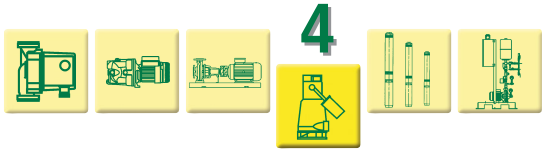
SUBMERSIBLE AND SUBMERGED PUMPS



DAB®

PUMP PERFORMANCE

DWT GROUP

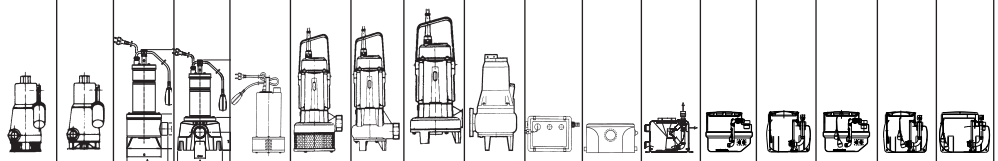
PUMPS • MOTORS • ELECTRONICS

TECHNICAL CATALOGUE SECTIONS:

CONTENTS

SUBMERSIBLE PUMPS

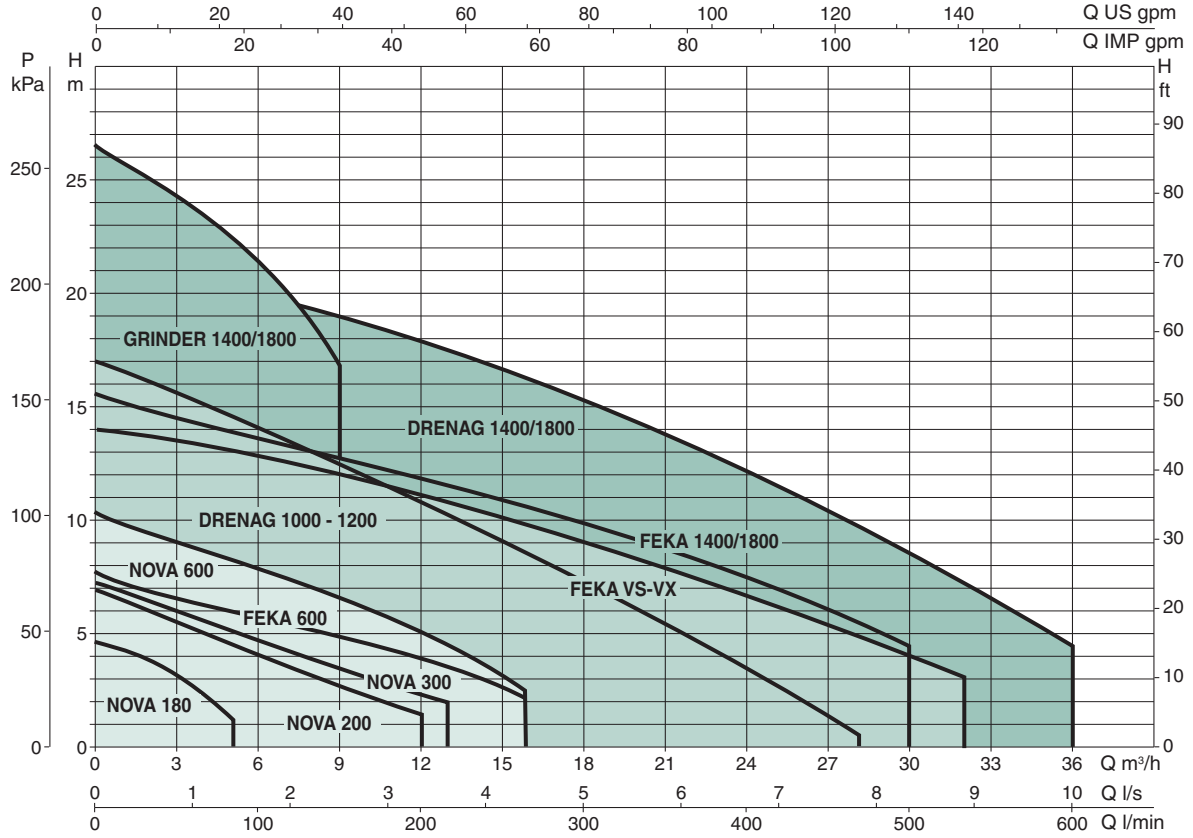
TABLE OF PERFORMANCE RANGES AND POSSIBLE APPLICATIONS

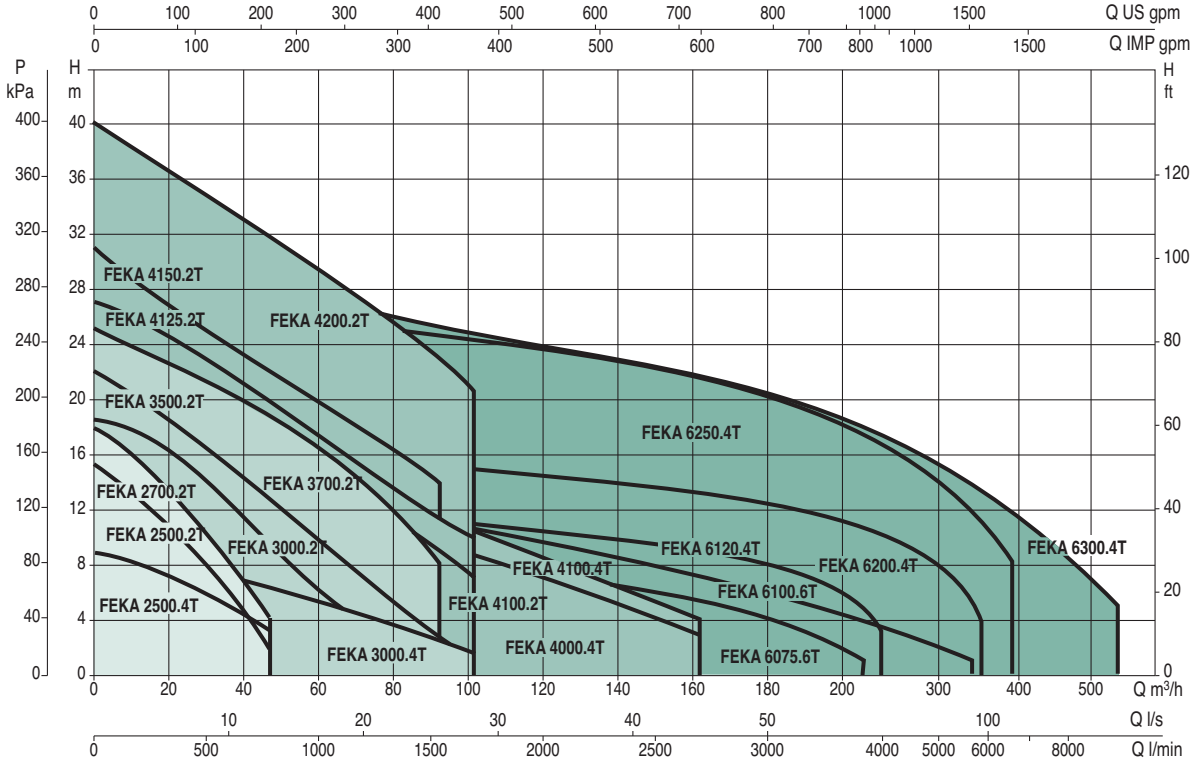
	NOVA	FEKA 600	FEKA VS	FEKA VX	DRENAG 1000-1200	DRENAG	FEKA	GRINDER	FEKA 2500/3000 4000/6000	NOVABOX 30/300	FEKALIFT	FEKABOX 100	FEKABOX 200	FEKABOX 280	FEKAFOS 200	FEKAFOS 280	FEKAFOS 550
																	
DNA connections										VARI	DN 28 DN 40	DN 50 DN 110	DN110	DN110	DN 110	DN110	DN110
DNM connections	1¼" G	1¼" G	2" F	2" F	1½" G	2" G	2" G	2" G	DN 65 DN 150	1¼" G	DN 25	2" G	2" G	2" G	2" G	2" G	2" G
Flow rate Q (m^3/h)	16	16	32	32	23	33	30	9	162	7,5	3,9	24	24	24	35	35	65
Head H (m)	10,2	7,4	14	14	17	21,5	15,5	26,5	40	6,9	6,9	9	9	9	9	26,5	26,5
Temperature t (°C)	+50	+50	+50	+50	+50	+55	+55	+55	+55	+50	+60	+50	+50	+50	+50	+55	+55
Ground-water	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●
Rain water	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●
Clean waste water	●	●	●	●	●	●	●		●	●		●	●	●	●	●	●
Dirty waste water		●	●	●			●	●	●		●	●	●	●	●	●	●
Fountain water			●	●	●	●											
River or lake water			●	●	●	●	●		●			●	●	●	●	●	●
Sandy water			●	●	●	●											
A Sewage containing, solids and long fibres									●					●		●	●

PERFORMANCE RANGE

SELECTION TABLE

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





PERFORMANCE RANGE

SELECTION TABLE

MODEL		P2 NOMINAL		Q																		
				m³/h	0	1	2	3	4,5	5	6	7	7,5	9	10	12	15	18	24	30	36
SINGLE-PHASE	THREE-PHASE	kW	HP	l/min	0	16,6	33,3	50	75	83,3	100	116,6	125	150	166,6	200	250	300	400	500	600
NOVA 180 M-A *	–	0,22	0,3		4,8	4,3	3,8	3	1,6												
NOVA 180 M-NA *	–	0,22	0,3		4,8	4,3	3,8	3	1,6												
NOVA 200 M-NA *	–	0,22	0,3		6,6	6,2	5,8	5,2	4,6	4,4	4	3,4	3,2	2,6	2,2						
NOVA 300 M-A *	–	0,22	0,3		6,8	6,4	6	5,6	5,1	4,9	4,6	4,2	4	3,4	3	2,2					
NOVA 600 M-A *	–	0,55	0,75		10,2	9,7	9,3	8,9	8,3	8,1	7,8	7,4	7,2	6,6	6,1	5	3,1				
NOVA 600 M-NA *	NOVA 600 T-NA *	0,55	0,75		10,2	9,7	9,3	8,9	8,3	8,1	7,8	7,4	7,2	6,6	6,1	5	3,1				
FEKA 600 M-A *	–	0,55	0,75		7,45	7,1	6,75	6,45	6,1	5,95	5,7	5,45	5,35	4,95	4,7	4,1	2,8				
FEKA 600 M-NA *	FEKA 600 T-NA *	0,55	0,75		7,45	7,1	6,75	6,45	6,1	5,95	5,7	5,45	5,35	4,95	4,7	4,1	2,8				
FEKA VS-VX 550 M-A	–	0,55	0,75	H (m)	7,4			6,9			6,2					4,1		1,8			
FEKA VS-VX 550 M-NA	FEKA VS-VX 550 T-NA	0,55	0,75		7,4			6,9			6,2					4,1		1,8			
FEKA VS-VX 750 M-A	–	0,75	1		9,6			9,2			8,5					6,7		4,3	1,9		
FEKA VS-VX 750 M-NA	FEKA VS-VX 750 T-NA	0,75	1		9,6			9,2			8,5					6,7		4,3	1,9		
FEKA VS-VX 1000 M-A	–	1,00	1,36		11,8			11,3			10,5					9,0		6,8	4,1		
FEKA VS-VX 1000 M-NA	FEKA VS-VX 1000 T-NA	1,00	1,36		11,8			11,3			10,5					9,0		6,8	4,1		
FEKA VS-VX 1200 M-A	–	1,20	1,60		14			13,4			12,8					11,2		9,0	6,7		
FEKA VS-VX 1200 M-NA	FEKA VS-VX 1200 T-NA	1,20	1,60		14			13,4			12,8					11,2		9,0	6,7		
DRENAG 1000 M-A/M-NA	DRENAG 1000 T-NA	1	1,36		15,3			13,7	13,2	13	12,1	11,5	11,2	10,5	10	8,7	6,8	4,7			
DRENAG 1200 M-A/M-NA	DRENAG 1200 T-NA	1,2	1,6		17			15,4	14,7	14,5	13,8	13,4	13	12,4	11,8	10,7	9	7,3	3,3		
DRENAG 1400 M	–	1,1	1,5		19,2						17	16,5	16,3	15,9	15,6	14,6	13,5	12,1	9	5,5	
–	DRENAG 1800 T	1,5	2		21,5						20	19,8	19,6	19	18,9	18	16,5	15,2	12	8,5	4,5
FEKA 1400 M	–	1,1	1,5		13,9						12	11,6	11,4	11	10,8	9,9	8,9	7,8	5,7	3,4	
–	FEKA 1800 T	1,5	2		15,5						13,7	13,3	13,1	12,8	12	11,8	10,7	9,7	7,3	4,5	
GRINDER 1400 M	–	1,1	1,5		24,5	23,8	22,8	22,3	20,8	20,6	19	17,4	16,8	14,1	13						
–	GRINDER 1800 T	1,52	26,5		25,3			25	24	22,9	22,3	21,6	20,3	19,9	17	16					

* Available also with special stainless steel motor shaft version (SV).

MODEL	P2 NOMINAL		Q																												
			m³/h	0	3	6	12	18	24	36	48	60	72	84	96	102	120	138	150	162	180	210	240	270	300	360	420	516			
	kW	HP	l/min	0	50	100	200	300	400	600	800	1000	1200	1400	1600	1700	2000	2300	2500	2700	3000	3500	4000	4500	5000	6000	7000	8800			
FEKA 2500.4 T	1,8	2,5		9	8,85	8,75	8,4	17,8	7,2	5,4	2																				
FEKA 2500.2 T	1,8	2,5		15,5	15,3	14,9	13,6	11,9	10	5,9	3																				
FEKA 2700.2 T	2,2	3		18	17,6	17	15,6	14	12,2	8,3																					
FEKA 3000.4 T	3,7	5		9,5			8,9	8,5	8,2	7,4	6,5	5,6	4,6	3,6	2,4	1,8															
FEKA 3000.2 T	3,7	5		18,7			17,5	16,6	15,4	12,6	9,5	6,4	4																		
FEKA 3500.2 T	4,4	6		22,3			20,4	19,1	17,9	15,2	12,8	10	7,5	5	2,5																
FEKA 3700.2 T	5,5	7,5		25		24,1	23,4	22,6	21,9	20,2	18,5	16,5	14	10,8																	
FEKA 4000.4 T	6	8		15,3					14,3	13,7	12,9	12	11,2	10,3	9,3	8,8	7,1	5,5	4,3	3											
FEKA 4100.4 T	7,5	10		17					16	15,2	14,7	13,8	12,8	11,8	10,6	10	8,3	6,5	5,2	4											
FEKA 4100.2 T	7,5	10		24					20,4	18,2	16,1	14,3	12,3	10,2	8,4	7,6															
FEKA 4125.2 T	9,2	12,5	H (m)	27			25,3	24,3	23,5	21,3	19,5	17,3	15,3	13,5	11,8	10,9															
FEKA 4150.2 T	11	15		31		29,3	28	26,8	25,8	23,8	22	20	18,2	16																	
FEKA 4200.2 T	15	20		40			38,5	37,8	36,6	34,3	32	29,8	27,6	25	22	20,6															
FEKA 6075.6 T	5,5	7,5		13						9,5	9,0	8,8	8,2	7,8	7,6	7,4	7,1	6,4	6,0	5,2	4,8	2,2									
FEKA 6100.6 T	7,5	10		15						13,5	13,0	12,8	11,8	11,2	10,4	10,2	9,5	8,2	7,8	6,8	6,5	5,0	3,5	2,5	1,2						
FEKA 6120.6 T	8,8	12		14						12,5	11,8	12,5	11,2	10,8	10,4	10,2	10,0	9,4	8,8	8,4	8,1	6,9	5,0	3,2							
FEKA 6150.6 T	11	15		17						15,8	15,2	15,2	14,2	13,8	13,6	13,4	12,4	11,8	11,2	10,4	10,0	8,7	7,7	5,8	4,8						
FEKA 6200.4 T	15	20		20						17,5	16,8	16,5	15,2	14,8	14,4	14,2	13,5	12,8	12,4	11,8	11,0	10,7	9,5	8,0							
FEKA 6250.4 T	18,5	25		31						28,0	27,0	26,5	25,4	24,6	24,0	23,8	23,0	21,6	20,6	20,0	20,0	18,5	16,5	15,0	12,5	10,5					
FEKA 6300.4 T	22	30		34,3						29,8	28,2	27,9	26,2	25,0	24,0	23,8	23,0	21,6	20,6	20,0	19,5	18,0	17,1	16,0	15,0	12,3	10,0	4,8			

NOVA - FEKA

SUBMERSIBLE PUMPS
FOR DRAINAGE AND WASTE WATER
FOR DOMESTIC USE

CE

GENERAL DATA

Applications

The submersible pump from the NOVA series is designed mainly for automatically operated fixed applications in domestic use, draining basements and garages which are subject to flooding.
Thanks to its compact, easy to handle form, it may also be used as a portable pump for emergencies such as lifting water from tanks or rivers, emptying swimming pools, fountains, excavations and underpasses. It is also ideal for gardening and hobbies in general.
The submersible pump from the FEKA series has been designed for lifting sewage from cesspools and is capable of draining suspended solids with dimensions up to 25 mm.
The level switch allows fixed installation and guarantees automatic pump operation.
Available also with special stainless steel motor shaft version (SV).

Constructional features of the pump

Water-resistant technopolymer pump body, impeller, top body and suction grid.
Stainless steel motor, rotor shaft and screws.
Triple O-ring seals interposed with oil chamber.

Constructional features of the motor

Continuous duty submersible induction motor. Stator fitted in an airtight stainless steel casing covered by a top body which contains the cabling, microswitch and capacitor. Rotor mounted on oversized greased sealed-for-life ball bearings to ensure silent running and long life. Built-in thermal and current overload protection and a capacitor permanently in circuit in the single-phase version. Three-phase motors should be protected with a suitable overload protection complying with the regulations in force.
Manufactured according to CEI 2-3 and CEI 61-69 standards (EN 60335-2-41).
Motor protection: IP68
Insulation class: F
Standard voltage: single-phase 220-240 V/50 Hz
three-phase 400 V/50 Hz
Standard cables for the single-phase version:

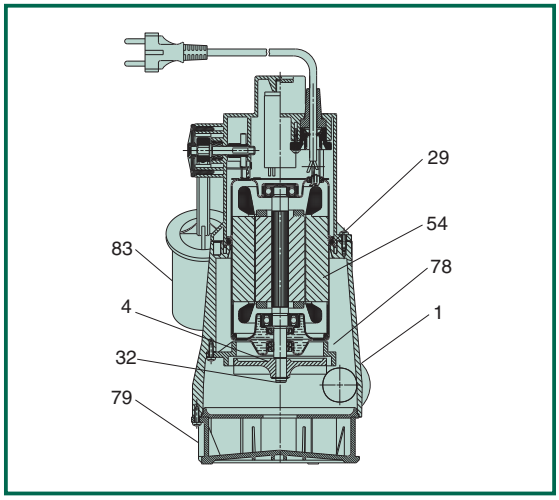
5 metres H05 RN-F	NOVA 180	M-A	-	NOVA 300	M-A
	NOVA 600	M-A	-	FEKA 600	M-A
10 metres H05 RN-F	NOVA 180	M-NA	-	NOVA 200	M-NA
10 metres H07 RN-F	NOVA 600	M-NA	-	FEKA 600	M-NA

Standard plug for the single-phase version: SCHUKO CEE 7 - VII - UNEL 47166-68
Standard cables for the three-phase version: 5 metres H07 RN-F

TECHNICAL DATA

N.	PARTS*		MATERIALS
1	PUMP BODY		TECHNOPOLYMER
4	IMPELLER		TECHNOPOLYMER
29	OR GASKET		NBR
32	STOP RING		12E - UNI 7435 STAINLESS
54	MOTOR:	TOP BODY	STAINLESS STEEL AISI 304 X5 CrNi 1810 - UNI 6900/71
		ROTOR SHAFT	STAINLESS STEEL AISI 416 X12 CrS13 - UNI 6900/71
			FOR SV SHAFT VERSION STAINLESS STEEL AISI 431
78	PRESSURE DISC (FOR NOVA)		TECHNOPOLYMER
79	SUCTION GRID		TECHNOPOLYMER
83	FLOAT		TECHNOPOLYMER

* In contact with the liquid

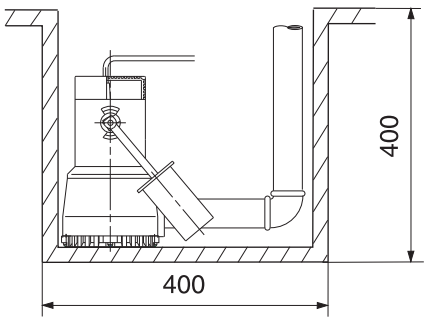


- Operating range: from 1 to 16 m³/h with head up to 10,2 metres
- Liquid quality requirements: NOVA cloudy water without fibres
  FEKA sewage from cesspools
- Free passage of solids through the suction grid:
  NOVA 180 - NOVA 200 5 mm
  NOVA 300 - NOVA 600 10 mm
  FEKA 600 25 mm
- Minimum draught depth:
  NOVA 180 77 mm
  NOVA 200 - NOVA 180 NA 8 mm
  NOVA 300 85 mm
  NOVA 600 A - FEKA 600 A 175 mm
  NOVA 600 NA - FEKA 600 NA 48 mm
- Liquid temperature range: from 0°C to +35°C for domestic use (EN 60335-2-41)
- Maximum immersion depth: 7 metres
- Maximum dry running time: 1 minute
- Installation: fixed or portable in a vertical position

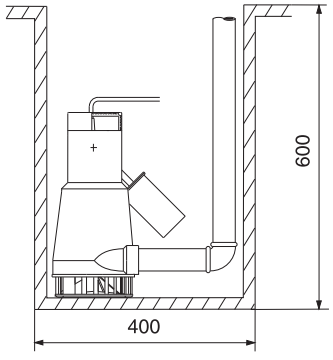
MODEL	WITH FLOAT (A)	WITHOUT FLOAT (NA)
NOVA 180	YES	YES
NOVA 200	NO	YES
NOVA 300	YES	NO
NOVA 600	YES	YES
FEKA 600	YES	YES

- Minimum pit dimensions for fixed installation with automatic operation:

NOVA 180 - NOVA 300

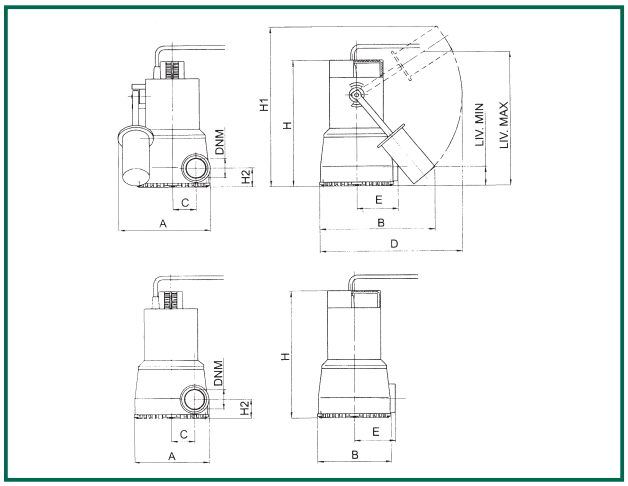


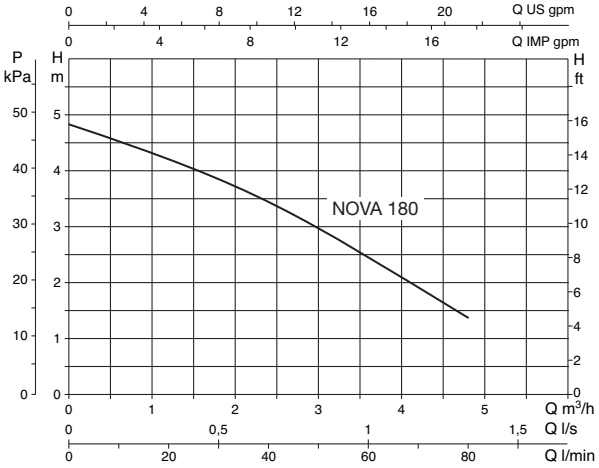
NOVA 600 - FEKA 600



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

NOVA 180



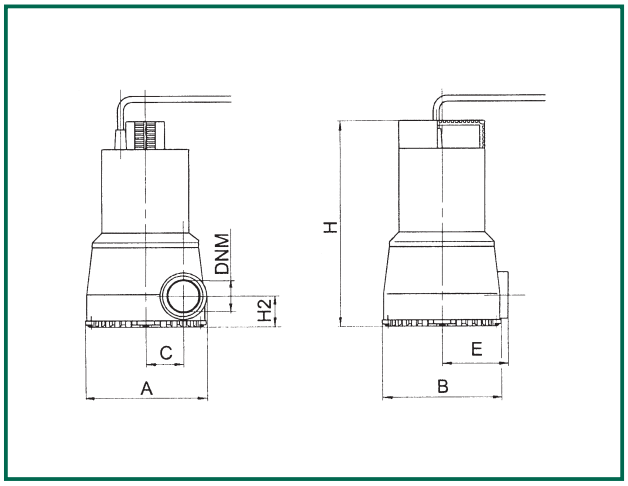


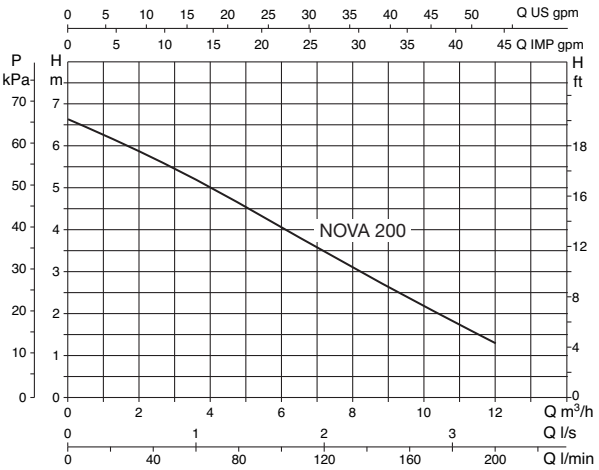
MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX	DNM	PACKING DIMENSIONS L/A	PACKING DIMENSIONS L/B	PACKING DIMENSIONS H	VOLUME m^3	WEIGHT Kg
NOVA 180 M-A	181	235	46	296	82	253	345	38	77	277	1¼"G	287	202	320	0,019	4,6
NOVA 180 M-NA	148	148	46	–	82	253	–	38	–	–	1¼"G	287	202	320	0,019	4,5

MODEL	ELECTRICAL DATA VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	HYDRAULIC DATA (n ≃ 2850 1/min)					
								Q m^3/h	0	1,2	2,4	3,6	4,8
								l/min	0	20	40	60	80
NOVA 180 M	1x220-240 V ~	190	0,20	0,28	0,9	5	450	H (m)	4,8	4,2	3,5	2,4	1,4

* Available also with special stainless steel motor shaft version (SV).

NOVA 200





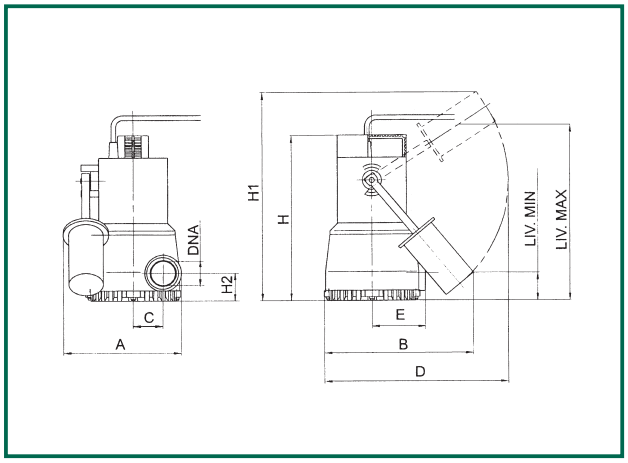
MODEL	A	B	C	E	H	H2	DNM	PACKING DIMENSIONS L/A	PACKING DIMENSIONS L/B	PACKING DIMENSIONS H	VOLUME m^3	WEIGHT Kg
NOVA 200 M-NA	148	148	46	82	253	38	1¼" G	287	202	320	0,019	4,5

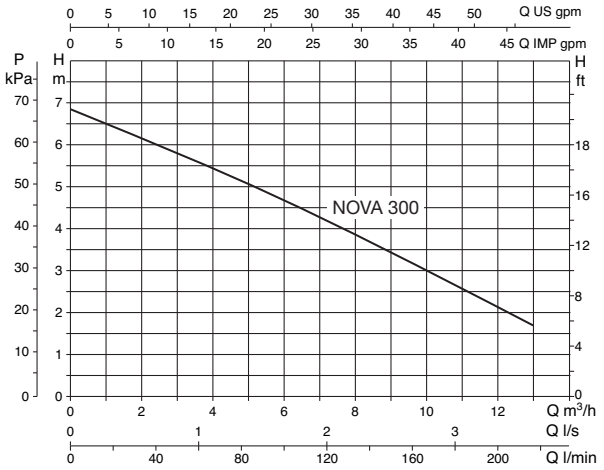
MODEL	ELECTRICAL DATA VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	HYDRAULIC DATA (n ≃ 2850 1/min)							
								Q m^3/h	0	3	4,5	6	7,5	9	12
								l/min	0	50	75	100	125	150	200
NOVA 200 M-NA	1x220-240 V ~	350	0,22	0,3	1,5	8	450	H (m)	6,6	5,2	4,6	4	3,2	2,6	1,4

* Available also with special stainless steel motor shaft version (SV).

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

NOVA 300



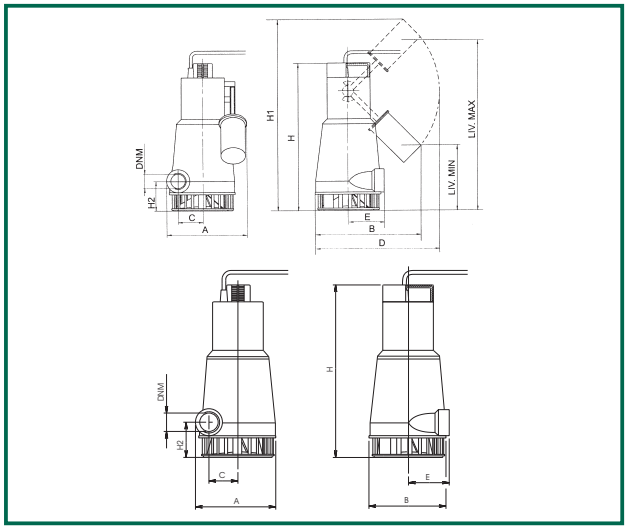


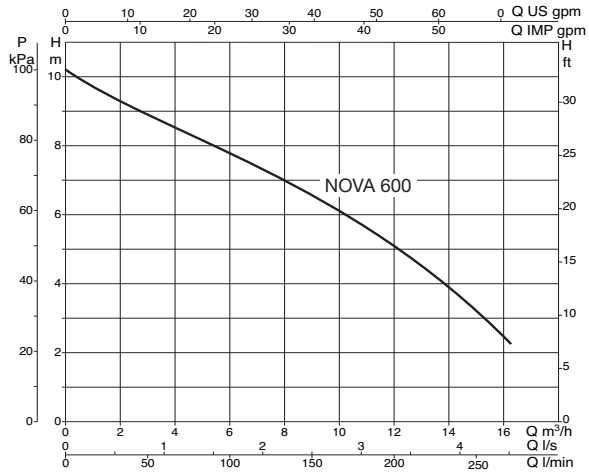
MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX	DNM	PACKING DIMENSIONS L/A	PACKING DIMENSIONS L/B	PACKING DIMENSIONS H	VOLUME m³	WEIGHT Kg
NOVA 300 M-A	181	235	46	296	82	262	354	47	85	285	1¼"G	287	202	320	0,019	4,6

MODEL	ELECTRICAL DATA VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	HYDRAULIC DATA (n ≃ 2850 1/min)									
								Q m³/h	0	3	4,5	6	7,5	9	10,8	12	13,02
								l/min	0	50	75	100	125	150	180	200	217
NOVA 300 M-A	1x220-240 V ~	355	0,22	0,3	1,6	8	450	H (m)	6,8	5,6	5,1	4,6	4	3,4	2,7	2,2	1,7

* Available also with special stainless steel motor shaft version (SV).

