

# GRINDER 1400-1800

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Operating range:** from 2 to 9 m<sup>3</sup>/h with head up to 24,5 m for the single-phase version, and 26,5 m for the three-phase version.

**Pumped liquid:** grey waste water, rough loaded water containing solid matter and/or long fibre, non aggressive.

**Liquid temperature range:** from 0 °C to +55 °C

**Maximum ambient temperature for operation with motor above water:** +40 °C

**Max. immersion depth:** 7 metres.

**Protection class:** IP68

**Insulation class:** F

**Standard voltage:** 220-240 V - 50Hz single-phase.  
380-415 V - 50Hz three-phase.

**Power cable:** H07RN-F, 10 metres.

**Installation:** fixed or portable, vertical position.

### APPLICATIONS

Cast-iron centrifugal submersible pump with grinder, suitable for lifting and decanting dirty waste civil and industrial water. Thanks to the grinding system, the matter found in the sewage (organic waste, textiles, rubber, etc.), is ground, enabling the lifting of the liquid without the risk of clogging or obstruction in the delivery piping.

### CONSTRUCTION FEATURES OF THE PUMP

Cast-iron pump body, motor casing and suction cover. High resistance cast-iron ring impeller. Microcast tempered steel grinder to ensure strength and durability. Stainless steel rotor shaft, handle, and bolts and screws. Inspectable oil seal chamber. Silicon carbide mechanical seal. GAS threaded 2" radial delivery port, to facilitate the installation of lifting devices (DSD 2).

### CONSTRUCTION FEATURES OF THE MOTOR

Continuous duty, dry asynchronous submersible motor in watertight casing. Rotor running on ball bearings, oversized and permanently lubricated. Thermal protection in the winding, to be connected to the control panel.

In order to operate, the pumps must be equipped with control and protection systems, supplied separately and not connected to the electric pumps. The single-phase version must be equipped with an ED HS control panel.

Supplied with 10 metre neoprene rubber power input cable 6x(4x1,5)+(2x0,5).

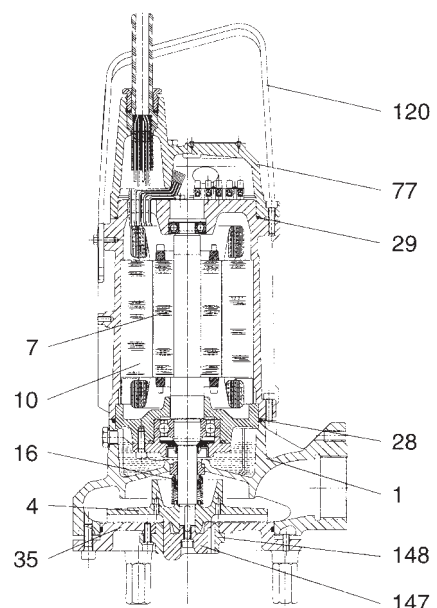
Number of poles: 2

Max starts/hour: 20

### MATERIALS

N.	PARTS*	MATERIALS
1	PUMP BODY	CAST IRON 200 UNI ISO 185
4	IMPELLER	CAST IRON 200 UNI ISO 185
7	MOTOR SHAFT	AISI 416 STAINLESS STEEL X12CrS13 - UNI 6900/71
10	MOTOR CASING	CAST IRON 200 UNI ISO 185
16	MECHANICAL SEAL	SILICON CARBIDE
28	OR RING	VITON
29	OR RING	VITON
35	SUCTION COVER	CAST IRON 200 UNI ISO 185
77	PROTECTION COVER	CAST IRON 200 UNI ISO 185
120	HANDLE	AISI 304 STAINLESS STEEL X5CrNi 1810 - UNI 6900/71
147	FIXED GRINDER SECTION	AISI 440 TEMPERED STAINLESS STEEL
148	FIXED GRINDER SECTION	AISI 440 TEMPERED STAINLESS STEEL

