

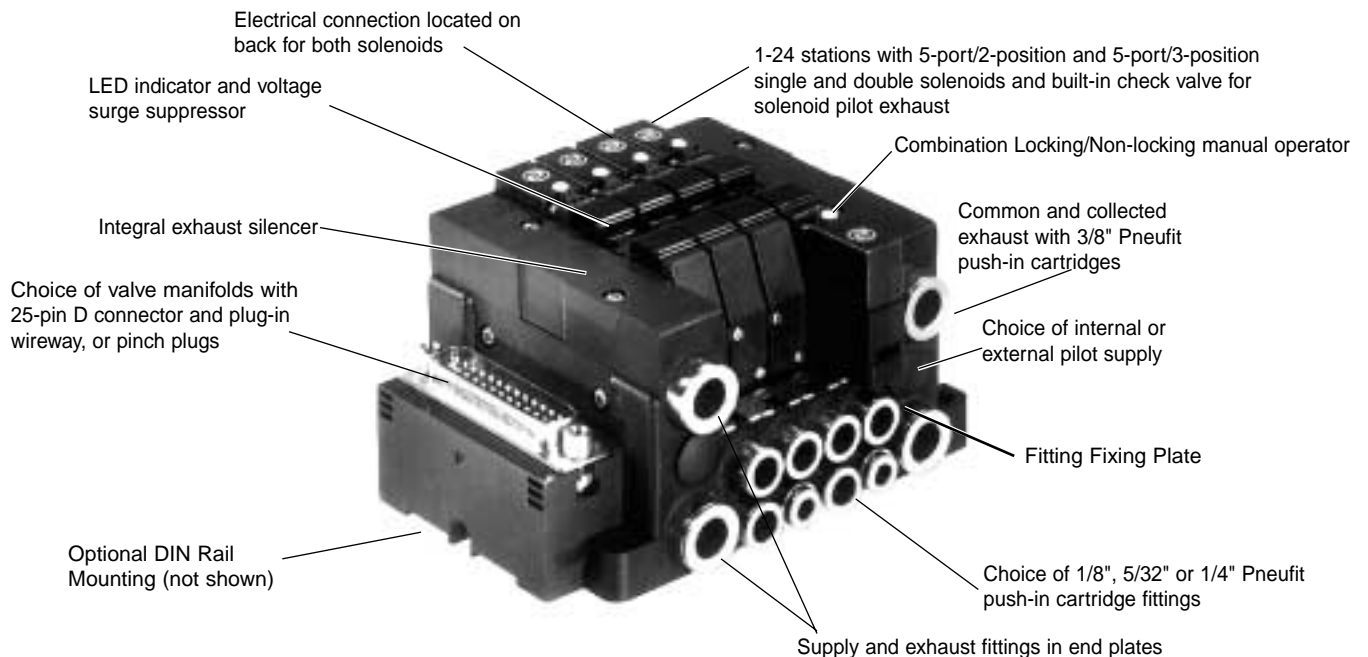
Nugget 30 Series Valves

5/2 and 5/3-position, high flow, compressed air micro valve with compact, lightweight 10mm body, and interchangeable fittings for 1/8", 5/32", 1/4", 4 or 6 mm tubing.

Contents

Features and Benefits	VAL-1-2
5-Port 2 and 3-Position Valves	VAL-1-3
Dimensional Information	VAL-1-4
25-pin D connectors	VAL-1-8
3-Port /2-Position Pilot Valves	VAL-1-9
Dimensional Information	VAL-1-10
Accessories	VAL-1-11
Ordering Subbase Assemblies	VAL-1-13
Product Numbering System	VAL-1-14

Four Station Nugget 30 High Flow Micro Valve with 25-pin D connector and Pneufit Fittings





Two Year Warranty

All Nugget 30 Valves are warranted to be free from defects for two years from the date of purchase. This warranty period provides users with a valuable guarantee of quality and serviceability.

High Flow

A Cv of .27 provides exceptionally high flow for the ultra-compact size of the valve, making the Nugget 30 appropriate for a wide range of applications from machine control to air logic systems.

10 mm Wide Body

The compact envelope of the Nugget 30 body, only .39" (10 mm) wide, makes it an ideal valve for applications where limited space is a criteria.

Electrical Connector Options

Two connector options are available. Choose from either a 25-pin D connector and plug-in wireway or pinch plugs with leads.

Lightweight

The lightweight, non-corrosive aluminum body 1 oz. (30g), plastic reinforced co-polymer subbase and end plates result in handling and mounting ease.

Common/Collected Exhaust with Built-in Muffler

The Nugget 30 is standard with common port exhaust which also collects pilot exhaust. Also standard is an exhaust muffler that is integral to all end-plates.

Two Subbase Options

The Nugget 30 is available on a lightweight plastic manifolding subbase with plug-in common wireway and 25-pin D connector that can provide for up to 24 stations. An aluminum fixed length, 10-32 UNF ported subbase is also available.

Interchangeable Pneufit Cartridge Push-In Fittings

The Nugget 30 offers the ease of field interchangeable port fittings for 1/8", 5/32", 1/4", 4 mm or 6 mm tubing. Simply slide out the quick fitting fixing plate and change cartridges. Endplates are available with 1/4", 3/8", or 8 mm push-in fittings.

Low Power Consumption

Extremely low power consumption of only one watt makes this valve ideal for computer based control systems as well as industrial applications where minimum energy consumption is desired.

LED and Surge Suppressor

The Nugget 30 comes standard with an LED and integrated surge suppressor.

