Technical Datasheet

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB

Operating point 1

Operating conditions (purchaser requirements)

Fluid	Water
Fluid variant	Clean water
Specified fluid temperature	20 °C
Density Fluid handled	998 kg/m³
Kinematic viscosity Fluid handled	1 mm²/s

Dimensioning operating point

Vapour pressure determined	-0,9766 bar.a
Minimum inlet pressure required	-0,3 bar
Specified ambient temperature	20 °C
Installation altitude above sea level	1.000 m

Operating conditions (performance)

Flow rate	213,85 m³/h
Minimum permissible flow rate	32,45 m³/h
Head	8,072 m
Shut-off head	10,84 m
Efficiency Pump	78,96 %
NPSH required	2,72 m
Maximum power input at duty point	5,949 kW
Maximum power input / curve	6,266 kW
Pump speed	1.473 1/min
Discharge pressure-max.	1,061 bar

Design data pump

Scope of supply Pump supplied by KSB	Pump + motor
Pump standard	EN 733
Design according to customer specification	Bottle rinser
Shaft axis position	Horizontal
Pump design	Close-coupled
Pump system design	Single-pump system
Specification of wetted parts	Manufactured without paint wetting impairment substances
Pump direction of rotation, viewed from casing side	Counterclockwise
Impeller diameter D2	182 mm
Impeller type	Radial, closed, multi-channel
Free passage	21,1 mm
Support foot	No
Input voltage and frequency	Without
Mains voltage	400 V
Mains frequency	50 Hz
Minimum efficiency index MEI	0,7
Minimum permissible fluid temperature	0 °C
Maximum permissible fluid temperature	60 °C
Quantity Stages, single-entry	1
Casing wear ring design suction-side	Flat
Casing wear ring design discharge-side	Flat
Installation chamber Casing cover	Conical (A-type cover)
Bearing bracket size / shaft unit	35
Pump bearing type, non-drive end	Anti-friction bearing
Pump bearing type, drive end	Anti-friction bearing
Pump directive	CE

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB

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)		

Auxiliary connections pump

6B Fluid Drain	G 1/2 Drilled and plugged	1M Pressure gauge Discharge nozzle	Without Without
6D Fluid Filling and venting	G 1/2 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	SMS A-type cover, vented	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	-0,24 bar	Mechanical seal type inboard	KSB's choice
		Material Shaft seal inboard	BQEGG DW001

Special design

Variant shaft seal

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB

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+KATAPHORESE		
Material Support foot	WITHOUT		

Driver

Electric motor	Yes	Rated speed Motor	1.465 1/min
Drive concept	Electric actuator	Number of motor poles	4
Drive standard, mechanical	IEC	Rated power Motor	7,5 kW
Drive standard electric	IEC	Motor power reserve determined	26,1 %
Motor bearing, insulated	No		
Motor manufacturer	KSB's choice	Rated voltage Motor	400 V
Customer supply Drive	No	Motor winding	400 / 690 V
Motor construction type	IM V15 (IM2011) IEC 60034-7	Rated frequency Motor	50Hz
Motor size	132M	Motor switching type	Delta
Efficiency class	IE3 (Premium)	Rated current Motor	15 A
Material motor housing	AL	Starting current ratio Ia/In	8,9
Enclosure Motor	IP55	Cos phi at 4/4 load	0,8
Enclosure Unit	Without	Motor efficiency at 4/4 load	90,4 %
Thermal class	155 (F) nach IEC 60085	Marking according to directive Drive	CE
Temperature sensor motor	3 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	67 dBa		
Type series Motor manufacturer	Acc. to motor manufacturer		

