

**JOUCOMATIC**

ISO 15407-1 - VDMA 24563 subbase-mounted body

**SPOOL VALVES**

solenoid air operated

**CNOMO pilots, size 15**



**2x3/2-5/2-5/3**

Series

**539**

Type

ISO size 01 (26 mm)

**FEATURES**

- The different electrical connections (DIN or metal M12) and low power consumption of the standard pilots allow the valves to be used in a variety of applications.
- Application models 2x3/2 in piloting of valves

**GENERAL**

**Fluid** Air or neutral gaz, filtered, lubricated or not  
**Operating pressure** 1 to 10 bar (with internal supply to pilot)  
 -0,950 bar to +10 bar (with external supply to pilot)  
**Ambient temperature** -10 °C to +60 °C  
**Flow (Qv at 6 bar)** 1150 l/min (ANR)  
 - conforming to ISO 6358 C = 4,40 x 10<sup>-8</sup> m<sup>3</sup>/s.Pa (sonic conductance)  
 b = 0,28 (absolute static pressure)  
**Subbase** Single or joinable subbases

**CONSTRUCTION**

**SPOOL VALVES**

**Body** Injected aluminium  
**Top cover, end covers** PAA (polyarylamide)  
**Internal parts** POM (polyacetal) and aluminium  
**Seals** NBR (nitrile)

**PILOTS** (see page P502B)

Solenoid valves 3/2 NC, **series 302**, pad mounting CNOMO E06.36.120N (size15)

**ELECTRICAL CHARACTERISTICS**

voltages		consumption		insulation class	protection degree	electrical connection
~	=	~	=			
24V, 115V	12V, 24V	1,2 VA	1,1 W	F	IP 65	spade plug size 15 connector, DIN 43650, 9,4 mm, industry standard B, rotatable by 90°
230V	24V	1,6 VA	1,5 W			
-	24V	-	1,15 W	F	IP 67	M12 connection + LED and protection

**SPECIFICATIONS**

function symbol	operators solenoid air operated pilot (14) return (12)	pilot pressure (bar)		spool valve		2 catalogue numbers		(W)	(M)				
		min.	max.	internal supply	external supply	+	solenoid valve quantity and cat. n°						
2x 3/2	NC-NC	spring return	2,5	10	53992126	53992135	+ 2x	30211109 (T15)	1,1	▼			
	NO-NO										30211110 (T15)	1,1	●
	NC-NO												
5/2	spring return	2,5	10	53992121	53992149	+ 1x	30211122 (T15)	1,5	●				
										differential return	2,5	10	53992026
	solenoid differential return	2,5	10	53992122	53992150	+ 2x	to see our complete range of pilot 302 (P502B)	0,65	●				
										solenoid air return	1	10	53992027
5/3	pressure held W1	2,5	10	53992028	53992129	+ 2x							
	pressure applied W2									2,5	10	53992029	53992130
	pressure release W3												

(M) Type of manual operator on pilot(s) ● : 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
- to be inserted after the basic solenoid valve catalogue number: --A (~) or --D (=)

Examples : **53992121 + 1 x 30211109--D 24V DC**  
**53992126 + 2 x 30211110--A 230V AC**

**OPTIONS** see page 6

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**E**



**JOUCOMATIC**

ISO 15407-1 - VDMA 24563 subbase-mounted body  
with integrated M12 connection

**SPOOL VALVES**  
solenoid air operated



**2x3/2-5/2-5/3**

Series

**539**

Type

ISO size 01 (26 mm)

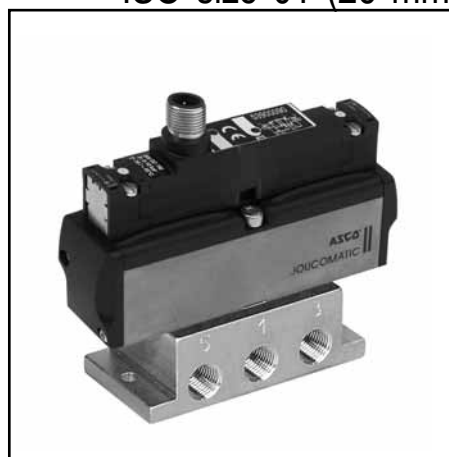


**FEATURES**

- The different electrical connections (DIN or metal M12) and low power consumption of the standard pilots allow the valves to be used in a variety of applications.
- Application models 2x3/2 in piloting of valves

