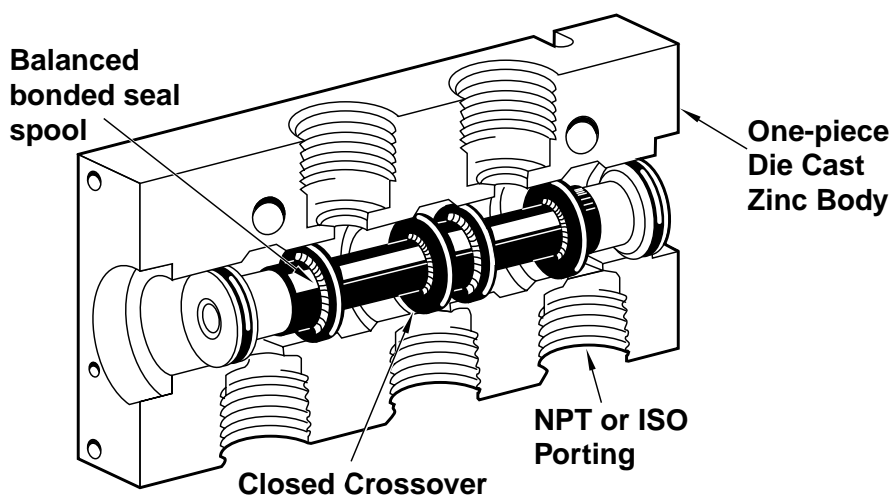


Nugget 500

Compressed air, directional
control spool valves with integral
bonded seals

Contents	
Features	VAL-11-2
Specifications	VAL-11-4
Assembled Valve and Manifolding Assemblies	VAL-11-17
Assembled Valve and Fixed Length Assemblies	VAL-11-18
Accessories	VAL-11-19
Product Numbering System	VAL-11-22





Design Features Provide High Reliability.

Norgren Nugget 500 Valves feature a precision spool with integral bonded seals. This design provides superior performance, fast and easy maintenance, dependable operation, and long life. Other key features and benefits include:

Two-Year Unconditional Warranty

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

Two Valve Configurations

Nugget 500 are available in a 5-Port/2-Position or 5-Port/3-Position configuration.

A Wide Range of Valve Accessories

Norgren offers a number of accessories for use with the Nugget 500 Valve, including valve body cover plates, speed control kits, mufflers, intermediate supply/exhaust block, solenoid exhaust filters, manifold blanking plates, and isolating plugs. These accessories allow cost-effective customizing for your specific application.

Small Subbase Footprint

All subbase valves mount on approximately 1.50" (38 mm) centers, reducing installation space requirements.

High Flow

A Cv of 5.0 provides exceptionally high flow for the compact size of the valve, making the Nugget 500 appropriate for machine control and general purpose industrial applications.

Nitrile Rubber-Based Seals

All Norgren Nugget 500 Valves utilize nitrile O-rings and seals for superior compatibility, wear, and operation over a wide temperature range.

Port and Operator Identification

Each of the ports is identified by a permanent number adjacent to the port on the body or subbase. In addition, a two-digit number at each end of the valve body indicates the ports connected when the operator at that end is actuated. Port and operator identification on Nugget 500 Valves comply with ANSI and NFPA T3.21.15-1989. See **Operating Variations** on page VAL-9-5 for examples.

Durable Finish

External valve body, operator and subbase surfaces are protected with an oven cured, epoxy resin paint that provides excellent corrosion and chip-resistant protection.

Quality Appearance

Norgren's high luster black gives any control circuit installation a quality appearance reflecting the superior operating capability built into every Nugget 500 Valve.

Four Mounting Styles

Inline Valves have two sets of mounting holes running through the valve body. Inline valves may be bolted to a surface or may be supported by connecting piping.

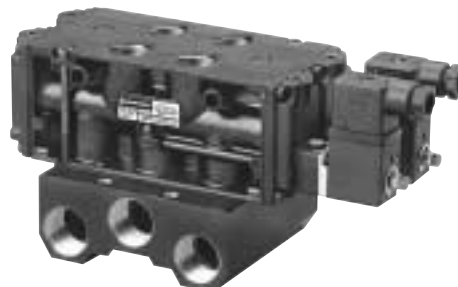
Fixed Length Manifolds allow the installation of inline valves on a competitively priced common manifold. For quick installation, valves are attached to the manifold with two socket head cap screws. Valves share common supply and exhaust galleries in the manifold.

A single **Subbase Valve** is attached to a **Single Subbase** with four socket head cap screws, providing easy installation. Inlet, exhaust, external pilot supply and cylinder ports are located on the sides of the subbase.

Subbase Valves are attached to **Manifolding Subbases** with four socket head cap screws. Subbases are held together with a clamping pin and set screw combination, which reduces potential leaks and allows quick assembly of valve stations. Common inlet and exhaust ports and common external pilot supply ports are located in the end plates. Cylinder ports are located in the ends of the subbases.

Closed Crossover

The design of the Nugget spool ensures that no air flow occurs between supply port 1 and exhaust ports 3 & 5, preventing the waste of compressed air.



Fixed Length Manifold



Operator Choices

Solenoid pilot and air pilot operators are available for primary actuation and return operation. For secondary operation air-assisted spring return, spring return and integral air return operators are offered.

Low Wattage Solenoid Operators

AC and DC operators requiring only 3.5 and 2.0 watts of power, respectively, are ideal for computer based control systems as well as industrial applications where minimum energy consumption is desired. Faster response times are realized using the 7.5 watt AC and DC operators.

Solenoid Exhaust Filter

Optional solenoid exhaust filters, for use in dusty environments, are available.

Solenoid Diffuser Plug

A diffuser plug installed in the pilot exhaust helps prevent entry of contaminants during shipping and normal operation. It may be removed when minimum response times are desired.

Rotatable Connector and Coil

The standard cable grip connector can be rotated 180°, and the solenoid coil can be turned 360° in 90° increments, making the operators adaptable for easy installation.

Electrical Connector Options

A cable grip electrical connector with indicator light; a 1/2" NPT conduit connector and a 5-foot, three-conductor, molded cable connector with or without indicator light and surge suppression are available.

Solenoid Manual Overrides

Standard solenoid operators are furnished with manual non-locking overrides to provide a means of shifting the valve without electrical power. Optional solenoids without overrides or with locking overrides are also available.



Single Subbase Valve

Internal or External Solenoid Pilot Supply

All inline solenoid operated valves may be quickly converted from an internal to an external pilot supply by reversing a one-piece seal between the operator and the body and removing the external supply port pipe plug. All subbase solenoid operated valves may be quickly converted from an internal pilot to a common external pilot supply by rotating a one-piece seal between the valve body and the subbase to provide pilot pressure from the external pilot supply port in the single subbase or endplate.

Sintered Bronze Vent Filters

Internal parts are protected by built-in sintered bronze vent filters on operators.

High Flow Pilot Exhaust Orifice

An oversized pilot exhaust orifice provides rapid return time when the valve is deactivated.



Inline Double Solenoid Valve



Manifolding Subbase Valve



Nugget 500 Series Valves

Specifications

Operating Specifications

Fluids: Filtered, lubricated or nonlubricated, compressed air or vacuum service.

Inlet Pressure Range:

Solenoid Operated Valves:*

With Internal Pilot Supply:

20 to 150 psig (1.4 to 10.3 bar)

With External Pilot Supply:

26" Hg** to 150 psig

(26" Hg** to 10.3 bar)

Air Operated Valves: 26" Hg** to 150 psig (26" Hg** to 10.3 bar).

Temperature Range (Ambient & Inlet):

Solenoid Operated Valves: -20°F to 120°F† (-29°C to 50°C).

Air Operated Valves: -20°F to 160°F†

(-29°C to 71°C).

Operator Pilot Pressures:

Maximum Pressure: 150 psig (10.3 bar)

Minimum Pressure requirements are given in the table below:

* Solenoid operators must be externally piloted if the supply pressure to the main valve is below the minimum pilot pressure listed in the table below.

** With vacuum supply plumbed to an exhaust port.

†With dewpoint of supply air less than air temperature below 35°F (2°C).

Port Size (PTF Standard, ISO Optional)

Inline Valves: 3/8" & 1/2" PTF standard, (ISO G optional); 3/4" PTF only

Inline Valve Fixed Length Manifold: 3/4" PTF inlet and exhaust ports standard (ISO G optional).