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB

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

Packaging

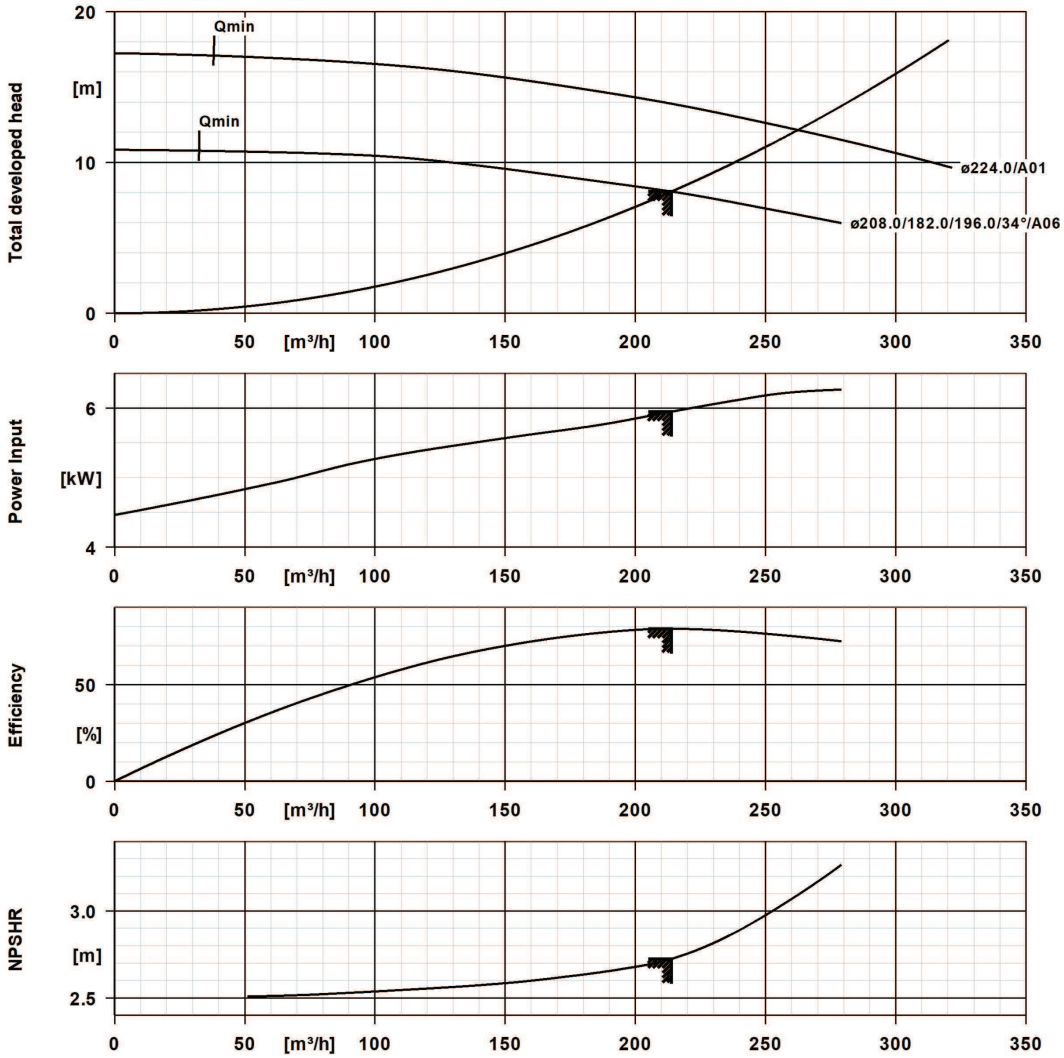
Suitable for transport	Truck transport
Suitable for storage	Indoor storage
Packaging category	KSB's choice (A0)

Nameplates

Duplicate name plate	No

Performance Curve (Pump)

