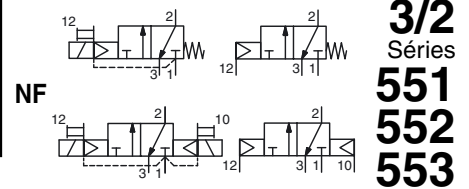




# SPOOL VALVES

pilot operated or air operated, spool type  
single/dual solenoid or air (mono/bistable function)  
aluminium body, 1/4 to 1/2



**3/2**  
Séries  
**551**  
**552**  
**553**

## FEATURES

- All the exhaust ports of the 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-EXIDA certified IEC 61508 Functional Safety data and can be used up to SIL 4 (551/TÜV)-SIL 3 (552-553/EXIDA)
- The solenoid valves satisfy all relevant EC directives

## GENERAL

<b>Differential pressure</b>	2 - 10 bar [1 bar = 100 kPa]						
<b>Flow (Qv at 6 bar)</b>	l/min (ANR)						
	<table border="1"> <tr> <td>1/4</td> <td>3/8</td> <td>1/2</td> </tr> <tr> <td>860</td> <td>3000</td> <td>3800</td> </tr> </table>	1/4	3/8	1/2	860	3000	3800
1/4	3/8	1/2					
860	3000	3800					

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, filtered	- 25°C to + 60°C	NBR (nitrile) + PUR (polyurethane)

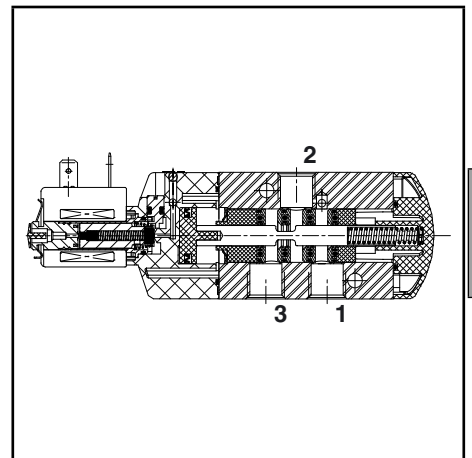
## MATERIALS IN CONTACT WITH FLUID

(\*) Ensure that the compatibility of the fluids in contact with the materials is verified

<b>Body, end cover</b>	Aluminium, black anodized
<b>End cover (spring return)</b>	Glass fibre filled PA
<b>Spool valve internal parts</b>	Zamak, stainless steel, POM, aluminium
<b>Seals</b>	NBR + PUR
<b>Core and core tube</b>	Stainless steel
<b>Shading coil</b>	Copper

## ELECTRICAL CHARACTERISTICS

<b>Coil insulation class</b>	F
<b>Connector</b>	Spade plug (cable Ø 6-8 mm or Ø 6-10 mm)
<b>Connector specification</b>	DIN 43650, 11 mm, industry standard B (type 01) or ISO 4400 / EN 175301-803, form A (type 02)
<b>Electrical safety</b>	IEC 335
<b>Electrical enclosure protection</b>	Moulded IP65 (EN 60529)
<b>Standard voltages</b>	DC (=) : 24V - 48V
(Other voltages and 60 Hz on request)	AC (~) : 24V - 48V - 115V - 230V / 50 Hz



prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type <sup>(1)</sup>
	inrush ~ (VA)	holding ~ (VA) (W)		hot/cold = (W)		~ 230 V/50 Hz	= 24 V DC	
		2,5	5					
SC	6	3,5	2,5	2,5/3	-25 to + 60	43004886	43004869	01
SC	15	7	5	5/6,9	-25 to + 60	43004649	43004647	02

<sup>(1)</sup> Refer to the dimensional drawings on the following page.

