

FEATURES

- M12 connection on top of valve: reduces installation time, wiring costs and prevents wiring errors
- Modular assembly with joinable subbases
- Spool & Sleeve or rubber packed technology in the same dimension body
- Flow rate up to 1200 l/min
- Internal or external pilot pressure supply capability
- Compliance with ISO standard 15407-1 26 mm
- Spool & sleeve technology for long service life, rubber-packed version for high flow combined with multi-functions

GENERAL

Operating pressure	See «SPECIFICATIONS» [1 bar =100 kPa]
Ambient temperature range (TS)	-10°C to +50°C
Rated flow	See «SPECIFICATIONS»
conforming to ISO 6358	C (5/2) = 5,21 x 10 ⁻⁸ (sonic conductance) b (5/2) = 0,34 (critical pressure ratio)
Pneumatic base	ISO 15407-1 26 mm (M12 on the top)
Connection	Single or manifold base
Response time	See «SPECIFICATIONS»


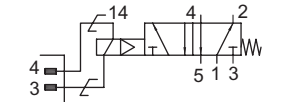
fluids (*)	temperature range (TS)	technology	seal materials (*)
air or inert gas ISO 8573 Level 7.4.4	-10°C to +50°C	rubber packed	NBR (nitrile) + PUR (polyurethane)
	-10°C to +50°C	spool & sleeve	metal-to-metal sealing

CONSTRUCTION

MATERIALS IN CONTACT WITH FLUID	
(*) Ensure that the compatibility of the fluids in contact with the materials is verified	
Body	Aluminium, E-coating treatment
Spool	Aluminium or st. steel (spool & sleeve)
Piston	POM (rubber packed)
Spring	Steel
Other seals	NBR
Other materials	PARA (polyarylamide) GF 50% (glass fiber reinforced)
Subbases	Aluminium, E-coating treatment

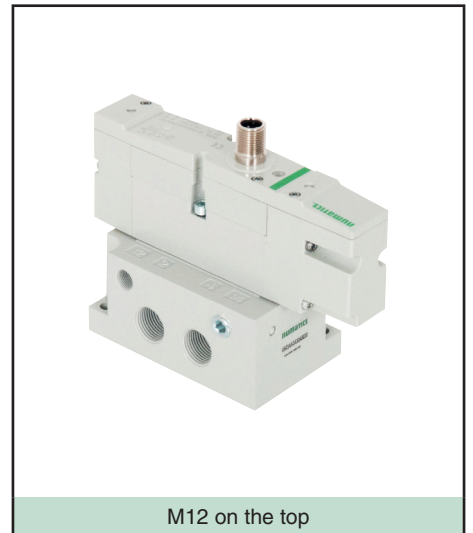
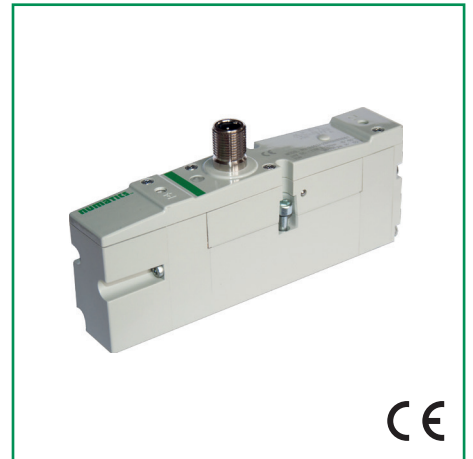
ELECTRICAL CHARACTERISTICS

Coil insulation class	F
Round connector	1 x 4 pin M12 male, IEC 61076-2-101
PIN assignment	ISO 20401
Electrical safety	IEC-EN 60730-1 / IEC-EN 60730-2-8
Electrical enclosure protection	IP65 (EN 60529)
Standard voltages	DC (=) : 24V
Power ratings (hot / cold) (=)	1,4 W / 1,7 W

M12 (ISO 20401) 		1	not used
			2
		3	common, 0 V
		4	supply, coil 14
		1	not used
		2	supply, coil 12
		3	common, 0 V
		4	supply, coil 14

ACCESSORIES


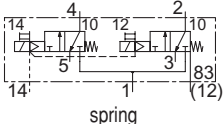
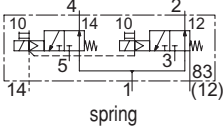
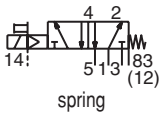
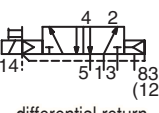
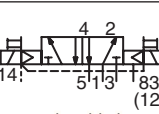
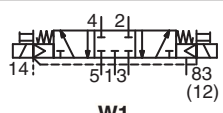
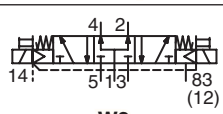
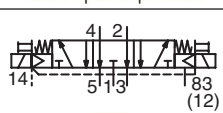
Straight M12 connector female	With 5 m cable length (5 pin): catalogue number 88130212
Sandwich kits	Shut off, pressure block, exhaust block, etc. (See following pages)
Pressure regulator	See following pages



