Technical Datasheet

ETB 100-080-200-GGXBV11WX3DN4HHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	100 m³/h	Vapour pressure determined	0.02337 bar.a
Target head	14 m	Required inlet pressure	-0.3 bar
Fluid	Water	Specified ambient temperature	20 °C
Fluid variant	Clean water	Installation altitude above sea level	1,000 m
Specified fluid temperature	20 °C		
Density Fluid handled	998 kg/m³		
Kinematic viscosity Fluid handled	1 mm²/s		

Operating conditions (performance)

Flow rate	99.93 m³/h	Maximum power input at duty point	4.476 kW
Minimum permissible flow rate	14.95 m³/h	Maximum power input / curve	5.129 kW
Head	13.98 m	Pump speed	1,482 1/min
Shut-off head	16.48 m	Discharge pressure-max.	1.613 bar
Efficiency Pump	84.85 %		
NPSH required	1.72 m		

Design data pump

Scope of supply Pump supplied by KSB	Pump	Mains frequency	50 Hz
		Minimum efficiency index MEI	0.7
Pump standard	EN 733	Minimum permissible fluid temperature	0 °C
Shaft axis position	Horizontal		
Pump design	Close-coupled	Maximum permissible fluid temperature	60 °C
Pump system design	Single-pump system		
Specification of wetted parts	Manufactured without paint wetting impairment substances	Quantity Stages, single-entry	1
		Casing wear ring design suction-side	Flat
Pump direction of rotation, viewed from casing side	Counterclockwise		
		Casing wear ring design discharge-side	Flat
Impeller diameter D2	212 mm		
Impeller	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	15.2 mm		
Nut lock for Impeller	No	Bearing bracket size / shaft unit	35
Swirl break	No	Pump bearing type, non-drive end	Anti-friction bearing
		Pump bearing type, drive end	Anti-friction bearing
		Pump directive	CE

* Special design

Nozzle connections pump

Nominal diameter Suction nozzle	DN 100	Nominal diameter Discharge nozzle	DN 80
Nominal pressure Suction nozzle	PN 16	Nominal pressure Discharge nozzle	PN 16
Suction nozzle position	Axial	Discharge nozzle position	0 deg
Suction nozzle design acc.to	EN1092-2	Discharge nozzle design acc.to	EN1092-2
Suction flange bolt hole pattern as per standard	EN1092-2	Discharge flange bolt hole pattern as per standard	EN1092-2
Flange facing type Inlet	Raised face (B,RF,C)		
Flange facing type Outlet	Raised face (B,RF,C)		

Auxiliary connections pump

6B Fluid Drain	G 3/8 Drilled and plugged	1M Pressure gauge Discharge nozzle	Without Without
6D Fluid Filling and venting	G 3/8 Drilled and plugged	1M Pressure gauge Suction nozzle	Without Without
Connection type 24E Quench liquid inlet	Without Without		
Connection type 5B Venting and drain	G 1/4 Drilled and plugged		

Shaft sealing

Shaft seal type	SMS A-type cover, vented	Shaft seal code	Code 11
Determined pressure Seal chamber	-0.21 bar	Shaft seal manufacturer inboard	KSB's choice
		Mechanical seal type inboard	1
		Material Shaft seal inboard	BQ1EGG-WA

* Special design

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Materials

Material Volute casing (102)	EN-GJL-250/A48 CL 35B	Material Bolts/Screws Hydraulic casing (902.01)	8.8
Material Casing cover (161)	EN-GJL-250/A48 CL 35B	Material Screw plug Hydraulic casing (903.01)	ST
Material Shaft	C45+N	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Impeller (230)	EN-GJL-250/A48 CL 35B	Material Nut Impeller fastening (920.95)	(ST)
Material Casing wear ring suction-side (502.01)	JL/LAMELLAR GRAPHITE CAST IRON	Material Key	C45+C/A311 GR 1045 CLASS A
Material Casing wear ring discharge-side (502.02)	JL/LAMELLAR GRAPHITE CAST IRON		
Material Shaft protecting sleeve (523)	(CRNIMO ST INT)		
Material Bearing bracket	WITHOUT		
Material Static seal Discharge cover	DPAF DW001		
Material Drive lantern	EN-GJL-250/A48 CL 35B		
Material Support foot	WITHOUT		

