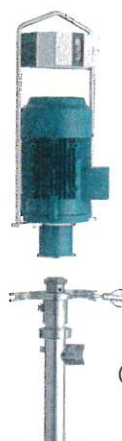


made of Stainless Steel



rigid



QCC



...and Versions SD/EX

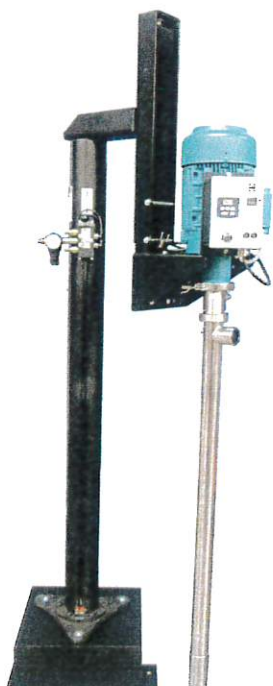
HIGH VISCOSITY DRUM PUMPS

**Eccentric Screw Pumps
for highly viscous liquids**



The right pump for

- fixed applications**
- mobile applications**
- easy to clean for multiple applications**
- operating in hazardous locations**



g[®]
grün-pumpen
take out, what's in.

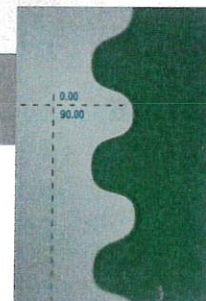
Grün High Viscosity Pumps go along with you through thick and thin



High viscosity pumps in operation...

with paint, glue and in hazardous locations

special thread for easy handling and perfect cleaning



A stepped programm for a wide choise of applications

4 versions of the pump for mounting inside and outside drums and containers

Version rigid

dedicated for fixed applications

- : motor and pump fixed coupled
- : easy to handle with spring balancer (lifting device)
- : special thread for simple disassembly (service, cleaning)
- : less parts, competitive price



Version QCC (Quick Change Coupling)

ideal for mobile applications

- : simple motor and pump separation
- : easy handling of motor and pump (separated)
- : no spring balancer (lifting device) necessary
- : one motor suitable for different pumps
- : special thread for simple disassembly (service, cleaning)



Version SD (Simple Disassembly)

functional design for frequent disassembly (service, cleaning)

- : simple motor and pump separation
- : separable drive shaft for easy cleaning and service in multiple applications
- : easy disassembly of the pump without tools or training
- : special thread for simple disassembly (service, cleaning)



Version EX (Explosion proof)

with safe use in hazardous locations

- : Ex-proof certification ATEX
- : certification for highly combustible liquids
- : simple motor and pump separation
- : special thread for simple disassembly (service, cleaning)



HIGH VISCOSITY DRUM PUMPS

**Eccentric Screw Pumps made of Stainless Steel
for highly viscous liquids**

Ord.-No

Reference values for the right pump						
Liquid	Viscosity	Temp.	Gasket	Stator	Rotation speed	Q max
	mPas	°C			rpm	l/min
honey	2.500	40 °C	MS*	NBR	900	50
liquid soap	4.000	20 °C	MS	NBR	900	50
fruit concentrates	1.600	20 °C	MS	NBR	900	50
glucose	20.000	35 °C	MS	NBR	900	50
glycerin	1.500	20 °C	MS	NBR	900	50
hand cream	8.000	20 °C	MS	NBR	900	50
resins	10.000	20 °C	MS	PTFE	900	50
jam, marmelade	8.500	20 °C	MS	NBR	900	50
cosmetics	20.000		MS	PTFE	900	50
paint	10.000		MS	PTFE	900	50
glue	4.000	20 °C	SB**	NBR	900	50
molasse	100.000		SB	NBR	300	5
mineral oil	10.000		MS	NBR	900	50
vegetable oil	2.000	20 °C	MS	NBR	900	50
polyole	60.000	20 °C	SB	NBR	500	14
shampoos	3.000	20 °C	MS	NBR	900	50
paste	50.000		MS	NBR	500	14
tomato purree	4.000	20 °C	MS	NBR	900	50
tomato ketchup	1.500	20 °C	MS	NBR	900	50
tooth paste	>70.000	40	SB	PTFE	300	5

* MS: mechanical seal

** SB: stuffing box

Description

Application

Advantages

Price

Recommendation

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take out, what's in.