## SPECIFICATIONS

pipe size	orifice size (mm)	flow coefficient Kv (m³/h) (l/min)		operating pressure differential (bar)				power coil (W)		catalogue number	options		
				min.	max. (PS)		air (*)				maintained	man. operator	
					~	=							
<b>NC - Normally closed, solenoid air pilot operated - spring return (monostable)</b>													
1/4	6	0,75	12,5	2	10	10	2,5	3	SCG551A005	MS	-	-	
3/8	12	2,49	41,5	2	10	10	5	6,9	SCG552A005	MS	-	-	
1/2	13	3,15	52,5	2	10	10	5	6,9	SCG553A005	MS	-	-	
<b>NC - Normally closed, solenoid air pilot operated and return (bistable)</b>													
1/4	6	0,75	12,5	2	10	10	2,5	3	SCG551A006	MS	-	-	
3/8	12	2,49	41,5	2	10	10	5	6,9	SCG552A006	MS	-	-	
1/2	13	3,15	52,5	2	10	10	5	6,9	SCG553A006	MS	-	-	
<b>NC - Solenoid air pilot operated - spring return (monostable), certified IEC 61508 Functional Safety data</b>													
1/4	6	0,75	12,5	2	10	10	2,5	3	SCG551A005SL	-	-	-	
3/8	12	2,49	41,5	2	10	10	5	6,9	SCG552A005SL	-	-	-	
1/2	13	3,15	52,5	2	10	10	5	6,9	SCG553A005SL	-	-	-	

### AIR OPERATED AND OPTIONS

- Versions (Type 03): - pilot air operated, spring return, catalogue numbers: **G551A105 / G551A105SL** (1/4); **G552A105 / G552A105SL** (3/8); **G553A105 / G553A105SL** (1/2)  
- pilot air operated and return, catalogue numbers: **G551A106** (1/4); **G552A106** (3/8); **G553A106** (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
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 94/9/EC (see "Explosionproof solenoids" section)
- Supply rail
- Other pipe connections are available on request
- Plug with visual indication and peak voltage suppression or with cable length of 2 m (see Solenoids, Coils & Accessories section)

### INSTALLATION

- The valves can be mounted in any position without affecting operation
- Do not connect the pressure supply to the exhaust port 3. The "environmentally-protected" construction is not adapted for a "distributing" function or use in NO function. Contact us for functions available in specific versions
- 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, contact us
- Valves with suffix "SL" are supplied with specific exhaust protectors
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Installation/maintenance instructions are included with each valve

### ACCESSORIES

series	pipe size	exhaust protector (stainless steel)
551	G 1/4	<b>34600419</b> <sup>(1)</sup>
552	G 3/8	<b>34600478</b> <sup>(1)</sup>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-552-553	M5	<b>34600484</b> <sup>(1)</sup>

<sup>(1)</sup> Supplied with suffix "SL".

### ORDERING EXAMPLES:

SC	G	551	A	005	MS	230V / 50 Hz
SC	G	551	A	005	SL	24V / DC
SC	G	552	A	006		115V / 50 Hz
		G	551	A	105	SL

prefix: SC  
 pipe thread: G  
 basic number: 551 A 105  
 voltage: 230V / 50 Hz, 24V / DC, 115V / 50 Hz  
 suffix: MS, SL

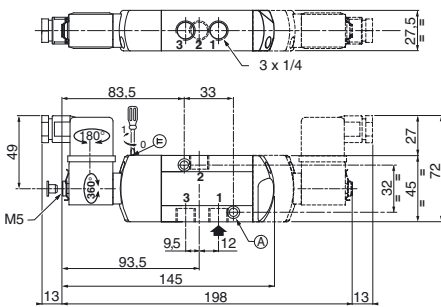
### DIMENSIONS (mm), WEIGHT (kg)



#### TYPE 01

Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65

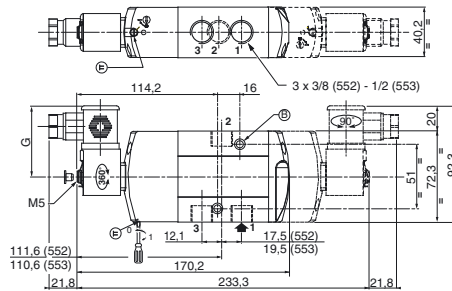
**551A005 / A005MS / A005SL / A006 / A006MS**



