

Data sheet



Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number:
Item no.: 200
Date:
Page: 1 / 9

ETL 050-050-250 GGS AV10D200304 BKS BIE5
Ohne Gehäuse, ohne Frequenzumrichter

Version no.: 1

Operating data

Requested flow rate	33.00 m ³ /h	Actual flow rate	32.99 m ³ /h
Requested developed head	16.50 m	Actual developed head	16.49 m
Pumped medium	Water, cooling water closed cooling circuit	Efficiency	62.6 %
Pumped medium details	Not containing chemical and mechanical substances which affect the materials	MEI (Minimum Efficiency Index)	≥ 0.70
Max. ambient air temperature	20.0 °C	Power absorbed	2.37 kW
Min. ambient air temperature	20.0 °C	Pump speed of rotation	1500 rpm
Fluid temperature	6.0 °C	NPSH required	2.40 m
		Permissible operating pressure	16.00 bar.g
Fluid density	1000 kg/m ³	Discharge press.	1.62 bar.g
Fluid viscosity	1.50 mm ² /s	Shutoff head	20.10 m
Suction pressure max.	0.00 bar.g	Min. allow. flow for continuous stable operation	5.31 m ³ /h
Mass flow rate	9.16 kg/s	Min. allow. mass flow for continuous stable operation	1.47 kg/s
Max. power on curve	2.92 kW	Design	Twin system one full duty + one standby pump Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2
Max. allow. mass flow	15.44 kg/s		

Design

Pump standard	Without	Shaft seal type	1
Back pull out unit will not fit in an Etaline ordered before Feb. 23, 2014		Material code	Q1Q1X4GG
Only back pull-out unit without pump casing		Shaft seal code	10
Design	Close-coupled in-line	Sealing plan	Single-acting mechanical seal with vented chamber (A- type casing cover, taper bore)
Orientation	Vertical	Seal chamber design	Conical seal chamber (A-type cover)
Suction nominal dia.	DN 50	Contact guard	With
Suction nominal pressure	PN 16	Wear ring	Casing wear ring
Suction position	180° (down)	Impeller diameter	232.0 mm
Suction flange drilled according to standard	EN1092-2	Free passage size	8 mm
Discharge nominal dia.	DN 50	Direction of rotation from drive	Clockwise
Discharge nominal pressure	PN 16	Silicon free pump assembly	Yes
Discharge position	top (0°/360°)	Bearing bracket construction	Close-coupled
Discharge flange drilled according to standard	EN1092-2	Bearing bracket size	25
Surface type	Raised face (form B to EN 1092)	Bearing type	Anti-friction bearings
Shaft seal	Single acting mechanical seal	Lubrication type	Grease
Shaft seal manufacturer	KSB	Color	Vermilion (RAL 2002)

Data sheet



Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number:
Item no.: 200
Date:
Page: 2 / 9

ETL 050-050-250 GGS AV10D200304 BKS BIE5
Ohne Gehäuse, ohne Frequenzumrichter

Version no.: 1

Driver, accessories

Driver type	Electric motor	Cos phi at 4/4 load	0.69
Drive standard mech.	IEC	Motor efficiency at 4/4 load	90.4 %
Model (make)	KSB SuPremE®	Temperature sensor	3 PTC resistors
Type series motor manufacturer	SuPremE C2 (with mounting plate for PumpDrive 2, non removable)	Terminal box position	0° same orientation Viewed from the drive
Drive supplied by	Standard motor supplied by KSB - mounted by KSB	Motor winding	400 V
Motor const. type	V1	Connection mode	Star
Motor size	100L	Motor cooling method	Surface cooling
Efficiency class	Efficiency class IE5 acc. IEC/TS 60034-30-2 (2016) – free of magnets.	Motor material	Aluminium
Motor speed	1500 rpm	Motor noise pressure level	60 dBA
Frequency	50 Hz	Driver colour	Same as the pump
Designed for operation with frequency inverter	Yes	CE-approval	Yes
Rated voltage	400 V	EAC Approval	Yes
Rated power P2	3.00 kW	Ambient temperature	40.0 °C
Available reserve	26.69 %	Max. absolute humidity	30 %
Rated current	7.8 A	Temp. sensor mtr. bearing	Without
Insulation class	F to IEC 34-1	UKCA conformity	Yes
Motor enclosure	IP55		

