



Submersible motor pumps

Cutter device "S" 50 Hz

Fields of Application

Pumping of waste water containing solid matter or domestic sewage such as waste from toilets, washing machines, dishwashers, in intermittent operation, etc.
Surface water or rain water pumping in intermittent operation such as car park drainage.
Drainage of sumps liable to flooding.

Operating characteristics

Q : up to 17 m³/h, (4,7 l/s).

H : up to 21 m.

Motor Power ;

1.5 kW maximum for three phase motor.

1.1 kW maximum for single phase motor.

Operating temperature up to 40°C.

Intermittently 70°C (3 to 5 min.).

Materials

Casing : EN.GJL-200 / JL 1030 / FGL 200 / GG 20.

Impeller : EN.GJL-200 / JL 1030 / FGL 200 / GG 20.

Shaft : Chrome steel 1.4021 / X20 Cr13 / Z20 C13.

Cutter system in very hard wear resistant material.

Shaft seal : (Motor side) Lip seal

Shaft seal : (Pump side) Mechanical seal
Silicon/Silicon

Nuts & bolts : Stainless steel

Elastomers : Nitrile rubber

Float switch : Polypropylene

Pump type

Vertical single casing submersible motor pump.

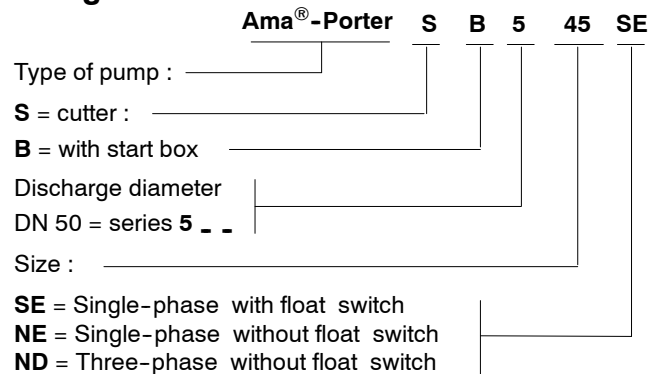
Shaft seal

Twin shaft seal with intermediate oil chamber.

Motor side : Single lip seal

Pump side : Single mechanical seal independent
of direction of rotation

Designation



Motor

Single phase : 230 V - 50 Hz with built in thermal
overload protection

Three phase : 400 V - 50 Hz direct on-line starting

Motor protection : IP68, Class F insulation in accordance
with EN 60529 / IEC 529.

Please note :

Variable-speed operation of this pump is not
allowed.

Operating mode S1 - submerged (max. 5 m)

Operating mode S3 - not submerged
(see dimension table)

Bearings

Sealed for life radial ball bearings.

CE - EN 12 050

The pump must not be used in countries where pumps
handling sewage with faeces are subject to explosion
protection regulations.

Scope of Supply

Pump complete ready for installation with either stationary or transportable mounting kits.

The **SE** versions are fitted with an integral float switch.

The single-phases versions are equipped with a start box with built-in capacitors.

Tight housing, IP 56, of insulating material. The box is provided with 2 cable glands and a power supply cable with plug.

Dimension: 190 mm x 140 mm x 70 mm

Fastening: 144 mm x 98 mm

Weight: 1.2 kg

Details

- Manufactured in cast iron construction
EN.GJL-200 / JL 1030 / FGL 200 / GG 20.
- Non-flameproof motor.
- Unique resin imbedded, plug connection.
- Single phase version are supplied with a 10 m electrical cable and plug.
- Three phase version supplied with a 10 m electrical cable.
- Integral cast handle for easy hanging or lifting.
- Paint coating:
 - Surface treatment: SA 2¹/₂, Sis 055900
 - Primer: Ferritic Oxide 35 to 40 µm
 - Top coat : environmentally-friendly KSB-standard coating, approx.40 µm, RAL 5002 (ultramarine blue).

Please note: We recommend to fit a ball non-return valve with full bore on the discharge side.

CAUTION: A swing check valve must absolutely be installed in the discharge line.

Description of installation kits

Version	SB 545 SE/NE S 545 ND
Variant	
Transportable	3 feet Discharge elbow (2") Hosetail (2"/63 mm) Hose clip (Ø 60 to 80) Nuts and bolts for feet and elbow
Stationary Guide rope or rail (1 or 2) or hoop (vertical discharge connection)	Duckfoot bend 50/50 mm Claw Bracket Guiding rope or hoop 1 or 2 Rail(s) not included Anchor bolts Chain
Stationary Guide rope or 1 rail or hoop (horizontal discharge connection)	Duckfoot bend 50/2" Claw Bracket Guiding rope or hoop Rail not included Anchor bolts Chain