				
Motor-Pump with safing bracket SB	Motor-Pump rigid coupled	Motor-Pump with quick change coupling (QCC)	Pump for simple disassembly (SD)	Pump with Ex-Certification
652-...	650-.....	651-.....	654-.....	653-.....
				
Light version of the eccentric pump, disconnection of motor-pump by moving the safing bracket Low flow rate, medium viscosities, mobile operation, for frequent drum change, using one motor and several pumps Light weight pump and motor, quick disconnection of the motor, start/stop switch with integrated overload protection, typical style of drum pumps	Motor-pump is one fixed coupled unit Fixed installation in containers and facilities, seldom moving the pump (weight) short overall length above the pressure outlet, less parts, long time service intervals	Motor-Pump with QCC coupled, motor-pump separable without tools, patent-registered solution Mobile operation of the pump, frequent moving of the pump, one motor for several pumps Quick separable motor, no spring balancer (lifting device) necessary, easy and safe handling of motor and pump, compliance with employment protection (weight)	Design like QCC, additional separable drive shaft for quick pump disassembly, no tools needed, extreme short overall length possible Application like QCC additional frequent disassembly of the pump (cleaning, service, etc), cleaning in washing machines, special applications outside of drums, containers, tanks Advantages like QCC, additional no tools needed for disassembly, quick disassembly, no specialist knowledge needed, safe in cleaning process, wetted components fit for washing machines, high flexibility	ATEX Ex II 1/2 G c IIB T4, design like QCC, additional universal-joint shaft, PTFE-Stator and MS adapted to Ex-requirements Application like QCC additional operation in hazardous locations, pumping highly combustible liquids Advantages like QCC, certified for operation in hazardous locations
Ideal for smaller quantities and higher pressure ranges than a centrifugal drum pump	If the pump is seldom moved, if spring balancer (lifting device) is available, for fixed installation in industrial equipment	Perfect for mobile applications in drums and containers, frequent lifting out of the drum, simple handling important for daily usage	Ideal version, if easy cleaning and simple disassembly are the main requirements in the application.	Obligatory for pumping highly combustible liquids, operation in hazardous locations
652-... solid fixed in the drum hole with drum adapter stainless steel	650-, 651-, 653-, 654-... ready for the use with mounting bracket and overload protection switch (includes start/stop function, cable and plug), solid fixed in the drum hole with adapter stainless steel			Attention: use Ex-protection switch, equipotential cable

Technical specificatoins of eccentric screw pumps ds

Type		ds 8.1	ds 20.1	ds 40.1	ds 40.2	ds 80.1
capacity (max)	l/min	15	15	25	25	50
delivery head (max)	bar	4	6	6	10	6
viscosity (max)	mPas	5.000	100.000	100.000	100.000	80.000
materials (pump)		tube, drive shaft, rotor made of SS 1.4571				
tube length (L)	mm	1000 1200	1000	1000	1100	1100
tube diameter (D)	mm	40	54	54	54	54
discharge thread	OT	1 1/4"	1 1/2"	1 1/2"	1 1/2"	1 1/2"
weight	kg	4	8	8	8	8
max. temperature	NBR	80				
	PTFE	140				
materials (seal)	o-ring	FPM				
mechanical seal subject to rotation	MS	carbon, ceramic				
mechanical seal EX subject to rotation	MS	-				
stuffing box independent of the rotation	SB	-				
stator materials		NBR light, PTFE				