Choice of Two Solenoid Operator Voltages

Two solenoid operator voltages are available on the Nugget 30: a 24V DC, or an optional 12V DC operator.

Long Life Rubber Seals

Extremely long-life nitrile seals provide durability and very low maintenance.

Same Length Body

The length of the valve body is the same for both the 5-port/3-position and 5-port/2-position valves.

Certified Valve Stacks

All factory assembled stacks are fully inspected and certified.

Nugget 30 Series Valves



Nugget 30

5/2 and 5/3-Position V02 Valves



- Small .39" (10 mm) wide, and lightweight
- With a Cv of .27, this aluminum and plastic valve is ideal for robotic and PLC applications.
- May be mounted as a modular manifolding subbase system offering the ease of a 25-pin D connector and plug-in wireway, or to a fixed length subbase.
- One watt solenoids with diode indicators and surge suppression are standard on all valves.

Technical Data

Fluids: Lubricated or non-lubricated compressed air, filtered to 5 microns.

Main Valve Inlet Pressure Range:
26"Hg to 102 psig (-0.9 to 7 bar)

Minimum Pilot Pressure:
2/position: 22 psig (1.5 bar)
3/position: 29 psig (2 bar)

Temperature Range: 41° to 122°F
(5° to 50°C)

Materials of Construction

Body: Aluminum and co-polymer

Spool, single and fixed length bases: Aluminum

Seals: Nitrile

Springs and Yoke: Stainless Steel

Manifolding base and end plate:

Reinforced co-polymer

Fittings: Nickel plated brass

Flow Characteristics

Size and Type	C _v
10-32 pipe fitting	0.18
5/32" tubing	0.16
1/4" tubing	0.27

Solenoid Operators

Voltages and Power Requirements:

24V DC (standard): 1W

12V DC (optional)*: 1W

Voltage Tolerances:

±10% rated voltage

Power Indicator: LED (red)

Surge Suppressor: Fly-wheel diode

Manual Override: Combination locking/non-locking

Coil Type: Class B. Side or bottom plug and D subconnector. Only one plug needed for double solenoid

Standard: Common negative

Optional: Common positive*

Enclosure Classification: NEMA 1

*Consult factory for delivery.

Port Size

10-32 UNF thread (fixed length subbase)

1/8", 5/32" or 1/4" interchangeable Pneufit push-in cartridges (modular manifolding subbase)

1/4", or 3/8" interchangeable Pneufit push-in cartridges, supply and exhaust on end plates

Note: Metric Tubing Push-In Cartridges available. See VAL-1-12.



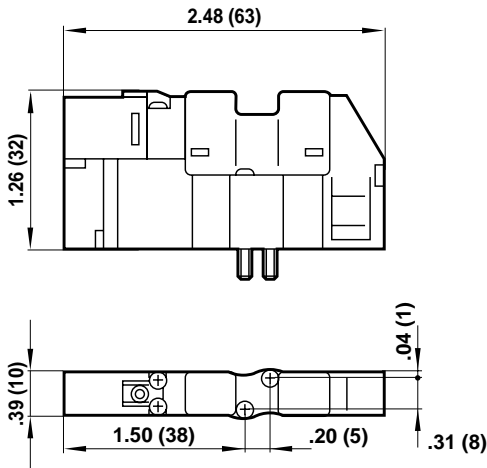
Nugget 30 Series Valves

All Dimensions in Inches (mm)

5/2 and 5/3 Position Valves

Symbol	Model	Solenoid Pilot	Electrical Connection	Operator	Mid-position	Return	Weight oz. (g)
	V025516A-B2631	Internal	Side Plug	Solenoid	–	Spring and air	0.9 (27)
	V025516A-B243A	Internal	Bottom plug	Solenoid	–	Spring and air	0.9 (27)
	V025526A-B2631	External	Side Plug	Solenoid	–	Spring and air	0.9 (27)
	V025526A-B243A	External	Bottom Plug	Solenoid	–	Spring and air	0.9 (27)
	V025511A-B2631	Internal	Side plug	Solenoid	–	Solenoid	1.32 (41)
	V025511A-B243A	Internal	Bottom plug	Solenoid	–	Solenoid	1.32 (41)
	V025522A-B2631	External	Side plug	Solenoid	–	Solenoid	1.32 (41)
	V025522A-B243A	External	Bottom plug	Solenoid	–	Solenoid	1.32 (41)
	V025611A-B2631	Internal	Side plug	Solenoid	All ports blocked	Solenoid	1.32 (41)
	V025611A-B243A	Internal	Bottom plug	Solenoid	All ports blocked	Solenoid	1.32 (41)
	V025711A-B2631	Internal	Side plug	Solenoid	Cylinder, open to exhaust	Solenoid	1.32 (41)
	V025711A-B243A	Internal	Bottom plug	Solenoid	Cylinder, open to exhaust	Solenoid	1.32 (41)
	V025622A-B2631	External	Side plug	Solenoid	All ports blocked	Solenoid	1.32 (41)
	V025622A-B243A	External	Bottom plug	Solenoid	All ports blocked	Solenoid	1.32 (41)
	V025722A-B2631	External	Side plug	Solenoid	Cylinder, open to exhaust	Solenoid	1.32 (41)
	V025722A-B243A	External	Bottom plug	Solenoid	Cylinder, open to exhaust	Solenoid	1.32 (41)

