



Submersible Motor Pump

## **AmaPorter**

DN 50-DN 80

Single-phase or Three-phase Asynchronous Motor  
50 Hz

## **Type Series Booklet**



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Type Series Booklet AmaPorter

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## Drainage Pumps / Grey Water Pumps

### Submersible Motor Pump

## AmaPorter



### Main applications

- Pump station
- Domestic waste water
- Waste water transport
- Draining of pits, shafts, etc.

### Fluids handled

- Grey water
- Waste water containing a small amount of solids
- Surface water or stormwater in intermittent periodic duty

### Operating data

Table 1: Operating properties

Characteristic		Value	
		AmaPorter F	AmaPorter S
Flow rate	Q [m <sup>3</sup> /h]	≤ 127,1	≤ 17
	Q [l/s]	≤ 35,3	≤ 4,7
Head	H [m]	≤ 36,9	≤ 21
Fluid temperature	T [°C]	≤ +40 (continuous duty)	
Motor rating	P <sub>2</sub> [kW]	≤ 4,2	≤ 1,5

### Design details

#### Design

- Fully floodable submersible motor pump
- Close-coupled design
- Single-stage
- Not self-priming
- Vertical installation

### Installation

- Wet-installed stationary model
- Wet-installed transportable model

### Drive

- Single-phase or three-phase AC asynchronous motor, DOL starting, with integrated temperature switch (depending on pump type), 50 Hz, 230 V | 400 V
- Enclosure IP68 (permanently submerged) to EN/IEC 60529
- Thermal class F

### Shaft seal

Drive end:

- Shaft seal ring

Pump end:

- One bi-directional mechanical seal with lip seal or two bi-directional mechanical seals in tandem arrangement (depending on the pump designation), with liquid reservoir

### Impeller type

- Various application-oriented impeller types (⇒ Page 8)

### Bearings

- Maintenance-free, grease-packed bearings sealed for life

## Designation

### Example: AmaPorter SB 545 SE

**Table 2:** Designation key

Code	Description	
AmaPorter	Type series	
S	Impeller type	
	F	Vortex impeller
	S	Impeller with cutter
B	Start capacitor	
		Without start capacitor
	B	With start capacitor
5	Size	
	5_	DN 50
	6_	DN 65
	8_	DN 80
45	Code nominal impeller diameter [mm]	
	45	145 mm
SE	Motor version	
	SE	Single-phase AC motor with float switch
	NE	Single-phase AC motor without float switch
	ND	Three-phase asynchronous motor without float switch

## Materials

**Table 3:** Overview of available materials

Component	AmaPorter F 50_ / 60_	AmaPorter F 51_ / 52_ / 61_ / 62_ / 82_	AmaPorter S_ 545
Casing	EN-GJL-200	EN-GJL-250	EN-GJL-200
Impeller			EN-GJL-250
Cutter		-	1.2080 (K100)
Shaft		1.4021 + QT800	
Shaft seal, drive end			
Shaft seal ring	<b>X</b>	-	<b>X</b>
Mechanical seal	-	Carbon / Al <sub>2</sub> O <sub>3</sub>	-
Shaft seal, pump end			
Mechanical seal		SiC / SiC	
Bolts and nuts		A2	
Joint rings		Nitrile butadiene rubber (NBR70)	
Float switch	Polypropylene	-	Polypropylene

## Coating and preservation

### Primer and top coat

Surface treatment:

- Blasted to SA 2 1/2 to DIN EN ISO 12944

Top coat:

- Two-component epoxy paint (RAL 5002), minimum film thickness = 80 µm

**Product benefits**

- High operating reliability, even under tough operating conditions, due to generously sized motor and thermal overload protection
- Long service life with shaft made of corrosion-resistant stainless steel and one or two bi-directional mechanical seals
- Trouble-free operation: Clogging by coarse particles is prevented by large free passage (vortex impeller) or by cutter with high mechanical resistance for grey water.
- Stationary pump sets easy to install and remove with automatic, bolt-free connection; leakage prevented by elastic sealing elements

- Ease of service with wetted bolts made of stainless steel which are easy to undo even after years of operation



**Product information**

**Product information as per Regulation No. 1907/2006 (REACH)**

For information as per European chemicals regulation (EC) No. 1907/2006 (REACH) see <https://www.ksb.com/en-global/company/corporate-responsibility/reach>.

**Certificates**

**Table 4:** Overview

Label	Effective in:	Note
	Europe	Suitable for products to EN 12050-1
 <div style="display: inline-block; vertical-align: middle; margin-left: 10px;"> <p>Type Tested and Monitored</p> <p><small>www.tuv.com ID: 1111215748</small></p> </div>	Europe	-



**Overview of product features / selection tables**
**Overview of range**
**Table 5:** Standard design variants

Size	F impeller					S impeller		
	AmaPorter F 50_ / 60_			AmaPorter F 51_ / 52_ / 61_	AmaPorter F 62_ / 82_	AmaPorter S_ 545		
Motor version	SE	NE	ND	ND		SE	NE	ND
Material variant	G					G		
<b>Number of motor poles</b>								
2-pole	X	X	X	X	-	X	X	X
4-pole	-	-	-	-	X	-	-	-
<b>Explosion protection</b>								
Motor version UL	Non-explosion-proof							
<b>Motor</b>								
Starting method	DOL			DOL		DOL		
Frequency of starts/hour	15			30		15		
Voltage	1~230 V	1~230 V	3~400 V	400 V		1~230 V	1~230 V	3~400 V
Cooling	Cooled by surrounding fluid							
Duty type	Continuous duty S1 (permanently submerged, 5 m max.)			S1: submerged (max. 25 m) (see <sup>2)</sup> in outline drawing) S3: unsubmerged (see <sup>1)</sup> in outline drawing)		Continuous duty S1 (permanently submerged, 5 m max.)		
<b>Power cable</b>								
Type	Rubber-sheathed cable (H07RN8-F 3G1)	Rubber-sheathed cable (H07RN8-F 4G1)	Rubber-sheathed cable (H07RN8-F 7G1.5)			Rubber-sheathed cable (H07RN8-F 4G1)		
Length	10 m <sup>1)</sup>			10 m		10m <sup>1)</sup>		
Cable entry	Absolutely watertight							
<b>Sealing elements</b>								
Shaft seal	Drive end: shaft seal ring Pump end: mechanical seal			Drive end: mechanical seal Pump end: mechanical seal		Drive end: shaft seal ring Pump end: mechanical seal		
Elastomer seals	NBR			NBR		NBR		
<b>Monitoring equipment</b>								
Winding temperature version UL	Thermal motor protection	-	Temperature monitoring circuit (with automatic reset and start-up): Bimetal switch directly connected with the control circuit of the motor contactor			Thermal motor protection	-	
<b>Coating</b>	Environmentally friendly KSB top coat (two-component epoxy paint), colour RAL 5002, film thickness = 80 µm							
<b>Installation</b>								
Stationary, with guide hoop arrangement	Installation depths 1.5 m / 1.8 m / 2.1 m							
Stationary, with single guide rail arrangement	Installation depth 6 m							
Stationary, with twin guide rail arrangement	Installation depth 6 m							
Stationary, with guide wire arrangement	Installation depth 4.5 m							
Transportable	Installation depth 14.5 m							
<b>Maximum temperature of fluid handled</b>								
Motor version UL	≤ +40 °C (+70 °C for short periods)			40 °C		≤ +40 °C (+70 °C for short periods)		

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1 Optional: 20 m

**Impellers**

	Vortex impeller (impeller type F)	<b>Suitable for the following fluids:</b> fluids containing solids and stringy material as well as fluids with entrapped air or entrapped gas
	Impeller with cutter (impeller type S)	<b>Suitable for the following fluids:</b> faeces, domestic sewage and waste water containing long fibres

**Overview of fluids handled**

The table below for your guidance is based on KSB's long-standing experience. The data are standard values and are not to be considered as generally binding recommendations. More detailed advice is available from our specialist department. The KSB materials laboratory's wealth of experience may be useful when selecting materials.

**Table 6:** Selection aid for materials and hydraulic systems per fluid

Fluid handled <sup>2)</sup>	Recommended material	Recommended impeller type <sup>3)</sup>	Recommended sealing elements	Comments, further recommendations
<b>Water, surface water</b>				
▪ Dam water	G	F	NBR	Free passage > any solids contained, possibly pre-screened
▪ Lake water	G	F	NBR	Free passage > any solids contained, possibly pre-screened
▪ River water	G	F	NBR	Free passage > any solids contained, possibly pre-screened
<b>Water, contaminated water</b>				
▪ Combined sewage, with strainer	G	F	NBR	-
▪ Combined sewage, without strainer	G	F	NBR	-
▪ Slightly contaminated water	G	F	NBR	Free passage > any solids contained, possibly pre-screened
▪ Waste water with faeces	G	F	NBR	EN 12050, min. free passage of 40 mm
▪ Waste water without faeces	G	F	NBR	-
<b>Municipal waste water</b>				
▪ Biologically treated	G	F	NBR	-
▪ Containing air and gas	G	F	NBR	Up to 8 %; contact KSB for higher concentrations.
▪ Domestic waste water with faeces	G	F	NBR	EN 12050, min. free passage of 40 mm
▪ Domestic waste water without faeces	G	F	NBR	-
▪ Pumped drainage	G	F	NBR	-
▪ Raw waste water containing solids, long fibres and abrasive particles	G	F	NBR	Free passage > any solids contained, possibly pre-screened
▪ Untreated	G	F	NBR	ATV <sup>4)</sup> recommends a free passage of 100 mm; min. free passage: 76 mm
<b>Water, raw water</b>				
▪ No details specified	G	F	NBR	-
<b>Non-abrasive, non-corrosive industrial waste water<sup>5)</sup></b>				
▪ Industrial waste water with faeces	G	F	NBR	-
▪ Industrial waste water without faeces	G	F	NBR	-
▪ Ammonium hydroxide	G	F	NBR	-

**2** For any fluids which are not listed in this table contact the manufacturer.

**3** The first impeller type listed should be given preference.

**4** ATV = German regulatory body for waste water management

**5** The hydrocarbons mentioned may occur in very high concentrations due to the difference in specific weight and their low solubility. If this is the case, contact KSB.

Fluid handled <sup>2)</sup>	Recommended material	Recommended impeller type <sup>3)</sup>	Recommended sealing elements	Comments, further recommendations
<ul style="list-style-type: none"> <li>Containing up to 5 % of ammonium hydroxide</li> </ul>	G	F	NBR	-
<ul style="list-style-type: none"> <li>Containing 5 % of calcium hydroxide Ca(OH)<sub>2</sub></li> </ul>	G	F	NBR	-
<ul style="list-style-type: none"> <li>Containing 10 % of dissolved carbonate Na<sub>2</sub>CO<sub>3</sub></li> </ul>	G	F	NBR	-
<ul style="list-style-type: none"> <li>Containing fibres</li> </ul>	G	F	NBR	-
<ul style="list-style-type: none"> <li>Containing paint suspension</li> </ul>	G	F	NBR	Solvent-free, observe the operator's instructions.
<ul style="list-style-type: none"> <li>Containing 25 % of urea (NH<sub>2</sub>)<sub>2</sub>-CO</li> </ul>	G	F	NBR	-
<b>Suspensions containing solids</b>				
<ul style="list-style-type: none"> <li>Pulp, concentration up to 1 % bone dry</li> </ul>	G	F	NBR	-
<ul style="list-style-type: none"> <li>Pulp, concentration up to 6 % bone dry</li> </ul>	G	F	NBR	-
<ul style="list-style-type: none"> <li>Water/sand mixture up to 0.5 g/l</li> </ul>	G	F	NBR	-
<b>Sludges</b>				
<ul style="list-style-type: none"> <li>Raw sludge</li> </ul>	G	F	NBR	Pumpable up to a dry substance content of: 13 % (D-max), 8 % (F)
<ul style="list-style-type: none"> <li>Digested sludge</li> </ul>	G	F	NBR	Pumpable up to a dry substance content of: 13 % (D-max), 8 % (F)
<ul style="list-style-type: none"> <li>Activated sludge</li> </ul>	G	F	NBR	Pumpable up to a dry substance content of: 13 % (D-max), 8 % (F)

**Technical data**
**AmaPorter**
**Table 7:** Overview of technical data

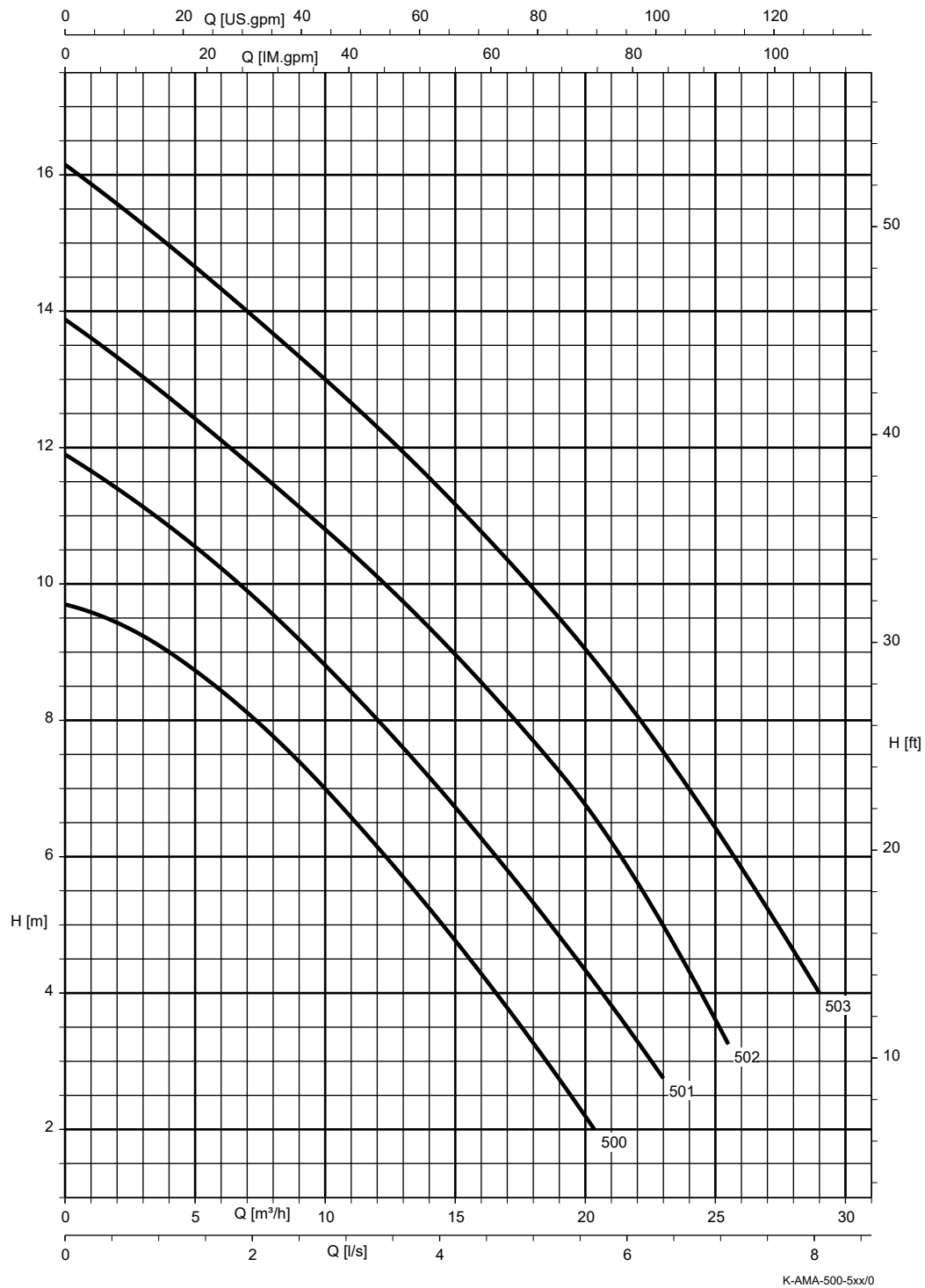
Size	Voltage		Power cable		Impeller diameter [mm]	Free pas- sage [mm]	P <sub>1</sub> [kW]	P <sub>2</sub> [kW]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	Power cable [mm <sup>2</sup> ]	Mat. No.	[kg]
	1~230 V	3~400 V	10 m	20 m									
500 SE	X	-	X	-	100	45	1,00	0,55	5,0	40,0	3G1	39017187	24
501 SE	X	-	X	-	110	45	1,25	0,75	6,0	40,0	3G1	39017100	24
502 SE	X	-	X	-	120	43	1,80	1,10	8,2	40,0	3G1	39017101	24
503 SE	X	-	X	-	130	41	1,80	1,10	8,2	40,0	3G1	39017102	24
500 NE	X	-	X	-	100	45	1,00	0,55	5,0	40,0	3G1	39017195	24
500 NE	X	-	-	X	100	45	1,00	0,55	5,0	40,0	3G1	39018542	25
501 NE	X	-	X	-	110	45	1,25	0,75	6,0	40,0	3G1	39017188	24
501 NE	X	-	-	X	110	45	1,25	0,75	6,0	40,0	3G1	39018543	25
502 NE	X	-	X	-	120	43	1,80	1,10	8,2	40,0	3G1	39017189	23
502 NE	X	-	-	X	120	43	1,80	1,10	8,2	40,0	3G1	39018544	25
503 NE	X	-	X	-	130	41	1,80	1,10	8,2	40,0	3G1	39017190	24
503 NE	X	-	-	X	130	41	1,80	1,10	8,2	40,0	3G1	39018545	25
500 ND	-	X	X	-	100	45	0,90	0,55	2,3	18,3	4G1	39017191	24
500 ND	-	X	-	X	100	45	0,90	0,55	2,3	18,3	4G1	39018538	25
501 ND	-	X	X	-	110	45	1,10	0,75	2,8	18,3	4G1	39017103	24
501 ND	-	X	-	X	110	45	1,10	0,75	2,8	18,3	4G1	39018539	25
502 ND	-	X	X	-	120	43	1,50	1,10	3,0	18,3	4G1	39017104	24
502 ND	-	X	-	X	120	43	1,50	1,10	3,0	18,3	4G1	39018540	25
503 ND	-	X	X	-	130	41	2,05	1,50	3,5	18,3	4G1	39017105	24
503 ND	-	X	-	X	130	41	2,05	1,50	3,5	18,3	4G1	39018541	25
510 ND	-	X	X	-	90	40	1,83	1,30	3,6	20,0	7G1,5	39100411	41
511 ND	-	X	X	-	107	40	1,83	1,30	3,6	20,0	7G1,5	39100412	41
512 ND	-	X	X	-	120	40	2,64	1,90	4,7	20,0	7G1,5	39100413	42
513 ND	-	X	X	-	130	40	3,30	2,30	5,6	20,0	7G1,5	39100414	42
514 ND	-	X	X	-	140	40	3,30	2,30	5,6	20,0	7G1,5	39100415	43
520 ND	-	X	X	-	130	40	3,90	3,10	6,9	50,0	7G1,5	39100416	52
521 ND	-	X	X	-	140	40	3,90	3,10	6,9	50,0	7G1,5	39100417	52
522 ND	-	X	X	-	150	40	5,40	4,20	9,0	50,0	7G1,5	39100418	53
523 ND	-	X	X	-	160	40	5,40	4,20	9,0	50,0	7G1,5	39100419	53
524 ND	-	X	X	-	170	40	5,40	4,20	9,0	50,0	7G1,5	39100420	54
525 ND	-	X	X	-	180	40	5,40	4,20	9,0	50,0	7G1,5	39100421	54
601 SE	X	-	X	-	110	60	1,25	0,75	6,0	40,0	3G1	39017106	28
602 SE	X	-	X	-	120	58	1,80	1,10	8,2	40,0	3G1	39017107	28
603 SE	X	-	X	-	130	56	1,80	1,10	8,2	40,0	3G1	39017108	28
601 NE	X	-	X	-	110	60	1,25	0,75	6,0	40,0	3G1	39017192	28
601 NE	X	-	-	X	110	60	1,25	0,75	6,2	40,0	3G1	39018549	29
602 NE	X	-	X	-	120	58	1,80	1,10	8,2	40,0	3G1	39017193	28
602 NE	X	-	-	X	120	58	1,80	1,10	8,2	40,0	3G1	39018628	29
603 NE	X	-	X	-	130	56	1,80	1,10	8,2	40,0	3G1	39017194	28
603 NE	X	-	-	X	130	56	1,80	1,10	8,2	40,0	3G1	39018629	29
601 ND	-	X	X	-	110	60	1,10	0,75	2,8	18,3	4G1	39017109	29
601 ND	-	X	-	X	110	60	1,10	0,75	2,8	18,3	4G1	39018546	30
602 ND	-	X	X	-	120	58	1,50	1,10	3,0	18,3	4G1	39017110	29
602 ND	-	X	-	X	120	58	1,50	1,10	3,0	18,3	4G1	39018547	30
603 ND	-	X	X	-	130	56	2,05	1,50	3,5	18,3	4G1	39017111	29
603 ND	-	X	-	X	130	56	2,05	1,50	3,5	18,3	4G1	39018548	30
610 ND	-	X	X	-	120	65	3,90	3,10	6,9	50,0	7G1,5	39100422	58
611 ND	-	X	X	-	128	65	3,90	3,10	6,9	50,0	7G1,5	39100423	58
612 ND	-	X	X	-	136	65	3,90	3,10	6,9	50,0	7G1,5	39100424	59
613 ND	-	X	X	-	146	65	5,40	4,20	9,0	50,0	7G1,5	39100425	59

