

Etabloc 100-080-200 GG

ETB 100-080-200-GGSBV66 WSFEV4HHB

Operating point 1

Dimensioning operating point

Operating conditions (purchaser requirements)

Target flow rate	125 m³/h	Vapour pressure determined	0.026 bar.a
Target head	40 m	Minimum inlet pressure required	-0.3 bar.r
Fluid	Antifreeze on propylene glycol base, inhibited, closed system, e.g. Antifrogen L or similar products	Specified ambient temperature	20 °C
		Installation altitude above sea level	1,000 m
Fluid variant	Concentration 30%		
Specified fluid temperature	20 °C		
Density Fluid handled	1,031 kg/m³		
Kinematic viscosity Fluid handled	3.34 mm²/s		

Operating conditions (performance)

Flow rate	125.01 m³/h	Maximum power input at duty point	17.98 kW
Minimum permissible flow rate	24.16 m³/h	Maximum power input / curve	23.44 kW
Maximum permissible flow rate	184.77 m³/h	Pump speed	3,000 1/min
Pump set		Shut-off discharge pressure	4.383 bar.r
Maximum permissible flow rate	215.16 m³/h		
Head	40 m		
Shut-off head	43.35 m		
Efficiency Pump	78.11 %		
NPSH required	4.43 m		

Design data pump

Scope of supply Pump supplied by KSB	Pump + 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	Close-coupled	Minimum permissible fluid temperature	-30 °C
Pump system design	Single-pump system	Maximum permissible fluid temperature	110 °C
Pump direction of rotation, viewed from casing side	Counterclockwise	Quantity Stages, single-entry	1
Hydraulic impeller diameter	172.8 mm	Casing wear ring design suction-side	Flat
Impeller type	Radial, closed, multi-channel	Casing wear ring design discharge-side	Flat
Free passage	15.2 mm	Installation chamber Casing cover	Conical (A-type cover)
Support foot	No	Bearing bracket size / shaft unit	35
		Pump directive	CE

Etabloc 100-080-200 GG

ETB 100-080-200-GGSBV66 WSFEV4HHB

Nozzle connections pump

Nominal diameter Suction nozzle	DN 100	Nominal diameter Discharge nozzle	DN 80
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)		

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
5B Venting and drain	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 66
		Shaft seal manufacturer inboard	BURGMANN
Operating mode of mechanical seal (function)	API plan 03	Mechanical seal type inboard	EMG13G6
Determined pressure Seal chamber	-0.04 bar.r	Material Shaft seal inboard	Q7Q7EGG-Y10 DW001

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 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		

Etabloc 100-080-200 GG

ETB 100-080-200-GGSBV66 WSFEV4HHB

Power Drive System

Drive concept	Electric actuator	Rated speed Motor	3,000 1/min
Drive standard, mechanical	IEC	Number of motor poles	4
Drive standard electric	IEC	Rated power Motor	22 kW
Motor manufacturer	KSB	Motor power reserve determined	22.4 %
Motor construction type	IM V15 (IM2011) IEC 60034-7	Rated voltage Motor	400 V
Motor size	180M	Motor winding	- / 400 V
Efficiency class	IE4 (Super Premium)	Rated frequency Motor	100Hz
Material motor housing	JL/LAMELLAR GRAPHITE CAST IRON	Motor switching type	Star
Enclosure Motor	IP55 (TEFC)	Maximum current Unit	0 A
Thermal class	155 (F) according to IEC 60085	Rated current Motor	50 A
Temperature sensor motor	3 PTC thermistors	Cos phi at 4/4 load	0.71
Terminal box position of motor (looking at the motor shaft)	360 °	Motor efficiency at 4/4 load	93.2 %
Operation on a frequency inverter permitted	Required by design	Marking according to directive CE Drive	
Sound pressure level Motor	72 dBa		
Type series Motor manufacturer	SuPremE C2		

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



Etabloc 100-080-200 GG
ETB 100-080-200-GGSBV66 WSFEV4HHB

Energy cost and Environmental Impact

Result

Estimated Product Carbon Footprint (cradle-to-gate) (CO₂eq) 1,313 kg
*

This PCF indication is based on the product mass assuming the typical shares of materials in use. The conversion rate between product mass and CO₂ emissions is based on several life cycle assessments acc. to ISO14040 / 14044 of sample products of the same type series. Objective and scope of these LCAs was defined as being limited to the manufacturing phase (cradle-to-gate). With regard to inputs, all materials, energy and auxiliary materials were accounted for, and with regard to outputs, emissions, scrap and waste were accounted for. The impact of outbound logistics is not covered. The assessments' input variables cover at least 95 % of the total product mass. The analysis focuses exclusively 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)

