

Economic Solutions in Electro Hydraulics and Sensor Application for Agricultural Equipments



Tractors



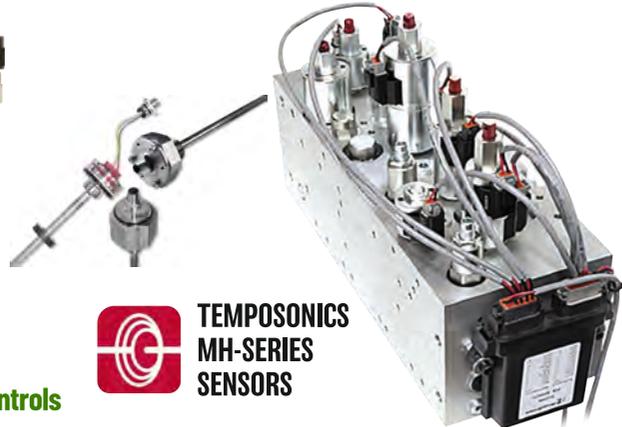
Sugarcane Harvester



Harvester



CAN J1939 Electronic Vehicle Controls with plus one Software



**TEMPOSONICS
MH-SERIES
SENSORS**

Cartridge Manifold Blocks



Header Control in Harvester



Sprayers



Traildag Solutions



Cartridge manifold blocks for Agricultural equipments, Mining, Material Handling, Machine Controls, Auto transmission system, engine control units & traction controllers

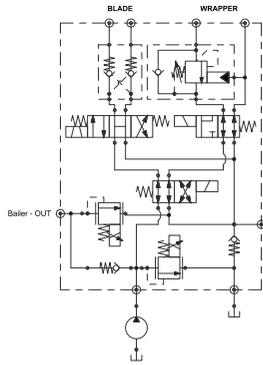
We serve all major OEM's in construction equipments, Mining, Material Handling, Agricultural Machinery, Earth moving equipments & Municipal vehicles
with dedicated team for development, sales & service professionals
We provide turnkey solution for Hydraulics, Electronics, Electro-mechanical & Sensors solutions

BALERS

Heavy bales of hay have a heavy reliance on hydraulics for compacting, wrapping and cutting. Our electrohydraulic solutions can provide fine control of hydraulically operated bale handling.

Proportional hydraulic control of the mechanisms for binding and wrapping bales is accomplished effectively with cartridge valves. Accurate proportional pressure control can ensure the correct bale density – soft in the centre to allow enough air flow for drying, and hard on the outside to shed water.

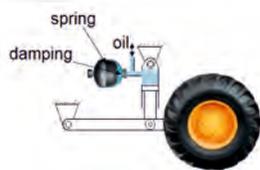
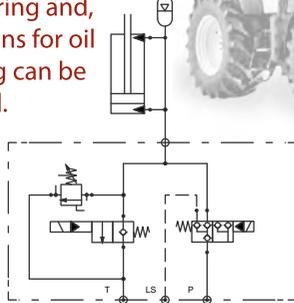
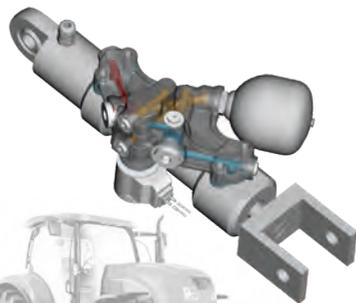
“Our electrohydraulic solutions can provide fine control of hydraulically operated bale handling.”



TRACTORS

Hydro-Pneumatic Suspension Diagram

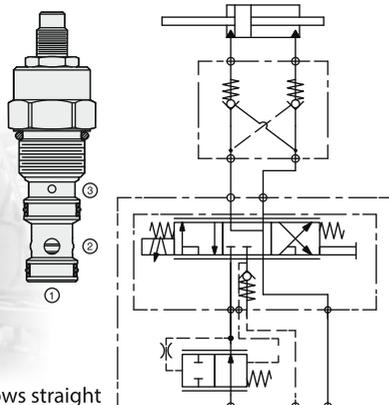
In a hydro-pneumatic suspension system, a cylinder and accumulator replace the torsion or leaf spring. The accumulator acts as the spring and, with restrictions for oil flow, damping can be accomplished.



SPRAYERS

Modern sprayers let you squeeze every drop of value from your solution. Precision requires accuracy, reliability, and repeatability from the vehicle hydraulics. At HydraForce, we hang our reputation on precision. With the most sophisticated flow and pressure controls available, your sprayer will perform dependably season after season. Products are available for all vehicle functions:

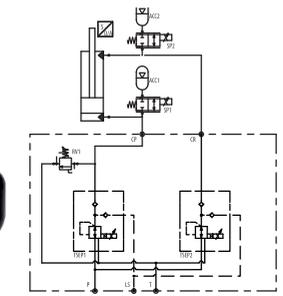
- Boom fold/unfold
- Precision boom height control
- Boom/axle suspension
- Electrohydraulic steering
- Solution pump control
- Filling pump control



Electrohydraulic steering control allows straight row-tracking yet follows the tractor when turning

HARVESTER

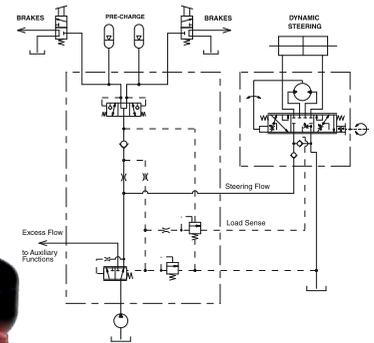
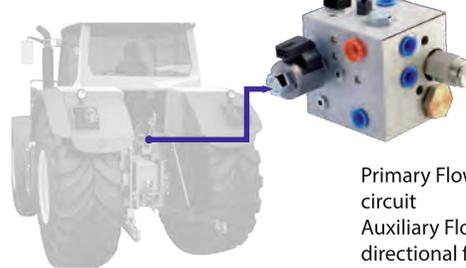
“Servocontrols custom header ride control solutions can be integrated into the header height control manifold, or designed as a stand alone system.”



