

# Technical data sheet

Eccentric worm-drive pumps F 550 TR and F 560 TR FOOD with clamp on the bearing flange



More than just pumps

## Eccentric worm-drive pumps F 550 TR and F 560 TR FOOD with clamp on the bearing flange



### Advantages/features:

- ▶ For use with VISCOFLUX mobile S and VISCOFLUX
- ▶ Also suitable for horizontal installation
- ▶ For transferring especially high-viscosity media
- ▶ With clamp on bearing flange
- ▶ No twisting open of the connection between pump and motor under the action of extreme forces and therefore no leaks
- ▶ Easy and fast disassembly
- ▶ All parts contacting media can be cleaned, disinfected or sterilised
- ▶ Drive with three-phase motors or compressed air motors
- ▶ F 550 for industrial use
- ▶ F 560 FOOD suitable for contact with foods complying with EG 1935/2004 and FDA CFR 21



Technical data/type	F 550 TR	F 560 TR
Version	Industry	FOOD
Rotation direction	Anti-clockwise	Anti-clockwise, Anti-clockwise/clockwise
Shaft	Cardan shaft, pinned	Cardan shaft, bolted / pinned
Mechanical seal	Open	Closed
<b>Connections</b>		
Bearing flange connection		Clamp 2"
Centring flange connection	Bolted	Clamp 2"
Outer tube connection		Clamp 2"
Suction-side connection		Clamp 2"
Discharge connection	Thread G 1 1/2 A	Clamp 2"
<b>Materials</b>		
Outer tube		Stainless steel
Bearing flange	Aluminium	Stainless steel
Centring flange	Stainless steel	Stainless steel
Seal	FKM	FKM
Mechanical seal	Oxide ceramic, O-ring FKM	SiC, O-ring FKM, FOOD/FDA
Shaft		Stainless steel
Eccentric worm		Stainless steel
Stators (not scope of supply)	Insertion stator, FKM / NBR / PTFE	Insertion stator, NBR / PTFE, FOOD
Stator housing (not scope of supply)	Stainless steel, clamp 2"	Stainless steel, clamp 2", FOOD
<b>Dimensions</b>		
Outer tube diameter (mm)	54 (pump and stator housing)	
Eccentric worm diameter (mm)	26	
Immersion depth, standard (mm)	1,000, 1,200	400, 1,000, 1,200
<b>Operating range</b>		
Container	Barrels, IBCs, tanks, mixing containers, etc.	
Use with drum-emptying system	VISCOFLUX mobile S	VISCOFLUX mobile S, VISCOFLUX
Installation	Vertical	Vertical / horizontal
Medium temperature max. (°C)	0 to +100	
Ambient temperature (°C)	0 to +40	
Pump weight 400/1,000/1,200 (kg)	- / 6.4 / 7.1	6.2 / 8.2 / 8.8
Stator weight, max.	0.5	
Stator housing weight, max.	0.5	
<b>Certificates</b>		
Food approvals		
<b>Performance data</b>		
Flow rate max., l/min	50	50
Delivery head max., bar	8	
Viscosity max., mPas	Paste	
<b>Motors</b> (not scope of supply)	Three-phase / compressed air motors	

# Design, installation example and dimensions

## Eccentric worm-drive pump F 550 TR

### Design:



Clamp connection between bearing flange and outer tube



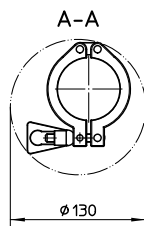
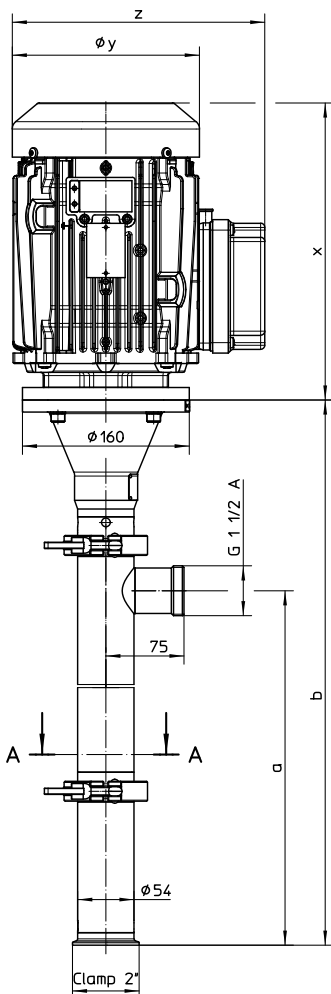
Clamp connection between outer tube and stator



Clamp connection between eccentric worm-drive pump and follower plate

### Dimensions:

#### Eccentric worm-drive pump F 550 TR



Installation dimension



550 TR With clamp on bearing flange

#### Immersion depths (id)

id (mm)	a (mm)	b (mm)
1,200	1,240	1,423
1,000	1,040	1,223

# Design, installation example and dimensions

## Eccentric worm-drive pump F 560 TR FOOD

### Design:



Clamp connection between bearing flange and centring flange, centring flange and outer tube



