DAB
WATER • TECHNOLOGY

FX

SUBMERSIBLE PUMPS



FEKA FXV

SUBMERSIBLE PUMPS



TECHNICAL DATA

Flow rate minimum and maximum: 62,8 m^3/h
Head up to: 19,6 m
Immersion dept (maximum): 20 m
Type of pumped liquid: waters with filamentary bodies, paper or textile material in the presence of domestic or civil waste
Free passage: 50 mm or 65 mm depending on the model
Supported liquid temperature (maximum and minimum): + 50°C (+ 60°C for a short period of time)
Flanged and threated: from 2", DN50, DN65
Impeller type: Vortex
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 only on request
Maximum dry run time: 10 min
Power cable (m) and plug: 10 m
Possible type of installation: mobile when on the ground, fixed with coupling
Certification: EN 12050-1 \ ATEX
Special versions on request: different cable lengths, different voltages and frequencies

Feka FXV is a submersible pump for draining sewage water in commercial building service. It is certified for the European Union standard EN 12050-1 which applies to sewage lifting containing faecal material in buildings and construction sites. Pump suitable for fixed installations with a coupling device or mobile if placed directly on the bottom of the tank. High-performance super vortex impeller with solid handling up to 50 mm or 60 mm. The pump is suitable for liquid with solids and long fibers in suspension. The reduced overall dimensions and the outlet ports both flanged and threaded make it ideal for replacements. 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

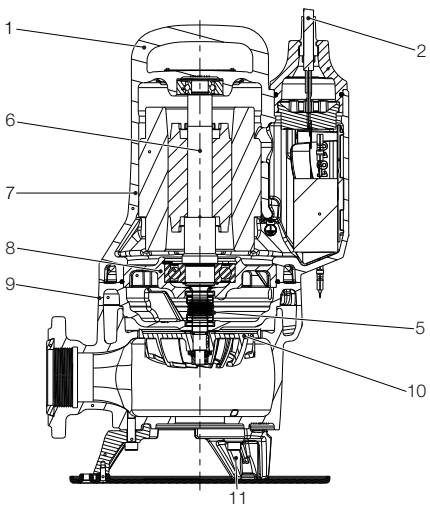
Pump body and impeller in cast iron. Motor shaft in AISI 304 stainless steel. Double mechanical seal in SiC-SiC/SiC-C in oil chamber not in contact with the pumped liquid, independent of the direction of rotation. Delivery port both flanged and threaded.

CONSTRUCTION FEATURES OF THE MOTOR

Available in single-phase asynchronous motor (MA / MNA versions) and three-phase motor (TNA versions). Rotor 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 integrated capacitor, available with float for automatic operation (MA) with powers up to 1,5 kW. In the three-phase motors the over-temperature sensor connection is responsibility of the user.

MATERIALS

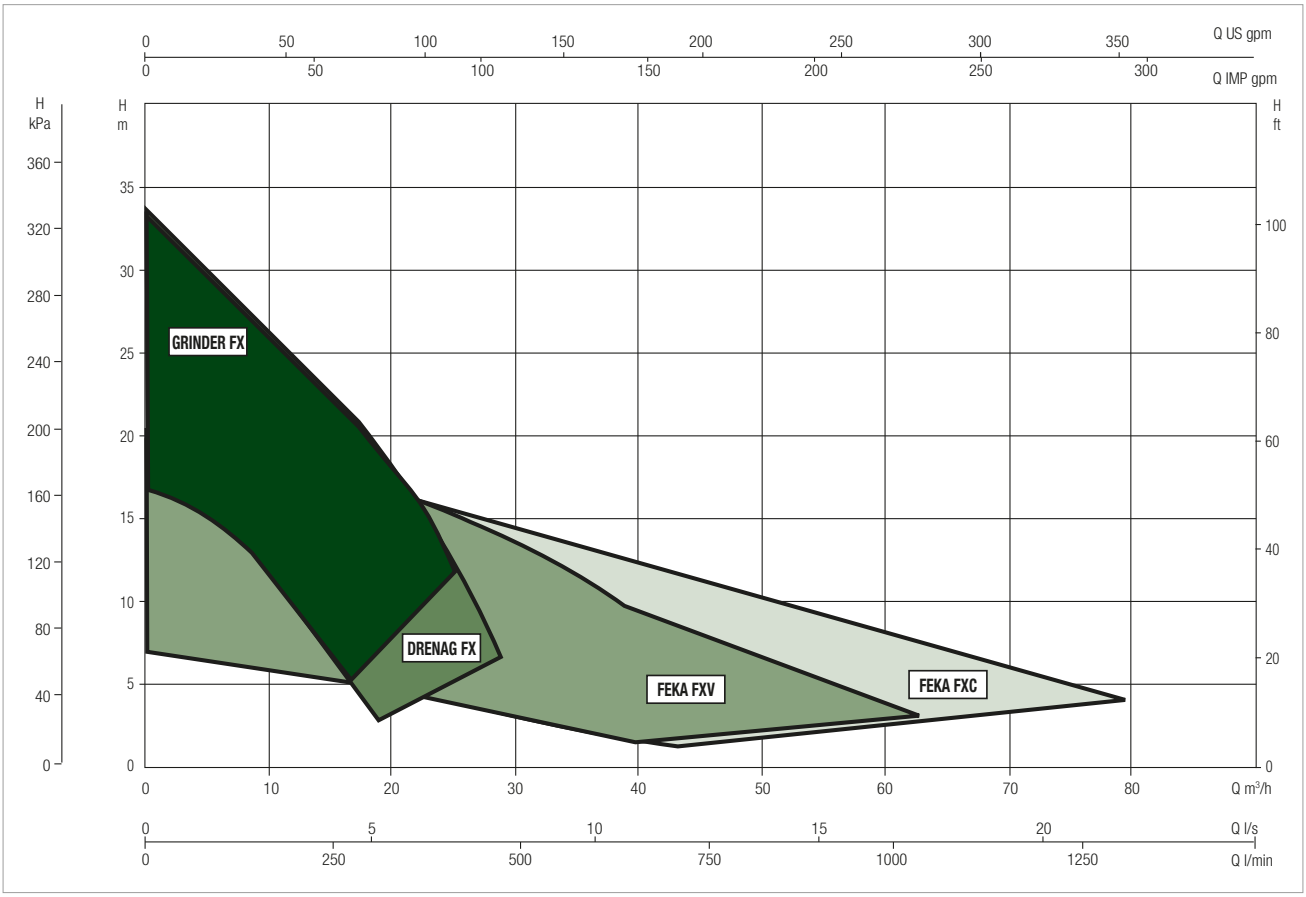
N°	PARTS	MATERIALS
1	HANDLE	CAST IRON EN GJL 200
2	ELECTRIC CABLE	07RN8-F
3	SCREWS	STAINLESS STEEL AISI 304
4	OR	NBR
5	MECHANICAL SEAL PUMP SIDE	SiC-SiC/SiC-C
	MECHANICAL SEAL MOTOR SIDE	SiC/CARBON
6	MOTOR SHAFT	STAINLESS STEEL AISI 304 (P2>1.5kW and 4 poles) AISI 431 (P2<1.2kW)
7	PUMP BODY / MOTOR	CAST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



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm^2/s and density equal to 1000 kg/m^3. Curve tolerance according to ISO9906.

