

Customer pos. no.:
 Inquiry date: 2023-08-16
 Inquiry no.: Pump Q=5ls H=6,7m
 Quantity: 1,000

Number: 4005125287 - 495
 Line: 000100
 Date: 2023-08-16
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Amarex F 080-180 G
 ARX F080-180/017F4USG -160 /01100M000

Version No.: 1

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	5 l/s	Vapour pressure determined	-0.9766 bar.r
Target mass flow rate	4.99 kg/s	Minimum allowed ambient temperature	-20 °C
Target head	6.7 m	Maximum allowed ambient temperature	40 °C
Fluid	Water	Installation altitude above sea level	1'000 m
Fluid variant	Clean water		
Specified fluid temperature	20 °C		
Density Fluid handled	998 kg/m ³		
Kinematic viscosity Fluid handled	1 mm ² /s		

Operating conditions (performance)

Flow rate	5.126 l/s	Maximum power input at duty point	0.8565 kW
Head	7.041 m	Maximum power input / curve	1.14 kW
Shut-off head	7.991 m	Pump speed	1'446 1/min
Efficiency Pump	41.15 %	Discharge pressure-max.	0.7821 bar.r

Design data pump

Scope of supply Pump supplied by KSB	Pump with stationary installation parts	Pump directive	CE
Installation code	S		
Pump design	Close-coupled		
Pump system design	Single-pump system		
Installation depth	6 m		
Impeller diameter D2	160 mm		
Impeller type	Vortex impeller		
Free passage	80 mm		

Nozzle connections pump

Nominal diameter Suction nozzle	Without	Nominal diameter Discharge nozzle	DN 80
Nominal pressure Suction nozzle	PN 16	Nominal pressure Discharge nozzle	PN 16
Suction flange bolt hole pattern as per standard	Without	Discharge flange bolt hole pattern as per standard	Drawing

Datasheet



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Shaft sealing

Shaft seal type	DMS tandem	Mechanical seal type inboard	MG1G36
		Material Shaft seal inboard	Q1Q1PGG
		Mechanical seal type outboard	MG1G6
		Material Shaft seal outboard	BVPGG

Materials

Design concept	G	Material motor housing	EN-GJL-250/A48 CL 35B
Material Volute casing	EN-GJL-250/A48 CL 35B	Material Power cable sheath	PE-C
Material Casing cover	EN-GJL-250/A48 CL 35B	Material Bolts/Screws	A4-70
Material Shaft	1.4021+QT800	Hydraulic casing	
Material Impeller	EN-GJL-250/A48 CL 35B	Material Impeller fastening	A4-80
Material Static seal Hydraulic casing	NBR 70	Material Lifting tackle Pump/mixer	WITHOUT
Material Inlet part suction-side	EN-GJL-250/A48 CL 35B	Material Elbow Outlet	EN-GJL-250/A48 CL 35B
Material Bearing bracket housing pump-end	EN-GJL-250/A48 CL 35B	Material Claw, wet installation	EN-GJL-250/A48 CL 35B

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Driver

Drive concept	With electric actuator	Rated speed Motor	1'370 1/min
Motor manufacturer	KSB	Number of motor poles	4
Motor size	NG09M	Rated power Motor	1.67 kW
Motor version	U	Motor power reserve determined	95 %
Rolling element bearing type non-drive end (Basic symbol)	Single-row deep groove ball bearing 6306	Mains type Motor	Three-phs alternating current
Efficiency class	Without	Rated voltage Motor	400 V
Motor cooling method	Surface cooling	Rated frequency Motor	50Hz
Enclosure Motor	IP68	Motor starting method	DOL
Thermal class	180 (H) nach IEC 60085	Motor switching type	Star
Temperature sensor motor	Bimetal switch	Rated current Motor	3.71 A
Operation on a frequency inverter permitted	Yes (acc to motor manufact)	Starting current ratio Ia/In	7.3
Length Power cable	10 m	Cos phi at 4/4 load	0.83
Quantity Power cables	1	Motor efficiency at 4/4 load	78.3 %
Cable type Power cable	H07RN-F	Motor service factor	1.15
Cable cross-section Power cable	7G1.5	Explosion protection directive Drive	Without
Quantity Control cables	0	Moisture protection monitoring Submersible motor	Leakage sensor
Cable type Control cable	Without	Motor power P1	1.03 kW
Seal Cable gland	Resin-sealed, absolutely watertight	P1 at 4/4 load	2.13 kW
Submersible motor		Specific energy Flow rate	0.0558 kWh/m ³
		Number of motor starts (per hour)	30

