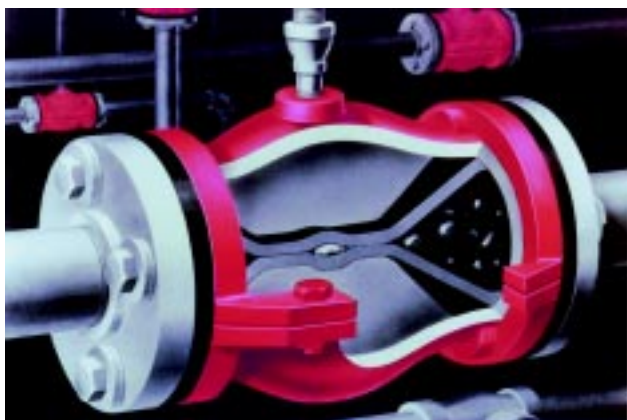


# Type A Pinch Valve

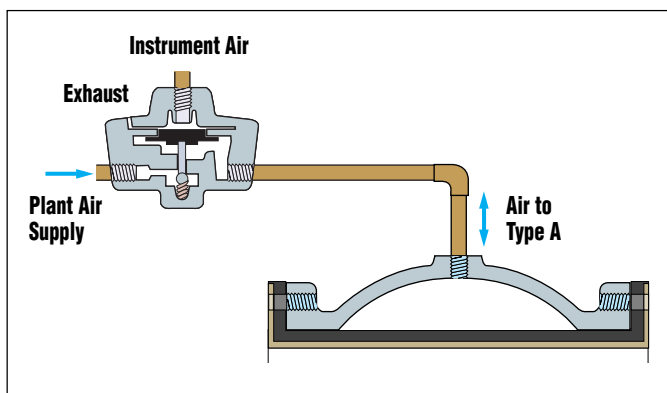
- ▶ Closes drop-tight on entrapped solids
- ▶ Body functions as built-in actuator
- ▶ No cavities or dead spots to bind valve operation
- ▶ Full-port, double-wall or cone sleeve trim
- ▶ Simple design not affected by harsh external environments
- ▶ No packing to replace or maintain, ever
- ▶ Cost effective, maintenance free



## Materials of Construction

- ▶ Cast iron or aluminum body
- ▶ Sleeves available in Pure Gum Rubber, Neoprene, Hypalon®, Chlorobutyl, Buna-N, EPDM and Viton®
- ▶ ANSI Class 125/150, 250/300

## Controlling a Type A with a Proportional Relay



Red Valve recommends an adjustable relay (as opposed to a fixed, proportional relay).

Introduced and patented by Red Valve, the air-actuated Type A Pinch Valve offers a unique, cost-effective solution to flow control problems. More Red Valve Type A Valves are in use than any other pinch valve throughout the world. The secret is in the rubber sleeve – the valve's only wetted part.

Actuation of the valve, the pinching action, is accomplished by air or hydraulic pressure placed on the sleeve. The valve body acts as a **built-in actuator**, eliminating costly pneumatic, hydraulic or electric actuators. Modulating the air pressure within the annular space between the body and the sleeve can open, throttle or close the valve. Approximately 35 psi over line pressure is required for closure.

The sleeve's flexibility allows the valve to close drop-tight around entrapped solids, eliminating hang-ups that could damage the valve. The sealing area is equal to 95 percent of the valve's length. There are no seats or packing to replace and no cavities or dead spots to collect debris and bind valve operation. The Type A Valve's abrasion resistance is unmatched. When the valve is open, it operates like a straight piece of pipe in the line. Type A Valves are used on remote locations or harsh environments since there are no external links, levers, pistons or rotating parts to cause downtime.

## Control

Throttling control is accomplished by using a booster or proportional relay to modulate air pressure to the Type A Valve. A changing air signal through the proportional relay will modulate the Type A Valve.

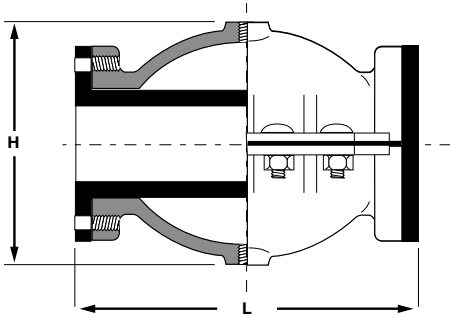
## Type A Double Wall

Designed for highly abrasive applications, the Type A Double-Wall Sleeve Valve outlasts even stellite V-Ball valves and metal-seated valves on abrasive slurries. To compensate for the extra sleeve thickness, the valve body is increased to the next size.

## Type A Cone

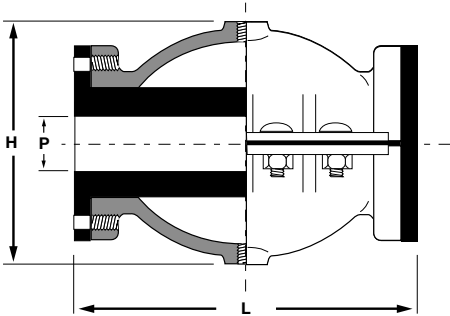
Type A Cone Sleeve Valves are designed specifically for throttling control applications. The  $C_v$  of the valve can be matched to any requirement by reducing the port at the center of the sleeve. The port reduction is maintained through the downstream half of the sleeve for increased wear resistance, and, since pressure recovery occurs downstream of the valve, cavitation is minimized.

