Data sheet

MovitecV 010/08-B4F53ES100B5VW
High pressure Inline Pump

Operating data

Requested flow rate	10.40 m³/h	Actual flow rate	10.41 m³/h
Requested developed head	65.90 m	Actual developed head	66.02 m
Pumped medium	Water	Efficiency	67.2 %
	Clean water	MEI (Minimum Efficiency Index)	≥ 0.70
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	Power absorbed	2.78 kW
		Pump speed of rotation	2925 rpm
Max. ambient air temperature	20.0 °C	NPSH required	1.81 m
Min. ambient air temperature	20.0 °C	Permissible operating pressure	16.00 bar.g
Fluid temperature	20.0 °C		
Fluid density	998 kg/m³	Discharge press.	6.46 bar.g
Fluid viscosity	1.00 mm²/s	Shutoff head	94.25 m
Suction pressure max.	0.00 bar.g	Min. allow. flow for continuous stable operation	1.20 m³/h
Mass flow rate	2.89 kg/s		
Max. power on curve	2.85 kW	Min. allow. mass flow for continuous stable operation	0.33 kg/s
Max. allow. mass flow	3.69 kg/s		
		Design	Single system 1 x 100 % 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	EMG-AC
Design according to standard	Drinking water acc. to ACS	Material code	BQ7EGG-Y10-DW001
Suction nominal dia.	G 1 1/2	Shaft seal code	53
Suction nominal pressure	PN 16	Sealing plan	I Single-acting mechanical seal(internal circulation)
Suction position	90° (right)		
Connection standard discharge	EN ISO 228-1	A liquid free of solids is assumed	
		Seal chamber design	Standard seal chamber
Discharge nominal dia.	G 1 1/2	Contact guard	With
Discharge nominal pressure	PN 16	Impeller diameter	96.0 mm
Discharge position	270° (left 90°)	Direction of rotation from drive	Clockwise
Oval flange		Color	Graphite black (RAL 9011)

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Driver, accessories

Frequency inverter operation allowed only for rated voltage.

Driver type	Electric motor	Starting current ratio	8
Drive standard mech.	IEC	Insulation class	F to IEC 34-1
Model (make)	KSB (DMC)	Motor enclosure	IP55
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Cos phi at 4/4 load	0.89
		Motor efficiency at 4/4 load	87.1 %
		Temperature sensor	3 PTC resistors
Motor const. type	V18	Terminal box position	90° (right)
Motor size	100L		Viewed from the drive
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Motor winding	400 / 690 V
		Number of poles	2
Motor speed	2925 rpm	Fixed bearing reinforced	axial
Frequency	50 Hz	Connection mode	Delta
Designed for operation with frequency inverter	Yes	Motor cooling method	Surface cooling
		Motor material	Aluminium
Rated voltage	400 V	Frequency inverter operation allowed	FI allowed
Rated power P2	3.00 kW		
Performance limit P2max	3.40 kW	Motor noise pressure level	63 dBa
Available reserve	22.26 %		
Rated current	5.6 A		

Materials V

Pump shroud (10-6)	Stainless steel 1.4301	O-Ring (412)	EPDM WRc / ACS Approved
Pump casing (101)	Stainless Steel 1.4308	Seal cover (471)	Stainless Steel 1.4308
Stage casing (108)	Stainless steel 1.4301	Bearing sleeve (529)	Tungsten Carbide
Cover (160)	Stainless steel 1.4301	Flange (723)	Stainless Steel 1.4308
Diffuser (171)	Stainless steel 1.4301	Baseplate (890)	Grey cast iron EN-GJL-250
Shaft (210)	Chrome steel 1.4057+QT800	Screwed plug (903)	Stainless steel 1.4301
Impeller (230)	Stainless steel 1.4301	Tie bolt (905)	Chrome steel 1.4057+QT800
Motor stool (341)	Grey cast iron EN-GJL-250	Nut (920)	Stainless steel 1.4301

