



BRAND
HYDRAULICS Co.

Made in the Heartland of America
Serving the World

Engineering & Manufacturing Solutions

LEFC

Large Electronically Adjustable Proportional
Pressure Compensated Flow Control

Specifications:

- See flow chart for capacity.
- Max. 3000 psi cartridge input pressure.
- Nominally Rated for 3000 psi (207 bar).
- Tank Port - #4 SAE (10 psi (0.69 bar) MAX. back pressure)
- Weight 32-3/4 lbs. (14.9 kg).
- 25-Micron Filtration or Better.
- Coil
 - 12 VDC standard.
 - 10.4 Ohms.
 - 14 Watts.
 - 1.15 Amp max.



Rated 100% continuous duty cycle

- Pulse Frequency (90 to 110 Hz)
- Operating Temperature: -20° to 210°F (-30° to 100°C)

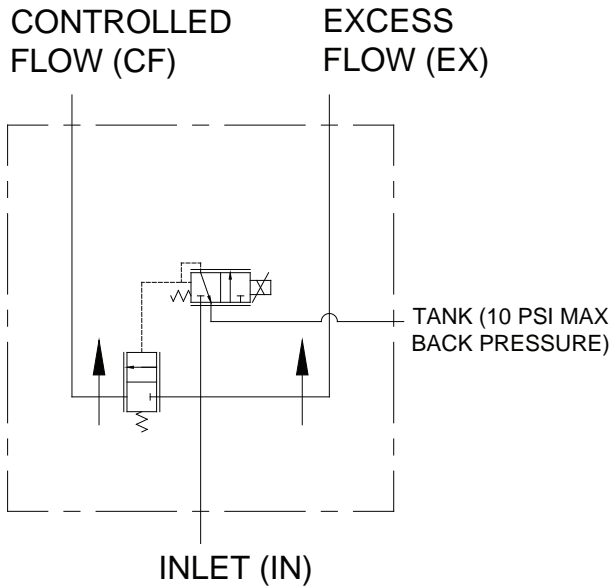


ISO 9001:2008 WITH DESIGN
Certificate #02.002.1



402.344.4434 • www.brand-hyd.com





MATERIALS:

- Cast Iron Body.
- Heat Treated Steel Spools.
- Buna N O'Rings.

FEATURES:

- PRECISION GROUND HEAT TREATED SPOOL that assures long life.
- DIAMOND HONED SPOOL BORE provides consistent spool fit with low leakage.
- EVERY LEFC IS TESTED for linearity and pressure compensation.
- STANDARD 3-PORT allows for pressure compensated flow out of two ports.
- OPTIONAL MANUAL OVERRIDE when electrical power is lost.

LEFC – GENERAL INFORMATION

The Brand, LEFC (large electronically adjustable proportional pressure compensated flow control) is an electronically controlled version of the original large FC51 style flow control valve. The LEFC performance as a flow control is very similar to the large FC51 because they both use the same spring and compensator spool. Thus, the control flow port (CF) and the excess flow port (EX) remain usable and pressure compensated.

The main advantage of the LEFC over the large FC51 is that the flow can be adjusted proportionally with a solenoid instead of manually. The orifice spool proportionally opens as the current through the solenoid increases, thus increasing the flow out of the CF port (similar to positioning the rotary side lever on the manual FC). The solenoid is connected to our optional EC – series controls which can be sold with the LEFC. Please see the Electronic Controllers section for your control needs. We also give the choice of coil voltage, coil terminal and maximum flow setting.