Solenoid Pilot, Air Assisted Spring Return, 2-Position



V025516A-B26*1

Type: 5/2 Side plug
Internal Pilot Supply

V025516A-B24*A

Type: 5/2 Bottom plug
Internal Pilot Supply

V025526A-B26*1

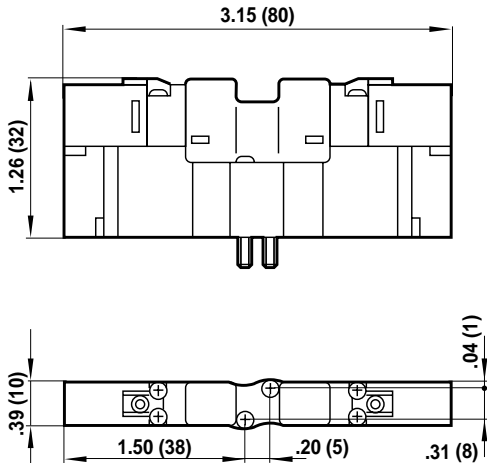
Type: 5/2 Side plug
External Pilot Supply

V025526A-B24*A

Type: 5/2 Bottom plug
External Pilot Supply

*Insert the voltage code:
2 for 12 VDC (*Consult factory for delivery*)
3 for 24 VDC

Double Solenoid Pilot, 2-Position



V025511A-B26*1

Type: 5/2 Side plug
Internal Pilot Supply

V025511A-B24*A

Type: 5/2 Bottom plug
Internal Pilot Supply

V025522A-B26*1

Type: 5/2 Side plug
External Pilot Supply

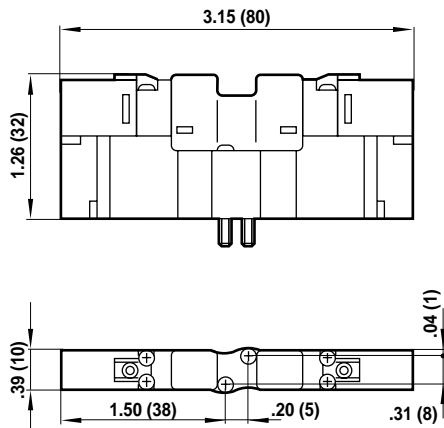
V025522A-B24*A

Type: 5/2 Bottom plug
External Pilot Supply

*Insert the voltage code:
2 for 12 VDC (*Consult factory for delivery*)
3 for 24 VDC



Double Solenoid Pilot, Spring Centered, 3-Position



V025611A-B26*1

Type: 5/3 All ports blocked, side plug
Internal Pilot Supply

V025611A-B24*A

Type: 5/3 All ports blocked, bottom plug
Internal Pilot Supply

V025622A-B26*1

Type: 5/3 All ports blocked, side plug
External Pilot Supply

V025622A-B24*A

Type: 5/3 All ports blocked, bottom plug
External Pilot Supply

*Insert the voltage code:

2 for 12 VDC (*Consult factory for delivery*)
3 for 24 VDC

V025711A-B26*1

Type: 5/3 Cylinder open to exhaust, side plug
Internal Pilot Supply

V025711A-B24*A

Type: 5/3 Cylinder open to exhaust, bottom plug
Internal Pilot Supply

V025722A-B26*1

Type: 5/3 Cylinder open to exhaust, side plug
External Pilot Supply

V025722A-B24*A

Type: 5/3 Cylinder open to exhaust, bottom plug
External Pilot Supply

*Insert the voltage code:

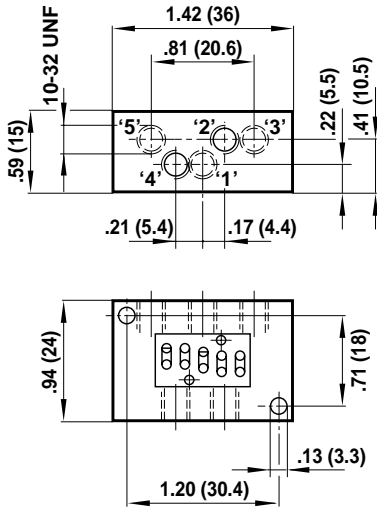
2 for 12 VDC (*Consult factory for delivery*)
3 for 24 VDC



Nugget 30 Series Valves

All Dimensions in Inches (mm)

Single Subbase

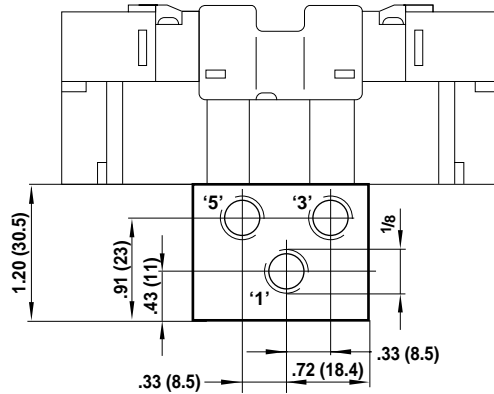


C/P43149/1

Type: 10-32 UNF Single station subbase

NOTE: For use with side plug, internal pilot versions only.