Thermal overload protection

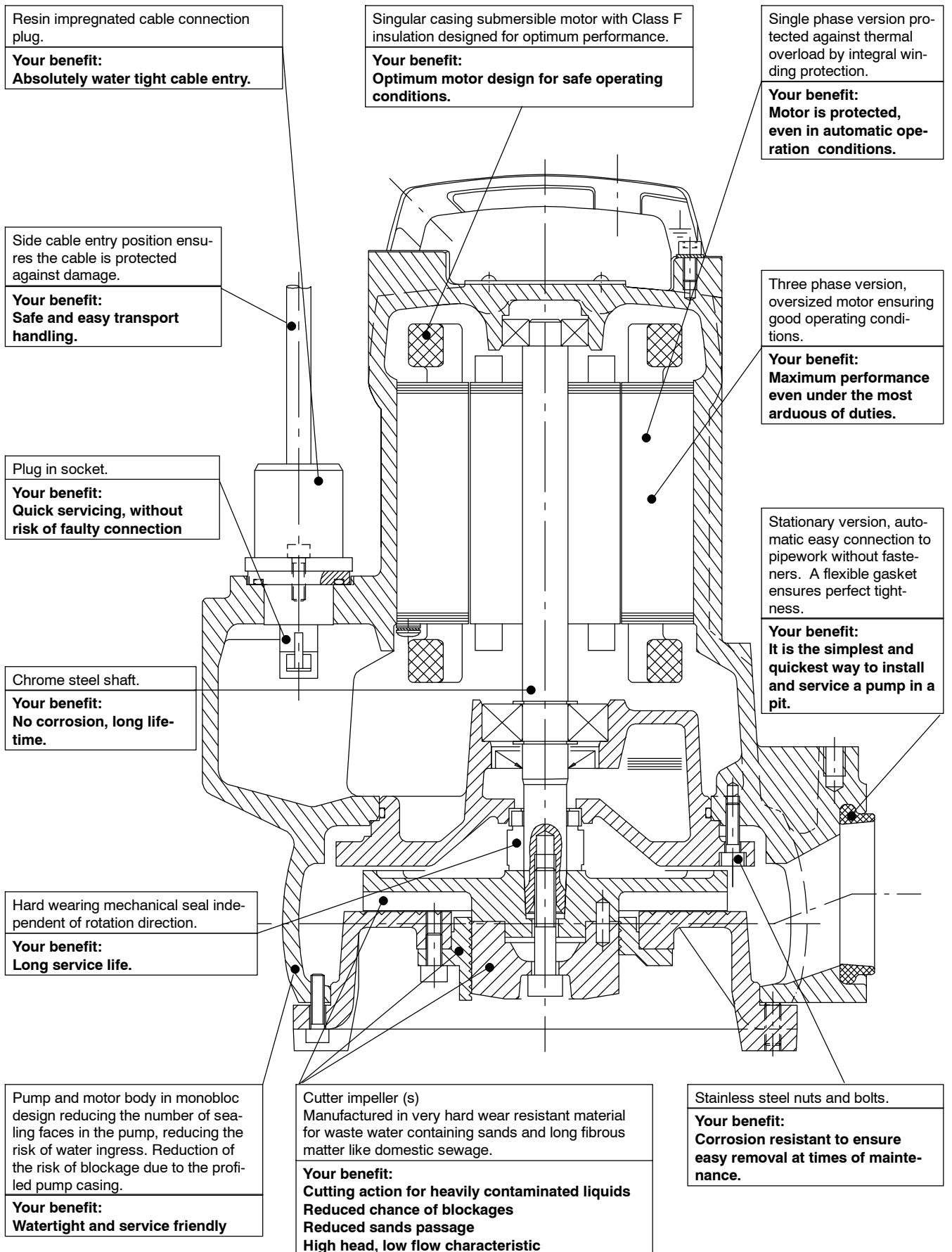
Single phase version

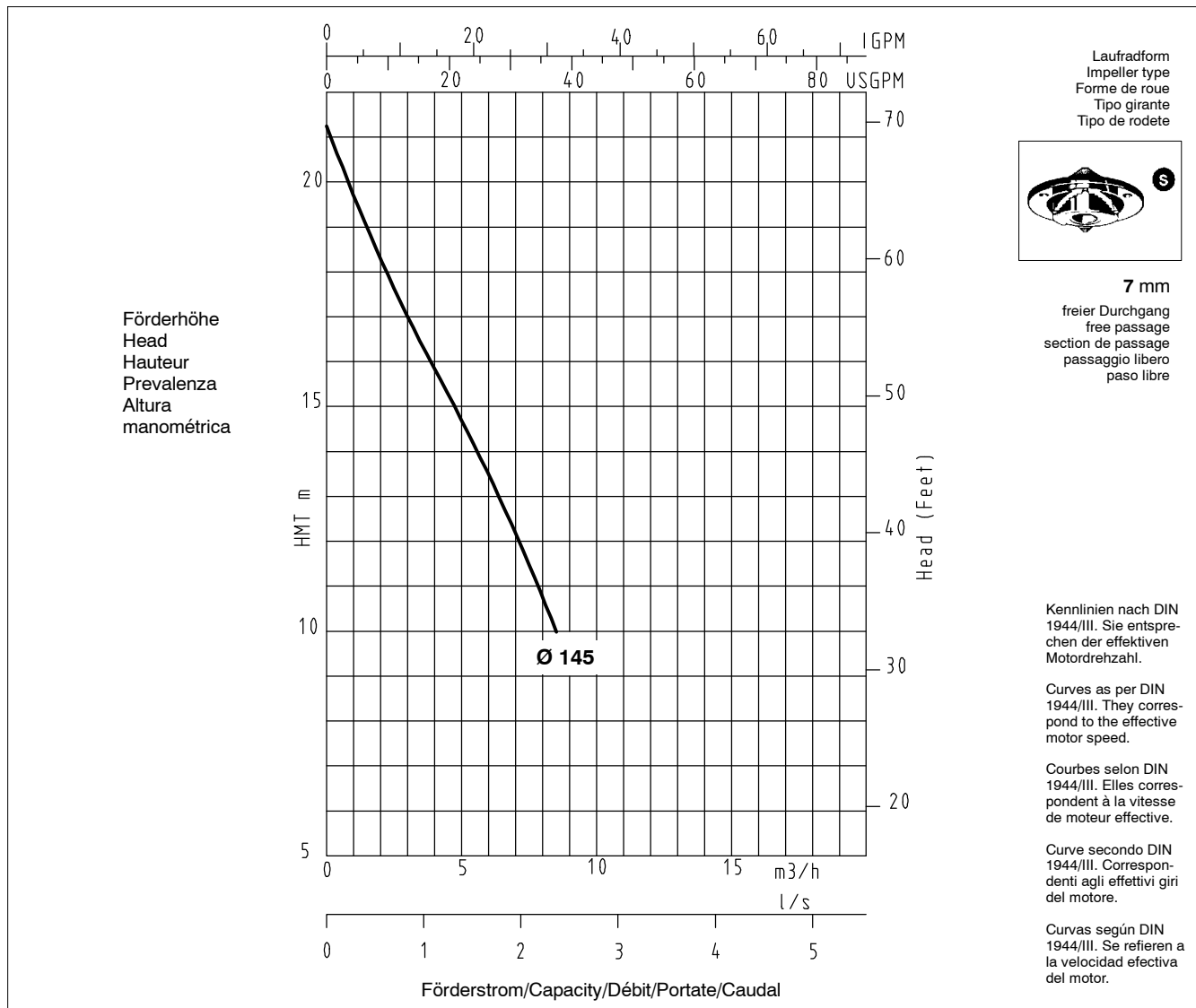
Integral thermal overload protection within motor windings.

Three phase version

No thermal protection of the windings, current supply should be protected via a thermal overload relay installed inside the control panel and set to the current value indicated on the rating plate +15%

Advantages offered by the Ama[®]-Porter S pump.

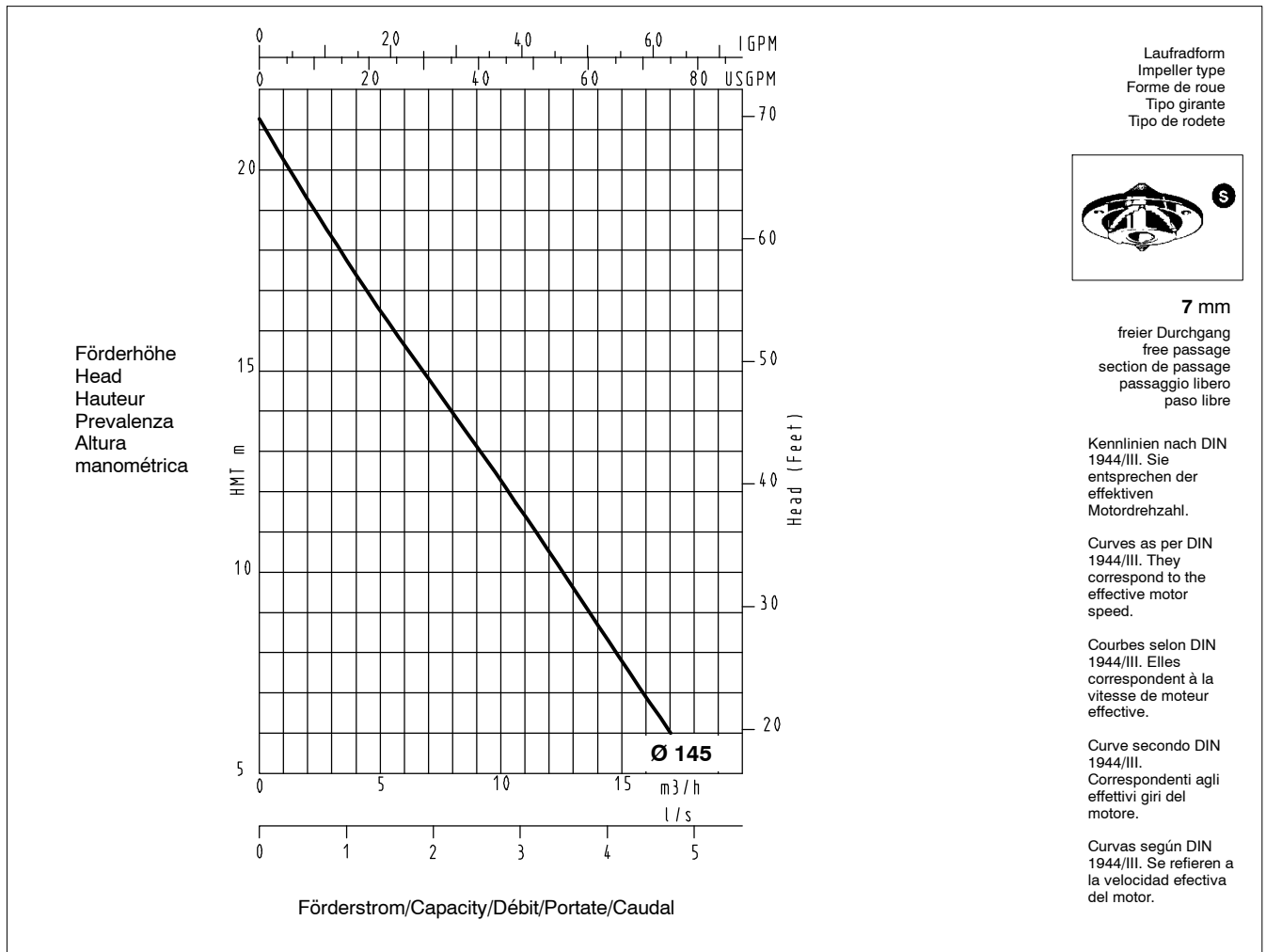


Ama[®]-Porter SB 545 SE/NE
2900 1/min

50 Hz - 1 ~ 230 V

Type	Impeller diameter mm	P ₁ kW	P ₂ kW	I _N (A)	I _D (A)	Temp. t°C	Electric cable	Outer diameter mm	Weight kg	Ident. Nr
SB 545 SE	145	1,8	1,1	8,2	18,2	40	4 x 1 mm ²	10,0	26	39 018 468
SB 545 NE	145	1,8	1,1	8,2	18,2	40	4 x 1 mm ²	10,0	26	39 018 469

