

Gen V CompGate 40 CG/ CO2 HP Full Range



The Gen-V WG40CG CompGate40 Compressed Gas external wastegate is a cost effective, high performing 40mm external wastegate designed for control strategies that actively bias the top chamber with high pressure for large boost bandwidth operation, such as CO2 drag racing, or compressed air WRC applications. The Compressed Gas range feature an inverted diaphragm to maximise diaphragm life from high pressure CO2 or compressed air systems. 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
- Standard option available
- Inverted diaphragm for top chamber high pressure support

Mechanical Data

| | |
|-----------------------------|---|
| Valve diameter | 40mm (1.57in) |
| Mass | 752g (1.66lbs) |
| Actuator linearity | 1.45% 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 | 500k cycles @ 180°C (356°F) ambient 650k cycles @ 80°C (176°F) ambient |
| Actuator/Valve ratio | 2:1 |
| 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

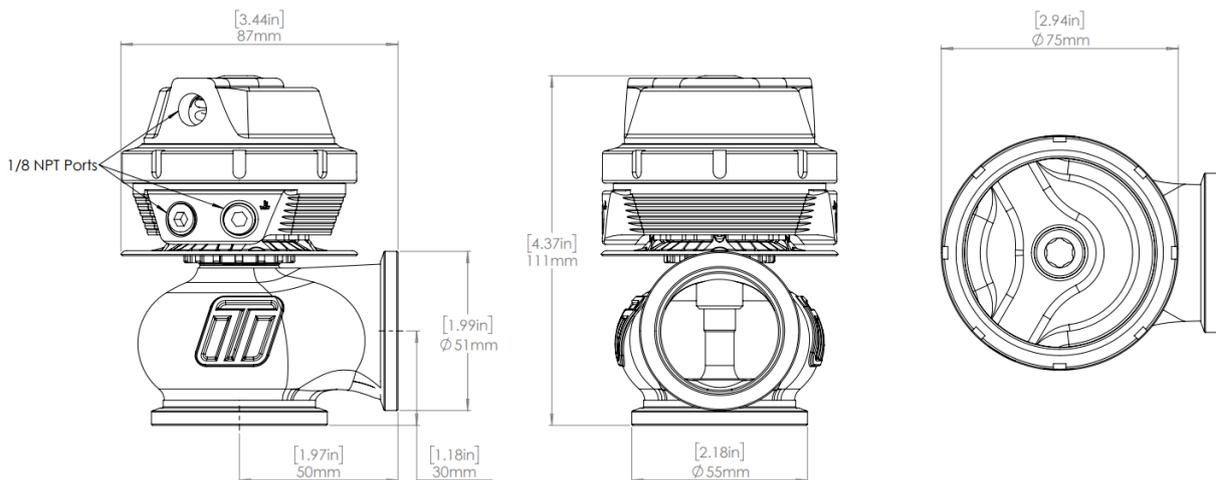
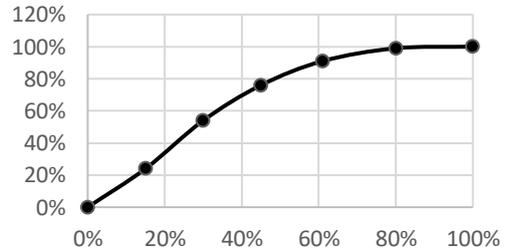
| | |
|-----------------------------------|---|
| Max. thermal stress (non-cooled)* | >60min @ 1250°C (2282°F) EGT continuous >24hr @ 1250°C (2282°F) EGT continuous |
| Max. thermal stress (h2O cooled)* | continuous |
| Max. ambient/compartament temp. | 260°C / 500°F |
| Max. actuator temp. | 310°C / 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

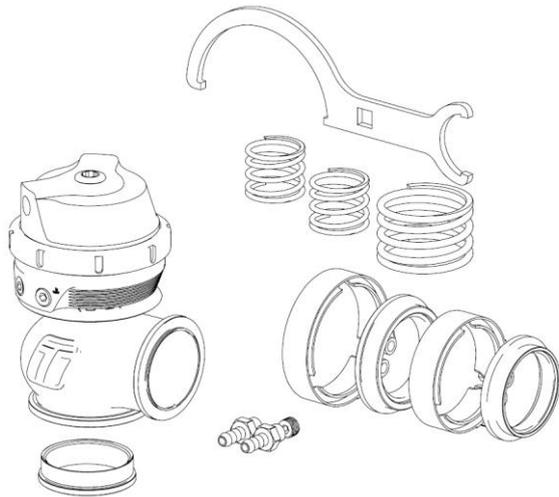
| | |
|----------------|---|
| Max. Flow | 165.4 CFM/4.53m ³ /min @1psidP |
| Flow Linearity | -15% of full lift (BFSL) |



*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)
- 4x 1/8" NPT plugs (1x installed) / 2x 1/8" NPT nipples
- Sticker
- Instruction card



Order Data

TS-0552-1242 GenV CompGate40 CG/CO2 HP Full Range

Accessories

- TS-0552-3001 WG40 Valve seat
 - TS-0552-3002 WG40 Valve and Guide set
 - TS-0552-3003 WG40 Inlet V-Band
 - TS-0552-3004 WG40 Outlet V-Band
 - TS-0505-3001 WG40 Stainless Inlet Weld Flange
 - TS-0505-3002 WG40 Stainless Outlet Weld Flange
 - TS-0550-3081 Gen V (3Psi) Inner (Black) WG38/40
 - TS-0550-3082 Gen V (5Psi) Inner (Grey) WG38/40
 - TS-0550-3081 Gen V (7Psi) Inner (Pink) WG38/40
 - TS-0550-3081 Gen V (14Psi) Inner (Red) WG38/40
 - TS-0550-3059 GenV CG Diaphragm Replacement Kit WG38/40
 - TS-0550-3013 GenV Actuator Collar Tool Suit WG38/40
- Refer to catalogue for further accessories*

Install Req.

- Inlet Pipe Suits 42.16mm/1.660" OD
- Outlet Pipe Suits 42.16mm/1.660" OD or Suits 33.40mm/1.315" OD
- Port Tube Min. ID 6mm / 0.236"

Spring Data

| Wastegate Size | Spring Pressure | | | |
|----------------|-----------------|------|------|-------|
| | 3psi | 5psi | 7psi | 14psi |
| WG38/40 | Black | Grey | Pink | Red |

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