Materials G

Casing cover (161)	Grey cast iron EN-GJL-250/A48CL35B	Joint ring (411)	Steel ST
Shaft (210)	Tempered steel C45+N	Shaft sleeve (523)	CrNiMo steel
Impeller (230)	Grey cast iron EN-GJL-250/A48CL35B	Stud (902)	Steel 8.8
Motor stool (341)	Grey cast iron EN-GJL-250/A48CL35B	Impeller nut (922)	Steel 8
Flat gasket (400)	DPAF DW001	Key (940)	Steel C45+C / A311 GR 1045 CLASS A

Packaging

Packaging category	A0 Packing acc. to KSB choice	Packaging for transport	Truck
Packaging for storage	Indoor		

Nameplates

Nameplates language	International
---------------------	---------------

Performance curve

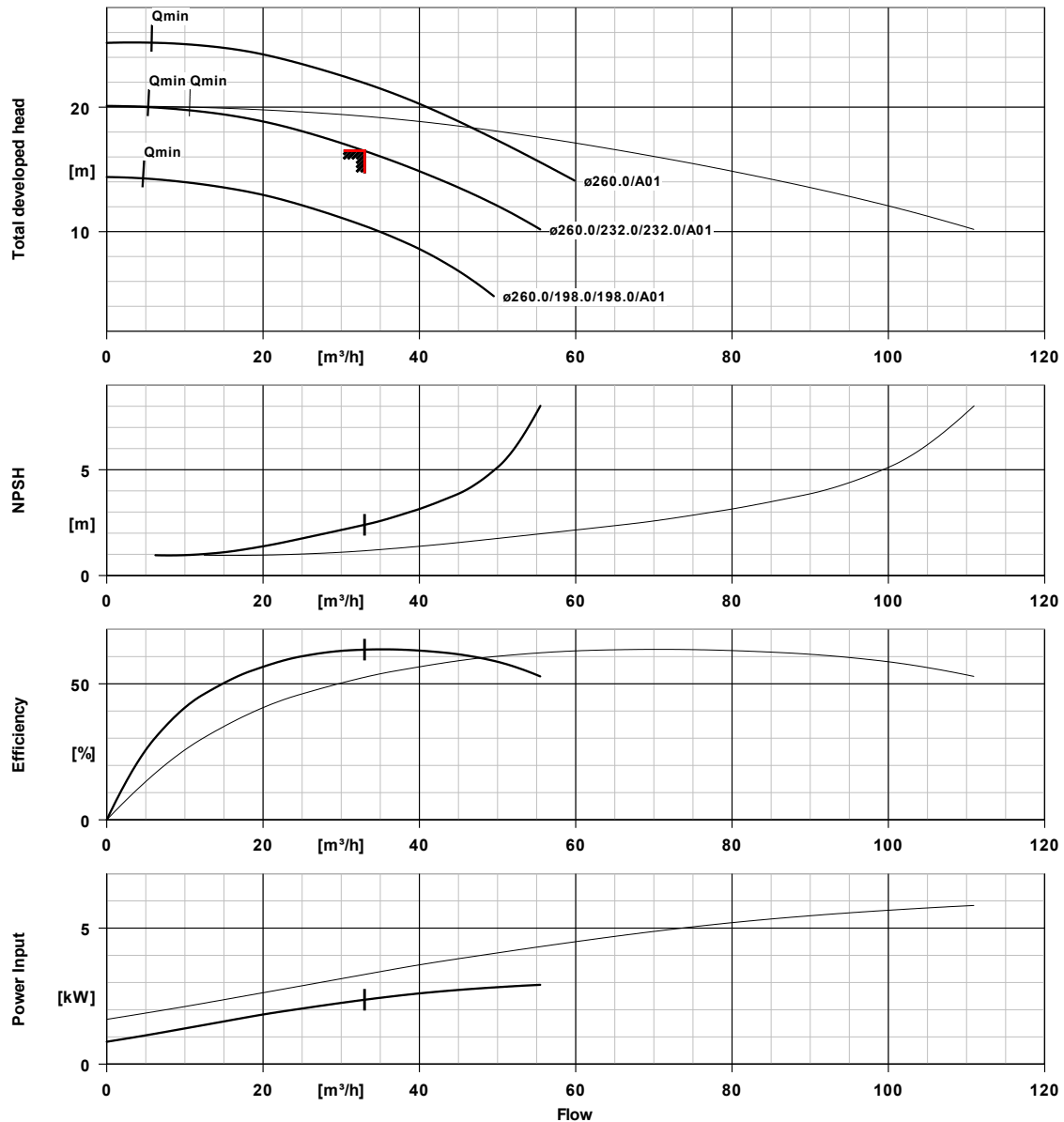


Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number:
Item no.:200
Date:
Page: 3 / 9

