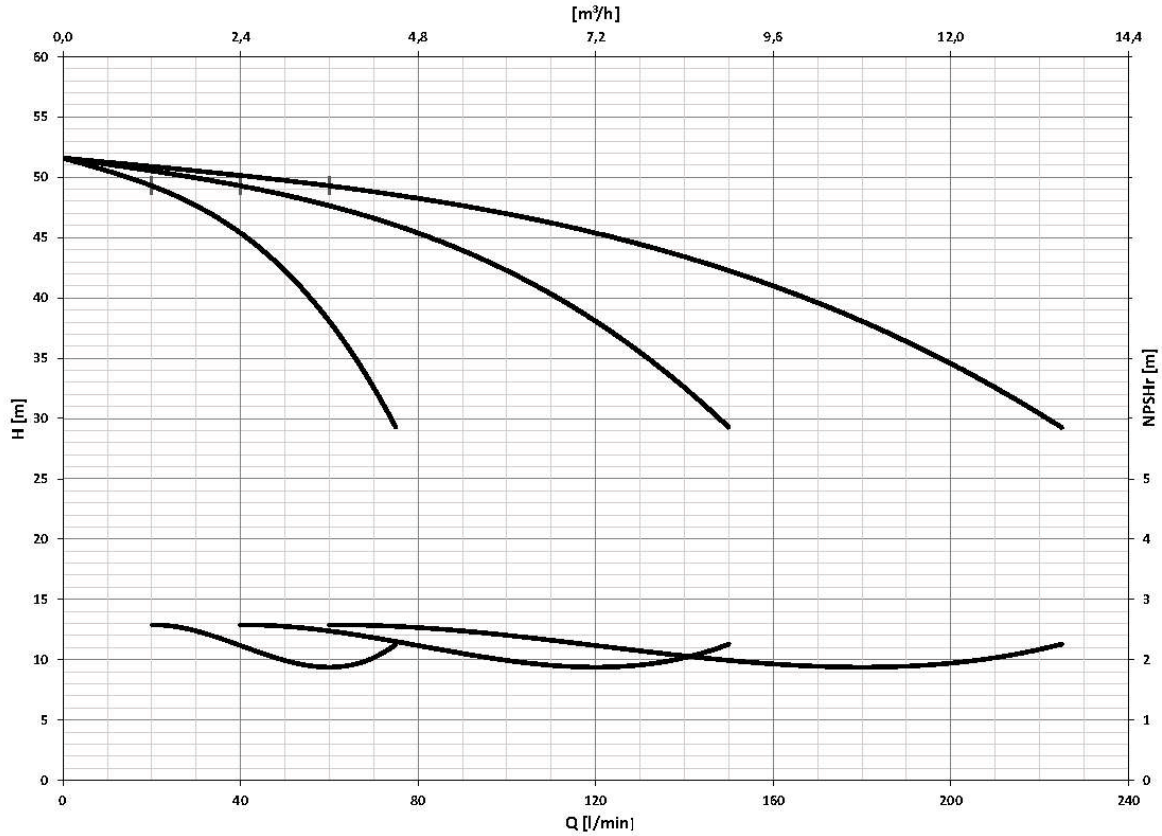
Model	Motor		Maximum working pressure (MPa)	Q=Capacity													
				l/min 0	225	300	390	450	540	600	750	900	1050	1200	1350	1440	
	kW	HP		m³/h 0	13,5	18,0	23,4	27,0	32,4	36,0	45,0	54,0	63,0	72,0	81,0	86,4	
				H=Total manometric head in meters													
3GP(E) EVMS(.)10 4/2.2	2.2 + 2.2 + 2.2	3 + 3 + 3	1,6	43,6	42,4	41,7	39,5	37,3	33,2	29,8	19,6	-	-	-	-	-	
3GP(E) EVMS(.)10 6/2.2	2.2 + 2.2 + 2.2	3 + 3 + 3		65,5	63,5	62,5	59	56	50	45	29,5	-	-	-	-	-	
3GP(E) EVMS(.)10 7/3.0	3.0 + 3.0 + 3.0	4 + 4 + 4		76,5	74	73	69	65,5	58	52	34,4	-	-	-	-	-	
3GP(E) EVMS(.)10 8/3.0	3.0 + 3.0 + 3.0	4 + 4 + 4		87,0	84,5	83,5	79	74,5	66,5	59,5	39,3	-	-	-	-	-	
3GP(E) EVMS(.)10 11/4.0	4.0 + 4.0 + 4.0	5.5 + 5.5 + 5.5		120	116	115	109	103	91,5	82	54	-	-	-	-	-	
3GP(E) EVMS(.)10 14/5.5	5.5 + 5.5 + 5.5	7.5 + 7.5 + 7.5		153	148	146	138	131	116	104	68,5	-	-	-	-	-	
3GP(E) EVMS(.)15 4/4.0	4.0 + 4.0 + 4.0	5.5 + 5.5 + 5.5		59	-	-	55	54,5	53	52	50	46,5	41	33,6	-	-	
3GP(E) EVMS(.)15 5/5.5	5.5 + 5.5 + 5.5	7.5 + 7.5 + 7.5		73,5	-	-	69	68	66	65	62	58	51	42	-	-	
3GP(E) EVMS(.)15 6/5.5	5.5 + 5.5 + 5.5	7.5 + 7.5 + 7.5		88,5	-	-	82,5	81,5	79,5	78	74,5	69,5	61	50,5	-	-	
3GP(E) EVMS(.)15 7/7.5	7.5 + 7.5 + 7.5	10 + 10 + 10		103	-	-	96,5	95	92,5	91	87	81	71,5	58,5	-	-	
3GP(E) EVMS(.)15 8/7.5	7.5 + 7.5 + 7.5	10 + 10 + 10		118	-	-	110	109	106	104	99,5	92,5	81,5	67	-	-	
3GP(E) EVMS(.)15 9/11	11 + 11 + 11	15 + 15 + 15		133	-	-	124	122	119	117	112	104	92	75,5	-	-	
3GP(E) EVMS(.)15 10/11	11 + 11 + 11	15 + 15 + 15		147	-	-	138	136	132	130	124	116	102	84	-	-	
3GP(E) EVMS(.)20 4/5.5	5.5 + 5.5 + 5.5	7.5 + 7.5 + 7.5		67,4	-	-	-	-	61	60	58	55,4	52,3	47,3	39,8	34,9	
3GP(E) EVMS(.)20 6/7.5	7.5 + 7.5 + 7.5	10 + 10 + 10		101	-	-	-	-	91,2	90	87	83,1	78,5	71	59,7	52,3	
3GP(E) EVMS(.)20 8/11	11 + 11 + 11	15 + 15 + 15		135	-	-	-	-	122	120	116	111	105	95	80	70	

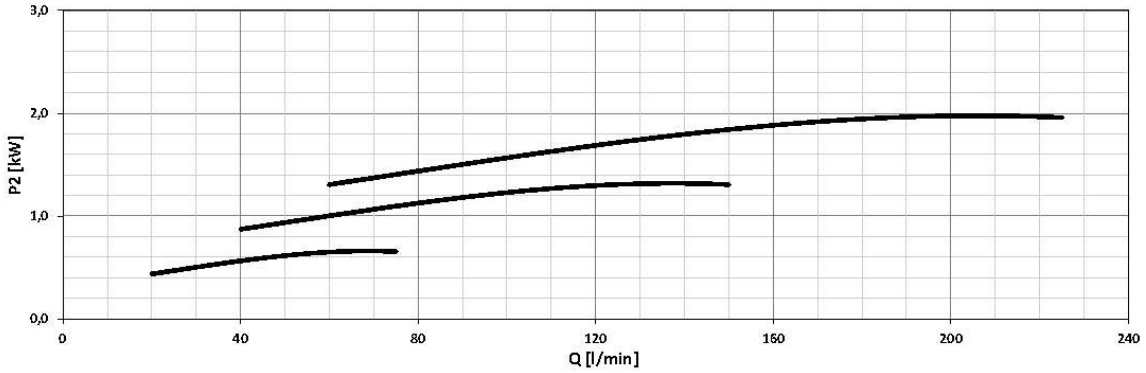
SELECTION CHART 3GP(E) EVM(.) 32-45-64

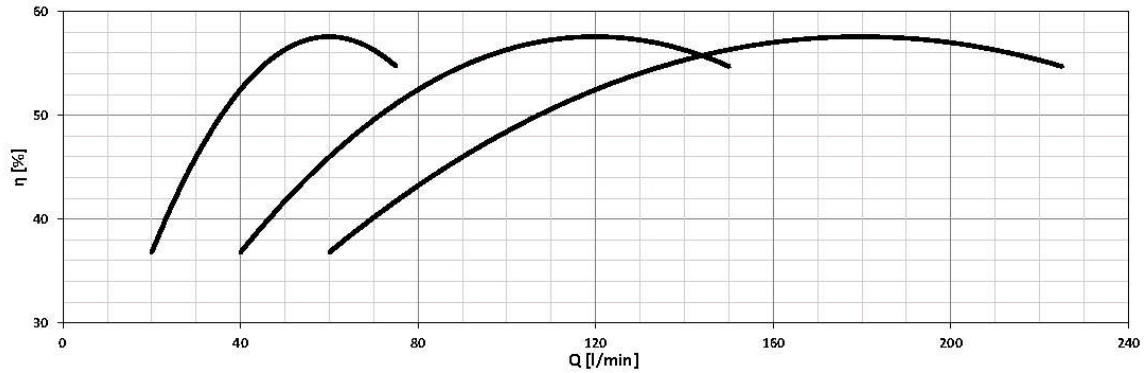
Model	Motor		Maximum working pressure [Mpa]	Q=Capacity									
				l/min 0	600	1050	1500	1800	2100	2700	3000	3600	4200
	kW	HP		m³/h 0	36	63	90	108	126	162	180	216	252
				H=Total manometric head in meters									
3GP(E) EVM(.)32 3-3/5.5	5.5 + 5.5 + 5.5	7.5 + 7.5 + 7.5	1.6	59.5	55.5	47.5	35.2	26.1	-	-	-	-	-
3GP(E) EVM(.)32 3-1/5.5	5.5 + 5.5 + 5.5	7.5 + 7.5 + 7.5		68	62	55	44.5	35.2	24.5	-	-	-	-
3GP(E) EVM(.)32 4-3/7.5	7.5 + 7.5 + 7.5	10 + 10 + 10		84	77	67	51.5	39.4	-	-	-	-	-
3GP(E) EVM(.)32 4-1/7.5	7.5 + 7.5 + 7.5	10 + 10 + 10		92	83.5	74.5	61	48.5	34.2	-	-	-	-
3GP(E) EVM(.)32 5-3/11	11 + 11 + 11	15 + 15 + 15		106	100	89	70	54	37.3	-	-	-	-
3GP(E) EVM(.)45 2-0/7.5	7.5 + 7.5 + 7.5	10 + 10 + 10		54	-	51.5	50	48	45	35.4	29.1	-	-
3GP(E) EVM(.)45 3-2/11	11 + 11 + 11	15 + 15 + 15		69	-	64	61	58	53	37.3	-	-	-
3GP(E) EVM(.)45 3-0/11	11 + 11 + 11	15 + 15 + 15		81	-	77.5	75	72.5	68	54	45	-	-
3GP(E) EVM(.)45 4-2/15	15 + 15 + 15	20 + 20 + 20		96	-	90	86	82	76	56	43	-	-
3GP(E) EVM(.)45 4-0/15	15 + 15 + 15	20 + 20 + 20		108	-	103	100	96.5	91	73	60.5	-	-
3GP(E) EVM(.)64 2-0/11	11 + 11 + 11	15 + 15 + 15		58.5	-	-	53.5	53	52	49	46.5	39.5	30.6
3GP(E) EVM(.)64 3-3/15	15 + 15 + 15	20 + 20 + 20		71	-	-	64	62.5	61	55.5	51	39.3	-
3GP(E) EVM(.)64 3-2/15	15 + 15 + 15	20 + 20 + 20		76.5	-	-	69.5	68	66.5	61.5	57.5	46.5	32.5
3GP(E) EVM(.)64 3-1/15	15 + 15 + 15	20 + 20 + 20		82.5	-	-	75	74	72.5	68	64	53.5	40
3GP(E) EVM(.)64 3-0/18.5	18.5 + 18.5 + 18.5	25 + 25 + 25		88	-	-	80.5	79.5	78	74	70.5	60.5	47.5
3GP(E) EVM(.)64 2-0/11	18.5 + 18.5 + 18.5	25 + 25 + 25		100	-	-	91	89	87	80.5	75.5	60.5	42
3GP(E) EVM(.)64 4-1/22	22 + 22 + 22	30 + 30 + 30		112	-	-	102	101	98.5	93	88	74.5	57
3GP(E) EVM(.)64 4-0/22	22 + 22 + 22	30 + 30 + 30		117	-	-	108	106	104	99	94.5	81.5	64.5

PERFORMANCE CURVE 3GP(E)