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB

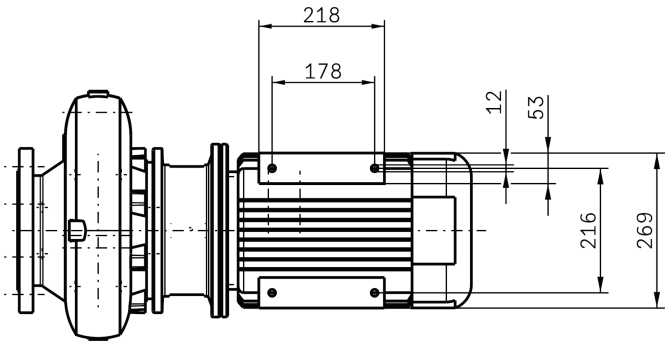


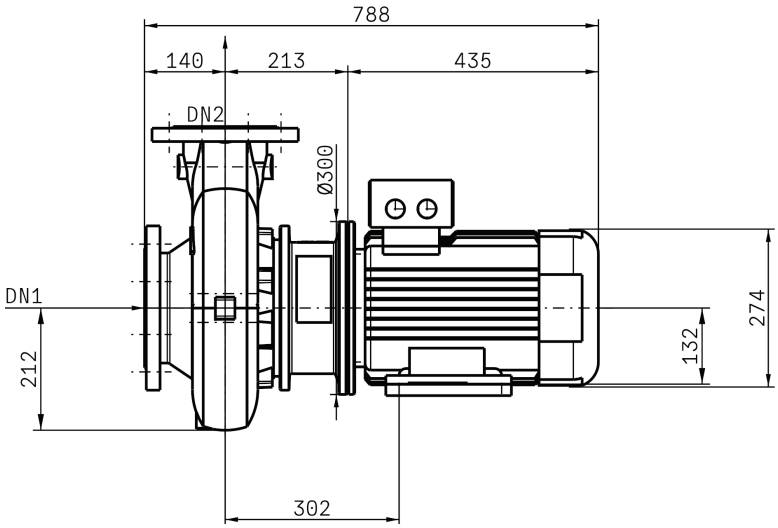
Curve Data

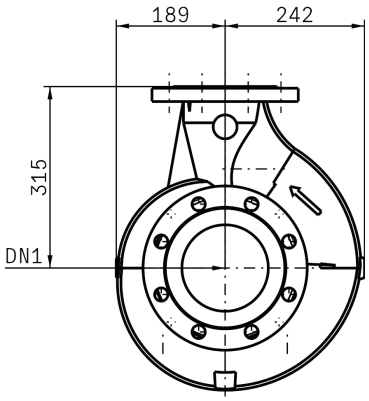
Pump speed	1.473 1/min	Efficiency Pump	79 %
Density Fluid handled	998 kg/m³	Minimum efficiency index MEI	0,7
Kinematic viscosity Fluid handled	1 mm²/s	Maximum power input at duty point	5,95 kW
Flow rate	214 m³/h	NPSH required	2,72 m
Head	8,07 m	Hydraulic impeller diameter	182 mm
		Hydraulic calculation according to standard/ class	EN ISO 9906 Class 3B

Installation plan

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB







Drawing is not to scale.

Dimensions are given in mm

Motor

Motor manufacturer	KSB's choice
Motor size	132M
Rated power Motor	7,5 kW
Number of motor poles	4
Rated speed Motor	1.465 1/min
Terminal box position of motor (looking at the motor shaft)	360 °

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	91,92 kg
Total weight Drive	68 kg
Total weight Pump set	159,9 kg

Installation plan

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB

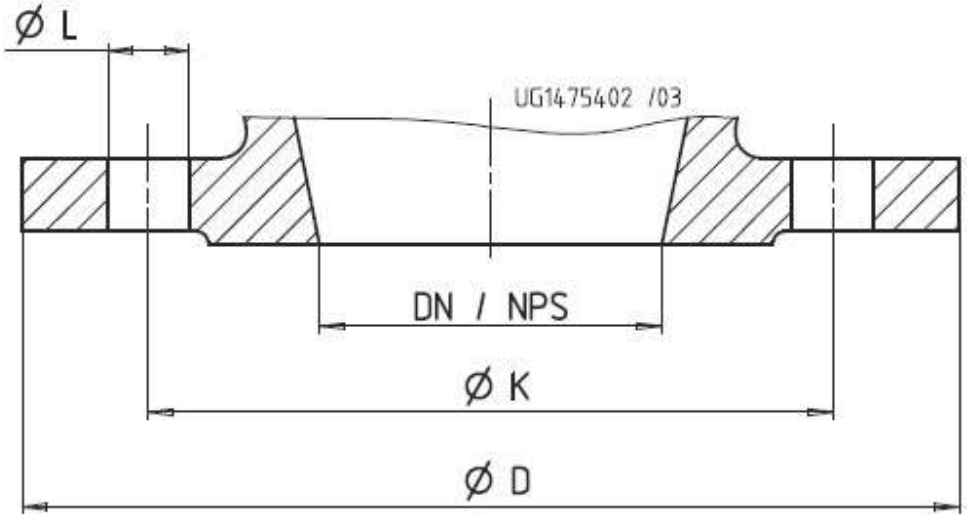
Connect pipelines stress-free

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

Flange dimension sheet

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB



	DN / NPS	Flange standard	Nominal pressure
Suction flange	DN 150	EN1092-2	PN 16
Discharge flange	DN 125	EN1092-2	PN 16

