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FC FLOW CONTROL (FC51, FC55, FCR51 & FCB51) INSTALLATION & USER GUIDE

SAFETY PRECAUTIONS:

- It is the purchaser's responsibility to determine the suitability of any Brand Hydraulics Co. 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 Co. 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.
- Overpressure may cause sudden and unexpected failure of a component in the hydraulic system, resulting in serious personal injury or death. Always use a gauge when adjusting a relief valve.

SPECIFICATIONS:

- Rated for 3000 psi (207 bar).
- Weighs 7- ¾ lbs. (3.52 kg).
- 30-Micron Filtration Recommended.
- Torque to turn side lever spool.
 - 35 in*lbs with 3000 psi (207 bar) on EX Port.

FEATURES:

- **CF port (Controlled Flow)** - Flow coming from the CF port is pressure compensated and proportional to the side lever rotation. CF flow can vary from closed to wide open.
- **EX port (Excess Flow)** - Flow coming from the EX port is also pressure compensated. Note: When side lever is set to 0, entire flow will exit valve via EX port.

MOUNTING & ADJUSTMENT INSTRUCTIONS:

- **Mounting** – Valve can be mounted in any orientation. Valve must be mounted on a flat surface. Special attention should be paid to not bend or twist the casting when mounting. Doing so may cause the compensator spool to bind, causing valve to fail. It is recommended to install washers between casting and mounting surface.
- **Relief Adjustment (FCR & FCB valves)** –Relief setting is factory preset to 1500 psi, unless otherwise noted within model code. Relief valve can be set anywhere within the range of 500 psi to 3000psi.
To adjust relief pressure: First, remove acorn nut and then turn the relief adjustment set screw clockwise to increase the pressure setting. One complete turn of set screw increases/decreases pressure by 300 psi. EX port MUST be plumbed back to tank for relief function to operate.

FREQUENTLY ASKED QUESTIONS:

Q: Can the CF port be blocked or plugged?

A: No. If the CF port is blocked or plugged for any reason the compensation spool will attempt to compensate for increasing pressure, and shift thus blocking the EX port as well, and rendering valve inoperable. DO NOT BLOCK CF PORT.

Q: Can the EX port be blocked or plugged?

A: The EX port can be blocked or plugged, but doing so requires a pressure compensated or load sense pump. Plugging the EX port may create instability issues that can be remedied by switching the compensator spool to a different spool. (Part # XDC609)

Q: Can flow be sent in reverse through valve.

A: Yes, If valve number begins with a FC55. If you're unsure of your valve's model number, please contact factory for assistance.

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Q: Can I add a relief to my standard FC51 valve?

A: It is not possible to add a built-in relief to a standard FC51 or FC55 valve. The casting is different, which prevents this.

Q: What kits are available for this valve?

A: There is a replacement seal kit for the FC51 & FC55 (Part # FC-K) A replacement seal kit for the FCR51 (Part # FCR-K). Seal replacement kit for the FCB51 (Part # FCB-K) Relief kit for FCB51 (TS-B)

TROUBLESHOOTING:

Problem: *Valve chatters or has stability issues.* Instability generally occurs when the valve sees an application that has rapidly changing loads. (ie: Fan, Vibration, etc.) Because of these changing loads the compensator spool tries to compensate rapidly. This causes the valve to become unstable, as well as begin to make noises, including a chatter.

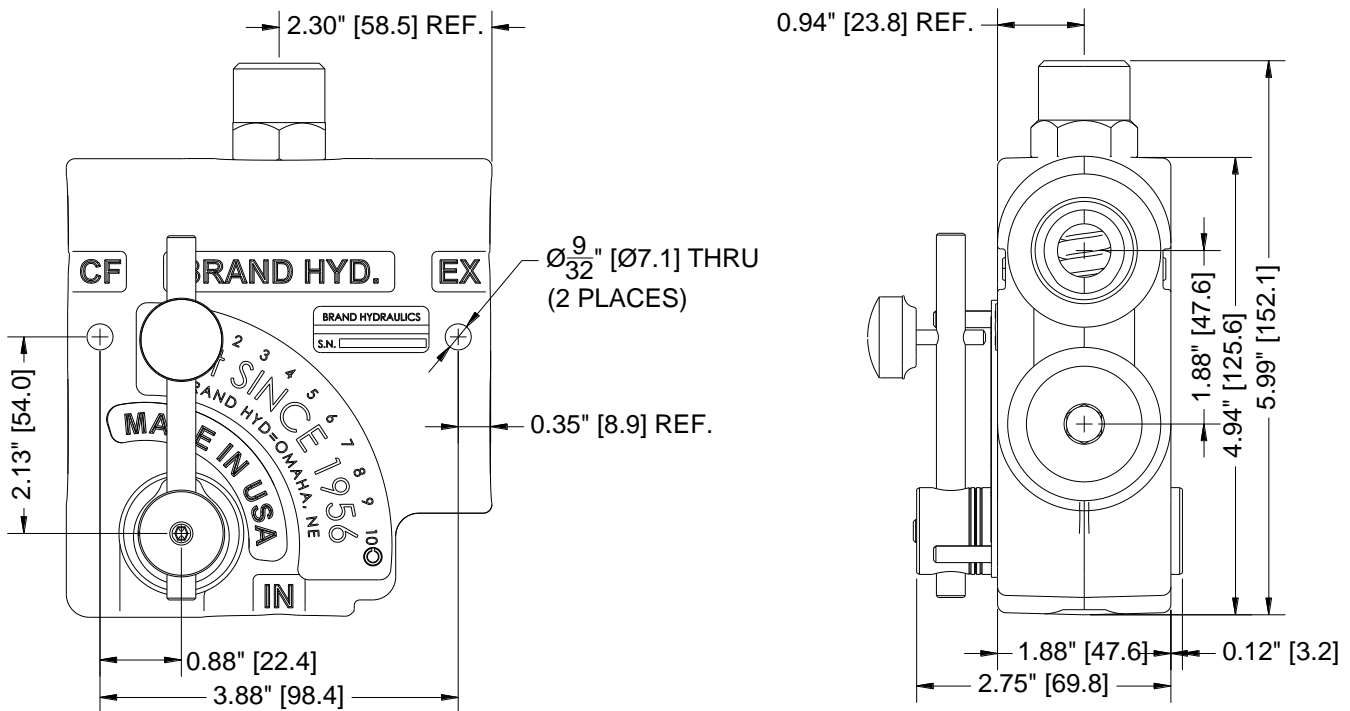
Solution: Most instability issues can be solved by using a different compensator spool. A replacement spool designed for load changing applications can be ordered. (Part #: XDC609)

