



BARREL AND CONTAINER PUMPS

NEW now supplied with FLUX-Clip



INNOVATORS
IN FLOW TECHNOLOGY

FLUX PUMPS: PERFECTION IN PUMPING

Do you want to transfer differing liquids quickly and economically?

Do you want to measure out varying quantities?

Do you want to ensure total safety for the operator or the environment when pumping hazardous products?

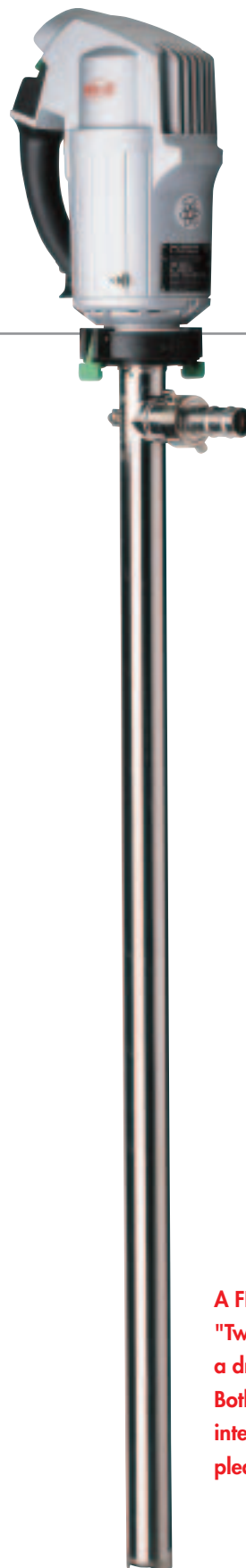
Do you want a pump which can cope even with peak loadings?

FLUX barrel and container pumps offer the high-tech design you require.

Whenever liquids are pumped out of a barrel or container, FLUX can supply a unit of unsurpassed quality: all FLUX pumps are available in different materials. You can choose between a pump with a mechanical seal or a sealless version. One of the unique features of both, the polypropylene and the PVDF mechanical seal version, is the steel cored inner tube providing, through increased lateral stability, a longer service life. Both, mixed centrifugal and axial impellers are available to suit differing head and flow applications. And if you want to combine the pumping and mixing operation FLUX also have the pump you need.

Another feature is the FLUX quick assembly system. This allows for simple and speedy pump strip down.

Of course, FLUX pumps require a powerful and reliable drive motor. A wide range of electric or compressed air motors provides a matched power unit throughout the pump range – even in hazardous locations or when pumping high flammability liquids. To complete the comprehensive FLUX program, a wide range of top class accessories is available – from protection against emission of noxious vapours through to the volumetric measurement of liquids.



A FLUX barrel pump is always a "Two-Component-Team" consisting of a drive motor and a pump (tube set). Both component parts are universally interchangeable. For further details please see page 10 onwards.



Small clip, big effect!

For suspending the hand tap or discharge hose, FLUX barrel pumps are now supplied with the new FLUX-Clip.

Assembly is easy: just fit FLUX-Clip on to the outlet nozzle of the pump and mount discharge hose. The FLUX-Clip allows for secure suspension of the hand tap in various positions.

The FLUX-Clip ensures the hand tap and discharge hose are safely stored and always ready for use.

Examples of different positions of suspension:



Which material goes best with which liquid

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Design concepts of FLUX barrel and container pumps

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FLUX barrel pumps (pump tube sets) in stainless steel (S), aluminium alloy (AL) and Hastelloy C (HC) in detail, together with performance charts

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FLUX barrel pumps (pump tube sets) in polypropylene (PP) and polyvinylidenfluoride (PVDF) in detail, together with performance charts

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FLUX container pump (pump tube set) in polypropylene (PP) in detail, together with performance chart

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FLUX quick action coupling to suit all FLUX barrel and container pumps

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FLUX motor data in detail

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Outline of FLUX barrel and container pumps with accessories

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Dimensions of FLUX barrel pumps and drive motors

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The great range of FLUX pumps

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FLUX BARREL AND CONTAINER PUMPS – WHICH MATERIAL GOES BEST WITH WHICH LIQUID

Stainless steel 1.4571/316 Ti (S) up to 120 °C

Suitable for high flammability liquids (up to temperatures of class T4) as well as for all neutral and non-flammable, thin liquids like solvents, organic acids, dilute anorganic acids and alkalis.

Certified for use in Zone 0*.

Examples of suitable liquids: **acetone**, alcohol, **ammonia**, petrol, **flammable solvents**, nitrocellulose varnishes, perchlorethylene, **trichlorethylene**, toluene, **potassic alkali**, **soda alkali**, phosphoric acid (up to 60 %), sulphuric acid (up to 7,5 % and more than 96 %), fruit juices, milk, salad oil and all liquids listed for aluminium alloy.

Hastelloy C (HC) up to 120 °C

Specially designed for pumping alternatively high flammability and chemically aggressive liquids.

Certified for use in Zone 0*.

Examples of suitable liquids: hydrofluoric acid, aqua regia, oleum, hydrochloric acid (up to 30 %), sulphuric acid, various mixed acids and all liquids listed for aluminium alloy and stainless steel.

Aluminium alloy AlMg5 (AL) up to 100 °C

Suitable for neutral, low flammability liquids.

Examples of suitable liquids: drilling emulsion, diesel oil, fuel oil, hydraulic oil, non-flammable solvents, liquid soap, liquid wax, water.

Polypropylene (PP) up to 50 °C

Suitable for both, chemically aggressive and neutral liquids, together with low flammability liquids such as acids and alkalis.

Examples of suitable liquids: **formic acid**, **ammonia**, boric acid, chromic acid (up to 10 %), liquid fertilizers, **acetic acid**, photo developers, hydrofluoric acid (up to 70 %), fruit acids, **potassic alkali**, copper chloride, lactic acid, **soda alkali**, phosphoric acid, hydrochloric acid, sulphuric acid (up to 80 %), distilled water.

Polyvinylidenfluorid (PVDF) up to 100 °C

Suitable for both, chemically aggressive and neutral liquids, together with low flammability liquids such as acids and alkalis.

Examples of suitable liquids: hydrobromic acid, chromic acid, chloric acid, hydrofluoric acid, sodium hypochlorite, nitric acid (up to 75 %), sulphuric acid and all liquids listed for polypropylene (except soda alkali).

***Zone 0**

Area in which a hazardous and explosive atmosphere of gases, vapours or fogs exists permanently or for a long period of time. In general such conditions exist inside of barrels or containers only.

The following pump models are tested and certified according to Directive 94/9/EC-ATEX 100a, category 1/2, for transferring high flammability liquids out of portable

barrels or containers in hazardous areas Zone 0:

F 424 S – EC Type examination certificate
PTB 00 ATEX 4108 X

F 425 S – EC Type examination certificate
PTB 99 ATEX 4001 X

F 426 S – EC Type examination certificate
PTB 00 ATEX 4109 X

F 430 S – EC Type examination certificate
PTB 00 ATEX 4110 X

F 430 HC – EC Type examination certificate
PTB 00 ATEX 4110 X

Bold and italic printing of liquids indicates that the standard o-ring fitted FKM is not sufficiently resistant to this liquid.

(Please consider when selecting the pump design.)

P.S.: Due to the enormous variety and complexity of industrial chemicals, together with the range and variation of FLUX products, we can only list some of all the suitable liquids. But we would be glad to send you a detailed Resistance Chart.

IN GOOD CONTACT WITH THE LIQUIDS: THE SEALLESS FLUX PUMP F424



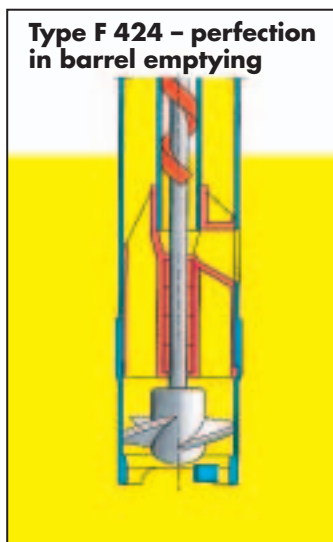
The liquids to be pumped are abrasive, but they do not leave any deposits. Dry running of the pump must not cause any problems. You are looking for a general purpose pump without a mechanical seal in the liquid section. The O-ring material FKM is not resistant to the liquids to be pumped.

The inner tube supports the pump shaft, which is lubricated by the liquid. The level of the liquid in the inner tube always corresponds to that in the barrel or container.

Special advantages:

- Safe dry running of the pump
- No wearing of seals
- The liquid being pumped is not contaminated by the shaft lubricant
- Inner tube and helix shaped support bearings completely self-draining

Here a FLUX pump in sealless version is your pump.



Flexible coupling between motor and pump

O-ring to seal between inner and outer tube (not in the liquid section)

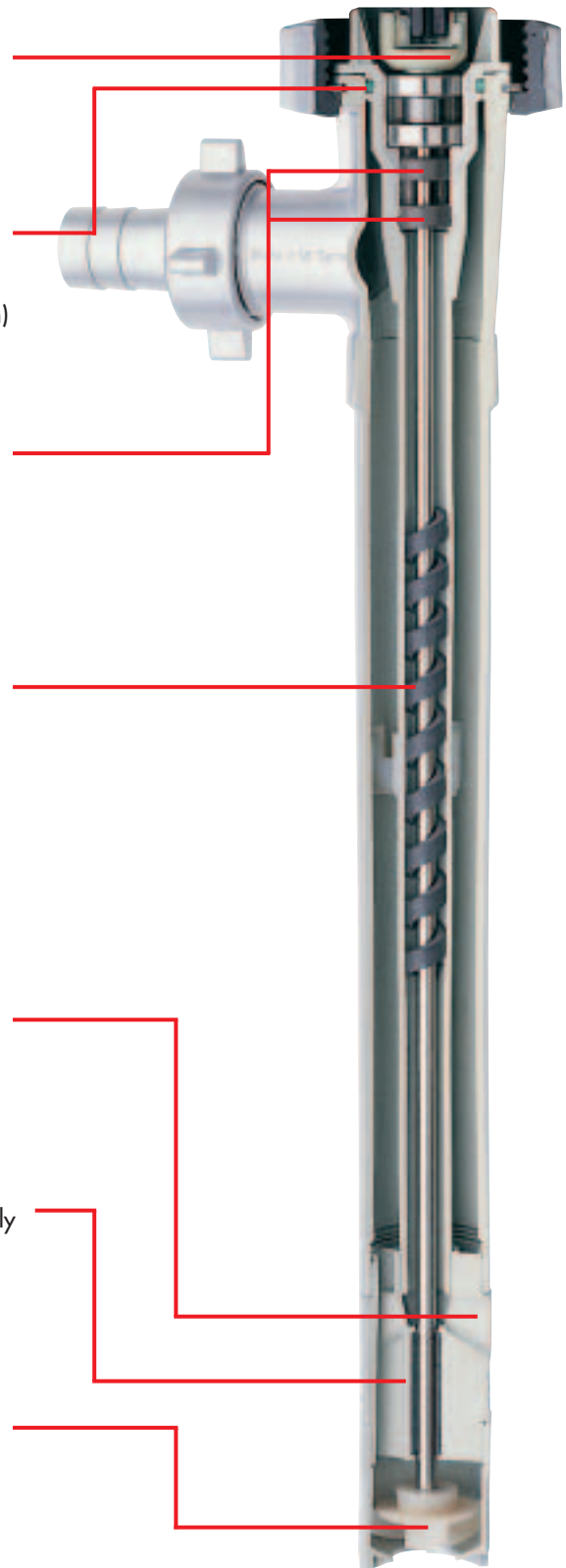
Radial shaft seals to prevent liquid and/or vapours entering the coupling area

Non-metallic helix shaped shaft support bearing

Pressure relief ports

Bottom bearing assembly which centers the shaft within the inner tube

Impellor in ETFE



NOTE All FLUX barrel pumps are stripped for cleaning with a minimum of effort.

A SHAFT IN A SHELL: THE FLUX PUMP F430 WITH MECHANICAL SEAL

Flexible coupling
between motor and pump

Steel cored inner tube in
PP and PVDF provides the
ultimate in stability. This
core prevents elongation
of the plastics at high
temperatures. This results
in an extended service life
of the mechanical seal

Packaging of the
mechanical seal and rotary
shaft seal adjacent to each
other ensures the maximum
integrity of the sealed inner tube

Impellor in ETFE



The pump must be used with many varying liquids, consequently the smallest residual left within the pump is unacceptable. You want to pump adhesive substances like paints, or liquids which tend to crystallize or harden.

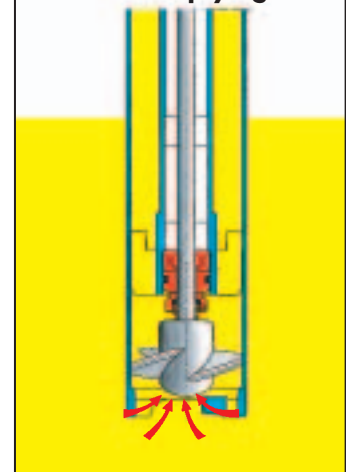
The inner tube houses the shaft. It is sealed at the bottom by a mechanical seal through which the shaft passes. Consequently the shaft does not come into contact with the liquid except for the small section between the impellor and seal.