DN / NPS	Flange standard	Nominal pressure	Ø D		Ø K	Ø L	Number of bolts
			Suction flange	Discharge flange			
DN 25	EN1092-1	PN 16	115		85	14	4
DN 25	EN1092-2	PN 16	115		85	14	4
DN 32	EN1092-1	PN 16	140		100	18	4
DN 32	EN1092-2	PN 16	140		100	19	4
DN 32	EN1092-3	PN 10	140		100	18	4
DN 40	EN1092-1	PN 16	150		110	18	4
DN 40	EN1092-2	PN 16	150		110	19	4
DN 40	EN1092-3	PN 16	150		110	18	4
DN 50	EN1092-1	PN 16	165		125	18	4
DN 50	EN1092-2	PN 10	165		125	19	4
DN 50	EN1092-3	PN 16	165		125	18	4
DN 65	EN1092-1	PN 16	185		145	18	4
DN 65	EN1092-2	PN 16	185		145	19	4
DN 65	EN1092-3	PN 10	185		145	18	4
DN 80	EN1092-1	PN 16	230	200	160	18	4
DN 80	EN1092-2	PN 16	229	200	160	19	8

Flange dimension sheet

Etabloc 150-125-200 GG
ETBF150-125-200-GGFBV11 WSFDN4HHB

DN 80	EN1092-3	PN 10	229	200	160	18	8
DN 100	EN1092-1	PN 16	230		180	18	8
DN 100	EN1092-2	PN 16	229		180	19	8
DN 100	EN1092-3	PN 10	229		180	18	8
DN 125	EN1092-1	PN 16	255		210	18	8
DN 125	EN1092-2	PN 16	254		210	19	8
DN 125	EN1092-3	PN 10	254		210	18	8
DN 150	EN1092-1	PN 16	285		240	22	8
DN 150	EN1092-2	PN 16	285		240	23	8
DN 150	EN1092-3	PN 10	285		240	22	8
DN 200	EN1092-1	PN 10	345		295	23	8
DN 200	EN1092-2	PN 10	343		295	22	8
DN 200	EN1092-3	PN 16	343		295	23	8
DN 200	EN1092-2	PN 10	343		295	22	8
DN 250	EN1092-2	PN 10	405		350	23	12
NPS 1	ASME B 16.1	CL 125	115		79,2	15,7	4
NPS 1	ASME B 16.5	CL 150	115		79,2	15,7	4
NPS 1 1/4	ASME B 16.1	CL 125	140		88,9	15,7	4
NPS 1 1/4	ASME B 16.5	CL 150	140		88,9	15,7	4
NPS 1 1/2	ASME B 16.1	CL 125	150		98,6	15,7	4
NPS 1 1/2	ASME B 16.5	CL 150	150		98,6	15,7	4
NPS 2	ASME B 16.1	CL 125	165		120,7	19,1	4
NPS 2	ASME B 16.5	CL 150	165		120,7	19,1	4
NPS 2 1/2	ASME B 16.1	CL 125	185		139,7	19,1	4
NPS 2 1/2	ASME B 16.5	CL 150	185		139,7	19,1	4
NPS 3	ASME B 16.1	CL 125	200		152,4	19,1	4
NPS 3	ASME B 16.5	CL 150	200		152,4	19,1	4
NPS 4	ASME B 16.1	CL 125	229		190,5	19,1	8
NPS 4	ASME B 16.5	CL 150	230		190,5	19,1	8
NPS 5	ASME B 16.1	CL 125	254		215,9	22,4	8
NPS 5	ASME B 16.5	CL 150	255		215,9	22,4	8
NPS 6	ASME B 16.1	CL 125	285		241,3	22,4	8
NPS 6	ASME B 16.5	CL 150	285		241,3	22,4	8
NPS 8	ASME B 16.1	CL 125	343		298,5	22,4	8
NPS 8	ASME B 16.5	CL 150	345		298,5	22,4	8