

## FLUX BARREL AND CONTAINER PUMPS

## MOTORS AND PUMPS TESTED AND CERTIFIED FOR USE IN HAZARDOUS AREAS

## FLUX HIGH VISCOSITY LIQUID PUMPS



A FLUX Barrel Pump is always a "Two-Component-Team" consisting of a motor and a pump. Both components are universally interchangeable.

This means: each FLUX barrel pump can be operated by different drive motors. On the other hand a wide range of different pump designs is available for each motor. Hence you benefit from an utmost flexibility.



Motor type (picture)	JUNIORFLUX	F 417	F 458 / F 458-1	F 457	F 457	F 460 Ex / F 460-1 Ex	F 416 Ex	FBM 4000 Ex	FLUX Pump-Kits	Three-phase motor	FBM 4000 Ex	F 403/4	FPM 4 Ex	Three-phase motor
Pumpe type (picture)	F 314 PP - 25/19	F 430 PP - 40/33	F 430 PVDF - 40/33	F 430 PP - 100/50	F 430 AL - 41/38	F 424 S - 43/38	F 425 S - 41/34	F 426 S - 41/38	All in one	F 520 S - 50/45	F 550 GS - 50/21	F 550 GS6 - 50/21	F 550 S - 54/26	F 560 S3 - 50/21
<b>Description</b>	Extremely lightweight, portable pump. Suitable for dispensing small amounts of thin, neutral or corrosive liquids out of carboys, hobbicks and narrow-necked containers.	Very lightweight, portable pump for acids and alkalis. Suitable for transferring thin, neutral or corrosive liquids.	Light, portable, robust and powerful barrel and container pump. Suitable for transferring thin to low viscosity, neutral or corrosive liquids.	Powerful, light and portable container pump featuring a high delivery head. Especially designed for transferring chemical fluids out of larger drums and 1000-L-Containers.	Light, portable, robust and powerful barrel and container pump. Suitable for transferring thin to medium viscosity, neutral or corrosive liquids.	Portable, robust and powerful barrel and container pump for use in hazardous areas. Suitable for transferring thin to medium viscosity, neutral or corrosive liquids.	Light, portable, robust and powerful barrel and container pump with compressed air motor for use in hazardous areas. Suitable for transferring thin to medium viscosity, neutral or corrosive liquids.	Portable and robust barrel and container pump with brushless motor for use in hazardous areas. Suitable for transferring thin to medium viscosity, neutral or corrosive liquids.	It is not merely the pump that makes the FLUX solution a perfect equipment. FLUX Pump Kits include everything required by todays busy engineers and buyers. All component parts are carefully selected to complement each other. FLUX Pump Kits are available for:	Robust screw pump. Suitable for transferring low to medium viscosity substances. Can also be operated against a closed outlet.	Universal, robust, portable and powerful positive displacement pump. Suitable for transferring low to medium viscosity substances.	Very light, portable positive displacement pump for small delivery rates. Suitable for transferring low to high viscosity substances. Very smooth pumping due to low pump speeds of 210 or 420 rpm.	Universal, robust and powerful positive displacement pump. Suitable for transferring low to high viscosity, even pasty substances.	Powerful sanitary pump, very easy to clean. Especially designed for sanitary operations with low to high viscosity, even pasty substances in the food, cosmetic and pharmaceutical industries.
