Super X

Inline 3/2 and 5/2 Spool valves, solenoid and pilot actuated

> Port size: G1/8 & G1/4
> Low and high power solenoid coil options
> End, side or face mounting solenoids
> Wide range of low power solenoids
> Light weight corrosion resistant materials
> Option for manual override acting directly on spool

Technical features

- **Medium:** Compressed air, filtered, lubricated or non-lubricated
- **Operation:** Spool Valve, indirectly actuated
- **Mounting:** Through-holes in valve body. It is recommended that valves should be mounted with the axis of the spool horizontal.

Flow Characteristics

<table>
<thead>
<tr>
<th>Size</th>
<th>Function</th>
<th>l/min</th>
<th>Cv</th>
<th>Kv</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>3/2,5/2</td>
<td>335</td>
<td>0.34</td>
<td>0.295</td>
</tr>
<tr>
<td>G1/4</td>
<td>3/2,5/2</td>
<td>965</td>
<td>0.98</td>
<td>0.853</td>
</tr>
</tbody>
</table>

Ambient/Media temperature:
- Solenoid pilot actuated valves
  - +5 ... +50°C (+41 ... +122°F)
- Air pilot actuated valves
  - 0 ... +80°C (+32 ... +176°F)
- Air supply must be dry enough to avoid ice formation at temperatures below +2°C (+35°F).

Materials:
- Body: Die cast aluminium alloy
- End cover: Aluminium or glass filled nylon
- Seals: NBR

Electrical details for solenoid operators

<table>
<thead>
<tr>
<th>Voltage tolerance</th>
<th>± 10%</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rating</td>
<td>100% continuous duty</td>
</tr>
<tr>
<td>Inlet orifice</td>
<td>1.0 mm (low power)</td>
</tr>
<tr>
<td></td>
<td>1.6 mm (high power)</td>
</tr>
<tr>
<td>Electrical connection (corresponding to chosen coil)</td>
<td>Industrial Standard, 22 mm</td>
</tr>
<tr>
<td>Solenoid coil mounting</td>
<td>Four positions x 90°</td>
</tr>
<tr>
<td>Manual override</td>
<td>Push and turn to lock (plastic)</td>
</tr>
<tr>
<td>Protection class</td>
<td>IP 65 (with sealed plug)</td>
</tr>
</tbody>
</table>
### 3/2 solenoid operated valves

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port size</th>
<th>Function</th>
<th>Operating pressure (bar)</th>
<th>Solenoid pilot</th>
<th>Solenoid mounting position</th>
<th>Voltage</th>
<th>Power (Watts)</th>
<th>Manual override</th>
<th>Weight (Kg)</th>
<th>Drawing No.</th>
<th>Model *1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>Side</td>
<td>Without coil</td>
<td>High</td>
<td>Without M/O</td>
<td>0.42</td>
<td>1</td>
<td>14123500000</td>
</tr>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>Without coil</td>
<td>Low</td>
<td>With M/O</td>
<td>0.36</td>
<td>2</td>
<td>1418350G000</td>
</tr>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>24 V DC</td>
<td>2 W</td>
<td>With M/O</td>
<td>0.36</td>
<td>2</td>
<td>1418350G024</td>
</tr>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>Without coil</td>
<td>Low</td>
<td>Without M/O</td>
<td>0.39</td>
<td>3</td>
<td>1418340L000</td>
</tr>
</tbody>
</table>

*1) Standard model numbers in **Bold**

### 3/2 solenoid operated valves

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port Size</th>
<th>Seal Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>X4100050</td>
<td>141.....</td>
</tr>
<tr>
<td>G1/4</td>
<td>X4200050</td>
<td>142.....</td>
</tr>
</tbody>
</table>