\* In contact with the liquid



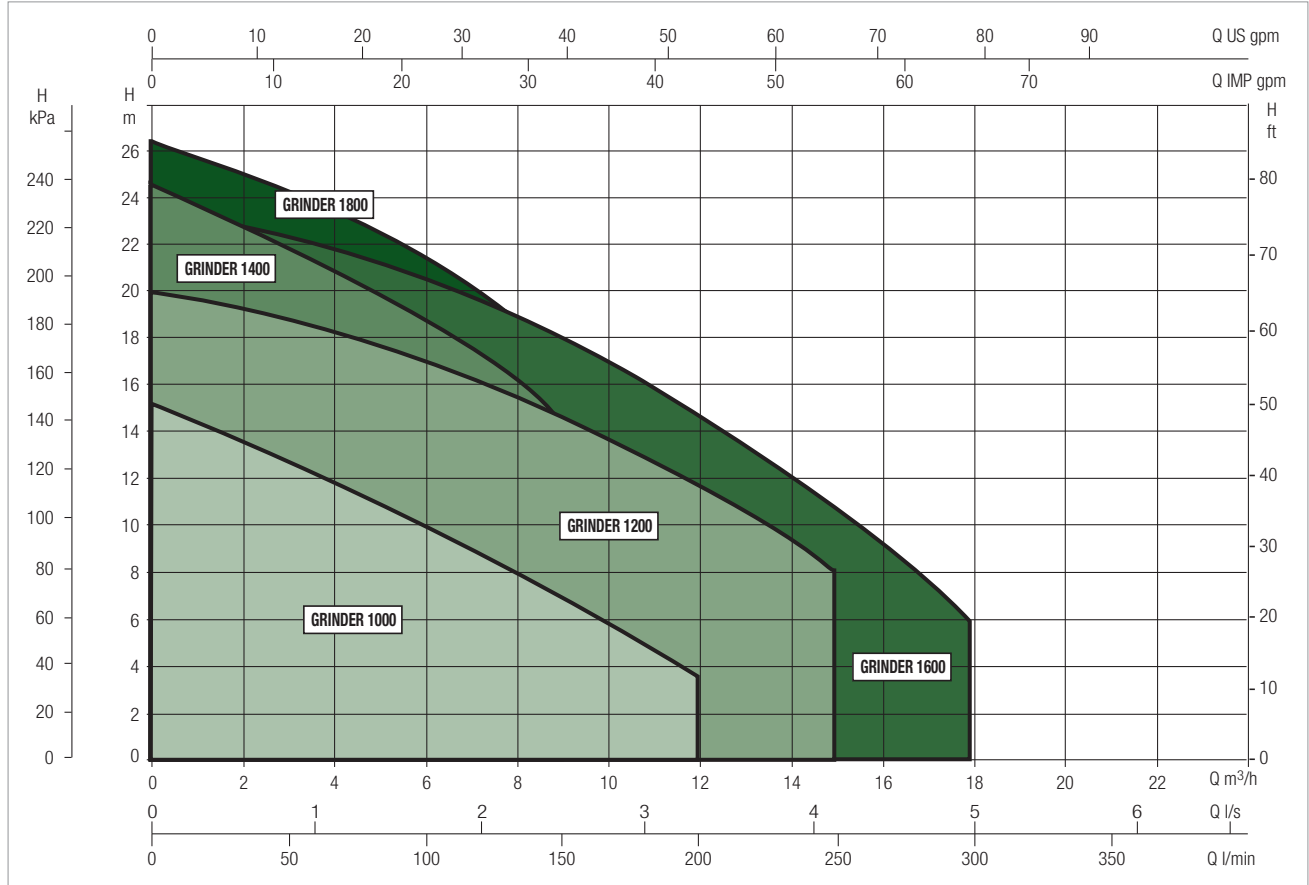
# GRINDER RANGE

## SUBMERSIBLE PUMPS

### PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

### GRAPHIC SELECTION TABLE

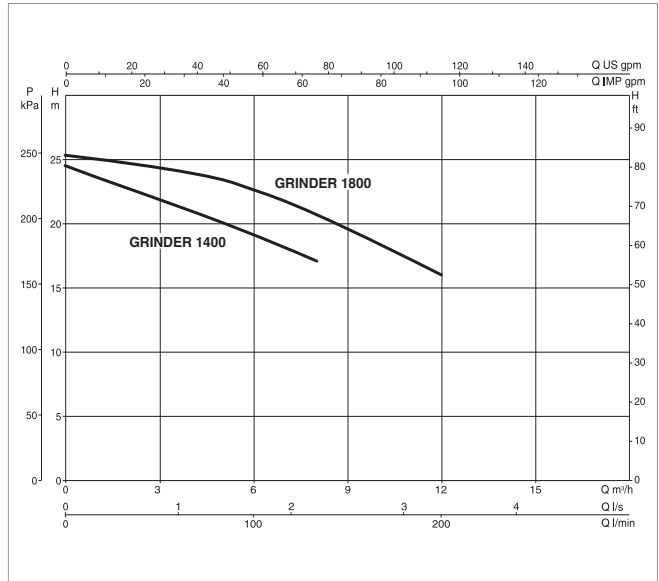
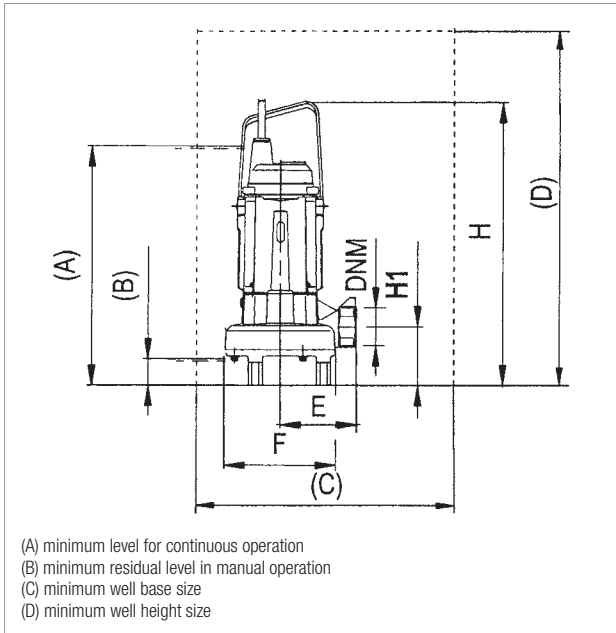


### SELECTION TABLE - GRINDER 1400-1800

MODEL	Q= m <sup>3</sup> /h	0	3	6	9	12	15	18
	Q=l/min	0	50	100	150	200	250	300
GRINDER 1400 M	H (m)	24.5	22.3	19	14.1			
GRINDER 1800 M	H (m)	25.3	25	22.3	19.9	16		

# GRINDER 1400 - 1800 - SUBMERSIBLE PUMPS FOR LIFTING WASTE WATER FOR GRINDING

Liquid temperature range: from 0 °C to +55 °C



The performance curves are based on kinematic viscosity values = 1 mm<sup>2</sup>/s and density equal to 1000 kg/m<sup>3</sup>. Curve tolerance according to ISO 9906.

MODEL	ELECTRICAL DATA						
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	CAPACITOR	
			kW	HP		µF	Vc
GRINDER 1400 M	1 x 220V -240V ~	1.95	1.1	1.5	8.7	40	450
GRINDER 1800 T	3 x 400V ~	2	1.5	2	3.8	-	-

MODEL	A	B	C	D	E	F Ø	DNM	H	H1	PACKING DIMENSIONS			VOLUME (m <sup>3</sup> )	WEIGHT kg
										L/A	L/B	H		
GRINDER 1400 M	500	50	500 X 500 min	600 min	150	219	2" G	549	109	680	330	446	0.1	43.2
GRINDER 1800 T	500	50	500 X 500 min	600 min	150	219	2" G	549	109	680	330	446	0.1	43.8