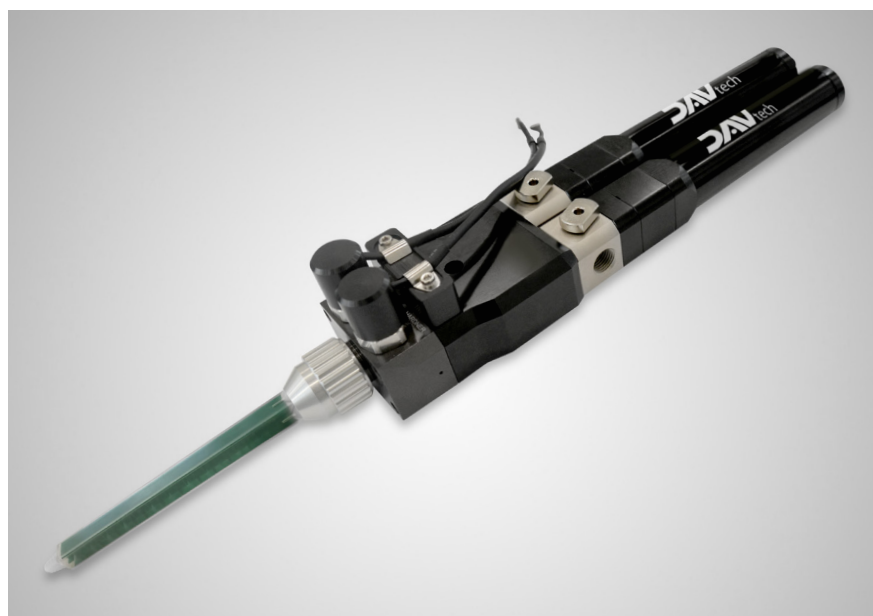


PDP 2K VOLUMETRIC PUMPS

The **PDP** volumetric pumps are a innovative, compact, versatile, precise and reliable 2k dispensing systems.

The specially designed rotary auger pump allow high performances dispensing for 2k material. The system provide an efficient and consistent dispensing more than any other piston or gear pump system.

Mix ratio and dispensing volume can be easily adjusted through the controller, changing speed and rotation of the rotor. The pumps are driven by a gearmotor with encoder and allow volumetric dispensing in strips, drops, or filling a determined volume with the highest accuracy, without be affected from inlet fluid pressure, viscosity and temperature of the media.



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FIELD OF APPLICATION:

- > 2K fluid dispensing

OPTIONS:

- > Pressure check system on pump outlet to monitor unwanted catalization in the mixing area.
- > Possibility to use pumps of different size together to be close to the requested ratio.

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	PDP-015	PDP-050	PDP-150	PDP-500	PDP-1000
Dimensions	60xL260xØ30mm	60xL260xØ30mm	67xL310xØ35mm	67xL310xØ35mm	67xL340xØ35mm
Weight	1.12 Kg	1.12 Kg	1.66 Kg	1.66 Kg	1.85 Kg
Input pressure	0~6 bar	0~6 bar	0~6 bar	0~6 bar	0~6 bar
Max. Dosing pressure	20 bar	20 bar	20 bar	15 bar	15 bar
Viscosity	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs	0~500,000 cPs
Dosing Volume/Rev.	≈0.03 ml	≈0.1 ml	≈0.3 ml	≈1.0 ml	≈2.0 ml
Motor Speed (rpm)	1~120 rpm	1~120 rpm	1~120 rpm	1~120 rpm	1~120 rpm
Min Dosing Volume	0.0003 ml	0.001 ml	0.003 ml	0.009 ml	0.009 ml
Dosing Flow Rate (Max.)	≈ 3.6 mil/min (0.06 mil/sec)	≈ 12 mil/min (0.2 mil/sec)	≈ 36 mil/min (0.6 mil/sec)	≈ 120 mil/min (2.0 mil/sec)	≈ 240 mil/min (2.0 mil/sec)
Accuracy of dosing	±1%	±1%	±1%	±1%	±1%
Mixing Ratio	1:1 ~ 10:1	1:1 ~ 10:1	1:1 ~ 10:1	1:1 ~ 10:1	1:1 ~ 10:1
Stator Material	Inert Elastomer	Inert Elastomer	Inert Elastomer	Inert Elastomer	Inert Elastomer
Material Inlet Port	G 1/4" (STD) ¹	G 1/4" (STD) ¹	G 1/4" (STD) ¹	G 1/4" (STD) ¹	G 1/4" (STD) ¹
Material Outlet Port	Luer Lock ²	Luer Lock ²	Luer Lock ²	Luer Lock ²	Luer Lock ²
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
Operating Condition	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

The two pumps are driven by the controller that automatically, after setting the requested ratio, calculate speed and acceleration of the single pumps to have not only a perfect proportioning but also the contemporaneity of the two fluids dispensing.

The mixing block, available in various shape and with different sizes, allow the using of static mixers of various size.

The single pump outlet pressure monitoring system (option) allow to check any kind of unwanted catalization in the mixing block or in the static mixer, making stronger the dispensing process.

STATIC MIXER

DAV Tech is able to support the customer on the choice of the right static mixer. The correct proportioning of resin and hardener is not enough to guarantee a perfect dispensing, so it's crucial to choose the right static mixer, for number of elements length diameter and shape.

INTEGRATION OF PDP PUMPS ON ROBOTS

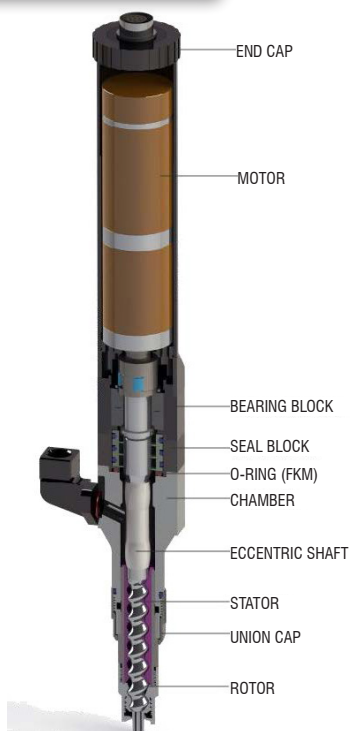
The PDP pumps are easy to be integrated on 6 axis, Scara or cartesian robots, with specific brackets, easy to create (DAV Tech can supply the 3d models of the pumps).

DRIVE PDP 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 filling mode. The communication with an external PLC can be done trough simple I/O.



Single pump section



Connection diagram

