

Product Information Piston Dosing Pump FEDOS E/DX

Reliable dosing of chemicals

Piston dosing pumps play an important role in the reliable and accurate dosing of liquids in the process cycles. They are appropriate for high-pressure applications and small dosing quantities.

Dosing pumps are used in many branches of industry that work with liquid chemicals - not excluding toxic and aggressive media.

Precision at high pressure

FEDOS E/DX pumps combine the advantages of piston metering pumps, e.g. the minor dependence of the back pressure and the linear change in flow rate on adjustment of the stroke length, with the advantages of an intelligent, microprocessor-controlled metering pump.

The FEDOS can be used for capacities from 0.17 to 31.5 l/h, with or without microprocessor control. Depending on the size of the pump, pressures between 25 and 100 bar are admissible by using aramid-reinforced packings. The standard version uses PTFE packings for the pressure range of up to 40 bar.

Versatile and flexible

FEDOS E pumps can be integrated in controls or automatic control systems.

If no control is required for constant dosing, the motor is connected directly to the terminal box. FEDOS E is applied in this case. Three-phase and a.c. motors are available for FEDOS E pumps.

To change the metering capacity, either the stroke length can be adjusted mechanically or the speed of the three-phase motor can be controlled by means of a separate frequency converter.

The intelligence of the FEDOS DX is derived from the well-proved series of MEMDOS E/DX diaphragm metering pumps.

It allows the adaption to a large number of different control signals and system monitoring equipment. For the chemical supply, for example, two controls are available: tank level control with alarm signal and low level indication. The signals required for external activation of the pump can be simple voltage-free closing contacts from water meters or controllers or analog 0(4)..20 mA signals. For internal control, the FEDOS DX can be adjusted continuously between 0 and max. 142 strokes/min, depending on the version. A single stroke follows each contact.

In short

- Suitable for accurate mixing tasks
- Capacity range 0.17 to 31.5 l/h, at up to 100 bar
- Minor dependence of the back pressure
- Linear development of the dosing quantity according to the stroke length
- Tappet drive with easy-to-operate capacity adjustment
- Also suitable for frequency converter operation
- Flushing bush optional



Model variants

FEDOS	Material	Connections	Order no.	
			E	DX
E/DX 01	1.4571/PTFE	G 1/4	10703005	10703012
E/DX 03	1.4571/PTFE	G 1/4	10703006	10703013
E/DX 06	1.4571/PTFE	G 1/4	10703003	10703001
E/DX 1	1.4571/PTFE	G 1/4	10703059	10703061
E/DX 2*	1.4571/PTFE	G 1/4	10703060	10703062
E/DX 5*	1.4571/AF	G 1/4	10703009	10703016
E/DX 8*	1.4571/AF	G 1/4	10703010	10703017
E/DX 17*	1.4571/AF	G 1/4	10703011	10703018
E/DX 30*	1.4571/AF	G 1/4	10703004	10703002

*) Only applicable for 50 Hz, 60 Hz version available on demand.

