

F 430 TR

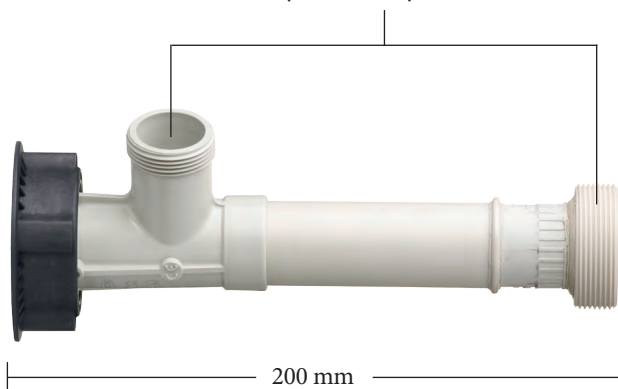
For dry installation/horizontal use



Horizontal pump F 430 TR is ideal for conveying media from IBCs, tanks and other containers with low level outlet. E.g. if a tank is not accessible from the top, or if the spatial conditions do not allow use of a vertical pump. For cleaning, the pump can be easily and quickly taken apart in its two main components. The pump is available in stainless steel or polypropylene. The stainless steel version can also be used in hazardous areas.

Connection possibilities for:

- mobile use, via hose connection and hose
- stationary use, directly at the thread



Technical data



Flow rate max.	63 GPM*
Delivery head max.	42 ft*
Viscosity max.	1200 cPs*
Materials pump	Stainless steel, polypropylene
Installation	Horizontal mobile, stationary

Functional description

In the F 430 TR, the mechanical seal seals the inner tube from the medium. This prevents the medium from getting into the inner tube. The shaft only comes into contact with the medium in the impeller area.


Product characteristics

- ▶ Can be used for numerous media cf. F 430 on page 13
- ▶ For containers with low level outlet
- ▶ With mechanical seal to seal inner tube
- ▶ Connection options for mobile and stationary use
- ▶ Pump can be disassembled into two parts: inner tube complete and outer tube
- ▶ 7.87 inches (200 mm) long
- ▶ Can be combined with various motors as required
- ▶ Temporary operation against closed valve (hand nozzle, ball valve) possible until max. operating temperature has been reached



Filling a detergent from a high tank in canisters.

Advantages

- ▶ Provides greatest flexibility in installation and mobility
- ▶ Can be used at low ceiling heights
- ▶ Stainless steel version for use in hazardous areas** 
- ▶ Can also be integrated into pipe systems
- ▶ A horizontal centrifugal pump that can be used with different FLUX motors

