Mechatronic controls

These levers or systems combine electrical and mechanical commands co-ordinated via electronic and computing logic. These products can be customized, therefore if they might be of some interest for your application, please feel free to contact us or a Flexball's representative





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This series of mechatronic controls is used to command the hydraulic pump for the motion of the machine. The lever combines a voltage output, generated from a Hall effect sensor, with a mechanical push-pull cable. A wide range of sticks with different bending and lengths fulfil most of the application requirements. On the handle can be mounted up to 3 push buttons, a rocker or a miniature electrical joystick.

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SPECIFICATION

- Lever ratio: 11:1
- Mechanical angle: ±25 degrees
- Mechanical stroke of the push-pull cable: 50 mm
- Voltage output signal
 - 0.50 V in forward position
 - 2.25 V in neutral position
 - 4.50 V in reverse position
- Standard connector: 3 poles wire Deutsch DT



SYSTEM 1350

1350 is an automatic control system which provides significant fuel and wear reduction on excavators, backhoe and wheel loaders.

SYSTEM SETUP

It is basically composed of:

- Control lever 600 or on-off switches to define engine working speed
- Mechanical actuator to change the working speed as a consequence of the pressure needed in the hydraulic circuit
- Push-pull cable
- Cabling with electrical connection towards pressure transmitters
- Pressure transmitters
- Keypad for the setup programming





AN ENERGY SAVER AND ENVIRONMENTAL FRIENDLY DEVICE

The machine is usually set at its nominal speed, in order to generate the hydraulic power necessary to fulfil the most energy consuming operation. Most of the time however, the hydraulic circuit is generating more power than necessary and the excess of power is uselessly dissipated.

If we consider how it works an excavator, the operator is selecting a fixed number of RPMs, which will not be changed for the whole working day, independently if the machine is standstill or digging. The power required in the two operating modes is different and the result is a loss of energy all the times the excavator is not digging.



Field tests have demonstrated that installing in your machine the 1350 system, there is a saving of 3 litres of fuel per day in case of back loaders and up to 2.5 litres per hour in case of a 20 tons excavators.

The installation of system 1350 on a small size backhoe ensures a payback period within 6 months.

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