

## Submersible motor pumps 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 40 m<sup>3</sup>/h, (11 l/s).

H : up to 16 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.
Shaft seal	: (Motor side) Lip seal
Shaft seal	: (Pump side) Mechanical seal Silicium Carbide/Alumin Oxide
Nuts & bolts	: Stainless steel
Elastomers	: Nitrile rubber
Float switch	: Polypropylene

### Design

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

	<b>Ama<sup>®</sup>-Porter</b>	<b>5</b>	<b>01</b>	<b>SE</b>
Type of pump :	_____			
Discharge diameter	_____			
DN 50 = serie <b>5</b> - -	_____			
DN 65 = serie <b>6</b> - -	_____			
Impeller size :	_____			
<b>SE</b> = Single-phase with float switch	_____			
<b>NE</b> = Single-phase without float switch	_____			
<b>ND</b> = Three-phase without float switch	_____			

### 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.



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● <http://www.ksb.com>

## 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.

## 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 2<sup>1</sup>/<sub>2</sub>, Sis 055900  
Primer : Ferritic Oxide 35 to 40 μm  
Top coat : environmentally-friendly KSB-standard coating, approx.40 μm, RAL 5002 (ultramarine blue).

## Description of installation kits

Series	5 — SE/NE/ND	6 — SE/NE/ND
Version		
<b>Transportable</b>	3 feet in stainless steel Discharge elbow (2") Hosetail (2") Hose clip (∅ 60 to 80) Nuts and bolts for feet and elbow	3 feet in stainless steel Discharge elbow (2") Hosetail (2" <sup>1</sup> / <sub>2</sub> ) Hose clip (∅ 80 to 100) Nuts and bolts for feet and elbow
<b>Stationary</b> 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	Duckfoot bend 65/65 mm Claw Bracket Guiding rope or hoop 1 or 2 Rail(s) not included Anchor bolts Chain
<b>Stationary</b> 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	Pump pedestal 65/2" <sup>1</sup> / <sub>2</sub> Claw Bracket Guiding rope or hoop Rail not included Anchor bolts Chain

## Thermal overload protection

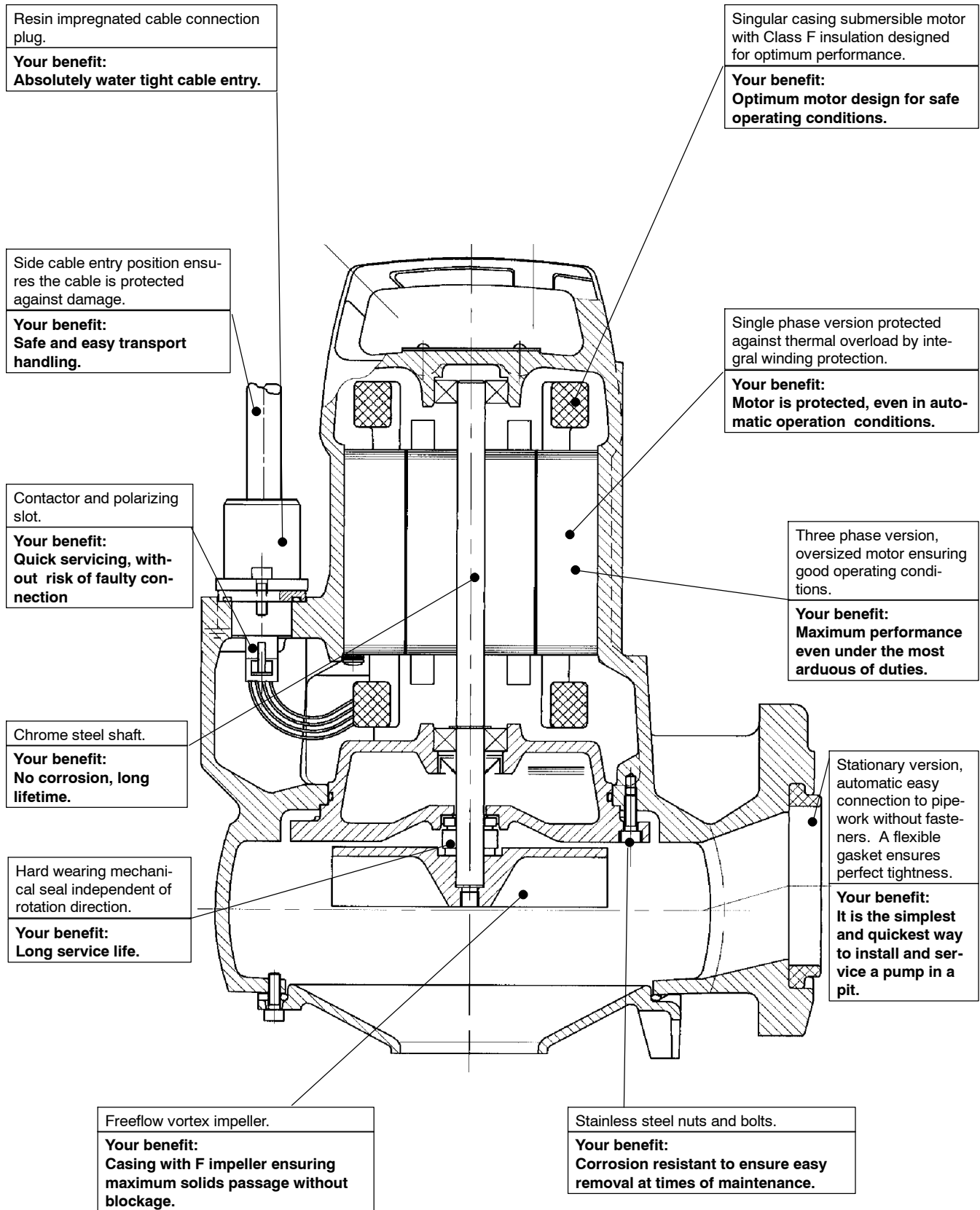
### Single phase version

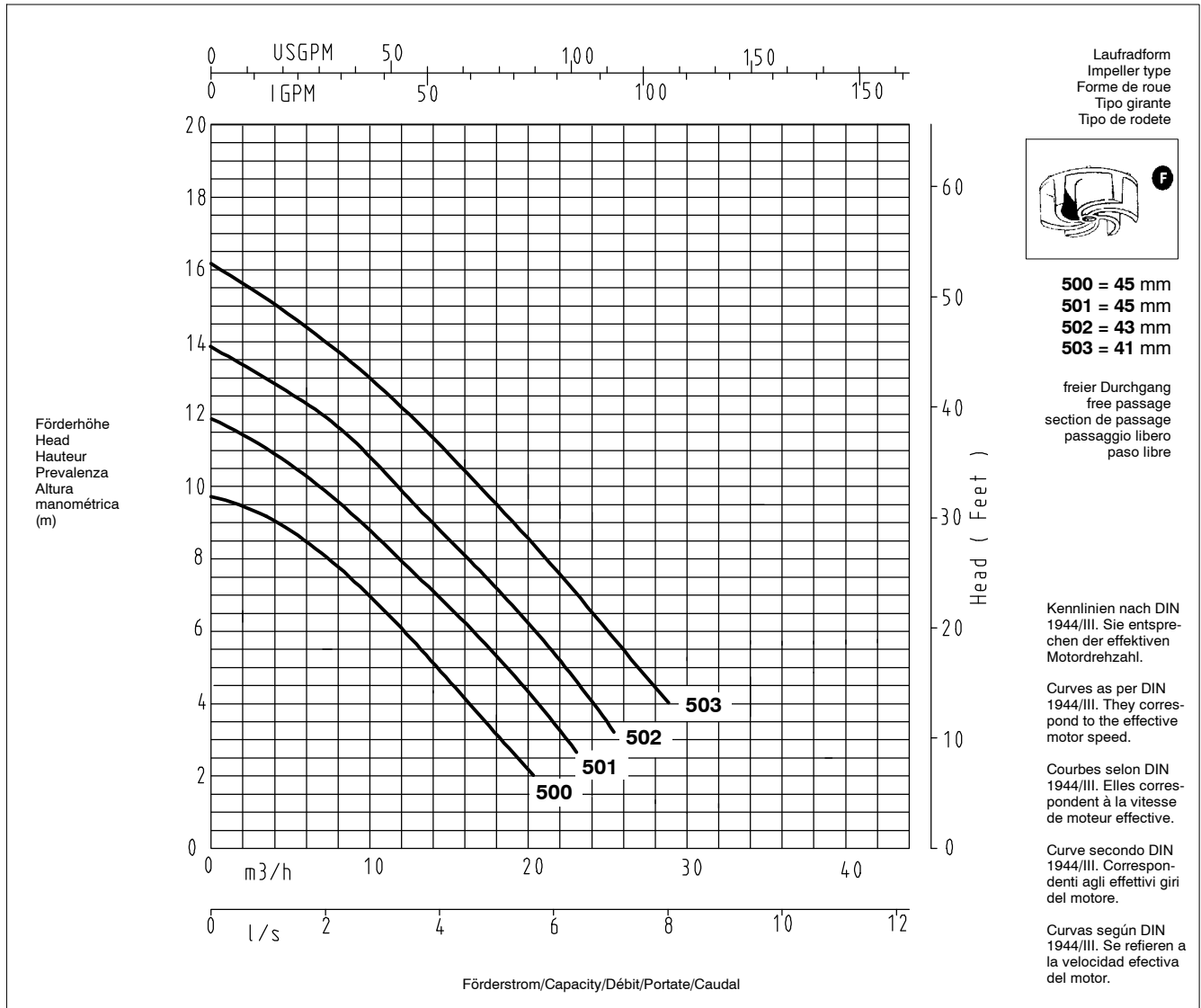
Integral thermal overload protection within motor windings.