M12 on the top

SPECIFICATIONS

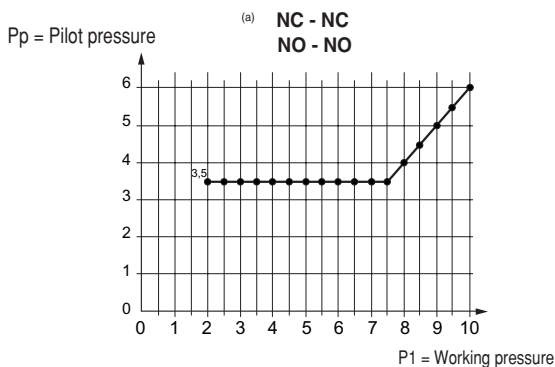
15-DIGIT PRODUCT CODE

function	symbol pilot (14) return (12)	rated flow at 6,3 bar ΔP 1 bar l/min (ANR)		response time open / closed (ms)	pilot pressure at 23°C (bar)		operating pressure port 1 (bar)		dimensions / type (1)	 ISO 15407-1
		1 → 2 1 → 4	2 → 3 4 → 5		min.	max.	min.	max. (PS) air (*)		
SPOOL VALVE, RUBBER PACKED TECHNOLOGY, WITH IMPULSE MANUAL OPERATOR (EXTERNAL SUPPLY)										
2 x 3/2 NC	 spring	900	800	15 / 20	3,5 (a)	10	2	10	01	R503A2BD0N83BF1 (R503A2BD0N82PF1) (b)
2 x 3/2 NO	 spring	900	900	15 / 20	3,5 (a)	10	2	10	01	R503A2BA0N83BF1
5/2	 spring	1200	1100	20 / 60	3	10	-0,95	10	01	R503A2B10N83BF1 (R503A2B10N82PF1) (b)
	 differential return	1200	1100	28 / 40	3	10	-0,95	10	01	R503A2BN0N83BF1
	 solenoid air	1200	1100	20	2	10	-0,95	10	01	R503A2B40N83BF1 (R503A2B40N82PF1) (b)
5/3	 W1 closed centre position	1200	1100	15 / 20	3	10	-0,95	10	01	R503A2B60N83BF1 (R503A2B60N82PF1) (b)
	 W2 centre open to pressure	1100	600	18 / 45	3	10	-0,95	10	01	R503A2B70N83BF1 (R503A2B70N82PF1) (b)
	 W3 centre open to exhaust	600	1100	18 / 45	3	10	-0,95	10	01	R503A2B50N83BF1 (R503A2B50N82PF1) (b)

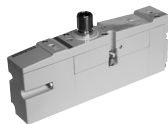
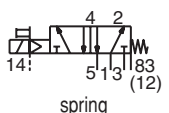
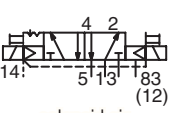
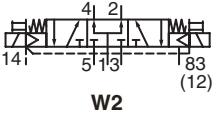
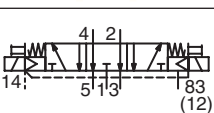
(1) For dimensions, see drawing(s) for each construction type on the following page(s).

(b) Internal piloting (internal supply).

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



SPECIFICATIONS

										15-DIGIT PRODUCT CODE
function	symbol pilot (14) return (12)	rated flow at 6,3 bar ΔP 1 bar l/min (ANR)		response time open / closed (ms)	pilot pressure at 23°C (bar)		operating pressure port 1 (bar)		dimensions / type (1)	 ISO 15407-1
		1 → 2 1 → 4	2 → 3 4 → 5		min.	max.	min.	max. (PS) air (*)		
								=		
SPOOL VALVE, SPOOL AND SLEEVE TECHNOLOGY, WITH IMPULSE MANUAL OPERATOR										
5/2	 spring	1100	1000	20 / 60	2	10	-0,95	10	01	R503A1B10N83BF1 (R503A1B10N82PF1) ^(b)
	 solenoid air	1100	1000	15	2	10	-0,95	10	01	R503A1B40N83BF1 (R503A1B40N82PF1) ^(b)
5/3	 W2 centre open to pressure	800	800	20 / 60	2	10	-0,95	10	01	R503A1B70N83BF1 (R503A1B70N82PF1) ^(b)
	 W3 centre open to exhaust	800	800	20 / 60	2	10	-0,95	10	01	R503A1B50N83BF1 (R503A1B50N82PF1) ^(b)

⁽¹⁾ For dimensions, see drawing(s) for each construction type on the following page(s).

