

Long lasting spool design

High flow compact valves

Three functional types: available in 3/2, 5/2, and 5/3 configurations

Low pressure operators



Technical data

Medium:

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

Operation:

Spool valve air pilot actuated.

Mounting:

Inline – through holes in valve body.

Port Size:

NPT – 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

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.

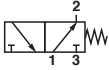
†† Pressure applied to port B of KA6 operator (port A open). A minimum vacuum of 6.1 inches Hg (KS1 return) applied to A (port B open) will also operate the valve. The KA6 operator can also be used as a differential pressure operator with or without return spring. The differential pressure required to 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)

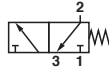
Valve	Port Size	Flow Path	
		Port 1 to 2 1 to 4	Port 2 to 3 4 to 5
3-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
5-Port, Inline	1/4"	1.6 (1600)	1.7 (1700)
	3/8"	1.6 (1600)	1.7 (1700)
	1/2"	1.6 (1600)	1.7 (1700)

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

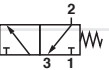
3/2 Air Pilot/Spring Return Normally Open

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K41DA00KA1KS6	1/4" NPT	Small Air	1/8" NPT	10" Hg - 150	65 - 150	54237-59
	K41DA00KA2KS6	1/4" NPT	Large Air	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41DA00KA6KS6	1/4" NPT	Low Pressure Operator	1/8" NPT	10" Hg - 150	4 - 150	54237-59
	K41DA00KA8KS6	1/4" NPT	Air Bleed	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41EA00KA1KS6	3/8" NPT	Small Air	1/8" NPT	10" Hg - 150	65 - 150	54237-59
	K41EA00KA2KS6	3/8" NPT	Large Air	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41EA00KA6KS6	3/8" NPT	Low Pressure Operator	1/8" NPT	10" Hg - 150	4 - 150	54237-59
	K41EA00KA8KS6	3/8" NPT	Air Bleed	1/8" NPT	10" Hg - 150	35 - 150	54237-59

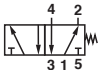
3/2 Air Pilot/Spring Return Normally Closed

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K41DA00KS6KA1	1/4" NPT	Small Air	1/8" NPT	10" Hg - 150	65 - 150	54237-59
	K41DA00KS6KA2	1/4" NPT	Large Air	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41DA00KS6KA6	1/4" NPT	Low Pressure Operator	1/8" NPT	10" Hg - 150	4 - 150	54237-59
	K41DA00KS6KS8	1/4" NPT	Air Bleed	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41EA00KS6KA1	3/8" NPT	Small Air	1/8" NPT	10" Hg - 150	65 - 150	54237-59
	K41EA00KS6KA2	3/8" NPT	Large Air	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41EA00KS6KA6	3/8" NPT	Low Pressure Operator	1/8" NPT	10" Hg - 150	4 - 150	54237-59
	K41EA00KS6KS8	3/8" NPT	Air Bleed	1/8" NPT	10" Hg - 150	35 - 150	54237-59

