

# PRODUCT OVERVIEW

Construction

Agriculture

Marine

Transportation

Forestry

Material Handling

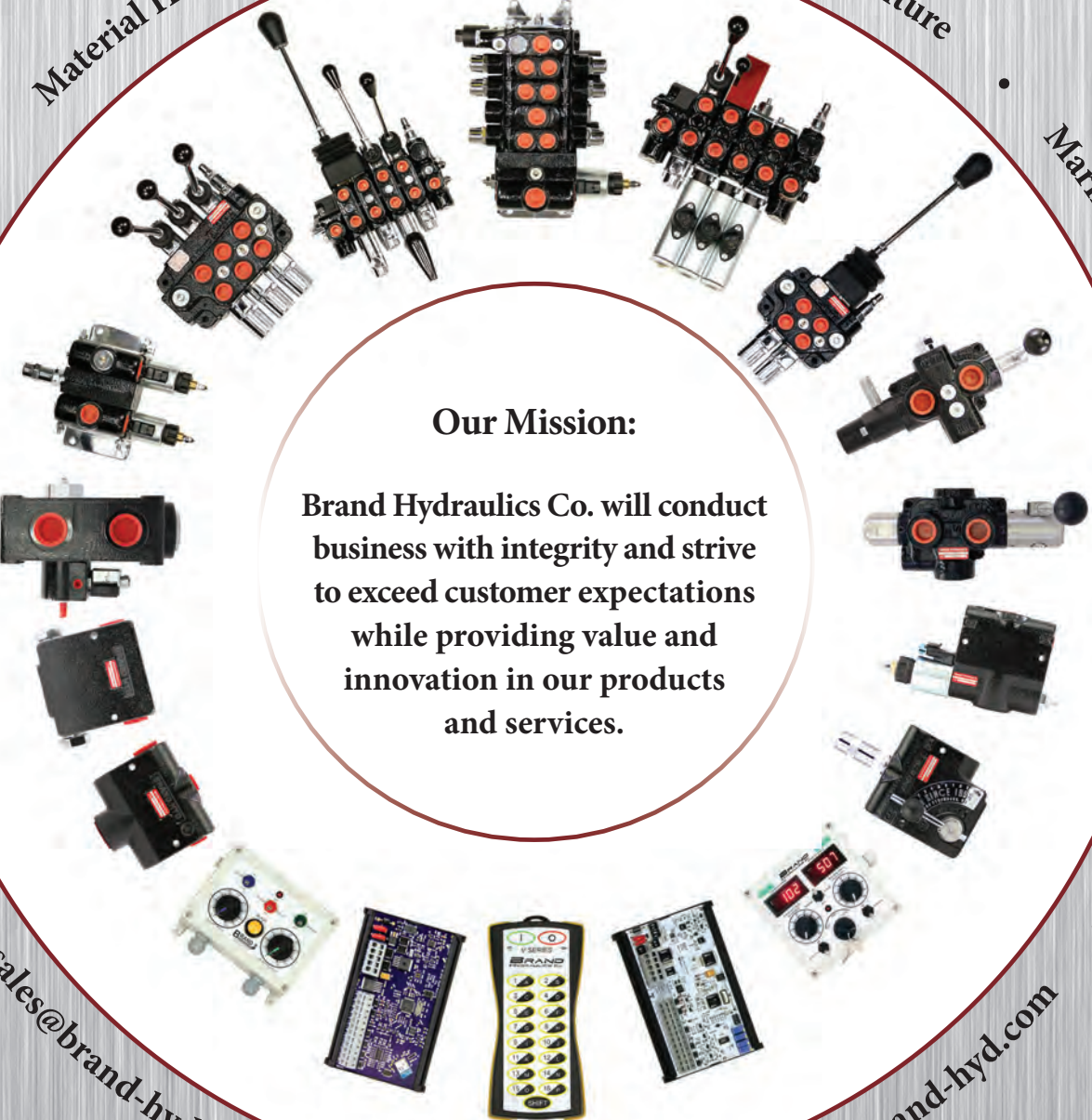
Waste Management

Industrial

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### Our Mission:

Brand Hydraulics Co. will conduct business with integrity and strive to exceed customer expectations while providing value and innovation in our products and services.



