

cunico **FRP Plug Valves** Mil-V-24509A

cunico's Full Round Port (FRP) self-lubricated plug valve is designed exclusively for sanitary system service. Our drip tight plug valve is highly corrosion resistant to sewage and seawater. The FRP plug valve operates freely under full line pressure and low breakaway-torque permits hand operators.

FRP-2 Way Plug Valve



• **Advantages of FRP Plug Valves:**

- Low Breakaway-Torque
- Non-Clogging
- No-Lubrication
- Operated by Lever, Handwheel, Actuator
- Operates freely under Full Line Pressure
- Highly Corrosion-Resistant to Sewage / Seawater
- Drip Tight
- CHT (Chemical holding tanks) application(s)

FRP-3 Way Plug Valve



• **Extended Operating Life of Plug Valves**

Example - In February of 2002, NGNN started the RCOH of CVN-69-Eisenhower, and replaced **cunico** plug valves originally installed in 1988, after 14 years of service, with new **cunico** plug valves.

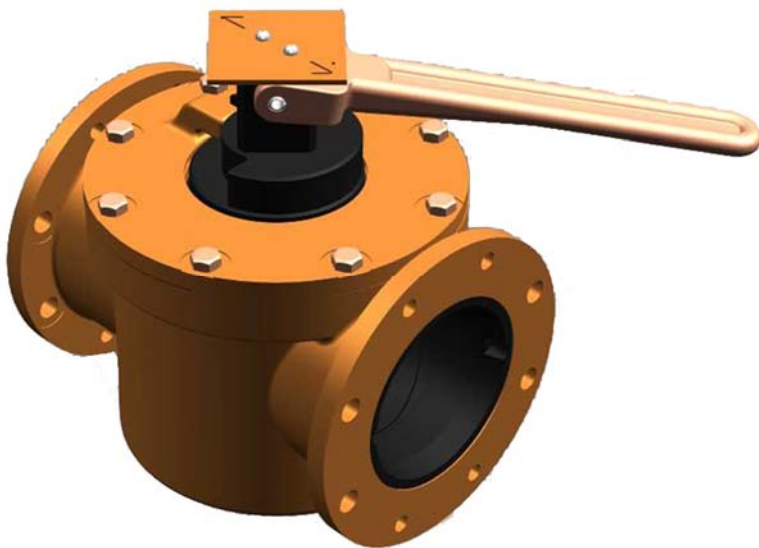
3-Way Valve with Gear Box



Cut-a-way View



2-Way Valve with Handle



Cut-a-way View



cunico Full Port Flow Plans

cunico 3-way valves are offered in 10 standard flow plans as indicated below. The positioning of the stops on each FRP valve is determined by the flow plan selected. When specifying or ordering a 3-way valve, the desired flow plan number must be indicated.

