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VAB 050-040-260 1502KB T82MECCS OA

Vitacast Bloc - Hygienic centrifugal pump

Operating data

Requested flow rate		Actual flow rate	25.00 m ³ /h
Requested developed head		Actual developed head	80.01 m
Pumped medium	Water Clean water Not containing chemical and mechanical substances which affect the materials	Efficiency	42.7 %
Ambient air temperature	20.0 °C	Power absorbed	12.72 kW
Fluid temperature	20.0 °C	Pump speed of rotation	2954 rpm
Fluid density	998 kg/m ³	NPSH required	1.86 m
Fluid viscosity	1.00 mm ² /s	Permissible operating pressure	10.00 bar.g
Suction pressure max.	0.00 bar.g	Discharge press.	7.83 bar.g
Mass flow rate	6.93 kg/s	Min. allow. mass flow for continuous stable operation	0.82 kg/s
Max. power on curve	13.98 kW	Shutoff head	92.02 m
Min. allow. flow for continuous stable operation	2.97 m ³ /h	Max. allow. mass flow	9.09 kg/s
		Design	Single system 1 x 100 %

Design



The pump conforms to the regulations of EGV 1935/2004.

Design	Close-coupled	Direction of rotation	Clockwise
Orientation	Horizontal	Spring Shrouding	open
Suction nominal dia.	DN 50	Material code	BQ1EGG
Suction nominal pressure	PN 10	Shaft seal code	T82
Suction position	axial	Sealing plan	B Dead-end
Connection standard	DIN 11851 (Milk thread)	Seal chamber design	Standard seal chamber
Discharge nominal dia.	DN 40	Impeller diameter	244.0 mm
Discharge nominal pressure	PN 10	Free passage size	5.0 mm
Discharge position	top (0°/360°)	Direction of rotation from drive	Clockwise
Discharge flange drilled according to standard	DIN 11851 (Milk thread)	Silicon free pump assembly	Yes
Counter Flange	No	Bearing bracket construction	Close-coupled
Shaft seal	Single acting mechanical seal	Bearing type	Anti-friction bearings
Manufacturer	Roten	Lubrication type	Grease
Type	Uniten 5	Color	White aluminium (similar RAL 9006)
Mechanical Seal Form	Unbalanced	Support or motor foot	4 point ball feet
		Motor shroud	With
		Surface finish wetted parts	3.2 µm

