

**Etaline 065-065-160 GG**

ETL 065-065-160-GGSCV11 WS2DN2AFB

**Operating point 1 Dimensioning operating point**

**Operating conditions (purchaser requirements)**

Target flow rate	56 m <sup>3</sup> /h	Vapour pressure determined	0.02337 bar.a
Target head	25 m		
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 <sup>3</sup>		
Kinematic viscosity Fluid handled	1 mm <sup>2</sup> /s		

**Operating conditions (performance)**

Flow rate	56.02 m <sup>3</sup> /h	Maximum power input at duty point	5.242 kW
Minimum permissible flow rate	12.73 m <sup>3</sup> /h	Maximum power input / curve	7.325 kW
Head	25.01 m	Pump speed	2,958 1/min
Shut-off head	29.96 m	Discharge pressure-max.	2.932 bar
Efficiency Pump	72.65 %		
NPSH required	3.65 m		

**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	Vertical	Minimum efficiency index MEI	0.7
Pump design	Close-coupled	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
Hydraulic impeller diameter	140.8 mm	Casing wear ring design discharge-side	Flat
Impeller type	Radial, closed, multi-channel	Installation chamber Casing cover	Conical (A-type cover)
Free passage	11.6 mm	Bearing bracket size / shaft unit	25
Nut lock for Impeller	No	Pump directive	CE
Swirl break	No		
Support foot	No		

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**Nozzle connections pump**

Nominal diameter Suction nozzle	DN 65	Nominal diameter Discharge nozzle	DN 65
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,C)		
Flange facing type Outlet	Raised face (B,RF,C)		

**Auxiliary connections pump**

6B Fluid Drain	G 1/4 Drilled and plugged	1M Pressure gauge Discharge nozzle	Without Without
6D Fluid Filling and venting	G 1/4 Drilled and plugged	1M Pressure gauge Suction nozzle	Without Without
Connection type 24E Quench liquid inlet	Without Without		
Connection type 5B Venting and drain	G 1/4 Manual globe valve, fitted		

**Shaft sealing**

Shaft seal type	SMS A-type cover, vented	Shaft seal code	Code 11
Determined pressure Seal chamber	-0.13 bar	Shaft seal manufacturer inboard	KSB's choice
		Mechanical seal type inboard	1
		Material Shaft seal inboard	BQ1EGG-WA

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**Materials**

Material Volute casing (102)	EN-GJL-250/A48 CL 35B	Material Bolts/Screws	8.8
Material Casing cover (161)	EN-GJL-250/A48 CL 35B	Hydraulic casing (902.01)	
Material Shaft	C45+N	Material Screw plug Hydraulic casing (903.01)	ST
Material Impeller (230)	EN-GJL-250/A48 CL 35B	Material Static seal Screw plug Volute casing	A4/AISI 316
Material Static seal Hydraulic casing (400.10)	DPAF DW001	Material Nut Impeller fastening (920.95)	(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 (502.02)	JL/LAMELLAR GRAPHITE CAST IRON		
Material Shaft protecting sleeve (523)	(CRNIMO ST INT)		
Material Bearing bracket	WITHOUT		
Material Static seal Discharge cover	DPAF DW001		
Material Drive lantern	EN-GJL-250/A48 CL 35B		
Material Support foot	WITHOUT		

**Driver**

Electric motor	No	Rated speed Motor	2,935 1/min
Drive concept	With electric actuator	Number of motor poles	2
Drive standard, mechanical	IEC	Rated power Motor	7.5 kW
Drive standard electric	IEC		
Motor construction type	IM V1 (IM3011) IEC 60034-7		
Motor size	132S		

**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	Polyco/acrylate polym w-based
Thickness Top coat	50 µm
Colour Top coat	RAL2002 Pastel Orange

