



## HIGH VISCOSITY LIQUID PUMPS



INNOVATORS  
IN FLOW TECHNOLOGY

# FLUX HIGH VISCOSITY LIQUID PUMPS – HIGHLY ACCLAIMED



FLUX high viscosity liquid pumps have been tried and tested in numerous industrial sectors around the world. Three pump designs are available in differing models to meet every requirement for transferring thin to high viscosity media.

All models are easy to operate and maintain. Naturally, they all carry the advanced design and safety features that users expect from FLUX. For more than 50 years we have manufactured innovative, high-quality products. Operators readily acknowledge the performance of our powerful and extremely reliable pumps.

## IN THIS BROCHURE:

FLUX eccentric worm-drive pumps type F 550 are designed for a wide range of applications. Two versions are available:

The robust **bearing flange version type F 550 S** is suited to continuous operation and is available with a three-phase electric motor or a compressed air motor.

The lightweight, easy-to-handle version for quick-change applications **type F 550 GS is equipped with a planetary gear**. These models are used with a FLUX commutator or compressed air motor, and are ideal for conveying substances with up to 30.000 mPas (cP) viscosity. The **F 550 GS6** model is designed for lower capacities, covering the viscosity range up to 80.000 mPas (cP).

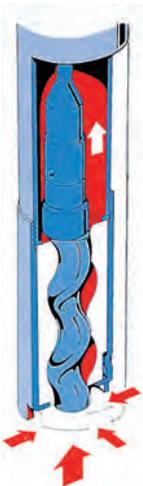
Under **type code F 560** both pump designs are available in **sanitary version type F 560 S and F 560 GS**, especially designed for use in the food, cosmetic and pharmaceutical industries.

To meet the highest sanitary standards these pump models are also available with **3A-approval**.



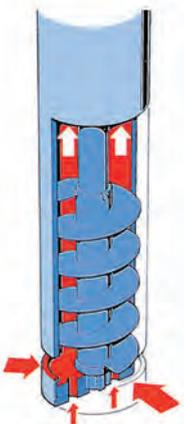
**ATEX 100** For use in hazardous areas **Zone 0** for transferring high flammability liquids class IIA or IIB, FLUX high viscosity liquid pumps type F 550 and F 560 are available in versions „XA“ and „XB“, tested and certified according to **Directive 94/9/EC-ATEX 100**.

FLUX screw pumps **type F 520** are ideal for the quick and safe transfer of thin to medium viscosity liquids up to a viscosity of 20.000 mPas (cP). Unlike the eccentric worm-drive pumps, they can be operated against a closed outlet. FLUX screw pumps are available with either a three-phase electric motor or a compressed air motor in a variety of power ratings.



### Positive displacement pump – eccentric worm type:

- smooth pumping of the liquid with very little turbulences
- easy to clean
- advanced pump design without any inaccessible or hidden voids, ideal for use in the food, cosmetic and pharmaceutical industries
- sanitary version available with 3A-approval
- vertical and horizontal use
- low wear, no valves, vanes etc.
- high output of 30 l/min or 50 l/min



### High viscosity liquid pump – Archimedean screw type:

- can be operated against a closed outlet
- low wear, no valve, vanes etc.
- easy to strip down
- delivery rate up to 35 l/min
- ideal for transferring free flowing fluids



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# ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 S AND F 550 SB VERSION WITH BEARING FLANGE

## Recommended for transferring

Thin to high viscosity, even pasty, still free flowing substances.

## Typical applications

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

## Seal types

Type F 550 S with mechanical seal or  
Type F 550 SB with stuffing box.

## Available drive motors

Three-phase electric or compressed air motors.  
Three-phase motors of 0,75 or 1,1 kW, with a speed of 930 or 700 rpm. For high viscosity, pasty substances a motor of 1,1 kW is required with a recommended speed of 700 rpm for viscosities exceeding 50.000 mPas (cP), because of the low velocity of such products. A speed of 930 rpm may be used if the product is still flowing or if a follow-on plate would support the continuous flow of the product to the pump inlet – please confer to VISCOFLUX system on page 26.

For viscosities up to 25.000 mPas (cP) a motor of 0,75 kW and 930 rpm will be sufficient.

On compressed air motors of 0,5 to 1,8 kW, the speed may be controlled by a valve in the air supply line.

## Scope of supply

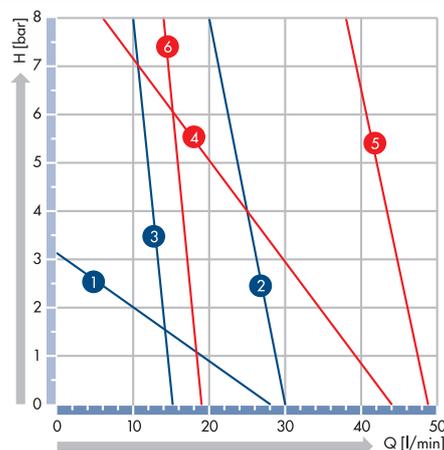
A complete eccentric worm-drive pump consists of:  
drive motor, pump, stator and hose connection.



## TECHNICAL DATA

Type	Viscosity mPas (cP)	Curve No.
F 550 S-50/21	1	1
F 550 SB-50/21	1.000–2.000	2
F 550 SXA-50/21	20.000–25.000	3
F 550 SXB-50/21		
F 550 S-54/26	1	4
F 550 SB-54/26	1.000–2.000	5
	20.000–25.000	6

## Performance Chart



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.

# ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 S AND F 550 SB VERSION WITH BEARING FLANGE



## ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 S AND F 550 SB, WITH BEARING FLANGE, WITHOUT DRIVE MOTOR

Type	F 550 S-50/21	F 550 SB-50/21	F 550 SXA-50/21	F 550 SXB-50/21
Delivery rate max.	30 l/min	30 l/min	30 l/min	30 l/min
Delivery head max.	8 bar	8 bar	8 bar	8 bar
Thread on outlet	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in ceramic oxide, o-rings in FKM	stuffing box in PTFE, re-adjustable	mechanical seal in ceramic oxide, o-rings in FKM	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	50 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	Stator PTFE black, included with the pump
Explosion-proof according to Directive 94/9/EC-ATEX 100	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)
<b>Part No./Weight</b>			<b>ATEX100</b>	<b>ATEX100</b>
Immersion length 700 mm	<b>550 25 507</b> /4,9 kg	<b>550 25 530</b> /5,9 kg	<b>550 23 020</b> /5,5 kg	<b>550 23 400</b> /5,5 kg
Immersion length 1000 mm	<b>550 25 510</b> /5,6 kg	<b>550 25 531</b> /6,6 kg	<b>550 23 021</b> /6,1 kg	<b>550 23 401</b> /6,1 kg
Immersion length 1200 mm	<b>550 25 512</b> /6,1 kg	<b>550 25 532</b> /7,1 kg	<b>550 23 022</b> /6,6 kg	<b>550 23 402</b> /6,6 kg

Type	F 550 S-54/26	F 550 SB-54/26
Delivery rate max.	50 l/min	50 l/min
Delivery head max.	8 bar	8 bar
Thread on outlet	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in ceramic oxide, o-rings in FKM	stuffing box in PTFE, re-adjustable
Material	bearing flange in aluminium*; outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti	
Outer-Ø	54 mm	54 mm
Stator	not included with the pump, separate part number please see list below	
<b>Part No./Weight</b>		
Immersion length 700 mm	<b>550 25 649</b> /5,4 kg	<b>550 25 694</b> /6,4 kg
Immersion length 1000 mm	<b>550 25 652</b> /6,1 kg	<b>550 25 695</b> /7,1 kg
Immersion length 1200 mm	<b>550 25 654</b> /6,6 kg	<b>550 25 696</b> /7,6 kg

Other lengths on request.

\*Type F 550 SF with bearing flange in stainless steel (316 Ti) on request

## STATORS FOR ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 S AND F 550 SB

Material	Temperature	Recommended for	Part No./Weight outer-Ø 50 mm	Part No./Weight outer-Ø 54 mm
NBR white (Nitrile Butadiene Rubber) elastomer	max. 90 °C	particularly suitable for oils and greases, also for food products	<b>550 24 248</b> /0,5 kg	<b>550 25 621</b> /0,6 kg
NBR black (Nitrile Butadiene Rubber) elastomer	max. 90 °C	particularly suitable for oils and greases, not suitable for food products	<b>550 24 244</b> /0,5 kg	<b>550 25 620</b> /0,6 kg
CSM (Chlorosulfonated Polyethylene) elastomer	max. 90 °C	particularly suitable for corrosive products, not suitable for oils, greases nor food products	<b>550 24 253</b> /0,5 kg	<b>550 25 622</b> /0,6 kg
FKM (Fluor Rubber) elastomer	max. 150 °C	excellent chemical resistance to all different kind of products not suitable for food products	<b>550 24 247</b> /0,5 kg	<b>550 25 619</b> /0,6 kg
PTFE (Ethylene-Tetra-Fluor-Ethylene) solid material	max. 150 °C	excellent chemical resistance, particularly suitable for food products, pharmaceuticals and cosmetics	<b>550 24 256</b> /0,6 kg	<b>550 25 625</b> /0,7 kg

## HOSE CONNECTION IN STAINLESS STEEL, COMPLETE WITH UNION NUT

Type F 550 S and F 550 SB	Part No./Weight
for flexible hose, inside Ø <b>DN 25</b>	<b>959 04 002</b> /0,2 kg
for flexible hose, inside Ø <b>DN 32</b>	<b>959 04 003</b> /0,3 kg
for flexible hose, inside Ø <b>DN 38</b>	<b>959 04 004</b> /0,4 kg

Drive motors see page 16

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# SANITARY PUMPS TYPE F 560 S VERSION WITH BEARING FLANGE

## Recommended for transferring

Thin to high viscosity, even pasty, still free flowing substances.

## Typical applications

A pump designed to meet the specific requirements of the food, cosmetic and pharmaceutical industries.

The sanitary pump type F 560 S can be stripped down in no time for cleaning and/or sterilisation. The stator housing comprises a safety bar to protect containers and to allow transfer operations from plastic liners.

The F 560 S pump is available in special version with 3A approval: ground and polished, equipped with a closed mechanical seal in stainless steel with sliding faces in silicium carbide (SiC).

## Seal type

Mechanical seal

## Available drive motors

Three-phase electric motors or compressed air motors

## Scope of supply

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



F 560 S3A-50/21  
with three-phase motor

## TECHNICAL DATA

Type	Viscosity mPas (cP)	Curve No.	Performance Chart
F 560 S1-50/21	1	1	
F 560 S2-50/21	1.000–2.000	2	
F 560 S3A-50/21	20.000–25.000	3	
F 560 S1-54/26	1	4	
F 560 S2-54/26	1.000–2.000	5	
F 560 S3A-54/26	20.000–25.000	6	

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

Values  $\pm$  10% at 930 rpm. Delivery rate depends on the velocity of the fluid.