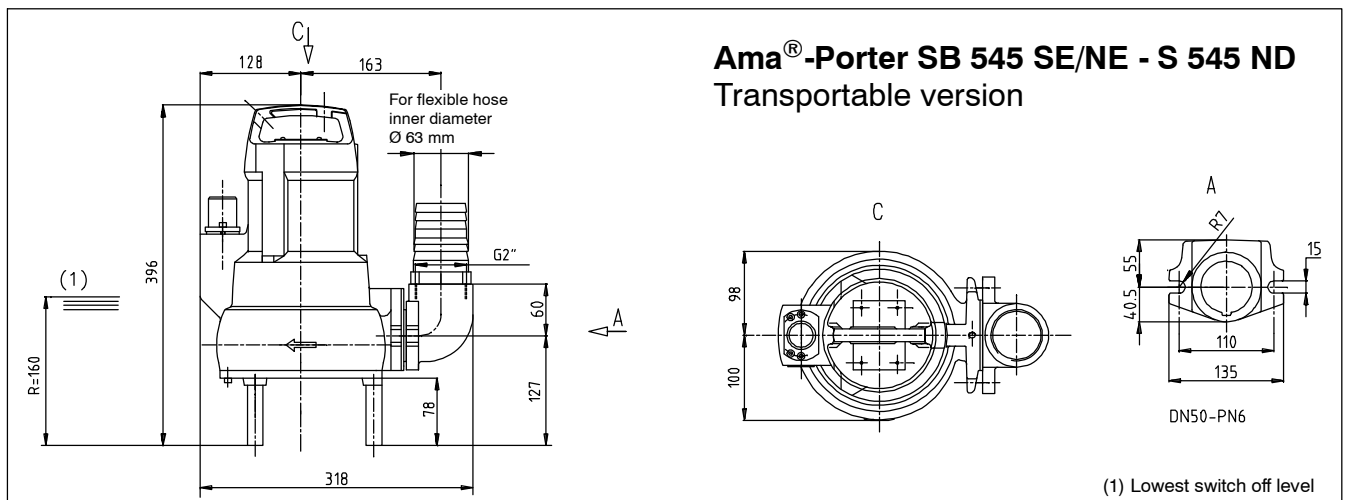
The diagrams refer to the effective speed of the motor.

Density=1, viscosity=1 cSt.

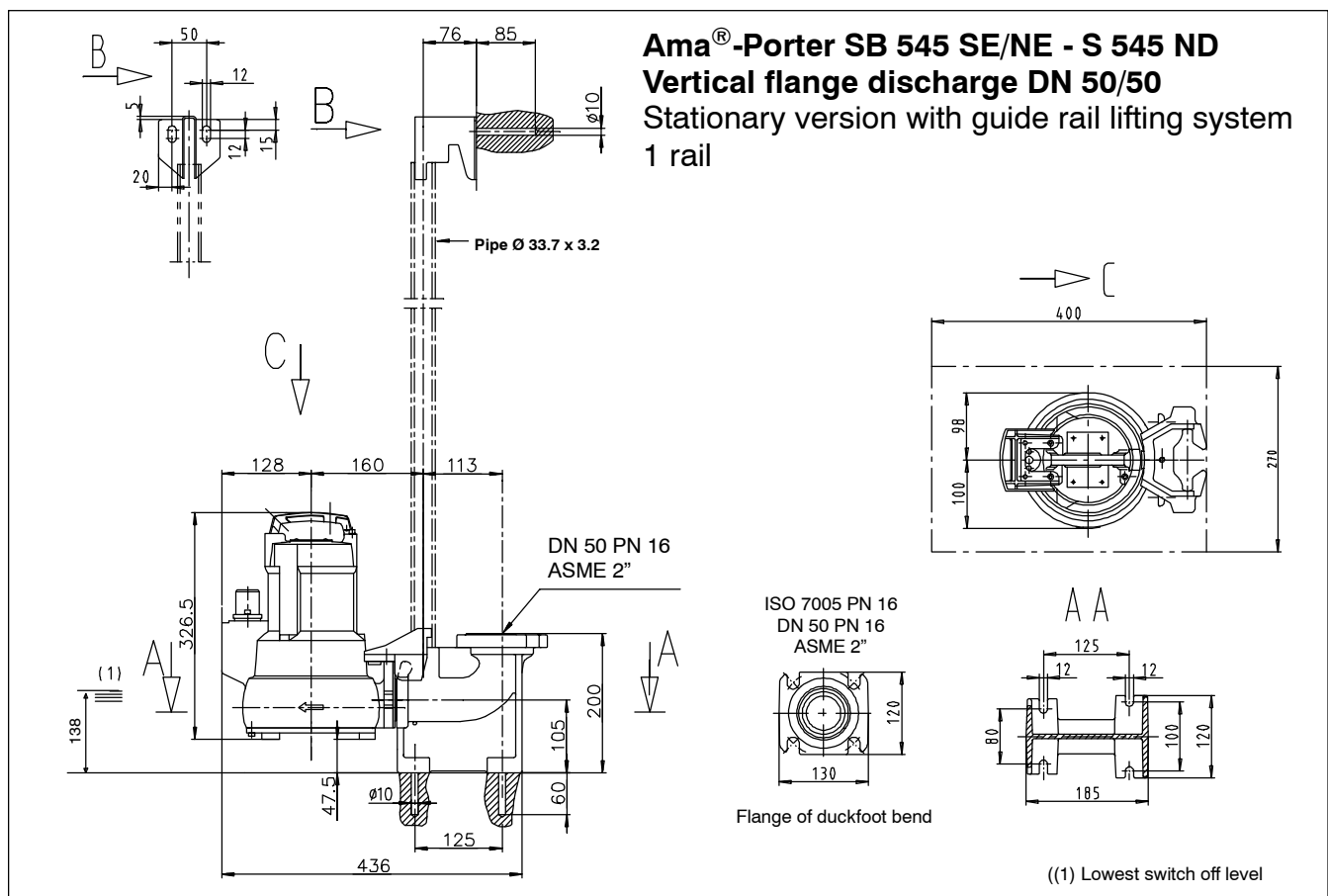
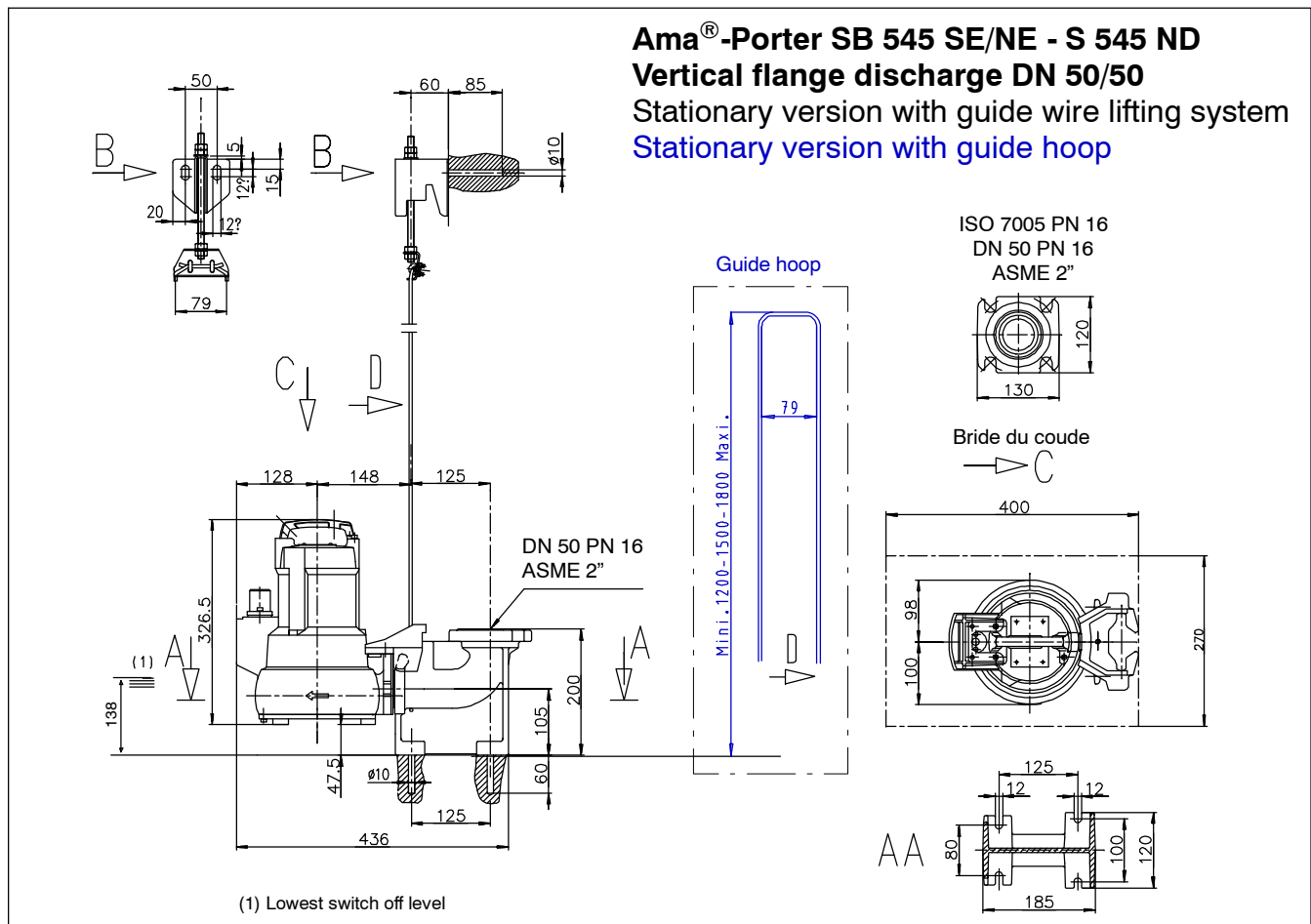
Ama[®]-Porter S 545 ND
2900 1/min