Typ		ds 8.1	ds 20.1	ds 40.1	ds 40.2	ds 80.1
		MS	MS	MS	MS	MS
ord.-no 652-000X	L	1000 1200				
bayonet coupling	NBR	5 6	-	-	-	-
	PTFE	2 3	-	-	-	-
ord.-no			650-	650-	650-	650-
rigid	NBR		0300	0304	0301	0305
	PTFE		0316	0320	0317	0321
ord.-no			651-	651-	651-	651-
QCC	NBR		0001	0005	0002	0006
	PTFE		0009	0013	0010	0014
ord.-no			654-	654-	654-	654-
SD	NBR		0001	0005	0002	0006
	PTFE		0009	0013	0010	0014
ord.-no			653-	653-	653-	653-
Ex:	PTFE		0001	-	0002	-

Other type-sizes on demand, submersible length individual available, discharge thread on customers requests available

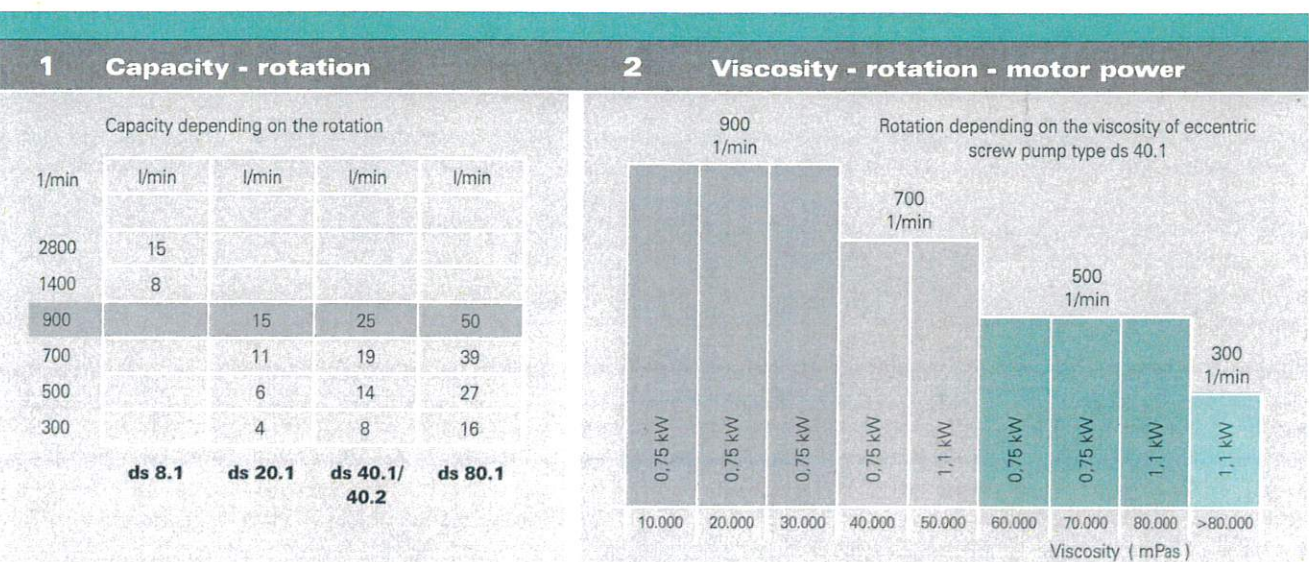
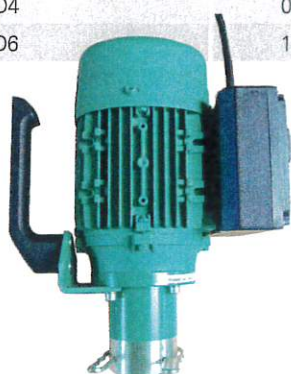
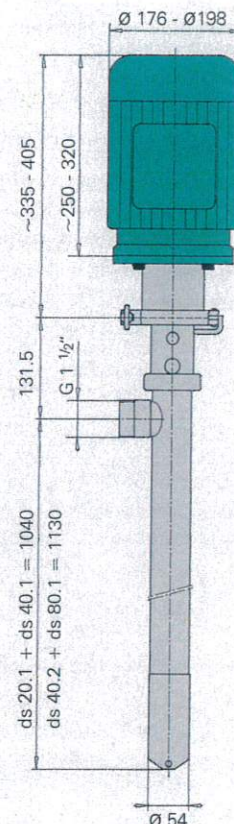