Size	Voltage		Power cable		Impeller diameter [mm]	Free pas- sage [mm]	P <sub>1</sub> [kW]	P <sub>2</sub> [kW]	I <sub>N</sub> [A]	I <sub>A</sub> [A]	Power cable [mm <sup>2</sup> ]	Mat. No.	[kg]
	1~230 V	3~400 V	10 m	20 m									
614 ND	-	X	X	-	152	65	5,40	4,20	9,0	50,0	7G1,5	39100426	57
615 ND	-	X	X	-	158	65	5,40	4,20	9,0	50,0	7G1,5	39100427	58
620 ND	-	X	X	-	112	65	1,29	0,80	2,9	17,4	7G1,5	39100428	49
621 ND	-	X	X	-	125	65	1,29	0,80	2,9	17,4	7G1,5	39100429	49
622 ND	-	X	X	-	135	65	1,29	0,80	2,9	17,4	7G1,5	39100430	49
623 ND	-	X	X	-	145	65	1,29	0,80	2,9	17,4	7G1,5	39100431	49
624 ND	-	X	X	-	155	65	1,29	0,80	2,9	17,4	7G1,5	39100432	49
625 ND	-	X	X	-	165	65	1,96	1,30	3,6	17,4	7G1,5	39100433	50
626 ND	-	X	X	-	175	65	1,96	1,30	3,6	17,4	7G1,5	39100434	50
627 ND	-	X	X	-	185	65	2,85	1,80	4,8	17,4	7G1,5	39100435	49
628 ND	-	X	X	-	195	65	2,85	1,80	4,8	17,4	7G1,5	39100436	51
820 ND	-	X	X	-	120	76	2,70	1,90	6,1	37,5	7G1,5	39100437	64
821 ND	-	X	X	-	135	76	2,70	1,90	6,1	37,5	7G1,5	39100438	65
822 ND	-	X	X	-	150	76	2,70	1,90	6,1	37,5	7G1,5	39100439	65
823 ND	-	X	X	-	165	76	3,61	2,60	7,0	37,5	7G1,5	39100440	66
824 ND	-	X	X	-	180	76	5,39	3,70	9,3	37,5	7G1,5	39100441	65
825 ND	-	X	X	-	195	76	5,39	3,70	9,3	37,5	7G1,5	39100442	67
826 ND	-	X	X	-	210	76	5,39	3,70	9,3	37,5	7G1,5	39100443	65
SB 545 SE	X	-	X	-	145	7	1,80	1,10	8,2	40,0	4G1	39018468	28
SB 545 NE	X	-	X	-	145	7	1,80	1,10	8,2	40,0	4G1	39018469	28
S 545 ND	-	X	X	-	145	7	2,05	1,50	3,5	18,3	4G1	39017859	26
S 545 ND	-	X	-	X	145	7	2,05	1,50	3,5	18,3	4G1	39018632	27

Characteristic curves

AmaPorter F 50\_ n = 2900 rpm

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.



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**AmaPorter F 51<sub>n</sub> = 2900 rpm**

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.

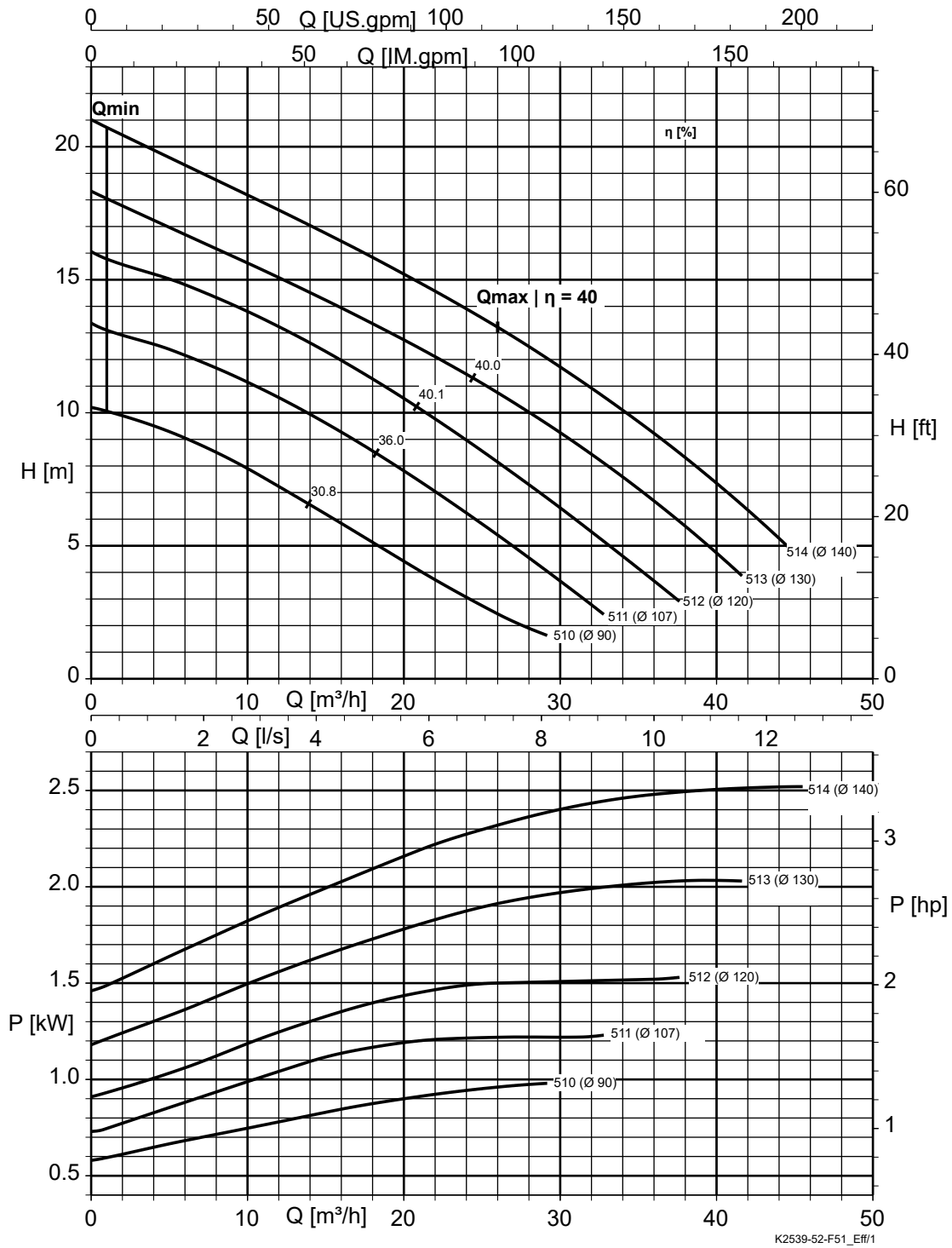


Fig. 1: Free passage : F 51<sub>n</sub> = 40 mm

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**AmaPorter F 52\_ n = 2900 rpm**

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.

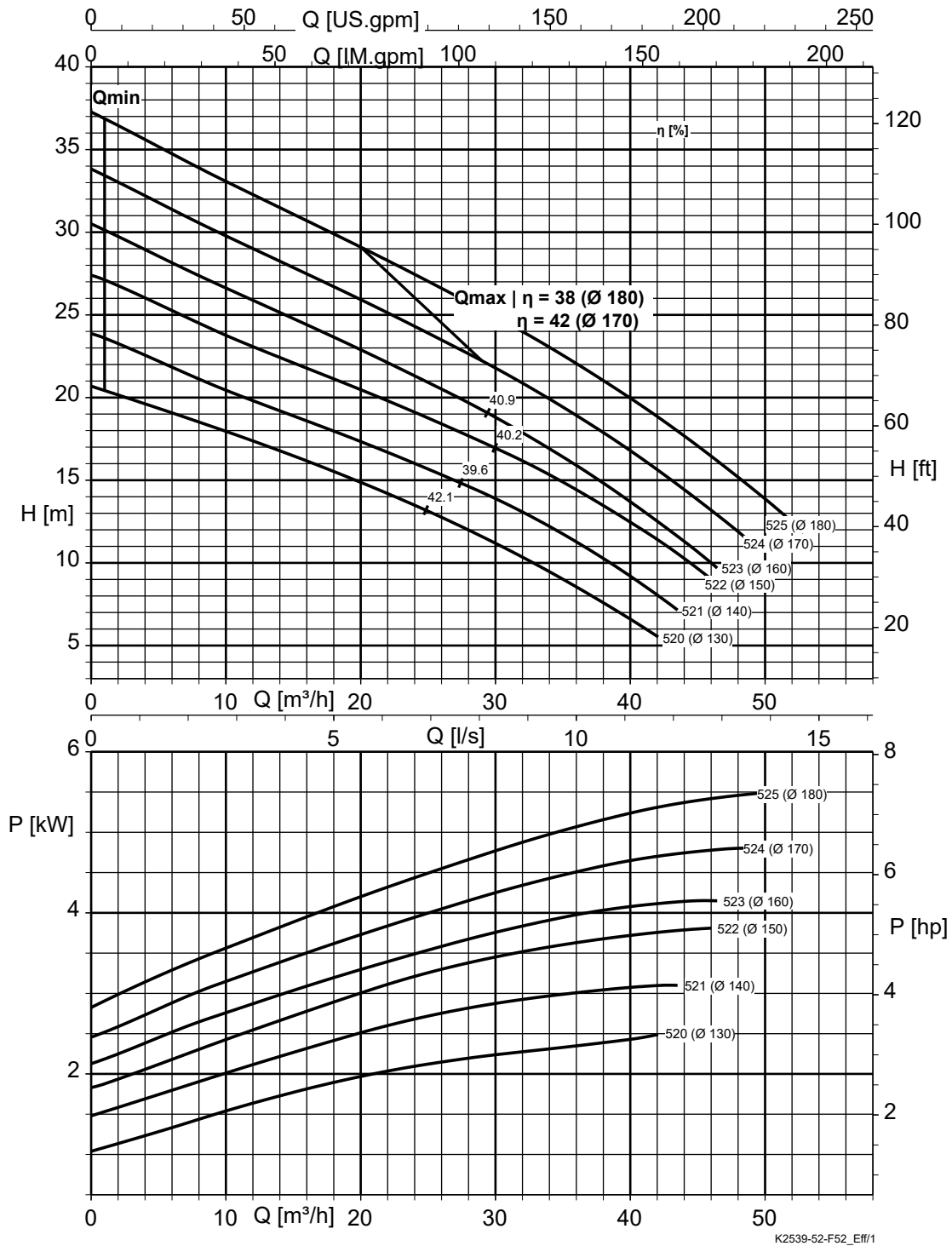
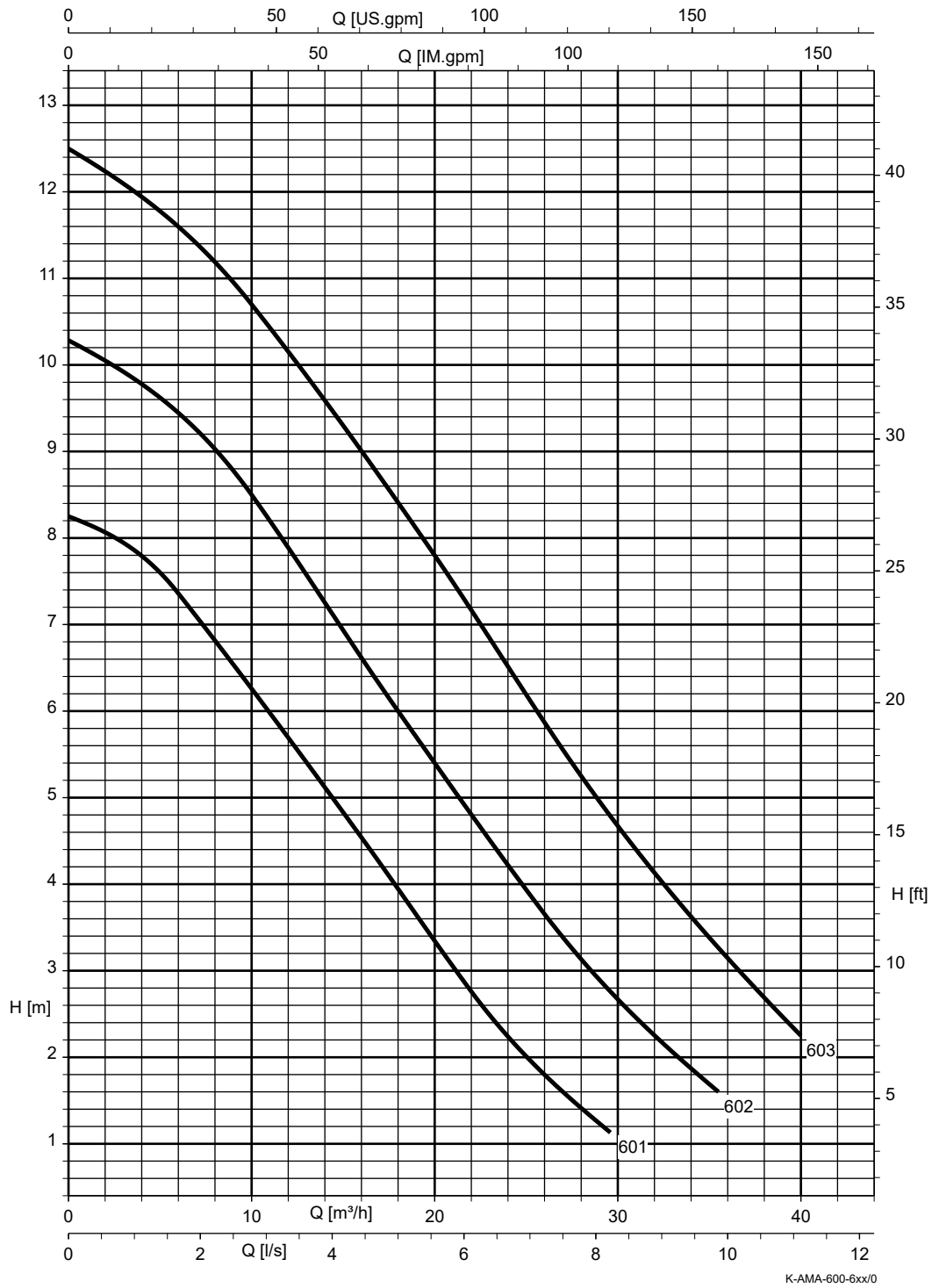


Fig. 2: Free passage : F 52\_ = 40 mm

**AmaPorter F 60\_ n = 2900 rpm**

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.



