Regulateurs Europa
Member of the HEINZMANN Group

TYPE 1500-3G

DATA SHEET

Description

The REGULATEURS EUROPA 1500 series governor is designed specifically for high power medium-speed and large-bore slow-speed diesel engines.

A centrifugal flyweight design, with a two-stage, high stiffness, backlash free hydraulic servomechanism, this governor provides the best possible control on engines that have a fuel pump control system with high stiction forces.

A booster unit can be supplied for application where minimal starting air consumption is required.

Features

- Proven design
- Special servomechanism to give best possible control on pumps with large stiction forces
- One module with 3 different work outputs all within the same frame size
- Speed setting options by synchronising motor, pneumatic and lever
- Work capacity of up to 250 ft lbf (337 Nm)
- Self-contained oil supply
- Droop adjustment
- Common base mounting
- Output shaft either side
- Output shaft both sides

Specification

Input speed ranges	Range 1: 230 ... 1,150 rpm either direction Range 2: 195 ... 960 rpm either direction Range 3: 160 ... 800 rpm either direction
Output shaft movement	40° (maximum) with 24° or greater to be used from no load to full load
Power to drive governor (at 1,000 rpm governor drive speed)	120 ft lbf work output 1.0 hp (0.75 kW) Input torque 5.3 lbf ft (7.2 Nm) 200 ft lbf work output 1.25 hp (1.0 kW) Input torque 6.6 lbf ft (9.0 Nm) 250 ft lbf work output 1.5 hp (1.2 kW) Input torque 7.9 lbf ft (10.7 Nm)
Output shaft dimensions	1 1/8 in nominal diameter, 48 SAE serrations, standard both sides of governor
Drive shaft dimensions	1 1/8 in nominal diameter, 48 SAE serrations standard. Alternatively, 5/8 in nominal diameter with 3/16 in x 3/16 in key
Base dimensions	250 mm square with four fixing holes 14 mm diameter at 220 mm centres
Rotation	Either clockwise or counter clockwise
Speed droop	Adjustable via external access from 0 ... 100 rpm for 60 % of the shaft travel
Stabilisation	Hydraulic system having non-linear characteristics giving high temporary droop at the set point of stability. The degree of damping introduced by the stabilisation system can be adjusted to suit the prime mover characteristics.

Speed setting options	**Lever** - (Normally supplied by engine builder) on projecting speed setting shaft 1/2 in nominal diameter, 36 SAE serrations
	Handwheel - Mounted on top of governor casing
	Synchronising motor - operating voltages: 24, 110 and 220/240 Volts AC/DC
	Nominal rate of change of speed 0.25 % per second
	Pneumatic - Standard pressure ranges 3 ... 15 lbf/in^2 (0.21... 1.05 bar) 5 ... 45 lbf/in^2 (0.35 ... 3.10 bar 5 ... 90 lbf/in^2 (0.35 ... 6.20 bar) 10 ... 60 lbf/in^2 (0.70 ... 4.13 bar)
	Speed indication - Up to three microswitches to give indication of selected speeds.
Shutdown options	**Manual** - By pushbutton on top of governor
	Electric - Solenoid energise to run or to stop: Operating voltages 24, 110 and 200 VDC
	Pneumatic pressurised to run or to stop - Standard pressure range: 50 ... 150 lbf/in (3.4 ... 10.3 bar)
	Low oil pressure - Responds to low oil pressure of prime mover. Two adjustable ranges 25 ... 50 lbf/in^2 (1.75 ... 3.4 bar) and 40.5 ... 81.2 lbf/in^2 (2.75 ... 5.5 bar)
Weight	Basic governor, lever speed setting model, 225 lbf (100 kg)
Fuel limitation options	**Manual** - External dial adjustable over the full range of governor output
	Boost pressure - Standard pressure ranges: 0 ... 20 lbf/in (0 ... 1.38 bar) 0 ... 30 lbf/in (0 ... 2.07 bar) 0 ... 45 lbf/in (0 ... 3.10 bar)
	Load control - Limitation of governor output via internal linkage acting from the speed setting mechanism
	Torque control - By reduction of set speed for marine propulsion prime movers with fixed pitch propeller or suction dredger pump drive
Load control options	**Hydraulic** - A spool valve controls an oil flow to and from the governor, dependent upon the deviation from a predetermined speed/governor position characteristic. The response characteristics may be adjusted by the supply pressure regulator within the governor. The oil supply may be obtained from the governor self-contained system or from an external source.
	Electric - An L.V.D.T. (Linear Variable Differential Transformer) within the governor provides a signal dependent upon the deviation from a predetermined speed/governor position characteristic

NOTE:

The load control and fuel characteristics may be controlled by more than one variable e.g. speed setting and boost pressure. The mechanism is so arranged that the engine will be controlled in a stable manner even if turbocharger failure occurs.

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