#### TYPE 02

Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

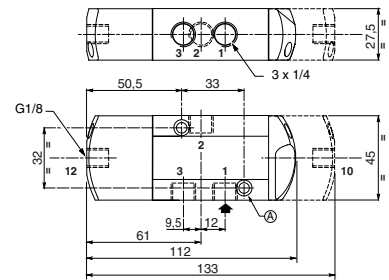
**552A005 / A005MS / A006 / A006MS**  
**553A005 / A005MS / A006 / A006MS**



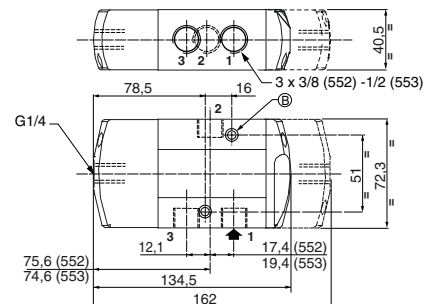
#### TYPE 03

No Prefix  
Air operated version

**551A105 / A105SL / A106**



**552A105 / A105SL / A106**  
**553A105 / A105SL / A106**



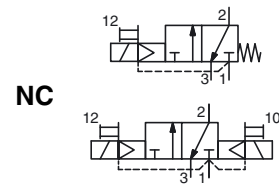
2 mounting holes:

- Ⓐ 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)
- Ⓑ 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)

type	prefix option	weight <sup>(2)</sup>	
		monostable	bistable
01 (551)	SC	0,35	0,43
02 (552)	SC	0,70	1,00
02 (553)	SC	0,69	0,99
03 (551)	-	0,28	0,36
03 (552)	-	0,81	1,07
03 (553)	-	0,80	1,06

<sup>(2)</sup>Incl. coil(s) and connector(s).

All leaflets are available on: [www.asconumatics.eu](http://www.asconumatics.eu)



### FEATURES

- All the exhaust ports of the 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 EN 175301-803, industry standard form C, with 9,4 mm spacing. Versions with M12 connection
- 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-EXIDA certified IEC 61508 Functional Safety data and can be used up to SIL 4 (551/TÜV)-SIL 3 (552-553/EXIDA)
- The solenoid valves satisfy all relevant EC directives

### GENERAL

Differential pressure  
Flow (Qv at 6 bar)

2 - 10 bar [1 bar = 100 kPa]  
l/min (ANR)

1/4	3/8	1/2
860	3000	3800

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, end cover	Aluminium, black anodized
End cover (spring)	Glass fibre filled PA
Spool valve internal parts	Zamak, stainless 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 (type 05)	Spade plug (cable Ø 4-6 mm)
Connector specification	Type 05: DIN 43650, 9,4 mm, form C
Connection	Type 07: M12 (CNOMO E03.62.520.N)
Electrical safety	IEC 335
Electrical enclosure protection	Moulded IP65 [05] or IP67 [07] (EN 60529)
Standard voltages	DC (=): 24V
(Other voltages and 60 Hz on request)	AC (~): 24V-115V-230V / 50 Hz (prefix CFSC)