^(b) Internal piloting (internal supply).

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

How to Order

Valves

15-DIGIT PRODUCT CODE

R 503 A 2 B N 0 N A00 F1

Thread connection

R = Pad mount

Product series

503 (26 mm valve)

Revision letter

A = Initial release

Actuation

1 = Spool and sleeve

2 = Rubber packed

Valve type

B = Solenoid pilot
(With impulse manual operator)

Function

A = 2x3/2 NO, dual 3-way ⁽²⁾

D = 2x3/2 NC, dual 3-way ⁽²⁾

N = 5/2, Differential air return ⁽²⁾

1 = 5/2, spring return

4 = 5/2, solenoid air return

5 = 5/3, W3, open center to exhaust

6 = 5/3, W1, center closed ⁽²⁾

7 = 5/3, W2, open center to pressure

Voltage - class

F1 = 24 V DC - class F

Options

M12 valves

(External piloting) ⁽¹⁾

A00 = Standard (No option)

With impulse manual operator

11B = With maintained manual operator

11M = Without manual operator

11Z = With push-button type maintained manual operator

14B = Internal pilot supply from port 1

83B = 10 b max. pressure - non UL certified

81G = 11B + 14B

82M = 11B + 83B

82N = 11M + 83B

82K = 11M + 14B

82P = 14B + 83B

69N = 14B + 11M + 83B

69P = 14B + 11B + 83B

Electrical interface

N = M12 connector (on top of the valve)

⁽¹⁾ **Single subbases:**

Used external spool valve (2 single subbases, internal or external supply).

Joinable subbase (manifold base):


Used external spool valves (internal/external supply configured in the end plate kits).

For internal piloting, contact us.

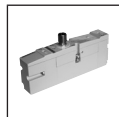
⁽²⁾ Only with rubber packed version.

INSTALLATION

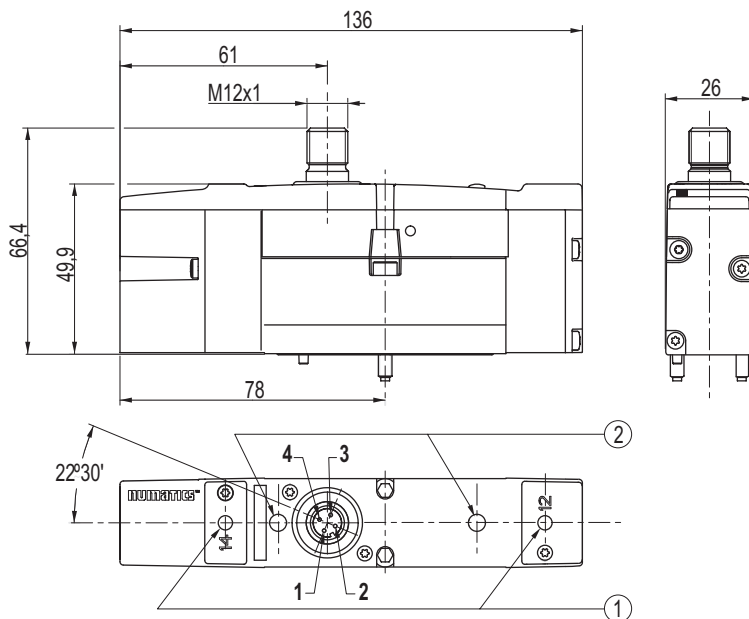
- The spool valves can be mounted in any position without affecting operation
- Spool valve supplied with mounting screws and mounting pad gasket
- ISO 15407-1 pneumatic pad mounting body

DIMENSIONS (mm), WEIGHT (kg) 

[Configurator - CAD Files](#)



TYPE 01
 Electrical interface "N"
 ISO 20401 / ISO 15407-1
 IP65



type	weight
01	0,232

- ① Manual operator location
- ② LED indicator

SINGLE AND JOINABLE SUBBASES (See following pages)

HOW TO ORDER

[Configurator - CAD Files](#)

15-DIGIT PRODUCT CODE

G 503 A M V2 2 0 A00 3 0

Thread connection

- G** = ISO 228/1
- 8** = NPT (contact us)
- K** = Push-in connectors ⁽¹⁾

Product series
503

Revision letter
A = Initial release

Product type

- A** = Single subbase
- M** = Joinable subbase (manifold base)

Mounting

- 3A** = Single subbase
- V2** = Joinable subbase, 2 stations, side ports

Not use

Interface

- 3** = ISO 15407-1

Options

- A00** = Standard (internal pilot)
- 14X** = External pilot supply from port 14
- 56Y** = 4-pin straight M12 connector in mounting Standard (internal pilot)
- 59W** = External pilot supply from port 14 + 4-pin straight M12 connector in mounting

