**FEATURES**

- The solenoid operated spool valves have threaded port connections and NAMUR interface.
- The same spool valve can be adapted for 3/2 NC or 5/2 functions for controlling double-acting and single-acting actuators.
- All the exhaust ports of this spool valve are connectable, providing better environmental protection, particularly recommended for sensitive areas, such as clean rooms, and applications in the pharmaceutical and food processing sectors.
- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally-protected construction).
- The monostable spool valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4/AK 7.
- ASCO/JOUCOMATIC solenoid valves satisfy all relevant EC Directives.

**GENERAL**

- **Differential pressure**: 2 - 10 bar [1 bar = 100 kPa]
- **Flow (Qᵥ at 6 bar)**:
  - 1/4: 700 l/min (ANR)
  - 3/8: 3000 l/min (ANR)
  - 1/2: 3000 l/min (ANR)

**MATERIALS IN CONTACT WITH FLUID**

- Fluids and temperature range:
  - Air, inert gas, filtered: -25°C to +60°C
  - Seal materials:
    - NBR (nitrile) + PUR (polyurethane)

**ELECTRICAL CHARACTERISTICS**

- **Coil insulation class**: F
- **Connector**:
  - Spade plug (cable Ø 6-8 mm or Ø 6-10 mm)
- **Connector specification**:
  - DIN 43650, 11 mm, industry standard B (type 01)
  - or ISO 4400 / EN 175301-803, form A (type 02)
- **Electrical safety**: IEC 335
- **Electrical enclosure protection**: Moulded IP65 (EN 60529)
- **Standard voltages**:
  - DC (=): 24V - 48V

**SPECIFICATIONS**

<table>
<thead>
<tr>
<th>.pipe size (G) (m³/h)</th>
<th>orifice size (G) (mm)</th>
<th>flow coefficient (Kᵥ)</th>
<th>operating pressure differential (bar)</th>
<th>max. (PS)</th>
<th>power coil (W)</th>
<th>catalogue number (MS)</th>
<th>options</th>
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<tbody>
<tr>
<td>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable)</td>
<td>1/4</td>
<td>6</td>
<td>0.6</td>
<td>10</td>
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<td>10</td>
<td>10</td>
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<tr>
<td>3/8</td>
<td>12</td>
<td>2.49</td>
<td>41.5</td>
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<td>10</td>
<td>10</td>
<td>5</td>
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<tr>
<td>3/2 NC - 5/2 - Solenoid air pilot operated and return (bistable)</td>
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<td>0.6</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>10</td>
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<td>41.5</td>
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<td>1/2</td>
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<td>41.5</td>
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<td>10</td>
<td>5</td>
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<tr>
<td>5/3 - W1 - pressure held, solenoid air pilot operated and return</td>
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<td>10</td>
<td>10</td>
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<td>3/8</td>
<td>12</td>
<td>2.49</td>
<td>41.5</td>
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<td>41.5</td>
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</tr>
<tr>
<td>5/3 - W3 - pressure release, solenoid air pilot operated and return</td>
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<td>0.6</td>
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<td>2</td>
<td>10</td>
<td>10</td>
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<td>3/8</td>
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<td>2.49</td>
<td>41.5</td>
<td>2</td>
<td>10</td>
<td>10</td>
<td>5</td>
</tr>
<tr>
<td>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable), certified IEC 61508 Functional Safety data</td>
<td>1/4</td>
<td>6</td>
<td>0.6</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>3/8</td>
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<td>2.49</td>
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<tr>
<td>1/2</td>
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<td>2.49</td>
<td>41.5</td>
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<td>10</td>
<td>5</td>
</tr>
</tbody>
</table>

