

Etanorm 065-040-200 GG
 ETN 065-040-200-GGSAA11 GSEBA4EHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	12 m ³ /h	Vapour pressure determined	0.02337 bar.a
Target head	12 m	Minimum inlet pressure required	-0.3 bar.r
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	12 m ³ /h	Maximum power input at duty point	0.7544 kW
Minimum permissible flow rate	2.913 m ³ /h	Maximum power input / curve	1.05 kW
Head	12 m	Pump speed	1,459 1/min
Shut-off head	12.46 m	Discharge pressure-max.	1.22 bar.r
Efficiency Pump	51.89 %		
NPSH required	1.21 m		

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Design data pump

Scope of supply Pump supplied by KSB	Pump + coupling + coupling guard + baseplate + motor	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	60 °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	190 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	8.9 mm	Bearing bracket size / shaft unit	25
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 65	Nominal diameter Discharge nozzle	DN 40
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 1/4 Drilled and plugged	1M Pressure gauge	Without
		Discharge nozzle	Without
6D Fluid Filling and venting	G 1/4 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 Volute casing	8.8
Material Casing cover	EN-GJL-250/A48 CL 35B	Material Screw plug Volute casing	ST
Material Shaft	C45+N	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Impeller	EN-GJL-250/A48 CL 35B	Material Nut Impeller fastening (ST)	
Material Casing wear ring suction-side	JL/LAMELLAR GRAPHITE CAST IRON	Material Key	C45+C/A311 GR 1045 CLASS A
Material Casing wear ring discharge-side	JL/LAMELLAR GRAPHITE CAST IRON		
Material Shaft protecting sleeve	(CRNIMO ST INT)		
Material Bearing bracket	EN-GJL-250/A48 CL 35B		
Material Static seal Discharge cover	DPAF DW001		

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Driver

Electric motor	Yes	Rated speed Motor	1,440 1/min
Drive concept	Electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	1.1 kW
Drive standard electric	IEC	Motor power reserve determined	45.8 %
Motor bearing, insulated	No	Rated voltage Motor	400 V
Motor manufacturer	KSB's choice	Motor winding	230 / 400 V
Customer supply Drive	No	Rated frequency Motor	50Hz
Motor construction type	IM B3 (IM1001) IEC 60034-7	Motor switching type	Star
Motor alignment	No	Rated current Motor	2.64 A
Motor size	90S	Starting current ratio Ia/In	8
Efficiency class	IE3 (Premium)	Cos phi at 4/4 load	0.8
Material motor housing	AL	Motor efficiency at 4/4 load	84.1 %
Enclosure Motor	IP55	Motor service factor	1.13
Thermal class	155 (F) nach IEC 60085	Directive Drive	CE
Temperature sensor motor	1 PTC thermistors		
Terminal box position of motor (looking at the motor shaft)	360 °		
Operation on a frequency inverter permitted	Yes (acc to motor manufact)		
Sound pressure level Motor	59 dBa		
Type series Motor manufacturer	Acc. to motor manufacturer		

Installation parts / Accessories

Coupling

Coupling type	ROFLEX N
Coupling manufacturer	KTR
Nominal size Coupling	68

Coupling guard

Coupling guard type	Light (ZN79)
Nominal coupling guard size	A148
Material Coupling guard	ST+Z

Baseplate

Baseplate type	Folded plate/U-section
Material Installation part Pump	(ST)
Baseplate size	13A
Drill baseplate at motor end	Yes
Material Connecting element Foundation	3.6+A2A

Accessories

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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-thinned
Thickness Top coat	40 µm
Colour Top coat	RAL5002 Ultramarine Blue
Colour Top coat Drive	RAL5002 Ultramarine Blue

