

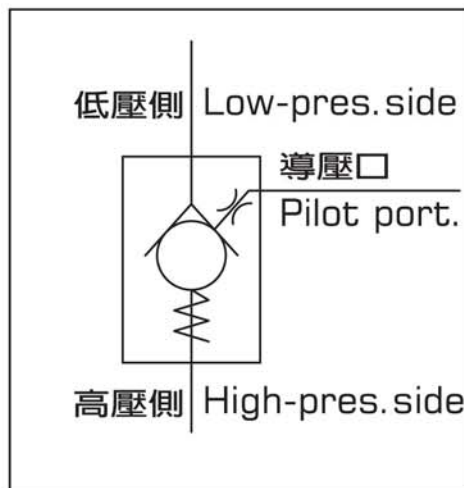


碟式預充閥

**Pre-fill valves
flange-clamped type.**



碟式預充閥 / Pre-fill valves (flange-clamped type)



配管法蘭 / Pipe Flanges



特性

- 體積小，易於拆裝
- 低壓損，流量大
- 構造簡單，耐久性佳
- 鋼質本體，鋼質組件計10種形式供 選用
- 展性鑄鐵本體，鋼質組件計6種形式供選配
- 可直接裝置於油缸蓋側

Special Features

- Small size and easy to install.
- Low pressure loss with high flow capacity.
- Compact and robust.
- Steel body with steel components available with 10 models for selection options.
- Ductile iron body with steel components available with 6 models for selection options.
- Good for directly intergrated onto the cylinder cap side.