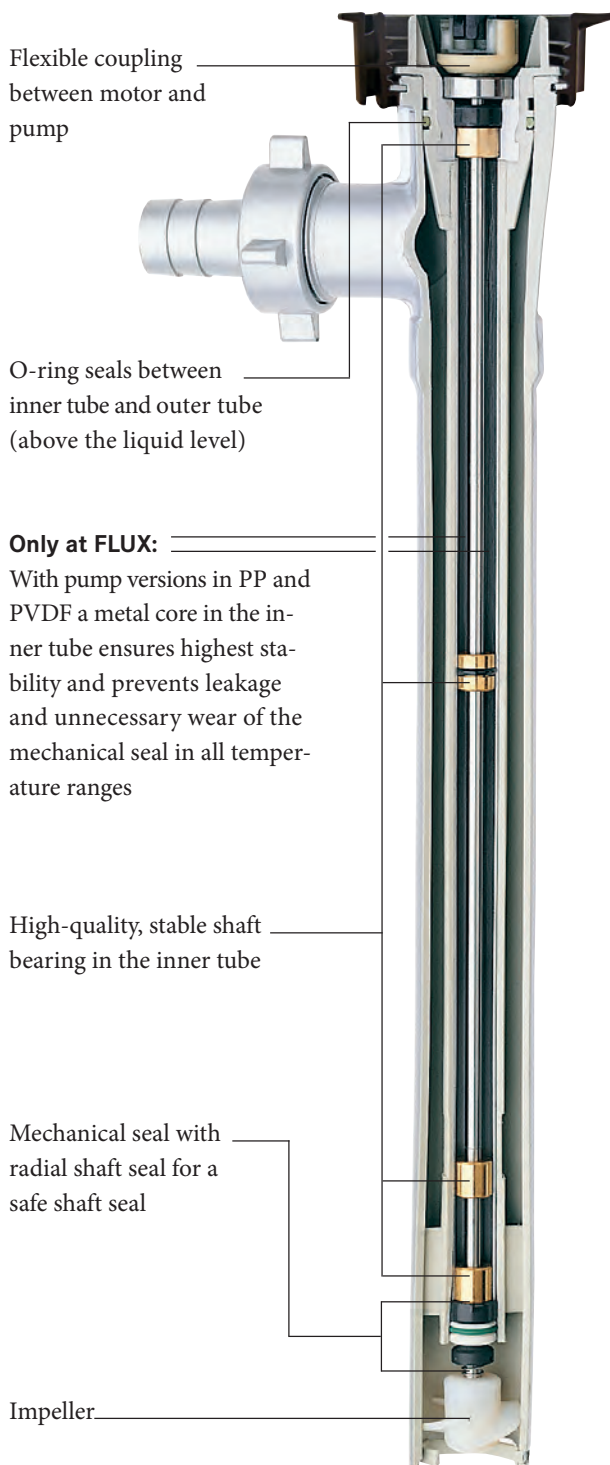
* dependent on pump model, motor and medium

** conform EC Directive 2014/34/EU

F/FP 430

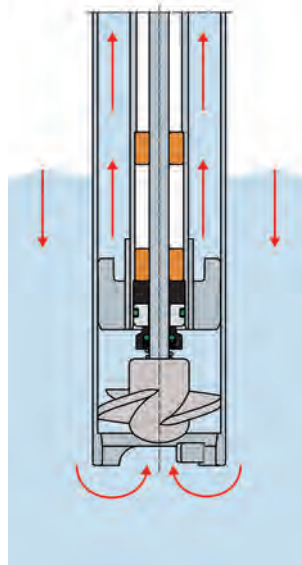
With mechanical seal

The universal F/FP 430 pump can be used for various media and is suitable for conveying out of drums, IBCs or tanks. Due to the construction with mechanical seal, the pump can be easily and quickly taken apart into its two main components. This allows good cleanability. Distinct feature, only at FLUX: The inner tube is reinforced with a metal core on plastic models (PP and PVDF). This always allows full function of the mechanical seal. This way, leakage and unnecessary wear are prevented for the complete operating temperature range. Furthermore, it provides highest stability and makes immersion lengths of up to 118 in (3000 mm) possible. Versions in stainless steel and hastelloy C are ex-protected. The stainless steel version is also available as FOOD certified version.



Functional description

The mechanical seal seals the inner tube from the medium, preventing the medium from getting into the inner tube. The shaft is only in contact with the medium in the rotor area.



The mechanical seal prevents medium from getting into the inner tube while pumping.



With just three hand movements the pump can be disassembled into inner tube (complete) and outer tube.

Product characteristics




- ▶ With mechanical seal for sealing the inner tube
- ▶ Pump can be disassembled into two parts: inner tube cpl. and outer tube
- ▶ Inner tube with metal core on PP and PVDF
- ▶ Versions for use in hazardous areas and food sector available
- ▶ Grease-lubricated shaft bearing
- ▶ Can be combined with various motors as required

Advantages

- ▶ Ideal for frequent medium changes, hardening media, fast drying media, crystallizing media
- ▶ Can be taken apart into main components easily and quickly for cleaning
- ▶ Compared to sealless pump higher service life on abrasive media
- ▶ The inner tube reinforced with metal core on plastic models prevents leakage and unnecessary wear of the mechanical seal in all operating temperature ranges
- ▶ High stability of the plastic pumps enables immersion lengths of up to 118 in (3000 mm)
- ▶ Temporary operation against closed valve (hand nozzle, ball valve etc.) is possible until max. indicated operating temperature
- ▶ Very quiet operation with low vibration
- ▶ Version in stainless steel and hastelloy C can be used in hazardous areas*** 
- ▶ FOOD version conforms to EC 1935/2004 and FDA CFR 21



Filling a system with hydraulic oil (F 430 AL).