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# SANITARY PUMPS TYPE F 560 S VERSION WITH BEARING FLANGE



## SANITARY PUMP TYPE F 560 S VERSION WITH BEARING FLANGE, WITHOUT DRIVE MOTOR

Type	F 560 S1-50/21	F 560 S2-50/21	F 560 S1XA-50/21	F 560 S2XA-50/21
Delivery rate max.	30 l/min	30 l/min	30 l/min	30 l/min
Delivery head max.	8 bar	8 bar	8 bar	8 bar
Thread on outlet	Rd 58 x 1/6	G 1½ A (BSP 1½" male)	Rd 58 x 1/6	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in SiC, o-rings in FKM (foodgrade)			
Material	bearing flange, outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti			
Outer-Ø	50 mm	50 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 Directive 94/9/EC-ATEX 100	not approved for transferring high flammability liquids in Zone 0		EC Type Examination Certificate No. PTB 99 ATEX 4052 X (Ex II 1/2 IIA T4)	
<b>Part No./Weight</b>			<b>ATEX100</b>	<b>ATEX100</b>
Immersion length 700 mm	<b>560 20 007/5,8 kg</b>	<b>560 20 107/5,8 kg</b>	-	-
Immersion length 1000 mm	<b>560 20 010/6,5 kg</b>	<b>560 20 110/6,5 kg</b>	<b>560 20 810/7,1 kg</b>	<b>560 20 910/7,1 kg</b>
Immersion length 1200 mm	<b>560 20 012/7,0 kg</b>	<b>560 20 112/7,0 kg</b>	<b>560 20 812/7,6 kg</b>	<b>560 20 912/7,6 kg</b>

Type	F 560 S1-54/26	F 560 S2-54/26
Delivery rate max.	50 l/min	50 l/min
Delivery head max.	8 bar	8 bar
Thread on outlet	Rd 58 x 1/6	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in SiC, o-rings in FKM (foodgrade)	
Material	bearing flange, outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti	
Outer-Ø	54 mm	54 mm
Stator	not included with the pump, separate part number please see list below	
<b>Part No./Weight</b>		
Immersion length 700 mm	<b>560 22 007/6,3 kg</b>	<b>560 22 107/6,3 kg</b>
Immersion length 1000 mm	<b>560 22 010/7,0 kg</b>	<b>560 22 110/7,0 kg</b>
Immersion length 1200 mm	<b>560 22 012/7,5 kg</b>	<b>560 22 112/7,5 kg</b>

## SANITARY PUMPS TYPE F 560 S3A IN 3A VERSION, WITHOUT DRIVE MOTOR

Type	F 560 S3A-50/21	F 560 S3A-54/26
Delivery rate max.	30 l/min	50 l/min
Delivery head max.	8 bar	8 bar
Thread on outlet	Clamp 2" 	Clamp 2" 
Seal type	closed mechanical seal in stainless steel, sliding faces in SiC, O-rings in FKM (foodgrade)	
Material	bearing flange, outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti, ground and polished	
Outer-Ø	50 mm	50 mm
Stator	not included with the pump, separate part number please see list below	
<b>Part No./Weight</b>		
Immersion length 700 mm	<b>560 20 607/5,8 kg</b>	<b>560 22 607/6,3 kg</b>
Immersion length 1000 mm	<b>560 20 610/6,5 kg</b>	<b>560 22 610/7,0 kg</b>
Immersion length 1200 mm	<b>560 20 612/7,0 kg</b>	<b>560 22 612/7,5 kg</b>

## STATOR IN PTFE, STATOR HOUSING IN STAINLESS STEEL WITH SAFETY BAR

Part No./Weight	Type F 560 S1 and F 560 S2	Type F 560 S3A
Outer-Ø 50 mm	<b>560 21 900/0,6 kg</b>	<b>560 21 901/0,6 kg</b>
Outer-Ø 54 mm	<b>560 23 900/0,7 kg</b>	<b>560 23 901/0,7 kg</b>

## HOSE CONNECTION IN STAINLESS STEEL, COMPLETE WITH UNION NUT OR CLAMP CONNECTION

Part No./Weight	Type F 560 S1	Type F 560 S2	Type F 560 S3A
for flexible hose, inside Ø DN 25	<b>959 04 115/0,2 kg</b>	<b>959 04 002/0,2 kg</b>	-
for flexible hose, inside Ø DN 32	<b>959 04 134/0,3 kg</b>	<b>959 04 003/0,3 kg</b>	<b>959 04 137/0,4 kg</b>
for flexible hose, inside Ø DN 38	<b>959 04 130/0,4 kg</b>	<b>959 04 004/0,4 kg</b>	<b>959 04 109/0,4 kg</b>

Drive motors see page 16

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# ECCENTRIC WORM-DRIVE PUMPS IN HORIZONTAL VERSION

## Recommended for transferring

Thin to high viscosity, even pasty, still free flowing substances.

## Typical applications

Eccentric worm-drive pumps Type F 550 TR and F 560 TR are designed for horizontal use.

A base plate or a pump trolley facilitates the installation with a three-phase electric motor.

This pump design is available in different versions:

**Type F 550 S TR** with bearing flange in aluminium and flange connection between outer tube and stator housing is recommended for transferring oils, greases, lubricants etc. in the industrial sector.

**Type F 550 SF TR** with bearing flange in stainless steel and clamp connection between outer tube and stator housing is recommended for use in pharmaceutical and food industries.

**Type F 560 S TR** with bearing flange in stainless steel and clamp connection between outer tube and stator housing is recommended for use in cosmetics, food and pharmaceutical industries.

The pump can be stripped down in no time for cleaning and/or sterilisation.

A special shaft design allows reversible flow operations.

All versions comprise a stator in PTFE.

## Seal type

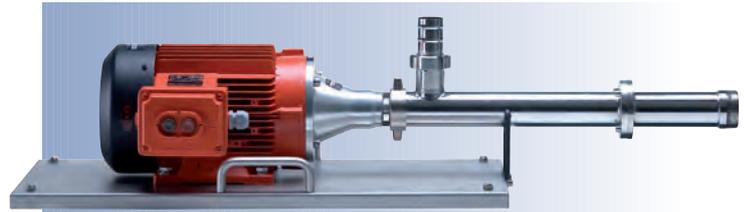
Mechanical seal

## Available drive motors

Three-phase electric motors with bottom flange

## Scope of supply

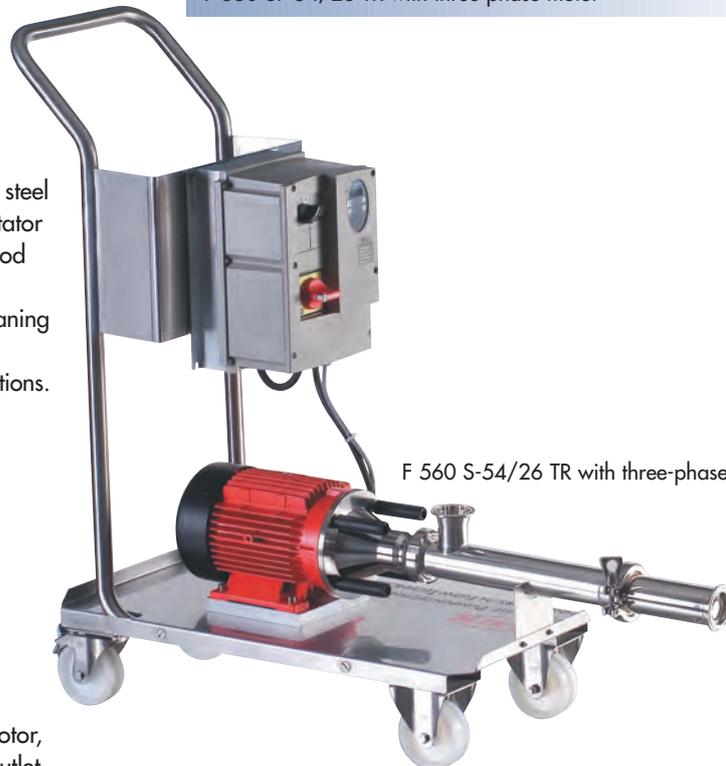
A complete horizontal pump consists of: drive motor, pump and stator, hose connection on inlet and outlet, base plate or pump trolley.



F 550 S-54/26 TR with three-phase motor



F 550 SF-54/26 TR with three-phase motor



F 560 S-54/26 TR with three-phase motor

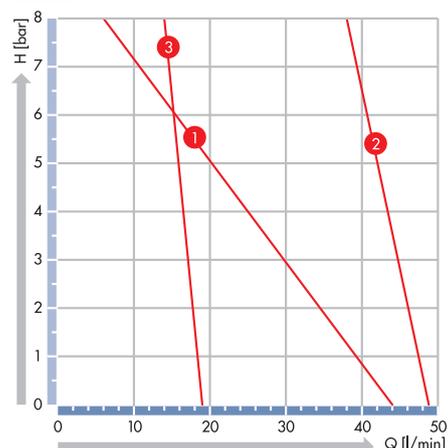
## TECHNICAL DATA

Type	Viscosity mPas (cP)	Curve No.
F 550 S-54/26 TR	1	1
F 550 SF-54/26 TR	1.000–2.000	2
F 560 S-54/26 TR	20.000–25.000	3

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

Values  $\pm$  10% at 930 rpm. Delivery rate depends on the velocity of the fluid.

## Performance Chart



# ECCENTRIC WORM-DRIVE PUMPS IN HORIZONTAL VERSION



## ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 S TR, F 550 SF TR AND F 560 S TR, WITHOUT DRIVE MOTOR

Type	F 550 S-54/26 TR
Delivery rate max.	50 l/min
Delivery head max.	8 bar
Thread on inlet/outlet	inlet: G 2 A (BSP 2" male); outlet: G 1 1/2 A (BSP 1 1/2 male)
Seal type	mechanical seal in ceramic oxide, o-rings in FKM
Material	bearing flange in aluminium; flexible shaft and eccentric worm in stainless steel 316 Ti
Outer-Ø	54 mm
Stator	stator in PTFE included with the pump
<b>Part No./Weight</b>	<b>550 25 503/5,5 kg</b>

Type	F 550 SF-54/26 TR
Delivery rate max.	50 l/min
Delivery head max.	8 bar
Thread on inlet/outlet	inlet and outlet: Clamp 2"
Seal type	mechanical seal in SiC, o-rings in FKM (foodgrade)
Material	bearing flange, outer tube and eccentric worm in stainless steel 316 Ti; flexible shaft in stainless steel 316 Ti with protective coating in PTFE
Outer-Ø	54 mm
Stator	stator in PTFE included with the pump
<b>Part No./Weight</b>	<b>550 25 692/6,1 kg</b>

Type	F 560 S-54/26 TR reversible flow
Delivery rate max.	50 l/min
Delivery head max.	8 bar
Thread on inlet/outlet	inlet and outlet: Clamp 2"
Seal type	mechanical seal in SiC, o-rings in FKM (foodgrade)
Material	bearing flange, outer tube and eccentric worm in stainless steel 316 Ti; easy to strip down shaft design in stainless steel 316 Ti for reversible flow operations
Outer-Ø	54 mm
Stator	stator in PTFE included with the pump
<b>Part No./Weight</b>	<b>560 23 104/6,3 kg</b>

Further accessories like frequency converter, motor protection switch and power supply cable on request.