Fixed Length Subbase Manifold



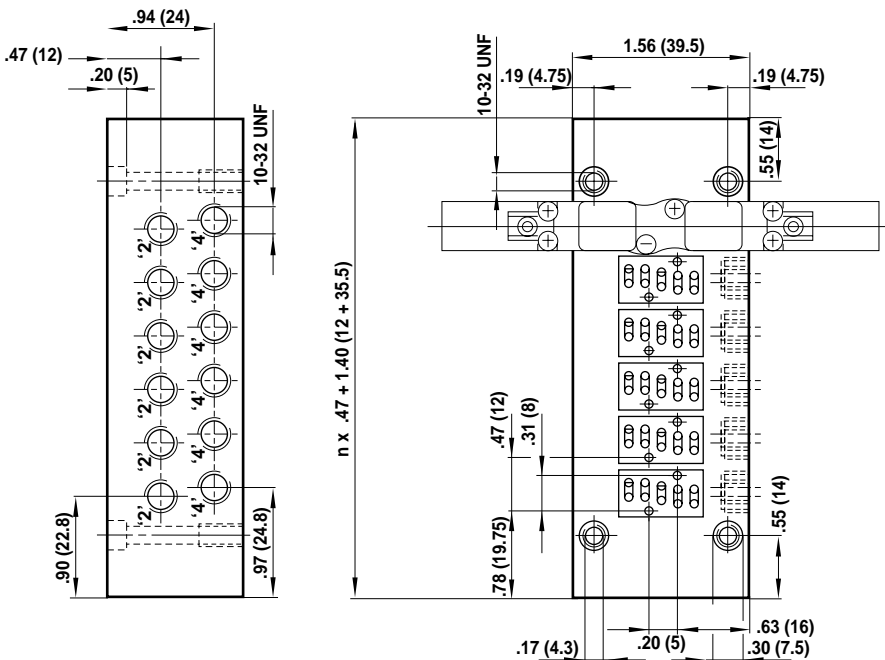
C/P43149/*

Type: 10-32 UNF Fixed Length Subbase Manifold

*Insert the number of stations, (2 to 12), being ordered.

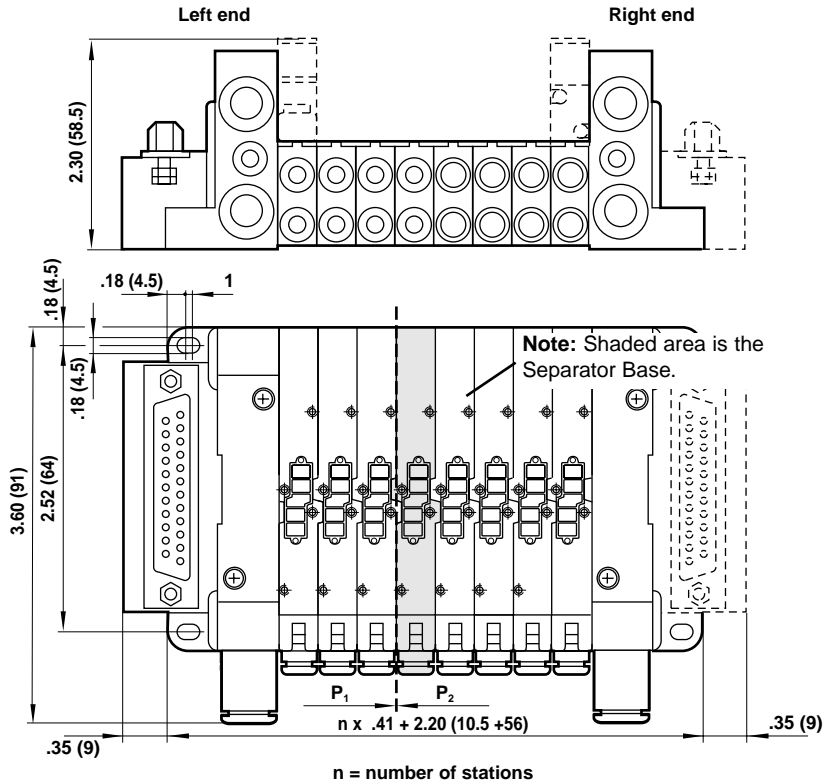
NOTE: For use with side plug, internal pilot versions only.

Replacement Gasket: M/P43166



Nugget 30 Series Valves

All Dimensions in Inches (mm)



Subbases

Model: **V025516A-Q1112**

Type: Supplied with 1/8" push-in fittings

Model: **V025516A-Q1114**

Type: Supplied with 5/32" push-in fittings

Model: **V025516A-Q1116**

Type: Supplied with 1/4" push-in fittings.

Model: **V025516A-Q1106**

Type: Supplied with Ø6 mm push-in fittings.

NOTE: Subbases are supplied with fittings, base seal, an intermediate seal between bases and fittings retaining plate. Fittings cartridges are interchangeable between bases, and sizes can be mixed.

Separator Bases

Model: **V025516A-Q1212**

Type: Separator Base. Supplied with 1/8" push-in fittings.

Model: **V025516A-Q1214**

Type: Separator Base. Supplied with 5/32" push-in fittings.

Model: **V025516A-Q1216**

Type: Separator Base. Supplied with 1/4" push-in fittings.

Model: **V025516A-Q1206**

Type: Separator Base. Supplied with Ø6 mm push-in fittings.

NOTE: Separator Bases do not have through passages. Use one in place of a standard subbase station to enable different pressure supplies to be connected to either end of the manifold.

Tie Rod Kits

Model: **V025516A-Q14****

Type: For 2 to 24 stations.

**Specify the number of stations in the manifold- 2 to 24.

End Plate Kits

Model: **V025516A-Q1316**

Type: Internal pilot supply. Supplied with 1/4" push-in fittings and pilot connection plugs.

Model: **V025526A-Q1316**

Type: External pilot supply. Supplied with 1/4" push-in fittings and 5/32" push-in fittings for external pilot connection.

Model: **V025516A-Q1317**

Type: Internal pilot supply. Supplied with 3/8" push-in fittings and pilot connection plugs.

