

Drum and Container pumps

Series 400 - in High Temperature (HT) version



More than just pumps



(HT) pumps and (HT) motor

In ambient temperature up to 60 °C (140 °F)

The use of drum and container pumps in potentially explosive environments is based on ATEX guidelines of maximum 40 °C (104 °F). The new FLUX commutator motor F 460 Ex (HT) in combination with the explosion-proof stainless steel FP 424 Ex S (HT) sealless pump, is now capable of operating in ambient temperature of up to 60 °C (140 °F). This new FLUX pump unit guarantees reliable operation even over long periods of use. It ensures the highest level of safety when pumping media, such as demulsifier, now also in potentially hazardous areas with high ambient temperature. For example, it is optimally suited for use in petrochemical and oil and gas sectors, especially in countries with high ambient temperature, like the Middle East and Northern Africa.

Both our motor F 460 Ex (HT), as well as our 400 series explosion proof (HT) stainless steel pumps are certified by the National Metrology Institute (PTB) for applications in hazardous areas with higher ambient temperature of up to 60 °C.



F 460 Ex (HT)

F 460 Ex (HT): The new ex-protected commutator motor for higher ambient temperature

The F 460 Ex (HT) is a compact commutator motor, with extremely tough double skin aluminium housing and is thus very quiet. The motor is completely enclosed. The optimal air flow ensures a very good cooling and thus a service life above average of the carbon brushes.



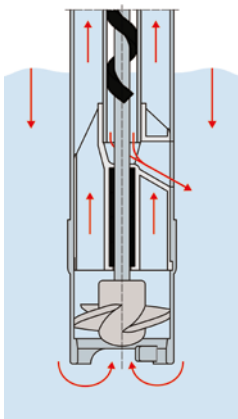
Advantages F 460 Ex (HT)

- ▶ Optimized design, specifically for higher ambient temperature
- ▶ Very robust aluminium housing
- ▶ Motor is completely enclosed
- ▶ F 460 Ex (HT) 420 W - 470 W
- ▶ PTB certified II2 GEx de IIC T5

Technical data

U_N rated voltage [V]	230-240
f_N rated frequency [Hz]	50-60
P_N rated power [W]	420-470
n_N rated speed [min ⁻¹]	6600-7700
M_N rated torque [Nm]	0,445
Protected to	IP 55
Number of poles	2
Net weight with 5m cable (kg)	5,9
Ambient temperature (°C)	-20 to +60

Drum pumps FP 424 Ex S (HT)



Optimal flow of the medium in the inner tube due to spiral shaped guide bearing.



FP 424 Ex S (HT): An example for a high ambient temperature (HT) drum and container pump

Functional description

With sealless drum pumps FP 424 the medium enters the inner tube along the shaft. There it has the same level as the liquid level in the drum. When emptying the drum, the medium level in the drum decreases. Accordingly the medium level in the inner tube also decreases. The fluid therein flows off through the relief openings.

FP 424 Ex S (HT) product characteristics

- ▶ No seal in the liquid area
- ▶ Long spiral-shaped guide bearing
- ▶ Multiple bearings support drive shaft
- ▶ Radial shaft seals prevent the intrusion of vapours and liquid in the coupling area
- ▶ Versions for operation in hazardous area
- ▶ PTB certified II ½ G c IIB T3



F 460 Ex (HT) motor with a 400 series drum and container (HT) pump

The combination of the newly designed F 460 Ex (HT) motor with a 400 series drum and container (HT) pump delivers the perfect pump unit for hazardous areas with higher ambient temperature conditions of up to 60 °C (140 °F)

Technical data commutator motor F 460 Ex (HT) in combination with




	FP 424 Ex S (HT)	FP 425 Ex S (HT)**
Flow rate max.	240 l/min*	110 l/min*
Head max.	30 mWs*	26 mWs*
Viscosity max.	1200*	1200*
Pump material outer tube	stainless steel	stainless steel
Immersion length mm (standard)	1000	1000

* dependent on pump model and medium

** for 99.98 % drum emptying available upon request

Advantages FP 424 Ex S (HT) with motor F 460 Ex (HT)

- ▶ Suitable for high ambient temperature applications up to 60 °C/140 °F (certified by German National Metrology Institute PTB)
- ▶ Stainless steel version for use in hazardous area 
- ▶ No seal wear
- ▶ Optimal emptying of the inner tube
- ▶ High service life
- ▶ Low wear of guide bearing and shaft
- ▶ Long bearing life
- ▶ Can be temporarily operated against closed valve (hand nozzle, valve etc.) until the indicated temperature of the materials is reached
- ▶ Low vibration

Media examples for hazardous areas

- ▶ Demulsifier
- ▶ Anti-foaming agents
- ▶ Inhibitors (e.g. corrosion inhibitors)
- ▶ Solvents
- ▶ Petroleum/fuels
- ▶ Mineral oil products
- ▶ Highly flammable liquids
- ▶ Methanol



Certificate issued by the German National Metrology Institute (PTB).



More than just pumps

Today the FLUX name is recognised around the globe as the trademark for top standards in pump technology. Everything started with the invention of the electric drum pump in 1950. Nowadays FLUX has an extensive range of products each of which can be customized. FLUX pumps are used for example in the chemical and pharmaceutical industries; in machinery and plant engineering as well as companies in electroplating, effluent treatment and the foodstuffs sector.

Whether single-product or system solution – FLUX quality is synonymous with a long service life, excellent economy and maximum safety.

In addition to the excellent product quality FLUX customers appreciate the superb level of expertise our staff has to offer as well as their genuine customer focus.

These days FLUX-GERÄTE GMBH supplies pumps to almost 100 countries around the globe.