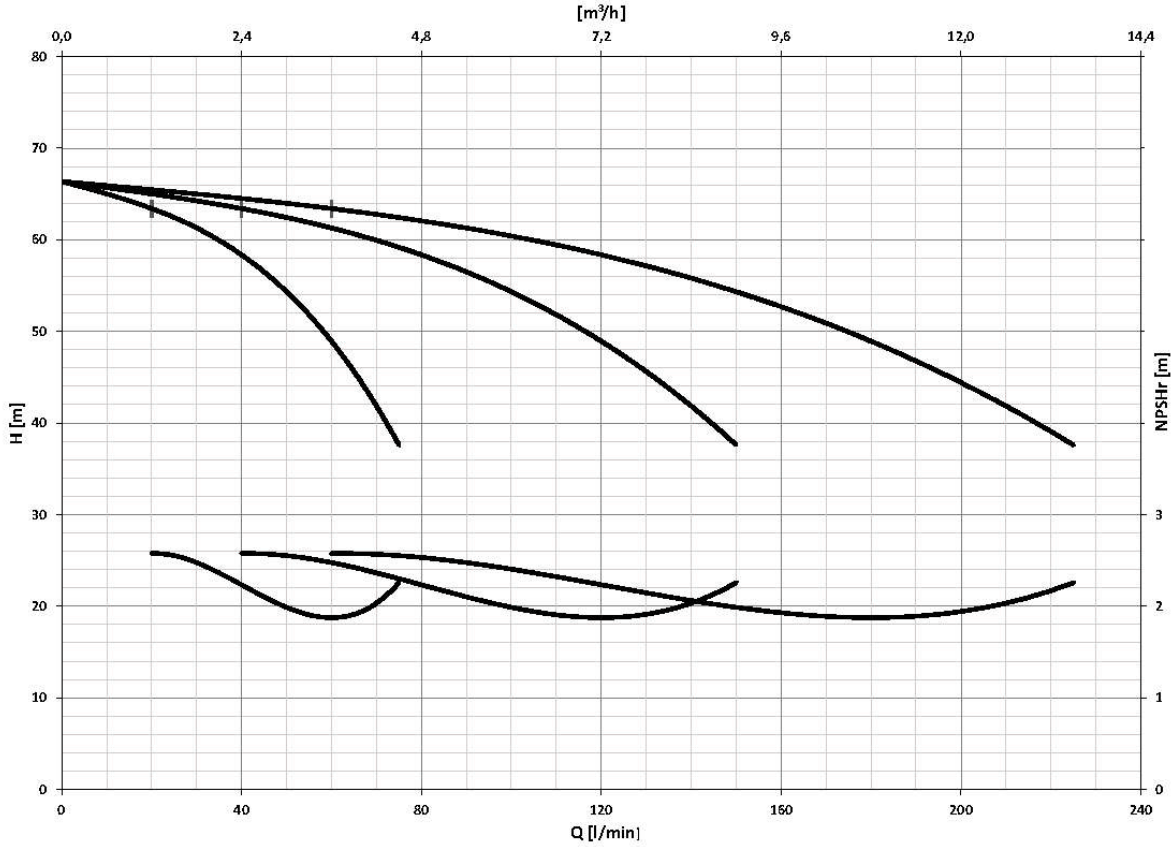
3GP(E) EVMS 3 7/0.75

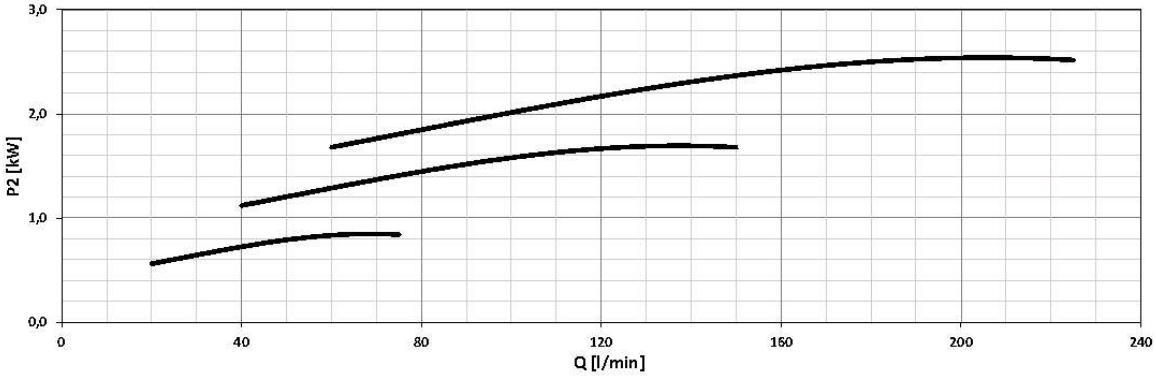


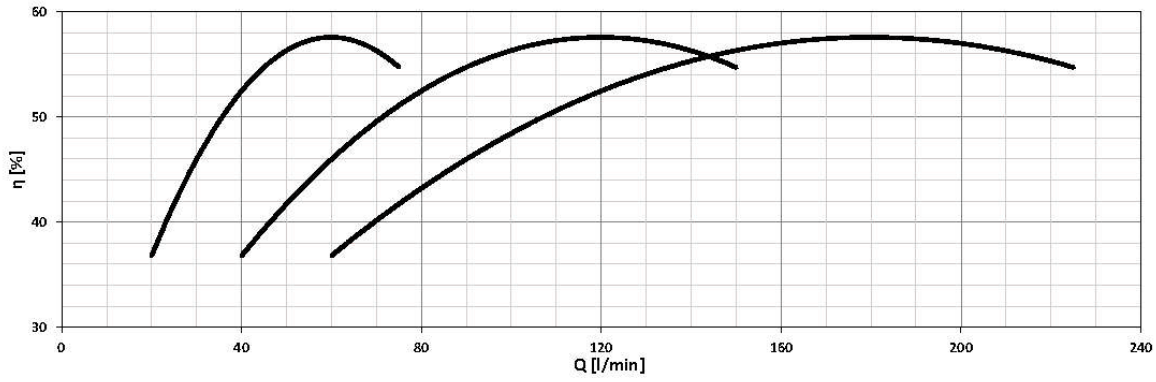




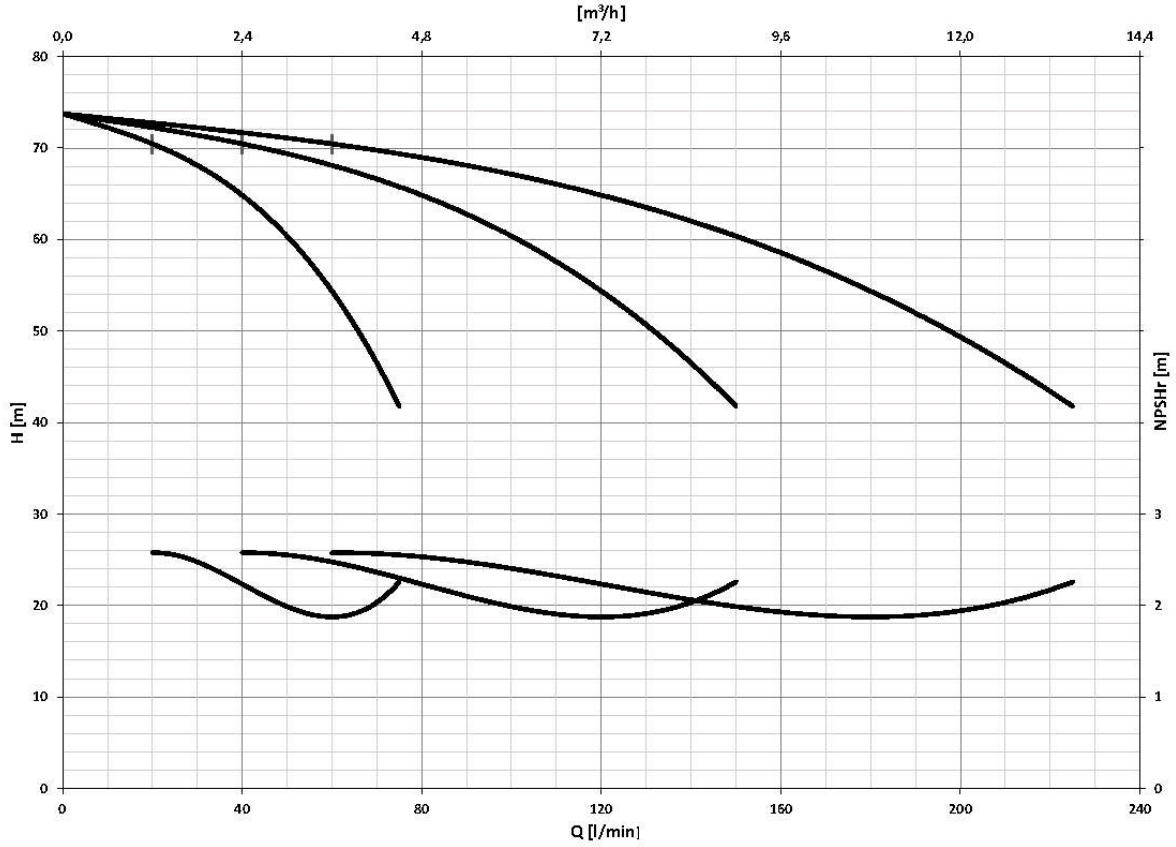
3GP(E) EVMS 3 9/1.1

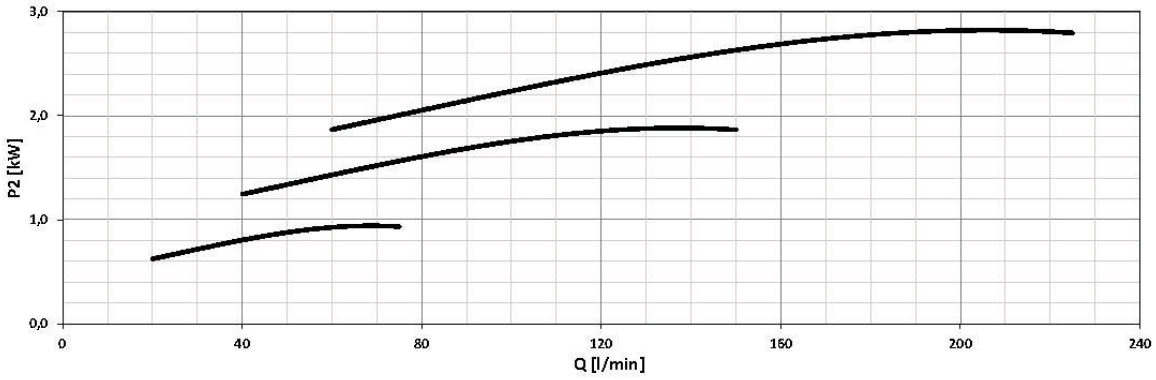


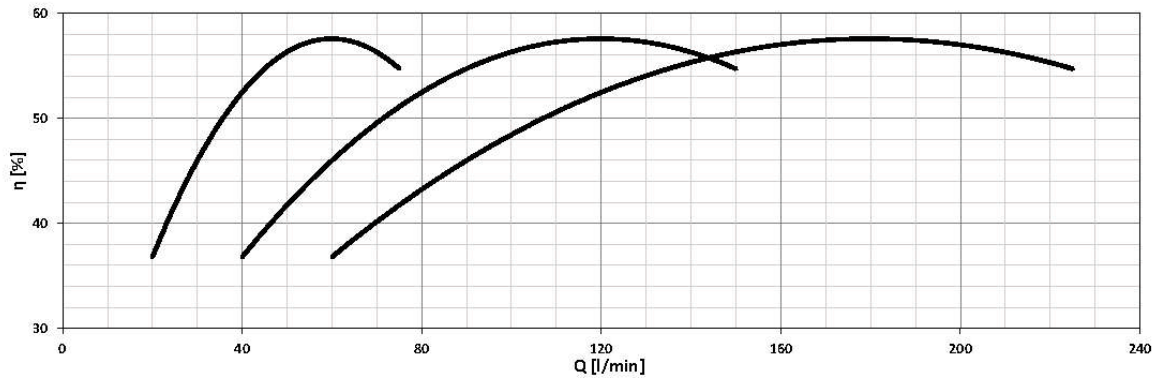




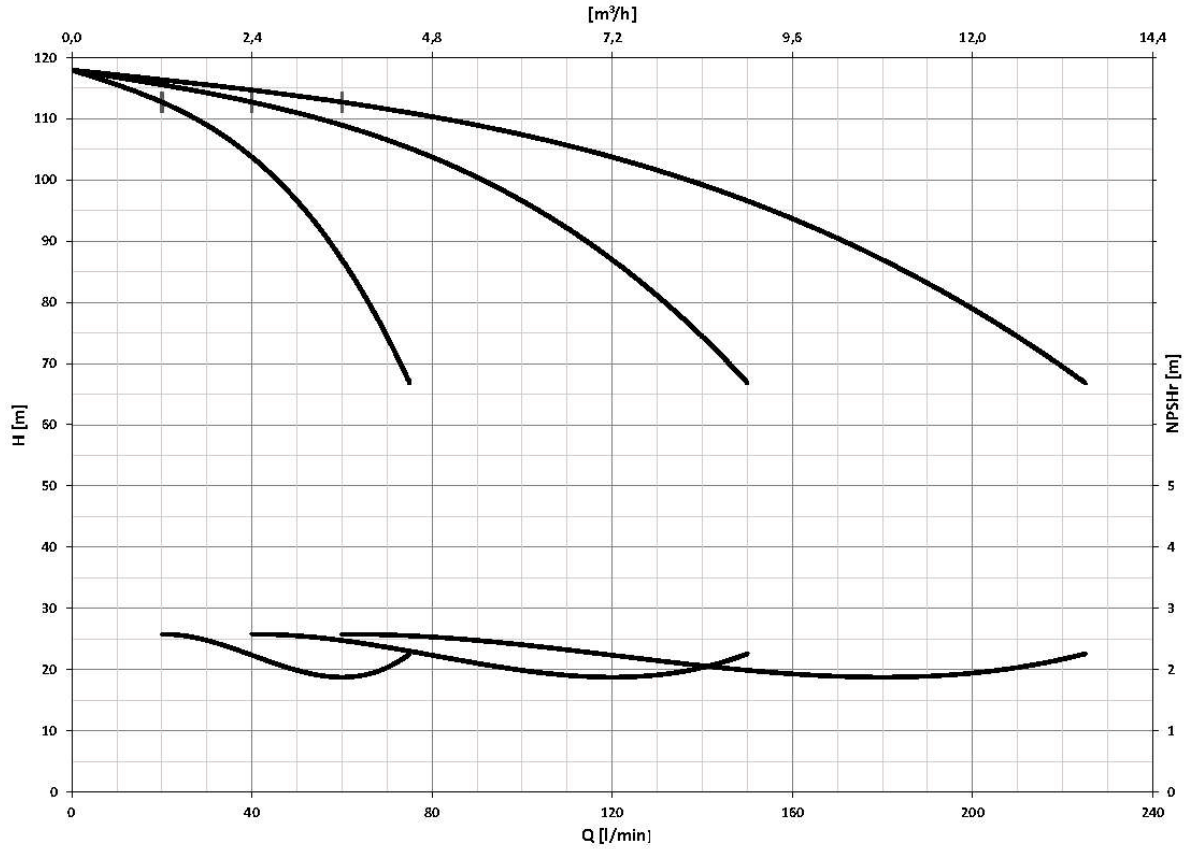
3GP(E) EVMS 3 10/1.1

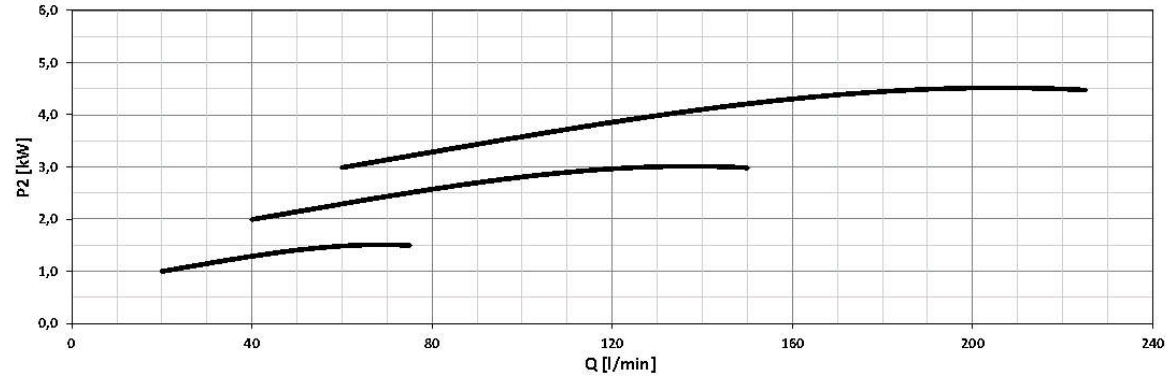


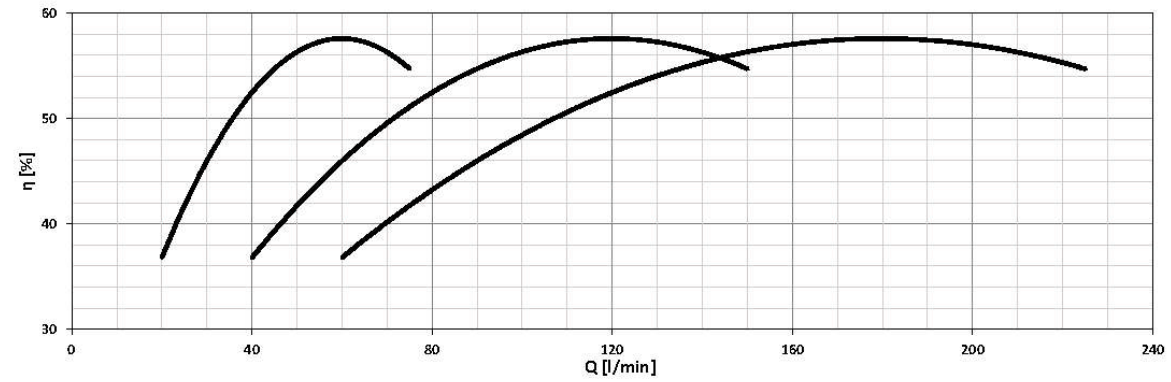




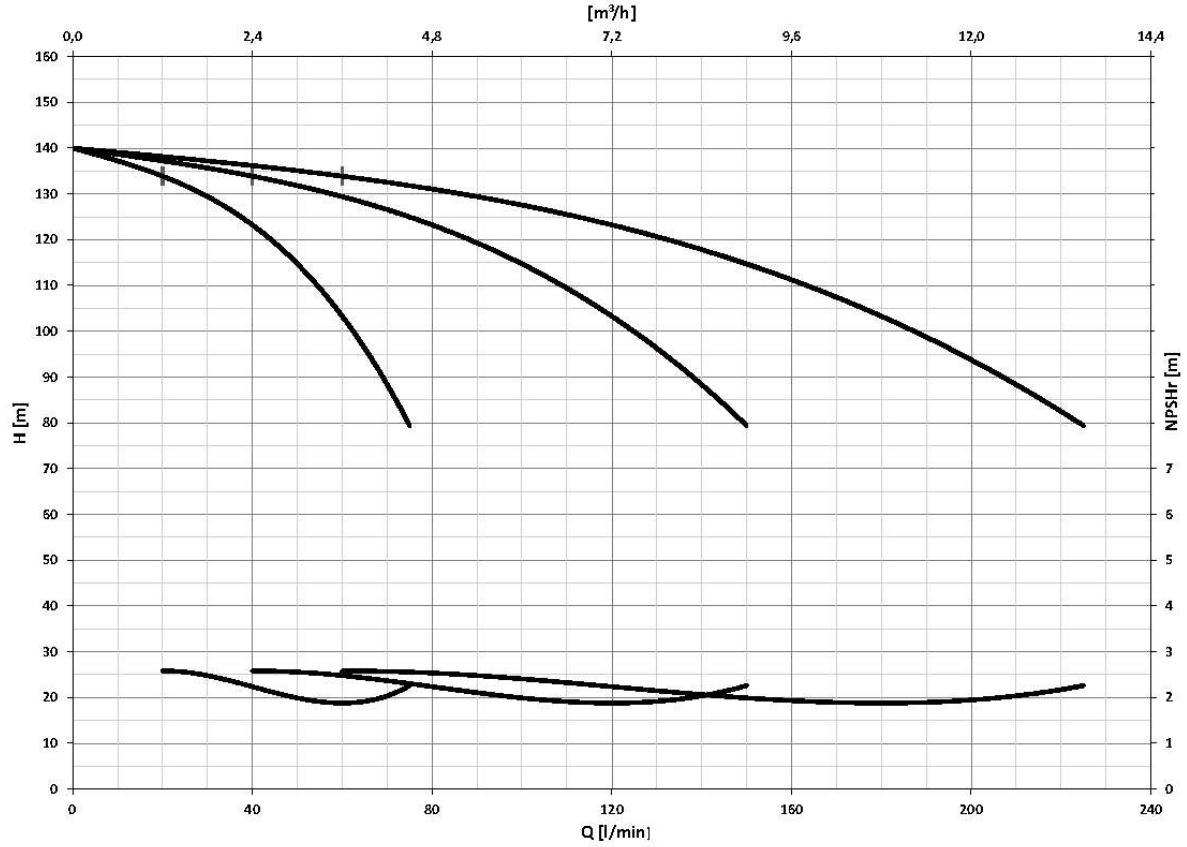
3GP(E) EVMS 3 16/1.5

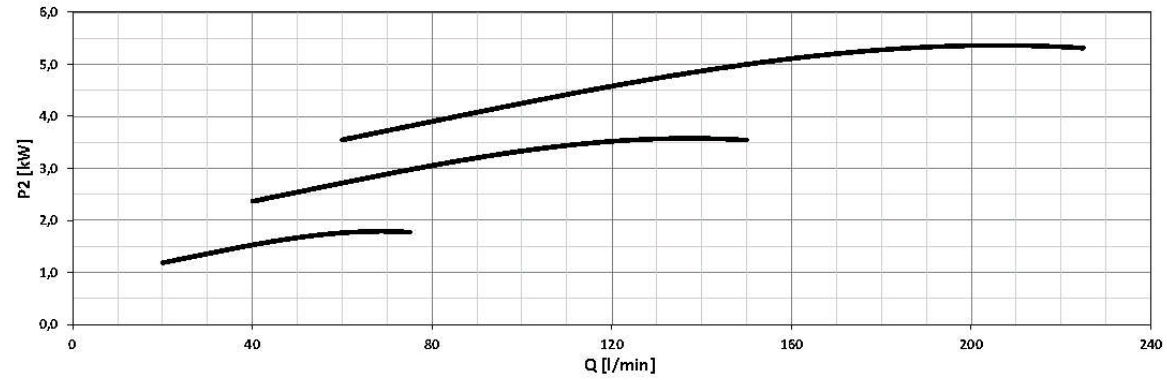


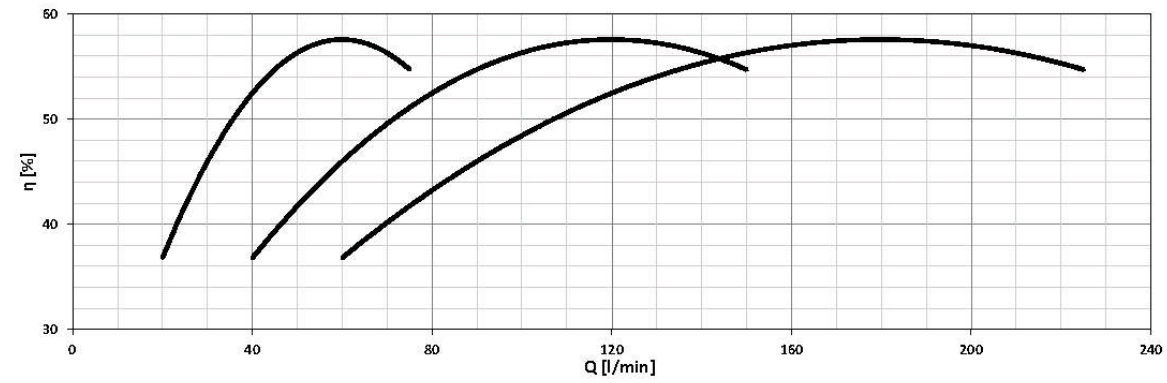




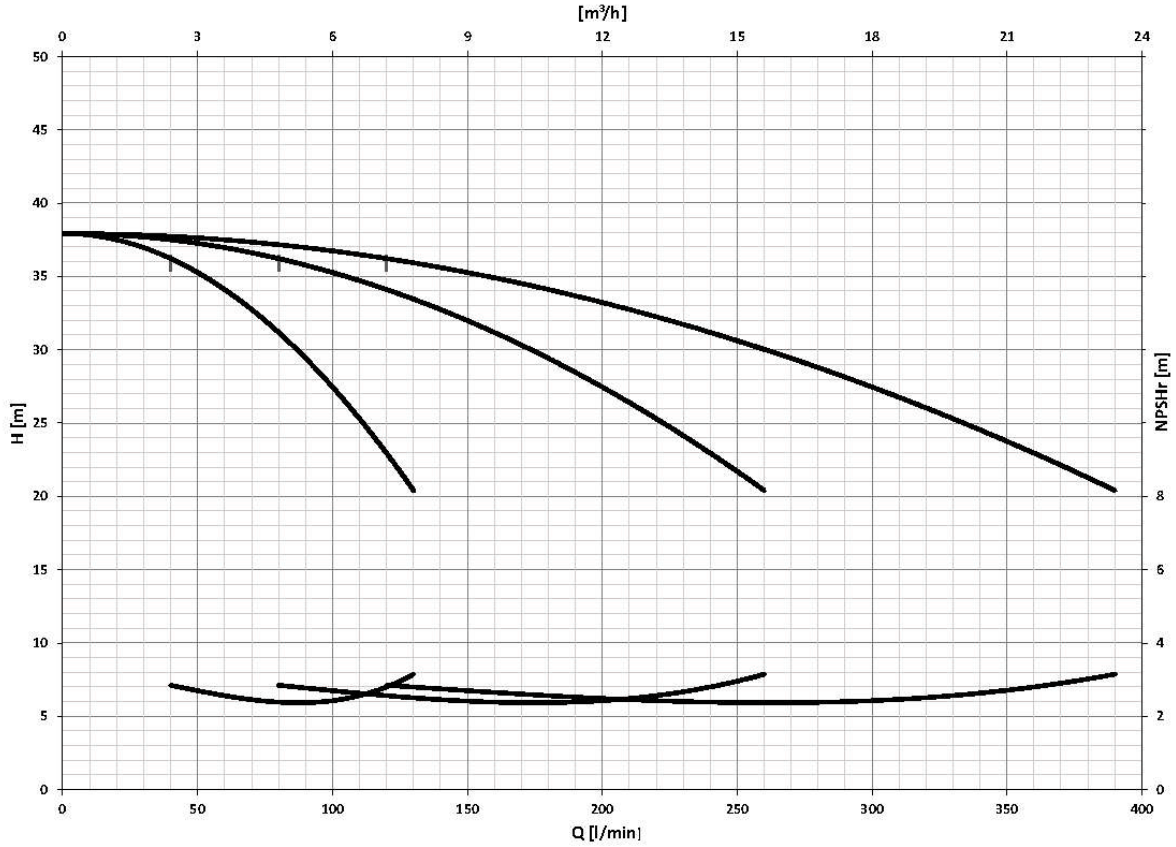
3GP(E) EVMS 3 19/2.2

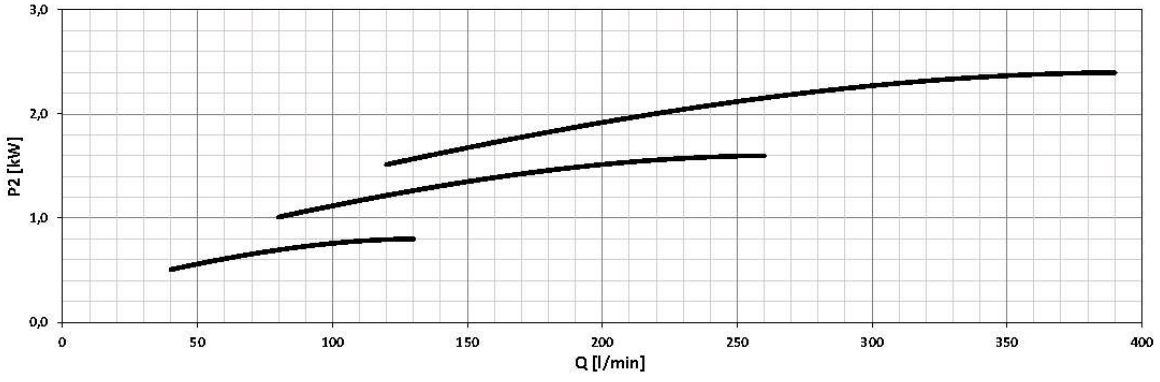


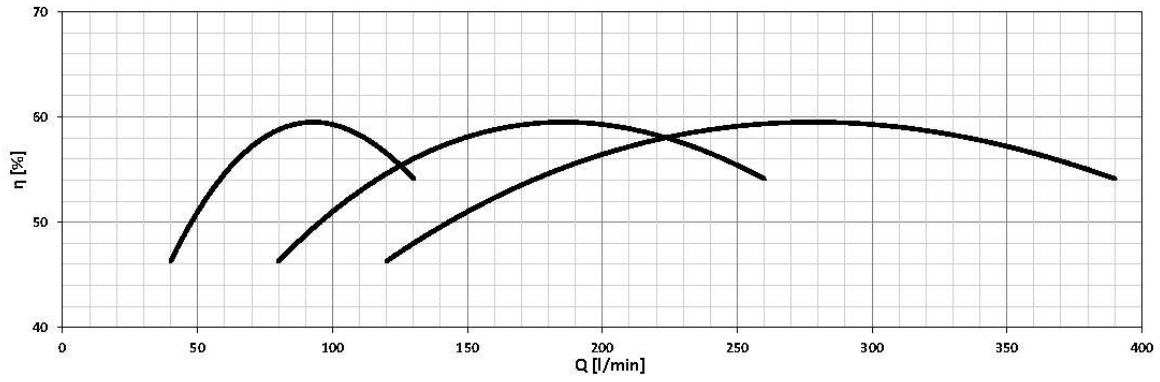




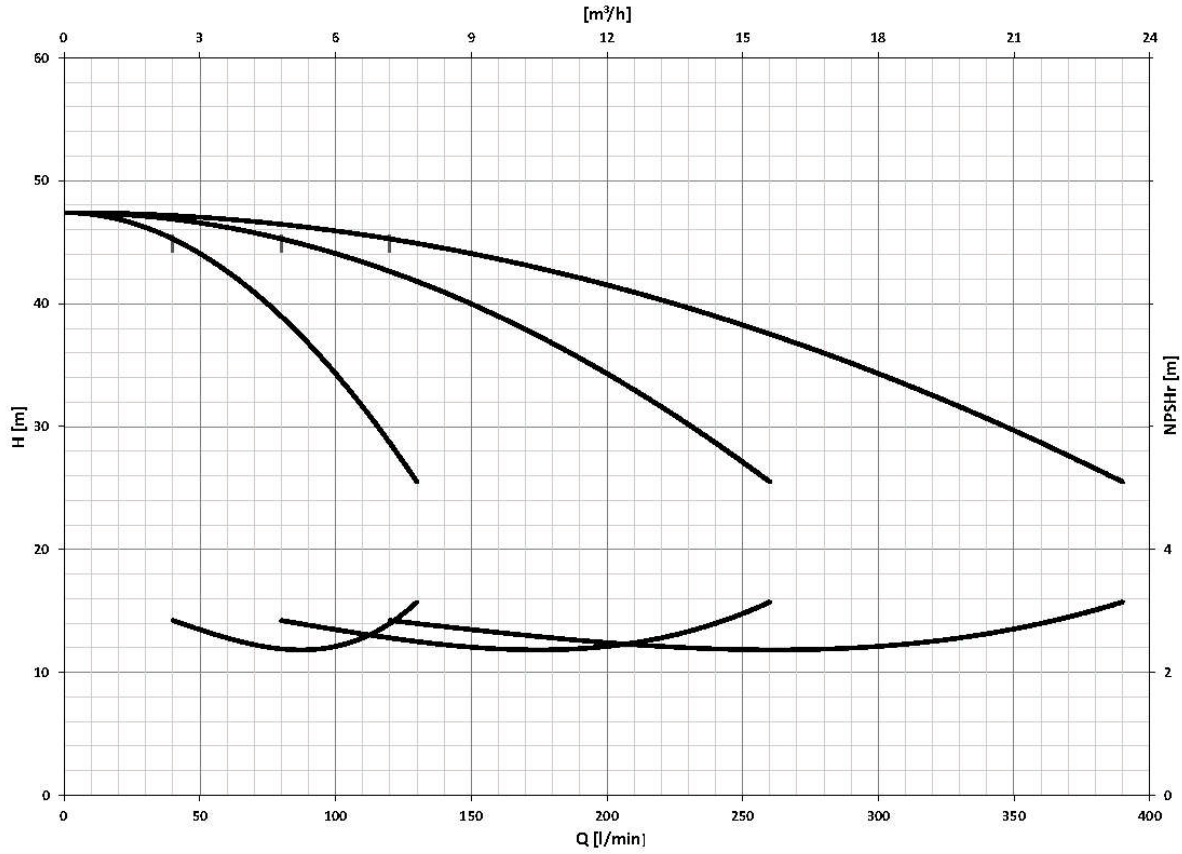
3GP(E) EVMS 5 4/0.75

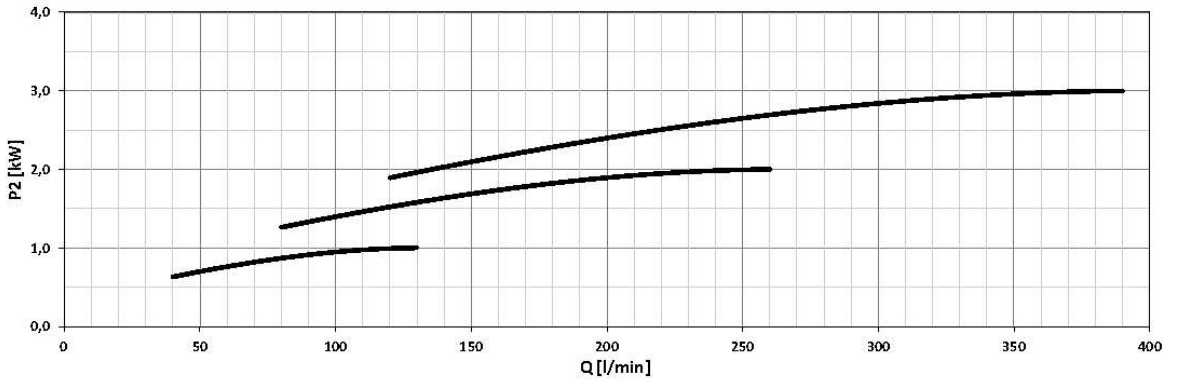


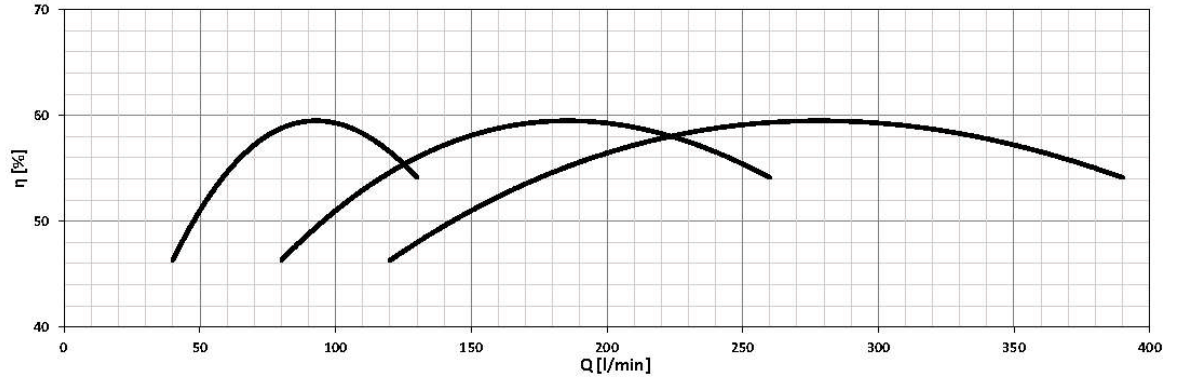




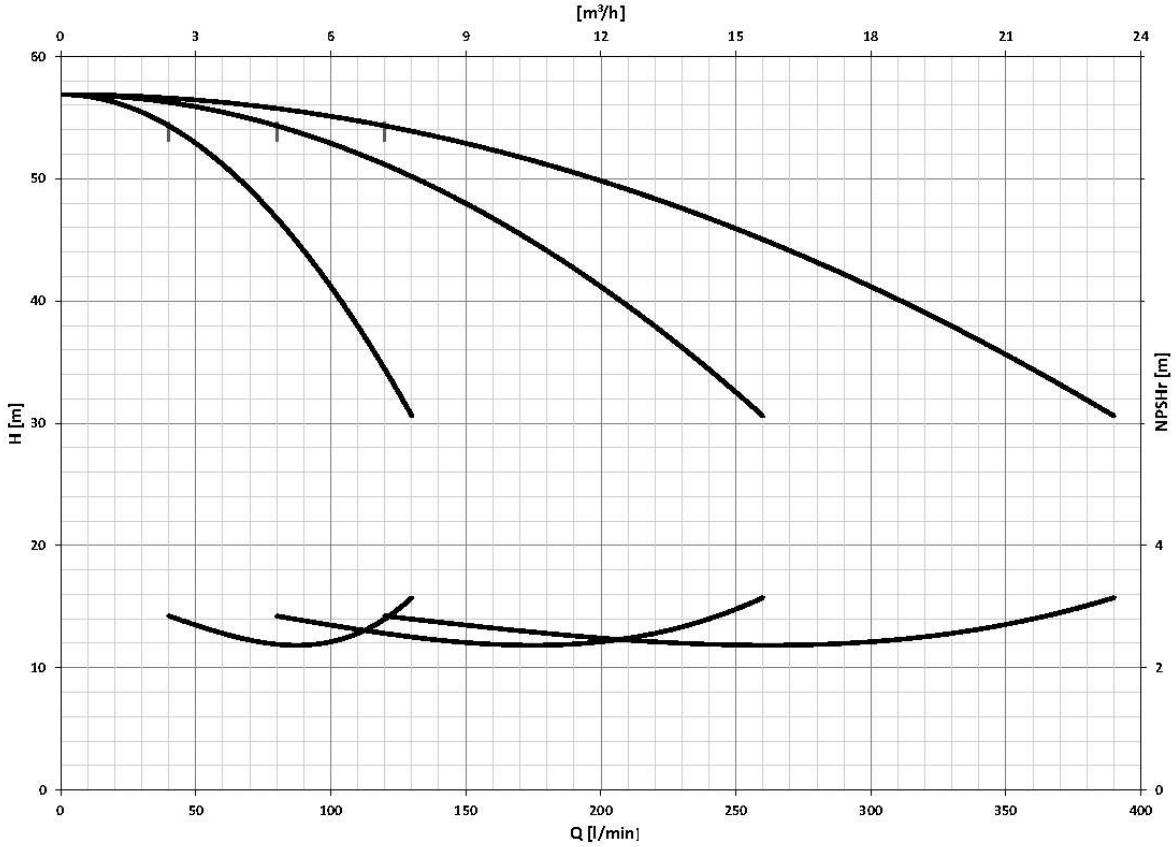
3GP(E) EVMS 5 5/1.1

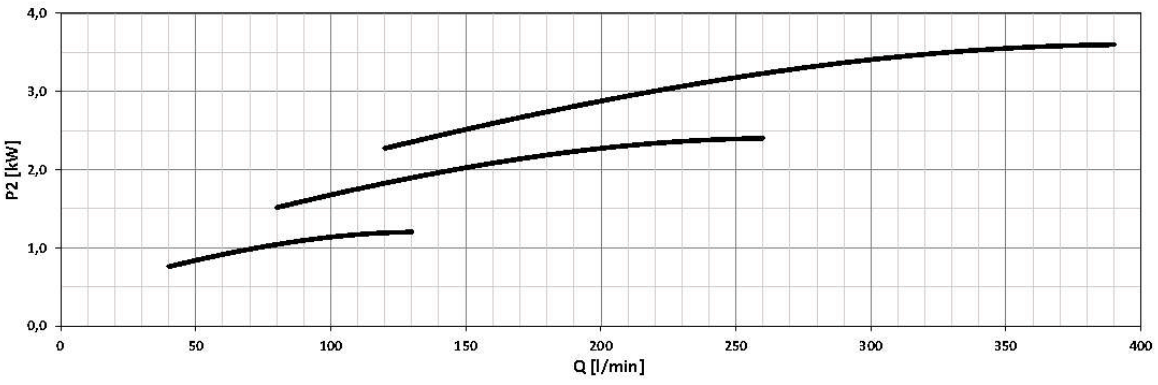


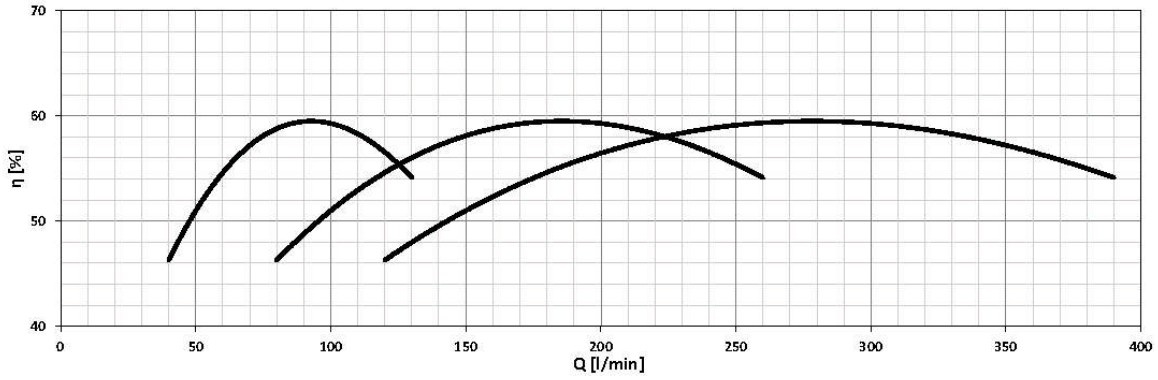




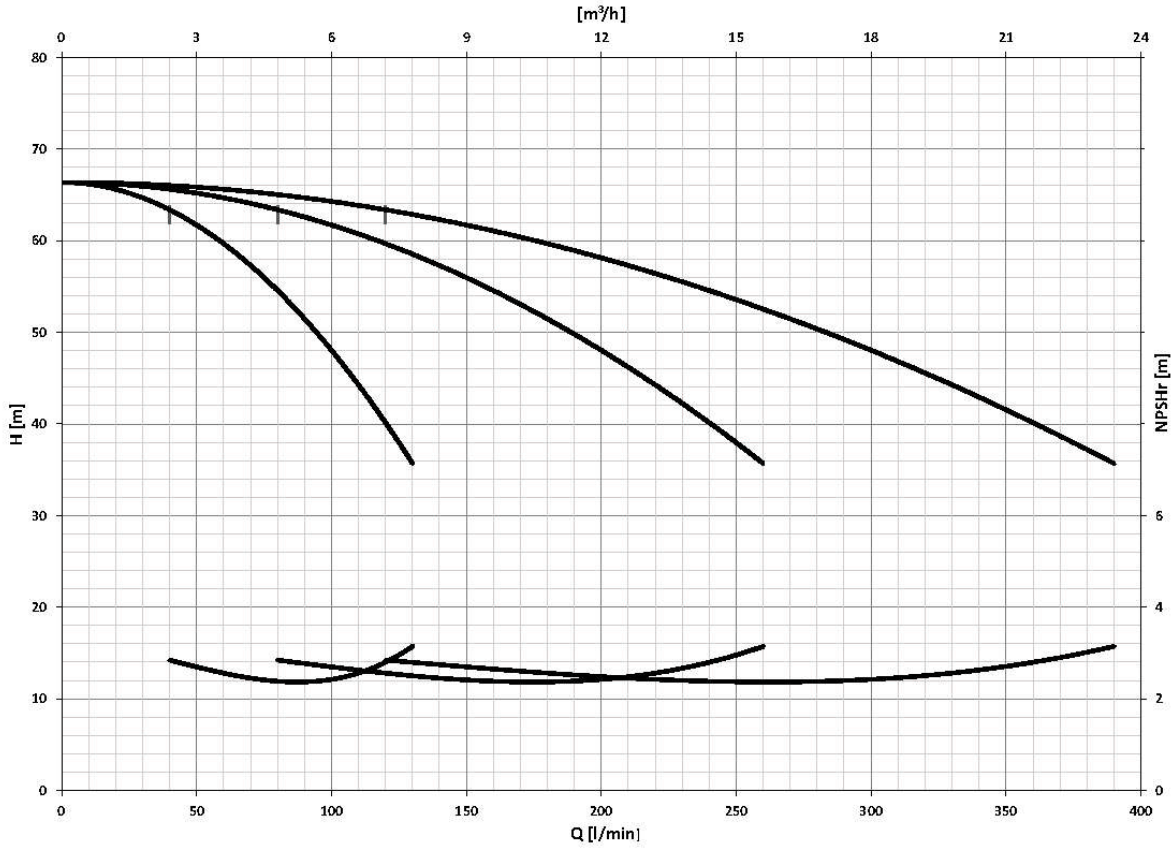
3GP(E) EVMS 5 6/1.5

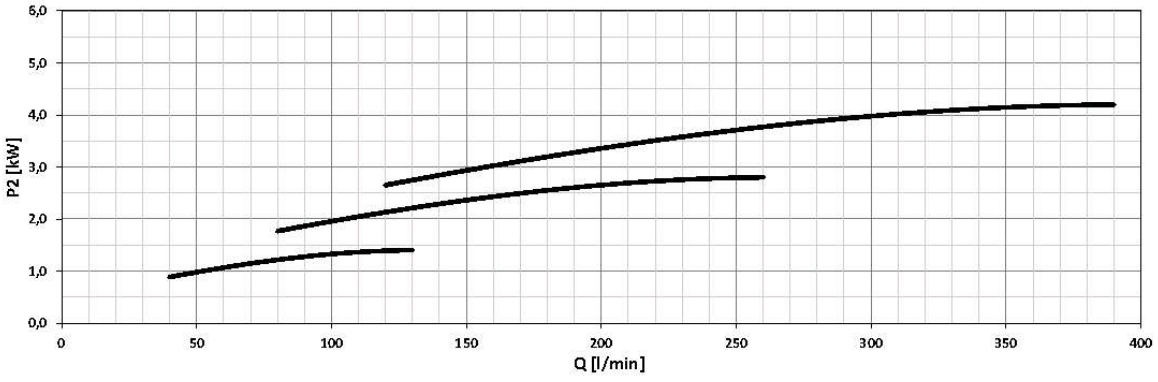


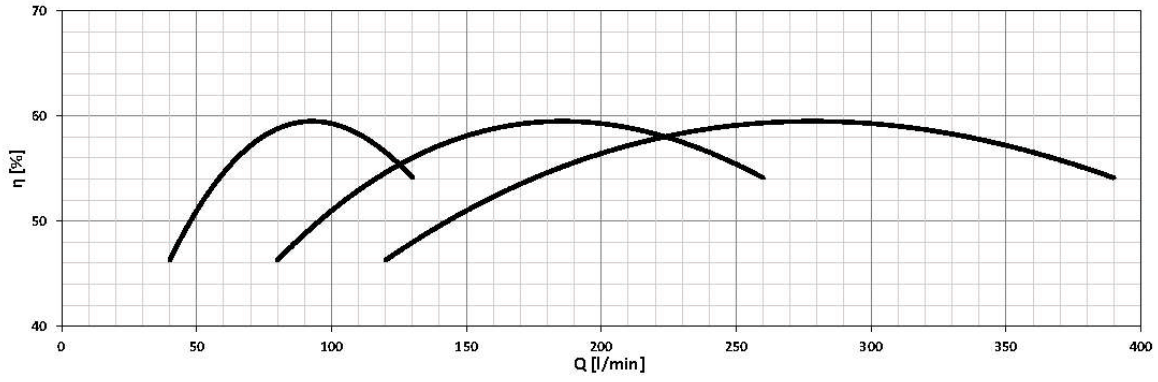




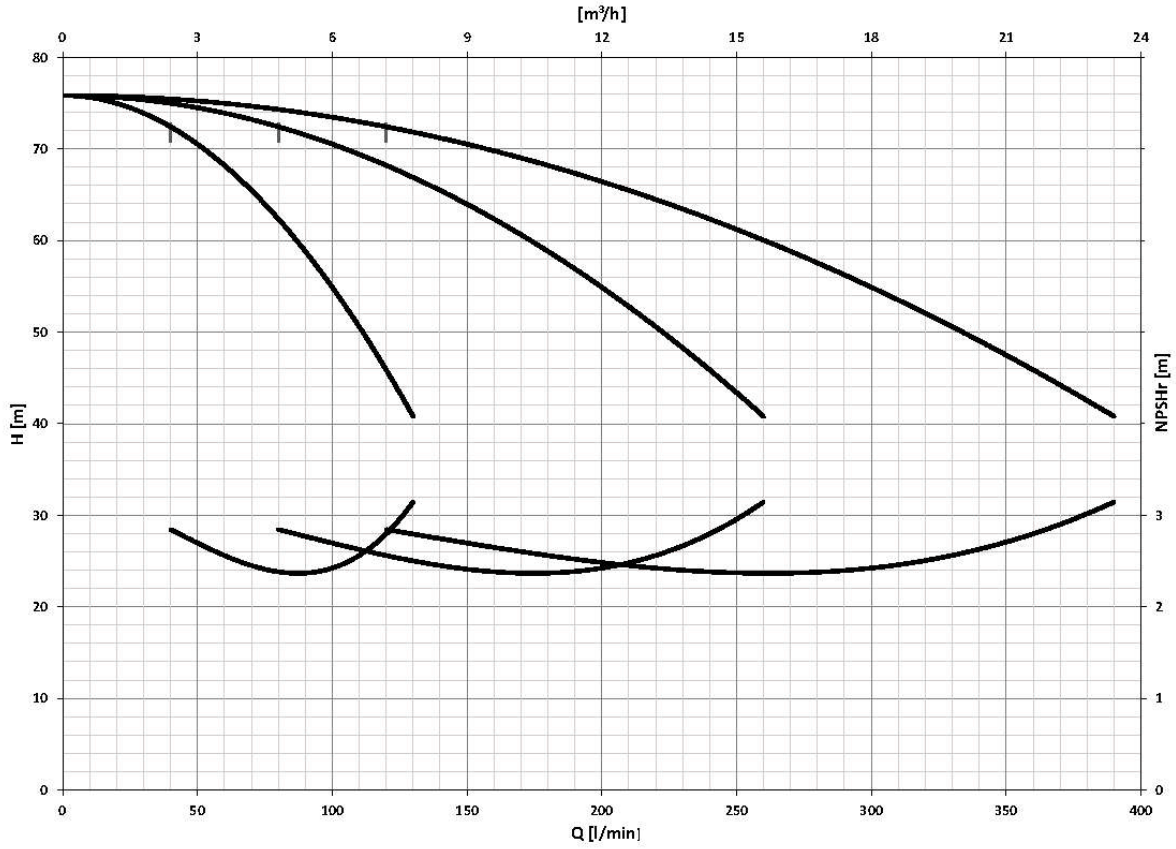
3GP(E) EVMS 5 7/1.5

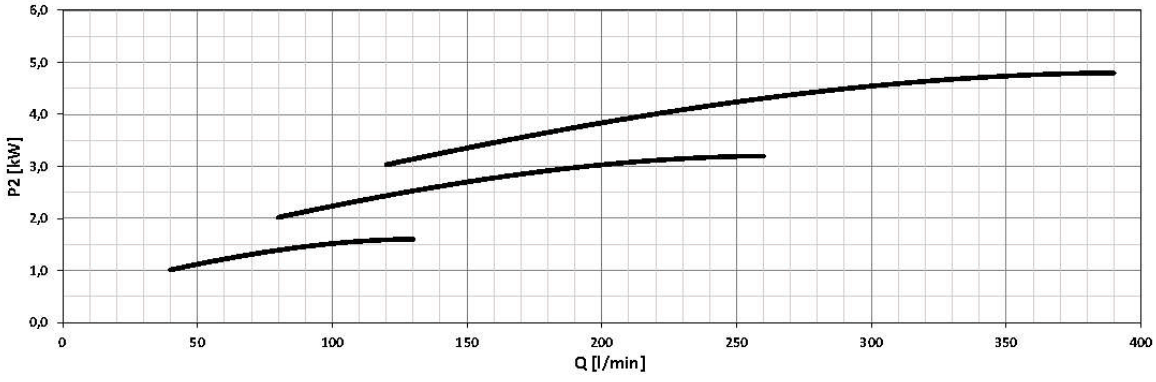


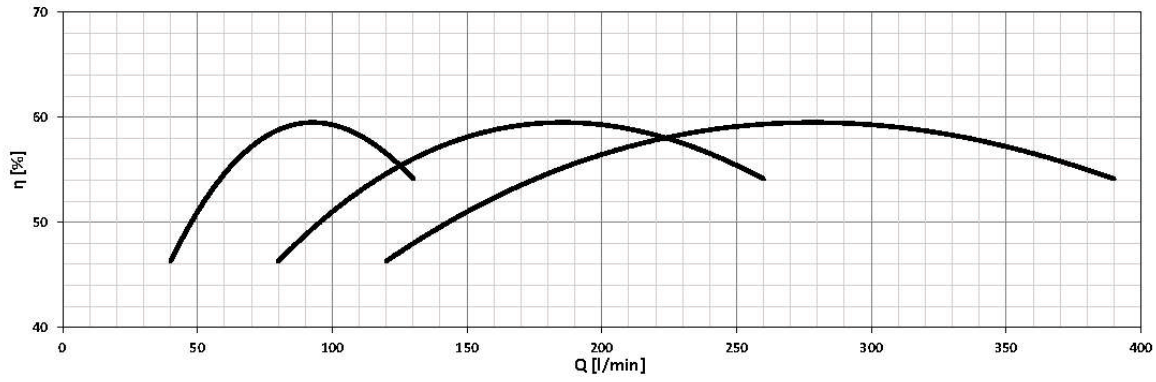




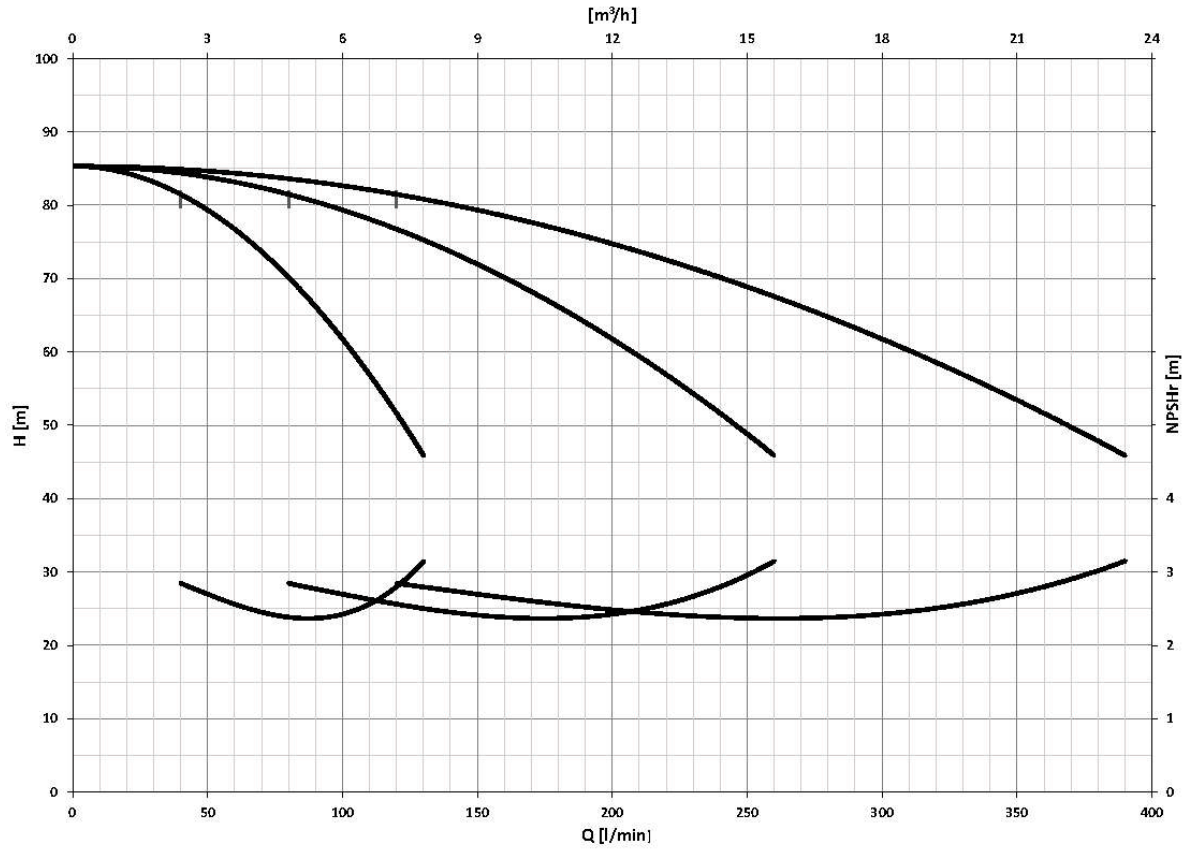
3GP(E) EVMS 5 8/2.2

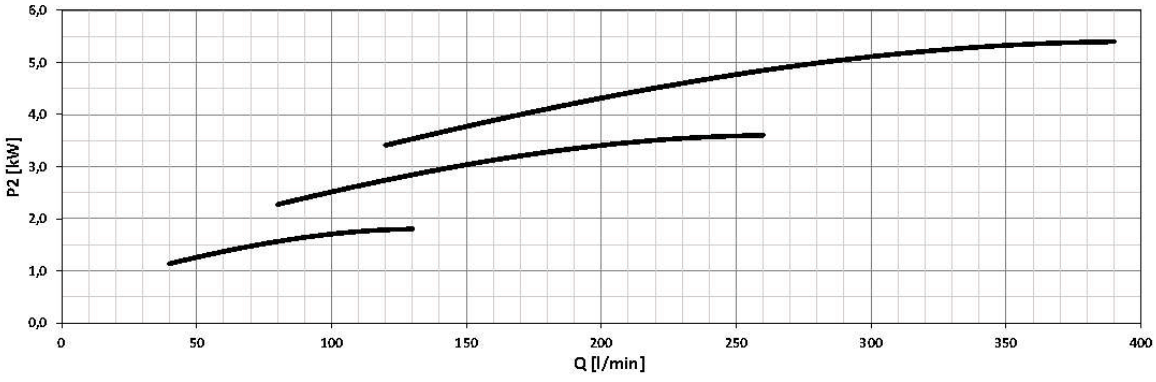


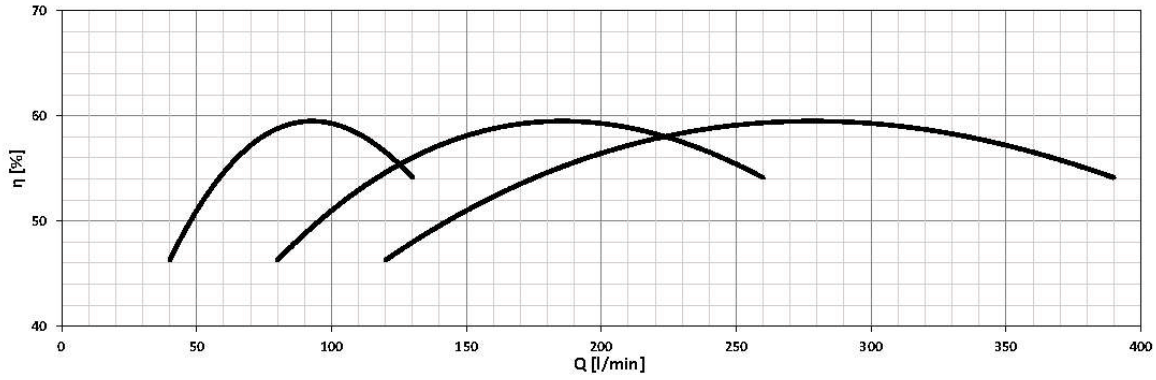




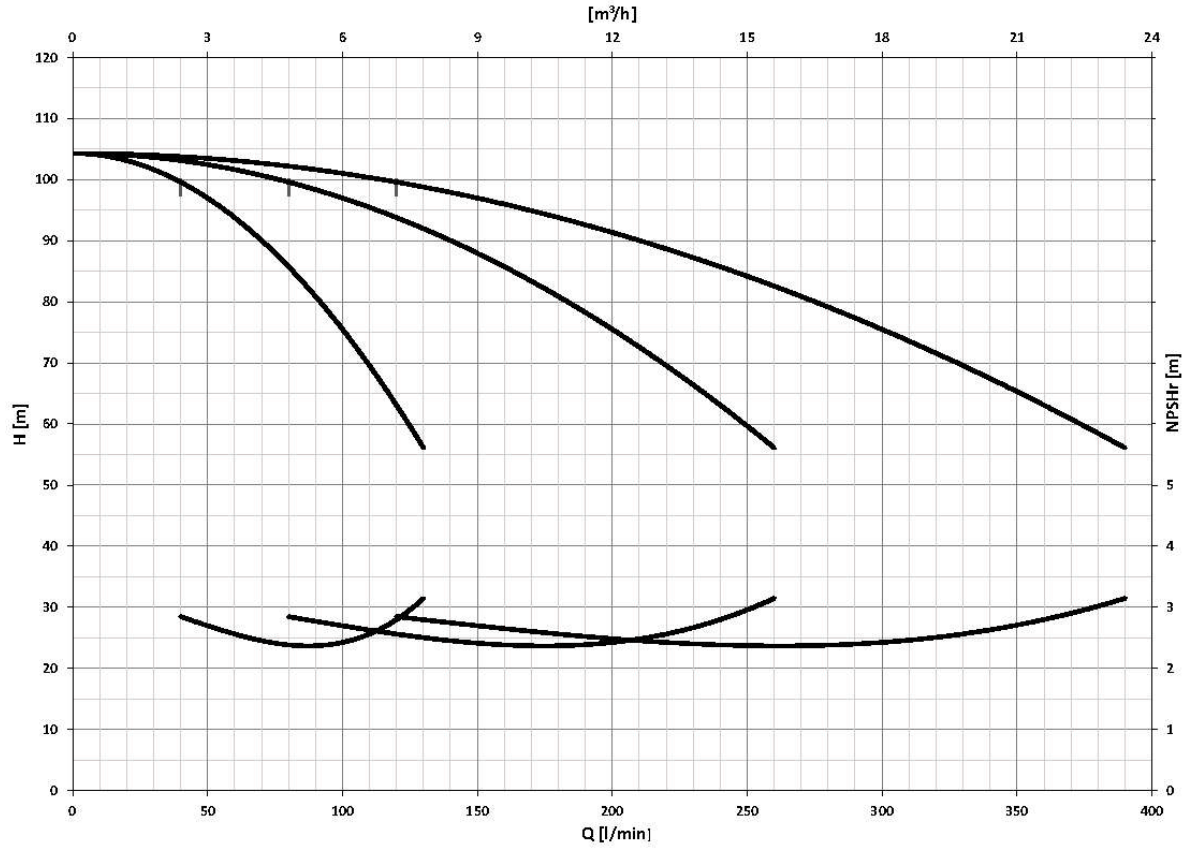
3GP(E) EVMS 5 9/2.2

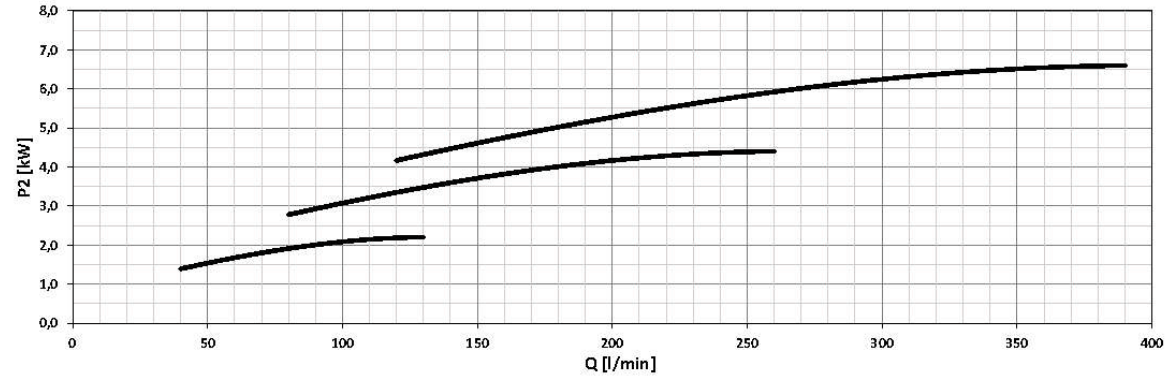


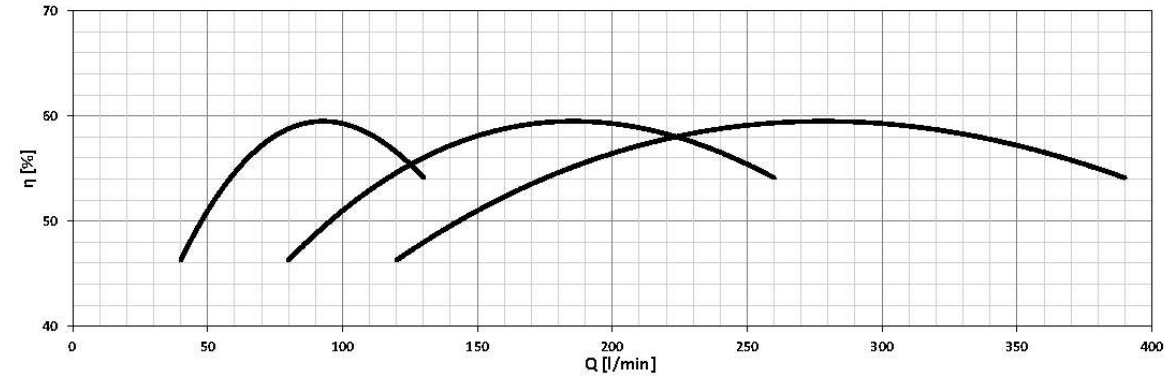




3GP(E) EVMS 5 11 /2.2







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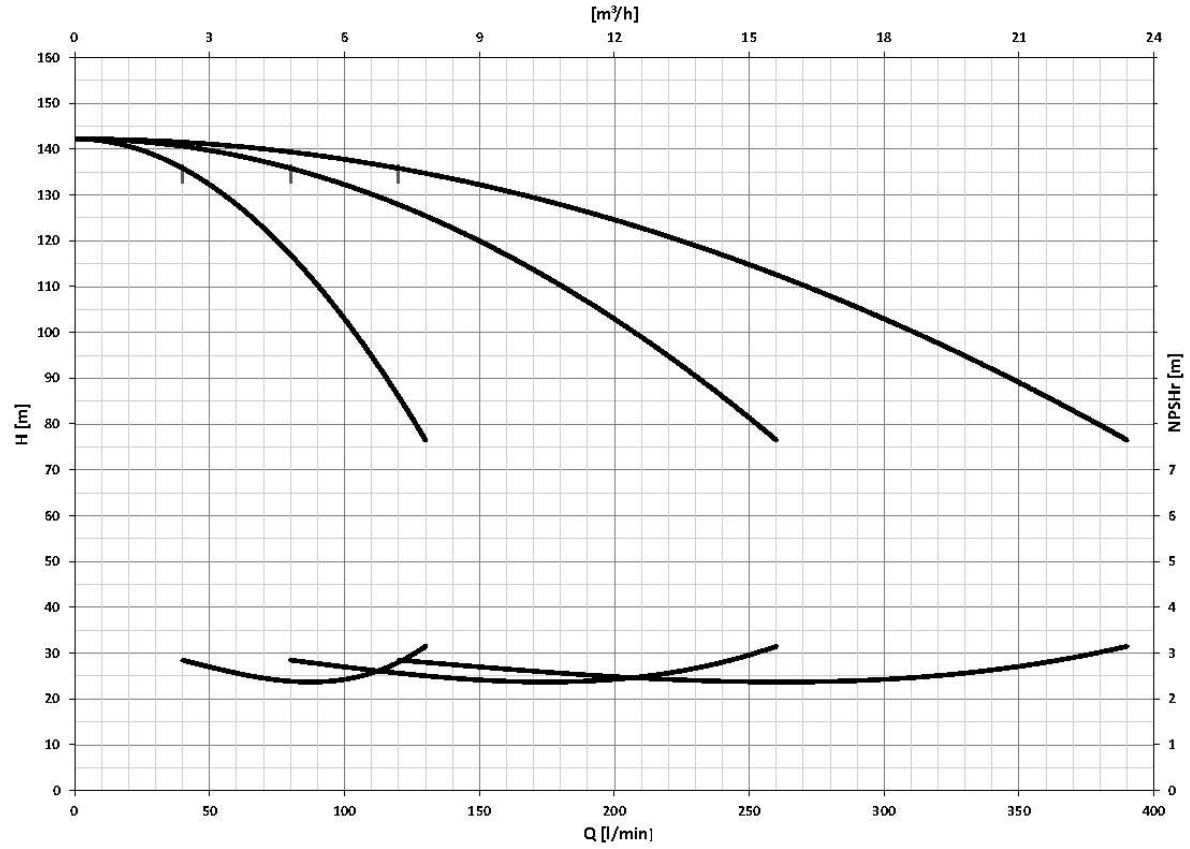

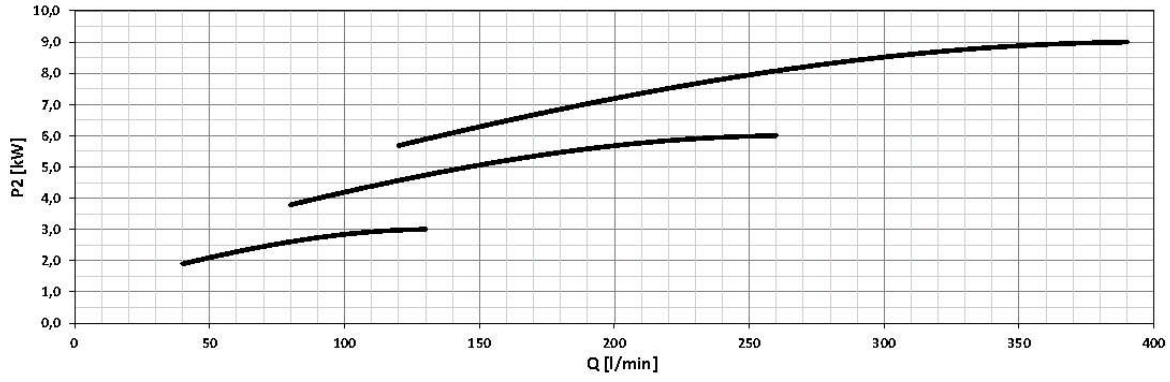

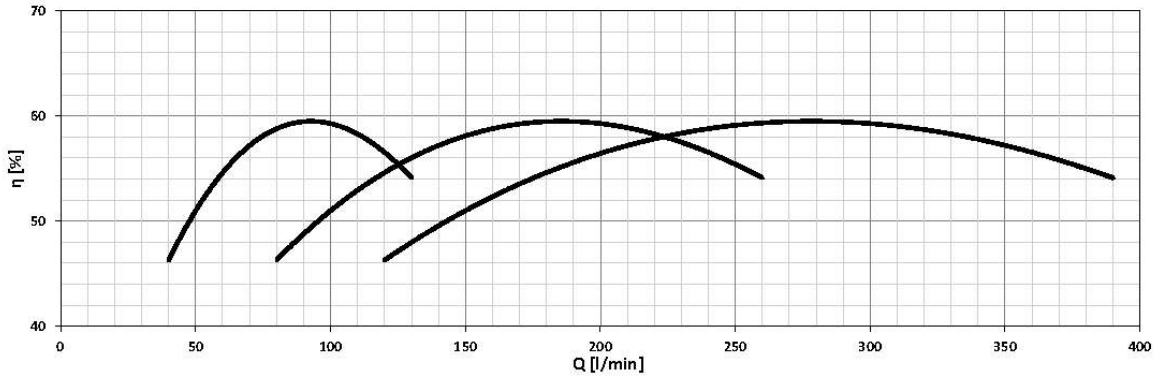

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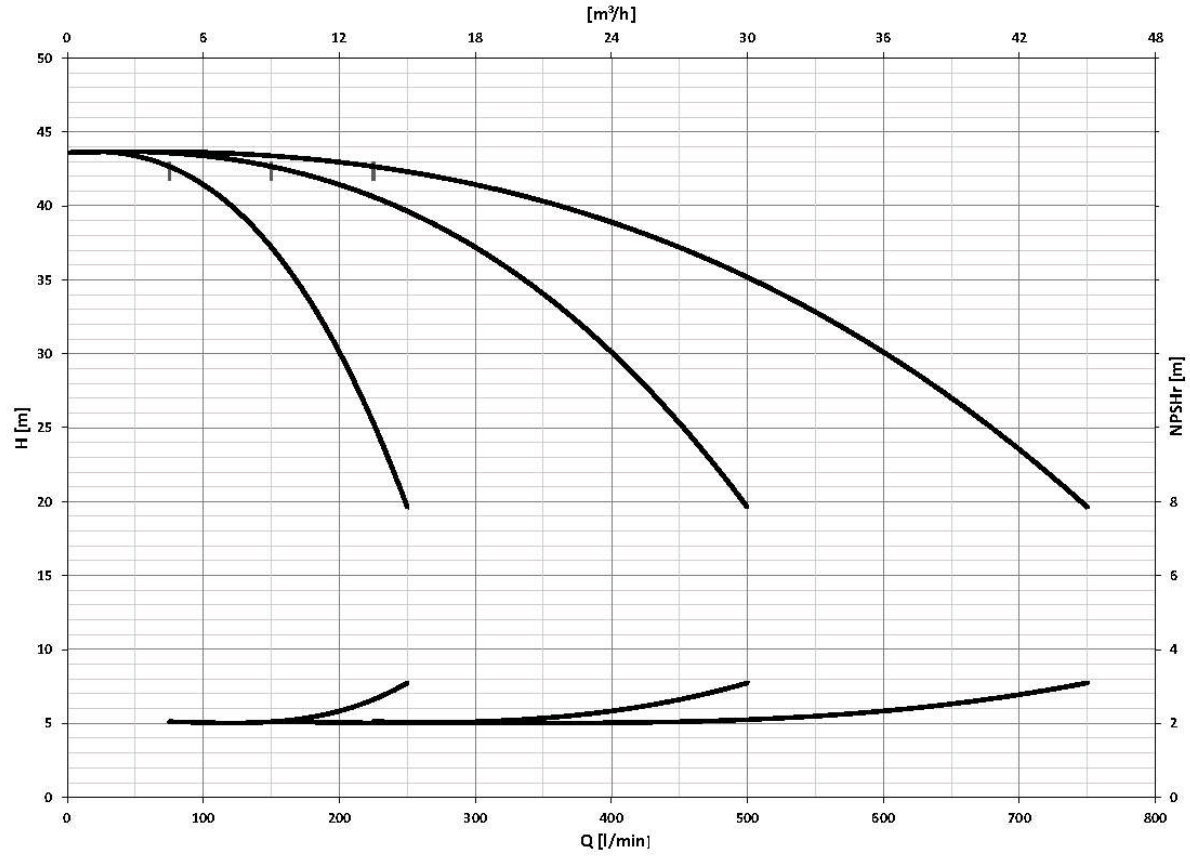
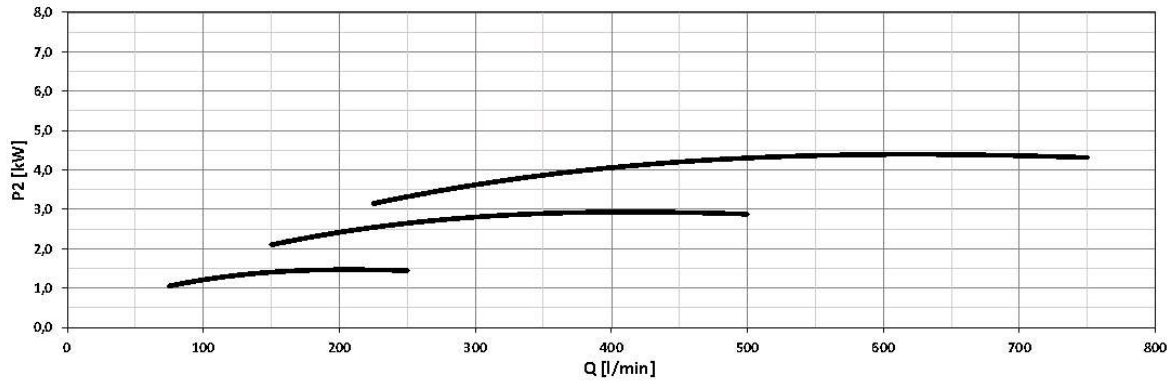
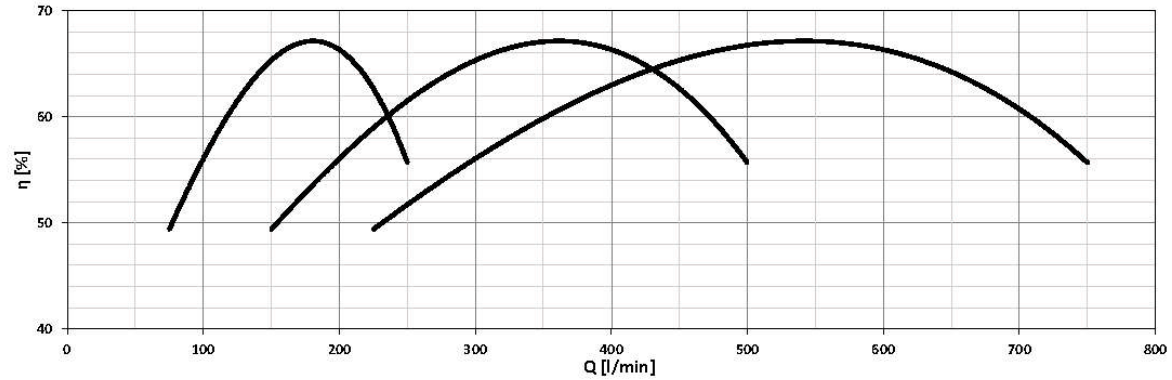
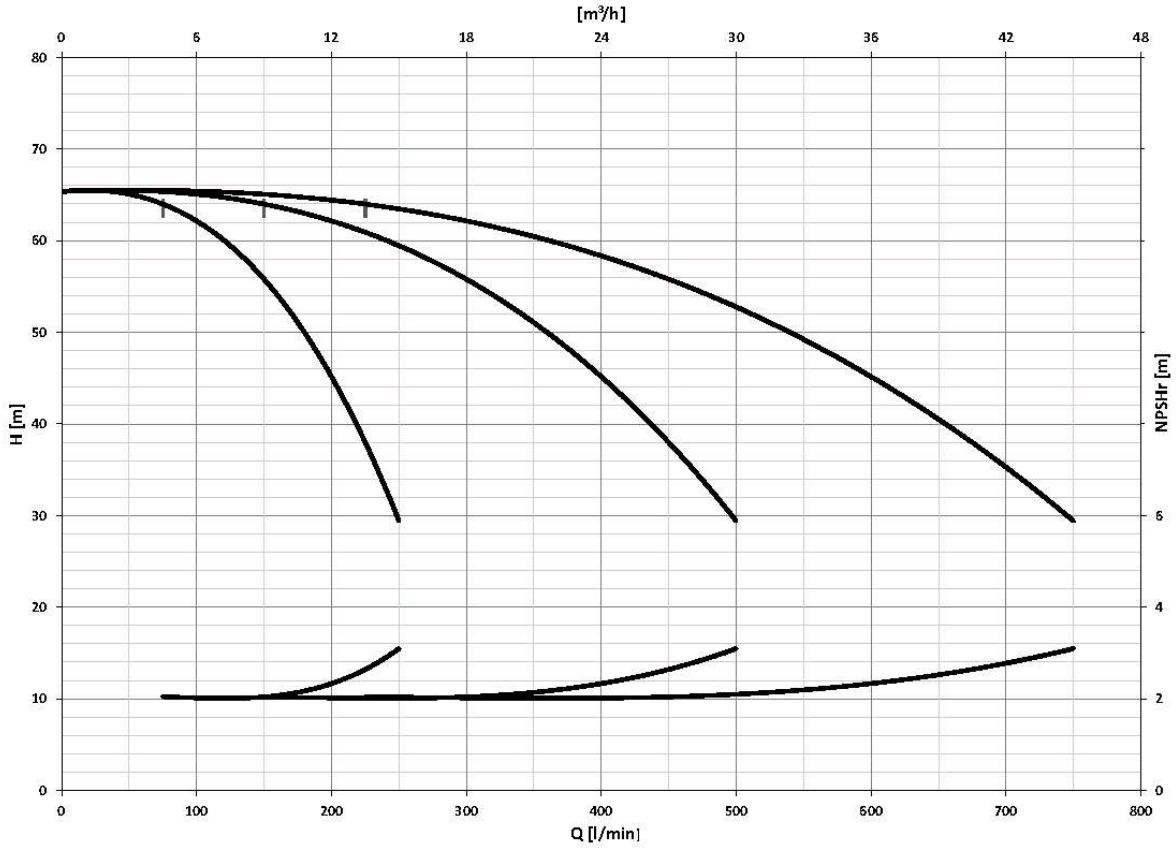
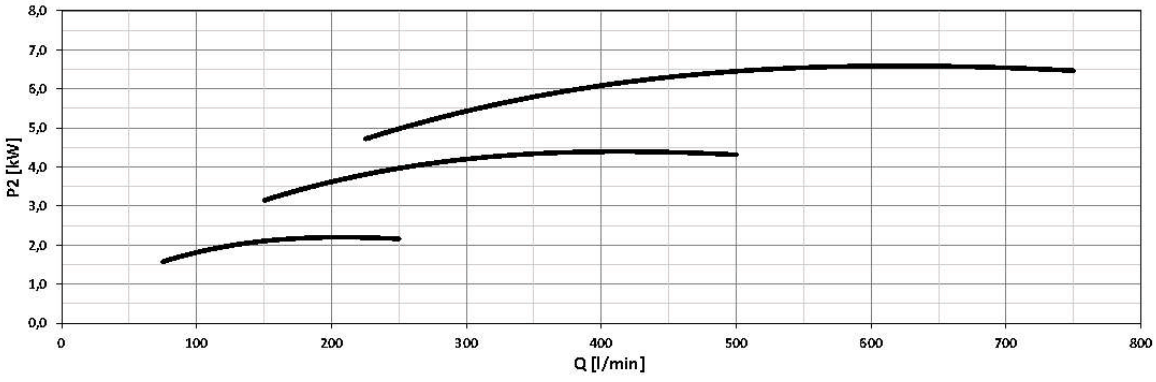


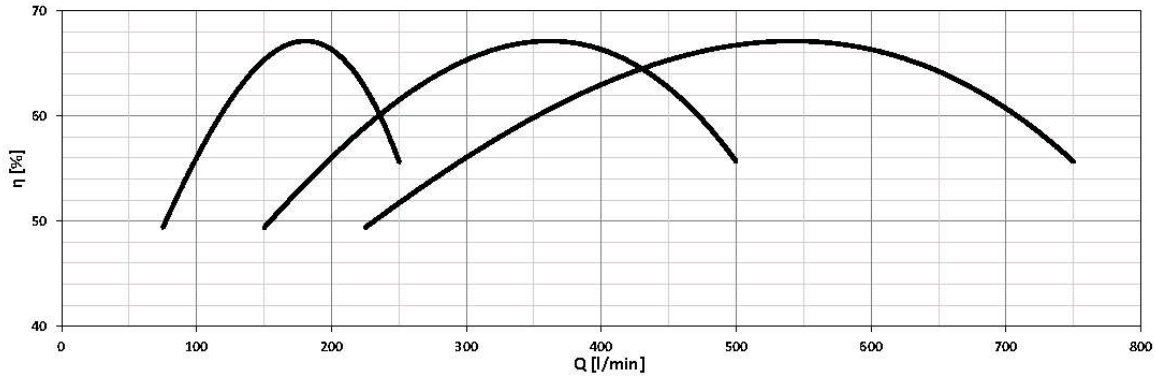




3GP(E) EVMS 10 6/2.2







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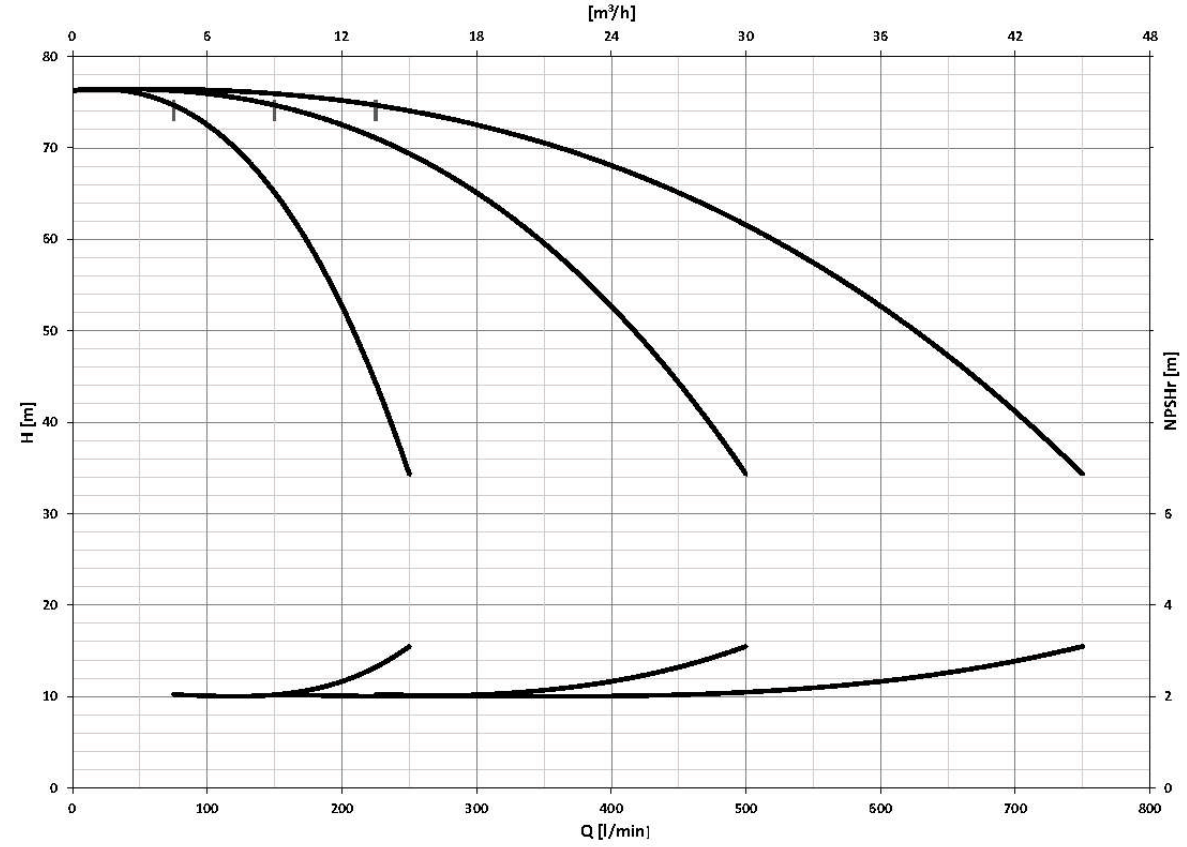

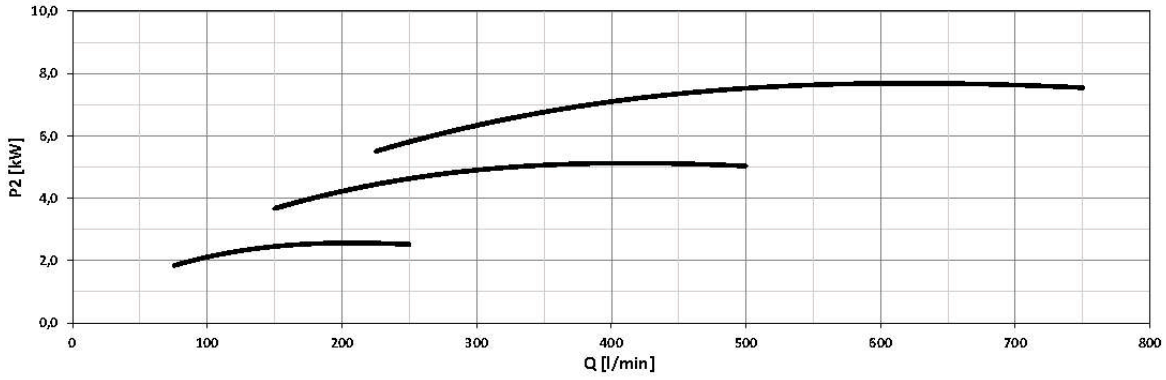

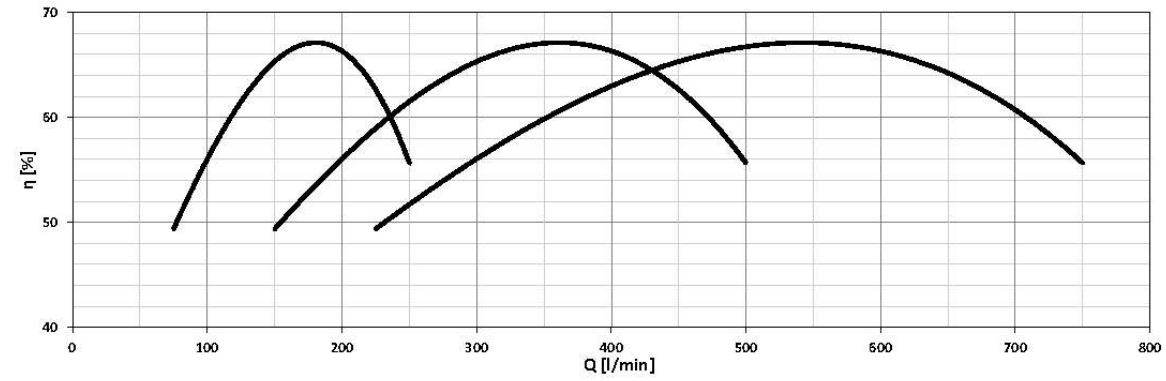

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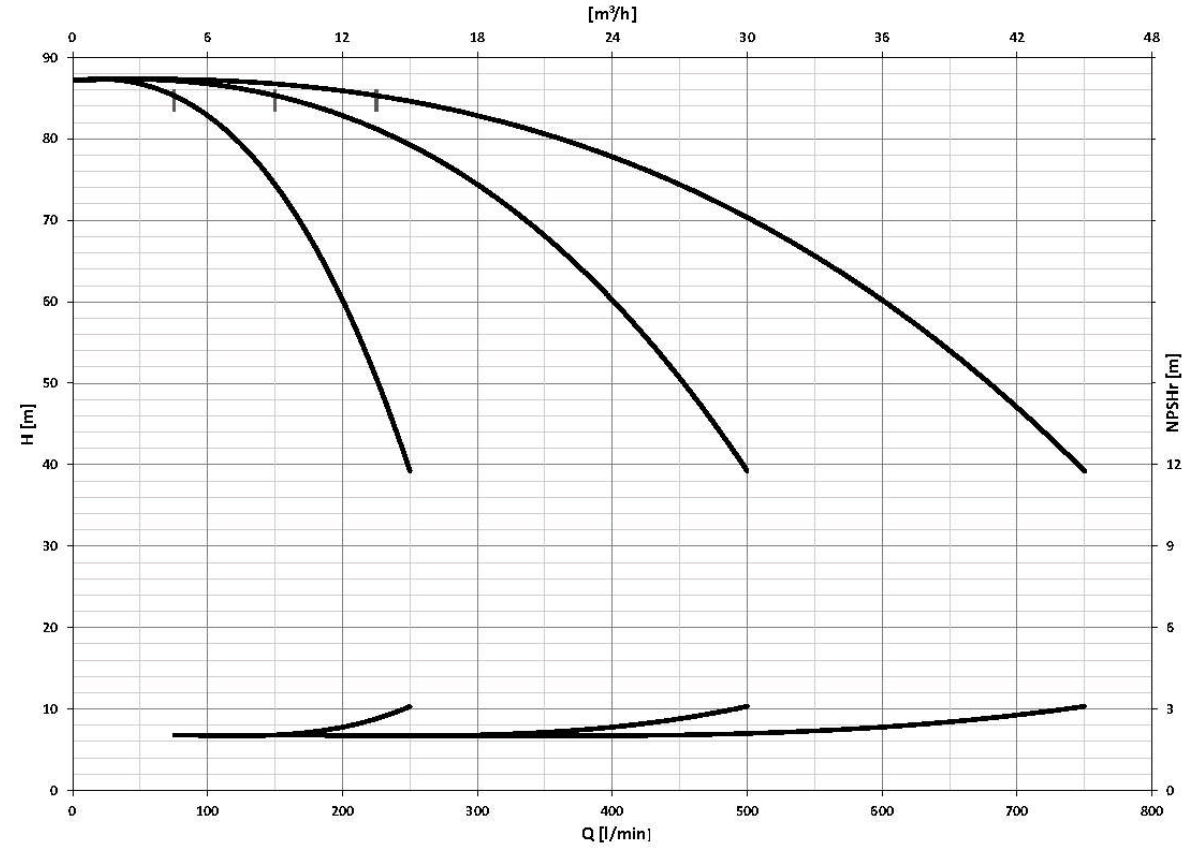
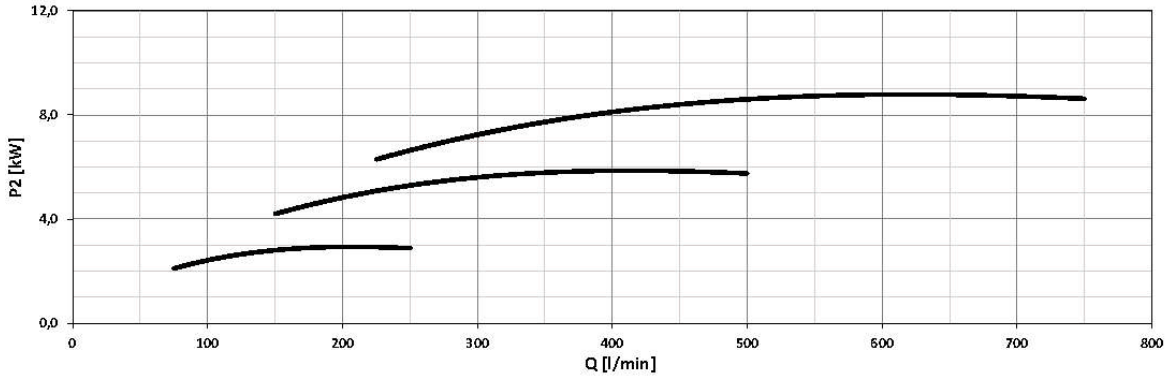
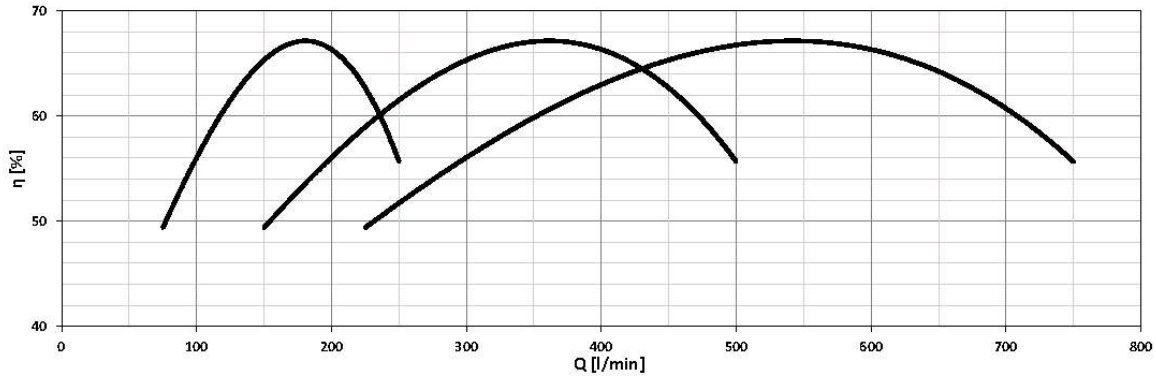
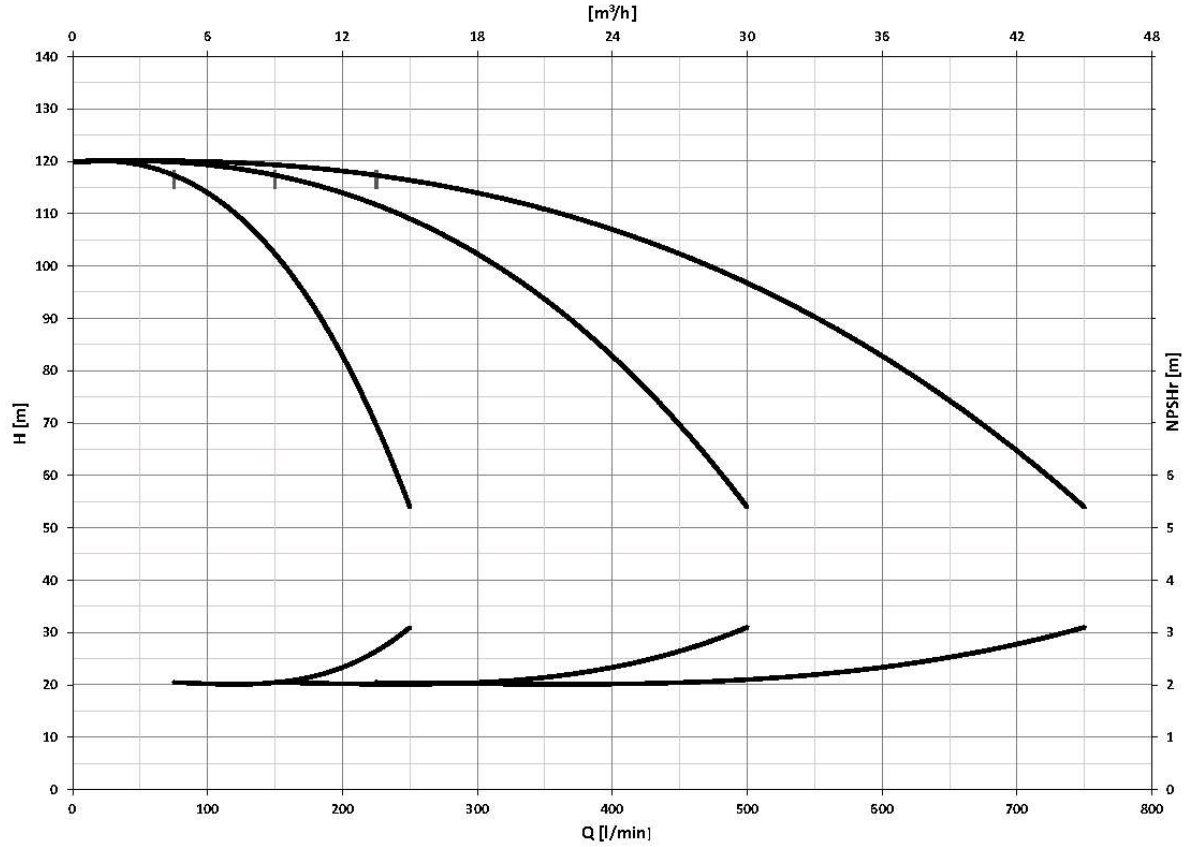
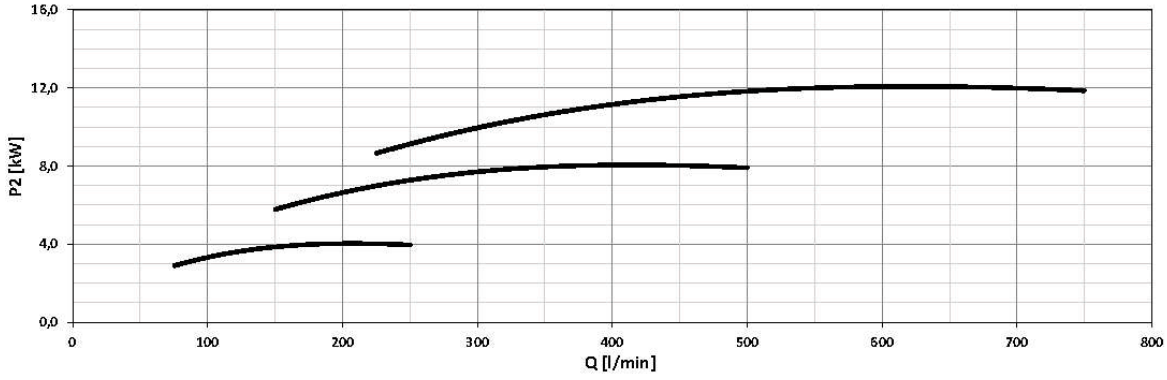