GRAPHIC SELECTION TABLE

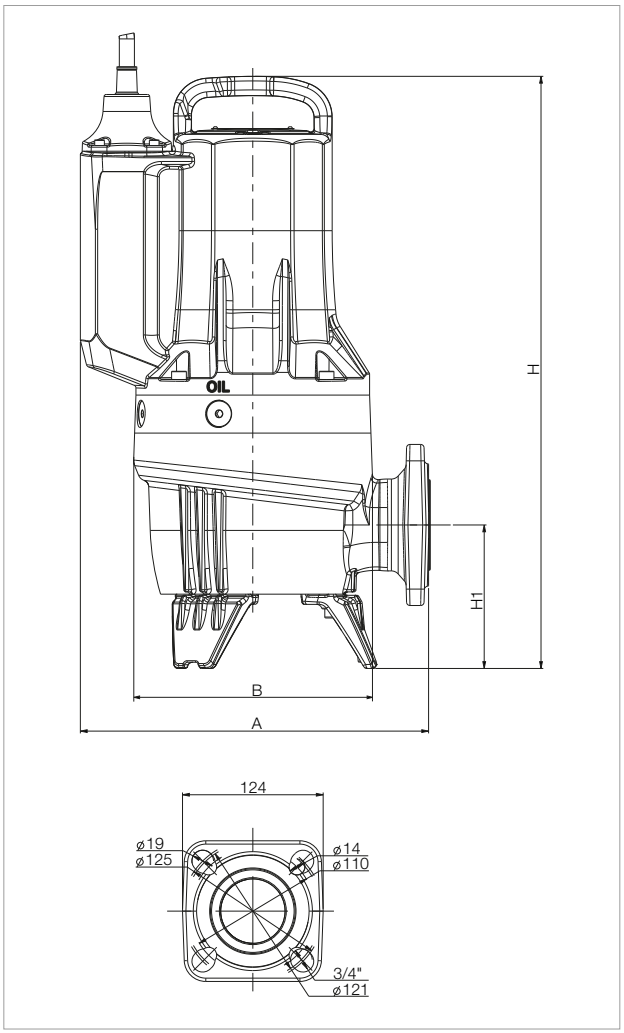


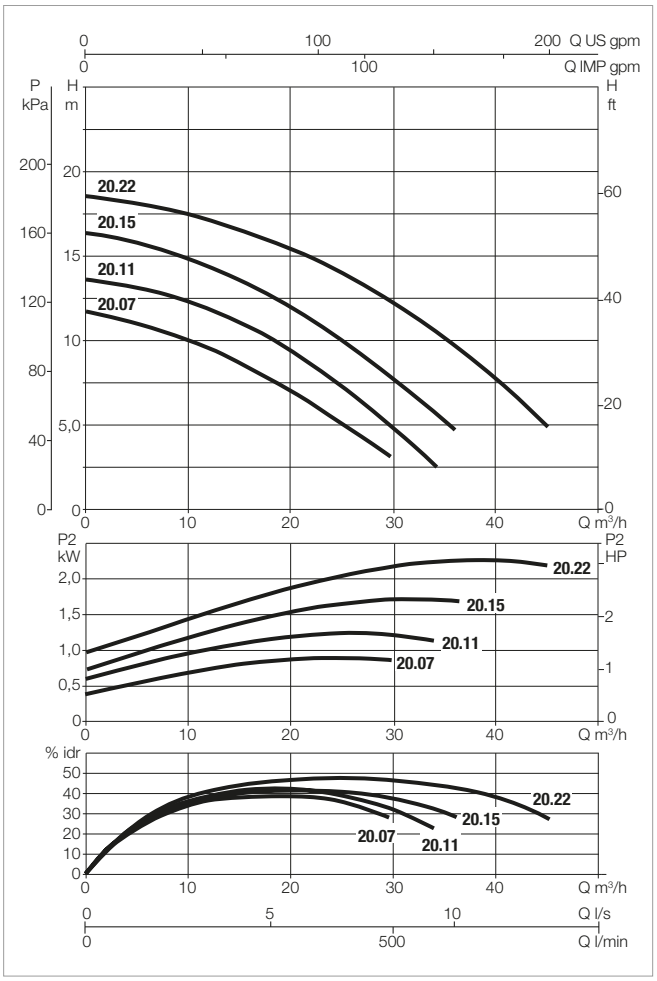
SELECTION TABLE FEKA FXV 20 - 25

MODEL	Q=m^3/h	0	6	12	18	24	30	36	42	48	54
	Q=l/min	0	100	200	300	400	500	600	700	800	900
FEKA FXV 20.07	H (m)	11,7	10,9	9,6	7,7	5,4	2,9				
FEKA FXV 20.11		13,1	12,9	11,9	10,1	7,7	4,8				
FEKA FXV 20.15		16,2	15,6	14,4	12,6	10,4	7,7	4,7			
FEKA FXV 20.22		18,5	18,0	17,1	15,9	14,3	12,2	9,7	6,6		
FEKA FXV 25.07		8,8	8,1	7,0	5,7	4,3	3,0	1,8			
FEKA FXV 25.11		11,3	10,7	9,6	8,2	6,6	4,9	3,4	2,2		
FEKA FXV 25.15		13,7	13,4	12,4	11,0	9,2	7,4	5,5	3,9	2,5	
FEKA FXV 25.22		16,5	16,3	15,6	14,5	13,0	11,3	9,4	7,5	5,6	3,8
FEKA FXV 25.07.4		6,3	6,0	5,5	4,8	3,9	2,9	1,8			
FEKA FXV 25.12.4		9,0	8,7	8,3	7,8	7,1	6,3	5,4	4,3	3,2	1,9

FEKA FXV 20 - 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				
FEKA FXV 20.07 MA	1x230V	1,4	0,9	1,2	6,4	29	25	2870
FEKA FXV 20.07 MNA*	1x230V	1,4	0,9	1,2	6,4	29	25	2870
FEKA FXV 20.07 TNA*	3x400V	1,4	0,9	1,2	2,4	22	-	2870
FEKA FXV 20.11 MA	1x230V	1,7	1,2	1,6	8	29	25	2870
FEKA FXV 20.11 MNA*	1x230V	1,7	1,2	1,6	8	29	25	2870
FEKA FXV 20.11 TNA*	3x400V	1,6	1,2	1,6	2,9	19	-	2870
FEKA FXV 20.15 MA	1x230V	2,3	1,7	2,3	10,5	36	40	2870
FEKA FXV 20.15 MNA*	1x230V	2,3	1,7	2,3	10,5	36	40	2870
FEKA FXV 20.15 TNA*	3x400V	2,2	1,7	2,3	4	25	-	2870
FEKA FXV 20.22 TNA*	3x400V	2,9	2,2	2,9	5	35	-	2870

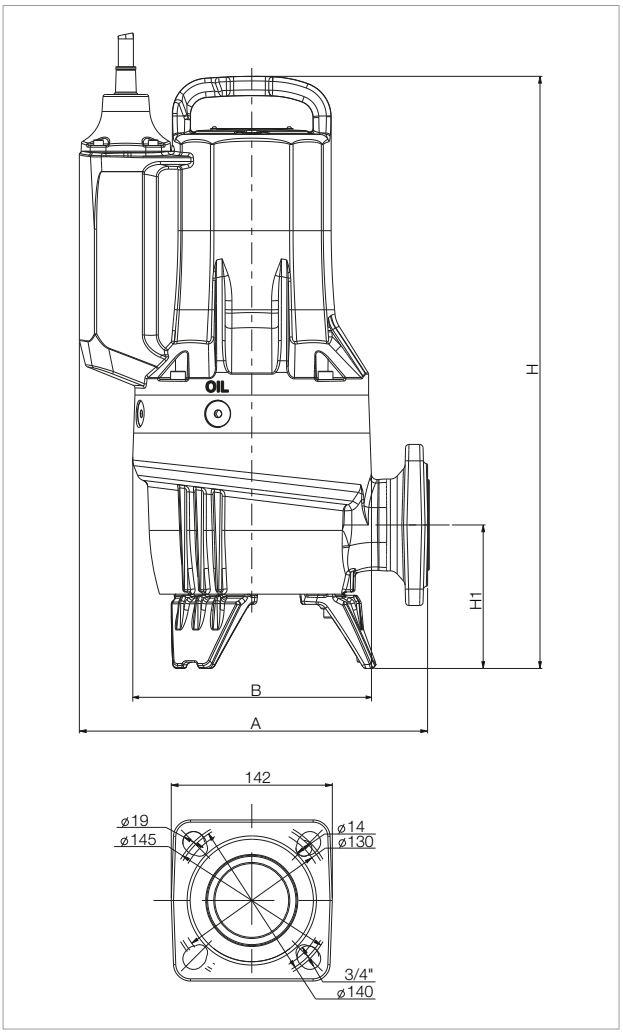
*Available in Ex version

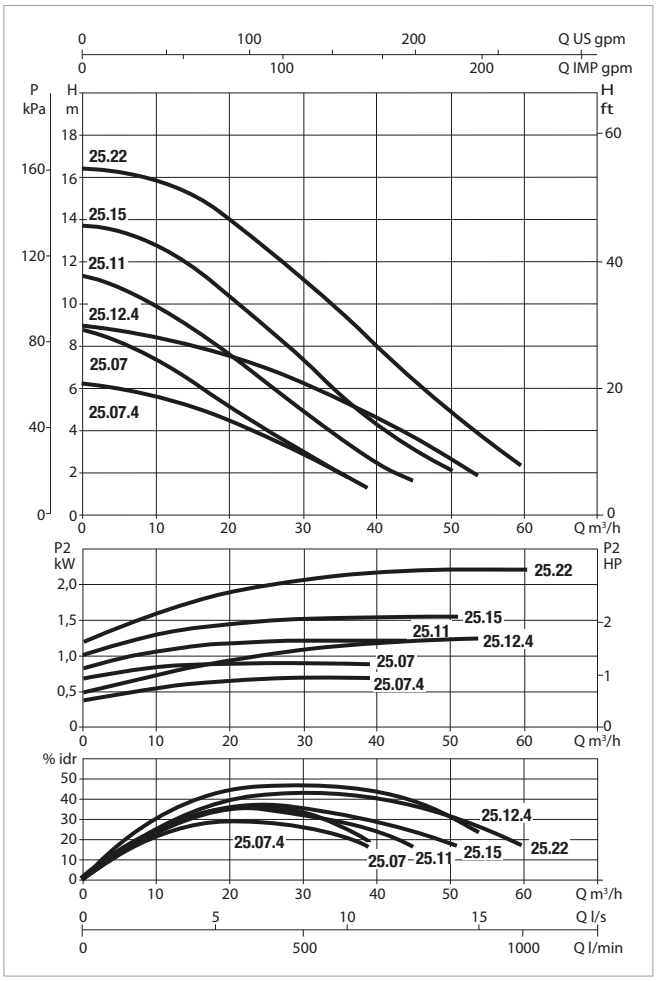
MODEL	FREE PASSAGE	A	B	H		H1	DELIVERY				PACKING DIMENSIONS			WEIGHT Kg
					Ex		GAS	DN1	HOLES	D	L/A	L/B	H	
FEKA FXV 20.07*	50	307	211	464	464	104	Rp 2"	50 PN10/6	4	125-110	660	370	400	35
FEKA FXV 20.11*	50	307	211	464	482	104	Rp 2"	50 PN10/6	4	125-110	660	370	400	35
FEKA FXV 20.15 MA	50	307	211	464	-	104	Rp 2"	50 PN10/6	4	125-110	660	370	400	39
FEKA FXV 20.15 MNA-TNA*	50	307	211	474	492	104	Rp 2"	50 PN10/6	4	125-110	660	370	400	39
FEKA FXV 20.22*	50	307	211	492	508	104	Rp 2"	50 PN10/6	4	125-110	660	370	400	40