Special advantages:

- The shaft support bearings are isolated from the liquid
- Steel cored inner tube in PP and PVDF pumps. This prevents elongation of the plastics, even at high temperatures
- Extended service life through well proven seal design

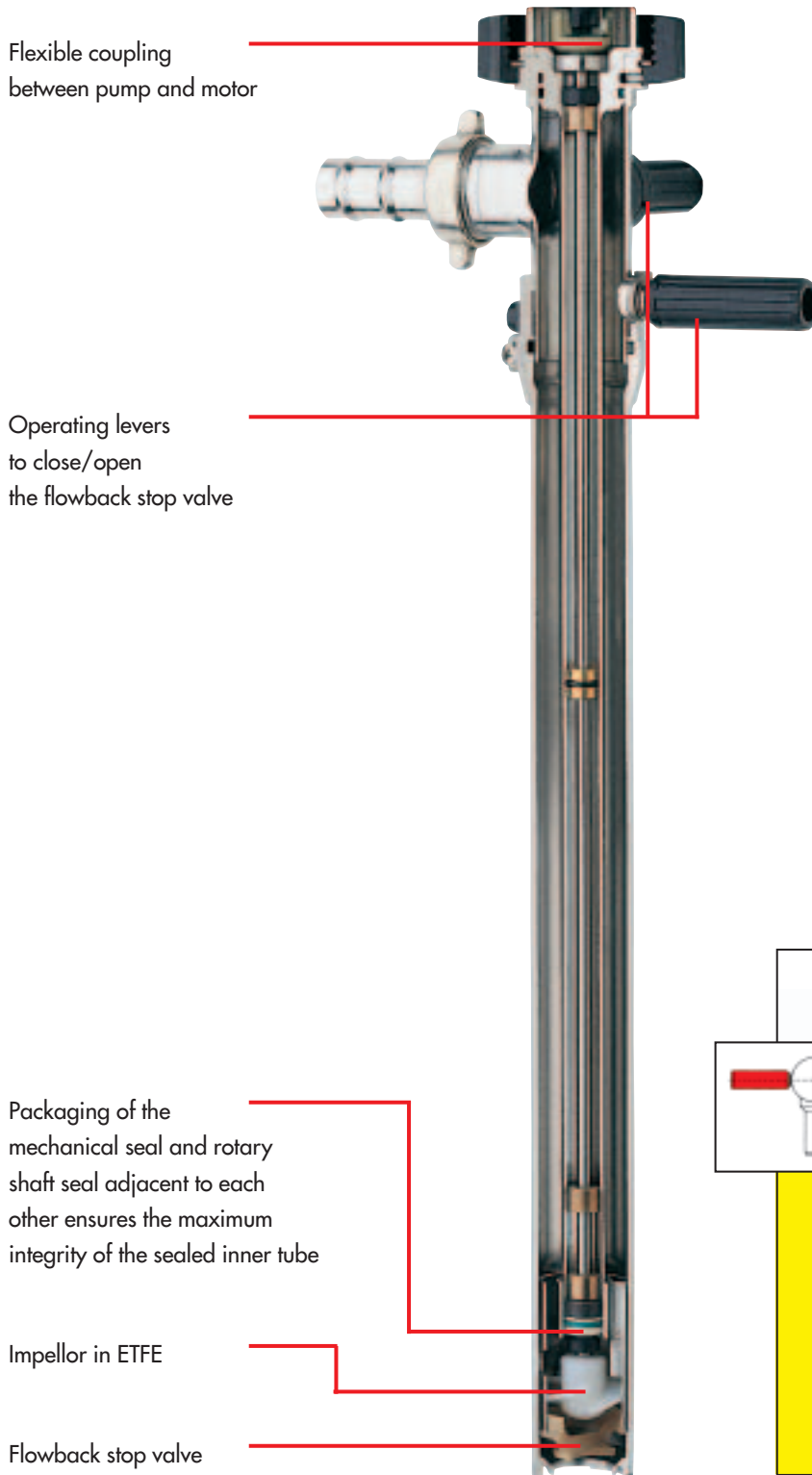
Here a FLUX pump with mechanical seal is the best choice.

Type F 430 – perfection in barrel emptying



NOTE For all other applications both designs – F 424 and F 430 – are equally suitable.

MOST ECONOMICAL DELIVERY: THE FLUX PUMP F425 FOR EMPTYING BARRELS UP TO 99,98%



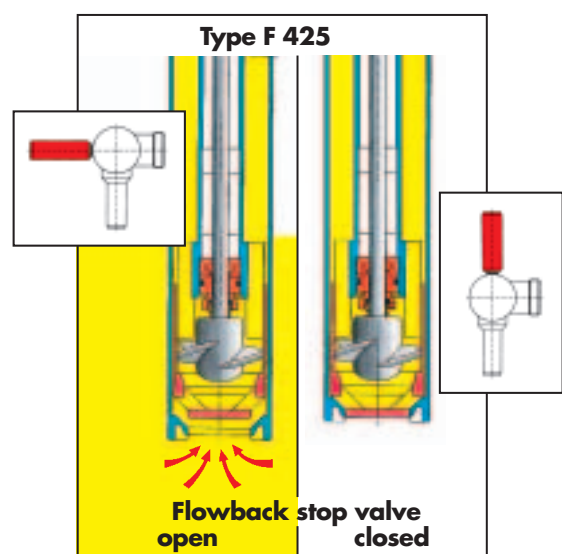
You are not prepared to accept any residual liquid in the barrel in order to avoid problems and costs of disposal or to avoid losing high value liquids.

Before the motor is switched off, the flowback stop valve at the pump inlet must be closed by operating the lever. This prevents the liquid flowing back into the empty barrel.

Special advantages:

- Especially easy operating of the pump
- Optimum use of the liquids
- Remains of less than 0,05 l

Here the FLUX F 425 for emptying barrels up to 99,98 % is your pump.



NOTE All FLUX barrel pumps are stripped for cleaning with a minimum of effort.

AN EXCELLENT MIXTURE: THE FLUX MIXING PUMP F426

Flexible coupling
between pump and motor

Adjusting lever to set
the pump to mixing or
discharge

Mixing openings

Packaging of the
mechanical seal and rotary
shaft seal adjacent to each
other ensures the maximum
integrity of the sealed inner tube

Impellor in ETFE

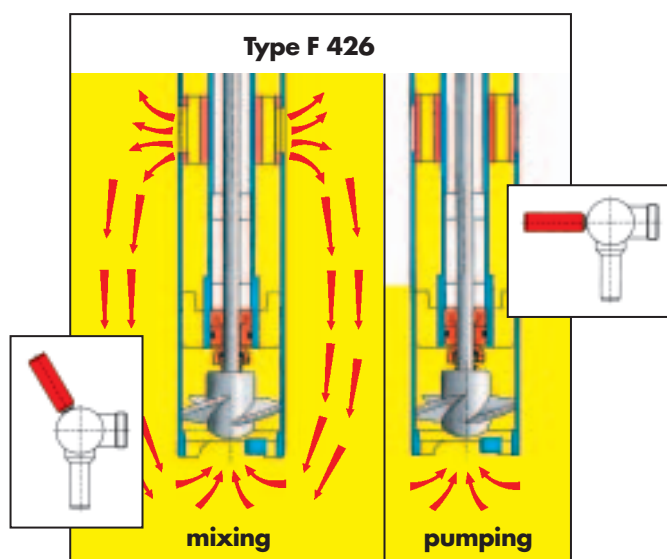
You want to mix and pump
liquids within a closed barrel or
an open container.

By turning the adjusting lever, the
pump can either mix or pump.
Liquids can also be mixed even
when being transferred to another
container.

Special advantages:

- No changes in the outer diameter of the pump tube in stainless steel as the pump works without any additional components.
- Light and handy design.
- Pump/barrel connection glands, also in vapour-proof version, are available

Here the FLUX mixing pump is the right pump for you.



NOTE All FLUX barrel pumps
are stripped for cleaning
with a minimum of effort.

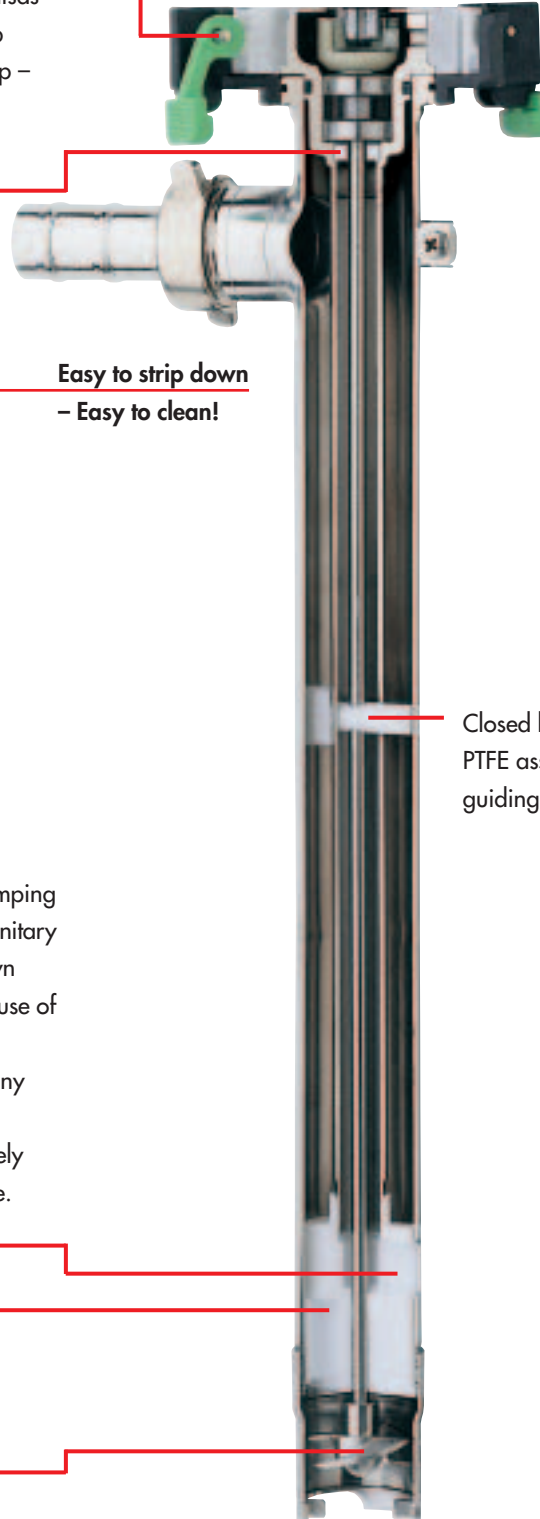
PURE CULTURE IN PUMPING: THE FLUX SANITARY PUMP F427



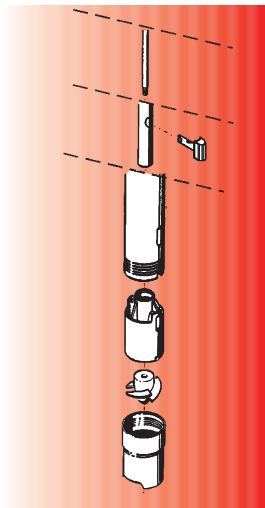
For use with all FLUX models:

Quick Action Coupling SSK 400 allows a quick assembly/disassembly of motor and pump (not included with the pump – see page 20)

Shaft seal to prevent liquids and/or vapours entering the coupling area



**Easy to strip down
– Easy to clean!**



FLUX facilitates aseptic pumping of delicate products. The sanitary pump can be stripped down within a few seconds because of its ingenious design. The F 427 does not have any inaccessible voids. This allows you to completely clean the pump at any time.

Pressure relief ports

Bottom bearing assembly which centers the shaft within the inner tube

Impellor in ETFE or in stainless steel

Closed bearing in PTFE assures safe guiding of the pump

You want a safe pumping of food, cosmetic or pharmaceutical products. The operating conditions require an easy and quick cleaning or sterilization of the pump at regular intervals to avoid any contamination of the product, e.g. when pumping varying liquids or different colours as well as quick-drying or film forming liquids.

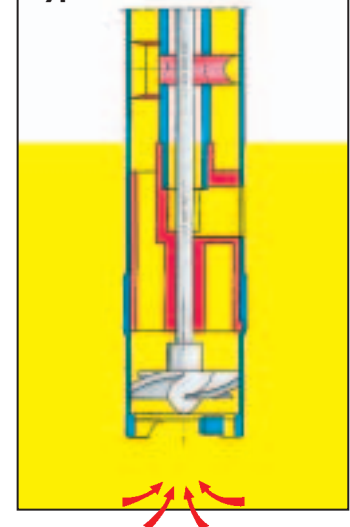
The efficient FLUX sanitary pump has been especially designed for aseptic applications.

Special advantages:

- All wetted parts are made in stainless steel, PTFE or ETFE
- The pump can be quickly stripped down for cleaning or sterilization
- Negligible wear by friction on seals and bearings

Here a FLUX sanitary pump is your pump.

Type F 427



NOTE All FLUX barrel pumps are stripped for cleaning with a minimum of effort.

FLUX BARREL PUMPS IN STAINLESS STEEL

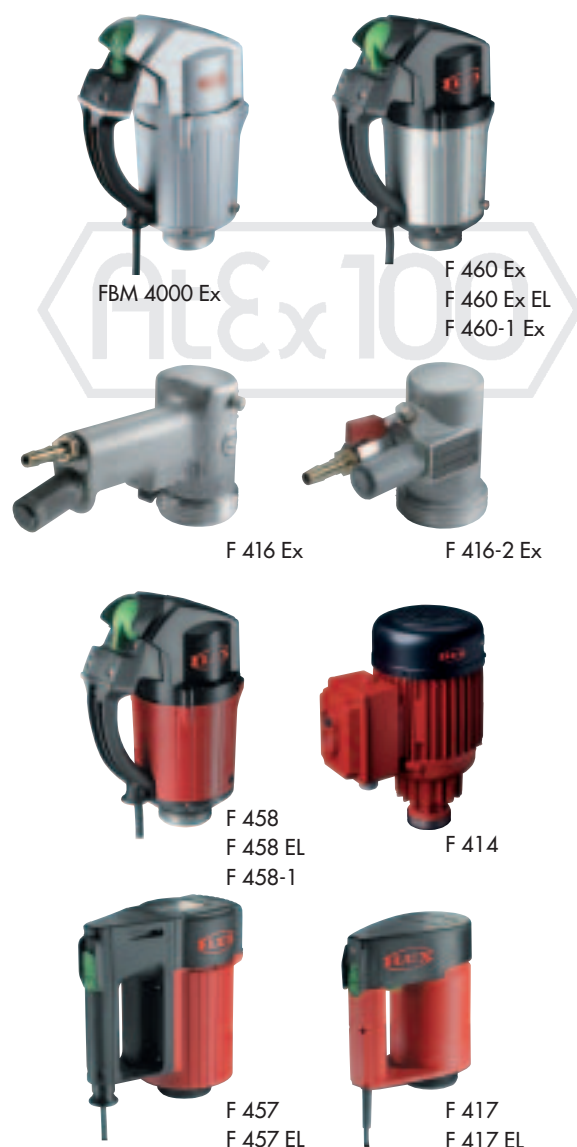
FLUX barrel pumps in stainless steel 316 Ti – except sanitary pump F 427 S – are approved according to Directive 94/9/EC-ATEX 100a for use in Zone 0, temperature class T4, for transferring high flammability liquids out of portable barrels or containers.