50 Hz - 3~ 400 V

Type	Impeller diameter mm	P ₁ kW	P ₂ kW	I _N (A)	I _D (A)	Temp. t°C	Electric cable	Outer diameter mm	Weight kg	Ident. Nr
S 545 ND	145	2,05	1,5	3,5	18,3	40	4 x 1 mm ²	10	24	39 017 859

The diagrams refer to the effective speed of the motor.
 Density=1, viscosity=1 cSt.

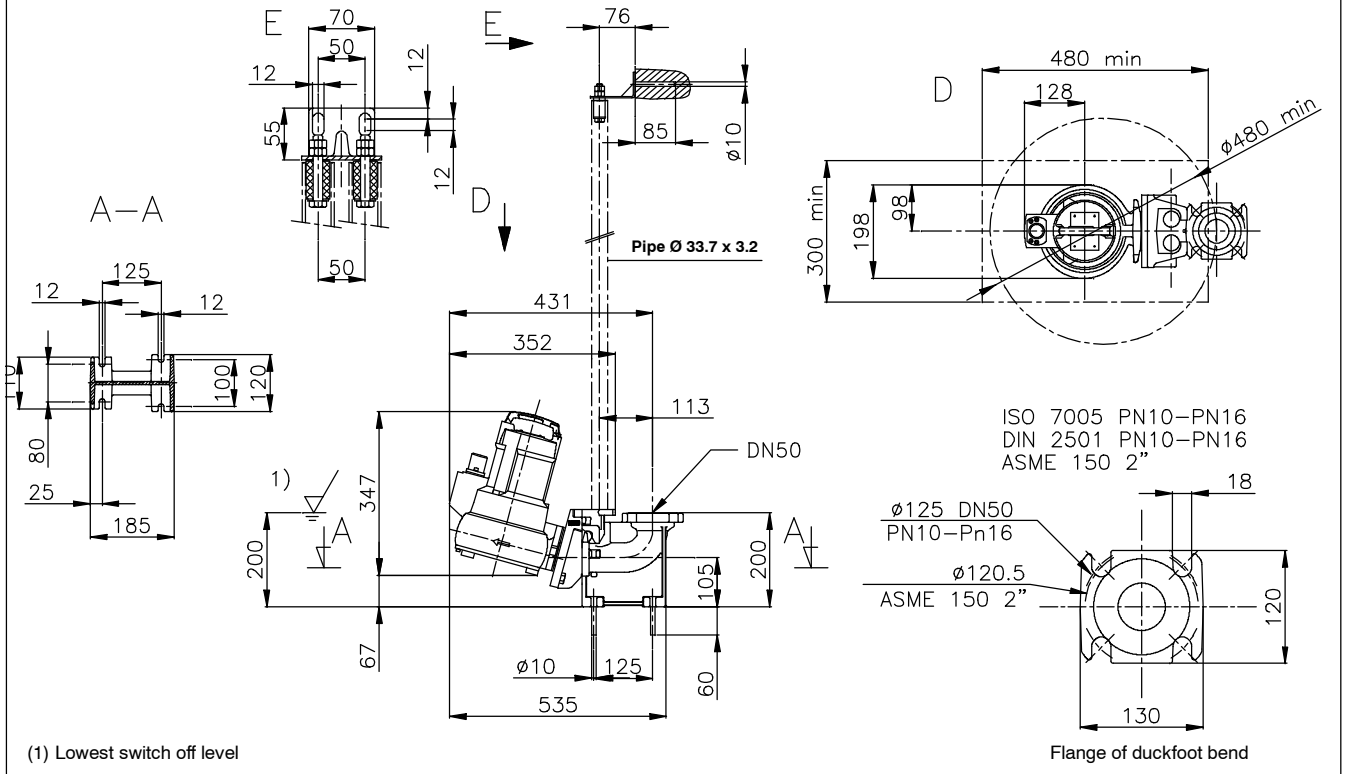
Dimensions


Encombrements

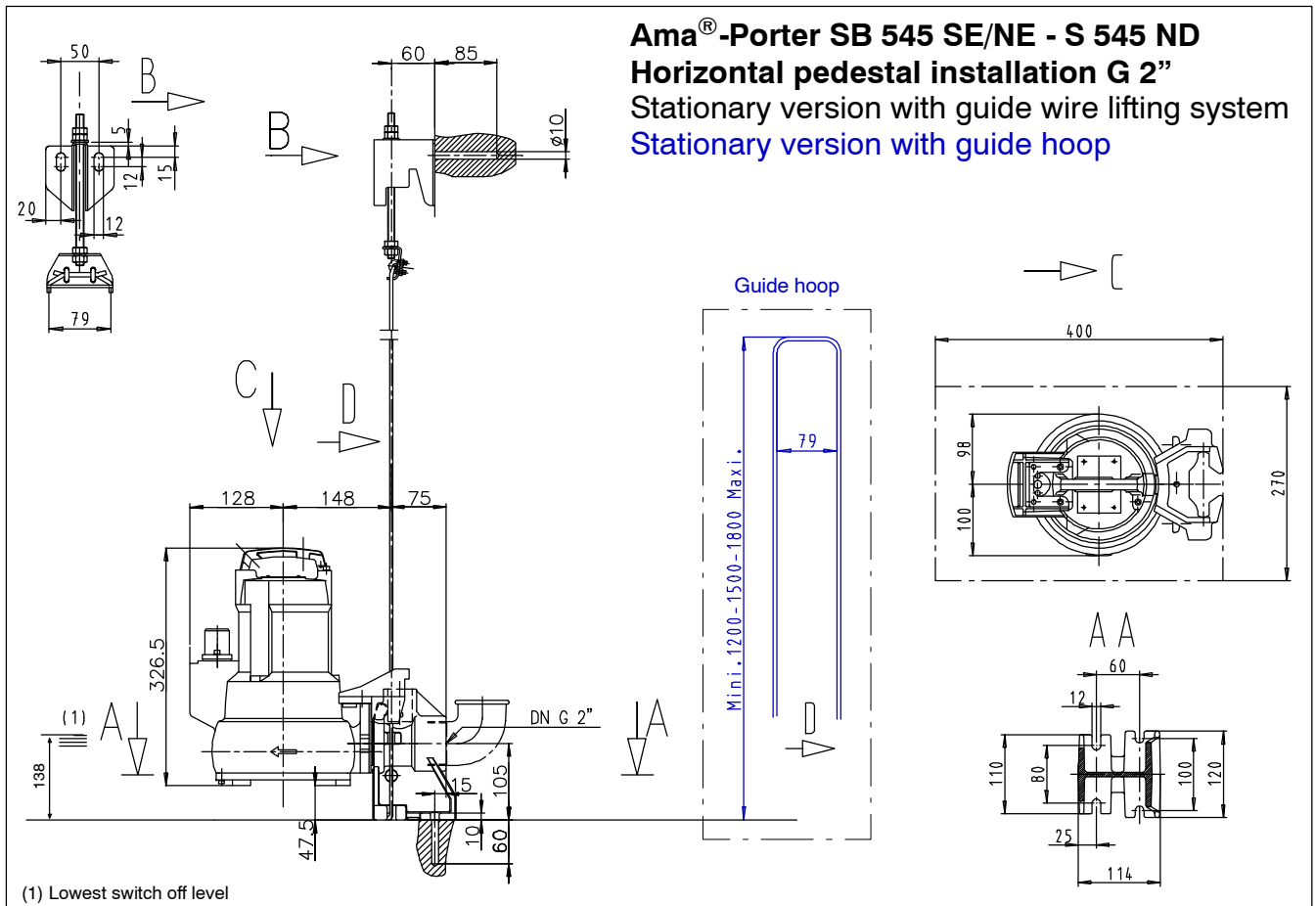


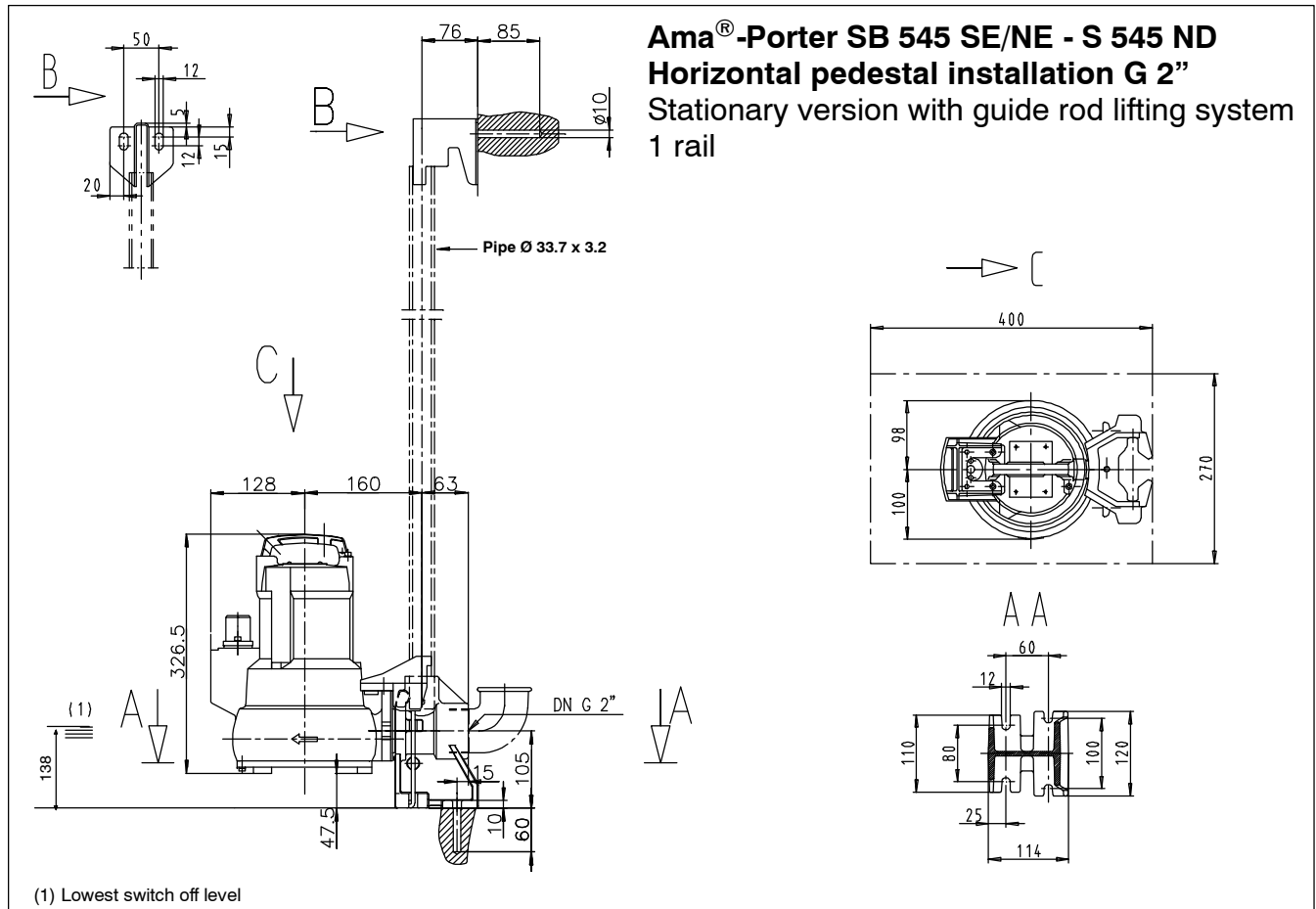
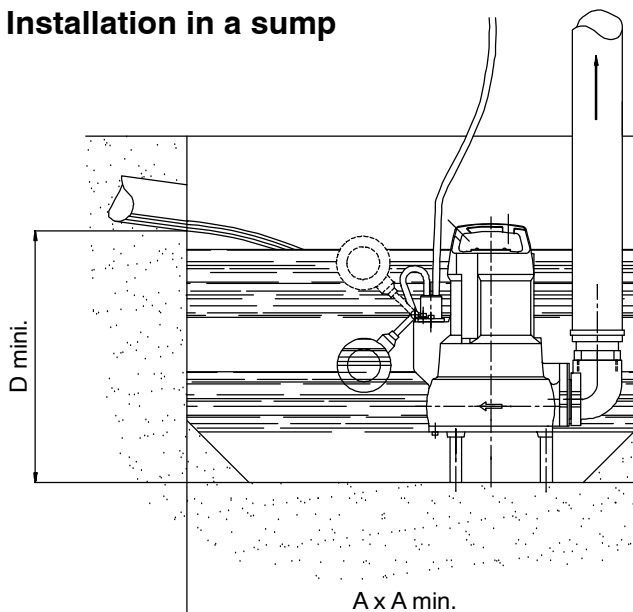
Encombremments

Ama®-Porter SB 545 SE/NE - S 545 ND
Vertical flange discharge DN 50/50