Installation parts / Accessories

Installation type Stationary, twin guide rails

Duckfoot

Nominal size Inlet Elbow DN 80
 Nominal size Outlet Elbow DN 80
 Standard Bolt hole pattern EN1092-2
 Connection Outlet Elbow
 Connection element type Chemical anchors
 Foundation

Lifting tackle / Lifting parts

Lifting tackle Pump/mixer Without

Guide rail arrangement (bracket(s) without rail(s))

Quantity Spacer Guide rail 0
 Guidance length 6 m

Claw

Claw design Vertical
 Nominal size Inlet Claw DN 80
 Nominal size Outlet Claw DN 80

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Version No.: 1

Coating

Surface preparation
Properties Top coat
Thickness Top coat
Colour Top coat

Free from dirt, grease, rust
2-component epoxy resin, high solid
80 µm
RAL5002 Ultramarine Blue

Packaging

Suitable for transport	Truck transport
Suitable for storage	Indoor storage
Packaging category	KSB's choice (A0)

Nameplates

Duplicate name plate	Yes
Additional text Name plate	No
Name plate engraving	Engraved by KSB

Performance Curve (Pump)

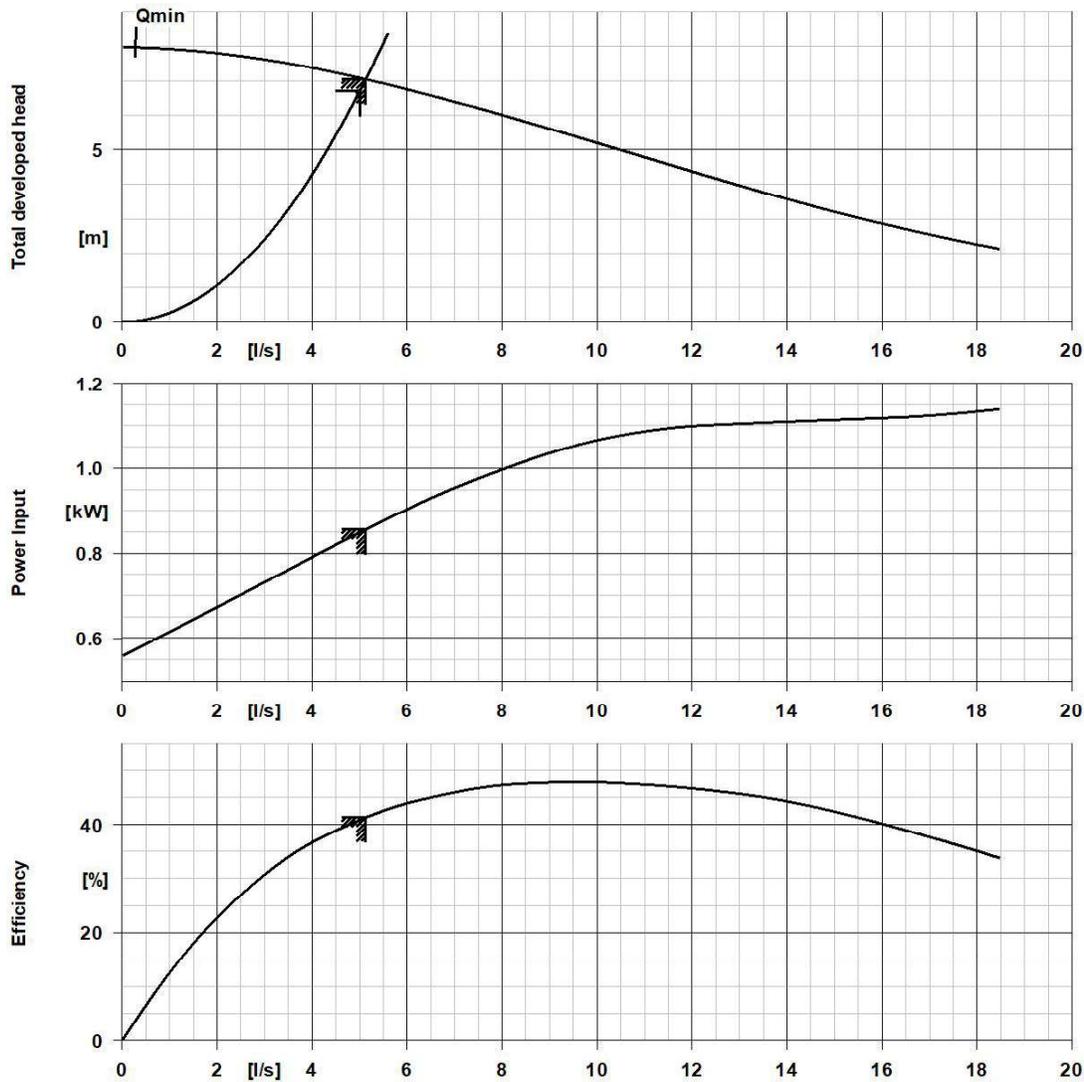


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Curve Data

Pump speed	1'446 1/min	Efficiency Pump	41.15 %
Density Fluid handled	998 kg/m ³	Maximum power input at duty point	0.8565 kW
Kinematic viscosity handled	Fluid 1 mm ² /s	NPSH required	0 m
Flow rate	5.126 l/s	Characteristic curve number	K2573-54-80180F/2
