



Mark 5850HP Series

High Back Pressure Regulator

CRN Registration Number Available

HIGH BACK PRESSURE REGULATORS

The Mark 5850HP is a high pressure, back pressure regulator designed to maintain upstream pressure of gases and liquids. As a compact, lightweight product, it is well suited for applications where space and weight are at a premium.

With a robust piston design, the MK5850HP can handle setpoints up to 5000 psig (345 bar) at 100°F (37,8°C) with ease. The T-bar adjusting handle allows convenient, precise final setpoint adjustment.

The valve is normally closed, with the soft seat maintaining ANSI Class VI shutoff. When the inlet rises above the spring setpoint, the pressure forces the piston upwards to open and relieve the pressure. As the inlet pressure falls to the spring setpoint, the valve then throttles to the closed position.

Among other applications, the MK5850HP can be used for:

- high pressure vessel venting
- high pressure injection applications
- gas/liquid sampling stations
- compressor skids
- test stands

Features:

- Complete barstock construction – ensures body/trim material quality and facilitates usage of alloy materials
- High flow – Cv 0.4 (Kv 0,34) in a compact design
- Full pressure rating across entire temperature range – maximum setpoints available at maximum pressures
- T-bar handle – allows convenient, precise final setpoint adjustment
- Proof-tested to 20,000 psi (1380 bar) – five times pressure rating, ensures safety when working with high pressures
- A variety of seal materials ensure compatibility with medium



A Division of
Richards Industrials
3170 Wasson Road
Cincinnati, OH 45209

513.533.5600
lowflow@richardsind.com

www.lowflowvalve.com

MK5850HP HIGH BACK PRESSURE REGULATOR
SPECIFICATIONS

Line Size: 1/2" (DN15)

End Connections

- Threaded
- Socket Weld
- Flanged (welded)

Standard Materials

- Body/Spring Housing: 316L Stainless Steel
- Adjusting Screw: Nitronic 60
- Seat: PEEK
- Orifice: 316L Stainless Steel
- Piston: Nitronic 60
- Cylinder: 316L Stainless Steel
- O-Rings: Buna-N (-65°F to 250°F/-54°C to 121°C); EPDM (-20°F to 450°F/-29°C to 232°C); Viton (-15°F to 400°F/-26°C to 204°C)
- Trim Bushings & Seals: Teflon
- Shutoff: Class VI
- For other body/trim materials, please consult factory

ORDERING SCHEMATIC

MODEL	
5850HP	Standard

BODY MATERIAL	
316	316L Stainless Steel

O-RING	
B	Buna-N
E	EPDM
V	Viton

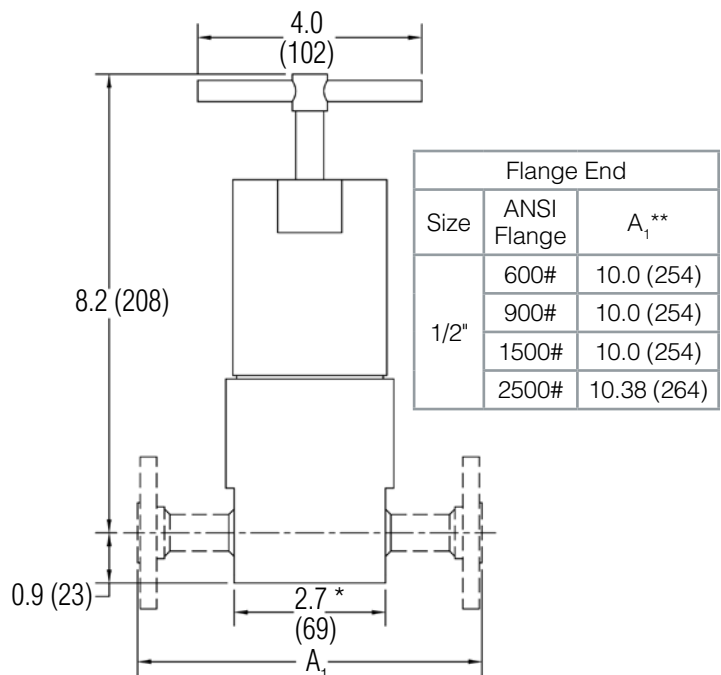
1 & 2		BODY	
Size		End Connection	
A	1/2" (DN15)	A	FNPT
		B	FSW
		E	600# Flange
		F	900# Flange
		G	1500# Flange
ZZ		Non-Standard	

Body Pressure/Temperature

- 5000 psig @ 100°F (345 bar @ 38°C)
- 3300 psig @ 450°F (228 bar @ 232°C) with EPDM
- 3300 psig @ 250°F (228 bar @ 121°C) with Buna
- 3300 psig @ 400°F (228 bar @ 204°C) with Viton

Standard Cv: 0.4 (0,34 Kv)

Standard Range: 800 - 5000 psi (55 - 345 bar); for lower setpoints, contact factory

DIMENSIONS


* 1/2" THD, FSW, & BWE Ends, weight 30 lbs (13,6 kgs)

** 1/2" Flanged End, ANSI 2500#, weight 45 lbs (20,5 kgs)

3 & 4		TRIM
4P		Cv 0.4
ZZ		Non-Standard

5 & 6		SET RANGE
B9		800 - 5000 psi (55 - 345 bar)
ZZ		Non-Standard

7 & 8		ACCESSORY
SC		Clean / Oil Free
ZZ		Non-Standard