

3-Way Pilot Valves

Models 4057 and 4457 Aluminum and stainless steel versions

Overview

AMOT Models 4057 and 4457 3-way valves have been developed for use in manual and automatic hydraulic or pneumatic control systems. They offer versatility in operating requirements and allowable pressure limits. For a 1/4" size control valve, they offer exceptional flow capacity.

Typical applications

Developed for use in manual and automatic control systems:

- Hydraulic fluid control
- Actuator control
- Pneumatic panel systems
- Safety control systems

Key features and benefits

- Suitable for use on many types of fluid:
 - Clean air
 - Natural gas
 - LP gases
 - Petroleum base lubricants
 - Hydraulic oils
 - Many other fluids
- Balanced force design, pressure can be applied to any port - simplifies system design
- Can be panel or bracket mounted - simple, flexible and low cost installation
- Uses the AMOT patented "Tad Pole" seal - provides lower friction and longer cycle life than conventional O-rings



**Type 4057D Valve
(Aluminum)**



**Type 4457A Valve
(Stainless Steel)**

amot

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3-Way Pilot Valves - Models 4057/4457

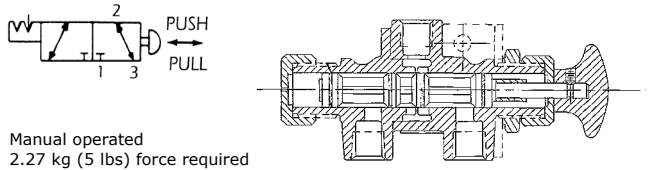
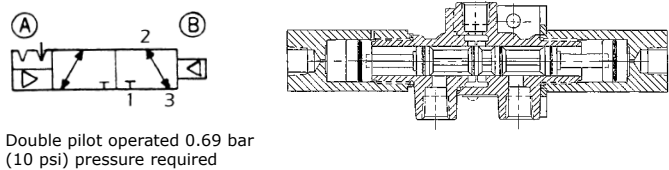
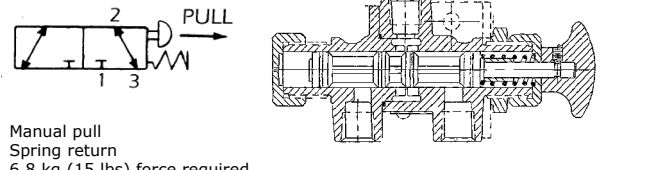
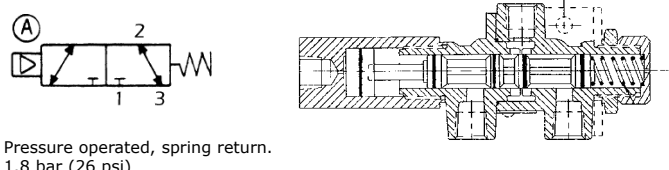
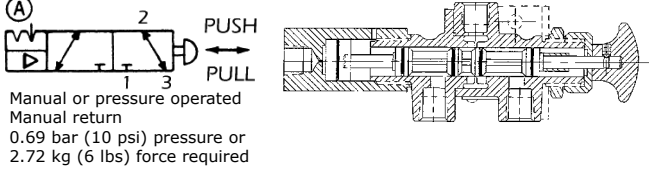
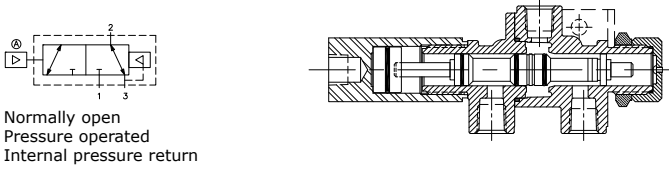
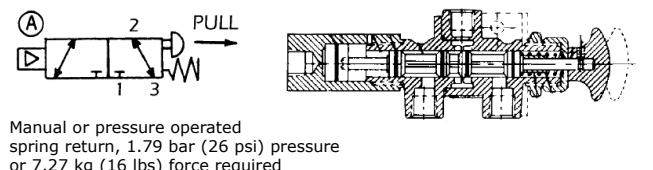
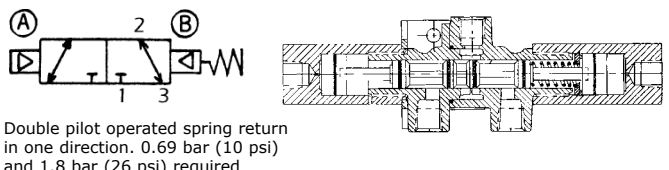
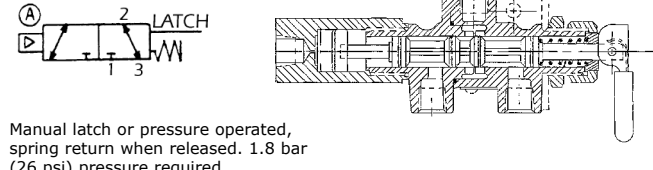
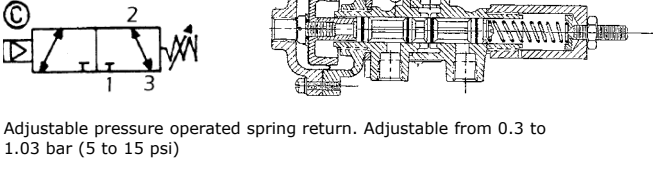
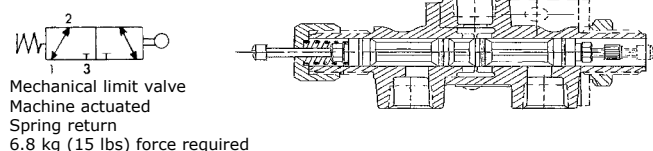
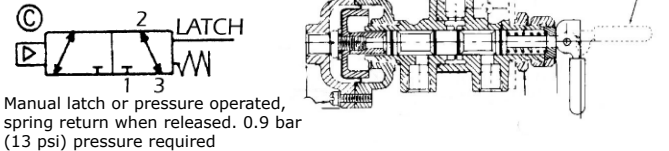
Operation