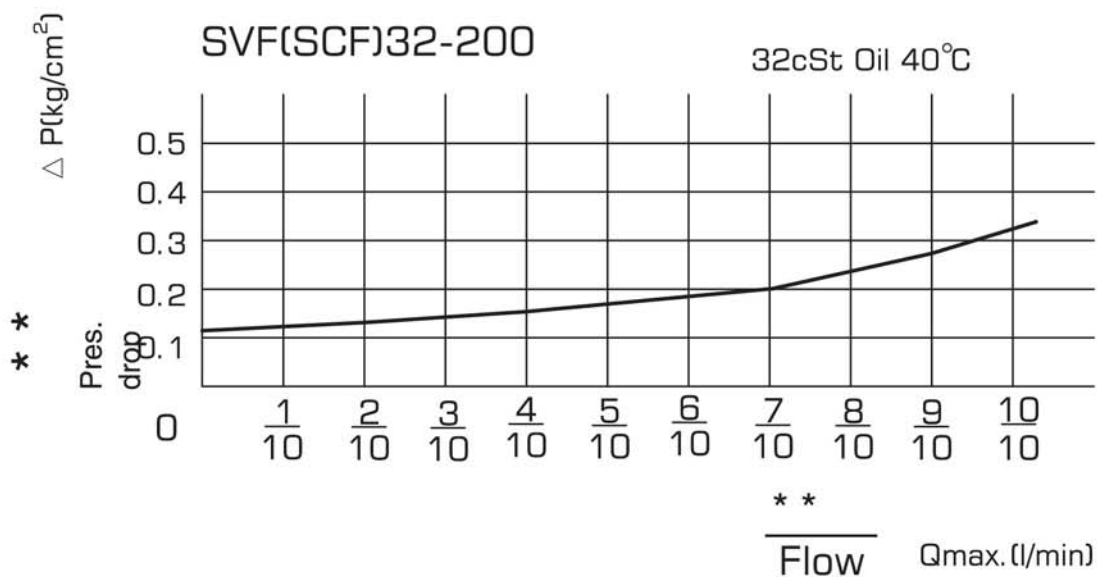


特性數據 / Specifications

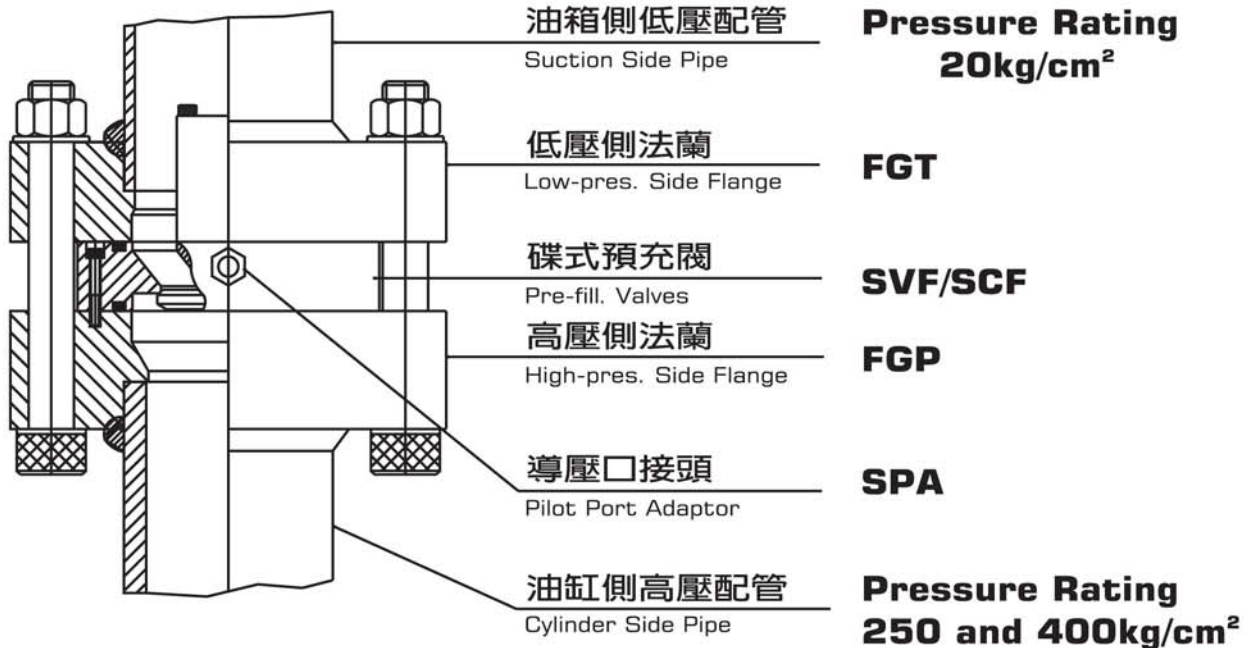
| 型式 Model | 最大流量 Flow Qmx (L/min) | 使用壓力 Oper. pressure Pmax. (bar) | 導壓比 Pilot ratio | 固定法蘭螺絲 Flange bolts | | 配管直徑 Pipe size | 閥重 Weight (kg) |
|-------------|-----------------------------|--|-----------------------|------------------------|---------------------|-------------------|----------------------|
| | | | | 支數 number | 尺寸 Nor. diameter | | |
| SVF-32 | 160 | 400 | 3.6 | 4 | M16 | 2B | 1.3 |
| SVF-40 | 250 | | 3.3 | 4 | M20 | 2.5B | 2.2 |
| SVF-50 | 400 | | 3.8 | 6 | M16.M24* | 3B | 2.9 |
| SVF-63 | 630 | | 4.2 | 8 | M16.M24* | 3.5B | 4.5 |
| SVF-80 | 1000 | | 4.3 | 8 | M16.M24* | 4B | 6.2 |
| SVF-100 | 1600 | | 4.3 | 8 | M22.M30* | 5B | 12.3 |
| SVF-125 | 2500 | | 4.3 | 12 | M24.M30* | 8B | 23 |
| SVF-160 | 4000 | | 4.2 | 16 | M30 | 10B | 50 |
| SVF-200 | 7000 | | 4.1 | 20 | M30 | 12B | 85 |
| SVF-250 | 15000 | | 4.4 | 22 | M42 | 18B | 156 |
| SCF-32 | 160 | 250 | 3.6 | 4 | M16 | 2B | 1.3 |
| SCF-50 | 400 | | 3.8 | 6 | M16 | 3B | 2.9 |
| SCF-63 | 630 | | 4.2 | 8 | M16 | 3.5B | 4.5 |
| SCF-80 | 1000 | | 4.3 | 8 | M16 | 4B | 6.2 |
| SCF-100 | 1600 | | 4.3 | 8 | M22 | 5B | 12.3 |
| SCF-125 | 2500 | | 4.3 | 12 | M24 | 8B | 23 |