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**Subbase** Single or joinable subbases



**CONSTRUCTION**

**SPOOL VALVES**

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**Top cover, end covers** PAA (polyarylamide)  
**Internal parts** POM (polyacetal) and aluminium  
**Seals** NBR (nitrile)

**PILOTS** (see leaflet P502B)

Solenoid valves 3/2 NC, **series 302**, pad mounting CNOMO E06.36.120N (15x15)

ports	
1	= Pressure supply
3-5	= Exhausts
2-4	= Outlets
82/84	= Pilot exhaust

**ELECTRICAL CHARACTERISTICS**

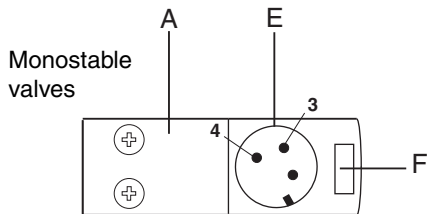
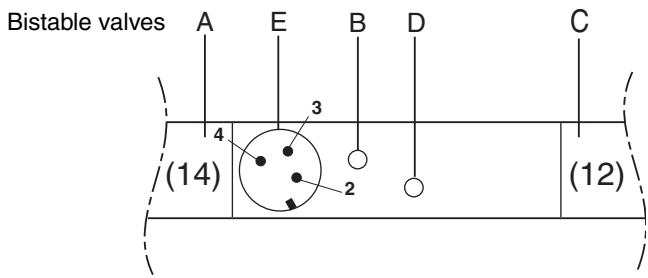
SV type	voltage	consumption	insulation class	protection degree	electrical connection
series 302	24V =	1,15 W	F	IP 67	<b>centralised M12 connection</b> CNOMO E03.62.520N on socket with 3 male pins

**SPECIFICATIONS**

function symbol		operators solenoid air operated pilot (14) return (12)	pilot pressure (bar)		catalogue number spool valve with series 302 pilot(s)			
			min.	max.	internal supply	external supply	(M)	
2x 3/2	NC-NC		spring return	2,5	10	53902155	53902154	▼
		5/2		spring return	2,5	10	53902072	53902069
	differential return		2,5	10	53902066	53902063	▼	
	solenoid differential return		2,5	10	53902084	53902081	▼	
	solenoid air operated return		1	10	53902090	53902087	▼	
5/3			pressure held <b>W1</b>	2,5	10	53902096	53902093	▼
			pressure applied <b>W2</b>	2,5	10	53902102	53902099	▼
			pressure release <b>W3</b>	2,5	10	53902108	53902105	▼

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

**DISPLAY AND CONNECTION OF M12 CONNECTOR**

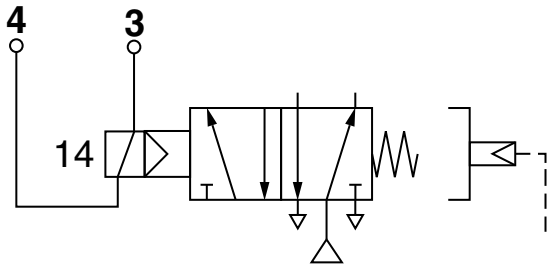


Contact	Connection
2	= Coil 12
3	= Common (0V)
4	= Coil 14

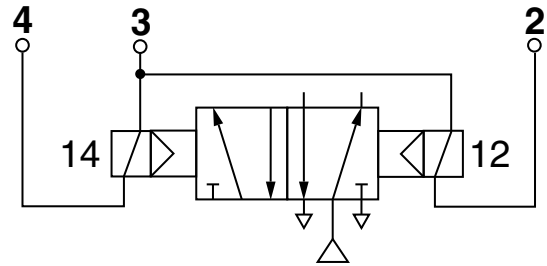
- A: Operator pilot valve (14)
- B: Yellow LED indicating energisation of pilot valve 14 (operator)
- C: Return pilot valve (12), bistable or 5/3
- D: Yellow LED indicating energisation of pilot valve 12 (return)
- E: Bulkhead connector, 3 male contacts, CNOMO E03.62.520N, for electrical connection of two pilot valves.
- F: Yellow LED indicating energisation of pilot valve.

