

Ritmo 05 MK



*Fluid distribution and -extrusion of gases and fluids
by multi-channel pumps with positively controlled
valves and all in PTFE construction*

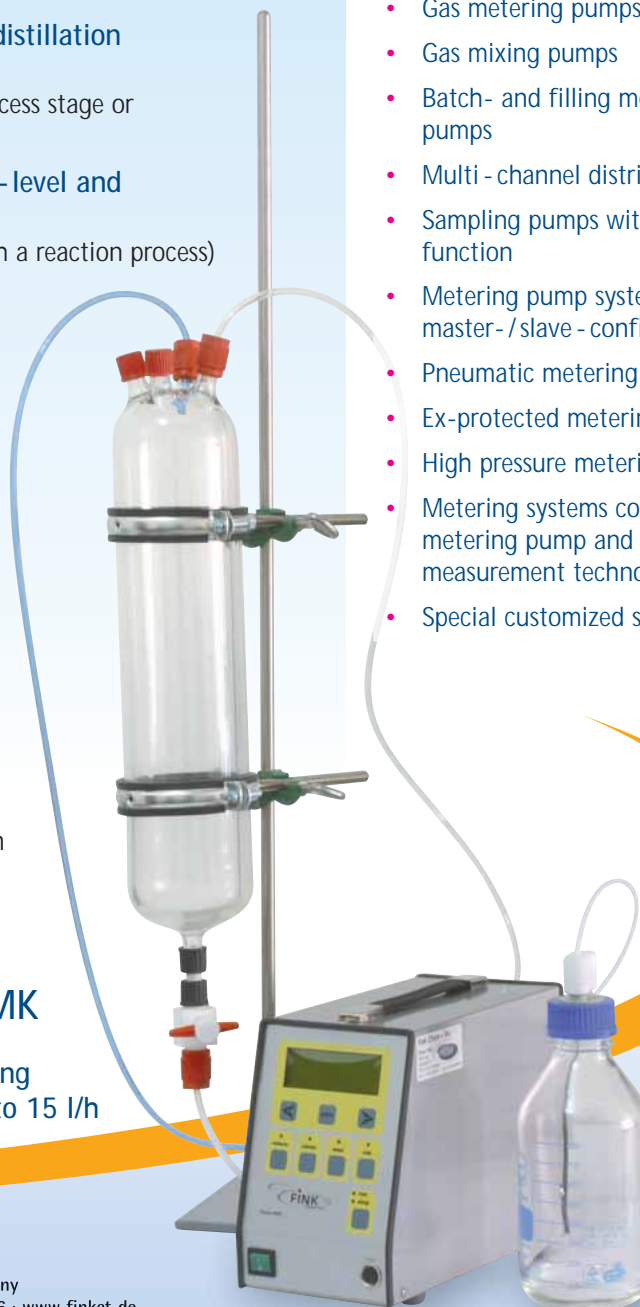
Metering pumps – exactly
matching your needs

- Easy and simple operation with direct entry of the delivery rate in ml/min and division ratio option by selecting the stroke frequency per channel
- Up to 3 pressure side positively controlled valves (all types available as heated version)
- Pump head, diaphragm and valves in all PTFE design version (for universal use with ultimate chemical resistance)
- Rational, cost efficient and space-saving application of a Metering Pump for multiple conform metering processes
- Circulation discharging (for controlling the hold-up period in reaction processes with simultaneous sampling option)
- Return flow discharging and -distribution in distillation processes under vacuum conditions (simultaneous return flow distribution in second process stage or sampling option)
- Return flow discharging in dependence of fill-level and simultaneous fluid charging (by access through a distillation processes or through a reaction process)
- Substance charging of small fluid or gas quantities under vacuum or over-pressure conditions (without necessary pressure compensation of the reaction process)
- Substance charging in dependence of the individual process development in the pilot plant (flexible and manually triggered at any time)
- Return function (residue drainage of the supply system, in the charging channel or in an additional suction or charging channel)
- Process and automatic control (analogue interface 4-20mA, digital control RS 232; read out of distribution ratio with external valuation of the quantity mass balance)

- 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

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Multi-channel Metering
Pump from 0.5 ml/h to 15 l/h



Technical Data

Pumpentyp	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 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 (251.6°F)					
Material, pump head	PTFE					
Material, diaphragm	PTFE					
Material, valves	PTFE					
Input voltage	100 - 240V					
Safety class	IP 30					
Ambient temperature	50°C (122°F)					
Max. dimensions LxWxH mm	270x130x205					

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



(above) Drive mechanism with 2 stroke (magnets) solenoids
(left) PTFE - Multi-channel pump - chamber with membrane and valve

Connection variations:

- ① GL - PTFE - unions with sealing ring and cone
- ② GL - PTFE - Flex 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 customized connections – depending on apparatus

