

# Oilgear

## HYDRAULIC MODULAR VALVE

### Relief Valve MRF



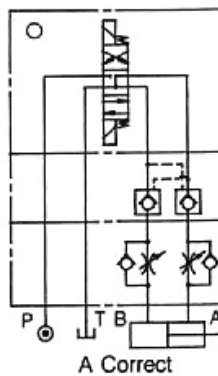
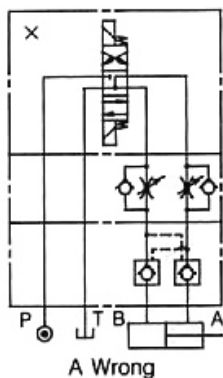
### FEATURES

Modular type of pressure controls, flow controls, and check valves are sandwiched between directional control valves and their subplates or manifolds. They use no piping and share a common mounting surface, and are the ultimate in modern design, compactness and efficiency. They reduce the possibility of leakage, vibration, flow noise caused by piping. The compactness takes less space, ease the installation and maintenance.

They are available in both D03 and D05 sizes.

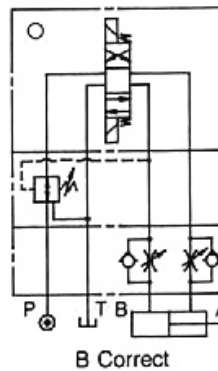
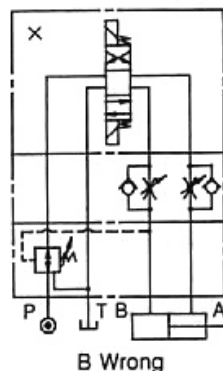
### CIRCUITRY EXAMPLES

**A.**  
Solenoid directional valve  
Pilot operated modular  
check valve (for A, B lines)  
Modular reducing valve (for B  
line)



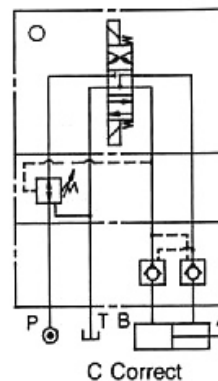
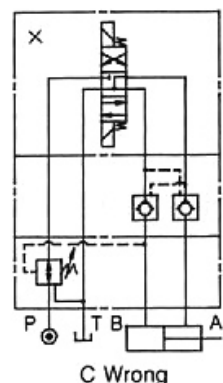
**A.**  
When MT-\*\*\*B and MPC-\*\*\*W are used together in same circuit, the right circuit is correct usage, and left is wrong, as the MPC would not be totally closed.

**B.**  
Solenoid directional valve  
Modular flow control valve (for  
A, B lines, metering out)  
Modular reducing valve (for B  
line)

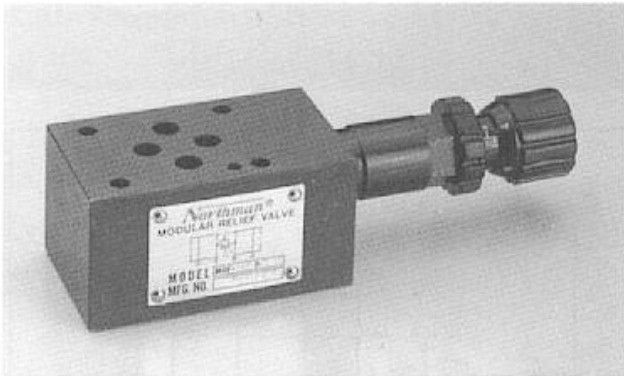


**B.**  
When MPR-\*\*\*B and MT-\*\*\*W are used together in same circuit, the right circuit is correct usage, and left is wrong, as the function of pressure reducing valve will be affected when oil flow from B to T. Because the metering out throttle/check valve will create a pressure which will cause pressure reducing valve to reduce the pressure too low, and the cylinder then can not operate with enough force or move smoothly.

**C.**  
Solenoid directional valve  
Modular flow control valve (for  
A, B lines, metering out)  
Modular pilot operated check  
valve (for A, B lines)



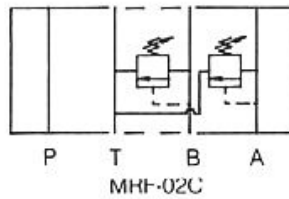
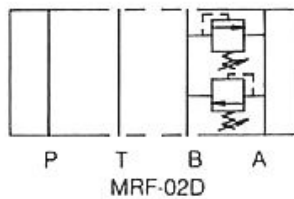
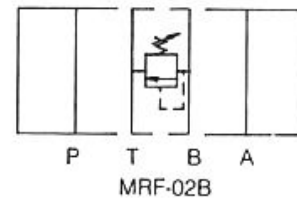
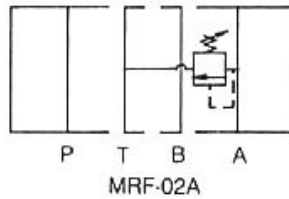
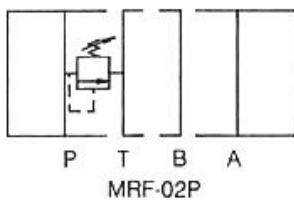
**C.**  
When MT-\*\*\*W and MPC-\*\*\*W are used together in same circuit, the MT should be installed closer to the cylinder ports, otherwise cylinder may have a "knocking" phenomenon happened.