Driver

Electric motor	Yes	Rated speed Motor	1,470 1/min
Drive concept	With electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	7.5 kW
Drive standard electric	IEC	Motor power reserve determined	67.6 %
Motor bearing, insulated	No		
Motor manufacturer	Siemens	Motor winding	220 / 380 *
Customer supply Drive	No	Rated frequency Motor	50Hz
Motor construction type	IM V15 (IM2011) IEC 60034-7	Motor starting method	Delta
Motor size	132M	Rated current Motor	14.3 A
Efficiency class	IE3 (Premium)	Starting current ratio Ia/In	7.4
Material motor housing	AL	Motor cos phi at nominal speed	0.84
Enclosure Motor	IP55 (TEFC)		
Thermal class	155 (F) nach IEC 60085	Efficiency Motor	89.1 %
Temperature sensor motor	3 PTC thermistors	Directive Drive	CE
Terminal box position of motor (looking at the motor shaft)	270 Grad		
Operation on a frequency inverter permitted	Yes (acc to motor manufact)		
Sound pressure level Motor	64 dBa		
Type series Motor manufacturer	1LE1		

* Special design

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Variant Driver

Variant K10 Electric motor	8.2 - IEC MOTOR IN SPECIAL DESIGN Siemens special motor with 220VD/380VY; position of the terminal box: left (viewed onto the motor shaft)

Installation parts / Accessories

Baseplate

Material Installation part Pump (S185)

Coating

Aggregate

Surface preparation	Free from dirt, grease, rust
Properties Primer coat	Hydro dip primer, water-dilutable
Thickness Primer coat	60 µm
Properties Top coat	Acrylate dispersion water-thin
Thickness Top coat	40 µm
Colour Top coat	RAL5002 Ultramarine Blue

Packaging

Suitable for transport	Truck transport
Suitable for storage	Indoor storage
Packaging category	KSB's choice(A0)

Nameplates

Duplicate name plate	No
Material Installation part Pump	(S185)

* Special design

Performance Curve (Pump)

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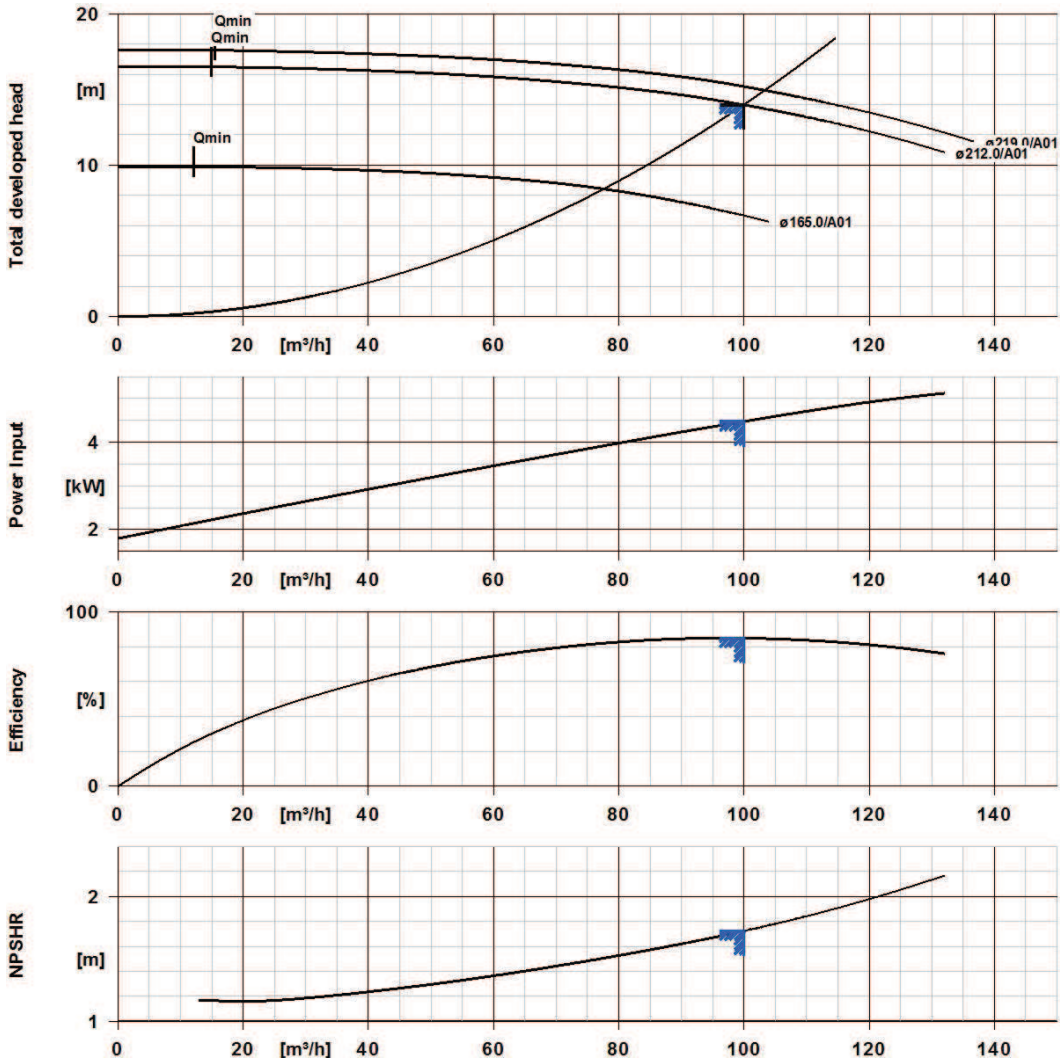

