

## PISTON METERING SYSTEMS

KD - 30 ltr » KD - 60 ltr » KD - 90 ltr » KD - 120 ltr



PROMERA®  
TECHNOLOGIEN FÜR FLUIDE



## PISTON METERING TECHNOLOGY

QUICK, HIGHLY ACCURATE METERING FROM  
LIQUID TO HIGHLY VISCOUS FLUIDS

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# PISTON METERING SYSTEMS

## SUCCESS THROUGH INNOVATIVE TECHNOLOGY

PROMERA BUILDS PISTON METERING SYSTEMS FOR INDUSTRIAL COMPANIES AND THEIR APPLICATIONS. OUR INTELLIGENT SYSTEM SOLUTIONS MEET THE HIGHEST PRECISION AND SPEED STANDARDS FOR THE PROCESSING OF FLUIDS.

**YOU PROFIT FROM »** REPRODUCIBLE FORMULAS » CONSISTENT MATERIAL QUALITY  
» TROUBLE-FREE OPERATION » LONG LIFE » LOWER PRODUCTION COSTS  
» INCREASED PRODUCTIVITY



PROMERA Injection valve



PROMERA Injection valve HVS\*



### FUNCTIONAL PRINCIPLE:

- » The hydraulic unit designed by PROMERA drives the piston metering cylinder (size: 30, 60, 90 or 120 liters)
- » The medium to be metered is supplied to the metering cylinder via an external pump
- » A measuring system measures the position
- » An SPS control system calculates the exact position of the piston. It considers and corrects the temperature, density and gas content when approaching the metering position
- » The medium to be metered can be introduced into the mixer at a variable or predetermined speed by means of the central injection valve with 6 or 5 (HVS\*) liquid connections
- » The communication with a higher-level control system enables easy mixture management

### APPLICATION SECTORS:

- » Rubber and tire industry » Plastics industry

### PROMERA INJECTION VALVES:

- » Up to 6 or 5 (HVS\*) different fluids per injection point on the mixer
- » Reliable **and** active blocking of fluids that are not required in the processed formula
- » Malfunction due to contaminated or blocked check valves ruled out
- » No undefined mixing up of fluids from the piston metering system to injection valve
- » High chemical and mechanical resistance thanks to ceramic coating

### APPLICATION RAW MATERIALS:

- » Silanes » Resins » Oils » Polyols » Liquid rubber

### EASY MAINTENANCE:

The maintenance shaft on the PROMERA piston metering system allows the material piston to be changed **without** completely disassembling the piston metering system



### PROPERTIES:

- » 2 or 4 material inlets and outlets per piston metering system
- » Volume precision of < 0.2 % regardless of shot size
- » Shot speed up to 120 ltr / min or 160 ltr / min (HVS\*)
- » Batch operation for extruder
- » Formula change **without** intermediate mixing (cleaning cycle)
- » Low space requirement thanks to compact design

# PISTON METERING SYSTEMS

## SPECIFICATIONS

- » 4 DIFFERENT PISTON METERING SYSTEM SIZES AVAILABLE: 30 / 60 / 90 / 120 LITERS WITH 2 OR 4 MATERIAL INLETS AND OUTPUTS
- » 1 TO 120 LITERS PER MEDIUM CAN BE SUPPLIED TO THE BATCH IN 10 TO 120 SECONDS WITH AN ACCURACY OF 0.2 % (DEPENDING ON VISCOSITY)
- » LARGE VISCOSITY RANGE FROM 10 TO 100,000 mPas
- » TEMPERATURE RANGE FROM 20° TO 80° C
- » CONSIDERS AND/OR CORRECTS THE MEDIUM'S TEMPERATURE FLUCTUATIONS, DENSITY AND GAS CONTENT



MODEL	KD-30 ltr	KD-60 ltr	KD-90 ltr	KD-120 ltr
<b>1. FLUID PUMPING SPECIFICATIONS</b>				
Maximum fluid outlet pressure	approx. 60 bar	approx. 60 bar	approx. 60 bar	approx. 60 bar
Pumping capacity	approx. 30 ltr	approx. 60 ltr	approx. 90 ltr	approx. 120 ltr
Duration of pumping	from 10 to 30 sec	from 10 to 60 sec	from 10 to 90 sec	from 10 to 120 sec
Reproducibility	approx. 2 to 10 cm <sup>3</sup>	approx. 2 to 10 cm <sup>3</sup>	approx. 2 to 10 cm <sup>3</sup>	approx. 2 to 10 cm <sup>3</sup>
Accuracy in % (shot size)	< 0.2	< 0.2	< 0.2	< 0.2
Min. / max. material temperature	approx. 20 to 80° C	approx. 20 to 80° C	approx. 20 to 80° C	approx. 20 to 80° C
Viscosity of pumped media	from 10 to 100,000 mPas	from 10 to 100,000 mPas	from 10 to 100,000 mPas	from 10 to 100,000 mPas
Fluid connections on piston metering system	up to 2 or 4	up to 2	up to 2	up to 2
<b>2. HYDRAULICS</b>				
Pressure	up to 280 bar			
Pumping capacity of hydraulic pump	up to 67 ltr / min or 145 ltr / min (HVS*)			
Hydraulic acoustic pressure	< 75 dBA			
Power connection	400 V / approx. 35 kW or 400 V / approx. 75 kW (HVS*)			
<b>3. CONNECTIONS</b>				
Material connection	28 L - DIN 2352	42 L - DIN 2352	42 L - DIN 2352	42 L - DIN 2352
Ventilation	18 L - DIN 2352	18 L - DIN 2352	18 L - DIN 2352	18 L - DIN 2352
<b>4. WEIGHT AND MASS</b>				
Weight without fluids	560 kg	820 kg	910 kg	1000 kg
Dimensions in mm (W x D x H)	570 x 725 x 2400	570 x 725 x 2400	570 x 725 x 3000	570 x 725 x 3600

## PROMERA ANLAGEN-SYSTEME GMBH

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