

ETB 100-080-200-GGSBV11WS3DN4HHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate		Vapour pressure determined	0.02337 bar.a
Target head		Minimum 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	max power @ rated impeller	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 voltage	400 V
Pump standard	EN 733	Mains frequency	50 Hz
Shaft axis position	Horizontal	Minimum efficiency index MEI	0.7
Pump design	Close-coupled	Minimum permissible fluid temperature	0 °C
Pump system design	Single-pump system	Maximum permissible fluid temperature	60 °C
Specification of wetted parts	Silicone-free	Quantity Stages, single-entry	1
Pump direction of rotation, viewed from casing side	Counterclockwise	Casing wear ring design suction-side	Flat
Impeller diameter D2	212 mm	Casing wear ring design discharge-side	Flat
Impeller	Closed rad multi-channel imp	Installation chamber Casing cover	Conical (A-type cover)
Free passage	15.2 mm	Bearing bracket size / shaft unit	35
Nut lock for diesel engine	No	Pump bearing type, non-drive end	Anti-friction bearing
Swirl break	No	Pump bearing type, drive end	Anti-friction bearing
		Directive Pump/Valve	CE

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Nozzle connections pump

Nominal diameter Suction nozzle	DN 100
Nominal pressure Suction nozzle	PN 16
Suction nozzle position	Axial
Connection standard Inlet	EN1092-2
Suction flange bolt hole pattern as per standard	EN1092-2

Nominal diameter Discharge nozzle	DN 80
Nominal pressure Discharge nozzle	PN 16
Discharge nozzle position	0 deg
Connection standard Outlet	EN1092-2
Discharge flange bolt hole pattern as per standard	EN1092-2

Auxiliary connections pump

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

1M Pressure gauge Discharge nozzle	Without Without
1M Pressure gauge Suction nozzle	Without Without

Shaft sealing

Shaft seal type	SMS A-type cover, vented
Determined pressure Seal chamber	-0.21 bar

Shaft seal code	Code 11
Shaft seal manufacturer inboard	KSB's choice
Mechanical seal type inboard	1
Material Shaft seal inboard	BQ1EGG-WA

Materials

Material Volute casing (102)	EN-GJL-250/A48 CL 35B
Material Casing cover (161)	EN-GJL-250/A48 CL 35B
Material Shaft	C45+N
Material Impeller (230)	EN-GJL-250/A48 CL 35B
Material Casing wear ring suction-side (502.01)	JL/LAMELLAR GRAPHITE CAST IRON
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

Material Bolts/Screws Hydraulic casing (902.01)	8.8
Material Screw plug Hydraulic casing (903.01)	ST
Material Static seal Screw plug Volute casing	A4/AISI 316
Material Nut Impeller fastening (920.95)	(ST)
Material Key	C45+C/A311 GR 1045 CLASS A

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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	Rated voltage Motor	400 V
Motor manufacturer	Siemens	Motor winding	400 / 690 V
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)	Efficiency Motor	89.9 %
Thermal class	155 (F) nach IEC 60085	Directive Drive	CE
Temperature sensor motor	3 PTC thermistors		
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		

Installation parts / Accessories

Coating

Aggregate

Surface preparation
Properties Primer coat
Thickness Primer coat
Properties Top coat
Thickness Top coat
Colour Top coat

Packaging

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

Baseplate

Material Installation part Pump (S185)

Free from dirt, grease, rust
Hydro dip primer, water-dilutable
60 µm
Acrylate dispersion water-thin
40 µm
RAL5002 Ultramarine Blue