Single Subbase: 3/8" or 1/2" PTF standard (ISO G optional); 1/8" PTF or ISO G external pilot supply.

Manifolding Subbase: 3/8" or 1/2" PTF standard (ISO G optional) cylinder ports.

End Plates for Manifolding Subbases: 3/4" PTF standard (ISO G optional) inlet and exhaust ports;

1/8" PTF or ISO G external pilot supply.

Operator: 1/8" PTF or ISO G external pilot supply port.

Special Order Threads: ISO Rc – Consult Factory.

Valve Materials

Body: Aluminum

Spool: Aluminum

Elastomers: Nitrile

Solenoid Operator Base: PPS Plastic

Operator Housing: Zinc

Speed Control Materials

Body: Zinc

Adjusting Screw: Brass

Elastomers: Nitrile

Subbase Materials

Fixed Length Manifold: Aluminum

Single & Manifolding Subbases: Aluminum

End Plate: Zinc

Elastomers: Nitrile

Solenoid Operator Specifications

Voltages and Power Requirements:

Standard:

120V/60Hz-110V/50Hz: 3.5W.

Optional:

24V/60Hz-24V/50Hz: 3.5W;

6 VDC: 2.0W;

12 VDC: 2.0W;

24 VDC: 2.0W;

110 VDC: 3.4W.

120V/60Hz-110V/50Hz: 7.5W;

240V/60Hz-220V/50Hz: 7.5W;

24V/60Hz-24V/50Hz: 7.5W;

12 VDC: 7.5W;

24 VDC: 6.0W.

Duty: Continuous at 90 to 105 % of rated voltage.

Coil Type: Class H. Molded with three-pin electrical plug-in connector.

Enclosure Classification: NEMA 4, and DIN 40050-IP65.

Electrical spade connections on the operator receptacle conform to industry standard form B for 3-pin connectors with 11 mm spacing.

Electrical Plug-in Connector: Cable grip for cables 1/4" to 5/16" (6 to 8 mm) in diameter.

Override: Non-locking, locking or no override

External Pilot Supply Port: 1/8" PTF or ISO G

Average Flow Factor (C_v)†

3/8", 1/2", & 3/4" Ported Valves: 4.0, 5.0, & 5.6, respectively.

†Flow rating determined in accordance with ANSI (NFPA).T3.21.3, Pneumatic fluid power – Flow test procedure and reporting method – for fixed orifice components.

Operator Pilot Pressures

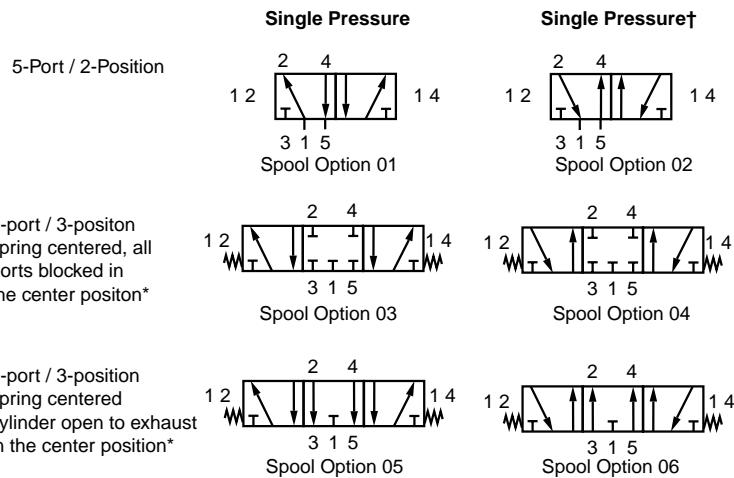
Maximum Pressure: 150 psig (10.3 bar)

Minimum Pilot Pressures are given in the following table

Primary Operator	Secondary Return Oper	Minimum Operating Pressure		
		Nondetent psig (bar)	Detent psig (bar)	Spring Centered psig (bar)
Air	Air	20 (1.4)	30 (2.1)	40 (2.8)
Solenoid	Solenoid	20 (1.4)	30 (2.1)	40 (2.8)
Solenoid	Spring	40 (2.8)	—	—
Solenoid	Air-Assisted Spring	40 (2.8)	—	—
Solenoid	Integral Air	40 (2.8)	—	—
Air	Spring	40 (2.8)	—	—
Air	Air-Assisted Spring	40 (2.8)	—	—
Air	Integral Air	40 (2.8)	—	—

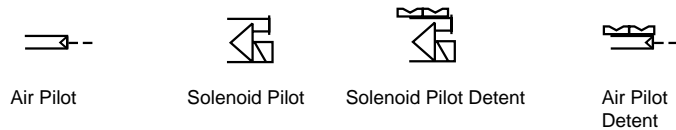


Operating Variations

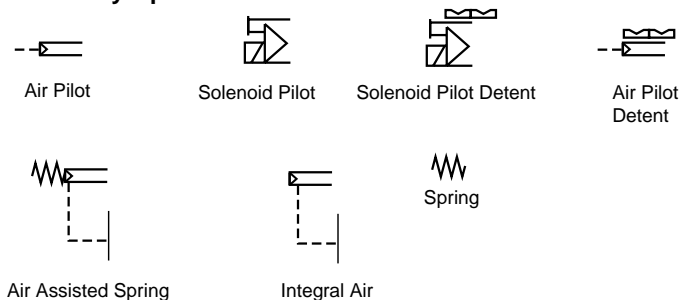


* 5-port / 3-position valves available with double solenoid pilot or double air pilot operators only
† Dual pressure valves require externally piloted operators

Primary Operators



Secondary Operators



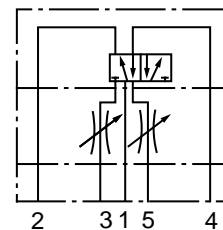
Seal Compatibility

Nugget 500 seals are compatible with most good quality O-ring lubricants, including:

- DC BR-2+ grease (Dow Corning)
- DC 44 grease (Dow Corning)
- Parker Super O-Lube (Parker Seal)
- Magnalube G (Saunders Industries)
- Nondetergent mineral based oil such as Mobil DTE light oil

Nugget 500 seals are not compatible with WD-40 or commonly used de-icer fluids. Consult factory to verify compatibility of lubricants or fluids not listed above.

Dual Sandwich Speed Control



Nugget 500 Series Valves

5/2 and 5/2 directional control
spool valves

- Long lasting spool design
- High flow compact valves
- Four mounting styles: inline, fixed length manifolds, single subbase, or subbase valves attached to manifolding subbases
- Wide range of operators available
- Two functional types: available in 5/2, and 5/3 configurations



Technical Data

Medium:

Filtered, lubricated or non-lubricated, compressed air or vacuum

Operation:

Spool valve air pilot actuated

Mounting:

Inline, fixed length manifold, single subbase, and manifolding subbase

Port Sizes:

3/8", 1/2", or 3/4", ISO G or PTF

Operating Pressure:

Maximum 150 psig (10.3 bar).

Flow Characteristics:

Port	Cv	l/min	scfm
3/8" Inline	4.0	4250	150
1/2" Inline	5.0	5150	180
3/4" Inline	5.6	6000	210
1/2" Subbase	4.7	5300	190

Operating Temperature

Solenoid Operated Valves: -20° to 120°F (-29° to 50°C)

Air Operated Valves: -20° to 160°F (-29° to 71°C)

*Consult our Technical Service for use below 36°F (2°C)

Materials:

Valve Body: Aluminum

Spool: Aluminum

Elastomers: Nitrile

Solenoid Operator Base: PPS plastic

Operator Housing: Zinc

Speed Control Materials

Body: Zinc

Adjusting Screw: Brass

Elastomers: Nitrile

Subbase Materials

Fixed Length Manifolds: Aluminum

Single and Manifolding Subbase: Aluminum

End Plate: Zinc

Elastomers: Nitrile

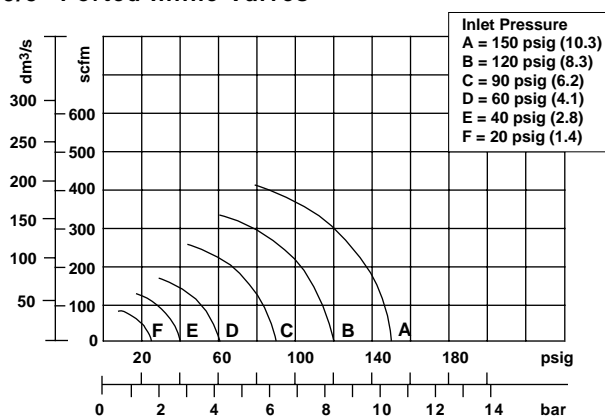
Order Information

To order standard Nugget 500 air pilot solenoid operated valves, quote model number from table, e.g. order

