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Section 10

Nugget 200 Spool Valves

Solenoid, Air, Manual, and Mechanically Operated Pneumatic Valves. Available in 1/4", 3/8", or 1/2" ports

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Manual Lever Operator



Stacking Valve with Junction Box



Low Pressure Air Operator on Inline Valve

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Nugget 200 Spool Valves

Norgren Nugget 200 valves feature a lightweight, one-piece aluminum spool and nitrile seal assembly. Shifting forces are minimized because of the low inertial spool made from high strength anodized aluminum. Highly durable low friction lip seals are designed to operate with lubricated or nonlubricated air.

Rugged Solenoid, Air, Manual, or Mechanical Operators
Nugget 200's one hundred and twelve different operators are designed to last for millions of cycles. Bodies and operators are made of precision machined, cast aluminum, zinc, PPA, or acetal.

High Flow
An inline Cv of 1.6 provides exceptionally high flow for its compact size. This makes the Nugget 200 valve appropriate for a wide range of applications, from machine control systems to air line control.

Segmented Latch Type Detent
The spool is held securely in place by a unique segmented detent which engages a lip on the piston.

Shock Absorbent Bumpers
Valve life is extended because of substantial bumpers which absorb the shock and vibration of the rapidly shifting spool and piston.

Port and Operator Identification
Each of the ports is identified by a permanent number adjacent to the port on both the body and end plates. In addition, on inline valves, a two-digit number at each end of the body indicates the ports connected when the operator at that end is actuated.

A Wide Range of Valve Accessories
Norgren offers a wide range of accessories for use with the Nugget 200 valve, including valve body cover plates, mufflers, intermediate supply exhaust block, isolating plugs, solenoid exhaust filter nut and many more. These accessories allow cost-efficient customizing for your specific application.



Stacking Valve with Junction Box

Four Mounting Styles

Inline Valves mount directly to the air line and are available with the following features:

- 1/4", 3/8", or 1/2" PTF or ISO G ports.
- 3-port/2-position, 5-port/2-position, or 5-port/3-position configurations. The 3-port/2-position configuration is not available with 1/2" ports.

Stacking Valve Assemblies are two or more valves manifolded together with tie rods and end plates. They are available with either a common inlet port, independent exhaust ports, or with common inlet and exhaust ports located in the end plates. Features include:

- 3/8" ports in the end plate. 1/4" or 3/8" cylinder ports in valve body.
- 5-port/2-position or 5-port/3-position configurations.

Stacking Valve Assemblies with Junction Box feature a plug-in solenoid operator which allows the valve to be serviced without disturbing the electrical wires. The solenoid plugs into a terminal block in the junction box, with a gasket to prevent entry of dust or moisture. They are available only in the common inlet and exhaust ports configuration. Other features are the same as listed above for Stacking Valve Assemblies.

All **stacking valves** mount on approximately 1-1/4" centers reducing installation space requirements.

Fixed Length Manifolds are available for most Nugget 200 1/4" and 3/8" inline valves. The fixed length manifold reduces plumbing and installation time. The lightweight aluminum construction uses 3/4" PTF common inlet and exhaust ports. These manifolds are available in 2 to 10 station lengths.

Durable Finish
External surfaces are protected with an oven cured, epoxy resin paint which provides excellent corrosion protection and chip resistance.

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Aesthetic Appearance
Norgren's high luster black powder paint gives any control circuit installation the quality appearance reflecting the superior operating capacity built into every Nugget 200 valve.

Low Watt Solenoid Options
The 120 VAC and 24 VAC solenoid operator options require only 3.5-watts of power and the 115 VDC operator requires 3.4 watts. All other DC operators require only 2 watts of power, ideal for computer based control systems as well as industrial applications where minimum energy consumption is desired.

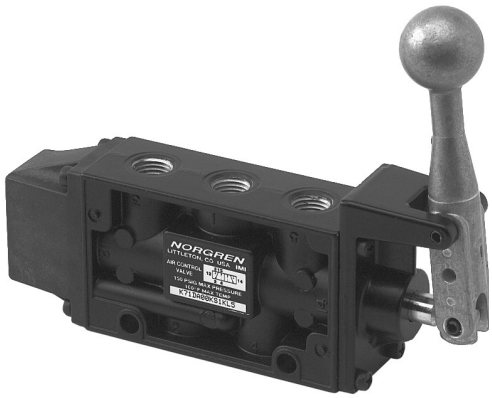
Rotatable Connector and Coil
The standard cable grip electrical connector can be rotated 180°, the solenoid coil can be turned in increments of 90°, and the solenoid operator housing can be turned in increments of 180° making the operators adaptable for easy installation.

Electrical Connector Options
A cable grip connector with indicator light; a 1/2" NPT conduit connector; and a 5-foot, three-conductor, molded cable with or without indicator light, surge protection and reverse voltage protection are available.

Solenoid Manual Overrides
Standard solenoid operators are furnished with locking manual overrides to provide a means of shifting the valve without electrical power. Optional solenoids without overrides and with nonlocking overrides are available.

CSA Certified Valves
Completed inline and stacking valve assemblies with certain operators are CSA Certified. Stacking valves with junction box and indicator light are CSA Component Certified.

Internal or External Solenoid Pilot Supply
All solenoid operated valves can be quickly converted from an internal to an external pilot supply by interchanging the positions of two interface seals and removing the external supply port pipe plug.



Manual Lever Operator

High Flow Pilot Exhaust Orifice
Oversize pilot exhaust orifice provides rapid return time when valve is deactuated.



Low Pressure Air Operator on Inline Valve

Solenoid Diffuser Plug
A diffuser plug is factory installed in every solenoid pilot exhaust to help prevent entry of contaminants during shipping and normal operation. It may be removed when minimum response times are desired.

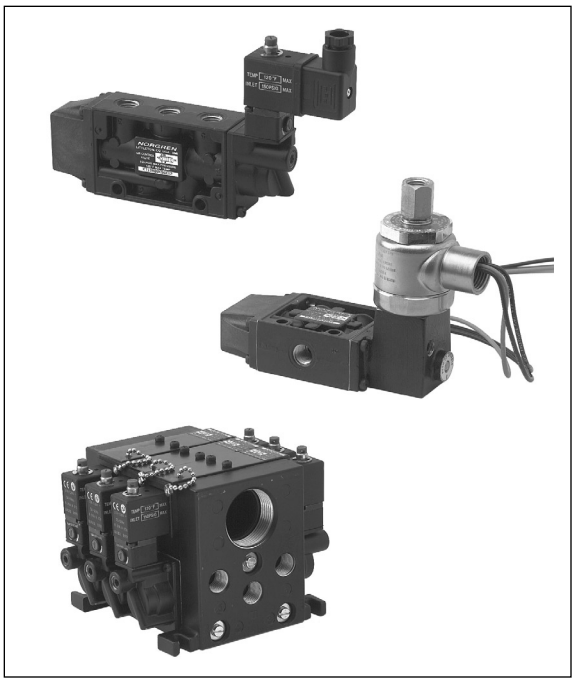
Electrical Connector Options
A cable grip connector with indicator light; a 1/2" NPT conduit connector; and a 5-foot, three-conductor, molded cable with or without indicator light, surge protection and reverse voltage protection are available.

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Nugget 200 Spool Valves

1/4", 3/8", and 1/2" Solenoid Pilot Actuated 3/2, 5/2, & 5/3 Inline and Stacking Valves

- **Long lasting spool design**
- **High flow compact valves**
- **Four mounting styles: inline, stacking valve assemblies, stacking valve assemblies with junction box, and fixed length manifold.**
- **Wide range of operators and voltages available**
- **Three functional types: available in 3/2, 5/2, and 5/3 configurations**



Technical Data

Medium:
Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:
Spool valve solenoid pilot actuated.

Mounting:
Stacking – through holes on manifold base.
Inline – through holes in valve body.

Port Size:
PTF – 1/4", 3/8", 1/2"
ISO G – 1/4", 3/8" .

Operating Pressure:
Maximum 150 psig (10.3 bar). For details see overleaf.

Operating Temperature:
-20° to 120°F (-29° to 50°C)
Consult Technical Service for use below 36°F (2°C).

Materials:
Body: Aluminum
Spool: Anodized aluminum
Solenoid Operator Base: plastic
Plunger and spring: Stainless steel
Elastomers: Nitrile and special nitrile-based low-friction elastomers.
Note: See ***Seal Compatibility*** p. VAL-10-5.

Ordering Information

To order standard Nugget 200 valves with coils, quote model number from tables overleaf, e.g. order: K71DA00-K36-KV21W2 for a 5-port/2-position, single Solenoid Pilot Operated, Spring Return model with an internal pilot supply, fitted with a 24 VDC standard wattage coil, and rotatable cable grip connector and locking override.

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Solenoid Operating Specifications

Inlet Pressure Range for Solenoid Operated Valves:
With Internal Pilot Supply: 15 to 150 psig*
(1.03 to 10.3 bar)
With External Pilot Supply: 10" Hg vacuum to 150 psig
(10.3 bar)
Temperature Range (Ambient/Inlet):
Solenoid Operated Valves: -20° to 120°F** (-29° to 50°C)
Low Wattage Solenoids: -20° to 155°F** (-29° to 68°C)
Operator Pilot Pressures:
Maximum Pilot Pressure: 150 psig (10.3 bar)
Minimum Pilot Pressure at 150 psig (10.3 bar) main valve inlet pressures are given in the following table:

* Minimum Inlet Pressure is dependent on the type of operator and return used. See Operator Pilot Pressure specifications in Operating Specifications.

** With the dew point of supply air less than air temperature below 35°F (2°C)

Minimum Pilot Pressures

Operator	Return	Nondetent psig (bar)	Spring Detented psig (bar)	Centered psig (bar)
Solenoid	Solenoid	15 (1.0)	25 (1.7)	45 (3.1)
Solenoid	Spring	35 (2.4)	–	–

Average Flow Factors in Cv‡ (l/min)

Valve	Port Size	Flow Path Port 1 to 2 1 to 4	Flow Path Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1700)	1.7 (1800)
	3/8"	1.6 (1700)	1.7 (1800)
5-Port, Inline	1/4"	1.6 (1700)	1.7 (1800)
	3/8"	1.6 (1700)	1.7 (1800)
	1/2"	1.6 (1700)	1.7 (1800)
5-Port, Stacking	1/4"	1.8 (1900)	1.4 (1450)
	3/8"	1.8 (1900)	1.4 (1450)

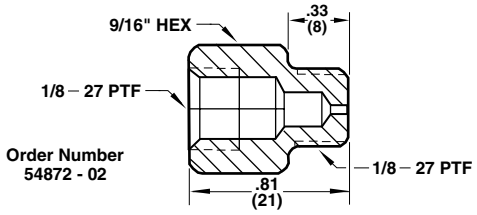
‡ Flow Rating determined in accordance with NFPA/T3.21.3, Pneumatic fluid power – Flow test procedure and reporting method – For fixed orifice components.

Seal Compatibility

Nugget 200 seals are compatible with the following lubricants:
DC BR-2+ grease (Dow Corning)
DC 44 grease (Dow Corning)
Nondetergent mineral based oil such as Mobil DTE light oil
Note: Nugget 200 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.

Warning

When a solenoid operator is used as a return for a manual or mechanical operator, the pilot pressure applied to the return operator must not exceed 40 psig (2.8 bar). Pilot pressures greater than 40 psig for a solenoid or air return will cause structural damage to the manual or mechanical operator and can also result in injury to the user. If the available pilot pressure exceeds 40 psig, an external pilot supply only must be used and a restrictor, part number 54872-02, must be installed in the pilot port of the return operator to reduce the return force to an acceptable level. Pilot pressure to the restrictor must not exceed 150 psig (10.3 bar).



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Solenoid Operator Specifications

KVx/KUx, K0x/K1x, K2x/K3x, K4x/K5x, & K6x/K7x Series

Voltages Available and Power Requirements:

Standard:	120V/60Hz-110V/50Hz: 7W
Optional:	KVx, K1x, K3x, K5x, & K7x Series
	12V/60Hz/50Hz: 7W
	24V/60Hz/50Hz: 7W
	48V/60Hz/50 Hz: 7W
	240V/60Hz: 7W
	220V/50Hz: 7W
	12 VDC: 6W
	24 VDC: 6W
Low Wattage:	KUx, K0x, K2x, K4x, & K6x Series
Standard:	24 VDC: 2W
Optional:	24V/50Hz/60Hz: 3.5W
	120V/60Hz: 3.5W
	110V/50Hz: 3.5W
	6 VDC: 2W
	12 VDC: 2W
	115 VDC: 3.4W

Duty: Continuous at 90 to 105% of rated voltage

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

Enclosure Classification: NEMA 4, per DIN 40050 – IP 65

Connector Plug:

KUx/KVx Series:	Standard,Cable grip for cables 1/4" to 5/16" (6 to 8 mm) in diameter
K2x/K3x Series:	Rotatable 1/2" Conduit Connector
K4x/K5x Series:	Class H. Molded with three-pin plug-in connector

Override: Manual, locking

Pilot Supply: Internal - standard, External - optional

External Pilot Supply Port: 1/8" PTF (ISO G Optional).

Minimum Electrical Signal Duration: Solenoid operated 2-position detented or nondetented valves can be shifted with a momentary electrical signal. Minimum signal duration is 13 milliseconds for single solenoid operated spring return valves. Double solenoid operated valves minimum signal duration is 20 milliseconds.

Electrical connector spades on the operator coil are 3-pin with 11 mm spacing.

KDx & KQx Series

Voltages Available and Power Requirements:

Standard:	120V/60Hz: 6W
Optional:	24V/60Hz/50Hz: 6W
	12VDC: 6W
	24VDC: 6W

Duty: Continuous at 85 to 105% of rated voltage

Coil Type: Class H. Molded with three-pins for electrical connection or optional electrical plug-in connector.

Enclosure Classification:
NEMA 4, per DIN 40050 – IP 65
Connector Plug: Cable grip for cables 1/4" to 5/16" (6 to 8 mm) in diameter.

Electrical Connections –
KD Series Operators: Furnished with 1/2" conduit connector molded into coil, leads are 18" long
KQ Series Operators: Furnished without a connector

Override: Manual, locking or nonlocking.

Pilot Supply: Internal - standard, External - optional

External Pilot Supply Port: 1/8" PTF (ISO G Optional).

Minimum Electrical Signal Duration: Solenoid operated 2-position detented or nondetented valves can be shifted with a momentary electrical signal. Minimum signal duration is 13 milliseconds for single solenoid operated spring return valves. Double solenoid operated valves minimum signal duration is 20 milliseconds.

