

Nugget 200 Spool Valves

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

Long lasting spool design
High flow compact valves
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 psig (10.3 bar).

Operating Temperature:

-20° to 120°F (-29° to 50°C)

Consult Technical Service for use below 35°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.



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

Average Flow Factors in Cv‡ (l/min)

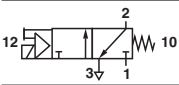
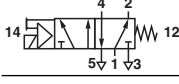
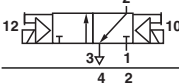
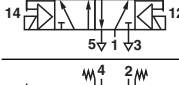


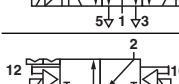
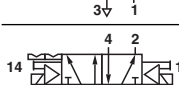
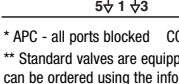
Valve	Port Size	Flow Path	
		Port 1 to 2 1 to 4	Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
5-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)

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

Nugget 200 Spool Valves

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

Solenoid Pilot Operated Inline Valves

	Body**	Operator	Description	Type	Port Size	Function*	Pressure psig	Weight lbs.	Repair Kit
	K41DA00	KS1-KV2	Sol/spring	3/2	1/4"		35 - 150	2.22	54237-59
	K41EA00	KS1-KV2	Sol/spring	3/2	3/8"		35 - 150	2.22	54237-59
	K71DA00	KS6-KV2	Sol/spring	5/2	1/4"		35 - 150	2.22	54237-56
	K71EA00	KS6-KV2	Sol/spring	5/2	3/8"		35 - 150	2.22	54237-56
	K41DA00	KV2-KV2	Double Solenoid	3/2	1/4"		15 - 150	4.4	54237-59
	K41EA00	KV2-KV2	Double Solenoid	3/2	3/8"		15 - 150	4.4	54237-59
	K71DA00	KV2-KV2	Double Solenoid	5/2	1/4"		15 - 150	4.4	54237-56
	K71EA00	KV2-KV2	Double Solenoid	5/2	3/8"		15 - 150	4.4	54237-56
	K81DA00	KV0-KV0	Double Solenoid	5/3	1/4"	APB	15 - 150	4.4	54237-56
	K81EA00	KV0-KV0	Double Solenoid	5/3	3/8"	APB	15 - 150	4.4	54237-56
	K81DA05	KV0-KV0	Double Solenoid	5/3	1/4"	COS	15 - 150	4.4	54237-57
	K81EA05	KV0-KV0	Double Solenoid	5/3	3/8"	COS	15 - 150	4.4	54237-57
	K81DA06	KV0-KV0	Double Solenoid	5/3	1/4"	COE	15 - 150	4.4	54237-58
	K81EA06	KV0-KV0	Double Solenoid	5/3	3/8"	COE	15 - 150	4.4	54237-58
	K41DA00	KVL-KVL	Double Solenoid	3/2	1/4"		25 - 150	4.4	54237-59
	K41EA00	KVL-KVL	Double Solenoid	3/2	3/8"		25 - 150	4.4	54237-59
	K71DA00	KVL-KVL	Double Solenoid	5/2	1/4"		25 - 150	4.4	54237-56
	K71EA00	KVL-KVL	Double Solenoid	5/2	3/8"		25 - 150	4.4	54237-56

* APC - all ports blocked COS - cylinder open to supply COE - cylinder ports open to exhaust

** 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 the web address.

Vacuum service available with externally piloted valves.