### BASE PLATE IN STAINLESS STEEL (316 Ti)

<b>Part No./Weight</b>	<b>001 15 033/5,6 kg</b>
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### PUMP TROLLEY IN STAINLESS STEEL (304)

<b>Part No./Weight</b>	<b>001 15 038/9,0 kg</b>
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### HOSE CONNECTION IN STAINLESS STEEL, COMPLETE WITH UNION NUT OR CLAMP CONNECTION

Part No./Weight	Type F 550 S TR Outlet G 1 1/2 A (BSP 1 1/2 male)	Type F 550 S TR Inlet G 2 A (BSP 2" male)	Type F 550 SF TR Type F 560 S TR Clamp 2"
for flexible hose, inside Ø <b>DN 25</b>	<b>959 04 002/0,2 kg</b>	-	-
for flexible hose, inside Ø <b>DN 32</b>	<b>959 04 003/0,3 kg</b>	<b>959 04 059/0,3 kg</b>	<b>959 04 137/0,4 kg</b>
for flexible hose, inside Ø <b>DN 38</b>	<b>959 04 004/0,4 kg</b>	<b>959 04 060/0,4 kg</b>	<b>959 04 109/0,4 kg</b>

### DRIVE MOTORS WITH BOTTOM FLANGE FOR ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 S TR, F 550 SF TR UND F 560 S TR

**Three-phase motors 230/400 Volt, 50 Hz, jet-proof to IP 55, with motor protection switch, without cable**

Capacity	Speed	Part No./Weight
0,75 kW	700 rpm	<b>001 02 151/22,0 kg</b>
1,1 kW	930 rpm	<b>001 02 150/17,0 kg</b>

Drive motors with bottom flange in other capacities on request.  
Accessories for drive motors see page 16

# ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS AND F 550 GSB WITH PLANETARY GEAR

## Recommended for transferring

Thin to medium viscosity liquids up to a maximum viscosity of 30.000 mPas (cP).

## Typical applications

Liquid transfer from barrels and/or containers.  
The eccentric worm-drive pumps type F 550 GS and F 550 GSB are particularly lightweight and easy-to-handle, making them extremely versatile pumps.  
The lightest model has a weight of 5,5 kg only.  
The weight of the complete pump depends on the immersion length and motor assembly.

## Seal type

Type F 550 GS with mechanical seal or  
Type F 550 GSB with stuffing box

## Available drive motors

Commutator motors or compressed air motors.

An infinitely variable speed variator – also available on explosion-proof models – allows the operator to set pump capacity to specific delivery requirements.

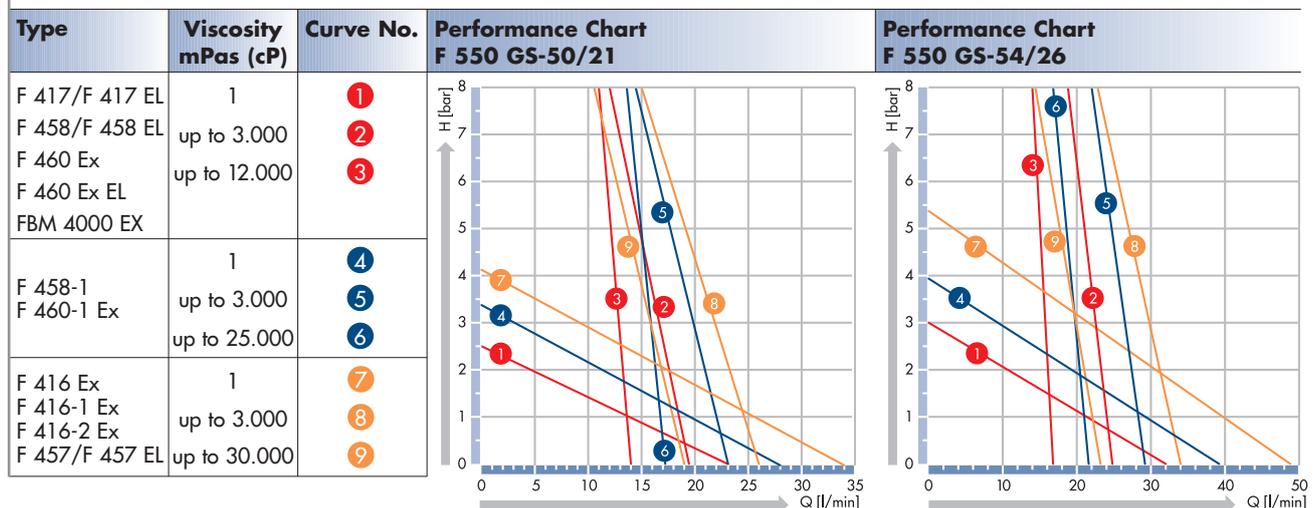
## Scope of supply

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



F 550 GS-54/26  
with commutator motor F 460 Ex

## TECHNICAL DATA



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

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# ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS AND F 550 GSB WITH PLANETARY GEAR



## ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS AND F 550 GSB WITH PLANETARY GEAR, WITHOUT DRIVE MOTOR

Type	F 550 GS-50/21	F 550 GSB-50/21	F 550 GSXA-50/21	F 550 GSXB-50/21
Delivery rate max.	30 l/min	30 l/min	30 l/min	30 l/min
Delivery head max.	8 bar	8 bar	8 bar	8 bar
Thread on outlet	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in ceramic oxide, o-rings in FKM	stuffing box in PTFE, re-adjustable	mechanical seal in ceramic oxide, o-rings in FKM	mechanical seal in ceramic oxide, o-rings in FKM
Material	outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti			
Outer-Ø	50 mm	50 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	Stator PTFE black, included with the pump
Explosion-proof according to Directive 94/9/EC-ATEX 100	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)
<b>Part No./Weight</b>			<b>ATEX100</b>	<b>ATEX100</b>
Immersion length 700 mm	<b>550 24 807</b> /4,3 kg	<b>550 24 838</b> /4,3 kg	<b>550 23 030</b> /4,8 kg	<b>550 23 410</b> /4,8 kg
Immersion length 1000 mm	<b>550 24 810</b> /5,0 kg	<b>550 24 839</b> /5,0 kg	<b>550 23 031</b> /5,5 kg	<b>550 23 411</b> /5,5 kg
Immersion length 1200 mm	<b>550 24 812</b> /5,5 kg	<b>550 24 840</b> /5,5 kg	<b>550 23 032</b> /6,0 kg	<b>550 23 412</b> /6,0 kg

Type	F 550 GS-54/26	F 550 GSB-54/26
Delivery rate max.	50 l/min	50 l/min
Delivery head max.	8 bar	8 bar
Thread on outlet	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in ceramic oxide, o-rings in FKM	stuffing box in PTFE, re-adjustable
Material	outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti	
Outer-Ø	54 mm	54 mm
Stator	not included with the pump, separate part number please see list below	
<b>Part No./Weight</b>		
Immersion length 700 mm	<b>550 25 675</b> /4,8 kg	<b>550 25 697</b> /4,8 kg
Immersion length 1000 mm	<b>550 25 676</b> /5,5 kg	<b>550 25 698</b> /5,5 kg
Immersion length 1200 mm	<b>550 25 677</b> /6,0 kg	<b>550 25 699</b> /6,0 kg

Other lengths on request

## STATORS FOR ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS AND F 550 GSB

Material	Temperature	Recommended for	Part No./Weight outer-Ø 50 mm	Part No./Weight outer-Ø 54 mm
NBR white (Nitrile Butadiene Rubber) elastomer	max. 90 °C	particularly suitable for oils and greases, also for food products	<b>550 24 248</b> /0,5 kg	<b>550 25 621</b> /0,6 kg
NBR black (Nitrile Butadiene Rubber) elastomer	max. 90 °C	particularly suitable for oils and greases, not suitable for food products	<b>550 24 244</b> /0,5 kg	<b>550 25 620</b> /0,6 kg
CSM (Chlorosulfonated Polyethylene) elastomer	max. 90 °C	particularly suitable for corrosive products, not suitable for oils, greases nor food products	<b>550 24 253</b> /0,5 kg	<b>550 25 622</b> /0,6 kg
FKM (Fluor Rubber) elastomer	max. 150 °C	excellent chemical resistance to all different kind of products, not suitable for food products	<b>550 24 247</b> /0,5 kg	<b>550 25 619</b> /0,6 kg
PTFE (Ethylene-Tetra-Fluor-Ethylene) solid material	max. 150 °C	excellent chemical resistance, particularly suitable for food products, pharmaceuticals and cosmetics	<b>550 24 256</b> /0,6 kg	<b>550 25 625</b> /0,7 kg

## HOSE CONNECTION IN STAINLESS STEEL, COMPLETE WITH UNION NUT

Type F 550 GS and F 550 GSB	Part No./Weight
for flexible hose, inside Ø <b>DN 25</b>	<b>959 04 002</b> /0,2 kg
for flexible hose, inside Ø <b>DN 32</b>	<b>959 04 003</b> /0,3 kg
for flexible hose, inside Ø <b>DN 38</b>	<b>959 04 004</b> /0,4 kg

Drive motors see page 17

# SANITARY PUMPS TYPE F 560 GS WITH PLANETARY GEAR

## Recommended for transferring

Thin to medium viscosity liquids up to maximum 30.000 mPas (cP).

## Typical applications

Very lightweight and easy-to-handle pump for use in the food, cosmetic and pharmaceutical industries. The sanitary pump type F 560 GS can be stripped down in no time for cleaning and/or sterilisation. The stator housing comprises a safety bar to protect containers and to allow transfer out of plastic inliners.

The sanitary pump type F 560 GS is available in special version with 3A approval: ground, polished, with a closed mechanical seal in stainless steel with sliding faces in silicium carbide (SiC).

## Seal type

Mechanical seal

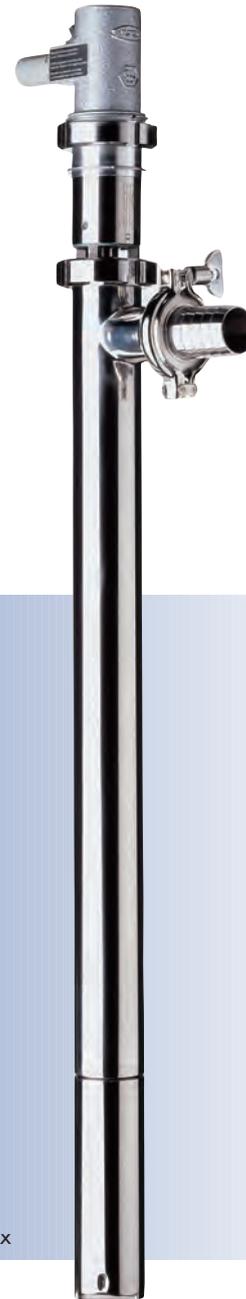
## Available drive motors

Commutator motors or compressed air motors.

An infinite variable speed variator - also on explosion-proof motors – allows the operator to set pump capacity to specific delivery requirements.