With the help of the performance charts you can compare the delivery rates achieved by each pump model powered by the various FLUX motors. Detailed motor data are shown on pages 21 to 31.

When using the pump with a discharge hose (of approx. 2 m) and a hand tap, the delivery rate will be approx. 70 l/min. Depending on the motor type a 200 l barrel can be emptied within 3–4 minutes.

The delivery rates shown in the performance charts are obtained at the outlet connection of the pump.

Special version for horizontal use on request.

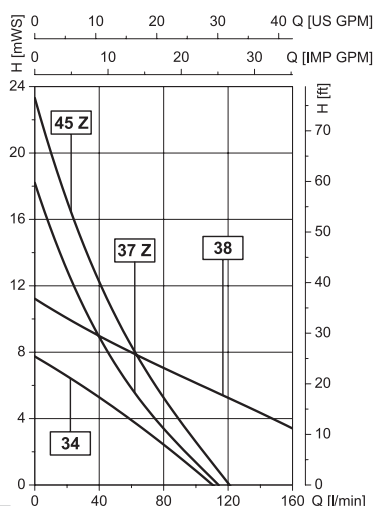


↗ This pump version will achieve a higher delivery rate!

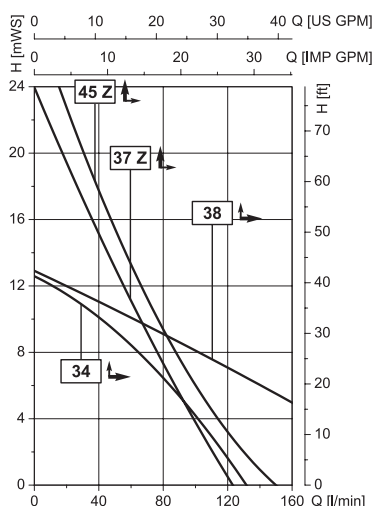
↗ This pump version will achieve a higher delivery head!

Max. viscosity per pump and motor, please see pages 32 and 33.

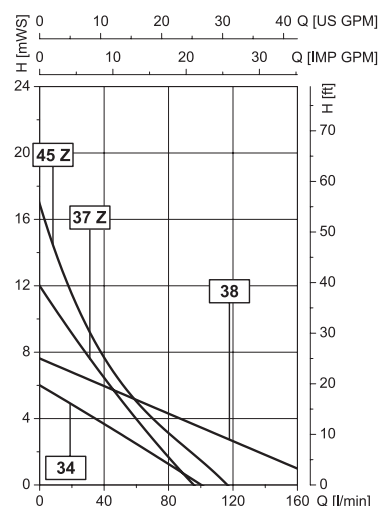
Motor FBM 4000 Ex










Motor F 416 Ex, F 416-1 Ex or F 416-2 Ex



Motor F 417 or F 417 EL



BARREL PUMP (TUBE SET) IN STAINLESS, THREAD ON OUTLET G 1 1/4 A (BSP 1 1/4" MALE), WITHOUT MOTOR

Type/Curve	F 424 S-43/38	F 424 S-43/37 Z	F 424 S-50/45 Z	
Version				
Seal type	sealless within the liquid section			
Material	shaft in stainless steel 316 Ti, impellor in ETFE, o-ring in FKM			
max. temperature	120 °C			
outer Ø	41 mm (foot piece 43 mm)	41 mm (foot piece 43 mm)	50 mm	
Part No./Weight				
Immersion length 700 mm	424 20 007/2,2 kg	424 20 107/2,2 kg	424 20 207/3,0 kg	
Immersion length 1000 mm	424 20 010/2,9 kg	424 20 110/2,9 kg	424 20 210/4,0 kg	
Immersion length 1200 mm	424 20 012/3,3 kg	424 20 112/3,3 kg	424 20 212/4,8 kg	
Typ /Kennlinie	F 425 S-41/34*	F 426 S-41/38	F 427 S3-43/38	
Version	99,98 % barrel emptying	Mixing pump	Sanitary pump	
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FKM		sealless within the liquid selection	
Material	shaft in stainless steel 316 Ti, seal in FKM, impellor in ETFE		shaft in stainless steel 316 Ti, impellor in ETFE, o-ring in FKM	
max. temperature	120 °C		120 °C	
outer Ø	41 mm	41 mm	41 mm (foot piece 43 mm)	
Part No./Weight				
Immersion length 700 mm	425 20 008/3,0 kg	–	427 20 307/2,2 kg	
Immersion length 1000 mm	425 20 011/3,8 kg	426 20 010/3,8 kg	427 20 310/2,9 kg	
Immersion length 1200 mm	425 20 013/4,4 kg	426 20 012/4,4 kg	427 20 312/3,3 kg	
Typ /Kennlinie	F 430 S-41/38	F 430 S-41/37 Z	F 430 S-50/45 Z	F 430 S-50/38
Version				
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FKM			
Material	shaft in stainless steel 316 Ti, seal in FKM, impellor in ETFE			
max. temperature	120 °C			
outer Ø	41 mm	41 mm	50 mm	50 mm
Part No./Weight				
Immersion length 700 mm	430 20 107/2,4 kg	430 20 407/2,4 kg	430 20 207/3,4 kg	430 20 307/3,4 kg
Immersion length 1000 mm	430 20 110/3,0 kg	430 20 410/3,0 kg	430 20 210/4,5 kg	430 20 310/4,5 kg
Immersion length 1200 mm	430 20 112/3,6 kg	430 20 412/3,6 kg	430 20 212/5,2 kg	430 20 312/5,2 kg
Accessories	Hose connection complete with nut G 1 1/4		DN 19 Part No. 959 04 061	DN 25 Part No. 959 04 041

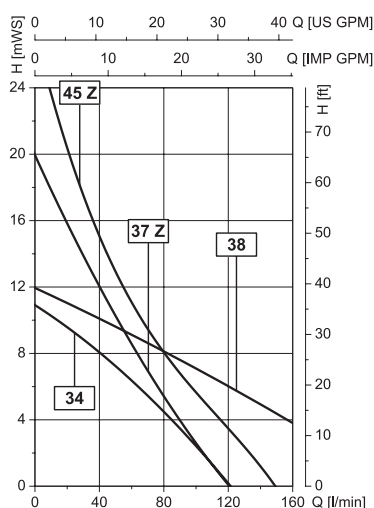
Pump models in immersion lenath of 200 – 3000 mm (in steps of 100 mm) on request.

* Model for higher delivery head on request.

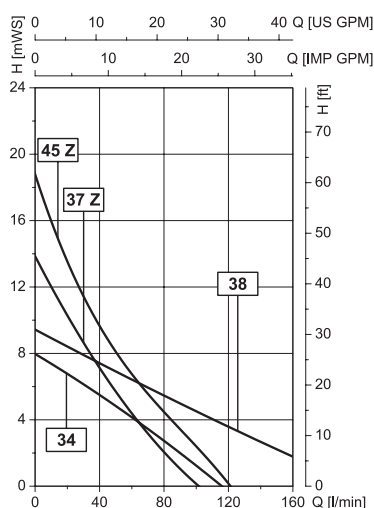
Pump models in immersion length of 200 – 3000 mm (in steps of 100 mm) on request.

* Model for higher delivery head on request.

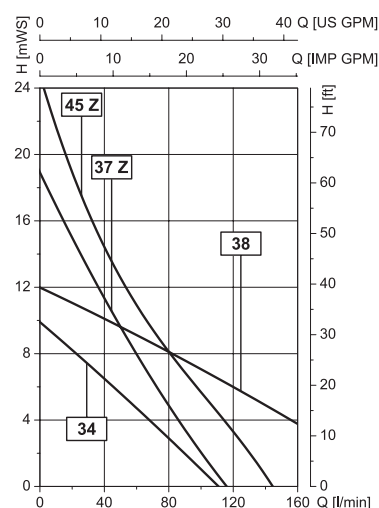
Motor F 457 or F 457 EL



Motor F 458, F 458 EL, F 460 Ex or F 460 Ex EL



Motor F 458-1 or F 460-1 Ex



Values ± 10% with water (20 °C) and a voltage of 230 Volt.

FLUX BARREL PUMPS IN ALUMINIUM ALLOY OR HASTELLOY C

FLUX barrel pumps in aluminium alloy AlMg5 are suitable for transferring neutral, low flammability liquids.

FLUX barrel pumps in Hastelloy C are approved according to Directive 94/9/EC-ATEX 100a for use in Zone 0, temperature class T4, for transferring high flammability liquids out of portable barrels or containers. In addition, Hastelloy C is chemically resistant to most of acids and alkalis, allowing the most universal use of this pump type.

With the help of the performance charts you can compare the delivery rates achieved by each pump model powered by the various FLUX motors.

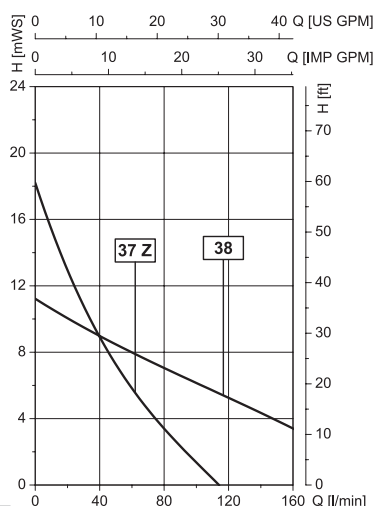
Detailed motor data are shown on pages 21 to 31.

When using the pump with a discharge hose (of approx. 2 m) and a hand tap, the delivery rate will be approx. 70 l/min. Depending on the motor type a 200 l barrel can be emptied within 3–4 minutes.

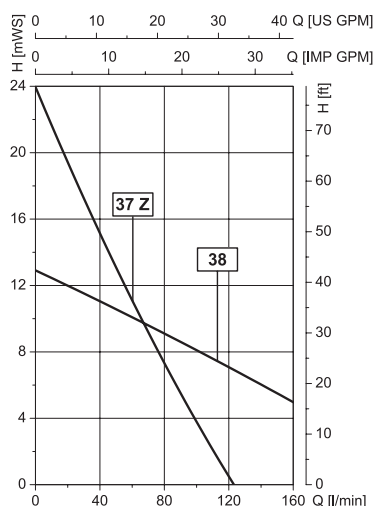
The delivery rates shown in the performance charts are obtained at the outlet connection of the pump.



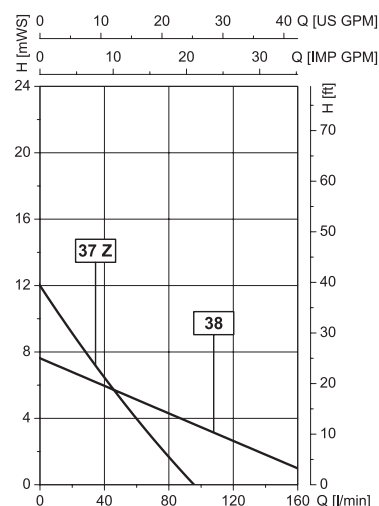
Motor FBM 4000 Ex



Motor F 416 Ex, F 416-1 Ex or F 416-2 Ex



Motor F 417 or F 417 EL



Detailed motor data see pages 21 to 31.

BARREL PUMP (TUBE SET) IN ALUMINIUM ALLOY, THREAD ON OUTLET G 1 1/4 A (BSP 1 1/4" MALE), WITHOUT MOTOR

Type/Curve	F 430 AL-41/38	F 430 AL-41/37 Z	F 430 AL-50/38
Version			
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in NBR		
Material	shaft in stainless steel 316 Ti, seal in NBR, impellor in ETFE		
max.temperature	120 °C (for short periods)		
outer Ø	41 mm	41 mm	50 mm
Part No./Weight			
Immersion length 700 mm	430 10 107/1,2 kg	430 10 407/1,2 kg	430 10 307/1,5 kg
Immersion length 1000 mm	430 10 110/1,5 kg	430 10 410/1,5 kg	430 10 310/1,8 kg
Immersion length 1200 mm	430 10 112/1,7 kg	430 10 412/1,7 kg	430 10 312/2,1 kg
Accessories	Hose connection complete with nut G 1 1/4 DN 19 Part No. 959 04 050 DN 25 Part No. 959 04 039		

Pump models in immersion length of 200 – 2000 mm (in steps of 100 mm) on request.

BARREL PUMP (TUBE SET) IN HASTELLOY C, THREAD ON OUTLET G 1 1/4 A (BSP 1 1/4" MALE), WITHOUT MOTOR

Type/Curve	F 430 HC-40/38
Version	
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FFKM
Material	shaft in Hastelloy C, seal in FFKM, impellor in ETFE
max.temperature	120 °C
outer Ø	40 mm
Part No./Weight	
Immersion length 700 mm	430 30 107/2,3 kg
Immersion length 1000 mm	430 30 110/3,0 kg
Immersion length 1200 mm	430 30 112/3,5 kg
Accessories	Hose connection complete with nut G 1 1/4 DN 25 Part No. 959 04 043

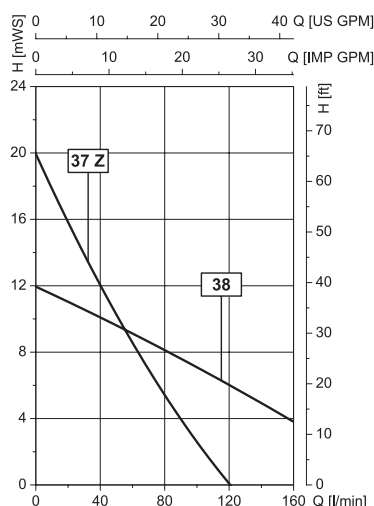
Other immersion lengths on request.

