

MAGNUM Series Steam Traps For Large Process Applications



A versatile line of high capacity steam traps, Bestobell's Magnum can be supplied with up to 18 bimetallic elements for hot condensate flows as high as 149,000 pounds per hour. With five models available for differential pressures up to 320 psi, you can add or delete elements to match your changing conditions.

- **Built to match your application** — body size, element pressure ranges, connection sizes and types are custom-matched to your specific application.
- **Single blade element** — offers long-term, trouble-free service because it's not prone to the dirt build-up encountered with many other bimetallic trap designs.
- **Modulating discharge** — automatically adjusts to operating pressure and load, overcoming problems associated with cyclic discharge.
- **Built-in check valve** — prevents backflow during shutdown.
- **Stainless Steel internals** — leads to longer service life since materials are highly resistant to fatigue and corrosion.
- **Continuous air and CO₂ venting** — maximizes heat transfer while minimizing corrosion.
- **Fast start-up capabilities** — due to high cold discharge capacities.

Bestobell MAGNUM Series Steam Traps

Specifications

Line Sizes: 1-1/2", 2", 3", 4", 6", 8"

End Connections: NPT, BSPT, BSPP (1-1/2" & 2" only); socket weld (1-1/2" & 2" only); raised face flanged ends: ANSI 150, 300. Flanged ends recommended for fabricated units.

Materials:

- Body & Cover: *single element units:* forged Carbon Steel; *multi-element units:* fabricated Steel
- Valve Seat & Cone: Stainless Steel
- Bimetal: Stainless Steel
- Nuts & Bolts: Steel
- Gasket: flexible Graphite

Maximum Working Conditions

Magnum Model	Differential Pressure
Magnum 3	30 psi (2,1 bar)
Magnum 6	70 psi (4,8 bar)
Magnum 10	120 psi (8,3 bar)
Magnum 16	200 psi (13,8 bar)
Magnum 25	320 psi (22,1 bar)

Body Size	Body Temp.	Body Pressure
Single	650° (343°C)	750 psi (52 bar)
Small		450 psi (31 bar)
Medium		450 psi (31 bar)
Large		310 psi (21 bar)

Note: final body pressure/temperature ratings dependent upon ratings of end connections.

Capacity Chart: capacity per element installed

When sizing, select model number suitable for the differential pressure for your application.

Divide your capacity requirement by element capacity shown to determine number of elements used (round up). Refer to **Body Size Selection Table** above to determine the appropriate Magnum body size required.