<b>Examples of suitable liquids</b> (for further information see detailed Resistance Chart)	Acetic acid, chromic acid, formic acid, fruit acid, hydrochloric acid, hydrofluoric acid, nitric acid, sulphuric acid, ammonia, caustic potash solution, caustic soda, liquid fertilizers			phosphoric acid,	Diesel oil, fuel oil, hydraulic oil, liquid soap, liquid wax, water	Acetone, gasoline, methyl alcohol, nitrocellulose varnishes, oils, paints and varnishes, as well as for use in the food, cosmetics and pharmaceutical industries				Dispersions, oils, soaps, fruit juices, gelatine, glycerine, honey, pudding, etc.	Paints, oils, varnishes, detergents, soaps, shampoos, fruit juices, jams, syrups, etc.	Dispersions, glue, plastic foam components, gels, ointments, pastes, chocolate, dough, honey, etc.	Dairy products, chocolate, honey, shampoos, soaps, creams, gels, ointments, etc.	
<b>max. delivery rate</b> <sup>1)</sup>	27 – 57 l/min	80 – 180 l/min	90 – 220 l/min	105 l/min	90 – 220 l/min	90 – 220 l/min	100 – 240 l/min	85 – 220 l/min		35 l/min	50 l/min	20 l/min	50 l/min	50 l/min
<b>max. delivery head</b> <sup>1)</sup>	5 – 8,5 m	6 – 17 m	10 – 28 m	35 m	11 – 30 m	10 – 28 m	12 – 30 m	8 – 30 m		2 bar	8 bar	8 bar	8 bar	8 bar
<b>Viscosity range up to</b>	500 mPas (cP)	800 mPas (cP)	1000 mPas (cP)	150 mPas (cP)	1000 mPas (cP)	1000 mPas (cP)	1200 mPas (cP)	1000 mPas (cP)		500 – 20000 mPas (cP)	30000 mPas (cP)	80000 mPas (cP)	pasty	pasty
<b>Pump Design / Standards</b>	F 314 – sealless, F 310 – with mechanical seal									Archimedian screw pump with bearing flange	Eccentric worm-drive pump with planetary gear	Eccentric worm-drive pump with planetary gear	Eccentric worm-drive pump with bearing flange	Sanitary pump with bearing flange or planetary gear. Also in 3A version for use in Zone 0
<b>Material</b>	Polypropylene (PP) or Stainless steel 316 L / 316 Ti (S)	Aluminium alloy (AL), Stainless steel 316 L / 316 Ti (S), Hastelloy C (HC), Polypropylene (PP), Polyvinylidenfluoride (PVDF)								Stainless steel 316 L / 316 Ti (S)	Stainless steel 316 L / 316 Ti (S), Stators: NBR black, NBR white, CSM, FPM, PTFE		Stainless steel 316 L / 316 Ti (S) Stator: PTFE	
<b>Seal type and material</b>	Mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FPM	Mechanical seal in ceramic oxide, PTFE/carbon, o-rings in EPDM, FPM, FPM or NBR								Mechanical seal in ceramic oxide, PTFE/carbon, o-rings in FPM	Mechanical seal in ceramic oxide, o-rings in FPM or FPM		Mechanical seal in SiC, o-rings in FPM	
<b>Diameter</b>	25, 28 or 32 mm	40 – 100 mm depending on the material of construction and the required pump output								50 mm	50 oder 54 mm (outer Ø)		50 or 54 mm (outer Ø)	
<b>Immersion length or nominal length</b>	500, 700 or 1000 mm	Barrel and container pumps: 700, 1000, 1200 mm. Special lengths: 500, 1500, 1800, 2000, 2500, 3000 mm. Other versions and lengths on request. Container pump type F 430 PP-100/50: 1000, 1200 and 1500 mm.								700, 1000, 1200 mm	700, 1000, 1200 mm. Other immersion lengths on request.		700, 1000, 1200, 1500 mm	
