

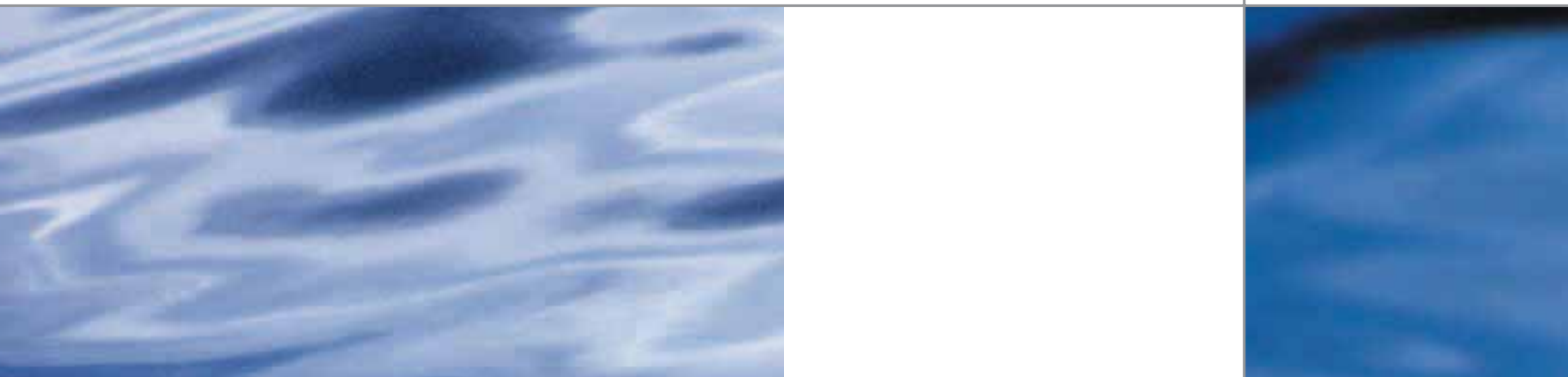


We deliver values.



drum and
container pumps

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?
Drum 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 drums 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.**

Whenever liquids are pumped out of a drum 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 highly flammable 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.



For further information to our pre-configured drum-pump kits see our brochure FLUX pump kits

The FLUX F 430 with mechanical seal

Flexible coupling
between motor and
pump

Steel cored inner tube
in PP and PVDF pro-
vides 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

Impeller in ETFE



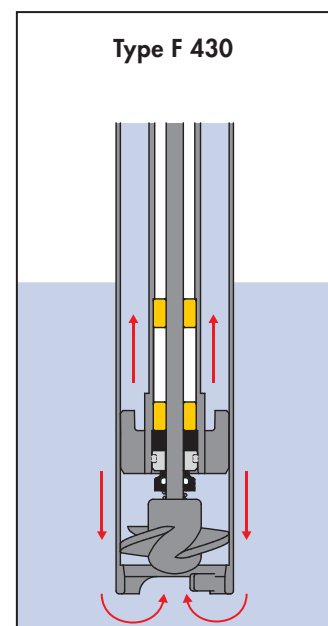
The pump must be used with many varying liquids, consequently the smallest residual left within the pump is unacceptable. You want to pump adhesive substances like paints or liquids which tend to crystallize or harden.

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 impeller 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.



FLUX drum pumps in stainless steel

FLUX drum pumps in stainless steel 316 Ti – except sanitary pump F 427 S – are approved according to ATEX-Directive 94/9/EC for use in Zone 0, temperature class T4, for transferring highly flammable liquids out of portable drums 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 29.

When using the pump with a discharge hose (of approx. 2 m) and a quick action tap, the delivery rate will be approx. 70 l/min. Depending on the motor type a 200 l drum 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.



FP 424 Ex S-43/38 with zone separation



FBM 4000 Ex



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



F 416 Ex



F 416-2 Ex



F 458
F 458 EL
F 458-1



F 414



F 457
F 457 EL



FEM 4070



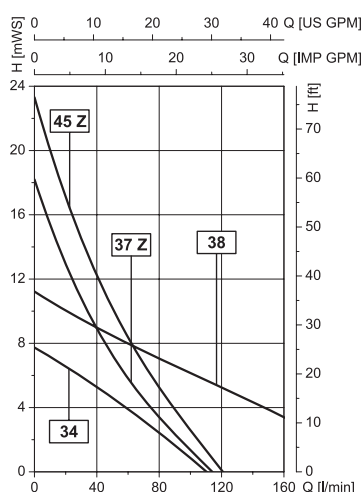
This pump version will achieve a higher delivery rate!