NOVA 600





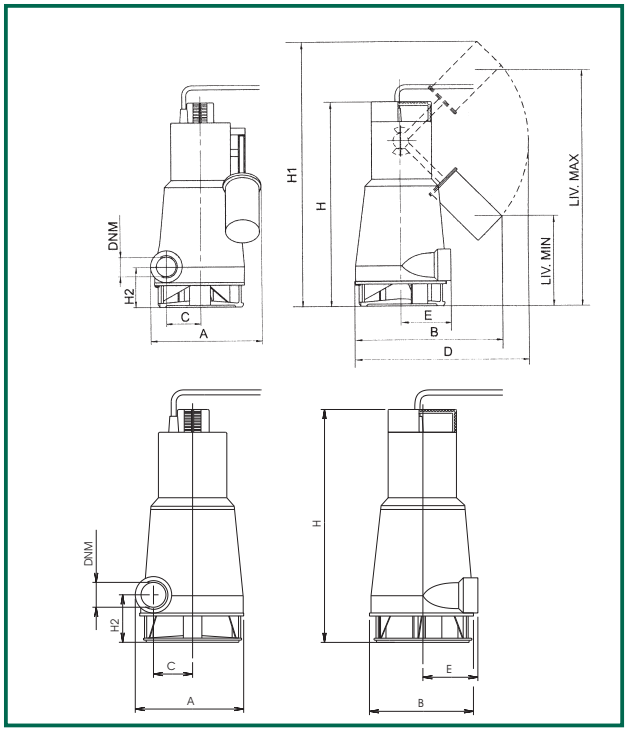
MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX	DNM	PACKING DIMENSIONS L/A	PACKING DIMENSIONS L/B	PACKING DIMENSIONS H	VOLUME m³	WEIGHT Kg
NOVA 600 M-A	193	235	56	296	90	368	443	73	190	390	1¼"G	287	202	431	0,025	7
NOVA 600 (M-T)-NA	162	160	56	–	90	368	–	73	–	–	1¼"G	287	202	431	0,025	6,7

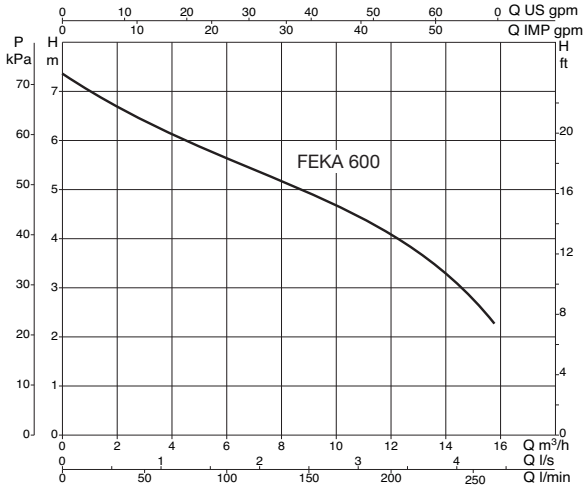
MODEL	ELECTRICAL DATA VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	HYDRAULIC DATA (n ≃ 2850 1/min)									
								Q m³/h	0	3	4,5	6	7,5	9	12	15	16,2
								l/min	0	50	75	100	125	150	200	250	270
NOVA 600 M	1x220-240 V ~	800	0,55	0,75	3,4	14	450	H (m)	10,2	8,9	8,3	7,8	7,2	6,6	5	3,1	2,3
NOVA 600 T	3x400 V ~	800	0,55	0,75	1,6	–	–										

* Available also with special stainless steel motor shaft version (SV).

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

FEKA 600





MODEL	A	B	C	D	E	H	H1	H2	LEV. MIN.	LEV. MAX	DNM	PACKING DIMENSIONS			VOLUME m^3	WEIGHT Kg
												L/A	L/B	H		
FEKA 600 M-A	193	235	56	296	90	368	443	73	190	390	1¼"G	287	202	431	0,025	7
FEKA 600 (M-T)-NA	162	160	56	–	90	368	–	73	–	–	1¼"G	287	202	431	0,025	6,7

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n ≃ 2850 1/min)									
	VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	Q m^3/h	0	3	4,5	6	7,5	9	12	15	15,9
								l/min	0	50	75	100	125	150	200	250	265
FEKA 600 M	1x220-240 V ~	1000	0,55	0,75	4,3	14	450	H (m)	7,45	6,45	6,1	5,7	5,35	4,95	4,1	2,8	2,2
FEKA 600 T	3x400 V ~	970	0,55	0,75	1,7	–	–										

* Available also with special stainless steel motor shaft version (SV).

FEKA VS
SUBMERSIBLE CENTRIFUGAL PUMP

CE

GENERAL DATA

Applications
Stainless steel submersible centrifugal pump with precision cast steel liquid vortex impeller, suitable for pumping sewer water and waste water in general containing solids up to a maximum size of 50 mm.

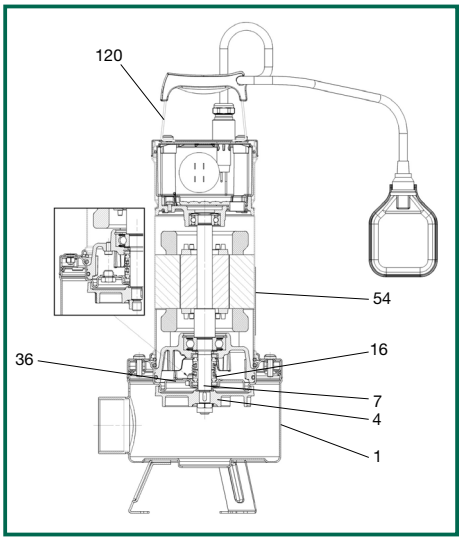
Constructional features of the pump
Pump body, seal housing cover, motor casing, cap with handle made of stainless steel. Precision cast steel impeller. Handle coated with insulating rubber. AISI 304 stainless steel motor shaft. Double mechanical seal with interposed oil chamber (non-toxic oil), made of carbon/alumina on the motor side and silicon carbide/silicon carbide on the pump side.

Constructional features of the motor
Dry, asynchronous, sealed and cooled by the pumped liquid.Rotor mounted on greased for-life ball bearings, oversized and selected to guarantee greater noise reduction and duration. Thermo-amperometric protection as standard for single-phase version, and the user's responsibility for the three-phase ver-sion. Constantly active capacitor on the single-phase version. Construction in accordance with the IEC 2-3 IEC 61-69 (EN 60335-2-41) standards.
Motor protection class: IP 68 - Insulation class: F
Standard voltage: 220-240V 50Hz Single-phase - 400V 50Hz Three-phase
Continual running with liquid at 35 °C and pump completely submerged. The single-phase version can be supplied with float for automatic function. Power supply cable: 10 metres of H07RN-F cable with Shuko plug for the single-phase version and 10 meters of H07RN-F cable for the three-phase version.

TECHNICAL DATA

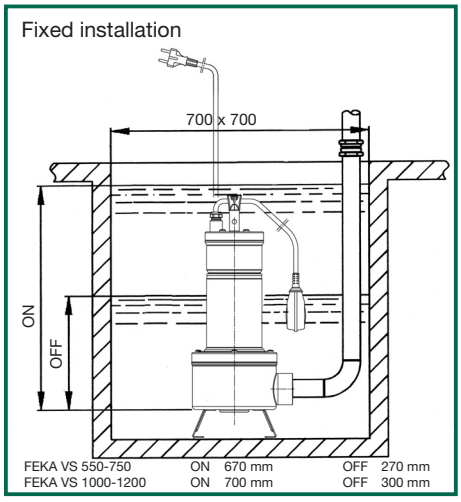
N.	PARTS*		MATERIALS
1	PUMP BODY		STAINLESS STEEL AISI 304
4	IMPELLER		MICROCASTING STAINLESS STEEL
7	MOTOR SHAFT		STAINLESS STEEL AISI 316
16	MECHANICAL SEAL	PUMP SIDE	SILICON CARBIDE/SILICON CARBIDE
		MOTOR SIDE	CARBON/ALLUMINA
36	SEAL COVER		STAINLESS STEEL AISI 304
54	MOTOR CASING		STAINLESS STEEL AISI 304
120	HANDLE		STAINLESS STEEL AISI 304 WITH INSULATING RUBBER COVER

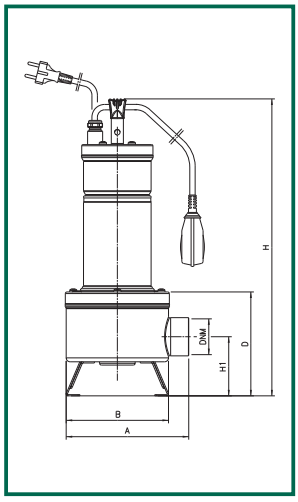
* In contact with the liquid

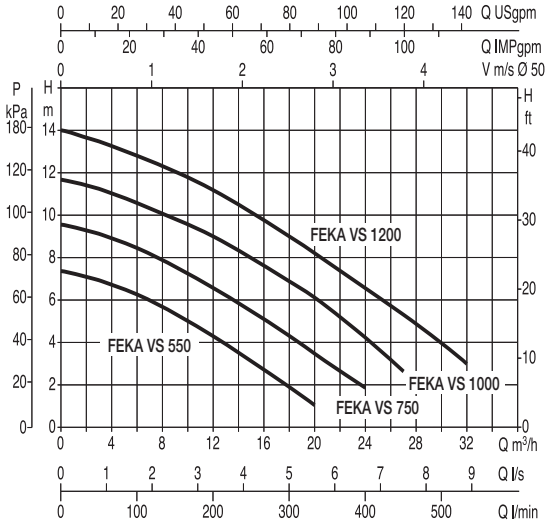


- Operating range: from 0 a 32 m³/h with head up to 14 metres.
- Pumped liquid: sewer water and waste water in general and non aggressive.
- Liquid temperature range: - da 0°C a +35°C for domestic use (EN 60335-2-41)
  - da 0°C a +50°C for other uses
- Maximum ambient temperature for pump running with sub-merged motor: +40°C
- Maximum immersion depth: 10 metri
- Installation: fixed or portable, vertical

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







MODEL	A	B	D	H	H1	Ø DNM	PACKAGING DIM. L/A	L/B	H	VOL m³	WEIGHT Kg
FEKA VS 550	203	170	172	492	98	2"F	240	600	240	0,034	16,3
FEKA VS 750	203	170	172	492	98	2"F	240	600	240	0,034	17,5
FEKA VS 1000	203	170	172	537	98	2"F	240	600	240	0,034	19,3
FEKA VS 1200	203	170	172	537	98	2"F	240	600	240	0,034	20,8

MODEL	VOLTAGE 50 HZ	ELECTRICAL DATA P1 max W	P2 Nominal kW	P2 Nominal HP	In A	Ist A	CAPACITOR µF	CAPACITOR VC	HYDRAULIC DATA (N≃2800 1/min) m³/h	0	3	6	12	18	20	24	27	32
									l/min	0	50	100	200	300	333	400	450	533
FEKA VS 550 M-NA	1x220-240 V~	927	0,55	0,75	4,2	20	20	450	H (m)	7,4	6,9	6,2	4,1	1,8	1,2	-	-	-
FEKA VS 550 M-A																		
FEKA VS 550 T-NA	3x400 V~	900	0,55	0,75	1,64	11	-	-										
FEKA VS 750 M-NA	1x220-240 V~	1111	0,75	1	5,13	20	20	450		9,6	9,2	8,5	6,7	4,3	3,5	1,9	-	-
FEKA VS 750 M-A																		
FEKA VS 750 T-NA	3x400 V~	1038	0,75	1	1,94	11	-	-										
FEKA VS 1000 M-NA	1x220-240 V~	1469	1	1,36	6,63	31	25	450		11,8	11,3	10,5	9	6,8	6	4,1	2,7	-
FEKA VS 1000 M-A																		
FEKA VS 1000 T-NA	3x400 V~	1374	1	1,36	2,51	16	-	-										
FEKA VS 1200 M-NA	1x220-240 V~	1936	1,2	1,6	8,63	38	30	450		14	13,4	12,8	11,2	9	8,3	6,7	5,3	3
FEKA VS 1200 M-A																		
FEKA VS 1200 T-NA	3x400 V~	1865	1,2	1,6	3,44	22	-	-										

FEKA VX
SUBMERSIBLE CENTRIFUGAL PUMP

CE

GENERAL DATA

Applications
Stainless steel submersible centrifugal pump with technopolymer liquid vortex impeller, suitable for pumping sewer water and waste water in general containing solids up to a maximum size of 50 mm.

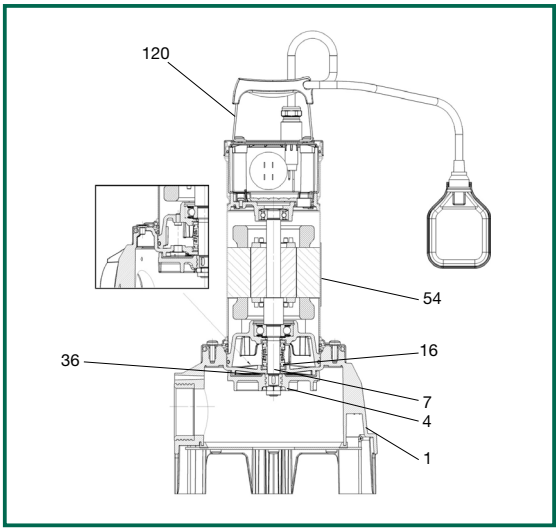
Constructional features of the pump
Pump body made of technopolymer, with threaded metal insert in the delivery port, seal housing cover, motor casing, cap with handle made of stainless steel. Technopolymer impeller.
Handle coated with insulating rubber. AISI 304 stainless steel motor shaft. Double mechanical seal with interposed oil chamber (non-toxic oil), made of carbon/alumina on the motor side and silicon carbide/silicon carbide on the pump side.

Constructional features of the motor
Dry, asynchronous, sealed and cooled by the pumped liquid.Rotor mounted on greased for-life ball bearings, oversized and selected to guarantee greater noise reduction and duration. Thermo-amperometric protection as standard for single-phase version, and the user's responsibility for the three-phase version. Constantly active capacitor on the single-phase version. Construction in accordance with the IEC 2-3 IEC 61-69 (EN 60335-2-41) standards.
Motor protection class: IP 68 - Insulation class: F
Standard voltage: 220-240V 50Hz Single-phase - 400V 50Hz Three-phase
Continual running with liquid at 35 °C and pump completely submerged. The single-phase version can be supplied with float for automatic function. Power supply cable: 10 metres of H07RN-F cable with Shuko plug for the single-phase version and 10 meters of H07RN-F cable for the three-phase version.

TECHNICAL DATA

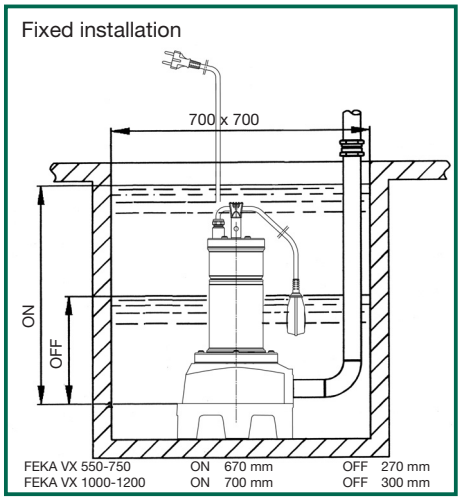
N.	PARTS*		MATERIALS
1	PUMP BODY		TECHNOPOLYMER
4	IMPELLER		TECHNOPOLYMER
7	MOTOR SHAFT		STAINLESS STEEL AISI 316
16	MECHANICAL SEAL	PUMP SIDE	SILICON CARBIDE/SILICON CARBIDE
		MOTOR SIDE	CARBON/ALLUMINA
36	SEAL COVER		STAINLESS STEEL AISI 304
54	MOTOR CASING		STAINLESS STEEL AISI 304
120	HANDLE		STAINLESS STEEL AISI 304 WITH INSULATING RUBBER COVER

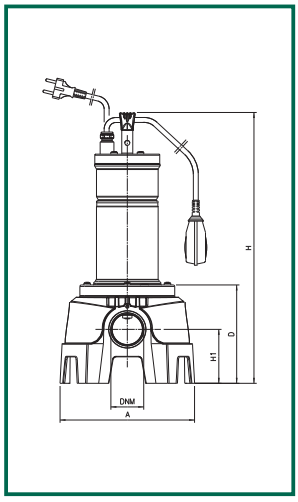
* In contact with the liquid

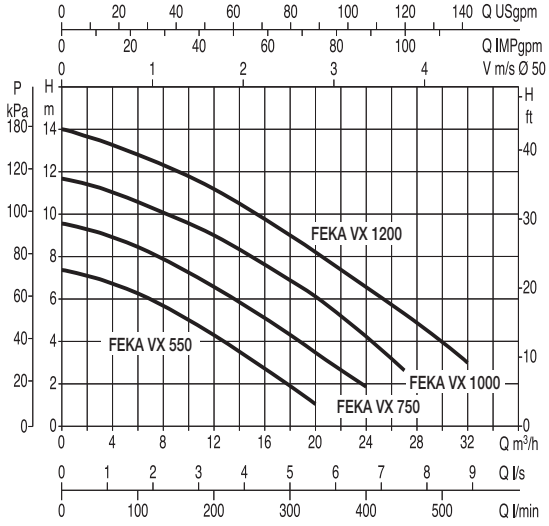


- Operating range: from 0 a 32 m³/h with head up to 14 metres.
- Pumped liquid: sewer water and waste water in general and non aggressive.
- Liquid temperature range: - da 0°C a +35°C for domestic use (EN 60335-2-41)
  - da 0°C a +50°C for other uses
- Maximum ambient temperature for pump running with sub-merged motor: +40°C
- Maximum immersion depth: 10 metri
- Installation: fixed or portable, vertical

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







MODEL	A	D	H	H1	Ø DNM	PACKAGING DIM. L/A	L/B	H	VOL m³	WEIGHT Kg
FEKA VX 550	245	179	498	98	2"F	360	600	320	0,069	16,7
FEKA VX 750	245	179	498	98	2"F	360	600	320	0,069	17,9
FEKA VX 1000	245	179	543	98	2"F	360	600	320	0,069	19,6
FEKA VX 1200	245	179	543	98	2"F	360	600	320	0,069	21,1

MODEL	VOLTAGE 50 HZ	ELECTRICAL DATA P1 max W	P2 Nominal kW	P2 Nominal HP	In A	Ist A	CAPACITOR µF	CAPACITOR VC	HYDRAULIC DATA (N≃2800 1/min) m³/h	0	3	6	12	18	20	24	27	32
									l/min	0	50	100	200	300	333	400	450	533
FEKA VX 550 M-NA	1x220-240 V~	927	0,55	0,75	4,2	20	20	450	H (m)	7,4	6,9	6,2	4,1	1,8	1,2	-	-	-
FEKA VX 550 M-A																		
FEKA VX 550 T-NA	3x400 V~	900	0,55	0,75	1,64	11	-	-										
FEKA VX 750 M-NA	1x220-240 V~	1111	0,75	1	5,13	20	20	450		9,6	9,2	8,5	6,7	4,3	3,5	1,9	-	-
FEKA VX 750 M-A																		
FEKA VX 750 T-NA	3x400 V~	1038	0,75	1	1,94	11	-	-										
FEKA VX 1000 M-NA	1x220-240 V~	1469	1	1,36	6,63	31	25	450		11,8	11,3	10,5	9	6,8	6	4,1	2,7	-
FEKA VX 1000 M-A																		
FEKA VX 1000 T-NA	3x400 V~	1374	1	1,36	2,51	16	-	-										
FEKA VX 1200 M-NA	1x220-240 V~	1936	1,2	1,6	8,63	38	30	450		14	13,4	12,8	11,2	9	8,3	6,7	5,3	3
FEKA VX 1200 M-A																		
FEKA VX 1200 T-NA	3x400 V~	1865	1,2	1,6	3,44	22	-	-										

DRENAG 1000 - 1200

STAINLESS STEEL
SUBMERSIBLE PUMP

CE

GENERAL DATA

Applications

Stainless steel submersible pump with thrust ring type impeller, for draining clear waste water containing solids of maximum **10 mm** diameter.

Pump construction characteristics

Pump body, impeller, flange, filter and disk, motor casing, casing with handle and cabling compartment cover in stainless steel AISI 304. Stainless steel handle covered with insulating rubber. AISI 316 stainless steel motor shaft.
Double mechanical seal with interposed non-toxic oil chamber, in carbon-aluminium motor side and silicon carbide-silicon carbide pump side.

Motor construction characteristics

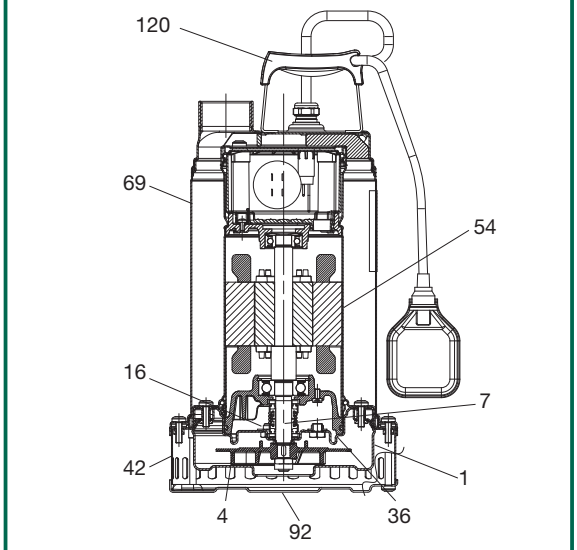
Dry asynchronous and waterproof type, cooled by pumped liquid. Rotor mounted on permanently lubricated ball bearings oversized and selected to guarantee silent operation and extended lifetime. Standard thermal switch protection device. Capacitor permanently fitted on single phase versions.
Construction in compliance with CEI 2-3 - CEI 61-69 (EN 60335-2-41).
Protection level: IP 68 Insulation class: F
Standard power supply: 220-240V 50Hz single phase
400V 50Hz three phase
Single phase version can be supplied with or without float for automatic operation.
Power cable: 10 metres H07RN-F, with UNEL 47166-68 plug for single phase version.

- Operation range: from 3 to 28 m^3/h with head up to 17 metres
- Pumped liquid: rain water, ground water, sandy water from construction site and clear waste water, non-aggressive in all cases.
- Liquid temperature range: - from 0°C to +35°C for domestic use (EN 60335-2-41)
  - from 0°C to + 50°C for other applications
- Max. ambient temperature for operation with motor emerged: +40°C
- Max. immersion: 10 metres
- Installation: fixed or mobile, horizontal or vertical

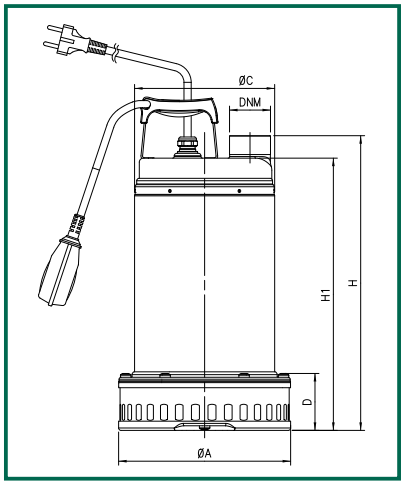
TECHNICAL DATA

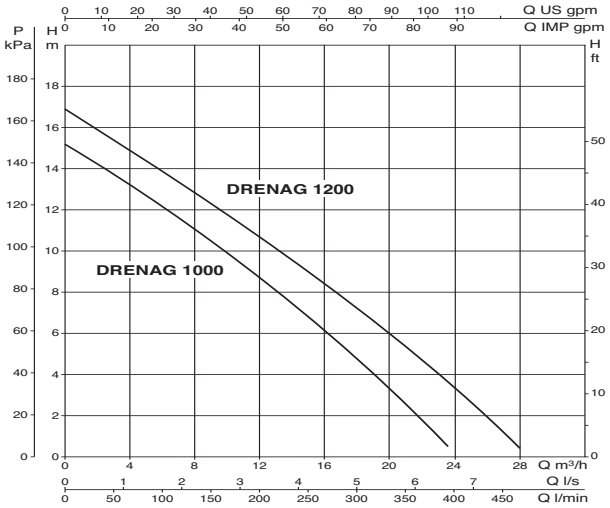
N.	PARTS*		MATERIALS
1	PUMP BODY		STAINLESS STEEL AISI 304 X5CrNi 1810 - UNI 6900/71
4	IMPELLER		
7	MOTOR SHAFT		MICROCASTING STAINLESS STEELAISI 316 X5CrNiMo 1712 - UNI 6900/71
16	MECHANICAL SEAL	PUMP SIDE	SILICON CARBIDE/SILICON CARBIDE
		MOTOR SIDE	CARBON/ALLUMINA
36	SEAL COVER		STAINLESS STEEL AISI 304 X5CrNi 1810 - UNI 6900/71
42	FILTER		
54	MOTOR CASING		
69	PUMP LINER		
92	FILTER COVER		
120	HANDLE		STAINLESS STEEL AISI 304 X5CrNi 1810 - UNI 6900/71 WITH INSULATING RUBBER COVER

* In contact with the liquid



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





MODEL	ØA	ØC	D	H	H1	Ø DNM	PACKAGING DIMENSIONS L/A	L/B	H	VOLUME m³	WEIGHT Kg
DRENAG 1000	215	175	71	413	385	1 1/2" F	240	600	250	0,034	17
DRENAG 1200											18,5

MODEL	ELECTRICAL DATA VOLTAGE 50 Hz	P1 MAX KW	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc
DRENAG 1000 M	1x220-240 V ~	1,29	1	1,36	6	25	450
DRENAG 1000 T	3x400 V ~	1,18	1	1,36	2,43	–	–
DRENAG 1200 M	1x220-240 V ~	1,85	1,2	1,6	7,5	30	450
DRENAG 1200 T	3x400 V ~	1,65	1,2	1,6	3,24	–	–

HYDRAULIC DATA (N=2800 1/min)											
Q m³/h	0	3	6	9	12	15	18	21	23,5	28
Q l/min	0	50	100	150	200	250	300	350	392	465
H (m)	15,3	13,7	12,1	10,5	8,7	6,8	4,7	2,4	0,5	
	17	15,4	13,8	12,4	10,7	9	7,3	5,2	3,5	0,4

DRENAG 1400 - 1800
SUBMERSIBLE PUMP
FOR USE ON BUILDING SITES

CE

GENERAL DATA

Applications
Submersible cast iron pump for use on building sites with thrust ring pipe impeller, designed for draining, lifting or transfer or sandy, muddy or sludgy water, ground water, rain water, fountain water, clean waste water, river or lake water containing solid bodies with maximum dimensions 12 mm.

Constructional features of the pump
Cast iron pump body and motor casing.
High-resistance cast iron thrust ring pipe impeller.
Cast iron suction cover covered with abrasion-proof rubber.
Stainless steel rotor shaft, handle, filter, filter cover and screws.
Inspectable oil seal chamber.
Silicon carbide mechanical seal.
The supply vent of 2” threaded GAS is radial to facilitate assembly on the lifting devices (DSD 2).

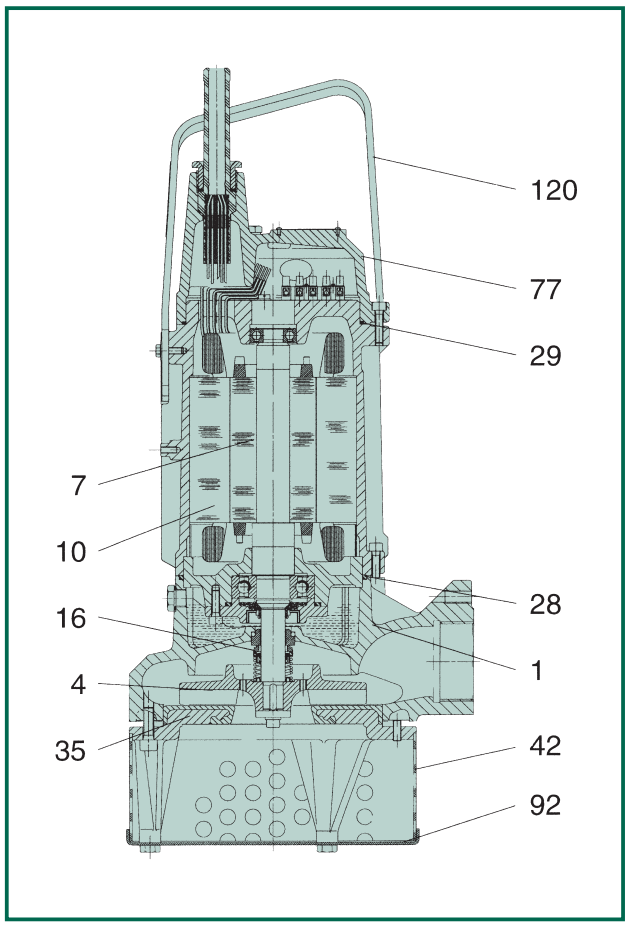
Constructional features of the motor
Continuous duty submersible induction motor, in a watertight casing.
Rotor mounted on oversized greased sealed-for-life ball bearings.
Thermal protection in the windings, to be connected to the control panel.
In order to operate, the pumps must be equipped with a control and protection system, supplied separately and not connected to the electropumps.
Supplied with 10 metres of neoprene rubber power cable 6x(4x1,5)+(2x0,5).
Motor protection: IP68
Insulation class: F
Manufactured according to CEI 2-3 standards.

Standard voltage:	single-phase	220-240 V/50 Hz
	three-phase	400 V/50 Hz

TECHNICAL DATA

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

* In contact with the liquid

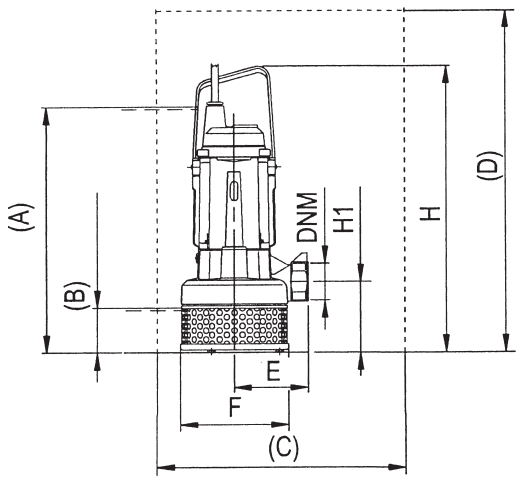


- Operating range: from 6 to 33 m^3/h with head up to 19,2 metres for the single-phase version and 21,5 metres for the three-phase version.
- Liquid quality requirements: sandy, muddy or sludgy water from building sites, clean waste water, rain water, ground water, fountain, river or lake water, always non aggressive
- Liquid temperature range: from 0°C to +55°C
- Free passage of solids through the suction grid: 12 mm
- Maximum immersion depth: 10 metres
- Installation: fixed or portable in a vertical position
- Special executions on request: other voltages and/or frequencies

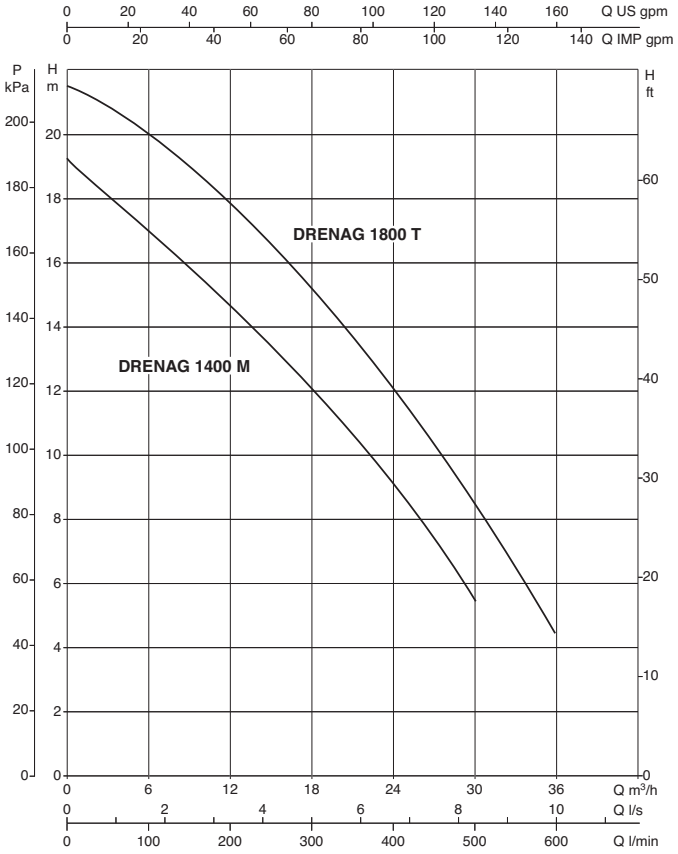
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 Kg/m³. Curve tolerance according to ISO 9906.

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

DRENAG 1400 - 1800



(A) minimum level for continuous duty
(B) minimum residual level in manual operation
(C) minimum dimension of borehole base
(D) minimum borehole height



MODEL	A	B	C	D	E	F Ø	DNM	H	H1	PACKING DIMENSIONS L/A	PACKING DIMENSIONS L/B	PACKING DIMENSIONS H	VOLUME m³	WEIGHT Kg
DRENAG 1400 M	500	90	500x500 min	600 min	150	219	2" G	584	144	680	330	380	0,085	43,3
DRENAG 1800 T	500	90	500x500 min	600 min	150	219	2" G	584	144	680	330	380	0,085	44,2

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n ≃ 2800 1/min)							
	VOLTAGE 50 Hz	P1 MAX kW	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	Q m³/h	0	6	12	18	24	30	36
								l/min	0	100	200	300	400	500	600
DRENAG 1400	1x220-240 V ~	2	1,1	1,5	9,2	40	450	H (m)	19,2	17	14,6	12,1	9	5,5	–
DRENAG 1800	3x400 V ~	2,3	1,5	2	4,4	–	–		21,5	20	18	15,2	12	8,5	4,5

FEKA 1400 - 1800

SUBMERSIBLE PUMPS FOR CESSPOOLS

CE

GENERAL DATA

Applications

Submersible cast iron pump with vortex backflowing impeller for cesspools. Suitable for lifting or drainage installations for sewage from cesspools and for generally dirty water containing solids up to maximum 38 mm diameter. Also suitable for ground water, rain water, clean and dirty waste water, river or lake water.