**Engineering & Manufacturing Solutions**

## Wireless Handheld Controllers



### V-Series

Handheld wireless control family that includes 5 different sized ergonomic enclosures. These controls are efficient and rugged. The transmitters are rated at IP65 and each unit includes a highly visibility boot for rugged weatherproof applications. Each unit has diagnostic LEDs and push button counts ranging from 8 to 16.

## Electronic Controllers



### EC20100

Spreader control with dual control knobs, dual outputs and a blast button. Both outputs and the blast button can be fully trimmed to suit your application. It is all housed in a waterproof enclosure for use inside or outside.



### EC20200

Control Box has a single knob to control the output current and a switch to turn the power off. Electronic circuitry, power switch, fuse holder, potentiometer and wire bushing are sealed in a rugged waterproof box. The outputs can be trimmed for minimum and maximum output current and ramping can be trimmed in both directions.



### EC20201

Control Box has a single knob to control the output current. The maintained switch is used to turn the power on/off and control 2 directional solenoids. Electronic circuitry, power switch, fuse holder, potentiometer and wire bushing are sealed in a rugged waterproof box. The outputs can be trimmed for minimum and maximum output current and ramping can be trimmed in both directions.



### EC20202

Control Box has a single knob to control the output current. The momentary switch is used to turn the power on/off and control 2 directional solenoids. Electronic circuitry, power switch, fuse holder, potentiometer and wire bushing are sealed in a rugged waterproof box. The outputs can be trimmed for minimum and maximum output current and ramping can be trimmed in both directions.





## EC20300

Control Box has a single LED to indicate the power is on. This unit is designed to accept analog signals remotely from a Potentiometer, 0-10 V, 0-5 V, or 4-20 mA. It is housed in a waterproof enclosure for use inside or outside. The outputs can be trimmed for minimum and maximum output current and ramping can be trimmed in both directions.



## EC20400

Joystick control box with a mini proportional single axis joystick. The control also has solid state switched output for each side of neutral. It is housed in a waterproof enclosure for use inside or outside. The outputs can be trimmed for minimum and maximum output current and ramping can be trimmed in both directions.



## DEC005000

Digital Interface Control was designed for DIN rail mount applications. A single control can accept any of the following input types: a Potentiometer, 0-10 V, 0-5 V, or 4-20 mA. The 3.0 amp constant current card comes with features like: microcontroller based current control provides rock solid current output, wide operating voltage range 9-30V, factory customizable PWM frequency 30-500Hz, enable inputs, span adjustments, output ramping, diagnostic LEDS and much more.



## ECM0001

Current steering module for the Series 36/38 valve. The module is designed to steer the current for the unloaded inlet coil. This module will allow you to use SPDT (Single Pole Double Throw) switches to minimize the amount of wire required for a system.



## DEC006000

Digital Electronic Control has a knob to control the output current and a switch to turn the power off. Electronic circuitry, power switch, fuse holder, potentiometer and wire bushing are sealed in a rugged weather proof box. The 3.0 amp constant current control comes with features like: microcontroller based current control provides rock solid current output, wide operating voltage range 9-30V, factory customizable output currents, ramping and PWM frequency 30-500Hz, active short circuit monitoring with lockout, diagnostic LED and much more.

## Electronic Controllers



### EC-12-01

Control Box has a knob to control the output current and a switch to turn the power off. Electronic circuitry, power switch, fuse holder, potentiometer and wire bushing are sealed in a rugged weather proof box.



### DEC007000

Digital Electronic Control functions electronically like the DEC006000, but allows dash or panel mounting. It comes with four position terminal block for easy wiring and short circuit protection. Circuit board is coated with a conformal coating to help protect against moisture, dust and other contaminants. The 3.0 amp constant current control comes with features like: microcontroller based current control provides rock solid current output, wide operating voltage range 9-30V, factory customizable output currents, ramping and PWM frequency 30-500Hz, active short circuit monitoring with lockout, diagnostic LED and much more.



