

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 to building service distribution systems
- 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 E-power 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 male
- Power voltage: Single-phase 230V
- Output voltage (pump): three-phase 230V
- Phase current: max 10 A
- Maximum pump power: 2.2 kW
- Output frequency: 5 - 60 Hz
- Display: 2 digit alphanumeric
- Protection rating: IP 65
- Operating temperature: 5 - 40 °C
- Pressure setpoint: 0.3 - 8 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 E-power

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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

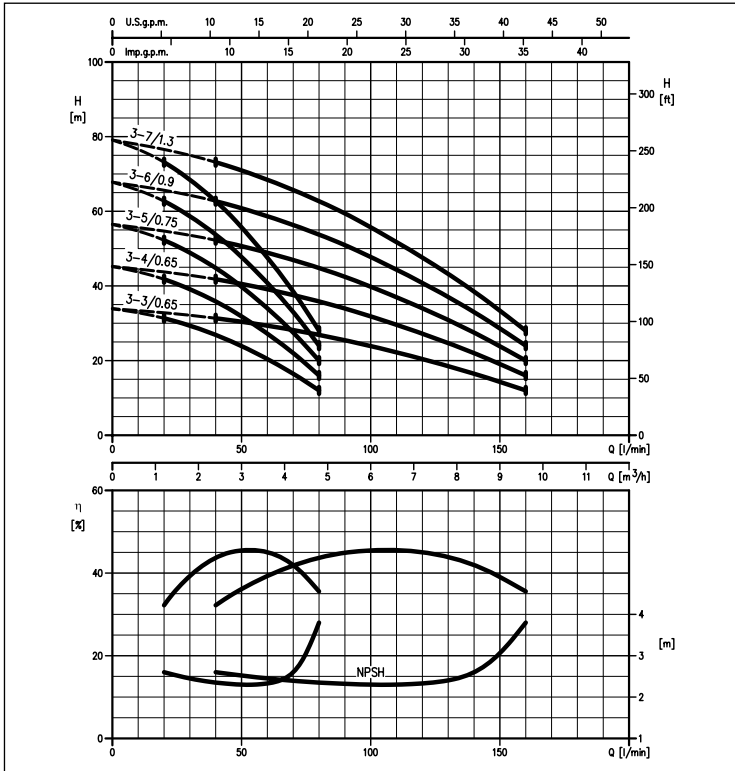
- Pressurisation system ready for hookup, factory assembled and tested for operation and hermetic seal
- Packaging
- Installation, user and maintenance instructions



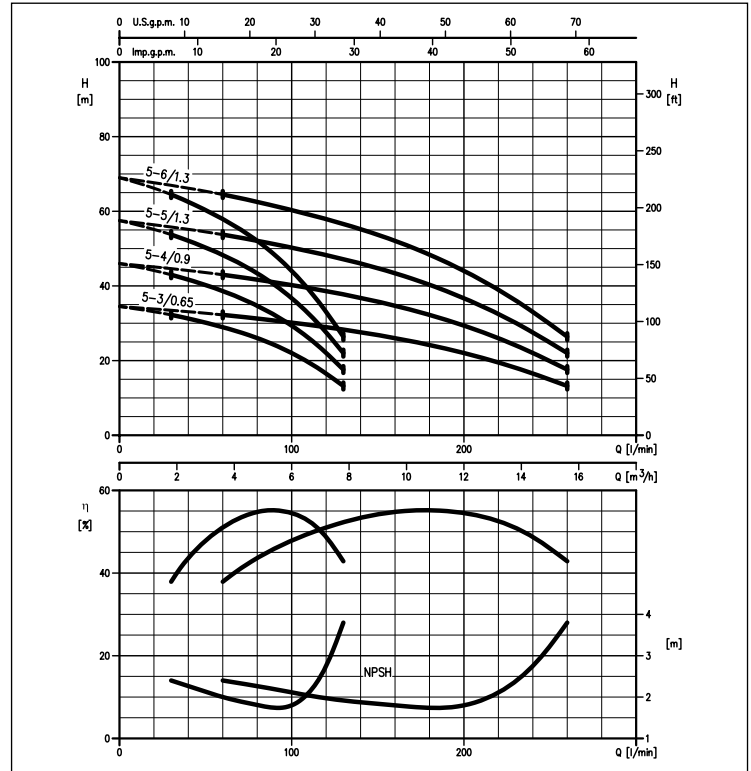
2GPE MATRIX E-power

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



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



The indicated characteristics do not include the pressure drop in the valves and lines; the indicated NPSH is a laboratory value for the pump alone

