

## StG LGV

### 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 +/- 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.

#### Application range

➔ Gas & steam turbine controls



#### Features

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

Force up to +/- 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

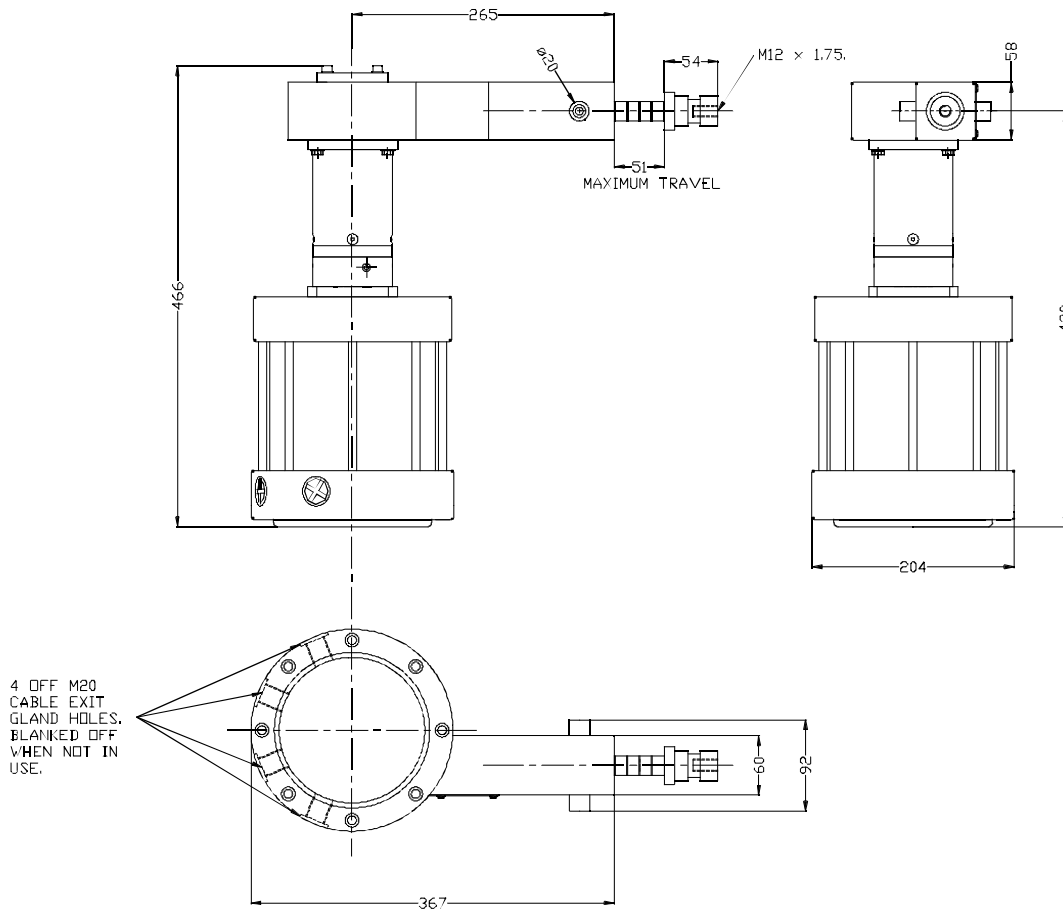
Fast acting and accurate

Highly efficient gearhead optimises utilisation of electrical power

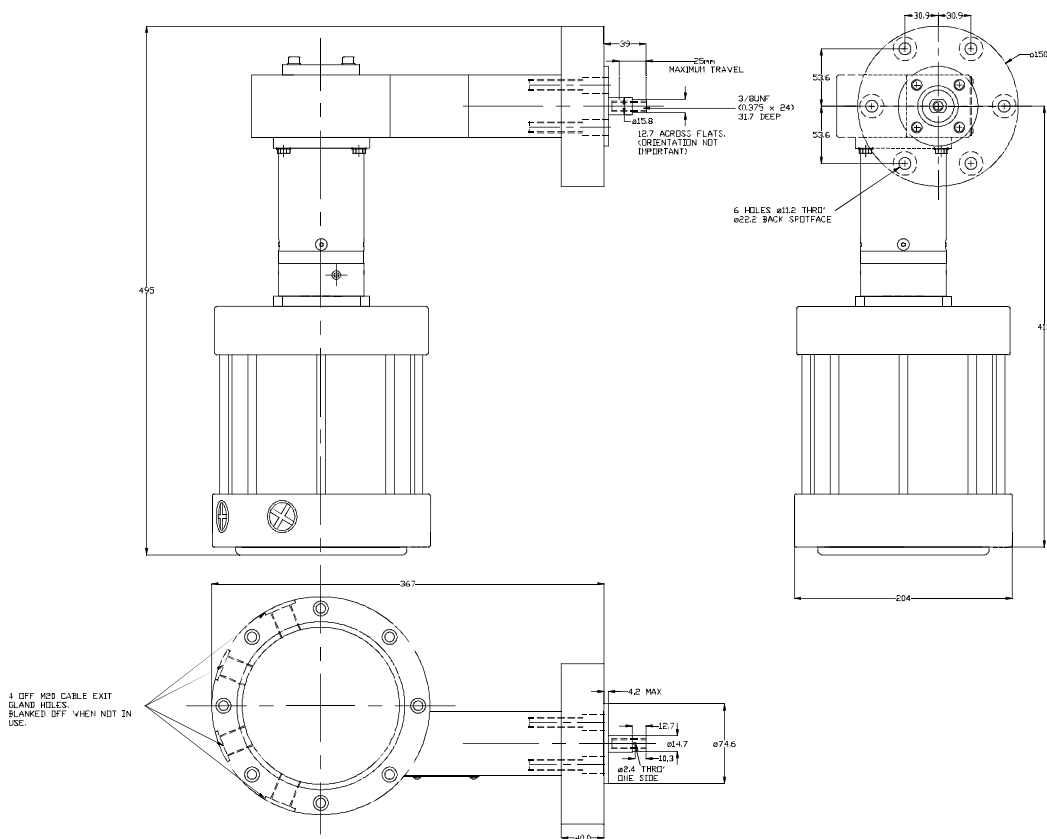
## Technical data

<b>Designation</b>	<b>Linear Output Span</b>	<b>Linear Output Force</b>	<b>Output Velocity</b>	<b>Gear Ratio</b>
<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
<b>Power supply voltage range</b>	18 through 32 VDC			
<b>Power supply current range</b>	< 1 A (steady state) through 10 A positioning			
<b>Ambient temperature range</b>	-40 through 60 °C			
<b>Environmental rating</b>	IP65			
<b>Hazardous area certification</b>	Ex'd Zone 1 (all gas groups) T6 ATEX (CSA pending)			
<b>Position demand signal</b>	4-20 mA equivalent 0 through 100 %			
<b>Position achieved feedback signal</b>	4-20 mA equivalent 0 through 100 %			
<b>Thrust feedback signal</b>	4-20 mA equivalent +/- 100 % force			
<b>Motor drive type</b>	Four quadrant pulse width modulated			
<b>Power</b>	180 W			
<b>Mounting</b>	2 x 20 mm diameter trunnions. Other mounting types to special order. Including special adapter plate and shaft end for Woodward TM25 applications			
<b>Drive shaft</b>	20 mm diameter with M12x1.75 female threaded end connection			
<b>Gearbox</b>	Epicyclic to lever and link			
<b>Mechanical deadband</b>	0.5 mm maximum			
<b>Field electrical connections</b>	Screw terminals accessible through actuator unit end cover with 20 x 1.5 mm threaded gland entries			
<b>Application</b>	Small frame gas turbines, steam turbines			
<b>Weight of assembly</b>	28 kg			
<b>Gearbox casing and actuator end plate material</b>	Aluminium			
<b>Actuator casing and gear material</b>	Steel			

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



# Dimensions StG-LGV-4500/25TM



*Subject to alterations. ©Heinzmann UK Ltd., 2015*

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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.

Another version of the actuator is available with the gear head extended from the servo drive unit by a torque tube. This allows the unit to be mounted in tight spaces on certain gas turbine types and assists with handling and installation.

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.

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