## FLUIDIC HIGH TECHNOLOGY

Made with PTFE and PCTFE, the FHT Stepper Motor Rotary Valves are designed for Medical, chemical, biological, environmental industries and the laboratory instruments and devices. These valves will replace the existing fluidic control systems such as manifolds installed with multi isolation valves and are being widely used for various new fluidic control projects and innovations.

# Stepper Motor Rotary Valve Characteristics

No metal parts contact fluid path. Compatible with aggressive and/or reactive fluids

Exclusive sealing surface design maintains consistent torque in a specified range

Precisely machined and polished assembly process guarantees highly reliable valves

Exclusive optical sensor and encoder design for highly accurate positioning

Orifice sizes up to 6.0mm (.236")

Valves designed for Up to 20 Ports Valves designed for the longest life, up to 10M cycles

Modified housing design provide a better and easier way to mount the valves on instruments

Designed and manufactured with smooth internal flow paths for easy flushing and cleaning of internal paths

Designed for using standard NEMA 17 or 23 size, 1.8°
Stepper Motors

10 – 30 VDC voltage working range.

Smallest internal volumes

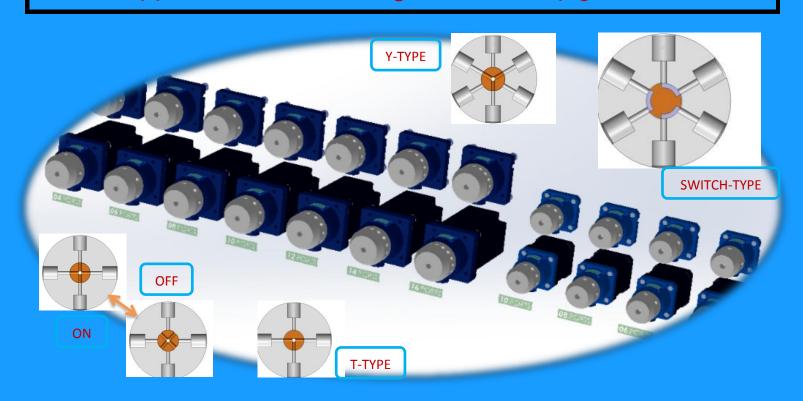




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FHT Stepper Motor Rotary Valves are available for many flow paths applications, such as port selection valves, flow path switch valves, multi-ON/OFF valves, "Y" type, "T" type flow path valves. The FHT team is able to design special configurations to meet customer needs and will work very closely with you to find the best options for your system and device designs.

## Stepper Motor Rotary Valve Configurations



### Stepper Motor Rotary Valve Driver

FHT Stepper Motor Rotary Valves are designed for standard NEMA 17 or NEMA 23 size Motors and provide HOME and PORT signals. These valves are easily driven by the customers own controller or driver circuit. Also, customers are able to find standard controllers from many different manufacturers who design and manufacture controllers to drive these NEMA 17 and NEMA 23 Stepper Motors. FHT suggests using controllers developed by Trinamic (<a href="www.trinamic.com">www.trinamic.com</a>) or Lin Engineering (<a href="www.linengineering.com">www.linengineering.com</a>). The FHT engineering team will fully support customers to select right controllers and programs to run these stepper motor rotary valves properly.

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Small Size Standard ERV Configuration			ERV Port Numbers, Pa					
		4 PORTS	6 PORTS	8 PORTS	10 PORTS	Comments		
Orifice Size								
mm	inch							
0.8	0.032	ERV001-04S08	ERV001-06S08	ERV001-08S08	ERV001-10S08			
		ERV001-04W08	ERV001-06W08	ERV001-08W08	ERV001-10W08			
1.4	0.055	ERV001-04S14	ERV001-06S14	ERV001-08S14	ERV001-10S14			
		ERV001-04W14	ERV001-06W14	ERV001-08W14	ERV001-10W14	1/4-28 Thread		
2.0	0.078	ERV001-04S20	ERV001-06S20	ERV001-08S20	N/A	1/4-20 IIII eau		
2.0		ERV001-04W20	ERV001-06W20	ERV001-08W20	N/A			
2.5	0.098	ERV001-04S25	ERV001-06S25	N/A	N/A			
		ERV001-04W25	ERV001-06W25	N/A	N/A			
3.2	0.125	ERV001-04S32	ERV001-06S32	N/A	N/A	5/16-24 Thread		
		ERV001-04W32	ERV001-06W32	N/A	N/A	3/10-24 Hilleau		
4.0	0.157	ERV001-04S40	N/A	N/A	N/A	5/16-24 Thread, Longer Head		
		ERV001-04W40	N/A	N/A	N/A	3, 10-24 Till eau, Lollgei Heau		