*Available in Ex version

FEKA FXV 25 - 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				
FEKA FXV 25.07 MA	1x230V	1,5	1	1,3	6,6	29	25	2870
FEKA FXV 25.07 MNA*	1x230V	1,5	1	1,3	6,6	29	25	2870
FEKA FXV 25.07 TNA*	3x400V	1,3	1	1,3	2,3	22	-	2870
FEKA FXV 25.11 MA	1x230V	1,7	1,2	1,6	7,6	29	25	2870
FEKA FXV 25.11 MNA*	1x230V	1,7	1,2	1,6	7,6	29	25	2870
FEKA FXV 25.11 TNA*	3x400V	1,7	1,2	1,6	3	19	-	2870
FEKA FXV 25.15 MA	1x230V	2,3	1,7	2,3	10,6	36	40	2870
FEKA FXV 25.15 MNA*	1x230V	2,3	1,7	2,3	10,6	36	40	2870
FEKA FXV 25.15 TNA*	3x400V	2,2	1,7	2,3	4	25	-	2870
FEKA FXV 25.22 TNA*	3x400V	2,8	2,2	2,9	4,9	35	-	2870
FEKA FXV 25.07.4 TNA*	3x400V	1	0,7	0,9	2,2	10	-	2870
FEKA FXV 25.12.4 TNA*	3x400V	1,7	1,2	1,6	3	15	-	2870

*Available in Ex version

MODEL	FREE PASSAGE	A	B	H		H1	DELIVERY				PACKING DIMENSIONS			WEIGHT Kg
					Ex		GAS	DN1	HOLES	D	L/A	L/B	H	
FEKA FXV 25.07*	65	307	211	502	519	124	-	65 PN10/6	4	145-130	660	370	400	36
FEKA FXV 25.11*	65	307	211	502	519	124	-	65 PN10/6	4	145-130	660	370	400	37
FEKA FXV 25.15*	65	307	211	522	539	127	-	65 PN10/6	4	145-130	660	370	400	43
FEKA FXV 25.22*	65	307	211	522	539	127	-	65 PN10/6	4	145-130	660	370	400	41
FEKA FXV 25.07.4*	65	335	253	545	545	132	-	65 PN10/6	4	145-130	660	370	400	45
FEKA FXV 25.12.4*	65	335	253	545	545	132	-	65 PN10/6	4	145-130	660	370	400	48

*Available in Ex version

FEKA FXC

SUBMERSIBLE PUMPS



TECHNICAL DATA

Flow rate minimum and maximum: 78,9 m^3/h
Head up to: 20,9 m
Immersion dept (maximum): 20 m
Type of pumped liquid: Waste water, sewage water
Free passage: 50 mm
Supported liquid temperature (maximum and minimum): + 50°C (+ 60°C for a short time)
Flanged and threated: from 2", DN50, DN65
Impeller type: Channel
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 when on the ground, fixed with coupling
Certification: EN 12050 \ ATEX
Special versions on request: different cable lengths, different voltages and frequencies

Feka FXC is a submersible pump for the drainage of sewage in commercial building service. The pump is certified according to the wastewater standard EN 12050-2. Pump suitable for fixed installations with a coupling device or mobile if placed directly on the bottom of the tank. Suitable for waste water without long fibers, rainwater and ground water. The pump is suitable for draining rooms subject to flooding, when high flow rates are required. The pump is designed for quick maintenance thanks to a constructive solution that provides easy access to the main components. 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

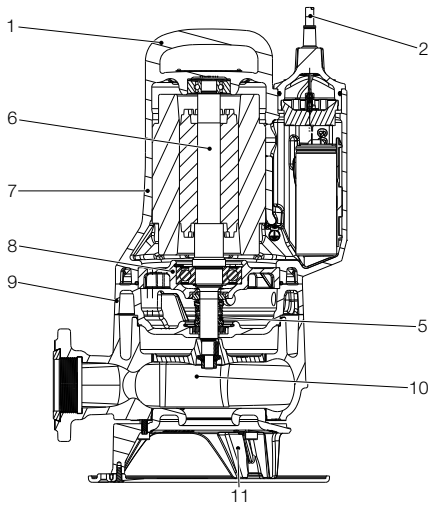
Channel impeller with anti-lock system, 50 mm free passage. Pump body and impeller in cast iron. Motor shaft in AISI 304 stainless steel. Double mechanical seal in SiC-SiC/SiC-C in oil chamber not in contact with the pumped liquid. Delivery port both flanged and threaded.

CONSTRUCTION FEATURES OF THE MOTOR

Available with single-phase asynchronous motor (MA / MNA versions) and three-phase motor (TNA versions). Rotor 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 integrated capacitor, available with float for automatic operation (MA version) with power up to 1,5 kW. In the three-phase motors the over-temperature sensor connection is responsibility of the user.

MATERIALS

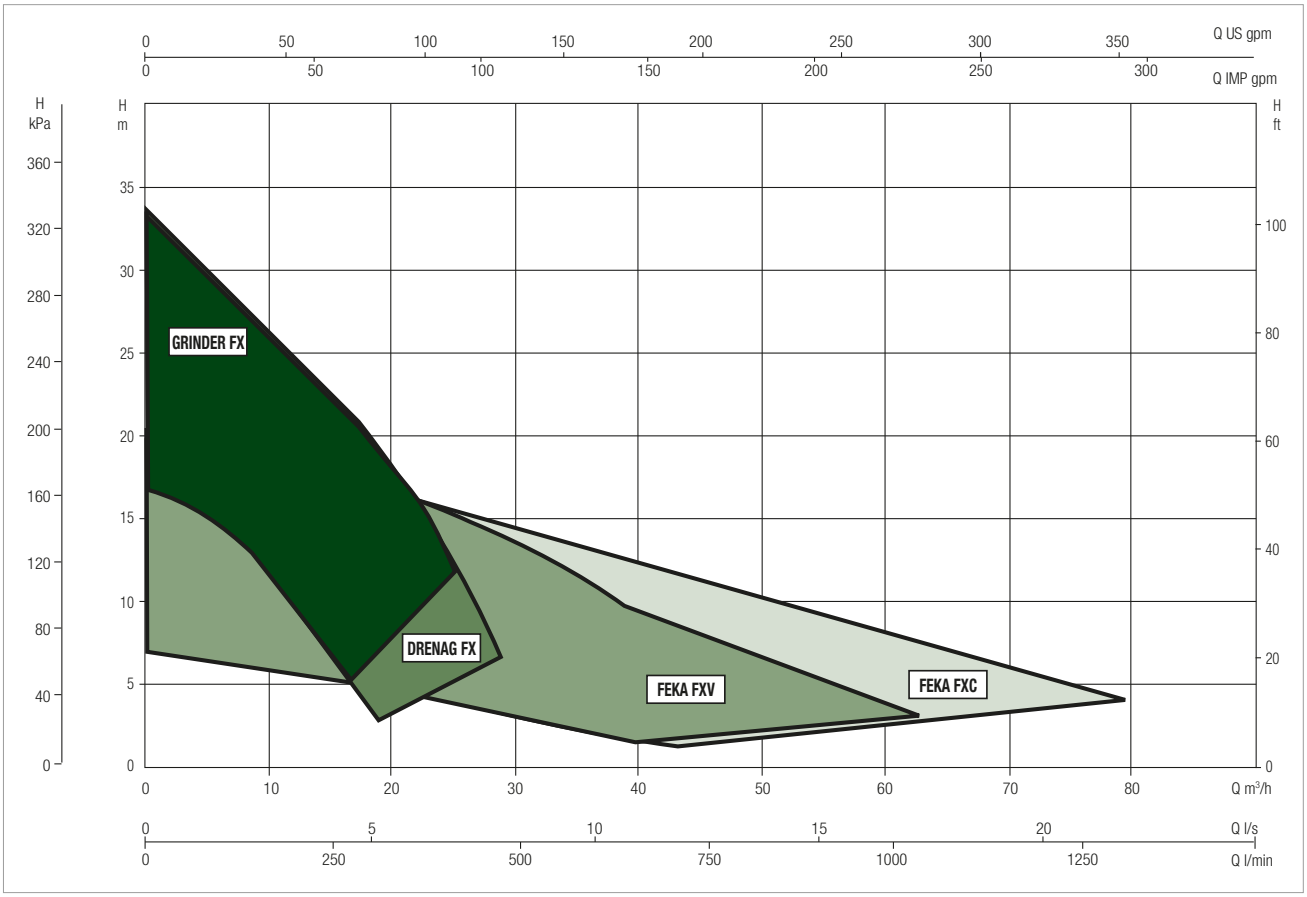
N°	PARTS	MATERIALS
1	HANDLE	CAST IRON EN GJL 200
2	ELECTRIC CABLE	07RN8-F
3	SCREWS	STAINLESS STEEL AISI 304
4	OR	NBR
5	MECHANICAL SEAL PUMP SIDE	SiC-SiC/SiC-C
	MECHANICAL SEAL MOTOR SIDE	SiC/CARBON
6	MOTOR SHAFT	STAINLESS STEEL AISI 304 (P2>1.5kW) AISI 431 (P2<1.2kW)
7	PUMP BODY / MOTOR	CAST IRON GJL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



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm^2/s and density equal to 1000 kg/m^3. Curve tolerance according to ISO9906.

