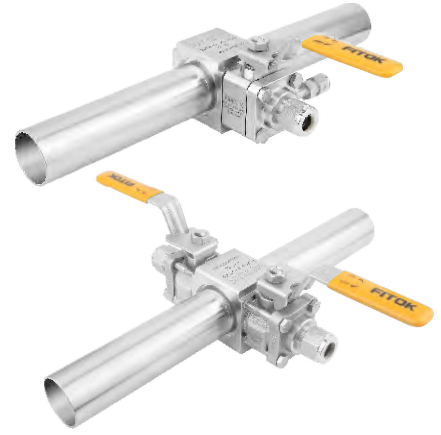


# Distribution Block Valves

## BDP Series

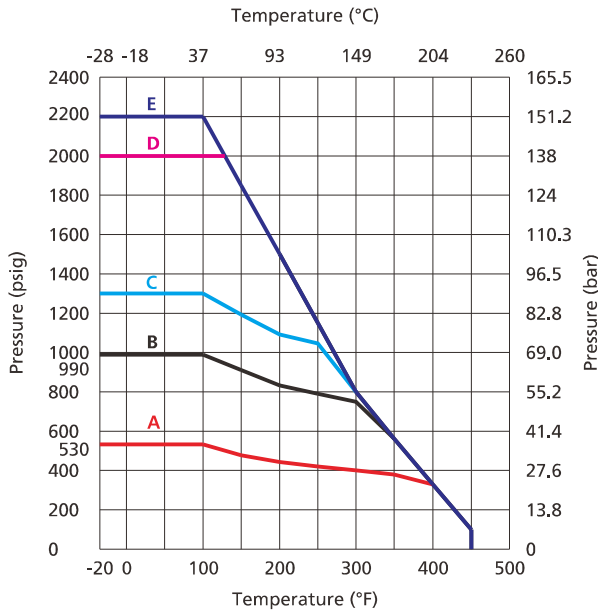


### Features

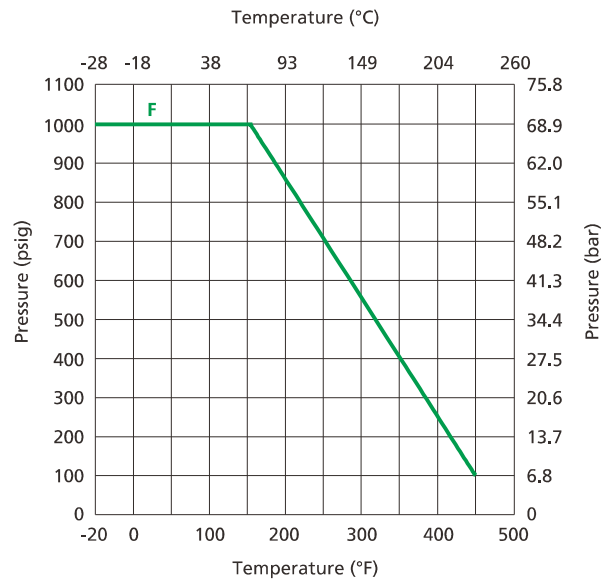
- Working temperature: -20 °F to 450 °F (-28 °C to 232 °C)
- Main line tube is full bore
- Main line Tube with orbital welding
- Branch ball valves are BHP or BGP series
- Factory tested for leaks with nitrogen or compressed air at rated working pressure, with optional helium leak testing to helium leak rate  $\leq 1 \times 10^{-8}$  std-cm<sup>3</sup>/s

### Pressure vs. Temperature

Branch ball valves are BHP Series



Branch ball valves are BGP Series



Main Line Tube Size in (mm)	4 × 0.083	2 × 0.065	1 1/2 × 0.065	1 × 0.065	3/4 × 0.065 1/2 × 0.049
Orifice Code	38, 32	13, 10	13, 10, 07	13, 10, 07	05, 07
Temperature and Pressure Curve	A —	B —	C —	D —	E —

Main Line Tube Size in (mm)	1 1/2 × 0.065	1 × 0.065	3/4 × 0.065 1/2 × 0.065
Orifice Code	15, 11, 07	15, 11, 07	07, 05
Temperature and Pressure Curve	F —		

