

Inverter controlled units with two vertical multi-stage pumps.

TYPICAL APPLICATIONS

GPE pressurisation units have the following applications:

- Water supply or distribution networks, apartment blocks, schools, hotels, etc.
- Generic industrial water supply
- Irrigation for gardens, parks and sports facilities

UNIT EQUIPMENT

- Two CVM series pumps with 2-pole self-ventilating asynchronous motor, efficiency class IE2 for three-phase motors starting from 0.75 kW with E-drive series INVERTER
- Control unit: pumps equipped with inverters for modulating control
- INVERTER control of each pump with pressure transducer and electronic control display
- Corrosion resistant materials for all components in contact with fluids
- Galvanised steel base
- Galvanised steel manifolds (AISI 304, AISI 316 available on request). The manifolds are dimensioned in relation to the total hydraulic output of the pressurisation system
- Delivery side shut-off valve on each pump
- Delivery side check valve
- Protection against water supply failure as standard supply
- Equipped for connection to delivery side accumulation tank

INVERTER CONTROL UNIT

E-drive is device for controlling and protecting pumping systems by varying the pump power voltage.

E-drive can be connected to any commercially available pump, and is used to keep a given setting constant (pressure, flow rate, fluid temperature, etc.) as the operating conditions vary. This means that the pump runs only when needed, thus preventing energy wastage and increasing its service life.

E-drive can also:

- protect the motor from overloads and dry running
- provide soft starts and stops to increase system life and reduce absorption peaks
- provide information about current absorption and power voltage
- register the hours of operation and trip alarms as required
- run one or more pumps at constant speed (DOL: Direct On Line)
- connect to other E-drives for combined operation
- Voltage: - Version **MT**: - Power voltage: single-phase 230V
- Output voltage (pump): three-phase 230V
- Version **TT**: - Power voltage: three-phase 400V
- Output voltage (pump): three-phase 400V
- Mains power frequency: 50 - 60 Hz (+/- 2%)
- Max. ambient operating temperature at nominal load: 40°C (104 °F)
- Max. altitude at nominal load: 1000 m
- Protection rating: IP55 (NEMA 4)
- Digital outputs configurable as NO or NC:
 1. motor run signal
 2. alarm signal
 3. pump command DOL 1
 4. pump command DOL 2
- Analogue inputs (10 / 15 VDC):
 1. 4-20 mA
 2. 4-20 mA
 3. 4-20 mA / 0 - 10 VDC (configurable)
 4. 4-20 mA / 0 - 10 VDC (configurable)
- 4 digital inputs, configurable NO or NC, for motor start/stop



2GPE CVM E-drive

DOMESTIC PRESSURISATION

TECHNICAL FEATURES

APPLICATION RANGE

- Maximum operating pressure: 11 bar
- Max fluid temperature: 40°C
- MEI > 0.4

For further information, refer to the Data Books available on www.ebaraeurope.com

PUMP MATERIALS

- Cast iron pump body and motor mount
- AISI 304 external jacket
- Impeller and diffuser in PPE + glass fibre reinforced PS
- Stages in PPE + glass fibre reinforced PS/PTFE
- AISI 416 shaft

MOTOR SPECIFICATIONS

- Motors IE2 from 0.75kW
- Self-ventilated asynchronous 2-pole motor
- Insulation Class F
- Protection rating IP44
- Three-phase voltage 230/400V ±10% 50Hz
- Permanently inserted capacitor and incorporated thermo-ampereometric protection device with automatic rearm for single-phase motor

ADVANTAGES

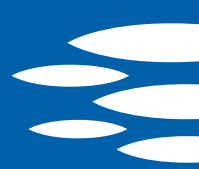
- Energy saving: the controller modulates the pump rate in relation to system demand, better than direct in-line connection to the mains supply
- Better, faster response regulation
- Reduced hammering due to gradual startup and shutdown
- Improved heating, A/C and pressurisation system comfort
- Reduced startup current
- Pumps switched at each startup
- Speed modulation of both pumps for optimal regulation