GENERAL INFORMATION:

Pipe Thread Sealant - Warranty is void when Teflon tape is used to seal pipe threads. This is because Teflon tape is a friction reducing agent which allows customers to over-torque fittings. We recommend using a sealant that does not include friction reducing agents i.e. Lead Plate.

DIMENSIONAL DATA:

FCR51 & FC51 DIMENSIONAL DATA (FCR51 SHOWN)



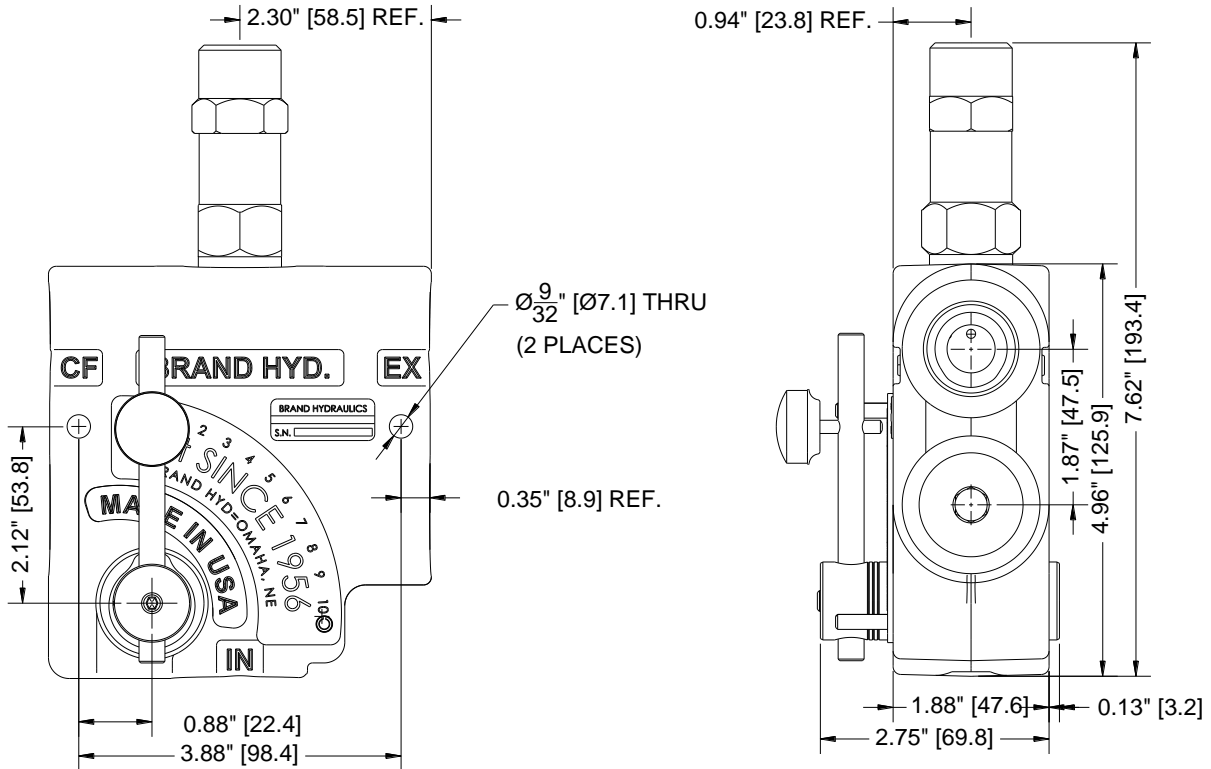


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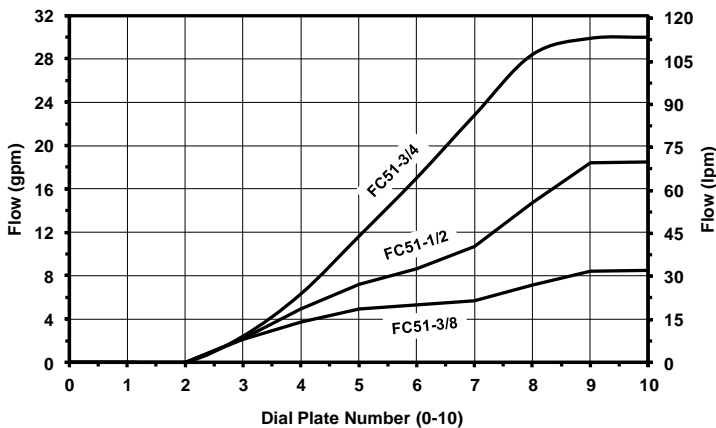
DIMENSIONAL DATA Cont'd:

FCB51 & FC51 DIMENSIONAL DATA (FCB51 SHOWN)



FLOW & PRESSURE INFORMATION:

Controlled Flow vs. Dial Plate for FC Series



Pressure Drop vs. Flow for FC Series