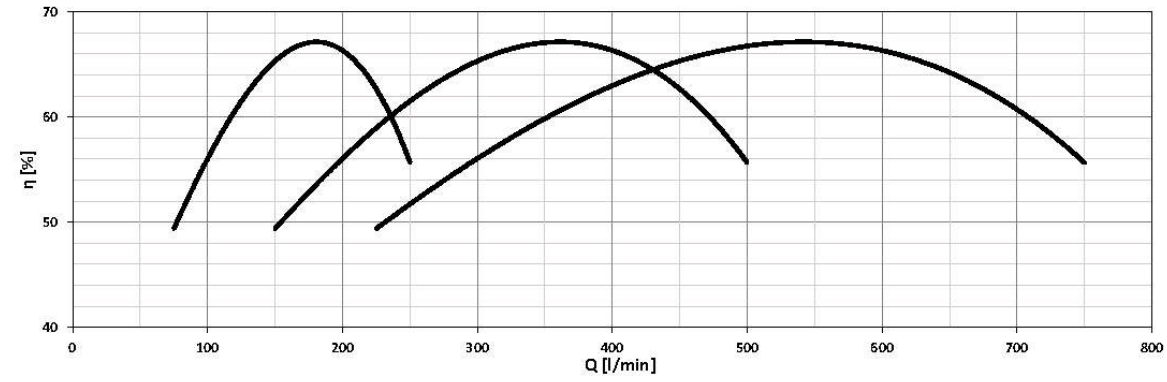




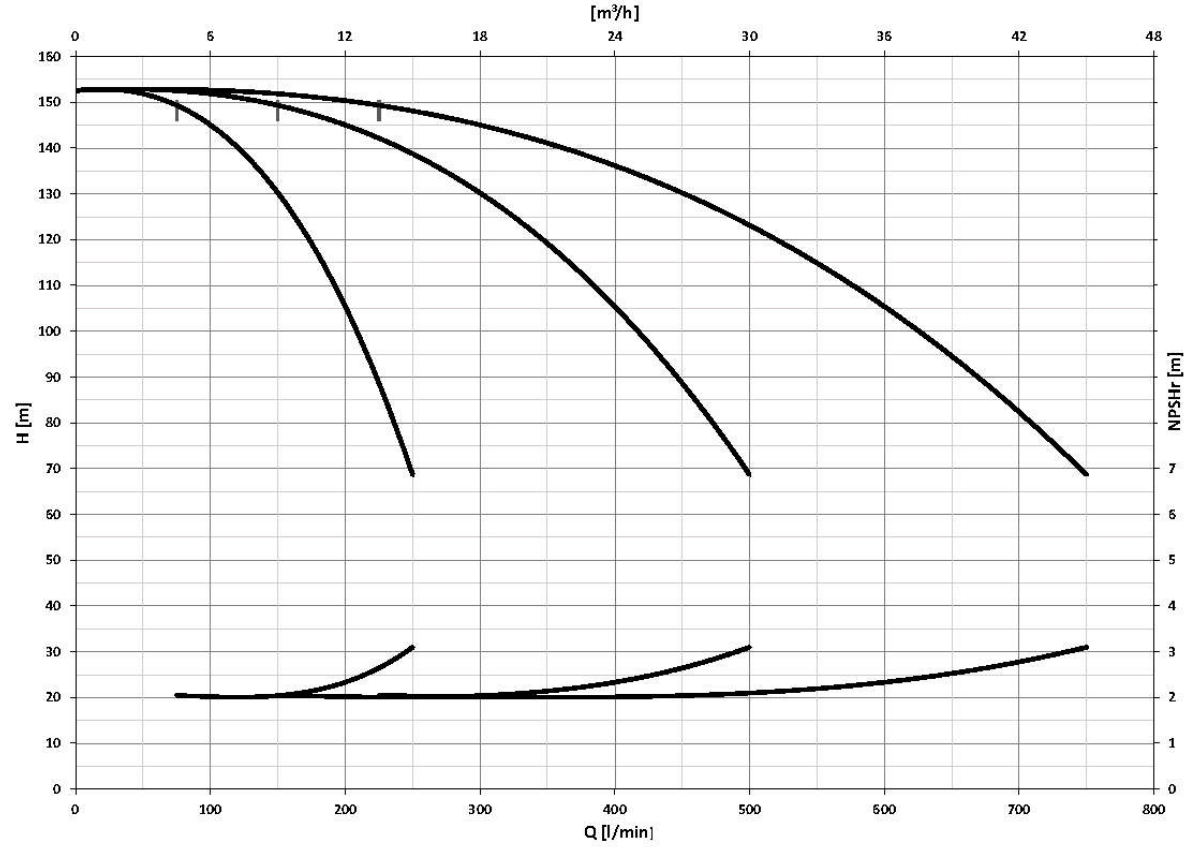
3GP(E) EVMS 10 11/4.0

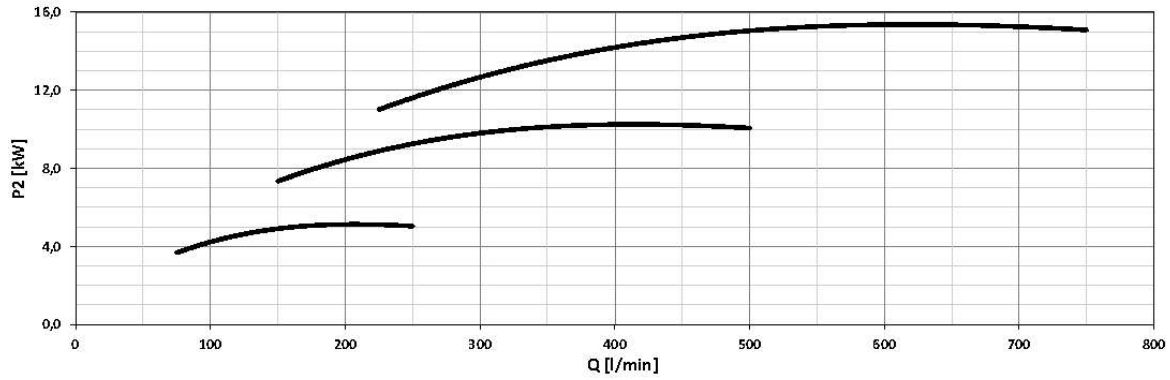


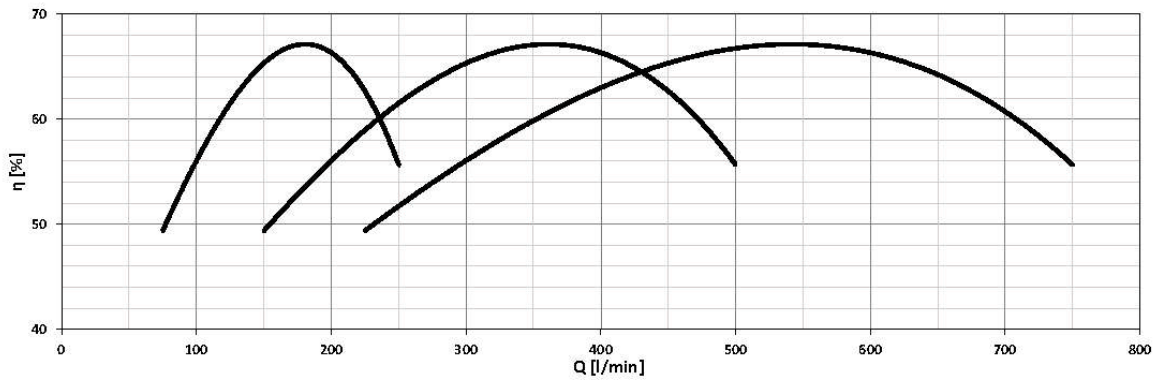




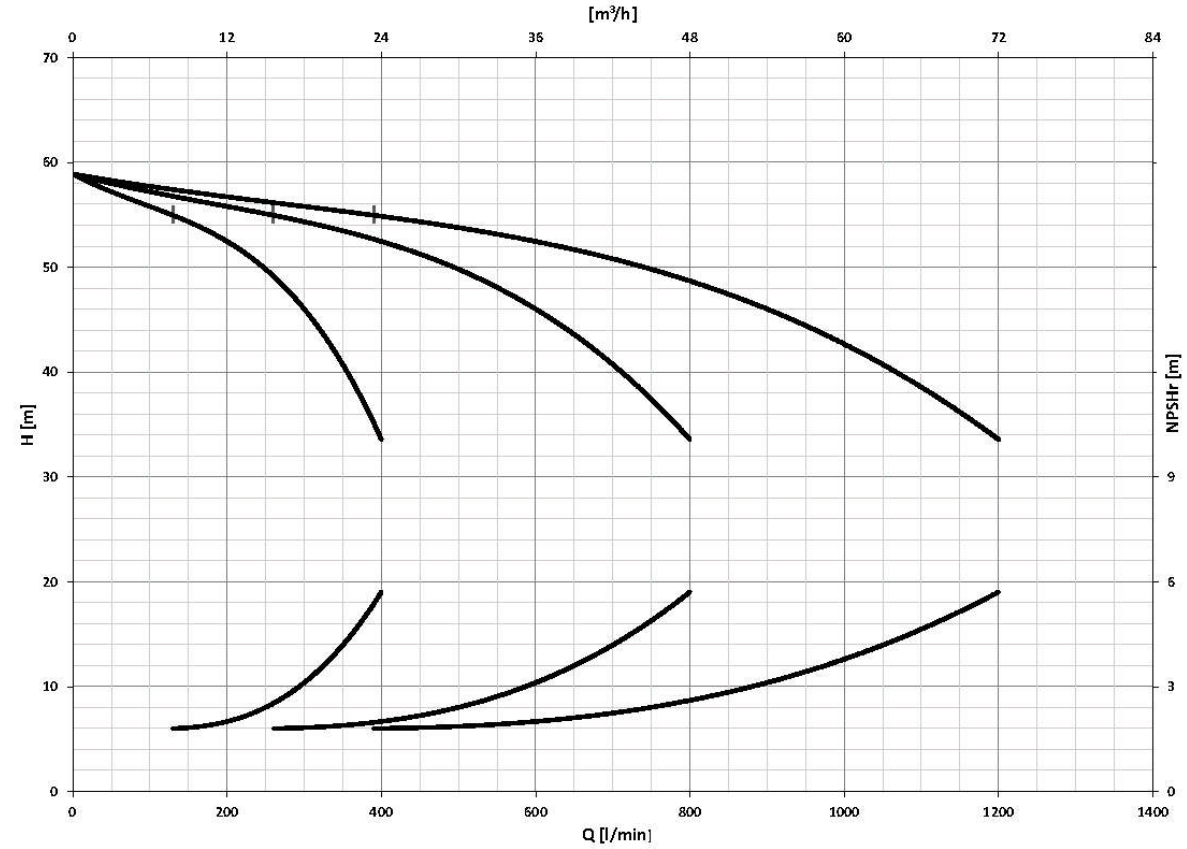
3GP(E) EVMS 10 14/5.5

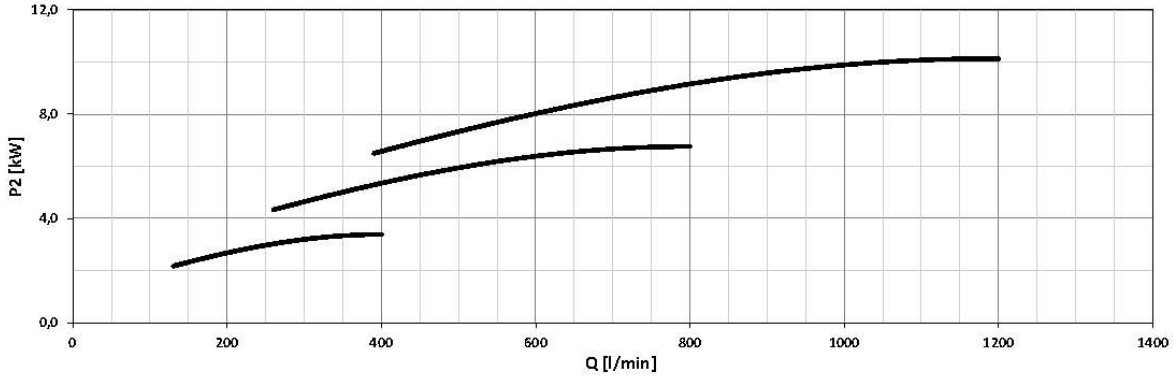


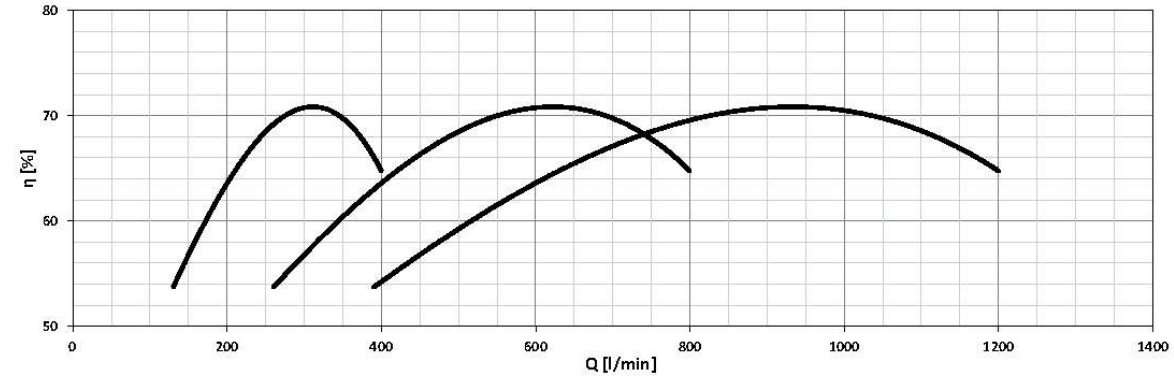




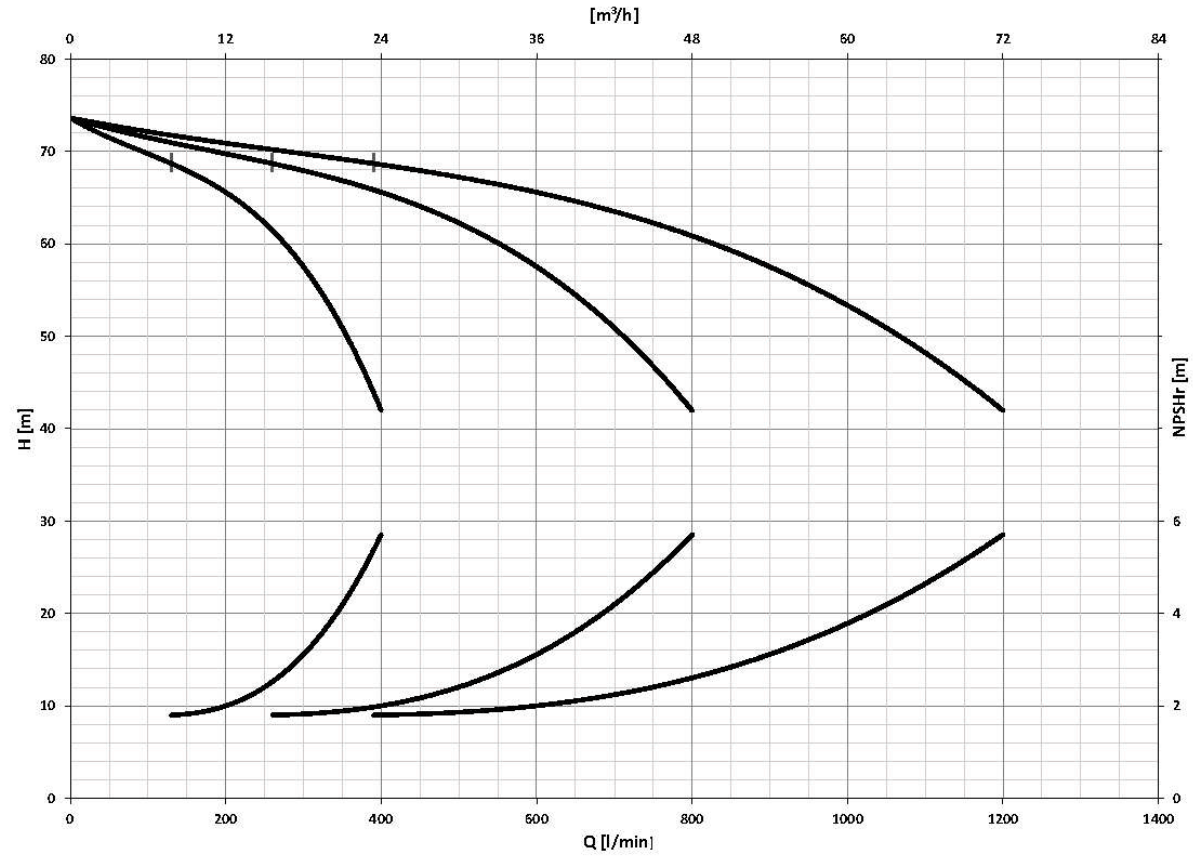
3GP(E) EVMS 15 4/4.0

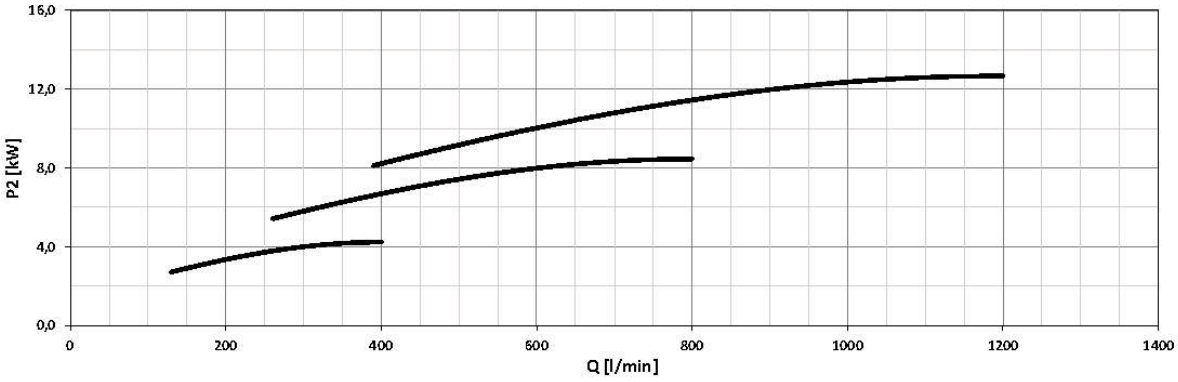


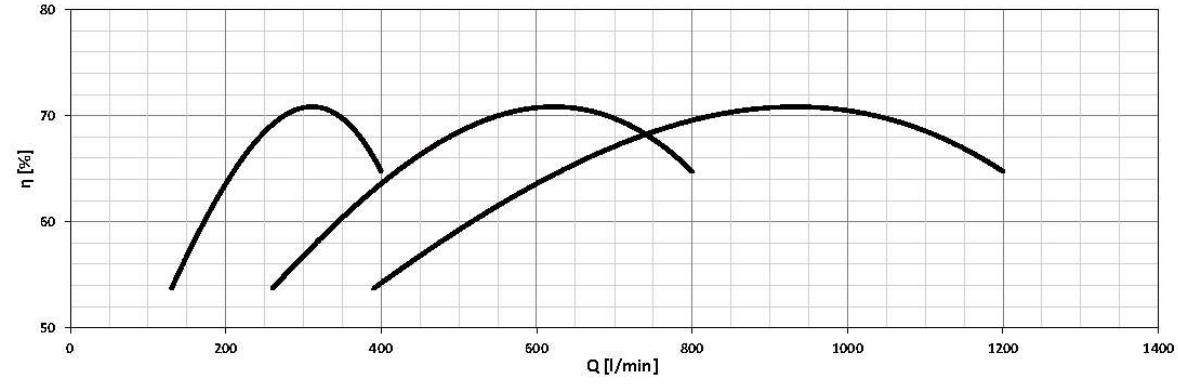




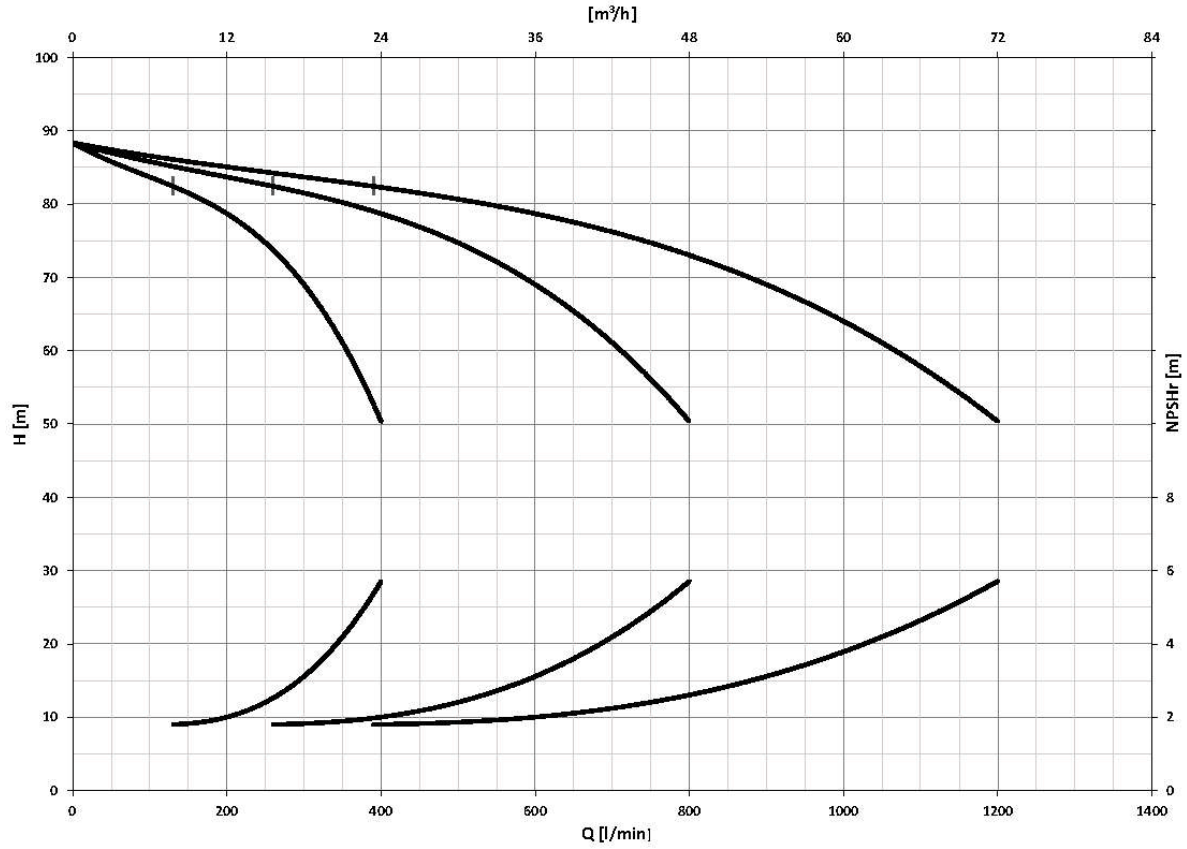
3GP(E) EVMS 15 5/5.5

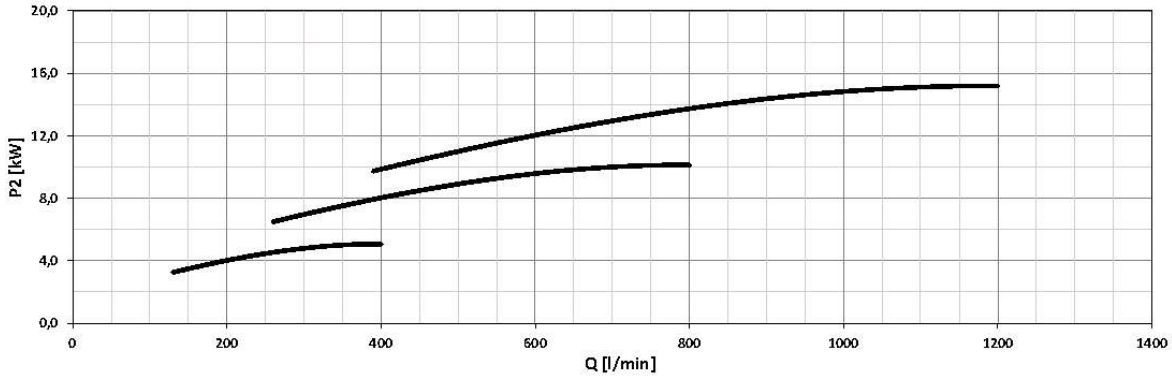


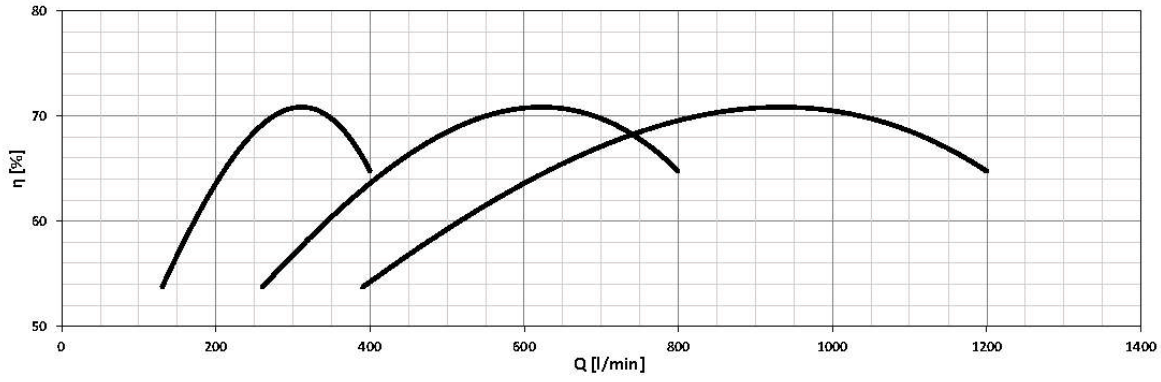




3GP(E) EVMS 15 6/5.5







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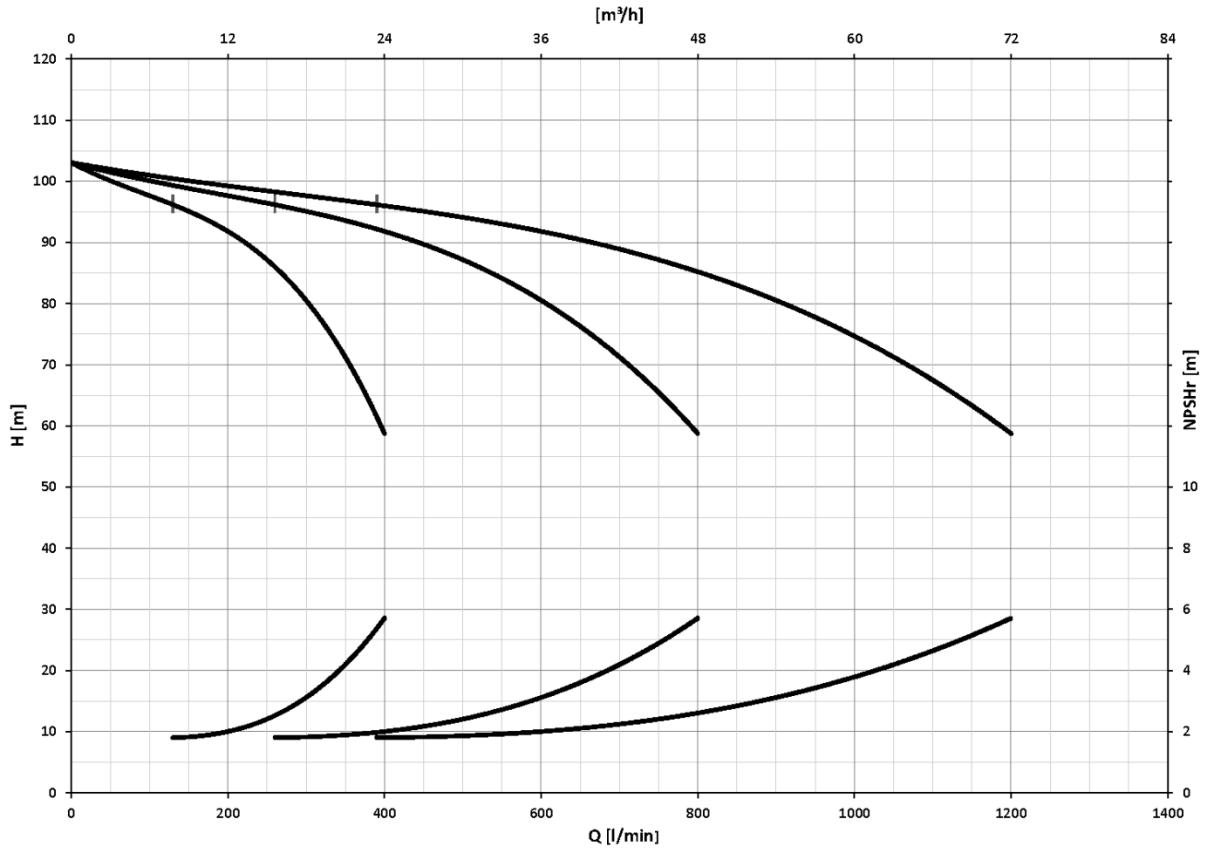
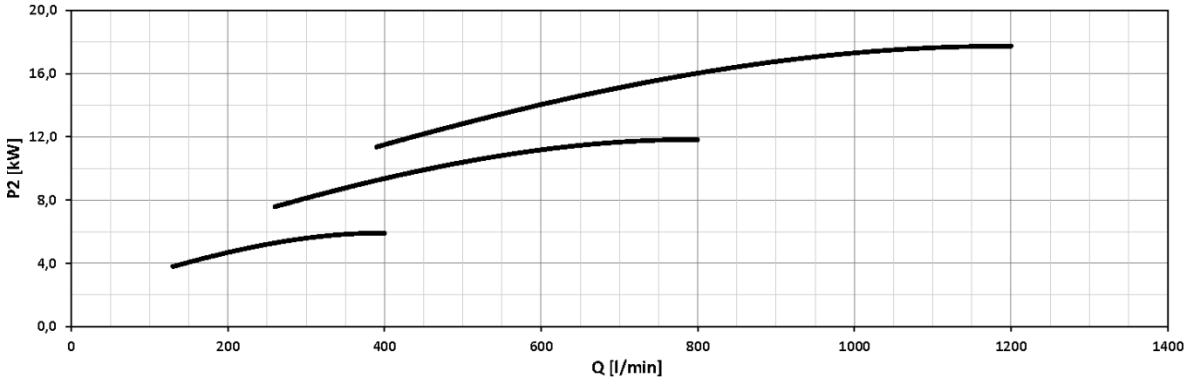
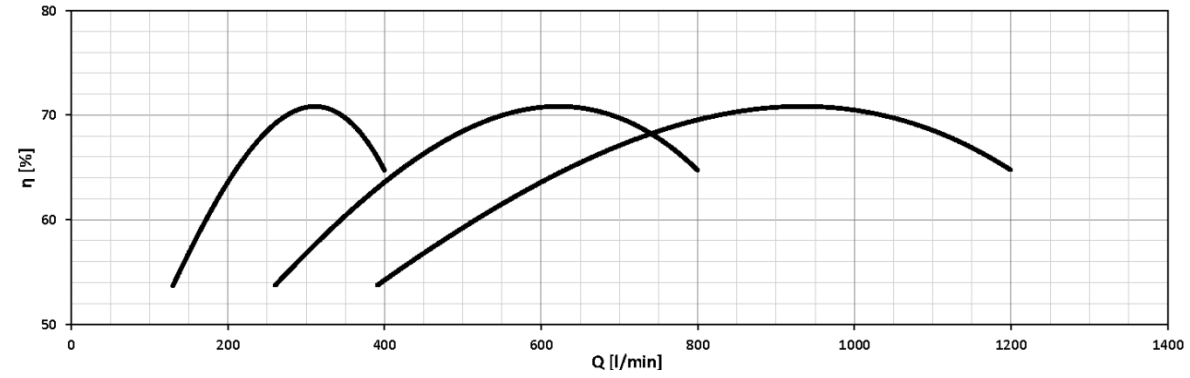
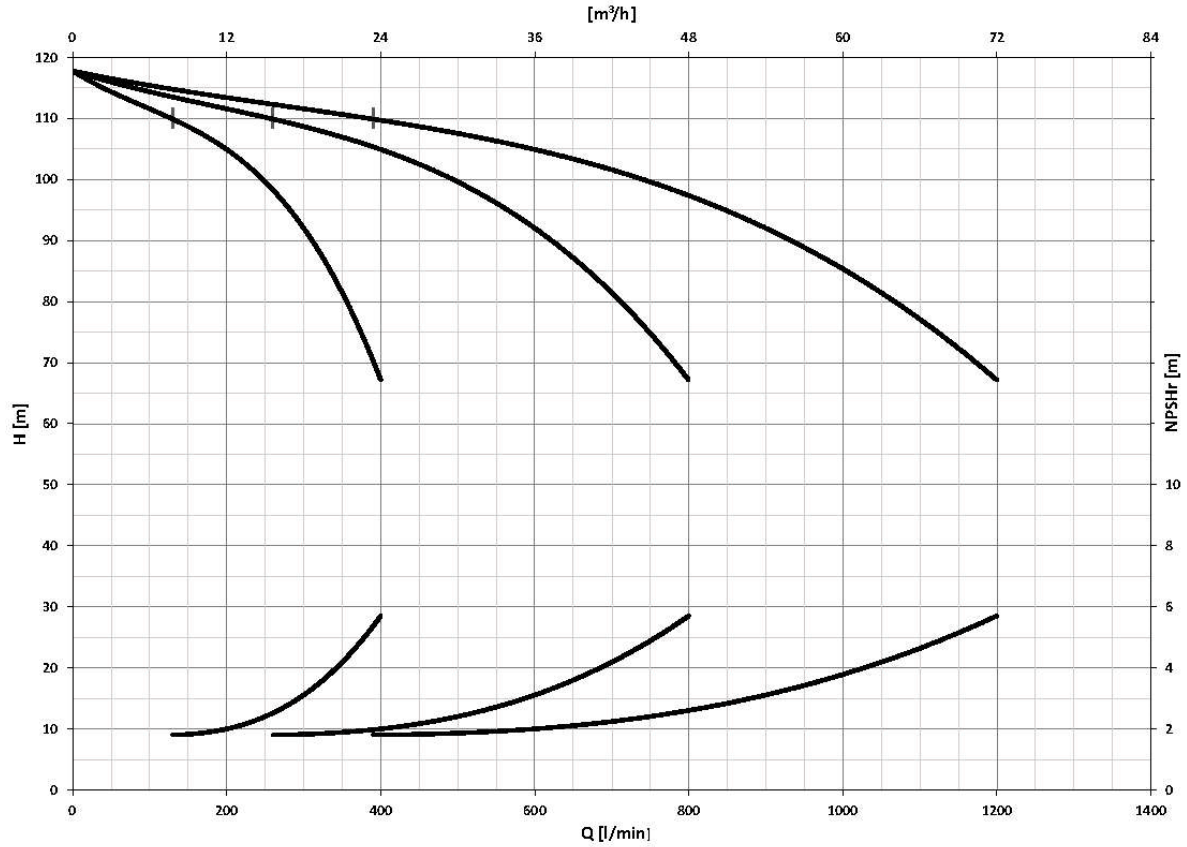
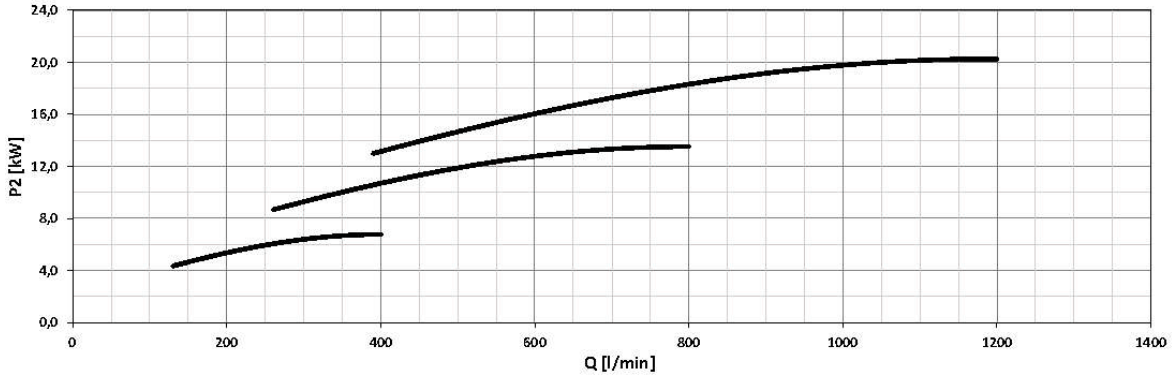


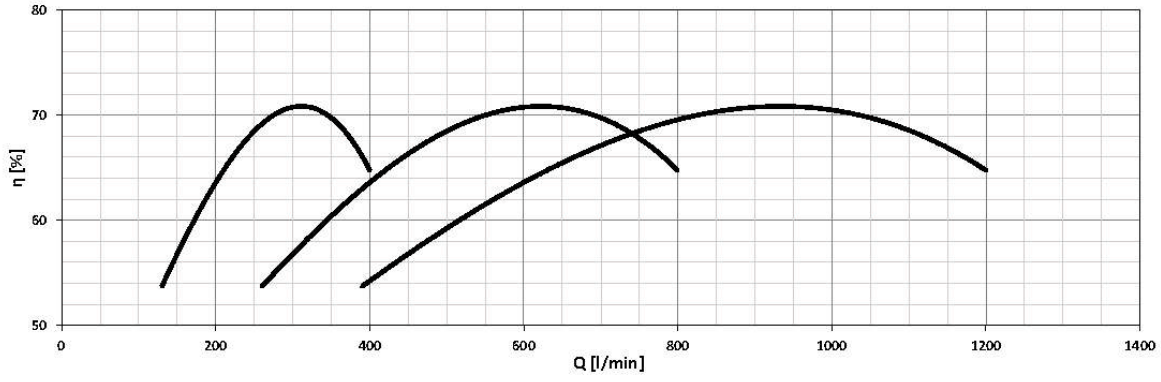




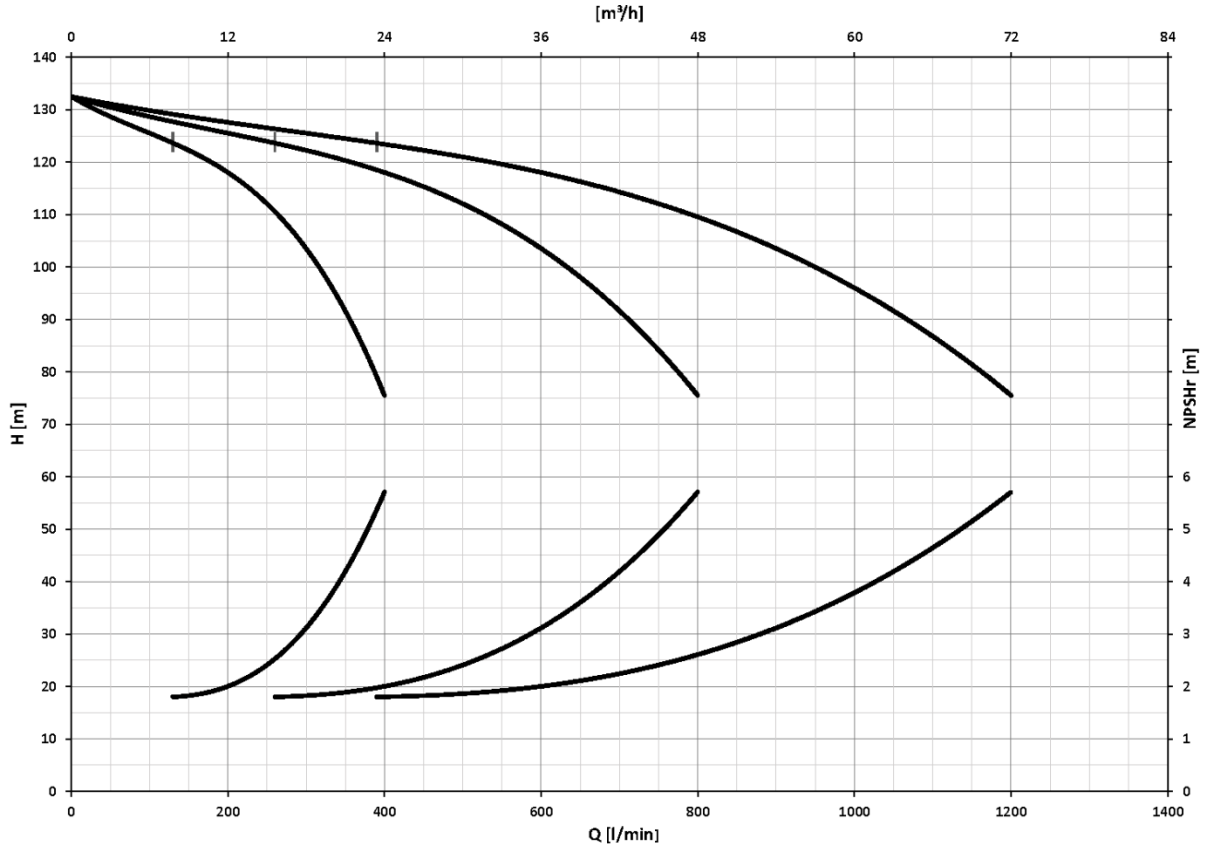
3GP(E) EVMS 15 8/7.5

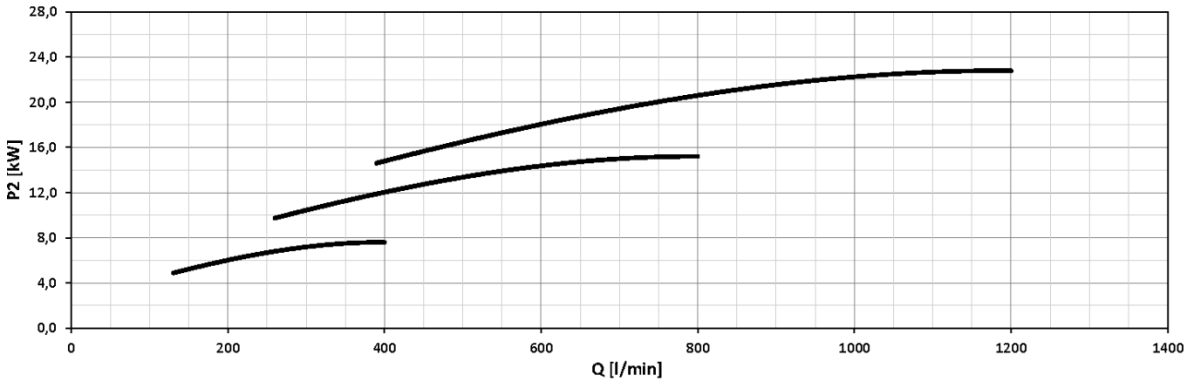


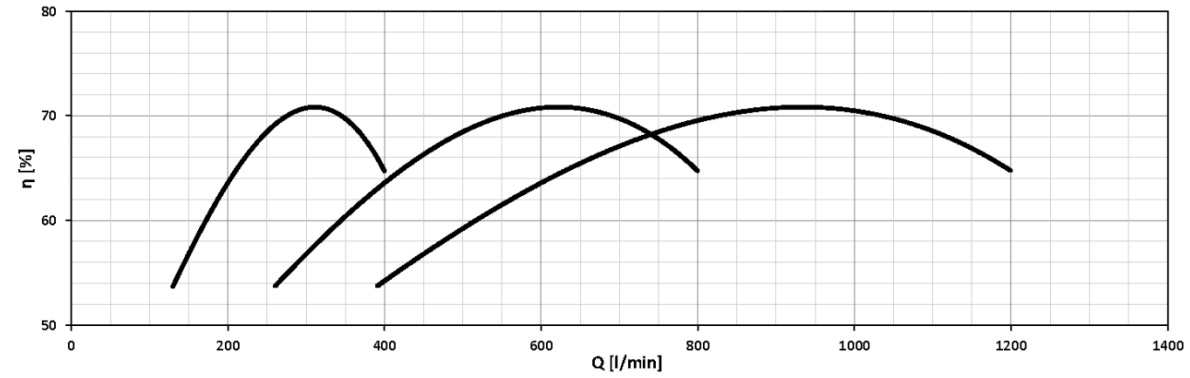




3GP(E) EVMS 15 9/11







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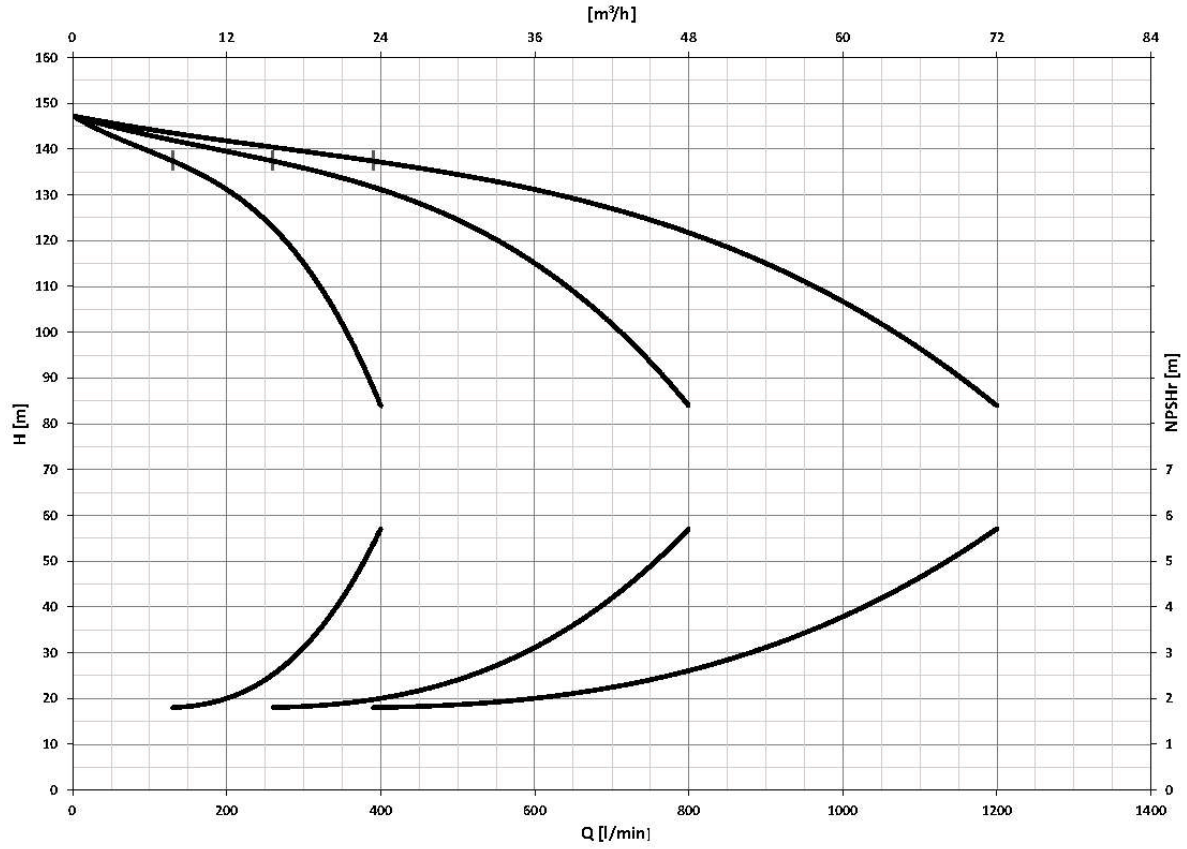

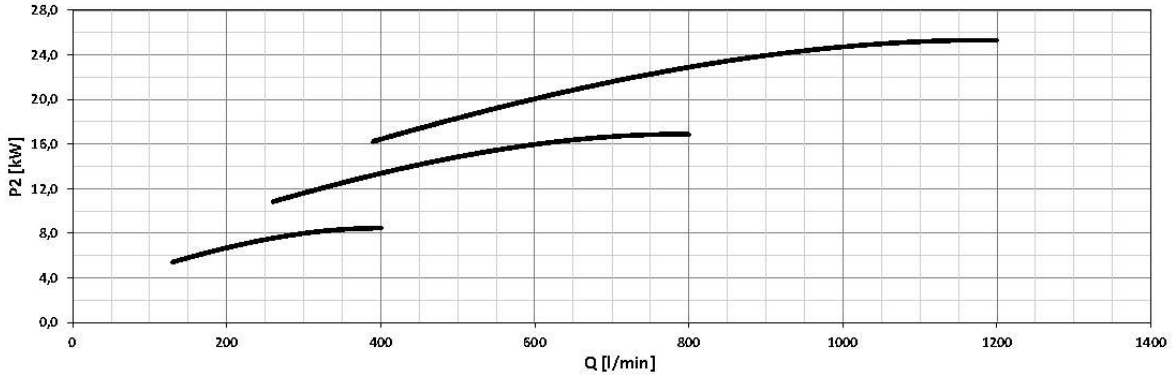

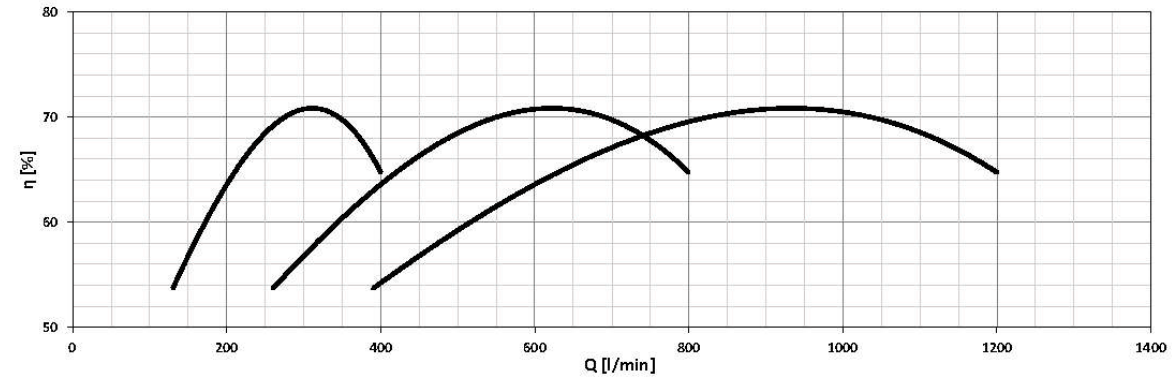

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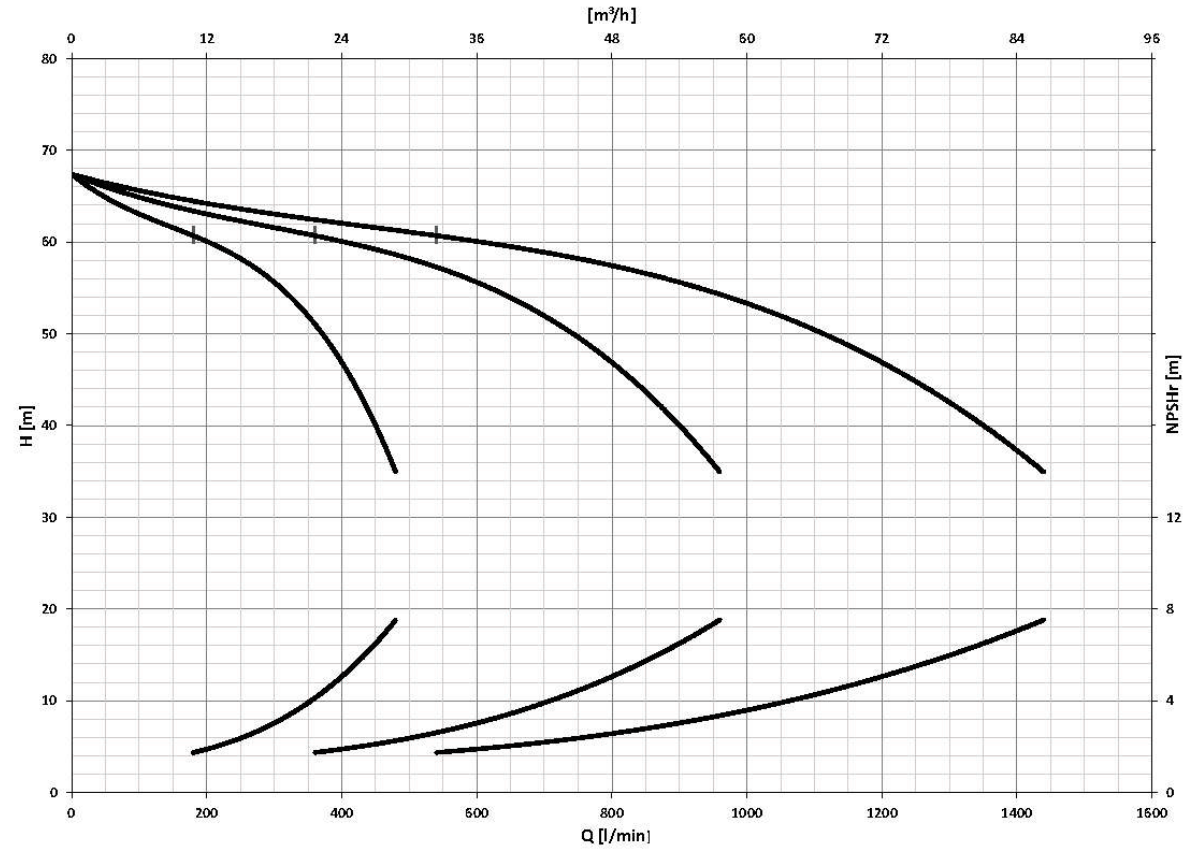

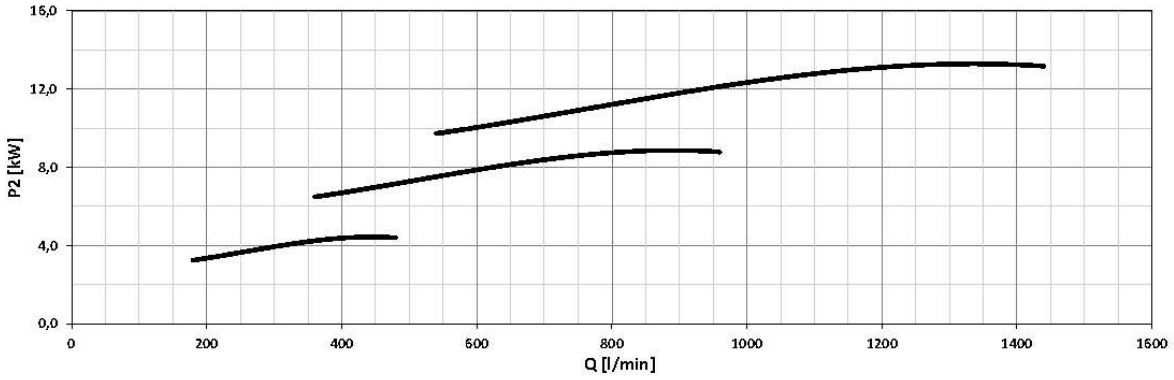

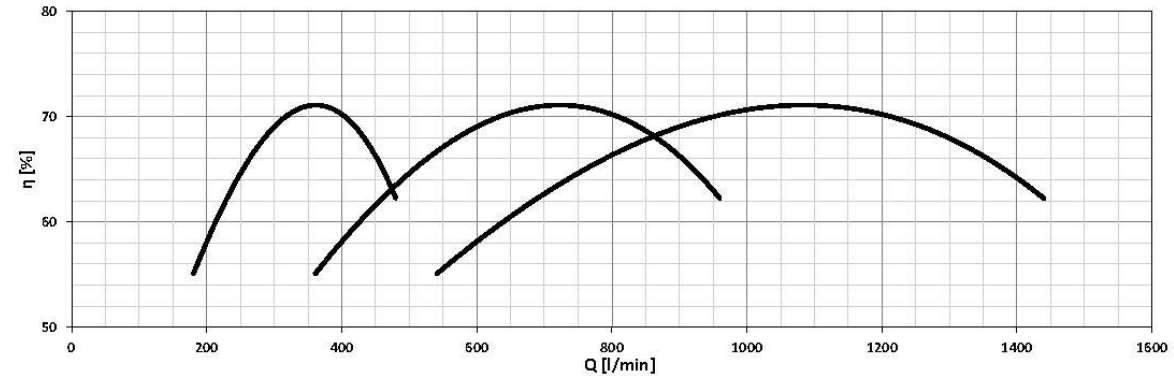

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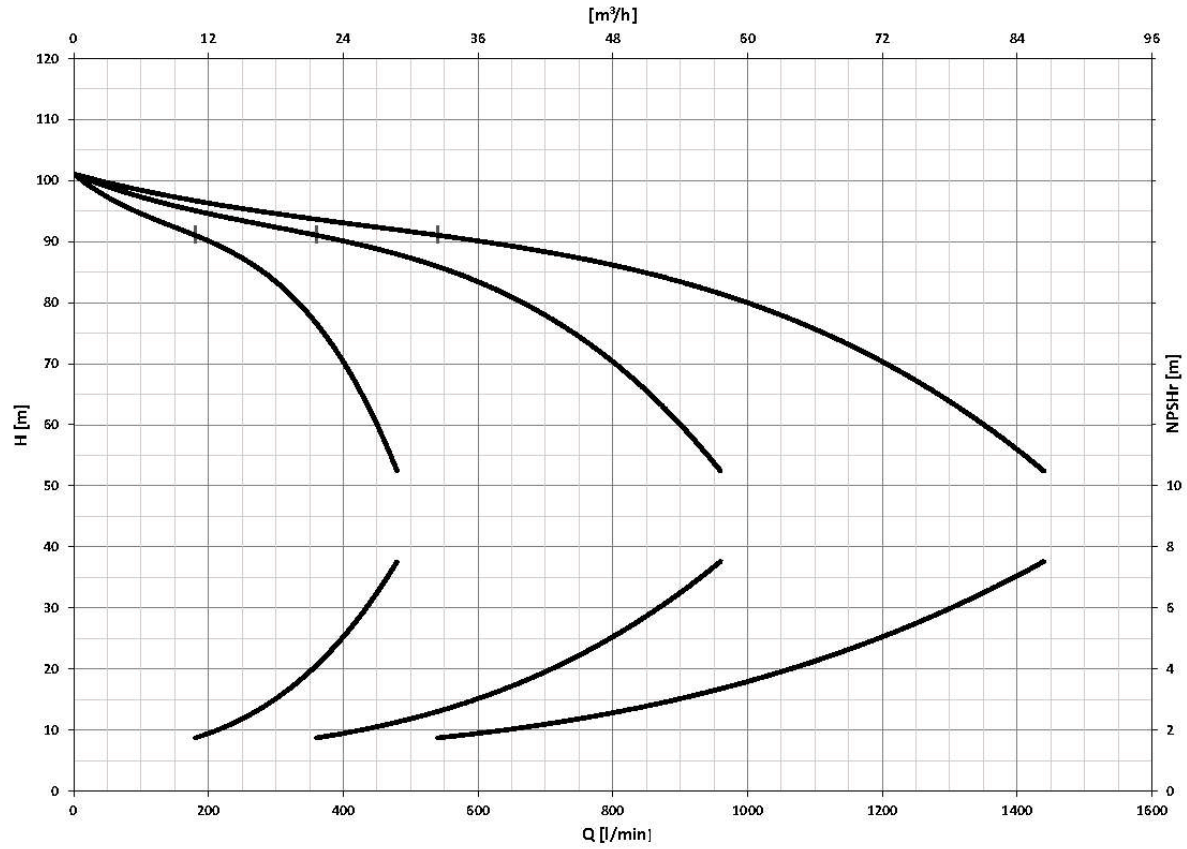

