

Movitec VCF 04/10 B

High-pressure In-line Pump

Operating data

Requested flow rate	0.00 m ³ /h	Actual flow rate	4.30 m ³ /h
Requested developed head	0.00 m	Actual developed head	70.24 m
Pumped medium	Water	Efficiency	60.5 %
	Clean water	Power absorbed	1.36 kW
	Materials are not affected by chemical and mech. substances	Pump speed of rotation	2913 rpm
Fluid temperature	20.0 °C	NPSH required	1.93 m
Fluid density	998 kg/m ³	Permissible operating pressure	25.00 bar.g
Fluid viscosity	1.00 mm ² /s	Discharge press.	6.87 bar.g
Suction pressure max.	0.00 bar.g	Min. allow. flow rate	0.60 m ³ /h
Suction pressure min.	0.00 bar.g	Min. allow. mass flow rate	0.17 kg/s
NPSH available	0.00 m	Shutoff head	93.81 m
Mass flow rate	1.19 kg/s	Design	Single system 1 x 100 %
Max. power on curve	1.47 kW	Acceptance standard	None; tolerances to ISO 9906 class 2, annex A

Design

Pump standard	KSB high pressure in-line international execution	Manufacturer	DP
Design	Close-coupled	Type	RMG-AC
Orientation	Vertical	Material code	Q1BVG
Suction nominal dia.	DN 25	Shaft seal code	14
Suction nominal pressure	PN 25	Sealing plan	I Single-acting mechanical seal(internal circulation)
Suction position	90° (right)	A liquid free of solids is assumed	
Connection standard suction	EN 1092-2	Seal chamber design	Standard seal chamber with
Discharge nominal dia.	DN 25	Contact guard	
Discharge nominal pressure	PN 25	Impeller diameter	86.0 mm
Pump discharge position	270° (left 90°)	Direction of rotation from drive	Clockwise
Connection standard discharge	EN 1092-2	Silicon free pump assembly	Yes
Shaft seal	Single acting mechanical seal	Color	Cataphoresis black

Driver, accessories

Driver type	Electric motor	Starting current ratio	9.1
Model (make)	KSB (DM)	Insulation class	F to IEC 34-1
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor enclosure	IP55
Motor const. type	V18	Cos phi at 4/4 load	0.88
Motor size	90S	Temperature sensor	Without
Efficiency class	IE2 acc. to IEC 60034-30	Motor winding	230 / 400 V
Motor speed	2915 rpm	Number of poles	2
Frequency	50 Hz	Fixed bearing reinforced	radial
Operating voltage	400 V	Connection mode	Star
Rated power P2	1.50 kW	Motor cooling method	Surface cooling
Performance limit P2max	1.99 kW	Motor material	Aluminium
Rated current	2.9 A	FI allowed	