**All leaflets are available on**: www.ascojoucomatic.com
AIR OPERATED AND OPTIONS

- Versions: - pilot air operated, spring return, catalogue numbers: G551A101 (1/4); G552A101 (3/8); G553A101 (1/2)
- Pilot air operated and return, catalogue numbers: G551A102 (1/4); G552A102 (3/8); G553A102 (1/2)
- Suffix “MF” (air operated only, low temperature version, -40°C)
- Suffix “GD” (air operated only, ATEX 2GD c)
- Compliance with “UL” standard is available on request
- Magnetic latch execution for 551 series, TPL 20649
- Valves equipped with exhaust reducers G 1/8 (3/2 NC-5/2, series 551), suffix M
- Set of stainless steel mounting screws (series 551), catalogue number 978 02 212
- Set of two G 1/8 exhaust reducers (series 551), catalogue number 881 00 344
- Other pipe threads are available on request
- Plug with visual indication and peak voltage suppression or with cable length of 2m (see Solenoids, Coils & Accessories section)

INSTALLATION

- The solenoid valves can be mounted in any position without affecting operation
- 3/2 NC-5/2 spool valve supplied with two interface plates with NAMUR mating surfaces. Depending on function (3/2 NC or 5/2), position one of the two plates on the spool valve body before installing on actuator
- Dowel pin (if necessary), bolts and gaskets are standard supplied
- It is necessary to connect pipes or fittings to the exhaust ports to protect the internal parts of the spool valve and its pneumatic operator if used outside or in harsh environments (dusts, liquids etc.)
- IEC 61508 Functional Safety (suffix SL), allowable temperature range: -40°C to +60°C. For probability of failure, consult ASCO/JOUCOMATIC
- Threaded pipe connection identifier is G = G (ISO 228/1)
- Valves with suffix “SL” are supplied with specific exhaust protectors
- Installation/maintenance instructions are included with each valve

ACCESSORIES

<table>
<thead>
<tr>
<th>series</th>
<th>pipe size</th>
<th>exhaust protector (stainless steel)</th>
<th>basic number</th>
<th>suffix pipe thread</th>
<th>voltage</th>
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<tbody>
<tr>
<td>551</td>
<td>G 1/8</td>
<td>34600018</td>
<td>G551A101</td>
<td>1/4</td>
<td>230V/50 Hz</td>
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<td>551(1/4)</td>
<td>G 1/4</td>
<td>3460019</td>
<td>G551A105</td>
<td>3/8</td>
<td>24V/DC</td>
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<td>552</td>
<td>G 3/8</td>
<td>34600478</td>
<td>G552A101</td>
<td>1/2</td>
<td>115V/50 Hz</td>
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<tr>
<td>553</td>
<td>G 1/2</td>
<td>34600479</td>
<td>G553A101</td>
<td>3/8</td>
<td></td>
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<tr>
<td>551-552-553</td>
<td>M5</td>
<td>34600484</td>
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</tbody>
</table>

ORDERING EXAMPLES:

- SC G 551 A 001 MS 230V / 50 Hz
- SC G 551 A 001 SL 24V / DC
- SC G 552 A 002 115V / 50 Hz
- G551 A 101 SL

DIMENSIONS (mm), WEIGHT (kg)

- TYPE 01
  - Prefix “SC” Solenoid
  - Epoxy moulded
  - IEC 335 / DIN 43650
  - IP65
  - 551A001/A001MS/A001SL/A002/A002MS

- TYPE 02
  - Prefix “SC” Solenoid
  - Epoxy moulded
  - IEC 335 / ISO 4400
  - IP65
  - 552A001/A001MS/A002/A002MS/A0025/52MS/A002/A002MS

- TYPE 03
  - No Prefix (suffix “GD”)
  - Air operated version
  - G551A101/A102

ORDERING EXAMPLES:

- SC G 551 A 001 MS 230V / 50 Hz
- SC G 551 A 001 SL 24V / DC
- SC G 552 A 002 115V / 50 Hz
- G551 A 101 SL

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FEATURES

- The solenoid operated spool valves have threaded port connections and NAMUR interface.
- The same spool valve can be adapted for 3/2 NC or 5/2 function for controlling double-acting and single-acting actuators.
- All the exhaust ports of this spool valve are connectable, providing better environmental protection, particularly recommended for sensitive areas, such as clean rooms, and applications in the pharmaceutical and food processing sectors.
- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally-protected construction).
- Solenoid pilot valve with spade-plug connector type DIN 43650, industry standard, form B with 9,4 mm spacing, or to ISO 15217/DIN 43650 form C with 8 mm spacing. Versions with M12 connector and cable ends.
- Solenoid pilot valve, CNOMO size 15 interface, with or without integral LED and electrical protection. LED indicator visible from 3 sides.
- The monostable spool valves have TÜV certified IEC 61508 Functional Safety data and can be used up to SIL 4/AK 7.
- ASCO/JOUCOMATIC solenoid valves satisfy all relevant EC Directives.

GENERAL

Differential pressure
2 - 10 bar
Flow (Qv at 6 bar)

<table>
<thead>
<tr>
<th>Size</th>
<th>1/4</th>
<th>3/8</th>
<th>1/2</th>
</tr>
</thead>
<tbody>
<tr>
<td>liters/min (ANR)</td>
<td>700</td>
<td>3000</td>
<td>3000</td>
</tr>
</tbody>
</table>

Pilot mounting interface surface
ISO 15218 (CNOMO E06.36.120N, size 15)

fluids (+) temperature range (TS) seal materials (+)

- air, inert gas, filtered
- 25°C to + 40°C
- NBR (nitrile) + PUR (polyurethane)

MATERIALS IN CONTACT WITH FLUID

Ensure that the compatibility of the fluids in contact with the materials is verified.

Body
Aluminium, black anodized

End cover (spring)
Glass-filled polyamide

Interface plates
Glass-filled polyamide

Spool valve internal parts
Zamak, st. steel, POM, aluminium

Pilot body
PAA

Pilot internal parts
POM, PET, stainless steel and brass

Pneumatic interface seal
TPE

ELECTRICAL CHARACTERISTICS

Coil insulation class
F

Connector (types 05/06)
Spade plug (cable Ø 6 - 7 mm)

Connector specification
Type 05: DIN 43650, 9,4 mm, industry standard B
Type 06: ISO 15217 / DIN 43650, 8 mm, form C
Type 07: M12 (CNOMO E03.62.520.N)

Connection
Type 07: M12 (CNOMO E03.62.520.N)
Type 08: cable ends (length 0.3 m), EN 60730

Electrical safety
IEC 335

Electrical enclosure protection
Moulded IP65 [05/06] or IP67 [07/08] (EN 61729)

Standard voltages
DC (=) : 24V
(Other voltages and 60 Hz on request)
AC (~) : 24V-115V-230V / 50 Hz (prefixes CFSC/CFSD)

SPECIFICATIONS
Solenoid Valves Series 551-552-553

Specifications

<table>
<thead>
<tr>
<th>Pipe size</th>
<th>Orifice size</th>
<th>Flow coefficient Kv</th>
<th>Operating pressure differential (bar)</th>
<th>Power coil</th>
<th>Connector DIN 43650, 9.4 mm</th>
<th>Connector DIN 43650, 8 mm</th>
<th>M12</th>
<th>Catalogue number</th>
<th>Options</th>
</tr>
</thead>
<tbody>
<tr>
<td>(G) (mm)</td>
<td>(m³/h)/(l/min)</td>
<td></td>
<td>(PS) max.</td>
<td>(W)</td>
<td>(type 05)</td>
<td>(type 06)</td>
<td>(type 07)</td>
<td>(type 08)</td>
<td></td>
</tr>
<tr>
<td>1/4</td>
<td>0.6</td>
<td>10</td>
<td>2</td>
<td>10</td>
<td>1.1...1.9/1.2/1.35</td>
<td>CFSCG551C502</td>
<td>CFSDG551C502</td>
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<td>-</td>
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<td>3/8</td>
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<td>2.49</td>
<td>41.5</td>
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<td>1.1...1.9/1.2/1.35</td>
<td>CFSCG552A502</td>
<td>CFSDG552A502</td>
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<td>13</td>
<td>2.49</td>
<td>41.5</td>
<td>2</td>
<td>10</td>
<td>1.3/1.5/1.7/1.9/2.1/3.5</td>
<td>CFSCG553A502</td>
<td>CFSDG553A502</td>
<td>-</td>
</tr>
</tbody>
</table>