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## Process Specification

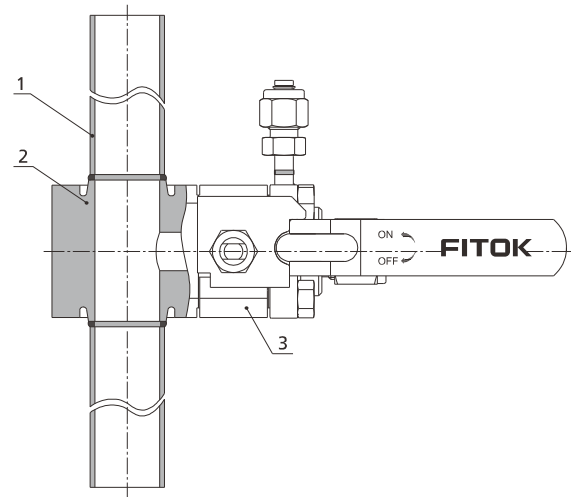
Item \ Process Specification	Special Cleaning and Packaging Process (FC-02)	Ultra High Purity Process (FC-03)
Material	CF8M, CF3M	CF3M
Flow Path Surface Roughness	Ra 25 µin. (0.6 µm)	Ra 10 µin. (0.25 µm)
Process	Machined	Electropolished
Lubrication	Components in contact with the medium are treated with special lubricants that are oxygen-compatible	

## Major Materials of Construction

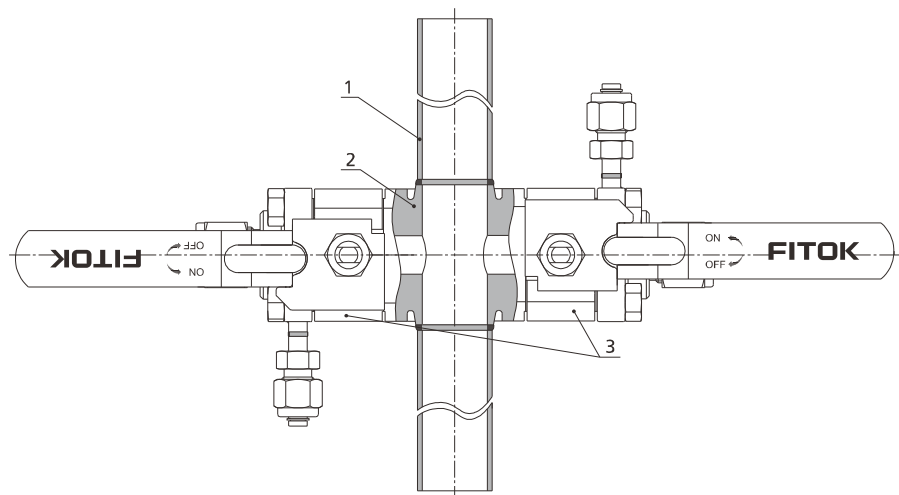
Item	Component	Material/Specification	
1	Main Line Tube	316L SS/A269	
2	Valve block	316L SS/A479	
3	BHP Series Branch Ball Valve	Body	CF8M/A351   CF3M/A351
		Seat	Modified PTFE
	BGP Series Branch Ball Valve	Body	CF8M/A351   CF3M/A351
		Seat	PTFE

Note:  
Components in contact with the media are listed in italics. Branch ball valves are BHP and BGP series, and other parts not listed are the same materials as BHP and BGP series standard valve parts.

