

Etanorm 150-125-250 GB
 ETNF150-125-250-GBVF11A GSIIJ2AHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	5.920 l/min	Vapour pressure determined	-0,9766 bar.a
Target mass flow rate	98,47 kg/s	Minimum inlet pressure required	0 bar
Target head	65 m	Specified ambient temperature	20 °C
Fluid	Water, fire-fighting water	Installation altitude above sea level	1.000 m
Fluid variant	without further specification 50204		
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	5.920 l/min	Maximum power input at duty point	79,27 kW
Minimum permissible flow rate	118,4 l/min	Maximum power input / curve	87,71 kW
Head	65,58 m	Pump speed	2.940 1/min
Shut-off head	75,19 m	Discharge pressure-max.	7,359 bar
Efficiency Pump	79,51 %		
NPSH required	4,4 m		

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Design data pump

Scope of supply Pump supplied by KSB	Bare-shaft pump	Mains voltage	400 V
Pump standard	EN 733	Mains frequency	50 Hz
Design according to regulation	Sprinkler acc. to VDS	Minimum permissible fluid temperature	4 °C
VDS acceptance number	P 4850418	Maximum permissible fluid temperature	40 °C
Maximum allowable flow rate VDS	5.923 l/min	Quantity Stages, single-entry	1
Head at maximum permissible flow rate VdS	65,6 m	Casing wear ring design suction-side	Flat
Shaft axis position	Horizontal	Casing wear ring design discharge-side	Flat
Pump design	Long-coupled (basepl-mounted)	Installation chamber Casing cover	Cylindrical (C-type cover)
Pump system design	Single-pump system	Bearing bracket size / shaft unit	60
Specification of wetted parts	Manufactured without paint wetting impairment substances	Bearing bracket type	Bearing bracket
Pump direction of rotation, viewed from casing side	Counterclockwise	Bearing bracket design	Heavy
Impeller diameter D2	242 mm	Pump bearing type, non-drive end	Anti-friction bearing
Impeller type	Radial, closed, multi-channel	Pump bearing type, drive end	Anti-friction bearing
Free passage	22,4 mm	Lubrication type	Grease lubrication
Nut lock for Impeller	Yes	Bearing seal Pump	Smooth clearance gap
Swirl break	No	Pump directive	CE

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)		
Flange facing type Outlet	Raised face (B,RF)		



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Auxiliary connections pump

6B Fluid Drain	G 1/2 Drilled and plugged	1M Pressure gauge Discharge nozzle	G 1/2 Drilled and plugged
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		

Shaft sealing

Shaft seal type	Packing int barrier fluid (Na)	Shaft seal code	Code 1A
Determined pressure Seal chamber	0,43 bar	Material Shaft seal inboard	RT-P

Materials

Material Volute casing	EN-GJL-250/A48 CL 35B	Material Bolts/Screws	8.8
Material Casing cover	EN-GJL-250/A48 CL 35B	Hydraulic casing	
Material Shaft	1.4057+QT800	Material Screw plug Hydraulic casing	ST
Material Impeller	CC480K DW	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Casing wear ring suction-side	CC495K-GS	Material Nut Impeller fastening	(CRNIMO ST INT)
Material Casing wear ring discharge-side	CC495K-GS	Material Key	1.4571+C/A276 TP 316 COND B
Material Shaft protecting sleeve	1.4122+QT750		
Material Bearing bracket	EN-GJS-400-18-LT		
Material Static seal Discharge cover	DPAF DW001		

Driver

Electric motor	No	Rated speed Motor	2.982 1/min
Drive concept	With electric actuator	Number of motor poles	2
Drive standard, mechanical	IEC	Rated power Motor	90 kW
Drive standard electric	IEC		
Motor construction type	IM B3 (IM1001) IEC 60034-7		
Motor size	280M		



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Coating

Aggregate

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

Free from dirt, grease, rust
Hydro dip primer, water-dilutable
60 µm
Acrylate dispersion water-thin
40 µm
RAL3000 Flame Red
RAL3000 Flame Red