**Fig. 3:** Free passage: F 60\_ = 40 mm

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**AmaPorter F 61<sub>n</sub>, n = 2900 rpm**

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.

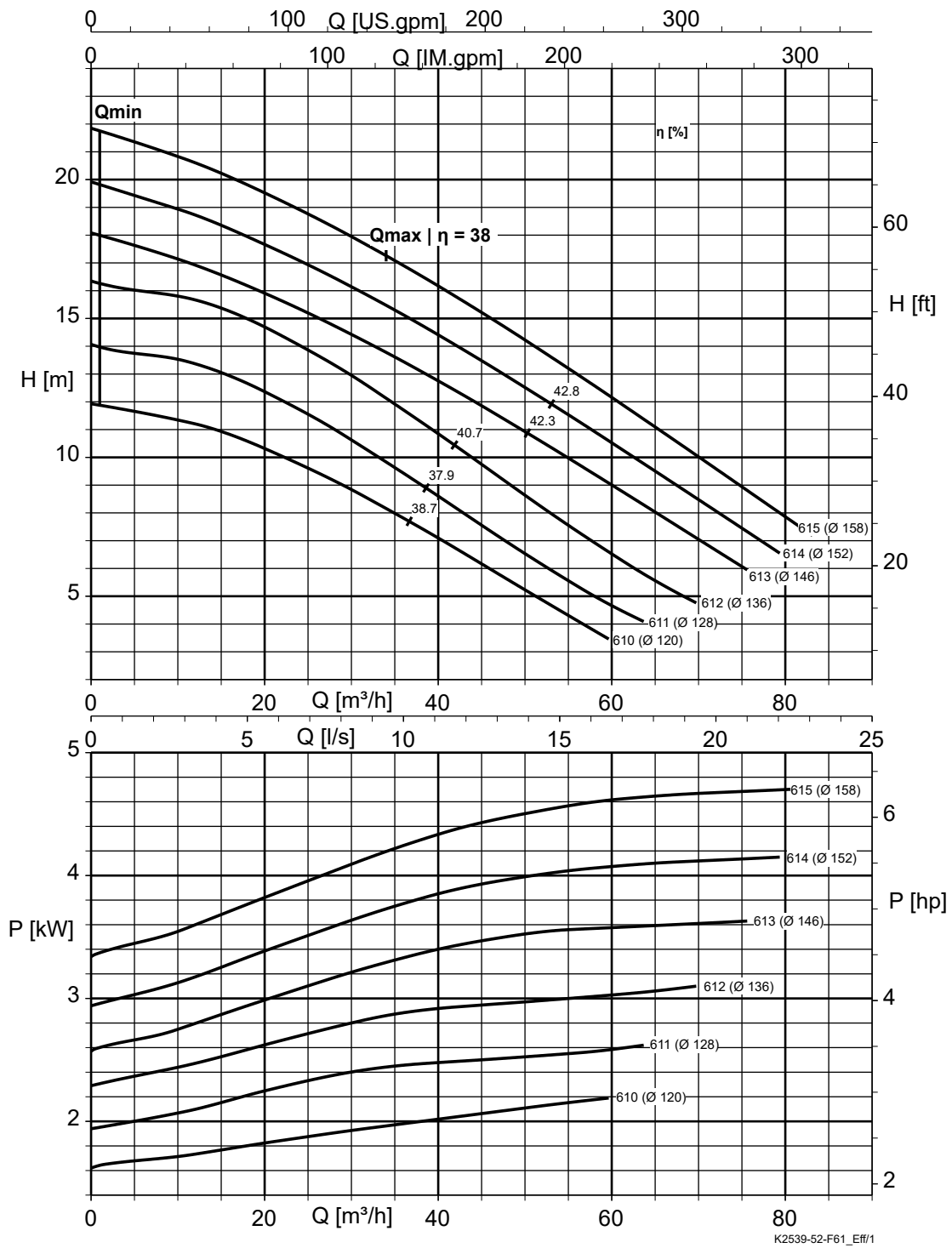
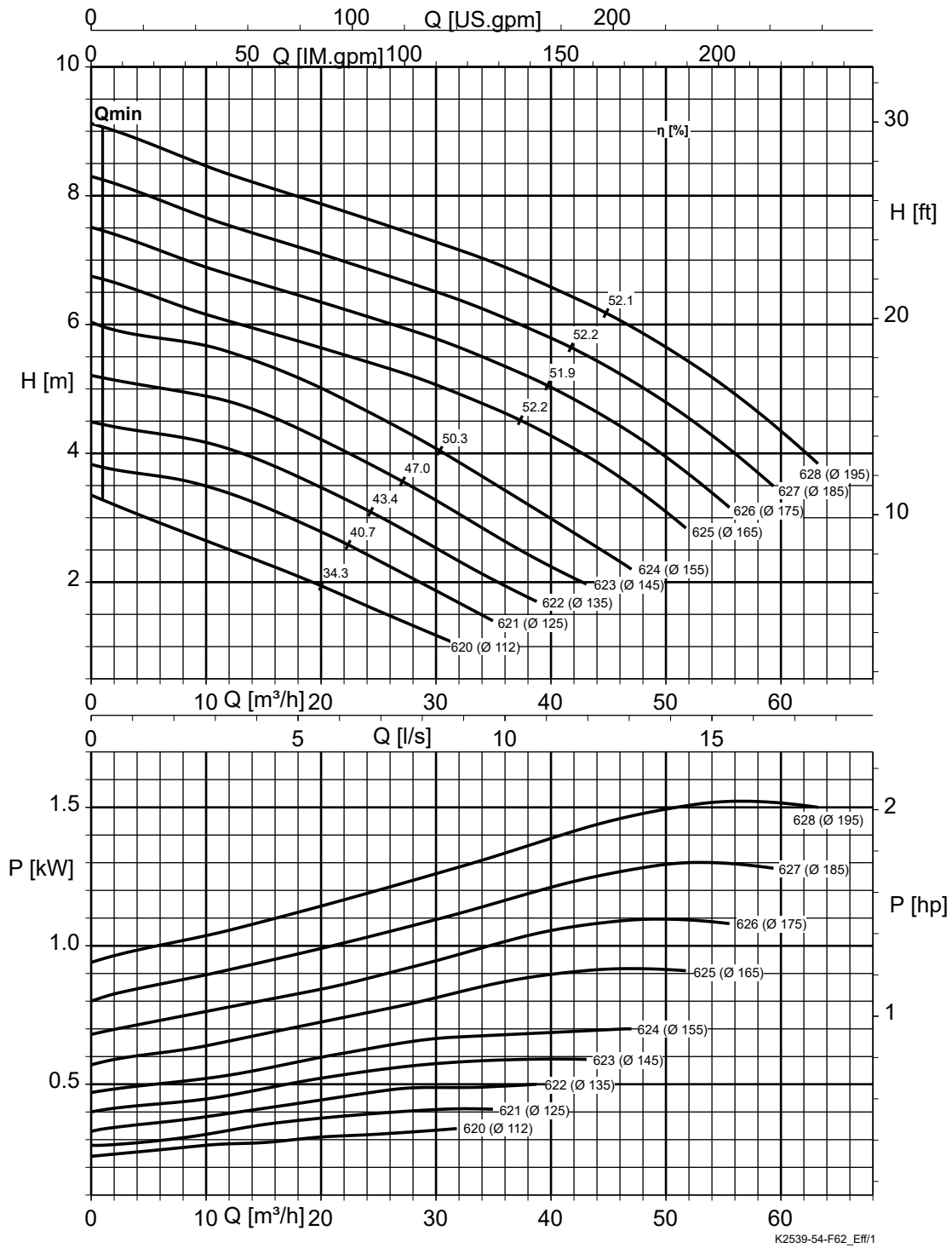


Fig. 4: Free passage: F 61<sub>n</sub> = 65 mm

**AmaPorter F 62\_ n = 1450 rpm**

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.



**Fig. 5:** Free passage: F 62\_ = 65 mm

**AmaPorter F 82\_ n = 1450 rpm**

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.

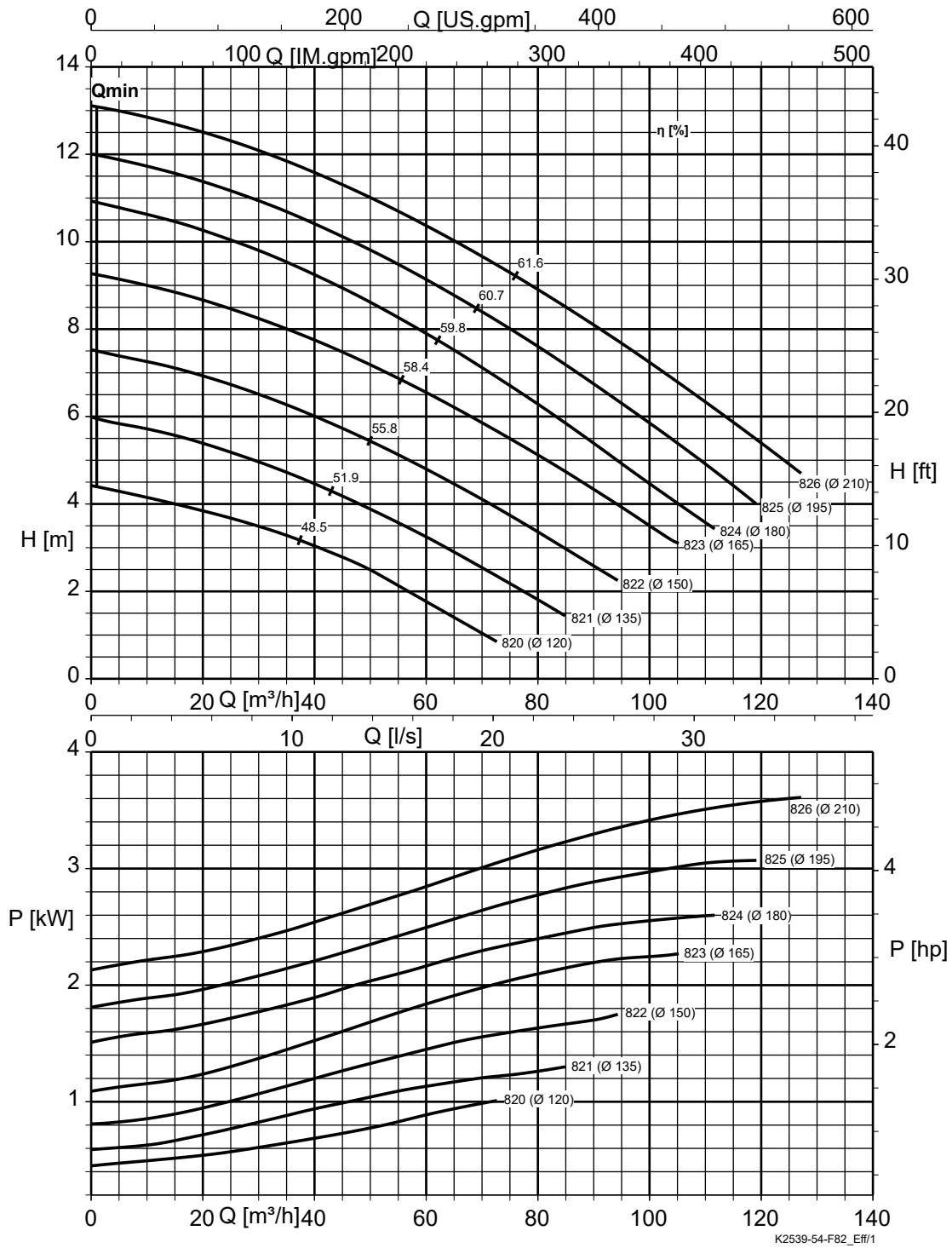


Fig. 6: Free passage: F 82\_ = 76 mm

**AmaPorter S\_545, n = 2900 rpm**

Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. The characteristic curves refer to the effective motor speed.

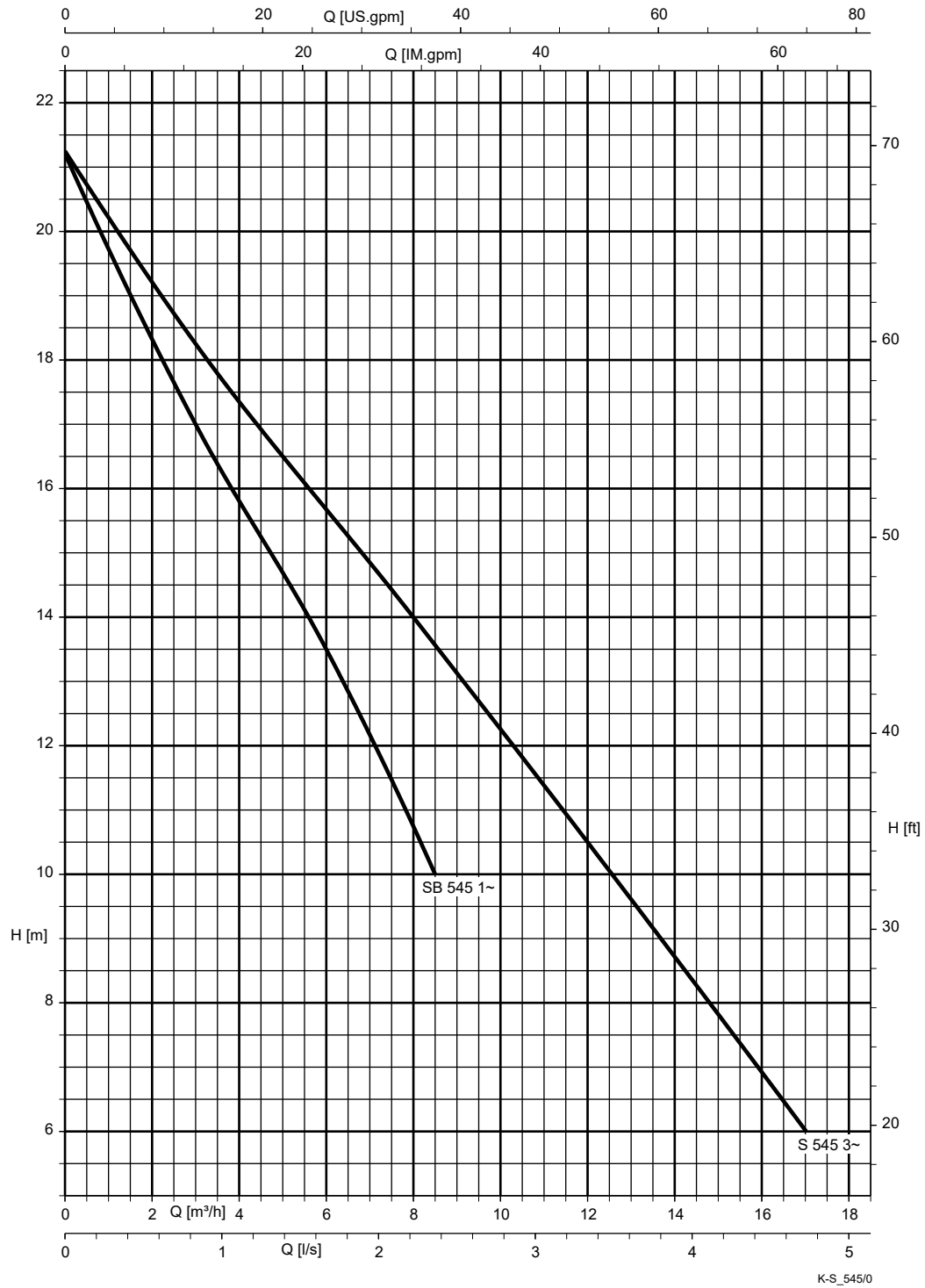


Fig. 7: Free passage: 7 mm

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Dimensions and connections

AmaPorter DN 50/65/80, transportable model

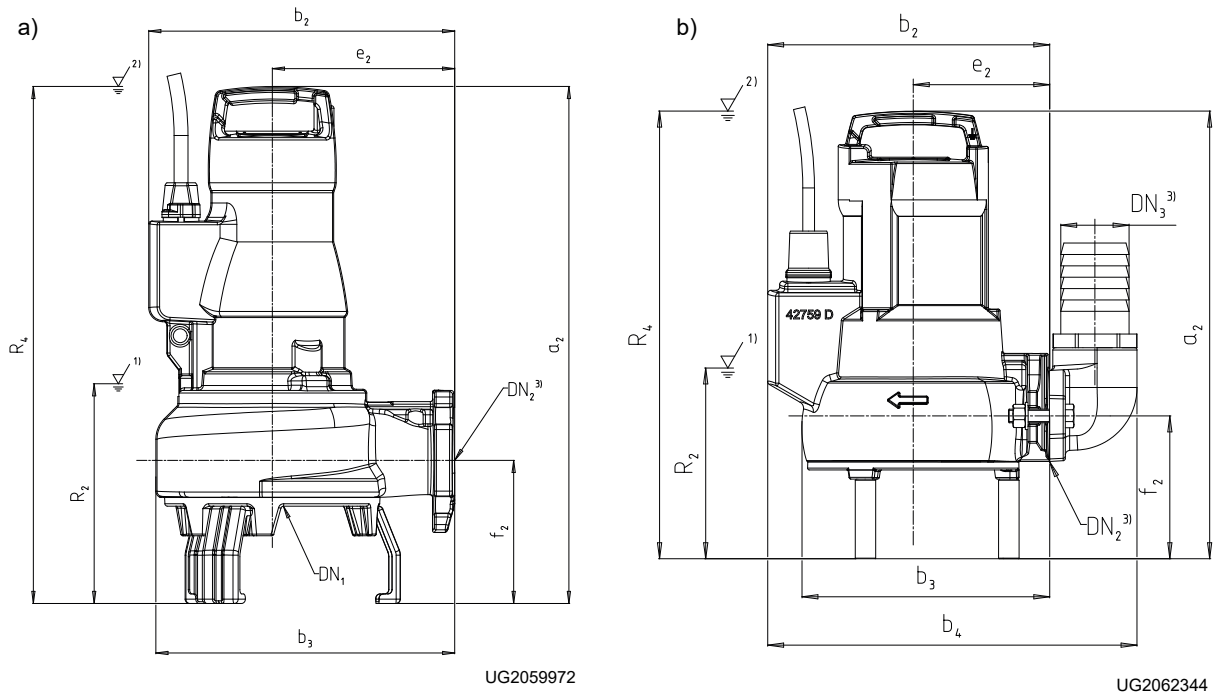


Fig. 8: Dimensions and connections

a)	AmaPorter F	b)	AmaPorter S
----	-------------	----	-------------

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Connection of elbow with fasteners and clamp, for sizes 50_/60_/545 consider adapter piece for hose in addition

Table 8: Pump set dimensions [mm]

Size	DN <sub>1</sub>	DN <sub>2</sub>	a <sub>2</sub>	b <sub>2</sub>	b <sub>3</sub>	b <sub>4</sub>	e <sub>2</sub>	f <sub>2</sub>	R <sub>2</sub>	R <sub>4</sub>
F 50_	44	50	393	248	218	-	120	125	160	393
F 51_	42	50	549	323	295	-	180	154	207	549
F 52_	42	50	610	337	308	-	180	157	203	610
F 60_	59	65	408	278	263	-	150	132	170	408
F 61_	65	65	655	367	335	-	210	166	248	655
F 62_	65	65	596	353	345	-	210	165	253	596
F 82_	80	80	674	387	392	-	230	189	249	674
S_545	-	50	394	248	218	325	120	126	160	394

AmaPorter F can be installed with an additional footplate. In this case, add 15 mm to a<sub>2</sub> and f<sub>2</sub>.

