HPS - Concept for BHL

The Market expectation drove us for **new HPS concept** for BHL market that give us the opportunity to express all our innovative attitude based on the main pilars of:

- Energy & power saving
- Hydraulic efficiency
- Better controllability of main functions
- Lowest impact on environment conditions

HPS - Smart functioning

The HPS solution has been thought for BHL (Back Hoe Loader) applications with the target to achieve **an innovative open center solution** with the following advantages:

- The HPS fits into the LVB (Loader Valve Block) and performs in a way to accomplish the below targets.

  - Fuel saving or power saving

  - Better back hoe functions controllability especially at different engine speeds and during the digging cycle

- The HPS allows to have a calibrated flow along the neutral gallery of the EVB (Excavator Valve Block) in order to minimise the pressure drop P to T hence to obtain Fuel Saving
- The HPS keeps constant the oil flow through the neutral gallery in order to avoid to have a change in the starting metering point typical of an open center solution. The starting point remains the same and is independent of engine speed and working pressure
- Furthermore the HPS considerably improves the controllability of multiple functions operated simultaneously
- One more advantage of HPS is the flow management for the filter and cooling systems because it keeps constant the quantity of oil which flows through the neutral passage

HPS - Overall improvements of Your Backhoe Loader

- Drastic reduction of P to T pressure drops that correspond to a power saving of considerable number of Kw
- Less duty temperature due to overall lower pressure drops in the hydraulic circuit
- Possibility to reduce cooler dimensions and get more visibility in the front of the machine
- Better feeling with the machine control
- Easy control on simultaneous functions, typical of more expensive load sensing circuit
- More comfort and machine controlability

HPS - Versatility

Thanks to its semplicity and versatility HPS can easily being installed into several different valve layouts.

- Single pump system
- Two pumps system
- Two pumps system with P2 unloading function
- Two pumps system with P1 unloading and 2 pumps combining flow

hydro control

www.hydrocontrol-inc.com

COMPANY WITH QUALITY MANAGEMENT SYSTEM CERTIFIED BY DNV
ISO 9001:2000

COMPANY WITH ENVIRONMENTAL MANAGEMENT SYSTEM CERTIFIED BY DNV
ISO 14001

Hydrocontrol

Hydrocontrol Power Saving

HPS™

The best and most reliable solution for 65-100 HP (48,5-74,6 Kw) Backhoe Loaders

hydro control

Loader Valve Block LVB

Excavator Valve Block EVB

HPS™ Hydrocontrol Power Saving

HC-D16 loader valve block

P2 unloading: automatic 2nd pump unloading for loading conditions or on demand for road conditions. Can also be used to have more digging power on the backhoe.

Dual pressure main relief valve on P2: to improve the overall energy saving of the machine during loader or backhoe work.

Ride control system: avoid bucket jump during road conditions, can be activated on demand.

Return to dig option: by electrical detent for rapid bucket repositioning and ready to load again.

