

FEATURES

- M12 connection with electrical interface in the subbase:
 - Allows to change the valve without any intervention on electrical and pneumatic connection
 - Reduces installation time and wiring costs
 - Prevents wiring errors
- Spool & Sleeve or rubber packed technology in the same dimension body
- High flow rate up to 1200 l/min
- Internal or external pilot pressure supply capability and compliance with ISO standard 15407-2 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 m³/s.Pa (sonic conductance)
 b (5/2) = 0,34 (critical pressure ratio)
Pneumatic/electric base ISO 15407-2 26 mm (M12 in the subbase)
Connection Single subbase
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


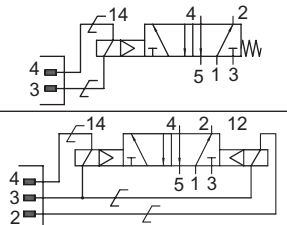
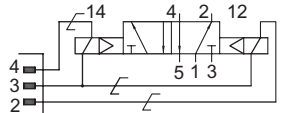
MATERIALS IN CONTACT WITH FLUID

(*) 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 not used 3 common, 0 V 4 supply, coil 14 |
| |  | 1 not used 2 supply, coil 12 3 common, 0 V 4 supply, coil 14 |


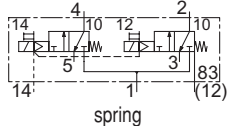
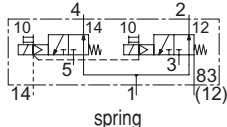
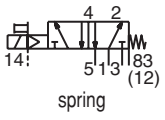
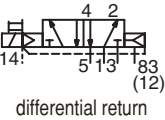
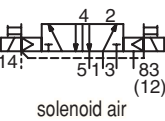
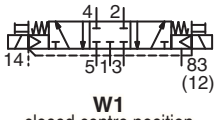
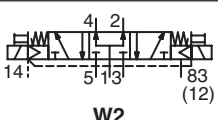
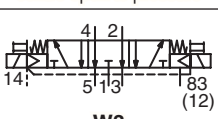
ACCESSORIES

| | | |
|--------------------------------------|--|--|
| Straight M12 connector female | with 5 m cable length (5 pin): catalogue number 88130212 |  |
|--------------------------------------|--|--|



