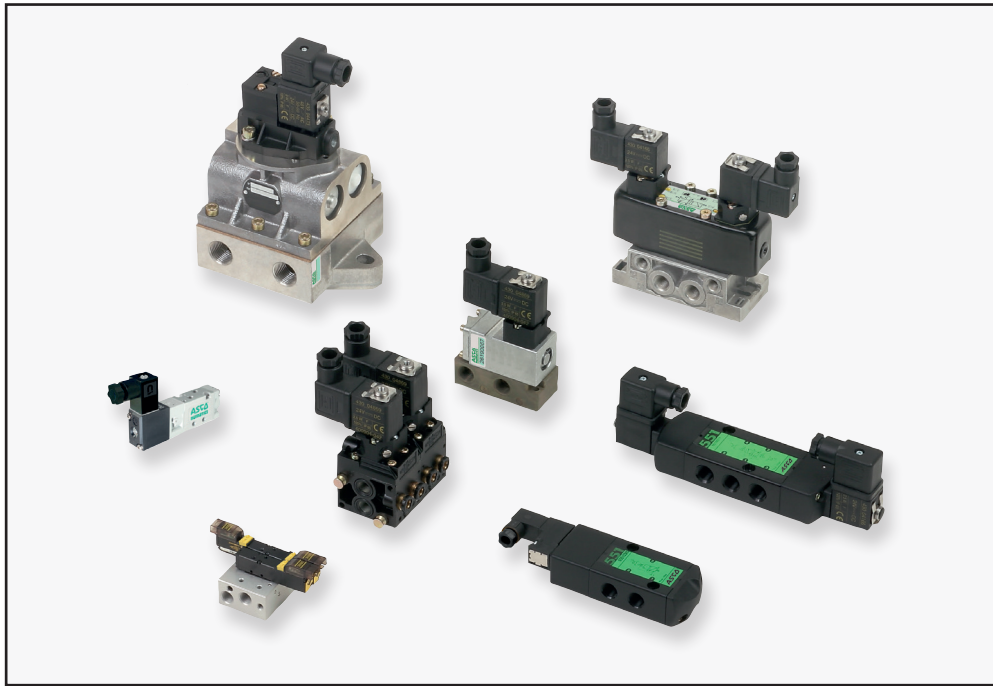


# SOLENOID AIR OPERATED POPPET VALVES AND SPOOL VALVES

## Product Index



ISO 5599-1 standards	ports/positions	function	pipe connections										valve technology	stainless steel screws	max. pressure (bar)	flow at 6 bar l/min (ANR)	solenoid pilot valve	Type	Illustration	Series	Page		
			┐	┐	┐	┐	┐	┐	┐	┐	┐	┐										┐	┐
	NC	NO	4	6	M3	M5	1/8"	1/4"	3/8"	1/2"	3/4"	1	1 1/4"	1 1/2"	┐								
<b>Poppet valves <sup>(1)</sup></b>																							
	3/2	●								┐					┐	rubber packed	10	700 1750	┐	DM		<a href="#">261</a> <a href="#">262</a>	<a href="#">13</a>
	3/2	●	●												┐	rubber packed	12	4500 35000	┐	DH		<a href="#">284</a> <a href="#">285</a> <a href="#">286</a>	<a href="#">15</a>
	3/2	●													┐	rubber packed	12	3000 31500	┐	DP		<a href="#">266</a> <a href="#">267</a> <a href="#">268</a>	<a href="#">17</a>
ISO	3/2	●	●													rubber packed	10	5675	┐	pilot (190 series) ISO 3		<a href="#">G34</a>	<a href="#">19</a>
	4/2									┐						rubber packed	10	210 840	┐			<a href="#">263</a> <a href="#">264</a>	<a href="#">21</a>
	4/2														┐	rubber packed	10	700 1750	┐	DM		<a href="#">261</a> <a href="#">262</a>	<a href="#">23</a>
	4/2														┐	rubber packed	12	3000 31500	┐	DP		<a href="#">266</a> <a href="#">267</a> <a href="#">268</a>	<a href="#">25</a>
<b>Spool valves <sup>(1)</sup></b>																							
	3/2	●	●													rubber packed		100	integrated pilot	Micro 10		<a href="#">518</a>	<a href="#">27</a>
	5/2													┐	rubber packed	8	100						
	5/3													┐	rubber packed		80						
	3/2	●													┐	rubber packed	8	400	integrated pilot	Mini-spool valve		<a href="#">520</a>	<a href="#">31</a>

<sup>(1)</sup> See "COILS AND ACCESSORIES" on [www.asco.com](http://www.asco.com)

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ISO 5599-1 standards	ports/positions	function	pipe connections											valve technology	stainless steel screws	max. pressure (bar)	flow at 6 bar l/min (ANR)	solenoid pilot valve	Type	Illustration	Series	Page	
			NC	NO	4	6	M3	M5	1/8	1/4	3/8	1/2	3/4										1
<b>Spool valves <sup>(1)</sup></b>																							
	5/2 5/3																8	175 600 1050		Mini-spool valve		<a href="#">519</a> <a href="#">520</a> <a href="#">521</a>	<a href="#">34</a>
																				Joinable subbases: 519-520-521		<a href="#">355</a>	<a href="#">36</a>
																				519		<a href="#">355</a>	<a href="#">37</a>
	5/2 5/3																10	1090 1860		spool & sleeve		<a href="#">L1</a> <a href="#">L2</a>	<a href="#">39</a> <a href="#">41</a>
	5/2																7	500		spool & sleeve		<a href="#">92280</a>	<a href="#">45</a>
	3/2 5/2 5/3	●															10	860		rubber packed		<a href="#">551</a> <a href="#">551</a>	<a href="#">1</a> <a href="#">47</a>
	3/2 5/2 5/3	●															10	860/3800 860 860/3800 860	●	rubber packed		<a href="#">551/553</a> <a href="#">551</a> <a href="#">551/553</a> <a href="#">551</a>	<a href="#">5</a> <a href="#">3</a> <a href="#">51</a> <a href="#">49</a>
	3/2 5/2	●															10	860/3800	M12 C115	pilot (302 series)		<a href="#">551</a> <a href="#">553</a> <a href="#">551</a> <a href="#">553</a>	<a href="#">7</a> <a href="#">53</a>
	3/2 5/2	●															10	860/3800	C115	pilot (630 series)		<a href="#">551</a> <a href="#">553</a>	<a href="#">55</a>
	3/2-5/2 5/3	●															10	700/3000		integrated pilot		<a href="#">551/553</a>	<a href="#">57</a>
	3/2-5/2																●	700		rubber packed		<a href="#">551</a>	<a href="#">61</a>
	3/2-5/2	●															10	700/3000	M12 C115	pilot (302 series)		<a href="#">551</a> <a href="#">553</a>	<a href="#">59</a>

<sup>(1)</sup> See "COILS AND ACCESSORIES" on [www.asco.com](http://www.asco.com)

standards		ports/positions	function	pipe connections										valve technology	stainless steel screws	max. pressure (bar)	flow at 6 bar l/min (ANR)	solenoid pilot valve	Type	Illustration	Series	Page		
VDMA/ISO15407-1	ISO 15407-2			□ - instant fittings O.D. (mm) ◻ - internal thread ØG ⊥ - pad mount ⊕ - pad mount, CNOMO size 15 ⊕ - pad mount, CNOMO size 30 ⊥ - NAMUR interface ØG																				
ISO 5599-1		6	8	1/8	1/4	3/8	1/2	3/4	1															
<b>Spool valves <sup>(1)</sup></b>																								
VDMA -		5/2 5/3															integrated pilot	ISO02		<a href="#">CL18</a>	<b>65</b>			
ISO		2x3/2 5/2 5/3	● ●														M12	ISO 15407-1 (18 mm)		<a href="#">502</a>	<b>64</b>			
																		ISO 15407-1 (26 mm)		<a href="#">503</a>				
ISO		2x3/2 5/2 5/3															M12 subbases	ISO 15407-2 (18 mm)		<a href="#">502</a>				
																		ISO 15407-2 (26 mm)		<a href="#">503</a>				
ISO		5/2																ISO1 Compact		<a href="#">541</a>	<b>69</b>			
ISO		5/2 5/3																1400	⊕30	ISO1		<a href="#">541 (ATEX)</a>	<b>75 77 (ATEX)</b>	
																		2800	⊕30	ISO2		<a href="#">542 (ATEX)</a>		
																		4200	⊕30	ISO3		<a href="#">543 (ATEX)</a>		
Subbases																				<a href="#">355</a>	<b>81</b>			
ISO		5/2 5/3																1200	M12	ISO1		<a href="#">503</a>	<b>79</b>	
																		2800	M12	ISO2		<a href="#">542</a>		
																		4200	M12	ISO3		<a href="#">543</a>		
ISO		5/2 5/3																1400	⊕30	ISO1		<a href="#">C12</a>	<b>93</b>	
																		2400	⊕30	ISO2		<a href="#">C23</a>		
																		4800	⊕30	ISO3		<a href="#">C34</a>		
ISO		5/2 5/3																1400	M12	ISO1		<a href="#">C12</a>	<b>95</b>	
																		2400	M12	ISO2		<a href="#">C23</a>		
ISO		5/2 5/3																10/12	6300/ 7000	⊕30	ISO4		<a href="#">544</a>	<b>99</b>
<b>Accessories</b>																								
Supply rail for mounting of monostable/bistable spool valves (1/4 - 3/8 - 1/2)																			<a href="#">881</a>	<b>9</b>				
Supply rail with pressure isolation valves for mounting of monostable/bistable spool valves (1/4)																			<a href="#">881</a>	<b>11</b>				
Padlockable pressure isolating plate																		ISO 5599/1 size 1		<a href="#">881</a>	<b>91</b>			
<b>Coils and solenoid operators</b>																								
																			400 430	<b>IV</b>				

<sup>(1)</sup> See "COILS AND ACCESSORIES" on [www.asco.com](http://www.asco.com)

## COIL CHARACTERISTICS

All coils are designed to operate at 15% or 10% below the nominal voltage (Un) and at 10% above the nominal voltage (Un). [Applicable standards: IEC 335, EN 60730- 1, UL 429]

The coils are rated for continuous duty within the maximum ambient temperature limits (100% ED).

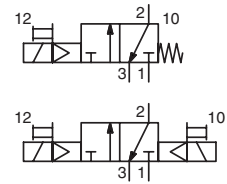
## CATALOGUE NUMBERS OF REPLACEMENT COILS

solenoid valve series	coil type	alternating current , AC (~) 50 Hz					direct current , DC (=)			
		24V	48V	115V	230V	240V	12V	24V	48V	110V
189	C22A - 2,5 W	43004416 (♣)	43004417 (♣)	43004419 (♣)	43004422 (♣)	43004423 (♣)	43004149	43004166	43004167	43004168
	C22 - 2,5 W (M12)	-	-	-	-	-	-	43005523	-	-
551	CM22 <sup>(1)</sup> - 2,5/3W	400127-081 (♣)	400127-085 (♣)	400127-098 (115V/50-120V/60)	400127-097 (♣)	400127-091(♣)	400904-541	400904-542	400904-544	400904-548
553	CM25 <sup>(1)</sup> - 5/5W	400727-181 (♣)	400727-185 (♣)	400727-118 (115V/50)	400727-117 (130V/50)	-	400727-181	400727-185	400727-118	400727-117
190	C25A - 3W	43004469	43004473	43004471	43004472	-	43004469	43004473	43004471	43004472
	C25 - 3 W (M12)	-	-	-	-	-	-	43005525	-	-
192	C30A	43005604 (♣)	43005611	43005617 (115V/50-120V/60)	43005627	-	-	43005642	-	-
	C30 (M12)	-	-	-	-	-	-	43005664	-	-

<sup>(1)</sup> For high reliability in humid exterior environments

(♣)Bifrequency 50/60 Hz.

CM22-2,5/3W COIL with connector Example: series 551	C22 COIL with M12 connection Example: series 189	CM25-5/5W COIL with connector Example: series 553	C25 COIL with M12 connection Example: series 190	C30A COIL with connector Example: series 192	C30 COIL with M12 connector Example: series 192



## FEATURES

- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally protected construction)
- For high reliability in very humid outside environments, the versions on [following pages](#) should preferably be used.

## GENERAL

<b>Fluids</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	2 to 10 bar
<b>Ambient temperature</b>	-25°C to +60°C
<b>Flow (Qv to 6 bar)</b>	860 l/min (ANR) - Kv : 12,5

## CONSTRUCTION

<b>SPOOL VALVE</b>	
<b>Body</b>	Aluminium, black anodized
<b>Internal parts</b>	Zinc diecast, stainless steel, POM (polyacetal), aluminium
<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>PILOT VALVE</b>	
<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>Electrical safety</b>	IEC 335
<b>Coil and magnetic circuit</b>	Encapsulated monobloc design
<b>Exhaust</b>	Tapped M5 exhaust port, equipped with exhaust protection



## ELECTRICAL CHARACTERISTICS

voltage	consumption		insulation class	protection degree	electrical connection
	inrush	holding			
~ 24V - 48V - 115V - 230V / 50Hz	6 VA	3,5 VA (2,5 W)	F	IP 65	spade plug connector size 22 EN 175301-803, industry standard form B (11 mm)
= 24V - 48V	2,5 W				

## SPECIFICATIONS

symbol	operators solenoid air pilot (14) return (12)	catalogue number		(M)
		with connector	without connector	
	spring	55102005	55102006	●
	solenoid air	55102007	55102008	●

(M) Type of manual operator on pilot(s): ● : maintained

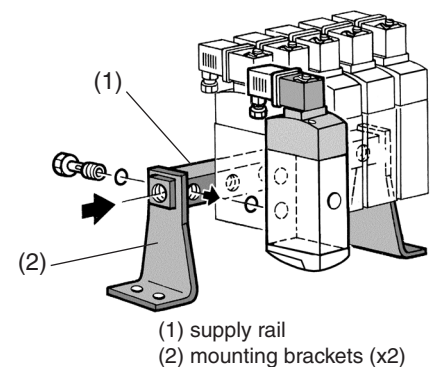
Note: do not connect the pressure supply to the exhaust port 3. For a "distributing" function or use in NO function, contact us.

## ACCESSORIES

- [Supply rails](#)

	supply rail supplied with seals and banjo bolts (without mounting brackets) (1)	supply rail with isolation valves - allows isolation of one or more spool valves from the main pressure supply
<b>supply rail for «n» valves</b>	G 1/4	G 1/4
2	88100034	88100915
3	88100035	88100916
4	88100036	88100917
5	88100037	88100918
6	88100038	88100919
7	88100039	88100920
8	88100040	88100921

- Set of 2 mounting brackets (2) for supply rail - catalogue number: **88100049**



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## OPTIONS

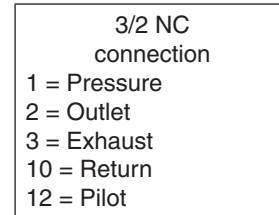
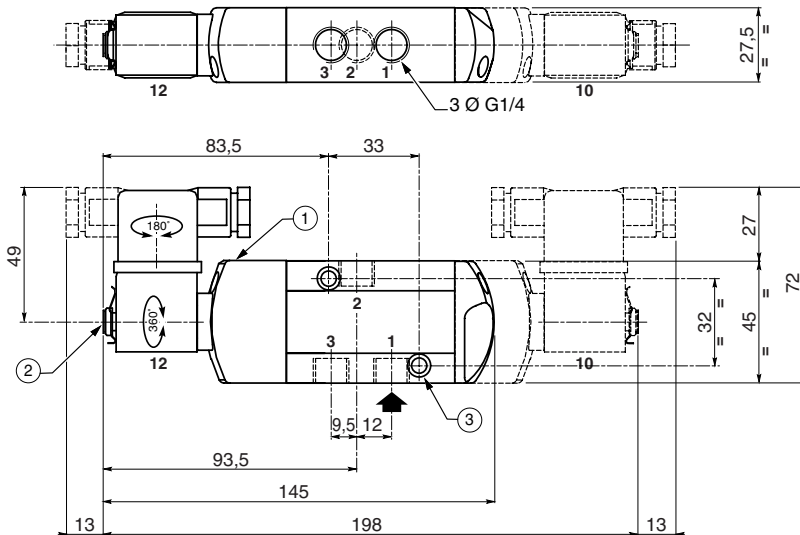
- Other voltages and 60 Hz on request
- [ATEX compliant coil and connector for use in potentially explosive dust environments \(SG\), zone 22](#)
- Connector size 22, cable length 2 m: **88122413**
- Electrovalve [with connector equipped with visual indicator and built-in electrical protection](#):

catalogue number of spool valve without connector + catalogue number of connector with visual indicator and built-in electrical protection (- / =)

24V	48V	115V	230V
<b>88122405</b>	<b>88122406</b>	<b>88122407</b>	<b>88122410</b>

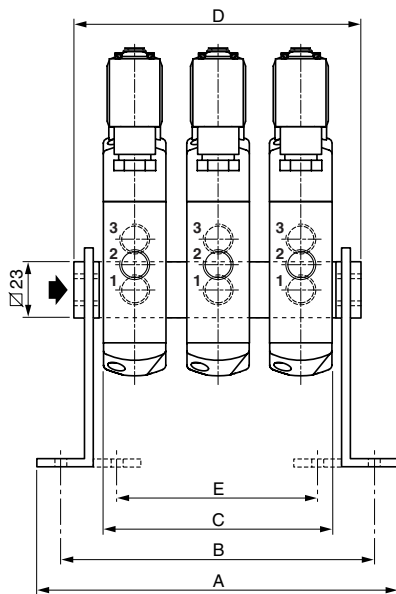
## DIMENSIONS (mm), WEIGHT (kg)

Weight: Spool valve + 1 pilot = 0,316 kg  
 Spool valve + 2 pilots = 0,436 kg

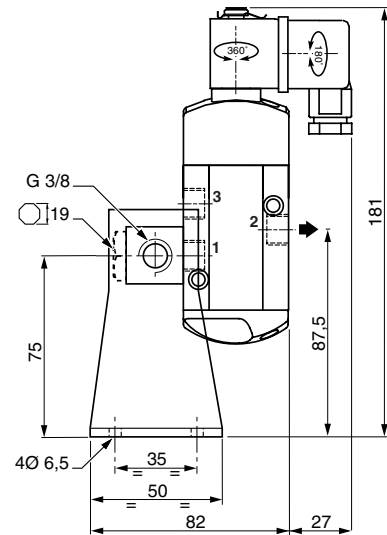


- ① Maintained manual operator
- ② Connectable M5 exhaust with protection
- ③ 2 mounting holes: Ø 5,3 spotfacing: Ø 9, depth 5

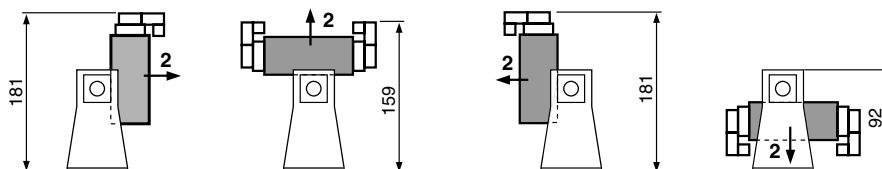
## ASSEMBLY WITH COMMON SUPPLY RAIL

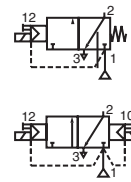


series 551	number of valves							
	2	3	4	5	6	7	8	
A	108	136	164	192	220	248	276	
B	92	120	148	176	204	232	260	
C	55	83	111	139	167	195	223	
D	78	106	134	162	190	218	246	
E	42	70	98	126	154	182	210	
type	weight (kg)							
with 1 pilot	0,9	1,3	1,7	2,0	2,4	2,9	3,3	
with 2 pilots	1,2	1,7	2,1	2,6	3,1	3,6	4,1	



This mounting arrangement allows valves to be mounted in any of 4 positions





## FEATURES

- Spool valve protected against food and beverage environment thanks to stainless steel screws
- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally protected construction)
- A reliable actuator pilot with the holes facing downwards and a moisture resistance

## GENERAL

<b>Fluids</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	2 to 10 bar
<b>Ambient temperature</b>	-25°C to +60°C
<b>Flow (Qv to 6 bar)</b>	860 l/min (ANR) - Kv : 12,5

## CONSTRUCTION

### SPOOL VALVE

<b>Body</b>	Aluminium, black anodized
<b>Internal parts</b>	Zinc diecast, stainless steel, POM (polyacetal), aluminium
<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>Screws</b>	Stainless steel 316L

### PILOT VALVE

<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>Electrical safety</b>	IEC 335
<b>Coil and magnetic circuit</b>	Encapsulated monobloc design
<b>Exhaust</b>	Tapped M5 exhaust port, equipped with exhaust protection



## ELECTRICAL CHARACTERISTICS

voltage	consumption		insulation class	protection degree	electrical connection
	inrush	holding			
~ 24V - 48V - 115V - 230V / 50Hz	6 VA	3,5 VA (2,5 W)	F	IP 65	spade plug connector size 22 EN 175301-803, industry standard form B (11 mm) with cable length of 2m
= 24V - 48V	2,5 W				

## SPECIFICATIONS

symbol	operators	catalogue number	(M)
	solenoid air pilot (14) return (12)	<b>with connector</b>	
	spring	<b>SCG551A091MS</b>	●
	solenoid air	<b>SCG551A093MS</b>	●

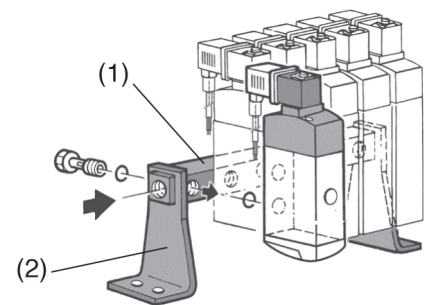
(M) Type of manual operator on pilot(s): ● : maintained

## ACCESSORIES

- [Supply rails](#)

	supply rail supplied with seals and banjo bolts (without mounting brackets) (1)	supply rail with isolation valves - allows isolation of one or more spool valves from the main pressure supply
<b>supply rail for «n» valves</b>	G 1/4	G 1/4
2	<b>88100034</b>	<b>88100915</b>
3	<b>88100035</b>	<b>88100916</b>
4	<b>88100036</b>	<b>88100917</b>
5	<b>88100037</b>	<b>88100918</b>
6	<b>88100038</b>	<b>88100919</b>
7	<b>88100039</b>	<b>88100920</b>
8	<b>88100040</b>	<b>88100921</b>

- Set of 2 mounting brackets (2) for supply rail - catalogue number : **88100049**



(1) supply rail  
(2) mounting brackets (x2)

All leaflets are available on: [www.asco.com](http://www.asco.com)

### OPTIONS

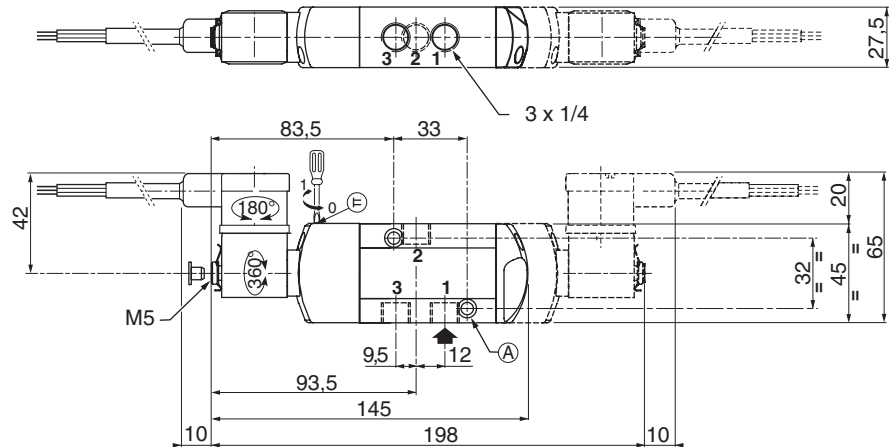
- Other voltages and 60 Hz on request
- Spade connector size 22, IP67 with integrated visual LED and varistor protection with PVC 0,75mm<sup>2</sup> cable length of 2 m : **88100937**
- Solenoid valve with connector equipped [with visual indicator and built-in electrical protection](#):

catalogue number of spool valve without connector + catalogue number of connector with visual indicator and built-in electrical protection (~ / =)

24V	48V	115V	230V
<b>88122405</b>	<b>88122406</b>	<b>88122407</b>	<b>88122410</b>

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

Weight: Spool valve + 1 pilot = 0,33 kg  
 Spool valve + 2 pilots = 0,47 kg

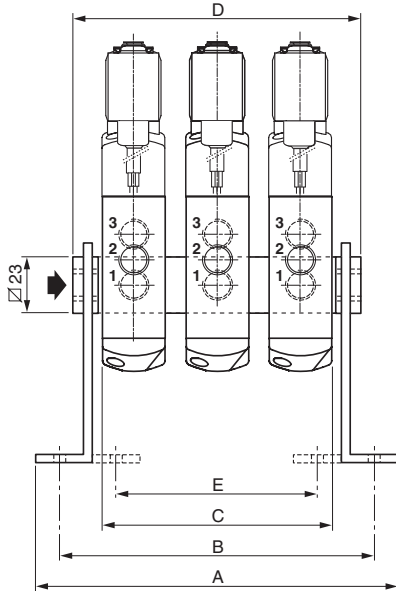


3/2 NC  
 connection  
 1 = Pressure  
 2 = Outlet  
 3 = Exhaust  
 10 = Return  
 12 = Pilot

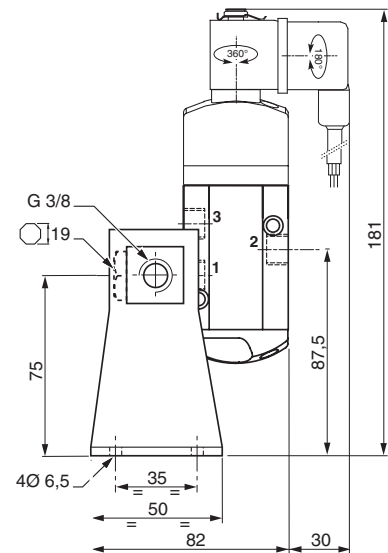
2 mounting holes:

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

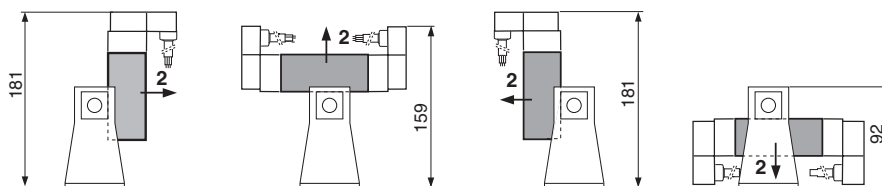
### ASSEMBLY WITH COMMON SUPPLY RAIL



series 551	number of valves							
	2	3	4	5	6	7	8	
A	108	136	164	192	220	248	276	
B	92	120	148	176	204	232	260	
C	55	83	111	139	167	195	223	
D	78	106	134	162	190	218	246	
E	42	70	98	126	154	182	210	
type	weight (kg)							
with 1 pilot	1,0	1,4	1,8	2,1	2,5	3,0	3,4	
with 2 pilots	1,3	1,8	2,2	2,7	3,2	3,7	4,2	



This mounting arrangement allows valves to be mounted in any of 4 positions

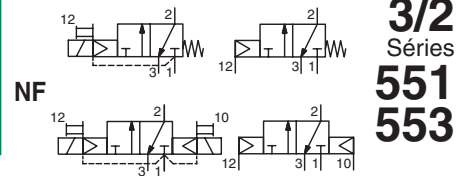






# SPOOL VALVES

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



**3/2**  
Séries  
**551**  
**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 in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) have TÜV (551 series) and EXIDA (551-553 series) certified with integrity levels: SIL 2 for HFT = 0 / SIL 3 for HFT = 1
- The solenoid valves satisfy all relevant EU directives

## GENERAL

<b>Differential pressure</b>	2 - 10,4 bar [1 bar = 100 kPa]				
<b>Flow (Qv at 6 bar)</b>	l/min (ANR)				
	<table border="1"> <tr> <td>1/4</td> <td>1/2</td> </tr> <tr> <td>860</td> <td>3800</td> </tr> </table>	1/4	1/2	860	3800
1/4	1/2				
860	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 tube</b>	Brass
<b>Core and plugnut</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>	EN 175301-803, 11 mm, industry standard form 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 AC (~) : 24V - 48V - 115V - 230V / 50 Hz
(Other voltages and 60 Hz on request)	

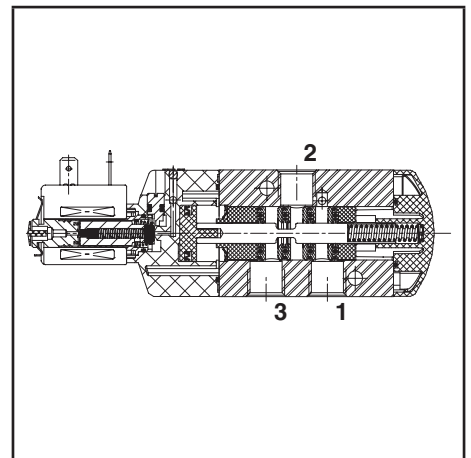
prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type <sup>(1)</sup>
	inrush ~ (VA)	holding ~ (W)		hot/cold = (W)		~ 230 V/50 Hz	= 24 V DC	
		(VA)	(VA)					
SC	6	3,5	2,5	2,5 / 3	-25 to + 60	400127-097	400904-542	01
SC	15	7	5	4 / 5	-25 to + 60	400727-117	400727-185	02

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

## SPECIFICATIONS

[Configurator - CAD Files](#)

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)					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	-	-
1/2	13	3,15	52,5	2	10	10	5	5	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	-	-
1/2	13	3,15	52,5	2	10	10	5	5	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	-	-	-
1/2	13	3,15	52,5	2	10	10	5	5	SCG553A005SL	-	-	-



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### AIR OPERATED AND OPTIONS

- Versions (Type 03): - pilot air operated, spring return, catalogue numbers: **G551A105 / G551A105SL** (1/4); **G553A105 / G553A105SL** (1/2)  
- pilot air operated and return, catalogue numbers: **G551A106** (1/4); **G553A106** (1/2)
- Suffix "MF" (air operated only, low temperature version, -40°C)
- Suffix "GD" (air operated only, ATEX 2GD c)
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (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). Check temperature range of valve body and solenoid for suitability. 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>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-553	M5	<b>34600484</b> <sup>(1)</sup>

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

### ORDERING EXAMPLES:

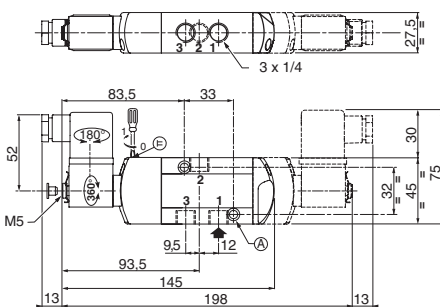
SC	G	551	A	005	MS	230V / 50 Hz
SC	G	551	A	005	SL	24V / DC
SC	G	553	A	006		115V / 50 Hz
	G	551	A	105	SL	

prefix: SC, pipe thread: G, basic number: 551, voltage: 230V / 50 Hz, suffix: MS, SL

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

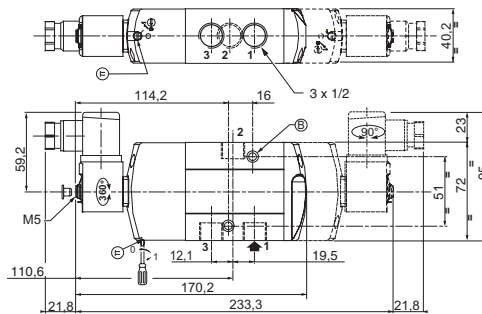
**TYPE 01**  
Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / DIN 43650  
IP65

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



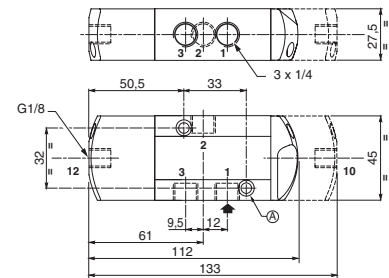
**TYPE 02**  
Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / ISO 4400  
IP65

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

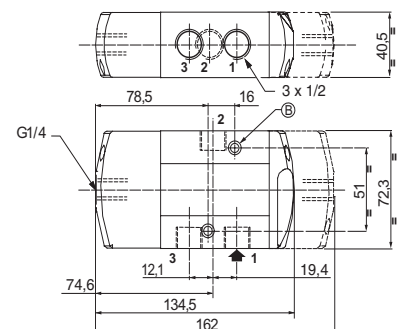


**TYPE 03**  
No Prefix  
Air operated version

**551A105 / 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	
		monostable	bistable
01 (551)	SC	0,35 <sup>(2)</sup>	0,43 <sup>(2)</sup>
02 (553)	SC	0,69 <sup>(2)</sup>	0,99 <sup>(2)</sup>
03 (551)	-	0,28	0,36
03 (553)	-	0,80	1,06

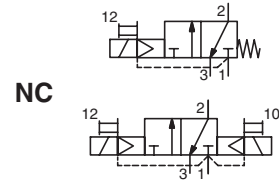
<sup>(2)</sup>Incl. coil(s) and connector(s).

### Configurator - CAD Files



# SOLENOID VALVES

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



**3/2**  
Series  
**551**  
**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)
- 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 in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) have TÜV (551 series) and EXIDA (551-553 series) 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 - 10,4 bar [1 bar = 100 kPa]  
**Flow (Qv at 6 bar)** l/min (ANR)

1/4	1/2
860	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

<b>Body, end cover</b>	Aluminium, black anodized
<b>End cover (spring)</b>	Glass fibre filled PA
<b>Spool valve internal parts</b>	Zamak, stainless steel, POM, aluminium
<b>Pilot body</b>	PARA
<b>Pilot internal parts</b>	POM, PET, stainless steel and brass
<b>Pneumatic interface seal</b>	TPE

## ELECTRICAL CHARACTERISTICS

<b>Coil insulation class</b>	F
<b>Connector (type 05)</b>	Spade plug (cable Ø 4-6 mm)
<b>Connector specification</b>	Type 05: DIN 43650, 9,4 mm, form C
<b>Connection</b>	Type 07: M12 (CNOMO E03.62.520.N)
<b>Electrical safety</b>	IEC 335
<b>Electrical enclosure protection</b>	Moulded IP65 [05] or IP67 [07] (EN 60529)
<b>Standard voltages</b>	DC (=): 24V AC (~): 24V-115V-230V / 50 Hz (prefix CFSC)

prefix option	power ratings				operator ambient temperature range (TS) (C°)	voltage		type <sup>(1)</sup>
	inrush	holding		hot/cold		~	=	
	~ (VA)	~ (VA)	~ (W)	= (W)		(V)	(V)	
CFSC	1,4	1,2	1,1	1/1,2	-25 to + 60	24-115	24	05
	1,8 <sup>(2)</sup>	1,6 <sup>(2)</sup>	1,5 <sup>(2)</sup>	1,15/1,35 <sup>(2)</sup>				
	2,1	1,6	1,5	-				
CFVT <sup>(3)</sup>	-	-	-	1,15/1,35	-25 to + 60	-	24	07

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

<sup>(3)</sup> Supplied with LED indicator and protection.

## SPECIFICATIONS

[Configurator - CAD Files](#)

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number		options		
									connector EN 175301-803 (9,4 mm) (type 05)	M12 (type 07)	maintained man. operator	impulse man. operator	
													~
<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	-
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	-
1/2	13	3,15	52,5	2	10	10	1,1..1,5	1,2	CFSCG553A506	-	MS	MO	-
							-	1,35	-	CFVTG553A506	MS	MO	-

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网址：<http://www.ivalve.com>

**Pneumatic Valves (3/2) - 7**  
传真：(86-532)585-10-365  
Email：[sales@bechinas.com](mailto:sales@bechinas.com)

### 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)	~	=	~	=	~/=	=				
<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	1,1..1,5	1,2	CFSCG551C505SL	-	-	MO	-
							-	1,35	-	CFVTG551C505SL	-	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 2014/34/EU (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). 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)
- 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>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-553	M5	<b>34600484</b> <sup>(1)</sup>

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

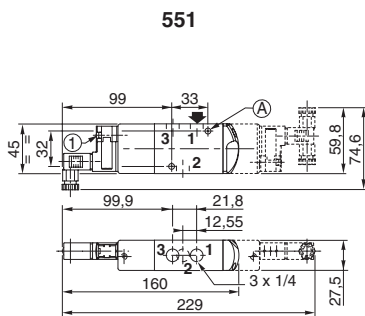
### ORDERING EXAMPLES:

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

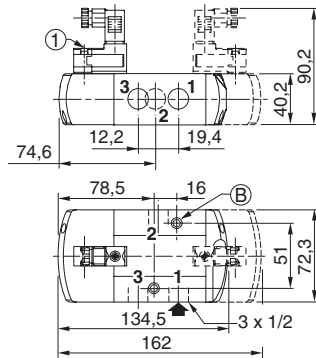
prefix — pipe thread — basic number — voltage — suffix

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

**TYPE 05**  
Prefix "CFSC"  
Polyaramide  
IEC 335 / IP65  
DIN 43650, 9,4 mm

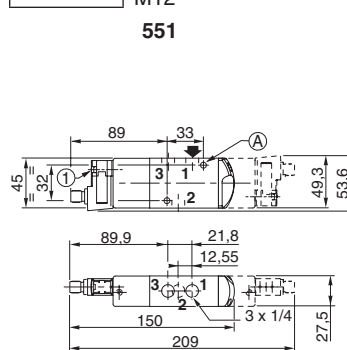


553

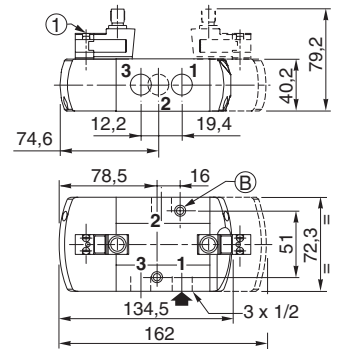


### Configurator - CAD Files

**TYPE 07**  
Prefix "CFVT"  
Polyaramide  
IEC 335 / IP67  
M12



553



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

- ① Manual operator location
- 2 mounting holes:
- (A) 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)
- (B) 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)

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

All leaflets are available on: [www.asco.com](http://www.asco.com)



# SUPPLY RAIL

for mounting of  
monostable/bistable spool valves  
1/4 - 3/8 - 1/2

Series  
**881**

## FEATURES

- Supply rail 1/4 (for valve series 551, L1), 3/8 (for valve series L2) and 1/2 (for valve series 553, L8)
- Easy, quick and cost-effective installation
- Orientable rail mounting for easy adaption to specific machine arrangement
- Available with up to 8 outlets

## GENERAL

**Max. inlet pressure** 0 - 16 bar [1 bar = 100 kPa]  
**Differential pressure** 0 - 10 bar  
**Ambient temperature** -20°C to + 60°C

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, filtered	-20°C to + 60°C <sup>(1)</sup>	NBR (nitrile)

<sup>(1)</sup> -20°C to +90°C when using valves other than those of series 551/521/L1/L2/553/L8.



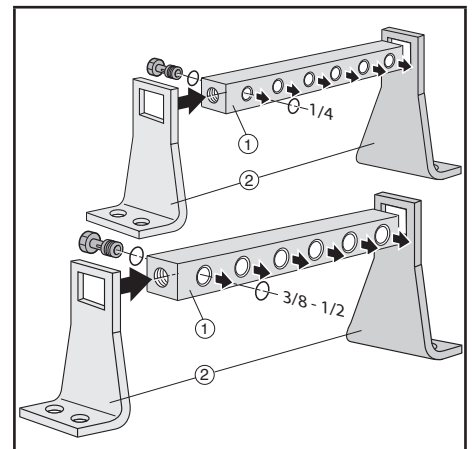
## MATERIALS IN CONTACT WITH FLUID

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

**Supply rail** Aluminium  
**Banjo bolts** Brass nickel plated  
**O-rings** NBR

## OTHER MATERIALS

**Mounting brackets** Steel



① Supply rail  
 ② Set of 2 mounting brackets

## SPECIFICATIONS

supply inlet size	orifice size	flow coefficient Kv		operating pressure differential (bar)			number of outlets	catalogue number (supply rail for «n» valves)		
				min.	max. (PS)			for valves G 1/4 (series 521, 551, L1, L2,...)	for valves G 3/8 (series L2,...)	for valves G 1/2 (series 553, L8,...)
					air inert gas (*)	~				
G	(mm)	(m³/h)	(l/min)							
<b>Supply rail with seals and banjo bolts, without mounting brackets</b>										
3/8 (outlets 2..8 x 1/4)	7	1,2	20	0	10	10	2	88100034	-	-
							3	88100035	-	-
							4	88100036	-	-
							5	88100037	-	-
							6	88100038	-	-
							7	88100039	-	-
							8	88100040	-	-
3/4 (outlets 2..8 x 3/8 or 1/2)	12 (3/8) 13 (1/2)	2,7 (3/8) 3 (1/2)	45 (3/8) 50 (1/2)	0	10	10	2	-	88100800	88100759
							3	-	88100801	88100760
							4	-	88100802	88100761
							5	-	88100803	88100762
		6	-				88100804	88100763		
		7	-				88100805	88100764		
		8	-				88100806	88100765		
		<b>Set of 2 mounting brackets</b>								88100049

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### OPTIONS

- Other pipe connections are available on request

### INSTALLATION

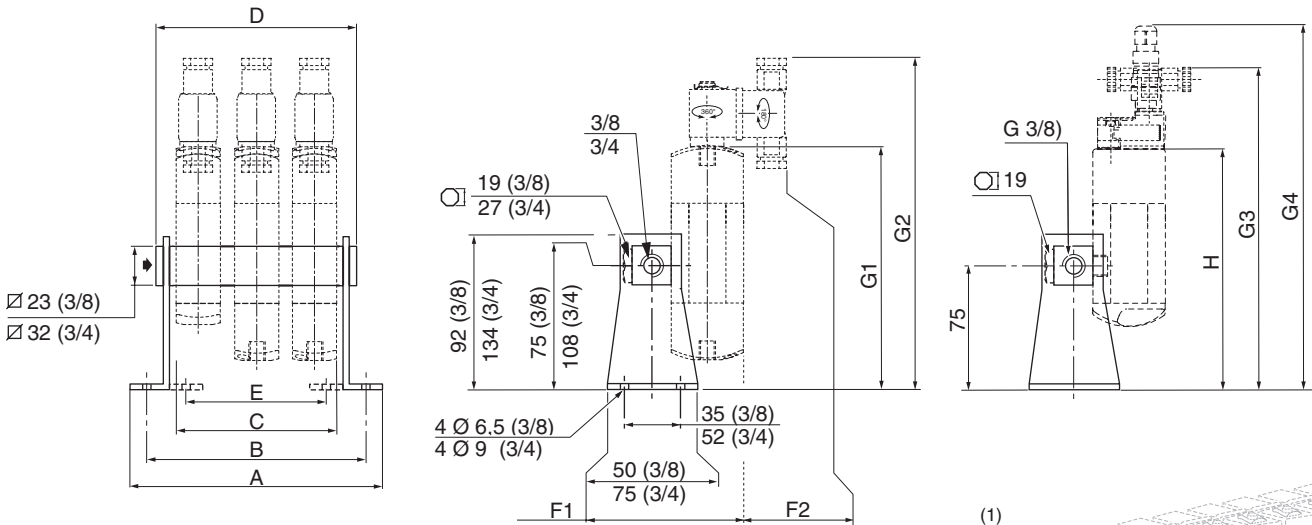
- The supply rails can be mounted in any position without affecting operation
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Installation/maintenance instructions are included with each supply rail

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



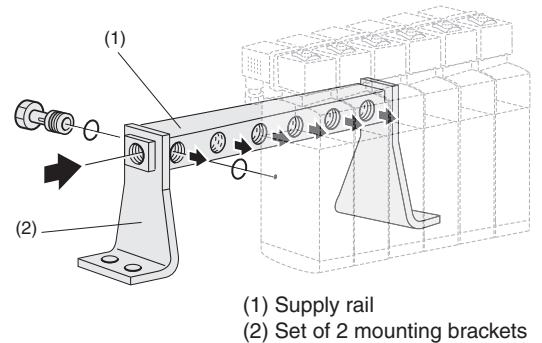
#### TYPE 01- 02

Supply rails  
Aluminium  
Type 01 = Inlet G 3/8, outlets G 1/4  
Type 02 = Inlet G 3/4, outlets G 3/8 or G 1/2



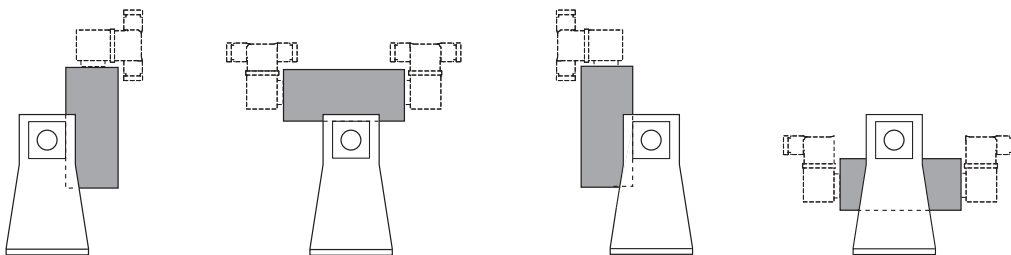
type	supply inlet size	number of valves	A	B	C	D	E	weight <sup>(2)</sup>		
								1/4	3/8	1/2
01	3/8	2	108	92	55	78	42	0,125	-	-
		3	136	120	83	106	70	0,176	-	-
		4	164	148	111	134	98	0,225	-	-
		5	192	176	139	162	126	0,276	-	-
		6	220	204	167	190	154	0,326	-	-
		7	248	232	195	218	182	0,374	-	-
		8	276	260	223	246	210	0,424	-	-
02	3/4	2	136	116	81	117	-	-	0,322	0,350
		3	177	157	122	158	-	-	0,454	0,497
		4	218	198	163	199	-	-	0,591	0,648
		5	259	239	204	240	-	-	0,719	0,791
		6	300	280	245	281	-	-	0,844	0,930
		7	341	321	286	322	-	-	0,990	1,091
		8	382	362	327	363	-	-	1,115	1,230

<sup>(2)</sup> Supply rail with banjo bolts and seals  
Additional weight per set of 2 mounting brackets: G 3/8 outlets 1/4 = 0,186 , G 3/4 outlets 3/8 or 1/2 = 0,416



adaptable valves	F1	F2	G1	G2	G3	G4	H
551	82	27	148	194	197	232	147
521	68	26	-	166	-	-	-
L1	78	22	78	160	-	-	-
552	126	20	202	260	-	-	-
L2	88	22	88	168	-	-	-
553	126	20	202	260	-	-	-
L8	111	22	111	256	-	-	-

This mounting arrangement allows valves to be mounted in any of 4 positions.



