

Etanorm 150-125-250 GB
 ETN 150-125-250-GBHAA11 GSFCM6BHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	150 m ³ /h	Vapour pressure determined	0.02337 bar.a
Target head	7.5 m		
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/m ³		
Kinematic viscosity Fluid handled	1 mm ² /s		

Operating conditions (performance)

Flow rate	150.01 m ³ /h	Maximum power input at duty point	3.637 kW
Minimum permissible flow rate	28.09 m ³ /h	Maximum power input / curve	3.86 kW
Head	7.501 m	Pump speed	977.2 1/min
Shut-off head	9.234 m	Discharge pressure-max.	0.9037 bar
Efficiency Pump	84.12 %		
NPSH required	1.39 m		

Design data pump

Scope of supply Pump supplied by KSB	Pump + coupling	Mains voltage	400 V
Pump standard	EN 733	Mains frequency	50 Hz
Design according to regulation	Drinking water acc to ACS	Minimum permissible fluid temperature	0 °C
Shaft axis position	Horizontal	Maximum permissible fluid temperature	60 °C
Pump design	Long-coupled (basepl-mounted)	Quantity Stages, single-entry	1
Pump system design	Single-pump system	Casing wear ring design suction-side	Flat
Specification of wetted parts	Manufactured without paint wetting impairment substances	Casing wear ring design discharge-side	Flat
Pump direction of rotation, viewed from casing side	Counterclockwise	Installation chamber Casing cover	Conical (A-type cover)
Hydraulic impeller diameter	245 mm	Bearing bracket size / shaft unit	35
Impeller type	Radial, closed, multi-channel	Bearing bracket type	Bearing bracket
Free passage	22.4 mm	Bearing bracket design	Medium
Nut lock for Impeller	No	Pump bearing type, non-drive end	Anti-friction bearing
Swirl break	No	Pump bearing type, drive end	Anti-friction bearing
		Lubrication type	Grease lubrication
		Bearing seal Pump	V-ring
		Pump directive	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
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 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
8B Leakage Drain	G 1/2 Drilled		
Connection type 24E Quench liquid inlet	Without Without		

Shaft sealing

Shaft seal type	SMS A-type cover	Shaft seal code	Code 11
Piping plan	API plan 03	Shaft seal manufacturer inboard	KSB's choice
Determined pressure Seal chamber	-0.25 bar	Mechanical seal type inboard	1
		Material Shaft seal inboard	BQ1EGG-WA

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Materials

Material Volute casing (102)	EN-GJL-250/A48 CL 35B	Material Bolts/Screws	8.8
Material Casing cover (161)	EN-GJL-250/A48 CL 35B	Hydraulic casing (902.01)	
Material Shaft (210)	C45+N	Material Screw plug Hydraulic casing (903.01)	ST
Material Impeller (230)	CC480K DW	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Casing wear ring suction-side (502.01)	JL/LAMELLAR GRAPHITE CAST IRON	Material Nut Impeller fastening (920.95)	(CRNIMO ST INT)
Material Casing wear ring discharge-side (502.02)	JL/LAMELLAR GRAPHITE CAST IRON	Material Key	1.4571+C/A276 TP 316 COND B
Material Shaft protecting sleeve (523)	(CRNIMO ST INT)		
Material Bearing bracket (330)	EN-GJL-250/A48 CL 35B		
Material Static seal Discharge cover	DPAF DW001		

Driver

Electric motor	No	Rated speed Motor	975 1/min
Drive concept	With electric actuator	Number of motor poles	6
Drive standard, mechanical	IEC	Rated power Motor	4 kW
Drive standard electric	IEC		
Motor construction type	IM B3 (IM1001) IEC 60034-7		
Motor size	132M		