壓降曲線 / Flow Curve



碟式預充閥 / Pre-fill valves (flange-clamped type)



碟式預充閥 / Pre-Fill valves

選購型號 Ordering Code

SVF-100-21C

① ② ③

1 型式 / Model

SVF-鋼質本體 SCM4
Steel body
SCF-球墨
FCD50

2 規格 / Size

SVF-32 to 250
SCF-32 to 125

3 設計資料 / Design Letter

配管法蘭 / Pipe Flanges

選購型號 Ordering Code

FGP-100-2-M22/5B

① ② ③ ④ ⑤

1 型式 / Model

FGP-高壓側法蘭
High-pres. Side Flange
FGT-低壓側法蘭
Low-pres. Side Flange

2 規格 / Size

3 壓力等級 / Pressure Range

2:250kg/cm²
4:400kg/cm²

4 螺絲公稱直徑 / Normal Bolt Diameter

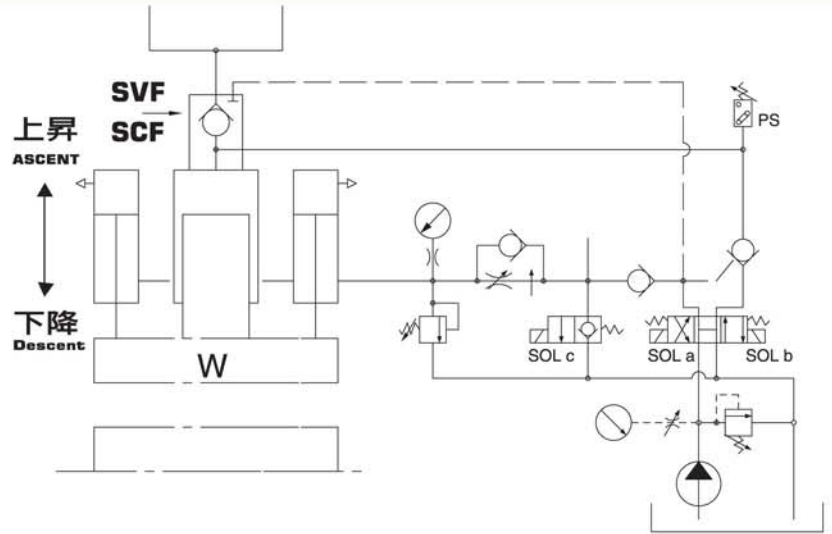
5 配管直徑稱呼 / Normal Pipe Diameter



碟式預充閥 油路運用例 (僅供參考)

Pre-fill valves(flange-clamped type).Typical application circuit(for reference)

| 動作 Operation | SOL | a | b | c | PS | SVF SCF |
|--------------------------------|-----|---|---|---|--------------|--------------------------|
| 下降快速 Rapid Descent | ✓ | | | ✓ | | 自吸 Suction |
| 下降加壓 Pressurized Descent | ✓ | | | ✓ | | 關閉 Closed |
| 出力保壓 Clamping | | | | | 計時 Timing | 關閉 Closed |
| 上昇動作 Ascent | | ✓ | | | | 導開 回油 Piloted open |



欲充閥選定型號

Example for model selection

已知條件

- 主壓油缸，直徑 $\phi 350\text{mm}$ 。
- 上昇油缸，內徑 $\phi 63\text{X}$ 桿徑 $\phi 35$ ，計2支。
- 滑板中座重量 $W: 1500\text{kg}$ 。
- 邦浦流量: 25 l/min 。

理論計算

- 主壓油缸面積: 961.625cm^2 。
- 上昇油缸桿側面積: 43.081cm^2 (計2支)。
- 上昇速度: 580cm/min (96.6mm/sec)。
- 上昇預充閥排油量 558 l/min 。
- 由型錄選擇適用型號 SVF (SCF)-63。
- 依滑板中座重量與上昇油缸面積關係，得知感應
- 壓力約 34.8kg/cm^2 ，可達成滑板中座，自重落下方式的具備條件。
- 下降速度以 SVF (SCF)-63 流量 630 l/min 言下降速度最快為 650cm/min (108mm/sec)。