All leaflets are available on: [www.asco.com](http://www.asco.com)

10 - Pneumatic Valves (3/2 - 5/2 - 5/3)

**BCAE**  
Automation Solutions

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Email：[sales@bechinas.com](mailto:sales@bechinas.com)



# SUPPLY RAIL WITH PRESSURE ISOLATION VALVES

for mounting of monostable/bistable valves

1/4

Series  
**881**

## FEATURES

- Supply rail allowing for easy installation of isolation valves during operation without having to cut the general pressure supply
- Supply rail designed for a large variety of 1/4" valves (521, 551, L1, L2)
- Isolation valves, mounting brackets and hardware included for immediate installation
- Large range of optional accessories to allow the rail to be adapted to different uses: 1/8" isolation valve, supply pressure isolation valve, shut-off valve etc.

## GENERAL

**Max. inlet pressure** 0 - 16 bar [1 bar = 100 kPa]  
**Differential pressure** 0 - 10 bar  
**Ambient temperature** -20°C to +90°C

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

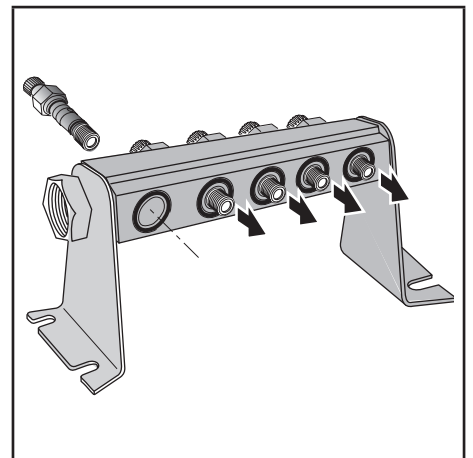
## MATERIALS IN CONTACT WITH FLUID

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

**Supply rail** Aluminium  
**End pieces** Stainless steel  
**Screw/isolation valve** Stainless steel  
**O-rings** NBR

## OTHER MATERIALS

**Low mounting brackets (65 mm)** Stainless steel



## SPECIFICATIONS

supply inlet size	orifice size	flow coefficient Kv		operating pressure differential (bar)			number of outlets	catalogue number  (supply rail for «n» valves with end pieces and low 65 mm mounting brackets)
				min.	max. (PS)			
G	(mm)	(m³/h)	(l/min)		air inert gas (*)			
				~	=			
<b>Supply rail with isolation valves, end pieces and low mounting brackets</b>								
1/2 (outlets 2..12 x 1/4)	6,8	1,1	18,3	0	10	10	2	<b>88100915</b>
							3	<b>88100916</b>
							4	<b>88100917</b>
							5	<b>88100918</b>
							6	<b>88100919</b>
							7	<b>88100920</b>
							8	<b>88100921</b>
							9	<b>88100922</b>
							10	<b>88100923</b>
							11	<b>88100924</b>
							12	<b>88100925</b>

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青岛秉诚自动化设备有限公司  
 地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F

服务热线：4006-918-365  
 网址：<http://www.ivalve.com>

**Pneumatic Valves (3/2 - 5/2 - 5/3) - 11**

传真：(86-532)585-10-365  
 Email: [sales@bechinas.com](mailto:sales@bechinas.com)

### OPTIONS

- High mounting brackets (120 mm) for lateral and bottom mounting of bistable valves
- Isolation valve with G 1/8 thread for valve type L1
- Supply pressure isolation valve
- Shut-off valve 1/4
- Other pipe connections are available on request

### INSTALLATION

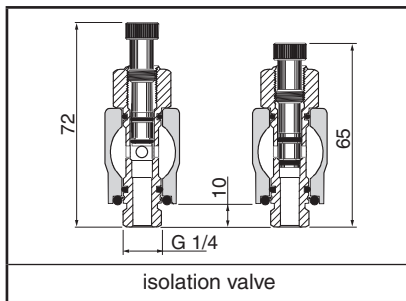
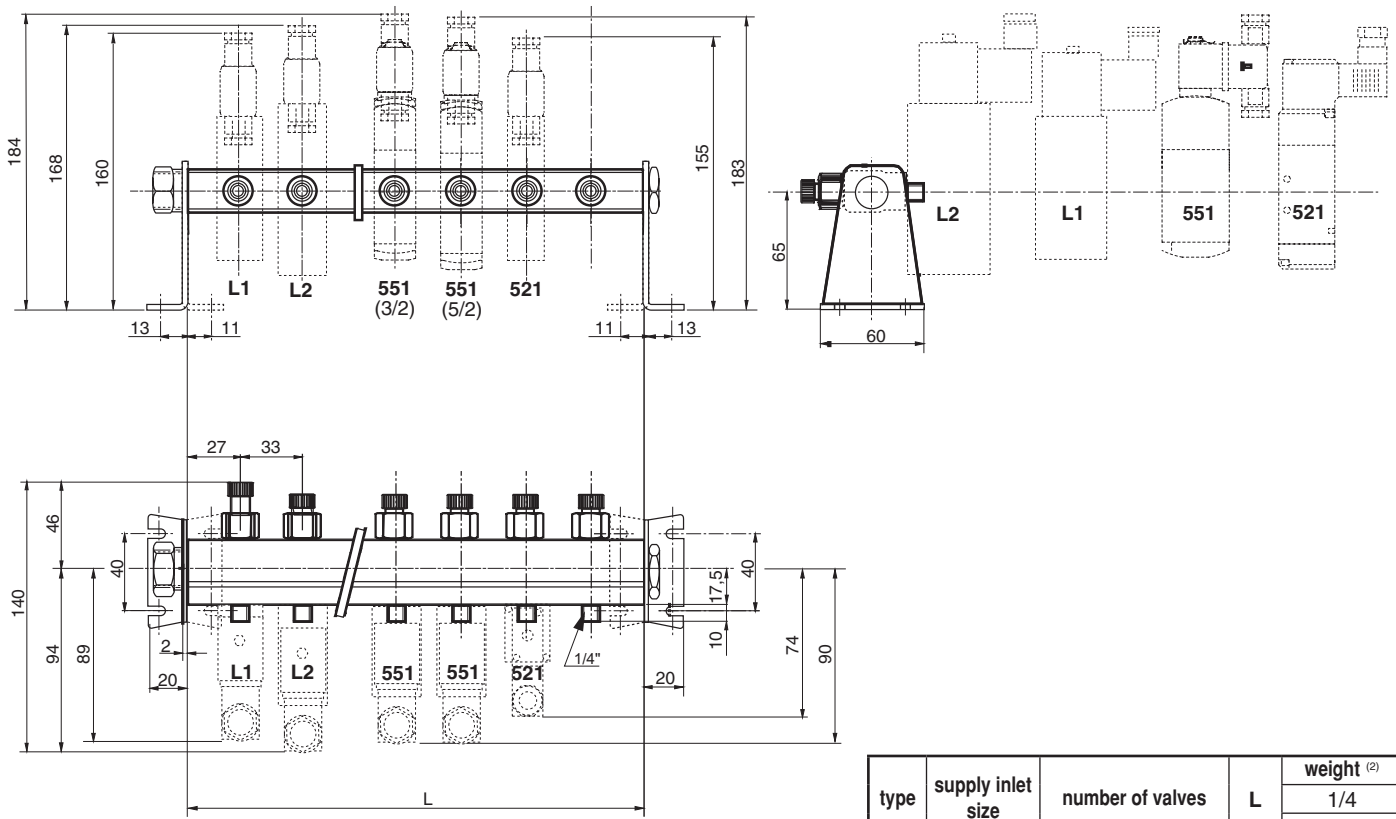
- The supply rails can be mounted in any position without affecting operation
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Installation/maintenance instructions are included with each supply rail

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



#### TYPE 01

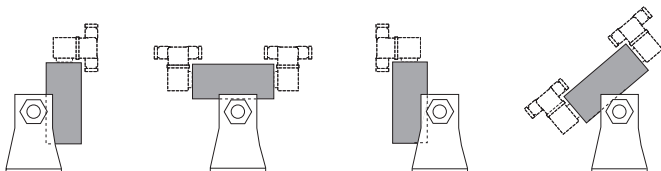
Supply rails  
Aluminium  
Inlet G 1/2, outlets G 1/4



type	supply inlet size	number of valves	L	weight <sup>(2)</sup>	
				1/4	
01	1/2	2	87	0,125	
		3	120	0,176	
		4	153	0,225	
		5	186	0,276	
		6	219	0,326	
		7	252	0,374	
		8	285	0,424	
		9	318	-	
		10	351	-	
		11	384	-	
		12	417	-	

<sup>(2)</sup> Supply rail with plugging screws, mounting brackets and seals.

This mounting arrangement allows valves to be mounted in any of several positions.



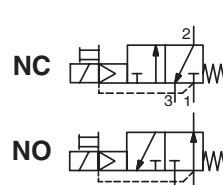
All leaflets are available on: [www.asco.com](http://www.asco.com)

12 - Pneumatic Valves (3/2 - 5/2 - 5/3)



## POPPET VALVES

solenoid air operated  
single solenoid (monostable function)  
pad mounting body, 1/4 - 3/8 subbases



**3/2**  
Series  
**261-262**  
Type  
**DM**

### FEATURES

- CNOMO pad-mount version for valve piloting applications
- Flexible installation on joinable subbases
- The solenoid air poppet valves satisfy all relevant EU directives

### GENERAL

**Operating pressure**  
**Pilot pressure**

2 - 10 bar [1 bar = 100 kPa]  
In external supply, the pilot pressure must be equal to or greater than the pressure in the valve

fluids (*)	temperature range (TS)	seal materials (*)
air, inert gas, lubricated or not	- 10°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

	Poppet valves	189/190 pilots
<b>Body</b>	Light alloy, treated	PA, glass-filled
<b>Disc</b>	PUR	NBR
<b>Core, core tube and plugnut</b>	-	Stainless steel
<b>Internal parts, springs</b>	Steel, light alloy, POM	Stainless steel
<b>Seals</b>	NBR	NBR
<b>Shading coil</b>	-	Copper

### CONSTRUCTION

**Mounting pad** (189/190 pilots) ISO 15218 (CNOMO 06-05-80 / NF E 49066, size 30)  
(subbases) CNOMO 05-05-81/05-05-82 / NF E 49066

### ELECTRICAL CHARACTERISTICS (PILOTS)

**Coil insulation class** F  
**Connector** 189 pilot Spade plug (cable Ø 6-8 mm)  
190 pilot Spade plug (cable Ø 6-10 mm)

### Connector specification

189 pilot EN 175301-803, industry standard form B (11 mm)  
190 pilot ISO 4400 / EN 175301-803, form A

### Electrical safety

**Electrical enclosure protection** IEC 335

### Standard voltages

Moulded IP65 (EN 60529)  
DC (=): 24V - 48V  
AC (~): 24V - 48V - 115V - 230V / 50 Hz

pilot	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type (1)
	inrush	holding		hot/cold		~	=	
	(VA)	(VA)	(W)	(W)				
189	6	3,5	2,5	2,5 / 3	-10 to + 60	43004422	43004166	01..04
190	9	4	3	3 / 3	-10 to + 60	43004472	43004473	

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

### SPECIFICATIONS

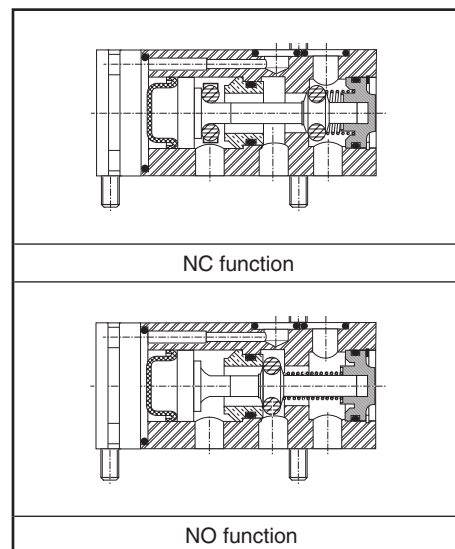
pipe size	orifice size	flow at 6,3 bar	flow coefficient Kv	operating pressure (bar)		catalogue number (2 catalogue numbers)		power coil (pilot) (W)	reference			
				min.	max. (PS)	poppet valve (without pilot)	pilot (with connector)					
					air (*)					~/=		
<b>NC - Normally closed</b>												
pad mounting (2)	1/4	8	700	10	2	10	26190067	18900001 19000005	●	2,5 3	3 3	G/DMP 301/O
	3/8	12	1750	25	2	10	26290352	19000006 19000017	●	3 3	3 3	
<b>NO - Normally open</b>												
pad mounting (2)	1/4	8	700	10	2	10	26190068	18900001 19000005	●	2,5 3	3 3	G/DMP 301/F
	3/8	12	1750	25	2	10	26290353	19000006 19000017	●	3 3	3 3	

### SUBBASES

pipe size	designation	composition	catalogue number
<b>Zamak subbases</b>			
tapped (G) (3)	1/4	laterally-connected single subbase (3 connectable lateral ports)	35300049
		laterally-connected joinable subbase (3 connectable lateral ports)	35300057
	3/8	laterally-connected single subbase (3 connectable lateral ports)	35700002
		laterally-connected joinable subbase (3 connectable lateral ports)	35700010

(2) Port 3: M5 (189/190 pilots).

(3) The subbases can be mounted on omega rail to EN 50022 using 2 clips (clips sold in packs of 10, catalogue number: 33400036).



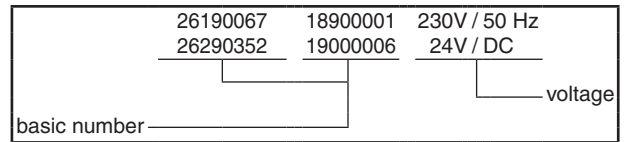
**OPTIONS**

- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (see "Explosionproof solenoids" section): Ex mb (PV), PV18901001 / PV19000005/6/17 / Potentially explosive atmospheres (SG), zone 22
- External solenoid valve supply plate, catalogue number: 88122201 (1/8)
- Plug with visual indication and peak voltage suppression or with cable length of 2 m (see Solenoids, Coils & Accessories section)

**INSTALLATION**

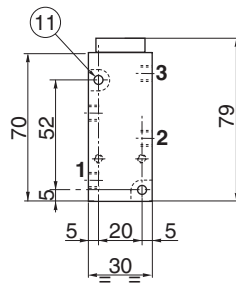
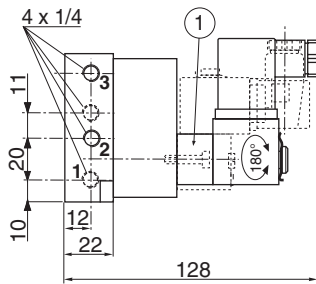
- The solenoid valves can be mounted in any position without affecting operation
- Mounting on single or joinable subbases
- ATEX 2014/34/EU versions (options "SG" and "PV") can be installed on single (all versions) or joinable zinc diecast subbases
- Pipe connections (G) have standard thread according to ISO 228/1
- Installation/maintenance instructions are included with each valve

**ORDERING EXAMPLES:**

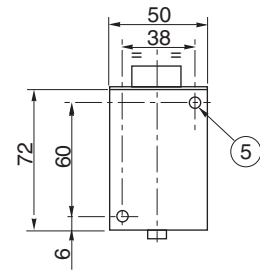
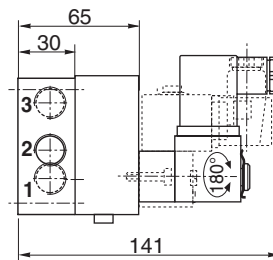


**DIMENSIONS (mm), WEIGHT (kg)**

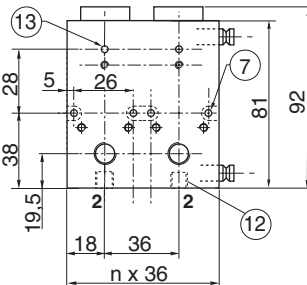
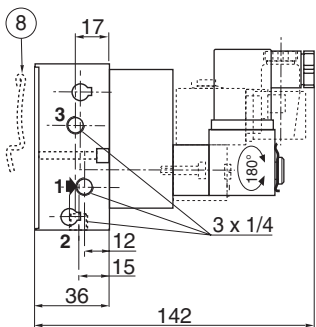
**TYPE 01**  
Single subbase  
1/4 - Zamak  
35300049



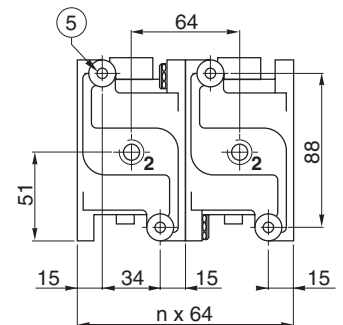
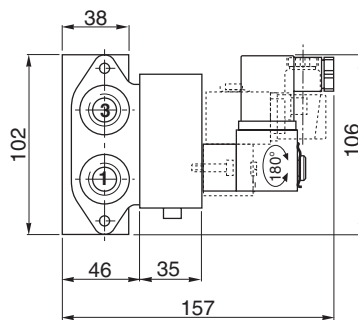
**TYPE 02**  
Single subbase  
3/8 - Zamak  
35700002



**TYPE 03**  
Joinable subbase  
1/4 - Zamak  
35300057



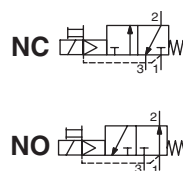
**TYPE 04**  
Joinable subbase  
3/8 - Zamak  
35700010



type	weight
01	0,45
02	0,80
03	0,50
04	0,80

- ① Manual operator location
- ⑦ Mounting: two dia. 4,5 mm securing holes
- ⑧ Adaptable clips
- ⑪ Mounting: two dia. 4,5 mm securing holes, dia. 8 mm counter-bores, depth 6 mm
- ⑫ Port 2: Accessible by removing cap
- ⑬ Mounting: two dia. 4,5 mm securing holes, dia. 7,5 mm counter-bores, depth 6 mm

All leaflets are available on: [www.asco.com](http://www.asco.com)



## GENERAL

FLUID : air or neutral gas, filtered, lubricated or not  
 PRESSURE : 2 to 10 bar (Pilot 190)  
 : 2 to 12 bar (Pilot 192)  
 MAX. ALLOW. TEMPERATURE : -10°C to +60°C  
 FLOW (Qv at 6 bar) : see table below  
 PILOT PRESSURE : In external supply, the pressure of the pilot fluid **must be at least** equal to the fluid pressure

## CONSTRUCTION

**Series 284**  
 Body: die-casting zinc alloy  
 Sealing: nitrile (NBR) and polyurethane (PUR)  
 Internal parts: light alloy and acetal resin (POM)

**Series 285/286**  
 Body and internal parts : light alloy  
 Sealing : nitrile (NBR)



## ELECTRICAL CHARACTERISTICS OF PILOTS

Type of sol. valve		Voltages	Consumption		Insulation class	Protection degree	Electrical connection
			Inrush	Hold			
Series 190	~	24V - 48V - 115V - 230V / 50 Hz	9VA	4VA (3W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	=	24V - 48V	3 W				
Series 192	~	24V - 48V - 115V - 230V / 50 Hz	12VA	6VA(4W)	F	IP 65	
	=	24V - 48V	5 W				

The solenoid valve 190 is dual voltage (24 V~, 12 V=) (48V~, 24V=) (115 V~, 48 V=) (230 V~, 115 V=)

## SPECIFICATIONS

### NC FUNCTION

Pipe size		Orifice size (mm)	Flow		2 catalogue numbers		(M)	Reference		
1 and 2	3		at 6 bar l/min (ANR)	Coeff. KV	VALVE	PILOT with standard connector				
G 3/8	G 1/2	12	4500	64	} + }	} + }	X ● ▼ X ● ▼	-		
G 1/2	G 1/2	15	6000	85				28490040	19000005	-
G 3/4	G 1	26	12500	180				28490041	19000006	G/DH 304/O
G 1	G 1	26	12500	180				28590238	19000017	G/DH 305/O
G 1 1/4	G 1 1/2	40	35000	500				28590239	-	GDM/DH 306/O
G 1 1/2	G 1 1/2	40	35000	500				28690025 *	19201001	GDM/DH 307/O
					28690026 *	19201002				
						19201003				

### NO FUNCTION

Pipe size		Orifice size (mm)	Flow		2 catalogue numbers		(M)	Reference		
1 and 2	3		at 6 bar l/min (ANR)	Coeff. KV	VALVE	PILOT with standard connector				
G 3/8	G 1/2	12	4500	64	} + }	} + }	X ● ▼ X ● ▼	-		
G 1/2	G 1/2	15	6000	85				28490042	19000005	-
G 3/4	G 1	26	12500	180				28490043	19000006	G/DH 304/F
G 1	G 1	26	12500	180				28590240	19000017	G/DH 305/F
G 1 1/4	G 1 1/2	40	35000	500				28590241	-	GDM/DH 306/F
G 1 1/2	G 1 1/2	40	35000	500				28690027 *	19201001	GDM/DH 307/F
					28690028 *	19201002				
						19201003				

(M) Type of manual operator on pilot(s): X : without ● : maintained ▼ : impulse

\*This equipment is always supplied with an intermediate amplifier for valves 3/2 - Ø 8 mm, Series 261 (26190067)

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**OPTIONS**

- Other voltages or 60Hz frequency on request
- Applications as a valve 2/2 (NC or NO), 3/2 with an amplifier, 3/2 or with pressure selection (can be used with vacuum - cat no. **28490027**)
- [Solenoid pilot 190 with solenoid head for dusty explosive atmospheres \(SG\), zone 22](#)
- [Connector with cable outlet, 2 m long](#) : cat no. **88122612**
- [Connector with transil protection \(see "Coils and Accessories" section\)](#)
- Solenoid valve with connector and built-in visual indicator and protection :

Solenoid valve **without** connector + Connector with built-in visual indicator and RC protection

Type of solenoid valve	(M)	catalogue number of solenoid valve without connector	catalogue number			
			24 V (~/=)	48 V (~/=)	115 V (~/=)	230 V (~/=)
<a href="#">190 NC</a>	×	<b>19000013</b>	<b>88122603</b>	<b>88122604</b>	<b>88122605</b>	<b>88122608</b>
	●	<b>19000014</b>				
	▼	<b>19000018</b>				
<a href="#">192 NC (1)</a>	×	<b>19201022</b>				
	●	<b>19201023</b>				
	▼	<b>19201024</b>				

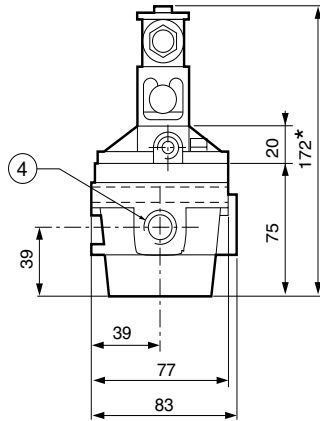
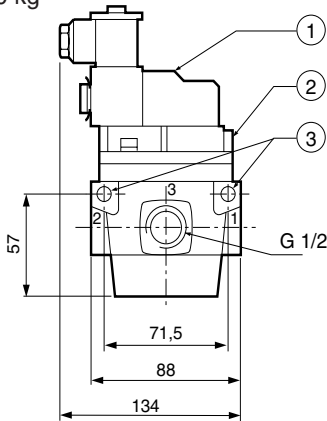
(M) Type of manual operator on pilot(s) : × : without ● : maintained ▼ : impulse

(1) Solenoid valve series 192 - 3/2 NC - Ø 2.1mm with exhaust in subbase

**DIMENSIONS AND WEIGHTS**

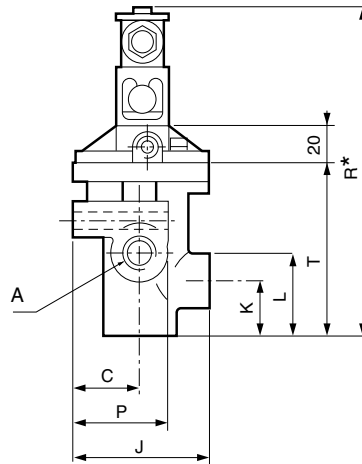
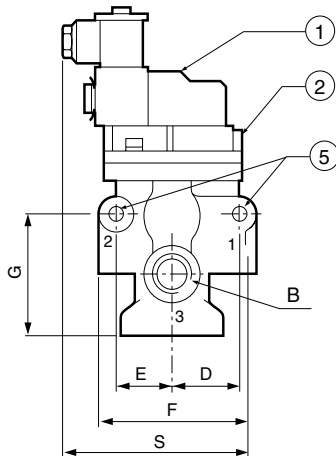
VALVE Series 284

Weight : 1,1700 kg



- ① Manual operator
- ② Orifice G 1/8 for external supply
- ③ Side mounting : 2 Ø 9
- ④ 2 Ø G 3/8 or G 1/2
- ⑤ Side mounting : 2 Ø N
- \* + 15 mm for plug removal

VALVE Series 285 - 286



Orifices 1 & 2 Ø A	Orifices 3 Ø B	C	D	E	F	G	J	K		L	ØN	P	R	S	T	⚖ (kg)
								NC	NO							
G 3/4 G 1	G1	39	43,5	39	113	91	92	88	45	67	9	62	223	149	126	1,450
G 1 1/4 G 1 1/2	G1 1/2	46	66,5	52	165	130	124	124	64	94	13	78	333	176	207	4,150

All leaflets are available on: [www.asco.com](http://www.asco.com)

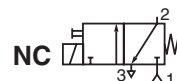
16 - Pneumatic Valves (3/2)



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服务热线：4006-918-365  
网址：<http://www.ivalve.cc>

传真：(86-532)585-10-365  
Email：[sales@bechinass.com](mailto:sales@bechinass.com)



### GENERAL

FLUID	: Air or neutral gas, filtered, lubricated or not
PRESSURE	: 2 to 10 bar (pilot 190) 2 to 12 bar (pilot 192)
TEMPERATURE	: - 10 °C, + 60 °C
FLOW (Qv at 6 bar)	: see table below
PILOT PRESSURE	: In external supply, the pressure of the pilot fluid <b>must be at least</b> equal to the fluid pressure

### CONSTRUCTION

Body in light alloy  
Internal parts in steel and light alloy  
Sealing in nitrile (NBR)  
Subbases in light alloy



### ELECTRICAL CHARACTERISTICS OF PILOTS

Type of sol. valve		Voltages	Consumption		Insulation class	Protection degree	Electrical connection
			Inrush	Hold			
Series 190	~	24V - 48V - 115V - 230V / 50 Hz	9VA	4VA (3W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	=	24V - 48V	3 W				
Series 192	~	24V - 48V - 115V - 230V / 50 Hz	12VA	6VA(4W)	F	IP 65	
	=	24V - 48V	5 W				

The solenoid valve 190 is dual voltage (24 V~, 12 V=) (48V~, 24V=) (115V~, 48 V=) (230V ~, 115V=)

### SPECIFICATIONS

Pipe size	Orifice size (mm)	Flow		Fluid pressure <sup>(1)</sup> (bar)		2 catalogue numbers		(M)	Reference
		at 6 bar l/min (ANR)	coef. KV	min.	max.	VALVE	PILOT with standard connector		
G 1/2	14	3000	42	2	10/12	26690018	+ } - }	×	G/DP 303/O
G 1	22	9100	130	2	10/12	26790014		●	
G 1 1/2	40	31500	450	2	10/12	26890298 <sup>(2)</sup>		▼	

(M) Type of manual operator on pilot(s): X : without ● : maintained ▼ : impulse

(1) 10 bar (with pilot 190), 12 bar (with pilot 192)

(2) Valve always delivered with an intermediary amplifier valve 3/2 - Ø 8 mm, series 261 (cat no. 26190067)

### SUBBASES

For a valve with mounting face	CHARACTERISTICS			catalogue number	References
	Subbase type	Pipe size	Connection type		
CNOMO 06.05.82/83 AFNOR E49068/69 G 1/2	SINGLE	G 1/2	Side ports	35700014	P/DP 303
	JOINABLE	G 1/2	Side ports	35700034	PJ/DP 303
CNOMO 06.05.84 AFNOR E49070 G 1	SINGLE	G 1	Side ports	35700016	P/DP 305
	JOINABLE	G 1	Side ports	35700036	PJ/DP 305
CNOMO 06.05.85 AFNOR E49071 G 1 1/2	SINGLE	G 1 1/2	Bottom ports	35700030	P/DP 307

### OPTIONS

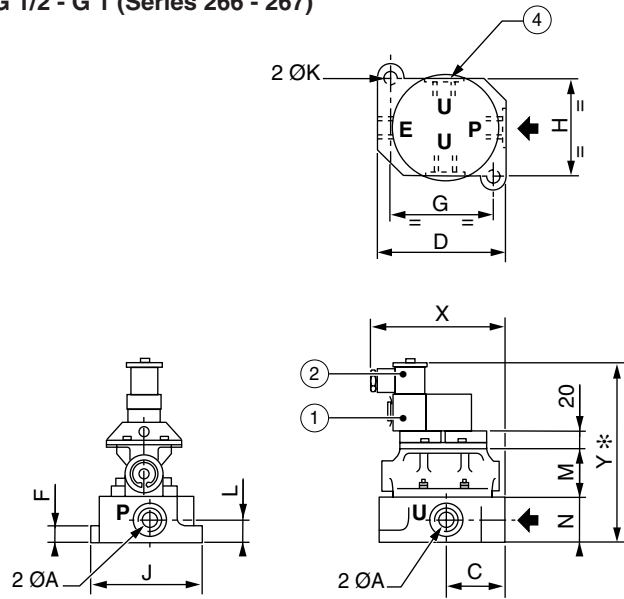
- Other voltages or frequency 60 Hz, on request
- Solenoid pilot 190 with solenoid head for dusty explosive atmospheres (SG), zone 22
- Solenoid valve, intrinsically safe (contact us)
- Connector with cable outlet, 2 m: cat no. **88122612**
- Solenoid valve 190 - 192 with connector and built-in visual indicator and protection
- Valve function NO (normally open to rest)

All leaflets are available on: [www.asco.com](http://www.asco.com)

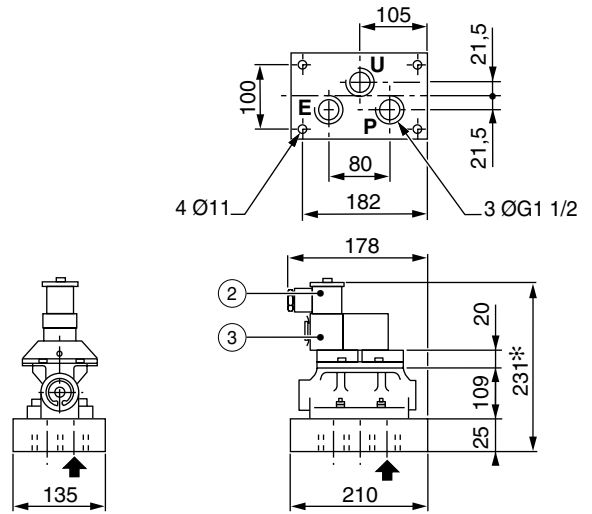
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**DIMENSIONS AND WEIGHTS OF SUBBASE MOUNTED POPPET VALVES**

VALVE ON SINGLE SUBBASES  
G 1/2 - G 1 (Series 266 - 267)



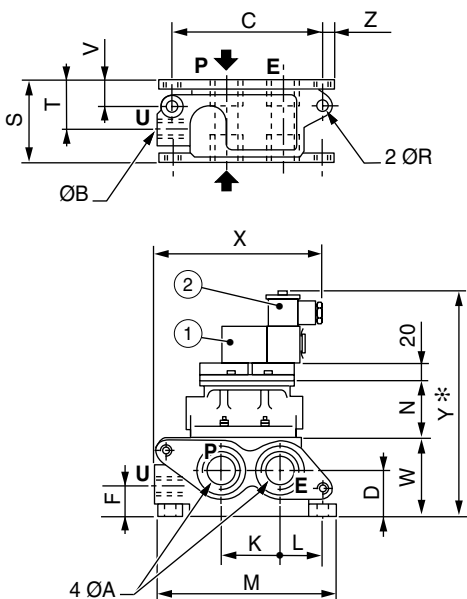
VALVE ON SINGLE SUBBASES  
G 1 1/2 (Series 268)  
Weight : 3 kg



Series	266	267
ØA	G 1/2	G 1
C	49	93,5
D	92	164
F	9	12
G	76	144
H	62	68
J	78	88
K	9	11
L	18	25
M	58	74
N	34	55
X	115	155
Y	189	226
Weight (kg)	1,500	2,300

- ① Pilot series 190 or 192
  - ② Connector rotatable by 90°
  - ③ Pilot series 192
  - ④ "U" connectable on 2 ports
- \* +15 mm for connector clearance

VALVE ON JOINABLE SUBBASES  
G 1/2 - G 1 (Series 266 - 267)



Series	266	267
ØA	G 3/4	G 1 1/4
ØB	G 1/2	G 1
C	130	172
D	36	56
F	25	37
L	34	45
M	152	203
N	58	74
R	11	14
S	85	104
T	56	63
V	28	32
W	65	95
X	149	176
Y	220	266
Z	11	14
Weight (kg)	2,100	3,700

- ① Pilot series 190 or 192
  - ② Connector rotatable by 90°
- \* +15 mm for connector clearance

### FEATURES

- Modular assembly with joinable subbases
- Subbases with side or bottom ports

### GENERAL

<b>Fluid</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	+1 to +10 bar (with internal supply to pilot) -0,950 to +21 bar (with external supply to pilot)
<b>Ambient temperature</b>	-10°C to +60°C
<b>Flow (Qv at 6 bar)</b>	5675 l/min (ANR)
<b>Response time</b>	See "specification"
<b>Life time</b>	200 millions of cycles
<b>Base</b>	ISO 5599/1 sizes 1-2-3 - AFNOR NF E49080
<b>Subbase</b>	Single subbase ISO/AFNOR NF E49085 Joinable subbase ISO/VDMA 24345 Joinable subbase with integrated functions



### CONSTRUCTION

<b>Body</b>	Aluminium
<b>Others parts</b>	Stainless steel, steel, aluminium alloy or plastic
<b>Seals</b>	NBR (nitrile)

### PILOTS

3/2 NC solenoid valves, **190 series**, pad mounting body ISO 15218 (size 30)

### ELECTRICAL CHARACTERISTICS

pilot	voltage		consumption		insulation class	protection degree	electrical connection
	~	=	inrush	hold			
series 190	~	24V-48V-115V-230V/50 Hz	9 VA	4 VA (3 W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	=	24V-48V	3 W				

The solenoid valve 190 is dual-voltage (24V~, 12V=) (48V~, 24V=) (115V~, 48V=) (230V~, 110V=)

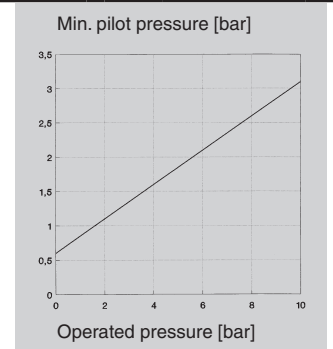
### SPECIFICATIONS

function symbol	operators pilot (14) solenoid air operated return (12)	taille	response time (ms)		pilot pressure (bar)		2 catalogue numbers		
			ener-gized	de-ener-gized	min..	max..	valve	+ solenoid pilot quantity & catalogue number with standard connector	(M)
NC 	spring return	ISO 3	30	65	0,6	10	G34BC300-X	+ 1x 19000005 19000006 19000017	× ● ▼
NO 	spring return	ISO 3	30	65	0,6	10	G34BO300-X		

(M) Type of manual operator on pilot(s): × : without ● : maintained ▼ : impulse

**When ordering**, please specify in addition to the basic solenoid valve catalogue number the type of current: voltage / frequency of the solenoid valve

Examples : **G34BC300-X + 1 x 19000017 24V/CC**



**OPTIONS**

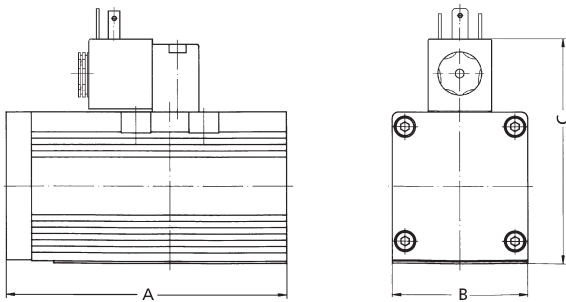
- Solenoid valve pilot 3/2 series 190 with M12 connection
- 16 bar version with solenoid valve pilot series 192
- Material and solenoid pilot valve for use in potentially **explosive atmospheres** caused by gases or dusts - ATEX directive 2014/34/EU (contact us)
- Connector with cable 2 m long ( )
- Connector with transil protection ( )
- Solenoid valve with plug and built-in visual control and protection:

Solenoid valve <b>without</b> connector			Connector with built-in visual control and VDR/RC protection			
type of valve	(M)	catalogue number solenoid valve <b>without</b> connector	catalogue number (~ / =)			
			24V	48V	115V	230V
190 NF	×	19000013	88122603	88122604	88122605	88122608
	●	19000014				
	▼	19000018				

(M) Type of manual operator on pilot(s) : × : without ● : maintained ▼ : impulse

**SUBBASES AND ACCESSORIES** : [see "Subbases/ISO sizes 1-2-3"](#)

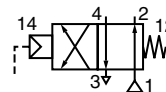
**DIMENSIONS (mm), WEIGHT (kg)**



type	A	B	C	weight
G34B.300A...	134,5	64	107,5	1,450

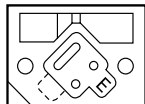
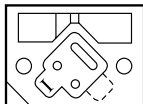
Incl. bolts and gaskets (gaskets of H-NBR)





### FEATURES

- Unit can be mounted individually or joined together by using diabolos with sunken locking screws
- Valves are fitted with pilot seals, which means that valves can be adapted to: internal supply (mark I) or external supply (mark E).



### GENERAL

<b>Fluid</b>	Air or neutral gaz, filtered, lubricated or not
<b>Operating pressure</b>	2 to 10 bar
<b>Pilot pressure</b>	With external supply, the pilot pressure must be equal or superior to the pressure in the valve
<b>Ambient temperature</b>	-10°C to +60°C
<b>Flow (Qv at 6 bar)</b>	See "specifications"

### CONSTRUCTION

<b>Body</b>	Zinc diecast
<b>Poppet</b>	Aluminium
<b>Seals</b>	NBR (nitrile)

### ELECTRICAL CHARACTERISTICS

pilot	voltage		consumption		insulation class	degree of protection	electrical connection
	~	=	inrush	hold			
series 189	~	24V-48V-115V-230V/50Hz	6 VA	3,5 VA (2,5 W)	F	IP 65	spade plug size 22 connector DIN 43650, 11 mm, industry standard B, rotatable x 180°
	=	24V-48V	2,5 W				

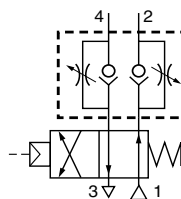
### SPECIFICATIONS

symbol	pipe size	orifice size (mm)	flow		fluid pressure (bar)		2 catalogue numbers			
			at 6 bar l/min (ANR)	Kv coefficient	min	max.	valve	+	pilot (~ / =)	(M)
	ports 2-4 with instant fittings ports 1-3: G1/8	3	210	3	2	10	26390005	+	18900001	●
	tapped G1/8	3	210	3	2	10	26390002	+	18900001	●
	tapped G1/4	6	840	12	2	10	26490026	+	18900001	●

(M) Type of manual operator on pilot(s) : ● : maintained

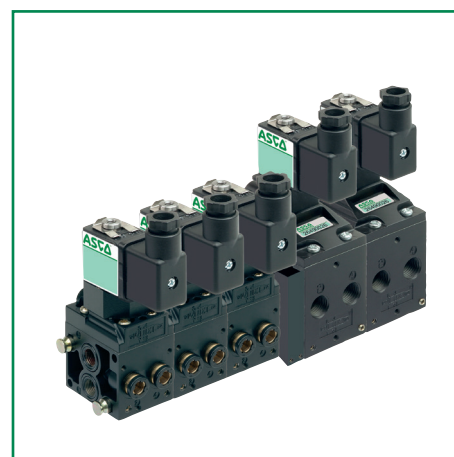
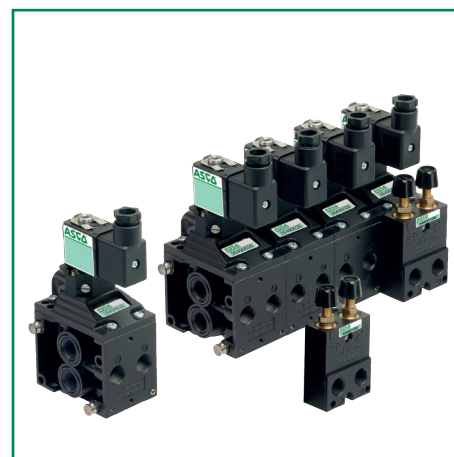
### ACCESSORIES

- Unit consisting of 2 flow regulators, joinable
  - for valve 263 (instant fittings  $\varnothing$  6 mm) - cat. no.: **34600211**
  - for valve 263 (G 1/8) - cat. no.: **34600209**
  - for valve 264 (G 1/4) - cat. no.: **34600109**
- Transfer unit for association of valves series 263 and 264, allowing communication of pressure feed (1) and exhaust (3) ports (18 mm thick). - cat. no.: **88126303**
- Power supply unit separate from main pressure
  - for valve 263 (G 1/8) - cat. no.: **88126301**
- The valves series 263 can be mounted on EN 50022 - AFNOR NF C63015 rail using mounting clips.
  - 10 clips - cat. no.: **33400036**



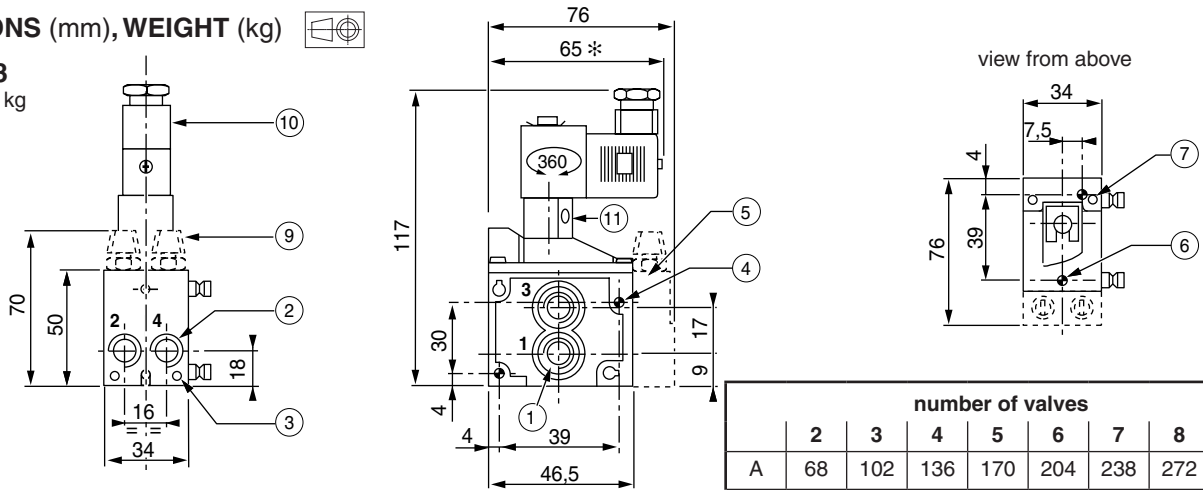
### OPTIONS

- For equipment and pilot valves for use in potentially **explosive atmospheres** caused by dusts or gases, in accordance with ATEX Directive 2014/34/EU.