### 5/2 solenoid operated valves

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port size</th>
<th>Function</th>
<th>Operating pressure (bar)</th>
<th>Solenoid pilot</th>
<th>Solenoid mounting position</th>
<th>Voltage</th>
<th>Power (Watts)</th>
<th>Manual override</th>
<th>Weight (Kg)</th>
<th>Drawing No.</th>
<th>Model *1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>Side</td>
<td>Without coil</td>
<td>High</td>
<td>Without M/O</td>
<td>0.50</td>
<td>6</td>
<td>X4125500000</td>
</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>Side</td>
<td>24 V DC</td>
<td>2 W</td>
<td>With M/O</td>
<td>0.50</td>
<td>6</td>
<td>X412550G024</td>
</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>Without coil</td>
<td>Low</td>
<td>With M/O</td>
<td>0.56</td>
<td>4</td>
<td>X412550G000</td>
</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>24 V DC</td>
<td>2 W</td>
<td>With M/O</td>
<td>0.56</td>
<td>4</td>
<td>X412550L024</td>
</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>Without coil</td>
<td>High</td>
<td>Without M/O</td>
<td>0.51</td>
<td>5</td>
<td>1428350M000</td>
</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Solenoid - Spring</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>24 V DC</td>
<td>2 W</td>
<td>With M/O</td>
<td>0.51</td>
<td>5</td>
<td>1428350G024</td>
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</tbody>
</table>

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### 5/2 solenoid operated valves

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port size</th>
<th>Function</th>
<th>Actuation</th>
<th>Operating pressure (bar)</th>
<th>Solenoid pilot</th>
<th>Solenoid mounting position</th>
<th>Voltage</th>
<th>Power (Watts)</th>
<th>Manual override</th>
<th>Weight (Kg)</th>
<th>Drawing No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>Side</td>
<td>24 V DC</td>
<td>6 W</td>
<td>With M/O</td>
<td>0.67</td>
<td>13</td>
<td>X422520M024</td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>Side</td>
<td>Without coil</td>
<td>Low</td>
<td>Without M/O</td>
<td>0.67</td>
<td>13</td>
<td>X422520L000</td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>Side</td>
<td>Without coil</td>
<td>Low</td>
<td>With M/O</td>
<td>0.67</td>
<td>13</td>
<td>X422520G000</td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>Side</td>
<td>Without coil</td>
<td>High</td>
<td>Without M/O</td>
<td>0.67</td>
<td>13</td>
<td>X4225200000</td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>24 V DC</td>
<td>6 W</td>
<td>With M/O</td>
<td>0.69</td>
<td>14</td>
<td>X428580M024</td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>24 V DC</td>
<td>2 W</td>
<td>With M/O</td>
<td>0.67</td>
<td>14</td>
<td>X428580G024</td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>Without coil</td>
<td>High</td>
<td>With M/O</td>
<td>0.69</td>
<td>14</td>
<td>X428580M000</td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Solenoid - Solenoid</td>
<td>2 - 10</td>
<td>Internal</td>
<td>End</td>
<td>Without coil</td>
<td>High</td>
<td>Without M/O</td>
<td>0.69</td>
<td>14</td>
<td>X4285800000</td>
</tr>
</tbody>
</table>

*1) Standard model numbers in **Bold**

#### Seal Kit

<table>
<thead>
<tr>
<th>5/2 solenoid operated valves</th>
<th>Port Size</th>
<th>Seal Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>X41..</td>
<td>G1/4</td>
<td>X4100050</td>
</tr>
<tr>
<td>X42..</td>
<td>G1/4</td>
<td>X4200050</td>
</tr>
</tbody>
</table>

#### Spare coils and alternative voltages

<table>
<thead>
<tr>
<th><strong>22 mm coil - 1.0 mm orifice (low power)</strong> for connector interface acc. to industrial standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voltage</strong></td>
</tr>
<tr>
<td>12 V d.c.</td>
</tr>
<tr>
<td>24 V d.c.</td>
</tr>
<tr>
<td>24 V a.c.</td>
</tr>
<tr>
<td>110/120 V 50/60 Hz</td>
</tr>
<tr>
<td>220/240 V 50/60 Hz</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th><strong>22 mm coil - 1.6 mm orifice (high power)</strong> for connector interface acc. to industrial standard</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Voltage</strong></td>
</tr>
<tr>
<td>12 V d.c.</td>
</tr>
<tr>
<td>24 V d.c.</td>
</tr>
<tr>
<td>24 V a.c.</td>
</tr>
<tr>
<td>110/120 V 50/60 Hz</td>
</tr>
<tr>
<td>220/240 V 50/60 Hz</td>
</tr>
</tbody>
</table>