Pump flange

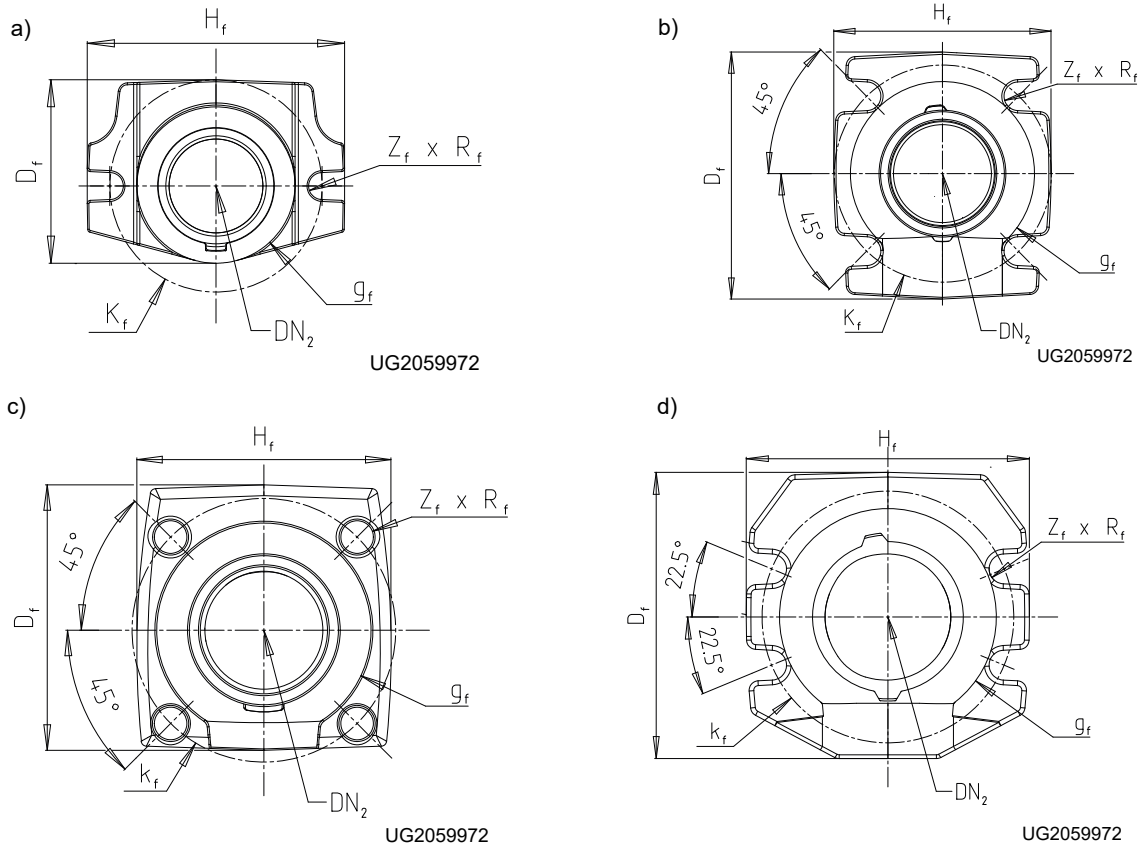


Fig. 9: Pump flange dimensions

a)	AmaPorter F 50_/S_545	b)	AmaPorter F 51_/52_/61_/62_
c)	AmaPorter F 60_	d)	AmaPorter F 82_

Table 9: Pump flange dimensions [mm]

Size	DN <sub>2</sub>	ISO 7005/DIN 2501	g <sub>f</sub>	k <sub>f</sub>	D <sub>f</sub>	H <sub>f</sub>	Z <sub>f</sub>	R <sub>f</sub>
F 50_	50	PN 6	82	110	95	134	2	7
F 51_/52_	50	PN 16	99	124	140	125	4	9,5
F 60_	65	PN 16	118	145	146	140	4	9
F 61_/62_	65	PN 16	122	145	164	144	4	9,5
F 82_	80	PN 16	138	160	182	180	4	9,5
S_545	50	PN 6	82	110	95	134	2	7

Connection elbow

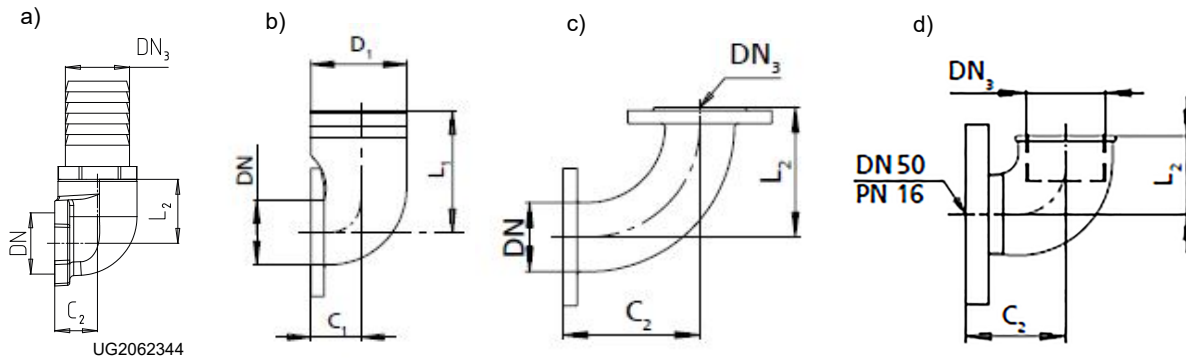


Fig. 10: Connection elbow dimensions

a)	Connection elbow with internal thread and external thread, together with threaded connection for hose piece (P6)	b)	Connection elbow with flange/hose connection (P13)
c)	Connection elbow with flanges (P14)	d)	Connection elbow with internal thread and external thread (P14) and threaded flange (P27)

Table 10: Dimensions of connection elbow [mm]

Size	DN	Connection elbow with internal thread and external thread, together with threaded connection for hose piece (P6)			Connection elbow with flange/hose connection (P13)			Connection elbow with flanges (P14)			Connection elbow with internal thread and external thread (P14) and threaded flange (P27)		
		DN <sub>3</sub>	C <sub>2</sub>	L <sub>2</sub>	D <sub>1</sub>	C <sub>1</sub>	L <sub>1</sub>	DN <sub>3</sub>	C <sub>2</sub>	L <sub>2</sub>	DN <sub>3</sub>	C <sub>2</sub>	L <sub>2</sub>
F 50_	50	G 2" <sup>6)</sup>	43	60	-	-	-	-	-	-	-	-	-
F 51_/52_	50	-	-	-	-	-	-	-	-	-	G 2"	78	58
F 60_	65	G 2 1/2" <sup>7)</sup>	51	100	-	-	-	-	-	-	-	-	-
F 61_/62_	65	-	-	-	75	40	135	65	135	135	-	-	-
F 82_	80	-	-	-	75	115	175	80	135	135	-	-	-
S_545	50	G 2"	43	60	-	-	-	-	-	-	-	-	-

6 Inside diameter of hose = 63 mm

7 Inside diameter of hose = 80 mm

Duckfoot bend

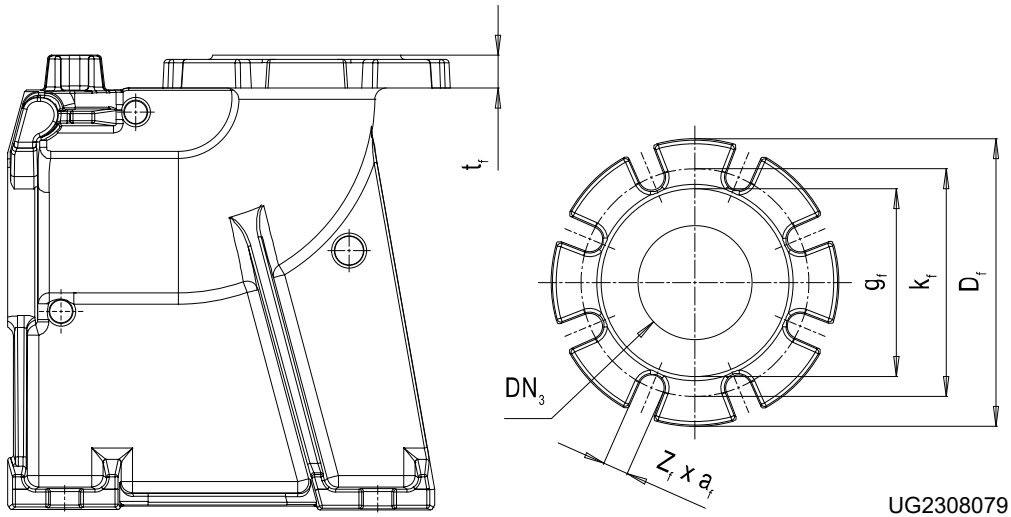
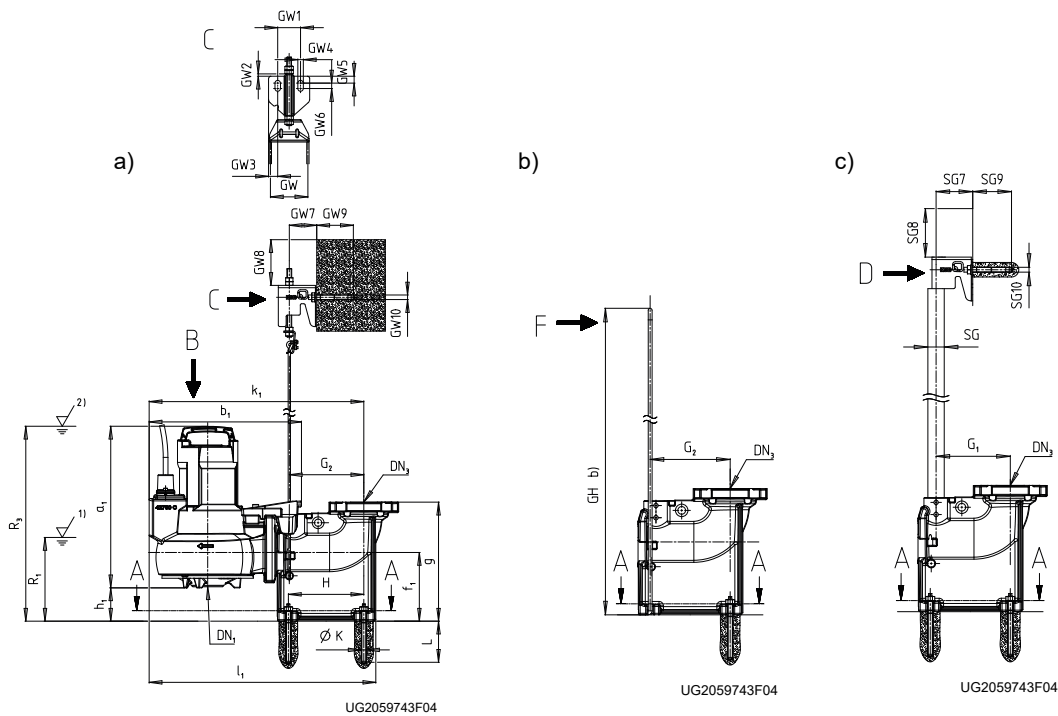


Fig. 11: Duckfoot bend dimensions

Table 11: Duckfoot bend dimensions [mm]

Flange design	DN <sub>3</sub>	g <sub>f</sub>	k <sub>f</sub>	t <sub>f</sub>	D <sub>f</sub>	Z <sub>r</sub>	a <sub>r</sub>
DN 50 (DN <sub>3</sub> = DIN ISO)	50	102	125	20	160	4	20
DN 50 (DN <sub>3</sub> = ASME)	50	102	120,5	20	160	4	20
DN 65 (DN <sub>3</sub> = DIN ISO/ASME)	65	122	140	22	180	4	21
DN 65/DN 80 (DN <sub>3</sub> = DIN ISO)	80	133	160	27	200	8	18
DN 80 (DN <sub>3</sub> = DIN ISO)	80	132	160	23	200	8	18
DN 80/DN 100 (DN <sub>3</sub> = DIN ISO/ASME)	100	156	180	23	220	8	18

**AmaPorter F/S, stationary installation, straight claw (horizontal), guide wire, guide hoop and single guide rail arrangement**



**Fig. 12:** Dimensions of stationary model, straight claw (horizontal)<sup>8)</sup>

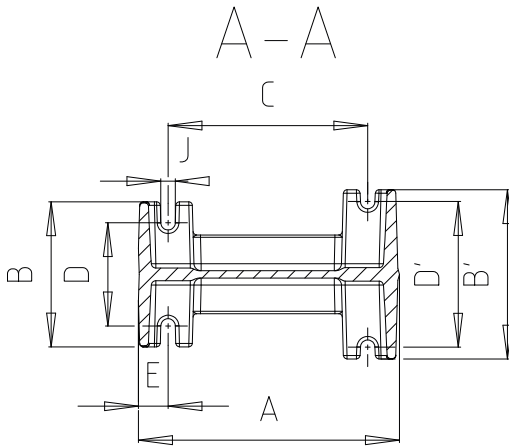
a)	Guide wire arrangement	b)	Guide hoop arrangement
c)	Single guide rail arrangement		

R1	Lowest stop level for automatic operation
R3	Minimum submergence for continuous operation

**Table 12:** Pump set dimensions [mm]

Size	DN <sub>1</sub>	a <sub>1</sub>	b <sub>1</sub>	f <sub>1</sub>	h <sub>1</sub>	k <sub>1</sub>	l <sub>1</sub>	R <sub>1</sub>	R <sub>3</sub>
F 50_	44	341	301	105	32	400	429	138	373
F 51_	42	466	377	105	35	472	502	161	501
F 52_	42	527	391	105	31	488	514	153	558
F 60_	59	354	334	150	73	470	496	183	427
F 61_	65	578	423	150	61	558	583	234	639
F 62_	65	518	409	150	63	544	569	241	581
F 82_	80	582	476	200	103	603	693	262	685
S_545	-	326	301	106	47	400	429	138	373

<sup>8</sup> Straight claw (vertical) for DN 80

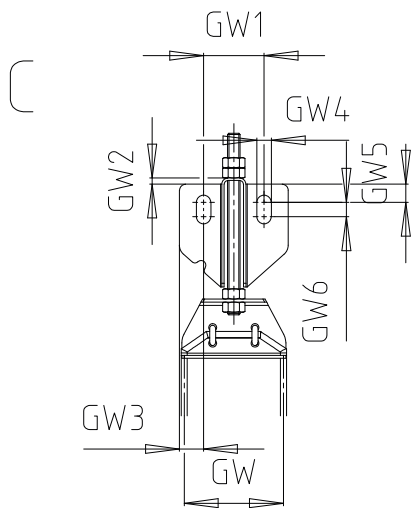


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Fig. 13: Duckfoot bend dimensions

Table 13: Duckfoot bend dimensions [mm]

Size	DN <sub>3</sub>	A	B	B'	C	D	D'	E	g	G <sub>1</sub>	G <sub>2</sub> <sup>9)10)</sup>	GH <sup>10)</sup>	GH1 <sup>10)</sup>	H	J	ØK	L
F 50_	50	179	110	120	125	80	100	25	201	113	125	3 sizes available: 1216/1516/1816	80	125	12	12	90
F 51_	50	179	110	120	125	80	100	25	201	113	125		80	125	12		90
F 52_	50	179	110	120	125	80	100	25	201	113	125		80	125	12		90
F 60_	65	216	120	140	165	85	120	25	260	153	163		80	165	12		90
F 61_	65	216	120	140	165	85	120	25	260	153	163		80	165	12		90
F 62_	65	216	120	140	165	85	120	25	260	153	163		80	165	12		90
F 82_	80	300	200	200	220	150	150	40	320	163	173 <sup>9)</sup>	-	-	170	20	18	125
S_545	50	179	110	120	125	80	100	25	201	113	125	3 sizes available: 1216/1516/1816	80	125	12	12	90