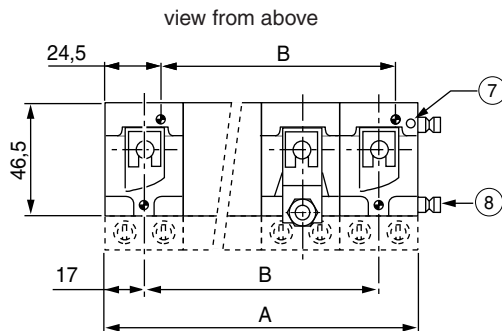
**DIMENSIONS (mm), WEIGHT (kg)**

**VALVE 263**  
weight: 0,450 kg



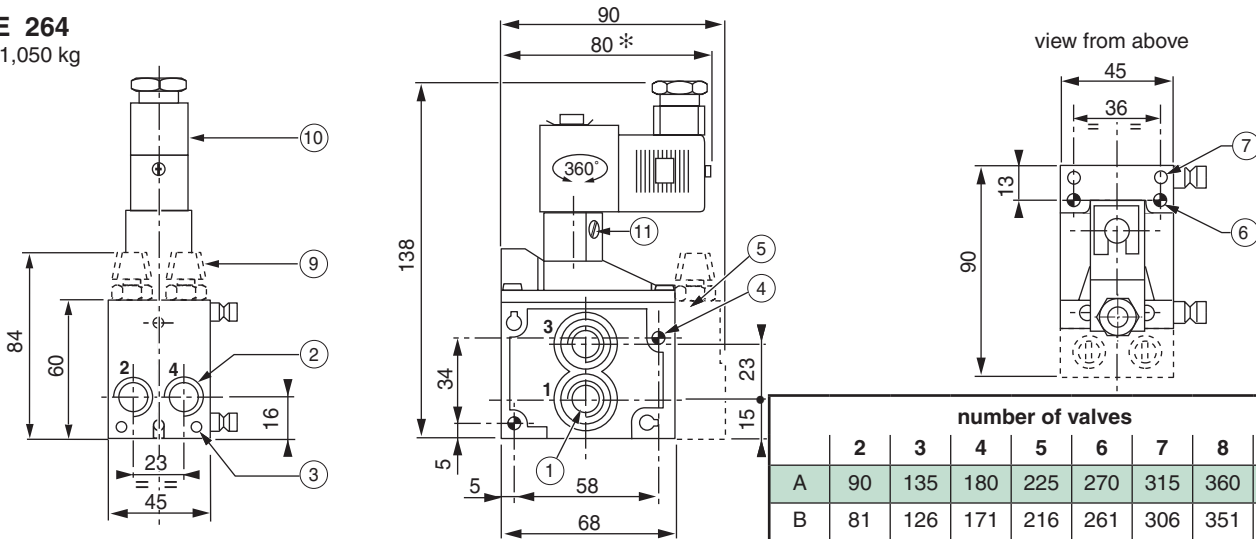
number of valves								
	2	3	4	5	6	7	8	+ 1
A	68	102	136	170	204	238	272	+ 34
B	34	68	102	136	170	204	238	+ 34

**Joinable valves**



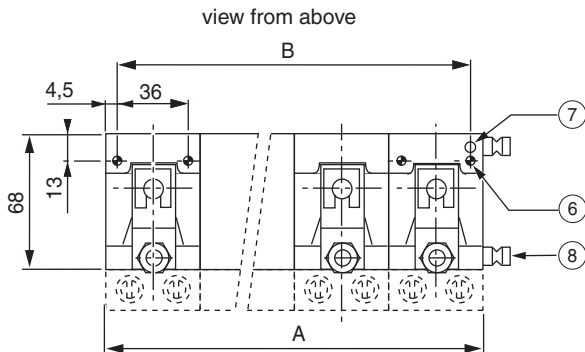
- ① 4 ports G 1/8  
**Valve supplied with 1 plug on orifices 1 and 3 seal joints**
- ② 2 ports G 1/8 or instant fittings Ø 6 OD
- ③ 2 grub screws for joining spindles
- ④ 2 screws for side mounting Ø 4,2 x 34
- ⑤ Accessory : Flow regulator
- ⑥ Top mounting 2 holes Ø 4,2 x 50
- ⑦ 2 grub screws for joining spindles
- ⑧ Joining spindles
- ⑨ Flow rate adjustment buttons
- ⑩ Pilot series 189
- ⑪ Manual operator
- \* +15 mm for plug removal

**VALVE 264**  
weight: 1,050 kg

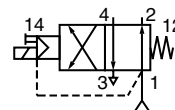


number of valves								
	2	3	4	5	6	7	8	+ 1
A	90	135	180	225	270	315	360	+45
B	81	126	171	216	261	306	351	+45

**Joinable valves**



- ① 4 ports G 1/4  
**Valve supplied with 1 plug on orifices 1 and 3 seal joints**
- ② 2 ports G 1/4
- ③ 2 grub screws for joining spindles
- ④ 2 screws for side mounting Ø 5,5 x 45
- ⑤ Accessory : Flow rate regulator
- ⑥ Top mounting 2 holes Ø 5,5 x 60
- ⑦ 2 grub screws for joining spindles
- ⑧ Joining spindles
- ⑨ Flow rate adjustment buttons
- ⑩ Pilot series 189
- ⑪ Manual operator
- \* +15 mm for plug removal



### GENERAL

FLUID	: Air or neutral gas, filtered, lubricated or not
PRESSURE	: 2 to 10 bar
TEMPERATURE	: -10°C to +60°C
FLOW (Qv at 6 bar)	: see table below
PILOT PRESSURE	: in external supply, the pilot pressure <b>must be equal</b> or superior to the pressure in the valve

### CONSTRUCTION

Body: light alloy  
 Sealings: polyurethane (PUR) and nitrile (NBR)  
 Mating surface to CNOMO 06-05-71/72 and AFNOR NF E49061/062  
 Internal parts: steel, light alloy and acetal resin (POM)



### ELECTRICAL CHARACTERISTICS OF PILOTS

Type of sol. valve		Voltages	Consumption		Insulation class	Protection degree	Electrical connection
			Inrush	Hold			
Series 189	~	24V - 48V - 115V - 230V / 50 Hz	6VA	3,5VA(2,5W)	F	IP 65	spade plug connector size 22 EN 175301-803, industry standard form B (11 mm), rotatable by 180°
	=	24V - 48V	2,5W				
Series 190	~	24V - 48V - 115V - 230V / 50 Hz	9VA	4VA(3W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	=	24V - 48V	3W				

The solenoid valve 190 is dual-voltage (24V~,12V=) (48V~,24V=) (115V~,48V=) (230V~, 115V=)

### SPECIFICATIONS

Pipe size	Orifice size (mm)	Flow		Fluid pressure (in bar)		2 catalogue numbers		(M)	Reference	
		at 6 bar l/min (SRA)	KV coefficient	min.	max.	VALVE	PILOT + with standard connector			
Subbase-mounted 1/4"	8	700	10	2	10	26190069	+	18900001	●	G/DMP 401
								19000005	×	
								19000006	●	
								19000017	▼	
Subbase-mounted 3/8"	12	1750	25	2	10	26290354	+	18900001	●	G/DMP 402
								19000005	×	
								19000006	●	
								19000017	▼	

(M) Type of manual operator on pilot(s): × : without ● : maintained ▼ : impulse

### SUBBASES

Valve mating surface	DESIGNATION			catalogue number	Reference
	Type of subbase	Pipe size	Type of port		
CNOMO 06.05.71 AFNOR E49061 G 1/4	SINGLE	G 1/4	Side	35700003	P/DMP 401
	JOINABLE	G 1/4	Bottom	35700008	PJ01/DMP 401
CNOMO 06.05.72 AFNOR E49062 G 3/8	SINGLE	G 3/8	Side	35700004	P/DMP 402
	JOINABLE	G 3/8	Bottom	35700011	PJ02/DMP 401-402

### OPTIONS

- Other voltages and 60 Hz on request
- Solenoid pilot valves 189-190-192 with connector and built-in visual indicator and protection
- Solenoid pilot valve 189 [with explosion-proof Ex mb coil](#)
- [Solenoid pilot valves 189/190 with solenoid head for dusty explosive atmospheres \(SG\), zone 22](#)
- External solenoid valve supply plate, code : **88122201** (G 1/8)

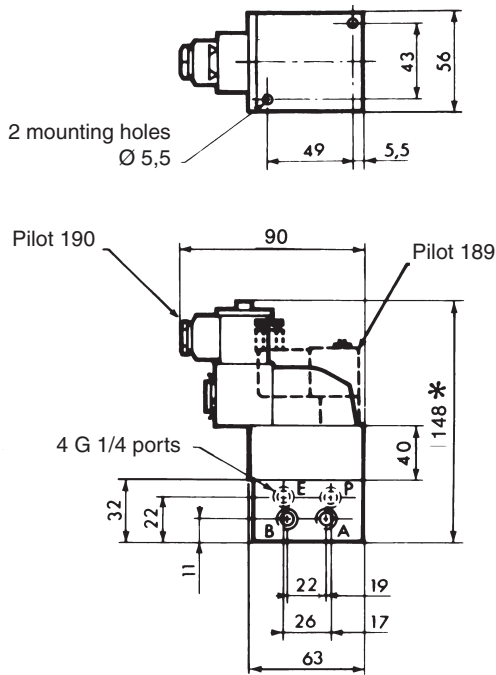
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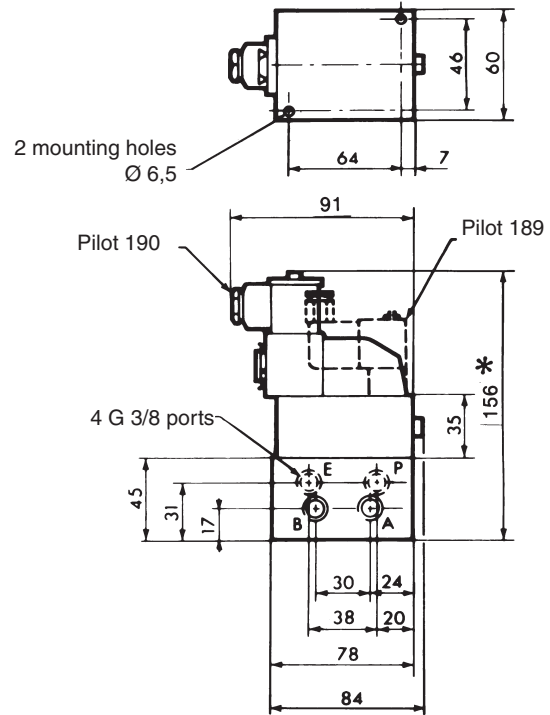
**DIMENSIONS AND WEIGHTS**

**VALVE ON SINGLE SUBBASE**

G 1/4 ports  
Subbase: cat no. **35700003**  
Weight: 0,750 kg

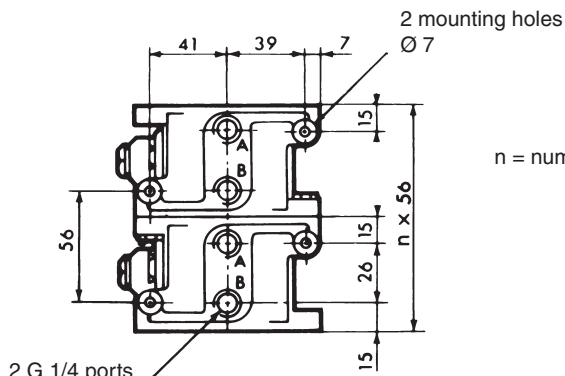


G 3/8 ports  
Subbase: cat no. **35700004**  
Weight: 1,050 kg

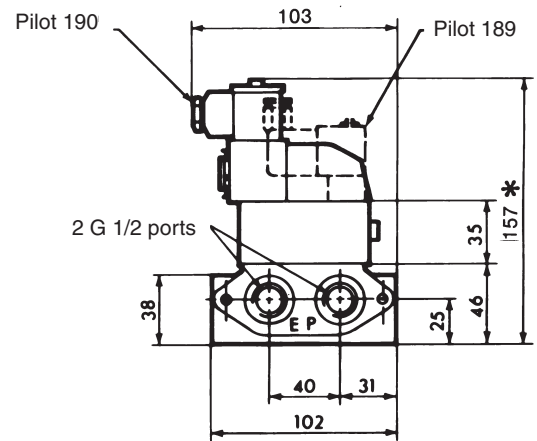
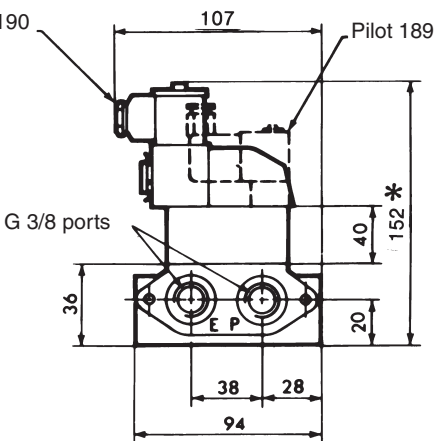
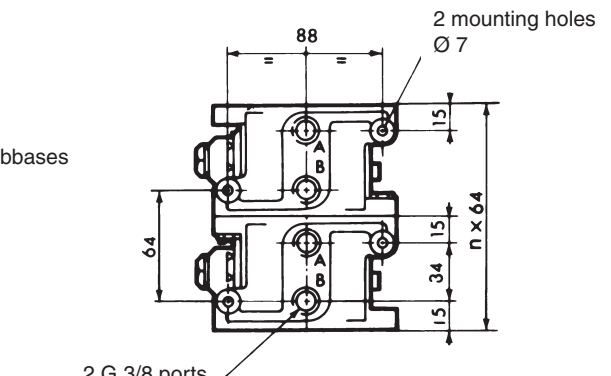


**VALVE ON JOINABLE SUBBASE**

G 1/4 ports  
Subbase: cat no. **35700008**  
Weight: 0,700 kg

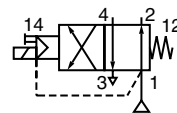


G 3/8 ports  
Subbase: cat no. **35700011**  
Weight: 0,950 kg



\* + 15 mm for connector removal  
+ 16 mm for external solenoid valve supply plate

All leaflets are available on: [www.asco.com](http://www.asco.com)



### GENERAL

FLUID : Air or neutral gas, filtered, lubricated or not  
 PRESSURE : 2 to 10 bar (190 pilot)  
                   2 to 12 bar (192 pilot)  
 AMBIENT TEMPERATURE : -10°C to +60°C  
 FLUID TEMPERATURE : -10°C to +60°C  
 FLOW (Qv at 6 bar) : see table below  
 PILOT PRESSURE : In external supply, the pressure of the pilot fluid  
                           **must be at least** equal to the fluid pressure

### CONSTRUCTION

Body in light alloy  
 Internal parts in steel and light alloy  
 Sealing in nitrile (NBR)  
 Subbases in light alloy



### ELECTRICAL CHARACTERISTICS OF PILOTS

Type of sol. valve		Voltages	Consumption		Insulation class	Protection degree	Electrical connection
			Inrush	Hold			
Series 190	~	24V - 48V - 115V - 230V / 50 Hz	9VA	4VA (3W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	=	24V - 48V	3 W				
Series 192	~	24V - 48V - 115V - 230V / 50 Hz	12VA	6VA(4W)	F	IP 65	
	=	24V - 48V	5 W				

The solenoid valve 190 is dual voltage (24V ~, 12V =) (48V ~, 24V =) (115V ~, 48V =) (230V ~, 115V =).

### SPECIFICATIONS

Pipe size	Orifice size (mm)	Flow		Fluid pressure <sup>(1)</sup> (bar)		2 catalogue numbers		(M)	References
		at 6 bar l/min (ANR)	coeff. KV	mini	maxi	VALVE	PILOT with standard connector		
G 1/2	14	3000	42	2	10/12	<b>26690017</b>	<b>19000005</b> <b>19000006</b> <b>19000017</b>  <b>19201001</b> <b>19201002</b> <b>19201003</b>	×	G/DP 403
G 1	22	9100	130	2	10/12	<b>26790013*</b>			●
G 1 1/2	40	31500	450	2	10/12	<b>26890297*</b>		▼	GDM/DP 407

(M) Type of manual operator on pilot(s): × : without    ● : maintained    ▼ : impulse

(1) 10 bar (with pilot 190) - 12 bar (with pilot 192)

\* This equipment is always supplied with an intermediate amplifier for valves 3/2 - Ø 8 mm, series 261 (cat no. 26190067)

### SUBBASES

For a valve with mounting face	CHARACTERISTICS			catalogue number	References
	Subbase type	Pipe size	Connection type		
CNOMO 06.05.72/73	SINGLE	G 1/2	Side ports	<b>35700018</b>	P/DP 403
AFNOR E49062/63	JOINABLE			<b>35700038</b>	PJ/DP 403
CNOMO 06.05.74	SINGLE	G 1	Side ports	<b>35700020</b>	P/DP 405
AFNOR E49064	JOINABLE			<b>35700040</b>	PJ/DP 405
CNOMO 06.05.75	SINGLE	G 1 1/2	Bottom ports	<b>35700032</b>	P/DP 407

OPTIONS : See overleaf

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**OPTIONS**

- Other voltages or frequency 60 Hz, on request
- 190 series solenoid pilot valve with solenoid head for dusty explosive atmospheres (SG), zone 22
- Solenoid valve, intrinsically safe (contact us)
- Connector with cable outlet, 2 m: cat no. **88122612**
- Solenoid valve with connector and built-in visual indicator and protection

**ORDERING**

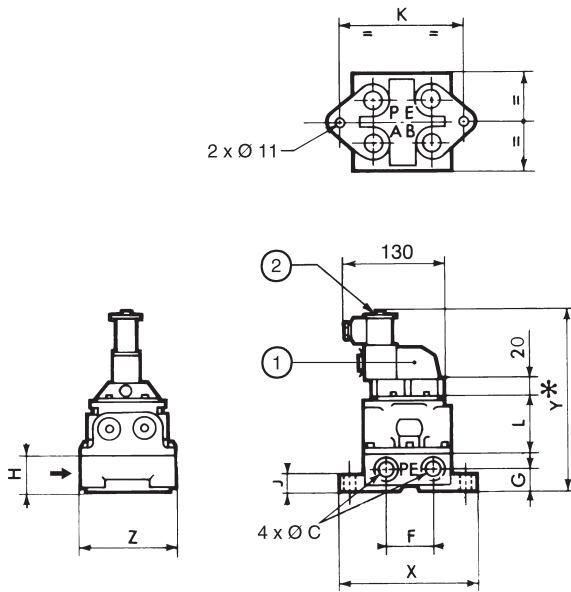
The valve, solenoid pilot and subbase must be ordered separately and the quantity and code of each component must be indicated. These items are delivered disassembled.

**DIMENSIONS AND WEIGHTS OF SUBBASE MOUNTED POPPET VALVES**

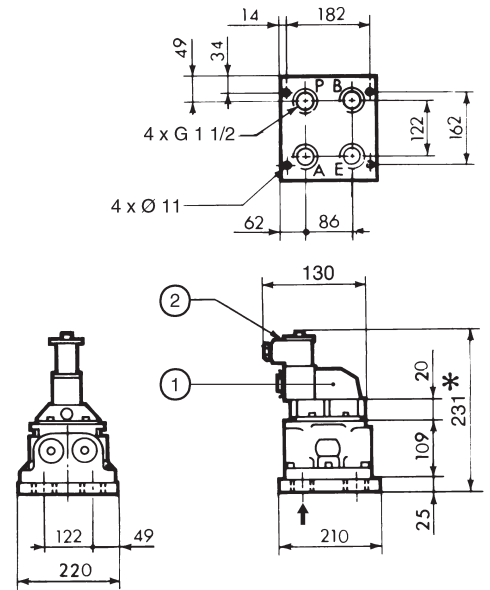
VALVE ON SINGLE SUBBASES

G 1/2 - G 1 (series 266 - 267)

series	266	267
Ø C	G 1/2	G 1
F	57	82
G	26	35
H	45	63
J	20	20
K	133	170
L	63	78
X	162	198
Y	205	238
Z	111	130
Weights (kg)	2,5	4,3

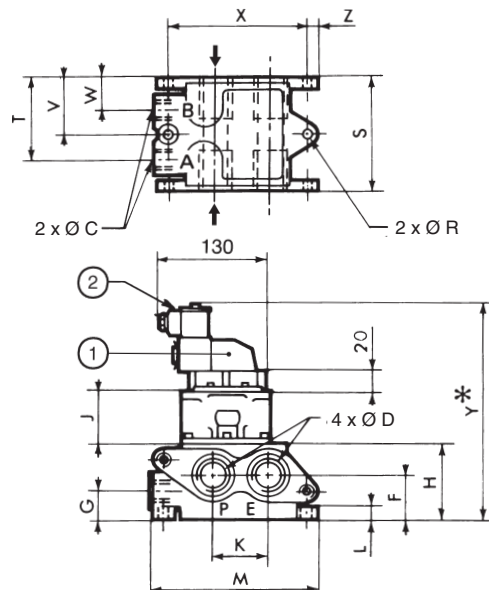


G 1 1/2 (series 268)  
Weight : 8,160 kg



VALVE ON JOINABLE SUBBASES (Series 266 - 267)

series	266	267
Ø C	G 1/2	G 1
Ø D	G 3/4	G 1 1/4
F	36	56
G	25	37
H	65	95
J	63	78
K	49	66
L	14	20
M	152	203
R	11	14
S	114	149
T	85	108
V	57	77
W	29	46
X	130	172
Y	225	270
Z	11	14
Weights (kg)	3	5,9



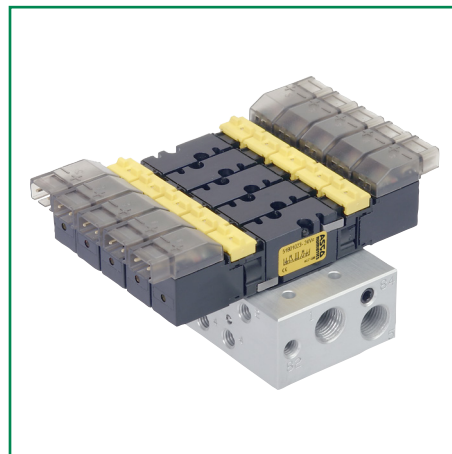
- ① Pilot 190 or 192
- ② Connector rotatable by 90°
- \* + 15 mm for connector clearance

### GENERAL

Fluid	Air or neutral gas, non-lubricated, filtered at 25 µm
Operating pressure	2 to 8 bar
Ambient temperature	+5°C to +50°C
Flow (Qv at 6 bar)	See "specifications"
Manual override	Impulse-type and maintained

### CONSTRUCTION

Body	Light alloy, PA (polyamide)
Internal parts	Light alloy, brass, stainless steel
Seals	NBR (nitrile)



### ELECTRICAL CHARACTERISTICS

voltage (other voltages on request)	consumption	insulation class	protection degree	electrical connection
24V = 12V = (+10%, -15%) 5V =	1 W	F	IP 40	connector with two 0.5 mm <sup>2</sup> lead wires + built-in LED and electrical protection or cable ends, 0,5 m long

The solenoid valves are designed for continuous operation within the maximum ambient temperature limits.

### SPECIFICATIONS

function symbol	operators pilot (14) solenoid air operated return (12)	flow		response time (ms)		consumption (W)	type of electrical connection (*)	catalogue number (1)
		at 6 bar l/min (ANR)	coeff. Kv	energized	de-energized			
3/2 NC 	differential return	100	1,43	9	25	1,3	1	51801002
							2	51801150
							3	51801151
							4	51801152
							5	51801153
3/2 NO 	differential return	100	1,43	9	25	1,3	1	51801004
							2	51801154
							3	51801155
							4	51801156
							5	51801157
5/2 	differential return	100	1,43	9	25	1,3	1	51801021
							2	51801158
							3	51801159
							4	51801160
							5	51801161
5/2 	solenoid air operated return	100	1,43	6	-	1,3	1	51801023
							2	51801162
							3	51801163
							4	51801164
							5	51801165
5/3 	pressure held W1	80	1,15	8	15	1,3	1	51801031
							2	51801166
							3	51801167
							4	51801168
							5	51801169
5/3 	pressure release W3	80	1,15	8	15	1,3	1	51801033
							2	51801170
							3	51801171
							4	51801172
							5	51801173

(\*) Type 1, 2, 3, 4 with LED and electrical protection

1 = horizontal, width 5,08 mm

2 = vertical, width 5,08 mm

3 = horizontal, width 2,54 mm

4 = vertical, width 2,54 mm

5 = Cable ends 0,5 m long, 0,25 mm<sup>2</sup>

(1) The connectors must be ordered **separately** indicating the quantity and one of the following codes:

Connectors with 2 lead wires

Pin spacing 5,08 mm - Length 0,5 m - **cat.no.: 88118801**

- Length 1,5 m - **cat.no.: 88118802**

- Length 3 m - **cat.no.: 88118803**

Pin spacing 2,54 mm

- Length 0,5 m - **cat.no.: 88118806**

- Length 1,5 m - **cat.no.: 88118807**

- Length 3 m - **cat.no.: 88118808**



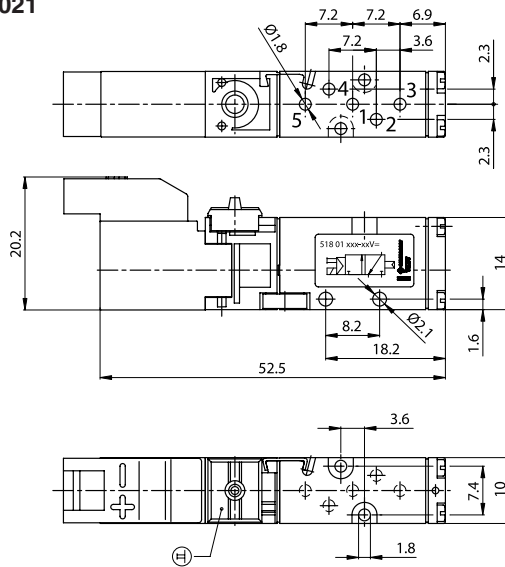
**SUBBASES** : see overleaf

**DIMENSIONS (mm), WEIGHT (kg)**

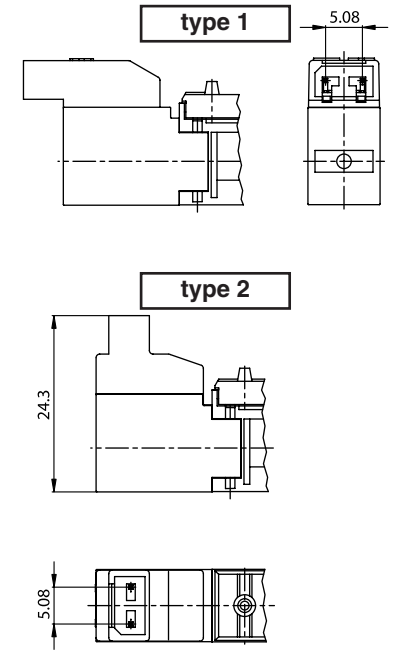
**MICRO SPOOL-VALVES 3/2 - 5/2**  
cat.no. 51801002, 51801004, 51801021

weight	
spool-valve	1 connector
0,023	0,005

- 1 = pressure  
2,4 = outlets  
3,5 = exhausts



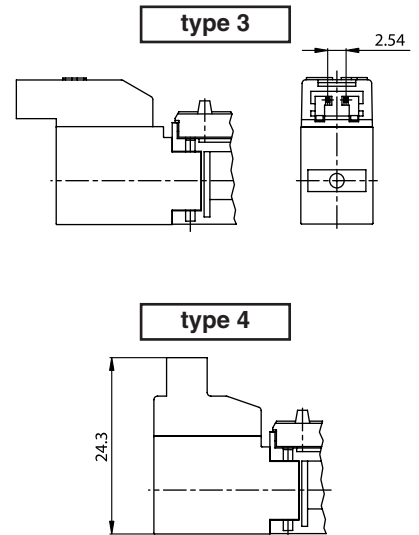
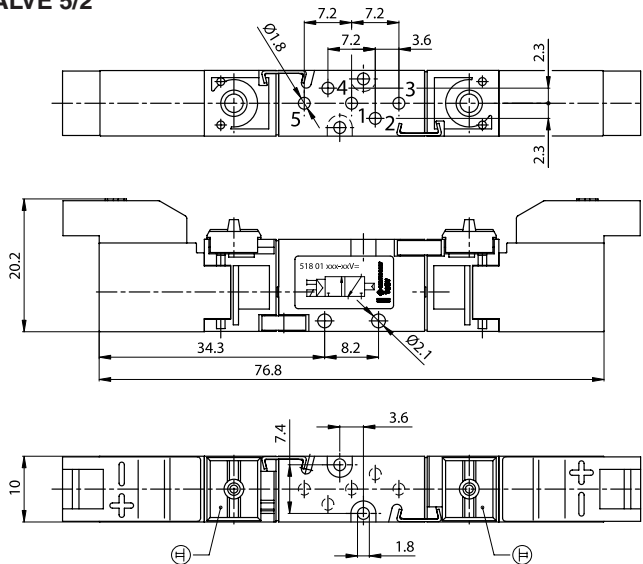
**ELECTRICAL CONNECTION**



**IMPULSE MICRO SPOOL-VALVE 5/2**  
cat.no. 51801023

weight	
spool-valve	2 connectors
0,037	0,010

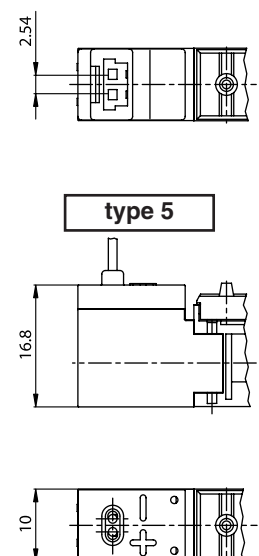
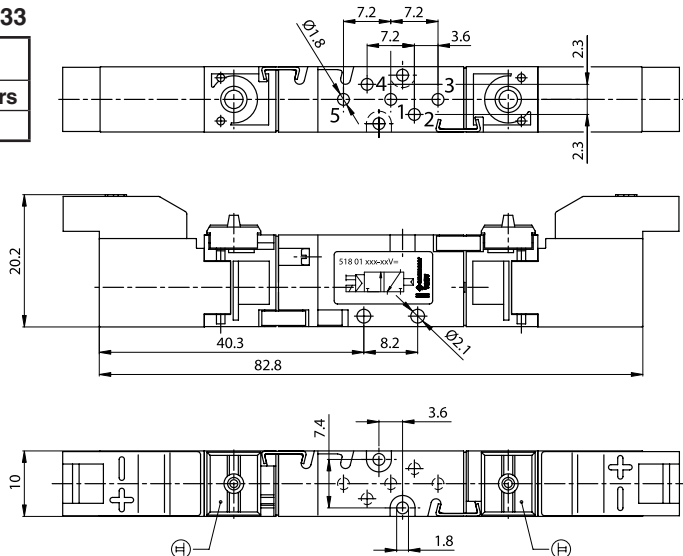
- 1 = pressure  
2,4 = outlets  
3,5 = exhausts



**MICRO SPOOL-VALVES 5/3**  
cat.no. 51801031, 51801033

weight	
spool-valve	2 connectors
0,040	0,010

- 1 = pressure  
2,4 = outlets  
3,5 = exhausts



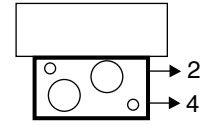
All leaflets are available on: [www.asco.com](http://www.asco.com)

28 - Pneumatic Valves (3/2 - 5/2 - 5/3)



# SUBBASES

for solenoid air operated spool valves  
with subbase-mounted body,  
Ø M5 side ports



Series  
**355**  
Type  
Micro 10

## CONSTRUCTION

Utilization connector (2-4)

ØM5 (on sides)

Material

Light alloy

## SUBBASES IDENTIFICATION - WEIGHT (kg)

subbase type	no. of spool valves	subbase code	subbase weight	port connection				
				1	3	5	2-4	82-84
single subbase	1	35500251	0,016	M5	M5	M5	M5	M3
	2	35500252	0,092	G 1/8	-	G 1/8	M5	M5
multiple subbases	3	35500253	0,120					
	4	35500254	0,142					
	5	35500255	0,165					
	6	35500256	0,190					
	7	35500257	0,213					
	8	35500258	0,236					
	9	35500259	0,260					
	10	35500260	0,284					

Blanking plate: **cat.no. 88135533**



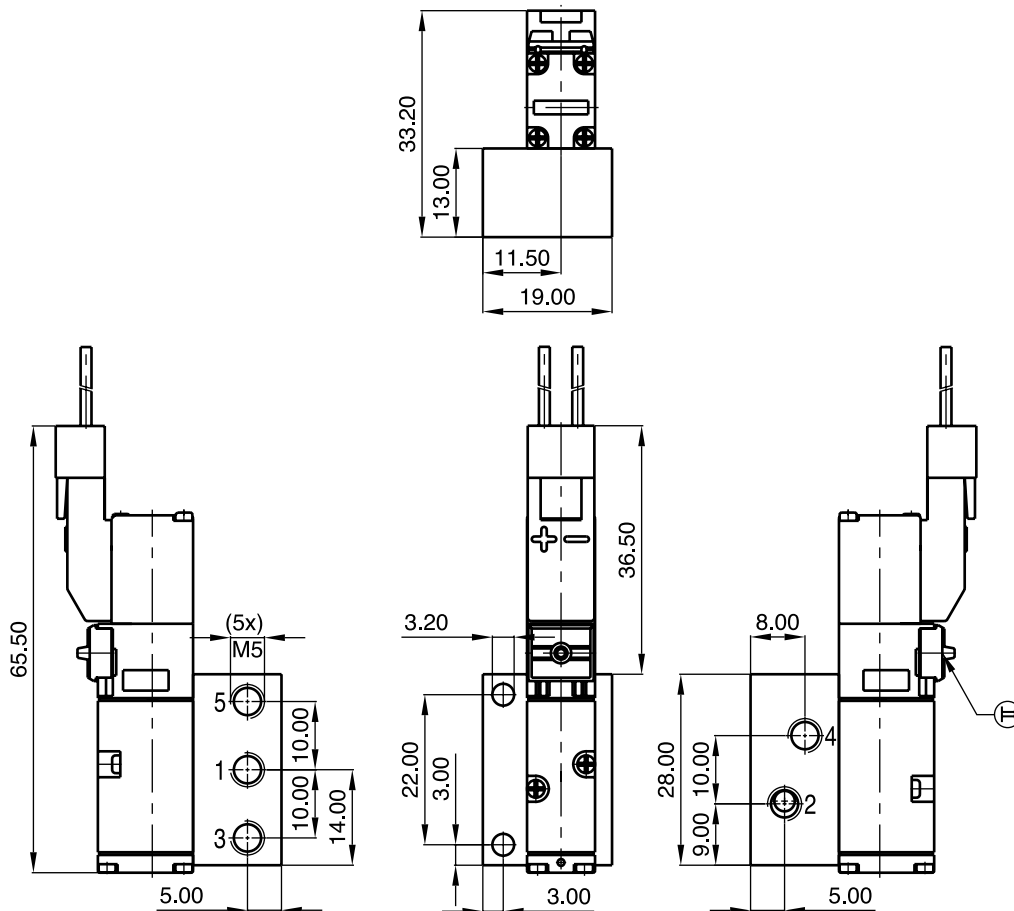
82-84 : Pilot exhaust

Multiple subbases :

The 1-5-82-84 ports can be connected at both ends. Subbases are delivered with sealing plugs.

## DIMENSIONS (mm)

3/2 - 5/2 - 5/3 SPOOL-VALVES ON SIMPLE SUBBASE (cat.no. 35500251)



00315GB-2016/R01  
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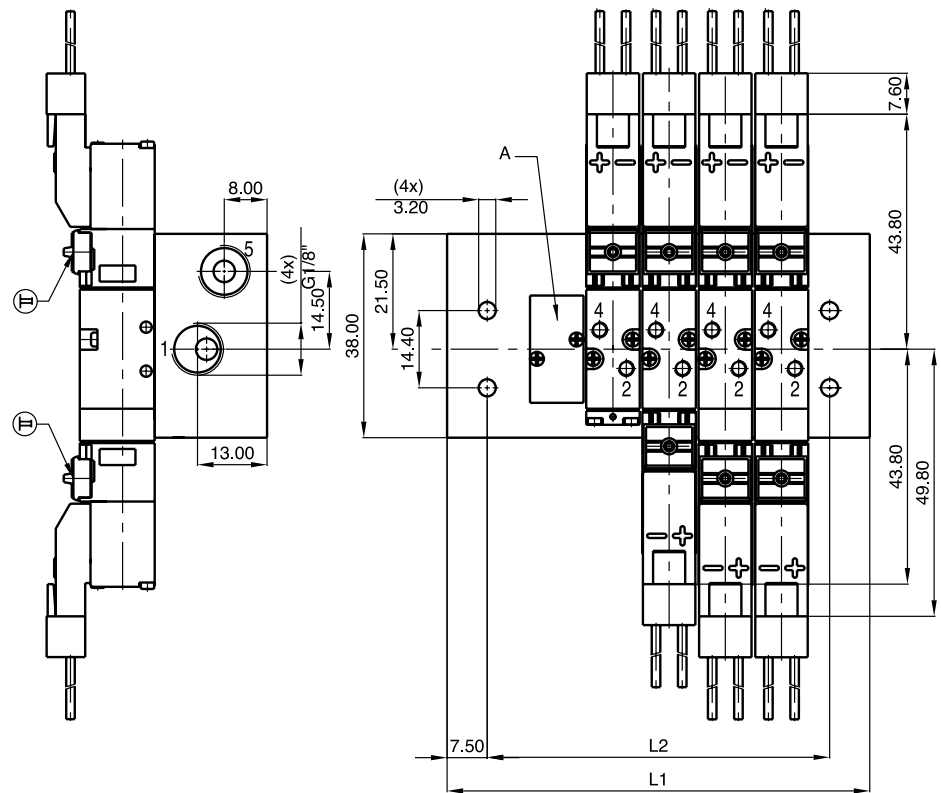
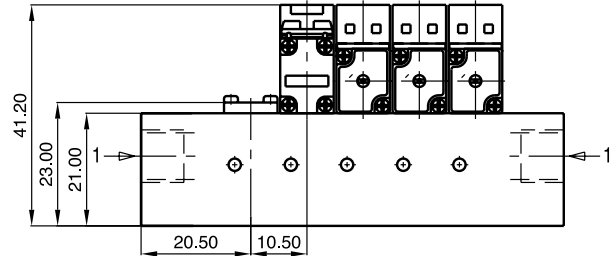
All leaflets are available on: [www.asco.com](http://www.asco.com)

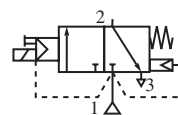
**DIMENSIONS (mm), WEIGHT (kg)**

3/2 - 5/2 - 5/3 SPOOL-VALVES ON **MULTIPLE** SUBBASE  
**Solenoid operated** micro spool valves subbase

subbase catalogue number	no. of spool valves	length		subbase weight
		L1	L2	
35500252	2	47,5	32,5	0,092
35500253	3	58	43	0,120
35500254	4	68,5	53,5	0,142
35500255	5	79	64	0,165
35500256	6	89,5	74,5	0,190
35500257	7	100	85	0,213
35500258	8	110,5	95,5	0,236
35500259	9	121	106	0,260
35500260	10	131,5	116,5	0,284

A: Blanking plate: **cat.no. 88135533**





## GENERAL

<b>Fluid</b>	Air or neutral gaz, filtered, lubricated or not
<b>Operating pressure</b>	1,5 to 8 bar
<b>Ambient temperature</b>	+5°C to +50°C
<b>Flow (Qv at 6 bar)</b>	400 l/min (ANR) - Kv : 5,7
<b>Response time</b>	energized 15 ms de-energized 45 ms
<b>Connection</b>	Instant fittings Ø 6 O.D. or G 1/4 subbases
<b>Mounting</b>	individual or joinable subbases

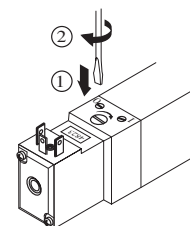
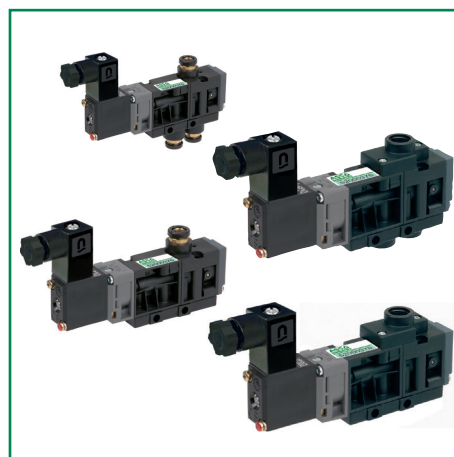
## CONSTRUCTION

### SPOOL VALVES

<b>Body</b>	POM (polyacetal)
<b>Cover</b>	POM (polyacetal)
<b>Internal parts</b>	POM (polyacetal) and brass
<b>Seals</b>	NBR (nitrile)
<b>Manual operator</b>	Maintained, impulse Latchable in hold position (push-turn)

### PILOT

<b>Seals</b>	NBR (nitrile)
<b>Electrical equipment</b>	Conforming to NF C79300 standard
<b>Coil and iron circuit</b>	Encapsulated



## ELECTRICAL CHARACTERISTICS

voltages		consumption	insulation class	protection degree	electrical connection
~	24V, 115V, 230V - 50/60Hz	2 VA (1,5 W)	F	IP 65	spade plug size 15 connector, DIN 43650, 9,4 mm, industry standard B, rotatable by 90°
=	24V	1,6 W			

## SPECIFICATIONS

function symbol	operators solenoid air operated pilot (14) return (12)	connection		catalogue number			
		port 2	ports 1-3	24V ~	115V ~	230V ~	24V =
	differential return	instant fitting 6 mm O.D.	inst. fitting 6mm O.D.	52000214	52000215	52000216	52000213
			subbase mounted	52000210	52000211	52000212	52000209
		tapped G 1/8	tapped G 1/8	52000194	52000195	52000196	52000193
			subbase mounted	52000190	52000191	52000192	52000189

3/2 NO version (operating pressure 2,5 to 8 bar) : on request

## ACCESSORIES

visual indicator (LED) and electrical protection (  )	24V =/~	88130401
	115V ~	88130402
	230V ~	88130403
connector size 15 with cable, 2 m long		88143567
connector size 15 with built-in visual indication and protection, with cable outlet, 2 m long (  )	24V =/~	88143580

## SUBBASES

possible mounting on joinable subbases. Fixing screws and seals are supplied with subbases

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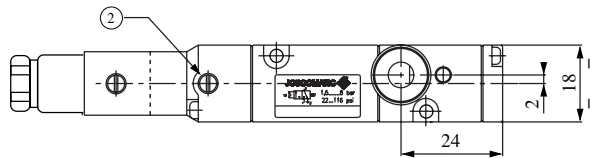
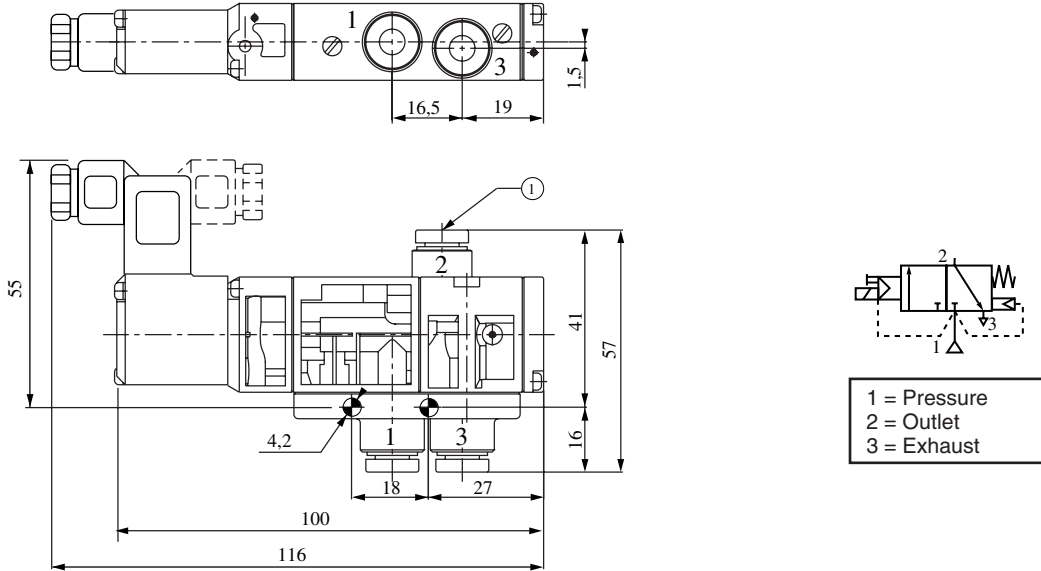
All leaflets are available on: [www.asco.com](http://www.asco.com)

**DIMENSIONS (mm), WEIGHT (kg)**

**Individual mounting version**

Connection with instant fitting

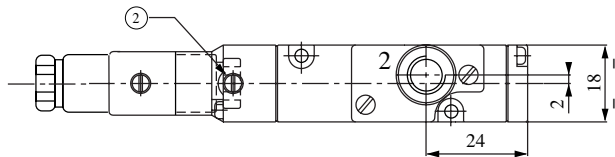
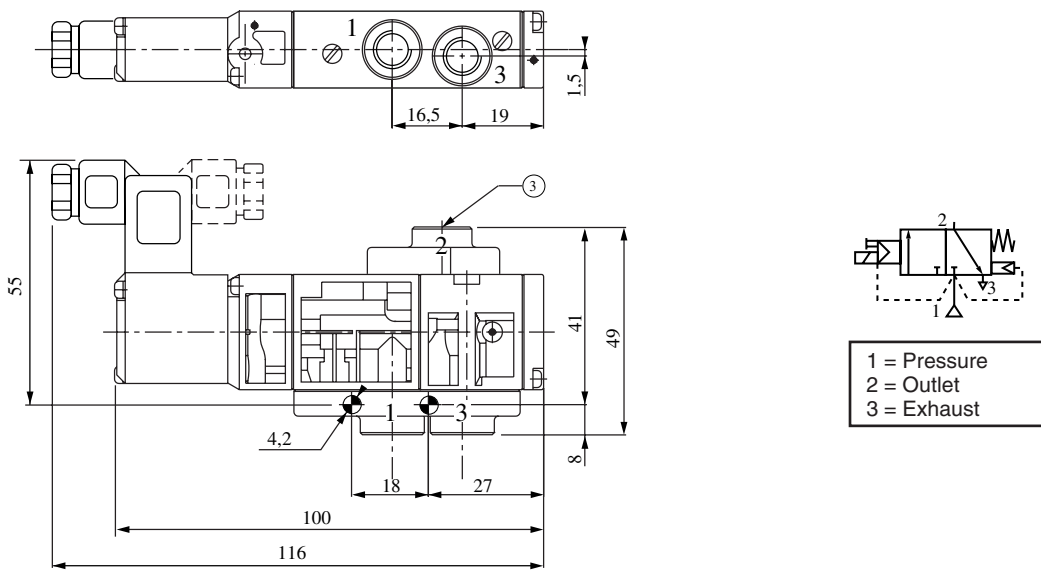
Weight : 0,102




- ① 3 instant fittings Ø6 mm O. D. tube
- ② Manual operator

Tapped G 1/8 connection

Weight : 0,094

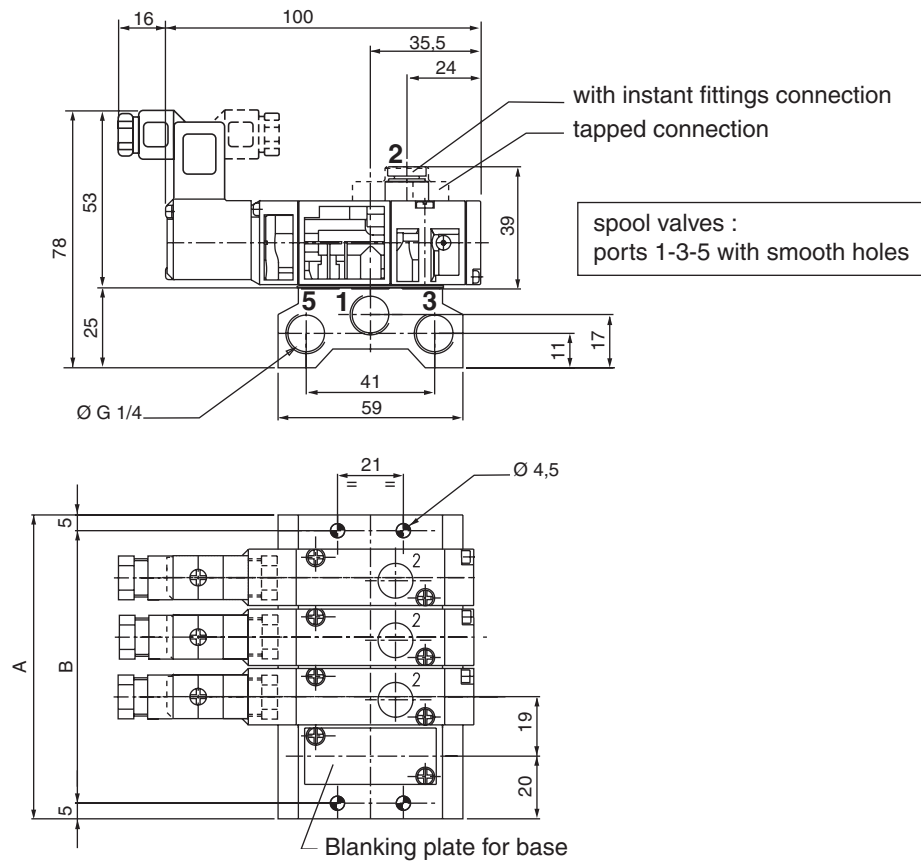


- ② Manual operator
- ③ 3 x ports tapped G 1/8

**DIMENSIONS (mm), WEIGHT (kg)** 

**Subbase mounted version**

Weight, valve only : 0,086



number of spool valves	A	B	weight*
2	59	49	0,145
3	78	68	0,195
4	97	87	0,240
5	116	106	0,290
6	135	125	0,340
7	154	144	0,385
8	173	163	0,435
9	192	182	0,485
10	211	201	0,530

\* subbases only

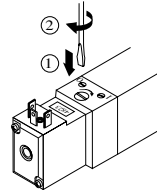
## GENERAL

Fluid	Air or neutral gaz, filtered, lubricated or not
Operating pressure	1,5 to 8 bar
Ambient temperature	+5°C to +50°C
Orifice size	519 : 2,5 mm; 520 : 4 mm; 521 : 6 mm
Flow (Qv at 6 bar)	series 519 175 l/min (ANR) - Kv : 2,5 series 520 600 l/min (ANR) - Kv : 8,5 series 521 1050 l/min (ANR) - Kv : 15