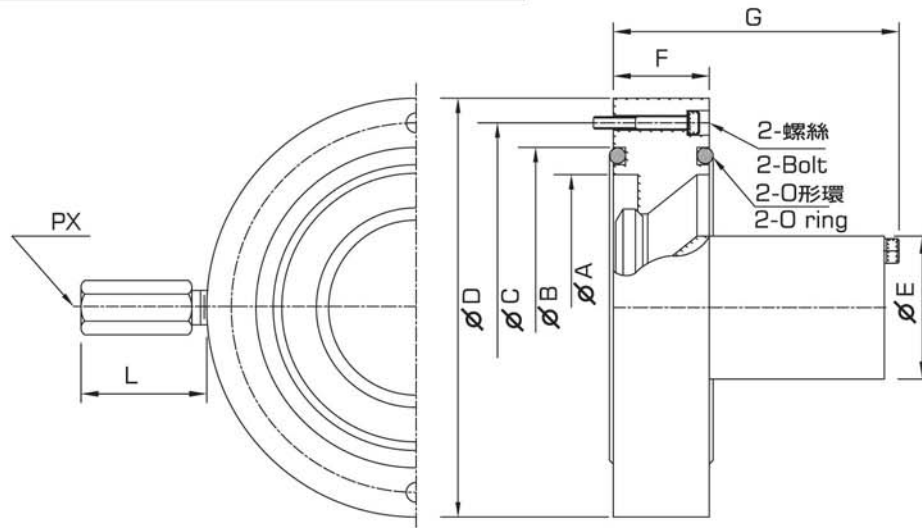
Given

- Main cylinder dia: $\phi 350\text{mm}$.
- Ascending cylinder: $2\text{-B}\phi 63\text{XR}\phi 35$.
- Weight of platen: 1500kg .
- Pump capacity: 25 l/min .

Analysis

- Area of main cylinder: 961.625cm^2
- Tow ascending cylinder area: 43.081cm^2
- Ascent speed: 580cm/min (96.6mm/sec).
- Flow thru pre-fill valve to tank: 558 l/min
- Selectable model: SVF(SCF)-63.
- The induced pressure in ascending cylinder is 36.8kg/cm^2 . For a free descending operation, the flow capacity.
- 630 l/min for SVF(SCF)-63, will allow a descending speed at 650cm/min (108mm/sec).

碟式預充閥 / Pre-fill valves (flange-clamped type)

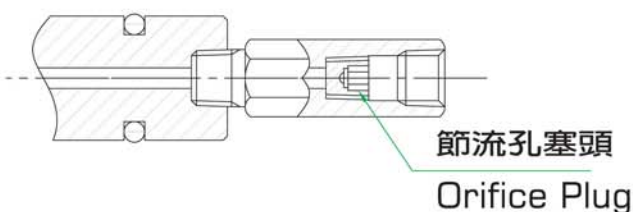


尺寸表 / Dimensions (mm)

SVF: 合金鋼 SCM4
SCF: 球墨鑄鐵 FCD50

| 型式 Model | ϕA | ϕB | ϕC | ϕD | ϕE | F | G | L | PX | 固定螺絲 fixed Bolt | O-Ring |
|-----------------|----------|----------|----------|----------|----------|------|------|----|--------|--------------------|---------|
| SVF-32 SCF-32 | 48 | 63 | - | 82 | 33 | 28 | 70 | 62 | PT1/4" | - | 1517-6 |
| SVF-40 | 56.5 | 73 | 91 | 107 | 39 | 28 | 71.5 | | | M4X30 | 1517-9 |
| SVF-50 SCF-50 | 72 | 90 | 112 | 128 | 42 | 29 | 91 | | | M4X30 | 1517-14 |
| SVF-63 SCF-63 | 87 | 105 | 125 | 143 | 50 | 33.5 | 106 | | | M5X35 | P95 |
| SVF-80 SCF-80 | 108 | 130.5 | 150 | 169 | 57 | 38.5 | 115 | | | M5X40 | P120 |
| SVF-100 SCF-100 | 130 | 155 | 185 | 210 | 70 | 44 | 150 | | | M6X45 | P145 |
| SVF-125 SCF-125 | 170 | 200 | 226 | 248 | 89 | 51 | 195 | | | M6X60 | P185 |
| SVF-160 | 218 | 250 | 284 | 310 | 120 | 70 | 230 | 70 | PT3/8" | M8X70 | P235 |
| SVF-200 | 272 | 310 | 355 | 390 | 145 | 95 | 300 | 85 | PT1/2" | M10X95 | P295 |
| SVF-250 | 350 | 398 | 445 | 490 | 176 | 110 | 390 | 85 | PT1/2" | M12X115 | P375 |