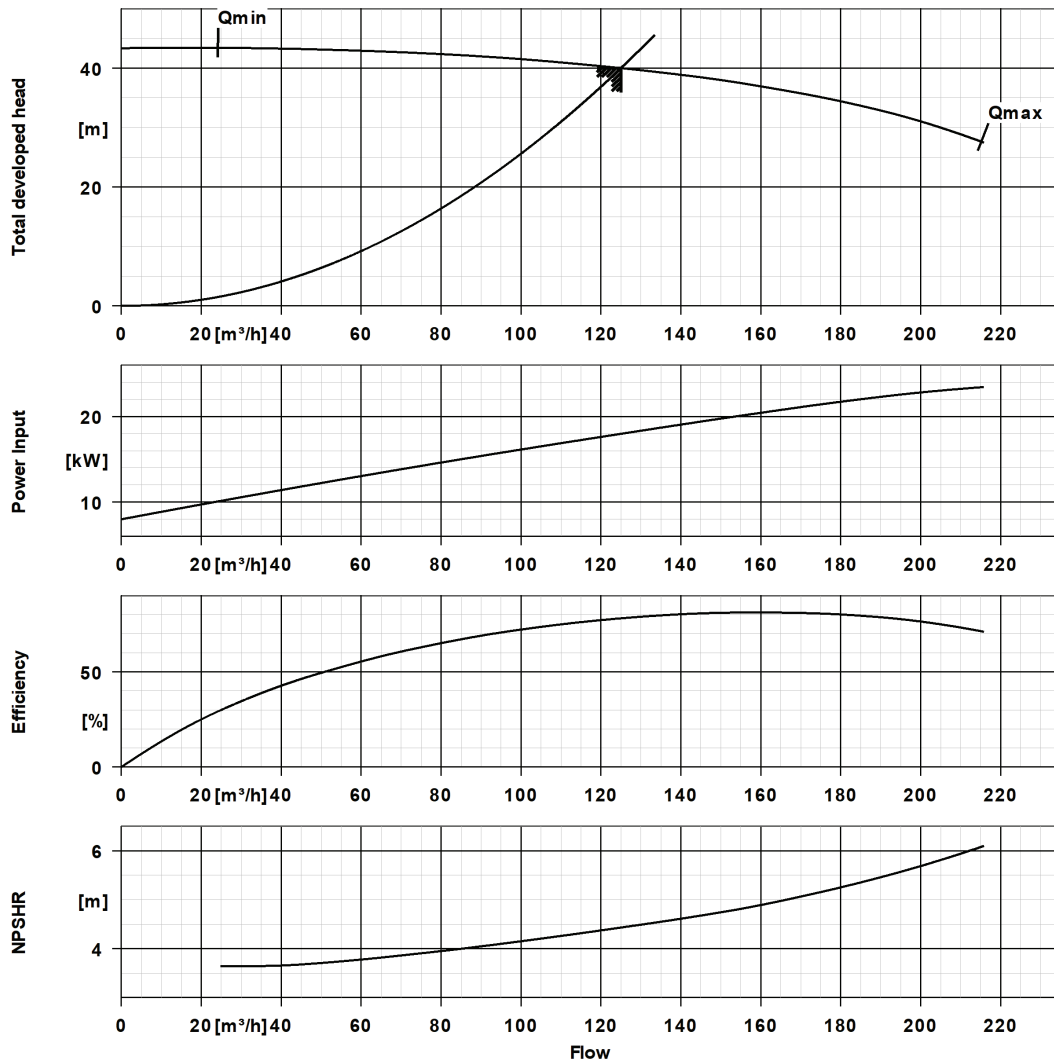
Performance Curve (Pump)