## CONSTRUCTION

### SPOOL VALVES

Body	Anodised white aluminium
Cover	POM (polyacetal)
Internal parts	Stainless steel, light alloy and POM (polyacetal)
Seals	NBR (nitrile)
Manual operator	Maintained, impulse Latchable in hold position (push-turn)



## PILOT

Seals	NBR (nitrile)
Electrical equipment	Conforming to NF C79300 standard
Coil and iron circuit	Encapsulated

## ELECTRICAL CHARACTERISTICS

voltages		consumption	insulation class	protection degree	electrical connection
~	24V, 115V, 230V - 50/60Hz	2 VA (1,5 W)	F	IP 65	spade plug size 15 connector, DIN 43650, 9,4 mm, industry standard B, rotatable by 90°
=	24V	1,6 W			

## SPECIFICATIONS

function symbol	operators solenoid air operated pilot (14) return (12)	response time (ms)		voltages	catalogue number			
		energized	de-energized		serie 519	serie 520	serie 521	
	spring return	20	30	24V ~ 115V ~ 230V ~	- - -	52000386 52000387 52000388	- - -	
	differential return	20	30	24V ~	51900002	52000002	52100002	
				115V ~ 230V ~	51900003 51900004	52000003 52000004	52100003 52100004	
	solenoid air return	20	-	24V ~	51900006	52000006	52100006	
				115V ~ 230V ~	51900007 51900008	52000007 52000008	52100007 52100008	
	pressure held <b>W1</b>	20	50	24V ~	51900010	52000010	52100010	
				115V ~	51900011	52000011	52100011	
				230V ~	51900012	52000012	52100012	
		pressure applied <b>W2</b>	20	50	24V ~	51900126	52000126	52100126
					115V ~	51900127	52000127	52100127
					230V ~	51900128	52000128	52100128
		pressure release <b>W3</b>	20	50	24V ~	51900087	52000087	52100087
					115V ~	51900088	52000088	52100088
					230V ~	51900089	52000089	52100089
				24V =	51900090	52000090	52100090	

## OPTIONS AND ACCESSORIES

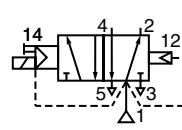
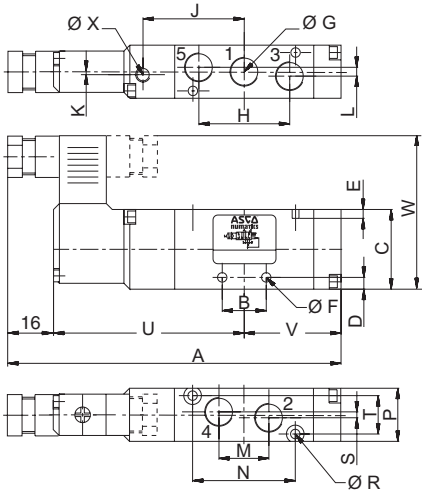
UR approval « UL Recognized »	24V =/~	612102
visual indicator (LED) and electrical protection (  )	24V =/~ 115V ~ 230V ~	88130401 88130402 88130403
connector size 15 with cable, 2 m long		88143567
connector size 15 with built-in visual indication and protection, with cable outlet, 2 m long (  )	24V =/~	88143580
flange for ports 2 - 4 with instant fittings for flexible tube 6 mm O.D. (series 520)		88135532

**SUBBASES** : possible mounting on joinable subbases ( ). Fixing screws and seals are supplied with subbases

All leaflets are available on: [www.asco.com](http://www.asco.com)

**DIMENSIONS (mm), WEIGHT (kg)**

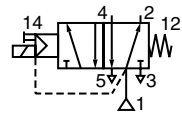
**5/2 differential return and spring return**



series	A	V
519	97,5	25
520	114	33,2
521	131,3	41,6

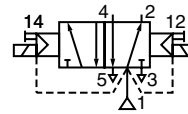
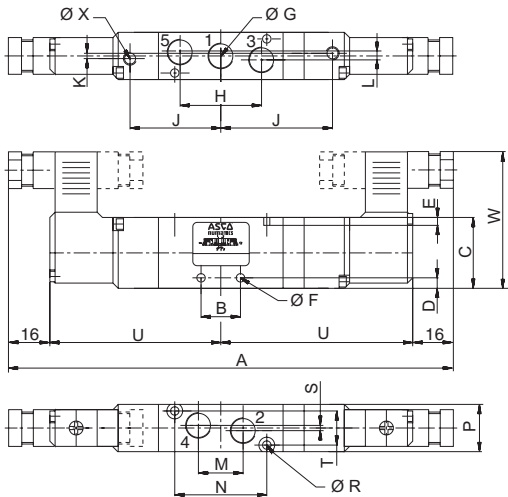
weight	
519	0,085
520	0,095
521	0,155

series	B	C	D	E	ØF	ØG	H	J	K	L	M	N	P	ØR	S	T	U	W	ØX	
5/2	519	11	26	4	4	3,3	M5	21,6	26	-	-	11	19	15	2,7	6	11	56,5	52	4
	520	15	27	6	3	3,3	G1/8	32,4	34,3	1	3	16,2	35	18	3,2	-	13	64,8	54,5	4
	521	22	31	6,5	4	4,3	G1/4	44	43,2	-	4	22	50	22	4,2	4	16	73,7	56,5	3



series	A	V
519	97,5	-
520	123,3	42,5
521	131,3	-

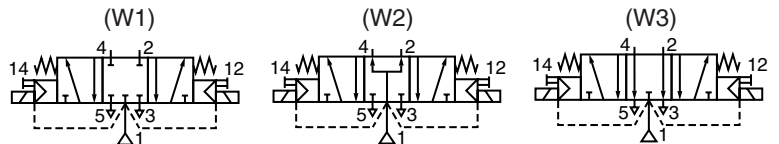
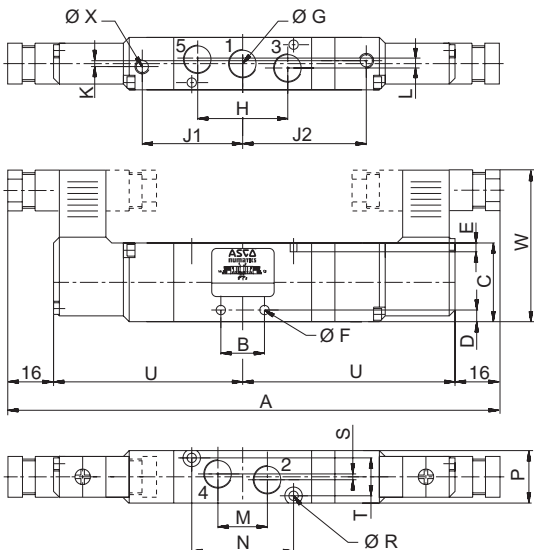
**5/2 solenoid air return**



weight	
519	0,135
520	0,160
521	0,200

series	A	B	C	D	E	ØF	ØG	H	J	K	L	M	N	P	ØR	S	T	U	W	ØX	
5/2	519	145	11	26	4	4	3,3	M5	21,6	26	-	-	11	19	15	2,7	6	11	56,5	52	4
	520	161,5	15	27	6	3	3,3	G1/8	32,4	34,3	2	3	16,2	35	18	3,2	-	13	64,8	54,5	4
	521	179,5	22	31	6,5	4	4,3	G1/4	44	43,2	-	4	22	50	22	4,2	4	16	73,7	56,5	3

**5/3 solenoid air return**



series	A	B	C	D	E	ØF	ØG	H	J1	J2	K	L	M	N	P	ØR	
5/3	519	153	11	26	4	4	3,3	M5	21,6	26	34	-	-	11	19	15	2,7
	520	170,3	15	27	6	3	3,3	G1/8	32,4	34,3	43,3	1	3	16,2	35	18	3,2
	521	188,3	22	31	6,5	4	4,3	G1/4	44	43,2	52,1	-	4	22	50	22	4,2

series	S	T	U	V	W	ØX	weight	
5/3	519	6	11	56,5	64,5	52	4	0,140
	520	-	13	64,8	73,7	54,5	4	0,170
	521	4	16	73,7	82,6	56,5	3	0,210

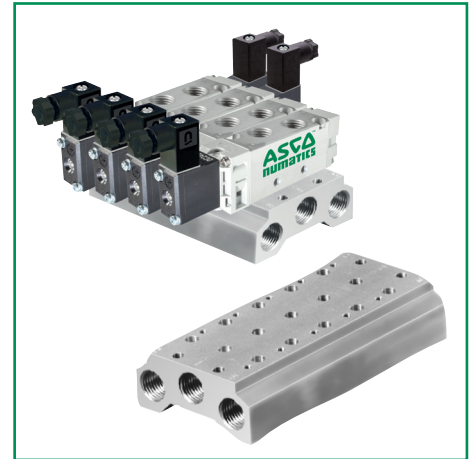
00439GB-2017/R01  
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### SPECIFICATIONS

number of valves	catalogue number		
	519 (M5)	520 (G 1/8)	521 (G 1/4)
2	35500324	35500333	35500342
3	35500325	35500334	35500343
4	35500326	35500335	35500344
5	35500327	35500336	35500345
6	35500328	35500337	35500346
7	35500329	35500338	35500347
8	35500330	35500339	35500348
9	35500331	35500340	35500349
10	35500332	35500341	35500350
flange (1)	-	88135532	-
blanking plate (2)	88135526	88135527	88135528

Subbases in light alloy are supplied with screws and seals for valve adaptation.  
Ports 1-3-5 can be connected at the 2 subbase ends.  
These subbases come with 3 plugs for ports 1-3-5.



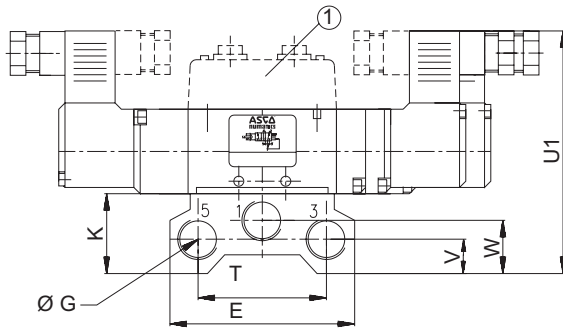
### MOUNTING RECOMMENDATIONS

5 spool valves at most can be **simultaneously** operated without pressure loss. To operated more valves, pressure must be supplied through appropriate inlets on each side of the subbase.

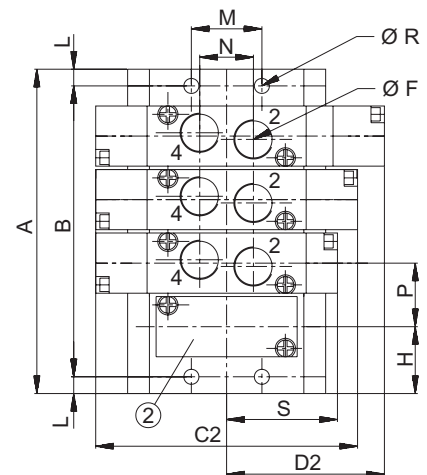
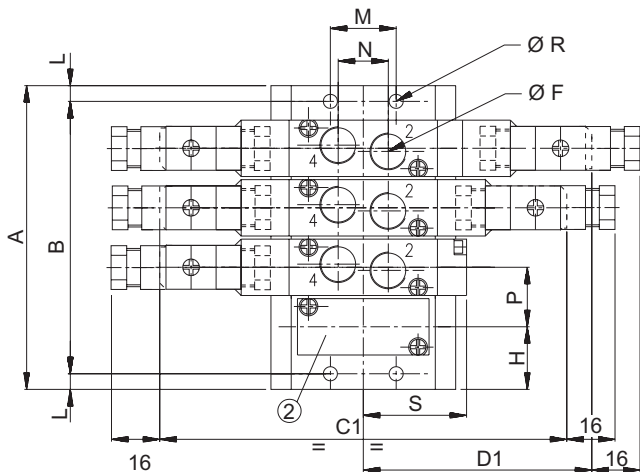
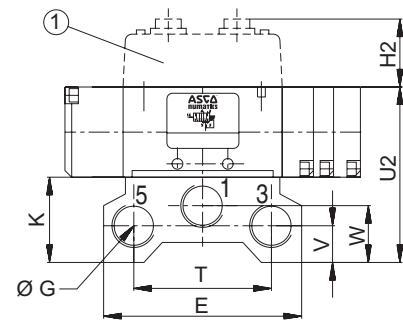
### DIMENSIONS (mm), WEIGHT (kg)



Solenoid air operator



Air operator



\* subbases only

number of valves	A			B			weight*		
	519	520	521	519	520	521	519	520	521
2	59	59	77	41	49	63	105	145	300
3	75	78	100	57	68	86	135	195	390
4	91	97	123	73	87	109	165	240	485
5	107	116	146	89	106	132	195	290	575
6	123	135	169	105	125	155	225	340	670
7	139	154	192	121	144	178	250	385	760
8	155	173	215	137	163	201	280	435	855
9	171	192	238	153	182	224	310	485	945
10	187	211	261	169	201	247	340	530	1040

- ① Flange for ports 2-4 with instant fittings for flexible tube 6 mm O.D. (520), and with pressure indicators
- ② Blanking plate for base

series	C1	C2	D1	D2	E	ØF	ØG	H	H2	K	L	M	N	P	ØR	S	T	U1	U2	V	W
519	113	61	64,5	38,5	46	M5	G1/8	21,5	15	20	9	16	11	16	4,5	25	32	72	46	8	13
520	129,5	85	73,2	51,5	59	G1/8	G1/4	20	23	25	5	21	16,2	19	4,5	33,5	41	80	52,5	11	17
521	143,7	100	82,6	59	74	G1/4	G3/8	27	-	30	7	26	22	23	5,5	41,5	52	87,5	62	13	19

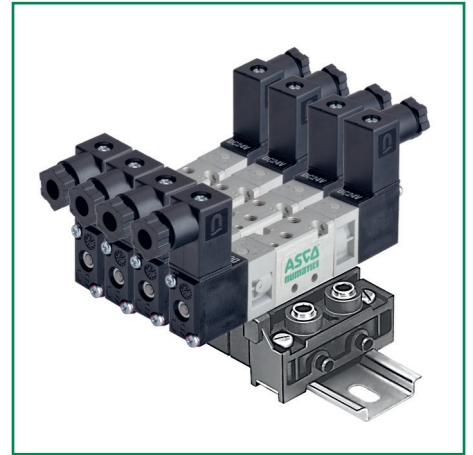
Series 520 spring return, dimension S = 51

All leaflets are available on: [www.asco.com](http://www.asco.com)



### CONSTRUCTION

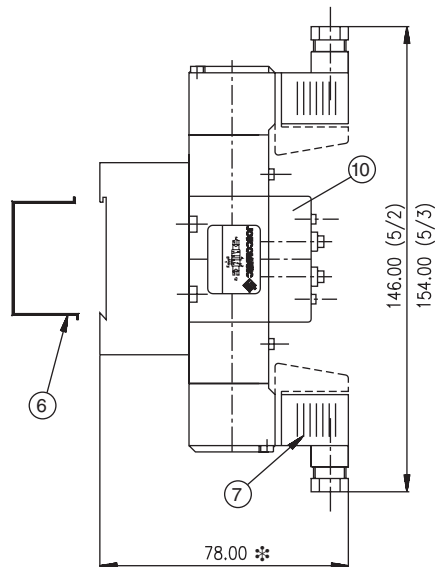
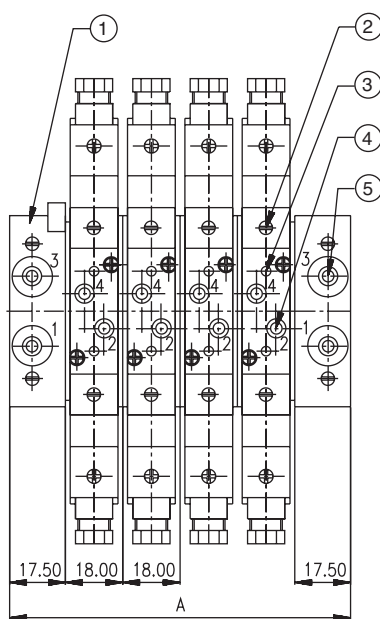
Subbase and flange in glass filled polyamide 6/6 (PA + FG)  
Pressure indicator for ports 2 and 4, on flange, in polyether



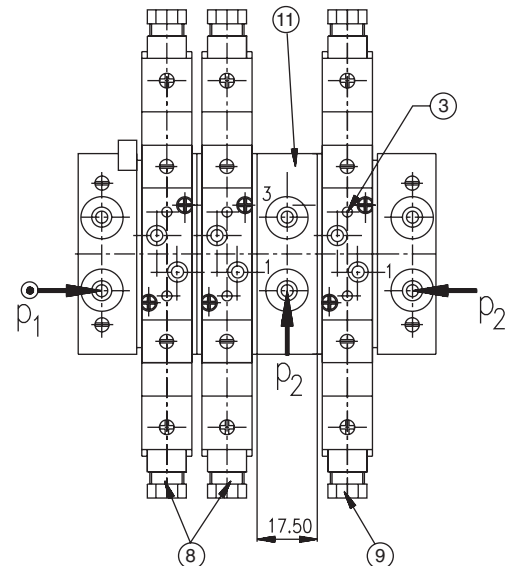
### SPECIFICATIONS

description	cat. number
joinable subbase + 1 flange (with instant fittings for tube 4 mm O.D.) + locking screw	35500149
set of 2 ends (with instant fittings for tube 6 mm O.D.)	30400001
intermediate supply module (with instant fittings for 6 mm O.D.)	30400004
flange for ports 2 - 4, with pressure indicators and instant fittings for flexible tube 4 mm O.D.	88135525
blanking plate for base series 519	88135526
visual indicator (LED) and electrical protection (see section "Coils and Accessories")	24V =/~ 88130401 115V~ 88130402 230V~ 88130403

### DIMENSIONS (mm)



### MOUNTING WITH 2 DIFFERENT PRESSURE SUPPLIES



number of valves	3	4	5	6	7	8
A **	89	107	125	143	161	179

NOTE : Pressure supply (1) and exhaust (3) ports can be connected to the left or to the right side [plug unused port (1)]  
For pressure supply in P2, plug the port left unused  
\* + 15 mm for plug removal  
\*\* When mounting with an intermediate supply module, add 17,5 mm to dimension A

- ① End plate
- ② Manual operator (Push - Turn)
- ③ Pressure indicator on ports 2 and 4 (on flange)
- ④ Instant fittings for flexible tube 4 mm O.D.
- ⑤ Instant fittings for flexible tube 6 mm O.D.
- ⑥ Symmetrical rail EN 50 022
- ⑦ Connector rotatable x 180°
- ⑧ Valves with pressure supply in P1
- ⑨ Valve(s) with pressure supply in P2
- ⑩ Flange for ports 2 - 4
- ⑪ Intermediate supply module for 2 different pressure supplies

All leaflets are available on: [www.asco.com](http://www.asco.com)

All leaflets are available on: [www.asco.com](http://www.asco.com)

38 - Pneumatic Valves (5/2 - 5/3)

**BCAE**  
Automation Solutions

青岛秉诚自动化设备有限公司  
地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F

服务热线：4006-918-365  
网址：<http://www.ivalve.cc>

传真：(86-532)585-10-365  
Email：[sales@bechinas.com](mailto:sales@bechinas.com)

## FEATURES

- Reliability: steel spool & sleeve technology with long service life
- Robust valve design, particularly recommended for use in high-temperature or dirty environments

## GENERAL

**Fluids** Air or neutral gas, filtered, lubricated or not  
**Operating pressure** 1 to 10 bar (with internal supply to pilot)  
 -0,950 to 15 bar (with external supply to pilot)  
**Ambient temperature** -20°C to +80°C  
**Flow (Qv at 6 bar)** See "SPECIFICATIONS"

## CONSTRUCTION

**Body** Aluminium, anodised, painted grey  
**Internal parts** Stainless steel, POM (polyacetal), aluminium  
**Static seals** NBR (nitrile)

## INTEGRATED PILOT

**Seals** NBR (nitrile)  
**Electrical equipment** Conforming to VDE 0580  
**Solenoid coil** Encapsulated  
**Exhaust** Over brass exhaust protector

## ELECTRICAL CHARACTERISTICS

	voltage	consumption		insulation class	protection degree	electrical connection
		inrush	hold			
~	24V - 48V - 115V - 230V / 50Hz	10 VA	7 VA	F	IP 65	spade plug size 22 connector DIN 43650, 11 mm industry standard B
=	24V - 48V	3,35 W				

## SPECIFICATIONS

function symbol	operators pilot (14) solenoid air operated return (12)	port size	débit		catalogue number without connector (1)	(M)				
			at 6 bar (l/min)	Kv (m³/h)						
 <b>5/2</b>	spring return	G 1/8	1000	0,87	L11BA452XG000YY	●				
		G 1/4			L12BA452XG000YY					
 <b>5/3</b>	solenoid air operated return	G 1/8			1000	0,87	L11BB452XG000YY	●		
		G 1/4					L12BB452XG000YY			
	pressure held <b>W1</b>	G 1/8					1000	0,87	L11BB652XG000YY	●
		G 1/4							L12BB652XG000YY	
	pressure applied <b>W2</b>	G 1/8	1000	0,87					L11BB752XG000YY	●
		G 1/4							L12BB752XG000YY	
pressure released <b>W3</b>	G 1/8	1000			0,87	L11BB552XG000YY			●	
	G 1/4					L12BB552XG000YY				

(M) Type of manual operator on pilot(s): ● : maintained

(1) For connectors:

type of current	<b>X</b>
AC (alternating current)	<b>0</b>
DC (direct current)	<b>B</b>

voltage	<b>YY</b>
24V DC	<b>61</b>
115 VAC - 50/60 Hz	<b>30</b>
24 VAC - 50/60 Hz	<b>20</b>
230 VAC - 50/60 Hz	<b>40</b>

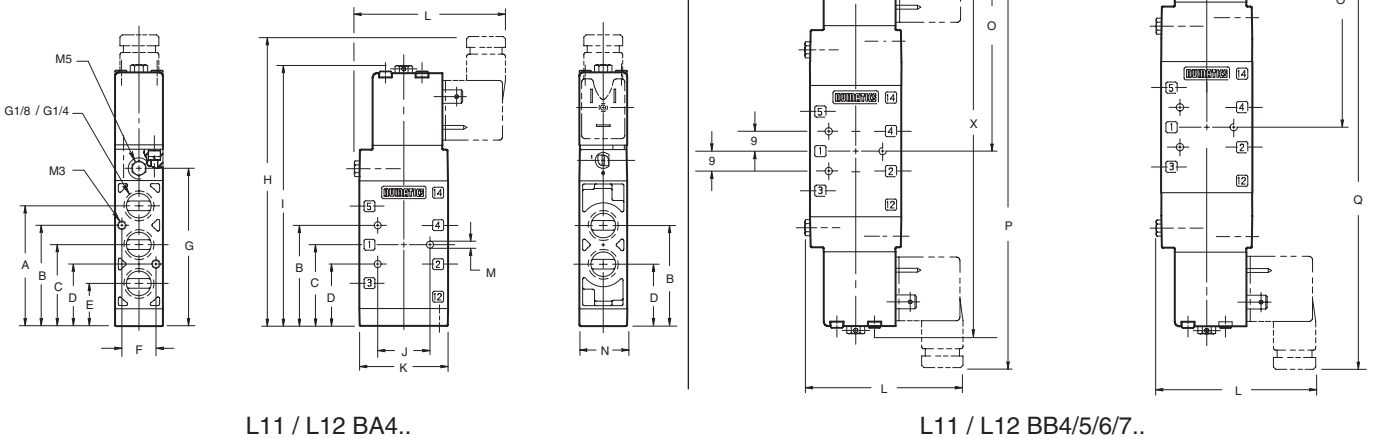
## OPTIONS (on request)

- Low power consumption 1,4 W (only in DC)
- Version for higher pressures up to 15 bar
- Version for higher temperatures up to 150 °C
- Stainless steel body
- Equipment for use in potentially explosive gas or dust atmospheres (ATEX directive 2014/34/EU)



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**DIMENSIONS (mm), WEIGHT (kg)**



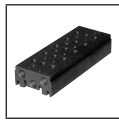
L11 / L12 BA4..

L11 / L12 BB4/5/6/7..

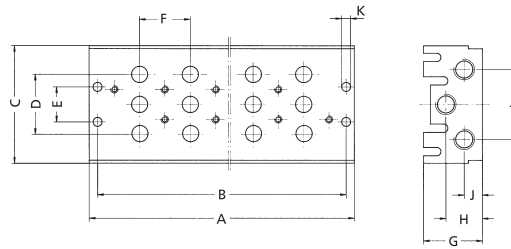
External air supply in M5

catalogue number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	weight
L11BA4.. L12BA4..	56,1	47,0	38,1	29,0	19,8	15,7	73,6	137,4	123,2	24,4	41,1	70,4	3,3	22,4	109,7	209,0	219,5	0,270
L11BB4/5/6/7.. L12BB4/5/6/7..																		0,420

**SUBBASES**



**Multiple subbase**  
front mounting  
threaded ports G 1/4



number of valves	A	B	C	D	E	F	G	H	J	K	L	weight	catalogue number
2	88,5	78,5	70,6	36	21	30,5	35,5	22	11	5,3	42	0,410	106-540
3	119,0	109,0	70,6	36	21	30,5	35,5	22	11	5,3	42	0,550	106-541
4	149,5	139,5	70,6	36	21	30,5	35,5	22	11	5,3	42	0,690	106-542
5	180,0	170,0	70,6	36	21	30,5	35,5	22	11	5,3	42	0,830	106-543
6	210,5	200,5	70,6	36	21	30,5	35,5	22	11	5,3	42	0,970	106-544
7	241,0	231,0	70,6	36	21	30,5	35,5	22	11	5,3	42	1,120	106-545
8	271,5	261,5	70,6	36	21	30,5	35,5	22	11	5,3	42	1,260	106-546
9	302,0	292,0	70,6	36	21	30,5	35,5	22	11	5,3	42	1,400	106-547
10	332,5	322,5	70,6	36	21	30,5	35,5	22	11	5,3	42	1,540	106-548
11	363,0	353,0	70,6	36	21	30,5	35,5	22	11	5,3	42	1,680	106-549
12	393,5	383,5	70,6	36	21	30,5	35,5	22	11	5,3	42	1,820	106-550

Note: Valves can only be mounted on subbase with adapter plate 239-311

**ACCESSORIES**

illustration	designation	application	dimensions			weight	catalogue number
			length	width	height		
	Adapter plate*	1 plate per station	59,2	22,1	5,6	0,020	239-311
	Blanking plate**	only for multiple subbase, front mounting	59,2	22,1	11,9	0,040	239-288
-	Blocking plugs	to separate channels "1", "3" & "5"	-	-	-	-	20.5499
-	Blocking screws G 1/4	to close ports "1" and/or "3" & "5"	-	-	-	-	AJ233.03-N

\* Including screws and seals

\*\* Blanking plate inclusive of adapter plate 239-311

All leaflets are available on: [www.asco.com](http://www.asco.com)

## FEATURES

- Reliability: steel spool & sleeve technology with long service life
- Robust valve design, particularly recommended for use in high-temperature or dirty environments

## GENERAL

<b>Fluids</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	1 to 10 bar (with internal supply to pilot) -0,950 to 15 bar (with external supply to pilot)
<b>Ambient temperature</b>	-20°C to +80°C
<b>Flow (Qv at 6 bar)</b>	See "SPECIFICATIONS"

## CONSTRUCTION

<b>Body</b>	Aluminium, anodised, painted grey
<b>Internal parts</b>	Stainless steel, POM (polyacetal), aluminium
<b>Static seals</b>	NBR (nitrile)

## INTEGRATED PILOT

<b>Seals</b>	NBR (nitrile)
<b>Electrical equipment</b>	Conforming to VDE 0580
<b>Solenoid coil</b>	Encapsulated
<b>Exhaust</b>	Over brass exhaust protector

## ELECTRICAL CHARACTERISTICS

	voltage	consumption		insulation class	protection degree	electrical connection
		inrush	hold			
~	24V - 48V - 115V - 230V / 50Hz	10 VA	7 VA	F	IP 65	spade plug size 22 connector DIN 43650, 11 mm industry standard B
=	24V - 48V	3,35 W				

## SPECIFICATIONS

	function symbol	operators pilot (14) solenoid air operated return (12)	Anschluss	débit		catalogue number without connector (1)	(M)
				at 6 bar (l/min)	Kv (m³/h)		
5/2		spring return	G 1/4	1700	1,48	L22BA452XG000YY	●
			G 3/8			L23BA452XG000YY	
		solenoid air operated return	G 1/4			L22BB452XG000YY	●
			G 3/8			L23BB452XG000YY	
5/3		pressure held W1	G 1/4	1700	1,48	L22BB652XG000YY	●
			G 3/8			L23BB652XG000YY	
		pressure applied W2	G 1/4			L22BB752XG000YY	●
			G 3/8			L23BB752XG000YY	
		pressure released W3	G 1/4			L22BB552XG000YY	●
			G 3/8			L23BB552XG000YY	

(M) Type of manual operator on pilot(s): ● : maintained

(1) For connectors:

type of current	X
AC (alternating current)	0
DC (direct current)	B


voltage	YY
24V DC	61
115 VAC - 50/60 Hz	30
24 VAC - 50/60 Hz	20
230 VAC - 50/60 Hz	40

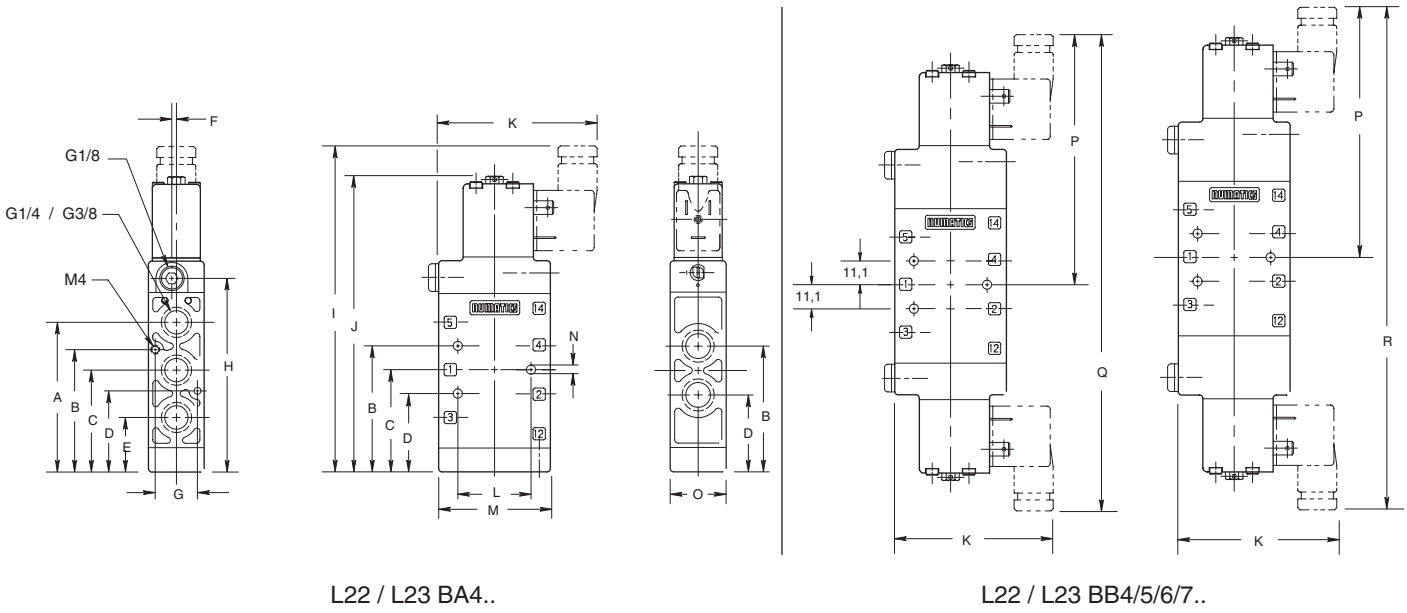
## OPTIONS (upon request)

- Low power consumption 1,4 W (only in DC)
- Version for higher pressures to 15 bar (21 bar).
- Version for higher temperatures up to 150 °C.
- Stainless steel body
- Equipment for use in potentially explosive gas or dust atmospheres (ATEX directive 2014/34/EU)



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DIMENSIONS (mm), WEIGHT (kg) 



L22 / L23 BA4..

L22 / L23 BB4/5/6/7..

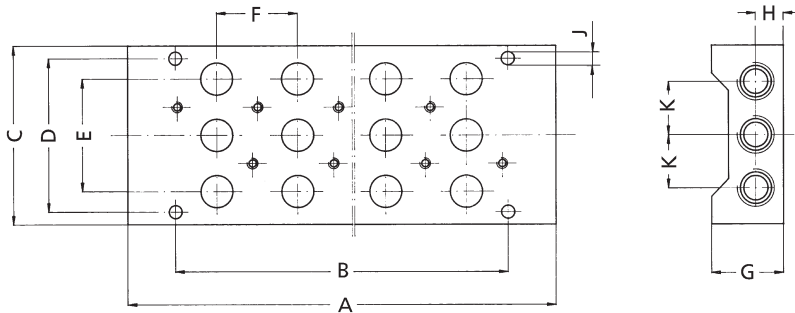
External air supply in G 1/8

catalogue number	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q	R	weight	
L22BA4..	69,1	57,9	47,0	35,8	24,6	2,0	19,1	89,7	152,1	136,7	72,9	32,3	50,8	4,3	25,4	118,4	223,0	236,7	0,390	
L23BA4..																			0,550	
L22BB4/5/6/7..																			0,550	
L23BB4/5/6/7..																				

**SUBBASES**



**Multiple subbase**  
Front mounting  
Threaded ports G 3/8



number of valves	dimensions											weight	catalogue number
	A	B	C	D	E	F	G	H	J	K			
2	105,4	67,0	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	0,410	106-715	
3	137,4	99,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	0,540	106-716	
4	169,4	131,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	0,670	106-717	
5	201,4	163,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	0,800	106-718	
6	233,4	195,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	0,939	106-719	
7	265,4	255,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	1,060	106-720	
8	297,4	259,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	1,190	106-721	
9	329,4	291,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	1,320	106-722	
10	361,4	323,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	1,450	106-723	
11	393,4	355,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	1,580	106-724	
12	425,4	387,4	70,5	63,4	44,4	32,0	30,6	212,4	4,1	22,2	1,710	106-725	

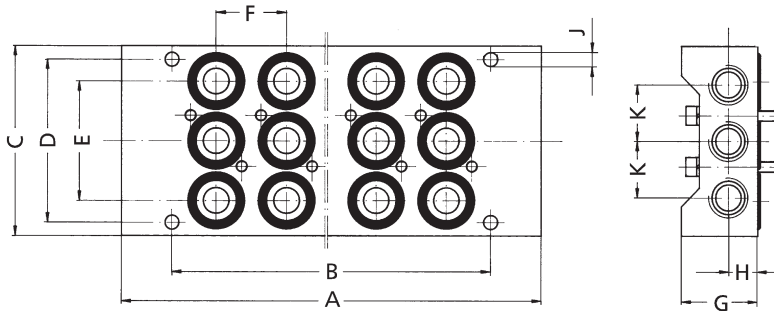
Note: Valves can only be mounted on subbase with adapter plate 239-312

All leaflets are available on: [www.asco.com](http://www.asco.com)

**SUBBASES**



**Multiple subbase**  
Rear mounting  
Threaded ports G 3/8

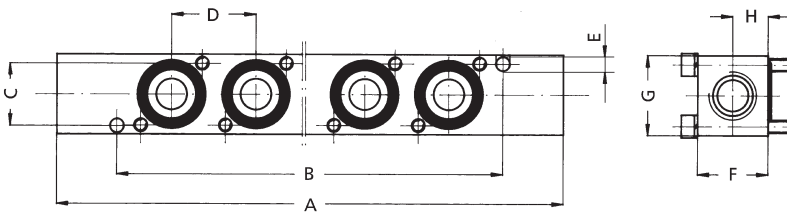


number of valves	dimensions										weight	catalogue number
	A	B	C	D	E	F	G	H	J	K		
2	99,6	61,0	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	0,360	229-979
3	127,7	87,1	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	0,460	229-980
4	151,9	113,3	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	0,560	229-981
5	178,1	139,4	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	0,660	229-982
6	204,2	165,6	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	0,750	229-983
7	230,4	191,8	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	0,850	229-984
8	256,5	217,9	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	0,950	229-985
9	282,7	244,1	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	1,050	229-986
10	308,9	270,3	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	1,140	229-987
11	335,0	296,4	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	1,240	229-988
12	361,2	322,6	70,5	63,4	44,4	26,2	28,7	11,4	4,1	22,2	1,340	229-989

Including screws and seals  
NPTF thread upon request



**P supply rail**  
Threaded ports G 3/8



number of valves	dimensions									weight	catalogue number
	A	B	C	D	E	F	G	H			
2	99,6	61,0	19,0	26,2	4,1	22,9	24,6	11,4	0,110	229-957	
3	127,7	87,1	19,0	26,2	4,1	22,9	24,6	11,4	0,140	229-958	
4	151,9	113,3	19,0	26,2	4,1	22,9	24,6	11,4	0,170	229-959	
5	178,1	139,4	19,0	26,2	4,1	22,9	24,6	11,4	0,200	229-960	
6	204,2	165,6	19,0	26,2	4,1	22,9	24,6	11,4	0,230	229-961	
7	230,4	191,8	19,0	26,2	4,1	22,9	24,6	11,4	0,260	229-962	
8	256,5	217,9	19,0	26,2	4,1	22,9	24,6	11,4	0,290	229-963	
9	282,7	244,1	19,0	26,2	4,1	22,9	24,6	11,4	0,330	229-964	
10	308,9	270,3	19,0	26,2	4,1	22,9	24,6	11,4	0,360	229-965	
11	335,0	296,4	19,0	26,2	4,1	22,9	24,6	11,4	0,390	229-966	
12	361,2	322,6	19,0	26,2	4,1	22,9	24,6	11,4	0,420	229-967	

Including screws and seals  
NPTF thread upon request

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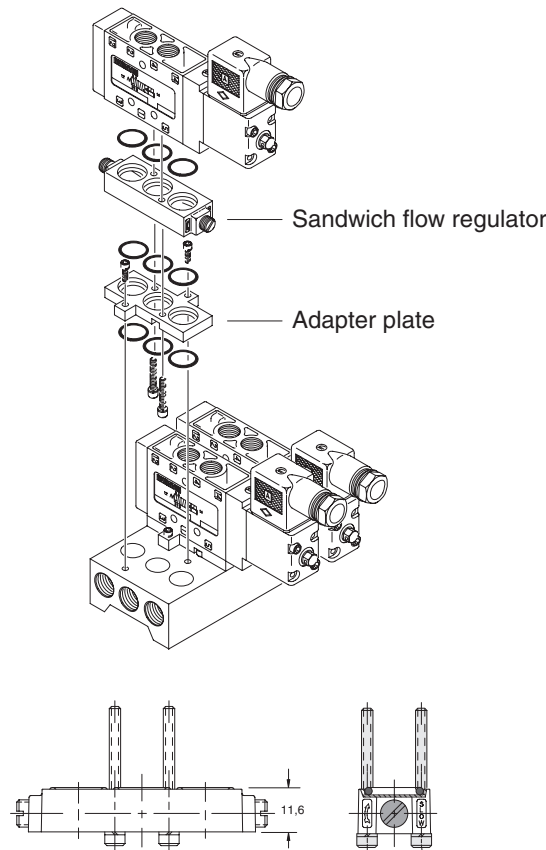
All leaflets are available on: [www.asco.com](http://www.asco.com)

ACCESSORIES

illustration	designation	application	dimensions			weight	catalogue number
			length	width	height		
	Valve isolating plate*	to block supply channel 1 for valve replacement without system depressurisation	70,1	25,4	20,0	0,150	<b>10.6445</b>
	Adapter plate*	1 plate per station only for multiple subbase, front mounting	70,1	25,4	7,14	0,020	<b>239-312</b>
	Blanking plate*	only for multiple subbase, front mounting	70,1	25,4	13,5	0,050	<b>239-471</b>
	Blanking plate*	only for multiple subbase, rear mounting	71,1	25,4	6,35	0,030	<b>229-991</b>
	Blanking plate*	only for P supply rail	25,4	24,6	6,35	0,020	<b>229-990</b>
	Sandwich flow regulator*	only for multiple subbase, front and rear mounting	—	—	—	0,080	<b>239-209</b>
—	Blocking plugs	to separate channels "1", "3" & "5"	—	—	—	—	<b>20.5499</b>
—	Blocking screws G 3/8	to close ports "1" and/or "3" & "5"	—	—	—	—	<b>AJ233.04-N</b>

\* Including screws and seals

MOUNTING ARRANGEMENT



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

44 - Pneumatic Valves (5/2 - 5/3)



## FEATURES

- Reliability: steel spool & sleeve technology with long service life
- Switching time of 6 ms.
- Suitable for repeatable applications, e.g. demanding gluing applications or in sorting systems
- Robust valve design, particularly recommended for use in high-temperature or dirty environments

## GENERAL

Fluids	Air or neutral gas, filtered, lubricated or not
Operating pressure	2,7 to 7 bar
Ambient temperature	-25°C to +90°C
Flow (Qv at 6 bar)	See "SPECIFICATIONS"
Response time	< 6 ms (ON), < 6 ms (OFF)



## CONSTRUCTION

Body	Aluminium, anodised, painted grey
Internal parts	Stainless steel, POM (polyacetal), aluminium
Static seals	NBR (nitrile)

## INTEGRATED PILOT

Seals	NBR (nitrile)
Electrical equipment	Conforming to VDE 0580
Solenoid coil	Encapsulated

## ELECTRICAL CHARACTERISTICS

voltage	consumption		insulation class	protection degree	Connector specification
	inrush	hold			
DC = 24V	3,5 W		F	IP 65	size 15, 9,4 mm pin spacing EN 175301-803, industry standard form C


## SPECIFICATIONS

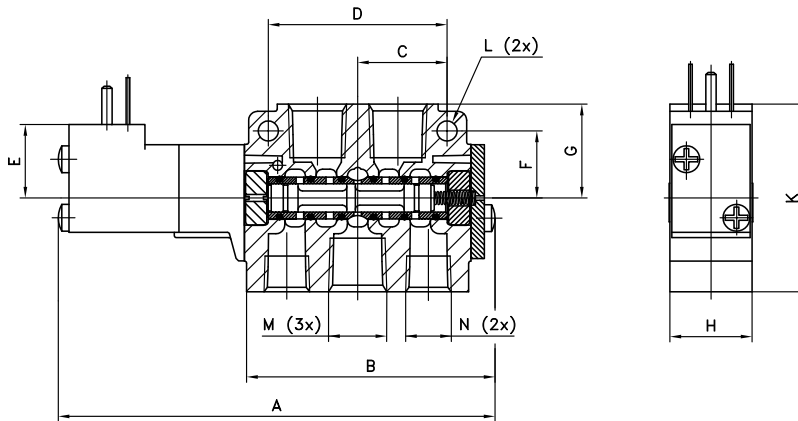
function symbol	operators pilot (14) solenoid air operated return (12)	Anschluss	flow		catalogue number without connector <sup>(1)</sup>
			at 6 bar l/min	Kv m³/h	
5/2	spring return	NPTF 1/4 (Exhaust NPTF 1/8)	500	0,47	92280-1

(1) For connectors: [see catalogue page](#)

## OPTIONS (upon request)

- Solenoid coil voltage of 115 VAC.

DIMENSIONS (mm), WEIGHT (kg) 



A	B	C	D	E	F	G	H	K	L	M	N	weight approx.
97	55,5	20	40	16	15	21	18	42	4,5 Ø	1/4 NPTF	1/8 NPTF	0,122

## FEATURES

- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally protected construction)
- For high reliability in very humid outside environments, the versions on [following pages](#) should preferably be used.

## GENERAL

<b>Fluids</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	2 to 10 bar
<b>Ambient temperature</b>	-25°C to +60°C
<b>Flow (Qv to 6 bar)</b>	5/2 860 l/min (ANR) - Kv : 12,5
	5/3 760 l/min (ANR) - Kv : 11

## CONSTRUCTION

### SPOOL VALVE

<b>Body</b>	Aluminium, black anodized
<b>Internal parts</b>	Zinc diecast, stainless steel, POM (polyacetal), aluminium
<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)

### PILOT VALVE

<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>Electrical safety</b>	IEC 335
<b>Coil and magnetic circuit</b>	Encapsulated monobloc design
<b>Exhaust</b>	Tapped M5 exhaust port, equipped with exhaust protection

## ELECTRICAL CHARACTERISTICS

	voltage	consumption		insulation class	protection degree	electrical connection
		inrush	holding			
~	24V - 48V - 115V - 230V / 50Hz	6 VA	3,5 VA (2,5 W)	F	IP 65	spade plug connector size 22 EN 175301-803, industry standard form B (11 mm)
=	24V - 48V	2,5 W				

## SPECIFICATIONS

fonction symbol	operators solenoid air pilot (14) return (12)	catalogue number		(M)
		with connector	without connector	
	spring return	55102009	55102010	●
	solenoid air return	55102011	55102012	●
	pressure held <b>W1</b>	55102118	55102119	●
	pressure release <b>W3</b>	55102120	55102121	●

(M) Type of manual operator on pilot(s): ● : maintained

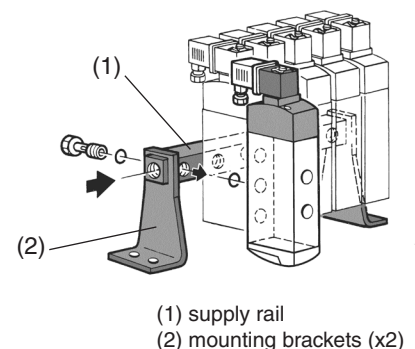
Note: do not connect the pressure supply to the exhaust port 3. For a "distributing" function or use in NO function, contact us.