GRAPHIC SELECTION TABLE

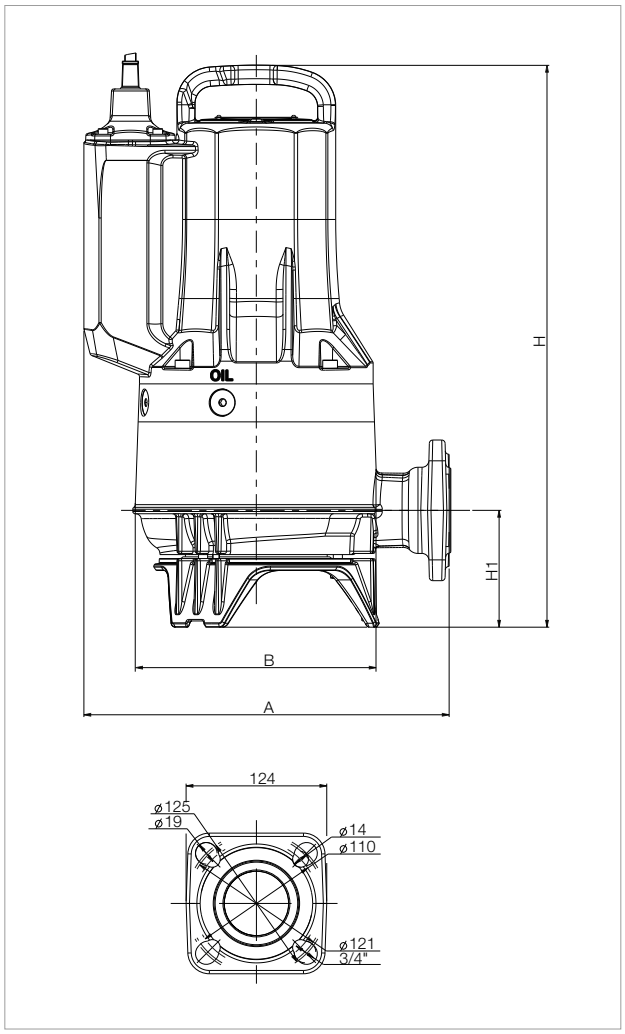


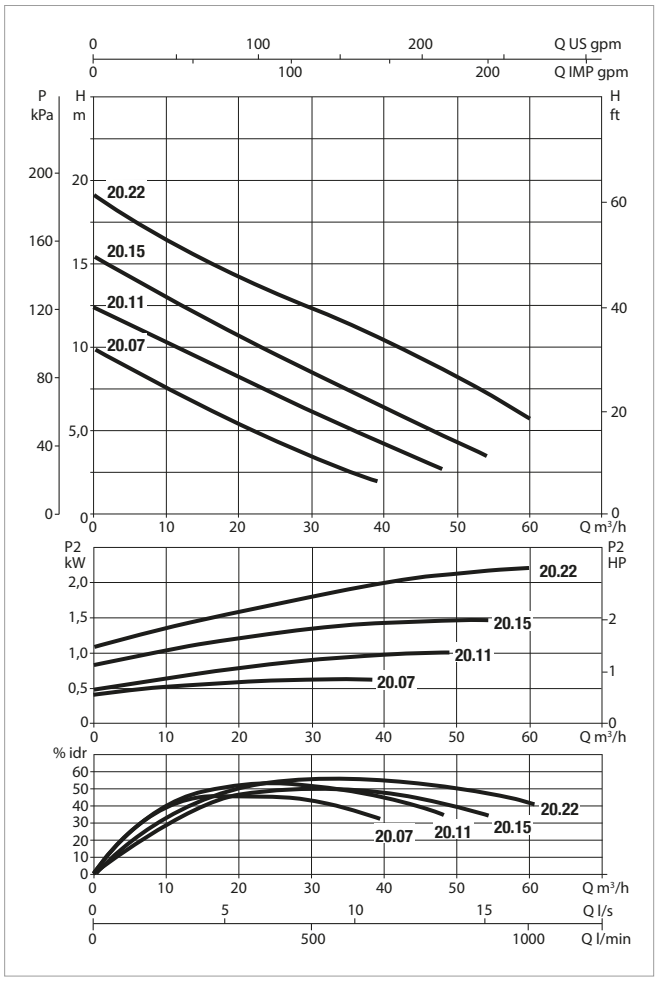
SELECTION TABLE FEKA FXC 20 - 25

MODEL	Q=m³/h	0	7	14	22	29	36	43	50	58	65
	Q=l/min	0	120	240	360	480	600	720	840	960	1080
FEKA FXC 20.07	H (m)	9,8	8,3	6,7	5,1	3,6	2,4				
FEKA FXC 20.11		12,4	10,8	9,3	7,8	6,4	5,0	3,6			
FEKA FXC 20.15		15,3	13,5	11,8	10,2	8,7	7,1	5,7	4,2		
FEKA FXC 20.22		19,1	17,2	15,5	14,0	12,6	11,2	9,8	8,1	6,2	
FEKA FXC 25.07		9,4	7,8	6,2	4,6	3,3	2,2	1,4			
FEKA FXC 25.11		11,9	10,3	8,8	7,4	6,0	4,8	3,5	2,4		
FEKA FXC 25.15		15,1	13,5	11,8	10,3	8,8	7,3	5,8	4,5	3,1	
FEKA FXC 25.22		18,9	16,9	15,2	13,8	12,4	11,1	9,8	8,4	6,9	5,1

FEKA FXC 20 - 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 mm^2/s and density equal to 1000 kg/m^3. 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				
FEKA FXC 20.07 MA	1x230V	0,9	0,7	0,9	4,1	15	20	2870
FEKA FXC 20.07 MNA*	1x230V	0,9	0,7	0,9	4,1	15	-	2870
FEKA FXC 20.07 TNA*	3x400V	0,9	0,7	0,9	1,8	22	-	2870
FEKA FXC 20.11 MA	1x230V	1,4	1	1,3	6,3	29	25	2870
FEKA FXC 20.11 MNA*	1x230V	1,4	1	1,3	6,3	29	-	2870
FEKA FXC 20.11 TNA*	3x400V	1,3	1	1,3	2,6	19	-	2870
FEKA FXC 20.15 MA	1x230V	2	1,5	2,0	9,1	36	40	2870
FEKA FXC 20.15 MNA*	1x230V	2	1,5	2,0	9,1	36	-	2870
FEKA FXC 20.15 TNA*	3x400V	1,8	1,5	2,0	3,5	25	-	2870
FEKA FXC 20.22 TNA*	3x400V	2,8	2,2	2,9	4,9	35	-	2870

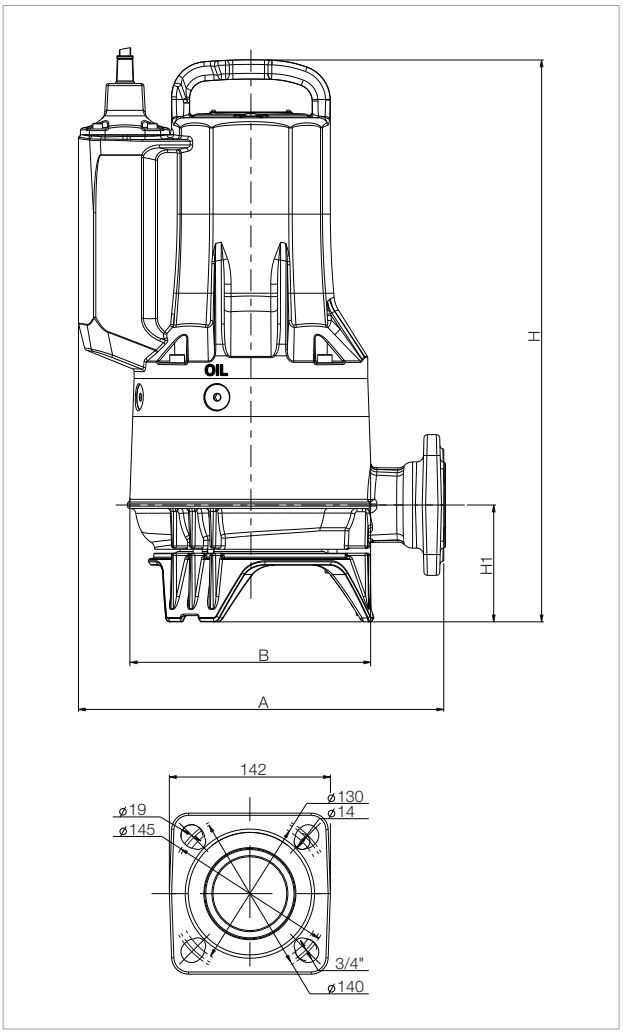
*Available in Ex version

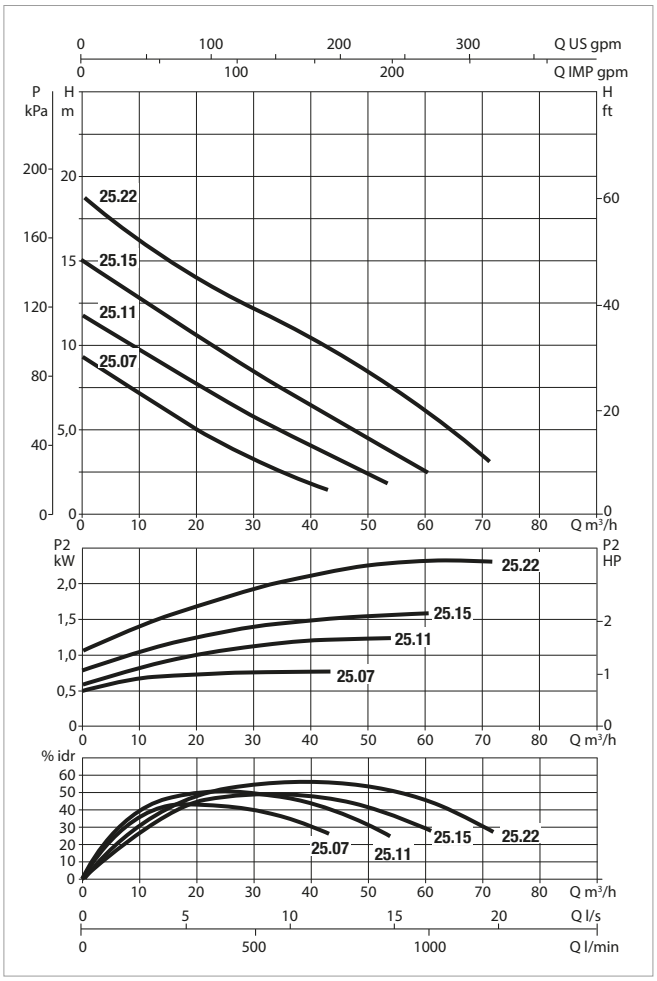
MODEL	FREE PASSAGE	A	B	H		H1	DELIVERY				PACKING DIMENSIONS			WEIGHT Kg
					Ex		GAS	DN1	HOLES	D	L/A	L/B	H	
FEKA FXC 20.07*	50	322	210	468	468	103	Rp 2"	50 PN10/6	4	125-110	660	370	400	37
FEKA FXC 20.11*	50	322	210	468	487	103	Rp 2"	50 PN10/6	4	125-110	660	370	400	37
FEKA FXC 20.15*	50	322	218	468	496	103	Rp 2"	50 PN10/6	4	125-110	660	370	400	42
FEKA FXC 20.22 *	50	322	218	496	512	103	Rp 2"	50 PN10/6	4	125-110	660	370	400	43

