

Etanorm 080-065-250 GG
ETN 080-065-250-GGSAA11 GSFFO2AHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate		Vapour pressure determined	0.1992 bar.a
Target head		Minimum inlet pressure required	-0.3 bar.r
Fluid	Water, high-temperature hot water	Specified ambient temperature	20 °C
Fluid variant	High-temperature hot water treated to VdTÜV 1466	Installation altitude above sea level	1,000 m
Specified fluid temperature	60 °C		
Density Fluid handled	983 kg/m³		
Kinematic viscosity Fluid handled	0.48 mm²/s		

Operating conditions (performance)

Flow rate	60 m³/h	Maximum power input at duty point	24.82 kW
Minimum permissible flow rate	18.75 m³/h	Maximum power input / curve	40.58 kW
Head	92 m	Pump speed	2,962 1/min
Shut-off head	93.64 m	Discharge pressure-max.	9.027 bar.r
Efficiency Pump	59.55 %		
NPSH required	2.89 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
Shaft axis position	Horizontal	Minimum efficiency index MEI	0.7
Pump design	Long-coupled (basepl-mounted)	Minimum permissible fluid temperature	0 °C
Pump system design	Single-pump system	Maximum permissible fluid temperature	110 °C
Specification of wetted parts	Manufactured without paint wetting impairment substances	Quantity Stages, single-entry	1
Pump direction of rotation, viewed from casing side	Counterclockwise	Casing wear ring design suction-side	Flat
Impeller diameter D2	255 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	14.3 mm	Bearing bracket size / shaft unit	35
Nut lock for Impeller	No	Bearing bracket type	Bearing bracket
Swirl break	No	Bearing bracket design	Medium
		Pump bearing type, non-drive end	Anti-friction bearing
		Pump bearing type, drive end	Anti-friction bearing
		Lubrication type	Grease lubrication
		Bearing seal Pump	V-ring
		Pump directive	CE

Nozzle connections pump

Nominal diameter Suction nozzle	DN 80	Nominal diameter Discharge nozzle	DN 65
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 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
8B Leakage Drain	G 1/2 Drilled		

Shaft sealing

Shaft seal type	SMS A-type cover	Shaft seal code	Code 11
Operating mode of mechanical seal (function)	API plan 03	Shaft seal manufacturer inboard	KSB's choice
Determined pressure Seal chamber	0.23 bar.r	Mechanical seal type inboard	1
		Material Shaft seal inboard	BQ1EGG-WA

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	C45+N	Material Screw plug Hydraulic casing	ST
Material Impeller	EN-GJL-250/A48 CL 35B	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Casing wear ring suction-side	JL/LAMELLAR GRAPHITE CAST IRON	Material Nut Impeller fastening (ST)	
Material Casing wear ring discharge-side	JL/LAMELLAR GRAPHITE CAST IRON	Material Key	C45+C/A311 GR 1045 CLASS A
Material Shaft protecting sleeve	(CRNIMO ST INT)		
Material Bearing bracket	EN-GJL-250/A48 CL 35B		
Material Static seal Discharge cover	DPAF DW001		

Driver

Electric motor	No	Rated speed Motor	2,955 1/min
Drive concept	With electric actuator	Number of motor poles	2
Drive standard, mechanical	IEC	Rated power Motor	30 kW
Drive standard electric	IEC		
Motor construction type	IM B3 (IM1001) IEC 60034-7		
Motor size	200L		



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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
RAL5002 Ultramarine Blue
RAL5002 Ultramarine Blue