ACCESSORIES

- Membrane accumulation tank: depending on installation conditions

CONSIGNMENT

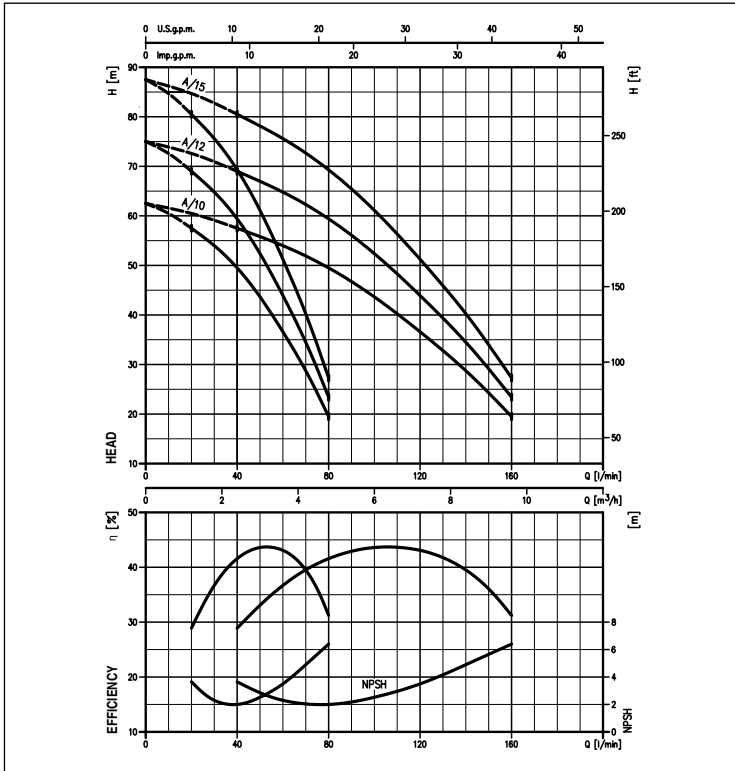
- Pressurisation system ready for hookup, factory assembled and tested for operation and hermetic seal
- Packaging
- Installation, user and maintenance instructions



