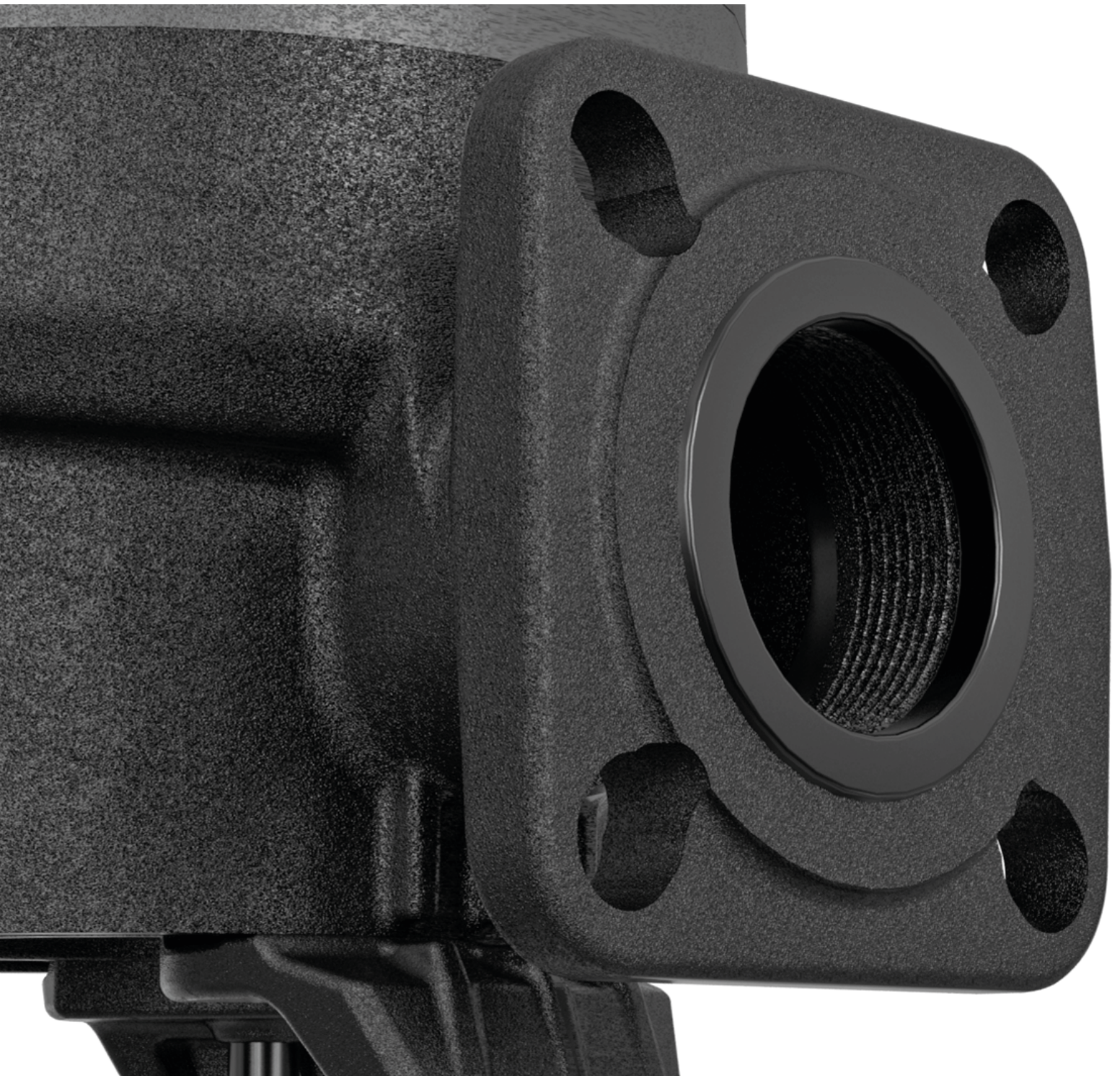




SUBMERSIBLE PUMPS



# GRINDER FX

## SUBMERSIBLE PUMPS



### TECHNICAL DATA

**Flow rate minimum and maximum:** 23,8 m<sup>3</sup>/h

**Head up to:** 33 m

**Immersion dept (maximum):** 20 m

**Type of pumped liquid:** loaded waters with filamentary bodies, paper or textile material in the presence of domestic or civil waste

