



Units with two horizontal multistage pumps with stainless steel hydraulic parts.

### PUMP FEATURES

#### FIELD OF USE

- Maximum temperature of the liquid: 110°C
- Maximum working pressure: 10 bar
- Maximum chlorine content: 500 ppm

#### MATERIALS

- Pump body, impeller, intermediate body, and seal housing disc and shaft in AISI 304
- Mechanical sealing in Carbon/Ceramic/EPDM
- Support and motor casing in aluminium

#### TECHNICAL DATA

- Self-ventilated 2 pole asynchronous motor
- Class of insulation F
- IP55 Protection rating
- 230V  $\pm 10\%$ , 50Hz single phase voltage, 230/400V  $\pm 10\%$ , 50Hz three phase voltage
- Permanent capacitor inserted and thermo-amperometric protection with automatic reset incorporated for the single phase motor

#### TYPICAL APPLICATIONS

The base of the group is in galvanised steel as are the manifolds. The discharge manifold is set-up to gather any two vertical type membrane reservoirs; two pressure switches, the electric control panel and a pressure gauge are mounted on it. On inlet, each electric pump has an isolating valve and a non-return valve, with the possibility of connection to an air supply unit and has another isolating valve in discharge mode.

#### Protection and control panel with CE mark

- IMQ and VDE marked components
- Very low voltage auxiliary circuit
- Motor switch-on and switch-off are controlled by two pressure switches
- The connection to a float of minimum pressure pressure switch is possible in order to prevent functioning in conditions when there is no suction water
- A device is present that inverts the insertion order of the pumps at every start-up
- Power supply: 230V, 50Hz single phase  
400V, 50 Hz three phase
- Direct start-up
- Power circuit protection fuses
- Auxiliary circuit protection fuses
- Protection rating IP 55
- Line main isolating device with door lock
- Aut - 0 - man. switches for each pump
- Reset circuit breaker protection
- Indicator LED:
  - network presence
  - motor running
  - level alarm
  - motor in protection mode (for three phase version only)
- Alarm output set-up
- On request, special version control panels can be used

#### FUNCTIONING PRINCIPLES

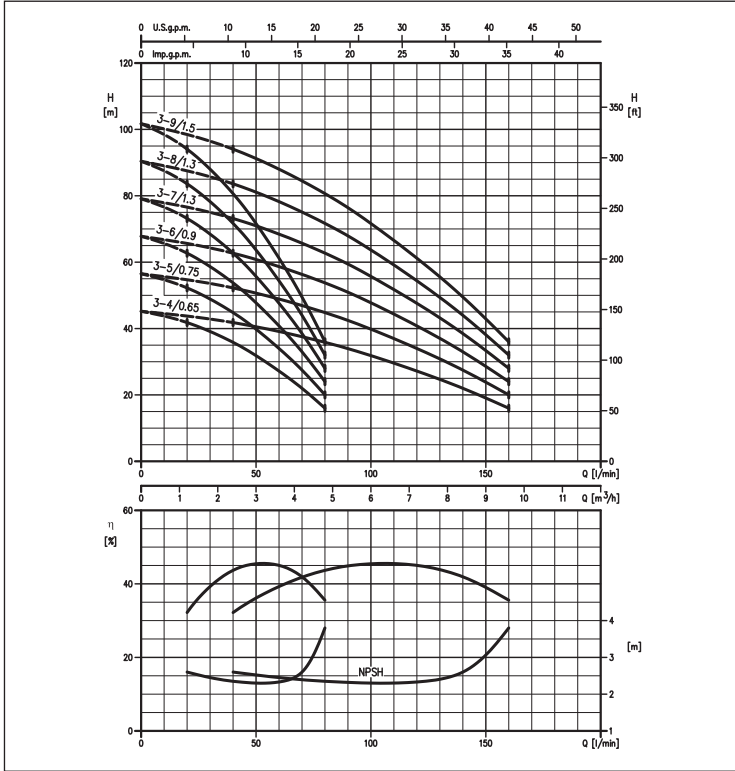
The withdrawal or however the escape of water from the system with the pumps at a standstill, causes the pressure to drop and the consequent closure of the pressure switch contact with highest calibration, which determines start-up of the first electric pump. If the outlet discharge exceeds the flow rate of a pump, the pressure continues to drop until it causes the closure of the contact of the second pressure switch and the start-up of the second pump. The end of the distribution of the reduction of the outlet discharge leads to the pressure in the system rising, with opening of the pressure switch contacts and staggered pumps stops. The inversion of the ignition order of the two motors reduces the number of hourly start-ups of the individual pumps and consequently allows a homogenous use of the same. By connecting a float or minimum pressure pressure switch to the control panel (whether for withdrawal from the primary collection reservoir or from the hydraulic circuit), the most frequent cause of electric pump breakdown is prevented: the lack of water at suction.