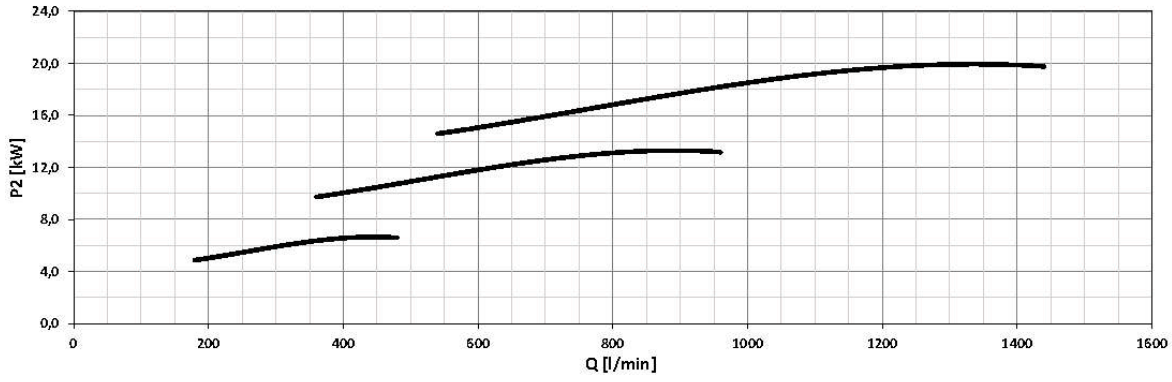

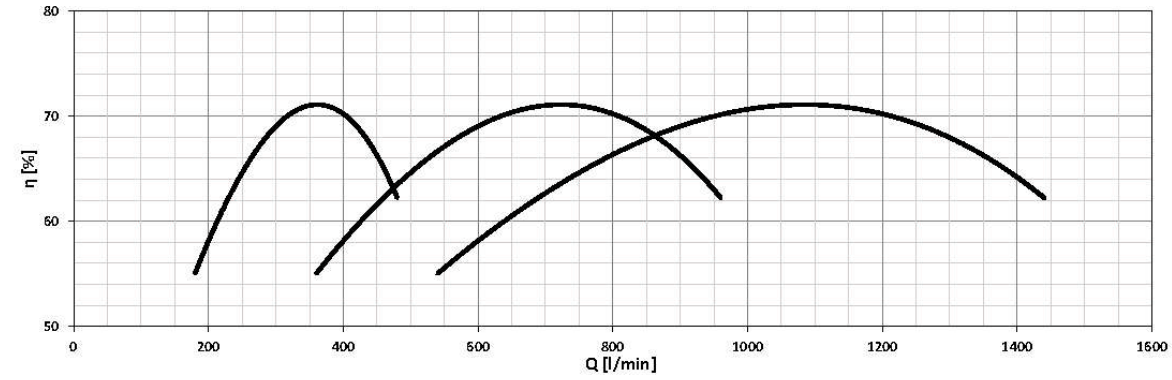

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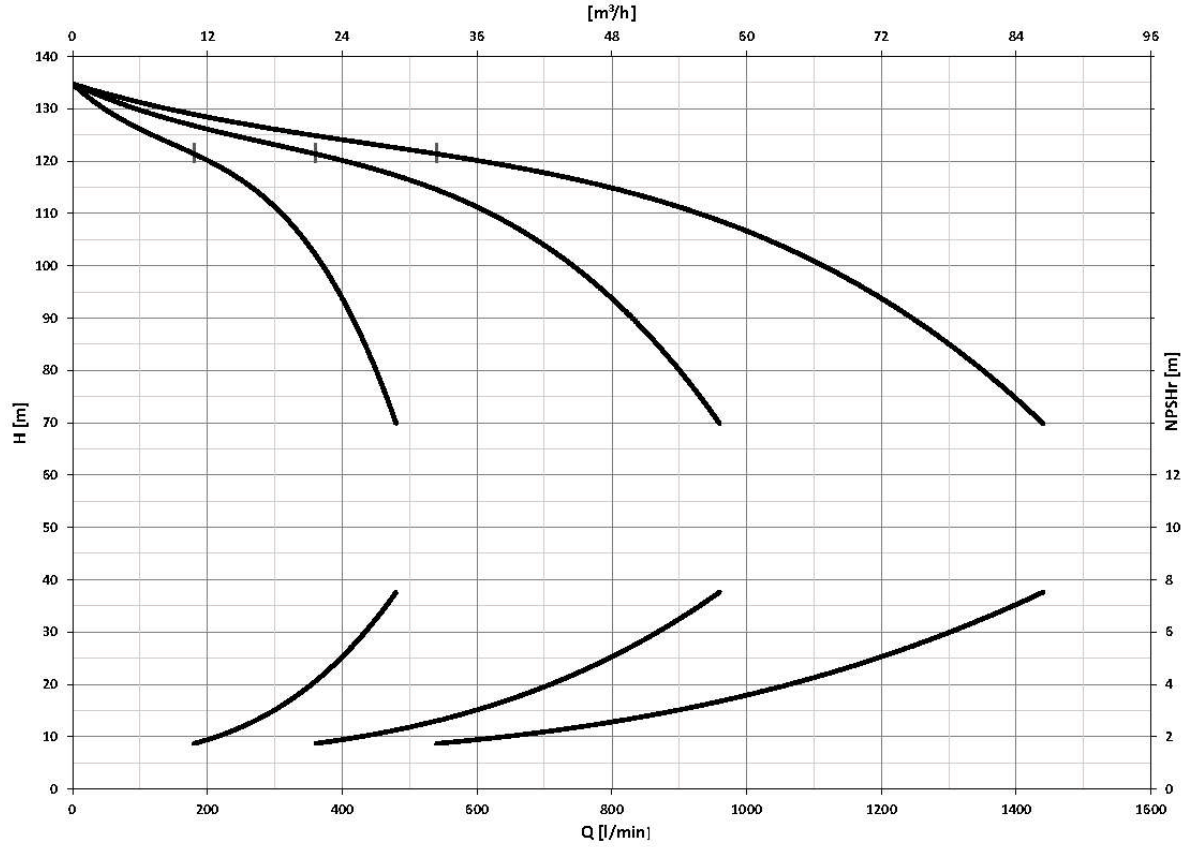
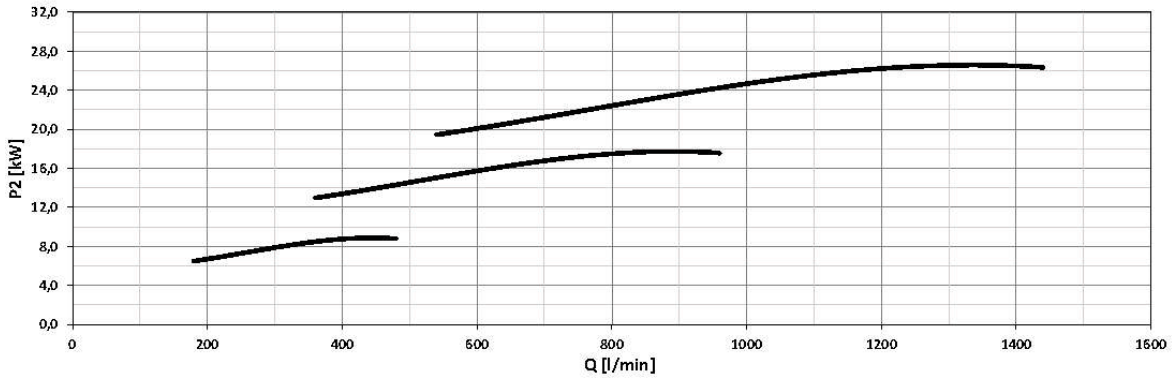
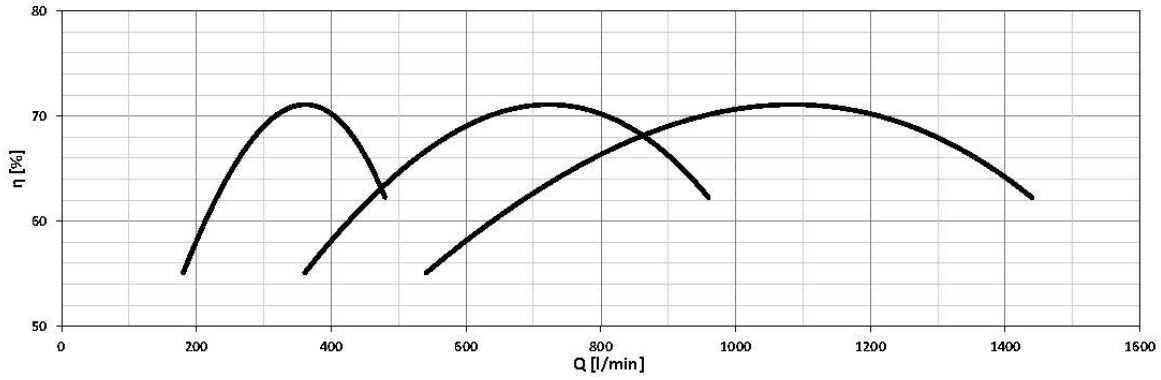
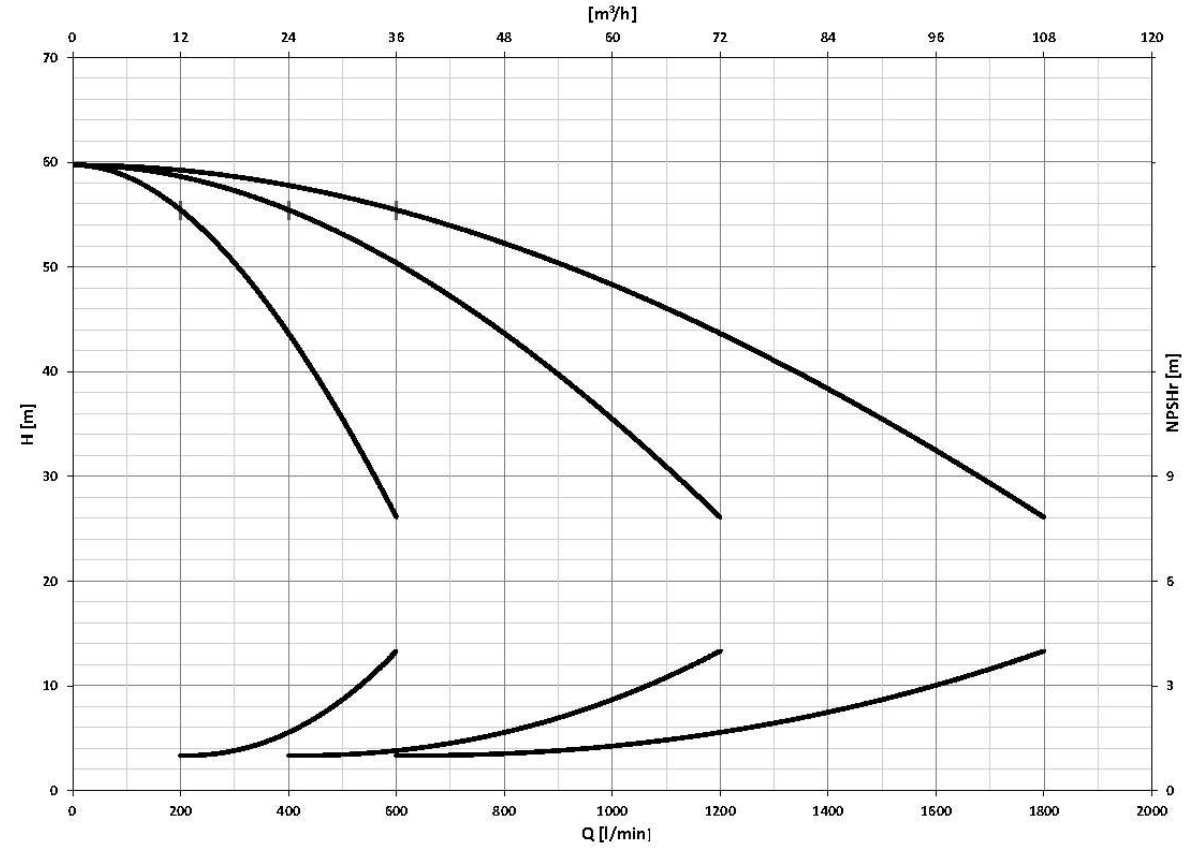
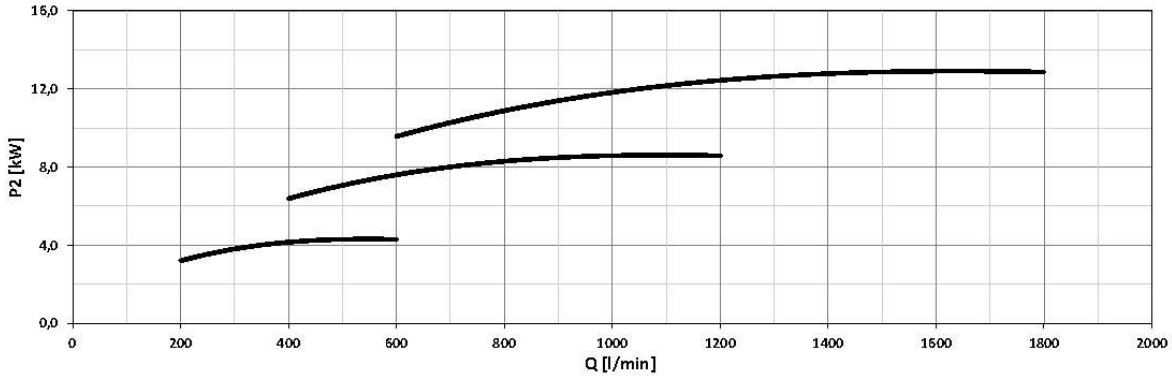


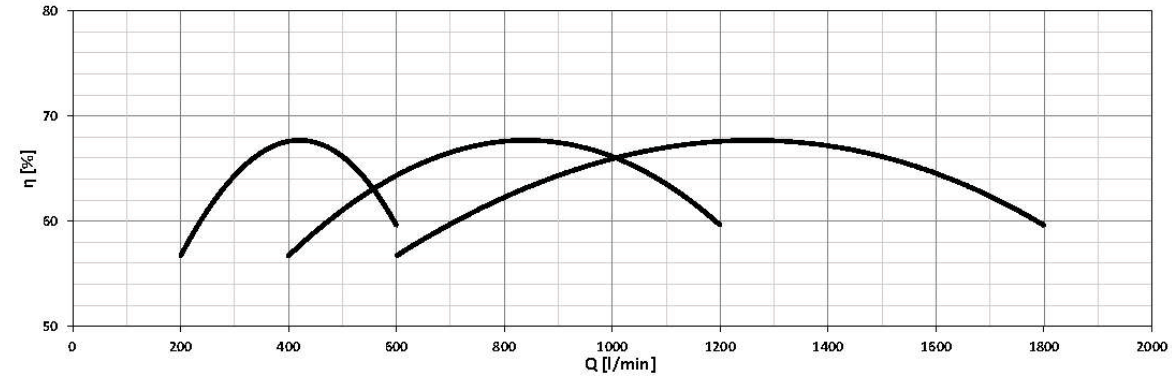




3GP(E) EVM 32 3-3/5.5







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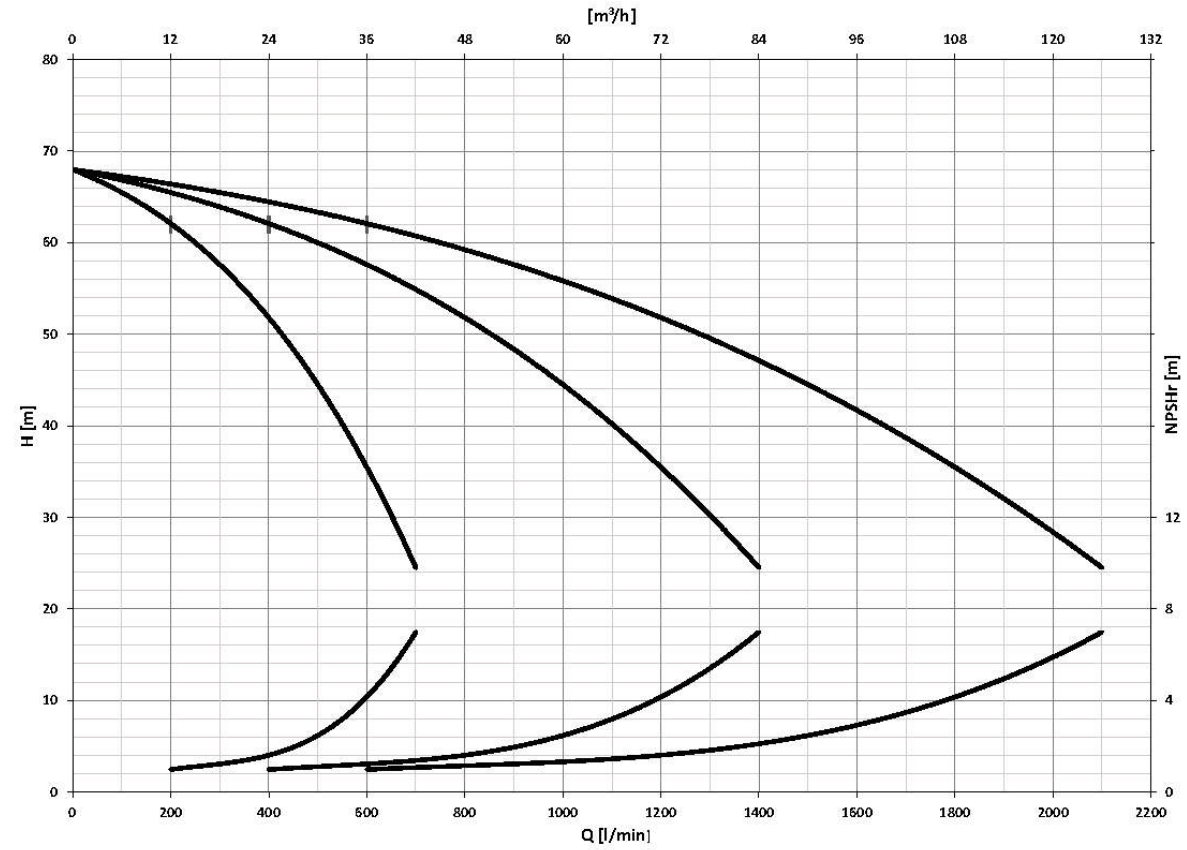
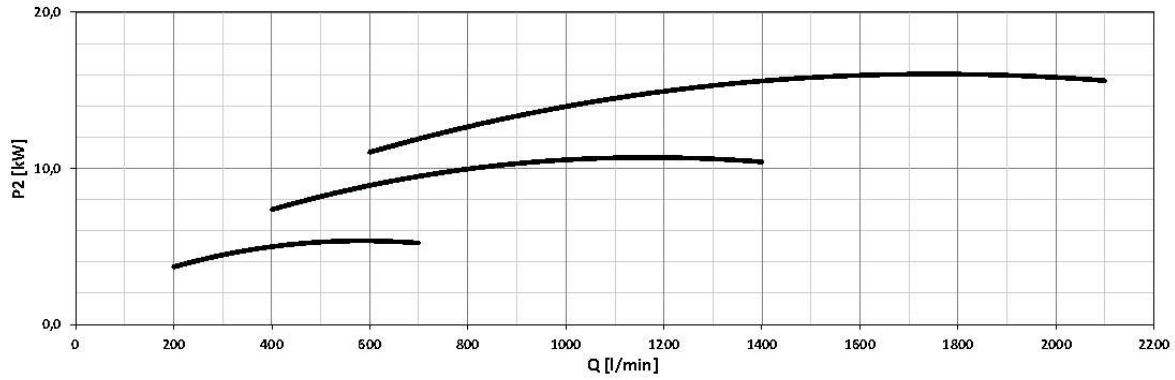
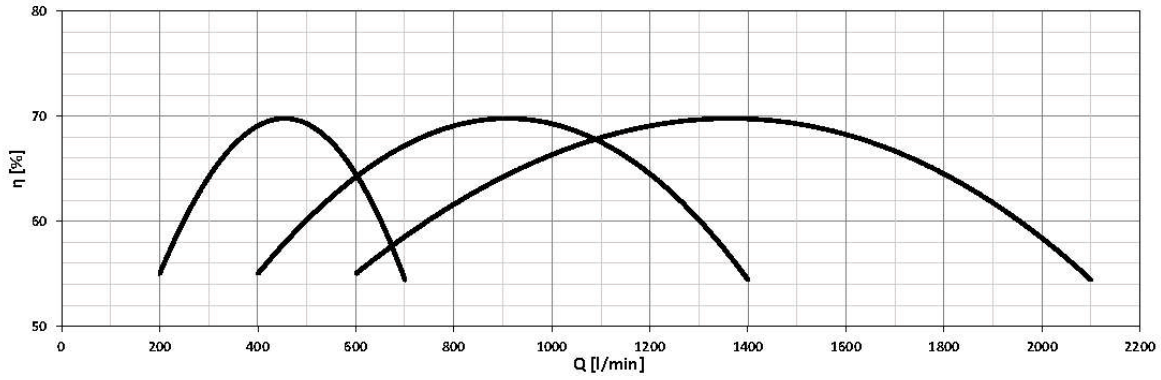
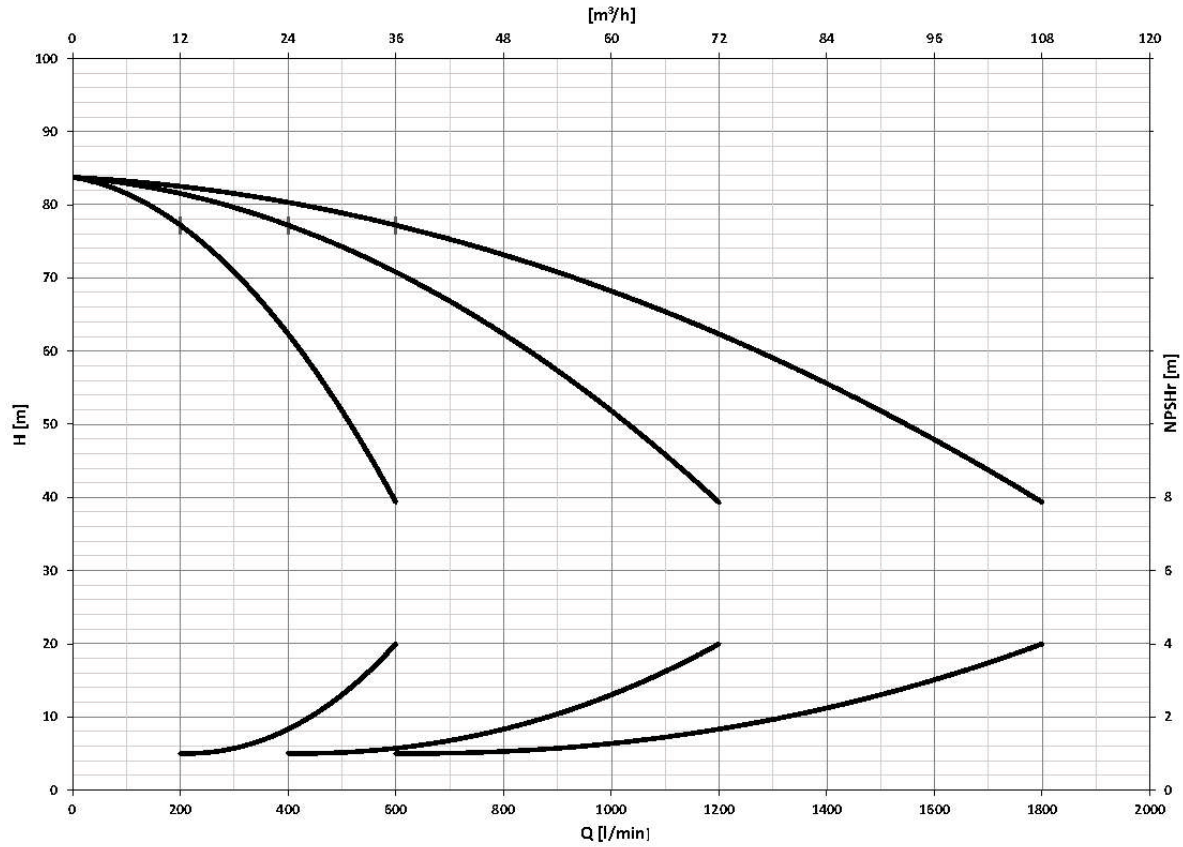
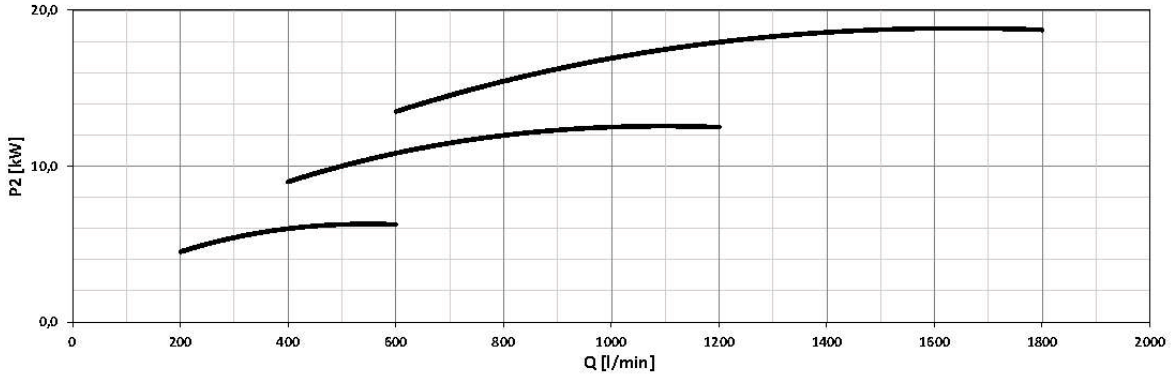