### EC-12-02

Panel Mount functions like the EC-12-01, but allows dash or panel mounting. It comes with four coil and power terminals for easy wiring and short circuit protection. Circuit board is coated with a special conformal coating to help protect against moisture, dust and other contaminants.

## Custom Electronics



Brand Hydraulics offers a single source for custom electronic packages, circuits and wire harnesses. We build custom electronics to exacting specifications while our engineering department is available to assist with customer design. Brand is equipped for large and small scale production quantities for products ranging from simple on/off switch boxes to fully integrated digital control systems. Our professional staff is committed to delivering a robust, high-quality and cost-competitive solution to any application need.

Brand Hydraulics welcomes inquiries on custom electronics or variations of products from the standard product line. For assistance with any application, contact Brand Hydraulics directly by phone or by e-mail at [custom@brand-hyd.com](mailto:custom@brand-hyd.com) and include your specifications.





### Capabilities

- Wireless control systems for mobile & static applications
- Handheld pendants or mounted control packages for most environments
- Complete service from concept through manufacturing including circuits, software, enclosures & cabling
- Custom electronics and circuit boards to meet customer requirements
- Analog and digital systems
- Open loop & closed loop controller designs
- Wiring harnesses
- Complete custom packages for out of the box OEM installation
- Private label of products available
- Custom machining of enclosures
- Small, medium and large quantities

## Flow Controls

### Small Manual Flow Controls (FC51, FCR51, FCB51, & FC55)



- Rated at 3000 PSI [206.8 Bar]
- Pressure compensating, variable flow control valves
- Rotary side lever to easily set controlled flow (CF)
- Controlled flow varies from zero to rated flow
- Compensator spool designed to reduce instability & hunting issues
- Standard flow settings: 0-8, 16, 30 GPM [0-30.2, 60.5, 114 l/min]
- Port sizes: 3/8", 1/2", 3/4" NPT & #6, 8, 10, 12 SAE
- Rotary lever spool can be drilled to custom max flow rates
- Relief option available only in FCR51 or FCB51 series flow controls
- Free reverse flow checks available in FC55 series flow controls

### Large Manual Flow Controls (FC51)



- Rated at 3000 PSI [206.8 Bar]
- Pressure compensating, variable flow control
- Rotary side lever to easily set controlled flow (CF)
- Controlled flow varies from zero to rated flow
- Standard flow settings: 0-50, 90 GPM [0-189, 341 l/min]
- Port sizes: 1", 1 1/4", 1 1/2" NPT & #16, 24 SAE
- Rotary lever spool can be drilled to custom max flow rates



## Flow Controls Dividers & Combiners



### Electric Flow Controls (EFC, EFCC, EFCR, & LEFC)



- Rated at 3000 PSI [206.8 Bar]
- Pressure compensating, variable flow control valves
- Electrically adjustable orifice varies controlled flow (CF)
- Controlled flow varies from zero to rated flow
- Compensator spool designed to reduce instability & hunting issues (EFC only)
- Free reverse flow option is available only in the EFCC electric flow control
- Relief option is available only in the EFCR electric flow control
- Available in both 3-port (standard) & 2-port
- EFC series valves offer flow ranges of 0-30 GPM [0- 114 l/min]
- EFC series valves are only available with #12 SAE ports
- LEFC valves offer flow ranges of 0-45, 55 GPM [170, 208 l/min] with #16 SAE ports
- See “Electronic Controllers” section for controller options

### Non-Adjustable Flow Controls (83AFF & 84AFF)



- Rated at 3000 PSI [206.8 Bar]
- Pressure compensation available only in Series 83 non-adjustable flow controls
- Series 83 is available up to 10 GPM [37.8 l/min] max flow rate
- Fixed orifice available with Series 84 non-adjustable flow controls
- Series 84 orifice diameters are available up to .250” [6.35 mm]
- Free Reverse flow built into both Series 83 & 84

