SK VALVES
SLEEVE CONTROL VALVES

■ MUTI-JET TYPE
多噴孔型 (4” ~ 104”)

■ FIXED CONE TYPE
單噴孔(固定錐)型 (4” ~ 104”)

Since 1966
The sleeve control valve is of axial flow channel design, controlling the inner fluid of the channel smoothly. Compared with other control valves, it has less noise and cavitation, and the valve’s flow coefficient $C_v$ and stroke are almost in linear relation, achieving the precise flow control.

According to different channel designs, the sleeve control valve can be classified to MULTI-JET CONTROL VALVE and FIXED CONE CONTROL VALVE.

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<th>Multi-Jet control valve</th>
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<td>Control curve</td>
<td>Linear / customized</td>
<td>Linear</td>
</tr>
<tr>
<td>Energy dissipation</td>
<td>Excellent</td>
<td>Good</td>
</tr>
<tr>
<td>Fluid</td>
<td>Clean water</td>
<td>Clean water, raw water and sewage</td>
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(The customized 客製化)
### 產品功能概要

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<td>Fixed Cone pressure relief valve</td>
<td>控制系統</td>
<td>操作機：(四週一)水壓缸 / 油壓缸 / 氣油壓缸 / 電動操作機</td>
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<td>SSH-RL固定錐型減壓閥</td>
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<td></td>
<td>PLC可程式控制器</td>
<td>Actuator(one of four options) water cylinder, oil cylinder pneumatic w/oil cylinder motor actuator</td>
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<td></td>
<td>Control system</td>
<td>Pressure sensor mode Solenoid model PLC</td>
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| SSR-RD | 控制閥型式 | 操作機：(四週一)水壓缸 / 油壓缸 / 氣油壓缸 / 電動操作機 | 維持下游管線系統於設定壓力之下，當控制閥下游壓力大於設定壓力時，鍵型閥自動減少套筒開度並維持閥門狀態。In order to maintain the downstream pipeline system under the setting index of pressure, when the valve' pressure is out of the setting index, the valve will regulate the pressure automatically. |
| Fixed Cone pressure reducing valve | 控制系統 | 操作機：(四週一)水壓缸 / 油壓缸 / 氣油壓缸 / 電動操作機 | |
| SME-RD | 現場控制箱 | PLC | |
| Multi-Jet pressure reducing valve | PLC可程式控制器 | Actuator(one of four options) water cylinder, oil cylinder pneumatic w/oil cylinder motor actuator | |
| SSH-RD固定錐型減壓閥 | Control system | Pressure sensor mode Solenoid model PLC | |
| SME-RD多噴孔型減壓閥 | | | |

| SSH-FW | 控制閥型式 | 操作機：(四週一)水壓缸 / 油壓缸 / 氣油壓缸 / 電動操作機 | 在設定的壓力範圍內控制管線流量於設定範圍之內，當流量低於或高於設定值時，鍵型閥自動增加或減少套筒開度並維持閥門狀態。Control the rate of flow in setting index range, when it is out of the index range, the valve will regulate to setting index automatically. |
| Fixed Cone valveRate of flow valve | 控制系統 | 操作機：(四週一)水壓缸 / 油壓缸 / 氣油壓缸 / 電動操作機 | |
| SME-FW | 現場控制箱 | PLC | |
| Multi-Jet valveRate of flow valve | PLC可程式控制器 | Actuator(one of four options) water cylinder, oil cylinder pneumatic w/oil cylinder motor actuator | |
| SSH-FW固定錐型流量控制閥 | 控制系統 | Pressure sensor mode Solenoid model PLC | |
| SME-FW多噴孔型流量控制閥 | | | |

**Remark 備註**

1. The extra water pressure supply is required as the hydraulic cylinder working pressure from pipeline is unclear 1kgf/cm².
2. The pressure class and flange specification are customized.

1. 本例操作(水壓缸)系統因採用數控自動系統，因此工作壓力不需達 1 kgf/cm²，否則須另購外部水壓泵。
2. 其他壓力等級及法蘭規格可另行設計。
The integral channel of this valve is of axial flow or vertical flow design. The interior sleeve formed by a group of multi-nozzle force the fluid to form a high-speed water jets to eliminate the energy. Equipping a movable sleeve gate on the exterior of multi-nozzle sleeve to control more effectively. Water jets strike each other instead of the sleeve walls preventing the inner wall damage, also the vibration and noise can be reduced effectively ,the valve’s service life can be extended.

**Axial Flow Type 輸流式多噴孔控制閥**

此閥整體流道採軸流式或豎立式設計，流體經由一組由多個噴孔所形成的噴孔管，引導流體形成高速水柱在噴孔管内部相互衝擊，藉以消除能量，噴孔管外部配置一可移動之套筒，並藉此套筒之行程位置控制有效噴孔數量，同時因為整個消能撞擊過程都在消能管內部完成，因此可有效降低震動、噪聲及避免沖蝕現象直接作用於閥體內壁，藉以延長主閥使用壽命。

**Vertical Flow Type 豎立式多噴孔控制閥**

Regulating 開啓調節狀態

Closing 關閉狀態
**DESIGN FEATURES 設計特點**

- **The customized design of multi-nozzle**
  The nozzle of bore and number in the multi-nozzle sleeve can be spiral patterned according to customers' hydraulic analysis.