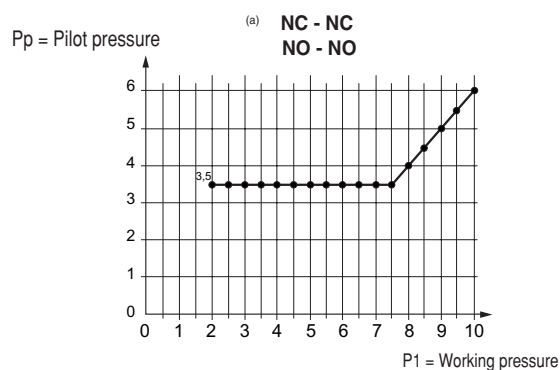
M12 electrical interface in the subbase

SPECIFICATIONS


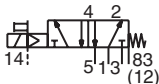
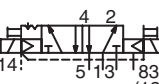
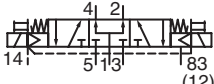
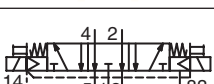
| | | | | | | | | | | 15-DIGIT PRODUCT CODE | |
|--|--|--|----------------|--|------------------------------------|------|---------------------------------------|---|--------------------------|--|--|
| function | symbol pilot (14) return (12) | rated flow at 6,3 bar ΔP 1 bar l/min (ANR) | | response time open / closed (ms) | pilot pressure at 23°C (bar) | | operating pressure port 1 (bar) | | dimensions / type (1) |  ISO 15407-2 | |
| | | 1 → 2 1 → 4 | 2 → 3 4 → 5 | | min. | max. | max. (PS) air (*) | | | | |
| | | | | | | | = | | | | |
| SPOOL VALVE, RUBBER PACKED TECHNOLOGY, WITH IMPULSE MANUAL OPERATOR (EXTERNAL SUPPLY) | | | | | | | | | | | |
| 2 x 3/2 NC |  | 900 | 800 | 15 / 20 | 3,5 (a) | 8 | 2 | 8 | 01 | R503A2BD0MA00F1 | |
| 2 x 3/2 NO |  | 900 | 900 | 15 / 20 | 3,5 (a) | 8 | 2 | 8 | 01 | R503A2BA0MA00F1 | |
| 5/2 |  | 1200 | 1100 | 20 / 60 | 3 | 8 | -0,95 | 8 | 01 | R503A2B10MA00F1 | |
| |  | 1200 | 1100 | 28 / 40 | 3 | 8 | -0,95 | 8 | 01 | R503A2BN0MA00F1 | |
| |  | 1200 | 1100 | 20 | 2 | 8 | -0,95 | 8 | 01 | R503A2B40MA00F1 | |
| 5/3 |  W1 closed centre position | 1200 | 1100 | 15 / 20 | 3 | 8 | -0,95 | 8 | 01 | R503A2B60MA00F1 | |
| |  W2 centre open to pressure | 1100 | 600 | 18 / 45 | 3 | 8 | -0,95 | 8 | 01 | R503A2B70MA00F1 | |
| |  W3 centre open to exhaust | 600 | 1100 | 18 / 45 | 3 | 8 | -0,95 | 8 | 01 | R503A2B50MA00F1 | |

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

(*) 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 15407-2 |
| | | 1 → 2 1 → 4 | 2 → 3 4 → 5 | | min. max. | | min. max. | | | |
| | | | | | max. (PS) air (*) | | = | | | |
| SPOOL VALVE, SPOOL AND SLEEVE TECHNOLOGY, WITH IMPULSE MANUAL OPERATOR | | | | | | | | | | |
| 5/2 |  spring | 1100 | 1000 | 20 / 60 | 2 | 8 | -0,95 | 8 | 01 | R503A1B10MA00F1 |
| |  solenoid air | 1100 | 1000 | 15 | 2 | 8 | -0,95 | 8 | 01 | R503A1B40MA00F1 |
| 5/3 |  W2 centre open to pressure | 800 | 800 | 20 / 60 | 2 | 8 | -0,95 | 8 | 01 | R503A1B70MA00F1 |
| |  W3 centre open to exhaust | 800 | 800 | 20 / 60 | 2 | 8 | -0,95 | 8 | 01 | R503A1B50MA00F1 |

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

(*) 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

Plug-in 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

M = Plug-in (electrical interface in the subbase)

⁽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 15407-2 pneumatic/electric pad mounting body (plug-in version, single subbase M12)
- 2D/3D CAD models - *In 3D*

DIMENSIONS (mm), WEIGHT (kg)

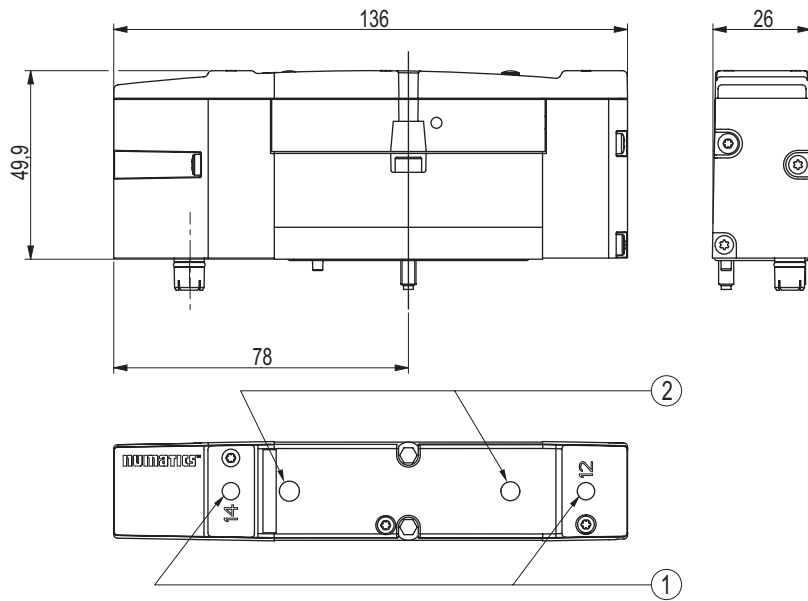


[Configurator - CAD Files](#)



