

Gen V WG45 Hypergate45



The Gen-V WG45 Hypergate45 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
- Motorsport Endurance / Compressed Gas options available

Mechanical Data

| | |
|-----------------------------|---|
| Valve diameter | 45mm (1.77in) |
| Mass | 1006g (2.22lb) |
| 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 | 2.07:1 |
| 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

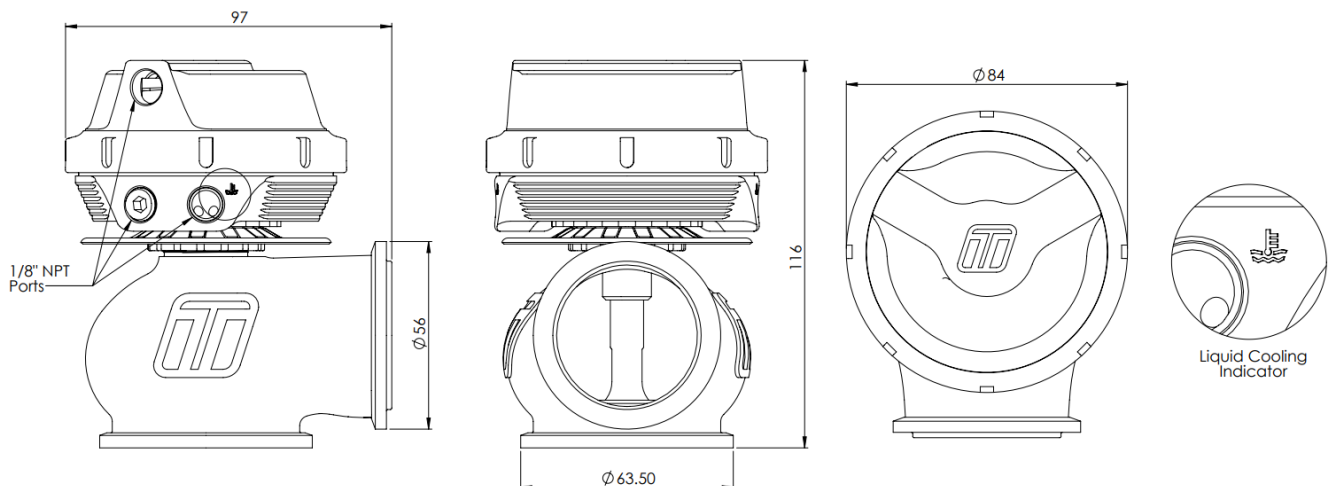
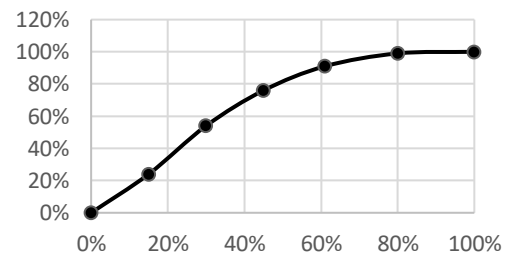
| | |
|-----------------------------------|---|
| Max. thermal stress (non-cooled)* | >30min @ 1250°C (2282°F) EGT continuous |
| Max. thermal stress (h2O cooled)* | >24hr @ 1250°C (2282°F) EGT continuous |
| Max. ambient/compartament temp. | 260°C / 500°F |
| Max. actuator temp. | 310°C / 590°F |

