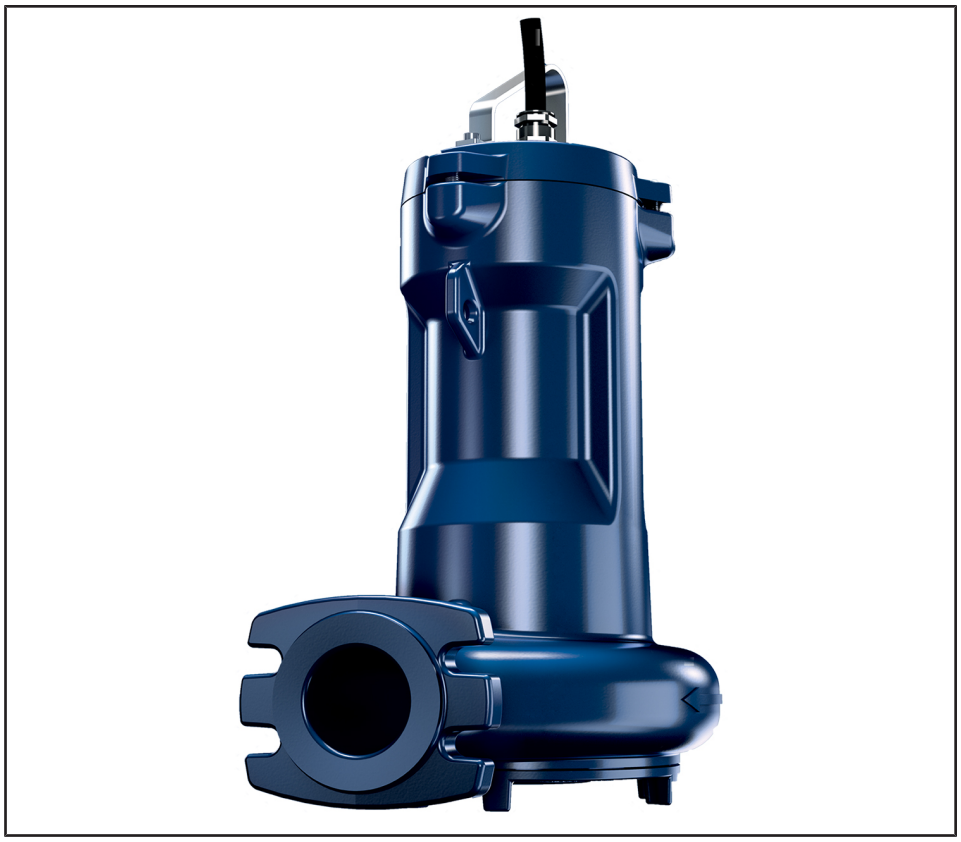
Submersible Motor Pump

Amarex

Sizes DN 50 to DN 150
Motors:
2 Poles: 014 to 084
4 Poles: 012 to 077

Type Series Booklet



Legal information/Copyright

Type Series Booklet Amarex

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Waste Water

Submersible Motor Pump

Amarex



Main applications

- Waste water transport
- Waste water management
- Drainage systems
- Waste water treatment plants
- Stormwater transport
- Recirculation
- Sludge treatment

Fluids handled

- Service water
- Grey water
- Waste water with faeces
- Waste water containing long fibres and solid substances
- Fluids containing gas
- Activated sludge
- Digested sludge
- Raw sludge

Further information on fluids handled

Overview of fluids handled (⇨ Page 11)

Operating data

Table 1: Operating properties

Characteristic		Value
Flow rate	Q [m³/h]	≤ 320
	Q [l/s]	≤ 89
Head	H [m]	≤ 42
Fluid temperature	T [°C]	≤ +40
Motor rating	P_2 [kW]	1,24- 8,4

Design details

Design

- Vertical single-stage submersible motor pump for wet installation, with vortex impeller (F-max) or open dual-vane impeller (D-max), stationary or transportable version
- Single-stage, single-entry, close-coupled non-self-priming pump set
- ATEX-compliant version available

Drive

- Three-phase asynchronous squirrel-cage motor in acc. with thermal class H
- Type of protection Ex db IIB (applies to explosion-proof pump sets only)
- Enclosure: IP68 to EN 60529/IEC529

Shaft seal

- Two bi-directional mechanical seals in tandem arrangement, with liquid reservoir

Impeller type

- Various application-oriented impeller types (⇨ Page 10)

Bearings

Motor-end bearings:

- Grease-packed bearings sealed for life
- Maintenance-free

Pump-end bearings:

- Grease-packed bearings sealed for life
- Maintenance-free
- Reinforced bearings[1)]

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1 Standard for impeller type D-max, optional for impeller type F-max

Designation

Table 2: Designation example

Position																																		
1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35	36
A	R	X		D	1	0	0	-	2	3	0	/	0	6	5	F	4	U	S	G		-	2	2	0	/	0	0	0	0	0	X	1	0	0
See name plate and data sheet																										See data sheet									

Table 3: Designation key

Position	Code	Description
1-3	Pump type	
	ARX	Amarex
5	Impeller type	
	D-max	Open two-vane impeller
	F-max	Vortex impeller
6-12	Size	
	100	Nominal discharge nozzle diameter [mm]
	230	Hydraulic system size
14-16	Motor rating P_N [kW]	
	012	1,24
	...	...
	084	8,40
17	Efficiency class[2)]	
	C	IE3
	F	None
18	Number of motor poles	
	2	2 poles
	4	4 poles
19	Motor version	
	U	Without explosion protection, standard
	Y	Explosion-proof
20	Motor construction type	
	S	Wet installation
21-22	Material variant	
	G	Standard variant grey cast iron[3)]
	G1	Standard variant grey cast iron, impeller made of duplex stainless steel
	G2	Standard variant grey cast iron, impeller made of white cast iron
	GH	Standard variant grey cast iron, impeller and discharge cover made of white cast iron
24-26	Nominal impeller diameter [mm]	
	090	90
	...	...
	220	220
28-36	00000X100	Additional code for design variant

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2 IEC 60034-30 standard not binding for submersible motor pumps. Efficiencies calculated/determined according to the measurement method specified in IEC 60034-2. The marking is used for submersible motors that achieve efficiency levels similar to those of standardised motors acc. to the IEC 60034-30 standard.

3 Depending on the configuration the impeller and suction cover of versions with D-max impeller are made of nodular cast iron.

Materials

Table 4: Overview of available materials

Part No. (⇨ Page 76)	Description		Version	Material variant			
				G	G1[4]	G2	GH
Pump set							
100	Casing			EN GJL-250			
160	Cover (motor)			EN GJL-250			
162	Suction cover		Standard	EN-GJL-250			EN GJL-250[4]
			With D-flector[5]	EN GJS-600-3	-	EN GJS-600-3	EN-GJN-HB555
163	Discharge cover			EN-GJL-250			EN-GJN-HB555
210	Shaft			1.4021			
230	Impeller		F-max	EN GJL-250	1.4517	EN-GJN-HB555	EN-GJN-HB555
			D-max	EN GJS-600-3	-	EN-GJN-HB555	EN-GJN-HB555
412	O-ring		Standard	Nitrile butadiene rubber (NBR70)			
			Option	Fluoroelastomer (FKM80)			
				Viton, Teflon-coated (FEP/FKM)			
433	Mechanical seal	Drive end	Standard	Carbon/Al2O3			
		Pump end	Standard	SIC/SIC/NBR			
			Option	SIC/SIC/FPM			
				SIC/SIC/KAL			
914	Hexagon socket head cap screw			A4			
Installation parts							
182	Pump foot			1.4301			
572	Guide wire suspension bracket			1.4571			
59-24	Wire			1.4401			
72-1	Flanged bend			EN-GJL-250			
732	Claw			EN-GJL-250			
885	Lifting chain / lifting rope			Lifting chain: 1.4404			
				Lifting rope: polypropylene			
892	Foot plate			1.4301			
894	Bracket			1.4301			

Description of materials

EN-GJL-250 grey cast iron (lamellar graphite cast iron)

Lamellar graphite cast iron to EN 1561 is the most widely used cast material for handling municipal sewage, waste water and sludges as well as stormwater and surface water. It is suitable for neutral fluids which are only slightly aggressive and cause little wear. The pH should be ≥ 6.5, the sand content ≤ 0.5 g/l.

Duplex stainless steel (1.4517 or technically equivalent material)

This type of carbon steel is resistant to cavitation, has excellent strength values and is used for high circumferential speeds. An excellent resistance to pitting corrosion makes ferritic-austenitic stainless carbon steel a popular choice for pumping acidic waste water with a high chloride content as well as seawater and brackish water. Thanks to its good chemical resistance, e.g. against waste water containing phosphorous and sulphuric acid, this material is used in a wide range of applications in the chemical industry and process engineering. Pumps made of duplex stainless steel have a very long service life, even when handling brines, chemical waste water (pH 1 - 12), grey water and landfill leachate.

Wear-resistant white cast iron (EN-GJN-HB555 [XCR14] or technically equivalent material)

Wear-resistant white cast iron is suitable for handling highly abrasive fluids containing sand, ash or iron ore sinter, for example. It has a Rockwell hardness of at least 54 HRC, which is higher than that of hardened chrome steel. Owing to its hardness, the chromium-molybdenum alloy cast iron features a notably higher wear resistance than EN-GJL-250 grey cast iron and other cast materials. The pH should be ≥ 6.5.

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4 Only available for version with F-max impeller
5 D-flector only available for version with D-max impeller

Product benefits

- High efficiency thanks to enhanced power density (Wh/m3), overall efficiency of up to 69 %, lower total cost of ownership
- Non-clogging (no clogging by wet wipes) with patented deflection technology and D-max impeller
- Long service life with high operating reliability and durable bearings (100,000 operating hours)
- Environmentally friendly with non-toxic, food-approved oil fill for lubricating the mechanical seal (liquid reservoir)
- Flexible thanks to easy substitution of competitor pumps with a large range of adapter claws and substitution pump app

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.

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Overview of product features / selection tables

Overview of product features, material variant G

Table 5: Overview of product features, material variant G

		Motor sizes			
		2 poles			
		14C 2...23F 2	18C 2…24F 2 29C 2...40F 2	35C 2…49F 2[6] 45C 2…73F 2	60C 2...84F 2
		4 poles			
		-	17F 4 12C 4…23F 4	21C4...35F 4 39F 4	36C 4…65F 4 45C 4…77F 4
Material variant		G			
Voltage		400 V			
Starting method		DOL	DOL	DOL / star-delta	DOL / star-delta
Cooling		Cooled by surrounding fluid			
Duty type (see [2] in outline drawing)		S1: submerged (max. 25 m) S1: outside the fluid, minimum water level R3 and power derating to IE3 S3: 25 %, 10 min, outside the fluid, minimum water level R1, rated power			
Frequency of starts/hour		30		30 ($P_2 \leq 7{,}5$ kW) 10 ($P_2 > 7{,}5$ kW)	
Bearings					
Bearing design	D-max	-	Double-row angular contact ball bearing		
	F-max	Deep groove ball bearing			
Lubrication		Grease-packed rolling element bearings sealed for life			
Sealing element		Contacting seals on both sides (e.g. 2RS1)			
Monitoring equipment					
Winding temperature motor version U		Temperature monitoring circuit (with automatic reset and start-up): bimetal switch directly connected with the control circuit of the motor contactor			
Winding temperature motor version Y		Limiting circuit (temperature limit for explosion protection without automatic reset): bimetal switch connected via a tripping unit with manual reset			
Power cable					
Type		Rubber-sheathed cable (H07RN8-F)			
Length		10 m			
Cable entry	Motor version U	Cable gland			
	Motor version Y	Resin-sealed cable entry			
Sealing elements					
Shaft seal		Mechanical seal (bellows-type mechanical seal) (Q1Q1PGG)			
Elastomer seals		NBR			
Explosion protection					
Motor version U		Not explosion-proof			
Motor version Y		Ⓔx II 2G Ex db h IIB T4 Gb			
Coating		Environmentally friendly KSB top coat (two-component epoxy paint), colour RAL 5002, film thickness = 80 µm			
Max. fluid temperature		40 °C			
Installation (⇨ Page 59)					
Stationary, with guide hoop	F-max	Installation depths 1.5 m/1.8 m/2.1 m			-
Stationary, with single guide rail arrangement[7]		Installation depth: 6 m		-	-
Stationary, with twin guide rail arrangement		Installation depth 6 m (available up to 12 m[8])			
Stationary, with guide wire arrangement		Installation depth: 4.5 m (available up to 9.5 m and 14.5 m)			
Transportable		Installation depth 14.5 m			

6 These motors are available for DOL starting only.
7 Only for motor sizes S and M
8 Only for DN 80 / DN 100 / DN 150

Overview of product features, material variants G1, G2, GH

Table 6: Overview of product features, material variants G1, G2, GH

		Motor sizes			
		2 poles			
		14C 2...23F 2	18C 2…24F 2 29C 2...40F 2	35C 2…49F 2[9] 45C 2…73F 2	60C 2...84F 2
		4 poles			
		-	17F 4 12C 4…23F 4	21C 4...35F 4 39F 4	36C 4…65F 4 45C 4…77F 4
Material variant	D-max	G2, GH			
	F-max	G1, G2, GH			
Voltage		230 V / 380 V / 415 V / 500 V / 690 V			
Starting method		DOL	DOL	DOL / star-delta[10]	DOL / star-delta[10]
Bearings					
Bearing design	F-max	Double-row angular contact ball bearing (optional)			
Power cable					
Type		Rubber-sheathed cable (S1BN8-F) Rubber-sheathed cable (S07RC4N8-F) (shielded) TEFZEL cable			
Length		≤ 50 m[11]			
Cable entry		Water-tight			
Monitoring equipment					
Leakage inside the motor		Leakage sensor in the motor (optional)			
Sealing elements					
Shaft seal		Mechanical seal (bellows-type mechanical seal) Q1Q1PGG Mechanical seal with covered springs			
Material variant, shaft seal (pump end)		Q7Q7VGG-Y10 Q12Q1VGG1 Q12Q1KGG1			
Elastomer seals		FKM FKM / Teflon			
Coating		Environmentally friendly KSB top coat (two-component epoxy paint), colour RAL 5002, film thickness = 80 µm			
Installation (⇨ Page 59)					
Stationary, with twin guide rail arrangement		Installation depth 12 m			
Stationary, with guide wire arrangement		Installation depth 14.5 m			

Impellers

	Vortex impeller (impeller type F-max)	**Suitable for the following fluids:** fluids containing solids and stringy material as well as fluids with entrapped air or entrapped gas
	Open two-vane impeller (impeller type D-max)	**Suitable for the following fluids:** waste water containing wet wipes and long fibres

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9 These motors are available for DOL starting only.
10 690 V DOL starting only
11 10 m / 15 m / 20 m / 30 m / 40 m / 50 m available

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 7: Selection aid for materials and hydraulic systems per fluid

Fluid handled[12]	Recommended material	Recommended impeller type[13]	Recommended sealing elements	Comments, further recommendations
Water, surface water				
▪ Dam water	G	F-max, D-max	NBR	Free passage > any solids contained, possibly pre-screened
▪ Lake water	G	F-max, D-max	NBR	Free passage > any solids contained, possibly pre-screened
▪ River water	G	F-max, D-max	NBR	Free passage > any solids contained, possibly pre-screened
Water, contaminated water				
▪ Mixed water, with strainer	G	F-max, D-max	NBR	-
▪ Mixed water, without strainer	G	F-max, D-max	NBR	-
▪ Slightly contaminated water	G	F-max, D-max	NBR	Free passage > any solids contained, possibly pre-screened
▪ Waste water with faeces	G	D-max, F-max	NBR	EN 12050, min. free passage of 40 mm
▪ Waste water without faeces	G	F-max, D-max	NBR	-
Municipal waste water				
▪ Biologically treated	G	F-max, D-max	NBR	-
▪ Containing air and gas	G	F-max	NBR	Up to 8 %; contact KSB for higher concentrations.
▪ Domestic waste water with faeces	G	F-max, D-max	NBR	EN 12050, min. free passage of 40 mm
▪ Domestic waste water without faeces	G	F-max, D-max	NBR	-
▪ Pumped drainage	G	F-max, D-max	NBR	-
▪ Raw waste water containing solids, long fibres and abrasive particles	G	F-max, D-max	NBR	Free passage > any solids contained, possibly pre-screened
▪ Untreated	G	F-max, D-max	NBR	ATV[14] recommends a free passage of 100 mm; min. free passage: 76 mm
Abrasive municipal waste water				
▪ Raw waste water containing solids, long fibres and abrasive particles	GH	D-max, F-max		Solids content < 5 g/l
Water, raw water				
▪ No details specified	G	F-max, D-max	NBR	-
Corrosive and abrasive industrial waste water				
▪ No details specified	G1	F-max	NBR	-
Abrasive, non-corrosive industrial waste water[15]				
▪ Containing dust / ash	G2, GH	F-max, D-max	NBR	-
▪ Containing lime milk > 5 to 15 %	G2, GH	F-max, D-max	NBR	-
▪ Pigment suspensions	G2, GH	F-max, D-max	NBR	-
▪ Lime water	G2, GH	F-max, D-max	NBR	-
▪ Wash water containing solids	G2, GH	F-max, D-max	NBR	-
Non-abrasive, non-corrosive industrial waste water[16]				
▪ Industrial waste water with faeces	G	F-max, D-max	NBR	-

12 For any fluids which are not listed in this table contact KSB.

13 The first impeller type listed should be given preference.

14 ATV = German regulatory body for waste water management

15 Severe hydroabrasive wear occurs if solids contents of approx. 0.5 g/l or higher are combined with circumferential speeds exceeding 20 m/s or part load conditions to the left of the duty point. The material variants required highly depend on the operating hours, rotational speed and flow velocity.

16 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[12)]	Recommended material	Recommended impeller type[13)]	Recommended sealing elements	Comments, further recommendations
▪ Industrial waste water without faeces	G	F-max, D-max	NBR	-
▪ Containing aliphatic hydrocarbons	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Ammonium hydroxide	G	F-max	NBR	-
▪ Containing up to 5 % of ammonium hydroxide	G	F-max	NBR	-
▪ Containing aromatic hydrocarbons	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing benzene	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing 5 % of calcium hydroxide $Ca(OH)_2$	G	F-max	NBR	-
▪ Containing chlorinated hydrocarbons	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing chloroform	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing 10 % of dissolved carbonate Na_2CO_3	G	F-max	NBR	-
▪ Containing ethylene chloride	G	F-max	FEP-FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing fibres	G	D-max, F-max	NBR	-
▪ Containing methane	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing methylene chloride	G	F-max	FEP-FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing oil	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing paint suspension	G	F-max	NBR	Solvent-free, observe the operator's instructions.
▪ Containing petrol	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing 10 % of potassium hydroxide KOH	G	F-max	FEP-FKM	-
▪ Containing 5 % of sodium hydroxide NaOH	G	F-max	FEP-FKM	-
▪ Containing styrene	G	F-max	FEP-FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing tetrachloroethylene	G	F-max	FKM	TEHSITE cable; for high concentrations contact KSB.
▪ Containing 25 % of urea $(NH_2)_2$-CO	G	F-max	NBR	-
Acidic water				
▪ Slightly acidic, pH >= 6	G1	F-max	FKM	pH ≥ 6 G1 variant and FPM (Viton) O-rings
Suspensions containing solids				
▪ Pulp, concentration up to 1 % bone dry	G	F-max, D-max	NBR	-
▪ Water/sand mixture up to 5 g/l	G2, GH	F-max, D-max	NBR	-
▪ Pulp, concentration up to 6 % bone dry	G	F-max, D-max	NBR	-
▪ Water/sand mixture up to 0.5 g/l	G	F-max, D-max	NBR	-
Sludges				
▪ Raw sludge	G	D-max, F-max	NBR	Pumpable up to a dry substance content of: 13 % (D-max), 8 % (F-max)
▪ Digested sludge	G	D-max, F-max	NBR	Pumpable up to a dry substance content of: 13 % (D-max), 8 % (F-max)
▪ Activated sludge	G	D-max, F-max	NBR	Pumpable up to a dry substance content of: 13 % (D-max), 8 % (F-max)

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Technical data

Amarex G/G2, open two-vane impeller, n = 2900 rpm

G = material variant grey cast iron (pump casing) / grey cast iron (intermediate casing) / nodular cast iron (impeller)

G2 = material variant grey cast iron (pump casing) / grey cast iron (intermediate casing) / Norihard, white cast iron (impeller)

D = open two-vane impeller

US = without explosion protection, for fluid temperatures of up to 40 °C

YS = explosion protection Ex II2G Ex db h IIB T4 Gb, for fluid temperatures of up to 40 °C

Table 8: Technical data

Size	Motor rating	Efficiency class[18][19]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter	P_2	P_1	I_N	I_A	T^{17}	[kg]	Mat. No.
n = 2900 rpm							[mm]	[kW]	[kW]	[A]	[A]	[°C]		
D080-140	024	F	2	U	S	G	129	2,40	2,95	4,89	45	40	75	39110670
D080-140	024	F	2	Y	S	G	129	2,40	2,95	4,89	45	40	77	39110672
D080-140	024	F	2	U	S	G2	129	2,40	2,95	4,89	45	40	75	39110671
D080-140	040	F	2	U	S	G	136	4,00	4,86	8,17	76	40	79	39110673
D080-140	040	F	2	Y	S	G	136	4,00	4,86	8,17	76	40	80	39110677
D080-140	040	F	2	U	S	G	144	4,00	4,86	8,17	76	40	79	39110674
D080-140	040	F	2	Y	S	G	144	4,00	4,86	8,17	76	40	80	39110678
D080-140	040	F	2	U	S	G2	136	4,00	4,86	8,17	76	40	79	39110675
D080-140	040	F	2	U	S	G2	144	4,00	4,86	8,17	76	40	79	39110676
D080-140	049	F	2	U	S	G	152	4,90	5,83	9,85	86	40	99	39110679
D080-140	049	F	2	Y	S	G	152	4,90	5,83	9,85	86	40	102	39110681
D080-140	049	F	2	U	S	G2	152	4,90	5,83	9,85	86	40	99	39110680
D080-170	045	C	2	U	S	G	144	4,54	5,13	10,10	125	40	111	39110682
D080-170	045	C	2	Y	S	G	144	4,54	5,13	10,10	125	40	115	39110684
D080-170	045	C	2	U	S	G2	144	4,54	5,13	10,10	125	40	111	39110683
D080-170	060	C	2	U	S	G	152	6,00	6,71	12,70	157	40	115	39110685
D080-170	060	C	2	Y	S	G	152	6,00	6,71	12,70	157	40	120	39110689
D080-170	060	C	2	U	S	G	161	6,00	6,71	12,70	157	40	115	39110686
D080-170	060	C	2	Y	S	G	161	6,00	6,71	12,70	157	40	120	39110690
D080-170	060	C	2	U	S	G2	152	6,00	6,71	12,70	157	40	115	39110687
D080-170	060	C	2	U	S	G2	161	6,00	6,71	12,70	157	40	115	39110688
D080-170	073	F	2	U	S	G	170	7,30	8,72	14,70	125	40	111	39110691
D080-170	073	F	2	Y	S	G	170	7,30	8,72	14,70	125	40	115	39110693
D080-170	073	F	2	U	S	G2	170	7,30	8,72	14,70	125	40	111	39110692
D100-140	035	C	2	U	S	G	129	3,57	4,06	7,46	86	40	112	39110721
D100-140	035	C	2	Y	S	G	129	3,57	4,06	7,46	86	40	115	39110723
D100-140	035	C	2	U	S	G2	129	3,57	4,06	7,46	86	40	112	39110722
D100-140	040	F	2	U	S	G	135	4,00	4,86	8,17	76	40	92	39110724
D100-140	040	F	2	Y	S	G	135	4,00	4,86	8,17	76	40	94	39110728
D100-140	040	F	2	U	S	G	142	4,00	4,86	8,17	76	40	92	39110725
D100-140	040	F	2	Y	S	G	142	4,00	4,86	8,17	125	40	94	39110729
D100-140	040	F	2	U	S	G2	135	4,00	4,86	8,17	76	40	92	39110726
D100-140	040	F	2	U	S	G2	142	4,00	4,86	8,17	76	40	92	39110727
D100-170	045	C	2	U	S	G	135	4,54	5,13	10,10	125	40	117	39110730
D100-170	045	C	2	Y	S	G	135	4,54	5,13	10,10	125	40	121	39110732
D100-170	045	C	2	U	S	G2	135	4,54	5,13	10,10	125	40	117	39110731
D100-170	060	C	2	U	S	G	142	6,00	6,71	12,70	157	40	122	39110733
D100-170	060	C	2	Y	S	G	142	6,00	6,71	12,70	157	40	126	39110737
D100-170	060	C	2	U	S	G	148	6,00	6,71	12,70	157	40	122	39110734
D100-170	060	C	2	Y	S	G	148	6,00	6,71	12,70	157	40	126	39110738

17 C: Motors to IE3

18 F: Motors without IE

19 Fluid temperature

Size n = 2900 rpm	Motor rating	Efficiency class[17)18)]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter [mm]	P_2 [kW]	P_1 [kW]	I_N [A]	I_A [A]	$T^{19)}$ [°C]	[kg]	Mat. No.
D100-170	060	C	2	U	S	G2	142	6,00	6,71	12,70	157	40	122	39110735
D100-170	060	C	2	U	S	G2	148	6,00	6,71	12,70	157	40	122	39110736
D100-170	073	F	2	U	S	G	154	7,30	8,72	14,70	125	40	115	39110739
D100-170	073	F	2	Y	S	G	154	7,30	8,72	14,70	125	40	121	39110741
D100-170	073	F	2	U	S	G2	154	7,30	8,72	14,70	125	40	117	39110740

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Amarex G/G2, open two-vane impeller, n = 1450 rpm

G = material variant grey cast iron (pump casing) / grey cast iron (intermediate casing) / nodular cast iron (impeller)

G2 = material variant grey cast iron (pump casing) / grey cast iron (intermediate casing) / Norihard, white cast iron (impeller)

D = open two-vane impeller

US = without explosion protection, for fluid temperatures of up to 40 °C

YS = explosion protection Ex II2G Ex db h IIB T4 Gb, for fluid temperatures of up to 40 °C