### SPECIFICATIONS

Max. operating pressure	210 Kg/cm <sup>2</sup> (3000PSI)
Max. flow capacity	35 LPM (9.3 GPM)

### SYMBOLS



### HOW TO ORDER

**MRF - 02P - K - 1 - 20**

DESIGN NUMBER

PRESSURE ADJUSTMENT RANGE :  
 1 : 8-70KGF/CM<sup>2</sup> (120-1000PSI)  
 2 : 35-140KGF/CM<sup>2</sup> (500-2000PSI)  
 3 : 70-210KGF/CM<sup>2</sup> (1000-3000PSI)

ADJUSTMENT MODEL :

K : WITH KNOB

NO CODE: WITHOUT KNOB

FUNCTION PORT :

P : P PORT

A : A PORT

B : B PORT

C : A&B PORT VENTING TO TANK

D : A&B PORT CROSS OVER RELIEF

PORT SIZE: 1/4" (D03)

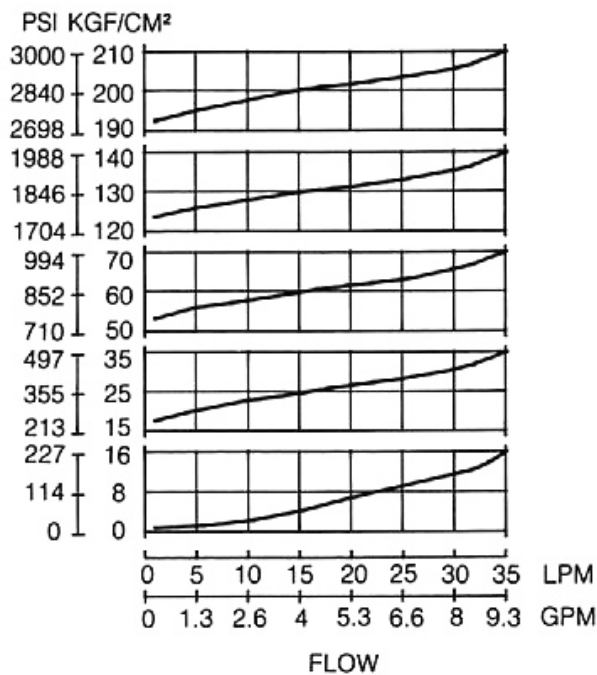
MODULAR RELIEF VALVE

### PERFORMANCE CURVES

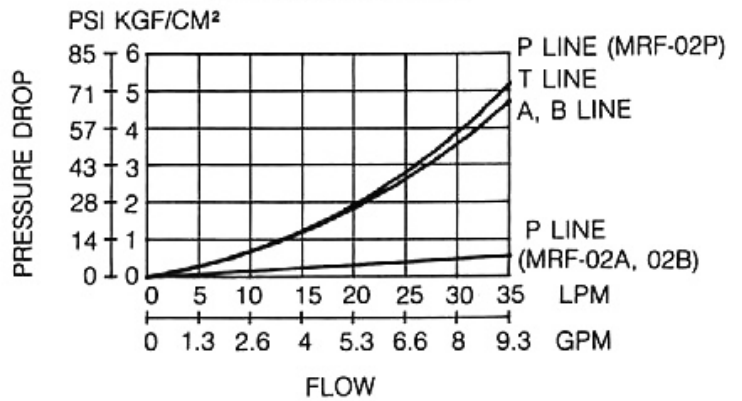
#### TEST CONDITIONS

Viscosity: 35 CST  
 Temperature: 50°C

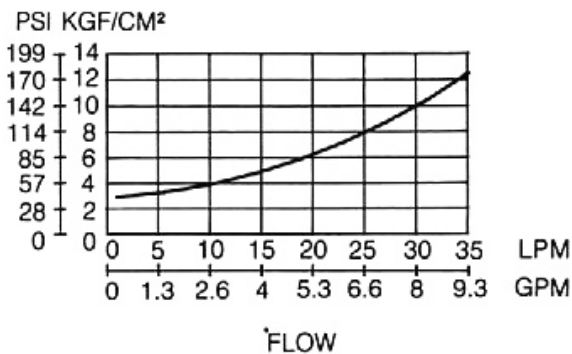
#### NOMINAL OVERRIDE CHARACTERISTICS



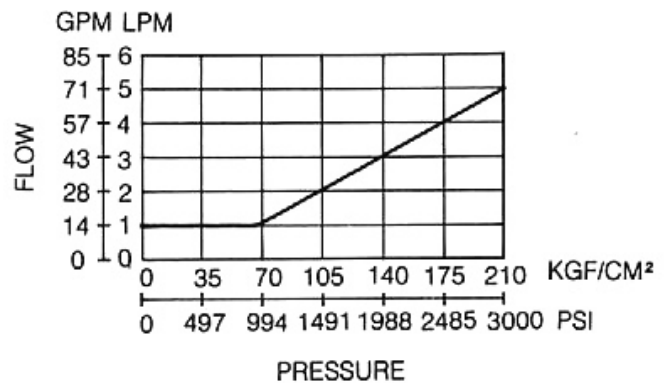
#### PRESSURE DROP



#### MIN. ADJUSTMENT PRESSURE



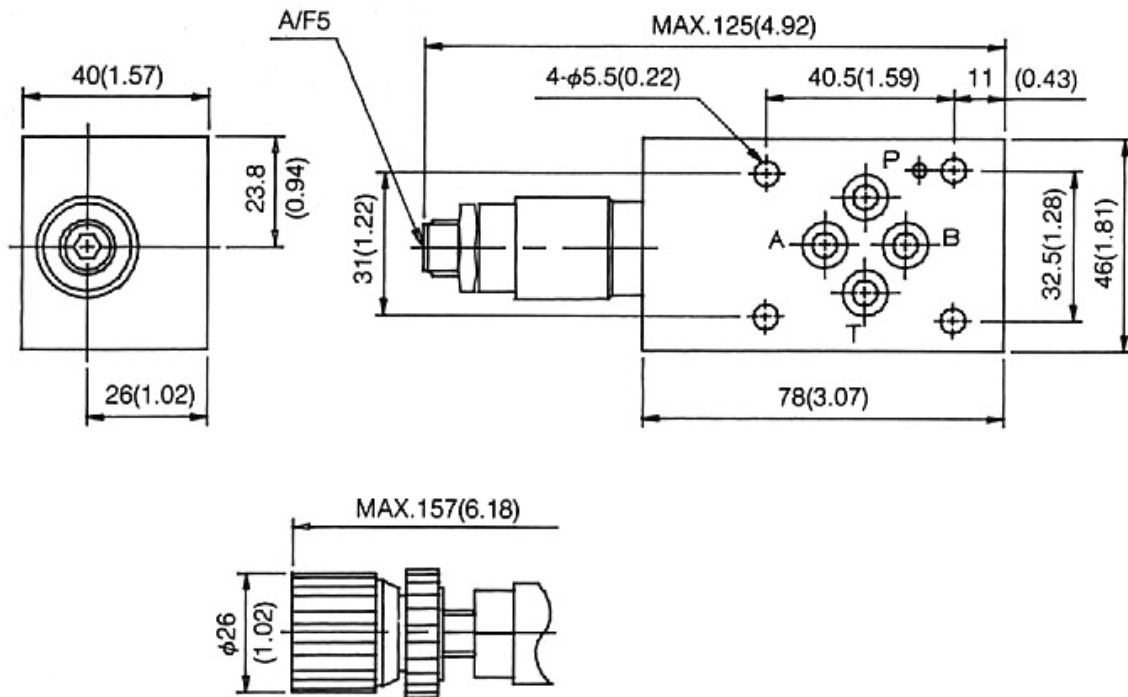
#### MIN. FLOW CHARACTERISTICS



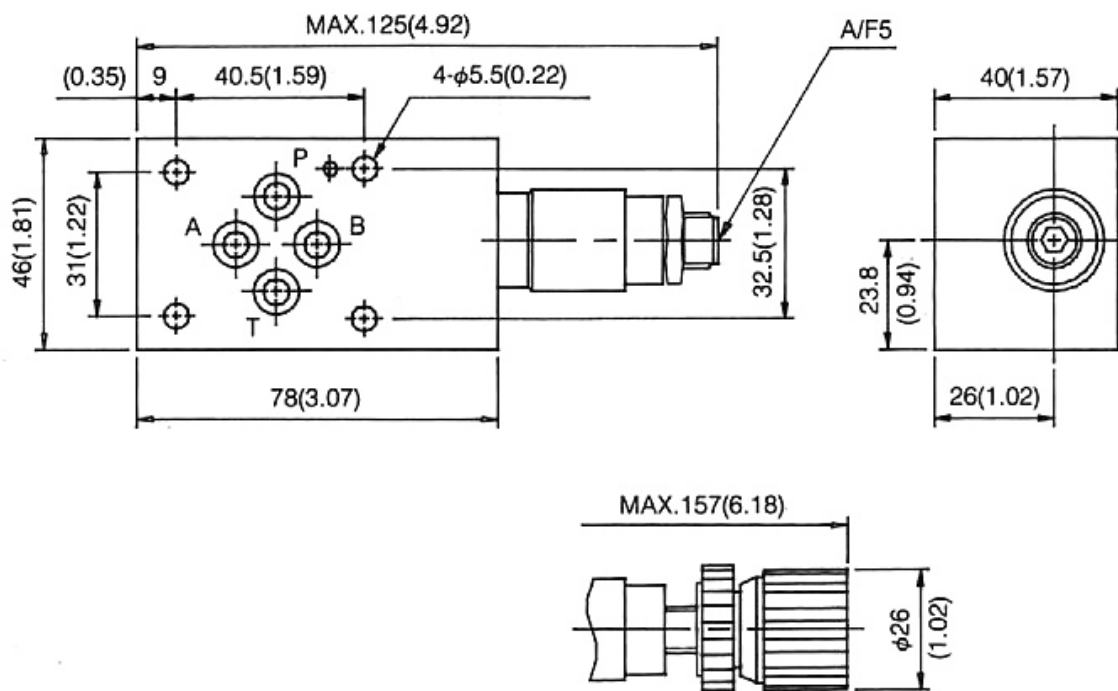
### INSTALLATION DIMENSIONS

UNIT: mm (inch)  
WEIGHT: 1.5 kgs (3.3 lbs)