## Type A – Full Port



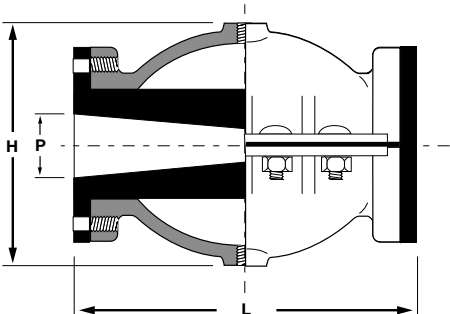
VALVE SIZE	LENGTH L	HEIGHT H	WORKING PRESSURE psi	WEIGHT CAST IRON lbs	AIR VOLUME ft <sup>3</sup>	AIR INLET NPT
1/2"	3"	3-1/2"	150	5	.002	1/4"
3/4"	4"	3-3/4"	150	7	.002	1/4"
1"	5"	4-1/4"	150	9	.002	1/4"
1-1/2"	7"	5"	150	17	.007	1/4"
2"	9"	6-1/2"	150	32	.016	1/4"
2-1/2"	10"	7"	150	40	.028	1/4"
3"	12"	8"	150	55	.049	1/4"
4"	12-1/2"	10-5/8"	150	85	.091	1/4"
5"	16-1/2"	11-1/2"	150	119	.187	1/4"
6"	20"	13"	150	166	.327	1/4"
8"	22"	16-1/4"	125	235	.640	1/4"
10"	24"	21"	100	425	1.09	1/4"
12"	26"	24"	100	640	1.70	1/4"
14"	30"	22"	75	780	2.39	1/4"
16"	34"	29-1/2"	75	910	3.59	1/4"
18"	39"	30-1/2"	50	1,275	5.27	3/4"
*20" x 24"	43"	31"	50	1,704	7.25	1"
*24" x 28"	51"	38-1/2"	50	2,100	12.5	1"

## Type A – Double Wall



VALVE SIZE	PORT SIZE P	LENGTH L	HEIGHT H	WORKING PRESSURE psi	WEIGHT CAST IRON lbs	AIR INLET NPT
1"	1/2"	5"	4-1/4"	150	11	1/4"
2"	1"	9"	6-1/2"	150	33	1/4"
2-1/2"	1-1/2"	10"	7"	150	42	1/4"
3"	2"	12"	8"	150	57	1/4"
4"	2-1/2"	12-1/2"	10-5/8"	150	88	1/4"
4"	3"	12-1/2"	10-5/8"	150	88	1/4"
5"	4"	16-1/2"	11-1/2"	150	123	1/4"
6"	5"	20"	13"	150	171	1/4"
8"	6"	22"	16-1/4"	125	239	1/4"
10"	8"	24"	21"	100	432	1/4"
12"	10"	26"	24"	100	648	1/4"
14"	12"	30"	22"	75	826	1/4"
16"	14"	34"	29-1/2"	75	970	1/4"
18"	16"	39"	30-1/2"	50	1,343	3/4"
*20" x 24"	18"	43"	31"	50	1,800	1"
*24" x 28"	20"	51"	38-1/2"	50	2,365	1"

## Type A – Cone



VALVE SIZE	AVAILABLE PORT SIZES P**	LENGTH L	HEIGHT H	WORKING PRESSURE psi	WEIGHT CAST IRON lbs	AIR INLET NPT
1"	1/4", 1/2", 3/4"	5"	4-1/4"	150	9	1/4"
1-1/2"	3/4", 1", 1-1/4"	7"	5"	150	17	1/4"
2"	3/4", 1", 1-1/2"	9"	6-1/2"	150	32	1/4"
2-1/2"	1", 1-1/2", 2"	10"	7"	150	40	1/4"
3"	1-1/2", 2", 2-1/2"	12"	8"	150	55	1/4"
4"	2", 2-1/2", 3"	12-1/2"	10-5/8"	150	85	1/4"
5"	2-1/2", 3", 4"	16-1/2"	11-1/2"	150	119	1/4"
6"	3", 4", 5"	20"	13"	150	166	1/4"
8"	4", 5", 6"	22"	16-1/4"	125	235	1/4"
10"	5", 6", 8"	24"	21"	100	425	1/4"
12"	6", 8", 10"	26"	24"	100	640	1/4"
14"	8", 10", 12"	30"	22"	75	810	1/4"
16"	10", 12", 14"	34"	29 1/2"	75	940	1/4"
18"	12", 14", 16"	39"	30 1/2"	50	1,321	3/4"
*20" x 24"	14", 16", 18"	43"	31"	50	1,770	1"
*24" x 28"	16", 18", 20"	51"	38 1/2"	50	2,277	1"

\*Valve uses extended flange.

\*\*Other port sizes available – consult factory.