

Submersible Motor Pump

Amarex N

50 Hz
DN 50 - DN 100

Type Series Booklet



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Type Series Booklet Amarex N

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Contents

Waste Water	4
Submersible Motor Pump	4
Amarex N	4
Main applications	4
Fluids handled	4
Operating data	4
Designation	4
Design details	4
Materials	5
Product benefits	6
Certifications	6
Programme overview / selection tables	6
Table of fluids handled	6
Overview of product features	8
Technical data	10
Characteristic curves	13
n = 2900 rpm	13
n = 1450 rpm	18
Dimensions and connections	23
Connections	23
Dimensions	24
Installation types	36
Installation information	37
Suggested installation layouts for transportable pump sets	37
Suggested installation layouts for stationary pump sets	38
Suggested electrical installation layouts	40
Scope of supply	40
Accessories	41
Installation parts for stationary pump sets	41
Installation parts for transportable pump sets	42
Chain for stationary and transportable pump sets	43
Pump accessories	43
Electrical accessories	45

Waste Water

Submersible Motor Pump

Amarex N



Main applications

- Waste water management
- Drainage systems
- Sewage treatment plants
- Sludge disposal
- Drainage of rooms and areas at risk of flooding on municipal, commercial and industrial premises

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

Operating data

Operating properties

Characteristic		Value
Flow rate	Q [m ³ /h]	≤ 190
	Q [l/s]	≤ 53
Head	H [m]	≤ 49

Characteristic	Value	
Fluid temperature	T [°C]	≤ 40 ¹⁾
Motor rating	P ₂ [kW]	0,8 - 4,2

Designation

Example: Amarex N F 80-220 / 04 4 YL G-220

Designation key

Code	Description	
Amarex N	Type series	
F	Impeller type	
	F	Free-flow impeller
	S	Cutter
	D	Open, diagonal single-channel impeller
80-220	Size of hydraulic system	
04	Motor size	
4	Number of motor poles	
	2	2 poles
	4	4 poles
YL	Motor version	
	UL	Without explosion protection, for fluid temperatures of up to 55 °C
	YL ²⁾	Without explosion protection, for fluid temperatures of up to 40 °C
	WL	Without explosion protection, for fluid temperatures of up to 60 °C
G	Material variant (⇒ Page 5)	
	G	Pump casing: grey cast iron EN-GJL-250 Intermediate casing: grey cast iron EN-GJL-250 Impeller: grey cast iron EN-GJL-250
	G1	Pump casing: grey cast iron EN-GJL-250 Intermediate casing: grey cast iron EN-GJL-250 Impeller: Noridur 1.4593 (duplex stainless steel)
	G2	Pump casing: grey cast iron EN-GJL-250 Intermediate casing: grey cast iron EN-GJL-250 Impeller: Norihard 0.9635 (white cast iron)
	GH	Pump casing: grey cast iron EN-GJL-250 Intermediate casing: Norihard 0.9635 (white cast iron) Impeller: Norihard 0.9635 (white cast iron)
220	Nominal impeller diameter [mm]	

Design details

Design

- Fully floodable submersible motor pump
- Not self-priming
- Close-coupled design

Drive

- Three-phase asynchronous squirrel-cage motor
- Motors integrated in explosion-proof pump sets are supplied in Ex d IIB type of protection.

1) For short periods (3 to 5 minutes or until the temperature guards trip) UL and WL models can be operated at up to 80 °C.

2) In countries stipulating explosion-proof units for handling sewage with faeces, motor version YL must be used.

Shaft seal

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

Impeller type

- Various, application-based impeller types

D impeller:

	Open, diagonal single-vane impeller (impeller type D)	Suitable for the following fluids: fluids containing solid substances and long fibres
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F impeller:

	Free-flow impeller (impeller type F)	Suitable for the following fluids: fluids containing solid substances and stringy material as well as fluids with entrapped air or gas
--	--------------------------------------	--

D and F impellers are suitable for handling the following fluids:

- Activated sludge
- Digested sludge
- Heating sludge
- Mixed water
- Raw waste water
- Raw sludge

- Recirculated sludge

S impeller:

	Impeller with cutter (impeller type S)	Suitable for the following fluids: faeces, domestic sewage and waste water containing long fibres
--	--	---

S impellers are suitable for handling the following fluids:

- Domestic waste water
- Grey water
- Waste water with faeces

Standard bearings

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

Reinforced bearings (optional, only for S impeller)

The following hydraulic system/motor combinations can be equipped with reinforced bearings:

Reinforced bearings

Size of hydraulic system	Motor size and number of poles
Amarex N S 50-172 (motor version YL)	002, 012, 022
Amarex N S 50-222 (motor version YL)	032, 042

Pump-end bearings:

- Grease-lubricated bearing sealed for life

Materials

Overview of material variants for standard variants

Component	S impeller		D impeller		F impeller	
	Amarex N S 50-172/... Amarex N S 50-222/...		Amarex N D 80-220/... Amarex N D 100-220/...		Amarex N F 50-... Amarex N F 65-... Amarex N F 80-... Amarex N F 100-...	
	G		G		G	
Casing	EN-GJL-250		EN-GJL-250		EN-GJL-250	
Intermediate casing	EN-GJL-250		EN-GJL-250		EN-GJL-250	
Impeller	EN-GJL-250		EN-GJL-250		EN-GJL-250	
Cutter	1.2080.02 (K100)		-		-	
Shaft	1.4021		1.4021		1.4021	
Mechanical seal	Drive end	Carbon/Al ₂ O ₃		Carbon/Al ₂ O ₃		
	Pump end	SiC/SiC		SiC/SiC		
Screws/bolts	A2		A2		A2	
Elastomers	NBR		NBR		NBR	

Overview of material variants for standard variants

Component	S impeller		D impeller		F impeller		
	Amarex N S 50-172/... Amarex N S 50-222/...		Amarex N D 80-220/... Amarex N D 100-220/...		Amarex N F 50-... Amarex N F 65-... Amarex N F 80-... Amarex N F 100-...		
	G		G		G1	G2	GH
Casing	-		-		EN-GJL-250	EN-GJL-250	EN-GJL-250
Intermediate casing	-		-		EN-GJL-250	EN-GJL-250	0.9635 ⁴⁾
Impeller	-		-		1.4593 ³⁾	0.9635 ⁴⁾	0.9635 ⁴⁾
Cutter	-		-		-	-	-
Shaft	-		-		1.4021	1.4021	1.4021

Component		S impeller	D impeller	F impeller		
		Amarex N S 50-172/... Amarex N S 50-222/...	Amarex N D 80-220/... Amarex N D 100-220/...	Amarex N F 50-... Amarex N F 65-... Amarex N F 80-... Amarex N F 100-...	G	G
		G	G	G1	G2	GH
Mechanical seal	Drive end	-	-	Carbon/Al ₂ O ₃	Carbon/Al ₂ O ₃	Carbon/Al ₂ O ₃
	Pump end	-	-	SiC/SiC	SiC/SiC	SiC/SiC
Screws/bolts		-	-	A2	A2	A2
Elastomers		-	-	NBR ⁵⁾	NBR ⁵⁾	NBR ⁵⁾

Product benefits

- Easy and fast installation/removal with polarised, absolutely watertight cable and KSB plug connection ensuring correct installation
- Motor absolutely watertight, also in the event of damage to the cable sheath and core insulation, with individually stripped, tinned and resin-sealed conductors
- Highest operating reliability with optimum motor selection for operating mode S1, thermal class F, explosion-proof variant in Ex d IIB T4 Gb
- Long service life with shaft made of corrosion-resistant stainless steel
- Zero maintenance, ideal for continuous duty, with long-life bearings sealed on both sides, grease-packed for life
- Environmentally friendly, non-toxic, food-approved oil fill for lubricating the mechanical seal (liquid reservoir)
- Significant reduction of energy costs by optimised hydraulic system and high efficiency
- Absolutely reliable and non-clogging design with optimised cutter (S impeller).
- Close-coupled pump design prevents risk of leakage (pump volute casing and motor housing cast as a single piece)
- Stationary pump sets easy to install and remove with automatic, bolt-free connection; leakage prevented by elastic sealing elements
- Ease of service with wetted bolts made of stainless steel, which are easy to undo even after years of operation
- Two bi-directional mechanical seals with oil reservoir filled with ecologically acceptable oil provide double safety

- Well suited for mechanical seal with covered spring for abrasive and aggressive fluids
- Only one set of spare parts for all pump sizes thanks to modular system

Certifications

Overview

Label	Valid in:	Comment
	Europe	Suitable for plants to Standard EN 12050-1
	Europe	BMW (test report) Nos.: 0420266-01 to 05

Programme overview / selection tables

Table 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. Make use of our laboratory's expertise when selecting materials.

Selection aid for materials and hydraulic systems per fluid

Fluid handled ⁶⁾	Recommended material	Recommended impeller type ⁷⁾	Comments, further recommendations
Grey water	EN-GJL-250	F, D, S	Free passage > any solids contained, possibly pre-screened
River water	EN-GJL-250	F, D	Free passage > any solids contained, possibly pre-screened
Contaminated surface water	EN-GJL-250	F, D	Free passage > any solids contained, possibly pre-screened
Waste water			
▪ Untreated municipal waste water	EN-GJL-250	F, D, S	ATV ⁸⁾ recommends a free passage of 100 mm; min. free passage: 76 mm

3) Noridur (= duplex stainless steel)
 4) Norihard (= white cast iron)
 5) Optional: FPM
 6) For any fluids which are not listed in this table contact KSB.
 7) The first impeller type listed should be given preference.
 8) ATV = German regulatory body for waste water management

Fluid handled ⁶⁾	Recommended material	Recommended impeller type ⁷⁾	Comments, further recommendations
<ul style="list-style-type: none"> Waste water containing air or gas 	EN-GJL-250	F	Up to 8 %, contact KSB for handling fluids with high outgassing rates
<ul style="list-style-type: none"> Raw waste water 	EN-GJL-250	F, D	ATV ⁸⁾ recommends a free passage of 100 mm; min. free passage: 76 mm
<ul style="list-style-type: none"> Mixed water 	EN-GJL-250	F	Free passage > any solids contained, possibly pre-screened
<ul style="list-style-type: none"> Waste water or grey water containing long fibres 	EN-GJL-250	F, D, S	Free passage > any solids contained, possibly pre-screened
<ul style="list-style-type: none"> Highly abrasive waste water causing wear (chemically neutral) 	Norihard	F	For solids contents < 5 g/l material variants G2, GH
<ul style="list-style-type: none"> Corrosive waste water 	Noridur	F	Material variant G1 if required according to analysis of the fluid handled
Sludges			
<ul style="list-style-type: none"> Raw sludge 	EN-GJL-250	D, F	Pumpable up to a dry substance content of: 13 % (D), 8 % (F)
<ul style="list-style-type: none"> Digested sludge 	EN-GJL-250	D, F	Pumpable up to a dry substance content of: 13 % (D), 8 % (F)
<ul style="list-style-type: none"> Activated sludge 	EN-GJL-250	D, F	Pumpable up to a dry substance content of: 13 % (D), 8 % (F)
Industrial waste water containing ...			
<ul style="list-style-type: none"> Paint suspensions 	EN-GJL-250	F	Solvent-free, observe the operator's instructions.
<ul style="list-style-type: none"> Lacquer/paint/varnish suspensions 	EN-GJL-250	F	Solvent-free, contact KSB for silicone-free version.
<ul style="list-style-type: none"> Fibres/pulp 	EN-GJL-250	F, S, D	
<ul style="list-style-type: none"> Chips/swarf 	Norihard	F	Material variant G2 or GH, special mechanical seal; solids content < 5 g/l
<ul style="list-style-type: none"> Abrasive substances⁹⁾ 	Norihard	F	Material variant G2 or GH, special mechanical seal; solids content < 5 g/l
Mildly acidic industrial waste water	EN-GJL-250	F	pH value ≥ 6.5 G1 variant and FPM (Viton) O-rings
Non-corrosive waste water			
<ul style="list-style-type: none"> Ammonium water 	EN-GJL-250	F	
<ul style="list-style-type: none"> Ammonium hydroxide 5 % NH₄OH 	EN-GJL-250	F	
<ul style="list-style-type: none"> Urea 25 % (NH₂)₂-CO 	EN-GJL-250	F	
<ul style="list-style-type: none"> Potassium hydroxide 10 % KOH 	EN-GJL-250	F	
<ul style="list-style-type: none"> Calcium hydroxide 5 % Ca(OH)₂ 	EN-GJL-250	F	
<ul style="list-style-type: none"> Sodium hydroxide 5 % NaOH 	EN-GJL-250	F	
<ul style="list-style-type: none"> Sodium carbonate 30 % Na₂CO₃ 	EN-GJL-250	F	
Non-corrosive waste water containing ...			
<ul style="list-style-type: none"> Aliphatic hydrocarbons, e.g. oils, petrol, butane, methane 	EN-GJL-250	F	FPM (Viton) O-rings, TEHSITE cable, for high concentrations contact KSB.
<ul style="list-style-type: none"> Aromatic hydrocarbons, e.g. benzene, styrene 	EN-GJL-250	F	FPM (Viton) O-rings, TEHSITE cable, for high concentrations contact KSB.
<ul style="list-style-type: none"> Chlorinated hydrocarbons (e.g. tetrachloroethylene, ethylene chloride, chloroform, methylene chloride) 	EN-GJL-250	F	FPM (Viton) O-rings, TEHSITE cable, for high concentrations contact KSB.
Highly abrasive industrial waste water causing wear (chemically neutral)¹⁰⁾			
<ul style="list-style-type: none"> Lime water 	Norihard	F	For sinter contents < 5 g/l, material variant GH
<ul style="list-style-type: none"> Lime milk containing quartz and pigment suspension 	Norihard	F	Lime milk of up to 15 %, material variant GH
<ul style="list-style-type: none"> Water/sand mixture 	Norihard	F	Up to 5 g/l solids content, material variant GH

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

7) The first impeller type listed should be given preference.

9) 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 low-flow conditions to the left of the duty point.

10) The material variants required highly depend on the operating hours, rotational speed and flow velocity.

Overview of product features

Standard designs

Size	S impeller	D impeller	F impeller
	Amarex N S 50-...	Amarex N D 80-... Amarex N D 100-...	Amarex N F 50-... Amarex N F 65-... Amarex N F 80-... Amarex N F 100-...
Material variant	G	G	G
Number of motor poles			
2-pole	50-172/... 50-222/...	-	50-170/... 50-220/... 65-170/...
4-pole	-	80-220/... 100-220/...	65-220/... 80-220/... 100-200/...
Explosion protection			
Motor version UL	Non-explosionproof		
Motor version YL ¹¹⁾	⊕ Ex d IIB T4 Gb		
Motor version WL	Non-explosionproof		
Motor			
Starting method	DOL ¹²⁾		
Voltage	400 V		
Cooling	Cooled by surrounding fluid		
Mode of operation	S1: submerged (max. 25 m) (see ²⁾ in outline drawing) S3: outside the fluid (see ¹⁾ in outline drawing)		
Power cable			
Type	Rubber-sheathed cable (H07RN8-F 7G1.5 ²⁾)		
Length	10 m		
Cable entry	Absolutely watertight		
Sealing elements			
Shaft seal	Mechanical seal		
Elastomer seals	NBR		
Monitoring equipment			
Winding temperature version YL	Temperature monitoring circuit (with automatic reset and start-up): bimetal switch directly connected with the control circuit of the motor contactor Limiting circuit (temperature limit for explosion protection without automatic reset): bimetal switch connected via a tripping unit with manual reset		
Winding temperature version UL, WL	Temperature monitoring circuit (with automatic reset and start-up): bimetal switch directly connected with the control circuit of the motor		
Coating	Environmentally-friendly KSB top coat (two-component epoxy paint), colour RAL 5002, film thickness = 80 µm		
Installation (⇒ Page 36)			
Stationary, with guide hoop	Installation depths 1.5 m/1.8 m/2.1 m		
Stationary, with single guide rail	Installation depth 4.5 m		
Stationary, with twin guide rail	Installation depth 4.5 m		
Stationary, with guide wire	Installation depth 4.5 m		
Transportable	Installation depth 4.5 m		
Maximum temperature of fluid handled			
Motor version UL	55 °C		
Motor version YL	40 °C		
Motor version WL	60 °C		

11) In countries stipulating explosion-proof units for handling sewage with faeces, motor version YL must be used.