## Dividers & Combiners

### Non-Adjustable Constant Volume Priority Divider (BG5, BGR5, BGC5 & BG4)



- Rated at 3000 PSI [206.8 Bar]
- Constant volume priority divider maintains priority port flow
- Divides flow to one constant output (priority) & one excess flow stream
- Priority flow is preset at factory to specified flow
- Flow changes at the inlet will be seen on the excess flow port, after priority is met
- Both outlets are pressure compensated & can be used for work functions
- BG5, BGR5, BGC5 are rated up to 30 GPM [114 l/min] flow
- BG5 port size: 3/8”, 1/2”, 3/4” NPT & #8, 10, 12 SAE
- Relief option available only in BGR5 priority divider
- Free reverse flow option available only in BGC5 priority divider
- BG4 priority divider allows inlet flows up to 45 GPM [170 l/min]
- BG4 available with 1” NPT or #16 SAE ports

### Adjustable Constant Volume Priority Divider (FG52 & FG54)



- Rated at 3000 PSI [206.8 Bar] & up to 30 GPM [114 l/min] inlet flow
- Constant volume priority divider maintains priority port flow
- Divides flow to one constant output (priority) & one excess flow stream
- Priority flow is adjustable by turning side setscrew
- Flow changes at the inlet will be seen on the excess flow port, after priority is met
- Both outlets are pressure compensated & can be used for work functions
- Priority flow is adjustable from 0-12 GPM [0-45.4 l/min]
- FG series available with 3/4" inlet & excess ports & 3/8" NPT priority
- FG series also available with #12 SAE porting
- Relief option available only in FG52 priority divider
- Free reverse flow option available only in FG54 priority divider

### Non-Adjustable Proportional Flow Divider (B50, BX50, B100 & B100AB)



- Rated at 3000 PSI [206.8 Bar]
- Both outlets are pressure compensated
- Proportional flow divider maintains output port ratios independent of inlet flow
- Output ratios can vary from 50:50 up to 95:5
- Free reverse flow option available only in B100 & B100AB dividers
- Auto-bypass for re-synchronizing cylinders available only in B100AB dividers
- B50, B100, & B100AB port sizes: 3/8", 1/2", 3/4" NPT & #10, #12 SAE
- BX50 available with 1" NPT or #16 SAE ports for flows up to 45 GPM [170 l/min]
- B100 also available with #24 SAE ports for flows up to 120 GPM [454 l/min]

### Adjustable Proportional Flow Divider (FP53, FP55 & FP56)



- Rated at 3000 PSI [206.8 Bar]
- Both outlets are pressure compensated
- Proportional flow divider maintains output port ratios independent of inlet flow
- Adjustable orifice to change outlet ratios
- Rated up to 30 GPM [114 l/min] inlet flow with 3/4" NPT ports
- Relief option available only in FP53 divider with 3/8" tank port
- Free reverse flow option available in FP55 & FP56 divider
- Dual adjustable orifice option available only in FP56 divider

## 4-Way Directional Controls

### Loader Directional Control Valve (LV & TS2)



- Rated at 4000 PSI [275.8 Bar] & 10 GPM [37.8 l/min] maximum flow
- Two spool monoblock valve designed for tractor-loader applications
- Port sizes: #8 SAE & #6 SAE
- Bucket regen (rapid tip) & float features available for standard loader functions
- Load checks are standard to prevent load drop when shifting spools
- Joystick or lever actuators allow for simple valve operation
- Power beyond & closed center options also available

### 4-Way Directional Control (HPV4, AO, LS & DC)



- Rated at 3000 PSI [206.8 Bar]
- Relief available in AO, LS & DC 4-way directional control valves
- AO rated up to 18 GPM [68.1 l/min] with 3/4" NPT in/outlet & 1/2" workports OR #12 SAE in/outlet & #10 SAE workports. Actuators: lever & rotary
- LS rated up to 18 GPM [68.1 l/min] with 3/4" NPT in/outlet & 1/2" workports OR #12 SAE in/outlet & #10 SAE workports. Log Splitter valve w/ hydraulic kickout
- DC rated up to 45 GPM [170 l/min] with 3/4" NPT in/outlet & 3/4" workports OR #16 SAE in/outlet & #16 SAE workports. Actuators: lever, rotary, & pilot
- HPV4 rated up to 6000 PSI [413.7 Bar], 5 GPM [18.9 l/min], rotary actuated, 1/4" NPT OR #4 SAE ports