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

Additional Operators

Position	Operator PTF	ISO G	Description	Operating Pressure psig	Weight lbs.	Repair Kit
Standard Solenoid Operator with Rotatable Grip Connector*						
2-Position Valves	KV1	KVB	non-locking override, nondetented, internal pilot	15 - 150	.53	54344-17
	KV2	KVC	locking override, nondetented, internal pilot	15 - 150	.53	54344-17
	KV4	KVE	non-locking override, nondetented, external pilot	15 - 150	.53	54344-17
	KV5	KVF	locking override, nondetented, external pilot	15 - 150	.53	54344-17
	KV6	KVG	non-locking override, detented, internal pilot	15 - 150	.53	54344-17
	KVL	KVN	locking override, detented, internal pilot	15 - 150	.53	54344-17
3-Position Valves	KV8	KVJ	non-locking override, spring centered, internal pilot	45 - 150	.53	54344-17
	KV0	KVA	locking override, spring centered, internal pilot	45 - 150	.53	54344-17
	KV3	KVD	non-locking override, spring centered, external pilot	15 - 150	.53	54344-17
Standard Solenoid Operator without Electrical Connector*						
2-Position Valves	K11	K1B	non-locking override, nondetented, internal pilot	15 - 150	.53	54344-17
	K16	K1G	non-locking override, detented, internal pilot	15 - 150	.53	54344-17
	K1L	K1N	locking override, detented, internal pilot	15 - 150	.53	54344-17
3-Position	K10	K1A	locking override, spring centered, internal pilot	45 - 150	.53	54344-17

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

** For external pilot options contact Application Engineering.

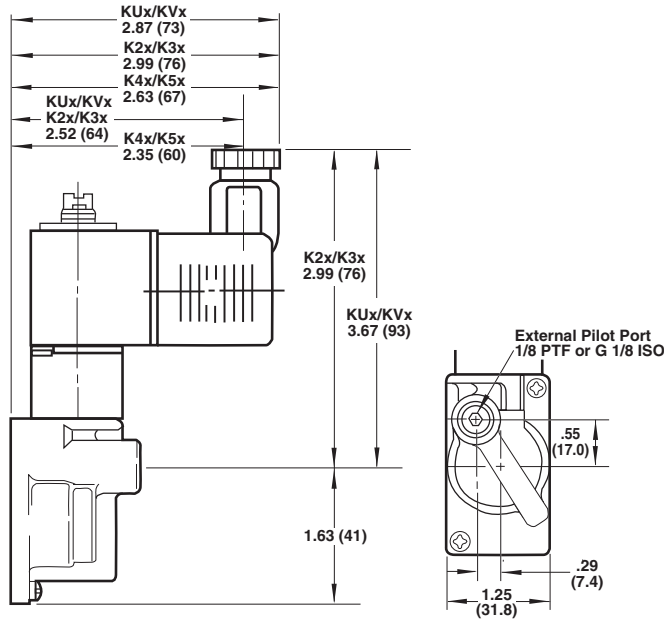
† Electrical connectors for KQX series solenoid operators go to web address.

Nugget 200 Spool Valves

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

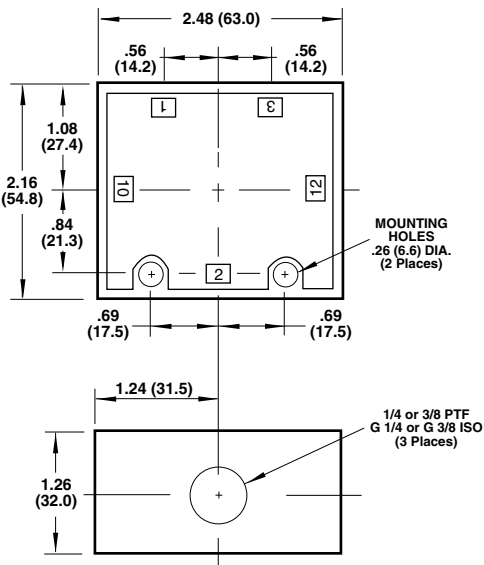
Dimensions in inches (mm)