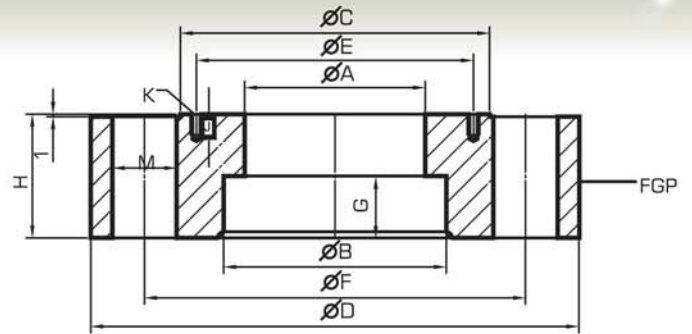
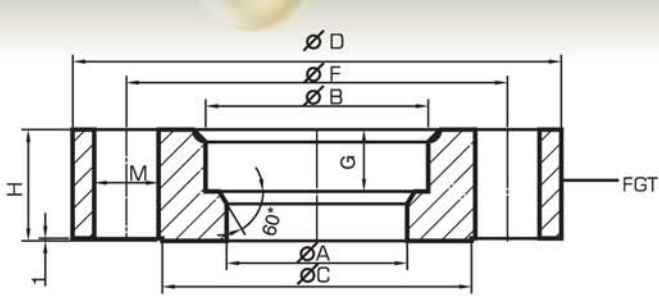
預充閥導壓口接頭 / Pre-fill valves pilot port adaptor



| 型式 Model | 節流孔 Orifice | 塞孔 Plug |
|-------------------|----------------|------------|
| SVF(SCF)-32,40,50 | 0.7mm | PT1/8" |
| SVF(SCF)-63 | 0.8mm | |
| SVF(SCF)-80 | 1.0mm | |
| SVF(SCF)-100 | 1.2mm | |
| SVF(SCF)-125,160 | 1.5mm | |
| SVF-200 | 1.8mm | PT1/4" |



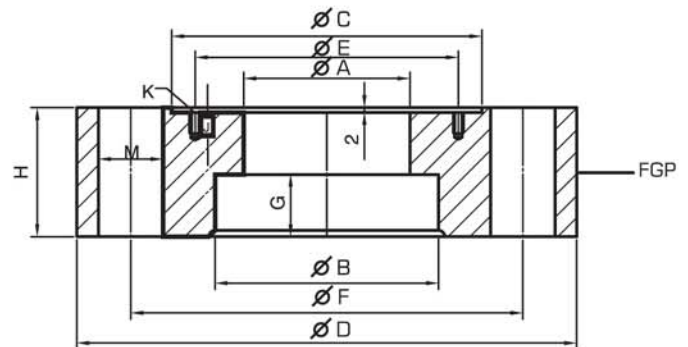
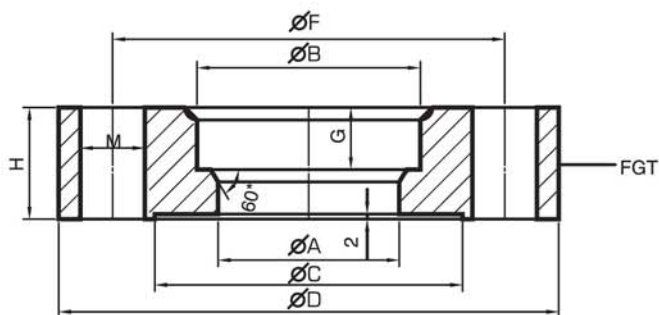
碟式預充閥安裝法蘭參考尺寸 Flanges Dimensions(mm)