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Materials VCF

Notes

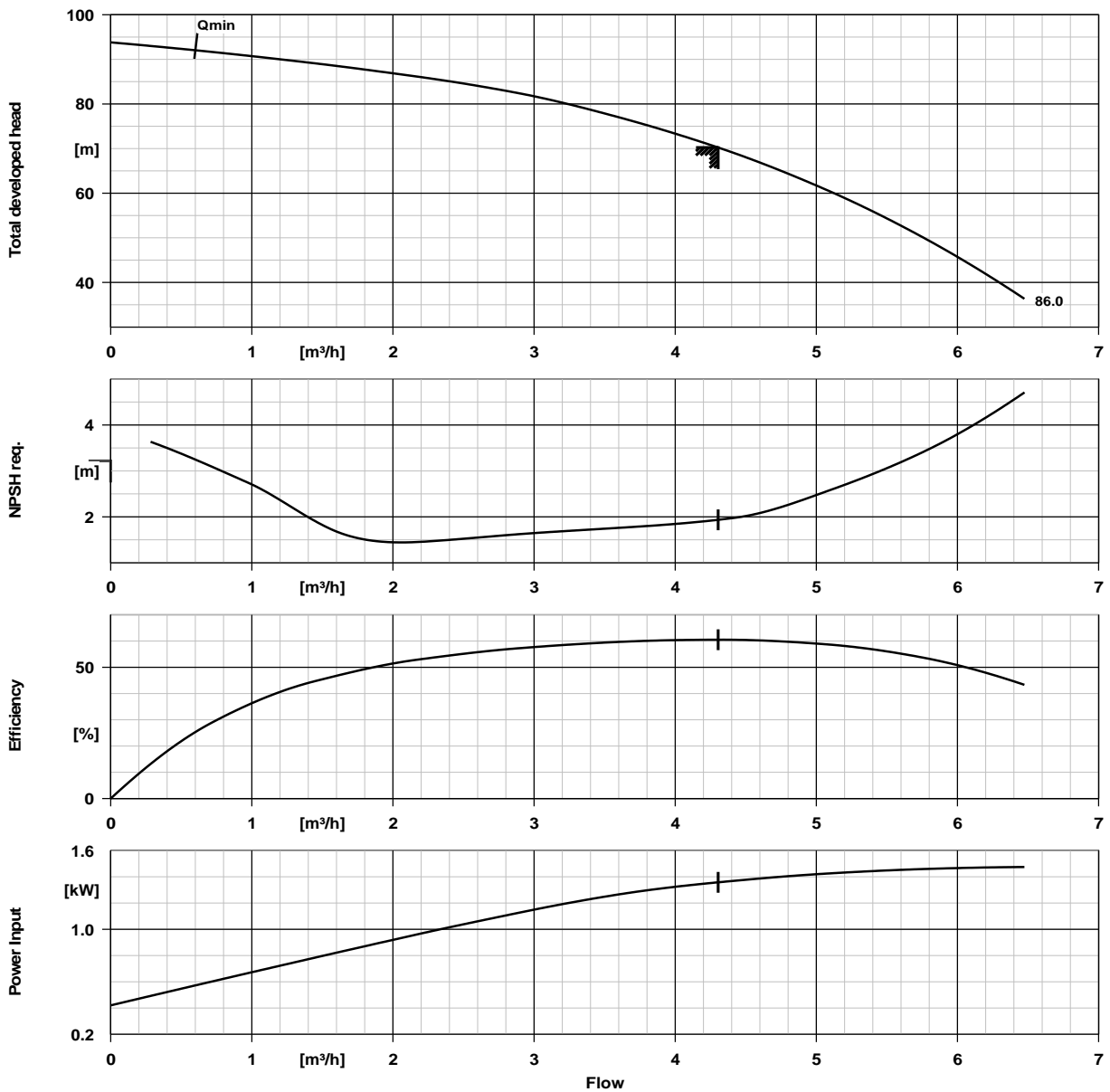
general criteria for a water analysis: pH-value ≥ 7 ; chloride content (Cl) ≤ 250 mg/kg. chlorine (Cl₂) ≤ 0.6 mg/kg.

Pump shroud (10-6)	Stainless steel 1.4301
Pump casing (101)	Grey cast iron JL 1040
Stage casing (108)	Stainless steel 1.4301
Cover (160)	Stainless steel 1.4301
Diffuser (171)	Stainless Steel 1.4308
Diffuser (171)	Stainless steel 1.4301
Shaft (210)	Chrome steel 1.4057+QT800

Impeller (230)	Stainless steel 1.4301
Motor stool (341)	Grey cast iron JL 1040
O-Ring (412)	Fluor caoutchouc FPM
Seal cover (471)	Stainless Steel 1.4308
Bearing sleeve (529)	Tungsten Carbide
Flange (723)	Grey cast iron JL 1040
Screwed plug (903)	Stainless steel 1.4301
Tie bolt (905)	Chrome steel 1.4057+QT800
Nut (920)	Stainless steel 1.4301