Constructional features of the pump

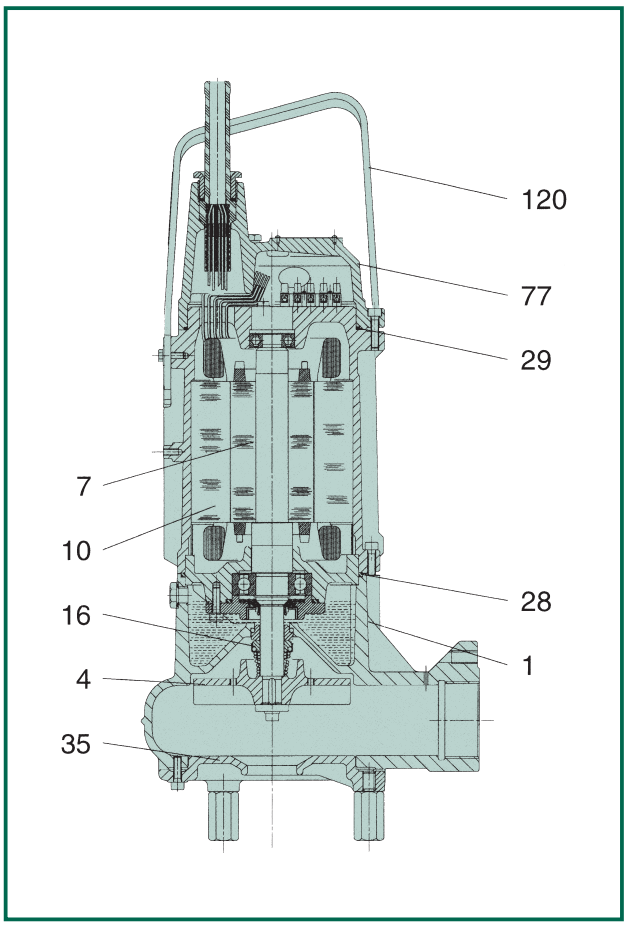
Cast iron pump body, motor casing, suction cover and impeller.
Stainless steel rotor, handle and screws.
Inspectable oil seal chamber.
Carbon/ceramic mechanical seal.
The supply vent of 2” threaded GAS is radial to facilitate assembly on the lifting devices (DSD 2).

Constructional features of the motor

Continuous duty submersible induction motor, in a watertight casing.
Rotor mounted on oversized greased sealed-for-life ball bearings.
Thermal protection in the windings, to be connected to the control panel.
In order to operate, the pumps must be equipped with a control and protection system, supplied separately and not connected to the electropumps.
Supplied with 10 metres of neoprene rubber power cable 6x(4x1,5)+(2x0,5).
Motor protection: IP68
Insulation class: F
Manufactured according to CEI 2-3 standards.

Standard voltage:	single-phase	220-240 V/50 Hz
	three-phase	400 V/50 Hz

TECHNICAL DATA



N.	PARTS*	MATERIALS
1	PUMP BODY	CAST IRON 200 UNI ISO 185
4	IMPELLER	CAST IRON 200 UNI ISO 185
7	MOTOR SHAFT	STAINLESS STEEL AISI 416 X12CrS13 - UNI 6900/71
10	MOTOR CASING	CAST IRON 200 UNI ISO 185
16	MECHANICAL SEAL	CARBON/CERAMIC
28	OR GASKET	VITON
29	OR GASKET	VITON
35	SUCTION COVER	CAST IRON 200 UNI ISO 185
77	PROTECTION COVER	CAST IRON 200 UNI ISO 185
120	HANDLE	STAINLESS STEEL AISI 304 X5CrNi 1810 - UNI 6900/71

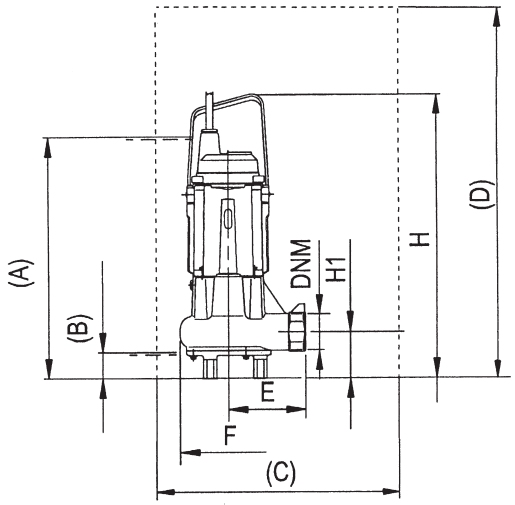
* In contact with the liquid

- Operating range: from 6 to 30 m³/h with head up to 14 metres for the single-phase version and 15,5 metres for the three-phase version.
- Liquid quality requirements: dirty waste water, untreated sewage containing solids, always non aggressive
- Liquid temperature range: from 0°C to +55°C
- Maximum ambient temperature for pump operation with the motor emerging: +40°C
- Free passage of solids: 38 mm
- Maximum immersion depth: 10 metres
- Installation: fixed or portable in a vertical position
- Special executions on request: other voltages and/or frequencies

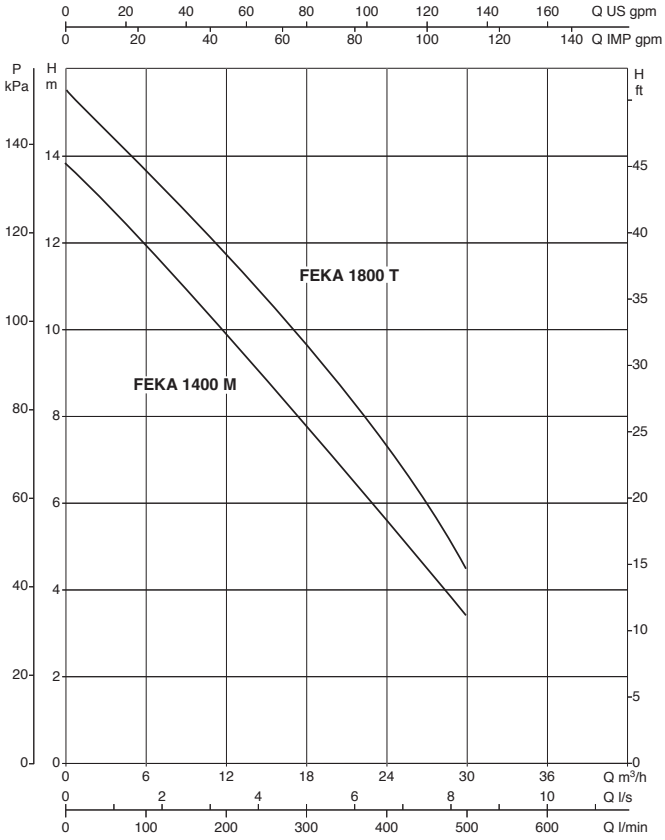
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

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

FEKA 1400 - 1800



(A) minimum level for continuous duty
(B) minimum residual level in manual operation
(C) minimum dimension of borehole base
(D) minimum borehole height



MODEL	A	B	C	D	E	F Ø	DNM	H	H1	PACKING DIMENSIONS L/A	PACKING DIMENSIONS L/B	PACKING DIMENSIONS H	VOLUME m³	WEIGHT Kg
FEKA 1400 M	500	50	500x500 min	600 min	160	200	2" G	583	94	680	330	380	0,085	41,2
FEKA 1800 T	500	50	500x500 min	600 min	160	200	2" G	583	94	680	330	380	0,085	42,4

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n ≃ 2800 1/min)						
	VOLTAGE 50 Hz	P1 MAX kW	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	Q m³/h	0	6	12	18	24	30
								l/min	0	100	200	300	400	500
FEKA 1400 M	1x220-240 V ~	1,8	1,1	1,5	8,5	40	450	H (m)	13,9	12	9,9	7,8	5,7	3,4
FEKA 1800 T	3x400 V ~	1,9	1,5	2	3,7	–	–		15,5	13,7	11,8	9,7	7,3	4,5

GRINDER 1400 - 1800

SUBMERSIBLE PUMPS WITH TRITURATOR

CE

GENERAL DATA

Applications

Submersible cast iron pump with triturator suitable for lifting or drainage installations for civil and industrial sewage. Thanks to the grinding system, the material present in the sewage (organic waste, fabric, rubber, etc.) is reduced into small particles, allowing the liquid to be pumped without any risk of clogging or obstruction of the delivery pipes.

Constructional features of the pump

Cast iron pump body, motor casing and suction cover.
High-resistance cast iron thrust ring pipe impeller.
Triturator device obtained by precision casting of extremely strong and durable materials.
Stainless steel rotor shaft, handle and screws.
Inspectable oil seal chamber.
Silicon carbide mechanical seal.
The supply vent of 2” threaded GAS is radial to facilitate assembly on the lifting devices (DSD 2).

Constructional features of the motor

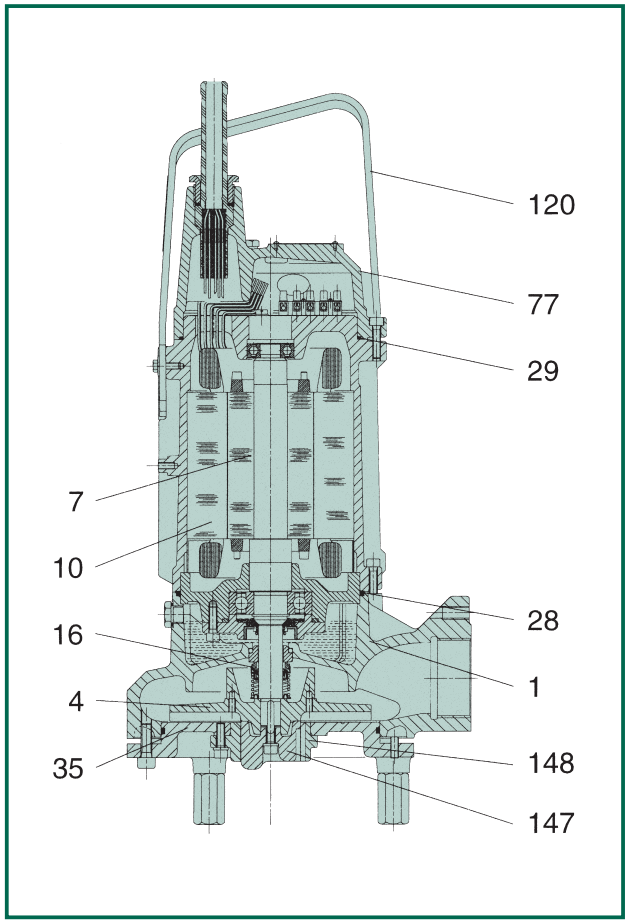
Continuous duty submersible induction motor, in a watertight casing.
Rotor mounted on oversized greased sealed-for-life ball bearings.
Thermal protection in the windings, to be connected to the control panel.
In order to operate, the pumps must be equipped with a control and protection system, supplied separately and not connected to the electropumps.
Supplied with 10 metres of neoprene rubber power cable 6x(4x1,5)+(2x0,5).
Motor protection: IP68
Insulation class: F
Manufactured according to CEI 2-3 standards.

Standard voltage:	single-phase	220-240 V/50 Hz
	three-phase	400 V/50 Hz

TECHNICAL DATA

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

* In contact with the liquid

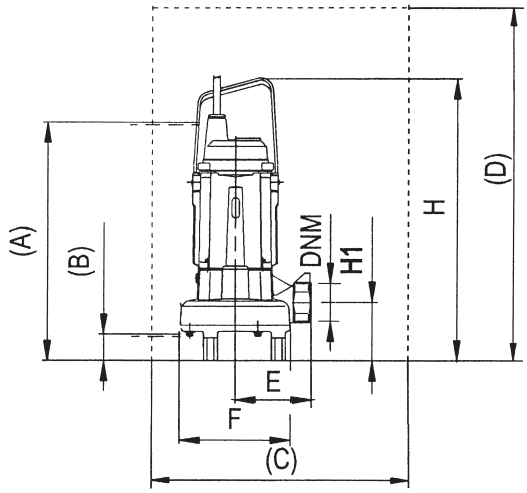


- Operating range: from 2 to 9 m³/h with head up to 24,5 metres for the single-phase version and 26,5 metres for the three-phase version.
- Liquid quality requirements: dirty waste water, untreated sewage containing solids and/or long fibres, always non aggressive
- Liquid temperature range: from 0°C to +55°C
- Maximum ambient temperature for pump operation with the motor emerging: +40°C
- Maximum immersion depth: 10 metres
- Installation: fixed or portable in a vertical position
- Special executions on request: other voltages and/or frequencies

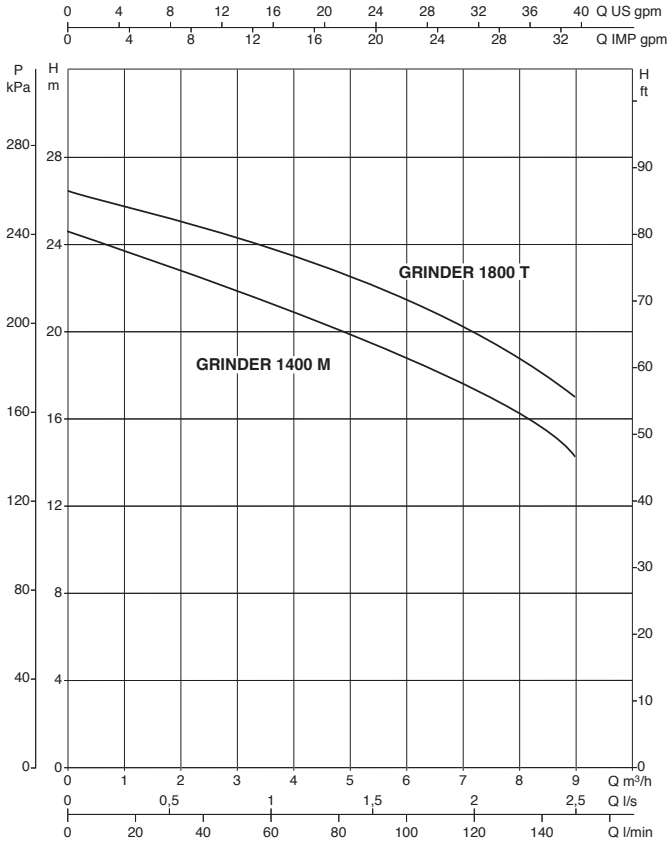
The performance curves are based on the kinematic viscosity values = 1 mm²/s and density equal to 1000 kg/m³. Curve tolerance according to ISO 9906.

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

GRINDER 1400 - 1800



(A) minimum level for continuous duty
(B) minimum residual level in manual operation
(C) minimum dimension of borehole base
(D) minimum borehole height



MODEL	A	B	C	D	E	F Ø	DNM	H	H1	PACKING DIMENSIONS L/A	PACKING DIMENSIONS L/B	PACKING DIMENSIONS H	VOLUME m³	WEIGHT Kg
GRINDER 1400 M	500	50	500x500 min	600 min	150	219	2" G	549	109	680	330	380	0,085	43,2
GRINDER 1800 T	500	50	500x500 min	600 min	150	219	2" G	549	109	680	330	380	0,085	43,8

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n ≃ 2800 1/min)						
	VOLTAGE 50 Hz	P1 MAX kW	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	Q m³/h	0	2	4	6	8	9
								l/min	0	33,3	66,6	100	133,3	150
GRINDER 1400 M	1x220-240 V ~	1,95	1,1	1,5	8,7	40	450	H (m)	24,5	22,8	21	19	16,2	14,1
GRINDER 1800 T	3x400 V ~	2	1,5	2	3,8	–	–		26,5	25	23,5	21,6	18,8	17

FEKA 2500-3000-4000-6000

SUBMERSIBLE PUMPS
FOR CESSPOOLS

CE

GENERAL DATA

Applications

Submersible cast iron pump with vortex backflowing impeller for cesspools. Suitable for lifting or drainage installations for sewage from cesspools and for generally dirty water containing solids (see technical particulars). Also suitable for ground water, rain water, clean and dirty waste water, river or lake water.

Constructional features of the pump

Cast iron pump body, motor casing, suction cover and impeller.
Stainless steel rotor and screws.
Double mechanical seal with inspectable oil seal chamber.

The flanged supply vent: Ø 65 mm for FEKA 2500 - FEKA 2700
Ø 80 mm for FEKA 3000 - FEKA 3500 - FEKA 3700
Ø 100 mm for FEKA 4000 - FEKA 4125 - FEKA 4150 - FEKA 4200
Ø 150 mm for FEKA 6075 - FEKA 6100 - FEKA 6120 - FEKA 6150
FEKA 6200 - FEKA 6250 - FEKA 6300

The pumps are supplied with threaded counter-flange (mass-produced).
On request, lifting devices are available,they facilitate the pump's descent in the cesspools and allow to execute the maintenances without disassembling the

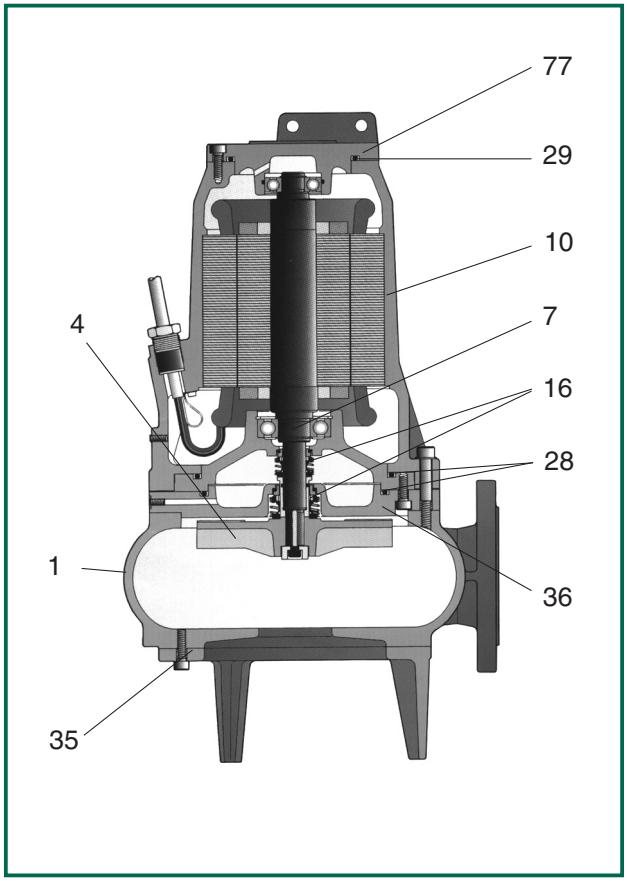
Constructional features of the motor

Continuous duty submersible induction motor, in a watertight casing.
Rotor mounted on oversized greased sealed-for-life ball bearings.
Thermal protection in the windings, to be connected to the control panel.
In order to operate, the pumps must be equipped with a control and protection system, supplied separately and not connected to the electropumps.
Supplied with 10 metres of neoprene rubber power cable 6x(4x1.5)+(2x0.5).
Motor protection: IP68
Insulation class: F
Manufactured according to CEI 2-3 standards.
Voltage: 3X400 V 50 Hz (fitted in ⅄∅for Feka 4100.4T - 4100.2T - 4150.2T - 4125.2T - 4200.2T, Feka 6075.6T - Feka 6100.6T - Feka 6120.4T - Feka 6200.4T - Feka 6250.4T - Feka 6300.4T).
Special executions on request: other voltages and/or frequencies, thermal protection in the windings and oil sensor (for all Feka 6000 models).

TECHNICAL DATA

N.	PARTS*	MATERIALS
1	PUMP BODY	CAST IRON 200 UNI ISO 185
4	IMPELLER	CAST IRON 200 UNI ISO 185
7	MOTOR SHAFT	STAINLESS STEEL AISI 416 X12CrS13 - UNI 6900/71
10	MOTOR CASING	CAST IRON 200 UNI ISO 185
16	MECHANICAL SEAL	SILICON CARBIDE
28	OR GASKET	NBR
29	OR GASKET	NBR
35	SUCTION COVER	CAST IRON 200 UNI ISO 185
36	MECHANICAL SEAL	CAST IRON 200 UNI ISO 185
77	PROTECTION COVER	CAST IRON 200 UNI ISO 185

* In contact with the liquid

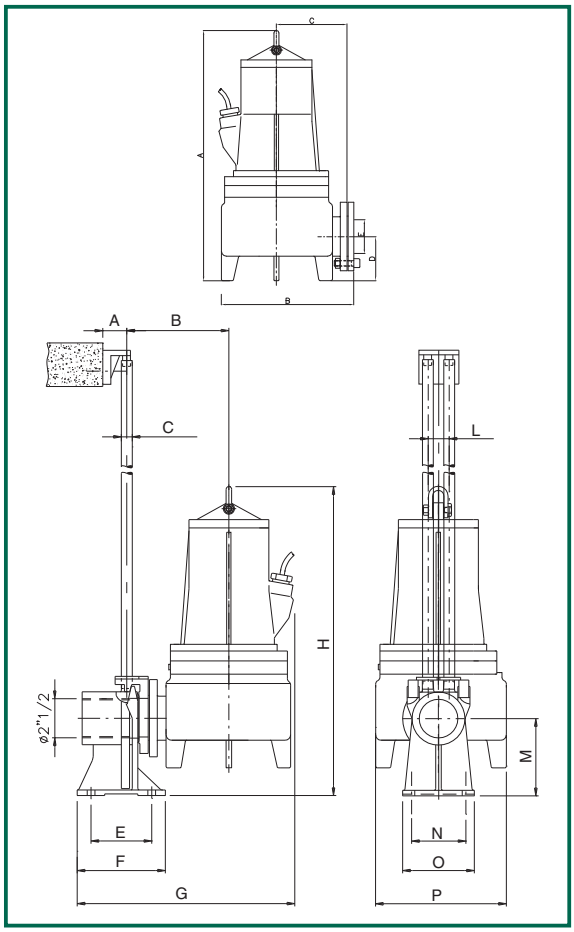


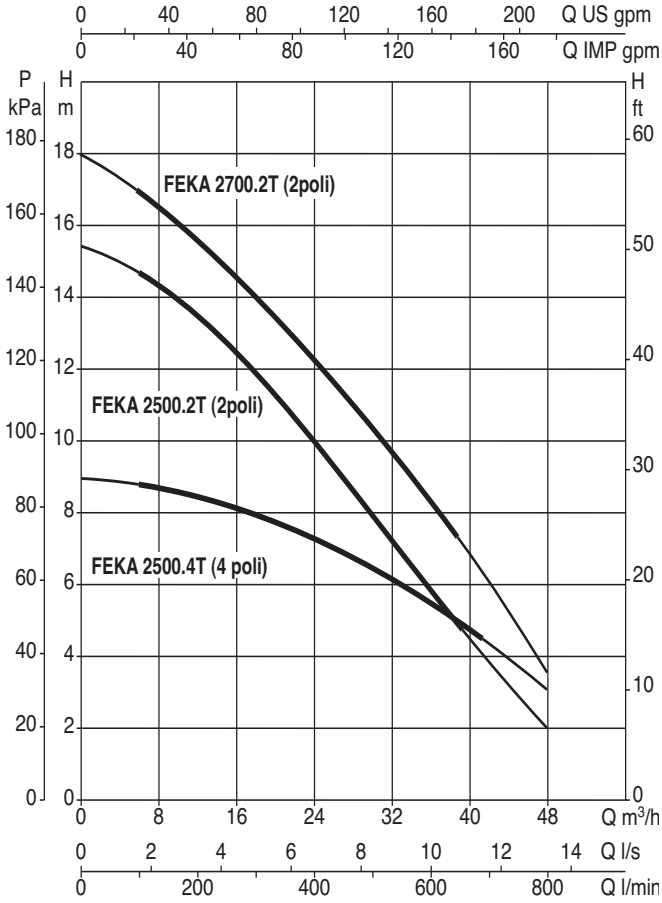
- Operating range: from 7 to 516 m^3/h in continuous duty with head up to 40 m;
- Liquid quality requirements: waste water, water in general containing solid bodies (view free passage in dimensions table), ground water, rain water, clean and black waste water, river or lake water, always non aggressive;
- Liquid temperature range: from 0°C to +55°C
- Maximum immersion depth: 10 metres
- Installation: fixed or portable in a vertical position

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

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

FEKA 2500





Packing dimension of the pump

MODEL	A	B	C	D	E	G	FREE PASSAGE OF SOLIDS mm	WEIGHT Kg
FEKA 2500.4T	515	273	158	90	62	2"1/2	62	40
FEKA 2500.2T								45
FEKA 2700.2T								47

Dimensions with lifting device

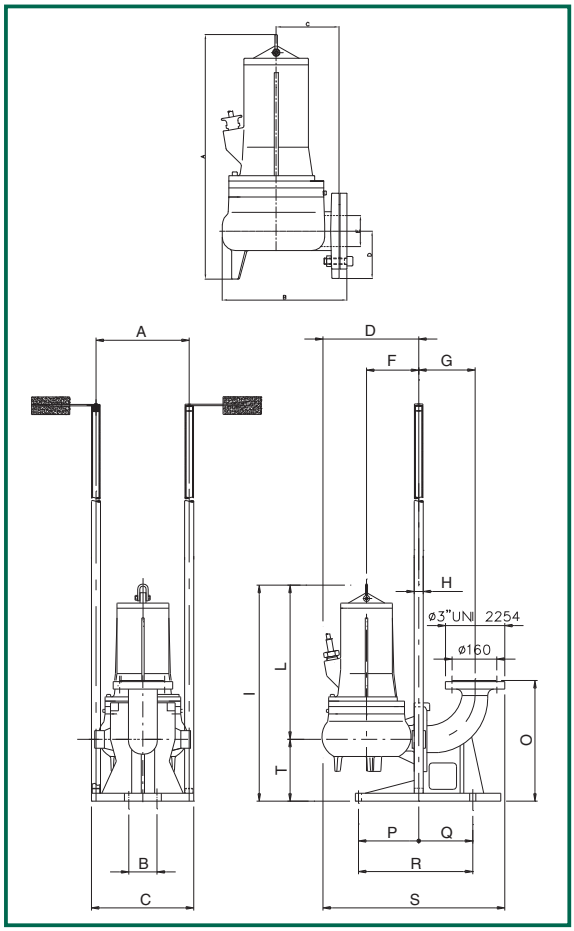
MODEL	A	B	C	D	E	F	G	H	L	M	N	O	P
FEKA 2500.4T	80	190	3/4"	2" 1/2	110	150	418	530	38	140	100	130	228
FEKA 2500.2T													
FEKA 2700.2T													

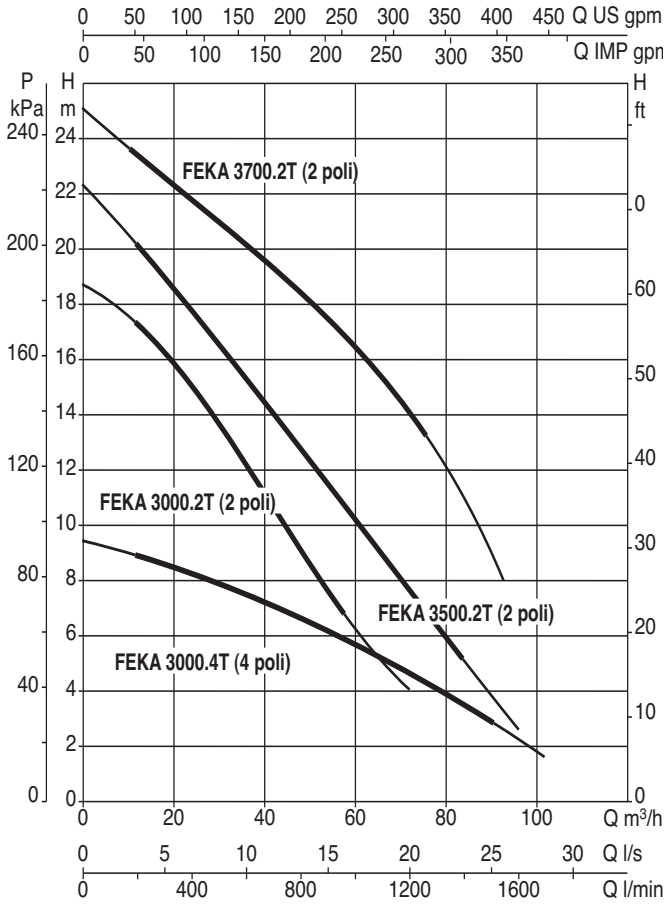
MODEL	ELECTRICAL DATA					HYDRAULIC DATA							
	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	RPM 1/min.	Q m^3/h	0	6	12	18	24	36	48
						Lt/min.	0	100	200	300	400	600	800
FEKA 2500.4T	3x400 V~	1,8	2,5	4,6	1400	H (m)	9	8,75	8,4	7,8	7,2	5,4	2
FEKA 2500.2T	3x400 V~	1,8	2,5	4,8	2800		15,5	14,9	13,6	11,9	10	5,9	3
FEKA 2700.2T	3x400 V~	2,2	3	5,4	2840		18	17	15,6	14	12,2	8,3	3,9

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

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

FEKA 3000





Packing dimension of the pump

MODEL	A	B	C	D	E	G	FREE PASSAGE OF SOLIDS mm	WEIGHT Kg
FEKA 3000.4T	620	315	185	125	82	3"	79	76
FEKA 3000.2T		365	203		68		67	72
FEKA 3500.2T								74
FEKA 3700.2T							50	76

Dimensions with lifting device

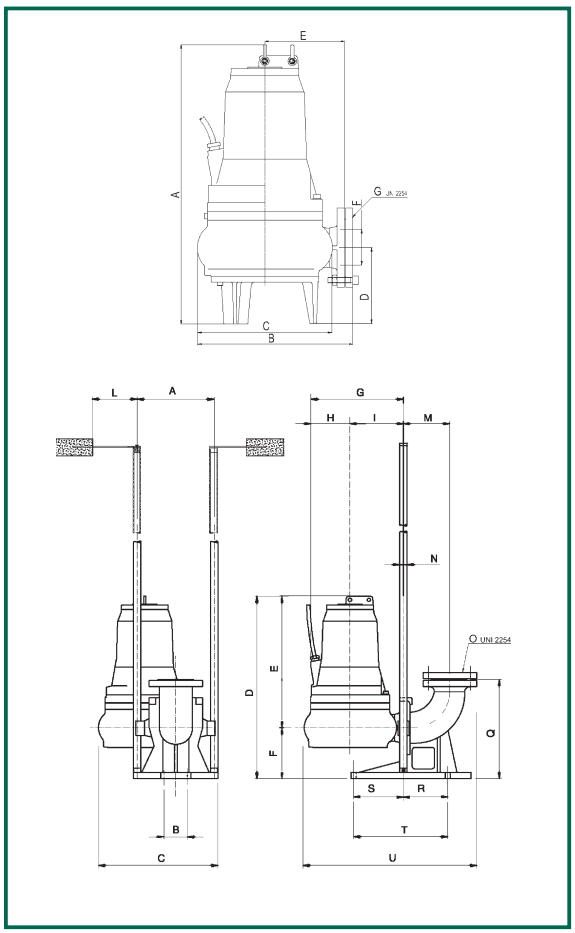
MODEL	A	B	C	D	F	G	H	I	L	O	P	Q	R	S	T
FEKA 3000.4T	353	110	422	315	175	180	2"	700	480	375	240	150	390	638	220
FEKA 3000.2T				330											
FEKA 3500.2T															
FEKA 3700.2T															

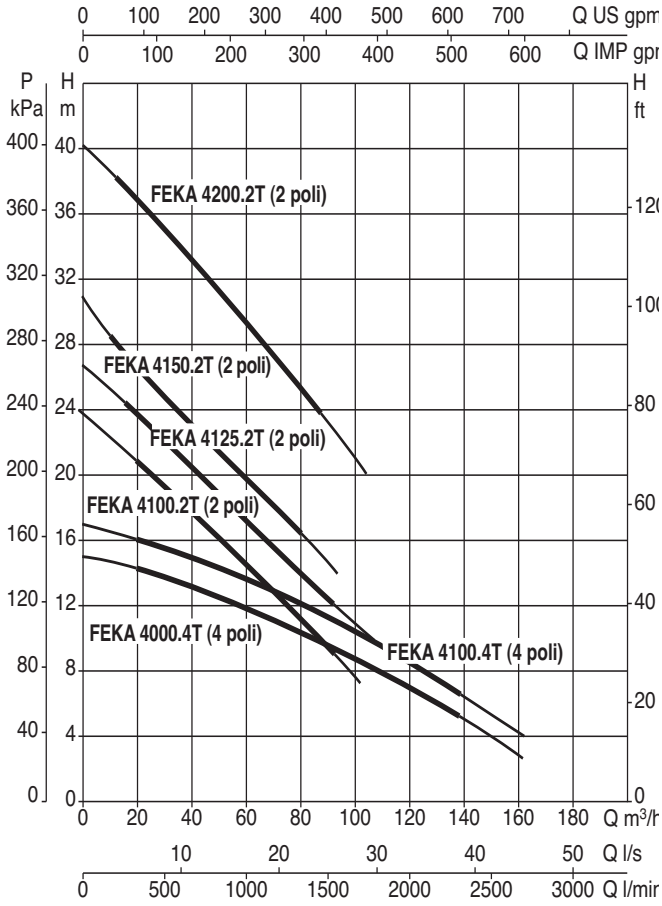
MODEL	ELECTRICAL DATA					HYDRAULIC DATA											
	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	RPM 1/min.	Q m³/h	0	12	18	24	36	48	60	72	84	96	102
						Lt./min.	0	200	300	400	600	800	1000	1200	1400	1600	1700
FEKA 3000.4T	3x400 V~	3,6	5	7,8	1400	H (m)	9,5	8,9	8,5	8,2	7,4	6,5	5,6	4,6	3,6	2,4	1,8
FEKA 3000.2T	3x400 V~	3,7	5	9,8	2800		18,7	17,5	16,6	15,4	12,6	9,5	6,4	4			
FEKA 3500.2T	3x400 V~	4,4	6	10	2910		22,3	20,4	19,1	17,9	15,2	12,8	10	7,5	5	2,5	
FEKA 3700.2T	3x400 V~	5,5	7,5	12	2900		25	23,4	22,6	21,9	20,2	18,5	16,5	14	10,8		