Technical data	  
Flow rate max.	63 GPM*
Delivery head max.	98 ft*
Viscosity max.	1200 cPs*
Materials pump	Stainless steel, polypropylene, polyvinylidene fluoride, aluminium, hastelloy C
Standard immersion depths	27/39/47 inches 700/1000/1200 mm
Other immersion depths/ special lengths**	200 - 3 000

Note

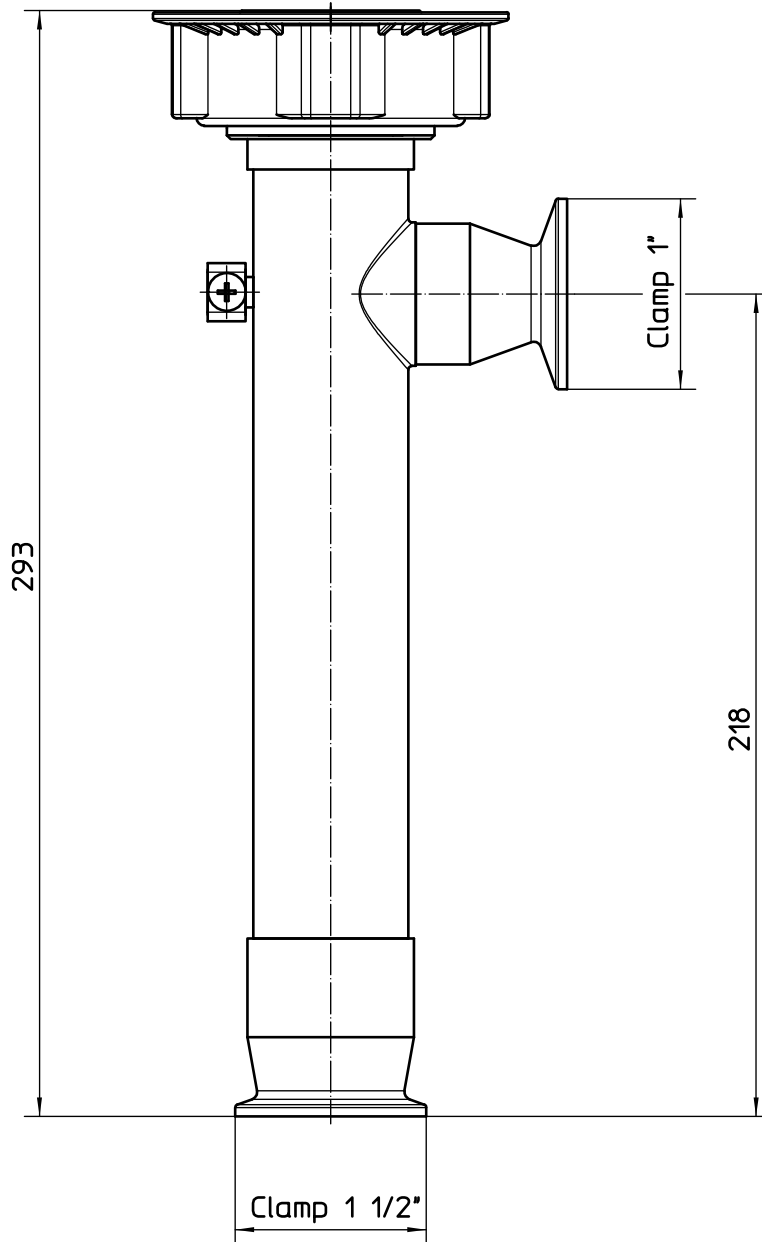
Horizontal version for dry installation see page 23.