3/2 NC - 5/2 - Solenoid air pilot operated and return (bistable)

1/4 | 0.6 | 10 | 2 | 10 | 1.1...1.9/1.2/1.35 | CFSCG551C501SL | CFSDG551C501SL | - | - | MO | - |

3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable), certified IEC 61508 Functional Safety data

1/4 | 0.6 | 10 | 2 | 10 | 1.1...1.9/1.2/1.35 | CFSCG551C501SL | CFSDG551C501SL | - | - | MO | - |

Options

- LED and protection, prefixes CFSC / CFSD, use TPL number: TPL 20674 (e.g.: CFSDKG551C5051PL20674)
- Straight M12 connector: cable entry Ø4 to 6 mm (catalogue number 88100304);
- with 2 m cable length (catalogue number 88100726);
- with 5 m cable length (catalogue number 88130212)
- Valves equipped with exhaust reducers G 1/8 (3/2 NC-5/2, series 551), suffix A1, M
- It is necessary to connect pipes or fittings to the exhaust ports to protect the internal parts of the spool valve and its pneumatic operator if used outside or in harsh environments (dusts, liquids etc.)
- IEC 61508 Functional Safety (suffix SL), allowable temperature range: -40°C to +60°C. For probability of failure, consult ASCO/JOUCOMATIC
- Threaded pipe connection identifier is G = G (ISO 228/1)
- Other pipe threads are available on request
- Installation/maintenance instructions are included with each valve
- Valve are with suffix "SL" are supplied with specific exhaust protectors
- Installation/maintenance instructions are included with each valve

Accessories

<table>
<thead>
<tr>
<th>Series</th>
<th>Pipe size</th>
<th>Exhaust protector (stainless steel)</th>
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<tbody>
<tr>
<td>551</td>
<td>G 1/8</td>
<td>34600418 (1)</td>
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<tr>
<td>552</td>
<td>G 3/8</td>
<td>34600478</td>
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<tr>
<td>553</td>
<td>G 1/2</td>
<td>34600479</td>
</tr>
<tr>
<td>551-552-553</td>
<td>M5</td>
<td>34600484 (1)</td>
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</table>

(1) Supplied with suffix "SL".

Dimensions (mm), Weight (kg)

<table>
<thead>
<tr>
<th>Type 05-06</th>
<th>Prefixes &quot;CFSC&quot; / &quot;CFSD&quot; Polyarilamide IEC 335 / IP65</th>
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</thead>
<tbody>
<tr>
<td>551</td>
<td>Type 05: DIN 43650, 9.4 mm Type 06: DIN 43650, 8 mm</td>
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<table>
<thead>
<tr>
<th>Type 07</th>
<th>Prefix &quot;CFVT&quot; Polyarilamide IEC 335 / IP67 M12</th>
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Ordering Examples:

<table>
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<th>Prefix</th>
<th>Pipe thread</th>
<th>Voltage</th>
<th>Option</th>
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<td>G 551</td>
<td>C 501</td>
<td>230V/50 Hz</td>
<td>MO/MO</td>
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<tr>
<td>CFSD</td>
<td>G 551</td>
<td>SL</td>
<td>115V/50 Hz</td>
<td>MO/MO</td>
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<tr>
<td>CFVT</td>
<td>G 552</td>
<td>A 502</td>
<td>24V/DC</td>
<td>MO/MO</td>
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<td>CFL</td>
<td>G 551</td>
<td>C 502</td>
<td>230V/50 Hz</td>
<td>MO/MO</td>
</tr>
</tbody>
</table>

Orderingexamples: (1) Prefixes CFSC/CFSD: including connector(s).

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