Packaging

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

Nameplates

Product properties

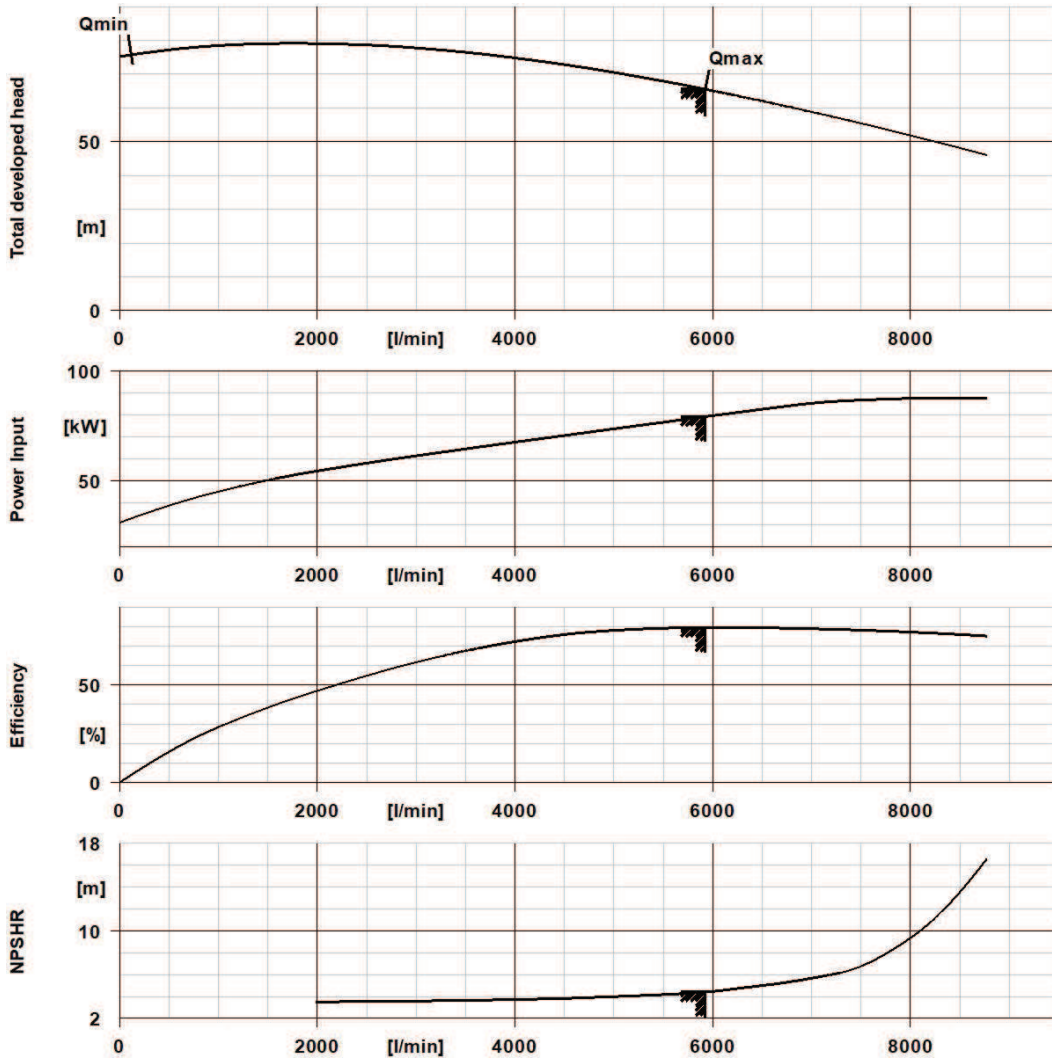
Specification of wetted parts
Standard Test of specification of wetted parts
Certificate Check of specification of wetted parts

Manufactured without paint wetting impairment substances
KSB documentation
Without

Performance Curve (Pump)



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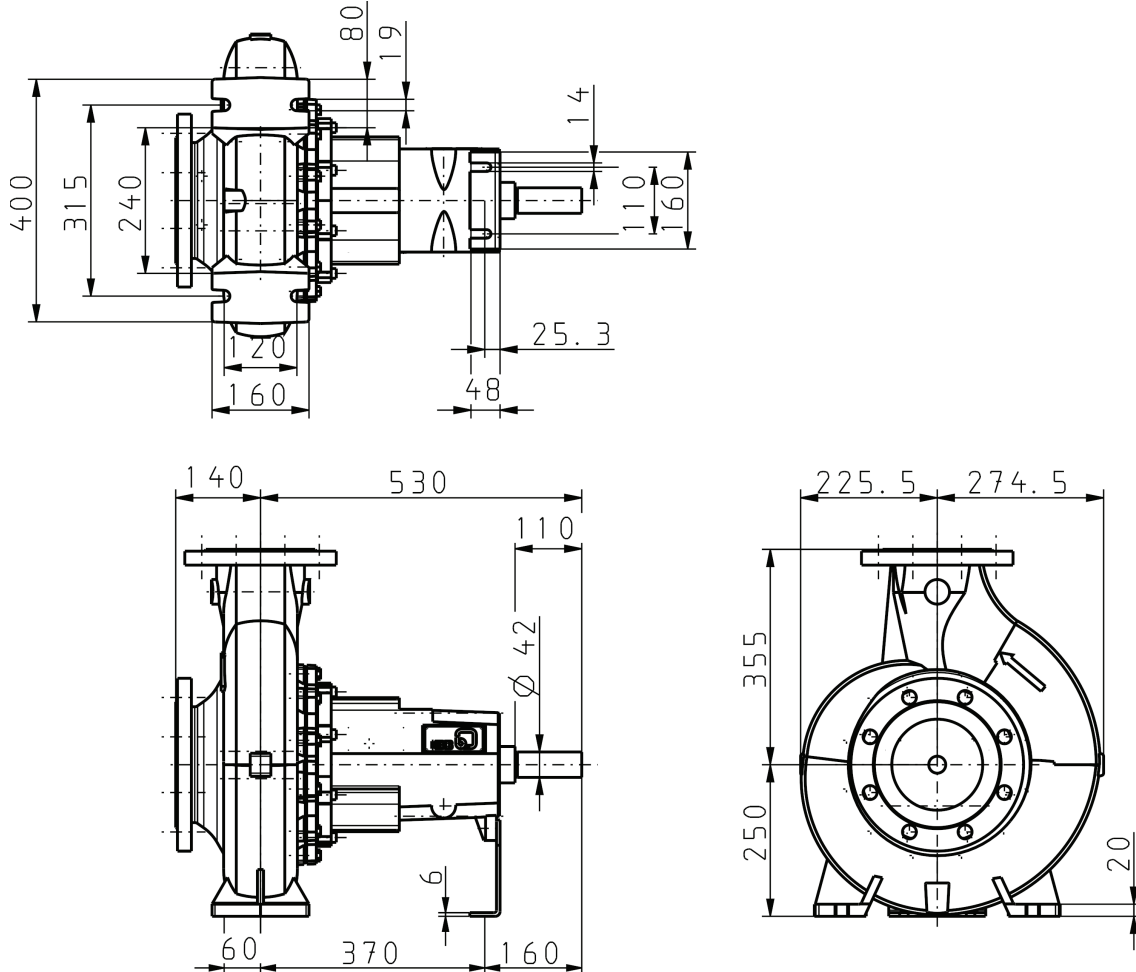


