Technical Datasheet

Etaline 032-032-200 GG
ETL 032-032-200-GGSBV11 WSEAV4HHB

Operating point 1 Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	12 m³/h	Vapour pressure determined	0.003944 bar.a
Target head	8.5 m	Minimum inlet pressure required	-0.3 bar.r
Fluid	Antifreeze on ethylene glycol base, inhibited, closed system, e.g. Antifrogen N or similar products	Specified ambient temperature	20 °C
		Installation altitude above sea level	1,000 m
Fluid variant	Concentration 35% 50296		
Specified fluid temperature	-8 °C		
Density Fluid handled	1,059 kg/m³		
Kinematic viscosity Fluid handled	7.616 mm²/s		

Operating conditions (performance)

Flow rate	12 m³/h	Maximum power input at duty point	0.5378 kW
Minimum permissible flow rate	1.942 m³/h	Maximum power input / curve	0.6277 kW
Maximum permissible flow rate	18.19 m³/h	Pump speed	1,485 1/min
Pump set		Shut-off pressure	1.097 bar.r
Maximum permissible flow rate	18.19 m³/h		
Head	8.5 m		
Maximum pressure determined at duty point	0.8824 bar.r		
Shut-off head	10.56 m		
Efficiency Pump	54.69 %		
NPSH required	1.44 m		

Design data pump

Scope of supply Pump supplied by KSB	Pump + motor	Mains voltage	400 V
		Mains frequency	50 Hz
Pump standard	EN 733	Minimum efficiency index MEI	0.7
Shaft axis position	Horizontal	Quantity Stages, single-entry	1
Pump design	Close-coupled	Installation chamber Casing cover	Conical (A-type cover)
Pump system design	Single-pump system		
Pump direction of rotation, viewed from casing side	Counterclockwise	Bearing bracket size / shaft unit	25
Hydraulic impeller diameter	175.2 mm	Pump directive	CE
Impeller type	Radial, closed, multi-channel		
Free passage	5.3 mm		
Hydraulic casing foot	No		

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Nozzle connections pump

Nominal diameter Suction nozzle	DN 32	Nominal diameter Discharge nozzle	DN 32
Nominal pressure Suction nozzle	PN 16	Nominal pressure Discharge nozzle	PN 16
Suction nozzle position	Opposite of discharge nozzle	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)		

Auxiliary connections pump

1M Pressure gauge Discharge nozzle	G 1/4 Drilled and plugged	5B Venting and drain	G 1/4 Drilled and plugged
1M Pressure gauge Suction nozzle	G 1/4 Drilled and plugged		
6B Fluid Drain	G 1/4 Drilled and plugged		
6D Fluid Filling and venting	G 1/4 Drilled and plugged		

Shaft sealing

Shaft seal type	Single mechanical seal; seal chamber can be vented (A-type casing cover) - AV	Shaft seal code	Code 11
		Shaft seal manufacturer inboard	KSB's choice
Determined pressure Seal chamber	-0.24 bar.r	Mechanical seal type inboard	KSB's choice
		Material Shaft seal inboard	BQEGG DW001

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Materials

Material Volute casing (102)	EN-GJL-250/A48 CL 35B	Material Bolts/Screws Volute casing (902.01)	8.8
Material Casing cover (161)	EN-GJL-250/A48 CL 35B	Material Nut Impeller fastening (920.95)	(ST)
Material Shaft	C45+N		
Material Impeller (230)	EN-GJL-250/A48 CL 35B		
Material Static seal Volute casing (400.10)	DPAF DW001		
Material Casing wear ring suction-side (502.01)	JL/LAMELLAR GRAPHITE CAST IRON		
Material Casing wear ring discharge-side (502.02)	JL/LAMELLAR GRAPHITE CAST IRON		
Material Shaft protecting sleeve (523)	(CRNIMO ST INT)		
Material Static seal Discharge cover	DPAF DW001		
Material Drive lantern	EN-GJL-250/A48 CL 35B		

Driver

Asynchronous motors	Yes	Rated speed Motor	1,420 1/min
Drive concept	Electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	0.75 kW
Drive standard electric	IEC	Motor power reserve determined	39.5 %
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 V1 (IM3011) IEC 60034-7	Motor switching type	Star
Motor size	80M	Rated current Motor	1.93 A
Efficiency class	IE3 (Premium)	Starting current ratio Ia/In	7.5
Material motor housing	AL	Cos phi at 4/4 load	0.81
Enclosure Motor	IP55 (TEFC)	Motor efficiency at 4/4 load	82.5 %
Thermal class	155 (F) according to IEC 60085	Limit value Maximum humidity Motor	30 g/m³
Temperature sensor motor	1 PTC thermistors	Marking according to directive Drive	CE
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	56 dBa		
Type series Motor manufacturer	Acc. to motor manufacturer (IEC, IE3)		

The values indicated are regarded as guaranteed values. They are applied to motors with a sinusoidal power supply within the permissible tolerances specified by IEC 60034-1. The values given on the name plate may be different.

