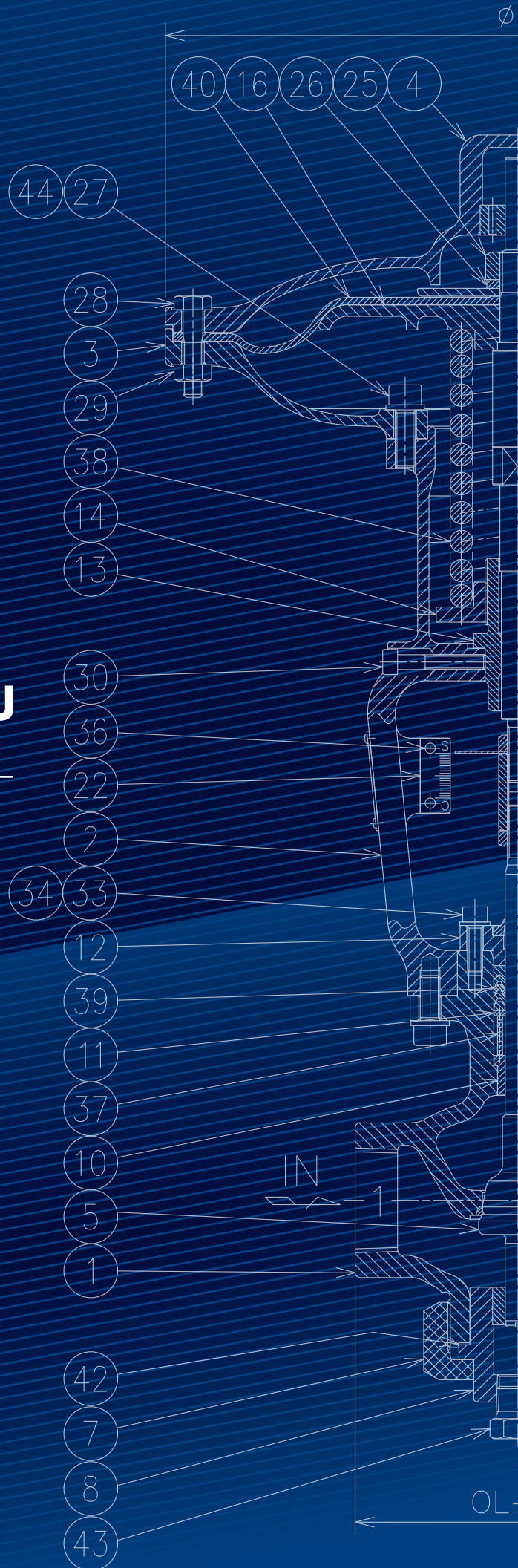


# **ROCKY-ICHIMARU**

Tire Curing Press Valves



# 4-way Piston Valve FP Series

The 4-way piston valve is a switching valve with an air driven cylinder. The single acting and double acting versions use the same design, and the single acting specification can be modified into a double acting specification by removing the spring inside the air cylinder and the cylinder cover plug. The valves are used in tire curing presses when switching the expanding and contracting action of the water hydraulic cylinder rod.

## Main Specification

Fluid	Cold water
Maximum Working Pressure	3.0MPa
Maximum Working Temperature	65℃
Operating Air Pressure	0.25 to 0.35MPa
End Connection	Pilot Port Rc1/4, NPT1/4, G1/4 Body Port Threaded End (Rc, NPT)
Body Port	Body: CAC406 *1
Material of main parts *2	Piston Rod: SUS304 with hard chrome plating Lantern Ring: C3604