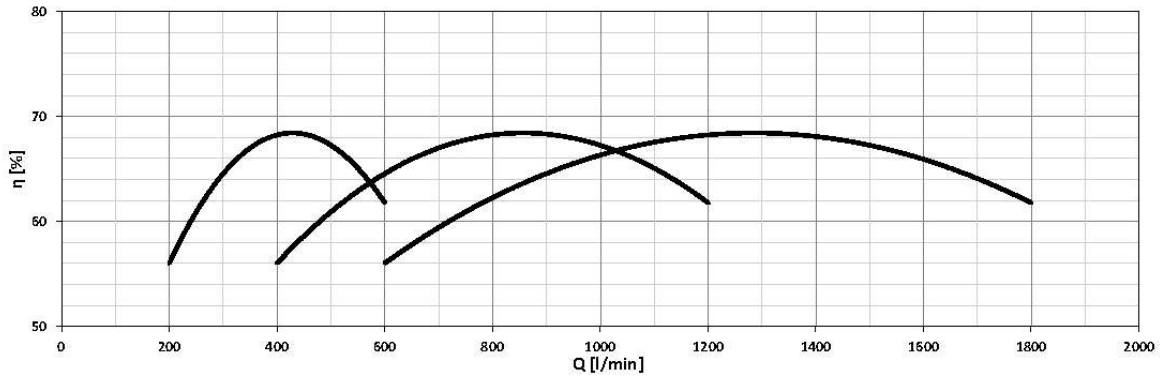




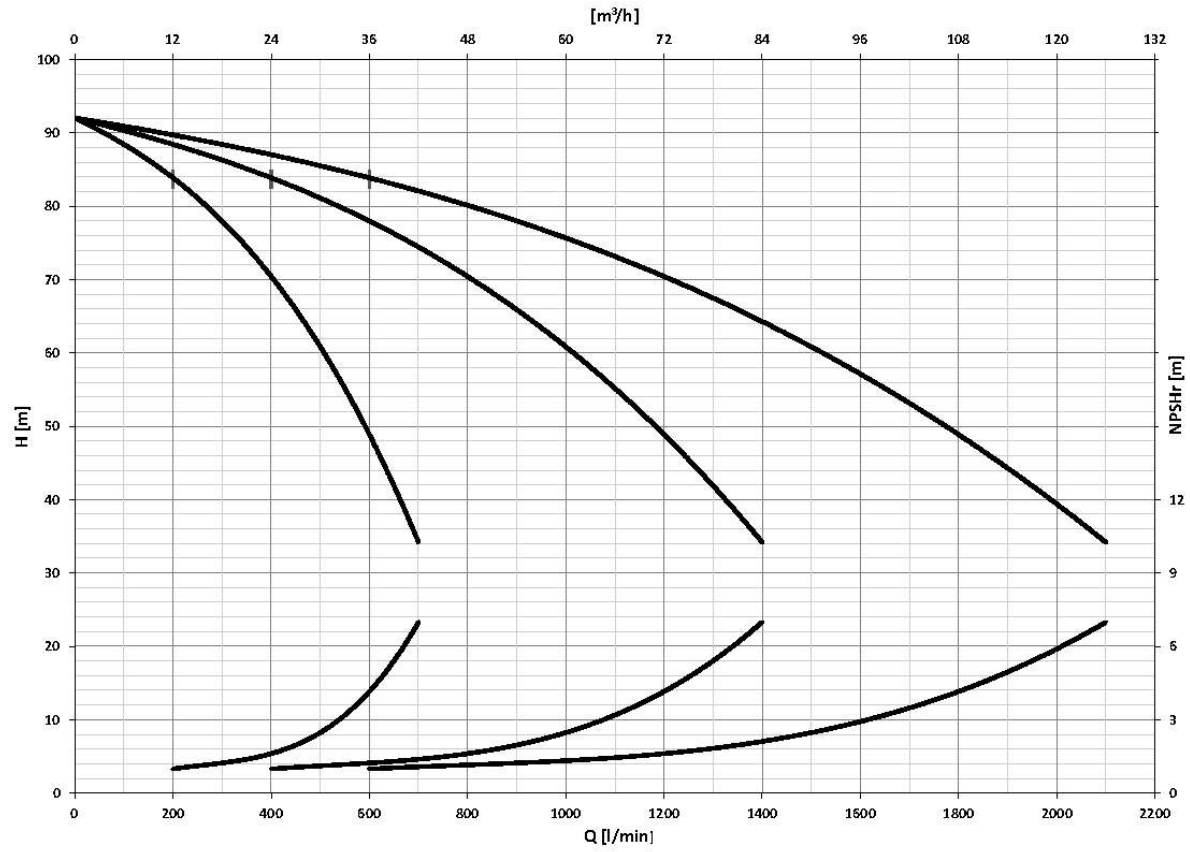
3GP(E) EVM 32 4-3/7.5

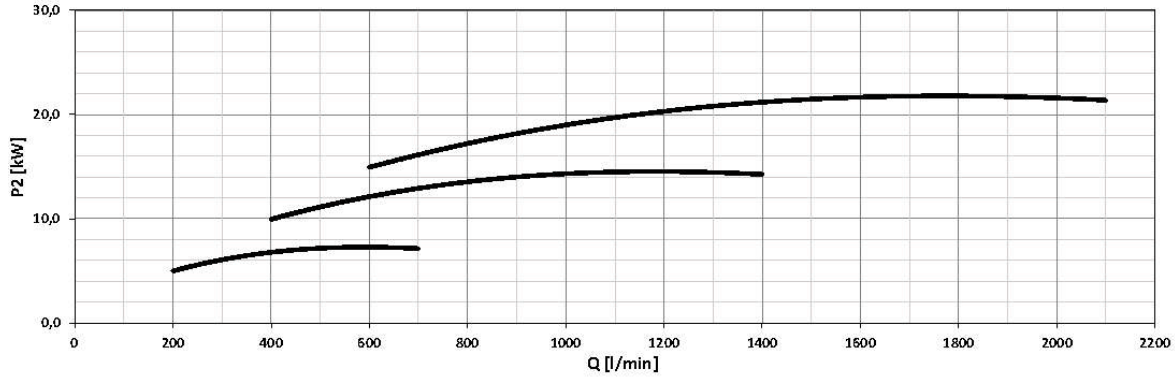


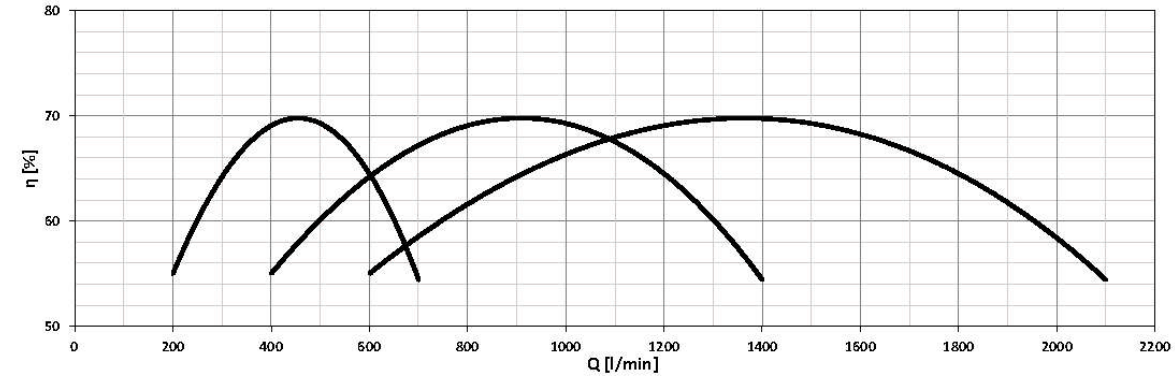




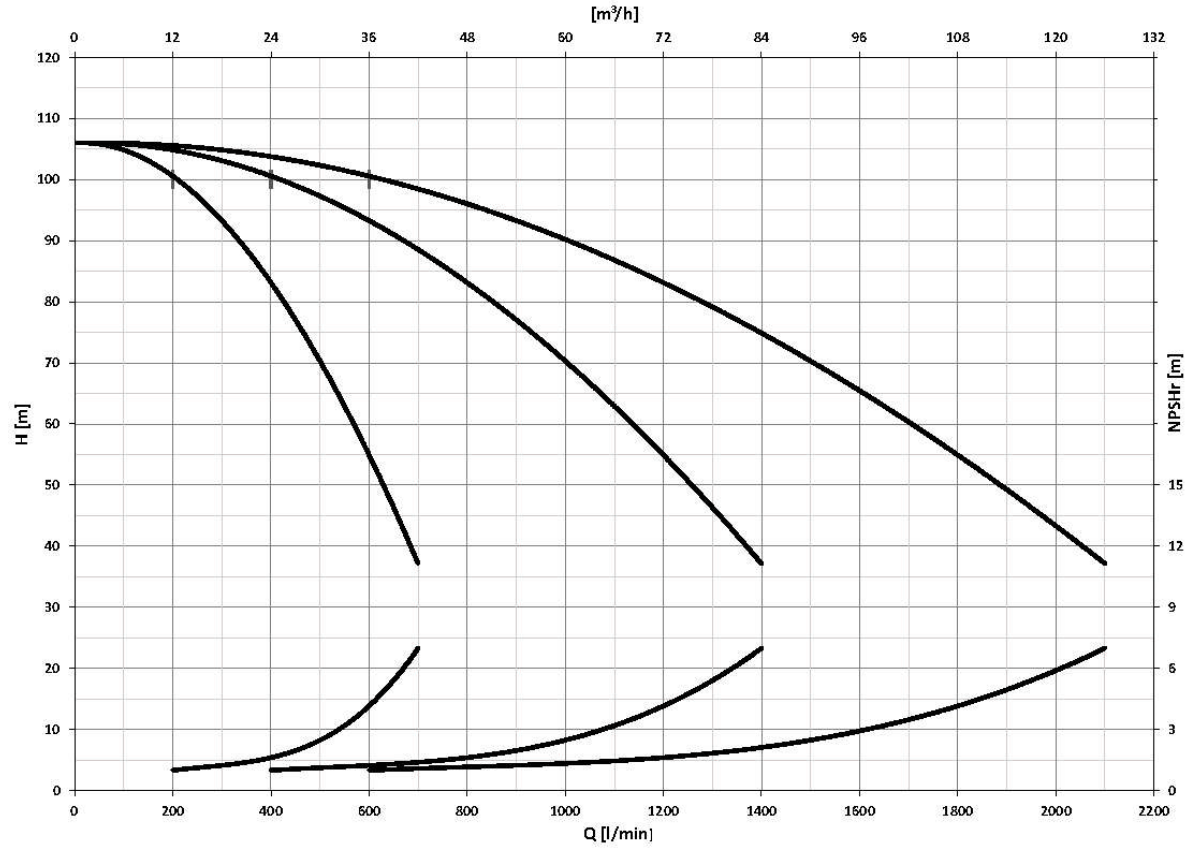
3GP(E) EVM 32 4-1/7.5

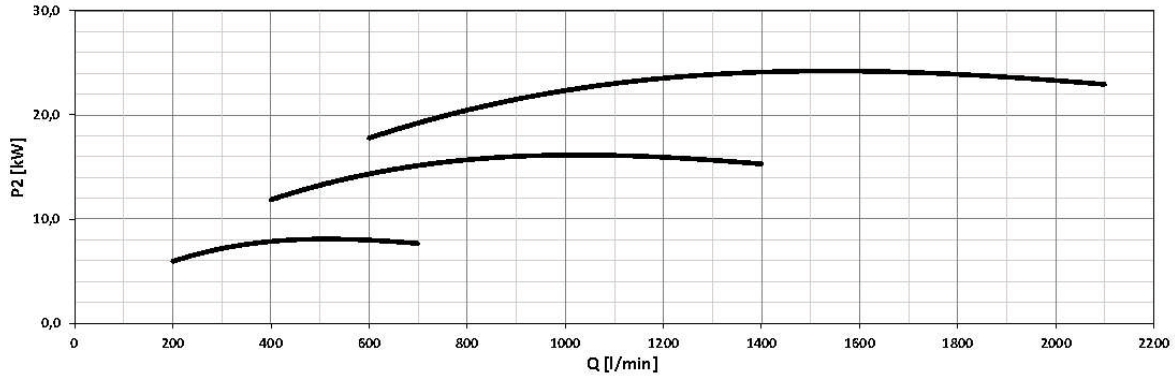


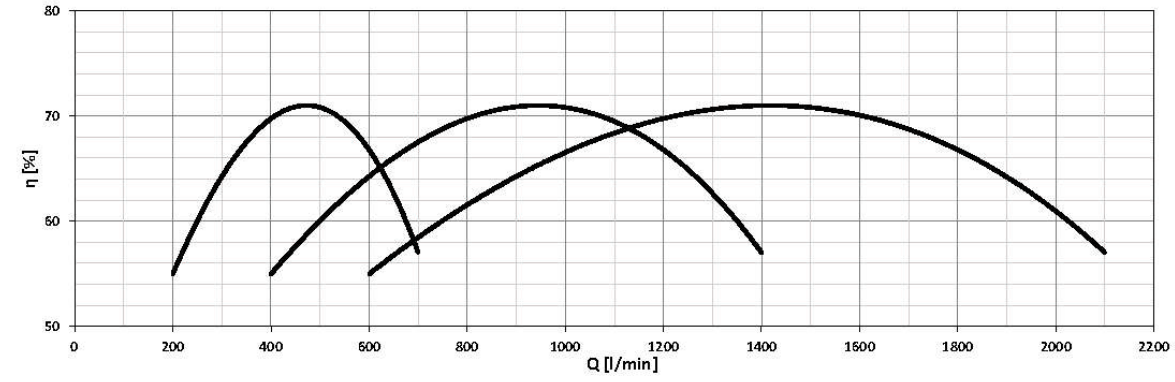




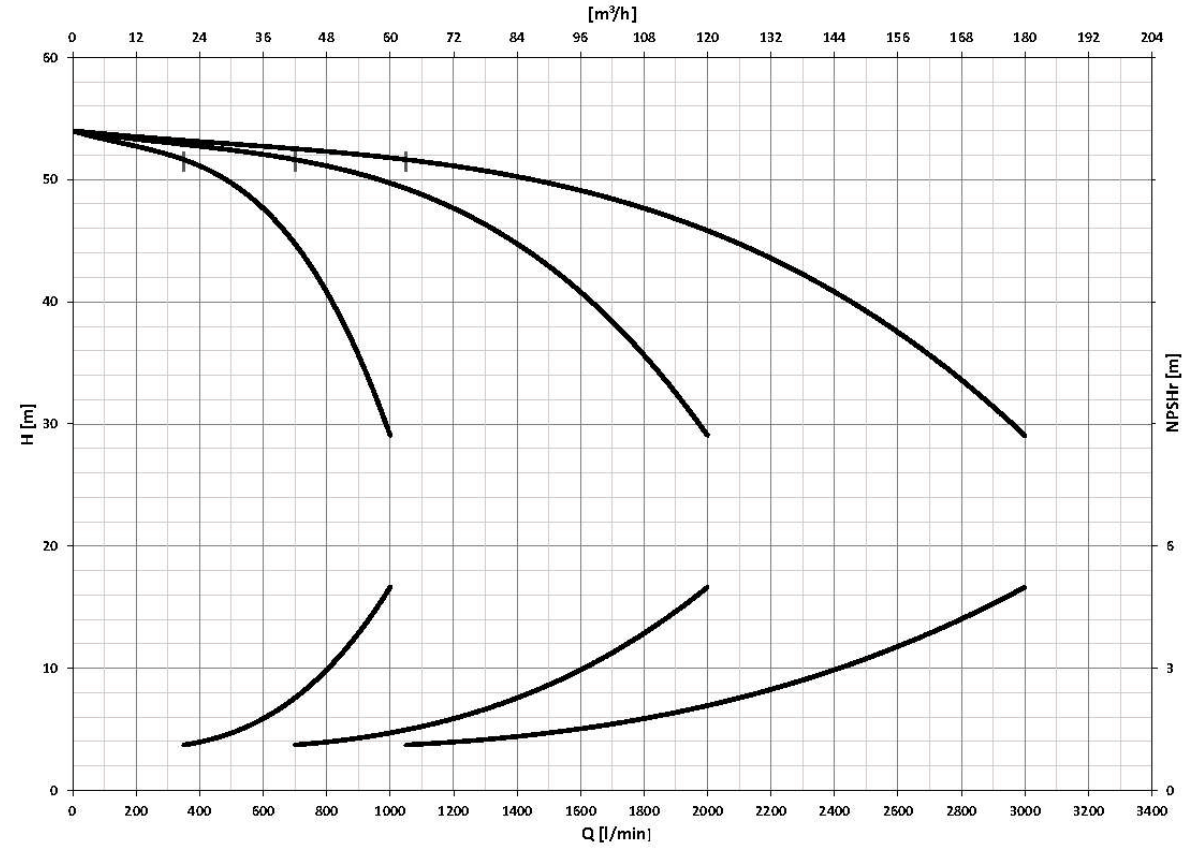
3GP(E) EVM 32 5-3/11

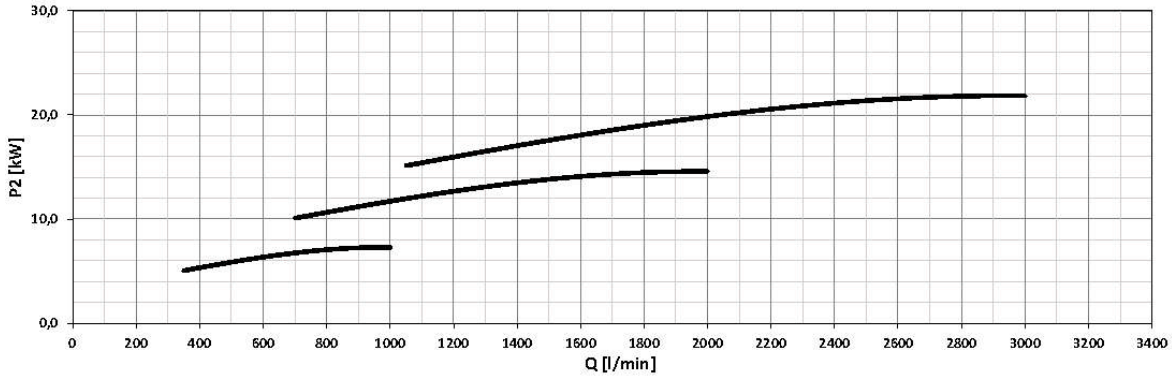


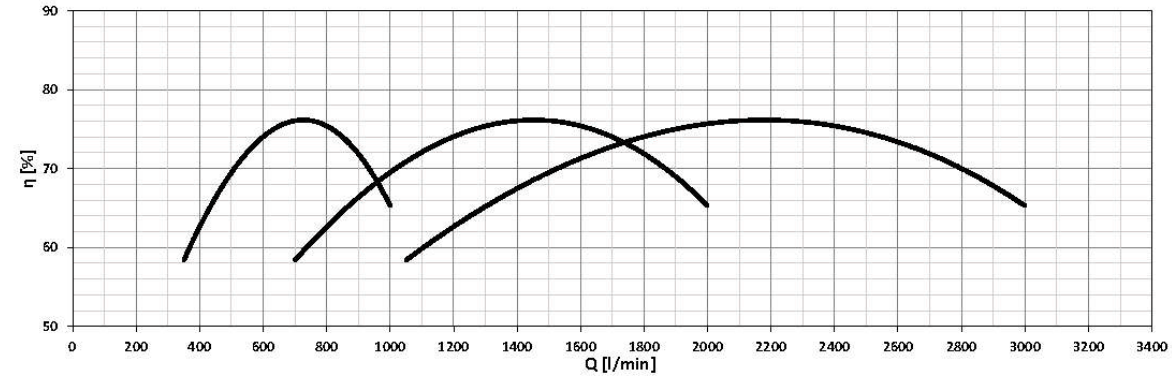




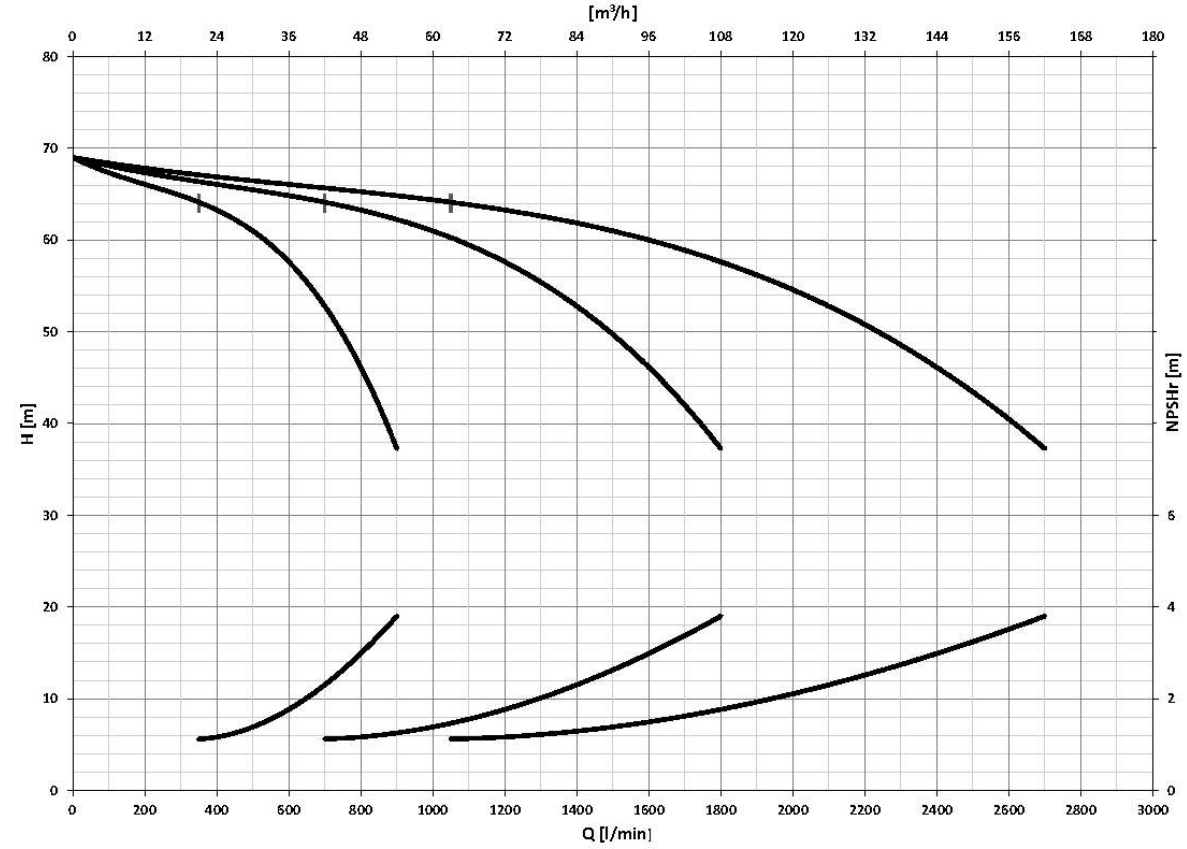
3GP(E) EVM 45 2-0/7.5

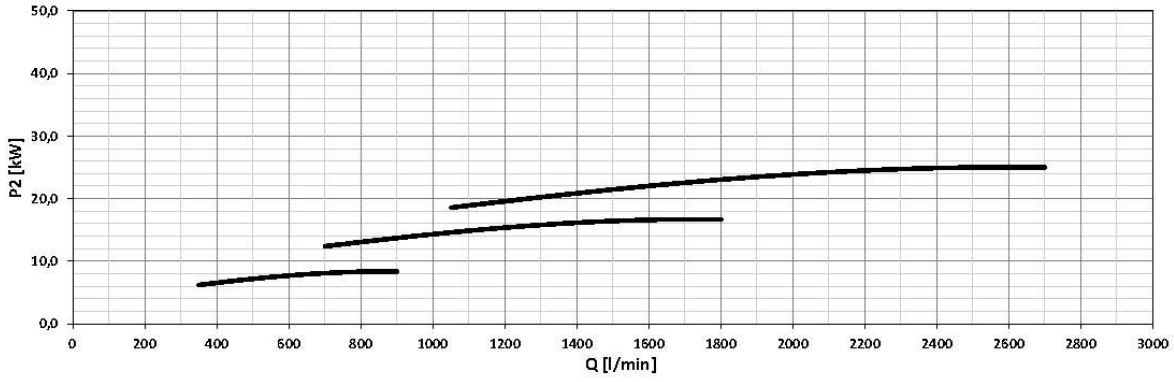


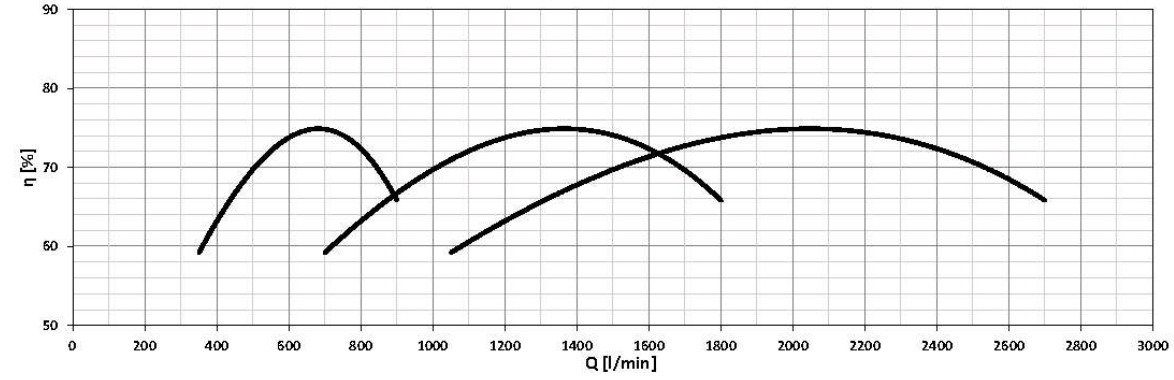




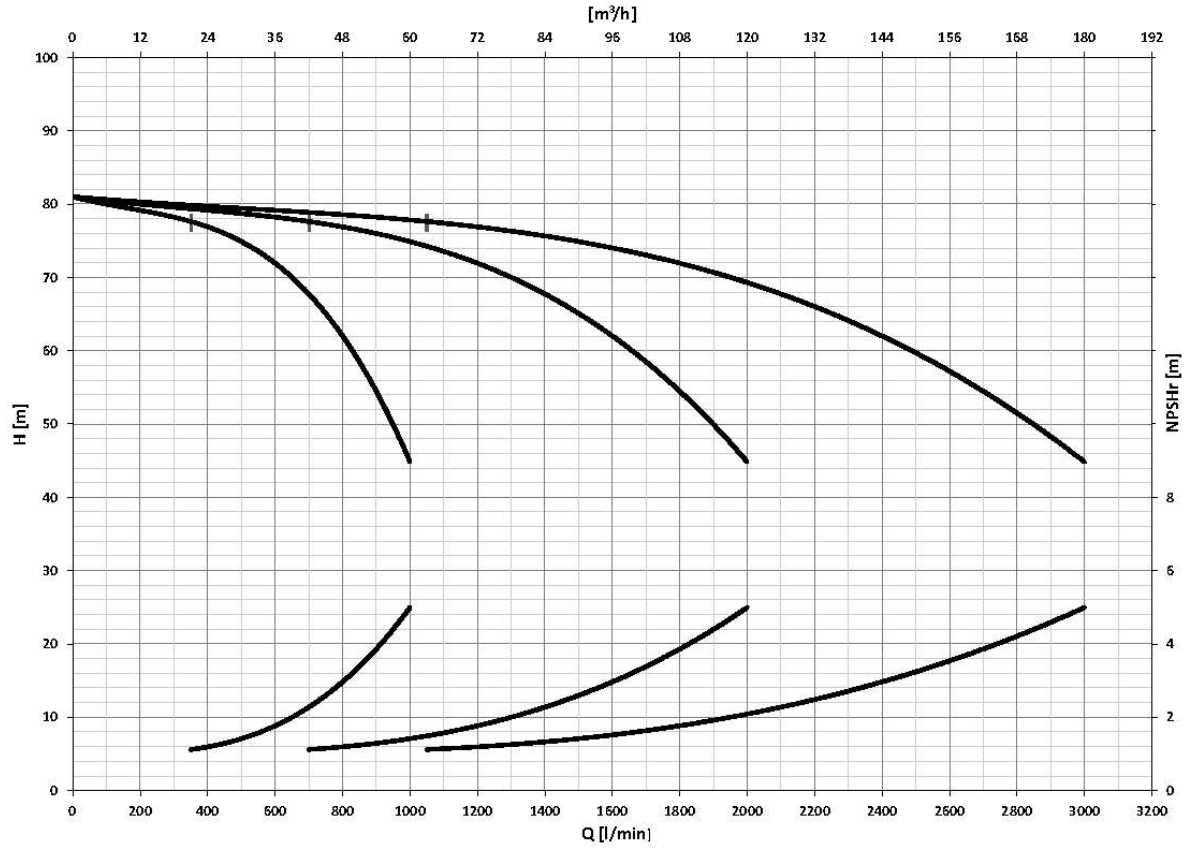
3GP(E) EVM 45 3-2/11

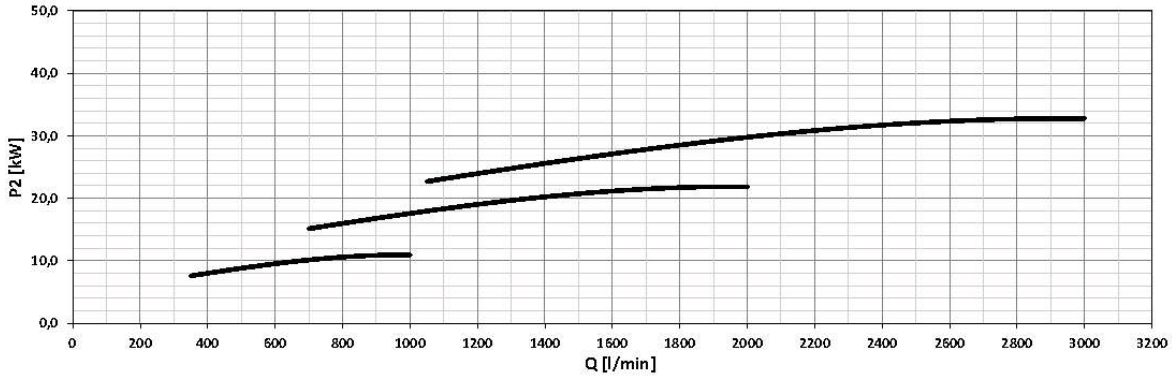


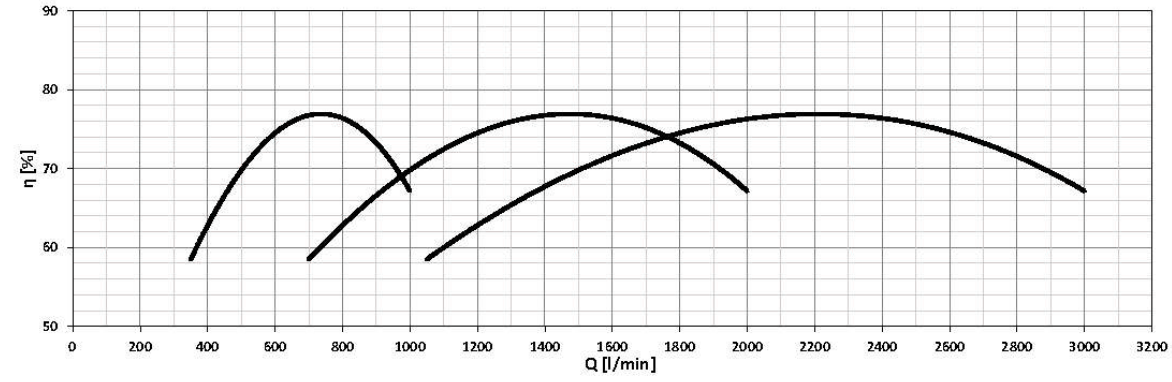




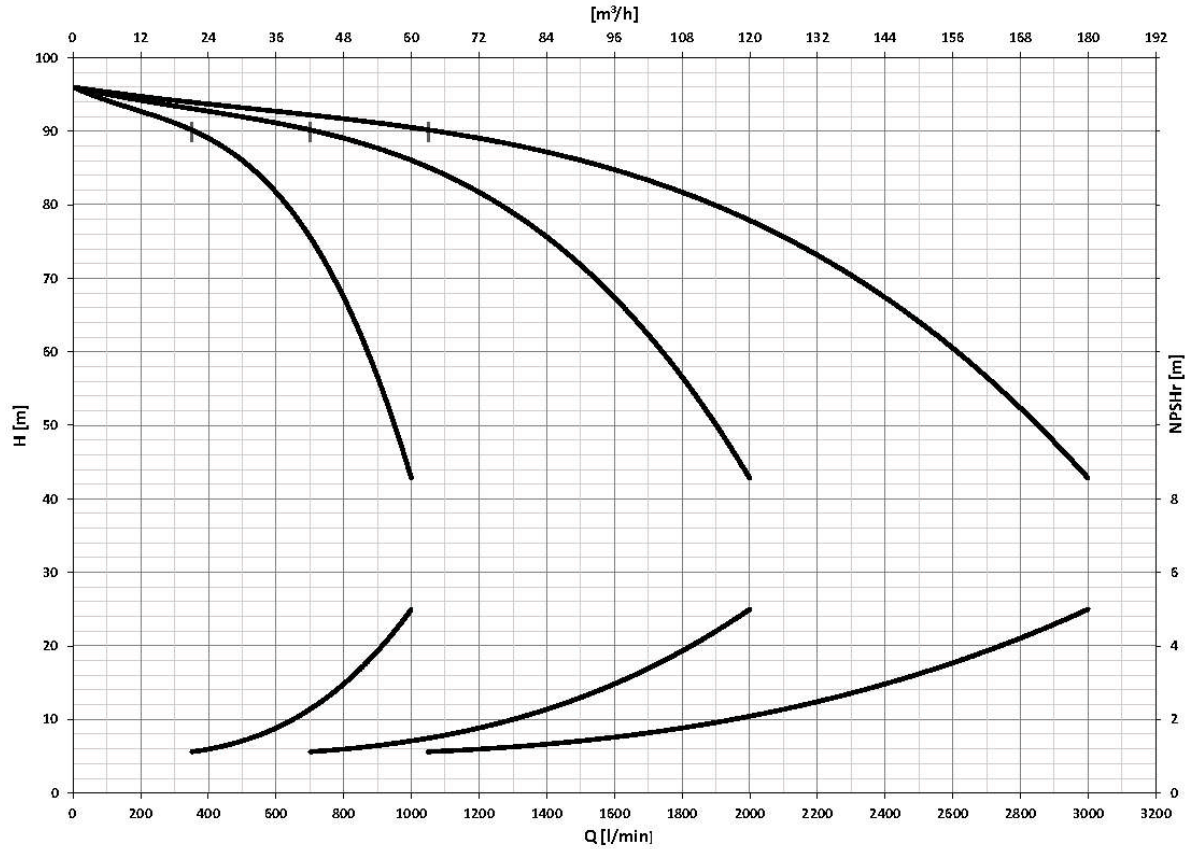
3GP(E) EVM 45 3-0/11

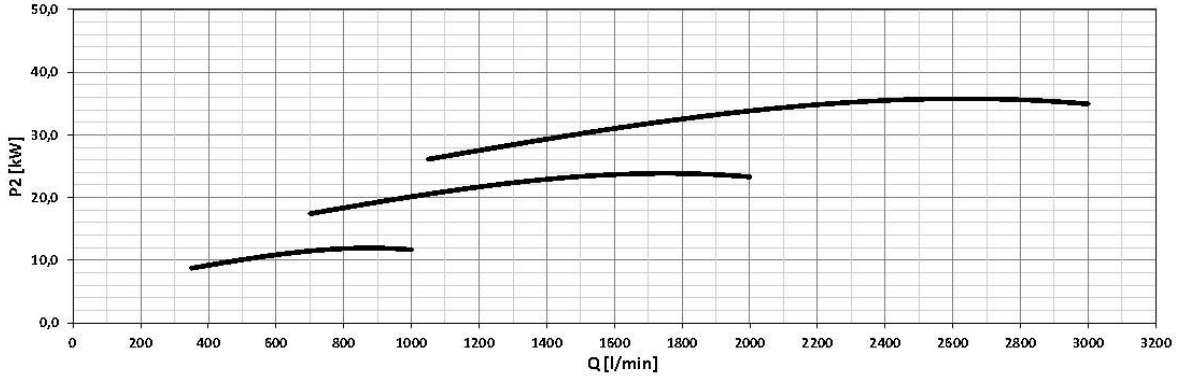


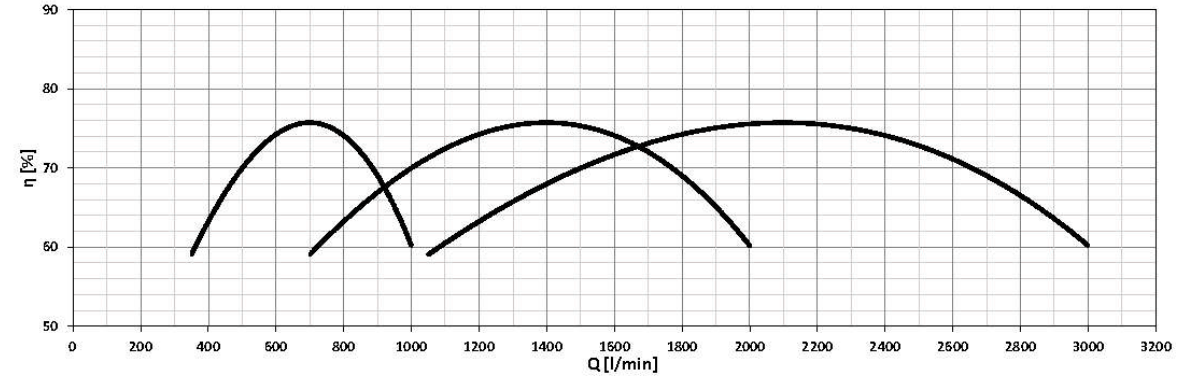




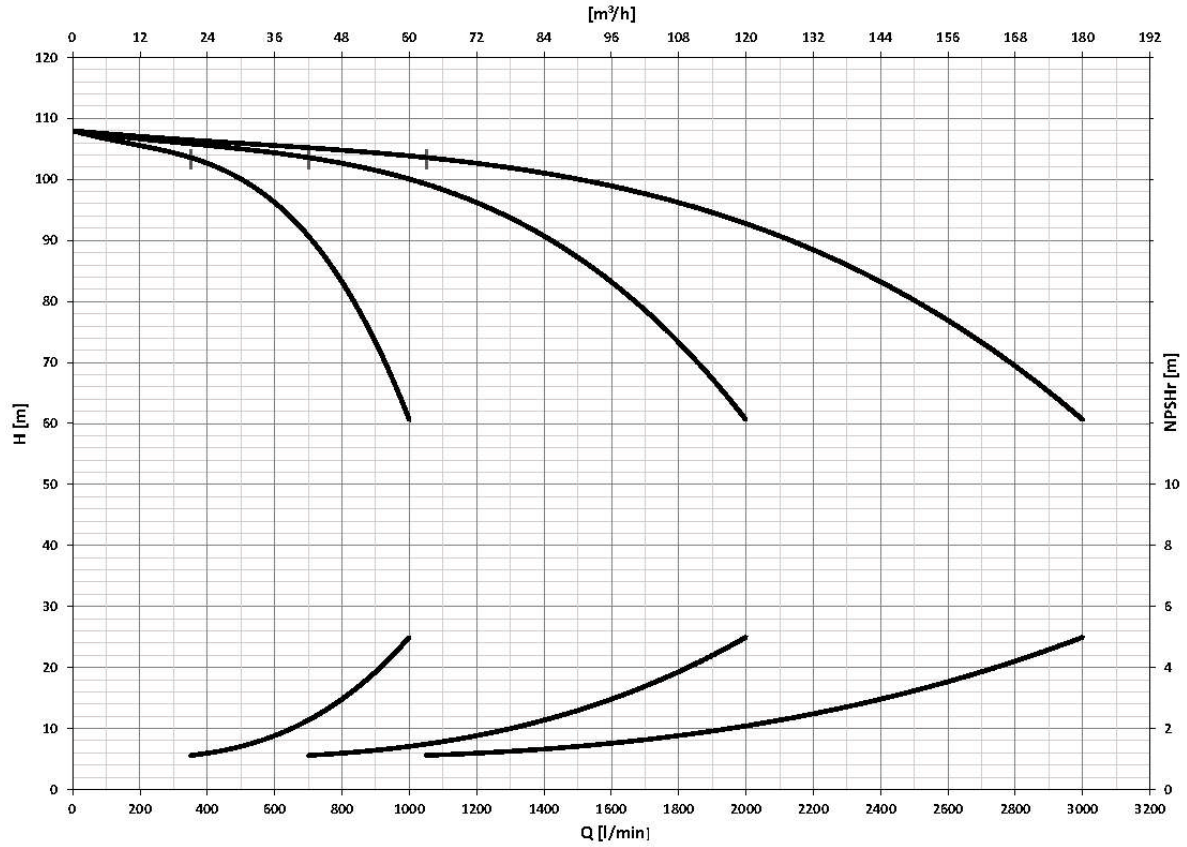
3GP(E) EVM 45 4-2/15

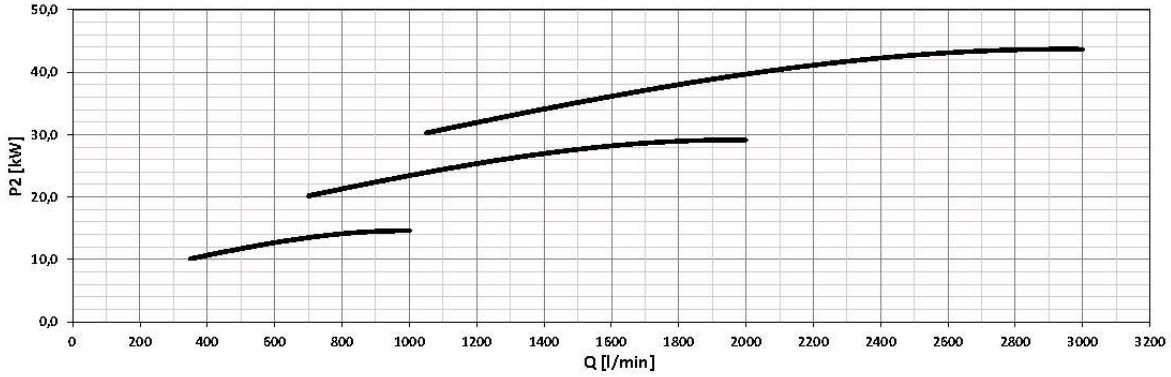


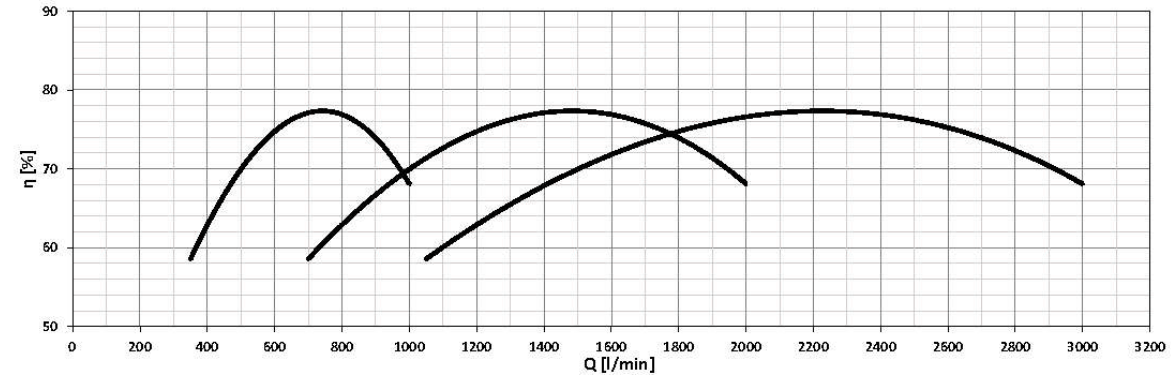




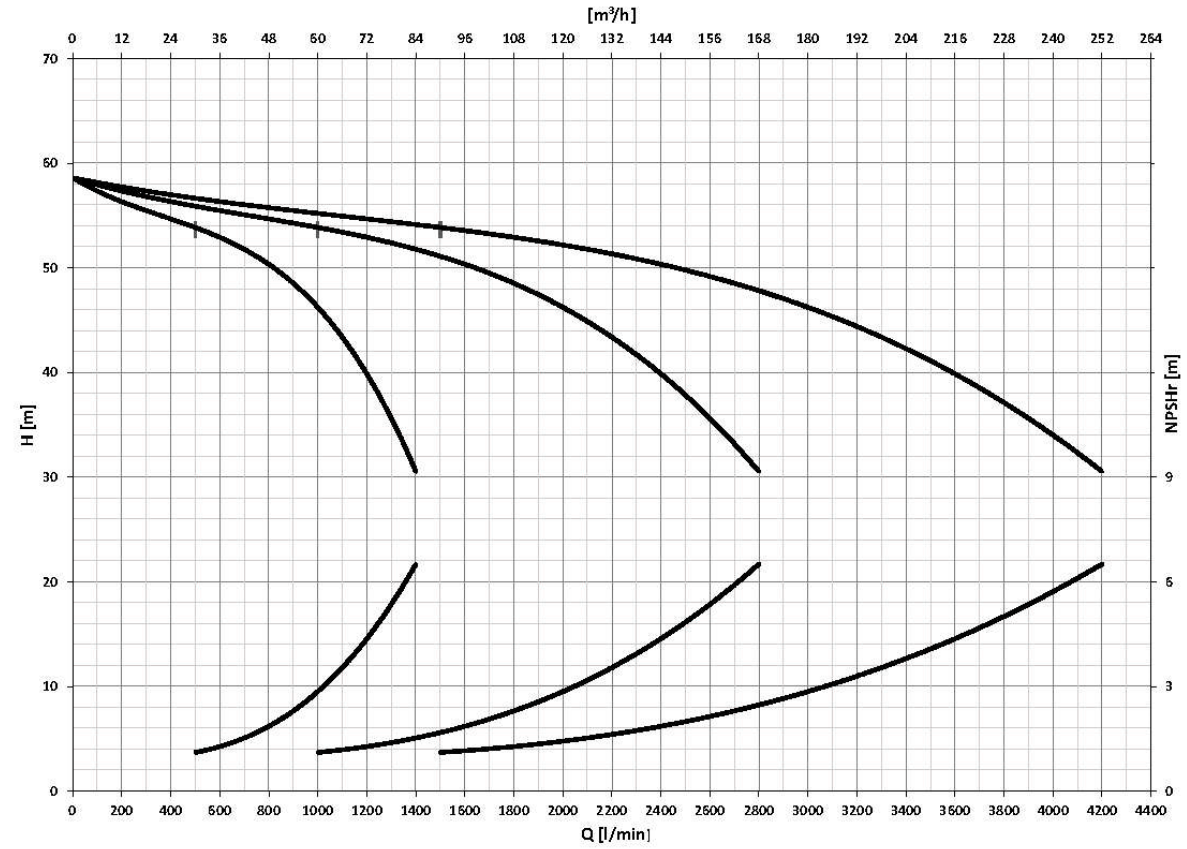
3GP(E) EVM 45 4-0/15

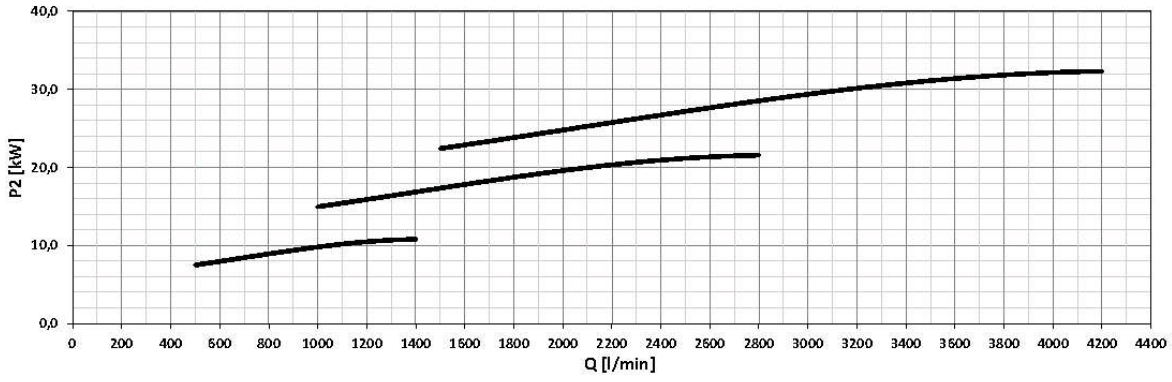


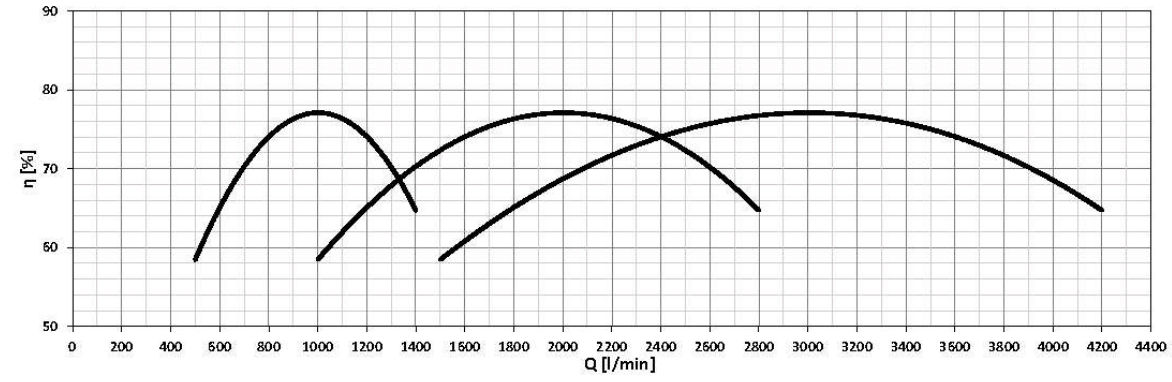




3GP(E) EVM 64 2-0/11



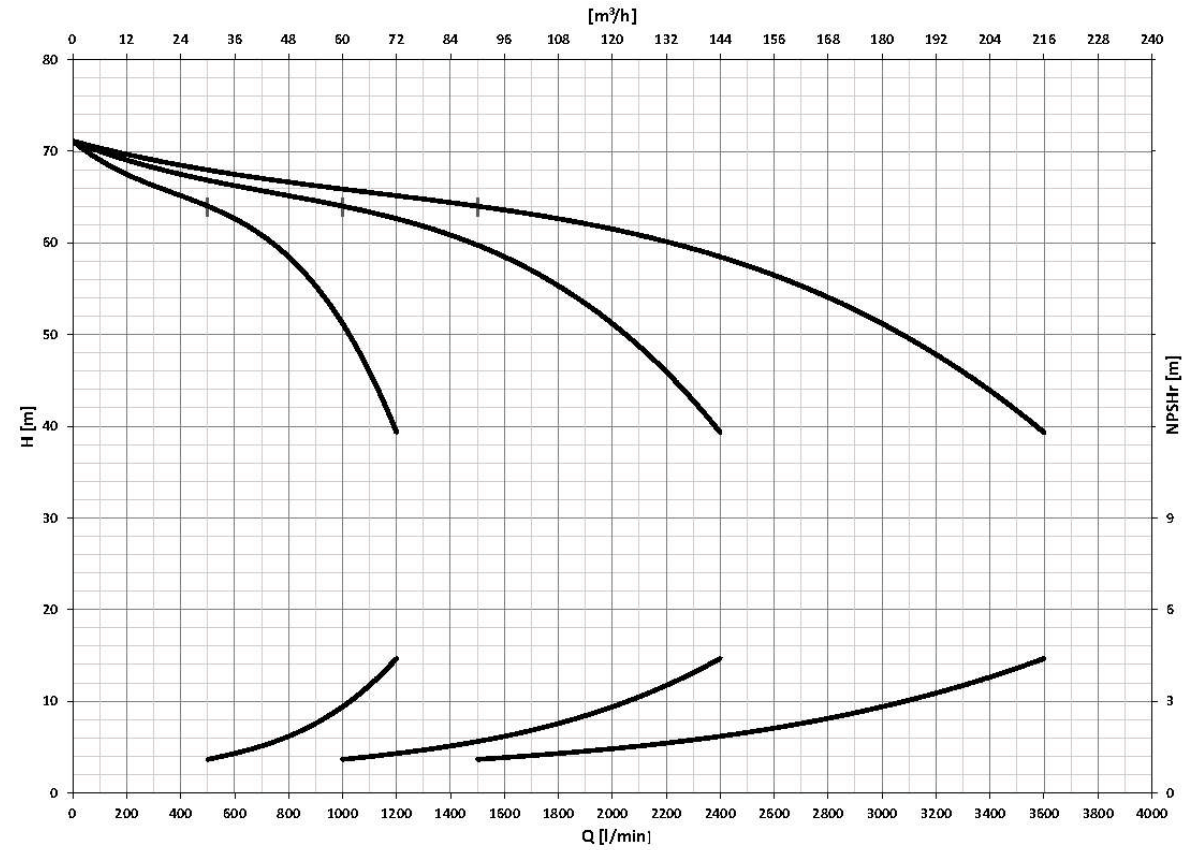


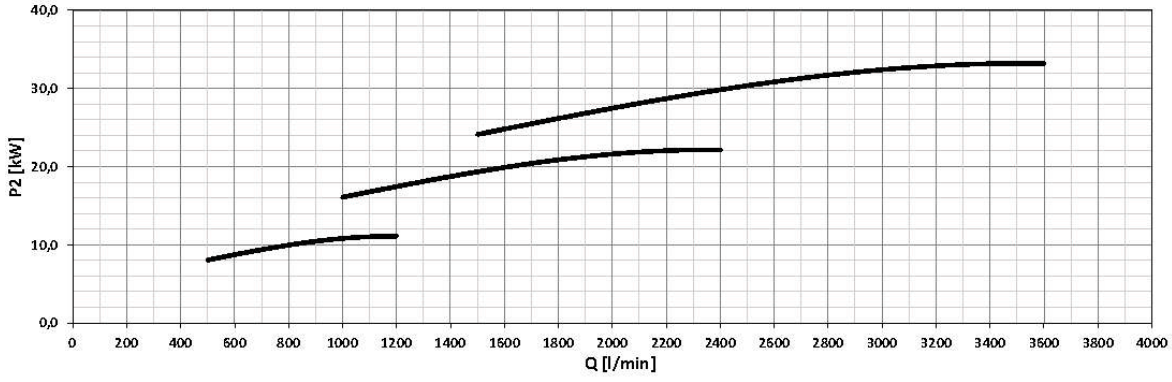


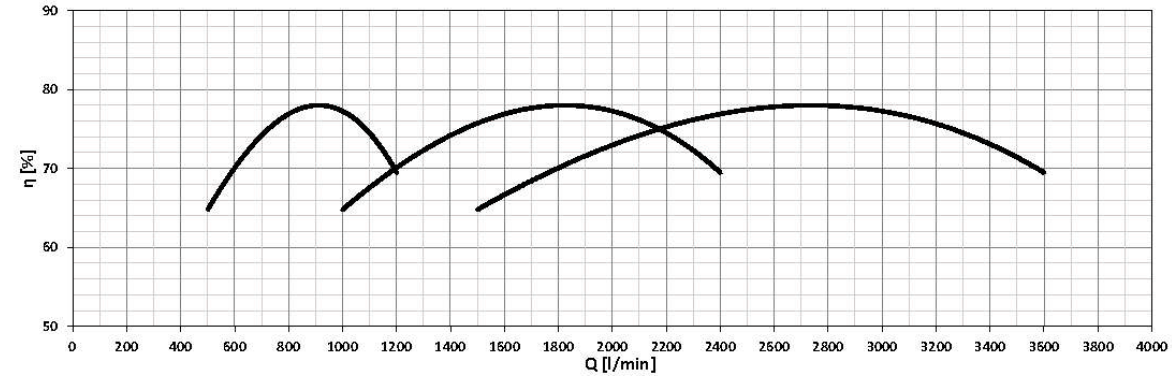
GP-GPE

PERFORMANCE CURVE

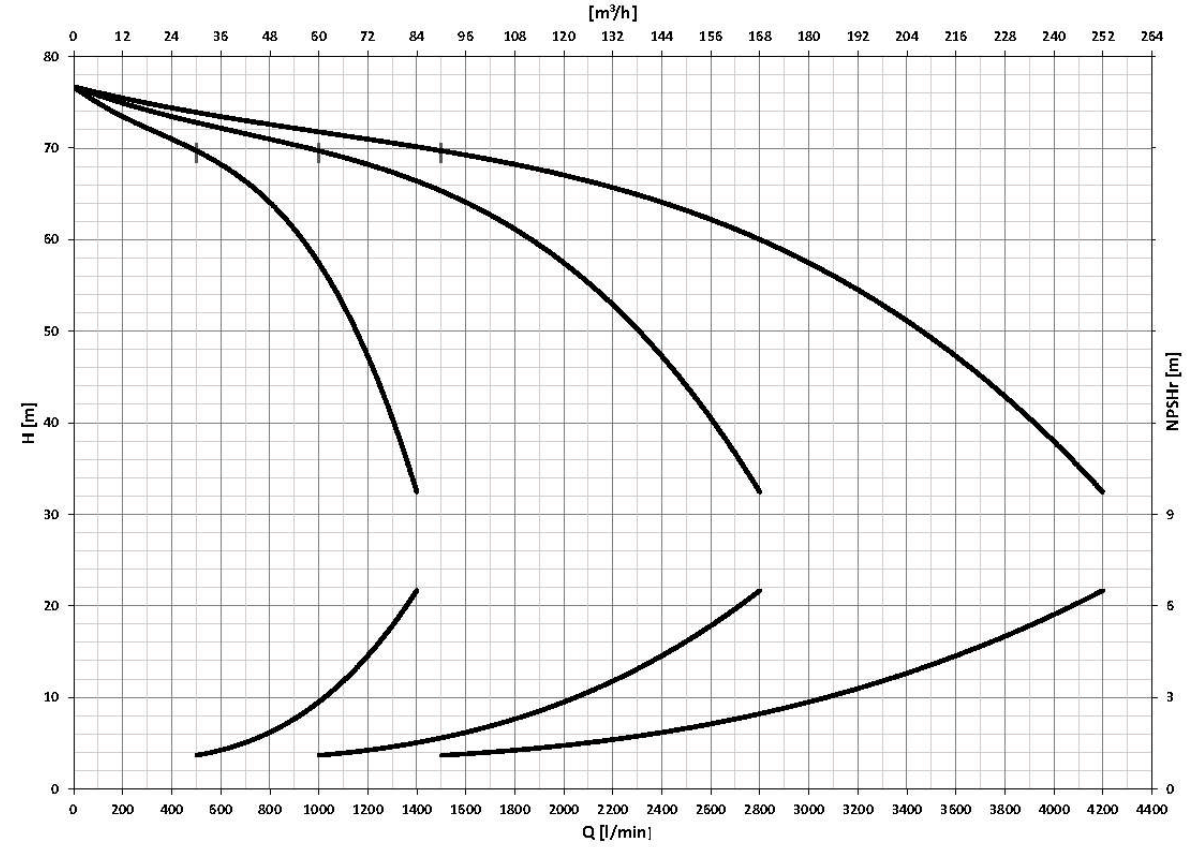
3GP(E) EVM 64 3-3/15

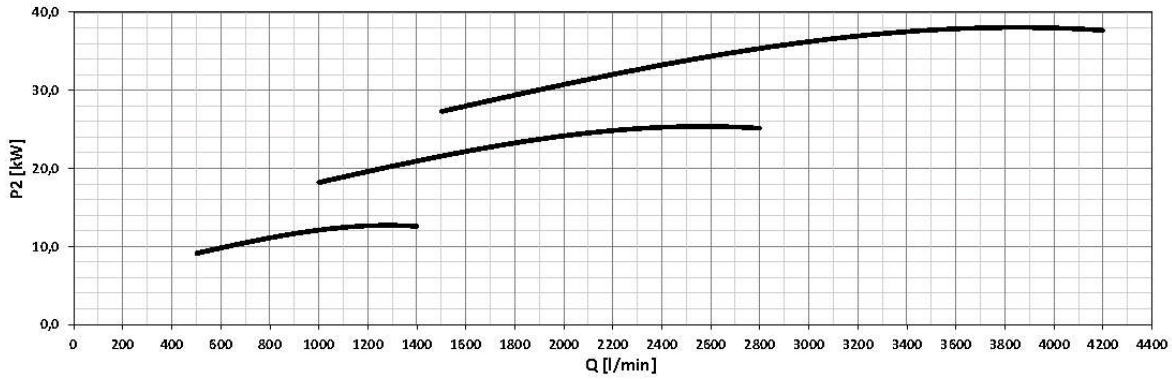


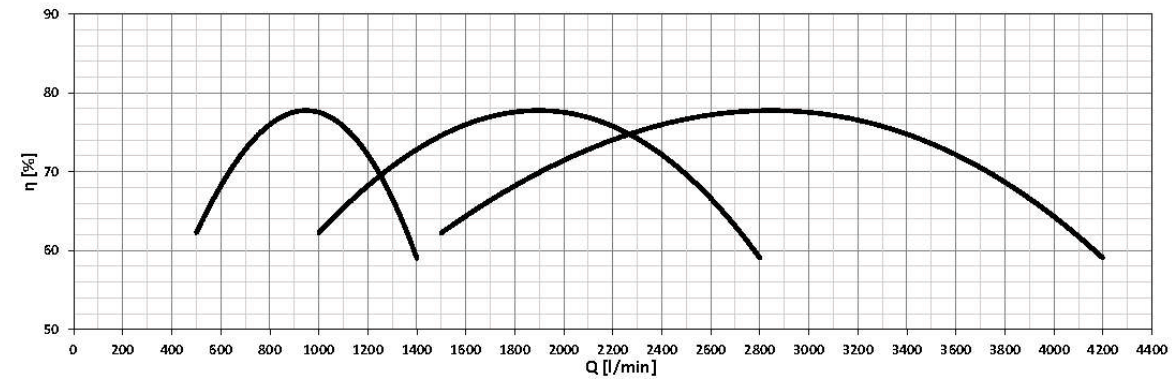




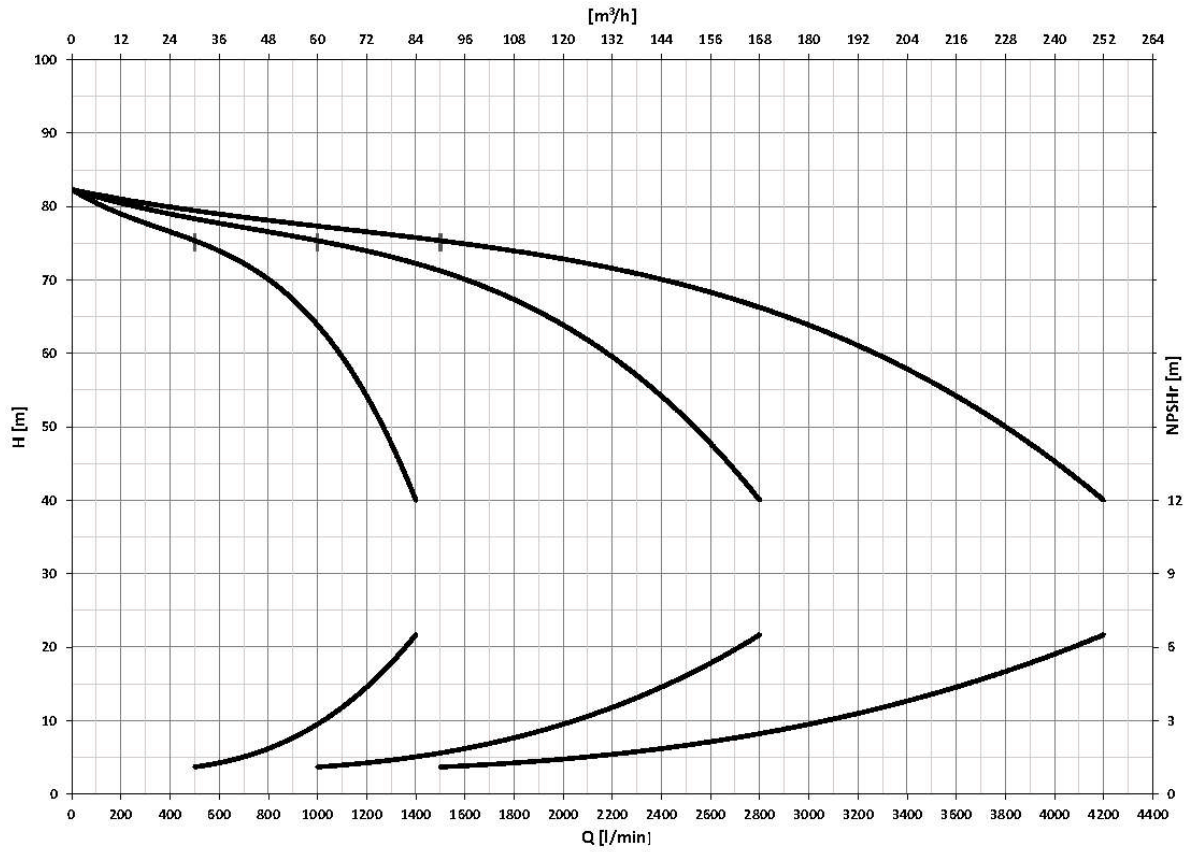
3GP(E) EVM 64 3-2/15

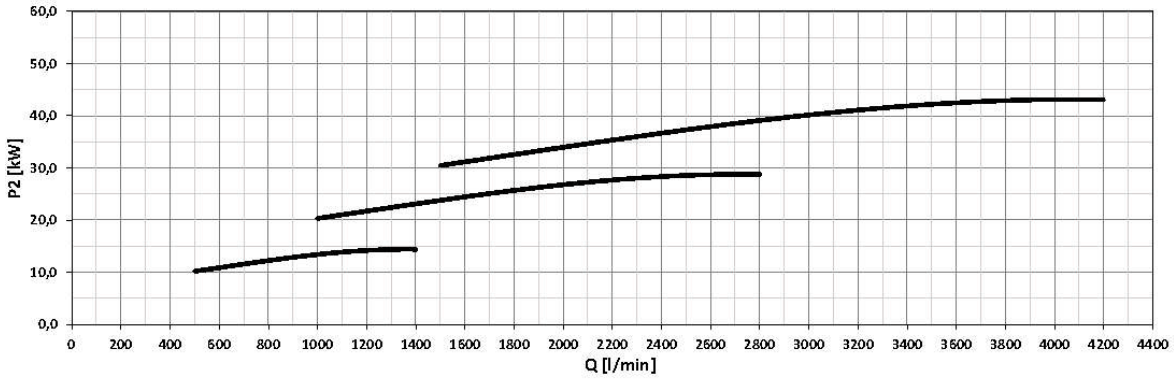


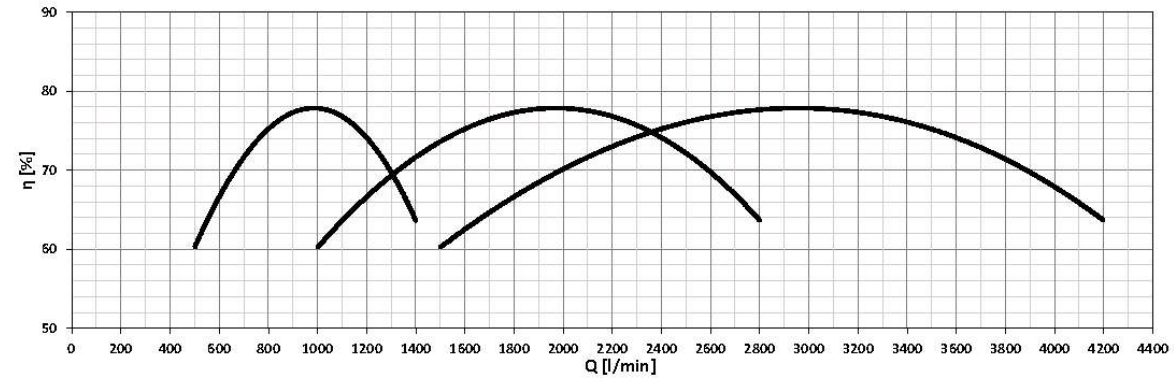




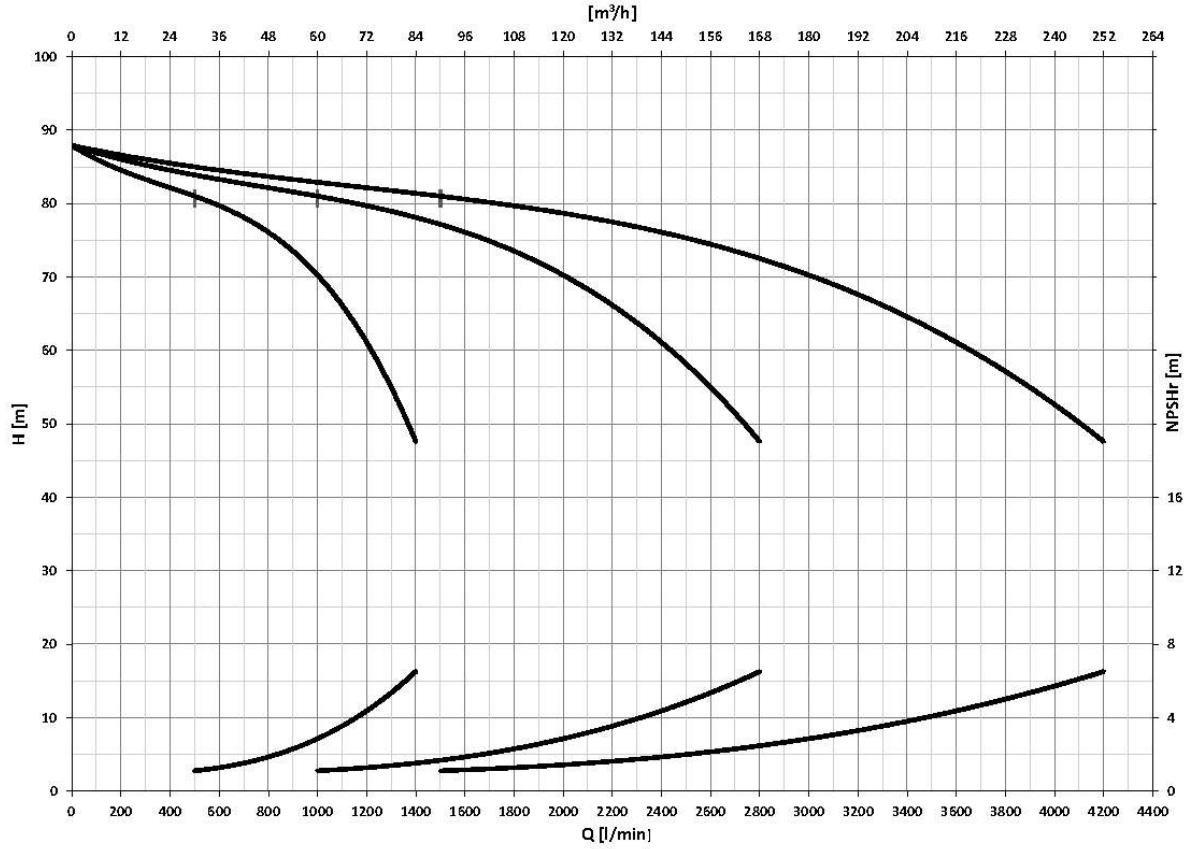
3GP(E) EVM 64 3-1/15

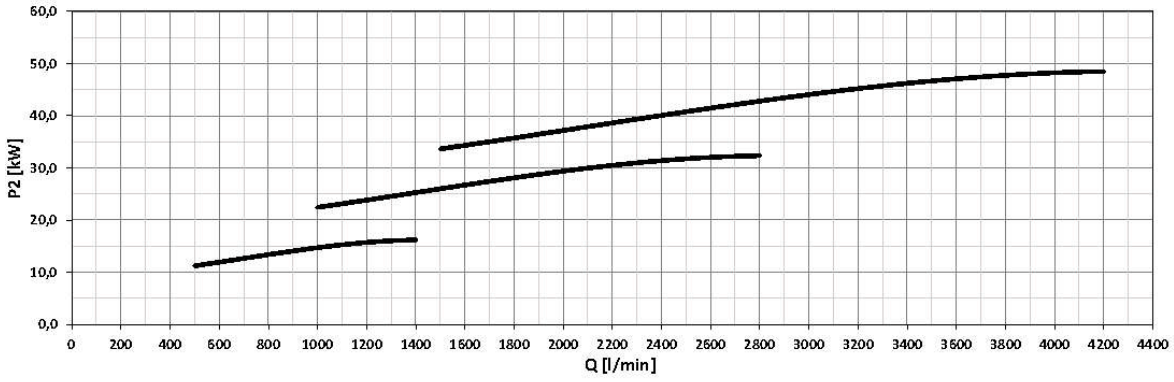


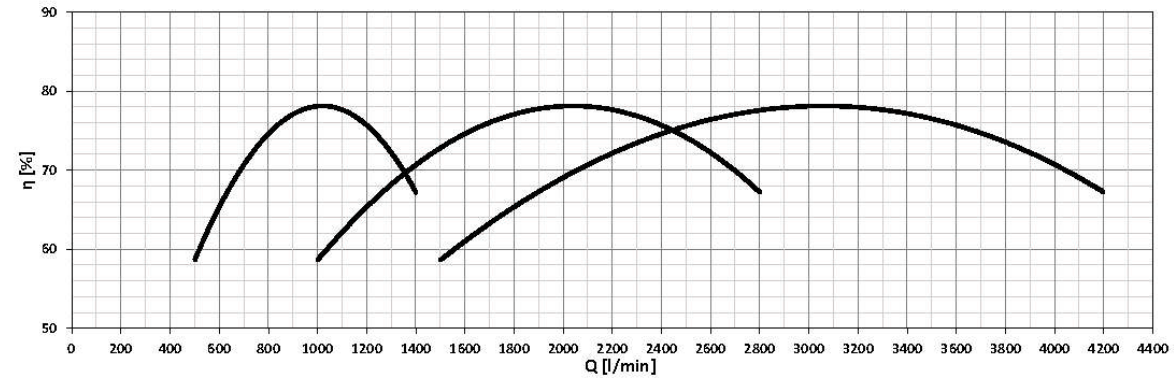




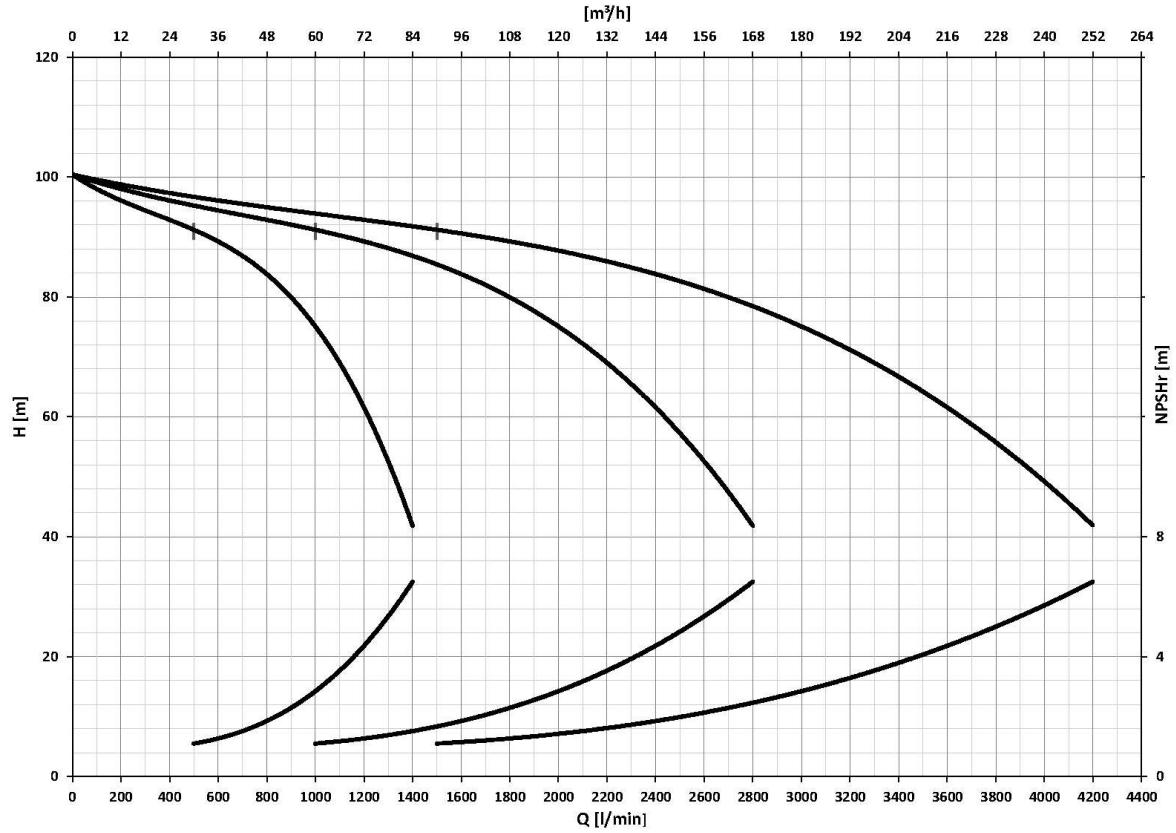
3GP(E) EVM 64 3-0/18.5

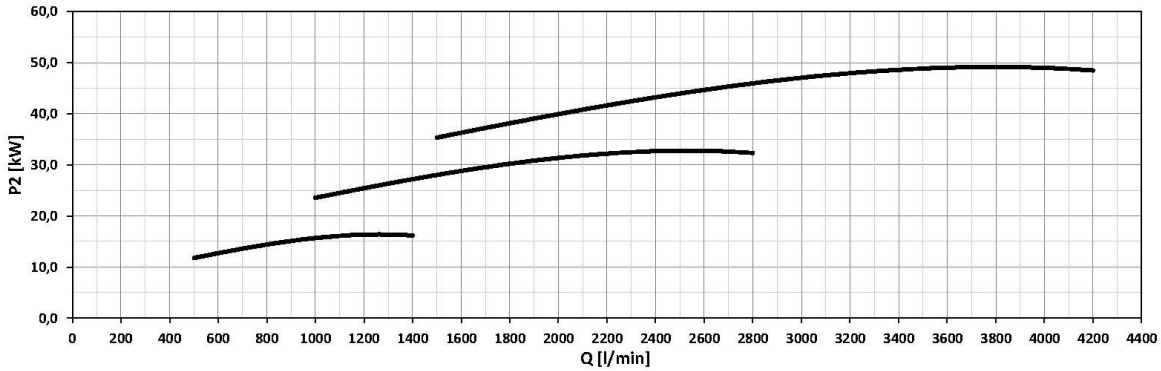


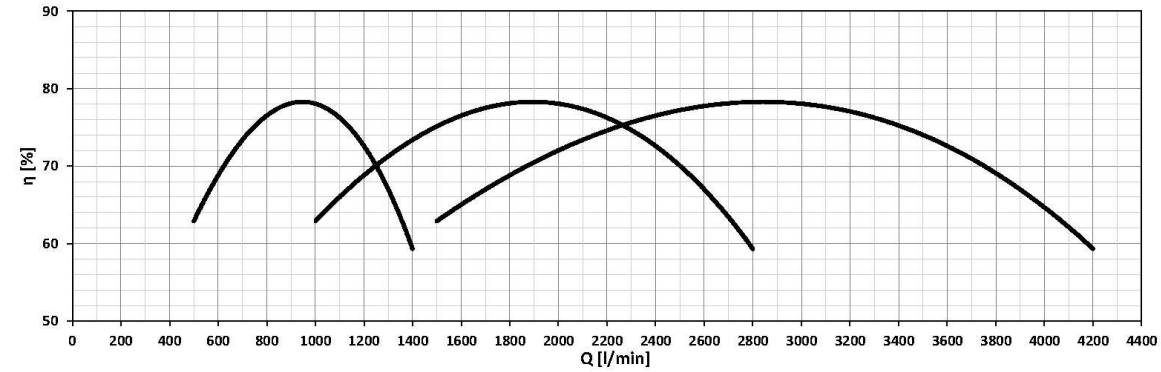




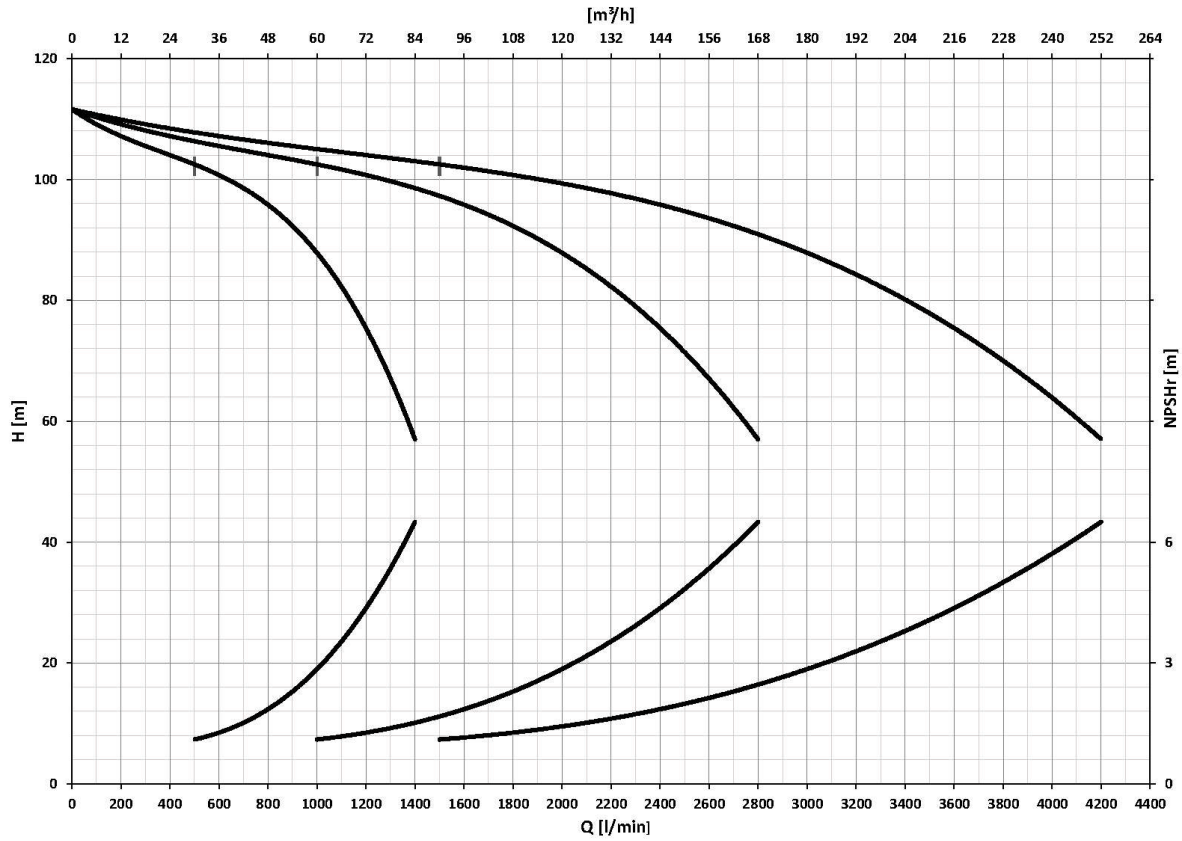
3GP(E) EVM 64 4-3/18.5

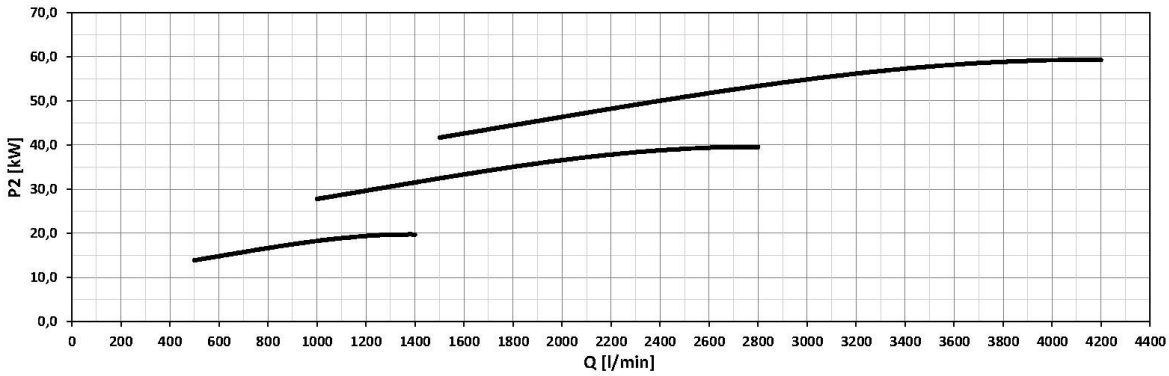


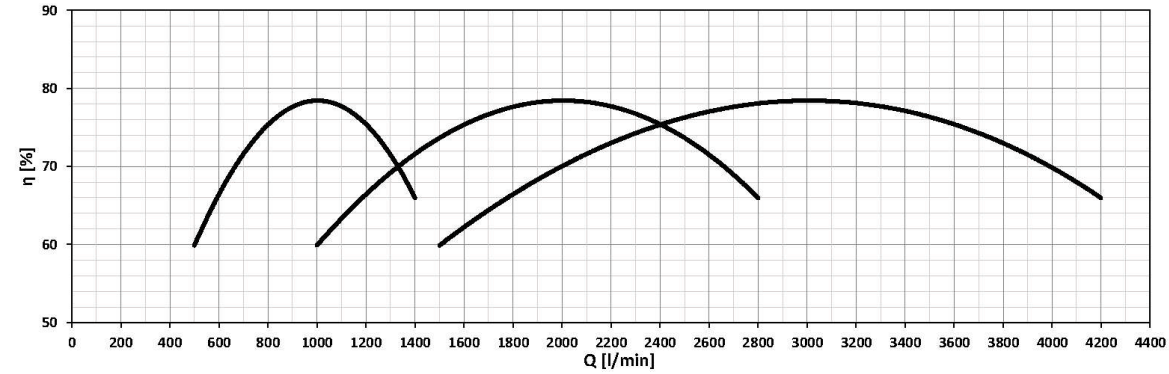




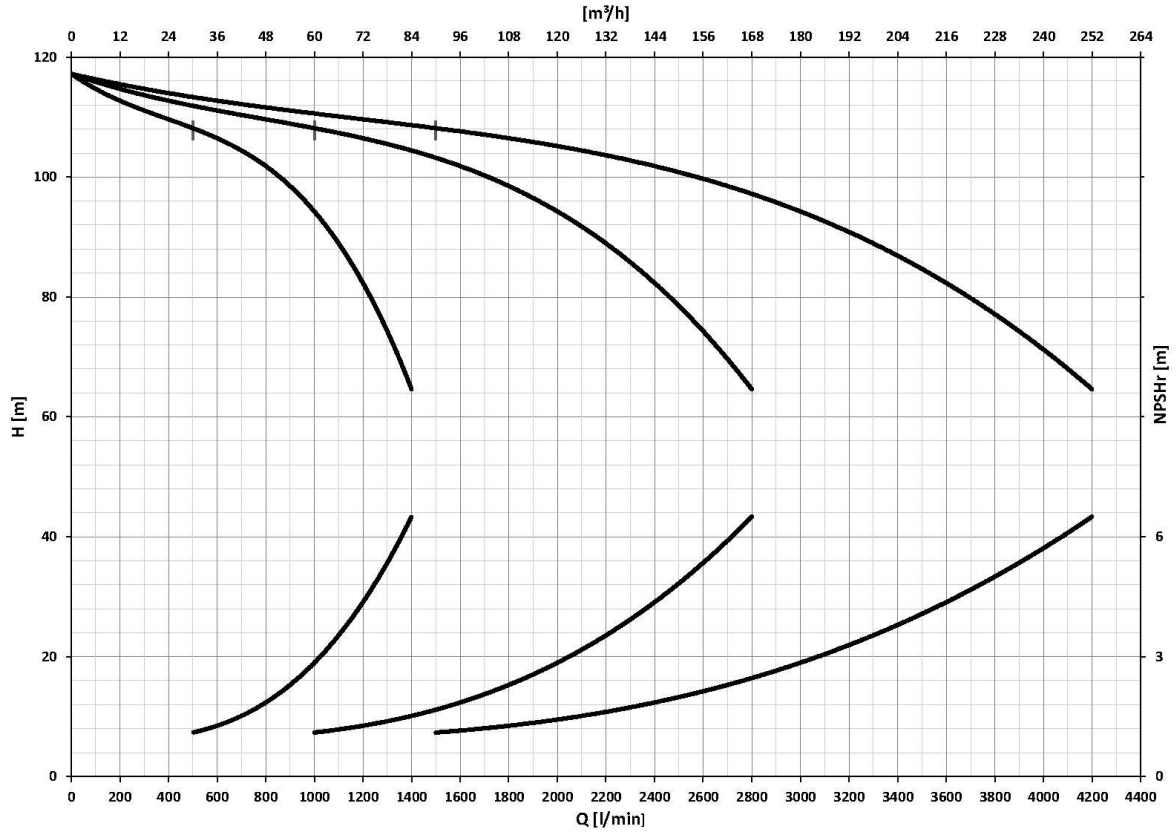
3GP(E) EVM 64 4-1/22

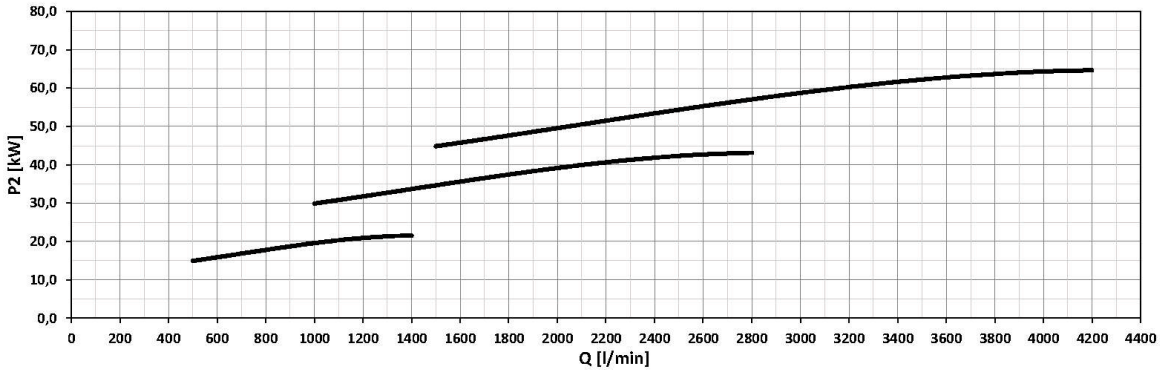


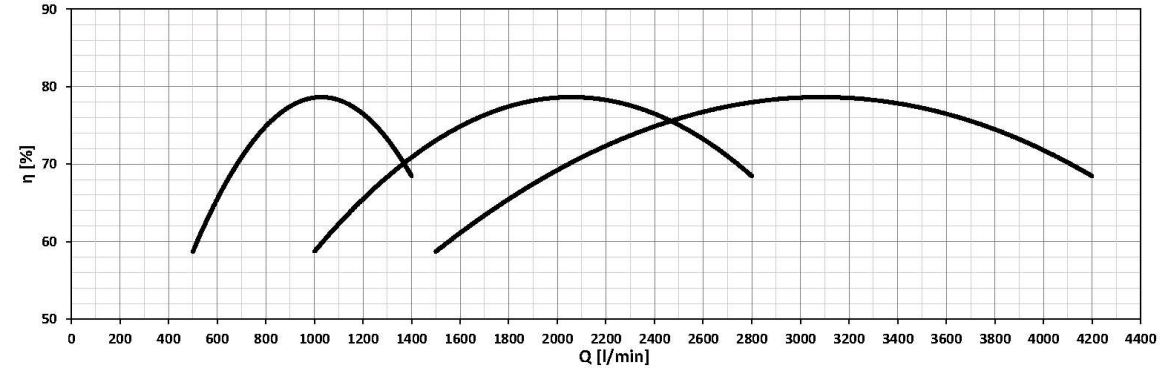




3GP(E) EVM 64 4-0/22

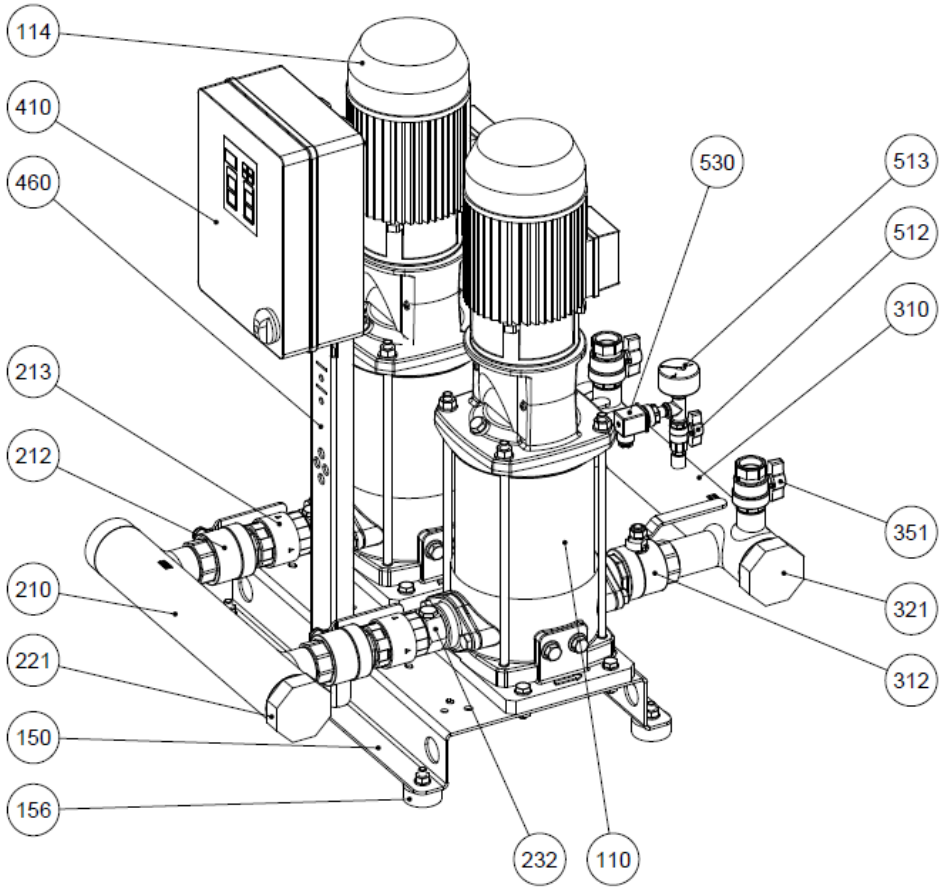






2GP CONSTRUCTION

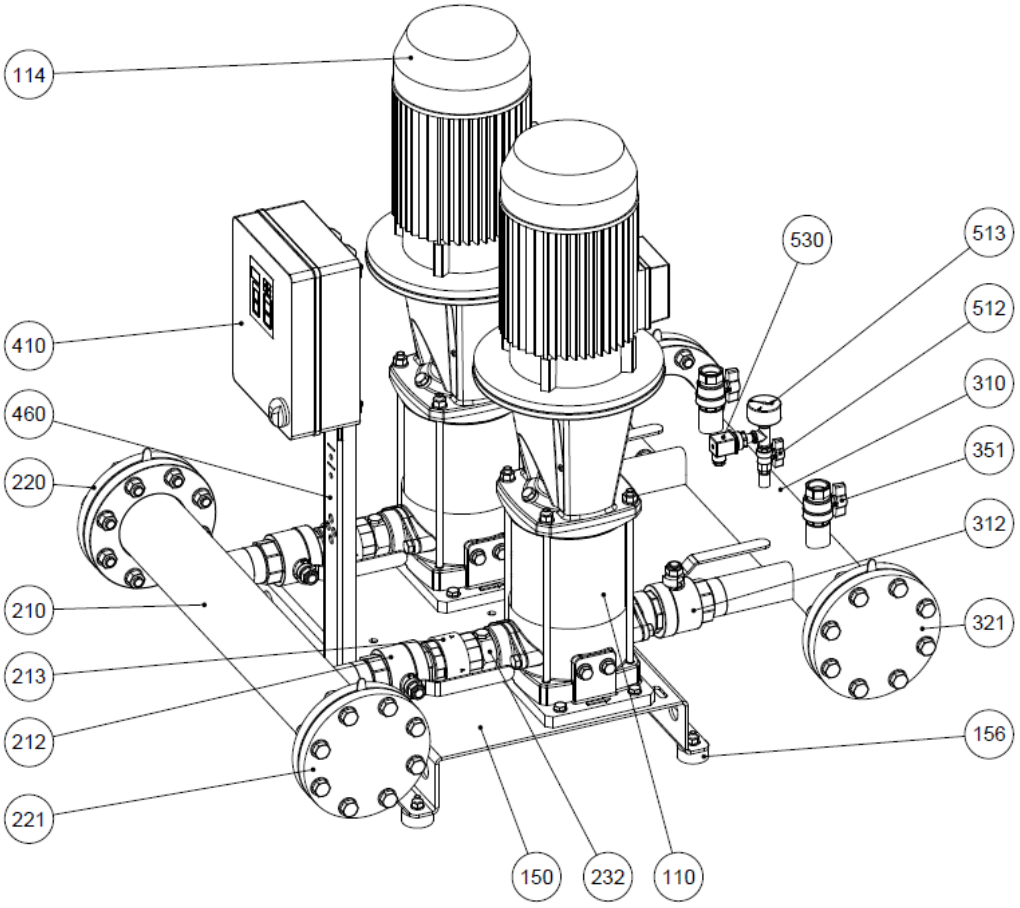
EXTERNAL VIEW 2GP EVMS(.) 3-5-10-15



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	2
114	Electric motor	-	2
150	Basement	Galvanized steel	1
156	Basement foot	SBR	4
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	2
213	Check valve	Brass / NBR	2
221	Threaded female cap	Yellow brass [1]	1
232	Nipple for air feeders	Yellow brass	2
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	2
321	Threaded female cap	Yellow brass [1]	1
351	Ball valve	CW617N / CW614N	2
410	Control panel	-	1
460	Control panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	1