Model: **V025526A-Q1317**

Type: External pilot supply. Supplied with 3/8" push-in fittings and 5/32" push-in fittings for external pilot connection.

Model: **V025516A-Q1308**

Type: Internal pilot supply. Supplied with Ø8 mm push-in fittings and pilot connection plugs.

Model: **V025526A-Q1308**

Type: External pilot supply. Supplied with Ø8 mm push-in fittings, and Ø4 mm pilot connection fittings.

NOTE: Kit consists of (1) left hand and (1) right hand end plate with push-in fittings as detailed above. Each End Plate features an inlet connection and a common silenced exhaust.



Nugget 30 Series Valves

25-Pin D Connector Subbase Harness and Housing

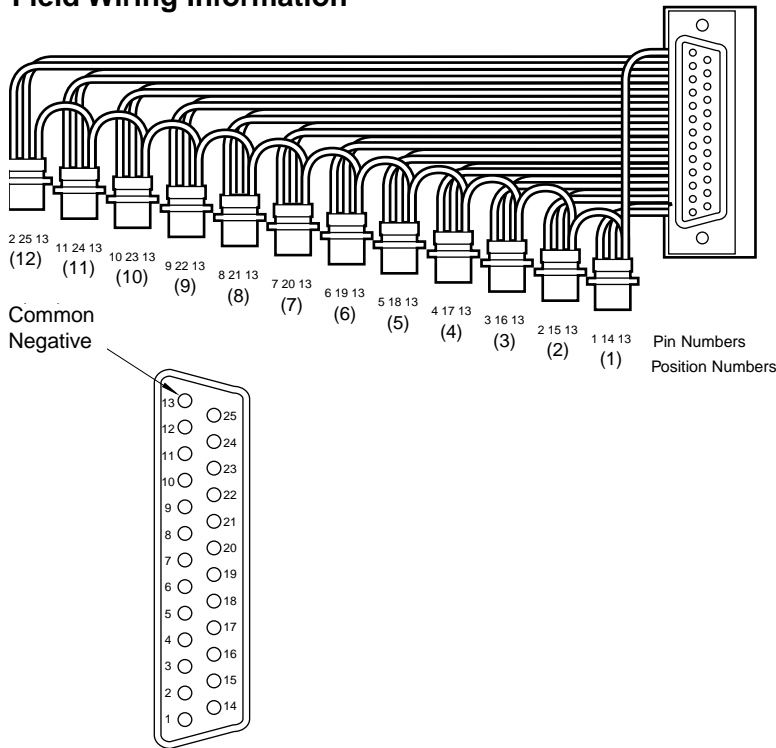
Model: **V025516A-Q1904** for 4 stations, harness and housing.
V025516A-Q1908 for 8 stations, harness and housing.
V025516A-Q1912 for 12 stations, harness and housing.

NOTE: For 13 to 24 stations use one harness at each end of the manifold.

When ordering, select a harness with an equal or greater number of stations than the valve stack. Unused plugs remain in the subbase endplate. For 25-pin D connector use bottom plug versions of the valves. Wiring is routed through a gallery in the bases and all connections go to one end of the valve. Double solenoid models feature an internal through-connection. The 25-pin D connector wiring is available for modular manifolding subbases only.

Station Number	Wire Color		
	Left	Center	Right (Com)
1	Brown	Red	Green
2	Orange	Yellow	Green
3	Green	Blue	Green
4	Purple	Grey	Green
5	White	Black	Green
6	Brown	Red	Green
7	Orange	Yellow	Green
8	Green	Blue	Green
9	Purple	Grey	Green
10	White	Black	Green
11	Brown	Red	Green
12	Orange	Yellow	Green

Field Wiring Information



The Subbase Harness carries wiring for double solenoid valves in multiples of 4, 8, or 12 stations. Pins 1-12 are for 1 4 end operators (single and double solenoid). Pins 14-25 are for 1 2 end operators (double solenoid only). Pin 13 is the common negative. To connect a single solenoid, wire two of the three pins called out on the diagram at left.

For Example:

V025516A-B243A Position 1 Single Solenoid
V025511A-B243A Position 2 Double Solenoid

Connect pins 1 and 13 for position 1, 1 4 end solenoid actuation.

Connect pins 2 and 13 for position 2, 1 4 end solenoid actuation and 15 and 13 for position 1 2 end solenoid actuation.

Nugget 30 Series Valves



Nugget 30

3-Port/2-Position V01 Valves



- Ideal for manifolding pilot applications where size is a consideration.
- The valve's .39" (10mm) width coupled with 24V DC or optional 12V DC coils make these valves ideal for lightweight and compact applications.
- Valves come with 300 mm pinch plugs.

Valve Order Information

Model	Operation	Voltage	Wt oz. (g)
V015416A-B2631	NC	24V DC	0.4 (12.6)
V015416A-B2621	NC	12V DC*	0.4 (12.6)

*Consult factory for delivery

Technical Data

Fluids: Lubricated or non-lubricated compressed air, filtered to 5 microns.
Operating Pressure:
15 to 102 psig (1 to 7 bar)
Temperature Range:
41°F to 122°F (5° to 50°C)
C_v : 0.015

Port Size

10-32 UNF thread (on subbase)

Solenoid Valves

Voltages and Power Requirements:

24V DC (standard): 1W

12V DC (optional)*: 1W

Voltage Tolerances: ±10% rated voltage

Power Indicator: LED (red)