NOTE: The built-in electrical protection is provided by bi-directional Transil diodes. Assignment is as per ISO/CD20401 standard.

**■ Monostable spool valves**



**■ Bistable and 5/3 spool valves**





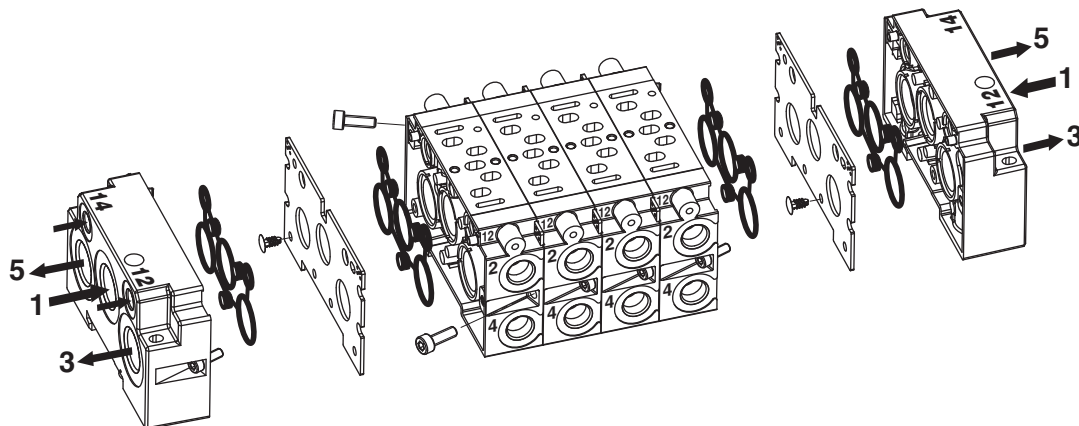
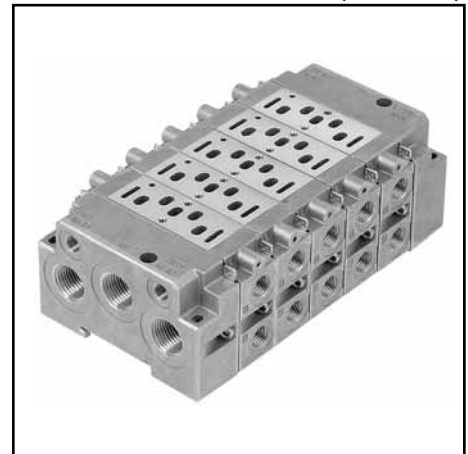
### GENERAL

This subbase system offers the following main characteristics:

- The equipment has a **standard** interface complying with the international standard ISO 15407-1, size 01 (26 mm), so that spool valves series 539 can be fitted.
- Subbases with **side ports or bottom ports**.
- Choice of connections: ports 2 and 4 tapped or with couplers.
- The subbases are fitted with selector plates, allowing for a choice of piping arrangements and inter-connections.

