

DOMESTIC PRESSURISATION



Inverter controlled units with two horizontal multi-stage pumps with stainless steel hydraulic components.

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 MATRIX series pumps with 2-pole self-ventilating asynchronous motor, efficiency class IE2 for three-phase motors starting from 0.65 kW with Hydrocontroller series INVERTER
- Control unit: pumps equipped with inverters for modulating control
- Automatic INVERTER control of each pump with frequency variation at constant pressure, electronic controller 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
- Intake/delivery shut-off valves on each pump
- Intake side check valve
- Delivery side pressure gauge
- Protection against water supply failure
- Equipped for connection to delivery side accumulation tank
- Circuit breaker panel with two thermal cutouts

INVERTER CONTROL UNIT

- Installation on line
- Mounting position: any
- Fittings: 1"¼ female
- Power voltage: three-phase 400V
- Output voltage (pump): three-phase 400V
- Phase current: max 6 A
- Maximum pump power: 2.2 kW
- Output frequency: 10 - 60 Hz
- Display: LCD 2 lines x 16 digits alphanumeric
- Protection rating: IP 65
- Operating temperature: 5 - 40 °C
- Pressure setpoint: 0.3 - 7.5 bar
- Max overpressure: 12 bar
- Electrical safety: EN60730
- Electromagnetic compatibility: EN61000 (specific standards declared in CE certificate)
- Protections:
 - Dry run
 - Over/under voltage
 - Short circuit
 - Over current
 - Over temperature
 - Insufficient pressure
 - Sensor failure



2GPE MATRIX HYDROCONTROLLER

DOMESTIC PRESSURISATION

TECHNICAL FEATURES

APPLICATION RANGE

- Max fluid temperature: 50°C
- Maximum operating pressure: 10 bar
- Maximum chlorine content: 500 ppm

PUMP MATERIALS

- Pump body, impellers, intermediate stages, gasket disk and shaft (parts in contact with fluid) in EN 1.4301 (AISI 304)
- Mechanical seal made of:
 - Ceramic/carbon fibre/EPDM (standard)
 - Ceramic/graphite/FPM (version H)
 - SiC/SiC/FPM (version HS)
 - Tungsten carbide/SiC/EPDM (version U3Q1EGG)
- Support in EN AB-AISI11Cu2(Fe) (die cast aluminium)

MOTOR SPECIFICATIONS

- Motors IE2 from 0.75kW
- Self-ventilated asynchronous 2-pole motor
- Insulation Class F
- Protection rating IP55
- Three-phase voltage 230/400V \pm 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

