

# VGW-L

## DATA SHEET

### Description

This is a position servo assembly consisting of a digital electronic controller, rotary servo motor and rotary to linear gearbox. In application, the unit is usually mounted in trunnions and connected by a spherical jointed coupling to a mechanism which transfers the linear motion to rotate several stages of variable inlet stator blades on an axial compressor.

The unit receives a 4-20 mA process demand signal and positions its output shaft in direct proportion to it. The unit returns 4-20 mA process feedback signals in proportion to actual position and output force. Output force up to  $\pm 4500$  N may be maintained and the unit only requires standard 24 VDC nominal battery supplies to operate.

The unit is independently certified explosion proof for use in hazardous areas.

Only 24 VDC nominal battery power supplies are required, making application very convenient and safe compared to competitive high voltage systems.

The actuator can be delivered with alternative fixing arrangements to suit different applications. Please discuss your specific requirements with HEINZMANN.

A further version is available with an adapter plate in place of the trunnions and a shaft end connection which are identical to those of the Woodward TM55 hydraulic actuator. This actuator can replace the TM55 with a version requiring only electric power instead of a hydraulic supply.



### Features

Stroke configurable up to 50 mm (at the time of ordering)

Force up to  $\pm 4500$  N

24 VDC safe battery power only required

Competitive solution for all small and medium-sized turbines

Independently certified for Zone 1 (Division 1) hazardous areas

Fast acting and accurate

Highly efficient gearhead optimises utilisation of electrical power

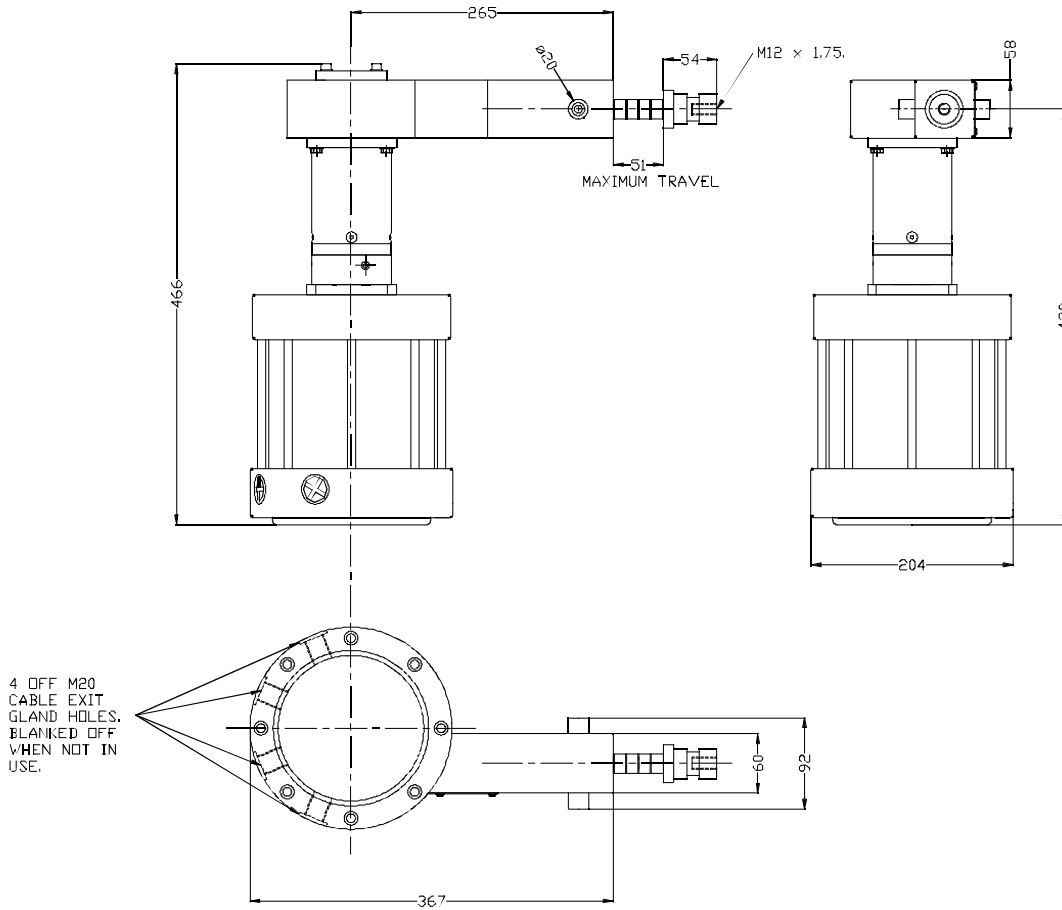
### Applications

- Gas & steam turbine controls

## Technical data

Designation	Linear Output Span	Linear Output Force	Output Velocity	Gear Ratio
<b>StG-LGV-2000-50S</b>	50	± 2000 N	50 mm/s	70 turns/stroke
<b>StG-LGV-4500-50S</b>	50	± 4500 N	25 mm/s	140 turns/stroke
<b>StG-LGV-4500-25S</b>	25	± 4500 N	50 mm/s	70 turns/stroke
<b>StG-LGV-4500-TM</b>	25	± 4500 N	25 mm/s	140 turns/stroke
Power supply voltage range	18 ... 32 VDC			
Power supply current range	< 1 A (steady state) ... 10 A positioning			
Ambient temperature range	-20 ... 85 °C			
Environmental rating	IP65			
Hazardous area certification	Ex db IIC T4 Gb (ATEX)			
Position demand signal	4 ... 20 mA equivalent 0 ... 100 %			
Position achieved feedback signal	4 ... 20 mA equivalent 0 ... 100 %			
Thrust feedback signal	4 ... 20 mA equivalent -/+ 100 % force			
Motor drive type	Four quadrant pulse width modulated			
Power	180 W			
Mounting	2x 20 mm diameter trunnions. Other mounting types to special order.			
Drive shaft	20 mm diameter with M12x1.75 female threaded end connection			
Gearbox	Epicyclic to lever and link			
Mechanical deadband	0.5 mm maximum			
Field electrical connections	Screw terminals accessible through actuator unit end cover with 20x 1.5 mm threaded gland entries			
Application	Small frame gas turbines, steam turbines			
Weight of assembly	28 kg			
Gearbox casing and actuator end plate material	Aluminium			
Actuator casing and gear material	Steel			

# Dimensions StG-LGV-4500/25S and StG-LGV-4500/50S



# Dimensions StG-LGV-4500/25TM