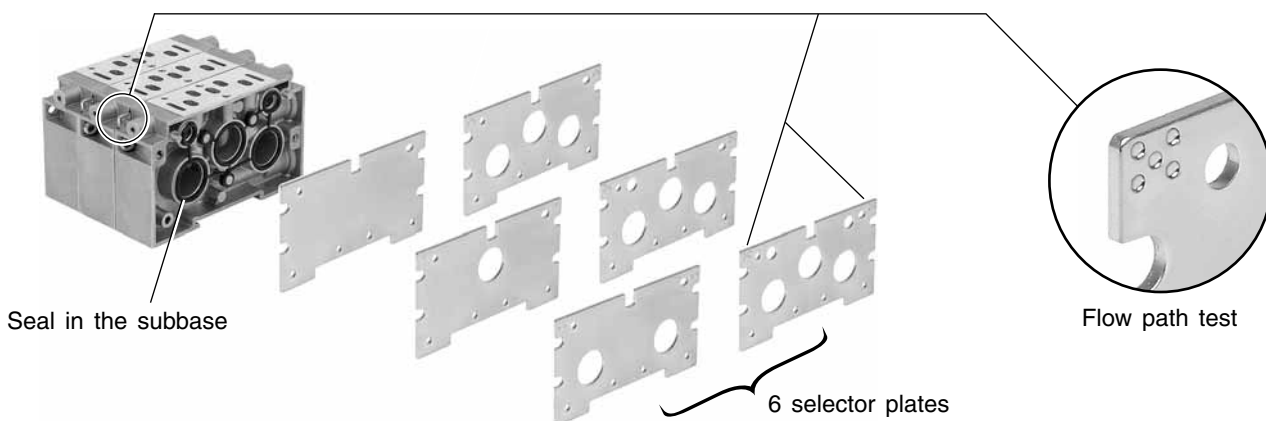
### CHARACTERISTICS AND ADVANTAGES

- Easy connection due to a large number of piping options on the subbase:
  - Side ports (2 and 4: tapped or with couplers).
  - Bottom ports (2 and 4: tapped or with couplers).
  - Ports 12 and 14 for external pilot pressure supply (tapped M5).
- Captive selector plates:
  - Each plate is provided with perforations allowing for error-free identification of the ports in use.
  - The standard selector plate (connection of ports 1-3-5-12-14) is pre-mounted on the subbase to allow for quick installation.
- Suitable for direct installation on machine frame:
  - Quick mounting on DIN rail with eccentric quarter-turn tappets.
- Easy assembly/disassembly: easy maintenance.
  - The inclined position of the mounting screws provides for easy assembly or disassembly of individual subbases without having to disassemble the whole system.