Stainless steel 1.4301
Grey cast iron JL 1040
Fluor caoutchouc FPM
Stainless Steel 1.4308
Tungsten Carbide
Grey cast iron JL 1040
Stainless steel 1.4301
Chrome steel 1.4057+QT800
Stainless steel 1.4301

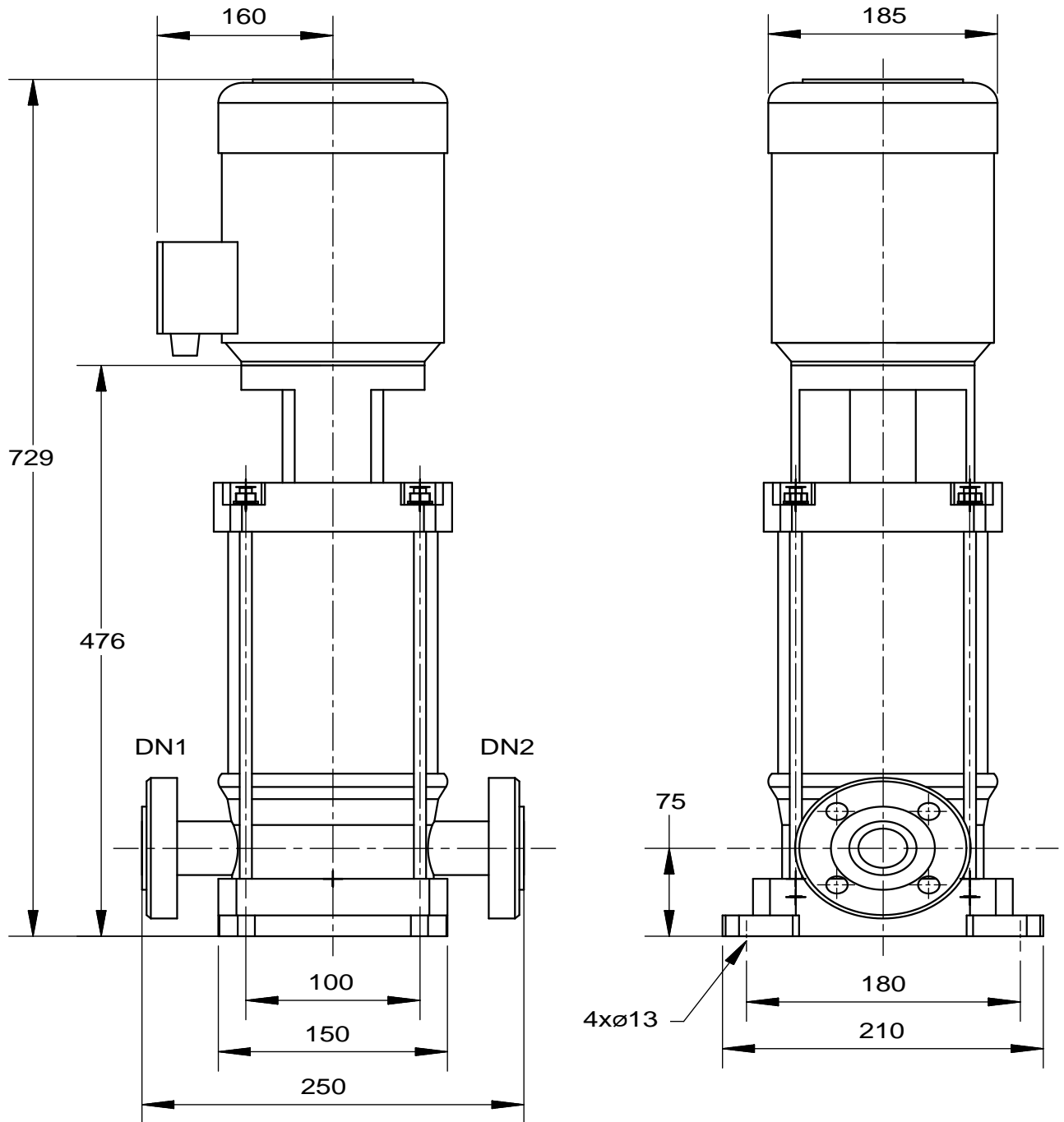
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Curve data