Single Horizontal Cross

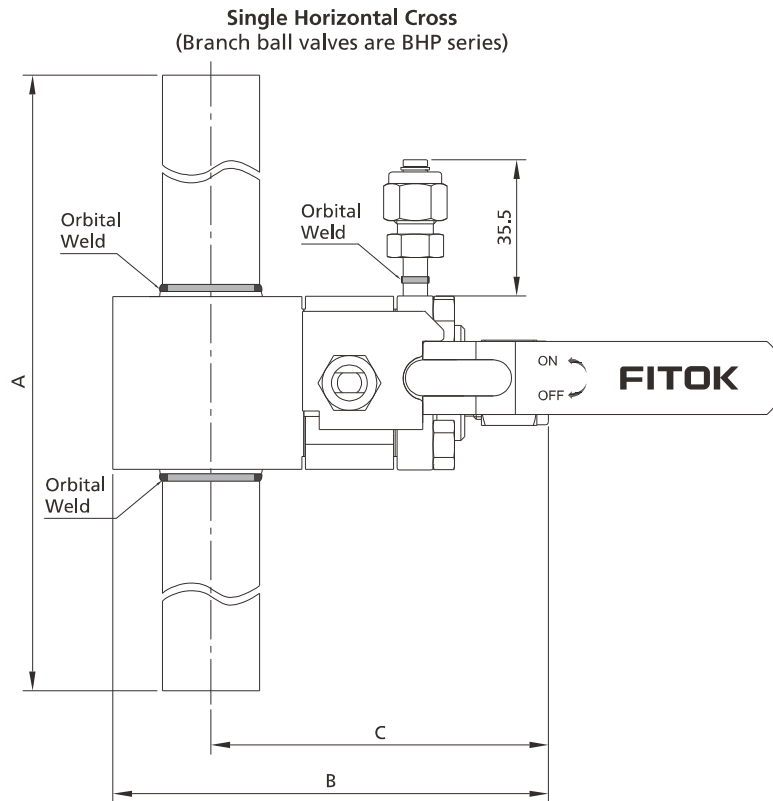


Double Horizontal Cross



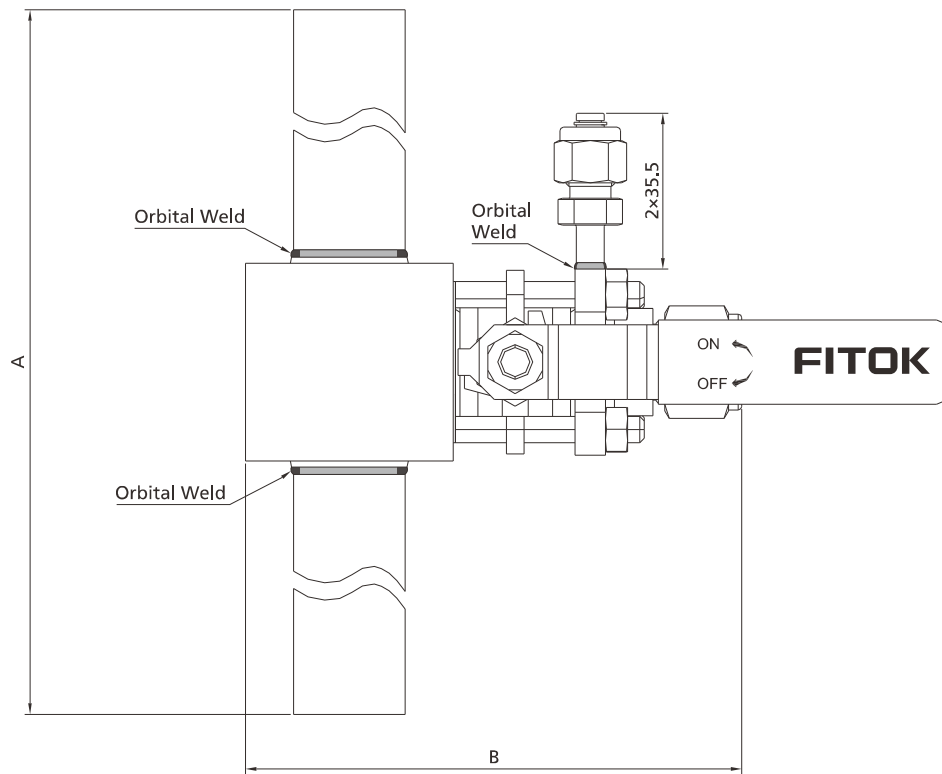
## Ordering information and dimensions

Please refer to BHP and BGP series for the dimensions of branch ball valves.  
Dimensions are indicated in in. (mm, only for reference and subject to change).