- **Advanced tapered nozzle design**
  The tapered nozzles allows the flow to accelerate smoothly, forming the water jets to enter the sleeve, which will control the flow precisely and dissipate the energy through sleeve gate to decide the quantity of water jets.

- **Advanced不仅仅是螺旋型孔孔設計**
  噴孔孔徑及孔數可依客戶水壓分析作最佳配置, 且所有噴孔採螺旋式配置以確保控制的連續性。

**Structure & Material 構造材質**

1. **Body 本體**
   Ductile Cast Iron 球墨鑄鐵
   Stainless Steel 不鏽鋼
   Carbon Steel 碳鋼

2. **Seat 閘座**
   EPDM
   Neoprene 合成橡膠
   ALBC 鋁青铜

3. **Sleeve 多噴孔管**
   Stainless Steel 不鏽鋼

4. **Gate 閘閥**
   Stainless Steel 不鏽鋼
   Nitronic

5. **Shaft 閥軸**
   Stainless Steel 不鏽鋼

6. **Drive Arm 驅動臂**
   Ductile Cast Iron 球墨鑄鐵

![Multi-jet Control Valve Sectional View 多噴孔閥截面圖](image)
The integral channel of this valve is of axial flow design. A specially-designed fixed cone guide the fluid forming the annular shunt, also provide the energy dissipation, reduce the noise, vibration and the cavitation of the valve. The movable sleeve sliding rail on the inducer which control the opening in the stroke. The water head loss is extremely low when the valve is fully open, it can be used as discharge valve at the end of pipe-line or flow control valve at the pipe-line.

Discharge Type 放流式單噴孔控制閥

Discharging 放流狀態

Closing 關閉狀態

Axial Flow Type 轉流式單噴孔控制閥

Regulating 開啓調節狀態

Closing 關閉狀態
**DESIGN FEATURES** 設計特點

- **Self-correcting seat design**
  The floating metal-metal valve seat design ensures the water-tight effect and service life of the valve seat.

- **Fixed cone and diversion design**
  The special flow guiding design can effectively allow the flow to form the annular shunt for energy dissipation.

- **Energy dissipation fitting design**
  The energy dissipation fitting on the nozzle plate can reduce the vibration by water jets and avoid the cavitation of the inner wall in the valve body.

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**Structure & Material** 構造材質

1. **Body** 體:
   - Ductile Cast Iron 球墨鑄鐵
   - Stainless Steel 不鏽鋼
   - Carbon Steel 碳鋼
2. **Seat 閥座**:
   - ALBC 鋁合金
3. **Sleeve 單墊孔管**:
   - Stainless Steel 不鏽鋼
4. **Fixed Cone 固定錐**:
   - Stainless Steel 不鏽鋼
   - Ductile Cast Iron 球墨鑄鐵
5. **Gate 單辦閘**:
   - Stainless Steel 不鏽鋼
   - Nitronic
6. **Shaft 閥軸**:
   - Stainless Steel 不鏽鋼
7. **Drive Arm 動動臂**:
   - Ductile Cast Iron 球墨鑄鐵
8. **Energy dissipation fitting 消能管**:
   - Stainless Steel 不鏽鋼

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**Self-correcting Seat 浮動閥座**

Opening 開啓狀態

Closing 關閉狀態

**Fixed cone and diversion 固定錐及導流板**

**Energy dissipation fitting 消能管**

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**Sectional View 單模孔割面圖**
SPECIFICATION 規格說明

<table>
<thead>
<tr>
<th>Pressure Class &amp; Flange / 壓力等級 &amp; 法蘭規格</th>
<th>Fluid / 適用流體</th>
</tr>
</thead>
<tbody>
<tr>
<td>Standard 規格</td>
<td>Class 等級</td>
</tr>
<tr>
<td>ANSI</td>
<td>125</td>
</tr>
<tr>
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<td>250</td>
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<tr>
<td>ISO / DIN / BS</td>
<td>PN10</td>
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<tr>
<td></td>
<td>PN16</td>
</tr>
<tr>
<td>JIS / CNS</td>
<td>7.5 K</td>
</tr>
<tr>
<td></td>
<td>10.0 K</td>
</tr>
<tr>
<td></td>
<td>16.0 K</td>
</tr>
</tbody>
</table>

Additionally:
- **Oil driver power kit**
  - Including motor, oil pump, pressure tank, oil tank, controller module

- **Air driver power kit**
  - Including air compressor, pressure tank, controller module

- **Motor actuator**
  - Including motor actuator, worm gear, controller module

Optional additional配件

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