#### MRF-02A-\*\*-\*\*-20



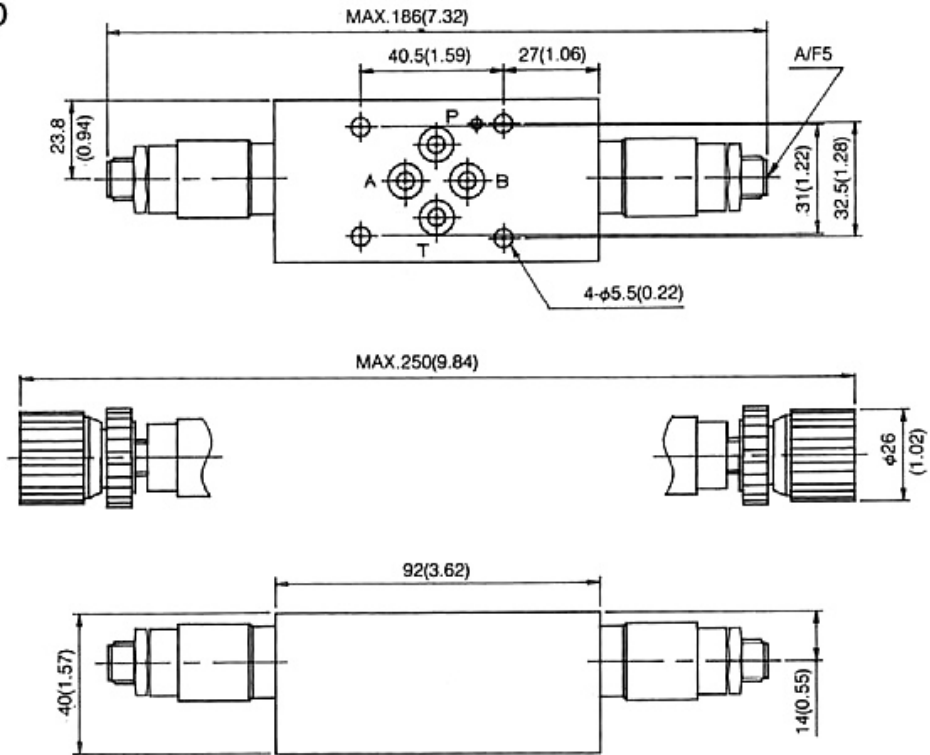
#### MRF-02P/B-\*\*-\*\*-20



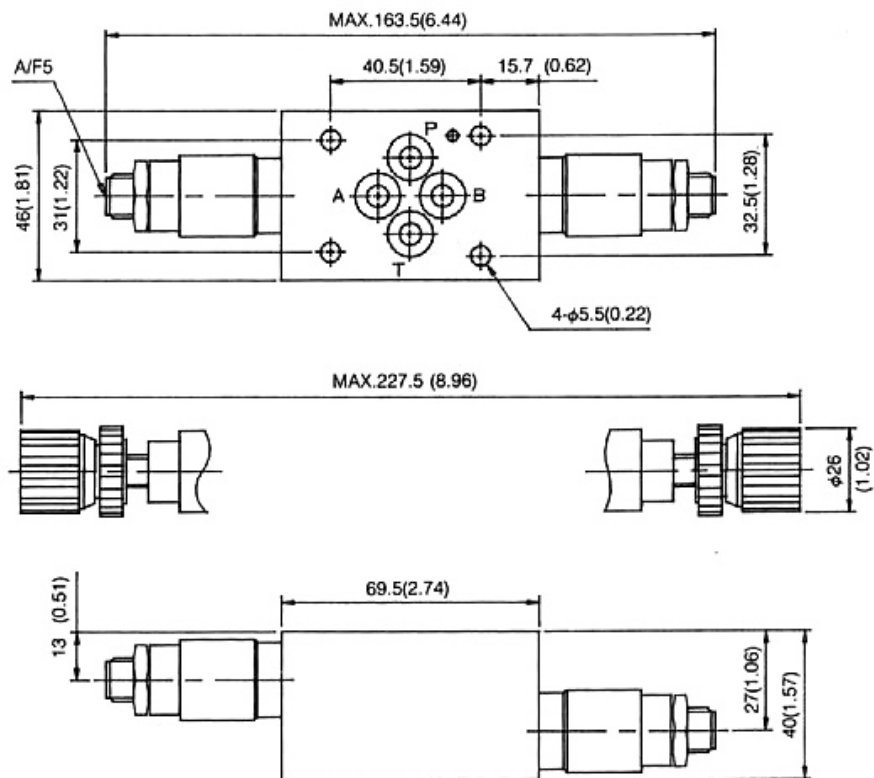
### INSTALLATION DIMENSIONS

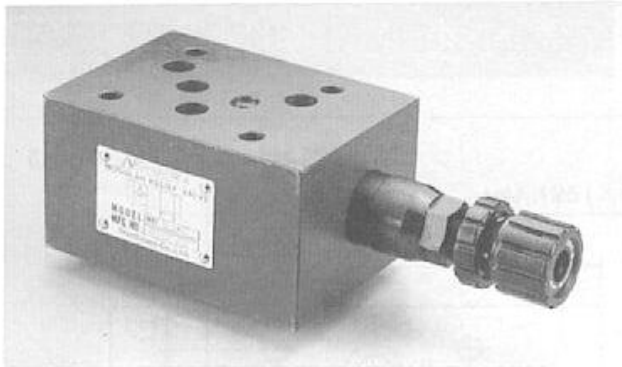
UNIT: mm(inch)  
WEIGHT: 1.7 kgs (3.75 lbs)

MRF-02C - \* - \* - 20



MRF-02D - \* - \* - 20

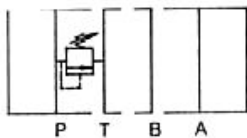




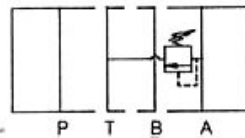
### SPECIFICATIONS

Max. operating pressure	210 Kg/cm <sup>2</sup> (3000PSI)
Max. flow capacity	70 LPM (20 GPM)

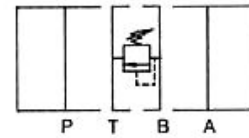
### SYMBOLS



MRF-03P



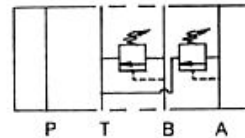
MRF-03A



MRF-03B



MRF-03D



MRF-03C

### HOW TO ORDER

**MRF - 03P - K - 1 - 30**

DESIGN NUMBER

PRESSURE ADJUSTMENT RANGE :  
 1 : 8-70KG/CM<sup>2</sup> (120-1000PSI)  
 2 : 35-140KG/CM<sup>2</sup> (500-2000PSI)  
 3 : 70-210KG/CM<sup>2</sup> (1000-3000PSI)

ADJUSTMENT MODEL:  
 K : WITH KNOB  
 NO CODE: WITHOUT KNOB

FUNCTION PORT :  
 P : P PORT  
 A : A PORT  
 B : B PORT  
 C : A&B PORT VENTING TO TANK  
 D : A&B PORT CROSS OVER RELIEF

PORT SIZE : 3/8" (D05)