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

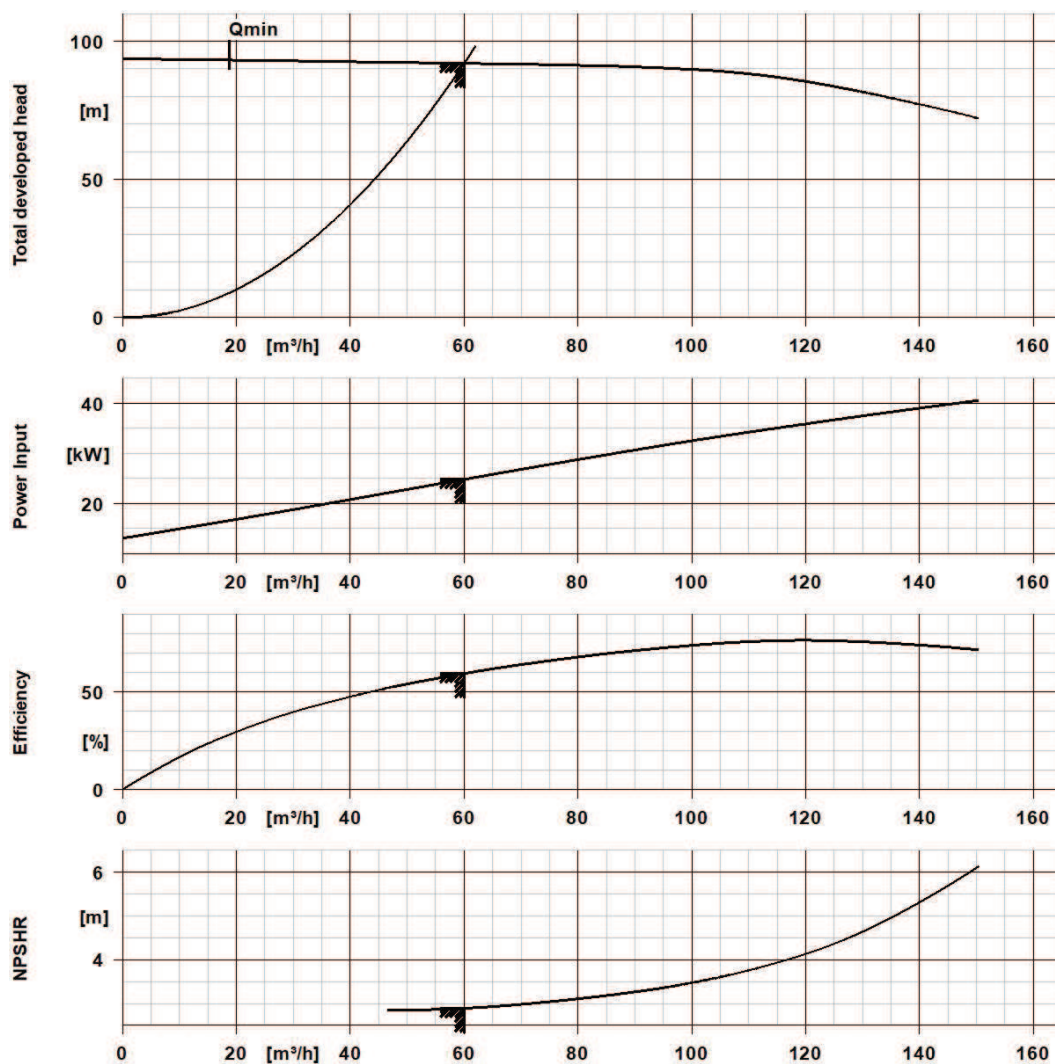
Performance Curve (Pump)



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Version No.: 1



Curve Data

Pump speed	2,962 1/min	Efficiency Pump	59.6 %
Density Fluid handled	983 kg/m^3	Minimum efficiency index MEI	0.7
Kinematic viscosity Fluid handled	0.48 mm^2/s	Maximum power input at duty point	24.8 kW
Flow rate	60 m^3/h	NPSH required	2.89 m
Head	92 m	Hydraulic impeller diameter	254.2 mm
		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)

Installation plan



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Motor

Rated power Motor	30 kW
Rated speed Motor	2,955 1/min

Connections

Nominal diameter Suction nozzle	DN 80
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 65
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	80.99 kg
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Connect pipelines stress-free

Plan for additional connections see extra drawing



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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