12) Maximum switching frequency: 30 starts per hour

Standard variants

Size	S impeller	D impeller	F impeller		
	Amarex N S 50-172/... Amarex N S 50-222/...	Amarex N D 80-220/... Amarex N D 100-220/...	Amarex N F 50-... Amarex N F 65-... Amarex N F 80-... Amarex N F 100-...		
Material variants	G	G	G1	G2	GH
Number of motor poles					
2-pole	-	-	50-170/... 50-220/... 65-170/...		
4-pole	-	-	65-220/... 80-220/... 100-200/...		
Shaft material					
Material 1.4462 + C45 N	X	X	X		
Motor					
Voltage	230 V, 415 V, 500 V, 690 V				
Monitoring equipment					
Leakage sensor in the motor space ¹³⁾	X	X	X		
Suction flange					
Drilled to DIN/ISO PN16 or ASME 150 lb	-	-	X		
Sealing elements					
Elastomers: O-rings and flange gaskets made of Viton, lower mechanical seal with Viton gaskets	X	X	X		
Shaft seal: special mechanical seal (mechanical seal with covered spring HJ977) ¹⁴⁾	X	X	X		
Power cables					
Standard rubber-sheathed cable (H07RN8-F 7G1.5 ²⁾ ; for versions ULG, YLG, WLG ¹⁵⁾	X	X	X		
Standard rubber-sheathed cable (H07RN8-F 8x1.5 ²⁾ for pump with leakage sensor ¹⁵⁾	X	X	X		
TEHSITE power cable (8G1.5) for pump with or without leakage sensor, for versions ULG, YLG, WLG ¹⁶⁾	X	X	X		
Shielded rubber-sheathed cable (S07RC4N8-F-8G1.5) for pump with or without leakage sensor, for versions ULG, YLG, WLG operated on a frequency inverter ¹⁶⁾	X	X	X		
Coating	Environmentally-friendly KSB standard coating (two-component epoxy paint), colour RAL 5002, film thickness = 300 µm				
Installation (⇒ Page 36)					
Stationary, with guide hoop	Installation depths 1.5 m/1.8 m/2.1 m				
Stationary, with single guide rail	Installation depth 6.0 m				
Stationary, with twin guide rail	Installation depth 6.0 m				
Stationary, with guide wire	Installation depth 9.5 m				
Transportable	Installation depth 4.5 m				

¹³⁾ 8-core connection cable required

¹⁴⁾ Silicon carbide/silicon carbide seal faces, Viton sealing elements, stainless steel spring and metal part, Viton (FPM) O-rings and flange gaskets

¹⁵⁾ Total lengths available 15 m/20 m/30 m/40 m/50 m

¹⁶⁾ Total lengths available 10 m/15 m/20 m/30 m/40 m/50 m

Technical data

Material variant G

Impeller diameter	Size	Motor version	P ₁	P _N	I _N	I _A	τ ¹⁷⁾	[kg]	Mat. No.
			[kW]	[kW]	[A]	[A]	[°C]		
120	S 50-172/002	UL	1,83	1,30	3,58	20	55	47	39100017
	S 50-172/002	YL	1,83	1,30	3,58	20	40	47	39100018
	S 50-172/002	WL	1,83	1,30	3,58	20	60	39	-
140	S 50-172/002	UL	1,83	1,30	3,58	20	55	47	39100019
	S 50-172/002	YL	1,83	1,30	3,58	20	40	47	39100020
	S 50-172/002	WL	1,83	1,30	3,58	20	60	39	-
160	S 50-172/012	UL	2,64	1,90	4,67	20	55	47	39100021
	S 50-172/012	YL	2,64	1,90	4,67	20	40	47	39100022
	S 50-172/012	WL	2,64	1,90	4,67	20	60	39	-
175	S 50-222/032	UL	3,90	3,10	6,90	50	55	58	39100041
	S 50-222/032	YL	3,90	3,10	6,90	50	40	58	39100042
	S 50-222/032	WL	3,90	3,10	6,90	50	55	54	-
190	S 50-222/042	UL	5,40	4,20	9,00	50	55	58	39100043
	S 50-222/042	YL	5,40	4,20	9,00	50	40	58	39100044
	S 50-222/042	WL	5,40	4,20	9,00	50	55	54	-
90	F 50-170/002	UL	1,83	1,30	3,58	20	55	41	39100045
	F 50-170/002	YL	1,83	1,30	3,58	20	40	41	39100046
	F 50-170/002	WL	1,83	1,30	3,58	20	60	41	-
107	F 50-170/002	UL	1,83	1,30	3,58	20	55	41	39100047
	F 50-170/002	YL	1,83	1,30	3,58	20	40	41	39100048
	F 50-170/002	WL	1,83	1,30	3,58	20	60	41	-
120	F 50-170/012	UL	2,64	1,90	4,67	20	55	42	39100049
	F 50-170/012	YL	2,64	1,90	4,67	20	40	42	39100050
	F 50-170/012	WL	2,64	1,90	4,67	20	60	42	-
130	F 50-170/022	UL	3,30	2,30	5,61	20	55	42	39100051
	F 50-170/022	YL	3,30	2,30	5,61	20	40	42	39100052
	F 50-170/022	WL	3,30	2,30	5,61	20	60	43	-
140	F 50-170/022	UL	3,30	2,30	5,61	20	55	43	39100053
	F 50-170/022	YL	3,30	2,30	5,61	20	40	43	39100054
	F 50-170/022	WL	3,30	2,30	5,61	20	60	43	-
130	F 50-220/032	UL	3,90	3,10	6,90	50	55	52	39100067
	F 50-220/032	YL	3,90	3,10	6,90	50	40	52	39100068
	F 50-220/032	WL	3,90	3,10	6,90	50	60	52	-
140	F 50-220/032	UL	3,90	3,10	6,90	50	55	52	39100069
	F 50-220/032	YL	3,90	3,10	6,90	50	40	52	39100070
	F 50-220/032	WL	3,90	3,10	6,90	50	60	52	-
150	F 50-220/042	UL	5,40	4,20	9,00	50	55	53	39100071
	F 50-220/042	YL	5,40	4,20	9,00	50	40	53	39100072
	F 50-220/042	WL	5,40	4,20	9,00	50	60	54	-
160	F 50-220/042	UL	5,40	4,20	9,00	50	55	53	39100073
	F 50-220/042	YL	5,40	4,20	9,00	50	40	53	39100074
	F 50-220/042	WL	5,40	4,20	9,00	50	60	54	-
170	F 50-220/042	UL	5,40	4,20	9,00	50	55	54	39100075
	F 50-220/042	YL	5,40	4,20	9,00	50	40	54	39100076
	F 50-220/042	WL	5,40	4,20	9,00	50	60	54	-
180	F 50-220/042	UL	5,40	4,20	9,00	50	55	54	39100077
	F 50-220/042	YL	5,40	4,20	9,00	50	40	54	39100078
	F 50-220/042	WL	5,40	4,20	9,00	50	60	54	-
120	F 65-170/032	UL	3,90	3,10	6,90	50	55	58	39100085
	F 65-170/032	YL	3,90	3,10	6,90	50	40	58	39100086
	F 65-170/032	WL	3,90	3,10	6,90	50	60	59	-
128	F 65-170/032	UL	3,90	3,10	6,90	50	55	58	39100087
	F 65-170/032	YL	3,90	3,10	6,90	50	40	58	39100088
	F 65-170/032	WL	3,90	3,10	6,90	50	60	59	-
136	F 65-170/032	UL	3,90	3,10	6,90	50	55	59	39100089
	F 65-170/032	YL	3,90	3,10	6,90	50	40	59	39100090
	F 65-170/032	WL	3,90	3,10	6,90	50	60	59	-
146	F 65-170/042	UL	5,40	4,20	9,00	50	55	59	39100091

¹⁷⁾ Fluid temperature

Impeller diameter	Size	Motor version	P ₁	P _N	I _N	I _A	T ¹⁷⁾	[kg]	Mat. No.
			[kW]	[kW]	[A]	[A]	[°C]		
	F 65-170/042	YL	5,40	4,20	9,00	50	40	59	39100092
	F 65-170/042	WL	5,40	4,20	9,00	50	60	60	-
152	F 65-170/042	UL	5,40	4,20	9,00	50	55	60	39100093
	F 65-170/042	YL	5,40	4,20	9,00	50	40	60	39100094
158	F 65-170/042	WL	5,40	4,20	9,00	50	60	60	-
	F 65-170/042	YL	5,40	4,20	9,00	50	40	60	39100095
112	F 65-170/042	WL	5,40	4,20	9,00	50	60	60	39100096
	F 65-170/042	YL	5,40	4,20	9,00	50	40	60	-
125	F 65-220/004	UL	1,29	0,80	2,90	17,4	55	49	39100097
	F 65-220/004	YL	1,29	0,80	2,90	17,4	40	49	39100098
	F 65-220/004	WL	1,29	0,80	2,90	17,4	60	49	-
135	F 65-220/004	UL	1,29	0,80	2,90	17,4	55	49	39100099
	F 65-220/004	YL	1,29	0,80	2,90	17,4	40	49	39100100
	F 65-220/004	WL	1,29	0,80	2,90	17,4	60	49	-
145	F 65-220/004	UL	1,29	0,80	2,90	17,4	55	49	39100101
	F 65-220/004	YL	1,29	0,80	2,90	17,4	40	49	39100102
	F 65-220/004	WL	1,29	0,80	2,90	17,4	60	49	-
155	F 65-220/004	UL	1,29	0,80	2,90	17,4	55	49	39100103
	F 65-220/004	YL	1,29	0,80	2,90	17,4	40	49	39100104
	F 65-220/004	WL	1,29	0,80	2,90	17,4	60	49	-
165	F 65-220/004	UL	1,29	0,80	2,90	17,4	55	49	39100105
	F 65-220/004	YL	1,29	0,80	2,90	17,4	40	49	39100106
	F 65-220/004	WL	1,29	0,80	2,90	17,4	60	49	-
175	F 65-220/014	UL	1,96	1,30	3,60	17,4	55	50	39100107
	F 65-220/014	YL	1,96	1,30	3,60	17,4	40	50	39100108
	F 65-220/014	WL	1,96	1,30	3,60	17,4	60	50	-
185	F 65-220/014	UL	1,96	1,30	3,60	17,4	55	50	39100109
	F 65-220/014	YL	1,96	1,30	3,60	17,4	40	50	39100110
	F 65-220/014	WL	1,96	1,30	3,60	17,4	60	50	-
195	F 65-220/024	UL	2,85	1,80	4,80	17,4	55	51	39100111
	F 65-220/024	YL	2,85	1,80	4,80	17,4	40	51	39100112
	F 65-220/024	WL	2,85	1,80	4,80	17,4	60	51	-
120	F 65-220/024	UL	2,85	1,80	4,80	17,4	55	51	39100113
	F 65-220/024	YL	2,85	1,80	4,80	17,4	40	51	39100114
	F 65-220/024	WL	2,85	1,80	4,80	17,4	60	51	-
135	F 80-220/034	UL	2,70	1,90	6,14	37,5	55	63	39100123
	F 80-220/034	YL	2,70	1,90	6,14	37,5	40	63	39100124
	F 80-220/034	WL	2,70	1,90	6,14	37,5	60	63	-
150	F 80-220/034	UL	2,70	1,90	6,14	37,5	55	63	39100137
	F 80-220/034	YL	2,70	1,90	6,14	37,5	40	63	39100138
	F 80-220/034	WL	2,70	1,90	6,14	37,5	60	63	-
165	F 80-220/034	UL	2,70	1,90	6,14	37,5	55	63	39100139
	F 80-220/034	YL	2,70	1,90	6,14	37,5	40	63	39100140
	F 80-220/034	WL	2,70	1,90	6,14	37,5	60	63	-
180	F 80-220/034	UL	3,61	2,60	7,00	37,5	55	63	39100129
	F 80-220/034	YL	3,61	2,60	7,00	37,5	40	63	39100130
	F 80-220/034	WL	3,61	2,60	7,00	37,5	60	64	-
195	F 80-220/044	UL	5,39	3,70	9,30	37,5	55	65	39100131
	F 80-220/044	YL	5,39	3,70	9,30	37,5	40	65	39100132
	F 80-220/044	WL	5,39	3,70	9,30	37,5	60	66	-
210	F 80-220/044	UL	5,39	3,70	9,30	37,5	55	65	39100133
	F 80-220/044	YL	5,39	3,70	9,30	37,5	40	65	39100134
	F 80-220/044	WL	5,39	3,70	9,30	37,5	60	66	-
120	F 80-220/044	UL	5,39	3,70	9,30	37,5	55	65	39100135
	F 80-220/044	YL	5,39	3,70	9,30	37,5	40	65	39100136
	F 80-220/044	WL	5,39	3,70	9,30	37,5	60	66	-
135	F 100-220/034	UL	2,70	1,90	6,14	37,5	55	64	39100145
	F 100-220/034	YL	2,70	1,90	6,14	37,5	40	64	39100146
	F 100-220/034	WL	2,70	1,90	6,14	37,5	60	64	-
	F 100-220/034	UL	2,70	1,90	6,14	37,5	55	64	39100159

¹⁷⁾ Fluid temperature

Impeller diameter	Size	Motor version	P ₁	P _N	I _N	I _A	T ¹⁷⁾	[kg]	Mat. No.
			[kW]	[kW]	[A]	[A]	[°C]		
	F 100-220/034	YL	2,70	1,90	6,14	37,5	40	64	39100160
	F 100-220/034	WL	2,70	1,90	6,14	37,5	60	64	-
150	F 100-220/034	UL	3,61	2,60	7,00	37,5	55	64	39100149
	F 100-220/034	YL	3,61	2,60	7,00	37,5	40	64	39100150
165	F 100-220/034	WL	3,61	2,60	7,00	37,5	60	64	-
	F 100-220/044	UL	5,39	3,70	9,30	37,5	55	65	39100151
	F 100-220/044	YL	5,39	3,70	9,30	37,5	40	65	39100152
	F 100-220/044	WL	5,39	3,70	9,30	37,5	60	67	-
180	F 100-220/044	UL	5,39	3,70	9,30	37,5	55	66	39100153
	F 100-220/044	YL	5,39	3,70	9,30	37,5	40	66	39100154
	F 100-220/044	WL	5,39	3,70	9,30	37,5	60	67	-
	F 100-220/044	UL	5,39	3,70	9,30	37,5	55	67	39100155
195	F 100-220/044	YL	5,39	3,70	9,30	37,5	40	67	39100156
	F 100-220/044	WL	5,39	3,70	9,30	37,5	60	67	-
210	F 100-220/044	UL	5,39	3,70	9,30	37,5	55	67	39100157
	F 100-220/044	YL	5,39	3,70	9,30	37,5	40	67	39100158
	F 100-220/044	WL	5,39	3,70	9,30	37,5	60	67	-
	D 80-220/034	UL	2,70	1,90	6,14	37,5	55	74	39100345
154	D 80-220/034	YL	2,70	1,90	6,14	37,5	40	74	39100346
	D 80-220/034	WL	2,70	1,90	6,14	37,5	60	75	-
168	D 80-220/034	UL	2,70	1,90	6,14	37,5	55	74	39100347
	D 80-220/034	YL	2,70	1,90	6,14	37,5	40	74	39100348
	D 80-220/034	WL	2,70	1,90	6,14	37,5	60	75	-
	D 80-220/034	UL	2,70	1,90	6,14	37,5	55	74	39100349
180	D 80-220/034	YL	2,70	1,90	6,14	37,5	40	74	39100350
	D 80-220/034	WL	2,70	1,90	6,14	37,5	60	75	-
190	D 80-220/034	UL	2,70	1,90	6,14	37,5	55	75	39100351
	D 80-220/034	YL	2,70	1,90	6,14	37,5	40	75	39100352
	D 80-220/034	WL	2,70	1,90	6,14	37,5	60	75	-
	D 100-220/034	UL	3,61	2,60	7,00	37,5	55	79	39100366
195	D 100-220/034	YL	3,61	2,60	7,00	37,5	40	79	39100367
	D 100-220/034	WL	3,61	2,60	7,00	37,5	60	79	-
209	D 100-220/044	UL	5,39	3,70	9,30	37,5	55	79	39100368
	D 100-220/044	YL	5,39	3,70	9,30	37,5	40	79	39100369
	D 100-220/044	WL	5,39	3,70	9,30	37,5	60	80	-
	D 100-220/044	UL	5,39	3,70	9,30	37,5	55	80	39100370
220	D 100-220/044	YL	5,39	3,70	9,30	37,5	40	80	39100371
	D 100-220/044	WL	5,39	3,70	9,30	37,5	60	80	-

