

ETB 100-080-160 CCSAV10D202202 B

Low-pressure centrifugal pump Etabloc

Operating data

Requested flow rate	195.00 m ³ /h	Actual flow rate	195.06 m ³ /h
Requested developed head	29.00 m	Actual developed head	29.02 m
Pumped medium	Water, contaminated water Slightly contaminated water	Efficiency	81.7 %
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	MEI (Minimum Efficiency Index)	≥ 0.70
Max. ambient air temperature	20.0 °C	Power absorbed	18.55 kW
Min. ambient air temperature	20.0 °C	Pump speed of rotation	2958 rpm
Fluid temperature	60.0 °C	NPSH required	7.21 m
		Permissible operating pressure	16.00 bar.g
Fluid density	983 kg/m ³	Discharge press.	2.80 bar.g
Fluid viscosity	0.48 mm ² /s	Shutoff head	36.93 m
Suction pressure max.	0.00 bar.g	Min. allow. flow for continuous stable operation	33.28 m ³ /h
Mass flow rate	53.26 kg/s	Min. allow. mass flow for continuous stable operation	9.09 kg/s
Max. power on curve	20.10 kW	Design	Single system 1 x 100 % tolerances to ISO 9906 class 3B
Max. allow. mass flow	74.67 kg/s		

Design

Pump standard	EN 733	Shaft seal type	1
Design	Close-coupled	Material code	Q1Q1X4GG
Orientation	Horizontal	Shaft seal code	10
Suction nominal dia.	DN 100	Sealing plan	Single-acting mechanical seal with vented chamber (A-type casing cover, taper bore)
Suction nominal pressure	PN 16	Seal chamber design	Conical seal chamber (A-type cover)
Suction position	axial	Contact guard	With
Suction flange drilled according to standard	EN1092-1	Impeller diameter	167.0 mm
Discharge nominal dia.	DN 80	Free passage size	15.1 mm
Discharge nominal pressure	PN 16	Silicon free pump assembly	Yes
Discharge position	top (0°/360°)	Bearing bracket construction	Close-coupled
Discharge flange drilled according to standard	EN1092-1	Bearing bracket size	25
Surface type	Raised face (form B to EN 1092)	Bearing type	Anti-friction bearings
Shaft seal	Single acting mechanical seal	Lubrication type	Grease
Shaft seal manufacturer	KSB	Color	Ultramarine blue (RAL 5002) KSB-blue

ETB 100-080-160 CCSAV10D202202 B

Low-pressure centrifugal pump Etabloc

Driver, accessories

Driver type	Electric motor	Motor efficiency at 4/4 load	92.7 %
Drive standard mech.	IEC	Temperature sensor	3 PTC resistors
Model (make)	KSB-Motor	Terminal box position	0°/360° (top)
Drive supplied by	Standard motor supplied by KSB - mounted by KSB		Viewed towards the suction nozzle
Motor const. type	V15	Motor winding	400 / 690 V
Motor size	180M	Number of poles	2
Efficiency class	Efficiency class IE3 acc. to IEC60034-30-1	Connection mode	Delta
Motor speed	2958 rpm	Motor cooling method	Surface cooling
Frequency	50 Hz	Motor material	Aluminium
Rated voltage	400 V	Frequency inverter operation allowed	FI allowed
Rated power P2	22.00 kW	Motor noise pressure level	77 dBa
Available reserve	18.63 %	Motor data can vary from type plate information. Motor data describes KSB´s choice functional specification and is used for pump selection.	
Rated current	41.2 A	CE-approval	Yes
Starting current ratio	9	Condensat drain motor	Yes
Insulation class	F to IEC 34-1	Ambient temperature	40
Motor enclosure	IP55	Max. absolute humidity	30
Cos phi at 4/4 load	0.87	Temp. sensor mtr. bearing	Without