Table 9: Technical data

Size	Motor rating	Efficiency class[21)22)]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter	P_2	P_1	I_N	I_A	$T^{20)}$	[kg]	Mat. No.
n = 1450 rpm							[mm]	[kW]	[kW]	[A]	[A]	[°C]		
D080-180	017	F	4	Y	S	G	162	1,67	2,13	3,71	27	40	81	39110702
D080-180	017	F	4	U	S	G	169	1,67	2,13	3,71	27	40	79	39110695
D080-180	017	F	4	Y	S	G	169	1,67	2,13	3,71	27	40	81	39110703
D080-180	017	F	4	U	S	G	176	1,67	2,13	3,71	27	40	79	39110696
D080-180	017	F	4	Y	S	G	176	1,67	2,13	3,71	27	40	81	39110704
D080-180	017	F	4	U	S	G	184	1,67	2,13	3,71	27	40	79	39110697
D080-180	017	F	4	Y	S	G	184	1,67	2,13	3,71	27	40	81	39110705
D080-180	017	F	4	U	S	G	162	1,67	2,13	3,71	27	40	79	39110694
D080-180	017	F	4	U	S	G2	162	1,67	2,13	3,71	27	40	79	39110698
D080-180	017	F	4	U	S	G2	169	1,67	2,13	3,71	27	40	79	39110699
D080-180	017	F	4	U	S	G2	176	1,67	2,13	3,71	27	40	79	39110700
D080-180	017	F	4	U	S	G2	184	1,67	2,13	3,71	27	40	79	39110701
D080-180	023	F	4	U	S	G	192	2,30	2,98	5,15	38	40	81	39110706
D080-180	023	F	4	Y	S	G	192	2,30	2,98	5,15	38	40	83	39110708
D080-180	023	F	4	U	S	G2	192	2,30	2,98	5,15	38	40	81	39110707
D080-230	035	F	4	U	S	G	200	3,55	4,41	7,56	45	40	110	39110709
D080-230	035	F	4	Y	S	G	200	3,55	4,41	7,56	45	40	113	39110715
D080-230	035	F	4	U	S	G	210	3,55	4,41	7,56	45	40	110	39110710
D080-230	035	F	4	Y	S	G	210	3,55	4,41	7,56	45	40	113	39110716
D080-230	035	F	4	U	S	G	220	3,55	4,41	7,56	45	40	110	39110711
D080-230	035	F	4	Y	S	G	220	3,55	4,41	7,56	45	40	113	39110717
D080-230	035	F	4	U	S	G2	200	3,55	4,41	7,56	45	40	110	39110712
D080-230	035	F	4	U	S	G2	210	3,55	4,41	7,56	45	40	110	39110713
D080-230	035	F	4	U	S	G2	220	3,55	4,41	7,56	45	40	110	39110714
D080-230	039	F	4	U	S	G	230	3,90	5,01	9,91	81	40	114	39110718
D080-230	039	F	4	Y	S	G	230	3,90	5,01	9,91	81	40	119	39110720
D080-230	039	F	4	U	S	G2	230	3,90	5,01	9,91	81	40	116	39110719
D100-180	017	F	4	U	S	G	156	1,67	2,13	3,71	27	40	92	39110742
D100-180	017	F	4	Y	S	G	156	1,67	2,13	3,71	27	40	94	39110752
D100-180	017	F	4	U	S	G	162	1,67	2,13	3,71	27	40	92	39110743
D100-180	017	F	4	Y	S	G	162	1,67	2,13	3,71	27	40	94	39110753
D100-180	017	F	4	U	S	G	169	1,67	2,13	3,71	27	40	92	39110744
D100-180	017	F	4	Y	S	G	169	1,67	2,13	3,71	27	40	94	39110754
D100-180	017	F	4	U	S	G	176	1,67	2,13	3,71	27	40	92	39110745
D100-180	017	F	4	Y	S	G	176	1,67	2,13	3,71	27	40	94	39110755
D100-180	017	F	4	U	S	G	184	1,67	2,13	3,71	27	40	92	39110746
D100-180	017	F	4	Y	S	G	184	1,67	2,13	3,71	27	40	94	39110756
D100-180	017	F	4	U	S	G2	156	1,67	2,13	3,71	27	40	92	39110747
D100-180	017	F	4	U	S	G2	162	1,67	2,13	3,71	27	40	92	39110748
D100-180	017	F	4	U	S	G2	169	1,67	2,13	3,71	27	40	92	39110749
D100-180	017	F	4	U	S	G2	176	1,67	2,13	3,71	27	40	92	39110750
D100-180	017	F	4	U	S	G2	184	1,67	2,13	3,71	27	40	92	39110751

20 C: Motors to IE3

21 F: Motors without IE

22 Fluid temperature

Size n = 1450 rpm	Motor rating	Efficiency class[20][21]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter [mm]	P_2 [kW]	P_1 [kW]	I_N [A]	I_A [A]	T^{22} [°C]	[kg]	Mat. No.
D100-230	035	F	4	U	S	G	192	3,55	4,41	7,56	45	40	114	39110757
D100-230	035	F	4	Y	S	G	192	3,55	4,41	7,56	45	40	117	39110765
D100-230	035	F	4	U	S	G	200	3,55	4,41	7,56	45	40	114	39110758
D100-230	035	F	4	Y	S	G	200	1.67	4,41	7,56	45	40	117	39110766
D100-230	035	F	4	U	S	G	210	3,55	4,41	7,56	45	40	114	39110759
D100-230	035	F	4	Y	S	G	210	3,55	4,41	7,56	45	40	117	39110767
D100-230	035	F	4	U	S	G	220	3,55	4,41	7,56	45	40	114	39110760
D100-230	035	F	4	Y	S	G	220	1,67	4,41	7,56	45	40	117	39110768
D100-230	035	F	4	U	S	G2	192	3,55	4,41	7,56	45	40	114	39110761
D100-230	035	F	4	U	S	G2	200	3,55	4,41	7,56	45	40	114	39110762
D100-230	035	F	4	U	S	G2	210	3,55	4,41	7,56	45	40	114	39110763
D100-230	035	F	4	U	S	G2	220	3,55	4,41	7,56	45	40	114	39110764
D150-230	036	C	4	U	S	G	180	3,59	4,06	8,40	106	40	134	39110769
D150-230	036	C	4	Y	S	G	180	3,59	4,06	8,40	106	40	138	39110777
D150-230	036	C	4	U	S	G	185	3,59	4,06	8,40	106	40	134	39110770
D150-230	036	C	4	Y	S	G	185	3,59	4,06	8,40	106	40	138	39110778
D150-230	036	C	4	U	S	G	191	3,59	4,06	8,40	106	40	134	39110771
D150-230	036	C	4	Y	S	G	191	3,59	4,06	8,40	106	40	138	39110779
D150-230	036	C	4	U	S	G	197	3,59	4,06	8,40	106	40	134	39110772
D150-230	036	C	4	Y	S	G	197	3,59	4,06	8,40	106	40	138	39110780
D150-230	036	C	4	U	S	G2	180	3,59	4,06	8,40	106	40	134	39110773
D150-230	036	C	4	U	S	G2	185	3,59	4,06	8,40	106	40	134	39110774
D150-230	036	C	4	U	S	G2	191	3,59	4,06	8,40	106	40	134	39110775
D150-230	036	C	4	U	S	G2	197	3,59	4,06	8,40	106	40	134	39110776
D150-230	045	C	4	U	S	G	204	4,48	5,04	10,70	118	40	138	39110781
D150-230	045	C	4	Y	S	G	204	4,48	5,04	10,70	118	40	142	39110783
D150-230	045	C	4	U	S	G2	204	4,48	5,04	10,70	118	40	138	39110782
D150-230	065	F	4	U	S	G	211	6,50	7,89	13,40	106	40	134	39110784
D150-230	065	F	4	Y	S	G	211	6,50	7,89	13,40	106	40	138	39110790
D150-230	065	F	4	U	S	G	218	6,50	7,89	13,40	106	40	134	39110785
D150-230	065	F	4	Y	S	G	218	6,50	7,89	13,40	106	40	138	39110791
D150-230	065	F	4	U	S	G	226	6,50	7,89	13,40	106	40	134	39110786
D150-230	065	F	4	Y	S	G	226	6,50	7,89	13,40	106	40	138	39110792
D150-230	065	F	4	U	S	G2	211	6,50	7,89	13,40	106	40	134	39110787
D150-230	065	F	4	U	S	G2	218	6,50	7,89	13,40	106	40	134	39110788
D150-230	065	F	4	U	S	G2	226	6,50	7,89	13,40	106	40	134	39110789

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Amarex G, vortex impeller, n = 2900 rpm

G = material variant grey cast iron (pump casing) / grey cast iron (intermediate casing) / grey cast iron (impeller)

F = vortex impeller

US = without explosion protection, for fluid temperatures of up to 40 °C

YS = explosion protection Ex II2G Ex db h IIB T4 Gb, for fluid temperatures of up to 40 °C

Table 10: Technical data

Size n = 2900 rpm	Motor rating	Efficiency class[24]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter [mm]	P_2 [kW]	P_1 [kW]	I_N [A]	I_A [A]	T^{23} [°C]	[kg]	Mat. No.
F050-140	023	F	2	U	S	G	100	2,35	3,04	5,25	45	40	60	39120001
F050-140	023	F	2	Y	S	G	100	2,35	3,04	5,25	45	40	61	39120002
F050-140	023	F	2	U	S	G	110	2,35	3,04	5,25	45	40	60	39120003
F050-140	023	F	2	Y	S	G	110	2,35	3,04	5,25	45	40	61	39120004
F050-140	023	F	2	U	S	G	120	2,35	3,04	5,25	45	40	60	39120005
F050-140	023	F	2	Y	S	G	120	2,35	3,04	5,25	45	40	61	39120006
F050-140	023	F	2	U	S	G	130	2,35	3,04	5,25	45	40	60	39120007
F050-140	023	F	2	Y	S	G	130	2,35	3,04	5,25	45	40	61	39120008
F050-140	023	F	2	U	S	G	140	2,35	3,04	5,25	45	40	60	39120009
F050-140	023	F	2	Y	S	G	140	2,35	3,04	5,25	45	40	61	39120010
F050-140	023	F	2	U	S	G	150	2,35	3,04	5,25	45	40	60	39120011
F050-140	023	F	2	Y	S	G	150	2,35	3,04	5,25	45	40	61	39120012
F050-140	023	F	2	U	S	G	160	2,35	3,04	5,25	45	40	60	39120013
F050-140	023	F	2	Y	S	G	160	2,35	3,04	5,25	45	40	61	39120014
F050-220[25]	024	F	2	U	S	G	160	2,40	2,95	4,89	45	40	65	39120027
F050-220[25]	024	F	2	Y	S	G	160	2,40	2,95	4,89	45	40	66	39120028
F050-220	040	F	2	U	S	G	160	4,00	4,86	8,17	76	40	68	39120031
F050-220	040	F	2	Y	S	G	160	4,00	4,86	8,17	76	40	70	39120032
F050-220[25]	040	F	2	U	S	G	170	4,00	4,86	8,17	76	40	68	39120033
F050-220[25]	040	F	2	Y	S	G	170	4,00	4,86	8,17	76	40	70	39120034
F050-220	049	F	2	U	S	G	170	4,90	5,83	9,85	86	40	86	39120037
F050-220	049	F	2	Y	S	G	170	4,90	5,83	9,85	86	40	89	39120038
F050-220[25]	040	F	2	U	S	G	180	4,00	4,86	8,17	76	40	68	39120045
F050-220[25]	040	F	2	Y	S	G	180	4,00	4,86	8,17	76	40	70	39120046
F050-220[25]	049	F	2	U	S	G	180	4,90	5,83	9,85	86	40	86	39120039
F050-220[25]	049	F	2	Y	S	G	180	4,90	5,83	9,85	86	40	89	39120040
F050-220[25]	049	F	2	U	S	G	190	4,90	5,83	9,85	86	40	86	39120035
F050-220[25]	049	F	2	Y	S	G	190	4,90	5,83	9,85	86	40	89	39120036
F050-220	073	F	2	U	S	G	190	7,30	8,72	14,70	125	40	91	39120041
F050-220	073	F	2	Y	S	G	190	7,30	8,72	14,70	125	40	95	39120042
F065-170	024	F	2	U	S	G	110	2,40	2,95	4,89	45	40	67	39120077
F065-170	024	F	2	Y	S	G	110	2,40	2,95	4,89	45	40	68	39120078
F065-170	024	F	2	U	S	G	120	2,40	2,95	4,89	45	40	67	39120079
F065-170	024	F	2	Y	S	G	120	2,40	2,95	4,89	45	40	68	39120080
F065-170	024	F	2	U	S	G	130	2,40	2,95	4,89	45	40	67	39120081
F065-170	024	F	2	Y	S	G	130	2,40	2,95	4,89	45	40	68	39120082
F065-170	024	F	2	U	S	G	140	2,40	2,95	4,89	45	40	67	39120083
F065-170	024	F	2	Y	S	G	140	2,40	2,95	4,89	45	40	68	39120084
F065-170	040	F	2	U	S	G	150	4,00	4,86	8,17	76	40	71	39120085
F065-170	040	F	2	Y	S	G	150	4,00	4,86	8,17	76	40	72	39120086
F065-170	040	F	2	U	S	G	160	4,00	4,86	8,17	76	40	71	39120087
F065-170	040	F	2	Y	S	G	160	4,00	4,86	8,17	76	40	72	39120088
F065-170[25]	040	F	2	U	S	G	170	4,00	4,86	8,17	76	40	71	39120089

23 F: Motors without IE

24 Fluid temperature

25 The motor rating does not cover the complete hydraulic characteristic curve.

Size n = 2900 rpm	Motor rating	Efficiency class[23]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter [mm]	P_2 [kW]	P_1 [kW]	I_N [A]	I_A [A]	T^{24} [°C]	[kg]	Mat. No.
F065-170[25]	040	F	2	Y	S	G	170	4,00	4,86	8,17	76	40	72	39120090
F065-170[25]	049	F	2	U	S	G	180	4,90	5,83	9,85	86	40	88	39120091
F065-170[25]	049	F	2	Y	S	G	180	4,90	5,83	9,85	86	40	91	39120092
F065-170	073	F	2	U	S	G	190	7,30	8,72	14,70	125	40	93	39120093
F065-170	073	F	2	Y	S	G	190	7,30	8,72	14,70	125	40	97	39120094
F080-220	024	F	2	U	S	G	140	2,40	2,95	4,89	45	40	71	39120163
F080-220	024	F	2	Y	S	G	140	2,40	2,95	4,89	45	40	73	39120164
F080-220	040	F	2	U	S	G	150	4,00	4,86	8,17	76	40	75	39120165
F080-220	040	F	2	Y	S	G	150	4,00	4,86	8,17	76	40	76	39120166
F080-220	040	F	2	U	S	G	160	4,00	4,86	8,17	76	40	75	39120167
F080-220	040	F	2	Y	S	G	160	4,00	4,86	8,17	76	40	76	39120168
F080-220[25]	049	F	2	U	S	G	170	4,90	5,83	9,85	86	40	93	39120169
F080-220[25]	049	F	2	Y	S	G	170	4,90	5,83	9,85	86	40	96	39120170
F080-220	073	F	2	U	S	G	180	7,30	8,72	14,70	125	40	98	39120171
F080-220	073	F	2	Y	S	G	180	7,30	8,72	14,70	125	40	102	39120172
F080-220	073	F	2	U	S	G	190	7,30	8,72	14,70	125	40	98	39120173
F080-220	073	F	2	Y	S	G	190	7,30	8,72	14,70	125	40	102	39120174
F080-220[25]	084	F	2	U	S	G	200	8,40	9,85	16,80	156	40	103	39120175
F080-220[25]	084	F	2	Y	S	G	200	8,40	9,85	16,80	156	40	107	39120176

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Amarex G, vortex impeller, n = 1450 rpm

G = material variant grey cast iron (pump casing) / grey cast iron (intermediate casing) / grey cast iron (impeller)

F = vortex impeller

US = without explosion protection, for fluid temperatures of up to 40 °C

YS = explosion protection Ex II2G Ex db h IIB T4 Gb, for fluid temperatures of up to 40 °C

Table 11: Technical data

Size n = 1450 rpm	Motor rating	Efficiency class[27]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter [mm]	P_2 [kW]	P_1 [kW]	I_N [A]	I_A [A]	T^{26} [°C]	[kg]	Mat. No.
F065-150	017	F	4	U	S	G	150	1,67	2,13	3,71	27	40	67	39120055
F065-150	017	F	4	Y	S	G	150	1,67	2,13	3,71	27	40	69	39120056
F065-150	017	F	4	U	S	G	160	1,67	2,13	3,71	27	40	67	39120057
F065-150	017	F	4	Y	S	G	160	1,67	2,13	3,71	27	40	69	39120058
F065-150	017	F	4	U	S	G	170	1,67	2,13	3,71	27	40	67	39120059
F065-150	017	F	4	Y	S	G	170	1,67	2,13	3,71	27	40	69	39120060
F065-150	017	F	4	U	S	G	180	1,67	2,13	3,71	27	40	67	39120061
F065-150	017	F	4	Y	S	G	180	1,67	2,13	3,71	27	40	69	39120062
F065-150	017	F	4	U	S	G	190	1,67	2,13	3,71	27	40	67	39120063
F065-150	017	F	4	Y	S	G	190	1,67	2,13	3,71	27	40	69	39120064
F065-150	017	F	4	U	S	G	200	1,67	2,13	3,71	27	40	67	39120065
F065-150	017	F	4	Y	S	G	200	1,67	2,13	3,71	27	40	69	39120066
F065-230	017	F	4	U	S	G	160	1,67	2,13	3,71	27	40	69	39120107
F065-230	017	F	4	Y	S	G	160	1,67	2,13	3,71	27	40	70	39120108
F065-230	017	F	4	U	S	G	170	1,67	2,13	3,71	27	40	69	39120109
F065-230	017	F	4	Y	S	G	170	1,67	2,13	3,71	27	40	70	39120110
F065-230	017	F	4	U	S	G	180	1,67	2,13	3,71	27	40	69	39120111
F065-230	017	F	4	Y	S	G	180	1,67	2,13	3,71	27	40	70	39120112
F065-230	017	F	4	U	S	G	190	1,67	2,13	3,71	27	40	69	39120113
F065-230	017	F	4	Y	S	G	190	1,67	2,13	3,71	27	40	70	39120114
F065-230	023	F	4	U	S	G	200	2,30	2,98	5,15	38	40	71	39120115
F065-230	023	F	4	Y	S	G	200	2,30	2,98	5,15	38	40	72	39120116
F065-230	035	F	4	U	S	G	210	3,55	4,41	7,56	45	40	88	39120117
F065-230	035	F	4	Y	S	G	210	3,55	4,41	7,56	45	40	91	39120118
F080-150	017	F	4	U	S	G	140	1,67	2,13	3,71	27	40	72	39120129
F080-150	017	F	4	Y	S	G	140	1,67	2,13	3,71	27	40	73	39120130
F080-150	017	F	4	U	S	G	160	1,67	2,13	3,71	27	40	72	39120131
F080-150	017	F	4	Y	S	G	160	1,67	2,13	3,71	27	40	73	39120132
F080-150	017	F	4	U	S	G	180	1,67	2,13	3,71	27	40	72	39120133
F080-150	017	F	4	Y	S	G	180	1,67	2,13	3,71	27	40	73	39120134
F080-180	017	F	4	U	S	G	140	1,67	2,13	3,71	27	40	72	39120143
F080-180	017	F	4	Y	S	G	140	1,67	2,13	3,71	27	40	74	39120144
F080-180	017	F	4	U	S	G	150	1,67	2,13	3,71	27	40	72	39120145
F080-180	017	F	4	Y	S	G	150	1,67	2,13	3,71	27	40	74	39120146
F080-180	017	F	4	U	S	G	160	1,67	2,13	3,71	27	40	72	39120147
F080-180	017	F	4	Y	S	G	160	1,67	2,13	3,71	27	40	74	39120148
F080-180	017	F	4	U	S	G	170	1,67	2,13	3,71	27	40	72	39120149
F080-180	017	F	4	Y	S	G	170	1,67	2,13	3,71	27	40	74	39120150
F080-180	017	F	4	U	S	G	180	1,67	2,13	3,71	27	40	72	39120151
F080-180	017	F	4	Y	S	G	180	1,67	2,13	3,71	27	40	74	39120152
F080-230	017	F	4	U	S	G	150	1,67	2,13	3,71	27	40	73	39120193
F080-230	017	F	4	Y	S	G	150	1,67	2,13	3,71	27	40	75	39120194
F080-230	017	F	4	U	S	G	160	1,67	2,13	3,71	27	40	73	39120195
F080-230	017	F	4	Y	S	G	160	1,67	2,13	3,71	27	40	75	39120196

26 F: Motors without IE

27 Fluid temperature

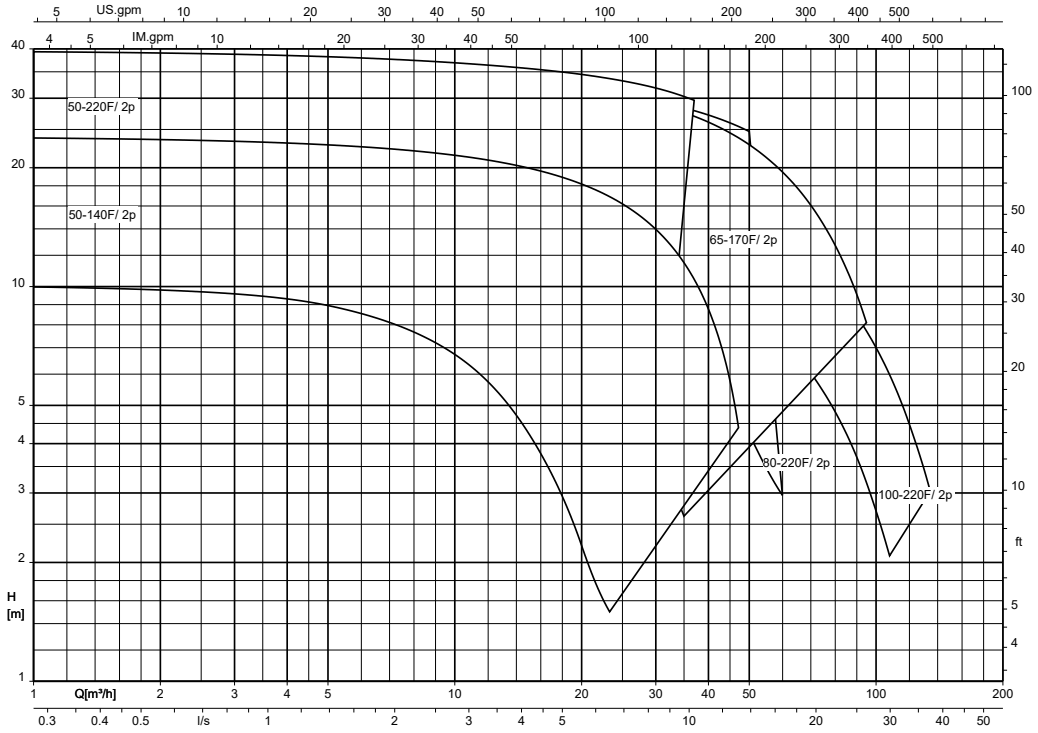
Size n = 1450 rpm	Motor rating	Efficiency class[26]	Number of poles	Motor version	Motor construction type	Material variant	Impeller diameter [mm]	P_2 [kW]	P_1 [kW]	I_N [A]	I_A [A]	T^{27} [°C]	[kg]	Mat. No.
F080-230	023	F	4	U	S	G	170	2,30	2,98	5,15	38	40	75	39120197
F080-230	023	F	4	Y	S	G	170	2,30	2,98	5,15	38	40	76	39120198
F080-230	035	F	4	U	S	G	180	3,55	4,41	7,56	45	40	94	39120199
F080-230	035	F	4	Y	S	G	180	3,55	4,41	7,56	45	40	98	39120200
F080-230	035	F	4	U	S	G	190	3,55	4,41	7,56	45	40	94	39120201
F080-230	035	F	4	Y	S	G	190	3,55	4,41	7,56	45	40	98	39120202
F080-230	039	F	4	U	S	G	200	3,90	5,01	9,91	81	40	99	39120203
F080-230	039	F	4	Y	S	G	200	3,90	5,01	9,91	81	40	102	39120204
F080-230[28]	039	F	4	U	S	G	210	3,90	5,01	9,91	81	40	99	39120205
F080-230[28]	039	F	4	Y	S	G	210	3,90	5,01	9,91	81	40	102	39120206
F100-180	017	F	4	U	S	G	140	1,67	2,13	3,71	27	40	75	39120221
F100-180	017	F	4	Y	S	G	140	1,67	2,13	3,71	27	40	76	39120222
F100-180	017	F	4	U	S	G	160	1,67	2,13	3,71	27	40	75	39120223
F100-180	017	F	4	Y	S	G	160	1,67	2,13	3,71	27	40	76	39120224
F100-180	017	F	4	U	S	G	180	1,67	2,13	3,71	27	40	75	39120225
F100-180	017	F	4	Y	S	G	180	1,67	2,13	3,71	27	40	76	39120226
F100-180[28]	017	F	4	U	S	G	190	1,67	2,13	3,71	27	40	75	39120227
F100-180[28]	017	F	4	Y	S	G	190	1,67	2,13	3,71	27	40	76	39120228
F100-230[28]	017	F	4	U	S	G	160	1,67	2,13	3,71	27	40	75	39120259
F100-230[28]	017	F	4	Y	S	G	160	1,67	2,13	3,71	27	40	77	39120260
F100-230[28]	023	F	4	U	S	G	170	2,30	2,98	5,15	38	40	77	39120261
F100-230[28]	023	F	4	Y	S	G	170	2,30	2,98	5,15	38	40	79	39120262
F100-230	035	F	4	U	S	G	180	3,55	4,41	7,56	45	40	97	39120263
F100-230	035	F	4	Y	S	G	180	3,55	4,41	7,56	45	40	99	39120264
F100-230	035	F	4	U	S	G	190	3,55	4,41	7,56	45	40	97	39120265
F100-230	035	F	4	Y	S	G	190	3,55	4,41	7,56	45	40	99	39120266
F100-230	039	F	4	U	S	G	200	3,90	5,01	9,91	81	40	102	39120267
F100-230	039	F	4	Y	S	G	200	3,90	5,01	9,91	81	40	105	39120268
F100-230[28]	039	F	4	U	S	G	210	3,90	5,01	9,91	81	40	102	39120269
F100-230[28]	039	F	4	Y	S	G	210	3,90	5,01	9,91	81	40	105	39120270
F150-180	065	F	4	U	S	G	160	6,50	7,89	13,40	106	40	130	39120285
F150-180	065	F	4	Y	S	G	160	6,50	7,89	13,40	106	40	134	39120286
F150-180	065	F	4	U	S	G	170	6,50	7,89	13,40	106	40	130	39120287
F150-180	065	F	4	Y	S	G	170	6,50	7,89	13,40	106	40	134	39120288
F150-180	065	F	4	U	S	G	180	6,50	7,89	13,40	106	40	130	39120289
F150-180	065	F	4	Y	S	G	180	6,50	7,89	13,40	106	40	134	39120290
F150-230	065	F	4	U	S	G	170	6,50	7,89	13,40	106	40	131	39120301
F150-230	065	F	4	Y	S	G	170	6,50	7,89	13,40	106	40	136	39120302
F150-230	065	F	4	U	S	G	180	6,50	7,89	13,40	106	40	131	39120303
F150-230	065	F	4	Y	S	G	180	6,50	7,89	13,40	106	40	136	39120304
F150-230	065	F	4	U	S	G	190	6,50	7,89	13,40	106	40	131	39120305
F150-230	065	F	4	Y	S	G	190	6,50	7,89	13,40	106	40	136	39120306
F150-230	065	F	4	U	S	G	200	6,50	7,89	13,40	106	40	131	39120307
F150-230	065	F	4	Y	S	G	200	6,50	7,89	13,40	106	40	136	39120308
F150-230[28]	065	F	4	U	S	G	210	6,50	7,89	13,40	106	40	131	39120309
F150-230[28]	065	F	4	Y	S	G	210	6,50	7,89	13,40	106	40	136	39120310
F150-230	077	F	4	U	S	G	210	7,70	9,20	15,90	118	40	136	39120315
F150-230	077	F	4	Y	S	G	210	7,70	9,20	15,90	118	40	140	39120316
F150-230	077	F	4	U	S	G	220	7,70	9,20	15,90	118	40	136	39120311
F150-230	077	F	4	Y	S	G	220	7,70	9,20	15,90	118	40	140	39120312

