

MovitecVSV004/07-B0S54FS080D5UW

High pressure Inline Pump

Operating data

Requested flow rate		Actual flow rate	3.01 m ³ /h
Requested developed head		Actual developed head	55.54 m
Pumped medium	Water, desalinated	Efficiency	57.5 %
	Distilled water, demineralized water	MEI (Minimum Efficiency Index)	≥ 0.70
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	Power absorbed	0.79 kW
Max. ambient air temperature	20.0 °C	Pump speed of rotation	2904 rpm
Min. ambient air temperature	20.0 °C	NPSH required	1.63 m
Fluid temperature	20.0 °C	Permissible operating pressure	25.00 bar.g
Fluid density	998 kg/m ³	Discharge press.	5.44 bar.g
Fluid viscosity	1.00 mm ² /s	Shutoff head	64.21 m
Suction pressure max.	0.00 bar.g	Min. allow. flow for continuous stable operation	0.60 m ³ /h
Mass flow rate	0.84 kg/s	Min. allow. mass flow for continuous stable operation	0.17 kg/s
Max. power on curve	1.00 kW	Design	Single system 1 x 100 %
Max. allow. mass flow	1.80 kg/s		Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

Design

Pump standard	KSB high pressure in-line international execution	Shaft seal	Single acting mechanical seal
Design	Close-coupled	Shaft seal manufacturer	DP
Orientation	Vertical	Shaft seal type	MG-FX
Suction nominal dia.	NPS 1¼	Material code	BQ7EGG-DW001
Suction nominal pressure	PN 40	Shaft seal code	54
Suction position	90° (right)	Sealing plan	I Single-acting mechanical seal(internal circulation)
Connection standard	Victaulic coupling	Water quality: Conductivity > 10 µS/cm < 250 µS/cm, SiO ₂ -content < 10 mg/l and solid content up to max 5 mg/l	
Discharge nominal dia.	NPS 1¼	Seal chamber design	Standard seal chamber
Discharge nominal pressure	PN 40	Contact guard	With
Discharge position	270° (left 90°)	Impeller diameter	86.0 mm
Victaulic coupling (V)		Direction of rotation from drive	Clockwise

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Driver, accessories

Driver type	Electric motor	Insulation class	F to IEC 34-1
Drive standard mech.	IEC	Motor enclosure	IP55
Model (make)	KSB (DMW)	Cos phi at 4/4 load	0.83
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor efficiency at 4/4 load	82.7 %
Motor const. type	V18	Temperature sensor	Without
Motor size	080M	Terminal box position	90° (right)
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Motor winding	Viewed from the drive
Motor speed	2903 rpm	Number of poles	230 / 400 V
Frequency	50 Hz	Fixed bearing reinforced	2
Rated voltage	400 V	Connection mode	axial
Rated power P2	1.10 kW	Motor cooling method	Star
Performance limit P2max	1.30 kW	Motor material	Surface cooling
Available reserve	64.24 %	Frequency inverter operation allowed	Aluminium
Rated current	2.3 A	Motor noise pressure level	FI allowed
Starting current ratio	7		60 dBA

Materials VS

Pump shroud (10-6)	CrNiMo steel 1.4404	O-Ring (412)	EPDM WRc / ACS Approved
Pump casing (101)	Stainless steel 1.4408	Seal cover (471)	Stainless steel 1.4408
Stage casing (108)	CrNiMo steel 1.4404	Bearing sleeve (529)	Tungsten Carbide
Cover (160)	CrNiMo steel 1.4404	Flange (723)	Stainless steel 1.4408
Diffuser (171)	CrNiMo steel 1.4404	Baseplate (890)	Ductile cast iron EN-GJS-400-15
Shaft (210)	Duplex steel 1.4460	Screwed plug (903)	CrNiMo steel 1.4404
Impeller (230)	CrNiMo steel 1.4404	Tie bolt (905)	Chrome steel 1.4057+QT800
Motor stool (341)	Grey cast iron EN-GJL-250	Nut (920)	CrNiMo steel 1.4404