ETL 050-050-250 GGS AV10D200304 BKS BIE5
Ohne Gehäuse, ohne Frequenzumrichter

Version no.: 1



Curve data

Speed of rotation 1500 rpm
Fluid density 1000 kg/m^3
Viscosity $1.50 \text{ mm}^2/\text{s}$
Flow rate $32.99 \text{ m}^3/\text{h}$
Requested flow rate $33.00 \text{ m}^3/\text{h}$
Total developed head 16.49 m
Requested developed head 16.50 m

Efficiency 62.6 %
MEI (Minimum Efficiency Index) ≥ 0.70
Power absorbed 2.37 kW
NPSHR 2.40 m
Curve number K1159.454/28
Effective impeller diameter 232.0 mm
Acceptance standard Tolerances to ISO 9906 Class 3B; below 10 kW acc. to paragraph 4.4.2

Speed curve



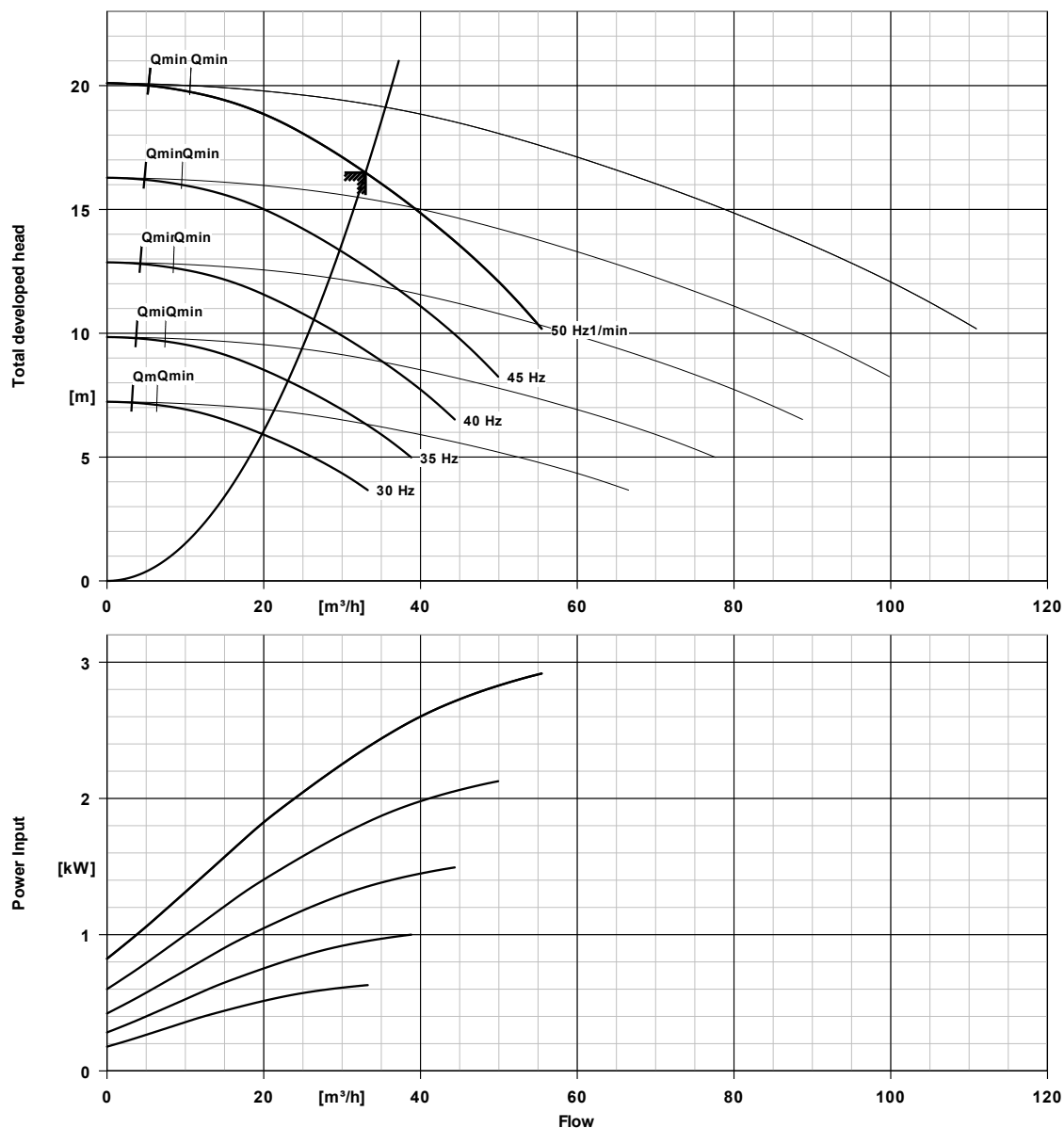
Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number:
Item no.:200
Date:
Page: 4 / 9

