

Pump station for domestic waste water

€ - EN 12 050-1

Evamatic-Box N 200 litres

Evamatic-Box N 500 litres

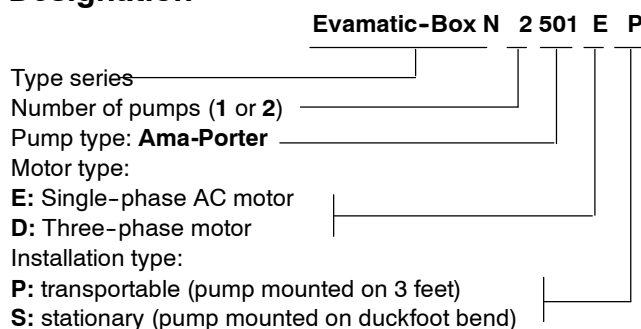
Applications

- Waste water
- Rain water
- Sewage
- Disposal of water occurring below the flood level

Operating data

Q up to 40 m³/h, (11 l/s)
H up to 21 m
t° max. 40 °C, 70°C for short periods (3 to 5 minutes)
Free passage: 45 to 60 mm

Designation



Materials

Single-piece water-proof tank made of polyethylene
Pipe made of PVC

Design

Features of Evamatic-Box N 200 l pump stations:

- 1 access cover, dia. 630 mm
- 8 nozzles from DN 50 to DN 150 as inlet and venting options, closed.
- 1 horizontal discharge nozzle, DN 50 or DN 65, closed (a check valve is integrated in the pipe supplied)
- 1 submersible motor pump with float switch in transportable or stationary installation with guide hoop
- 1 drainage nozzle, DN 40, closed

Features of Evamatic-Box N 500 l pump stations:

- 1 access cover, dia. 630 mm
- 12 nozzles, DN 50 or DN 150, as inlet and venting options, closed.
- 2 vertical or horizontal discharge nozzles, DN 50 or DN 65, as discharge options, closed. (The supplied pipes with integrated check valves allow both options.)
- 1 drainage nozzle, DN 40, closed
- 2 submersible motor pumps in stationary installation with guide hoop
- 3 float switches for level control, fastened to a removable rod (patented system)
- The control unit is not included in the scope of supply.

Options:

- Level-adjusting piece, 300 mm, (with fasteners and sealing element)
- Hand pump
- Self-adhesive pads for noise reduction
- LevelControl Basic 2 control unit (Evamatic-Box N 500 l)
- Alarm switchgear (Evamatic-Box N 200 l)

Open-loop/closed-loop control

KSB recommends to use the LevelControl Basic 2 control unit. (Electrical accessories optionally available.)

