

Ritmo[®] 15

*High Tec in dosing technology
with variable valve actuators, fluid-neutral
pressure sensor and extreme vacuum capability*

Ritmo[®]-15 metering pumps are specialized, high-tech precision dosing pumps for laboratory, research and process development, mini-plant technology and for industrial use as miniature dispensers.

Outstanding properties

- ✓ Dosing rates from 3 µl / min to 480 ml / min
- ✓ Back pressure up to 18 bar
- ✓ extremely wide dosing range of 1: 7000

Innovative detail solutions

- ✓ Full-PTFE equipment
- ✓ Positively controlled diaphragm valves
- ✓ Variable valve actuators
- ✓ Adapted output characteristics
- ✓ Fluid-neutral pressure sensor
- ✓ Integrated stroke detection

Unique functionality

Easy operation via touch screen with direct entry of the dosing rate

Low-pulsation precision dosing with accuracy <1% of the setpoint

Maximum chemical resistance, for the most aggressive fluids and gases

Maximum product purity with FDA / BGVO compliance

Hermetic tightness between suction side and pressure side and with robust suction

Absolute vacuum capability in vacuum or out of vacuum

Return function for recirculating aggressive fluid residues or product smeltings

Clean function for rinsing or inerting processes (CIP / SIP)

Process capability and data transfer via analogue (4-20mA) and digital interfaces (RS232)

Integrated controller for gravimetric or volumetric control of complex process flows



Technical data:

Pumpentyp	R15-35-18	R15-160-12	R15-500-5
Max. Dosing capacity (ml/min)	35	160	500
Min. Dosing rate (ml/min)	0,035	0,16	0,5
Min dosing capacity (ml/min) ***	0,005	0,05	0,15
Stroke volume (ml)	0,8	3,5	11
Max. Stroke frequency (strokes/min)		50	
Suction interruption (sec)		ca. 0,7	
Max. Dosing time (min)		ca. 30	
Max. Overpressure (bar) *****	18	12	5
Max. Overpressure (bar) PTFE Fitting	10	10	5
Max. vaccum (mbar abs.) ***		1	
Max. Viscosity (mpas)	100	150	200
Max. Viscosity (mpas) ****	2.000	3.000	4.000
Max. Temperature fluid (°C)		80 (150)*****	
Absolute accuracy		< 1%	
Relative accuracy (Reproducibility)		< 0,5%	
Material wetted		PTFE	
Supply voltage (V)	pump 48 VDC / power adapter 80-264VAC (47-63Hz)		
Power consumption (W)	pump 45 / pump heated 150		
protection		IP40	
Ambient temperature (°C)		40	
Dimensions LxWxH (mm)		280x124x175	
Weight (kg)		5,5	

All specified parameters were carefully determined with reference liquid.
Dosing with other liquids may cause deviations.

* User-side reduction of the pump stroke considering the max. Pressure rating of PTFE hoses according to manufacturer's instructions

** Max. vacuum at the pump inlet and outlet.
Dosing medium must be free of bubbles in a pure liquid form.

Possibly, necessary adjustments on the suction side: anti-cavitation mode (AK), hydrostatic inlet, maximum hose diameter, short hose lengths
Pressure side: setting valve lift on the pressure side (software VD)

**** using the anti-cavitation mode (AK), the suction speed of the pump is reduced in 3 stages.

25% AK = 5 sec max. Dosing rate approx. 24%
50% AK = 10 sec max. Dosing rate approx. 12%
100% AK = 20 sec max. Dosing rate approx. ca. 6%

***** when using a thermally decoupled pump head

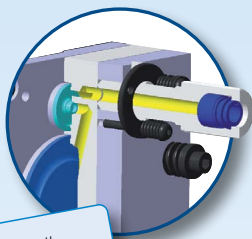


R15 with gravimetric dosing control

Integrated dosing controller with adapted control algorithms for communication with a balance or a flow sensor.
A separate dosing regulator is not required



R15 with volumetric dosing control



hermetically sealed valves

Fluid connections:

The base plate allows the adaptation of various fluid connections:

○ RFC - Fluid connection in full PTFE design up to 10 bar

○ IG 1-4 Fluid connection in stainless steel up to 18 bar

○ Special design according to customer requirements



PTFE-Filter with 5 und 50 µm



PTFE pump chamber with membrane