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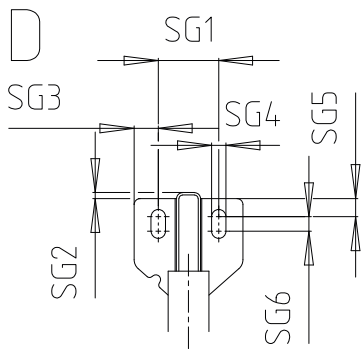
Fig. 14: Dimensions of guide wire arrangement

Table 14: Dimensions of guide wire arrangement [mm]

Size	GW	GW1	GW2	GW3	GW4	GW5	GW6	GW7	GW8	GW9	GW10
F 5_ / 6_	79	50	5	20	12	15	12	60	100	80	Ø10
F 8_	165										
S_545	82										

9 For guide wire arrangement only

10 For guide hoop arrangement only

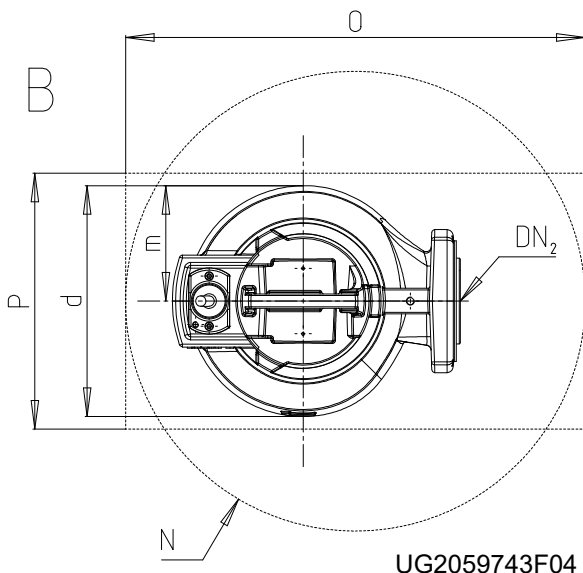


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Fig. 15: Dimensions of single guide rail arrangement

Table 15: Dimensions of single guide rail arrangement [mm]

Size	SG	SG1	SG2	SG3	SG4	SG5	SG6	SG7	SG8	SG9	SG10
F 5_ / 6_	Ø33,7×3,2	50	5	20	12	15	12	76	100	80	Ø10
F 8_	Ø60,3×3,6							60			
S_545	Ø33,7×3,2							76			



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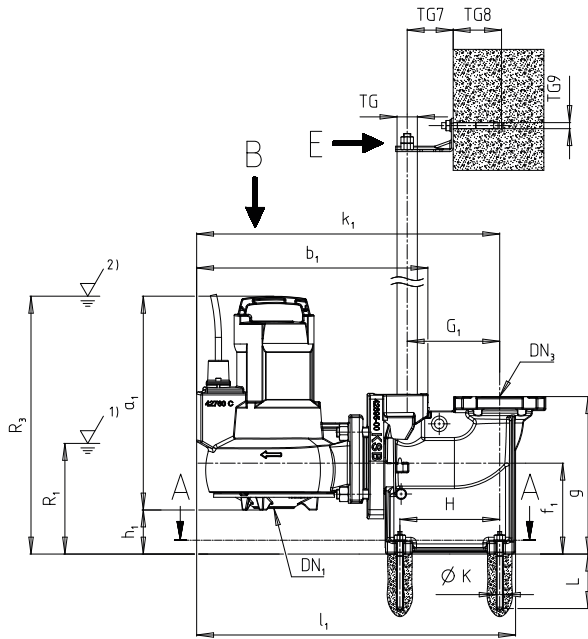
Fig. 16: Pump set dimensions

Table 16: Pump set dimensions [mm]

Size	DN <sub>2</sub>	d	m	N min.	O min.	P min.
F 50_	50	196	98		400	270
F 51_	50	250	125		465	350
F 52_	50	254	129		465	350
F 60_	65	226	113		450	350
F 61_	65	251	127		500	400
F 62_	65	265	142		500	400
F 82_	80	322	176		550	400
S_545	50	196	98		400	270

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AmaPorter F 6\_ / 8\_, stationary installation, straight claw (vertical), twin guide rail arrangement



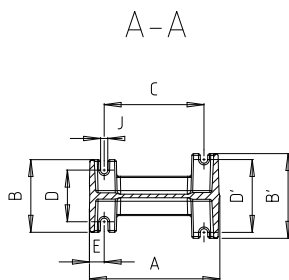
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Fig. 17: Dimensions of stationary model, straight claw (vertical), twin guide rail arrangement

R1	Lowest stop level for automatic operation
R3	Minimum submergence for continuous operation

Table 17: Pump set dimensions [mm]

Size	DN <sub>1</sub>	a <sub>1</sub>	b <sub>1</sub>	f <sub>1</sub>	h <sub>1</sub>	k <sub>1</sub>	l <sub>1</sub>	R <sub>1</sub>	R <sub>3</sub>
F 60_	59	354	385	150	73	501	528	183	427
F 61_	65	578	468	150	61	588	613	234	639
F 62_	65	518	454	150	63	574	599	241	581
F 82_	80	582	506	200	103	630	720	262	685



UG2059743F03

Fig. 18: Duckfoot bend dimensions, twin guide rail arrangement

Table 18: Duckfoot bend dimensions, twin guide rail arrangement [mm]

Size	DN <sub>3</sub>	A	B	B'	C	D	D'	E	G	G <sub>1</sub>	H	J	ØK	L
F 60_	65	216	120	140	165	85	120	25	260	153	165	12	12	90
F 61_														
F 62_														
F 82_	80	300	200	200	220	150	150	40	320	170	170	20	18	125

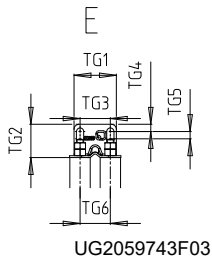


Fig. 19: Mounting bracket dimensions, twin guide rail arrangement

Table 19: Mounting bracket dimensions, twin guide rail arrangement [mm]

Size	TG	TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8	TG9
F 6_	Ø33,7 × 3,2	70	55	50	12	12	50	76	80	Ø10
F 8_	Ø60,3 × 3,6						82	86		

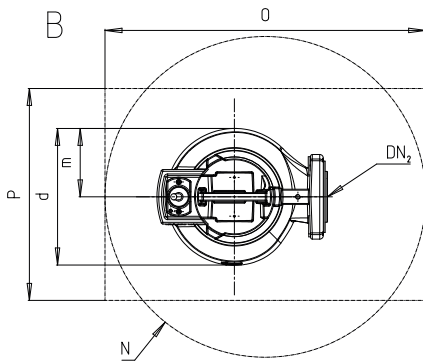
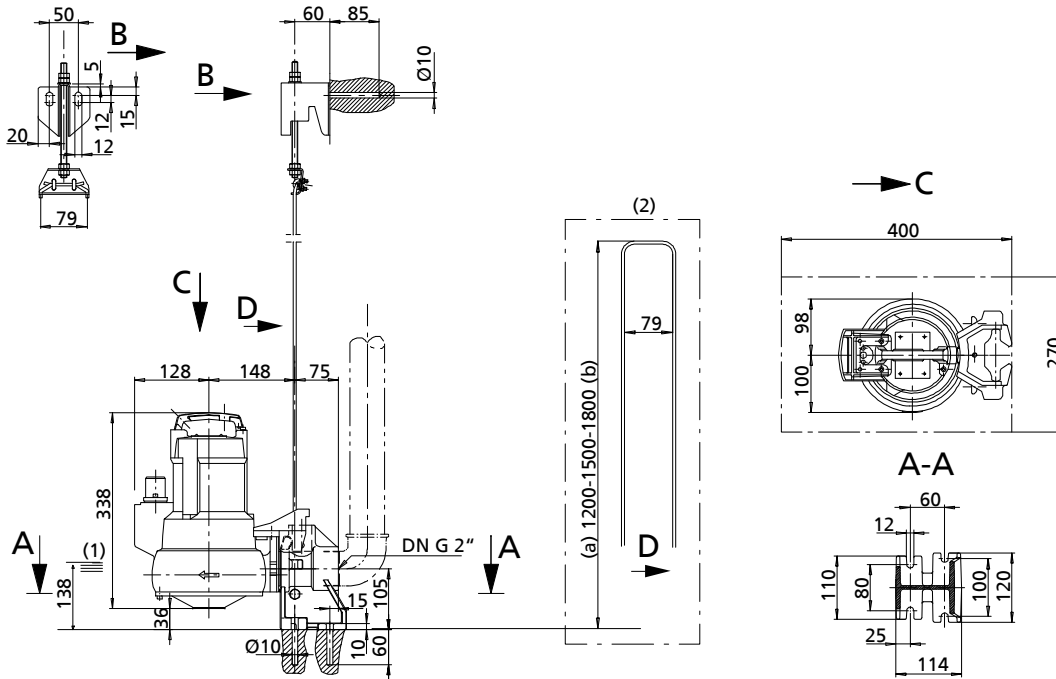


Fig. 20: Pump set dimensions, twin guide rail arrangement

Table 20: Pump set dimensions [mm]

Size	DN <sub>2</sub>	d	m	N min.	O min.	P min.
F 60_	65	226	113		530	350
F 61_		251	127		550	400
F 62_		265	142			
F 82_	80	322	176		580	

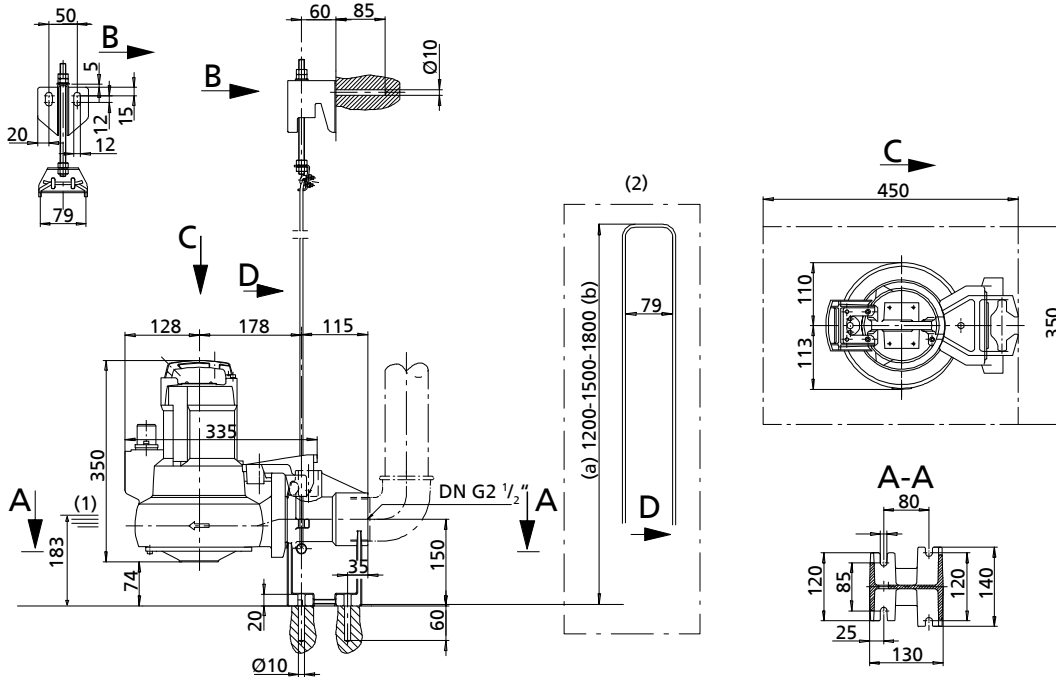
**AmaPorter F 50\_ stationary wet installation, straight pump foot G 2", guide wire/guide hoop arrangement**



**Fig. 21:** Dimensions of stationary wet-installed model, straight pump foot G 2", guide wire/guide hoop arrangement

(1)	Lowest switch-off point	(a)	Minimum
(2)	Guide hoop	(b)	Maximum

**AmaPorter F 60\_ stationary wet installation, straight pump foot G 2 1/2", guide wire/guide hoop arrangement**

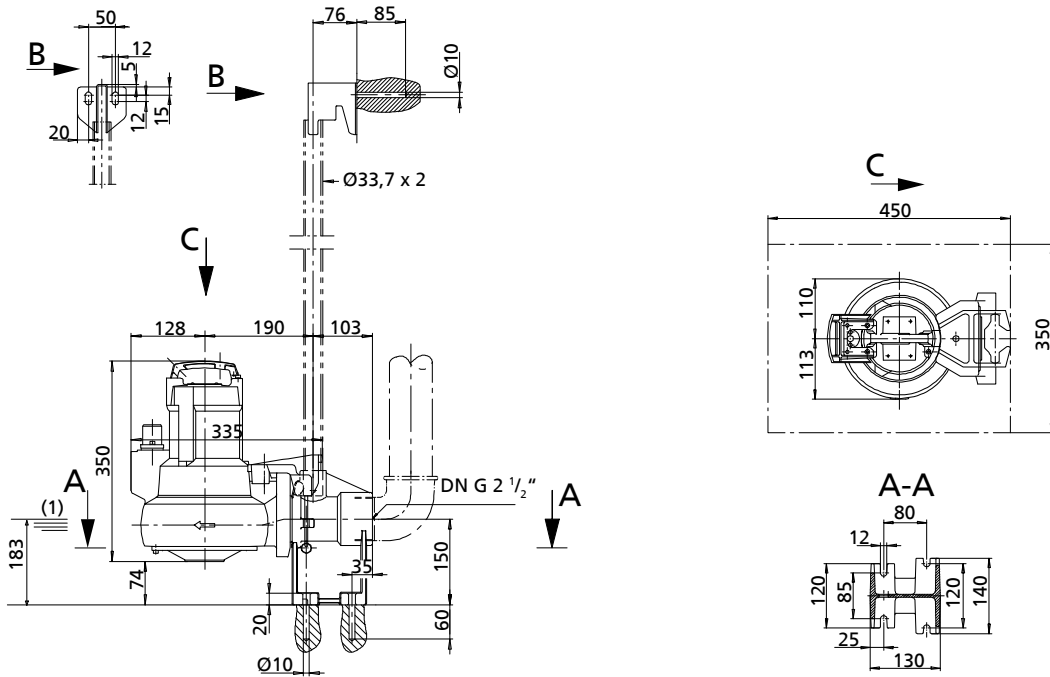


**Fig. 22:** Dimensions of stationary wet-installed model, straight pump foot G 2 1/2", guide wire/guide hoop arrangement

(1)	Lowest switch-off point	(a)	Minimum
(2)	Guide hoop	(b)	Maximum



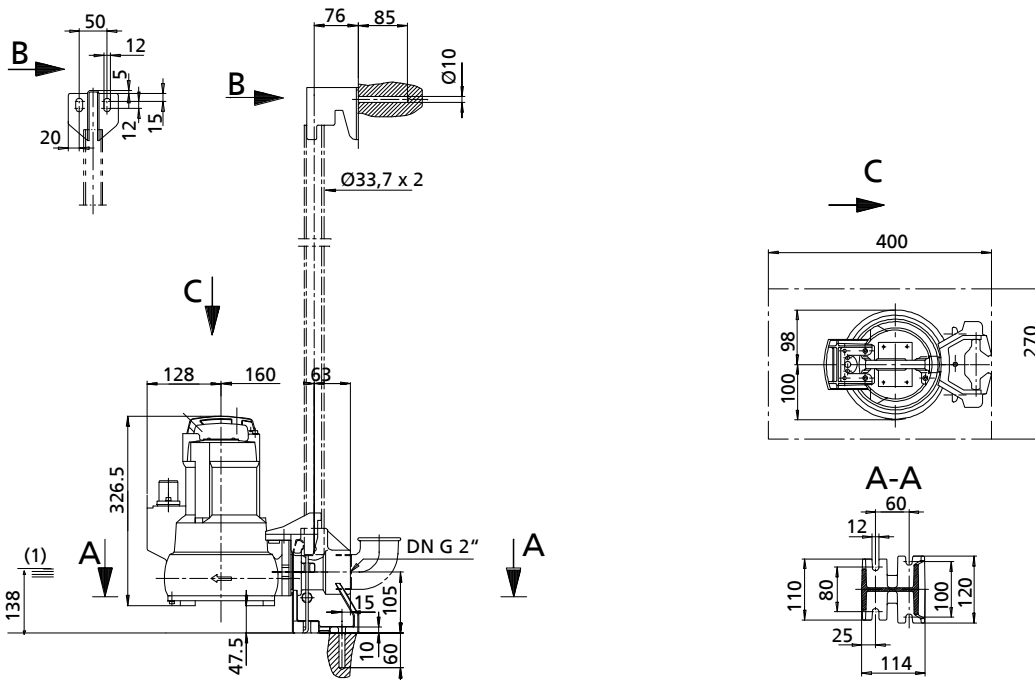
**AmaPorter F 60\_ stationary wet installation, straight pump foot G 2 1/2", single guide rail arrangement**



