Regulateurs Europa
Member of the HEINZMANN Group

TYPE 1800-3G

DATA SHEET

Description

The REGULATEURS EUROPA 1800 series governor is designed specifically for medium and slow-speed diesel engines.

This governor is a centrifugal flyweight design with a two-stage, high stiffness, backlash free, hydraulic servomechanism, providing 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
- Work output 60 ft lbf (81 Nm) 80 ft lbf (108 Nm)
- Special 2 stage servomechanism to give best possible control on pumps with large stiction forces
- One module with 2 different work outputs all within the same frame size
- Externally adjustable droop control
- Speed setting options by lever, dial, synchronising motor or pneumatic
- Self-contained oil supply
- Common base mounting
- Output shaft both sides

Specification

Variable speed applications	Normal operating speed range 200 ... 1,200 rpm
Constant speed applications	Governor drive speed range at rated engine speed 900 ... 1,200 rpm
Output shaft movement	40° (maximum) with 24° or greater to be used from no load to full load
Oil supply	Self-contained 0.94 imp gall (4.25 litres)
Oil cooler	An oil cooler can be supplied for applications where the ambient exceeds 40 °C
Weight (Basic governor - speed setting model)	114 lb (52 kg)
Power to drive governor (at 1000 rpm governor drive speed)	60 ft lbf work output - 0.50 hp (0.37 kW) Input torque 2.62 lbf ft (3.54 Nm) 80 ft lbf work output - 0.75 hp (0.56 kW) Input torque 3.5 lbf ft (4.74 Nm)
Output shaft dimensions	7/8 in nominal diameter, 48 SAE serrations, standard both sides of governor
Drive shaft dimensions	1 1/8 in nominal diameter, 48 SAE serrations, standard Alternative 5/8 in nominal diameter with 3/16 in x 3/16 in key
Base dimensions	7 3/4 in square with four fixing holes 14.0 mm diameter at 6 3/4 in centres
Rotation	Either clockwise or counter clockwise
Speed droop	Adjustable by external dial from 0 ... 100 rpm for 60 % of the shaft travel

Stabilisation	Hydraulic system having non-linear characteristic giving high temporary droop at the set point for stability. The degree of damping introduced by the stabilisation system is adjustable (after the removal of a cover) to suit the application and incorporates a unique reset cut off feature.
Speed setting options	**Lever** (normally supplied by engine builder) - On projecting speed setting shaft, 1/2 in nominal diameter 36 SAE serrations. **Dial** - Multi-turn knob giving fine and coarse indication. **Synchronising motor** - 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 ... 1.03 bar) 5 ... 45 lbf/in^2 (0.34 ... 3.10 bar) 5 ... 90 lbf/in^2 (0.34 ... 6.20 bar) 10 ... 60 lbf/in^2 (0.69 ... 4.14 bar) **Speed indication** - Up to three micro switches to give indication of selected speeds.
Shutdown options	**Manual** - By pushbutton **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^2 (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) & 40.5 ... 81.2 lbf/in^2 (2.75 ... 5.5 bar).
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 limitation** - By reduction of set speed for marine propulsion prime movers with fixed pitch propellers or suction dredger pump drive.

NOTE:
The load control and fuel limit 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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