## ACCESSORIES

### • Supply rails

	supply rail supplied with seals and banjo bolts (without mounting brackets) (1)	supply rail with isolation valves - allows isolation of one or more spool valves from the main pressure supply
<b>supply rail for «n» valves</b>	G 1/4	G 1/4
2	88100034	88100915
3	88100035	88100916
4	88100036	88100917
5	88100037	88100918
6	88100038	88100919
7	88100039	88100920
8	88100040	88100921

• Set of 2 mounting brackets (2) for supply rail - catalogue number : 88100049



All leaflets are available on: [www.asco.com](http://www.asco.com)

**OPTIONS**

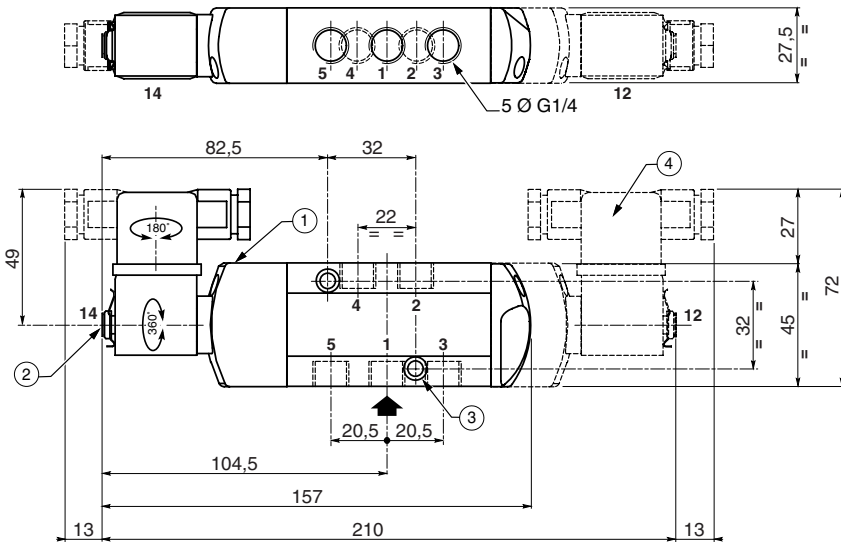
- Other voltages and 60 Hz on request
- ATEX compliant coil with connector for use in potentially explosive dust environments (SG), zone 22
- Connector size 22, cable length 2 m: **88122413**
- Electrovalve with connector equipped with visual indicator and built-in electrical protection:

catalogue number of spool valve without connector + catalogue number of connector with visual indicator and built-in electrical protection (- / =)

24V	48V	115V	230V
<b>88122405</b>	<b>88122406</b>	<b>88122407</b>	<b>88122410</b>

**DIMENSIONS (mm), WEIGHT (kg)**

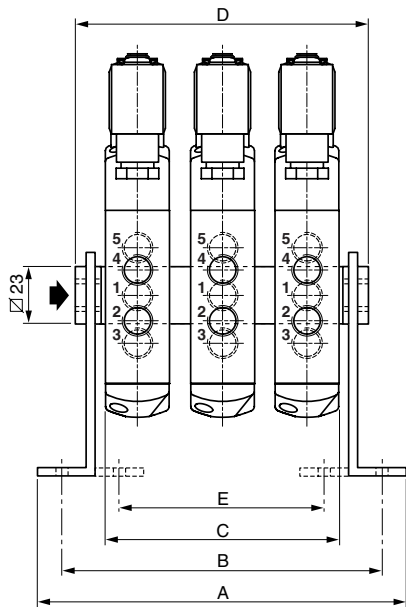
Weight: Spool valve + 1 pilot = 0,350 kg  
 Spool valve + 2 pilots = 0,470 kg



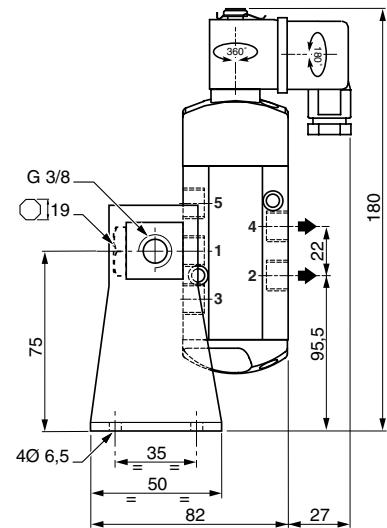
- 5/2-5/3 connection
- 1 = Pressure
  - 2,4 = Outlets
  - 3,5 = Exhausts
  - 12 = Return
  - 14 = Pilot

- ① Maintained manual operator
- ② Connectable M5 exhaust with protection
- ③ 2 mounting holes: Ø 5,3 spotfacing: Ø 9, depth 5
- ④ Pilot side 12 for 5/2 bistable or 5/3 versions

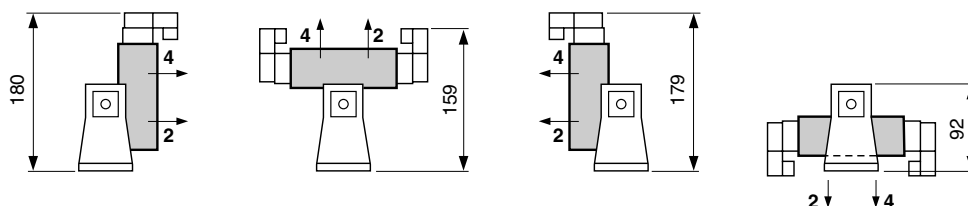
**ASSEMBLY WITH COMMON SUPPLY RAIL**

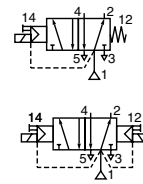


series 551	number of valves							
	2	3	4	5	6	7	8	
A	108	136	164	192	220	248	276	
B	92	120	148	176	204	232	260	
C	55	83	111	139	167	195	223	
D	78	106	134	162	190	218	246	
E	42	70	98	126	154	182	210	
type	weight (kg)							
with 1 pilot	1	1,4	1,8	2,2	2,6	3	3,4	
with 2 pilots	1,3	1,8	2,3	2,8	3,3	3,8	4,3	



This mounting arrangement allows valves to be mounted in any of 4 positions





## FEATURES

- Spool valve protected against food and beverage environment thanks to stainless steel screws and IP67 protection
- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally protected construction)
- A reliable actuator pilot with the holes facing downwards and a moisture resistance

## GENERAL

<b>Fluids</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	2 to 10 bar
<b>Ambient temperature</b>	-25°C to +60°C
<b>Flow (Qv to 6 bar)</b>	5/2 860 l/min (ANR) - Kv : 12,5

## CONSTRUCTION

### SPOOL VALVE

<b>Body</b>	Aluminium, black anodized
<b>Internal parts</b>	Zinc diecast, stainless steel, POM (polyacetal), aluminium
<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>Screws</b>	Stainless steel 316L

### PILOT VALVE

<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>Electrical safety</b>	IEC 335
<b>Coil and magnetic circuit</b>	Encapsulated monobloc design
<b>Exhaust</b>	Tapped M5 exhaust port, equipped with exhaust protection



## ELECTRICAL CHARACTERISTICS

voltage	consumption		insulation class	protection degree	electrical connection
	inrush	holding			
~ 24V - 48V - 115V - 230V / 50Hz	6 VA	3,5 VA (2,5 W)	F	IP 65	spade plug connector size 22 EN 175301-803, industry standard form B (11 mm) with cable length of 2m
= 24V - 48V	2,5 W				

## SPECIFICATIONS

fonction symbol	operators	catalogue number	(M)
5/2	solenoid air pilot (14) return (12)	with coil & connector	
	spring return	SCG551A097MS	●
	solenoid air return	SCG551A098MS	●

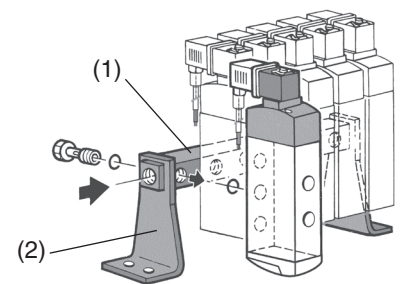
(M) Type of manual operator on pilot(s): ● : maintained

## ACCESSORIES

### • Supply rails

	supply rail supplied with seals and banjo bolts (without mounting brackets) (1)	supply rail with isolation valves - allows isolation of one or more spool valves from the main pressure supply
supply rail for «n» valves	G 1/4	G 1/4
2	88100034	88100915
3	88100035	88100916
4	88100036	88100917
5	88100037	88100918
6	88100038	88100919
7	88100039	88100920
8	88100040	88100921

- Set of 2 mounting brackets (2) for supply rail - catalogue number : 88100049



(1) supply rail  
(2) mounting brackets (x2)

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### OPTIONS

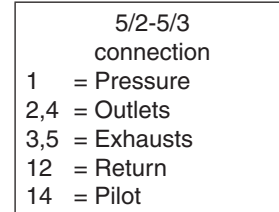
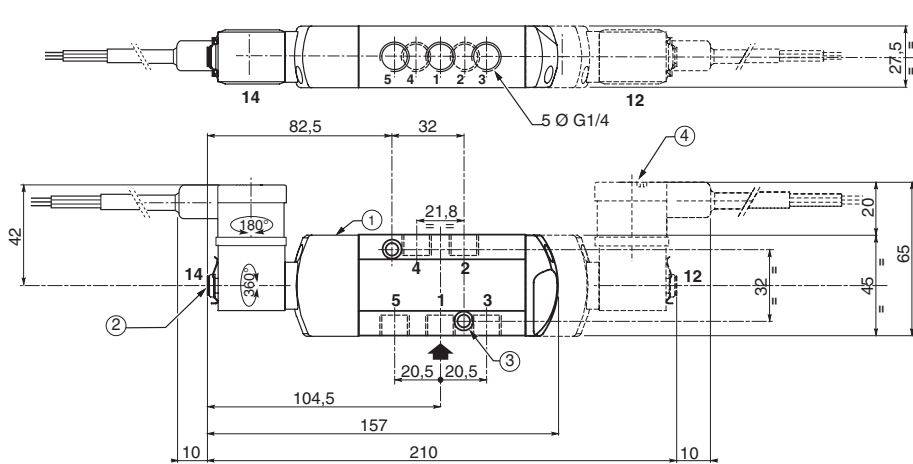
- Other voltages and 60 Hz on request
- Spade connector size 22, IP67 with integrated visual LED and varistor protection with PVC 0,75mm<sup>2</sup> cable lenght of 2 m: **88100937**
- Electrovalve with connector equipped with visual indicator and built-in electrical protection:

catalogue number of spool valve without connector + catalogue number of connector with visual indicator and built-in electrical protection (~ / =)

	24V	48V	115V	230V
	<b>88122405</b>	<b>88122406</b>	<b>88122407</b>	<b>88122410</b>

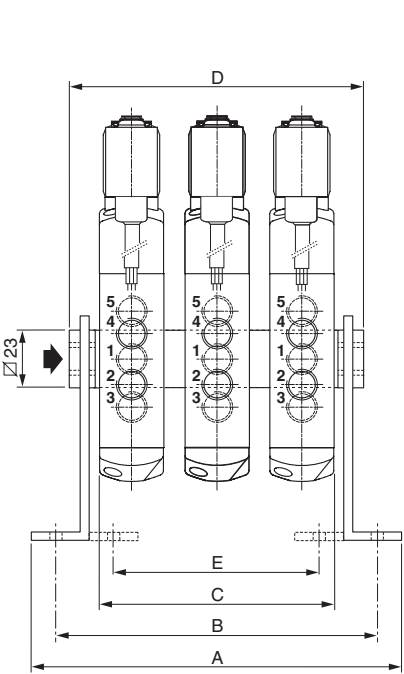
### DIMENSIONS (mm), WEIGHT (kg)

Weight: Spool valve + 1 pilot = 0,67 kg  
 Spool valve + 2 pilots = 0,73 kg

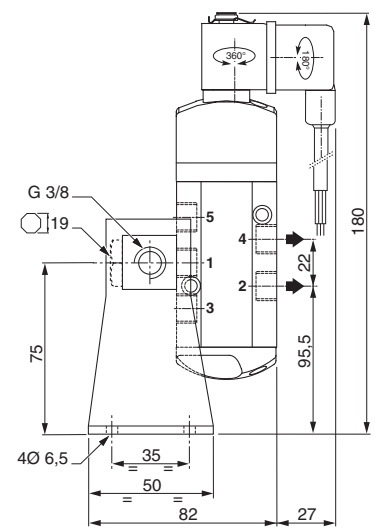


2 mounting holes:  
 ① 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)

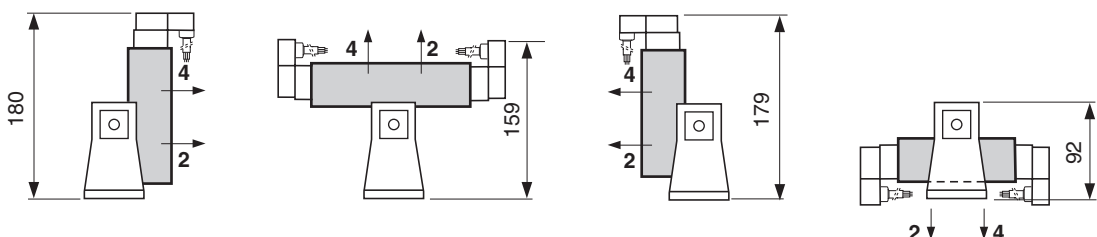
### ASSEMBLY WITH COMMON SUPPLY RAIL



series 551	number of valves							
	2	3	4	5	6	7	8	
A	108	136	164	192	220	248	276	
B	92	120	148	176	204	232	260	
C	55	83	111	139	167	195	223	
D	78	106	134	162	190	218	246	
E	42	70	98	126	154	182	210	
type	weight (kg)							
with 1 pilot	1,1	1,5	1,9	2,3	2,7	3,1	3,5	
with 2 pilots	1,4	1,9	2,4	2,9	3,4	3,9	4,4	



This mounting arrangement allows valves to be mounted in any of 4 positions

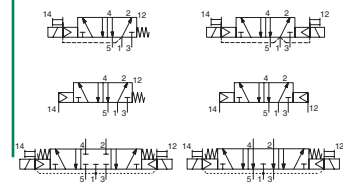


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# SPOOL VALVES

pilot operated or air operated, spool type  
single/dual solenoid or air  
aluminium body, 1/4 - 1/2



**5/2-5/3**  
Series  
**551**  
**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 in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) have TÜV (551 series) and EXIDA (551-553 series) 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  
Flow (Qv at 6 bar)

2 - 10 bar [1 bar = 100 kPa]  
l/min (ANR)  
1/4 | 1/2  
860 | 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, end cover	Aluminium, black anodized
End cover (spring return)	Glass fibre filled PA
Spool valve internal parts	Zamak, stainless steel, POM, aluminium
Seals	NBR + PUR
Core tube	Brass
Core and plugnut	Stainless steel
Shading coil	Copper

## ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Connector	Spade plug (cable Ø 6-8 mm or Ø 6-10 mm)
Connector specification	EN 175301-803, 11 mm, industry standard form 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 AC (~) : 24V - 48V - 115V - 230V / 50 Hz

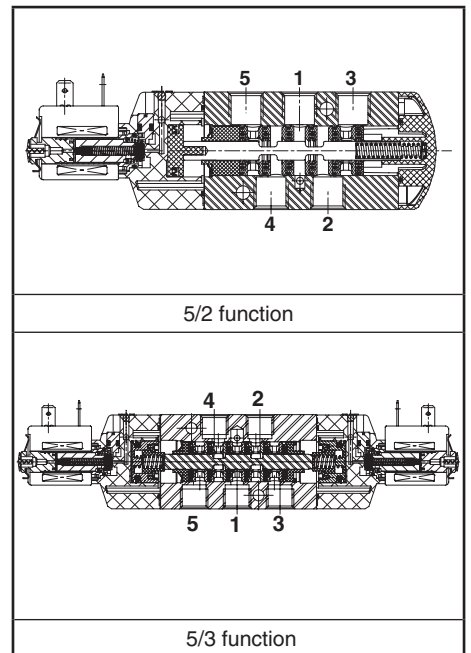
prefix option	power ratings				operator ambient temperature range (TS) (C°)	replacement coil		type <sup>(1)</sup>
	inrush ~	holding ~		hot/cold =		~	=	
	(VA)	(VA)	(W)	(W)		230 V/50 Hz	24 V DC	
SC	6	3,5	2,5	2,5 / 3	-25 to +60	400127-097	400904-542	01
SC	15	7	5	4 / 5	-25 to +60	400727-117	400727-185	02

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

## SPECIFICATIONS

[Configurator - CAD Files](#)

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>5/2 - Solenoid air pilot operated - spring return (monostable)</b>												
1/4	6	0,75	12,5	2	10	10	2,5	3	SCG551A017	MS	-	-
1/2	13	3,15	52,5	2	10	10	5	5	SCG553A017	MS	-	-
<b>5/2 - Solenoid air pilot operated and return (bistable)</b>												
1/4	6	0,75	12,5	2	10	10	2,5	3	SCG551A018	MS	-	-
1/2	13	3,15	52,5	2	10	10	5	5	SCG553A018	MS	-	-
<b>5/3 - W1 - pressure held, solenoid air pilot and return</b>												
1/4	6	0,75	12,5	2	10	10	2,5	3	SCG551A067	MS	-	-
1/2	13	3,15	52,5	2	10	10	5	5	SCG553A067	MS	-	-
<b>5/3 - W3 - pressure released, solenoid air pilot and return</b>												
1/4	6	0,75	12,5	2	10	10	2,5	3	SCG551A068	MS	-	-
1/2	13	3,15	52,5	2	10	10	5	5	SCG553A068	MS	-	-
<b>5/2 - 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	SCG551A017SL	-	-	-
1/2	13	3,15	52,5	2	10	10	5	5	SCG553A017SL	-	-	-



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网址：<http://www.ivalve.com>

**Pneumatic Valves (5/2 - 5/3) - 51**  
传真：(86-532)585-10-365  
Email：[sales@bechinas.com](mailto:sales@bechinas.com)

### AIR OPERATED AND OPTIONS

- Versions (Type 03): - pilot air operated, spring return, catalogue numbers: **G551A117 / G551A117SL** (1/4); **G553A117 / G553A117SL** (1/2)  
- pilot air operated and return, catalogue numbers: **G551A118** (1/4); **G553A118** (1/2)
- Suffix "MF" (air operated only, low temperature version, -40°C)
- Suffix "GD" (air operated only, ATEX 2GD c)
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (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
- 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
- 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>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-553	M5	<b>34600484</b> <sup>(1)</sup>

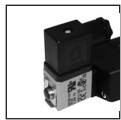
<sup>(1)</sup> Supplied with suffix "SL"

### ORDERING EXAMPLES:

SC	G	551	A	017	MS	230V / 50 Hz
SC	G	551	A	017	SL	24V / DC
SC	G	553	A	018		115V / 50 Hz
	G	551	A	117	SL	

prefix | pipe thread | basic number | voltage | suffix

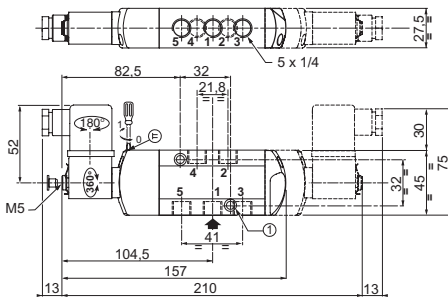
### DIMENSIONS (mm), WEIGHT (kg)



#### TYPE 01

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

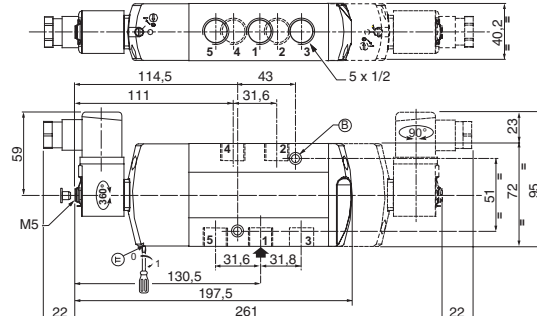
**551A017 / A017MS / A017SL / A018 / A018MS**  
**551A067 / A067MS / A068 / A068MS**



#### TYPE 02

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

**553A017 / A017MS / A018 / A018MS / A067 / A067MS / A068 / A068MS**  
**553A017SL**

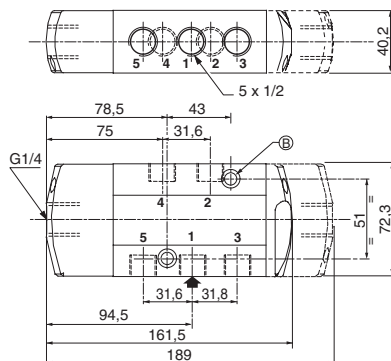
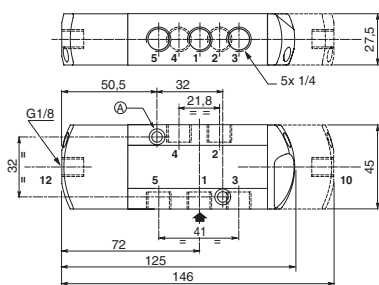


#### TYPE 03

No prefix  
Air operated version

**551A117 / A117SL / A118**

**553A117 / A117SL / A118**



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	W1-W3
01 (551)	SC	0,48	0,60	0,60
02 (553)	SC	0,84	1,14	1,14
03 (551)	-	0,32	0,40	0,40
03 (553)	-	0,79	1,24	1,24

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

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52 - Pneumatic Valves (5/2 - 5/3)

**BCAE**  
Automation Solutions

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服务热线：4006-918-365  
网址：<http://www.ivalve.com>

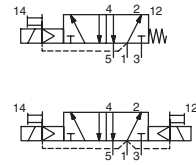
传真：(86-532)585-10-365  
Email：[sales@bechinas.com](mailto:sales@bechinas.com)





# SOLENOID VALVES

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



**5/2**  
Series  
**551**  
**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)
- 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 in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) have TÜV (551 series) and EXIDA (551-553 series) 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  
Flow (Qv at 6 bar)

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

1/4	1/2
860	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	Aluminium, black anodized
End cover (spring)	Glass fibre filled PA
Spool valve internal parts	Zamak, stainless steel, POM, aluminium
Pilot body	PARA
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 <sup>(1)</sup>			
	inrush	holding		hot/cold		~	=				
	~	~	(W)	=		(V)	(V)				
CFSC	1,4	1,2	1,1	1/1,2	-25 to +60	24-115	24	05			
	1,8 <sup>(2)</sup>	1,6 <sup>(2)</sup>	1,5 <sup>(2)</sup>	1,15/1,35 <sup>(2)</sup>							
	2,1	1,6	1,5	-					-25 to +60	230	-
	2,5 <sup>(2)</sup>	2 <sup>(2)</sup>	1,9 <sup>(2)</sup>	-					-25 to +50	-	-
CFVT <sup>(3)</sup>	-	-	-	1,15/1,35	-25 to +60	-	24	07			

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

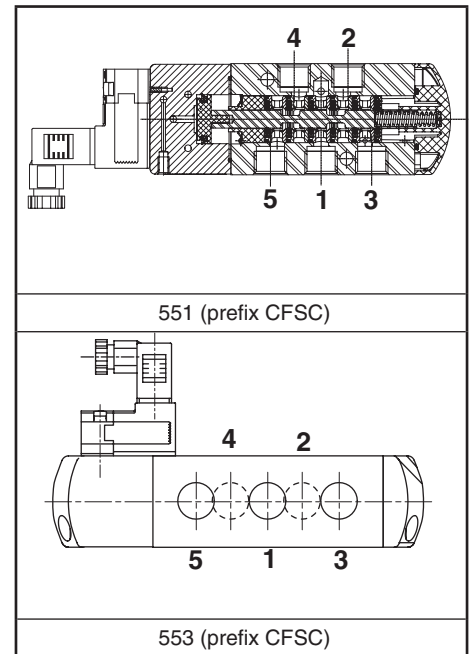
<sup>(2)</sup> Values with LED indicator and protection, use TPL 20674.

<sup>(3)</sup> Supplied with LED indicator and protection.

## SPECIFICATIONS

[Configurator - CAD Files](#)

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number		options			
									connector EN 175301-803 (9,4 mm) (type 05)	M12 (type 07)	maintained man. operator	impulse man. operator		
													~	=
G	(mm)	(m³/h)	(l/min)	min.	max. (PS)	air (*)	~	=	~	=				
<b>5/2 - Solenoid air pilot operated - spring return (monostable)</b>														
1/4	6	0,75	12,5	2	10	10	1,1..1,5	1,2	CFSCG551C517	-	MS MO	-		
							-	1,35	-	CFVTG551C517	-	MS MO	-	
1/2	13	3,15	52,5	2	10	10	1,1..1,5	1,2	CFSCG553A517	-	MS MO	-		
							-	1,35	-	CFVTG553A517	-	MS MO	-	
<b>5/2 - Solenoid air pilot operated and return (bistable)</b>														
1/4	6	0,75	12,5	2	10	10	1,1..1,5	1,2	CFSCG551C518	-	MS MO	-		
							-	1,35	-	CFVTG551C518	-	MS MO	-	
1/2	13	3,15	52,5	2	10	10	1,1..1,5	1,2	CFSCG553A518	-	MS MO	-		
							-	1,35	-	CFVTG553A518	-	MS MO	-	



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Pneumatic Valves (5/2) - 53  
传真：(86-532)585-10-305  
Email：[sales@bechinas.com](mailto:sales@bechinas.com)

**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)	(m <sup>3</sup> /h)	(l/min)		~	=	~	=	~/=	=			

**5/2 - 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	options					
1/4	6	0,75	12,5	2	10	10	1,1..1,5	1,2	CFSCG551C517SL	-	-	MO	-	
							-	1,35	-	CFVTG551C517SL	-	-	MO	-
1/2	13	3,15	52,5	2	10	10	1,1..1,5	1,2	CFSCG553A517SL	-	-	MO	-	
							-	1,35	-	CFVTG553A517SL	-	-	MO	-

**OPTIONS**

- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (see "Explosionproof solenoids" section)
- LED and protection, prefix CFSC, use TPL number: TPL 20674 (e.g.: 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
- 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)
- 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>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-553	M5	<b>34600484</b> <sup>(1)</sup>

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

**ORDERING EXAMPLES:**

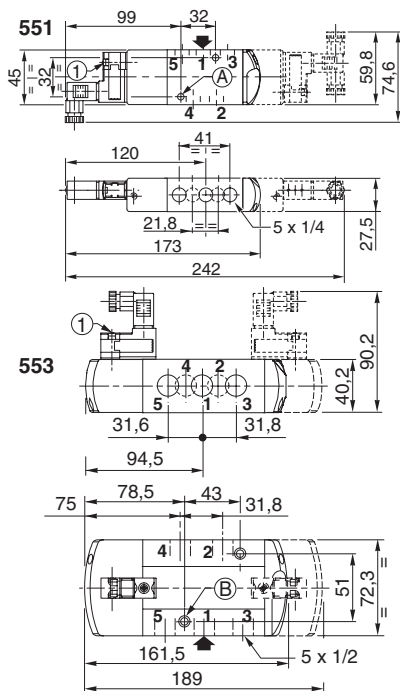
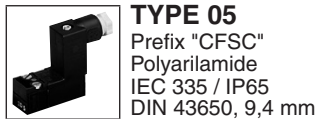
CFSC	G	551	C	517	230V / 50 Hz	
CFSC	G	551	C	517	SL	115V / 50 Hz
CFVT	G	553	A	518	MS	24V / DC
CFSC	G	553	A	517	SLMO	230V / 50 Hz

prefix — pipe thread — basic number — voltage — suffix

**DIMENSIONS (mm), WEIGHT (kg)**



[Configurator - CAD Files](#)



type	prefix option	weight <sup>(2)</sup>			
		monostable		bistable	
05	CFSC	0,36	1	0,41	2,08
07	CFVT	0,38	1,02	0,45	2,12

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

- 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)

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# SPOOL VALVES

## solenoid air operated

G1/4 to G1/2 tapped body  
with CNOMO size 15 low power pilot

**3/2-5/2**  
Series  
**551-553**

### FEATURES

- The valves offer environmental protection against the ingress of liquids, dusts or other foreign matter (environmentally-protected construction)

### GENERAL

<b>Fluid</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	2 to 10 bar
<b>Ambient temperature</b>	0°C to +60°C (with pilot series 630)
<b>Flow (Qv at 6 bar)</b>	series 551 860 l/min (ANR) - Kv : 12,5 series 553 3800 l/min (ANR) - Kv : 52,5
<b>Base</b>	size 15 ISO 15218 (CNOMO E06.36.120N)

### CONSTRUCTION

<b>SPOOL VALVES</b>	
<b>Body, end covers</b>	Black anodised aluminium
<b>Internal parts</b>	Stainless steel, POM (polyacetal), aluminium
<b>Seals</b>	NBR (nitrile), PUR (polyurethane)

### PILOTS

Solenoid pilot valve series 630 (  )

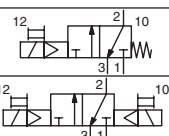
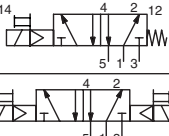


### ELECTRICAL CHARACTERISTICS

pilot		voltages	consumption		insulation class	protection degree	electrical connection
size	series		inrush	hold			
15	630	24V to 70V (1)	0,6VA	0,007W	F	IP 65	spade plug size 15 connector, DIN 43650, 9,4 mm, industry standard B, rotatable by 90°
			0,007W				

(1) max. current : 80 mA, current of max. maintenance : 1 mA

### SPECIFICATIONS

function symbol	operators		pipe size	catalogue number with standard connector	
	pilot (14)	return (12)		pilot 630 CNOMO size 15	(M)
	solenoid air	spring	G1/4	<b>PISCG551A505</b>	MO
		solenoid air	G1/2	<b>PISCG553A505</b>	MO
	solenoid air	solenoid air	G1/4	<b>PISCG551A506</b>	MO
		solenoid air	G1/2	<b>PISCG553A506</b>	MO
	solenoid air	spring	G1/4	<b>PISCG551A517</b>	MO
		solenoid air	G1/2	<b>PISCG553A517</b>	MO
	solenoid air	solenoid air	G1/4	<b>PISCG551A518</b>	MO
		solenoid air	G1/2	<b>PISCG553A518</b>	MO

(M) Type of manual operator on pilot(s) ▼ : impulse

Note: do not connect the pressure supply to the exhaust port 3. For a "distributing" function or use in NO function, contact us.

When ordering, please specify:

PISC	G	551	A	517	MO	24V	CC	
PISCX	G	553	A	505	MO	24V	CC	TPL 17777
prefix	pipe thread	basic number						TPL n°
								voltage
								suffix

How to order a version without connector :  
Use the TPL 17777.

The TPL number (Temporary Parts List) indicates special construction. In this case, the spool valve catalogue number contains the prefix "X" and the TPL number must always be mentioned following the spool valve catalogue number.

Example : PISCXG553A505MO 24V DC TPL17777

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### OPTIONS

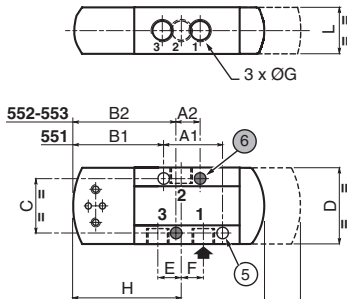
- Other pipe threads are available on request

### ACCESSORIES

series	pipe size	stainless steel exhaust protector
551	G 1/4	34600419
551-553	M5	34600484

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

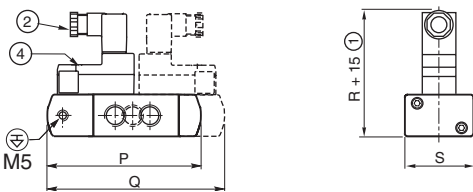
#### 3/2 NC SPOOL VALVES



- 1 Extra length for disassembly, depending on model
- 2 Connector size 15, rotatable by 90°
- 4 Manual operator
- 5 Series 551: 2 mounting holes Ø 5,3 - spotfacing Ø 9, depth 5
- 6 Series 553: 2 mounting holes Ø 6,5 - spotfacing Ø 11, depth 6

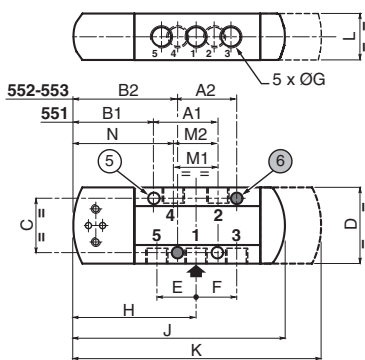
series	weight 3/2 NC	
	pilot 630	
	monost.	bistable
551	0,36	0,41
553	1,00	2,08

With pilot 630



series	A1	A2	B1	B2	C	D	E	F	ØG	H	J	K	L	P	Q	R	S
551	33	-	51,5	-	32	45	11	11	G1/4	61,5	113	134	27,5	113	134	75	45
553	-	16	-	78,5	51	72,3	12,2	19,4	G1/2	62,7	135	162	40,2	135	162	87	72,3

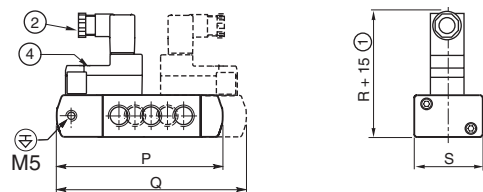
#### 5/2 SPOOL VALVES



- 1 Extra length for disassembly, depending on model
- 2 Connector size 15, rotatable by 90°
- 4 Manual operator
- 5 Series 551: 2 mounting holes Ø 5,3 - spotfacing Ø 9, depth 5
- 6 Series 553: 2 mounting holes Ø 6,5 - spotfacing Ø 11, depth 6

series	weight 5/2	
	pilot 630	
	monost.	bistable
551	0,51	0,56
553	1,15	2,23

With pilot 630



series	A1	A2	B1	B2	C	D	E	F	ØG	H	J	K	L	M1	M2	N	P	Q	R	S
551	32	-	51	-	32	45	20,5	20,5	G1/4	72	125	146	27,5	22	-	-	125	146	75	45
553	-	43	-	78,5	51	72,3	31,6	31,8	G1/2	94,5	162	189	40,2	-	31,6	75	162	189	87	72,3

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56 - Pneumatic Valves (3/2 - 5/2)

**BCAE**  
Automation Solutions

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# SPOOL VALVES

pilot operated or air operated, spool type  
single/dual solenoid or air  
aluminium body, "NAMUR" style, 1/4 - 1/2

3/2-5/2  
5/3  
Séries  
551  
553

## 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)
- The monostable spool valves in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) have TÜV (551 series) and EXIDA (551-553 series) 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  
Flow (Qv at 6 bar)

2 - 10 bar [1 bar = 100 kPa]  
l/min (ANR)  
1/4 | 1/2  
700 | 3000

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

## ELECTRICAL CHARACTERISTICS

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

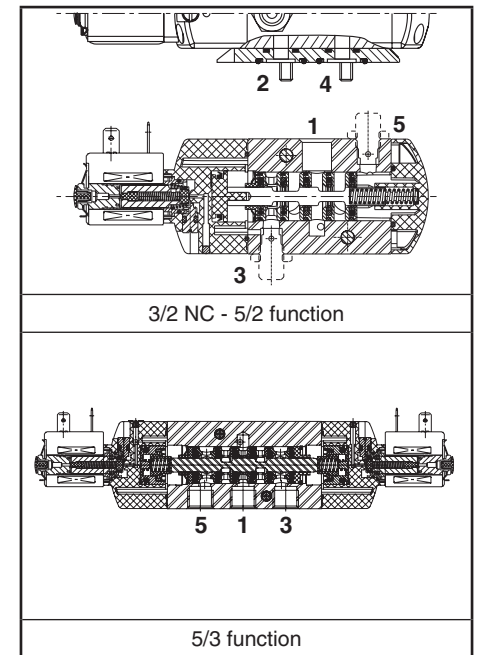
prefix option	power ratings				operator ambient temperature range (TS) (°C)	replacement coil		type <sup>(1)</sup>
	inrush ~ (VA)	holding ~ (W)		= (W)		~ 230 V/50 Hz	= 24 V DC	
		(VA)	(W)					
SC	6	3,5	2,5	2,5 / 3	-25 to +60	400127-097	400904-542	01
SC	15	7	5	4 / 5	-25 to +60	400727-117	400727-185	02

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

## SPECIFICATIONS

[Configurator - CAD Files](#)

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number	options		
		(m³/h)	(l/min)	min.	max. (PS)	air (*)	~	=		maintained	man. operator	
G	(mm)	(m³/h)	(l/min)		~	=	~	=	~/=			
<b>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable)</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A001 SCG553A001	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	5		MS	-	-
<b>3/2 NC - 5/2 - Solenoid air pilot operated and return (bistable)</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A002 SCG553A002	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	5		MS	-	-
<b>5/3 - W1 - pressure held, solenoid air pilot and return</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A065 SCG553A065	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	5		MS	-	-
<b>5/3 - W3 - pressure released, solenoid air pilot and return</b>												
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A066 SCG553A066	MS	-	-
1/2	13	2,49	41,5	2	10	10	5	5		MS	-	-
<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	2	10	10	2,5	3	SCG551A001SL SCG553A001SL	-	-	-
1/2	13	2,49	41,5	2	10	10	5	5		-	-	-



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Pneumatic Valves (3/2 - 5/2 - 5/3 - NAMUR) 57

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Email：sales@bechinas.com

### AIR OPERATED AND OPTIONS

- Versions (Type 03): - pilot air operated, spring return, catalogue numbers: **G551A101 / G551A101SL** (1/4); **G553A101 / G553A101SL** (1/2)  
- pilot air operated and return, catalogue numbers: **G551A102** (1/4); **G553A102** (1/2)
- Suffix **"MF"** (air operated only, low temperature version, -40°C)
- Suffix **"GD"** (air operated only, ATEX 2GD c)
- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (see "Explosionproof solenoids" section)
- Valves equipped with exhaust reducers G 1/8 (3/2 NC-5/2, series 551), suffix **MMS**
- Set of stainless steel mounting screws (series 551), catalogue number **97802212**
- Set of two G 1/8 exhaust reducers (series 551), 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 valves can be mounted in any position without affecting operation
- 3/2 NC-5/2 spool valve supplied with one or two interface plates with NAMUR mating surfaces. Depending on function (3/2 NC or 5/2), position the plate (series 551) or one of the two plates (series 553) 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)
- 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>
551 (W1/W3)	G 1/4	<b>34600419</b>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-553	M5	<b>34600484</b> <sup>(1)</sup>

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

### ORDERING EXAMPLES:

SC	G	551	A	001	MS	230V / 50 Hz
SC	G	551	A	001	SL	24V / DC
SC	G	553	A	002		115V / 50 Hz
		G	551	A	101	SL

prefix: SC  
 pipe thread: G  
 basic number: 551 A 101  
 voltage: 230V / 50 Hz  
 suffix: MS, SL

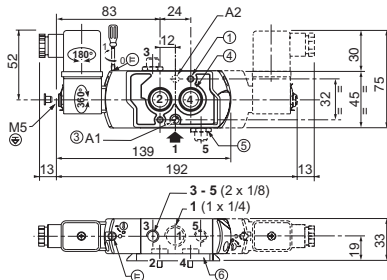
### DIMENSIONS (mm), WEIGHT (kg)



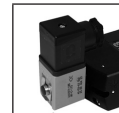
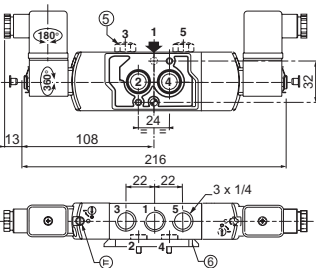
#### TYPE 01

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

**551A001/A001MS/A001SL/A002/A002MS**



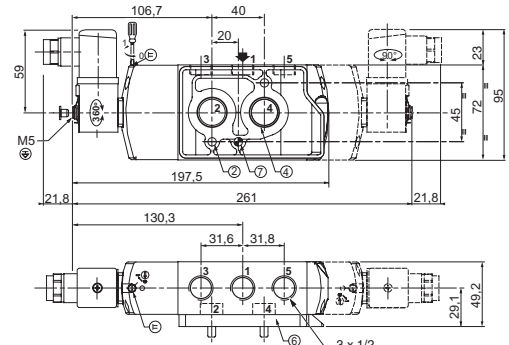
**551A065/A065MS/A066/A066MS  
(W1 - W3)**



#### TYPE 02

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

**553A001/A001MS/A001SL/A002/A002MS  
553A065/A065MS/A066/A066MS**

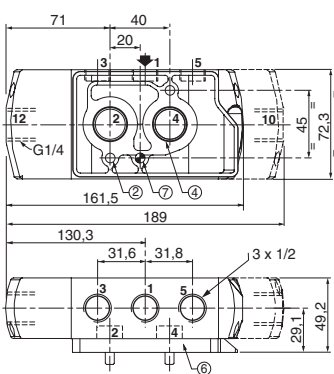
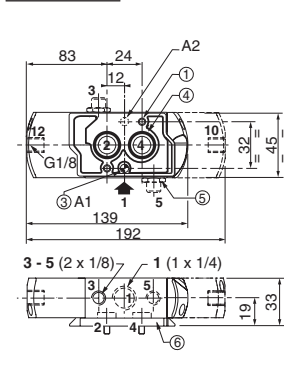


#### TYPE 03

No prefix  
Air operated version

**G551A101/A102**

**G553A101/A101SL/A102**



- ① 2 mounting holes: 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)
- ② 2 mounting holes: 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)
- ③ One 5 mm dia. hole for dowel pin:  
- in position A1: 3/2 NC function plate  
- in position A2: 5/2 function plate
- ④ 2 O-ring seals (supplied)
- ⑤ Exhaust reducer (G 1/8, 3/2 NC-5/2, series 551) or exhaust protector
- ⑥ Interface plate

weight <sup>(2)</sup> (kg)	type 01		type 02		type 03	
	3/2-5/2	5/3	553	551	551	553
monostable.	0,34	-	0,90	0,31	0,85	
bistable	0,46	0,45	1,20	0,41	1,11	

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

### Configurator - CAD Files

All leaflets are available on: [www.asco.com](http://www.asco.com)

58 - Pneumatic Valves (3/2 - 5/2 - 5/3 - NAMUR)



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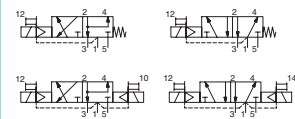
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# SOLENOID VALVES

pilot operated, spool type  
single/dual solenoid (mono/bistable function)  
aluminium body, "NAMUR" style, 1/4 - 1/2



3/2-5/2

Series  
**551**  
**553**

## 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)
- 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 in conformity with IEC 61508 Standard (2010 route 2<sub>H</sub> version) have TÜV (551 series) and EXIDA (551-553 series) 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  
Flow (Qv at 6 bar)

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

1/4	1/2
700	3000

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)

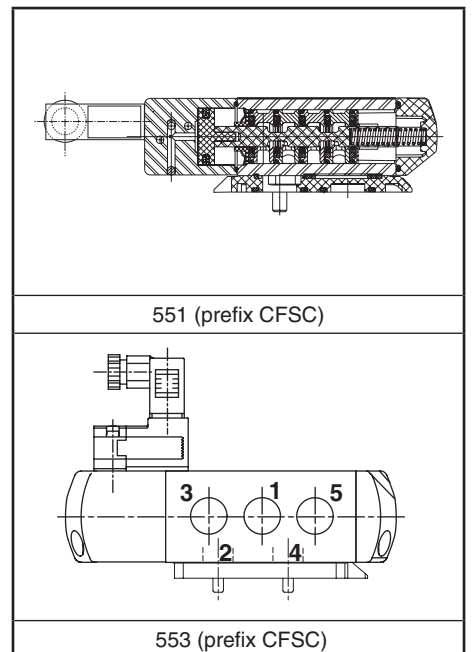
## MATERIALS IN CONTACT WITH FLUID

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

Body	Aluminium, black anodized
End cover (spring)	Glass fibre filled PA
Interface plates	Glass fibre filled PA
Spool valve internal parts	Zamak, stainless steel, POM, aluminium
Pilot body	PARA
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 <sup>(1)</sup>			
	inrush ~	holding ~		hot/cold =		~	=				
	(VA)	(VA)	(W)	(W)		(V)	(V)				
CFSC	1,4	1,2	1,1	1/1,2	-25 to +60	24-115	24	05			
	1,8 <sup>(2)</sup>	1,6 <sup>(2)</sup>	1,5 <sup>(2)</sup>	1,15/1,35 <sup>(2)</sup>							
	2,1	1,6	1,5	-					-25 to +60	230	-
	2,5 <sup>(2)</sup>	2 <sup>(2)</sup>	1,9 <sup>(2)</sup>	-					-25 to +50	-	-
CFVT <sup>(3)</sup>	-	-	-	1,15/1,35	-25 to +60	-	24	07			

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

<sup>(2)</sup> Values with LED indicator and protection, use TPL 20674.

<sup>(3)</sup> Supplied with LED indicator and protection.