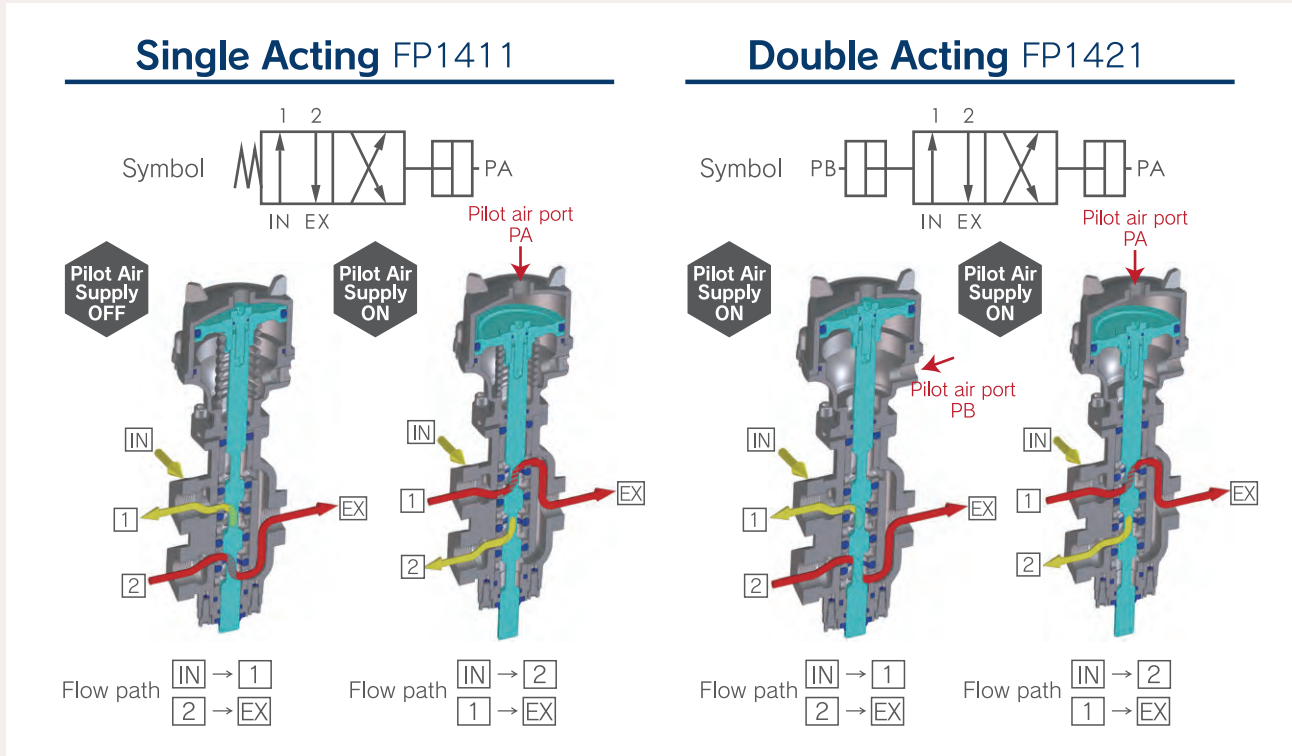
\*1. Can also be manufactured with SCS under a specialized specification.

\*2. See valve assembly drawings for details.

	DN08、DN10		DN15、DN20	
Appearance				
Model Number	FP1411-□□	FP1421-□□	FP1411-□□	FP1421-□□
Function	Single Acting	Double Acting	Single Acting	Double Acting



The relationship between the path and the air supply status is shown below for a typical valve model.



**Product Coding**



symbol	Meaning of symbol	Code	Meaning of code	Remarks
N1	Model	1	1st Model	
N2	Number of Ports	4	4-way type	
N3	Function	1	Single Acting	
		2	Double Acting	
N4	End Connection	1	Threaded End	
N5	Nominal Size	08	DN8	
		10	DN10	
		15	DN15	
		20	DN20	
N6	End Connection Body Port/ Pilot Port Thread Type	P	Rc / Rc	Indicates connection / pilot port is threaded. For "B", the connection is a flanged end or Rc type and pilot port is a G type. Thread size on pilot port is 1/4 inch (Rc1/4, NPT1/4, G1/4).
		N	NPT / NPT	
		B	Rc / G	
N7	Specialized Code	Z□□	Specialized specification	Bespoke code (e.g. Z1) is used for specialized options.

**Specialized Specifications (Example)**

• Stainless steel body (Specialized Code: Z2)  
 Fast water flow can cause erosion and corrosion in the valve body, so a stainless steel body can be used to avoid this problem.