This pump version will achieve a higher delivery rate!

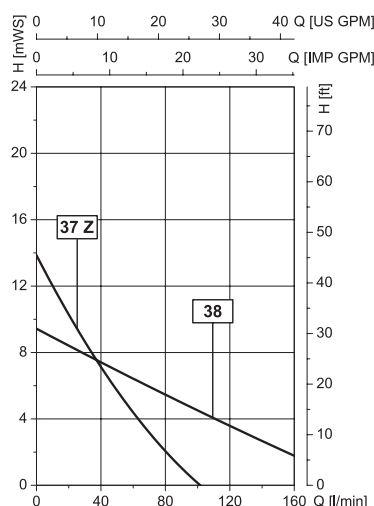
This pump version will achieve a higher delivery head!

Max. viscosity per pump and motor, please see pages 32 and 33.

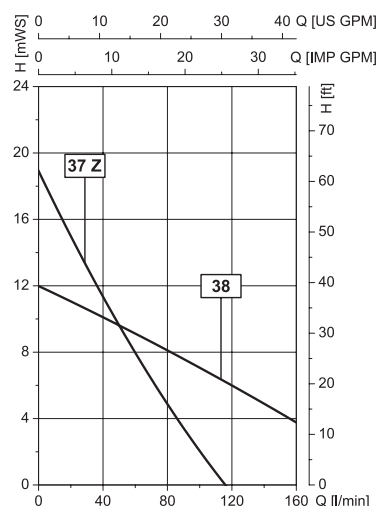
Motor F 457 or F 457 EL



Motor F 458, F 458 EL, F 460 Ex or F 460 Ex EL



Motor F 458-1 or F 460-1 Ex



Values ± 10 % with water (20 °C) and a voltage of 230 Volt.

FLUX BARREL PUMPS IN POLYPROPYLENE

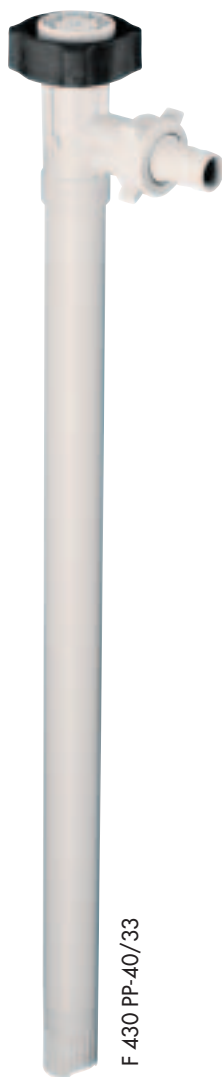
FLUX barrel pumps in polypropylene are used for both, chemically aggressive and low flammability liquids such as acids and alkalis, together with most thin and neutral liquids.

With the help of the performance charts you can compare the delivery rates achieved by each pump model powered by the various FLUX motors. Detailed motor data are shown on pages 21 to 31.

When using the pump with a discharge hose (of approx. 2 m) and a hand tap, the delivery rate will be approx. 70 l/min. Depending on the motor type a 200 l barrel can be emptied within 3–4 minutes.

The delivery rates shown in the performance charts are obtained at the outlet connection of the pump.

Special version for horizontal use on request.



F 430 PP-40/33



F 417
F 417 EL



F 457
F 457 EL



F 458
F 458 EL
F 458-1



F 414



FBM 4000 Ex



F 460 Ex
F 460 Ex EL
F 460-1 Ex



F 416 Ex



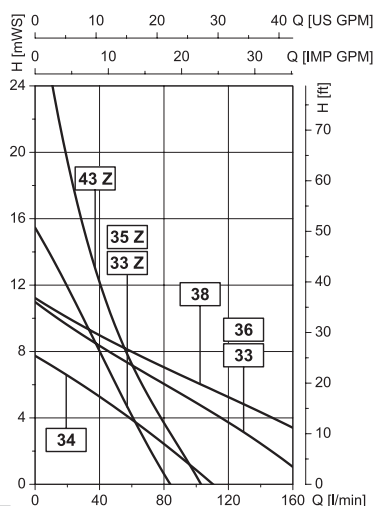
F 416-2 Ex

↖ This pump version will achieve a higher delivery rate!

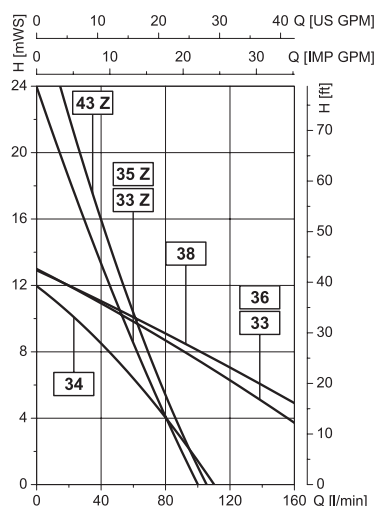
↖ This pump version will achieve a higher delivery head!

Max. viscosity per pump and motor, please see pages 32 and 33.

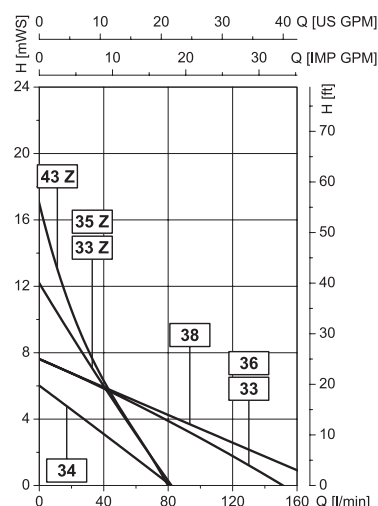
Motor FBM 4000 Ex











Motor F 416 Ex, F 416-1 Ex or F 416-2 Ex



Motor F 417 or F 417 EL

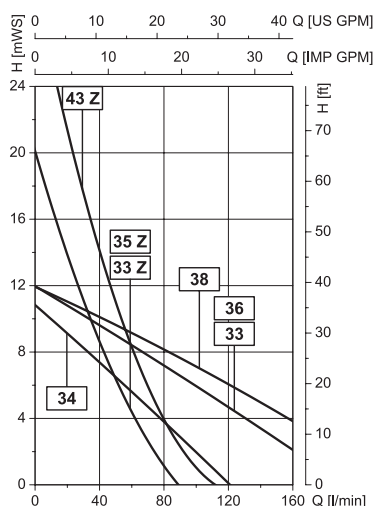


BARREL PUMP (PUMP TUBE SET) IN POLYPROPYLENE, THREAD ON OUTLET G 1 1/4 A (BSP 1 1/4" MALE), WITHOUT MOTOR

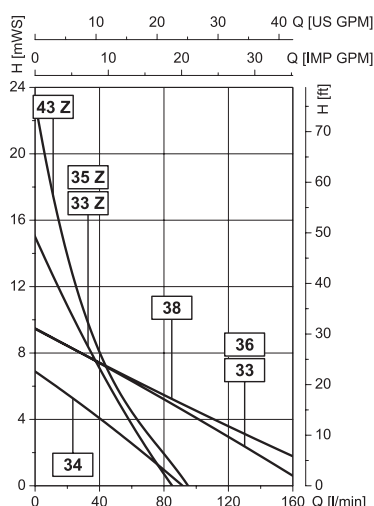
Type/ <u>Curve</u>	F 424 PP-41/ <u>36</u>	F 424 PP-41/ <u>35 Z</u>	F 424 PP-50/ <u>38</u>	F 424 PP-50/ <u>43 Z</u>
Version				
Seal type	sealless within the liquid section			
Material	shaft in Hastelloy C, impellor in ETFE, o-ring in FKM			
max. temperature	50 °C			
outer Ø	40 mm (foot piece 41 mm)	40 mm (foot piece 41 mm)	50 mm	50 mm
Part No./Weight				
Immersion length 700 mm	424 40 007 /0,8 kg	424 40 107 /0,8 kg	424 40 207 /0,9 kg	424 40 307 /0,9 kg
Immersion length 1000 mm	424 40 010 /1,0 kg	424 40 110 /1,0 kg	424 40 210 /1,3 kg	424 40 310 /1,3 kg
Immersion length 1200 mm	424 40 012 /1,2 kg	424 40 112 /1,2 kg	424 40 212 /1,6 kg	424 40 312 /1,6 kg
Type/ <u>Curve</u>	F 425 PP-50/ <u>34</u>		F 426 PP-50/ <u>33</u>	
Version	99,98 % barrel emptying		Mixing pump	
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FKM			
Material	shaft in Hastelloy C, seal in FKM, impellor in ETFE			
max. temperature	50 °C			
outer Ø	50 mm		50 mm	
Part No./Weight				
Immersion length 700 mm	425 40 048 /1,6 kg		-	
Immersion length 1000 mm	425 40 051 /2,0 kg		426 40 001 /1,8 kg	
Immersion length 1200 mm	425 40 053 /2,3 kg		426 40 002 /2,1 kg	
Type/ <u>Curve</u>	F 430 PP-40/ <u>33</u>	F 430 PP-40/ <u>33 Z</u>	F 430 PP-50/ <u>43 Z</u>	F 430 PP-50/ <u>38</u>
Version				
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FKM			
Material	shaft in Hastelloy C, seal in FKM, impellor in ETFE			
max. temperature	50 °C			
outer Ø	40 mm	40 mm	50 mm	50 mm
Part No./Weight				
Immersion length 700 mm	430 40 107 /1,1 kg	430 40 407 /1,1 kg	430 40 207 /1,1 kg	430 40 307 /1,1 kg
Immersion length 1000 mm	430 40 110 /1,4 kg	430 40 410 /1,4 kg	430 40 210 /1,5 kg	430 40 310 /1,5 kg
Immersion length 1200 mm	430 40 112 /1,6 kg	430 40 412 /1,6 kg	430 40 212 /1,7 kg	430 40 312 /1,7 kg
Accessories	Hose connection complete with nut G 1 1/4		DN 19 Part No. 959 04 053	DN 25 Part No. 959 04 052

Pump models in immersion length of 200 – 3000 mm (in steps of 100 mm) on request.

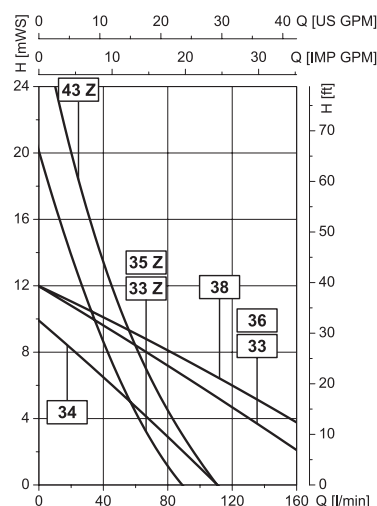
Motor F 457 or F 457 EL



Motor F 458, F 458 EL, F 460 Ex or F 460 Ex EL



Motor F 458-1 or F 460-1 Ex



Values ± 10 % with water (20 °C) and a voltage of 230 Volt.

FLUX BARREL PUMPS IN POLYVINYLIDENFLUORIDE

FLUX barrel pumps in polyvinyliden-fluoride are used for both, chemically aggressive and low flammability liquids such as acids and alkalis, together with most thin and neutral liquids.

With the help of the performance charts you can compare the delivery rates achieved by each pump model powered by the various FLUX motors. Detailed motor data are shown on pages 21 to 31.

When using the pump with a discharge hose (of approx. 2 m) and a hand tap, the delivery rate will be approx. 70 l/min. Depending on the motor type a 200 l barrel can be emptied within 3–4 minutes.

The delivery rates shown in the performance charts are obtained at the outlet connection of the pump.



F 424 PYDF-41/36



F 417
F 417 EL



F 457
F 457 EL



F 458
F 458 EL
F 458-1



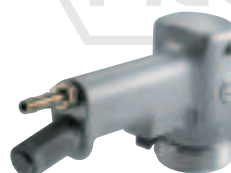
F 414



FBM 4000 Ex



F 460 Ex
F 460 Ex EL
F 460-1 Ex



F 416 Ex



F 416-2 Ex



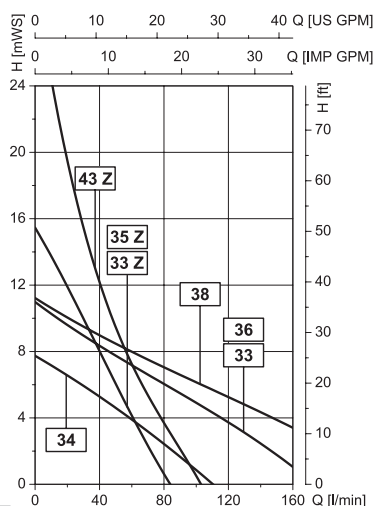
This pump version will achieve a higher delivery rate!



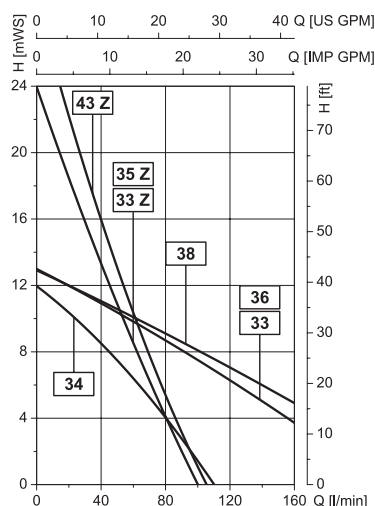
This pump version will achieve a higher delivery head!