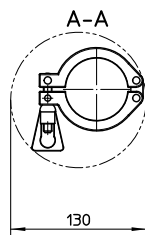
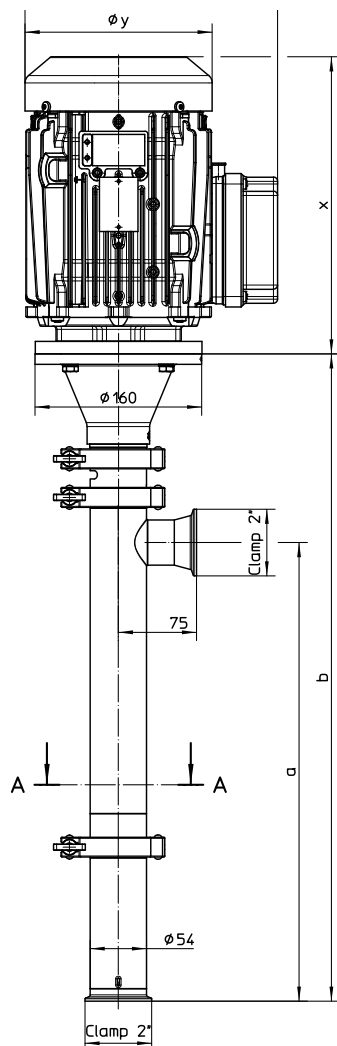
Individual parts of upper area: bearing flange, shaft, centring flange, mechanical seal, hinged clamp (2x) and outer tube



Individual parts of lower area: hinged clamp, stator housing, stator and eccentric worm

### Dimensions:

#### Eccentric worm-drive pump F 560 TR FOOD



Installation dimension

#### Immersion depths (id)

id (mm)	a (mm)	b (mm)
1,200	1,240	1,421
1,000	1,040	1,221
400	440	621



VISCOFLUX mobile S with an F 560 TR with a clamp on the bearing flange for transferring high-viscosity pasty media

# Performance diagrams<sup>1)</sup>

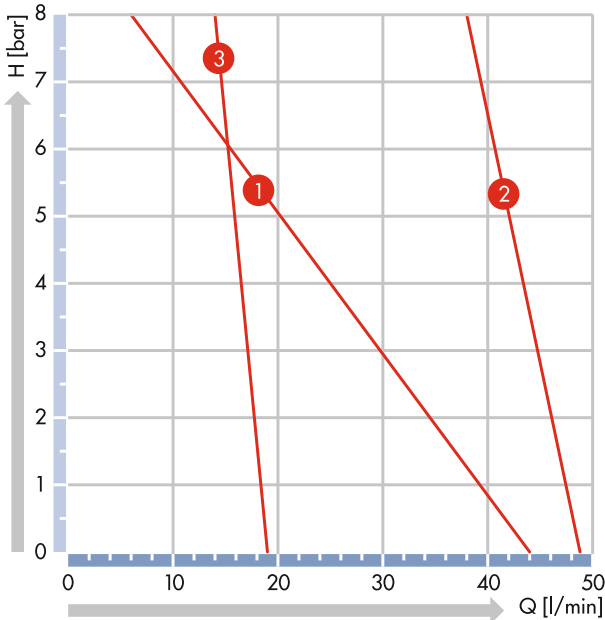
Eccentric worm-drive pumps F 550 TR and F 560 TR FOOD



More than just pumps

Performance diagram:

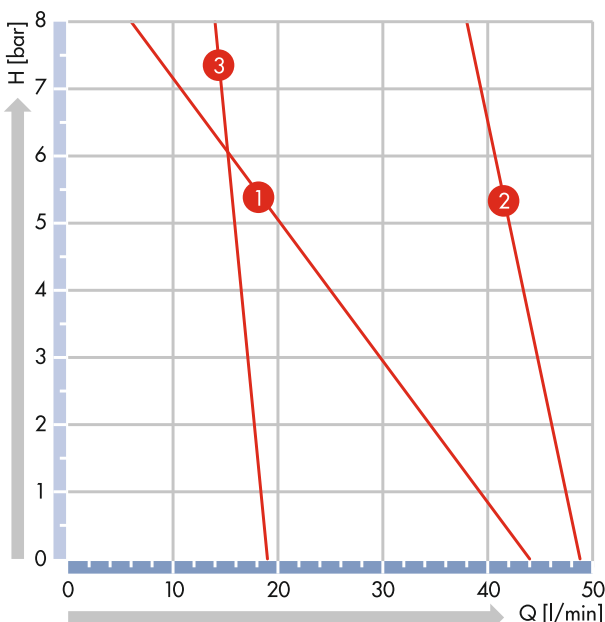
## Eccentric worm-drive pump F 550 TR



Pump type	Viscosity in mPas	Output curve no.
F 550 S2-54/26	1	1
	1,000 - 2,000	2
	20,000 - 25,000	3

Performance diagram:

## Eccentric worm-drive pump F 560 TR FOOD



Pump type	Viscosity in mPas	Output curve no.
F 560 S3-54/26	1	1
	1,000 - 2,000	2
	20,000 - 25,000	3

### Three-phase motors for use with eccentric worm-drive pumps:

Viscosity up to 25,000 mPas: 0.75 kW at a speed of 930 rpm.