**Supported liquid temperature (maximum and minimum):** + 50°C (+ 60°C for short period of time)

**Flanged and threaded:** from 1"½, DN32, DN40

**Impeller type:** Grinder

**Start time (maximum) per hour:** 20/h

**Class of protection:** IP 68

**Motor insulation class:** F

**Single phase power input:** 1x 220-240V 50Hz

**Three phase power input:** 3x 400V 50Hz / 3x 230V 50Hz on request

**Maximum dry run time:** 10 min

**Power cable (m) and plug:** 10 m

**Possible type of installation:** mobile on the ground or fixed on a coupling device

**Certification:** EN 12050 \ ATEX

**Special versions on request:** different cable lengths, different voltages and frequencies

Grinder FX is a submersible pump with shredder designed for the drainage of waste water coming from drains in civil and commercial environments. The pump is certified according to the wastewater standard EN 12050-1. Pump suitable for fixed installations with a coupling device or mobile if placed on a base directly on the bottom of the tank. Thanks to the high-strength grinder, the pump is suitable for installations with small-diameter pipes or those requiring high pressures. The pump is designed for quick maintenance thanks to a constructive solution that provides easy access to the main components of the pump. Automatic versions with power up to 1,5 kW. ATEX version available for use in potentially explosive environments. (ATEX certifications: II2G Ex db k IIB T4 or IEC EX: Ex db IIB T4 Gb).

### CONSTRUCTION FEATURES OF THE PUMP

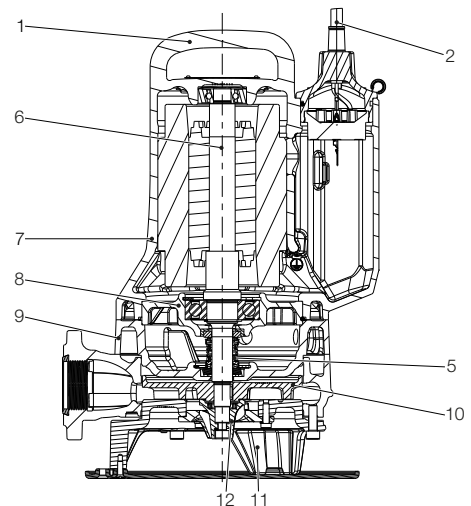
Pump body and impeller in cast iron, shredder in AISI 630. Motor shaft in AISI 304 stainless steel. Double mechanical seal in SiC-SiC/SiC-C in oil chamber not in contact with the pumped liquid, independent of the direction of rotation. Delivery port both flanged and threaded.

### CONSTRUCTION FEATURES OF THE MOTOR

Single-phase asynchronous motor (MA / MNA versions) and three-phase version motor (TNA versions). The rotor is mounted on lubricated bearings. Continuous operation in S1 with the motor completely immersed. Dry running for a maximum time of 10 minutes. Over-temperature sensors in the motor windings with intervention threshold at +130°C. Quick-bonded resin-bonded cable gland, 07RN8-F power cable. Single-phase versions with starter and capacitor in a separate panel, MA versions with float for automatic operation. In the three-phase motors the over-temperature sensor connection is responsibility of the user.