**Fig. 25:** Dimensions of stationary wet-installed model, straight pump foot G 2 1/2", single guide rail arrangement

(1)	Lowest switch-off point
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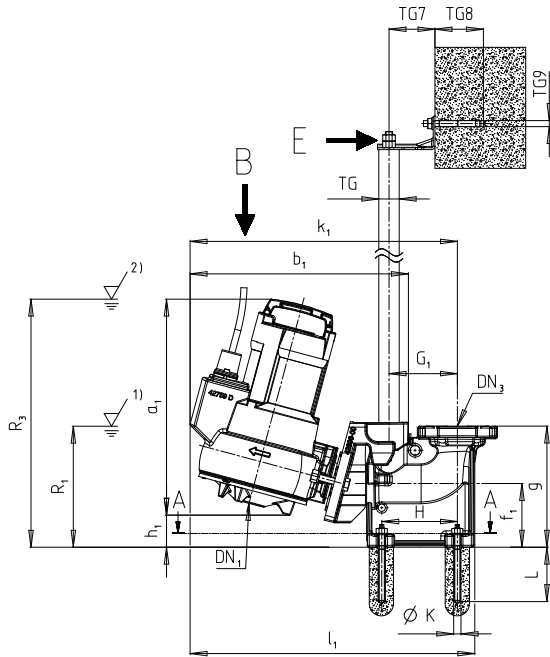
**AmaPorter S\_ 545, stationary wet installation, straight pump foot G 2", single guide rail arrangement**



**Fig. 26:** Dimensions of stationary wet-installed model, straight pump foot G 2", single guide rail arrangement

(1)	Lowest switch-off point
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**AmaPorter F / S, stationary installation, inclined claw, twin guide rail arrangement**



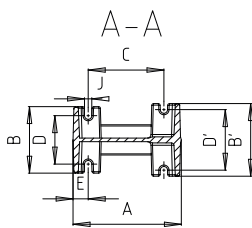
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**Fig. 27:** Dimensions of stationary model, inclined claw, twin guide rail arrangement

R1	Lowest stop level for automatic operation
R3	Minimum submergence for continuous operation

**Table 21:** Pump set dimensions [mm]

Size	DN <sub>1</sub>	a <sub>1</sub>	b <sub>1</sub>	f <sub>1</sub>	h <sub>1</sub>	k <sub>1</sub>	l <sub>1</sub>	R <sub>1</sub>	R <sub>3</sub>
F 50_	44	357	361	105	53	442	471	200	411
F 51_	42	494	422		54	499	528	220	550
F 52_	42	549	426		53	506	535	230	606
S_545	-	343	361		67	442	471	200	411



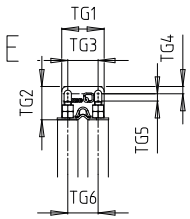
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**Fig. 28:** Duckfoot bend dimensions, inclined claw, twin guide rail arrangement

**Table 22:** Duckfoot bend dimensions, twin guide rail arrangement, inclined claw [mm]

Size	DN <sub>3</sub>	A	B	B'	C, H	D	D'	E	g	G <sub>1</sub>	J	ØK	L
F 50_	50	179	110	120	125	80	100	25	201	113	12	12	90
F 51_													
F 52_													
S_545													

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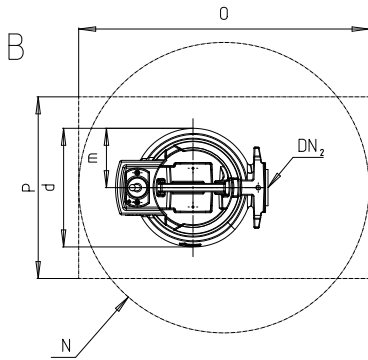


UG2059414F02

Fig. 29: Mounting bracket dimensions, inclined claw, twin guide rail arrangement

Table 23: Mounting bracket dimensions, twin guide rail arrangement, inclined claw [mm]

Size	TG	TG1	TG2	TG3	TG4	TG5	TG6	TG7	TG8	TG9
F 5_	Ø33,7 × 3,2	70	55	50		12	50	76	80	Ø10
S_545	Ø33,7 × 3,2									



UG2059414F02

Fig. 30: Pump set dimensions, inclined claw, twin guide rail arrangement

Table 24: Pump set dimensions [mm]

Size	DN <sub>2</sub>	d	m	N min.	O min.	P min.
F 50_	50	196	98	480	300	
F 51_		250	125			
F 52_		254	129			
S_545		196	98			

Installation types

Table 25: Installation type S – stationary wet installation

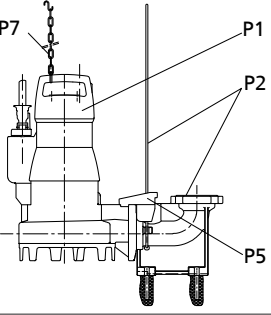
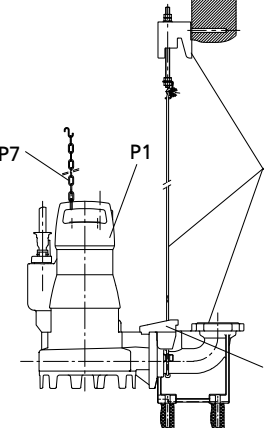
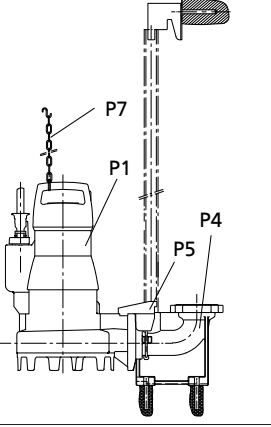
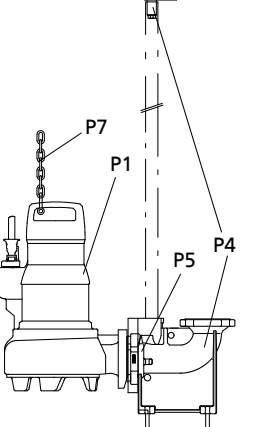
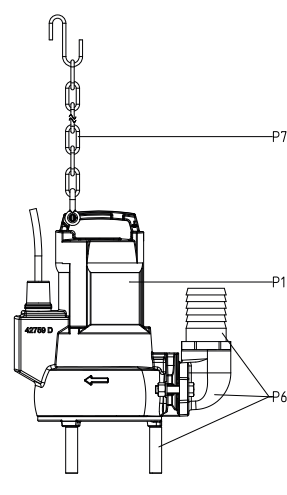
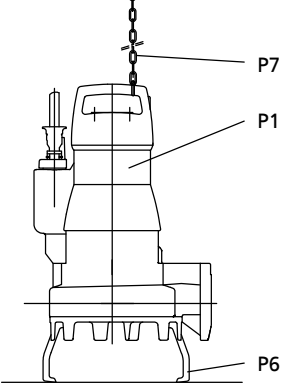
Installation type	Description
	<p><b>Guide hoop arrangement</b> (only for sizes 5_/6_)</p> <p>P1: pump</p> <p>P2: installation parts (duckfoot bend and fasteners), guide hoop arrangement, installation depth = 1.5 m / 1.8 m / 2.1 m</p> <p>P5: claw with sealing element and fasteners</p> <p>P7: lifting chain / lifting rope with shackle, length = 2 m</p>
	<p><b>Guide wire arrangement</b></p> <p>P1: pump</p> <p>P4: installation parts (duckfoot bend and fasteners, guide wire, mounting bracket), guide wire arrangement, standard installation depth = 4.5 m</p> <p>P5: claw with sealing element and fasteners</p> <p>P7: lifting chain / lifting rope with shackle, length = 5 m</p>
	<p><b>Single guide rail arrangement</b></p> <p>P1: pump</p> <p>P4: installation parts (duckfoot bend and fasteners, mounting bracket), single guide rail arrangement, standard installation depth = 6 m</p> <p>P5: claw with sealing element and fasteners</p> <p>P7: lifting chain / lifting rope with shackle, length = 5 m</p>
	<p><b>Twin guide rail arrangement</b></p> <p>P1: pump</p> <p>P4: installation parts (duckfoot bend and fasteners, mounting bracket), twin guide rail arrangement, standard installation depth = 6 m</p> <p>P5: claw and adapter with sealing element and fasteners</p> <p>P7: lifting chain / lifting rope with shackle, length = 5 m</p>

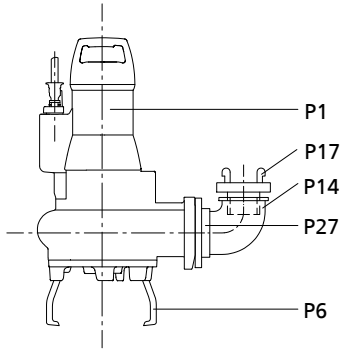
Table 26: Installation type transportable wet-installed model

Installation type	Description
	<p><b>Transportable wet-installed model</b></p> <p>P1: pump</p> <p>P6: 3 feet, connection elbow with fasteners, claw, adapter</p> <p>P7: lifting chain / lifting rope with shackle, length = 5 m</p>
	<p>P1: pump</p> <p>P6: 3 feet (foot plate with optional fasteners)</p> <p>P7: lifting chain / lifting rope with shackle, length = 5 m</p>

**Installation information**

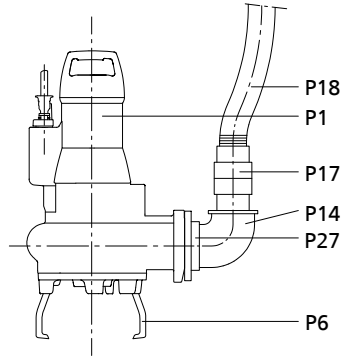
**Suggested installation layouts for transportable pump sets**

DN<sub>2</sub>50

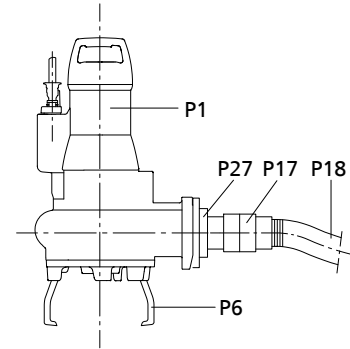


**Suggested installation layout 1**  
Vertical hose connection with elbow (P14) and Storz rigid coupling (P17) (quick-action coupling)

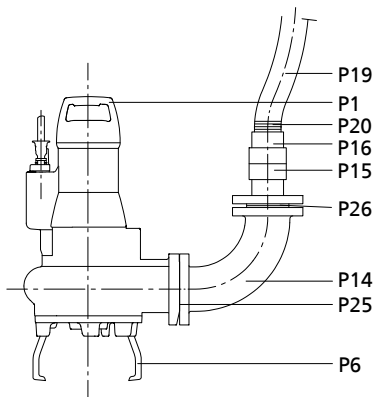
**Sizes 65, 80, 100**



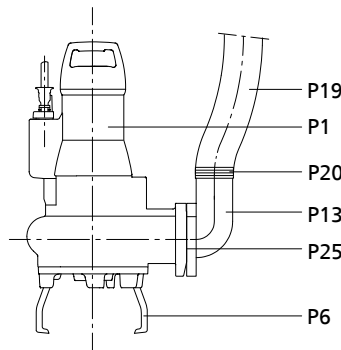
**Suggested installation layout 2**  
Vertical hose connection with plastic hose (P18)



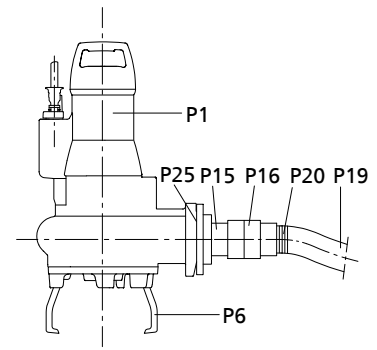
**Suggested installation layout 3**  
Horizontal hose connection (quick-action coupling) with plastic hose (P18)



**Suggested installation layout 1**  
Vertical hose connection (quick-action coupling) with plastic hose (P19) and hose clip (P20)



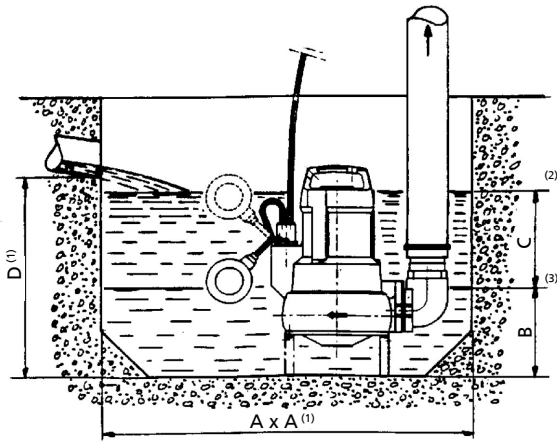
**Suggested installation layout 2**  
Vertical hose connection with plastic hose (P19), hose clip (P20) and connection elbow (P13)



**Suggested installation layout 3**  
Horizontal hose connection (quick-action coupling connection) with plastic hose (P19), hose clip (P20), Storz hose coupling (P16), Storz rigid coupling (P15)

**P1 to P27** (⇒ Page 41)

Sump - AmaPorter F 50\_ / 60\_ / S\_545

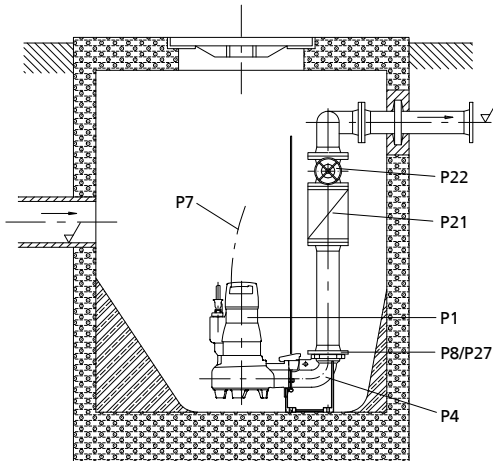


(1)	Minimum
(2)	Start
(3)	Stop

Size	A	B	C	D
	[mm <sup>2</sup> ]	[mm]		
F 50_	600 x 600	160	190	450
F 60_	600 x 600	170	190	480
S_545	600 x 600	160	190	450

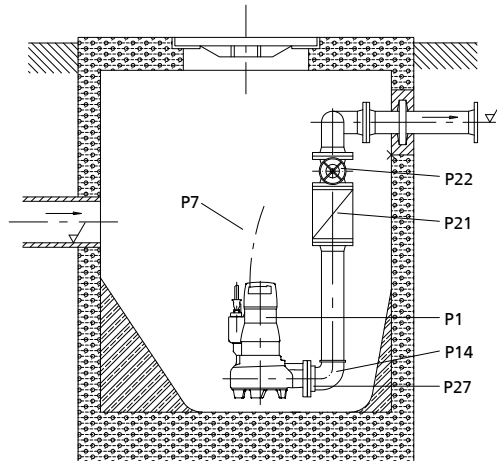
Suggested installation layouts for stationary pump sets

**Guide hoop arrangement**  
DN<sub>2</sub> 50/ DN<sub>2</sub> 65



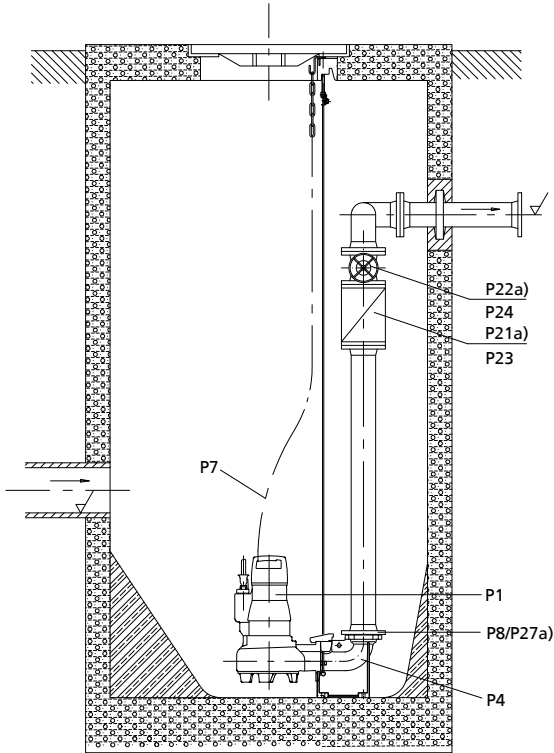
Suggested installation layout 1  
Single-pump station  
Duckfoot bend

**Suspended installation**  
DN<sub>2</sub> 50/ DN<sub>2</sub> 65

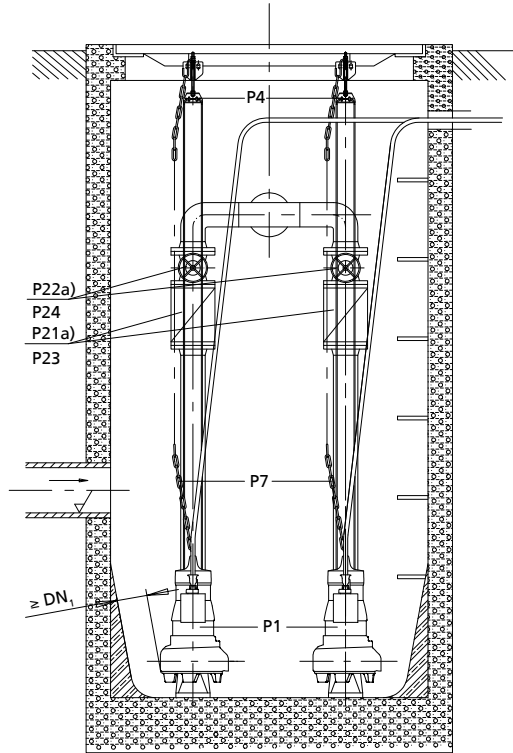


Suggested installation layout 2  
Single-pump station for 1.5 m installation depth  
Direct connection to discharge line (suspended installation)

**Guide wire, single guide rail and twin guide rail arrangement**  
DN<sub>2</sub> 50/ DN<sub>2</sub> 65



Suggested installation layout 3  
Available with either guide wire, single guide rail or twin guide rail arrangement  
Single-pump station for 4.5 m installation depth  
Duckfoot bend