*Available in Ex version

FEKA FXC 25 - 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				
FEKA FXC 25.07 MA	1x230V	0,9	0,6	0,8	4,1	15	20	2870
FEKA FXC 25.07 MNA*	1x230V	0,9	0,6	0,8	4,1	15	-	2870
FEKA FXC 25.07 TNA*	3x400V	0,9	0,6	0,8	1,8	22	-	2870
FEKA FXC 25.11 MA	1x230V	1,4	1,1	1,5	6,4	29	25	2870
FEKA FXC 25.11 MNA*	1x230V	1,4	1,1	1,5	6,4	29	-	2870
FEKA FXC 25.11 TNA*	3x400V	1,4	1,1	1,5	2,6	19	-	2870
FEKA FXC 25.15 MA	1x230V	2	1,6	2,1	9,3	36	40	2870
FEKA FXC 25.15 MNA*	1x230V	2	1,6	2,1	9,3	36	-	2870
FEKA FXC 25.15 TNA*	3x400V	1,9	1,6	2,1	3,6	25	-	2870
FEKA FXC 25.22 TNA*	3x400V	2,9	2,3	3,1	5	35	-	2870

*Available in Ex version

MODEL	FREE PASSAGE	A	B	H		H1	DELIVERY				PACKING DIMENSIONS			WEIGHT Kg
					Ex		GAS	DN1	HOLES	D	L/A	L/B	H	
FEKA FXC 25.07 MA	50	322	210	478	-	103	-	65 PN10/6	4	145-130	660	370	400	37
FEKA FXC 25.07 MNA - TNA*	50	322	210	468	468	103	-	65 PN10/6	4	145-130	660	370	400	37
FEKA FXC 25.11*	50	322	210	468	486	103	-	65 PN10/6	4	145-130	660	370	400	38
FEKA FXC 25.15*	50	322	218	478	496	103	-	65 PN10/6	4	145-130	660	370	400	43
FEKA FXC 25.22 *	50	322	218	496	512	103	-	65 PN10/6	4	145-130	660	370	400	44

*Available in Ex version

GRINDER FX

SUBMERSIBLE PUMPS



TECHNICAL DATA

Flow rate minimum and maximum: 23,8 m^3/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 threated: 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

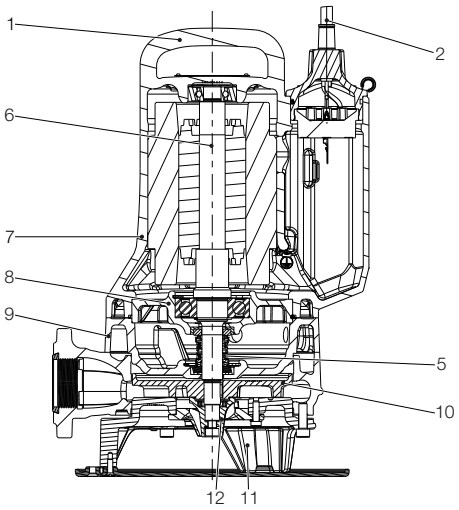
Pump body and impeller in cast iron, shredder in AISI 630. Motor shaft in AISI 304 stainless steel. Double mechanical seal in SiC-SiC/SiC-C in oil chamber not in contact with the pumped liquid, independent of the direction of rotation. Delivery port both flanged and threaded.

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

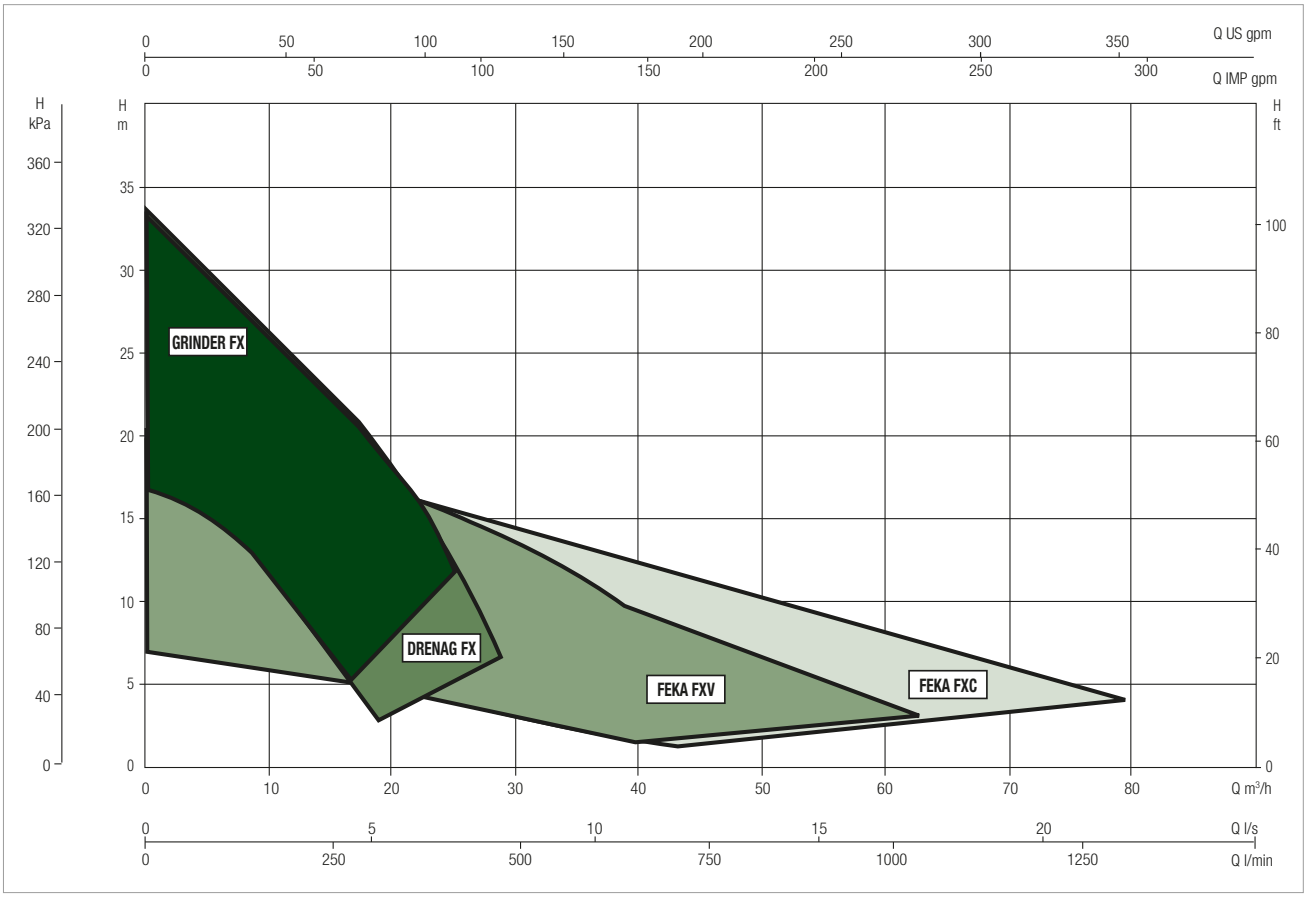
N°	PARTS	MATERIALS
1	HANDLE	CAST IRON EN GJL 200
2	ELECTRIC CABLE	07RN8-F
3	SCREWS	STAINLESS STEEL AISI 304
4	OR	NBR
5	MECHANICAL SEAL PUMP SIDE	SiC-SiC/SiC-C
	MECHANICAL SEAL MOTOR SIDE	SiC/CARBON
6	MOTOR SHAFT	STAINLESS STEEL AISI 304 (P2>1.5kW) AISI 431 (P2<1.2kW)
7	PUMP BODY / MOTOR	CAST IRON EN GJL 200
8	BEARING INNER FLANGE	ALLUMINIUM ALLOY EN AC 46100
9	FLANGE	CAST IRON EN GJL 200
10	IMPELLER	CAST IRON EN GJL 250
11	BASE	CAST IRON EN GJL 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^2/s and density equal to 1000 kg/m^3. Curve tolerance according to ISO9906.