# 2GP MATRIX

## DOMESTIC PRESSURE BOOSTING

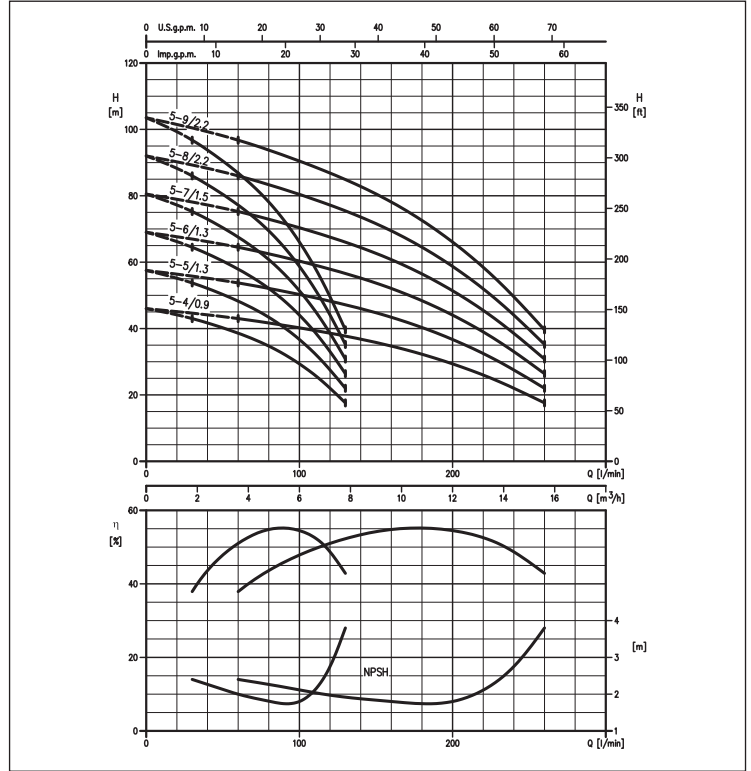
### 2GP MATRIX 3 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



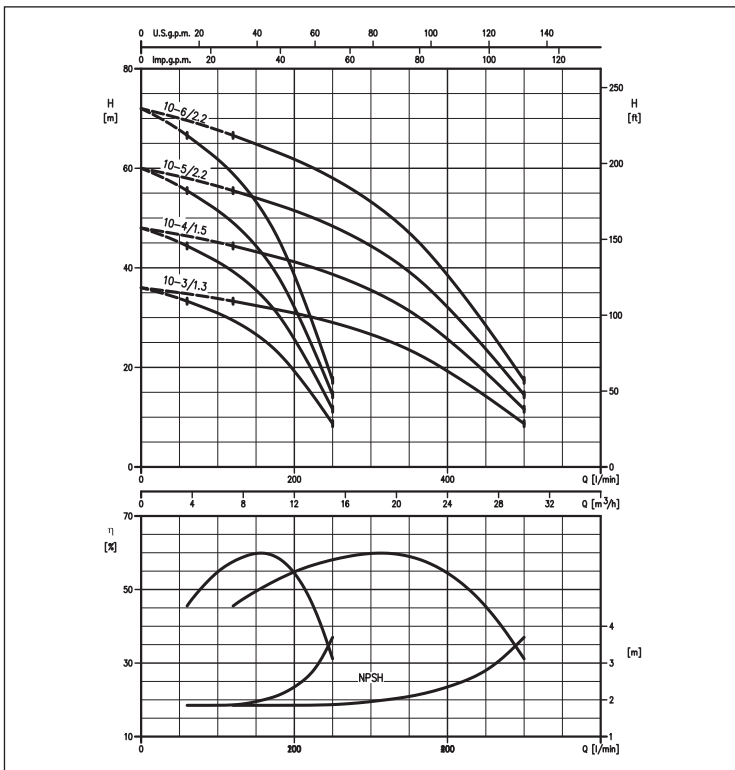
### 2GP MATRIX 5 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