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

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

FEKA 4000





Packing dimension of the pump

MODEL	A	B	C	D	E	F	G	FREE PASSAGE OF SOLIDS mm	WEIGHT Kg
FEKA 4000.4T	774	410	366	227	225	100	4"	98	149
FEKA 4100.4T									158
FEKA 4100.2T								83	142
FEKA 4125.2T									148
FEKA 4150.2T	874								160
FEKA 4200.2T									220

Dimensions with lifting device

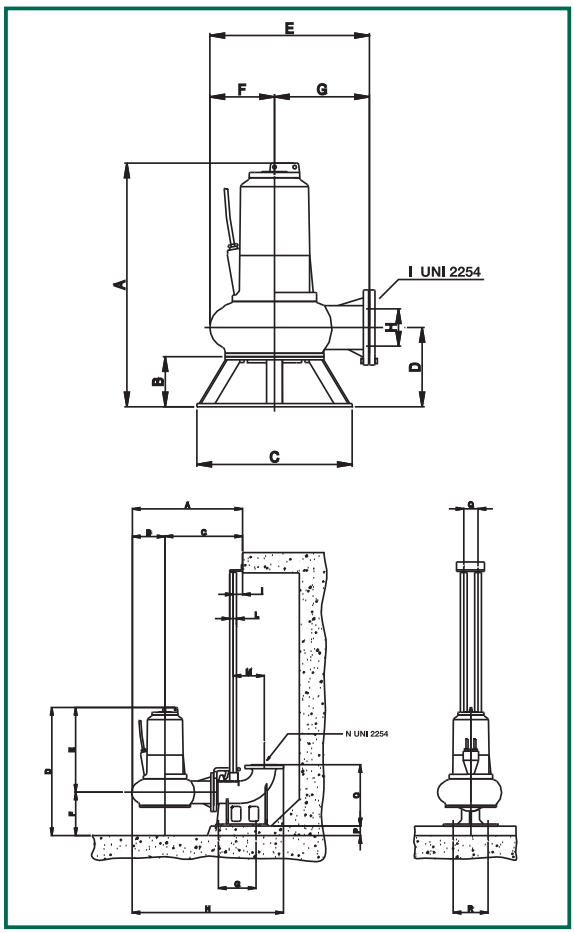
MODEL	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R	S	T	U
FEKA 4000.4T	355	110	520	774	547	227	410	185	225	300	200	ø 2"	ø 4"	–	420	180	280	460	730
FEKA 4100.4T																			
FEKA 4100.2T																			
FEKA 4125.2T																			
FEKA 4150.2T																			
FEKA 4200.2T																			

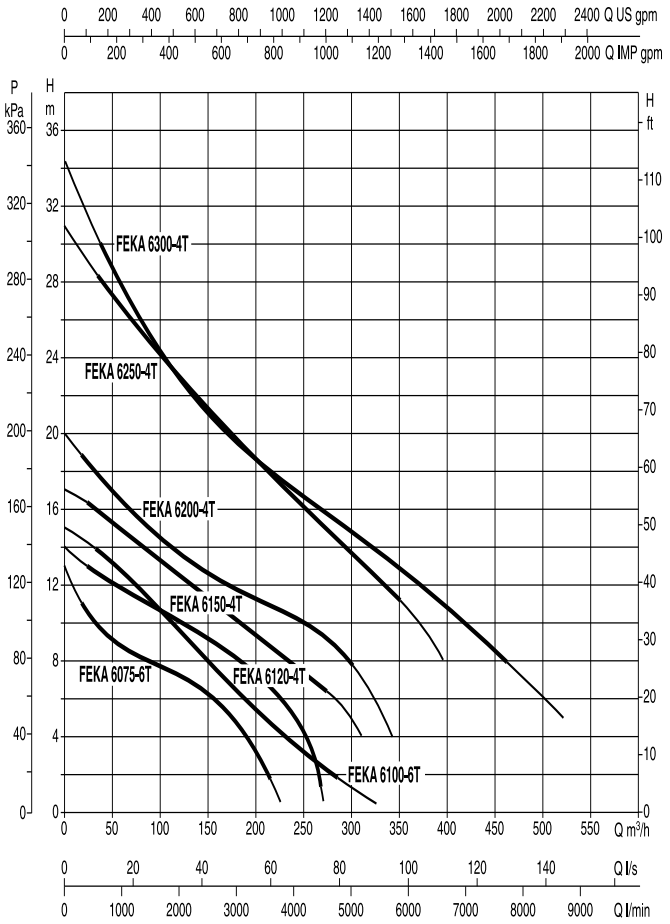
MODEL	ELECTRICAL DATA					HYDRAULIC DATA													
	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	RPM 1/min.	Q m³/h	0	24	36	48	60	72	84	96	102	120	138	150	162
						Lt./min.	0	400	600	800	1000	1200	1400	1600	1700	2000	2300	2500	2700
FEKA 4000.4T	3x400 V~	6	8	15	1400	H (m)	15,3	14,3	13,7	12,9	12	11,2	10,3	9,3	8,8	7,1	5,5	4,3	3
FEKA 4100.4T	3x400 V~ (⅄/∅)	7,5	10	20	1400		17	16	15,2	14,7	13,8	12,8	11,8	10,6	10	8,3	6,5	5,2	4
FEKA 4100.2T	3x400 V~ (⅄/∅)	7,5	10	22,5	2800		24	20,4	18,2	16,1	14,3	12,3	10,2	8,4	7,6				
FEKA 4125.2T	3x400 V~ (⅄/∅)	9,2	12,5	26	2930		27	23,5	21,3	19,5	17,3	15,3	13,5	10,9					
FEKA 4150.2T	3x400 V~ (⅄/∅)	11	15	23	2890		31	25,8	23,8	22	20	18,2	16						
FEKA 4200.2T	3x400 V~ (⅄/∅)	15	20	31	2920		40	36,6	34,3	32	29,8	27,6	25	22	20,6				

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

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

FEKA 6000





Packing dimension of the pump

MODEL	A	B	C	D	E	F	G	H	I	FREE PASSAGE OF SOLIDS mm	WEIGHT Kg
FEKA 6075.6T	950	190	590	301	602	240	362	150	DN 150	95	200
FEKA 6100.6T	1150	190	590	317	657	271	386	150	DN 150	108	300
FEKA 6120.4T	950	190	590	301	602	240	362	150	DN 150	95	200
FEKA 6150.4T	950	190	590	301	602	240	362	150	DN 150	95	212
FEKA 6200.4T	950	190	590	301	602	240	362	150	DN 150	95	226
FEKA 6250.4T	1150	190	590	317	657	271	386	150	DN 150	108	330
FEKA 6300.4T	1150	190	590	317	657	271	386	150	DN 150	108	340

Dimensions with lifting device

MODEL	A	B	C	D	E	F	G	H	I	L	M	N	O	P	Q	R
FEKA 6075.6T	810	240	570	970	650	320	300	1100	70	ø 2"	229	DN 150	450	70	105	275
FEKA 6100.6T	871	271	600	1155	835	320	300	1174	70	ø 2"	229	DN 150	450	70	105	275
FEKA 6120.4T	810	240	570	970	650	320	300	1100	70	ø 2"	229	DN 150	450	70	105	275
FEKA 6150.4T	810	240	570	970	650	320	300	1100	70	ø 2"	229	DN150	450	70	105	275
FEKA 6200.4T	810	240	570	970	650	320	300	1100	70	ø 2"	229	DN 150	450	70	105	275
FEKA 6250.4T	871	271	600	1155	835	320	300	1174	70	ø 2"	229	DN 150	450	70	105	275
FEKA 6300.4T	871	271	600	1155	835	320	300	1174	70	ø 2"	229	DN 150	450	70	105	275

MODEL	ELECTRICAL DATA					Q	HYDRAULIC DATA																	
	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	RPM 1/min.	m³/h	0	36	48	60	72	84	96	102	120	138	150	162	180	210	240	270	300	360	420	516
						Lt./min.	0	600	800	1000	1200	1400	1600	1700	2000	2300	2500	2700	3000	3500	4000	4500	5000	6000	7000	8600
FEKA 6075.6T	3x400 V~ (⅄/∅)	5,5	7,5	12	950		13	9,5	9,0	8,8	8,2	7,8	7,6	7,4	7,1	6,4	6,0	5,2	4,8	2,2						
FEKA 6100.6T	3x400 V~ (⅄/∅)	7,5	10	19	950		15	13,5	13,0	12,8	11,8	11,2	10,4	10,2	9,5	8,2	7,8	6,8	6,5	5,0	3,5	2,5	1,2			
FEKA 6120.4T	3x400 V~ (⅄/∅)	8,8	12	23	1450		14	12,5	11,8	12,5	11,2	10,8	10,4	10,2	10,0	9,4	8,8	8,4	8,1	6,9	5,0	3,2				
FEKA 6150.4T	3x400 V~ (⅄/∅)	11	15	26	1450	H (m)	17	16	15,8	15,2	14,9	14,4	13,9	13,4	12,4	11,8	11,2	10,8	10,0	8,2	7,7	5,8	4,8			
FEKA 6200.4T	3x400 V~ (⅄/∅)	15	20	31	1450		20	17,5	16,8	16,5	15,2	14,8	14,4	14,2	13,5	12,8	12,4	11,8	11,8	11,0	10,7	9,5	8,0			
FEKA 6250.4T	3x400 V~ (⅄/∅)	18,5	25	37	1450		31	28,0	27,0	26,5	25,4	24,6	24,0	23,8	23,0	21,6	20,6	20,0	20,0	18,5	16,5	15,0	12,5	10,5		
FEKA 6300.4T	3x400 V~ (⅄/∅)	22	30	46	1450		34,3	29,8	28,2	27,9	26,2	25,0	24,0	23,8	23,0	21,6	20,6	20,0	19,5	18,0	17,1	16,0	15,0	12,3	10,0	4,8

PROTECTION AND CONTROL SYSTEMS

SINGLE-PHASE VERSION

MODEL	MDN	ED 1,3 M	ED 3 M	ED 3 M Hs	E-BOX 2D	E-BOX 2D 40 μF	SOCCORRER
TYPE OF PUMP	DRENAG 1400 M FEKA 1400 M	FEKA 600 M FEKA VS M FEKA VX M DRENAG 900 M	DRENAG 1400 M FEKA 1400 M	GRINDER 1400 M	FEKA 600 M FEKA VS M FEKA VX M DRENAG 900 M	DRENAG 1400 M FEKA 1400 M	TUTTE LE POMPE MONOFASE
N° pump to be connected	1	1	1	1	2	2	1 o 2
Static torque increase				●			
N° float to be connected*	1	1 o 2	1 o 2	1 o 2	2 o 3	2 o 3	1 o 2
Remote operation of luminous alarms or float alarms		●	●	●	●	●	●
Man.-0-Auto. selector		●	●	●	●	●	

THREE-PHASE VERSION

MODEL	ED 1 T	ED 1,5 T	ED 2,5 T	E-BOX 2D	E-BOX 2D
TYPE OF PUMP	FEKA 600 T FEKA VS 550-750 T FEKA VX 550-750 T	FEKA VS 1000-1200 T FEKA VS 1000-1200 T DRENAG 900 T	DRENAG 1800 T FEKA 1800 T GRINDER 1800 T FEKA 2500.4 T FEKA 2500.2 T FEKA 2700.2 T	FEKA 600 T FEKA VS 550-750 T FEKA VX 550-750 T FEKA VS 1000-1200 T DRENAG 900 T	DRENAG 1800 T FEKA 1800 T GRINDER 1800 T FEKA 2500.4 T FEKA 2500.2 T FEKA 2700.2 T
N° pump to be connected	1	1	1	2	2
N° float to be connected*	1 o 2	1 o 2	1 o 2	2 o 3	2 o 3
Remote operation of luminous alarms or float alarms	●	●	●	●	●
Man.-0-Auto. selector	●	●	●	●	●

* To be ordered separatly

PROTECTION AND CONTROL SYSTEMS

THREE-PHASE VERSION

MODEL	ED 4 T	ED 7,5 T	ED 8 T	ED 15 T	ED 20 T	ED 25 T	ED 30 T
TYPE OF PUMP	FEKA 3000.4 T	FEKA 3000.2 T FEKA 3500.2 T FEKA 3700.2 T FEKA 6075.6 T	FEKA 4000.4 T	FEKA 4100.4 T FEKA 4100.2 T FEKA 4150.2 T FEKA 6100.6 T FEKA 6120.4 T	FEKA 4125.2 T FEKA 4200.2 T FEKA 6200.4 T	FEKA 6250.4 T	FEKA 6300.4 T
N° pump to be connected	1	1	1	1	1	1	1
N° float to be connected*	1 o 2	1 o 2	1 o 2	1 o 2	1 o 2	1 o 2	1 o 2
Remote operation of luminous alarms or float alarms	●	●	●	●	●	●	●
Man.-0-Auto. selector	●	●	●	●	●	●	●
Star-delta starting				●	●	●	●

THREE-PHASE VERSION

MODEL	E2D 8 T	E2D 15 T	E2D 16 T	E2D 30 T	E2D 40 T	E2D 50 T	E2D 60 T
TYPE OF PUMP	FEKA 3000.4 T	FEKA 3000.2 T FEKA 3500.2 T FEKA 3700.2 T FEKA 6075.6 T	FEKA 4000.4 T	FEKA 4100.4 T FEKA 4100.2 T FEKA 4150.2 T FEKA 6100.6 T FEKA 6120.4 T	FEKA 4125.2 T FEKA 4200.2 T FEKA 6200.4 T	FEKA 6250.4 T	FEKA 6300.4 T
N° pump to be connected	2	2	2	2	2	2	2
N° float to be connected*	2 o 3	2 o 3	2 o 3	2 o 3	2 o 3	2 o 3	2 o 3
Remote operation of luminous alarms or float alarms	●	●	●	●	●	●	●
Man.-0-Auto. selector	●	●	●	●	●	●	●
Star-delta starting			●	●	●	●	●

* To be ordered separatly

CONTROL MDN

CE

GENERAL DATA

Applications

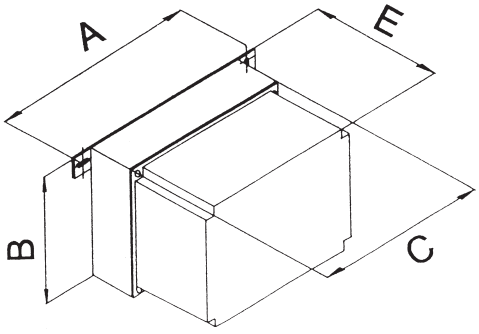
Control unit for the protection and automatic and manual operation of DRENAG 1400 M and FEKA 1400 M single-phase electropumps.
To be connected to a wall socket 2P+ ⏚ 16 Amp 220-240 V a.c. with a block switch and fuse-carrier, using type AM fuses, 10-12 Amp.

Characteristics

Supplied in a self-extinguishing plastic box, fitted with a bracket for wall mounting.
Complete with:
- micro circuit breaker with manual reset for overload protection;
- thermal protection with automatic reset;
- 40 µF starting capacitor;
- remote control switch to guarantee operation of an optional float (available on request);
- terminal board for connecting the electropump and the float (if required, fed at 220-240V);
- 1,5 m power cable H07RN-F 3G1,5 with EEC plug 17-2P+Earth (16A-220V);
- plate showing the wiring diagram applied on the inside of the cover.

TECHNICAL DATA

- Supply voltage	220 - 240 V
- Phases	1
- Frequency	50 Hz
- Rated output power	1,1 kW - 1,5 HP
- Max. rated using current	12 Amp
- Starting capacitor	40 µF-450 V
- Field of use environment temp.	-10°C +40°C
- Degree of protection	IP55
- Storage temperature	-10°C +60°C
- Relative humidity of the air	MAX 95%
- Electric construction	EN 603204-1 and EN 60439-1
- E.M.C. (emissions)	EN 55014 - EN 61000-3-2-1



MODEL	DIMENSIONS (mm)				WEIGHT (Kg)
	A	B	C	E	
MDN	225	168	198	148	2,1

DAB PUMP PERFORMANCE

ED 1,3 M - ED 3 M

CE

GENERAL DATA

Applications

Electric panel for the protection and automatic operation by means of one or more floats of single-phase electropumps, like t is indicated in the following table:

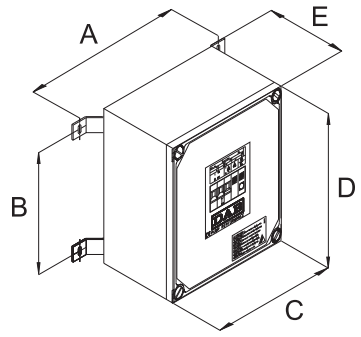
CONTROL PANEL	ELECTROPUMP
ED 1,3 M	FEKA 600M, FEKA VS-VX 550 M-NA, FEKA VS-VX 750 M-NA, FEKA VS-VX 1000 M-NA, FEKA VS-VX 1200 M-NA, DRENAG 900M
ED 3 M	DRENAG 1400 M, FEKA 1400 M

Characteristics

Supplied in a thermoplastic self-extinguishing box, fitted with a bracket for wall mounting. The panel is self-protected and it protects the electropump from overloads and short circuit breakers with manual reset (only for model ED 3 M).
Complete with:
- insulating switch of the supply line;
- self-protected transformer for the supply at 24V of the external controls;
- terminals for connecting the electropump and the control floats minimum/maximum (or thrust meter etc.);
- terminals for connecting the alarm float and for installing a remote acoustic or luminous alarm (without potential);
- thermal protection with manual reset for connection to the KK leads from the motor (only for model ED 3 M);
- button in front of the panel for the manual functioning of the electropump;
- green signal in front the panel indicating the working pump.

TECHNICAL DATA

- Supply voltage:	220 - 240 V +/- 10%	
- Phases:	1	
- Frequency:	50 - 60 Hz	
	ED 1,3 M	**ED 3 M**
- Rated output power:	1,85 KW 220-240 V	2,95 KW 220-240 V
- Max. rated using current:	10 Ampere	16 Ampere
- Starting capacitor:	–	40 µF
- Field of use environment temp.:	-10°C +40°C	
- Storage environment temp. limit:	-25°C +55°C	
- Relative humidity (without condensation):	50% at 40°C max. (90% at 20°C)	
- Max. altitude:	3000 m (a.s.l.)	
- Degree of protection:	IP 55	
- Construction of the panels:	according to EN 60204-1 and EN 60439-1	



MODEL	DIMENSIONS (mm)					WEIGHT (Kg)
	A	B	C	D	E	
ED 1,3 M	350	245	270	300	190	5,6
ED 3 M	350	245	270	300	190	5,6

ED 3 M Hs

CE

GENERAL DATA

Applications

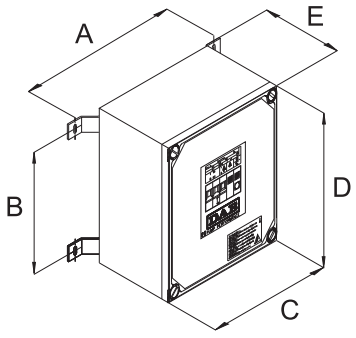
Electric panel for the protection and automatic operation by means of one or more floats of single-phase electropumps model GRINDER 1400 M in single installation.

Characteristics

Supplied in a thermoplastic self-extinguishing box, fitted with a bracket for wall mounting. The panel is self-protected and it protects the electropump from overloads and short circuit breakers with manual reset.
Complete with:
- insulating switch of the supply line;
- automatic device for increasing static torque when starting with the possibility of regulation from 0,5 to 4 seconds (set from the constructor during the taring at 2 seconds).
- self-protected transformer for the supply at 24V of the external controls;
- terminals for connecting the electropump and the control floats minimum/maximum (or thrust meter etc.);
- terminals for connecting the alarm float and for installing a remote acoustic or luminous alarm (without potential);
- thermal protection with manual reset for connection to the KK leads from the motor;
- button in front of the panel for the manual functioning of the electropump;
- green signal in front the panel indicating the working pump.

TECHNICAL DATA

- Supply voltage:	220 - 240 V +/- 10%
- Phases:	1
- Frequency:	50 - 60 Hz
- Rated output power:	2,95 KW 220-240 V
- Max. rated using current:	16 Ampere
- Starting capacitor:	40 µF - 450 V
- Starting capacitor:	200-250 µF - 320 V
- Field of use environment temp.:	-10°C +40°C
- Storage environment temp. limit:	-25°C +55°C
- Relative humidity (without condensation):	50% at 40°C max. (90% at 20°C)
- Max. altitude:	3000 m (a.s.l.)
- Degree of protection:	IP 55
- Construction of the panels:	according to EN 60204-1 and EN 60439-1



MODEL	DIMENSIONS (mm)					WEIGHT (Kg)
	A	B	C	D	E	
ED 3 M Hs	350	335	270	390	190	6,9

E-BOX 2D M / T - E-BOX 2D M 40 μF

GENERAL DATA

Applications

Control panel for the protection and automatic operation, with floats or level sensor control, of two single-phase or three-phase (direct starting) electric pumps installed as a pair. Thanks to the facility for pump current control (1-12 A) the E- Box control panel is compatible with a large number of different pump models. E-box can control one or more pumps.

PANEL		ELECTRIC PUMP
E-BOX 2D	SINGLE-PHASE	FEKA 600 M, FEKA VS M, FEKA VX M, DRENAG 900 M
E-BOX 2D 40 μF		DRENAG 1400 M, FEKA 1400 M
E-BOX 2D	THREE-PHASE	FEKA 600 T, FEKA VS 550-750 T, FEKA VX 550-750 T, FEKA VS 1000-1200 T, DRENAG 900 T, DRENAG 1800 T, FEKA 1800 T, GRINDER 1800 T, FEKA 2500.4 T, FEKA 2500.2 T, FEKA 2700.2 T

Features

Supplied in a self-extinguishing thermoplastic enclosure, complete with wall mounting brackets.
The control panel protects the pumps from overloads and short-circuit conditions, with manual reset, and overtemperature conditions with automatic reset.

Front panel components:
- main disconnect switch with padlockable doorlock
- AUT - 0 - MAN operating mode selection buttons
- alarms RESET button
- run, trip and alarm indicator lights

Components inside the control panel enclosure:
- control circuit board, fuses, contactors
- terminals for single phase (L-N) or three-phase (L1-L2-L3) power feeding input
- terminals for connection of single-phase (L-N) or three-phase (U-V-W) electric pumps
- terminals for connection to pressure switches, sensors, KK thermal protection, alarm signalling N.O. contacts
- mini dipswitches for operating mode selection float switches or level sensors, filling or emptying of tanks, operation with one or two pumps.

E-Box functions
The E-Box control panel protects the electric pumps and starts them in sequence in relation to the filling or emptying of the tanks, with water level detection system by means of level sensors or 2 - 3 float switches (standard or bulb type). At each operating cycle the pumps starting sequence is inverted. E-box can also control just one pump by setting the dipswitches appropriately.

Operation with two float switches
The two float switches system must be used in cases in which the dimensions of the water collection tank allow sufficient travel of the floats. Float switch B enables operation of the first pump, float switch C starts also the second pump. The two pumps are stopped when the contact of float switch B opens.

Operation with three float switches
The three float switches system, which is to be preferred because of the precision of pumps starting and stopping, is recommended in cases wherein the tank diameter is limited such as to obstruct regular travel of the floats.
Float switch B enables operation of the first pump, float switch C starts also the second pump.
The two pumps are stopped when the contact of the third float switch A opens.

Operation with level sensor
Level sensor systems are recommended in cases wherein it is not possible to use the float switch (narrow tank / sump, sewage, etc.)

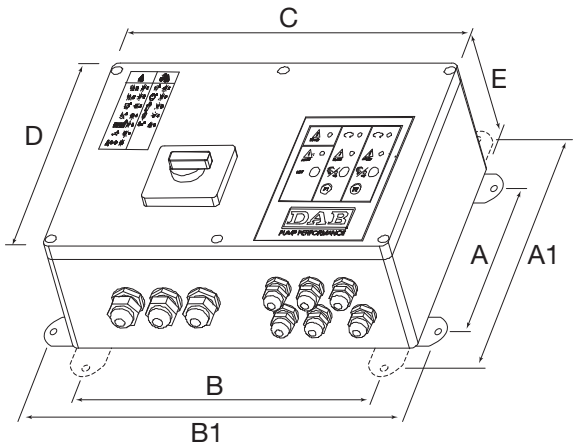
Pump start and stop functions are selected by means of two trimmers:
- SP: tank max level (in metres)
- DP: tank min/max level (in percentage with respect to Sp)

Emptying function:
the first pump starts after level SP (e.g. 2 m) is surpassed; if the tank level does not fall, after 5 seconds also the second pump is started to assist the first one.
The two pumps are stopped on the basis of the SP - DP value
(e.g. with DP= 50%, pumps stop at 2 metres - 50% = 1 metre).

Filling function:
the first pump starts when level DP falls
(e.g. SP= 2 metres, DP= 50% pump starts at 2 m - 50% = 1 metre),
if the tank level does not increase, after 5 seconds also the second pump is started to assist the first one.
The two pumps are stopped on the basis of the SP value (e.g. 2 metres).

TECHNICAL DATA

Nominal power supply voltage	1x230 V - 3x230 V - 3x400 V (selectable)
Frequency	50 - 60 Hz
Maximum operating power	5.5 kW + 5.5 kW
Maximum operating current	12 A + 12 A
Start capacitor (E-BOX 2D M40 µF only)	40 microfarads
Operating environmental temperature limits	-10° C + 40° C
Storage temperature limits	-25° C + 55° C
Air relative humidity	90% at 20° C
Max. altitude	100 m above sea level
Protection rating	IP 55
Control panel construction reference standard	EN 60335-1



MODEL	DIMENSIONS (mm)							GROSS WEIGHT (Kg)
	A	A1	B	B1	C	D	E	
E-BOX 2D M / T	212	265	282	337	320	260	120	
E-BOX 2D M 40 µF	212	265	282	337	320	260	120	

SOCCORRER

GENERAL DATA

Applications

SOCCORRER systems are suitable for civil and industrial installations wherein a 230 V single-phase electric pump must be powered and a temporary power loss may result in flooding of rooms located under the level of the water-drainage system, resulting in possible damage to property or personal injury.
The new SOCCORRER systems are composed of two main parts: a metal bracket with wall fixing system and a body made of self-extinguishing ABS. The innovative styling of these ensures that they are suitable for installation in all types of surroundings.

OPERATION

SOCCORRER systems are completely automatic because they are controlled by a high performance microprocessor capable of administrating:

- Mains power loss and the need to switch to battery power
- Battery type and charge level
- Battery charging in the shortest possible time
- Starting and stopping of the electric pumps (also by means of a safety float switch)
- Current monitoring protection system
- Electric pump overloads
- Automatic reset of the electric pumps
- Pump dry running protection
- Manual and automatic self-test routines
- Voltage free contact for remote alarm signal

SOCCORRER systems are available with a “single output” (one electric pump) or “dual output” (two electric pumps). In the “dual output” version operation of the electric pumps can be alternated or simultaneous.

SUPPLY

SOCCORRER systems are supplied complete with: anti-flood controller, battery connection cables, sealed batteries, and battery mounting racks. The float switch is supplied separately, although it is required for operation in conjunction with non-automatic DAB pumps.

SOCCORRER – selection tables

CORRECT SELECTION OF THE "SOCCORRER" FLOOD PROTECTION SYSTEM

1. In the RUN TIME TABLE, find the maximum exposed area in compliance with the requirements of the application this allows us to choose the pump* (pumps must be ordered separately)
2. Now follow the column to find the required run time in minutes in order to select the correct SOCCORRER complete with batteries.
3. in the ACCESSORIES table, identify the devices required for correct installation on the basis of the pump and SOCCORRER models

* for heads in excess of 3 metres it is good practice to check the working point of the pumps

SOCCORRER RUN TIMES TABLES ** (minutes)		PUMP MODEL	NOVA 180 	NOVA 200 	NOVA 300 	NOVA 600 	FEKA 600 	FEKA VS - VX 550 	FEKA VS - VX 750 
TOTAL EXPOSED AREA (m²)			40	95	125	190	150	160	230
MODEL	Operation	No. of batteries							
SOCCORRER 500	SINGLE OUTPUT (1 pump)	4 x 18 Ah	106	63	60				
SOCCORRER 600	SINGLE OUTPUT (1 pump) DUAL OUTPUT (2 pumps running alternately)	2 x 45 Ah	166	100	93				
		2 x 60 Ah	230	138	129				
	SINGLE OUTPUT (2 pumps running simultaneously) DUAL OUTPUT (2 pumps running simultaneously)	2 x 45 Ah	83	x	x				
		2 x 60 Ah	115	x	x				
SOCCORRER 1000 PLUS	SINGLE OUTPUT (1 pump) DUAL OUTPUT (2 pumps running alternately)	2 x 45 Ah				47			
		2 x 60 Ah				65		49	
		2 x 100 Ah				123		88	
	SINGLE OUTPUT (2 pumps running simultaneously) DUAL OUTPUT (2 pumps running simultaneously)	2 x 45 Ah		54	50	x	x	x	
		2 x 60 Ah		73	66	x	x	x	
		2 x 100 Ah		140	130	x	x	x	
SOCCORRER 1500	SINGLE OUTPUT (1 pump) DUAL OUTPUT (2 pumps running alternately)	4 x 60 Ah				121	95	98	80
		4 x 100 Ah				218	172	176	144
	SINGLE OUTPUT (2 pumps running simultaneously) DUAL OUTPUT (2 pumps running simultaneously)	4 x 60 Ah				x	x	x	x
		4 x 100 Ah				x	x	x	x
SOCCORRER 2000	SINGLE OUTPUT (1 pump) DUAL OUTPUT (2 pumps running alternately)	4 x 60 Ah							
		4 x 100 Ah							
	SINGLE OUTPUT (2 pumps running simultaneously) DUAL OUTPUT (2 pumps running simultaneously)	4 x 60 Ah				60	x	x	x
		4 x 100 Ah				106	x	x	x
SOCCORRER 2500	SINGLE OUTPUT (1 pump) DUAL OUTPUT (2 pumps running alternately)	4 x 60 Ah							
		4 x 100 Ah							
	SINGLE OUTPUT (2 pumps running simultaneously) DUAL OUTPUT (2 pumps running simultaneously)	4 x 60 Ah					47	48	x
		4 x 100 Ah					84	86	x
SOCCORRER 3000	SINGLE OUTPUT (1 pump) DUAL OUTPUT (2 pumps running alternately)	4 x 60 Ah							
		4 x 100 Ah							
	SINGLE OUTPUT (2 pumps running simultaneously) DUAL OUTPUT (2 pumps running simultaneously)	4 x 60 Ah							40
		4 x 100 Ah							74
SOCCORRER 4000	SINGLE OUTPUT (1 pump) DUAL OUTPUT (2 pumps running alternately)	4 x 180 Ah							284
	SINGLE OUTPUT (2 pumps running simultaneously) DUAL OUTPUT (2 pumps running simultaneously)	4 x 180 Ah							142

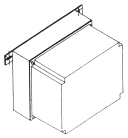
**** To ensure the maximum performance of the system use exclusively the Soccorrer-pump combinations indicated above.**

SOCCORRER – selection tables

SOCCORRER RUN TIMES TABLES ** (minutes)		PUMP MODEL	FEKA VS - VX 1000 	FEKA VS - VX 1200 	DRENAG 1000 	DRENAG 1200 	DRENAG 1400 	FEKA 1400 
TOTAL EXPOSED AREA (m^2)			300	310	230	300	385	385
MODEL	OPERATION	No. of batteries						
SOCCORRER 2000	SINGLE OUTPUT DUAL OUTPUT (for alternate operation)	4 x 60 Ah	62		68	55		
		4 x 100 Ah	109		120	96		
SOCCORRER 2500	SINGLE OUTPUT DUAL OUTPUT (for alternate operation)	4 x 60 Ah		47			44	47
		4 x 100 Ah		83			78	85
SOCCORRER 3000	SINGLE OUTPUT DUAL OUTPUT (for alternate operation)	4 x 60 Ah						
		4 x 100 Ah						
SOCCORRER 4000	SINGLE OUTPUT DUAL OUTPUT (for alternate operation)	4 x 100 Ah						
		4 x 180 Ah	220	169	243	195	159	172
	DUAL OUTPUT (simultaneaous)	4 x 100 Ah	57	x	63	51	x	x
		4 x 180 Ah	110	x	122	97	x	x
SOCCORRER 5000	SINGLE OUTPUT DUAL OUTPUT (for alternate operation)	4 x 100 Ah						
		4 x 180 Ah						
	DUAL OUTPUT (simultaneaous)	4 x 100 Ah		44			41	45
		4 x 180 Ah		83			78	85

** To ensure the maximum performance of the system use exclusively the Soccorrer-pump combinations indicated above.

OPTIONAL ACCESSORIES TO BE ORDERED SEPARATELY

TABLE OF ACCESSORIES		1° FLOAT 		2° FLOAT 		MDM CONTROL PANEL 	SEALED BATTERIES 	AUDIBLE VISUAL ALARM 
	PUMP TYPE	M-NA	M-A	M-NA	M-A	FEKA 1400M DRENAG 1400 M		
SOCCORRER	SINGLE OUTPUT	●	⊗	○	⊗	●	○	○
	DUAL OUTPUT FOR ALTERNATE OPERATION	●	⊗	○	⊗	●	○	○
	DUAL OUTPUT FOR SIMULTANEOUS OPERATION	●	●	●	⊗	●	○	○

● OBLIGATORY ○ SAFETY/OPTIONAL ⊗ NOT NECESSARY

SOCCORRER

MAIN DISPLAY INDICATIONS

Soccorrer systems are equipped with an intuitive display with guided software that presents the following information:

- Line voltage in V (Volt);
- Pump power draw with mains power present in VA (Volt Amperes);
- Batteries charge current with mains power present in A (Amperes);
- Batteries voltage in V (Volt);
- Maximum overload current expressed in A (Amperes);
- Number of pump starts in the presence of mains power;

- Number of pump starts using battery power;
- Run time of pump expressed in hours and minutes using battery power;
- Total run time of pump expressed in hours and minutes (batteries + mains);
- Number of hours and run time, user programmable, to perform self-test routine (only for pumps with float switch connected directly to the system);
- Serial number;
- Microprocessor version.