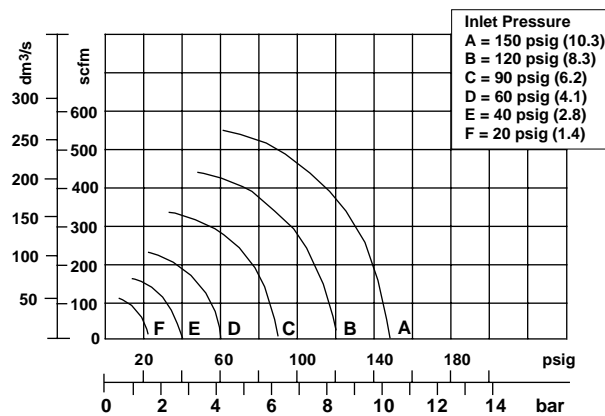
MN01CGA-35-AJJA for a 5-port/2-position, single solenoid, spring return model.



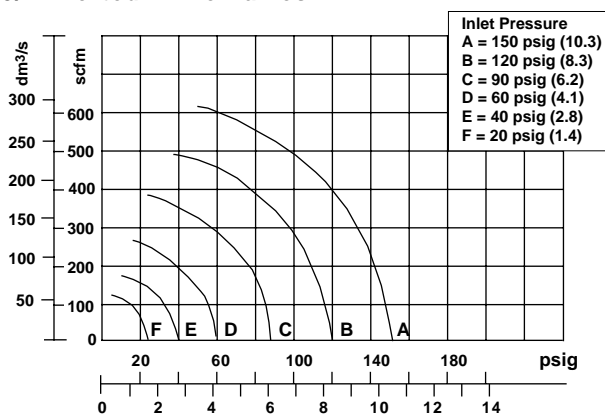
FLOW CHARACTERISTICS 3/8" Ported Inline Valves



FLOW CHARACTERISTICS 1/2" Ported Inline Valves



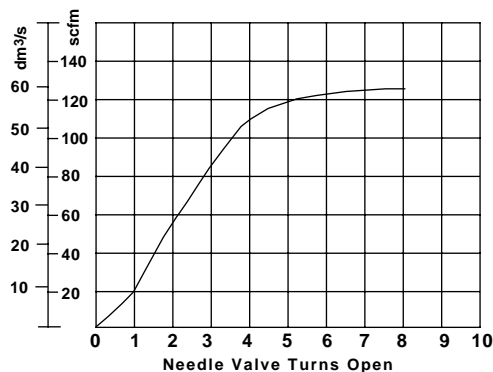
FLOW CHARACTERISTICS 3/4" Ported Inline Valves



SPEED CONTROL

Inlet Pressure: 90 PSIG (6.2 bar)

Flow Path: 2 to 3 and 4 to 5 (cyl to exhaust)





Nugget 500 Series Valves

Inline Valves

Description	Symbol	Type	Port Size	Body	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Solenoid		5-port/2-position single pressure	1/2" PTF	MN01CGA	35-AJJA	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-50
Spring Return*		5-port/2-position dual pressure	1/2" PTF	MN02CGA	35-AKJA	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-51
Double Solenoid		5-port/2-position single pressure	1/2" PTF	MN01CGA	25-AJJA	20 - 150 (1.4 - 10.3)	1.71 (.78)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02CGA	25-AJJA	20 - 150 (1.4 - 10.3)	1.71 (.78)	54677-51
Double Solenoid Detent		5-port/2 position single pressure	1/2" PTF	MN01CGA	25-BJJA	30 - 150 (2.1 - 10.3)	1.99 (.90)	54677-50
		5-port/2 position dual pressure	1/2" PTF	MN02CGA	25-BJJA	30 - 150 (2.1 - 10.3)	1.99 (.90)	54677-51 54677-51
Double Solenoid		5-port/3-position single pressure, all ports blocked in center position	1/2" PTF	MN03CGA	25-FJJA	40 - 150 (2.8 - 10.3)	1.99 (.90)	54677-52
		5-port/3-position dual pressure, all ports blocked in center position	1/2" PTF	MN04CGA	25-FJJA	40 - 150 (2.8 - 10.3)	1.99 (.90)	54677-53
Double Solenoid Spring Centered Cylinder Open to Exhaust		5-port/3-position single pressure, cylinder open to exhaust	1/2" PTF	MN05CGA	25-FJJA	20 - 150 (1.4 - 10.3)	1.99 (.90)	54677-54
		5-port/3-position dual pressure cylinder open to exhaust	1/2" PTF	MN06CGA	25-FJJA	20 - 150 (1.4 - 10.3)	1.99 (.90)	54677-55

* Standard valves are equipped with PTF threads, solenoid operators with non-locking overrides, internal pilot, 120V/60 Hz-110V/50 Hz coils and cable grip connectors. Optional solenoid operators, coil voltages and electrical connectors can be ordered using the information on p. VAL-11-22.

Note: For ISO-G threads, insert "G" in the 7th position.



Inline Valves

Description	Symbol	Type	Port Size	Body	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Air Spring Return*		5-port/2-position single pressure	1/2" PTF	MN01CGA	33-A000	40 - 150 (2.8 - 10.3)	1.16 (.53)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02CGA	33-A000	40 - 150 (2.8 - 10.3)	1.16 (.53)	54677-51
Double Air		5-port/2-position single pressure	1/2" PTF	MN01CGA	23-A000	20 - 150 (1.4 - 10.3)	1.16 (.53)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02CGA	23-A000	20 - 150 (1.4 - 10.3)	1.16 (.53)	54677-51
Double Air Detent		5-port/2 position single pressure	1/2" PTF	MN01CGA	23-B000	30 - 150 (2.1 - 10.3)	1.42 (.65)	54677-50
		5-port/2 position dual pressure	1/2" PTF	MN02CGA	23-B000	30 - 150 (2.1 - 10.3)	1.42 (.65)	54677-51
Double Air, Spring Centered, all ports blocked		5-port/3-position single pressure, all ports blocked in center position	1/2" PTF	MN03CGA	23-F000	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-52
		5-port/3-position dual pressure, all ports blocked in center position	1/2" PTF	MN04CGA	23-F000	40 - 150 (2.8 - 10.3)	1.42 (.65)	54677-53
Double Air Spring Centered Cylinder Open to Exhaust		5-port/3-position single pressure, cylinder open to exhaust	1/2" PTF	MN05CGA	23-F000	20 - 150 (1.4 - 10.3)	1.42 (.65)	54677-54
		5-port/3-position dual pressure, cylinder open to exhaust	1/2" PTF	MN06CGA	23-F000	20 - 150 (1.4 - 10.3)	1.42 (.65)	54677-55

* Standard valves are equipped with PTF threads..

Note: For ISO-G threads, insert "G" in the 7th position.



Nugget 500 Series Valves

Valves with Manifolding Subbases

Description	Symbol	Type	Port Size	Body	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Solenoid		5-port/2-position single pressure	1/2" PTF	MN01GGA	35-AJJA	40 - 150 (2.8 - 10.3)	2.37 (1.08)	54677-50
Spring Return*		5-port/2-position dual pressure	1/2" PTF	MN02GGA	35-AKJA	40 - 150 (2.8 - 10.3)	2.37 (1.08)	54677-51
Double Solenoid		5-port/2-position single pressure	1/2" PTF	MN01GGA	25-AJJA	20 - 150 (1.4 - 10.3)	2.64 (1.20)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02GGA	25-AJJA	20 - 150 (1.4 - 10.3)	2.64 (1.20)	54677-51
Double Solenoid Detent		5-port/2 position single pressure	1/2" PTF	MN01GGA	25-BJJA	30 - 150 (2.1 - 10.3)	2.94 (1.34)	54677-50
		5-port/2 position dual pressure	1/2" PTF	MN02GGA	25-BJJA	30 - 150 (2.1 - 10.3)	2.94 (1.34)	54677-51
Double Solenoid		5-port/3-position single pressure, all ports blocked in center position	1/2" PTF	MN03GGA	25-FJJA	40 - 150 (2.8 - 10.3)	2.94 (1.34)	54677-52
		5-port/3-position dual pressure, all ports blocked in center position	1/2" PTF	MN04GGA	25-FJJA	40 - 150 (2.8 - 10.3)	2.94 (1.34)	54677-53
Double Solenoid Spring Centered Cylinder Open to Exhaust		5-port/3-position single pressure, cylinder open to exhaust	1/2" PTF	MN05GGA	25-FJJA	20 - 150 (1.4 - 10.3)	2.94 (1.34)	54677-54
		5-port/3-position dual pressure cylinder open to exhaust	1/2" PTF	MN06GGA	25-FJJA	20 - 150 (1.4 - 10.3)	2.94 (1.34)	54677-55

* Standard valves are equipped with PTF threads, solenoid operators with non-locking overrides, internal pilot, 120V/60 Hz-110V/50 Hz coils and cable grip connectors.