Optional electrical connectors for KQx Series operators conform to DIN43650 Form A for Three-Pin Electrical Connectors.

Electrical spades on the KQx Series operator coil are 3-pin with 18 mm spacing.

CSA Certified Valves

KDx and KQx Series solenoid operators are CSA Certified. Optional solenoid coil voltages,solenoid cable grip electrical connectors and 1/2" NPT conduit electrical connectors also qualify for CSA Certification.

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KMx Series

Voltages Available and Power Requirements:
Standard: KMx: 120V/60Hz, 6W
Optional: KMx: 24V/60Hz/50Hz, 6W
12VDC: 6W
24VDC: 6W

Duty: Continuous at 85 to 105% of rated voltage.

Coil Type: Class H Molded with three-pin plug-in terminal block connector. KMx Series has an indicator light molded into coil

Enclosure Classification: NEMA 1

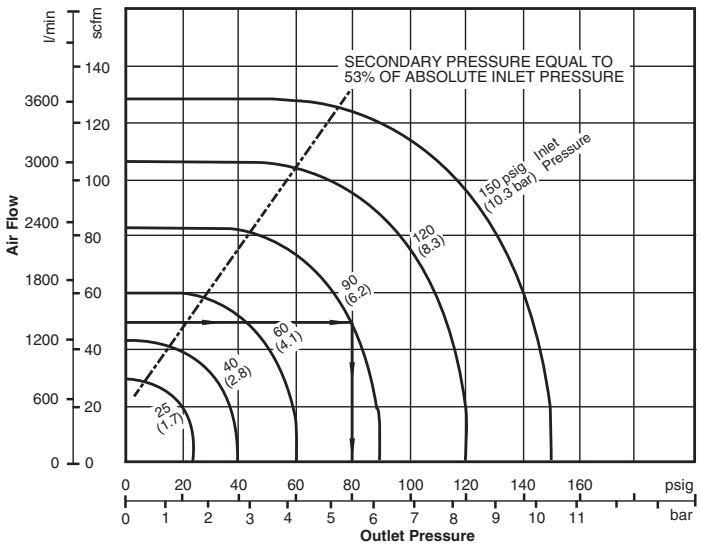
Override: Manual, locking or nonlocking

External Pilot Supply Port: 1/8" PTF (ISO G Optional).

Minimum Electrical Signal Duration: Solenoid operated 2-position detented or nondetented valves can be shifted with a momentary electrical signal. Minimum signal duration is 13 milliseconds for single solenoid operated valves. Double solenoid operated valves minimum signal duration is 20 milliseconds.

Electrical connectors conform to DIN43650 Form A for Three-Pin Electrical Connectors.
CSA Component Certified

Flow Chart
1/4", 3/8" & 1/2" Ported Valves



Example –

Find: Pressure drop

Given: Inlet pressure = 90 psig
Air Flow = 50 scfm

Solution: Enter chart at 50 scfm and intersect with 90 psig inlet pressure line.
Read outlet pressure = 80 psig.
Pressure drop is equal to 90 minus 80 = 10 psig

KXx Series Hazardous Location Solenoid

Voltages Available and Power Requirements
Standard: 120V/60Hz-100V/50Hz: 12W
Optional: 240V/60Hz: 12W
208V/50Hz: 12W
24V/60Hz: 12W
22V/50Hz: 12W
6 VDC: 12W
12 VDC: 12W
24 VDC: 12W
48 VDC: 12W
115 VDC: 12W

Duty: Continuous at 85 to 105% of rated voltage

Coil Type: Molded

Enclosure Classification: NEMA 7C, 7D, 8C, 8D, 9E, 9F and 9G. Meets the requirements of Underwriters Laboratories for use in hazardous locations as defined in National Electrical Code (ANSI CI-1975): Class I, Groups C & D; and Class II, Groups E, F & G. Per DIN 40050 – IP 65.

Electrical Connection: Furnished with fixed connection for 1/2" conduit.

Override: Manual, nonlocking - standard, locking - optional

Pilot Supply: internal - standard, external - optional

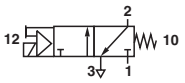
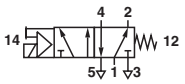
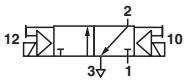
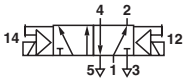
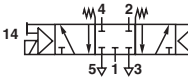
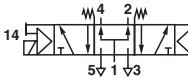
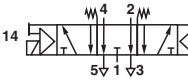
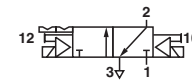
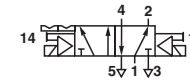
External Pilot Port: 1/8-27 NPTF

Exhaust Port: 1/4" NPT

Minimum Electrical Signal Duration: Solenoid operated 2-position detented or nondetented valves can be shifted with a momentary air or electrical signal. Minimum signal duration is 17 milliseconds.

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Solenoid Pilot Operated Inline Valves

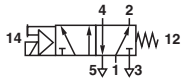
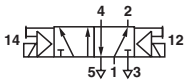
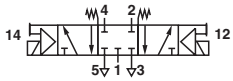
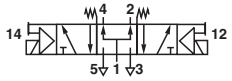
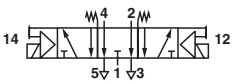
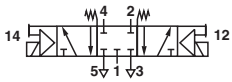
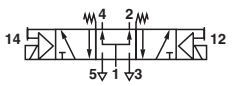
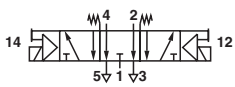
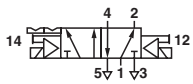
Description	Symbol	Type	Port Size	Body*	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Solenoid Spring Return		3-Port/ 2-Position	1/4"	K41DA00	KS1-KV2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KV2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS6-KV2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS6-KV2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS6-KV2	35 - 150 (2.4 - 10.3)	4.40 (2.00)	54237-56
Double Solenoid (Non-Detented)		3-Port/ 2-Position	1/4"	K41DA00	KV2-KV2	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-59
			3/8"	K41EA00	KV2-KV2	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KV2-KV2	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KV2-KV2	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-56
			1/2"	K71FA00	KV2-KV2	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-56
		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KV0-KV0	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KV0-KV0	1.0 - 10.3 (15 - 150)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KV0-KV0	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KV0-KV0	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-57
			3/3"	K81EA05	KV0-KV0	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KV0-KV0	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KV0-KV0	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-58
			3/8"	K81EA06	KV0-KV0	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KV0-KV0	15 - 150 (1.0 - 10.3)	4.40 (2.00)	54237-58
Double Solenoid (Detented)		3-Port/ 2-Position	1/4"	K41DA00	KVL-KVL	25 - 150 (1.7 - 10.3)	4.40 (2.00)	54237-59
			3/8"	K41EA00	KVL-KVL	25 - 150 (1.7 - 10.3)	4.40 (2.00)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KVL-KVL	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KVL-KVL	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KVL-KVL	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-56

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12. Solenoid specifications given on pp. VAL-10-6/7.

Note: For ISO-G threads, insert “G” in the 5th position. 1/2" ported bodies are not available with ISO G threads.

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Solenoid Pilot Operated Stacking Valves

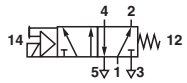
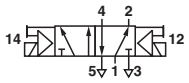
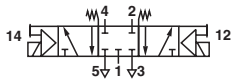
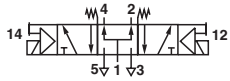
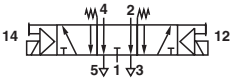
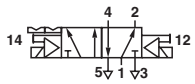
Description	Symbol	Type	Port Size	Body*	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Solenoid Spring Return		5-Port/ 2-Position Common Inlet	1/4"	K78DA00	KS6-KV2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
			3/8"	K78EA00	KS6-KV2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Common Inlet & Exh.	1/4"	K79DA00	KS6-KV2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA00	KS6-KV2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
Double Solenoid (Non-Detented)		5-Port/ 2-Position Common Inlet	1/4"	K78DA00	KV2-KV2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K78EA00	KV2-KV2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Common Inlet & Exh.	1/4"	K79DA00	KV2-KV2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA00	KV2-KV2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
Double Solenoid (Non-Detented Common Inlet-Port 1		5-Port/ 3-Position All Ports Blocked	1/4"	K88DA00	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K88EA00	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K88DA05	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
			3/8"	K88EA05	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K88DA06	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
			3/8"	K88EA06	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
Double Solenoid (Non-Detented Common Inlet & Exhaust - Ports 1,3&5		5-Port/ 3-Position All Ports Blocked	1/4"	K89DA00	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K89EA00	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K89DA05	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
			3/8"	K89EA05	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K89DA06	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
			3/8"	K89EA06	KV0-KV0	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
Double Solenoid (Detented)		5-Port/ 2-Position Common Inlet	1/4"	K78DA00	KVL-KVL	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
			3/8"	K78EA00	KVL-KVL	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Common Inlet & Exh	1/4"	K79DA00	KVL-KVL	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA00	KVL-KVL	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12. Solenoid specifications given on pp. VAL-10-6/7.

Note: For ISO-G threads, insert “G” in the 5th position.

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Solenoid Pilot Operated Stacking Valves With Junction Box

Description	Symbol	Type	Port Size	Body*	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Solenoid Spring Return		5-Port/ 2-Position No Lights	1/4"	K79DA80	KS6-K72	35 - 150 (2.4 - 150)	.53 (.24)	54237-56
			3/8"	K79EA80	KS6-K72	35 - 150 (2.4 - 150)	.53 (.24)	54237-56
		5-Port/ 2-Position One Light	1/4"	K79DA50	KS6-KM1	35 - 150 (2.4 - 150)	.53 (.24)	54237-56
			3/8"	K79EA50	KS6-KM1	35 - 150 (2.4 - 150)	.53 (.24)	54237-56
Double Solenoid (Non-Detented)		5-Port/ 2-Position No Lights	1/4"	K79DA80	K72-K72	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA80	K72-K72	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Two Lights	1/4"	K79DA50	KM1-KM1	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA50	KM1-KM1	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
Double Solenoid (Non-Detented 5-Port/ 3-Position Common Inlet & Exhaust - Ports 1,3,5		All Ports Blocked No Lights	1/4"	K89DA80	K70-K70	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K89EA80	K70-K70	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
		All Ports Blocked Two Lights	1/4"	K89DA50	KM8-KM8	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K89EA50	KM8-KM8	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
		Inlet Open to Cyl No Lights	1/4"	K89DA85	K70-K70	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
			3/8"	K89EA85	K70-K70	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
		Inlet Open to Cyl Two Lights	1/4"	K89DA55	KM8-KM8	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
			3/8"	K89EA55	KM8-KM8	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-57
		Cyl Open to Exhaust No Lights	1/4"	K89DA86	K70-K70	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
			3/8"	K89EA86	K70-K70	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
		Cyl Open to Exhaust Two Lights	1/4"	K89DA56	KM8-KM8	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
			3/8"	K89EA56	KM8-KM8	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-58
Double Solenoid (Detented)		5-Port/ 2-Position No Lights	1/4"	K79DA80	K7L-K7L	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA80	K7L-K7L	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Two Lights	1/4"	K79DA50	KM6-KM6	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA50	KM6-KM6	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12. Solenoid specifications given on pp. VAL-10-6/7.

Note: For ISO-G threads, insert "G" in the 5th position.

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Solenoid Pilot Operators

Position	Operator ISO G	Operator PTF	Description	Operating Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Standard Solenoid Operator with Rotatable Grip Connector*						
2-Position Valves	KVB	KV1	non-locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	KVC	KV2	locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	KVE	KV4	non-locking override, nondetented, external pilot	10" Hg - 150 (Vacuum - 10.3)	.53 (.24)	54344-17
	KVF	KV5	locking override, nondetented, external pilot	10" Hg - 150 (Vacuum - 10.3)	.53 (.24)	54344-17
	KVG	KV6	non-locking override, detented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	KVN	KVL	locking override, detented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
3-Position Valves	KVJ	KV8	non-locking override, spring centered, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	KVA	KV0	locking override, spring centered, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	KVD	KV3	non-locking override, spring centered, external pilot	10" Hg - 150 (Vacuum - 10.3)	.53 (.24)	54344-17
Standard Solenoid Operator without Electrical Connector*						
2-Position Valves	K1B	K11	non-locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	K1G	K16	non-locking override, detented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	K1N	K1L	locking override, detented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
3-Position Valves	K1A	K10	locking override, spring centered, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
Standard Solenoid Operator with Rotatable 1/2" Conduit Connector*						
2-Position Valves	K3B	K31	non-locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	K3C	K32	locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.53 (.24)	54344-17
	K3E	K34	non-locking override, nondetented, external pilot	10" Hg - 150 (Vacuum - 10.3)	.53 (.24)	54344-17
	K3F	K35	locking override, nondetented, external pilot	10" Hg - 150 (Vacuum - 10.3)	.53 (.24)	54344-17
	K3G	K36	non-locking override, detented, internal pilot	1.03 - 10.3 (15 - 150)	.53 (.24)	54344-17
	K3N	K3L	locking override, detented, internal pilot	1.03 - 10.3 (15 - 150)	.53 (.24)	54344-17
	K3P	K3M	locking override, detented, external pilot	10" Hg - 150 (Vacuum - 10.3)	.53 (.24)	54344-17
3-Position Valves	K3J	K38	non-locking override, spring centered, internal pilot	1.03 - 10.3 (15 - 150)	.80 (.36)	54344-17
	K3A	K30	locking override, spring centered, internal pilot	1.03 - 10.3 (15 - 150)	.80 (.36)	54344-17
Standard Solenoid Operator with Molded Cord Connector, 1.6 mm (5'3") Connector Cable*						
2-Position Valves	K5C	K52	locking override, nondetented, internal pilot	1.03 - 10.3 (15 - 150)	.80 (.36)	54344-17
	K5F	K55	locking override, nondetented, external pilot	10" Hg - 150 (Vacuum - 10.3)	.80 (.36)	54344-17
	K5N	K5L	locking override, detented, internal pilot	15 - 150 (1.03 - 10.3)	.80 (.36)	54344-17
3-Position Valves	K5A	K50	locking override, spring centered, internal pilot	15 - 150 (1.03 - 10.3)	.82 (.37)	54344-17
CSA Certified Solenoid Operator with Fixed 1/2" Conduit Connector Molded into Cord**						
2-Position Valves	KDB	KD1	non-locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.60 (.27)	54344-17
	KDC	KD2	locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.60 (.27)	54344-17
CSA Certified Solenoid Operator without Electrical Connector**†						
2-Position Valves	KQB	KQ1	non-locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.61 (.28)	54344-17
	KQC	KQ2	locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	.61 (.28)	54344-17
	KQG	KQ6	non-locking override, detented, internal pilot	15 - 150 (1.03 - 10.3)	.61 (.28)	54344-17
3-Position Valves	KQJ	KQ8	non-locking override, spring centered, internal pilot	15 - 150 (1.03 - 10.3)	.62 (.29)	54344-17
Hazardous Location Solenoid Operator**						
2-Position Valves	KXB	KX1	non-locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	1.48 (.67)	53478-07
	KXC	KX2	locking override, nondetented, internal pilot	15 - 150 (1.03 - 10.3)	1.48 (.67)	53478-07
3-Position Valves	KXJ	KX8	non-locking override, spring centered, internal pilot	15 - 150 (1.03 - 10.3)	1.49 (.68)	53478-07

* Standard voltage is 110/1250 AC 50/60 Hz. For optional voltages add three characters to the end of the part number. See p. VAL-10-12. For low wattage options contact Application Engineering.