Max. viscosity per pump and motor, please see pages 32 and 33.

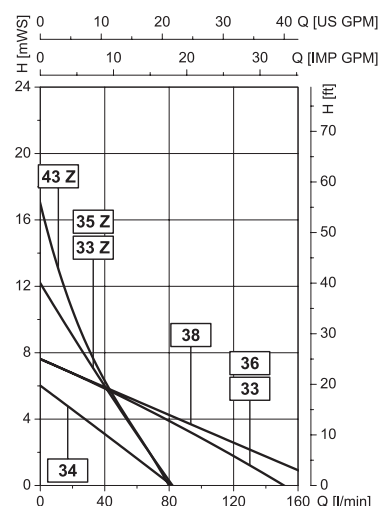
Motor FBM 4000 Ex



Motor F 416 Ex, F 416-1 Ex or F 416-2 Ex



Motor F 417 or F 417 EL



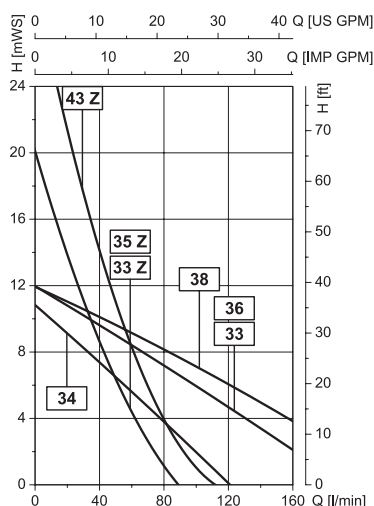
BARREL PUMP (TUBE SET) IN POLYVINYLIDENFLUORIDE, THREAD ON OUTLET G 1 1/4 A (BSP 1 1/4" MALE), WITHOUT MOTOR

Type/Curve	F 424 PVDF-41/36	F 424 PVDF-41/35 Z	F 424 PVDF-50/38
Version			
Seal type	sealless within the liquid section		
Material	shaft in Hastelloy C, impellor in ETFE, o-ring in FKM		
max. temperature	100 °C		
outer Ø	40 mm (foot piece 41 mm)	40 mm (foot piece 41 mm)	50 mm
Part No./Weight			
Immersion length 700 mm	424 60 007/1,1 kg	424 60 107/1,1 kg	424 60 207/1,4 kg
Immersion length 1000 mm	424 60 010/1,4 kg	424 60 110/1,4 kg	424 60 210/1,9 kg
Immersion length 1200 mm	424 60 012/1,6 kg	424 60 112/1,6 kg	424 60 212/2,2 kg

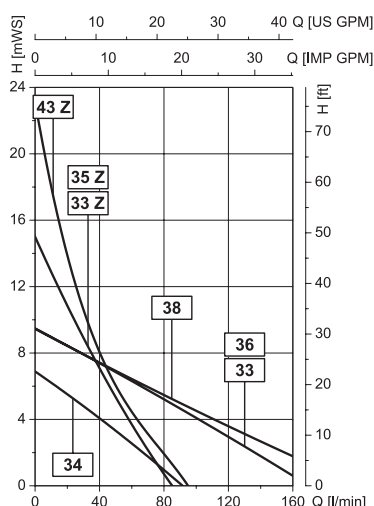
Type/Curve	F 430 PVDF-40/33	F 430 PVDF-40/33 Z	F 430 PVDF-50/43 Z	F 430 PVDF-50/38
Version				
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FKM			
Material	shaft in Hastelloy C, seal in FKM, impellor in ETFE			
max. temperature	100 °C			
outer Ø	40 mm	40 mm	50 mm	50 mm
Part No./Weight				
Immersion length 700 mm	430 60 107/1,4 kg	430 60 407/1,4 kg	430 60 207/1,7 kg	430 60 307/1,7 kg
Immersion length 1000 mm	430 60 110/1,7 kg	430 60 410/1,7 kg	430 60 210/2,1 kg	430 60 310/2,1 kg
Immersion length 1200 mm	430 60 112/2,0 kg	430 60 412/2,0 kg	430 60 212/2,5 kg	430 60 312/2,5 kg
Accessories	Hose connection with nut G 1 1/4		DN 19 Part No. 959 04 101	DN 25 Part No. 959 04 102

Pump models in immersion length of 200 – 3000 mm (in steps of 100 mm) on request.

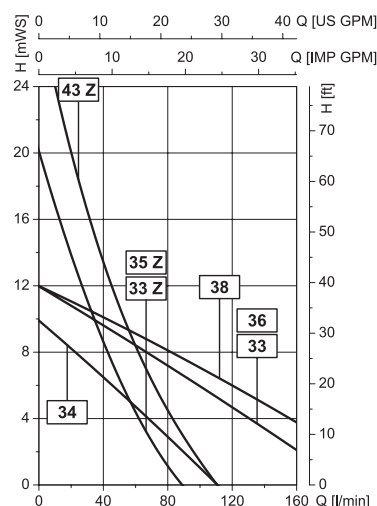
Motor F 457 or F 457 EL



Motor F 458, F 458 EL, F 460 Ex or F 460 Ex EL



Motor F 458-1 or F 460-1 Ex



Values ± 10% with water (20 °C) and a voltage of 230 Volt.

FLUX CONTAINERPUMP IN POLYPROPYLENE

The powerful, extremely lightweight and easy-to-handle solution for transferring corrosive acids and alkalis and almost every thin, low flammability liquid out of larger containers: FLUX container pump type F 430 PP-100/50 in polypropylene. Especially designed for emptying 1000-L-Containers, this pump provides the high safety and ease of handling you do appreciate on FLUX barrel pumps.

The use of this pump allows to dispense with floor drains, minimizing leakage risks and eliminating residual liquid within suction pipes and subsequent handling cost. A compression gland or a vapour-proof gland always secures the pump in a vertical position within the dome of the container.

With the help of the performance chart you can compare the delivery rates achieved by the container pump powered by motors type F 457, F 458-1 or F 414. Detailed motor data are shown on pages 21 – 31.

Depending on the motor type, this pump will achieve a maximum delivery rate of 105 l/min and a maximum delivery head of 32 m liquid column in transferring liquids up to a maximum viscosity of 150 mPas (cP).



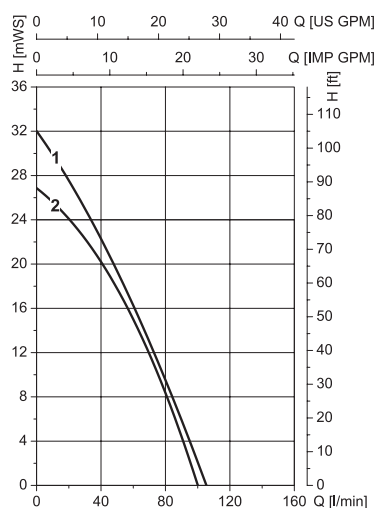
F 457



F 458-1



F 414



**FLUX Container Pump
F 430 PP-100/50
in combination with**

- 1** = Commutator motor
Type F 457/F 458-1
- 2** = Three-phase gearmotor
Type F 414

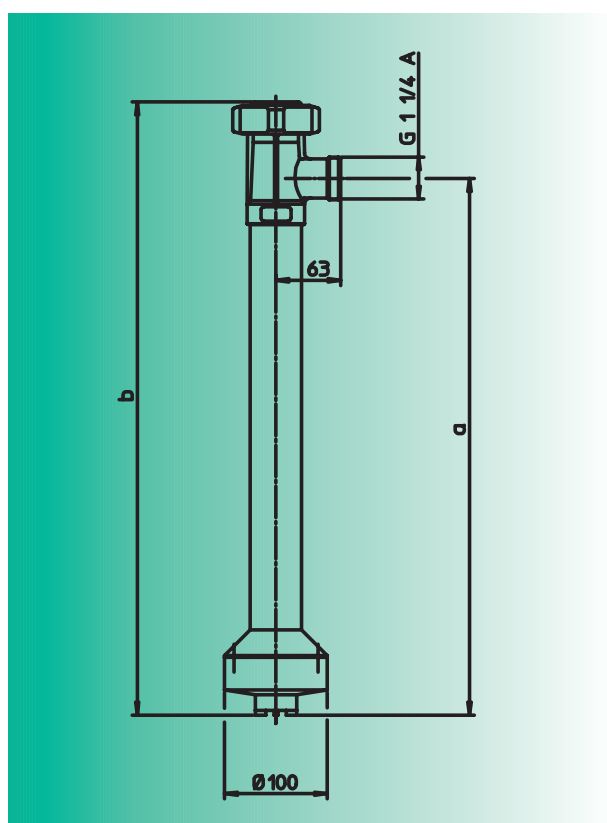
Detailed motor data
see pages 21 to 31

CONTAINER PUMP (TUBE SET) IN POLYPROPYLENE, THREAD ON OUTLET G 1 1/4 A, WITHOUT MOTOR

Type	F 430 PP-100/50		
Version			
Seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FKM		
Material	shaft in Hastelloy C, seal in FKM, impellor in polypropylene		
max. temperature	50 °C		
outer Ø	100 mm		
Part No./Weight			
Immersion length 1000 mm	430 40 510/2,0 kg		
Immersion length 1200 mm	430 40 512/2,2 kg		
Immersion length 1500 mm	430 40 515/2,5 kg		
Accessories	Hose connection with nut G 1 1/4	DN 25 Part No. 959 04 052	DN 32 Part No. 959 04 054

Accessories for fixing the pump onto the container	Part No.
Screw cap DN 150	001 14 063
Screw cap DN 225	001 14 064
in connection with FLUX vapour-proof gland, consisting of:	
Valve part (PP) Ø 50 mm	001 14 243
Threaded ring (PP) G 2	001 14 238

Dimensions in mm	a	b
Immersion length 1000 mm	1022	1097
Immersion length 1200 mm	1222	1297
Immersion length 1500 mm	1522	1597



FLUX QUICK ACTION COUPLING SSK 400

FLUX Quick Action Coupling Type SSK 400 suits all FLUX barrel and container pumps Type F 424, F 425, F 426, F 427 and F 430 and allows a quick assembly/disassembly of pump and motor within a few seconds only.

This allows the use of several pump tube sets with one drive motor only.

The quick action coupling SSK 400 consists of a clamping element which is mounted onto the pump tube set and a threaded ring which is screwed onto the drive motor.



Type		Part No.
Quick Action Coupling SSK 400 complete	consisting of threaded ring (motor side) and clamping element (pump side)	001 10 802
or as individual parts:		
Threaded ring	to be screwed onto the drive motor	001 10 800
Clamping element	to be mounted onto the pump tube set	001 10 804

Barrel and Container Pumps are used in almost every sector of the processing and manufacturing industries. Initially designed for decanting and transfer operations of differing liquids from barrels and containers, current production time scales are now requiring these pumps to be used on applications with extended run times and frequent stopping and starting.

NEW

These, more arduous uses, are exactly the applications the new brushless motor Type FBM 4000 Ex has been designed for. For either continuous or intermittent use, or even precise dispensing operations: the new brushless motor is ideally suited.

The brushless motor Type FBM 4000 Ex is featuring a compact design, a robust double shell housing in aluminium and a very low noise level. The explosion-proof motor is tested and certified according to the latest Directive 94/9/EC-ATEX 100a. EC-Type-Examination Certificate PTB 03 ATEX 1042.

The combined on/off switch and easy to use speed controller allow precise dispensing operations.

Electronic monitoring of speed, voltage and temperature.

A no-volt release safety circuit monitors the power and prevents unintentional re-start of the pump. This feature ensures additional safety for the user.

Due to negligible wear, the brushless motor design guarantees lowest cost of ownership, even with continuous use.

Brushless motor, explosion-proof to II 2 G EEx de IIC T6, protection class I.


Jet-proof according to IP 55.

With power supply cable, 5 m long, with safety plug (not explosion-proof).



FBM 4000 Ex

BRUSHLESS MOTOR, EXPLOSION-PROOF, CERTIFIED ACCORDING TO DIRECTIVE 94/9/EC – 100a

Typ	Capacity	Voltage	Frequency	Weight	Part No. Version
					with no volt release safety circuit
FBM 4000 Ex	600 W	230 V	50-60 Hz	6,2 kg	400 01 000

Accessories see page 23.

Explosion-proof commutator motor Type F 460 Ex featuring a compact design, a robust double shell housing in aluminium and a very low noise level. Tested and certified according to Directive 94/9/EC-ATEX 100a.

EC-Type-Examination Certificate PTB 97 ATEX 1035.

An improved ventilation system provides optimal cooling and ensures an extended service life.

Additional safety by an integral no-volt release to prevent from any unintentional re-starting after a voltage discontinuity.

Commutator motor, explosion-proof to II 2 G EEx de IIC T6, protection class I in 230, 240 or 110 Volt, protection class III in 42, 24 or 12 Volt.

Jet-proof according to IP 55.

With power supply cable, 5 m long. 230, 240 and 110 Volt version with safety plug (not explosion-proof).

42, 24 and 12 Volt version without plug.

230 Volt version approved to VDE, GS and SEV standards.



F 460 Ex (pict.)
F 460 Ex EL

Type F 460 Ex EL, 230 Volt, with infinitely variable speed control included in the switch knob for an easy control of the delivery rate.



F 460-1 Ex

The commutator motor Type F 460-1 Ex is identical with Type F 460 Ex, but has a considerably higher capacity of 700 Watt.

This model is recommended for applications requiring a higher delivery rate or when transferring medium viscosity products or liquids with a higher density.

Commutator motor, explosion-proof to II 2 G EEx de IIC T6, protection class I in 230 or 240 Volt.


Explosion-proof to II 2 G EEx de IIC T5, protection class I in 110 Volt.

Jet-proof to IP 55.

With power supply cable, 5 m long. 230, 240 and 110 Volt version with safety plug (not explosion-proof).

