

MovitecV F040/03-B1X53ES160A5VW

High pressure Inline Pump

Operating data

Requested flow rate	40.00 m³/h	Actual flow rate	40.00 m³/h
Requested developed head	68.00 m	Actual developed head	67.99 m
Pumped medium	Water, drinking water / tap water	Efficiency	74.8 %
	Tap water	Power absorbed	9.88 kW
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	Pump speed of rotation	3061 rpm
		NPSH required	3.20 m
Max. ambient air temperature	20.0 °C	Permissible operating pressure	16.00 bar.g
Min. ambient air temperature	20.0 °C	Discharge press.	6.65 bar.g
Fluid temperature	20.0 °C		
Fluid density	998 kg/m³	Shutoff head	82.67 m
Fluid viscosity	1.00 mm²/s	Min. allow. flow for continuous stable operation	3.90 m³/h
Suction pressure max.	0.00 bar.g	Min. allow. mass flow for continuous stable operation	1.08 kg/s
Mass flow rate	11.09 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	11.17 kW		
Max. allow. mass flow	15.80 kg/s		

Design

Pump standard	KSB high pressure in-line international execution	Shaft seal manufacturer	DP
Movitec 40 is not standard suitable for the replacement of the previous pump size 45 due to different, competitor identical, casing dimensions.		Shaft seal type	EMG-AC
		Material code	BQ7EGG-Y10-DW001
		Shaft seal code	53
		Sealing plan	I Single-acting mechanical seal(internal circulation)
Design	Close-coupled	A liquid free of solids is assumed	
Orientation	Vertical	Seal chamber design	Standard seal chamber
Suction nominal dia.	DN 80	Contact guard	With
Suction nominal pressure	PN 25	Impeller diameter	125.0 mm
Suction position	90° (right)	Direction of rotation from drive	Clockwise
Connection standard	EN 1092-2	Color	Graphite black (RAL 9011)
discharge			
Discharge nominal dia.	DN 80		
Discharge nominal pressure	PN 25		
Discharge position	270° (left 90°)		
Round flange (F)			
Shaft seal	Single acting mechanical seal		

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Driver, accessories

Frequency inverter operation allowed only for rated voltage.

Starting current	
Driver type	Electric motor
Drive standard mech.	IEC
Model (make)	KSB (DMW)
Drive supplied by	Standard motor supplied by KSB - mounted by KSB
Motor const. type	V1
Motor size	160M
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1
Speed control selection	Specified speed
Frequency	50 Hz
Designed for operation with frequency inverter	Yes
Rated voltage	400 V
Rated power P2	11.00 kW
Performance limit P2max	12.65 kW
Available reserve	11.55 %
Rated current	19.3 A

Starting current ratio	8
Insulation class	F to IEC 34-1
Motor enclosure	IP55
Cos phi at 4/4 load	0.90
Motor efficiency at 4/4 load	0.9 %
Temperature sensor	3 PTC resistors
Terminal box position	90° (right) Viewed from the drive
Motor winding	400 / 690 V
Number of poles	2
Fixed bearing reinforced	axial
Connection mode	Delta
Motor cooling method	Surface cooling
Motor material	Grey cast iron GG/CAST IRON
Frequency inverter operation allowed	FI allowed
Motor noise pressure level	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

