

MovitecV F060/02-B1X53ES160A5VW

High pressure Inline Pump

Operating data

Requested flow rate	55.00 m ³ /h	Actual flow rate	60.31 m ³ /h
Requested developed head	35.00 m	Actual developed head	42.09 m
Pumped medium	Water	Efficiency	76.7 %
	Clean water	Power absorbed	9.00 kW
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	Pump speed of rotation	2959 rpm
		NPSH required	3.56 m
Max. ambient air temperature	20.0 °C	Permissible operating pressure	16.00 bar.g
Min. ambient air temperature	20.0 °C	Discharge press.	4.12 bar.g
Fluid temperature	20.0 °C		
Fluid density	998 kg/m ³	Shutoff head	61.06 m
Fluid viscosity	1.00 mm ² /s	Min. allow. flow for continuous stable operation	5.09 m ³ /h
Suction pressure max.	0.00 bar.g	Min. allow. mass flow for continuous stable operation	1.41 kg/s
Mass flow rate	16.72 kg/s	Design	Single system 1 x 100 % Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Max. power on curve	9.76 kW		
Max. allow. mass flow	21.50 kg/s		

Design

Pump standard	KSB high pressure in-line international execution	Shaft seal manufacturer	DP
Design	Close-coupled	Shaft seal type	EMG-AC
Orientation	Vertical	Material code	BQ7EGG-Y10-DW001
Suction nominal dia.	DN 100	Shaft seal code	53
Suction nominal pressure	PN 16	Sealing plan	I Single-acting mechanical seal(internal circulation)
Suction position	90° (right)	A liquid free of solids is assumed	
Connection standard	EN 1092-2	Seal chamber design	Standard seal chamber
discharge		Contact guard	With
Discharge nominal dia.	DN 100	Impeller diameter	150.0 mm
Discharge nominal pressure	PN 16	Direction of rotation from drive	Clockwise
Discharge position	270° (left 90°)	Color	Graphite black (RAL 9011)
Round flange (F)			
Shaft seal	Single acting mechanical seal		

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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	0.90
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor efficiency at 4/4 load	91.2 %
Motor const. type	V1	Temperature sensor	3 PTC resistors
Motor size	160M	Terminal box position	90° (right)
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Motor winding	Viewed from the drive
Motor speed	2957 rpm	Number of poles	400 / 690 V
Frequency	50 Hz	Fixed bearing reinforced	2
Rated voltage	400 V	Connection mode	axial
Rated power P2	11.00 kW	Motor cooling method	Delta
Performance limit P2max	12.70 kW	Motor material	Surface cooling
Available reserve	41.07 %	Frequency inverter operation allowed	Grey cast iron GG/CAST IRON
Rated current	19.3 A	Motor noise pressure level	FI allowed
Starting current ratio	8		68 dBa

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)	Ductile cast iron EN-GJS-400-15
Diffuser (171)	Stainless steel 1.4301	Baseplate (890)	Ductile cast iron EN-GJS-400-15
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)	Ductile cast iron EN-GJS-400-15	Nut (920)	Stainless steel 1.4301