Ordering information	Main line tube size in.	Branch line tube end size	Orifice in. (mm)	Dimensions, in. (mm)		
				A	B	C
BDP□□-SHC-TB8-FL4-05-D1	1/2 × 0.049	1/4 in.	0.187 (4.8)	7.00 (178)	3.31 (84.1)	2.56 (65.0)
BDP□□-SHC-TB8-FL6-07-D1		3/8 in.	0.281 (7.1)			
BDP□□-SHC-TB12-FL4-05-D1	3/4 × 0.065	1/4 in.	0.187 (4.8)	9.00 (229)	3.31 (84.1)	2.56 (65.0)
BDP□□-SHC-TB12-FL6-07-D1		3/8 in.	0.281 (7.1)			
BDP□□-SHC-TB16-FL6-07-D1	1 × 0.065	3/8 in.	0.281 (7.1)	13.0 (330)	4.31 (109)	3.31 (84.1)
BDP□□-SHC-TB16-FL8-10-D1		1/2 in.	0.411 (10.4)		4.44 (113)	3.44 (87.4)
BDP□□-SHC-TB16-FL12-13-D1		3/4 in.	0.516 (13.1)			
BDP□□-SHC-TB24-FL6-07-D1	1 1/2 × 0.065	3/8 in.	0.281 (7.1)	13.0 (330)	4.56 (116)	3.44 (87.4)
BDP□□-SHC-TB24-FL8-10-D1		1/2 in.	0.411 (10.4)		4.69 (119)	6.56 (90.4)
BDP□□-SHC-TB24-FL12-13-D1		3/4 in.	0.516 (13.1)			
BDP□□-SHC-TB32-FL8-10-D1	2 × 0.065	1/2 in.	0.411 (10.4)	13.0 (330)	5.97 (152)	4.06 (103)
BDP□□-SHC-TB32-FL12-13-D1		3/4 in.	0.516 (13.1)			
BDP□□-SHC-TB64-FL24-32-D1	4 × 0.083	1 1/2 in.	1.250 (31.8)	23.0 (584)	10.2 (259)	7.19 (183)
BDP□□-SHC-TB64-FL32-38-D1		2 in.	1.500 (38.1)		11.6 (295)	8.63 (219)

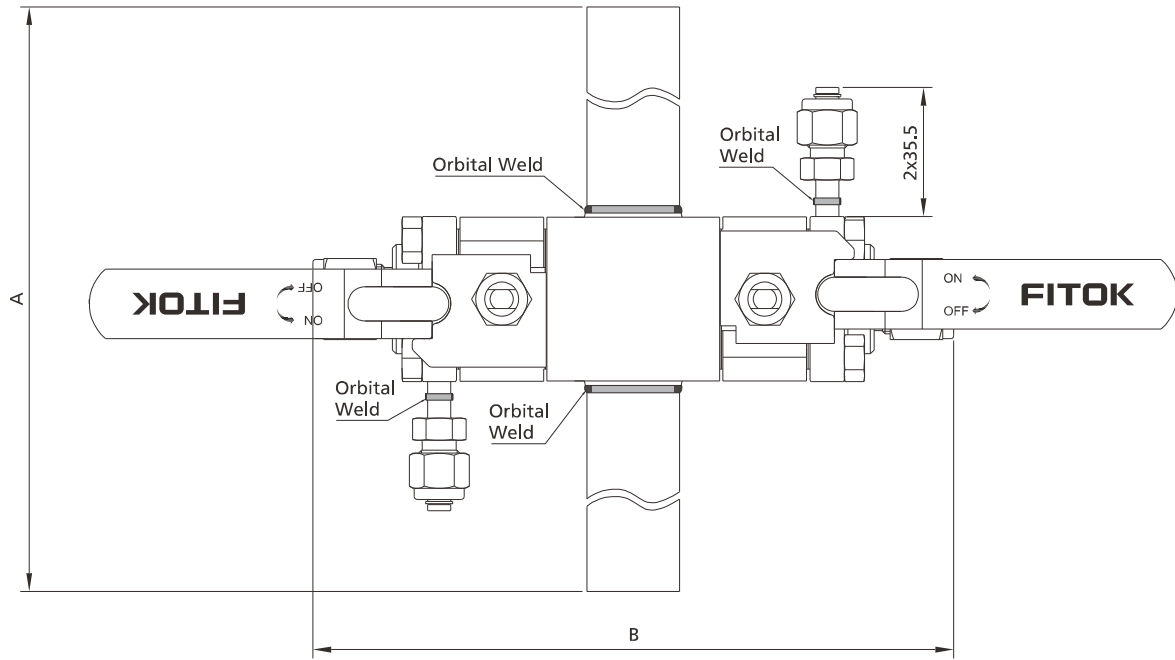
**Single Horizontal Cross**  
(Branch ball valves are BGP series)