ETL 050-050-250 GGS AV10D200304 BKS BIE5

Version no.: 1

Ohne Gehäuse, ohne Frequenzumrichter



Curve data

Fluid density 1000 kg/m^3
Viscosity $1.50 \text{ mm}^2/\text{s}$
Flow rate $32.99 \text{ m}^3/\text{h}$
Requested flow rate $33.00 \text{ m}^3/\text{h}$

Total developed head 16.49 m
Requested developed head 16.50 m
MEI (Minimum Efficiency Index) ≥ 0.70
Effective impeller diameter 232.0 mm

Installation plan



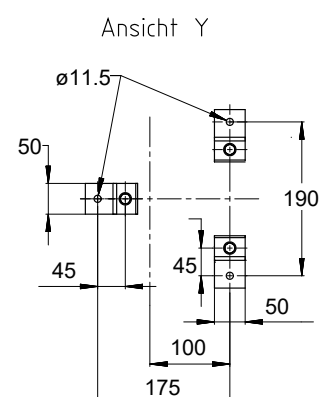
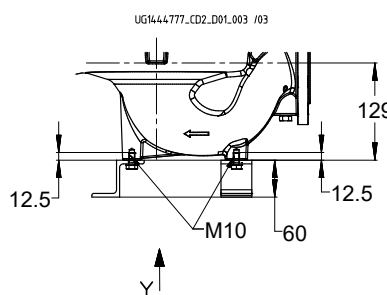
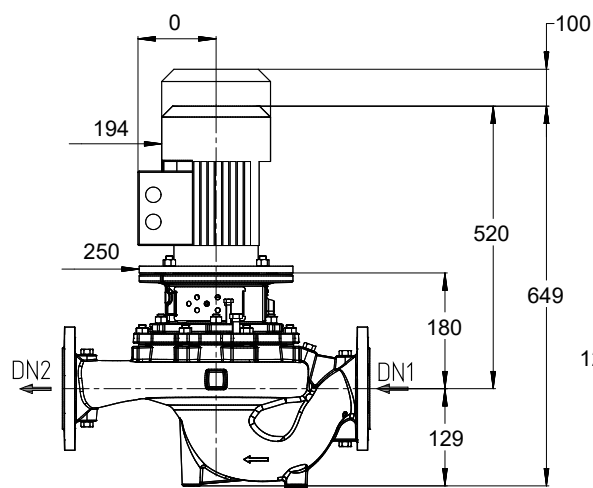
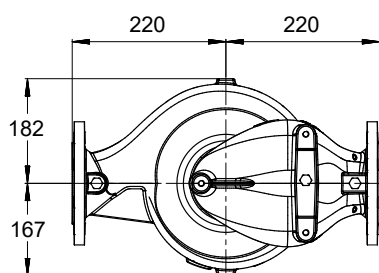
Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number:
Item no.:200
Date:
Page: 5 / 9

ETL 050-050-250 GGS AV10D200304 BKS BIE5

Version no.: 1

Ohne Gehäuse, ohne Frequenzumrichter



Drawing is not to scale

Dimensions in mm

Motor

Motor manufacturer	KSB
Motor size	100L
Motor power	3.00 kW
Number of poles	4
Speed of rotation	1500 rpm
Position of terminal box	0° same orientation Viewed from the drive

Connections

Suction nominal size DN1	DN 50 / EN1092-2
Discharge nominal size DN2	DN 50 / EN1092-2
Nominal pressure suct.	PN 16
Rated pressure disch.	PN 16

Weight net

Pump	39 kg
Motor	26 kg
PumpDrive 2	6 kg
Total	71 kg

Connect pipes without stress or strain!