28 The motor rating does not cover the complete hydraulic characteristic curve.

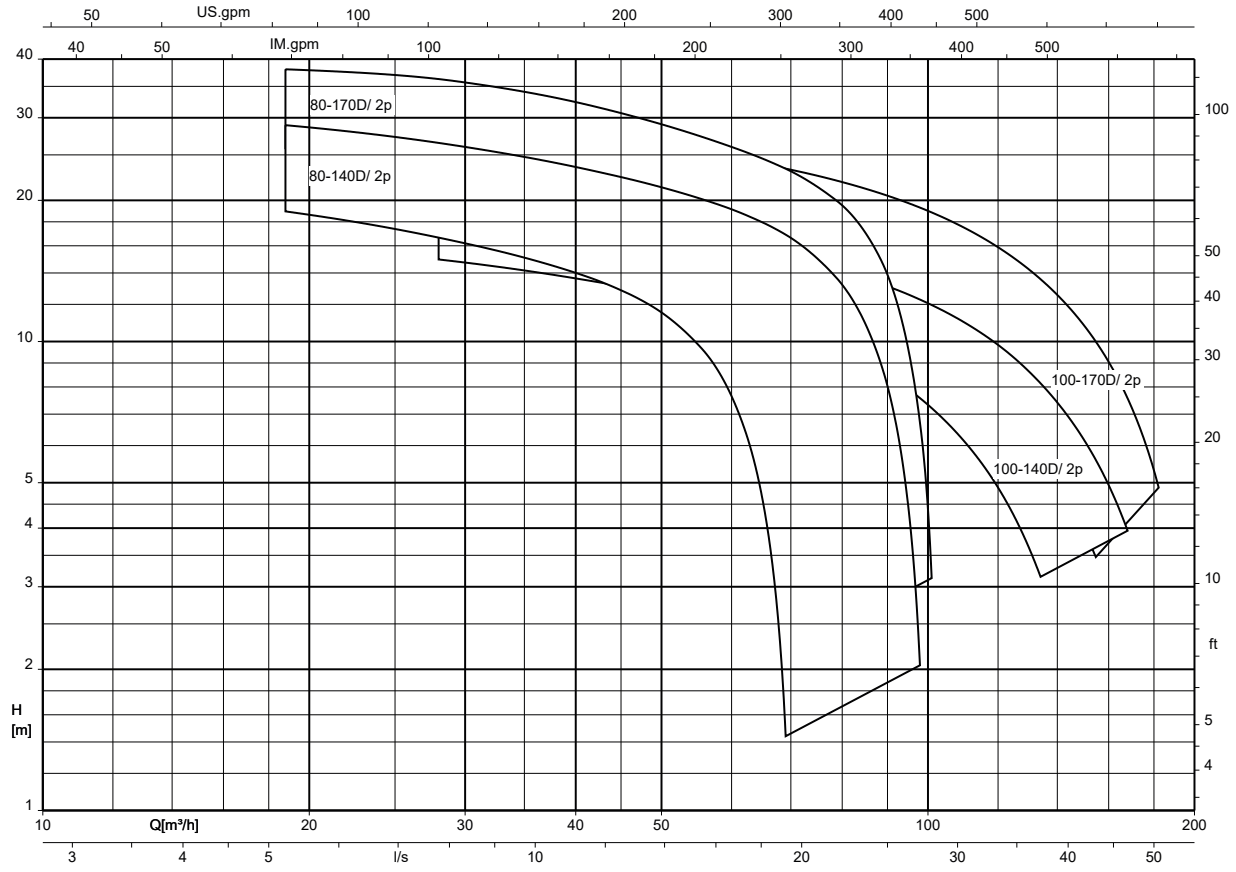
Selection charts

n = 2900 rpm

Amarex, F-max, n = 2900 rpm



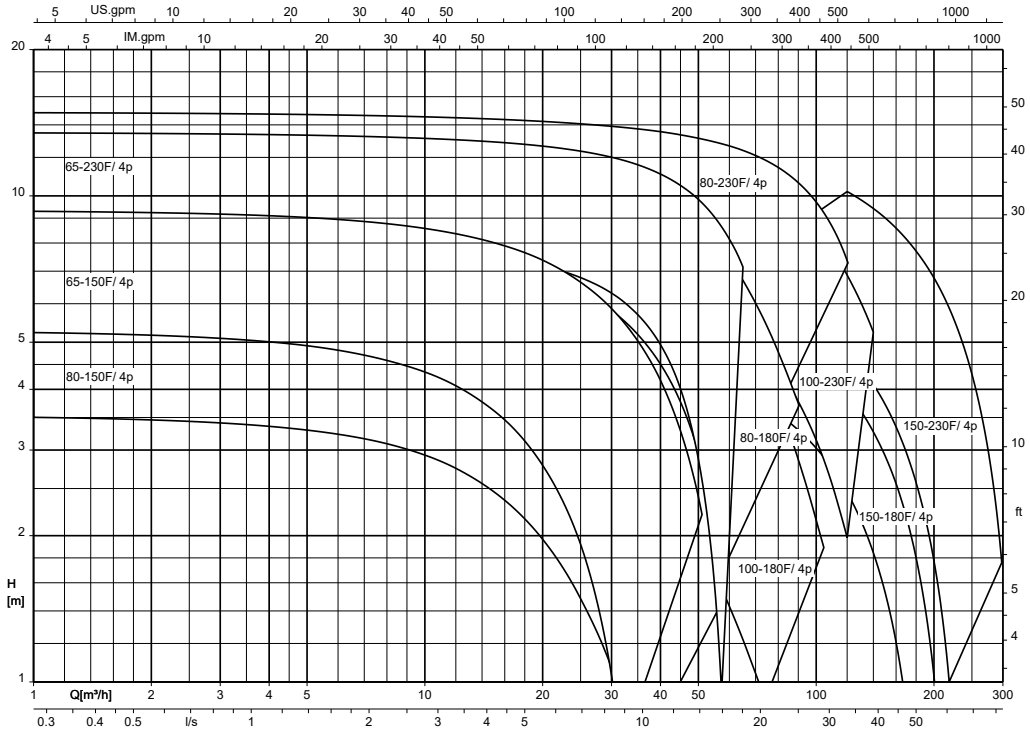
Amarex, D-max, n = 2900 rpm



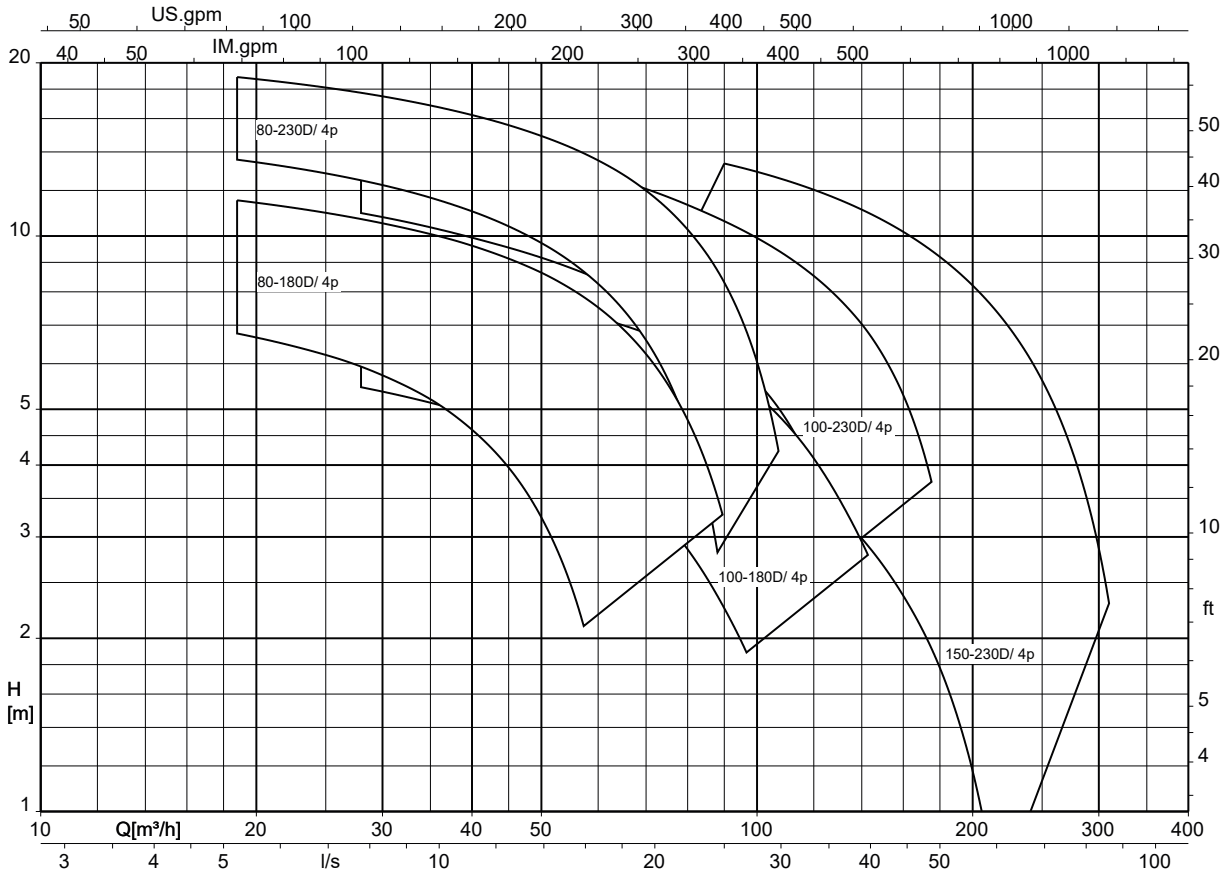
2573.5/04-EN

n = 1450 rpm

Amarex, F-max, n = 1450 rpm



Amarex, D-max, n = 1450 rpm



2573.5/04-EN

Dimensions and connections

Dimensions

Amarex DN 50/65/80/100, transportable version

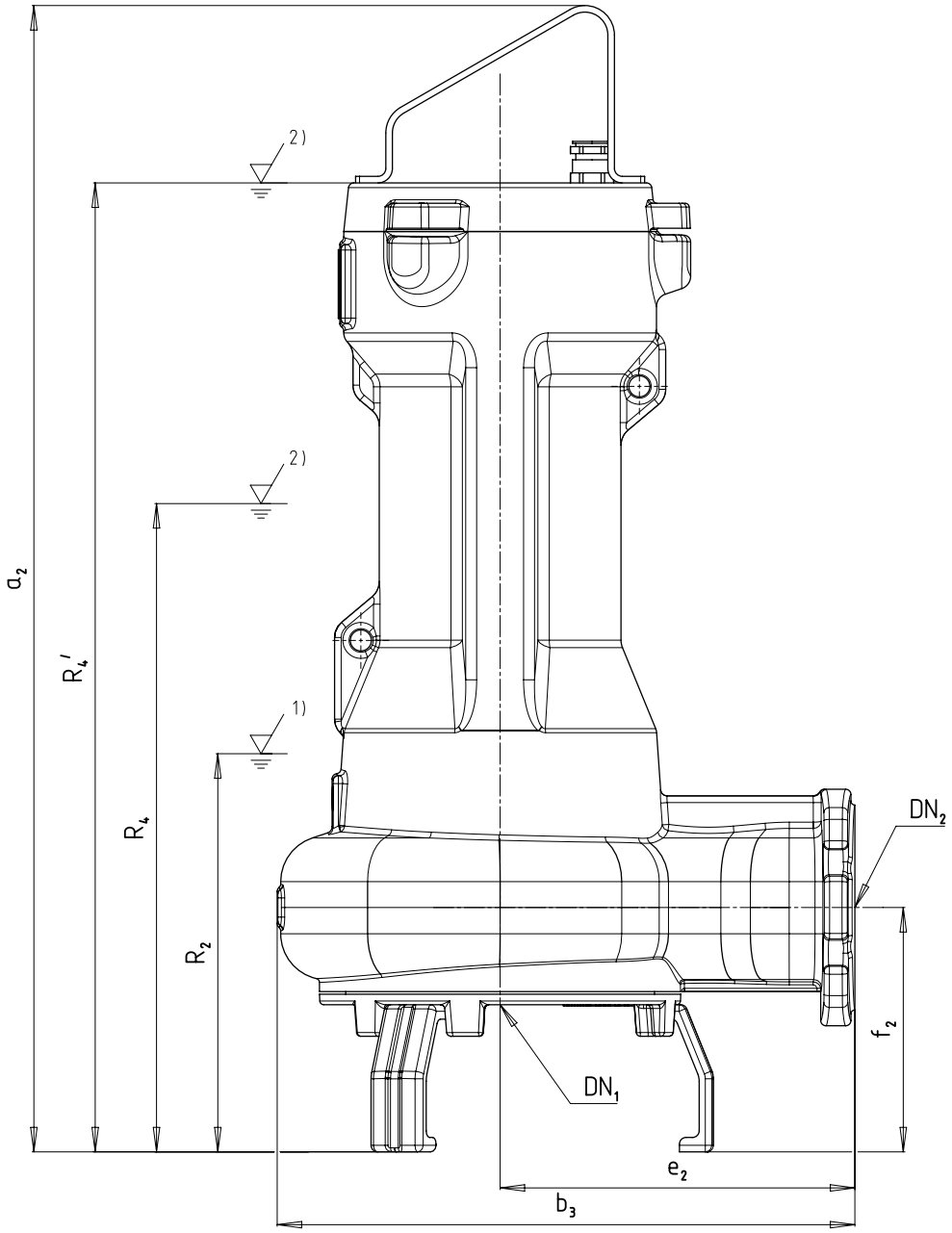


Fig. 1: Dimensions of transportable model

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation

Table 12: Pump dimensions [mm]

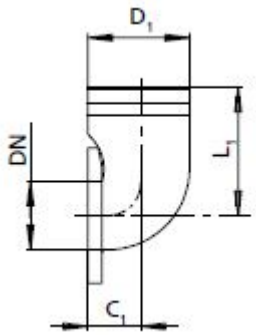
Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_2	b_3	e_2	f_2	R_2	R_4	R_4'
F050-140	014	C	2	U	S	42	50	715	279	170	163	239	374	-
F050-140	014	C	2	Y	S	42	50	724	279	170	163	239	374	-
F050-140	023	F	2	U	S	42	50	715	279	170	163	239	-	600
F050-140	023	F	2	Y	S	42	50	724	279	170	163	239	-	609
F050-220	018	C	2	U	S	42	50	753	311	180	163	247	347	-
F050-220	018	C	2	Y	S	42	50	762	311	180	163	247	347	-
F050-220	024	F	2	U	S	42	50	753	311	180	163	247	-	638
F050-220	024	F	2	Y	S	42	50	762	311	180	163	247	-	647
F050-220	029	C	2	U	S	42	50	753	311	180	163	247	432	-
F050-220	029	C	2	Y	S	42	50	762	311	180	163	247	432	-
F050-220	035	C	2	U	S	42	50	826	311	180	163	360	400	-
F050-220	035	C	2	Y	S	42	50	835	311	180	163	360	400	-
F050-220	040	F	2	U	S	42	50	753	311	180	163	247	-	638
F050-220	040	F	2	Y	S	42	50	762	311	180	163	247	-	647
F050-220	045	C	2	U	S	42	50	826	311	180	163	360	490	-
F050-220	045	C	2	Y	S	42	50	835	311	180	163	360	490	-
F050-220	049	F	2	U	S	42	50	826	311	180	163	360	-	691
F050-220	049	F	2	Y	S	42	50	835	311	180	163	360	-	700
F050-220	073	F	2	U	S	42	50	826	311	180	163	360	-	691
F050-220	073	F	2	Y	S	42	50	835	311	180	163	360	-	700
F065-150	012	C	4	U	S	65	65	784	351	210	184	278	378	-
F065-150	012	C	4	Y	S	65	65	793	351	210	184	278	378	-
F065-150	017	F	4	U	S	65	65	784	351	210	184	278	-	669
F065-150	017	F	4	Y	S	65	65	793	351	210	184	278	-	678
F065-150	021	C	4	U	S	65	65	856	351	210	184	390	430	-
F065-150	021	C	4	Y	S	65	65	865	351	210	184	390	430	-
F065-150	023	F	4	U	S	65	65	784	351	210	184	278	-	669
F065-150	023	F	4	Y	S	65	65	793	351	210	184	278	-	678
F065-170	018	C	2	U	S	65	65	784	351	210	184	278	378	-
F065-170	018	C	2	Y	S	65	65	793	351	210	184	278	378	-
F065-170	024	F	2	U	S	65	65	784	351	210	184	278	-	669
F065-170	024	F	2	Y	S	65	65	793	351	210	184	278	-	678
F065-170	029	C	2	U	S	65	65	784	351	210	184	278	463	-
F065-170	029	C	2	Y	S	65	65	793	351	210	184	278	463	-
F065-170	035	C	2	U	S	65	65	856	351	210	184	390	430	-
F065-170	035	C	2	Y	S	65	65	865	351	210	184	390	430	-
F065-170	040	F	2	U	S	65	65	784	351	210	184	278	-	669
F065-170	040	F	2	Y	S	65	65	793	351	210	184	278	-	678
F065-170	045	C	2	U	S	65	65	856	351	210	184	390	520	-
F065-170	045	C	2	Y	S	65	65	865	351	210	184	390	520	-
F065-170	049	F	2	U	S	65	65	856	351	210	184	390	-	721
F065-170	049	F	2	Y	S	65	65	865	351	210	184	390	-	730
F065-170	073	F	2	U	S	65	65	856	351	210	184	390	-	721
F065-170	073	F	2	Y	S	65	65	865	351	210	184	390	-	730
F065-230	012	C	4	U	S	65	65	784	351	210	184	278	378	-
F065-230	012	C	4	Y	S	65	65	793	351	210	184	278	378	-
F065-230	017	F	4	U	S	65	65	784	351	210	184	278	-	669
F065-230	017	F	4	Y	S	65	65	793	351	210	184	278	-	678
F065-230	021	C	4	U	S	65	65	856	351	210	184	390	430	-
F065-230	021	C	4	Y	S	65	65	865	351	210	184	390	430	-
F065-230	023	F	4	U	S	65	65	784	351	210	184	278	-	669
F065-230	023	F	4	Y	S	65	65	793	351	210	184	278	-	678
F065-230	035	F	4	U	S	65	65	856	351	210	184	390	-	721
F065-230	035	F	4	Y	S	65	65	865	351	210	184	390	-	730

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_2	b_3	e_2	f_2	R_2	R_4	R_4'
F065-230	039	F	4	U	S	65	65	856	351	210	184	280	-	721
F065-230	039	F	4	Y	S	65	65	865	351	210	184	280	-	730
D080-140	024	F	2	U	S	80	80	758	373	230	176	252	-	643
D080-140	024	F	2	Y	S	80	80	767	373	230	176	252	-	652
D080-140	029	C	2	U	S	80	80	758	373	230	176	252	437	-
D080-140	029	C	2	Y	S	80	80	767	373	230	176	252	437	-
D080-140	035	C	2	U	S	80	80	786	373	230	176	320	360	-
D080-140	035	C	2	Y	S	80	80	795	373	230	176	320	360	-
D080-140	040	F	2	U	S	80	80	758	373	230	176	252	-	643
D080-140	040	F	2	Y	S	80	80	767	373	230	176	252	-	652
D080-140	049	F	2	U	S	80	80	786	373	230	176	320	-	651
D080-140	049	F	2	Y	S	80	80	795	373	230	176	320	-	660
F080-150	012	C	4	U	S	80	80	798	385	230	194	292	392	-
F080-150	012	C	4	Y	S	80	80	807	385	230	194	292	392	-
F080-150	017	F	4	U	S	80	80	798	385	230	194	292	-	683
F080-150	017	F	4	Y	S	80	80	807	385	230	194	292	-	692
F080-150	021	C	4	U	S	80	80	871	384	230	182	405	445	-
F080-150	021	C	4	Y	S	80	80	880	384	230	182	405	445	-
D080-170	045	C	2	U	S	80	80	837	390	230	182	371	501	-
D080-170	045	C	2	Y	S	80	80	846	390	230	182	371	501	-
D080-170	060	C	2	U	S	80	80	857	390	230	182	421	441	-
D080-170	060	C	2	Y	S	80	80	866	390	230	182	421	441	-
D080-170	073	F	2	U	S	80	80	837	390	230	182	371	-	702
D080-170	073	F	2	Y	S	80	80	846	390	230	182	371	-	711
D080-170	084	F	2	U	S	80	80	857	390	230	182	421	-	722
D080-170	084	F	2	Y	S	80	80	866	390	230	182	421	-	731
D080-180	012	C	4	U	S	90	80	758	373	230	176	252	352	-
D080-180	012	C	4	Y	S	90	80	767	373	230	176	252	352	-
D080-180	017	F	4	U	S	90	80	758	373	230	176	252	-	643
D080-180	017	F	4	Y	S	90	80	767	373	230	176	252	-	652
D080-180	021	C	4	U	S	90	80	786	373	230	176	320	360	-
D080-180	021	C	4	Y	S	90	80	795	373	230	176	320	360	-
D080-180	023	F	4	U	S	90	80	758	373	230	176	252	-	643
D080-180	023	F	4	Y	S	90	80	767	373	230	176	252	-	652
F080-180	012	C	4	U	S	80	80	798	385	230	194	292	392	-
F080-180	012	C	4	Y	S	80	80	807	385	230	194	292	392	-
F080-180	017	F	4	U	S	80	80	798	385	230	194	292	-	683
F080-180	017	F	4	Y	S	80	80	807	385	230	194	292	-	692
F080-180	021	C	4	U	S	80	80	871	384	230	182	405	445	-
F080-180	021	C	4	Y	S	80	80	880	384	230	182	405	445	-
F080-180	023	F	4	U	S	80	80	798	385	230	194	292	-	683
F080-180	023	F	4	Y	S	80	80	807	385	230	194	292	-	692
F080-180	035	F	4	U	S	80	80	871	384	230	182	405	-	736
F080-180	035	F	4	Y	S	80	80	880	384	230	182	405	-	745
F080-180	036	C	4	U	S	80	80	891	384	230	194	455	415	-
F080-180	036	C	4	Y	S	80	80	900	384	230	194	455	415	-
F080-180	045	C	4	U	S	80	80	891	384	230	194	455	495	-
F080-180	045	C	4	Y	S	80	80	900	384	230	194	455	495	-
F080-220	024	F	2	U	S	80	80	798	385	230	194	292	-	683
F080-220	024	F	2	Y	S	80	80	807	385	230	194	292	-	692
F080-220	029	C	2	U	S	80	80	798	385	230	194	292	477	-
F080-220	029	C	2	Y	S	80	80	807	385	230	194	292	477	-
F080-220	035	C	2	U	S	80	80	871	384	230	182	405	445	-
F080-220	035	C	2	Y	S	80	80	880	384	230	182	405	445	-
F080-220	040	F	2	U	S	80	80	798	385	230	194	292	-	683

