



### TECHNICAL DATA

- Operating range:** from 0,9 to 7,2 m<sup>3</sup>/h with head up to 86 metres.
- Pumped liquid:** clean, free of solids and abrasives, non-aggressive.
- Max percentage of sand in water:** 50 g/m<sup>3</sup>.
- Liquid temperature range:** from 0 °C to +40 °C.
- Maximum immersion depth:** 20 metres.
- Motor protection class:** IP 68.
- Motor protection rating:** F.
- Installation:** fixed or portable, vertical or horizontal position.
- Operation:** manual or automatic (continuous duty with totally submerged pump).
- Discharge port diameter:** 1"1/4 GAS.
- Pump maximum diameter:** 138 mm.

### APPLICATIONS

PULSAR electric pumps are utilised for lifting clear water from boreholes, first water collection tanks or cisterns, wells or water courses, and are capable of distributing pressurised water to domestic installations, small agricultural plants, and sprinkler systems for lawns and vegetable gardens. The pump has a very silent operation, and can be installed inside boreholes and tanks, thus avoiding all the potential problems connected with suction and unpriming.

### CONSTRUCTION FEATURES OF THE PUMP

Multistage monobloc submersible pump with hydraulic section below the motor, which is cooled by the pumped liquid. Impellers, diffusers, strainer and oil sump in abrasion-proof thermoplastic material. Outer liner, stator sleeve, upper head with delivery connection and closing ring in AISI 304 stainless steel. Upper and lower bearing support in pressed anti-dezincification brass. Rotor shaft extension in AISI 304 stainless steel. Elastomers in NBR. Stainless steel screws. Double mechanical seal with interposed oil chamber, in ceramic/carbon on the motor side, and silicon carbide/silicon carbide on the pump side. The seal system adopted ensures watertight sealing of the motor and good performance of the mechanical seal even in the event of short term dry operation.

### CONSTRUCTION FEATURES OF THE MOTOR

Submersible type continuous duty asynchronous motor. Stator enclosed in airtight casing made of AISI 304 stainless steel and covered by an outer protection that protects the wiring and the capacitor. Rotor running on ball bearings, oversized to ensure low noise and durability. The single-phase version has built-in thermal-amperometric protection and permanently connected capacitor. For the protection of the three-phase motor, we recommend the use of remote overload cut-outs, in compliance with current local regulations. Construction according to CEI 2-3 and CEI 61-69 (EN 60335-2-41).

**Motor protection class:** IP 68

**Insulation class:** F

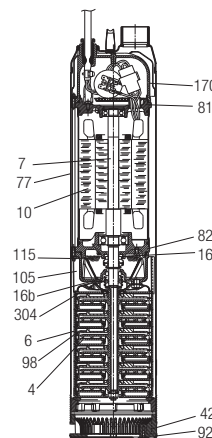
**Standard voltages:** Single-phase 220/240 V - 50 Hz.  
Three-phase 400 V - 50 Hz.

**Standard cables:** 20 m cable type H07 RN-F; single-phase version complete with SCHUKO CEE 7-VII-UNEL 47166-68 plug. The single-phase version can be supplied with or without float switches for automatic operation.

### MATERIALS

N.	PART*	MATERIALS
4*	IMPELLER	TECHNOPOLYMER
6*	DIFFUSER	TECHNOPOLYMER
7*	SHAFT WITH ROTOR	AISI 304 (part in contact with the pumped liquid)
10*	MOTOR CASING WITH WOUND STATOR	AISI 304
16*	COMPLETE UPPER MECHANICAL SEAL	NBR/CERAMIC/CARBON
16b	COMPLETE LOWER MECHANICAL SEAL	NBR/SILICON/CARBON
42*	SUCTION STRAINER	TECHNOPOLYMER
77*	OUTER LINER	AISI 304
81*	UPPER BEARING SUPPORT	PRESSED BRASS
82*	LOWER BEARING SUPPORT	PRESSED BRASS
92*	STRAINER COVER	AISI 304
98*	DIFFUSER HOUSING	TECHNOPOLYMER
105*115	SUMP	TECHNOPOLYMER
170*	SEAL LUBRICATION FLUID	ESSO MARCOL 172 OIL
304*	WIRING COMPARTMENT COVER	TECHNOPOLYMER
	REAR DISC	TECHNOPOLYMER

\* In contact with the pumped liquid.



