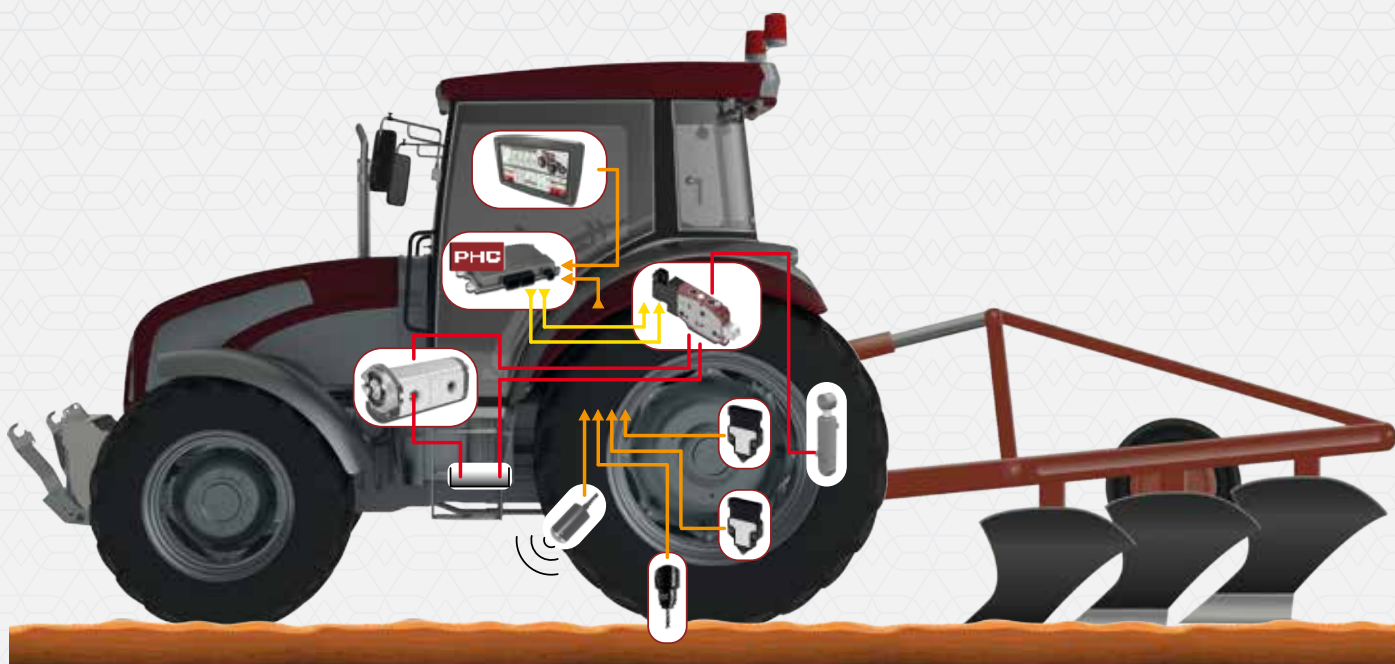


NEW

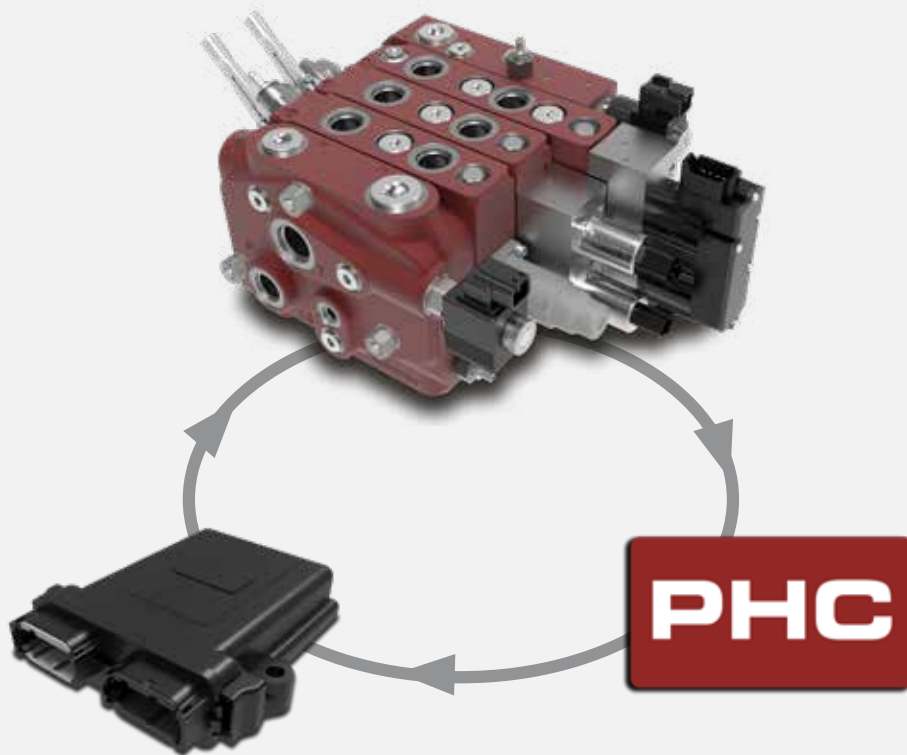
# Hitch Control system

## Direct electroportional system for implement automatic control



## HITCH CONTROL SYSTEM

DIRECT ELECTROPORTIONAL SYSTEM FOR IMPLEMENT AUTOMATIC CONTROL



Walvoil automated electrohydraulic Hitch Control system allows the control of the towed or pushed implements on the tractor, replacing manual adjustment with efficient and precise management.

All adjustments, which compensate for unexpected changes in ground conditions, are performed by the operator directly in the cabin; this operation mode offers an automated and optimized control of machine performance and guarantees a higher level of operator safety.

Walvoil Hitch Control counteracts oscillations of the attachment during the moving phase, reducing wear and making transport more comfortable for the driver.

