

# Ritmo 05 MS



*Metering system with chronological synchronisation and quantity proportionality of pulsating fluid flows and in all PTFE design*

Metering pumps – exactly matching your needs

- Simple operation of all pumps integrated in the system by direct entry of discharge rate in ml/min (without complicated calculation of stroke volume, stroke frequency, calibration table and metered quantity ratio)
- Simple specification of the Master – Slave allocations with the pump menu (no separate programming requirement)
- Pump-head, diaphragm and valves of all pumps in all PTFE design version (universal application with highest chemical resistance, also as heated version)
- Displacement of the working diaphragm via linear actuating elements (fast suction speed and synchronisation of applied full or partial strokes)
- Positively controlled, by stroke magnet synchronized valves (very robust suction performance and synchronized adapted opening time of the discharge valve)
- No additional equipment, no control- or programming technique (Metering pumps are self controlling and compensating with another)
- Metering of the slave pumps with full and partial strokes and calculation of the possible partial stroke rate synchronized with the master
- Volumetric metering of absolute quantity ratio, stoichiometric discharge metering rates of several fluids or gases in a reaction- or mixing process
- Stepping motor controlled, absolute chronologically synchronized metering of several fluids or gases in reaction- or mixing process
- Exact control of process relevant parameter in a reaction system (without time-consuming nominal/actual value compensation and nominal value overshoot, e.g. pH-value dependant or temperature dependant reaction control)
- Synchronous metering of fluids or gases in other discharge-, circulation-, flushing-, injection- or reaction systems
- Process and automation capable control (analogue interface 4-20mA, digital control RS 232, special Master/Slave interface for interlacing several pumps)
- Metering pumps in all PTFE – version
- Stepping motor controlled diaphragm metering
- Diaphragm metering unit with positively controlled valve engineering
- Metering pumps with heated and cooled pump head
- Metering pumps for vacuum applications
- Gas metering pumps
- Gas mixing pumps
- Batch- and filling metering pumps
- Multi - channel distributor pumps
- Sampling pumps with flushing function
- Metering pump system in master - / slave - configuration
- Pneumatic metering pumps
- Ex-protected metering pumps
- High pressure metering pumps
- Metering systems consisting of metering pump and Coriolis measurement technology
- Special customized solutions

## Ritmo 05 MS

Metering pumps from  
0.5 ml/h to 15 l/h



Pump type	R 05/03	R 05/30	R 05/60	R 05/120	R 05/150	R 05/250
max. metering capacity ml/min	3	30	60	120	150	250
min. metering capacity µl/min	3	30	60	120	150	250
max. stroke frequency strokes/min	ca. 43	ca. 43	ca. 46	ca. 48	ca. 79	ca. 79
max. pressure inlet bar	4	4	3	2	3	2
max. pressure outlet bar	4	4	3	2	3	2
Stroke volume µl	70	700	1300	2500	1900	3400
min. stroke duration sec	1,4	1,4	1,3	1,2	0,8	0,8
max. stroke duration sec	1400	1400	1300	1500	800	800
Repeat accuracy %	< 1	< 1	< 1	< 1	< 1	< 1
Vacuum at inlet mbar	20	20	20	20	20	20
Vacuum at outlet mbar	0	0	0	0	0	0
Max. viscosity mPas	200	200	300	600	600	600
Max. medium temperature	120°C (248°F)					
Material, pump head	PTFE					
Material, diaphragm	PTFE					
Material, valves	PTFE					
Input voltage	100 - 240V, 25 W					
Safety class	IP 30					
Ambient temperature	50°C (122°F)					
max. dimensions LxBxT mm	270 x 130 x 205					

The above rated values have been carefully determined with reference fluid. If other fluids are metered, the above values may differ minimally.



(above) Drive engineering  
(left) PTFE-pump-chamber with diaphragm

### Connecting options:

- ① GL-PTFE unions with sealing ring and cone
- ② GL-PTFE flexible unions with precision thread and silicone jacket for vacuum use and for temperature changes
- ③ Tube sleeve with PTFE-Adapter (no image)
- ④ Swagelok / Gyrolok stainless steel unions
- ⑤ Rapid action couplings (no image)
- ⊗ Other customised connections—depending on apparatus