Packaging

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

Product properties

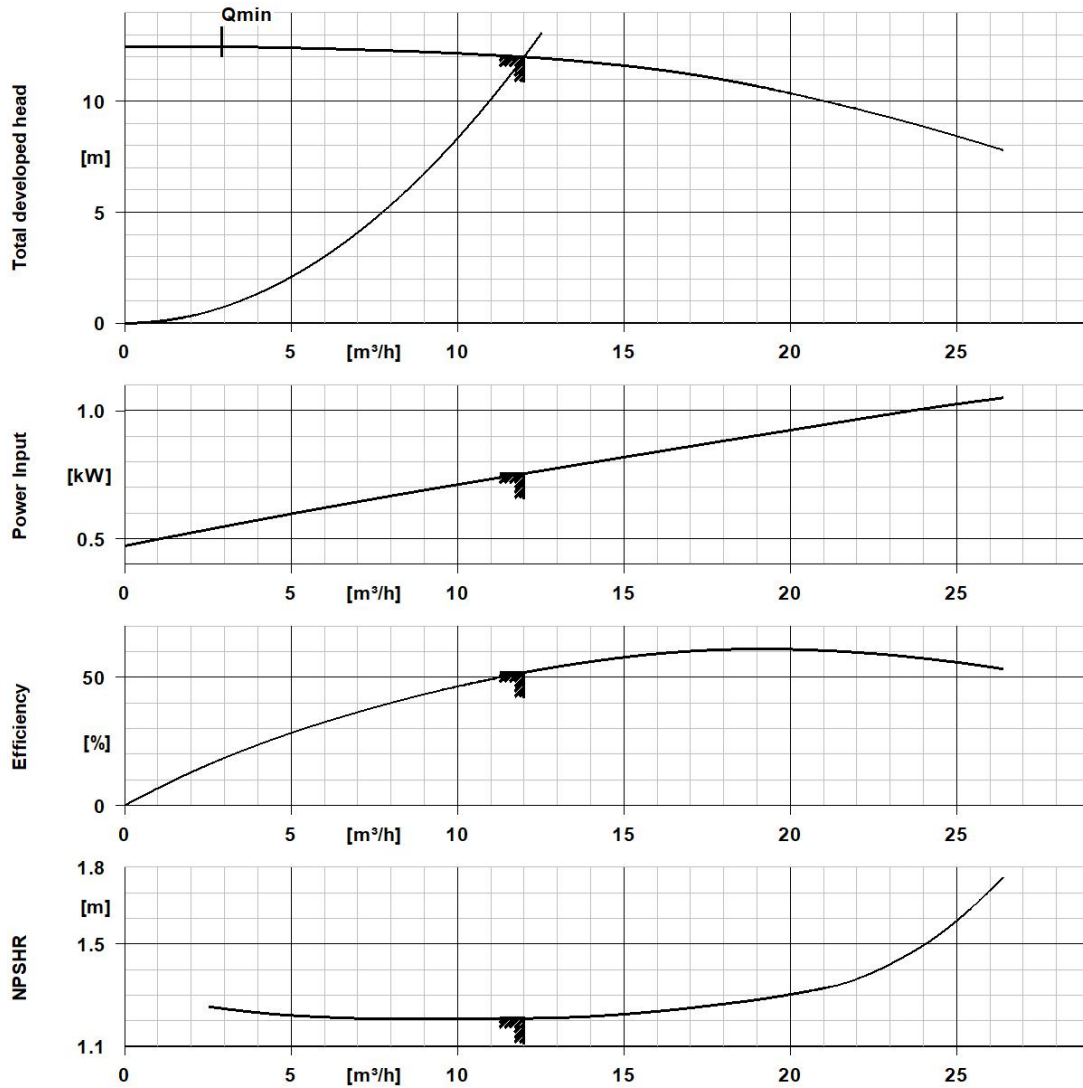
Specification of wetted parts	Manufactured without paint wetting impairment substances
Standard Test of specification of wetted parts	KSB documentation
Certificate Check of specification of wetted parts	Without

Nameplates

Performance Curve (Pump)