Packaging

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

Nameplates

Nameplates language	International

Performance curve

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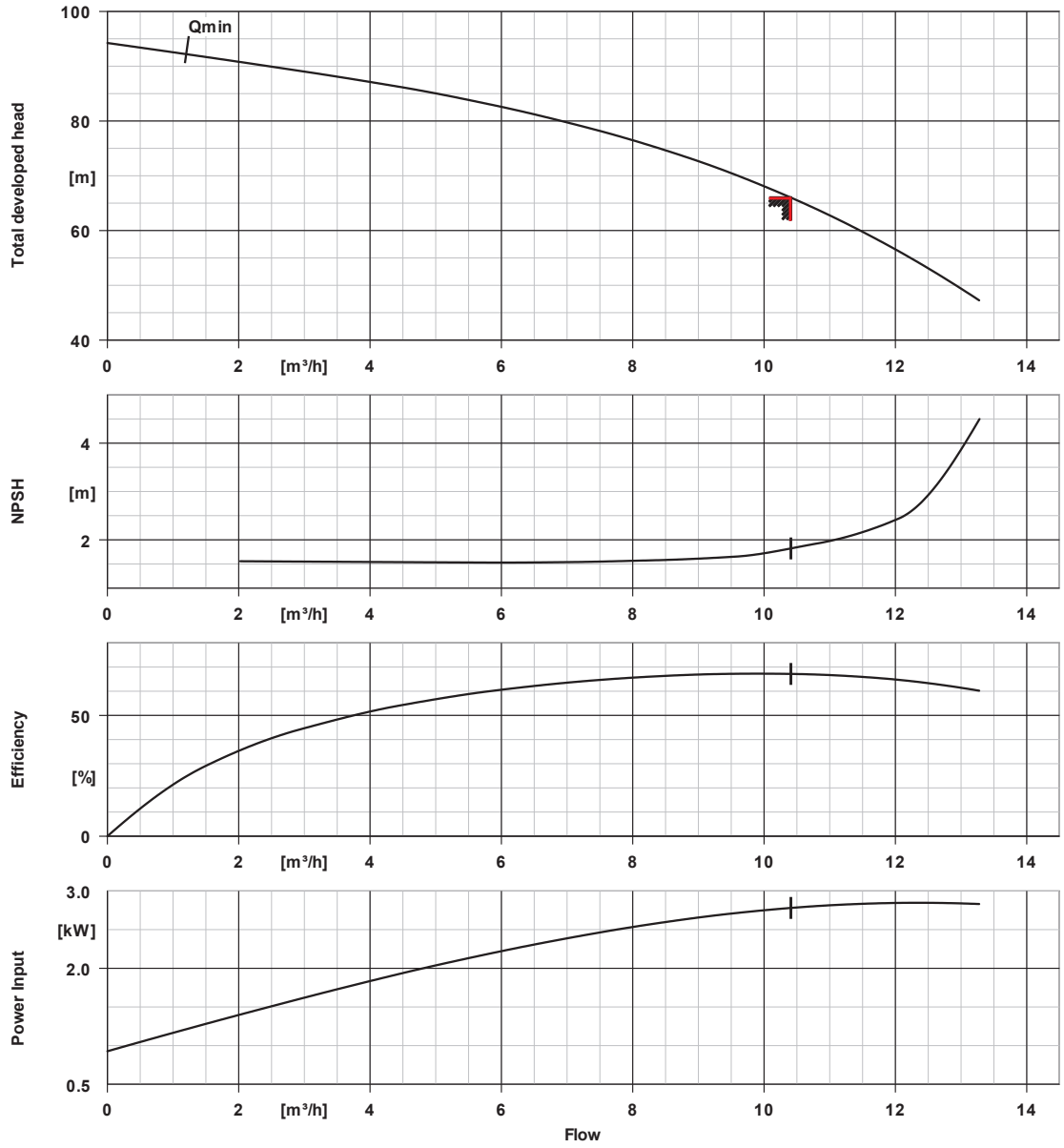

Curve data

Speed of rotation	2925 rpm	Efficiency	67.2 %
Fluid density	998 kg/m³	MEI (Minimum Efficiency Index)	≥ 0.70
Viscosity	1.00 mm²/s		
Flow rate	10.41 m³/h	Power absorbed	2.78 kW
Requested flow rate	10.40 m³/h	NPSHR	1.81 m
Total developed head	66.02 m	Curve number	Mov10TNG2900/2
Requested developed head	65.90 m	Effective impeller diameter	96.0 mm
		Acceptance standard	Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