### 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<sup>®</sup>-Porter pump.



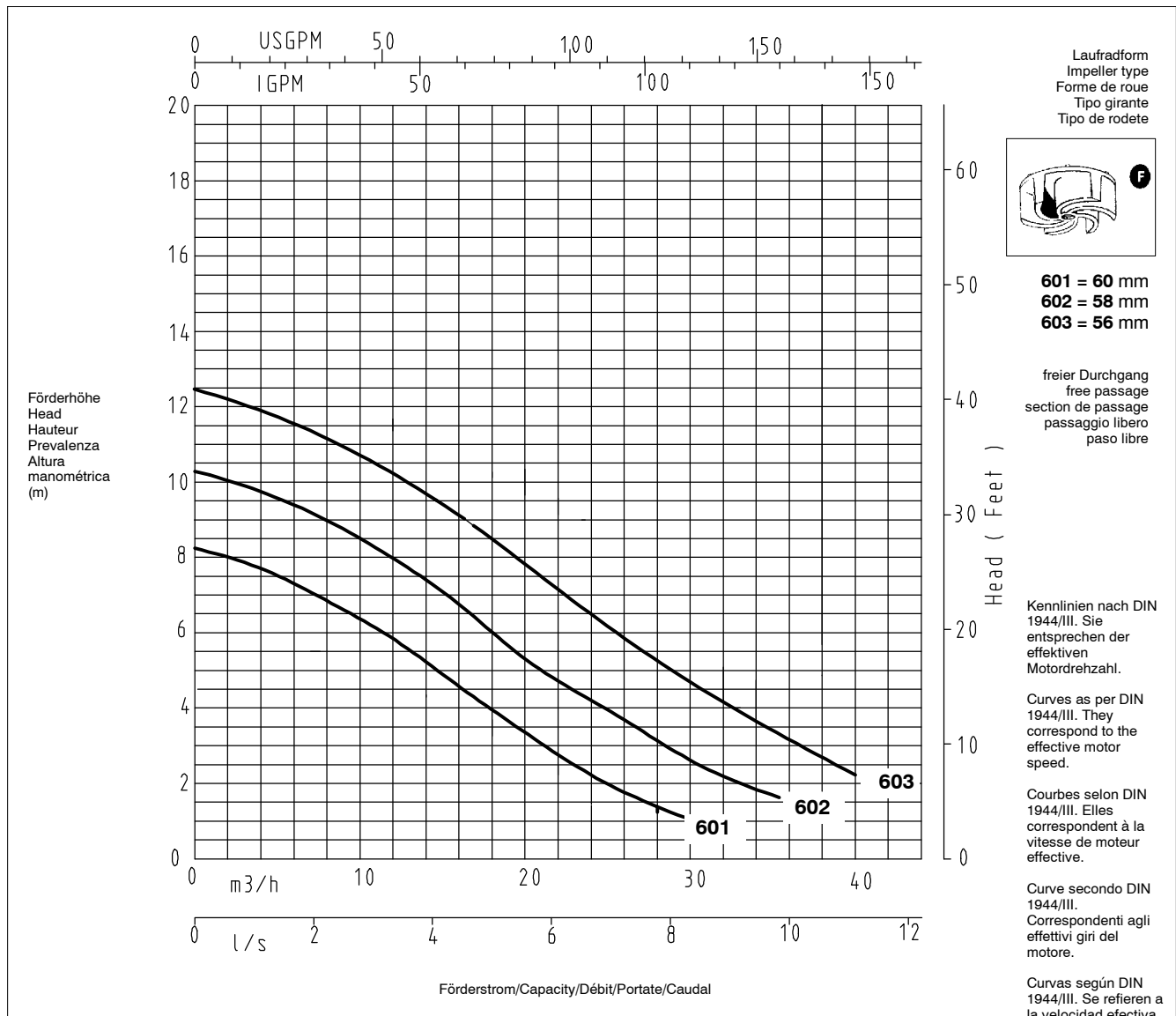
**Ama®-Porter size 5 – SE/NE/ND**
**2 900 1/min**

**50 Hz - 1 ~ 230 V**

Type	Impeller diameter mm	P <sub>1</sub> kW	P <sub>2</sub> kW	I <sub>N</sub> (A)	I <sub>D</sub> (A)	Temp. t°C	Electric cable	Outer diameter mm	Weight kg	Ident. Nr
500 SE	100	1,0	0,55	5,0	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 187
501 SE	110	1,25	0,75	6,0	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 100
502 SE	120	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 101
503 SE	130	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 102
500 NE	100	1,0	0,55	5,0	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 195
501 NE	110	1,25	0,75	6,0	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 188
502 NE	120	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 189
503 NE	130	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	22	39 017 190

**50 Hz - 3 ~ 400 V**

500 ND	100	0,9	0,55	2,3	18,3	40	4 x 1 mm <sup>2</sup>	10	22	39 017 191
501 ND	110	1,1	0,75	2,8	18,3	40	4 x 1 mm <sup>2</sup>	10	22	39 017 103
502 ND	120	1,5	1,1	3,0	18,3	40	4 x 1 mm <sup>2</sup>	10	22	39 017 104
503 ND	130	2,05	1,5	3,5	18,3	40	4 x 1 mm <sup>2</sup>	10	22	39 017 105

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

**Ama®-Porter size 6 – – SE/NE/ND**
**2 900 1/min**

**50 Hz - 1 ~ 230 V**

Type	Impeller diameter mm	P <sub>1</sub> kW	P <sub>2</sub> kW	I <sub>N</sub> (A)	I <sub>D</sub> (A)	Temp. t°C	Electric cable	Outer diameter mm	Weight kg	Ident. Nr
601 SE	110	1,25	0,75	6,0	18,2	40	3 x 1 mm <sup>2</sup>	9,0	25	39 017 106
602 SE	120	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	25	39 017 107
603 SE	130	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	25	39 017 108
601 NE	110	1,25	0,75	6,0	18,2	40	3 x 1 mm <sup>2</sup>	9,0	25	39 017 192
602 NE	120	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	25	39 017 193
603 NE	130	1,8	1,1	8,2	18,2	40	3 x 1 mm <sup>2</sup>	9,0	25	39 017 194

**50 Hz - 3 ~ 400 V**

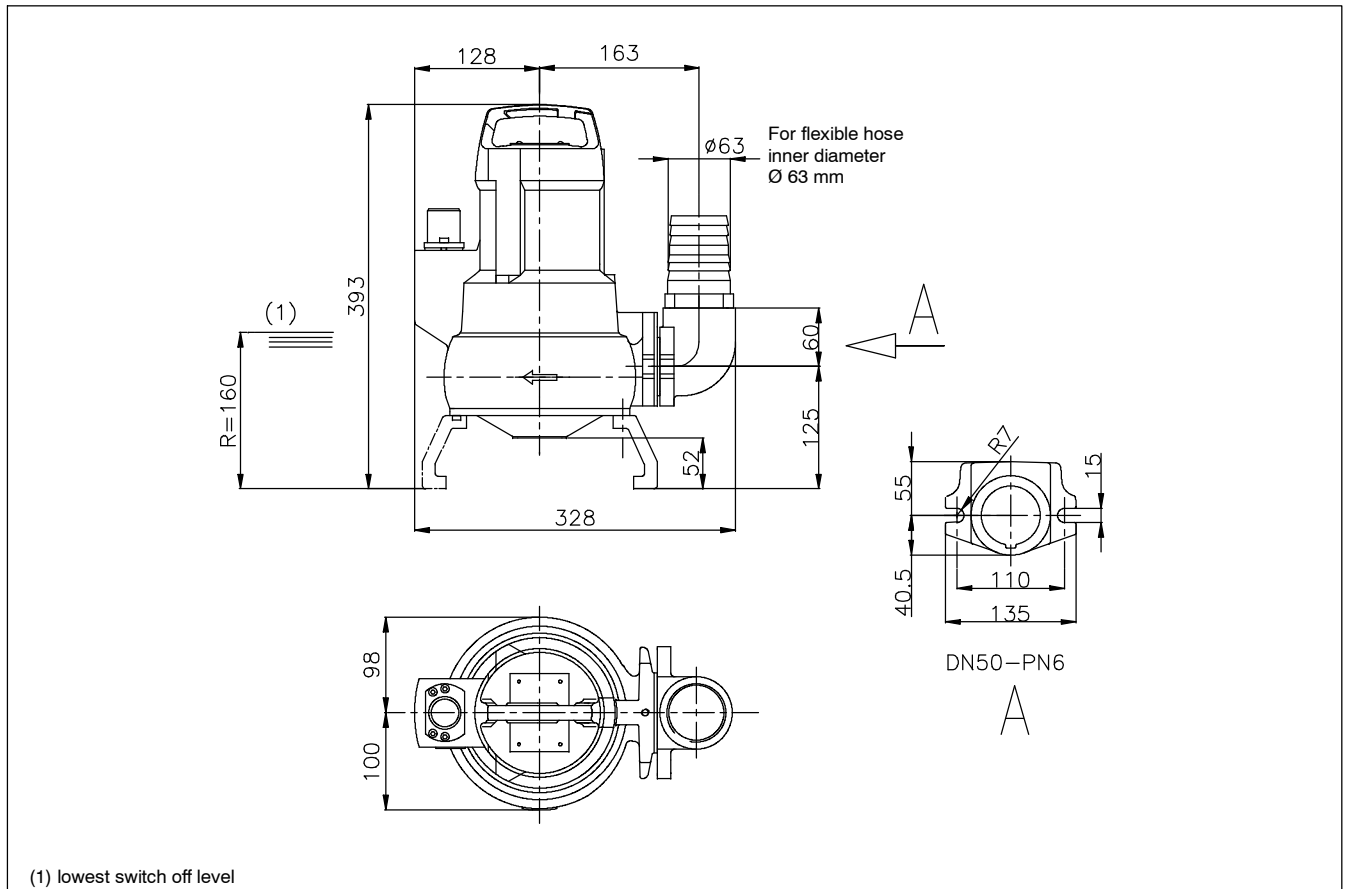
601 ND	110	1,1	0,75	2,8	18,3	40	4 x 1 mm <sup>2</sup>	10	25	39 017 109
602 ND	120	1,5	1,1	3,0	18,3	40	4 x 1 mm <sup>2</sup>	10	25	39 017 110
603 ND	130	2,05	1,5	3,5	18,3	40	4 x 1 mm <sup>2</sup>	10	25	39 017 111