Installation parts / Accessories

Coupling

Coupling type	ROFLEX N
Coupling manufacturer	KTR
Nominal size Coupling	95

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

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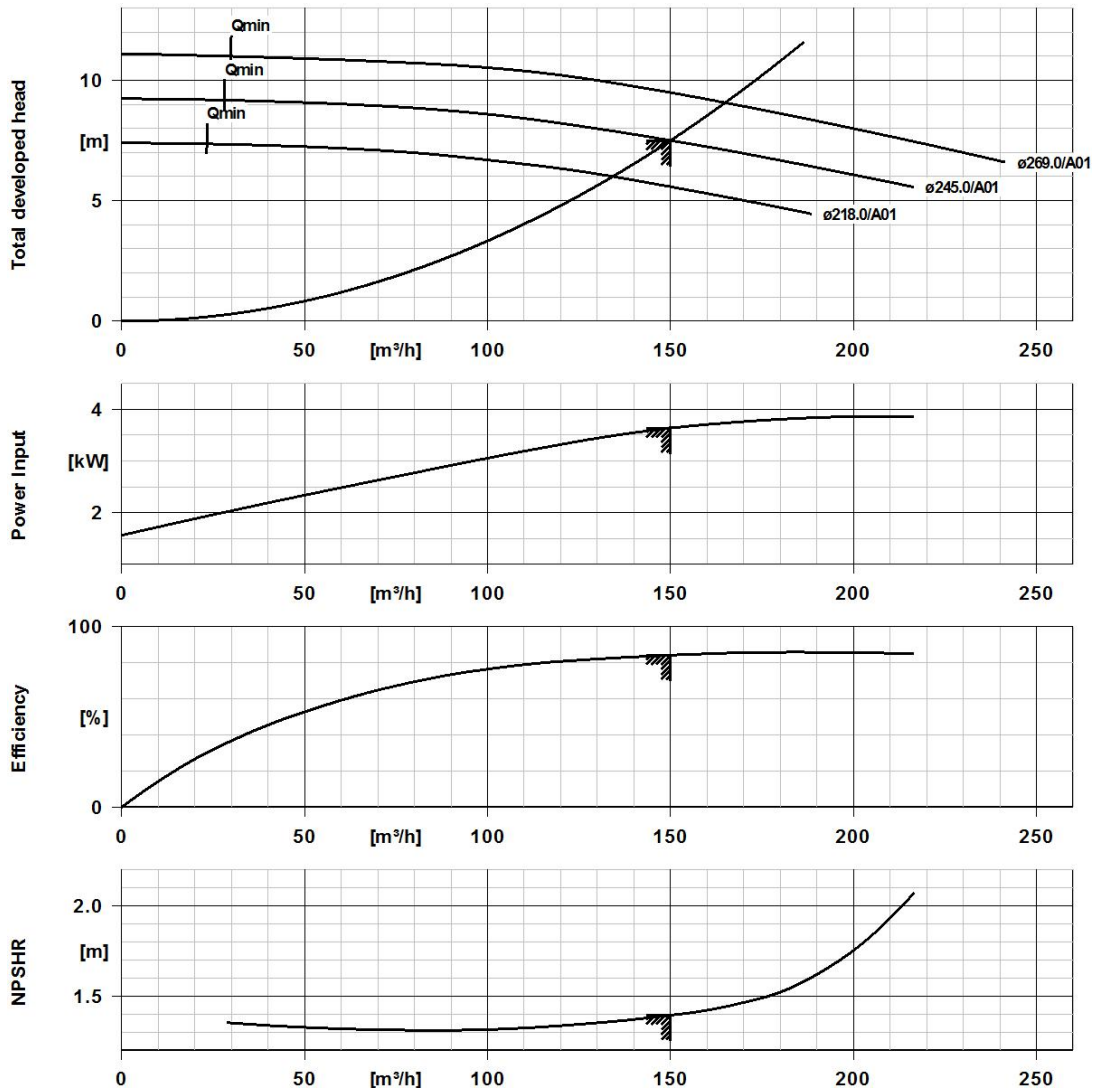
Packaging

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

Nameplates

Duplicate name plate	No
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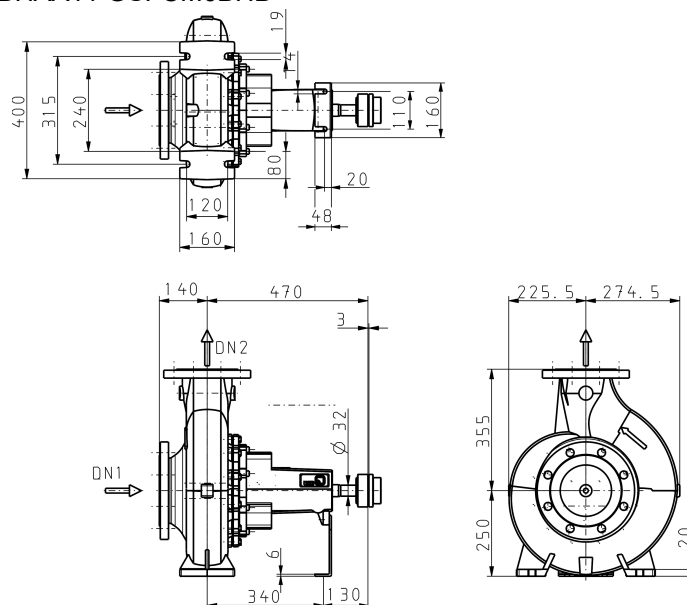
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Curve Data

Pump speed	977.2 1/min	Efficiency Pump	84.12 %
Density Fluid handled	998 kg/m ³	Maximum power input at duty point	3.64 kW
Kinematic viscosity Fluid handled	1 mm ² /s	NPSH required	1.39 m
Flow rate	150.01 m ³ /h	Hydraulic calculation according to standard/ class	EN ISO 9906 class 3B
Head	7.501 m		

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Drawing is not to scale.

Dimensions are given in mm

Motor

Rated power Motor 4 kW
 Rated speed Motor 975 1/min

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

Coupling

Coupling manufacturer KTR
 Coupling type ROFLEX N
 Nominal size Coupling 95

Net weight

Total weight Pump 126 kg
 Total weight Coupling 2.6 kg
 Total weight Pump set 129 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