The system therefore allows control solutions that contribute to make the machines more competitive by improving operator safety, comfort and productivity.

## THE HITCH CONTROL VALVE WITH SD8 AND DPK120

The core of this system is the Hitch Control Valve dedicated section inside walvoil SD8 and DPK120 sectional valves. The main features of this section for both sectional valves are:

- The attachment position is automatically setted on the working operation.
- Proportional valve for the lowering function.
- Auxiliary relief valve.
- Proportional valve with compensator for raising function.
- This section can be integrated in any position in the sectional valves.

# HITCH CONTROL SYSTEM

DIRECT ELECTROPORTIONAL SYSTEM FOR IMPLEMENT AUTOMATIC CONTROL

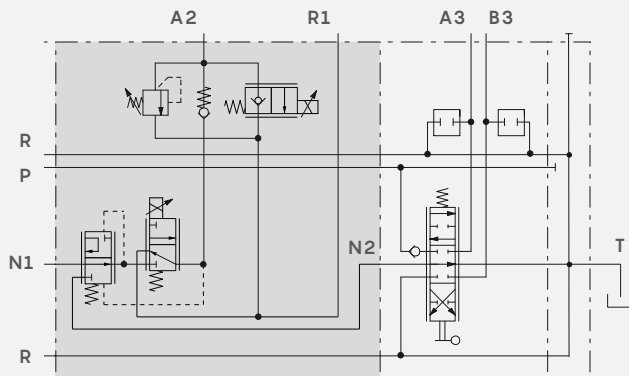


## FEATURES WITH SD 8

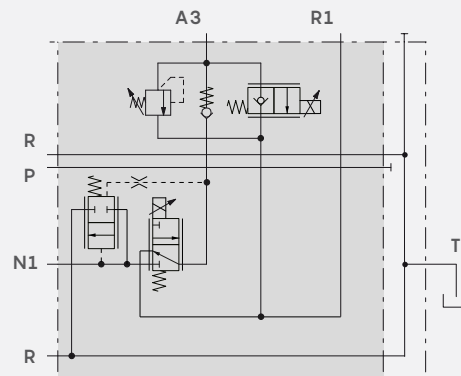
- Rated flow up to 90 l/min (23.8 US gpm).
- Integrated system on tractors up to 100 Hp.
- Damping system during the transport mode.