## MATERIALS

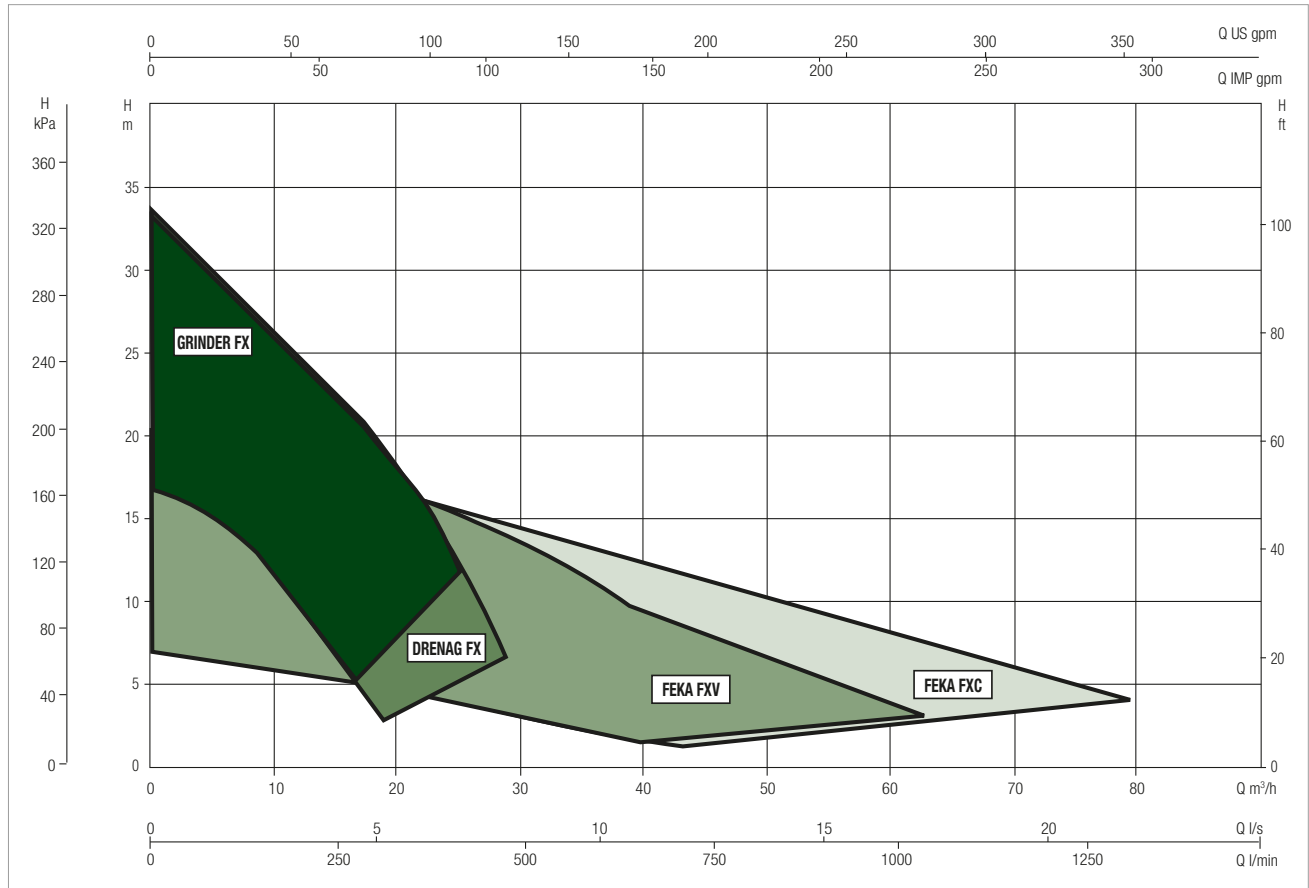
N°	PARTS	MATERIALS
1	HANDLE	CAST IRON EN G.JL 200
2	ELECTRIC CABLE	07RN8-F
3	SCREWS	STAINLESS STEEL AISI 304
4	OR	NBR
5	MECHANICAL SEAL PUMP SIDE	SiC-SiC/SiC-C
	MECHANICAL SEAL MOTOR SIDE	SiC/CARBON
6	MOTOR SHAFT	STAINLESS STEEL AISI 304 (P2>1.5kW) AISI 431 (P2<1.2kW)
7	PUMP BODY / MOTOR	CAST IRON EN G.JL 200
8	BEARING INNER FLANGE	ALLUMINIUM ALLOY EN AC 46100
9	FLANGE	CAST IRON EN G.JL 200
10	IMPELLER	CAST IRON EN G.JL 250
11	BASE	CAST IRON EN G.JL 200
12	CUTTER / CUTTER BASE	STAINLESS STEE EN1.4542 / AISI 630
13	COATING	CATAPHORESIS and ACRILIC TWO-COMPONENT 50µm