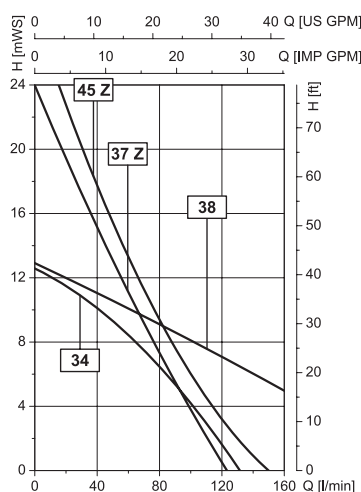
This pump version will achieve a higher delivery head!

Max. viscosity per pump and motor, please see pages 28 and 29.

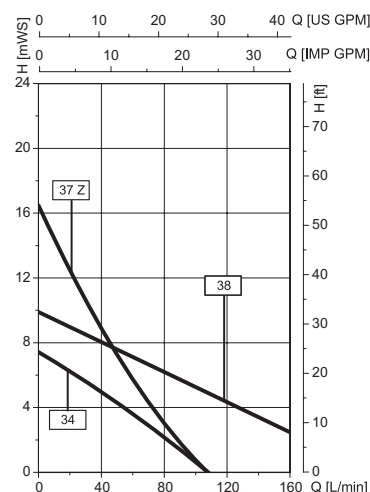
motor FBM 4000 Ex



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



motor FEM 4070



drum pump (tube set) in stainless steel, thread on outlet G 1¼ male, motors on page 21

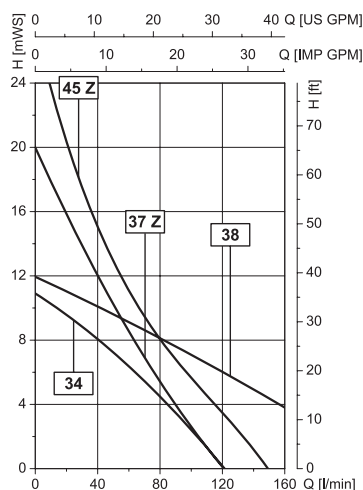
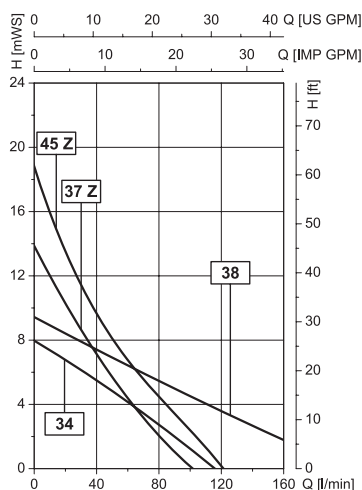
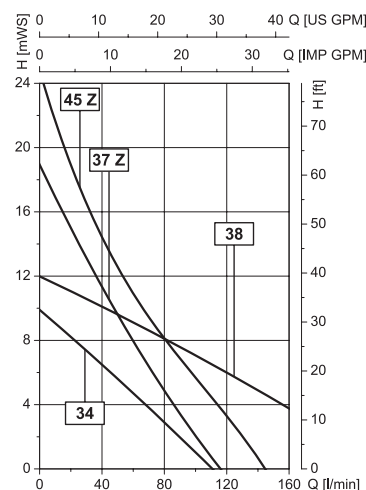
type/curve	FP 424 Ex S-43/38 ¹	FP 424 Ex S-43/37 Z ¹	F 424 S-50/45 Z
version			
seal type	sealless within the liquid section		
material	shaft in stainless steel 316 Ti, impeller in ETFE, o-ring in FKM		
max. temperature	100 °C		
outer-Ø	41 mm (foot piece 43 mm)	41 mm (foot piece 43 mm)	50 mm
part no. / weight			
immersion length 700 mm	424 22 007 / 2,2 kg	424 22 107 / 2,2 kg	424 20 207 / 3,0 kg
immersion length 1.000 mm	424 22 010 / 2,9 kg	424 22 110 / 2,9 kg	424 20 210 / 4,0 kg
immersion length 1.200 mm	424 22 012 / 3,3 kg	424 22 112 / 3,3 kg	424 20 212 / 4,8 kg

type/curve	FP 425 Ex S-41/34 ^{1,2}	F 426 S-41/38	F 427 S3-43/38
version	99,98 % drum emptying	mixing pump	sanitary pump
seal type	mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FKM		sealless within the liquid section
material	shaft in stainless steel 316 Ti, seal in FKM, impeller in ETFE		shaft in stainless steel 316 Ti, impeller in ETFE, o-ring in FKM
max. temperature	100 °C		
outer-Ø	41 mm	41 mm	41 mm (foot piece 43 mm)
part no. / weight			
immersion length 700 mm	425 22 008 / 3,0 kg	–	427 20 307 / 2,2 kg
immersion length 1.000 mm	425 22 011 / 3,8 kg	426 20 010 / 3,8 kg	427 20 310 / 2,9 kg
immersion length 1.200 mm	425 22 013 / 4,4 kg	426 20 012 / 4,4 kg	427 20 312 / 3,3 kg