## SPECIFICATIONS

[Configurator - CAD Files](#)

pipe size	orifice size	flow coefficient Kv		operating pressure differential (bar)			power coil (W)		catalogue number		options		
									connector EN 175301-803 (9,4 mm) (type 05)	M12 (type 07)	maintained man. operator	impulse man. operator	-
G	(mm)	(m³/h)	(l/min)	min.	max. (PS)	air (*)	~	=	~/=	=			
<b>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable)</b>													
1/4	6	0,6	10	2	10	10	1,1..1,5	1,2	CFSCG551C501	-	MS MO	-	-
							-	1,35	-	CFVTG551C501	MS MO	-	-
1/2	13	2,49	41,5	2	10	10	1,1..1,5	1,2	CFSCG553A501	-	MS MO	-	-
							-	1,35	-	CFVTG553A501	MS MO	-	-
<b>3/2 NC - 5/2 - Solenoid air pilot operated and return (bistable)</b>													
1/4	6	0,6	10	2	10	10	1,1..1,5	1,2	CFSCG551C502	-	MS MO	-	-
							-	1,35	-	CFVTG551C502	MS MO	-	-
1/2	13	2,49	41,5	2	10	10	1,1..1,5	1,2	CFSCG553A502	-	MS MO	-	-
							-	1,35	-	CFVTG553A502	MS MO	-	-

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Pneumatic Valves (3/2 - 5/2 - NAMUR) - 59  
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### 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)		~	=	~	=	~/=	=			
<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	2	10	10	1,1..1,5	1,2	CFSCG551C501SL	-	-	MO	-
							-	1,35	-	CFVTG551C501SL	-	MO	-
1/2	13	2,49	41,5	2	10	10	1,1..1,5	1,2	CFSCG553A501SL	-	-	MO	-
							-	1,35	-	CFVTG553A501SL	-	MO	-

### OPTIONS

- Explosionproof enclosures for use in zones 1/21-2/22, categories 2-3 to ATEX Directive 2014/34/EU (see "Explosionproof solenoids" section)
- LED and protection, prefixes CFSC / CFSD, use TPL number: TPL 20674 (e.g.: CFSDXG551C505TPL20674)
- Straight M12 connector: with 5 m cable length (catalogue number **88130212**)
- Valves equipped with exhaust reducers G 1/8 (3/2 NC-5/2, series 551), suffix **MMS**
- Set of stainless steel mounting screws (series 551), catalogue number **97802212**
- Set of two G 1/8 exhaust reducers (series 551), catalogue number **88100344**
- 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
- 3/2 NC-5/2 spool valve supplied with one or two interface plates with NAMUR mating surfaces. Depending on function (3/2 NC or 5/2), position the plate (series 551) or one of the two plates (series 553) 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)
- 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>
553	G 1/2	<b>34600479</b> <sup>(1)</sup>
551-553	M5	<b>34600484</b> <sup>(1)</sup>

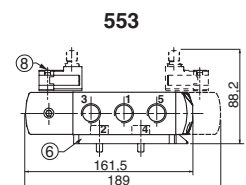
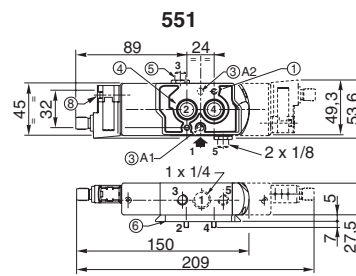
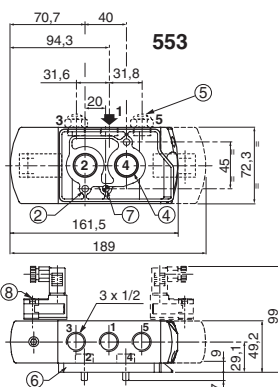
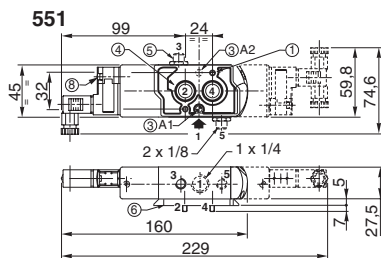
<sup>(1)</sup> Supplied with suffix "SL"

### ORDERING EXAMPLES:

CFSC	G	551	C	501	230V / 50 Hz
CFSC	G	551	C	501	SL 115V / 50 Hz
CFVT	G	553	A	502	MS 24V / DC
CFSC	G	551	C	501	SLMO 230V / 50 Hz

prefix — pipe thread — basic number — voltage — suffix

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



2 mounting holes:

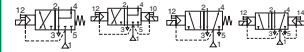
- ① 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)
- ② 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)
- ③ One 5 mm dia. hole for dowel pin:
  - in position A1: 3/2 NC function plate
  - in position A2: 5/2 function plate
- ④ 2 O-ring seals (supplied)
- ⑤ Exhaust reducer (G 1/8, series 551) or exhaust protector
- ⑥ Interface plate
- ⑦ One 6,5 mm dia. hole for dowel pin, position for 3/2 NC or 5/2 function plate
- ⑧ Manual operator location

type	prefix option	weight <sup>(2)</sup>			
		monostable		bistable	
05	CFSC	0,34	1	0,39	2,08
07	CFVT	0,36	1,02	0,43	2,12

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

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### FEATURES

- Spool valve protected against food and beverage environment thanks to stainless steel screws
- 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)
- 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)

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, end cover	Aluminium, black anodized
End cover (spring return)	PBT
Spool valve internal parts	stainless steel, POM, aluminium
Seals	NBR + PUR
Core and core tube	Stainless steel
Shading coil	Copper
Screws	Stainless steel 316L

### ELECTRICAL CHARACTERISTICS

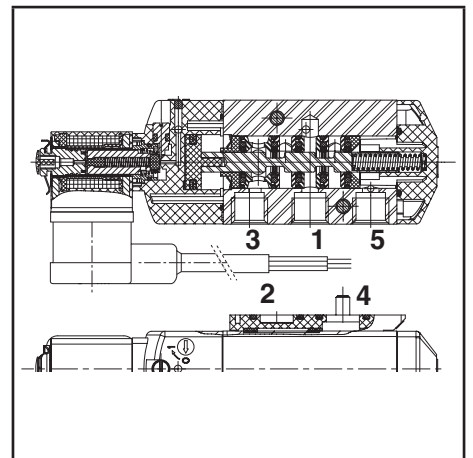
Coil insulation class	F
Connector	Spade plug connector with cable outlet 2 m long
Connector specification	EN 175301-803, 11 mm, industry standard form B (type 01)
Electrical safety	IEC 335
Electrical enclosure protection	Moulded-in cable IP67 (EN 60529)
Standard voltages	DC (=): 24V - 48V
(Other voltages 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 <sup>(1)</sup>
	inrush ~ (VA)	holding ~ (VA) (W)		hot/cold = (W)		~ 230 V/50 Hz	= 24 V DC	
SC	6	3,5	2,5	2,5/3	-25 to +60	400127-097	400904-542	01


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

### SPECIFICATIONS

pipe size	orifice size	flow coefficient Kv (m³/h) (l/min)		operating pressure differential (bar)			power coil (W)		catalogue number (with maintained manual operator)
				min.	max. (PS)		~	=	
					air (*)				
G	(mm)				~	=	~	=	~/=
<b>3/2 NC - 5/2 - Solenoid air pilot operated - spring return (monostable)</b>									
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A082MS
<b>3/2 NC - 5/2 - Solenoid air pilot operated and return (bistable)</b>									
1/4	6	0,6	10	2	10	10	2,5	3	SCG551A084MS



## AIR OPERATED AND OPTIONS

- Valves equipped with exhaust reducers G 1/8 (3/2 NC-5/2, series 551), suffix M
- Set of two G 1/8 exhaust reducers (series 551), catalogue number **88100344**
- Other pipe connections are available on request
- Spade connector size 22, IP67 with integrated visual LED and varistor protection and PVC 0,75 mm<sup>2</sup> cable length of 2 m: **88100937**
- Plug with visual indication and peak voltage suppression or with cable length of 2 m (  )

## INSTALLATION

- The 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.)
- Threaded pipe connection is standard: G = G (ISO 228/1)
- Installation/maintenance instructions are included with each valve

## ACCESSORIES

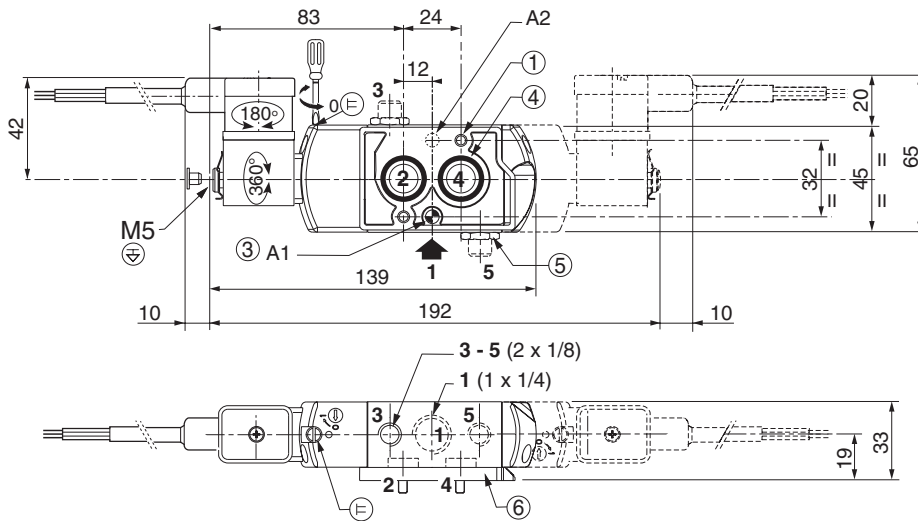
series	pipe size	exhaust protector (stainless steel)
551	G 1/8	<b>34600418</b>
551	M5	<b>34600484</b>

## ORDERING EXAMPLES:

SC	G	551	A 082	MS	230V / 50 Hz
prefix	pipe thread	basic number			voltage suffix

## DIMENSIONS (mm), WEIGHT (kg)

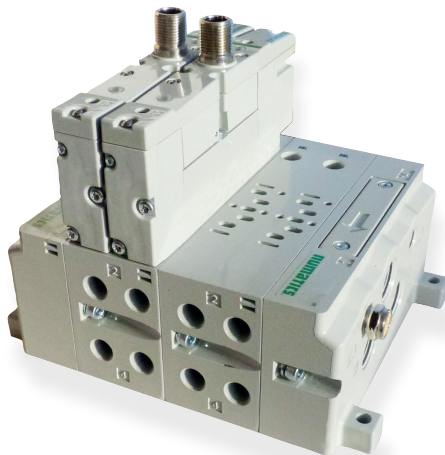
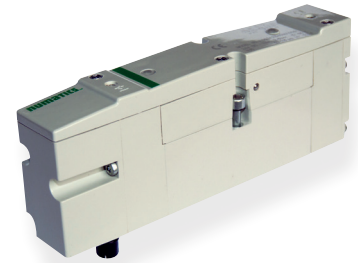
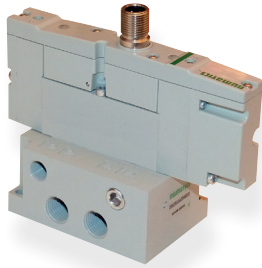
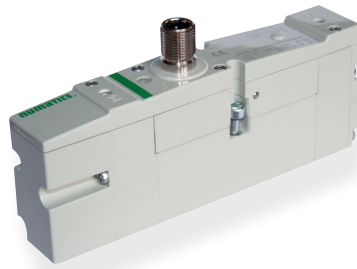
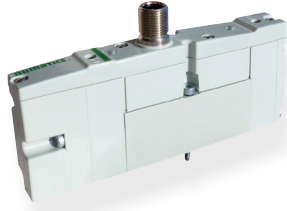
**TYPE 01**  
Prefix "SC" Solenoid  
Epoxy moulded  
IEC 335 / DIN 43650  
IP67



type	prefix option	weight <sup>(2)</sup>	
		monostable	bistable
01	SC	0,47	0,59

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

- ① 2 mounting holes: 5,3 mm dia. (Spotfacing: 9 mm dia., depth 5 mm)
- ② 2 mounting holes: 6,5 mm dia. (Spotfacing: 11 mm dia., depth 6 mm)
- ③ One 5 mm dia. hole for dowel pin:  
- in position A1: 3/2 NC function plate  
- in position A2: 5/2 function plate
- ④ 2 O-ring seals (supplied)
- ⑤ Exhaust reducer (G 1/8, 3/2 NC-5/2, series 551) or exhaust protector
- ⑥ Interface plate



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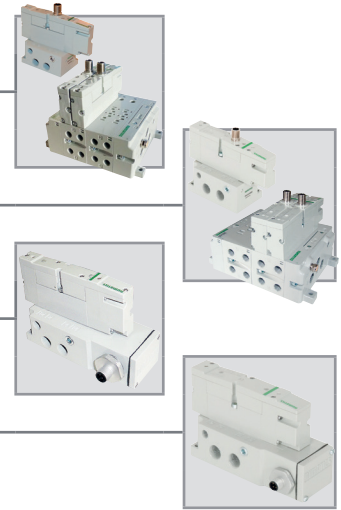
All leaflets are available on: [www.asco.com](http://www.asco.com)

**ISO 15407-1 Valves, 502 Series**

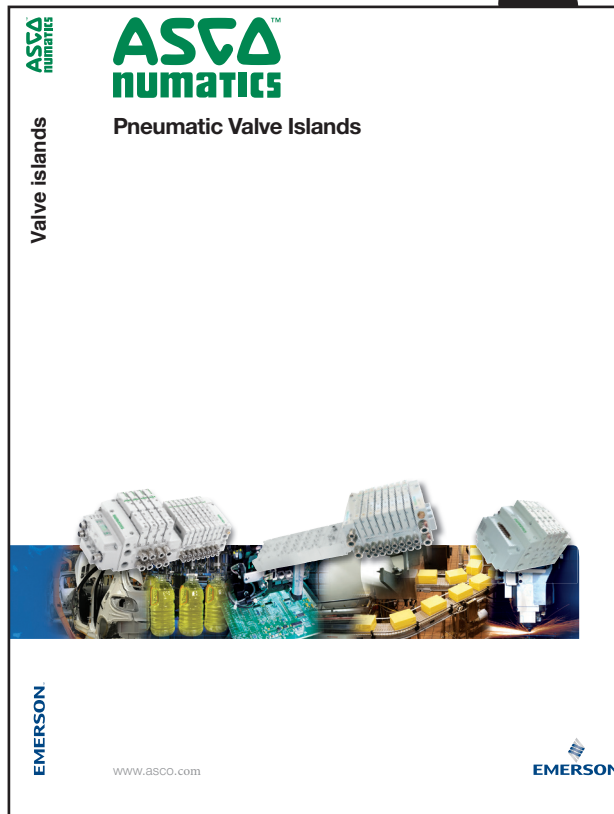
**ISO 15407-1 Valves, 503 Series**

**ISO 15407-2 Valves, 502 Series**

**ISO 15407-2 Valves, 503 Series**



Consult the online configurator - CAD files on: [www.asco.com](http://www.asco.com)



All leaflets are available on: [www.asco.com](http://www.asco.com)

64 - Pneumatic Valves (2 x 3/2, 5/2, 5/3)



### FEATURES

- Reliability: steel spool & sleeve technology with long service life
- Robust valve design, particularly recommended for use in high-temperature or dirty environments

### GENERAL

<b>Fluids</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	1 to 16 bar (with internal supply to pilot) -0,950 to 16 bar (with external supply to pilot)
<b>Ambient temperature</b>	-20°C to +80°C
<b>Flow (Qv at 6 bar)</b>	400 l/min (500 l/min with special subbase)
<b>Base</b>	ISO 15407-1 - VDMA 24563
<b>Subbase</b>	Single or joinable subbases

### CONSTRUCTION

<b>Body</b>	Aluminium, anodised, painted grey
<b>Internal parts</b>	Stainless steel, POM (polyacetal), aluminium
<b>Static seals</b>	NBR (nitrile)

### PILOTS

<b>Solenoid coil</b>	Encapsulated
<b>Electrical equipment</b>	Conforming to VDE 0580
<b>Seals</b>	NBR (nitrile)

### ELECTRICAL CHARACTERISTICS

	voltage	consumption	insulation class	protection degree	electrical connection
~	115V - 50/60Hz	4,3 /3,6 VA	F	IP 65	spade plug size 15 connector, EN 175301-803, industry standard form C (9,4 mm) rotatable by 90°
=	24V	1,9 W			

### SPECIFICATIONS

	function symbol	operators Pilot (14) solenoid air operated return (12)	port size	flow		catalogue number without connector <sup>(1)</sup>	(M)
				at 6 bar l/min	Kv m³/h		
5/2		spring return	subbase G 1/8	400	0,38	181BA400A0000YY	▼
		solenoid air operated return				181BB400A0000YY	▼
5/3		pressure held <b>W1</b>				181BB600A0000YY	▼
		pressure applied <b>W2</b>				181BB700A0000YY	▼
		pressure released <b>W3</b>				181BB500A0000YY	▼

(M) Type of manual operator on pilot(s): ▼ : impulse

(1) See page connectors ( )

voltage	YY
24VDC	61
115 VAC	30

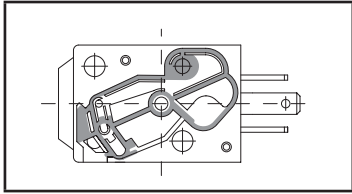
### OPTIONS (upon request)

- Larger ported manifolds for higher flow rates
- Quick-acting version < 6 ms
- Solenoid coil form C, ISO 15217/DIN 43650, 8 mm

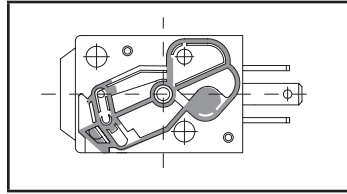
00639GB-2017/R01  
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## INTERNAL/EXTERNAL PILOT AIR SUPPLY

The valves are equipped with a selector seal allowing to choose between internal and external pilot air supply



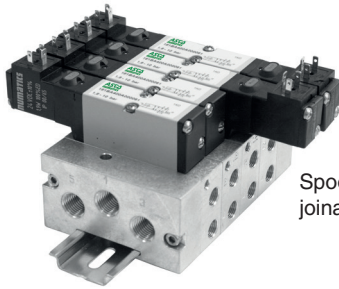
Internal supply



External supply

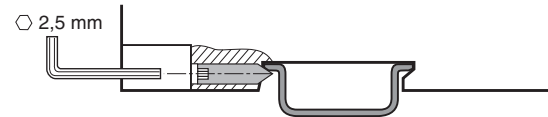
## SUBBASES

Subbase	size	type of port	description	port connection			catalogue number
				1-3-5	2-4	12-14	
single subbase	ISO 02	side	subbase	G 1/8	G 1/8	M5	35500525
joinable subbase	ISO 02	side	subbase	-	G 1/8	M5	35500527
			set of 2 end plates	G 1/4	-	-	88135539
			set of 3 plugs on main pressure (1) and exhausts (3-5) for 2 different pressure supplies (see below).				88135541
			blanking plate				88100358

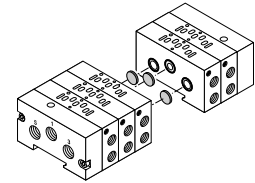
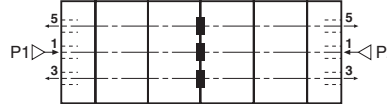


Spool valves mounted on joinable subbases

Joinable subbases ISO 02 can be mounted on symmetric EN 50022 profiles with hexagon screws

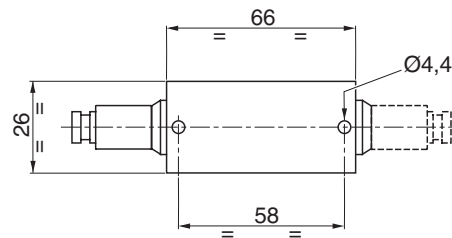
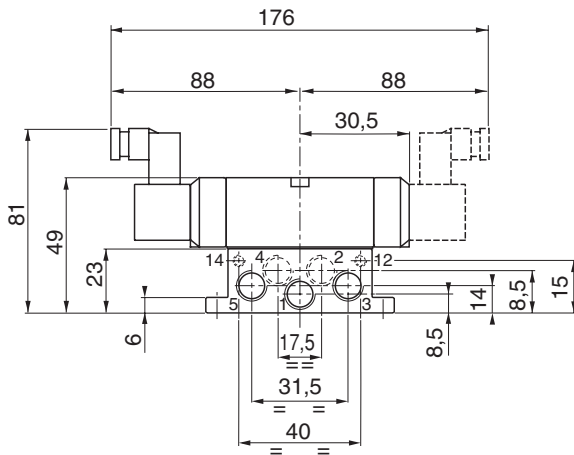


The set of plugs allows subbases to be supplied with 2 different pressure inlets



## DIMENSIONS (mm), WEIGHT (kg)

Valve with integrated pilot on single subbase



weight	
valve + subbase	
181BA400A... monostable	181BB 4 / 5 / 6 / 700A... bistable
0,106	0,144

port no.	Ø port
1-3-5	G 1/8
2-4	G 1/8
12-14	M5

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66 - Pneumatic Valves (5/2 - 5/3)



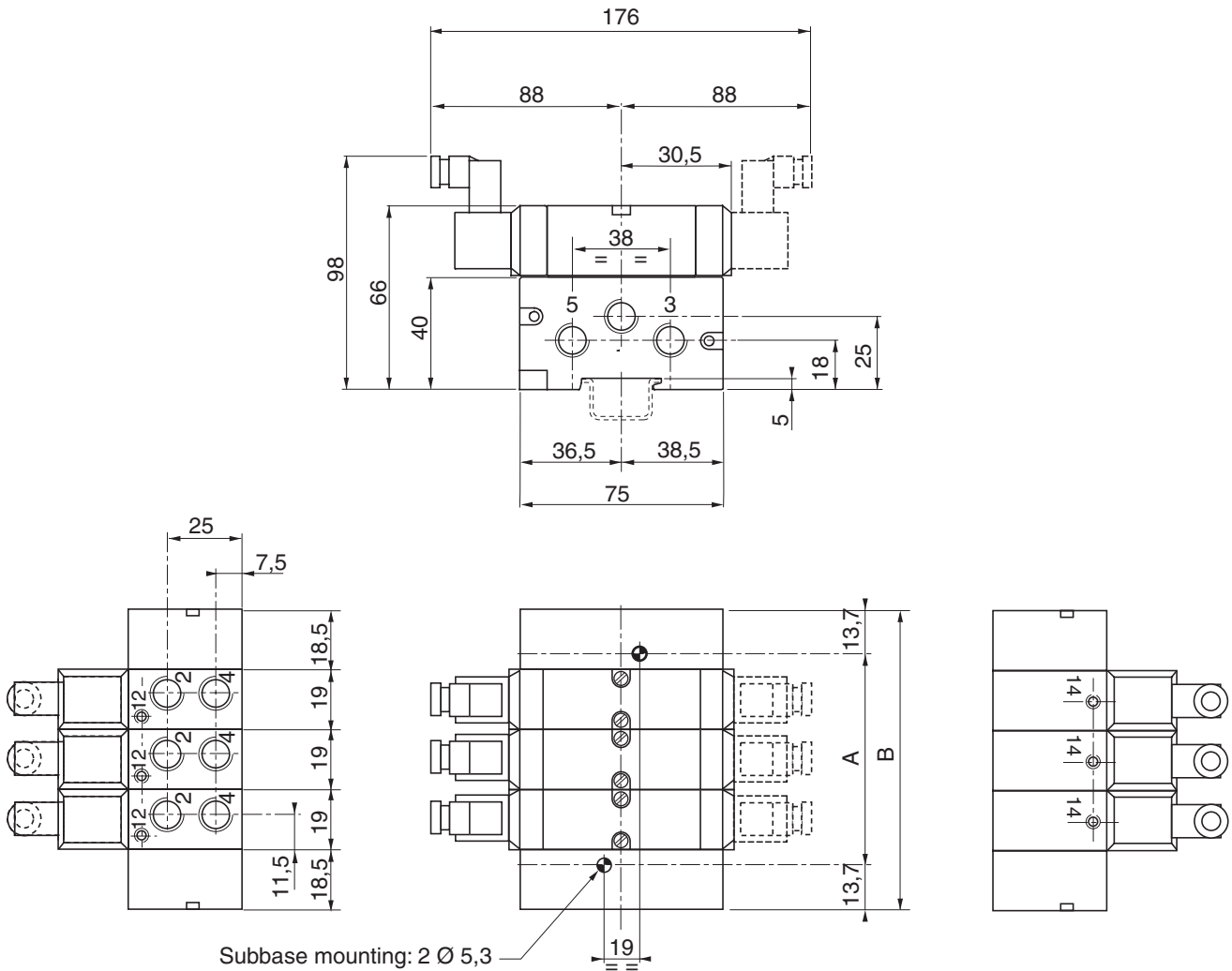
青岛秉诚自动化设备有限公司  
地址：中国·青岛市重庆南路99号海尔云街甲3号楼7F

服务热线：4006-918-365  
网址：<http://www.ivalve.cc>

传真：(86-532)585-10-365  
Email：[sales@bechinas.com](mailto:sales@bechinas.com)

**DIMENSIONS (mm), WEIGHT (kg)** 

Valve with integrated pilot on joinable subbase



number of subbases	A	B	weight valve + subbase + end plates
3	66,5	94	1,100
4	85,5	113	1,390
5	104,5	132	1,680
6	123,5	151	1,970
7	142,5	170	2,260
8	161,5	189	2,550
+1	+19	+19	+ 0,290



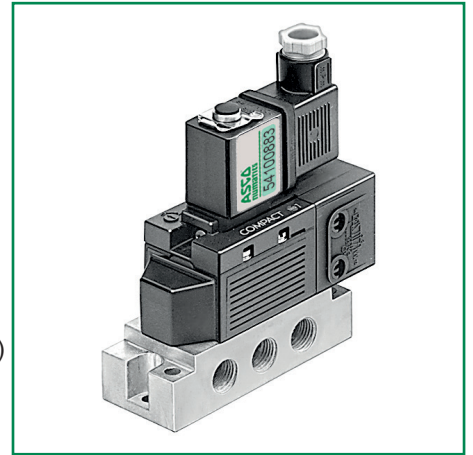


#### FEATURES

- Modular assembly with joinable subbases
- Subbases with side or bottom ports
- Version with manual spool position testers

#### GENERAL

<b>Fluid</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	3 to 10 bar
<b>Ambient temperature</b>	-10°C to +60°C
<b>Flow (Qv at 6 bar)</b>	1050 l/min (ANR)
<b>Flow coefficient</b>	Kv = 15
<b>Life</b>	15 millions of cycles (in normal operating conditions)
<b>Base</b>	ISO 5599/01- Size 1
<b>Subbase</b>	Single subbase ISO/AFNOR NF E49085 Joinable subbase ISO/VDMA 24345 Joinable subbase with integrated functions



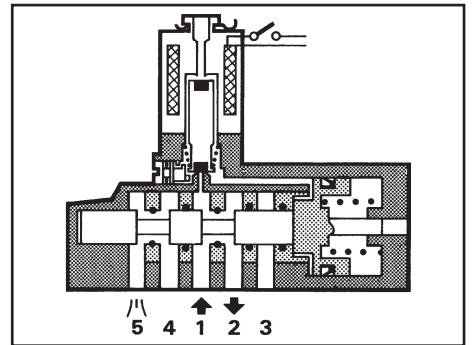
#### CONSTRUCTION

##### SPOOL VALVE

<b>Body and cover</b>	PA + FG (glass filled polyamide 6/6)
<b>Internal parts</b>	POM (polyacetal), light alloy and brass
<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)

##### BUILT-IN SOLENOID PILOT

<b>Seals</b>	NBR (nitrile) and PUR (polyurethane)
<b>Electrical devices</b>	Conforming to standard NF-C79300
<b>Coil and iron circuit</b>	Encapsulated monobloc, rotatable x 360°
<b>Exhaust</b>	M5 ports tapped, with exhaust plug
<b>Manual operator</b>	Maintained



#### ELECTRICAL CHARACTERISTICS

type of coil	voltage		consumption		insulation class	protection degree	electrical connection
	~	=	inrush	hold			
standard size 22	~	24V-48V-115V-230V-50Hz	6VA	3,5VA (2,5W)	F	IP 65	spade plug size 22 connector DIN 43650, 11 mm, industry standard B
	=	24V-48V	2,5W				

#### SPECIFICATIONS

symbol	operators		response time (ms)		catalogue number		manual operator
	pilot (14)	return (12)	energized	de-energized	with connector	without connector	
	solenoid air operated	spring	18	70	54100883	54100884*	maintained

\* Option : connector with built-in visual indicator and electrical protection ( )

#### SUBBASES

description	type	Ø	catalogue number
single subbase (ISO/AFNOR)	compact - side port	G 1/4	35500150
	bottom port	G 1/4	35500077
joinable subbase (ISO/VDMA)	bottom port	G 1/4	35500165
	1 set of 2 end plates (supply and exhaust side ports)	G 3/8	35500166

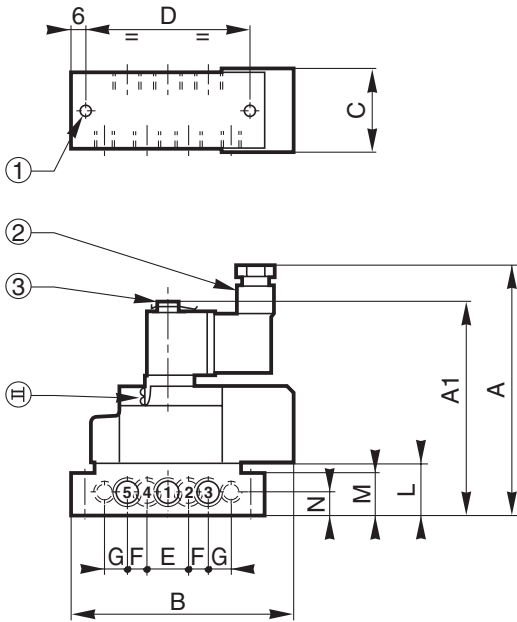
Other subbases:

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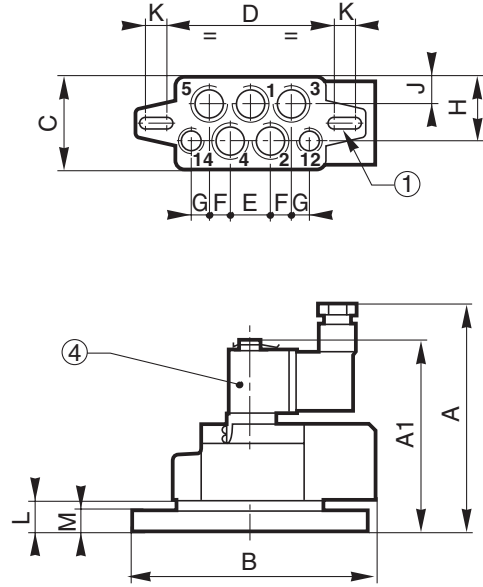
## DIMENSIONS (mm), WEIGHT (kg)

VALVE ON **SINGLE** SUBBASE

Code of subbase with **side** port : **35500150**



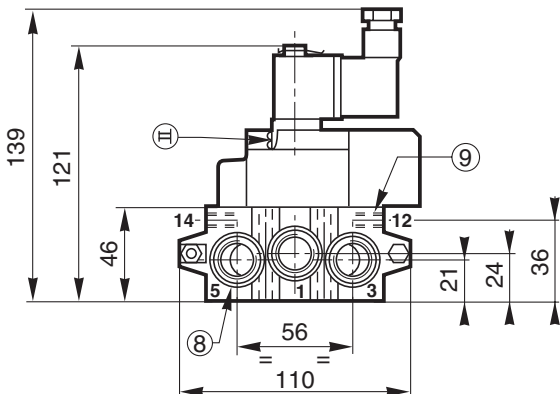
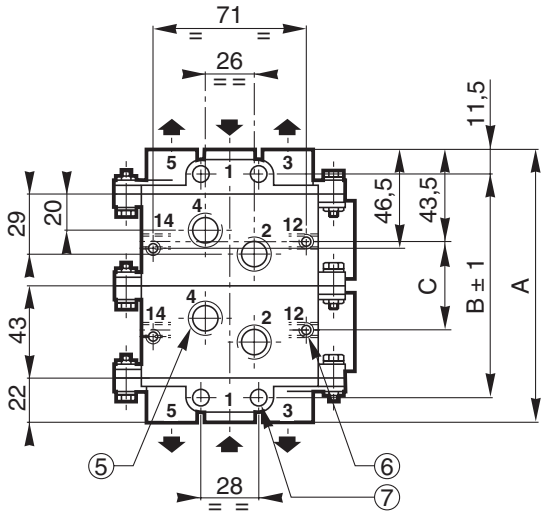
Code of subbase with **bottom** port : **35500077**



subbase catalogue number	port orifices			A	A1	B	C	D	E	F	G	H	J	K	L	M	N	weight
	12 - 14	2 - 4	1 - 3 - 5															
35500150	G 1/8	G 1/4	G 1/4	118	100	105	39	80	20	10	9	-	-	-	25	19	11	0,450
35500077	G 1/8	G 1/4	G 1/4	109	91	114	47	80	20	10	8,5	31	13,4	9	16	10	-	0,370

weight of compact monostable valve : 0.230 kg

## VALVE ON **JOINABLE** SUBBASES WITH BOTTOM PORT ISO/VDMA



	catalogue number	port orifices		
		12-14	2-4	1-3-5
subbase	35500165	G 1/8	G 1/4	-
2 end plates	35500166	-	-	G 3/8

set of end plate supplied with 3 plugs G 3/8 (for 1-3-5)

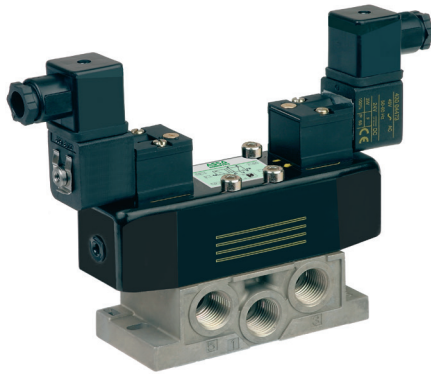
number of subbases	A	B ± 1	C	weight
3	173	150	86	1,600
4	216	193	129	2,050
5	259	236	172	2,500
6	302	279	215	2,950
7	345	322	258	3,400
8	388	365	301	3,850

Weight = valves + subbases + end plates

- ① Mounting : 2 Ø 5,5
- ② Size 22 connector
- ③ Port M5 depth 5.5
- ④ Coil rotatable x 360°
- ⑤ 2 ports G 1/4 (2-4)
- ⑥ Bottom mounting : 2 Ø M5
- ⑦ Mounting : 4 Ø 7
- ⑧ 3 ports G 3/8 (1-3-5)
- ⑨ 2 ports G 1/8 (12-14)
- Ⓗ Manual operator



Spool valve ISO 5599/1 size 1  
solenoid air operated



Spool valve ISO 5599/1 size 2  
solenoid air operated



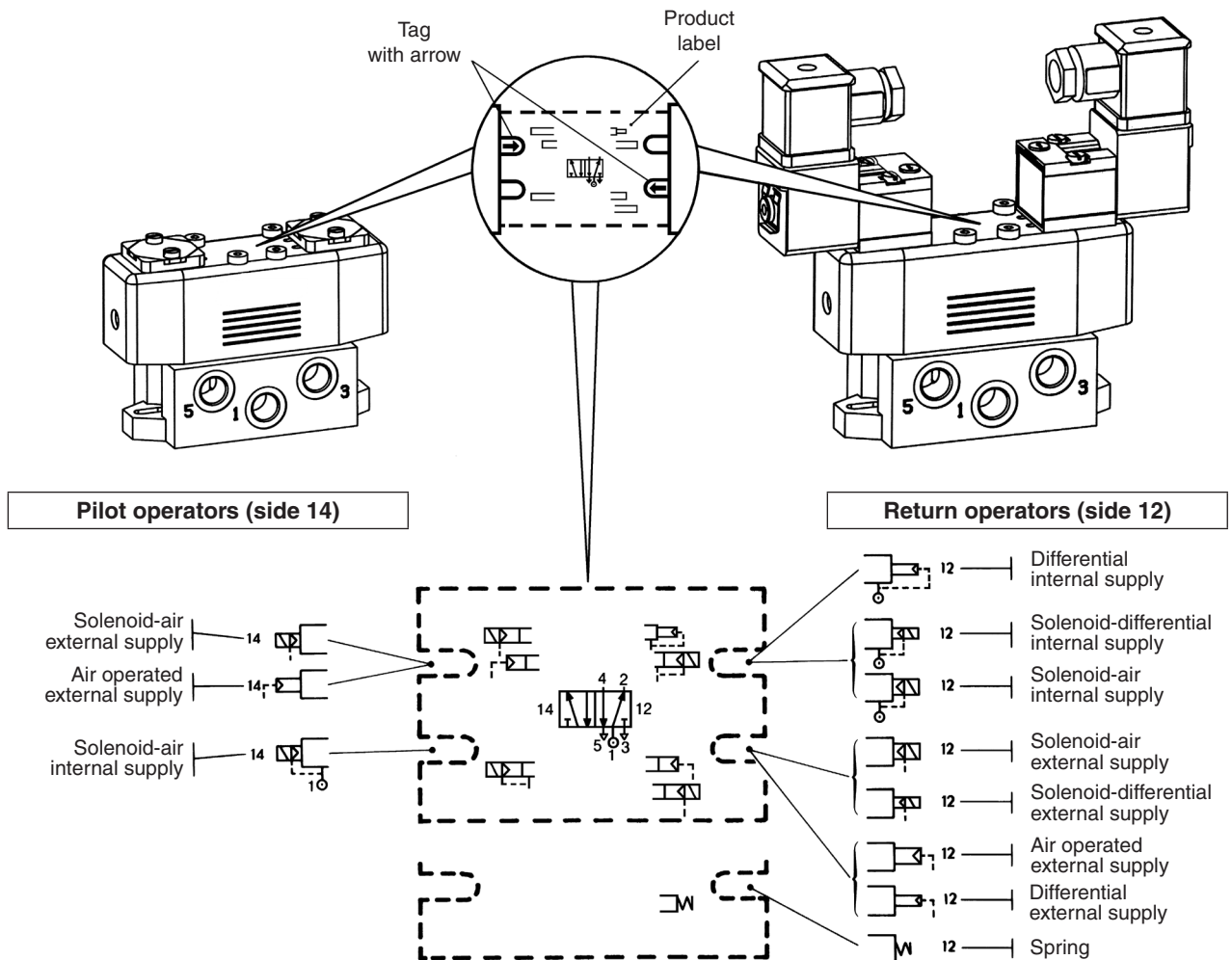
Spool valve ISO 5599/1 size 3  
solenoid air operated

### MULTIFUNCTION

Multifunction valves are equipped with 2 pilot selector seals on the top face, on both pilot and return sides. Each selector seal can be set on 2 positions, allowing internal or external supply to the pilot or return operators, in both versions (pneumatic and electropneumatic). External supply allows the valves to operate with a supply pressure ranging from 0 to 12 bar and under vacuum pressure. Each seal includes a tag with an arrow to be set onto the notch corresponding to the required pilot function (see below). Modifications of the function are very simple. The valves are delivered pre-set according to the valve code selected on your order.

#### Air operated spool valve

#### Solenoid air operated spool valve

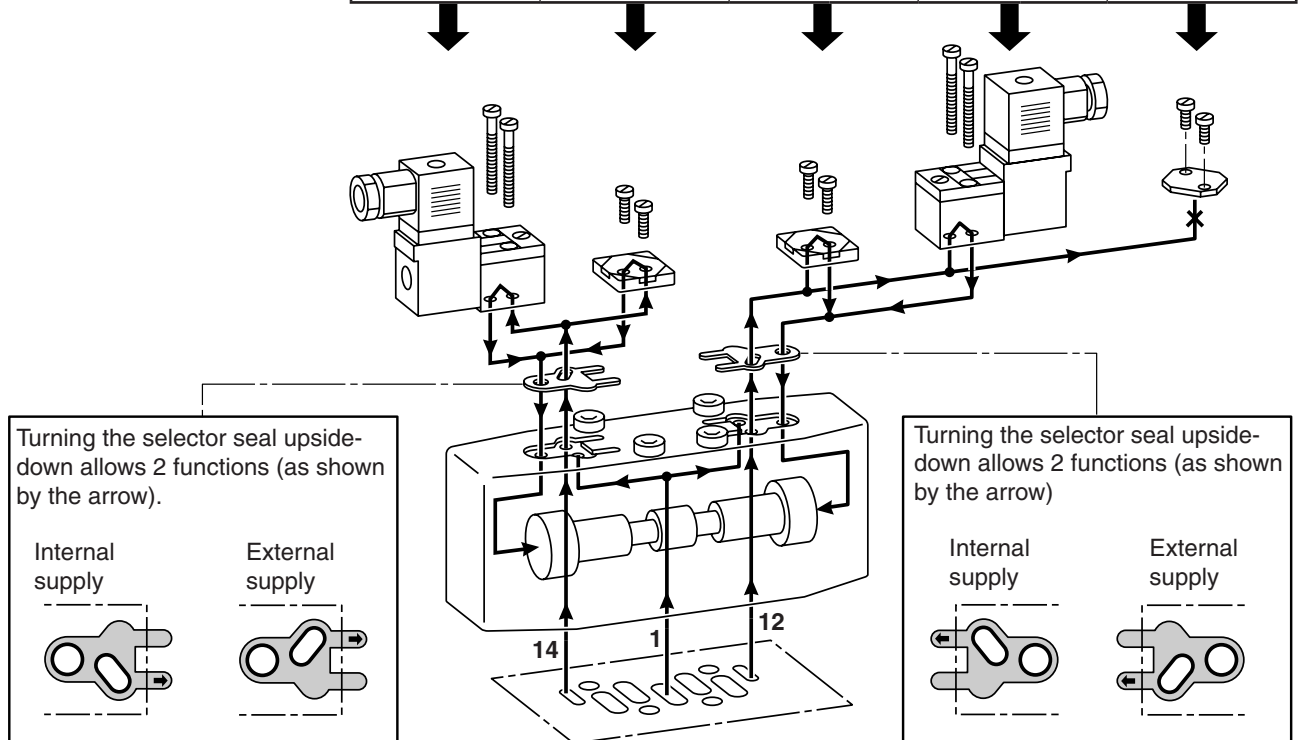


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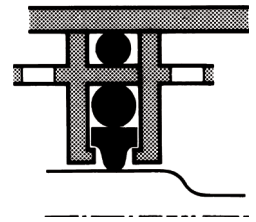
The diagram below shows the accessories (delivered with the valves) and/or the solenoid valves appropriate for each function. These components may be separately supplied when changing the function of the valve.

	functions		pilot		return		
	symbols	pilot (14) return (12)					
<b>5/2</b>		Air operated Spring return		●			●
		Air operated Differential return		●	●		
		Air operated Air		●	●		
		Solenoid air operated Spring return	●				●
		Solenoid air operated Differential return	●		●		
		Solenoid air operated Air return	●		●		
		Solenoid air operated Solenoid differential return	●			●	
		Solenoid air operated pilot and return	●			●	
<b>5/3</b>		Air operated W1-W2-W3		●	●		
		Solenoid air operated W1-W2-W3	●			●	
			solenoid valves <b>189-190 or 192</b>	interface <b>88100074</b>	interface <b>88100074</b>	solenoid valves <b>189-190 or 192</b>	blanking plate <b>88100073</b>



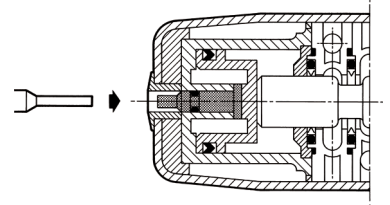
**USE WITH NON LUBRICATED AIR**

The ISO valves will operate satisfactorily with lubricated or non lubricated air, even with dry air due to a patented sealing system : a "T" seal backed with a cushioning or compensation seal. This arrangement of seals maintains minimum pilot pressure which remains constant even after the valve has been switched off for a long period of time. When restarting, the performance of the valve will be the same as during continuous operating conditions. This characteristic ensures good performance in both re-start and continuous operation conditions.

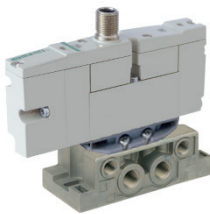


**MANUAL TESTERS INDICATING THE POSITION OF THE SPOOL**

On request, spool valves can be delivered equipped with manual testers so that the spool position can be checked or moved by manual override.



**M12 ELECTRICAL CONNECTION (3-pin)**



Spool valve ISO 15407-1 (26 mm),  
M12 electrical connection,  
with adapter ISO 5599/1 size 1



Spool valve ISO 5599/1 size 2  
with M12 electrical connection



Spool valve ISO 5599/1 size 3  
with M12 electrical connection

Pad mounting spool valves with M12 connector by 3-contact. This system has the following advantages:

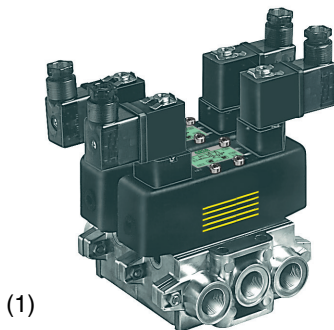
- Smaller dimensions (503 pilot or mini-solenoid valve - pilot series 302)
- Shorter connection time
- Built-in electrical display and protection
- Instantaneous electrical disconnection

**EASY INSTALLATION**

ASCO Numatics markets a complementary range of components simplifying the installation of valves ISO:

- [Single subbase with side ports or bottom ports](#)
- [Joinable subbases with bottom ports \(1\)](#)

[Numerous accessories complete these systems](#)



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## SUMMARY

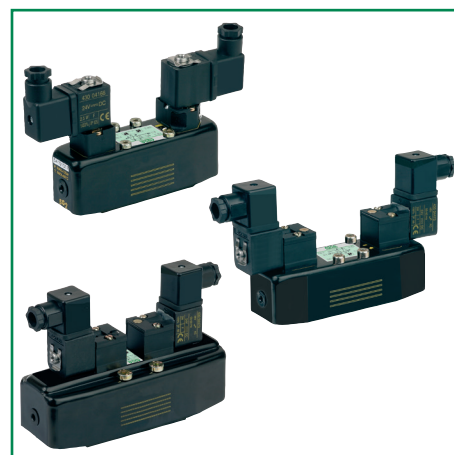
Products	Illustration	Series	Page
Multifonction spool valves		541 542 543	<b>75</b> <b>77 (ATEX)</b>
Spool valves with M12 electrical connection		503 542 543	<b>79</b>
Single subbases with side ports, ISO sizes 1, 2, 3		<a href="#">541</a> <a href="#">542</a> <a href="#">543</a>	<b>81</b>
Single subbases with bottom ports, ISO sizes 1 and 2		<a href="#">541</a> <a href="#">542</a> <a href="#">543</a>	<b>81</b>
Metallic joinable subbases with bottom ports ISO sizes 1, 2, 3		<a href="#">541</a> <a href="#">542</a> <a href="#">543</a>	<b>81</b>
Metallic joinable subbases with side ports ISO sizes 1 and 2		<a href="#">355</a>	<b>86</b>
Accessories ISO sizes 1, 2, 3		<a href="#">346</a>	<b>90</b>

### FEATURES

- Reliability: long service life of 30 million cycles
- Choice of internal/external supply with selector seals (vacuum use to -0,950 bar)
- Modular assembly with joinable subbases
- Subbases with side or bottom ports

### GENERAL

	ISO 1	ISO 2	ISO 3
Fluid	Air or neutral gas, filtered, lubricated or not		
Operating pressure	+3 to +10 bar (with internal supply to pilot)		
	-0,950 to +12 bar (with external supply to pilot)		
	Can be used with vacuum -0,950 bar max.		
Pilot pressure	See specifications tables		
Ambient temperature	-10°C to +60°C		
Flow (Qv at 6 bar)	1400 l/min (ANR)	2800 l/min (ANR)	4200 l/min (ANR)
Flow coefficients	C = 5,8 x 10 <sup>-8</sup> m <sup>3</sup> /s.Pa (sonic conductance)		
	b = 0,28 (absolute static pressure)		
Response time	See tables choice of equipment		
Life	30 millions of cycles		
Base	ISO 5599/1 sizes 1-2-3 - AFNOR NF E49080		
Subbase	Single subbase ISO/AFNOR NF E49085		
	Joinable subbase ISO/VDMA 24345		
	Joinable subbase with integrated functions		



### CONSTRUCTION

Cover	Painted steel
Pilot and return assembly	POM (polyacetal)
Seals	NBR (nitrile) and PUR (polyurethane)
Internal parts	POM (polyacetal), light alloy

### ELECTRICAL CHARACTERISTICS

pilot	voltage	consumption		insulation class	protection degree	electrical connection
		inrush	hold			
series 189	~ 24V-48V-115V-230V/50Hz	6 VA	3,5 VA (2,5 W)	F	IP 65	spade plug size 22 connector, DIN 43650, 11 mm, industry standard B, rotatable by 180°
	= 24V-48V	2,5 W				
series 190	~ 24V-48V-115V-230V/50 Hz	9 VA	4 VA (3 W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	= 24V-48V	3 W				

The solenoid valve 190 is dual-voltage (24V~, 12V=) (48V~, 24V=) (115V~, 48V=) (230V~, 110V=)

### SPECIFICATIONS 5/2

function 5/2 symbol	operators pilot (14) solenoid air operated return (12)	size	response time (1) (ms)		pilot pressure (bar)		2 catalogue numbers	
			ener-gized	de-ener-gized	min.	max.	valve	+ solenoid pilot quantity & catalogue number with standard connector (M)
	spring return	ISO 1	25	66	3	10	54191023	+ 1x { <ul style="list-style-type: none"> <li>18900001 ●</li> <li>-</li> <li>19000005 ×</li> <li>19000006 ●</li> <li>19000017 ▼</li> </ul>
		ISO 2	19	68	2,5		54292023	
		ISO 3	45	130	3		54391023	
	differential return	ISO 1	41	45	3	10	54191024	
		ISO 2	32	49	2		54292024	
		ISO 3	71	82	3		54391024	
	air return	ISO 1	21	-	1,5	10	54191025	
		ISO 2	16	-	1,5		54292025	
		ISO 3	28	-	1,5		54391025	
	solenoid differential return	ISO 1	16	18	3	10	54191026	
		ISO 2	15	16	2		54292026	
		ISO 3	21	23	3		54391026	
	Solenoid air operated return	ISO 1	17	16	1,5	10	54191027	+ 2x { <ul style="list-style-type: none"> <li>18900001 ●</li> <li>-</li> <li>19000005 ×</li> <li>19000006 ●</li> <li>19000017 ▼</li> </ul>
		ISO 2	16	15	1,5		54292027	
		ISO 3	26	25	1,5		54391027	

(M) Type of manual operator on pilot(s): × : without ● : maintained ▼ : impulse

(1) With solenoid valve series 190

**SPECIFICATIONS 5/3**

function 5/3  symbol	operators pilot (14) return (12) solenoid air operated	size	response time (1) (ms)		pilot pressure (bar)		2 catalogue numbers		
			ener- gized	de-ener- gized	min.	max.	valve	+ solenoid pilot quantity & catalogue number	(M)
	pressure held <b>W1</b>	ISO 1	16	17	3	10	<b>54191028</b>	+ 2x {	<b>18900001</b> ● <b>19000005</b> × <b>19000006</b> ● <b>19000017</b> ▼
		ISO 2	16	16			<b>54292028</b>		
		ISO 3	27	26			<b>54391028</b>		
	pressure applied <b>W2</b>	ISO 1	44	18	3	10	<b>54191030</b>		
		ISO 2	54	18			<b>54292030</b>		
		ISO 3	93	27			<b>54391029</b>		
	pressure release <b>W3</b>	ISO 1	17	47	3	10	<b>54191029</b>		
		ISO 2	19	61			<b>54292029</b>		
		ISO 3	29	28			<b>54391030</b>		

(M) Type of manual operator on pilot : × : without ● : maintained ▼ : impulse  
 (1) With solenoid valve series 190

**OPTIONS**

- Solenoid valve pilot 3/2 series 192 in 3 versions
- Equipment with manual testers so that the spool position can be checked
- Material and solenoid pilot valve for use in potentially **explosive atmospheres** caused by gases or dusts - ATEX directive 2014/34/EU (See following pages)
- Connector with cable 2m long (see "Coils and accessories" section)
- Connector with transil protection (see "Coils and accessories" section)
- Solenoid valve with plug and built-in visual control and protection :

Solenoid valve **without** connector + Connector with built-in visual control and VDR/RC protection

type of valve	(M)	catalogue number solenoid valve without connector	catalogue number (~ / =)			
			24V	48V	115V	230V
189 NC	●	<b>18900002</b>	<b>88122405</b>	<b>88122406</b>	<b>88122407</b>	<b>88122410</b>
190 NC	×	<b>19000013</b>	<b>88122603</b>	<b>88122604</b>	<b>88122605</b>	<b>88122608</b>
	●	<b>19000014</b>				
	▼	<b>19000018</b>				
192 NC (2)	×	<b>19200022</b>				
	●	<b>19200023</b>				
	▼	<b>19200024</b>				

(M) Type of manual operator on pilot(s) : × : without ● : maintained ▼ : impulse  
 (2) Solenoid valve series 192 - 3/2 NC - Ø 2,1mm with exhaust in base

**SUBBASES AND ACCESSORIES : see catalogue pages**





Spool valves intended for use in potentially explosive atmospheres caused by gases, vapours, mists and/or dusts (ATEX directive 2014/34/EU)

**CLASSIFICATION (ISO 1-2-3): II 2 GD IIC Ta 60°C T6 (T85°C)**

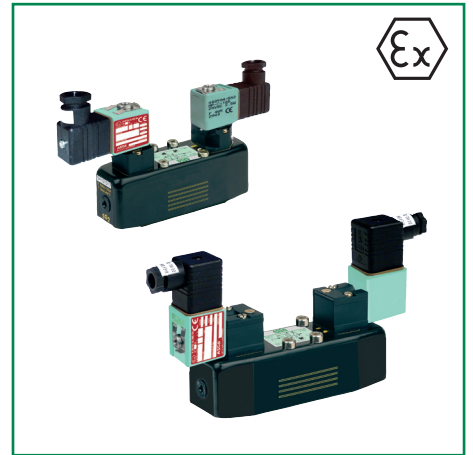
Temperature range: -10°C ≤ Ta ≤ +60°C

Compliance with the Essential Health and Safety Requirements has been assured by compliance with European Standards EN 13463-1.

