

Gearbox Shift Servo Model ZF203-1

Introduction:

The GSS Gear Shift Servo has been designed for top end customers looking to reduce shift times and improve air consumption and packaging space. By combining a shift actuator with a valve block, the GSS allows fast response combined with a reduction of air used. Only a single air line is needed from the accumulator and a single wiring connector provides power to the valves. The specially designed body and valve block are CNC machined from a high grade aluminium billet and protectively anodised. A durable chrome rod and protective air filters add to the reliability. Low friction seal technology allows for smooth movement and a quick, accurate return to rest position. Adjustable rod ends on both the body and piston rod allow adjustment to fit most applications. The GSS is a proven winner in both GT and single seater race series around the world and has been successful fitted to WRC and off road race cars.



Summary:

- Valve on actuator design
- Quick response
- Low air consumption
- Powerful action
- Simplified vehicle installation
- 34mm total stroke
- Adjustable rod ends
- M8 and 1/4" mounting ends
- Dash 4 JIC air feed fitting
- Proven durability in 24hr races

System requirements:

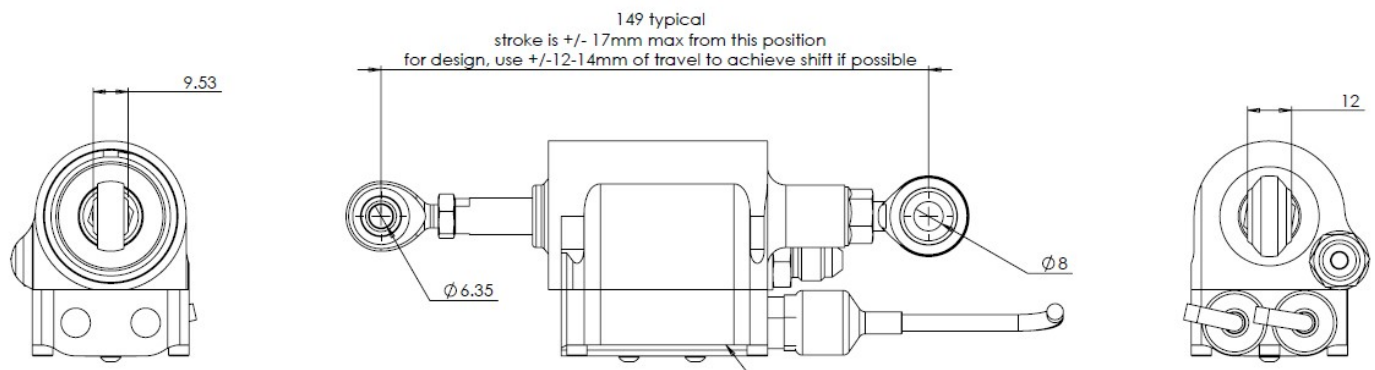
Air supply	.....	<10	bar
Ambient working temperature	.....	-10 to +70	°C
Voltage range	.....	8-16	V
Maximum current	.....	4.5	A at 12v, 20°C
Min valve coil resistance	.....	2.9	Ohms at 20°C
Installation notes	.....	See Appendix 1	

Technical data:

Valve response time	.....	<10	msec
Maximum operating pressure	.....	10	bar
Stroke	.....	+/- 17	mm
Fitting air in	.....	Dash 4	JIC male
Mounting rod ends	.....	¼	inch on rod
	.....	8	mm on body
Max valve on time	.....	1	second
Max valve duty	.....	50	%

Dimensions:

Length	.....	149	mm between mounting centres at rest
Width	.....	48	mm
Height	.....	59	mm
Weight	.....	364	g

Installation at rest position:

Ordering information:

Description	Part number
GSS 34 – Gear Shift Servo	ZF203-1

Appendix 1
Installation notes

- Requires clean, dry air supply
- Install away from direct heat sources.
- Do not strain or side load actuator – allow free and easy movement.
- Preferred mounting is with valves at lowest point.
- Use copperslip when attaching hose fittings – not Loctite or PTFE tape.
- Use only aluminium or stainless steel hose fittings
- Actuator should be at 90° to actuator clevis at rest.
- Ensure rest position is at mid point of stroke
- Upshift is normally rod extending from actuator, down is retraction.
- Keep rod clean of dirt and debris.
- Service interval of 30hrs or 6000km.

Appendix 2
Wiring details

Connector fitted on GSS	.....	Deutsch DTM04 3P
Cable length	.....	200mm

Pin	Application	Notes
1	12V	22awg
2	Up valve	22awg
3	Down valve	22awg