### 4-Way Directional Control w/ Pressure Compensation (SDCF & DCF)



- Rated at 3000 PSI [206.8 Bar]
- Built in full-range pressure compensated bypass type flow control
- Standard adjustable pilot operated relief
- SDCF rated up to 18 GPM [68.1 l/min] with 3/4" NPT in/outlet & 1/2" workports OR #12 SAE in/outlet & #10 SAE workports
- DCF rated up to 45 GPM [170 l/min] with 3/4" NPT in/outlet & 3/4" workports OR #16 SAE in/outlet & #16 SAE workports
- Available with lever & rotary actuators



## 4-Way Directional Controls

### Monoblock Directional Control Valve (MB & TS)



- Available in one, two or three spool monoblock configurations
- Available with power beyond or closed center features
- Float option available with both MB & TS valves
- MB series rated up to 4000 PSI [275.8 Bar] & 10 GPM [37.8 l/min], three spool  
MB rated up to 8 GPM [30.3 l/min]
- MB series offered with #8 SAE porting & lever and/or joystick actuators
- TS series rated up to 3000 PSI [206.8 Bar] & 18 GPM [68.1 l/min]
- TS series offered with #12 SAE in/outlet ports & #10 SAE workports
- TS spool actuators include lever or rotary

### Selector Valves (MS & DS)



- MS series switches one port between two separate circuits
  - MS75 rated up to 3000 PSI [206.8 Bar] & 30 GPM [114 l/min] with 3/4" NPT ports
  - MS16SAE rated up to 3000 PSI [206.8 Bar] & 45 GPM [170 l/min] with #16 SAE ports
- DS double selector switches two ports between two separate circuits
  - Also allows for switching a circuit from series to parallel
  - Available with knob, lever, pilot or electrical operators
  - Port sizes & Ratings (for knob, lever & pilot operators):
    - #8 SAE (4500 PSI [310.2 Bar] & 10 GPM [37.8 l/min])
    - #10 SAE (4500 PSI [310.2 Bar] & 18 GPM [68.1 l/min])
    - #12 SAE (4500 PSI [310.2 Bar] & 30 GPM [114 l/min])
- See Catalog for electrically operated DS ratings

## Stackable 4-Way Directional Control

### Series 20 - Manually Operated



- Rated at 4500 PSI [310.2 Bar] & up to 6 GPM [22.7 l/min] flow rate
- Combines up to six sections into one valve assembly (Consult factory for more)
- Parallel configuration is standard, series configurations are available
- Port size: #6 SAE all ports
- Built-in load checks for each work-section
- Available with lever or joystick actuators
- Inlet relief, power beyond & closed center outlet options available

### Series 21 - Electrically Operated



- Rated at 4000 PSI [275.8 Bar] in parallel, 3000 PSI [206.8 Bar] in series & up to 6 GPM [22.7 l/- min] flow rate
- Combines up to six sections into one valve assembly
- Port size: #6 SAE all ports
- Inlet relief, power beyond & closed center outlet options available
- Enclosed solenoid spool operators
- Manual override available in push-button or lever styles
- Combinable with Series 20 Manual sections

### Series 34 - Manually Operated



- Rated at 3500 PSI [241.3 Bar] & up to 12 GPM [45.4 l/min]
- Combines up to twelve sections into one valve assembly (Consult factory for more)
- Port size: #10 SAE in/outlet, #8 SAE workports
- Parallel configuration is standard, series configurations are available
- Inlet relief, power beyond & closed center outlet options available
- Fourth-position float option available on the last spool section only
- Available with lever (straight or adjustable-angle) or joystick actuators
- Available with built in port-reliefs or load-checks

### Series 36 & 38 - Electrically Operated



- Rated at 3500 PSI [241.3 Bar]
- Combines up to twelve sections into one valve assembly (Consult factory for more)
- Series 36: #10 SAE in/outlet, #8 SAE workports & rated up to 12 GPM [45.4 l/min]
- Series 38: #10 SAE all ports & rated up to 24 GPM [90.8 l/min]
- Inlet relief, power beyond & closed center options available
- Available with built in port-reliefs or load-checks
- Solenoid actuation standard, manual handle options available