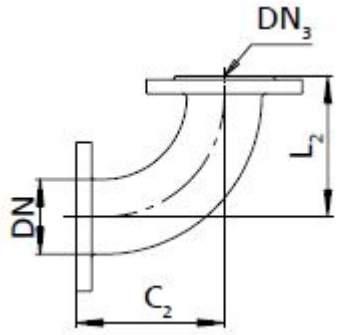
Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_2	b_3	e_2	f_2	R_2	R_4	R_4'
F080-220	040	F	2	Y	S	80	80	807	385	230	194	292	-	692
F080-220	045	C	2	U	S	80	80	871	384	230	182	405	535	-
F080-220	045	C	2	Y	S	80	80	880	384	230	182	405	535	-
F080-220	049	F	2	U	S	80	80	871	384	230	182	405	-	736
F080-220	049	F	2	Y	S	80	80	880	384	230	182	405	-	745
F080-220	060	C	2	U	S	80	80	891	384	230	194	455	475	-
F080-220	060	C	2	Y	S	80	80	900	384	230	194	455	475	-
F080-220	073	F	2	U	S	80	80	871	384	230	182	405	-	736
F080-220	073	F	2	Y	S	80	80	880	384	230	182	405	-	745
F080-220	084	F	2	U	S	80	80	891	384	230	194	455	-	756
F080-220	084	F	2	Y	S	80	80	900	384	230	194	455	-	765
D080-230	035	F	4	U	S	90	80	837	390	230	182	371	-	702
D080-230	035	F	4	Y	S	90	80	846	390	230	182	371	-	711
D080-230	036	C	4	U	S	90	80	857	390	230	182	421	381	-
D080-230	036	C	4	Y	S	90	80	866	390	230	182	421	381	-
D080-230	039	F	4	U	S	90	80	837	390	230	182	261	-	702
D080-230	039	F	4	Y	S	90	80	846	390	230	182	261	-	711
D080-230	045	C	4	U	S	90	80	857	390	230	182	421	461	-
D080-230	045	C	4	Y	S	90	80	866	390	230	182	421	461	-
D080-230	065	F	4	U	S	90	80	857	390	230	182	421	-	722
D080-230	065	F	4	Y	S	90	80	866	390	230	182	421	-	731
F080-230	017	F	4	U	S	80	80	798	385	230	194	292	-	683
F080-230	017	F	4	Y	S	80	80	807	385	230	194	292	-	692
F080-230	021	C	4	U	S	80	80	871	384	230	182	405	445	-
F080-230	021	C	4	Y	S	80	80	880	384	230	182	405	445	-
F080-230	023	F	4	U	S	80	80	798	385	230	194	292	-	683
F080-230	023	F	4	Y	S	80	80	807	385	230	194	292	-	692
F080-230	035	F	4	U	S	80	80	871	384	230	182	405	-	736
F080-230	035	F	4	Y	S	80	80	880	384	230	182	405	-	745
F080-230	036	C	4	U	S	80	80	891	384	230	194	455	415	-
F080-230	036	C	4	Y	S	80	80	900	384	230	194	455	415	-
F080-230	039	F	4	U	S	80	80	871	384	230	182	295	-	736
F080-230	039	F	4	Y	S	80	80	880	384	230	182	295	-	745
F080-230	045	C	4	U	S	80	80	891	384	230	194	455	495	-
F080-230	045	C	4	Y	S	80	80	900	384	230	194	455	495	-
F080-230	065	F	4	U	S	80	80	891	384	230	194	455	-	756
F080-230	065	F	4	Y	S	80	80	900	384	230	194	455	-	765
D100-140	035	C	2	U	S	90	100	812	431	270	193	346	386	-
D100-140	035	C	2	Y	S	90	100	821	431	270	193	346	386	-
D100-140	040	F	2	U	S	90	100	784	431	270	193	278	-	669
D100-140	040	F	2	Y	S	90	100	793	431	270	193	278	-	678
D100-140	049	F	2	U	S	90	100	812	431	270	193	346	-	677
D100-140	049	F	2	Y	S	90	100	821	431	270	193	346	-	686
D100-170	045	C	2	U	S	90	100	844	440	270	186	378	508	-
D100-170	045	C	2	Y	S	90	100	853	440	270	186	378	508	-
D100-170	060	C	2	U	S	90	100	864	440	270	186	428	448	-
D100-170	060	C	2	Y	S	90	100	873	440	270	186	428	448	-
D100-170	073	F	2	U	S	90	100	844	440	270	186	378	-	709
D100-170	073	F	2	Y	S	90	100	853	440	270	186	378	-	718
D100-170	084	F	2	U	S	90	100	864	440	270	186	428	-	729
D100-170	084	F	2	Y	S	90	100	873	440	270	186	428	-	738
D100-180	012	C	4	U	S	110	100	784	431	270	193	278	378	-
D100-180	012	C	4	Y	S	110	100	793	431	270	193	278	378	-
D100-180	017	F	4	U	S	110	100	784	431	270	193	278	-	669
D100-180	017	F	4	Y	S	110	100	793	431	270	193	278	-	678

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_2	b_3	e_2	f_2	R_2	R_4	R_4'
D100-180	021	C	4	U	S	110	100	812	431	270	193	346	386	-
D100-180	021	C	4	Y	S	110	100	821	431	270	193	346	386	-
D100-180	023	F	4	U	S	110	100	784	431	270	193	278	-	669
D100-180	023	F	4	Y	S	110	100	793	431	270	193	278	-	678
F100-180	012	C	4	U	S	100	100	821	433	270	207	315	415	-
F100-180	012	C	4	Y	S	100	100	830	433	270	207	315	415	-
F100-180	017	F	4	U	S	100	100	821	433	270	207	315	-	706
F100-180	017	F	4	Y	S	100	100	830	433	270	207	315	-	715
F100-180	021	C	4	U	S	100	100	894	433	270	207	428	468	-
F100-180	021	C	4	Y	S	100	100	903	433	270	207	428	468	-
F100-180	023	F	4	U	S	100	100	821	433	270	207	315	-	706
F100-180	023	F	4	Y	S	100	100	830	433	270	207	315	-	715
F100-180	035	F	4	U	S	100	100	894	433	270	207	428	-	759
F100-180	035	F	4	Y	S	100	100	903	433	270	207	428	-	768
F100-180	036	C	4	U	S	100	100	914	433	270	207	478	438	-
F100-180	036	C	4	Y	S	100	100	923	433	270	207	478	438	-
F100-220	035	C	2	U	S	100	100	894	433	270	207	428	468	-
F100-220	035	C	2	Y	S	100	100	903	433	270	207	428	468	-
F100-220	045	C	2	U	S	100	100	894	433	270	207	428	558	-
F100-220	045	C	2	Y	S	100	100	903	433	270	207	428	558	-
F100-220	049	F	2	U	S	100	100	894	433	270	207	428	-	759
F100-220	049	F	2	Y	S	100	100	903	433	270	207	428	-	768
F100-220	060	C	2	U	S	100	100	914	433	270	207	478	498	-
F100-220	060	C	2	Y	S	100	100	923	433	270	207	478	498	-
F100-220	073	F	2	U	S	100	100	894	433	270	207	428	-	759
F100-220	073	F	2	Y	S	100	100	903	433	270	207	428	-	768
F100-220	084	F	2	U	S	100	100	914	433	270	207	478	-	779
F100-220	084	F	2	Y	S	100	100	923	433	270	207	478	-	788
D100-230	035	F	4	U	S	110	100	844	440	270	186	378	-	709
D100-230	035	F	4	Y	S	110	100	853	440	270	186	378	-	718
D100-230	036	C	4	U	S	110	100	864	440	270	186	428	388	-
D100-230	036	C	4	Y	S	110	100	873	440	270	186	428	388	-
D100-230	039	F	4	U	S	110	100	844	440	270	186	268	-	709
D100-230	039	F	4	Y	S	110	100	853	440	270	186	268	-	718
D100-230	045	C	4	U	S	110	100	864	440	270	186	428	468	-
D100-230	045	C	4	Y	S	110	100	873	440	270	186	428	468	-
F100-230	017	F	4	U	S	100	100	821	433	270	207	315	-	706
F100-230	017	F	4	Y	S	100	100	830	433	270	207	315	-	715
F100-230	021	C	4	U	S	100	100	894	433	270	207	428	468	-
F100-230	021	C	4	Y	S	100	100	903	433	270	207	428	468	-
F100-230	023	F	4	U	S	100	100	821	433	270	207	315	-	706
F100-230	023	F	4	Y	S	100	100	830	433	270	207	315	-	715
F100-230	035	F	4	U	S	100	100	894	433	270	207	428	-	759
F100-230	035	F	4	Y	S	100	100	903	433	270	207	428	-	768
F100-230	036	C	4	U	S	100	100	914	433	270	207	478	438	-
F100-230	036	C	4	Y	S	100	100	923	433	270	207	478	438	-
F100-230	039	F	4	U	S	100	100	894	433	270	207	318	-	759
F100-230	039	F	4	Y	S	100	100	903	433	270	207	318	-	768
F100-230	045	C	4	U	S	100	100	914	433	270	207	478	518	-
F100-230	045	C	4	Y	S	100	100	923	433	270	207	478	518	-
F100-230	065	F	4	U	S	100	100	914	433	270	207	478	-	779
F100-230	065	F	4	Y	S	100	100	923	433	270	207	478	-	788

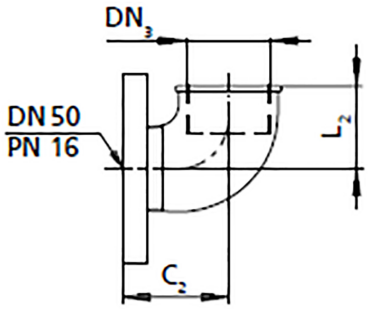
Connection elbow



Connection elbow with flange/hose connection (P13)



Connection elbow with flanges (P14)

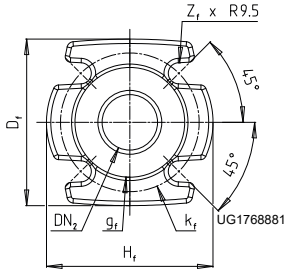


Connection elbow with internal thread and external thread (P14) and threaded flange (P27)

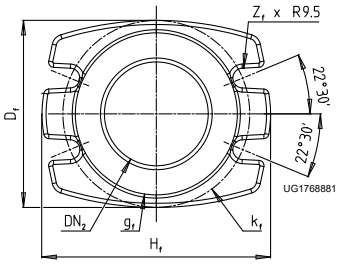
Table 13: Dimensions of connection elbow [mm]

DN	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)		
	D_1	C_1	L_1	DN_3	C_2	L_2	DN_3	C_2	L_2
50	-	-	-	-	-	-	G 2"	78	58
65	75	40	135	65	135	135	-	-	-
80	75	115	175	80	135	135	-	-	-
100	110	45	195	100	120	135	-	-	-

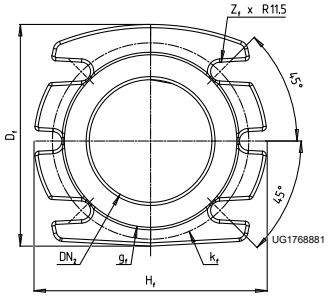
Pump flange DN2



Pump flange DN 50 / 65



Pump flange DN 80 / 100



Pump flange DN 150

Table 14: Dimensions of pump flange DN2 [mm]

Flange variant	DN_2	g_f	k_f	D_f	H_f	Z_f
50	50	99	125	150	150	4
65	65	118	145	170	170	4
80	80	132	160	160	200	4
100	100	156	180	180	220	4
150	100	211	240	271	285	6

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Pump flange DN3

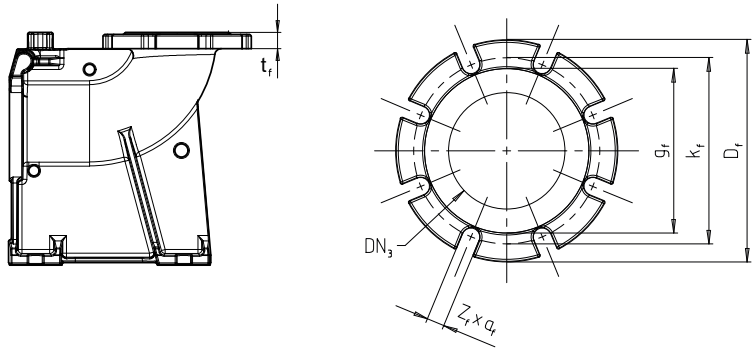


Fig. 2: Dimensions of pump flange DN3

Table 15: Pump flange dimensions DN3 [mm]

Flange variant	DN_3	g_f	k_f	t_f	D_f	$Zf^{29)}$	a_f
DN 50/50 ISO	50	102	125	20	160	4	20
DN 50/50 ASME	50	102	120,5	20	160	4	20
DN 65/65	65	122	140	22	180	4	21
DN 65/80 ISO	80	133	160	27	200	8	18
DN 65/80 ASME	80	127	152,5	26,5	191	4	19
DN 80/80 ISO	80	132	160	23	200	8	18
DN 80/80 ASME	80	127	152,5	23	190	4	19
DN 80/100	100	156	180	23	220	8	18
DN 100/100	100	156	180	24	220	8	19
DN 150/150	150	212	240	26	285	8	23

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29 Number of holes

Amarex DN 50, stationary installation, guide wire arrangement, single guide rail arrangement, guide hoop arrangement

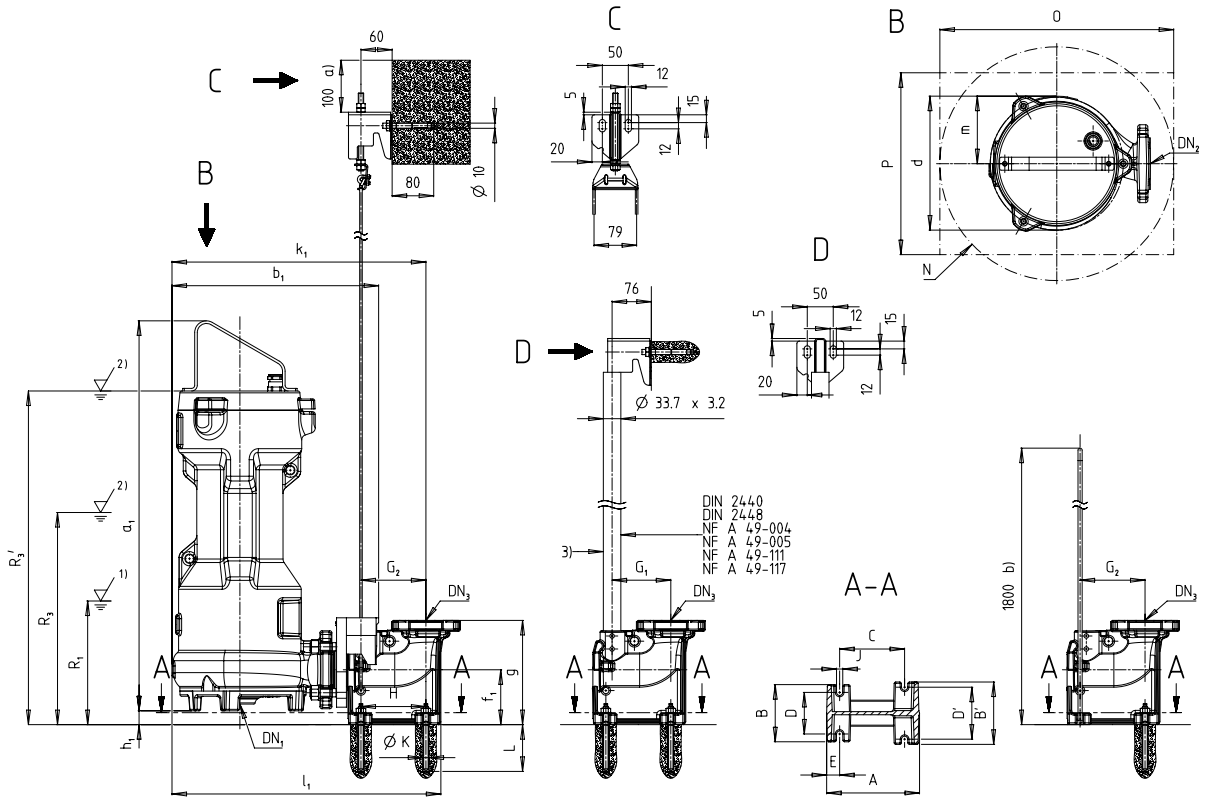


Fig. 3: Dimensions, Amarex DN 50, stationary installation, guide wire arrangement, single guide rail arrangement, guide hoop arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 16: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F050-140	014	C	2	U	S	42	50	631	368	216	150	106	201	99	27	150	457	125	486	109	4	182	317	-
F050-140	014	C	2	Y	S	42	50	640	368	216	150	106	201	99	27	150	457	125	486	109	4	182	317	-
F050-140	023	F	2	U	S	42	50	631	368	216	150	106	201	99	27	150	457	125	486	109	4	182	-	543
F050-140	023	F	2	Y	S	42	50	640	368	216	150	106	201	99	27	150	457	125	486	109	4	182	-	552
F050-220	018	C	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	290	-
F050-220	018	C	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	290	-
F050-220	024	F	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	581
F050-220	024	F	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	590
F050-220	029	C	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	375	-
F050-220	029	C	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	375	-
F050-220	035	C	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	343	-
F050-220	035	C	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	343	-
F050-220	040	F	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	581
F050-220	040	F	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	590
F050-220	045	C	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	433	-

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F050-220	045	C	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	433	-
F050-220	049	F	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	634
F050-220	049	F	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	643
F050-220	073	F	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	634
F050-220	073	F	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	643

Table 17: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F050-140	014	C	2	U	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-140	014	C	2	Y	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-140	023	F	2	U	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-140	023	F	2	Y	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	018	C	2	U	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	018	C	2	Y	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	024	F	2	U	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	024	F	2	Y	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	029	C	2	U	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	029	C	2	Y	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	035	C	2	U	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350
F050-220	035	C	2	Y	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350
F050-220	040	F	2	U	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	040	F	2	Y	S	50	179	110	120	125	80	100	25	113	125	125	12	10	90	465	465	350
F050-220	045	C	2	U	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350
F050-220	045	C	2	Y	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350
F050-220	049	F	2	U	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350
F050-220	049	F	2	Y	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350
F050-220	073	F	2	U	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350
F050-220	073	F	2	Y	S	50	179	110	120	125	80	100	25	-	125	125	12	10	90	465	465	350

Amarex DN 50, stationary installation, twin guide rail arrangement

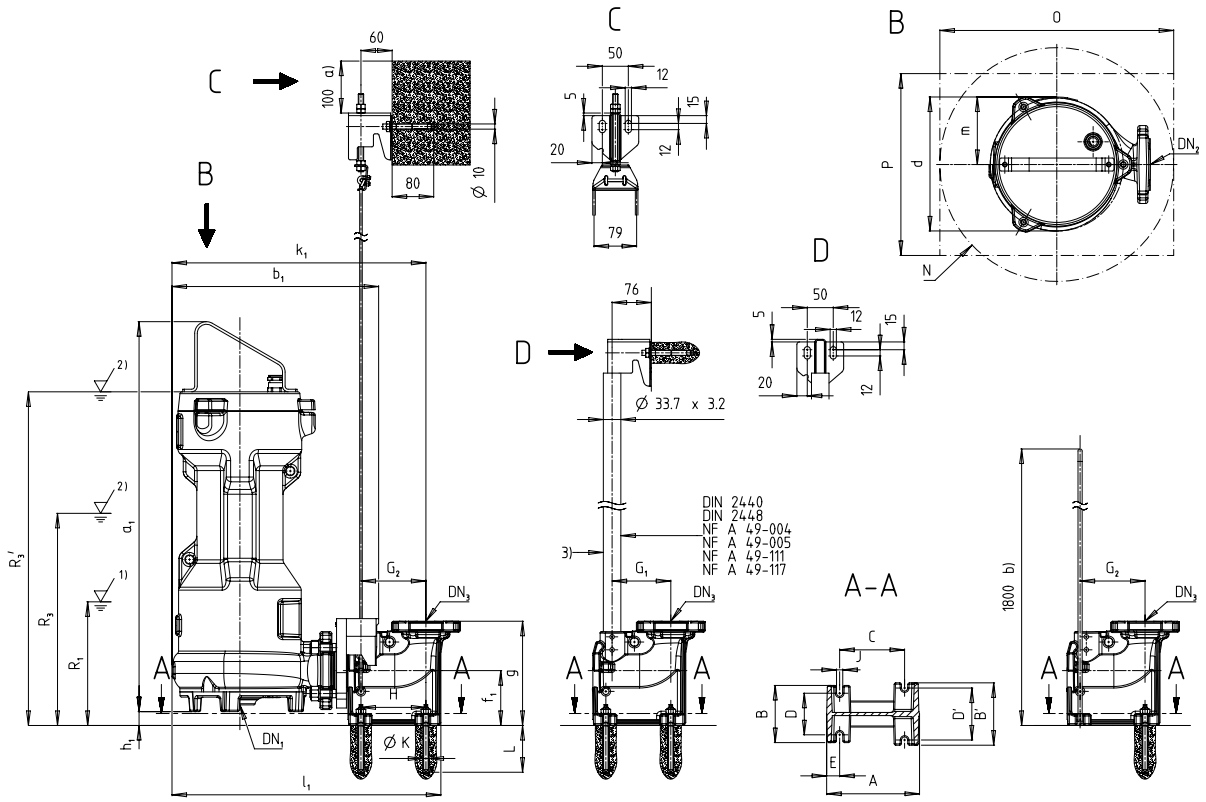


Fig. 4: Dimensions, Amarex DN 50, stationary installation, twin guide rail arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 18: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F050-140	014	C	2	U	S	42	50	631	368	216	150	106	201	99	27	150	457	125	486	109	4	182	317	-
F050-140	014	C	2	Y	S	42	50	640	368	216	150	106	201	99	27	150	457	125	486	109	4	182	317	-
F050-140	023	F	2	U	S	42	50	631	368	216	150	106	201	99	27	150	457	125	486	109	4	182	-	543
F050-140	023	F	2	Y	S	42	50	640	368	216	150	106	201	99	27	150	457	125	486	109	4	182	-	552
F050-220	018	C	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	290	-
F050-220	018	C	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	290	-
F050-220	024	F	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	581
F050-220	024	F	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	590
F050-220	029	C	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	375	-
F050-220	029	C	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	375	-
F050-220	035	C	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	343	-
F050-220	035	C	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	343	-
F050-220	040	F	2	U	S	42	50	669	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	581
F050-220	040	F	2	Y	S	42	50	678	398	258	150	106	201	99	27	150	489	125	518	130	4	190	-	590
F050-220	045	C	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	433	-
F050-220	045	C	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	433	-

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F050-220	049	F	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	634
F050-220	049	F	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	643
F050-220	073	F	2	U	S	42	50	742	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	634
F050-220	073	F	2	Y	S	42	50	751	398	258	150	106	201	99	27	150	489	125	518	130	4	303	-	643

Table 19: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F050-140	014	C	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-140	014	C	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-140	023	F	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-140	023	F	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	018	C	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	018	C	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	024	F	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	024	F	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	029	C	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	029	C	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	035	C	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	035	C	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	040	F	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	040	F	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	045	C	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	045	C	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	049	F	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	049	F	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	073	F	2	U	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350
F050-220	073	F	2	Y	S	50	179	110	120	125	80	100	25	113	-	125	12	10	90	465	465	350

Amarex DN 65, stationary installation, guide wire arrangement, single guide rail arrangement, guide hoop arrangement

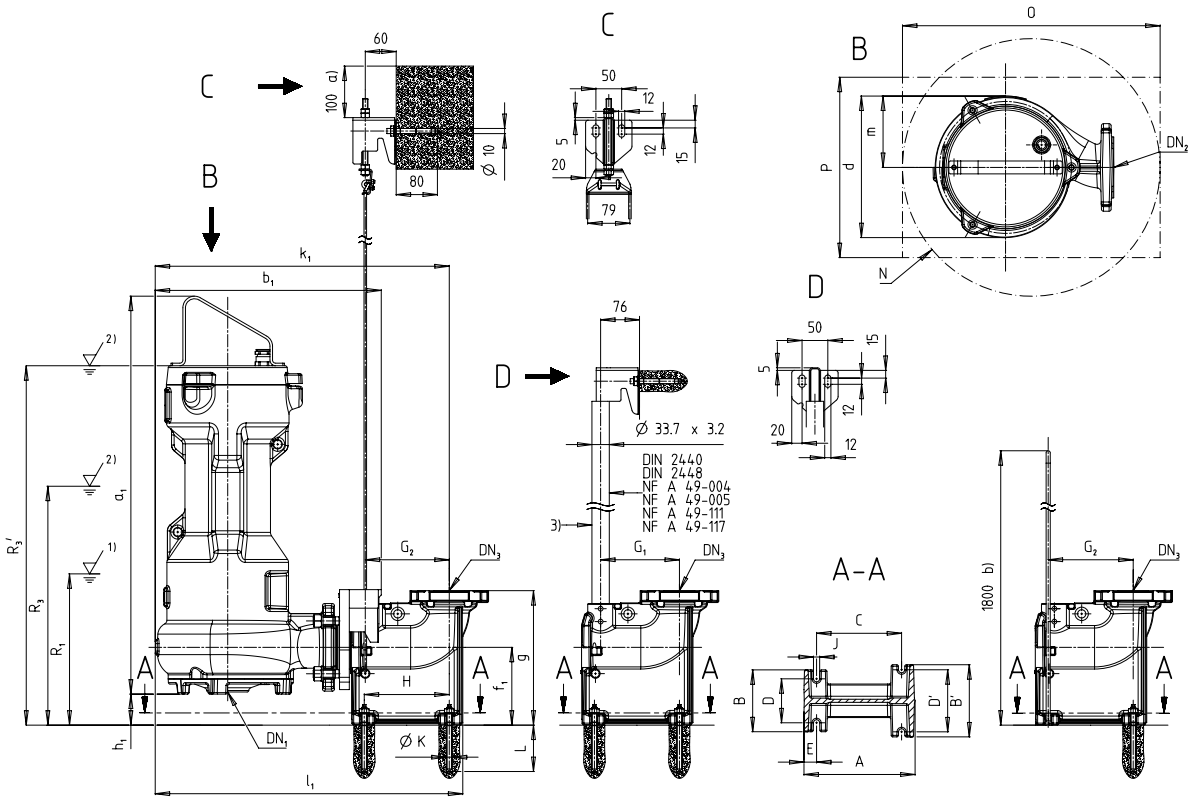


Fig. 5: Dimensions, Amarex 65, stationary installation, guide wire arrangement, single guide rail arrangement, guide hoop arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 20: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F065-150	012	C	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-150	012	C	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-150	017	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-150	017	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-150	021	C	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-150	021	C	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-150	023	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-150	023	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-170	018	C	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-170	018	C	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-170	024	F	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-170	024	F	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-170	029	C	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	430	-
F065-170	029	C	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	430	-
F065-170	035	C	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-

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Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F065-170	035	C	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-170	040	F	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-170	040	F	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-170	045	C	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	487	-
F065-170	045	C	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	487	-
F065-170	049	F	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	688
F065-170	049	F	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	697
F065-170	073	F	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	688
F065-170	073	F	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	697
F065-230	012	C	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-230	012	C	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-230	017	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-230	017	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-230	021	C	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-230	021	C	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-230	023	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-230	023	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-230	035	F	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	688
F065-230	035	F	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	697
F065-230	039	F	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	247	-	688
F065-230	039	F	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	247	-	697

Table 21: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F065-150	012	C	4	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-150	012	C	4	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-150	017	F	4	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-150	017	F	4	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-150	021	C	4	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-150	021	C	4	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-150	023	F	4	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-150	023	F	4	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	018	C	2	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	018	C	2	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	024	F	2	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	024	F	2	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	029	C	2	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	029	C	2	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	035	C	2	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-170	035	C	2	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-170	040	F	2	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	040	F	2	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-170	045	C	2	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F065-170	045	C	2	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-170	049	F	2	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-170	049	F	2	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-170	073	F	2	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-170	073	F	2	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-230	012	C	4	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-230	012	C	4	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-230	017	F	4	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-230	017	F	4	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-230	021	C	4	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-230	021	C	4	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-230	023	F	4	U	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-230	023	F	4	Y	S	65	216	120	140	165	85	120	25	153	165	165	12	10	90	550	550	400
F065-230	035	F	4	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-230	035	F	4	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-230	039	F	4	U	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400
F065-230	039	F	4	Y	S	65	216	120	140	165	85	120	25	-	165	165	12	10	90	550	550	400