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

Dimensions

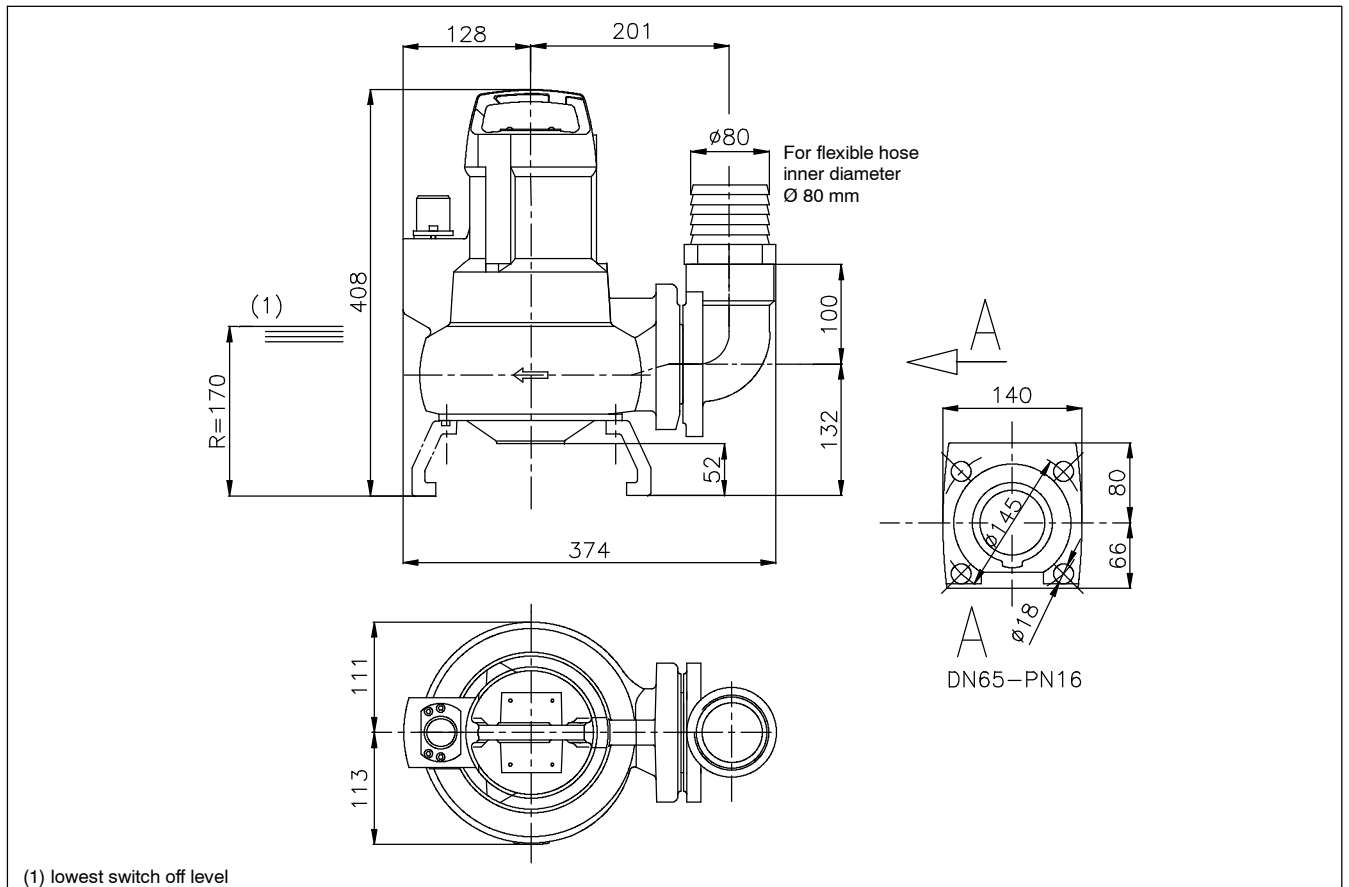
Ama<sup>®</sup>-Porter size 5 --

Transportable version

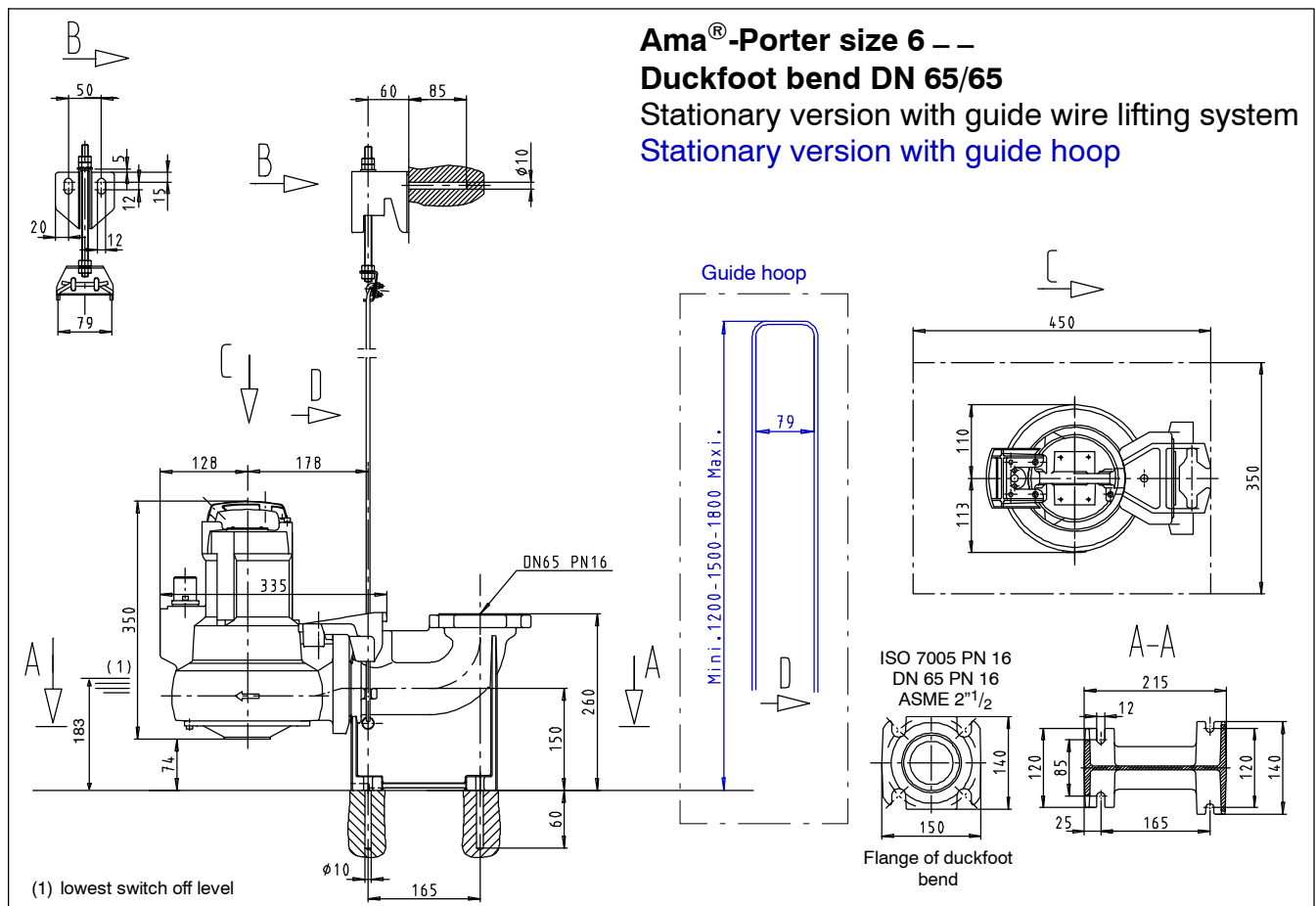
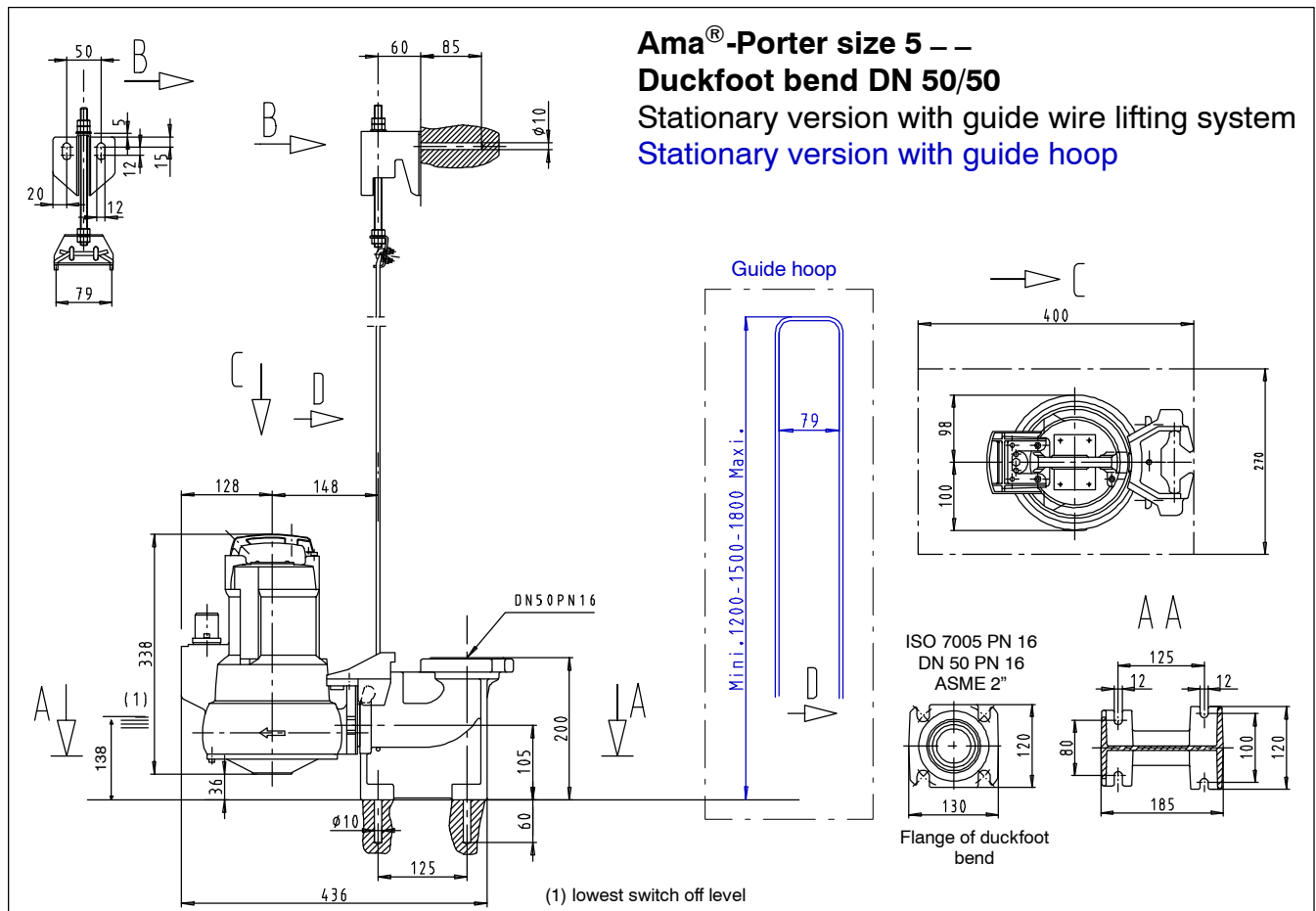