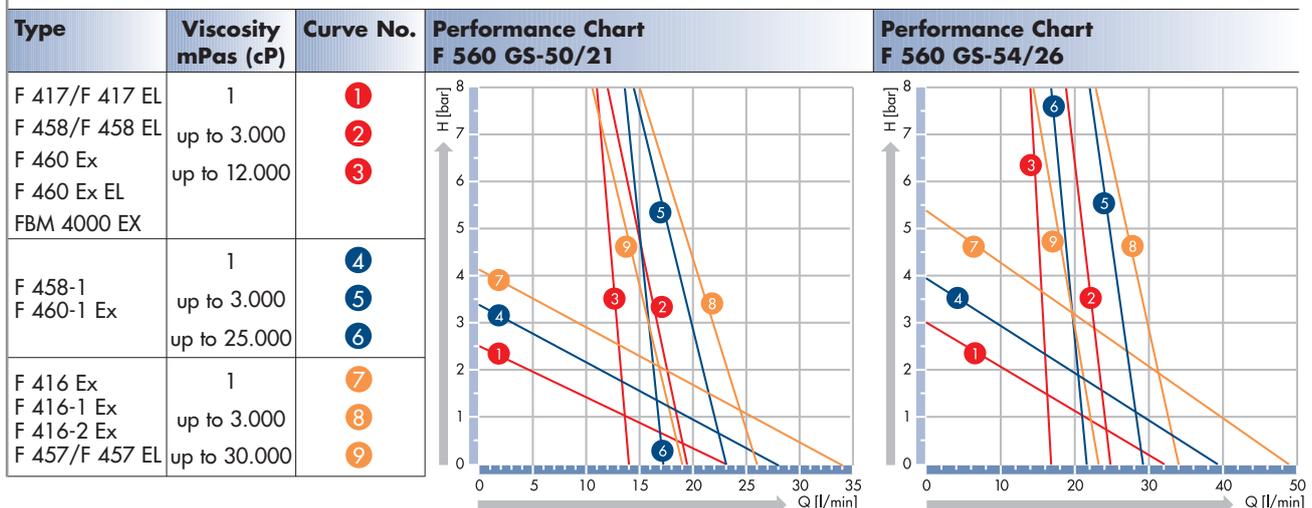
## Scope of supply

A complete sanitary pump consists of: drive motor, pump, stator and hose connection.



F 560 GS3A-54/26  
with air motor F 416-2 Ex

## TECHNICAL DATA



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

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# SANITARY PUMPS TYPE F 560 GS WITH PLANETARY GEAR



## SANITARY PUMPS TYPE F 560 GS WITH PLANETARY GEAR, WITHOUT DRIVE MOTOR

Type	F 560 GS1-50/21	F 560 GS2-50/21	F 560 GS1XA-50/21	F 560 GS2XA-50/21
Delivery rate max.	30 l/min	30 l/min	30 l/min	30 l/min
Delivery head max.	8 bar	8 bar	8 bar	8 bar
Thread on outlet	Rd 58 x 1/6	G 1½ A (BSP 1½" male)	Rd 58 x 1/6	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in SiC, o-rings in FKM (foodgrade)			
Material	outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti			
Outer-Ø	50 mm	50 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 Directive 94/9/EC-ATEX 100	not approved for transferring high flammability liquids in Zone 0		EC Type Examination Certificate No. PTB 99 ATEX 4052 X (Ex II 1/2 G IIA T4)	
<b>Part No./Weight</b>				
Immersion length 700 mm	<b>560 20 307</b> /5,4 kg	<b>560 20 407</b> /5,4 kg	-	-
Immersion length 1000 mm	<b>560 20 310</b> /5,7 kg	<b>560 20 410</b> /5,7 kg	<b>560 21 010</b> /5,9 kg	<b>560 21 110</b> /5,9 kg
Immersion length 1200 mm	<b>560 20 312</b> /6,2 kg	<b>560 20 412</b> /6,2 kg	<b>560 21 012</b> /6,2 kg	<b>560 21 112</b> /6,2 kg

Type	F 560 GS1-54/26	F 560 GS2-54/26
Delivery rate max.	50 l/min	50 l/min
Delivery head max.	8 bar	8 bar
Thread on outlet	Rd 58 x 1/6	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in SiC, o-rings in FKM (foodgrade)	
Material	outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti	
Outer-Ø	54 mm	54 mm
Stator	not included with the pump, separate part number please see list below	
<b>Part No./Weight</b>		
Immersion length 700 mm	<b>560 22 307</b> /5,8 kg	<b>560 22 407</b> /5,8 kg
Immersion length 1000 mm	<b>560 22 310</b> /6,2 kg	<b>560 22 410</b> /6,2 kg
Immersion length 1200 mm	<b>560 22 312</b> /6,7 kg	<b>560 22 412</b> /6,7 kg

## SANITARY PUMPS TYPE F 560 GS3A IN 3A VERSION, WITHOUT DRIVE MOTOR

Type	F 560 GS3A-50/21	F 560 GS3A-54/26
Delivery rate max.	30 l/min	50 l/min
Delivery head max.	8 bar	8 bar
Thread on outlet	Clamp 2"	Clamp 2"
Seal type	closed mechanical seal in stainless steel, sliding faces in SiC, o-rings in FKM (foodgrade)	
Material	outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti: ground and polished	
Outer-Ø	50 mm	50 mm
Stator	not included with the pump, separate part number please see list below	
<b>Part No./Weight</b>		
Immersion length 700 mm	<b>560 20 707</b> /5,4 kg	<b>560 22 707</b> /5,8 kg
Immersion length 1000 mm	<b>560 20 710</b> /5,7 kg	<b>560 22 710</b> /6,2 kg
Immersion length 1200 mm	<b>560 20 712</b> /6,2 kg	<b>560 22 712</b> /6,7 kg

## STATOR IN PTFE, STATOR HOUSING IN STAINLESS STEEL WITH SAFETY BAR

Part No./Weight	Type F 560 GS1 and F 560 GS2	Type F 560 GS3A
Outer-Ø 50 mm	<b>560 21 900</b> /0,6 kg	<b>560 21 901</b> /0,6 kg
Outer-Ø 54 mm	<b>560 23 900</b> /0,7 kg	<b>560 23 901</b> /0,7 kg

## HOSE CONNECTION IN STAINLESS STEEL, COMPLETE WITH UNION NUT OR CLAMP CONNECTION

Part No./Weight	Type F 560 GS1	Type F 560 GS2	Type F 560 GS3A
for flexible hose, inside Ø <b>DN 25</b>	<b>959 04 115</b> /0,2 kg	<b>959 04 002</b> /0,2 kg	-
for flexible hose, inside Ø <b>DN 32</b>	<b>959 04 134</b> /0,3 kg	<b>959 04 003</b> /0,3 kg	<b>959 04 137</b> /0,4 kg
for flexible hose, inside Ø <b>DN 38</b>	<b>959 04 130</b> /0,4 kg	<b>959 04 004</b> /0,4 kg	<b>959 04 109</b> /0,4 kg

Drive motors see page 17

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# ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS6 WITH PLANETARY GEAR

## Recommended for transferring

Thin to high viscosity substances up to a maximum viscosity of 80.000 mPas (cP).

## Typical applications

Very lightweight and easy-to-handle pump designed for lower capacities. Extremely smooth transfer operations with a speed of 210 or 420 rpm only.

## Seal type

Mechanical seal (stuffing box on request).

## Available drive motors

Single-phase AC motors with capacitor switch or three-phase motors.

## Scope of supply

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



F 550 GS6-50/21  
with three-phase motor F 403/4

## TECHNICAL DATA

Type	Speed	Curve No.	Performance Chart
F 550 GS6-50/21	Motor 1450 rpm Pump 210 rpm	1	
	Motor 2850 rpm Pump 420 rpm	2	
F 550 GS6-54/26	Motor 1450 rpm Pump 210 rpm	3	
	Motor 2850 rpm Pump 420 rpm	4	

Values  $\pm$  10% at 930 rpm. Delivery rate depends on the velocity of the fluid.

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# ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS6 WITH PLANETARY GEAR



## ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS6 WITH PLANETARY GEAR, WITHOUT DRIVE MOTOR

Type	F 550 GS6-50/21	F 550 GS6-54/26
Delivery rate max.	13 l/min	20 l/min
Delivery head max.	8 bar	8 bar
Thread on outlet	G 1½ A (BSP 1½" male)	G 1½ A (BSP 1½" male)
Seal type	mechanical seal* in ceramic oxide, o-rings in FKM	
Material	outer tube, torsion shaft and eccentric worm in stainless steel 316 Ti	
Outer-Ø	50 mm	54 mm
Stator	not included with the pump, separate part number please see list below	
Part No./Weight		
Immersion length 700 mm	<b>550 23 200</b> /4,3 kg	<b>550 23 300</b> /4,8 kg
Immersion length 1000 mm	<b>550 23 201</b> /5,0 kg	<b>550 23 301</b> /5,5 kg
Immersion length 1200 mm	<b>550 23 202</b> /5,5 kg	<b>550 23 302</b> /6,0 kg

\* stuffing box in PTFE on request

## STATORS FOR ECCENTRIC WORM-DRIVE PUMP TYPE F 550 GS6

Material	Temperature	Recommended for	Part No./Weight outer-Ø 50 mm	Part No./Weight outer-Ø 54 mm
NBR white (Nitrile Butadiene Rubber) elastomer	max. 90 °C	particularly suitable for oils and greases, also for food products	<b>550 24 248</b> /0,5 kg	<b>550 25 621</b> /0,6 kg
NBR black (Nitrile Butadiene Rubber) elastomer	max. 90 °C	particularly suitable for oils and greases, not suitable for food products	<b>550 24 244</b> /0,5 kg	<b>550 25 620</b> /0,6 kg
CSM (Chlorosulfonated Polyethylene) elastomer	max. 90 °C	particularly suitable for corrosive products, not suitable for oils, greases nor food products	<b>550 24 253</b> /0,5 kg	<b>550 25 622</b> /0,6 kg
FKM (Fluor Rubber) elastomer	max. 150 °C	excellent chemical resistance to all different kind of products, not suitable for food products	<b>550 24 247</b> /0,5 kg	<b>550 25 619</b> /0,6 kg
PTFE (Ethylene-Tetra-Fluor-Ethylene) solid material	max. 150 °C	excellent chemical resistance, particularly suitable for food products, pharmaceuticals and cosmetics	<b>550 24 256</b> /0,6 kg	<b>550 25 625</b> /0,7 kg

## HOSE CONNECTION IN STAINLESS STEEL, COMPLETE WITH UNION NUT

Type F 550 GS6	Part No./Weight
for flexible hose, inside Ø <b>DN 25</b>	<b>959 04 002</b> /0,2 kg
for flexible hose, inside Ø <b>DN 32</b>	<b>959 04 003</b> /0,3 kg
for flexible hose, inside Ø <b>DN 38</b>	<b>959 04 004</b> /0,4 kg

## DRIVE MOTORS FOR ECCENTRIC WORM-DRIVE PUMP TYPE F 550 GS6

**Single-phase AC motors with capacitor switch,  
230 Volt, 50 Hz, jet-proof to IP 55, with motor protection switch, 5 m cable and plug**