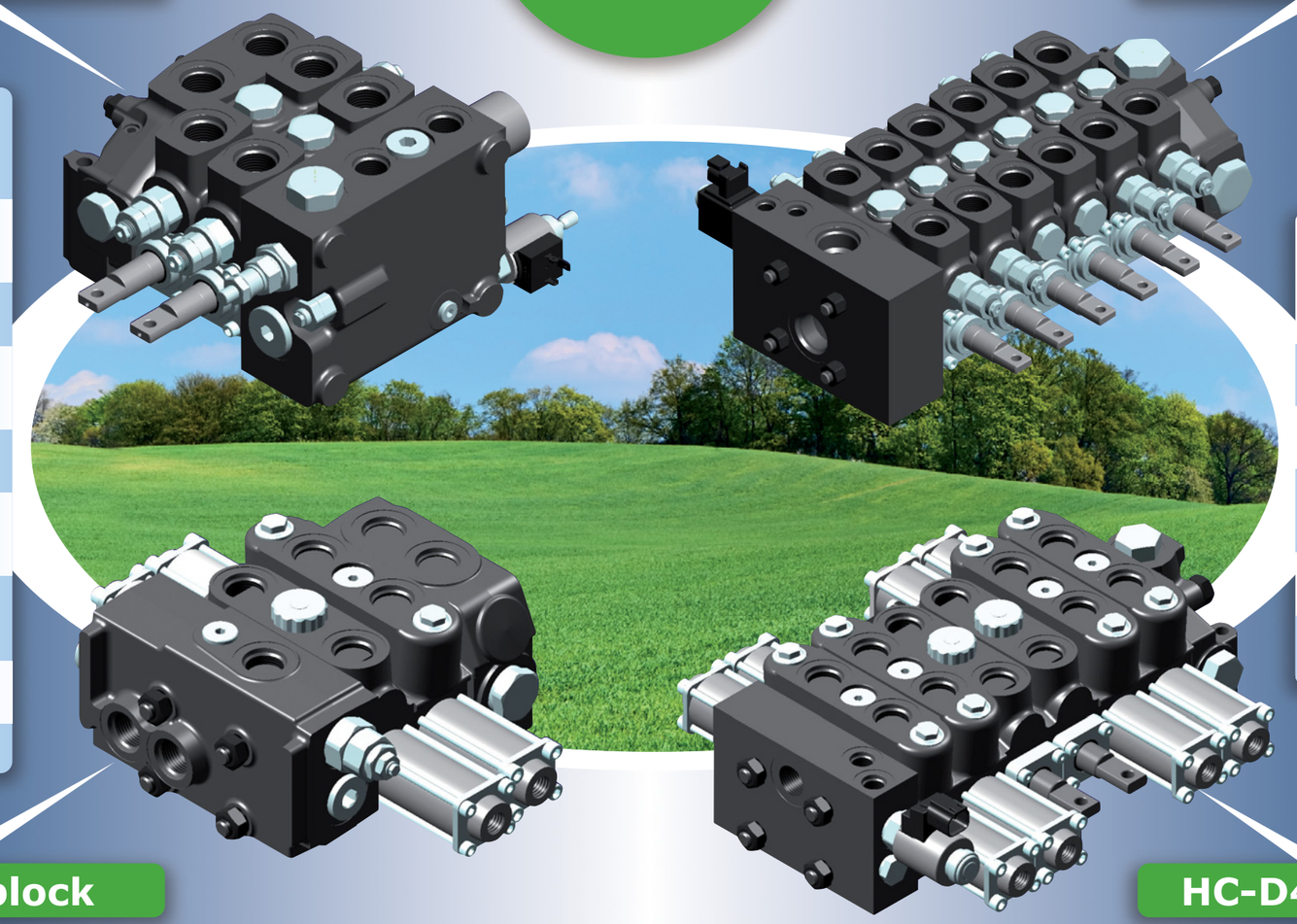
Float option: by mechanical detent for ground leveling.

Anti shock plus anti cavitation auxiliary valve: available with fix or variable adjusted pressure setting.

HPS: automatic power saving system for flow management and exceptional controllability of the backhoe.

4 in 1 bucket option: the valve design makes the 3rd function available.

Servo control option: by hydraulic joysticks.



HC-D16 excavator valve block

EVB module: reduces drastically the hydraulic pressure drop, giving a tremendous fuel saving, improving enormously the controllability of all the functions independently from working pressure.

Electric side shift clamp valve: for backhoe rapid positioning and clamping.

Calibrated spool for each single function: HC's design allows for the machine productivity.

Anti shock plus anti cavitation auxiliary valve: available with fix or variable adjusted pressure setting.

Additional functions: the valve design makes the 7th and 8th function available.

Servo control option: by hydraulic joysticks or electro–hydraulic proportional control.

HC-D4 loader valve block

HC-D4 excavator valve block