Compliance with standards

€ - EN 12 050-1

Motor

Single-phase AC motor: 230 V - 50 Hz with integrated temperature switch

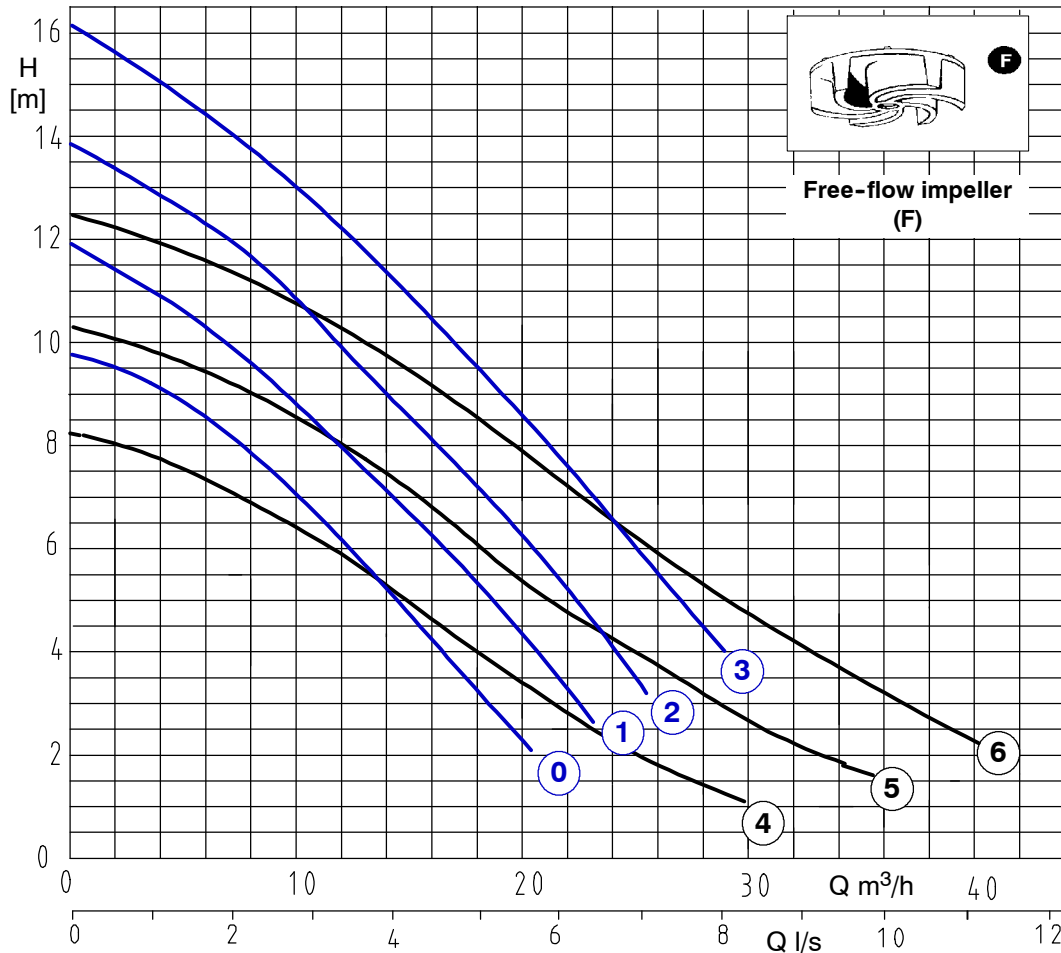
Three-phase motor: 400 V - 50 Hz, DOL starting
Motors in IP 68 enclosure, thermal class F to EN 60529 / IEC 529

Important:

The pump is not approved for use in countries stipulating explosion-proof units for handling waste water containing faeces.

Product benefits

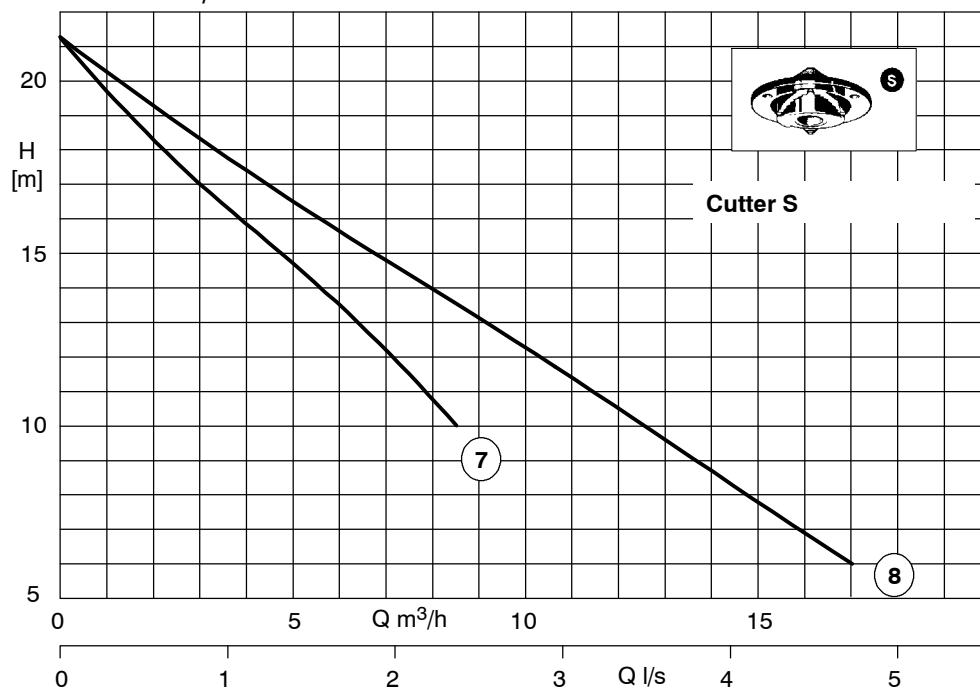
- Market-leading product for the disposal of waste water in private and commercial sectors
- Easy to install either directly on the floor or in underfloor position
- Numerous connection options provide a high degree of flexibility
- Automatic operation
- Non-clogging hydraulic system: free-flow impeller or cutter
- Pump(s) can easily be lifted out of the tank through the generously sized access opening (cover dia.: 630)
- Easy access to float switches (fastened to a removable rod in the case of Evamatic-Box N 500 l) (patented system)

