

ETB 150-125-200-GBSBV11WS3DN4HHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	150 m³/h	Vapour pressure determined	0.02337 bar.a
Target head	11.5 m	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	149.94 m³/h	Maximum power input at duty point	6.48 kW
Minimum permissible flow rate	34.27 m³/h	max power @ rated impeller	7.554 kW
Head	11.49 m	Pump speed	1,470 1/min
Shut-off head	12.72 m	Discharge pressure-max.	1.245 bar
Efficiency Pump	72.31 %		
NPSH required	2.96 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	197 mm	Casing wear ring design discharge-side	Flat
Impeller	Closed rad multi-channel imp	Installation chamber Casing cover	Conical (A-type cover)
Free passage	21.1 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 150	Nominal diameter Discharge nozzle	DN 125
Nominal pressure Suction nozzle	PN 16	Nominal pressure Discharge nozzle	PN 16
Suction nozzle position	Axial	Discharge nozzle position	0 deg
Connection standard Inlet	EN1092-2	Connection standard Outlet	EN1092-2
Suction flange bolt hole pattern as per standard	EN1092-2	Discharge flange bolt hole pattern as per standard	EN1092-2

Auxiliary connections pump

6B Fluid Drain	G 1/2 Drilled and plugged	1M Pressure gauge Discharge nozzle	Without Without
6D Fluid Filling and venting	G 1/2 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	-0.23 bar	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 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)	CC480K DW	Material Nut Impeller fastening (920.95)	(CRNIMO ST INT)
Material Casing wear ring suction-side (502.01)	JL/LAMELLAR GRAPHITE CAST IRON	Material Key	1.4571+C/A276 TP 316 COND B
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		

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Driver

Electric motor	Yes	Rated speed Motor	1,465 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	15.7 %
Motor bearing, insulated	No	Rated voltage Motor	400 V
Motor manufacturer	KSB's choice	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	15 A
Efficiency class	IE3 (Premium)	Starting current ratio Ia/In	8.9
Material motor housing	AL	Motor cos phi at nominal speed	0.8
Enclosure Motor	IP55 (TEFC)	Efficiency Motor	90.8 %
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)	360 Grad		
Operation on a frequency inverter permitted	Yes (acc to motor manufact)		
Sound pressure level Motor	67 dBa		
Type series Motor manufacturer	K12 (IEC, IE3)		

Installation parts / Accessories

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)

