

Laboratory pumps

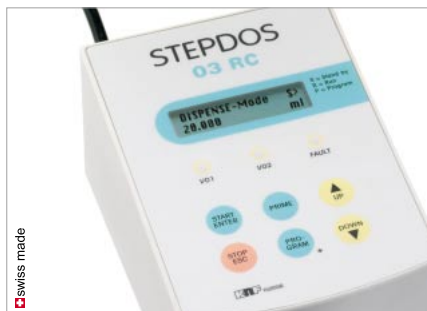
for liquids



First class pumps for first class science
www.knflab.com

Stepdos®

The newest way to meter aggressive and neutral liquids



IP 65

SOFTWARE

ANALOG

RS232

RS485

- Continuous and steady flow from 0.03 ml/min to 80 ml/min
- Self priming up to 4 mWg
- Able to run dry
- Analog and digital control
- Splashproof IP 65
- Practically pulsation free

One solution, two versions, countless applications

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

- Protection class IP 65
- Mains supply 100-230V / 50-60Hz
- Allowed ambient temperature 5-40°C
- Allowed liquid temperature 5-80°C
- Repeatability +/- 1%
- Accuracy +/- 2%
- Weight 1.5 kg
- Dimensions 190 x 115 x 80mm

Manual or external controlling

Version	Control	Function
18S - Version	Manual operation through keypad	<ul style="list-style-type: none"> • Run mode for continuous dosing • Dispense mode by volume (min. 50 µl), time and repeatable metering • Rapid suction feature
18RC - Version	Either manual operation or external control	<ul style="list-style-type: none"> • Analog control: 0-20mA, 4-20mA, 0-10V, 0-5V • Digital control: RS232 and RS485 (up to 99 pumps) • Impulse operation, 2 Logic input • Output signal fault alarm • Windows compatible software and cables included

Extremely high chemical resistance

- Our diaphragms are PTFE covered, our valves are made from FFPM
- The head is available in PP/PVDF/PTFE or Stainless Steel

Connections

Model	FEM 03*	FEM 08
PP - PVDF	UNF (F) 1/4" - 28	For tubing 4/6 mm
SS - PTFE	UNF (F) 1/4" - 28	NPT 1/8" (F)

*Supply with 1 meter tubing PTFE 3.2 x 1.6 mm and connectors

Choose your pump. Example: FEM 08 KT.18RC

Model	+	Head material	+	Control	=	Your Stepdos®
FEM 03		KT (PP)		18S - Version		
FEM 08		TT (PVDF)		18RC - Version		
		FT (PTFE)				
		ST (Stainless Steel)				

Liquiport®

The rational way to transfer neutral or corrosive liquids



IP 65



ANALOG

- Flow range from 0.2 l/min to 3 l/min
- Self priming up to 4 mWg
- Able to run dry
- Analog and impulse control
- Splashproof IP 65
- Virtually maintenance free

One solution, four versions, countless applications

Pump type Liquiport®	Flow rate at atmos. pressure (l/min) (with water at 20°C)	Max. suction head (mWg)	Max. pressure head (mWg)
NF 100	0.2 - 1.3	4	10
NF 1.100	0.2 - 1.3	4	60
NF 300	0.5 - 3.0	3	10
NF 1.300	0.5 - 3.0	3	60

- Protection class IP 65
- Mains supply 100-230V / 50 - 60Hz
- Allowed ambient temperature 5-40°C
- Allowed liquid temperature 5-80°C
- Weight NF 100 / 1.100 1.0kg
- Weight NF 300 / 1.300 1.5kg
- Dimensions NF 100 / 1.100 130 x 99 x 177 mm
- Dimensions NF 300 / 1.300 160 x 104 x 188 mm

Manual or external controlling

Version	Control	Function
18S - Version	Manual operation	<ul style="list-style-type: none"> • Flow rate adjustable from 10 to 100% • Standby mode • Maximal pressure limitation
18RC - Version	Either manual operation or external control	<ul style="list-style-type: none"> • Analog control: 0-10V from 0 to 100% (others on request) • Start / Stop through TTL contact • Output signal fault alarm • Cable for external control included

Extremely high chemical resistance

- Our diaphragms are PTFE covered, our valves are made from FFPM
- The head is available in PP / PVDF / PTFE

Connections

- Supply with barbed fittings:
- NF 100 / 1.100 for tubing ID 8 mm
 - NF 300 / 1.300 for tubing ID 12 mm

Choose your pump. Example: NF 100 TT.18S

Model	+	Head material	+	Control	=	Your Liquiport®
NF 100		KT (PP)		18S - Version		
NF 1.100		TT (PVDF)		18RC - Version		
NF 300		FT (PTFE)				
NF 1.300						

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