TYPE 01

Electrical interface "M"
ISO 15407-2 / ISO 20401
IP65



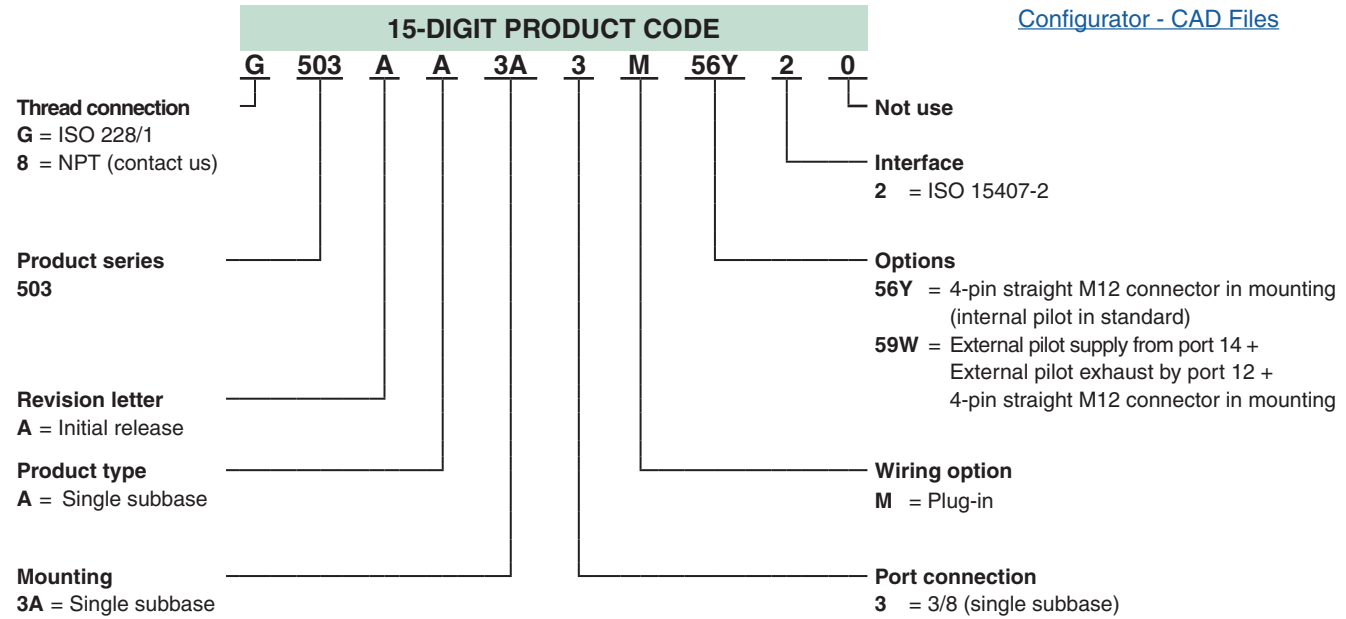
| type | weight |
|------|--------|
| 01 | 0,236 |

- ① Manual operator
- ② LED indicator


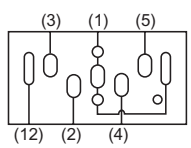

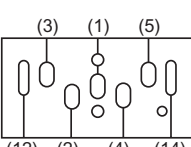
SINGLE SUBBASES

HOW TO ORDER

[Configurator - CAD Files](#)