Surge Suppressor: Fly-wheel diode

Manual Override: Combination locking/non-locking

Coil Type: Class B Side plug

Operation: Direct acting poppet

Enclosure Classification: NEMA 1

*Consult factory for delivery

Materials of Construction

Body: Aluminum and co-polymer

Single and fixed length bases: Aluminum

Seals: Nitrile

Springs and Yoke: Stainless Steel

Fittings: Nickel plated brass

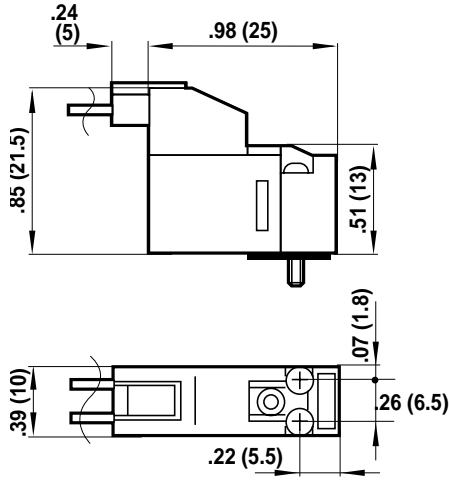


Nugget 30 Series Valves

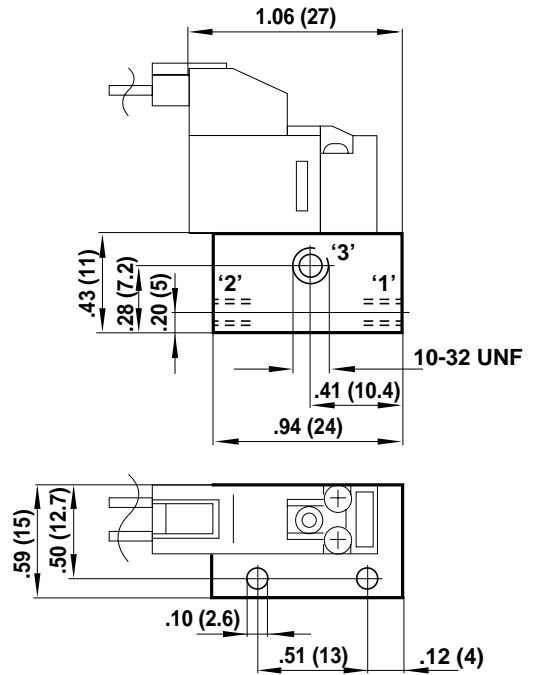
All Dimensions in Inches (mm)

Direct Solenoid, Spring Return Subbase Mounted Valve V015416A-B26*1 3/2 Normally Closed

* Insert voltage code
2 = 12 V DC
3 = 24 V DC

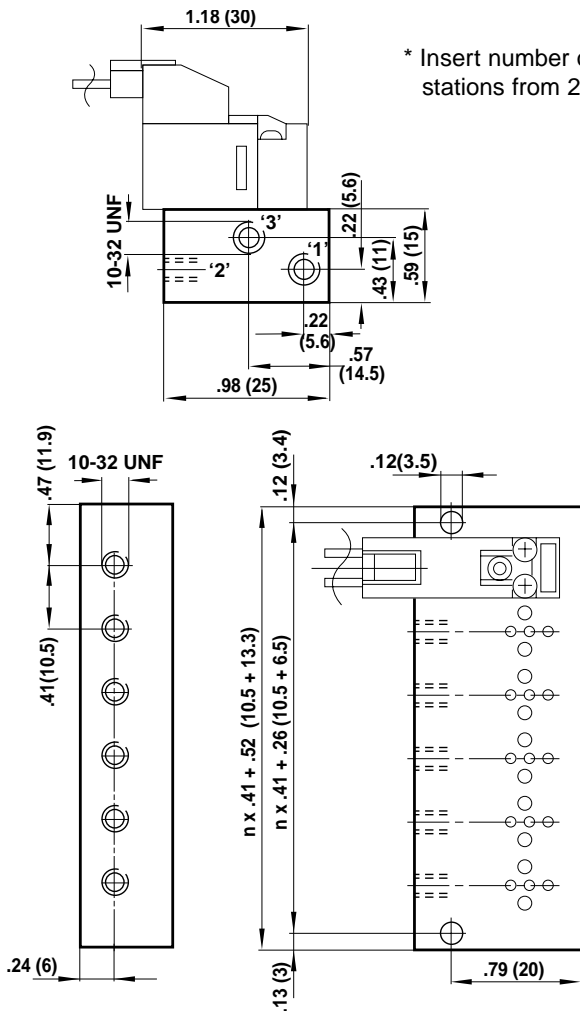


10-32 UNF Single Subbase C/P43154/1



Fixed Length Subbase Manifolds C/P43154/_ *

* Insert number of stations from 2 to 12



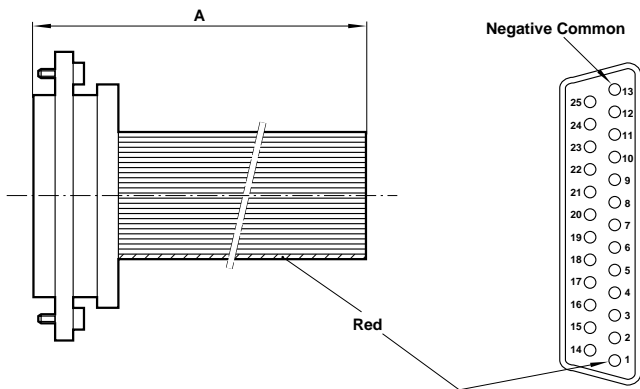
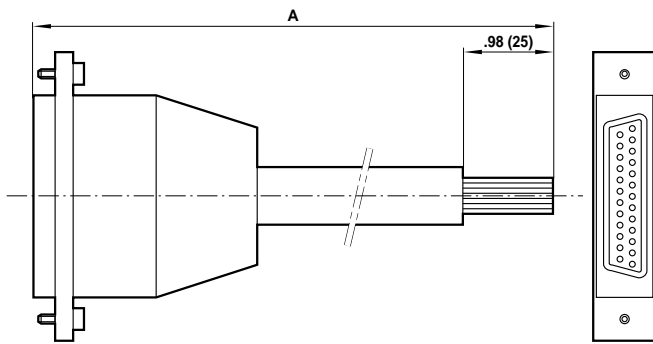
Replacement gasket: M/P43150

