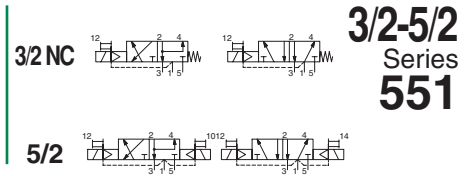




# SOLENOID VALVES

pilot operated, spool type  
single/dual solenoid (mono/bistable function)  
brass body, "NAMUR" style, 1/4



**3/2-5/2**  
Series  
**551**

## 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 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)
- Can be externally piloted (external air pilot supply) to convert valve to zero minimum operation by flipping a gasket
- The monostable spool valves in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) have TÜV certified with integrity levels: SIL 2 for HFT = 0 / SIL 3 for HFT = 1
- The solenoid valves satisfy all relevant EU directives



## GENERAL

**Differential pressure** 2 - 10 bar [1 bar = 100 kPa]  
**Flow (Qv at 6 bar)** 700 l/min (ANR)  
**Pilot mounting interface surface** ISO 15218 (CNOMO E06.36.120N, size 15)

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, filtered	-40°C to +60°C	VMQ (silicone) + PUR (polyurethane)

## MATERIALS IN CONTACT WITH FLUID

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

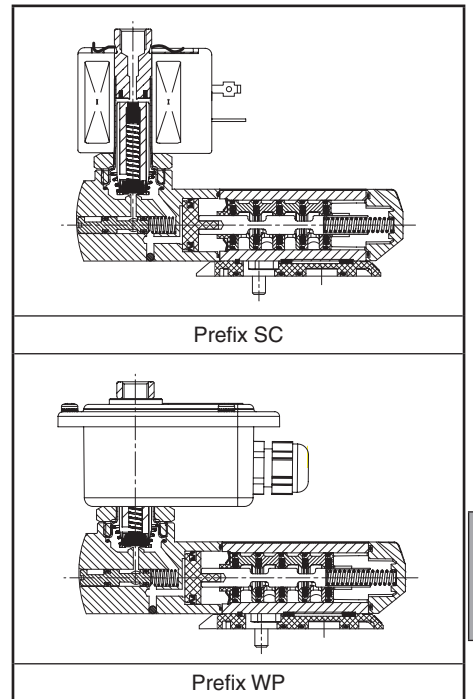
**Body, end cover, seats** Brass  
**Spool valve internal parts** Brass, stainless steel, POM  
**Core tube** Stainless steel  
**Core and plugnut** Stainless steel  
**Core spring** Stainless steel  
**Top disc** PA  
**Pilot seals** FPM, NBR  
**Interface plates** Glass fibre filled PA  
**Shading coil** Copper

## OTHERS MATERIALS

**Solenoid enclosure (WP)** Zinc plated steel (epoxy coated)

## ELECTRICAL CHARACTERISTICS

**Coil insulation class** F  
**Connector (SC)** Spade plug (cable Ø 6-10 mm)  
**Connector specification (SC)** ISO 4400 / EN 175301-803, form A  
**Coil connection (WP)** Embedded screw terminal (cable ø 7 - 12 mm)  
**Cable entry (WP)** Cable gland, polyamide (PA), M20x1,5  
**Electrical safety** IEC 335  
**Electrical enclosure protection** Moulded IP65 (SC) or IP67 (WP) (EN 60529)  
**Standard voltages** DC (=): 24V - 48V  
AC (~): 24V - 48V - 115V - 230V / 50 Hz  
(Other voltages and 60 Hz on request)



prefix option	power ratings				operator ambient temperature range (TS) (°C)	replacement coil		type <sup>(1)</sup>
	inrush ~		holding ~			~	=	
	(VA)	(VA)	(W)	(W)		230 V/50 Hz	24 V DC	
SC	55	23	10,5	9 / 11,2	-40 to +75	400425-117	400425-142	01
WP	55	23	10,5	9 / 11,2	-40 to +75	400405-117	400405-142	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. <sup>(2)</sup>	max. (PS)					type 01 (SC)	type 02 (WP)	impulse / maintained	man. operator	
					air (*)	~								
<b>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable)</b>														
1/4	6	0,6	10	0 / 2	10	10	10,5	11,2	SCG551A403	WPG551A403	MO	-	-	
<b>3/2 NC - 5/2 - Solenoid air pilot operated and return (bistable)</b>														
1/4	6	0,6	10	0 / 2	10	10	10,5	11,2	SCG551A404	WPG551A404	MO	-	-	
<b>3/2 NC - 5/2 - Solenoid air pilot operated spring return (monostable), certified IEC 61508 Functional Safety data</b>														
1/4	6	0,6	10	0 / 2	10	10	10,5	11,2	SCG551A403SL	WPG551A403SL	-	-	-	

<sup>(2)</sup> Zero minimum is only achieved if external pressure is applied.