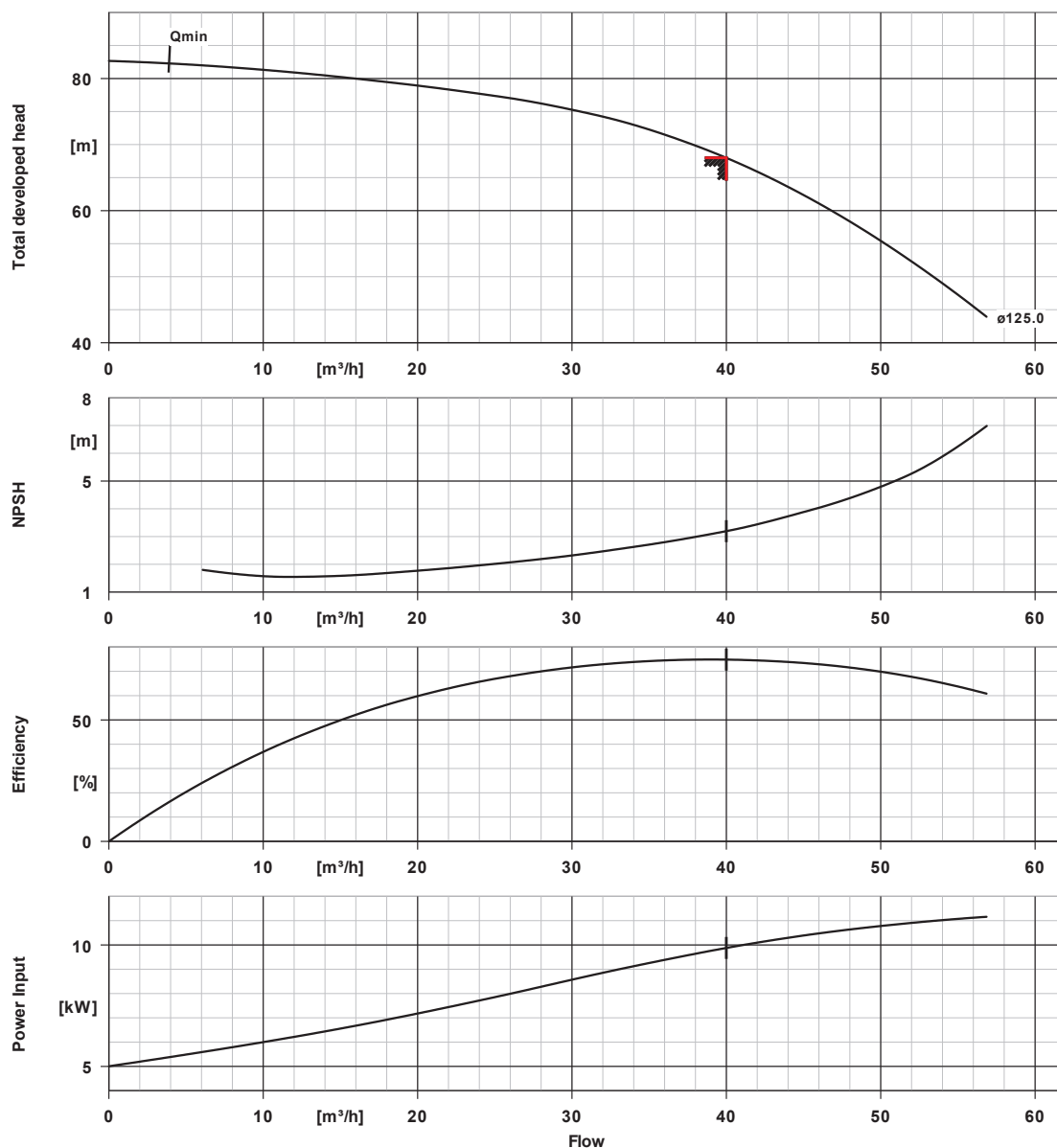
Packaging category	A0 Packing acc. to KSB choice	Packaging for transport	Truck
Packaging for storage	Indoor		