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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

Energy cost and Environmental Impact

Result

Estimated Product Carbon Footprint (cradle-to-gate) (CO2eq) *	223 kg

*is based on the product weight assuming typical material proportions. The conversion rate between product weight and CO2 emissions is based on several life cycle analyses in acc. with ISO 14040 / 44 of sample products from the same series. The objective and scope of these LCAs was limited to the manufacturing phase (cradle-to-gate). With regard to the ‘inputs’, all materials, energy and auxiliary materials were taken into account; with regard to the ‘outputs’, emissions, scrap and waste were considered. The influence of outgoing logistics is not covered. The input variables of the analyses cover at least 95% of the total weight. The analysis focusses on the global warming potential (EF3.0 Climate Change - total).

Packaging

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

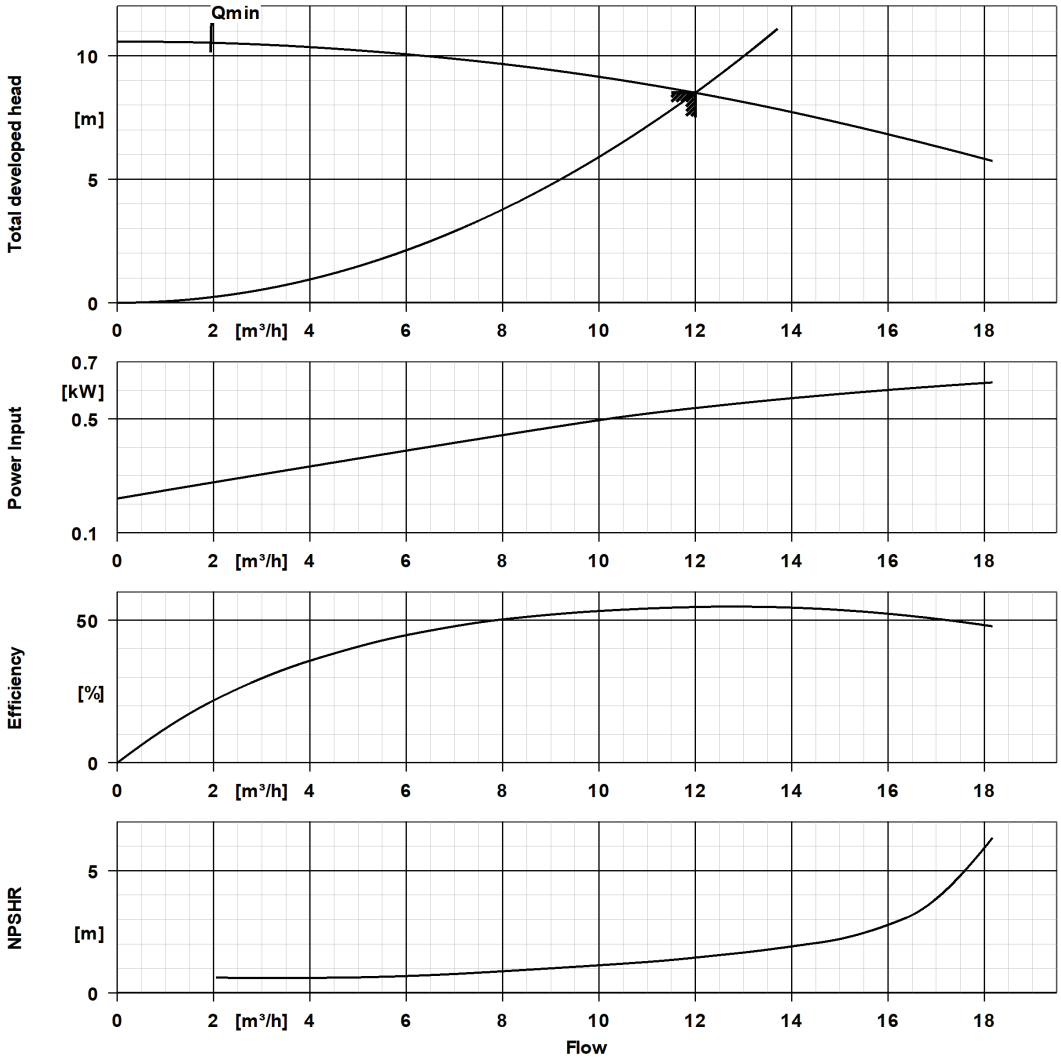
Order related documents

Detail drawing Mechanical seal	No

Performance Curve (Pump)