MODULAR RELIEF VALVE

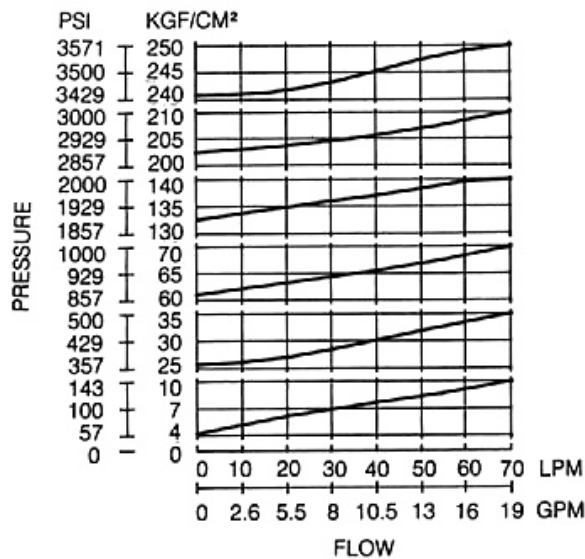
### PERFORMANCE CURVES

#### TEST CONDITIONS

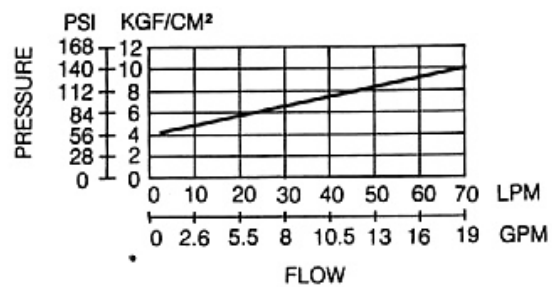
Viscosity: 35 CST

Temperature: 50°C

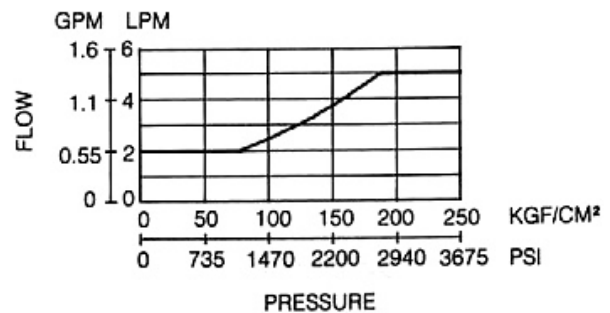
#### NOMINAL OVERRIDE CHARACTERISTICS



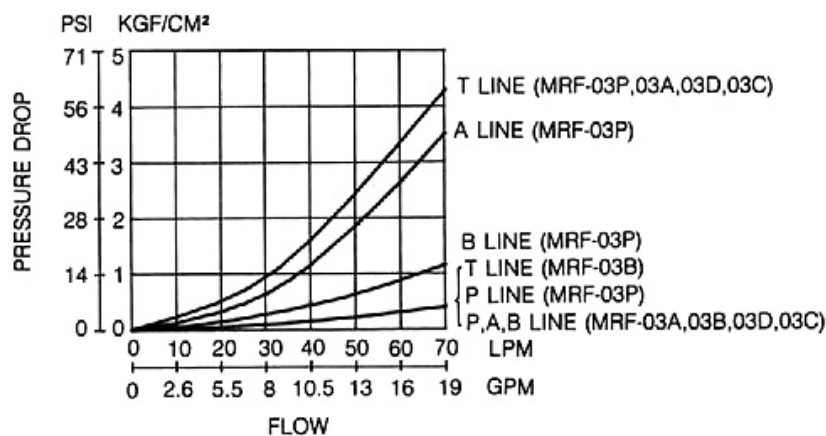
#### MIN. ADJUSTMENT PRESSURE



#### MIN. FLOW