SINGLE SUBBASES

| function | | designation | thread type | dimensions / type ⁽¹⁾ | 15-DIGIT PRODUCT CODE |
|--|---|--|-------------|----------------------------------|------------------------|
| SINGLE SUBBASE (ISO 15407-2) FOR PLUG-IN VALVE | | | | | |
|  |  | <p>internal supply</p> <p>1-2-3-4-5 = 5 x 3/8</p> <p>12 = 1/8 (pilot exhaust)</p> <p>(mounting interface surface with electrical connector)</p> | G | 02 | G503AA3A3M56Y20 |
|  |  | <p>external supply</p> <p>1-2-3-4-5 = 5 x 3/8</p> <p>12 = 1/8 (pilot exhaust)</p> <p>14 = 1/8 [pilot external supply]</p> <p>(mounting interface surface with electrical connector)</p> | G | 02 | G503AA3A3M59W20 |

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

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DIMENSIONS (mm), WEIGHT (kg) 

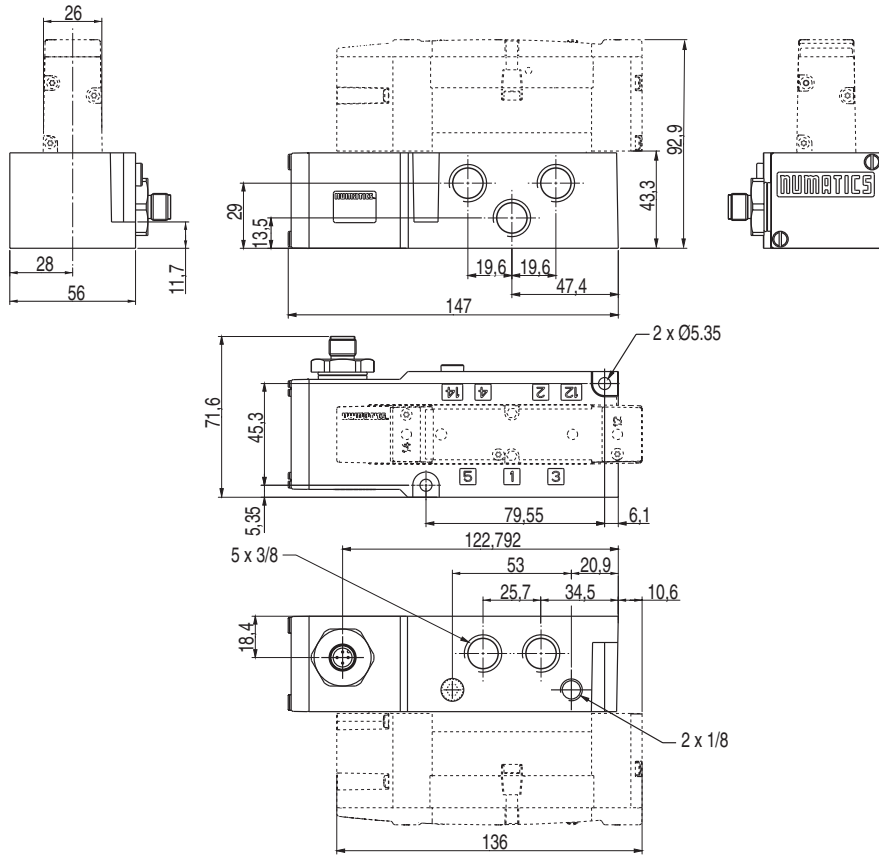
[Configurator - CAD Files](#)



TYPE 02

Single subbases, M12 connector in mounting
 ISO 15407-2, plug-in version
 3/8 = 1, 2, 3, 4, 5 ports
 1/8 = 12, 14 ports

G503AA3A3M56Y20 - G503AA3A3M59W20



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| type | code | weight |
|------|------------------------|--------|
| 02 | G503AA3A3M56Y20 | 0,231 |
| | G503AA3A3M59W20 | 0,228 |