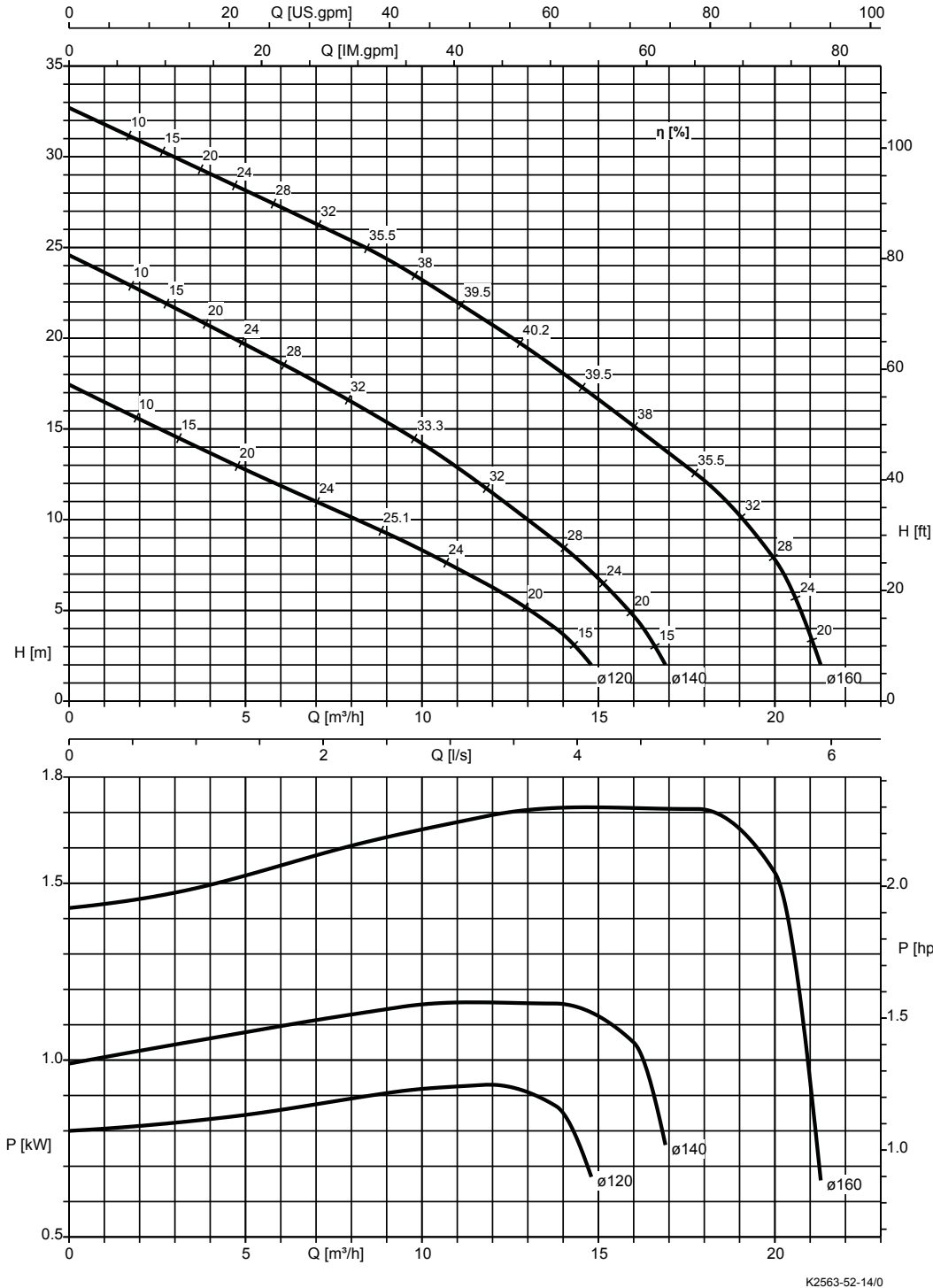
¹⁷⁾ Fluid temperature

Characteristic curves

n = 2900 rpm

Amarex N S 50-172, n = 2900 rpm

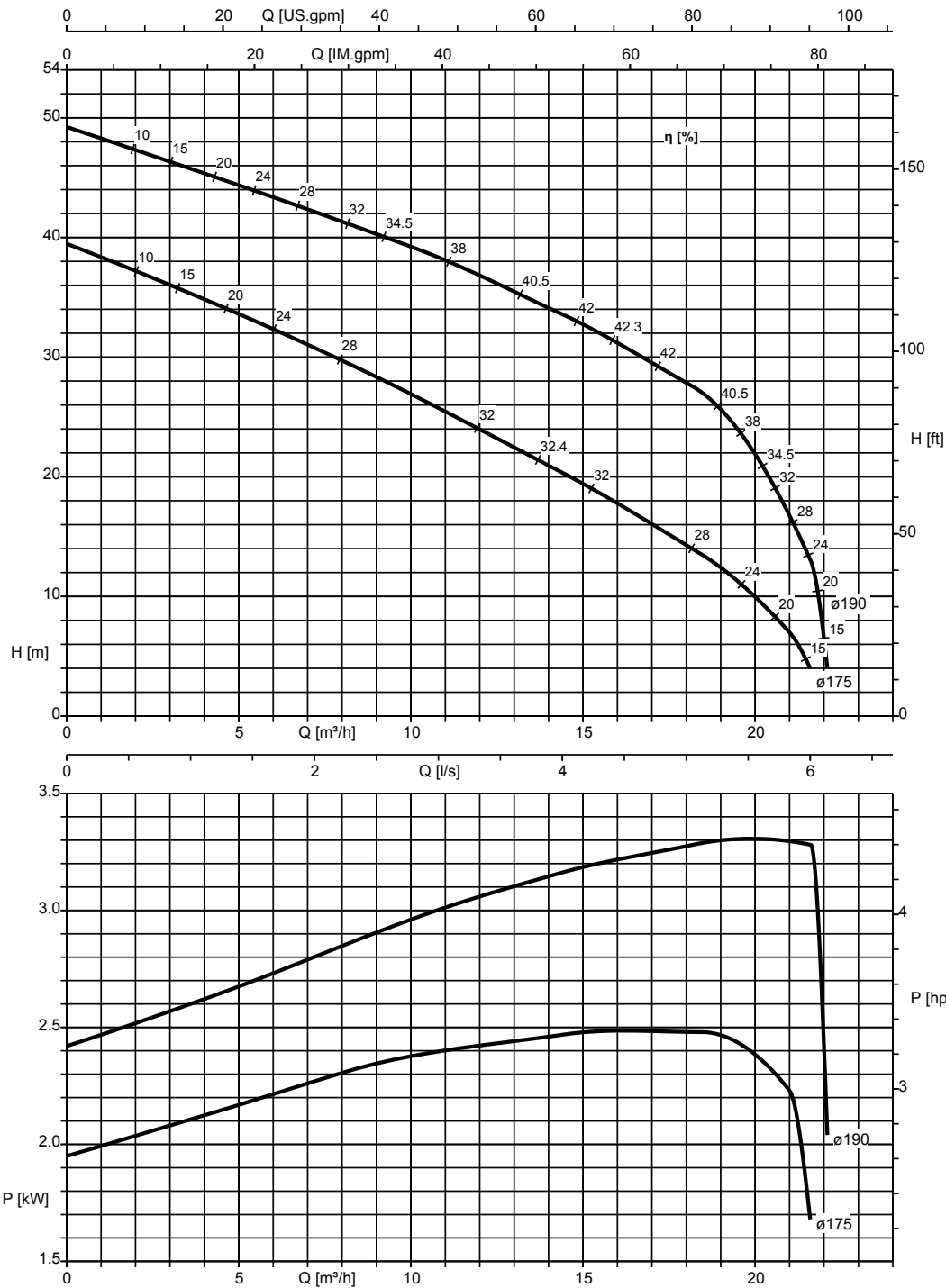
Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. They refer to the effective motor speed.