Technical data

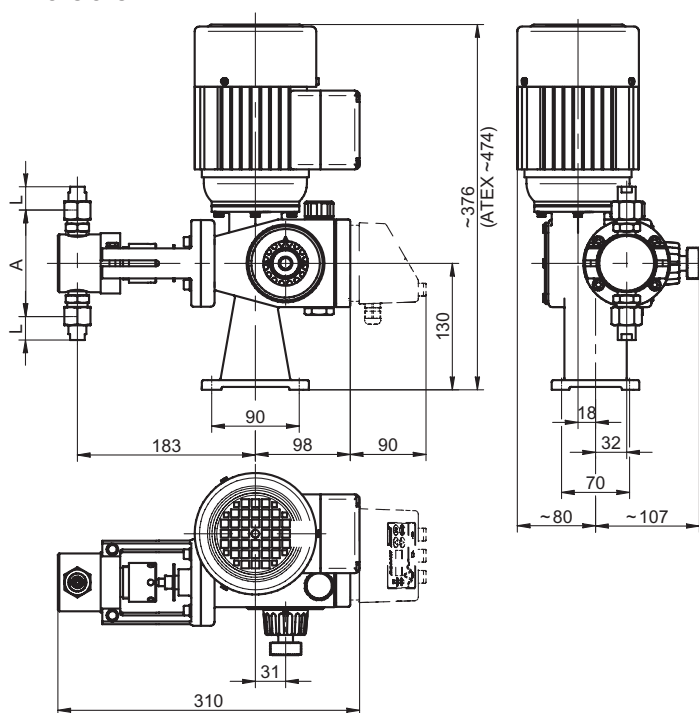
FEDOS E/DX	01	03	06	1	2*	5*	8*	17*	30*
Capacity at max. pressure (50 Hz)	0.17 l/hr	0.31 l/hr	0.63 l/hr	1.42 l/hr	2.13 l/hr	4.8 l/hr	8.5 l/hr	17.0 l/hr	31.5 l/hr
Stroke volume	0,11 ml/stroke			0.25 ml/stroke		0.56 ml/stroke	1.0 ml/stroke	2.0 ml/stroke	3.7 ml/stroke
Max. pressure	40 bar							25 bar	
Max. pressure**	100 bar						80 bar	40 bar	25 bar
Stroke frequency	26 min ⁻¹	48 min ⁻¹	95 min ⁻¹		142 min ⁻¹				
Piston-Ø	4 mm			6 mm		9 mm	12 mm	17 mm	23 mm
Stroke length	9 mm								
Suction lift	800 mbar								
Max. ambient temperature***	40 °C								
Capacity E (3~)	50 W					250 W			
Power DX (1~)	120 W								
Insulation class	F								
Protective class	IP 55								
Voltage at pulse input	5V DC (must be voltage-free for contact making)								
Voltage at level connection	5V DC (level probe with break contact for alarm/empty)								
Alarm relay, voltage-free change-over contact	250 V AC, 2,5 A or 30 V DC, 2,5 A								
Weight	approx. 11 kg				approx. 16 kg				

*) Flow rate and stroke frequency data refer to 60 Hz operation also.

**) High-pressure version

***) Ambient temperature 60 °C, for a short time 80 °C

Dimensions

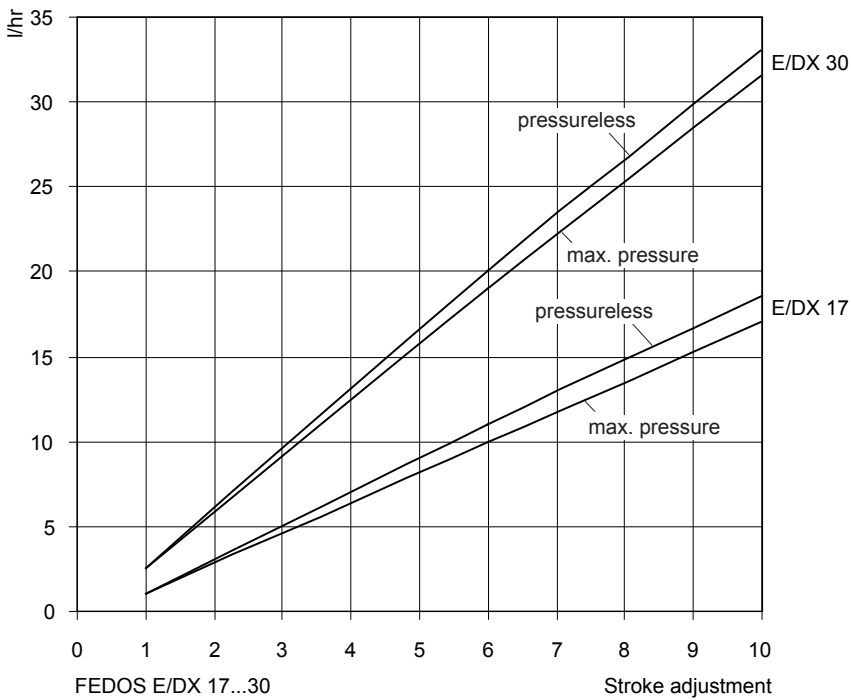
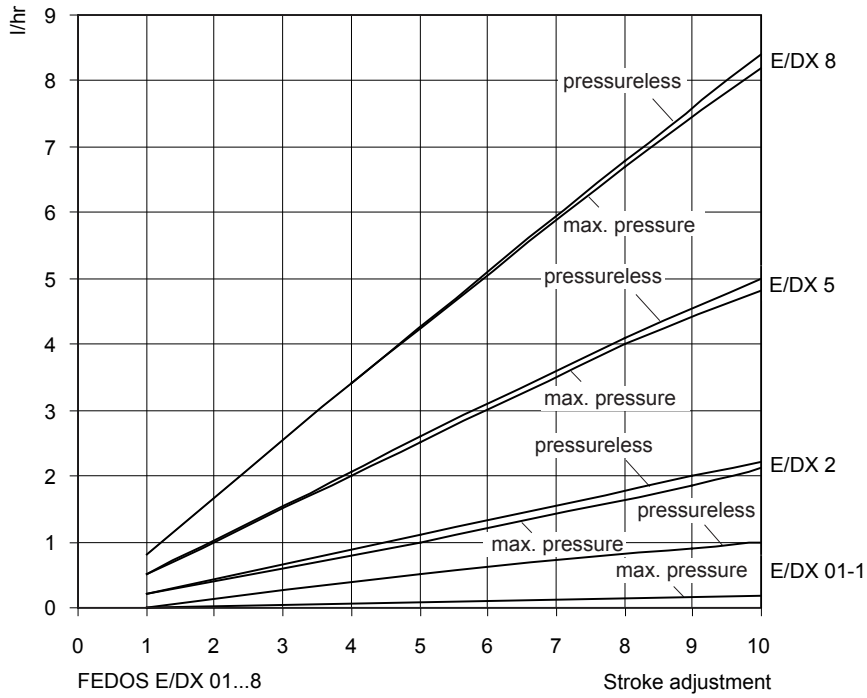