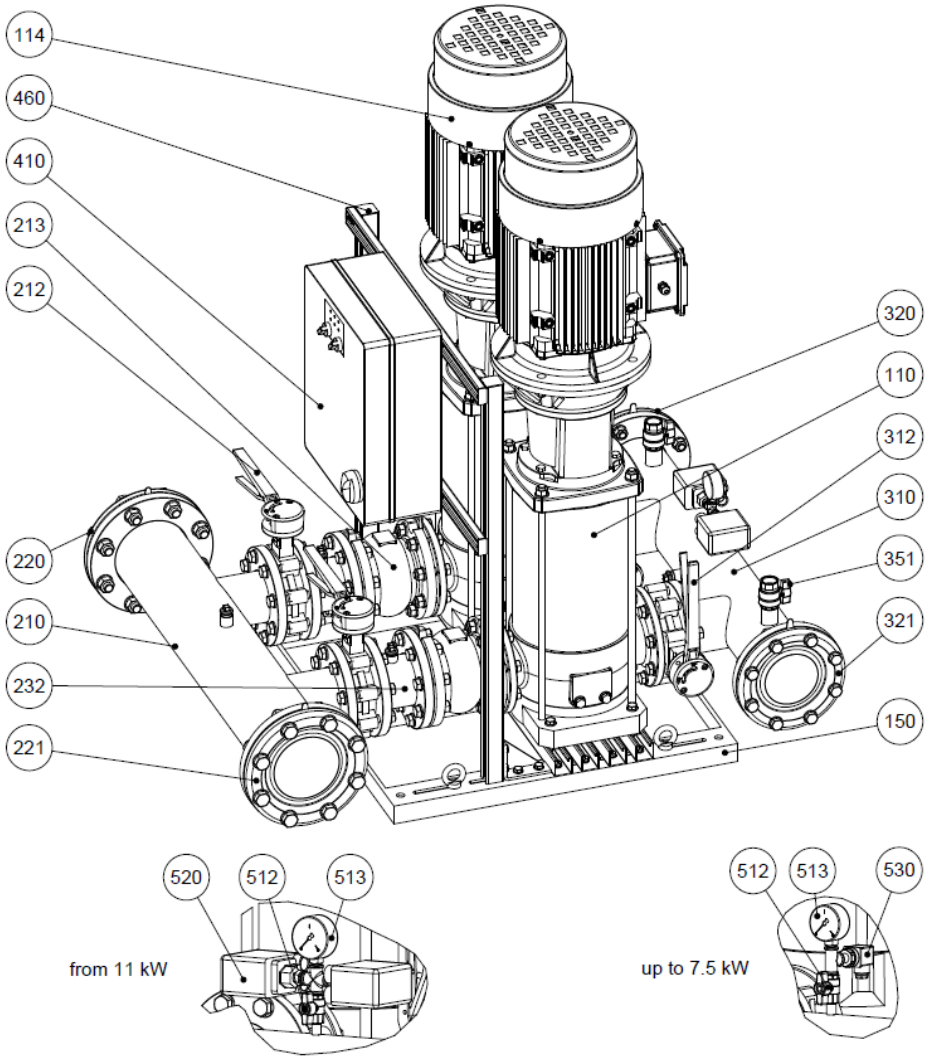
[1] Stainless steel only for EVMS(.) 15

EXTERNAL VIEW 2GP EVMS(.) 20



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	2
114	Electric motor	-	2
150	Basement	Galvanized steel	1
156	Basement foot	SBR	4
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	2
213	Check valve	Brass / NBR	2
220	Counterflange	AISI 304	1
221	Blind counterflange	AISI 304	1
232	Nipple for air feeders	Yellow brass	2
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	2
320	Counterflange	AISI 304	1
321	Blind counterflange	AISI 304	1
351	Ball valve	CW617N / CW614N	2
410	Control panel	-	1
460	Control panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	1

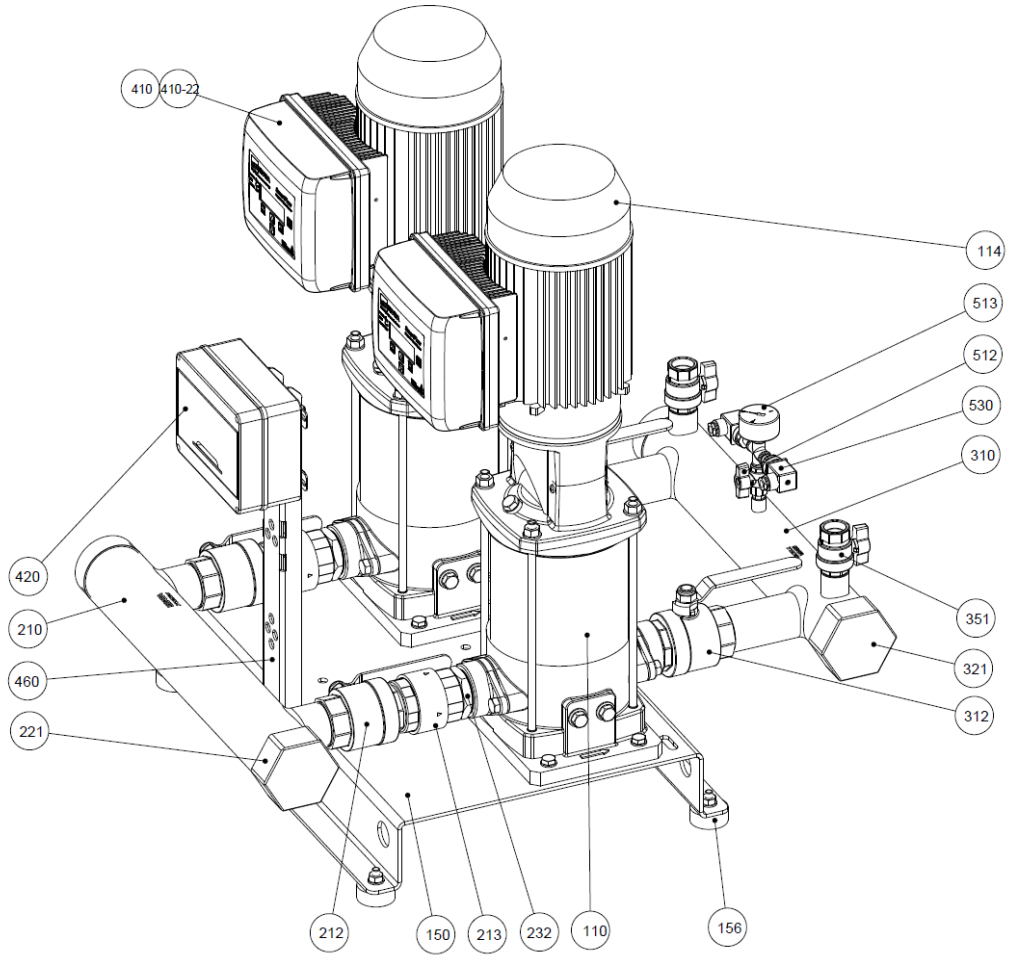
EXTERNAL VIEW 2GP EVM(.) 32-45-64



N°	PART NAME	MATERIAL	Quantity up to 7.5 kW	Quantity from 11 kW
110	Principal pump	-	2	
114	Electric motor	-	2	
150	Frame	Galvanized steel	1	
210	Suction manifold	Galvanized steel	1	
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	2	
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	2	
220	Counterflange	Galvanized steel	1	
221	Blind counterflange	Galvanized steel	1	
232	Flanged socket for air feeders	Galvanized steel	2	
310	Discharge manifold	Galvanized steel	1	
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	2	
320	Counterflange	Galvanized steel	1	
321	Blind counterflange	Galvanized steel	1	
351	Ball valve	CW617N / CW614N	2	
410	Control panel	-	1	
460	Control panel frame	Galvanized steel	1	
512	Ball valve	CW617N / CW614N	1	
513	Pressure gauge	Copper alloy / plastic	1	
520	Pressure switches	-	-	2
530	Pressure transmitter	-	1	-

2GPE CONSTRUCTION

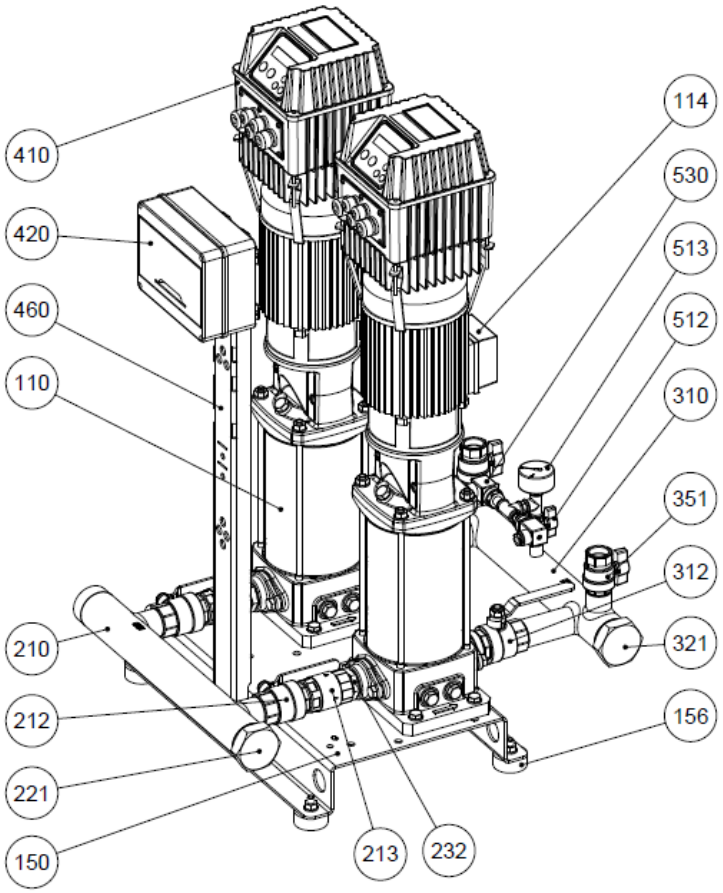
EXTERNAL VIEW 2GPE EVMS(.) 3-5-10-15 E-SPD



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	2
114	Electric motor	-	2
150	Basement	Galvanized steel	1
156	Basement foot	SBR	4
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	2
213	Check valve	Brass / NBR	2
221	Threaded female cap	Yellow brass [1]	1
232	Nipple	Yellow brass	2
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	2
321	Threaded female cap	Yellow brass [1]	1
351	Ball valve	CW617N / CW614N	2
410	E-SPD	-	2
410-22	E-SPD adaptor		2
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	2

[1] Stainless steel only for EVMS(.) 15

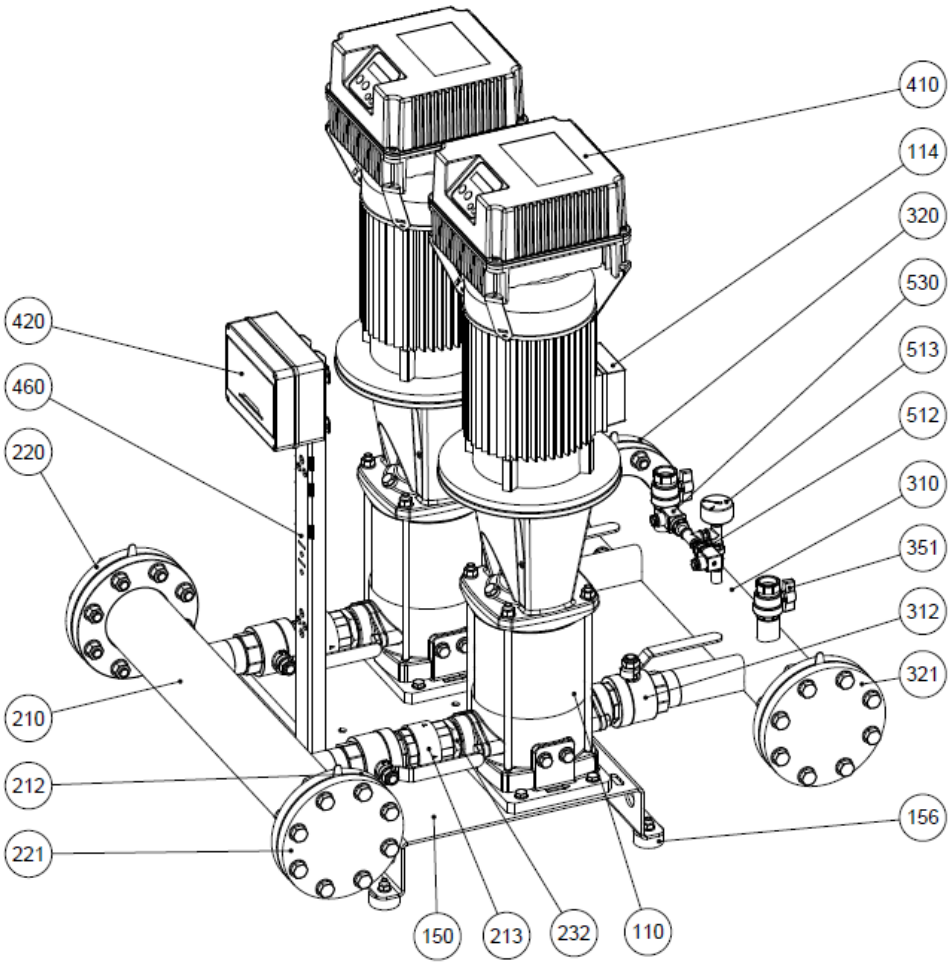
EXTERNAL VIEW 2GPE EVMS(.) 3-5-10-15 E-DRIVE



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	2
114	Electric motor	-	2
150	Basement	Galvanized steel	1
156	Basement foot	SBR	4
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	2
213	Check valve	Brass / NBR	2
221	Threaded female cap	Yellow brass [1]	1
232	Nipple	Yellow brass	2
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	2
321	Threaded female cap	Yellow brass [1]	1
351	Ball valve	CW617N / CW614N	2
410	E-Drive	-	2
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	2

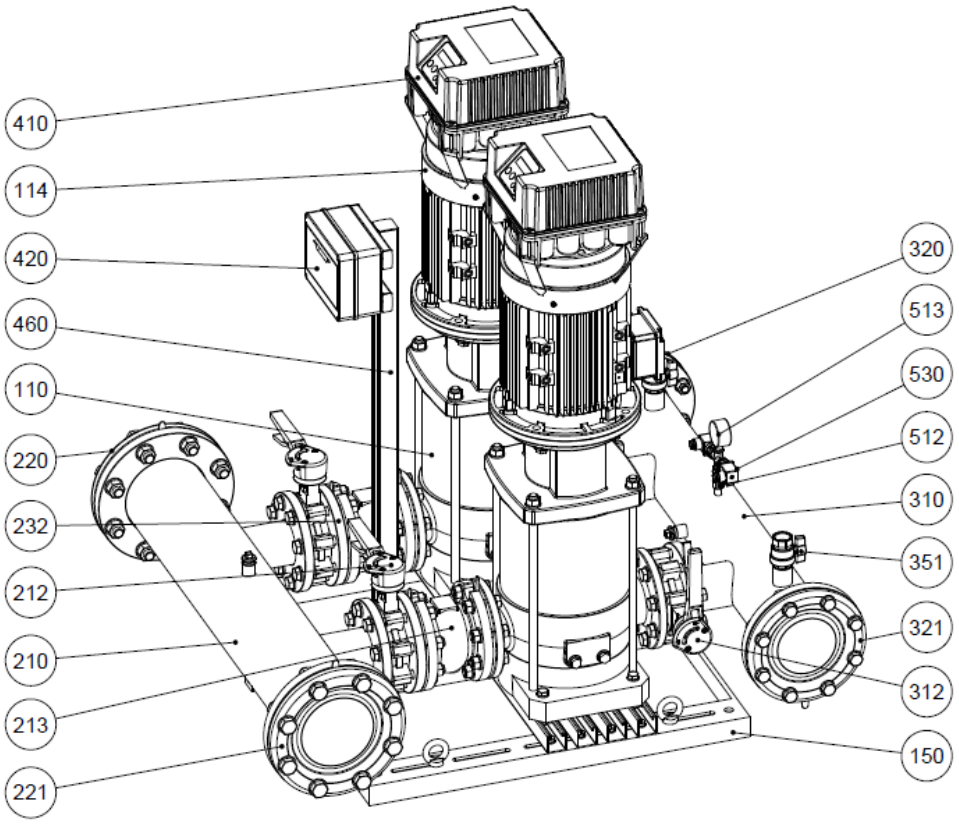
[1] Stainless steel only for EVMS(.) 15

EXTERNAL VIEW 2GPE EVMS(.) 20 E-DRIVE



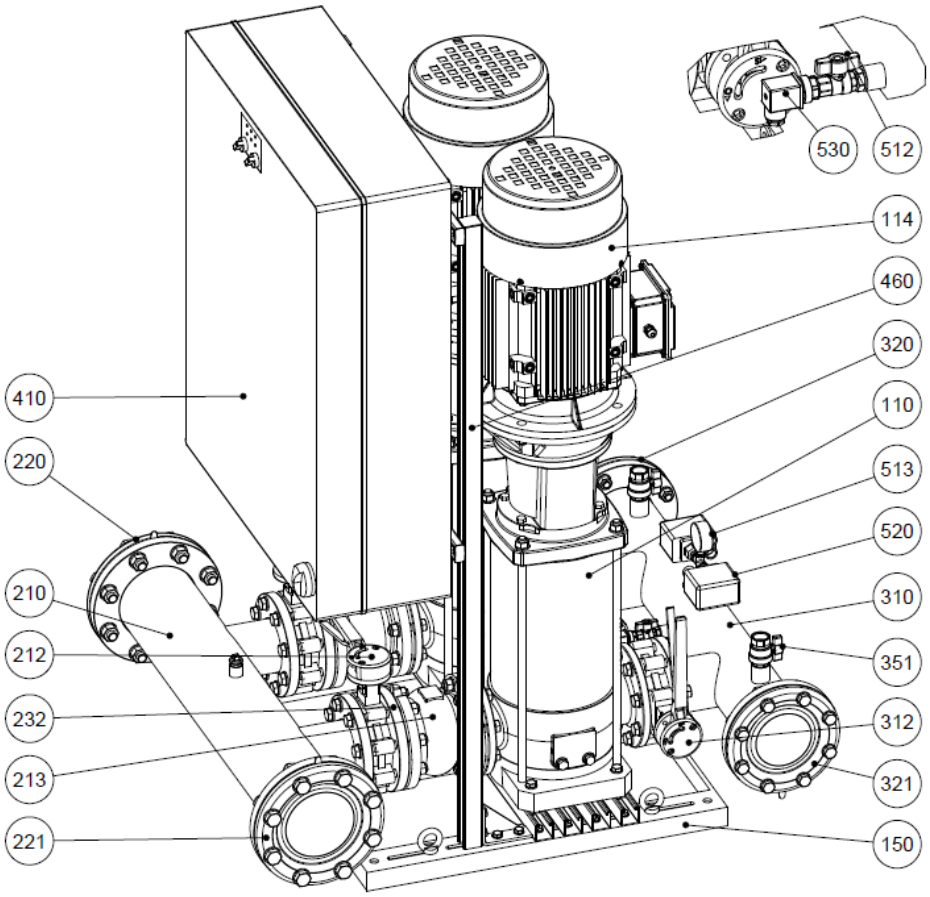
N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	2
114	Electric motor	-	2
150	Basement	Galvanized steel	1
156	Basement foot	SBR	4
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	2
213	Check valve	Brass / NBR	2
220	Counterflange	AISI 304	1
221	Blind counterflange	AISI 304	1
232	Nipple	Yellow brass	2
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	2
320	Counterflange	AISI 304	1
321	Blind counterflange	AISI 304	1
351	Ball valve	CW617N / CW614N	2
410	E-Drive	-	2
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	2

EXTERNAL VIEW 2GPE EVM(.) 32-45-64 E-DRIVE



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	2
114	Electric motor	-	2
150	Basement	Galvanized steel	1
210	Suction manifold	Galvanized steel	1
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	2
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	2
220	Counterflange	Galvanized steel	1
221	Blind counterflange	Galvanized steel	1
232	Spacer flange	Galvanized steel	2
310	Discharge manifold	Galvanized steel	1
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	2
320	Counterflange	Galvanized steel	1
321	Blind counterflange	Galvanized steel	1
351	Ball valve	CW617N / CW614N	2
410	E-Drive	-	2
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	2

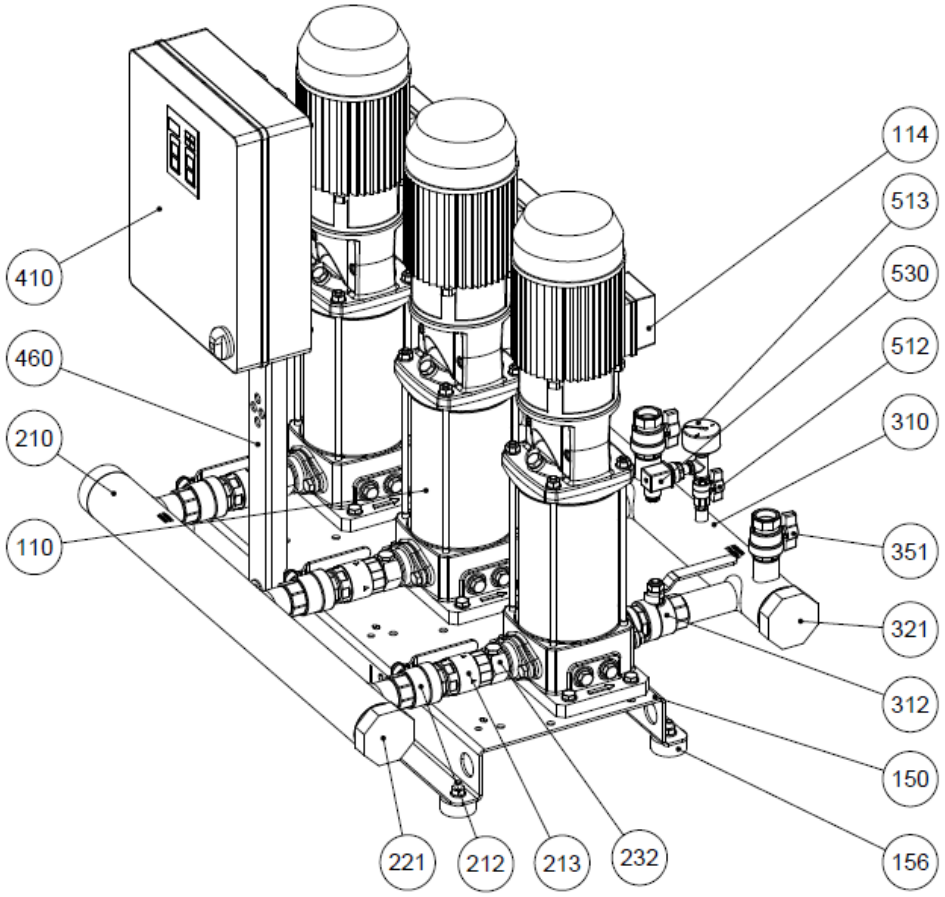
EXTERNAL VIEW 2GPE EVM(.) 32-45-64 EFC/MFC



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	2
114	Electric motor	-	2
150	Frame	Galvanized steel	1
210	Suction manifold	Galvanized steel	1
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	2
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	2
220	Counterflange	Galvanized steel	1
221	Blind counterflange	Galvanized steel	1
232	Spacer flange	Galvanized steel	2
310	Discharge manifold	Galvanized steel	1
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	2
320	Counterflange	Galvanized steel	1
321	Blind counterflange	Galvanized steel	1
410	Control panel	-	1
460	Control panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	2
513	Pressure gauge	Copper alloy / plastic	1
520	Pressure switches	-	2
530	Pressure transmitter	-	1

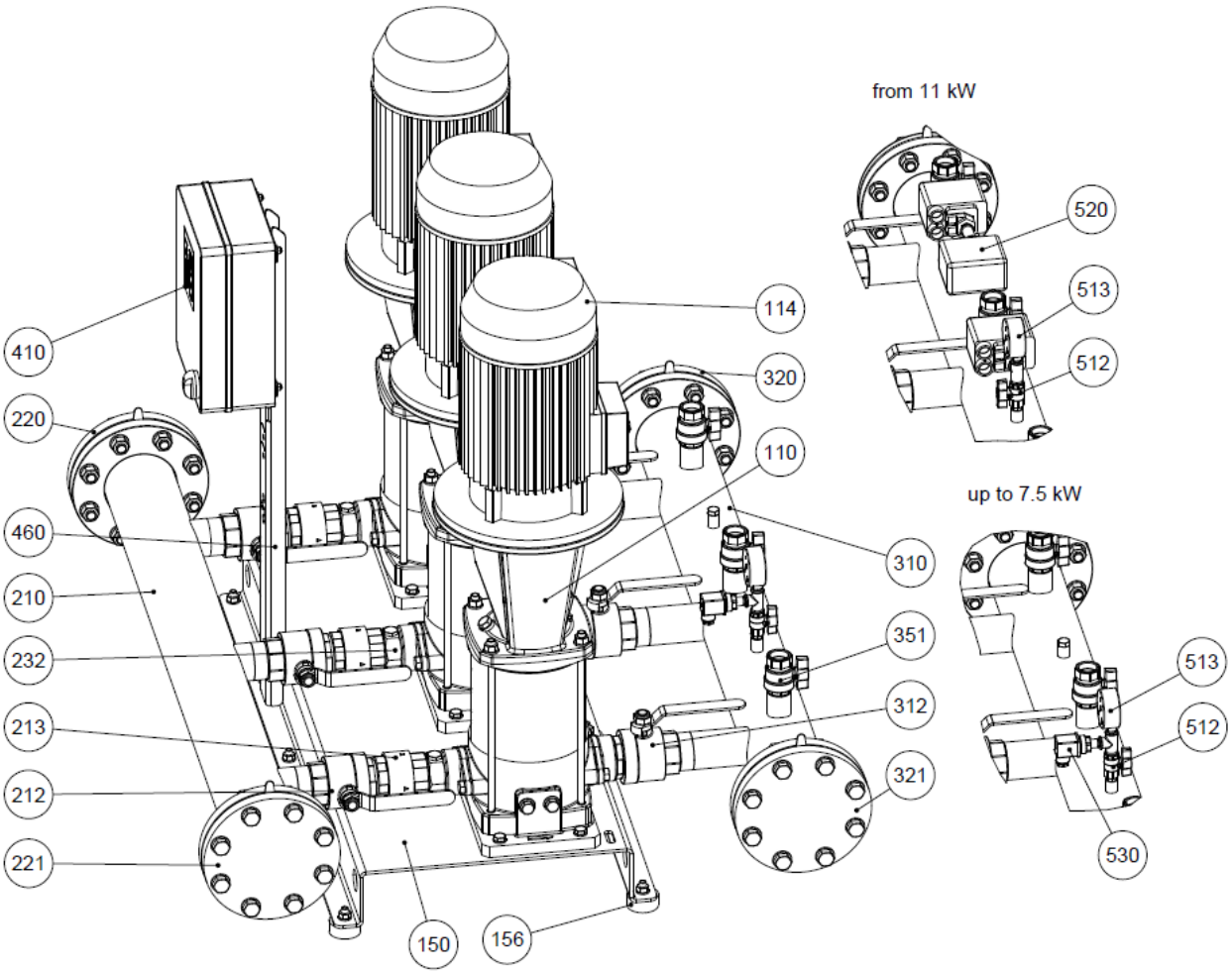
3GP CONSTRUCTION

EXTERNAL VIEW 3GP EVMS(.) 3-5-10



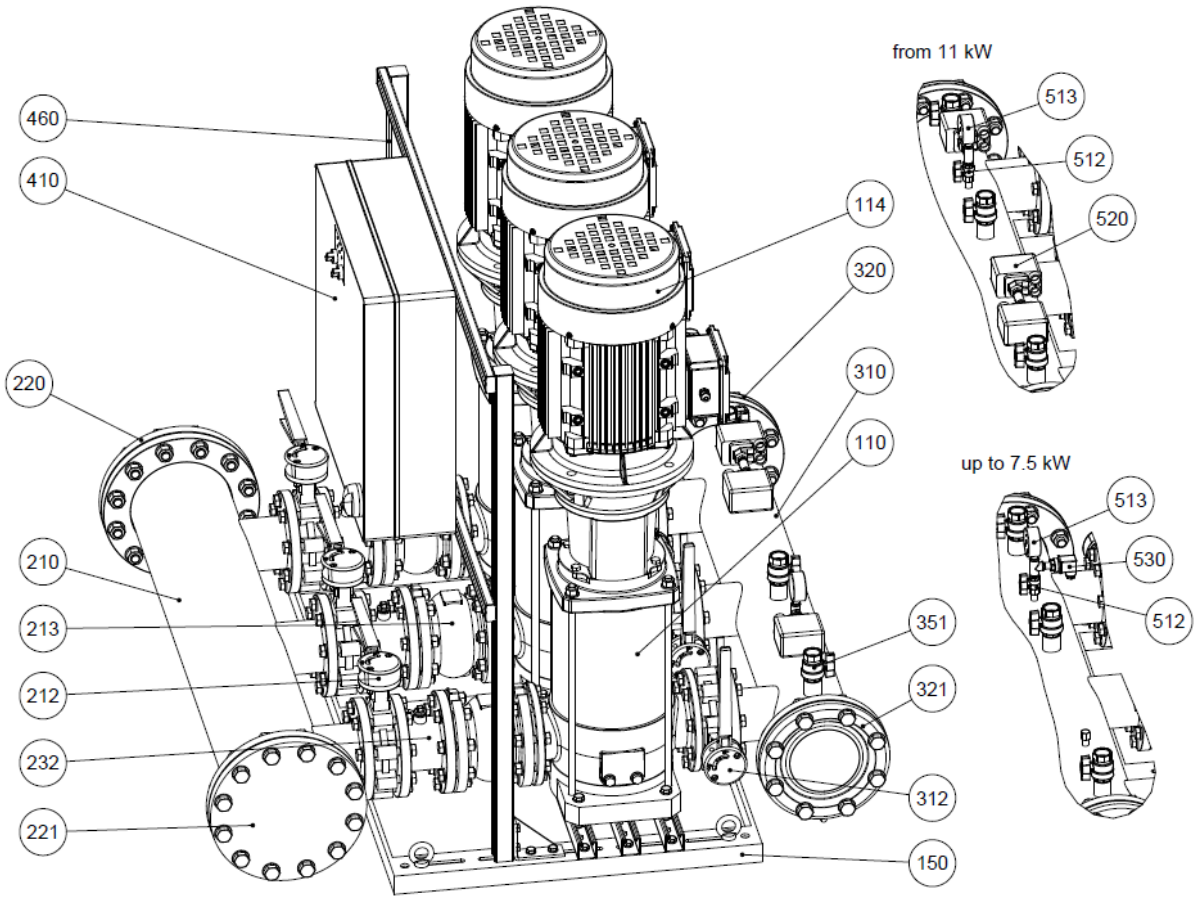
N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	3
114	Electric motor	-	3
150	Basement	Galvanized steel	1
156	Basement foot	SBR	6
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	3
213	Check valve	Brass / NBR	3
221	Threaded female cap	Yellow brass	1
232	Nipple for air feeders	Yellow brass	3
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	3
321	Threaded female cap	Yellow brass	1
351	Ball valve	CW617N / CW614N	3
410	Control panel	-	1
460	Control panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	1

EXTERNAL VIEW 3GP EVMS(.) 15-20



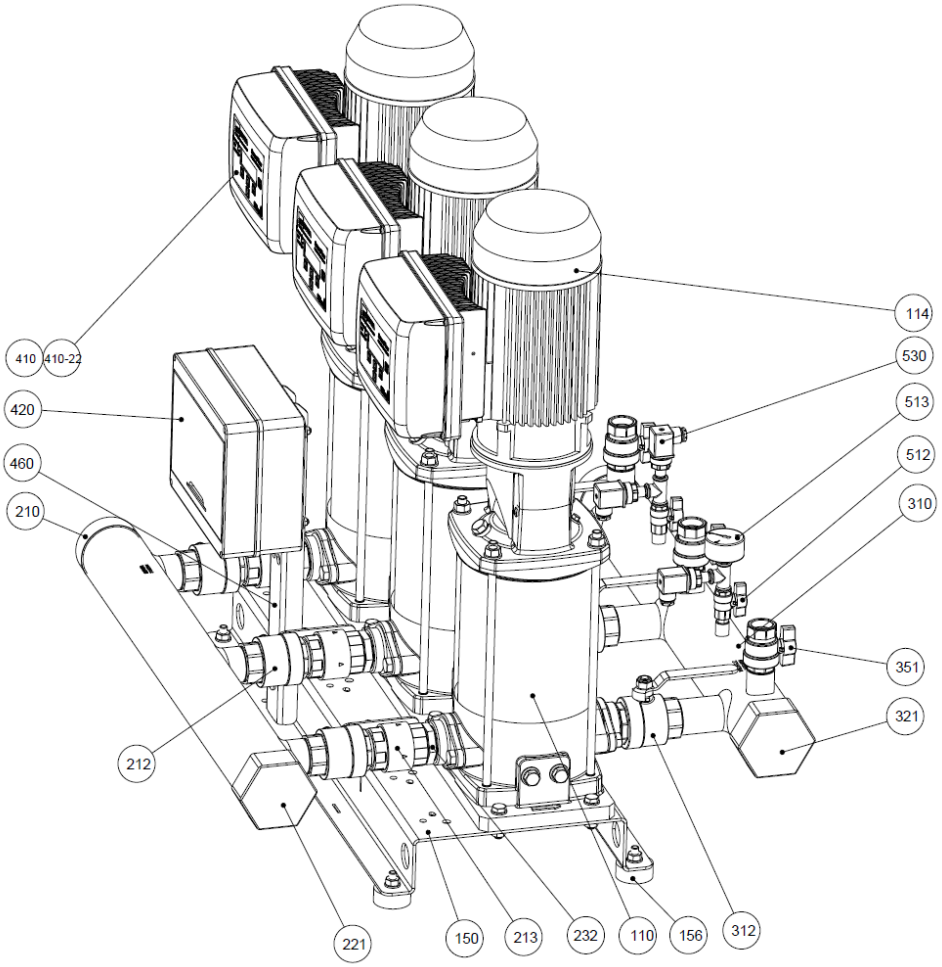
N°	PART NAME	MATERIAL	Quantity	
			up to 7.5 kW	from 11 kW
110	Principal pump	-	3	
114	Electric motor	-	3	
150	Basement	Galvanized steel	1	
156	Basement foot	SBR	6	
210	Suction manifold	AISI 304	1	
212	Ball valve	CW617N / CW614N	3	
213	Check valve	Brass / NBR	3	
220	Counterflange	AISI 304	1	
221	Blind counterflange	AISI 304	1	
232	Nipple for air feeders	Yellow brass	3	
310	Discharge manifold	AISI 304	1	
312	Ball valve	CW617N / CW614N	3	
320	Counterflange	AISI 304	1	
321	Blind counterflange	AISI 304	1	
351	Ball valve	CW617N / CW614N	3	
410	Control panel	-	1	
460	Control panel frame	Galvanized steel	1	
512	Ball valve	CW617N / CW614N	1	2
513	Pressure gauge	Copper alloy / plastic	1	
520	Pressure switches	-	-	3
530	Pressure transmitter	-	1	-

EXTERNAL VIEW 3GP EVM(.) 32-45-64



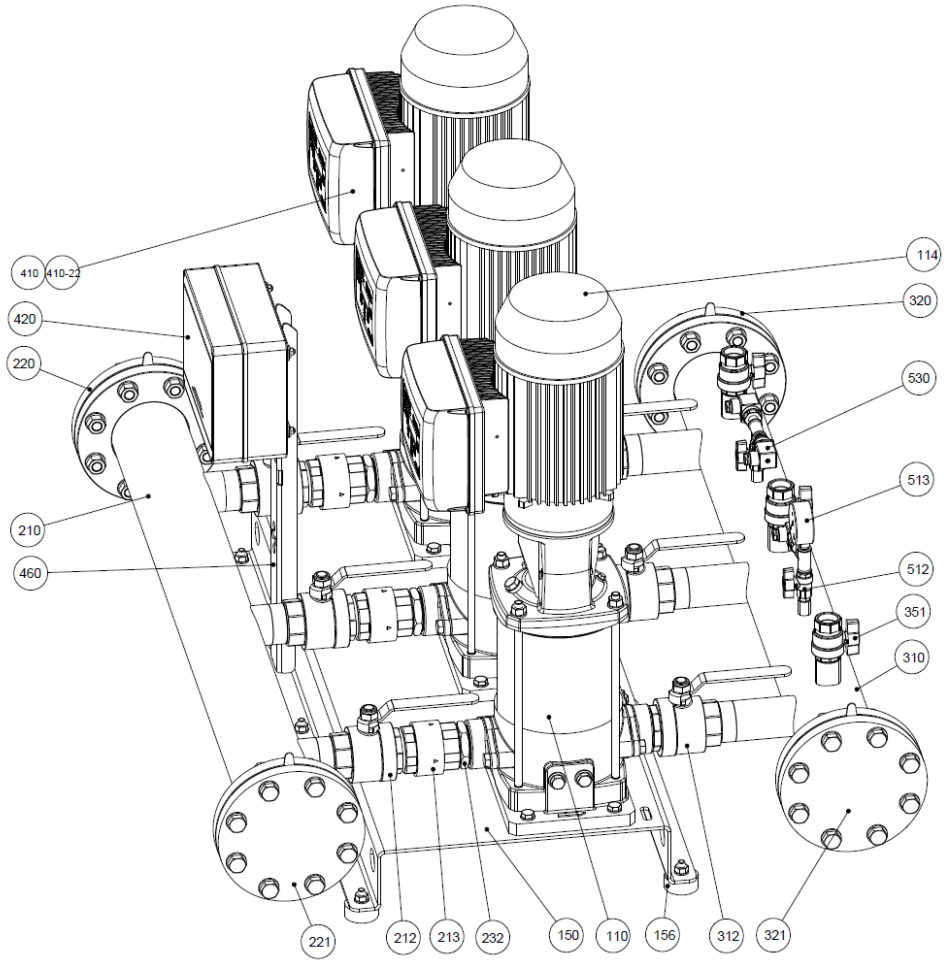
N°	PART NAME	MATERIAL	Quantity	
			up to 7.5 kW	from 11 kW
110	Principal pump	-	3	
114	Electric motor	-	3	
150	Frame	Galvanized steel	1	
210	Suction manifold	Galvanized steel	1	
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3	
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	3	
220	Counterflange	Galvanized steel	1	
221	Blind counterflange	Galvanized steel	1	
232	Threaded socket for air feeders	Galvanized steel	3	
310	Discharge manifold	Galvanized steel	1	
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3	
320	Counterflange	Galvanized steel	1	
321	Blind counterflange	Galvanized steel	1	
351	Ball valve	CW617N / CW614N	3	
410	Control panel	-	1	
460	Control panel frame	Galvanized steel	1	
512	Ball valve	CW617N / CW614N	1	2
513	Pressure gauge	Copper alloy / plastic	1	
520	Pressure switches	-	-	3
530	Pressure transmitter	-	1	-

EXTERNAL VIEW 3GPE EVMS(.) 3-5-10 E-SPD



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	3
114	Electric motor	-	3
150	Basement	Galvanized steel	1
156	Basement foot	SBR	4
210	Suction manifold	Galvanized steel	1
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	3
221	Blind counterflange	Galvanized steel	1
232	Spacer flange	Galvanized steel	3
310	Discharge manifold	Galvanized steel	1
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
321	Blind counterflange	Galvanized steel	1
351	Ball valve	CW617N / CW614N	3
410	E-SPD	-	3
410-22	E-SPD adaptor		3
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	3

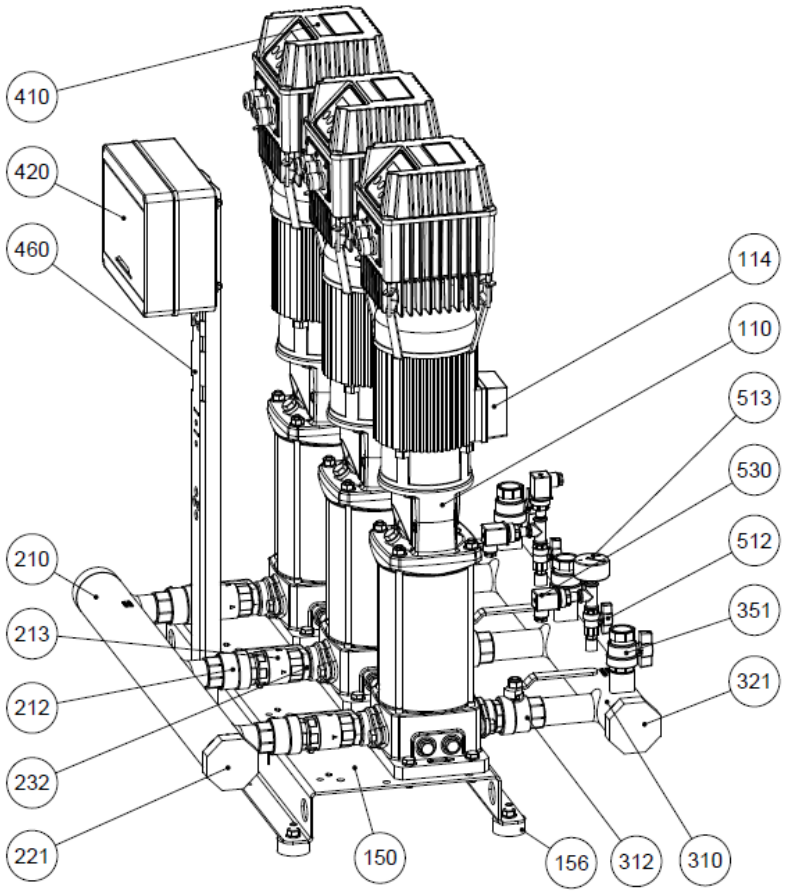
EXTERNAL VIEW 3GPE EVM(.) 15 E-SPD



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	3
114	Electric motor	-	3
150	Basement	Galvanized steel	1
156	Basement foot	SBR	6
210	Suction manifold	Galvanized steel	1
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	3
220	Counterflange	Galvanized steel	1
221	Blind counterflange	Galvanized steel	1
232	Spacer flange	Galvanized steel	3
310	Discharge manifold	Galvanized steel	1
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
320	Counterflange	Galvanized steel	1
321	Blind counterflange	Galvanized steel	1
351	Ball valve	CW617N / CW614N	3
410	E-SPD	-	3
410-22	E-SPD adaptor	-	3
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	1
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	3

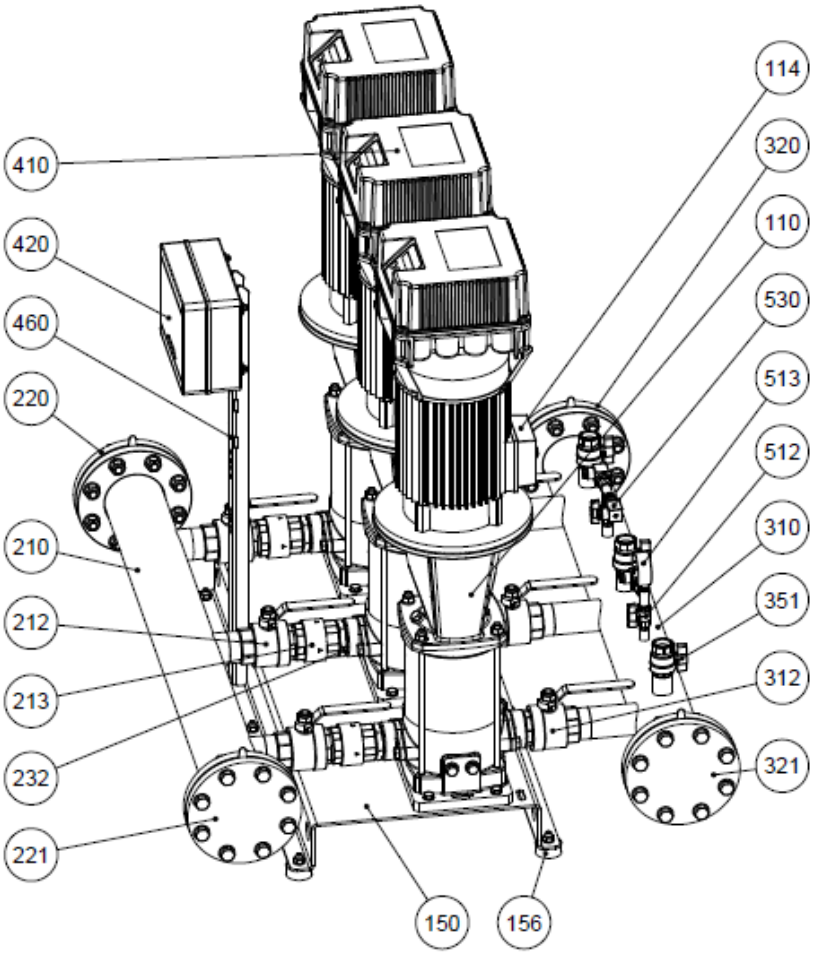
3GPE CONSTRUCTION

EXTERNAL VIEW 3GPE EVMS(.) 3-5-10 E-DRIVE



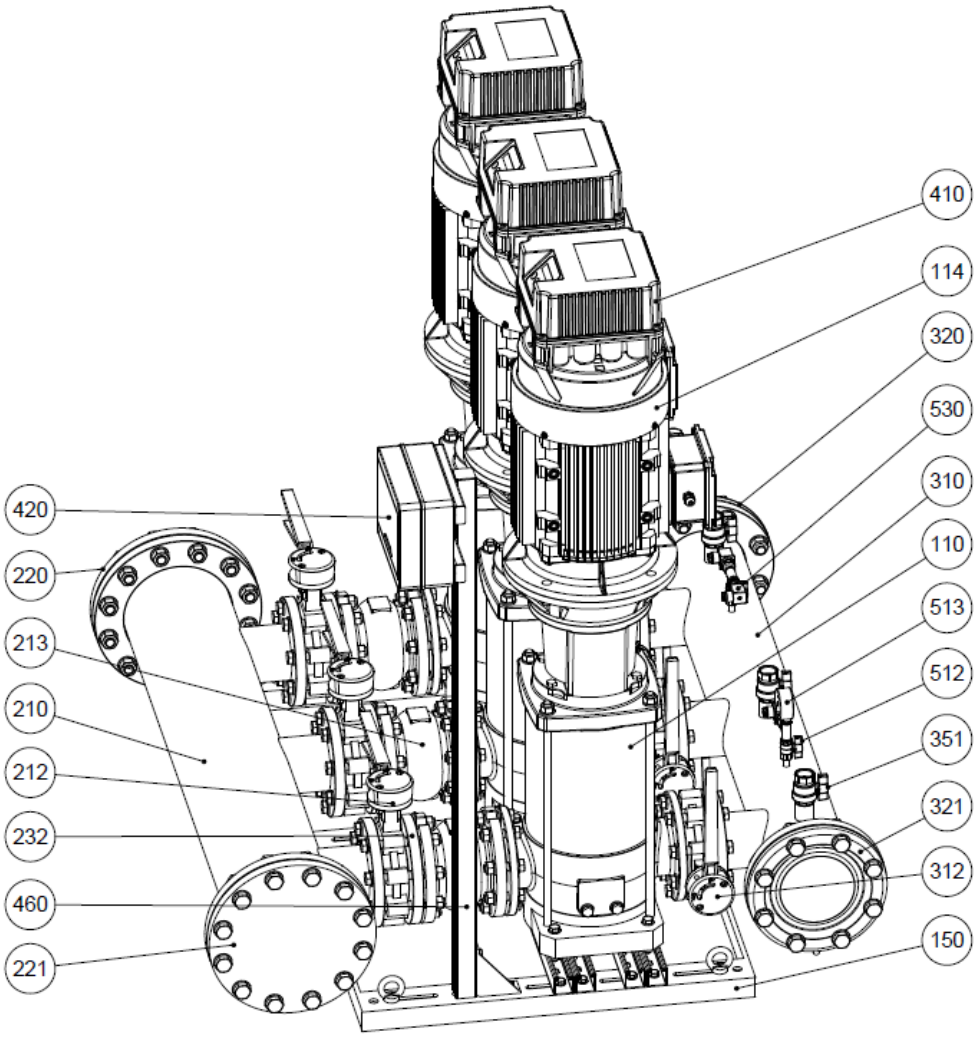
N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	3
114	Electric motor	-	3
150	Basement	Galvanized steel	1
156	Basement foot	SBR	6
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	3
213	Check valve	Brass / NBR	3
221	Threaded female cap	Yellow brass	1
232	Nipple	Yellow brass	3
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	3
321	Threaded female cap	Yellow brass	1
351	Ball valve	CW617N / CW614N	3
410	E-Drive	-	3
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	2
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	3

EXTERNAL VIEW 3GPE EVMS(.) 15-20 E-DRIVE



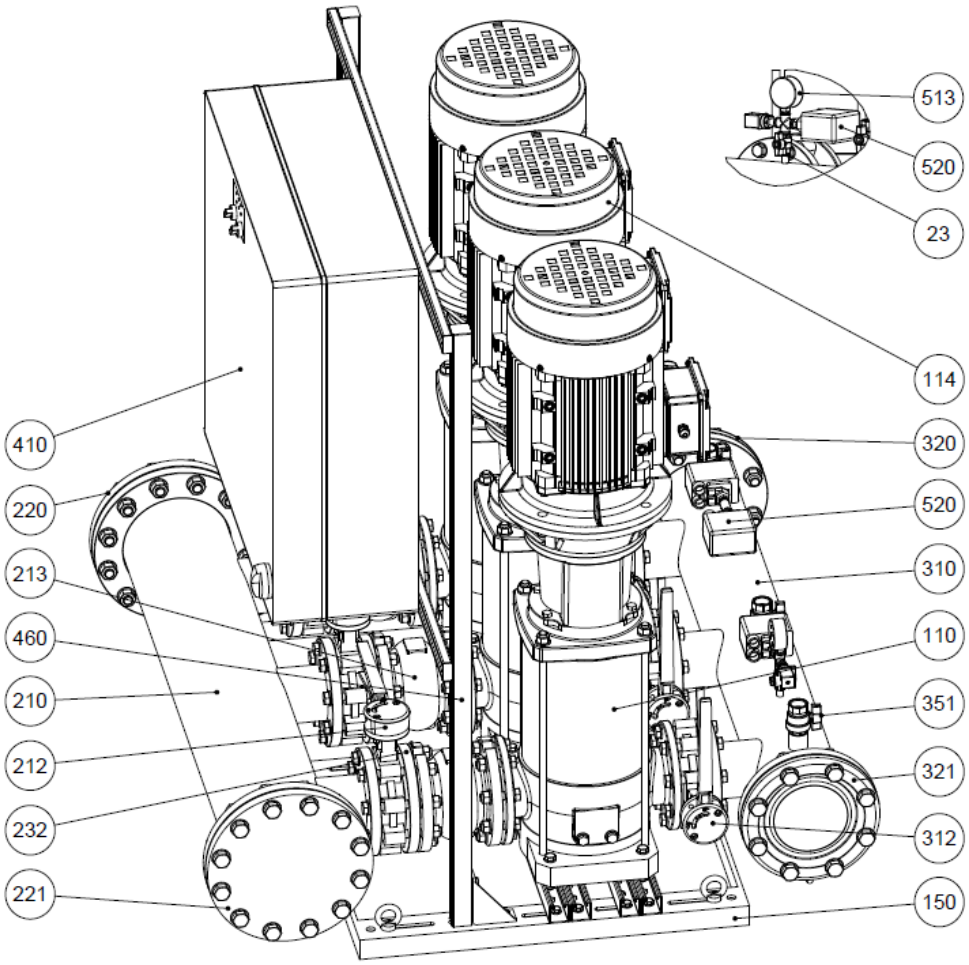
N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	3
114	Electric motor	-	3
150	Basement	Galvanized steel	1
156	Basement foot	SBR	6
210	Suction manifold	AISI 304	1
212	Ball valve	CW617N / CW614N	3
213	Check valve	Brass / NBR	3
220	Counterflange	AISI 304	1
221	Blind counterflange	AISI 304	1
232	Nipple	Yellow brass	3
310	Discharge manifold	AISI 304	1
312	Ball valve	CW617N / CW614N	3
320	Counterflange	AISI 304	1
321	Blind counterflange	AISI 304	1
351	Ball valve	CW617N / CW614N	3
410	E-Drive	-	3
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	2
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	3

EXTERNAL VIEW 3GPE EVM(.) 32-45-64 E-DRIVE



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	3
114	Electric motor	-	3
150	Basement	Galvanized steel	1
210	Suction manifold	Galvanized steel	1
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	3
220	Counterflange	Galvanized steel	1
221	Blind counterflange	Galvanized steel	1
232	Spacer flange	Galvanized steel	3
310	Discharge manifold	Galvanized steel	1
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
320	Counterflange	Galvanized steel	1
321	Blind counterflange	Galvanized steel	1
351	Ball valve	CW617N / CW614N	3
410	E-Drive	-	3
420	Protection panel	-	1
460	Protection panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	2
513	Pressure gauge	Copper alloy / plastic	1
530	Pressure transmitter	-	3

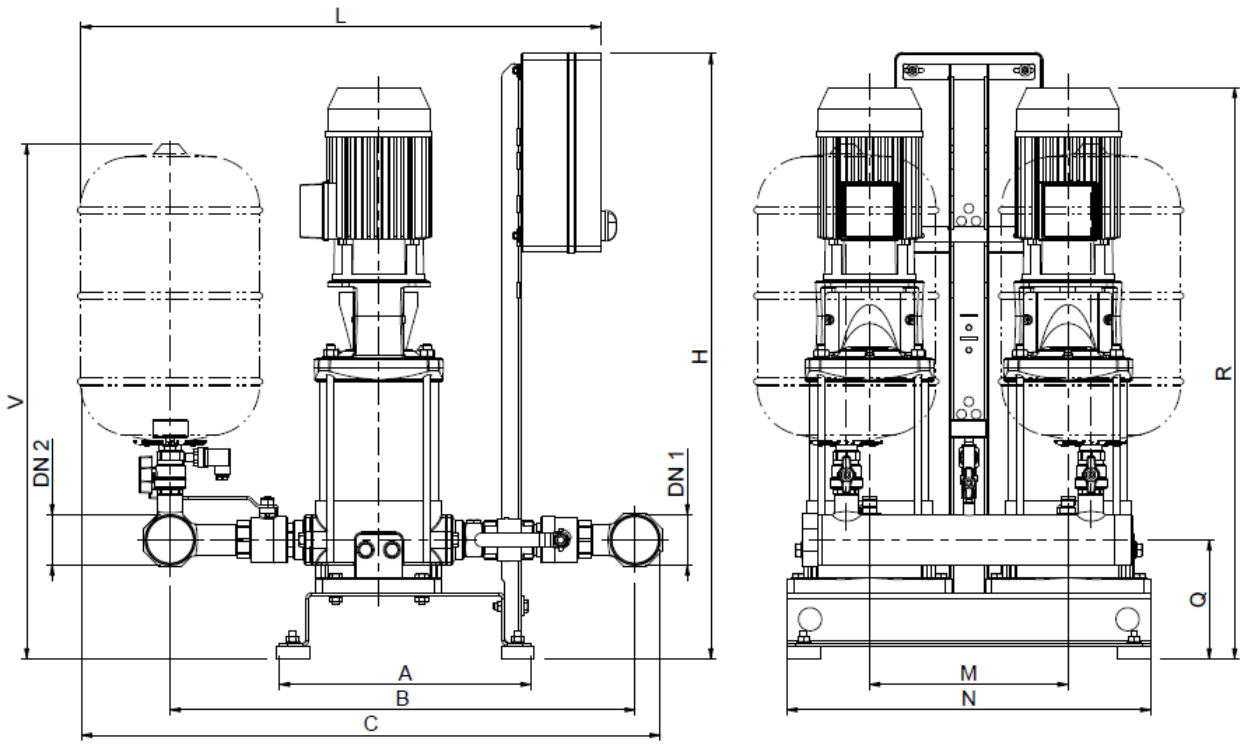
EXTERNAL VIEW 3GPE EVM(.) 32-45-64 EFC/MFC



N°	PART NAME	MATERIAL	Quantity
110	Principal pump	-	3
114	Electric motor	-	3
150	Frame	Galvanized steel	1
210	Suction manifold	Galvanized steel	1
212	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
213	Check valve (Clapet)	Cast iron EN 1561 EN-GJL-250	3
220	Counterflange	Galvanized steel	1
221	Blind counterflange	Galvanized steel	1
232	Spacer flange	Galvanized steel	3
310	Discharge manifold	Galvanized steel	1
312	Butterfly valve (Lug)	Cast iron EN GJL 250 (JL 1040)	3
320	Counterflange	Galvanized steel	1
321	Blind counterflange	Galvanized steel	1
351	Ball valve	CW617N / CW614N	3
410	Control panel	-	1
460	Control panel frame	Galvanized steel	1
512	Ball valve	CW617N / CW614N	2
513	Pressure gauge	Copper alloy / plastic	1
520	Pressure switches	-	3
530	Pressure transmitter	-	1

