

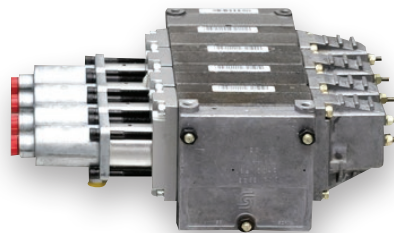


Versatile functionality for hoist and plow control

Designed as cost effective alternatives, Certified Power Solutions offers hydraulic valves that can be controlled electronically, pneumatically (air) or manually (cables) for typical plow control operations. Traditional control options fit the cost and service consistency needs of your fleet.

LEVER (AIR) CONTROLS

- Proportional (feathering) control of device
- Ability to stack valves into banked package
- Single- and dual-axis functions
- Various handle bends for access
- Detent, center lock and posi lock available



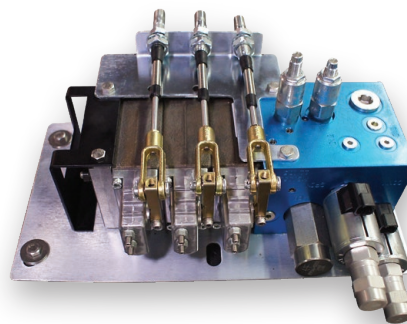
Hydraulic valve with pneumatic (air) actuators



Lever (air) controls

LEVER (CABLE) CONTROLS

- Proportional (feathering) control of device
- Ability to stack valves into banked package
- Single- and dual-axis functions
- Various handle bends for access
- Detent, center lock and posi lock available



Hydraulic valve with cable actuators



Lever (cable) controls



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Accurate application controls for versatile spreading

The Dual Spread™ control system provides simple, accurate open- or closed-loop controls for spreading applications including granular and pre-wet. The Dual Spread offers 6 programmable rates for augers, spinners and liquid applications.



DualSpread control system

PRODUCT APPLICATION

- Granular and liquid spreading for snow and ice applications

3 OPEN- OR CLOSED-LOOP SPREADING CHANNELS

- Auger, spinner and pre-wet

COMPENSATION FOR CHANGES IN LANE WIDTH SETTINGS

- Area spreading in lbs/gal per lane mile
- Distance spreading in lbs/gal per mile

MATERIAL DESIGNATION

- Up to 6 types of granular and 6 types of liquid with customized application rates for each

DATA LOGGING BY MATERIAL NAME

- Select specific application rates, definitions and related data logging for specific purposes (i.e., state vs. county vs. city roads)

STORM AND SEASON TOTALS

- System logs application amounts by rate definition for the storm and the season (storm total is operator resettable)

AVL READY

- Compatible with many brands of radio and cell phone AVL systems

BLAST AND PASS (PAUSE)

- Blast is programmable (on/off, timed, momentary)
- Remote blast and pass accessible

OUTPUT SIGNAL

- Multiple frequency settings for ease-of-valve compatibility

POWER SAFETY

- Power Safe™ signals prevents random grounds powering any hydraulics system attached (auger, spinner, conveyor, etc.)
- Channel Safe™ detects and protects against open or short circuits on hydraulic drive channels

DISPLAY TYPE

- 4 lines x 20 characters on the white/blue graphic LCD

SYSTEM MOUNTING

- Seat mounted or pedestal mounted
- Standalone

WARNING INDICATORS

- Integrated visible (LCD) and audible (buzzer) for spreading alarms

OPTIONAL EQUIPMENT

- Data Shark™ with Drive by Download™ for data logging and wireless download

OPERATING TEMPERATURE RANGE

- Minimum: -20 degrees Celsius; maximum: 70 degrees Celsius

POWER REQUIREMENTS

- Minimum: 11 Volts DC
- Maximum: 15 Volts DC
- Maximum: 10 Amps
- Fuses rated at 10 Amps



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Basic control systems for dependable spreading applications

The EZ Spread™ features the most reliable controls for basic spreading applications. Designed for granular and pre-wet applications, the EZ Spread electronic spreader control system from Certified Power Solutions combines core functionality with user-friendly operations.



