

# STEPDOS®

**Microprocessor controlled  
diaphragm metering pump  
with continuous flow**

DATA SHEET E 735



## Various operating modes

Manual, analog and digital control  
Dispense Mode, Impulse operation

## Continuous metering

Quasi-continuous flow  
Constant output over the entire cycle  
Accuracy +/- 2%, Repeatability +/- 1%

## User friendly

Clearly designed operating functions  
Easy to follow programming  
Digital display in ml/min, kg/h, ...

## For laboratory or industry

Chemically resistant  
(Liquid contacting parts in e.g. PTFE / FFPM)  
Easy to clean  
Compact, easy to use  
Housing protected to IP 65

**K+F** FLODOS

# The latest way to meter aggressive and neutral liquids

The new microprocessor controlled diaphragm metering pump STEPDOS® is designed for use with neutral and aggressive liquids. The STEPDOS® combines KNF «know-how» with the use of modern electronics. The fact that the STEPDOS® pump produces continuous and steady flow even at low rpm is particularly interesting. This is achieved by means of a stepper motor which ensures

Two models are available:

- The S version for manual operation
- The RC version for either manual operation or external control (Windows® compatible software and cables included)

that the suction part of the cycle is completed at maximum speed, but the output part of the cycle is controlled on a variable basis according to the selected speed. Constant adaptation of the motor speed results in a steady output over the entire cycle.

Dispense Mode – variable volume metering

- Metering by volume from 50 µl to 115.2 l
- Metering by time from 0.34 s to 24 h
- Repeatable metering (1 - 65'000 times) with adjustable pause time (up to 24 h)

The compact size and the completely closed housing (IP 65) makes the STEPDOS® highly suitable for use in the laboratory and many industrial applications.

Flow rate at atmos. pressure (ml/min) (with water at 20 °C)	Max. suction head (mWg)	Max. pressure head (mWg)	Pump type			
			Base model	Components		
				1	2	3
0.03 - 30	4	60	FEM 03		.18	
0.08 - 80	3	20	FEM 08		.18	

1	Materials of head components	
KT	Head	PP
	Valves	FFPM
	Sealing rings	FFPM
	Diaphragm	PTFE-coated
TT	Head	PVDF
	Valves	FFPM
	Sealing rings	FFPM
	Diaphragm	PTFE-coated
ST	Head	Stainless Steel 1.4435
	Valves	FFPM
	Diaphragm	PTFE-coated
FT	Head	PTFE
	Valves	FFPM
	Diaphragm	PTFE-coated

Version	3	
	S	RC
Manual flow control	Yes	Yes
Variable volume metering	Yes	Yes
Calibration	Yes	Yes
Rapid suction feature	Yes	Yes
Self-priming, able to run dry	Yes	Yes
Safe against overpressure	Yes	Yes
Digital control (RS-232, RS-485)	No	Yes
Impulse operation	No	Yes
Analog control (0-20mA, 4-20mA, 0-10V, 0-5V)	No	Yes
Interface for electronic weighing scales	No	Yes
Fault alarm (output signal)	No	Yes
Flow and level monitoring	No	Yes

Technical data	
Rpm	0.180 - 180 rpm
Voltage	100 - 230 V
Frequency	50 - 60 Hz
Power consumption	30 W
Protection class	IP 65
Noise level	< 40 dB
Dimensions (L x W x H)	190 x 115 x 80 mm
Weight	1.5 kg
CE marking	EN 61010 / EN 55011

Specifications	FEM 03	FEM 08
Volume, batch	50 µl ... 43.2 l	80 µl ... 115.2 l
	0.34 s ... 24 h	0.34 s ... 24 h
Allowed liquid/gas temp.	5 - 80 °C	
Allowed ambient temp.	5 - 40 °C	
Max. viscosity	150 cSt	
Connection thread KT-TT	UNF ¼"-28	for hose 4/6*
Connection thread ST-FT	Inside thread UNF ¼"-28	
* UNF ¼"-28 or M5 on request		

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