Nameplates

Nameplates language	International	Additional nameplate with QR Code and RFID Chip
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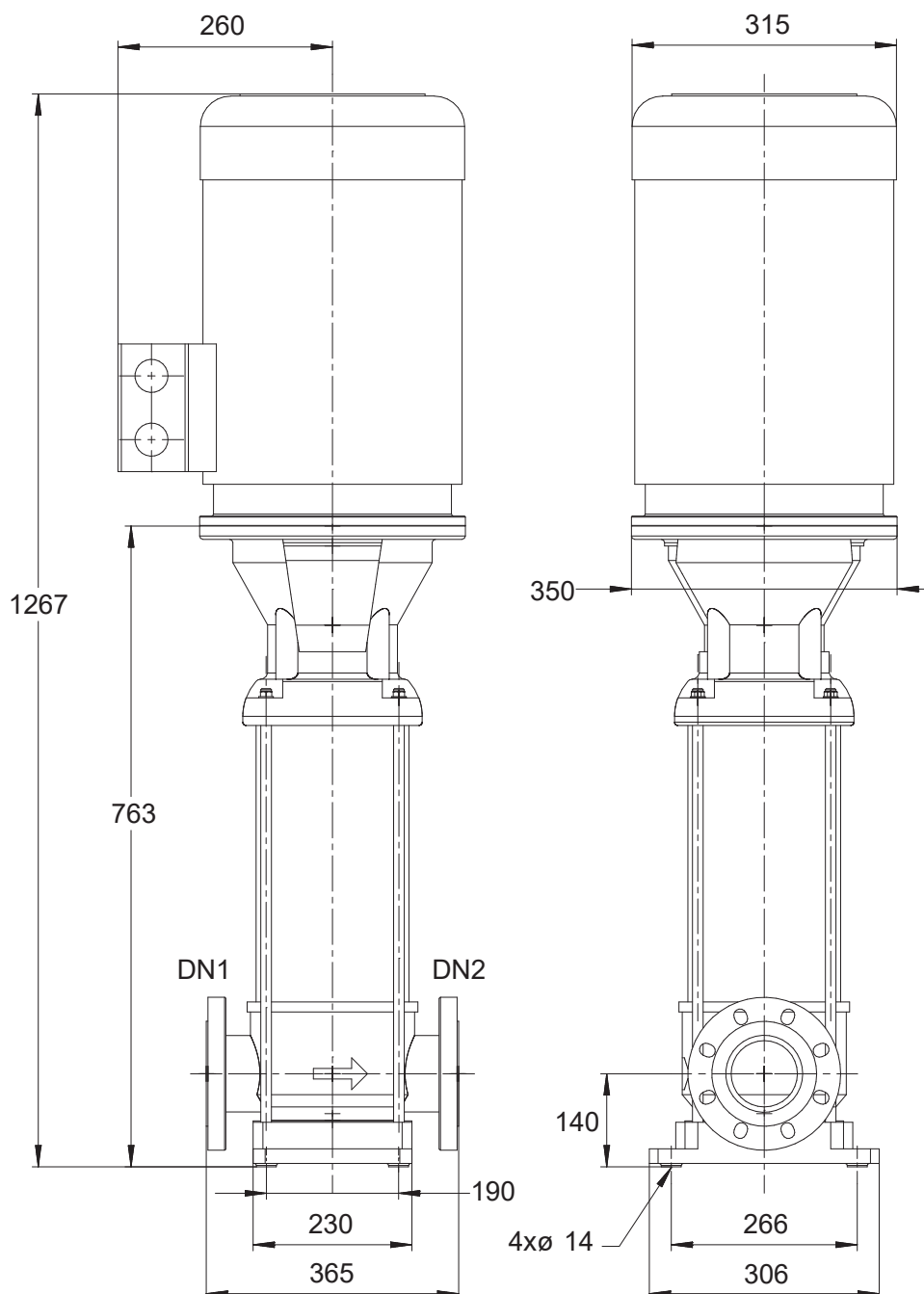


Curve data

Speed of rotation	3061 rpm	Efficiency	74.8 %
Fluid density	998 kg/m^3	Power absorbed	9.88 kW
Viscosity	1.00 mm^2/s	NPSHR	3.20 m
Flow rate	40.00 m^3/h	Curve number	MovitecB40_2pol_50Hz/2
Requested flow rate	40.00 m^3/h	Effective impeller diameter	125.0 mm
Total developed head	67.99 m	Acceptance standard	Tolerances to ISO 9906
Requested developed head	68.00 m		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	160M
Motor power	11.00 kW
Number of poles	2
Speed of rotation	2946 rpm
Position of terminal box	90° (right)
	Viewed from the drive
Thrust bearing housing	No

Connections

Suction nominal size DN1	DN 80 / EN 1092-2
Discharge nominal size DN2	DN 80 / EN 1092-2
Nominal pressure suct.	PN 25
Rated pressure disch.	PN 25
Round flange (F)	

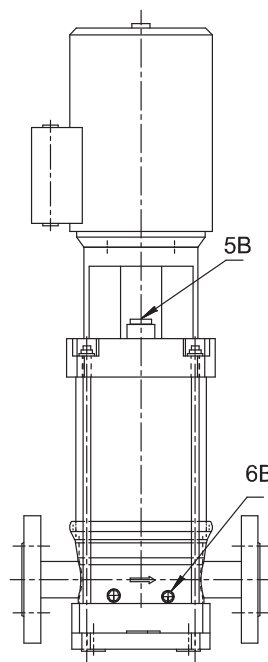
Weight net

Pump	109 kg
Motor	93 kg
Total	202 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.