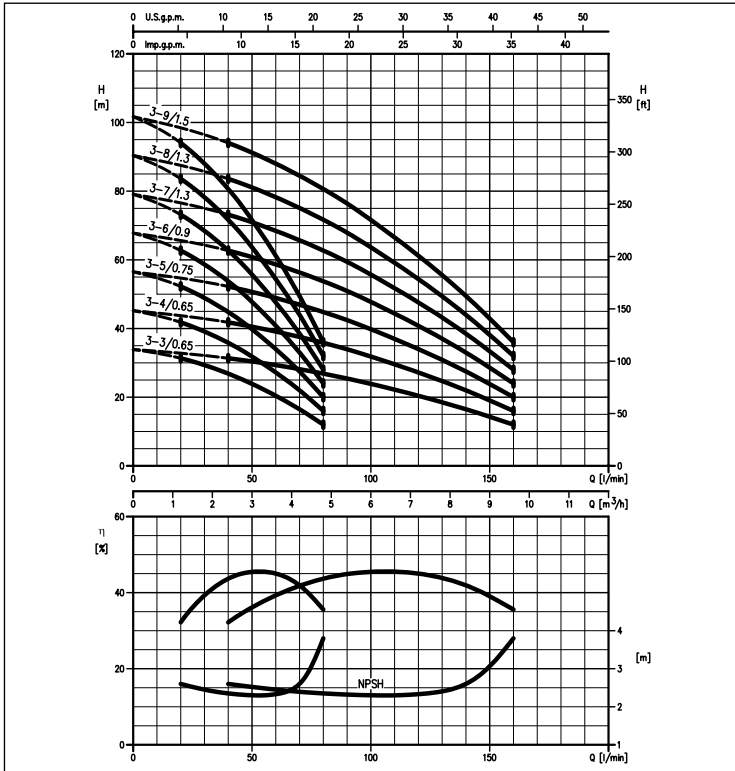
CONSIGNMENT

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

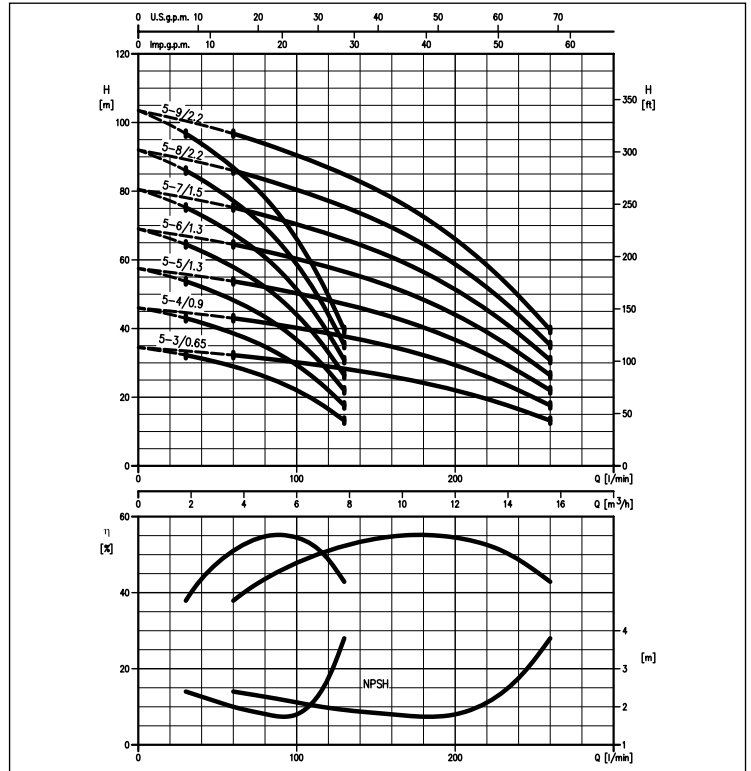
2GPE MATRIX HYDROCONTROLLER

DOMESTIC PRESSURISATION

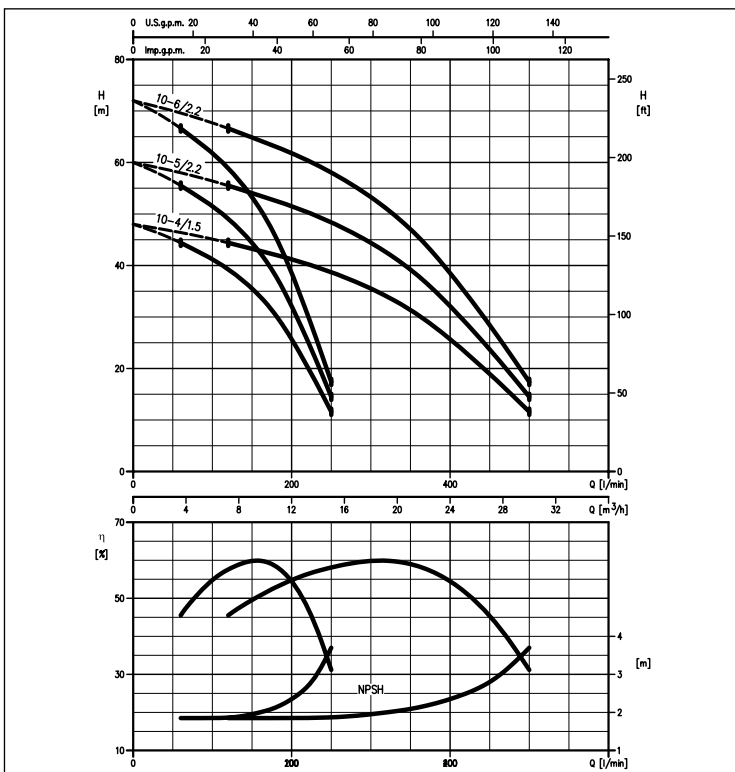
PERFORMANCE CURVES for 2GPE MATRIX 3 series
(ISO 9906 Annex A)



PERFORMANCE CURVES for 2GPE MATRIX 5 series
(ISO 9906 Annex A)



PERFORMANCE CURVES for 2GPE MATRIX 3 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

The contents of this publication must not be regarded as binding. EBARA, Pumps Europe S.p.A. reserves the right to alter any modification it deems necessary, without prior notice.

