

PSG50 Pneumatic Straight Gate



The PSG50 Pneumatic Straight Gate solution features an all-billet actuator construction designed as a durable, adjustable and performance enhancing control device for externally wastegated turbos. The Turbosmart Pneumatic Straight gate features a wide range of flow control capabilities allowing for stability throughout the powerband allowing for consistent and controllable boost pressure.

- Self-Balancing Zero-Offset Butterfly Valve
- Unparalleled Tuning Window: 5+ Times Base Spring Pressure
- Designed and Validated to 1300 Deg C (2372 Deg F) EGT's
- 360 Degree 60mm V-Band Fitment
- Clock-able Billet Actuator & Bracket
- Collared cap retainment for ease of adjustment
- Twin Port chamber actuation available for large boost bandwidth

Mechanical Data

Actuator diameter	57mm
Mass	1270g (2.8lb)
Actuator stroke	15mm
Linearity	-1.78% of full lift (BFSL)
Hysteresis	6.4% of base pressure
Set pressure accuracy	+/- 0.5 psi of base pressure
Safe working pressure max.	100 psi / 690 kPa / 6.89 bar
Actuator life	0.75x10 ⁶ cycles @ 180°C ambient 1.0x10 ⁶ cycles @ 80°C ambient
Max. spring base pressure	26 psi / 180 kPa / 1.8 bar
Min. spring base pressure	5 psi / 34 kPa / 0.34 bar
Port fittings type	Upper: 1 x 1/8" NPT Lower: 2 x 1/8" NPT

Thermal Data

Max. ambient/compartement temp.	260°C / 500°F
Max. actuator temp.	310°C / 590°F
Max. body temp	1300 °C / 2372 °F

Included in the Box

- Wastegate unit
- Outlet V-Band
- Outlet V-Band
- Outlet SS304 weld flange
- Outlet SS304 weld flange
- Sticker
- Instruction card

Accessories

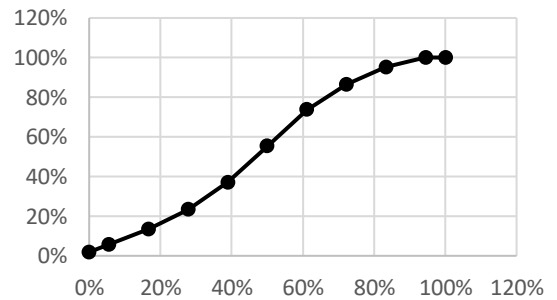
TS-0503-3002	WG60 Stainless Outlet Weld Flange
TS-0555-3004	WG60 Outlet V-Band
TS-0600-2006	6psi Inner spring (GenV IWG 3 PSI Spring)
TS-0600-2007	9psi Inner spring (GenV IWG 5 PSI Spring)
TS-0600-2008	12psi Middle Spring (GenV IWG 7 PSI Spring)
TS-0600-2009	21psi Outer Spring (GenV IWG 14 PSI Spring)
TS-0600-2010	GenV IWG Sensor Cap Upgrade
TS-0600-2004	GenV IWG Diaphragm Assembly Replacement

Material Data

Beryllium (Be)	0%
Diaphragm	Proprietary Silicone w/ Nomex
Actuator housing	6262 T6 anodised Al.
Control arm bush	N60
Linkage	N60
Control arm	431 and 304 SS
Elastomers	Viton
Springs	17-7PH Stainless Steel
Bracket	6262 T6 anodised Al.

Flow Characteristics

Max. Flow	383.9 CFM/10.87m ³ /min @1psidP
Flow Linearity	-8.8% of full lift (BFSL)



Order Data

TS-0565-1212	PSG50V Pneumatic StraightGate (Vacuum) 6 InHg Black
TS-0565-1762	PSG50 Pneumatic Straight Gate 6psi Black

Spring Chart

Location	Inner	Inner	Middle	Outer
Pressure	6psi	9psi	12psi	21psi
6psi	•			
9psi		•		
12psi			•	
18psi	•		•	
21psi				•