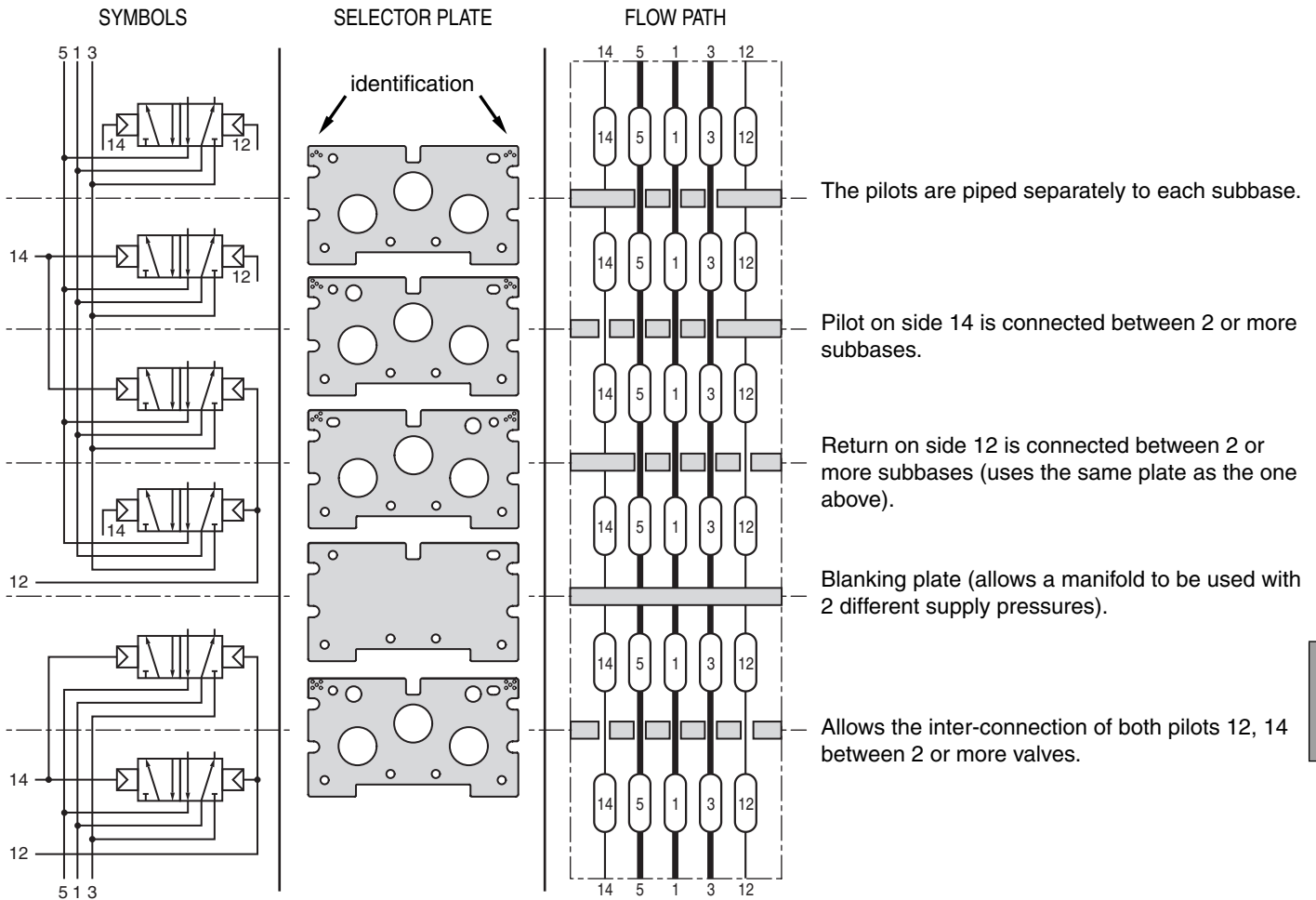


### POSSIBLE FLOW PATHS

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**

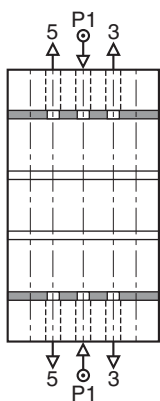
Pressure supply and exhaust on the end fittings.

Supply and exhausts to 1 side plate.

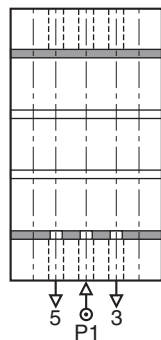
Assembly with 2 different pressures and with the exhaust piped to both end plates.

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

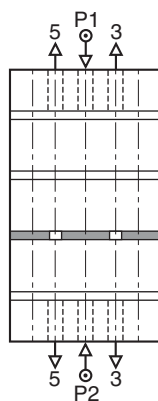
Assembly with the supply port in 1 end plate and the exhaust from the other end plate.



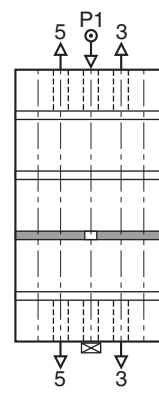
Selector plates supplied as standard allows the assembly as shown above.



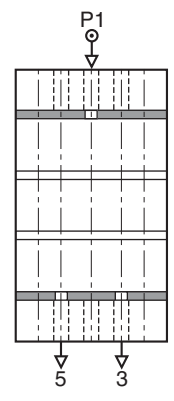
This assembly requires a blank selector plate (no flow).



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. This arrangement allows the assembly without plugging any ports.