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

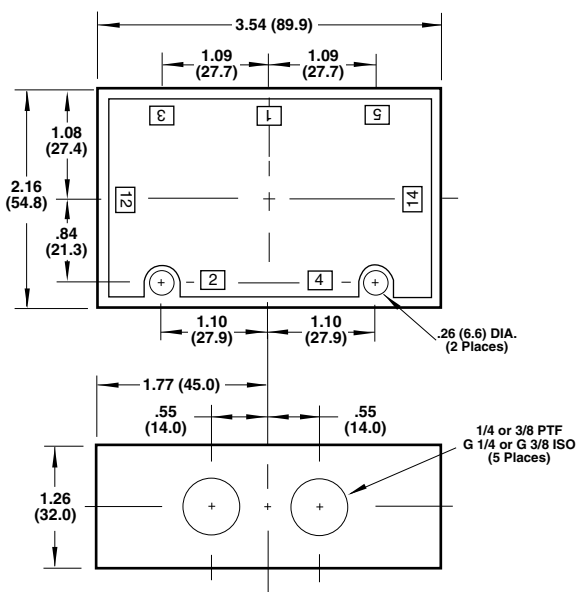


Inline Bodies

3-WAY - 1/4" & 3/8" PORTS K41



4-WAY - 1/4" & 3/8" PORTS K71 or K81



Nugget 200 Spool Valves

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



Long lasting spool design

High flow compact valves

Mounting styles: inline and fixed length manifold.

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 base.

Inline – through holes in valve body.

Port Size:

PTF – 1/4", 3/8", 1/2"

ISO G – 1/4", 3/8" .

Operating Pressure:

10 Hg vacuum to 150 psig (10.3 bar).

For details see overleaf.

Operating Temperature:

-20° to 160°F (-29° to 71°C)

Consult Technical Service for use below 35°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.

Minimum Pilot Pressures

Operator	Return	Nondetent psig (bar)	Detented psig (bar)	Spring 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 Pressure Air ††	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	Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
5-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
	1/2"	1.6 (1600)	1.7 (1700)

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

Nugget 200 Spool Valves

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

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	
KY2X		X				X		
KY3X		X					X	
KY5	X		X			X		
KY5	X		X				X	
KY6X			X			X		
KY7X			X				X	
KY8	X			X		X		
KY9	X			X			X	
KYAX				X		X		
KYBX				X			X	
KYC	X				X	X		
KYD	X				X		X	
KYEX					X	X		
KYFX					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	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

Rotatable Cable Grip Connector	Single/Dual1VC/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

Nugget 200 Spool Valves

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3/2, 5/2, & 5/3 Inline Valves

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			KD _x , Series Operators	KQ _x Series Operators	KM _x Series Operators	KX _x 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	-	-

KU_x/KV_x, K0_x/K1_x, K2_x/K3_x, K4_x/K5_x, K6_x/K7_x 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.

	KV _x , K1 _x , K3 _x , K5 _x & K7 _x Series	KU _x , K0 _x , K2 _x , K4 _x & K6 _x Series
	Replacement Bases	Replacement Bases
Locking Override	54462-02	54462-04
Non-locking Override	54462-09	54462-10