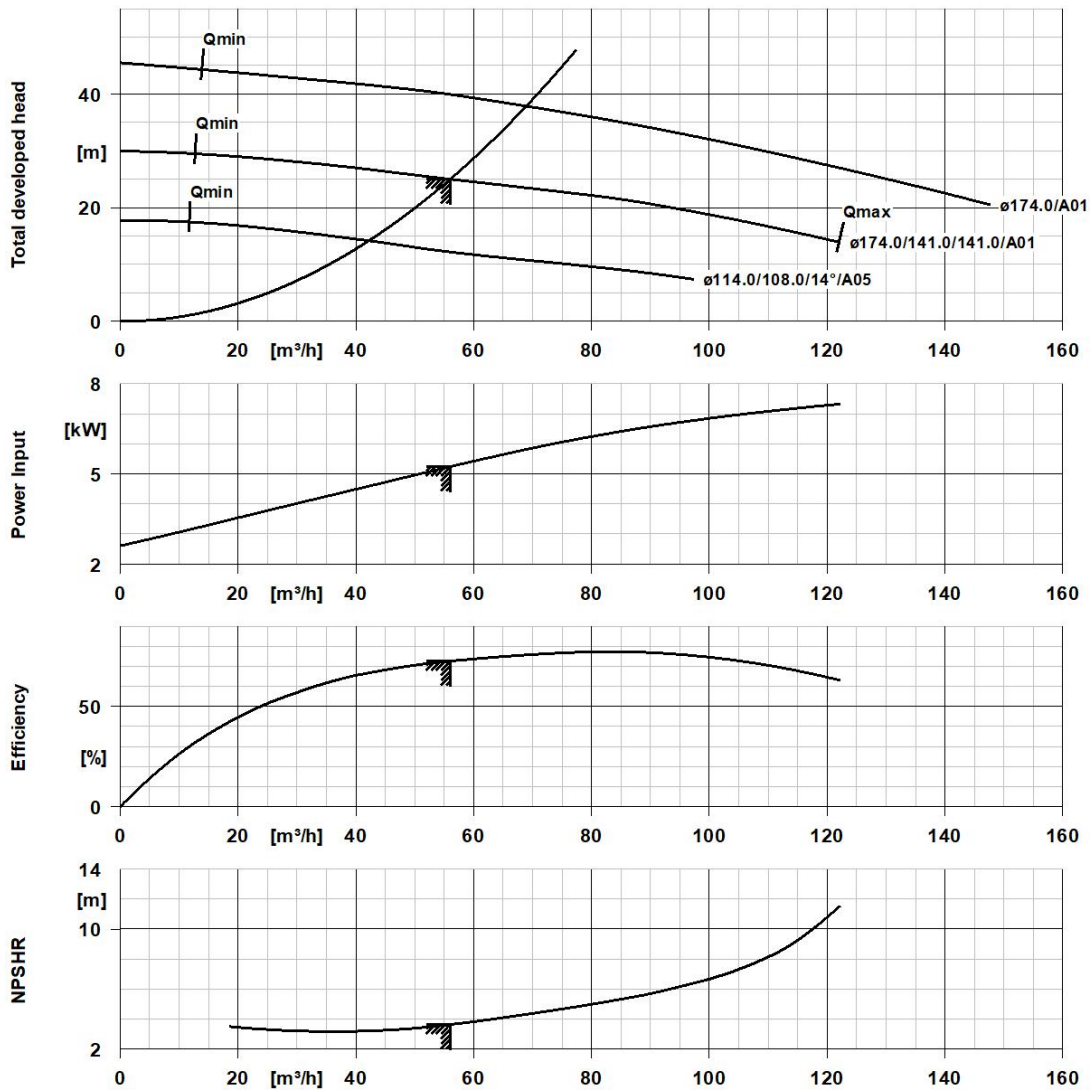
**Packaging**

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

**Nameplates**

Duplicate name plate	No
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**Curve Data**

Pump speed	2,958 1/min	Efficiency Pump	72.65 %
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	5.24 kW
Flow rate	56.02 m³/h	NPSH required	3.65 m
Head	25.01 m	Hydraulic calculation according to standard/class	EN ISO 9906 class 3B

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Dimensions are given in mm

### Motor

Rated power Motor	7.5 kW
Rated speed Motor	2,935 1/min

### Connections

Nominal diameter Suction nozzle	DN 65
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	37.1 kg
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### 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