



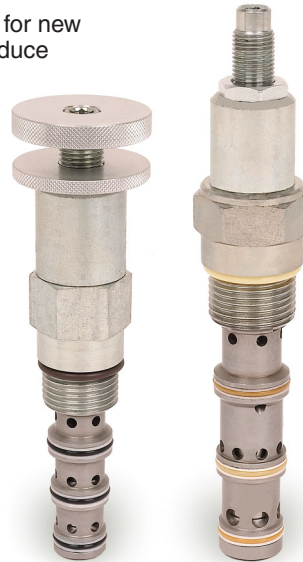
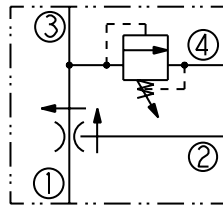
## ••••• INNOVATION AT WORK FOR YOU •••••

### New FRRV10-41F & FRRV12-41F Priority Flow Control Valves with Built-In Relief

**O**EMs and machine designers today are looking for new ways to improve machine performance and reduce costs. HydraForce's new FRRV series "two-in-one" cartridge valve designs are an innovation the mobile equipment market has been waiting for. These unique new valves have been issued a U.S. Patent, No. 7,063,100.

The new FRRV valves are combination fixed, pressure compensated, priority flow controls with built-in adjustable relief on the priority leg, and an integral damping chamber in the priority section to improve stability. Because we have combined two valve functions into a single cartridge, using one valve instead of two will reduce space requirements and cost in a hydraulic system.

**USASI/ISO Symbol**



this critical priority-flow is eliminated. The two flow sizes available will cover most small- and mid-range flow applications.

The relief valve in the FRRV10-41F is virtually an RV10-20 direct-acting relief cartridge, while the relief in the FRRV12-41F uses the RV12-26 style relief. All of the standard HydraForce adjustment options are available. The relief pressure settings are adjustable from 250 psi/17 bar to 3000 psi/204 bar. Both valves are capable of system pressures to 4000 psi/276 bar.

These new valves are well-suited for applications that require re-combining the priority flow to the bypass flow. Special internal drillings and logic allow for re-combining flows, or the priority flow can be sent back to the tank.

Our new FRRV valves are the latest example of our continuing commitment to develop innovative new products, offering better features and improved system performance. HydraForce continues to work toward being the leader in design, manufacturing and applications of hydraulic cartridge valves and electro-hydraulic systems in the mobile equipment OEM markets.

HydraForce has released two different cavity size versions. The FRRV10-41F has a maximum inlet flow of 10 gpm/38 lpm with a fixed priority flow from 0.25 gpm/1 lpm to 5 gpm/19 lpm. The FRRV12-41F is rated for a maximum inlet flow of 20 gpm/76 lpm and has a fixed priority flow from 0.25 gpm/1 lpm to 12 gpm/45 lpm. Because this priority flow is factory-set to the application, unwanted field-tampering of

Features	Benefits
Multi-function valve. A bypass type, fixed, compensated, priority flow control with built-in adjustable relief on the priority flow leg.	Reduce cost by using one valve and cavity instead of two.
Uses standard industry cavities.	No additional tooling costs required.
Integral damping chamber in priority flow section.	Improves overall valve performance and stability.
Two sizes available: FRRV10 and FRRV12.	Covers the small- and mid-range flow applications
Factory-set fixed priority flow.	Prevents unauthorized field-tampering.
Low spring-compensator value of 80 psi to 100 psi.	Reduces potential for heat buildup.
Priority flow can be re-combined with bypass flow after the actuator. In this case, flow from the RV must also be re-combined with bypass flow.	Flexibility for use in a variety of applications.
Priority RV adjustable from 250 psi/17 bar to 3000 psi/204 bar. Maximum system pressure of 4000 psi/276 bar.	Allow for use in a variety of applications.
Adjustable relief valve with all standard RV adjustments available.	Variety of options for a variety of applications.
Adjustment cannot be backed out.	A, B, C and L options can safely be adjusted under pressure.
RV spring-stops prevent spring from going solid.	Assures RV will function once spring value is reached. Cannot over-adjust valve to disable relief.
Tested to 1 million cycles at full rated flow and pressure.	Long life; no worries about wear or decreased performance over time.

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