<b>Motor</b>	Commutator motor 230 Watt with 2-speed switch for speed regulation, overload cut-out switch, ergonomic handle, integral bracket for suspending the pump.	Commutator motor 450 Watt with on/off switch and overload cut-out switch, with or without electronic speed adjusting device.	Commutator motor 460 or 700 Watt with on/off switch and overload cut-out switch, with or without no-volt release, with or without electronic speed adjusting device.	Commutator motor 800 Watt with on/off switch and overload cut-out switch, with or without electronic speed adjusting device.	Commutator motor 800 Watt with on/off switch and overload cut-out switch, with or without no-volt release, with or without electronic speed adjusting device.	Commutator motor, explosion-proof, 460 or 700 Watt with on/off switch and overload cut-out switch, with or without no-volt release, with or without electronic speed adjusting device, with earth wire connector.	Compressed air motor, explosion-proof, 470 Watt at 6 bar operating pressure, with silencer and earth wire connector. Manual or automatic control. F 416 Ex with trigger valve, F 416-1 Ex without valve, F 416-2 Ex with ball valve.	Brushless motor, explosion-proof, 600 Watt with combined on/off, switch and speed controller, with no-volt release safety circuit electronic monitoring of speed, voltage and temperature.		Three-phase motor 0,75 to 3,0 kW, 2850 rpm	Brushless motor, commutator or compressed air motor	Single-phase AC motor with capacitor switch 0,30, 0,50 or 0,55 kW, 1450 or 2850 rpm. Three-phase motor 0,55 or 0,75 kW, 1450 or 2850 rpm	Three-phase motor 0,75 or 1,1 kW, 930 or 700 rpm or compressed air motor. 0,6 – 2,0 kW	Three-phase motor 0,75 or 1,1 kW, 930 or 700 rpm or compressed air motor. Motors for version with planetary gear see type 550 GS
<b>Protection class Standards</b>	Double insulated, protection class II, splash-proof to IP 24, radio interference suppression. VDE, GS, CSA and SEV standards.	Double insulated, protection class II, splash-proof to IP 24, radio interference suppression. VDE, GS, CSA and SEV standards.	Protection class I resp. III, jet-proof to IP 55, with special corrosion-resistant painting, radio interference suppression. VDE, GS and CSA standards.	Double insulated, protection class II, splash-proof to IP 24, radio interference suppression. VDE, GS and CSA standards.	Double insulated, protection class II, splash-proof to IP 24, radio interference suppression. VDE, GS and CSA standards.	II 2 G EEx de IIC T6 resp. T5, protection class I resp. III, jet-proof to IP 55, radio interference suppression. EC Type Examination Certificate No. PTB 97 ATEX 1035. VDE, GS, SEV and UL standards.	II 2 G cp IIC T6, PTB-Registration No. 02 ATEX D022. Compressed air motors should only be used with filter-regulator-lubricator unit.	II 2 G EEx de IIC T6, protection class I, jet-proof to IP 55, radio interference suppression. EC Type Examination Certificate No. PTB 03 ATEX 1042.		Protection class I, jet-proof to IP 55	Non explosion-proof: see type F 417, F 457, F 458, F 458-1 explosion-proof: see type FBM 4000 Ex, F 460 Ex, F 460-1 Ex, F 416 Ex, F 416-1 Ex, F 416-2 Ex	Protection class I, jet-proof to IP 55	Protection class I, jet-proof to IP 55 or explosion-proof to II 2 G EEx e II T3	
<b>Voltage</b>	240, 230, 120, 110, 100 V 50 or 60 Hz	240, 230, 120, 110, 100 V 50 or 60 Hz	240, 230, 120, 110 V 50 or 60 Hz, 24, 12 V DC	240, 230, 120, 110 V 50 Hz	240, 230, 120, 110 V 50 Hz	240, 230, 120, 110 V, 42 V 50 or 60 Hz, 24, 12 V DC		230 V 50 or 60 Hz		230 or 400 V 50 Hz		230 or 230/400 V 50 Hz	230 or 400 V 50 Hz	230 or 400 V 50 Hz
<b>Weight</b>	1,8 – 3,2 kg	3,5 – 6 kg	7 – 9 kg	6 – 9 kg	5 – 7,5 kg	8 – 10 kg	3 – 5 kg	7 – 10 kg		13 – 26 kg	6 – 12 kg	10 – 16 kg	10 – 30 kg	10 – 30 kg

