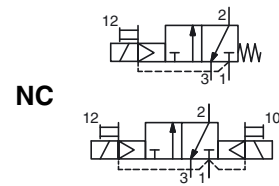




SOLENOID VALVES

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



3/2
Series
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)
- Can be externally piloted (external air pilot supply) to convert valve to zero minimum operation by flipping a gasket
- 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

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

Body	Aluminium, black anodized
End cover (spring return)	Glass fibre filled PA
Spool valve internal parts	Zamak, stainless steel, POM, aluminium
Core, core tube and plugnut	Stainless steel
Core spring	Stainless steel
Top disc	PA
Pilot seals	FPM, NBR
Shading coil	Copper

OTHERS MATERIALS

Solenoid enclosure Zinc plated steel (epoxy coated)

ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Coil connection	Embedded screw terminal (cable ø 7 - 12 mm)
Cable entry	Cable gland, polyamide (PA), M20x1,5
Electrical safety	IEC 335
Electrical enclosure protection	IP67 (EN 60529)
Standard voltages	DC (=): 24V - 48V
(Other voltages and 60 Hz on request)	AC (~): 24V - 48V - 115V - 230V / 50 Hz

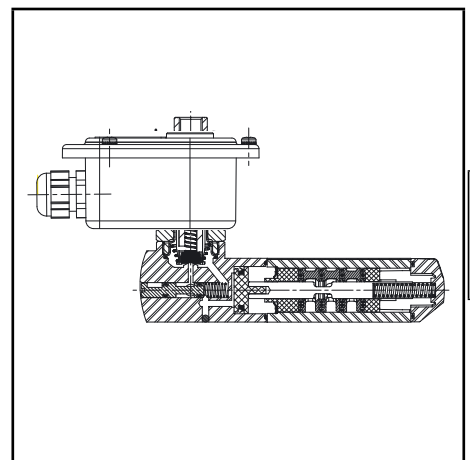
prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type ⁽¹⁾
	inrush ~ (VA)	holding ~ (VA) (W)		hot/cold = (W)		~ 230 V/50 Hz	= 24 V DC	
		~ (VA)	~ (W)					
WP	55	23	10,5	9/11,2	-40 to +75	400405-117	400405-142	01

⁽¹⁾ Refer to the dimensional drawings on the following page

SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)				power coil (W)		catalogue number	options		
				min. ⁽²⁾	max. (PS)		~				=	impulse/maintained	man. operator
(mm)	(m³/h)	(l/min)	~		=	~		=	~/=				
NC - Normally closed, solenoid air pilot operated - spring return (monostable)													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B405	MO	-	-	
3/8	12	2,49	41,5	0 / 2	10	10	10,5	11,2	WPG552A405	MO	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A405	MO	-	-	
NC - Normally closed, solenoid air pilot operated and return (bistable)													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B406	MO	-	-	
3/8	12	2,49	41,5	0 / 2	10	10	10,5	11,2	WPG552A406	MO	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A406	MO	-	-	
NC - Solenoid air pilot operated - spring return (monostable), certified IEC 61508 Functional Safety data													
1/4	6	0,75	12,5	0 / 2	10	10	10,5	11,2	WPG551B405SL	-	-	-	
3/8	12	2,49	41,5	0 / 2	10	10	10,5	11,2	WPG552A405SL	-	-	-	
1/2	13	3,15	52,5	0 / 2	10	10	10,5	11,2	WPG553A405SL	-	-	-	

⁽²⁾ Zero minimum is only achieved if external pressure is applied.



E

OPTIONS

- Valves configured for external pilot air supply with ASCO solenoid interface, TPL 20547
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 94/9/EC (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 "WPHT"
- 1/2" NPT (prefix "T") and M20 x 1.5 (prefix "ET") conduits (aluminium or 316 SS) available for steel solenoid enclosure
- Low temperature version (-40°C), use suffix "MF"
- Other pipe connections are available on request

INSTALLATION

- The solenoid 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)
- 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)
551-552-553	G 1/8	34600418 ⁽¹⁾
551	G 1/4	34600419 ⁽¹⁾
552	G 3/8	34600478 ⁽¹⁾
553	G 1/2	34600479 ⁽¹⁾

⁽¹⁾ Supplied with suffix "SL".

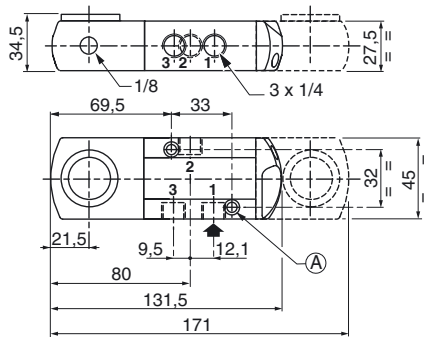
ORDERING EXAMPLES:

WP	G	551	B	405	230V / 50 Hz
WP	G	551	B	405	SL 230V / 50 Hz
WP	G	553	A	406	MO 24V / DC
WPHT	G	551	B	406	MO 230V / 50 Hz
WP	G	552	A	406	MO 115V / 50 Hz

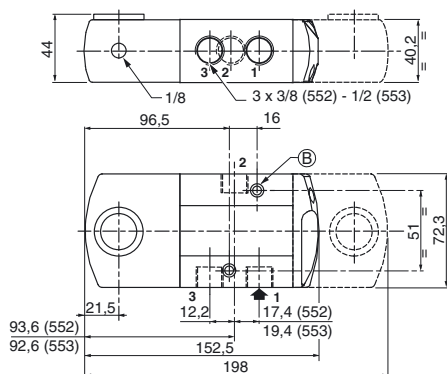
prefix ————
 pipe thread ————
 basic number ————
 voltage ————
 suffix ————

DIMENSIONS (mm), WEIGHT (kg)

Series 551



Series 552-553

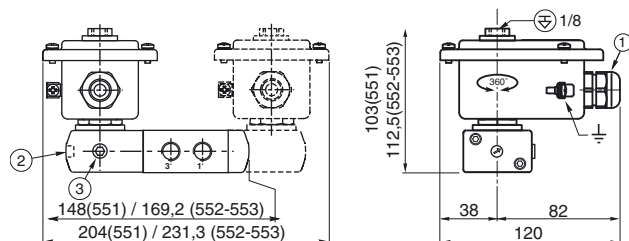


2 mounting holes:

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



TYPE 01
Prefix "WP" Solenoid
Metal; epoxy coated
IEC 335
IP67



type	prefix option	weight ⁽²⁾					
		monostable			bistable		
		551	552	553	551	552	553
04	WP	0,79	1,46	1,36	1,49	2,03	1,93

⁽²⁾ Including coil and cable gland.

- Ⓐ Cable gland for unarmoured cable with 7 to 12 mm dia. sheath
- Ⓑ Manual operator location
- Ⓒ External pilot air supply, 1/8 pipe size