#### Connector plugs - ordered separately

- Industrial standard 22 mm 2-pole + PE
  - Voltage: 12 V d.c.
    - Power: 7.5 W
    - Model: QM/48/82J/21
  - Voltage: 24 V d.c.
    - Power: 6 W
    - Model: QM/48/83J/21
  - Voltage: 24 V a.c.
    - Power: 12/8 VA
    - Model: QM/48/84J/21
  - Voltage: 110/120 V 50/60 Hz
    - Power: 12/8 VA
    - Model: QM/48/88J/21
  - Voltage: 220/240 V 50/60 Hz
    - Power: 12/8 VA
    - Model: QM/48/89J/21

---

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### 3/2 Air pilot actuated valves

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port size</th>
<th>Function</th>
<th>Actuation</th>
<th>Operating pressure (bar)</th>
<th>Pilot pressure</th>
<th>Weight (Kg)</th>
<th>Drawing No.</th>
<th>Model *1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Pilot - Spring</td>
<td>-0.93 ... 10</td>
<td>2 ... 10 bar</td>
<td>0.21</td>
<td>15</td>
<td>03041302</td>
<td></td>
</tr>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Pilot - Spring</td>
<td>-0.93 ... 10</td>
<td>4 ... 10 bar</td>
<td>0.19</td>
<td>16</td>
<td>03040102</td>
<td></td>
</tr>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Pressure or Vacuum - Spring</td>
<td>-0.93 ... 10</td>
<td>0.3 ... 2 or 0.4 Vac (min)</td>
<td>0.33</td>
<td>17</td>
<td>03037002</td>
<td></td>
</tr>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Pilot - Pilot</td>
<td>-0.93 ... 10</td>
<td>2 ... 10 bar</td>
<td>0.22</td>
<td>18</td>
<td>03040702</td>
<td></td>
</tr>
<tr>
<td>G1/8</td>
<td>3/2 NC</td>
<td>Pressure Priority - Pilot</td>
<td>-0.93 ... 10</td>
<td>2 ... 10 bar</td>
<td>0.25</td>
<td>19</td>
<td>03041202</td>
<td></td>
</tr>
<tr>
<td>G1/4</td>
<td>3/2 NC</td>
<td>Pilot - Spring</td>
<td>-0.93 ... 10</td>
<td>2 ... 10 bar</td>
<td>0.42</td>
<td>20</td>
<td>03060102</td>
<td></td>
</tr>
<tr>
<td>G1/4</td>
<td>3/2 NC</td>
<td>Pilot - Pilot</td>
<td>-0.93 ... 10</td>
<td>2 ... 10 bar</td>
<td>0.42</td>
<td>21</td>
<td>030601M2</td>
<td></td>
</tr>
<tr>
<td>G1/4</td>
<td>3/2 NC</td>
<td>Pressure or Vacuum - Spring</td>
<td>-0.93 ... 10</td>
<td>0.3 ... 2 or 0.4 Vac (min)</td>
<td>0.55</td>
<td>26</td>
<td>03039002</td>
<td></td>
</tr>
<tr>
<td>G1/4</td>
<td>3/2 NC</td>
<td>Pressure Priority - Pilot</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.33</td>
<td>27</td>
<td>03045202</td>
<td></td>
</tr>
<tr>
<td>G1/4</td>
<td>3/2 NC</td>
<td>Pilot - Pilot</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.50</td>
<td>29</td>
<td>X3064102</td>
<td></td>
</tr>
<tr>
<td>G1/4</td>
<td>3/2 NC</td>
<td>Pilot Priority - Pilot</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.57</td>
<td>30</td>
<td>X3065202</td>
<td></td>
</tr>
</tbody>
</table>