MACHINE DATA	***TEST***	***HISTORIC***
V1 228V P: 486VA Vb50.9V Ib: 4.7A	TEST 1↑/2↓ ENTER 230 26.2 P 427VA	INTERVENTI EPS IN RETE : 41900
MATRICOLA 1000-07-0830	TEMPO FRA I TEST ↓↑ 44 ORE ENTER	INTERVENTI EPS SU BATT.: 06801
	DURATA DEI TEST ↑↓ 12 sec. ENTER	USCITA RETE ON 00024 h 15 min.
		USCITA INV. ON 00012 h 05 min.

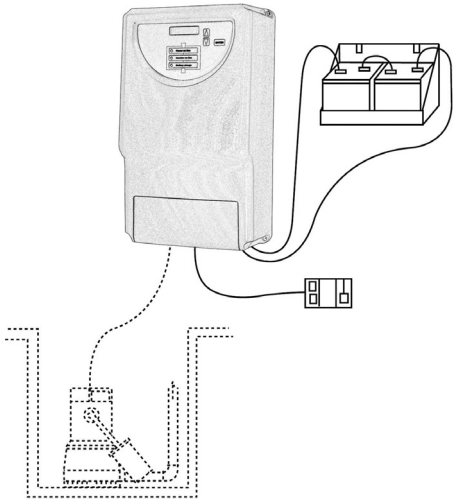
MODEL	ELECTRICAL DATA			HYDRAULIC DATA																
	In A	P2 NOMINAL		Q m³/h Lt./min.	0 0	1 16,6	2 33,3	3 50	4,5 75	5 83,3	6 100	7 116,6	7,5 125	9 150	10 166,6	12 200	15 250	18 300	24 400	30 500
		kW	HP																	
NOVA 180 M-A	0,9	0,22	0,3		4,95	4,45	3,9	3,15	1,7	1,15										
NOVA 180 M-NA	0,9	0,22	0,3		4,95	4,45	3,9	3,15	1,7	1,15										
NOVA 200 M-NA	1,5	0,22	0,3		7,1	6,6	6,1	5,6	4,9	4,7	4,2	3,7	3,5	2,8	2,35	1,5				
NOVA 300 M-A	1,6	0,22	0,3		7,18	6,7	6,23	5,8	5,2	5	4,6	4,2	4	3,42	3	2,2				
NOVA 600 M-A	3,4	0,55	0,75		10,2	9,7	9,3	8,9	8,3	8,1	7,8	7,4	7,2	6,6	6,1	5	3,1			
NOVA 600 M-NA	3,4	0,55	0,75		10,2	9,7	9,3	8,9	8,3	8,1	7,8	7,4	7,2	6,6	6,1	5	3,1			
FEKA 600 M-A	4,3	0,55	0,75		7,45	7,1	6,75	6,45	6,1	5,95	5,7	5,45	5,35	4,95	4,7	4,1	2,8			
FEKA 600 M-NA	4,3	0,55	0,75		7,45	7,1	6,75	6,45	6,1	5,95	5,7	5,45	5,35	4,95	4,7	4,1	2,8			
FEKA VS-VX 550 M-A	4,2	0,55	0,75		7,4	7,3	7,2	6,9	6,7	6,6	6,2	6,0	5,9	5,6	5,2	4,1	3,2	1,8		
FEKA VS-VX 550 M-NA	4,2	0,55	0,75	H	7,4	7,3	7,2	6,9	6,7	6,6	6,2	6,0	5,9	5,6	5,2	4,1	3,2	1,8		
FEKA VS-VX 750 M-A	5,13	0,75	1	(m)	9,6	9,5	9,4	9,2	9,0	8,9	8,5	8,3	8,2	7,6	7,2	6,7	5,6	4,3	1,9	
FEKA VS-VX 750 M-NA	5,13	0,75	1		9,6	9,5	9,4	9,2	9,0	8,9	8,5	8,3	8,2	7,6	7,2	6,7	5,6	4,3	1,9	
FEKA VS-VX 1000 M-A	6,63	1,00	1,36		11,8	11,7	11,6	11,3	11,1	11,0	10,5	10,3	10,2	9,8	9,4	9,0	8,0	6,8	4,1	
FEKA VS-VX 1000 M-NA	6,63	1,00	1,36		11,8	11,7	11,6	11,3	11,1	11,0	10,5	10,3	10,2	9,8	9,4	9,0	8,0	6,8	4,1	
FEKA VS-VX 1200 M-A	8,63	1,20	1,60		14	13,9	13,8	13,4	13,2	13,0	12,8	12,6	12,5	12,0	11,6	11,2	10,1	9,0	6,7	
FEKA VS-VX 1200 M-NA	8,63	1,20	1,60		14	13,9	13,8	13,4	13,2	13,0	12,8	12,6	12,5	12,0	11,6	11,2	10,1	9,0	6,7	
DRENAG 1000 M-A / M-NA	6	1	1,36		15,3			13,7	13,2	13	12,1	11,5	11,2	10,5	10	8,7	6,8	4,7		
DRENAG 1200 M-A / M-NA	7,5	1,2	1,6		17			15,4	14,7	14,5	13,8	13,4	13	12,4	11,8	10,7	9	7,3	3,3	
DRENAG 1400 M	9,2	1,1	1,5		19,2						17	16,5	16,3	15,9	15,6	14,6	13,5	12,1	9	5,5
FEKA 1400 M	8,5	1,1	1,5		13,9						12	11,6	11,4	11	10,8	9,9	8,9	7,8	5,7	3,4

SOCCORRER – technical data and configurations

TECHNICAL DATA		SOCCORRER 500	SOCCORRER 600	SOCCORRER 1000 PLUS	SOCCORRER 1500	SOCCORRER 2000	SOCCORRER 2500	SOCCORRER 3000	SOCCORRER 4000	SOCCORRER 5000
POWER SUPPLY VOLTAGE		230 V (+6% / -10%) - 50 Hz								
OUTPUT VOLTAGE		230 V (+6% / -10%) - 50 Hz								
WAVEFORM		Stepwave								
BATTERY VOLTAGE		48 Vcc	24 Vcc	48 Vcc						
BATTERY OPERATING LIMITS		40 Vcc	20 Vcc	40 Vcc						
EFFICIENCY		90%	85%	88%						
CUT-IN TIME		1 second								
MAINS-BATTERY SWITCHING		Automatic								
MAX. POWER OUTPUT	(VA)	500 VA	600 VA	1000 VA	1500 VA	2000 VA	2500 VA	3000 VA	4000 VA	5000 VA
MAX. CURRENT OUTPUT	(A)	2,2	2,6	4,4	6,5	8,7	11	13	17,4	22
MAX. PUMP MOTOR CURRENT	(A)	1,9	2,3	3,8	5,7	7,6	9,6	11,5	15,2	20
MAX. PEAK CURRENT	(A)	10	10	15	20	25	30	30	50	50
TEMPERATURE RANGE		-20 °C - 60 °C								
HUMIDITY		55 90% not condensed								
PROTECTION RATING		IP 21								
DIMENSIONS	L X H X P (mm)	285 x 520 x 210								
MATERIAL		Steal bearing structure and self-extinguishing ABS coating								
WEIGHT	(Kg)	32	18	24	30	36	40	44	46	55

CONFIGURATIONS

SINGLE OUTPUT (1 pump)



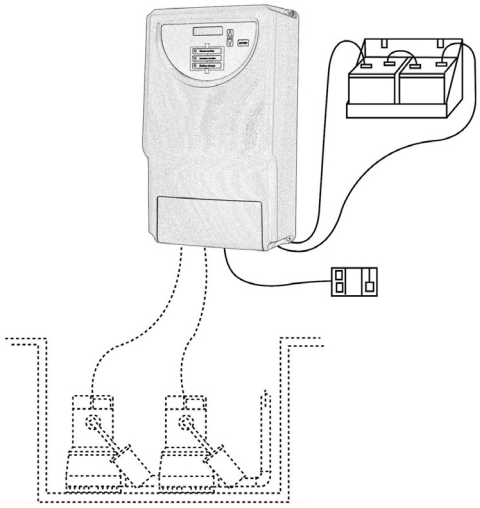
THE SOCCORRER KIT includes;

- anti-flood controller configured to control 1 electric pump
- sealed batteries *
- batteries-holder rack (except for 180 Ah batteries)
- cables kit for batteries connection
- instruction manual

The pumps, float switches and other accessories must be ordered separately.

*** Included for the Soccorrer 500 model**

DUAL OUTPUT (2 pumps)



THE SOCCORRER KIT includes;

- anti-flood controller configured to control 2 electric pumps
- sealed batteries
- batteries-holder rack (except for 180 Ah batteries)
- cables kit for batteries connection
- instruction manual

The pumps, float switches and other accessories must be ordered separately.

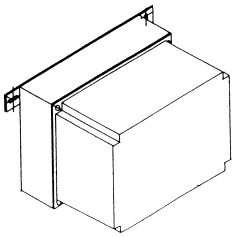
SOCCORRER – accessories

FLOAT

Float 5 metres
10 metres
15 metres
20 metres

MDN CONTROLLER

Controller for protection and automatic operation of single-phase electric pumps type DRENAG 1400M and FEKA 1400M.
Supplied in a self-extinguishing plastic enclosure, equipped with pre-mounted wall bracket. Complete with manually resettable micro disconnect for overload protection, automatic reset thermal protection and start capacitor.



MODEL	DIMENSIONS (mm)			Weight Kg
	L	H	P	
CONTROL MDN	198	168	148	2,1

BATTERY HOLDER COVER

Battery holder rack cover in non-toxic self-extinguishing polycarbonate
- User protection against accidental contact with battery terminals
- High level of impact resistance.

MODEL	DIMENSIONS (mm)			Weight Kg
	L	H	P	
BATTERY HOLDER COVER	395	230	265	1

SEALED BATTERIES

- Hermetically sealed batteries
- Maintenance-free
- Longer life
- Power check for visual charge status monitoring
- Lead/Calcium/Tin technology
- Double heat-sealed cover with integral “Flame Arrest” tablet
- Anti-corrosion terminals
- Case bottom with “Flex Ribs” to absorb vibration
- Nominal voltage 12VDC
- Average battery life 4 – 5 years.

MODEL	DIMENSIONS (mm)			Weight Kg
	L	H	P	
Batteria 60Ah Ermetica	242	190	175	14,4
Batteria 90Ah Ermetica	352	190	175	23,3

AUDIBLE AND VISUAL ALARM

Flashing siren powered by the anti-flood system batteries, complete with trip float switch.

ED 1 T - ED 1,5 T - ED 2,5 T

CE

GENERAL DATA

Applications

Electric panels for the protection and automatic operation by means of one or more floats of single-phase electropumps, like t is indicated in the following table:

CONTROL PANEL	ELECTROPUMP
ED 1 T	FEKA 600 T, FEKA VS-VX 550 T-NA, FEKA VS-VX 750 T-NA
ED 1,5 T	FEKA VS-VX 1000 T-NA, FEKA VS-VX 1200 T-NA, DRENAG 900 T
ED 2,5 T	DRENAG 1800 T, FEKA 1800 T, GRINDER 1800 T, FEKA 2500.4 T, FEKA 2500.2 T, FEKA 2700.2 T

Characteristics

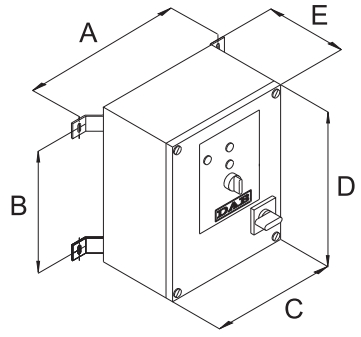
Supplied in a thermoplastic self-extinguishing box, fitted with a bracket for wall mounting. The panel is self-protected and it protects the electropump from overloads and short circuit breakers with manual reset (only for model ED 2,5 T paired off to Drenag/Feka/Grinder 1800).
Complete with:
- insulating switch of the supply line;
- self-protected transformer for the supply at 24V of the external controls;
- terminals for connecting the electropump and the control floats minimum/maximum (or thrust meter etc.);
- terminals for connecting the alarm float and for installing a remote acoustic or luminous alarm (without potential);
- thermal protection with manual reset for connection to the KK leads from the motor (only for model ED 2,5 T, fit a jumper when using it with Feka 2500.4 T - 2500.2 T - 2700.2 T);
- switch in front the panel for the manual functioning - o - automatic of the electropump;
- signalling in front the panel:
  - luminous red signal which indicates the intervention of the amperometric protection;
  - luminous green signal which indicates that the pump is working;
  - luminous white signal which indicates the correct functioning of the auxiliaries circuits.

TECHNICAL DATA

- Supply voltage: 400 V +/- 10%
- Phases: 3
- Frequency: 50 - 60 Hz

	ED 1T	**ED 1,5 T**	**ED 2,5 T**
- Rated output power:	1,38 KW	2,2 KW	3,5 KW
- Max. rated using current:	2,5 A	4A	6,3A

- Field of use environment temp.: -10°C +40°C
- Storage environment temp. limit: -25°C +55°C
- Relative humidity (without condensation): 50% at 40°C max. (90% at 20°C)
- Max. altitude: 3000 m (a.s.l.)
- Degree of protection: IP 55
- Construction of the panels: according to EN 60204-1 and EN 60439-1



MODEL	DIMENSIONS (mm)					WEIGHT (Kg)
	A	B	C	D	E	
ED 1 T	350	245	270	300	230	5,6
ED 1,5 T	350	245	270	300	230	5,6
ED 2,5 T	350	245	270	300	230	5,6

ED 4 T - ED 7,5 T - ED 8 T - ED 15 T - ED 20 T - ED 25 T - ED 30 T CE

GENERAL DATA

Applications

Electrical panels for protection and automatic control using float/s for submersible three-phase electric pumps, installed singly, as shown in the following table:

CONTROL PANEL	ELECTROPUMP
ED 4 T	FEKA 3000.4 T
ED 7,5 T	FEKA 3000.2 T, FEKA 3500.2 T, FEKA 3700.2 T
ED 7,5 T (⅄ /Δ)	FEKA 6075.6 T
ED 8 T	FEKA 4000.4 T
ED 15 T (⅄ /Δ)	FEKA 4100.4 T, FEKA 4100.2 T, FEKA 4150.2 T, FEKA 6100.6 T, FEKA 6120.4 T
ED 20 T (⅄ /Δ)	FEKA 4125.2 T, FEKA 4200.2 T, FEKA 6150.4 T
ED 25 T (⅄ /Δ)	FEKA 6250.4 T, FEKA 6200.4 T
ED 30 T (⅄ /Δ)	FEKA 6300.4 T

Characteristics

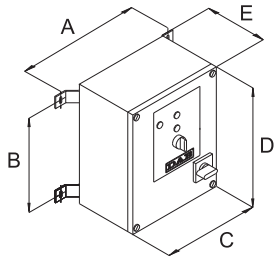
Supplied with cabinet in flame-proof, thermoplastic material, with brackets for wall-mounting.
The panel is self-protected and protects the electric pump from overloading and short circuits, power failure with a manually resettable device.
Supplied complete with:
- isolator for the power input line with padlockable door handle;
- self-protected transformer for 24V powering of external commands;
- terminals for connecting electric pump and min. and max. control float/s (or pressure switches, etc.);
- terminals for connecting a remote acoustic or luminous alarm (without potential);
- terminals for connecting temperature/oil sensors from the motor. Supplied with a jumper to be removed when using it.
- switch on the front of the panel for man - 0 - aut operation of the electric pump;
- LED on the front of the panel:
  - red LED indicating that the thermal-current protection device has cut in
  - green LED on the front of the panel indicating the pump is working
  - yellow LED indicating that the auxiliary circuits are working correctly
- Models ED 15 T and ED 20 T are provided with star-delta starting.

TECHNICAL DATA

- Rated power input: 400V~ +/- 10%
- Phases: 3
- Frequency: 50-60 Hz

	ED 4T	**ED 7,5 T**	**ED 8 T**	**ED 15 T**	**ED 20 T**	**ED 25 T**	**ED 30 T**
- Rated input current (A):	6-10	9-14	13-18	20-25	24-32	25-40	40-63

- Operating temperature range: -10°C +40°C
- Storage temperature range: -25°C + 55°C
- Relative humidity (without condensation): 50% at 40°C MAX (90% at 20°C)
- Max. altitude: 3000 m (a.s.l.)
- Level of protection: IP55
- The panels are built to EN 60204-1 and EN 60439-1 standards



MODEL	DIMENSIONS (mm)					WEIGHT (Kg)
	A	B	C	D	E	
ED 4 T	350	245	270	300	230	8
ED 7,5 T	350	245	270	300	230	10
ED 7,5 T (⅄ /Δ)	350	335	270	390	230	10
ED 8 T	350	245	270	300	230	10,5
ED 15 T (⅄ /Δ)	350	335	270	300	230	16
ED 20 T (⅄ /Δ)	350	335	270	300	230	16
ED 25 T (⅄ /Δ)	350	335	270	300	230	18,4
ED 30 T (⅄ /Δ)	350	335	270	300	230	18,4

E2D 16 T - E2D 30 T - E2D 40 T - E2D 50 T - E2D 60 T

GENERAL DATA

Applications

Electrical panels for protection and automatic control using float/s for submersible three-phase electric pumps, twin installation, as shown in the following table:

CONTROL PANEL	ELECTROPUMP
E2D 16 T	FEKA 4000.4 T
E2D 30 T (⅄ /Δ)	FEKA 4100.4 T, FEKA 4100.2 T, FEKA 4150.2 T, FEKA 6100.6 T, FEKA 6120.4 T
E2D 40 T (⅄ /Δ)	FEKA 4125.2 T, FEKA 4200.2 T, FEKA 6150.4 T
E2D 50 T (⅄ /Δ)	FEKA 6250.4 T, FEKA 6200.4 T
E2D 60 T (⅄ /Δ)	FEKA 6300.4 T

Characteristics

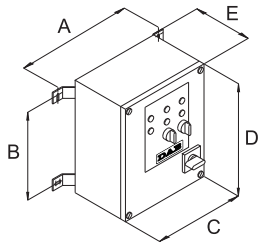
Supplied with cabinet in flame-proof, thermoplastic material, with brackets for wall-mounting.
The panel is self-protected and protects the electric pump from overloads and short circuits with manual reset.
Complete with:
- modular isolator for the power input line with padlockable door handle;
- self-protected transformer for 24V powering of external commands;
- terminals for connecting the electric pump and min./max. control floats (or pressure switches, etc.);
- terminals for connecting a remote acoustic or luminous alarm; (without potential)
- terminals for connecting temperature/oil sensors from the motor. Supplied with a jumper to be removed when using it.
- pre-set for inverting the starting order of the two pumps at every start up, for simultaneous operation and for starting one of the two in case the other one breaks down;
- switch on the front of the panel for manual – 0 – automatic electric pump operation;
- indicators on the front of the panel:
  - red LED indicating the current protection device has cut in;
  - green LED indicating the pump is working;
  - yellow LED indicating the auxiliary circuits are working properly.
- Models E2D 30 T and E2D 40 T are provided with star-delta starting.

TECHNICAL DATA

- Rated power input: 400V~ +/- 10%
- Phases: 3
- Frequency: 50-60 Hz

	E2D 16 T	**E2D 30 T**	**E2D 40 T**	**E2D 50 T**	**E2D 60 T**
- Rated input current (A):	13-18	20-25	24-32	25-40	40-63

- Operating temperature range: -10°C +40°C
- Storage temperature range: -25°C + 55°C
- Relative humidity (without condensation): 50% at 40°C MAX (90% at 20°C)
- Max. altitude: 3000 m (a.s.l.)
- Level of protection: IP55
- The panels are built to EN 60204-1 and EN 60439-1 standards



MODEL	DIMENSIONS (mm)					WEIGHT (Kg)
	A	B	C	D	E	
E2D 16 T	345	335	270	390	230	15
E2D 30 T (⅄ /Δ)	514	335	270	390	230	15
E2D 40 T (⅄ /Δ)	514	335	270	390	230	30
E2D 50 T (⅄ /Δ)	514	335	270	390	230	37
E2D 60 T (⅄ /Δ)	514	335	270	390	230	37

E3D 7,5 T - E3D 12 T - E3D 22,5 T - E3D 22,5 T S/D - E3D 24 T
E3D 45 T S/D - E3D 60 T S/D - E3D 75 T S/D - E3D 90 T S/D

CE

GENERAL DATA

Applications

Control cabinets for protection and automatic operation by means of float switch(es) of three-phase submersible electric pumps installed in pairs as shown in the following table:

PANEL	ELECTRIC PUMP
E3D 7,5 T	FEKA 2500 4.T - FEKA 2500 2.T - FEKA 2700 2.T
E3D 12 T	FEKA 3000 4.T
E3D 22,5 T	FEKA 3000 2.T - FEKA 3500 2.T - FEKA 3700 2.T
E3D 22,5 T S/D	FEKA 6075 6.T
E3D 24 T	FEKA 4000 4.T
E3D 45 T S/D	FEKA 4100 4.T - FEKA 4100 2.T - FEKA 4150 2.T - FEKA 6120 4.T - FEKA 6100 6.T
E3D 60 T S/D	FEKA 4125 2.T - FEKA 4200 2.T - FEKA 6150 4.T
E3D 75 T S/D	FEKA 6200 4.T - FEKA 6250 4.T
E3D 90 T S/D	FEKA 6300 4.T

Features

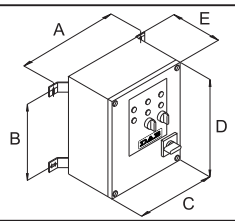
Supplied in a self-extinguishing thermoplastic enclosure, complete with wall mounting brackets.
The control box is self-protected and it protects the pump from overloads, short circuits and phase loss, with manual reset.
Complete with:
- Power line disconnect device with padlockable door lock handle;
- Self-protected transformer to provide 24V supply for external controls;
- Terminals to connect electric pump and minimum/maximum level float switches (or pressure switches, etc.);
- Terminals to connect alarm control for remote installation of a sounder or warning light (voltage free);
- Terminals for connection of temperature/oil sensors from motor. Supplied with a series of jumpers to be removed when the relative functions are utilised.
- Prearrange for inversion of the starting sequence of the two pumps at each system start, for simultaneous operation and for each of the pumps to cut in if the other one develops a fault;
- Electric pump manual – 0 – automatic selector on control box front panel;
- Indicators on control box front panel:
- Red warning light: overload protection trip;
- Green indicator light: pump-running status;
- Yellow indicator light: control circuits correct operation
- Models E3D 22,5 T S/D - E3D 45 T S/D - E3D 60 T S/D - E3D 75 T S/D - E3D 90 T S/D feature star-delta starting.
- Terminals 35/36 R for maximum pressure protection
- Dry-run and maximum pressure warning light HL1

TECHNICAL DATA

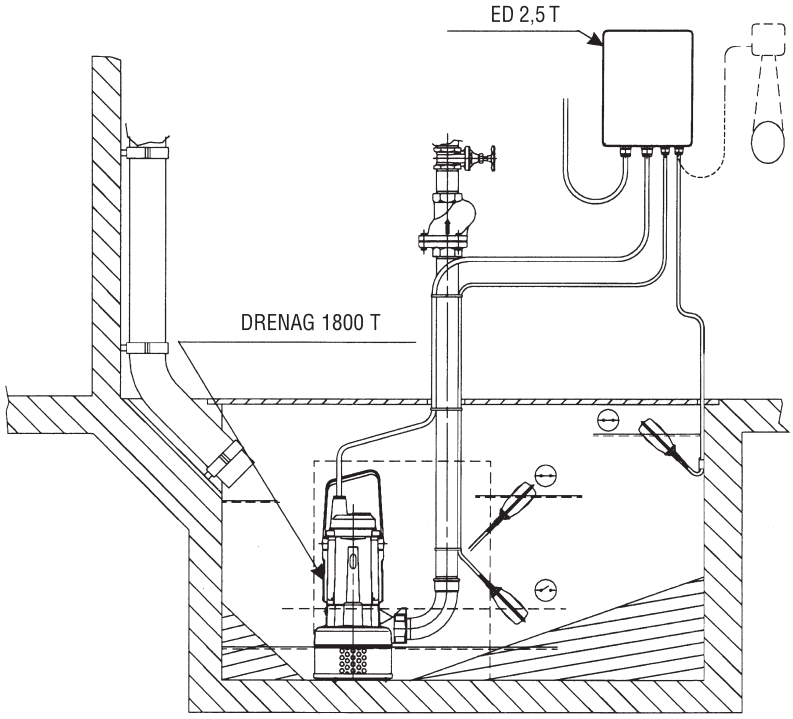
- Nominal power supply voltage: 400V~ +/- 10%
- Phases: 3
- Frequency: 50-60 Hz
- Rated operating current (A):

E3D 7,5 T	E3D 12 T	E3D 22,5 T	E3D 22,5 T S/D	E3D 24 T	E3D 45 T S/D	E3D 60 T S/D	E3D 75 T S/D	E3D 90 T S/D
6,3	10	14	14	18	25	32	40	63

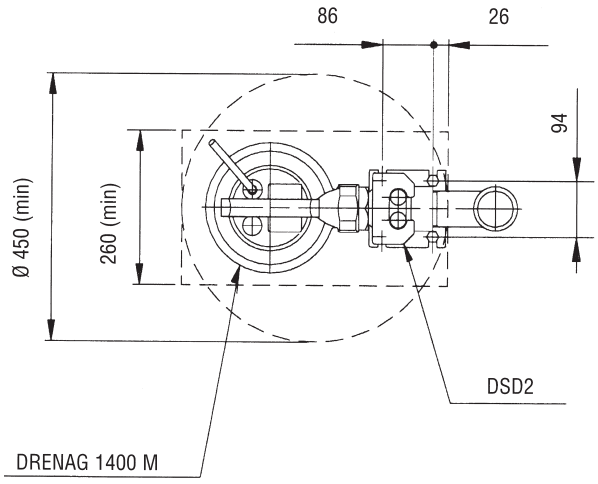
- Operating environmental temperature limits: -10°C +40°C
- Storage temperature limits: -25°C + 55°C
- Air relative humidity (non-condensing): 50% at 40°C MAX (90% at 20°C)
- Max. altitude: 3000 m a.s.l.
- Protection rating: IP55
- Construction of electrical enclosures: to EN 60204-1 and EN 60439-1



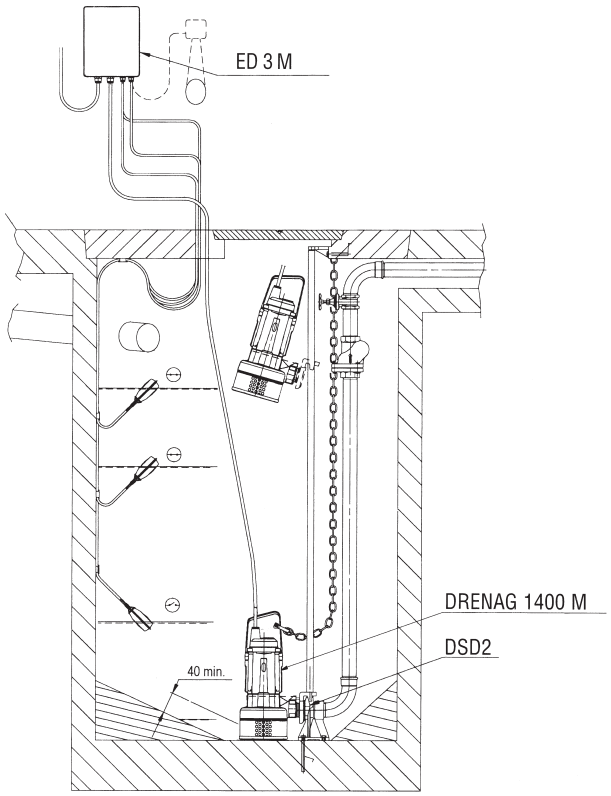
MODEL	DIMENSIONS (mm)					GROSS WEIGHT (Kg)
	A	B	C	D	E	
E3D 7,5 T	610	335	540	360	170	15
E3D 12 T	610	335	540	360	170	15
E3D 22,5 T	610	335	540	360	170	30
E3D 22,5 T S/D	610	335	540	360	170	37
E3D 24 T	470	500	540	360	255	37
E3D 45 T S/D	470	500	400	600	255	
E3D 60 T S/D	570	600	500	700	255	
E3D 75 T S/D	570	600	500	700	255	
E3D 90 T S/D	570	600	500	700	255	



Fixed installation with 1 Drenag 1800 T pump, complete with ED 2,5 T control unit, with one MIN/MAX level control float and 1 alarm float.

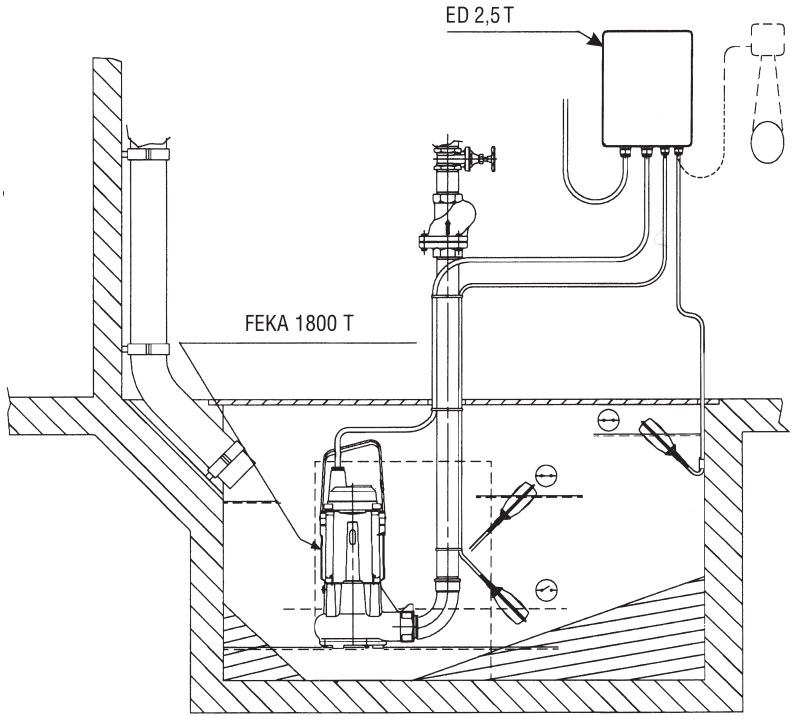


Minimum dimensions of borehole cover for systems provided with DSD2 (layout view).

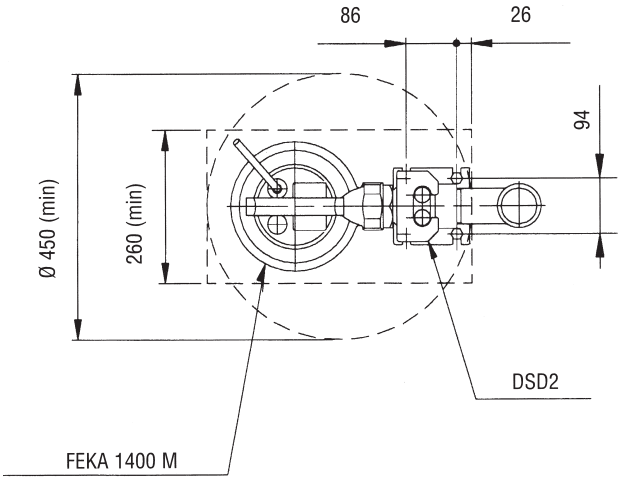


Fixed installation with 1 Drenag 1400 M pump with DSD2 device, complete with ED 3 M control unit, with two minimum and maximum level control floats and one alarm float.

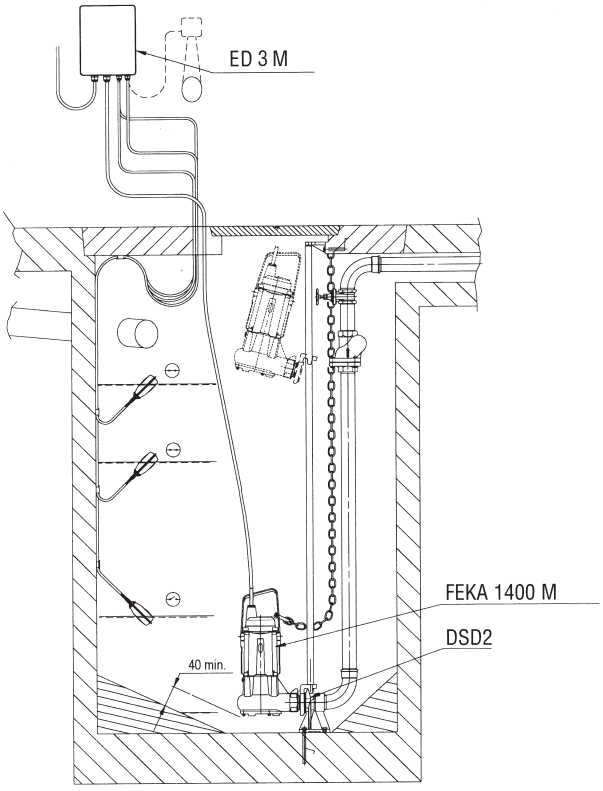
* Technical data of control units from page 32



Fixed installation with 1 Feka 1800 T pump, complete with ED 2,5 T control unit, with one MIN/MAX level control float and 1 alarm float.