Free passage = 6 mm

Amarex N S 50-222, n = 2900 rpm

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

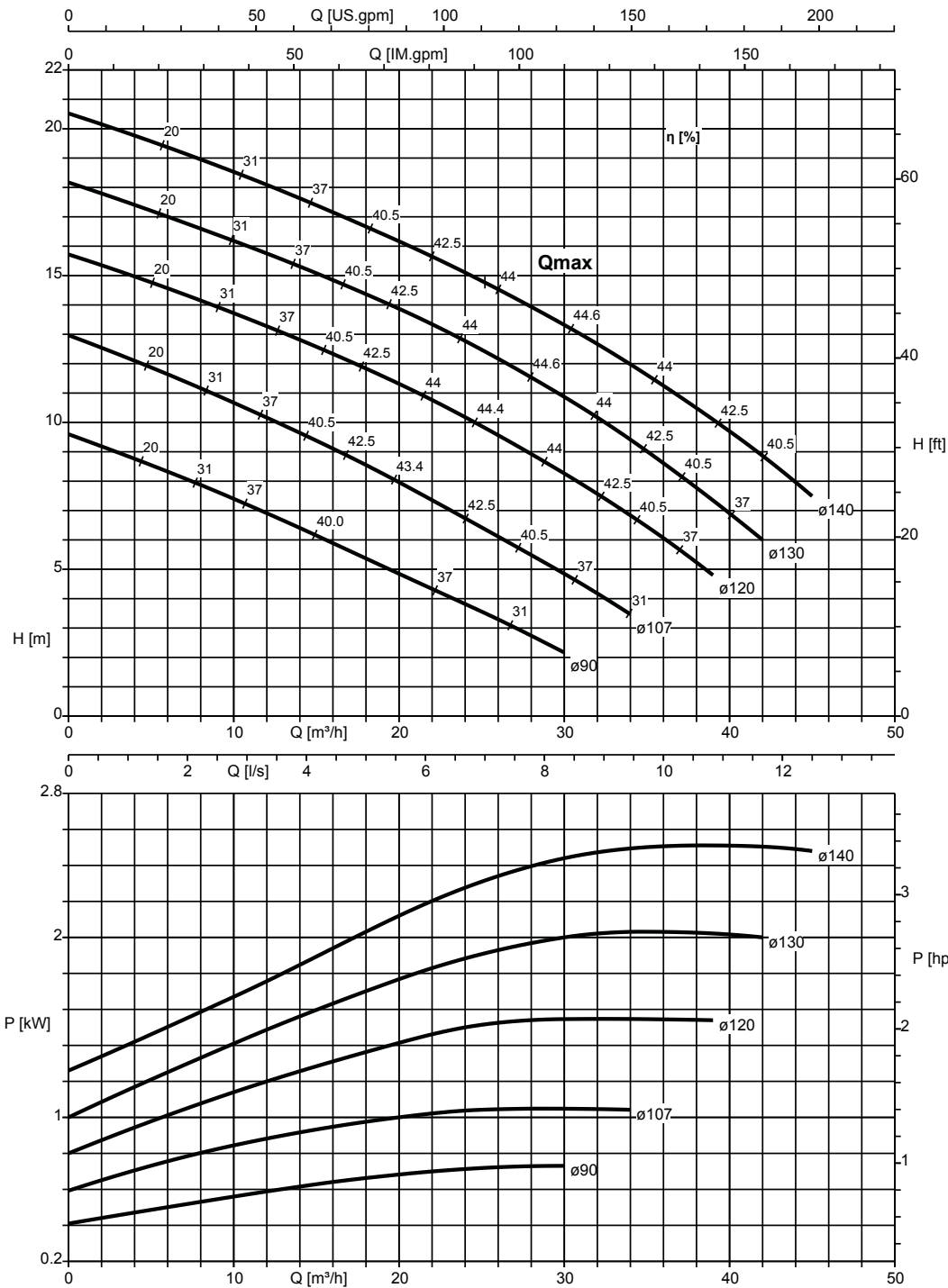


K2563-52-15/0

Free passage = 6 mm

Amarex N F 50-170, n = 2900 rpm

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

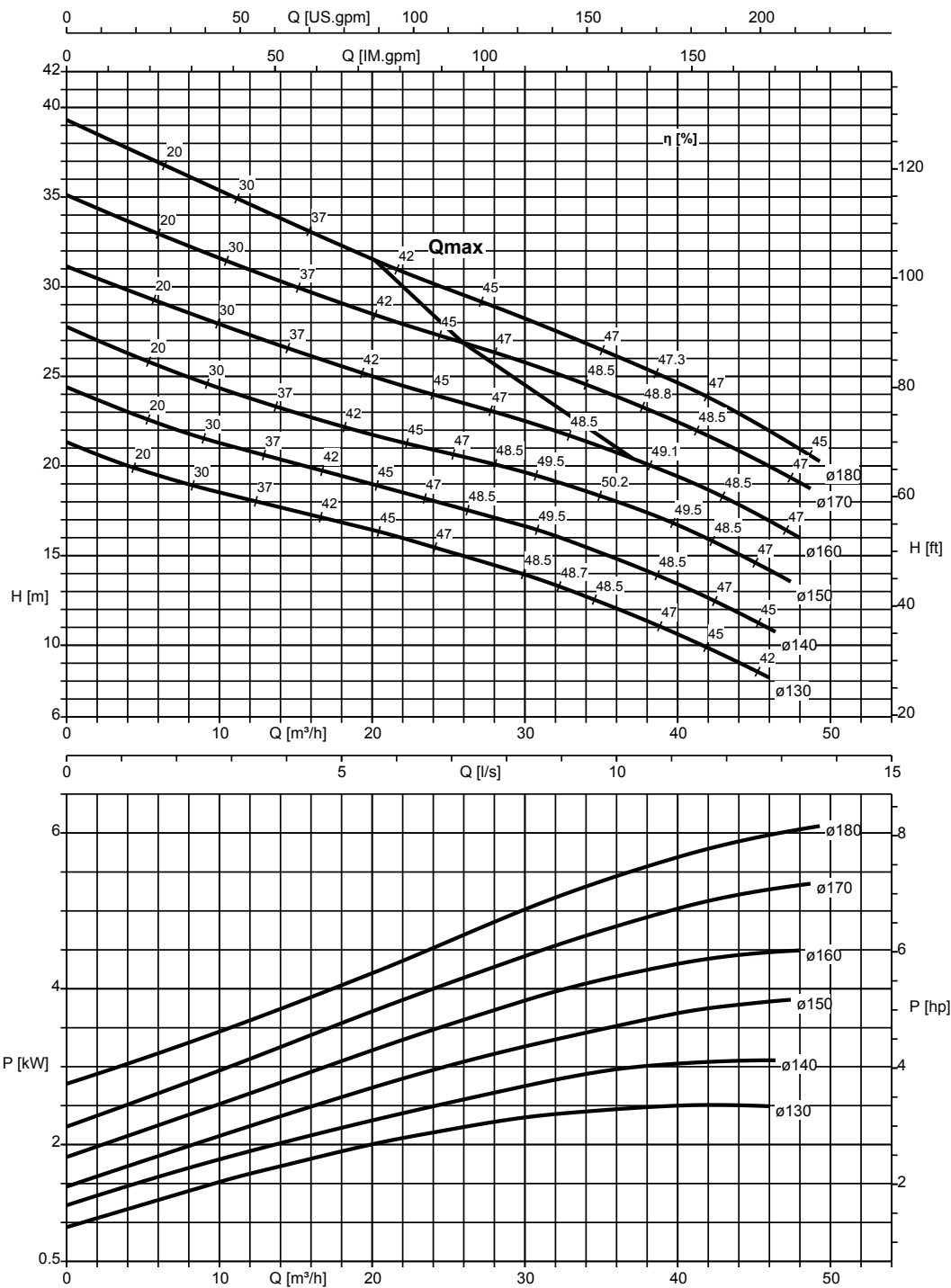


K2563-52-13/0

Free passage = 40 mm

Amarex N F 50-220, n = 2900 rpm

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

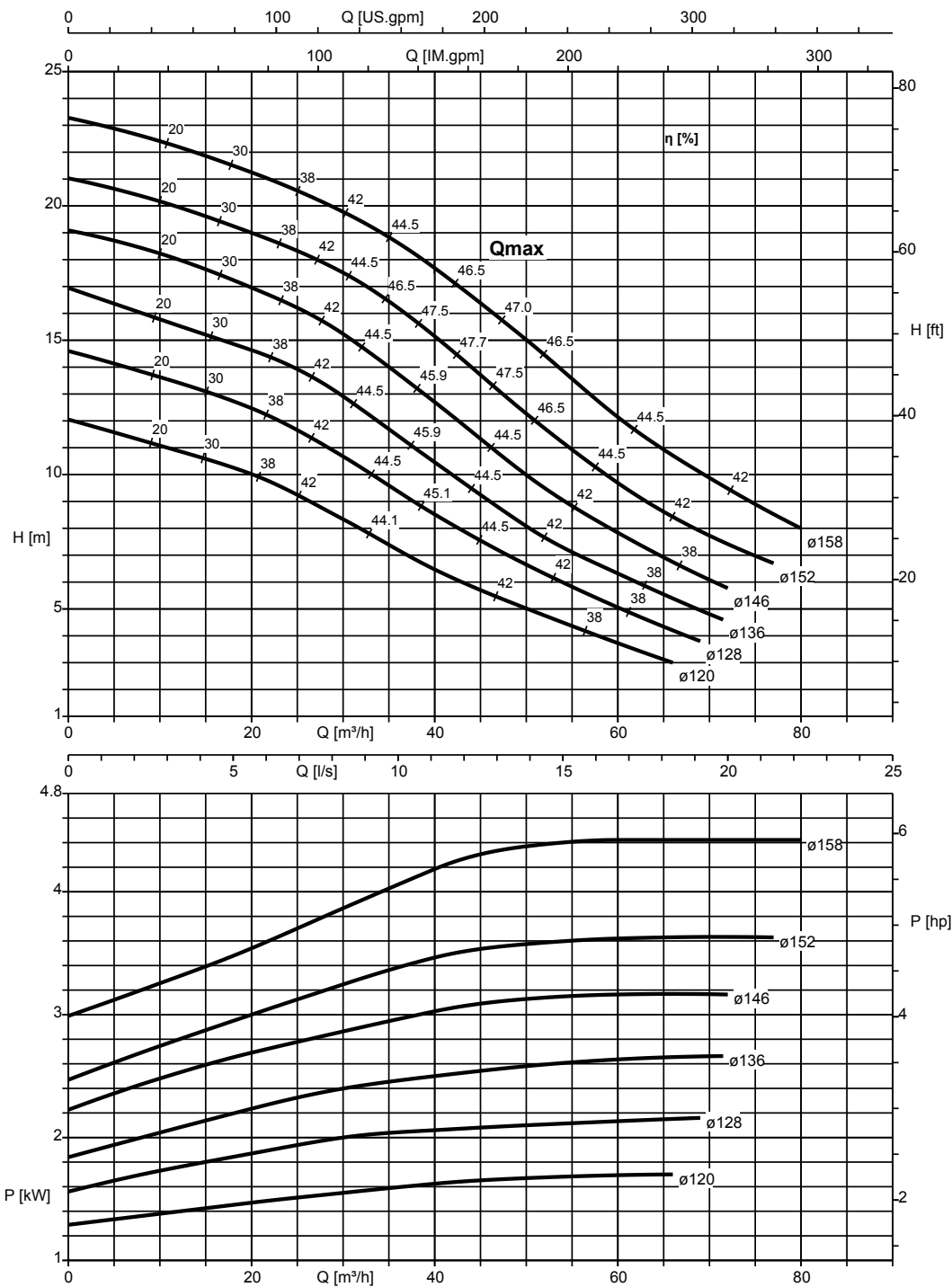


K2563-52-04/0

Free passage = 40 mm

Amarex N F 65-170, n = 2900 rpm

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



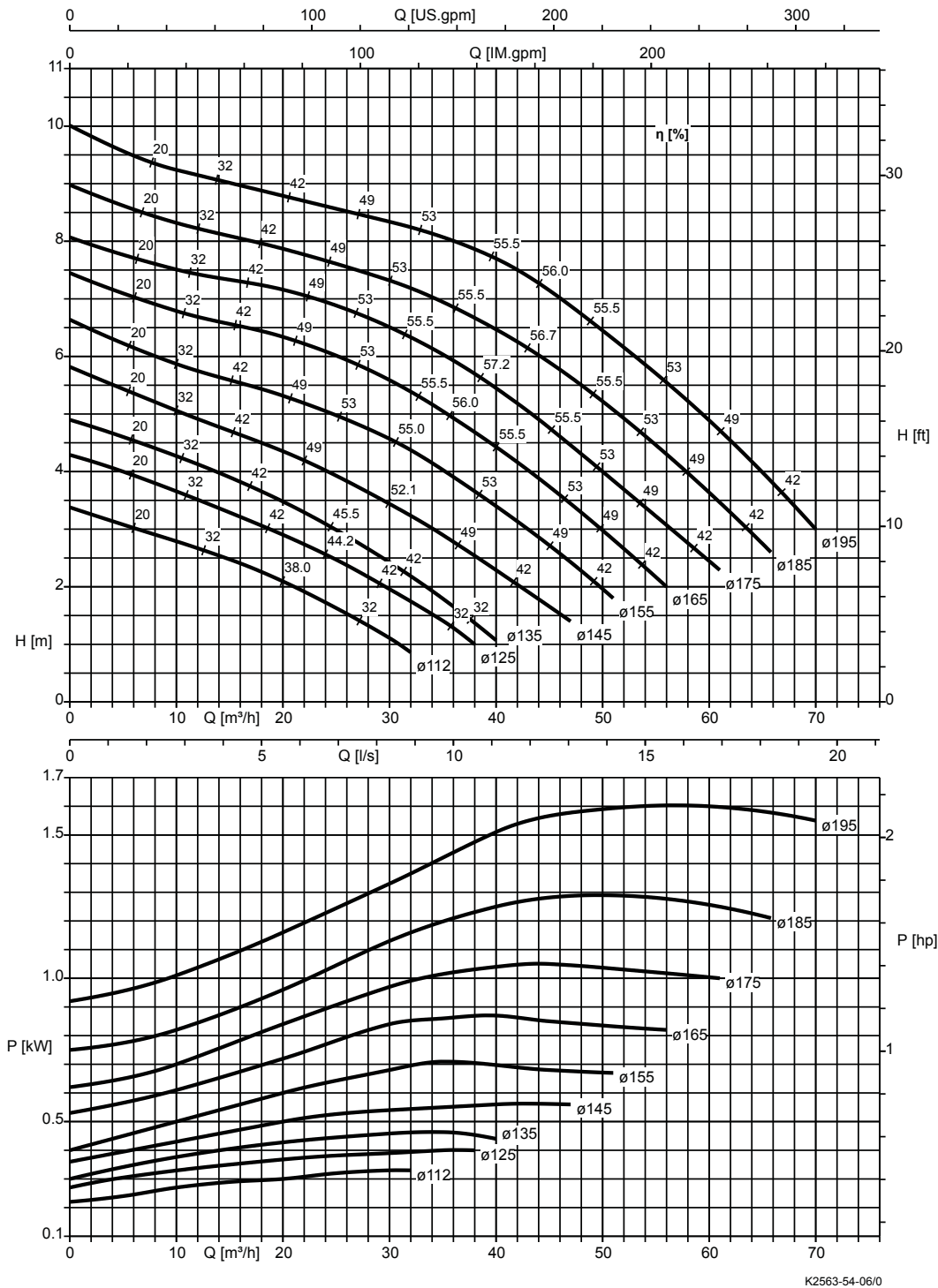
K2563-52-05/0

Free passage = 65 mm

n = 1450 rpm

Amarex N F 65-220, n = 1450 rpm

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

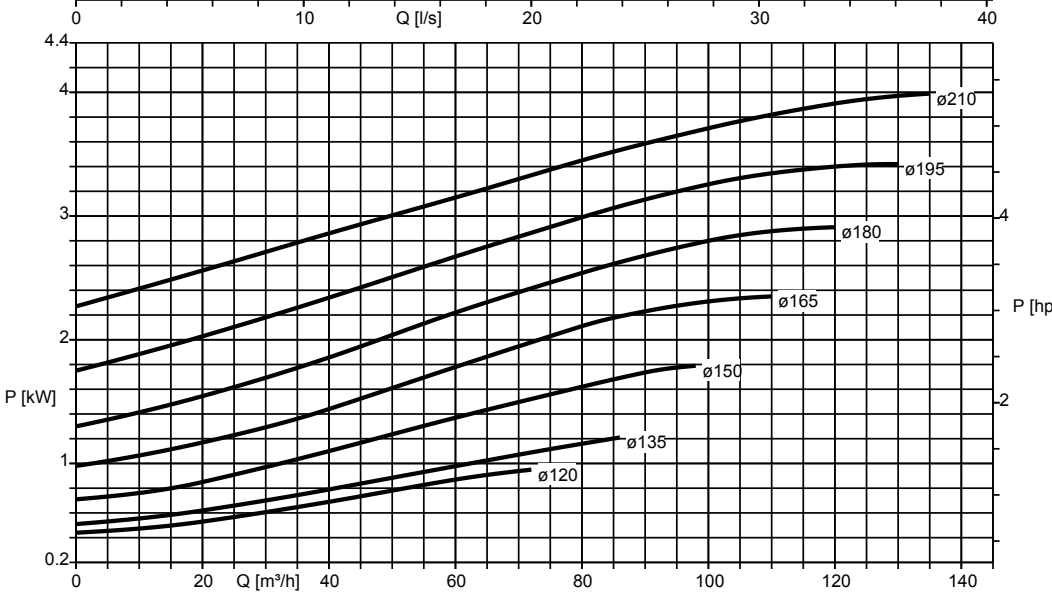
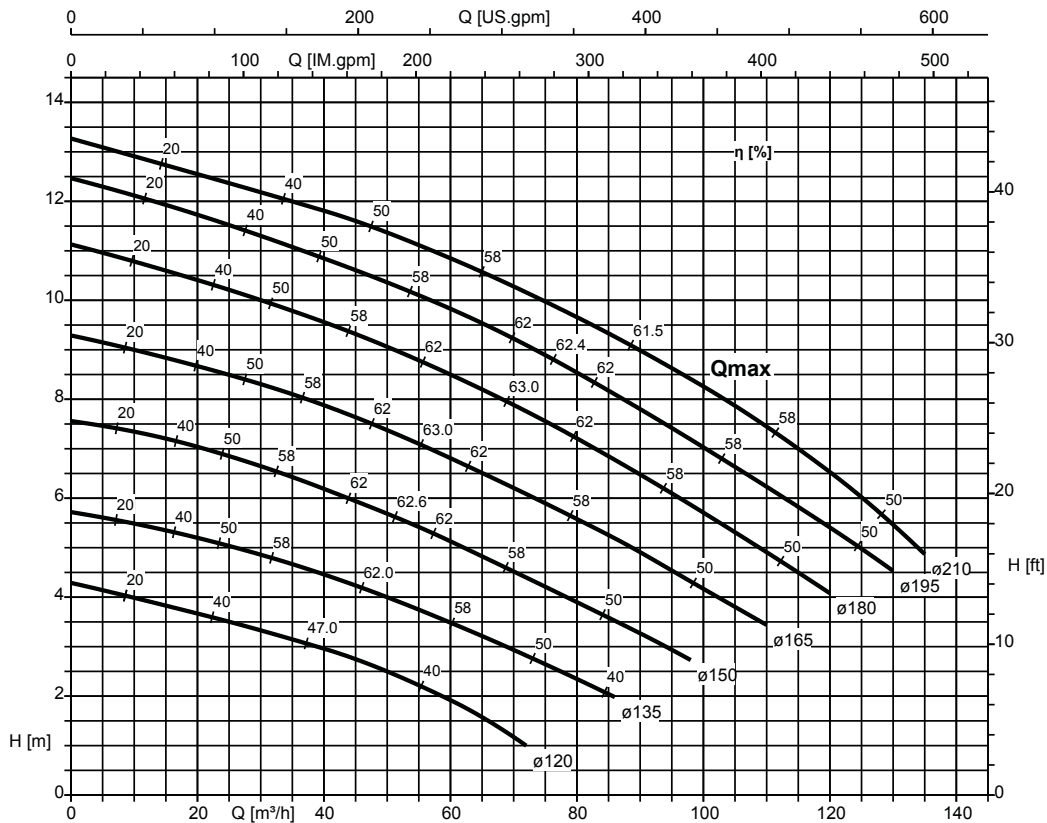