### 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 ISO9906.

### GRAPHIC SELECTION TABLE

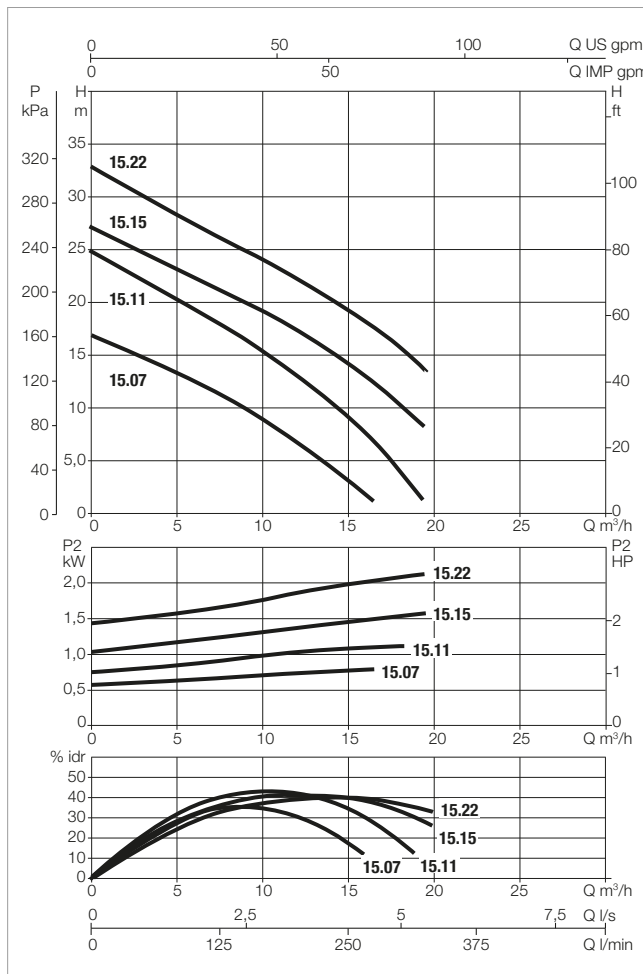
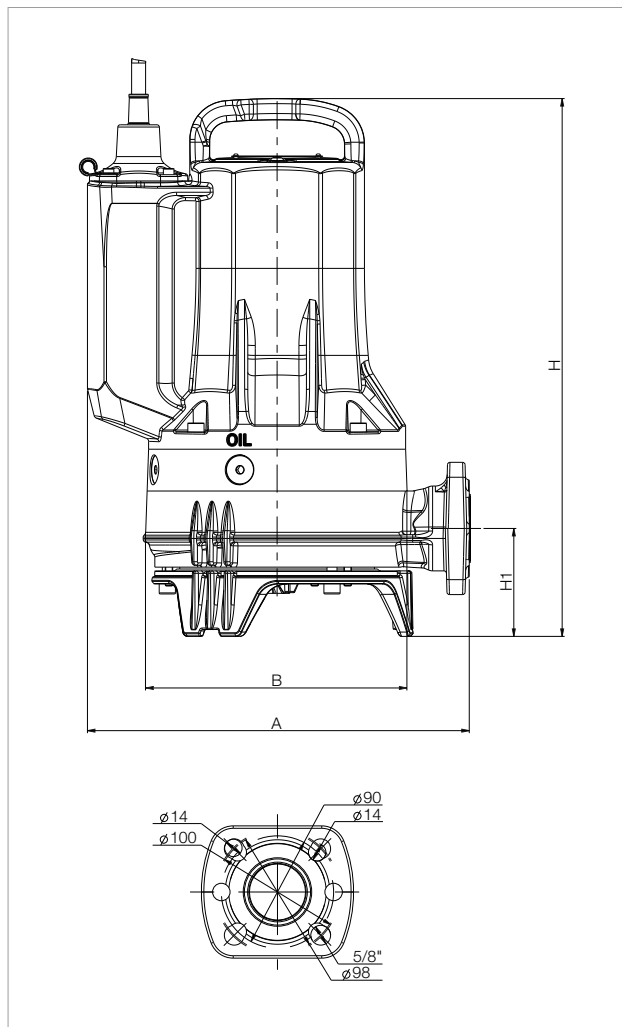