Packaging

Packaging category	A0 Packing acc. to KSB choice	Packaging for transport	Truck
Packaging for storage	Indoor		

Nameplates

Nameplates language	International
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Auxiliary connections

5B venting	G 3/8, Closed with venting plug	6B Pumped liquid drain	G 1/4, Drilled and plugged.
5B Material	CrNiMo steel 1.4404		

Coating

KSB coating code	Without	Total film thickness approx.	0 µm
Final coating	Without		

Baseframe / foundation rail coating

KSB coating code	DP 2	Final coating	2-component epoxy resin
Surface preparation	Free from dirt, grease, rust	Color	Graphite black (RAL 9011)
Primer	Not specified	Total film thickness approx.	100 µm
Intermediate coating	Not specified		

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Motor coating

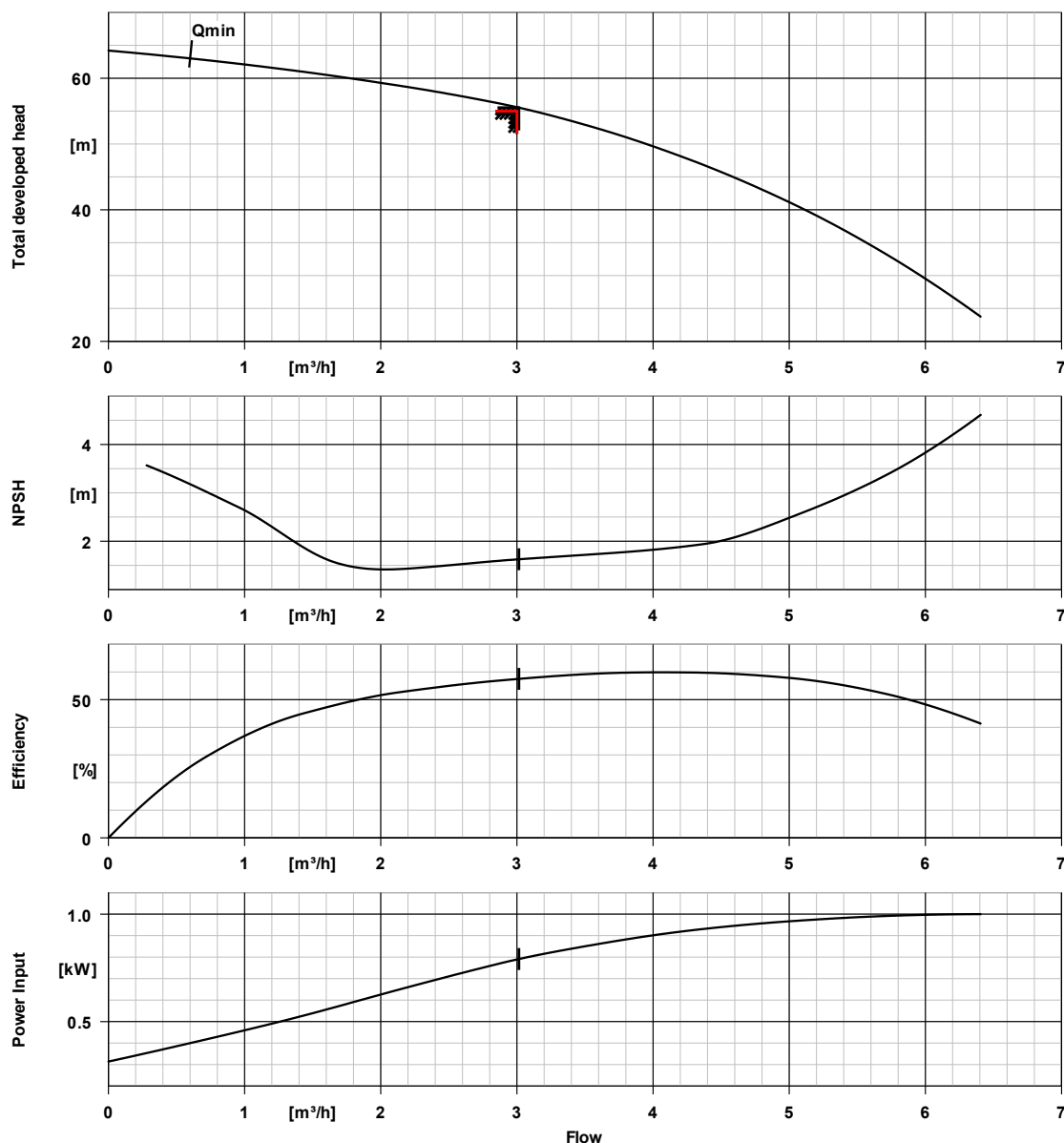
KSB coating code	DP 3	Final coating	2-component epoxy resin
Surface preparation	Free from dirt, grease, rust	Color	Ultramarine blue (RAL 5002)
Primer	Not specified		KSB-blue
Intermediate coating	Not specified	Total film thickness approx.	30 µm