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Driver, accessories

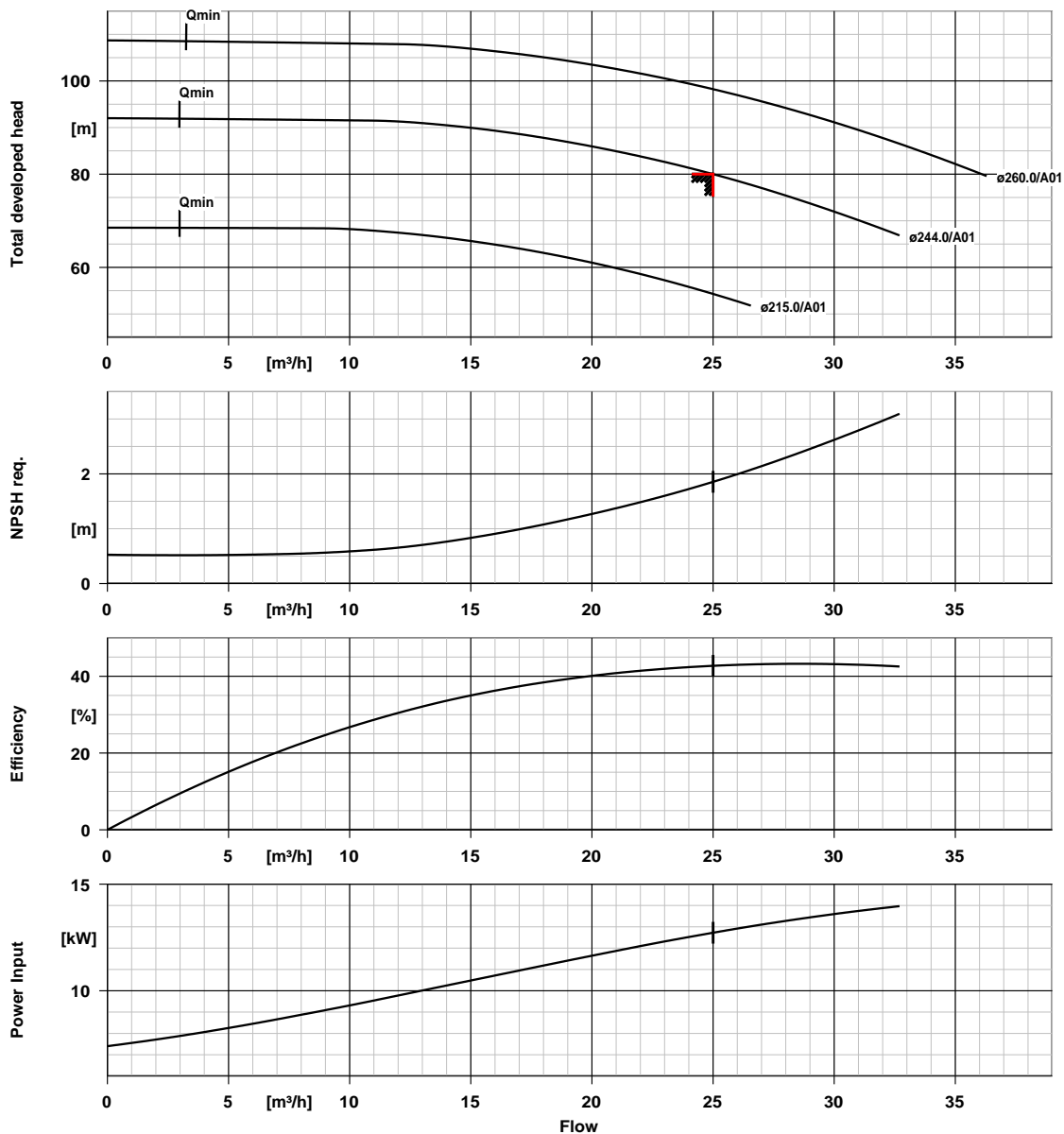
Driver type	Electric motor	Motor enclosure	IP55
Drive standard mech.	IEC	Cos phi at 4/4 load	0.78
Model (make)	KSB-Motor	Motor efficiency at 4/4 load	91.9 %
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Temperature sensor	3 PTC resistors
Motor const. type	V15	Terminal box position	0°/360° (top)
Motor size	160M	Motor winding	Viewed from the drive
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Number of poles	400 / 690 V
Frequency	50 Hz	Connection mode	2
Rated voltage	400 V	Motor cooling method	Delta
Rated power P2	15.00 kW	Motor material	Surface cooling
Available reserve	17.90 %	Frequency inverter operation allowed	Aluminium
Rated current	29.4 A	Motor noise pressure level	FI allowed
Starting current ratio	9.2		74 dBa
Insulation class	F to IEC 34-1	Motor data can vary from type plate information. Motor data describes KSB's choice functional specification and is used for pump selection.	

Materials C

Circular casing (103)	Stainless steel 1.4409	Taper locking ring (515)	Stainless steel 1.4301
Discharge cover (163)	Stainless steel 1.4409	Cover plate (68-3)	Stainless steel 1.4301
Shaft (210)	CrNiMo steel 1.4404	Motor shroud (683)	Stainless steel 1.4301
Impeller (230)	Stainless steel 1.4409	Impeller nut (922)	CrNiMo steel 1.4404
O-Ring (412)	EPDM 70 FDA		