type/curve	FP 430 Ex S-41/38 ¹	FP 430 Ex S-41/37 Z ¹	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, impeller in ETFE			
max. temperature	100 °C			
outer-Ø	41 mm	41 mm	50 mm	50 mm
part no. / weight				
immersion length 700 mm	430 22 107 / 2,4 kg	430 22 407 / 2,4 kg	430 20 207 / 3,4 kg	430 20 307 / 3,4 kg
immersion length 1.000 mm	430 22 110 / 3,0 kg	430 22 410 / 3,0 kg	430 20 210 / 4,5 kg	430 20 310 / 4,5 kg
immersion length 1.200 mm	430 22 112 / 3,6 kg	430 22 412 / 3,6 kg	430 20 212 / 5,2 kg	430 20 312 / 5,2 kg

accessories	hose connection complete with nut G 1¼ female		DN 19 part no. 959 04 061	DN 25 part no. 959 04 041
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Pump models in immersion lengths of 200 – 3000 mm (in steps of 100 mm) on request ² 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


¹ with zone separation

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

FLUX commutator motor F 460 Ex in detail

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 ATEX-Directive 94/9/EC.

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.

EC-Type-Examination Certificate PTB 10 ATEX 1053 X.

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.

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.



F 460 Ex (pict)
F 460 Ex EL
F 460-1 Ex

Commutator motor, explosion-proof to II 2 G Ex d e IIC T6 / T5 Gb, protection class I in 230, 240 or 110 volt, protection class III in 42, 24 or 12 volt. Jet-proof according to IP 55, version with no-volt release, with power supply cable, 5 m long, with safety plug (not explosion-proof). – 42, 24 and 12 volt version without plug.

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	CC	5,1 kg	–	–	460 00 003
F 460 Ex	230 W	12 V	CC	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

230 Volt version, approved to VDE / GS standards.

Other voltages and/or frequencies on request.



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

FLUX air motors are explosion-proof according to ATEX-Directive 94/9/EC. PTB Registration No. 02 ATEX D022-1.

These motors are recommended for transferring highly flammable 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.

Power at 6 bar operating pressure – 470 watt.

Power at 3 bar operating pressure – 170 watt.