Ama<sup>®</sup>-Porter size 6 --

Transportable version

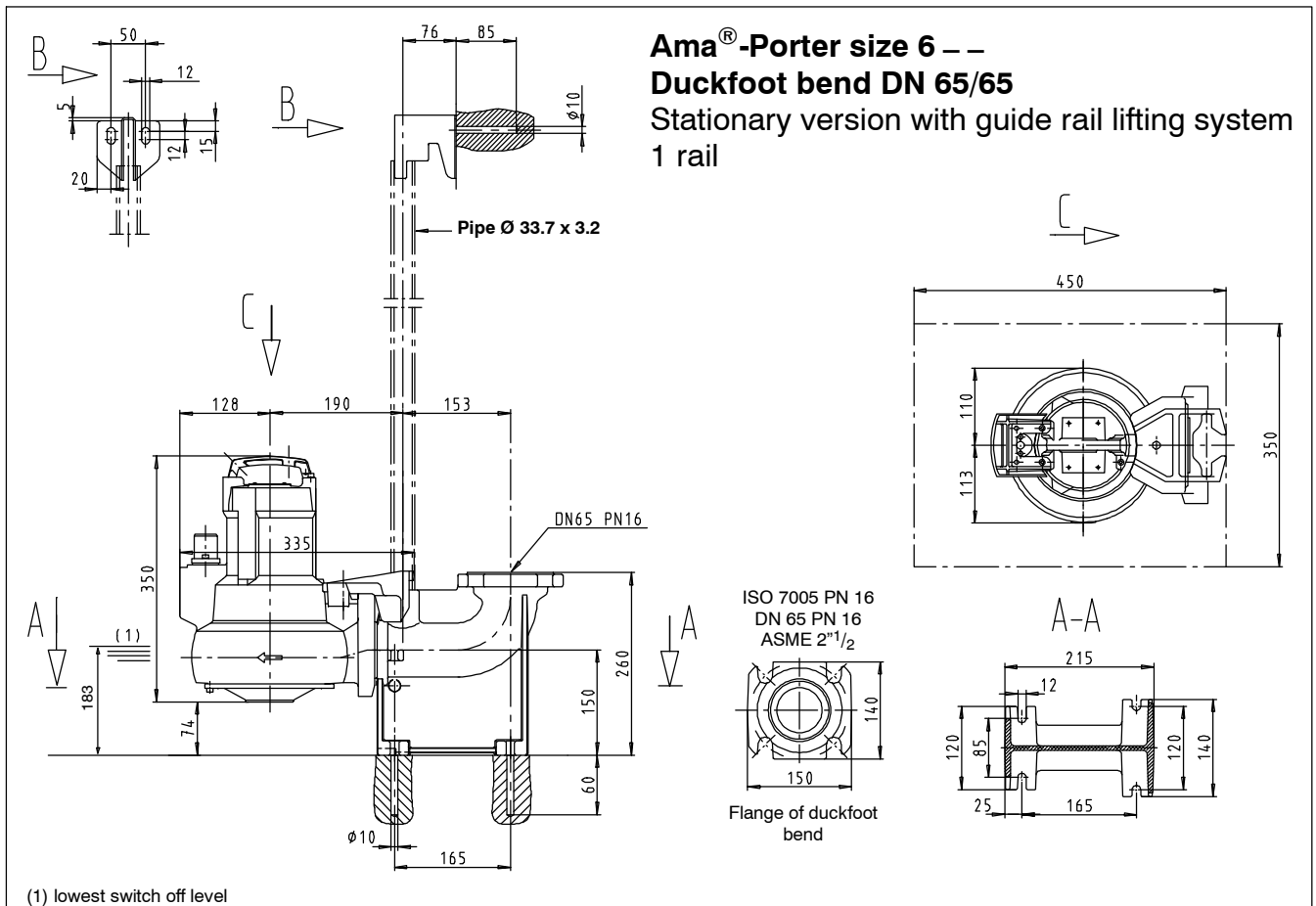
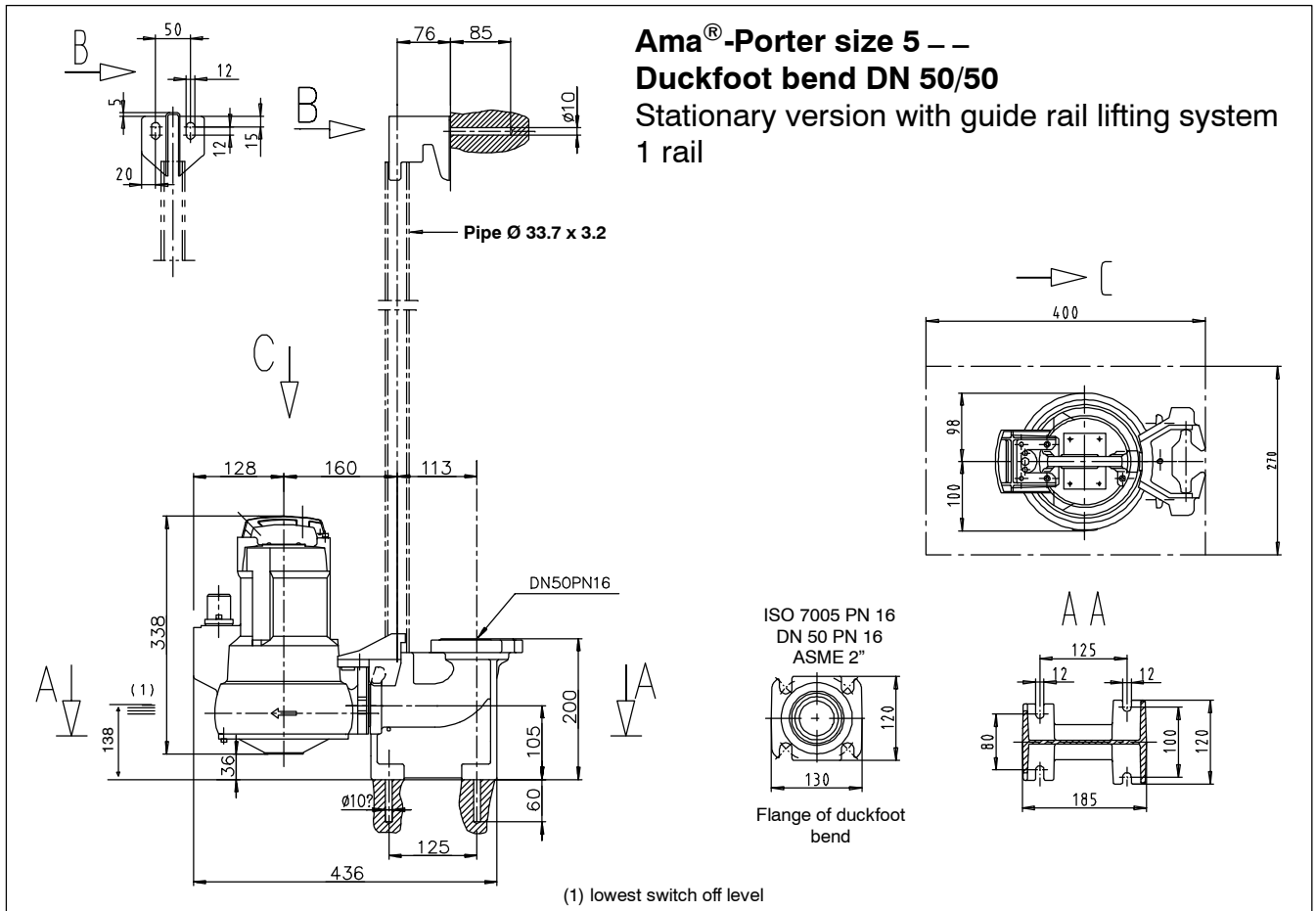


