

Gen V WG50 Progate50



The Gen-V WG50 Progate50 external wastegate is a cost effective, high performing 45mm external wastegate. The Gen-V 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
- Compressed Gas option available

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

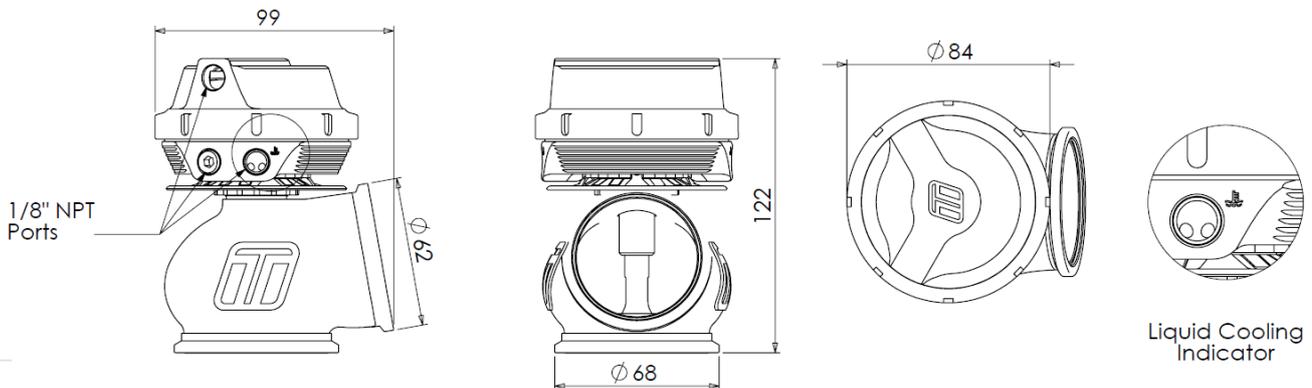
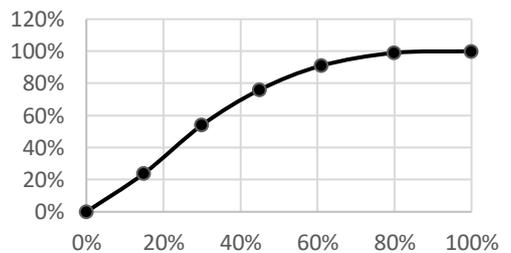
Max. thermal stress (non-cooled)*	>45min @ 1250°C (2282°F) EGT continuous
Max. thermal stress (h2O cooled)*	>24hr @ 1250°C (2282°F) EGT continuous
Max. ambient/compartament temp.	260°C / 500°F
Max. actuator temp.	310°C / 590°F

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
Weld Flanges	304 Stainless Steel
Springs	17-7PH Stainless Steel

Flow Data

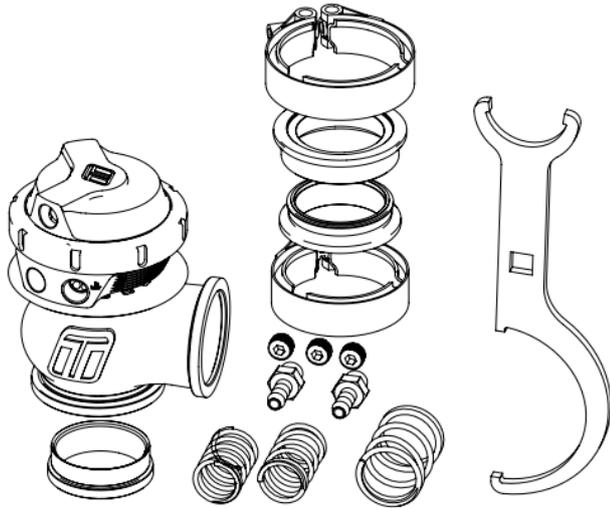
Max. Flow	241.6 CFM/6.81m ³ /min @1psidP
Flow Linearity	-17% of full lift (BFSL)



*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

- Wastegate unit (pre-assembled with spring as per order)
- SS316 Valve seat
- Inlet V-Band
- Inlet SS304 weld flange
- Outlet V-Band
- Outlet SS304 weld flange
- Collar tool (master/slave)
- 17-7PH 3, 5, 7, 14 psi spring kit (1x spring installed)
- 94x 1/8" NPT plugs (1x installed) / 2x 1/8" NPT nipples
- Sticker
- Instruction card



Order Data

- TS-0554-1001 Gen-V WG50 Progate 50 7psi Blue
- TS-0554-1002 Gen-V WG50 Progate 50 7psi Black
- TS-0554-1011 Gen-V WG50 Progate 50 14psi Blue
- TS-0554-1012 Gen-V WG50 Progate 50 14psi Black
- TS-0554-1015 Gen-V WG50 Progate 50 14psi Sleeper

Accessories

- TS-0554-3001 WG50 Valve Seat
- TS-0554-3002 WG50 Valve and Guide Set
- TS-0554-3003 WG50 Inlet V-Band
- TS-0554-3004 WG50 Outlet V-Band
- TS-0502-3001 WG50 Stainless Inlet Weld Flange
- TS-0502-3002 WG50 Stainless Outlet Weld Flange
- TS-0504-3007 WG50 Alloy Inlet Weld Flange
- TS-0504-3008 WG50 Alloy Outlet Weld Flange
- TS-0550-3002 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

Install Req.

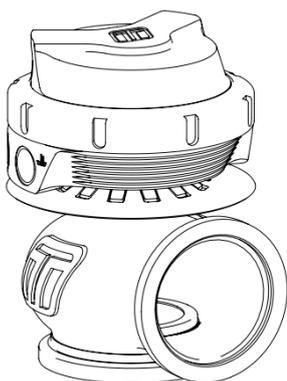
- Inlet Pipe Suits 50.8mm/2.00" OD
- Outlet Pipe Suits 50.8mm/2.00" OD
- Port Tube 6mm / 0.236"
- Min. ID

Spring Data

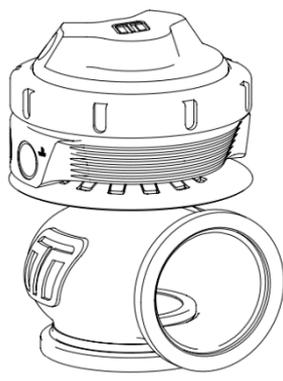
Master Collar Size	Spring Pressure			
	3psi	5psi	7psi	14psi
84mm	Orange	Yellow	Green	Sky Blue

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

Configurations Available



Standard



Standard Compressed Gas