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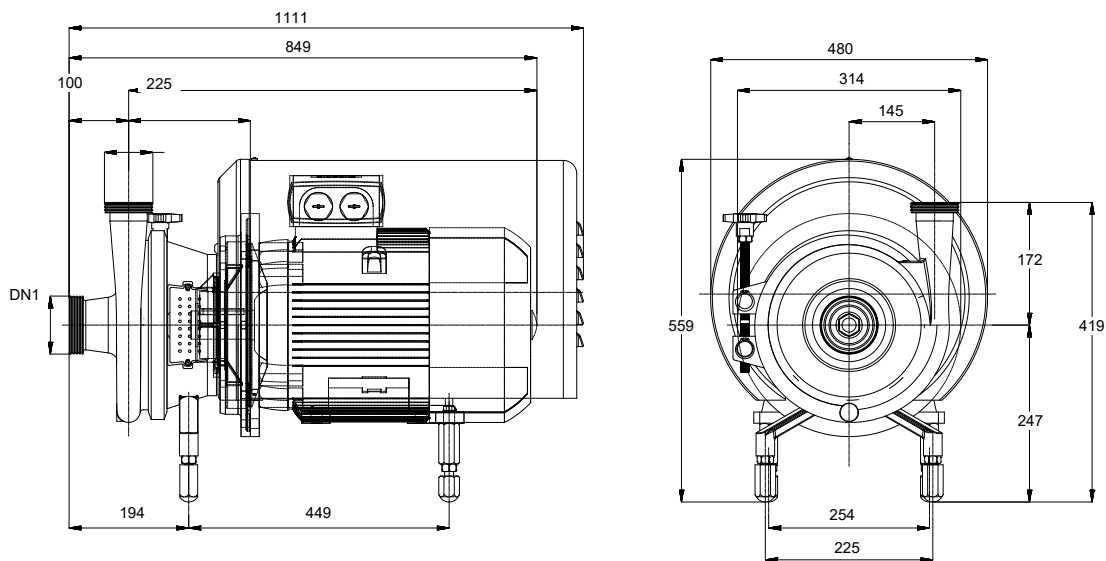
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Curve data

Speed of rotation	2954 rpm	Requested developed head	80.00 m
Fluid density	998 kg/m ³	Efficiency	42.7 %
Viscosity	1.00 mm ² /s	Power absorbed	12.72 kW
Flow rate	25.00 m ³ /h	NPSH required	1.86 m
Requested flow rate	25.00 m ³ /h	Curve number	VA-40260-2900
Total developed head	80.01 m	Effective impeller diameter	244.0 mm

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Drawing is not to scale

Dimensions in mm

Motor

Motor manufacturer	KSB-Motor
Motor size	160M
Motor power	15.00 kW
Number of poles	2
Speed of rotation	2946 rpm
Position of terminal box	0°/360° (top)
	Viewed from the drive

Connections

Suction nominal size DN1	DN 50 / DIN 11851 (Milk thread)
Discharge nominal size DN2	DN 40 / DIN 11851 (Milk thread)
Nominal pressure suct.	PN 10
Rated pressure disch.	PN 10

Weight net

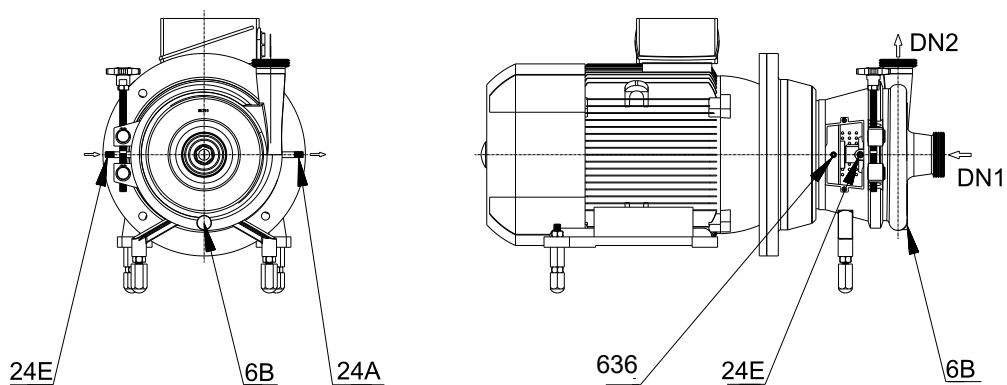
Pump	68 kg
Motor	88 kg
Total	156 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

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Connections

6B Pumped liquid drain	G 3/8	Not executed
24E/24A Quench liquid in/out	G 1/4	Not executed
10E/10A Sealing liquid in/out	G 1/4	Not executed
636 Lubrication for bearing		Grease nipple