Type	Capacity	Speed	max. Viscosity	Part No./Weight
F 403/2	0,50 kW	2850 rpm	30.000 mPas (cP)	<b>403 01 015</b> /8,0 kg
F 403/4	0,55 kW	1450 rpm	80.000 mPas	<b>403 01 014</b> /11,0 kg

**Three-phase motors 230/400 Volt, 50 Hz, jet-proof to IP 55, with motor protection switch, 5 m cable and plug**

Type	Capacity	Speed	max. Viscosity	Part No./Weight
F 403/4	0,55 kW	1450 rpm	80.000 mPas	<b>403 01 011</b> /8,0 kg
F 403/2	0,75 kW	2850 rpm	50.000 mPas	<b>403 01 013</b> /8,0 kg

**Three-phase motors 230/400 Volt, 50 Hz, explosion-proof to II 2 G EEx e II T3, with cable terminal box, without cable**

Type	Capacity	Speed	max. Viscosity	Part No./Weight
F 403/6 Ex	0,55 kW	930 rpm	80.000 mPas	<b>403 01 018</b> /10,0 kg
F 403/4 Ex	0,55 kW	1450 rpm	80.000 mPas	<b>403 01 017</b> /8,0 kg
F 403/2 Ex	0,75 kW	2850 rpm	50.000 mPas	<b>403 01 019</b> /8,0 kg

### Accessories

Accessories	Part No./Weight
<b>Carrying handle</b> , stainless steel for IP 55 motors	<b>001 10 584</b> /1,0 kg
<b>Carrying handle</b> , stainless steel for explosion-proof motors	<b>001 10 587</b> /1,0 kg

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# DRIVE MOTORS FOR ECCENTRIC WORM-DRIVE PUMPS

DRIVE MOTORS FOR ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 S AND SANITARY PUMPS TYPE F 560 S\*  
VERSION WITH BEARING FLANGE



Three-phase motor



Compressed air motor

### Three-phase motors 230/400 Volt, 50 Hz, with motor protection switch, without cable

Capacity	Speed	jet-proof to	max. Viscosity	Part No./Weight
0,75 kW	930 rpm	IP 55	25.000 mPas (cP)	<b>001 01 046</b> /12,5 kg
0,75 kW	700 rpm	IP 55	pasty	<b>001 01 546</b> /22,0 kg
1,1 kW	930 rpm	IP 55	50.000 mPas (cP)	<b>001 01 047</b> /16,0 kg
1,1 kW	700 rpm	IP 55	pasty	<b>001 01 547</b> /23,0 kg

### Three-phase motors 230/400 Volt, 50 Hz, with cable terminal box, without cable

Capacity	Speed	jet-proof to	max. Viscosity	Part No./Weight
0,75 kW	930 rpm	IP 55	25.000 mPas (cP)	<b>001 01 006</b> /12,5 kg
0,75 kW	700 rpm	IP 55	pasty	<b>001 01 506</b> /22,0 kg
1,1 kW	930 rpm	IP 55	50.000 mPas (cP)	<b>001 01 007</b> /16,0 kg
1,1 kW	700 rpm	IP 55	pasty	<b>001 01 507</b> /23,0 kg

### Three-phase motors 230/400 Volt, 50 Hz, explosion-proof, with cable terminal box, without cable



Capacity	Speed	explosion-proof to	max. Viscosity	Part No./Weight
0,75 kW	930 rpm	II G EEx e II T3	25.000 mPas (cP)	<b>001 01 066</b> /15,0 kg
1,1 kW	930 rpm	II G EEx e II T3	50.000 mPas (cP)	<b>001 01 067</b> /18,0 kg
0,95 kW	700 rpm	II G EEx e II T3	pasty	<b>001 01 567</b> /22,0 kg

\*drive motors for sanitary pumps in special white painting on request

### Accessories

	Part No./Weight
<b>Carrying handle</b> , stainless steel for three-phase motors, not explosion-proof for three-phase motors, explosion-proof	<b>001 10 571</b> /1,0 kg <b>001 10 586</b> /1,2 kg
<b>Power supply cable</b> , 5 m long with plug 5 m long without plug yardware	<b>934 08 020</b> /1,4 kg <b>934 08 025</b> /1,3 kg <b>934 08 901</b> /0,2 kg
<b>Cekon-plug</b> , 5-pole	<b>937 01 014</b> /0,1 kg
<b>Motor protection switch, explosion-proof to II 2 G EEx de IIC T6</b> 0,75 kW, 700 and 930 rpm, range of setting 1,6 – 2,5 A 0,95 and 1,1 kW, 700 and 930 rpm, range of setting 2,5 – 4,0 A	<b>936 06 118</b> /2,6 kg <b>936 06 119</b> /2,6 kg

### Compressed air motors, max. operating pressure 7 bar, explosion-proof to II 2 G cT5



Type	Capacity	Speed at 6 bar	Connection	max. Viscosity	Part No./Weight
<b>FKM 4 Ex</b>	0,5 kW	1000 rpm	G <sup>3</sup> / <sub>8</sub> (BSP <sup>3</sup> / <sub>8</sub> " female)	25.000 mPas (cP)	<b>001 04 000</b> /5,0 kg
<b>FKM 6 Ex</b>	1,1 kW	1000 rpm	G <sup>1</sup> / <sub>2</sub> (BSP <sup>1</sup> / <sub>2</sub> " female)	50.000 mPas (cP)	<b>001 04 014</b> /7,0 kg
<b>FKM 8 Ex</b>	1,8 kW	1000 rpm	G <sup>1</sup> / <sub>2</sub> (BSP <sup>1</sup> / <sub>2</sub> " female)	pasty	<b>001 04 002</b> /10,0 kg

### Accessories

	Part No./Weight
<b>Carrying handle</b> , stainless steel	<b>001 10 520</b> /1,0 kg
<b>Filter-regulator-lubricator unit</b> , connection G <sup>1</sup> / <sub>2</sub> (BSP <sup>1</sup> / <sub>2</sub> " female)	<b>001 10 103</b> /1,9 kg
<b>Compressed air hose</b> , in PVC, DN 13, yardware	<b>001 10 008</b> /0,2 kg
<b>Hose coupling</b> (Type 27, DN 10) brass, for compressed air hose DN 13	<b>959 13 122</b> /0,1 kg
<b>Nipple</b> (Type 27, DN 10) for hose coupling DN 13 – G <sup>1</sup> / <sub>2</sub> A (BSP <sup>1</sup> / <sub>2</sub> " male)	<b>959 13 121</b> /0,1 kg
<b>Hose nozzle</b> , brass, for compressed air hose, DN 13 – G <sup>1</sup> / <sub>2</sub> A (BSP <sup>1</sup> / <sub>2</sub> " male)	<b>959 05 017</b> /0,1 kg

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## DRIVE MOTORS FOR ECCENTRIC WORM-DRIVE PUMPS TYPE F 550 GS AND SANITARY PUMPS TYPE F 560 GS VERSION WITH PLANETARY GEAR



F 417/F 417 EL



F 457/F 457 EL



F 458/F 458-1



F 460 Ex/F 460-1 Ex

### Commutator motors 230 V, 50 Hz, 5 m cable and plug

Type	Capacity	protected to	max. Viscosity	Part No./Weight version with NVR*	Part No./Weight version without NVR*
<b>F 417</b>	450 Watt	splash-proof to IP 24	10.000 mPas (cP)	-	<b>417 01 004</b> /2,4 kg
<b>F 417 EL**</b>	450 Watt	splash-proof to IP 24	10.000 mPas (cP)	-	<b>417 01 012</b> /2,4 kg
<b>F 457</b>	800 Watt	splash-proof to IP 24	30.000 mPas (cP)	<b>457 01 005</b> /4,0 kg	<b>457 01 002</b> /4,0 kg
<b>F 457 EL**</b>	800 Watt	splash-proof to IP 24	30.000 mPas (cP)	<b>457 01 003</b> /4,0 kg	<b>457 01 041</b> /4,0 kg
<b>F 458</b>	460 Watt	jet-proof to IP 55	12.000 mPas (cP)	<b>458 00 006</b> /5,1 kg	<b>458 00 001</b> /5,1 kg
<b>F 458 EL**</b>	460 Watt	jet-proof to IP 55	12.000 mPas (cP)	<b>458 00 027</b> /5,1 kg	-
<b>F 458-1</b>	700 Watt	jet-proof to IP 55	25.000 mPas (cP)	<b>458 01 004</b> /5,9 kg	<b>458 01 001</b> /5,9 kg
<b>F 460 Ex</b>	460 Watt	II 2 G EEx de IIC T6	12.000 mPas (cP)	<b>460 00 006</b> /5,1 kg	<b>460 00 001</b> /5,1 kg
<b>F 460 Ex EL**</b>	460 Watt	II 2 G EEx de IIC T6	12.000 mPas (cP)	<b>460 00 028</b> /5,1 kg	-
<b>F 460-1 Ex</b>	700 Watt	II 2 G EEx de IIC T6	25.000 mPas (cP)	<b>460 01 004</b> /5,9 kg	<b>460 01 001</b> /5,9 kg

NVR\* = no-volt release

EL\*\* = version with infinitely variable speed variator

### Accessories

**Carrying handle**, steel painted in black  
for drive motor Type F 457  
for drive motors Type F 458 and F 460 Ex

Part No./Weight

**001 10 533**/0,3 kg  
**001 10 557**/0,3 kg



F 416 Ex



F 416-1 Ex



F 416-2 Ex

### Compressed air motors, max. operating pressure 6 bar, thread for compressed air hose G 1/4 (BSP 1/4" female)

Type	Capacity	explosion-proof to	max. Viscosity	Version	Part No./Weight
<b>F 416 Ex</b>	470 Watt	II G cp IIC T6	30.000 mPas (cP)	with trigger valve	<b>416 00 100</b> /1,4 kg
<b>F 416-1 Ex</b>	470 Watt	II G cp IIC T6	30.000 mPas (cP)	without valve	<b>416 00 020</b> /0,9 kg
<b>F 416-2 Ex</b>	470 Watt	II G cp IIC T6	30.000 mPas (cP)	with ball valve	<b>416 00 030</b> /1,0 kg

### Accessories

**Filter-regulator-lubricator unit**, connection G 1/4 (BSP 1/4" female)

Part No./Weight

**001 10 100**/1,0 kg

**Compressed air hose**, electrically conductive, DN 10, yardware

**001 10 098**/0,2 kg

**Hose coupling** (Type 26, DN 7,2) brass, for compressed air hose DN 10

**959 13 066**/0,1 kg

**Nipple** (Type 26, DN 7,2) for hose coupling DN 10 - G 1/4 A (BSP 1/4" male)

**959 13 065**/0,1 kg

**Hose nozzle**, brass, for compressed air hose, DN 10 - G 1/4 A (BSP 1/4" male)

**959 05 022**/0,1 kg

Further accessories for drive motors please see special brochure on FLUX ACCESSORIES.

# FLUX SCREW PUMP TYPE F 520 S WITH BEARING FLANGE

## Recommended for transferring

Low to medium viscosity liquids up to a maximum viscosity of 20.000 mPas (cP).

