

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.



Specification

Input speed ranges

Range 1: 230 - 1150 r/min either direction

Range 2: 195 - 960 r/min either direction

Range 3: 160 - 800 r/min 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 1000 r/min 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.

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

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 r/min 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 charac-
teristics.

Speed setting options

Lever - (Normally supplied by engine builder) on pro-
jecting 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/in² (0.21-1.05 bar)

5-45 lbf/in² (0.35-3.10 bar)

5-90 lbf/in² (0.35-6.20 bar)

10-60 lbf/in² (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 Volts DC

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/in²
(1.75-3.4 bar) & 40.5-81.2 lbf/in² (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, dependant 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 con-
tained system or from an external source.

ELECTRIC - An L.V.D.T. (Linear Variable Differential Trans-
former) within the governor provides a signal dependent
upon the deviation from a predetermined speed/gover-
nor position characteristic.

NOTE:

*The load control and fuel characteristics may be control-
led 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.*

Subject to alterations. ©REGULATEURS EUROPA, Ltd., 2010

REGULATEURS EUROPA Ltd.

Port Lane, Colchester, Essex CO1 2NX
United Kingdom
Phone: +44 (0)1206 799 556
Fax: +44 (0)1206 792 685
Email: sales@regulateurseuropa.com



REGULATEURS EUROPA

Member of the
Heinzmann Group

REGULATEURS EUROPA BV

Ekkelkamp 3, 9301 ZZ Roden
The Netherlands
Phone: +31 (0)5050 19888
Fax: +31 (0)5050 13618
Email: sales@regulateurs-europa.com