Examples of media

- ▶ Acids
- ▶ Alkalis
- ▶ Mineral oil products
- ▶ Highly flammable liquids
- ▶ Solvents
- ▶ Petroleum/Fuels
- ▶ Dilute solutions
- ▶ Paints and lacquers
- ▶ Flavours
- ▶ Spirits



Filling an essential oil (F 430 S).



Bemerkung:

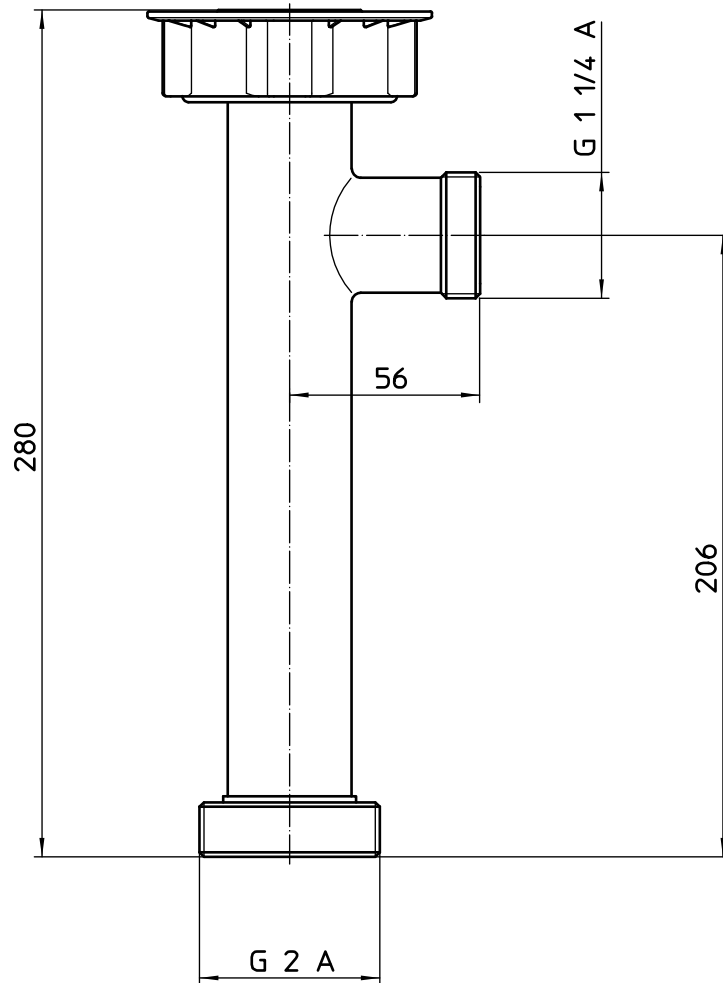
Bei Montage von Motor und Pumpe reduziert sich die Gesamtlänge um 16 mm!

Note:

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

Nota:

La hauteur totale se réduit de 16 mm lorsque le moteur est monté sur la pompe!