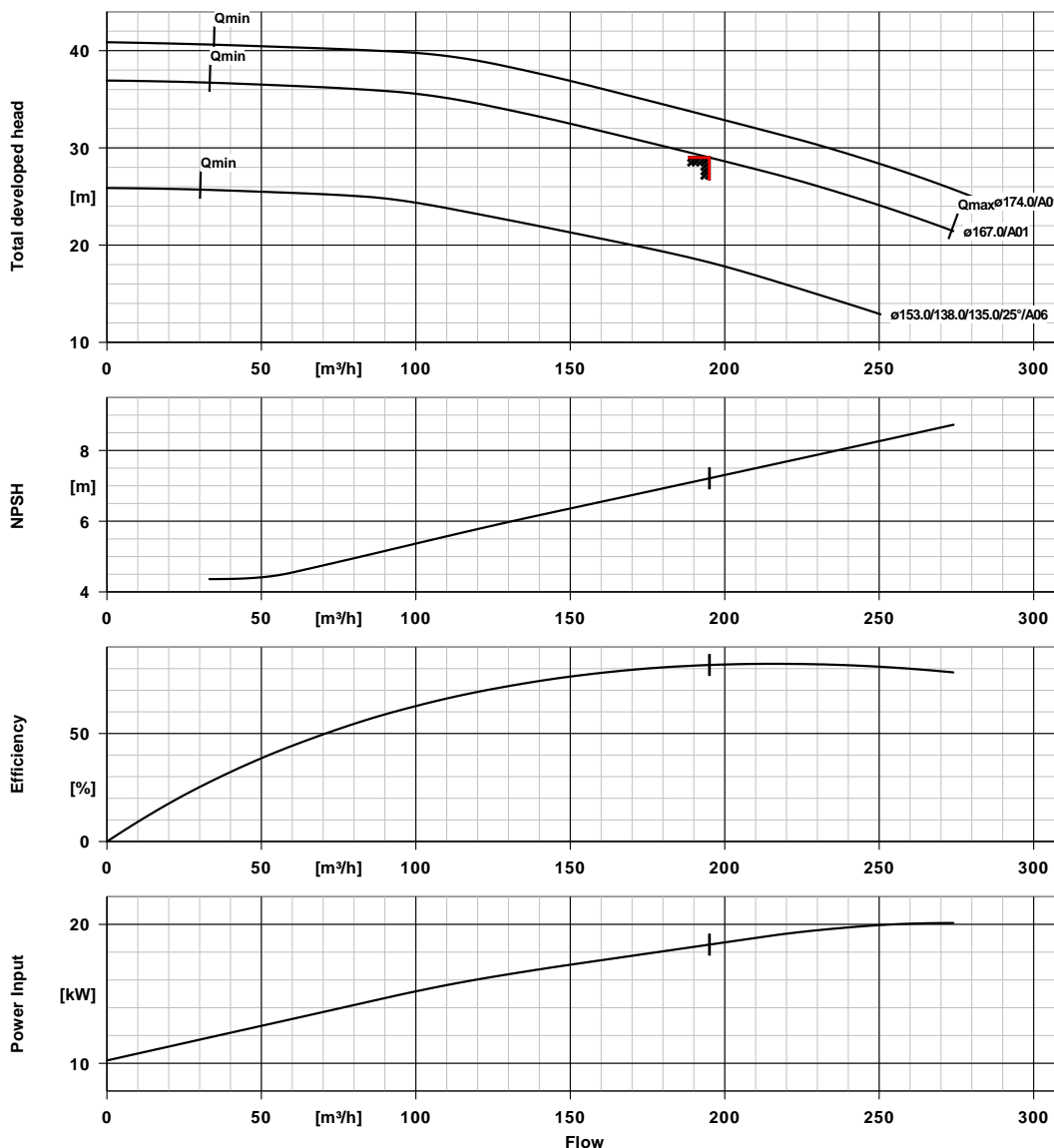
Materials C

Volute casing (102)	Stainless steel 1.4408 / A743 GR CF8M	Casing wear ring (502.1)	Without
Casing cover (161)	Stainless steel 1.4408 / A743 GR CF8M	Casing wear ring (502.2)	Without
Shaft (210)	Stainless steel 1.4571	Shaft sleeve (523)	CrNiMo steel
Impeller (230)	Stainless steel 1.4408 / A743 GR CF8M	Stud (902)	Stainless steel A4-70 / A 193 Gr B8M CL2
Motor stool (341)	Grey cast iron EN-GJL-250/A48CL35B	Nut (920.01)	CrNiMo steel A4 / AISI 316
Flat gasket (400)	DPAF seal plate asbestos free	Nut (920.95)	CrNiMo steel A4 / AISI 316

Performance curve



ETB 100-080-160 CCSAV10D202202 B Low-pressure centrifugal pump Etabloc



Curve data

Speed of rotation	2958 rpm	Efficiency	81.7 %
Fluid density	983 kg/m ³	MEI (Minimum Efficiency Index)	≥ 0.70
Viscosity	0.48 mm ² /s	Power absorbed	18.55 kW
Flow rate	195.06 m ³ /h	NPSH required	7.21 m
Requested flow rate	195.00 m ³ /h	Curve number	K1311.452/40
Total developed head	29.02 m	Effective impeller diameter	167.0 mm
Requested developed head	29.00 m		