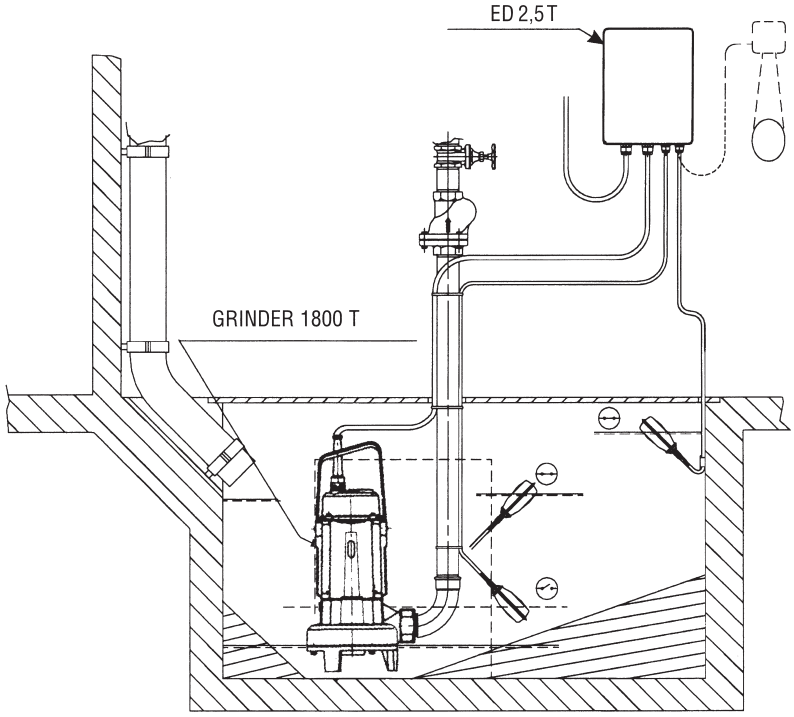


Minimum dimensions of borehole cover for systems provided with DSD2 (layout view).

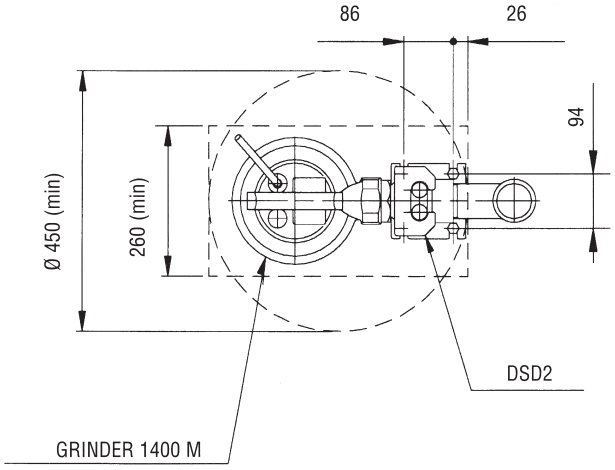


Fixed installation with 1 Feka 1400 M pump with DSD2 device, complete with ED 3 M control unit, with two minimum and maximum level control floats and one alarm float.

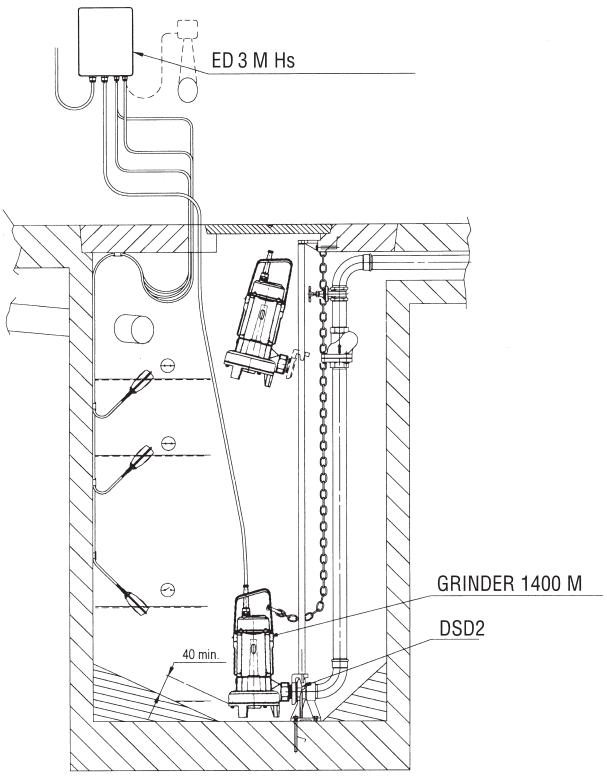
* Technical data of control units from page 32



Fixed installation with 1 Grinder 1800 T pump, complete with ED 2,5 T control unit, with one MIN/MAX level control float and 1 alarm float.



Minimum dimensions of borehole cover for systems provided with DSD2 (layout view).



Fixed installation with 1 Grinder 1400 M pump with DSD2 device, complete with ED 3 M control unit, with two minimum and maximum level control floats and one alarm float.

* Technical data of control units from page 32

ACCESSORIES

FLOAT SWITCHES

Supplied with 5, 10 or 20 metres of 3x1 H07 RN-F cable

A bulbo

KELLER SENSOR

Pressure sensor for applications with clean water and sewerage

CHARACTERISTICS:

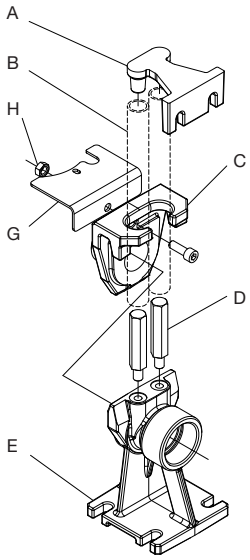
alibration range:	0 – 0.5 bar
Amperage:	4 - 20 mA
Voltage:	8 - 32 VDC
Cable:	20 metres

SUPPORT PLATE KIT

Support device for FEKA?and GRINDER, complete with support disc, spacers and screws. Recommended in portable applications to prevent the pump from becoming fouled with sand during operation.

LIFTING DEVICES

DSD2 - FEKA VS-VX

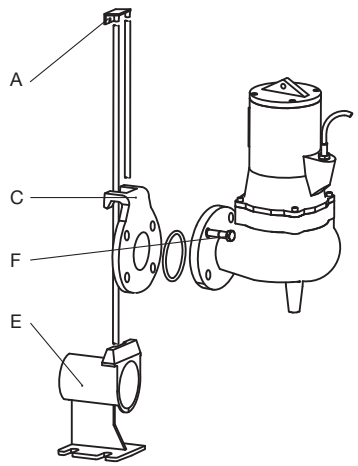


Lifting device for 3/4” Gas drop pipes, complete with: base elbow, skid, pipes fixing bracket, pipe guide studs and pump locking nut.

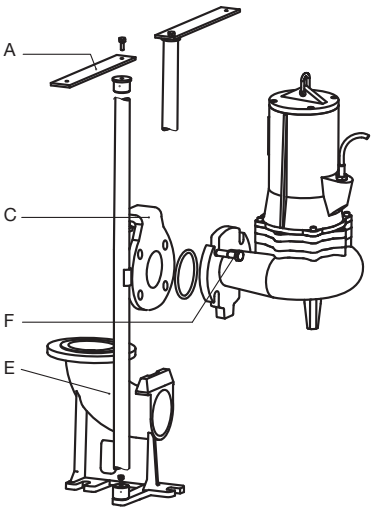
DSD2-FEKA VS-VX is supplied complete with pump fixing bracket.

A	A pipe fifing
B	3/4” pipes
C	Skid
D	Pipe guide studs
E	base elbow
F - H	Bracket fixing nuts and screw
G	Antirotation bracket (only FEKA VS and VX)

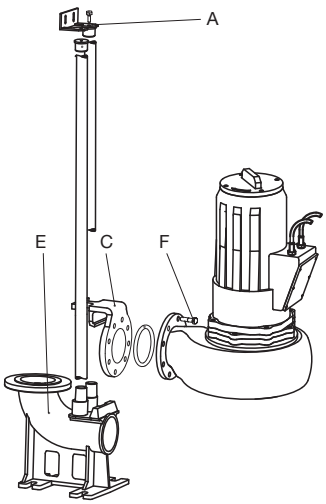
FEKA 2500 - 2,5"



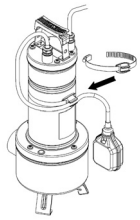
FEKA 3000/4000



FEKA 6075/6300

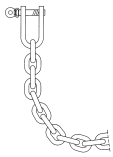


CABLE CLAMPS FOR FEKA VS and FEKA VX



Height adjustable float cable clamp secured to the motor jacket
(fekabox version)

CLEVIS KIT

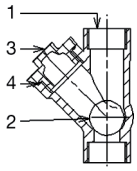


Pump lifting device. Chain and clevis made of stainless steel AISI 316.
Chain length 5 or 10 m on request.

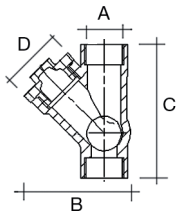
ACOUSTIC ALARM

230Vac - 10W acoustic alarm

NON-RETURNE VALVE



N°	Description	Qty	Materials
1	CASING	1	PVC
2	BALL	1	Cast iron NBR
3	CAP	1	PVC
4	SEAL	1	NBR (nitrile)



Rif.	DN inch	A mm	B mm	C mm	D mm	Weight Kg	Kv m 3/H	ζ
5222	1"1/4	33/42	114,0	143,0	66,0	0,450	22,30	3,30
5223	1"1/2	40/49	160,0	257,0	89,0	1,010	57,80	1,20
5224	2"	50/60	160,0	179,0	89,0	0,810	68,30	2,10

BALL CHECK VALVES, FLANGED

DN 65 - PN 10
DN 80 - PN 10
DN 100 - PN 10
DN 150 - PN 10

CONTROL AS1

Electronic control unit with alarm device for operation even in the absence of current by means of a 10-hour reserve charge provided by lead buffer batteries. Complete with 1.5 m cable with EXPORT DIN 49441 R2 plug and one float with 10 m H07 RN-F cable, not connected.
Degree of protection: IP30 - Temp.: -10°C +40°C - Consumption: 7 VA 220-240V.
Self-extinguishing thermoplastic box for wall mounting.
Supplied with wall brackets, screws and a spare fuse.

MODEL	VOLTAGE 50-60 Hz	AUTONOMY CHARGE	SOUND VOLUME	WEIGHT Kg
Control AS1	1x115 V ~	10 HOURS	95 dB discontinuous	3,3
	1x220-240 V ~			

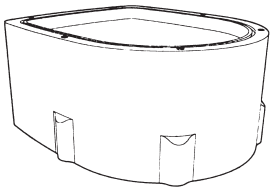
ADAPTER FOR LIFTING DEVICES

AVAILABLE IN THREE DIFFERENT VERSIONS, DN 65 - DN 80 - DN 100.
Adapter for lifting devices in existing installations, designed to adapt the system to the DAB pump.

REFLOW KIT

Kit for installation in FEKABOX and FEKAFOX tanks.
1 ball check valve, 1 2" ball on-off valve and 2 fittings. Integral 2" passage. Made in PVC.

STEP FOR FEKAFOS AND FEKABOX



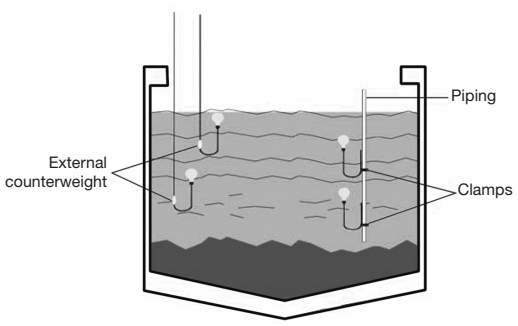
300mm step (up to 2 steps can be installed one on top of the other).

300 G FLOAT COUNTERWEIGHT

The counterweight is mounted directly onto the level regulator output cable.

WEIGHT	Standard 200 g	gr. 300
DIMENSIONS	Ø 47X55	Ø 47X55
MATERIAL	Shockproof polystyrene	Shockproof polystyrene
FILLING MATERIAL	sand + iron shot	sand + iron shot

INSTALLATION METHODS



NOVABOX 30/300.1

EN 12050-2

CE

GENERAL DATA

Applications
Automatic collecting and lifting station for domestic waste water from baths, wash-hand basins, showers and washing machines located in basements or anywhere under the sewer level.

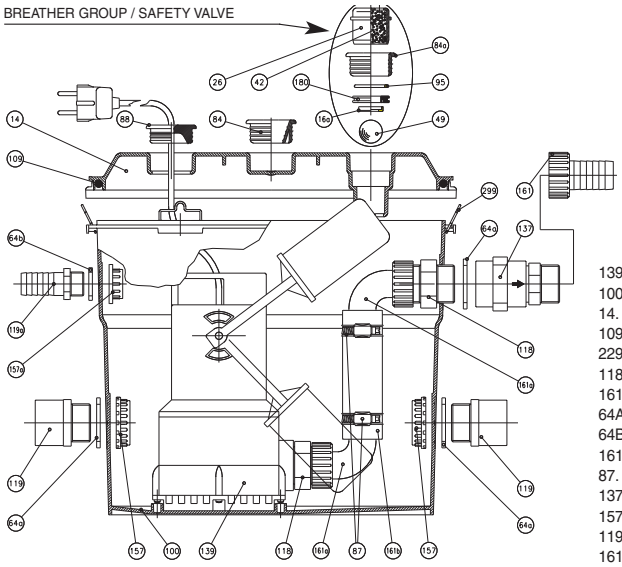
Conveyable liquids
Waste water free from solids and/or fibrous substances.

Constructional features
Hydraulic part
1 NOVA 300 M-A submersible electropump with 5 metres of cable and a plug - 1 technopolymer container with capacity 30 litres - 1 non-return valve fitted on the delivery - technopolymer plumbing connections.

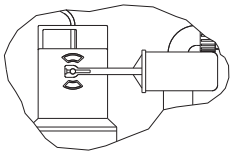
Electrical part
The NOVA 300 M-A pump fitted in the NOVABOX 30/300.1 has as standard features a built-in float, motor with thermal and current overload protection and a capacitor permanently in circuit.

Supply
The NOVABOX 30/300 collecting and lifting station is supplied complete with the pump.To avoid damages during the transport, the pump is placed inside the container with a proper packing that has to be removed before using it. The station is supplied in a sturdy cardboard package, complete with an instructions leaflet for installation and maintenance.
The supply also includes a series of accessories which make the product particularly versatile with just a few simple adjustments.
Alarm system (when it is requested), composed from a power-station and a probe. Installed on the Novabox's top, it allows to check the maximum level inside the tank (acoustic signal).
The system is able to function even in case there is a black-out for 10 hours. Beside the acoustic alarm incorporated, it is possible to send again at distance a luminous or acoustic alarm (not supplied).

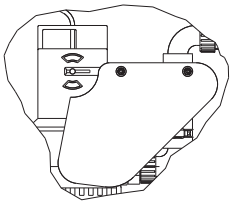
Novabox 30/300.1 is in compliance with the norm En 12050-2.



STANDARD FLOAT



FLOAT TYPE B "SHOWER"



139.	PUMP
100.	TANK
14.	COVER
109.	GASKET
229.	CLOSER CLIP
118.	NIPPLES 1 1/4"
161A.	CURVE RUBBER HOLDER 1 1/4" X 32
64A.	GASKET Ø 1 1/4"
64B.	GASKET Ø 3/4"
161B.	RUBBER PIPE 32
87.	HOSE CLAMP Ø 44
137.	NON-RETURNE VALVE 1 1/4"
157.	COLLAR 1 1/4"
119A.	RIGHT RUBBER HOLDER 3/4" X 25
161.	RIGHT RUBBER HOLDER 1 1/4" X 32

88.	RUBBER CABLE GLAND
119.	ADAPTOR 50 x 40 x 1 1/4"
157a.	COLLAR 3/4"
84.	PIPE CLAMP Ø 30 mm
83.	FLOAT KIT

BREATHER GROUP / SAFETY VALVE

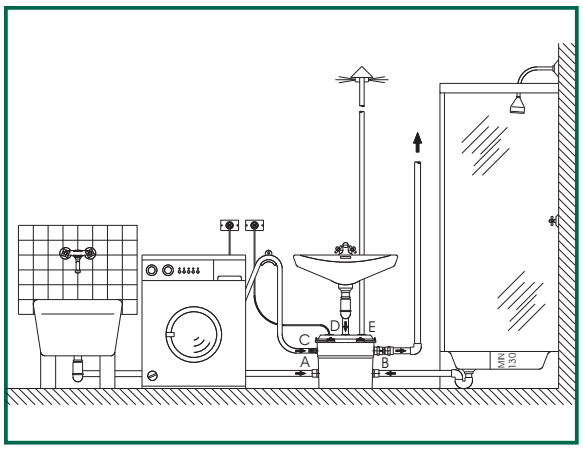
49.	FLOAT BALL
16a.	O RING Ø 15 mm
180.	VALVE SUPPORT
95.	ORING -3143 36,14 x 2,62
26.	BREATHER PLUG
84a.	PIPE CLAMP Ø 40 mm
42.	FILTER

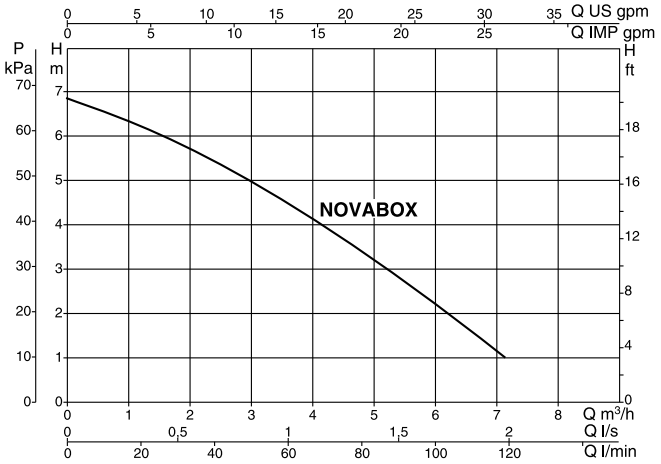
DAB PUMP PERFORMANCE

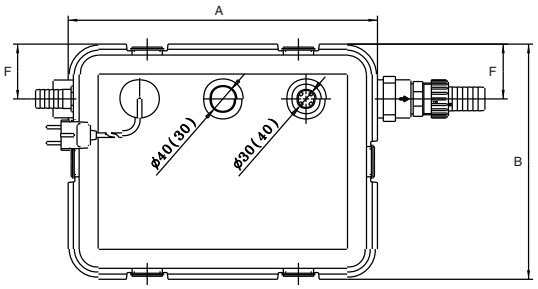
TECHNICAL DATA

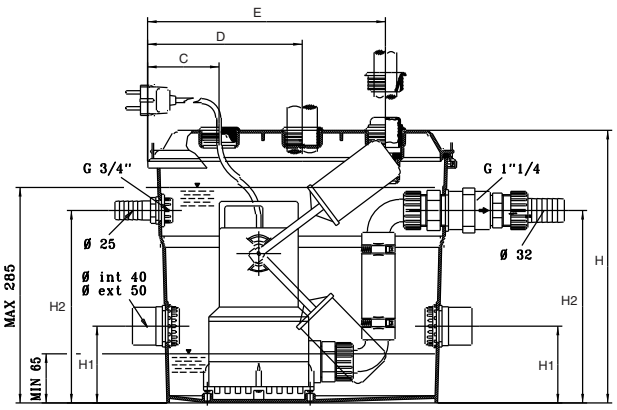
- Operating range: from 1 to 7,2 m³/h with head up to 6,9 metres
- Liquid temperature range: +50°C
  90°C for a maximum time of 3 min.
- Pump motor protection: IP 68
- Motor Insulation class: F
- Pump manufactured according to standards: CEI 61-69 (EN 60335-2-41)
- Standard single-phase voltage: 220-240 V/50 Hz

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









MODEL	A	B	C	D	E	F	H	H1	H2	PACKING DIMENSIONS			VOLUME m³	WEIGHT Kg
										L/A	L/B	H		
NOVABOX 30/300.1	407	309	94	204	314	72	360	100	254	45	33	38	0,056	9,2

MODEL	ELECTRICAL DATA							HYDRAULIC DATA (n ≃ 2800 1/min)					
	VOLTAGE 50 Hz	P1 MAX W	P2 NOMINAL kW	P2 NOMINAL HP	In A	CAPACITOR µF	CAPACITOR Vc	Q m³/h	0	2,4	4,8	6	7,2
								l/min	0	40	80	100	120
NOVABOX 30/300.1	1x220-240 V ~	290	0,22	0,3	1,3	8	450	H (m)	6,9	5,3	3,2	2,2	1,2

FEKALIFT
LIFTING STATION

BASIC

CE

GENERAL DATA

Applications

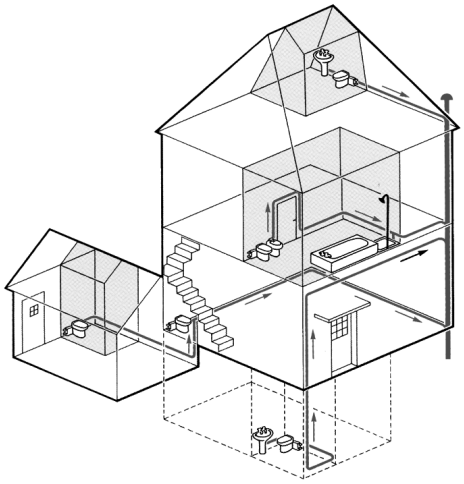
Small lifting stations for automatic collecting and pumping sewage. Its use is necessary whenever the wastewater cannot be expelled by gravity. The lifting station is mounted directly behind the WC and is therefore unaffected by the type of waste piping and unions.
This lifting station can be used wherever an additional toilet is required during new building work, renovations and structural modifications. Depending on the model, a shower, bidet and washbasin can be connected together with the WC.
The inflow water from the sanitary ware connected to the system automatically turns on the Fekalift 50/150 when there is an increase in the water level of approximately 8 cm and is automatically turned off when the level drops by approximately 3 cm. The solids and excrement that arrive from the toilet are chopped and forced into the general waste pipe through the pressure pipe.
The Fekalift 50/150 can be connected to any European standards WC with horizontal waste. At least 6 litres of water must be available each time flushing is performed. Water saving push button flushes are advised.
The appealing design, technical innovation and manufacturing quality make FEKALIFT an indispensable item for the fitting of a supplementary toilet, above or below the backwater level (based on the DIN 1986 standard).
The Fekalift 50 and Fekalift 150 systems are suitable for water temperatures up to 35°C and are resistant to slightly acidic substances. Avoid the discharge of water containing greasy or oily substances into the Fekalift 50 and Fekalift 150.

Constructional Characteristics

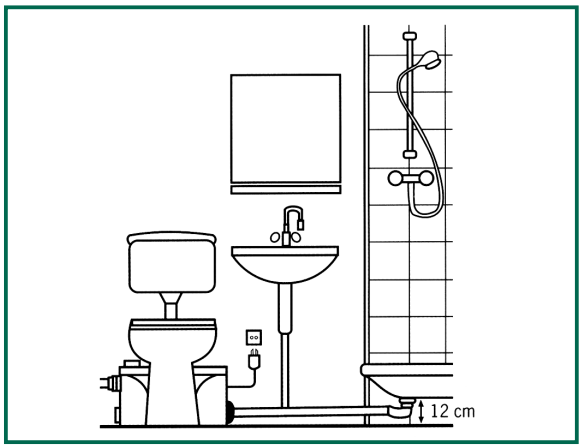
The motor, powerful yet noiseless, the pump and the grinding device are made of stainless steel.
The integrated pump purifying system makes the station practically maintenance-free. Easy to install, it is also designed for connection of a shower base with 12 cm drain height.
The forced side duct with built-in no-return valve allows the cover to be removed without having to remove the delivery pipe.

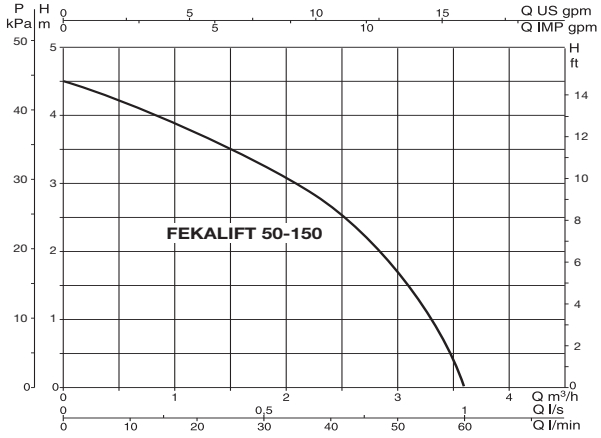
TECHNICAL DATA

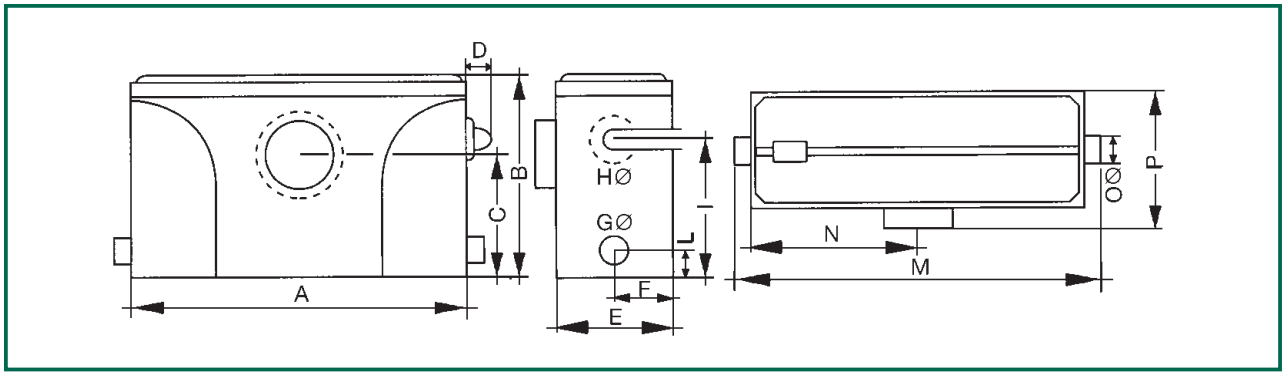
- Power input: 1x230 V~ 50 Hz
- Current: 2,1 A
- Power: 450 W
- Flow Q: 3 m³/h
- Head H: 4,5 m
- Max liquid temperature: 35°C
- Insulation class: B
- Speed of rotation: 2900 1/min.
- Delivery union: DN 25
- Operation: automatic
- Capacity: Fekalift 50 9 lt.
  Fekalift 150 12 lt.



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







MODEL	A	B	C	D	E	F	G Ø	H Ø	I	L	M	N	O Ø	P
FEKALIFT 50	377	275	180	90	177	–	–	DN 28	200	70	–	188	–	–
FEKALIFT 150	485	270	180	50	170	85	DN 40	DN 28	200	40	530	242,5	40	200

MODEL	ELECTRICAL DATA					HYDRAULIC DATA (n ~ 2800 1/min)					
	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	Q m³/h	0	0,6	1,2	1,8	3	3,3
					l/min	0	10	20	30	50	55
FEKALIFT 50/150	1x230 V ~	0,45	0,61	2,1	H (m)	4,5	4,1	3,7	3,2	1,7	1,1

FEKALIFT
LIFTING STATION

PROFESSIONAL

CE

GENERAL DATA

Applications

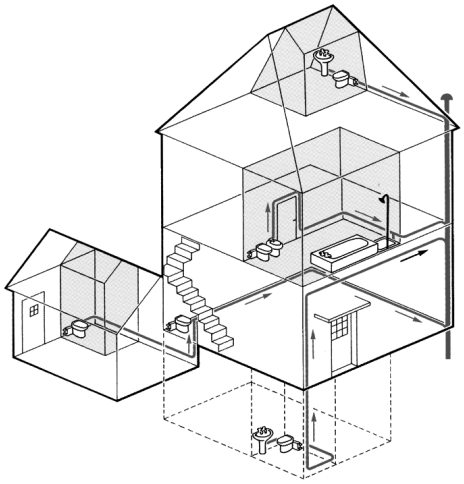
Small lifting stations for automatic collecting and pumping sewage. Its use is necessary whenever the wastewater cannot be expelled by gravity. The lifting station is mounted directly behind the WC and is therefore unaffected by the type of waste piping and unions.
This lifting station can be used wherever an additional toilet is required during new building work, renovations and structural modifications. Depending on the model, a shower, bidet and washbasin can be connected together with the WC.
The inflow water from the sanitary ware connected to the system automatically turns on the Fekalift 100/200 when there is an increase in the water level of approximately 8 cm and is automatically turned off when the level drops by approximately 3 cm. The solids and excrement that arrive from the toilet are chopped and forced into the general waste pipe through the pressure pipe.
The Fekalift 100/200 can be connected to any European standards WC with horizontal waste. At least 6 litres of water must be available each time flushing is performed. Water saving push button flushes are advised.
The appealing design, technical innovation and manufacturing quality make FEKALIFT an indispensable item for the fitting of a supplementary toilet, above or below the backwater level (based on the DIN 1986 standard).
The Fekalift 100 and Fekalift 200 systems are suitable for water temperatures up to 60°C and are resistant to slightly acidic substances. Avoid the discharge of water containing greasy or oily substances into the Fekalift 100 and Fekalift 200.

Constructional Characteristics

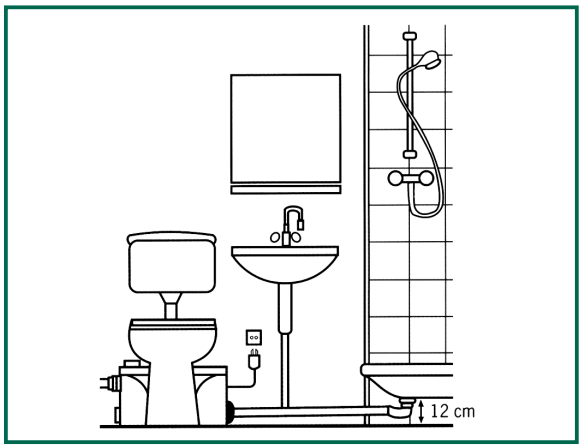
The motor, powerful yet noiseless, the pump and the grinding device are made of stainless steel.
The integrated pump purifying system makes the station practically maintenance-free. Easy to install, it is also designed for connection of a shower base with 12 cm drain height.
The forced side duct with built-in no-return valve allows the cover to be removed without having to remove the delivery pipe.

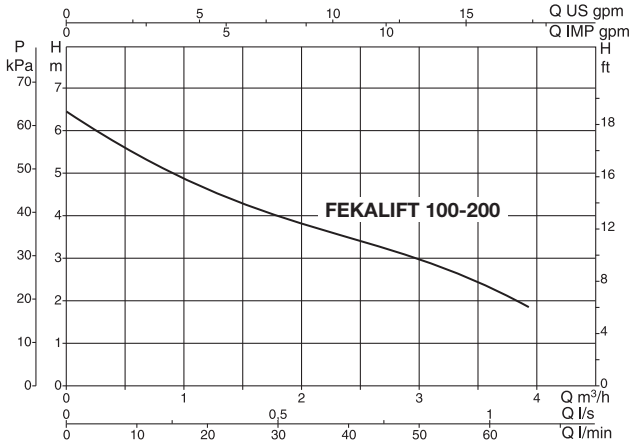
TECHNICAL DATA

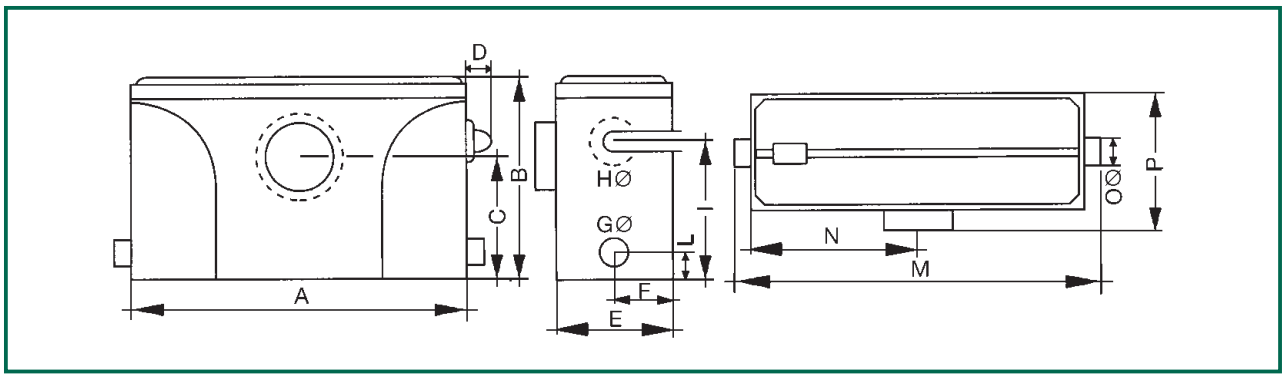
- Power input: 1x230 V~ 50 Hz
- Current: 2,1 A
- Power: 650 W
- Flow Q: 3,9 m³/h
- Head H: 6,4 m high or 70 m length
- Max liquid temperature: 60°C
- Insulation class: B
- Speed of rotation: 3000 1/min.
- Delivery union: DN 25
- Operation: automatic
- Approval: VDE - GS
- Built to: DIN 19762
- Capacity: Fekalift 100 9 lt.
  Fekalift 200 12 lt.