## Typical applications

Robust pump design to handle substances up to a maximum viscosity of 20.000 mPas (cP). The screw pumps type F 520 S – unlike the F 550 and F 560 series pumps – are not a positive displacement pump design. This allows pumping operations against a closed outlet without using a by-pass valve.

## Seal type

Mechanical seal

## Available drive motors

Three-phase electric motors or compressed air motors

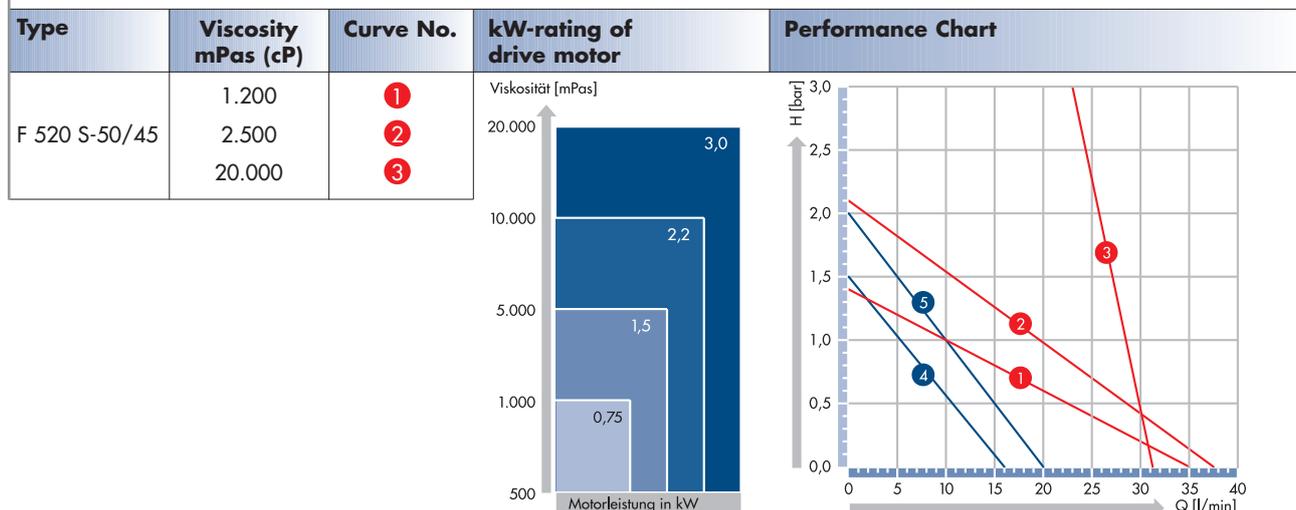
## Scope of supply

A complete screw pump consists of: drive motor, pump and hose connection.



F 520 S-50/45  
with three-phase motor

## TECHNICAL DATA



Values ± 10% obtained with a speed of 2850 rpm. Delivery data for other viscosities on request.

**Springer Pumps, LLC**

Tel: 866-777-6060

Fax: 866-777-6383

[info@springerpumps.com](mailto:info@springerpumps.com)

[www.springerpumps.com](http://www.springerpumps.com)

# FLUX SCREW PUMP TYPE F 520 S WITH BEARING FLANGE



## SCREW PUMP TYPE F 520 S, WITHOUT DRIVE MOTOR

Type	F 520 S-50/45
Pump design	bearing flange version
Viscosity max.	20.000 mPas (cP)
Delivery rate max.	35 l/min
Delivery head max.	2 bar
Thread on outlet	G 1½ A (BSP 1½" male)
Seal type	mechanical seal in ceramic oxide, o-rings in FKM
Material	bearing flange in aluminium, outer tube and shaft in stainless steel 316 Ti
Screw	stainless steel 316 Ti
Outer-Ø	50 mm
Part No./Weight	
Immersion length 700 mm	<b>520 23 003</b> /5,5 kg
Immersion length 1000 mm	<b>520 23 004</b> /6,6 kg
Immersion length 1200 mm	<b>520 23 022</b> /6,0 kg

## HOSE CONNECTION IN STAINLESS STEEL, COMPLETE WITH UNION NUT

Part No./Weight	Type F 520 S-50/45
for flexible hose, inside Ø <b>DN 25</b>	<b>959 04 002</b> /0,2 kg
for flexible hose, inside Ø <b>DN 32</b>	<b>959 04 003</b> /0,3 kg
for flexible hose, inside Ø <b>DN 38</b>	<b>959 04 004</b> /0,4 kg

## DRIVE MOTORS FOR SCREW PUMP TYPE F 520 S-50/45

Three-phase motors 230/400 Volt, 50 Hz, jet-proof to IP 55, without cable

Type	Capacity	Speed	Part No./Weight Motor with cable terminal box	Part No./Weight Motor with motor protection switch
Three-phase motor	0,75 kW	2850 rpm	<b>001 00 006</b> /7,5 kg	<b>001 00 046</b> /7,5 kg
Three-phase motor	1,5 kW	2850 rpm	<b>001 00 008</b> /12,0 kg	<b>001 00 048</b> /12,0 kg
Three-phase motor	2,2 kW	2850 rpm	<b>001 00 009</b> /15,0 kg	<b>001 00 049</b> /15,0 kg
Three-phase motor	3,0 kW	2850 rpm	<b>001 00 010</b> /20,0 kg	<b>001 00 050</b> /20,0 kg

### Accessories

Accessories	Part No./Weight
Carrying handle, stainless steel	<b>001 10 571</b> /1,0 kg

## Compressed air motors, maximum operating pressure 7 bar, explosion-proof to II 2 G cT5



Type	Capacity	Speed at 6 bar	Connection	Part No./Weight
<b>FKM 4 Ex</b>	1,0 kW	3000 rpm	G ¾ (BSP ¾" female)	<b>001 04 000</b> /5,0 kg
<b>FKM 6 Ex</b>	2,6 kW	3000 rpm	G 1½ (BSP 1½" female)	<b>001 04 014</b> /7,0 kg

### Accessories

Accessories	Part No./Weight
Carrying handle, stainless steel	<b>001 10 520</b> /1,0 kg

Further accessories for drive motors please see page 16

# ACCESSORIES FOR FLUX HIGH VISCOSITY LIQUID PUMPS



**ATTACHMENT CLAMP** TO SECURELY FASTEN THE PUMP IN OPEN CONTAINERS OR BARRELS

Pump-Ø	Part No./Weight
50 mm	<b>001 10 603</b> /0,1 kg
54 mm	<b>001 10 604</b> /0,5 kg



**CONTAINER CLIP** TO SUSPEND THE PUMP INTO OPEN CONTAINERS

Material	Pump-Ø	Part No./Weight
Aluminium, PVC-coated	50 mm	<b>001 15 006</b> /0,1 kg



**COMPRESSION GLAND** TO SECURE THE PUMP IN THE BUNGHOLE OF THE BARREL

Material	Pump-Ø	Connection thread	Part No./Weight
PP	50 mm	male thread G 2	<b>001 14 062</b> /0,1 kg
Steel/zinc-plated	50 mm	male thread G 2	<b>001 14 003</b> /0,5 kg
Steel/zinc-plated	50 mm	male thread M 64 x 4	<b>001 14 002</b> /0,5 kg



**DISCHARGE SPOUT** WITH UNION NUT G 1<sup>1</sup>/<sub>4</sub> FOR DIRECT MOUNTING ONTO THE PUMP OUTLET TO ALLOW THE FILLING OF ADJACENT CONTAINERS

Material	Outlet	Part No./Weight
Stainless steel 316 Ti	DN 25	<b>959 07 007</b> /0,4 kg
<b>Reduction piece G 1<sup>1</sup>/<sub>2</sub> – G 1<sup>1</sup>/<sub>4</sub> A</b>		<b>959 06 005</b> /0,1 kg



**HOIST** WITH INFINITELY ADJUSTABLE LOAD BALANCER

Carrying force	Rope length	Part No./Weight
9 – 14 kg	2 m	<b>001 21 000</b> /3,7 kg
16 – 21 kg	2 m	<b>001 21 002</b> /4,1 kg



**BY-PASS VALVE, INLET – OUTLET CONNECTION G 1<sup>1</sup>/<sub>2</sub> – G 1<sup>1</sup>/<sub>2</sub> A**  
FOR DIRECT MOUNTING ONTO THE OUTLET OF PUMPS TYPE F 550

Material	Pressure setting	Discharge connection	Part No./Weight
Stainless steel 316 Ti	4 – 6 bar	Flow back tube	<b>001 18 027</b> /3,1 kg
Stainless steel 316 Ti	4 – 6 bar	Hose connection DN 13	<b>001 18 029</b> /2,7 kg
Brass	2 – 8 bar	Flow back tube	<b>001 18 026</b> /2,3 kg
Brass	2 – 8 bar	Hose connection DN 13	<b>001 18 028</b> /1,9 kg

For flexible hoses, hose fittings and further accessories, please see detailed brochure on FLUX ACCESSORIES.

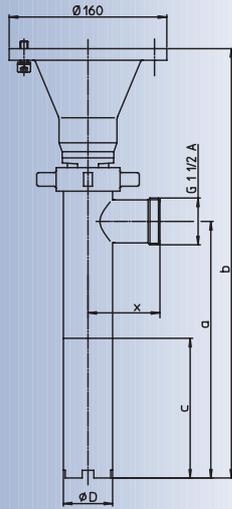
Media	Viscosity	Temperature
Alkyd resins	500–3.000 mPas (cP)	20 °C
Apple-purée	1.500 mPas (cP)	20 °C
Baby food	1.400 mPas (cP)	40 °C
Brewers's yeast	370 mPas (cP)	20 °C
Butter	30.000 mPas (cP)	40 °C
Butter cream, sour	550 mPas (cP)	20 °C
Butter fat	45 mPas (cP)	40 °C
Castor oil	2.420 mPas (cP)	10 °C
Castor oil	1.000–1.500 mPas (cP)	20 °C
Caustic soda 50%	45 mPas (cP)	20 °C
Chocolate confectionery	2.600 mPas (cP)	40 °C
Chocolate sauce	280 mPas (cP)	50 °C
Cleaning emulsions	1.500 mPas (cP)	70 °C
Cocoa butter	50 mPas (cP)	60 °C
Cocoa paste	4.000 mPas (cP)	20 °C
Coconut oil	80 mPas (cP)	20 °C
Cod-liver oil	35 mPas (cP)	40 °C
Corn oil	30 mPas (cP)	60 °C
Cotton seed oil	60 mPas (cP)	20 °C
Cream, 30–50% fat	11–115 mPas (cP)	20 °C
Dental adhesive	30.000 mPas (cP)	20 °C
Dipropyleneglycol	107 mPas (cP)	20 °C
Evaporated milk	80 mPas (cP)	40 °C
Evaporated milk, sweetened	6.100 mPas (cP)	20 °C
Fruit juice	50 mPas (cP)	20 °C
Fruit juice concentrate	1.500 mPas (cP)	20 °C
Fruit mash	600 mPas (cP)	20 °C
Gelatine	1.200 mPas (cP)	45 °C
Glucose	4.300–6.800 mPas (cP)	25–30 °C
Glycerine 100%	4.500 mPas (cP)	10 °C
Glycerine 100%	1.490 mPas (cP)	20 °C
Glycol	20 mPas (cP)	20 °C
Gravy	110 mPas (cP)	80 °C
Hand creme	8.000 mPas (cP)	20 °C
Honey	2.000 mPas (cP)	40 °C
Jam	8.500 mPas (cP)	20 °C
Lacquers (25% pigments)	3.000 mPas (cP)	20 °C
Lard	65 mPas (cP)	40 °C
Latex emulsions	200 mPas (cP)	20 °C
Linseed oil	55 mPas (cP)	20 °C
Liqueurs	10–100 mPas (cP)	20 °C
Liquid egg	150 mPas (cP)	45 °C
Liquid soap	85 mPas (cP)	60 °C
Liquid wax	500 mPas (cP)	90 °C
Lubricating oil	60–200 mPas (cP)	20 °C
Machine oil, heavy	600 mPas (cP)	20 °C
Machine oil, light	150 mPas (cP)	20 °C
Malt extract	9.500 mPas (cP)	20 °C
Mayonnaise	2.000 mPas (cP)	20 °C