### Dimensions



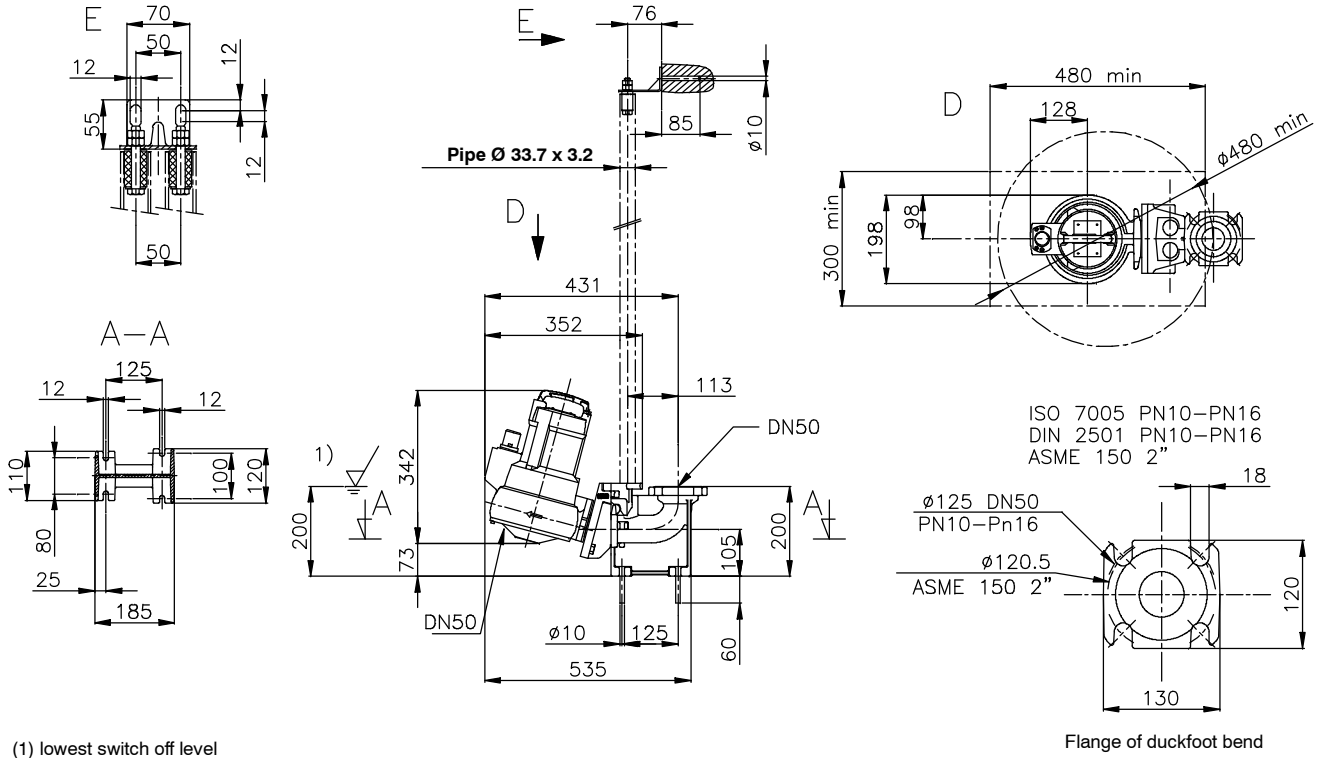


Dimensions



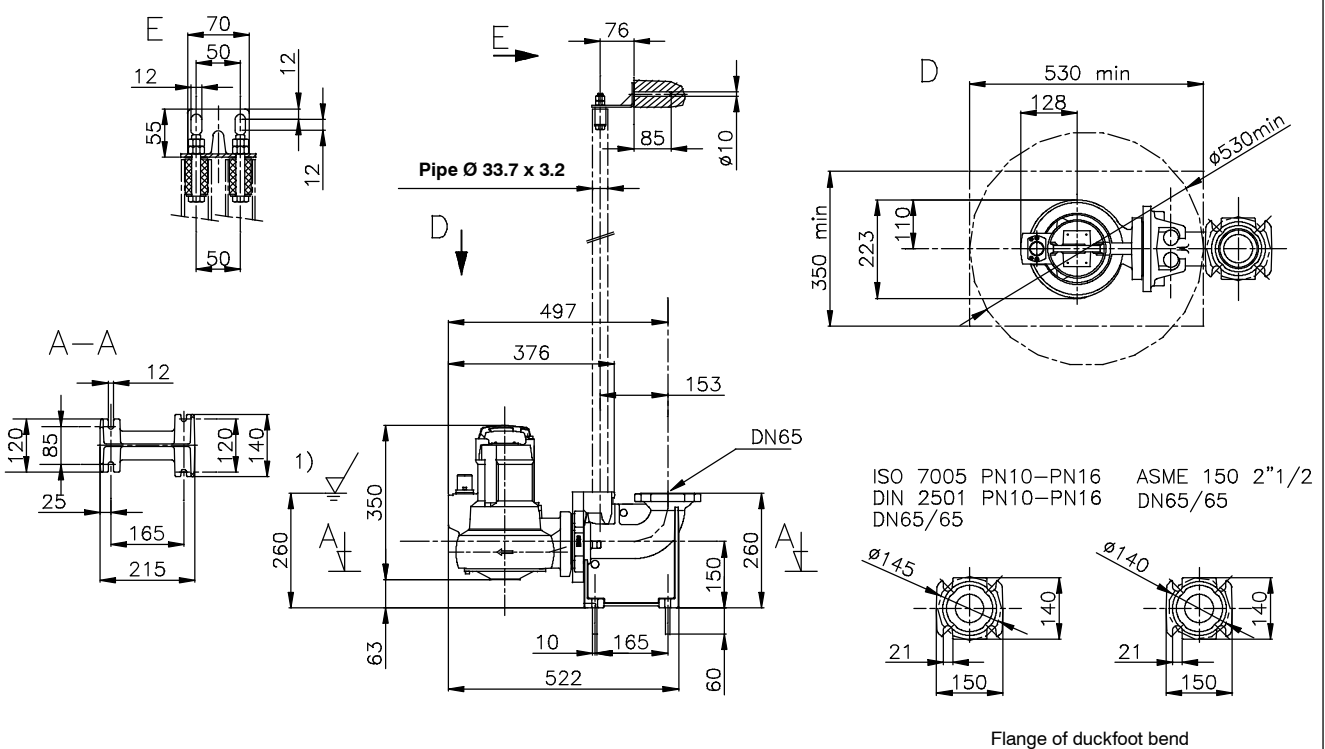
**Dimensions**

**Ama<sup>®</sup>-Porter size 5 --  
Duckfoot bend DN 50/50**  
Stationary version with guide rail lifting system - 2 rails



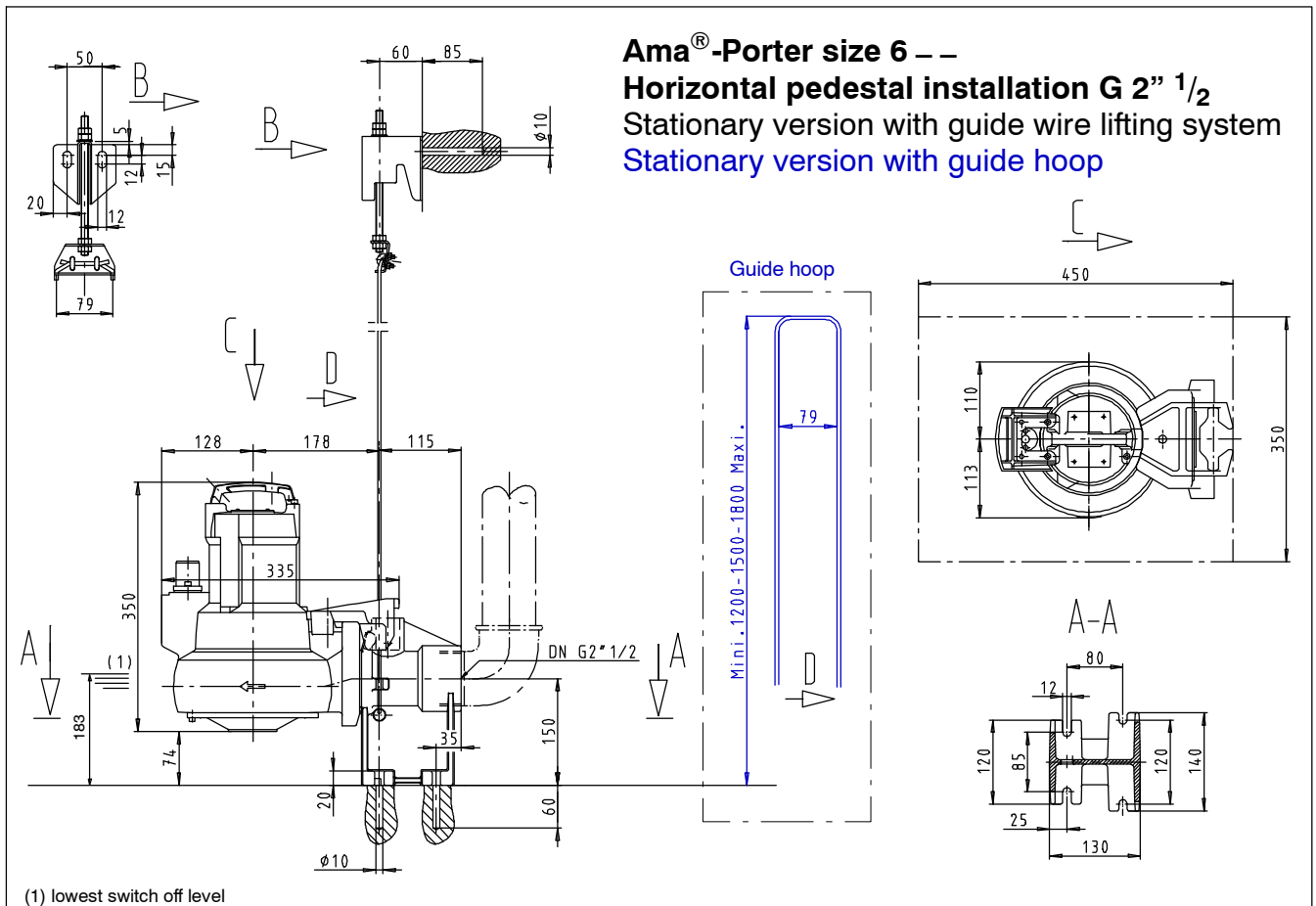
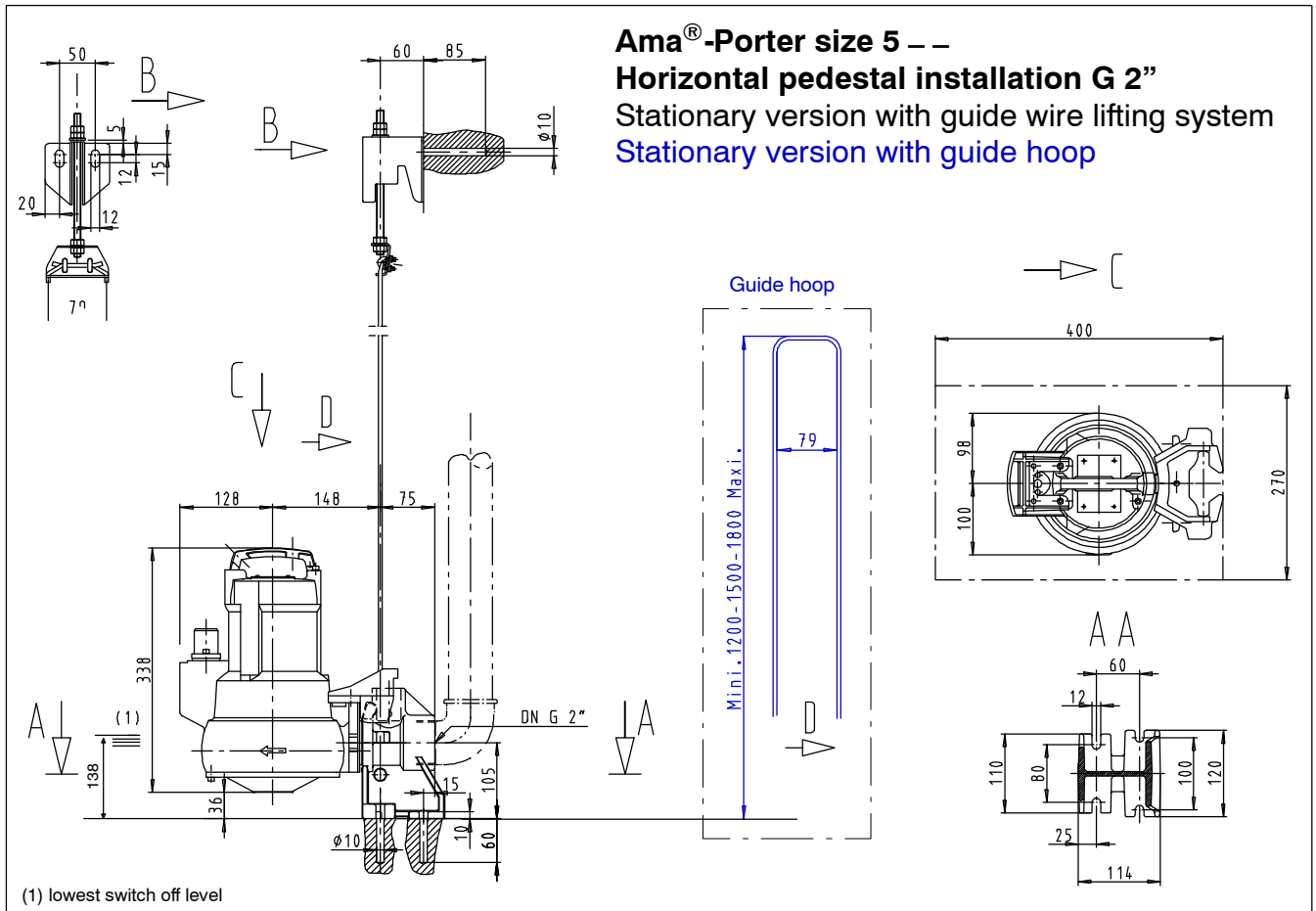
(1) lowest switch off level