Selection chart - 2 900 1/min - free-flow impeller

Technical data: Evamatic-Box N 200 I

No.	Sizes	Free passage (mm)	Motor			Net weight (kg)	Ident. No.	
			Speed (1/min)	P _{nom} (kW)	Amperage (A)			
					1~ 230 V			3~ 400 V
Evamatic-Box N 200 I								
0	1500 E-P	45	2900	0.55	5.0	54	39 023 380	
1	1501 E-P	45	2900	0.75	6.0	54	39 023 381	
2	1502 E-P	45	2900	1.10	8.2	54	39 023 382	
3	1503 E-P	45	2900	1.10	8.2	54	39 023 383	
4	1601 E-P	60	2900	0.75	6.0	64	39 023 384	
5	1602 E-P	60	2900	1.10	8.2	64	39 023 385	
6	1603 E-P	60	2900	1.10	8.2	64	39 023 386	
0	1500 E-S	45	2900	0.55	5.0	70	39 023 388	
1	1501 E-S	45	2900	0.75	6.0	70	39 023 389	
2	1502 E-S	45	2900	1.10	8.2	70	39 023 390	
3	1503 E-S	45	2900	1.10	8.2	70	39 023 391	
4	1601 E-S	60	2900	0.75	6.0	83	39 023 392	
5	1602 E-S	60	2900	1.10	8.2	83	39 023 393	
6	1603 E-S	60	2900	1.10	8.2	83	39 023 394	

Technical data: Evamatic-Box N 500 I

No.	Sizes	Free passage (mm)	Motor				Net weight (kg)	Ident. No.
			Speed (1/min)	P _{nom} (kW)	Amperage (A)			
					1~ 230 V	3~ 400 V		
Evamatic-Box N 500 I								
0	2500 E-S	45	2900	0.55	5.0		110	39 023 396
1	2501 E-S	45	2900	0.75	6.0		110	39 023 397
2	2502 E-S	45	2900	1.10	8.2		110	39 023 398
3	2503 E-S	45	2900	1.10	8.2		110	39 023 399
4	2601 E-S	60	2900	0.75	6.0		122	39 023 400
5	2602 E-S	60	2900	1.10	8.2		122	39 023 401
6	2603 E-S	60	2900	1.10	8.2	122	39 023 402	
0	2500 D-S	45	2900	0.55		2.3	110	39 023 404
1	2501 D-S	45	2900	0.75		2.8	110	39 023 405
2	2502 D-S	45	2900	1.10		3.0	110	39 023 406
3	2503 D-S	45	2900	1.50		3.5	110	39 023 407
4	2601 D-S	60	2900	0.75		2.8	122	39 023 408
5	2602 D-S	60	2900	1.10		3.0	122	39 023 409
6	2603 D-S	60	2900	1.50	3.5	122	39 023 410	

