



**BRAND**  
HYDRAULICS Co.

Made in the Heartland of America  
Serving the World

Engineering & Manufacturing Solutions

# FC

High Volume Full Range Pressure  
Compensating Variable Flow Control

## Specifications:

- See flow chart for capacity.
- Rated for 3000 psi (207 bar).
- Weighs 28 – 3/4 lbs. (13.0 kg).
- 30-Micron Filtration Recommended.
- Torque to turn side lever spool.  
-40 in\*lbs (4.5Nm) with 3000  
(207 bar) psi on CF port or the  
EX port.

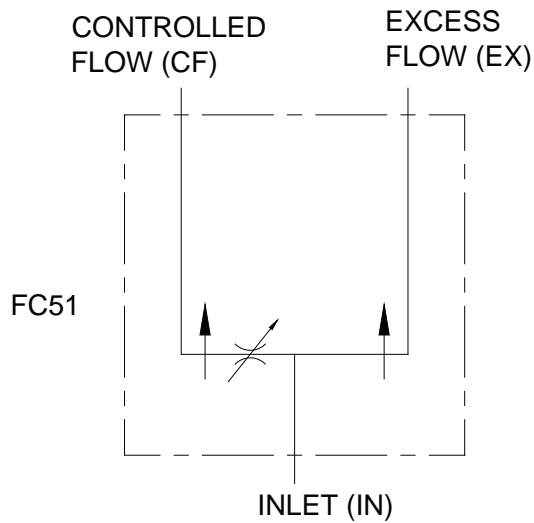


ISO 9001:2008 WITH DESIGN  
Certificate #02.002.1



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**MATERIALS:**

- Ductile Cast Iron Body.
- Heat Treated Steel Spools.
- Buna N O'Rings.
- Consult factory for stainless steel rotary spool.

**FEATURES:**

- PRECISION GROUND PLATED SPOOL that assures long life.
- DIAMOND HONED SPOOL BORE provides consistent spool fit with low leakage.
- EVERY FC IS TESTED for shutoff, linearity, and pressure compensation.
- STANDARD 3-PORT allows for pressure compensated flow out of two ports.

## FC – GENERAL INFORMATION

The Brand, full range pressure compensating variable flow control is designed so that the orifice area varies as the lever is rotated. Fluid travels past the variable orifice, by the compensator spool and then out the controlled flow port. Therefore the flow out of the CF port is proportional to the orifice area which can vary from closed to wide open. The sum of the controlled flow and the excess flow equals the inlet flow and as the controlled flow increases the excess flow decreases. Both outlet flows are pressure compensated with a spool that maintains a constant flow while adjusting for pressure. Hunting between the compensated pump and our valve is dampened with a cross hole in the casting. Thus, the outlet flow is smooth and constant regardless of the pressure on the CF and EX port.

## FC – EXAMPLES OF COMMON MODEL CODES:

**FC51-1**.....1” ports and standard 50 gpm (189.3 lpm) rotary spool.

**FC51-1 1/2**.....1 1/2” ports and 90 gpm (340.7 lpm) rotary spool.

**FC51-24\*100**.....Number 24SAE ports and 50 gpm (189.3 lpm) rotary spool.

## FC – CREATING A MODEL CODE FOR FC’S:

F C 51

**PORT SIZE:** \_\_\_\_\_

- 1** – 1” NPT (0-50 gpm (0-189.3 lpm) standard )
- 1 1/4** – 1 1/4” NPT (0-90 gpm (0-340.7 lpm) standard)
- 1 1/2** – 1 1/2” NPT (0-90 gpm (0-340.7 lpm) standard)
- 16** - #16SAE (1 5/16 – 12) (0-50 gpm (0-189.3 lpm) standard)
- 24** - #24SAE (1 7/8 – 12) (0-90 gpm (340.7 lpm) standard)