**Ama<sup>®</sup>-Porter size 6 --  
Duckfoot bend DN 65/65**  
Stationary version with guide rail lifting system - 2 rails

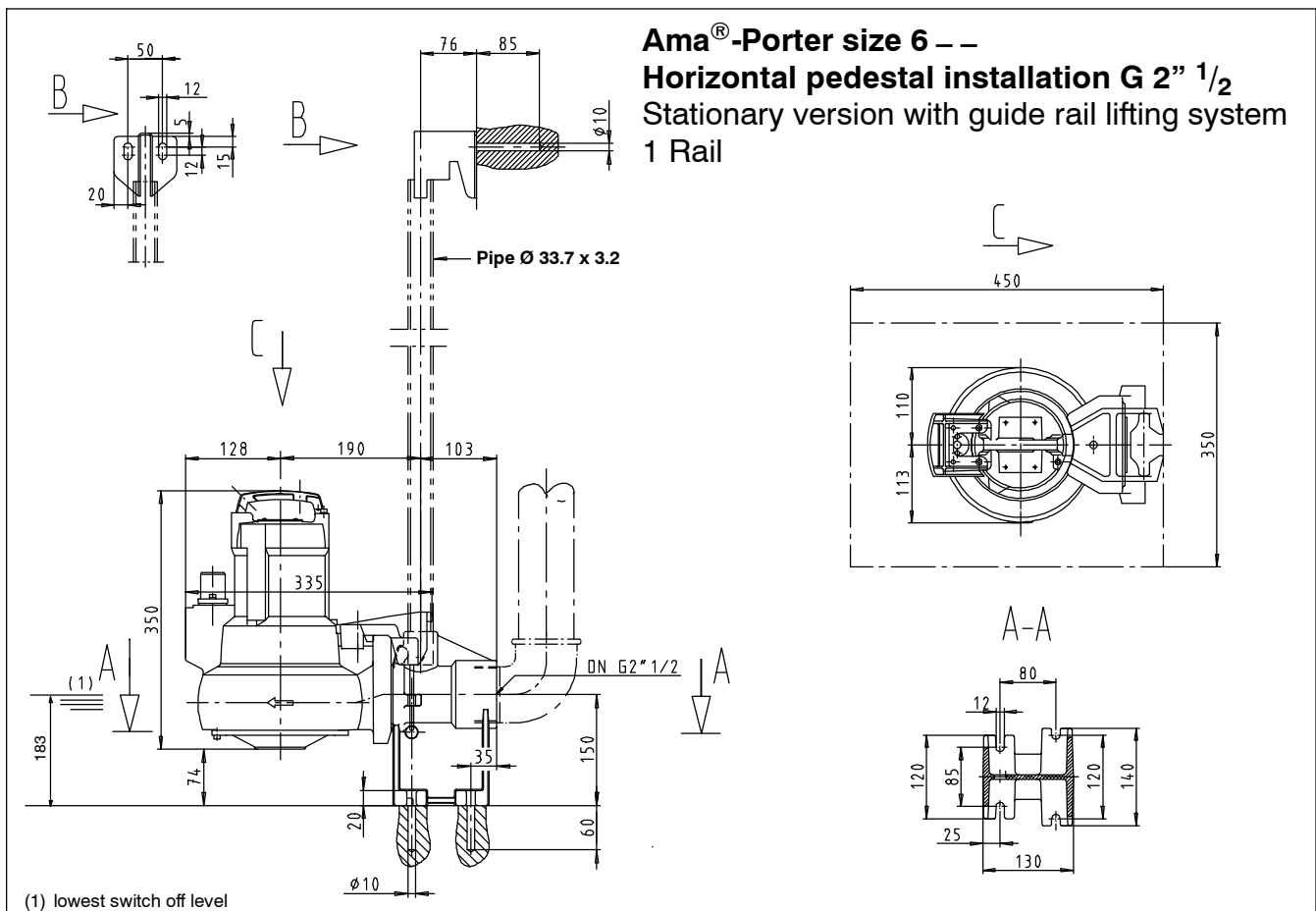
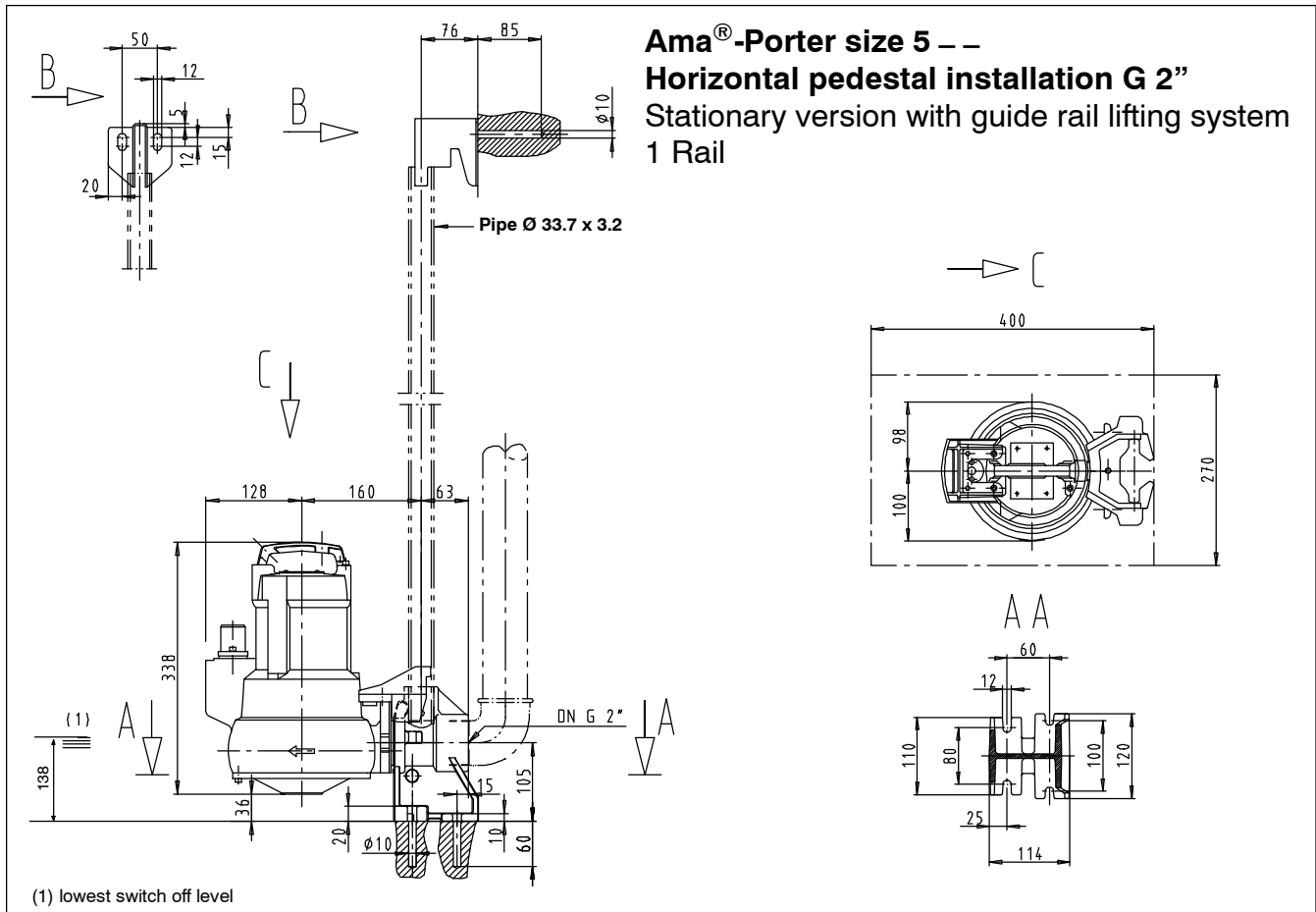


(1) lowest switch off level

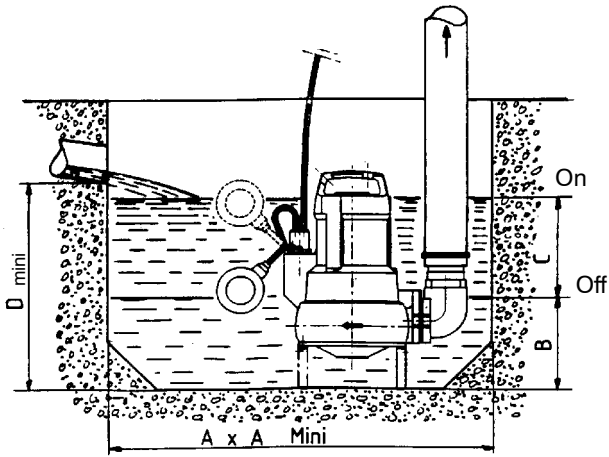
Dimensions



**Dimensions**



Installation in a sump



Dimensions in mm

	A	B	C	D
<b>Ama-Porter 5</b> --	600 x 600	160	190	450
<b>Ama-Porter 6</b> --	600 x 600	170	190	480