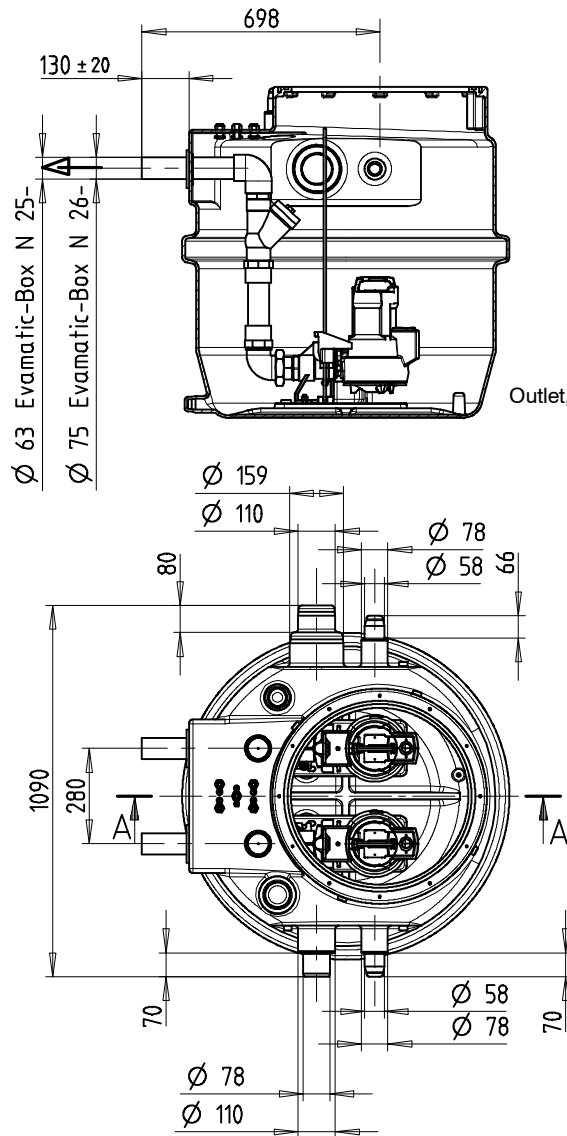
Selection chart - 2 900 1/min - cutter

Technical data

No.	Sizes	Free passage (mm)	Motor				Net weight (kg)	Ident. No.
			Speed (1/min)	P _{nom} (kW)	Amperage (A)			
					1~ 230 V	3~ 400 V		
Evamatic-Box N 200 I								
7	1545 EB-P	-	2900	1.10	8.2		57	39 023 387
7	1545 EB-S	-	2900	1.10	8.2		73	39 023 395
Evamatic-Box N 500 I								
7	2545 EB-S	-	2900	1.10	8.2		117	39 023 403
8	2545 D-S	-	2900	1.50		3.5	114	39 023 411

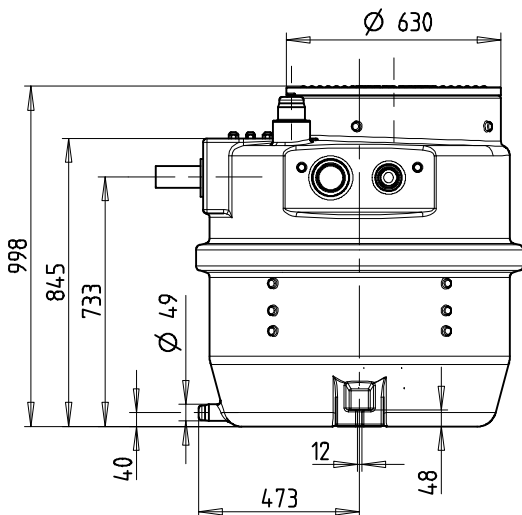
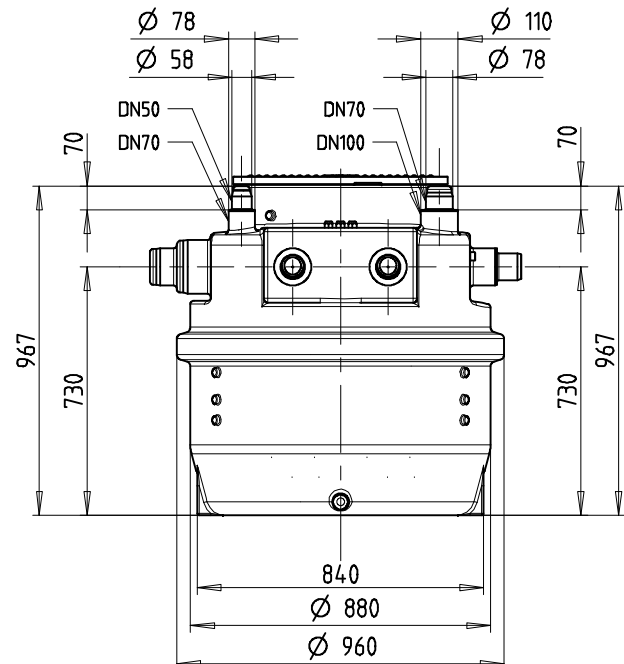
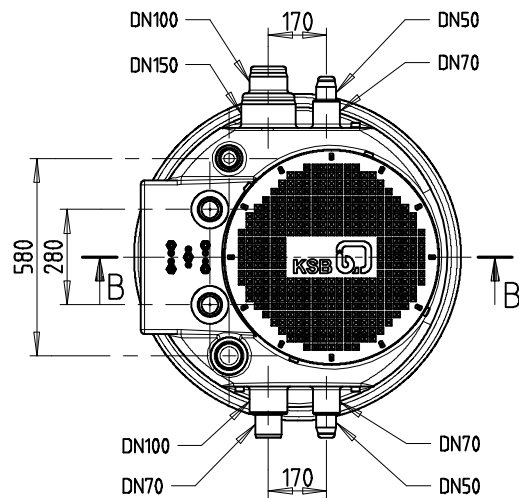
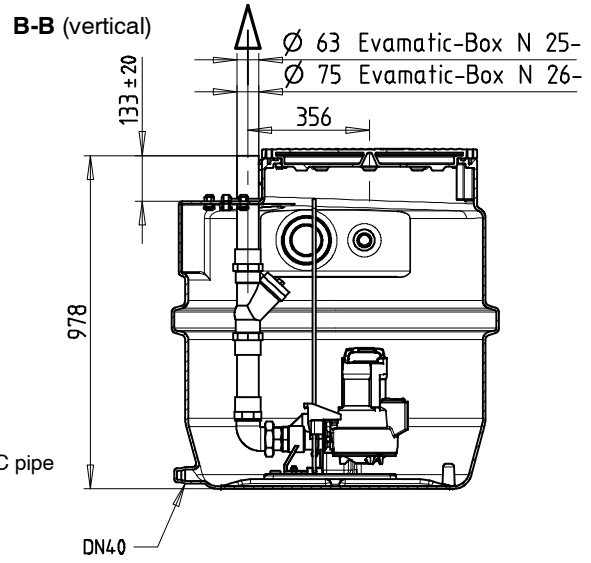
Dimensions