VS. ADJUSTMENT PRESSURE



#### PRESSURE DROP

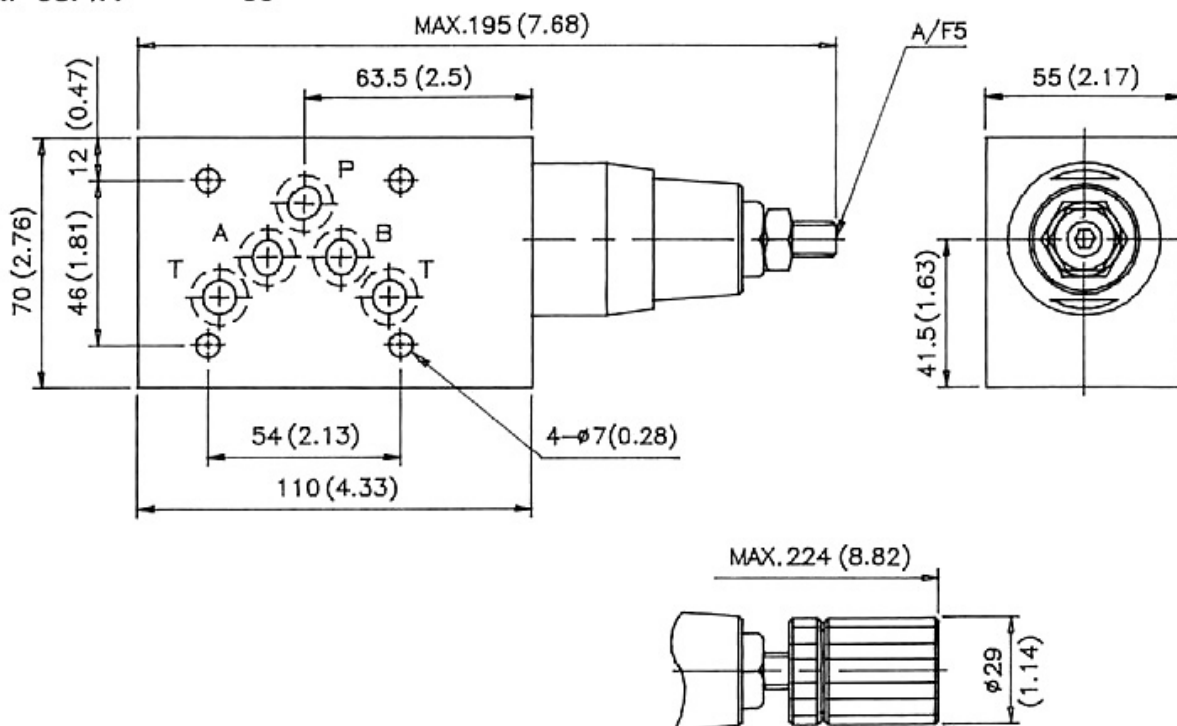




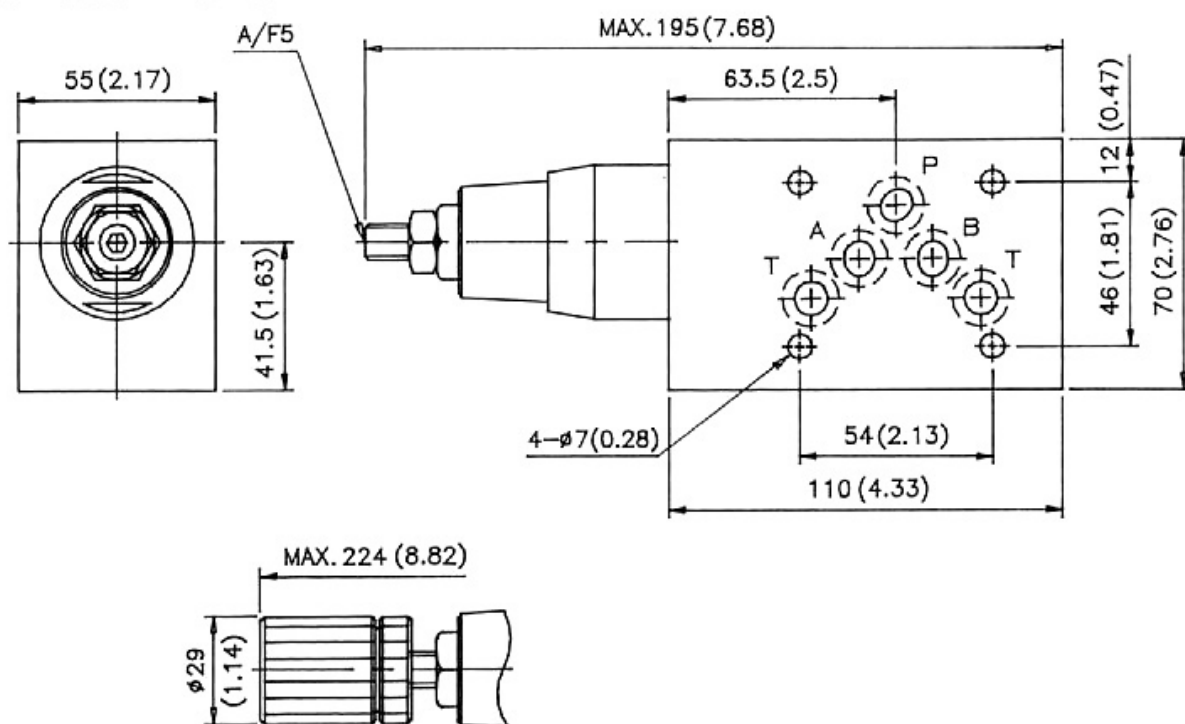
### INSTALLATION DIMENSIONS

UNIT: mm(inch)  
WEIGHT: 3.3kgs (7.28lbs)

MRF-03P/A - \* - \* - 30



MRF-03B - \* - \* - 30

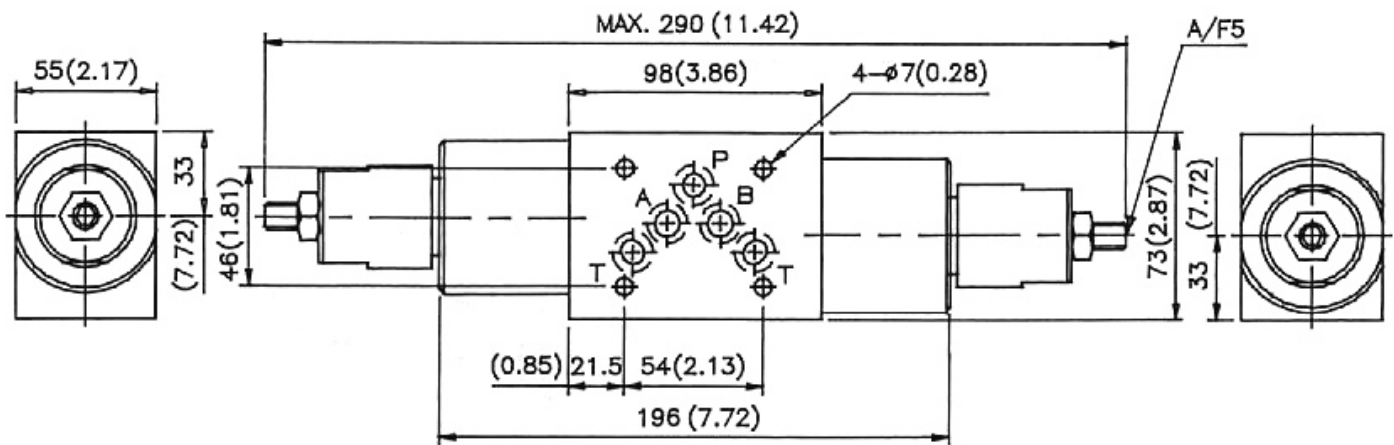


### INSTALLATION DIMENSIONS

UNIT: mm(inch)

WEIGHT: 3.7 kgs (8.16 lbs)