Installation plan



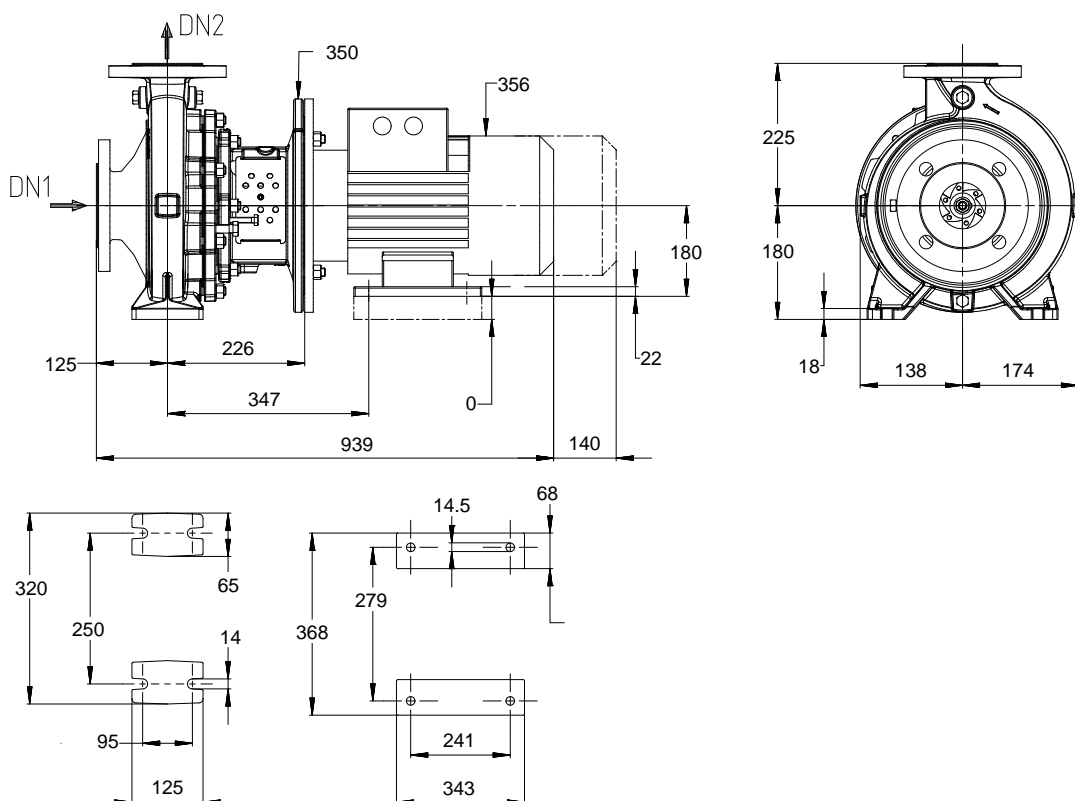
Customer item no.:

Doc. no.: ETB80-160-CC unit

Quantity: 1

ETB 100-080-160 CCSAV10D202202 B

Low-pressure centrifugal pump Etabloc



Drawing is not to scale

Dimensions in mm

Motor

Motor manufacturer	KSB-Motor
Motor size	180M
Motor power	22.00 kW
Number of poles	2
Speed of rotation	2958 rpm
Position of terminal box	0°/360° (top) Viewed towards the suction nozzle

Connections

Suction nominal size DN1	DN 100 / EN1092-1
Discharge nominal size DN2	DN 80 / EN1092-1
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

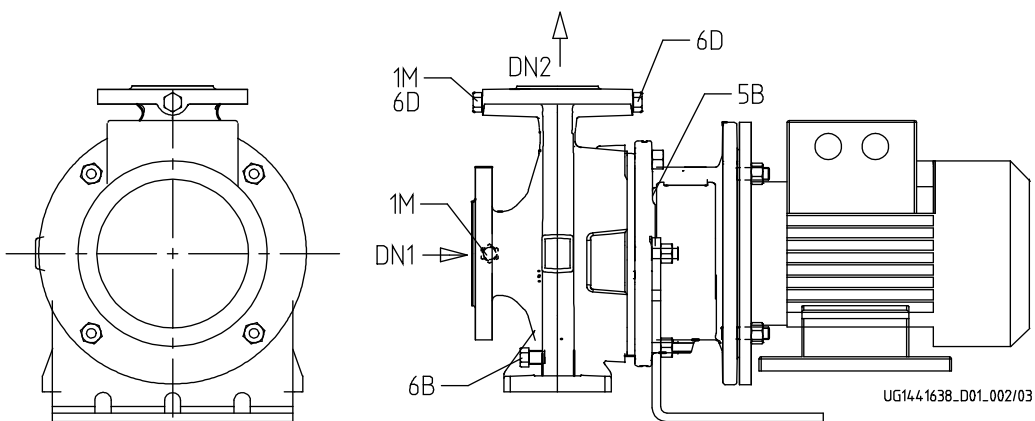
Weight net

Pump	52 kg
Motor	164 kg
Total	216 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

ETB 100-080-160 CCSAV10D202202 B
 Low-pressure centrifugal pump Etabloc



Connections

Pump casing variant		XX16
1M.2 Pressure gauge connection		Not executed
1M.1 / 6D Pressure gauge or filling/venting connection	G 3/8	Drilled and plugged.
6B Pumped liquid drain	G 3/8	Drilled and plugged.
6D Pumped medium - filling / venting		Not executed
11E Flushing liquid inlet		Not executed
5B venting		Drilled and plugged.