Evamatic-Box N 500 litres, 25.. DN 50 and 26.. DN 65

A-A (horizontal)



B-B (vertical)



Scope of supply

Evamatic-Box N 200 I

- 1 single-piece tank made of polyethylene, volume 200 litres, anchored to the floor at two points, comprising:
 - 1 access cover, dia. 630 mm, with sealing element and 12 screws
 - 8 nozzles as inlet and venting options, closed, arranged as follows:
 - 1 horizontal nozzle DN 150/DN 100 and 1 horizontal nozzle DN 70/DN 50 on one side
 - 1 horizontal nozzle DN 100/DN 70 and 1 horizontal nozzle DN 70/DN 50 on the opposite side
 - 1 horizontal discharge nozzle DN 50 or DN 65, closed
 - 1 drainage nozzle, DN 40, closed
- 1 discharge pipe DN 50 or DN 65 with integrated ball check valve made of PVC and sealing element for the pipe passage through the tank wall
- 1 submersible motor pump with single-phase motor (Ama-Porter 5 _ _ or 6 _ _ or S 545), with float switch for ON/OFF and 10-metre power cable with CE plug; pump in transportable or stationary installation with guide hoop
- 1 opening with cable grommet for running the power cable (with plug) through the tank wall
- 1 lifting chain made of stainless steel 1.4401, with hook made of 1.4571 (attached at the top of the tank)