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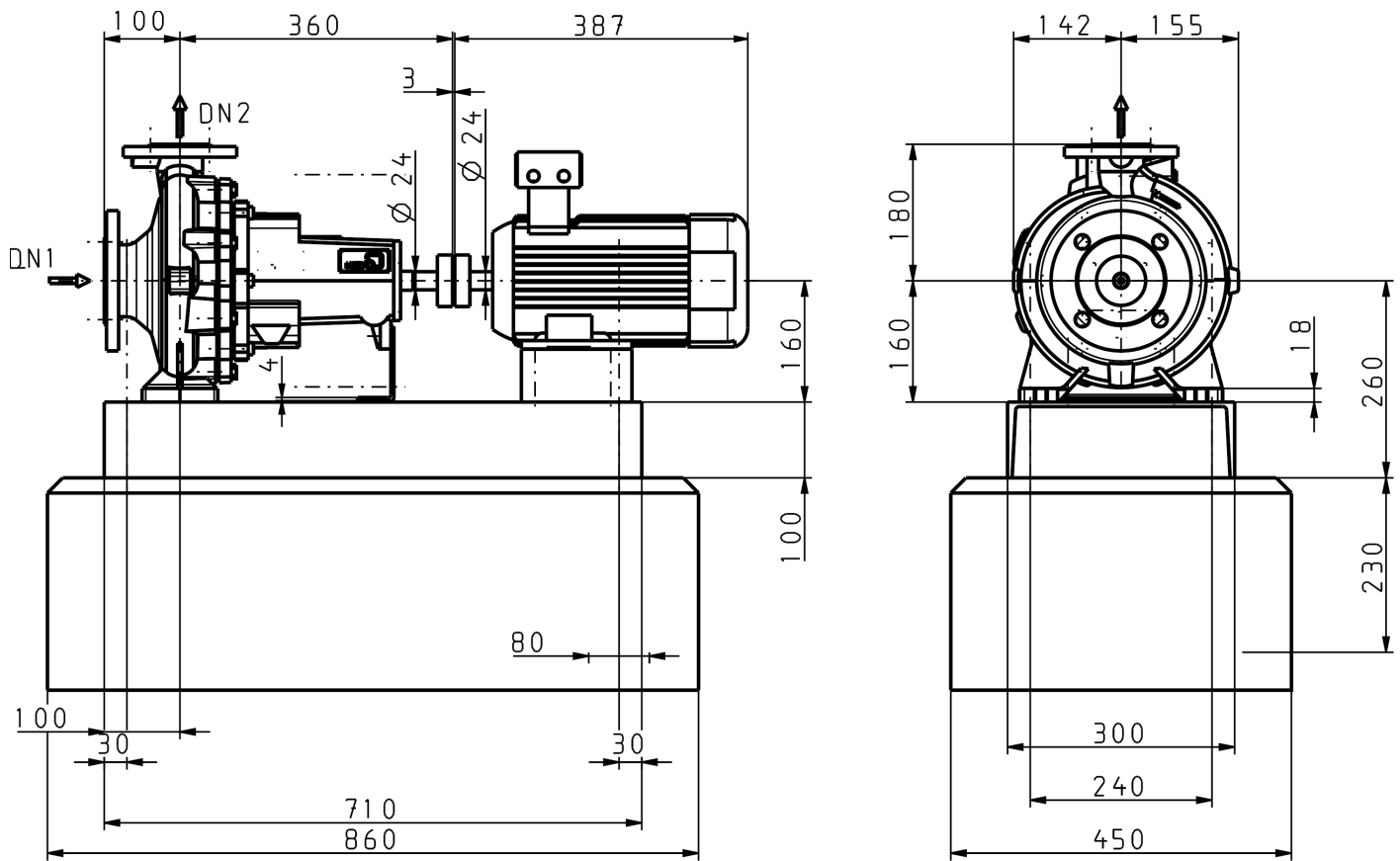


Curve Data

Pump speed	1,459 1/min	Efficiency Pump	51.9 %
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	0.75 kW
Flow rate	12 m ³ /h	NPSH required	1.21 m
Head	12 m	Hydraulic impeller diameter	189.6 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)

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Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	KSB's choice
Motor size	90S
Rated power Motor	1.1 kW
Number of motor poles	4
Rated speed Motor	1,440 1/min
Terminal box position of motor (looking at the motor shaft)	360 °

Connections

Nominal diameter Suction nozzle	DN 65
Suction flange bolt hole pattern	as per standard
Nominal diameter Discharge nozzle	DN 40
Discharge flange bolt hole pattern	as per standard
Nominal pressure Suction nozzle	PN 16
Nominal pressure Discharge nozzle	PN 16

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Baseplate

Baseplate type	Folded plate/U-section
Baseplate size	13A
Material Connecting element	3.6+A2A
Foundation	

Coupling

Coupling manufacturer	KTR
Coupling type	ROFLEX N
Nominal size Coupling	68

Net weight

Total weight Pump	45.23 kg
Total weight Installation parts	36.59 kg
Total weight Coupling	0.74 kg
Total weight Contact guard	0.62 kg
Total weight Drive	23 kg
Total weight Pump set	106.2 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