Motor stool coating

KSB coating code	DP 3	Final coating	2-component epoxy resin
Surface preparation	Free from dirt, grease, rust	Color	Ultramarine blue (RAL 5002)
Primer	Not specified		KSB-blue
Intermediate coating	Not specified	Total film thickness approx.	30 µm

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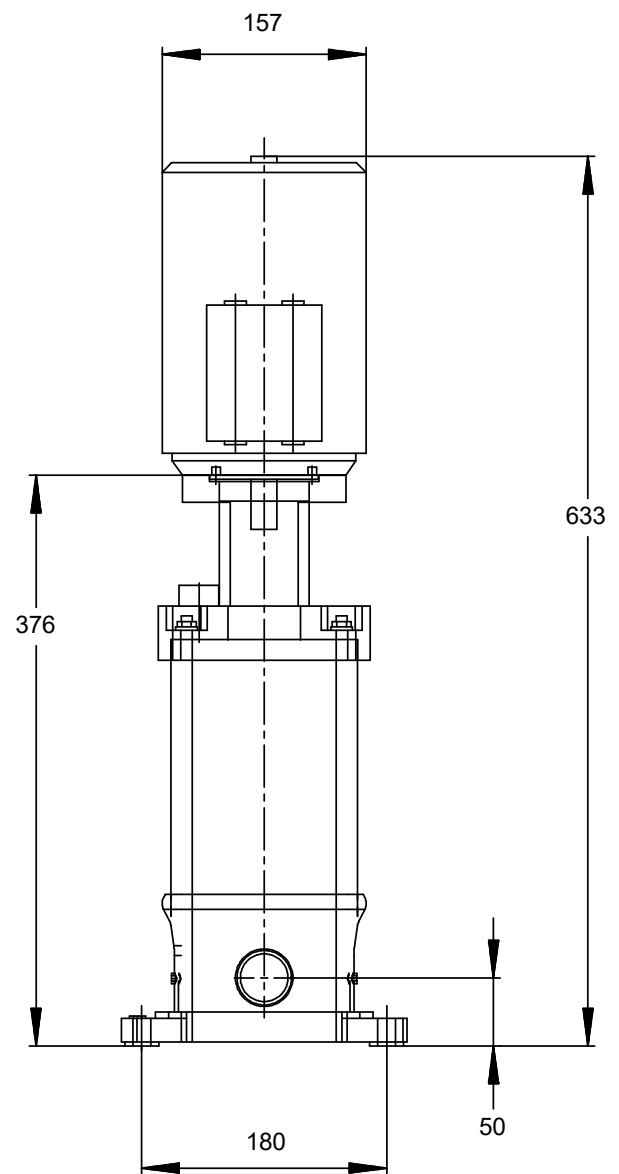
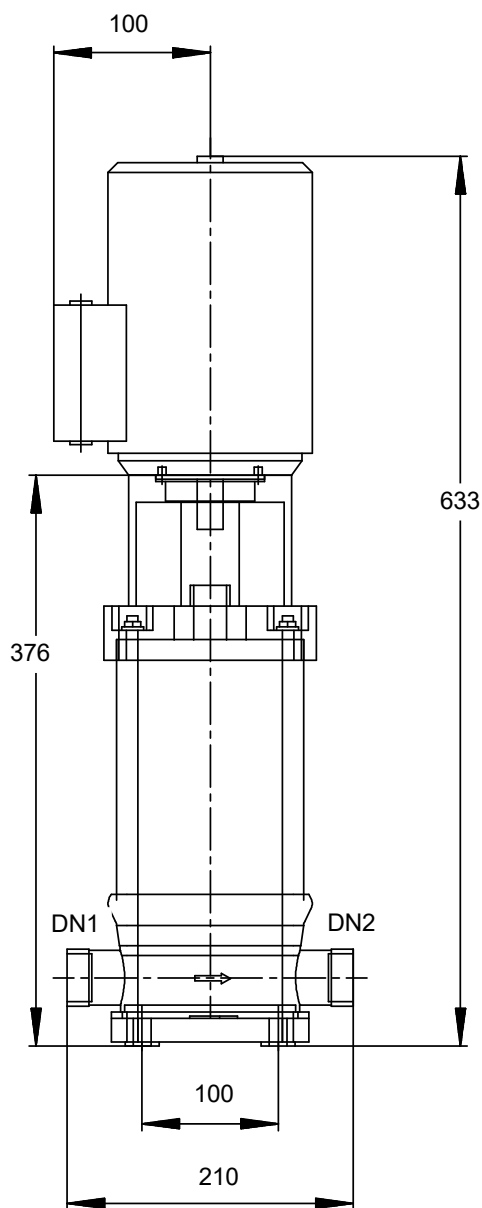