Pilots: 189 (PV) / 189 (SG) / 190 (R314/LPKF)

**ELECTRICAL CHARACTERISTICS**

<b>Standard voltages</b>	DC (=): 24V - 48V
(Other voltages on request)	AC (~): 24V - 48V - 115V - 230V/50-60 Hz



**COIL TEMPERATURE CLASSIFICATION TABLES**

Solenoid operators for potentially explosive atmospheres

Allowable minimum ambient temperature: -10°C.

**TYPE 01: PV (189 pilot)**

encapsulated, II 2G Ex mb IIC T5..T3 Gb / II 2D Ex mb IIIC T100°C..T200°C Db IP67

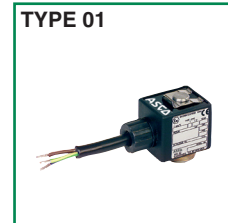
moulded enclosure with integrated cable

AC solenoids (~)

DC solenoids (=)

Pn (watt)	maximum ambient °C surface temperature			
	T6 85°C	T5 100°C	T4 135°C	T3 200°C
insulation class F (155°C) 100% E.D.				
4,0	-	-	60	-

Pn (watt)	maximum ambient °C surface temperature			
	T6 85°C	T5 100°C	T4 135°C	T3 200°C
insulation class F (155°C) 100% E.D.				
3,0	-	40	60	60



**TYPE 02/03: SG (189/190 pilots)**

For dust applications - II 3 D Ex tc IIIC T115°C Dc IP65X

The assembly consisting of the coil and connector has IP65 protection

Spade plug [189 Series: cable Ø 4,5-7 mm / 190 Series: (cable Ø 4,5-10 mm)]

max. AC power (W)	max. DC power (W)
17,1	11,6

	surface temperature	min. ambient temperature	max. ambient temperature	E.D. <sup>(1)</sup>
SG	115°C	-10°C	+50°C	100%

<sup>(1)</sup> Duty factor.



**TYPE 04: R314/LPKF**

flameproof enclosure - II2G Ex d IIB+H2 Gb T6..T4, II2D Ex tb IIIC Db IP66/IP67

aluminium enclosure, ISO 15218 (CNOMO, size 30) interface

AC solenoids (~)

DC solenoids (=)

Un (V)	Pn (watt) (2)(3)	solenoid size M6	maximum ambient °C <sup>(4)</sup> surface temperature		
			T6 85°C	T5 100°C	T4 135°C
insulation class F (155°C) 100% E.D.					
24	5,4	●	40	-	60
48	5,8	●	40	-	60
115	7,1	●	-	40	60
230	7,4	●	-	40	60

Un (V)	Pn (watt)		solenoid size M6	maximum ambient °C <sup>(4)</sup> surface temperature		
	hot/cold			T6 85°C	T5 100°C	T4 135°C
insulation class F (155°C) 100% E.D.						
24	5,9	7,5 <sup>(3)</sup>	●	-	40	60
48	6	7,6 <sup>(3)</sup>	●	-	40	60



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<sup>(2)</sup> Rectified coil construction.

<sup>(3)</sup> Maximum cold wattage.

<sup>(4)</sup> For the layout of the control circuit, see the installation and maintenance instructions at: [www.asco.com](http://www.asco.com)

All leaflets are available on: [www.asco.com](http://www.asco.com)

**SPECIFICATIONS**

When ordering, please specify: the standard spool valve code and its ATEX option and the solenoid pilot code

5/2 symbols	function solenoid air pilot (14) return (12)	size	response time (ms)		pilot pressure (bar)		2 codes		(M)			
			energized	de-energized	min.	max.	spool valve	+ solenoid pilot quantity and code				
	spring return	ISO 1	25	66	3	10	54191023	+ 1x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01				
		ISO 2	19	68	2,5					54292023		
		ISO 3	45	130	3					54391023		
	differential return	ISO 1	41	45	3	10	54191024		+ 1x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01			
		ISO 2	32	49	2						54292024	
		ISO 3	71	82	3						54391024	
	air return	ISO 1	21	-	1,5	10	54191025			+ 2x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01		
		ISO 2	16		1,5							54292025
		ISO 3	28		1,5							54391025
	solenoid-differential return	ISO 1	16	18	3	10	54191026				+ 2x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01	
		ISO 2	15	16	2			54292026				
		ISO 3	21	23	3			54391026				
	solenoid air return	ISO 1	17	16	1,5	10	54191027	+ 2x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01				
		ISO 2	16	15	1,5				54292027			
		ISO 3	26	25	1,5				54391027			

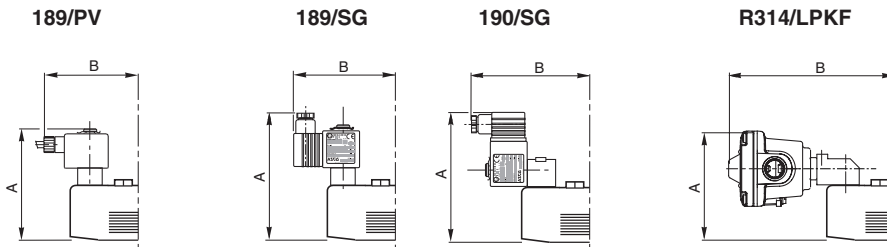
5/3 symbols	function solenoid air pilot (14) solenoid air return (12)	size	response time (ms)		pilot pressure (bar)		2 codes		(M)			
			energized	de-energized	min.	max.	spool valve	+ solenoid pilot quantity and code				
	W1 closed centre position	ISO 1	16	17	3	10	54191028	+ 2x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01				
		ISO 2	16	16						54292028		
		ISO 3	27	26						54391028		
	W2 centre open to pressure	ISO 1	44	18	3	10	54191030		+ 2x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01			
		ISO 2	54	18							54292030	
		ISO 3	93	27							54391029	
	W3 centre open to exhaust	ISO 1	17	47	3	10	54191029			+ 2x PV18900001 SG18900001 SG19000005 SG19000006 SG19000017 R314K311GNN00 R314K311GNN01		
		ISO 2	19	61								54292029
		ISO 3	29	28								54391030

(M) Type of manual operator on pilot(s): X : without ● : maintained ▼ : impulse

**OPTIONS**

- Equipment with manual testers so that the spool position can be checked.

**DIMENSIONS (mm)**



size	A			B		
	541	542	543	541	542	543
PV/189	92	94	109	82	112	-
SG/189	91	93	108	105	135	-
SG/190	118	120	135	108	118	-
R314	93	94	170	137	167	118

543 Series (R314/LPKF pilot):  
Intermediate subbase code: **88119104** (required for mounting)

### FEATURES

- M12 connection: Prevents wiring errors, reduces installation time and reduces wiring costs
- Modular assembly with joinable subbases

### GENERAL

#### Fluid

#### Operating pressure

**503**  
**542-543**

#### Pilot pressure

#### Ambient temperature

#### Flow (Qv at 6 bar)

#### Flow coefficients

- conforming to ISO 6358

#### Response time

#### Life (millions of cycles)

#### Base

#### Subbase

	ISO 1	ISO 2	ISO 3
Fluid	Air or neutral gas, filtered, lubricated or not		
Operating pressure	+3 to +10 bar (with internal supply to pilot)		
	-0,950 to +10 bar (with external supply to pilot)		
	-0,950 to +12 bar (with external supply to pilot)		
	Can be used with vacuum -0,950 bar max.		
Pilot pressure	See tables choice of equipment		
Ambient temperature	-10°C to +50°C (503 pilot)/+60°C (302 pilot)		
Flow (Qv at 6 bar)	1200 l/min (ANR)	2800 l/min (ANR)	4200 l/min (ANR)
Flow coefficients	See specifications tables		
	C = 5,21 x 10 <sup>-8</sup> m <sup>3</sup> /s.Pa (sonic conductance)		
	b = 0,34 (critical pressure ratio)		
	C = 5,8 x 10 <sup>-8</sup> m <sup>3</sup> /s.Pa (sonic conductance)		
	b = 0,28 (critical pressure ratio)		
Response time	See specifications tables		
Life (millions of cycles)	30	30	30
Base	ISO 5599/1 sizes 1-2-3 - AFNOR NF E49080		
Subbase	Single subbase ISO/AFNOR NF E49085		
	Joinable subbase ISO/VDMA 24345		
	Joinable subbase with integrated functions		



### CONSTRUCTION

#### Body/Cover

#### Pilot and return assembly

#### Seals

#### Internal parts

#### 503

Aluminium, E-coating treatment

POM

NBR (nitrile) and PUR (polyurethane)

PARA (polyarylamide), steel

#### 542-543

Painted steel

POM

NBR (nitrile) and PUR (polyurethane)

POM (polyacetal), light alloy

### SPECIFICATIONS (SPOOL VALVE WITH INTERNAL PILOT SUPPLY)

function symbol	operators pilot (14) solenoid air operated return (12)	size	response time (ms)		pilot pressure (bar)		catalogue number spool valve with pilot series 302 (with internal supply) (M)		
			energized	de-energized	min.	max.	×	●	▼
5/2	spring return	ISO 1	20	60	3	10	R503A2B10Q82KF1	R503A2B10Q81GF1	R503A2B10Q14BF1
		ISO 2	32	65	2,5	10	54202151	54202172	54202193
		ISO 3	62	104	3	10	54302151	54302172	54302193
	differential return	ISO 1	28	40	3	10	R503A2BN0Q82KF1	R503A2BN0Q81GF1	R503A2BN0Q14BF1
		ISO 2	51	62	2	10	54202152	54202173	54202194
		ISO 3	97	71	3	10	54302152	54302173	54302194
	air return	ISO 1	-	-	-	10	-	-	-
		ISO 2	21	-	1,5	10	54202153	54202174	54202195
		ISO 3	34	-	1,5	10	54302153	54302174	54302195
	differential return	ISO 1	-	-	-	10	-	-	-
		ISO 2	17	21	2	10	54202154	54202175	54202196
		ISO 3	29	39	3	10	54302154	54302175	54302196
solenoid air operated	ISO 1	20	20	2	10	R503A2B40Q82KF1	R503A2B40Q81GF1	R503A2B40Q14BF1	
	ISO 2	18	20	2	10	54202155	54202176	54202197	
	ISO 3	33	38	2	10	54302155	54302176	54302197	
5/3	W1 closed centre position	ISO 1	15	20	3	10	R503A2B60Q82KF1	R503A2B60Q81GF1	R503A2B60Q14BF1
		ISO 2	25	26	2,5	10	54202156	54202177	54202198
		ISO 3	37	46	3	10	54302156	54302177	54302198
	W2 centre open to pressure	ISO 1	-	-	-	10	-	-	-
		ISO 2	54	26	2,5	10	54202157	54202178	54202199
		ISO 3	77	50	3	10	54302157	54302178	54302199
	W3 centre open to exhaust	ISO 1	18	45	3	10	R503A2B50Q82KF1	R503A2B50Q81GF1	R503A2B50Q14BF1
		ISO 2	28	59	2,5	10	54202158	54202179	54202200
		ISO 3	40	52	3	10	54302158	54302179	54302200

(M) Type of manual operator on pilot(s): × : without ● : maintained ▼ : impulse

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**SPECIFICATIONS (SPOOL VALVE WITH EXTERNAL PILOT SUPPLY)**

function symbol	operators pilot (14) solenoid air operated return (12)	size	response time (ms)		pilot pressure (bar)		catalogue number spool valve with pilot series 503 or 302 (with external supply) <sup>(1)</sup>		
			energized	de-energized	min.	max.	(M)		
							×	●	▼
	spring return	ISO 1	20	60	3	10	R503A2B10Q11MF1	R503A2B10Q11BF1	R503A2B10QA00F1
		ISO 2	32	65	2,5		54202159	54202180	54202201
		ISO 3	62	104	3		54302159	54302180	54302201
	differential return	ISO 1	28	40	3	10	R503A2BNOQ11MF1	R503A2BNOQ11BF1	R503A2BNOQA00F1
		ISO 2	51	62	2		54202160	54202181	54202202
		ISO 3	97	71	3		54302160	54302181	54302202
	air return	ISO 1	-	-	-	10	-	-	-
		ISO 2	21	-	1,5		54202161	54202182	54202203
		ISO 3	34	-	1,5		54302161	54302182	54302203
differential return	ISO 1	-	-	-	10	-	-	-	
	ISO 2	17	21	2		54202162	54202183	54202204	
	ISO 3	29	39	3		54302162	54302183	54302204	
solenoid air operated	ISO 1	20	20	2	10	R503A2B40Q11MF1	R503A2B40Q11BF1	R503A2B40QA00F1	
	ISO 2	18	20	2		54202163	54202184	54202205	
	ISO 3	33	38	2		54302163	54302184	54302205	
	<b>W1</b> closed centre position	ISO 1	15	20	3	10	R503A2B60Q11MF1	R503A2B60Q11BF1	R503A2B60QA00F1
		ISO 2	25	26	2,5		54202164	54202185	54202206
		ISO 3	37	46	3		54302164	54302185	54302206
	<b>W2</b> centre open to pressure	ISO 1	-	-	-	10	-	-	-
		ISO 2	54	26	2,5		54202165	54202186	54202207
		ISO 3	77	50	3		54302165	54302186	54302207
	<b>W3</b> centre open to exhaust	ISO 1	18	45	3	10	R503A2B50Q11MF1	R503A2B50Q11BF1	R503A2B50QA00F1
		ISO 2	28	59	2,5		54202166	54202187	54202208
		ISO 3	40	52	3		54302166	54302187	54302208

(M) Type of manual operator on pilot(s): × : without ● : maintained ▼ : impulse

<sup>(1)</sup> In external pilot version, the spool valve can be used in an air system at pressures between:  
503 : -0,950 bar to +10 bar / 542-543 : -0,950 bar to +12 bar

**ELECTRICAL CHARACTERISTICS OF PILOTS**




size	type of valve	voltage	consumption	insulation class	protection degree	connection
ISO 1	series 503	24 V DC	1,7 W 1,4 W	F	IP 65	for M12 centralised connection IEC 60947.5.2 - ISO/CD20401 CNOMO E03.62.520N on base with 3 male contacts
ISO 2 - 3	series 302	24 V DC	2 W 1 W			

**CONNECTORS**

Straight M12 connector with 5 female contacts, Ø4 to 6 mm cable entry, code: **88100304**  
 Straight M12 connector with 5 female contacts, Ø6 to 8 mm cable entry, code: **88100256**  
 Straight M12 connector with 5 female contacts, cable length 5 m, code: **88130212**  
 Right-angle M12 connector with 5 female contacts, cable length 5 m, code: **88130213**

**SUBBASES AND ACCESSORIES (page: 81): [www.asco.com](http://www.asco.com)**

### SPECIFICATIONS

type of subbase	description		port connection				size	catalogue number	
	type of port		12-14	1	2-4	3-5			
<b>single subbases</b>  ISO 5599/1 AFNOR NFE 49080	 side	tapped	G 1/8	G 1/4	G 1/4	G 1/4	ISO 1	35500076	
			G 1/8	G 1/4	G 1/4	G 3/8		35500061	
			G 1/8	G 3/8	G 3/8	G 3/8		35500382	
			 bottom	tapped	G 1/8	G 3/8	G 3/8	G 3/8	ISO 2
	G 1/8	G 1/2			G 1/2	G 1/2	35500562		
	with couplers	G 1/8			G 1/2	G 1/2	G 1/2	ISO 3	35500171
		G 1/8			G 3/4	G 3/4	G 3/4		35500192
	<b>joinable subbases</b>  ISO 5599/1 VDMA 24345	 bottom	subbase	G 1/8	-	G 1/4	-	ISO 1	35500165
set of 2 end plates			-	G 3/8	-	G 3/8	35500166		
subbase			G 1/8	-	G 3/8	-	ISO 2	35500169	
set of 2 end plates			-	G 1/2	-	G 1/2		35500170	
subbase			G 1/8	-	G 1/2	-	ISO 3	35500173	
set of 2 end plates			-	G 1	-	G 1		35500174	
set of 3 plugs on main pressure (1) and exhausts (3-5) for 2 different pressure supplies (see A)						ISO 1	88135521		
						ISO 2	88135522		
						ISO 3	88135520		

Set of 2 end plates supplied with 3 plugs (for 1-3-5)

(A) Mounting principle of a plug set : this device allows joinable subbases to be supplied with 2 different pressure inlets.



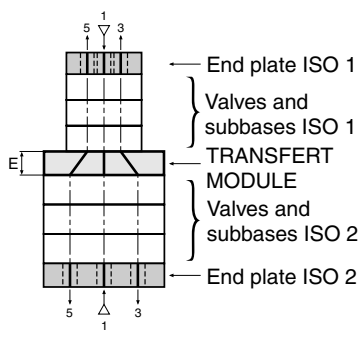
### SET OF TRANSFER PLATES AND CONNECTIONS

• Set of transfer plates and connections to put together different sizes of ISO - VDMA joinable subbases :

**ISO 1 - ISO 2**, set including :

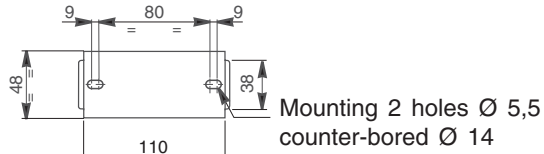
- A transfer module to allow connection of ISO-VDMA joinable subbases through ISO 1 and ISO 2 **bottom** ports, and connection of supply pressure (1) and exhausts (3-5) through the unit.
- One end plate ISO 1 (ports 1 - 3 - 5)
- One end plate ISO 2 (ports 1 - 3 - 5)

**ISO 1 - ISO 3** set including the same parts as mentioned above, but adapted to the connection of ISO 1 and ISO 3

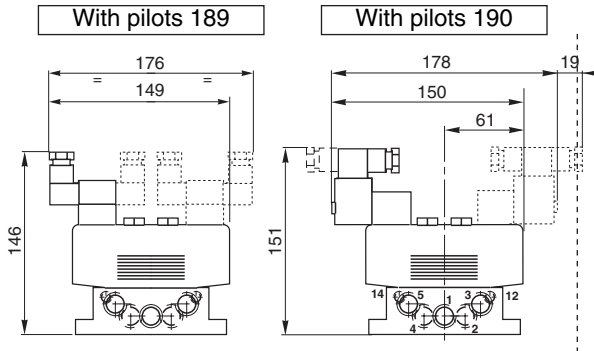
description	type	catalogue number	E (mm)	
Set of transfer plate and connections for ISO/VDMA joinable subbases with <b>bottom</b> ports	ISO 1 - ISO 2	35500199	20	
	ISO 1 - ISO 3	35500194	32	

**DIMENSIONS (mm), WEIGHT (kg)**

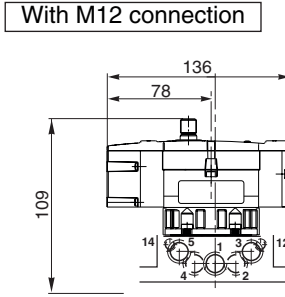
VALVES ON SINGLE SUBBASES  
Side port - ISO 1



**541 Series**



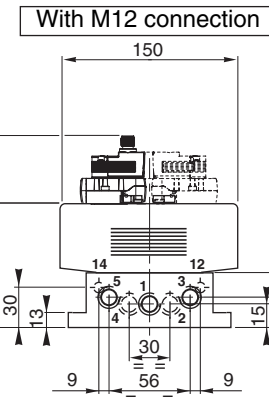
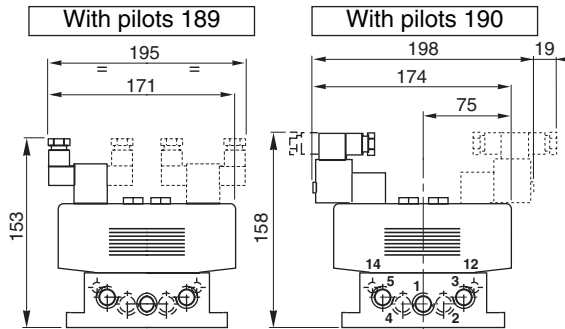
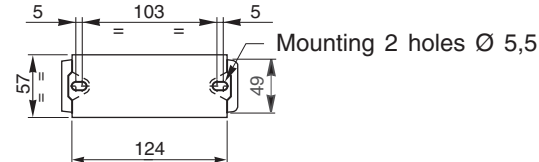
**503 Series**



subbase catalogue number	port connection		
	12-14	1-2-4	3-5
35500076	G 1/8	G 1/4	G 1/4
35500061		G 3/8	G 3/8
35500382		G 3/8	G 3/8

total weight					
with 1 pilot			with 2 pilots		
189	190	M12	189	190	M12
0,725	0,785	0,665?	0,825	0,945	0,695?

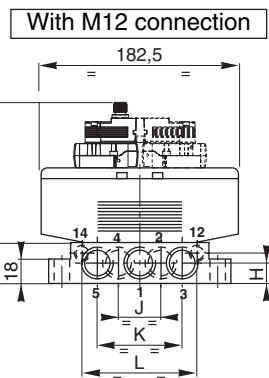
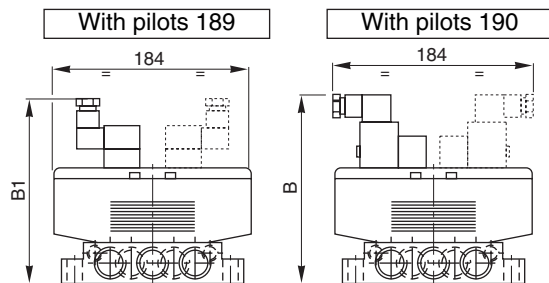
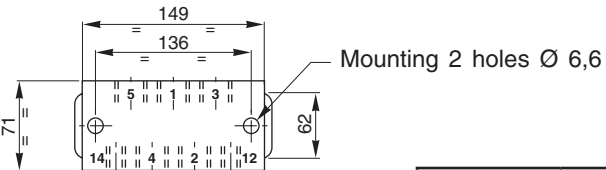
542 VALVES ON SINGLE SUBBASES  
Side port - ISO 2



subbase catalogue number	port connection		
	12-14	1-2-4	3-5
35500560	G 1/8	G 3/8	G 3/8
35500562		G 1/2	G 1/2

total weight					
with 1 pilot			with 2 pilots		
189	190	M12	189	190	M12
0,950	1,010	0,930	1,080	1,200	0,980

543 VALVES ON SINGLE SUBBASES  
Side port - ISO 3




subbase catalogue number	port connection		
	12-14	1-2-4	3-5
35500171	G 1/8	G 1/2	G 1/2
35500192		G 3/4	G 3/4

total weight						
G	with 1 pilot			with 2 pilots		
	189	190	M12	189	190	M12
1/2	1,585	1,645	1,540	1,685	1,800	1,585
3/4	2,652	2,127	2,022	2,167	2,282	2,067

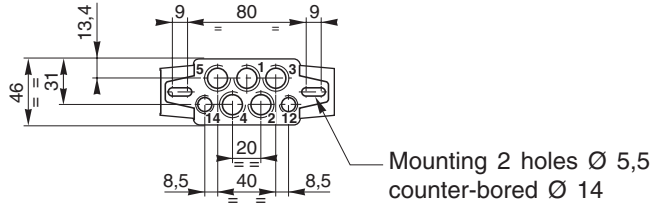
	B	B1	B2	E	F	H	J	K	L
G 1/2	164	159,5	152	32	22	17	32	68	90
G 3/4	182	177,5	170	50	40	20	36	80	92

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82 - Solenoid Operated Valves (5/2 - 5/3)

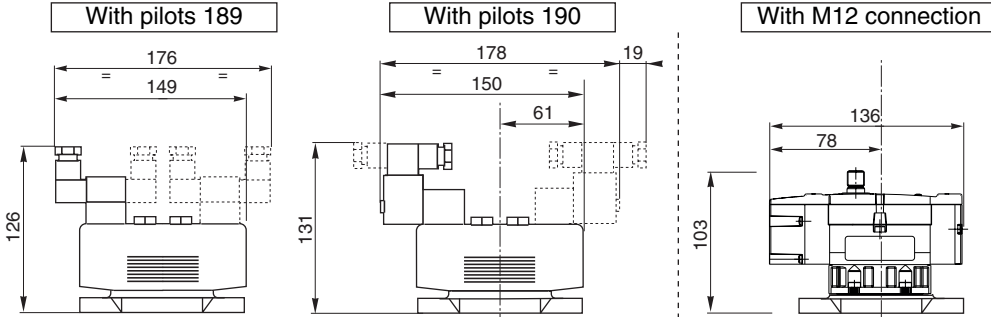
**DIMENSIONS (mm), WEIGHT (kg)** 

VALVES ON SINGLE SUBBASES  
Bottom port - ISO 1



**541 Series**

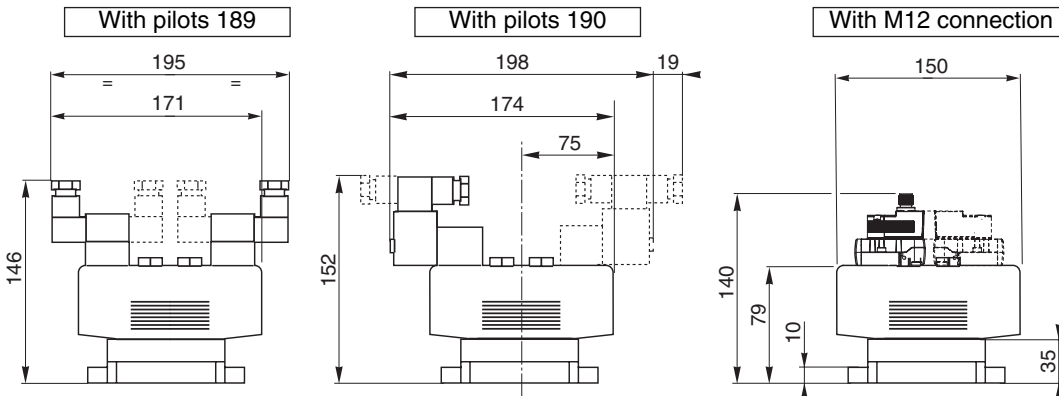
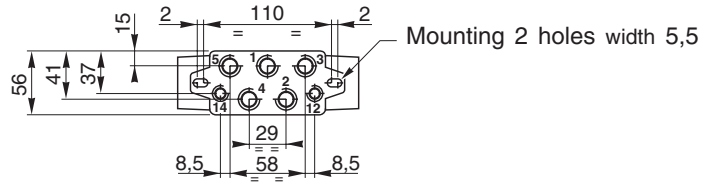
**503 Series**



subbase catalogue number	port connection		
	12-14	1-2-4	3-5
35500077	G 1/8	G 1/4	G 1/4
35500069	Instant fittings		G 1/4
	Ø 4 OD	Ø 8 OD	

total weight					
with 1 pilot			with 2 pilots		
189	190	M12	189	190	M12
0,720	0,780	0,660	0,820	0,940	0,690

**542 VALVES ON SINGLE SUBBASES**  
Bottom port - ISO 2



subbase catalogue number	port connection		
	12-14	1-2-4	3-5
35500085	G 1/8	G 3/8	G 3/8

total weight					
with 1 pilot			with 2 pilots		
189	190	M12	189	190	M12
0,670	0,730	0,650	0,800	0,920	0,700

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**DIMENSIONS (mm), WEIGHT (kg)**

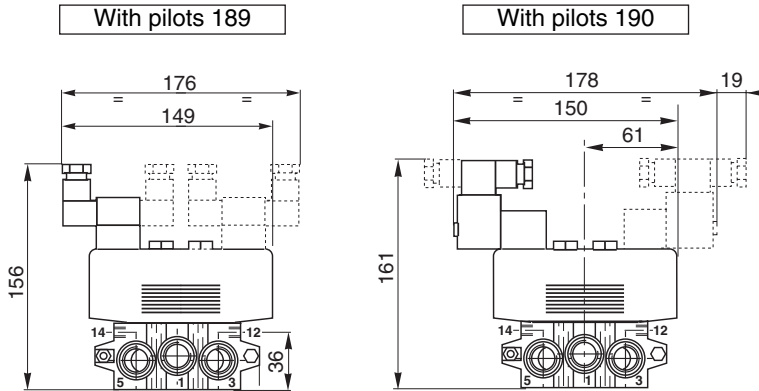
**SPOOL VALVES ON METALLIC JOINABLE SUBBASES**

**Bottom port - ISO 1**

number of subbases	A	B±1	C	weight		
				valves with 2 pilots + subbases + end plates		
				pilot 189	pilot 190	M12
3	173	150	86	2,850	3,200	2,450
4	216	193	129	3,500	4,000	3,000
5	259	236	172	4,100	4,700	3,450
6	302	279	215	4,750	5,500	4,000
7	345	322	258	5,350	6,200	4,450
8	388	365	301	6,000	7,000	5,000

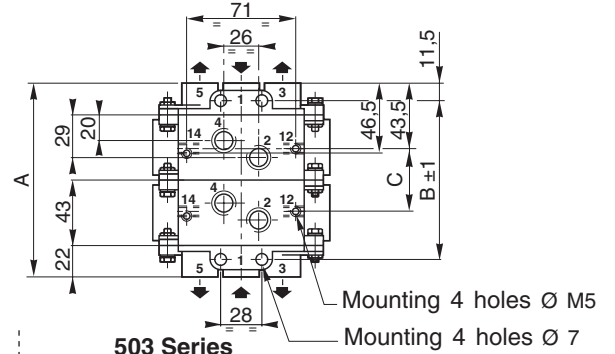
Pilots weight : 1 x 189 = 0,120 kg - 1 x 190 = 0,180 kg  
1 x M12 = 0,058 kg - 2 x M12 = 0,110 kg

**541 Series**

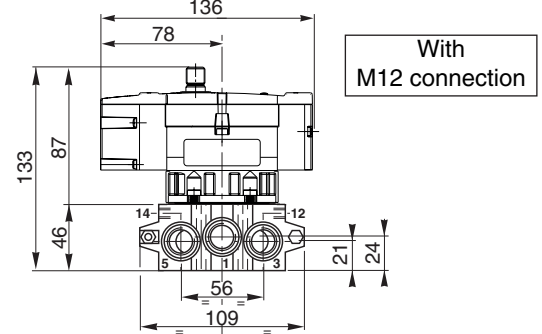


	code	port connection		
		12-14	2-4	1-3-5
subbase	<b>35500165</b>	G 1/8	G 1/4	-
2 end plates	<b>35500166</b>	-	-	G 3/8

Set of end plates supplied with 3 plugs G 3/8 (for 1-3-5)



**503 Series**

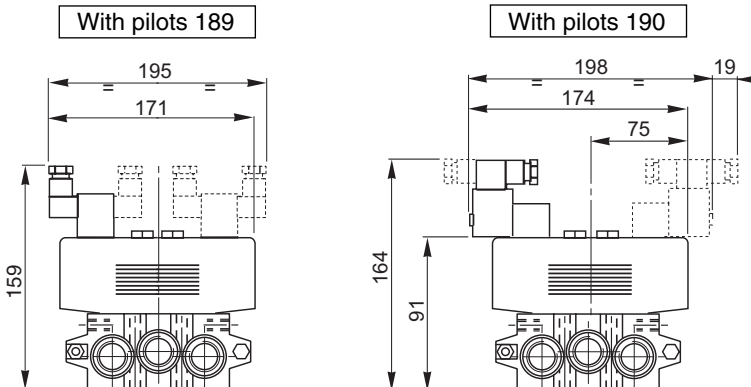


**542 SPOOL VALVES ON METALLIC JOINABLE SUBBASES**

**Bottom port - ISO 2**

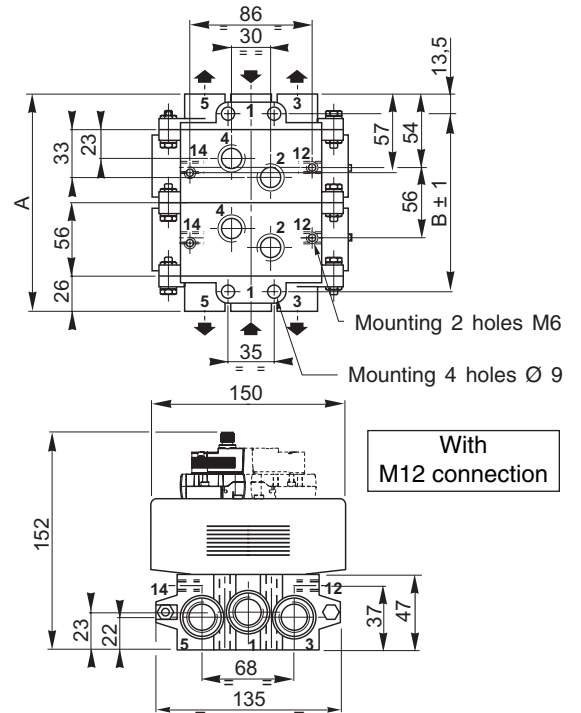
number of subbases	A	B±1	C	weight		
				valves with 2 pilots + subbases + end plates		
				pilot 189	pilot 190	M12
3	220	193	112	3,600	3,900	3,240
4	276	249	168	4,600	5,100	4,220
5	332	305	224	5,700	6,300	5,200
6	388	361	280	6,800	7,500	6,180
7	444	417	336	7,800	8,700	7,160
8	500	473	392	9,000	9,900	8,140

Pilot weight : 1 x 189 = 0,120 kg - 1 x 190 = 0,180 kg  
1 x M12 = 0,073 kg - 2 x M12 = 0,140 kg



	catalogue number	port connection		
		12-14	2-4	1-3-5
subbase	<b>35500169</b>	G 1/8	G 3/8	-
2 end plates	<b>35500170</b>	-	-	G 1/2

Set of end plates supplied with 3 plugs G 1/2 (for 1-3-5)





**DIMENSIONS (mm), WEIGHT (kg)**

**543 SPOOL VALVES ON METALLIC JOINABLE SUBBASES**

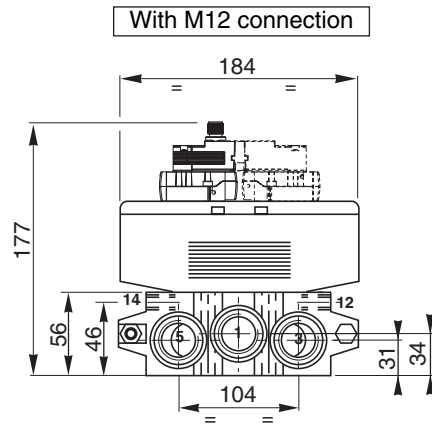
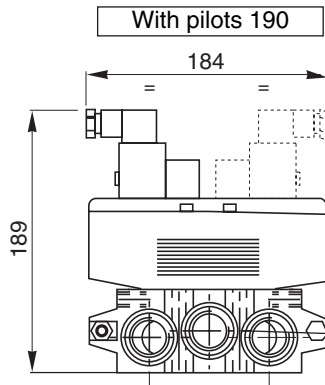
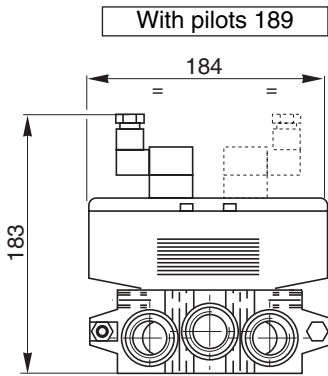
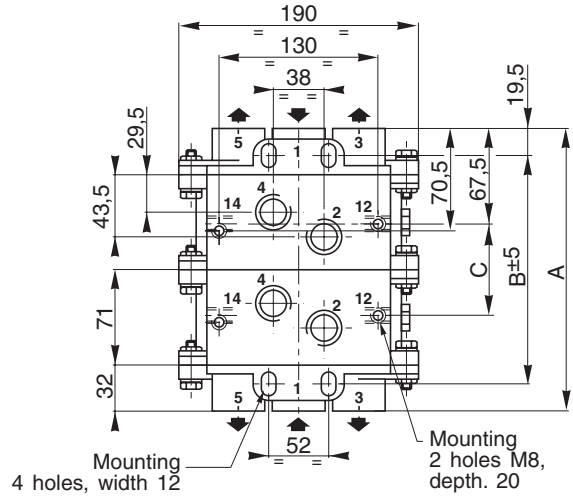
**Bottom port - ISO 3**

	catalogue number	port connection		
		12-14	2-4	1-3-5
subbase	35500173	G 1/8	G 1/2	-
2 end plates	35500174	-	-	G 1

Set of end plates supplied with 3 plugs G 3/8 (for 1-3-5)

number of subbases	A	B±1	C	weight		
				valves with 2 pilots + subbases + end plates		
				pilot 189	pilot 190	M12
2	206	167	71	4,140	4,260	3,820
3	277	238	142	5,740	5,860	5,200
4	348	309	213	7,340	7,460	6,580
5	419	380	284	8,940	9,060	7,960
6	490	451	355	10,540	10,660	9,120
7	561	522	426	12,140	12,140	10,380

Pilots weight : 1 x 189 = 0,120 kg - 1 x 190 = 0,180 kg  
1 x M12 = 0,073 kg - 2 x M12 = 0,141 kg



### GENERAL

This subbase system comprises joinable subbases and accessories with 3 principal characteristics.

- The equipment has a **standard** interface complying with the international standard ISO 5599/1 - Size 1, so that spool valves series 541 can be fitted.
- Subbases for **side ports**.
- The subbases are fitted with selector plates which mean that various piping arrangements and inter-connections can be selected.

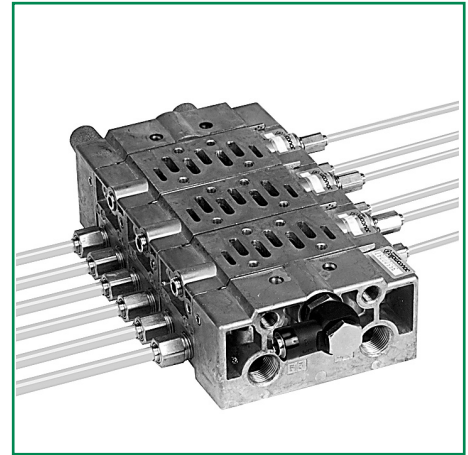
### CONNECTION POSSIBILITIES

These joinable subbases with side ports offer many advantages:

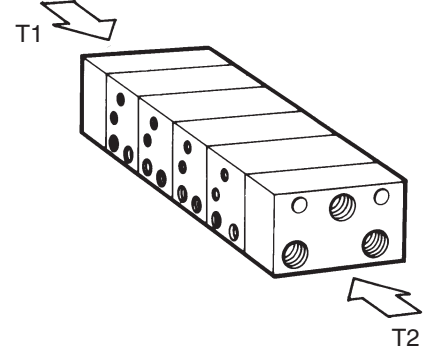
- Various piping possibilities due to a large number of port connections.
- Simple assembly in panels due to an improved accessibility to the ports.
- Simple maintenance.
- A reduction in costs due to the removal of pivoting mounting chassis and a reduction in the number of fittings.
- Possibility of mounting directly onto the body of the machine.
- A reduction in lengths of tube giving improved flow rates and improved response times.

These bases allow piping to outlet ports (2, 4) and pilot ports (12, 14) on both side faces, as shown below.

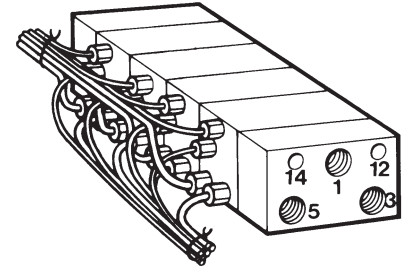
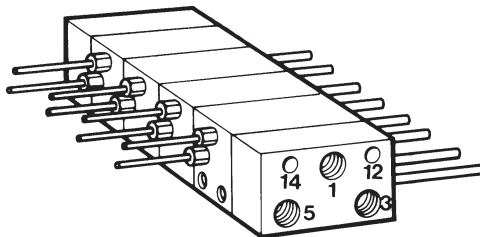
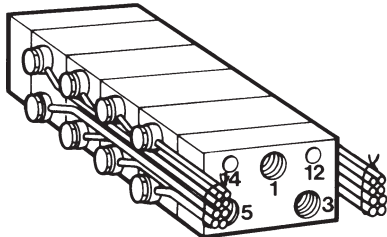
The end plates allow the piping of the supply (1) and exhausts (3,5), in addition, the pilots (12,14) can be piped into the end plates.