Optional solenoid operators, coil voltages and electrical connectors can be ordered using the information on p. VAL-11-22.

Note: For ISO-G threads, insert "G" in the 7th position.



Valves with Manifolding Subbases

Description	Symbol	Type	Port Size	Body	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Air Spring Return*		5-port/2-position single pressure	1/2" PTF	MN01GGA	33-A000	40 - 150 (2.8 - 10.3)	2.09 (.95)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02GGA	33-A000	40 - 150 (2.8 - 10.3)	2.09 (.95)	54677-51
Double Air		5-port/2-position single pressure	1/2" PTF	MN01GGA	23-A000	20 - 150 (1.4 - 10.3)	2.09 (.95)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02GGA	23-A000	20 - 150 (1.4 - 10.3)	2.09 (.95)	54677-51
Double Air Detent		5-port/2 position single pressure	1/2" PTF	MN01GGA	23-B000	30 - 150 (2.1 - 10.3)	2.37 (1.08)	54677-50
		5-port/2 position dual pressure	1/2" PTF	MN02GGA	25-B000	30 - 150 (2.1 - 10.3)	2.37 (1.08)	54677-51
Double Air, Spring Centered, all ports blocked		5-port/3-position single pressure, all ports blocked in center position	1/2" PTF	MN03GGA	23-F000	40 - 150 (2.8 - 10.3)	2.37 (1.08)	54677-52
		5-port/3-position dual pressure, all ports blocked in center position	1/2" PTF	MN04GGA	23-F000	40 - 150 (2.8 - 10.3)	2.37 (1.08)	54677-53
Double Air Spring Centered Cylinder Open to Exhaust		5-port/3-position single pressure, cylinder open to exhaust	1/2" PTF	MN05GGA	23-F000	20 - 150 (1.4 - 10.3)	2.37 (1.08)	54677-54
		5-port/3-position dual pressure, cylinder open to exhaust	1/2" PTF	MN06GGA	23-F000	20 - 150 (1.4 - 10.3)	2.37 (1.08)	54677-55

* Standard valves are equipped with PTF threads.

Note: For ISO-G threads, insert "G" in the 7th position.



Nugget 500 Series Valves

Valves on a Single Subbase

Description	Symbol	Type	Port Size	Body	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Solenoid		5-port/2-position single pressure	1/2" PTF	MN01EGA	35-AJJA	40 - 150 (2.8 - 10.3)	2.08 (.95)	54677-50
Spring Return*		5-port/2-position dual pressure	1/2" PTF	MN02EGA	35-AKJA	40 - 150 (2.8 - 10.3)	2.08 (.95)	54677-51
Double Solenoid		5-port/2-position single pressure	1/2" PTF	MN01EGA	25-AJJA	20 - 150 (1.4 - 10.3)	2.33 (1.06)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02EGA	25-AJJA	20 - 150 (1.4 - 10.3)	2.33 (1.06)	54677-51
Double Solenoid Detent		5-port/2 position single pressure	1/2" PTF	MN01EGA	25-BJJA	30 - 150 (2.1 - 10.3)	2.62 (1.19)	54677-50
		5-port/2 position dual pressure	1/2" PTF	MN02EGA	25-BJJA	30 - 150 (2.1 - 10.3)	2.62 (1.19)	54677-51
Double Solenoid		5-port/3-position single pressure, all ports blocked in center position	1/2" PTF	MN03EGA	25-FJJA	40 - 150 (2.8 - 10.3)	2.62 (1.19)	54677-52
		5-port/3-position dual pressure, all ports blocked in center position	1/2" PTF	MN04EGA	25-FJJA	40 - 150 (2.8 - 10.3)	2.62 (1.19)	54677-53
Double Solenoid Spring Centered Cylinder Open to Exhaust		5-port/3-position single pressure, cylinder open to exhaust	1/2" PTF	MN05EGA	25-FJJA	20 - 150 (1.4 - 10.3)	2.62 (1.19)	54677-54
		5-port/3-position dual pressure cylinder open to exhaust	1/2" PTF	MN06EGA	25-FJJA	20 - 150 (1.4 - 10.3)	2.62 (1.19)	54677-55

* Standard valves are equipped with PTF threads, solenoid operators with non-locking overrides, internal pilot, 120V/60 Hz-110V/50 Hz coils and cable grip connectors. Optional solenoid operators, coil voltages and electrical connectors can be ordered using the information on p. VAL-11-22.

Note: For ISO-G threads, insert "G" in the 7th position.



Valves on a Single Subbase

Description	Symbol	Type	Port Size	Body	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Air		5-port/2-position single pressure	1/2" PTF	MN01EGA	33-A000	40 - 150 (2.8 - 10.3)	1.81 (.82)	54677-50
Spring Return*		5-port/2-position dual pressure	1/2" PTF	MN02EGA	33-A000	40 - 150 (2.8 - 10.3)	1.81 (.82)	54677-51
Double Air		5-port/2-position single pressure	1/2" PTF	MN01EGA	23-A000	20 - 150 (1.4 - 10.3)	1.81 (.82)	54677-50
		5-port/2-position dual pressure	1/2" PTF	MN02EGA	23-A000	20 - 150 (1.4 - 10.3)	1.81 (.82)	54677-51
Double Air Detent		5-port/2 position single pressure	1/2" PTF	MN01EGA	23-B000	30 - 150 (2.1 - 10.3)	2.09 (.95)	54677-50
		5-port/2 position dual pressure	1/2" PTF	MN02EGA	23-B000	30 - 150 (2.1 - 10.3)	2.09 (.95)	54677-51
Double Air, Spring Centered, all ports blocked		5-port/3-position single pressure, all ports blocked in center position	1/2" PTF	MN03EGA	23-F000	40 - 150 (2.8 - 10.3)	2.09 (.95)	54677-52
		5-port/3-position dual pressure, all ports blocked in center position	1/2" PTF	MN04EGA	23-F000	40 - 150 (2.8 - 10.3)	2.09 (.95)	54677-53
Double Air Spring Centered Cylinder Open to Exhaust		5-port/3-position single pressure, cylinder open to exhaust	1/2" PTF	MN05EGA	23-F000	20 - 150 (1.4 - 10.3)	2.09 (.95)	54677-54
		5-port/3-position dual pressure, cylinder open to exhaust	1/2" PTF	MN06EGA	23-F000	20 - 150 (1.4 - 10.3)	2.09 (.95)	54677-55

* Standard valves are equipped with PTF threads.