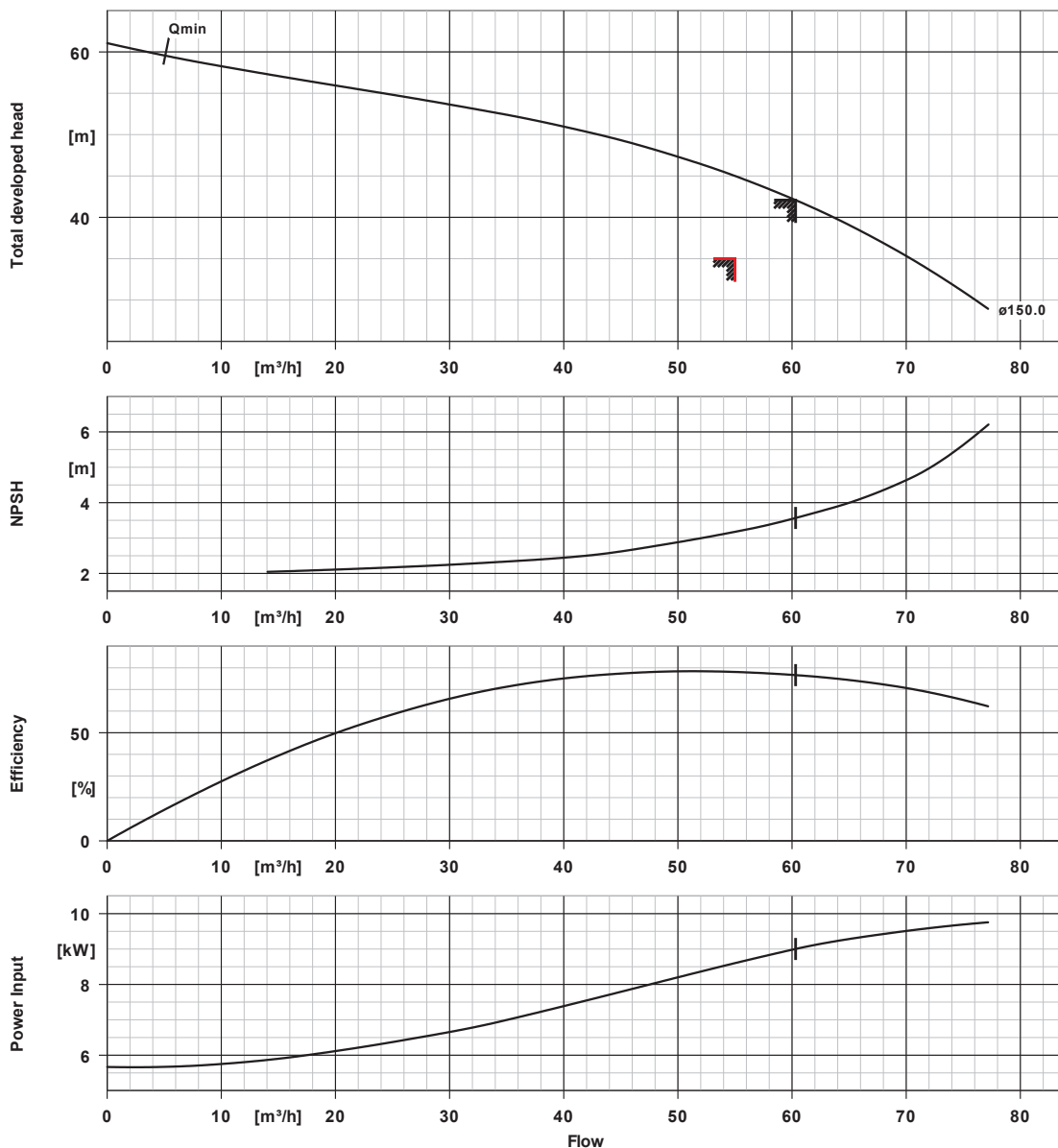
Packaging

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

Nameplates

Nameplates language	International
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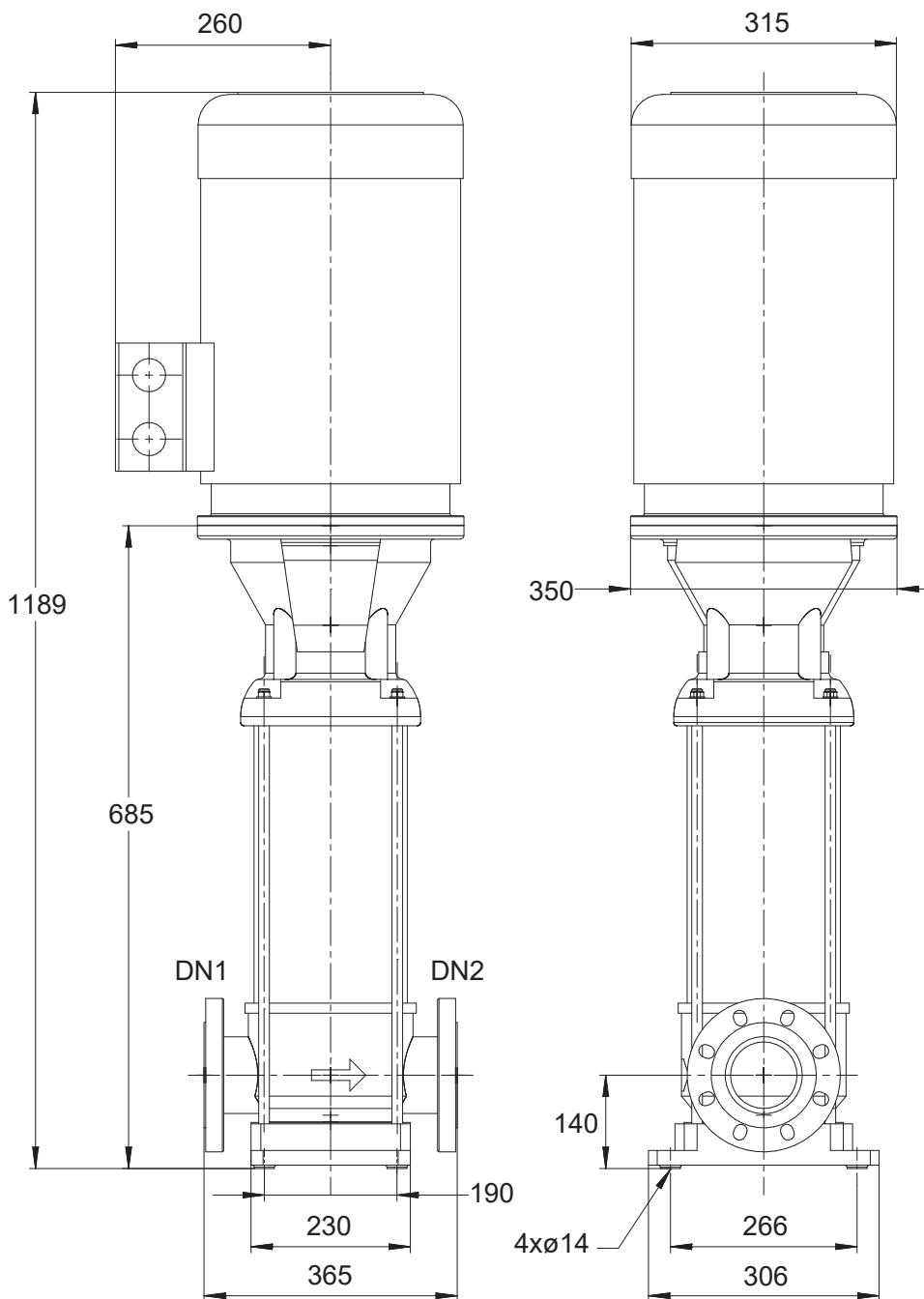


Curve data

Speed of rotation	2959 rpm	Efficiency	76.7 %
Fluid density	998 kg/m^3	Power absorbed	9.00 kW
Viscosity	1.00 mm^2/s	NPSHR	3.56 m
Flow rate	60.31 m^3/h	Curve number	MovitecB60_2pol_50Hz/1
Requested flow rate	55.00 m^3/h	Effective impeller diameter	150.0 mm
Total developed head	42.09 m	Acceptance standard	Tolerances to ISO 9906
Requested developed head	35.00 m		Class 3B; below 10 kW
			acc. to paragraph 4.4.2

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Motor

Motor manufacturer	KSB (DMW)
Motor size	160M
Motor power	11.00 kW
Number of poles	2
Speed of rotation	2957 rpm
Position of terminal box	90° (right) Viewed from the drive
Thrust bearing housing	No

Connections

Suction nominal size DN1	DN 100 / EN 1092-2
Discharge nominal size DN2	DN 100 / EN 1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16
Round flange (F)	

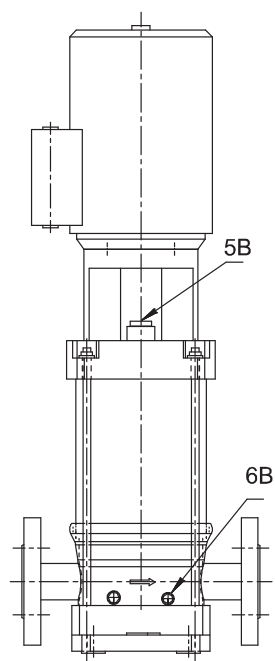
Weight net

Pump	116 kg
Motor	93 kg
Total	208 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.