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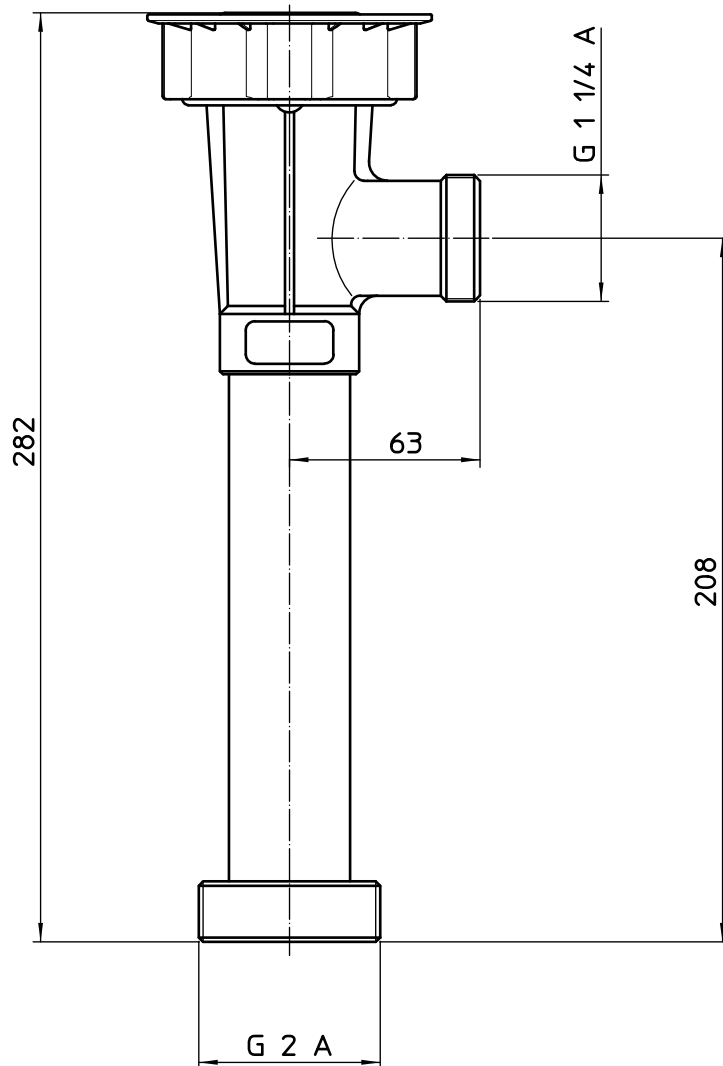
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Overview pump motors

For series 400 FLUX pumps

Suitable motors type	Commutator		
Motor type	FEM 4070	F 457	F 458 / F 458-1
Image			
Description	<p>The compact commutator motor The FEM 4070 has a continuously variable speed for different flow rates and a capacity of 500 watts. It convinces with its compact design, low weight and mainly by its low noise level.</p>	<p>The most powerful commutator motor With 800 watts the motor F 457 is the most powerful commutator motor. The handy compact design has very good air cooling, a low noise level and is optionally available with an integrated no-volt release.</p>	<p>The robust commutator motor The F 458 is a compact commutator motor, with extremely tough double skin aluminium housing and is thus very quiet. The motor is completely enclosed and has a special corrosion-resistant paint. Therefore, it is suitable for use in extreme conditions, even areas with corrosive vapours.</p>
Protection class/ Operation mode	IP 24/S1	IP 24/S1	IP 55/S1
Ex-marking	-	-	-
Certificates			
Venting	Internal	Internal	External
Voltage (Volt) Frequency	100/110/120/230/240 V 50 - 60 Hz	110/120/230/240 V 50 - 60 Hz	12/24; 42/110/120/230/240 V DC; 50 - 60 Hz
Power (watts)	500	800	12 V: 230/24 V: 410/460/700
Speed setting	Infinitely	Optional	Optional
Weight	5.7 lbs (2.6 kg)	8.8 lbs (4 kg)	11.2/13 lbs (5.1/5.9 kg)
Low voltage protection	Optional	Optional	Optional
Advantages/characteristics	<ul style="list-style-type: none"> ▶ Commutator motor ▶ Low noise level ▶ With infinite speed adjustment ▶ Compact design ▶ Low weight ▶ Awarded the iF Design Award 	<ul style="list-style-type: none"> ▶ Most powerful commutator motor ▶ Low noise level ▶ F 457 EL: with infinite speed adjustment 	<ul style="list-style-type: none"> ▶ Commutator motor ▶ Very robust aluminium housing ▶ With special corrosion-resistant paint ▶ Very low noise level ▶ Motor is completely enclosed ▶ F 458: 460 Watt ▶ F 458-1: 700 Watt ▶ F 458 EL: with infinite speed adjustment