230 Volt version approved to VDE, GS and SEV standards.

COMMUTATOR MOTOR, EXPLOSION-PROOF, CERTIFIED ACCORDING DIRECTIVE 94/9/EC – ATEX 100a

Type	Capacity	Voltage	Frequency	Weight	Part No. Version		
					with no-volt release, with variable speed control	with no-volt release, without variable speed control	without no-volt release, without variable speed control
F 460 Ex	460 W	230 V	50 Hz	5,1 kg	-	460 00 006	460 00 001
F 460 Ex EL	460 W	230 V	50 Hz	5,1 kg	460 00 028	-	-
F 460 Ex	460 W	240 V	50 Hz	5,1 kg	-	460 00 005	460 00 000
F 460 Ex	460 W	110 V	50 Hz	5,1 kg	-	460 00 007	460 00 002
F 460 Ex	460 W	42 V	50 Hz	5,1 kg	-	460 00 030	-
F 460 Ex	410 W	24 V	DC	5,1 kg	-	-	460 00 003
F 460 Ex	230 W	12 V	DC	5,1 kg	-	-	460 00 004
F 460-1 Ex	700 W	230 V	50 Hz	5,9 kg	-	460 01 004	460 01 001
F 460-1 Ex	700 W	240 V	50 Hz	5,9 kg	-	460 01 003	460 01 000
F 460-1 Ex	700 W	110 V*	50 Hz	5,9 kg	-	460 01 005	460 01 002

* Temperature class T5
Other voltages and/or frequencies on request.

Accessories		Part No.	
		System CEAG	System Stahl
CEE Explosion-proof plug	explosion-proof to II 2 G EEx de IIC T6, 3-pole, 220-240 Volt, jet-proof to IP 65	937 01 030	937 01 018
CEE Explosion-proof socket	explosion-proof to II 2 G EEx de IIC T6, 3-pole, 220-240 Volt, jet-proof to IP 65	937 50 041	937 50 022
Earth (ground) wire with crocodile clip	2 m long 2 m long, reinforced version 3 m long		931 90 008 931 90 015 931 90 013
Carrying handle	allowing easy immersion and removal of the pump in combination with commutator motors Type F 460 Ex, F 460 Ex EL, F 460-1 Ex or FBM 4000 Ex.		001 10 557

FLUX COMMUTATOR MOTOR F 458

Commutator motor Type F 458 featuring a compact design, a robust double shell housing in aluminium and a very low noise level.

An improved ventilation system provides optimal cooling and ensures an extended service life.

Totally enclosed, fan cooled motor design and special corrosion-resistant painting, making these models particularly suitable for use in corrosive, vapour laden atmospheres.

Additional safety by an integral no-volt release to prevent from any unintentional re-starting after a voltage discontinuity.

Commutator motor, protection class I in 230, 240 or 110 Volt.
Protection class III in 24 or 12 Volt.

Jet-proof according to IP 55.

With power supply cable, 5 m long. 230, 240 and 110 Volt version with safety plug. 24 and 12 Volt version without plug.

Approved to VDE, GS and CSA standards.



F 458 (pict.)
F 458 EL

Type F 458 EL, 230 Volt, with infinitely variable speed control included in the switch knob for an easy control of the delivery rate.



F 458-1

The commutator motor Type F 458-1 is identical with Type F 458, but has a considerably higher capacity of 700 Watt. This model is recommended for applications requiring a higher delivery rate or when transferring medium viscosity products or liquids with a higher density.

Commutator motor, protection class I in 230, 240 or 110 Volt.

Jet-proof according to IP 55.

With power supply cable, 5 m long, and safety plug.

230 Volt version approved to VDE, GS and CSA standards.

COMMUTATOR MOTOR, JET-PROOF, WITH SPECIAL CORROSION-RESISTANT PAINTING

Type	Capacity	Voltage	Frequency	Weight	Part No. Version		
					with no-volt release, with variable speed control	with no-volt release, without variable speed control	without no-volt release, without variable speed control
F 458	460 W	230 V	50 Hz	5,1 kg	-	458 00 006	458 00 001
F 458 EL	460 W	230 V	50 Hz	5,1 kg	458 00 027	-	-
F 458	460 W	240 V	50 Hz	5,1 kg	-	458 00 005	458 00 000
F 458	460 W	110 V	50 Hz	5,1 kg	-	458 00 007*	458 00 002
F 458	410 W	24 V	DC	5,1 kg	-	-	458 00 003
F 458	230 W	12 V	DC	5,1 kg	-	-	458 00 004
F 458-1	700 W	230 V	50 Hz	5,9 kg	-	458 01 004	458 01 001
F 458-1	700 W	240 V	50 Hz	5,9 kg	-	458 01 003	458 01 000
F 458-1	700 W	110 V	50 Hz	5,9 kg	-	458 01 005*	458 01 002
*50 Hz version only. Other voltages and/or frequencies on request.							
Accessories							Part No.
Carrying handle	allowing easy immersion and removal of the pump						001 10 557

NOTE For transferring high flammability liquids and for use in hazardous areas explosion-proof motors must be used.

Commutator motor Type F 417 featuring a compact design, an optimal cooling system, a low noise level and an extended service life.

Extremely light-weight and easy to handle, allowing a most universal use with neutral, corrosive, low flammability liquids.

Commutator motor in 230, 240 or 110 Volt.

Double insulated according to protection class II, with integral thermal cut-out switch.

Splash-proof according to IP 24.

With power supply cable, 5 m long, with 2-pole plug.

Approved to VDE, GS, SEV et CSA standards.

Type F 417 EL with infinitely variable speed control device for an easy control of the delivery rate.



F 417
F 417 EL (pict.)



F 457 (pict.)
F 457 EL

Powerful commutator motor Type F 457 featuring a compact design, an optimal cooling system, a low noise level and an extended service life.

Extremely light-weight and easy to handle, allowing a most universal use with neutral, corrosive, low flammability liquids.

Commutator motor, 800 Watt, in 230, 240 or 110 Volt.

Double insulated according to protection class II, with thermal cut-out switch.

Splash-proof according to IP 24.

With power supply cable, 5 m long, and 2-pole plug.

Approved to VDE, GS and CSA standards.

Type F 457 EL with infinitely variable speed control device for an easy control of the delivery rate.

COMMUTATOR MOTOR, EXTREMELY LIGHT-WEIGHT AND EASY TO HANDLE

Type	Capacity	Voltage	Frequency	Weight	Part No. Version	
					with variable speed control	without variable speed control
F 417	450 W	230 V	50 Hz	2,4 kg	-	417 01 004
F 417 EL	450 W	230 V	50 Hz	2,4 kg	417 01 012	-
F 417	450 W	240 V	50 Hz	2,4 kg	-	417 01 402
F 417 EL	450 W	240 V	50 Hz	2,4 kg	417 01 406	-
F 417	350 W	110 V	50 Hz	2,4 kg	-	417 01 302
F 417 EL	350 W	110 V	50 Hz	2,4 kg	417 01 307	-

Type	Capacity	Voltage	Frequency	Weight	Part No. Version		
					with no-volt release, with variable speed control	with no-volt release, without variable speed control	without no-volt release, without variable speed control
F 457	800 W	230 V	50 Hz	4,0 kg	-	457 01 005	457 01 002
F 457 EL	800 W	230 V	50 Hz	4,0 kg	457 01 003	-	-
F 457	800 W	240 V	50 Hz	4,0 kg	-	457 01 006	457 01 007
F 457 EL	800 W	240 V	50 Hz	4,0 kg	457 01 008	-	-
F 457	800 W	110 V	50 Hz	4,0 kg	-	457 01 009	457 01 010
F 457 EL	800 W	110 V	50 Hz	4,0 kg	457 01 011	-	-

Other voltages and/or frequencies on request.

Accessories		Part No.
Carrying handle	allowing an easy immersion and removal of the pump.	001 10 533

NOTE For transferring high flammability liquids and for use in hazardous areas explosion-proof motors must be used.

FLUX THREE-PHASE GEARMOTOR F 414

The robust three-phase gearmotor F 414 is especially designed for extreme operating conditions and extended operating periods.

Three-phase gearmotor, 230/400 Volt, 50 Hz, protection class I, jet-proof to IP 55.

Capacity: 0,55, 0,75 or 1,1 kW.

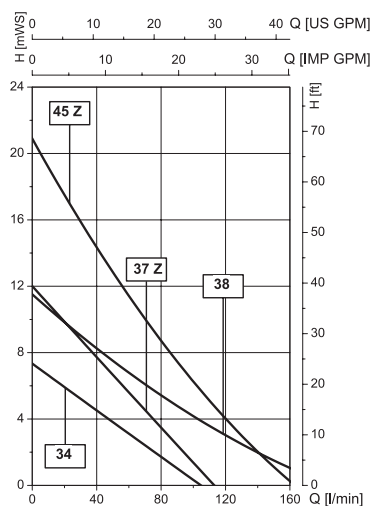
Available with motor protection switch or with cable terminal box.

Without power supply cable.

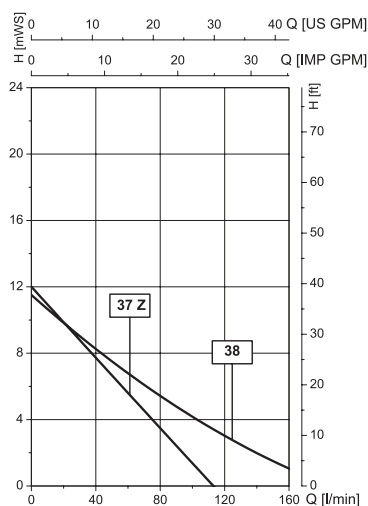


F 414

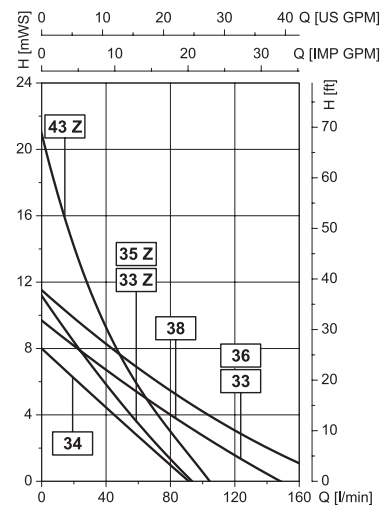
Motor F 414 in combination with pump tube sets in stainless steel



Motor F 414 in combination with pump tube sets in Aluminium or Hastelloy C



Motor F 414 in combination with pump tube sets in PP or PVDF



Values $\pm 10\%$ with water (20 °C) and a voltage of 230 Volt.

THREE-PHASE GEARMOTOR, JET-PROOF TO IP 55

Type	Capacity	Voltage	Frequency	Range of setting motor protection switch	Weight	Part No. Version	
						with motor protection switch, mounted on the motor	without motor protection switch, with cable terminal box
F 414	0,55 kW	230/400 V	50 Hz	0,9–1,6 A	8,8/8,0 kg	414 01 112	414 01 110
F 414	0,75 kW	230/400 V	50 Hz	1,5–2,5 A	11,3/10,5 kg	414 01 123	414 01 122
F 414	1,1 kW	230/400 V	50 Hz	2,4–3,5 A	12,8/12,0 kg	414 01 131	414 01 130
Accessories							Part No.
Carrying handle	allowing an easy immersion and removal of the pump						001 10 527
Power supply cable	5 m long, complete with Cekon plug, 5-pole						934 08 020
Power supply cable	5 m long, without plug						934 08 025
Power supply cable	yard ware						934 08 901
Cekon plug	5-pole						937 01 014

In combination with air motors FLUX barrel and container pumps are very lightweight, easy to handle and extremely powerful at the same time.

FLUX air motors are explosion-proof according to Directive 94/9/EC – ATEX 100a. PTB Registration No. 02 ATEX D022. These motors are recommended for transferring high flammability liquids and are particularly suitable for applications requiring a powerful and easy to adjust motor.

The speed can be adjusted via the filter-regulator-lubricator unit on models F 416 Ex and F 416-1 Ex or on a ball valve on model F 416-2 Ex.

Compressed air motor, explosion-proof to II 2 G cp IIC T6.

Power 470 Watt at 6 bar operating pressure.

Power 170 Watt at 3 bar (minimum operating pressure).

Easily variable speed control by adjusting either the air supply pressure or volume.

Motor overload-proof.

Air connection G 1/4 (BSP 1/4" female).

Low noise level by an exhaust silencer.

An optional exhaust air hose and filter is available to prevent the lubricating oil contaminating the environment.