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

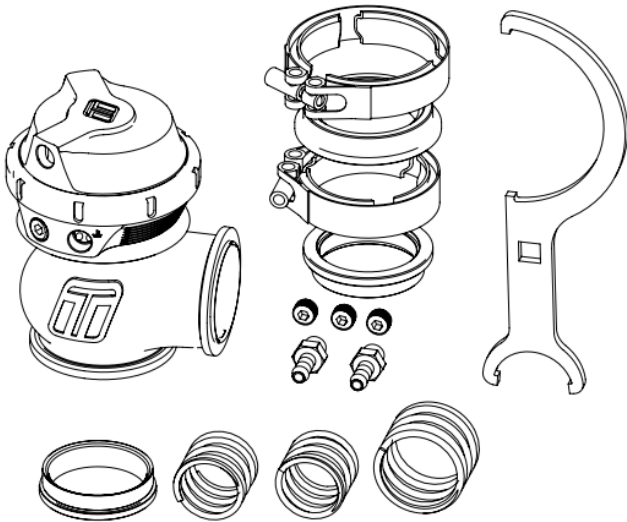
| | |
|----------------|---|
| Max. Flow | 193.6 CFM/5.48m ³ /min @1psidP |
| Flow Linearity | -18% of full lift (BFSL) |



*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)
- 817-7PH 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-0553-1001 Gen-V WG45 Hypergate 45 7psi Blue
- TS-0553-1002 Gen-V WG45 Hypergate 45 7psi Black
- TS-0553-1011 Gen-V WG45 Hypergate 45 14psi Blue
- TS-0553-1012 Gen-V WG45 Hypergate 45 14psi Black
- TS-0553-1015 Gen-V WG45 Hypergate 45 14psi Sleeper

Accessories

- TS-0553-3001 WG45 Valve seat
- TS-0553-3002 WG45 Valve and Guide set
- TS-0553-3003 WG45 Inlet V-Band
- TS-0553-3004 WG45 Outlet V-Band
- TS-0504-3007 WG45 Alloy Inlet Weld Flange
- TS-0504-3008 WG45 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.

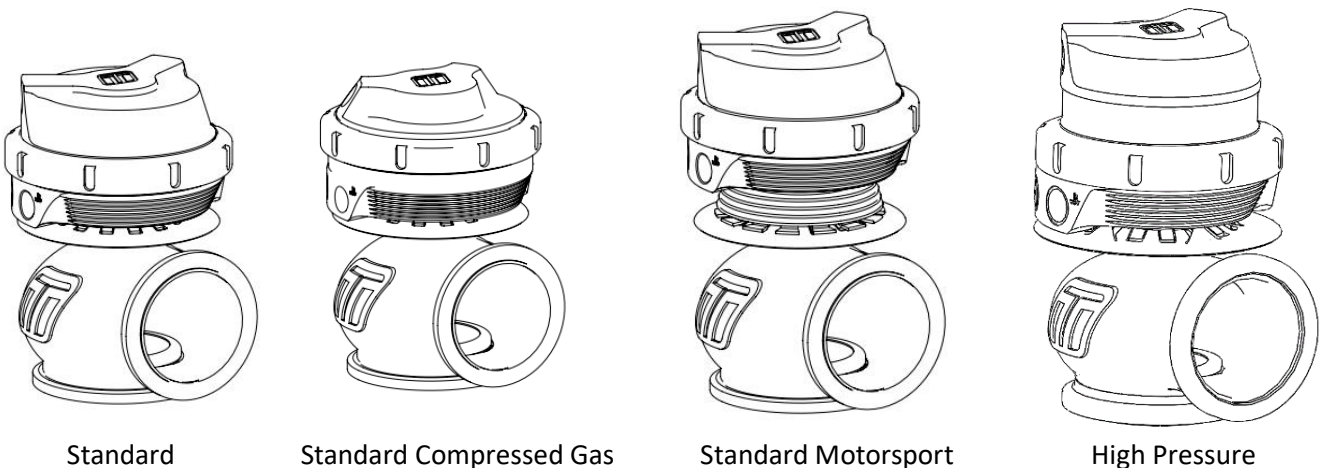
- Inlet Pipe Suits 47.63mm/1.875" OD
- Outlet Pipe Suits 44.45mm/1.75" OD
- Port Tube 6mm / 0.236"
- Min. ID

Spring Data

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

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

Configurations Available



Standard

Standard Compressed Gas

Standard Motorsport

High Pressure