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Amarex DN 65, stationary installation, twin guide rail arrangement

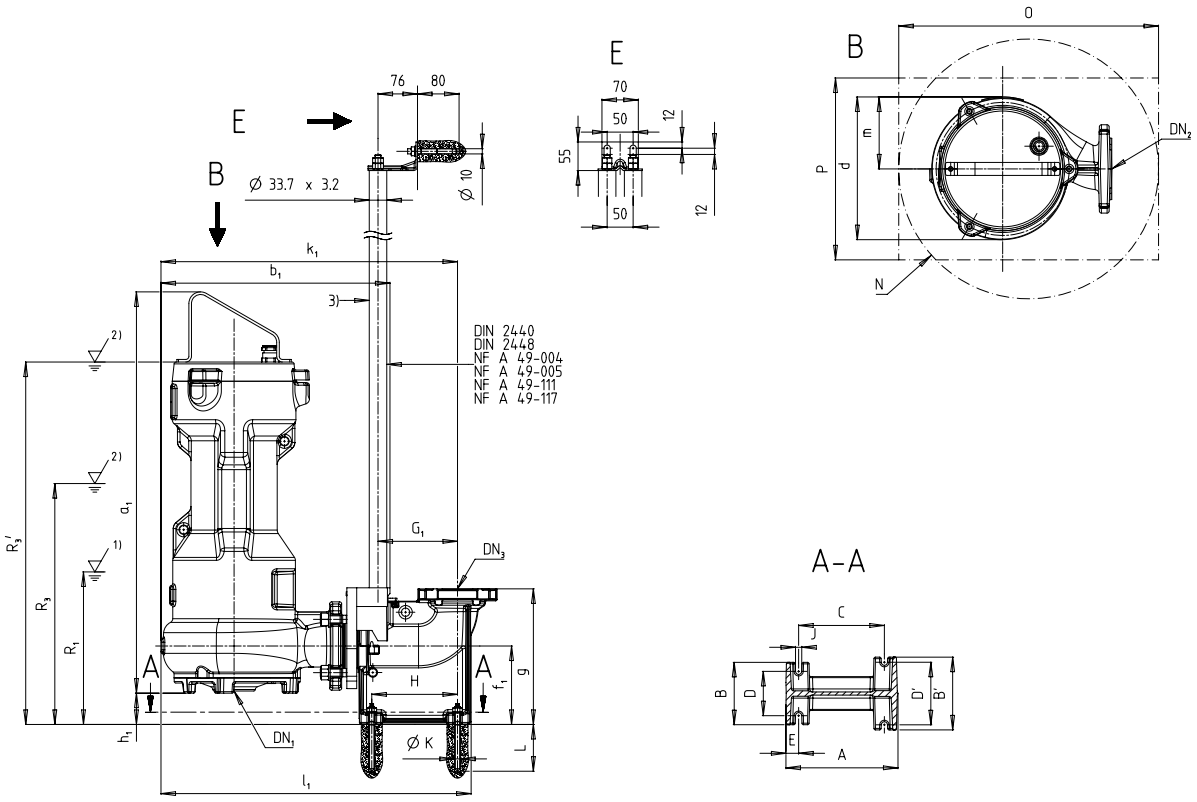


Fig. 6: Dimensions, Amarex DN 65, stationary installation, twin guide rail arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 22: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F065-150	012	C	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-150	012	C	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-150	017	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-150	017	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-150	021	C	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-150	021	C	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-150	023	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-150	023	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-170	018	C	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-170	018	C	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-170	024	F	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-170	024	F	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-170	029	C	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	430	-
F065-170	029	C	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	430	-
F065-170	035	C	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-170	035	C	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F065-170	040	F	2	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-170	040	F	2	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-170	045	C	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	487	-
F065-170	045	C	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	487	-
F065-170	049	F	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	688
F065-170	049	F	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	697
F065-170	073	F	2	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	688
F065-170	073	F	2	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	697
F065-230	012	C	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-230	012	C	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	345	-
F065-230	017	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-230	017	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-230	021	C	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-230	021	C	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	397	-
F065-230	023	F	4	U	S	65	65	691	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	636
F065-230	023	F	4	Y	S	65	65	700	440	274	170	151	261	118	60	170	569	145	595	138	4	245	-	645
F065-230	035	F	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	688
F065-230	035	F	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	357	-	697
F065-230	039	F	4	U	S	65	65	763	440	274	170	151	261	118	60	170	569	145	595	138	4	247	-	688
F065-230	039	F	4	Y	S	65	65	772	440	274	170	151	261	118	60	170	569	145	595	138	4	247	-	697

Table 23: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F065-150	012	C	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-150	012	C	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-150	017	F	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-150	017	F	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-150	021	C	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-150	021	C	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-150	023	F	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-150	023	F	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	018	C	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	018	C	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	024	F	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	024	F	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	029	C	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	029	C	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	035	C	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	035	C	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	040	F	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	040	F	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	045	C	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	045	C	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400

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Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F065-170	049	F	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	049	F	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	073	F	2	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-170	073	F	2	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	012	C	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	012	C	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	017	F	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	017	F	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	021	C	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	021	C	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	023	F	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	023	F	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	035	F	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	035	F	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	039	F	4	U	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400
F065-230	039	F	4	Y	S	65	216	120	140	165	85	120	25	153	-	165	12	10	90	550	550	400

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Amarex DN 80, stationary installation, guide wire arrangement, twin guide rail arrangement

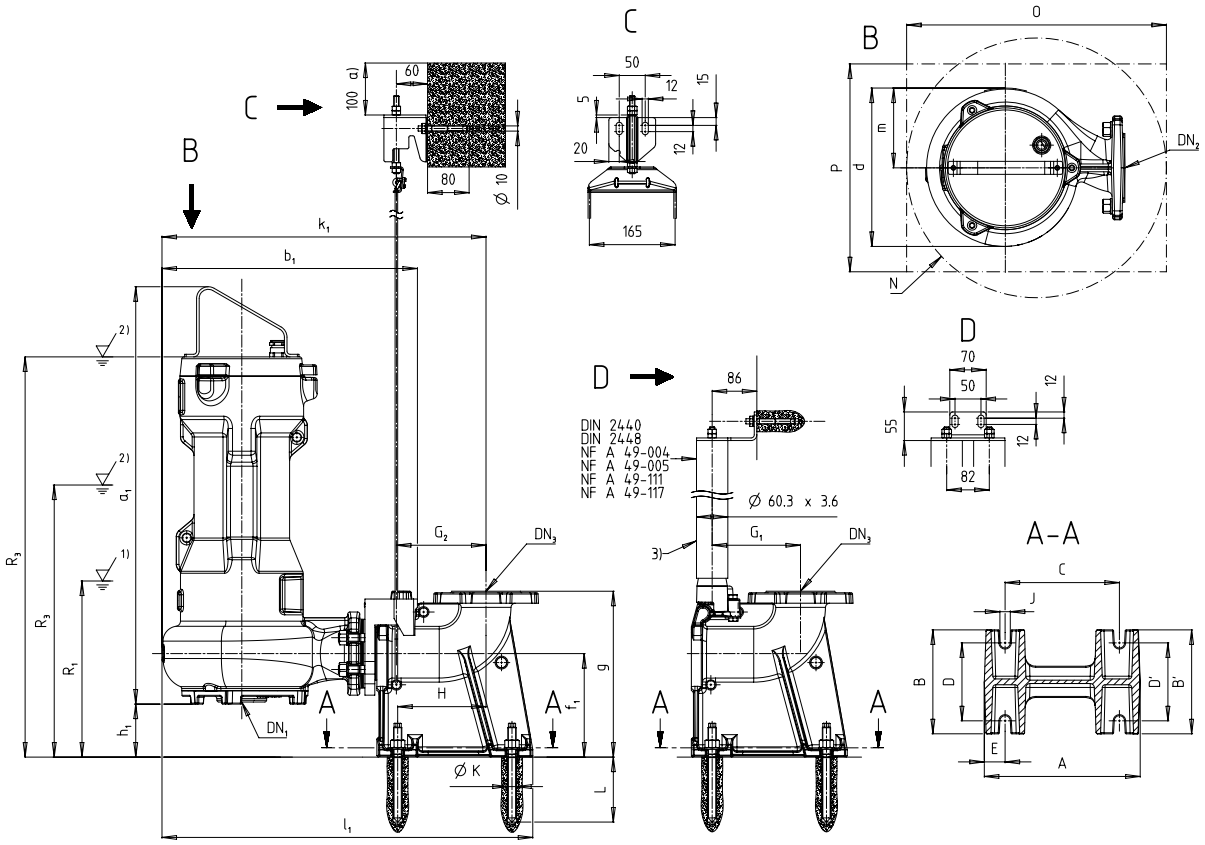


Fig. 7: Dimensions, Amarex DN 80, stationary installation, guide wire arrangement, twin guide rail arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 24: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
D080-140	024	F	2	U	S	80	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-140	024	F	2	Y	S	80	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676
D080-140	029	C	2	U	S	80	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	461	-
D080-140	029	C	2	Y	S	80	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	461	-
D080-140	035	C	2	U	S	80	80	698	480	282	160	200	320	132	112	200	611	160	701	154	4	344	384	-
D080-140	035	C	2	Y	S	80	80	707	480	282	160	200	320	132	112	200	611	160	701	154	4	344	384	-
D080-140	040	F	2	U	S	80	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-140	040	F	2	Y	S	80	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676
D080-140	049	F	2	U	S	80	80	698	480	282	160	200	320	132	112	200	611	160	701	154	4	344	-	675
D080-140	049	F	2	Y	S	80	80	707	480	282	160	200	320	132	112	200	611	160	701	154	4	344	-	684
F080-150	012	C	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-150	012	C	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-150	017	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-150	017	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-150	021	C	4	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-
F080-150	021	C	4	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-

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Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
D080-170	045	C	2	U	S	80	80	743	497	282	160	200	320	132	112	200	628	160	718	166	4	389	519	-
D080-170	045	C	2	Y	S	80	80	752	497	282	160	200	320	132	112	200	628	160	718	166	4	389	519	-
D080-170	060	C	2	U	S	80	80	763	497	282	160	200	320	132	112	200	628	160	718	166	4	439	459	-
D080-170	060	C	2	Y	S	80	80	772	497	282	160	200	320	132	112	200	628	160	718	166	4	439	459	-
D080-170	073	F	2	U	S	80	80	743	497	282	160	200	320	132	112	200	628	160	718	166	4	389	-	720
D080-170	073	F	2	Y	S	80	80	752	497	282	160	200	320	132	112	200	628	160	718	166	4	389	-	729
D080-170	084	F	2	U	S	80	80	763	497	282	160	200	320	132	112	200	628	160	718	166	4	439	-	740
D080-170	084	F	2	Y	S	80	80	772	497	282	160	200	320	132	112	200	628	160	718	166	4	439	-	749
D080-180	012	C	4	U	S	90	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	376	-
D080-180	012	C	4	Y	S	90	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	376	-
D080-180	017	F	4	U	S	90	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-180	017	F	4	Y	S	90	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676
D080-180	021	C	4	U	S	90	80	698	480	282	160	200	320	132	112	200	611	160	701	154	4	344	384	-
D080-180	021	C	4	Y	S	90	80	707	480	282	160	200	320	132	112	200	611	160	701	154	4	344	384	-
D080-180	023	F	4	U	S	90	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-180	023	F	4	Y	S	90	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676
F080-180	012	C	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-180	012	C	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-180	017	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-180	017	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-180	021	C	4	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-
F080-180	021	C	4	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-
F080-180	023	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-180	023	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-180	035	F	4	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	742
F080-180	035	F	4	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	751
F080-180	036	C	4	U	S	80	80	794	492	305	160	200	320	132	103	200	623	160	713	154	4	461	421	-
F080-180	036	C	4	Y	S	80	80	803	492	305	160	200	320	132	103	200	623	160	713	154	4	461	421	-
F080-180	045	C	4	U	S	80	80	794	492	305	160	200	320	132	103	200	623	160	713	154	4	461	501	-
F080-180	045	C	4	Y	S	80	80	803	492	305	160	200	320	132	103	200	623	160	713	154	4	461	501	-
F080-220	024	F	2	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-220	024	F	2	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-220	029	C	2	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	483	-
F080-220	029	C	2	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	483	-
F080-220	035	C	2	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-
F080-220	035	C	2	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-
F080-220	040	F	2	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-220	040	F	2	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-220	045	C	2	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	541	-
F080-220	045	C	2	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	541	-
F080-220	049	F	2	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	742
F080-220	049	F	2	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	751
F080-220	060	C	2	U	S	80	80	794	492	305	160	200	320	132	103	200	623	160	713	154	4	461	481	-
F080-220	060	C	2	Y	S	80	80	803	492	305	160	200	320	132	103	200	623	160	713	154	4	461	481	-
F080-220	073	F	2	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	742
F080-220	073	F	2	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	751
F080-220	084	F	2	U	S	80	80	794	492	305	160	200	320	132	103	200	623	160	713	154	4	461	-	762
F080-220	084	F	2	Y	S	80	80	803	492	305	160	200	320	132	103	200	623	160	713	154	4	461	-	771
D080-230	035	F	4	U	S	90	80	743	497	282	160	200	320	132	112	200	628	160	718	166	4	389	-	720
D080-230	035	F	4	Y	S	90	80	752	497	282	160	200	320	132	112	200	628	160	718	166	4	389	-	729
D080-230	036	C	4	U	S	90	80	763	497	282	160	200	320	132	112	200	628	160	718	166	4	439	399	-
D080-230	036	C	4	Y	S	90	80	772	497	282	160	200	320	132	112	200	628	160	718	166	4	439	399	-

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
D080-230	039	F	4	U	S	90	80	743	497	282	160	200	320	132	112	200	628	160	718	166	4	279	-	720
D080-230	039	F	4	Y	S	90	80	752	497	282	160	200	320	132	112	200	628	160	718	166	4	279	-	729
D080-230	045	C	4	U	S	90	80	763	497	282	160	200	320	132	112	200	628	160	718	166	4	439	479	-
D080-230	045	C	4	Y	S	90	80	772	497	282	160	200	320	132	112	200	628	160	718	166	4	439	479	-
D080-230	065	F	4	U	S	90	80	763	497	282	160	200	320	132	112	200	628	160	718	166	4	439	-	740
D080-230	065	F	4	Y	S	90	80	772	497	282	160	200	320	132	112	200	628	160	718	166	4	439	-	749
F080-230	012	C	2	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	-	389	-
F080-230	012	C	2	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	-	398	-
F080-230	017	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-230	017	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-230	021	C	4	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-
F080-230	021	C	4	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	451	-
F080-230	023	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-230	023	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-230	035	F	4	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	742
F080-230	035	F	4	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	411	-	751
F080-230	036	C	4	U	S	80	80	794	492	305	160	200	320	132	103	200	623	160	713	154	4	461	421	-
F080-230	036	C	4	Y	S	80	80	803	492	305	160	200	320	132	103	200	623	160	713	154	4	461	421	-
F080-230	039	F	4	U	S	80	80	774	492	305	160	200	320	132	103	200	623	160	713	154	4	301	-	742
F080-230	039	F	4	Y	S	80	80	783	492	305	160	200	320	132	103	200	623	160	713	154	4	301	-	751
F080-230	045	C	4	U	S	80	80	794	492	305	160	200	320	132	103	200	623	160	713	154	4	461	501	-
F080-230	045	C	4	Y	S	80	80	803	492	305	160	200	320	132	103	200	623	160	713	154	4	461	501	-
F080-230	065	F	4	U	S	80	80	794	492	305	160	200	320	132	103	200	623	160	713	154	4	461	-	762
F080-230	065	F	4	Y	S	80	80	803	492	305	160	200	320	132	103	200	623	160	713	154	4	461	-	771

Table 25: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
D080-140	024	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	024	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	029	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	029	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	035	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	035	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	040	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	040	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	049	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-140	049	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-150	012	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-150	012	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-150	017	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-150	017	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-150	021	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-150	021	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400

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Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
D080-170	045	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-170	045	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-170	060	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-170	060	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-170	073	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-170	073	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-170	084	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-170	084	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	012	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	012	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	017	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	017	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	021	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	021	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	023	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-180	023	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	012	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	012	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	017	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	017	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	021	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	021	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	023	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	023	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	035	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	035	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	036	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	036	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	045	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-180	045	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	024	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	024	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	029	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	029	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	035	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	035	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	040	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	040	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	045	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	045	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	049	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	049	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	060	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	060	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	073	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	073	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	084	F	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-220	084	F	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	035	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	035	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	036	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	036	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
D080-230	039	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	039	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	045	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	045	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	065	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
D080-230	065	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	012	C	2	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	012	C	2	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	017	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	017	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	021	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	021	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	023	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	023	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	035	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	035	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	036	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	036	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	039	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	039	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	045	C	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	045	C	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	065	F	4	U	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400
F080-230	065	F	4	Y	S	80	300	200	200	220	150	150	40	170	173	170	20	18	125	580	580	400

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Amarex DN 80, stationary installation, single guide rail arrangement

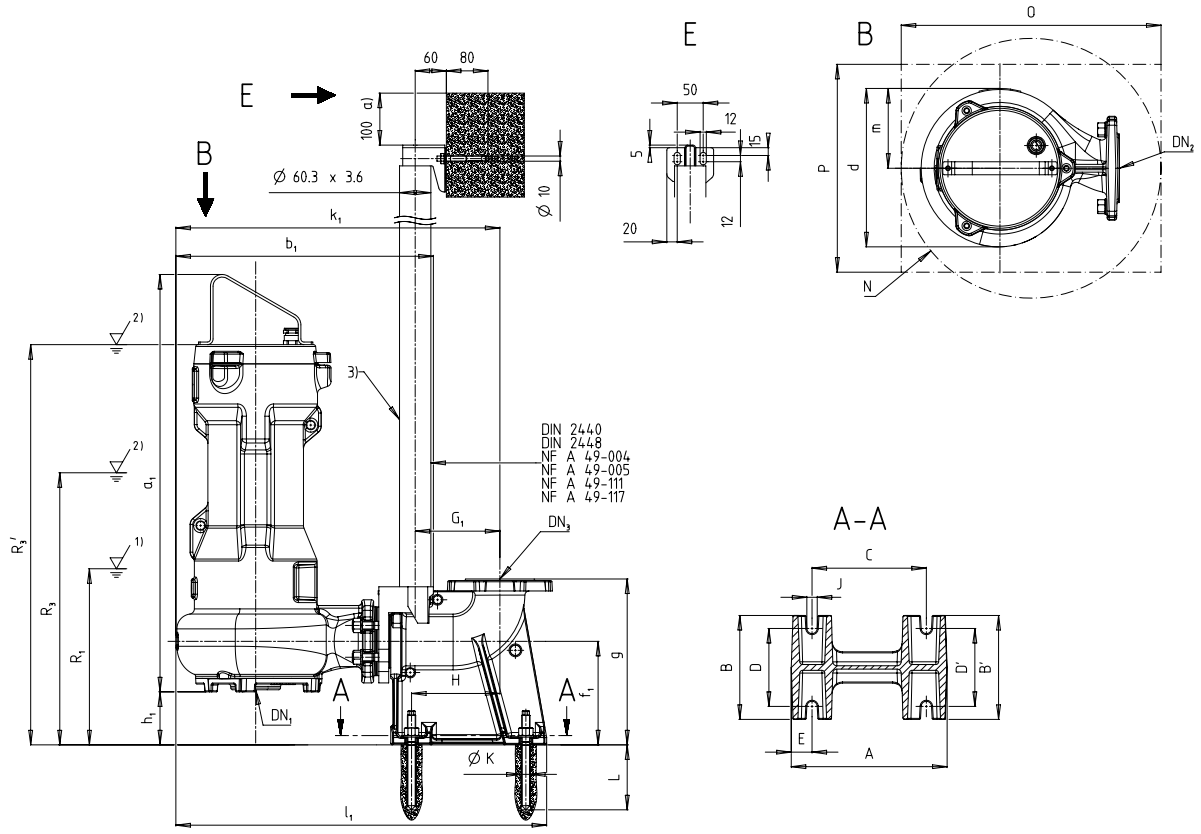


Fig. 8: Dimensions, Amarex DN 80, stationary installation, single guide rail arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 26: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
D080-140	024	F	2	U	S	80	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-140	024	F	2	Y	S	80	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676
D080-140	029	C	2	U	S	80	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	461	-
D080-140	029	C	2	Y	S	80	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	461	-
D080-140	040	F	2	U	S	80	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-140	040	F	2	Y	S	80	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676
F080-150	012	C	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-150	012	C	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-150	017	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-150	017	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
D080-180	012	C	4	U	S	90	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	376	-
D080-180	012	C	4	Y	S	90	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	376	-
D080-180	017	F	4	U	S	90	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-180	017	F	4	Y	S	90	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676
D080-180	023	F	4	U	S	90	80	670	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	667
D080-180	023	F	4	Y	S	90	80	679	480	282	160	200	320	132	112	200	611	160	701	154	4	276	-	676

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F080-180	012	C	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-180	012	C	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	398	-
F080-180	017	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-180	017	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-180	023	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-180	023	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-220	024	F	2	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-220	024	F	2	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-220	029	C	2	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	483	-
F080-220	029	C	2	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	483	-
F080-220	040	F	2	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-220	040	F	2	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-230	017	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-230	017	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698
F080-230	023	F	4	U	S	80	80	701	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	689
F080-230	023	F	4	Y	S	80	80	710	492	305	160	200	320	132	103	200	623	160	713	154	4	298	-	698

Table 27: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
D080-140	024	F	2	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-140	024	F	2	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-140	029	C	2	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-140	029	C	2	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-140	040	F	2	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-140	040	F	2	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-150	012	C	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-150	012	C	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-150	017	F	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-150	017	F	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-180	012	C	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-180	012	C	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-180	017	F	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-180	017	F	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-180	023	F	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
D080-180	023	F	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-180	012	C	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-180	012	C	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-180	017	F	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-180	017	F	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-180	023	F	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-180	023	F	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-220	024	F	2	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-220	024	F	2	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400

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Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F080-220	029	C	2	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-220	029	C	2	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-220	040	F	2	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-220	040	F	2	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-230	017	F	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-230	017	F	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-230	023	F	4	U	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400
F080-230	023	F	4	Y	S	80	300	200	200	220	150	150	40	163	-	170	20	18	125	580	580	400

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Amarex DN 100, stationary installation, guide wire arrangement, twin guide rail arrangement

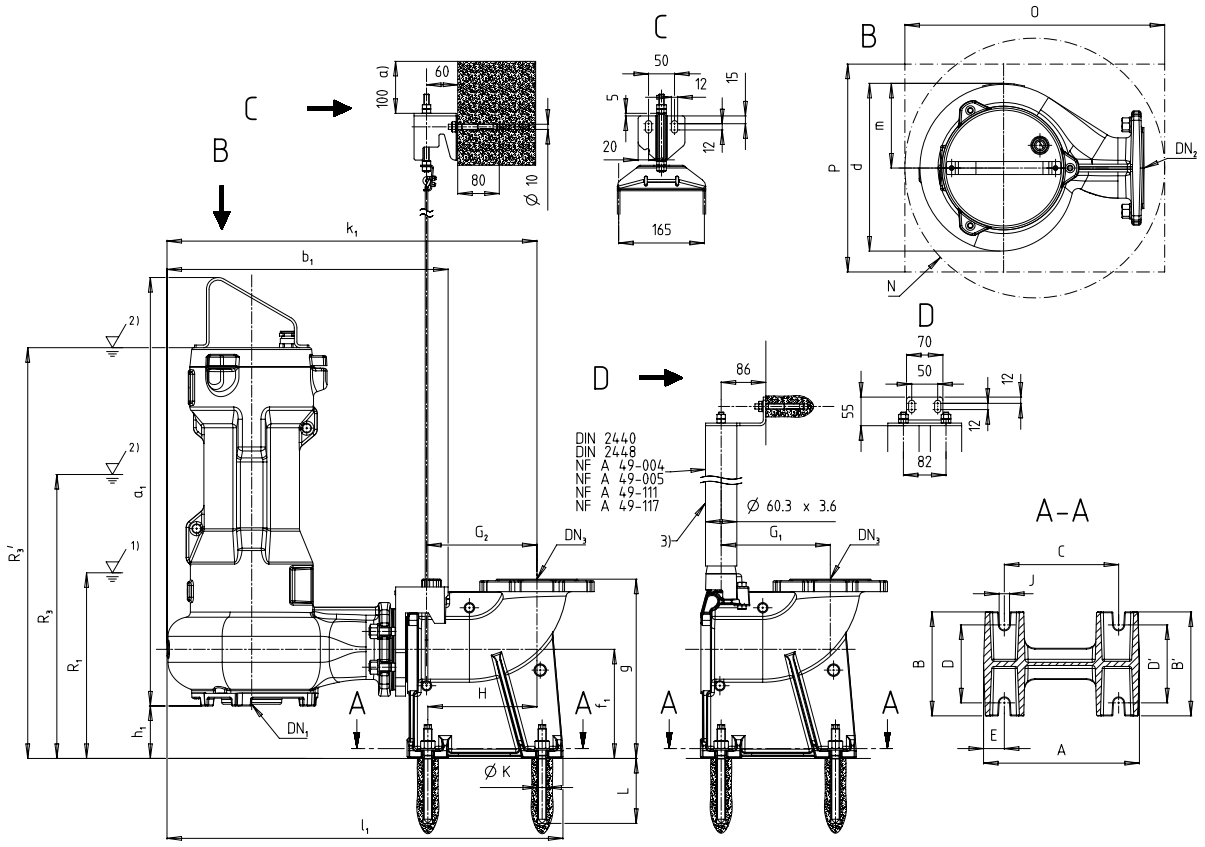


Fig. 9: Dimensions, Amarex DN 100, stationary installation, guide wire arrangement, twin guide rail arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 28: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
D100-140	035	C	2	U	S	90	100	717	538	324	180	210	345	156	112	220	708	180	758	185	4	363	403	-
D100-140	035	C	2	Y	S	90	100	726	538	324	180	210	345	156	112	220	708	180	758	185	4	363	403	-
D100-140	040	F	2	U	S	90	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	686
D100-140	040	F	2	Y	S	90	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	695
D100-140	049	F	2	U	S	90	100	717	538	324	180	210	345	156	112	220	708	180	758	185	4	363	-	694
D100-140	049	F	2	Y	S	90	100	726	538	324	180	210	345	156	112	220	708	180	758	185	4	363	-	703
D100-170	045	C	2	U	S	90	100	756	547	336	180	210	345	156	112	220	717	180	767	189	4	402	532	-
D100-170	045	C	2	Y	S	90	100	765	547	336	180	210	345	156	112	220	717	180	767	189	4	402	532	-
D100-170	060	C	2	U	S	90	100	776	547	336	180	210	345	156	112	220	717	180	767	189	4	452	472	-
D100-170	060	C	2	Y	S	90	100	785	547	336	180	210	345	156	112	220	717	180	767	189	4	452	472	-
D100-170	073	F	2	U	S	90	100	756	547	336	180	210	345	156	112	220	717	180	767	189	4	402	-	733
D100-170	073	F	2	Y	S	90	100	765	547	336	180	210	345	156	112	220	717	180	767	189	4	402	-	742
D100-170	084	F	2	U	S	90	100	776	547	336	180	210	345	156	112	220	717	180	767	189	4	452	-	753
D100-170	084	F	2	Y	S	90	100	785	547	336	180	210	345	156	112	220	717	180	767	189	4	452	-	762
D100-180	012	C	4	U	S	110	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	395	-
D100-180	012	C	4	Y	S	110	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	395	-