** For external pilot options contact Application Engineering.

† Electrical connectors for KQX series solenoid operators see VAL-10-12.

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Lightweight Plastic* Solenoid Operator

	Wattage		Connector Type				Override	
	Standard Watt	Low Watt	No Connector	Cable Grip	Conduit	5' Molded	Locking	Non Locking
KY0		X	X				X	
KY1		X	X					X
KY2	X		X				X	
KY3	X		X					X
KY5		X		X			X	
KY5		X		X				X
KY6	X			X			X	
KY7	X			X				X
KY8		X			X		X	
KY9		X			X			X
KYA	X				X		X	
KYB	X				X			X
KYC		X				X	X	
KYD		X				X		X
KYE	X					X	X	
KYF	X					X		X

* Polyphthalamide resin (PPA)

Optional Coil Voltages

Additional Part Number Characters

Voltages			Standard Wattage KVx, K1x, K3x, K5x, & K7x Series Operators		Low Wattage KUx, K0x, K2x, K4x, & K6x Series Operators		KDx, Series Operators		KQx Series Operators		KMx Series Operators		KXx Series Operators	
60 Hz	50 Hz	DC	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid	Single Solenoid	Double Solenoid
120	110	–	Standard	Standard	1WH	2WH	Standard	Standard	Standard	Standard	Standard	Standard	–	–
240	220	–	1W6	2W6	–	–	1TE	2TE	1T2	2T2	1TN	2TN	1NH	2NH
12	12	–	1W3	2W3	–	–	–	–	–	–	–	–	–	–
24	24	–	1W4	2W4	1WJ	2WJ	1TD	2TD	1T1	2T1	1TM	2TM	–	–
48	48	–	1W5	2W5	–	–	–	–	–	–	–	–	–	–
–	240	–	–	–	–	–	–	–	1T3	2T3	–	–	–	–
120	100	–	–	–	–	–	–	–	–	–	–	–	Standard	Standard
–	–	6	1W7	2W7	1WK	2WK	1TF	2TF	1T4	2T4	–	–	1N7	2N7
–	–	12	1W1	2W1	1WF	2WF	1T6	2T6	1T5	2T5	1TS	2TS	1NA	2NA
–	–	24	1W2	2W2	Standard		1TH	2TH	1T6	2T6	1TT	2TT	1ND	2ND
–	–	48	–	–	–	–	1TJ	2TJ	1T7	2T7	1TU	2TU	–	–
–	–	115	–	–	1WL	2WL	1TK	2TK	1T8	2T8	1TX	2TX	–	–
–	–	10.5	–	–	–	–	–	–	1T9	2T9	–	–	–	–

Example: On K41DA00-KS6-KV1, change from standard 110VAC to 240VAC by adding 1W6 to the part number. New part number becomes K41DA00-KS6-KV11W6

Electrical Connectors for KQx Series Solenoid Operators – Order With Numbers

To order solenoid connectors for KQx Series Operators, specify the desired solenoid connector part number listed below in addition to the desired valve model number, e. g. K41DA00-KQ1-KQ12VC

CSA Certified Electrical Connectors for KQx Series Solenoid Operators

	Single/Dual
Rotatable Cable Grip Connector	1VC/2VC
1/2" NPT Conduit Connector	1V2/2V2
Rotatable Cable Grip with Indicator Light,	
110V AC/DC only	1C3/2C3
24V AC/DC only	1C2/2C2
12V AC/DC only	1C1/2C1
220V AC/DC only	1C4/2C4

Optional KQx Series Electrical Connectors Non-CSA Certified

5-Foot Molded Cord Connector 1V1/2V1

KQx Series Accessories – Non-CSA Certified

Extended Locking Override – Black Knob with Stainless Steel Plunger
Contact Application Engineering

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Replacement Coils

Voltages			Standard Wattage KVx, K1x, K3x, K5x & K7x Series Operators Coil Only	Low Wattage KUx, K0x, K2x, K4x, & K6x Series Operators Coil Only	KDx, Series Operators Coil Only	KQx Series Operators Coil Only	KMx Series Operators Coil Only
60 Hz	50 Hz	DC					
120	110	–	54452-01	54469-03	54944-21	54932-21	54960-21
240	220	–	54452-07	–	54944-23	54932-23	54960-23
12	12	–	54452-04	–	–	–	–
24	24	–	54452-05	54469-04	54944-22	54932-22	54960-22
48	48	–	54452-06	–	–	–	–
–	240	–	—	–	54932-24	–	–
120	100	–	–		–	–	–
240	208	–	–	–	–	–	–
24	22	–	–	–	–	–	2362-07
–	–	6	–	54469-05	54944-25	54932-25	–
–	–	12	54452-02	54469-01	54944-26	54932-26	54960-26
–	–	24	54452-03	54469-02	54944-27	54932-27	54960-27
–	–	48	–	–	54944-28	54932-28	54960-28
–	–	115	–	54469-06	54944-29	54932-29	54960-29
–	–	10.5	–	–	–	54932-30	–

Solenoid Assemblies Ordered Separately

Includes coil, plunger, sleeve and seal

Voltages			KDx, Series Operators	KQx Series Operators	KMx Series Operators	KXx Series
60 Hz	50 Hz	DC				
120	110	–	54944-01	54932-01	54960-01	53902-01
240	220	–	54944-03	54932-03	54960-03	53902-14
24	24	–	54944-02	54932-02	54960-02	–
–	240	–	–	54932-04	–	–
120	100	–	–	–	–	–
240	208	–	–	–	–	–
24	22	–	–	–	–	–
–	–	6	54944-05	54932-05	54960-05	53902-10
–	–	12	54944-06	54932-06	54960-06	53902-11
–	–	24	54944-07	54932-07	54960-07	53902-12
–	–	48	54944-08	54932-08	54960-08	–
–	–	115	54944-09	54932-09	54960-09	–
–	–	10.5	–	54932-10	–	–

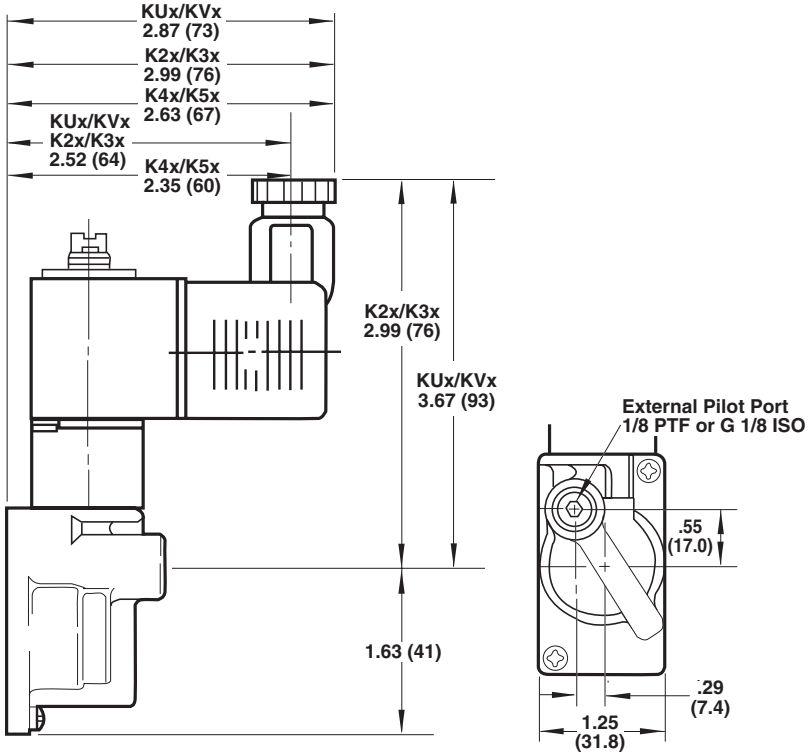
KUx/KVx, K0x/K1x, K2x/K3x, K4x/K5x,K6x/K7x Series Operators

Solenoid assemblies for these operators can be obtained by ordering a replacement coil from the ordering information on this page. Appropriate solenoid base, standard or low wattage assemblies can be ordered from the following table.

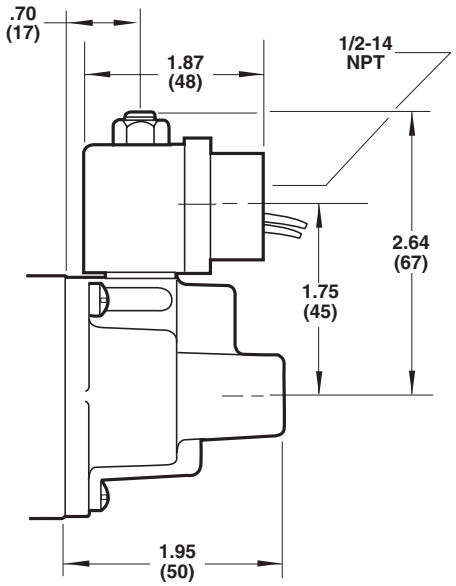
	KVx, K1x, K3x, K5x & K7x Series Replacement Bases	KUx, K0x, K2x, K4x & K6x Series Replacement Bases
Locking Override	54462-02	54462-04
Non-locking Override	54462-09	54462-10

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KUx/KVx Series (cable grip)
K2x/K3x Series (conduit)
K4x/K5x Series (molded cord)

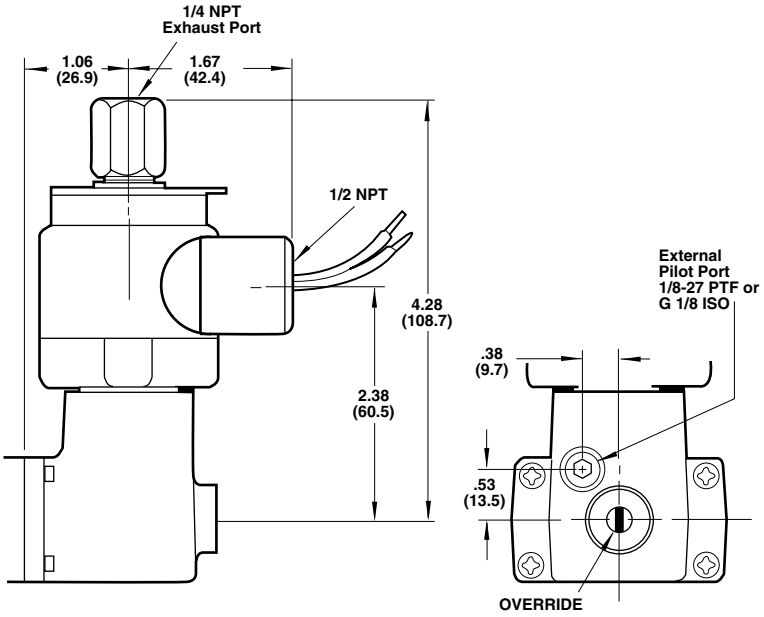


KD Series (integral conduit)

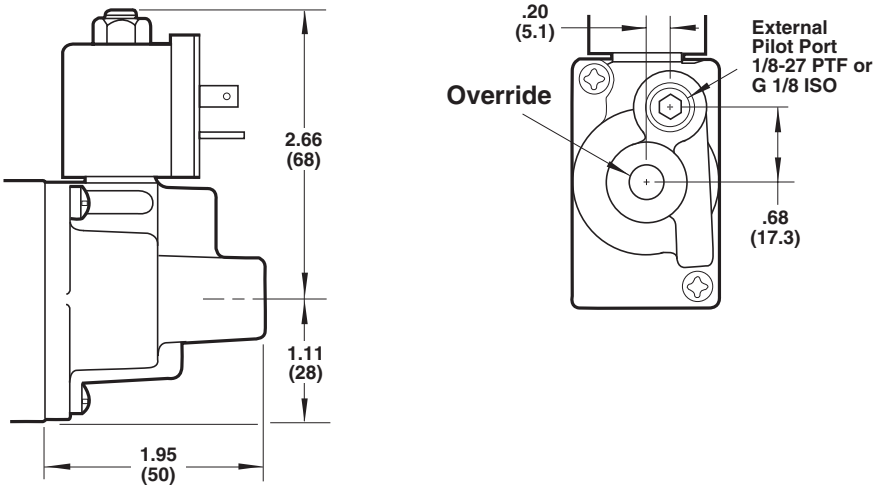


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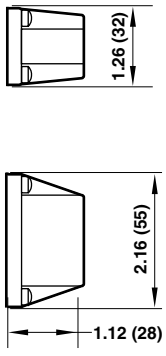
KX Series Hazardous Location



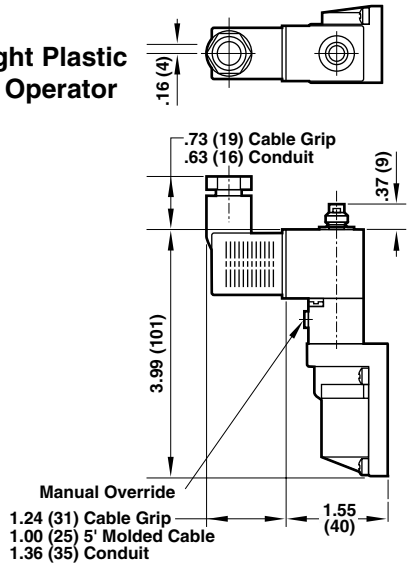
KQx Series (no connector)