Nugget 30 Series Valves

All Dimensions in Inches (mm)



25-Pin D Connectors



Pin Number	Wire Color	Pin Number	Wire Color
1	Red	2-25	Grey

25-Pin D Connector Cable (For use with 25-pin D connector on manifold subbase wireway stacks.)

V025516A-Q2210

Type: 25 way MIL Standard D connector, A = 3' (1.0m)

V025516A-Q2230

Type: 25 way MIL Standard D connector, A = 10' (3.0m)

V025516A-Q2250

Type: 25 way MIL Standard D connector, A = 16' (5.0m)

Pin Number	Wire Color	Pin Number	Wire Color
1	Red	14	Green/red
2	Blue	15	Yellow/red
3	Green	16	White/red
4	Yellow	17	Red/black
5	White	18	Red/brown
6	Brown	19	Yellow/blue
7	Violet	20	White/blue
8	Orange	21	Blue/black
9	Pink	22	Orange/blue
10	Turquoise	23	Yellow/green
11	Grey	24	White/green
12	Red/blue	25	Orange/green
13	Black		

25-Pin D Connector Ribbon Cable*

V025516A-Q4310

Type: 25 way MIL Standard D connector, A = 3' (1.0m)

V025516A-Q4330

Type: 25 way MIL Standard D connector, A = 10' (3.0m)

V025516A-Q4350

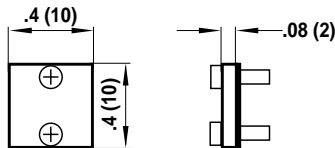
Type: 25 way MIL Standard D connector, A = 16' (5.0m)

* Low cost option

Blanking Plate

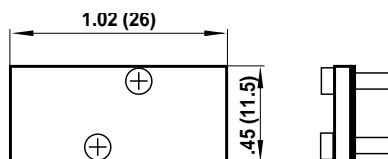
M/P43164

Blocks unused stations on single and fixed length subbase 3-port/2-position valves.



M/P43165

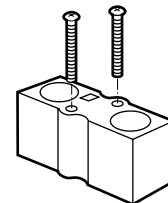
Blocks unused stations on single and fixed length subbase 5-port/2-position valves.



Blanking Block

V025516A-Q1600

Blocks unused intermediate base stations on 4-way modular sub-bases





Nugget 30 Series Valves

All Dimensions in Inches (mm)

Pinch Plugs (for 5/2 and 5/3 valves)

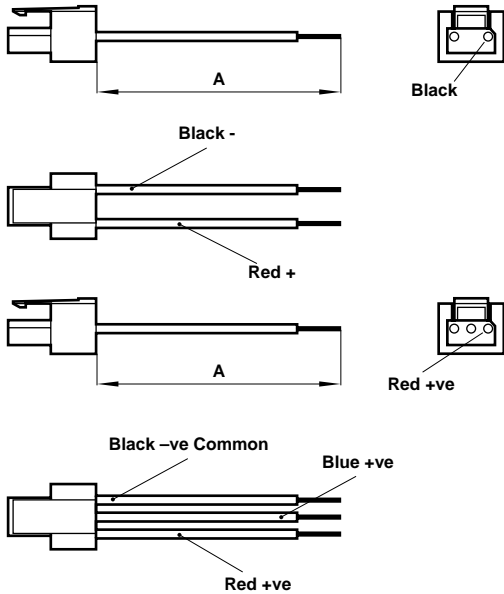
V025516A-Q20**

Type: 2-wire negative common, for single solenoid

Model: **V025516A-Q21****

Type: 3-wire negative common, for double solenoid

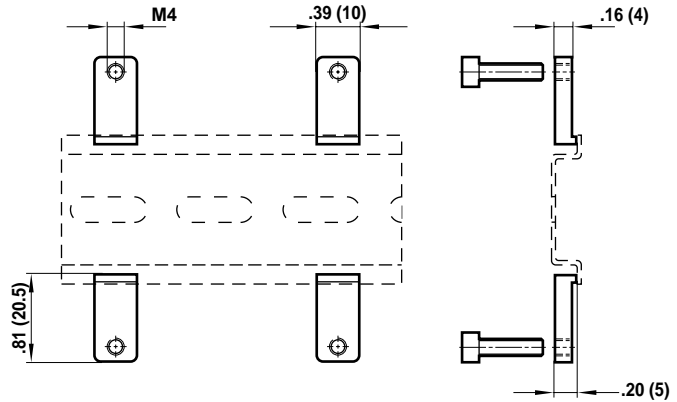
Model	Dim. A
V025516A-Q2003	11.8 (300)
V025516A-Q2010	39.4 (1000)
V025516A-Q2103	11.8 (300)
V025516A-Q2110	39.4 (1000)



DIN Mounting Rail Kits

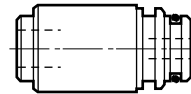
V025516A-Q1700

Type: Kit fits modular bases to DIN EN 50022 mounting rail.