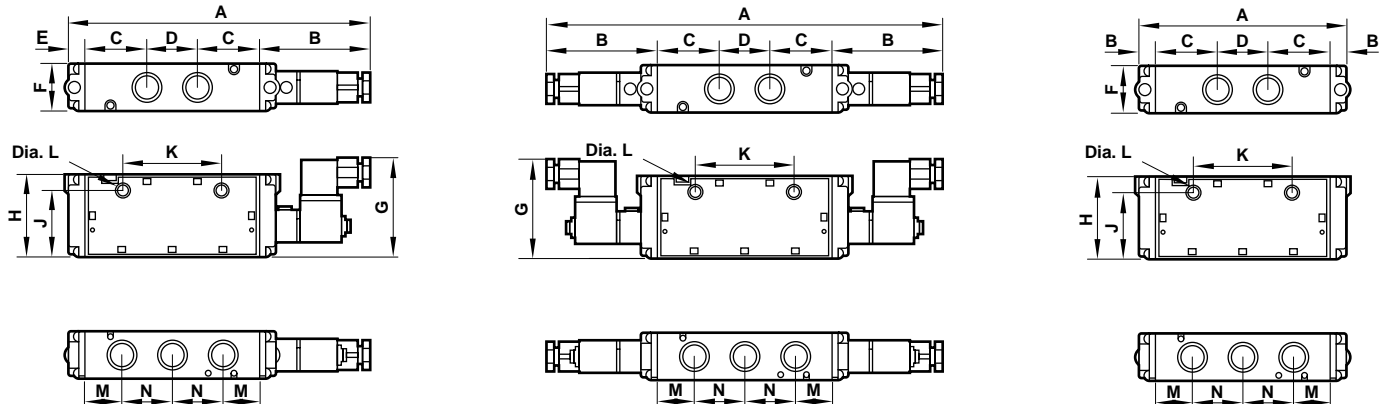
Note: For ISO-G threads, insert "G" in the 7th position.



Nugget 500 Series Valves

All Dimensions in Inches (mm)

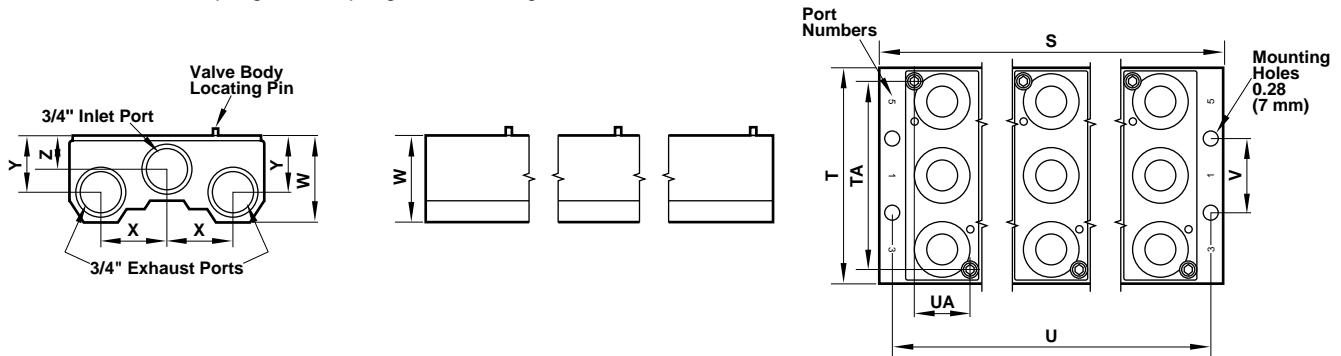
Inline Valve Dimensions



Note: 4 mm hex key drive required for mounting screw removal/replacement

Valve	A	B	C	D	E	F	G	H	J	K	L	M	N
Solenoid Pilot Operator — 5-Port/2-Position Nondetent													
Single Solenoid*	9.46 (240)	3.53 (90)	1.91 (49)	1.48 (38)	0.63 (16)	1.44 (37)	2.71 (69)	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Double Solenoid	12.36 (314)	3.53 (90)	1.91 (49)	1.48 (38)	—	1.44 (37)	2.71 (69)	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Solenoid Pilot Operator — 5-Port/2-Position Detent or 5-Port/3-Position Spring Centered													
Double Solenoid	13.30 (338)	4.00 (102)	1.91 (49)	1.48 (38)	—	1.44 (37)	2.71 (69)	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Air Pilot Operator — 5-Port/2-Position Nondetent													
Single Air*	6.56 (167)	0.63 (16)	1.91 (49)	1.48 (38)	0.63 (16)	1.44 (37)	—	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Double Air	6.56 (7)	0.63 (16)	1.91 (49)	1.48 (38)	—	1.44 (37)	—	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)
Air Pilot Operator — 5-Port/2-Position Detent or 5-Port/3-Position Spring Centered													
Double Air	7.50 (191)	1.10 (28)	1.91 (49)	1.48 (38)	—	1.44 (37)	—	2.44 (62)	1.94 (49)	3.00 (76)	0.27 (7)	1.17 (30)	1.48 (38)

*With air-assisted spring return, spring return or integral air return

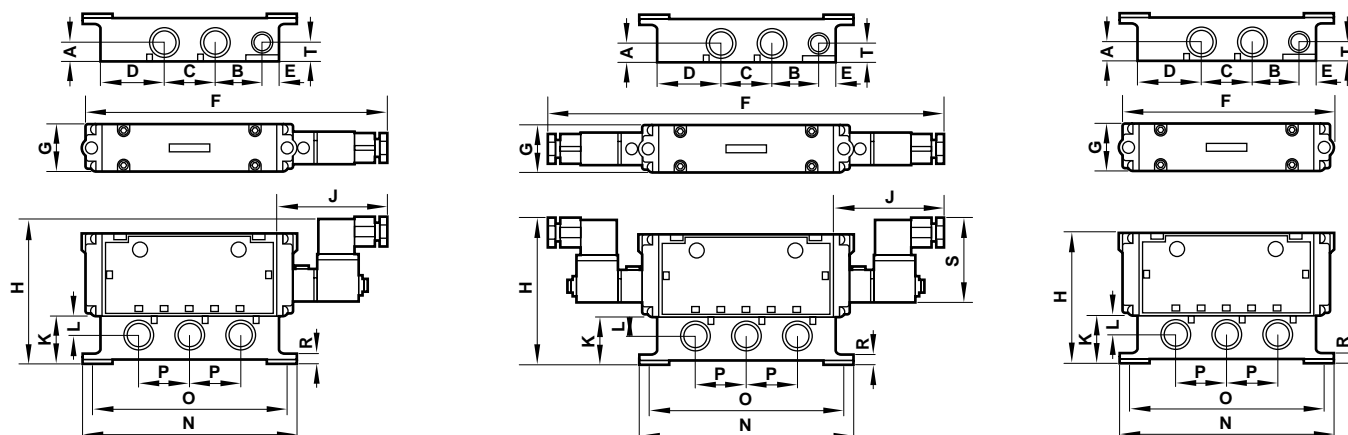


Manifold Kits*		Fixed Length Manifold Kits and Dimensions											
Ports	No. of Stations	S	T	U	V	W	X	Y	Z	TA	UA		
3/4 NPT	3/4 ISO G												
13342-60	13342-70	2	4.00 (102)	4.28 (109)	3.50 (89)	1.50 (38)	1.78 (45)	1.48 (38)	1.13 (29)	0.65 (17)	3.75 (95)	1.12 (28)	
13342-61	13342-71	3	5.50 (140)	4.28 (109)	5.00 (127)	1.50 (38)	1.78 (45)	1.48 (38)	1.13 (29)	0.65 (17)	3.75 (95)	1.12 (28)	
13342-62	13342-72	4	7.00 (178)	4.28 (109)	6.50 (165)	1.50 (38)	1.78 (45)	1.48 (38)	1.13 (29)	0.65 (17)	3.75 (95)	1.12 (28)	
13342-63	13342-73	5	8.50 (216)	4.28 (109)	8.00 (203)	1.50 (38)	1.78 (45)	1.48 (38)	1.13 (29)	0.65 (17)	3.75 (95)	1.12 (28)	
13342-64	13342-74	6	10.00 (254)	4.28 (109)	9.50 (241)	1.50 (38)	1.78 (45)	1.48 (38)	1.13 (29)	0.65 (17)	3.75 (95)	1.12 (28)	
13342-65	13342-75	8	13.00 (330)	4.28 (109)	12.50 (318)	1.50 (38)	1.78 (45)	1.48 (38)	1.13 (29)	0.65 (17)	3.75 (95)	1.12 (28)	
13342-66	13342-76	10	16.00 (406)	4.28 (109)	15.50 (394)	1.50 (38)	1.78 (45)	1.48 (38)	1.13 (29)	0.65 (17)	3.75 (95)	1.12 (28)	

*Kits include manifolds, seals, and valve attaching hardware. See VAL-11-19 for blanking plate kits.