F 416 Ex
with trigger
operated valve



F 416-1 Ex
without valve



F 416-2 Ex
with ball valve

AIR MOTOR, EXPLOSION-PROOF

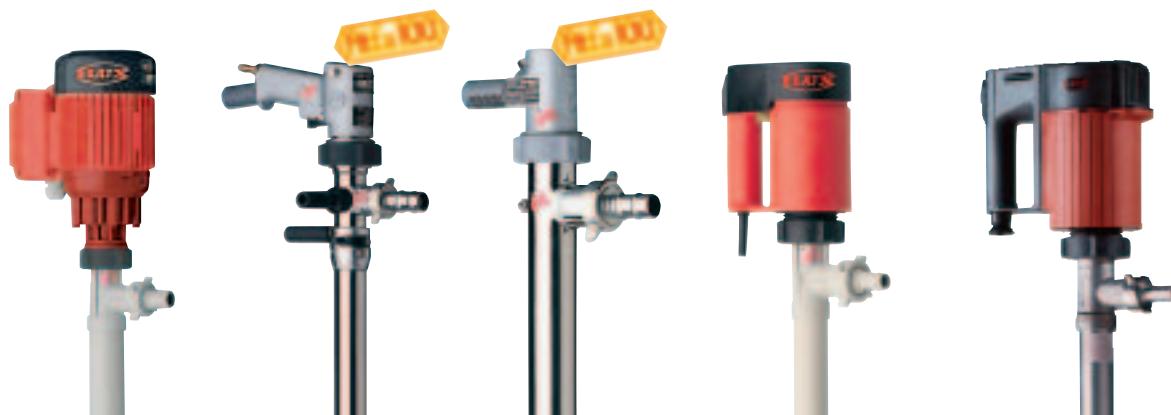
Type	Capacity	Operating pressure max.	Air consumption	Version	Weight	Part No.
F 416 Ex	470 W	6 bar	14 l/sec	with trigger operated valve	1,4 kg	416 00 100
F 416-1 Ex	470 W	6 bar	14 l/sec	without valve	0,9 kg	416 00 020
F 416-2 Ex	470 W	6 bar	14 l/sec	with ball valve	1,0 kg	416 00 030
Accessories						Part No.
Filter-regulator-lubricator unit	consisting of water separator, pressure gauge and lubricator. Thread on inlet and outlet G 1/4 (BSP 1/4" female)					001 10 100
Compressed air hose	DN 10, electrically conductive (blue)					001 10 098
Hose coupling	brass, spring-actuated, with hose nozzle DN 10 for compressed air hose					959 13 066
Nipple	brass, DN 10 – G 1/4 A (BSP 1/4" male) for hose coupling					959 13 065
Hose nozzle	brass, DN 10 – G 1/4 A (BSP 1/4" male) for compressed air hose					959 05 022
Earth (ground) wire with crocodile clip	2 m long 2 m long, reinforced version 3 m long					931 90 008 931 90 015 931 90 013

CAPACITY RANGE



Motor Type	FBM 4000 Ex			F 458	F 460 Ex		F 458-1	F 460-1 Ex		
Pump tube set Type	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	
F 430 S-41/38	220	11	800	200	9,5	800	220	12	700	
F 430 S-41/37 Z	110	17,5	1000	100	14	1000	115	19	900	
F 430 S-50/38	220	11	800	200	9,5	800	220	12	700	
F 430 S-50/45 Z	120	23	800	130	19	900	145	25	900	
F 424 S-43/38	220	11	800	200	9,5	800	220	12	700	
F 424 S-43/37 Z	110	17,5	1000	100	14	1000	115	19	900	
F 424 S-50/45 Z	120	23	800	130	19	900	145	25	900	
F 425 S-41/34	110	8	800	115	8	800	115	10	900	
F 426 S-41/38	220	11	800	200	9,5	800	220	12	700	
F 427 S3-43/38	220	11	800	200	9,5	800	220	12	700	
F 430 AL-41/38	220	11	800	200	9,5	800	220	12	700	
F 430 AL-41/37 Z	110	17,5	1000	100	14	1000	115	19	800	
F 430 AL-50/38	220	11	800	200	9,5	800	220	12	700	
F 430 HC-40/38	220	11	800	200	9,5	800	220	12	700	
F 430 PP/PVDF-40/33	160	10,5	800	170	9,5	800	190	12	900	
F 430 PP/PVDF-40/33 Z	85	15,5	1000	85	15	1000	90	20	900	
F 430 PP/PVDF-50/38	220	11	800	200	9,5	800	220	12	700	
F 430 PP/PVDF-50/43 Z	105	30	1000	95	23	1000	110	28	900	
F 424 PP/PVDF-41/36	175	11	800	170	9,5	800	190	12	900	
F 424 PP/PVDF-41/35 Z	85	15,5	1000	85	15	1000	90	20	900	
F 424 PP/PVDF-50/38	220	11	800	200	9,5	800	220	12	700	
F 424 PP-50/43 Z	125	30	1000	95	23	1000	110	28	900	
F 425 PP-50/34	110	8	800	90	7	1000	110	10	900	
F 426 PP-50/33	160	10,5	800	170	9,5	800	190	12	900	

Values \pm 10 % with water (20 °C) and a voltage of 230 Volt.



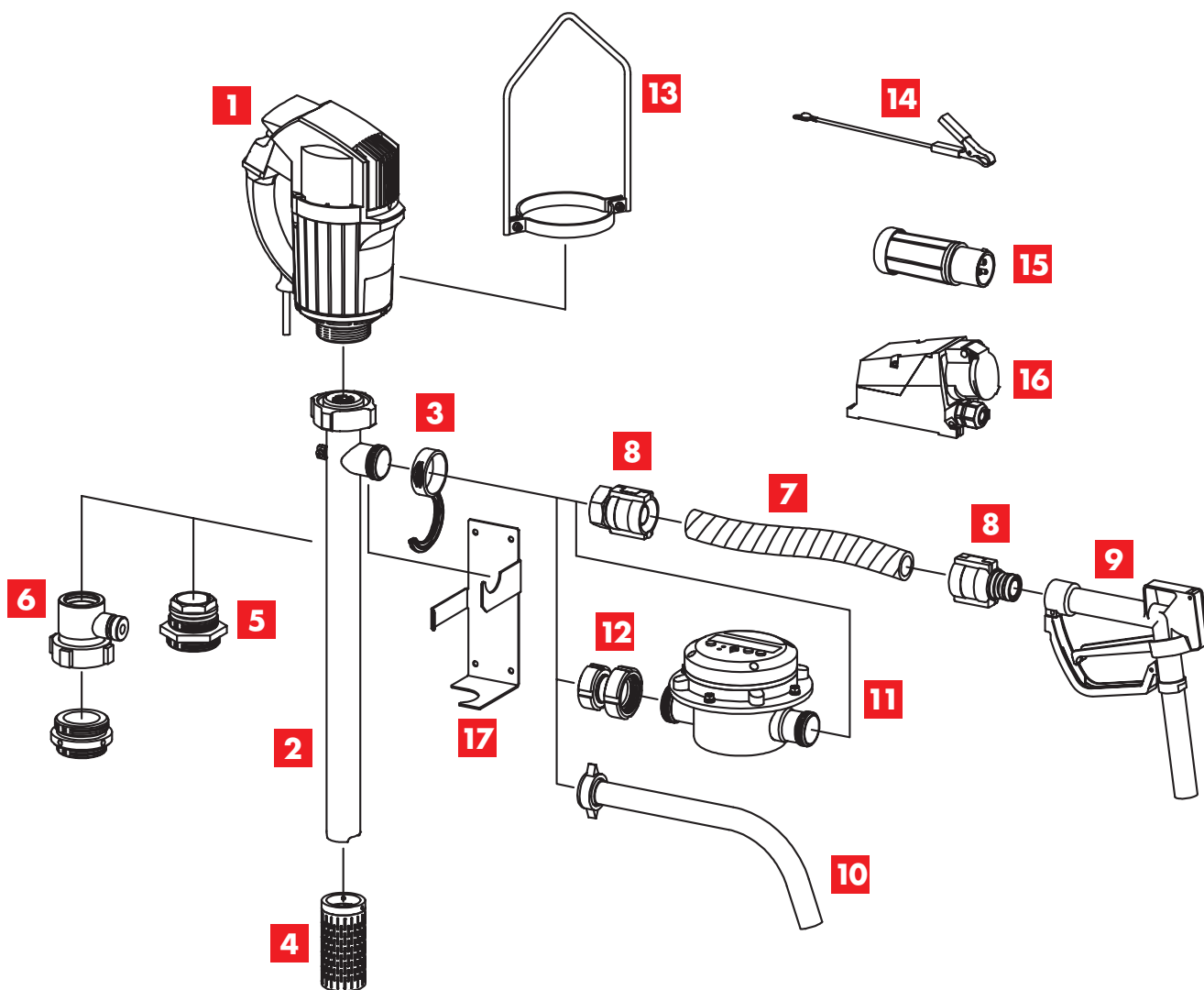
	F 414			F 416 Ex			F 416-1 Ex F 416-2 Ex			F 417			F 417 EL			F 457			F 457 EL		
	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)	Delivery rate* l/min	Delivery head** m	Viscosity max. mPas (Δ cP)
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	115	12	1000	120	24	1200	95	12	800	120	20	1000	160	21	1000	145	30	1200	185	11	900
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	17	800	150	26	900	185	11	900
	160	21	1000	145	30	1200	115	17	800	150	26	900	185	11	900	240	13	1000	180	7,5	600
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	115	12	1000	120	24	1200	95	12	800	120	20	1000	160	21	1000	145	30	1200	185	11	900
	160	21	1000	145	30	1200	115	17	800	150	26	900	185	11	900	240	13	1000	180	7,5	600
	100	7	1000	130	13	1200	100	6	800	120	11	900	185	11	900	240	13	1000	180	7,5	600
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	115	12	1000	120	24	1200	95	12	800	120	20	1000	160	21	1000	145	30	1200	185	11	900
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	145	10	1000	205	13	1200	150	7,5	800	190	12	800	90	11	1000	100	24	1200	185	11	900
	90	11	1000	100	24	1200	80	12	800	90	20	1000	105	21	1000	105	30	1200	185	11	900
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	105	21	1000	105	30	1200	80	17	800	110	30	900	145	10	1000	205	13	1200	185	11	900
	145	10	1000	205	13	1200	150	7,5	800	190	12	800	90	11	1000	100	24	1200	185	11	900
	90	11	1000	100	24	1200	80	12	800	90	20	1000	105	21	1000	105	30	1200	185	11	900
	185	11	900	240	13	1000	180	7,5	600	220	12	800	115	12	800	120	20	1000	185	11	900
	105	21	1000	105	30	1200	80	17	800	110	30	900	145	10	1000	205	13	1200	185	11	900
	90	8	1000	110	12	1200	80	6	800	120	11	1000	145	10	900	205	13	1200	150	7,5	800
	145	10	900	205	13	1200	150	7,5	800	190	12	800	90	11	1000	100	24	1200	185	11	900

* Maximum delivery rate with free outlet; obtained on the outlet connection.

** Maximum delivery head with closed outlet; obtained on the outlet connection.

GENERAL VIEW FLUX BARREL AND CONTAINER PUMP WITH ACCESSORIES FOR HIGH FLAMMABILITY LIQUIDS (EXPLOSION-PROOF VERSION)

It is not merely the pump that makes the FLUX solution a perfect equipment. On this page you will find a general view on the explosion-proof FLUX barrel pump together with all accessories for transferring high flammability liquids. With all items in bold printing you will have a ready to use pump assembly, which may be completed by other accessories shown on this page.



1 Drive Motor

2 Barrel Pump (pump tube set)

3 FLUX-Clip

4 Suction strainer

5 Compression gland

6 Fume gland Type FES

7 Flexible hose*

8 Swaged hose fittings*

9 Quick action tap

10 Discharge spout

11 Liquid meter

12 Connecting piece FMC 100

13 Carrying handle

14 Earth (ground) wire

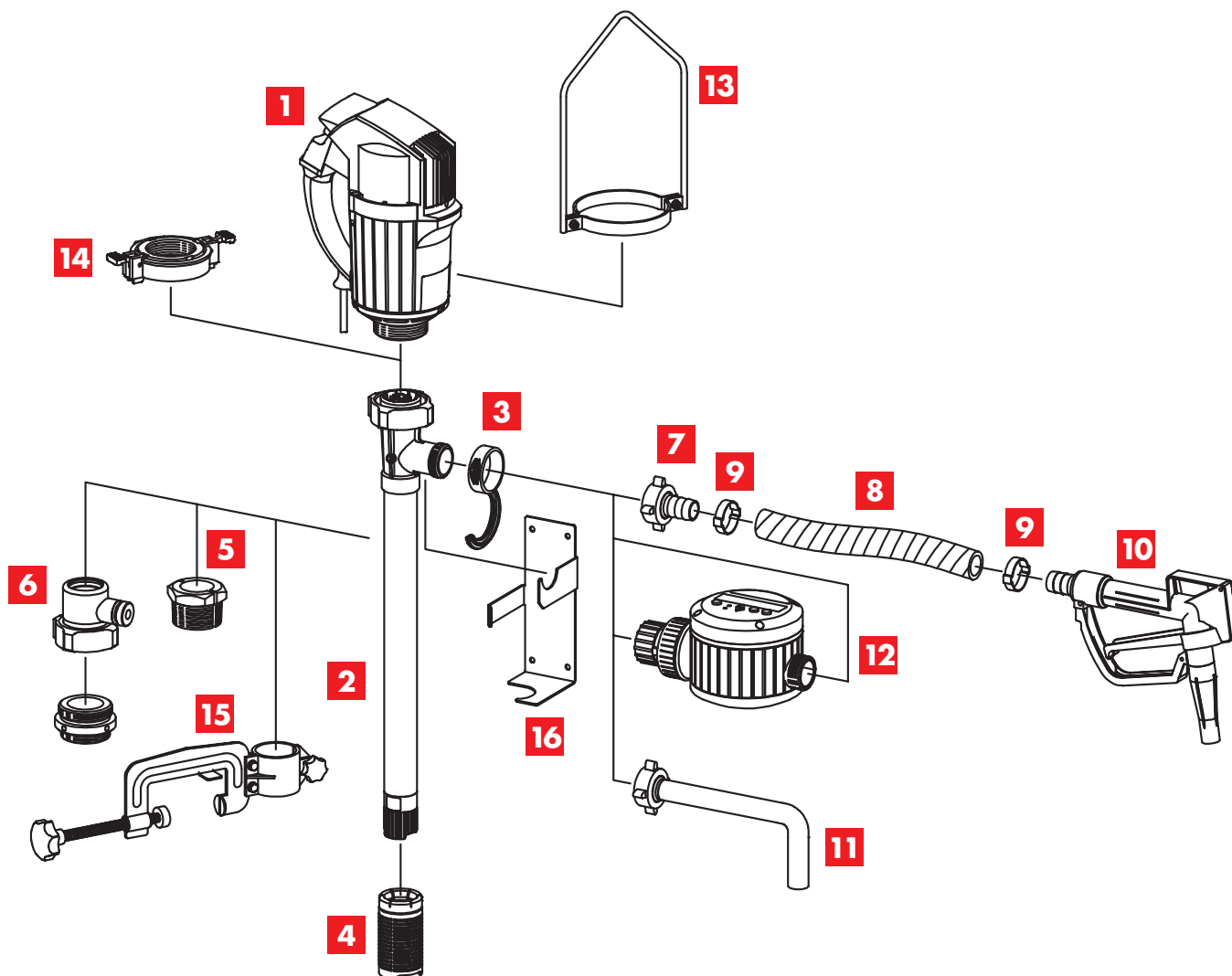
15 Explosion-proof plug

16 Explosion-proof socket

17 Wall bracket

* On request also available completely mounted and tested for electrical conductivity.