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







MODEL	A	B	C	D	E	F	G Ø	H Ø	I	L	M	N	O Ø	P
FEKALIFT 100	377	275	180	90	177	–	–	DN 28	200	70	–	188	–	–
FEKALIFT 200	485	270	180	50	170	85	DN 40	DN 28	200	40	530	242,5	40	200

MODEL	ELECTRICAL DATA					HYDRAULIC DATA (n ~ 2800 1/min)					
	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	Q m³/h	0	0,6	1,2	1,8	3	3,9
					l/min	0	10	20	30	50	65
FEKALIFT 100/200	1x230 V ~	0,65	0,88	2,1	H (m)	6,4	5,6	4,7	3,9	3	1,9

FEKALIFT
LIFTING STATION

PROFESSIONAL

CE

GENERAL DATA

Applications

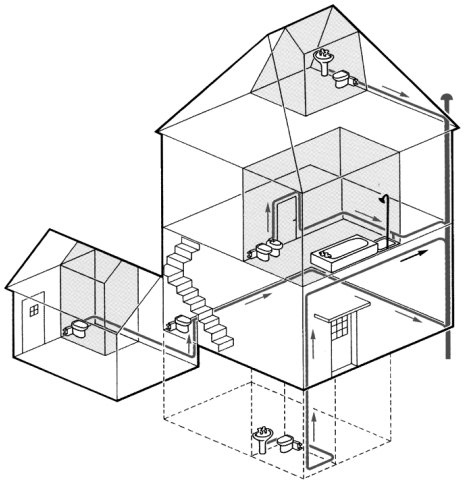
Lifting stations for automatic collecting and pumping sewage. Its use is necessary whenever the wastewater cannot be expelled by gravity.The lifting system, with FEKALIFT 300 VM wall-mounted installation, consists of a tank made of synthetic, non-putrescible, impermeable, gas-proof and odourless material, with a single-stage centrifugal pump that starts up automatically when the water level rises to about 8 cm, and stops when it drops to about 4 cm. The integrated grinder minces all solid substances found in the wastewater, so as to enable their passage through pipes of small diameter (25 mm ID). The FEKALIFT 300 VM tank is equipped with a horizontal WC delivery pipe DN 100, a lateral wastewater delivery pipe DN 40 (optional) and a revolving delivery union DN 28 with integrated non-return valve. The non-return valve in the delivery union prevents backflow in the tank's delivery pipe. Moreover, the cover of the lifting system is equipped with a ventilation and bleed device. This lifting station can be used wherever a toilet is required on the site of new installations, structural renovations and modifications. Depending on the model, a shower, bidet and washbasin can be connected in addition to the WC.
Fekalift 300 VM can be connected to any WC designed according to European standards, equipped with horizontal outlet. The use of flush tanks equipped with water saving flush button is recommended. The attractive design, innovative technique and quality of workmanship make FEKALIFT 300 VM an indispensable component when installing an additional toilet below or above the backwater level (according to DIN 1986). The Fekalift 300 VM system is suitable for water temperatures up to 60°C and is resistant to the action of moderately acid substances. Do not allow wastewater containing greasy or oily substances to flow into the system.

Constructional Characteristics

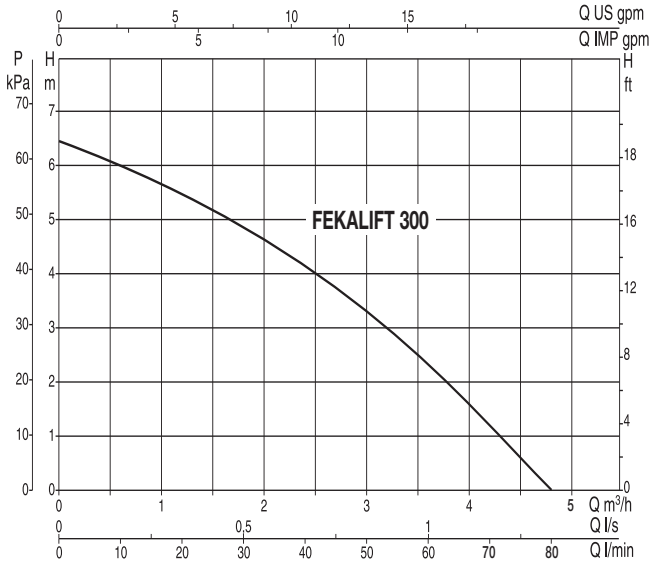
The motor, powerful yet noiseless, the pump and the grinding device are made of stainless steel.
The integrated pump purifying system makes the station practically maintenance-free. Easy to install, it is also designed for connection of a shower base with 12 cm drain height.
The forced side duct with built-in no-return valve allows the cover to be removed without having to remove the delivery pipe.

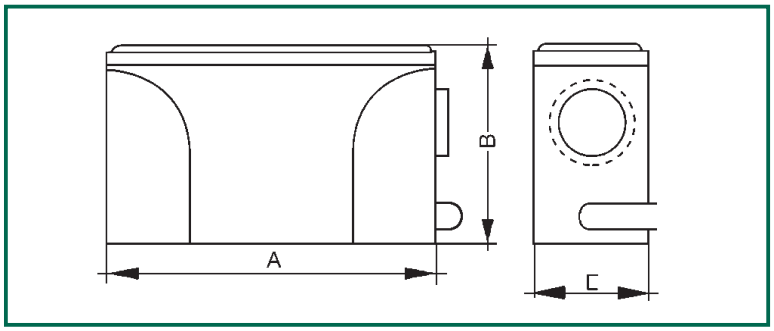
TECHNICAL DATA

- Delivery pipe: 1“ (DN25)
- Power input: 230V/1Ph, 50Hz
- Power: 650 Watt
- Rated current: 2,1 A
- Motor protection: IP 44
- Speed of rotation: 3000 1/min.
- Max head H: 8 m
- Max flow Q: 80 l/min
- Delivery pressure: 0,9 bar
- Cable length: 1.5m with plug
- Weight: 7,0kg
- Capacity: 9 lt.



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





MODEL	A	B	C
FEKALIFT 300	377	275	177

MODEL	ELECTRICAL DATA					HYDRAULIC DATA (n ~ 2800 1/min)					
	VOLTAGE 50 Hz	P2 NOMINAL kW	P2 NOMINAL HP	In A	Q m³/h	0	0,6	1,2	1,8	3	3,9
					l/min	0	10	20	30	50	65
FEKALIFT 300	1x230 V ~	0,65	0,88	2,1	H (m)	6,5	6,1	5,7	5	3,2	1,7

FEKABOX 100

FITTED FOR
FEKA 600 MA
FEKA VS 550-750 M-A

CE

GENERAL DATA

Applications

Automatic collection and lifting system, ideal for collecting and pumping black water and domestic/industrial waste from basements located under the level of the drains into sewers.

Pumped liquid

Phreatic water, rain water, clear waste water, black waste water and water from rivers and lakes.

TECHNICAL DATA

FEKABOX 100 comprises a high density polyethylene tank with an effective capacity of 100 litres, supplied with tank cover and technopolymer gasket. Fitted for operation with one automatic electric pump FEKA 600-FEKA VS **to be ordered separately.**

- Material: 5 mm thick propylene
- Tank inlet: DN50 - DN100 (male/female)
- Tank outlet: DN50 - 2”GAS (vertical or horizontal)
- Discharge: DN40
- Max liquid temperature: +50°C
- Supplied with anti floatation device (EN 12050-1 standard)

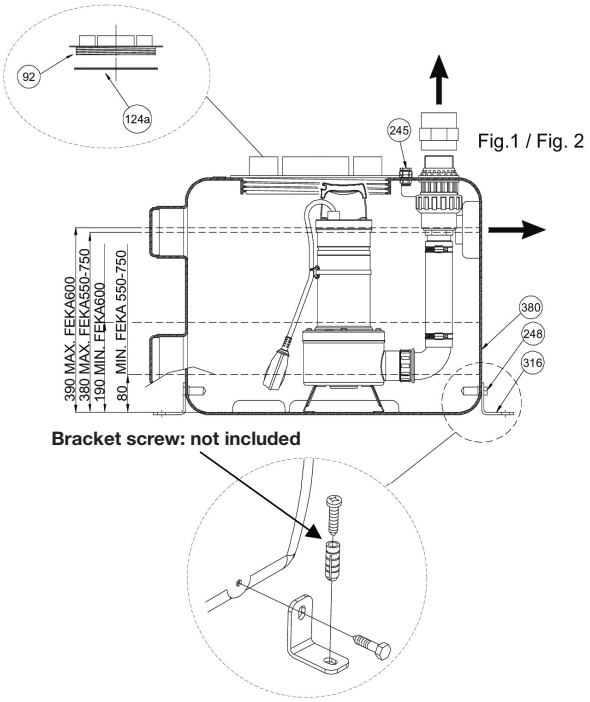


Fig. 1

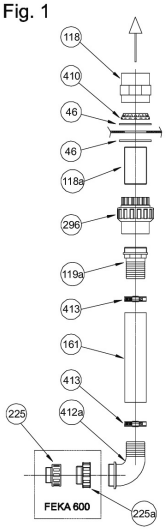
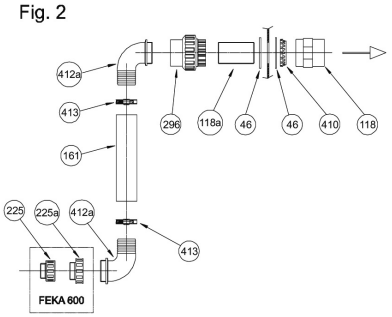
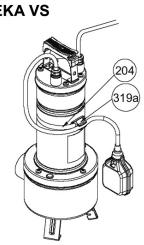


Fig. 2

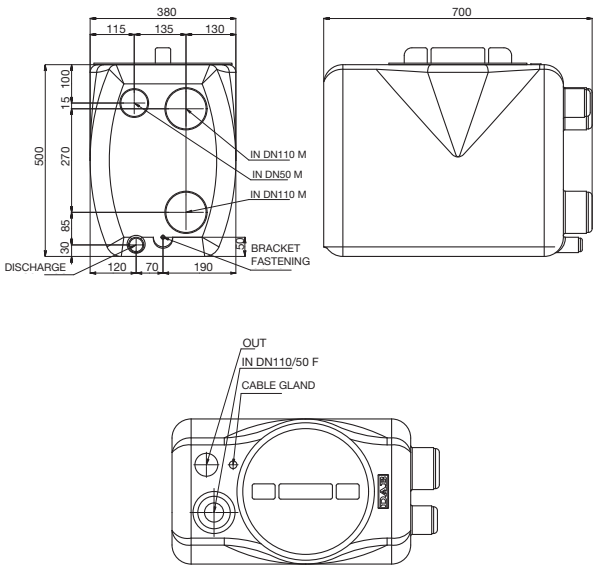


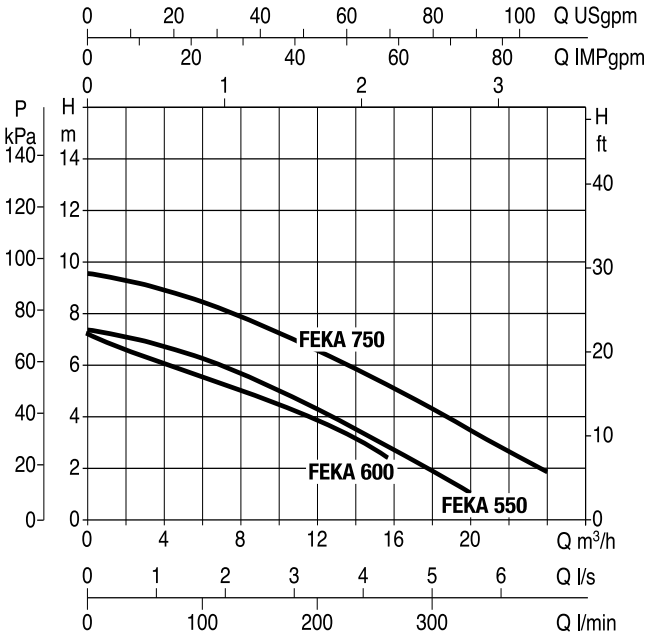
FEKA VS



46	GASKET 78X58X4 (2")
92	TANK COVER
118	SLEEVE 63X2"
118a	BAR WITH THREADED HOLES 2"X100
119a	RUBBER HOLDER
124a	GASKET COVER
161	RUBBER PIPE 57X50 L=240
204	CABLE CLAMP
225	ADAPTER M-F 1 1/4" - 1 1/2"
225a	ADAPTER M-F 1 1/2" - 2"
245	CABLE GLAND M20X1,5
248	TE SCREW 10X40
296	UNION 3 pcs WITH O-RING
316	FASTENING BRACKET
319a	CABLE HOLDER
380	TANK
410	COLLAR 2" PP OR PVC
412a	BENT HOSE ADAPTER
413	TUBE CLAMP Ø57

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





MODEL	A	B	C	D	E	F	G	H	H1	H2	H3	H4	H5	I	WEIGHT Kg
FEKABOX 100	700	190	70	120	380	115	135	270	100	15	85	30	50	130	8,5

FEKABOX 200

PREDISPOSTA PER
FEKA 600 MA
FEKA VS 550-750 M-A
FEKA VX 550-750 M-A
FEKA VS 1000-1200 M-A
FEKA VX 1000-1200 M-A

CE

GENERAL DATA

Applications

Automatic collecting and lifting station, ideal for collection and pumping to sewers of sewerage and domestic/industrial drains from basements located below the level of the sewer network.

Compatible liquids

Ground water, stormwater, clear wastewater, foul wastewater, river water and lake water.

Construction features

Hydraulic section
FEKABOX 200 is composed of a high density polyethylene tank having an effective capacity of 200 litres, with a trafficable cover complete with gasket that provides an effective gas and liquid seal, support plate in stainless steel and hydraulic unions kit for connection of the pump to the sewer system. Complete with: special cable gland, DN50 and DN110 liquid inlet manifolds and 2" outlet manifold. Complete with DN50 breather pipe connection. The use of an alarm float switch is possible on request.
Prearranged for operation of an automatic electric pump (see models in diagram) to be ordered separately.

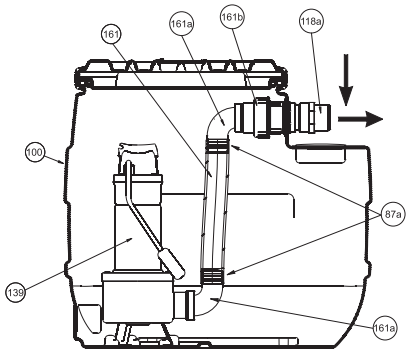
Supply

The station is supplied in a robust carton on a pallet and is complete with instruction leaflet for installation and maintenance.
A float switch cable clamp kit is supplied (clamp secured to motor sleeve and adjustable in height)

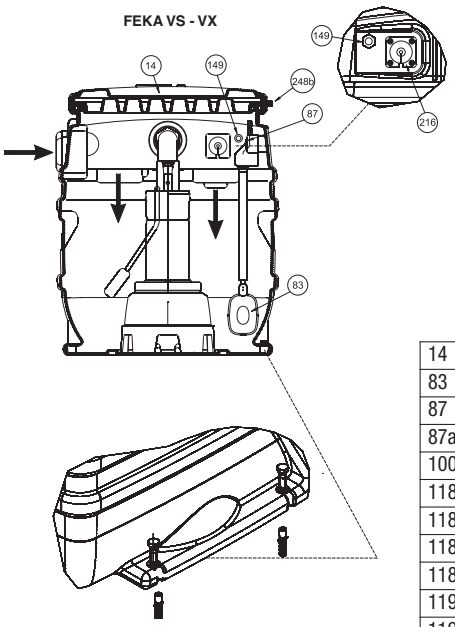
TECHNICAL DATA

- Operating range:	from 1 to 24 m^3/h with head of up to 9.6 m.
- Maximum liquid temperature:	+50°C

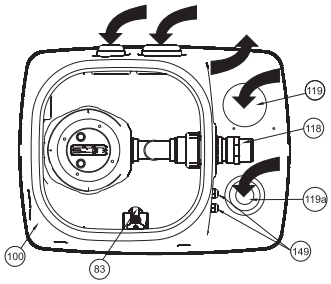
FEKA VS - VX



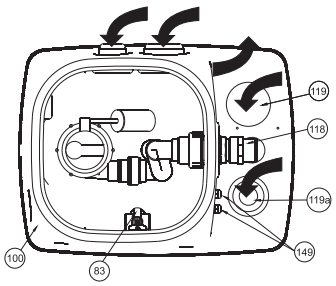
FEKA VS - VX



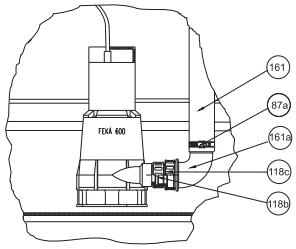
FEKA VS - VX



FEKA 600

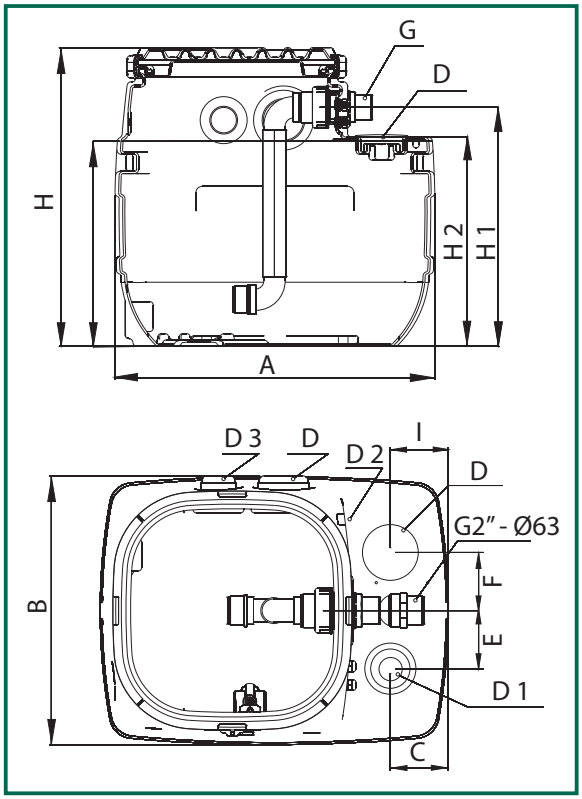


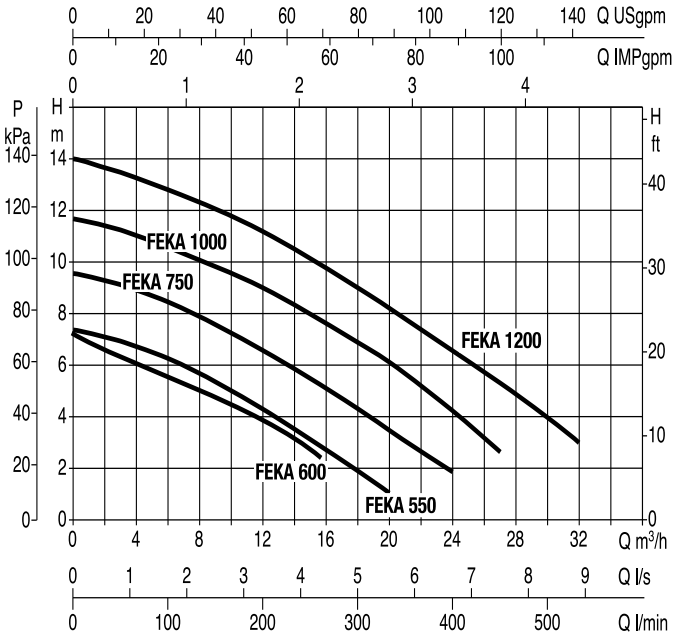
FEKA 600



14	COVER
83	ALARM FLOAT SWITCH (on request only)
87	CABLE CLAMP
87a	HOSE CLAMP Ø57
100	TANK
118	STUB PIPE 63X2”
118a	100X2” THREADED PIPE
118b	REDUCTION M-F 1 $^1/_4$” - 1$^1/_2$”
118c	REDUCTION M-F 1$^1/_2$”- 2”
119	DN 110 UNION (inlet)
119a	DN 50 45° ELBOW (inlet - ventilation)
139	PUMP
149	PG 11 CABLE GLAND
161	57x50 L=300 RUBBER HOSE
161a	2”x50 CURVED HOSE CONNECTION
161b	3 PCS. UNION WITH O-Ring (2”)
204	CABLE CLAMP
216	SPECIL CABLE GLAND
248b	COVER SCREWS
253	PUMP POSITION PLATE
319a	CLAMP

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





MODEL	A	B	C	D	D1	D2	D3	E	F	G	H	H1	H2	I	WEIGHT Kg
FEKABOX 200	750	579	124,5	DN 110	DN 50/110	DN 75	DN 110	125	125	2”	700	560	490	124,5	18

FEKABOX 280

PREDISPOSTA PER
FEKA 600 MA
FEKA VS 550-750 M-A
FEKA VX 550-750 M-A
FEKA VS 1000-1200 M-A
FEKA VX 1000-1200 M-A

CE

GENERAL DATA

Applications

Automatic collecting and lifting station, ideal for collection and pumping to sewers of sewerage and domestic/industrial drains from basements located below the level of the sewer network.

Compatible liquids

Ground water, stormwater, clear wastewater, foul wastewater, river water and lake water.

Construction features

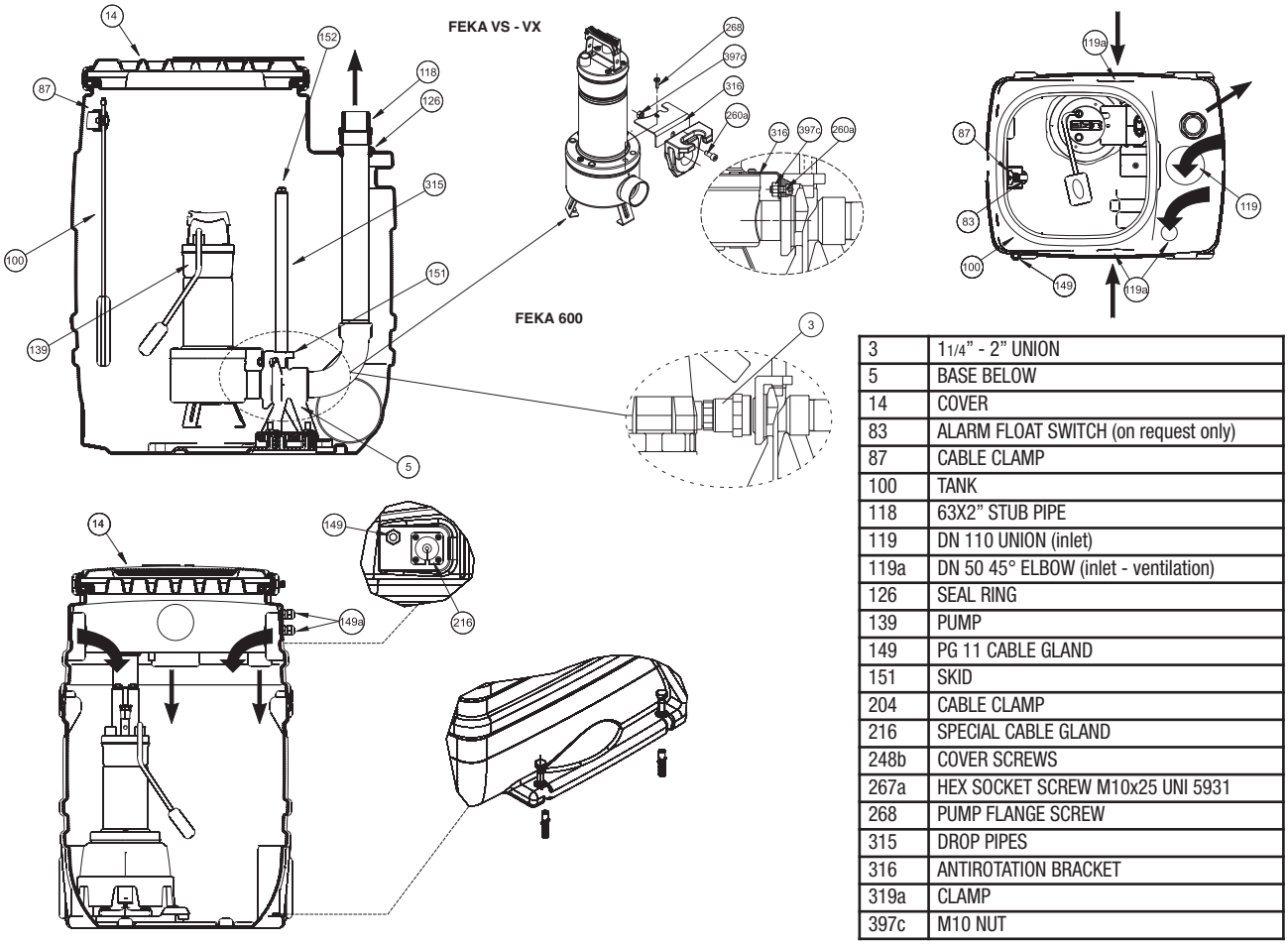
FEKABOX 280 is composed of a high density polyethylene tank having an effective capacity of 280 litres, with a trafficable cover complete with gasket that provides an effective gas and liquid seal, a DSD-2 device complete with base elbow, skid, pipes guide plate with drop pipes and hydraulic unions kit for connection of the pump to the sewer system.
Complete with special cable gland, DN50 and DN110 liquid inlet manifolds and 2” outlet. Complete with DN50 breather pipe connection. The use of an alarm float switch is possible on request.
Prearranged for operation of an automatic electric pump (see models in diagram) to be ordered separately. If to be used with VS or VX electric pump models order the bracket for the DSD2 device separately

Supply

The station is supplied in a robust carton on a pallet and is complete with instruction leaflet for installation and maintenance.
A float switch cable clamp kit is supplied (clamp secured to motor sleeve and adjustable in height)

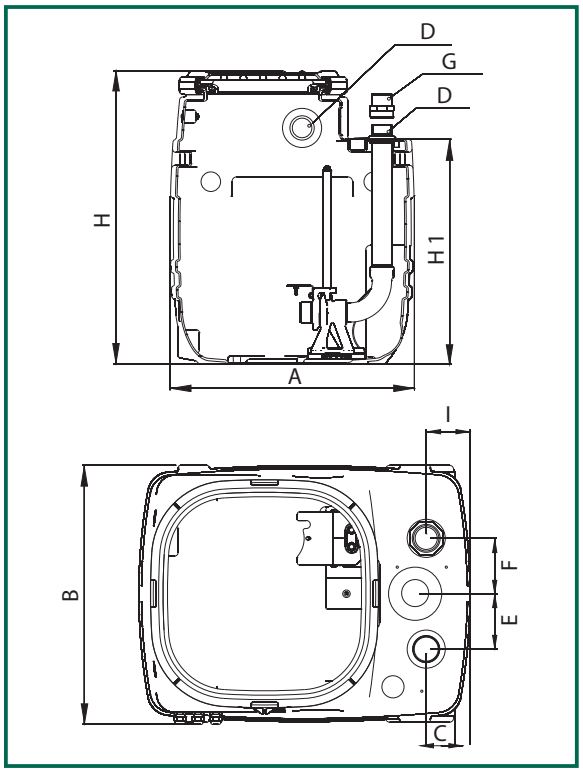
TECHNICAL DATA

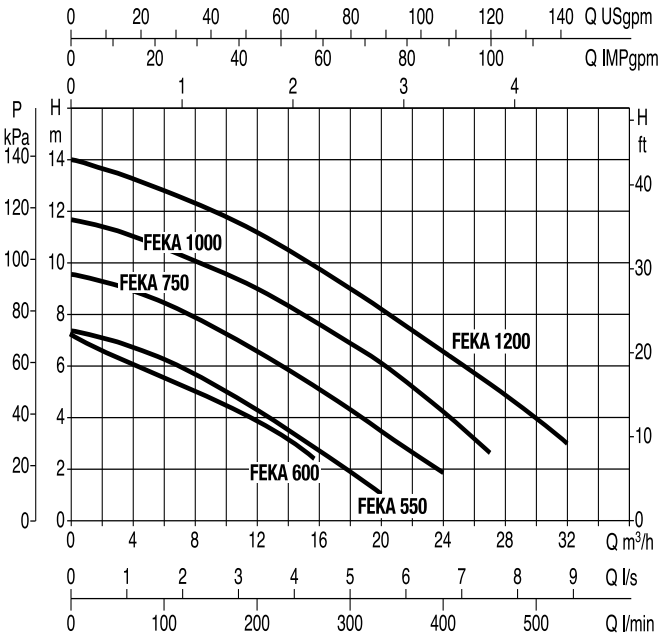
- Operating range:	from 1 to 24 m^3/h with head of up to 9 m.
- Maximum liquid temperature:	+50°C



3	1¼" - 2" UNION
5	BASE BELOW
14	COVER
83	ALARM FLOAT SWITCH (on request only)
87	CABLE CLAMP
100	TANK
118	63X2" STUB PIPE
119	DN 110 UNION (inlet)
119a	DN 50 45° ELBOW (inlet - ventilation)
126	SEAL RING
139	PUMP
149	PG 11 CABLE GLAND
151	SKID
204	CABLE CLAMP
216	SPECIAL CABLE GLAND
248b	COVER SCREWS
267a	HEX SOCKET SCREW M10x25 UNI 5931
268	PUMP FLANGE SCREW
315	DROP PIPES
316	ANTIROTATION BRACKET
319a	CLAMP
397c	M10 NUT

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





MODEL	A	B	C	D	E	F	G	H	H1	I	WEIGHT Kg
FEKABOX 280	750	585	99	DN 50/110	125	125	2" - Ø 63	900	690	99	34

FEKAFOS 200

PREDISPOSTA PER
FEKA 600 NA
FEKA VS/VX 550 M-NA/T-NA
FEKA VS/VX 750 M-NA/T-NA
FEKA VS/VX 1000 M-NA/T-NA
FEKA VS/VX 1200 M-NA/T-NA

CE

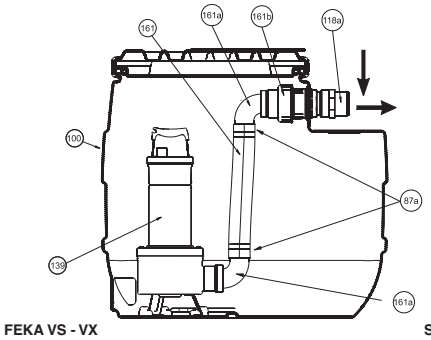
GENERAL DATA

Applications
Automatic station for collecting, lifting station and pumping to sewers of sewerage and domestic/industrial drains from basements located below the level of the sewer network.

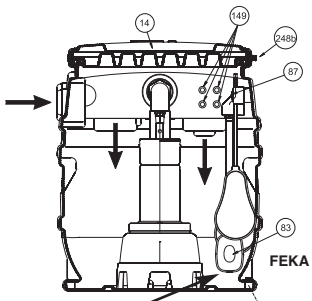
Compatible liquids
Ground water, stormwater, clear wastewater, foul wastewater, river water and lake water.

Construction features
FEKAFOS 200 is composed of a high density polyethylene tank having an effective capacity of 200 litres, with a trafficable cover complete with gasket that provides an effective gas and liquid seal, support plate in stainless steel and hydraulic unions kit for connection of the pump to the sewer system. Complete with 2 bulb-type float switches mounted on a stainless steel support plate, cable glands for connection of float switch cables and pump cables to the control panel **(to be ordered separately as per table)**. Complete with DN50 and DN110 liquid inlet manifolds and 2" outlet manifold. Complete with DN50 breather pipe connection. The use of an alarm float switch is possible on request.

Prearranged for operation of a non-automatic electric pump (see models in diagram) **to be ordered separately**.