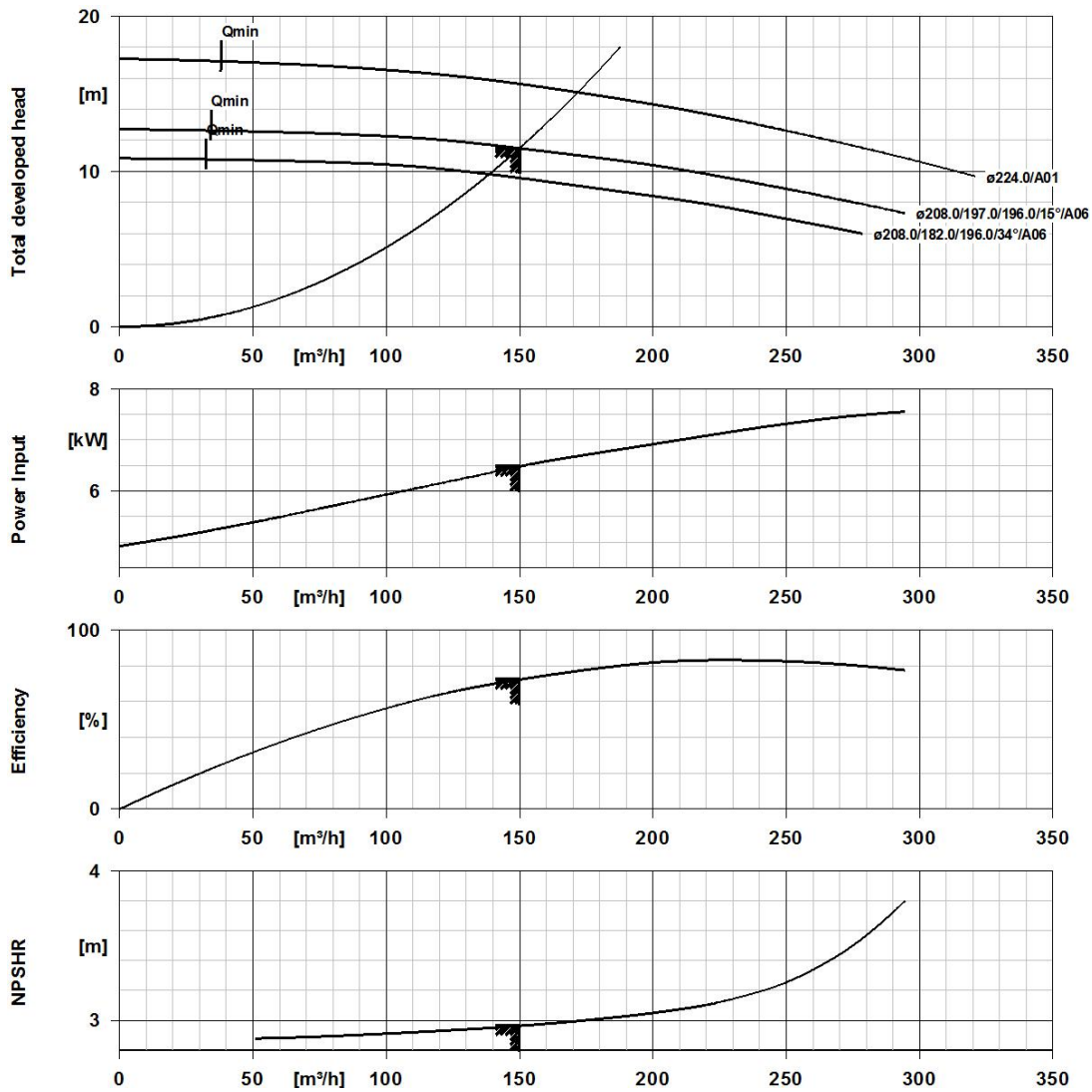
Baseplate

Material Installation part Pump (S185)

Nameplates

Duplicate name plate	No
Material Installation part Pump	(S185)

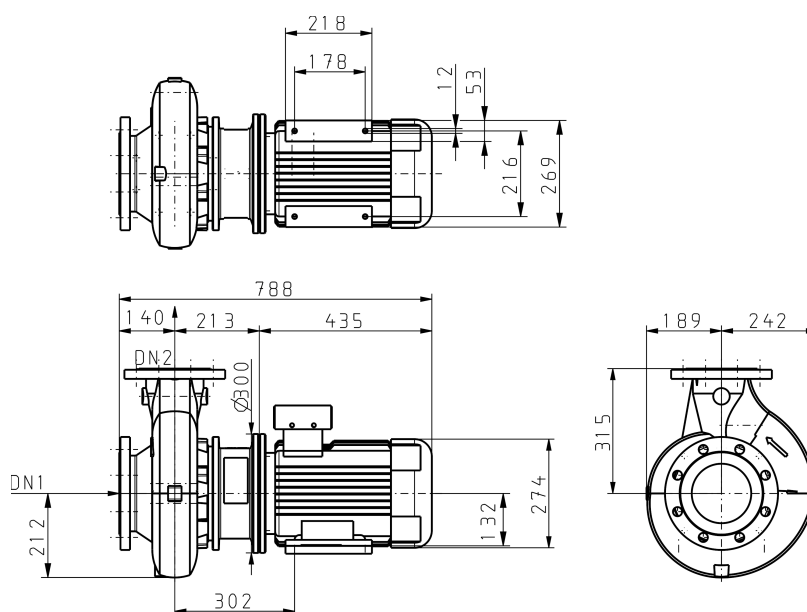
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Curve Data

Pump speed	1,470 1/min	Efficiency Pump	72.31 %
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	6.48 kW
Flow rate	149.94 m³/h	NPSH required	2.96 m
Head	11.49 m	Hydraulic impeller diameter	196.9 mm

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Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	KSB's choice
Motor size	132M
Rated power Motor	7.5 kW
Number of motor poles	4
Rated speed Motor	1,465 1/min
Terminal box position of motor (looking at the motor shaft)	360 Grad

Connections

Nominal diameter Suction nozzle	DN 150
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 125
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	94.2 kg
Total weight Drive	68 kg
Total weight Pump set	162 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