K2563-54-06/0

Free passage = 65 mm

Amarex N F 80-220, n = 1450 rpm

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

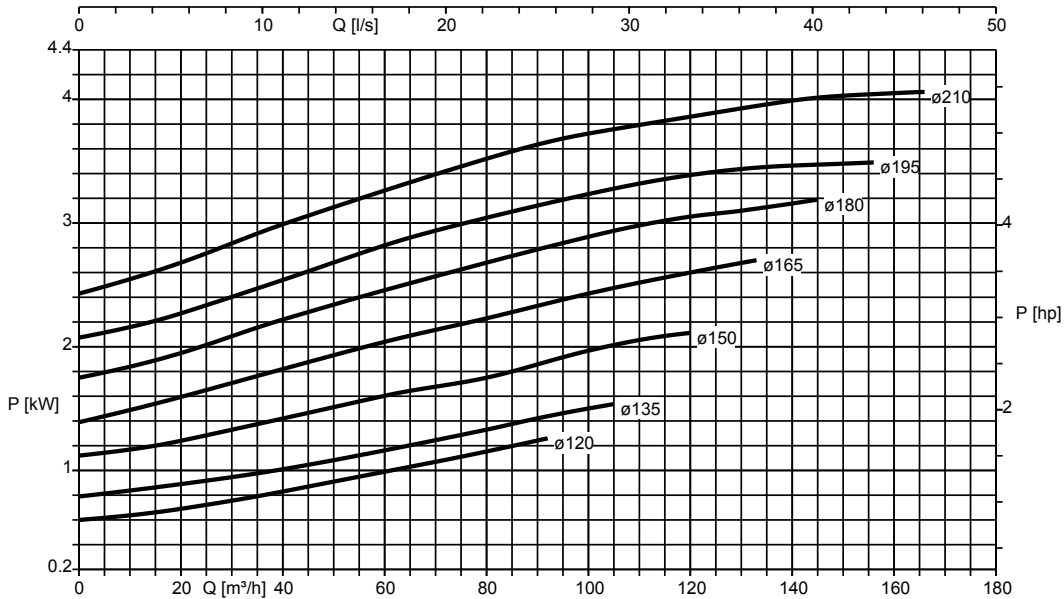
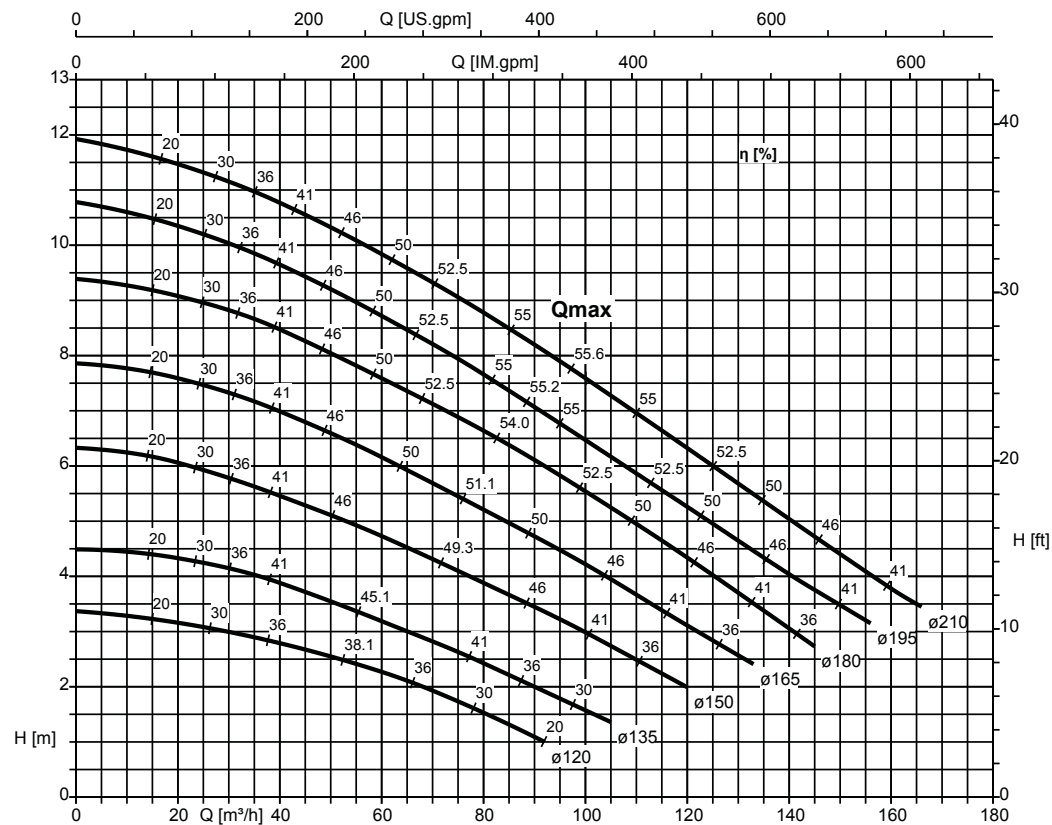


K2563-54-07/0

Free passage = 76 mm

Amarex N F 100-220, n = 1450 rpm

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

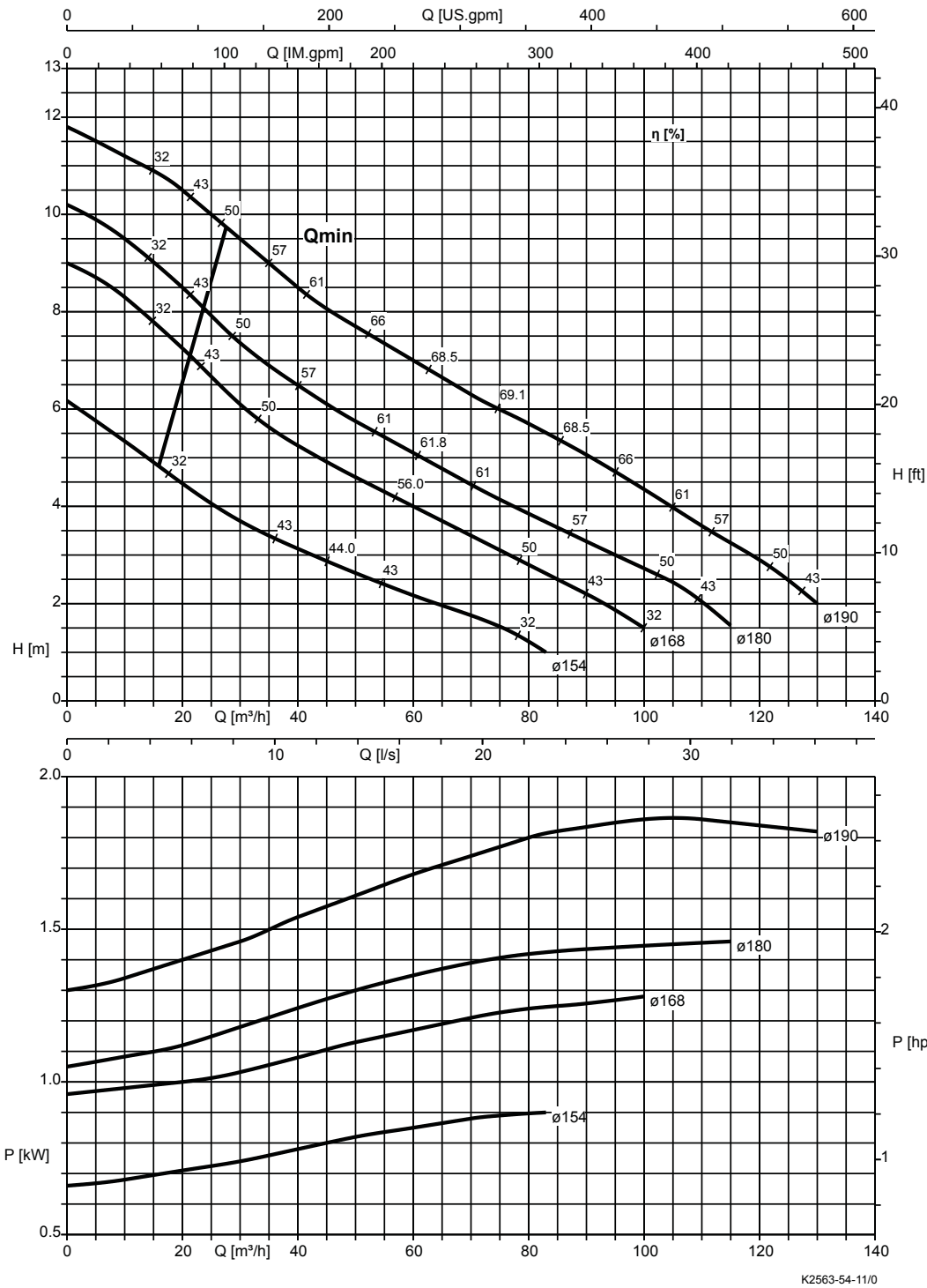


K2563-54-08/0

Free passage = 100 mm

Amarex N D 80-220, n = 1450 rpm

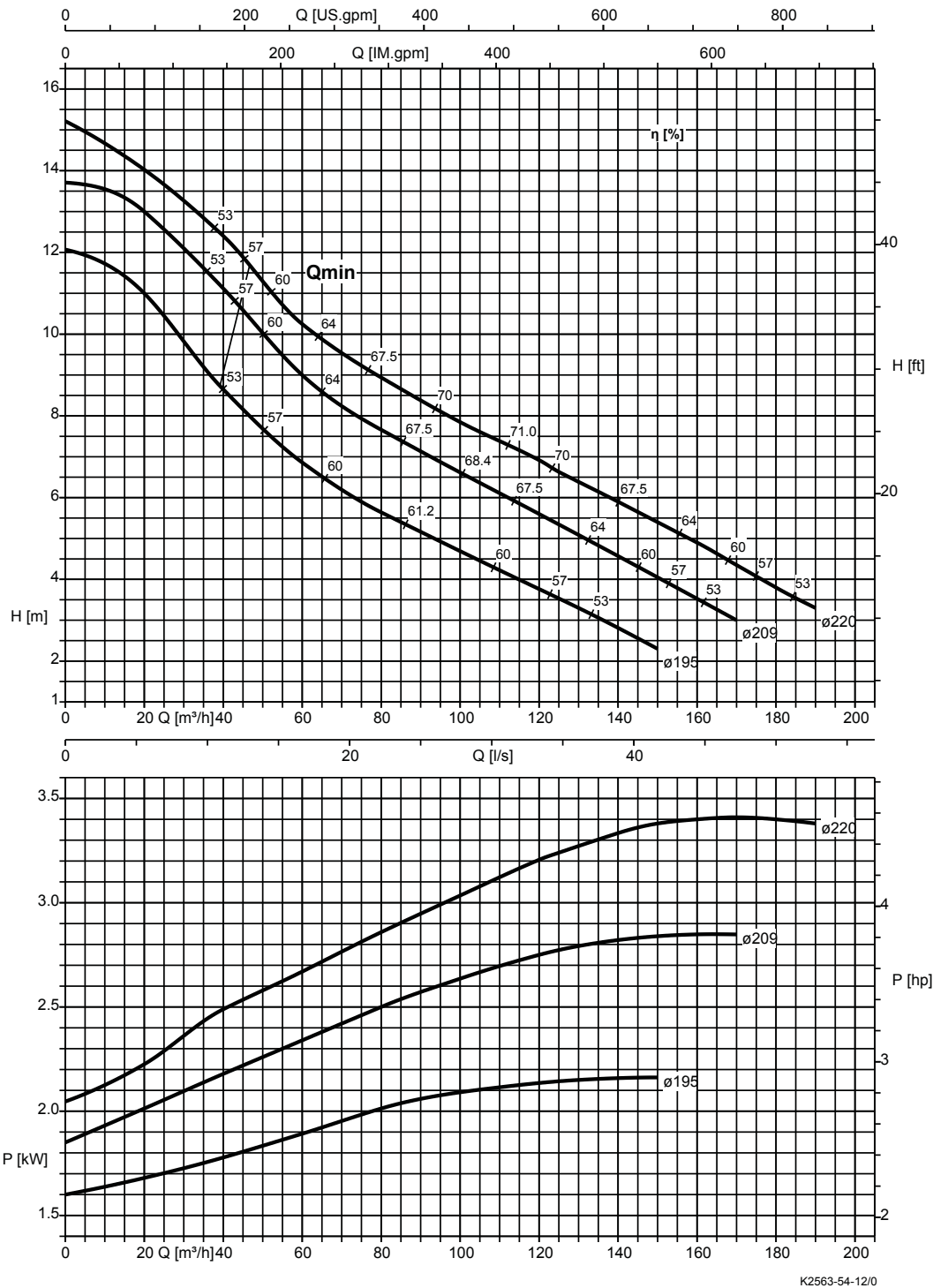
Characteristic curves to ISO 9906 Class 2A / 3B, below 10 kW to § 4.4.2. They refer to the effective motor speed.



Free passage = 65 mm

Amarex N D 100-220, n = 1450 rpm

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



Free passage = 76 mm

Dimensions and connections

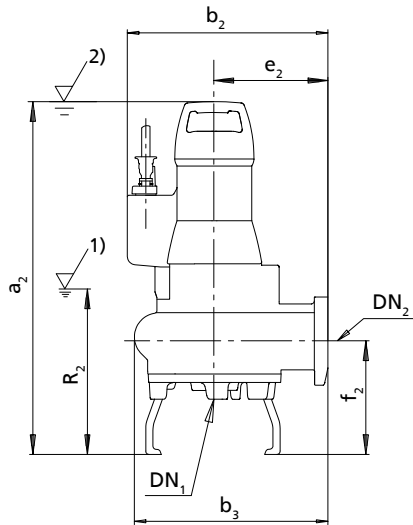
Connections

Discharge line connections at the duckfoot bend

Flanged connection (DN 50/DN 65)	Threaded connection in the flange (DN 50/DN 65)	Clamped connection (DN 50/DN 65)
	<p>For standard pipes to DIN 2440 / DIN 2441</p> <ul style="list-style-type: none"> ▪ With outside diameter of 60.3 mm, steel for DN 50 ▪ With outside diameter of 63 mm, PVC (ISO 3606) for DN 50 ▪ With threaded flange DN 50 - G 2" ▪ With outside diameter of 76.1 mm, steel for DN 65 ▪ With outside diameter of 75 mm, PVC (ISO 3606) for DN 65 ▪ With threaded flange DN 65 - G 2 1/2" 	<p>For standard pipes to DIN 2440 / DIN 2441 / DIN 2448</p> <ul style="list-style-type: none"> ▪ With outside diameter of 60.3 mm, steel for DN 50 ▪ With outside diameter of 63 mm, PVC (ISO 3606) for DN 50 ▪ With outside diameter of 76.1 mm, steel for DN 65 ▪ With outside diameter of 75 mm, PVC (ISO 3606) for DN 65

Dimensions

Amarex N 50/65/80/100 - transportable version

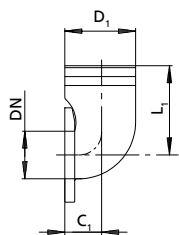


- 1) Lowest switch-off point for automatic operation
- 2) Minimum submergence for continuous operation

Pump dimensions [mm]

Size	Pump							
	DN ₁	DN ₂	a ₂ ¹⁸⁾	b ₂	b ₃	e ₂	f ₂ ¹⁸⁾	R ₂
50-172 S	-	50	547	322	293	180	152	207
50-170 F	50	50	547	322	293	180	152	207
50-222 S	-	50	609	336	307	180	155	203
50-220 F	50	50	609	336	307	180	155	203
65-170 F	65	65	653	367	338	210	164	248
65-220 F	65	65	593	353	347	210	163	253
80-220 F	80	80	672	386	392	230	187	249
80-220 D	-	80	672	386	392	230	187	249
100-220 F	100	100	698	383	390	230	207	277
100-220 D	-	100	698	383	390	230	207	277

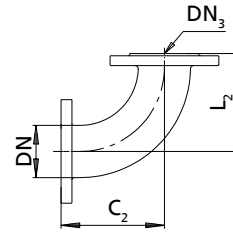
Connection elbow with flange/hose connection (P13)



Dimensions [mm]

DN	D ₁	C ₁	L ₁
65	75	40	135
80	75	115	175
100	110	45	195

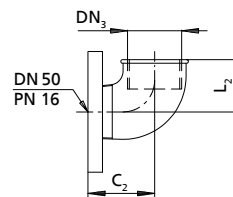
Connection elbow with flanges (P14)



Dimensions [mm]

DN	DN ₃ ¹⁹⁾	C ₂	L ₂
65	65	135	135
80	80	135	135
100	100	120	175

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



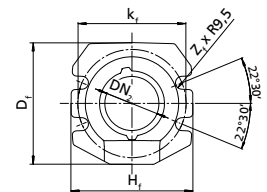
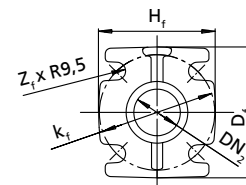
Dimensions [mm]

DN	DN ₃	C ₂	L ₂
50	G 2"	78	58

Pump flange DN₂

DN 50 and 65
ISO 7005 PN 16
DIN 2501 PN 16

DN 80 and 100
ISO 7005 PN 16
DIN 2501 PN 16



Dimensions of the pump flange in [mm]

Size	Flange			
	H _f	k _f	D _f	Z _f
50-172 S	125	125	140	4
50-170 F	125	125	140	4
50-222 S	125	125	140	4
50-220 F	125	125	140	4
65-170 F	144	145	164	4
65-220 F	144	145	164	4
80-220 F	180	160	180	4
80-220 D	180	160	180	4
100-220 F	202	180	205	4
100-220 D	202	180	205	4

