

Gen V eWG60 Hypergate60

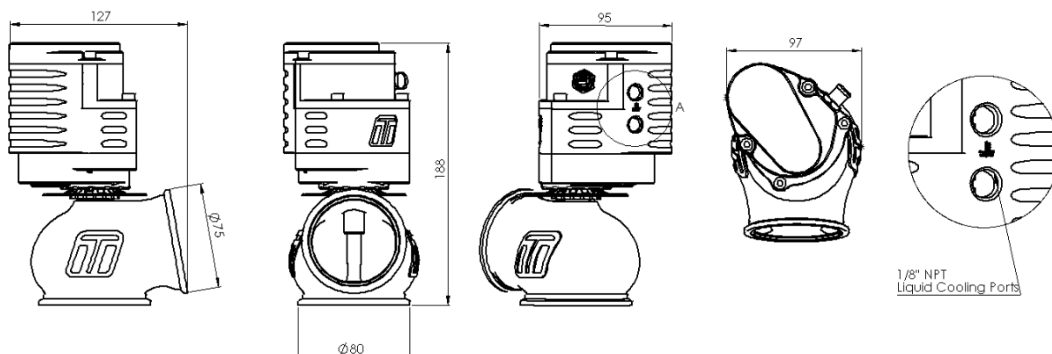


The Gen-V WG60 Hypergate60 external electronic wastegate is a cost effective, high performing 60mm external wastegate. The Gen-V provides extensive user configurability, world leading extended thermal performance, fatigue resistance and best in class flow performance for optimum control and longevity.

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

Mechanical Data	
Valve diameter	60mm (2.36in)
Mass	WG60 2192g (4.833 lbs)
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 @ 150°C (302 °F) ambient 800k cycles @ 80°C (176 °F) ambient
Port fittings type	Liquid Cooling: 2x 1/8" NPT
Thermal Data	
Max. thermal stress (non-cooled)*	>45min @ 1250°C EGT continuous
Max. thermal stress (h2O cooled)*	>24hr @ 1250°C EGT continuous
Max. ambient/compartament temp.	260°C / 500°F
Max. actuator temp.	150°C / 257°F
Electrical Data	
Sensor Operating voltage	5V +/-0.5V
Output	Analog 0-5V
Operating Temperature	-40 °C to 150 °C
Sensor Supply Current	21mA

Temp Sensor Data		
Accuracy	+/- 2.5°C	
Voltage offset at 0°C	500mV	
Gain	10mV/°C	
Response @63%	1.3s	
Sensor Output (mV)	Deg C	Deg F
500	0	32
2000	150	302
Connection Data		
Red 22AWG	5V	
Black 22AWG	0V	
White 22AWG	Valve position	
Yellow 22AWG	Sensor Temperature	
Red 14WG	Motor A (positive closed)	
Black 14AWG	Motor B (positive open)	



*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.

Material Data																									
Beryllium (Be)	0%																								
Main Body	High temp 347 SS																								
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																								
Motor Data																									
Wire Size	16AWG																								
Direction	Red wire positive closed																								
Stall Current**	60A																								
Hold Current	0A (Short motor wire for braking)																								
Max Force @stall	4085N																								
Max Force @power	2042N																								
Speed (Opening)	598%/s																								
Speed Vs Force																									
<table border="1"> <caption>Speed Vs Force Data</caption> <thead> <tr> <th>Valve Force (N)</th> <th>Speed (%/s)</th> <th>Drive Current (A)</th> </tr> </thead> <tbody> <tr><td>0</td><td>580</td><td>5</td></tr> <tr><td>200</td><td>520</td><td>10</td></tr> <tr><td>400</td><td>480</td><td>15</td></tr> <tr><td>600</td><td>430</td><td>20</td></tr> <tr><td>800</td><td>390</td><td>25</td></tr> <tr><td>1000</td><td>360</td><td>28</td></tr> <tr><td>1200</td><td>330</td><td>30</td></tr> </tbody> </table>		Valve Force (N)	Speed (%/s)	Drive Current (A)	0	580	5	200	520	10	400	480	15	600	430	20	800	390	25	1000	360	28	1200	330	30
Valve Force (N)	Speed (%/s)	Drive Current (A)																							
0	580	5																							
200	520	10																							
400	480	15																							
600	430	20																							
800	390	25																							
1000	360	28																							
1200	330	30																							

Flow Characteristics																	
Max. Flow	193.6 CFM/5.48m ³ /min @1psidP																
Flow Linearity	-18% of full lift (BFSL)																
Flow Linearity																	
<table border="1"> <caption>Flow Linearity Data</caption> <thead> <tr> <th>Valve Lift (%)</th> <th>Flow (%)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td></tr> <tr><td>20</td><td>25</td></tr> <tr><td>40</td><td>55</td></tr> <tr><td>60</td><td>80</td></tr> <tr><td>80</td><td>95</td></tr> <tr><td>100</td><td>98</td></tr> </tbody> </table>		Valve Lift (%)	Flow (%)	0	0	20	25	40	55	60	80	80	95	100	98		
Valve Lift (%)	Flow (%)																
0	0																
20	25																
40	55																
60	80																
80	95																
100	98																
Valve Force Vs Exhaust Pressure																	
<table border="1"> <caption>Valve Force Vs Exhaust Pressure Data</caption> <thead> <tr> <th>Valve Force (N)</th> <th>Valve Pressure (psi)</th> </tr> </thead> <tbody> <tr><td>0</td><td>0</td></tr> <tr><td>200</td><td>10</td></tr> <tr><td>400</td><td>20</td></tr> <tr><td>600</td><td>30</td></tr> <tr><td>800</td><td>40</td></tr> <tr><td>1000</td><td>50</td></tr> <tr><td>1200</td><td>65</td></tr> </tbody> </table>		Valve Force (N)	Valve Pressure (psi)	0	0	200	10	400	20	600	30	800	40	1000	50	1200	65
Valve Force (N)	Valve Pressure (psi)																
0	0																
200	10																
400	20																
600	30																
800	40																
1000	50																
1200	65																

Included in the Box	
Wastegate unit	
SS316 Valve seat	
Inlet V-Band	
Inlet SS304 weld flange	
Outlet V-Band	
Outlet SS304 weld flange	
Collar tool (master/slave)	
Sticker	
Instruction card	

Order Data	
TS-0555-1502	Gen-V eWG60 Hypergate 60 Electronic Black

Accessories	
TS-0553-3002	WG60 Valve and Guide set
TS-0555-3003	WG60 Inlet V-Band
TS-0555-3004	WG60 Outlet V-Band
TS-0503-3001	WG60 Stainless Inlet Weld Flange
TS-0503-3002	WG60 Stainless Outlet Weld Flange
TS-0503-3007	WG60 Alloy Inlet Weld Flange
TS-0503-3008	WG60 Alloy Outlet Weld Flange
TS-0550-3013	54mm Actuator Collar Tool
<i>Refer to catalogue for further accessories</i>	

Install Req.	
Inlet Pipe	Suits 63.5mm/2.50" OD
Outlet Pipe	Suits 63.5mm/2.50" OD
Port Tube Min. ID	6mm / 0.236"

** High amperage for prolonged periods will damage the motor, keep high Amperage operation to short bursts.