

Life Science

IMI Adaptas

Rotary shear valve 4 port, continuously rotating

VD04002PKNAUH0050

- Rated to 34 bar (500 psi)
- Stepper motor with planetary gearing system
- High performance and cost effective
- Saving space and reducing complexity
- Proven and robust design
- Continuously rotating valve acting like a pump



Technical features

Type:

4 port, continuously rotating

Pressure rating: 34 bar (500 psi)

Port threads: 1/4-28 UNF-2B

Fitting type: Flat

Power requirements:

1.26A 24V

Gear box ratio: 3.66:1

RS-485

Motor specification: 2 phase, 1.8° step angle

Communication Protocol:

*Available with PCB Step Master

Dimensions:

Height: 143.3 mm (5.64 in) Width: 42.1 mm (1.66 in) Depth: 42.1 mm (1.66 in)

Flow passage diameters: 1.0 mm (0.04 in)

Port to port volume: (1) 10.6 μL, (2) 2.4 μL

Stator port volume:

(1) 10.3 µL, (2) 2.1 µL

Rotor channel volume:

 $0.3 \, \mu L$

Weight: 0.35 kg (0.77 lbs)

Operating temperature: +4 ... +80°C (+39 ... +176°F)

Storage temperature: -30 ... +80°C (-86 ... +176°F)

Storage humidity:

< 95% humidity, non-condensing

Switching time:

< 0,25s

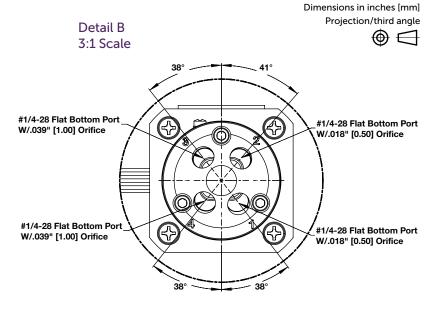
Wetted materials: Stator: PEEK Rotor: UHMW

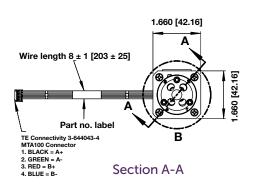
Compliance: RoHS, REACH

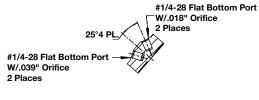
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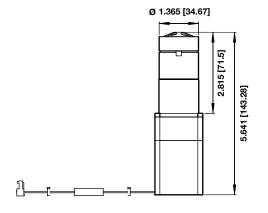


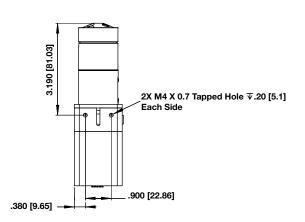
Dimensions



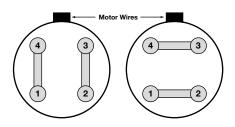








Typical working cycle





Rotary shear valve part numbering VD 04 00 2 PK NA UH 005 0 *1) Substitute Valve electronics Substitute Valve type VD 0 Valve, driven None VM Valve, manual Driver PCB 1 Repair kit RK Valve box 2 Number of ports Substitute Rated pressure (psi) Substitute 4 ports 04 Undefined 000 6 ports 06 500 005 80 1700 017 8 ports 09 3900 039 9 ports 5000 10 ports 10 050 5500 11 055 11 ports 12 6000 060 12 ports 13 7000 070 13 ports 16 ports 16 Rotor material Substitute Number of positions Substitute PEEK РК 2 positions 02 Stainless steel SS 3 positions 03 Stainless steel with DLC SD 4 positions 04 Ceramic CM 6 positions 06 PEEK blend PB 8 positions 80 UHMWPE UΗ 10 positions 10 Polyimide Ы 12 positions 12 Seal material Substitute Port style Substitute PEEK РК #10-32 Cone 1 Stainless steel SS 2 Stainless steel with DLC SD #1/4-28 Flat #5/16-18 Flat 3 Ceramic СМ #1/4-28 Cone 4 PEEK blend РΒ UHMWPE #6-32 Cone 5 UH Polyimide ΡI Not applicable NA Stator material Substitute PEEK РК Stainless steel SS Stainless steel with DLC SD Ceramic CM

Configurations available

Туре	Operating pressure		Part no. *2)
	(bar)	(psi)	
6 port, 2 position manual	483	7000	VM06021SSPKPI0700
6 port, 2 position	379	5500	VD06021SSNAPI0550
4 port, 3 position	117	1700	VD04032PKPKPK0170
8 port, 4 position	269	3900	VD08042PKPKPK0390
9 port, 8 position	117	1700	VD09082PKPKPK0170
13 port, 12 position	117	1700	VD13122PKPKPK0170
4 port shuttle valve	38	550	VD04002PKNAUH0050
Available on request:			
4 port, 2 position	269	3900	VD04022PKPKPK0390
8 port, 2 position	34	500	VD08021PKPKPK0050
Coming soon:			
VALVE BOX (6/2)	483	7000	VD06021SDNAPB0702-1
6 port, 2 position	483	7000	VD06021SDNAPB0700-1
6 port, 2 position	483	7000	VD06021SDNAPB0700-2

^{*2)} Step Master PCB available to all models.

PEEK blend

UHMWPE

Polyimide

PB

UH

Ы

^{*1)} Modifier (if needed, at the end):

[&]quot;-000" (tbd)

[&]quot;-KIT" (accessories included)