 Stationary version with guide rail lifting system - 2 rails



Ama®-Porter SB 545 SE/NE - S 545 ND
Horizontal pedestal installation G 2"
 Stationary version with guide wire lifting system
 Stationary version with guide hoop

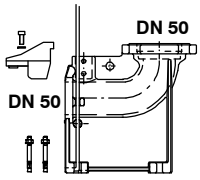
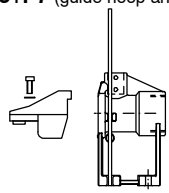
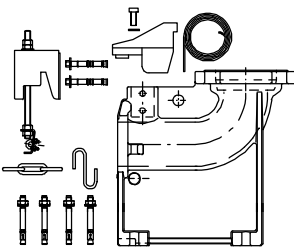
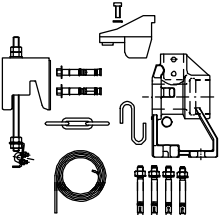
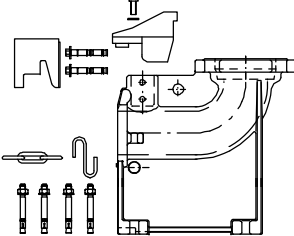
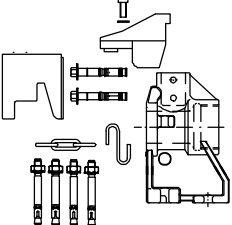


Dimensions

Installation in a sump


Dimensions in mm

	A	B	C	D
Ama-Porter SB 545 SE/NE	600 x 600	160	190	450
Ama-Porter S 545 ND	600 x 600	160	190	450