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
D100-180	017	F	4	U	S	110	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	686
D100-180	017	F	4	Y	S	110	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	695
D100-180	021	C	4	U	S	110	100	717	538	324	180	210	345	156	112	220	708	180	758	185	4	363	403	-
D100-180	021	C	4	Y	S	110	100	726	538	324	180	210	345	156	112	220	708	180	758	185	4	363	403	-
D100-180	023	F	4	U	S	110	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	686
D100-180	023	F	4	Y	S	110	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	695
F100-180	012	C	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	418	-
F100-180	012	C	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	418	-
F100-180	017	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709
F100-180	017	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718
F100-180	021	C	4	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	471	-
F100-180	021	C	4	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	471	-
F100-180	023	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709
F100-180	023	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718
F100-180	035	F	4	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	762
F100-180	035	F	4	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	771
F100-180	036	C	4	U	S	100	100	817	540	323	180	210	345	156	100	220	710	180	760	163	4	481	441	-
F100-180	036	C	4	Y	S	100	100	826	540	323	180	210	345	156	100	220	710	180	760	163	4	481	441	-
F100-220	035	C	2	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	471	-
F100-220	035	C	2	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	471	-
F100-220	045	C	2	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	561	-
F100-220	045	C	2	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	561	-
F100-220	049	F	2	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	762
F100-220	049	F	2	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	771
F100-220	060	C	2	U	S	100	100	817	540	323	180	210	345	156	100	220	710	180	760	163	4	481	501	-
F100-220	060	C	2	Y	S	100	100	826	540	323	180	210	345	156	100	220	710	180	760	163	4	481	501	-
F100-220	073	F	2	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	762
F100-220	073	F	2	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	771
F100-220	084	F	2	U	S	100	100	817	540	323	180	210	345	156	100	220	710	180	760	163	4	481	-	782
F100-220	084	F	2	Y	S	100	100	826	540	323	180	210	345	156	100	220	710	180	760	163	4	481	-	791
D100-230	035	F	4	U	S	110	100	756	547	336	180	210	345	156	112	220	717	180	767	189	4	402	-	733
D100-230	035	F	4	Y	S	110	100	765	547	336	180	210	345	156	112	220	717	180	767	189	4	402	-	742
D100-230	036	C	4	U	S	110	100	776	547	336	180	210	345	156	112	220	717	180	767	189	4	452	412	-
D100-230	036	C	4	Y	S	110	100	785	547	336	180	210	345	156	112	220	717	180	767	189	4	452	412	-
D100-230	039	F	4	U	S	110	100	756	547	336	180	210	345	156	112	220	717	180	767	189	4	292	-	733
D100-230	039	F	4	Y	S	110	100	765	547	336	180	210	345	156	112	220	717	180	767	189	4	292	-	742
D100-230	045	C	4	U	S	110	100	776	547	336	180	210	345	156	112	220	717	180	767	189	4	452	492	-
D100-230	045	C	4	Y	S	110	100	785	547	336	180	210	345	156	112	220	717	180	767	189	4	452	492	-
F100-230	017	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709
F100-230	017	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718
F100-230	021	C	4	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	471	-
F100-230	021	C	4	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	471	-
F100-230	023	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709
F100-230	023	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718
F100-230	035	F	4	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	762
F100-230	035	F	4	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	431	-	771
F100-230	036	C	4	U	S	100	100	817	540	323	180	210	345	156	100	220	710	180	760	163	4	481	441	-
F100-230	036	C	4	Y	S	100	100	826	540	323	180	210	345	156	100	220	710	180	760	163	4	481	441	-
F100-230	039	F	4	U	S	100	100	797	540	323	180	210	345	156	100	220	710	180	760	163	4	321	-	762
F100-230	039	F	4	Y	S	100	100	806	540	323	180	210	345	156	100	220	710	180	760	163	4	321	-	771
F100-230	045	C	4	U	S	100	100	817	540	323	180	210	345	156	100	220	710	180	760	163	4	481	521	-

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F100-230	045	C	4	Y	S	100	100	826	540	323	180	210	345	156	100	220	710	180	760	163	4	481	521	-
F100-230	065	F	4	U	S	100	100	817	540	323	180	210	345	156	100	220	710	180	760	163	4	481	-	782
F100-230	065	F	4	Y	S	100	100	826	540	323	180	210	345	156	100	220	710	180	760	163	4	481	-	791

Table 29: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
D100-140	035	C	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-140	035	C	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-140	040	F	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-140	040	F	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-140	049	F	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-140	049	F	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	045	C	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	045	C	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	060	C	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	060	C	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	073	F	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	073	F	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	084	F	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-170	084	F	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	012	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	012	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	017	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	017	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	021	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	021	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	023	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-180	023	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	012	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	012	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	017	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	017	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	021	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	021	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	023	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	023	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	035	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	035	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	036	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-180	036	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	035	C	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	035	C	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	045	C	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420

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Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F100-220	045	C	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	049	F	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	049	F	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	060	C	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	060	C	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	073	F	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	073	F	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	084	F	2	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-220	084	F	2	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	035	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	035	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	036	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	036	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	039	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	039	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	045	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
D100-230	045	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	017	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	017	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	021	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	021	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	023	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	023	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	035	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	035	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	036	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	036	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	039	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	039	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	045	C	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	045	C	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	065	F	4	U	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420
F100-230	065	F	4	Y	S	100	300	200	200	220	150	150	40	210	213	210	20	18	125	650	650	420

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Amarex DN 100, stationary installation, single guide rail arrangement

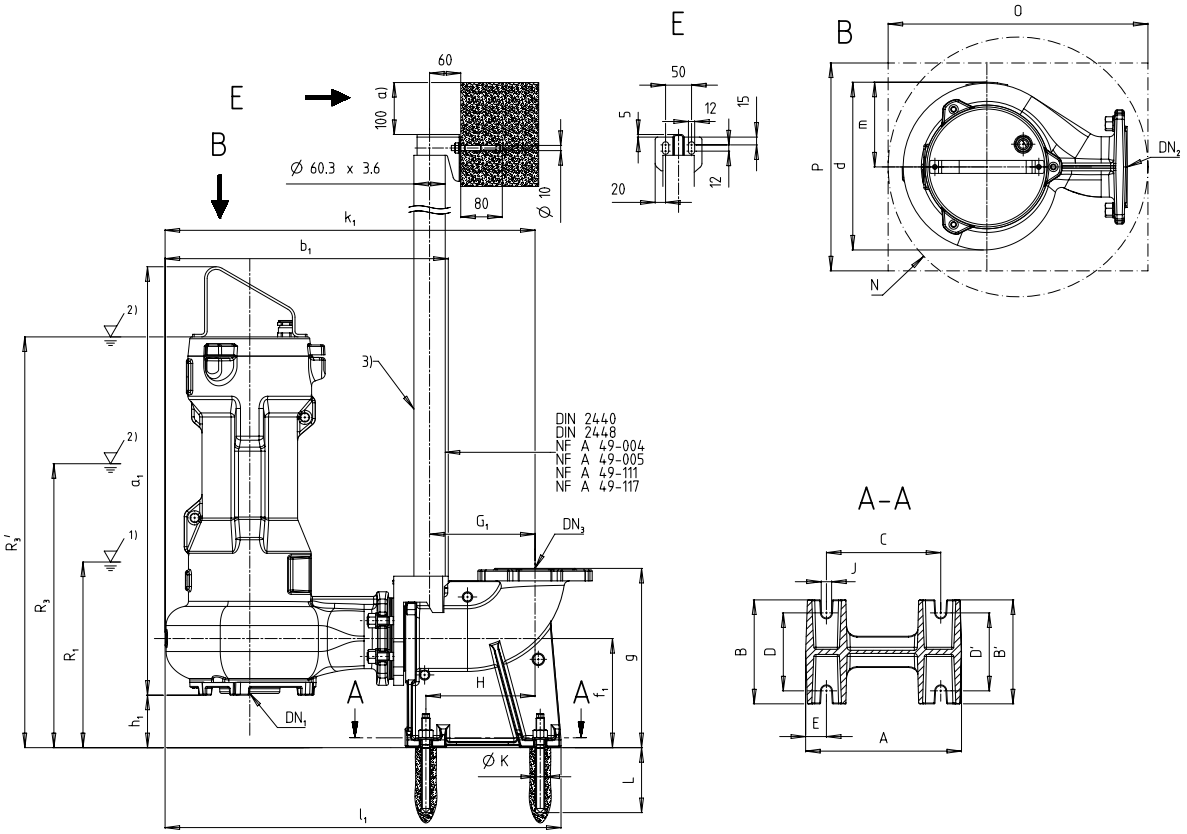


Fig. 10: Dimensions, Amarex DN 100, stationary installation, single guide rail arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 30: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
D100-140	040	F	2	U	S	90	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	686
D100-140	040	F	2	Y	S	90	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	695
D100-180	012	C	4	U	S	110	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	395	-
D100-180	012	C	4	Y	S	110	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	395	-
D100-180	017	F	4	U	S	110	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	686
D100-180	017	F	4	Y	S	110	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	695
D100-180	023	F	4	U	S	110	100	689	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	686
D100-180	023	F	4	Y	S	110	100	698	538	324	180	210	345	156	112	220	708	180	758	185	4	295	-	695
F100-180	012	C	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	418	-
F100-180	012	C	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	418	-
F100-180	017	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709
F100-180	017	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718
F100-180	023	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709
F100-180	023	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718
F100-230	017	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709

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Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F100-230	017	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718
F100-230	023	F	4	U	S	100	100	724	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	709
F100-230	023	F	4	Y	S	100	100	733	540	323	180	210	345	156	100	220	710	180	760	163	4	318	-	718

Table 31: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
D100-140	040	F	2	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
D100-140	040	F	2	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
D100-180	012	C	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
D100-180	012	C	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
D100-180	017	F	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
D100-180	017	F	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
D100-180	023	F	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
D100-180	023	F	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-180	012	C	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-180	012	C	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-180	017	F	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-180	017	F	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-180	023	F	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-180	023	F	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-230	017	F	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-230	017	F	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-230	023	F	4	U	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420
F100-230	023	F	4	Y	S	100	300	200	200	220	150	150	40	203	-	210	20	18	125	650	650	420

Amarex DN 150, stationary installation, guide wire arrangement, twin guide rail arrangement

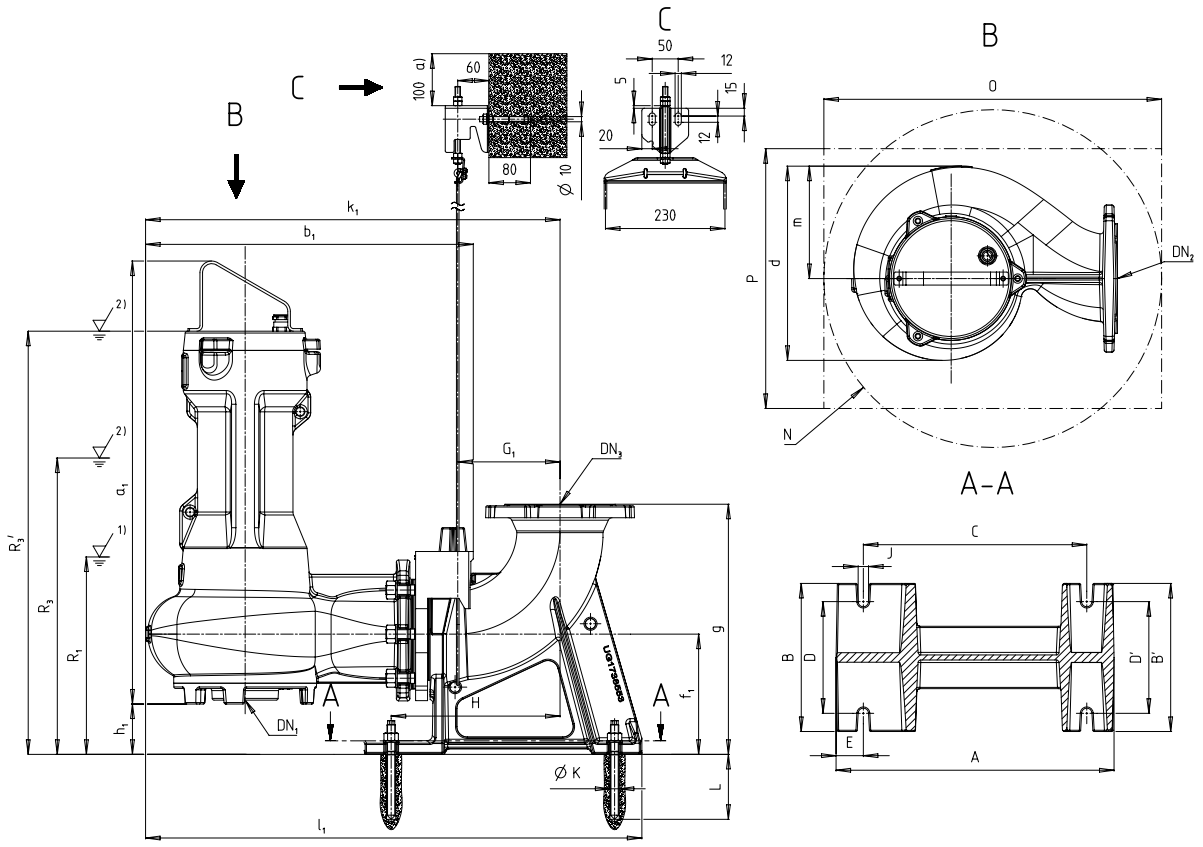


Fig. 11: Dimensions, Amarex DN 150, stationary installation, guide wire arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

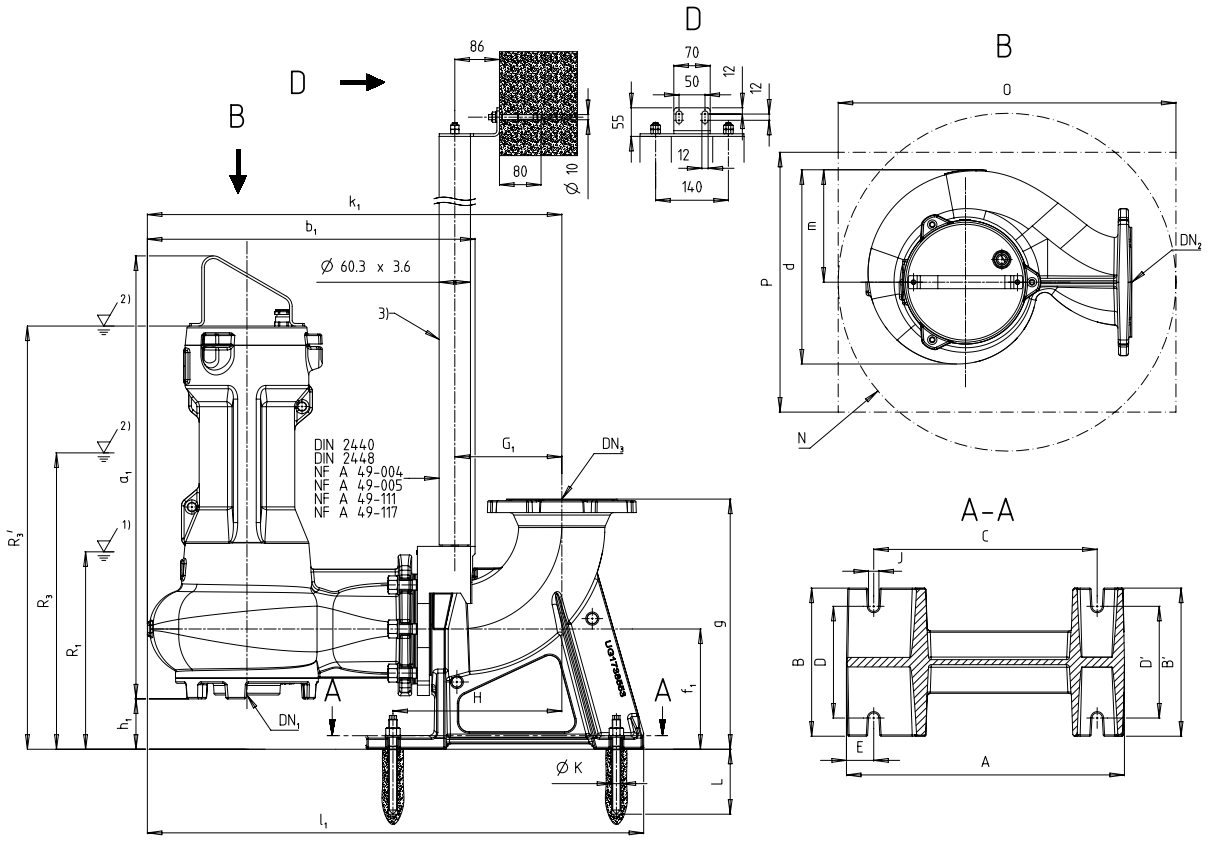


Fig. 12: Amarex 150, stationary installation, twin guide rail arrangement

1)	Lowest stop level for automatic operation
2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply

Table 32: Pump set dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F150-180	036	C	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	465	-
F150-180	036	C	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	465	-
F150-180	045	C	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	545	-
F150-180	045	C	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	545	-
F150-180	065	F	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	806
F150-180	065	F	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	815
F150-180	077	F	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	806
F150-180	077	F	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	815
D150-230	036	C	4	U	S	150	150	846	630	374	271	232	481	211	95	285	796	240	953	216	6	505	465	-
D150-230	036	C	4	Y	S	150	150	855	630	374	271	232	481	211	95	285	796	240	953	216	6	505	465	-
D150-230	045	C	4	U	S	150	150	846	630	374	271	232	481	211	95	285	796	240	953	216	6	505	545	-
D150-230	045	C	4	Y	S	150	150	855	630	374	271	232	481	211	95	285	796	240	953	216	6	505	545	-
D150-230	065	F	4	U	S	150	150	846	630	374	271	232	481	211	95	285	796	240	953	216	6	505	-	806
D150-230	065	F	4	Y	S	150	150	855	630	374	271	232	481	211	95	285	796	240	953	216	6	505	-	815
D150-230	077	F	4	U	S	150	150	846	630	374	271	232	481	211	95	285	796	240	953	216	6	505	-	806
D150-230	077	F	4	Y	S	150	150	855	630	374	271	232	481	211	95	285	796	240	953	216	6	505	-	815
F150-230	036	C	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	465	-
F150-230	036	C	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	465	-

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_1	DN_2	a_1	b_1	d	D_f	f_1	g	g_f	h_1	H_f	k_1	k_f	l_1	m	Z_f	R1	R3	R3'
F150-230	045	C	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	545	-
F150-230	045	C	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	545	-
F150-230	065	F	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	806
F150-230	065	F	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	815
F150-230	077	F	4	U	S	150	150	844	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	806
F150-230	077	F	4	Y	S	150	150	853	630	374	271	232	481	211	97	285	796	240	953	216	6	505	-	815

Table 33: Foundation dimensions [mm]

Size	Motor rating	Efficiency class	Number of poles	Motor version	Motor construction type	DN_3	A	B	B'	C	D	D'	E	G_1	G_2	H	J	ØK	L	N min.	O min.	P min.
F150-180	036	C	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-180	036	C	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-180	045	C	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-180	045	C	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-180	065	F	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-180	065	F	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-180	077	F	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-180	077	F	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	036	C	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	036	C	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	045	C	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	045	C	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	065	F	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	065	F	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	077	F	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
D150-230	077	F	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	036	C	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	036	C	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	045	C	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	045	C	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	065	F	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	065	F	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	077	F	4	U	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500
F150-230	077	F	4	Y	S	150	535	285	285	430	215	215	53	206	-	325	20	18	125	730	730	500

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Installation types

Table 34: Installation type S, stationary wet installation

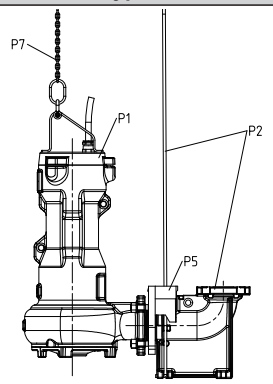
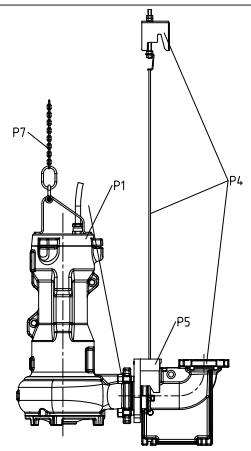
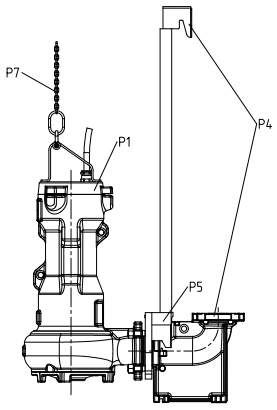
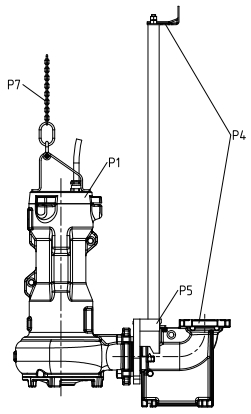
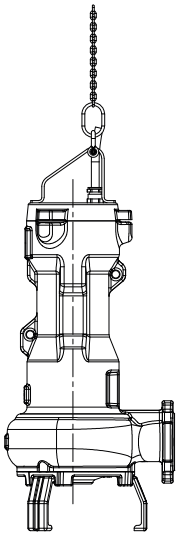
Installation type	Description	Comment
	**Guide hoop arrangement** P1: pump P2: installation parts for guide hoop arrangement, installation depth = 1.5 m / 1.8 m / 2.1 m P5: claw P7: chain and shackle	Only available for specific sizes, see selection configurator.
	**Guide wire arrangement** P1: pump P4: installation parts for guide wire arrangement, installation depth = 4.5 m / 9.5 m / 14.5 m P5: claw P7: chain and shackle	-
	**Single guide rail arrangement** P1: pump P4: installation parts for single guide rail arrangement P5: claw P7: chain and shackle	Only available for specific sizes, see selection configurator.
	**Twin guide rail arrangement** P1: pump P4: installation parts for twin guide rail arrangement P5: claw and adapter P7: chain and shackle	Only available for specific sizes, see selection configurator.

