

Type 546 Control Ball Option



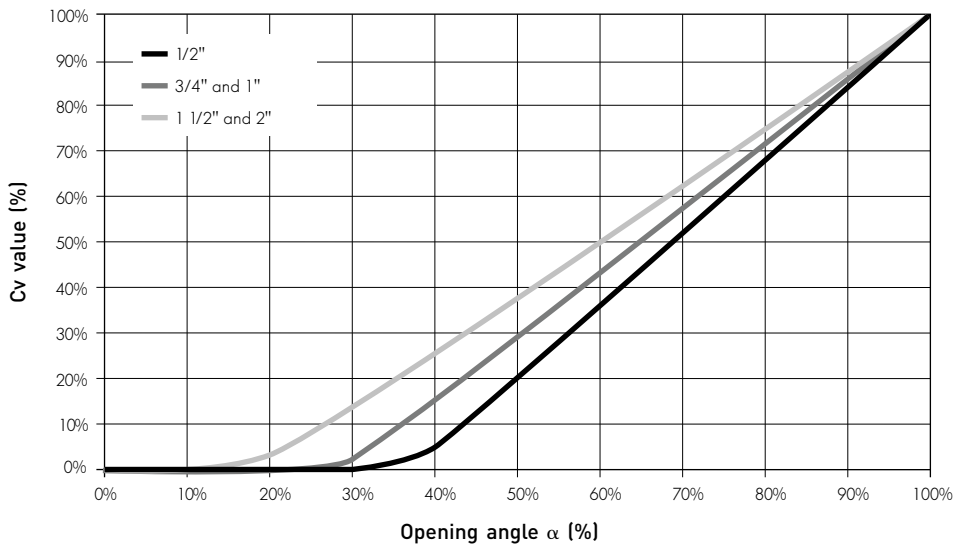
Plastic ball valves are ideal shut-off valves for aggressive media. With increased automation in piping systems, the need for control functions also increases. The "characterized" ball of the Type 546 Control Ball Option allows for very small pressure loss in the open position and excellent flow control utilizing both manual and actuated versions.

George Fischer has adapted the ball design of the familiar Type 110 and developed the Type 546 option, a ball valve program which, with its flow characteristics, is ideally suited for control tasks. This new Type 546 option is available in PVC, CPVC, PP and PVDF, in manual as well as actuated versions (electric and pneumatic).

Product Features

- All-plastic valve
- Dimension range 1/2"-2"
- Large selection of materials: PVC, CPVC, PP, PVDF
- Linear flow characteristics
- High Cv value
- Manual and actuated versions
- Simple design
- George Fischer product quality

Flow Diagram



For other differential pressures:

$$Q_{gpm} = C_v \sqrt{\Delta p}$$

C_v = Gallons per minute at 1 psi pressure drop

3/4" (25 mm) valves are 1" (32 mm) valves with specialized end connectors.

1 1/2" (50 mm) valves are 2" (63 mm) valves with specialized end connectors.

Cv values for different control angles at $\Delta p = 1$ psi

Set values				Flow									
Angle		Voltage [V]	Current [mA]	1/2"		3/4"		1"		1 1/2"		2"	
[°]	%	0-10 V	4-20 mA	(gpm)	% of Cv	(gpm)	% of Cv	(gpm)	% of Cv	(gpm)	% of Cv	(gpm)	% of Cv
0	0	0	4.0	0	0	0	0	0	0	0	0	0	0
9	10	1	5.6	0	0	0	0	0	0	0	0	0	0
18	20	2	7.2	0	0	0	0	0	0	1.1	2	1.5	3
27	30	3	8.8	0	0	0	0	0.3	2	7.4	14	7.8	15
36	40	4	10.4	0.3	5	2.2	14	2.5	16	13.8	27	14.0	27
45	50	5	12.0	1.3	20	4.6	28	4.6	30	20.1	39	20.2	39
54	60	6	13.6	2.2	36	6.9	43	6.7	44	26.5	51	26.5	51
63	70	7	15.2	3.2	52	9.2	57	8.9	58	32.8	63	32.8	64
72	80	8	16.8	4.1	68	11.5	71	11.1	72	39.1	76	39.0	76
81	90	9	18.4	5.0	84	13.8	86	13.2	86	45.5	88	45.2	88
90	100	10	20.0	6.0=Cv	100	16.1=Cv	100	15.4=Cv	100	51.9=Cv	100	51.5=Cv	100

Type 546 Control Ball Valve Option



How To Order

1. Add option "C" to the end of the valve part number
2. Add option "C" price to valve list price (1½" valves use 2" price; ¾" valves use 1" price)
3. "C" discount applies for manual or actuated valve with characterized ball

Example:

161 546 344C
 1" PVC/EPDM Type 546 Ball Valve with control ball

Size (inch)	PVC Adder	CPVC ¹ Adder	PP Adder	PVDF Adder
¾				
½				
¾**				
1				
1¼				
1½**				
2				

Characterized Ball Only

(C)

Size (inch)	PVC	PP	PVDF
½	161491032	167483419	175483379
1 and ¾	161491034	167483421	175483381
2 and 1½	161491037	167483424	175483384

Notes:

- ¹ CPVC valve uses PVDF Ball
- ** ¾" and 1½" are reduced from next largest size in the same way as the Type 110. Price using 1" and 2" valves, respectfully.
- Control Ball Option <C> available in both manual and actuated valves. [See actuated valves and accessories pricing to build complete price.]
- When specifying on a Type 107 electric actuator, only 90 deg on/off available.
- When specifying on Types 131-133 using EA 21, the PE 25 positioner is also required and sold as a factory assembly. See EA21 Accessories for complete details.