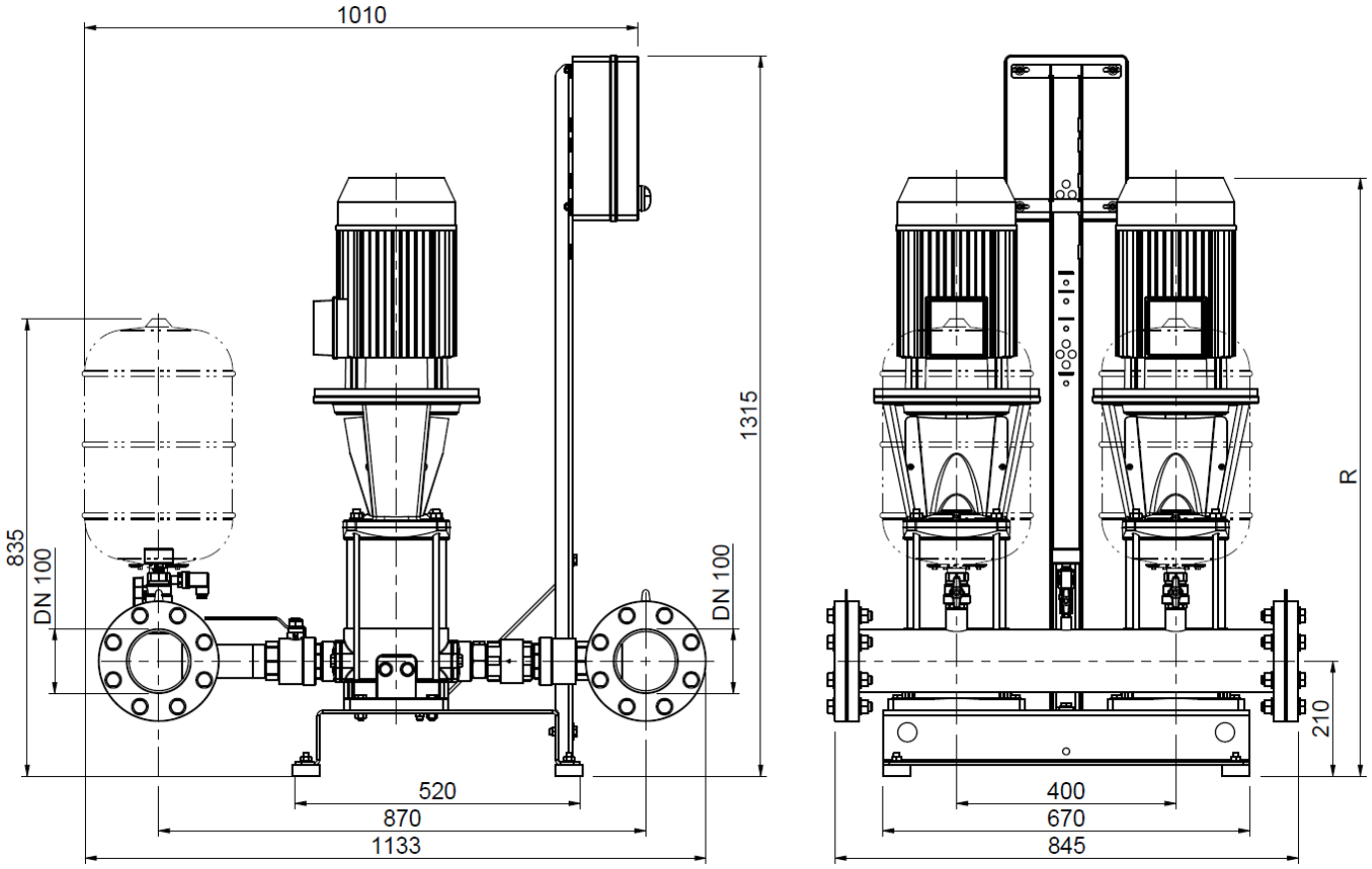
OVERALL DIMENSIONS 2GP BOOSTER SET

2GP EVMS(.) 3-5-10-15



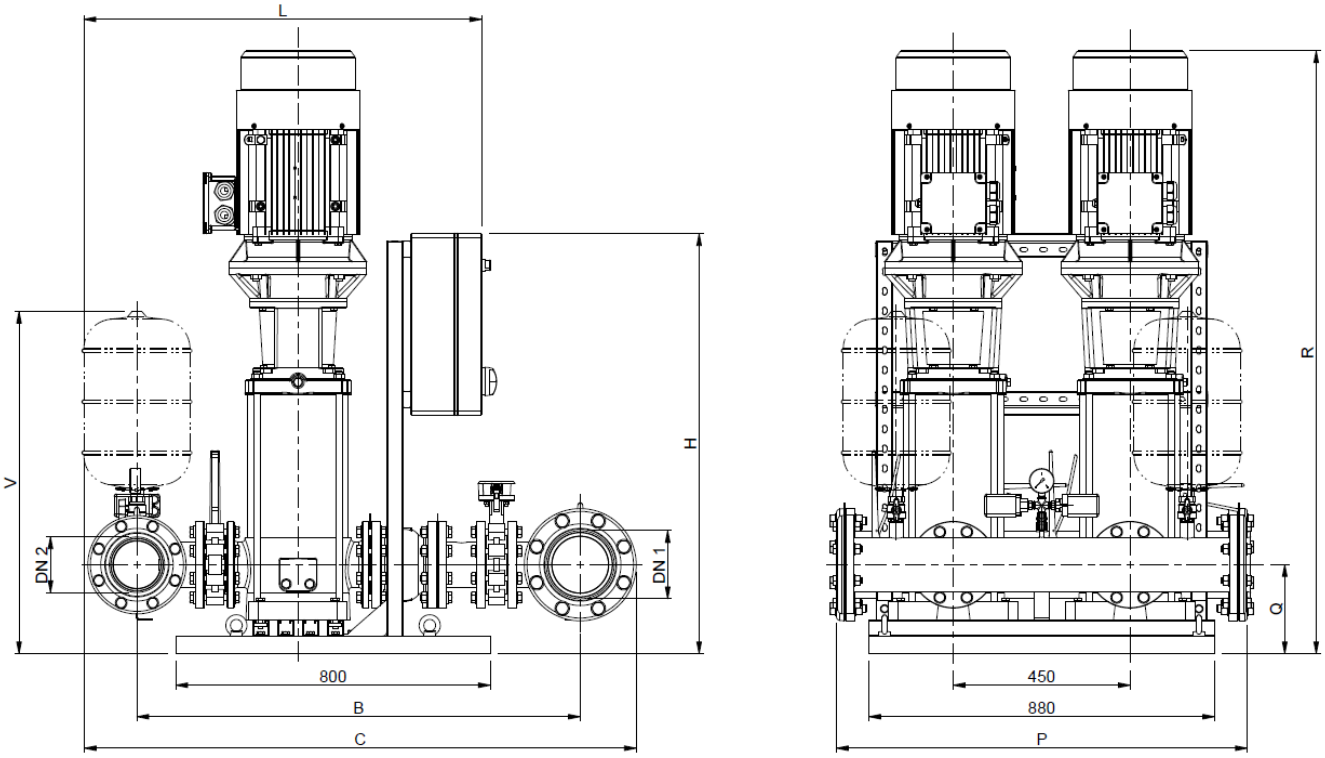
Booster Type	Dimensions [mm]														Weight [kg]	
	DN1	DN2	A	B	C	H	L 1~	L 3~	M	N	Q	R 1~	R 3~	V	1~	3~
2GP EVMSG 3 7N5/0,75 (M)	G1 ½	G1 ½	380	600	760	915	745	775	300	550	150	700	700	735	77	72
2GP EVMSG 3 9N5/1,1 (M)	G1 ½	G1 ½	380	600	760	915	745	775	300	550	150	740	750	735	80	76
2GP EVMSG 3 16N5/1,5 (M)	G1 ½	G1 ½	380	600	760	915	745	775	300	550	150	930	955	735	100	91
2GP EVMSG 3 19N5/2,2	G1 ½	G1 ½	380	600	760	915	-	775	300	550	150	-	1020	735	-	97
2GP EVMSG 5 4N5/0,75	G 2	G 2	380	635	800	915	-	790	300	550	150	-	665	740	-	73
2GP EVMSG 5 5N5/1,1	G 2	G 2	380	630	795	915	-	760	300	550	150	-	700	740	-	77
2GP EVMSG 5 6N5/1,5 (M)	G 2	G 2	380	630	795	915	760	760	300	550	150	765	785	740	93	95
2GP EVMSG 5 7N5/1,5 (M)	G 2	G 2	380	630	795	915	760	760	300	550	150	790	815	740	94	86
2GP EVMSG 5 9N5/2,2 (M)	G 2	G 2	380	630	795	915	760	760	300	550	150	850	870	740	100	91
2GP EVMSG 5 11N5/2,2	G 2	G 2	380	630	795	915	-	760	300	550	150	-	925	740	-	93
2GP EVMSG 5 15N5/3	G 2	G 2	380	630	795	915	-	760	300	550	150	-	1100	740	-	114
2GP EVMSG 10 4N5/2,2 (M)	G2 ½	G2 ½	380	705	875	915	740	770	300	550	180	780	805	780	115	106
2GP EVMSG 10 6N5/2,2 (M)	G2 ½	G2 ½	380	705	875	915	740	770	300	550	180	840	865	780	119	110
2GP EVMSG 10 8N5/3	G2 ½	G2 ½	380	705	875	915	-	770	300	550	180	-	985	780	-	127
2GP EVMSG 10 11N5/4	G2 ½	G2 ½	380	705	875	915	-	770	300	550	180	-	1095	780	-	147
2GP EVMSG 10 14N5/5,5	G2 ½	G2 ½	520	700	870	915	-	900	400	670	200	-	1340	800	-	202
2GP EVMSG 15 4N5/4	G 3	G 3	520	815	995	915	-	960	400	670	210	-	960	815	-	194
2GP EVMSG 15 6N5/5,5	G 3	G 3	520	815	995	1315	-	960	400	670	210	-	1175	815	-	237
2GP EVMSG 15 7N5/7.5	G 3	G 3	520	815	995	1315	-	960	400	670	210	-	1235	815	-	255
2GP EVMSG 15 8N5/7,5	G 3	G 3	520	815	995	1315	-	960	400	670	210	-	1405	815	-	258

2GP EVMS(.) 20



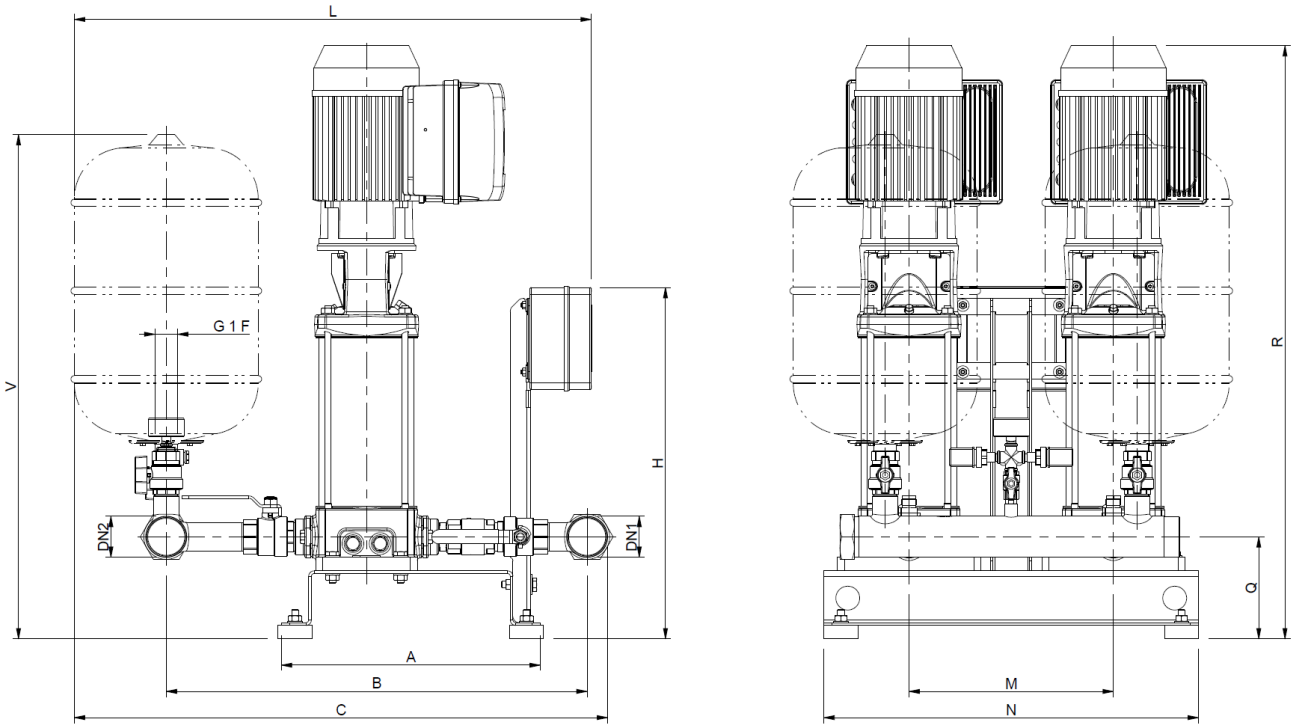
Booster Type	Dimensions [mm] R	Weight [kg]
2GP EVMSG 20 4N5/5,5	1095	225
2GP EVMSG 20 6N5/7,5	1195	244

2GP EVM(.) 32-45-64



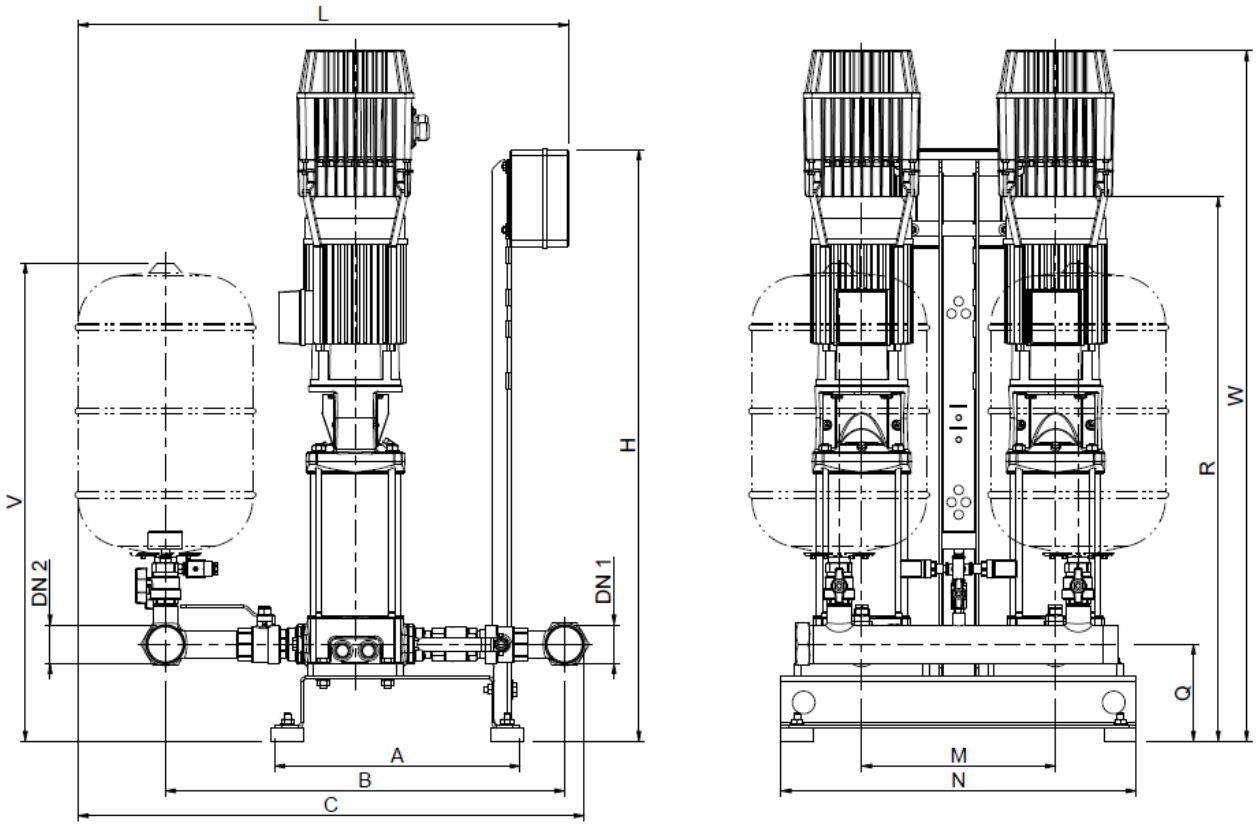
Booster Type	Dimensions [mm]										Weight [kg]
	DN1	DN2	B	C	H	L	P	Q	R	V	
2GP EVMG 32 3-3F5/5.5	DN125	DN100	1005	1260	850	900	1040	190	985	820	391
2GP EVMG 32 3-1F5/5.5	DN125	DN100	1005	1260	850	900	1040	190	985	820	391
2GP EVMG 32 4-3F5/7.5	DN125	DN100	1005	1260	850	900	1040	190	1035	820	401
2GP EVMG 32 4-1F5/7.5	DN125	DN100	1005	1260	850	900	1040	190	1035	820	401
2GP EVMG 32 5-3F5/11	DN125	DN100	1005	1260	1065	960	1040	190	1360	820	489
2GP EVMG 45 2-0 F5/7.5	DN150	DN125	1085	1360	850	945	1045	225	1030	870	433
2GP EVMG 45 3-2 F5/11	DN150	DN125	1085	1360	1065	1005	1045	225	1380	870	518
2GP EVMG 45 3-0 F5/11	DN150	DN125	1085	1360	1065	1005	1045	225	1380	870	518
2GP EVMG 45 4-2 F5/15	DN150	DN125	1085	1360	1245	1065	1045	225	1475	870	588
2GP EVMG 45 4-0 F5/15	DN150	DN125	1085	1360	1245	1065	1045	225	1475	870	588
2GP EVMG 64 2-0F5/11	DN150	DN125	1130	1405	1065	1010	1045	225	1310	870	540
2GP EVMG 64 3-3F5/15	DN150	DN125	1130	1405	1065	1010	1045	225	1405	870	604
2GP EVMG 64 3-2F5/15	DN150	DN125	1130	1405	1065	1010	1045	225	1405	870	604
2GP EVMG 64 3-1F5/15	DN150	DN125	1130	1405	1065	1010	1045	225	1405	870	604
2GP EVMG 64 3-0F5/18.5	DN150	DN125	1130	1405	1065	1010	1045	225	1450	870	634
2GP EVMG 64 4-3F5/18.5	DN150	DN125	1130	1405	1065	1010	1045	225	1520	870	650
2GP EVMG 64 4-1F5/22	DN150	DN125	1130	1405	1065	1010	1045	225	1555	870	789
2GP EVMG 64 4-0F5/22	DN150	DN125	1130	1405	1065	1010	1045	225	1555	870	789

OVERALL DIMENSIONS 2GPE BOOSTER SET
2GPE EVMS(.) 3-5-10-15 E-SPD



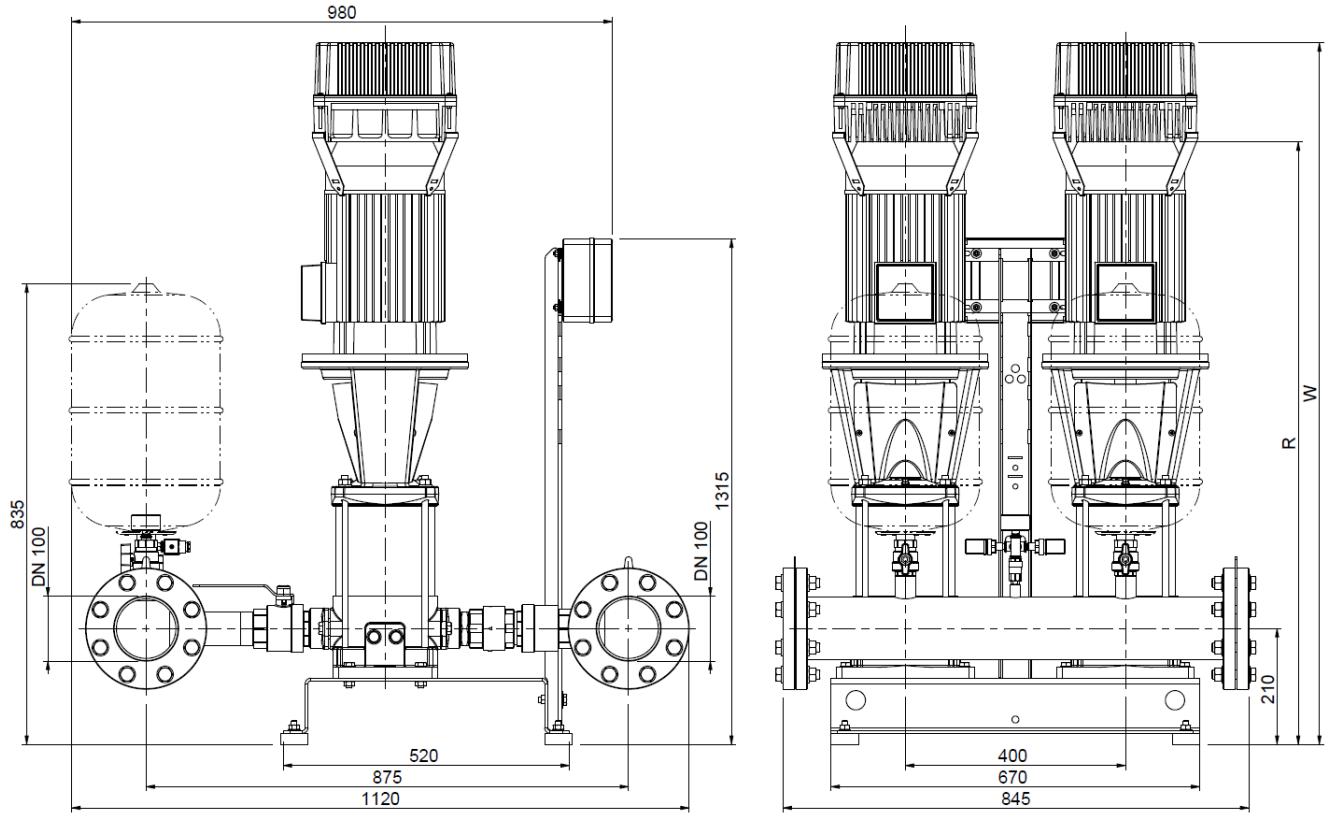
Booster Type	Dimensions [mm]														
	DN1	DN2	A	B	C	ESPM H	ESPT H	ESPM L	ESPT L	M	N	Q	R	V	Weight [kg]
2GPE EVMSG 3 8N5/0.75 ESPT	G 1 1/2	G 1 1/2	380	583	741	-	516	-	745	300	550	150	719	735	74
2GPE EVMSG 3 9N5/1.1 ESPM	G 1 1/2	G 1 1/2	380	583	741	511	-	743	745	300	550	150	751	735	78
2GPE EVMSG 3 10N5/1.1 ESPT(ESPM)	G 1 1/2	G 1 1/2	380	583	741	511	516	743	745	300	550	150	772	735	79
2GPE EVMSG 5 7N5/1.5 ESPT(ESPM)	G 2	G 2	380	618	783	511	516	757	759	300	550	150	815	741	87
2GPE EVMSG 5 8N5/2.2 ESPT	G 2	G 2	380	618	783	-	516	-	759	300	550	150	843	741	91
2GPE EVMSG 5 9N5/2.2 ESPT	G 2	G 2	380	618	783	-	516	-	759	300	550	150	871	741	92
2GPE EVMSG 10 6N5/2.2 ESPT(ESPM)	G 2 1/2	G 2 1/2	380	686	859	511	516	756	758	300	550	180	864	778	111
2GPE EVMSG 10 7N5/3 ESPT	G 2 1/2	G 2 1/2	380	686	859	-	516	-	758	300	550	180	955	778	127
2GPE EVMSG 10 8N5/3 ESPT	G 2 1/2	G 2 1/2	380	686	859	-	516	-	758	300	550	180	985	778	129
2GPE EVMSG 15 4N5/4 ESPT	G 3	G 3	520	804	983	-	637	-	930	400	670	210	961	815	155

2GPE EVMS(.) 3-5-10-15 E-DRIVE



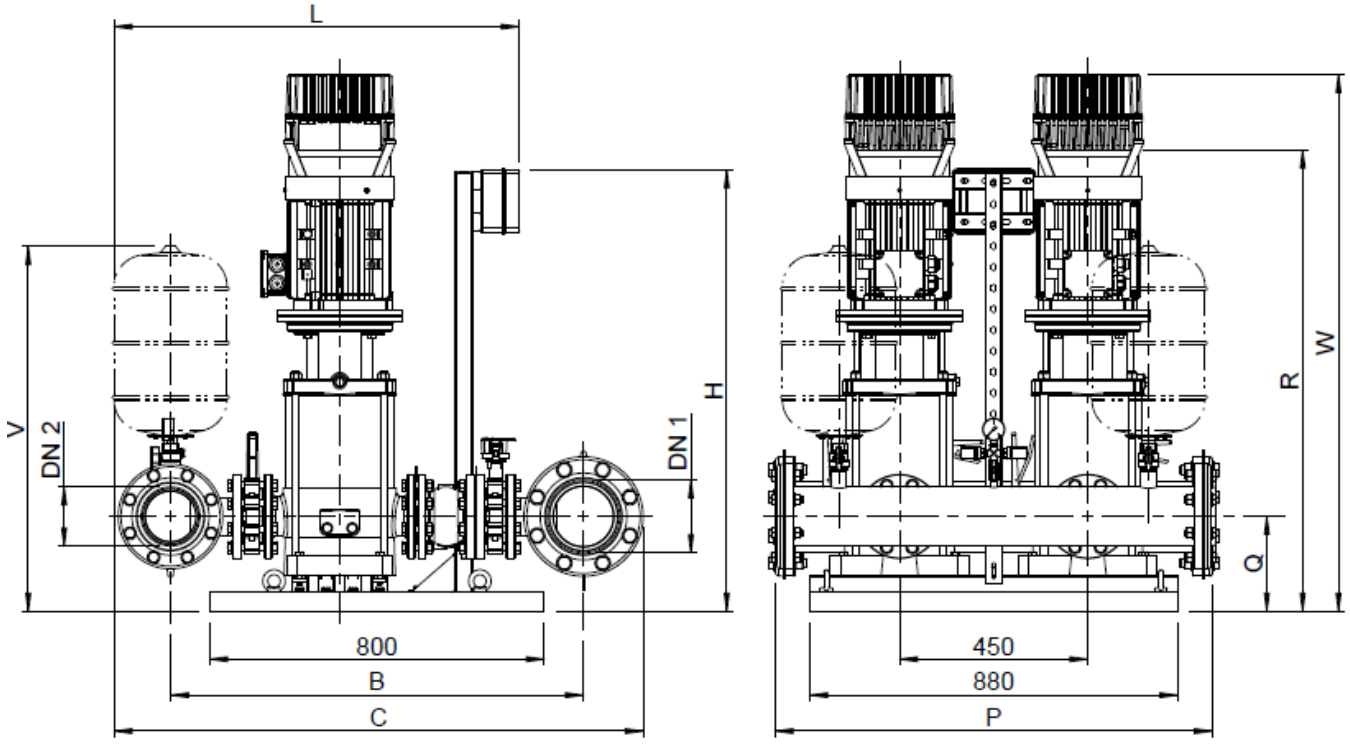
Booster Type	Dimensions [mm]													Weight
	DN1	DN2	A	B	C	H	L	M	N	Q	R	W	V	[kg]
2GPE EVMSG 3 10N5/1.1 EDM	G 1 ½	G 1 ½	380	585	740	915	745	300	550	150	770	1000	735	81
2GPE EVMSG 5 7N5/1.5 EDM	G 2	G 2	380	620	780	910	760	300	550	150	815	1045	740	89
2GPE EVMSG 5 8N5/2.2 EDT	G 2	G 2	380	620	780	915	760	300	550	150	845	1070	740	95
2GPE EVMSG 5 9N5/2.2 EDT	G 2	G 2	380	620	780	915	760	300	550	150	870	1100	740	96
2GPE EVMSG 10 6N5/2,2 EDT(EDM)	G 2 ½	G 2 ½	380	685	860	915	740	300	550	180	865	1090	780	115
2GPE EVMSG 10 7N5/3 EDT	G 2 ½	G 2 ½	380	685	860	915	745	300	550	180	955	1185	780	131
2GPE EVMSG 10 8N5/3 EDT	G 2 ½	G 2 ½	380	685	860	915	745	300	550	180	985	1215	780	132
2GPE EVMSG 10 11N5/4 EDT	G 2 ½	G 2 ½	380	685	860	915	745	300	550	180	1095	1325	780	152
2GPE EVMSG 10 14N5/5,5 EDT	G 2 ½	G 2 ½	520	680	855	1325	885	400	670	200	1340	1520	800	212
2GPE EVMSG 15 4N5/4 EDT	G 3	G 3	520	805	985	915	930	400	670	210	960	1145	815	199
2GPE EVMSG 15 5N5/5,5 EDT	G 3	G 3	520	805	985	1315	930	400	670	210	1135	1315	815	245
2GPE EVMSG 15 6N5/5,5 EDT	G 3	G 3	520	805	985	1315	930	400	670	210	1175	1355	815	247
2GPE EVMSG 15 7N5/7,5 EDT	G 3	G 3	520	805	985	1315	930	400	670	210	1235	1415	815	265
2GPE EVMSG 15 8N5/7,5 EDT	G 3	G 3	520	805	985	1315	930	400	670	210	1275	1455	815	268
2GPE EVMSG 15 9N5/11 EDT	G 3	G 3	520	805	985	1315	930	400	670	210	1365	1545	815	304
2GPE EVMSG 15 10N5/11 EDT	G 3	G 3	520	805	985	1315	930	400	670	210	1405	1585	815	307

2GPE EVMS(.) 20 E-DRIVE



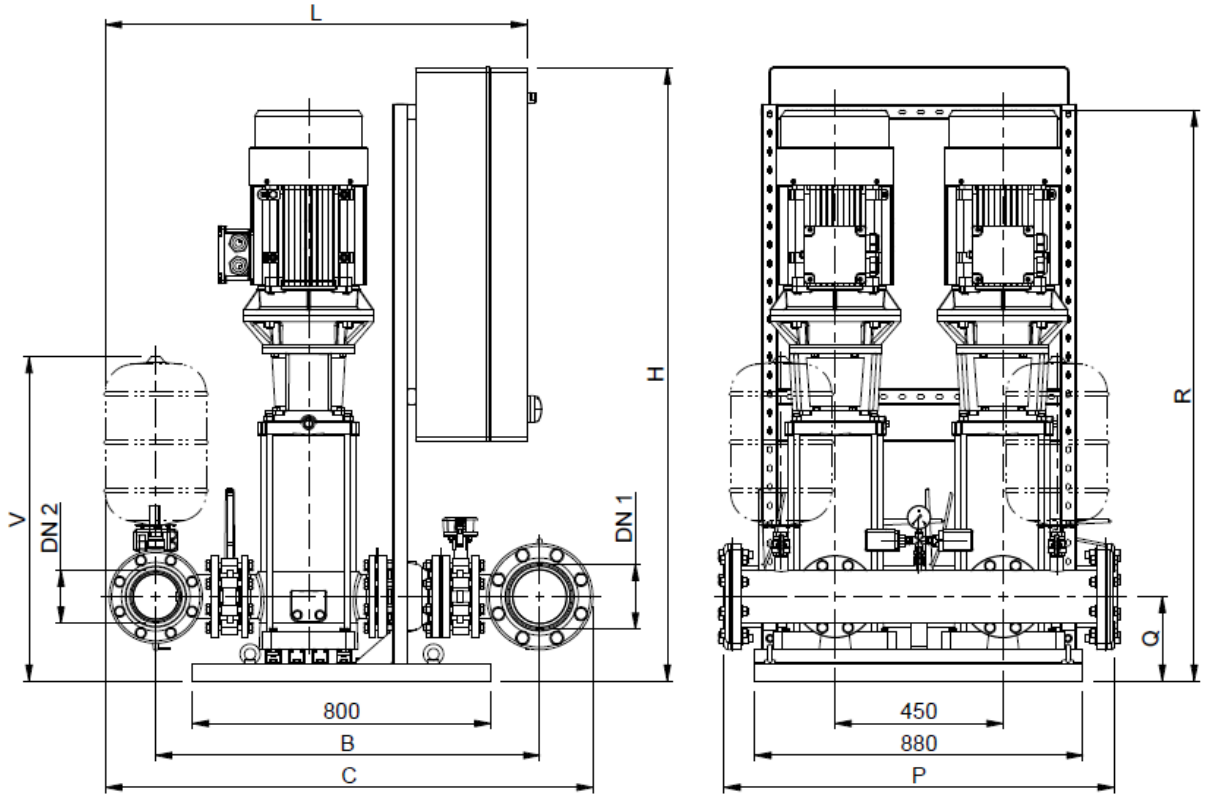
Booster Type	Dimensions [mm]		Weight
	R	W	[kg]
2GPE EVMSG 20 4N5/5,5 EDT	1095	1275	235
2GPE EVMSG 20 6N5/7,5 EDT	1195	1375	254
2GPE EVMSG 20 8N5/11 EDT	1325	1505	317

2GPE EVM(.) 32-45-64 E-DRIVE



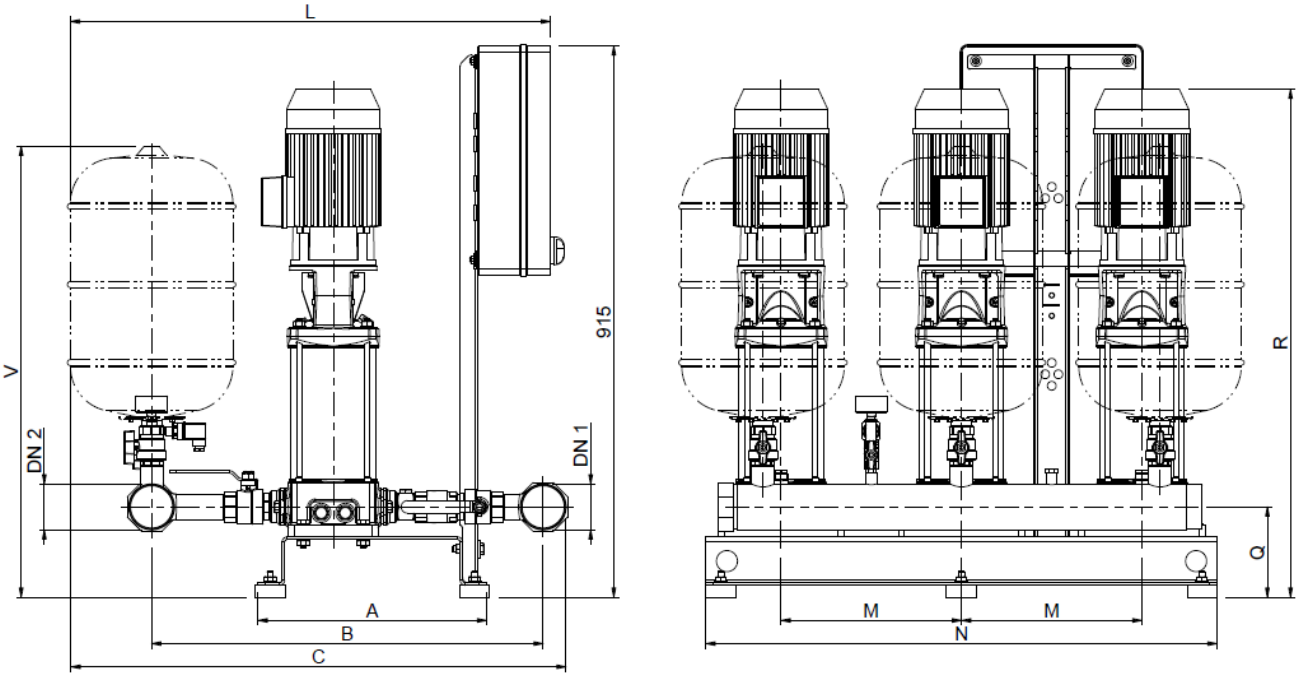
Booster Type		Dimensions [mm]											Weight [kg]
		DN1	DN2	B	C	H	L	P	Q	R	W	V	
2GPE EVMG 32 3-3F5/5.5 EDT		DN125	DN100	895	1150	855	895	1040	190	985	1165	830	406
2GPE EVMG 32 3-1F5/5.5 EDT		DN125	DN100	895	1150	855	895	1040	190	985	1165	830	406
2GPE EVMG 32 4-3F5/7.5 EDT		DN125	DN100	895	1150	1050	895	1040	190	1035	1215	830	416
2GPE EVMG 32 4-1F5/7.5 EDT		DN125	DN100	895	1150	1050	895	1040	190	1035	1215	830	416
2GPE EVMG 32 5-3F5/11 EDT		DN125	DN100	895	1150	1050	895	1040	190	1360	1540	830	501
2GPE EVMG 45 2-0F5/7.5 EDT		DN150	DN125	985	1265	1050	965	1045	225	1030	1210	870	438
2GPE EVMG 45 3-2F5/11 EDT		DN150	DN125	985	1265	1110	965	1045	225	1380	1560	870	531
2GPE EVMG 45 3-0F5/11 EDT		DN150	DN125	985	1265	1110	965	1045	225	1380	1560	870	531
2GPE EVMG 45 4-2F5/15 EDT		DN150	DN125	985	1265	1110	965	1045	225	1475	1655	870	601
2GPE EVMG 45 4-0F5/15 EDT		DN150	DN125	985	1265	1110	965	1045	225	1475	1655	870	601
2GPE EVMG 64 2-0F5/11 EDT		DN150	DN125	1030	1305	1255	1000	1045	225	1310	1490	870	550
2GPE EVMG 64 3-3F5/15 EDT		DN150	DN125	1030	1305	1255	1000	1045	225	1405	1585	870	614
2GPE EVMG 64 3-2F5/15 EDT		DN150	DN125	1030	1305	1255	1000	1045	225	1405	1585	870	614
2GPE EVMG 64 3-1F5/15 EDT		DN150	DN125	1030	1305	1255	1000	1045	225	1405	1585	870	614

2GPE EVM(.) 32-45-64 EFC/MFC



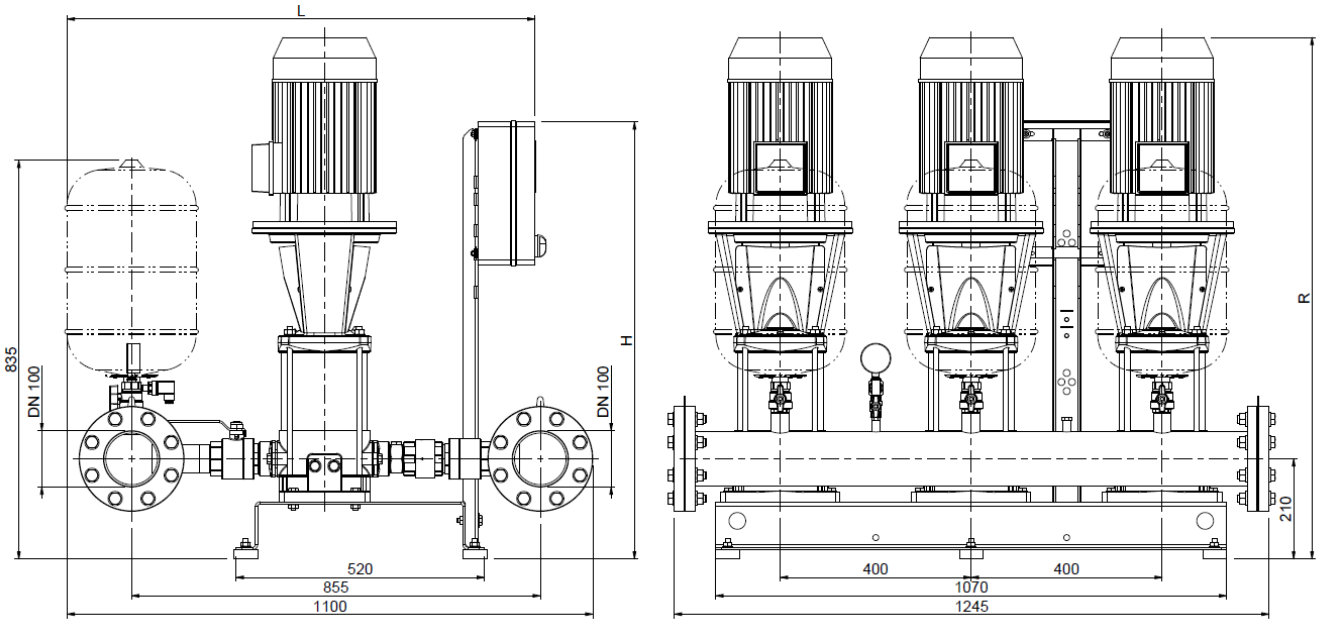
Booster Type	Dimensions [mm]										Weight [kg]
	DN1	DN2	B	C	H	L	P	Q	R	V	
2GPE EVMG 32 3-3F5/5.5 EFC	DN125	DN100	895	1150	1045	980	1040	190	985	830	406
2GPE EVMG 32 3-1F5/5.5 EFC	DN125	DN100	895	1150	1045	980	1040	190	985	830	406
2GPE EVMG 32 4-3F5/7.5 EFC	DN125	DN100	895	1150	1045	980	1040	190	1035	830	416
2GPE EVMG 32 4-1F5/7.5 EFC	DN125	DN100	895	1150	1045	980	1040	190	1035	830	416
2GPE EVMG 32 5-3F5/11 EFC	DN125	DN100	895	1150	1545	1080	1040	190	1360	830	501
2GPE EVMG 45 2-0F5/7.5 EFC	DN150	DN125	985	1260	1045	1025	1045	225	1030	870	448
2GPE EVMG 45 3-2F5/11 EFC	DN150	DN125	985	1260	1545	1125	1045	225	1380	870	531
2GPE EVMG 45 3-0F5/11 EFC	DN150	DN125	985	1260	1545	1125	1045	225	1380	870	531
2GPE EVMG 45 4-2F5/15 EFC	DN150	DN125	985	1260	1545	1125	1045	225	1475	870	601
2GPE EVMG 45 4-0F5/15 EFC	DN150	DN125	985	1260	1545	1125	1045	225	1475	870	601
2GPE EVMG 64 2-0F5/11 EFC	DN150	DN125	1030	1305	1545	1130	1045	225	1310	870	550
2GPE EVMG 64 3-3F5/15 EFC	DN150	DN125	1030	1305	1545	1130	1045	225	1405	870	614
2GPE EVMG 64 3-2F5/15 EFC	DN150	DN125	1030	1305	1545	1130	1045	225	1405	870	614
2GPE EVMG 64 3-1F5/15 EFC	DN150	DN125	1030	1305	1545	1130	1045	225	1405	870	614
2GPE EVMG 64 3-0F5/18.5 EFC	DN150	DN125	1030	1305	1645	1130	1045	225	1450	870	644
2GPE EVMG 64 4-3F5/18.5 EFC	DN150	DN125	1030	1305	1645	1130	1045	225	1520	870	660
2GPE EVMG 64 4-1F5/22 EFC	DN150	DN125	1030	1305	1645	1130	1045	225	1555	870	796
2GPE EVMG 64 4-0F5/22 EFC	DN150	DN125	1030	1305	1645	1130	1045	225	1555	870	796

OVERALL DIMENSIONS 3GP BOOSTER SET
3GP EVMS(.) 3-5-10



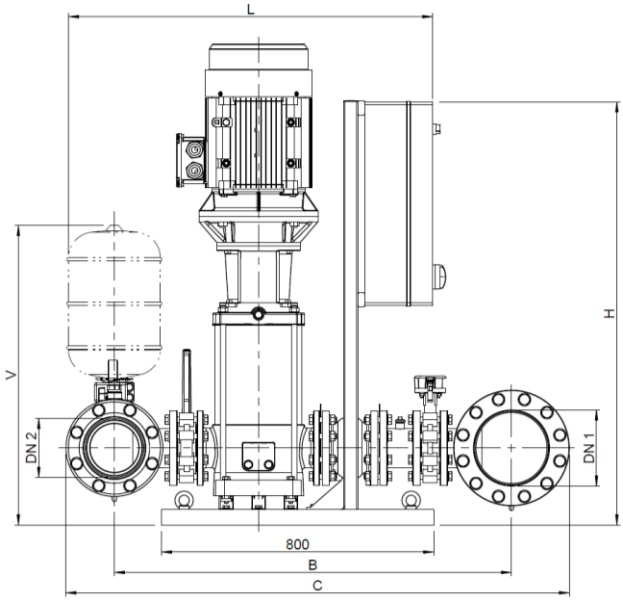
Booster Type	Dimensions [mm]											Weight
	DN1	DN2	A	B	C	L	M	N	Q	R	V	[kg]
3GP EVMSG 3 7N5/0,75	G 2	G 2	380	615	780	780	300	850	150	700	740	113
3GP EVMSG 3 9N5/1,1	G 2	G 2	380	615	780	780	300	850	150	750	740	120
3GP EVMSG 3 10N5/1,1	G 2	G 2	380	615	780	780	300	850	150	770	740	120
3GP EVMSG 3 16N5/1,5	G 2	G 2	380	615	780	780	300	850	150	955	740	143
3GP EVMSG 3 19N5/2,2	G 2	G 2	380	615	780	780	300	850	150	1020	740	151
3GP EVMSG 5 4N5/0,75	G 2 ½	G 2 ½	380	650	820	795	300	850	150	665	750	115
3GP EVMSG 5 5N5/1,1	G 2 ½	G 2 ½	380	650	820	795	300	850	150	700	750	121
3GP EVMSG 5 6N5/1,5	G 2 ½	G 2 ½	380	650	820	795	300	850	150	785	750	133
3GP EVMSG 5 7N5/1,5	G 2 ½	G 2 ½	380	650	820	795	300	850	150	815	750	135
3GP EVMSG 5 8N5/2,2	G 2 ½	G 2 ½	380	650	820	795	300	850	150	845	750	141
3GP EVMSG 5 9N5/2,2	G 2 ½	G 2 ½	380	650	820	795	300	850	150	870	750	142
3GP EVMSG 5 11N5/2,2	G 2 ½	G 2 ½	380	650	820	795	300	850	150	925	750	146
3GP EVMSG 5 15N5/3,0	G 2 ½	G 2 ½	380	650	820	795	300	850	150	1100	750	178
3GP EVMSG 10 4N5/2,2	G 3	G 3	380	715	895	790	300	850	180	805	785	166
3GP EVMSG 10 6N5/2,2	G 3	G 3	380	715	895	790	300	850	180	865	785	171
3GP EVMSG 10 7N5/3,0	G 3	G 3	380	715	895	790	300	850	180	955	785	196
3GP EVMSG 10 8N5/3,0	G 3	G 3	380	715	895	790	300	850	180	985	785	198
3GP EVMSG 10 11N5/4,0	G 3	G 3	380	715	895	790	300	850	180	1095	785	227
3GP EVMSG 10 14N5/5,5	G 3	G 3	520	715	895	895	400	1070	200	1340	805	311

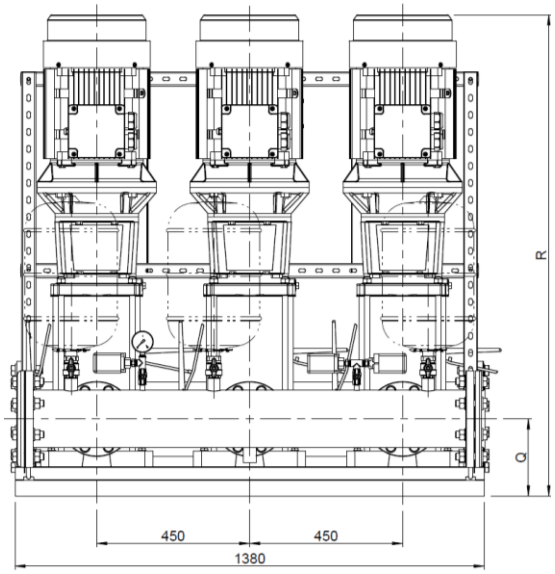
3GP EVMS(.) 15-20



Booster Type	Dimensions [mm]			Weight [kg]
	H	L	R	
3GP EVMSG 15 4N5/4,0	915	980	960	280
3GP EVMSG 15 5N5/5,5	1315	980	1135	341
3GP EVMSG 15 6N5/5,5	1315	980	1175	344
3GP EVMSG 15 7N5/7,5	1315	980	1235	372
3GP EVMSG 15 8N5/7,5	1315	980	1275	376
3GP EVMSG 15 10N5/11	1300	1050	1405	449
3GP EVMSG 20 4N5/5,5	1315	980	1095	326
3GP EVMSG 20 6N5/7,5	1315	980	1195	355
3GP EVMSG 20 8N5/11	1300	1050	1325	462

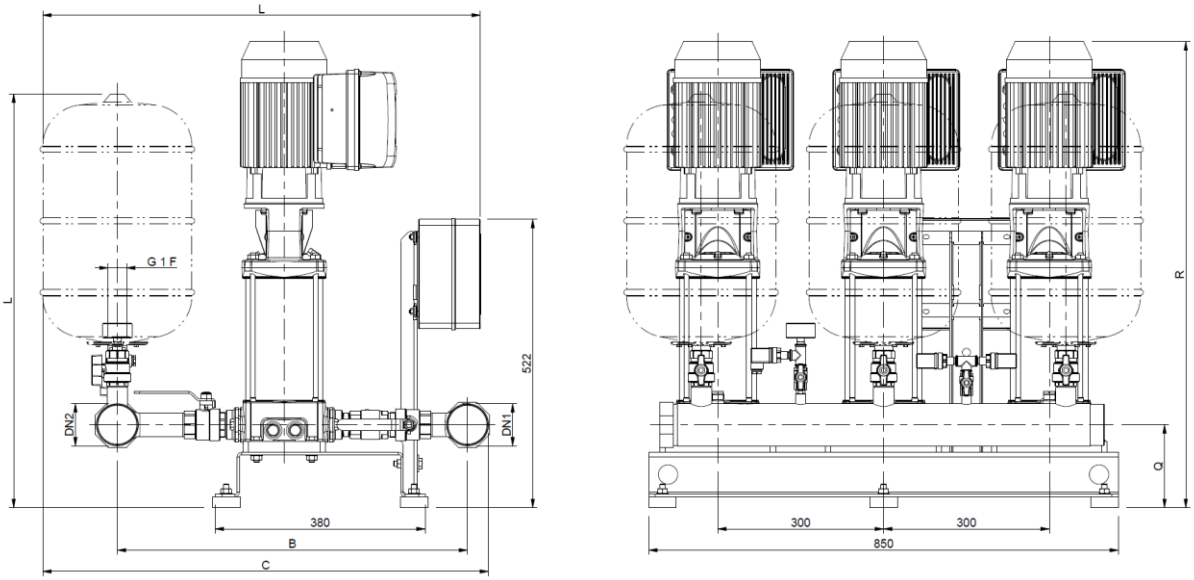
3GP EVM(.) 32-45-64





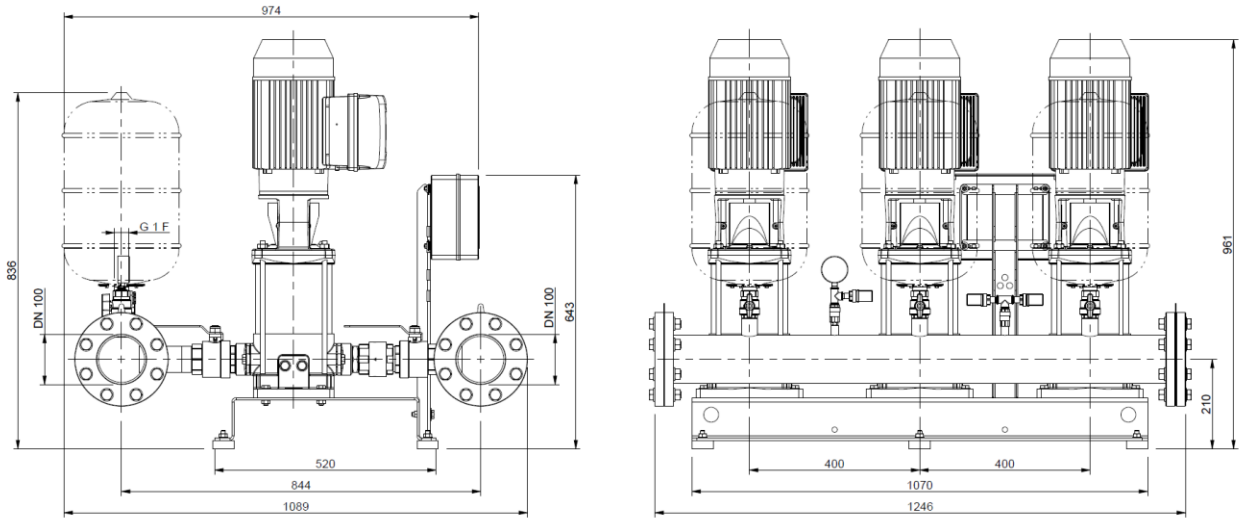
Booster Type	Dimensions [mm]									Weight [kg]
	DN1	DN2	B	C	H	L	Q	R	V	
3GP EVMG 32 3-3F5/5.5	DN150	DN125	1030	1305	1050	945	190	985	830	578
3GP EVMG 32 3-1F5/5.5	DN150	DN125	1030	1305	1050	945	190	985	830	578
3GP EVMG 32 4-3F5/7.5	DN150	DN125	1030	1305	1050	945	190	1035	830	593
3GP EVMG 32 4-1F5/7.5	DN150	DN125	1030	1305	1050	945	190	1035	830	593
3GP EVMG 32 5-3F5/11	DN150	DN125	1030	1305	1245	1025	190	1360	830	728
3GP EVMG 45 2-0 F5/7.5	DN200	DN150	1225	1540	1050	985	225	1030	880	670
3GP EVMG 45 3-2 F5/11	DN200	DN150	1225	1540	1245	1065	225	1380	880	802
3GP EVMG 45 3-0 F5/11	DN200	DN150	1225	1540	1245	1065	225	1380	880	802
3GP EVMG 45 4-2 F5/15	DN200	DN150	1225	1540	1245	1065	225	1475	880	913
3GP EVMG 45 4-0 F5/15	DN200	DN150	1225	1540	1245	1065	225	1475	880	913
3GP EVMG 64 2-0F5/11	DN200	DN150	1170	1485	1245	1070	225	1310	880	832
3GP EVMG 64 3-3F5/15	DN200	DN150	1170	1485	1245	1070	225	1405	880	934
3GP EVMG 64 3-2F5/15	DN200	DN150	1170	1485	1245	1070	225	1405	880	934
3GP EVMG 64 3-1F5/15	DN200	DN150	1170	1485	1245	1070	225	1405	880	934
3GP EVMG 64 3-0F5/18.5	DN200	DN150	1170	1485	1245	1070	225	1450	880	979
3GP EVMG 64 4-3F5/18.5	DN200	DN150	1170	1485	1245	1070	225	1520	880	1003
3GP EVMG 64 4-1F5/22	DN200	DN150	1170	1485	1545	1120	225	1555	880	1205
3GP EVMG 64 4-0F5/22	DN200	DN150	1170	1485	1545	1120	225	1555	880	1205

3GPE EVMS(.) 5-10 E-SPD



Booster Type	Dimensions [mm]								Weight [kg]
	DN1	DN2	B	C	L	Q	R	V	
3GPE EVMSG5 8N5/2.2 ESPT	G 2 1/2	G 2 1/2	634	807	792	150	843	748	137
3GPE EVMSG10 6N5/2.2 ESPT	G 3	G 3	699	880	817	180	864	785	168
3GPE EVMSG10 7N5/3 ESPT	G 3	G 3	699	880	817	180	955	785	192

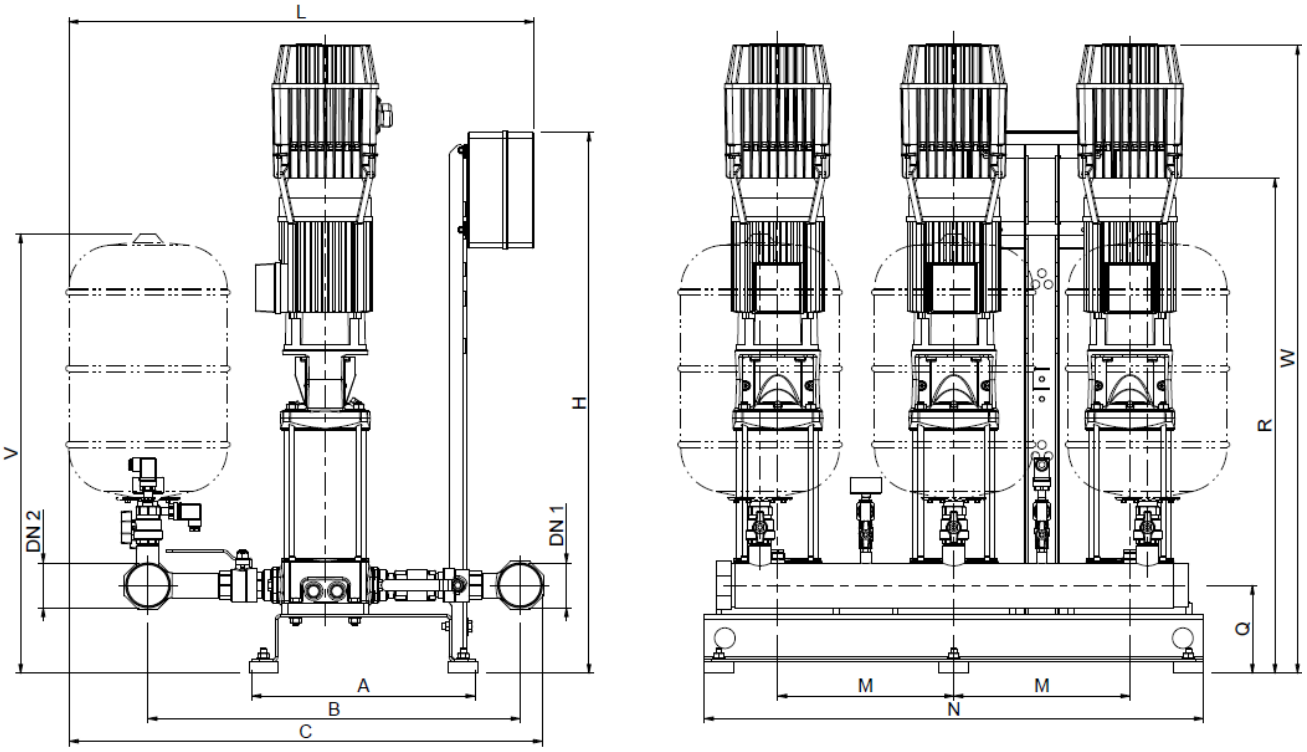
3GPE EVMS(.) 15-4N5/4 ESPT



Weight 271 kg

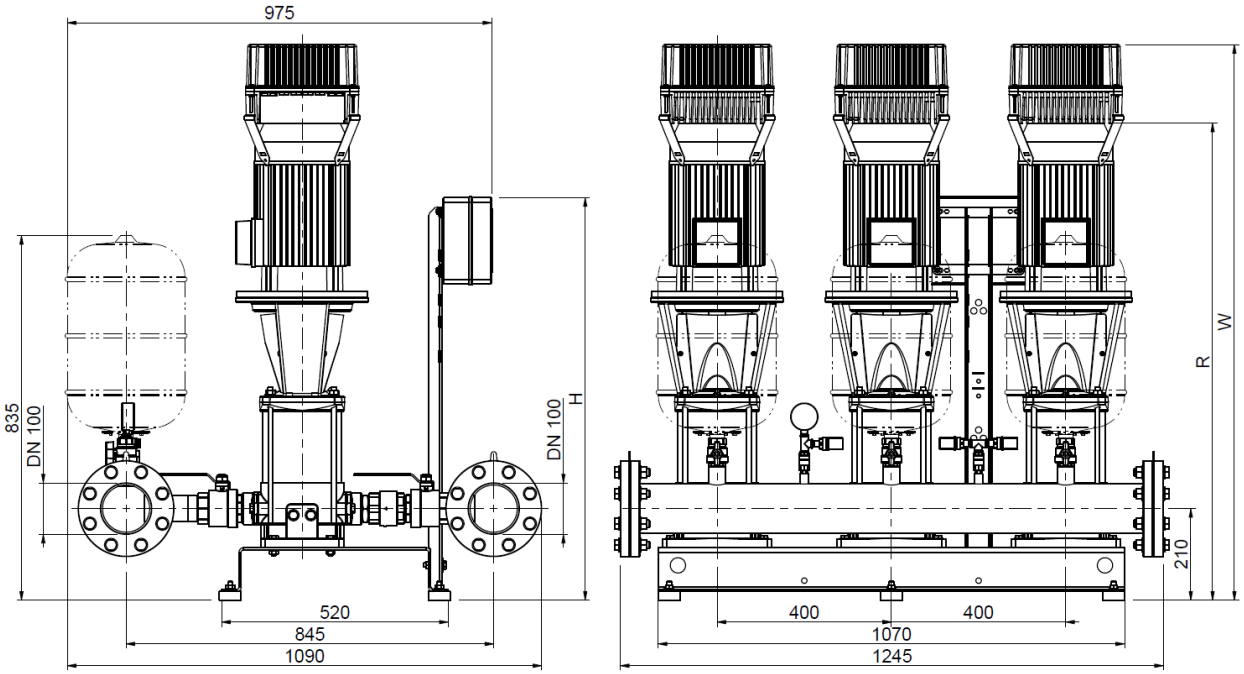
OVERALL DIMENSIONS 3GPE BOOSTER SET

3GPE EVMS(.) 3-5-10 E-DRIVE



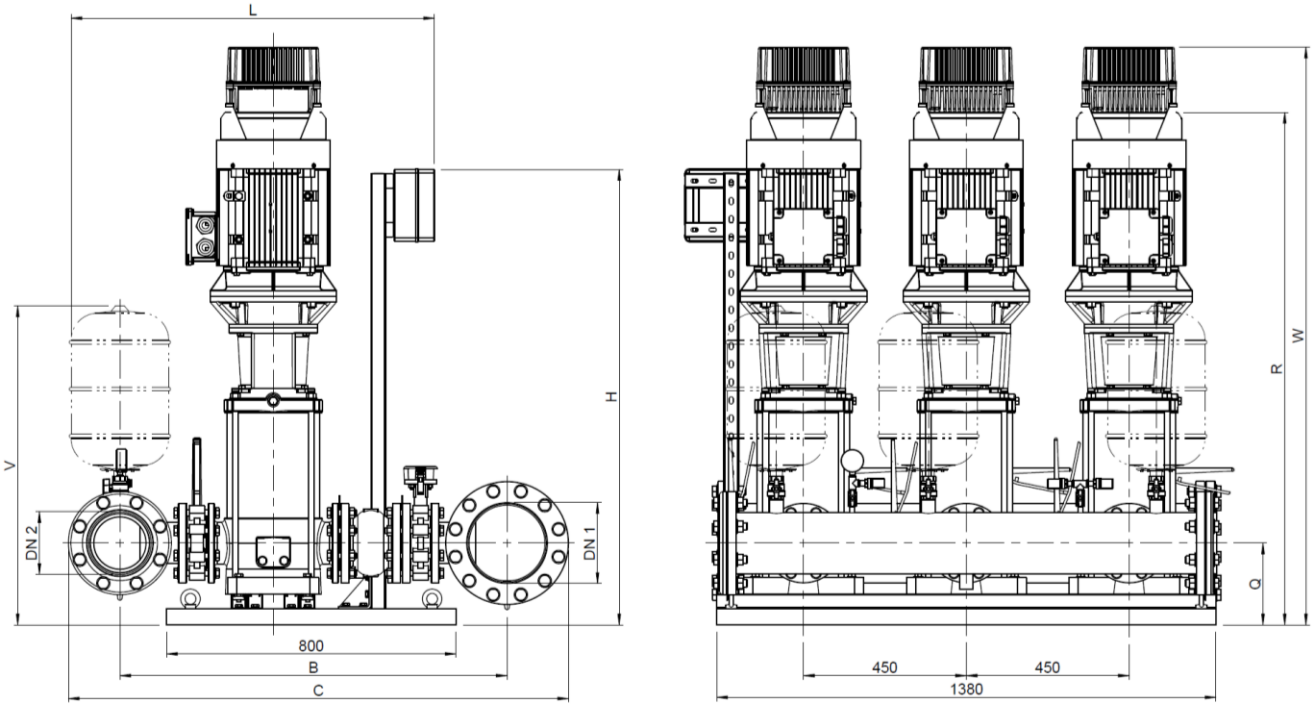
Booster Type	Dimensions [mm]													Weight
	DN1	DN2	A	B	C	H	L	M	N	Q	R	W	V	[kg]
3GPE EVMSG 3 7N5/0,75 EDT	G 2	G 2	380	595	760	920	775	300	850	150	700	925	740	117
3GPE EVMSG 3 9N5/1,1 EDT	G 2	G 2	380	595	760	920	775	300	850	150	750	980	740	124
3GPE EVMSG 3 10N5/1,1 EDT	G 2	G 2	380	595	760	920	775	300	850	150	770	1000	740	125
3GPE EVMSG 3 16N5/1,5 EDT	G 2	G 2	380	595	760	920	775	300	850	150	955	1185	740	147
3GPE EVMSG 3 19N5/2,2 EDT	G 2	G 2	380	595	760	920	775	300	850	150	1020	1245	740	155
3GPE EVMSG 5 4N5/0,75 EDT	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	665	890	750	119
3GPE EVMSG 5 5N5/1,1 EDT	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	700	930	750	125
3GPE EVMSG 5 6N5/1,5 EDT	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	785	1015	750	137
3GPE EVMSG 5 7N5/1,5 EDT(EDM)	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	815	1045	750	138
3GPE EVMSG 5 8N5/2,2 EDT	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	845	1070	750	145
3GPE EVMSG 5 9N5/2,2 EDT	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	870	1100	750	146
3GPE EVMSG 5 11N5/2,2 EDT	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	925	1155	750	150
3GPE EVMSG 5 15N5/3,0 EDT	G 2 ½	G 2 ½	380	635	805	920	790	300	850	150	1100	1330	750	181
3GPE EVMSG 10 4N5/2,2 EDT	G 3	G 3	380	700	880	920	785	300	850	180	805	1030	785	170
3GPE EVMSG 10 6N5/2,2 EDT	G 3	G 3	380	700	880	920	785	300	850	180	865	1090	785	175
3GPE EVMSG 10 7N5/3,0 EDT	G 3	G 3	380	700	880	920	785	300	850	180	955	1185	785	199
3GPE EVMSG 10 8N5/3,0 EDT	G 3	G 3	380	700	880	920	785	300	850	180	985	1215	785	201
3GPE EVMSG 10 11N5/4,0 EDT	G 3	G 3	380	700	880	920	785	300	850	180	1095	1325	785	230
3GPE EVMSG 10 14N5/5,5 EDT	G 3	G 3	520	700	880	1325	890	400	1070	200	1340	1520	805	322