Nugget 200 Spool Valves

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

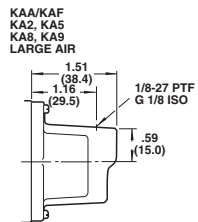
Air Pilot Operated Inline Valves

	Body*	Operator	Description	Type	Port Size	Pilot Pressure psig	Weight lbs.	Repair Kit
	K41DA00	KS1-KA2	Air/spring	3/2	1/4"	35 - 150	2.22	54237-59
	K41EA00	KS1-KA2	Air/spring	3/2	3/8"	35 - 150	2.22	54237-59
	K71DA00	KS6-KA2	Air/spring	5/2	1/4"	35 - 150	2.22	54237-56
	K71EA00	KS6-KA2	Air/spring	5/2	3/8"	35 - 150	2.22	54237-56
	K71FA00	KS6-KA2	Air/spring	5/2	1/2"	35 - 150	2.22	54237-56
	K41DA00	KA2-KA2	Air/Air	3/2	1/4"	15 - 150	4.4	54237-59
	K41EA00	KA2-KA2	Air/Air	3/2	3/8"	15 - 150	4.4	54237-59
	K71DA00	KA2-KA2	Air/Air	5/2	1/4"	15 - 150	4.4	54237-56
	K71EA00	KA2-KA2	Air/Air	5/2	3/8"	15 - 150	4.4	54237-56
	K71FA00	KA2-KA2	Air/Air	5/2	1/2"	15 - 150	4.4	54237-56
	K81DA00	KAC-KAC	Air/Air	5/3	1/4"	45 - 150	4.4	54237-56
	K81EA00	KAC-KAC	Air/Air	5/3	3/8"	45 - 150	4.4	54237-56
	K81FA00	KAC-KAC	Air/Air	5/3	1/2"	45 - 150	4.4	54237-56
	K81DA05	KAC-KAC	Air/Air	5/3	1/4"	45 - 150	4.4	54237-57
	K81EA05	KAC-KAC	Air/Air	5/3	3/8"	45 - 150	4.4	54237-57
	K81FA05	KAC-KAC	Air/Air	5/3	1/2"	45 - 150	4.4	54237-57
	K81DA06	KAC-KAC	Air/Air	5/3	1/4"	45 - 150	4.4	54237-58
	K81EA06	KAC-KAC	Air/Air	5/3	3/8"	45 - 150	4.4	54237-58
	K81FA06	KAC-KAC	Air/Air	5/3	1/2"	45 - 150	4.4	54237-58
	K41DA00	KAA-KAA	Air/Air	3/2	1/4"	25 - 150	4.4	54237-59
	K41EA00	KAA-KAA	Air/Air	3/2	3/8"	25 - 150	4.4	54237-59
	K71DA00	KAA-KAA	Air/Air	5/2	1/4"	25 - 150	4.4	54237-56
	K71EA00	KAA-KAA	Air/Air	5/2	3/8"	25 - 150	4.4	54237-56
	K71FA00	KAA-KAA	Air/Air	5/2	1/2"	25 - 150	4.4	54237-56

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

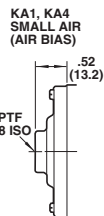
Air Operators

Position	Operator	ISO-G	PTF	Description	Minimum operating Pressure psig (bar)	Weight lbs. (kg)	Repair Kit
2-Position Valves	KAB	KAA		detent, large air	25 (1.7)	0.73 (.33)	54344-16
	KA5	KA2		nondetent, large air	15 (1.0)	0.70 (.32)	54344-16
	KAF	KA2		detent bleed - .02 (.5mm) diameter bleed orifice	25 (1.7)	0.73 (.33)	54344-16
	KA9	KA8		nondetent bleed - .02 (.5mm) diameter bleed orifice	15 (1.0)	0.70 (0.32)	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)	0.33 (0.15)	54344-16
3-Position Valves	KS5	KS4		nondetent, spring bias, use with KA2 or KA5	35 (2.5)	0.44 (0.20)	54344-16
	KAD	KAC		spring centered	45 (3.1)	0.73 (0.33)	54344-16

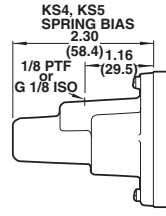


Air Bleed Operators
Constantly bleeds a small amount of air to atmosphere. The valve spool shifts when air bleed is stopped by a customer-supplied on-off valve.

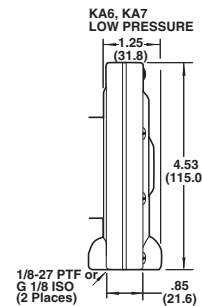
Dimensions in inches (mm)



KA1 Air Bias Operator
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.



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



KA6 Low Pressure Operator (inline valves only)

Operator shifts the valve spool with only 4 psig (.28 bar) applied to Port B (Port A open). A minimum vacuum of 6.1" Hg (with KS1 spring return) applied to port A (Port B open) will also operate the valve. Can also be used as a differential pressure operator with or without spring return.

Nugget 200 Spool Valves

1/4", 3/8", or 1/2" Ports, Manual and Mechanical Actuated 3/2, 5/2, & 5/3 Inline 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
- Technical Data**

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

Operation:
Spool valve manual or mechanical actuation.

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 35°F (2°C).