Wiring option

- 0** = Non-plug-in
- U** = M12 Connectors w/ Pass Thru Communication
Pin 1= Coil 14; Pin 2=Not Used; Pin 3=Common; Pin 4=Not Used

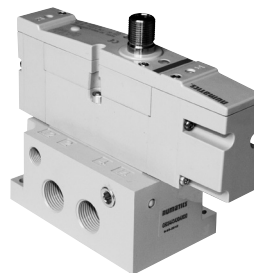
Port connection

- 2** = 1/4 (joinable base)
- 3** = 3/8 (single subbase)
- H** = OD 8 mm (push-in connector) ⁽¹⁾
- K** = OD 10 mm (push-in connector) ⁽¹⁾

⁽¹⁾ Joinable subbase only

SINGLE SUBBASES (see following page for details)

M12 SPOOL VALVE
+
SINGLE SUBBASE
ISO 15407-1

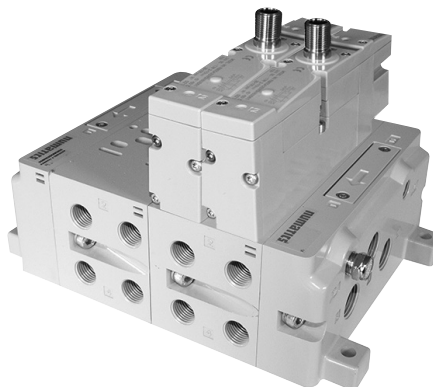


JOINABLE SUBBASES (see following page for details)


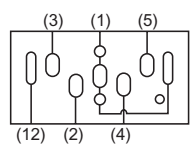

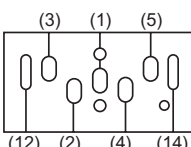
M12 SPOOL VALVE
+
JOINABLE SUBBASE
ISO 15407-1

(one subbase for
2 stations valves)

Accessories:
pressure regulator,
speed control, ...

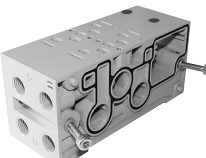
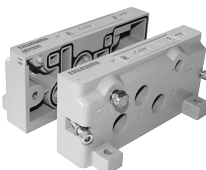


SINGLE SUBBASES

function	designation	thread type	dimensions / type ⁽¹⁾	15-DIGIT PRODUCT CODE
SINGLE SUBBASE (ISO 15407-1) FOR M12 ON THE TOP VALVE				
 	<p>internal supply</p> <p>1-2-3-4-5 = 3/8</p> <p>12 = 1/8 (pilot exhaust)</p>	G	02	G503AA3A30A0030
 	<p>external supply</p> <p>1-2-3-4-5 = 3/8</p> <p>12 = 1/8 (pilot exhaust)</p> <p>14 = 1/8 (pilot external supply)</p>	G	02	G503AA3A3014X30


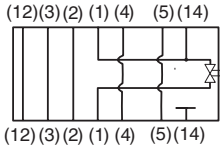

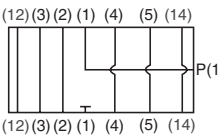

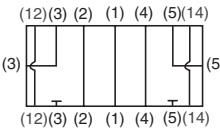

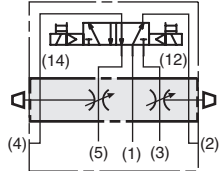












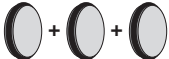

⁽¹⁾ For dimensions, see drawing(s) for each construction type on the following page(s).

JOINABLE SUBBASE (MANIFOLD BASE)

function	designation	thread type	dimensions / type ⁽¹⁾	15-DIGIT PRODUCT CODE
DOUBLE JOINABLE SUBBASE (ISO 15407-1) FOR M12 ON THE TOP VALVE				
	<p>one manifold base for 2 stations valve</p> <p>side ports, 4 x 1/4</p>	G	03	G503AMV220A0030
END PLATE KITS				
	<p>horizontal supply</p> <p>3 x 3/8 (1/3/5 ports)</p> <p>2 x 1/8 (12/14 ports)</p>	G	03	G503AK428304004

⁽¹⁾ For dimensions, see drawing(s) for each construction type on the following page(s).