Speed of rotation	2913 rpm	Power absorbed	1.36 kW
Fluid density	998 kg/m^3	NPSH required	1.93 m
Viscosity	1.00 mm^2/s	Curve number	K95000400
Flow rate	4.30 m^3/h	Effective impeller diameter	86.0 mm
Total developed head	70.24 m	Acceptance standard	None; tolerances to ISO 9906 class 2, annex A
Efficiency	60.5 %		

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Drawing is not to scale

Dimensions in mm

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Motor

Motor manufacturer	KSB (DM)
Motor size	90S
Motor power	1.50 kW
Speed of rotation	2915 rpm
Position of terminal box	90° (right)
Thrust bearing housing	No

Connections

Suction nominal size DN1	DN 25 / EN 1092-2
Discharge nominal size DN2	DN 25 / EN 1092-2
Nominal pressure suct.	PN 25
Rated pressure disch.	PN 25

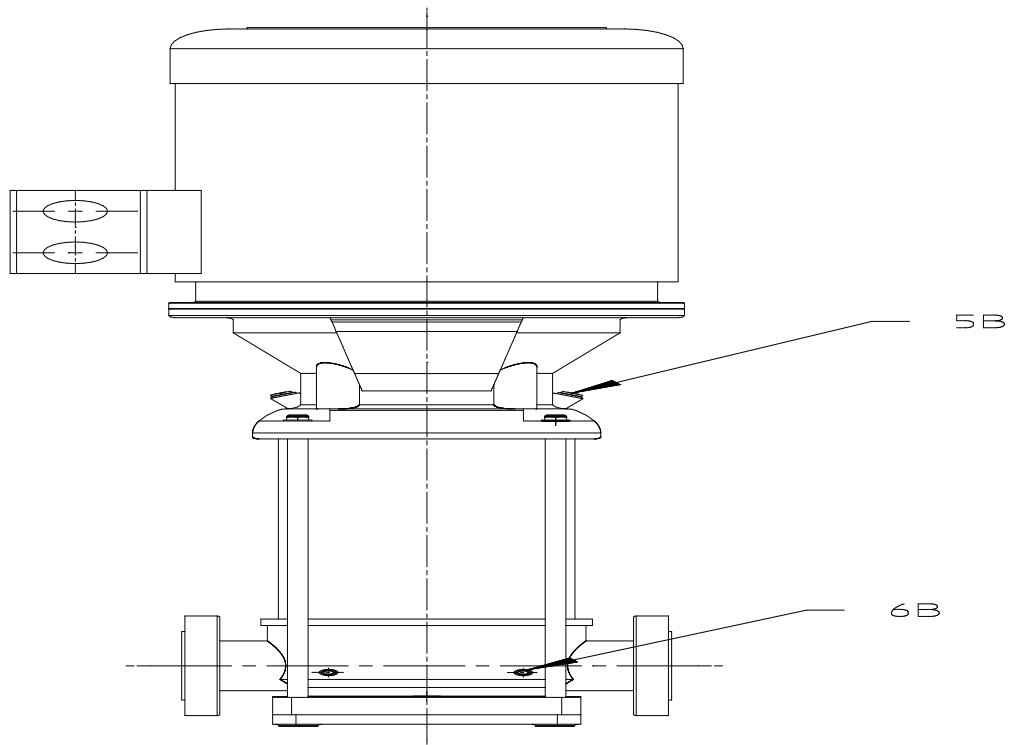
Weight net

Pump	21 kg
Motor	17 kg
Total	38 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

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Connections

6B Pumped liquid drain
5B venting

G 1/4
G 3/8

Drilled and plugged.
Closed with venting plug