2GPE MATRIX HYDROCONTROLLER

DOMESTIC PRESSURISATION

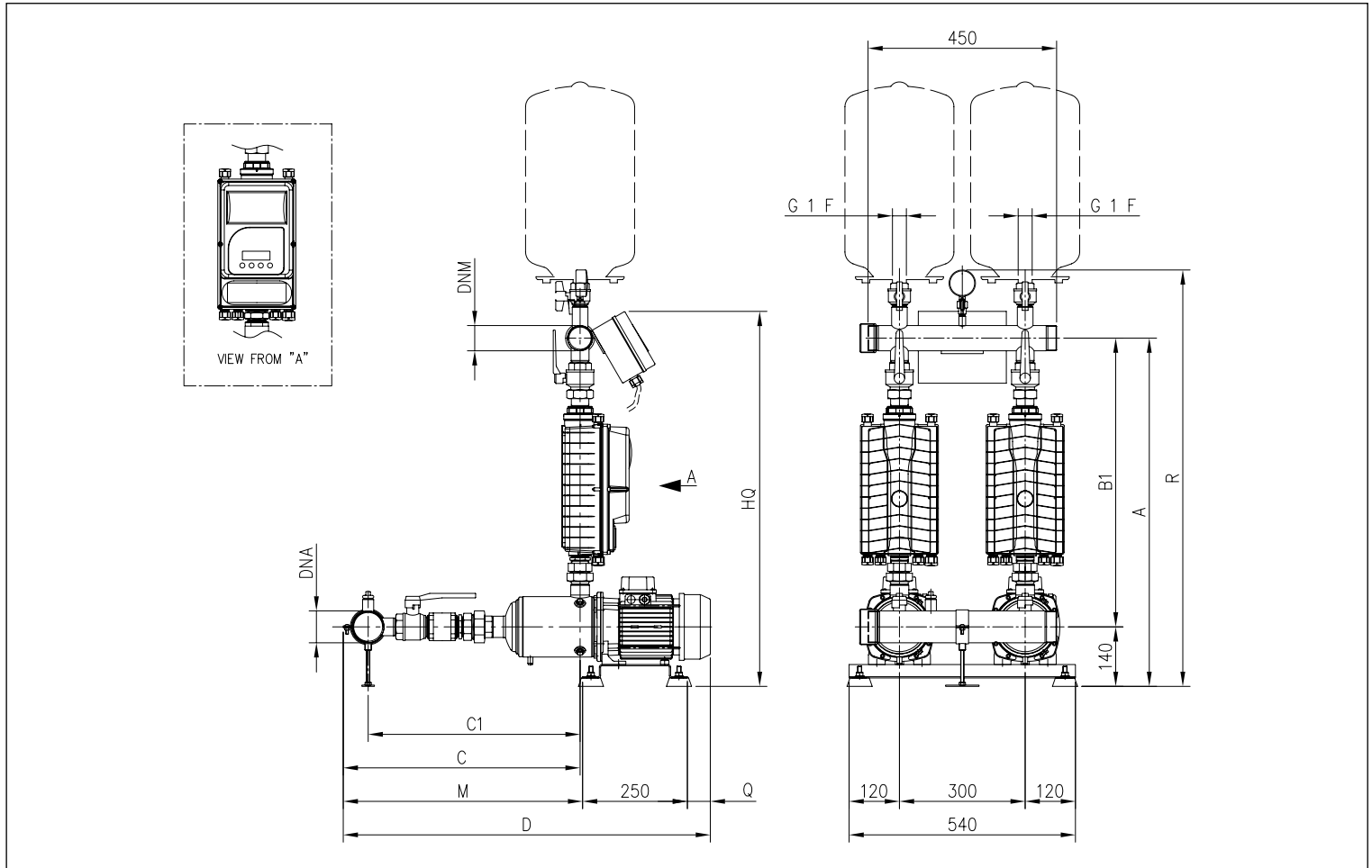
TABLE OF PERFORMANCE AND ELECTRICAL DATA FOR TWO PUMPS RUNNING SIMULTANEOUSLY

Model Single-phase 230V	[kW]	Max absorption [A] Three-phase 400V	Q = Flow rate									
			l/min m ³ /h	40 2.4	60 3.6	120 7.2	160 9.6	200 12	260 15.6	320 19.2	400 24	500 30
			H = Head [m]									
2GPE MATRIX 3-3T/0.65 HYD	0.65+0.65	3.2	31.4	29.3	20.4	12.0	-	-	-	-	-	-
2GPE MATRIX 3-4T/0.65 HYD	0.65+0.65	3.2	42.0	39.1	27.2	16.0	-	-	-	-	-	-
2GPE MATRIX 3-5T/0.75 HYD	0.75+0.75	3.4	52.5	49.0	34.0	20.0	-	-	-	-	-	-
2GPE MATRIX 3-6T/0.9 HYD	0.9+0.9	5.0	62.5	58.5	41.0	24.0	-	-	-	-	-	-
2GPE MATRIX 3-7T/1.3 HYD	1.3+1.3	6.4	73.0	68.5	47.5	28.0	-	-	-	-	-	-
2GPE MATRIX 3-8T/1.5 HYD	1.3+1.3	6.4	83.5	78.0	54.5	32.0	-	-	-	-	-	-
2GPE MATRIX 3-9T/1.5 HYD	1.5+1.5	7.4	94.0	88.0	61.0	36.0	-	-	-	-	-	-
2GPE MATRIX 5-3T/0.65 HYD	0.65+0.65	3.2	-	43.0	38.6	34.7	24.9	17.6	-	-	-	-
2GPE MATRIX 5-4T/0.9 HYD	0.9+0.9	5.0	-	43.0	38.6	34.7	24.9	17.6	-	-	-	-
2GPE MATRIX 5-5T/1.3 HYD	1.3+1.3	6.4	-	54.0	48.5	43.5	36.7	22.0	-	-	-	-
2GPE MATRIX 5-6T/1.3 HYD	1.3+1.3	6.4	-	64.5	58.0	52.0	44.0	26.4	-	-	-	-
2GPE MATRIX 5-7T/1.5 HYD	1.5+1.5	7.4	-	75.5	67.5	61.0	51.5	30.8	-	-	-	-
2GPE MATRIX 5-8T/2.2 HYD	2.2+2.2	9.4	-	86.0	77.0	69.5	58.5	35.2	-	-	-	-
2GPE MATRIX 5-9T/2.2 HYD	2.2+2.2	9.4	-	97.0	87.0	78.0	66.0	39.6	-	-	-	-
2GPE MATRIX 10-4T/1.5 HYD	1.5+1.5	7.4	-	-	44.5	43.0	41.0	38.1	34.0	25.7	11.6	-
2GPE MATRIX 10-5T/2.2 HYD	2.2+2.2	9.4	-	-	55.5	53.5	51.5	47.5	42.5	32.1	14.5	-