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			thread type	dimensions / type (1)	ACCESSORIES CODE
SANDWICH SHUT OFF KIT					
		<ul style="list-style-type: none"> Used to shut-off pressure to the valve which is mounted above it Allows easy maintenance without the need to shut-off pressure to the whole manifold (specified for 2x3/2 NC-NC valve) ⚠ Pay attention to residual pressures ⚠ The valve should not be energised during disassembly Always internal piloting 	-	04	R503AY432939001
SANDWICH PRESSURE BLOCK KIT					
		<ul style="list-style-type: none"> Used to supply a separate pressure to a single valve station without needing blocking disc 	G	05	G503AW432938002
SANDWICH EXHAUST BLOCK KIT					
		<ul style="list-style-type: none"> Used to isolate the exhaust of the single valve station from the manifold base Allows faster exhaust response by re-routing 	G	06	G503AX432938001
SANDWICH SPEED CONTROL KIT					
		<ul style="list-style-type: none"> Used to control double acting cylinder speed by restricting exhaust flow (3 & 5) 	-	08	R503AS432940001
BLANK STATION PLATE KIT					
		<ul style="list-style-type: none"> Used to block off a manifold station block for future use 	-	07	P503AB428359001
BLOCKING DISCS KIT					
	+ 	• Port 1	-	-	P503AD431191001
	+ 	• Port 3			P503AD431191002
	+ 	• Port 5			P503AD431191003
	+ 	• Ports 1 and 3			P503AD431191004
	+ 	• Ports 1 and 5			P503AD431191005
	+ 	• Ports 3 and 5			P503AD431191006
	+ 	• Ports 1, 3 and 5			P503AD431191007

(1) For dimensions, see drawing(s) for each construction type on the following page(s).

DIMENSIONS (mm), WEIGHT (kg)



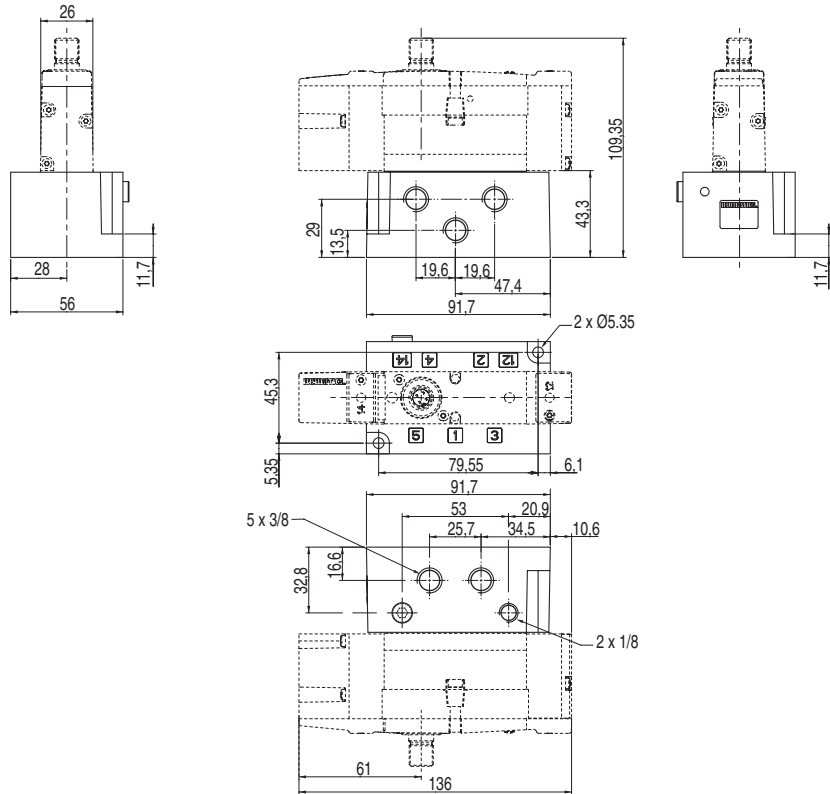
[Configurator - CAD Files](#)



TYPE 02


Single subbases
 ISO 15407-1 (M12 on the top)
 3/8 = 1, 2, 3, 4, 5 ports
 1/8 = 12, 14 ports

G503AA3A30A0030 - G503AA3A3014X30

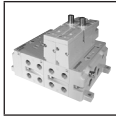


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type	code	weight
02	G503AA3A30A0030	0,310
	G503AA3A3014X30	0,307