¹⁸⁾ If a foot plate is fitted, a₂ + 10 mm

¹⁹⁾ DN₃ to ISO 7005/DIN 2501

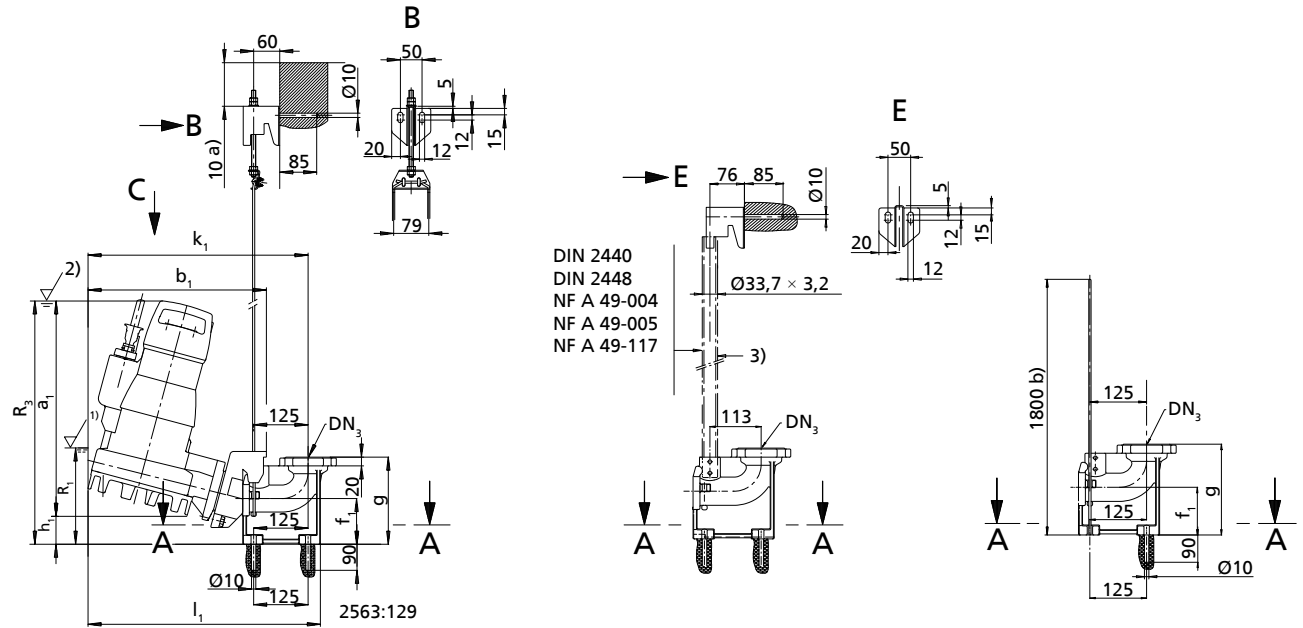
Amarex N 50 - stationary installation with guide wire, single guide rail and guide hoop arrangement, inclined claw

DN 3 = DN 50: DIN ISO ASME = standard

Guide wire arrangement

Single guide rail arrangement

Guide hoop arrangement



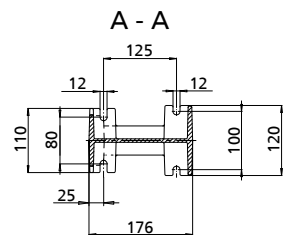
1)	Lowest switch-off point for automatic operation	2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply	a)	Minimum
b)	Maximum		

Dimensions of pump and foundation [mm]

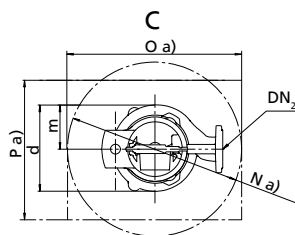
Size	Pump													Foundation			
	DN ₂	a ₁	b ₁	d	f ₁	g	h ₁	k ₁	l ₁	m	R ₁	R ₃	Z _f	DN ₃	N	O	P
50-172 S	50	495	421	250	105	200	58	500	526	125	220	550	4	50	480	480	350
50-222 S	50	556	416	254	105	200	54	506	532	129	230	606	4	50	480	480	350

Installation in the sump

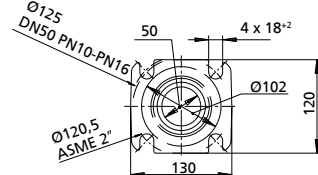
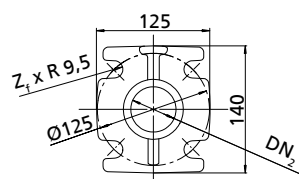
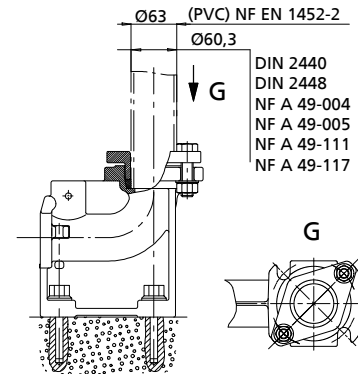
Clamped connection



Pump flange DN₂
ISO 7005 PN10/16
DIN 2501 PN10/16



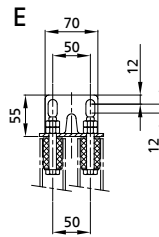
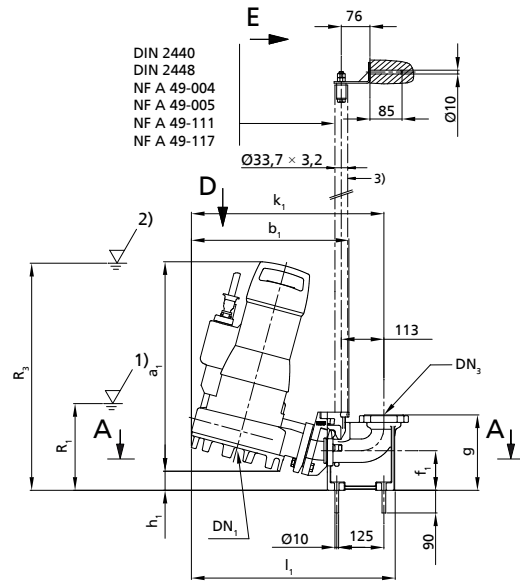
Flanged bend DN₃
ISO 7005 PN16
DIN 2501 PN16
ASME 2"
ASME B16.1 class 125



Amarex N 50 - stationary installation with twin guide rail arrangement, inclined claw

DN 3 = DN 50: DIN ISO ASME = standard

Twin guide rail arrangement

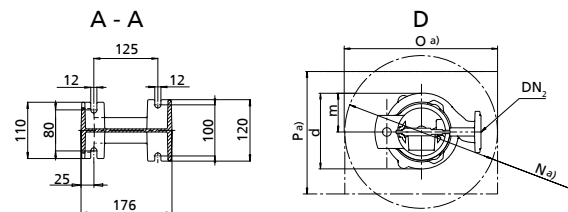


1)	Lowest switch-off point for automatic operation	2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply	a)	Minimum

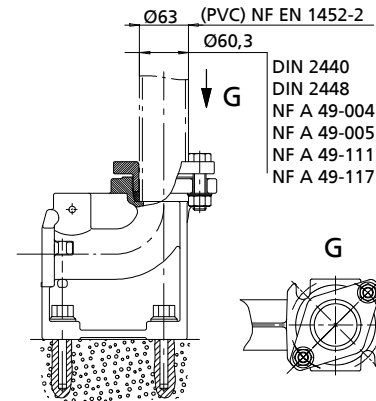
Dimensions of pump and foundation [mm]

Size	Pump														Foundation			
	DN ₁	DN ₂	a ₁	b ₁	d	f ₁	g	h ₁	k ₁	l ₁	m	R ₁	R ₃	Z _f	DN ₃	N	O	P
50-172 S	-	50	494	422	250	105	200	54	499	528	125	220	550	4	50	480	480	350
50-170 F	50	50	494	422	250	105	200	54	499	528	125	220	550	4	50	480	480	350
50-222 S	-	50	549	426	254	105	200	53	506	535	129	230	606	4	50	480	480	350
50-220 F	50	50	549	426	254	105	200	53	506	535	129	230	606	4	50	480	480	350

Installation in the sump

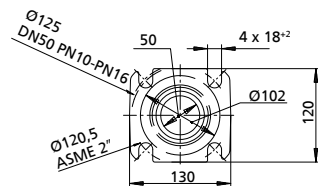


Clamped connection



Flanged bend DN₃

ISO 7005 PN16
DIN 2501 PN16
ASME 2"
ASME B16.1 class 125



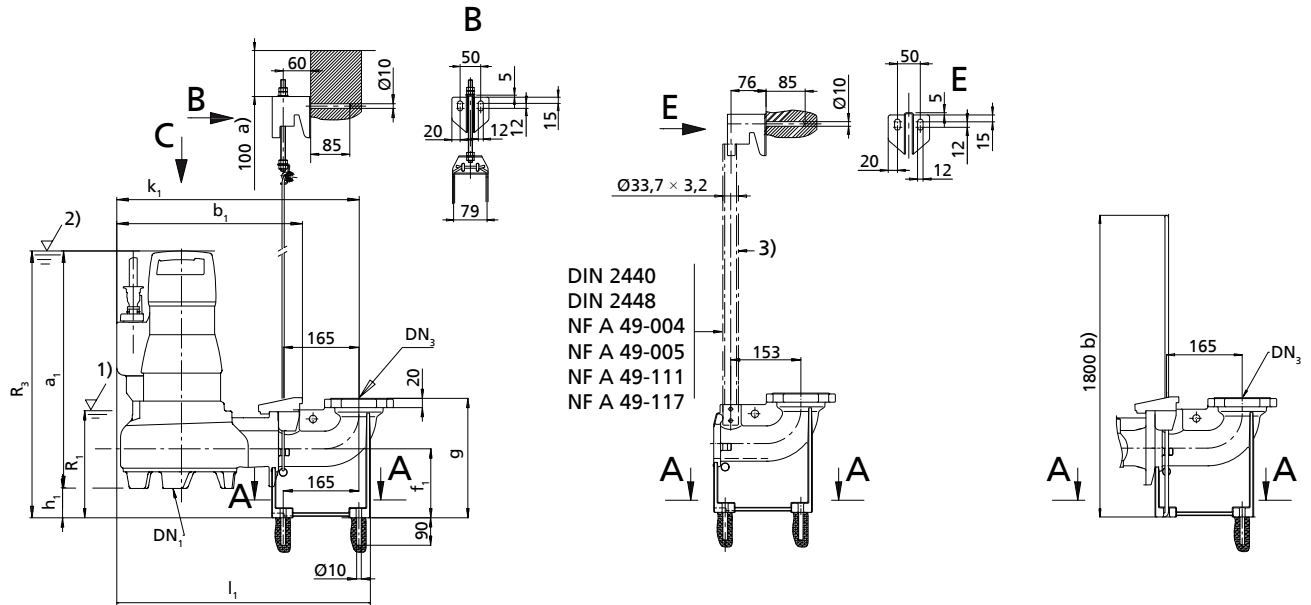
Amarex N 65, stationary installation with guide wire, single guide rail and guide hoop arrangement

DN 3 = 65/65: DIN ISO ASME = standard - DN 3 = 65/80: DIN ISO = standard, ASME = variant

Guide wire arrangement

Single guide rail arrangement

Guide hoop arrangement

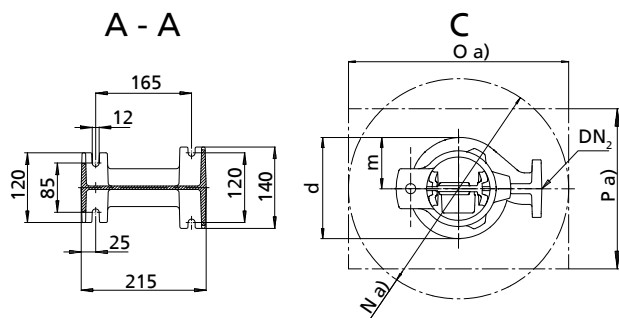


1)	Lowest switch-off point for automatic operation	2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply	a)	Minimum
b)	Maximum		

Dimensions of pump and foundation [mm]

Size	Pump														Foundation			
	DN ₁	DN ₂	a ₁	b ₁	d	f ₁	g	h ₁	k ₁	l ₁	m	R ₁	R ₃	Z _f	DN ₃	N	O	P
65-170 F	65	65	578	422	251	150	260	61	558	583	127	234	639	4	65	500	500	400
65-220 F	65	65	518	407	265	150	260	63	544	569	142	241	581	4	65	500	500	400

Installation in the sump

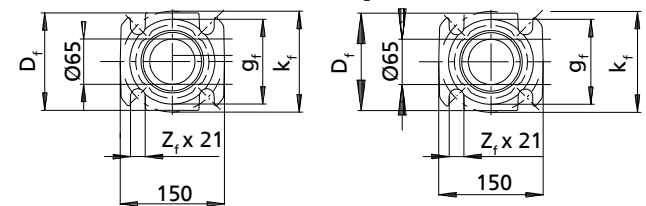


Flanged bend DN

DN 65/65

ISO 7005 PN16
DIN 2501 PN16

ASME B 16.1 class 125
2 1/2"



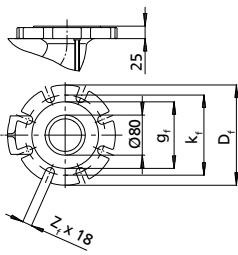
Dimensions of the flanged bend DN₃ [mm]

Flange variant	DN ₃	g _f	k _f	D _f	Z _f
ISO 7005 PN16	65	122	145	140	4
DIN 2501 PN16	80	133	160	200	8
ASME B16.1 class 125	65	122	140	140	4
	80	127	152,5	191	4

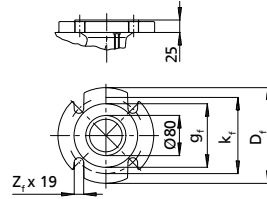
Extension elbow DN₃

DN 65/80

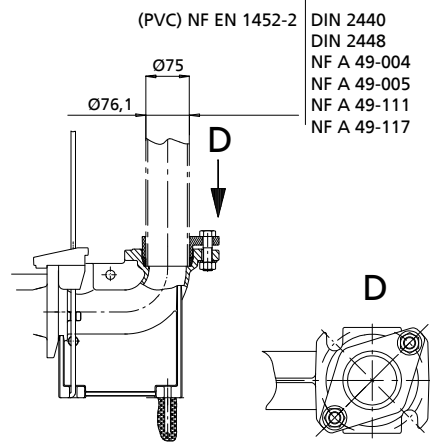
ISO 7005 PN16
DIN 2501 PN16



ASME B 16.1 class 125
3"



Clamped connection

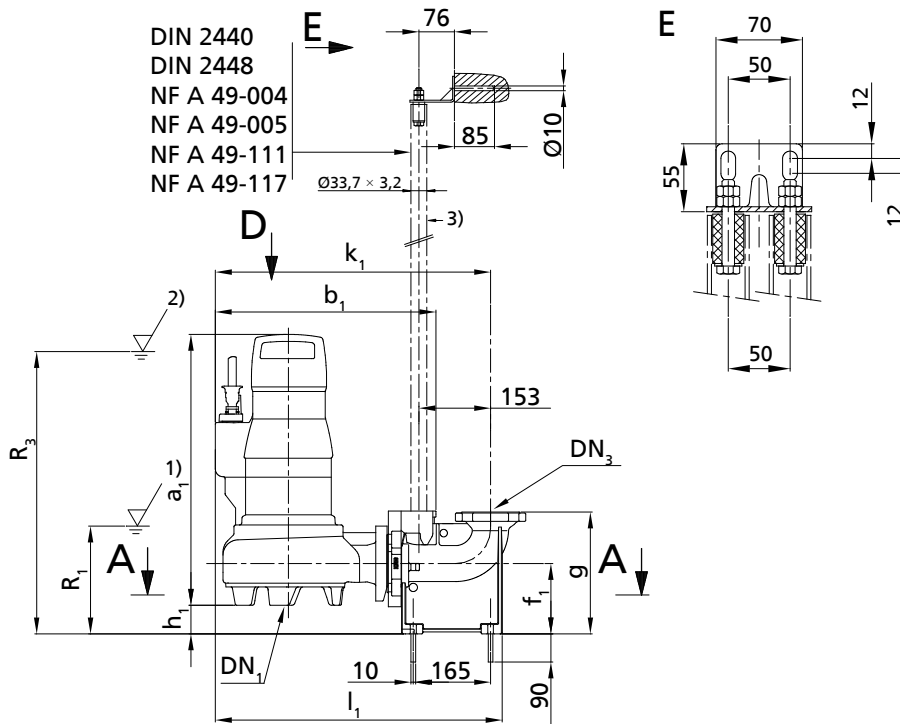


(PVC) NF EN 1452-2
DIN 2440
DIN 2448
NF A 49-004
NF A 49-005
NF A 49-111
NF A 49-117

Amarex N 65, stationary installation with twin guide rail arrangement

DN 3 = 65/65: DIN ISO ASME = standard - DN 3 = 65/80: DIN ISO = standard, ASME = variant