The 3-way pilot valves feature modular construction and incorporate a sliding spool. The standard spool has a small center dead spot position and no valve port overlap. With the spool fully to the left (rest position), Port 2 is open to Port 3 and Port 1 is closed. With the spool moved to the right (actuated position),

Port 2 is open to Port 1 and Port 3 is closed.

The valves are available with a variety of manual and pressure operators and with manual, pressure or spring returns. See the valve types table below for the standard variations which are available.

Valve Types

<p>Type CA</p>  <p>Manual operated 2.27 kg (5 lbs) force required</p>	<p>Type CF</p>  <p>Double pilot operated 0.69 bar (10 psi) pressure required</p>
<p>Type CB</p>  <p>Manual pull Spring return 6.8 kg (15 lbs) force required</p>	<p>Type CG</p>  <p>Pressure operated, spring return. 1.8 bar (26 psi)</p>
<p>Type CD</p>  <p>Manual or pressure operated Manual return 0.69 bar (10 psi) pressure or 2.72 kg (6 lbs) force required</p>	<p>Type C1</p>  <p>Normally open Pressure operated Internal pressure return</p>
<p>Type CE</p>  <p>Manual or pressure operated spring return, 1.79 bar (26 psi) pressure or 7.27 kg (16 lbs) force required</p>	<p>Type C2</p>  <p>Double pilot operated spring return in one direction. 0.69 bar (10 psi) and 1.8 bar (26 psi) required</p>
<p>Type CP</p>  <p>Manual latch or pressure operated, spring return when released. 1.8 bar (26 psi) pressure required.</p>	<p>Type CT</p>  <p>Adjustable pressure operated spring return. Adjustable from 0.3 to 1.03 bar (5 to 15 psi)</p>
<p>Type CS</p>  <p>Mechanical limit valve Machine actuated Spring return 6.8 kg (15 lbs) force required</p>	<p>Type SB</p>  <p>Manual latch or pressure operated, spring return when released. 0.9 bar (13 psi) pressure required</p>

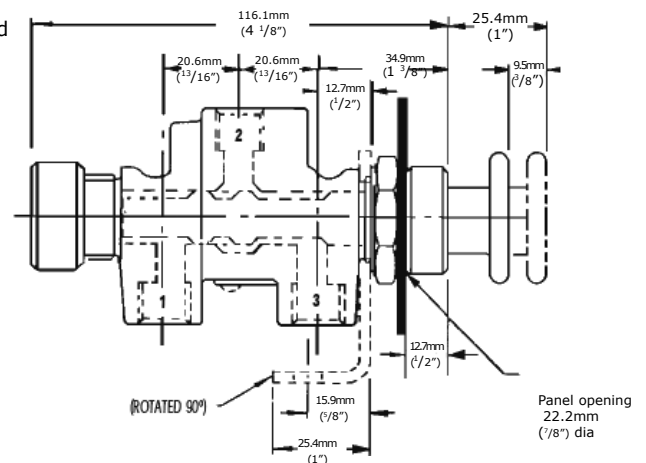
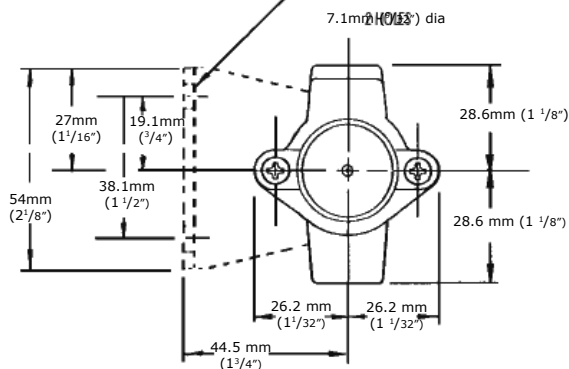
3-Way Pilot Valves - Models 4057/4457