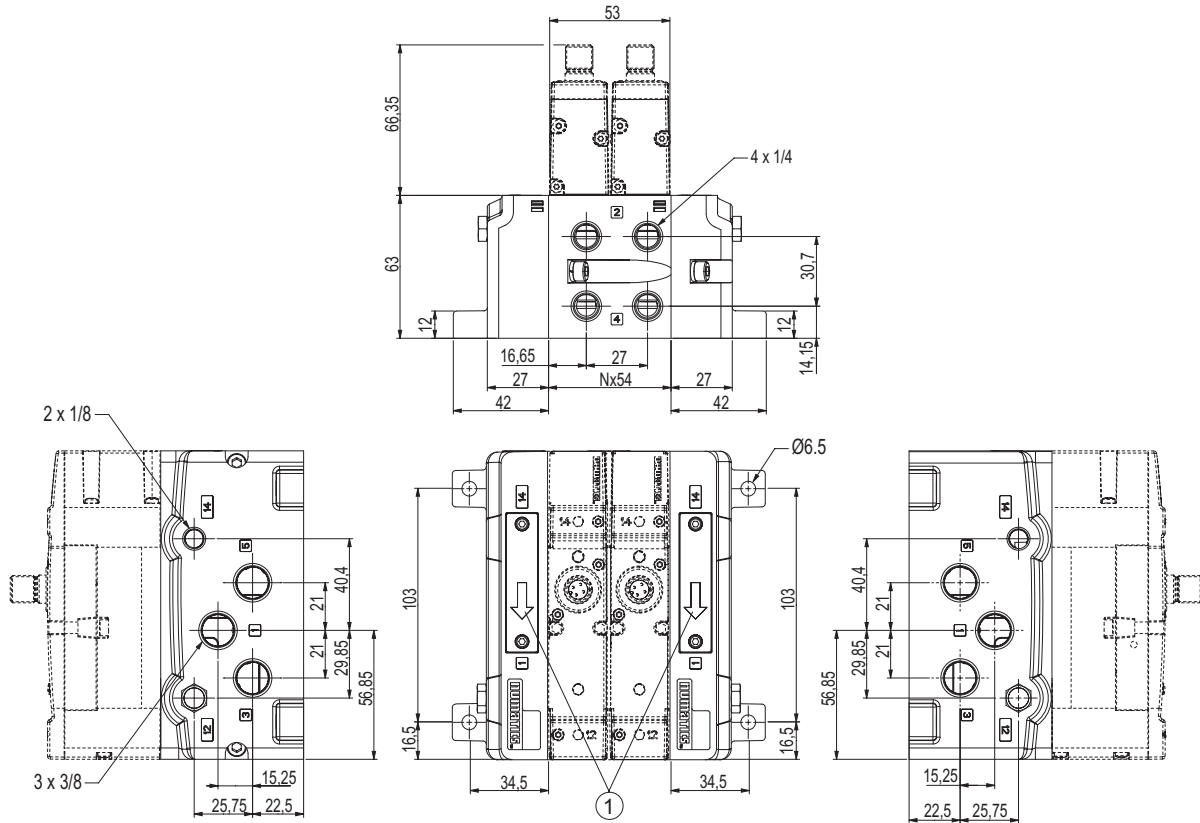
DIMENSIONS (mm), WEIGHT (kg) 

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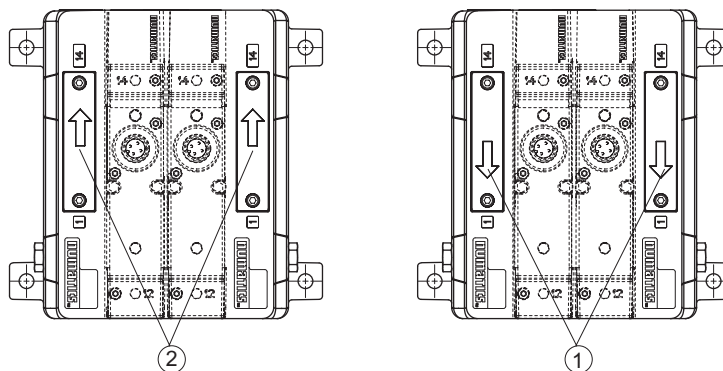


TYPE 03

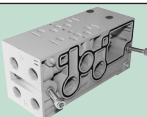

Joinable subbase (manifold base), horizontal supply
 ISO 15407-1
 4 x 1/4 = 2 and 4 ports (dual subbase)
 3 x 3/8 = 1, 3, 5 ports; 2 x 1/8 = 12 and 14 ports (end plate kits)




End plates adaptation for internal/external supply (piloting)



- ① Internal supply (factory setting)
- ② External supply configuration

type	code	weight
03	 G503AMV220A0030 ⁽¹⁾	0,564
	 G503AK428304004	0,727

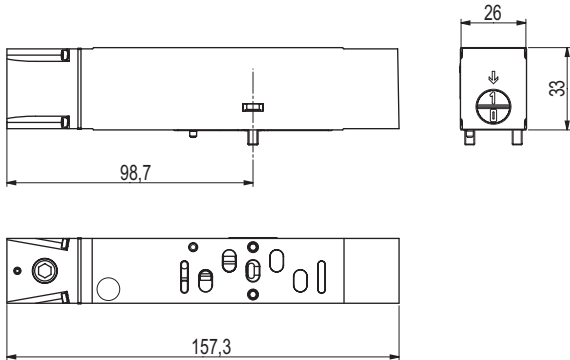
⁽¹⁾ For 2 stations.