Installation Kits for Stationary Installation

Item Illustration	Description	Ama-Porter	Ident. No.	Weight net approx. kg/unit	
P2+P5+P7 (guide hoop arrangement) 	Installation parts for stationary wet installation consisting of: duckfoot bend DN 50 guide hoop, bolts, anchor bolts, clamps with stainless steel bolts, 2 m chain (galvanized steel) and shackle 1.4401	Installation depth : 1.5 m 1.8 m 2.1 m	●	39 020 769	11.0
			●	39 020 770	12.0
			●	39 020 771	13.0
P2+P5+P7 (guide hoop arrangement) 	Installation parts for stationary wet installation consisting of: duckfoot bend DN 50 / 2" guide hoop, bolts, anchor bolts, clamps with stainless steel bolts, 2 m chain (galvanized steel) and shackle 1.4401	Installation depth : 1.5 m 1.8 m 2.1 m	●	39 020 795	7.8
			●	39 020 796	8.8
			●	39 020 797	10.8
P4 + P5 + P7 (guide wire arrangement) 	Installation parts for stationary wet installation for 4.5 m installation depth consisting of: duckfoot bend, suspension bracket, mounting bracket, 10 m guide wire, bolts, anchor bolts clamps with stainless steel bolts, 5 m chain (galvanized steel) and shackle 1.4401	DN 50	●	39 021 023	14.5
P4 + P5 + P7 (guide wire arrangement) 	Installation parts for stationary wet installation for 4.5 m installation depth consisting of: duckfoot bend, suspension bracket, mounting bracket, 10 m guide wire, bolts, anchor bolts clamps with stainless steel bolts, 5 m chain (galvanized steel) and shackle 1.4401	DN 50 / 2"	●	39 020 779	11.5
P4 + P5 + P7 (guide rail arrangement) 	Installation parts for stationary wet installation for 3 m installation depth consisting of: duckfoot bend, mounting bracket, bolts and anchor bolts, clamps with stainless steel bolts, 5 m chain (galvanized steel) and shackle 1.4401	DN 50	●	39 021 212	14.0
P4 + P5 + P7 (guide rail arrangement) 	Installation parts for stationary wet-well installation for 3 m installation depth consisting of: duckfoot bend, mounting bracket, bolts and anchor bolts, clamps with stainless steel bolts, 5 m chain (galvanized steel) and shackle 1.4401	DN 50 / 2"	●	39 021 182	10.8

Installation kit for twin guide rail arrangement

Item Illustration	Description	Ama-Porter	Ident. No.	Weight net approx. kg/unit
P4 + P5 + P7 (twin guide rails) DN50/DN65 	Installation parts for stationary wet-well installation, consisting of: duckfoot bend, mounting bracket, stainless steel bolts, adapter, anchor bolts, 5 m chain (galvanized steel) and shackle 1.4401	●	39 023 002	14.0
P5 (twin guide rails) Mounting bracket 	Mounting bracket, cpl., consisting of: Mounting bracket, stainless steel bolts, adapter, anchor bolts	●	39 022 984	1,6
P5 (twin guide rails) Claw 	Claw JL1040 with stainless steel bolts	●	39 022 990	6.5

Installation Kit for Transportable Versions

Item Illustration	Description	Ama-Porter	Ident. No.	Weight net approx. kg/unit
P6 DN 50 	Kit for transportable models (Plastic hose inside diameter 63 P19) consisting of: adapter for hose connection connection elbow three feet hose clip including bolts	●	39 018 120	1.0

Bracket

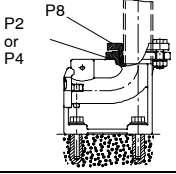








Item Illustration	Description	Ama-Porter	Ident. No.	Weight net approx. kg/unit
P5 	Claw, JL 1040 with bolts guide wire, rail, hoop arrangements	●	39 021 016	1.0

Chain for Stationary and Transportable Versions

Item Illustration	Description	Ama-Porter	Ident. No.	Weight net approx. kg/unit
P7 Chain (galvanized steel) shackle 1.4401 and hook 1.4571 	2 m B5 x 35	●	19 141 819	1.0
	5 m B5 / 6	●	19 141 820	2,2

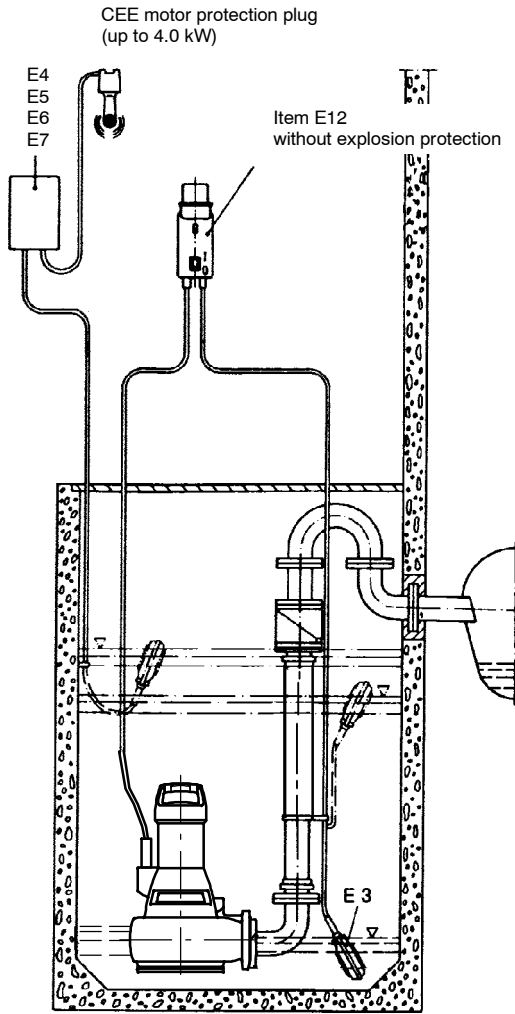
*) for installation depths > 4.5 m ... 9 m

Accessories for Stationary and Transportable Models

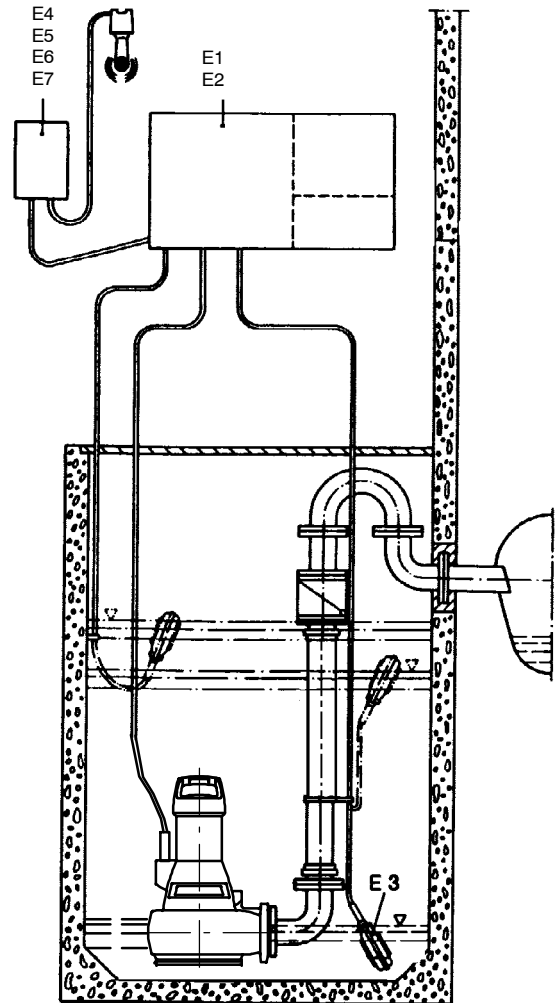
Item Illustration	Description	Connection	Ama-Porter 5..	Ident. No.	Weight net approx. kg/unit
P8 (clamped connection) 	Flange for pipe coupling PN 10 at the flange of the duckfoot bend Mating dimensions to PN 16	DN 50 / R 2" pipe	●	19 551 111	1.0
P10 	Screwed flange PN 6 B50 DIN 2558 with bolts for pump discharge nozzle (Seal element is fitted on the pump) GTW TZN	DN 50 / Rp 2	●	19 200 721	1.0
P14 	Bend with internal and external thread, A4	G 2"	●	00 241 966	0.3
P17 	Storz rigid coupling AL with external thread	C 52 / G 2 A	●	00 524 370	0.22
P18 	Plastic hose DN 50 DIN 14 811 with integrated C couplings	C 52 5 m C 52 10 m C 52 20 m	● ● ●	00 522 262 00 522 263 00 522 264	1.8 3.4 6.6
P19 	Plastic hose without coupling (max. 30 m) DIN 14 811	Ø 63 5 m 10 m 20 m 30 m	● ● ● ●	39 018 688 39 018 689 39 018 690 39 019 073	1.7 3.4 6.8 10.2
P20 	Hose clip DIN 3017 Cr steel	B 50	●	00 460 476	0.1
P21	RK swing check valve plastic, ISO 7/I with full port and drain plug, conformity mark P-I 3751 Not suitable for pumped drainage	Rp 2"	●	01 009 773	2.2
P22 	Socket gate valve PN 10 - 12 DIN 3352 CuZn	Rp 2"	●	00 411 503	0.8
P27 	Screwed flange PN 16/2", threaded connection DN 50 / Rp 2" C50 DIN 2566 with bolts, gasket and nuts for flanged elbow		●	19 551 353	2.0