Pneufit Push-In Fitting Cartridges

Interchangeable cartridges



Pneufit Blanking Plug

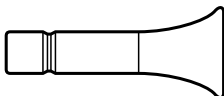
Use to plug unused ports on manifold subbase.

Nickel plated brass Blanking Plug

1/8"	12-004-0100
5/32" (4 mm)	12-004-0200
1/4"	12-004-0400
3/8"	12-004-0600

Thermoplastic Blanking Plug

5/32" (4 mm)	11-004-0400
1/4"	94-050-904
3/8"	94-050-906
6 mm	11-004-0600
8 mm	11-004-0800



Cylinder Port Fittings

1/8"	12-X00-0013
5/32"	10-X00-0004
1/4"	12-X00-0004
4 mm	10-X00-0004
6 mm	10-X00-0006

Supply / Exhaust Fittings

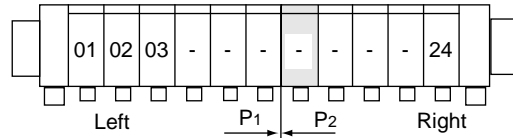
1/4"	12-X00-0025
3/8"	12-X00-0006
8 mm	10-X00-0008



To Order Modular Manifolding Subbases

There are a variety of configurations that can be supplied as assembled stacks. To order factory assembled valve and manifolding subbase assemblies:

1. Select your valve and voltage from the table on VAL-1-4, and indicate the station number on the base where each valve is to be positioned.
2. Select the base configuration using the following table as a guide.



25-Pin D Connector (left side)

- X No 25-Pin D Connector
- A for up to 4 valves
- B for up to 8 valves
- C for up to 12 valves

Cylinder and External Pilot Ports

- 1E 1/8" PIF cylinder, INT pilot, 3/8" PIF inlet/exhaust
- 1F 1/8" PIF cylinder, EXT pilot, 3/8" PIF inlet/exhaust
- 1G 1/8" PIF cylinder, INT pilot, 1/4" inlet/exhaust
- 1H 1/8" PIF cylinder, EXT pilot, 1/4" PIF inlet/exhaust
- 2A Ø4 mm, INT pilot, 8 mm PIF inlet/exhaust
- 2B Ø4 mm, EXT pilot, 8 mm PIF inlet/exhaust
- 2E 5/32" PIF cylinder, INT pilot, 3/8" PIF inlet/exhaust
- 2F 5/32" PIF cylinder, EXT pilot, 3/8" PIF inlet/exhaust
- 2G 5/32" PIF cylinder, INT pilot 1/4" inlet/exhaust
- 2H 5/32" PIF cylinder, EXT pilot 1/4" inlet/exhaust
- 3A Ø6 mm, INT pilot, 8 mm PIF inlet/exhaust
- 3B Ø6 mm, EXT pilot, 8 mm PIF inlet/exhaust
- 4E 1/4" PIF INT pilot, 3/8" PIF inlet/exhaust
- 4F 1/4" PIF EXT pilot, 3/8" PIF inlet/exhaust

Number of stations 01-24

25-Pin D Connector (right side)

- X No 25-Pin D Connector
- A for up to 4 valves
- B for up to 8 valves
- C for up to 12 valves

Cylinder and External Pilot Ports (Dual Pressure)

- 1E 1/8" PIF cylinder, INT pilot, 3/8" PIF inlet/exhaust
- 1F 1/8" PIF cylinder, EXT pilot, 3/8" PIF inlet/exhaust
- 1G 1/8" PIF cylinder, INT pilot, 1/4" inlet/exhaust
- 1H 1/8" PIF cylinder, EXT pilot, 1/4" PIF inlet/exhaust
- 2A Ø4 mm, INT pilot, 8 mm PIF inlet/exhaust
- 2B Ø4 mm, EXT pilot, 8 mm PIF inlet/exhaust
- 2E 5/32" PIF cylinder, INT pilot, 3/8" PIF inlet/exhaust
- 2F 5/32" PIF cylinder, EXT pilot, 3/8" PIF inlet/exhaust
- 2G 5/32" PIF cylinder, INT pilot 1/4" inlet/exhaust
- 2H 5/32" PIF cylinder, EXT pilot 1/4" inlet/exhaust
- 3A Ø6 mm, INT pilot, 8 mm PIF inlet/exhaust
- 3B Ø6 mm, EXT pilot, 8 mm PIF inlet/exhaust
- 4E 1/4" PIF INT pilot, 3/8" PIF inlet/exhaust
- 4F 1/4" PIF EXT pilot, 3/8" PIF inlet/exhaust

Number of stations 01-23 dual pressure
XX Single pressure default

Factory Assembled Valve and Manifolding Subbase Assemblies

The following ordering example details the information needed to order the 6 valve assembly shown at right.

One Nugget 30 valve stack consisting of:

Position	Quantity	Part Number
Position 3-6	4 pcs	V025516A-B243A
Positions 1-2	2 pcs	V025511A-B243A
	1 pcs	V02B2E06-XXXXX

NOTE: Bottom plug version valves must be used with 25-pin D connector and wireway.



Fixed Length Subbase Assemblies

Order fixed length assemblies as follows-

One Nugget 30, six valve stack consisting of:

Position	Quantity	Part Number
Positions 1-6	6 pcs	V025516A-B2631 C/P43149/6

NOTE: Fixed length subbases must use side-plug version valves.





Nugget 30 Series Valves