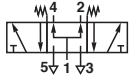
3/2 Air Pilot/Air Pilot

Symbol	Model	Port Size	Detented	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K41DA00KA1KA1	1/4" NPT		Small Air	1/8" NPT	10" Hg - 150	25 - 150	54237-59
	K41DA00KA2KA2	1/4" NPT		Large Air	1/8" NPT	10" Hg - 150	15 - 150	54237-59
	K41DA00KAAKAA	1/4" NPT	Yes	Large Air	1/8" NPT	10" Hg - 150	25 - 150	54237-59
	K41DA00KA1KA2	1/4" NPT		Air Bias	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41DA00KA6KA6	1/4" NPT		Low Pressure Operator	1/8" NPT	10" Hg - 150	1 - 150	54237-59
	K41DA00KA8KA8	1/4" NPT		Air Bleed	1/8" NPT	10" Hg - 150	15 - 150	54237-59
	K41EA00KA1KA1	3/8" NPT		Small Air	1/8" NPT	10" Hg - 150	25 - 150	54237-59
	K41EA00KA2KA2	3/8" NPT		Large Air	1/8" NPT	10" Hg - 150	15 - 150	54237-59
	K41EA00KAAKAA	3/8" NPT	Yes	Large Air	1/8" NPT	10" Hg - 150	25 - 150	54237-59
	K41EA00KA1KA2	3/8" NPT		Air Bias	1/8" NPT	10" Hg - 150	35 - 150	54237-59
	K41EA00KA6KA6	3/8" NPT		Low Pressure Operator	1/8" NPT	10" Hg - 150	1 - 150	54237-59
	K41EA00KA8KA8	3/8" NPT		Air Bleed	1/8" NPT	10" Hg - 150	15 - 150	54237-59

5/2 Air Pilot /Spring Return

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K71DA00KS6KA1	1/4" NPT	Small Air	1/8" NPT	10" Hg - 150	65 - 150	54237-56
	K71DA00KS6KA2	1/4" NPT	Large Air	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71DA00KS6KA6	1/4" NPT	Low Pressure Operator	1/8" NPT	10" Hg - 150	4 - 150	54237-56
	K71DA00KS6KA8	1/4" NPT	Air Bleed	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71EA00KS6KA1	3/8" NPT	Small Air	1/8" NPT	10" Hg - 150	65 - 150	54237-56
	K71EA00KS6KA2	3/8" NPT	Large Air	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71EA00KS6KA6	3/8" NPT	Low Pressure Operator	1/8" NPT	10" Hg - 150	4 - 150	54237-56
	K71EA00KS6KA8	3/8" NPT	Air Bleed	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71FA00KS6KA1	1/2" NPT	Small Air	1/8" NPT	10" Hg - 150	65 - 150	54237-56
	K71FA00KS6KA2	1/2" NPT	Large Air	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71FA00KS6KA6	1/2" NPT	Low Pressure Operator	1/8" NPT	10" Hg - 150	4 - 150	54237-56
	K71FA00KS6KA8	1/2" NPT	Air Bleed	1/8" NPT	10" Hg - 150	35 - 150	54237-56

5/2 Double Air Pilot

Symbol	Model	Port Size	Detented	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K71DA00KA1KA1	1/4" NPT		Small Air	1/8" NPT	10" Hg - 150	25 - 150	54237-56
	K71DA00KA2KA2	1/4" NPT		Large Air	1/8" NPT	10" Hg - 150	15 - 150	54237-56
	K71DA00KAAKAA	1/4" NPT	Yes	Large Air	1/8" NPT	10" Hg - 150	25 - 150	54237-56
	K71DA00KA1KA2	1/4" NPT		Air Bias	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71DA00KA6KA6	1/4" NPT		Low Pressure Operator	1/8" NPT	10" Hg - 150	1 - 150	54237-56
	K71DA00KA8KA8	1/4" NPT		Air Bleed	1/8" NPT	10" Hg - 150	15 - 150	54237-56
	K71EA00KA1KA1	3/8" NPT		Small Air	1/8" NPT	10" Hg - 150	25 - 150	54237-56
	K71EA00KA2KA2	3/8" NPT		Large Air	1/8" NPT	10" Hg - 150	15 - 150	54237-56
	K71EA00KAAKAA	3/8" NPT	Yes	Large Air	1/8" NPT	10" Hg - 150	25 - 150	54237-56
	K71EA00KA1KA2	3/8" NPT		Air Bias	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71EA00KA6KA6	3/8" NPT		Low Pressure Operator	1/8" NPT	10" Hg - 150	1 - 150	54237-56
	K71EA00KA8KA8	3/8" NPT		Air Bleed	1/8" NPT	10" Hg - 150	15 - 150	54237-56
	K71FA00KA1KA1	1/2" NPT		Small Air	1/8" NPT	10" Hg - 150	25 - 150	54237-56
	K71FA00KA2KA2	1/2" NPT		Large Air	1/8" NPT	10" Hg - 150	15 - 150	54237-56
	K71FA00KAAKAA	1/2" NPT	Yes	Large Air	1/8" NPT	10" Hg - 150	25 - 150	54237-56
	K71FA00KA1KA2	1/2" NPT		Air Bias	1/8" NPT	10" Hg - 150	35 - 150	54237-56
	K71FA00KA6KA6	1/2" NPT		Low Pressure Operator	1/8" NPT	10" Hg - 150	1 - 150	54237-56
	K71FA00KA8KA8	1/2" NPT		Air Bleed	1/8" NPT	10" Hg - 150	15 - 150	54237-56