SUSPENSION

Cartridge valving and manifolds are used extensively in axle, cabin, header and even track suspension systems.

“Servocontrols manufactures a range of priority on demand pressure compensators, with dynamic load sensing for fast response.”

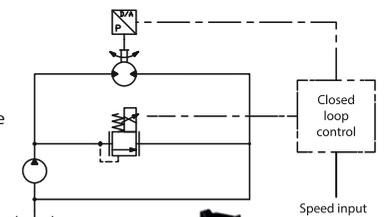


Primary Flow to the brake section of the circuit
Auxiliary Flow diverted to the directional function

BALERS AND BALER/WRAPPERS

Combi-balers that combine rolling and wrapping save time in the field. Precise pressure controls allow optimum bale density. Torque drive smooths out pressure oscillations in the high inertial load wrapper drive. Post-compensated flow-sharing technology allows baling and wrapping to occur simultaneously with other functions to bale continuously without stopping. HydraForce cartridge valves support all functions:

- Open/close/ejection
- Head lift/lower
- Gathering and cutting
- Precise pressure control for optimum bale density
- Belt drive
- Wrapping



Constant torque control provides smooth operation of bale wrapper



Application : Automatic Control of Working Position

Market : Agricultural Machines

Branch : Harvester / Combines

Description : 7 Sensors integrated inside hydraulic cylinders to control lifting of the mower and to turn automatically back into working position.

Benefits :

- Because the sensor is inside the hydraulic cylinder the sensor is best protected vs. any damage
- Higher Productivity
- Higher Accuracy



Application : Round Balers

Market : Agricultural Machines

Branch : Trailed Round Balers

Description : These machines are Two different Controls the baler size and the door position in the variable room is already installed a sensor in the door (my be is possible use only one in two movements.) To control the door position can increase the productivity up to 60 balers per day

Benefits :

- Higher reliability and accuracy .
- Integrated and guarded inside in the cylinder.
- Reduced mechanical parts, faster installation , cost reduction.
- EMC, Immunity against electromagnetic HF-fields up to 200V/m.



Application : Sprayer with "Drift Stopper system"

Market : Agricultural Machines

Branch : Trailed sprayer

Description : New trailed sprayer with "Drift Stopper system" 2 Sensors integrated inside hydraulic cylinders to control the distance between the panels and the panels position

Benefits :

- Because the sensor is inside the hydraulic cylinder, the sensor is better protected vs. any damage
- Lower cost because now they are installing some switches.
- Higher Accuracy



Application : Cabin Suspension

Market : Agricultural Machines

Branch : Tractors

Description : Cabin Suspension, Project 'COMFORT PACKAGE' to improve all round ride comfort for operators with total control with total control from in cab console. Also known as single point control with front cabin Pivot point and 2 rear hydraulic cylinders.

New Standard ISO 2631 is obligate from year 2010 on an could be fulfilled with our sensors.

Benefits :

- Increased reliability
- Very much increase of comfort for operator / driver over rough terrain.
- Higher yields from increased speed and safety

Sensors & Alliance Partners from last 20 years



rexroth
A Bosch Company

Markets **HYDRAFORCE**
POWER FORWARD™

- Aerial Work Platforms
- Agriculture
- Construction
- Forestry Equipment
- Material Handling
- Fluid Power
- Industrial
- Mining
- Municipal
- Paving
- Powertrain and Transmission
- Truck Work Equipment
- Turf Care
- Other



Bosch Rexroth and HydraForce offer the world's broadest and deepest portfolio of compact powerful solutions for mobile and Agricultural equipment, including cartridge valves, compact directional valves, hydraulic integrated circuits, compact power modules, and easy-to-use electronic controls.



Compact Directional Valves, Smart & Modular Solutions



G3 Valves - Next generation control solutions for transmissions, pilot systems, diesel engine and powertrain systems.



Smoother Load Control. Reliable Performance.



Electronic Controllers.

Temposonics make sensors



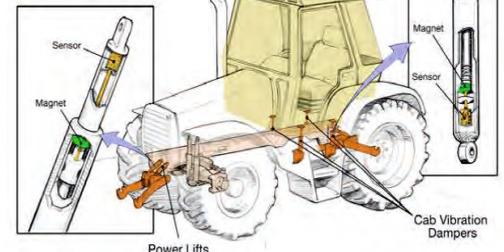
Agricultural machine

New Electric Solutions, Artificial Intelligence (A I), Hydraulics, Temposonics, ECUs & Software Solutions for Agricultural Machines

1. Temposonics Sensors
Tradition, Experience, Innovation. Pioneer of magnetostrictive Linear Measurement and Technology Leader
2. Mobile Hydraulic Machines Market Requirements
 - Increase the Machine's Productivity
 - Reduce fuel consumption and Emission
 - Reduce the costs on Design & System Solution
 - Safety for Operator and Environment
 - Comfort for Machine Operator



Safe installation inside the hydraulic cylinder



SERVOCONTROLS facility
Industrial Estate, Udyambag, Belagavi



SERVOCONS 300+Employees



SERVOCONTROLS & HYDRAULICS INDIA PVT. LTD.

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