MRF-03C/D- \* - \* - \* - 30

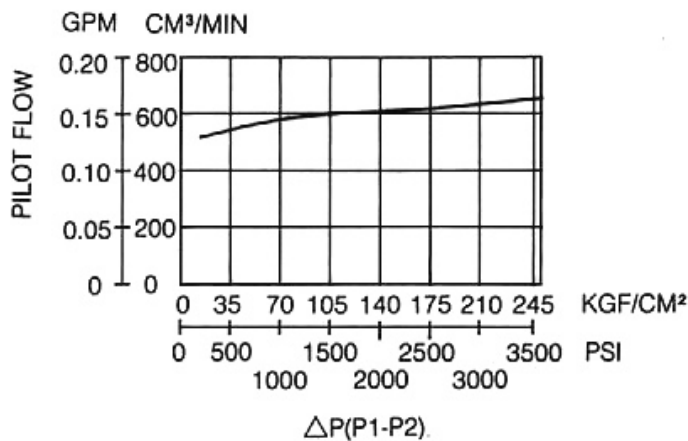


### PERFORMANCE CURVES

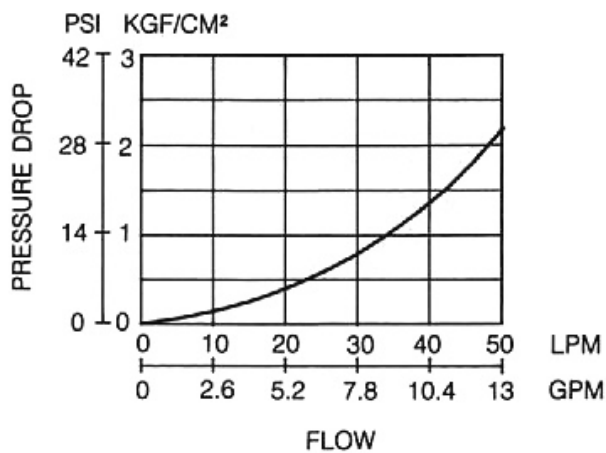
#### TEST CONDITIONS

Viscosity: 35 CST  
 Temperature: 50°C

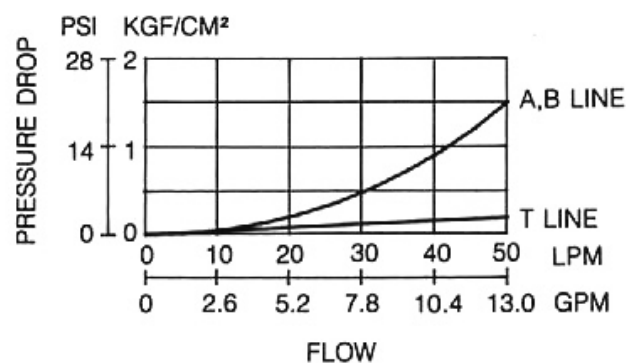
#### PILOT FLOW CHART

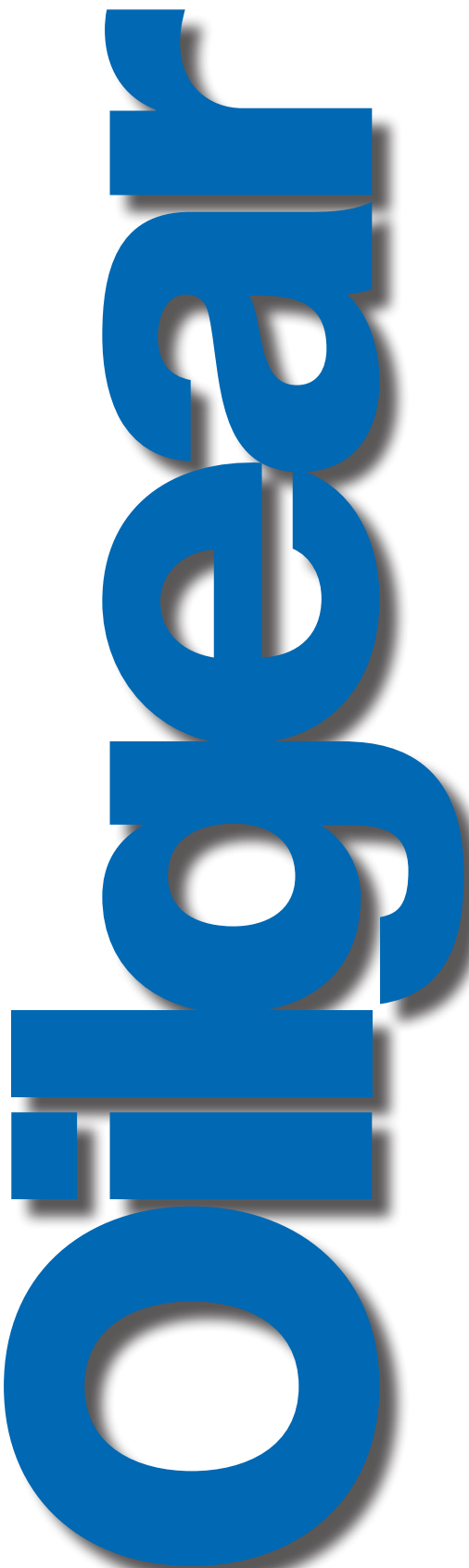


#### PRESSURE DROP AT SPOOL FULLY OPENED (P-LINE)



#### PRESSURE DROP





**Oilgear**

Sede Mundial

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Para obter informações adicionais sobre seu aplicativo ou sobre os produtos referenciados neste manual, entre em contato com a Oilgear mais próxima. Acesse o website da Oilgear para obter uma relação completa de nossos endereços.