Note on protection class acc. to DIN EN 60529 and operation mode acc. to EN 60034-1

IP 24: Protected against solid foreign objects with diameter > 0.49 in (12.5 mm) and against access with one finger; protection against all-over spray water

IP 55: Protected against dust in a damaging quantity and complete protection against touch; protection against jet of water (nozzle) from any angle

S1: Continuous operation with constant load



	F 460 Ex / F 460-1 Ex	Brushless FBM 4000 Ex	Compressed-air F 416 Ex	Three-phase F 414
				
	<p>The ex-protected commutator motor F 460 Ex is a compact commutator motor, with extremely tough double skin aluminium housing and is thus very quiet. The motor is completely enclosed. Optimal air flow ensures very good cooling and thus extended service life of the carbon brushes.</p>	<p>The world's first brushless drum pump motor FBM 4000 Ex is a brushless drum pump motor, with extremely tough double skin aluminium housing and is thus very quiet. Soft-start and easy to handle speed control allow sensitive dosing. It is low-wear and maintenance-free.</p>	<p>The lightweight and easy to handle compressed-air motor Compressed-air motor F 416 Ex is very light and easy to handle and at the same time extremely powerful. Thanks to a silencer it is very quiet. Alternatively an exhaust hose can be used to guide the exhaust air to an oil separator. The speed is simply adjusted by varying the operating pressure or the amount of air.</p>	<p>Three-phase motor for extreme operating conditions With robust three-phase gearmotor F 414 an increased duty cycle is possible, so it can be used in extreme conditions. It convinces with a constant speed.</p>
	IP 55/S1	IP 55/S1	-/-	IP 55/S1
	 II 2 G Ex d e IIC T6 resp. T5	 II 2 G Ex d e IIC T5 Gb	 II G cp IIC T6	-
				
	External	External	Compressed-air	External
	12/24; 42/110/120/230/240 V DC; 50 - 60 Hz	230 V 50 - 60 Hz	87 PSI (6 bar) (17 SCFM air consumption)	230/400 V 60 Hz
	12 V: 230/24 V: 410/460/700	600	470	550/750/1100
	Optional	Infinitely	Optional	-
	11.2/13 lbs (5.1/5.9 kg)	13.6 lbs (6.2 kg)	1.9 - 3 lbs (0.9 - 1.4 kg)	19.4 - 28.2 lbs (8.8 - 12.8 kg)
	Optional	Yes	-	-
	<ul style="list-style-type: none"> ▶ Commutator motor ▶ Very robust housing in aluminium ▶ Motor is completely closed ▶ F 460 Ex: 460 Watt ▶ F 460-1 Ex: 700 Watt ▶ F 460 Ex EL: 460 Watt, with infinite speed adjustment 	<ul style="list-style-type: none"> ▶ Brushless motor ▶ Increased run times ▶ Very low wear ▶ Maintenance-free ▶ Low life cycle costs ▶ With infinite speed adjustment ▶ Very low noise level ▶ Extremely tough double skin aluminium housing 	<ul style="list-style-type: none"> ▶ Compressed-air motor ▶ Very lightweight and easy to handle ▶ Extremely powerful ▶ Highest power of all drum pump motors ▶ F 416 Ex: with trigger valve ▶ F 416-1 Ex: without valve ▶ F 416-2 Ex: with ball valve 	<ul style="list-style-type: none"> ▶ Three-phase gearmotor ▶ Increased duty cycle possible ▶ The most powerful electric drum pump motor ▶ Available with motor protection switch or cable terminal box ▶ Constant speed

Note on motor power and undervoltage protection

Electrical power consumed is stated for electric motors, for a compressed-air motor, the output power is stated.

The compressed-air motor F 416 Ex (470 W) is more powerful than the commutator motor F 457 (800 W).

Undervoltage protection prevents the motor from starting unintentionally after a power failure. The motor must then be started manually. Motors with undervoltage protection are therefore not suitable for operation with switching amplifiers such as in semi-automatic filling systems (cf. page 36-37).