How to Read the Part NumberS							
ERV001	-04	S	08	M or MC			
ERV SIZE	PORT NUMBER	ТҮРЕ	ORIFICE SIZE	M - Installed with			
001-SMALL SIZE	04 - 4 PORTS	S - Selection	08 - 8mm	Motor			
001-SIVIALL SIZE	06 - 6 PORTD	W - Switch*	14 - 1.4mm	MC - Installed with			
002-LARGE SIZE	08 - 8 PORTS	Note*: notify if the	20 - 2.0mm	Motor and			
002-LANGE SIZE	10 - 10 PORTS	pressure is 100psi or	25 - 2.5mm	Controller			
	12 - 12 PORTS	higher	32 - 3.2mm				
	14 - 14 PORTS		40 - 4.0mm				
	16 - 16 PORTS		50 - 5.0mm				
	18 - 18 PORTS		60 - 6.0mm	Head, Motor			
Head only	20 - 20 PORTS	Head & Motor		and Contorller			

Life Cycles Identified by Colors at operating pressure 200 psi (Max working pressure 500 psi)

6 Millions

6-10 Millions

4 Millions

2 Millions

4.0	0.157	ERV001-04W40	N/A	N/A	N/A	5/16-24 Thread, Longer Head		Contact with FHT sales if the working pressure is higher than 200 psi.			
Large Size ERV Port Numbers, Part Numbers and Cycles											
Standard ERV		4 PORTS	6 PORTS	8 PORTS	10 PORTS	12 PORTS	14 PORTS	16 PORTS	18 PORTS	20 PORTS	
Config	guration						,				Comments
Orifi	ce Size										
mm	inch			9 10			9100		0 300		
0.8	0.032	ERV002-04S08	ERV002-06S08	ERV002-08S08	ERV002-10S08	ERV002-12S08	ERV002-14S08	ERV002-16S08	ERV002-18S08	ERV001-20S08	1/4-28 Thread, two Lines Ports for 18 and 20 ports Valves
<b></b>	0.002	ERV002-04W08	ERV002-06W08	ERV002-08W08	ERV002-10W08	ERV002-12W08	ERV002-14W08	ERV002-16W08	ERV001-18W08	ERV001-20W08	
1.4	0.055	ERV002-04S14	ERV002-06S14	ERV002-08S14	ERV002-10S14	ERV002-12S14	ERV002-14S14	ERV002-16S14	N/A	N/A	1/4-28 Thread
2.4	0.033	ERV002-04W14	ERV002-06W14	ERV002-08W14	ERV002-10W14	ERV002-12W14	ERV002-14W14	ERV002-16W14	N/A	N/A	
2.0	0.078	ERV002-04S20	ERV002-06S20	ERV002-08S20	ERV002-10S20	ERV002-12S20	ERV002-14S20	N/A	N/A	N/A	
2.0	0.078	ERV002-04W20	ERV002-06W20	ERV002-08W20	ERV002-10W20	ERV002-12W20	ERV002-14W20	N/A	N/A	N/A	
2.5	0.098	ERV002-04S25	ERV002-06S25	ERV002-08S25	ERV002-10S25	ERV002-12S25	N/A	N/A	N/A	N/A	
2.5	0.038	ERV002-04W25	ERV002-06W25	ERV002-08W25	ERV002-10W25	ERV002-12W25	N/A	N/A	N/A	N/A	
3.2	0.125	ERV002-04S32	ERV002-06S32	ERV002-08S32	ERV002-10S32	N/A	N/A	N/A	N/A	N/A	5/16-24 Thread
3.2		ERV002-04W32	ERV002-06W32	ERV002-08W32	ERV002-10W32	N/A	N/A	N/A	N/A	N/A	
4.0	0.157	ERV002-04S40	ERV002-06S40	ERV002-08S40	N/A	N/A	N/A	N/A	N/A	N/A	5/16-24 Thread, Longer Head
		ERV002-04W40	ERV002-06W40	ERV002-08W40	N/A	N/A	N/A	N/A	N/A	N/A	3/ 10-24 Till eau, Longer Heau
5.0	0.197	ERV002-04S50	ERV002-06S50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	3/8-24 Thread, Longer Head
3.0		ERV002-04W50	ERV002-06W50	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
6.0	0.236	ERV002-04S60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	
		ERV002-04W60	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	