



The Gen-V WG45M Hypergate45 Motorsport external wastegate is a cost effective, high performing 45mm external wastegate designed specifically for endurance racing or where water cooling is not available and high thermal thresholds are required for extended periods of time. 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.

- CFD driven heatsink design
- Liquid cooling provision
- Strap type V-band clamps
- User adjustable actuator position
- Modular actuator design
- Standard / Compressed Gas configurations available

MECHANICAL DATA

Valve diameter	45mm
Mass	1098g
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 ambient 800k cycles @ 80°C 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
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THERMAL DATA

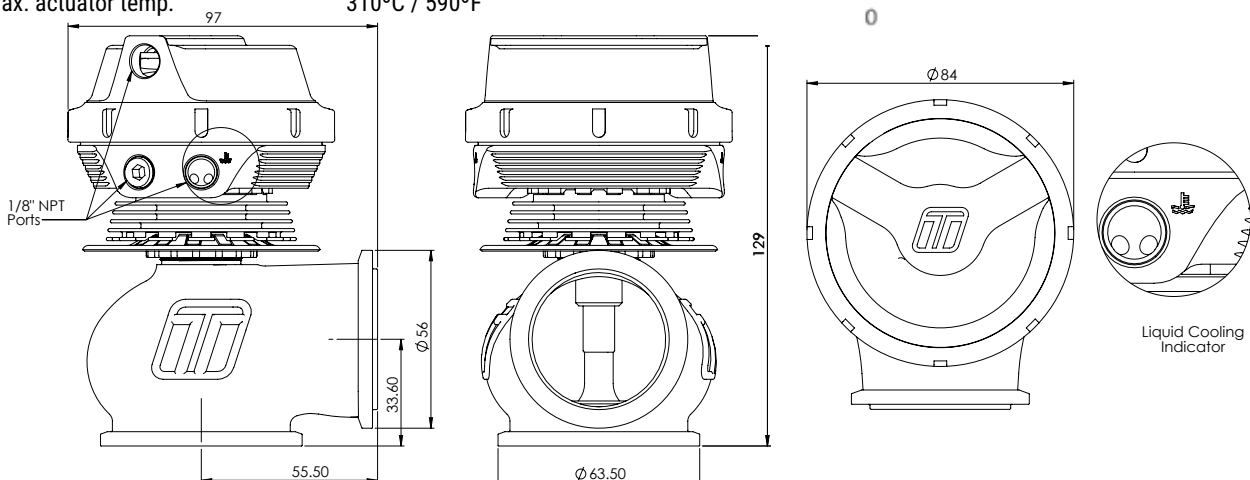
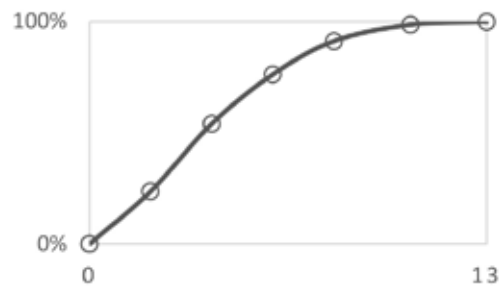
Max. thermal stress (non-cooled)*	>90min @ 1250°C EGT continuous
Max. thermal stress (h2O cooled)*	>24hr @ 1250°C EGT continuous
Max. ambient/compart ment temp.	260°C / 500°F
Max. actuator temp.	310°C / 590°F

MATERIAL DATA

Main Body	High temp 347 SS
Heatsink	6061 T6 anodised Al.
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	17/7 PH Stainless Steel
Beryllium (Be)	0%

FLOW DATA

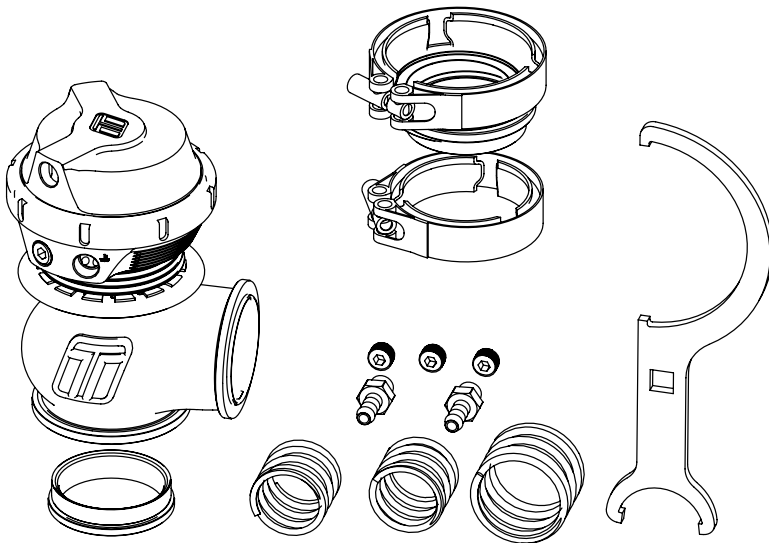
Max. Flow	193.6 CFM/5.48m ³ /min @1psidP
Flow Linearity	-18% of full lift (BFSL)



*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)
- 17/7 PH 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-0553-1101	Gen-V WG45M Hypergate 45 7psi Motorsport Blue
TS-0553-1102	Gen-V WG45M Hypergate 45 7psi Motorsport Black

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-0550-3024	WG45/50 Sensor Cap Upgrade Kit Black (sensor included)
TS-0550-3025	WG45/50 Sensor Cap Upgrade Kit Blue (sensor included)
TS-0550-3005	WG45/50 Diaphragm Replacement Kit
TS-0550-3014	WG45/50 Actuator Collar Tool

Refer to website for further accessories

INSTALL REQ.

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

SPRING DATA

Wastegate Size	Spring Pressure			
	3psi	5psi	7psi	14psi
WG45/50	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