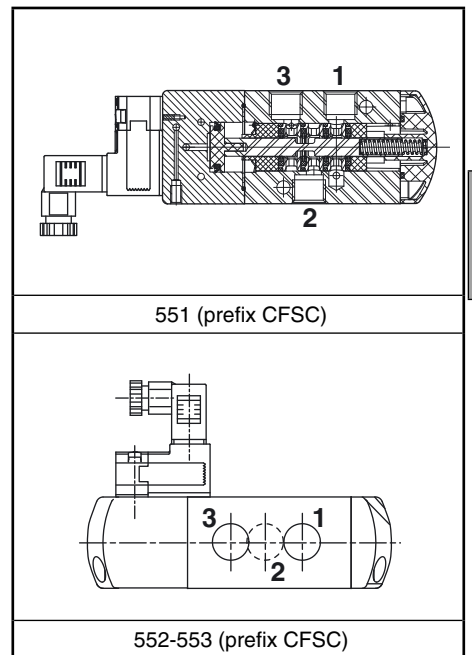
prefix option	power ratings			operator ambient temperature range (TS) (C°)	voltage		type (1)
	inrush ~ (VA)	holding ~ (VA)	hot/cold = (W)		~ (V)	= (V)	
CFSC	1,4	1,2	1,1	1/1,2	-25 to +60	24-115	24
	1,8 (2)	1,6 (2)	1,5 (2)	1,15/1,35(2)			
	2,1	1,6	1,5	-	-25 to +60	230	-
	2,5 (2)	2 (2)	1,9 (2)	-	-25 to +50	-	-
CFVT (3)	-	-	-	1,15/1,35	-25 to +60	-	24

(1) Refer to the dimensional drawings on the following page.  
(2) Values with LED indicator and protection, use TPL 20674.

(3) Supplied with LED indicator and protection.

### SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number		options		
		(m³/h)	(l/min)	min.	max. (PS)		~	=	connector EN 175301-803 (9,4 mm) (type 05)	M12 (type 07)	maintained man. operator	impulse man. operator	-
G	(mm)				~	=							
<b>NC - Normally closed, solenoid air pilot operated - spring return (monostable)</b>													
1/4	6	0,75	12,5	2	10	10	1,1...1,5	1,2	CFSCG551C505	-	MS	MO	-
							-	1,35	-	CFVTG551C505	MS	MO	-
3/8	12	2,49	41,5	2	10	10	1,1...1,5	1,2	CFSCG552A505	-	MS	MO	-
							-	1,35	-	CFVTG552A505	MS	MO	-
1/2	13	3,15	52,5	2	10	10	1,1...1,5	1,2	CFSCG553A505	-	MS	MO	-
							-	1,35	-	CFVTG553A505	MS	MO	-
<b>NC - Normally closed, solenoid air pilot operated and return (bistable)</b>													
1/4	6	0,75	12,5	2	10	10	1,1...1,5	1,2	CFSCG551C506	-	MS	MO	-
							-	1,35	-	CFVTG551C506	MS	MO	-
3/8	12	2,49	41,5	2	10	10	1,1...1,5	1,2	CFSCG552A506	-	MS	MO	-
							-	1,35	-	CFVTG552A506	MS	MO	-
1/2	13	3,15	52,5	2	10	10	1,1...1,5	1,2	CFSCG553A506	-	MS	MO	-
							-	1,35	-	CFVTG553A506	MS	MO	-



E

### SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number		options	
				min.	max. (PS)				connector EN 175301-803 (9,4 mm) (type 05)	M12 (type 07)	maintained man. operator	impulse man. operator
					air (*)							
G	(mm)	(m³/h)	(l/min)		~	=	~	=	~/=	=		

**NC - Solenoid air pilot operated - spring return (monostable), certified IEC 61508 Functional Safety data**

pipe size	orifice size	flow coefficient Kv	operating pressure differential (bar)	power coil (W)	connector	M12	maintained man. operator	impulse man. operator					
1/4	6	0,75	12,5	2	10	10	1,1..1,5	1,2	CFSCG551C505SL	-	-	MO	-
							-	1,35	-	CFVTG551C505SL	-	MO	-
3/8	12	2,49	41,5	2	10	10	1,1..1,5	1,2	CFSCG552A505SL	-	-	MO	-
							-	1,35	-	CFVTG552A505SL	-	MO	-
1/2	13	3,15	52,5	2	10	10	1,1..1,5	1,2	CFSCG553A505SL	-	-	MO	-
							-	1,35	-	CFVTG553A505SL	-	MO	-