Table for the motor choose

		gear-motor					
	rotation (rpm)	300	500	700	900	1400	2800
motor type	power	ord.-no	ord.-no	ord.-no	ord.-no	ord.-no	ord.-no
IP55, 50 Hz with terminal box	kW / V / phases	kg	kg	kg	kg	kg	kg
safing bracket						500-	500-
on/off protection switch	0,37+0,55/ 230 / 1					0073	7 0044 7
without protection switch	0,37 / 230/400 / 3					0051	7 0039 7
rigid		550-	550-	530-	530-		
	0,37 / 230/400	0041 14	0044 14	0101 13			
	0,55 / 230/400	0042 17	0045 17	0102 16	0106 14		
without protection switch	0,75 / 230/400	0043 18	0046 18	0103 20	0107 16		
	1,1 / 230/400			0104 23	0108 21		
	1,5 / 230/400			0105 25	0109 24		
QCC, SD		550-	550-	530-	530-		
	0,37 / 230/400	0017 14	0020 14	0036 13			
	0,55 / 230/400	0018 17	0021 17	0037 16	0047 14		
without protection switch	0,75 / 230/400	0019 18	0022 18	0038 20	0040 16		
	1,1 / 230/400			0039 23	0041 21		
	1,5 / 230/400			0088 25	0042 24		
Ex II 2 G Ex e II T3				530-	530-		
	0,65 / 230/400			0043 26	0051 14		
without protection switch	0,95 / 230/400			0044 31	0045 20		
	1,35 / 230/400			0095 28	0046 27		
QCC, compressed air					520-		
D4	0,6				0009 10		
D6	1,1				0010 14		



Single phase induction motor with on/off overload protection switch. The right combination for medium viscous fluids with all advantages of a quick change coupling by the safing bracket.

Eccentric screw pumps in operation

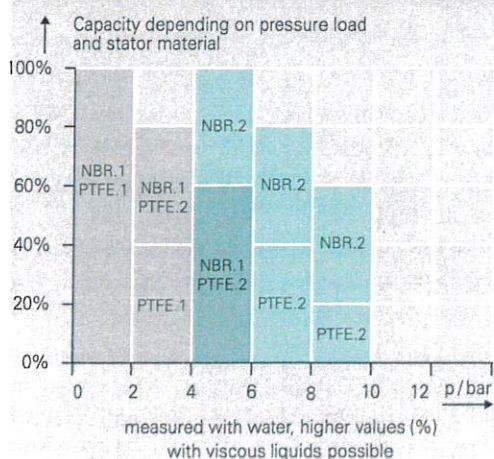
The hydraulic performance of eccentric screw pumps can be influenced by the drive. The capacity variation is nearly proportional to the motor speed variation (s. table 1). Increasing viscosity reduces the flowability of the liquid. By reducing the motor speed the pump can be adjusted to the liquid (s. table 2). Low rotation prevents damage from highly viscous liquids

Theoretically the flow rate of the eccentric screw pump is independent of the discharge load. But in practise we see that depend-

ing on the discharge load. The leakage gap between rotor and stator grows with an increasing discharge load (s. table 3).

The characteristics in table 3 are measured with water. Increasing viscosity reduces the influence of the discharge load. For sizing the right pump you must consider the relation of capacity and pressure load.

3 Pressure load - capacity



The way to the right motor drive

In table 2 you see the motors with power (kW) and rotation (rpm) related to the viscosity for the pump size 40.1.

For the smaller type 20.1 you can choose a motor one power level lower.

For the bigger types 40.2 and 80.1 you must choose a motor one power level higher.



Important accessories for the eccentric screw pumps



Wall fastening for applications in suction mode outside of drums and containers



Tripod for applications outside of drums and containers with positive suctionhead

Hose connector with wing nut
IT 1 1/2" ND 32 or ND 38

Drum adapter for solid fixing in the drum OT 2" d=52 mm

Foot strainer keeps particles away

Overload protection switch ready-for-use



More useful accessories see pricelist and on demand

Vertretung:



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