### SELECTION TABLE GRINDER FX 15

MODEL	Q=m³/h	0	2,4	4,8	7,2	9,6	12	14,4	16,8	19,2
	Q=l/min	0	40	80	120	160	200	240	280	320
<b>GRINDER FX 15.07</b>	H (m)	16,9	15,2	13,4	11,4	9,2	6,7	3,9		
<b>GRINDER FX 15.11</b>		24,9	22,6	20,5	18,3	15,9	13,2	10,1	6,3	1,8
<b>GRINDER FX 15.15</b>		27,3	25,2	23,3	21,4	19,5	17,3	14,8	11,9	8,5
<b>GRINDER FX 15.22</b>		32,8	30,5	28,5	26,5	24,4	22,3	19,9	17,2	14,0

# GRINDER FX 15 - SUBMERSIBLE PUMPS

Pumped liquid temperature range: da 0° a +50°C. For higher temperatures contact our sales network.



The performance curves are based on kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO9906.

MODEL	ELECTRICAL DATA							
	POWER INPUT 50 Hz	P1 MAX kW	P2 NOMINAL		In A	Is A	CAPACITOR	RATED SPEED rpm/min
			Kw	HP				
GRINDER FX 15.07 MA	1x230V	1,1	0,8	1,1	5,3	29	25+200	2870
GRINDER FX 15.07 MNA*	1x230V	1,1	0,8	1,1	5,3	29	25+200	2870
GRINDER FX 15.07 TNA*	3x400V	1	0,8	1,1	2	22	-	2870
GRINDER FX 15.11 MA	1x230V	1,5	1,1	1,5	6,8	29	25+200	2870
GRINDER FX 15.11 MNA*	1x230V	1,5	1,1	1,5	6,8	29	25+200	2870
GRINDER FX 15.11 TNA*	3x400V	1,5	1,1	1,5	2,8	19	-	2870
GRINDER FX 15.15 MA	1x230V	2,2	1,6	2,1	9,8	36	40+200	2870
GRINDER FX 15.15 MNA*	1x230V	2,2	1,6	2,1	9,8	36	40+200	2870
GRINDER FX 15.15 TNA*	3x400V	2,1	1,6	2,1	3,8	25	-	2870
GRINDER FX 15.22 TNA*	3x400V	2,6	2,1	2,8	4,7	35	-	2870

\*Available in Ex version

MODEL	FREE PASSAGE	A		B		H		H1	DELIVERY				PACKING DIMENSIONS			WEIGHT Kg
		A	B	Ex	H	GAS	DN1		HOLES	D	L/A	L/B	H			
GRINDER FX 15.07*	-	306	215	404	404	87	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	35		
GRINDER FX 15.11*	-	306	215	404	421	87	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	35		
GRINDER FX 15.15*	-	306	215	413	430	87	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	38		
GRINDER FX 15.22*	-	306	215	430	448	87	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	39		

\*Available in Ex version