KS6 Spring Return



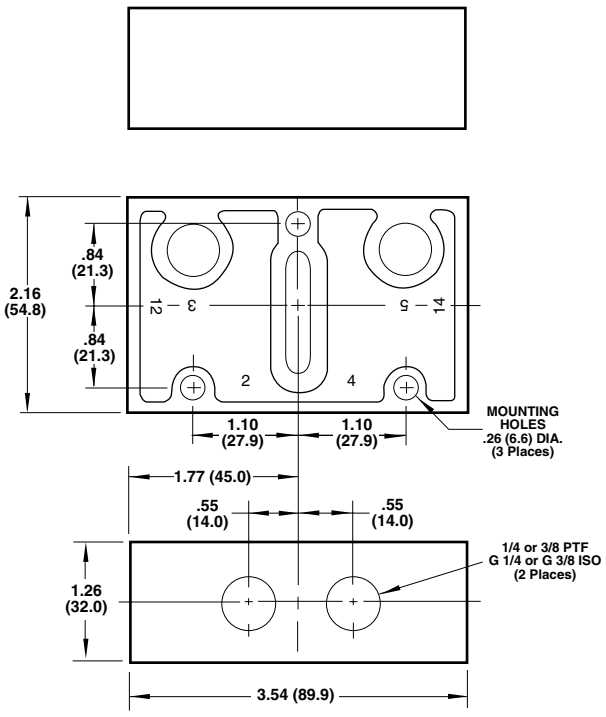
KYX Lightweight Plastic Solenoid Operator



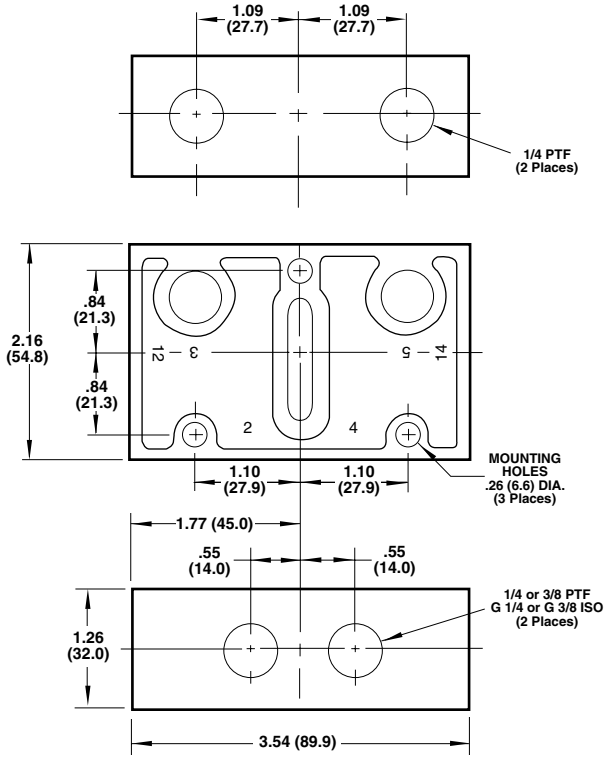
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Stacking Bodies

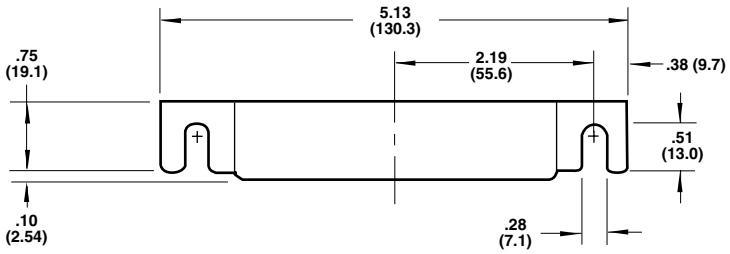
COMMON PORTS 1, 3 & 5
K79 or K89

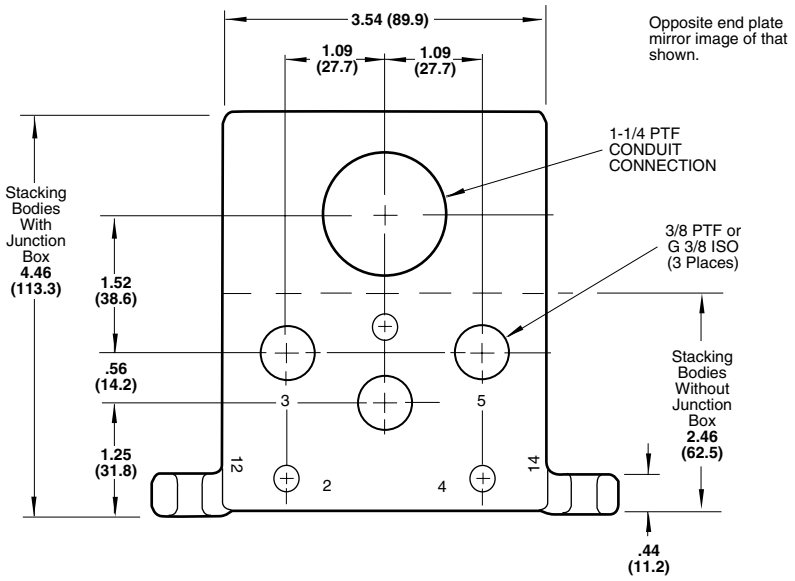


COMMON PORT 1
K78 or K88



Stacking Body End Plates

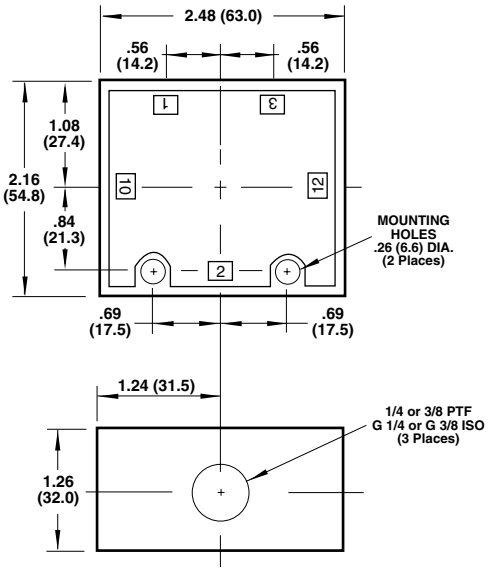




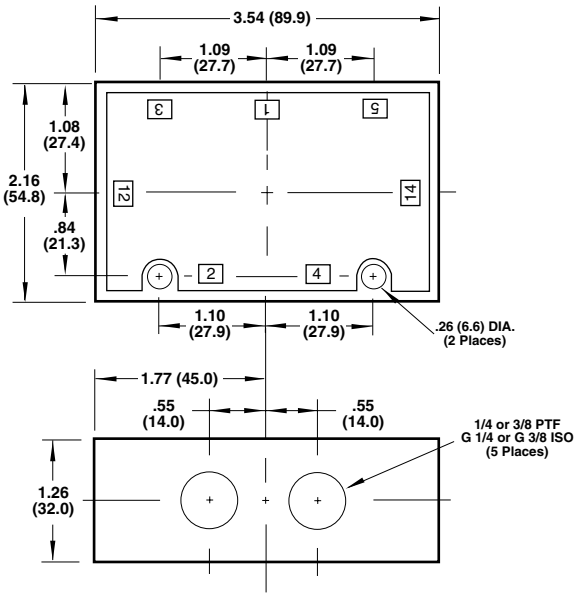
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Inline Bodies

3-WAY – 1/4" & 3/8" PORTS K41

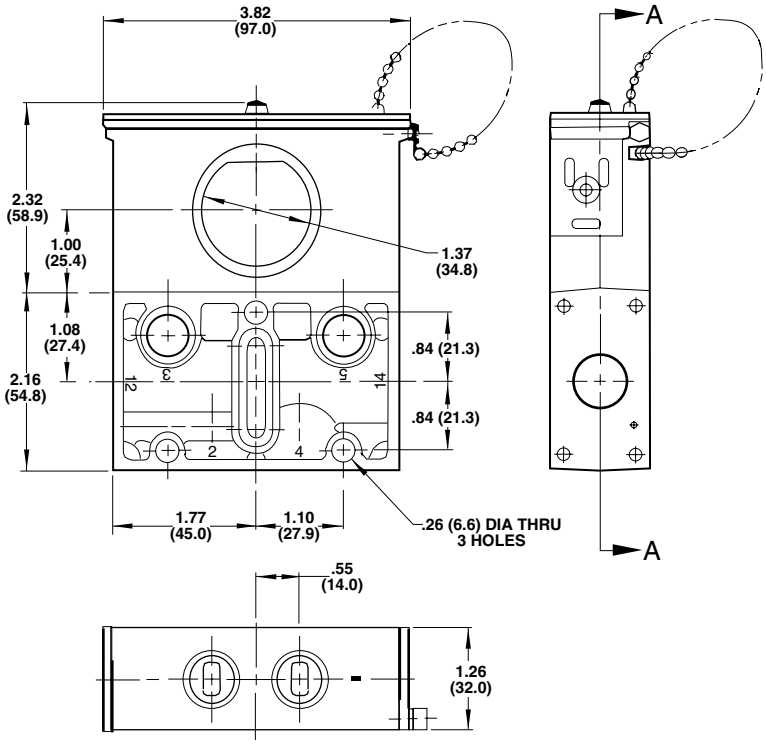


4-WAY – 1/4" & 3/8" PORTS K71 or K81

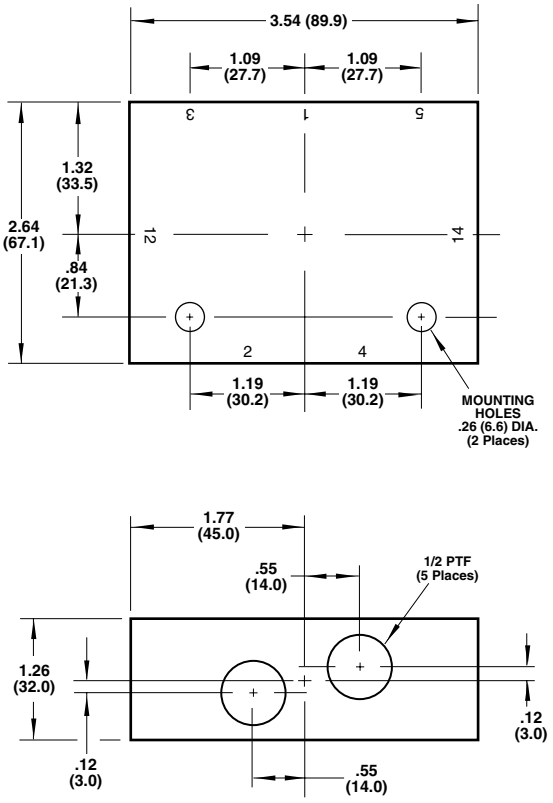


Stacking Body Junction Box

COMMON PORTS 1, 3 & 5 K79 or K89



4-WAY – 1/2" PORTS K71 or K81



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Nugget 200 Spool Valves

1/4", 3/8", and 1/2" Air Pilot Actuated 3/2, 5/2, & 5/3 Inline and Stacking Valves

- **Long lasting spool design**
- **High flow compact valves**
- **Wide range of Air Pilot Operators available**
- **Three functional types available in 3/2, 5/2, and 5/3 configurations**



Technical Data

Medium:
Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:
Spool valve air pilot actuated.

Mounting:
Stacking – through holes on manifold subbase.
Inline – through holes in valve body.

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

Operating Pressure:
Maximum 150 psig (10.3 bar). For details see overleaf.

Operating Temperature:
-20°F to 160°F (-29°C to 71°C).
Consult Technical Service for use below +2°C (36°F).

Materials
Body: Aluminum
Spool: Anodized aluminum
Elastomers: Nitrile and special nitrile-based low-friction elastomers.

Ordering Information

To order standard Nugget 200 air pilot operated valves, quote model number from tables overleaf, e.g. order: K71DA00-KS6-KA2 for a 5-port/2-position, single Air Pilot Operated, Spring Return model.

Seal Compatibility
Nugget 200 seals are compatible with the following lubricants:
DC BR-2+ grease (Dow Corning)
DC 44 grease (Dow Corning)
Nondetergent mineral based oil such as Mobil DTE light oil
Nugget 200 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.

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Air Pilot Operating Specifications

Inlet Pressure Range:
10" Hg vacuum to 150 psig (10.3 bar)
Temperature Range (Ambient/Inlet):
-20° to 160°F* (-29° to 71°C)
Operator Pilot Pressures:
Maximum Pilot Pressure: 150 psig (10.3 bar)
Minimum Pilot Pressure at 150 psig (10.3 bar) main valve inlet pressures are given in the following table:

* With the dew point of supply air less than air temperature below 35°F (2°C)

Minimum Pilot Pressures

Operator	Return	Nondetent psig (bar)	Spring Detented psig (bar)	Centered psig (bar)
Large Air	Large Air	15 (1.0)	25 (1.7)	45 (3.1)
Large Air †	Small Air	35 (2.4)	–	–
Small Air	Small Air	25 (1.7)	–	–
Large Air	Spring	35 (2.4)	–	–
Low PressureAir††	Spring	4 (.27)	–	–
Small Air	Spring	65 (4.5)	–	–
Air Bleed	Air Bleed	15 (1.0)	25 (1.7)	–
Air Bleed	Spring	35 (2.4)	–	–

† Pressure applied simultaneously to both operators. The piston area of the KA2 operator is approximately twice that of the KA1 operator.

†† Pressure applied to port B of KA6 operator (port A open). A minimum vacuum of 6.1 inches Hg (KS1 return) applied to A (port B open) will also operate the valve. The KA6 operator can also be used as a differential pressure operator with or without return spring. The differential pressure required to shift the valve without return spring is less than 1 psig (2" Hg). To reduce the possibility of internal contamination, it is suggested that a filter/breather be installed in the port.

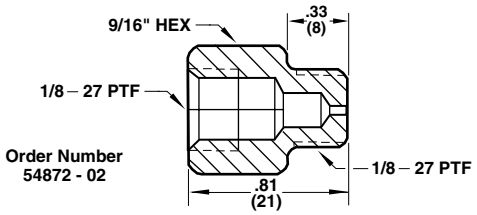
Average Flow Factors in Cv‡ (l/min)

Valve	Port Size	Flow Path Port 1 to 2 1 to 4	Flow Path Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1700)	1.7 (1800)
	3/8"	1.6 (1700)	1.7 (1800)
5-Port, Inline	1/4"	1.6 (1700)	1.7 (1800)
	3/8"	1.6 (1700)	1.7 (1800)
	1/2"	1.6 (1700)	1.7 (1800)
5-Port, Stacking	1/4"	1.8 (1900)	1.4 (1450)
	3/8"	1.8 (1900)	1.4 (1450)

‡ Flow Rating determined in accordance with NFPA/T3.21.3, Pneumatic fluid power – Flow test procedure and reporting method – For fixed orifice components.