### Hitch valve on the 1st section or intermediate sections

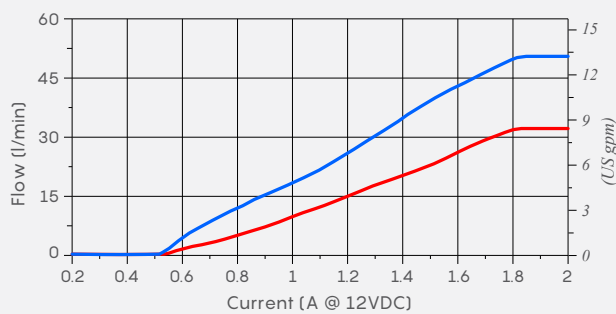


### Hitch on the last section

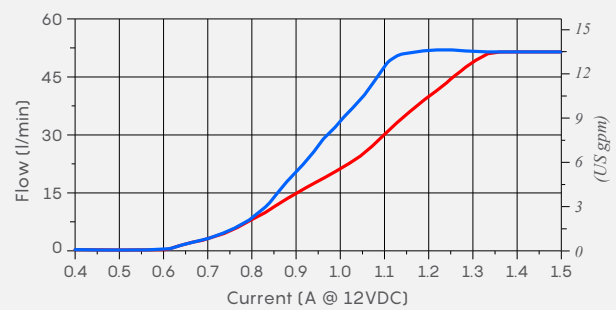


## PERFORMANCE DATA

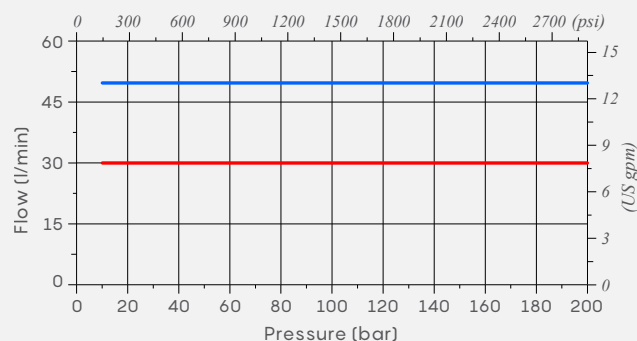
Raising function (P⇒A)



Lowering function (P⇒R1)



Raising compensation curve (P⇒A)



— 30 l/min (7.9 US gpm)  
— 50 l/min (13.2 US gpm)  
Temp = 50 °C (122 °F)



# HITCH CONTROL SYSTEM

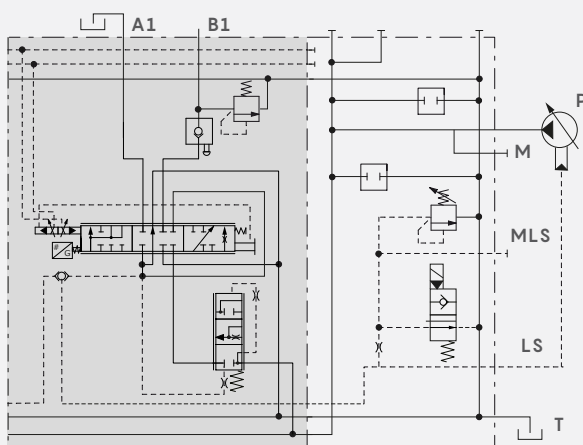
DIRECT ELECTROPORTIONAL SYSTEM FOR IMPLEMENT AUTOMATIC CONTROL

## FEATURES WITH DPK120

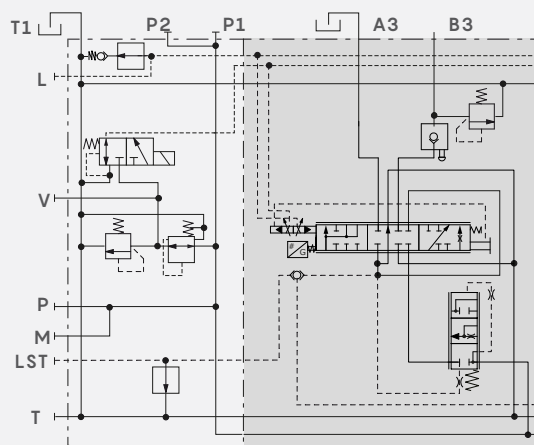
- Rated flow up to 120 l/min (32 US gpm) on ports and 180 l/min (47.5 US gpm) on inlet.
- Integrated system on tractors up to 130 Hp.