Page: 1 / 1

Etabloc 100-080-200 GG

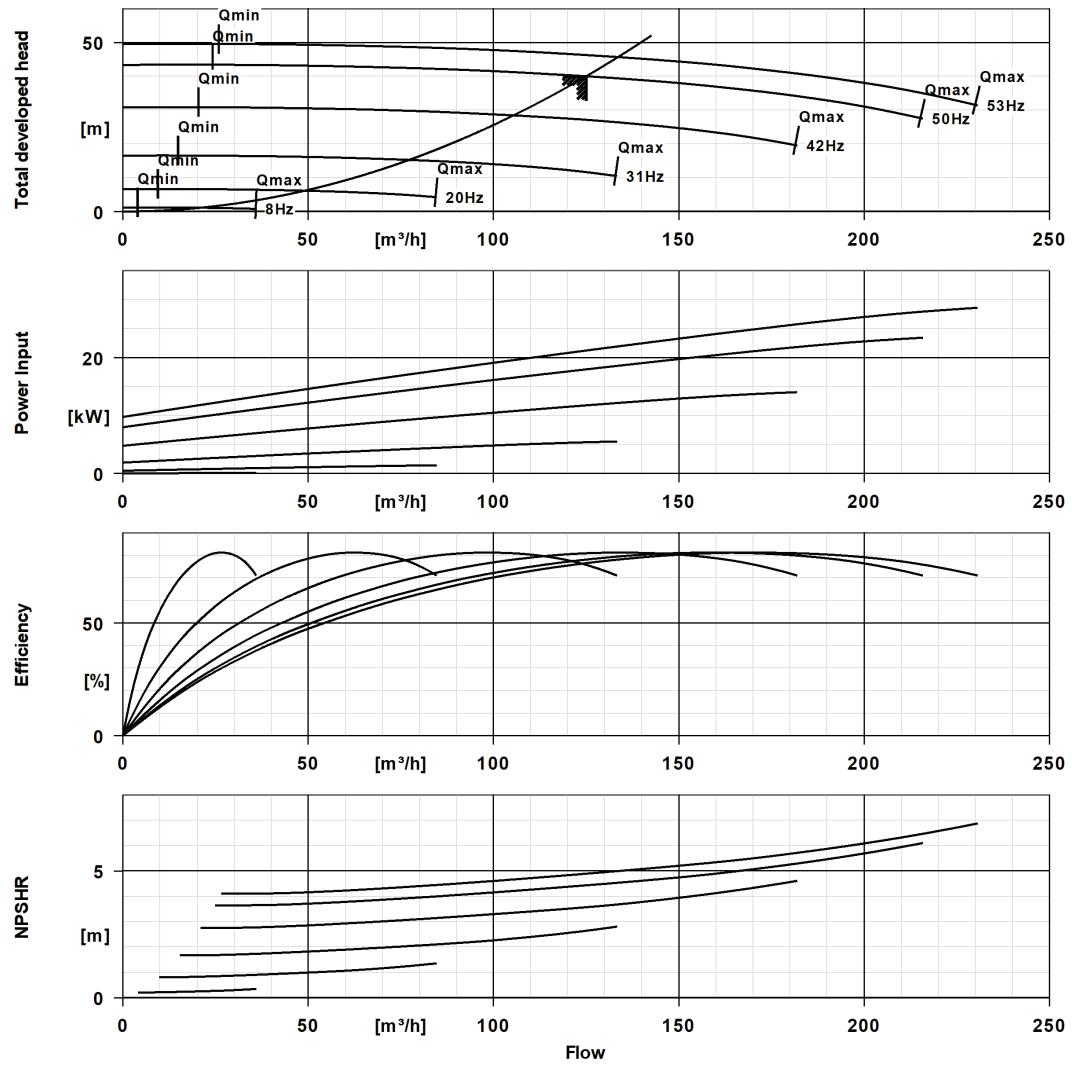
ETB 100-080-200-GGSBV66 WSFEV4HHB



Curve Data

Pump speed	3,000 1/min	Efficiency Pump	78.1 %
Density Fluid handled	1,031 kg/m³	Minimum efficiency index MEI	0.7
Kinematic viscosity Fluid handled	3.34 mm²/s	Maximum power input at duty point	18 kW
Flow rate	125 m³/h	NPSH required	4.43 m
Maximum permissible flow rate	215 m³/h	Hydraulic impeller diameter	172.8 mm
Head	40 m	Hydraulic calculation according to standard/class	EN ISO 9906 Class 3B