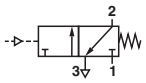
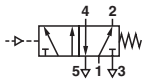
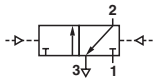
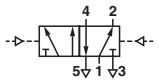
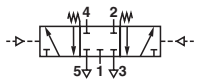
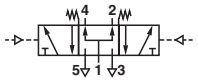
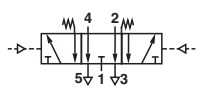
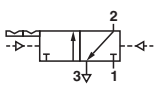
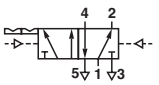
Warning

When a solenoid or air operator is used as a return for a manual or mechanical operator, the pilot pressure applied to the return operator must not exceed 40 psig (2.8 bar). Pilot pressures greater than 40 psig for a solenoid or air return will cause structural damage to the manual or mechanical operator and can also result in injury to the user. If the available pilot pressure exceeds 40 psig, an external pilot supply only must be used and a restrictor, part number 54872-02, must be installed in the pilot port of the return operator to reduce the return force to an acceptable level. Pilot pressure to the restrictor must not exceed 150 psig (10.3 bar).



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Air Pilot Operated Inline Valves

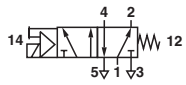
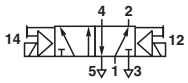
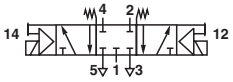
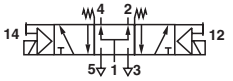
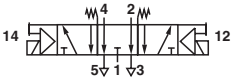
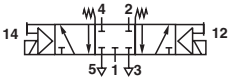
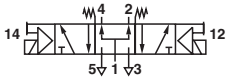
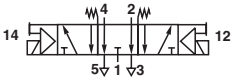
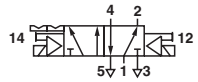
Description	Symbol	Type	Port Size	Body*	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Air Spring Return		3-Port/ 2-Position	1/4"	K41DA00	KS1-KA2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KA2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS6-KA2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS6-KA2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS6-KA2	35 - 150 (2.4 - 10.3)	2.22 (1.01)	54237-56
Double Air (Non-Detented)		3-Port/ 2-Position	1/4"	K41DA00	KA2-KA2	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KA2-KA2	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KA2-KA2	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KA2-KA2	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KA2-KA2	15 - 150 (1.0 - 10.3)	2.22 (1.01)	54237-56
		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-57
			3/8"	K81EA05	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-58
			3/8"	K81EA06	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KAC-KAC	45 - 150 (3.1 - 10.3)	4.40 (2.00)	54237-58
Double Air (Detented)		3-Port/ 2-Position	1/4"	K41DA00	KAA-KAA	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KAA-KAA	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KAA-KAA	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KAA-KAA	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KAA-KAA	25 - 150 (1.7 - 10.3)	2.22 (1.01)	54237-56

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12.

Note: For ISO-G threads, insert “G” in the 5th position. 1/2" ported bodies are not available with ISO G threads.

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Air Pilot Operated Stacking Valve

Description	Symbol	Type	Port Size	Body*	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Single Solenoid Spring Return		5-Port/ 2-Position	1/4"	K78DA00	KS6-KA2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
			3/8"	K78EA00	KS6-KA2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Common Inlet & Exh.	1/4"	K79DA00	KS6-KA2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA00	KS6-KA2	35 - 150 (2.4 - 10.3)	.53 (.24)	54237-56
Double Solenoid (Non-Detented)		5-Port/ 2-Position	1/4"	K78DA00	KA2-KA2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K78EA00	KA2-KA2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Common Inlet & Exh.	1/4"	K79DA00	KA2-KA2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA00	KA2-KA2	15 - 150 (1.0 - 10.3)	.53 (.24)	54237-56
Double Solenoid (Non-Detented Common Inlet-Port 1		5-Port/ 3-Position All Ports Blocked	1/4"	K88DA00	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-56
			3/8"	K88EA00	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K88DA05	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-57
			3/8"	K88EA05	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K88DA06	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-58
			3/8"	K88EA06	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-58
Double Solenoid (Non-Detented Common Inlet & Exhaust - Ports 1,3&5		5-Port/ 3-Position All Ports Blocked	1/4"	K89DA00	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-56
			3/8"	K89EA00	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K89DA05	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-57
			3/8"	K89EA05	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K89DA06	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-58
			3/8"	K89EA06	KAC-KAC	45 - 150 (3.1 - 10.3)	.53 (.24)	54237-58
Double Solenoid (Detented)		5-Port/ 2-Position	1/4"	K78DA00	KAA-KAA	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
			3/8"	K78EA00	KAA-KAA	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
		5-Port/ 2-Position Common Inlet & Exh	1/4"	K79DA00	KAA-KAA	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56
			3/8"	K79EA00	KAA-KAA	25 - 150 (1.7 - 10.3)	.53 (.24)	54237-56

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12.

Note: For ISO-G threads, insert "G" in the 5th position.

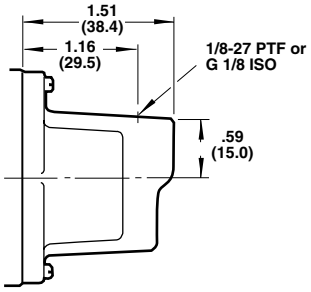
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Air Operators

Position	Operator		Description	Operating Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
	ISO-G	PTF				
2-Position Valves	KAB	KAA	detent, large air	25 (1.7)	.73 (.33)	54344-16
	KA5	KA2	nondetent, large air	15 (1.0)	.70 (.32)	54344-16
	KAF	KAE	detent bleed - .02 (.5mm) diameter bleed orifice	25 (1.7)	.73 (.33)	54344-16
	KA9	KA8	nondetent bleed - .02 (.5mm) diameter bleed orifice	15 (1.0)	.70 (.32)	54344-16
	KA7	KA6	nondetent, low pressure (inline only)	4 (.27)	2.46 (1.12)	–
	KA4	KA1	nondetent, air bias (small air), return for manual operators or as air bias with KA2 or KA5	25 (1.7)	.33 (.15)	54344-16
	KS5	KS4	nondetent, spring bias, use with KA2 or KA5	35 (2.5)	.44 (.20)	54344-16
3-Position Valves	KAD	KAC	spring centered	25 (1.7)	.73 (.33)	54344-16

Air Operators

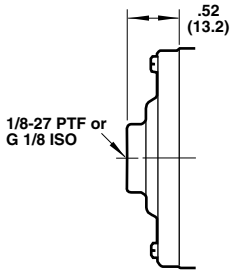
KAA/KAF
KA2, KA5
KA8, KA9
LARGE AIR



Air Bleed Operators

Air bleed operators have a 0.02" (0.5 mm) diameter orifice which connects pressure port 1 of the main valve to the operator piston and to atmosphere. A small amount of air constantly bleeds to atmosphere. The valve spool shifts when air bleed is stopped by a customer-supplied on-off valve.

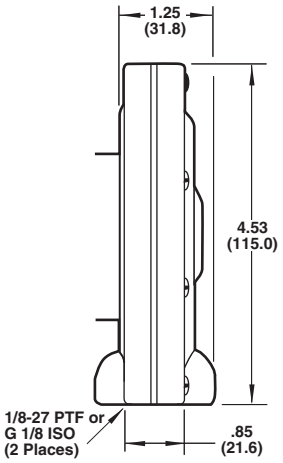
KA1, KA4
SMALL AIR
(AIR BIAS)



KA1 Air Bias Operator

Piston area of the KA1 operator is approximately 1/2 of the KA2 piston. When pressure is applied to the KA1 operator the valve spool shifts to the KA2 end. When pressure is applied to both the KA1 and KA2 operators the valve spool shifts to the KA1 end.

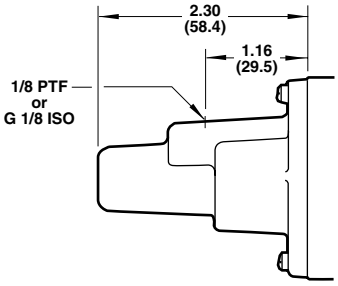
KA6, KA7
LOW PRESSURE



KA6 Low Pressure Operator (inline valves only)

The low pressure operator will shift the valve spool with only 4 psig (.28 bar) applied to Port B (Port A open). A minimum vacuum of 6.1" Hg (with HS1 spring return) applied to port A (Port B open) will also operated the valve. The KA6 operator can also be used as a differential pressure operator with or without spring return.the differential pressure required to shift the valve spool without a spring return is less than 1 psig (2" Hg). A filter/breather should be installed in the open port to reduce the possibility of internal contamination.

KS4, KS5
SPRING BIAS

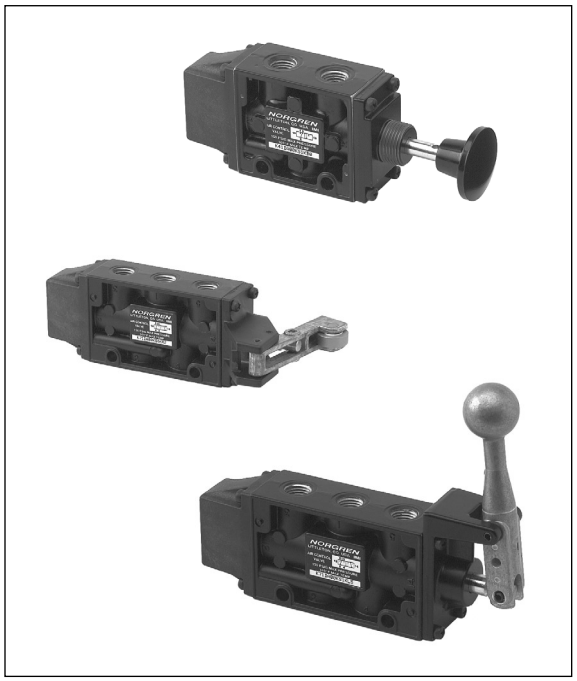


KS4 Spring Bias Operator

Piston area of the KS4 operator is the same as the KA2 operator. The piston is the KS4 operator is spring loaded to shift the valve spool to the KA2 end. The valve spool shifts to the KS4 end when pressure is applied to the KA2 operator. When pressure is applied to both the KS4 and KA2 operators the valve spool shifts to the KA2 end.

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1/4", 3/8", or 1/2" Ports, Manual and Mechanical Actuated 3/2, 5/2, & 5/3 Inline and Stacking Valves



- **Long lasting spool design**
- **High flow compact valves**
- **Wide range of Manual and Mechanical Operators available**
- **Three functional types available in 3/2, 5/2, and 5/3 configurations**

Ordering Information

To order standard Nugget 200 manual/ mechanical operated valves, quote model number from tables overleaf, e.g. order:

K71DA00-KS1-KK0 for a 5-port/2-position, single Manually Operated black knob, Spring Return (nondetented) model.

Average Flow Factors in Cv‡ (l/min)

		Flow Path	
		Port	Port
	Port	1 to 2	2 to 3
Valve	Size	1 to 4	4 to 5
3-Port, Inline	1/4"	1.6 (1700)	1.7 (1800)
	3/8"	1.6 (1700)	1.7 (1800)
5-Port, Inline	1/4"	1.6 (1700)	1.7 (1800)
	3/8"	1.6 (1700)	1.7 (1800)
	1/2"	1.6 (1700)	1.7 (1800)
5-Port, Stacking	1/4"	1.8 (1900)	1.4 (1450)
	3/8"	1.8 (1900)	1.4 (1450)

‡ Flow Rating determined in accordance with NFPA/T3.21.3, Pneumatic fluid power – Flow test procedure and reporting method – For fixed orifice components.

Technical Data

Medium:
Filtered and lubricated or non-lubricated compressed air or vacuum.

Operation:
Spool valve air pilot actuated.

Mounting:
Stacking – through holes on manifold base.
Inline – through holes in valve body.

Port Size:
1/4", 3/8", or 1/2" PTF, or 1/4", or 3/8" ISO-G

Operating Pressure:
Maximum 150 psig (10.3 bar). For details see overleaf.

Operating Temperature:
-20°F to 160°F (-29°C to 71°C)
Consult Technical Service for use below 36°F (2°C).

Materials:
Body: Aluminum
Spool: Anodized aluminum
Elastomers: Nitrile and special nitrile-based low-friction elastomers.

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Manual Operators

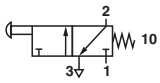
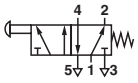
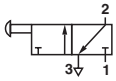
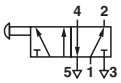
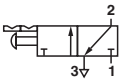
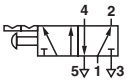
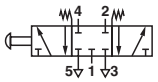
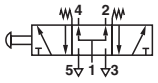
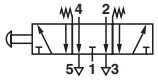
Position	Operator	Description	Min. Operating Force lbs. (kg)
2-Position	KB0	Palm Button - Black, Nondetent (Inline Only)	18.0 (8.2)
	KB1	Palm Button - Red, Nondetent (Inline Only)	18.0 (8.2)
	KB2	Palm Button - Green, Nondetent (Inline Only)	18.0 (8.2)
	KB3	Palm Button - Black, Detent (Inline Only)	9.0 (4.1)
	KB4	Palm Button - Red, Detent (Inline Only)	9.0 (4.1)
	KB5	Palm Button - Green, Detent (Inline Only)	9.0 (4.1)
	KF0	Foot Pedal, Nondetent	11.0 (5.0)
	KK0	Knob - Black, Nondetent	18.0 (8.2)
	KK1	Knob - Black, Detent	9.0 (4.1)
	KL0	Lever, Nondetent (Inline Only)	9.0 (4.1)
	KL1	Lever, 2-Position Detent (Inline Only)	7.0 (3.2)
	KL5	Lever, Nondetent	9.0 (4.1)
	KL6	Lever, 2-Position Detent	7.0 (3.2)
	KT0	Treadle, Nondetent (Inline Only)	13.0 (5.9)
	KT1	Treadle, 2-Position Detent (Inline Only)	9.0 (4.1)
3-Position	KB6	Palm Button - Black, Spring Centered	9.0 (4.1)
	KK2	Knob - Black, Spring Centered	9.0 (4.1)
	KK3	Knob - black, 3-Position Detent	9.0 (4.1)
	KL2	Lever, Spring Centered (Inline Only)	7.0 (3.2)
	KL3	Lever, 3-Position Detent (Inline Only)	7.0 (3.2)
	KL7	Lever, Spring Centered	7.0 (3.2)
	KL8	Lever, 3-Position Detent	7.0 (3.2)
	KT2	Treadle, Spring Centered	9.0 (4.1)