3GPE EVMS(.) 15-20 E-DRIVE



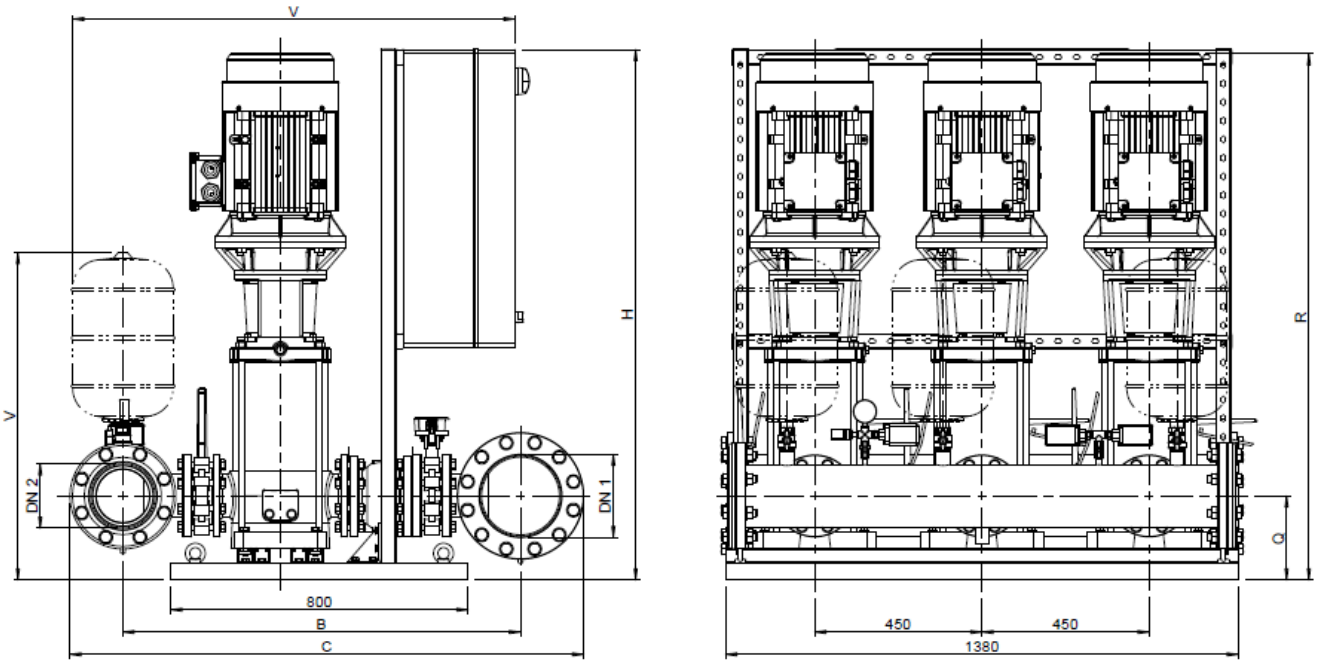
Booster Type	Dimensions [mm]			Weight
	H	R	W	[kg]
3GPE EVMSG 15 4N5/4,0 EDT	925	960	1190	284
3GPE EVMSG 15 5N5/5,5 EDT	1325	1135	1315	352
3GPE EVMSG 15 6N5/5,5 EDT	1325	1175	1355	356
3GPE EVMSG 15 7N5/7,5 EDT	1325	1235	1415	383
3GPE EVMSG 15 8N5/7,5 EDT	1325	1275	1455	387
3GPE EVMSG 15 9N5/11 EDT	1325	1365	1545	440
3GPE EVMSG 15 10N5/11 EDT	1325	1405	1585	444
3GPE EVMSG 20 4N5/5,5 EDT	1325	1095	1275	337
3GPE EVMSG 20 6N5/7,5 EDT	1325	1195	1375	366
3GPE EVMSG 20 8N5/11 EDT	1325	1325	1505	458

3GPE EVM(.) 32-45-64 E-DRIVE



Booster Type	Dimensions [mm]										Weight [kg]
	DN1	DN2	B	C	H	L	Q	R	W	V	
3GPE EVMG 32 3-3F5/5.5 EDT	DN150	DN125	920	1195	855	895	190	985	1165	830	570
3GPE EVMG 32 3-1F5/5.5 EDT	DN150	DN125	920	1195	855	895	190	985	1165	830	570
3GPE EVMG 32 4-3F5/7.5 EDT	DN150	DN125	920	1195	1050	895	190	1035	1215	830	585
3GPE EVMG 32 4-1F5/7.5 EDT	DN150	DN125	920	1195	1050	895	190	1035	1215	830	585
3GPE EVMG 32 5-3F5/11 EDT	DN150	DN125	920	1195	1050	895	190	1360	1540	830	705
3GPE EVMG 45 2-0F5/7.5 EDT	DN200	DN150	1025	1335	1050	965	225	1030	1210	880	662
3GPE EVMG 45 3-2F5/11 EDT	DN200	DN150	1025	1335	1110	965	225	1380	1560	880	779
3GPE EVMG 45 3-0F5/11 EDT	DN200	DN150	1025	1335	1110	965	225	1380	1560	880	779
3GPE EVMG 45 4-2F5/15 EDT	DN200	DN150	1025	1335	1110	965	225	1475	1655	880	884
3GPE EVMG 45 4-0F5/15 EDT	DN200	DN150	1025	1335	1110	965	225	1475	1655	880	884
3GPE EVMG 64 2-0F5/11 EDT	DN200	DN150	1070	1385	1255	1000	225	1310	1490	880	806
3GPE EVMG 64 3-3F5/15 EDT	DN200	DN150	1070	1385	1255	1000	225	1405	1585	880	902
3GPE EVMG 64 3-1F5/15 EDT	DN200	DN150	1070	1385	1255	1000	225	1405	1585	880	902
3GPE EVMG 64 3-2F5/15 EDT	DN200	DN150	1070	1385	1255	1000	225	1405	1585	880	902

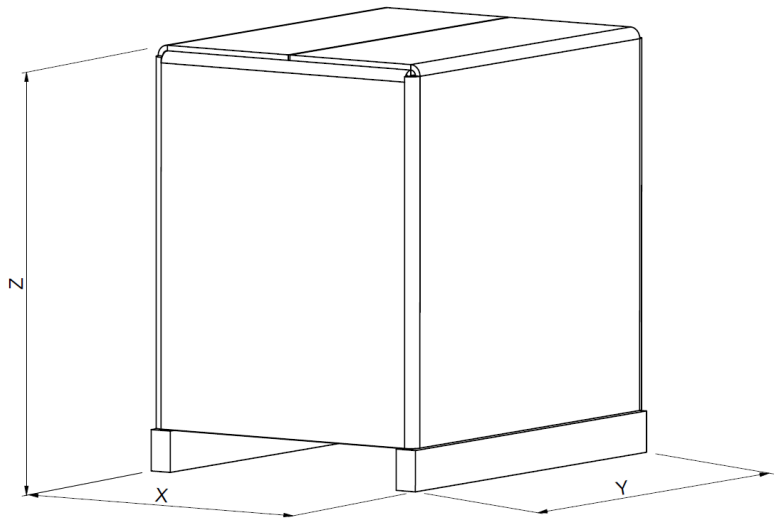
3GPE EVM(.) 32-45-64 EFC/MFC



Booster Type	Dimensions [mm]									Weight [kg]
	DN1	DN2	B	C	H	L	Q	R	V	
3GPE EVMG 32 3-3F5/5.5 EFC	DN150	DN125	920	1195	1475	1175	190	985	830	588
3GPE EVMG 32 3-1F5/5.5 EFC	DN150	DN125	920	1195	1475	1175	190	985	830	588
3GPE EVMG 32 4-3F5/7.5 EFC	DN150	DN125	920	1195	1475	1175	190	1035	830	603
3GPE EVMG 32 4-1F5/7.5 EFC	DN150	DN125	920	1195	1475	1175	190	1035	830	603
3GPE EVMG 32 5-3F5/11 EFC	DN150	DN125	920	1195	1475	1225	190	1360	830	728
3GPE EVMG 45 2-0F5/7.5 EFC	DN200	DN150	1025	1335	1575	1250	225	1030	880	680
3GPE EVMG 45 3-2F5/11 EFC	DN200	DN150	1025	1335	1575	1300	225	1380	880	802
3GPE EVMG 45 3-0F5/11 EFC	DN200	DN150	1025	1335	1575	1300	225	1380	880	802
3GPE EVMG 45 4-2F5/15 EFC	DN200	DN150	1025	1335	1575	1300	225	1475	880	907
3GPE EVMG 45 4-0F5/15 EFC	DN200	DN150	1025	1335	1575	1300	225	1475	880	907
3GPE EVMG 64 2-0F5/11 EFC	DN200	DN150	1070	1385	1575	1170	225	1310	880	829
3GPE EVMG 64 3-3F5/15 EFC	DN200	DN150	1070	1385	1575	1170	225	1405	880	925
3GPE EVMG 64 3-2F5/15 EFC	DN200	DN150	1070	1385	1575	1170	225	1405	880	925
3GPE EVMG 64 3-1F5/15 EFC	DN200	DN150	1070	1385	1575	1170	225	1405	880	925
3GPE EVMG 64 3-0F5/18.5 EFC	DN200	DN150	1070	1385	1775	1170	225	1450	880	970
3GPE EVMG 64 4-3F5/18.5 EFC	DN200	DN150	1070	1385	1775	1170	225	1520	880	994
3GPE EVMG 64 4-1F5/22 EFC	DN200	DN150	1070	1385	1775	1170	225	1555	880	1196
3GPE EVMG 64 4-0F5/22 EFC	DN200	DN150	1070	1385	1775	1170	225	1555	880	1196

PACKING

TYPE “1”



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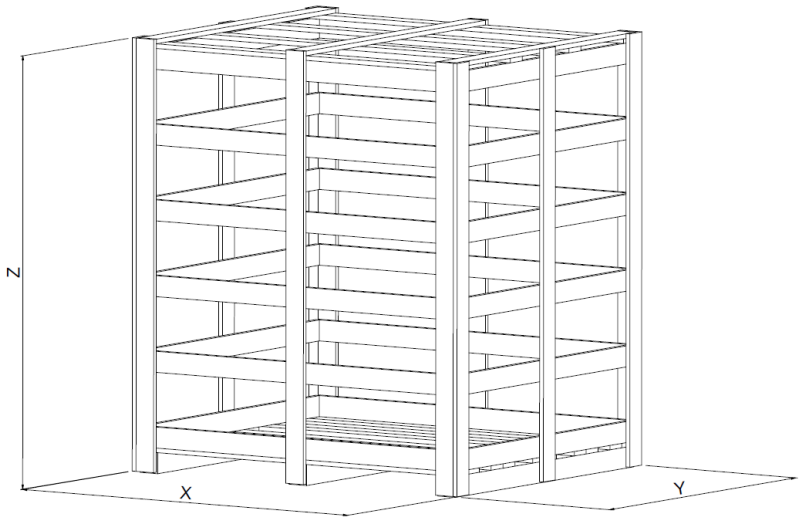


2GP(E) EVMS(.) 3-5-10-15-20

	Booster type	Overall dimensions packing X	Y	Z	Booster+packing Weight [kg]	Packing type
2GP	2GP EVMSG 3 7N5/0,75 (M)	1230	830	1365	95	1
	2GP EVMSG 3 9N5/1,1 (M)				99	
	2GP EVMSG 3 16N5/1,5 (M)				114	
	2GP EVMSG 3 19N5/2,2				120	
	2GP EVMSG 5 4N5/0,75				96	
	2GP EVMSG 5 5N5/1,1				100	
	2GP EVMSG 5 6N5/1,5 (M)				118	
	2GP EVMSG 5 7N5/1,5 (M)				109	
	2GP EVMSG 5 9N5/2,2 (M)				114	
	2GP EVMSG 5 11N5/2,2				116	
	2GP EVMSG 5 15N5/3				137	
	2GP EVMSG 10 4N5/2,2 (M)				129	
	2GP EVMSG 10 6N5/2,2 (M)				133	
	2GP EVMSG 10 8N5/3				150	
	2GP EVMSG 10 11N5/4				170	
	2GP EVMSG 10 14N5/5,5	1235	1135	1790	239	
	2GP EVMSG 15 4N5/4				231	
	2GP EVMSG 15 6N5/5,5				274	
	2GP EVMSG 15 7N5/7,5				292	
	2GP EVMSG 15 8N5/7,5				295	
	2GP EVMSG 20 4N5/5,5				262	
	2GP EVMSG 20 6N5/7,5				281	
2GPE E-SPD	2GPE EVMSG 3 8N5/0.75 ESPT	1230	830	1365	97	1
	2GPE EVMSG 3 9N5/1.1 ESPM				101	
	2GPE EVMSG 3 10N5/1.1 ESPT(ESPM)				102	
	2GPE EVMSG 5 7N5/1.5 ESPT(ESPM)				110	
	2GPE EVMSG 5 8N5/2.2 ESPT				114	
	2GPE EVMSG 5 9N5/2.2 ESPT				115	
	2GPE EVMSG 10 6N5/2.2 ESPT(ESPM)				134	
	2GPE EVMSG 10 7N5/3 ESPT				150	
	2GPE EVMSG 10 8N5/3 ESPT				152	
	2GPE EVMSG 15 4N5/4 ESPT	1235	1135	1790	192	
2GPE E-DRIVE	2GPE EVMSG 3 10N5/1.1 EDM	690	780	1215	93	
	2GPE EVMSG 5 7N5/1.5 EDM	1230	830	1365	112	
	2GPE EVMSG 5 8N5/2.2 EDT				118	
	2GPE EVMSG 5 9N5/2.2 EDT				119	
	2GPE EVMSG 10 6N5/2,2 EDT (EDM)				138	
	2GPE EVMSG 10 7N5/3 EDT				154	
	2GPE EVMSG 10 8N5/3 EDT	1235	1135	1790	169	
	2GPE EVMSG 10 11N5/4 EDT				189	
	2GPE EVMSG 10 14N5/5,5 EDT				249	
	2GPE EVMSG 15 4N5/4 EDT				236	
	2GPE EVMSG 15 5N5/5,5 EDT				282	
	2GPE EVMSG 15 6N5/5,5 EDT				284	
	2GPE EVMSG 15 7N5/7,5 EDT				302	
	2GPE EVMSG 15 8N5/7,5 EDT				305	
	2GPE EVMSG 15 9N5/11 EDT				341	
	2GPE EVMSG 15 10N5/11 EDT				344	
	2GPE EVMSG 20 4N5/5,5 EDT				272	
	2GPE EVMSG 20 6N5/7,5 EDT				291	

2GP(E) EVM(.) 32-45-64

	Booster	Overall dimensions packing X	Y	Z	Booster+packing Weight [kg]	Packing type
2GP	2GP EVM(.)32 3-3F5/5.5	1585	1350	1790	443	1
	2GP EVM(.)32 3-1F5/5.5				443	
	2GP EVM(.)32 4-3F5/7.5				453	
	2GP EVM(.)32 4-1F5/7.5				453	
	2GP EVM(.)32 5-3F5/11				541	
	2GP EVM(.)45 2-0F5/7.5				485	
	2GP EVM(.)45 3-2F5/11				570	
	2GP EVM(.)45 3-0F5/11				570	
	2GP EVM(.)45 4-2F5/15				640	
	2GP EVM(.)45 4-0F5/15				640	
	2GP EVM(.)64 2-0F5/11				592	
	2GP EVM(.)64 3-3F5/15				656	
	2GP EVM(.)64 3-2F5/15				656	
	2GP EVM(.)64 3-1F5/15				656	
	2GP EVM(.)64 3-0F5/18.5				686	
	2GP EVM(.)64 4-3F5/18.5				702	
	2GP EVM(.)64 4-1F5/22				841	
	2GP EVM(.)64 4-0F5/22				841	
2GPE E-DRIVE	2GPE EVM(.)32 3-3F5/5.5 EDT	1585	1350	1790	458	1
	2GPE EVM(.)32 3-1F5/5.5 EDT				458	
	2GPE EVM(.)32 4-3F5/7.5 EDT				468	
	2GPE EVM(.)32 4-1F5/7.5 EDT				468	
	2GPE EVM(.)32 5-3F5/11 EDT				553	
	2GPE EVM(.)45 2-0F5/7.5 EDT				490	
	2GPE EVM(.)45 3-2F5/11 EDT				583	
	2GPE EVM(.)45 3-0F5/11 EDT				583	
	2GPE EVM(.)45 4-2F5/15 EDT				653	
	2GPE EVM(.)45 4-0F5/15 EDT				653	
	2GPE EVM(.)64 2-0F5/11 EDT				602	
	2GPE EVM(.)64 3-3F5/15 EDT				666	
	2GPE EVM(.)64 3-2F5/15 EDT				666	
	2GPE EVM(.)64 3-1F5/15 EDT				666	
2GPE EFC	2GPE EVM(.)32 3-3F5/5.5 EFC	1585	1350	1790	458	1
	2GPE EVM(.)32 3-1F5/5.5 EFC				458	
	2GPE EVM(.)32 4-3F5/7.5 EFC				468	
	2GPE EVM(.)32 4-1F5/7.5 EFC				468	
	2GPE EVM(.)32 5-3F5/11 EFC				553	
	2GPE EVM(.)45 2-0F5/7.5 EFC				500	
	2GPE EVM(.)45 3-2F5/11 EFC				583	
	2GPE EVM(.)45 3-0F5/11 EFC				583	
	2GPE EVM(.)45 4-2F5/15 EFC				653	
	2GPE EVM(.)45 4-0F5/15 EFC				653	
	2GPE EVM(.)64 2-0F5/11 EFC				602	
	2GPE EVM(.)64 3-3F5/15 EFC				666	
	2GPE EVM(.)64 3-2F5/15 EFC				666	
	2GPE EVM(.)64 3-1F5/15 EFC				666	
	2GPE EVM(.)64 3-0F5/18.5 EFC				696	
	2GPE EVM(.)64 4-3F5/18.5 EFC				712	
	2GPE EVM(.)64 4-1F5/22 EFC				848	
	2GPE EVM(.)64 4-0F5/22 EFC				848	

3GP(E) EVMS(.) 3-5-10-15-20

	Booster	Overall dimensions packing X	Y	Z	Booster+packing Weight [kg]	Packing type
3GP	3GP EVMSG 3 7N5/0,75	1230	830	1365	136	1
	3GP EVMSG 3 9N5/1,1				143	
	3GP EVMSG 3 10N5/1,1				143	
	3GP EVMSG 3 16N5/1,5				166	
	3GP EVMSG 3 19N5/2,2				174	
	3GP EVMSG 5 4N5/0,75	1235	1135	1790	152	
	3GP EVMSG 5 5N5/1,1				158	
	3GP EVMSG 5 6N5/1,5				170	
	3GP EVMSG 5 7N5/1,5				172	
	3GP EVMSG 5 8N5/2,2				178	
	3GP EVMSG 5 9N5/2,2				179	
	3GP EVMSG 5 11N5/2,2				183	
	3GP EVMSG 5 15N5/3,0				215	
	3GP EVMSG 10 4N5/2,2	1235	1135	1790	203	
	3GP EVMSG 10 6N5/2,2				208	
	3GP EVMSG 10 7N5/3,0				233	
	3GP EVMSG 10 8N5/3,0				235	
	3GP EVMSG 10 11N5/4,0				264	
	3GP EVMSG 10 14N5/5,5				348	
	3GP EVMSG 15 4N5/4,0	1585	1350	1790	332	
	3GP EVMSG 15 5N5/5,5				393	
	3GP EVMSG 15 6N5/5,5				396	
	3GP EVMSG 15 7N5/7,5				424	
	3GP EVMSG 15 8N5/7,5				428	
	3GP EVMSG 15 10N5/11				501	
	3GP EVMSG 20 4N5/5,5				378	
	3GP EVMSG 20 6N5/7,5				407	
	3GP EVMSG 20 8N5/11				514	
3GPE E-SPD	3GPE EVMSG5 8N5/2.2 ESPT	1235	1135	1790	174	1
	3GPE EVMSG10 6N5/2.2 ESPT				205	
	3GPE EVMSG10 7N5/3 ESPT				229	
	3GPE EVMSG15 4N5/4 ESPT	1585	1350	1790	323	
3GPE E-DRIVE	3GPE EVMSG 3 7N5/0,75 EDT	1235	1135	1790	154	1
	3GPE EVMSG 3 9N5/1,1 EDT				161	
	3GPE EVMSG 3 10N5/1,1 EDT				162	
	3GPE EVMSG 3 16N5/1,5 EDT				184	
	3GPE EVMSG 3 19N5/2,2 EDT				192	
	3GPE EVMSG 5 4N5/0,75 EDT	1235	1135	1790	156	
	3GPE EVMSG 5 5N5/1,1 EDT				162	
	3GPE EVMSG 5 6N5/1,5 EDT				174	
	3GPE EVMSG 5 7N5/1,5 EDT				175	
	3GPE EVMSG 5 8N5/2,2 2 EDT				182	
	3GPE EVMSG 5 9N5/2,2 EDT				183	
	3GPE EVMSG 5 11N5/2,2 EDT				187	
	3GPE EVMSG 5 15N5/3,0 EDT	1235	1135	1790	218	
	3GPE EVMSG 10 4N5/2,2 EDT				207	
	3GPE EVMSG 10 6N5/2,2 EDT				212	
	3GPE EVMSG 10 7N5/3,0 EDT				236	
	3GPE EVMSG 10 8N5/3,0 EDT				238	
	3GPE EVMSG 10 11N5/4,0 EDT				267	
	3GPE EVMSG 10 14N5/5,5 EDT				359	
	3GPE EVMSG 15 4N5/4,0 EDT	1585	1350	1790	336	
	3GPE EVMSG 15 5N5/5,5 EDT				404	
	3GPE EVMSG 15 6N5/5,5 EDT				408	
	3GPE EVMSG 15 7N/7,5 EDT				435	
	3GPE EVMSG 15 8N5/7,5 EDT				439	
	3GPE EVMSG 15 9N5/11 EDT				492	
	3GPE EVMSG 15 10N5/11 EDT				496	
	3GPE EVMSG 20 4N5/5,5 EDT				389	
	3GPE EVMSG 20 6N5/7,5 EDT				418	
	3GPE EVMSG 20 8N5/11 EDT				510	

3GP(E) EVM(.) 32-45-64

	Booster	Overall dimensions packing X	Y	Z	Booster+packing Weight [kg]	Packing Type
3GP	3GP EVM(.)32 3-3F5/5.5	1860	1560	2070	704	2
	3GP EVM(.)32 3-1F5/5.5				704	
	3GP EVM(.)32 4-3F5/7.5				719	
	3GP EVM(.)32 4-1F5/7.5				719	
	3GP EVM(.)32 5-3F5/11				854	
	3GP EVM(.)45 2-0F5/7.5				796	
	3GP EVM(.)45 3-2F5/11				928	
	3GP EVM(.)45 3-0F5/11				928	
	3GP EVM(.)45 4-2F5/15				1039	
	3GP EVM(.)45 4-0F5/15				1039	
	3GP EVM(.)64 2-0F5/11				958	
	3GP EVM(.)64 3-3F5/15				1060	
	3GP EVM(.)64 3-2F5/15				1060	
	3GP EVM(.)64 3-1F5/15				1060	
	3GP EVM(.)64 3-0F5/18.5				1105	
	3GP EVM(.)64 4-3F5/18.5				1129	
	3GP EVM(.)64 4-1F5/22				1331	
	3GP EVM(.)64 4-0F5/22				1331	
3GPE E-DRIVE	3GPE EVM(.)32 3-3F5/5.5 EDT	1860	1560	2070	696	2
	3GPE EVM(.)32 3-1F5/5.5 EDT				696	
	3GPE EVM(.)32 4-3F5/7.5 EDT				711	
	3GPE EVM(.)32 4-1F5/7.5 EDT				711	
	3GPE EVM(.)32 5-3F5/11 EDT				831	
	3GPE EVM(.)45 2-0F5/7.5 EDT				788	
	3GPE EVM(.)45 3-2F5/11 EDT				905	
	3GPE EVM(.)45 3-0F5/11 EDT				905	
	3GPE EVM(.)45 4-2F5/15 EDT				1010	
	3GPE EVM(.)45 4-0F5/15 EDT				1010	
	3GPE EVM(.)64 2-0F5/11 EDT				932	
	3GPE EVM(.)64 3-3F5/15 EDT				1028	
	3GPE EVM(.)64 3-2F5/15 EDT				1028	
	3GPE EVM(.)64 3-1F5/15 EDT				1028	
3GPE EFC	3GPE EVM(.)32 3-3F5/5.5 EFC	1860	1560	2070	714	2
	3GPE EVM(.)32 3-1F5/5.5 EFC				714	
	3GPE EVM(.)32 4-3F5/7.5 EFC				729	
	3GPE EVM(.)32 4-1F5/7.5 EFC				729	
	3GPE EVM(.)32 5-3F5/11 EFC				854	
	3GPE EVM(.)45 2-0F5/7.5 EFC				806	
	3GPE EVM(.)45 3-2F5/11 EFC				928	
	3GPE EVM(.)45 3-0F5/11 EFC				928	
	3GPE EVM(.)45 4-2F5/15 EFC				1033	
	3GPE EVM(.)45 4-0F5/15 EFC				1033	
	3GPE EVM(.)64 2-0F5/11 EFC				955	
	3GPE EVM(.)64 3-3F5/15 EFC				1051	
	3GPE EVM(.)64 3-2F5/15 EFC				1051	
	3GPE EVM(.)64 3-1F5/15 EFC				1051	
	3GPE EVM(.)64 3-0F5/18.5 EFC				1096	
	3GPE EVM(.)64 4-3F5/18.5 EFC				1120	
	3GPE EVM(.)64 4-1F5/22 EFC				1322	
	3GPE EVM(.)64 4-0F5/22 EFC				1322	

CONTROL PANEL FIXED SPEED

2EP-E SPECIFICATION

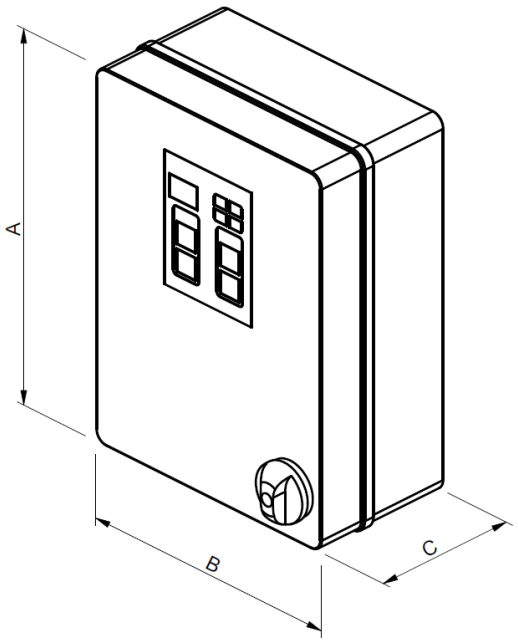
- **SERIES 2EP-E M UA (single-phase power output)**
- **SERIES 2EP-E T UA (three-phase power output)**

Electrical panel (protection and control) for two electropumps. Manual or automatic operation through pressure transmitter or/and pressure switches. The panel is configured to start the two pumps alternately in stand-by to pressure transmitter or/and pressure switch. The electrical panel protects the motors against overload and phase failure. Any protection devices that intervene are signalled on the panel itself and remotely through no voltage contacts. The protection device against overload and phase failure resets automatically three times, and manually after the fourth intervention.

TECHNICAL FEATURES

- P.MIN= Operation against dry running (tripped by a level float or minimum pressure switch) with automatic reset once water supply is restored, with warning lamp.
- TRP= control by pressure transmitter
- PR1= Pump n. 1 start/stop (not included in the pressure set)
- PR2= Pump n. 2 start/stop (not included in the pressure set)
- Automatic start sequence alternation
- Motor protection against overload with automatic reset for three times and manual reset the fourth time
- Motor line protection against short-circuits with fuses for motor startup
- Transformer and auxiliary circuit protection with fuses
- Remote signalling, through NC-NO no voltage contact, of the protection devices that intervene

Version		2EP-E M UA	2EP-E T UA
Power source	Frequency	50/60 Hz	
	Phase	Single-phase	Three-phase
	Voltage	230 V ± 10%	400 V ± 10%
	Power	0.55 ÷ 2.2 kW	1.1 ÷ 7.5 kW
Others	Protection degree	IP 56	
	Ambient Temperature	-10°C + 50°C up to 7.5 kW	
	Pressurisation units	2 pumps	
	Relative humidity	50% a 40°C MAX (90% a 20°C)	
	Max altitude	1000 m (a.s.l.)	
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II)		



2EP-E M UA MODELS TABLE

Model	Single pump Power [kW]	I Calibration [A]	Motor fuse	Dimensions AxBxC [mm]	Weight [kg]
2EP-E 0,55 M	0,55	2x4,5	6A aM (10x38)	240 x 190 x 90	1,5
2EP-E 1,1 M	1,1	2x9	10A aM (10x38)	240 x 190 x 90	1,5
2EP-E 1,5 M	1,5	2x12	12A aM (10x38)	240 x 190 x 90	1,5
2EP-E 2,2 M	2,2	2x15	20A aM (10x38)	300 x 220 x 120	2,2

2EP-E T UA MODELS TABLE

Model	Single pump Power [kW]	I Calibration [A]	Motor fuse	Dimensions AxBxC [mm]	Weight [kg]
2EP-E 1,1 T	1,1	2x3.5	4A am (10x38)	300 x 220 x 120	3,5
2EP-E 2,2 T	2,2	2x5	8A am (10x38)	300 x 220 x 120	3,5
2EP-E 4 T	4	2x9	12A am (10x38)	300 x 220 x 120	3,5
2EP-E 7,5 T	7,5	2x15	20A am (10x38)	300 x 220 x 120	3,5

Notes: 4 pumps version are available with EP control panel on request

2EP SD UA SPECIFICATION

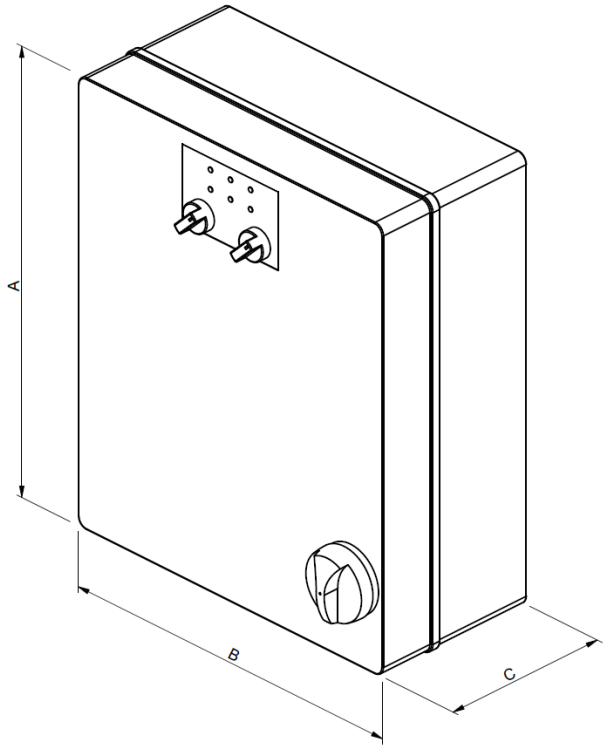
• SERIES 2EP SD UA (star/delta starting)

Electrical panel (protection and control) for two electropumps. Manual or automatic operation through pressure switches or floats. The panel is configured to start the two pumps alternately in stand-by to pressure switch / float switch enable signals. The electrical panel protects the motors against overload and phase failure. Any protection devices that intervene are signalled on the panel itself and remotely through no voltage contacts. The protection device against overload and phase failure resets automatically three times, and manually after the fourth intervention (any interventions, from 1 to 3, are cancelled one hour after the last intervention).

TECHNICAL FEATURES

• P.MIN= Operation against dry running (tripped by a level float or minimum pressure switch) with automaticreset once water supply is restored, with warning lamp.
• PR1= Pump n. 1 start/stop
• PR2= Pump n. 2 start/stop
• Automatic start sequence alternation
• Motor protection against overload with automatic reset for three times and manual reset the fourth time
• Motor line protection against short-circuits with fuses for motor startup
• Transformer and auxiliary circuit protection with fuses
• Remote signalling, through NC-NO no voltage contact, of the protection devices that intervene

Version		2EP SD UA
Power source	Frequency	50/60 Hz
	Phase	Three-phase
	Voltage	400 V ± 10%
	Power	11 ÷ 37 kW
Others	Protection degree	IP 55
	Ambient Temperature	-5°C + 40°C
	Pressurisation units	2 pumps
	Relative humidity	50% a 40°C MAX (90% a 20°C)
	Max altitude	1000 m (a.s.l.)
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II)	



2EP SD UA MODELS TABLE

Model	Single pump Power [kW]	I Calibration** [A]	Motor fuse	Dimensions AxBxC [mm]	Weight [kg]
2EP 11 SD	11	2x12	25A aM (14x51)	460x380x180	11
2EP 15 SD	15	2x18	40A aM (14x51)	460x380x180	11
2EP 18,5 SD	18	2x21	50A aM (14x51)	460x380x180	11
2EP 22 SD	22	2x29	63A aM (NH00)	500x500x200	18
2EP 30 SD	30	2x36	80A aM (NH00)	600x600x200	40
2EP 37 SD	37	2x45	100A aM (NH00)	1000x800x300	50

- ** Delta connection current measured

Notes: Standard Control panels EP SD three-phase are available for 1, 2, 3 pumps from 11kW up to 37kW power; 4 pumps version or power from 45kW and above are available on request

3EP-E SPECIFICATION

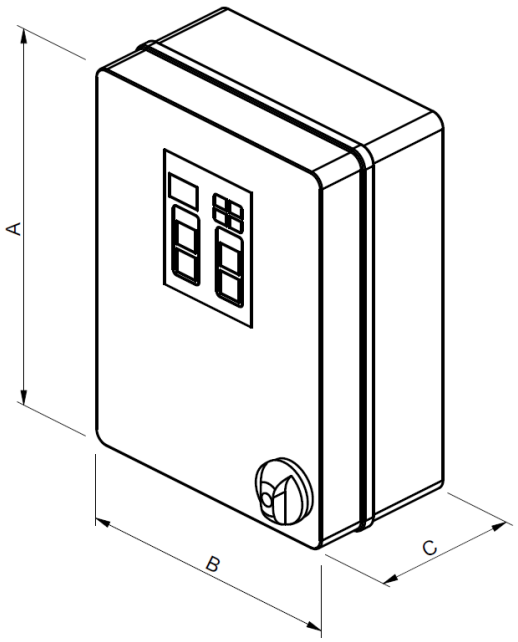
• SERIES 3EP-E T UA (three-phase power output)

Electrical panel (protection and control) for three electropumps. Manual or automatic operation through pressure transmitter or/and pressure switches. The panel is configured to start the two pumps alternately in stand-by to pressure transmitter or/and pressure switch. The electrical panel protects the motors against overload and phase failure. Any protection devices that intervene are signalled on the panel itself and remotely through no voltage contacts. The protection device against overload and phase failure resets automatically three times, and manually after the fourth intervention.

TECHNICAL FEATURES

• P.MIN= Operation against dry running (tripped by a level float or minimum pressure switch) with automatic reset once water supply is restored, with warning lamp.
• TRP= control by pressure transmitter
• PR1= Pump n. 1 start/stop (not included in the pressure set)
• PR2= Pump n. 2 start/stop (not included in the pressure set)
• PR3= Pump n. 3 start/stop (not included in the pressure set)
• Automatic start sequence alternation
• Motor protection against overload with automatic reset for three times and manual reset the fourth time
• Motor line protection against short-circuits with fuses for motor startup
• Transformer and auxiliary circuit protection with fuses
• Remote signalling, through NC-NO no voltage contact, of the protection devices that intervene

Version		3 EP-E
Power source	Frequency	50/60 Hz
	Phase	Three-phase
	Voltage	400 V ± 10%
	Power	1.1 ÷ 7.5 kW
Others	Protection degree	IP 56
	Ambient Temperature	-10°C + 50°C
	Relative humidity	50% a 40°C MAX (90% a 20°C)
	Relative humidity	1000 m (a.s.l.)
	Pressurisation units	3 pumps
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II)	



3EP-E T UA MODELS TABLE

Model	Single pump Power [kW]	I Calibration [A]	Motor fuse	Dimensions AxBxC [mm]	Weight [kg]
3EP-E 1,1 T	1,1	3x3,5	4A aM (10x38)	380x300x120	9,5
3EP-E 2,2 T	2,2	3x5	8A aM (10.3x38)	380x300x120	9,5
3EP-E 4 T	4	3x9	12A aM (10.3x38)	380x300x120	9,5
3EP-E 7,5 T	7,5	3x15	20A aM (10.3x38)	380x300x120	9,5

Notes: 4 pumps version are available with EP control panel on request

3EP SD UA SPECIFICATION

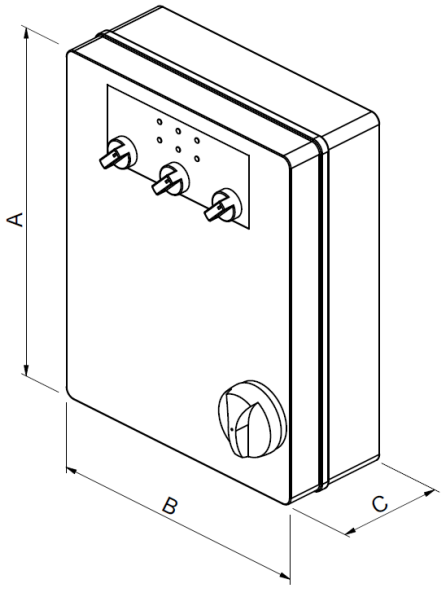
• SERIES 3EP SD UA (star/delta starting)

Electrical enclosure (protection and control) for three electropumps. Manual or automatic operation through pressure switches or floats. The panel is configured to start the three pumps alternately in repose to pressure switch / float switch enable signals.The electrical panel protects the motors against overload and phase failure. Any protection devices that intervene are signalled on the panel itself and remotely through no voltage contacts. The protection device against overload and phase failure resets automatically three times, and manually after the fourth intervention (any interventions, from 1 to 3, are cancelled one hour after the last intervention).

TECHNICAL FEATURES

• P.MIN= Operation against dry running (tripped by a level float or minimum pressure switch) with automaticreset once water supply is restored, with warning lamp.
• PR1= Electropump/s start/stop
• PR2= Electropump/s start/stop
• PR3= Electropump/s start/stop
• Automatic start sequence alternation
• Motor protection against overload with automatic reset for three times and manual reset the fourth time
• Motor line protection against short-circuits with fuses for motor startup
• Transformer and auxiliary circuit protection with fuses
• Remote signalling, through NC-NO no voltage contact, of the protection devices that intervene

Version		3 EP SD UA
Power source	Frequency	50/60 Hz
	Phase	Three-phase
	Voltage	400 V ± 10%
	Power	11 ÷ 37 kW
Others	Protection degree	IP 55
	Ambient Temperature	-5°C + 40°C
	Relative humidity	50% a 40°C MAX (90% a 20°C)
	Relative humidity	1000 m (a.s.l.)
	Pressurisation units	3 pumps
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II)	



3EP SD UA MODELS TABLE

Model	Single pump Power [kW]	I Calibration [A]	Motor fuse	Dimensions AxBxC [mm]	Weight [kg]
3EP 11 SD	11	3x15	25A am (14x51)	600x600x200	25
3EP 15 SD	15	3x18	25A am (14x51)	600x600x200	31
3EP 18,5 SD	18,5	3x21	40A am (14x51)	600x600x200	31
3EP 22 SD	22	3x29	50A am (14x51)	800x600x250	35
3EP 37 SD	37	3x44	63A am (NH00)	1000x800x300	54

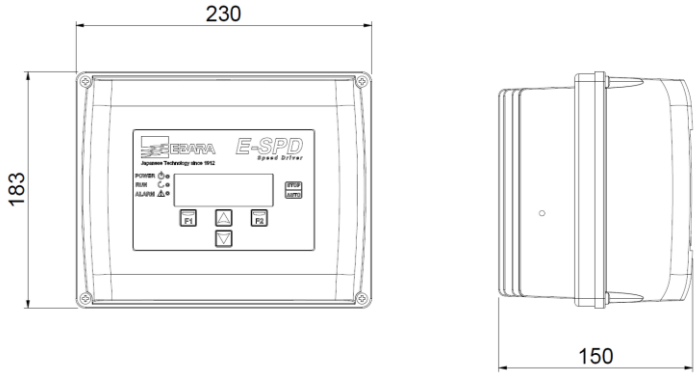
Notes: Standard Control panels EP SD three-phase are available for 1, 2, 3 pumps from 11kW up to 37kW power; 4 pumps version or power from 45kW and above are available on request

CONTROL PANEL VARIABLE SPEED

E-SPD SPECIFICATION

In-line electronic device for controlling electropumps, employing inverter technology. Starts and stops the pump and modulates the speed of the motor in relation to the water demand on the system, to maintain the operating pressure setting. Provides excellent comfort for the end user, significant energy savings and increased service life, the typical advantages of inverter controlled autoclave systems. E-SPD is an inverter that could be installed on the terminal box. It can be adapted on horizontal and vertical pumps. E-SPD can protect the system against overpressure, overcurrent, voltage fluctuation, dry run and water leak. The connection for this mode is made by communication line ON/OFF.

E-SPD			
Power	Version	MT	TT
	Power Voltage	Single-phase 230 V	Three-phase 400 V
	Output Voltage (pump)	Three-phase 230 V	Three-phase 400 V
	Output frequence	50 ÷ 60Hz	
	Maximum pump power	2.2 kW	4 kW
	Max I in	20 A	12 A
	Max I out	11 A	11 A
Others	Pressure setpoint	0.5 ÷ 25 bar	
	Protection degree	IP 55	
	Ambient Temperature	-10 ÷ 40°C	
	Pressurisation units	2-3 pumps	
	Weight	2,7 Kg	
	Protection	Dry-running	
		Over/under voltage	
		Short-circuit	
		Overload	
		Overtemperature	
		Low pressure	
		Pressure sensor fault	
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II)		

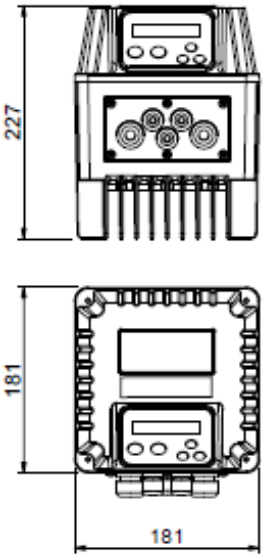


E-DRIVE SPECIFICATION

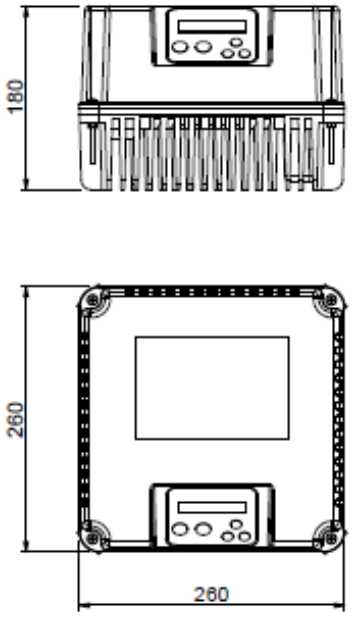
Electronic device with external control for controlling electropumps, employing inverter technology. Starts and stop the pump and modulates the speed of the motor in relation to the water demand on the system, to optimise system operation. Provides excellent comfort for the end user, significant energy savings and increased service life, the typical advantages of inverter controlled autoclave systems.

E-DRIVE									
Version		**EDM**		**EDT**					
		1500	**3000**	**2200**	**4000**	**5500**	**7500**	**11000**	**15000**
Power	Power Voltage	Single-phase 230V		Three-phase 400V					
	Output Voltage (pump)	Three-phase 230V		Three-phase 400V					
	Output frequence	5 ÷ 60 Hz							
	Maximum pump power	1.5kW	3kW	2.2kW	4kW	5.5kW	7.5kW	11kW	15kW
	Max I in	15 A	20 A	10 A	13.5 A	16 A	21 A	31 A	35 A
	Max I out	7 A	11 A	6 A	9 A	14 A	18 A	25 A	30 A
Others	Pressure sensor	0 ÷ 16 or 0 ÷ 25 Bar							
	Protection degree	IP 55							
	Temperature range	Max 40°C							
	Pressurisation units	Up to 8 pumps							
	Weight	4	4.3	4.4	4.4	7	7	7	7.2
	Analogue inputs	4-20mA (10 or 15Vdc)							
	Digital outputs	NO or NC for: Running motor signal and Alarm							
	Digital inputs	NO or NC for: Start and stop motor							
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II)								

E-Drive 1500; 2200; 3000; 4000.



E-Drive 5500; 7500; 11000; 15000.



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SP (EFC and MFC) SPECIFICATION

The control panels SP EFC/MFC series inverters modulate the operation of electropumps in response to control by the pressure transmitter (transducer measuring flow or other external signal 4-20 mA), regulating the speed of the electropumps to keep system demand constant. If the electronic controller or pressure transmitter fails, a system of pressure switches controls the pumps directly (if present).

VERSION
- "EFC": Control panel for two or more electric pumps, with a single inverter with pump exchange
- "MFC": Control panel for two or more electric pumps, with an inverter for each individual electropump

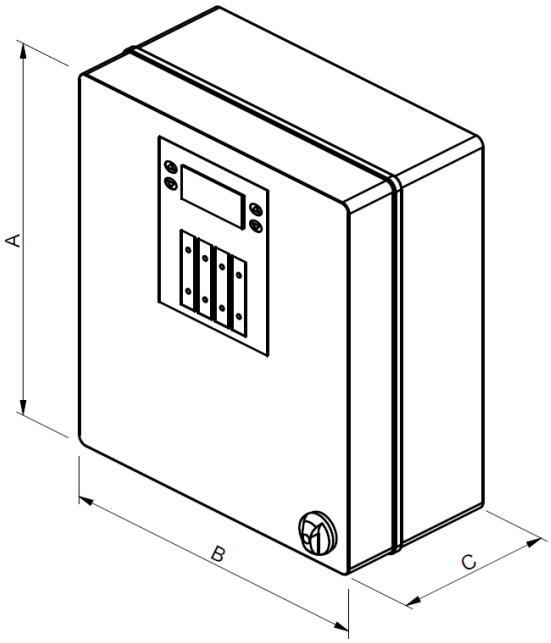
EFC / MFC		
Power	Power Voltage	Three-phase 400 V
	N° phases	Three phase without the use of neutral
	Frequence	50/60Hz
	Pump power	From 1.5kW up to 30kW
	Protection degree	IP55 up to 2.2kW IP44 3kW and above
	Ambient Temperature	-10°C + 40°C
	Pressurisation units	2 or 3 pumps
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS)	

Single inverter with exchange pump (SP EFC)

Panel type	Pump motor power (Three-phase)	Starting (Emergency / fixed speed pumps)	Option
2/3 pumps	1.5÷7.5 kW	Direct	Inverter pump Exchange
	11÷30kW	Star-Delta	

Multi-inverter: one inverter for each pump (SP MFC)

Panel type	Pump motor power (Three-phase)	Starting (Emergency / fixed speed pumps)
2/3 pumps	1.5 - 7,5 kW	Inverter ramp
	11 - 30 KW	Inverter ramp



2SP EFC MODELS TABLE

Model	Motor power [kW]	Current [A]	Dimensions A-B-C [mm]	Weight [Kg]
2SP EFC 1,5T-2	2x1.5	2x3,7	450x400x200	25
2SP EFC 2,2T-2	2x2.2	2x5,3	450x400x200	25
2SP EFC 3T-2	2x3	2x7,2	450x400x250	25
2SP EFC 4T-2	2x4	2x9	450x400x250	25
2SP EFC 5,5T-2	2x5.5	2x12	450x400x250	27
2SP EFC 7,5T-2	2x7.5	2x15,5	450x400x250	27
2SP EFC 11SD-2	2x11	2x23	800x800x300	32
2SP EFC 15SD-2	2x15	2x31	800x800x300	32
2SP EFC 18,5SD-2	2x18.5	2x37	1000x800x300	32
2SP EFC 22SD-2	2x22	2x43	1000x800x300	36
2SP EFC 30SD-2	2x30	2x61	1200x800x300	36

3SP EFC MODELS TABLE

Model	Motor power [kW]	Current [A]	Dimensions A-B-C [mm]	Weight [Kg]
3SP EFC 1,5T-2	3x1.5	3x3,7	450x400x200	25
3SP EFC 2,2T-2	3x2.2	3x5,3	450x400x200	25
3SP EFC 3T-2	3x3	3x7,2	450x400x250	25
3SP EFC 4T-2	3x4	3x9	450x400x250	25
3SP EFC 5,5T-2	3x5.5	3x12	450x400x250	33
3SP EFC 7,5T-2	3x7.5	3x15,5	450x400x250	33
3SP EFC 11SD-2	3x11	3x23	800x800x300	38
3SP EFC 15SD-2	3x15	3x31	800x800x300	38
3SP EFC 18,5SD-2	3x18.5	3x37	1000x800x300	38
3SP EFC 22SD-2	3x22	3x43	1000x800x300	42
3SP EFC 30SD-2	3x30	3x61	1200x800x300	42

2SP MFC MODELS TABLE

Model	Motor power [kW]	Current [A]	Dimensions A-B-C [mm]	Weight [Kg]
2SP EFC 1,5T-2	2x1.5	2x3.7	500x400x200	28
2SP EFC 2,2T-2	2x2.2	2x5.3	500x400x200	28
2SP EFC 3T-2	2x3	2x7.2	500x400x250	28
2SP EFC 4T-2	2x4	2x9	600x400x250	28
2SP MFC 5,5T-2	2x5.5	2x12	600x400x250	28
2SP MFC 7,5T-2	2x7.5	2x15,5	600x600x250	28
2SP MFC 11T-2	2x11	2x23	800x600x300	60
2SP MFC 15T-2	2x15	2x31	800x600x300	60
2SP MFC 18,5T-2	2x18.5	2x37	800x600x300	60
2SP MFC 22T-2	2x22	2x43	800x800x300	65
2SP MFC 30T-2	2x30	2x61	1600x800x400	65

3SP MFC MODELS TABLE

Model	Motor power [kW]	Current [A]	Dimensions A-B-C [mm]	Weight [Kg]
3SP MFC 1,5T-2	3x1.5	3x3.7	800x600x250	33
3SP MFC 2,2T-2	3x2.2	3x5.3	800x600x250	33
3SP MFC 3T-2	3x3	3x7.2	800x600x250	33
3SP MFC 4T-2	3x4	3x9	800x600x250	33
3SP MFC 5,5T-2	3x5.5	3x12	800x600x250	33
3SP MFC 7,5T-2	3x7.5	3x15,5	800x600x250	33
3SP MFC 11T-2	3x11	3x23	800x800x300	75
3SP MFC 15T-2	3x15	3x31	1000x800x300	75
3SP MFC 18,5T-2	3x18.5	3x37	1200x800x300	75
3SP MFC 22T-2	3x22	3x43	1200x800x400	83
3SP MFC 30T-2	3x30	3x61	1600x1000x400	83

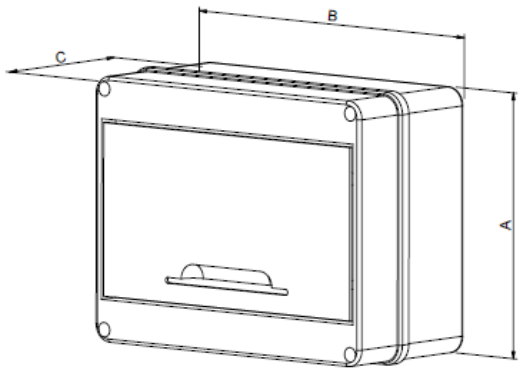
Notes: Standard Control panels EP SD three-phase are available for 1, 2, 3 pumps until 30kW power; 4 pumps version or power from 37kW and above are available on request

PROTECTION PANEL SPECIFICATION

Connection box for inverter :

- Connects the inverters with the power supply point.
- Equipped with circuit breakers on individual lines

Power source	Frequency	50/60 Hz	
	Phase	Single-phase	Three-phase
	Voltage	230 V ± 10%	400 V ± 10%
	Power	0.37 ÷ 3 kW	0.37 ÷ 15 kW
Others	Protection degree	IP 55	
	Ambient Temperature	-5°C + 40°C	
	Pressurisation units	2 pumps	
	Relative humidity	50% a 40°C MAX (90% a 20°C)	
	Max altitude	1000 m (a.s.l.)	
Directives	2014/35/EU (LVD), 2014/30/EU (EMC), 2011/65/EU (RoHS II)		



Model	N° Pumps	Power [kW]	Dimensions A-B-C [mm]	Max Current [A]
PROT 2E-DR 1.5-3M	2	2x3	160x120x90	2x20
PROT 2E-DR 4T		2x4	160x200x90	2x16
PROT 2E-DR 5.5T		2x5.5	160x200x90	2x20
PROT 2E-DR 7.5T		2x7.5	160x200x90	2x25
PROT 2E-DR 15T		2x15	160x200x90	2x32
PROT 3E-DR 1.5-3M	3	3x3	160x120x90	3x20
PROT 3E-DR 4T		3x4	200x250x110	3x16
PROT 3E-DR 5.5T		3x5.5	200x250x110	3x20
PROT 3E-DR 7.5T		3x7.5	200x250x110	3x25
PROT 3E-DR 15T		3x15	200x250x110	3x32

EBARA Pumps Europe S.p.A.
Via Torri di Confine 2/1 int. C
36053 Gambellara (Vicenza), Italy
Phone +39 0444 706811
Fax +39 0444 405811
ebara_pumps@ebaraeurope.com
www.ebaraeurope.com

EBARA Corporation
11-1, Haneda Asahi-cho, Ohta-ku,
Tokyo 144-8510
Japan
Phone +81 3 6275 7598
Fax +81 3 5736 3193
www.ebara.com

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