GRAPHIC SELECTION TABLE

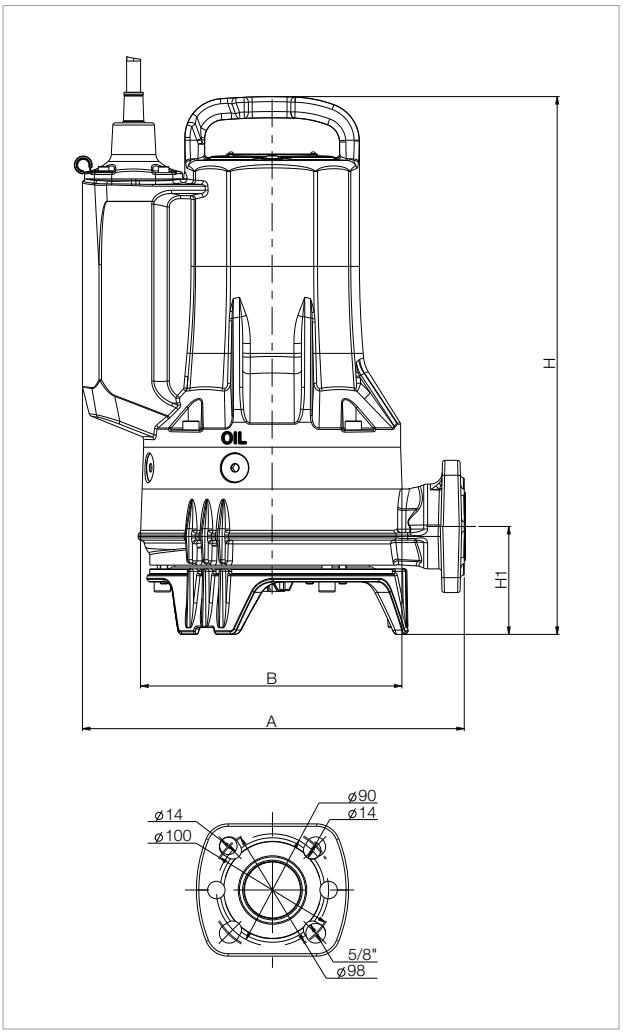


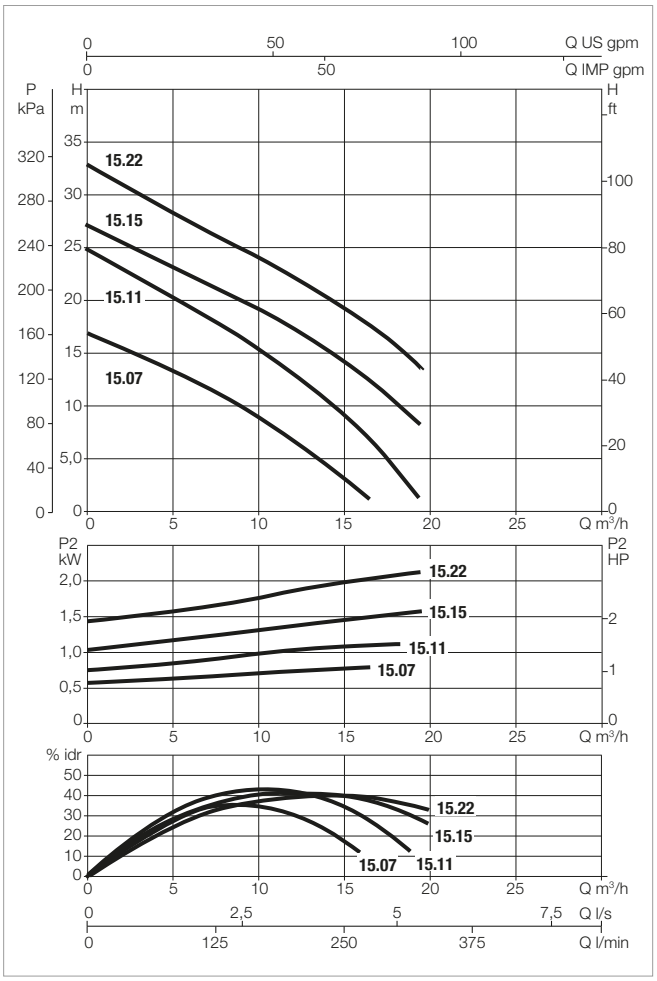
SELECTION TABLE GRINDER FX 15

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
GRINDER FX 15.07	H (m)	16,9	15,2	13,4	11,4	9,2	6,7	3,9		
GRINDER FX 15.11		24,9	22,6	20,5	18,3	15,9	13,2	10,1	6,3	1,8
GRINDER FX 15.15		27,3	25,2	23,3	21,4	19,5	17,3	14,8	11,9	8,5
GRINDER FX 15.22		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
					Ex		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



TECHNICAL DATA

Flow rate minimum and maximum: 28,5 m^3/h
Head up to: 33 m
Immersion dept (maximum): 20 m
Type of pumped liquid: drainage water
Free passage: 10 mm
Supported liquid temperature (maximum and minimum): + 50°C (+ 60°C for short period)
Flanged and threated: from 1"½, DN32, DN40
Impeller type: Open
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 (other lengths on request)
Possible type of installation: mobile when on the ground, fixed with coupling
Certification: EN 12050-2 \ ATEX
Special versions on request: different cable lengths, different voltages and frequencies

Drenag FX is a submersible pump for the drainage water, groundwater or rainwater in commercial building service; The pump is suitable for applications with high prevalence. The pump is certified according to the wastewater standard EN 12050-2. Suitable for fixed installations with a coupling device or mobile if placed directly on the bottom of the tank. It 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

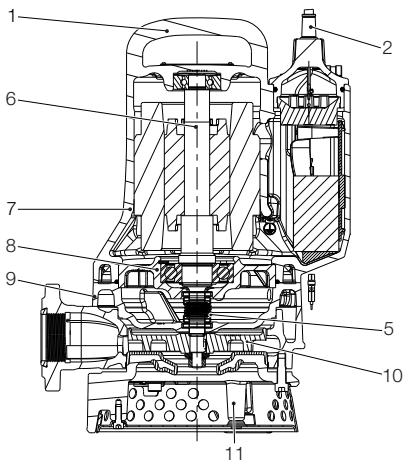
Open impeller and wear-resistant rubber disc for the use even in the presence of abrasive particles. Pump body and impeller in spheroidal cast iron. Motor shaft in AISI 304 stainless steel. Double mechanical seal in SiC-SiC/SiC-C in oil chamber not in contact with the pumped liquid. Delivery port both flanged and threaded.

CONSTRUCTION FEATURES OF THE MOTOR

Single-phase asynchronous motor (MA / MNA versions) and three-phase (TNA versions). Rotor 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. Cable glande with resin, 07RN8-F power cable with quick connection. Single-phase versions with integrated capacitor, available with float for automatic operation (MA version) with power up to 1,5 kW. In the three-phase motors the over-temperature sensor connection is responsibility of the user.

MATERIALS

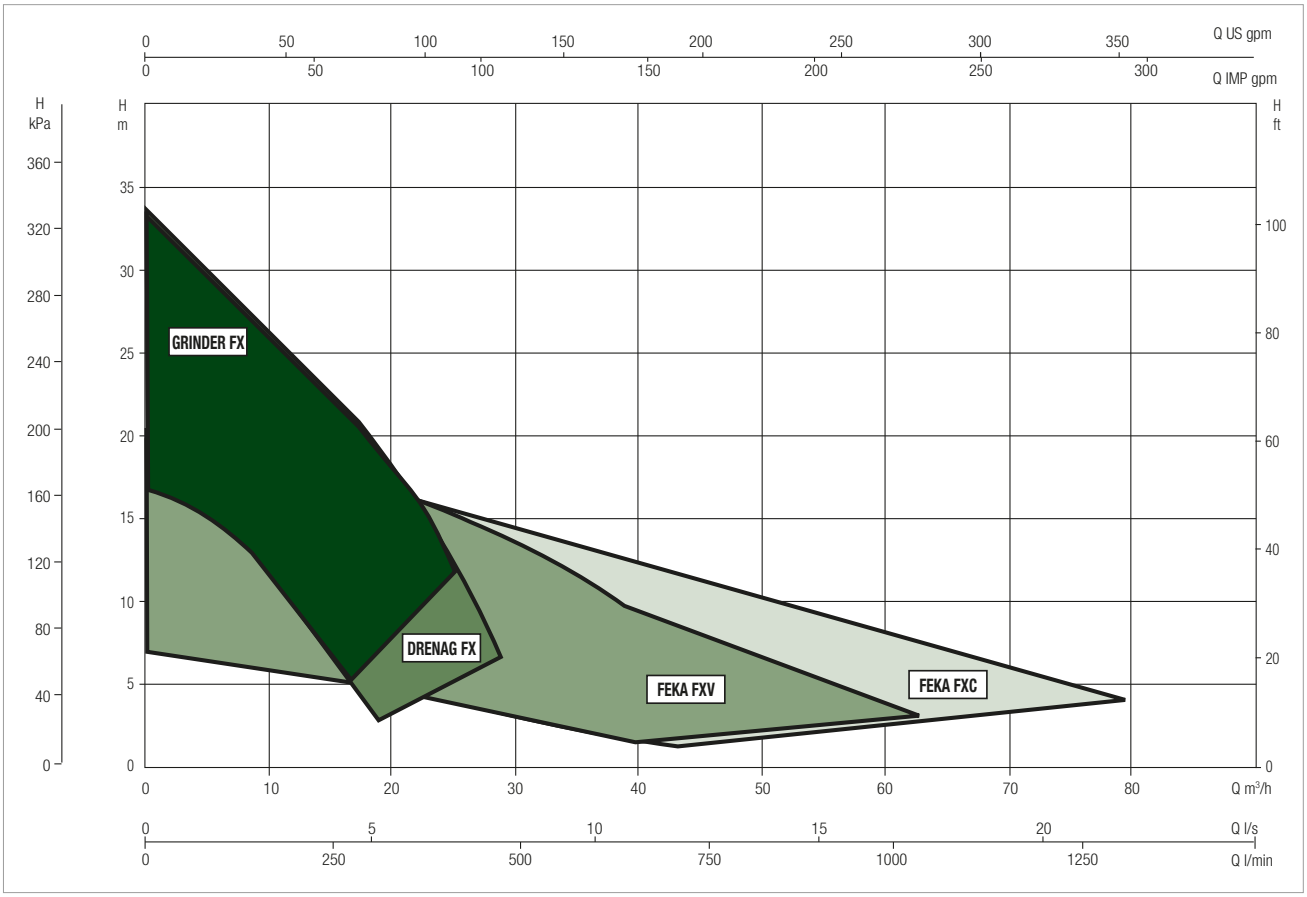
N°	PARTS	MATERIALS
1	HANDLE	CAST IRON EN GJL 200
2	ELECTRIC CABLE	07RN8-F
3	SCREWS	STAINLESS STEEL AISI 304
4	OR	NBR
5	MECHANICAL SEAL PUMP SIDE	SiC-SiC/SiC-C
	MECHANICAL SEAL MOTOR SIDE	SiC/CARBON
6	MOTOR SHAFT	STAINLESS STEEL AISI 304 (P2>1.5kW) AISI 431 (P2<1.2kW)
7	PUMP BODY / MOTOR	CAST IRON EN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