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

Stackable inline lockout valve (1/4")
Compliant with SEMI Standard S2-0200, section 17 "Hazardous Energy Control". This valve is lockable only in the position in which the hazardous energy is removed.

Order Information
K910121: Includes valve assembly with panel mount washer, nut, black knob and lockout key.

Kits
40164-K30: Includes cross bar and tie rods for connecting two valves for simultaneous operation of both valves. Additional kits may be used to create multi-valve manifolds.



Average Flow Factors in Cv‡ (l/min)

Valve	Port Size	Flow Path	
		Port 1 to 2 1 to 4	Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
5-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
	1/2"	1.6 (1600)	1.7 (1700)

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

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)
3-Position	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)
	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)



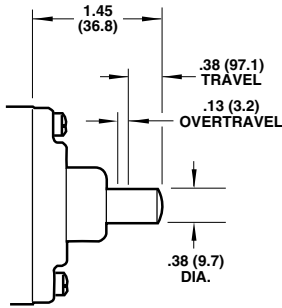
Nugget 200 Spool Valves

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

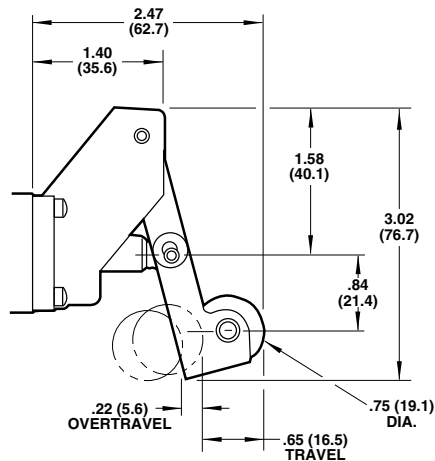
Dimensions in inches (mm)