Evamatic-Box N 500 I

- 1 single-piece tank made of polyethylene, volume 500 litres, anchored to the floor at two points, comprising:
 - 1 access cover, dia. 630 mm, with sealing element and 12 screws
 - 12 nozzles as inlet and venting options closed, arranged as follows:
 - 1 horizontal nozzle DN 150/DN 100 and 1 horizontal nozzle DN 70/DN 50 on one side
 - 1 horizontal nozzle DN 100/DN 70 and 1 horizontal nozzle DN 70/DN 50 on the opposite side
 - 1 vertical nozzle DN 100/DN 70 and 1 vertical nozzle DN 70/DN 50
 - 2 vertical or horizontal discharge nozzles DN 50 or DN 65, closed. (The piping kit supplied allows both options.)
 - 1 drainage nozzle, DN 40, closed
- 2 discharge pipes DN 50 or DN 65 with integrated ball check valves made of PVC and sealing elements for the pipe passages through the tank wall
- 2 submersible motor pumps with single-phase or three-phase motors (Ama-Porter 5 _ _ or 6 _ _ or S 545), with 10-metre power cable (single-phase pumps: with CE plug) in stationary installation with guide hoop
- 5 cable glands for routing the power cables and float switch cables (nozzles closed)
- 1 lifting chain made of stainless steel 1.4401, with hook made of 1.4571 (attached at the top of the tank) for each pump
- 3 float switches fastened to a removable rod (patented system)

Compliance with standard EN 12050-1

Evamatic-Box N tanks comply with standard EN 12050-1 and are, therefore, absolutely odour-proof.

The 200-litre and 500-litre tanks have successfully passed tightness testing at a test pressure of 0.5 bar in accordance with the standard.

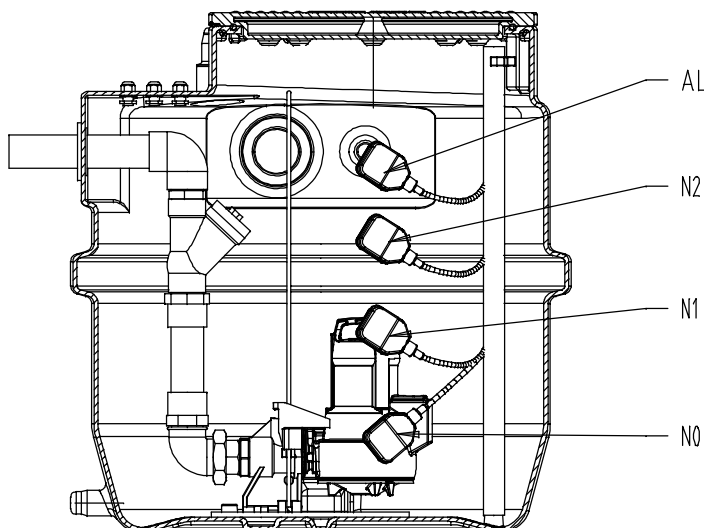
Automatic operation

Evamatic-Box N 200 I

Automatic operation is provided by the (ON/OFF) float switch fitted on the pump.