Suggested electrical installation layouts

Please note: Ama-Porter only available without explosion protection!

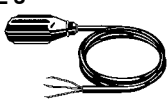

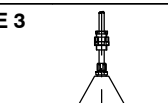

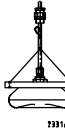


Suggestion No. 1









Suggestion No. 2

Electrical Accessories

Item	Illustration	Description	Ama-Porter	Ident. No.	Weight			
E 3		Float switch with connection cable for	3 m	●	11 037 742	0.5		
			5 m	●	11 037 743	0.8		
			10 m	●	11 037 744	1.4		
			15 m	●	11 037 745	1.8		
			20 m	●	11 037 746	2.6		
			25 m	●	11 037 747	2.9		
		Float switch ¹⁾ for intermediate installation, with connection cable for	3 m	●	11 037 749	0.6		
			5 m	●	11 037 750	0.9		
			10 m	●	11 037 751	1.5		
			20 m	●	11 037 752	2.7		
				Float switch ¹⁾ for intermediate installation, for filling with connection cable for	3 m	●	11 037 759	0.6
					5 m	●	11 037 760	0.9
10 m	●	11 037 761			1.5			
20 m	●	11 037 762			2.7			
E 3		Pressure bell set (open system) with polyamide hose 8 x 1 Hose length 10 m Hose length 20 m	●	19 071 721	1.2			
			●	19 071 837	2.0			
E 3		Pressure bell set (closed system) with polyamide hose 8 x 3 Hose length 10 m Hose length >10 m on request	●	19 071 722	3.5			

¹⁾ not suitable for LevelControl





Electrical Accessories

Item	Illustration	Description	Ident. No.	Weight
E 4		AS 0 alarm switchgear with circuit breaker, mains-dependent, 4.1 kHz at a distance of 1 m, with piezoceramic signal transmitter 85 dBA, 140 x 80 x 57 mm Use float switch (item E 3) or moisture sensor F 1 (item E 8) as contactor.	230V~/ 12V =	29 128 401 0.5
E 5		AS 2 alarm switchgear, dependent on mains supply, with piezoceramic signal transmitter, 85 dBA at a distance of 1m and 4.1 kHz, circuit breaker, green equipment-on lamp, volt-free contact for hook-up to a control station. Plastic housing IP 20, 140 x 80 x 57 mm Use float switch (item E 3) or moisture sensor F 1 (item E 8) as contactor.	230 V~/ 12V = 1.2 VA	29 128 422 0.5
E 6		AS 4 alarm switchgear, mains-independent, with piezoceramic signal transmitter, 85 dBA at a distance of 1 m and 4.1 kHz, with self-charging power supply unit for 5 hours' operation in case of a mains failure, circuit breaker, green equipment-on lamp, volt-free contact for hook-up to a control station. Plastic housing IP 20, 140 x 80 x 57 mm Use float switch (item E 3) or moisture sensor F 1 (item E 8) as contactor.	230V~/ 12V = 1.2 VA	29 128 442 1.2
E 7		AS 5 alarm switchgear, mains-independent, with self-charging power supply unit for 10 hours' operation in case of a mains failure, mains pilot LED, warning indicator light, horn-off push button, volt-free contact for hook-up to a control station, ready for connection with 1.8 m cable and plug. ISO housing IP 41, Dimensions: 190 x 165 x 75 mm	230V~/ 12V = 5 VA	00 530 561 1.7
		Internal horn Enclosure IP 33 Use float switch (item E 3) as contactor.	12V = 105 dB(A), 1.2 W	01 086 547 0.3
E 8		F1 moisture sensor as contactor for alarm switchgears AS 0, AS 2 or AS 4, with 3 m connection cable. Possible applications for alarm transmission: High-water alarm by suspending the moisture sensor in a (pump) sump above the pump start-up level. Water alarm signal at a water level of only 1 mm (!), by placing the contactor on the floor of rooms subject to a flooding risk, e.g. the cellar or next to the washing machine in the kitchen or bathroom. 52 x 21 x 20 mm		19 072 366 0.9

Caution!
Not for potentially explosive atmospheres!





Electrical Accessories for Pumps Without Explosion Protection

1 ~ 230 V/50 Hz

Item	Illustration	Description	Size	Ident. No.	Ama-Porter	Weight
					S 545	ca. kg
E6		Switchgear for single-phase single pump set IP 54	MSE 100.1	19 070 140	●	1.0
E11¹⁾		Switchgear for single pump set with manual-0-automatic selector switch and motor contactor, indicator lamps and volt-free contacts for operation and fault indications. External socket with 10 A fuse. Enclosure IP 54, 270 x 220 x 125 mm Please note the instructions below!	EDW 100.1	19 070 187	●	2.0
E11 / E12		LevelControl Advanced Control unit for monitoring and controlling pumps; features: - Graphical display - Integrated alarm buzzer (mains-independent battery back-up) - Fluid level indication - Overload detection (dry running / lack-of-water detection) - Functional check run via battery-backed real-time clock - Integrated current and voltage measurement - Indication of effective power and operating hours - Freely selectable automatic re-start				
E11		LevelControl Advanced Control unit for single pump, IP 54 power range up to 10 A, 4 kW, 1~230 V PE+N, direct starting Dimensions CU-1 (WxHxD): 255 x 216 x 100 mm Dimensions SU-1 (WxHxD): 300 x 400 x 155 mm				
		Connections for up to 4 float switches 24 V DC or analog sensor 4...20 mA	CU-1 10 LE	01 135 045	●	3.0
		H03 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 3.5 m water column	CU-1 10 H03	01 135 046	●	3.0
		H10 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 10.5 m water column	CU-1 10 H10	01 135 079	●	3.0
		A02 bubbler system: internal pressure sensor with compressor up to 2 m tank depth	SU-1 10 A02	01 135 081	●	10.0
		A03 bubbler system: internal pressure sensor with compressor up to 3 m tank depth	SU-1 10 A03	01 135 082	●	10.0
E12¹⁾		Switchgear for duplex pump unit, IP 54 with automatic alternate, stand-by and peak load operation function. Integrated fuse elements, manual-0-automatic selector switch and motor contactor, indicator lamps for operation of pump 1, operation of pump 2, and fault indication. Volt-free contacts for operation and fault indication for each pump. Connections for temperature / float switch on terminal strip with external socket with 10 A fuse. Enclosure IP 54, 300 x 400 x 150 mm	DDW 100.1	19 070 151	●	9.3
E11 / E12		LevelControl Advanced Control unit for two pumps, IP 54 power range up to 10 A, 4 kW, 1~230 V PE+N, direct starting Dimensions CU-1 (WxHxD): 255 x 216 x 100 mm Dimensions SU-1 (WxHxD): 300 x 400 x 155 mm				
		Connections for up to 4 float switches 24 V DC or analog sensor 4...20 mA	CU-2 10 LE	01 135 077	●	3.0
		H03 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 3.5 m water column	CU-2 10 H03	01 135 078	●	3.0
		H10 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 10.5 m water column	CU-2 10 H10	01 135 080	●	3.0
		A02 bubbler system: internal pressure sensor with compressor up to 2 m tank depth	SU-2 10 A02	01 135 083	●	19.0
		A03 bubbler system: internal pressure sensor with compressor up to 3 m tank depth	SU-2 10 A03	01 135 084	●	19.0


¹⁾ Selected for 1 ~ 230 V or 3 ~ 400 V. For other voltages and frequencies please contact KSB.