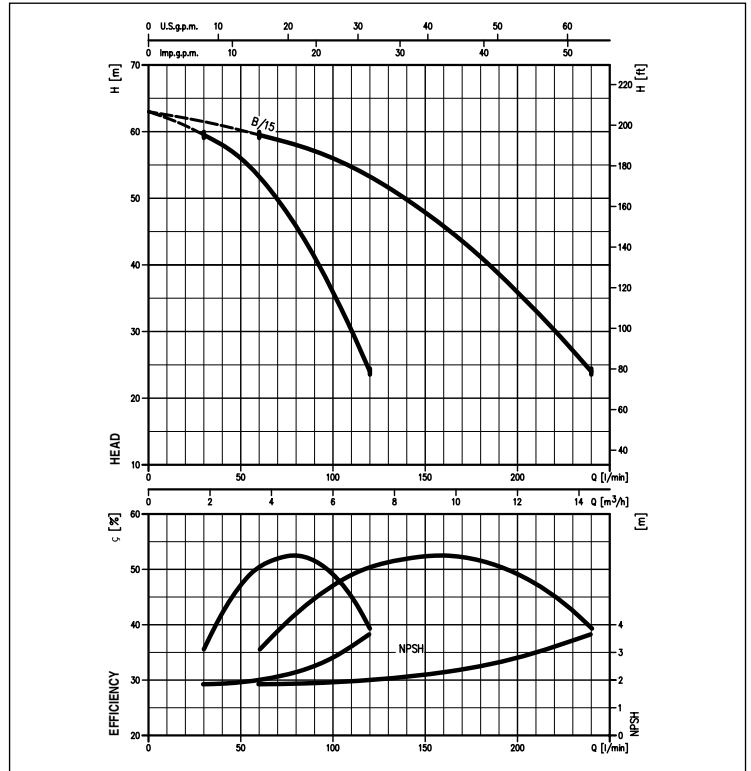
2GPE CVM E-drive

DOMESTIC PRESSURISATION

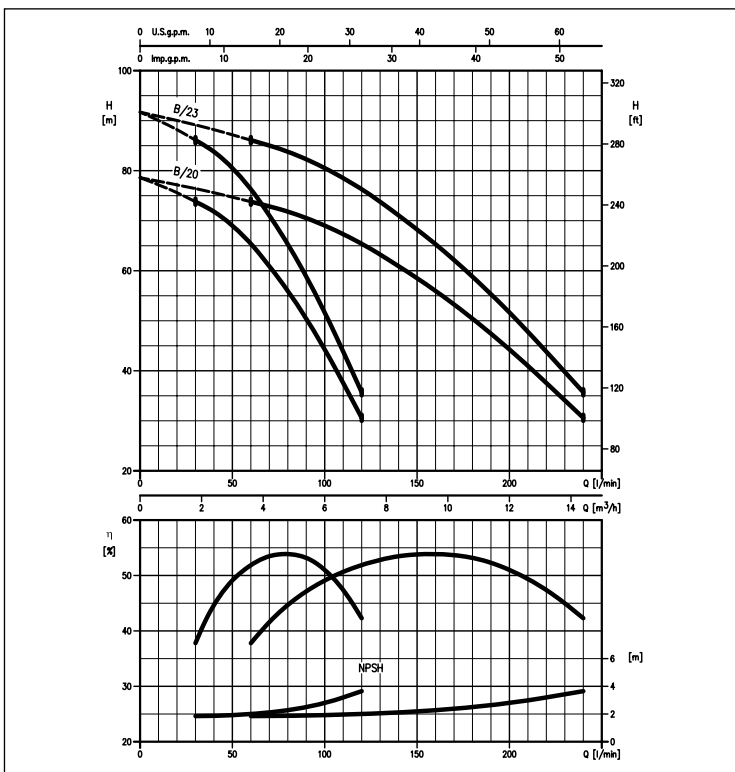
PERFORMANCE CURVES for 2GP CVM A 10 - A 12 - A 15 series
(ISO 9906 Annex A)



PERFORMANCE CURVES for 2GPE CVM B 15 series
(ISO 9906 Annex A)



PERFORMANCE CURVES for 2GPE CVM B 20 B 23 series
(ISO 9906 Annex A)



The indicated characteristics do not include the pressure drops in the valves and lines
The indicated NPSH is a laboratory value related to the pump alone