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**SUBBASES**

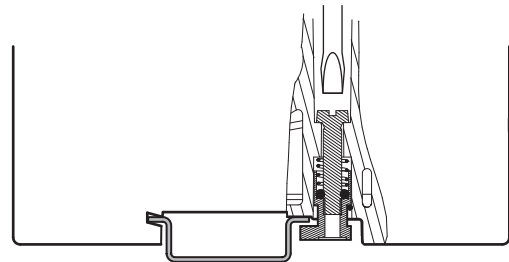
subbase	size	connection	description	port connection			catalogue number
				1-3-5	2-4	12-14	
single subbase	ISO 01		subbase	G 1/4	G 1/4	M5	<b>35500526</b>
joinable subbases	ISO 01	side	1 subbase + 2 seals 1 selector plate (connects ports 1-3-5-12-14)	-	G 1/4	(1)	<b>35500576</b>
				-	instant fittings tube 10mm O.D	-	<b>35500578</b>
		bottom	1 subbase + 2 seals 1 selector plate (connects ports 1-3-5-12-14)	-	G 1/4	-	<b>35500573</b>
				-	instant fittings tube 10mm O.D	-	<b>35500575</b>
			2 end plates + 2 seals 1 selector plate (connects ports 1-3-5-12-14)	G 1/2	-	G 1/8	<b>88135559</b>
			blank selector plate (no flow)				<b>88135558</b>
			selector plate (connects port 1)				<b>88135557</b>
			selector plate (connects ports 3 and 5)				<b>88135556</b>
			selector plate (connects ports 1 - 3 - 5)				<b>88135555</b>
			selector plate (connects ports 1 - 3 - 5 and 1 pilot 12 or 14)				<b>88135554</b>
			selector plate (connects ports 1 - 3 - 5 and 2 pilots 12 and 14)				<b>88135553</b>
	blanking plate to cover interface				<b>88100357</b>		

(1) Joinable subbase with side ports G 1/4 and ports 12-14 tapped M5, catalogue number **35500588**



Spool valves with subbase mounted pilots on joinable subbases

Joinable subbases ISO 01 can be mounted on symmetrical EN 50022 profile with two 1/4-turn eccentric nuts.



**SPOOL VALVE OPTIONS**

- Material and solenoid pilot valve for use in potentially **explosive atmospheres** caused by gases or dusts - ATEX directive 94/9/EC (consult our ATEX - X019 catalogue)
- Version with collectable exhausts, consult us

**M12 CONNECTORS**

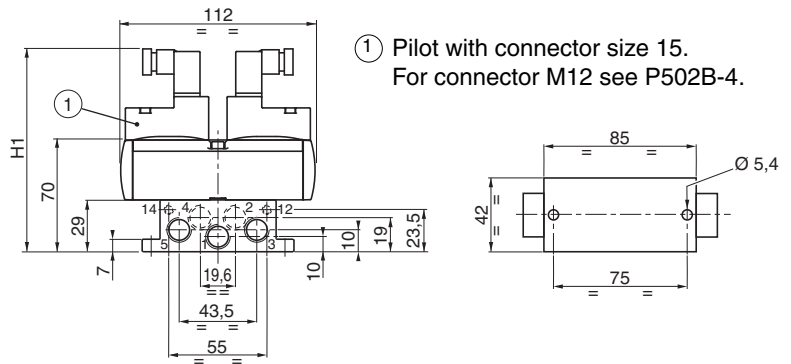
- Straight M12 connector with 5 female contacts, Ø4 to 6mm cable entry, catalogue number: **88100304**
- Straight M12 connector with 5 female contacts, Ø6 to 8mm cable entry, catalogue number: **88100256**
- Straight M12 connector with 5 female contacts, cable length 5m, catalogue number: **88130212**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

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

**Spool valve on single subbase**

weight	
spool valve + subbase	
with 1 pilot	with 2 pilots
0,465	0,510

n° ports	Ø ports	pilot	dimension H1
1-3-5	G 1/4	size 15	120
2-4	G 1/4	M12	109
12-14	M5	integrated M12	109



① Pilot with connector size 15.  
For connector M12 see P502B-4.

**Spool valve on joinable subbases**

number of subbases	dimension		weight spool valve + 2 pilots + subbases + end plates
	A	B	
3	128,8	140	1,601
4	155,8	167	1,966
5	182,8	194	2,331
6	209,8	221	2,696
7	236,8	248	3,061
8	263,8	275	3,426
+1	+27	+27	0,365

n° ports	Ø ports	pilot	dimension H2
1-3-5	G 1/2	size 15	151
2-4	G 1/4	M12	140
12-14 (*)	G 1/8	integrated M12	140

(\*) subbases : tapping M5 of ports 12 and 14 on request

- ① Pilot with connector size 15.  
Connector M12: see P502B-4.
- ② Tapped bottom port
- ③ Bottom port with instant fittings for flexible tube 10mm O.D
- ④ Tapped side port
- ⑤ Side port with instant fittings for flexible tube 10mm O.D