Suggested installation layout 4  
Available with either guide wire, single guide rail or twin guide rail arrangement  
Dual-pump station for 4.5 m installation depth  
Duckfoot bend

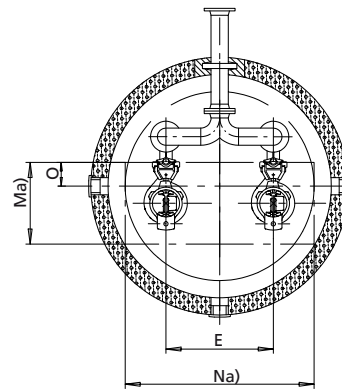
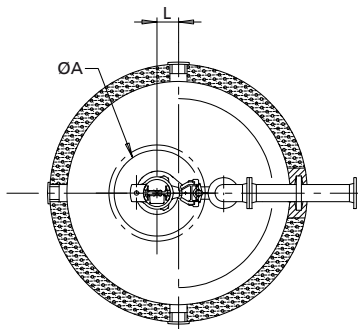
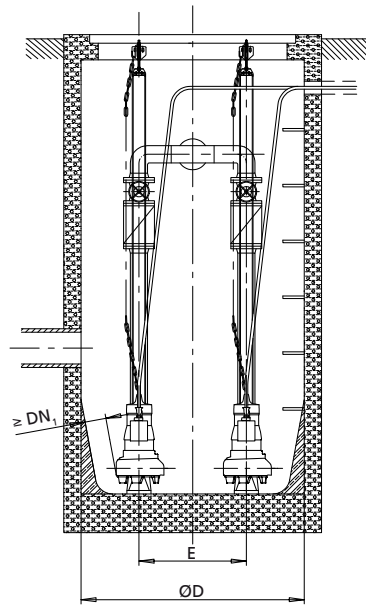
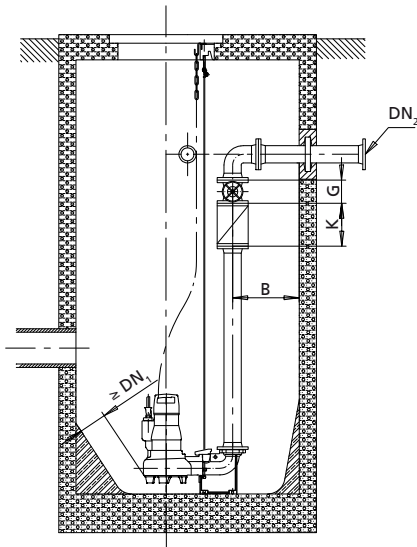
a)	Only DN <sub>2</sub> 50
----	-------------------------

Dimensions

Guide wire, single guide rail and twin guide rail arrangement

Suggested installation layout 3

Suggested installation layout 4



Single-pump station for 4.5 m installation depth  
Duckfoot bend

Dual-pump station for 4.5 m installation depth  
Duckfoot bend

a)	Minimum
----	---------

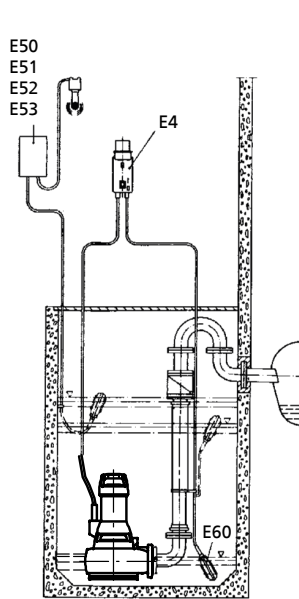
Table 27: Dimensions [mm]

Size		Ø A	B	Ø D	E	G	K	L	M	N	O	DN <sub>1</sub>	DN <sub>2</sub>
F 51_	1 pump	625	165	1000	-	75	150	42	-	-	-	42	50
	2 pumps	-	235	1000	300	75	150	-	550	700	200	42	50
F 52_	1 pump	625	165	1000	-	75	150	42	-	-	-	42	50
	2 pumps	-	235	1000	300	75	150	-	550	700	200	42	50
F 61_ / 62_	1 pump	625	175	1000	-	180	260	92	-	-	-	65	65
	2 pumps	-	360	1200	600	180	260	-	550	1000	135	65	65
F 82_	1 pump	625	200	1000	-	180	260	25	-	-	-	80	80
	2 pumps	-	320	1200	600	180	260	-	600	1000	168	80	80

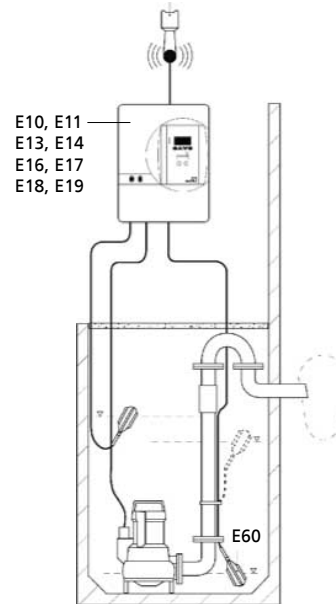
Suggested electrical installation layouts

 Non-explosion-proof pump set

AmaPorter F

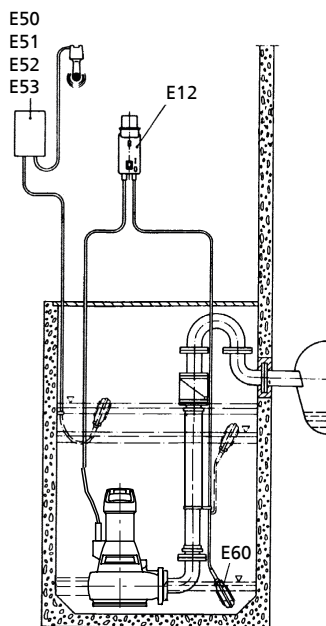


Suggested installation layout 1

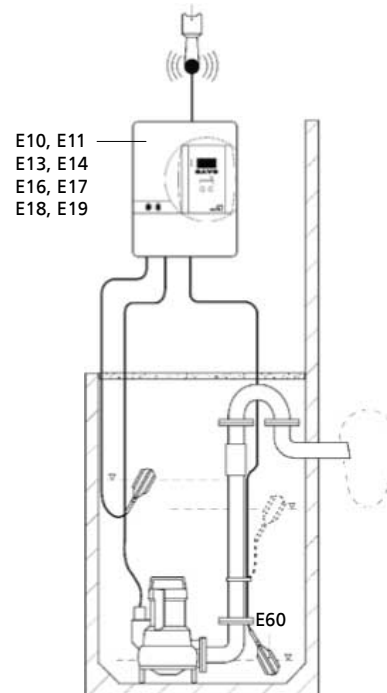


Suggested installation layout 2

AmaPorter S



Suggested installation layout 1



Suggested installation layout 2

### Scope of supply

Depending on the model, the following items are included in the scope of supply:

#### Stationary wet-installed model (installation type S)

- Pump set complete with electric cables
- Claw with sealing elements and fasteners
- Lifting rope / lifting chain
- Mounting bracket with fasteners
- Duckfoot bend with fasteners
- Guiding equipment<sup>11)</sup>

#### Transportable wet-installed model (installation type P)

- Pump set complete with electric cables
- 3 feet
- Connection elbow incl. fasteners
- Connection piece
- Clamp
- Foot plate incl. fasteners
- Lifting rope / lifting chain

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**11** The guide rails are not included in the scope of supply.

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**Accessories**
**Installation parts for stationary pump sets**
**Table 28:** Overview of installation parts for stationary pump sets

Item	Description	Connection	Installation depth [m]	Size						Mat. No.	[kg]	
				F 50_	F 51_/52_	F 60_	F 61_/62_	F 82_	S_ 545			
<b>Guide hoop arrangement</b>												
P2 + P5 	Installation parts for stationary wet installation (guide hoop arrangement)  Comprising: duckfoot bend, stainless steel anchor bolts, guide hoop, straight claw (horizontal) with stainless steel screw/bolt	DN 50 (DN <sub>3</sub> = DIN ISO / ASME)	1,5	X	-	-	-	-	X	39020769	11	
					-	X	-	-	-	-	39022210	9
		DN 50 (DN <sub>3</sub> = DIN ISO / ASME)	1,8	X	-	-	-	-	X	39020770	12	
					-	X	-	-	-	-	39022211	10
		DN 50 (DN <sub>3</sub> = DIN ISO / ASME)	2,1	X	-	-	-	-	X	39020771	13	
					-	X	-	-	-	-	39022212	11
		DN 65 (DN <sub>3</sub> = DIN ISO / ASME)	1,5	-	-	X	X	-	-	-	39020827	14.5
DN 65 (DN <sub>3</sub> = DIN ISO / ASME)	1,8	-	-	X	X	-	-	-	39020828	15.5		
DN 65 (DN <sub>3</sub> = DIN ISO / ASME)	2,1	-	-	X	X	-	-	-	39020829	17		
P2 + P5 	Installation parts for stationary wet installation (guide hoop arrangement)  Comprising: straight pump foot, guide hoop, stainless steel anchor bolts, straight claw (horizontal) with stainless steel screw/bolt	DN 50 / G 2"	1,5	X	-	-	-	-	X	39020795	7.8	
		DN 50 / G 2"	1,8	X	-	-	-	-	X	39020796	8.8	
		DN 50 / G 2"	2,1	X	-	-	-	-	X	39020797	10.8	
		DN 65 / G 2 1/2"	1,5	-	-	X	-	-	-	-	39020813	11.2
		DN 65 / G 2 1/2"	1,8	-	-	X	-	-	-	-	39020814	10.6
		DN 65 / G 2 1/2"	2,1	-	-	X	-	-	-	-	39020815	12.1
<b>Guide wire arrangement</b>												
P4 + P5 	Installation parts for stationary wet installation (guide wire arrangement)  Comprising: duckfoot bend, stainless steel anchor bolts, suspension bracket, mounting bracket, 10 m guide wire, straight claw (horizontal) with stainless steel screw/bolt	DN 50 (DN <sub>3</sub> = DIN ISO / ASME)	4,5	X	-	-	-	-	X	39021023	10.6	
					-	X	-	-	-	-	39022196	10.5
		DN 65 (DN <sub>3</sub> = DIN ISO / ASME)	4,5	-	-	X	X	-	-	-	39021025	14.4
		DN 65 / DN 80 (DN <sub>3</sub> = 80   DIN ISO)	4,5	-	-	X	X	-	-	-	39020834	19.1
		DN 80 (DN <sub>3</sub> = DIN ISO)	4,5	-	-	-	-	-	X	-	39020988	27.3
		DN 80 / DN 100 (DN <sub>3</sub> = 100   DIN ISO / ASME)	4,5	-	-	-	-	-	X	-	39021002	31.5
P4 + P5 	Installation parts for stationary wet installation (guide wire arrangement)  Comprising: straight pump foot, stainless steel anchor bolts, suspension bracket, mounting bracket, 10 m guide wire, straight claw (horizontal) with stainless steel screw/bolt	DN 50 / G 2"	4,5	X	-	-	-	-	X	39020779	11.5	
		DN 65 / G 2 1/2"	4,5	-	-	X	-	-	-	-	39020806	14.7
<b>Single guide rail arrangement</b>												
P4 + P5 	Installation parts for stationary wet installation (single guide rail arrangement)  Comprising: duckfoot bend, stainless steel anchor bolts, mounting bracket, straight claw (horizontal) with stainless steel screw/bolt (guide rails not included in the scope of supply)	DN 50 (DN <sub>3</sub> = DIN ISO / ASME)	6,0	X	-	-	-	-	X	39021212	14	
					-	X	-	-	-	-	39022204	12.5
		DN 65 (DN <sub>3</sub> = DIN ISO / ASME)	6,0	-	-	X	X	-	-	-	39021213	17.2
		DN 65 / DN 80 (DN <sub>3</sub> = 80   DIN ISO)	6,0	-	-	X	X	-	-	-	39021194	18.7
		DN 80 (DN <sub>3</sub> = DIN ISO)	6,0	-	-	-	-	-	X	-	39021200	26
		DN 80 / DN 100 (DN <sub>3</sub> = 100   DIN ISO / ASME)	6,0	-	-	-	-	-	X	-	39021206	23.8



Item	Description	Connection	Installation depth [m]	Size						Mat. No.	[kg]	
				F 50_	F 51_/52_	F 60_	F 61_/62_	F 82_	S_545			
P4 + P5 	Installation parts for stationary wet installation (single guide rail arrangement)  Comprising: straight pump foot, stainless steel anchor bolts, mounting bracket, 10 metre guide wire, adapter, straight claw (horizontal) with stainless steel screw/bolt (guide rails not included in the scope of supply)	DN 50 / G 2"	6,0	X	-	-	-	-	X	39021182	10.8	
		DN 65 / G 2 1/2"	6,0	-	-	X	-	-	-	-	39021188	14
<b>Twin guide rail arrangement</b>												
P4 + P5 	Installation parts for stationary wet installation (twin guide rail arrangement)  Comprising: duckfoot bend, stainless steel anchor bolts, mounting bracket, adapter, inclined claw (DN 50) / straight claw (vertical) (DN 65, DN 80) with stainless steel screw/bolt (guide rails not included in KSB's scope of supply)	DN 50 (DN <sub>3</sub> = DIN ISO / ASME)	6,0	X	X	-	-	-	X	39023002	15.2	
		DN 65 (DN <sub>3</sub> = DIN ISO / ASME)	6,0	-	-	X	X	-	-	-	39023006	18.7
		DN 65 / DN 80 (DN <sub>3</sub> = 80   DIN ISO)	6,0	-	-	X	X	-	-	-	39023009	22.8
		DN 80 (DN <sub>3</sub> = DIN ISO)	6,0	-	-	-	-	X	-	-	39023018	32.4
		DN 80 / DN 100 (DN <sub>3</sub> = 100   DIN ISO / ASME)	6,0	-	-	-	-	X	-	-	39023024	34
<b>Claw</b>												
P5 	Guide wire, single guide rail, guide hoop arrangement  Straight claw (horizontal) EN-GJL-250 (exception: EN-GJS-400-15 for sizes F 51_ / F 52_) with stainless steel screw/bolt	DN 50	1,5/1,8/2,1	X	-	-	-	-	X	39021016	1.1	
					-	X	-	-	-	-	39022248	1.2
		DN 65	4,5	-	-	X	X	-	-	-	39021018	2
		DN 80	6,0	-	-	-	-	X	-	-	39021020	3.5
P5 	Twin guide rail arrangement Inclined claw (DN 50)/straight claw (vertical) (DN 65, DN 80) EN-GJL-250 with stainless steel screw/bolt	DN 50	6,0	X	X	-	-	-	X	39022990	6	
		DN 65		-	-	X	X	-	-	-	39022993	7.3
		DN 80		-	-	-	-	X	-	-	39022996	9.7
<b>Lifting bail</b>												
	Lifting bail made of stainless steel 1.4306 with A4-70 bolts, for lowering the pump set at an angle	DN 50	14,5	-	X	-	-	-	-	39022395	0.6	
		DN 50	14,5	-	X	-	-	-	-	-	39023593	0.85
		DN 65 / DN 80		-	-	-	X	X	-	-	39023594	1.2

Item	Description	Connection	Installation depth [m]	Size						Mat. No.	[kg]
				F_50_	F_51_/52_	F_60_	F_61_/62_	F_82_	S_545		
<b>Conversion parts</b>											
P14 	Parts for conversion to twin guide rail arrangement, consisting of: mounting bracket, stainless steel screws/bolts, adapter, anchor bolts	DN 50 / DN 65	6,0	X	X	X	X	-	X	39022984	1
		Note: required for conversion of guide hoop, guide wire or single guide rail arrangement to twin guide rail arrangement  A claw for twin guide rail arrangements must be provided.		DN 80	-	-	-	-	X	-	39022987

**Table 29:** Installation parts for transportable wet-installed model

Item	Description	Connection	Installation depth [m]	Size						Mat. No.	[kg]
				F_50_	F_51_/52_	F_60_	F_61_/62_	F_82_	S_545		
P6 	Comprising: 3 feet, connection elbow with fasteners, adapter, claw	DN 50	14,5	X	-	-	-	-	-	39023046	2
P6 		DN 65		-	-	X	-	-	-	39023047	4.1
P6 		DN 50		-	-	-	-	-	X	39018120	2
P6 	Comprising: 3 feet	DN 50 / DN 65 / DN 80	-	X	-	X	X	-	05017148	0.07	
P6 	Comprising: footplate incl. bolts (only for uneven mounting surfaces and in combination with feet)	DN 50 / DN 65 / DN 80	-	X	-	X	X	-	39022262	0.9	

**Table 30:** Lifting rope / lifting chain for stationary and transportable pump sets (all sizes)

Item	Description	Load	Length	Mat. No.	[kg]
		Max.			
		[kg]	[m]		
	Chain (1.4404) short-linked, tested and duly labelled to Directive 2006/42/EC (Machinery Directive), hook (1.4301), shackle (1.4404)	200	2	39024056	1.2
		200	3	39024057	1.6
		200	5	39024058	2.4
		200	10	39024059	4.4
	Lifting rope, 5 m, made of polypropylene, with shackle 1.4401 and hook 1.4571 <sup>12)</sup>	-	5	39021975	2.5

<sup>12</sup> Increase quantity for larger installation depths.