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Version No.: 1



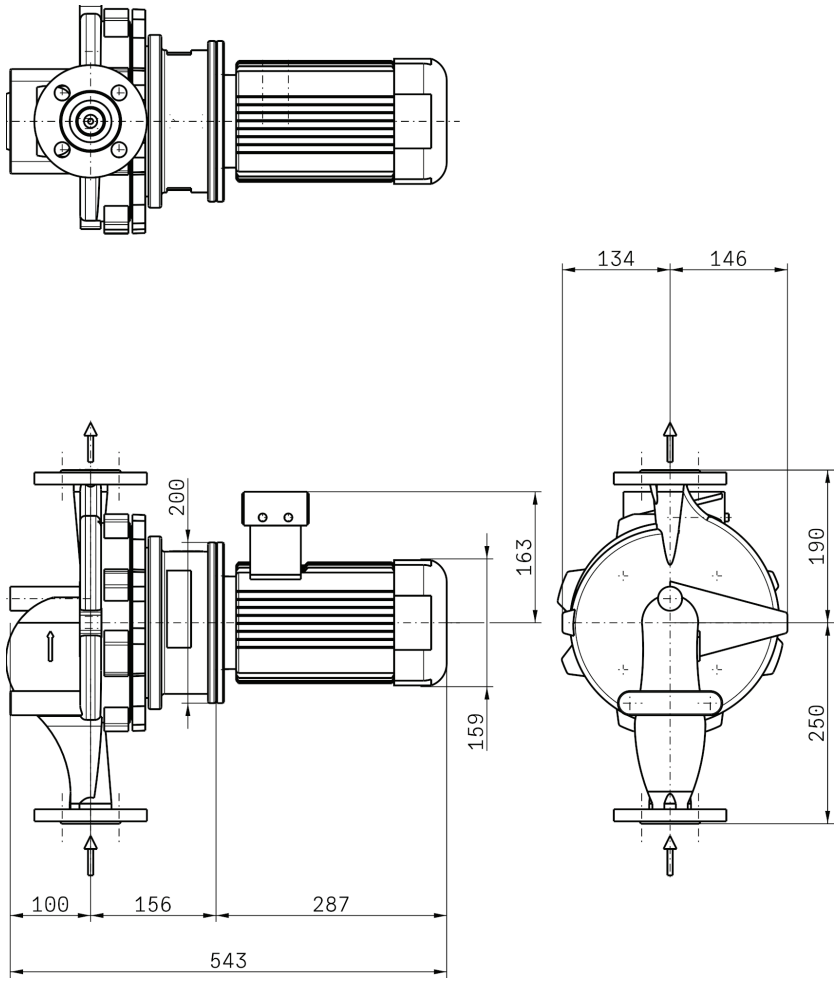
Curve Data

Pump speed	1,485 1/min	Efficiency Pump	54.7 %
Density Fluid handled	1,059 kg/m³	Minimum efficiency index MEI	0.7
Kinematic viscosity Fluid handled	7.62 mm²/s	Maximum power input at duty point	0.54 kW
Flow rate	12 m³/h	NPSH required	1.44 m
Maximum permissible flow rate	18.2 m³/h	Hydraulic impeller diameter	175.2 mm
Head	8.5 m	Hydraulic calculation according to standard/ class	EN ISO 9906 Class 3B
Maximum pressure determined at duty point	0.88 bar.r		

Installation plan

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Version No.: 1



Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	KSB's choice
Motor size	80M
Rated power Motor	0.75 kW
Number of motor poles	4
Rated speed Motor	1,420 1/min
Terminal box position of motor (looking at the motor shaft)	360 °

Connections

Nominal diameter Suction nozzle	DN 32
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 32
Discharge flange bolt hole pattern as per standard	EN1092-2
Nominal pressure Suction nozzle	PN 16
Nominal pressure Discharge nozzle	PN 16

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Net weight

Total weight Pump	34.89 kg
Total weight Drive	14 kg
Total weight Pump set	48.89 kg
Total weight Assembly/transport aids	2.12 kg

Connect pipelines stress-free

Plan for additional connections see extra drawing

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