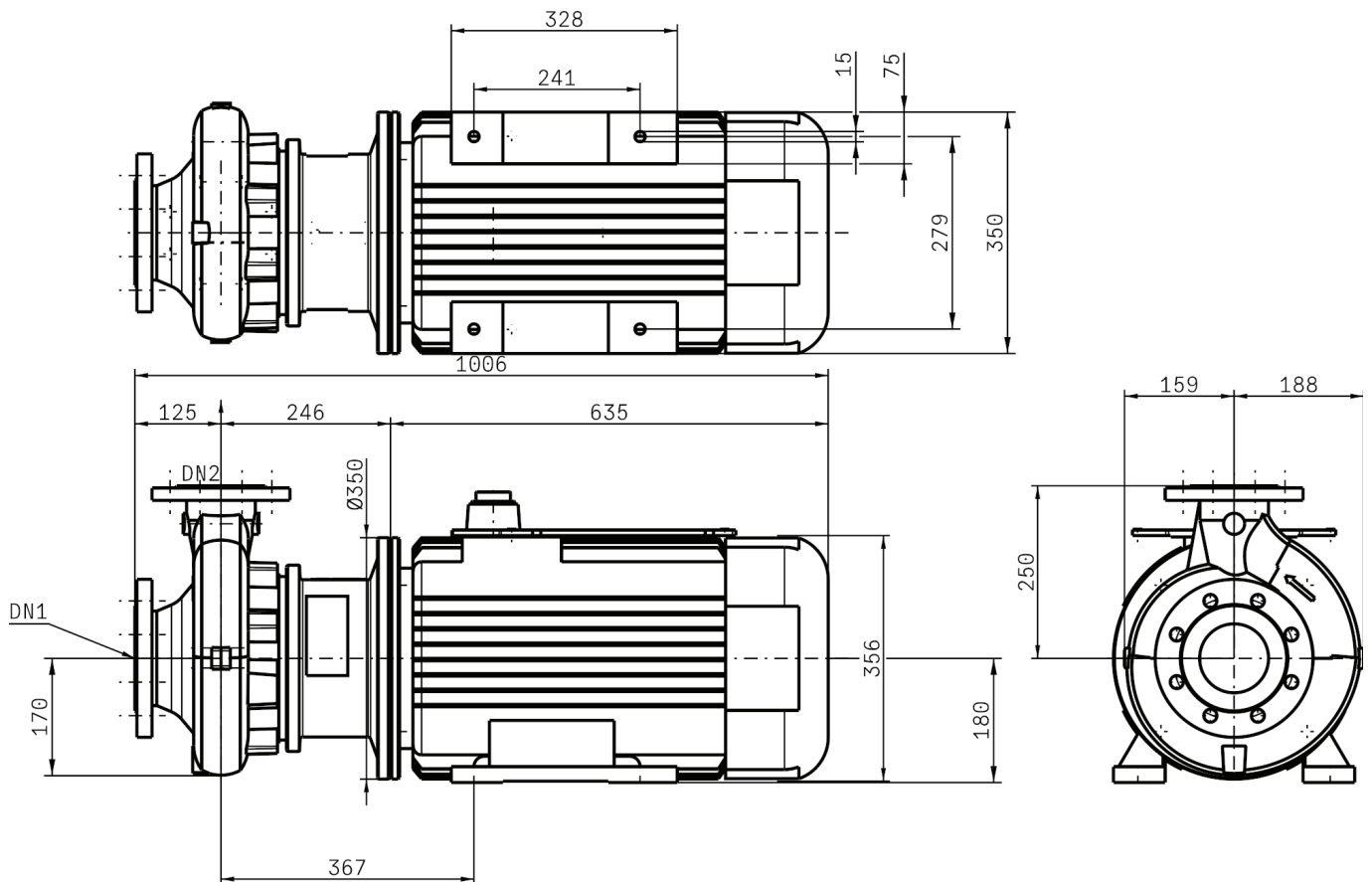
Etabloc 100-080-200 GG
ETB 100-080-200-GGSBV66 WSFEV4HHB



Curve Data

Density Fluid handled	1,031 kg/m³	Head	40 m
Kinematic viscosity Fluid handled	3.34 mm²/s	Minimum efficiency index MEI	0.7
Flow rate	125 m³/h	Hydraulic impeller diameter	172.8 mm

Etabloc 100-080-200 GG ETB 100-080-200-GGSBV66 WSFEV4HHB



Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	KSB
Motor size	180M
Rated power Motor	22 kW
Number of motor poles	4
Rated speed Motor	3,000 1/min
Terminal box position of motor (looking at the motor shaft)	360 °

Connections

Nominal diameter Suction nozzle	DN 100
Suction flange bolt hole pattern as per standard	EN1092-2
Nominal diameter Discharge nozzle	DN 80
Discharge flange bolt hole pattern as per standard	EN1092-2
Nominal pressure Suction nozzle	PN 16
Nominal pressure Discharge nozzle	PN 16



Etabloc 100-080-200 GG

ETB 100-080-200-GGSBV66 WSFEV4HHB

Net weight

Total weight Pump	62.53 kg
Total weight Drive	167 kg
Total weight Pump set	229.5 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