Ordering information	Main line tube size in.	Branch line tube end size	Orifice in. (mm)	Dimensions, in. (mm)	
				A	B
BDP□□-SHC-TB8-BGP-FL4-05-D1	1/2 × 0.049	1/4 in.	0.19 (4.8)	7.00 (178)	3.12 (79.2)
BDP□□-SHC-TB8-BGP-FL6-07-D1		3/8 in.	0.28 (7.1)		
BDP□□-SHC-TB12-BGP-FL4-05-D1	3/4 × 0.065	1/4 in.	0.19 (4.8)	9.00 (229)	3.12 (79.2)
BDP□□-SHC-TB12-BGP-FL6-07-D1		3/8 in.	0.28 (7.1)		
BDP□□-SHC-TB16-BGP-FL6-07-D1	1 × 0.065	3/8 in.	0.28 (7.1)	13.0 (330)	4.53 (115)
BDP□□-SHC-TB16-BGP-FL8-11-D1		1/2 in.	0.42 (10.6)		4.72 (120)
BDP□□-SHC-TB16-BGP-FL12-15-D1		3/4 in.	0.55 (14.0)		
BDP□□-SHC-TB24-BGP-FL6-07-D1	1 1/2 × 0.065	3/8 in.	0.28 (7.1)	13.0 (330)	4.80 (122)
BDP□□-SHC-TB24-BGP-FL8-11-D1		1/2 in.	0.42 (10.6)		5.00 (127)
BDP□□-SHC-TB24-BGP-FL12-15-D1		3/4 in.	0.55 (14.0)		

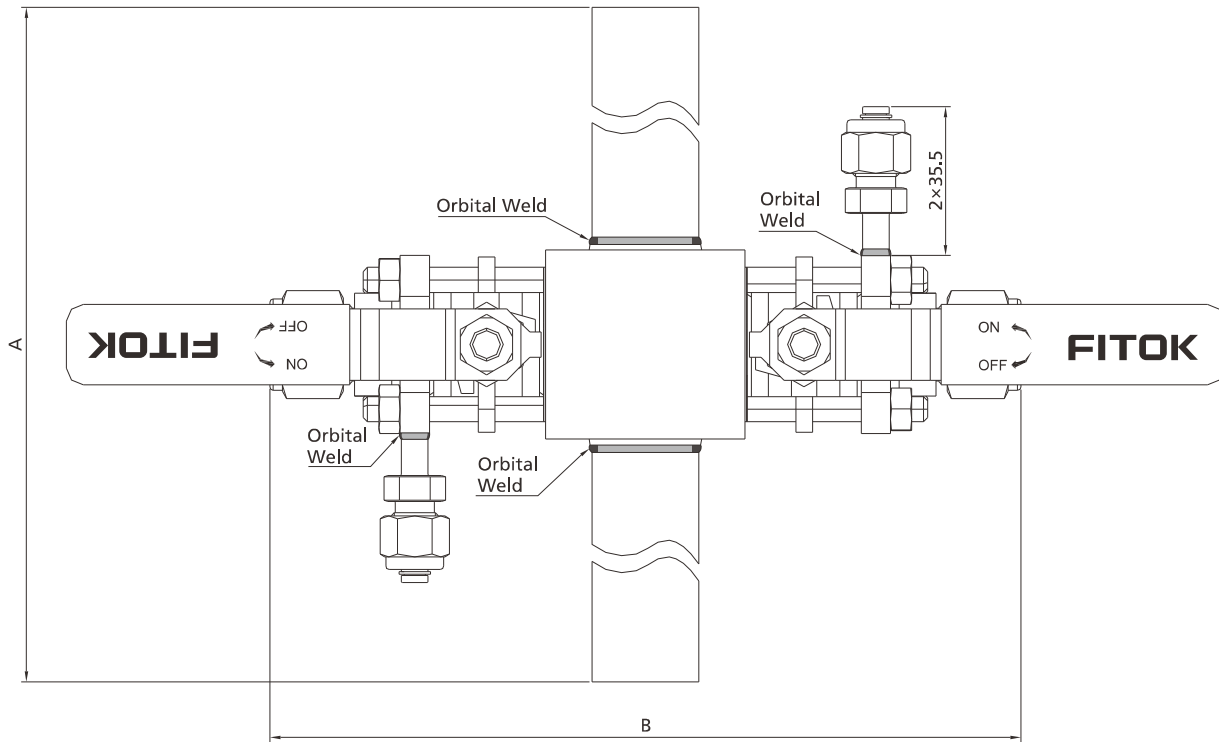
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**Double Horizontal Cross**  
(Branch ball valves are BHP series)