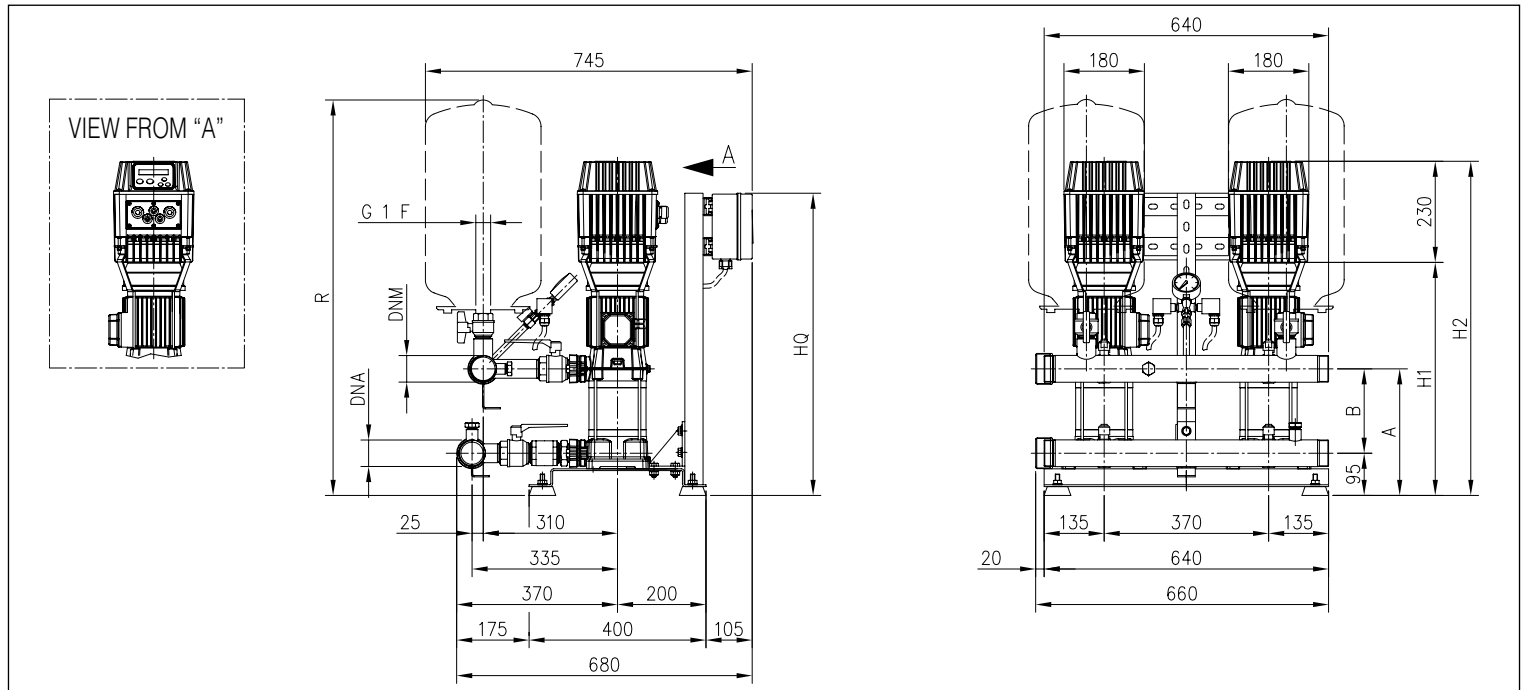
2GPE CVM E-drive

DOMESTIC PRESSURISATION

TABLE OF PERFORMANCE AND ELECTRICAL DATA FOR TWO PUMPS RUNNING SIMULTANEOUSLY

Model		[kW]	Max absorption [A]		Q = Flow rate								
MT	TT		Three-phase		l/min	60	80	100	120	160	200	240	
				230V	400V	40	3.6	4.8	6	7.2	9.6	12	14.4
						m ³ /h	H = Head [m]						
2GPE CVM A/10 E-DRIVE 1500 MT	2GPE CVM A/10 E-DRIVE 2200 TT	0.75+0.75	5.8	3.4		57.5	54.0	49.5	43.5	36.6	19.5	-	-
2GPE CVM A/12 E-DRIVE 1500 MT	2GPE CVM A/12 E-DRIVE 1500 TT	0.9+0.9	8.6	5.0		69.0	65.0	59.5	52.5	44.0	23.4	-	-
2GPE CVM A/15 E-DRIVE 1500 MT	2GPE CVM A/15 E-DRIVE 1500 TT	1.1+1.1	8.6	5.0		80.5	75.5	69.5	61.0	51.0	27.3	-	-
2GPE CVM B/15 E-DRIVE 1500 MT	2GPE CVM B/15 E-DRIVE 1500 TT	1.1+1.1	8.6	5.0		-	60.5	58.5	56.2	53.3	45.8	36.0	24.5
2GPE CVM B/20 E-DRIVE 1500 MT	2GPE CVM B/20 E-DRIVE 1500 TT	1.5+1.5	12.6	7.4		-	74.0	72.0	69.0	65.5	56.0	44.5	30.6
-	2GPE CVM B/23 E-DRIVE 2200 TT	1.7+1.7	-	8.0		-	86.0	84.0	80.5	76.5	65.5	51.5	35.7

DIMENSIONS



DIMENSION CHART

Model		Dimensions [mm]									Weight [kg]
MT	TT	A	B	R	DNA	DNM	H1	H2	HQ		
2GPE CVM A/10 E-DRIVE 1500 MT	2GPE CVM A/10 E-DRIVE 2200 TT	285	190	890	G 2	G 2	510	740	665	72	
2GPE CVM A/12 E-DRIVE 1500 MT	2GPE CVM A/12 E-DRIVE 1500 TT	310	215	915	G 2	G 2	550	780	690	76	
2GPE CVM A/15 E-DRIVE 1500 MT	2GPE CVM A/15 E-DRIVE 1500 TT	335	240	940	G 2	G 2	575	805	730	76	
2GPE CVM B/15 E-DRIVE 1500 MT	2GPE CVM B/15 E-DRIVE 1500 TT	285	190	890	G 2	G 2	525	755	680	75	
2GPE CVM B/20 E-DRIVE 1500 MT	2GPE CVM B/20 E-DRIVE 1500 TT	310	215	915	G 2	G 2	585	815	725	85	
-	2GPE CVM B/23 E-DRIVE 2200 TT	335	240	940	G 2	G 2	610	840	765	85	