Mechanical Operators

Position	Operator	Description	Min. Operating Force lbs. (kg)
2-Position	KP0	Tappet, Nondetent	18.0 (8.2)
	KR2	Lever Roller, Nondetent (Inline Only)	11.0 (5.0)
	KR3	One-Way Trip Roller, Nondetent	11.0 (5.0)
	KR4	Lever Roller, Nondetent	11.0 (5.0)
	KR5	One-Way Trip Roller, Nondetent (Inline Only)	11.0 (5.0)

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Manually Operated Inline Valves - Palm Button

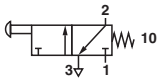
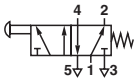
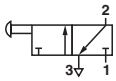
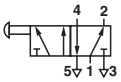
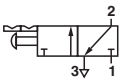
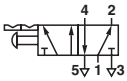
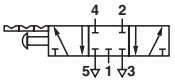
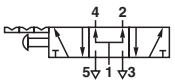
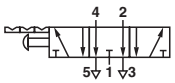
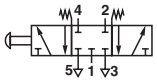
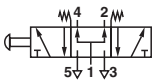
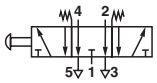
Description	Symbol	Type	Port Size	Body*	Operator	Miniature Operating Force lbs. (kg)	Weight lbs. (kg)	Repair Kits
Spring Return (Non-Detented		3-Port/ 2-Position	1/4"	K41DA00	KS1-KB0	18.0 (8.2)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KB0	18.0 (8.2)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS1-KB0	18.0 (8.2)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS1-KB0	18.0 (8.2)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS1-KB0	18.0 (8.2)	2.22 (1.01)	54237-56
End Cap (Non-Detented)		3-Port/ 2-Position	1/4"	K41DA00	KC0-KB0	18.0 (8.2)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KB0	18.0 (8.2)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KC0-KB0	18.0 (8.2)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KB0	18.0 (8.2)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KB0	18.0 (8.2)	2.22 (1.01)	54237-56
End Cap (Detented)		3-Port/ 2-Position	1/4"	K41DA00	KC0-KB3	9.0 (4.1)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KB3	9.0 (4.1)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KC0-KB3	9.0 (4.1)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KB3	9.0 (4.1)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KB3	9.0 (4.1)	2.22 (1.01)	54237-56
End Cap (Spring Centered)		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-57
			3/8"	K81EA05	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KC0-KB6	9.0 (4.1)	2.00 (4.40)	54237-58
			3/8"	K81EA06	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KC0-KB6	9.0 (4.1)	4.40 (2.00)	54237-58

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12.

Note: For ISO-G threads, insert "G" in the 5th position. 1/2" ported bodies are not available with ISO G threads.

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Manually Operated Inline Valves - Knob

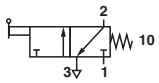
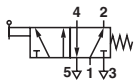
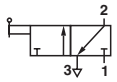
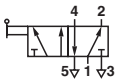
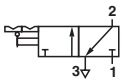
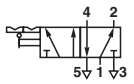
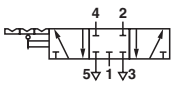
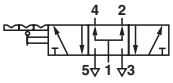
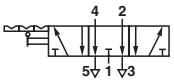
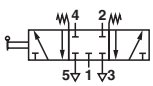
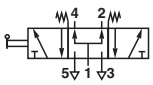
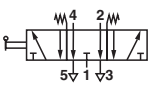
Description	Symbol	Type	Port Size	Body*	Operator	Pilot Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
Spring Return (Non-Detented		3-Port/ 2-Position	1/4"	K41DA00	KS1-KK0	18.0 (8.2)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KK0	18.0 (8.2)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS1-KK0	18.0 (8.2)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS1-KK0	18.0 (8.2)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS1-KK0	18.0 (8.2)	2.22 (1.01)	54237-56
End Cap (Non-Detented)		3-Port/ 2-Position	1/4"	K41DA00	KC0-KK0	18.0 (8.2)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KK0	18.0 (8.2)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KC0-KK0	18.0 (8.2)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KK0	18.0 (8.2)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KK0	18.0 (8.2)	2.22 (1.01)	54237-56
End Cap (Detented)		3-Port/ 2-Position	1/4"	K41DA00	KC0-KK1	9.0 (4.1)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KK1	9.0 (4.1)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KC0-KK1	9.0 (4.1)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KK1	9.0 (4.1)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KK1	9.0 (4.1)	2.22 (1.01)	54237-56
		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-57
			3/8"	K81EA05	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-58
			3/8"	K81EA06	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KC0-KK3	9.0 (4.1)	4.40 (2.00)	54237-58
End Cap (Spring Centered)		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-57
			3/8"	K81EA05	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-58
			3/8"	K81EA06	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KC0-KK2	9.0 (4.1)	4.40 (2.00)	54237-58

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12.

Note: For ISO-G threads, insert "G" in the 5th position. 1/2" ported bodies are not available with ISO G threads.

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Manually Operated Inline Valves - Lever

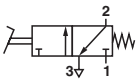
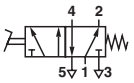
Description	Symbol	Type	Port Size	Body*	Operator	Minimum Operating Force lbs. (kg)	Weight lbs. (kg)	Repair Kit
Spring Return (Non-Detented		3-Port/ 2-Position	1/4"	K41DA00	KS1-KL0	9.0 (4.1)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KL0	9.0 (4.1)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS1-KL0	9.0 (4.1)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS1-KL0	9.0 (4.1)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS1-KL0	9.0 (4.1)	2.22 (1.01)	54237-56
End Cap (Non-Detented)		3-Port/ 2-Position	1/4"	K41DA00	KC0-KL0	9.0 (4.1)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KL0	9.0 (4.1)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KC0-KL0	9.0 (4.1)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KL0	9.0 (4.1)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KL0	9.0 (4.1)	2.22 (1.01)	54237-56
End Cap (Detented)		3-Port/ 2-Position	1/4"	K41DA00	KC0-KL1	7.0 (4.1)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KL1	7.0 (4.1)	2.22 (1.01)	54237-59
		5-Port/	1/4"	K71DA00	KC0-KL1	7.0 (4.1)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KL1	7.0 (4.1)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KL1	7.0 (4.1)	2.22 (1.01)	54237-56
		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-57
			3/8"	K81EA05	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-58
			3/8"	K81EA06	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KC0-KL3	7.0 (4.1)	4.40 (2.00)	54237-58
End Cap (Spring Centered)		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-57
			3/8"	K81EA05	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-58
			3/8"	K81EA06	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KC0-KL2	7.0 (4.1)	4.40 (2.00)	54237-58

* Standard valves are equipped with PTF threads, solenoid operators with 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-10-11/12.

Note: For ISO-G threads, insert "G" in the 5th position. 1/2" ported bodies are not available with ISO G threads.

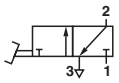
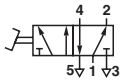
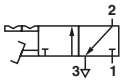
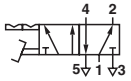
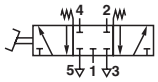
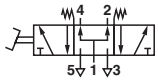
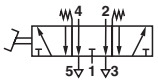
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Manually Operated Inline Valves - Foot Pedal

Description	Symbol	Type	Port Size	Body*	Operator	Minimum Operating Force lbs. (kg)	Weight lbs. (kg)	Repair Kit
Foot Pedal (Non-Detented)		3-Port/ 2-Position	1/4"	K41DA00	KS1-KF0	11.0 (5.0)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KF0	11.0 (5.0)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS6-KF0	11.0 (5.0)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS6-KF0	11.0 (5.0)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS6-KF0	11.0 (5.0)	2.22 (1.01)	54237-56

* Standard valves are equipped with PTF threads.
Note: For ISO-G threads, insert "G" in the 5th position. 1/2" ported bodies are not available with ISO G threads.

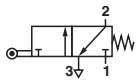
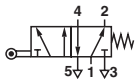
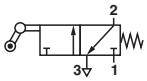
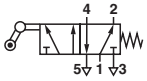
Manually Operated Inline Valves - Treadle

Description	Symbol	Type	Port Size	Body*	Operator	Minimum Operating Force lbs. (kg)	Weight lbs. (kg)	Repair Kit
Treadle (Non-Detented		3-Port/ 2-Position	1/4"	K41DA00	KC0-KT0	13.0 (5.9)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KT0	13.0 (5.9)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KC0-KT0	13.0 (5.9)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KT0	13.0 (5.9)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KT0	13.0 (5.9)	2.22 (1.01)	54237-56
Treadle (Detented)		3-Port/ 2-Position	1/4"	K41DA00	KC0-KT1	9.0 (4.1)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KC0-KT1	9.0 (4.1)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KC0-KT1	9.0 (4.1)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KC0-KT1	9.0 (4.1)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KC0-KT1	9.0 (4.1)	2.22 (1.01)	54237-56
Treadle (Spring Centered)		5-Port/ 3-Position All Ports Blocked	1/4"	K81DA00	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-56
			3/8"	K81EA00	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-56
			1/2"	K81FA00	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-56
		5-Port/ 3-Position Inlet Open to Cylinder	1/4"	K81DA05	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-57
			3/8"	K81EA05	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-57
			1/2"	K81FA05	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-57
		5-Port/ 3-Position Cyl Open to Exhaust	1/4"	K81DA06	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-58
			3/8"	K81EA06	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-58
			1/2"	K81FA06	KC0-KT2	9.0 (4.1)	4.40 (2.00)	54237-58

* Standard valves are equipped with PTF threads.
Note: For ISO-G threads, insert "G" in the 5th position. 1/2" ported bodies are not available with ISO G threads.

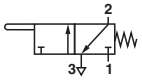
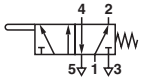
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Mechanically Operated Inline Valves - Lever Roller

Description	Symbol	Type	Port Size	Body*	Operator	Minimum Operating Force lbs. (kg)	Weight lbs. (kg)	Repair Kit
Lever Roller (Non-Detented		3-Port/ 2-Position	1/4"	K41DA00	KS1-KR2	11.0 (5.0)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KR2	11.0 (5.0)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS6-KR2	11.0 (5.0)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS6-KR2	11.0 (5.0)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS6-KR2	11.0 (5.0)	2.22 (1.01)	54237-56
1-Way Trip Lever Roller (Non-Detented		3-Port/ 2-Position	1/4"	K41DA00	KS1-KR5	11.0 (5.0)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KR5	11.0 (5.0)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS6-KR5	11.0 (5.0)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS6-KR5	11.0 (5.0)	2.22 (1.01)	54237-56
			1/2"	K71FA00	KS6-KR5	11.0 (5.0)	2.22 (1.01)	54237-56

* Standard valves are equipped with PTF threads.
Note: For ISO-G threads, insert “G” in the 5th position. 1/2" ported bodies are not available with ISO G threads.

Mechanically Operated Inline Valves - Tappet

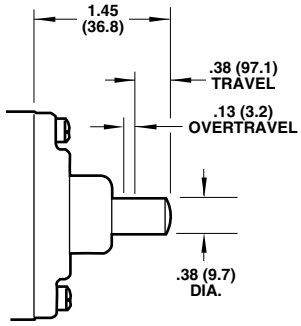
Description	Symbol	Type	Port Size	Body*	Operator	Minimum Operating Force lbs. (kg)	Weight lbs. (kg)	Repair Kit
Tappet (Non-Detented)		3-Port/ 2-Position	1/4"	K41DA00	KS1-KP0	18.0 (8.2)	2.22 (1.01)	54237-59
			3/8"	K41EA00	KS1-KP0	18.0 (8.2)	2.22 (1.01)	54237-59
		5-Port/ 2-Position	1/4"	K71DA00	KS6-KP0	18.0 (8.2)	2.22 (1.01)	54237-56
			3/8"	K71EA00	KS6-KP0	18.0 (8.2)	2.22 (1.01)	54237-56

* Standard valves are equipped with PTF threads.
Note: For ISO-G threads, insert “G” in the 5th position.

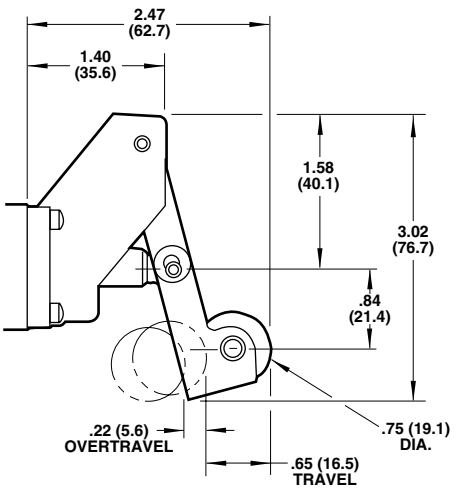
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Mechanical Operators