Twin guide rail arrangement

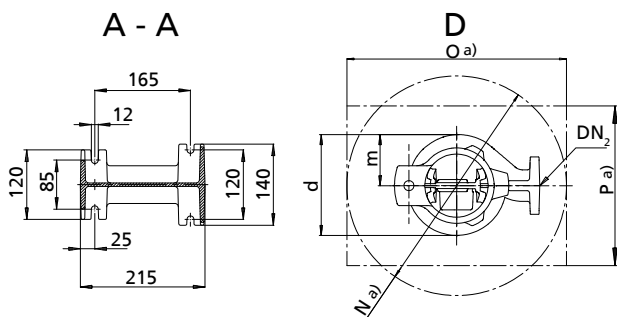


1)	Lowest switch-off point for automatic operation	2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply	a)	Minimum

Dimensions of pump and foundation [mm]

Size	Pump													Foundation			
	DN ₁	DN ₂	a ₁	b ₁	d	f ₁	g	h ₁	k ₁	l ₁	m	R ₁	R ₃	Z _f	N	O	P
65-170 F	65	65	578	468	251	150	260	61	588	613	127	234	639	4	550	550	400
65-220 F	65	65	518	454	265	150	260	63	574	599	142	241	581	4	550	550	400

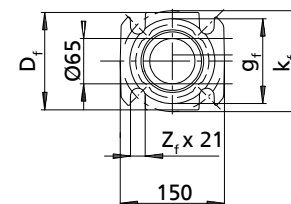
Installation in the sump



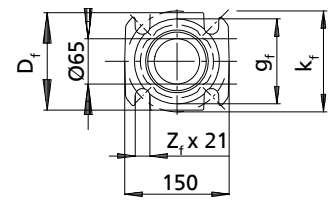
Flanged bend DN

DN 65/65

ISO 7005 PN16
DIN 2501 PN16



ASME B16.1 class 125
2 1/2"



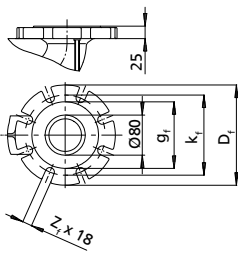
Dimensions of flanged bend DN₃ [mm]

Flange variant	DN ₃	g _f	k _f	D _f	Z _f
ISO 7005 PN16	65	122	145	140	4
DIN 2501 PN16	80	133	160	200	8
ASME B16.1 class 125	65	122	140	140	4
	80	127	152,5	191	4

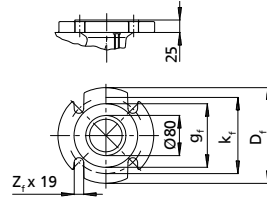
Extension elbow DN₃

DN 65/80

ISO 7005 PN16
DIN 2501 PN16



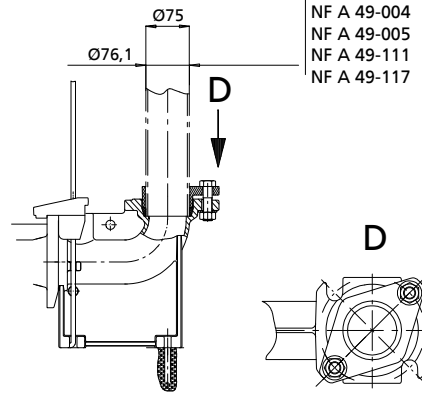
ASME B16.1 class 125
3"



Clamped connection

(PVC) NF EN 1452-2

DIN 2440
DIN 2448
NF A 49-004
NF A 49-005
NF A 49-111
NF A 49-117



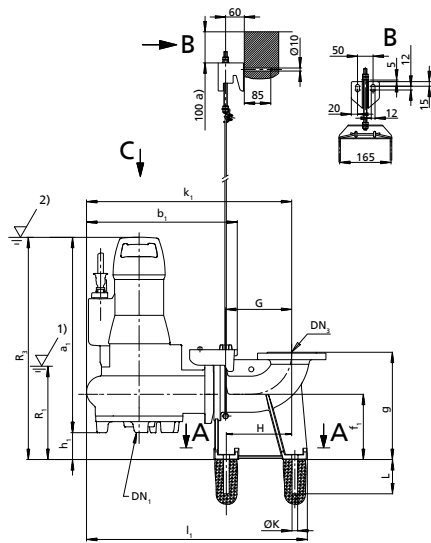
D

D

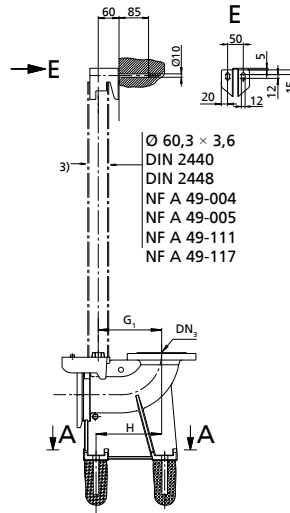
Amarex N 80 and 100 - stationary installation with guide wire and single guide rail arrangement

DN 3 = 80/80: DIN ISO = standard, ASME = variant - DN 3 = 80/100 or 100/100: DIN ISO ASME = standard

Guide wire arrangement



Single guide rail arrangement



1)	Lowest switch-off point for automatic operation	2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply	a)	Minimum

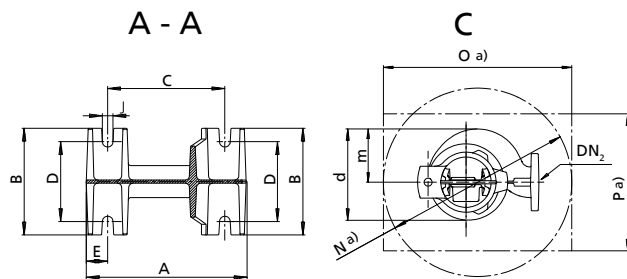
Pump dimensions [mm]

Size	Pump												
	DN ₁	DN ₂	a ₁	b ₁	d	f ₁	g	h ₁	k ₁	l ₁	m	R ₁	R ₃
80-220 F	80	80	582	478	322	200	320	103	604	694	176	262	685
80-220 D	-	80	602	478	322	200	320	86	604	694	176	262	688
100-220 F	100	100	603	476	318	210	345	98	641	691	169	280	701
100-220 D	-	100	628	476	318	210	345	76	641	691	169	280	704

Foundation dimensions [mm]

Size	Foundation														
	DN ₃	A	B	C	D	E	G	G ₁	H	J	øK	L	N	O	P
80-220 F/D	80	300	200	220	150	40	172,5	163	170	20	18	110	550	550	400
80-220 F/D	100	300	200	220	150	40	172,5	163	170	20	18	110	550	550	400
100-220 F/D	100	300	200	220	150	40	212,5	203	210	20	18	110	550	550	400

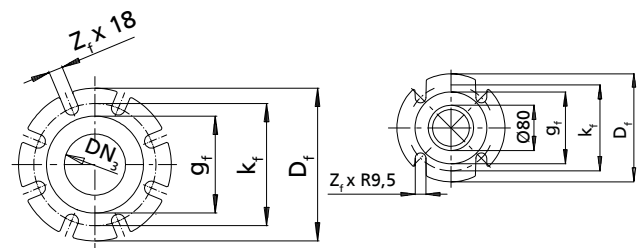
Installation in the sump



Flanged bend DN

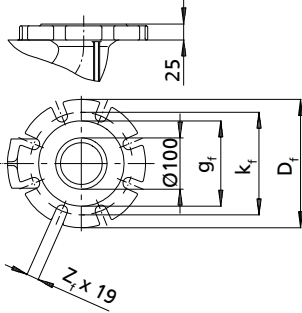
DN 80/80
ISO 7005 PN16
DIN 2501 PN16
DN 100/100
ISO 7005 PN16
DIN 2501 PN16
ASME B16.1 class 125
4"

DN 80/80
ASME B16.1 class 125
3"

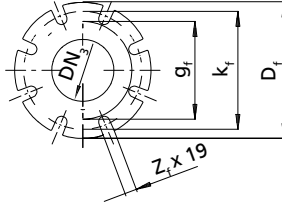


Extension elbow DN₃

DN 80/100
ISO 7005 PN16
DIN 2501 PN16



DN 80/100
ASME B16.1 class 125
4"



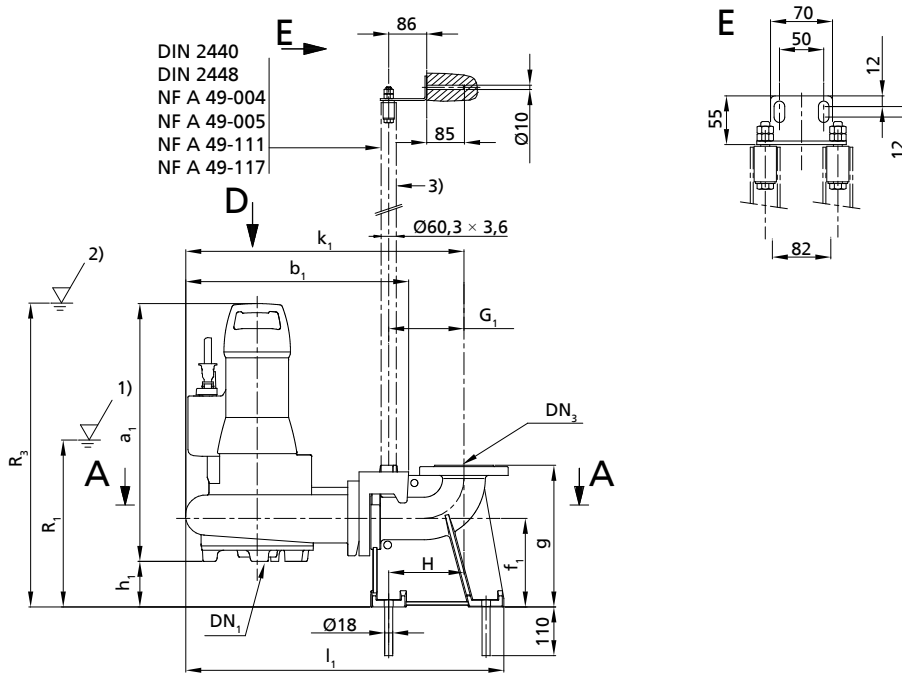
Dimensions of flanged bend DN₃ [mm]

Flange variant	DN ₃	g _f	k _f	D _f	Z _f
ISO 7005 PN16	80	132	160	200	8
DIN 2501 PN16	100	156	180	220	8
ASME B16.1 class 125	80	127	152,5	191	4
	100	156	190,5	220	8

Amarex N 80 and 100 - stationary installation with twin guide rail arrangement

DN 3 = 80/80: DIN ISO = standard, ASME = variant - DN 3 = 80/100 or 100/100: DIN ISO ASME = standard

Twin guide rail arrangement

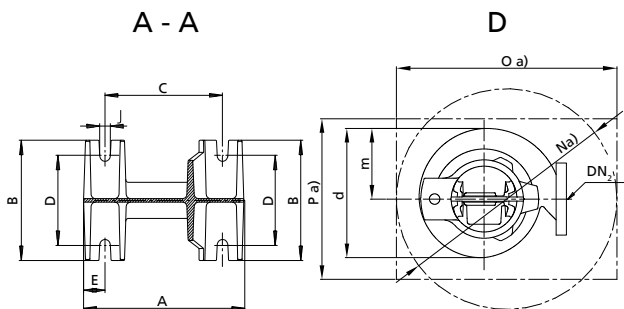


1)	Lowest switch-off point for automatic operation	2)	Minimum submergence for continuous operation
3)	Not included in KSB's scope of supply	a)	Minimum
b)	Maximum		

Pump dimensions [mm]

Size	Pump												
	DN ₁	DN ₂	a ₁	b ₁	d	f ₁	g	h ₁	k ₁	l ₁	m	R ₁	R ₃
80-220 F	80	80	582	506	322	200	320	103	630	720	176	262	685
80-220 D	-	80	602	506	322	200	320	86	630	720	176	262	688
100-220 F	100	100	603	529	318	210	345	98	674	724	169	280	701
100-220 D	-	100	628	529	318	210	345	76	674	724	169	280	704

Installation in the sump



Foundation dimensions [mm]

Size	Foundation											
	DN ₃	A	B	C	D	E	G ₁	H	J	N	O	P
80-220 F	80	300	200	220	150	40	170	170	20	580	580	400
80-220 D	100	300	200	220	150	40	170	170	20	580	580	400
100-220 F	100	300	200	220	150	40	210	210	20	600	600	400
100-220 D	100	300	200	220	150	40	210	210	20	600	600	400

Flanged bend DN

DN 80/80

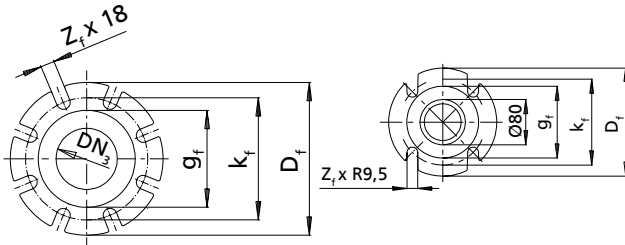
ISO 7005 PN16
DIN 2501 PN16

DN 100/100

ISO 7005 PN16
DIN 2501 PN16
ASME B16.1 class 125
4"

DN 80/80

ASME B16.1 class 125
3"



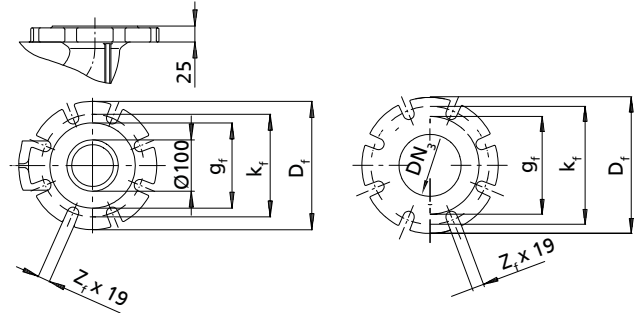
Extension elbow DN₃

DN 80/80

ISO 7005 PN16
DIN 2501 PN16

DN 80/100

ASME B16.1 class 125
4"

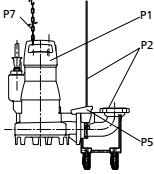
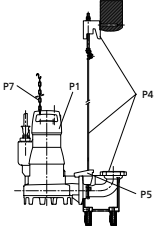
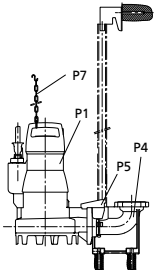
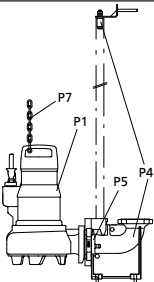


Dimensions of flanged bend DN₃ [mm]

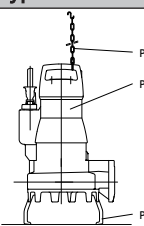
Flange variant	DN ₃	g _f	k _f	D _f	Z _f
ISO 7005 PN16	80	132	160	200	8
DIN 2501 PN16	100	156	180	220	8
ASME B16.1 150 lbs	80	127	152,5	191	4
	100	156	190,5	220	8

