

TYPE 1800 2G

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.



Specification

Variable speed applications

Normal operating speed range - 200 to 1200 r/min.

Constant speed applications

Governor drive speed range at rated engine speed - 900 - 1200 r/min

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 degrees C.

Weight

(Basic governor - speed setting model) 114 lb (52 kg)

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

Power to drive governor

(at 1000 r/min 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 rev./min 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 pro-
 jecting 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/in² (0.21 - 1.03 bar)
 5-45 lbf/in² (0.34 - 3.10 bar)
 5-90 lbf/in² (0.34 - 6.20 bar)
 10-60 lbf/in² (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 Volts DC.

Pneumatic - Pressurised to run or to stop standard pres-
 sure range 50-150 lbf/in² (3.4-10.3 bar).

Low oil pressure - Responds to low oil pressure of
 prime mover.

Two adjustable ranges 25-50 lbf/in² (1.75-3.4 bar) &
 40.5-81.2 lbf/in² (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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