*1) Standard model numbers in **Bold**

### 5/2 Air pilot actuated valves

<table>
<thead>
<tr>
<th>Symbol</th>
<th>Port size</th>
<th>Function</th>
<th>Actuation</th>
<th>Operating pressure (bar)</th>
<th>Pilot pressure</th>
<th>Weight (Kg)</th>
<th>Drawing No.</th>
<th>Model *1)</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Pilot - Spring</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.30</td>
<td>24</td>
<td>X3044102</td>
<td></td>
</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Pilot - Pilot</td>
<td>-0.93 ... 10</td>
<td>2 ... 10 bar</td>
<td>0.35</td>
<td>25</td>
<td>X3044702</td>
<td></td>
</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Pressure or Vacuum - Spring</td>
<td>-0.93 ... 10</td>
<td>0.3 ... 2 or 0.4 Vac (min)</td>
<td>0.55</td>
<td>26</td>
<td>X3039002</td>
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</tr>
<tr>
<td>G1/8</td>
<td>5/2</td>
<td>Pressure Priority - Pilot</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.33</td>
<td>27</td>
<td>X3045202</td>
<td></td>
</tr>
<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Pilot - Spring</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.50</td>
<td>29</td>
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<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Pilot - Pilot</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.57</td>
<td>29</td>
<td>X3064702</td>
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<tr>
<td>G1/4</td>
<td>5/2</td>
<td>Pilot Priority - Pilot</td>
<td>-0.93 ... 10</td>
<td>3 ... 10</td>
<td>0.57</td>
<td>30</td>
<td>X3065202</td>
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</tr>
</tbody>
</table>

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### Seal Kit

#### 3/2 air pilot actuated valves

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Seal Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>03844702</td>
</tr>
<tr>
<td>G1/8</td>
<td>03837002</td>
</tr>
<tr>
<td>G1/4</td>
<td>03861202</td>
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#### 5/2 air pilot actuated valves

<table>
<thead>
<tr>
<th>Port Size</th>
<th>Seal Kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>G1/8</td>
<td>03844702</td>
</tr>
<tr>
<td>G1/8</td>
<td>03837002</td>
</tr>
<tr>
<td>G1/4</td>
<td>03861202</td>
</tr>
</tbody>
</table>
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G1/4 142835 Models
3/2 Single Solenoid Valve

G1/8 X41225 Models
5/2 Single Solenoid Valves

G1/8 X41855 Models
5/2 Single Solenoid Valve

Spool manual override only available on models with “M” or “G”
**Super X**

Inline 3/2 and 5/2 Spool valves, solenoid and pilot actuated

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**G1/8 X41252 Models**

5/2 Double Solenoid Valves

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**G1/8 X41858 Model**

5/2 Double Solenoid Valve

---

**G1/4 X42155 Models**

5/2 Single Solenoid Valves

---

Spool manual override only available on models with “M” or “G”
Super X
Inline 3/2 and 5/2 Spool valves, solenoid and pilot actuated

G1/4 X4225 Models
5/2 Single Solenoid Valves

G1/4 X4255 & X49251 Models
5/2 Single Solenoid Valve

G1/4 X42252 Models
5/2 Double Solenoid Valves

Dimensions in mm
Projection/First angle

1 Spool manual override only available on models with “M” or “G”

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Super X
Inline 3/2 and 5/2 Spool valves, solenoid and pilot actuated

G1/8 X3044702 Model
5/2 Double Pilot Valve

G1/8 X3039002 Model
5/2 Single Diaphragm Pilot Valve

G1/8 X3045202 Model
5/2 Pilot Priority Valve

G1/4 X3064102 Model
5/2 Single Pilot Valve

Dimensions in mm
Projection/First angle
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Super X
Inline 3/2 and 5/2 Spool valves, solenoid and pilot actuated

G1/4 X3064702 Model
5/2 Double Pilot Valve

G1/4 X3065202 Model
5/2 Pilot Priority Valve

Dimensions in mm
Projection/First angle

Warning

These products are intended for use in industrial compressed air systems only. Do not use these products where pressures and temperatures can exceed those listed under "Technical features/data".

Before using these products with fluids other than those specified, for non-industrial applications, life-support systems or other applications not within published specifications, consult IMI Precision Engineering, Norgren GmbH.

Through misuse, age, or malfunction, components used in fluid power systems can fail in various modes.

The system designer is warned to consider the failure modes of all component parts used in fluid power systems and to provide adequate safeguards to prevent personal injury or damage to equipment in the event of such failure.

System designers must provide a warning to end users in the system instructional manual if protection against a failure mode cannot be adequately provided.

System designers and end users are cautioned to review specific warnings found in instruction sheets packed and shipped with these products.

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