Media	Viscosity	Temperature
Molasses 80 °Bx	10.000 mPas (cP)	20 °C
Molasses 83 °Bx	50.000 mPas (cP)	20 °C
Molasses 85 °Bx	100.000 mPas (cP)	20 °C
Motor oil SAE 10W	160 mPas (cP)	20 °C
Motor oil SAE 140	2.300 mPas (cP)	20 °C
Motor oil SAE 20W	160 mPas (cP)	20 °C
Motor oil SAE 30	380 mPas (cP)	20 °C
Motor oil SAE 40	600 mPas (cP)	20 °C
Motor oil SAE 50	900 mPas (cP)	20 °C
Motor oil SAE 5W	50 mPas (cP)	20 °C
Motor oil SAE 90	700 mPas (cP)	20 °C
Oleic acid	40 mPas (cP)	20 °C
Olive oil	85 mPas (cP)	20 °C
Palm oil	130 mPas (cP)	20 °C
Paraffin emulsion	3.000 mPas (cP)	20 °C
Peanut oil	40 mPas (cP)	40 °C
Polyester resin	3.000 mPas (cP)	30 °C
Polyglycerine caprinate	6.000–7.000 mPas (cP)	15 °C
Polymer solution	20.000 mPas (cP)	20 °C
Polyol (A-Component)	85.000 mPas (cP)	10 °C
Polyol, non-pigmented	500–5.000 mPas (cP)	20 °C
Potassium hydroxide	67 mPas (cP)	20 °C
Printing ink (and colours)	550–2.200 mPas (cP)	40 °C
Pudding	1.000 mPas (cP)	40 °C
Rapeseed oil	160 mPas (cP)	20 °C
Resin solution	7.100 mPas (cP)	20 °C
Salad dressing	1.300–2.600 mPas (cP)	20 °C
Salad oil	65 mPas (cP)	20 °C
Shampoo	3.000 mPas (cP)	20 °C
Soft cheese	30.000 mPas (cP)	60 °C
Soybean oil	80 mPas (cP)	20 °C
Soybean oil, treated	600–800 mPas (cP)	20 °C
Starch solution 25° Baumé	300 mPas (cP)	20 °C
Steam turbine oil	300–1.100 mPas (cP)	20 °C
Sugar solution 65° Bx	120 mPas (cP)	20 °C
Sugar solution 70° Bx	400 mPas (cP)	20 °C
Tomato ketchup	1.000 mPas (cP)	30 °C
Tomato paste	195 mPas (cP)	20 °C
Tooth paste	70.000 mPas (cP)	40 °C
Train oil	100 mPas (cP)	20 °C
Transformer oil	30 mPas (cP)	30 °C
Transformer oil	75 mPas (cP)	10 °C
Vegetable soup	430 mPas (cP)	20 °C
Vitamin oil	4.500 mPas (cP)	10 °C
Water-based lacquer	900 mPas (cP)	20 °C
Whey	800–1.500 mPas (cP)	40 °C
Whipped foods	1.500 mPas (cP)	40 °C
White oil	300 mPas (cP)	20 °C
Yogurt	150 mPas (cP)	40 °C

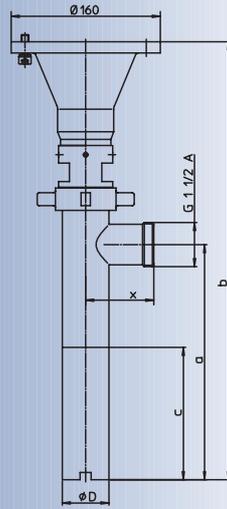
The media listed above have to be considered as examples only, as their viscosity may change substantially due to different composition and/or other temperatures. An in-service test will provide the utmost certainty in selecting the most suitable pump type. This applies especially to „Non-Newtonian liquids“, the exact viscosity of which is difficult to define and may change during pumping operation (intrinsic viscosity). FLUX sales representatives will always be at your disposal for an individual demonstration.

# DIMENSIONS

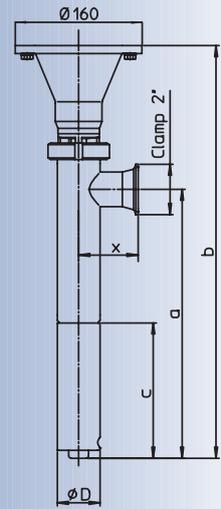
### F 550 S



### F 550 SB

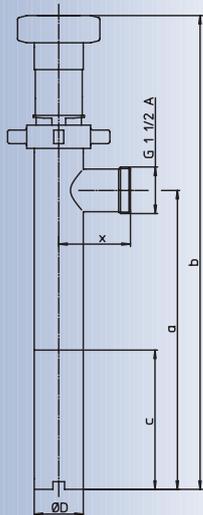


### F 560 S

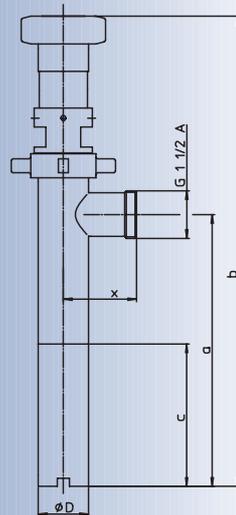


Type	F 550 S-50/21		F 550 SB-50/21		F 560 S-50/21	
Dimensions in mm	ØD	x	a	b	c	
Immersion length 700 mm	50	73	714	897	143	932
Immersion length 1000 mm	50	73	1014	1197	143	1232
Immersion length 1200 mm	50	73	1214	1397	143	1432
Type	F 550 S-54/26		F 550 SB-54/26		F 560 S-54/26	
Dimensions in mm	ØD	x	a	b	c	
Immersion length 700 mm	54	75	740	923	170	958
Immersion length 1000 mm	54	75	1040	1223	170	1258
Immersion length 1200 mm	54	75	1240	1423	170	1458

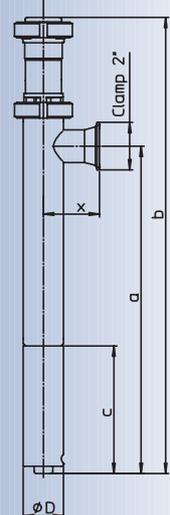
### F 550 GS



### F 550 GSB

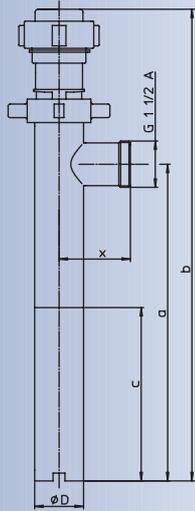


### F 560 GS

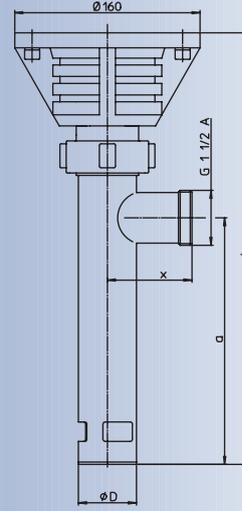


Type	F 550 GS-50/21		F 550 GSB-50/21		F 560 GS-50/21	
Dimensions in mm	ØD	x	a	b	c	
Immersion length 700 mm	50	73	714	897	143	932
Immersion length 1000 mm	50	73	1014	1197	143	1232
Immersion length 1200 mm	50	73	1214	1397	143	1432
Type	F 550 GS-54/26		F 550 GSB-54/26		F 560 GS-54/26	
Dimensions in mm	ØD	x	a	b	c	
Immersion length 700 mm	54	75	740	914	170	948
Immersion length 1000 mm	54	75	1040	1214	170	1248
Immersion length 1200 mm	54	75	1240	1414	170	1448

**F 550 GS6**



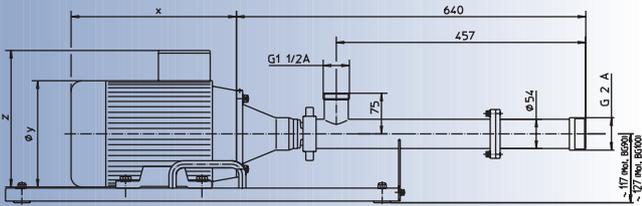
**F 520 S-50/45**



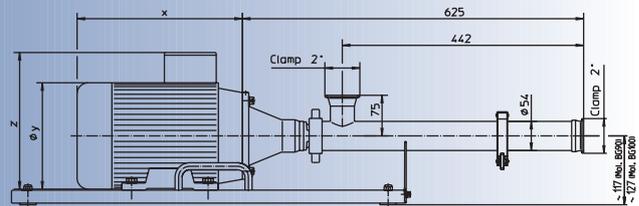
Type	F 550 GS6-50/21					F 550 GS6-54/26				
Dimensions in mm	ØD	x	a	b	c	ØD	X	a	b	c
Immersion length 700 mm	50	73	713	867	143	54	75	740	894	170
Immersion length 1000 mm	50	73	1013	1167	143	54	75	1040	1194	170
Immersion length 1200 mm	50	73	1213	1367	143	54	75	1240	1394	170

Type	F 520 S-50/45		
Dimensions in mm	ØD	a	b
Immersion length 700 mm	50	715	876
Immersion length 1000 mm	50	1015	1176
Immersion length 1200 mm	50	1215	1376