PERFORMANCE RANGE

The performance curves are based on kinematic viscosity values = 1 mm^2/s and density equal to 1000 kg/m^3. Curve tolerance according to ISO9906.

GRAPHIC SELECTION TABLE

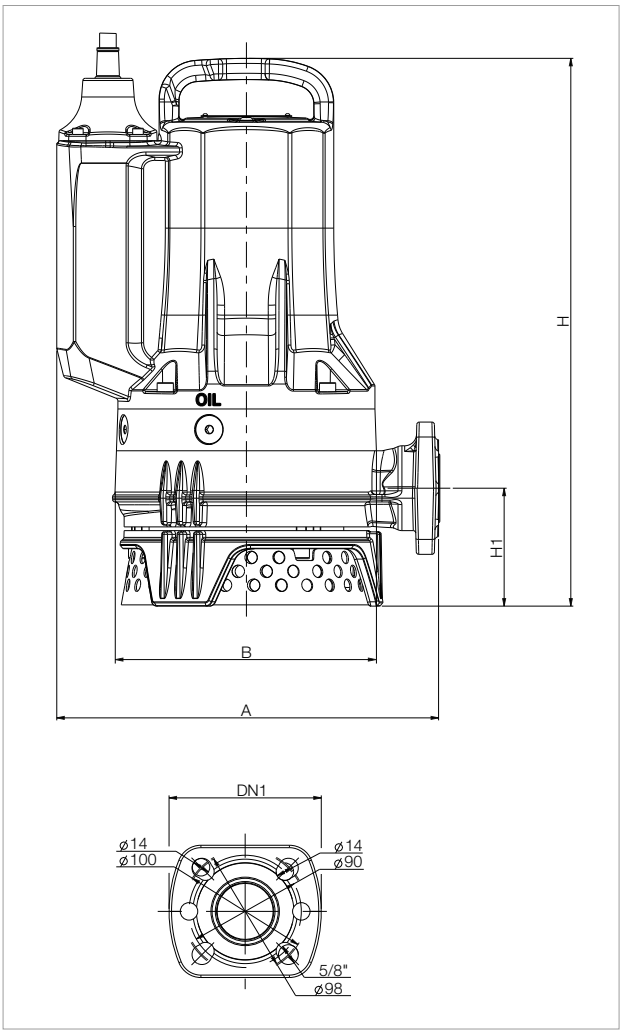


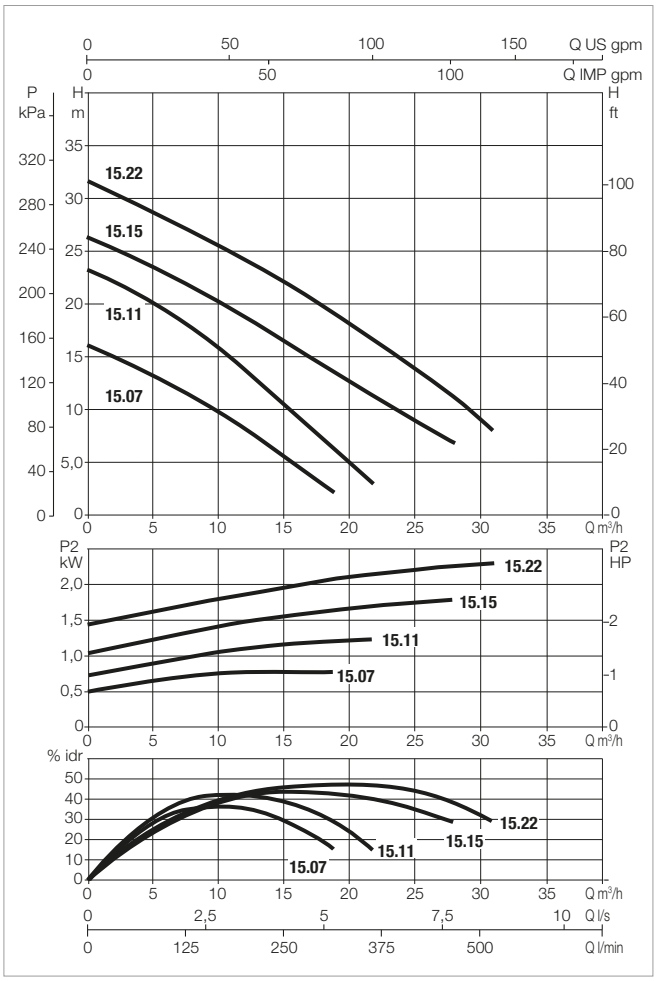
SELECTION TABLE DRENAG FX 15

MODEL	Q=m³/h	0	3	6	9	12	15	18	21	24	27	30
	Q=l/min	0	50	100	150	200	250	300	350	400	450	500
DRENAG FX 15.07	H (m)	16,2	14,5	12,6	10,5	8,1	5,5	2,8				
DRENAG FX 15.11		23,3	21,5	19,3	16,7	13,8	10,6	7,3	3,8			
DRENAG FX 15.15		26,4	24,9	23,1	21,1	18,9	16,6	14,2	11,8	9,5	7,4	
DRENAG FX 15.22		31,8	30,0	28,2	26,3	24,3	22,1	19,8	17,4	14,8	12,0	9,0

DRENAG 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				
DRENAG FX 15.07 MA	1x230V	1,1	0,8	1,1	5,1	29	25	2870
DRENAG FX 15.07 MNA*	1x230V	1,1	0,8	1,1	5,1	29	25	2870
DRENAG FX 15.07 TNA*	3x400V	1	0,8	1,1	2,1	22	-	2870
DRENAG FX 15.11 MA	1x230V	1,5	1,2	1,6	6,8	29	25	2870
DRENAG FX 15.11 MNA*	1x230V	1,5	1,2	1,6	6,8	29	25	2870
DRENAG FX 15.11 TNA*	3x400V	1,5	1,2	1,6	2,8	19	-	2870
DRENAG FX 15.15 MA	1x230V	2,3	1,8	2,4	10,6	36	40	2870
DRENAG FX 15.15 MNA*	1x230V	2,3	1,8	2,4	10,6	36	40	2870
DRENAG FX 15.15 TNA*	3x400V	2,5	1,8	2,4	4,3	25	-	2870
DRENAG FX 15.22 TNA*	3x400V	3,1	2,3	3,1	5,2	35	-	2870

*Available in Ex version

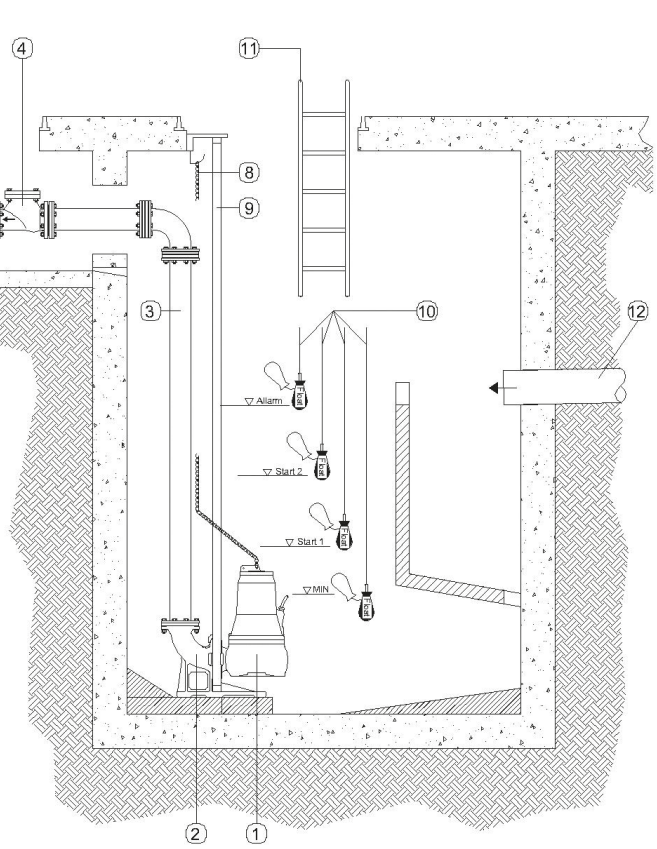
MODEL	FREE PASSAGE	A	B	H		H1	DELIVERY				PACKING DIMENSIONS			WEIGHT Kg
					Ex		GAS	DN1	HOLES	D	L/A	L/B	H	
DRENAG FX 15.07*	10	306	215	412	412	95	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	35
DRENAG FX 15.11*	10	306	215	412	430	95	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	35
DRENAG FX 15.15*	10	306	215	421	439	95	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	38
DRENAG FX 15.22*	10	306	215	439	456	95	Rp 1"1/2	DN32 PN10 / 6 DN40 PN6	4 2	100-90 90	660	370	400	39

