

Industrial eccentric worm-drive pumps type F 550 S Version with bearing flange

Recommended for transferring

Thin to highly viscous, even pasty, still free flowing substances.

Typical applications

Transferring viscous substances from drums and/or containers.
Feeding filling machines.

Available drive motors

Three-phase electric or compressed-air motors.

Three-phase motors of 0.75 or 1.1 kW, with a speed of 850 rpm. For highly viscous, pasty substances a motor of 1.1 kW is required for viscosities exceeding 50,000 cPs, because of the low velocity of such products². A higher speed may be used if the product is still flowing or if a follower plate would support the continuous flow of the product to the pump inlet – please refer to the VISCOFLUX system information.

For viscosities up to 25,000 cPs, a motor of 0.75 kW will be sufficient.

On compressed-air motors, the speed is controlled by a valve on the motor or in the air supply line.

Scope of supply

A complete eccentric worm-drive pump consists of: drive motor, pump, stator and hose connection.




Technical data - Flow rate estimates based on varying viscosities

550S 50/21	
VISCOSITY (CPS)	MAX GPM
1,000	10
3,000	8
10,000	6 - 7
20,000	4.5
30,000	4
40,000	2.5 - 3.5
50,000	2 - 3
60,000	1.5 - 2
70,000	1.5 - 2
80-100,000	1 - 2

550S 54/26	
VISCOSITY (CPS)	MAX GPM
1,000	12
3,000	10
10,000	8
20,000	6
30,000	5.5
40,000	3.5 - 4.5
50,000	3 - 4
60,000	2.5 - 3.5
70,000	2 - 3
80-100,000	1 - 2



With higher viscosities delivery rate will be lower, depending on the velocity of the fluid.

Values ± 10% at 930 rpm. Delivery rate depends on the velocity of the fluid.

¹  Ex-proof versions available

² Motor capability can vary depending on flow characteristics of the liquid being pumped.

Eccentric worm-drive pumps with mechanical seal, in bearing flange version, drive motors see page 16

Type	F 550 S-50/21	F 550 S-54/26	F 550 SXA-50/21	F 550 SXB-50/21
Delivery rate max.	10 GPM (37 LPM)	12 GPM (45 LPM)	10 GPM (37 LPM)	
Delivery head max.	116 PSIG (8 bar)			
Thread on outlet	G 1½A (BSP 1½" male)			
Seal type	mechanical seal in ceramic oxide, o-rings in FKM			
Material	bearing flange in aluminium*; outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti			
Outer-Ø	50 mm	54 mm	50 mm	50 mm
Stator	not included with the pump, separate part number please see list below		Stator PTFE white, included with the pump	
Explosion-proof according to ATEX-Directive 2014/34/EU for use in Zone 0	not approved for transferring high flammability liquids in Zone 0		EC Type Examination Certificate No. PTB 99 ATEX 4050 X (Ex II 1/2 G IIA T4)	EC Type Examination Certificate No. PTB 99 ATEX 4051 X (Ex II 1/2 G IIB T4))
Part No./Weight				
Immersion length 27" (700 mm)	550 25 507 /10.8 lbs	550 25 649 /11.9 lbs	550 23 020 /12.1 lbs	550 23 400 /12.1 lbs
Immersion length 39" (1000 mm)	550 25 510 /12.3 lbs	550 25 652 /13.4 lbs	550 23 021 /13.4 lbs	550 23 401 /13.4 lbs
Immersion length 47" (1200 mm)	550 25 512 /14.5 lbs	550 25 654 /14.5 lbs	550 23 022 /14.5 lbs	550 23 402 /14.5 lbs

Other lengths on request.

Also available:

- Version with cardan shaft for higher torque
- Pumps with right/left rotation for emptying the pump or clearing blockages
- Pumps for VISCOFLUX and VISCOFLUX mobile
- Horizontally mounted versions - see page 14

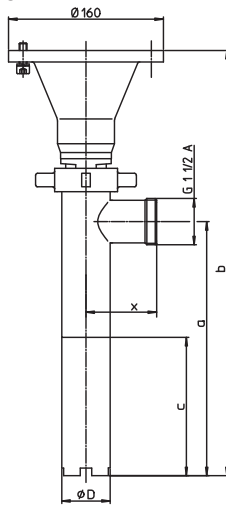
Stators for eccentric worm-drive pumps type F 550 S

Material	Temperature max.	Recommended for	Part No./Weight outer-Ø 50 mm	Part No./Weight outer-Ø 54 mm
NBR white (Nitrile Butadiene Rubber) elastomer	194°F (90°C)	particularly suitable for oils and greases, also for food products	550 24 248 /1.1 lbs	550 25 621 /1.3 lbs
NBR black (Nitrile Butadiene Rubber) elastomer	194°F (90°C)	particularly suitable for oils and greases, not suitable for food products	550 24 244 /1.1 lbs	550 25 620 /1.3 lbs
FKM (Fluor Rubber) elastomer	248°F (120°C)	excellent chemical resistance to all different kind of products, not suitable for food products	550 24 247 /1.1 lbs	550 25 619 /1.3 lbs
PTFE (Ethylene-Tetra-Fluor-Ethylene) solid material	248°F (120°C)	excellent chemical resistance, particularly suitable for food products, pharmaceuticals and cosmetics	550 24 256 /1.3 lbs	550 25 625 /1.5 lbs

Hose connection in stainless steel, complete with union nut G 1½

Type F 550 S	Part No./Weight
for flexible hose, inside 1" (DN 25)	959 04 002 /0.4 lbs
for flexible hose, inside 1-1/4" (DN 32)	959 04 003 /0.6 lbs
for flexible hose, inside 1-1/2" (DN 38)	959 04 004 /0.8 lbs

F 550 S



Type		F 550 S-50/21			
Dimensions in mm	ØD	x	a	b	c
Immersion length 27" (700 mm)	50	73	714	897	143
Immersion length 39" (1000 mm)	50	73	1014	1197	143
Immersion length 47" (1200 mm)	50	73	1214	1397	143
Type		F 550 S-54/26			
Dimensions in mm	ØD	x	a	b	c
Immersion length 27" (700 mm)	54	75	740	923	170
Immersion length 39" (1000 mm)	54	75	1040	1223	170
Immersion length 47" (1200 mm)	54	75	1240	1423	170