Curve Data

Pump speed	1,482 1/min	Efficiency Pump	84.85 %
Density Fluid handled	998 kg/m³	Minimum efficiency index MEI	0.7
Kinematic viscosity Fluid handled	1 mm²/s	Maximum power input at duty point	4.48 kW
Flow rate	99.93 m³/h	NPSH required	1.72 m
Head	13.98 m	Hydraulic impeller diameter	211.9 mm

Installation plan

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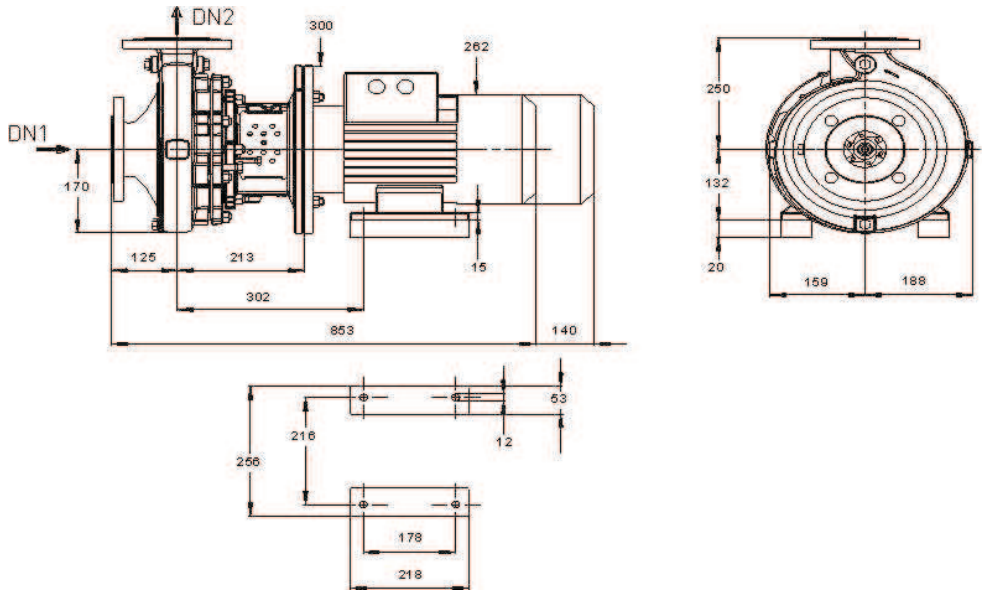

Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	Siemens
Motor size	132M
Rated power Motor	7.5 kW
Number of motor poles	4
Rated speed Motor	1,470 1/min
Terminal box position of motor (looking at the motor shaft)	270 Grad

Connections

Nominal diameter Suction nozzle	DN 100
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 80
Discharge flange bolt hole pattern as per standard	EN1092-2
Nominal pressure Suction nozzle	PN 16
Nominal pressure Discharge nozzle	PN 16

Net weight

Total weight Pump	58.4 kg
Total weight Drive	64 kg
Total weight Pump set	122 kg

Connect pipelines stress-free

Plan for additional connections see extra drawing

Dimensional tolerances for shaft axis height: DIN 747
Dimensions without tolerances, middle tolerances to: ISO 2768-m
Connection dimensions for pumps: EN735
Dimensions without tolerances - welded parts: ISO 13920-B
Dimensions without tolerances - gray cast iron parts: ISO 8062-CT9