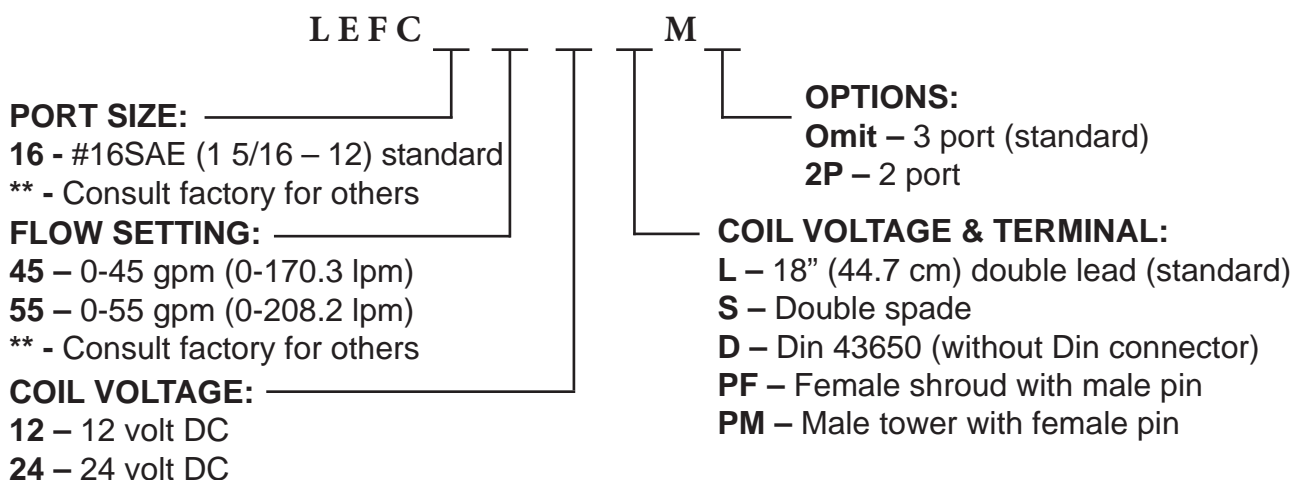
2-PORT- The 2-port (2P) option is a modified version of the standard 3-port EFC. This option lets the customer use the control flow port while the excess port is plugged. To use the EFC 2-port a pressure compensated pump is required. The 2-port can be converted to a 3-port by removing the EX plug.

LEFC – EXAMPLES OF COMMON MODEL CODES:

LEFC164512LM.....# 16 SAE ports, 45 gpm (170.3 lpm), 12 VDC coil, 18” (44.7 cm) double lead coil terminal and manual override.

LEFC165512LM.....# 16 SAE ports, 55 gpm (208.2 lpm), 12 VDC coil, 18” (44.7 cm) double lead coil terminal and manual override.

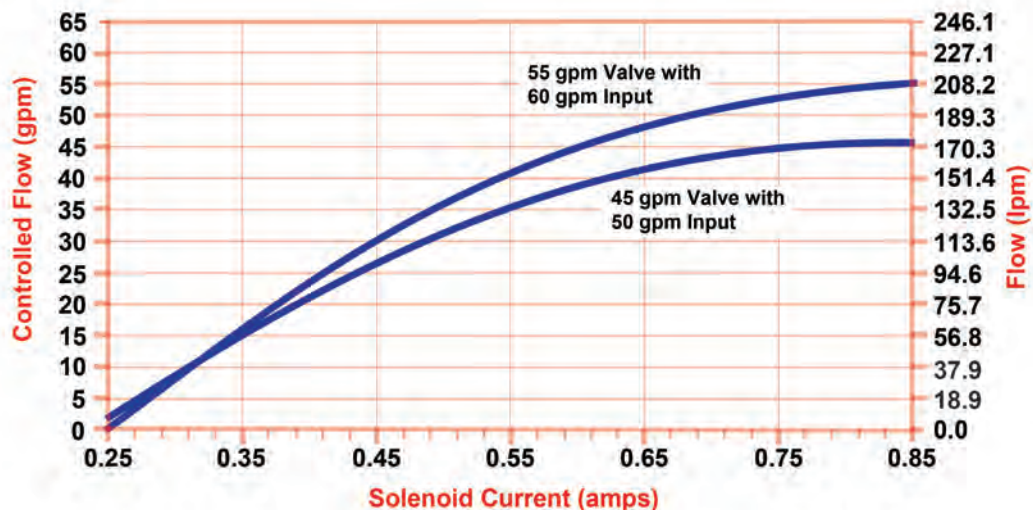
LEFC – CREATING A MODEL CODE FOR LEFC’S:



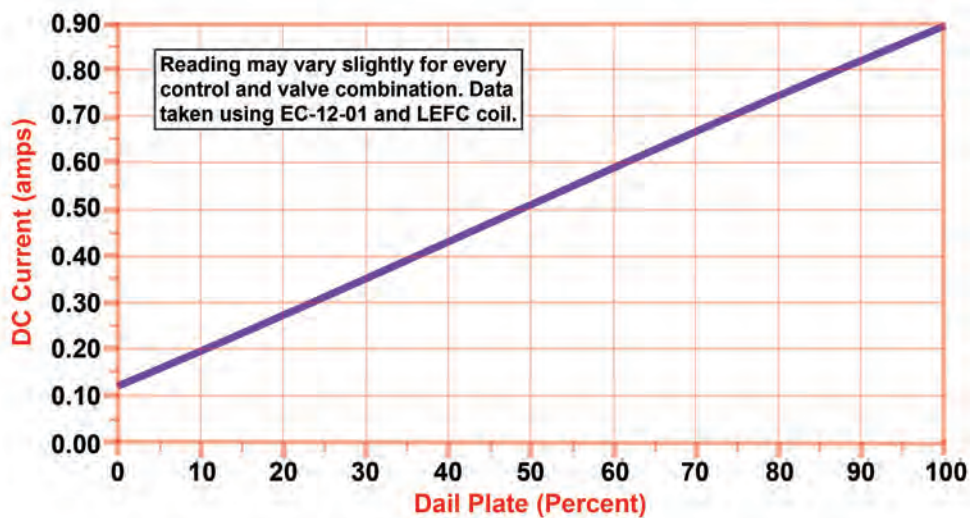
LEFC FLOW & PRESSURE INFO:

Controlled Flow vs. Solenoid Current

Oil Temp = 100 deg. F w/140-147 SUS Oil

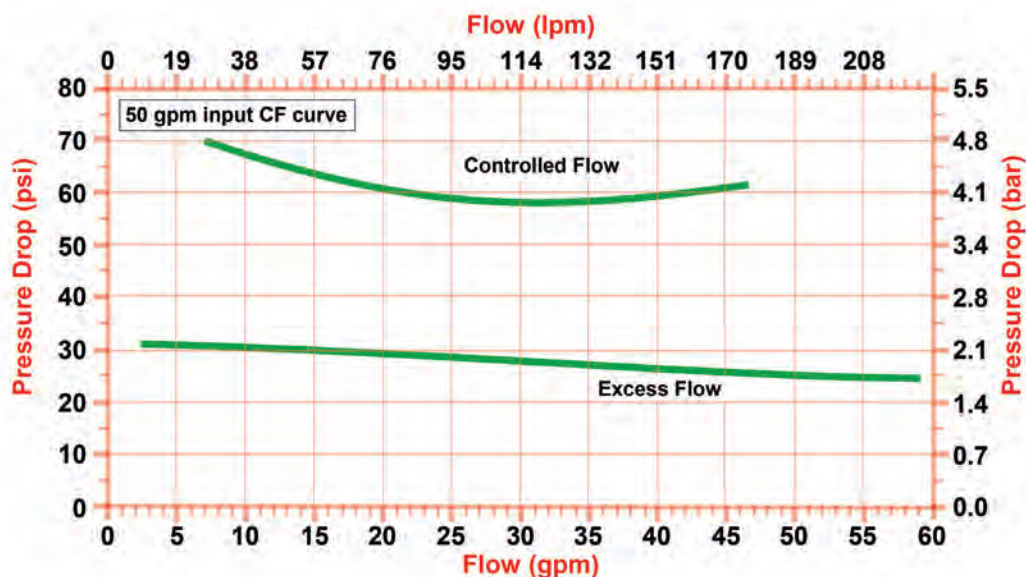


Current vs. Dial Plate for EC-12-01, EC-12-01L and EC-12-02

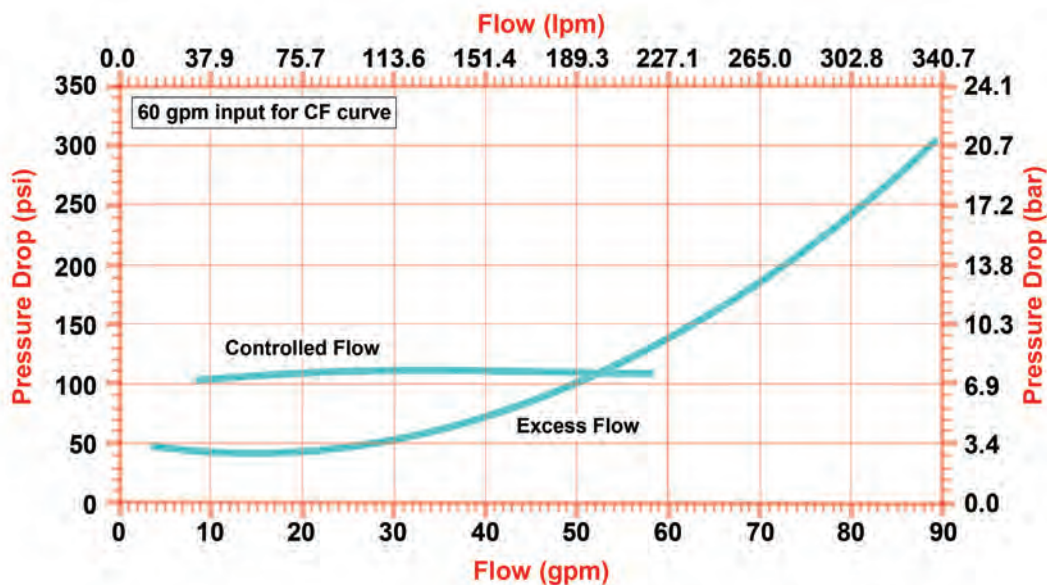


LEFC FLOW & PRESSURE INFO:

Pressure Drop vs. Flow for 45 gpm Valve



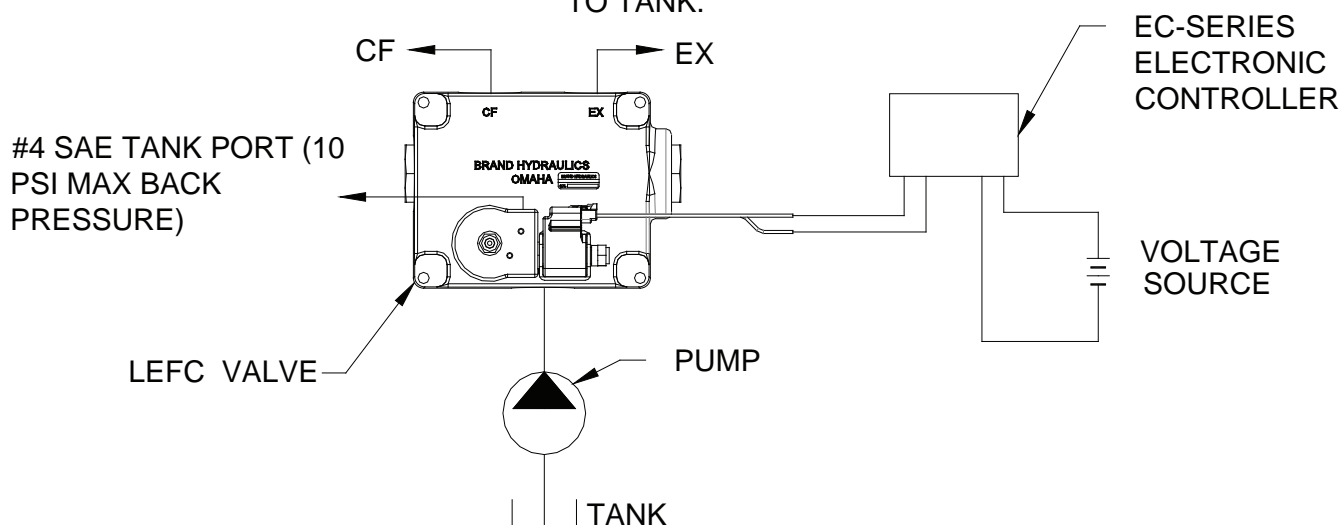
Pressure Drop vs. Flow for 55 gpm Valve



SCHEMATIC DRAWING:

CF-CONTROLLED FLOW
PRIORITY PORT, PRESSURE
COMPENSATED

EX-EXCESS FLOW IS PRESSURE
COMPENSATED. THE FLOW CAN BE
USED TO DO WORK OR RAN BACK
TO TANK.



DIMENSIONAL DATA (LEFC SHOWN):