EZ Spread
2- or 3-channel control

PRODUCT SUMMARY

- Ground speed oriented or manual spreader control
- Includes 3 channels for 2- or 3-channel operation
- Open-loop control for auger, spinner and auxiliary (pre-wet, X-conveyor) channels
- Adjustable settings from 0–10
- Backlit control panel
- Programmable trim settings

PROPORTIONAL CHANNELS

- Independent control of 3 proportional channels
- Usually configured for auger/conveyor, spinner and either cross auger or pre-wet

GROUND SPEED OPTIONS

- Ground speed triggered (GST): starts with truck motion, off when truck stops
- Ground speed oriented (GSO): on with truck motion, automatically adjusts output to compensate for truck speed, off when truck stops
- Manual: no ground speed interaction

HYDRAULIC TRIMMING

- Configuration mode for hydraulic trimming without manual trim pots

BLAST AND PAUSE

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- System powers up with pause active to prevent indoor spreading

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Save time and money with a centralized power system

PowerSmart™ is a 12-volt DC, solid state printed circuit assembly that improves the installation of snowplow truck equipment accessories by providing a central power and connection point for switches, sensors, relay controlled devices and Certified Power Solutions accessory products.

SUMMARY

- Standardize truck body wiring across multiple end users and equipment sets
- Faster troubleshooting with common wiring, labels and LED notifications on board
- Extra relays on board allow installers to “plug and play” for specific functions

MAIN POWER CAPACITY

- 12 volts DC, 120 Amps max when connected to vehicle battery with 4awg wire
- On board clamp diode protects equipment from voltage spikes
- “Ignition hot” wire turns system on and off with truck ignition

POWER CONTACTS

- 12 volts, general purpose power points with individual fuses up to 30 Amps each
- Power points for Certified Power Solutions modules, each 15 Amps, and 30 Amps for electric pre-wet driver
- Each power point has a red LED to indicate power status

SENSOR INPUTS

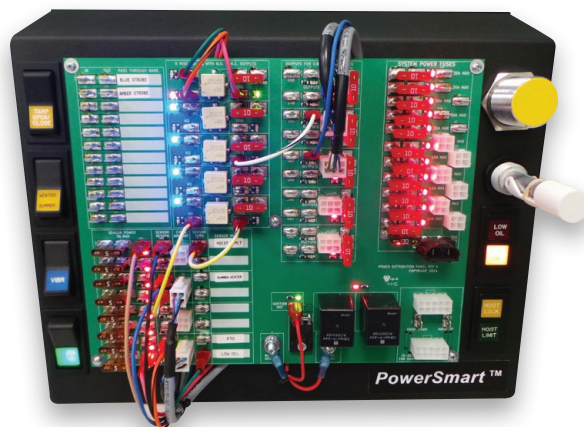
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- Green LED indicates sensor state = true

SWITCH INTERFACES

- 10-amp fuse for each switch, red LED indicates power
- Normally open and normally closed contacts available for use
 - Normally open spades, yellow LED
 - Normally closed spades, blue LED

CONTROL RELAYS

- 10-amp fuse for each relay, red LED indicates power with trigger spade (green LED)
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PowerSmart demo close-up



PowerSmart installed



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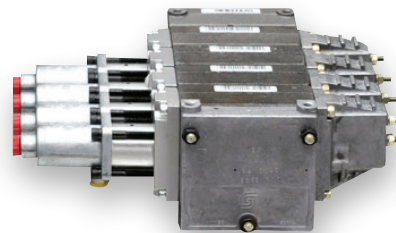


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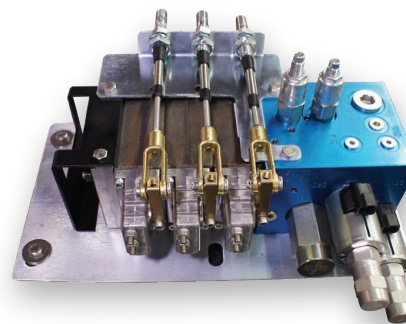
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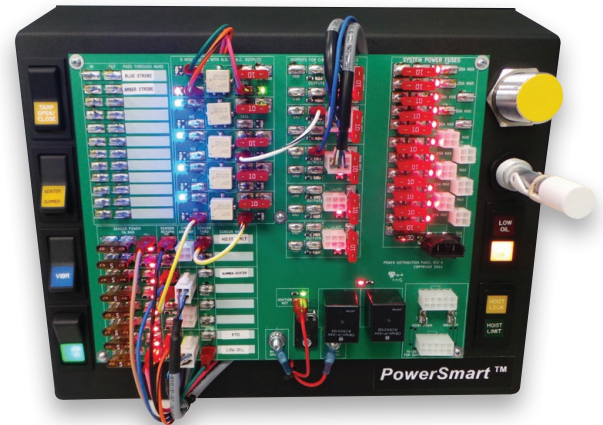
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