All dimensions in mm.

Performance curves

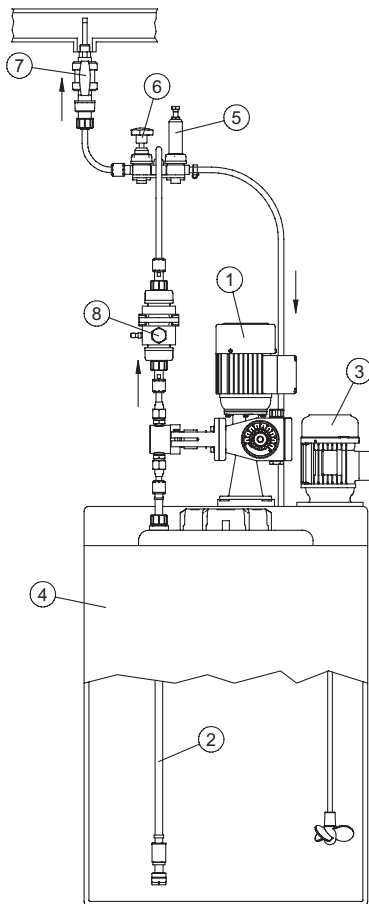
The performance curves refer to water at 20 °C (68 °F). The performance of the dosing pump depends on the viscosity of the process fluid and hydraulic installation conditions.

Dosing pumps must therefore be gauged in litres during application.



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Installation examples



Legend

- ① FEDOS E/DX
- ② Suction line
- ③ Electric agitator
- ④ Chemical tank
- ⑤ Pressure relief valve
- ⑥ Diaphragm shutoff valve
- ⑦ Injection nozzle
- ⑧ Pulsation dampener

Accessories

Even the best dosing pump is capable of improvement - by means of appropriate technical surroundings. That is why a particularly comprehensive accessories programme is available which turns your dosing pump into an efficient dosing system.

As an option, the multifunctional valve PENTABLOC is available, which offers the functionalities of a back-pressure valve as well as those of a safety blowdown valve. Such functions as anti-siphon, pressure relief and flow indication and monitoring are also integrated.

For further accessories for your dosing pump, please refer to our dosing pump brochure.

To optimise the dosing process, we recommend back-pressure and pressure-relief valves. They are used

- to increase the dosing accuracy in the presence of fluctuating back pressures.
- for long dosing lines in order to prevent excess delivery. (The accelerated medium continues moving on account of its own inertia even when the delivery stroke has already ended.)
- to prevent siphoning through the dosing pump if the suction pressure is higher than the system pressure.
- to prevent the system pressure from rising to an impermissibly high level on the discharge side of the dosing pump; this may for example be caused by the accidental closing of valves while the pump is in operation or a clogged injector.