## Installation Kits for Stationary Installation

Item Illustration	Description	Ama-Porter		Ident. No.	Weight net approx. kg/unit		
		5..	6..				
<p><b>P2+P5+P7</b> (guide hoop arrangement)</p>	<b>Installation parts for stationary wet installation</b> consisting of: duckfoot bend <b>DN 50</b> guide hoop, bolts, anchor bolts, <b>clamps with stainless steel bolts,</b> 2 m <b>chain (galvanized steel)</b> and <b>shackle 1.4401</b>	<b>Installation depth : 1.5 m</b>		39 020 769	11.0		
		1.8 m		39 020 770	12.0		
		2.1 m		39 020 771	13.0		
<p><b>P2+P5+P7</b> (guide hoop arrangement)</p>	<b>Installation parts for stationary wet installation</b> consisting of: duckfoot bend <b>DN 65</b> guide hoop, bolts, anchor bolts, <b>clamps with stainless steel bolts,</b> 2 m <b>chain (galvanized steel)</b> and <b>shackle 1.4401</b>	<b>Installation depth : 1.5 m</b>		39 020 827	14.5		
		1.8 m		39 020 828	15.5		
		2.1 m		39 020 829	17.0		
<p><b>P2+P5+P7</b> (guide hoop arrangement)</p>	<b>Installation parts for stationary wet installation</b> consisting of: duckfoot bend <b>DN 50 / 2"</b> guide hoop, bolts, anchor bolts, <b>clamps with stainless steel bolts,</b> 2 m <b>chain (galvanized steel)</b> and <b>shackle 1.4401</b>	<b>Installation depth : 1.5 m</b>		39 020 795	7.8		
		1.8 m		39 020 796	8.8		
		2.1 m		39 020 797	10.8		
<p><b>P2+P5+P7</b> (guide hoop arrangement)</p>	<b>Installation parts for stationary wet installation</b> consisting of: duckfoot bend <b>DN 65/2" 1/2</b> guide hoop, bolts, anchor bolts, <b>clamps with stainless steel bolts,</b> 2 m <b>chain (galvanized steel)</b> and <b>shackle 1.4401</b>	<b>Installation depth : 1.5 m</b>		39 020 813	11.2		
		1.8 m		39 020 814	12.2		
		2.1 m		39 020 815	13.7		
<p><b>P4 + P5 + P7</b> (guide wire arrangement)</p>	<b>Installation parts for stationary wet installation for 4.5 m installation depth</b> consisting of: duckfoot bend, suspension bracket, mounting bracket, 10 m guide wire, bolts, anchor bolts <b>clamps with stainless steel bolts,</b> 5 m <b>chain (galvanized steel)</b> and <b>shackle 1.4401</b>						
		<b>DN 50</b>		●	●	39 021 023	14.5
		<b>DN 65</b>		●	●	39 021 025	17.6
<p><b>P4 + P5 + P7</b> (guide wire arrangement)</p>	<b>Installation parts for stationary wet installation for 4.5 m installation depth</b> consisting of: duckfoot bend, suspension bracket, mounting bracket, 10 m guide wire, bolts, anchor bolts <b>clamps with stainless steel bolts,</b> 5 m <b>chain (galvanized steel)</b> and <b>shackle 1.4401</b>						
		<b>DN 50 / 2"</b>		●	●	39 020 779	11.5
		<b>DN 65 / 2" 1/2</b>		●	●	39 020 806	14.7
<p><b>P4 + P5 + P7</b> (guide rail arrangement)</p>	<b>Installation parts for stationary wet installation for 3 m installation depth</b> consisting of: duckfoot bend, mounting bracket, bolts and anchor bolts, <b>clamps with stainless steel bolts,</b> 5 m <b>chain (galvanized steel)</b> and <b>shackle 1.4401</b>						
		<b>DN 50</b>		●	●	39 021 212	14.0
		<b>DN 65</b>		●	●	39 021 213	17.2

### Installation Kits for Stationary Installation

Item Illustration	Description	Ama-Porter		Ident. No.	Weight net approx. kg/unit
		5..	6..		
	<b>Installation parts for stationary wet-well installation for 3 m installation depth</b> consisting of: duckfoot bend, mounting bracket, bolts and anchor bolts, <b>clamps</b> with stainless steel bolts, 5 m <b>chain</b> (galvanized steel) and <b>shackle</b> 1.4401	●	●	39 021 182	10.8
				39 021 188	14.0
	<b>DN 50 / 2"</b> <b>DN 65 / 2"1/2</b>				

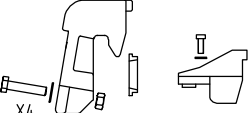
### Installation kit for twin guide rail arrangement

Item Illustration	Description	Ama-Porter		Ident. No.	Weight net approx. kg/unit
		5..	6..		
<b>P4 + P5 + P7</b> (twin guide rails) 	<b>Installation parts for stationary wet-well installation, consisting of:</b> duckfoot bend, mounting bracket, stainless steel bolts, adapter, anchor bolts, 5 m <b>chain</b> (galvanized steel) and <b>shackle</b> 1.4401	●	●	39 023 002	14.0
				39 023 006	21.0
	<b>DN 50</b> Inclined claw <b>DN 65</b> Right-angled claw				
<b>P5</b> (twin guide rails) <b>Mounting bracket</b> 	<b>Mounting bracket, cpl., consisting of:</b> Mounting bracket, stainless steel bolts, adapter, anchor bolts	●	●	39 022 984	1.6
	<b>DN 50 - DN 65</b>				
<b>P5</b> (twin guide rails) <b>Claw</b> 	<b>Claw</b> JL1040 with stainless steel bolts	●		39 022 990	6.5
			●		39 022 993
	<b>DN 50</b> Inclined claw <b>DN 65</b> Right-angled claw				


### Installation Kit for Transportable Versions

Item Illustration	Description	Ama-Porter		Ident. No.	Weight net approx. kg/unit
		5..	6..		
<b>P6 - DN 50</b> 	<b>Kit for transportable models</b> (Plastic hose inside diameter 63 P19) consisting of: adapter for hose connection connection elbow three feet hose clip including bolts	●		39 023 046	2.0
<b>P6 - DN 65</b> 	<b>Kit for transportable models</b> (Plastic hose inside diameter 80 P19) consisting of: adapter for hose connection connection elbow three feet hose clip including bolts		●	39 023 047	4.0

**Bracket**

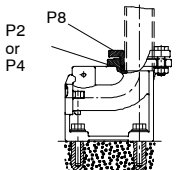




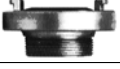

Item Illustration	Description	Ama-Porter		Ident. No.	Weight net approx. kg/unit
		5..	6..		
<b>P5</b> 	<b>Claw, JL 1040 with bolts</b> guide wire, rail, hoop arrangements	●	●	39 021 016 39 021 018	1.0 2.0

**Chain for Stationary and Transportable Versions**

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

\*) for installation depths &gt; 4.5 m ... 9 m

**Accessories for Stationary and Transportable Models**

Item Illustration	Description	Connection	Ama-Porter		Ident. No.	Weight net approx. kg/unit
			5..	6..		
<b>P8</b> (clamped connection) 	<b>Flange for pipe coupling PN 10</b> at the flange of the duckfoot bend Mating dimensions to PN 16	DN 50 / R 2" pipe	●		19 551 111	1.0
		DN 65 / R 2" 1/2 pipe		●	39 020 184	1.3
<b>P10</b> 	<b>Screwed flange PN 6</b> B50 DIN 2558 with bolts for <b>pump discharge nozzle</b>  (Seal element is fitted on the pump) GTW TZN	DN 50 / Rp 2	●		19 200 721	1.0
<b>P14</b> 	Bend with internal and external thread, A4	G 2"	●		00 241 966	0.3
		G 2" 1/2		●	00 240 316	0.4
<b>P15</b> 	<b>Storz rigid coupling with flange</b> drilled to DIN 2501, PN 16, aluminium / steel To be used for flanged connections item 25	DN 65 / B 75		●	18 040 148	2,0
<b>P16</b> 	<b>Storz hose coupling</b> aluminium 2 hose clips item 20 are required for hose mounting. (for plastic hose B 75 P.19)	DIN 14 322 B 75		●	00 520 454	0.7
<b>P17</b> 	<b>Storz rigid coupling AL</b> with external thread	C 52 / G 2 A	●		00 524 370	0.22
		B 75 / G 2 1/2 A		●	00 524 371	0.4
<b>P18</b> 	<b>Plastic hose DN 50</b> DIN 14 811 with integrated C couplings	C 52 5 m	●		00 522 262	1.8
		C 52 10 m	●		00 522 263	3.4
		C 52 20 m	●		00 522 264	6.6
		B 75 5 m		●	39 018 686	3.5
		B 75 10 m		●	39 018 687	5.5
B 75 20 m		●	00 522 265	9.5		