Subbase Valve on Single Subbase Dimensions

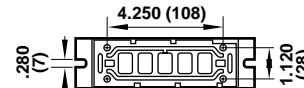
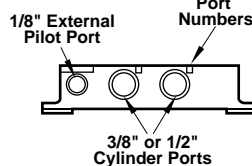
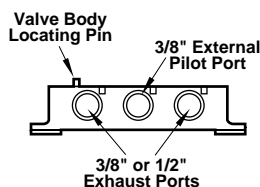


Note: 4 mm hex key drive required for mounting screws

Valve	A	B	C	D	E	F	G	H	J	K	L	N	O	P	R	S	T
Solenoid Pilot Operator — 5-Port/2-Position Nondetent																	
Single Solenoid*	0.63 (16)	1.94 (49)	1.48 (38)	1.46 (37)	0.48 (12)	9.46 (240)	1.80 (46)	4.15 (105)	3.53 (90)	1.38 (35)	0.63 (16)	6.50 (165)	6.05 (154)	1.48 (38)	0.25 (6)	2.71 (69)	0.63 (16)
Double Solenoid	0.63 (16)	1.94 (49)	1.48 (38)	1.46 (37)	0.48 (12)	10.40 (264)	1.80 (46)	4.15 (105)	4.00 (102)	1.38 (35)	0.63 (16)	6.50 (165)	6.05 (154)	1.48 (38)	0.25 (6)	2.71 (69)	0.63 (16)
Solenoid Pilot Operator — 5-Port/2-Position Detent or 5-Port/3-Position Spring Centered																	
Double Solenoid	0.63 (16)	1.94 (49)	1.48 (38)	1.46 (37)	0.48 (12)	12.36 (314)	1.80 (46)	4.15 (105)	3.53 (90)	1.38 (35)	0.63 (16)	6.50 (165)	6.05 (154)	1.48 (38)	0.25 (6)	2.71 (69)	0.63 (16)
Air Pilot Operator — 5-Port/2-Position Nondetent																	
Single Air*	0.63 (16)	1.94 (49)	1.48 (38)	1.46 (37)	0.48 (12)	6.56 (167)	1.80 (46)	3.89 (99)	—	1.38 (35)	0.63 (16)	6.50 (165)	6.05 (154)	1.48 (38)	0.25 (6)	—	0.63 (16)
Double Air	0.63 (16)	1.94 (49)	1.48 (38)	1.46 (37)	0.48 (12)	6.56 (167)	1.80 (46)	3.89 (99)	—	1.38 (35)	0.63 (16)	6.50 (165)	6.05 (154)	1.48 (38)	0.25 (6)	—	0.63 (16)
Air Pilot Operator — 5-Port/2-Position Detent or 5-Port/3-Position Spring Centered																	
Double Air	0.63 (16)	1.94 (49)	1.48 (38)	1.46 (37)	0.48 (12)	7.50 (191)	1.80 (46)	3.89 (99)	—	1.38 (35)	0.63 (16)	6.50 (165)	6.05 (154)	1.48 (38)	0.25 (6)	—	0.63 (16)

*With air-assisted spring return, spring return or integral air return.

Single Subbase Ports

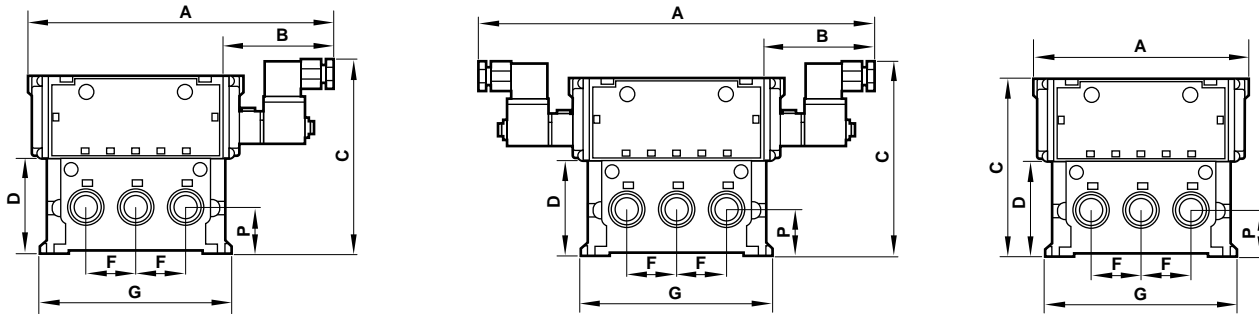




Nugget 500 Series Valves

All Dimensions in Inches (mm)

Subbase Valves on Modular Manifold Dimensions



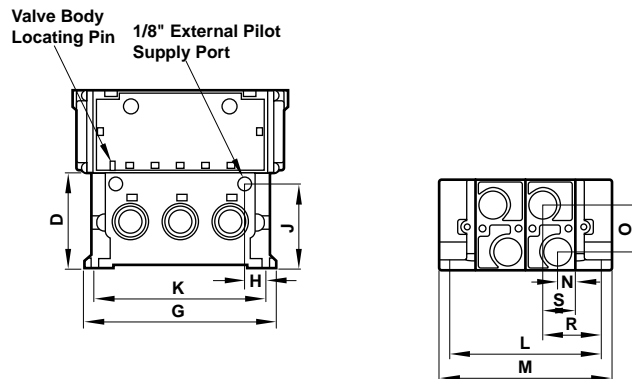
Note: 4 mm hex key drive required for mounting screws

Valve	A	B	C	D	F	G	H	J	K	L**	M**	N	O	P	R	S
Solenoid Pilot Operator — 5-Port/2-Position Nondetent																
Single Solenoid*	9.46 (240)	3.53 (90)	5.62 (143)	2.85 (72)	1.48 (38)	5.76 (146)	0.97 (25)	2.48 (63)	5.13 (130)	4.58 (116)	5.14 (131)	0.53 (14)	1.44 (37)	1.35 (34)	0.97 (25)	1.82 (46)
Double Solenoid	12.36 (314)	3.53 (90)	5.62 (143)	2.85 (72)	1.48 (38)	5.76 (146)	0.97 (25)	2.48 (63)	5.13 (130)	4.58 (116)	5.14 (131)	0.53 (14)	1.44 (37)	1.35 (34)	0.97 (25)	1.82 (46)
Solenoid Pilot Operator — 5-Port/2-Position Detent or 5-Port/3-Position Spring Centered																
Double Solenoid	13.30 (338)	4.00 (102)	5.62 (143)	2.85 (72)	1.48 (38)	5.76 (146)	0.97 (25)	2.48 (63)	5.13 (130)	4.58 (116)	5.14 (131)	0.53 (14)	1.44 (37)	1.35 (34)	0.97 (25)	1.82 (46)
Air Pilot Operator — 5-Port/2-Position Nondetent																
Single Air*	6.56 (167)	—	5.36 (136)	2.85 (72)	1.48 (38)	5.76 (146)	0.97 (25)	2.48 (63)	5.13 (130)	4.58 (116)	5.14 (131)	0.53 (14)	1.44 (37)	1.35 (34)	0.97 (25)	1.82 (46)
Double Air	6.56 (167)	—	5.36 (136)	2.85 (72)	1.48 (38)	5.76 (146)	0.97 (25)	2.48 (63)	5.13 (130)	4.58 (116)	5.14 (131)	0.53 (14)	1.44 (37)	1.35 (34)	0.97 (25)	1.82 (46)
Air Pilot Operator — 5-Port/2-Position Detent or 5-Port/3-Position Spring Centered																
Double Air	7.50 (191)	—	5.36 (136)	2.85 (72)	1.48 (38)	5.76 (146)	0.97 (25)	2.48 (63)	5.13 (130)	4.58 (116)	5.14 (131)	0.53 (14)	1.44 (37)	1.35 (34)	0.97 (25)	1.82 (46)

*With air-assisted spring return, spring return or integral air return.

**Dimensions shown are for two end plates and two manifolding subbases. Add 1.50" (38 mm) for each additional manifolding subbase.