Target flow rate	5 l/s	Impeller diameter D2	160 mm
Head	7.041 m	Hydraulic calculation according to standard/class	EN ISO 9906 §4.4.2 (pump input power below 10 kW)
Target head	6.7 m		

Datasheet



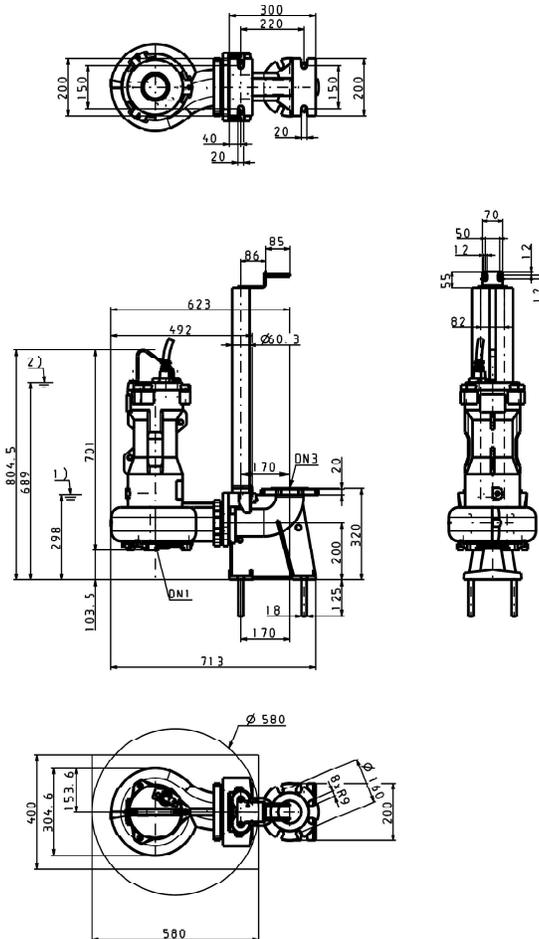
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1) Lowest stop level for automatic operation
 2) Minimum submergence for continuous operation



Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	KSB
Motor size	NG09M
Rated power Motor	1.67 kW
Number of motor poles	4
Rated speed Motor	1'370 1/min
H	

Connections

Nominal diameter Suction nozzle	Without
Suction flange bolt hole pattern as per standard	Without
Nominal diameter Discharge nozzle	DN 80
Discharge flange bolt hole pattern as per standard	Drawing
Nominal pressure Suction nozzle	PN 16
Nominal pressure Discharge nozzle	PN 16

Net weight

Total weight Pump	70.77 kg
Weight of installation kits	30.25

Connect pipelines stress-free

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Dimensional tolerances for shaft axis height: DIN 747
Dimensions without tolerances, middle tolerances to: ISO
2768-m
Connection dimensions for pumps: EN735
Dimensions without tolerances - welded parts: ISO 13920-B
Dimensions without tolerances - gray cast iron parts: ISO
8062-CT9

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Total weight Pump set 101 kg

Plan for additional connections see extra drawing