Viscosity from 50,000 mPas: 1.1 kW at a speed of 700 rpm (caused by the lower flow speed of the transferred medium)

1) At higher viscosity levels, the delivery quantity decreases corresponding to the flow speed of the medium. Measured values  $\pm 10\%$  at 930 rpm.

The delivery quantity is dependent on the flow speed of the medium.

# Part numbers

Eccentric worm-drive pumps F 550 TR and F 560 TR FOOD with clamp on the bearing flange and suitable stators, hose connections and motors

## Eccentric worm-drive pumps F 550 TR

Type	Use with	Number clamps on bearing flange	Material of bearing flange	Mechanical seal	Length	Part number
<b>Anti-clockwise rotation</b>						
F 550 S2-54/26-1,000, GW, TR, Clamp	VISCOFLUX mobile S	1	Aluminium	Open	1,000	10-550 23 670
F 550 S2-54/26-1,200, GW, TR, Clamp	VISCOFLUX mobile S	1	Aluminium	Open	1,200	10-550 23 672

## Eccentric worm-drive pumps F 560 TR FOOD suitable for contact with foods complying with EG 1935/2004 and FDA CFR 21



Type	Use with	Number clamps on bearing flange	Material of bearing flange	Mechanical seal	Length	Part number
<b>Anti-clockwise rotation</b>						
F 560 S3-54/26-400 TR, FOOD, Clamp	VISCOFLUX	2	Stainless steel	Closed	400	10-560 25 404
F 560 S3-54/26-1,000 TR, FOOD, Clamp	VISCOFLUX mobile S	2	Stainless steel	Closed	1,000	10-560 25 470
F 560 S3-54/26-1,200 TR, FOOD, Clamp	VISCOFLUX mobile S	2	Stainless steel	Closed	1,200	10-560 25 472
<b>with anti-clockwise/clockwise rotation</b>						
F 560 S3-54/26-400 TR, FOOD, Clamp	VISCOFLUX	2	Stainless steel	Closed	400	10-560 23 203

## Suitable stators and stator housing

Type	Version	Material	Part number
<b>For eccentric worm-drive pump F 550 TR</b>			
Insertion stator 54/26 FKM black		FKM	10-550 25 546
Insertion stator 54/26 FKM PTFE		PTFE	10-550 25 626
Insertion stator 54/26 NBR white		NBR	10-550 25 545
Stator housing 54/26 TR		Stainless steel	10-560 28 149
<b>For eccentric worm-drive pump F 560 TR, in FOOD version</b>			
Insertion stator 54/26 FKM PTFE	FOOD	PTFE	10-550 25 626
Insertion stator 54/26 NBR white	FOOD	NBR	10-550 25 545
Stator housing 54/26 TR	FOOD	Stainless steel	10-560 28 282

## Suitable hose connections in stainless steel

Pump connection	Hose connection	Seal	Part number
<b>For eccentric worm-drive pump F 550 TR</b>			
G 1½, with union nut	DN 25	-	10-959 04 002
G 1½, with union nut	DN 32	-	10-959 04 003
G 1½, with union nut	DN 38	-	10-959 04 004
<b>For eccentric worm-drive pump F 560 TR, in FOOD version</b>			
Clamp 2", with hinged clamp	DN 32	FKM	10-959 04 173
Clamp 2", with hinged clamp	DN 32	NBR	10-959 04 174
Clamp 2", with hinged clamp	DN 38	FKM	10-959 04 175
Clamp 2", with hinged clamp	DN 38	NBR	10-959 04 176

## Suitable motors

<b>Three-phase motors, 230/400 volt, 50 Hz, with cable terminal box, not incl. cable</b>			
Output	Speed	Max. viscosity	Part number
0.75 kW	930 rpm	up to 25,000 mPas	10-001 03 392
0.75 kW	700 rpm	up to 50,000 mPas	10-001 01 506
1.1 kW	930 rpm	up to 50,000 mPas	10-001 03 394
1.1 kW	700 rpm	from 50,000 mPas	10-001 01 507
<b>Compressed air motors, max. operating pressure 7 bar</b>			
Type	Output	Max. viscosity	Part number
FPM 6 Ex	1.2 kW, 1,000 rpm	up to 50,000 mPas	10-001 04 014
FPM 8 Ex	2.0 kW, 1,000 rpm	from 50,000 mPas	10-001 04 002



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