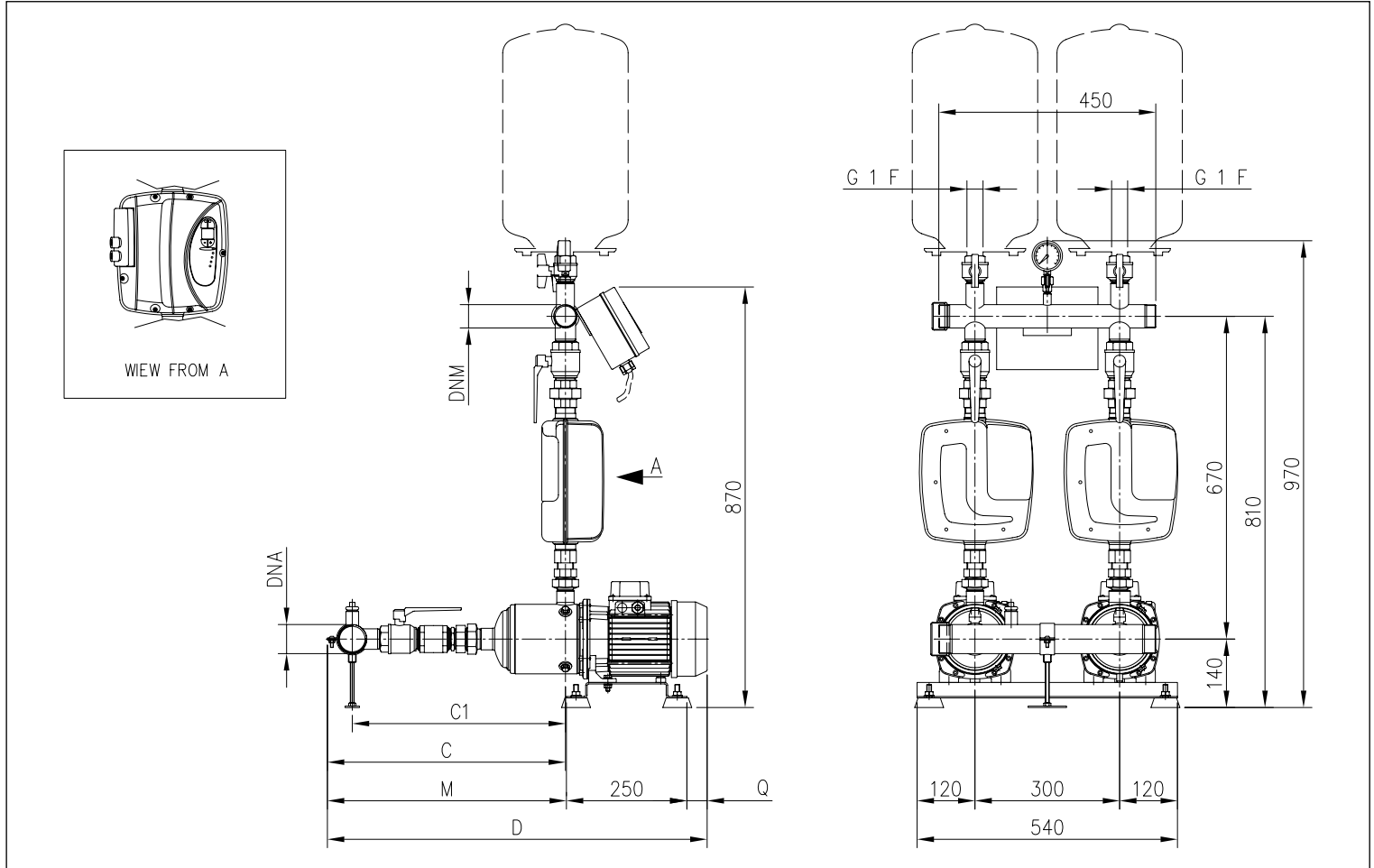
TABLE OF PERFORMANCE AND ELECTRICAL DATA FOR TWO PUMPS RUNNING SIMULTANEOUSLY

Model	[kW]	Max absorption [A] Three-phase 230V	Q = Flow rate						
			l/min m³/h	40 2.4	60 3.6	120 7.2	160 9.6	200 12	260 15.6
			H = Head [m]						
2GPE MATRIX 3-3T/0.65 E-PW	0.65	5.6		31.4	29.3	20.4	12.0	-	-
2GPE MATRIX 3-4T/0.65 E-PW	0.65+0.65	5.6		42.0	39.1	27.2	16.0	-	-
2GPE MATRIX 3-5T/0.75 E-PW	0.75	5.8		52.5	49.0	34.0	20.0	-	-
2GPE MATRIX 3-6T/0.9 E-PW	0.9+0.9	8.6		62.5	58.5	41.0	24.0	-	-
2GPE MATRIX 3-7T/1.3 E-PW	1.3+1.3	11.0		73.0	68.5	47.5	28.0	-	-
2GPE MATRIX 5-3T/0.65 E-PW	0.9+0.9	5.6	-	-	43.0	38.6	34.7	24.9	17.6
2GPE MATRIX 5-4T/0.9 E-PW	1.3+1.3	8.6	-	-	54.0	48.5	43.5	36.7	22.0
2GPE MATRIX 5-5T/1.3 E-PW	1.3+1.3	11.0	-	-	64.5	58.0	52.0	44.0	26.4
2GPE MATRIX 5-6T/1.3 E-PW	1.5+1.5	11.0	-	-	75.5	67.5	61.0	51.5	30.8

2GPE MATRIX E-power

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DIMENSIONS



DIMENSION CHART

Model	Dimensions [mm]							Weight [kg]
	C	C1	DNA	DNM	D	M	Q	
2GPE MATRIX 3-3T/0.65 E-PW	360	310	G 2"	G 1 1/2"	615	360	5	38
2GPE MATRIX 3-4T/0.65 E-PW	385	335	G 2"	G 1 1/2"	640	385	5	39
2GPE MATRIX 3-5T/0.75 E-PW	410	360	G 2"	G 1 1/2"	665	410	5	43
2GPE MATRIX 3-6T/0.9 E-PW	435	380	G 2"	G 1 1/2"	700	435	15	46
2GPE MATRIX 3-7T/1.3 E-PW	460	405	G 2"	G 1 1/2"	750	460	40	52
2GPE MATRIX 5-3T/0.65 E-PW	315	265	G 2"	G 1 1/2"	570	315	5	38
2GPE MATRIX 5-4T/0.9 E-PW	340	290	G 2"	G 1 1/2"	605	340	15	43
2GPE MATRIX 5-5T/1.3 E-PW	365	315	G 2"	G 1 1/2"	665	365	40	50
2GPE MATRIX 5-6T/1.3 E-PW	390	335	G 2"	G 1 1/2"	680	390	40	51

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