Specification

	4057	4457
Body material	Anodised aluminum	Stainless steel
Standard spool and internal materials	Anodised aluminum	Anodised aluminum
Standard seal materials	Viton	Viton
Maximum temperature	120°C (250°F)	120°C (250°F)
Flow coefficient	Cv = 1.2	Cv = 1.2
Maximum pressure at Ports 1, 2 or 3	8.62 bar (125 psi)	8.62 bar (125 psi)
Maximum pressure at Ports A or B	10.3 bar (150 psi)	10.3 bar (150 psi)
Maximum pressure at Port C (types CT & SB only)	8.62 bar (125 psi)	Not available
Net weight	0.3 to 0.9 kg (0.6 to 2 lbs)	0.8 to 2.6 kg (1.7 to 5.7 lbs)

Dimensions

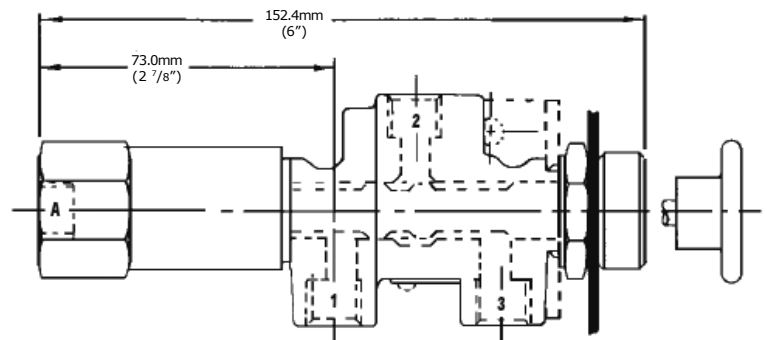
- Type CA:** Manual operated 2.27 kg (5 lbs) force required
Type CB: Manual pull spring return 6.8 kg (15 lbs) force required



Type CD: Manual or pressure operated manual return, 0.69 bar (10 psi) pressure or 2.72 kg (6 lbs) force required

Type CE: Manual or pressure operated spring return, 1.79 bar (26 psi) pressure or 7.26 kg (16 lbs) force required

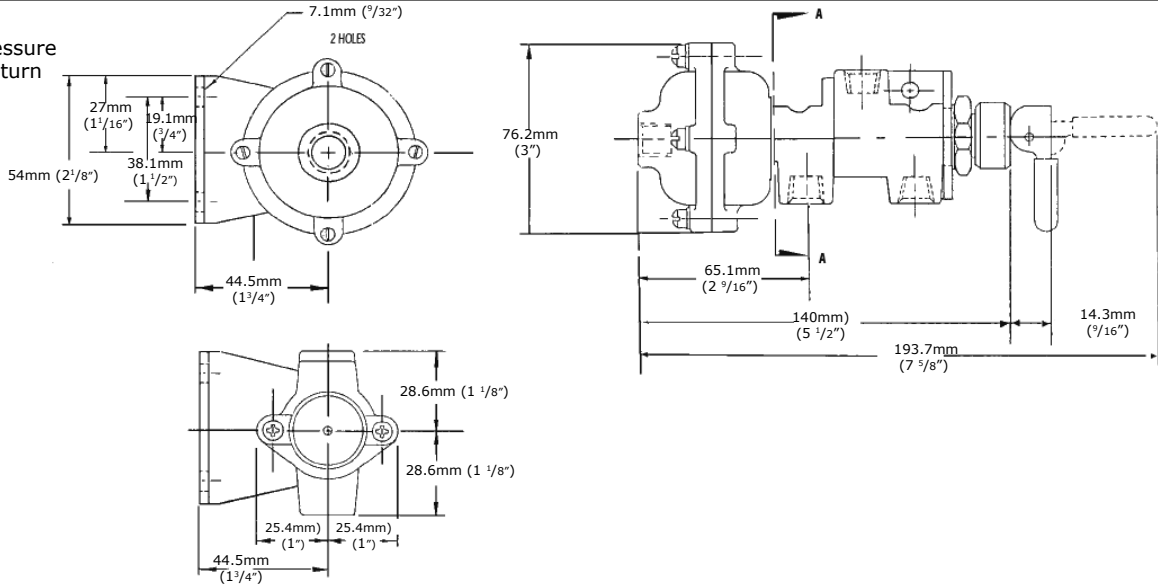
Type CG: Pressure operated, spring return, 1.79 bar (26 psi) pressure required