5/3 All Ports Blocked

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K81DA00KACKAC	1/4" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-56
	K81EA00KACKAC	3/8" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-56
	K81FA00KACKAC	1/2" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-56

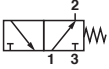
5/3 Center Open to Exhaust

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K81DA06KACKAC	1/4" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-58
	K81EA06KACKAC	3/8" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-58
	K81FA06KACKAC	1/2" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-58

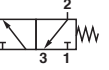
5/3 Center Open to Pressure

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K81DA05KACKAC	1/4" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-57
	K81EA05KACKAC	3/8" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-57
	K81FA05KACKAC	1/2" NPT	Large Air	1/8" NPT	10" Hg - 150	45 - 150	54237-57

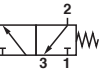
3/2 Air Pilot/Spring Return Normally Open

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K41DG00KA4KS6	1/4" ISO G	Small Air	1/8" ISO G	10" Hg - 150	65 - 150	54237-59
	K41DG00KA5KS6	1/4" ISO G	Large Air	1/8" ISO G	10" Hg - 150	35 - 150	54237-59
	K41EG00KA4KS6	3/8" ISO G	Small Air	1/8" ISO G	10" Hg - 150	65 - 150	54237-59
	K41EG00KA5KS6	3/8" ISO G	Large Air	1/8" ISO G	10" Hg - 150	35 - 150	54237-59

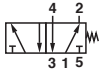
3/2 Air Pilot/Spring Return Normally Closed

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K41DG00KS6KA4	1/4" ISO G	Small Air	1/8" ISO G	10" Hg - 150	65 - 150	54237-59
	K41DG00KS6KA5	1/4" ISO G	Large Air	1/8" ISO G	10" Hg - 150	35 - 150	54237-59
	K41EG00KS6KA4	3/8" ISO G	Small Air	1/8" ISO G	10" Hg - 150	65 - 150	54237-59
	K41EG00KS6KA5	3/8" ISO G	Large Air	1/8" ISO G	10" Hg - 150	35 - 150	54237-59

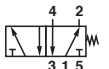
3/2 Air Pilot/Air Pilot

Symbol	Model	Port Size	Detented	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K41DG00KA4KA4	1/4" ISO G		Small Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-59
	K41DG00KA5KA5	1/4" ISO G		Large Air	1/8" ISO G	10" Hg - 150	15 - 150	54237-59
	K41DG00KABKAB	1/4" ISO G	Yes	Large Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-59
	K41DG00KA4KA5	1/4" ISO G		Air Bias	1/8" ISO G	10" Hg - 150	35 - 150	54237-59
	K41EG00KA4KA4	3/8" ISO G		Small Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-59
	K41EG00KA5KA5	3/8" ISO G		Large Air	1/8" ISO G	10" Hg - 150	15 - 150	54237-59
	K41EG00KABKAB	3/8" ISO G	Yes	Large Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-59
	K41EG00KA4KA5	3/8" ISO G		Air Bias	1/8" ISO G	10" Hg - 150	35 - 150	54237-59