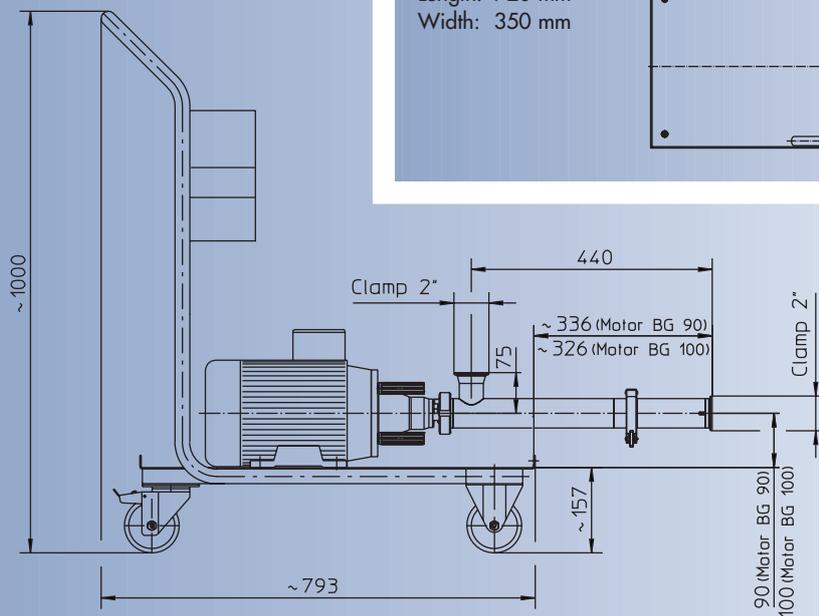
**F 550 S-54/26 TR**



**F 550 SF-54/26 TR**

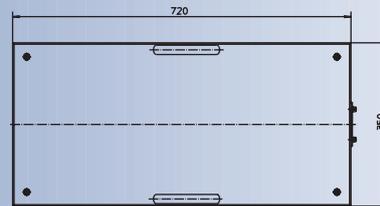


**F 560 S-54/26 TR**



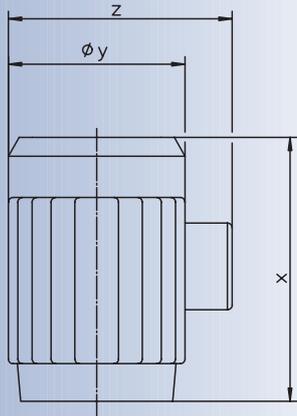
**Console**

Length: 720 mm  
Width: 350 mm

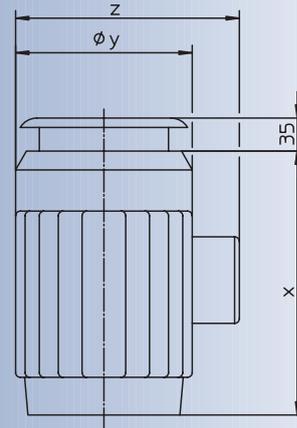


# DIMENSIONS

**TPM IP 55**



**TPM Ex**



**Three-phase motors (TPM), jet-proof to IP 55, for use with F 550 S and F 560 S**

Capacity	Speed	X	ØY	Z
0,75 kW	930 rpm	244	176	227
0,75 kW	700 rpm	303	196	252
1,1 kW	930 rpm	269	176	227
1,1 kW	700 rpm	303	196	252

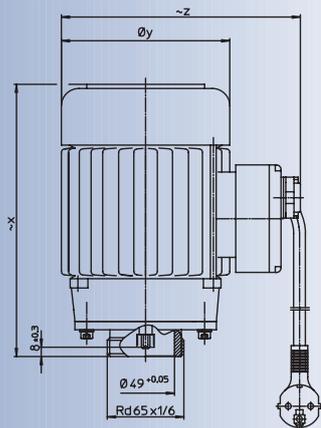
**Three-phase motors (TPM), explosion-proof, for use with F 550 S and F 560 S**

Capacity	Speed	X	ØY	Z
0,75 kW	930 rpm	244	176	237
1,1 kW	930 rpm	269	176	237
0,95 kW	700 rpm	303	196	256

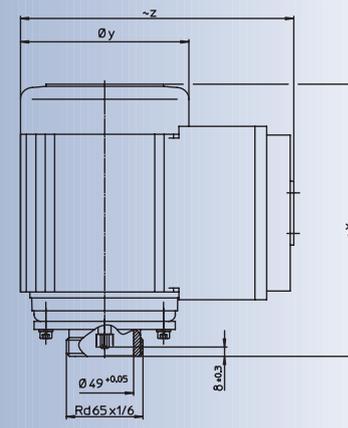
**Three-phase motors (TPM), jet-proof to IP 55, for use with F 520 S**

Capacity	Speed	X	ØY	Z
0,75 kW	2850 rpm	232	158	201
1,5 kW	2850 rpm	244	176	227
2,2 kW	2850 rpm	269	176	227
3,0 kW	2850 rpm	303	196	252

**SPM**



**TPM**



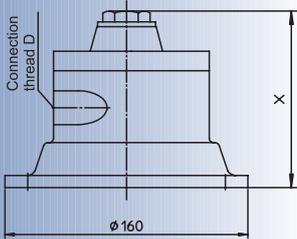
**Single-phase motor (SPM) with capacitor switch, for use with F 550 GS6**

Type	Capacity	Speed	X	ØY	Z
F 403/2	0,50 kW	2850 rpm	233	143	203
F 403/4	0,55 kW	1450 rpm	258	160	223

**Three-phase motor (TPM), jet-proof to IP 55, for use with F 550 GS6**

Type	Capacity	Speed	X	ØY	Z
F 403/4	0,55 kW	1450 rpm	257	160	251
F 403/2	0,75 kW	2850 rpm	257	160	251

### Compressed air motors



for use with F 550 S and F 560 S

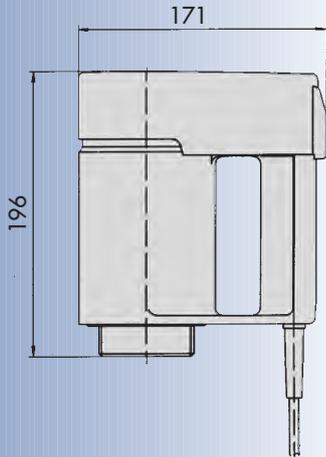
Type	Capacity	Speed	X	Connection thread D
FKM 4 Ex	0,5 kW	1000 rpm	117	G 3/8 (BSP 3/8" female)
FKM 6 Ex	1,1 kW	1000 rpm	155	G 1/2 (BSP 1/2" female)
FKM 8 Ex	1,8 kW	1000 rpm	177	G 1/2 (BSP 1/2" female)

for use with F 520 S

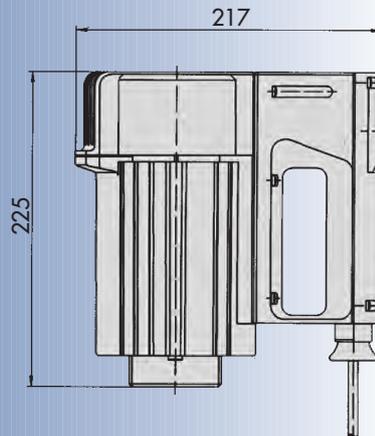
Type	Capacity	Speed	X	Connection thread D
FKM 4 Ex	1,0 kW	3000 rpm	117	G 3/8 (BSP 3/8" female)
FKM 6 Ex	2,6 kW	3000 rpm	155	G 1/2 (BSP 1/2" female)

### Drive motors for F 550 GS and F 560 GS

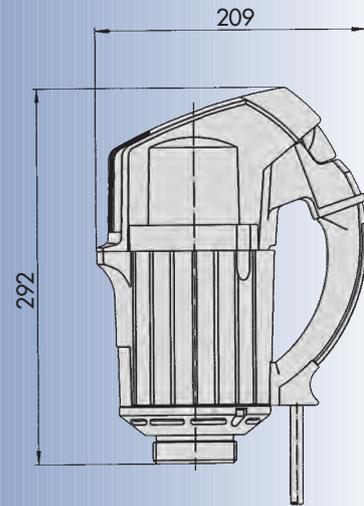
#### F 417/F 417 EL



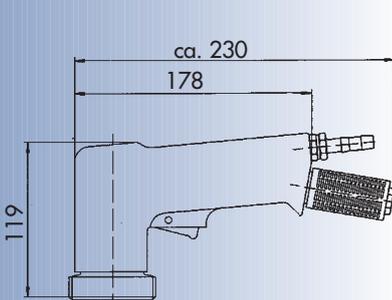
#### F 457/F 457 EL



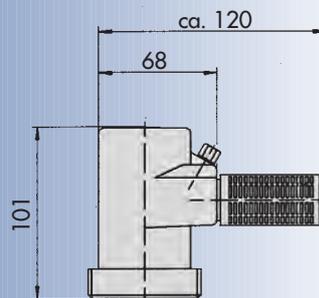
#### F 458/F 458 EL/F 458-1/ F 460 Ex/F 460 Ex EL/ F 460-1 Ex



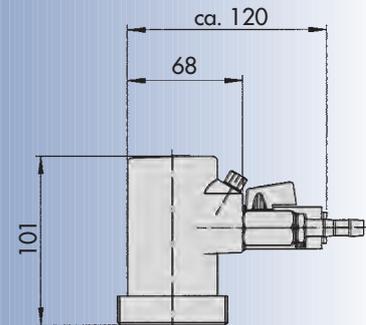
#### F 416 Ex



#### F 416-1 Ex



#### F 416-2 Ex



With motor and pump assembled, the total length reduces by 16 mm.

# NEW

**The cost-effective solution from the world's leading barrel pump manufacturer for pumping non-flowing products, like for example: Grease, ointment, paste, silicon, paint and varnishes, as well as a great number of basic products in food industry (e.g. tomato paste, cottage cheese etc.) from 200-l-barrel to process.**



## FEATURES AND BENEFITS

- Protects the integrity of products by using gentle, progressive cavity pumping technology and removing the need for heating to induce flow.
- Simple to use and eliminates wastage due to incomplete barrel emptying.
- Compact design with lifting handles for easy portability and assembly.
- Features fast strip down for cleaning or sterilisation. Also available with pumps to 3A standards for use in hygienic applications.
- Stainless steel construction/elastomer combinations customised to suit the application.
- Delivery rate up to max. 40 l/min.

## DESCRIPTION

Frame-mounted total package including:  
guide cylinder with follower plate in stainless steel, clamp connection to the pump.  
Flexible lip seal customized for drum diameter.  
Hydraulic ram in aluminium and control unit for lifting the pump and follower plate after barrel emptying.

Progressive cavity pump type F 550 SF-54/26 TR in stainless steel, with mechanical seal, o-rings in FKM (Viton®), with stator in PTFE, clamp connection to the follower plate, arched pump outlet with thread G 1 1/2 A (BSP 1 1/2" male).

Drive motor: three-phase or air-driven motors in differing kw-ratings and speeds.



# THE GREAT RANGE OF FLUX PUMPS



# YES!

I am interested in top class pump technology.  
Please send the following catalogues:

- |   |  |
|---|--|
| <input type="checkbox"/> FLUX JUNIORFLUX                  | <input type="checkbox"/> FLUX AIR-OPERATED DIAPHRAGM PUMPS |
| <input type="checkbox"/> FLUX PUMP KITS                   | <input type="checkbox"/> FLUX MIXERS                       |
| <input type="checkbox"/> FLUX BARREL AND CONTAINER PUMPS  | <input type="checkbox"/> FLUX LIQUID METERS                |
| <input type="checkbox"/> FLUX CENTRIFUGAL IMMERSION PUMPS | <input type="checkbox"/> FLUX PROCESS CONTROL SYSTEM PCS   |

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