Manifold Subbase Assembly



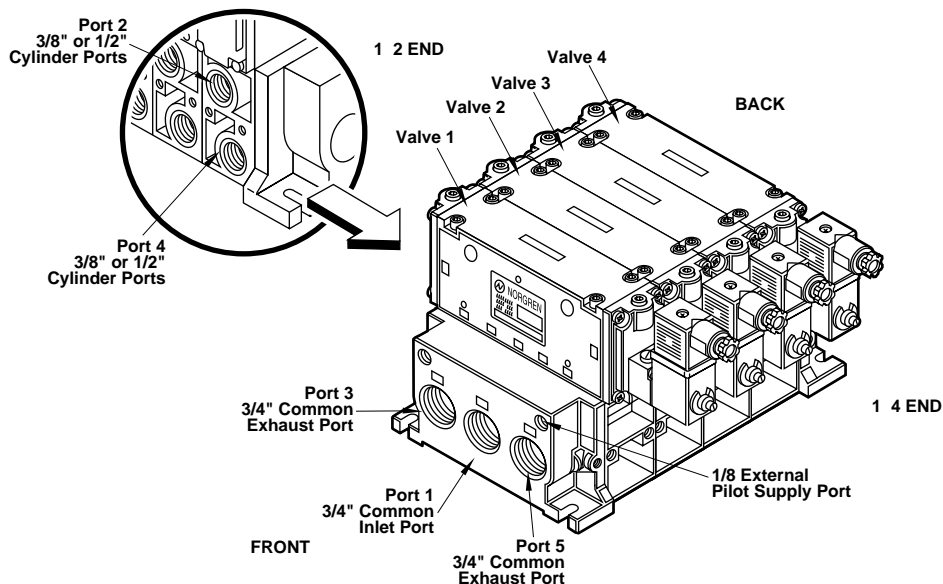


Factory Assembled Valve and Manifolding Subbase Assemblies

For ordering information, the valve and manifolding subbase assembly are oriented with the 1 2 operator end on the left side, and the 1 4 operator end on the right side. The valves are listed from FRONT to BACK. This example illustrates how to order a valve and manifolding subbase assembly, with isolating plugs for two different working pressures installed between valve manifold subbases 2 and 3.

Four pipe plugs are included with the end plate kit to allow blocking of unused common inlet, exhaust, and pilot end plate ports to prevent air loss and entry of contaminants.

Valve Pos. No.	Qty.	Product Number	Special Instructions
1	1	MN01GCA-75-ALJA	
2	1	MN01GGA-75-ALJA	
	1	54676-50	Install isolating plugs
3	1	MN01GGA-75-ALJA	
4	1	MN01GGA-75-ALJA	
	1	13338-50	End Plate kit
	4	99-059-530	Ass'y charge



Isolating Plug Kits

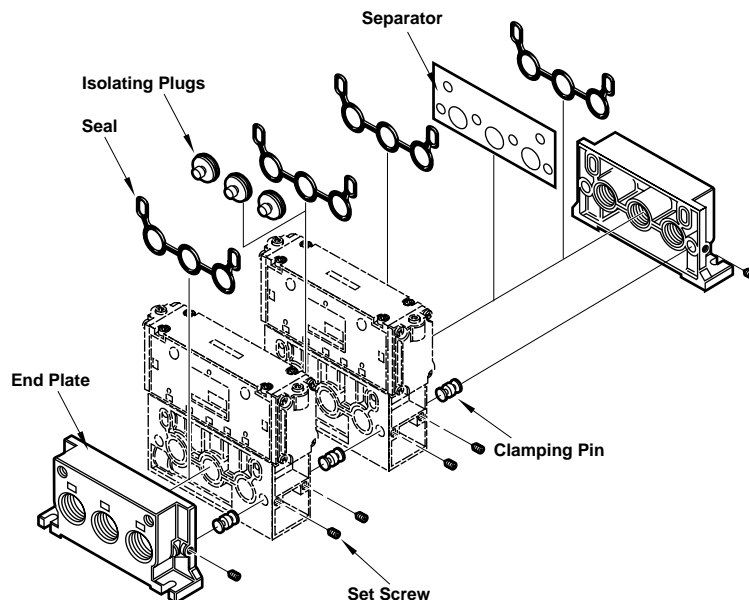
An isolating plug kit is available to allow the use of different inlet pressures. A valve and manifolding subbase assembly can be divided into two sections by inserting isolating plugs between any two manifolding subbases.

The drawing at right illustrates a valve and manifolding subbase assembly separated for a two pressure applications by isolating plugs.

Ordering Information

Isolating Plug Kit* 54676-50

*Kit contains 3-Isolating Plugs





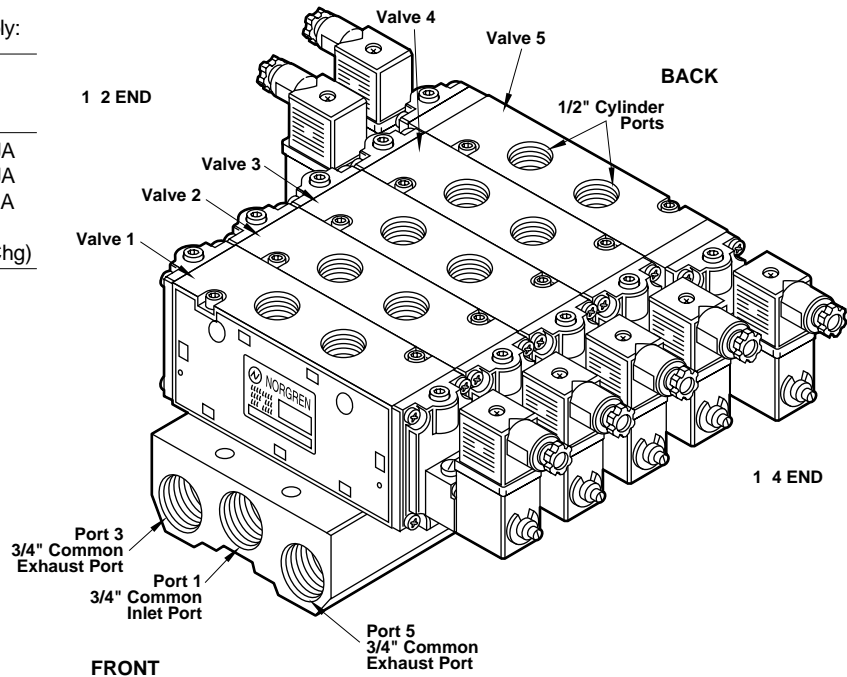
Factory Assembled Valve and Fixed Length Assemblies

For ordering information, the valve and manifold assembly is oriented with the 1 2 operator end on the left side and the 1 4 operator end on the right side. The valves are listed from FRONT to BACK.

e.g. to order a five station, fixed length manifold assembly:

Valve Pos. No.	Qty.	Product Number
1-3	3	MN01CGA-75-AJJA
4	1	MN01CGA-25-AJJA
5	1	MN03CGA-25-FJJA
	1	13342-63
	4	33-059-530 (Ass'y Chg)

Special Instructions: One assembly consisting of the Nugget stack above.

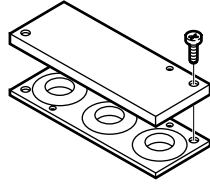




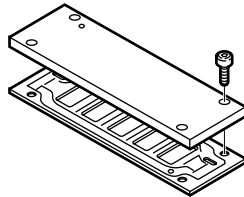
Blanking Plate Kit

The blanking plate kit consists of a blanking plate, seal, and attaching hardware. The plate is installed on a subbase in place of a valve, allowing an additional valve to be added at a later date.

For Fixed Length
Manifolds: 54689-50



For Single and
Manifolding Subbases: 54689-51



Quietaire® Mufflers and Speed Control Mufflers

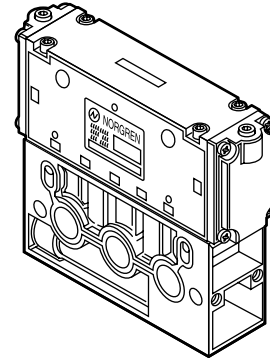
Mufflers should be installed in the exhaust ports of Nugget 500 Valves to reduce work area noise and help prevent contaminants from entering the valve. Speed control mufflers also allow metering of the exhaust air flow to restrict the speed of air cylinders and air motors. Do not use speed control mufflers in manifold exhaust ports.

Port Size NPT	Sintered Type Muffler	Speed Control Muffler	Shell Type
3/8	MS003A	MM003A	MB003A
1/2	MS004A	MM004A	MB004A
3/4	MS006A	MM006A	MB006A

See Norgren publication APC-101 for complete muffler information.

Intermediate Supply/Exhaust Block

The intermediate supply/exhaust block consists of a supply/exhaust block, a manifolding subbase valve body without spool, interface seals and hardware needed to connect the subbase to the adjacent subbase and six isolating plugs. The supply/exhaust block provides a method of connecting an additional air supply to the valve manifold. This helps prevent starvation of supply air to the valves when a number of valves are operated simultaneously. The block also allows use of three or more supply pressures in the same manifold, and may also be used to exhaust individual valves.