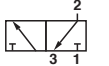
5/2 Air Pilot /Spring Return

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K71DG00KS6KA4	1/4" ISO G	Small Air	1/8" ISO G	10" Hg - 150	65 - 150	54237-56
	K71DG00KS6KA5	1/4" ISO G	Large Air	1/8" ISO G	10" Hg - 150	35 - 150	54237-56
	K71EG00KS6KA4	3/8" ISO G	Small Air	1/8" ISO G	10" Hg - 150	65 - 150	54237-56
	K71EG00KS6KA5	3/8" ISO G	Large Air	1/8" ISO G	10" Hg - 150	35 - 150	54237-56
	K71FG00KS6KA4	1/2" ISO G	Small Air	1/8" ISO G	10" Hg - 150	65 - 150	54237-56
	K71FG00KS6KA5	1/2" ISO G	Large Air	1/8" ISO G	10" Hg - 150	35 - 150	54237-56

5/2 Double Air Pilot

Symbol	Model	Port Size	Detented	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K71DG00KA4KA4	1/4" ISO G		Small Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-56
	K71DG00KA5KA5	1/4" ISO G		Large Air	1/8" ISO G	10" Hg - 150	15 - 150	54237-56
	K71DG00KABKAB	1/4" ISO G	Yes	Large Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-56
	K71DG00KA4KA5	1/4" ISO G		Air Bias	1/8" ISO G	10" Hg - 150	35 - 150	54237-56
	K71EG00KA4KA4	3/8" ISO G		Small Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-56
	K71EG00KA5KA5	3/8" ISO G		Large Air	1/8" ISO G	10" Hg - 150	15 - 150	54237-56
	K71EG00KABKAB	3/8" ISO G	Yes	Large Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-56
	K71EG00KA4KA5	3/8" ISO G		Air Bias	1/8" ISO G	10" Hg - 150	35 - 150	54237-56
	K71FG00KA4KA4	1/2" ISO G		Small Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-56
	K71FG00KA5KA5	1/2" ISO G		Large Air	1/8" ISO G	10" Hg - 150	15 - 150	54237-56
	K71FG00KABKAB	1/2" ISO G	Yes	Large Air	1/8" ISO G	10" Hg - 150	25 - 150	54237-56
	K71FG00KA4KA5	1/2" ISO G		Air Bias	1/8" ISO G	10" Hg - 150	35 - 150	54237-56

5/3 All Ports Blocked

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K81DG00KADKAD	1/4" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-56
	K81EG00KADKAD	3/8" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-56
	K81FG00KADKAD	1/2" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-56

5/3 Center Open to Exhaust

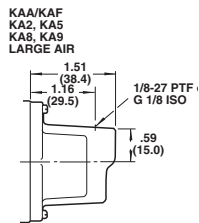
Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K81DG06KADKAD	1/4" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-58
	K81EG06KADKAD	3/8" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-58
	K81FG06KADKAD	1/2" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-58

5/3 Center Open to Pressure

Symbol	Model	Port Size	Operator	Pilot Port Size	Operating Pressure	Pilot Pressure	Repair Kit
	K81DG05KADKAD	1/4" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-57
	K81EG05KADKAD	3/8" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-57
	K81FG05KADKAD	1/2" ISO G	Large Air	1/8" ISO G	10" Hg - 150	45 - 150	54237-57

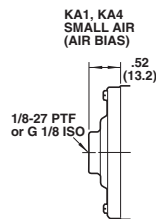
Replacement Parts

Model	Pilot Port size	Description	Positions
KA1	1/8" NPT	Small Air	2-position
KA2	1/8" NPT	Large Air	2-position
KA6	1/8" NPT	Low Pressure Air	2-position
KA8	1/8" NPT	Air Bleed	2-position
KAA	1/8" NPT	Large Air Detented	2-position
KAC	1/8" NPT	Large Air	3-position
KA4	1/8" ISO G	Small Air	2-position
KA5	1/8" ISO G	Large Air	2-position
KAB	1/8" ISO G	Large Air Detented	2-position
KAD	1/8" ISO G	Large Air	3-position
KS6		Spring Return	2-position



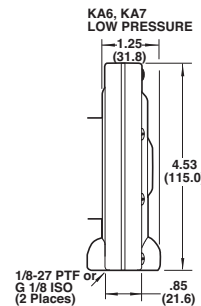
Air Bleed Operators

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.