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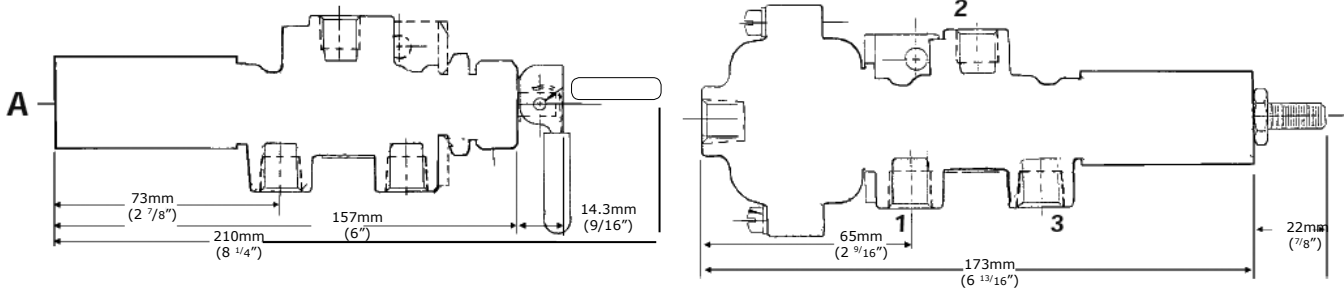
Dimensions continued

Type SB:
Manual latch or pressure operated, spring return when released
0.9 bar (13 psi)



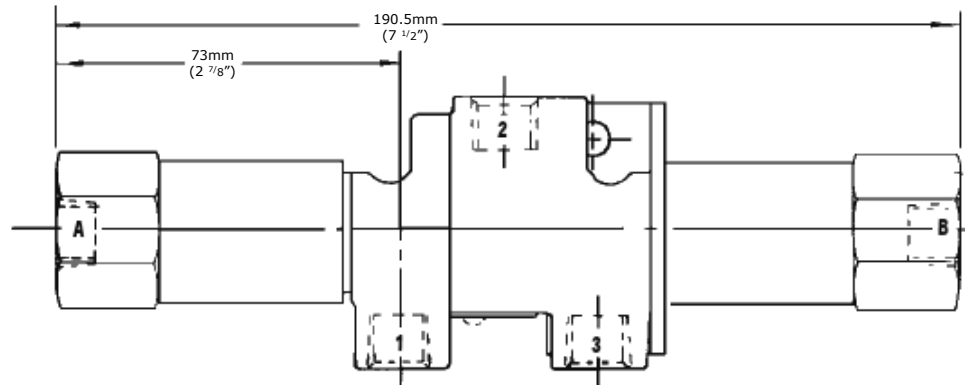
Type CP: Manual latch or pressure operated, spring return when released. 1.8 bar (26 psi) pressure required.

Type CT: Adjustable pressure operated spring return. Adjustable from 0.3 to 1.03 bar (5 to 15 psi).



Type CF: Double pilot operated, 0.69 bar (10 psi) pressure required.

Type C2: Double pilot operated, spring return in one direction, 0.69 bar (10 psi) and 1.79 bar (26 psi) pressure required.