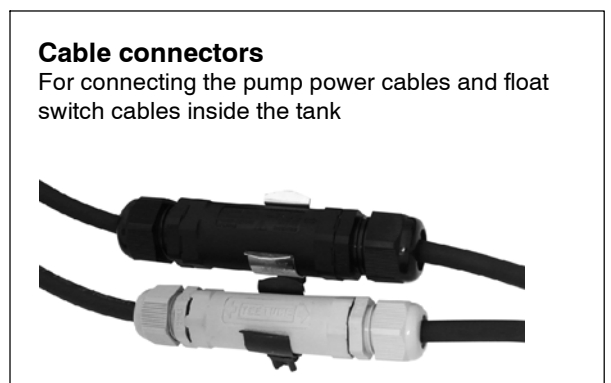
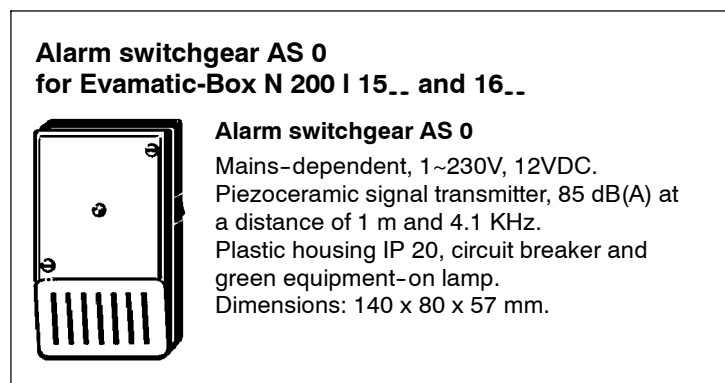
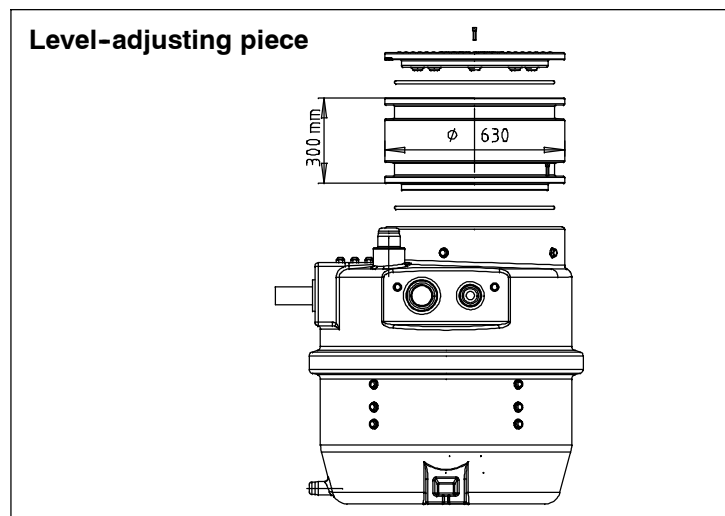
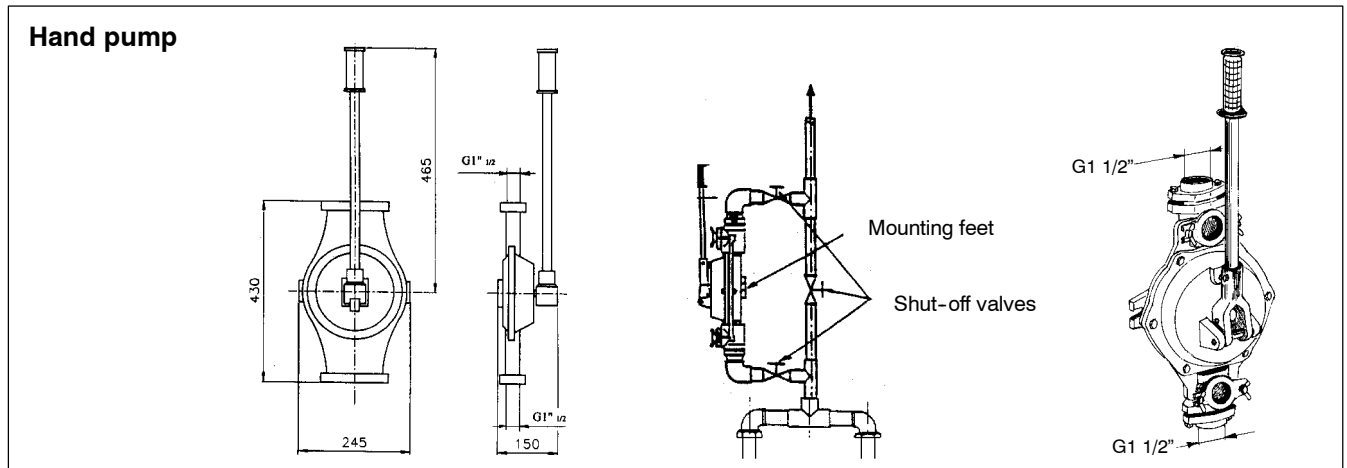
Evamatic-Box N 500 I

The three float switches are fitted at levels NB, N1 and AL on a removable rod inside the tank.



- N0 - Stop level of pumps 1 and 2
- N1 - Start level of pump 1
- N1 - Start level of pump 2
- AL - Alert level

The control unit ensures automatic pump changeover after every start-stop cycle (pump 1 becomes pump 2 and vice versa).



Accessories


Description		Ident. No.	Gross weight kg
Hand pump		00 520 485	12.0
Level-adjusting piece	300 mm	39 023 481	10.0
Gate valve, cast iron	DN 50	00 411 503	1.2
	DN 65	39 000 507	1.8
Gate valve, PVC	DN 50	39 017 886	1.5
	DN 65	39 018 149	2.0
Cable connector, IP 68, for fastening at the cover, for connecting the pumps or the float switches inside the tank (1 cable connector per cable)			
For Ama-Porter F with single-phase AC motor		39 023 444	0.15
For Ama-Porter S with single-phase AC motor and all Ama-Porter models with three-phase motor		39 023 445	0.15
For the float switches		39 023 444	0.15

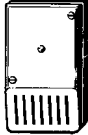

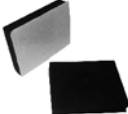

Accessories
Dual-pump station with LevelControl Basic 2

For dual-pump stations we recommend to use the LevelControl Basic 2 control unit, which controls automatic operation of both pumps (automatic pump changeover after every start, peak load operation function and automatic pump changeover in the case of a pump fault). LevelControl Basic 2 also offers an alarm function so that no separate alarm switchgear is required.