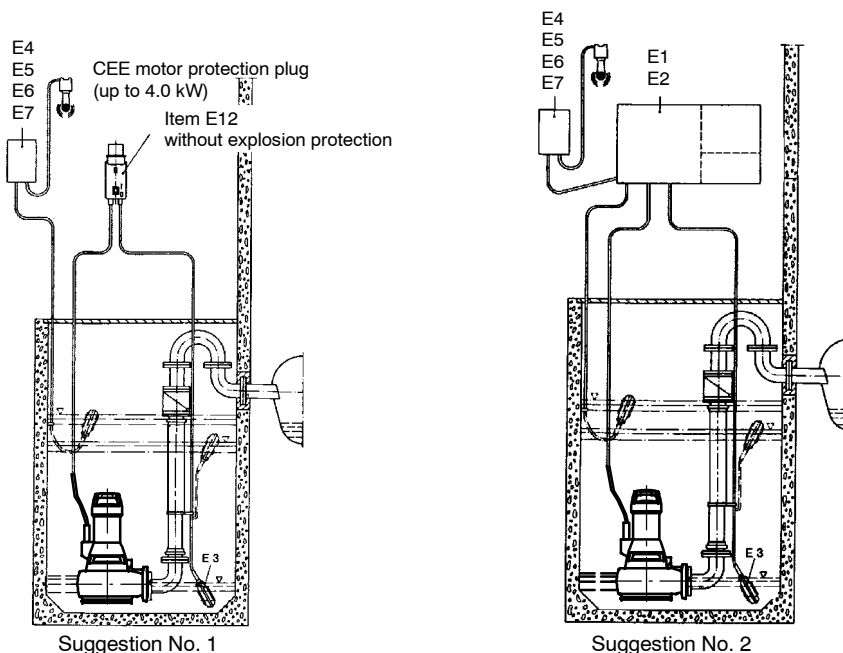


## Accessories for Stationary and Transportable Models

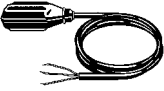


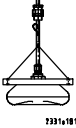
Item Illustration	Description	Connection	Ama-Porter		Ident. No.	Weight net approx. kg/unit	
			5..	6..			
	<b>Plastic hose</b> without coupling (max. 30 m) DIN 14 811	Ø 63	5 m	●	39 018 688 39 018 689 39 018 690 39 019 073	1.7	
			10 m	●		3.4	
			20 m	●		6.8	
			30 m	●		10.2	
		Ø 80	5 m		●	39 018 691	2.15
			10 m		●	39 019 062	4.3
			20 m		●	39 019 063	8.6
			30 m		●	39 019 072	12.9
		B 75	5 m		●	39 019 064	2.0
			10 m		●	39 019 065	4.0
			20 m		●	39 019 066	8.0
			30 m		●	39 019 071	12.0
	<b>Hose clip</b> DIN 3017 Cr steel	B 50	●	00 460 476	0.1		
		B 75		●	00 109 515	0.1	
	<b>RK swing check valve</b> plastic, ISO 7/1 with full port and drain plug, conformity mark P-I 3751 Not suitable for pumped drainage	Rp 2"	●	01 009 773	2.2		
	<b>Socket gate valve</b> PN 10 - 12 DIN 3352 CuZn	Rp 2"	●	00 411 503	0.8		
	<b>Check valve to KSB's choice</b> (not illustrated), cast iron, with full port, lifting device, flanges drilled to DIN 2501, PN 16 (not for lifting units)	DN 65		●	48 829 253	16.0	
	<b>Gate valve to KSB's choice,</b> Flanges drilled to PN 16	DN 65		●	48 816 272	17.0	
	<b>Set of installation accessories</b> for a flange connection, discharge nozzle / item 15, consisting of: 4 hexagon head bolts with nuts and 1 sealing element			●	19 551 115	0.8	
	<b>Screwed flange PN 16/2", threaded connection</b> DN 50 / Rp 2" C50 DIN 2566 with bolts, gasket and nuts for flanged elbow		●		19 551 353	2.0	
	Suction strainer		●	●	39 023 050	2.0	

## Suggested electrical installation layouts

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









**Electrical Accessories**

Item	Illustration	Description	Ama-Porter							Ident. No.	Weight	
			500	501	502	503	601	602	603			
<b>E 3</b>		<b>Float switch</b>	3 m	●	●	●	●	●	●	●	11 037 742	0.5
		with connection cable for	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
		30 m	●	●	●	●	●	●	●	11 037 748	3.4	
		<b>Float switch <sup>1)</sup></b>	3 m	●	●	●	●	●	●	●	11 037 749	0.6
		for intermediate installation,	5 m	●	●	●	●	●	●	●	11 037 750	0.9
		with connection cable for	10 m	●	●	●	●	●	●	●	11 037 751	1.5
			20 m	●	●	●	●	●	●	●	11 037 752	2.7
		<b>Float switch <sup>1)</sup></b>	3 m	●	●	●	●	●	●	●	11 037 759	0.6
for intermediate installation,		5 m	●	●	●	●	●	●	●	11 037 760	0.9	
for filling	10 m	●	●	●	●	●	●	●	11 037 761	1.5		
with connection cable for	20 m	●	●	●	●	●	●	●	11 037 762	2.7		
<b>E 3</b>		<b>Pressure bell set (open system)</b>										
		with polyamide hose 8 x 1		●	●	●	●	●	●	●	19 071 721	1.2
		Hose length 10 m	●	●	●	●	●	●	●	19 071 837	2.0	
		Hose length 20 m										
<b>E 3</b>		<b>Pressure bell set (closed system)</b>										
		with polyamide hose 8 x 3	●	●	●	●	●	●	●	19 071 722	3.5	
		Hose length 10 m										
		Hose length >10 m on request										

<sup>1)</sup> not suitable for LevelControl





**Electrical Accessories**

Item	Illustration	Description	Ident. No.	Weight
E 4		<b>AS 0 alarm switchgear</b> 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		<b>AS 2 alarm switchgear</b> , 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		<b>AS 4 alarm switchgear</b> , 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		<b>AS 5 alarm switchgear</b> , 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
		<b>Internal horn</b> 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		<b>F1 moisture sensor</b> as contactor for alarm switchgears AS 0, AS 2 or AS 4, with 3 m connection cable. Possible applications for alarm transmission: <b>High-water alarm by suspending the moisture sensor in a (pump) sump above the pump start-up level.</b> <b>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.</b> 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 ca. kg
					500 NE	501 NE	502 NE	503 NE	601 NE	602 NE	603 NE	
<b>E6</b>		<b>Switchgear for single-phase single pump set IP 54</b>	MSE 60.1 MSE 80.1 MSE 100.1	19 070 138 19 070 139 19 070 140	●	●	●	●	●	●	●	1.0 1.0 1.0
<b>E11<sup>1)</sup></b>		<b>Switchgear for single pump set</b> 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
<b>E11 / E12</b>		<b>LevelControl Advanced</b> 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										
<b>E11</b>		<b>LevelControl Advanced</b> Control unit for <b>single</b> pump, IP 54 power range up to 10 A, 4 kW, <b>1~230 V</b> 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
<b>E12<sup>1)</sup></b>		<b>Switchgear for duplex pump unit, IP 54</b> 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
<b>E11 / E12</b>		<b>LevelControl Advanced</b> Control unit for <b>two</b> pumps, IP 54 power range up to 10 A, 4 kW, <b>1~230 V</b> 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

<sup>1)</sup> 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 kg
						500 ND	501 ND	502 ND	503 ND	601 ND	602 ND	603 ND	
E6 <sup>1)</sup>		<b>Switchgear for three-phase current single pump set</b> 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 40.1	2.6-3.7 A	19 070 116	●	●	●		●	●		1.0 1.0
			MSD 60.1	3.7-5.5 A	19 070 117				●				
E10 <sup>1)</sup>		<b>Switchgear for single pumping station</b> 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 40.1	2.5-4 A	19 070 092	●	●	●		●	●		2.0 2.0
			EDP 60.1	4-6.3 A	19 070 093				●				
<b>E10 / E13</b>		<b>LevelControl Advanced</b> 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											
<b>E10</b>		<b>LevelControl Advanced</b> Control unit for <b>single</b> pump, IP 54 power range up to 10 A, 4 kW, <b>3~400 V</b> 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 <sup>1)</sup>		<b>Switchgear for duplex pumping stations</b> 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 40.1	2.5-4 A	19 070 148	●	●	●		●	●		9.3 9.3
			DDP 60.1	4-6 A	19 070 149				●				
<b>E10 / E13</b>		<b>LevelControl Advanced</b> Control unit for <b>two</b> pumps, IP 54 power range up to 10 A, 4 kW, <b>3~400 V</b> 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 kg				
			500 D	501 D	502 D	503 D	601 D	602 D	603 D						
E12		<b>KSB motor protection plug Hyper</b> 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: 2.6 - 3.7 A 3.7 - 5.5 A	●	●	●		●	●		19 071 492					
						●			●		19 071 493				
E13		<b>Switchgears 1) with bubbler control,</b>  IP 54 for <b>non-explosion-proof</b> pumps and for indoor installation Dimensions EDEL 580 x 260 x 130 EDEL 600 x 400 x 200  Single pumping station Duplex pumping station  Additional pressure bell set required.	EDEL 40.3	2.5 - 4.0 A	●	●	●		●	●		19 071 718	9.3		
			EDEL 60.3	4.0 - 6.3 A				●			●		19 071 719	9.3	
			DDEL 40.2	2.5 - 4.0 A	●	●	●		●	●			19 071 995	18.0	
			DDEL 60.2	4.0 - 6.3 A				●			●		19 071 996	18.0	
		<b>Switchgears 1) with plastic housing</b> for outdoor wall mounting, IP 66 Single pumping station  Duplex pumping station  Additional pressure bell set required.	EDEL 40.3 FLS	2.5 - 4.0 A	●	●	●		●	●			19 071 843	15.0	
			EDEL 60.3 FLS	4.0 - 6.3 A				●			●		19 071 844	15.0	
			DDEL 40.2 FLS	2.5 - 4.0 A	●	●	●		●	●			19 071 998	23.0	
			DDEL 60.2 FLS	4.0 - 6.3 A				●			●		19 071 999	23.0	
		<b>Switchgear with static pressure control</b> IP 54 EDES 40.3-LC EDES 60.3-LC	●	●	●		●	●			01 057 976	2.0			
						●			●			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		<b>Pressure bell set</b> (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			
		Clamp for mast mounting of switchgear EDEL /DDEL FLS (Max. mast diameter 170 mm, to be supplied by the operator.)		●	●	●	●	●	●	●		01 055 725	2.2		
		Base for EDEL /DDEL FLS switchgear, made of glass-fibre reinforced polyester, RAL 7032, incl. metal frame for setting in concrete.		●	●	●	●	●	●	●		11 301 318	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 <sub>max</sub> approx. 150 mA) and for charging an accumulator 12 V, 1.2 Ah	0.4
O 7.1	<b>Alarm equipment for PZ033</b> 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	<b>Horn</b> for direct connection to LevelControl	01 118 748
O9	<b>Combined alarm</b> for direct connection to LevelControl	01 118 747
O10	<b>Flashlight</b> for direct connection to LevelControl	01 118 746
O16	<b>PC ServiceTool</b>	47 121 210
O11	<b>Control cabinet heater</b> for LevelControl CU	E071
O12	<b>Control cabinet heater</b> with thermostat for LevelControl SU	E072
O13	<b>Charging unit PZ033 N</b> for LevelControl SU (without accumulator)	E075
O14	<b>Lead gel accumulator</b> 12V, 1.2 Ah for PZ033 N	E076
O15	<b>Alarm equipment for PZ033 N</b> - Flashlight 12 V DC, IP 65 - Horn 12 V DC, IP 33 - <b>Combined alarm</b> , siren and flashlight, 12 V DC, IP65	01 056 355 01 086 547 01 073 476