### CONNECTION THROUGH THE END PLATES



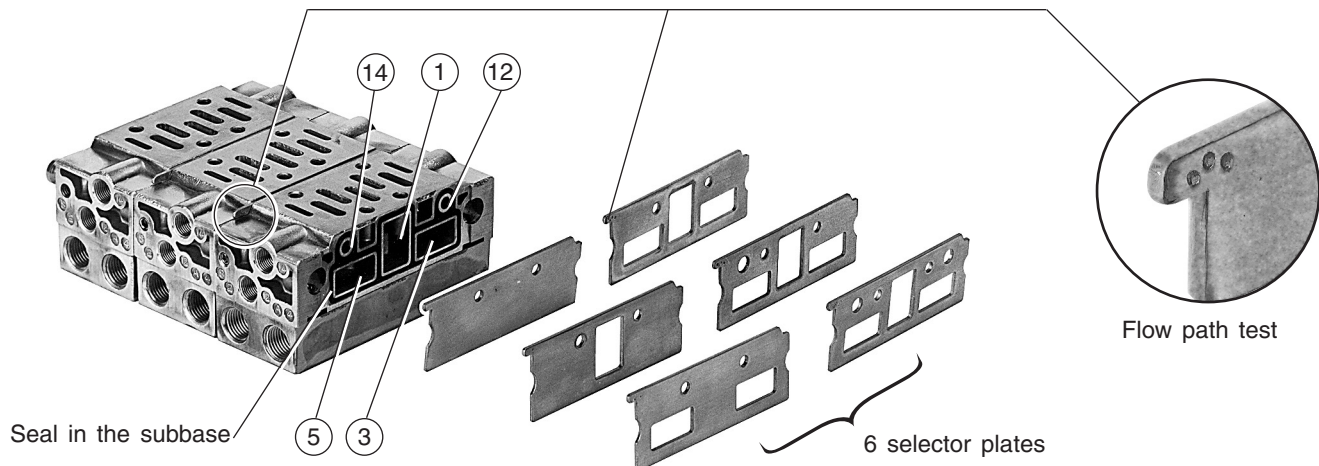
### SAMPLE PIPING ARRANGEMENTS



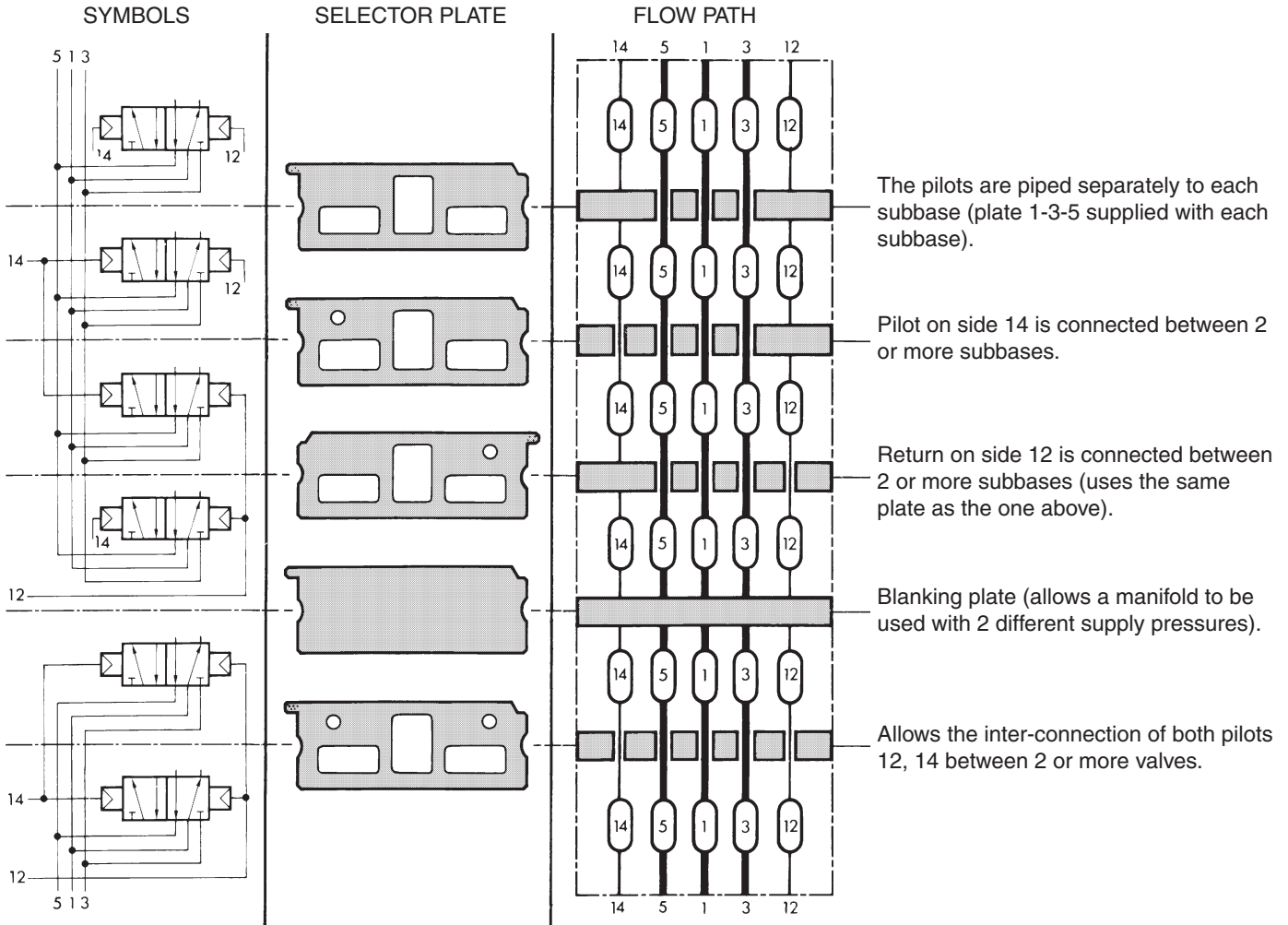
This arrangements allows the use of rotatable fitting

### POSSIBLE FLOW PATHS

The subbases include 5 flow paths (1-3-5-12-14), all of which can be connected through the end plates of each manifold assembly.



**POSSIBLE FLOW PATHS**



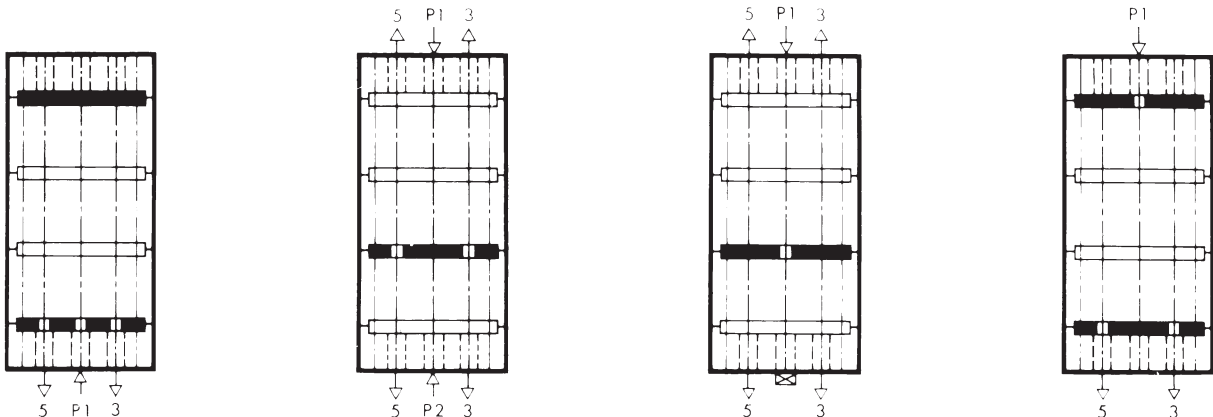
**PIPING OF SUPPLY AND EXHAUSTS TO THE END COVERS**

**STANDARD ASSEMBLY**  
Supply and exhausts to 1 side plate.

Assembly with 2 different pressures and with the exhaust piped to both end plates.

Assembly with 1 supply on 1 plate but with exhausts from the 2nd end plate.

Assembly with the supply port in 1 end plate and the exhaust from the other end plate.



Selector plates supplied as standard allows the assembly as shown above.

For this assembly a selector plate with connections between 3, 5 is necessary.

For this assembly a selector plate allows flow through port 1 if required. The supply port in the second plate must be plugged.

For this assembly you require 2 selector plates, 1 allowing flow through port 1 and 1 allowing flow through ports 3, 5. With ISO 1 bases this arrangement allows the assembly without plugging any ports.

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**CHOICE OF EQUIPMENT**

description	parts list	ports					code	
		1-3-5		2-4		12-14	ISO 1	ISO 2
		ISO 1	ISO 2	ISO 1	ISO 2	ISO 1-2		
metallic joinable subbase with side ports	1 subbase + 2 seals 1 selector plate (connects ports 1 - 3 - 5) 2 G 1/4 plugs 1 G 1/8 plug 2 assembly diabolos	-	-	G 1/4	G 1/2	G 1/8	35500088	35500102
set of 2 end plates	2 end plates + 2 seals 1 blank selector plate (no flow) 1 selector plate (connects ports 1 - 3 - 5) 2 assembly diabolos	G 3/8	G 3/4	-	-	G 1/8	35500087	35500101
blank selector plate (no flow)							88135501	88135506
selector plate (connects port 1)							88135512	88135513
selector plate (connects ports 3 and 5)							88135510	88135511
selector plate (connects ports 1 - 3 - 5)							88135502	88135507
selector plate (connects ports 1 - 3 - 5 and 1 pilot 12 or 14)							88135503	88135508
selector plate (connects ports 1 - 3 - 5 and 2 pilots 12 and 14)							88135504	88135509

**SET OF TRANSFER PLATES AND CONNECTIONS**

• Allow connection of ISO 1 and ISO 2 metallic joinable subbases, with side port .

Set including : - A transfer module to allow connection of subbases ISO 1 and ISO 2

- One end plate ISO 2 (ports 1 - 3 - 5 : G 3/4)
- One end plate ISO 1 (ports 1 - 3 - 5 : G 3/8)

**SPECIFICATIONS**

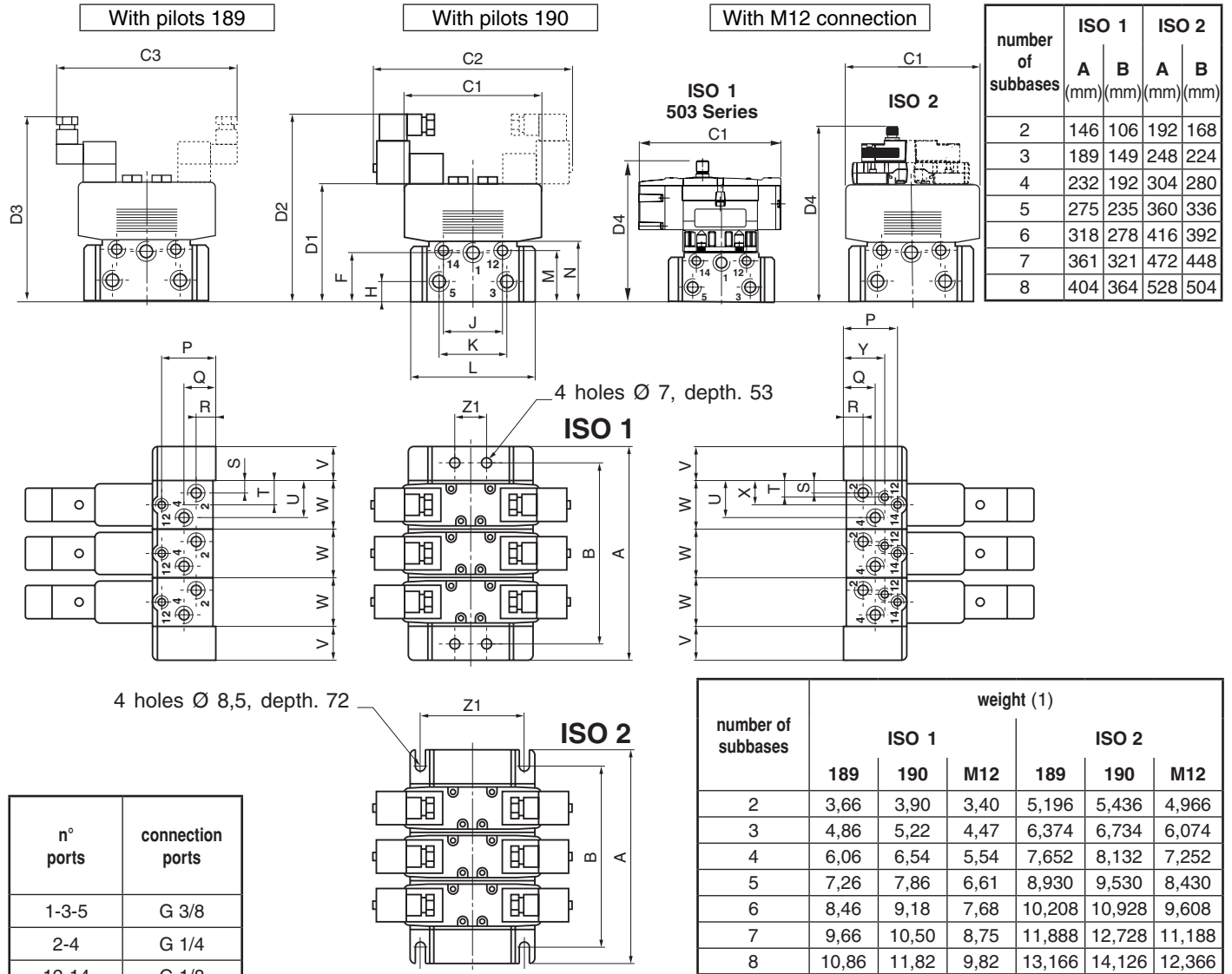
designation	type	catalogue number	E (mm)	
set of transfer plate and connections for joinable metallic subbases with side port	ISO 1 - ISO 2	35500390	30	

**ACCESSORIES** ([see «ACCESSORIES» page](#))

**DIMENSIONS (mm), WEIGHT (kg)**

SPOOL VALVES ON METALLIC JOINABLE SUBBASES

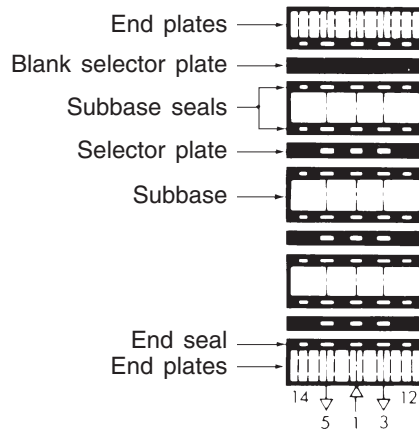
Side ports - ISO 1-2



(1) Spool valves with 2 pilots 189 + subbases + end plates  
Pilot weight : 1 x 189 = 0,120 kg - 1 x 190 = 0,180 kg  
M12 **ISO1** 1 x M12 = 0,058 kg - 2 x M12 = 0,110 kg  
M12 **ISO2** 1 x M12 = 0,073 kg - 2 x M12 = 0,140 kg

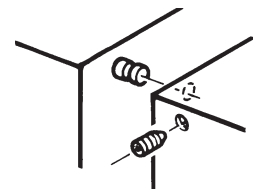
	C1	C2	C3	D1	D2	D3	D4	F	H	J	K	L	M	N	P	Q	R	S	T	U	V	W	X	Y	Z1
<b>ISO 1</b>	136	178	176	95	168	163	140	42	16	53	59	106	44	53	44	13	13	11	17,5	32	30	43	26	30	28
<b>ISO 2</b>	150	198	171	126	197	191	185	62	30	62	62	126	72	80	68	36	17	15	18	41	40	58	38	64	104

**ASSEMBLY OF SUBBASES**



**CONNECTION**

End plates and subbases are connected together using a system of diabolos and grub screws.



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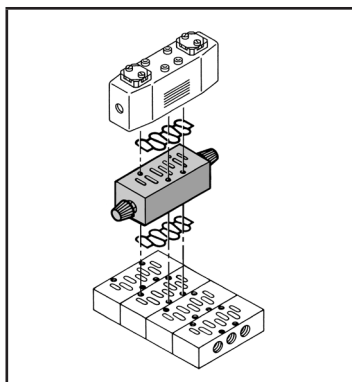
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503 accessories	<b>Blank station plate kit</b> G503AW428300003	<b>Sandwich pressure block</b> G503AW428300003	<b>Sandwich exhaust block</b> G503AX428300001
	R503AS425575001	R503ARS1GJ14M20	R503ARD1GJ14M20
	<b>Sandwich speed control kit</b>	<b>Sandwich Pressure Regulators</b>	

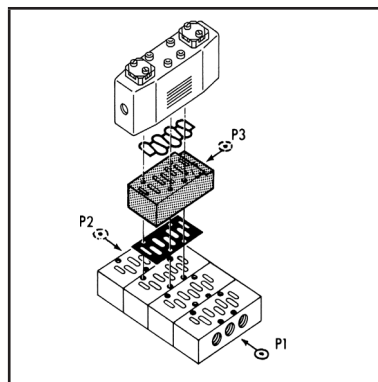


**SPECIFICATIONS**

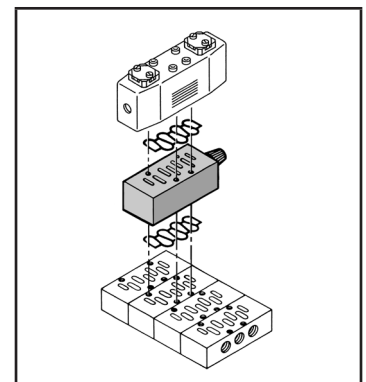
designation	symbol	catalogue number				
		ISO 1	ISO 2	ISO 3		
<b>Blanking plate to cover interface</b> This plate allows later assembly with a spool valve.		88135517	88135518	88135519		
<b>Flow regulator sandwich</b> This unit, fitted between the subbase and the valve, incorporates 2 flow regulators in the exhaust ports 3 and 5. Flow regulators can be used to control the speed of a double acting cylinder. Weights : <b>ISO 1</b> : 0,230 kg - <b>ISO 2</b> : 0,440 kg - <b>ISO 3</b> : 1 kg		34600476	34600477	-		
<b>Separate pressure supply module</b> This unit, fitted between the subbase and the valve, allows an individual valve to be supplied with a different pressure from that in the main manifold. The pressure feed within the side bases is not blocked by adding this plate. Pressure supply port P : G 1/4		35500118	-	-		
<b>Sandwich pressure regulator module</b>  This module, which is placed between a subbase and a spool valve, is designed to regulate the pressure and the port according to:  - Adjustable pressure: 0.5 to 10bar - G1/8 (A) port on top for pressure gauge connection - Locking adjustment knob of "Pull-Turn-Push" type   ISO 1 : E=45 mm L=146 mm ISO 2 : E=60 mm L=180 mm ISO 3 : E=67 mm L=208 mm		regulator flow at 6 bar : <b>ISO 1</b> : 550 l/min weight : 0,387 kg <b>ISO 2</b> : 1000 l/min weight : 1,680 kg <b>ISO 3</b> : 2000 l/min weight : 2,210 kg	Button side 12 14	34600474  34600471	-	-
		regulator flow at 6 bar : <b>ISO 1</b> : 850 l/min weight : 0,387 kg <b>ISO 2</b> : 1400 l/min weight : 1,680 kg <b>ISO 3</b> : 2700 l/min weight : 2,210 kg	34600458	-	-	
		regulator flow at 6 bar : <b>ISO 1</b> : 850 l/min weight : 0,387 kg <b>ISO 2</b> : 1400 l/min weight : 1,680 kg <b>ISO 3</b> : 2700 l/min weight : 2,210 kg	34600459	-	-	
		regulator flow at 6 bar : <b>ISO 1</b> : 850 l/min weight : 0,577 kg <b>ISO 2</b> : 1400 l/min weight : 2,400 kg <b>ISO 3</b> : 2700 l/min weight : 3,200 kg	34600460	-	-	
	Gauge Ø40 (0 - 12 bar)				34300014	
G1/8 bracket connection for pressure gauge mounting				88100617		



Sandwich flow regulator module



Separate pressure supply module



Sandwich pressure regulator module

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### FEATURES

- Sandwich-type plate for pressure isolation on port 1.
- Pressure isolating plate designed to exhaust on ports 3 and 5.
- The pressure isolating plate is fitted between the subbase and the valve.
- Allows removal of valves without affecting system operation.
- **Lockable with D6 padlock in open or closed position.**
- Not suitable for W3-type valves (centre closed).

### GENERAL

Operating pressure -0,950 to 12 bar  
Ambient temperature range -10°C to +60°C

### CONSTRUCTION

MATERIALS IN CONTACT WITH FLUID	
(*) Ensure that the compatibility of the fluids in contact with the materials is verified	
Body	Aluminium
Screw	Steel
Seals	NBR

### SPECIFICATIONS

size	code
ISO1	88100963

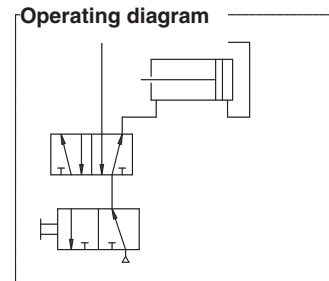
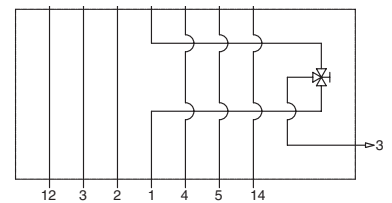
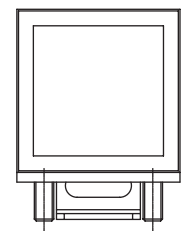
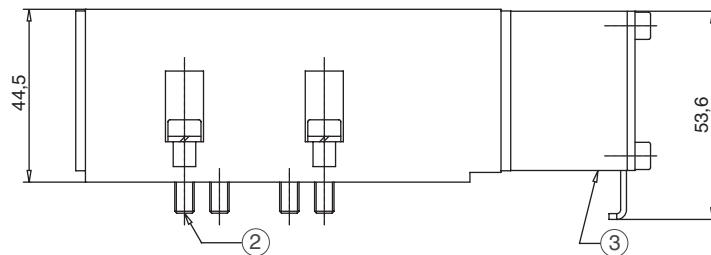
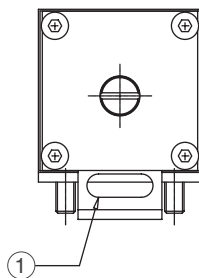


Diagram of pressure isolating plate  
Valve side interface

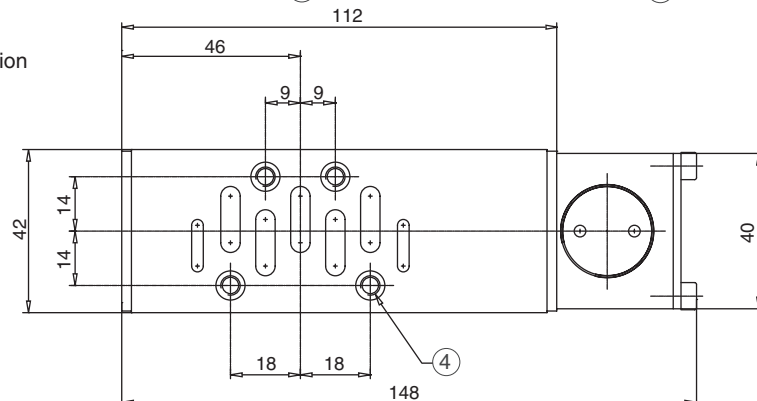


Subbase side interface

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



- ① Lockable in open or closed position with dia. 6 mm padlock
- ② 4xM5 (subbase mounting)
- ③ Exhaust port Ø2
- ④ 4x female threads (ISO1 valve mounting)



series	weight
ISO 1	0,510

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### FEATURES

- Reliability: steel spool & sleeve technology with long service life
- Modular assembly with joinable subbases
- Subbases with side or bottom ports

### GENERAL

<b>Fluid</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	+1 to +10 bar (with internal supply to pilot) -0,950 to +12 bar (with external supply to pilot)
<b>Ambient temperature</b>	-10°C to +60°C
<b>Flow (Qv at 6 bar)</b>	ISO 1: 1400 l/min (ANR) ISO 2: 2800 l/min (ANR) ISO 3: 4200 l/min (ANR)
<b>Response time</b>	See tables choice of equipment
<b>Life</b>	200 millions of cycles
<b>Base</b>	ISO 5599/1 sizes 1-2-3 - AFNOR NF E49080
<b>Subbase</b>	Single subbase ISO/AFNOR NF E49085 Joinable subbase ISO/VDMA 24345 Joinable subbase with integrated functions



### CONSTRUCTION

<b>Body</b>	Aluminium
<b>Other parts</b>	Stainless steel, steel, aluminium alloy or plastic
<b>Static Seals</b>	NBR (nitrile)

### PILOTS

Solenoid valves 3/2 NC, series 190, pad mounting ISO 15218 (size 30)

### ELECTRICAL CHARACTERISTICS

	voltage	consumption		insulation class	protection degree	electrical connection
		inrush	hold			
~	24V-48V-115V-230V/50 Hz	9 VA	4 VA (3 W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
=	24V-48V	3 W				

The solenoid valve 190 is dual-voltage (24V~, 12V=) (48V~, 24V=) (115V~, 48V=) (230V~, 110V=)

### SPECIFICATIONS

function symbol	operators pilot (14) solenoid air operated return (12)	size	response time (ms)		pilot pressure (bar)		2 catalogue numbers		
			energized	de-energized	min.	max.	valve	+ solenoid pilot quantity & catalogue number with standard connector	(M)
	spring return	ISO 1	15	35	1	10	C12BA400-X C23BA400-X C34BA400-X	+ 1x { 19000005 19000006 19000017	× ● ▼
		ISO 2	20	35					
		ISO 3	20	90					
	Solenoid air operated return	ISO 1	15	15	1	10	C12BB400-X C23BB400-X C34BB400-X	+ 2x { 19000005 19000006 19000017	× ● ▼
		ISO 2	15	15					
		ISO 3							
	pressure hold W1	ISO 1	15	35	1	10	C12BB600-X C23BB600-X C34BB600-X		
		ISO 2	20	20					
		ISO 3							
pressure applied W2	ISO 1	15	35	1	10	C12BB700-X - C34BB700-X			
	ISO 2								
	ISO 3								
pressure release W3	ISO 1	15	35	1	10	C12BB500-X C23BB500-X C34BB500-X			
	ISO 2	20	20						
	ISO 3								

(M) Type of manual operator on pilot(s): × : without ● : maintained ▼ : impulse

**When ordering**, please specify in addition to the basic solenoid valve catalogue number:

the type of current: voltage / frequency of the solenoid valve

Example : **C12BB400-X + 2 x 19000017 24V/DC**

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**OPTIONS**

- 3/2 solenoid valves piloting: [series 189](#), [series 190 with M12 connection](#), [series 192](#)
- 16 bar version (wide ambient temperature range: -10°C to +90°C):

type of valve	(M)	catalogue number
190 NF 16 bar	×	19060016
	●	19060019
	▼	19060017

- Material and solenoid pilot valve for use in potentially **explosive atmospheres** caused by gases or dusts - ATEX directive 2014/34/EU (contact us)
- [Connector with cable 2 m long](#)
- [Connector with transil protection](#)
- Solenoid valve with plug and built-in visual control and protection :

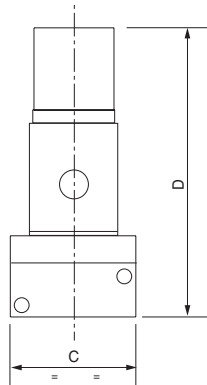
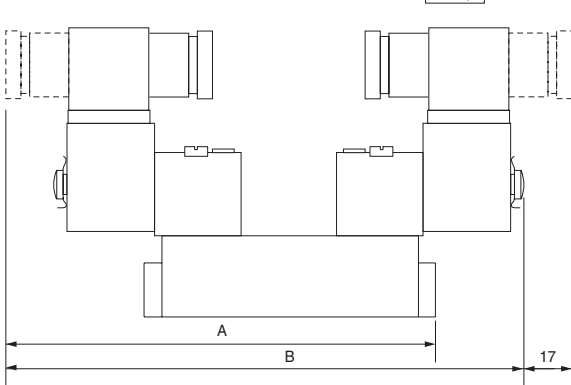
Solenoid valve **without** connector + Connector with built-in visual control and VDR/RC protection

type of valve	(M)	catalogue number solenoid valve <b>without</b> connector	catalogue number (~ / =)			
			24V	48V	115V	230V
190 NF	×	19000013	88122603	88122604	88122605	88122608
	●	19000014				
	▼	19000018				

(M) Type of manual operator on pilot(s) : × : without ● : maintained ▼ : impulse

**SUBBASES AND ACCESSORIES** : [see preceding pages](#)

**DIMENSIONS (mm), WEIGHT (kg)**



size	type	A	B	C	D	weight (kg)
ISO1	BA	136,0	—	42,0	102,0	0,50
	BB	—	168,0	42,0	102,0	0,60
ISO2	BA	149,0	—	50,8	104,6	0,70
	BB	—	169,0	50,8	104,6	0,80
ISO3	BA	179,0	—	63,5	114,0	1,10
	BB	—	196,7	63,5	114,0	1,26

incl. bolts and gaskets

## FEATURES

- M12 connection: Prevents wiring errors, reduces installation time and reduces wiring costs
- Modular assembly with joinable subbases

## GENERALITES

<b>Fluid</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	+1 to +10 bar with internal supply to pilot) -0,950 to +10 bar (with external supply to pilot)
<b>Ambient temperature</b>	-10°C to +50°C
<b>Flow (Qv at 6 bar)</b>	ISO1: 1400 l/min (ANR) ISO2: 2400 l/min (ANR)
<b>Response time</b>	200 millions of cycles
<b>Base</b>	ISO 5599/1 sizes 1-2-3 - AFNOR NF E49080
<b>Subbase</b>	Single subbase ISO/AFNOR NF E49085 Joinable subbase ISO/VDMA 24345 Joinable subbase with integrated functions



## CONSTRUCTION

<b>Body</b>	Aluminium
<b>Other parts</b>	Stainless steel, steel, aluminium alloy or plastic
<b>Static Seals</b>	NBR (nitrile)

## ELECTRICAL CHARACTERISTICS

voltage	consumption	insulation class	protection degree	electrical connection
24 VCC (=)	2,5 W	F	IP 65	centralised M12 connection to VDMA 24571 (ISO/CD 20401) with integral LED and surge suppression (yellow LED)

## SPECIFICATIONS

function symbol	operators pilot (14) solenoid air operated return (12)	size	response time (ms)		pilot pressure (bar)		catalogue numbers	
			ener-gized	de-ener-gized	min.	max.		(M)
	rappel ressort	ISO 1	20	32	1	10	C12BA400RA26Y61 C23BA400RA26Y61	▼
		ISO 2	15	36				
	rappel électropneumatique	ISO 1	20	-	1	10	C12BB400RA26Y61 C23BB400RA26Y61	▼
		ISO 2	15	-				
	centre fermé <b>W1</b>	ISO 1	20	32	1	10	C12BB600RA26Y61 C23BB600RA26Y61	▼
		ISO 2	15	36				
			centre ouvert à la pression <b>W2</b>	ISO 1				
ISO 2	15			36				
	centre ouvert à l'échappement <b>W3</b>	ISO 1	20	32	1	10	C12BB500RA26Y61 C23BB500RA26Y61	▼
ISO 2	15	36						

(M) Type of manual operator on pilot(s): ▼ : impulse

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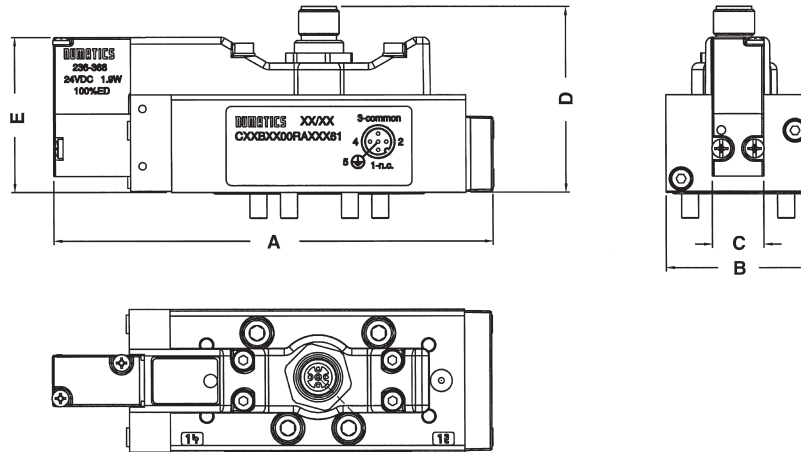
**OPTIONS**

- 16 bar, on request

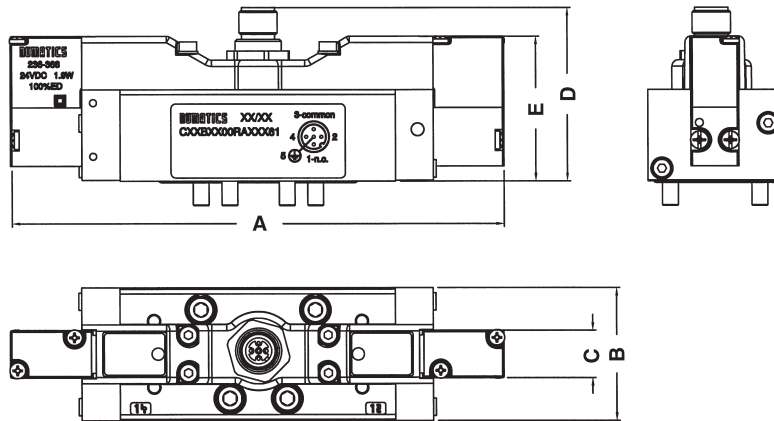
**SUBBASES AND ACCESSORIES :** [see preceding pages](#)

**DIMENSIONS (mm), WEIGHT (kg)**

**monostable spool valve**  
ISO 1 and ISO 2



**bistable and 5/3 spool valve**  
ISO 1 and ISO 2



size	type	A	B	C	D	E	weight (kg)
ISO1	BA	129,4	42,1	15,0	54,8	45,7	0,50
	BB	155,4	42,1	15,0	54,8	45,7	0,55
ISO2	BA	150,2	50,8	15,0	57,6	48,6	0,70
	BB	175,9	50,8	15,0	57,6	48,6	0,80

incl. bolts and gaskets

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96 - Pneumatic Valves (5/2 - 5/3)

### MULTIFUNCTION

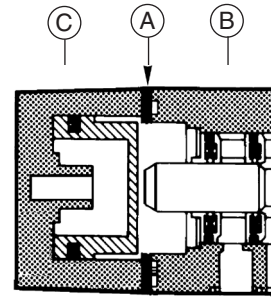
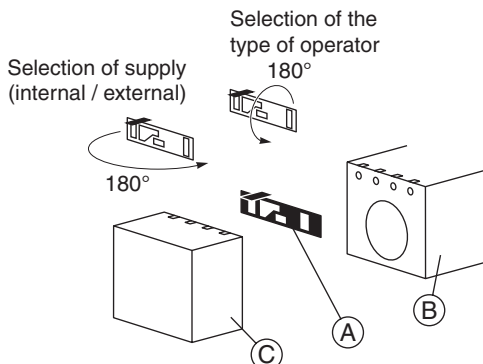
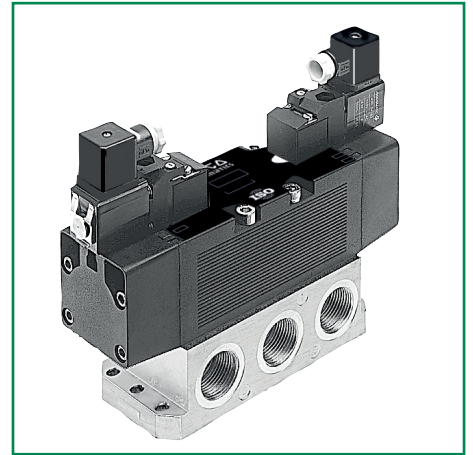
#### • Multifunction selector

The multifunction selector is equipped with 2 pilot selector seals (A) located between the body (B) and the covers (C), on both sides : pilot and return. Each selector can be set on 3 or 4 positions. Rotating or turning it upside-down allows the following functions :

- internal or external supply to pilot or return operators.
- selection of the type of operator : air operated or solenoid-air pilot or return.

For this, it is only necessary to position one of the arrows of the selector into the notch matching the diagram of the required function (see below). Functions can be modified at will. The valves are delivered with the selector pre-set on the position corresponding to the function requested on order (see table CHOICE OF EQUIPMENT).

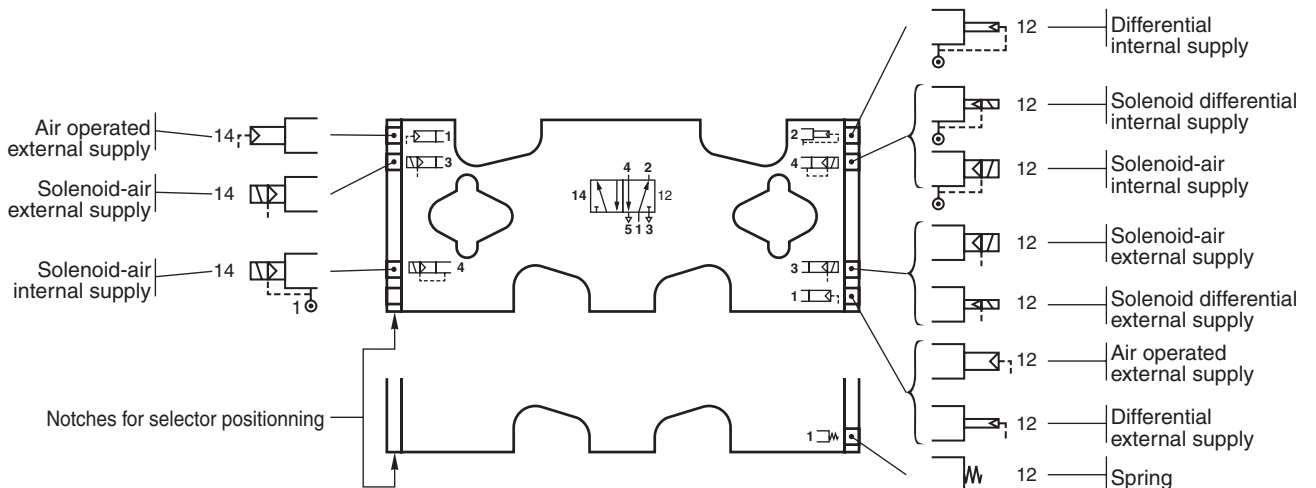
External supply enables the valves to be used with a fluid pressure ranging from 0 to 12 bar and with vacuum.



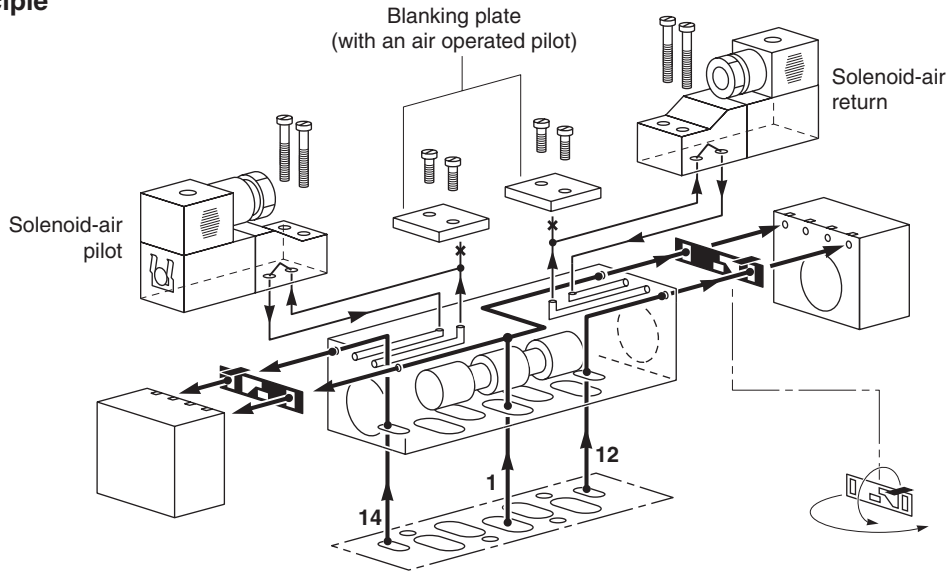
#### • Pilot function

#### Pilot operators

#### Return operators

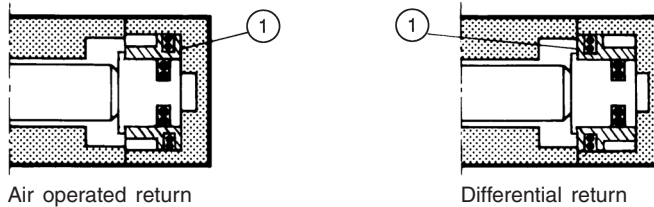


• **Operating principle**



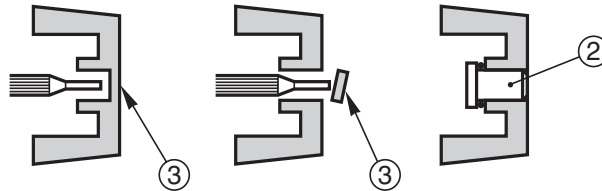
• **Changing from an air operated return valve to a differential return valve**

An air operated return valve can be changed into a differential return valve by turning over the outside piston ring as shown in the diagram below (1).



• **Manual operator using a tester (option)**

A manual operator can be equipped with a tester (2) by knocking the knock-out plug (3) out of the end cover.



• **An air operated valve can be changed into a solenoid air valve by :**

- re-positioning the selector seal,
- removing the upper blanking plate (side 12 or 14),
- fitting a selector seal if lacking,
- adding a solenoid pilot valve on the upper part.

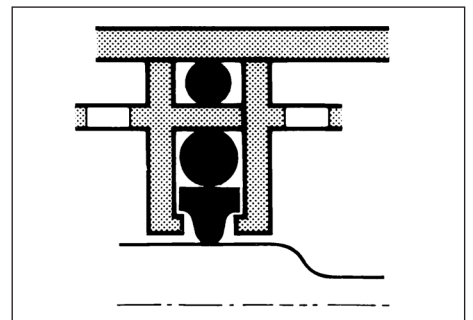
• **A solenoid air valve can be changed into an air operated valve by :**

- removing the solenoid pilot valve,
- fitting a blanking plate on the pilot base (plate code : 88100073),
- re-positioning the selector seal.

**USE WITH UNLUBRICATED AIR**

This range of valves will operate satisfactorily with lubricated air or unlubricated air and even with dry air, due to a sealing device which has been patented. Essentially, a "T" seal backed up by a cushioning or compensation seal.

This arrangement of seals assures a minimum pilot pressure which will remain constant even after the valve has been stopped for a long period of time. When re-starting, the performance of the valve will be the same as during continuous operation. This important "non-stiction" characteristic assures satisfactory performance under all conditions.

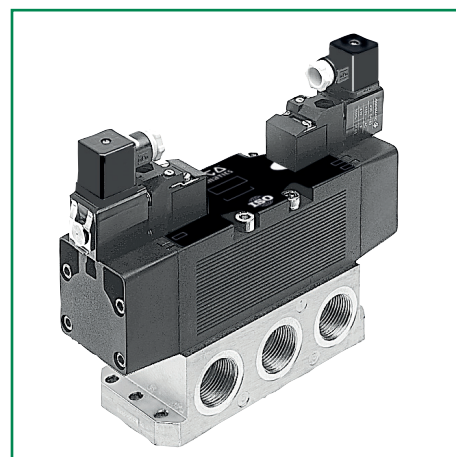


### FEATURES

- Choice of internal/external supply with selector seals (vacuum use to -0,950 bar)

### GENERAL

<b>Fluid</b>	Air or neutral gas, filtered, lubricated or not
<b>Operating pressure</b>	-0,950 to +12 bar (with external supply to pilot) +2,5 to +10/12 bar (with internal supply to pilot)
<b>Pilot pressure</b>	See specifications tables
<b>Ambient temperature</b>	-10°C to +40°C
<b>Flow (Qv at 6 bar)</b>	6300 l/min (ANR) (with subbase G 3/4) 7000 l/min (ANR) (with subbase G 1)
<b>Flow coefficient</b>	Kv = 90 (with subbase G 3/4) Kv = 100 (with subbase G 1)
<b>Life</b>	5 millions of cycles (in normal operating conditions)
<b>Base</b>	ISO 5599/1 - Size 4
<b>Subbase</b>	Single subbase ISO/AFNOR NF E49085



### CONSTRUCTION

<b>Body and cover</b>	Die-cast zinc alloy
<b>Seals</b>	NBR (nitrile)
<b>Internal parts</b>	Light alloy and POM (polyacetal), die-cast zinc alloy

### ELECTRICAL CHARACTERISTICS

type of coil	voltage		consumption		insulation class	protection degree	electrical connection
	~	=	inrush	hold			
series 192	~	24V-48V-115V-230V-50 Hz	12 VA	6 VA (4 W)	F	IP 65	spade plug size 30 connector, ISO4400/EN175301-803, form A, rotatable by 90°
	=	24V-48V	5 W				

### SPECIFICATIONS 5/2

function 5/2 symbol	operators pilot (14) solenoid air operated return (12)	response time (ms)		pilot pressure (bar)		2 catalogue numbers		
		ener-gized	de-ener-gized	min.	max.	valve	+ solenoid pilot quantity & catalogue number with standard connector	(M)
	spring return	60	220	2,5	12	54490017	+ 1x { 19201001 19201002 19201003	× ● ▼
	differential return	90	170	2	12	54490018		
	air return	40	-	1,5	12	54490019		
	solenoid differential return	40	-	2	12	54490020	+ 2x { 19201001 19201002 19201003	× ● ▼
	solenoid air operated return	40	-	1,5	12	54490021		

(M) Type of manual operator on pilot(s) : × : without ● : maintained ▼ : impulse

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**SPECIFICATIONS 5/3**

function 5/3  symbol	operators pilot (14) solenoid air operated return (12)	response time (ms)		pilot pressure (bar)		2 catalogue numbers		
		ener- gized	de-ener- gized	min.	max.	valve	+ solenoid pilot quantity & catalogue number	(M)
	Pressure held <b>W1</b>	70	250	3	12	54490022	+ 2x { 19201001 19201002 19201003	with standard connector  (M)  × ● ▼
	Pressure release <b>W3</b>	70	250	3	12			

(M) Type of manual operator on pilot(s) : X : without ● : maintained ▼ : impulse

**OPTIONS**

- Equipment with manual testers so that the spool position can be checked
- Connector with cable 2m long - code : **88122612**
- Connector with transil protection (see "Coils and accessories" section)
- Solenoid valve with plug and built-in visual control and protection :

Solenoid valve **without** connector + Connector with built-in visual control and VDR/RC protection

type of valve	(M)	solenoid valve without connector catalogue number	catalogue number (~ / =)			
			24V	48V	115V	230V
192 NC (1)	×	19201022	88122603	88122604	88122605	88122608
	●	19201023				
	▼	19201024				

(M) Type of manual operator on pilot(s) : X : without ● : maintained ▼ : impulse

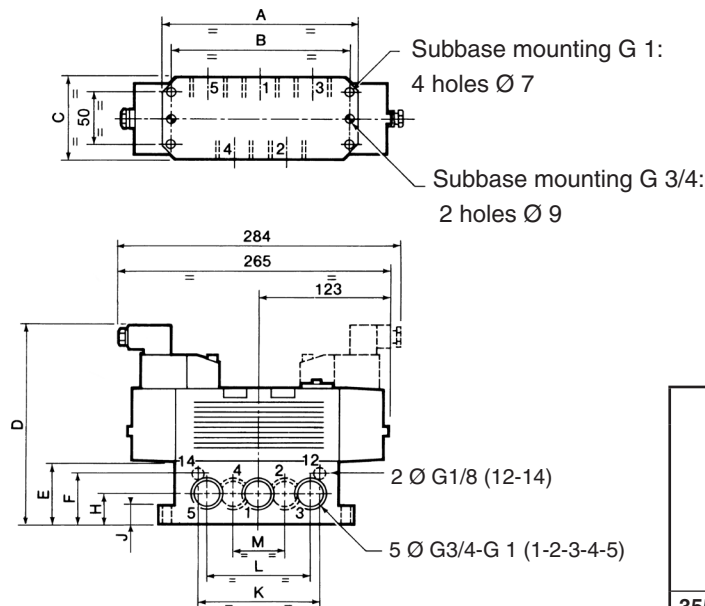
(1) Solenoid valve series 192 - 3/2 NC - Ø 2,1mm with exhaust in base

**SUBBASES**

type of subbases	subbase catalogue number	port orifices		
		12-14	1-2-4	3-5
single subbases with side port	35500144	G 1/8	G 3/4	G 3/4
	35500082	G 1/8	G 1	G 1

**DIMENSIONS (mm), WEIGHT (kg)**

VALVE ON SINGLE SUBBASE WITH SIDE PORT



code subbase	dimension											weight	
	A	B	C	D	E	F	H	J	K	L	M	with 1 pilot 192	with 2 pilots 192
35500144	195	177	85,5	189	42	32	22	19	116	88	40	4,860	5,120
35500082	186	172	80	207	60	47	30	18	116	106	50	4,960	5,220

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