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.



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.

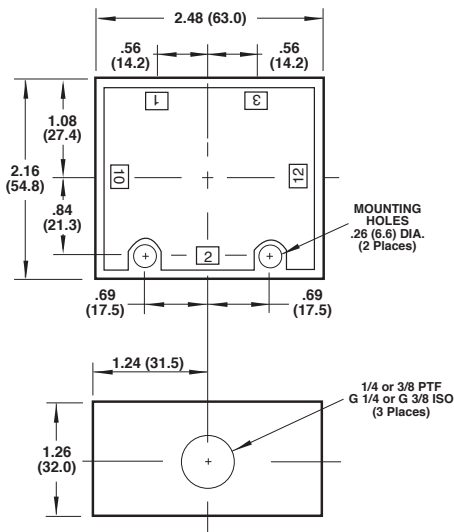
Dimensions in inches (mm)

Replacement Parts

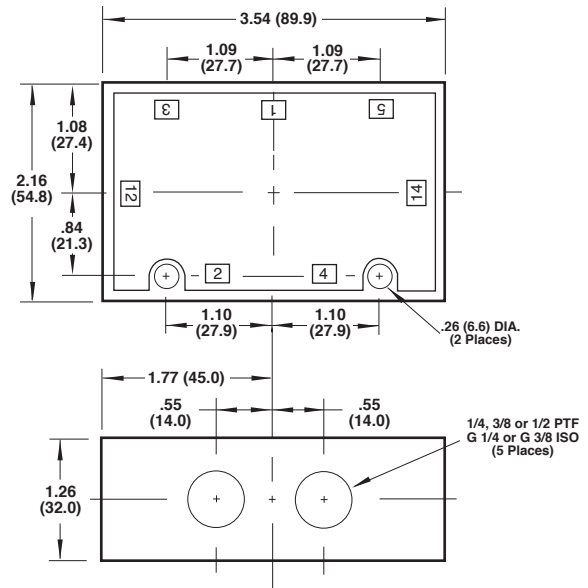
NTP	ISO G Thread	Function	Port Size	Replacement Spool
K41DA00	K41DG00	3-ported / 2 position	1/4"	54237-59
K41ED00	K41ED00	3-ported / 2 position	3/8"	54237-59
K71DA00	K71DG00	5-ported / 2 position	1/4"	54237-56
K71EA00	K71EG00	5-ported / 2 position	3/8"	54237-56
K71FA00	K71FG00	5-ported / 2 position	1/2"	54237-56
K81DA00	K81DG00	5-ported / 3 position APB	1/4"	54237-56
K81EA00	K81EG00	5-ported / 3 position APB	3/8"	54237-56
K81FA00	K81FG00	5-ported / 3 position APB	1/2"	54237-56
K81DA06	K81DG06	5-ported / 3 position COE	1/4"	54237-58
K81EA06	K81EG06	5-ported / 3 position COE	3/8"	54237-58
K81FA06	K81FG06	5-ported / 3 position COE	1/2"	54237-58
K81DA05	K81DG05	5-ported / 3 position COP	1/4"	54237-57
K81EA05	K81EG05	5-ported / 3 position COP	3/8"	54237-57
K81FA05	K81FG05	5-ported / 3 position COP	1/2"	54237-57

Inline Bodies

3-WAY – 1/4" & 3/8" PORTS
K41



4-WAY – 1/4", 3/8", 1/2" PORTS
K71 or K81



Dimensions in inches (mm)