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**V872-1**

## OPTIONS

- Valves configured for external pilot air supply, use TPL 20547
- Explosionproof enclosures for use in zones 0/20-1/21-2/22, categories 1-2-3 to ATEX-Directive 2014/34/EU (see "Explosionproof Solenoids" section)
- Compliance with "UL", "CSA" and other local approvals available on request
- Coil insulation class H for max. ambient temperature +80°C, prefix HT ("SCHT" or "WPHT")
- 1/2" NPT (prefix "T") and M20 x 1.5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid enclosure
- Valves equipped with exhaust reducers, suffix M
- Set of stainless steel mounting screws, catalogue number **97802212**
- Set of two exhaust reducers, catalogue number **88100344**
- 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 solenoid valves can be mounted in any position without affecting operation
- 3/2 NC-5/2 spool valve supplied with one interface plate with NAMUR mating surface. Depending on function (3/2 NC or 5/2), position the plate on the spool valve body before installing on actuator
- Do not connect the pressure supply to the exhaust port 3. The "environmentally-protected" construction is not adapted for NO function. Contact us for function available in specific version
- 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). Check temperature range of valve body and solenoid for suitability. For probability of failure, contact us
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Prefix "WP" execution: solenoid enclosure has a cable gland with integral strain relief for cables with an O.D. from 7 to 12 mm and is provided with internal and external grounding terminals
- 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 1/8	<b>34600418</b> <sup>(1)</sup>

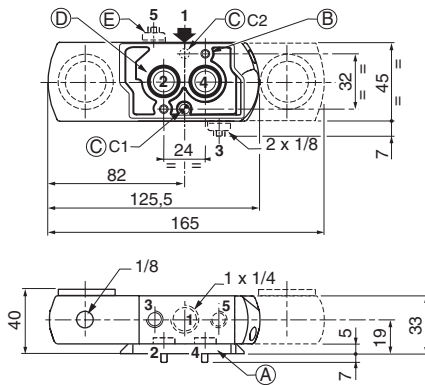
<sup>(1)</sup> Supplied with suffix "SL".

## ORDERING EXAMPLES:

	<b>SC</b>	<b>G</b>	<b>551</b>	<b>A</b>	<b>403</b>	<b>230V / 50 Hz</b>
	<b>SC</b>	<b>G</b>	<b>551</b>	<b>A</b>	<b>403</b>	<b>SL</b> 230V / 50 Hz
	<b>WP</b>	<b>G</b>	<b>551</b>	<b>A</b>	<b>404</b>	24V / DC
	<b>WP</b>	<b>G</b>	<b>551</b>	<b>A</b>	<b>403</b>	<b>MO</b> 115V / 50 Hz
	<b>WPHT</b>	<b>G</b>	<b>551</b>	<b>A</b>	<b>404</b>	<b>MO</b> 230V / 50 Hz

prefix — pipe thread — basic number — voltage — suffix

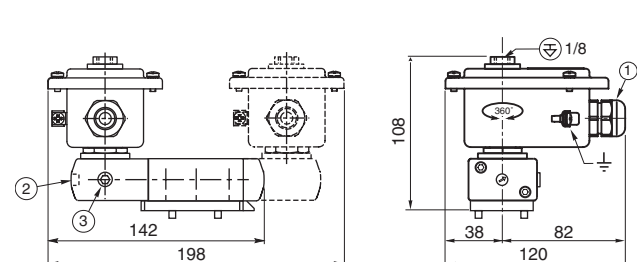
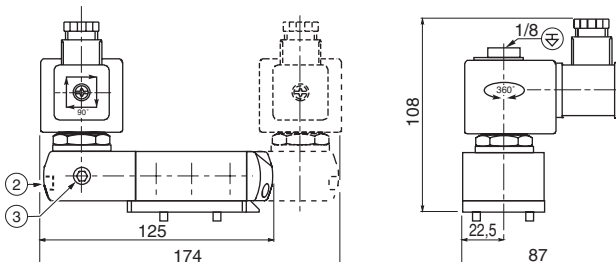
## DIMENSIONS (mm), WEIGHT (kg)



- (A) Interface plate
- (B) Mounting: 2 CHc M5x35 screws, engaged length 7 mm
- (C) One 5 mm dia. hole for dowel pin:
  - in position C1: 3/2 NC function plate
  - in position C2: 5/2 function plate
- (D) 2 O-ring seals (supplied)
- (E) Exhaust reducer or exhaust protector G 1/8

**TYPE 01**  
Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

**TYPE 02**  
Prefix "WP" Solenoid  
Metal; epoxy coated  
IEC 335  
IP67



type	prefix option	weight <sup>(1)</sup>	
		monostable	bistable
01	SC	1,45	1,96
02	WP	1,62	2,23

- (1) Cable gland for unarmoured cable with 7 to 12 mm dia. sheath
- (2) Manual operator location
- (3) External pilot air supply, 1/8 pipe size

<sup>(1)</sup> Including coil(s), connector (SC) and cable gland (WP).

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