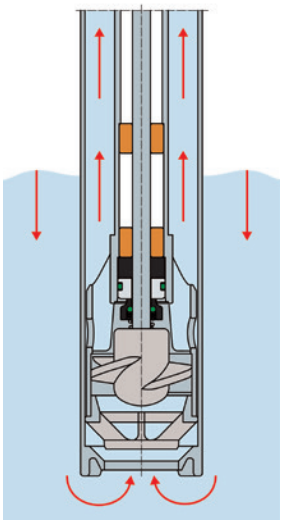
Technical Data Sheet

Drum pumps F/FP 425

More than just pumps

Drum pumps F/FP 425



Advantages/characteristics:

- For 99.98 % drum emptying
- With backflow valve
- Two control levers to easily close the backflow valve
- With mechanical seal for inner tube seal
- Optimum residual emptying, with e.g. less than 0.05 l residual quantity in a 200 l drum
- Reduction of drum cleaning and/or disposal costs
- No loss of medium when reassembling the pump from one drum to the next
- Optimum usage of costly fluids
- Distinct feature: The inner tube is reinforced with a metal core on the PP-version
- Operation against closed valve (e.g. hand nozzle) is possible (until the indicated max. operating temperature has been reached)

Technical data/type	**F 425 PP**	**FP 425 Ex S**	**F 425 HC**
Seal type	Mechanical seal		
Version	With impeller for max. flow rate, with mixed half axial impeller for max. delivery head (Z-version)		
Pressure-side connection	Thread G 1¼ A		
Materials			
Pump	Polypropylene	Stainless steel 316 Ti	Hastelloy C
O-ring[2)]	FKM	FKM, FFKM	FFKM
Mechanical seal	Oxide ceramics, PTFE/coal, O-ring FKM		Oxide ceramics, PTFE/coal, O-ring FFKM
Shaft	Hastelloy C	Stainless steel	Hastelloy C
Impeller	ETFE		
Dimensions			
Outer tube diameter / Impeller diameter (mm)	50/34	41/34 41/34 Z	40/34
Standard immersion depth (mm)	700, 1 000, 1 200		1 200
Other immersion depths / special lengths (mm)[3)]	500 - 2 000		
Operating range			
Container	Drums, IBCs, tanks, canisters, hobbocks, mixing containers etc.		
Media temperature (°C)	0 to +50	0 to +100	0 to +120
Media temperature ex-application (°C)	-	0 to +40	0 to +40
Ambient temperature (°C)	0 to +40	-20 to +40	
Weight Ø 40, ID 1 200 mm (kg)	-	-	3.5
Weight Ø 41, ID 1 000 mm (kg)	-	3.8	-
Weight Ø 50, ID 1 000 mm (kg)	2.0	-	-
Certificates			
Ex-identification	None	II ½ G Ex h IIB T4...T3 Ga/Gb	II ½ G IIB T4
Silicone-free version	On request		

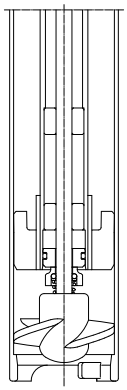
Performance data[1)]	**Impeller**	**Half axial impeller (Z-version)**
Flow rate max. l/min.	120	85
Delivery head max. mwc	12	26
Viscosity max. mPas	1 200	1 200

1) Depending on pump version, media and motor 2) Other materials available on request 3) In gradations of 100 mm

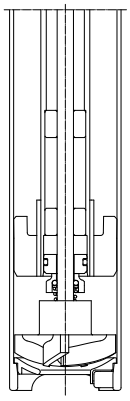
Design, function and dimensions

Drum pumps F/FP 425

Design:

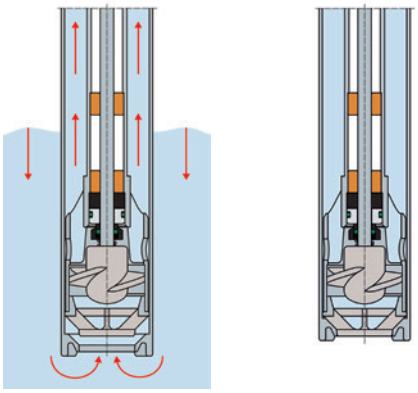


F/FP 425 with mechanical seal and axial impeller



F 425 with mechanical seal and half axial impeller (Z-version)

Function:

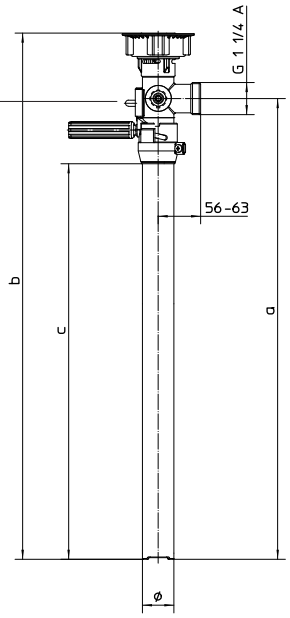


F/FP 425 with open and closed backflow valve

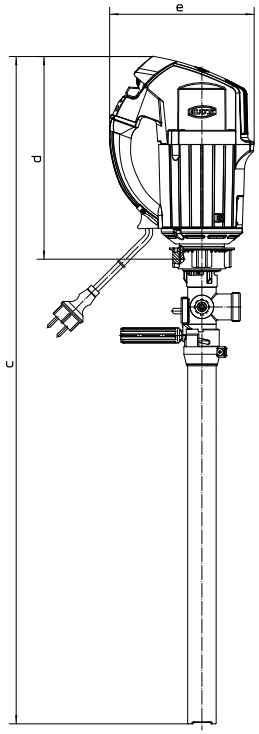
Dimensions:

Drum pump F/FP 425

Connection for equipotential bonding. Only on S- and HC-version



Drum pump with motor



Immersion depths (ID)

Pump material	Ø (mm)	ID	ID with closed backflow valve			ID with open backflow valve		
	Outer tube/ impeller	(mm)	a (mm)	b (mm)	c (mm)	a (mm)	b (mm)	c (mm)
PP	50/34	700	816	891	726	824	899	726
		1 000	1 116	1 191	1 026	1 124	1 199	1 026
		1 200	1 316	1 391	1 226	1 324	1 399	1 226
		Other	ID + 116	ID + 191	ID + 26	ID + 124	ID + 199	ID + 26
S	41/34 41/34 Z	700	805	890	726	812	897	726
		1 000	1 105	1 190	1 026	1 112	1 197	1 026
		1 200	1 305	1 390	1 226	1 312	1 397	1 226
		Other	ID + 105	ID + 190	ID + 26	ID + 112	ID + 197	ID + 26
HC	40/34	700	815	890	738	822	897	738
		1 000	1 115	1 190	1 038	1 122	1 197	1 038
		1 200	1 315	1 390	1 238	1 322	1 397	1 238
		Other	ID + 115	ID + 190	ID + 38	ID + 122	ID + 197	ID + 38

c = usable immersion depth

F/FP 425 with motor

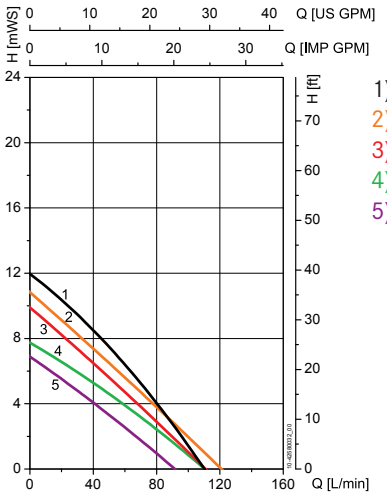
Motor type	c (mm)	d (mm)	e (mm)
FEM 4070	b + d - 16	207	186
F 457 (EL)		225	217
F 458 (-1, EL)		292	209
F 460 Ex (-1, EL)		292	209
FBM 4000 Ex		292	209
F 416 Ex		119	230
F 416-1 Ex		101	120
F 416-2 Ex		101	120

Performance diagrams[1] & part numbers

Drum pumps F/FP 425

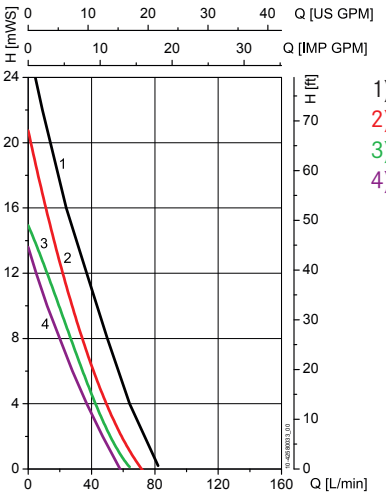
The following performance diagrams apply to the indicated impellers and motors, for all pump materials respectively.