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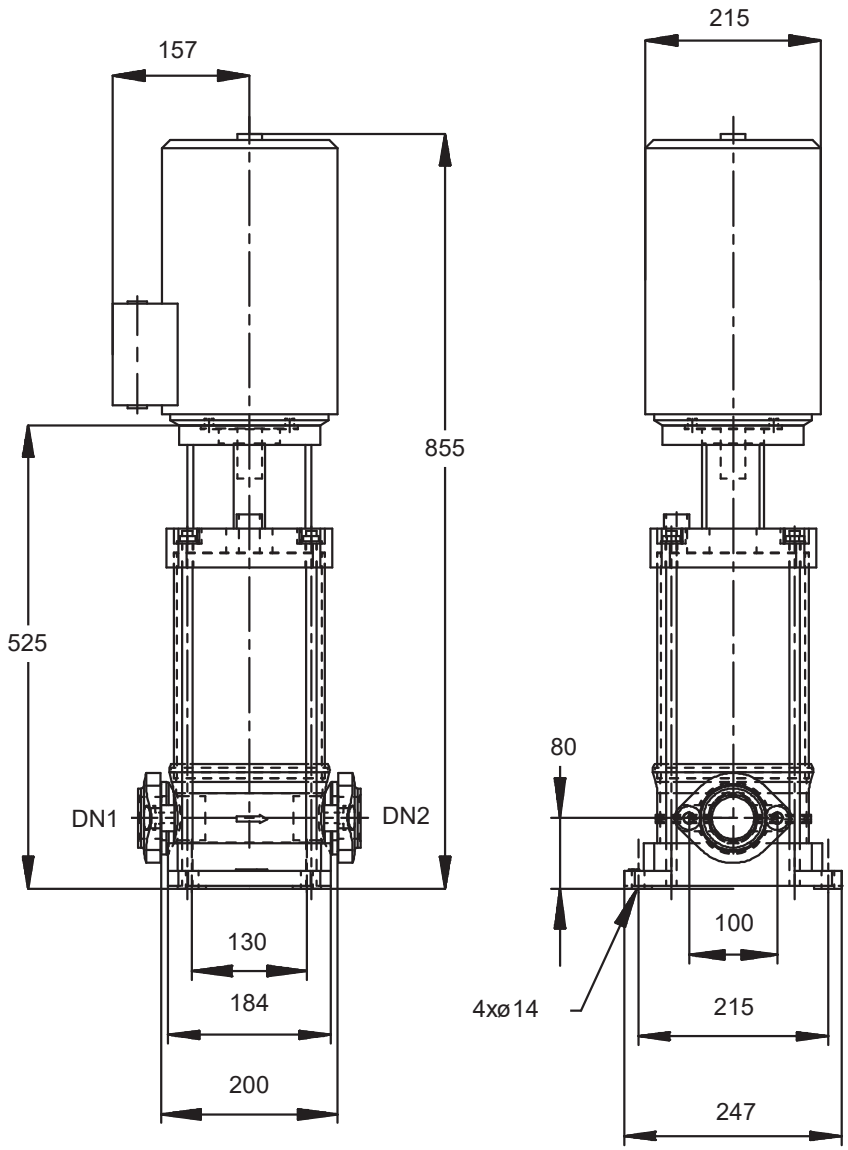

Drawing is not to scale

Dimensions in mm

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Motor

Motor manufacturer	KSB (DMC)
Motor size	100L
Motor power	3.00 kW
Number of poles	2
Speed of rotation	2925 rpm
Position of terminal box	90° (right) Viewed from the drive
Thrust bearing housing	No

Connections

Suction nominal size DN1	G 1 1/2 / EN ISO 228-1
Discharge nominal size DN2	G 1 1/2 / EN ISO 228-1
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Oval flange

Weight net

Pump	28 kg
Motor	27 kg
Total	55 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

Connection plan

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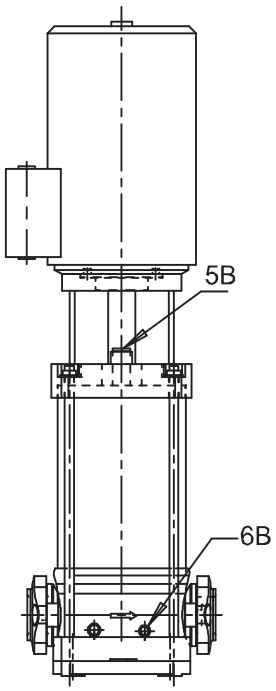

Connections

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