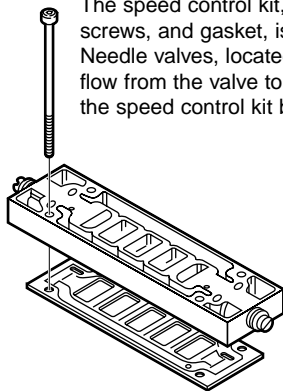


Supply/Exhaust Block

1/2" PTF54693-50
1/2" ISO G54693-51

Dual Sandwich Speed Control Kit

The speed control kit, consisting of a speed control block, mounting screws, and gasket, is installed between a subbase valve and a subbase. Needle valves, located at both ends of the speed control, restrict exhaust flow from the valve to control the speed of an air cylinder or motor. Order the speed control kit below.



Speed Control Kit13336-60



Nugget 500 Series Valves

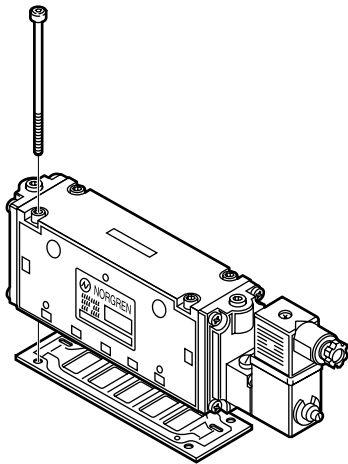
Subbase Valves with Operators without Subbase

Note: Mounting screws and gaskets are included.

Single Solenoid, Spring Return

5-Port/2-Position:

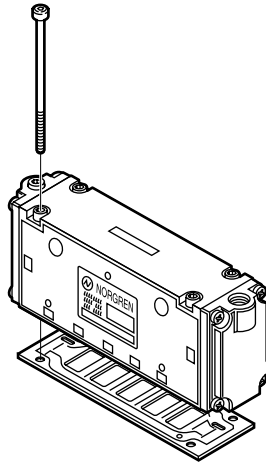
NondetentMN01D0A-35-ALJA



Single Air, Spring Return

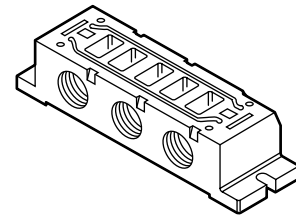
5-Port/2-Position:

NondetentMN01D0A-33-A000



Single Subbase for Subbase Valve

3/8 PTF	13340-70
3/8 ISO G	13340-71
1/2 PTF	13340-72
1/2 ISO G	13340-73



Double Solenoid

5-Port/2-Position:

NondetentMN01D0A-25-ALJA

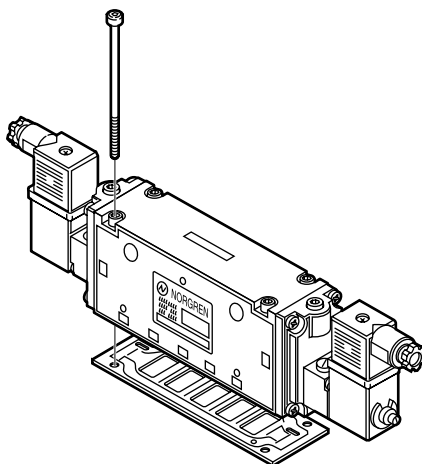
DetentMN01D0A-25-BLJA

5-Port/3-Position:

All Ports Blocked...MN03D0A-25-FLJA

Cylinder Open to

Exhaust.....MN05D0A-25-FLJA



Double Air

5-Port/2-Position:

NondetentMN01D0A-23-A000

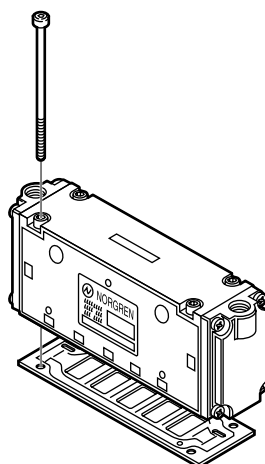
DetentMN01D0A-23-B000

5-Port/3-Position:

All Ports Blocked.....MN03D0A-23-F000

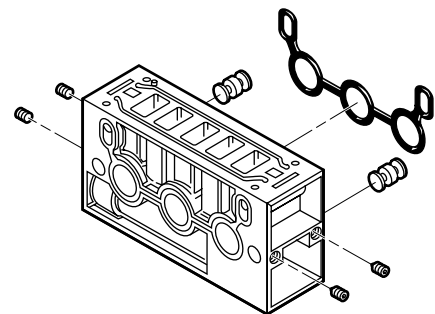
Cylinder Open to

ExhaustMN05D0A-23-F000



Manifolding Subbase for Subbase Valve

3/8 PTF	13335-50
3/8 ISO G	13335-51
1/2 PTF	13335-52
1/2 ISO G	13335-53





Factory Installed Back Cover Plates for Valve Bodies

The Back Cover Plate ordered with the valve allows the valve to be used in wash-down environments such as food or medical processing. If a subbase valve is desired for wash-down environments, use only the single subbase.

- For cover plate installed on an Inline Valve body specify **with 54690-11** after the valve body number.
- For cover plate installed on a Subbase Valve body specify **with 54690-12** after the valve body number.

Pneu-Fit Push-in Tube Fittings

Push-in tube fittings are an excellent way to save valve connection time and simplify component replacement. See Norgren Fittings catalog APC-101 for a complete selection of push-in tube fittings, flexible tubing, tubing markers, and tube mounts.

Part Numbers for Replacement Solenoid Coils & Armature Bases

Solenoid Coils:

24V/60Hz-24V/50Hz, 3.5W	54469-04
120V/60Hz-110V/50Hz, 3.5W	54469-03
6VDC, 2W	54469-05
12VDC, 2W	54469-01
24VDC, 2W	54469-02
110VDC, 3.4W	54469-06
240V/60Hz-220V/50Hz, 7.5W	54452-07
120V/60Hz-110V/50Hz, 7.5W	54452-01
24V/60Hz-24V/50Hz, 7.5W	54452-05
12VDC, 7.5W	54452-02
24VDC, 6W	54452-03

Solenoid Base and Armature:

Without Override	
6 to 7.5 Watt	54462-01
2 to 3.5 Watt	54462-03
With Locking Override	
6 to 7.5 Watt	54462-02
2 to 3.5 Watt	54462-04
With Non-Locking Override	
6 to 7.5 Watt	54462-09
2 to 3.5 Watt	54462-10

Part Numbers for Replacement Connectors

Cable Grip Connector.....	54934-01
Cable Grip Connector with Indicator Light	
110/120 VAC/DC	54934-02
24 VAC/DC	54934-08
1/2" NPT Conduit	54934-05
Molded 5-ft Cable Connector	
0-220 VAC/DC	54934-21
Molded 5-ft Cable Connector with Indicator Light and surge suppression	
24 VAC/DC	54934-30
110 VAC/DC	54934-35
240 VAC/DC	54934-37

Part Numbers for Repair Parts & Kits

Metal Coil Retaining Ring.....	54453-01
Solenoid Connector Seal Kit	54935-01
Solenoid Exhaust Port Diffuser	54463-01
Solenoid Exhaust Port Filter	
Ordered With Valve	54463-50
Ordered Separately	54463-51
Spool Replacement Kits:	
Single Pressure, 2-Position	54677-50
Dual Pressure, 2-Position	54677-51
Single Pressure, 3-Position,	
All Ports Blocked*	54677-52
Dual Pressure, 3-Position,	
All Ports Blocked*	54677-53
Single Pressure, 3-Position, Cylinder	
Open to Exhaust*	54677-54
Dual Pressure, 3-Position, Cylinder	
Open to Exhaust*	54677-55
*In the center position	
Seal Kits	
Inline Valves	54692-50
Subbase Valves	54692-51
Inline Valve to Fixed	
Length Manifold	54674-89
Subbase Valve	
to Subbase	54672-89
Manifolding Subbase to	
End Plates	54673-89
Manifold clamping	
pin (1) & set screws (2)	54574-50
Mounting Screws Valve to Fixed	
Length Manifold or Subbase	54580-60
Mounting Screws Valve and	
Speed Control to Subbase	54580-61



Nugget 500 Series Valves