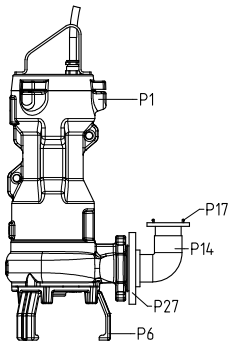
Table 35: Installation type P, transportable wet-installed model

Installation type	Description
	P1: pump P6: pump foot P7: chain and shackle

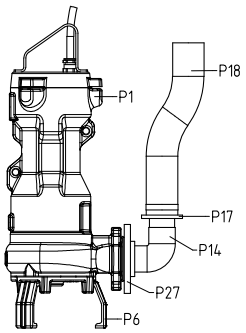
Installation information

Suggested installation layouts for transportable pump sets

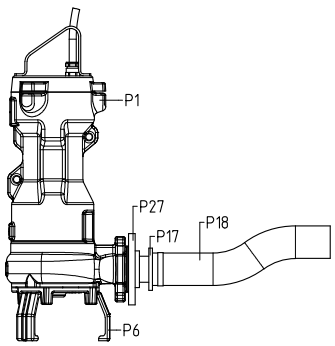
Size 50



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

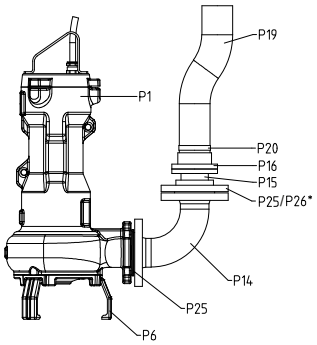


Suggested installation layout 2
Vertical hose connection with plastic hose (P18)



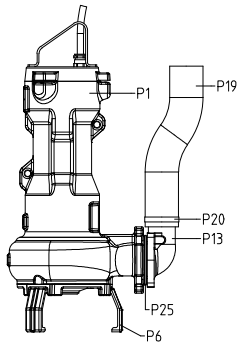
Suggested installation layout 3
Horizontal hose connection (quick connection) with plastic hose (P18)

Sizes 65, 80, 100

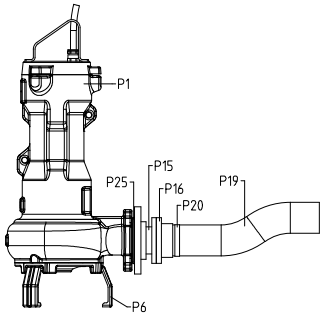


Suggested installation layout 1
Vertical hose connection (quick connection) with plastic hose (P19) and hose clip (P20)

* For size 65: P25
For size 85, 100: P26



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

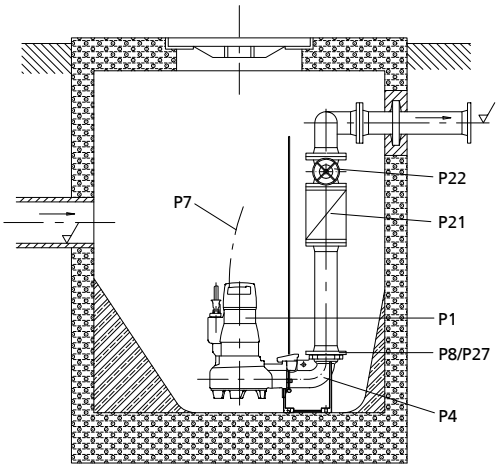


Suggested installation layout 3
Horizontal hose connection (quick connection) with plastic hose (P19), hose clip (P20), Storz hose coupling (P16), Storz rigid coupling (P15)

Suggested installation layouts for stationary pump sets

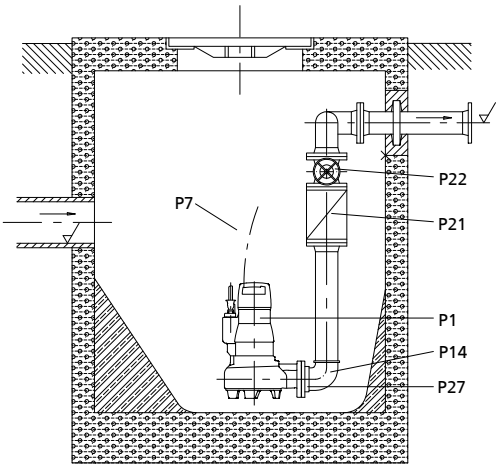
Sizes 50, 65, 80, 100

Guide hoop arrangement
Amarex F50-140/220, F65-150/170/230



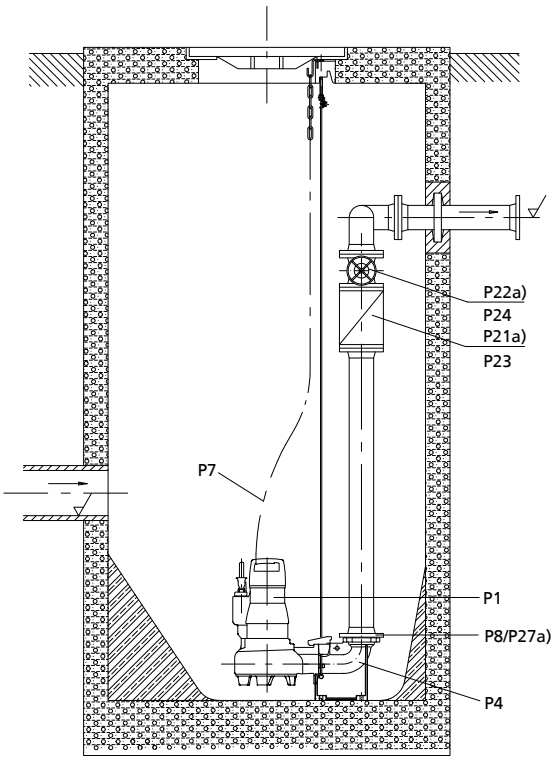
Suggested installation layout 1
Single-pump station
Duckfoot bend

Suspended installation
Amarex F50-140

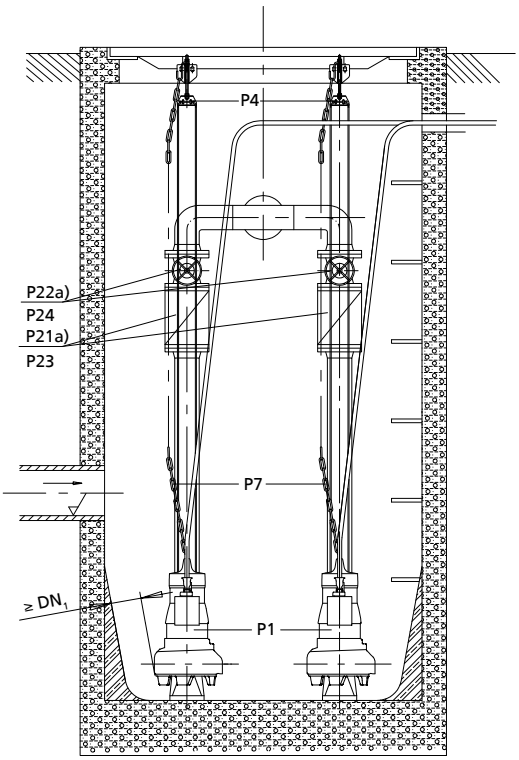


Suggested installation layout 2
Single-pump station for 1.5 m installation depth
Direct connection to discharge line (suspended installation)

Guide wire, single guide rail or twin guide rail arrangement
Amarex 50, 65, 80, 100



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

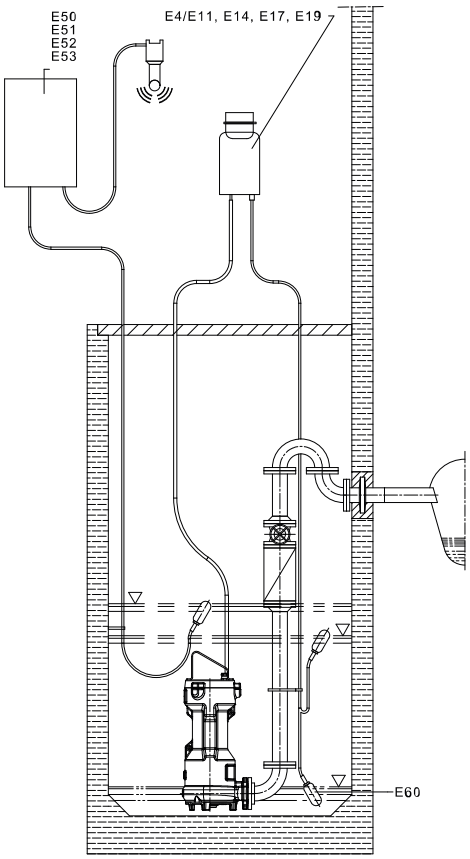
a)	DN 50 only

2573.5/04-EN

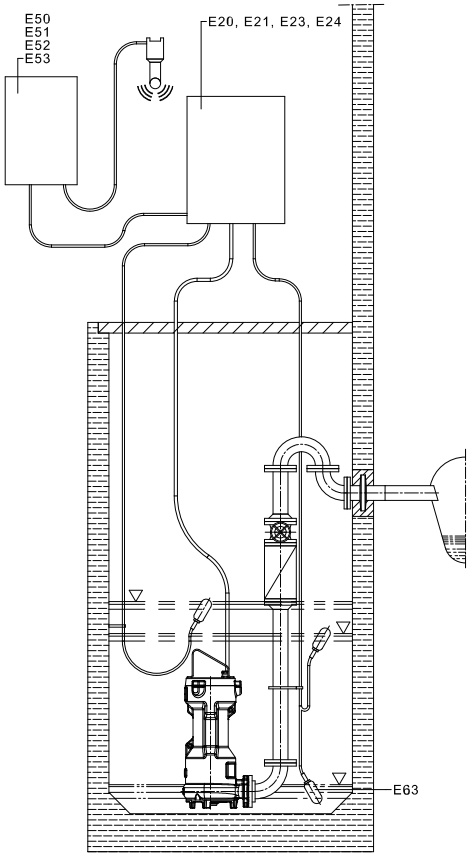
Suggested electrical installation layouts

Amarex is available in explosion-proof and non-explosionproof design.

CEE motor protection switch (up to 4.0 kW)



Suggested installation layout 1
without explosion protection



Suggested installation layout 2
with explosion protection

Scope of supply

Stationary wet-installed model (installation type S)

- Pump set, complete with power cable
- Claw with sealing elements and fasteners
- Lifting rope / lifting chain[30)]
- Mounting bracket with fasteners
- Duckfoot bend with mounting elements
- Guiding equipment[31)]

Transportable wet-installed model (installation type P)

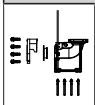
- Pump set, complete with power cable
- Feet (and foot plate, if applicable)
- Lifting rope / lifting chain[32)]

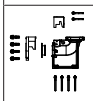
30 Optional
31 The guide rails are not included in the scope of supply.
32 Optional

Accessories

Installation parts for stationary pump sets

Table 36: Installation parts for stationary pump sets

Item		Description	Size	Sealing element	Installation depth [m]	Mat. No.	[kg]
	P2 + P5	Guide hoop arrangement Installation parts for stationary wet installation Consisting of: DN 50 flanged duckfoot bend, stainless steel anchor bolts, guide hoop, claw with stainless steel screws/bolts	DN 50 DN 3: DIN ISO ASME Inclined claw	NBR 60	1,5	05045152 19521154	12.2 1.5
				FKM 60	1,5	05045153 19521154	12.2 1.5
				NBR 60	1,8	05045152 19521155	12.2 2.5
				FKM 60	1,8	05045153 19521155	12.2 2.5
				NBR 60	2,1	05045152 19521156	12.2 4
				FKM 60	2,1	05045153 19521156	12.2 4
		Guide hoop arrangement Installation parts for stationary wet installation Consisting of: DN 65 flanged duckfoot bend, stainless steel anchor bolts, guide hoop, claw with stainless steel screws/bolts	DN 65 DN 3: DIN ISO ASME	NBR 60	1,5	05045148 19521154	16.2 1.5
				FKM 60	1,5	05045149 19521154	16.2 1.5
				NBR 60	1,8	05045148 19521155	16.2 2.5
				FKM 60	1,8	05045149 19521155	16.2 2.5
				NBR 60	2,1	05045148 19521156	16.2 4
				FKM 60	2,1	05045149 19521156	16.2 4
		Guide hoop arrangement Installation parts for stationary wet installation Consisting of: DN 65/80 flanged duckfoot bend, stainless steel anchor bolts, guide hoop, claw with stainless steel screws/bolts	DN 65/80 DN 3: DIN ISO	NBR 60	1,5	05045160 19521154	18.3 1.5
				FKM 60	1,5	05045161 19521154	18.3 1.5
				NBR 60	1,8	05045160 19521155	18.3 2.5
				FKM 60	1,8	05045161 19521155	18.3 2.5
				NBR 60	2,1	05045160 19521156	18.3 4
				FKM 60	2,1	05045161 19521156	18.3 4
			DN 65/80 DN 3: ASME	NBR 60	1,5	05045156 19521154	18.4 1.5
				FKM 60	1,5	05045157 19521154	18.4 1.5
				NBR 60	1,8	05045156 19521155	18.4 2.5
				FKM 60	1,8	05045157 19521155	18.4 2.5
				NBR 60	2,1	05045156 19521156	18.4 4
				FKM 60	2,1	05045157 19521156	18.4 4

Item		Description	Size	Sealing element	Installation depth [m]	Mat. No.	[kg]
	P4 + P5	Guide wire arrangement Installation parts for stationary wet installation Consisting of: flanged duckfoot bend, stainless steel anchor bolts, suspension bracket, mounting bracket, 10 m guide wire, claw with stainless steel screws/bolts	DN 50 DN 3: DIN ISO ASME	NBR 60 FKM 60	4,5 4,5	05044127 05044128	13.9 13.9
			DN 65 DN 3: DIN ISO ASME	NBR 60 FKM 60	4,5 4,5	05044125 05044126	17.9 17.9
			DN 65/80 DN 3: DIN ISO	NBR 60 FKM 60	4,5 4,5	05044211 05044212	20 20
			DN 65/80 DN 3: ASME	NBR 60 FKM 60	4,5 4,5	05044129 05044210	20.1 20.1
			DN 80 DN 3: DIN ISO	NBR 60 FKM 60	4,5 4,5	05018552 05018553	29.5 29.5
			DN 80 DN 3: ASME	NBR 60 FKM 60	4,5 4,5	05028880 05028881	27.4 27.4
			DN 80/100 DN 3: DIN ISO ASME	NBR 60 FKM 60	4,5 4,5	05018556 05018557	28.9 28.9
			DN 100 DN 3: DIN ISO ASME	NBR 60 FKM 60	4,5 4,5	05018554 05018555	34.6 34.6
			DN 150 DN 3: DIN ISO ASME	NBR 60 FKM 60	4,5 4,5	05018558 05018559	74.2 74.2
	P4 + P5	Single guide rail arrangement Installation parts for stationary wet installation Consisting of: flanged duckfoot bend, stainless steel anchor bolts, mounting bracket, claw with stainless steel screws/bolts (guide rail not included in KSB's scope of supply)	DN 50 DN 3: DIN ISO ASME	NBR 60	4,5	05045152 05017151	12.2 0.3
				FKM 60	4,5	05045153 05017151	12.2 0.3
			DN 65 DN 3: DIN ISO ASME	NBR 60	4,5	05045148 05017151	16.2 0.3
				FKM 60	4,5	05045149 05017151	16.2 0.3
			DN 65/80 DN 3: DIN ISO	NBR 60	4,5	05045160 05017151	18.3 0.3
				FKM 60	4,5	05045161 05017151	18.3 0.3
			DN 65/80 DN 3: ASME	NBR 60	4,5	05045156 05017151	18.4 0.3
				FKM 60	4,5	05045157 05017151	18.4 0.3
			DN 80 DN 3: DIN ISO	NBR 60	4,5	05018726 05017151	27.9 0.3
				FKM 60	4,5	05018727 05017151	27.9 0.3
			DN 80 DN 3: ASME	NBR 60	4,5	05028255 05017151	25.9 0.3
				FKM 60	4,5	05028256 05017151	25.9 0.3
			DN 80/100 DN 3: DIN ISO ASME	NBR 60	4,5	05018742 05017151	27.3 0.3
				FKM 60	4,5	05018743 05017151	27.3 0.3
			DN 100 DN 3: DIN ISO ASME	NBR 60	4,5	05018729 05017151	33.1 0.3
				FKM 60	4,5	05018740 05017151	33.1 0.3

Item		Description	Size	Sealing element	Installation depth [m]	Mat. No.	[kg]
	P4 + P5	Twin guide rail arrangement Installation parts for stationary wet installation Consisting of: flanged duckfoot bend, stainless steel anchor bolts, mounting bracket, adapter, claw with stainless steel screws/bolts (guide rails not included in KSB's scope of supply)	DN 50 DN 3: DIN ISO ASME	NBR 60 FKM 60	- -	05044215 05044216	13.3 13.3
			DN 65 DN 3: DIN ISO ASME	NBR 60 FKM 60	- -	05044213 05044214	17.2 17.2
			DN 65/80 DN 3: DIN ISO	NBR 60 FKM 60	- -	05044219 05044220	19.3 19.3
			DN 65/80 DN 3: ASME	NBR 60 FKM 60	- -	05044217 05044218	19.4 19.4
			DN 80 DN 3: DIN ISO	NBR 60 FKM 60	- -	05018645 05018646	30.2 30.2
			DN 80 DN 3: ASME	NBR 60 FKM 60	- -	05028447 05028448	28.2 28.2
			DN 80/100 DN 3: DIN ISO ASME	NBR 60 FKM 60	- -	05018649 05018650	29.6 29.6
			DN 100 DN 3: DIN ISO ASME	NBR 60 FKM 60	- -	05018647 05018648	35.4 35.4
			DN 150 DN 3: DIN ISO ASME	NBR 60 FKM 60	- -	05016943 05016944	73.3 73.3
	P5	Guide hoop arrangement, guide wire arrangement, single guide rail arrangement Claw for Amarex EN-GJL-250 with stainless steel screws/bolts	DN 50	NBR 60 FKM 60	- -	05046255 05046256	4.8 4.8
			DN 65	NBR 60 FKM 60	- -	05046259 05046270	5.9 5.9
		Single guide rail arrangement Claw for Amarex EN-GJL-250 with stainless steel screws/bolts	DN 80	NBR 60 FKM 60	- -	05016790 05016791	6.6 6.6
			DN 100	NBR 60 FKM 60	- -	05016794 05016795	7.3 7.3
		Twin guide rail arrangement Claw for Amarex EN-GJL-250 with stainless steel screws/bolts	DN 50	NBR 60 FKM 60	- -	05046257 05046258	4.9 4.9
			DN 65	NBR 60 FKM 60	- -	05046271 05046272	5.9 5.9
		Guide wire arrangement, twin guide rail arrangement Claw for Amarex EN-GJL-250 with stainless steel screws/bolts	DN 80	NBR 60 FKM 60	- -	05016792 05016793	6.4 6.4
			DN 100	NBR 60 FKM 60	- -	05016796 05016797	7 7.1
			DN 150	NBR 60 FKM 60	- -	05016798 05016799	13.9 13.9

Installation parts for transportable pump sets

Table 37: Installation parts for transportable pump sets

Item		Description	Size	Mat. No.	[kg]
	P6	3 pump feet	DN 50/65/80/100	05017148	0.1
		Footplate with bolts (only for uneven mounting surfaces and in combination with feet)	DN 50/65/80/100	05016969	1

Chain for stationary and transportable pump sets

Table 38: Chain for stationary and transportable pump sets

Item		Description	Motor construction type	Length [m]	Mat. No.	[kg]
	P7	Chain (1.4404), short-linked, hook (1.4301), shackle (1.4404), maximum load 200 kg	S-M	3	05018486	0.8
			L-X	3	05018487	0.9
			S-M	5	05018488	2.3
			L-X	5	05018489	2.4
			S-M	10	05018510	4.4
			L-X	10	05018511	4.6
			S-M	15	05018512	6.6
			L-X	15	05018513	6.8
	-	Polypropylene lifting rope with shackle 1.4401 and hook 1.4571	S-M	5	05018515	2.1
			L-X	5	05018517	2.2

Pump accessories

Table 39: Accessories for stationary and transportable pump sets

Item		Description	Connection	Length [m]	Amarex 50	Amarex 65	Amarex 80	Amarex 100	Mat. No.	[kg]
	P8	Flange for pipe coupling PN 10, at the flanged elbow, mating dimensions to PN 16	DN 50 / R 2	-	✗	-	-	-	19551111	1.2
			DN 65 / R 2 1/2	-	-	✗	-	-	39020184	1.2
	P9	PVC adapter for hose connection, with 1 hose clip	R2	-	✗	-	-	-	11191498	0.3
	P13	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, to be used for flange connections item 25 / item 26 (not for DN 100).	DN 65/B 75	-	-	✗	-	-	19135655	6
			DN 80/B 75	-	-	-	✗	-	19131746	6.6
			DN 100/A 110	-	-	-	-	✗	19139718	10
	P14	Angle with internal thread / external thread, galvanised grey cast iron (flange connection see P27 and P30)	R 2	-	✗	-	-	-	00241966	0.3
		Connection elbow with flanges PN 16, DIN 2501 (to be used for flange connections item 25 or item 26), grey cast iron	DN 65/65	-	-	✗	-	-	00265480	11
			DN 65/80	-	-	✗	-	-	25198402	8
			DN 80/80	-	-	-	✗	-	11150856	10
			DN 100/100	-	-	-	-	✗	25145802	14.4
	P15	Storz rigid coupling	DN 65 / B 75	-	-	✗	-	-	18040148	3.5
			DN 80/B 75	-	-	-	✗	-	18072642	3.5
			DN 100/A 110	-	-	-	-	✗	18060162	5
	P16	Storz hose coupling 2 hose clips, item 20, are required for hose mounting (for plastic hoses B 75 and A 110, item 19)	C 52 (DIN 14321)	-	✗	-	-	-	00524551	0.3
			B 75 (DIN 14322)	-	-	✗	✗	-	00520454	0.7
			A 110 (DIN 14323)	-	-	-	-	✗	00522313	1.5
	P17	Storz rigid coupling	C 52 / G 2	-	✗	-	-	-	00524370	0.2
			B 75 / G 2 1/2	-	-	✗	-	-	00524371	0.4
	P18	Plastic hose DN 50, DIN 14811, with integrated C couplings	C 52-5 m	-	✗	-	-	-	00522262	2.3
			C 52-10 m	-	✗	-	-	-	00522263	4.2
			C 52-20 m	-	✗	-	-	-	00522264	5.7
	P19	Plastic hose, without coupling, DIN 14811 63	-	5	✗	-	-	-	39018688	1.7
			-	10	✗	-	-	-	39018689	3.4
			-	20	✗	-	-	-	39018690	6.8
		Plastic hose without coupling, DIN 14 811 B 75	-	5	-	✗	✗	-	39019064	2
			-	10	-	✗	✗	-	39019065	4
			-	20	-	✗	✗	-	39019066	8

Item		Description	Connection	Length	Amarex				Mat. No.	[kg]
				[m]	50	65	80	100		
	P19	Plastic hose without coupling, DIN 14 811 B 75	-	30	-	✗	✗	-	39019071	12
		Plastic hose without coupling, DIN 14 811 80	-	5	-	-	✗	-	39018691	2.2
			-	10	-	-	✗	-	39019062	4.3
		Plastic hose without coupling, DIN 14 811 A 110	-	5	-	-	-	✗	39019067	4.7
			-	10	-	-	-	✗	39019068	9.3
			-	30	-	-	-	✗	39019070	27.9
	P20	Hose clip DIN 3017, chrome steel	B 50[33)]	-	✗	-	-	-	39000515	0
			B 75	-	-	✗	✗	-	00109515	0
			AL 110 - 120 B[34)]	-	-	-	-	✗	00520853	0.1
	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	-	✗	-	-	-	01009773	0.5
	P22	Socket gate valve, CuZn, PN 10-12 DIN 3352	Rp 2	-	✗	-	-	-	00411503	1.3
			Rp 2 1/2	-	-	✗	-	-	39000507	1.7
	P23	Check valve, grey cast iron, full bore, lifting device, flanges drilled to DIN 2501, PN 16	DN 65	-	-	✗	-	-	48829253	13.7
			DN 80	-	-	-	✗	-	48829254	16.5
			DN 100	-	-	-	-	✗	48829255	20.9
	P24	COBRA-SGP with flat body, grey cast iron, PN 16, flanges drilled to ISO 7005/DIN 2501	DN 65	-	-	✗	-	-	48229953	16.2
			DN 80	-	-	-	✗	-	48229954	19.5
			DN 100	-	-	-	-	✗	48229955	26.8
	P25	Set of installation accessories for a flange connection, discharge nozzle; item 13, 14 or 15 Consisting of: 4 hexagon head bolts with nuts and 1 sealing element	-	-	✗	-	-	-	39021944	0.8
					-	✗	-	-	19551115	0.8
					-	-	✗	-	19551100	0.8
					-	-	-	✗	19551113	0.8
	P26	Set of installation accessories for a flange connection Consisting of: 8 hexagon head bolts with nuts and 1 sealing element	-	-	-	-	✗	-	19551114	0.8
					-	-	-	✗	19551116	0.8
	P27	Threaded flange for guide hoop arrangement (P2) and guide wire arrangement (P4) Consisting of: flange, 4 hexagon head bolts with nuts and washers and 1 sealing element	DN 50 / Rp 2	-	✗	-	-	-	19551353	2
			DN 65 / Rp 2 1/2	-	-	✗	-	-	39021943	2.9
	P28	Hand pump, wall mounting, grey cast iron, suction-side connection Rp 1 1/2	-	-	✗	✗	✗	✗	00520485	12
	P30	Adapter with reduced external thread M4 EN 1042K	2 x Rp 1 1/4	-	-	-	-	-	01135663	0.4

33 For plastic hose Ø 63 item 19
34 2 units required

Non-ATEX-compliant control units / switchgear

Table 40: Control units and switchgear for Amarex, non-ATEX-compliant (**Valid for all countries except France.**)

Item		Description	I_N Min. [A]	I_N Max. [A]	Type	Mat. No.	[kg]
	E4	Multi-functional plug, type Hyper, with motor protection relay CEE plug	2,6	3,7	Hyper 37.1	19071492	1
			3,7	5,5	Hyper 55.1	19071493	1
			5,5	8,0	Hyper 80.1	19071494	1
			8,0	11,5	Hyper 115.1	19071495	1
LevelControl Basic 2 control unit for single-pump station, IP54							
	E11	For float switch or 4 - 20 mA sensor, optionally with master switch, 400 x 281 x 135 mm	2,5	4,0	BC1 400 DFNO 040	19073763	4.5
			4,0	6,3	BC1 400 DFNO 063	19073764	4.5
			6,3	10,0	BC1 400 DFNO 100	19073765	4.5
	E14	Pneumatic, optional master switch, 400 x 281 x 135 mm	2,5	4,0	BC1 400 DPNO 040	19073768	4.5
			4,0	6,3	BC1 400 DPNO 063	19073769	4.5
			6,3	10,0	BC1 400 DPNO 100	19073770	4.5
	E17	Bubbler control with master switch, 400 x 300 x 155 mm	2,5	4,0	BS1 400 DLNO 040	19073818	12
			4,0	6,3	BS1 400 DLNO 063	19073819	12
			6,3	10,0	BS1 400 DLNO 100	19073820	12
	E19	Bubbler control in BC version Only to be used for connections with a neutral conductor. Optional component O1 (master switch) not possible. 400 x 281 x 135 mm	2,5	4,0	BC1 400 DLNO 040	19075148	4.5
			4,0	6,3	BC1 400 DLNO 063	19075149	4.5
			6,3	10,0	BC1 400 DLNO 100	19075150	4.5
LevelControl Basic 2 control unit for dual-pump station, IP54							
	E31	For float switch or 4 - 20 mA sensor, optionally with master switch, 400 x 281 x 135 mm	2,5	4,0	BC2 400 DFNO 040	19073777	4.7
			4,0	6,3	BC2 400 DFNO 063	19073778	4.7
			6,3	10,0	BC2 400 DFNO 100	19073779	4.7
	E34	Pneumatic, optional master switch, 400 x 281 x 135 mm	2,5	4,0	BC2 400 DPNO 040	19073782	4.7
			4,0	6,3	BC2 400 DPNO 063	19073783	4.7
			6,3	10,0	BC2 400 DPNO 100	19073784	4.7
	E37	Bubbler control with master switch, 400 x 300 x 155 mm	2,5	4,0	BS2 400 DLNO 040	19073860	13
			4,0	6,3	BS2 400 DLNO 063	19073861	13
			6,3	10,0	BS2 400 DLNO 100	19073862	13
	E39	Bubbler control in BC version Only to be used for connections with a neutral conductor. Optional component O1 (master switch) not possible. 400 x 281 x 135 mm	2,5	4,0	BC2 400 DLNO 040	19075151	4.7
			4,0	6,3	BC2 400 DLNO 063	19075152	4.7
			6,3	10,0	BC2 400 DLNO 100	19075153	4.7
LevelControl Basic 2 optional components (processed via KSB EasySelect)[35)]							
	O1	Master switch for LevelControl Basic 2 BC, fitted	-	-	-	01143084	0.2
	O2	Control cabinet heating for type BS, fitted with 20 W thermostat	-	-	-	19074269	0.3
	O10	Outdoor cabinet type 142 with base, for type BC IP 44, glass fibre reinforced polyester, colour: RAL 7035, locking device: profile half cylinder, can be buried Internal dimensions H × W × D [mm]: 600 × 276 × 165	-	-	-	19071911	15
	O11	Outdoor cabinet type 0/845 for types BS1 (up to 25 A) and BS2 (up to 10 A) IP44, glass fibre reinforced polyester, colour: RAL 7035, DIN 43 629, locking device: profile half cylinder, can be buried, including metal frame for setting in concrete Dimensions H x W x D [mm]: 585 x 845 x 315	-	-	-	19071440	40
	O200	Signalling module for LevelControl Basic 2 BC	-	-	-	19075182	0.2
	O201	Signalling module for type BC, with pressure sensor 3 mWC for redundant pneumatic level measurement or redundant bubbler system	-	-	-	19075183	1.1
	O203	Signalling module for type BS	-	-	-	19075185	1.1