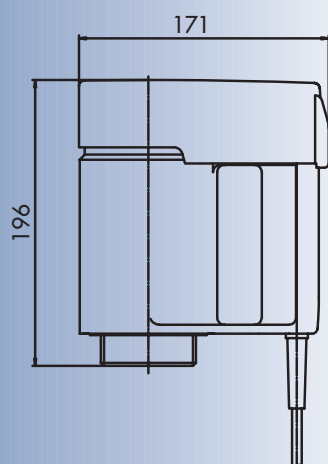
It is not merely the pump that makes the FLUX solution a perfect equipment. On this page you will find a general view on the FLUX barrel pump together with all accessories for transferring non-flammable liquids. With all items in bold printing you will have a ready to use pump assembly, which may be completed by other accessories shown on this page.



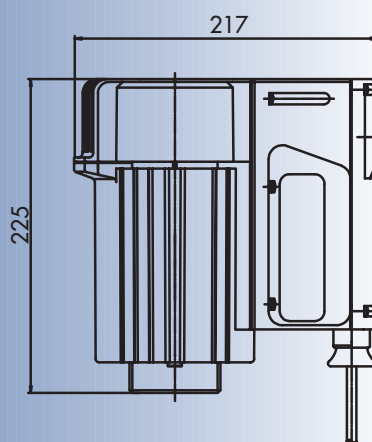
- | | |
|----------|------------------------------------|
| 1 | Drive Motor |
| 2 | Barrel Pump (pump tube set) |
| 3 | FLUX-Clip |
| 4 | Suction strainer |
| 5 | Compression gland |
| 6 | Fume gland Type FES |
| 7 | Hose connection |
| 8 | Flexible hose* |

- | | |
|-----------|------------------------------------|
| 9 | Hose clip |
| 10 | Quick action tap |
| 11 | Discharge spout |
| 12 | Liquid meter |
| 13 | Carrying handle |
| 14 | Quick action coupling Type SSK 400 |
| 15 | Attachment clamp |
| 16 | Wall bracket |

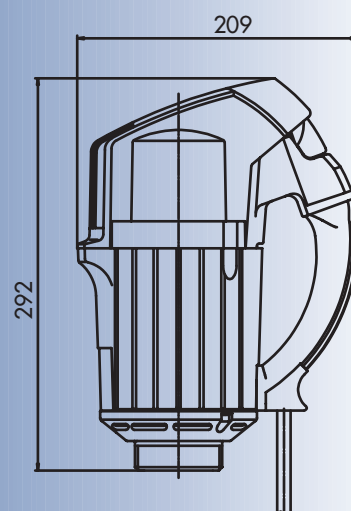
F 417/F 417 EL



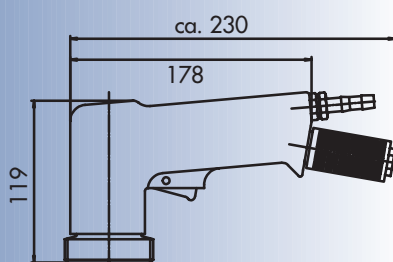
F 457/ F 457 EL



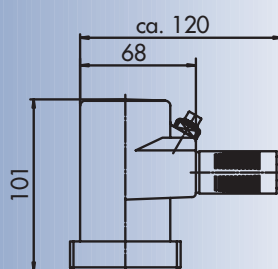
**F 458/F 458 EL/F 458-1/
F 460 Ex/F 460 Ex EL/
F 460-1 Ex/FBM 4000 Ex**



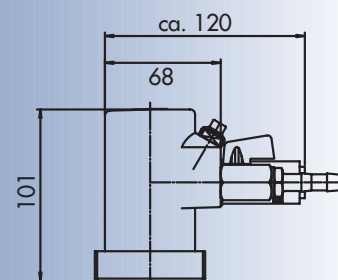
F 416 Ex



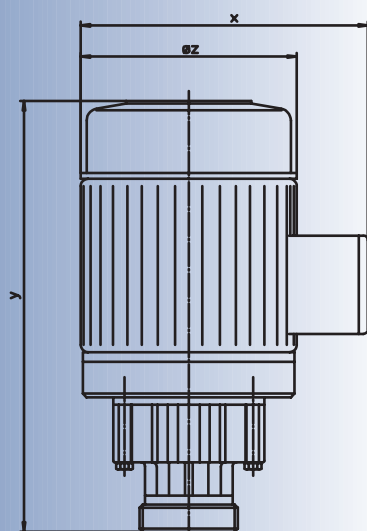
F 416-1 Ex



F 416-2 Ex



F 414

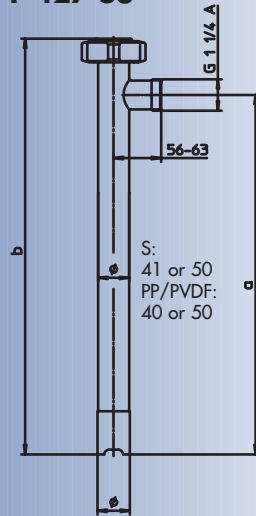


Type F 414

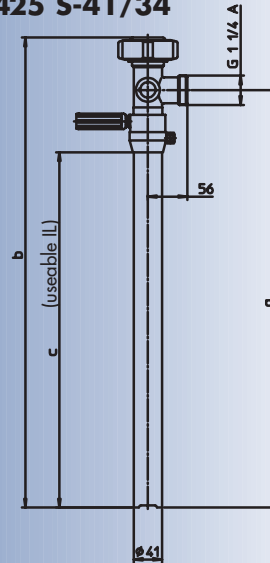
Capacity	X	Y	Øz
0,55 kW	200	285	143
0,75 kW	217	311	160
1,1 kW	217	311	160

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

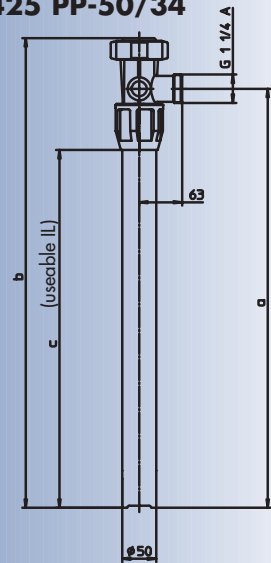
**F 424 S/PP/PVDF
F 427 S3**



F 425 S-41/34

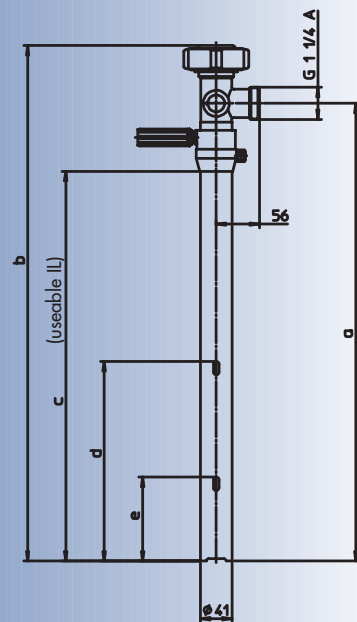


F 425 PP-50/34

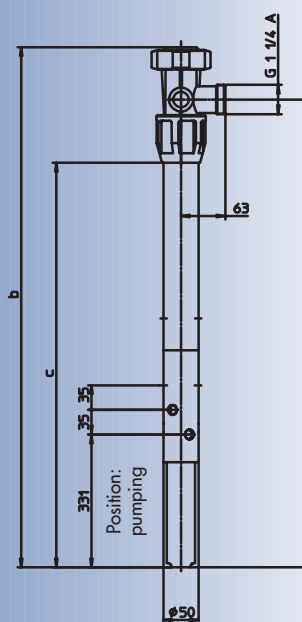


Type	F 424 S/PP/PVDF and F 427 S3			F 425 S-41/34			F 425 PP-50/34		
Dimensions in mm	Ø	a	b	a	b	c	a	b	c
Immersion length 700 mm	S: 43 or 50.	715	790	815	890	738	816	891	726
Immersion length 1000 mm	PP/PVDF:	1015	1090	1115	1190	1038	1116	1191	1026
Immersion length 1200 mm	41 or 50.	1215	1290	1315	1390	1238	1316	1391	1226
	on models PP/PVDF-41/35 Z, dimensions a and b are reduced by 8 mm.			with open valve dimensions a and b are increased by 7 mm.			with open valve dimensions a and b are increased by 8 mm.		

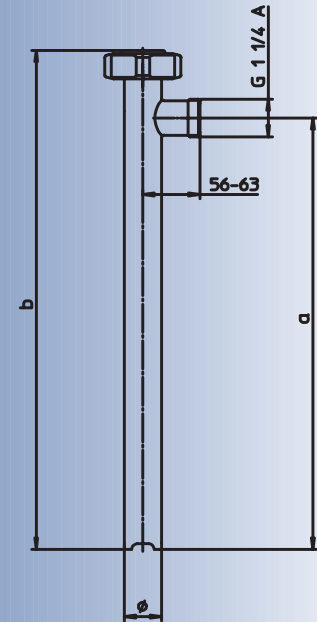
F 426 S-41/38



F 426 PP-50/33



F 430 S/AL/HC/PP/PVDF



IL: Immersion length

Type	F 426 S-41/38					F 426 PP-50/33			F 430 S/AL/HC/PP/PVDF		
Dimensions in mm	a	b	c	d	e	a	b	c	Ø	a	b
Immersion length 700 mm	—	—	—	—	—	—	—	—	S/AL: 41 or 50.	706	780
Immersion length 1000 mm	1106	1181	1018	352	202	1106	1180	1016	HC: 40. PP/PVDF:	1006	1080
Immersion length 1200 mm	1306	1381	1218	352	202	1306	1380	1216	40 or 50.	1206	1280

For example: Type F 430 S-41/38 with an immersion length of 1000 mm has a total length (shown as dimension „b“) of 1080 mm.

The total length of the pump including motor type F 460 Ex is 1080 mm + 292 mm – 16 mm = 1356 mm.

FLUX ACCESSORIES & COMPLEMENTS



It is not merely the pump that makes the FLUX solution a perfect equipment. FLUX Pump Kits include everything for that quick start required by today's busy engineers and buyers: a ready to work, straight out of the box pump. All component parts – pump, motor and accessories – are carefully selected to complement each other.

FLUX Pump Kits are available for:

- acids and alkalis
- concentrated acids and alkalis
- petroleum products
- high flammability liquids
- universal applications
- 99,98% barrel emptying

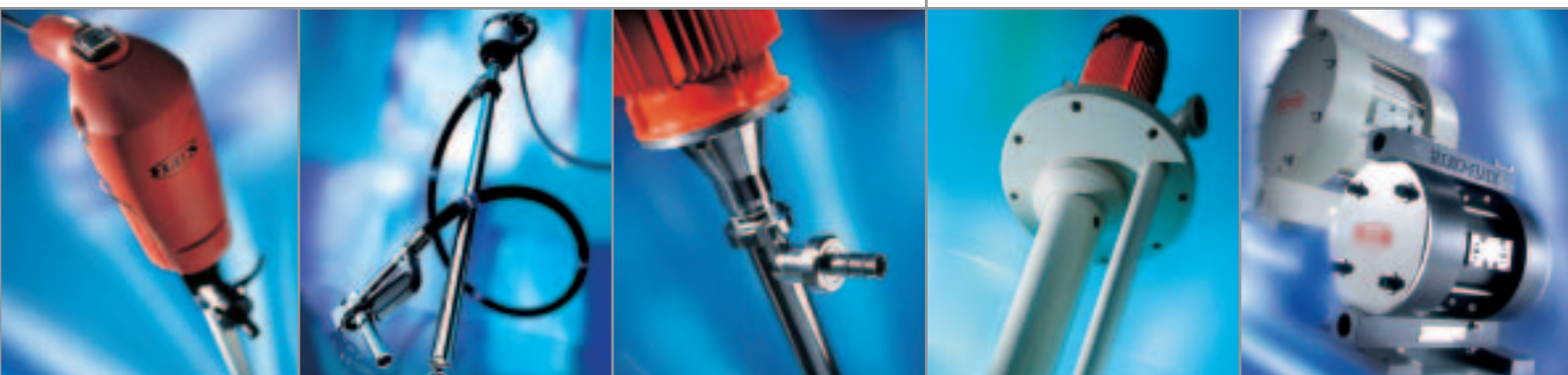
Select the most suitable combination and see the advantages of buying a FLUX Pump Kit, the new all-inclusive service!



If you want to keep your liquids under control, FLUX barrel and container pumps can be completed by a Liquid Meter Type FMC 100. Various models are available in PP, ETFE or stainless steel for flowrates of 10 – 100 l/min. An easy-to-read 7-digit LCD unit together with multifunctional keys ensures a simple calibration and input, everything for easy use by the operator.

All models are explosion-proof to II 2 G EEx ia IIB T6 according to Directive 94/9/EC-ATEX 100a.

For detailed information on FLUX Pump Kits, FLUX Liquid Meters and other FLUX products please ask for our sales brochures. Just fill in the form on the following page and return it by FAX.



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 HIGH VISCOSITY LIQUID 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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Please mark with a cross, complete the address and then sent us a fax. Fax number see on the back side!



INNOVATORS IN FLOW TECHNOLOGY

All around the globe, FLUX is synonymous with top standards in pump technology. Whether it is barrel pumps, high viscosity liquid pumps, vertical centrifugal immersion pumps, air-operated diaphragm pumps, liquid meters, mixers or top class accessories – FLUX with its complete and comprehensive range is always the one to address to. Benefit from our competence. We look forward to hearing from you!