

PCP VOLUMETRIC PUMPS

The **PCP** volumetric pumps is the state of art in the micro-dispensing world.

The pumps are driven by a gearmotor with encoder and allow volumetric dispensing in strips, drops, or fill a determined volume with the highest accuracy, without be affected from inlet fluid pressure, viscosity and temperature of the media etc.

The motor, driven in one direction dispense the fluid, and if driven in the other direction suck back the fluid, preventing dripping and levelling the pressure on the nozzle.



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FIELD OF APPLICATION:

- > **Silicone dispensing**
- > **Grease dispensing**
- > **Resin dispensing**
- > **Adhesive dispensing**
- > **Low to high viscosity fluid dispensing**

FEATURES:

- > Many sizes to allow the perfect choice for any application
- > Dispensing not affected by temperature and viscosity changes
- > Simple maintenance due to the design of the pump
- > Possibility to have special features such as body in PEEK, rotor in Ceramic, stator in PA etc.
- > Possibility to dispense filled materials without wearing problems
- > Suck back function to prevent any dripping

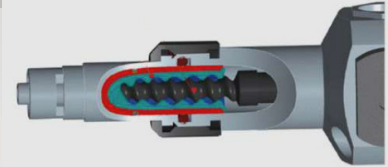
Technical data

ITEM	UPON REQUEST							
	PCP-005	PCP-015	PCP-050	PCP-150	PCP-500	PCP-1000	PCP-1500	PCP-2000
Dimensions	27xL230xØ27mm	27xL230xØ27mm	27xL230xØ27mm	29xL280xØ29mm	29xL280xØ29mm	29xL312xØ29mm	45xL430xØ45mm	60xL580xØ60mm
Weight	360 g	360 g	374 g	532 g	530 g	700 g	2,5 kg	3,5 kg
Input pressure	0~6 bar	0~6 bar	0~6 bar	0~6 bar	0~6 bar	0~6 bar	0~6 bar	0~6 bar
Max. Dosing pressure	20 bar	20 bar	20 bar	20 bar	15 bar	20 bar	20 bar	20 bar
Viscosity	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs
Dosing Volume/Rev.	≈0.005 ml	≈0.015 ml	≈0.05 ml	≈0.15 ml	≈0.5 ml	≈1.0 ml	≈1.5 ml	≈2.0 ml
Motor Speed (rpm)	1~120 rpm	1~120 rpm	1~120 rpm	1~120 rpm	1~120 rpm	1~120 rpm	1~150 rpm	1~150 rpm
Dosing Flow Rate (Max.)	≈0.6 ml/min	≈1.8 ml/min	≈6.0 ml/min	≈18 ml/min	≈60 ml/min	≈120 ml/min	≈180 ml/min	≈280 ml/min
Accuracy of dosing	±1%	±1%	±1%	±1%	±1%	±1%	±1%	±1%
Stator Material	Inert Elastomer	Inert Elastomer	Inert Elastomer	Inert Elastomer	Inert Elastomer	Inert Elastomer	Inert Elastomer	Inert Elastomer
Material Inlet Port	G 1/4" ¹	G 1/4" ¹	G 1/4" ¹	G 1/4" ¹	G 1/4" ¹	G 1/4" ¹	G 3/8" ¹	G 3/8" ¹
Material Outlet Port	Luer Lock ²	Luer Lock ²	Luer Lock ²	Luer Lock ²	Luer Lock ²	Luer Lock ²	Luer Lock ²	PT 3/8" (STD)
Wetting Part Material	SUS / UHMW - PE / FKM ³	SUS / UHMW - PE / FKM ³	SUS / UHMW - PE / FKM ³	SUS / UHMW - PE / FKM ³	SUS / UHMW - PE / FKM ³	SUS / UHMW - PE / FKM ³	SUS / UHMW - PE / FKM ³	SUS / UHMW - PE / FKM ³
Operating Condition	10~40°C	10~40°C	10~40°C	10~40°C	10~40°C	10~40°C	10~40°C	10~40°C

1. Different inlet, such as syringe fitting, possible upon request - 2. Different outlet possible upon request - 3. Different materials possible upon request.

PRINCIPLE OF FUNCTIONING

A cavity is generated between the rotor and the stator when assembled, and, when the motor rotate, the cavity is moved forward, creating vacuum in the inlet area and pressure in the outlet area. With the control of the rotation of the motor the result is a perfect control of the dispensing process



INTEGRATION OF PCP PUMPS ON ROBOTS

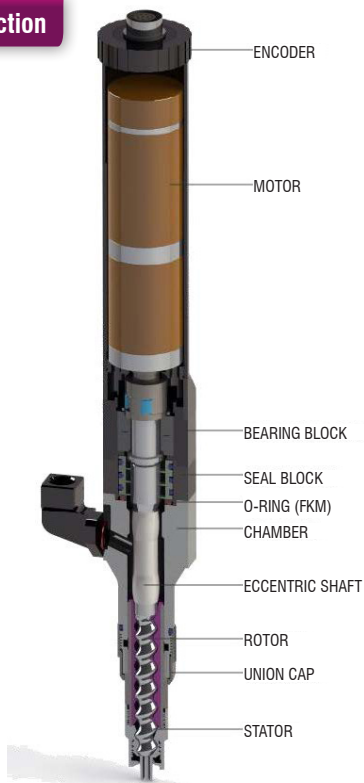
The PCP pumps are easy to be integrated on 6 axis, Scara or cartesian robots, with specific brackets, easy to create (DAV Tech can supply the 3d models of the pumps).

DRIVE PCP PUMPS

The control of the pump allow to set all the parameters in a really simple way. Is possible to operate in shot mode, steady mode (for stripes) or metering (filling) mode. The communication with an external PLC can be done trough simple I/O.



Section



Connection diagram