**Warning**

• If a water leak is found from the aperture between the body and cylinder cover, the O-ring within the valve body may be worn. This can cause reverse flow of water within the cylinder, so maintenance should be performed on the valve promptly in such a case (seal replacement).



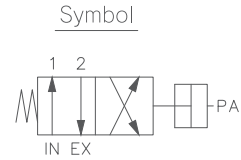
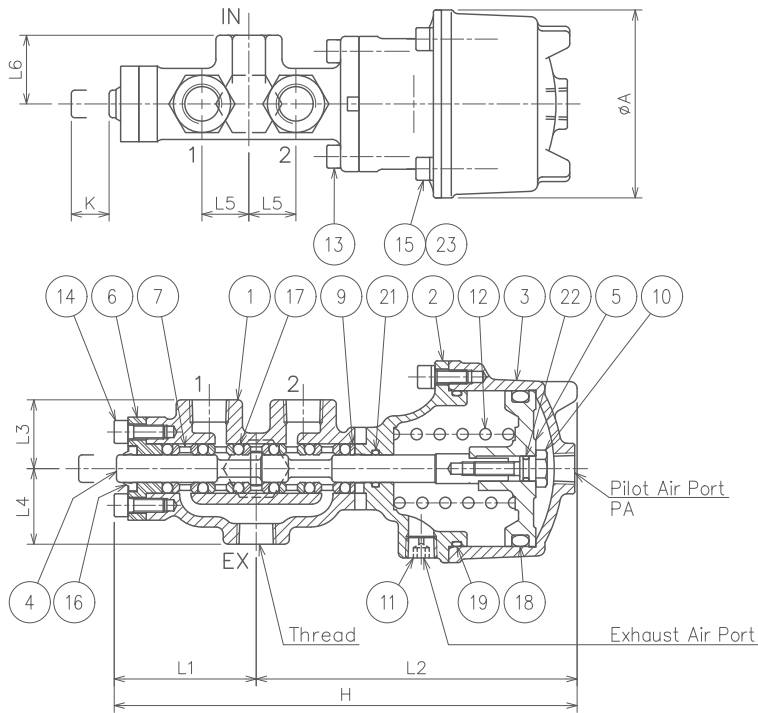
Image. Aperture for leak detection



**DN08, DN10**

**FP1411-□□**

**Single Acting**



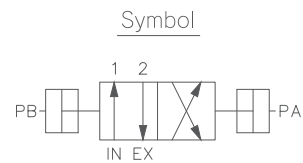
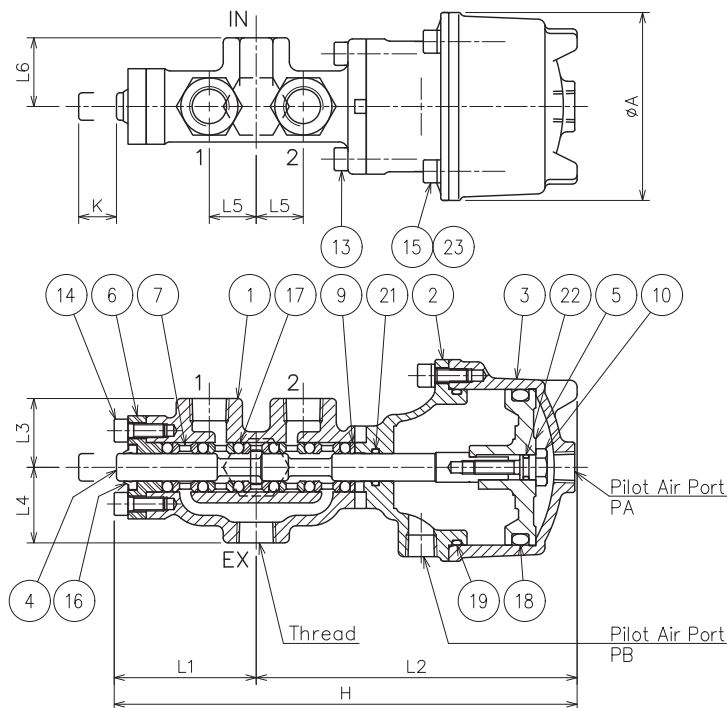
☆:Recommended Spare Parts