*Available in Ex version

ACCESSORIES

CONTROL PANELS

PUMPING STATION ACCESSORIES



EXAMPLE OF INSTALLATION OF TWO SUBMERSIBLE ELECTRIC PUMPS

LEGEND:

1 Submersible electric pump
2 Coupling foot
3 Delivery pipework
4 Ball check valve
5 Gate valve
6 Electric control panel
7 Manifold
8 Pump extraction chain
9 Guide pipe
10 Level switches
11 Well inspection ladder
12 Adduction pipework

FLOATS	DESCRIPTION	
	FLOAT	5 meters
		10 meters
		15 meters
		20 meters
	BULB FLOAT	10 meters
		20 meters
	ATEX 10MT FLOAT	
	300 g COUNTERWEIGHT FOR FLOAT	

COUPLING UNIT	DESCRIPTION
	DA-050 HORIZONTAL COUPLING UNIT
	DA-065 HORIZONTAL COUPLING UNIT DN65

CLEVIS KIT	DESCRIPTION
	CLEVIS KIT WITH 5 METRE CHAIN MAX 150 KG
	CLEVIS KIT WITH 10 METRE CHAIN MAX 350 KG
	CLEVIS KIT WITH 10 METRE CHAIN MAX 700 KG

ADAPTORS	DESCRIPTION
	90° COMPACT CURVE 1" 1/2 GAS
	90° CURVE COMPACT 2" GAS
	FX ADAPTER - GRINDER COUPLING FOOT - FEKA2000
	FX ADAPTER - GRINDER COUPLING FOOT - FEKA1400/1800

KIT FLANGE	DESCRIPTION
	KIT FLANGE DN 65 PN 16 UNI 2254

BALL CHECK VALVES	DESCRIPTION
	BALL CHECK VALVE PN10 PVC 1 1" ¼ THREADED
	BALL CHECK VALVE PN10 PVC 1 1" ½ THREADED
	BALL CHECK VALVE PN10 PVC 2" THREADED
	BALL CHECK VALVE PN10 PVC 2"1/2 PN6 THREADED
	BALL CHECK VALVE PN10 PVC 3" PN6 THREADED
	BALL CHECK VALVE 1" ¼ THREADED
	BALL CHECK VALVE 1" ½ THREADED
	BALL CHECK VALVE 2" THREADED
	BALL CHECK VALVE 2" ½ THREADED
	BALL CHECK VALVE DN50
	BALL CHECK VALVE DN65
	BALL CHECK VALVE DN 80

GATE VALVES	DESCRIPTION
	DN 50 FLAT BODY GATE VALVES
	DN 65 FLAT BODY GATE VALVES
	DN 80 FLAT BODY GATE VALVES

PANEL CONTROL AND ALARMS	DESCRIPTION
	CONTROL AS 1 - WITH ALARM DEVICE
	ACOUSTIC ALARM - 230 V - 50 HZ
	ACOUSTIC ALARM - 24 V - 50 HZ
	FLASHING ORANGE 230V

TRANSDUCERS	DESCRIPTION
	0-5 M - 20 M LEVEL TRANDUCERS E.BOX PANEL CABLE

ELECTRIC PROTECTION AND CONTROL PANELS

E.BOX



TECHNICAL DATA

Nominal power input voltage:
e.box plus 1x 230 V / 3 x 230 V - 3 x 400 V (automatic selection)
e.box basic 1x 230 V
Frequency: 50 - 60 Hz
Maximum power of use:
e.box plus 5,5 kW + 5,5 kW
e.box basic 2,2 kW + 2,2 kW
Maximum current of use: 12 A + 12 A
Starting capacitor: supplied as accessory KIT
Ambient temperature operation limits: -10° C + 40° C
Air relative humidity: 90% a 20° C
Max. altitude: 1000 s.l.m.
Protection class: IP 55
Display: 1.6" for e.box PLUS D and e.box BASIC D models
Standard of reference for the construction of the control panels EN 60335-1

APPLICATIONS

E.box is an electronic control panel that provides all the functions and protections required for the installation of a pumping set for draining, filling, and pressurisation purposes.

E.BOX PLUS is an electric control panel for automatic protection and operation of one or more submersible electric pumps or pressure booster pumps, both single and three phase, for domestic, civil, and industrial applications. Thanks to the current regulation possibility, the e.box control panel is compatible with all pump models with current between 1 and 12 A, with power up to 5,5 kW.

E.BOX BASIC is an electric control panel for automatic protection and operation of one or more single phase submersible electric pumps or pressure booster pumps for domestic applications. The e.box control panel is compatible with all single phase pump models with current between 1 and 12 A, with power up to 2,2 kW, as indicated in the product compatibility table.

CONTROL PANEL CONSTRUCTION

Supplied in an IP 55 protection class self-extinguishing thermoplastic material box, the control panel protects the electric pumps from abnormal conditions such as: overload and overtemperature (with automatic reset), short circuit (with fuses - Plus model only), pump current surges (amperometric protection), abnormal voltage, dry run, quick starts, pressure sensor fault, or inconsistency of the external protection commands.

FRONT PANEL COMPONENTS

- General disconnector with padlockable door lock.
- AUT-0-MAN operation selection pushbuttons.
- Alarm RESET pushbutton.
- Operation, stop, alarm notification lamps.
- Display, for PLUS D or BASIC D models.

PANEL INTERNAL COMPONENTS

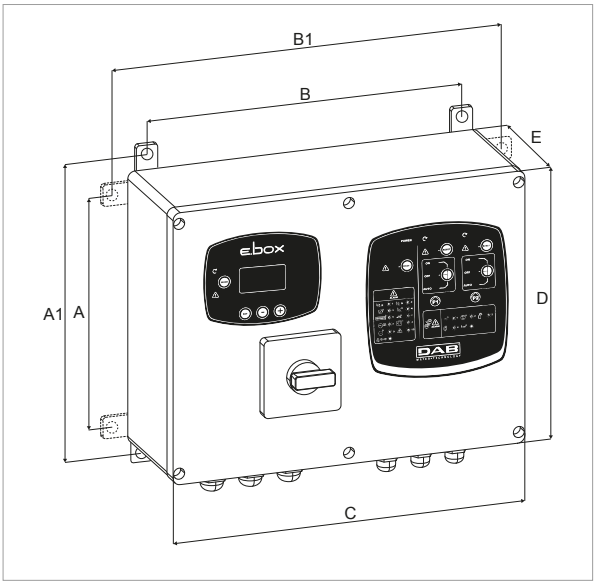
- Electronic control card with protection fuses and contactors.
- Power input connection terminals, single phase (L-N in the Basic version), or three phase (L1-L2-L3 in the Plus version).
- Electric pump connection terminals, single phase (L-N in the BASIC version), or three phase (L1-L2-L3 in the PLUS version).
- Terminals for the connection of pressure switches, sensors, KK thermal protection, alarm notification N.O. contacts. Operation selection dip switch: level floats or sensor, tank filling and emptying, operation with one or two pumps also for the version with display.

SOFTWARE

For the models with display, the software
- During the first installation, provides step by step guidance in the selection of the correct settings based on the actual application.
- Makes the status of the control panel and the pumps clearly and immediately visible.
- When compared to the previous model, makes it easier to change the level settings, as operation of the control panel dip switch is no longer required.

ELECTRIC PROTECTION AND CONTROL PANELS

E.BOX



MODEL	A	A1	B	B1	C	D	E	PACKING DIMENSIONS			WEIGHT Kg
								L/A	L/B	H	
E.BOX BASIC 230/50-60	212	265	282	337	320	260	120	250	430	310	4
E.BOX PLUS 230-400V/50-60	212	265	282	337	320	260	120	250	430	310	5
E.BOX BASIC D 230/50-60	212	265	282	337	320	260	120	250	430	310	4
E.BOX PLUS D 230-400V/50-60	212	265	282	337	320	260	120	250	430	310	5

MODEL	ELECTRICAL DATA					
	POWER INPUT 50 HZ	STARTING	P2 NOMINAL		MAX CURRENT A	DISPLAY
			kW x2	HP x2		
E.BOX BASIC 230/50-60	1X230 V~	direct	2,2	3	12+12	
E.BOX PLUS 230-400V/50-60	1X230 V~	direct	2,2	3	12+12	
	3X230 V~		3	4		
	3X400 V~		5,5	7,5		
E.BOX BASIC D 230/50-60	1X230 V~	direct	2,2	3	12+12	•
E.BOX PLUS D 230-400V/50-60	1X230 V~	direct	2,2	3	12+12	•
	3X230 V~		3	4		
	3X400 V~		5,5	7,5		

ACCESSORIES

	FLOAT	5 meters cable
		10 meters cable
		15 meters cable
		20 meters cable
	BULB FLOAT	10 meters cable
		20 meters cable
	0-5 m - 20 m LEVEL TRANSDUCER E.BOX PANEL CABLE	

	FLASHING ORANGE 230 V
	KIT CAPACITOR 40UF
	KIT CAPACITOR 30UF
	KIT CAPACITOR 20UF

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