35 Optional components must be processed via KSB EasySelect, otherwise they will be supplied but not fitted.

Item		Description	I_N Min. [A]	I_N Max. [A]	Type	Mat. No.	[kg]
	O204	Signalling module for type BS, with pressure sensor 3 mWC for redundant pneumatic level measurement or redundant bubbler system	-	-	-	19075186	0.8

Table 41: Control units and switchgear for Amarex, non-ATEX-compliant (**Only valid for France.**)

Item		Description	I_N Min. [A]	I_N Max. [A]	Type	Mat. No.	[kg]
	E4	Multi-functional plug, type Hyper, with motor protection relay CEE plug	2,6	3,7	Hyper 37.1	19071492	1
			3,7	5,5	Hyper 55.1	19071493	1
			5,5	8,0	Hyper 80.1	19071494	1
			8,0	11,5	Hyper 115.1	19071495	1
LevelControl Basic 2 control unit for single-pump station							
	E11	For float switch or 4 - 20 mA sensor, with master switch, 400 x 278 x 120 mm	2,5	4,0	BC1 400 DFNO 040 02	19073878	4.5
			4,0	6,3	BC1 400 DFNO 063 02	19073879	4.5
			6,3	10,0	BC1 400 DFNO 100 02	19073880	4.5
	E14	Pneumatic, with master switch, 400 x 278 x 120 mm	2,5	4,0	BC1 400 DPNO 040 02	[36]	[36]
			4,0	6,3	BC1 400 DPNO 063 02	[36]	[36]
			6,3	10,0	BC1 400 DPNO 100 02	[36]	[36]
	E17	Bubbler control, with master switch, 400 x 300 x 155 mm	2,5	4,0	BS1 400 DLNO 040 02	[36]	[36]
			4,0	6,3	BS1 400 DLNO 063 02	[36]	[36]
			6,3	10,0	BS1 400 DLNO 100 02	[36]	[36]
LevelControl Basic 2 control unit for dual-pump station							
	E11	For float switch or 4 - 20 mA sensor, optional master switch, 400 x 278 x 120 mm	2,5	4,0	BC2 400 DFNO 040 02	19073888	4.7
			4,0	6,3	BC2 400 DFNO 063 02	19073889	4.7
			6,3	10,0	BC2 400 DFNO 100 02	19073890	4.7
	E14	Pneumatic, with master switch, 400 x 278 x 120 mm	2,5	4,0	BC2 400 DPNO 040 02	[36]	[36]
			4,0	6,3	BC2 400 DPNO 063 02	[36]	[36]
			6,3	10,0	BC2 400 DPNO 100 02	[36]	[36]
	E17	Bubbler control, with master switch, 400 x 300 x 155 mm	2,5	4,0	BS2 400 DLNO 040 02	[36]	[36]
			4,0	6,3	BS2 400 DLNO 063 02	[36]	[36]
			6,3	10,0	BS2 400 DLNO 100 02	[36]	[36]

2573.5/04-EN

36 See KSB EasySelect

Alarm switchgears for pumps, non-ATEX-compliant

Table 42: AS 0/AS 1/AS 2/AS 4/AS 5

Item	Description	Mat. No.	[kg]
E50 	Alarm switchgear AS 0 With circuit breaker, acoustic signalling device with 85 dB(A), green equipment-on lamp Plastic housing, IP20, H × W × D = 140 × 80 × 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 AS 2 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 × W × D = 140 × 80 × 57 [mm]. Use float switch, F1 leakage sensor (item E64) or signal relay of control unit as contactor.	29128422	0.5
E52 	Alarm switchgear AS 4 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 × W × D = 140 × 80 × 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 AS 5 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 × W × D = 190 × 165 × 75 [mm]. Use float switch (E60) or signal relay of control unit as contactor.	00530561	1.7
E55 	Alarm switchgear AS 1 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

Accessories for non-ATEX-compliant control units

Table 43: Control unit accessories for Amarex, non-ATEX-compliant

Item		Description	Length [m]	Mat. No.	[kg]
	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	11037742	0.5
			5	11037743	0.8
			10	11037744	1.3
			15	11037745	1.8
			20	11037746	2.5
			25	11037747	2.9
			30	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	11037756	0.8
			10	11037757	1.4
			20	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 cellar or next to the washing machine in the kitchen or bathroom) Dimensions [mm]: 52 × 21 × 20 (H × W × D)	3 m	19072366	0.2
	E65	Open pressure bell set, pneumatic and bubbler control with polyamide tube 8 x 1 mm	10	19071721	1.2
			20	19071837	2
			50	19074200	2.5
	E66	Closed pressure bell set, pneumatic with polyamide tube 8 x 3 mm	10	19071722	3.5
			> 10	On request	
	E70	Horn, 12 V DC, 105 dB, 150 mA, IP54	-	01086547	0.1
	E71	Alarm combination, 12 V DC	-	01139930	0.1
	E72	Yellow alarm strobe light, 12 V DC, 195 mA, IP65	-	01056355	0.3
	O45	Plastic housing, IP65, for easier installation of alarm strobe light, for wall mounting	-	01061067	0.2
	E73	KSB ServiceTool	-	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	-	19074194	0.8
	E91	Rechargeable battery retrofit kit for LevelControl Basic 2, type BS Scope of supply: 1 rechargeable battery (12 V, 1.2 Ah) and charge controller	-	19074199	1

LevelControl Basic 2 control units, ATEX-compliant

Control units for ATEX applications are not explosion-proof, which means that they must not be operated in potentially explosive atmospheres.

For ATEX-compliant variants, intrinsic safety barriers and an ATEX level switch (float switch) must be fitted. Selection via KSB EasySelect.

Table 44: Control units and switchgear for Amarex, ATEX-compliant (**Valid for all countries except France.**)

Item		Description	I_N Min. [A]	I_N Max. [A]	Type	Mat. No.	[kg]
LevelControl Basic 2 control unit for single-pump station							
	E20	Float switch, with master switch, 600 x 400 x 200 mm	2,5	4,0	BS1 400 DFEO 040	19073800	12
			4,0	6,3	BS1 400 DFEO 063	19073801	12
			6,3	10,0	BS1 400 DFEO 100	19073802	12
	E21	Pneumatic, optional master switch, 400 x 281 x 135 mm	2,5	4,0	BC1 400 DPEO 040	19073771	4.5
			4,0	6,3	BC1 400 DPEO 063	19073772	4.5
			6,3	10,0	BC1 400 DPEO 100	19073773	4.5
	E23	Bubbler control with master switch, 400 x 300 x 155 mm	2,5	4,0	BS1 400 DLEO 040	19073821	12
			4,0	6,3	BS1 400 DLEO 063	19073822	12
			6,3	10,0	BS1 400 DLEO 100	19073823	12
	E24	Bubbler control in BC version Only to be used for connections with a neutral conductor. Optional component O1 (master switch) not possible. 400 x 281 x 135 mm	2,5	4,0	BC1 400 DLEO 040	19075154	4.5
			4,0	6,3	BC1 400 DLEO 063	19075155	4.5
			6,3	10,0	BC1 400 DLEO 100	19075156	4.5
LevelControl Basic 2 control unit for dual-pump station							
	E40	Float switch, with master switch, 600 x 400 x 200 mm	2,5	4,0	BS2 400 DFEO 040	19073842	13
			4,0	6,3	BS2 400 DFEO 063	19073843	13
			6,3	10,0	BS2 400 DFEO 100	19073844	13
	E41	Pneumatic, optional master switch, 400 x 281 x 135 mm	2,5	4,0	BC2 400 DPEO 040	19073785	4.7
			4,0	6,3	BC2 400 DPEO 063	19073786	4.7
			6,3	10,0	BC2 400 DPEO 100	19073787	4.7
	E43	Bubbler control with master switch, 400 x 300 x 155 mm	2,5	4,0	BS2 400 DLEO 040	19073863	13
			4,0	6,3	BS2 400 DLEO 063	19073864	13
			6,3	10,0	BS2 400 DLEO 100	19073865	13
	E44	Bubbler control in BC version Only to be used for connections with a neutral conductor. Optional component O1 (master switch) not possible. 400 x 281 x 135 mm	2,5	4,0	BC2 400 DLEO 040	19075157	4.7
			4,0	6,3	BC2 400 DLEO 063	19075158	4.7
			6,3	10,0	BC2 400 DLEO 100	19075159	4.7
LevelControl Basic 2 optional components (processed via KSB EasySelect)[37]							
	O7	Intrinsic safety barrier for additional float switch in potentially explosive atmospheres for example, high water float switch for pneumatic measurement or bubbler control in potentially explosive atmospheres Only in combination with type BS: Stahl 9002/13-280-093-001	-	-	-	01085568	0.2

Table 45: Accessories for control units and switchgear for Amarex, ATEX-compliant (**Only valid for France!**)

Item		Description	I_N Min. [A]	I_N Max. [A]	Type	Mat. No.	[kg]
LevelControl Basic 2 control unit for single-pump station							
	E20	Float switch, with master switch, 600 x 400 x 200 mm	2,5	4,0	BS1 400 DFEO 040 02	[38]	[38]
			4,0	6,3	BS1 400 DFEO 063 02	[38]	[38]
			6,3	10,0	BS1 400 DFEO 100 02	[38]	[38]
	E21	Pneumatic, with master switch, 400 x 278 x 120 mm	2,5	4,0	BC1 400 DPEO 040 02	[38]	[38]
			4,0	6,3	BC1 400 DPEO 063 02	[38]	[38]
			6,3	10,0	BC1 400 DPEO 100 02	[38]	[38]

37 Optional components must be processed via KSB EasySelect, otherwise they will be supplied but not fitted.

38 See KSB EasySelect

Item		Description	I_N Min. [A]	I_N Max. [A]	Type	Mat. No.	[kg]
	E23	Bubbler control, with master switch, 400 x 300 x 155 mm	2,5	4,0	BS1 400 DLEO 040 02	38)	38)
			4,0	6,3	BS1 400 DLEO 063 02	38)	38)
			6,3	10,0	BS1 400 DLEO 100 02	38)	38)
LevelControl Basic 2 control unit for dual-pump station							
	E40	Float switch, with master switch, 600 x 400 x 200 mm	2,5	4,0	BS2 400 DFEO 040 02	38)	38)
			4,0	6,3	BS2 400 DFEO 063 02	38)	38)
			6,3	10,0	BS2 400 DFEO 100 02	38)	38)
	41	Pneumatic, with master switch, 400 x 278 x 120 mm	2,5	4,0	BC2 400 DPEO 040 02	38)	38)
			4,0	6,3	BC2 400 DPEO 063 02	38)	38)
			6,3	10,0	BC2 400 DPEO 100 02	38)	38)
	E43	Bubbler control, with master switch, 400 x 300 x 155 mm	2,5	4,0	BS2 400 DLEO 040 02	38)	38)
			4,0	6,3	BS2 400 DLEO 063 02	38)	38)
			6,3	10,0	BS2 400 DLEO 100 02	38)	38)

Accessories for ATEX-compliant control units

Table 46: Accessories for Amarex, ATEX-compliant

Item		Description	Length [m]	Mat. No.	[kg]
	E63	Float switch with free cable end (NO contact) With declaration of compliance with explosion protection standards Power cable: H07RN-F 3G1	5	01148226	0.7
			10	01148247	1
			20	01148248	2
	E65	Open pressure bell set, pneumatic and bubbler control with polyamide tube 8 x 1 mm	10	19071721	1.2
			20	19071837	2
			50	19074200	2.5
	E66	Closed pressure bell set, pneumatic with polyamide tube 8 x 3 mm	10	19071722	3.5
			> 10	On request	
	E70	Horn, 12 V DC, 105 dB, 150 mA, IP54– non-explosion-proof	-	01086547	0.1
	E71	Alarm combination, 12 V DC , non-explosion-proof	-	01139930	0.1
	E72	Yellow alarm strobe light, 12 V DC, 195 mA, IP65, non-explosion-proof	-	01056355	0.3
	O45	Plastic housing, IP65, for easier installation of alarm strobe light, for wall mounting	-	01061067	0.2
	E73	KSB ServiceTool	-	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	-	19074194	0.8
	E91	Rechargeable battery retrofit kit for LevelControl Basic 2, type BS Scope of supply: 1 rechargeable battery (12 V, 1.2 Ah) and charge controller	-	19074199	1

General arrangement drawings with list of components

General assembly drawings for version US

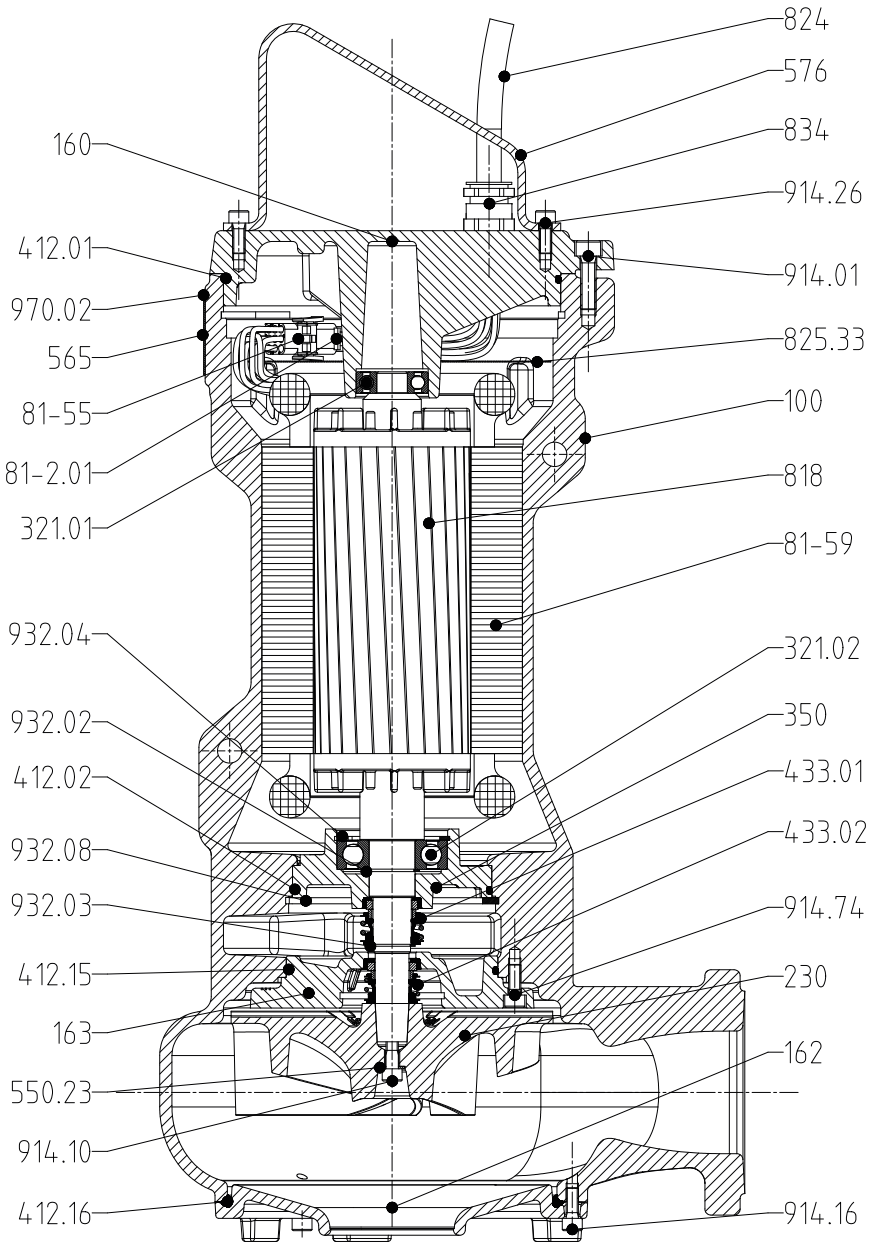


Fig. 13: General assembly drawing for version US, with impeller type F-max

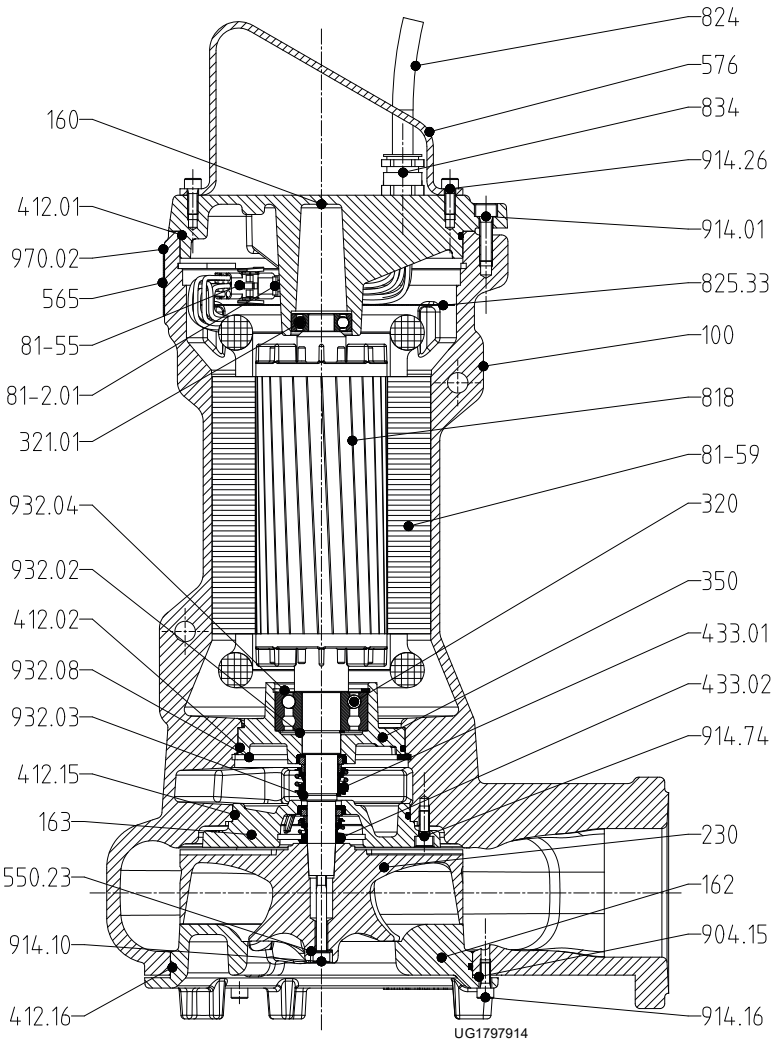


Fig. 14: General assembly drawing for version US, with impeller type D-max

Table 47: List of components

Part No.	Description	Part No.	Description
100	Casing	576	Handle
160	Cover	81-2.01	Plug
162	Suction cover	81-55	Socket
163	Discharge cover	81-59	Stator
230	Impeller	818	Rotor
320[39)]	Rolling element bearing	824	Cable
321.01/.02[40)]	Radial ball bearing	825.33	Cable guard
350	Bearing housing	834	Cable gland
412.01/.02/.15/.16	O-ring	904.15[39)]	Grub screw
433.01/.02	Mechanical seal	914.01/.10/.16/.26/.74	Hexagon socket head cap screw
550.23	Disc	932.02/.03/.04/.08	Circlip
565	Rivet	970.02	Label/plate

39 Only used for version with impeller type D-max
40 Only used for version with impeller type F-max

General assembly drawing for version YS

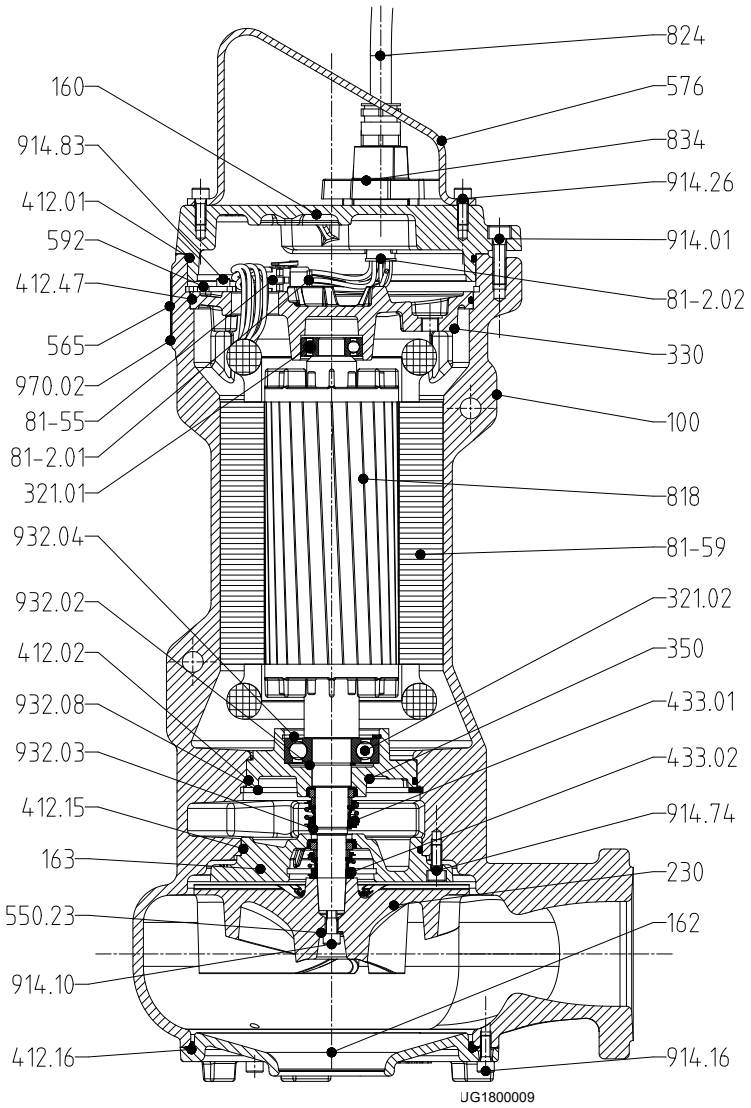


Fig. 15: General assembly drawing for version YS, impeller type F-max

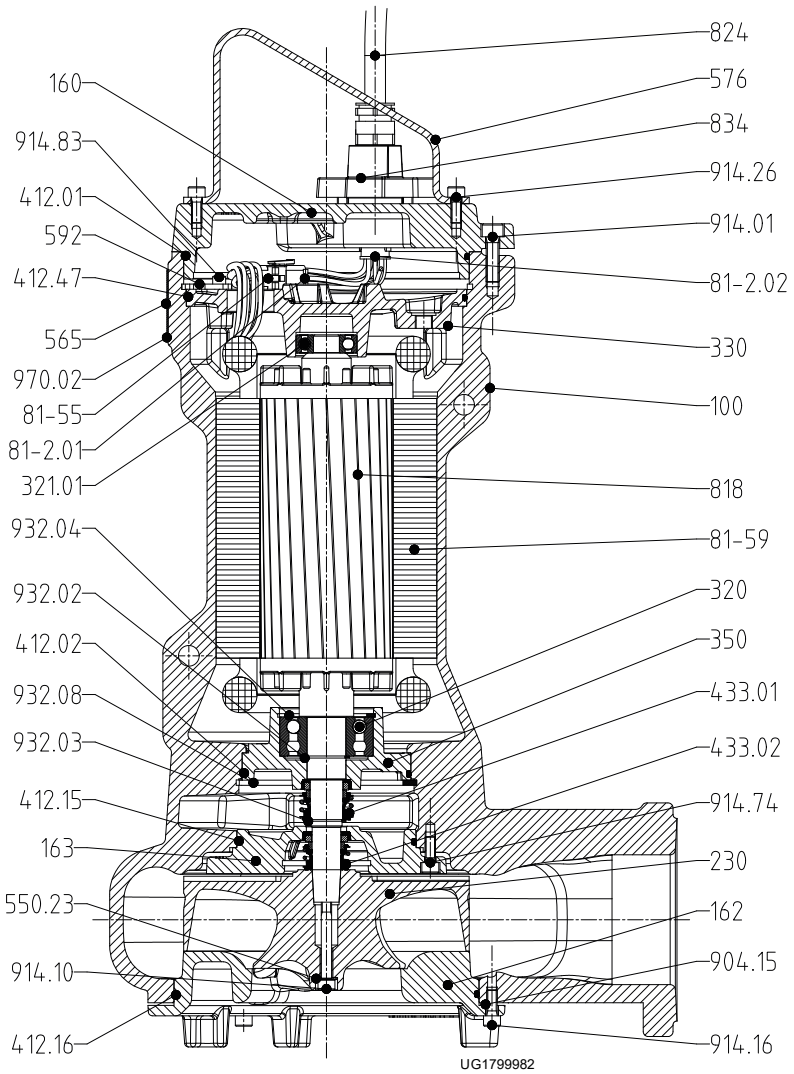


Fig. 16: General assembly drawing for version YS, impeller type D-max

Table 48: List of components

Part No.	Description	Part No.	Description
100	Casing	576	Handle
160	Cover	592	Plug
162	Suction cover	81-2.01/.02	Plug
163	Discharge cover	81-55	Socket
230	Impeller	81-59	Stator
320[41)]	Rolling element bearing	818	Rotor
321.01/.02[42)]	Radial ball bearing	824	Cable
330	Bearing bracket	834	Cable gland
350	Bearing housing	904.15[41)]	Grub screw
412.01/.02/.15/.16/.47	O-ring	914.01/.10/.16/.26/.74/.83	Hexagon socket head cap screw
433.01/.02	Mechanical seal	932.02/.03/.04/.08	Circlip
550.23	Disc	970.02	Label/plate
565	Rivet		

41 Only used for version with impeller type D-max
42 Only used for version with impeller type F-max

Glossary

Grey water

Faecal-free waste water

IE3

Efficiency class to IEC 60034-30: 3 = Premium Efficiency
(IE = International Efficiency)

Mat. No.

This identification number is composed of an 8-digit numerical code that uniquely identifies a product entered in SAP.

2573.5/04-EN

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