Nameplates

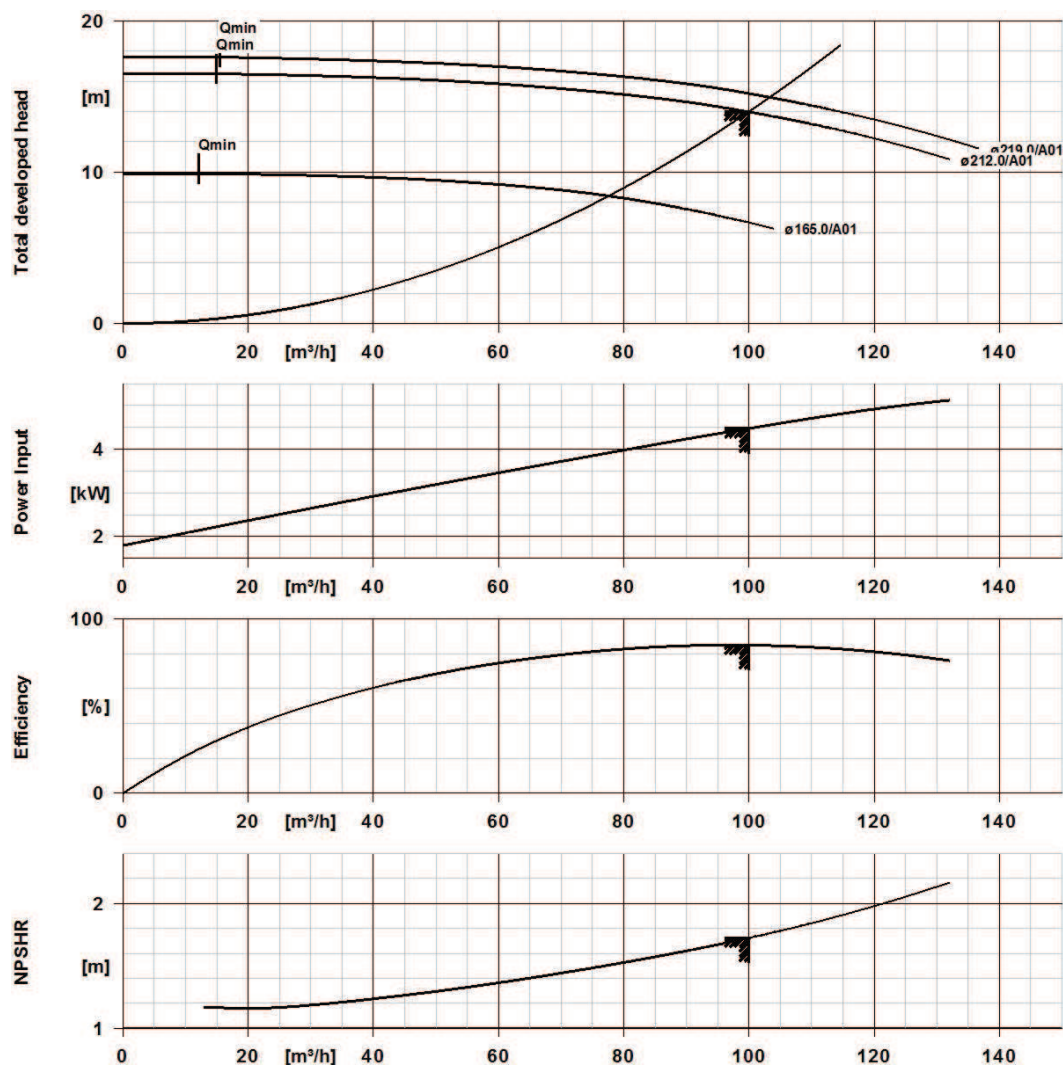
Duplicate name plate	No
Material Installation part Pump (S185)	

Performance Curve (Pump)



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Curve Data

Pump speed	1,482 1/min	Efficiency Pump	84.85 %
Density Fluid handled	998 kg/m^3	Minimum efficiency index MEI	0.7
Kinematic viscosity Fluid handled	1 mm^2/s	Maximum power input at duty point	4.48 kW
Flow rate	99.93 m^3/h	NPSH required	1.72 m
Head	13.98 m	Hydraulic impeller diameter	211.9 mm

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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

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

Plan for additional connections see extra drawing