3 ~ 400 V/50 Hz

Item	Illustration	Description	Size	Rated motor currents	Ident. No.	Ama-Porter	Weight
E6 ¹⁾		Switchgear for three-phase current single pump set Enclosure IP 54, motor contactor with overcurrent relay. Manual-0-automatic selector switch, operation and fault indicator lamps, terminal for float switch. Enclosure IP 54, 170 x 100 x 112	MSD 60.1	3.7-5.5 A	19 070 117	S 545 ●	kg 1.0
E10 ¹⁾		Switchgear for single pumping station with motor protection switch, manual-0-automatic selector switch and motor contactor . Indicator lamp and volt-free contacts for operation and fault indication. Terminals for motor temperature switch and float switch. Enclosure IP 54, 240 x 160 x 120	EDP 60.1	4-6.3 A	19 070 093	●	2.0
E10 / E13		LevelControl Advanced Control unit for monitoring and controlling pumps; features: - Graphical display - Integrated alarm buzzer (mains-independent battery back-up) - Fluid level indication - Overload detection (dry running / lack-of-water detection) - Functional check run via battery-backed real-time clock - Integrated current and voltage measurement - Indication of effective power and operating hours - Freely selectable automatic re-start					
E10		LevelControl Advanced Control unit for single pump, IP 54 power range up to 10 A, 4 kW, 3~400 V PE+N, direct starting Dimensions CU-1 (WxHxD): 255 x 216 x 100 mm Dimensions SU-1 (WxHxD): 300 x 400 x 155 mm					
		Connections for up to 4 float switches 24 V DC or analog sensor 4...20 mA	CU-1 10 LE		01 111 397	●	3.0
		H03 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 3.5 m water column	CU-1 10 H03		01 118 650	●	3.0
		H10 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 10.5 m water column	CU-1 10 H10		01 118 651	●	3.0
		A02 bubbler system: internal pressure sensor with compressor up to 2 m tank depth	SU-1 10 A02		01 118 645	●	10.0
		A03 bubbler system: internal pressure sensor with compressor up to 3 m tank depth	SU-1 10 A03		01 118 647	●	10.0
E13 ¹⁾		Switchgear for duplex pumping stations with automatic alternate, stand-by and peak-load operation function, with one motor protection switch each, manual-0-automatic selector switch and motor contactor, indicator lamps for manual operation, operation pump 1, operation pump 2 and fault indication. Volt-free contacts for operation and fault. Connections for temperature / float switch on terminal strip Enclosure IP 54, 300 x 400 x 150	DDP 60.1	4-6 A	19 070 149	●	9.3
E10 / E13		LevelControl Advanced Control unit for two pumps, IP 54 power range up to 10 A, 4 kW, 3~400 V PE+N, direct starting Dimensions CU-1 (WxHxD): 255 x 216 x 100 mm Dimensions SU-1 (WxHxD): 300 x 400 x 155 mm					
		Connections for up to 4 float switches 24 V DC or analog sensor 4...20 mA	CU-2 10 LE		01 111 401	●	3.0
		H03 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 3.5 m water column	CU-2 10 H03		01 118 652	●	3.0
		H10 pneumatic sensor (hydrostatic pressure measurement without compressor): internal pressure sensor up to 10.5 m water column	CU-2 10 H10		01 118 723	●	3.0
		A02 bubbler system: internal pressure sensor with compressor up to 2 m tank depth	SU-2 10 A02		01 118 648	●	19.0
		A03 bubbler system: internal pressure sensor with compressor up to 3 m tank depth	SU-2 10 A03		01 118 649	●	19.0

¹⁾ Selected for 1 ~ 230 V or 3 ~ 400 V. For other voltages and frequencies please contact KSB.

Electrical Accessories

Item	Illustration	Description	Ama-Porter	Ident. No.	Weight
			S 545		kg
E12		KSB motor protection plug Hyper CEE industrial plug 3L + PE + N, 16 A, 400 V, - 6h with phase inverter, motor protection relay, manual-0-automatic selector switch, reset button, indicator lamps for rotary field, operation and fault indication (e.g. with float switch, item E 3). for rated currents of: 3.7 - 5.5 A	●	19 071 493	
E13		Switchgears 1) with bubbler control, IP 54 for non-explosion-proof pumps and for indoor installation Dimensions EDEL 580 x 260 x 130 EDEL 600 x 400 x 200 Single pumping station EDEL 60.3 4.0 - 6.3 A Duplex pumping station DDEL 60.2 4.0 - 6.3 A Additional pressure bell set required.	● ●	19 071 719 19 071 996	9.3 18.0
		Switchgears 1) with plastic housing for outdoor wall mounting, IP 66 Single pumping station EDEL 60.3 FLS 4.0 - 6.3 A Duplex pumping station DDEL 60.2 FLS 4.0 - 6.3 A Additional pressure bell set required.	● ●	19 071 844 19 071 999	15.0 23.0
		Switchgear with static pressure control IP 54 EDES 60.3-LC	●	01 057 977	2.0
1) Switching point settings, in mm from sump floor On: 400/500 *) Off: 200 Alarm: 500/600 *) *)for DDEL					
E13.1		Pressure bell set (open system) with polyamide hose 8 x 1 Hose length 10 m Hose length 20 m Clamp for mast mounting of switchgear EDEL /DDEL FLS (Max. mast diameter 170 mm, to be supplied by the operator.) Base for EDEL /DDEL FLS switchgear, made of glass-fibre reinforced polyester, RAL 7032, incl. metal frame for setting in concrete.	● ● ● ●	19 071 721 19 071 837 01 055 725 11 301 318	1,2 2,0 2.2 6.9

Caution! The switchgear assemblies are not explosion-proof and therefore must only be operated outside potentially explosive atmospheres.
 The alarm switchgear assemblies are not explosion-proof and therefore must only be operated outside potentially explosive atmospheres.

Options (control cabinet extension may be necessary)

Item	Description	Weight kg
O 1	Operating hours counter	0.1
O 2	Ammeter	0.1
O 3	Voltmeter with changeover switch	0.1
O 4	Master switch	0.2
O 5	Control cabinet heater, for installation in control box, with temperature controller	0.3
O 6	Monitoring relay (phase failure / sequence, under/over-voltage)	0.4
O 7	Integrated, mains-independent alarm and charging unit PZ033 (complete) for hook-up to alarm equipment, e.g. piezo alarm sounder or flashlight (I _{max} approx. 150 mA) and for charging an accumulator 12 V, 1.2 Ah	0.4
O 7.1	Alarm equipment for PZ033 Flashlight 12 V IP 65 (for EDEL/DDEL FLS supplied in mounted condition). Horn 12 V, approx. 90 dB(A), IP 33 for indoor and outdoor installation, mount in a position where it is protected against direct rain.	0.2 0.2

Options for LevelControl

Item	Description	Ident. No. Component No.
O8	Horn for direct connection to LevelControl	01 118 748
O9	Combined alarm for direct connection to LevelControl	01 118 747
O10	Flashlight for direct connection to LevelControl	01 118 746
O16	PC ServiceTool	47 121 210
O11	Control cabinet heater for LevelControl CU	E071
O12	Control cabinet heater with thermostat for LevelControl SU	E072
O13	Charging unit PZ033 N for LevelControl SU (without accumulator)	E075
O14	Lead gel accumulator 12V, 1.2 Ah for PZ033 N	E076
O15	Alarm equipment for PZ033 N - Flashlight 12 V DC, IP 65 - Horn 12 V DC, IP 33 - Combined alarm , siren and flashlight, 12 V DC, IP65	01 056 355 01 086 547 01 073 476



KSB S.A.S.
128, rue Carnot - 59320 Sequedin (Lille)
B.P. 60095 - 59482 Haubourdin Cedex - France

• Phone : +33 3 20 22 70 00
• Fax : +33 3 20 22 71 47

• <http://www.ksb.com>