For auxiliary connections see separate drawing.

Installation plan



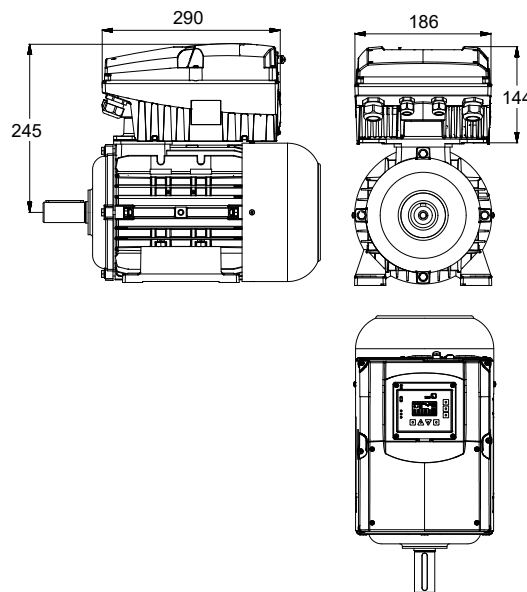
Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number:
Item no.:200
Date:
Page: 6 / 9

ETL 050-050-250 GGS AV10D200304 BKS BIE5
Ohne Gehäuse, ohne Frequenzumrichter

Version no.: 1

Supplementary drawing for PumpDrive



Drawing is not to scale

Connection plan

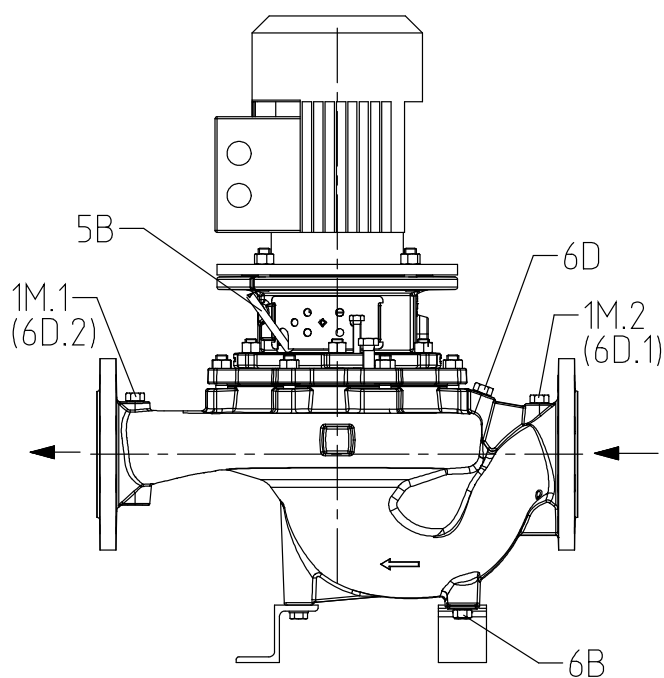


Customer item no.:
Communication dated:
Doc. no.:
Quantity: 1

Number:
Item no.:200
Date:
Page: 7 / 9

ETL 050-050-250 GGS AV10D200304 BKS BIE5
Ohne Gehäuseschutz, ohne Frequenzumrichterline

Version no.: 1



UG1444722_D01_003/ 02

Connections

Pump casing variant

1M.1 Pressure gauge connection

1M.2 Pressure gauge connection

6B Pumped liquid drain

6D Pumped medium - filling / venting

5B venting

G 1/4

G 1/4

G 1/4

G 1/4

G 1/4

XX46

Drilled and plugged.

Drilled and plugged.

Drilled and plugged.

Drilled and plugged.

Closed with venting plug