### OPTIONS

- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 94/9/EC (see "Explosionproof solenoids" section)
- LED and protection, prefix CFSC, use TPL number: TPL 20674 (e.g.: CFSCXG551C505TPL20674)
- Straight M12 connector: with 5 m cable length (catalogue number **88130212**)
- Supply rail
- Versions with spade-plug connector type ISO 15217/DIN 43650 form C with 8 mm spacing or with cable ends: contact us
- Other pipe connections are available on request
- Plug with visual indication and peak voltage suppression or with cable length of 2 m (see Solenoids, Coils & Accessories section)

### INSTALLATION

- The valves can be mounted in any position without affecting operation
- Do not connect the pressure supply to the exhaust port 3. The "environmentally-protected" construction is not adapted for a "distributing" function or use in NO function. Contact us for functions available in specific versions
- 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, contact us
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Valves with suffix "SL" are supplied with specific exhaust protectors
- Installation/maintenance instructions are included with each valve

### ACCESSORIES

series	pipe size	exhaust protector (stainless steel)
551	G 1/4	<b>34600419</b> <sup>(1)</sup>
552	G 3/8	<b>34600478</b> <sup>(1)</sup>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-552-553	M5	<b>34600484</b> <sup>(1)</sup>

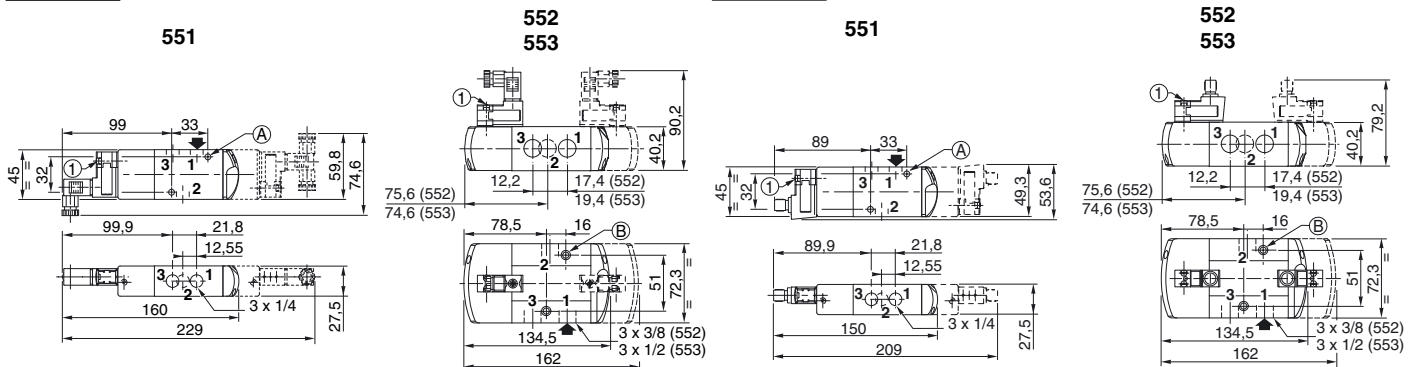
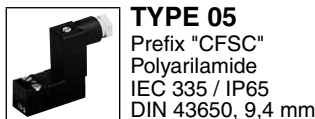
<sup>(1)</sup> Supplied with suffix "SL".

### ORDERING EXAMPLES:

CFSC	G	551	C	505	230V / 50 Hz	
CFSC	G	551	C	505	SL	115V / 50 Hz
CFVT	G	552	A	506	MS	24V / DC
CFSC	G	553	A	505	SLMO	230V / 50 Hz

prefix — pipe thread — basic number — voltage — suffix

### DIMENSIONS (mm), WEIGHT (kg)



type	prefix option	weight <sup>(2)</sup>					
		monostable			bistable		
		551	552	553	551	552	553
05	CFSC	0,33	1,1	1,03	0,46	2,18	2,08
07	CFVT	0,35	1,12	1,04	0,5	2,22	2,12

① Manual operator location

2 mounting holes:

Ⓐ 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)

Ⓑ 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)

<sup>(2)</sup> Prefix CFSC: including connector(s).