# Stackable 4-Way Directional Control Additional Products



## Series 36/38 EFC - Electrically Operated, Built in Electronic Flow Control



- Rated at 3000 PSI [206.8 Bar]
- Combines standard EFC & Series 36/38 features into one valve assembly
- EFC inlet port size: #12 SAE
- Series 36: #8 SAE work-ports & rated up to 12 GPM [45.4 l/min]
- Series 38: #10 SAE work-ports & rated up to 24 GPM [90.8 l/min]

## SEFC - Electronic Flow Control Stack Valve



- Rated at 3000 PSI [206.8 Bar] & up to 30 GPM [114 l/min]
- Combines up to five EFC valves into one valve assembly
- Parallel or series options available
- EFC port sizes: #12 SAE
- See SEFC Catalog for section details

# Additional Products

## Adjustable Hydraulic Relief Valves (RL & RLC)



- Rated up to 3000 PSI [206.8 Bar]
- Adjustable pressure setting range from 150 PSI [10.3 Bar] to 3000 PSI [206.8 Bar]
- RL series: Simple ball-spring relief
- RLC series: High lift ball spring relief - reduces noise, heat & chatter
- NPT & SAE porting available (see catalog or contact factory for available sizes)

## Adjustable Pilot Operated Relief Valves (POR)



- Rated up to 3000 PSI [206.8 Bar] & 30 GPM [114 l/min]
- Adjustable pressure setting range from 500 PSI to 3000 PSI
- Maintains consistent cracking pressure at high & low pressures
- Port size: 3/4" NPT only



## Additional Products

### Pilot Operated Check Valve (PC)



- Rated up to 3000 PSI [206.8 Bar]
- Steel ball with Delrin check seat for zero leakage (steel seat optional)
- PC37C port sizes: 3/8" NPT in/outlet & 1/4" NPT pilot port, rated up to 8 GPM [30.2 l/min]
- PC50C port sizes: 1/2" NPT in/outlet & 1/4" NPT pilot port, rated up to 16 GPM [60.6 l/min]
- PC6C port sizes: #6 SAE in/outlet & pilot port, rated up to 8 GPM [30.2 l/min]
- PC8C port sizes: #8 SAE in/outlet & #6 SAE pilot port, rated up to 16 GPM [60.6 l/min]
- POC76 - Port sizes: 3/4" NPT in/outlet & 3/8" NPT pilot port, rated up to 30 GPM [114 l/min]
  - Minimum pilot pressure: 50 PSI [3.45 Bar]
  - Metering is accomplished by varying pilot pressure

### Shuttle Valve (SHV)



- Rated up to 3000 PSI [206.8 Bar]
- SHV25C port sizes: 1/4" NPT all ports, 50 PSI [3.45 Bar] pressure drop at 5 GPM [18.9 l/min]
- SHV50C port sizes: 1/2" NPT all ports, 15 PSI [1.03 Bar] pressure drop at 15 GPM [56.8 l/min]

### Hand Operated Hydraulic Pump (HP)



- Vertical or horizontal options available
- Port sizes: #6 SAE outlet & 1/4" NPT tank fill-port
- HP22SA: single acting pump .20 in<sup>3</sup> [3.27 cm<sup>3</sup>] per cycle, 6000 PSI [413.7 Bar] max
- HP61DA: double acting pump .60 in<sup>3</sup> [9.83 cm<sup>3</sup>] per cycle, 3000 PSI [206.8 Bar] max
- HP121DA: double acting pump 1.20 in<sup>3</sup> [19.66 cm<sup>3</sup>] per cycle, 2000 PSI [137.9 Bar] max
- Standard adjustable relief & release valve (not included with "No Tank" option)
- Four standard tank sizes or two options to use in conjunction with an external reservoir

It is the purchaser's responsibility to determine the suitability of any Brand Hydraulics product for an intended application, and to ensure that it is installed in accordance with all federal, state, local, private safety and health regulations, codes and standards. Due to the unlimited variety of machines, vehicles and equipment on which our products can be used, it is impossible for Brand Hydraulics to offer expert advice on the suitability of a product for a specific application. It is our customer's responsibility to undertake the appropriate precautions, testing and evaluation to prevent injury to the end-user.