Evamatic-Box N 500 litres 25 .. and 26 ..

			230 V	400 V	Current min-max A	Evamatic-Box N				Ident. No.	Gross weight ≈ kg
						2500 E 2501 E 2601 E	2502 E 2503 E 2602 E 2603 E 2545 EB	2500 D	2501 D 2502 D 2503 D 2601 D 2602 D 2603 D 2545 D		
E 30	 <p>Control unit for dual-pump stations IP 54 LevelControl Basic 2 Peak load operation function, DOL starting, manual-0-automatic selector switch, indicator lamps and control panel, high water alert, integrated alarm buzzer 85 dB(A), operating hours counter/start-stop cycle counter per pump, voltage measurement, phase monitoring, volt-free contact for general fault message</p> <p style="text-align: right;">BC2 230 DFNO 100</p> <p>With external socket Optional mains-independent alarm via rechargeable battery</p> <p>361 x 278 x 120 mm</p> <p>Float switch or 4...20mA sensor</p>	X			10.0	X	X			19 073 774	5.0
E 30	 <p>Control unit for dual-pump station, IP 54 LevelControl Basic 2 Peak load operation function, DOL starting, manual-0-automatic selector switch, indicator lamps and control panel, high water alert, integrated alarm buzzer 85 dB(A), operating hours counter/start-stop cycle counter per pump, voltage measurement, phase monitoring, volt-free contact for general fault message</p> <p style="text-align: right;">BC2 400 DFNO 025 BC2 400 DFNO 040</p> <p>With external socket Optional mains-independent alarm via rechargeable battery</p> <p>361 x 278 x 120 mm</p> <p>Float switch or 4...20mA sensor</p>	X	X		1.6 - 2.5 2.5 - 4.0		X		X	19 073 776 19 073 777	5.0 5.0

Evamatic-Box N 200 litres 15 . . and 16 . .

			Evamatic-Box N		Ident. No.	Gross weight ≈ kg
			1500 E 1501 E 1601 E	1502 E 1503 E 1602 E 1603 E 1545 EB		
E 30	 <p>Alarm switchgear AS 0, AS 2, AS 4 with circuit breaker, piezoceramic signal transmitter, 85 dB(A) at a distance of 1 m and 4.1 kHz, green equipment-on lamp Use float switch (E 60) or moisture sensor F 1 (E 64) as contactor.</p>	230 V~/ 12 V=1,2 VA				
0	Mains-dependent	AS 0	X	X	29 128 401	0.50
1	Mains-dependent with volt-free signalling contact	AS 2	X	X	29 128 422	0.50
2	Mains-independent with volt-free signalling contact, self-charging power supply unit for 5 hours' operation in case of a mains failure	AS 4	X	X	29 128 442	1.20
E 60	 <p>Float switch, polypropylene housing (max. fluid temp. 70 °C) With free cable end (NO contact) Circuit closed in upper float position Connection cable (H 07 RN-F3G1) Clamp with holder Fastening screw (clamp holder) Cable gland (for cable passage)</p>	230 V AC or 24V AC/24V DC min. 20 mA max. 8 A 10 m	X	X	39 023 446	1.50
	 <p>8 noise reduction pads made of natural rubber, self-adhesive, for fitting on the tank floor</p>		X	X	18 078 943	0.02
	 <p>Adapters (set) (reducing or increasing adapters) for Tank opening DN 70 > Adapter for connecting pipe dia. 53 to dia. 63 Tank opening DN 100 > Adapter for connecting pipe dia. 53 to dia. 63 Tank opening DN 100 > Adapter for connecting pipe dia. 75 to dia. 89</p>		X	X	01 313 530 39 023 452 39 023 453	0.50 0.60 0.60



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