Hitch valve on the 1st section or intermediate sections

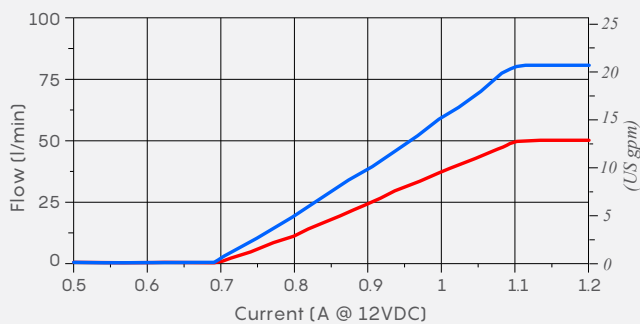


Hitch on the last section

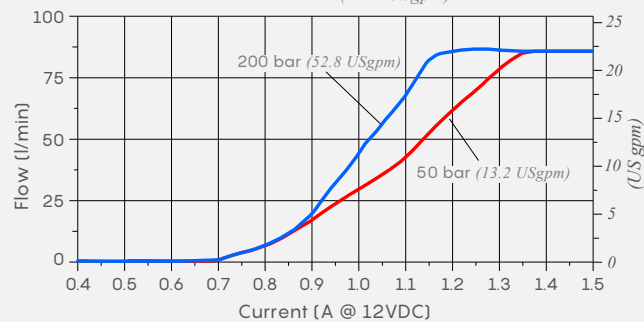


## PERFORMANCE DATA

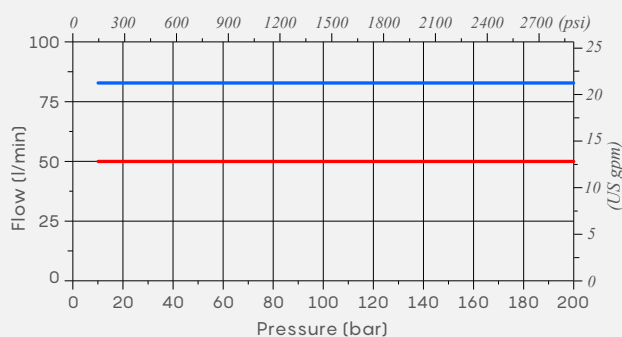
**Raising function (P⇒A)**



**Lowering function (A⇒R1)**  
with 80 l/min (21.1 USgpm)



**Raising compensation curve (P⇒A)**



— 50 l/min (13.2 US gpm)  
— 80 l/min (21.1 US gpm)  
Temp = 50 °C (122 °F)

## THE DEVICES

### SD8 sectional valve



- Pitch 41 mm (1.04 in), compatible with quick coupling arrangement.
- Dedicated cast iron section for the Hitch Control management.
- Nominal Flow: 90 l/min (23.8 US gpm).
- Max pressure: 315 bar (4600 psi).
- Kick out function with single/double effect.
- PWM proportional electro-hydraulic control.
- Special middle section with integrated flow regulator.
- Low Leak or Zero Leak optional configurations.
- Optimization in the outlet/inlet section.

### DPK120 pre-compensated sectional valve



- Pitch 44 mm (1.117 in), compatible with fittings connection option.
- Dedicated section for the Hitch Control management.
- Nominal Flow: 120 l/min (32 US gpm).
- Max pressure: 250 bar (3600 psi).
- Kick out function with single/double effect.
- Special middle section with integrated flow regulator.
- Section Zero Leak.
- PWM and NG5 CANbus electro-hydraulic control.
- Single or double Zero Leak valve configuration.
- Optimization in the outlet/inlet section.

### Display



- Design for agricultural and off-highway vehicles.
- WVGA monitor.
- Up to 19 analog/digital inputs, 4 frequency inputs.
- CANbus solution.

## THE DEVICES

### CED1200S, CED400W or PVD200 Electronic Control Unit with PHC Studio Suite



- CANbus and Analog solutions.
- Microprocessor-based PWM driver designed to control 8 (CED400W) , 12 (CED1200S) or up to 4 (PVD200) proportional outputs, with current closed loop.
- Hardware category 2, for applications up to Performance Level D / SIL 2 (CED1200S).
- Up to IPx9K.
- Fully programmable through PHC Studio tool (CED400W) according to IEC61131-3 standard or Mathworks® tools (CED1200S).
- With a single installation it's possible to manage all Walvoil development tools.

### Angle and draft sensors



- CANbus and Analog solution.
- Angle sensor with Hall Effect technology.
- Redundancy (available only for analog solution).
- IP67.
- Amp or Deutsch connector options

# HITCH CONTROL SYSTEM

DIRECT ELECTROPORTIONAL SYSTEM FOR IMPLEMENT AUTOMATIC CONTROL

Walvoil offers 3 Hitch Control system levels to meet the different customer needs:

## • Base Solution

It includes only directional valve with integrated Hitch Control Valve section.

## • Intermediate Solution

Closed loop complete system including, in addition to directional valve, the ECU fitted with PHC Softwares.

## • Advanced Solution

It's the most complete proposal including the same products as the Intermediate Solution, with customizable display, angle and draft sensors.

Devices	Type of solutions		
	Base	Intermediate	Advanced
SD8 Sectional valve	•	•	•
DPK 120 Sectional valve	•	•	•
CED1200S, CED400W or PVD200 ECUs		•	•
Display			•
Sensors			•

NOTE: if the applications do not require the versatility and completeness of the CED400W or CED1200S Control Units, the systems listed can be supplied with the simpler PVD200 Control Unit.

## TESTING ACTIVITIES

Walvoil manufactures high-performance and reliable products, designed, developed and tested with the most advanced technologies, capable to increase the added value of the machine.

With in-house developed and customised software, dedicated to the most varied applications, machine control can be made more precise and comfortable.

The Research and Development Department continuously tests all systems and application solutions, to provide reliable results and performance that always meet customer expectations.



Each application requires a series of dedicated components that can work in perfect synergy, increasing the reliability and efficiency of the machine.

Walvoil is always oriented towards improving its products, always looking for new answers to market challenges that allow optimisation of critical parameters, increased efficiency, energy savings and automation of system functions.



# HITCH CONTROL SYSTEM

DIRECT ELECTROPORTIONAL SYSTEM FOR IMPLEMENT AUTOMATIC CONTROL



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