| 型式 Model | $\varnothing D$ | $\varnothing F$ | $\varnothing B$ | $\varnothing A$ | $\varnothing E$ | $\varnothing C$ | H | G | J | K | M |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|----|------|-----------------------|
| FGP-32-2-M16/2B FGT-32-2-M16/2B | 135 | 103.2 | 61.1 | 47.5 | - | 82 | 35 | 20 | - | - | 4- $\varnothing 17.5$ |
| FGP-40-2-M20/2.5B FGT-40-2-M20/2.5B | 165 | 130.1 | 77.1 | 57 | 91 | 107 | 44 | 22 | 10 | 2-M4 | 4- $\varnothing 22$ |
| FGP-50-2-M16/3B FGT-50-2-M16/3B | 180 | 146 | 90 | 73 | 112 | 125 | 40 | 20 | 10 | 2-M4 | 6- $\varnothing 18$ |
| FGP-50-4-M24/3B FGT-50-4-M24/3B | 198 | 154 | 90 | 73 | 112 | 125 | $\frac{50}{45}$ | 25 | 10 | 2-M4 | 6- $\varnothing 26$ |
| FGP-63-2-M16/3.5B FGT-63-2-M16/3.5B | 198 | 161 | 102.2 | 88 | 125 | 140 | $\frac{42}{35}$ | $\frac{20}{12}$ | 10 | 2-M5 | 8- $\varnothing 18$ |
| FGP-63-4-M24/3.5B FGT-63-4-M24/3.5B | 214 | 169 | 102.2 | 88 | 125 | 140 | $\frac{65}{50}$ | 27 | 10 | 2-M5 | 8- $\varnothing 26$ |
| FGP-80-2-M16/4B FGT-80-2-M16/4B | 220 | 187 | 115.2 | 108.5 | 150 | 166 | $\frac{45}{35}$ | $\frac{20}{15}$ | 10 | 2-M5 | 8- $\varnothing 18$ |
| FGP-80-2-M24/4B FGT-80-2-M24/4B | 240 | 195 | 115.2 | 108.5 | 150 | 166 | $\frac{65}{55}$ | 27 | 10 | 2-M5 | 8- $\varnothing 26$ |
| FGP-100-2-M22/5B FGT-100-2-M22/5B | 280 | 236 | 141 | 132 | 185 | 210 | $\frac{65}{55}$ | $\frac{25}{20}$ | 10 | 2-M6 | 8- $\varnothing 23$ |
| FGP-100-4-M30/5B FGT-100-4-M30/5B | 300 | 244 | 141 | 132 | 185 | 210 | $\frac{80}{70}$ | 30 | 10 | 2-M6 | 8- $\varnothing 33$ |

32~100

法蘭參考尺寸



| 型式 Model | $\varnothing D$ | $\varnothing F$ | $\varnothing B$ | $\varnothing A$ | $\varnothing E$ | $\varnothing C$ | H | G | J | K | M |
|--|-----------------|-----------------|-----------------|-----------------|-----------------|-----------------|-------------------|-----------------|----|-------|----------------------|
| FGP-125-2-M24/8B FGT-125-2-M24/8B | 350 | 300 | 219 | 168 | 226 | 249 | $\frac{70}{60}$ | $\frac{35}{25}$ | 15 | 2-M6 | 12- $\varnothing 26$ |
| FGP-125-4-M30/8B FGT-125-4-M30/8B | 354 | 300 | 219 | 168 | 226 | 249 | $\frac{90}{80}$ | $\frac{50}{30}$ | 15 | 2-M6 | 12- $\varnothing 32$ |
| FGP-160-4-M30/10B FGT-160-4-M30/10B | 422 | 367 | 270 | 218 | 284 | 311 | $\frac{90}{80}$ | $\frac{40}{30}$ | 15 | 2-M6 | 16- $\varnothing 32$ |
| FGP-200-2-M30/12B FGT-200-2-M30/12B | 510 | 442 | 321 | 270 | 355 | 391 | $\frac{100}{90}$ | $\frac{40}{35}$ | 20 | 2-M10 | 20- $\varnothing 32$ |
| FGP-250-2-M30/18B FGT-250-2-M30/18B | 632 | 555 | 460 | 348 | 445 | 495 | $\frac{110}{100}$ | $\frac{55}{40}$ | 20 | 2-M12 | 24- $\varnothing 32$ |

125~250

法蘭參考尺寸



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