3-Way Pilot Valves - Models 4057/4457

How to order

Use the table below to select the unique specification of your 4057 3-Way Pilot Valve

Example Code	4057D	019F	1	-AA	
Basic Model					
Basic Model	4057D				Anodized Aluminium
Operator, Finish and Thread - Gulf-Proofed NPT					
Operator, Finish and Thread - Gulf Proofed Anodised Aluminium NPT	019F				CA - Manual operated - 2.2 kg / 5 lbs force required
	020F				CB - Manual pull spring return 6.8 kg / 15 lbs force required
	022H				CD - Manual or pressure operated manual return, 10 psi (0.69 bar) pressure or 2.72 kg / 6 lbs force required
	023H				CE - Manual or pressure operated spring return, 1.79 bar / 26 psi pressure or 2.72 kg / 6 lbs force required
	025H				CP - Manual latch or pressure operated, spring return when released. 1.8 bar / 26 psi pressure required
	027K				SB - Manual latch or pressure operated, spring return when released 0.9 bar / 26 psi
	029K				CT - Adjustable pressure operated spring return. Adjustable from 0.3 to 1.03 bar / 5 to 15 psi
	031H				CG - Pressure operated, spring return, 1.79 bar / 26 psi pressure required
	032J				CF - Double pilot operated, 0.69 bar / 10 psi pressure required
	035J				C2 - Double pilot operated, spring return in one direction, 0.69 bar / 10 psi and 1.79 bar / 26 psi pressure required
Standard Spool - Valve type					
Spool	1				Standard centre dead spot
	2				Valve port overlap
	5				Standard centre dead spot
	6				Valve port overlap
					CA, CB, CD, CE, CP, CT, CG, CF, C2
					SB
Customer Special Code					
Customer Special Requirements				-AA	Standard Product
				***	Customer Special Code

Use the table below to select the unique specification of your 4457 3-Way Pilot Valve

Example Code	4457A	001F	1	-AA	
Basic Model					
Basic Model	4457A				Stainless Steel
Operator, Finish and Thread - Stainless Steel NPT					
Operator, Finish and Thread - Stainless Steel NPT	001F				CA - Manual operated - 2.2 kg / 5 lbs force required
	002F				CB - Manual pull spring return 6.8 kg / 15 lbs force required
	004H				CD - Manual or pressure operated manual return, 0.69 bar / 10 psi pressure or 2.72 kg / 6 lbs force required
	005H				CE - Manual or pressure operated spring return, 1.79 bar / 26 psi pressure or 7.27 kg / 16 lbs force required
	007H				CP - Manual latch or pressure operated, spring return when released. 1.79 bar / 26 psi pressure required
	013H				CG - Pressure operated, spring return, 1.79 bar / 26 psi pressure required
	014J				CF - Double pilot operated, 0.69 bar / 10 psi pressure required
Spool - Valve Type					
Spool	1				Standard center dead spot
	2				Valve port overlap
Customer Special Code					
Customer Special Requirements				-AA	Standard Product
				***	Customer Special Code

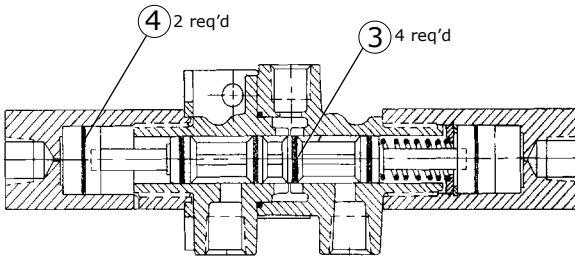
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Options

Bracket Mounting or Panel Mounting. A satin chrome nut, Part Number: 3496L001 is available as an option, and it substitutes for the standard nut to improve the appearance for the front of a panel mounting.

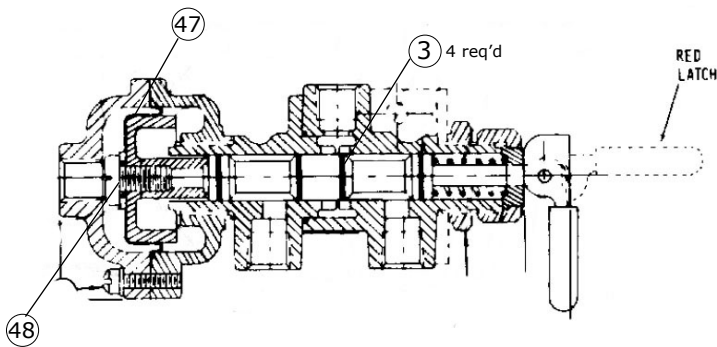
Red Knob: Part Number 681L001 is available for types CA, CB, CD or CE as a substitute for the standard black knob.

Service Kits



For all types except CT & SB (Viton) Kit 9113X001 (May contain extra parts when used with some valves).			
Ref no.:	Qty	Description	Part no.
3	4	Seal ring, Viton	7896L002
4	2	Seal ring, Viton	7898L002

Types CT & SB



For Types CT & SB (Viton) Kit 9128X001			
Ref no.:	Qty	Description	Part no.
3	4	Seal ring, Viton	7896L002
47	1	Diaphragm, Viton	2254L002
48	1	Thread seal	7898L002

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