<sup>1)</sup> obtained with water 20 °C at the outlet nozzle of the pump. All values represent maximum performance data depending on the different pump-motor combinations and pump designs. These must not correspond to the models shown in above pictures.

## FLUX VERTICAL CENTRIFUGAL IMMERSION PUMPS



Three-phase motor F 620 S-30	Three-phase motor F 640 PP-185	Three-phase motor F 706 PP-350	Three-phase motor F 716 PP1-115	Three-phase motor F 726 PVDF2-135
Centrifugal immersion pump in 2 sizes. Suitable for stationary or portable applications. Also available in horizontal version.	Centrifugal immersion pump in 4 sizes. Suitable for stationary or portable applications. Also available in horizontal version.	Vertical centrifugal immersion pump in 4 sizes. Version with support tube and slide bearings lubricated by the liquid being pumped. Suitable for continuous use.	Compact design requiring little space for installation above the mounting flange. Available in 4 sizes, version with support tube or support bars. Suitable for dry operation and continuous use.	Very robust construction with shaft bearings located in a pedestal. Available in 4 sizes, version with support bars. Suitable for temperatures up to 100 °C and continuous use.
For transferring larger volumes of low flammability liquids	For transferring larger volumes of low flammability liquids	Transferring corrosive liquids in the chemical industry and chemical engineering	Transferring and circulating corrosive liquids in the chemical industry, chemical engineering, electroplating industry, exhaust air purification, water and waste water treatment	
19 – 23 m³/h	17 – 44 m³/h	12 – 74 m³/h	8 – 45 m³/h	8 – 45 m³/h
10 – 12 m water column	8 – 33 m water column	15 – 33 m water column	8 – 35 m water column	8 – 35 m water column
2500 mPas (cP)	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)	150 mPas (cP)
with mechanical seal	with mechanical seal	with slide bearings, no seals in contact with liquid	no bearings nor seals in contact with the liquid	no bearings nor seals in contact with the liquid
Stainless steel 316 Ti (S)	Polypropylene (PP), Polyvinylidenfluoride (PVDF)	Polypropylene (PP)	Polypropylene (PP), Polyvinylidenfluoride (PVDF)	Polypropylene (PP), Polyvinylidenfluoride (PVDF)
Mechanical seal in ceramic oxide, o-rings in EPDM, FPM, FFFM	Mechanical seal in ceramic oxide/SiC, o-rings in EPDM, FPM, FFFM	sealless	sealless	sealless
140 mm (outer Ø)	148 – 264 mm (outer Ø)	174 – 417 mm (outer Ø)	150 – 264 mm (outer Ø)	150 – 264 mm (outer Ø)
700, 1000, 1500 mm. Nominal length 300 – 3000 mm on request.	700, 1000, 1500, 2000 mm. Nominal length 400 – 4100 mm on request.	500, 700, 1000 mm. On model size 230 up to 2000 mm.	300, 400, 500 mm, extension tube up to 1500 mm.	300, 400, 500 mm, extension tube up to 1500 mm.
Three-phase motor 0,75 – 4,0 kW, 2850 rpm	Three-phase motor 0,75 – 4,0 kW, 2850 rpm	Three-phase motor 0,37 – 5,5 kW, 2850 or 1450 rpm	Three-phase motor 0,37 – 5,5 kW, 2850 rpm	Three-phase motor 0,37 – 5,5 kW, 2850 or 1450 rpm
Protection class I, jet-proof to IP 55 or explosion-proof to II 2 G EEx e II T3	Protection class I, jet-proof to IP 55 or explosion-proof to II 2 G EEx e II T3	Protection class I, jet-proof to IP 55 or explosion-proof to II 2 G EEx e II T3	Protection class I, jet-proof to IP 55	Protection class I, jet-proof to IP 55 or explosion-proof to II 2 G EEx e II T3
230 or 400 V 50 Hz	230 or 400 V 50 Hz	230 or 400 V 50 Hz	230 or 400 V 50 Hz	230 or 400 V 50 Hz
15 – 45 kg	15 – 60 kg	13 – 85 kg	9 – 50 kg	17 – 75 kg