DIMENSIONS (mm), WEIGHT (kg) 



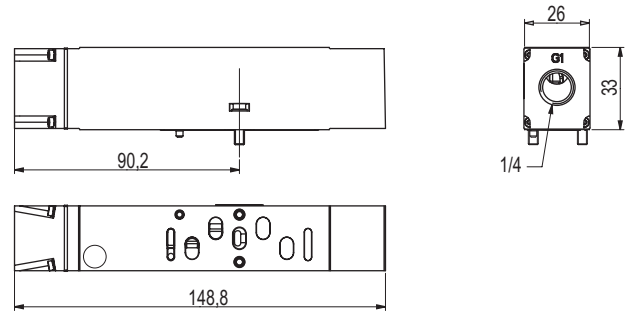
TYPE 04
Sandwich shut off
ISO 15407-1

R503AY432939001



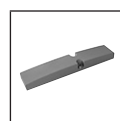
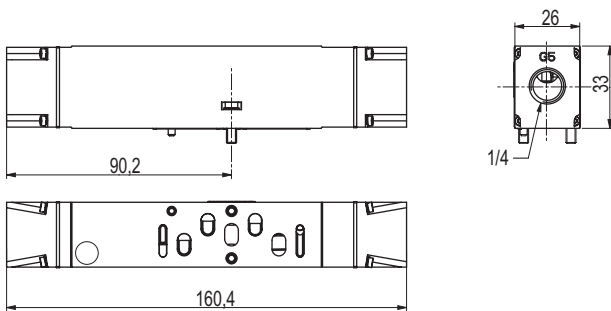
TYPE 05
Sandwich pressure block
ISO 15407-1

G503AW432938002



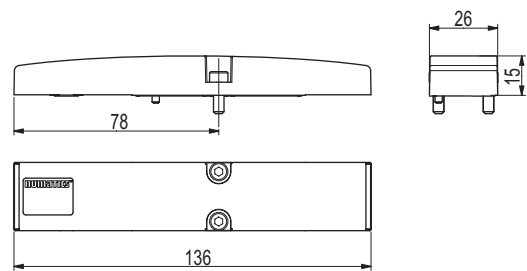
TYPE 06
Sandwich exhaust block
ISO 15407-1

G503AX432938001



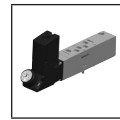
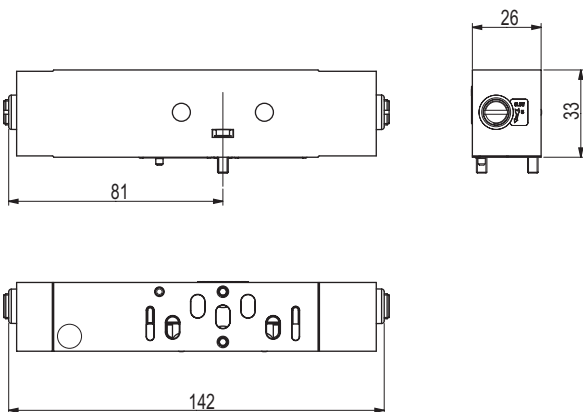
TYPE 07
Blank station plate kit
ISO 15407-1

P503AB428359001



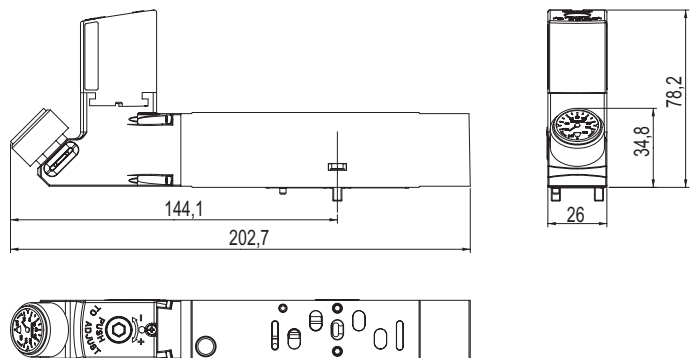
TYPE 08
Speed control
ISO 15407-1

R503AS432940001



TYPE 09
Single regulator
"RS" type
ISO 15407-1

R503ARS120A0030



type	weight
04	0,237
05	0,208
06	0,241
07	0,084
08	0,248
09	0,428 ⁽¹⁾

⁽¹⁾ Incl. gauge(s).