Curve data

Speed of rotation	2904 rpm	Efficiency	57.5 %
Fluid density	998 kg/m^3	MEI (Minimum Efficiency Index)	≥ 0.70
Viscosity	1.00 mm^2/s	Power absorbed	0.79 kW
Flow rate	3.01 m^3/h	NPSHR	1.63 m
Requested flow rate	3.00 m^3/h	Curve number	K95000400/2
Total developed head	55.54 m	Effective impeller diameter	86.0 mm
Requested developed head	55.00 m	Acceptance standard	Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

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Drawing is not to scale

Dimensions in mm

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Motor

Motor manufacturer	KSB (DMW)
Motor size	080M
Motor power	1.10 kW
Number of poles	2
Speed of rotation	2903 rpm
Position of terminal box	90° (right)
	Viewed from the drive
Thrust bearing housing	No

Connections

Suction nominal size DN1	NPS 1¼ / Victaulic coupling
Discharge nominal size DN2	NPS 1¼ / Victaulic coupling
Nominal pressure suct.	PN 40
Rated pressure disch.	PN 40
Victaulic coupling (V)	

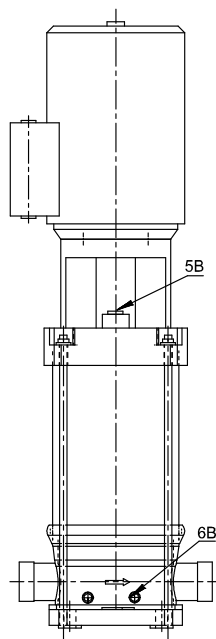
Weight net

Pump	14 kg
Motor	12 kg
Total	26 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

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Connections

5B venting
6B Pumped liquid drain

G 3/8
G 1/4

Closed with venting plug
Drilled and plugged.