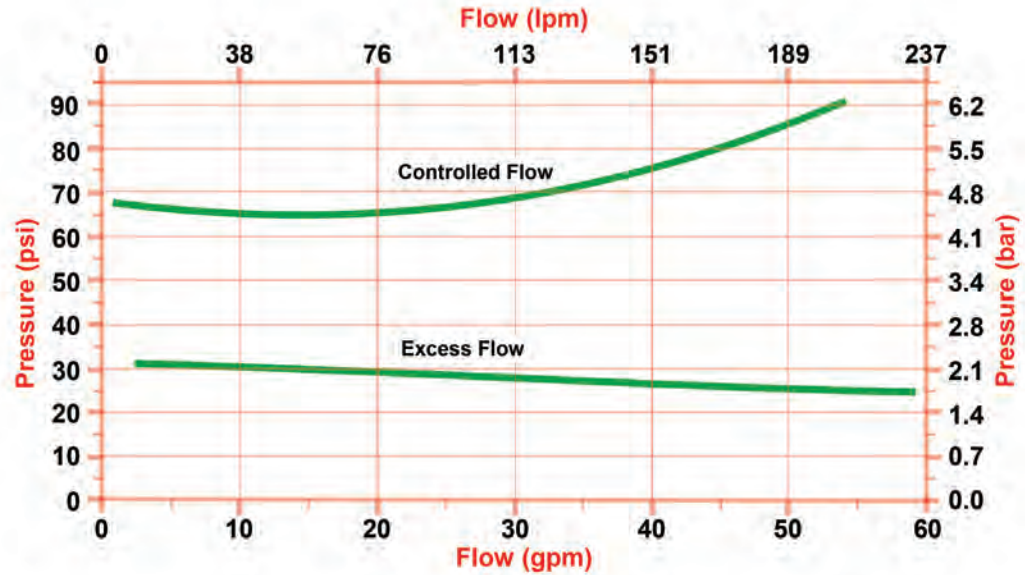
**FLOW SETTING:**

**\*100** – 0-50 gpm (0-189.3 lpm)

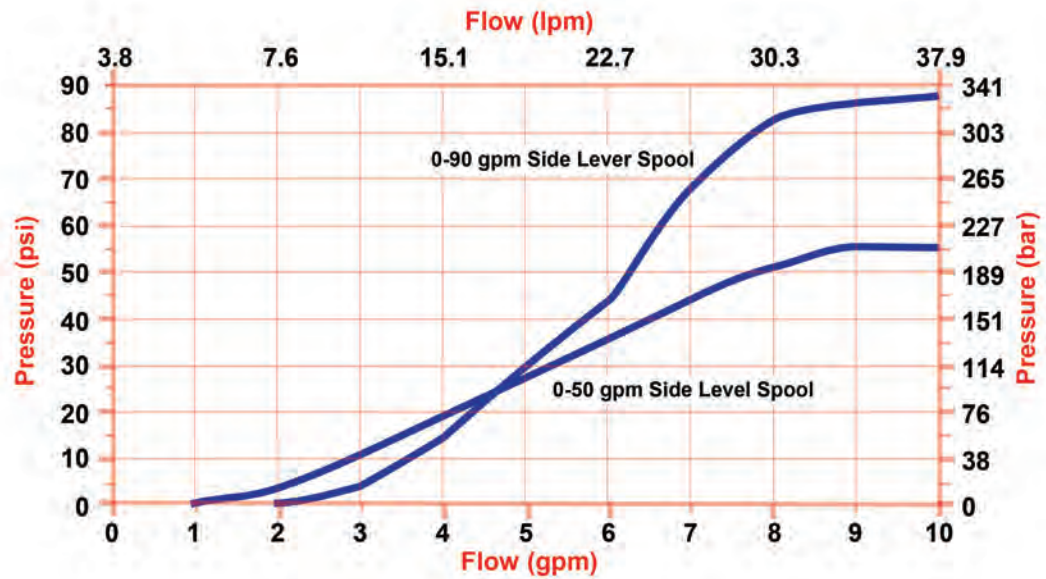
**\*\*** - Need not specify for standard flow setting noted under “PORT SIZE”

## FC - FLOW AND PRESSURE INFO:

Pressure Drop vs. Flow



Flow vs. Dial Plate





**DIMENSIONAL DATA:**  
**DIMENSIONAL DATA (inches & [millimeters]):**