Flow Plan 1

3-Way, 3-Port; 180° Turn, 3 Positions



Flow Plan 2

3-Way, 3-Port; 180° Turn, 3 Positions



Flow Plan 3

3-Way, 3-Port; 180° Turn, 3 Positions



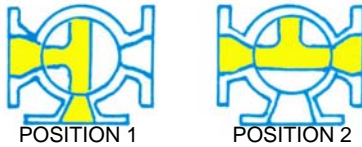
Flow Plan 4

3-Way, 3-Port; 180° Turn, 3 Positions



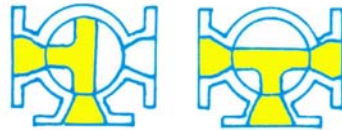
Flow Plan 5

3-Way, 3-Port; 90° Turn, 2 Positions



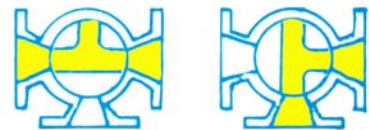
Flow Plan 6

3-Way, 3-Port; 90° Turn, 2 Positions



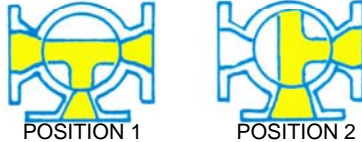
Flow Plan 7

3-Way, 3-Port; 90° Turn, 2 Positions



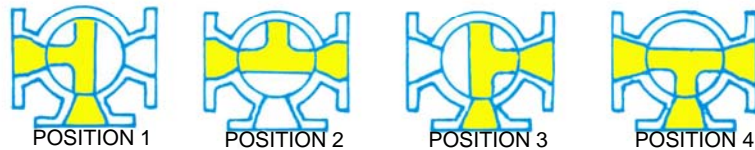
Flow Plan 8

3-Way, 3-Port; 90° Turn, 2 Positions



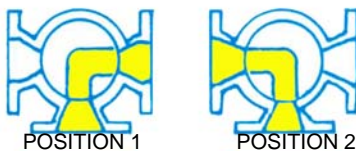
Flow Plan 10

3-Way, 3-Port; Without Stop Ring, 4 Positions



Flow Plan 9

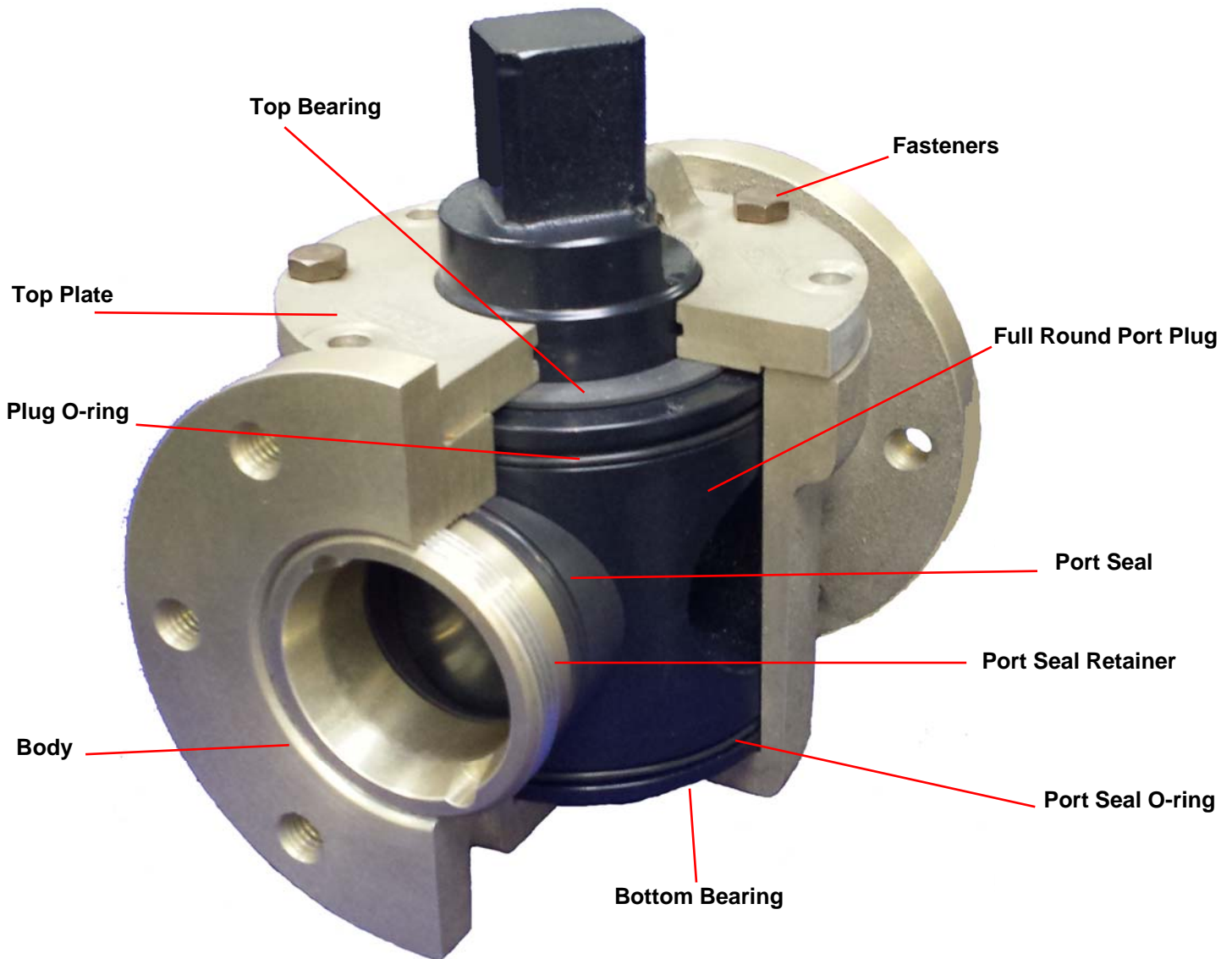
3-Way, 3-Port; 90° Turn, 2 Positions



Legend

 = Flow position

cunico FRP 2way Valve Part List



• Specifications: MIL-V-24509A

150 psi cold working pressure

225 psi body test pressure

Shock tested to MIL-S-901-D

Vibration tested to MIL-STD-167-1

• Configuration:

2way 2 port

• Body & Plug Material:

Navy M bronze & Aluminum Bronze

Lever: Manganese bronze

Coating: Cunicote CC5-baked on fluoroplastic

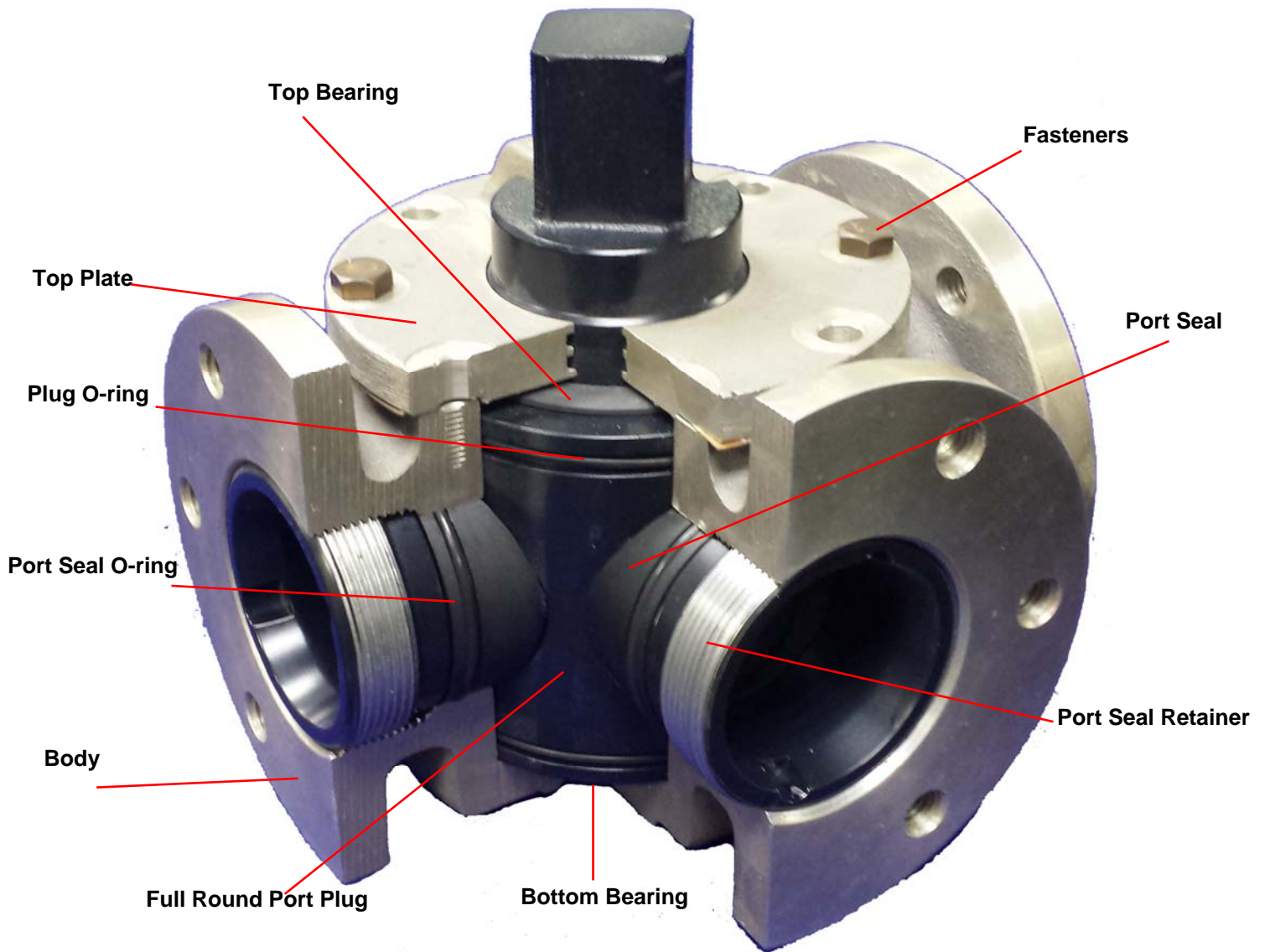
Seals: Graphite filled TFE

Sizes: 1¼" IPS - 8" IPS

U.S. Coast Guard Affidavit Valve Manufacturer; U.S. Navy Approved

 www.cunicocorp.com	SUBMARINES			SURFACE SHIPS		CARGO SHIPS	 www.dynamiccontrols.co.uk
	 <small>SSN's</small>	 <small>SSBN's</small>	 <small>DIESEL ELECTRIC</small>	 <small>CVN's</small>	 <small>DD's and CG's</small>	 <small>LNG</small>	

cunico FRP 3way Valve Part List



• Specifications: MIL-V-24509A

150 psi cold working pressure

225 psi body test pressure

Shock tested to MIL-S-901-D

Vibration tested to MIL-STD-167-1

• Configuration:

3way 2 port

3way 3port

See page **3 of 6** for port flown plan

• Body & Plug Material:

Navy M bronze & Aluminum Bronze

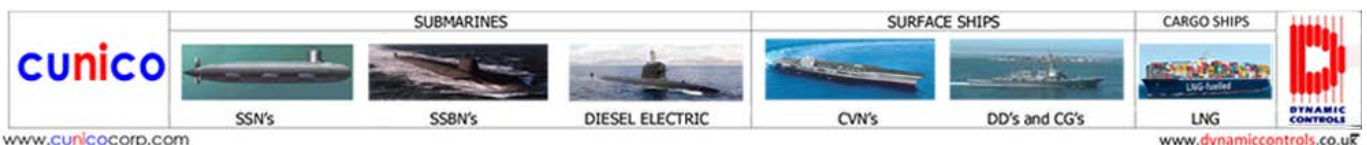
Lever: Manganese bronze

Coating: Cunicote CC5-baked on fluoroplastic

Seals: Graphite filled TFE

Sizes: 1¼" IPS - 8" IPS

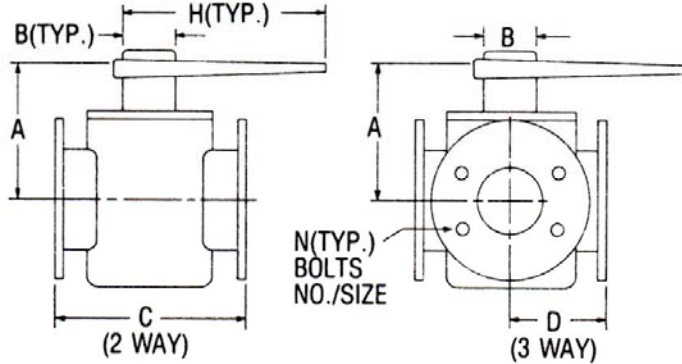
U.S. Coast Guard Affidavit Valve Manufacturer; U.S. Navy Approved



cunico Valve Configuration and Sizes

FRP2—A 2way port valve designed for full flow as a shut-off valve.

FRP3—Available in 3way 3port and 3way 2port valves designed to divert flow or as single shut-off valve. Ten flow plans are possible (see below for flow plan chart)



Navy Plug Valves (MIL-V-24509)

2 Way		3 Way		
FRP-2 2 PORTS	2 PORTS FLOW PAN 9	3 PORTS FLOW PLAN 1-8, 10	FRP-3 2 & 3 PORTS	

SIZE (IPS)	BOLTS NO./SIZE N	STEM TOP TO CENTER LINE OF FLOW A	STEM FLATS B	FACE TO FACE C ± 1/16	CENTER TO FACE D ± 1/16	LEVER LENGTH	PART NO.	WEIGHT (LBS.)	PART NO.	PART NO.	WEIGHT (LBS.)
1¼	4 - ½	3½	15/16	5.250	—	7½ Without	922002 922003	18 17	— —	— —	— —
1½	6 - ½	3 ¹⁵ / ₁₆	15/16	5.750	3.125	7½ Without	922012 922013	32 31	923012 923013	923312 923313	33 34
2	6 - ½	4 ⁷ / ₁₆	1¼	6.500	3.500	7½ Without	922022 922023	41 38	923022 923023	923322 923323	46 23
2½	6 - ½	5	1¼	7.750	4.000	7¾ Without	922042 922043	59 56	923042 923043	923332 923333	66 63
3	8 - ½	5½	1¾	9.000	4.500	7¾ Without	922062 922063	78 74	923062 923063	923342 923343	86 82
3½	8 - ½	6 ⁷ / ₁₆	1¾	10.062	—	7¾ Without	922072 922073	94 90	— —	— —	— —
4*	8 - 5/8	7 ¹³ / ₁₆	1¾	10.500	5.250	9 Without	922082 922083	118 114	923082 923083	923362 923363	131 127
5*	10 - 5/8	7 ¹³ / ₁₆	2	13.000	6.500	9 Without	922092 922093	133 129	923092 923093	923372 923373	148 144
6*	12 - 5/8	8 ⁷ / ₈	27/16	15.000	7.500	9 Without	922102 922103	252 247	923102 923103	923382 923383	270 265
8*	14 - 5/8	11 ¹ / ₁₆	3	19.00	9.55	16 Without	922122 922123	* 458	923122 923123	923392 923393	* 488

	SUBMARINES			SURFACE SHIPS		CARGO SHIPS	
	 SSN's	 SSBN's	 DIESEL ELECTRIC	 CVN's	 DD's and CG's	 LNG	

www.cunicocorp.com www.dynamiccontrols.co.uk