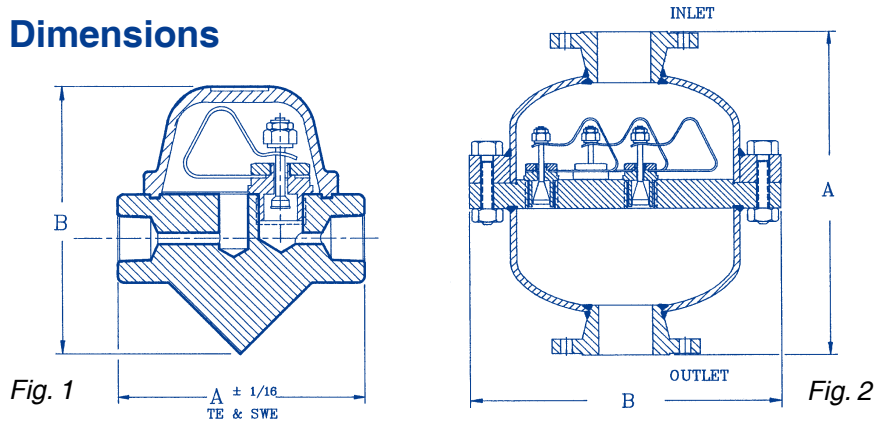
Model	Differential Pressure, psi (bar)	5 (0,34)	10 (0,69)	20 (1,38)	30 (2,07)	50 (3,45)	70 (4,83)	100 (6,90)	120 (8,28)	150 (10,34)	200 (13,79)	260 (17,93)	320 (22,07)
Magnum 3	Cold start-up, lbs/hr (kg/hr)	20000 (9072)	30000 (13608)	40000 (18144)	50000 (22680)	—	—	—	—	—	—	—	—
	Hot flow, lbs/hr (kg/hr)	6300 (2857)	7500 (3402)	9000 (4082)	11000 (4989)	—	—	—	—	—	—	—	—
Magnum 6	Cold start-up, lbs/hr (kg/hr)	—	15000 (6804)	25000 (11340)	31000 (14061)	42000 (19051)	46000 (20865)	—	—	—	—	—	—
	Hot flow, lbs/hr (kg/hr)	—	4400 (1995)	6000 (2721)	7200 (3265)	8500 (3855)	9200 (4173)	—	—	—	—	—	—
Magnum 10	Cold start-up, lbs/hr (kg/hr)	—	—	10000 (4536)	16000 (7257)	20000 (9072)	26000 (11793)	31000 (14061)	35000 (15876)	—	—	—	—
	Hot flow, lbs/hr (kg/hr)	—	—	2600 (1179)	4550 (2063)	6200 (2812)	6800 (3084)	7700 (3492)	8300 (3764)	—	—	—	—
Magnum 16	Cold start-up, lbs/hr (kg/hr)	—	—	—	—	17000 (7711)	21000 (9525)	26000 (11793)	31000 (14061)	36000 (16329)	41000 (18597)	—	—
	Hot flow, lbs/hr (kg/hr)	—	—	—	—	1800 (816)	2700 (1224)	3800 (1723)	4750 (2154)	5850 (2653)	6900 (3129)	—	—
Magnum 25	Cold start-up, lbs/hr (kg/hr)	—	—	—	—	—	—	—	—	27000 (12247)	33000 (14968)	42000 (19051)	47000 (21319)
	Hot flow, lbs/hr (kg/hr)	—	—	—	—	—	—	—	—	2800 (1270)	3900 (1769)	5200 (2358)	6400 (2903)

Note: flow rates based on discharge to atmospheric pressure, valid for back pressures up to 20% of inlet pressure. Higher back pressures require reset of control element to obtain these capacities. Consult factory for details.

Body Size Selection (based on number of elements used)

No. of Elements	1	1 or 2	3	4 - 6	7 - 10	11 - 18
Magnum 3 or 6	Use 2" GM3 or GM6	Small	Medium	Medium	Large	N/A
Magnum 10, 16, 25	Single Element Body	Small	Small	Medium	Medium	Large

Dimensions



Size	Ends	Fig. 1		Fig. 2		
		1 Element Body	Small Body	Medium Body	Large Body	
A	1-1/2", 2"	NPT/SW	7-1/8" (181 mm)	16-13/32" (416,7 mm)	—	—
	1-1/2"	300#FE	11-1/2" (292,1 mm)	16" (406,4 mm)	—	—
	2"	300# FE	11-3/8" (288,9 mm)	16" (406,4 mm)	19-1/2" (495,3 mm)	—
	3"	FE	N/A	16-1/8" (409,6 mm)	19-7/8" (504,8 mm)	—
	4"	FE	N/A	16-1/4" (412,8 mm)	20-1/8" (511,2 mm)	—
	6"	FE	N/A	16" (406,4 mm)	20-3/8" (517,5 mm)	24" (609,6 mm)
B	All	All	9-1/2" (241,3 mm)	12-3/16" (309,6 mm)	18-1/2" (469,9 mm)	22-1/2" (571,5 mm)
Wt.	—	—	33 to 51 lbs. 15 to 23 kg	110 lbs. 50 kg	280 lbs. 127 kg	340 lbs. 154 kg

Note: contact factory for availability of larger sizes.