F 416 Ex
with trigger
operated valve



F 416-1 Ex
without valve



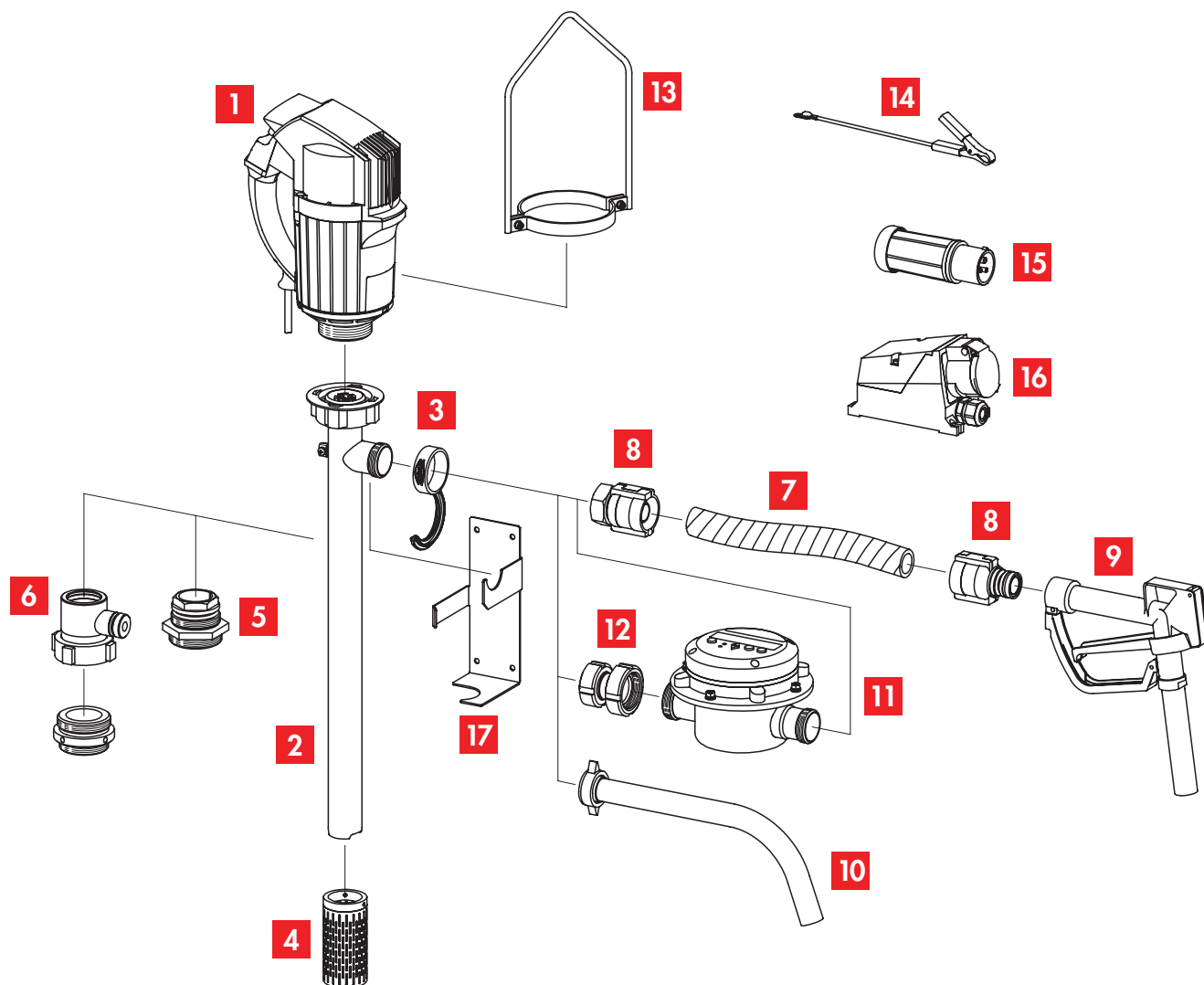
F 416-2 Ex
with ball valve

Air motor, explosion-proof to II 2 G c IIC T6, easily variable speed control by adjusting either the air supply pressure or volume, motor overload-proof, air connection G ¼ (BSP ¼" female).

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 ¼ (BSP ¼" 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 ¼ A (BSP ¼" male) for hose coupling				959 13 065
hose nozzle		brass, DN 10 – G ¼ A (BSP ¼" male) for compressed air hose				959 05 022
earth (ground) wire with crocodile clip		2 m long 3 m long 2 m long, reinforced version				931 90 008 931 90 013 931 90 015

general view FLUX drum and container pump with accessories for highly flammable 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 drum pump together with all accessories for transferring highly 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 drum 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

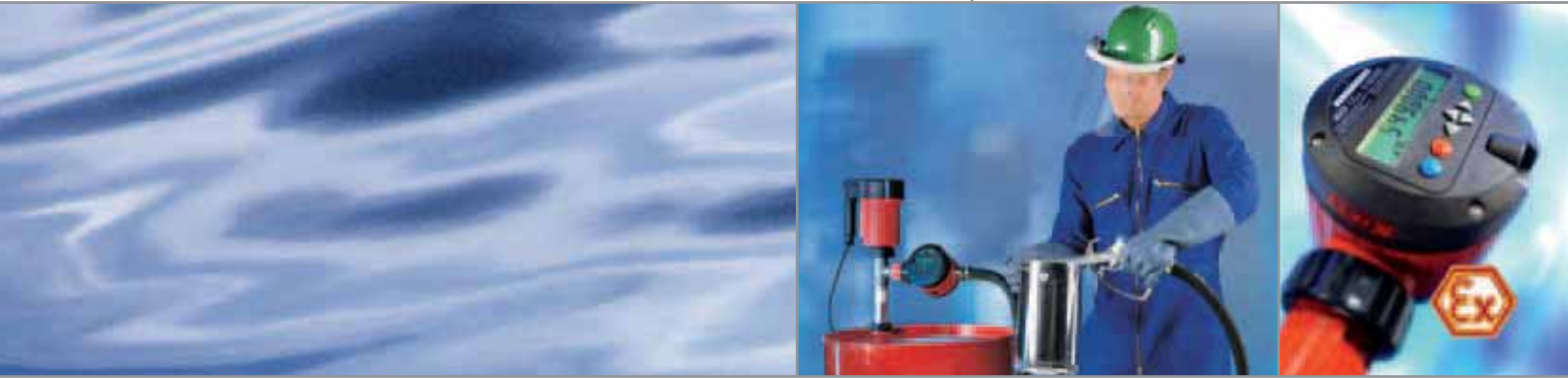
14 earth (ground) wire

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. 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
- highly flammable liquids
- universal applications
- 99,98 % drum emptying

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



Flow meters and FLUXTRONIC®

Flow meters based on the nutating disc (FMC) or oval rotor principle (FMO) offer the right solution for any application.

In combination with the FLUXTRONIC® evaluation electronics, filling and dosing processes of almost all fluids can be carried out with maximal precision and safety. This goes for a wide range of liquids from thin to highly viscous. In automatic operation, signals can be output for control purposes. In this way, the most varied processes can be controlled..

For detailed information on FLUX Pump Kits, FLUX Liquid Meters and other FLUX products please ask for our sales brochures.