# PULSAR 50

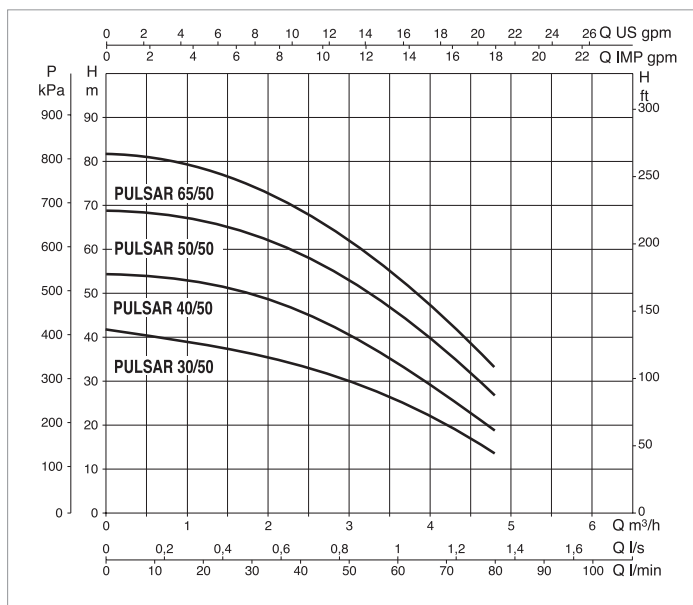
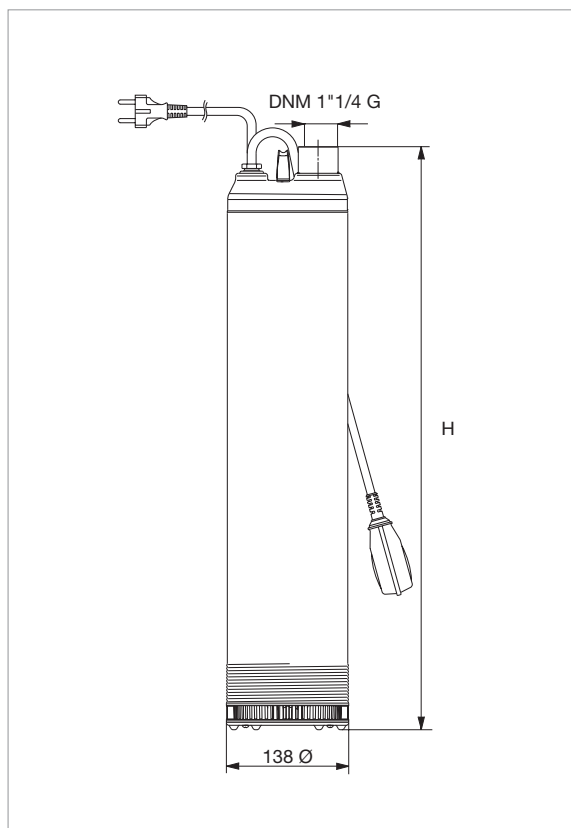
## 5" SUBMERSIBLE MONOBLOC MULTISTAGE PUMPS

### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINAL		Q=m³/h	0	1,2	2,4	3,6	4,8	6	7,2
	kW	HP	Q=l/min	0	20	40	60	80	100	120
PULSAR 30/50	0,55	0,75	H (m)	42	38,2	33,8	24,8	13,5	-	-
PULSAR 40/50	0,75	1		56	51	45	33	18	-	-
PULSAR 50/50	1	1,36		72	65,5	58	43,6	24,5	-	-
PULSAR 65/50	1,2	1,6		86	78,5	70	52,8	29	-	-

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA							H mm	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		In A	CAPACITOR			L/A	L/B	H			
			kW	HP		µF	Vc							
PULSAR 30/50 M	1x230 V~	0,94	0,55	0,75	4,5	16	450	562	690	220	165	0,037	20	17,3
PULSAR 30/50 T-NA	3x230 V~	0,87	0,55	0,75	2,85	-	-	562	690	220	165	0,037	20	17,3
PULSAR 30/50 T-NA	3x400 V~	0,87	0,55	0,75	1,65	-	-	562	690	220	165	0,037	20	17,3
PULSAR 40/50 M	1x230 V~	1,12	0,75	1	5,2	16	450	562	690	220	165	0,037	20	17,5
PULSAR 40/50 T-NA	3x230 V~	1,03	0,75	1	3,2	-	-	562	690	220	165	0,037	20	17,5
PULSAR 40/50 T-NA	3x400 V~	1,03	0,75	1	1,85	-	-	562	690	220	165	0,037	20	17,5
PULSAR 50/50 M	1x230 V~	1,45	1	1,36	6,5	25	450	630	690	220	165	0,037	20	18,5
PULSAR 50/50 T-NA	3x230 V~	1,35	1	1,36	4,15	-	-	630	690	220	165	0,037	20	18,5
PULSAR 50/50 T-NA	3x400 V~	1,35	1	1,36	2,4	-	-	630	690	220	165	0,037	20	18,5
PULSAR 65/50 M	1x230 V~	1,70	1,2	1,6	7,8	30	450	657	690	220	165	0,037	20	19,5
PULSAR 65/50 T-NA	3x230 V~	1,60	1,2	1,6	5	-	-	657	690	220	165	0,037	20	19,5
PULSAR 65/50 T-NA	3x400 V~	1,60	1,2	1,6	2,9	-	-	657	690	220	165	0,037	20	19,5



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.