Axial impeller Ø 34



1) F 416 Ex (6 bar)
2) F 457
3) F 458-1, F 460-1 Ex
4) FBM 4000 Ex, FEM 4070
5) F 458, F 460 Ex

Half axial impeller Ø 34 Z



1) F 416 Ex (6 bar)
2) F 457, F 458-1, F 460-1 Ex
3) FBM 4000 Ex, FEM 4070
4) F 458, F 460 Ex

Part numbers:

Standard immersion depths

Type	Material			Diameter (mm)		Part no.		
	Pump	Shaft	O-ring	Ø outer tube	Ø impeller	700 mm	1 000 mm	1 200 mm
F 425 Connection thread G 1¼ A	PP	HC	FKM	50	34	10-425 40 048	10-425 40 051	10-425 40 053
	HC	HC	FFKM	40	34	-	-	10-425 30 007
FP 425 Connection thread G 1¼ A	S	S	FKM	41	34	10-425 22 008	10-425 22 011	10-425 22 013
			FFKM			10-425 29 108	10-425 29 111	10-425 29 113
			FKM		34 Z	10-425 22 028	10-425 22 031	10-425 22 033

Special lengths

Type	Material			Diameter (mm)		Part no.	
	Pump	Shaft	O-ring	Ø outer tube	Ø impeller	1 500 mm	2 000 mm
FP 425 Connection thread G 1¼ A	S	S	FKM	41	34	10-425 22 016	10-425 22 021
			FFKM			10-425 29 116	-
			FKM		34 Z	10-425 22 036	10-425 22 041

Special version (HCL-type for pumping various concentrations of hydrochloric acid)

Type	Material			Diameter (mm)		Part no.		
	Pump	Shaft in contact with medium	O-ring	Ø outer tube	Ø impeller	700 mm	1 000 mm	1 200 mm
F 425 HCL mechanical seal with bellows Connection thread G 1¼ A	PP	HC	FKM	41	34	10-425 40 068	10-425 40 071	10-425 40 073

Other immersion depths/other O-rings/other connections on request

Hose connections with union nut G 1¼

Material		Size			
Connection	Union nut	DN 13	DN 19	DN 25	DN 32
Polypropylene (PP)	PP	10-959 04 081	10-959 04 053	10-959 04 052	10-959 04 054
Hastelloy C (HC)	S			10-959 04 043	10-959 04 044
Stainless steel (S) 316 Ti	Brass nickel-plated		10-959 04 061	10-959 04 041	10-959 04 042
Stainless steel (S) 316 Ti	S		10-959 04 062	10-959 04 063	10-959 04 064

1) Determined with water at 20 °C, measured values ± 10 % maximum flow rate with open discharge outlet

Pump kits

Drum pumps F/FP 425

Pre-configured kits consist of:

1 motor with cable and plug
2 pump with mechanical seal
3 hose line
4 hand nozzle
5 compression gland

Also for ex-applications

Pump kits	**For 99.98 % drum emptying**	
Examples of media	Valuable media, polluting media, toxic media, highly flammable liquids, solvents	
Flow rate max. (l/min.)	35[1] (115)[2]	
Delivery head max. (mwc)	8[2]	
Temperature max. (°C)	100 (with ex-applications max. 40)	
Viscosity (mPas)	600	
Pump	**FP 425 Ex S-41/34**	
Pump material	Stainless steel 316 Ti	
O-ring material	FKM	
Immersion depth (mm)	1 000	1 200
Ex-identification	II ½ G Ex h IIB T4...T3 Ga/Gb	
Motor	**F 460 Ex**	
Technical data	230 V, 50 Hz, 460 watt	
Rpm setting	Yes	
Low-voltage protection	Yes	
Protection class	IP 55	
Connection cable length (m)	5	
Plug type	2-pole	
Ex-identification	II 2 G Ex db eb IIC T6 bzw. T5 Gb	
Hose line	Universal, DN 21	
Length (m)	2	
Hose mounting	Hose fittings, stainless steel	
Hand nozzle	Stainless steel, PTFE/FEP	
Compression glands	PP, conductive	
Connection thread	G2	
Weight (kg)	11.7	12.2
Part number	10-460 25 010	10-460 25 012

1) In the kit with hose and hand nozzle
2) Only applies to pump without hand nozzle, without hose

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FLUX-GERÄTE GMBH
Talweg 12 · D-75433 Maulbronn
Tel +49 7043 101-0 · Fax +49 7043 101-444
info@flux-pumpen.de · www.flux-pumps.com