## PRODUCT RANGE

BARREL PUMPS  
CONTAINER PUMPS  
HIGH VISCOSITY LIQUID PUMPS  
CENTRIFUGAL IMMERSION PUMPS

PLEASE SEEN ON BACK PAGE:

AIR-OPERATED DIAPHRAGM PUMPS  
LIQUID METERS

INNOVATORS  
IN FLOW TECHNOLOGY

## FLUX AIR-OPERATED DIAPHRAGM PUMPS



### FLUX Air-operated Diaphragm Pumps Type FDM and Type RFM

FLUX air-operated diaphragm pumps are available in 2 designs: moulded design type FDM and massive construction type RFM. Both types are genuine allrounders for the safe, reliable and careful (no shearing) transfer of thin to medium viscosity substances, even with solids in suspension, as well as abrasive, high flammability or aereated liquids. The pumps are submersible, suitable for dry operation and ideal for use in hazardous areas. Each type is available in different models and versions because of a great variety of possible material combinations of the wetted parts.

<b>Models:</b>	1/4"	up to max.	25 l/min
	1/2"	up to max.	50 l/min
	1"	up to max.	200 l/min
	1 1/2"	up to max.	460 l/min
	2"	up to max.	690 l/min
	3"	up to max.	1000 l/min

**Max. suction head:** up to 8 m (liquid-filled)

**Max. operating pressure:** up to 8 bar

**Materials (pump housing):** Polypropylene (PP), Polyvinylidenfluoride (PVDF), Poly-tetra-fluor-ethylene (PTFE), Aluminium alloy (AL), Stainless steel 316 Ti (S), Cast iron (GG)



Also in explosion-proof version according to Directive 94/9/EC-ATEX 100a

## FLUX LIQUID METERS



### FLUX Liquid Meters Type FMC and Type FMO with electronic digital display, explosion-proof to II 2 G EEx ia IIB T6 according to Directive 94/9/EC-ATEX 100a



Liquid meter, nutating disc (type FMC) or oval rotor (type FMO) type, for portable use or stationary installation. Suitable for neutral, corrosive, high flammability and/or viscous liquids up to 500.000 mPas (cP). With easy-to-read 13 mm LCD display, showing all figures either in litres, IMP gallons or US gallons, depending on the program selected.

The liquid meter can be used – in connection with an interface amplifier – as a presettable batch controller to actuate a magnetic valve or a pump.

**LCD display:**    **Materials:**    **max. operating pressure:**

• resettable	Polypropylene (PP)	4 bar
• with totalizer	Ethylene-tetrafluor-ethylene (ETFE)	4 bar
• display of the flowrate per minute	Aluminium (AL) Stainless steel 316 Ti or 316 L	55 bar 55 bar

Minimum operating pressure: 0,1 bar, flowrate: 0,1 – 350 l/min

### **NEW** FLUX Process Control System PCS – the intelligent system for computerized liquid handling operations



INNOVATORS IN FLOW TECHNOLOGY

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## FLUX AIR-OPERATED DIAPHRAGM PUMPS



**NEW**



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**Max. operating pressure:** up to 8 bar

**Materials (pump housing):** Polypropylene (PP), Polyvinylidenfluoride (PVDF), Poly-tetra-fluor-ethylene (PTFE), Aluminium alloy (AL), Stainless steel 316 Ti (S), Cast iron (GG)



Also in explosion-proof version according to Directive 94/9/EC-ATEX 100a

## FLUX LIQUID METERS



### FLUX Liquid Meters Type FMC and Type FMO with electronic digital display, explosion-proof to II 2 G EEx ia IIB T6 according to Directive 94/9/EC-ATEX 100a



Liquid meter, nutating disc (type FMC) or oval rotor (type FMO) type, for portable use or stationary installation. Suitable for neutral, corrosive, high flammability and/or viscous liquids up to 500.000 mPas (cP).

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