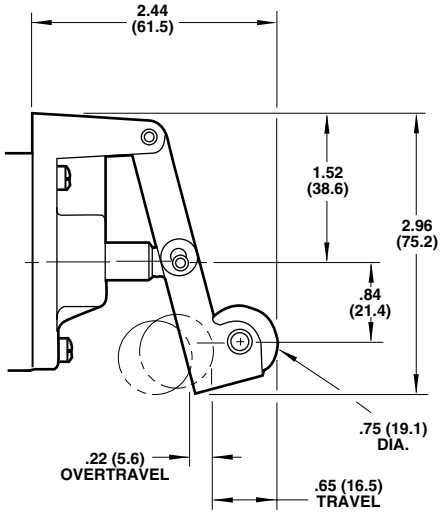
KP0 – TAPPET



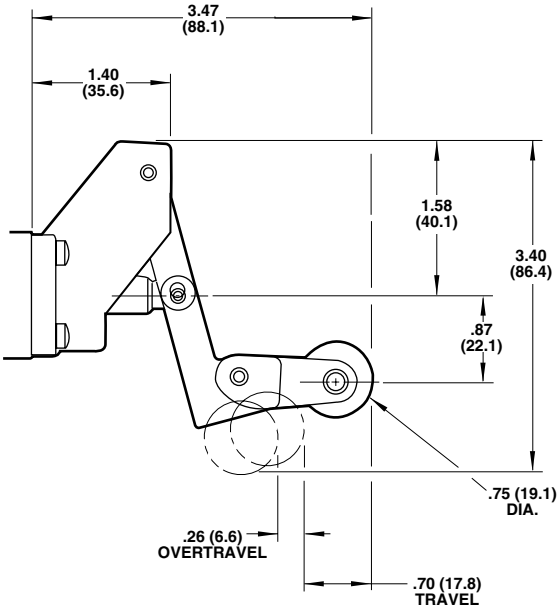
KR2 – LEVER ROLLER



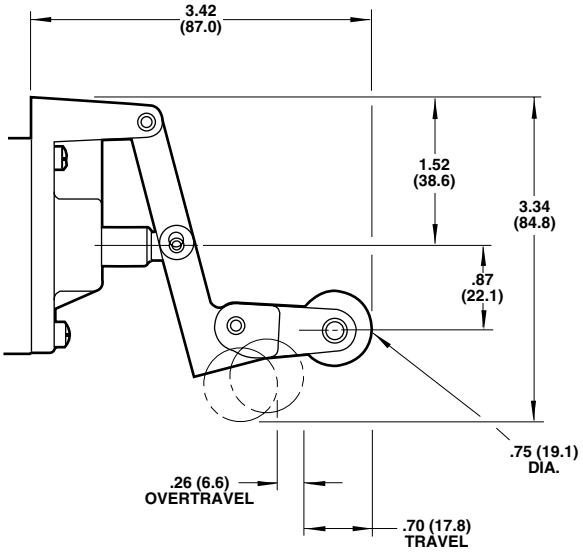
KR4 – LEVER ROLLER



KR5 – LEVER ROLLER ONE-WAY TRIP

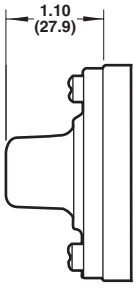


KR3 – LEVER ROLLER ONE-WAY TRIP

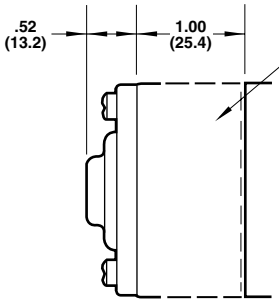


Spring Return & End Cap

KS1– SPRING RETURN



KC0 – END CAP

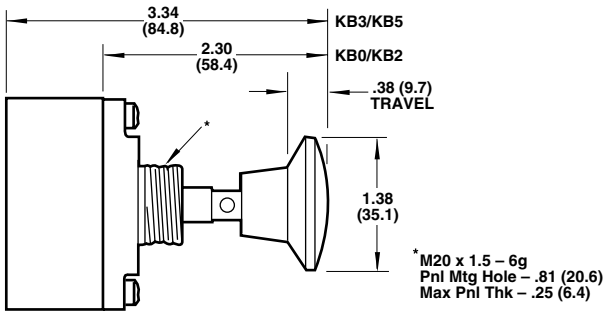


SPACER BLOCK – Used only with spring centered manual operators (KK2, KL2, KL7, KT2).

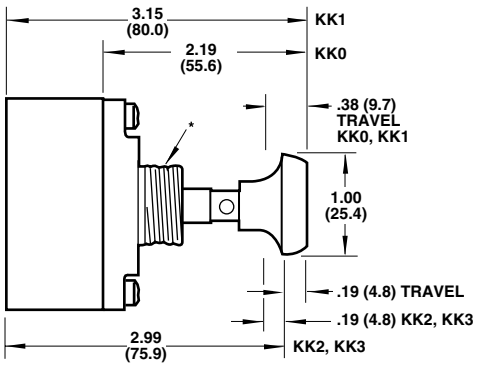
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Manual Operators

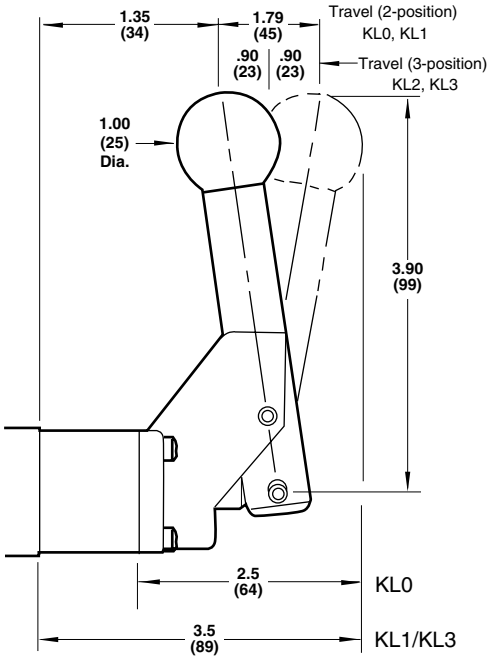
KB0/KB5 – PALM BUTTON



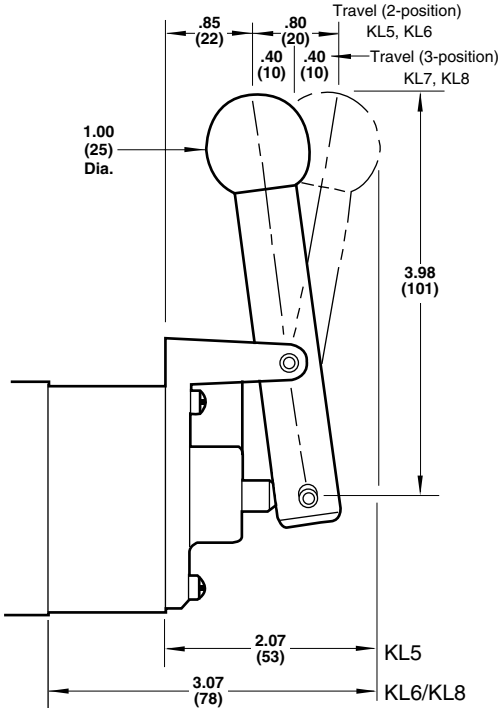
KK0/KK3 – KNOB



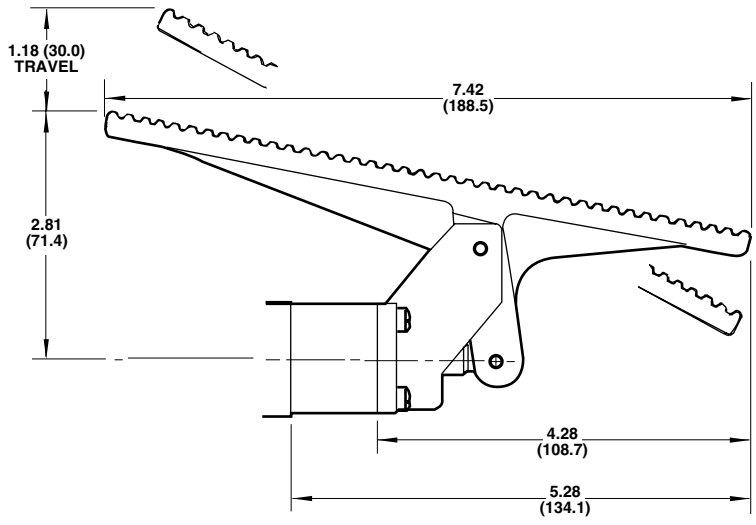
KL0/KL3 – LEVER



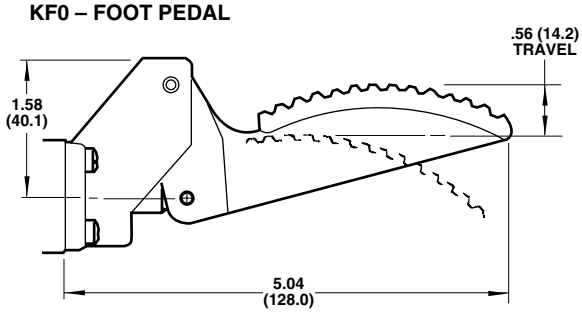
KL5/KL8 – LEVER



KT0/KT2 – TREADLE



KF0 – FOOT PEDAL

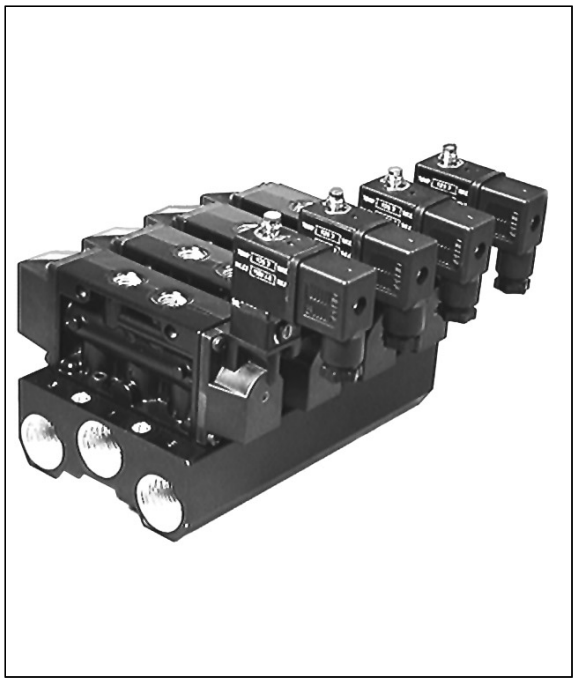


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Nugget 200 Spool Valves

Fixed Length Manifold for 1/4" and 3/8" Inline Valves

- **Reduces plumbing and installation time.**
- **Lightweight aluminum construction.**
- **3/4" PTF common inlet and exhaust ports.**
- **For use with most Nugget 200 1/4" and 3/8" inline valves.**
- **Available in 2 to 10 station lengths.**



Technical Data
Fluid: Compressed air
Maximum Pressure: See valve specifications
Operating Pressure: See valve specifications
Port Size: 3/4" PTF Inlet and Exhaust
Mounting Holes: 0.28" (7 mm) Diameter
Materials:
Manifold – Aluminum
Seals – Nitrile

Ordering Example
To order valves mounted to a fixed length manifold please follow these steps:
1. Order only 1/4" and 3/8" inline bodies ending in 2 (i.e. K71DA02)*
2. Note the manifold is to be assembled.
3. Note positions of various valving.

Example:
One four station Nugget 200 fixed length manifold assembly consisting of:
Position 1:
(1) K71DA02 - KY6 - KY6 (Dbl Sol Valve)
Positions 2 - 4:
(3) K71DA02 - KS6 - KY6 (Single Solenoid Valve)
(1) 13249-62 (Four Station Manifold)
(4) 99-051-530 (Assembly Charge)

* Note standard K71DA00 and K71EA00 bodies cannot be mounted to fixed length manifold.

Blanking Plate Kit: 54588-50

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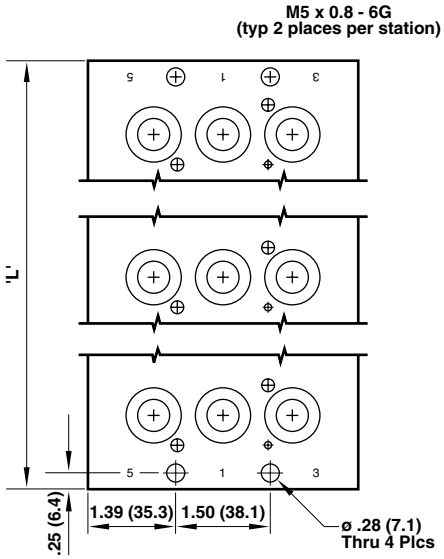
Ordering Information - Models listed include all mounting hardware and gaskets. Inlet and exhaust ports are 3/4" PTF.

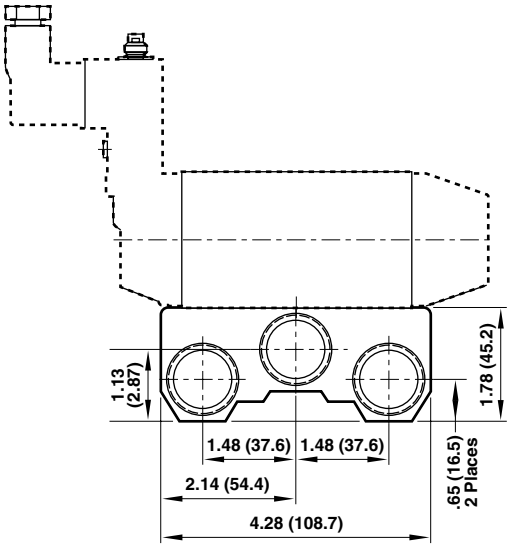
Fixed Length Manifold

Number of Stations	Part Number
2	13249-60
3	13249-61
4	13249-62
5	13249-63
6	13249-64
8	13249-65
10	13249-66

Repair Parts

Item	Number Required	Part Number
Mounting Screws	2	6005-14
Seals	3	2338-25





Dash	"L"
-60	4.000 (101.6)
-61	5.750 (146.0)
-62	7.375 (187.3)
-63	9.125 (231.8)
-64	10.750 (273.0)
-65	14.125 (358.8)
-66	17.375 (441.3)

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Special Instructions – Factory Assembled Stacking Valves

For Ordering purposes the valve stack is oriented as shown in column two:

Unless otherwise noted:

1. Cylinder (outlet) ports are oriented toward the bottom
2. The 1 2 operator is on the left side, the 1 4 operator on the right side.
3. Valves are listed from the FRONT to the BACK

Example 1: One stacking valve assembly with common inlet and exhaust (ports 1, 3 and 5) and junction boxes with solenoid operators with indicator lights. Isolating plugs for two different working pressures installed between valves 4 and 5.

Example 2: One Combination stacking valve assembly without junction boxes. Valves on one end of stack with common inlet and exhaust (ports 1, 3 and 5), and on the opposite end with common inlet only (port 1).

Answer Example 1

Valve Pos. No.	Quantity	Product Number	Special Instructions
1	1	K79DA50-KS6-KM1	
2	1	K79DA50-KS6-KM1	
3	1	K79DA50-KM6-KM6	
4	1	K89EA50-KM8-KM8	
			Isolating Plugs Common Ports 1, 3 & 5
5	1	K79DA50-KM6-KM6	
6	1	K79DA50-KM6-KM6	
7	1	K79DA50-KM6-KM6	
	1	13295-50	End Plate Kit

Answer Example 2

Valve Pos. No.	Quantity	Product Number	Special Instructions
1	1	K79DA00-KS6-KV2	
2	1	K89EA00-KV0-KV0	
3	1	K79EA00-KV2-KV2	
4	1	K78DA00-KS6-KV2	
5	1	K78EA00-KS6-KV2	
	1	13295-52	End Plate Kit

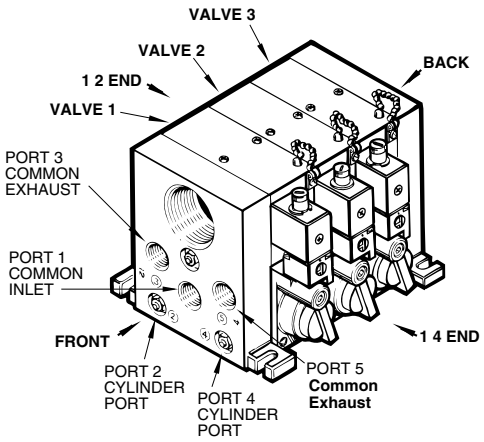
Note:

Mufflers or filter nuts should be used in all valve body, end plate, or solenoid operator exhaust ports to prevent entry of dirt and to reduce the noise level of the exhausting air.
In wet locations, exhaust ports should not face upward to lessen the possibility of liquids entering the unit.