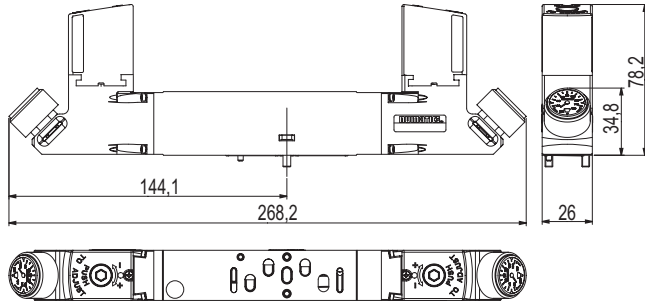
DIMENSIONS (mm), WEIGHT (kg)

[Configurator - CAD Files](#)

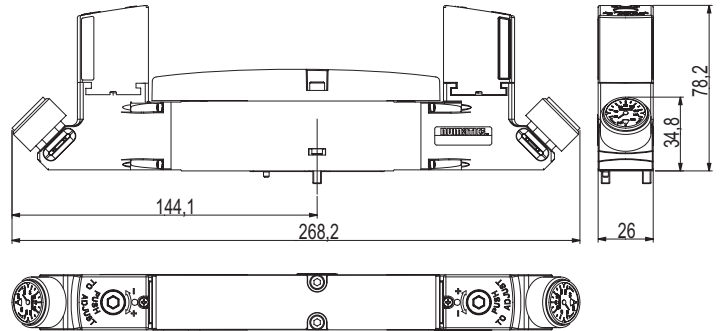


TYPE 12 - 15
Double regulator
ISO 15407-1

R503ARD120A0030 / R503ARD120A0030

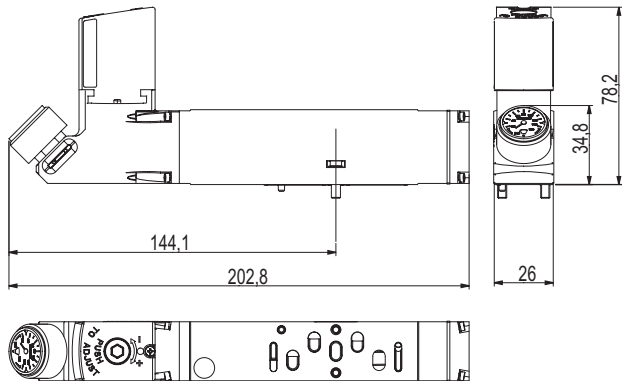


R503ARE120A0000

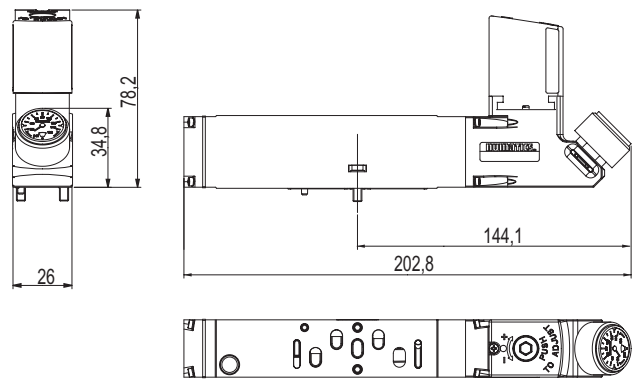


TYPE 10 - 11 - 13 - 14
Single regulator
ISO 15407-1

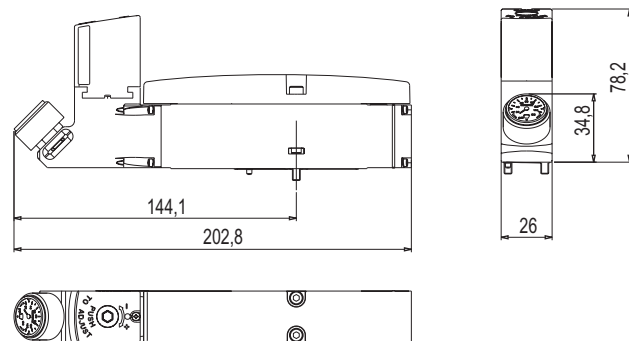
R503ARD12016P30 / R503ART12016P30



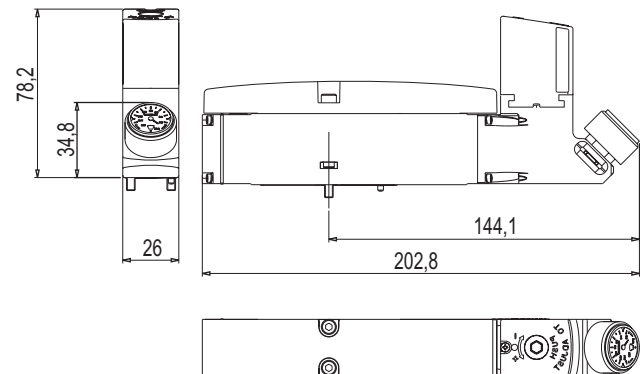
R503ARD12016N30 / R503ART12016N30



R503ARE12016P00



R503ARE12016N00



type	weight
10 - 11	0,429 ⁽¹⁾
12	0,667 ⁽¹⁾
13 - 14	0,515 ⁽¹⁾
15	0,760 ⁽¹⁾

⁽¹⁾ Incl. gauge(s).