Installation types

Installation type S – stationary wet installation

Installation type	Description	Comment
	<p>Guide hoop arrangement</p> <p>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, length = 2 m</p>	<p>Only for the following sizes:</p> <p>50-170 50-172 50-220 50-222 65-170 65-220</p>
	<p>Guide wire arrangement</p> <p>P1: pump P4: installation parts for guide wire arrangement, installation depth = 4.5 m P5: claw P7: chain and shackle, length = 5 m</p>	
	<p>Single guide rail arrangement</p> <p>P1: pump P4: installation parts for single guide rail arrangement P5: claw P7: chain and shackle, length = 5 m</p>	
	<p>Twin guide rail arrangement</p> <p>P1: pump P4: installation parts for twin guide rail arrangement P5: claw and adapter P7: chain and shackle, length = 5 m</p>	

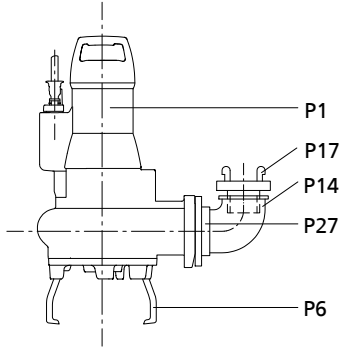
Installation type P – transportable wet installation

Installation type	Description
	<p>P1: pump P6: foot P7: chain and shackle, length = 5 m</p>

Installation information

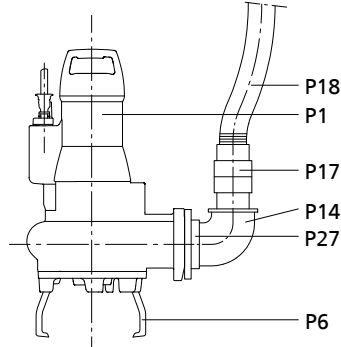
Suggested installation layouts for transportable pump sets

Size 50



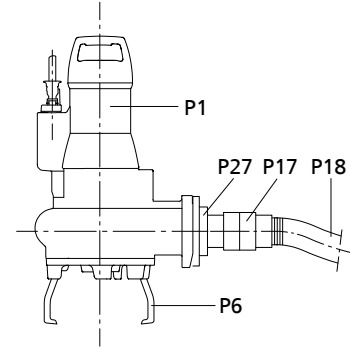
Suggestion 1

Vertical hose connection with elbow (P14) and Storz rigid coupling (P17) (quick connection)



Suggestion 2

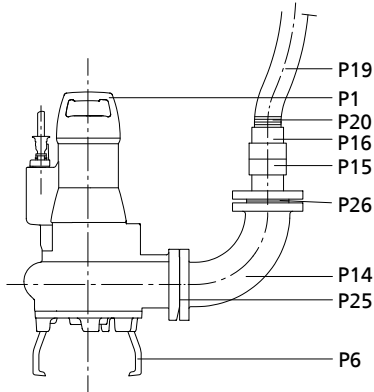
Vertical hose connection with plastic hose (P18)



Suggestion 3

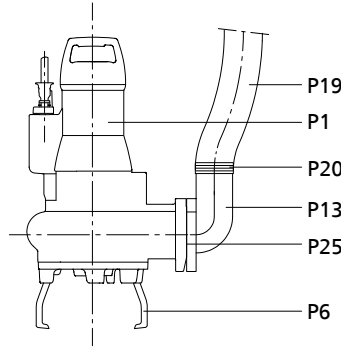
Horizontal hose connection (quick connection) with plastic hose (P18)

Sizes 65, 80, 100



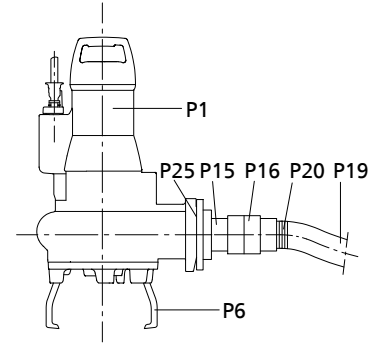
Suggestion 1

Vertical hose connection (quick connection) with plastic hose (P19) and hose clip (P20)



Suggestion 2

Vertical hose connection with plastic hose (P19), hose clip (P20) and connection elbow (P13)



Suggestion 3

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

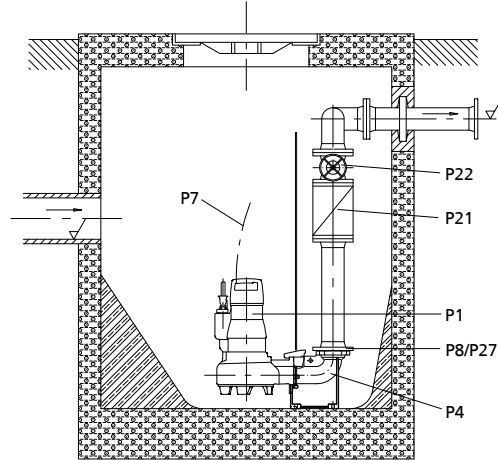
P1 to P27 (⇒ Page 41)

Suggested installation layouts for stationary pump sets

Sizes 50, 65, 80, 100

Guide hoop arrangement

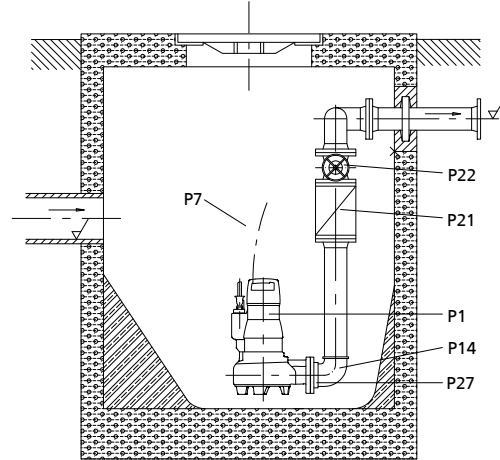
Amarex N S 50-172/F 50-170, S 50-222/F 50-220, F 65-170/65-220



Suggestion 1
Single-pump station
Flanged duckfoot bend

Suspended installation

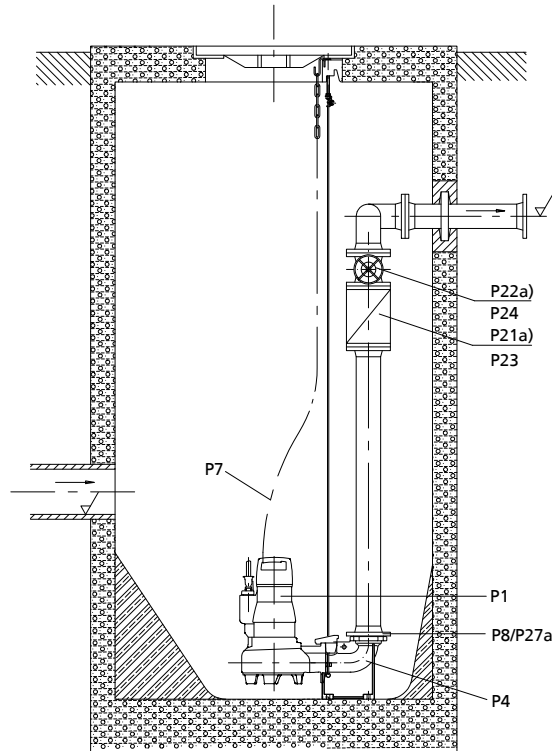
Amarex N S 50-172/F 50-170, S 50-222/F 50-220, F 65-170/65-220



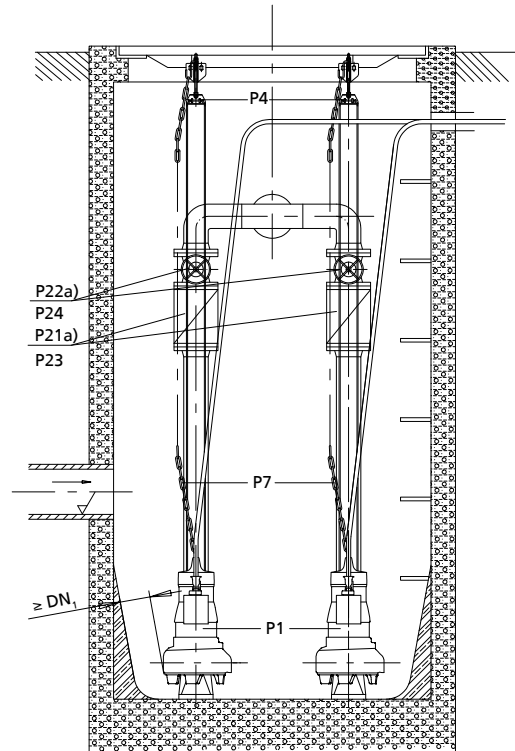
Suggestion 2
Single-pump station for 1.5 m installation depth
Direct connection to discharge pipe (suspended installation)

Guide wire, single guide rail or twin guide rail arrangement

Amarex N 50, 65, 80, 100



Suggestion 3
Either with guide wire, single guide rail or twin guide rail arrangement
Single-pump station for 4.5 m installation depth
Flanged duckfoot bend



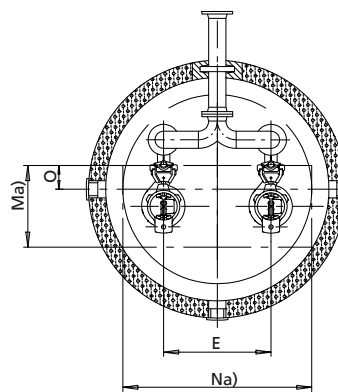
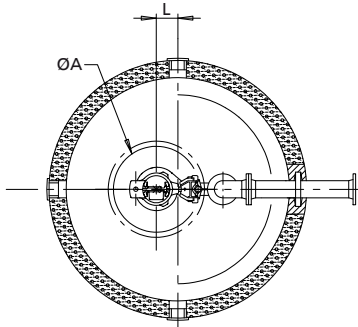
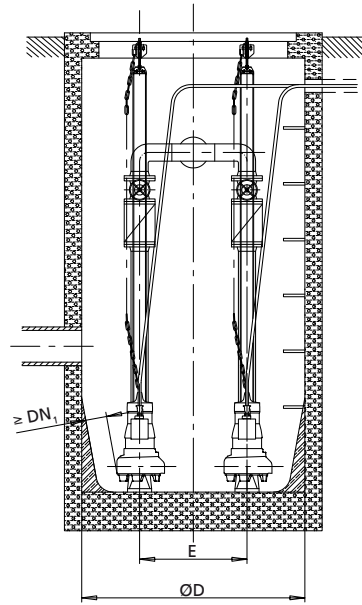
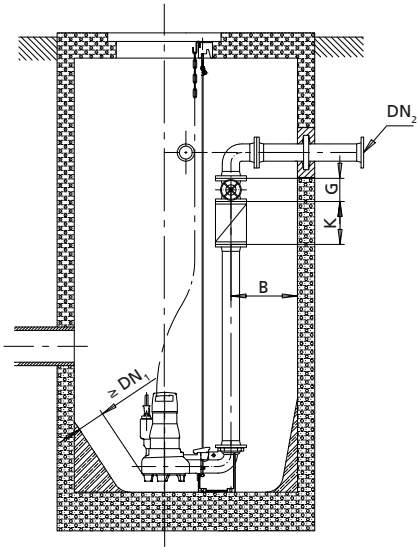
Suggestion 4
Either with guide wire, single guide rail or twin guide rail arrangement
Dual-pump station for 4.5 m installation depth
Flanged duckfoot bend

a)	DN 50 only
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Dimensions

Guide wire arrangement

Amarex N 50, 65, 80, 100



Single-pump station for 4.5 m installation depth
Flanged duckfoot bend

Dual-pump station for 4.5 m installation depth
Flanged duckfoot bend

a)	minimum
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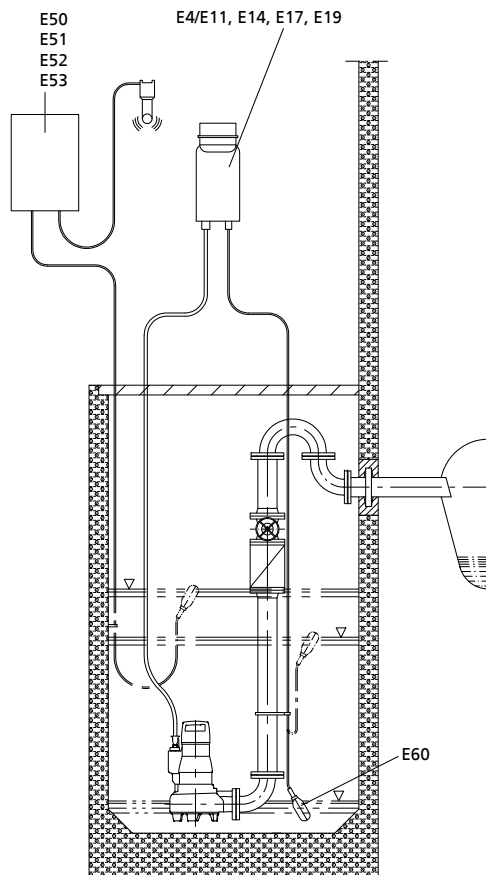
Dimensions [mm]

Amarex N		Ø A	B	Ø D	E	G	K	L	M	N	O	DN ₁	DN ₂
S 50-172 /	1 pump	625	165	1000	-	75	150	42	-	-	-	50	50
F 50-170	2 pumps	-	235	1000	300	75	150	-	550	700	200	50	50
S 50-222 /	1 pump	625	165	1000	-	75	150	42	-	-	-	50	50
F 50-220	2 pumps	-	235	1000	300	75	150	-	550	700	200	50	50
F 65-170 /	1 pump	625	175	1000	-	180	260	92	-	-	-	65	65
F 65-220	2 pumps	-	360	1200	600	180	260	-	550	1000	135	65	65
F 80-220 /	1 pump	625	200	1000	-	180	260	25	-	-	-	80	80
D 80-220	2 pumps	-	320	1200	600	180	260	-	600	1000	168	80	80
F 100-220	1 pump	625	200	1000	-	190	300	65	-	-	-	100	100
	2 pumps	-	320	1200	600	190	300	-	600	1000	128	100	100

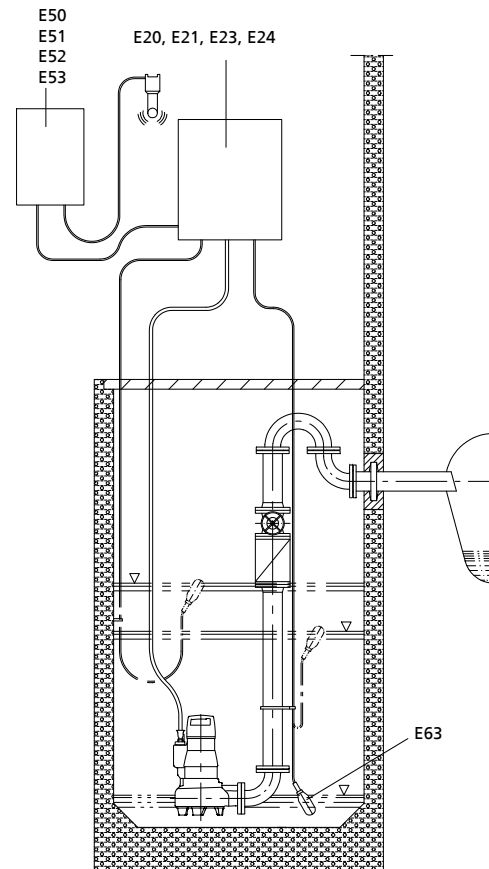
Suggested electrical installation layouts

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

CEE motor protection switch (up to 4.0 kW)



Suggested installation layout No. 1
Non-explosionproof



Suggested installation layout No. 2
Explosion-proof

Scope of supply

Stationary wet-installed model (installation type S)

- Pump set, complete with power cable
- Claw with sealing element (O-ring) and mounting elements
- Lifting rope/lifting chain²⁰⁾
- Mounting bracket with mounting elements

- Duckfoot bend with mounting elements
- Guiding accessories
(guide rails are not included in KSB's scope of supply)

Transportable wet-installed model (installation type P)

- Pump set, complete with power cable
- Feet (and foot plate, if applicable)
- Lifting rope/lifting chain²¹⁾

²⁰⁾ Optional

²¹⁾ Optional