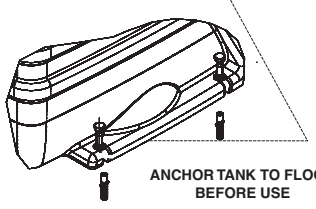


FEKA VS - VX

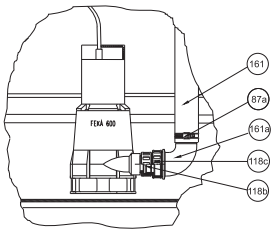


FEKA VS - VX

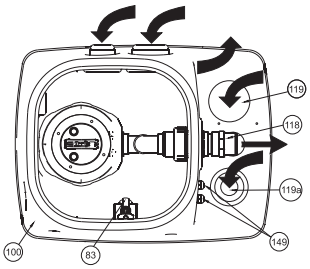
SUPPLIED ON REQUEST ONLY



ANCHOR TANK TO FLOOR BEFORE USE



FEKA 600



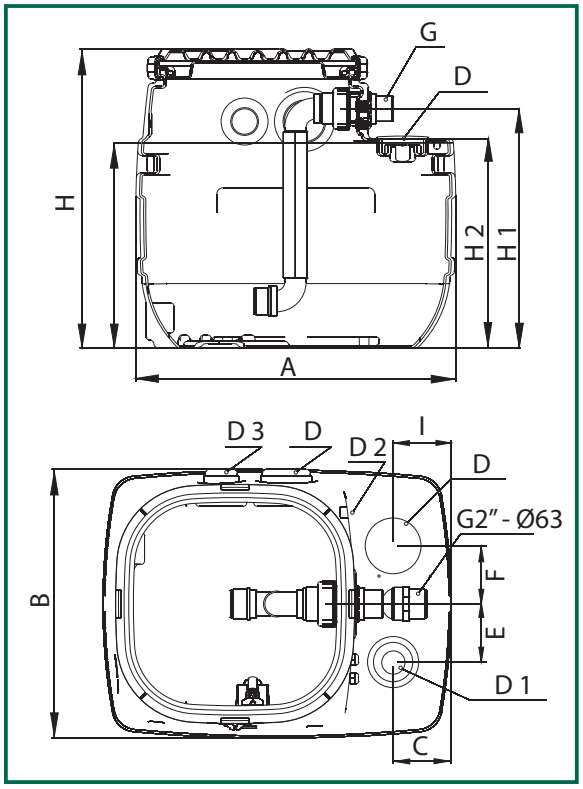
FEKA VS - VX

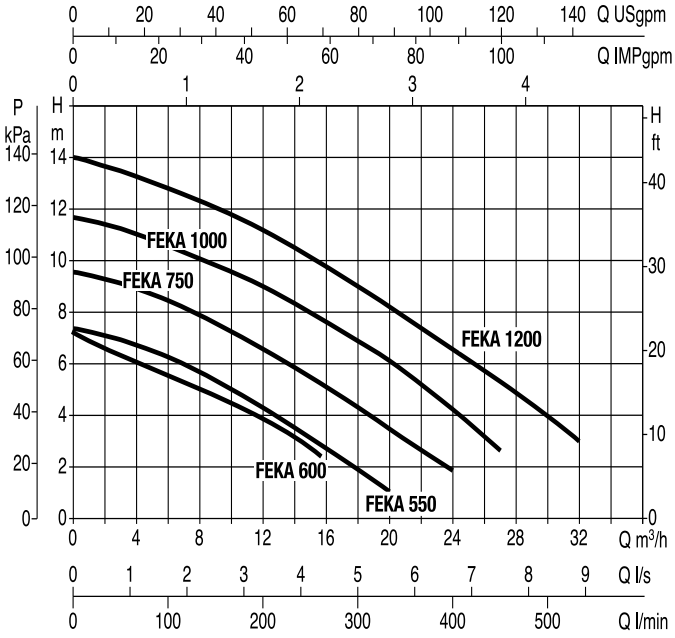
14	COVER
83	ALARM FLOAT SWITCH (supplied on request only)
87	CABLE CLAMP
87a	Ø57 HOSE CLAMP
100	TANK
118	63X2" STUB PIPE
118a	100X2" THREADED PIPE
118b	1 1/4" - 1 1/2" M-F REDUCTION
118c	1 1/2" - 2" M-F REDUCTION
119	DN 110 UNION (inlet)
119a	DN 50 45° ELBOW (inlet or ventilation)
139	PUMP
149	M20 CABLE GLANDS
161	57X50 L=300 RUBBER HOSE
161a	2"X50 CURVED HOSE CONNECTION
161b	3 PCS. UNION WITH O-Ring (2")
248b	COVER SCREWS

TECHNICAL DATA

- Operating range: from 1 to 35 m³/h with head of up to 9 m.
- Maximum liquid temperature: +50°C

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





MODEL	A	B	C	D	D1	D2	D3	E	F	G	H	H1	H2	I	WEIGHT Kg
FEKAFOS 200	750	579	124,5	DN 110	DN 50/110	DN 50	DN 75	125	125	2"	700	560	490	124,5	22

PUMP CONTROL PANEL / ELECTRICAL PANEL

MODEL	P2 NOMINAL ELECTRIC PUMP kW	HP	SINGLE-PHASE PANEL 230V~ 50 Hz	THREE-PHASE PANEL 400V~ 50 Hz
FEKA 600 NA	0,55	0,75	ED1,3 M	ED1 T
FEKA VS-VX 550 NA	0,55	0,75	ED1,3 M	ED1 T
FEKA VS-VX 750 NA	0,75	1	ED1,3 M	ED1 T
FEKA VS-VX 1000 NA	1	1,36	ED1,3 M	ED1,5 T
FEKA VS-VX 1200 NA	1,2	1,6	ED1,3 M	ED1,5 T

FEKAFOS 280

PREDISPOSTA PER
FEKA 600 NA
FEKA VS/VX 550 M-NA/T-NA
FEKA VS/VX 750 M-NA/T-NA
FEKA VS/VX 1000 M-NA/T-NA
FEKA VS/VX 1200 M-NA/T-NA
FEKA/GRINDER 1400/1800

CE

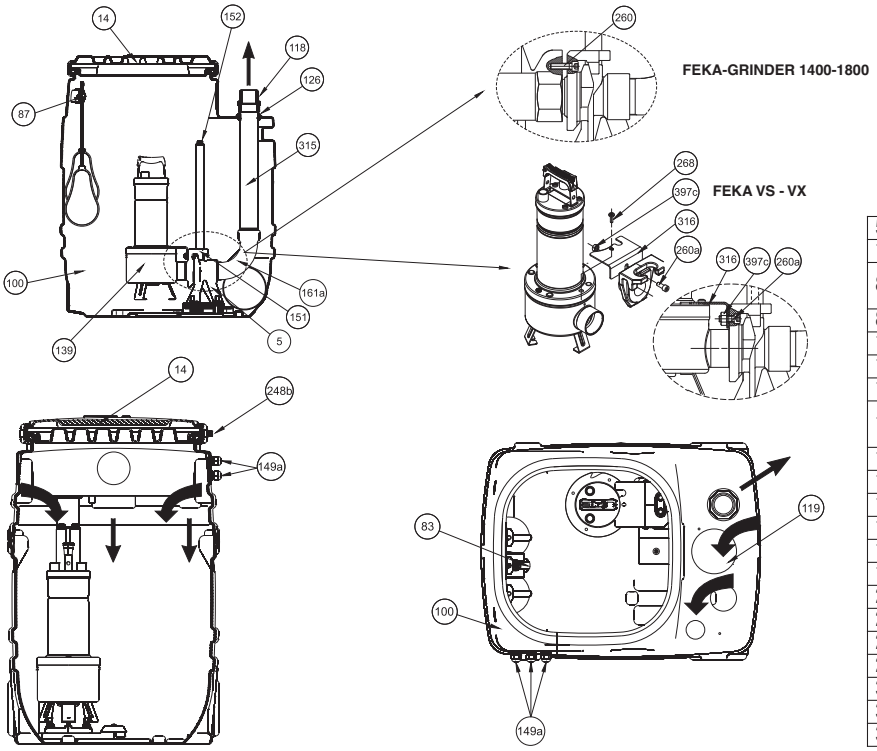
GENERAL DATA

Applications
Automatic station for collecting, lifting station and pumping to sewers of sewerage and domestic/industrial drains from basements located below the level of the sewer network.

Compatible liquids
Ground water, stormwater, clear wastewater, foul wastewater, river water and lake water.

Construction features
FEKAFOS 280 is composed of a high density polyethylene tank having an effective capacity of 280 litres, with a trafficable cover complete with gasket that provides an effective gas and liquid seal, a DSD-2 device (to facilitate pump servicing) complete with base elbow, skid, pipes guide plate with drop pipes and hydraulic unions kit for connection of the pump to the sewer system. Prearranged for operation of a non-automatic electric pump (see models indicated above) **to be ordered separately**. Complete with: 2 bulb-type float switches mounted on a stainless steel support plate, cable glands for connection of float switch cables and pump cables to the control panel (**to be ordered separately as per table**). Complete with DN50 and DN110 liquid inlet manifolds and 2" outlet manifold. Complete with DN50 breather pipe connection. The use of an alarm float switch is possible on request.

Supply
The station is supplied in a robust carton on a pallet and is complete with instruction leaflet for installation and maintenance.

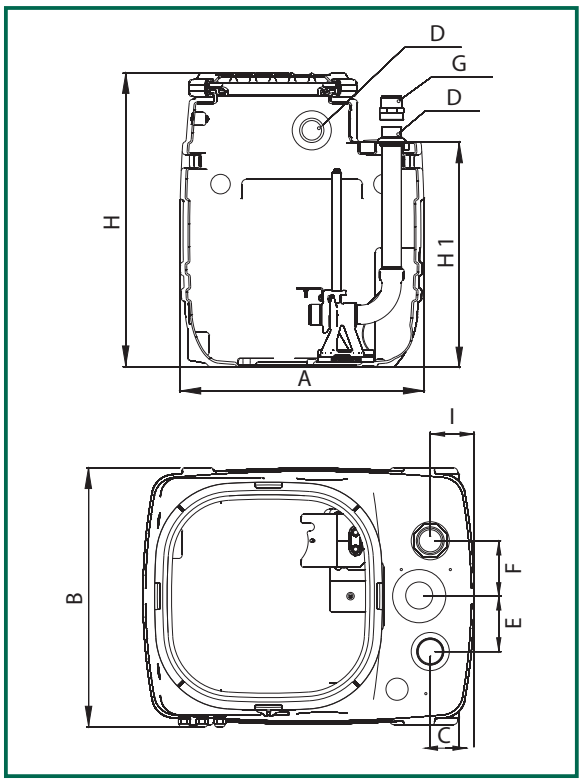


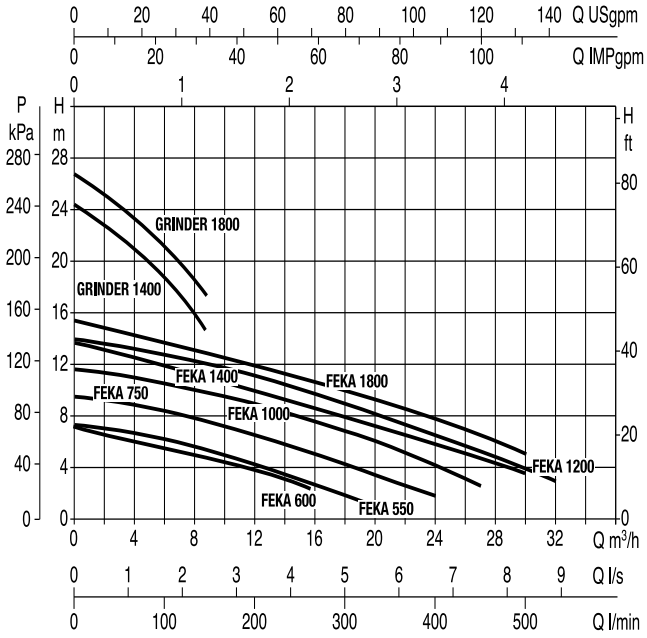
5	BASE BELOW
14	COVER
83	ALARM FLOAT SWITCH (supplied on request only)
87	CABLE CLAMP
100	TANK
118	63X2" STUP PIPE
119	DN 110 INLET
119a	DN 50/110 INLET OR DN 50 VENTILATION INLET
126	SEAL RING
139	PUMP
149a	M20 CABLE GLANDS
151	SKID
152	FIXING BRACKET
161a	2"X50 CURVED HOSE CONNECTION
248b	COVER FIXING SCREWS
260	HEX SOCKET SCREW M10x60 UNI 5931
260a	HEX SOCKET SCREW M10x25 UNI 5931
268	PUMP FLANGE SCREW
315	DROP PIPES
316	ANTIROTATION BRACKET
397c	M10 NUT

TECHNICAL DATA

- Operating range: from 1 to 35 m3/h with head of up to 26.5 m.
- Maximum liquid temperature: +55°C

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





MODEL	A	B	C	D	E	F	G	H	H1	I	WEIGHT Kg
FEKAFOS 280/...	750	585	99	DN 50/110	125	125	2"	900	690	99	37

SELECTION OF PUMP / ELECTRICAL PANEL

MODEL	P2 NOMINAL ELECTRIC PUMP kW	HP	230V~ SINGLE-PHASE PANEL 50 Hz	400V~ THREE-PHASE PANEL 50 Hz
FEKA 600 NA	0,55	0,75	ED1,3 M	ED1 T
FEKA VS-VX 550 NA	0,55	0,75	ED1,3 M	ED1 T
FEKA VS-VX 750 NA	0,75	1	ED1,3 M	ED1 T
FEKA VS-VX 1000 NA	1	1,36	ED1,3 M	ED1,5 T
FEKA VS-VX 1200 NA	1,2	1,6	ED1,3 M	ED1,5 T
FEKA 1400	1,1	1,5	ED3 M	–
FEKA 1800	1,5	2	–	ED2,5 T
GRINDER 1400	1,1	1,5	ED3 M Hs	–
GRINDER 1800	1,5	2	–	ED2,5 T

FEKAFOS 280 DOUBLE

PREDISPOSTA PER
FEKA 600 NA
FEKA VS/VX 550 M-NA/T-NA
FEKA VS/VX 750 M-NA/T-NA
FEKA VS/VX 1000 M-NA/T-NA
FEKA VS/VX 1200 M-NA/T-NA

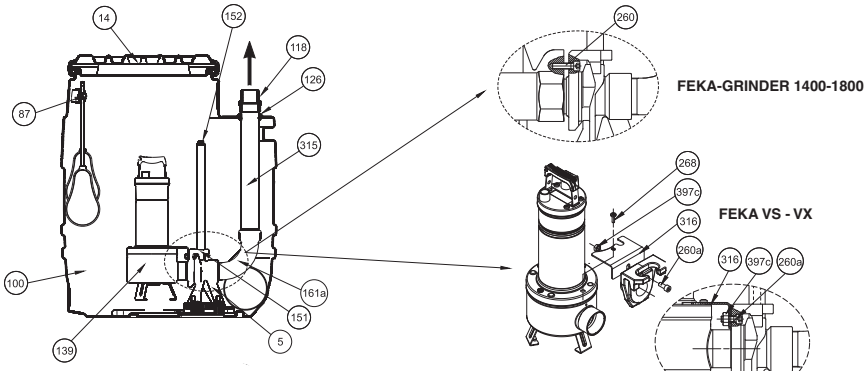
CE

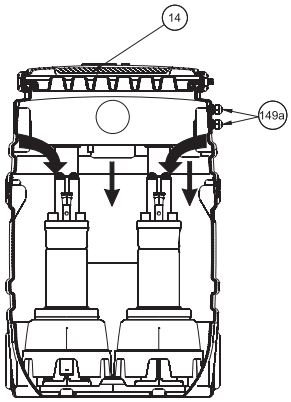
GENERAL DATA

Applications
Automatic station for collecting, lifting station and pumping to sewers of sewerage and domestic/industrial drains from basements located below the level of the sewer network.

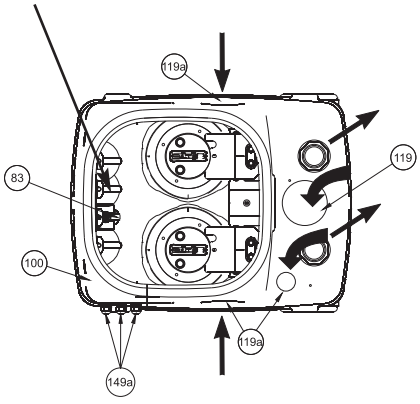
Compatible liquids
Ground water, stormwater, clear wastewater, foul wastewater, river water and lake water.

Construction features
FEKAFOS 280 DUAL is composed of a high density polyethylene tank having an effective capacity of 280 litres, with a trafficable cover complete with gasket that provides an effective gas and liquid seal, 2 DSD-2 devices (to facilitate pumps servicing) complete with base elbows, skids, pipe guide brackets, drop pipes and hydraulic unions kit for connection of the pumps to the sewer system. Prearranged for operation of 2 non-automatic electric pumps (see models indicated above) **to be ordered separately**. Complete with: 3 bulb-type float switches mounted on a stainless steel support plate, cable glands for connection of float switch cables and pump cables to the control panel (**to be ordered separately as per table**).
Complete with DN50-DN110 liquid inlet manifolds and 2" outlet. Complete with DN50 breather pipe connection. The use of an alarm float switch is possible on request.





SUPPLIED ON REQUEST ONLY

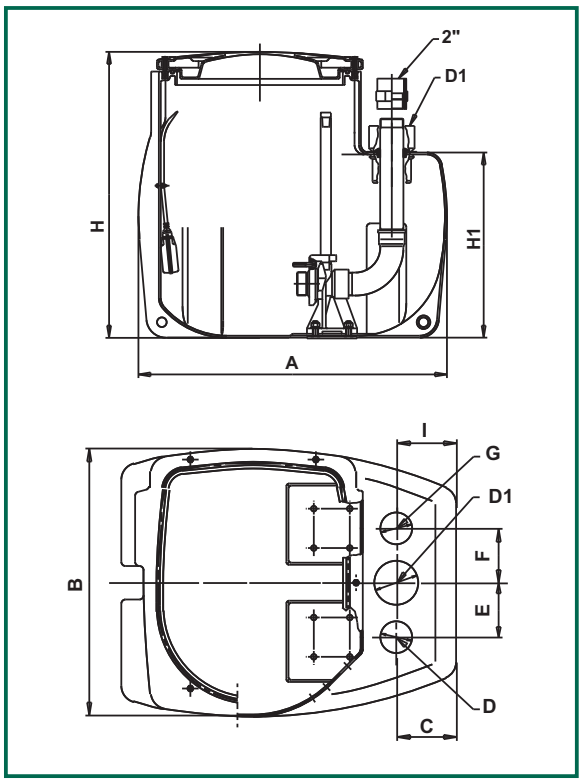


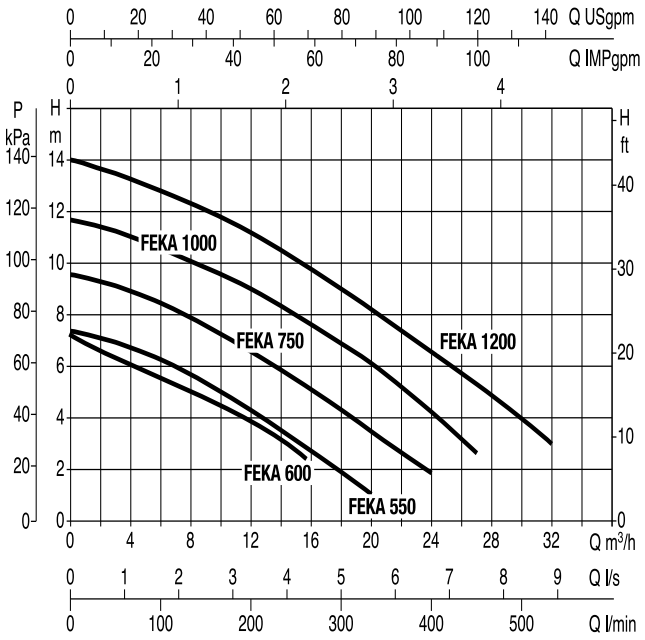
5	BASE ELBOW	149	PG 11 CABLE GLAND
14	COVER	149a	PG 13,5 CABLE GLAND
83	ALARM FLOAT SWITCH (on request only)	151	SKID
87	CABLE CLAMP	152	FIXING BRACKET
100	TANK	248b	COVER SCREWS
118	63X2" STUB PIPE	266	HEX SOCKET SCREW M10x16
119	DN 110 UNION (inlet)	267	HEX SOCKET SCREW M10x60 UNI 5931
119a	DN 50 45° ELBOW (inlet or ventilation)	267a	HEX SOCKET SCREW M10x25 UNI 5931
119b	DN 50 45° ELBOW (ventilation)	268	PUMP SOCKET SCREW
126	SEAL RING	315	DROP PIPES
139	PUMP	316	ANTIROTATION BRACKET
149	PG 11 CABLE GLAND	397c	M10 NUT

TECHNICAL DATA

- Operating range: from 1 to 35 m³/h with head up to 26,5 metres
- Liquid temperature range: +55°C

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





MODEL	A	B	C	D	D1	E	F	G	H	H1	I	WEIGHT Kg
FEKAFOS 280 DOUBLE/...	800	640	145	DN 50	DN 110	130	130	2"	745	480	145	54

CHOICE OF PUMP/ELECTRICAL PANEL

PUMP MODEL	P2 NOMINAL ELECTRIC PUMP kW	HP	SINGLE-PHASE 230V~ / THREE-PHASE 400V~ 50 Hz
2FEKA 600 NA	0,55	0,75	E-BOX
2FEKA VS-VX 550 NA	0,55	0,75	E-BOX
2FEKA VS-VX 750 NA	0,75	1	E-BOX
2FEKA VS-VX 1000 NA	1	1,36	E-BOX
2FEKA VS-VX 1200 NA	1,2	1,6	E-BOX

FEKAFOS 550

FITTED FOR
FEKA 600 NA
FEKA VS/VX 550 M-NA/T-NA
FEKA VS/VX 750 M-NA/T-NA
FEKA VS/VX 1000 M-NA/T-NA
FEKA VS/VX 1200 M-NA/T-NA
FEKA 1400/1800
GRINDER 1800

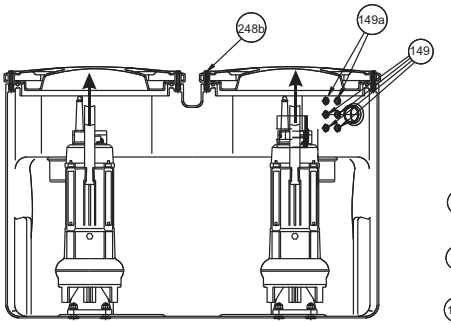
CE

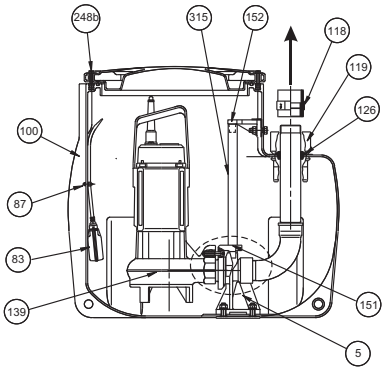
GENERAL DATA

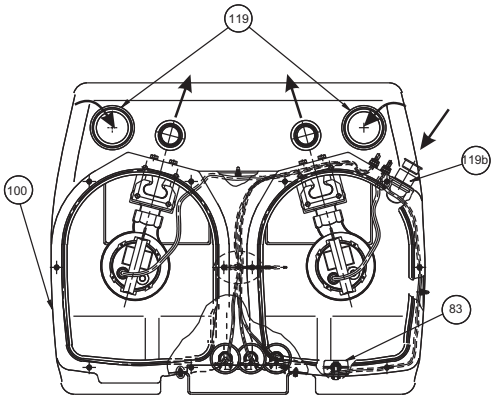
Applications
Automatic system for collecting, lifting and pumping black water and domestic/industrial waste from basements located under the level of the drains into sewers.

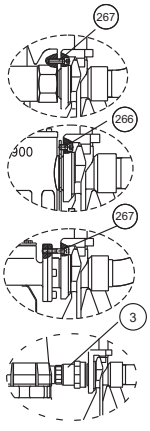
Pumped liquid
Phreatic water, rain water, clear waste water, black waste water and water from rivers and lakes.

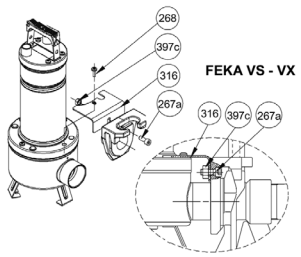
Technical features
FEKABOX 550 comprises a high density polyethylene tank with an effective capacity of 550 litres, with 2 sturdy gas and liquid proof sealed covers, 2 DSD-2 devices to simplify pump maintenance, supports, slides, hose brackets and chute hoses, and pipe fittings for connecting the two pumps to the drains. Fitted for two non-automatic electric pump (see models indicated above) **to be ordered separately.** Complete with: 3 bulb floats mounted on a stainless steel support, cable holder for connecting the float and pump cables to the electrical panel **(to order separately according to the table).** Complete with DN110 suction manifolds and 2" delivery manifolds. Complete with connector for DN50 vent tube. An alarm float can be used on request.











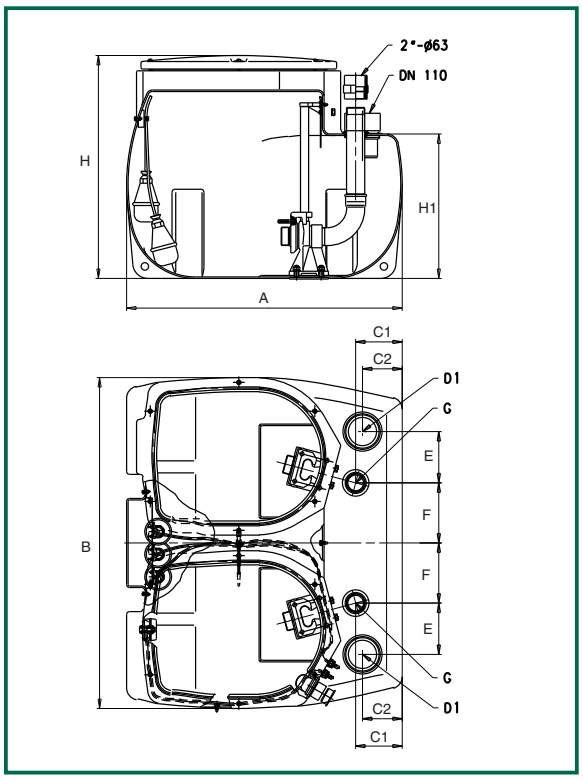
FEKA VS - VX

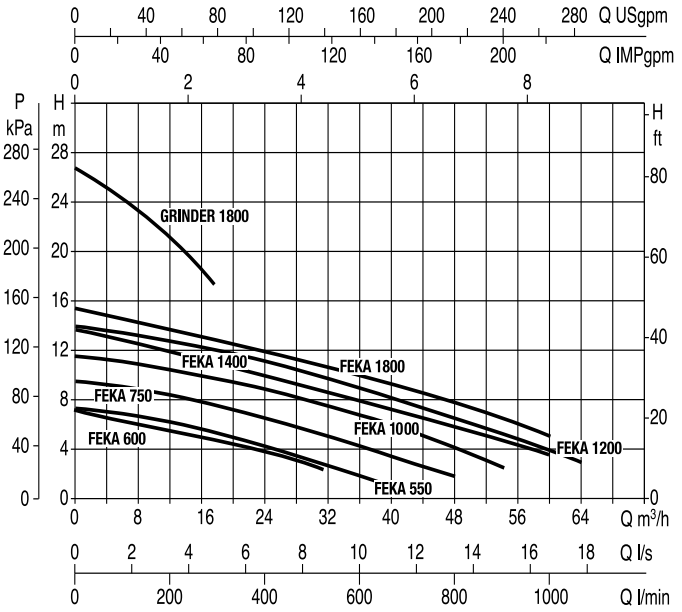
5	FIXED PART
14	COVER
83	"ALARM" FLOAT (not supplied)
87	CABLE CLAMP
100	TANK
118	SLEEVE 63X2"
119	UNION DN 110 (inlet)
119b	45° ELBOW DN 50 (inlet)
126	OUTLET HOSE CLAMP
139	PUMP
149	CABLE HOLDER PG 11
149a	CABLE HOLDER PG 13,5
151	SLIDE MOBILE PART
152	FASTENING BRACKET
248b	COVER SCREW
266	TCEI SCREW M10X16
267	TCEI SCREW M10X60 UNI 5931
267a	TCEI SCREW M10X25 UNI 5931
268	PUMP FLANGE SCREW
315	GUIDE HOSES
316	ANTI-ROTATION BRACKET
397c	M10 NUT

TECHNICAL DATA

- Operating range: from 1 to 65 m³/h with head up to 26,5 metres
- Liquid temperature range: +55°C

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





Curves refer to two pumps in function.

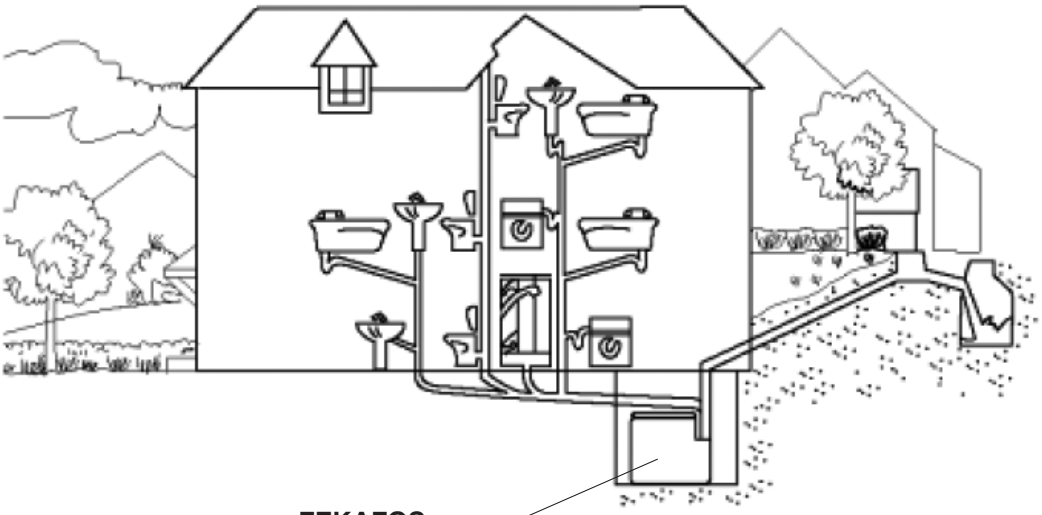
MODEL	A	B	C1	C2	D1	E	F	G	H	H1	WEIGHT Kg
FEKAFOS 550/...	920	1100	155	135	DN 110	170	200	2"	745	480	94

CHOICE OF PUMP/ELECTRICAL PANEL

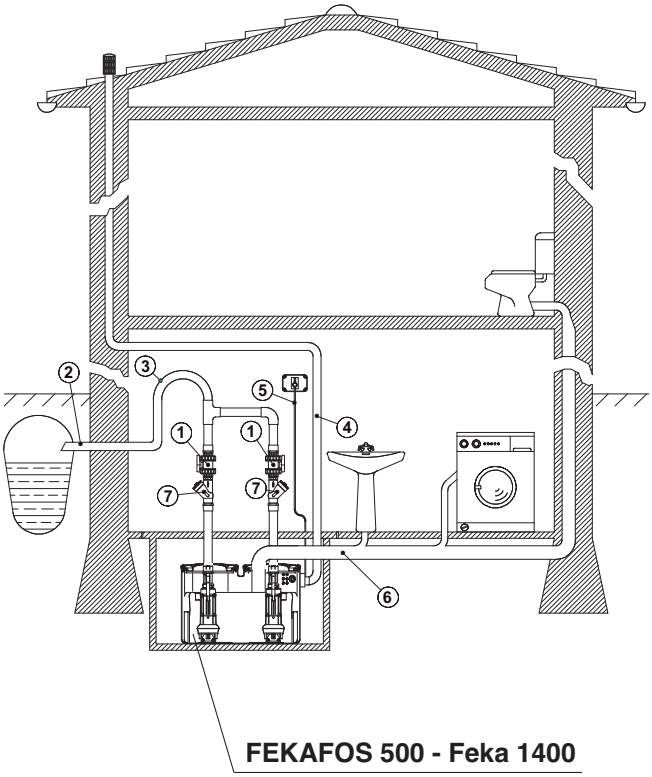
PUMP MODEL	P2 NOMINAL ELECTRIC PUMP kW	HP	SINGLE-PHASE 230V~ / THREE-PHASE 400V~ 50 Hz
2FEKA 600 NA	0,55	0,75	E-BOX
2FEKA VS-VX 550 NA	0,55	0,75	E-BOX
2FEKA VS-VX 750 NA	0,75	1	E-BOX
2FEKA VS-VX 1000 NA	1	1,36	E-BOX
2FEKA VS-VX 1200 NA	1,2	1,6	E-BOX
2FEKA 1400	1,1	1,5	E-BOX
2FEKA 1800	1,5	2	–
2GRINDER 1800	1,5	2	–

EXAMPLES OF INSTALLATION

The installation can be made either at surface level or underground whenever any ground obstacles must be crossed in order to join up to a remote sewer system. FEKAFOS can be installed in basements, garages and underground pits.

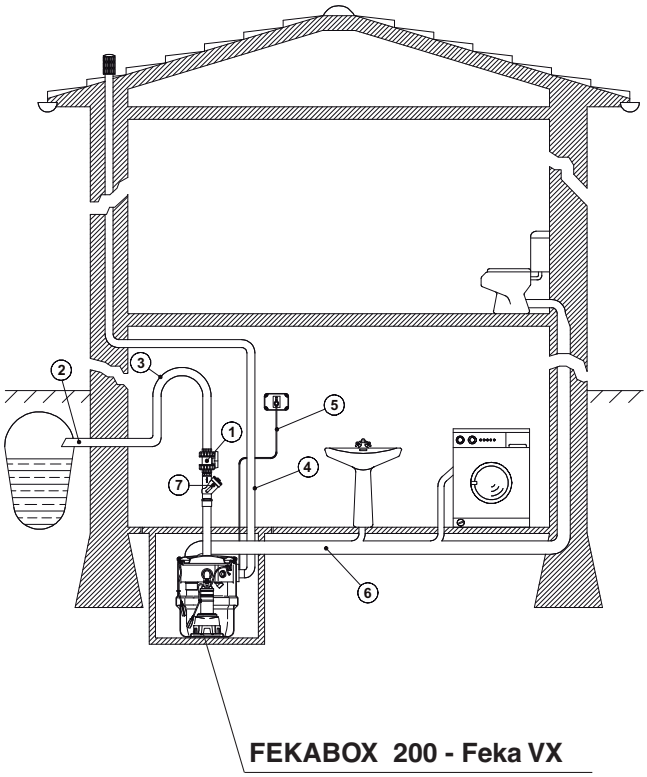


FEKAFOS



FEKAFOS 500 - Feka 1400

1 - On-Off ball valve
2 - Delivery
3 - Siphon
4 - Ventilation
5 - Power cable
6 - Collection
5 - Non-return valve



FEKABOX 200 - Feka VX

1 - On-Off ball valve
2 - Delivery
3 - Siphon
4 - Ventilation
5 - Power cable
6 - Collection
5 - Non-return valve

NOTES

NOTES

NOTES

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