Ordering information	Main line tube size in.	Branch line tube end size	Orifice in. (mm)	Dimensions, in. (mm)	
				A	B
BDP□□-DHC-TB8-FL4-05-D1	1/2 × 0.049	1/4 in.	0.187 (4.8)	7.00 (178)	5.19 (132)
BDP□□-DHC-TB8-FL6-07-D1		3/8 in.	0.281 (7.1)		
BDP□□-DHC-TB12-FL4-05-D1	3/4 × 0.065	1/4 in.	0.187 (4.8)	9.00 (229)	5.19 (132)
BDP□□-DHC-TB12-FL6-07-D1		3/8 in.	0.281 (7.1)		
BDP□□-DHC-TB16-FL6-07-D1	1 × 0.065	3/8 in.	0.281 (7.1)	13.0 (330)	6.69 (170)
BDP□□-DHC-TB16-FL8-10-D1		1/2 in.	0.411 (10.4)		6.88 (175)
BDP□□-DHC-TB16-FL12-13-D1		3/4 in.	0.516 (13.1)		
BDP□□-DHC-TB24-FL6-07-D1	1 1/2 × 0.065	3/8 in.	0.281 (7.1)	13.0 (330)	6.94 (176)
BDP□□-DHC-TB24-FL8-10-D1		1/2 in.	0.411 (10.4)		7.13 (181)
BDP□□-DHC-TB24-FL12-13-D1		3/4 in.	0.516 (13.1)		
BDP□□-DHC-TB32-FL8-10-D1	2 × 0.065	1/2 in.	0.411 (10.4)	13.0 (330)	8.19 (208)
BDP□□-DHC-TB32-FL12-13-D1		3/4 in.	0.516 (13.1)		
BDP□□-DHC-TB64-FL24-32-D1	4 × 0.083	1 1/2 in.	1.250 (31.8)	23.0 (584)	14.4 (365)
BDP□□-DHC-TB64-FL32-38-D1		2 in.	1.500 (38.1)		17.2 (437)

**Double Horizontal Cross**  
(Branch ball valves are BGP series)



Ordering information	Main line tube size in.	Branch line tube end size	Orifice in. (mm)	Dimensions, in. (mm)	
				A	B
BDP□□-DHC-TB8-BGP-FL4-05-D1	1/2 × 0.049	1/4 in.	0.19 (4.8)	7.00 (178)	4.65 (118)
BDP□□-DHC-TB8-BGP-FL6-07-D1		3/8 in.	0.28 (7.1)		
BDP□□-DHC-TB12-BGP-FL4-05-D1	3/4 × 0.065	1/4 in.	0.19 (4.8)	9.00 (229)	4.65 (118)
BDP□□-DHC-TB12-BGP-FL6-07-D1		3/8 in.	0.28 (7.1)		
BDP□□-DHC-TB16-BGP-FL6-07-D1	1 × 0.065	3/8 in.	0.28 (7.1)	13.0 (330)	6.14 (156)
BDP□□-DHC-TB16-BGP-FL8-11-D1		1/2 in.	0.42 (10.6)		6.34 (161)
BDP□□-DHC-TB16-BGP-FL12-15-D1		3/4 in.	0.55 (14.0)		
BDP□□-DHC-TB24-BGP-FL6-07-D1	1 1/2 × 0.065	3/8 in.	0.28 (7.1)	13.0 (330)	6.38 (162)
BDP□□-DHC-TB24-BGP-FL8-11-D1		1/2 in.	0.42 (10.6)		6.57 (167)
BDP□□-DHC-TB24-BGP-FL12-15-D1		3/4 in.	0.55 (14.0)		

Fittings

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Regulators

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Tubing

Integrated Systems

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