Mechanical Operators

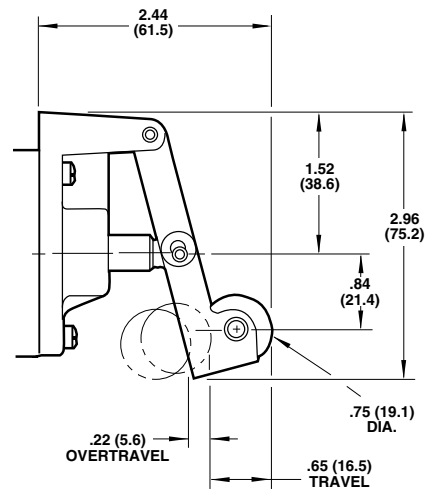
KP0 – TAPPET



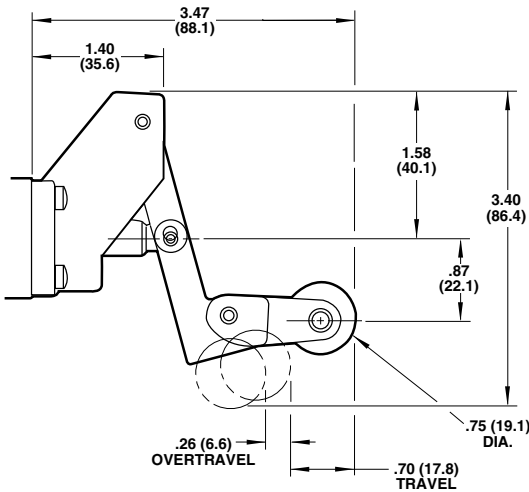
KR2 – LEVER ROLLER



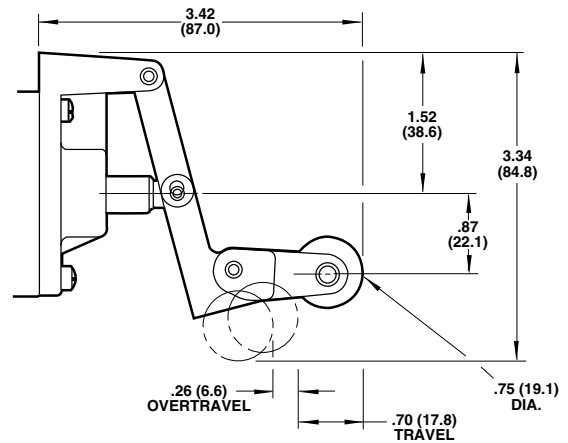
KR4 – LEVER ROLLER



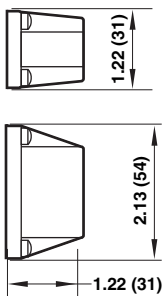
KR5 – LEVER ROLLER ONE-WAY TRIP



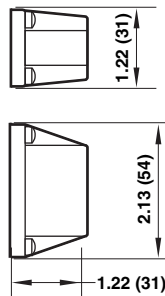
KR3 – LEVER ROLLER ONE-WAY TRIP



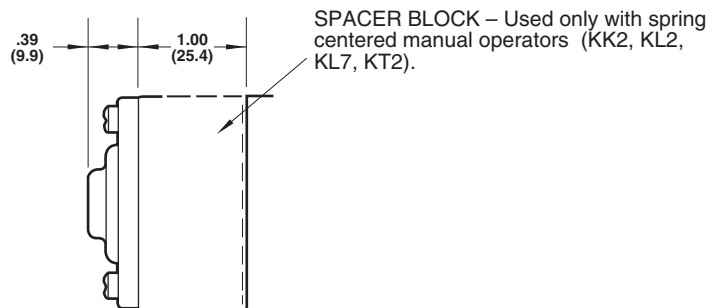
KS1 Spring Return & End Cap



KS6 Spring Return



KC0 – END CAP



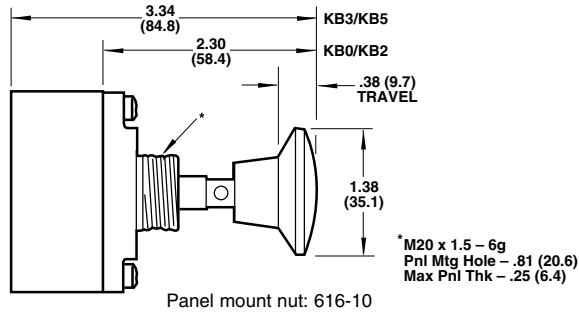
Nugget 200 Spool Valves

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

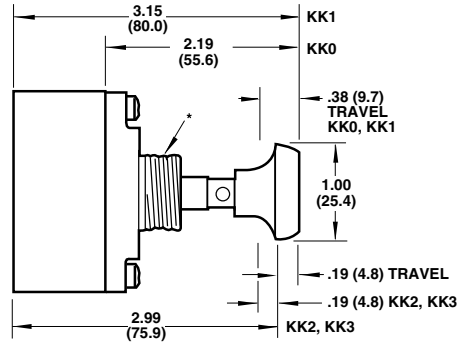
Dimensions in inches (mm)