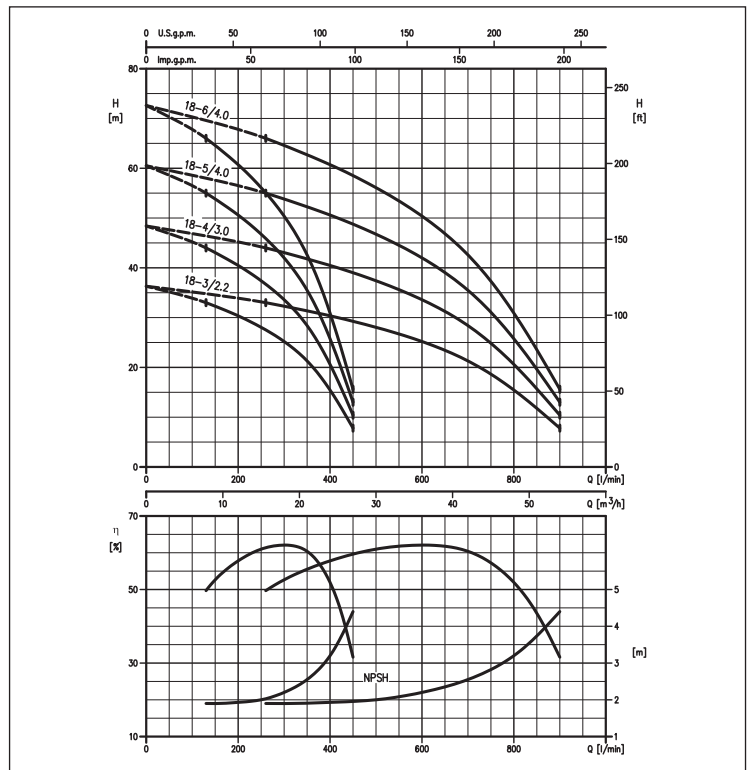
### 2GP MATRIX 10 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



### 2GP MATRIX 18 range PERFORMANCE CURVES

(according to ISO 9906 Attachment A)