# PULSAR 80

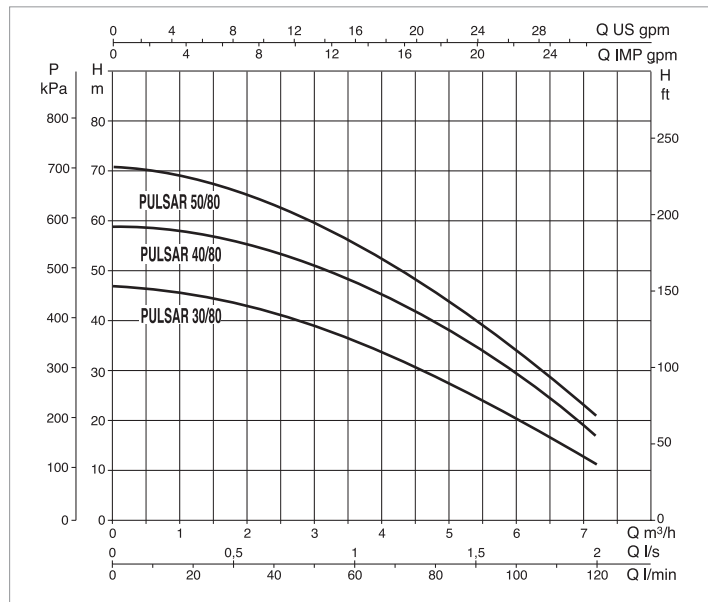
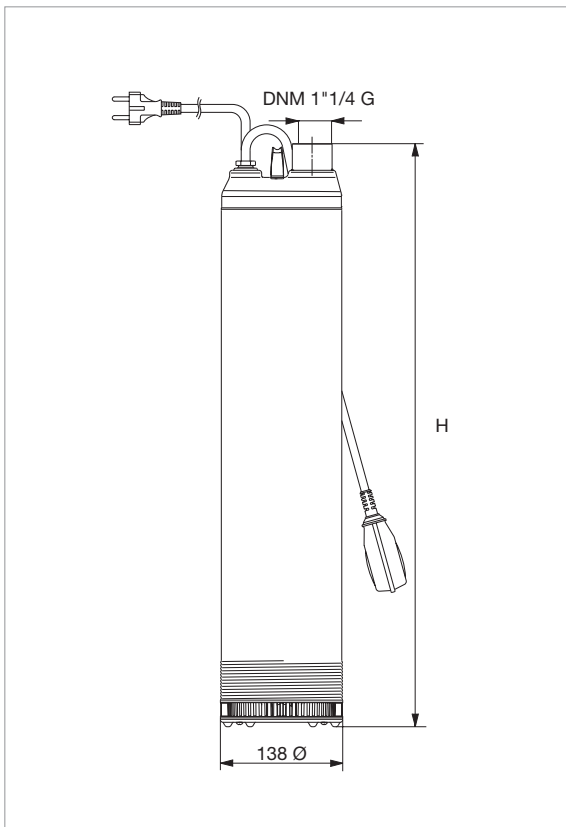
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### PERFORMANCE AT 50 Hz

MODEL	ELECTRICAL DATA		HYDRAULIC DATA							
	P2 NOMINAL		Q=m³/h	0	1,2	2,4	3,6	4,8	6	7,2
	kW	HP	Q=l/min	0	20	40	60	80	100	120
PULSAR 30/80	0,75	1	H (m)	51	48,2	44,8	39,2	32,4	23,5	13
PULSAR 40/80	1	1,36		64	61	56,8	50	41,5	30,5	16,2
PULSAR 50/80	1,2	1,6		77	73,2	68	60	50	37	19,6

### ELECTRICAL DATA AND DIMENSIONS

MODEL	ELECTRICAL DATA							H mm	PACKING DIMENSIONS			PACKING VOLUME m³	Q.TY X PALLET	WEIGHT kg
	POWER INPUT 50 Hz	P1 kW	P2 NOMINAL		I <sub>n</sub> A	CAPACITOR			L/A	L/B	H			
			kW	HP		µF	Vc							
PULSAR 30/80 M	1x230 V~	1,12	0,75	1	5,2	16	450	562	690	220	165	0,037	20	17,5
PULSAR 30/80 T-NA	3x230 V~	1,03	0,75	1	3,2	-	-	562	690	220	165	0,037	20	17,5
PULSAR 30/80 T-NA	3x400 V~	1,03	0,75	1	1,85	-	-	562	690	220	165	0,037	20	17,5
PULSAR 40/80 M	1x230 V~	1,45	1	1,36	6,5	25	450	630	690	220	165	0,037	20	18,5
PULSAR 40/80 T-NA	3x230 V~	1,35	1	1,36	4,15	-	-	630	690	220	165	0,037	20	18,5
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PULSAR 50/80 T-NA	3x230 V~	1,60	1,2	1,6	5	-	-	657	690	220	165	0,037	20	19,5
PULSAR 50/80 T-NA	3x400 V~	1,60	1,2	1,6	2,9	-	-	657	690	220	165	0,037	20	19,5



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equivalent to 1000 kg/m³. Curve tolerance according to ISO 9906.