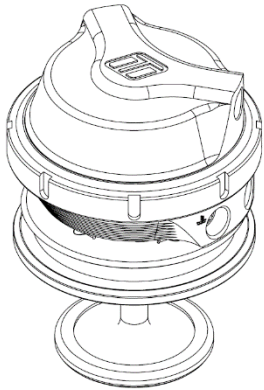


Gas Valve Actuator 50mm



The Gas Valve Actuator 50 (GVA50) is a cost effective, high performing 50mm hot gas actuator valve. Based on Turbosmart's industry leading Gen-V external wastegate technology the GVA provides extensive user configurability, world leading extended thermal performance, fatigue resistance and best in class flow performance for optimum control and longevity.

- Liquid cooling provision
- Strap type V-band clamps
- User adjustable actuator position
- Modular actuator design

Mechanical Data

Valve diameter	50mm (1.96in)
Mass	1022g (2.25lbs)
Actuator linearity	1.02% of full lift (BFSL)
Set pressure accuracy	+/- 0.5 psi of base pressure
Safe working pressure max.	220 psi / 1520 kPa / 15 bar
Safe inverted pressure max.	180 psi / 1250 kPa / 12.5 bar
Actuator life	550k cycles @ 180°C (356 °F) ambient 800k cycles @ 80°C (176 °F) ambient
Actuator/Valve ratio	1.6:1
Max. spring base pressure	26 psi / 180 kPa / 1.8 bar
Min. spring base pressure	3 psi / 21 kPa / 0.2 bar
Port fittings type	Air: 2x 1/8" NPT top chamber Air: 2x 1/8" NPT lower chamber Liquid Cooling: 2x 1/8" NPT

Thermal Data

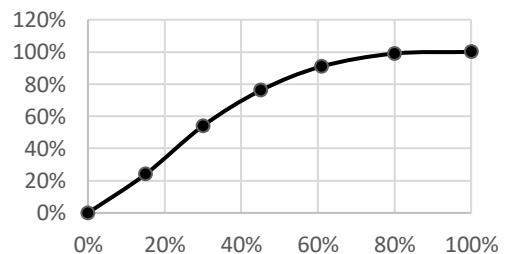
Max. thermal stress (non-cooled)*	>45min @ 1250°C (2282°F) EGT continuous
Max. thermal stress (h2O cooled)*	>24hr @ 1250°C (2282°F) EGT continuous
Max. ambient/compartments temp.	260°C / 500°F
Max. actuator temp.	310°C / 590°F

Material Data

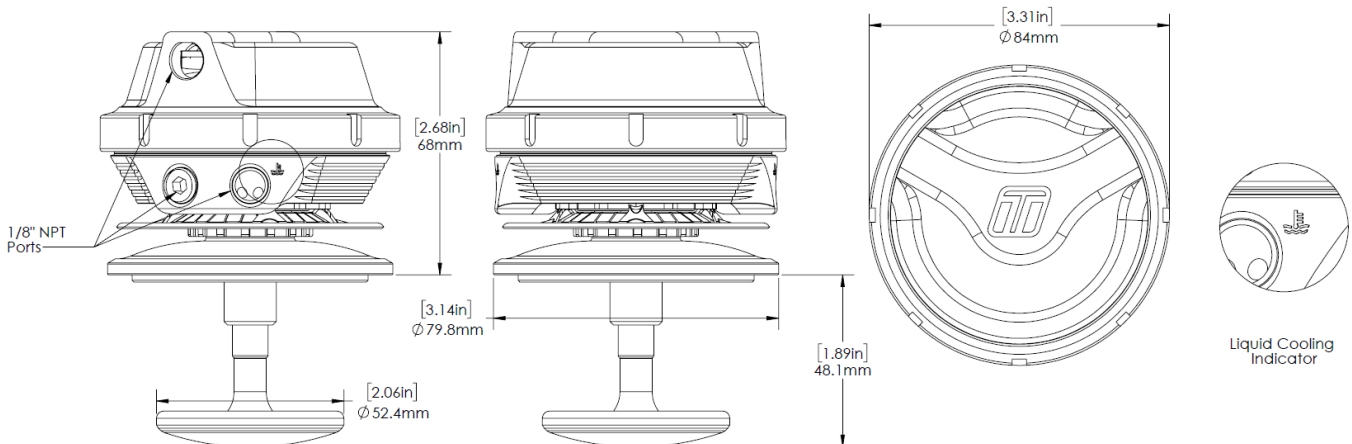
Beryllium (Be)	0%
Main Body	High temp 347 SS
Diaphragm	Proprietary Silicone w/ nomex
Actuator housing	6061 T6 anodised Al.
Valve Guide	Nitronic 60
Valve	EV8 w/ proprietary plating
V-Band	Heat treated 431 SS w/ 18-8 nut
Springs	17-7PH Stainless Steel

Flow Data

Max. Flow	241.6 CFM/6.81m ³ /min @1psidP
Flow Linearity	-17% of full lift (BFSL)



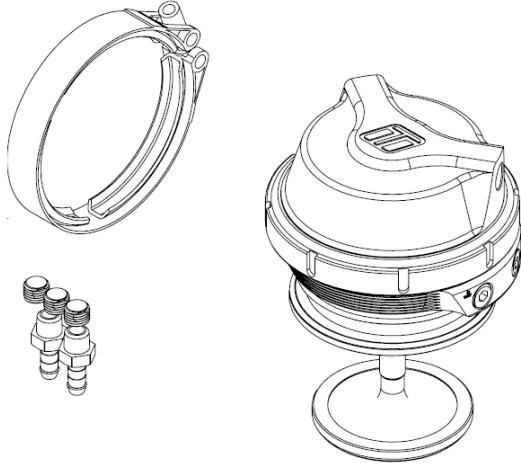
*Flow will be limited by machined geometry of cavity



*Continual source of minimum 1250°C exhaust gas, with no cool down periods for at least 30minutes and no external air cooling on actuator, this is a destructive test that an ICE engine cannot support. Contact tech support for further information.

Included in the Box

- Valve actuator unit (pre-assembled with 14psi spring)
- Inlet V-Band
- Collar tool (Optional)
- 4x 1/8" NPT plugs (1x installed) / 2x 1/8" NPT nipples
- Sticker
- Instruction card



Order Data

TS-0554-1712 GVA50 14psi Black

Accessories

- TS-0554-3002 WG50 Valve and Guide Set
- TS-0554-3003 WG50 Inlet V-Band
- TS-0550-3151 84mm Spring Kit
- TS-0550-3024 84mm Sensor Cap Upgrade Black
- TS-0550-3025 84mm Sensor Cap Upgrade Blue
- TS-0550-3005 84mm Diaphragm Replacement Kit
- TS-0550-3014 84mm Actuator Collar Tool

Refer to catalogue for further accessories

Spring Data

Master Collar Size	Spring Pressure			
	3psi	5psi	7psi	14psi
84mm	Orange	Yellow	Green	Sky Blue

Boost Pressure	Location	Inner	Inner	Middle	Outer
	Pressure	3psi	5psi	7psi	14psi
3psi		•			
5psi			•		
7psi				•	
10psi		•		•	
12psi			•	•	
14psi					•
17psi		•			•
19psi			•		•
21psi				•	•
24psi		•		•	•
26psi			•	•	•

Cavity Depth