☆	23	Spring Lock Washer
☆	22	O-Ring
☆	21	O-Ring
☆	19	O-Ring
☆	18	O-Ring
☆	17	O-Ring
☆	16	Dust Seal
	15	Socket Cap Screw
	14	Socket Cap Screw
	13	Socket Cap Screw
	12	Spring
	11	Orifice Plug
	10	Tension Bolt
	9	Washer
	7	Lantern Ring
	6	Head Cover
	5	Piston
	4	Piston Rod
	3	Cylinder
	2	Cylinder Cover
	1	Body

Nominal Size		Dimensions (mm)									Weight (kg)
mm	inch	L1	L2	H	L3	L4	L5	L6	A	K	
8	1/4	62	140	202	30	33	20.5	30	82	16.5	2.4
10	3/8	62	140	202	30	33	20.5	30	82	16.5	2.4

**FP1421-□□**

**Double Acting**



☆:Recommended Spare Parts

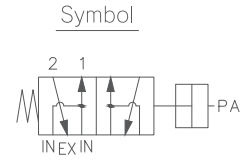
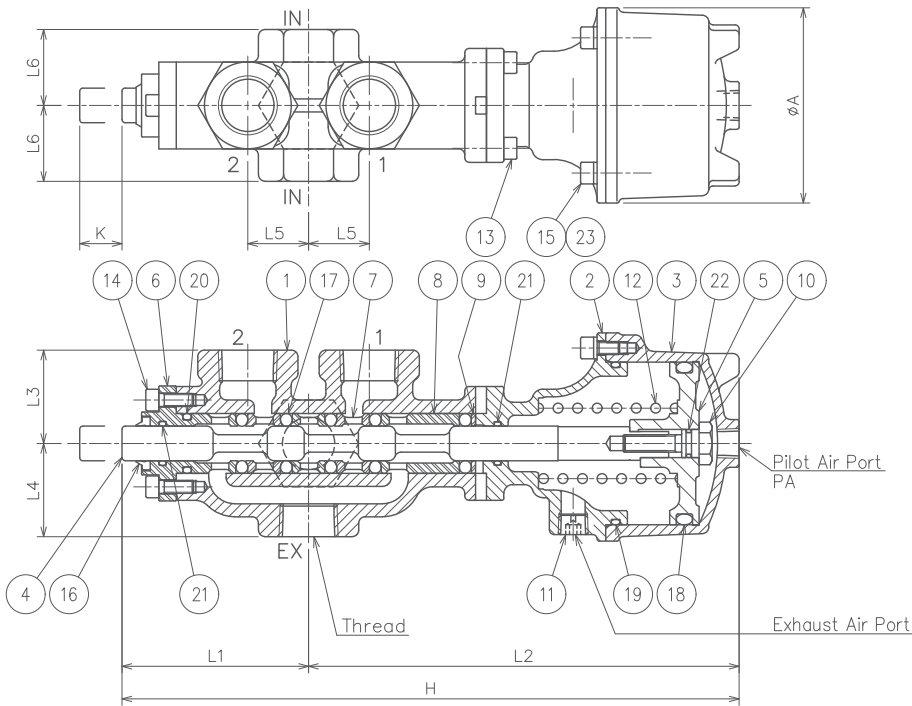
☆	23	Spring Lock Washer
☆	22	O-Ring
☆	21	O-Ring
☆	19	O-Ring
☆	18	O-Ring
☆	17	O-Ring
☆	16	Dust Seal
	15	Socket Cap Screw
	14	Socket Cap Screw
	13	Socket Cap Screw
	10	Tension Bolt
	9	Washer
	7	Lantern Ring
	6	Head Cover
	5	Piston
	4	Piston Rod
	3	Cylinder
	2	Cylinder Cover
	1	Body

Nominal Size		Dimensions (mm)									Weight (kg)
mm	inch	L1	L2	H	L3	L4	L5	L6	A	K	
8	1/4	62	140	202	30	33	20.5	30	82	16.5	2.3
10	3/8	62	140	202	30	33	20.5	30	82	16.5	2.3