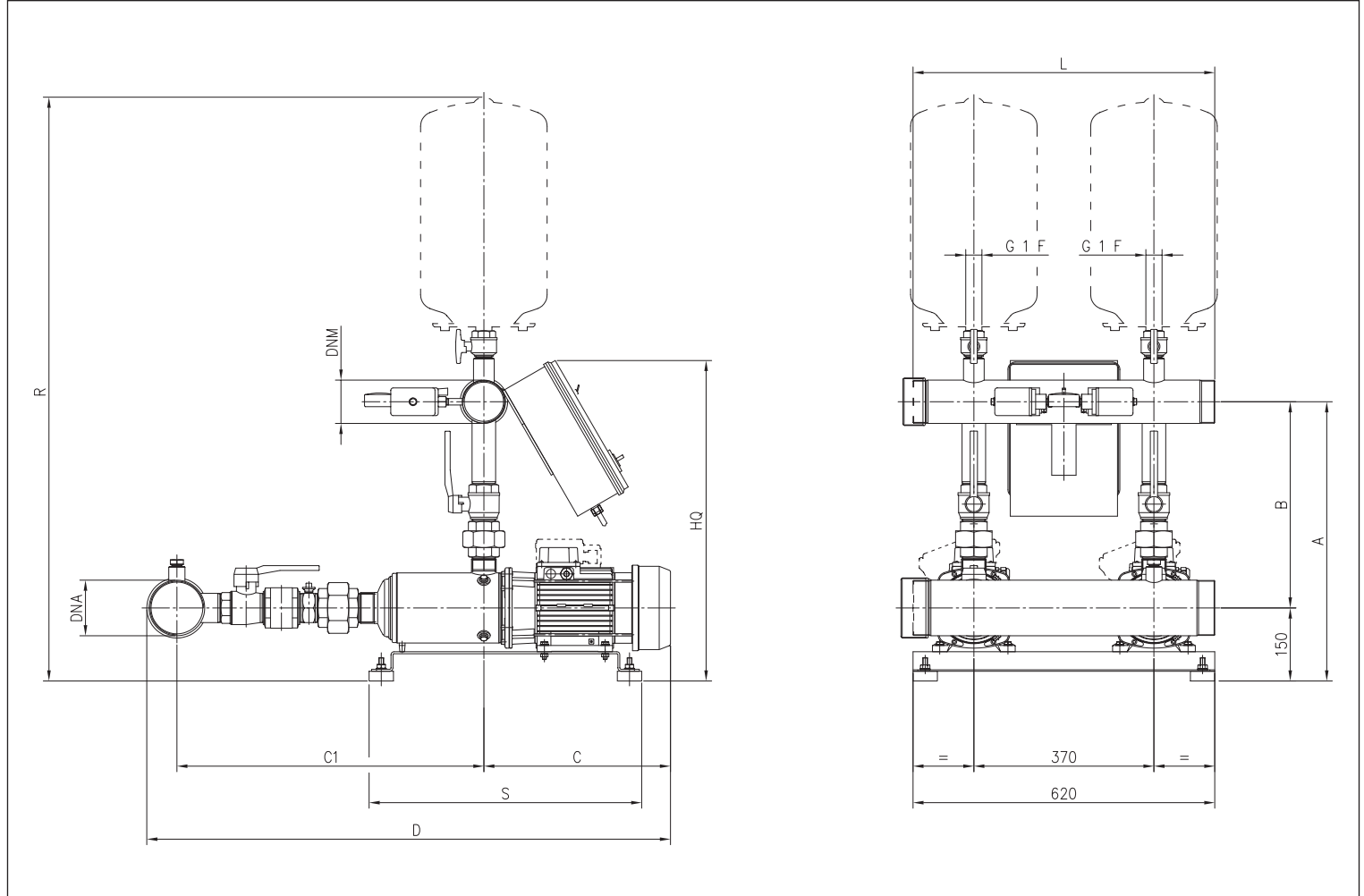
# 2GP MATRIX

## DOMESTIC PRESSURE BOOSTING

PERFORMANCE TABLE AND ELECTRIC DATA OF THE TWO PUMPS FUNCTIONING SIMULTANEOUSLY

230V single phase	Model 400V three-phase	[kW]	Max absorption [A]		Q=Flow rate															
			230V single phase	400V three-phase	l/min m³/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	600 36	700 42	800 48	900 54		
MATRIX 3-4/0.65M	MATRIX 3-4/0.65	0,65+0,65	9	3,2	42,0	39,1	27,2	16,0	-	-	-	-	-	-	-	-	-	-		
MATRIX 3-5/0.75M	MATRIX 3-5/0.75	0,75+0,75	10,8	5	52,5	49,0	34,0	20,0	-	-	-	-	-	-	-	-	-	-		
MATRIX 3-6/0.9M	MATRIX 3-6/0.9	0,9+0,9	11,4	5,2	62,5	58,5	41,0	24,0	-	-	-	-	-	-	-	-	-	-		
MATRIX 3-7/1.3M	MATRIX 3-7/1.3	1,3+1,3	15,6	7	73,0	68,5	47,5	28,0	-	-	-	-	-	-	-	-	-	-		
MATRIX 3-8/1.3M	MATRIX 3-8/1.3	1,3+1,3	15,6	7	83,5	78,0	54,5	32,0	-	-	-	-	-	-	-	-	-	-		
MATRIX 3-9/1.5M	MATRIX 3-9/1.5	1,5+1,5	17,4	6,8	94,0	88,0	61,0	36,0	-	-	-	-	-	-	-	-	-	-		
MATRIX 5-4/0.9M	MATRIX 5-4/0.9	0,9+0,9	11,4	5,2	-	43,0	38,6	34,7	29,4	17,6	-	-	-	-	-	-	-	-		
MATRIX 5-5/1.3M	MATRIX 5-5/1.3	1,3+1,3	15,6	7	-	54,0	48,5	43,5	36,7	22,0	-	-	-	-	-	-	-	-		
MATRIX 5-6/1.3M	MATRIX 5-6/1.3	1,3+1,3	15,6	7	-	64,5	58,0	52,0	44,0	26,4	-	-	-	-	-	-	-	-		
MATRIX 5-7/1.5M	MATRIX 5-7/1.5	1,5+1,5	17,4	6,8	-	75,5	67,5	61,0	51,5	30,8	-	-	-	-	-	-	-	-		
MATRIX 5-8/2.2M	MATRIX 5-8/2.2	2,2+2,2	26	9,2	-	86,0	77,0	69,5	58,5	35,2	-	-	-	-	-	-	-	-		
MATRIX 5-9/2.2M	MATRIX 5-9/2.2	2,2+2,2	26	9,2	-	97,0	87,0	78,0	66,0	39,6	-	-	-	-	-	-	-	-		
MATRIX 10-3/1.3M	MATRIX 10-3/1.3	1,3+1,3	15,6	7	-	-	33,3	32,1	30,9	28,6	25,5	19,3	8,7	-	-	-	-	-		
MATRIX 10-4/1.5M	MATRIX 10-4/1.5	1,5+1,5	17,4	6,8	-	-	44,5	43,0	41,0	38,1	34,0	25,7	11,6	-	-	-	-	-		
MATRIX 10-5/2.2M	MATRIX 10-5/2.2	2,2+2,2	26	9,2	-	-	55,5	53,5	51,5	47,5	42,5	32,1	14,5	-	-	-	-	-		
MATRIX 10-6/2.2M	MATRIX 10-6/2.2	2,2+2,2	26	9,2	-	-	66,5	64,5	62,0	57,0	51,0	38,5	17,4	-	-	-	-	-		
MATRIX 18-3/2.2M	MATRIX 18-3/2.2	2,2+2,2	26	9,2	-	-	-	-	-	33,0	31,9	30,4	28,1	25,2	21,3	15,5	7,8	-		
-	MATRIX 18-4/3.0	3+3	-	12,6	-	-	-	-	-	44,0	42,5	40,5	37,4	33,6	28,4	20,6	10,4	-		
-	MATRIX 18-5/4.0	4+4	-	16,2	-	-	-	-	-	55,0	53,0	50,5	47,0	42,0	35,5	25,8	13,0	-		
-	MATRIX 18-6/4.0	4+4	-	16,2	-	-	-	-	-	66,0	64,0	60,5	56,0	50,5	42,5	30,9	15,6	-		