Important:

1. Solenoid operated 2-position detent and nondetent, and 3-position spring centered valves can be combined in the same stack.
2. Plain stacking valves with common port 1 only and plain valves with common ports 1, 3 and 5 can be combined in one stack if grouped together at opposite ends.
3. A stack or group of valves with common port 1 only must have isolating plugs installed in the manifolding exhaust ports (3 and 5) between each valve and each of the end plates. Two exhaust port isolating plugs are furnished with each valve. Installation need not be specified on orders for factory assembled stacks as this will be done automatically.
4. Isolating plugs furnished in the end plate kit at no extra cost can be placed between two stacking valves to block the common ports and separate a section of the valve stack to accommodate two different input pressures. One pressure is brought in from the front end plate and the second pressure from the end plate in the back. (Specify on order form under “Special Instructions” where to install isolating plugs.)
5. Ports 1, 3 and 5 in one end plate can be plugged if so specified on order under “Special Instructions”.

Factory Assembled Stacking Valve Common Inlet & Exhaust



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Special Instructions – Stacking Valves

- The numbers shown in the stacking valve Ordering Information tables include the valve plus the interface seals and threaded tie rods needed to connect the valve to the adjacent valve or end plate.
- An end plate kit is required to complete a valve stack assembly. It includes two end plates and the necessary seals and attaching hardware. Also included are three pipe plugs to close one end of the stack and three isolating plugs (discs). The isolating plugs can be used to separate the valve stack into two sections and thus allow valves with a common inlet only to be combined with valves having both a common inlet and common exhausts, or to allow the use of different inlet pressures.
- Always specify the valve order number, the end plate kit number and the quantity desired. See table below.

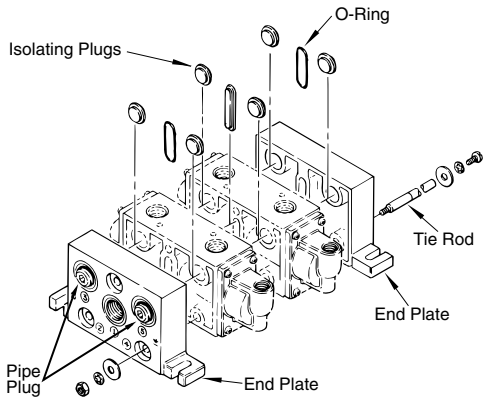
End Plate Kit	Order Number	
	3/8 PTF Ports	G 3/8 ISO Ports
For valves without junction box	13295-52	13295-53
For valves with junction box	13295-50	13295-51

- Valves and end plates are shipped unassembled. See pp. VAL-10-36/37 for factory assembled stacks.
- Stacking valves are available in two configurations – Common Inlet and Exhaust (Ports 1, 3, and 5) and Common Inlet Only (Port 1). Speed controls can be installed in the exhaust ports only on the Common Inlet (Port 1) configuration. The Common Inlet (Port 1) configuration cannot be used with the junction box.
- Solenoid operated 2-position detent and nondetent, and 3-position spring centered valves can be combined in the same stack.

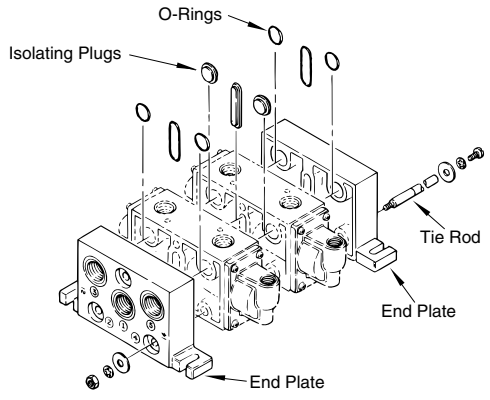
Isolating Plugs

Stacked banks of valves can be divided into two sections by substituting the isolating plugs for the O-rings between any two valves. They can also be used to block the end plate ports on one end if desired. Although one inlet port and two exhaust port isolating plugs are included with the end plate kit, the individual plugs can be ordered separately.

Isolating Plugs	Quantity Required	Order No.
Inlet (Port 1)	1	54350-89
Exhaust (Ports 3 & 5)	2	54350-88



Typical Valve Stack (Common Inlet Only - Port1)



Typical Valve Stack (Common Inlet and Exhaust - Ports 1, 3 and 5)

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Nugget 200 Product Numbering System — Air, Manual, and Mechanical Operators and Solenoid Operators with Locking Override

1 0 End 1 2 End Operator | 1 2 End 1 4 End Operator | 3-Way Valves 4-Way Valves

Valve Body

K 4 1 D A 0 0 – K S 1 – K V 2

Valve Type (inline bodies)

K41 – 3-Way, 2-Position, 3-Port
K71 – 4-Way, 2-Position, 5-Port
K81 – 4-Way, 3-Position, 5-Port

STACKING BODIES WITHOUT JUNCTION BOX – *COMMON PRESSURE PORT 1 ONLY (USE WHEN SPEED CONTROLS ARE NEEDED IN EXHAUST PORTS 3 & 5)*
K78 – 4-Way, 2-Position, 5-Port
K88 – 4-Way, 3-Position, 5-Port

STACKING BODIES – *COMMON PRESSURE PORT 1 AND COMMON EXHAUST PORTS 3 & 5*
K79 – 4-Way, 2-Position, 5-Port
K89 – 4-Way, 3-Position, 5-Port

BASIC BODY/PORT SIZE

D – 1/4" Body, 1/4" Ports
E – 1/4" Body, 3/8" Ports
F – 1/4" Body, 1/2" Ports

PORT THREAD

A – National Taper (PTF)
G – ISO (G Series)

JUNCTION BOX (STACKING BODY ONLY)

0 – No Junction Box
5 – Junction Box With Lights (KMx Series Operators only)
8 – Junction Box Without Lights (K6x/K7x Series Operators only)

SPOOL TYPE

0 – 2- or 3-Position, All Ports Blocked
5 – 3-Position, Inlet Open to Cylinder
6 – 3-Position, Exhaust Open to Cylinder

OPERATORS FOR INLINE AND STACKING BODIES

1 0 END 3-WAY, 1 2 END 4-WAY **Spring Operators and End Cap**

KS1 – Return For All 3-Way Valves and 4-Way Valves With Manual Operators (Except KF0 Foot Pedal)
KS6 – Return For 4-Way Valves With Air, Solenoid, Mechanical Operators and KF0 Manual Operators
KC0 – End Cap For Use With Manual Operators

OPERATORS FOR 2-POSITION INLINE AND STACKING BODIES

Pilot Port
PTF ISO
Air Operators

KAA KAB Detent, Large Air
KA2 KA5 Nondetent, Large Air
KAE KAF Detent Bleed – .02 (.5 mm) Diameter Bleed Orifice

Standard Solenoid Operator with Rotatable Cable Grip Connector & Locking Override

KV2 KVC Nondetent, Internal Pilot
KV5 KVF Nondetent, External Pilot
KVL KVN Detent, Internal Pilot

Standard Solenoid Operator without Electrical Connector, with Locking Override

K1L K1N Detent, Internal Pilot

Standard Solenoid Operator with Rotatable 1/2" Conduit Connector & Locking Override

K32 K3C Nondetent, Internal Pilot
K35 K3F Nondetent, External Pilot
K3L K3N Detent, Internal Pilot
K3M K3P Detent, External Pilot

Standard Solenoid Operator with Molded Cord Connector, 5 Foot/3-Conductor Cable & Locking Override

K52 K5C Nondetent, Internal Pilot
K55 K5F Nondetent, External Pilot
K5L K5N Detent, Internal Pilot

CSA Listed Solenoid Operator with Fixed 1/2" Conduit Connector & Locking Override

KD2 KDC Nondetent, Internal Pilot

CSA Listed Solenoid Operator without Electrical Connector, with Locking Override

KQ2 KQC Nondetent, Internal Pilot

Hazardous Location Solenoid Operator — Inline Valves Only with Locking Override

KX2 KXC Nondetent, Internal Pilot

Manual Operators

KB0 Palm Button – Black, Nondetent (Inline Only)
KB1 Palm Button – Red, Nondetent (Inline Only)
KB2 Palm Button – Green, Nondetent (Inline Only)
KB3 Palm Button – Black, Detent (Inline Only)
KB4 Palm Button – Red, Detent (Inline Only)
KB5 Palm Button – Green, Detent (Inline Only)
KF0 Foot Pedal, Nondetent
KK0 Knob – Black, Nondetent
KK1 Knob – Black, Detent
KL0 Lever, Nondetent (Inline Only)
KL1 Lever, 2-Position Detent (Inline Only)
KL5 Lever, Nondetent
KL6 Lever, 2-Position Detent
KT0 Treadle, Nondetent (Inline Only)
KT1 Treadle, 2-Position Detent (Inline Only)

Mechanical Operators

KP0 Tappet, Nondetent
KR2 Lever Roller, Nondetent (Inline Only)
KR3 One-Way Trip Roller, Nondetent
KR4 Lever Roller, Nondetent
KR5 One-Way Trip Roller, Nondetent (Inline Only)

OPERATORS FOR 3-POSITION INLINE AND STACKING BODIES

Pilot Port
PTF ISO
Air Operators

KAC KAD Spring Centered

Standard Solenoid Operators with Rotatable Cable Grip Connector & Locking Override

KV0 KVA Spring Centered, Internal Pilot
KV3 KVD Spring Centered, External Pilot

Standard Solenoid Operator without Electrical Connector, with Locking Override

K10 K1A Spring Centered, Internal Pilot

Standard Solenoid Operators with Rotatable 1/2" Conduit Connector & Locking Override

K30 K3A Spring Centered, Internal Pilot

Standard Solenoid Operator with Molded Plug Connector: 5-foot, 3-Conductor Cable & Locking Override

K50 K5A Spring Centered, Internal Pilot

Manual Operators

KB6 Palm Button – Black, Spring Centered
KK2 Knob – Black, Spring Centered
KK3 Knob – Black, 3 Position Detent
KL2 Lever, Spring Centered (Inline Only)
KL3 Lever, 3-Position Detent (Inline Only)
KL7 Lever, Spring Centered
KL8 Lever, 3 Position Detent
KT2 Treadle, Spring Centered

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Nugget 200 Product Numbering System — Solenoid Operators with Nonlocking Override

Valve Body | 1 0 End 1 2 End Operator | 1 2 End 1 4 End Operator | 3-Way Valves 4-Way Valves

K 4 1 D A 0 0 – K S 1 – K V 2

Valve Type

INLINE BODIES

K41 – 3-Way, 2-Position, 3-Port
K71 – 4-Way, 2-Position, 5-Port
K81 – 4-Way, 3-Position, 5-Port

STACKING BODIES WITHOUT JUNCTION BOX – *COMMON PRESSURE PORT 1 ONLY (USE WHEN SPEED CONTROLS ARE NEEDED IN EXHAUST PORTS 3 & 5)*

K78 – 4-Way, 2-Position, 5-Port
K88 – 4-Way, 3-Position, 5-Port

STACKING BODIES – *COMMON PRESSURE PORT 1 AND COMMON EXHAUST PORTS 3 & 5*

K79 – 4-Way, 2-Position, 5-Port
K89 – 4-Way, 3-Position, 5-Port

BASIC BODY/PORT SIZE

D – 1/4" Body, 1/4" Ports
E – 1/4" Body, 3/8" Ports
F – 1/4" Body, 1/2" Ports

PORT THREAD

A – National Taper (PTF)
G – ISO (G Series)

JUNCTION BOX (STACKING BODY ONLY)

0 – No Junction Box
5 – Junction Box With Lights (KMx Series Operators only)
8 – Junction Box Without Lights (K6x/K7x Series Operators only)

SPOOL TYPE

0 – 2- or 3-Position, All Ports Blocked
5 – 3-Position, Inlet Open to Cylinder
6 – 3-Position, Exhaust Open to Cylinder

OPERATORS FOR INLINE AND STACKING BODIES

1 0 END 3-WAY, 1 2 END 4-WAY

Spring Operators and End Cap

KS1 – Return For All 3-Way Valves and 4-Way Valves With Manual Operators (Except KF0 Foot Pedal)
KS6 – Return For 4-Way Valves With Air, Solenoid, Mechanical Operators and KF0 Manual Operators
KC0 – End Cap For Use With Manual Operators

OPERATORS FOR 2-POSITION INLINE AND STACKING BODIES

Pilot Port
PTF ISO

Standard Solenoid Operator with Rotatable Cable Grip Connector & Nonlocking Override

KV1 KVB Nondetent, Internal Pilot
KV4 KVE Nondetent, External Pilot
KV6 KVG Detent, Internal Pilot

Standard Solenoid Operator without Electrical Connector, with Nonlocking Override

K11 K1B Nondetent, Internal Pilot
K16 K1G Detent, Internal Pilot

Standard Solenoid Operator with Rotatable 1/2" Conduit Connector & Nonlocking Override

K31 K3B Nondetent, Internal Pilot
K34 K3E Nondetent, External Pilot
K36 K3G Detent, Internal Pilot

CSA Listed Solenoid Operator with Fixed 1/2" Conduit Connector & Nonlocking Override

KD1 KDB Nondetent, Internal Pilot

CSA Listed Solenoid Operator without Electrical Connector, with Nonlocking Override

KQ1 KQB Nondetent, Internal Pilot
KQ6 KQG Detent, Internal Pilot

Hazardous Location Solenoid Operator with Nonlocking Override — Inline Valves Only

KX1 KXB Nondetent, Internal Pilot

OPERATORS FOR 3-POSITION INLINE AND STACKING BODIES

Pilot Port
PTF ISO

Air Operators

KAC KAD Spring Centered

Standard Solenoid Operators with Rotatable Cable Grip Connector & Nonlocking Override

KV8 KVJ Spring Centered, Internal Pilot

Standard Solenoid Operators with Rotatable 1/2" Conduit Connector & Nonlocking Override

K38 K3J Spring Centered, Internal Pilot

Hazardous Location Solenoid Operator with Nonlocking Override — Inline Valves Only

KX8 KXB Spring Centered, Internal Pilot

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