Manual Operators

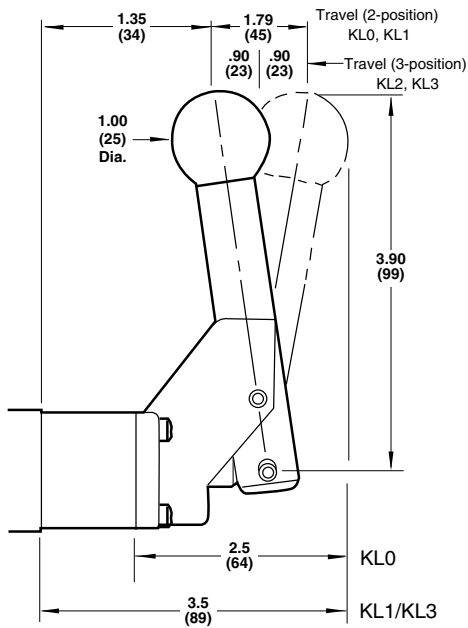
KB0/KB5 – PALM BUTTON



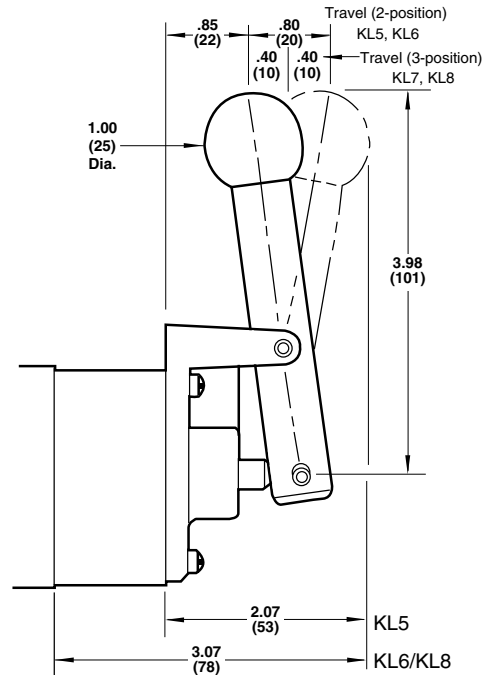
KK0/KK3 – KNOB



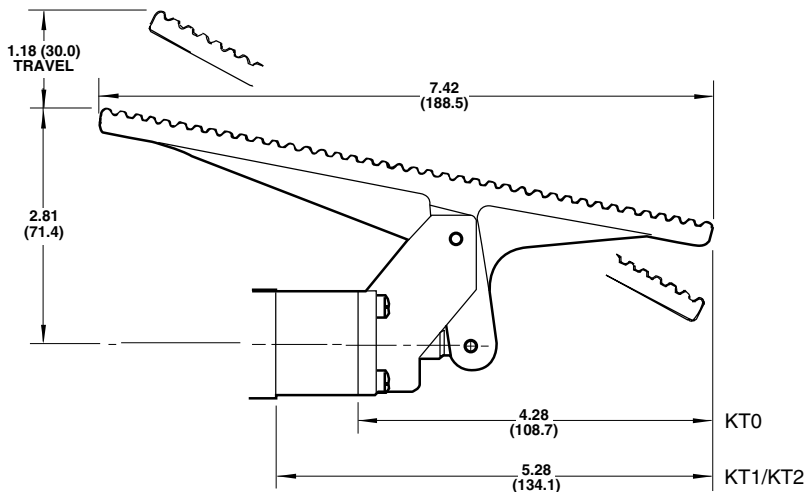
KL0/KL3 – LEVER



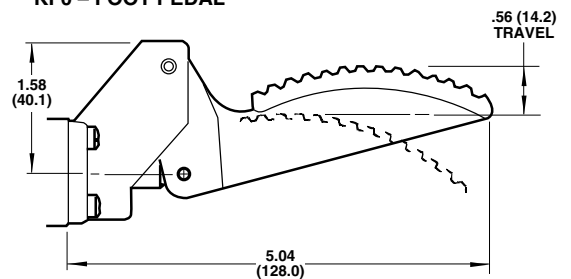
KL5/KL8 – LEVER



KT0/KT2 – TREADLE



KF0 – FOOT PEDAL



VALVES

Nugget 200 Spool Valves

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

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

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

Valve Body

K 4 1 D A 0 0 - K S 1 - K V 2 1 W 6

See Optional Coil Voltages p. VAL-171

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 (KGx/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 KFO Foot Pedal)

KS6 – Return For 4-Way Valves With Air, Solenoid, Mechanical Operators and KFO Manual Operators

KCO – 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)
 KFO 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
 KTO Treadle, Nondetent (Inline Only)
 KT1 Treadle, 2-Position Detent (Inline Only)

Mechanical Operators

KPO 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

KVO 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

VALVES

VAL-166

www.norgren.com/info/US-VAL-166

Nugget 200 Spool Valves

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

Nugget 200 Product Deconfigurator — Solenoid Operators with Nonlocking Override