### DIMENSIONS



### DIMENSIONS TABLE

Model		A	B	C	C1	D	Dimensions [mm]		HQ		L	R	S	Weight [kg]	
							DNA	DNM	[2]	[1]				[2]	[1]
2GP MATRIX 3-4M/0,65	2GP MATRIX 3-4T/0,65	490	340	255	450	740	50	40	550	565	520	1100	380	54,0	54,0
2GP MATRIX 3-5M/0,75	2GP MATRIX 3-5T/0,75	490	340	255	475	765	50	40	550	565	520	1100	380	58,0	58,0
2GP MATRIX 3-6M/0,9	2GP MATRIX 3-6T/0,9	490	340	255	500	790	50	40	550	565	520	1100	380	61,0	61,0
2GP MATRIX 3-7M/1,3	2GP MATRIX 3-7T/1,3	490	340	295	520	850	50	40	550	565	520	1100	550	68,0	68,0
2GP MATRIX 3-8M/1,3	2GP MATRIX 3-8T/1,3	490	340	295	545	875	50	40	550	565	520	1100	550	68,0	69,0
2GP MATRIX 3-9M/1,5	2GP MATRIX 3-9T/1,5	490	340	295	570	900	50	40	550	565	520	1100	550	72,0	71,0
2GP MATRIX 5-4M/0,9	2GP MATRIX 5-4T/0,9	500	350	295	490	825	65	50	560	575	520	1110	380	62,0	62,0
2GP MATRIX 5-5M/1,3	2GP MATRIX 5-5T/1,3	500	350	295	515	850	65	50	560	575	520	1110	380	67,0	66,0
2GP MATRIX 5-6M/1,3	2GP MATRIX 5-6T/1,3	500	350	295	535	875	65	50	560	575	520	1110	380	70,0	69,0
2GP MATRIX 5-7M/1,5	2GP MATRIX 5-7T/1,5	500	350	295	560	895	65	50	560	575	520	1110	550	75,0	74,0
2GP MATRIX 5-8M/2,2	2GP MATRIX 5-8T/2,2	500	350	305	585	935	65	50	575	575	520	1110	550	86,0	78,0
2GP MATRIX 5-9M/2,2	2GP MATRIX 5-9T/2,2	500	350	305	610	960	65	50	575	575	520	1110	550	86,0	78,0
2GP MATRIX 10-3M/1,3	2GP MATRIX 10-3T/1,3	515	365	300	510	855	80	65	585	600	520	1135	380	72,0	70,0
2GP MATRIX 10-4M/1,5	2GP MATRIX 10-4T/1,5	515	365	300	540	885	80	65	585	600	520	1135	380	73,0	73,0
2GP MATRIX 10-5M/2,2	2GP MATRIX 10-5T/2,2	515	365	310	570	930	80	65	600	600	520	1135	380	85,0	78,0
2GP MATRIX 10-6M/2,2	2GP MATRIX 10-6T/2,2	515	365	310	600	960	80	65	600	600	520	1135	550	89,0	81,0
2GP MATRIX 18-3M/2,2	2GP MATRIX 18-3T/2,2	575	425	315	520	895	100	80	660	660	620	1200	380	94,0	87,0
-	2GP MATRIX 18-4T/3,0	575	425	350	555	965	100	80	660	660	620	1200	550	-	98,0
-	2GP MATRIX 18-5T/3,8	575	425	385	595	1000	100	80	660	660	620	1200	550	-	109,0
-	2GP MATRIX 18-6T/4,0	575	425	385	630	1075	100	80	660	660	620	1200	550	-	111,0

[1]= Three-phase

[2]= Single phase