Curve Data

Pump speed	2.940 1/min	Efficiency Pump	79,5 %
Density Fluid handled	998 kg/m ³	Maximum power input at duty point	79,3 kW
Kinematic viscosity Fluid handled	1 mm ² /s	NPSH required	4,4 m
Flow rate	5.920 l/min	Hydraulic impeller diameter	242 mm
Head	65,6 m	Hydraulic calculation according to standard/class	EN ISO 9906 Class 3B

According to EN ISO 9906, §4.4.2 (pump input power below 10 kW)

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Drawing is not to scale.

Dimensions are given in mm

Motor

Rated power Motor 90 kW
 Rated speed Motor 2.982 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

Net weight

Total weight Pump 146,8 kg



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Connect pipelines stress-free

Dimensional tolerances for shaft axis height: DIN 747

Dimensions without tolerances, middle tolerances to: ISO 2768-m

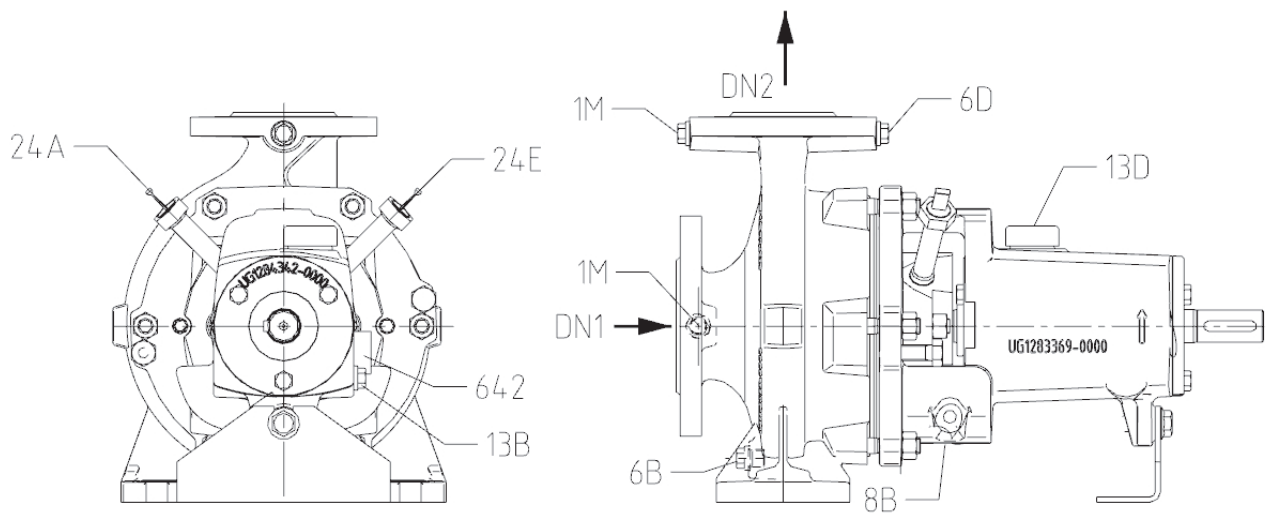
Connection dimensions for pumps: EN735

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

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Connections

- 6B Fluid Drain
- 6D Fluid Filling and venting
- 8B Leakage Drain
- 1M Pressure gauge Discharge nozzle
- 1M Pressure gauge Suction nozzle
- Connection size 1M Pressure gauge Suction nozzle
- 4M Temperature measurement connection
- 26M Shock pulse measurement

G 1/2	Drilled and plugged
G 1/2	Drilled and plugged
G 1/2	Drilled
G 1/2	Drilled and plugged
Without	Without
Without	Without
Without	Without
Without	Without