2GPE MATRIX 10-6T/2.2 HYD	2.2+2.2	9.4	-	-	66.5	64.5	62.0	57.0	51.0	38.5	17.4	-

2GPE MATRIX HYDROCONTROLLER

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DIMENSIONS



DIMENSION CHART

Model	Dimensions [mm]											Weight [kg]
	A	B1	C	C1	DNA	DNM	D	M	Q	HQ	R	
2GPE MATRIX 3-3T/0.65 HYD	865	725	360	310	G 2"	G 1 1/2"	615	360	5	930	1025	42
2GPE MATRIX 3-4T/0.65 HYD	865	725	385	335	G 2"	G 1 1/2"	640	385	5	930	1025	43
2GPE MATRIX 3-5T/0.75 HYD	865	725	410	360	G 2"	G 1 1/2"	665	410	5	930	1025	47
2GPE MATRIX 3-6T/0.9 HYD	865	725	435	380	G 2"	G 1 1/2"	700	435	15	930	1025	50
2GPE MATRIX 3-7T/1.3 HYD	865	725	460	405	G 2"	G 1 1/2"	750	460	40	930	1025	56
2GPE MATRIX 3-8T/1.5 HYD	865	725	480	430	G 2"	G 1 1/2"	770	480	40	930	1025	58
2GPE MATRIX 3-9T/1.5 HYD	865	725	505	455	G 2"	G 1 1/2"	810	505	55	930	1025	62
2GPE MATRIX 5-3T/0.65 HYD	865	725	315	265	G 2"	G 1 1/2"	570	315	5	930	1025	42
2GPE MATRIX 5-4T/0.9 HYD	865	725	340	290	G 2"	G 1 1/2"	605	340	15	930	1025	47
2GPE MATRIX 5-5T/1.3 HYD	865	725	365	315	G 2"	G 1 1/2"	655	365	40	930	1025	54
2GPE MATRIX 5-6T/1.3 HYD	865	725	390	335	G 2"	G 1 1/2"	680	390	40	930	1025	55
2GPE MATRIX 5-7T/1.5 HYD	865	725	410	360	G 2"	G 1 1/2"	715	410	55	930	1025	60
2GPE MATRIX 5-8T/2.2 HYD	865	725	435	385	G 2"	G 1 1/2"	740	435	55	930	1025	60
2GPE MATRIX 5-9T/2.2 HYD	865	725	460	410	G 2"	G 1 1/2"	765	460	55	930	1025	60
2GPE MATRIX 10-4T/1.5 HYD	870	730	425	365	G 2 1/2"	G 2"	735	430	55	935	1035	61
2GPE MATRIX 10-5T/2.2 HYD	870	730	455	395	G 2 1/2"	G 2"	765	460	55	935	1035	62
2GPE MATRIX 10-6T/2.2 HYD	870	730	485	425	G 2 1/2"	G 2"	795	490	55	935	1035	63