# DN15, DN20

## FP1411-□□

### Single Acting



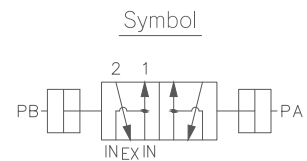
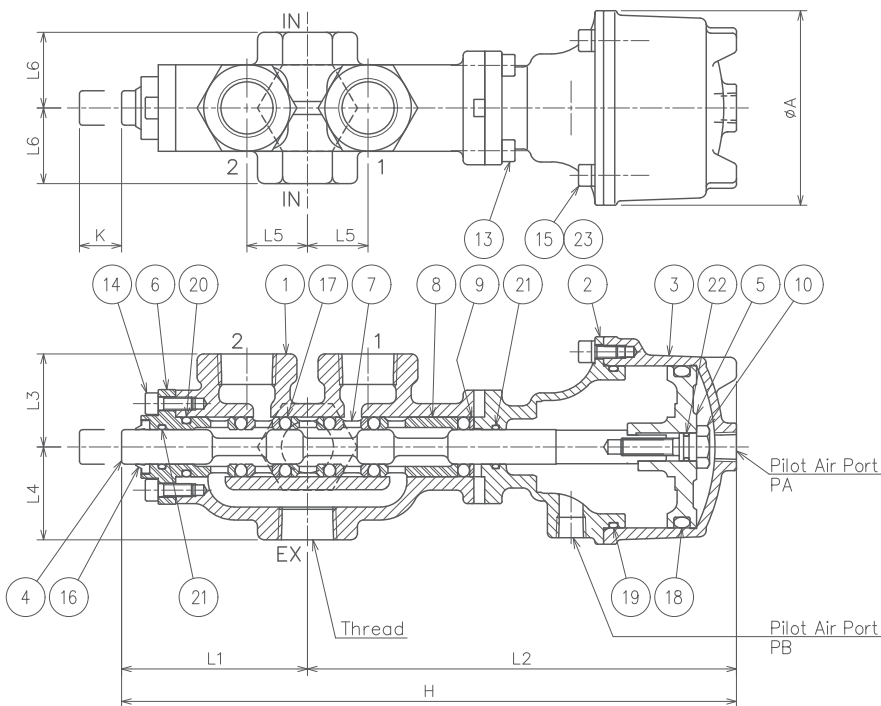
☆: Recommended Spare Parts

☆ 23	Spring Lock Washer
☆ 22	O-Ring
☆ 21	O-Ring
☆ 20	O-Ring
☆ 19	O-Ring
☆ 18	O-Ring
☆ 17	O-Ring
☆ 16	Dust Seal
15	Socket Cap Screw
14	Socket Cap Screw
13	Socket Cap Screw
12	Spring
11	Orifice Plug
10	Tension Bolt
9	Washer
8	Long Lantern Ring
7	Lantern Ring
6	Head Cover
5	Piston
4	Piston Rod
3	Cylinder
2	Cylinder Cover
1	Body

Nominal Size		Dimensions (mm)									Weight (kg)
mm	inch	L1	L2	H	L3	L4	L5	L6	A	K	
15	1/2	86	198.5	284.5	43	43	28	35	90	19.5	4.8
20	3/4	86	198.5	284.5	43	43	28	35	90	19.5	4.8

## FP1421-□□

### Double Acting



☆: Recommended Spare Parts

☆ 23	Spring Lock Washer
☆ 22	O-Ring
☆ 21	O-Ring
☆ 20	O-Ring
☆ 19	O-Ring
☆ 18	O-Ring
☆ 17	O-Ring
☆ 16	Dust Seal
15	Socket Cap Screw
14	Socket Cap Screw
13	Socket Cap Screw
10	Tension Bolt
9	Washer
8	Long Lantern Ring
7	Lantern Ring
6	Head Cover
5	Piston
4	Piston Rod
3	Cylinder
2	Cylinder Cover
1	Body

Nominal Size		Dimensions (mm)									Weight (kg)
mm	inch	L1	L2	H	L3	L4	L5	L6	A	K	
15	1/2	86	198.5	284.5	43	43	28	35	90	19.5	4.5
20	3/4	86	198.5	284.5	43	43	28	35	90	19.5	4.5

<Manufacturer>

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