**Pump accessories**
**Table 31:** Overview of pump accessories<sup>13)</sup>





Item	Description	Connection	Length [m]	AmaPorter						Mat. No.	[kg]
				F 50_	F 51_ / 52_	F 60_	F 61_ / 62_	F 82_	S_ 545		
	Flange for pipe coupling PN 10, at the flanged elbow, mating dimensions to PN 16	DN 50 / R 2	-	X	X	-	-	-	X	19551111	1.2
		DN 65 / R 2 1/2	-	-	-	X	X	-	-	39020184	1.2
	PVC adapter for hose connection, with 1 hose clip	(Plastic hose, inside diameter 63 mm/R2, see P19)	-	X	X	-	-	-	X	11191498	0.3
	Threaded flange PN 6, B50 DIN 2558 with screws/bolts for discharge nozzle	DN 50 / Rp 2	-	X	-	-	-	-	X	19200721	1
	Connection elbow with flange/hose connection made of EN-GJL-250, grey cast iron  PN 16, DIN 2501, including joint ring and hose clip; for DN 100 also with fixing bolts  For flange connection use item 25 / item 26 (not for DN 100).	DN 65/B 75	-	-	-	X	X	-	-	19135655	6
		DN 80/B 75	-	-	-	-	-	X	-	-	19131746
	Angle with internal thread / external thread, galvanised grey cast iron (flange connection see P27)	G 2	-	X	X	-	-	-	X	00241966	0.3
		G 2 1/2	-	-	-	X	-	-	-	-	00240316
	Connection elbow with flanges PN 16, DIN 2501 (for flange connection use item 25 or item 26), grey cast iron	DN 65/65	-	-	-	-	X	-	-	00265480	11
		DN 65/80	-	-	-	-	X	-	-	25198402	8
		DN 80/80	-	-	-	-	-	X	-	11150856	10
	Flange connection to DIN 2501, drilled to PN 16, aluminium / steel  Storz rigid coupling	DN 65 / B 75	-	-	-	X	X	-	-	18040148	3.5
		DN 80/B 75	-	-	-	-	-	X	-	18072642	3.5
	Storz hose coupling, aluminium alloy for plastic hose B 75 (P19)  2 hose clips (P20) are required for hose mounting.	C 52 (DIN 14321)	-	-	X	-	-	-	-	00524551	0.3
		B 75 (DIN 14322)	-	-	-	X	X	X	-	00520454	0.7
	Storz rigid coupling with external thread to DIN ISO 228/1	C 52 / G 2 A	-	X	X	-	-	-	X	00524370	0.2
		B 75 / G 2 1/2	-	-	-	X	X	-	-	00524371	0.4

2539.51/12-EN

13 Special design on request

Item	Description	Connection	Length [m]	AmaPorter						Mat. No.	[kg]
				F 50_	F 51_ / 52_	F 60_	F 61_ / 62_	F 82_	S_ 545		
 P18	Plastic hose DN 50, DIN 14811, with integrated C couplings	C 52	5	X	X	-	-	-	X	00522262	2.3
		C 52	10	X	X	-	-	-	X	00522263	4.2
		C 52	20	X	X	-	-	-	X	00522264	5.7
 P19	Plastic hose without coupling, DIN 14811	63 <sup>14)</sup>	5	X	X	-	-	-	X	39018688	1.7
			10	X	X	-	-	-	X	39018689	3.4
			20	X	X	-	-	-	X	39018690	6.8
		B 75	5	-	-	X	X	X	-	39019064	2
			10	-	-	X	X	X	-	39019065	4
			20	-	-	X	X	X	-	39019066	8
			30	-	-	X	X	X	-	39019071	12
		80 <sup>14)</sup>	5	-	-	-	-	X	-	39018691	2.2
			10	-	-	-	-	X	-	39019062	4.3
 P20	Hose clip DIN 3017, chrome steel	B 50	-	X	-	-	-	X	00460476	0.04	
		B 50 <sup>15)</sup>	-	-	X	-	-	-	39000515	0.03	
		B 75	-	-	-	X	X	X	-	00109515	0.05
 P21	RK swing check valve Plastic, EN 12050-4, with internal thread ISO 7/1, full bore and drain plug; cannot be used for pumped drainage	Rp 2	-	X	X	-	-	-	X	01009773	0.5
 P22	Socket gate valve, CuZn, PN 10-12 DIN 3352	Rp 2	-	X	X	-	-	-	X	00411503	1.29
		Rp 2 1/2	-	-	-	X	X	-	-	39000507	1.7
 P23	Check valve grey cast iron, full bore, lifting device, flanges drilled to DIN 2501, PN 16	DN 65	-	-	-	X	X	-	-	48829253	13.74
		DN 80	-	-	-	-	-	X	-	48829254	16.5
 P24	COBRA-SGP with flat body, grey cast iron, PN 16, flanges drilled to ISO 7005/DIN 2501	DN 65	-	-	-	X	X	-	-	48229953	16.2
		DN 80	-	-	-	-	-	X	-	48229954	19.5
 P25	Set of installation accessories for a flange connection, discharge nozzle (items 14 or 15) Consisting of: 4 hexagon head bolts with nuts and 1 sealing element	-	-	-	-	X	X	-	-	19551115	0.8
		-	-	-	-	-	-	X	-	39021944	0.8
		-	-	-	-	-	-	X	-	19551100	0.8

14 Inside diameter  
15 For plastic hose Ø 63 item 19

Item	Description	Connection	Length [m]	AmaPorter						Mat. No.	[kg]
				F 50_	F 51_/52_	F 60_	F 61_/62_	F 82_	S_ 545		
P26	 <p>Set of installation accessories for a flange connection Consisting of: 8 hexagon head bolts with nuts and 1 sealing element</p>		-	-	-	-	-	X	-	19551114	0.8
P27	 <p>Threaded flange PN 16 / R 2, threaded connection C50 DIN 2566 with screws/bolts, sealing element and nuts for duckfoot bend Consisting of: flange, 4 hexagon head bolts with nuts and washers and 1 sealing element</p>	DN 50 / Rp 2	-	X	X	-	-	-	X	19551353	3.23
		DN 65 / Rp 2 1/2	-	-	-	X	X	-	-	39021943	2.9
P28	 <p>Suction strainer</p>	-	-	X	-	X	-	-	X	39023050	2
P28	 <p>Hand pump, wall mounting, grey cast iron, suction-side connection Rp 1 1/2</p>	-	-	-	X	-	X	X	-	00520485	12

**Electrical accessories**
**Control units and switchgear**

Not valid for France.

**Table 32:** Overview of control units and switchgear

Item	Description	Type	Voltage	I <sub>N</sub> min.	I <sub>N</sub> max.	AmaPorter											Mat. No.	[kg]		
						F 500	F 501	F 502	F 503	F 51	F 52	F 601	F 602	F 603	F 61	F 62			F 82	S 545
			[V]	[A]																
	MSE switchgear	60.1	230	-	-	X	-	-	-	-	-	-	-	-	-	-	-	19070138	1	
	Float switch	80.1	230	-	-	-	X	-	-	-	-	X	-	-	-	-	-	19070139	1	
		100.1	230	-	-	-	X	X	X	-	-	X	X	-	-	-	X	19070140	1	
	MSD motor protection switch	40.1	400	-	-	X	X	X	-	-	X	X	-	-	-	-	X	19070116	1	
	Float switch	60.1	400	-	-	-	-	X	-	-	-	X	-	-	-	X	19070117	1.55		
	Multi-functional plug, type Hyper, with motor protection relay	Hyper 37.1	400	2,6	3,7	X	X	X	-	X	X	X	-	X	X	X	X	19071492	0.98	
		Hyper 55.1	400	3,7	5,5	-	-	X	X	X	-	-	X	X	X	X	-	19071493	0.98	
		Hyper 80.1	400	5,5	8,0	-	-	-	X	X	-	-	X	X	X	X	-	19071494	1	
		Hyper 115.1	400	8,0	11,5	-	-	-	X	X	-	-	X	X	X	X	-	19071495	0.98	
<b>LevelControl Basic 2 control unit for single-pump station, IP54</b>																				
	For float switch or 4 - 20 mA sensor, optionally with master switch, 400 x 281 x 135 mm	BC1 230 <sup>DFNO</sup> 100	230	-	-	X	X	X	X	-	-	X	X	X	-	-	-	X	19073760	4.5
	For float switch or 4 - 20 mA sensor, optionally with master switch, 400 x 281 x 135 mm	BC1 400 <sup>DFNO</sup> 040	400	2,5	4,0	X	X	X	-	X	X	X	-	-	-	-	X	19073763	4.67	
		BC1 400 <sup>DFNO</sup> 063	400	4,0	6,3	-	-	-	X	X	X	-	-	X	X	X	X	-	19073764	4.5
		BC1 400 <sup>DFNO</sup> 100	400	6,3	10,0	-	-	-	X	X	-	-	-	X	X	X	-	19073765	4.5	
<b>LevelControl Basic 2 control unit for dual-pump station, IP54</b>																				
	For float switch or 4 - 20 mA sensor, optionally with master switch, 400 x 281 x 135 mm	BC2 230 <sup>DFNO</sup> 100	230	-	-	X	X	X	X	-	-	X	X	X	-	-	-	X	19073774	4.7
	For float switch or 4 - 20 mA sensor, optionally with master switch, 400 x 281 x 135 mm	BC2 400 <sup>DFNO</sup> 040	400	2,5	4,0	X	X	X	-	X	X	X	-	X	X	X	X	19073777	4.7	
		BC2 400 <sup>DFNO</sup> 063	400	4,0	6,3	-	-	-	X	X	X	-	-	X	X	X	X	-	19073778	4.7
		BC2 400 <sup>DFNO</sup> 100	400	6,3	10,0	-	-	-	X	X	-	-	-	X	X	X	-	19073779	4.7	






**Control units and switchgear**

Only valid for France.


**Table 33:** Overview of control units and switchgear for France

Item	Description	Type	Voltage [V]	I <sub>N</sub> min. [A]	I <sub>N</sub> max. [A]	AmaPorter											Mat. No.	[kg]		
						F 500	F 501	F 502	F 503	F 51	F 52	F 601	F 602	F 603	F 61	F 62			F 82	S 545
	Multi-functional plug, type Hyper, with motor protection relay CEE plug	Hyper 37.1	400	2,6	3,7	X	X	X	-	X	X	X	X	-	X	X	X	X	19071492	0.98
		Hyper 55.1	400	3,7	5,5	-	-	-	X	X	X	-	-	X	X	X	X	-	19071493	0.98
		Hyper 80.1	400	5,5	8,0	-	-	-	-	X	X	-	-	-	X	X	X	-	19071494	1
		Hyper 115.1	400	8,0	11,5	-	-	-	-	X	X	-	-	-	X	X	X	-	19071495	0.98
<b>LevelControl Basic 2 control unit for single-pump station, IP 54</b>																				
	For float switch or 4-20 mA sensor, optional master switch, 400 x 278 x 135 mm	BC1 230 <sup>DFNM</sup> 063 02	230	-	-	X	X	-	-	-	-	X	-	-	-	-	-	19073874	4.5	
		BC1 230 <sup>DFNM</sup> 100 02	230	-	-	-	-	X	X	-	-	-	X	X	-	-	-	X	19073875	4.5
	For float switch or 4-20 mA sensor, optional master switch, 400 x 278 x 135 mm	BC1 400 <sup>DFNO</sup> 025 02	400	-	-	X	-	-	-	-	-	-	-	-	-	-	-	19073877	4.5	
		BC1 400 <sup>DFNO</sup> 040 02	400	2,5	4,0	-	X	X	X	X	X	X	X	X	X	X	X	X	19073878	5.01
		BC1 400 <sup>DFNO</sup> 063 02	400	4,0	6,3	-	-	-	-	X	X	-	-	-	X	X	X	-	19073879	4.5
		BC1 400 <sup>DFNO</sup> 100 02	400	6,3	10,0	-	-	-	-	X	X	-	-	-	X	X	X	-	19073880	4.5
<b>LevelControl Basic 2 control unit for dual-pump station, IP 54</b>																				
	For float switch or 4-20 mA sensor, optional master switch, 400 x 278 x 135 mm	BC2 230 <sup>DFNM</sup> 063 02	230	-	-	X	X	-	-	-	-	X	-	-	-	-	-	19073884	4.7	
		BC2 230 <sup>DFNM</sup> 100 02	230	-	-	-	-	X	X	-	-	-	X	X	-	-	-	X	19073885	4.7
	For float switch or 4-20 mA sensor, optional master switch, 400 x 278 x 135 mm	BC2 400 <sup>DFNO</sup> 025 02	400	-	-	X	-	-	-	-	-	-	-	-	-	-	-	19073887	4.7	
		BC2 400 <sup>DFNO</sup> 040 02	400	2,5	4,0	-	X	X	X	X	X	X	X	X	X	X	X	X	19073888	4.7
		BC2 400 <sup>DFNO</sup> 063 02	400	4,0	6,3	-	-	-	-	X	X	-	-	-	X	X	X	-	19073889	5.63
		BC2 400 <sup>DFNO</sup> 100 02	400	6,3	10,0	-	-	-	-	X	X	-	-	-	X	X	X	-	19073890	5.61

**Alarm switchgears for pumps, non-ATEX-compliant**
**Table 34:** AS 0/AS 1/AS 2/AS 4/AS 5

Item	Description	Mat. No.	[kg]
E50 	Alarm switchgear AS0 With circuit breaker, acoustic signalling device with 85 dB(A), green equipment-on lamp Plastic housing, IP20, H x W x D = 140 x 80 x 57 [mm]. Use float switch, F1 leakage sensor (item E64), M1 alarm contactor or signal relay of control unit as contactor.	29128401	0.5
E51 	Alarm switchgear AS2 With circuit breaker, acoustic signalling device with 85 dB(A), green equipment-on lamp, volt-free contact for hook-up to a control station Plastic housing, IP20, H x W x D = 140 x 80 x 57 [mm]. Use float switch, F1 leakage sensor (item E64) or signal relay of control unit as contactor.	29128422	0.5
E52 	Alarm switchgear AS4 With circuit breaker, acoustic signalling device with 85 dB(A), green equipment-on lamp, volt-free contact for hook-up to a control station, self-charging power supply unit for 5 hours of operation in the event of a power failure Plastic housing, IP20, H x W x D = 140 x 80 x 57 [mm]. Use float switch (E60), F1 leakage sensor (item E64) or signal relay of control unit as contactor.	29128442	0.5
E53 	Alarm switchgear AS5 Mains-independent, with self-charging power supply unit for 10 hours of operation in the event of a power failure, mains pilot LED, fault indicator light, acknowledgement button, volt-free contact for hook-up to a control station, ready for connection with 1.8 m power cable and plug. ISO housing, IP41, H x W x D = 165 x 190 x 75 [mm]. Use float switch (E60) or signal relay of control unit as contactor.	00530561	1.7
E55 	Alarm switchgear AS1 In IP30 ISO plug housing, mains-independent, with self-charging power supply unit for 5 hours of operation in the event of a power failure, acoustic signalling device 70 dB(A) with circuit breaker and integrated signal transmitter with 3-metre power cable, max. 60 °C, not suitable for steam and condensate. 1. High water alert by suspending the sensor in a (pump) sump above the pump start-up point. 2. Water alert signal at a water level of only 1 mm by placing the sensor on the floor in areas with a flooding or leakage risk, e.g. the cellar or next to the washing machine in the kitchen or bathroom.	00533740	0.9

**Control unit/switchgear accessories**
**Table 35:** Control unit / switchgear accessories

Item	Description	Length of electric cable / flexible tube [m]	AmaPorter								Mat. No.	[kg]
			F 500	F 501	F 502	F 503	F 601	F 602	F 603	S_545		
 E60 Float switch with free cable end Function: circuit closed in upper float position (NO contact) Float switch housing: polypropylene Fluid temperature: ≤ 70 °C Power cable: H07RN-F3G1	3	X	X	X	X	X	X	X	X	11037742	0.5	
	5	X	X	X	X	X	X	X	X	11037743	0.74	
	10	X	X	X	X	X	X	X	X	11037744	1.28	
	15	X	X	X	X	X	X	X	X	11037745	1.84	
	20	X	X	X	X	X	X	X	X	11037746	2.25	
	25	X	X	X	X	X	X	X	X	11037747	2.9	
	30	X	X	X	X	X	X	X	X	11037748	3.4	
 E62 Float switch with free cable end Function: circuit open in upper float position (NC contact) Float switch housing: polypropylene Fluid temperature: 70 °C max. Power cable: H07RN-F3G1	5	X	X	X	X	X	X	X	X	11037756	0.8	
	10	X	X	X	X	X	X	X	X	11037757	1.4	
	20	X	X	X	X	X	X	X	X	11037758	2.6	
 E64 F1 leakage sensor Contactor for alarm switchgears AS 0, AS 2, AS 4 or as alarm transmitter for LevelControl Basic 2 Alarm transmission options: High water alert by suspending the sensor in a (pump) sump above the pump start-up point. Warning at a water level of 1 mm in areas with a flooding or leakage risk (e.g. in the basement or next to the washing machine in the kitchen or bathroom) Dimensions [mm]: 52 × 21 × 20 (H × W × D)	3 m	X	X	X	X	X	X	X	X	19072366	0.2	
 E70 Horn, 12 V DC, 105 dB, 150 mA, IP54		X	X	X	X	X	X	X	X	01086547	0.09	
 E71 Alarm combination (yellow lamp and piezo buzzer 92 dB), 12 V DC, 120 mA, IP65		X	X	X	X	X	X	X	X	01139930	0.1	
 E72 Yellow alarm strobe light, 12 V DC, 195 mA, IP65		X	X	X	X	X	X	X	X	01056355	0.14	
 E73 KSB ServiceTool PACTware		X	X	X	X	X	X	X	X	47121210	0.2	
 E90 Rechargeable battery retrofit kit for LevelControl Basic 2, type BC Scope of supply: 2 rechargeable batteries (6 V, 1.3 Ah) and charge controller		X	X	X	X	X	X	X	X	19074194	0.8	
 E91 Rechargeable battery retrofit kit for LevelControl Basic 2, type BC Scope of supply: 1 rechargeable battery (12 V, 1.2 Ah) and charge controller		X	X	X	X	X	X	X	X	19074199	1	







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