

4-Way Pilot Valves

Models 4058D & 4458A

Typical applications

- Developed for use in manual and automatic control systems:
 - Hydraulic fluid control
 - Actuator control
 - Pneumatic panel systems
 - Safety control systems




**Model 4058D
(Aluminum)**

Key features and benefits

- Balanced force design
 - Pressure can be applied to any port
- Center dead spot
 - No port overlap
- Arranged for panel or bracket mounting
- Available in aluminum or 316 stainless steel

Accreditations available

- PED Suitable for Group 1 & 2 liquids & gases (Ensure materials are compatible)
- ATEX  II 3G TX X
- CE 4058D Complies with all relevant EU directives

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4-Way Pilot Valves - Models 4058D/4458A

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4-Way Pilot Valves - Models 4058D/4458A

Overview

AMOT Models 4058 and 4458 4-way valves were developed for use in manual and automatic hydraulic or pneumatic control systems. They offer versatility in operation requirements and allowable pressure limits. For a ¼" size control valve, they offer exceptional flow capacity.

These valves are suitable for use on clean air, natural gas, L.P. gases, petroleum-based lubricants and hydraulic oils as well as many other fluids making use of the patented "Tad-Pole" seal from AMOT which provides for lower friction and longer cycle life than conventional o-rings.

Operation

Each valve is carefully assembled, tested and inspected to ensure that high quality standards are met. Valves are made from precision cast and machined aluminum or stainless steel parts.

The unique porting arrangement eliminates steel ring cutting and permits pressure inlet at any port without danger of seal "blow out". Standard construction permits valves pressures to 125 psi.

Installation

- All connections are made with ¼" pipe thread fittings.
- Apply a quality thread sealant such as Loctite™ Pipe Sealant to pipe thread connections, but do not permit it to enter the valve passages.
- Teflon thread sealing tape may be used but must be applied so that shreds of the tape do not enter the valve.
- Avoid over-tightening fittings on the valve port bosses as they may be cracked, especially when Teflon thread sealing tape is used.
- All 4058D/4458A valves may be bracket mounted; most are also suitable for panel mounting.

Valve Characteristics

Operator, finish and thread

Operator, finish and thread (B) ¹		Valve type (see page 6)	Description
4058D Gulf-proofed NPT	4458A Stainless steel NPT		
011B	010B	CA	Manual operated - 2.2 kg (5 lbs) force required
012B	009B	CB	Manual pull spring return - 6.8 kg (15 lbs) force required
014E	007E	CD	Manual or pressure operated manual return - 0.69 bar (10 psi) pressure or 2.72 kg (6 lbs) force required
015E	006E	CE	Manual or pressure operated spring return - 1.79 bar (26 psi) pressure or 7.27 kg (16 lbs) force required
016H	005H	CF	Double pilot operated - 0.69 bar (10 psi) pressure required
017E	004E	CG	Pressure operated spring return - 1.79 bar (26 psi) pressure required
018E	003E	CP	Manual latch or pressure operated spring return when released - 1.8 bar (26 psi) pressure required
019L	-	CT	Adjustable pressure operated spring return - Adjustable from 0.3 - 1.03 bar (5 - 15 psi) pressure required

NOTES:

¹ If your operator, finish and thread code does not correspond with the given values, please contact the facility to confirm your operator, finish and thread code.

4-Way Pilot Valves - Models 4058D/4458A

Valve Characteristics Continued

Options


- All valves may be bracket mounted; most are also suitable for 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.

How to Order

Use the table below to select the unique specification of your 4058/4458 4-Way Pilot Valves.

Examples	4058D	014E	1	-AA	Code description	Comments
	4458A	010B	1	-AA		
Basic model (A)						
Basic model (A)	4058D				Precision cast aluminum	
	4458A				316 Stainless steel	
Operator, finish and thread (B)						
Operator, finish and thread (B)		*			For operator, finish and threads available, refer to the operator, finish and thread table on page 3,	
Spool (C)						
Spool (C)			1		Standard spool	Anodized aluminum
Customer special requirements (D)						
Customer special requirements (D)				-AA	Standard	May be omitted
				-***	Customer special code	

Specification

	4058D		4458A	
	Metric units	English units	Metric units	English units
Body material	Precision cast aluminum		316 Stainless steel	
Standard spool material	Anodized aluminum		Anodized aluminum	
Standard seal materials	Viton		Viton	
Maximum temperature	120°C	248°F	120°C	248°F
Flow coefficient	Kv = 1.04	Cv = 1.2	Kv = 1.04	Cv = 1.2
Maximum pressure at ports 1, 2, 3, 4, or 5*	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 (type CT ONLY)**	8.62 bar	125 psi	8.62 bar	125 psi
Net weight	0.4-1.0 kg	0.9-2.2 lbs	1.0-2.9 kg	2.2-6.4 lbs
Accreditations available	PED	Suitable for Group 1 & 2 liquids & gases (Ensure materials are compatible)		
	ATEX		II 3G TX X	
	CE	4058D Complies with all relevant EU directives		

* 10.34 bar (150 psi) if a slight increase in operation force and pressures is acceptable.

** 24.11 bar (350 psi) if a suitable orifice is used to prevent damage to valve components from sudden application of pressure.

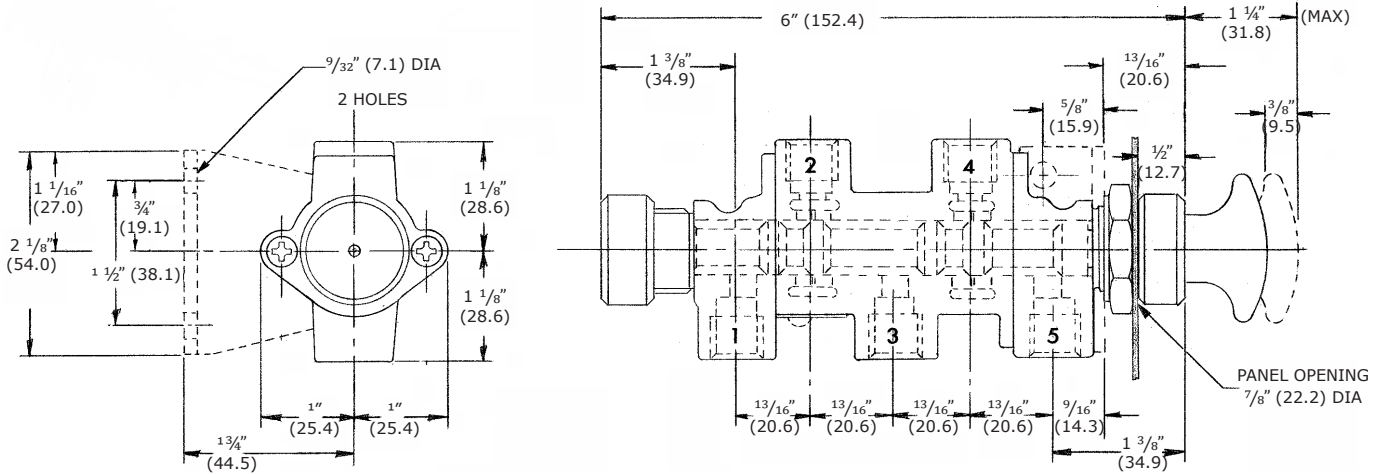
4-Way Pilot Valves - Models 4058D/4458A

Dimensions

Dimensions - inches (mm)

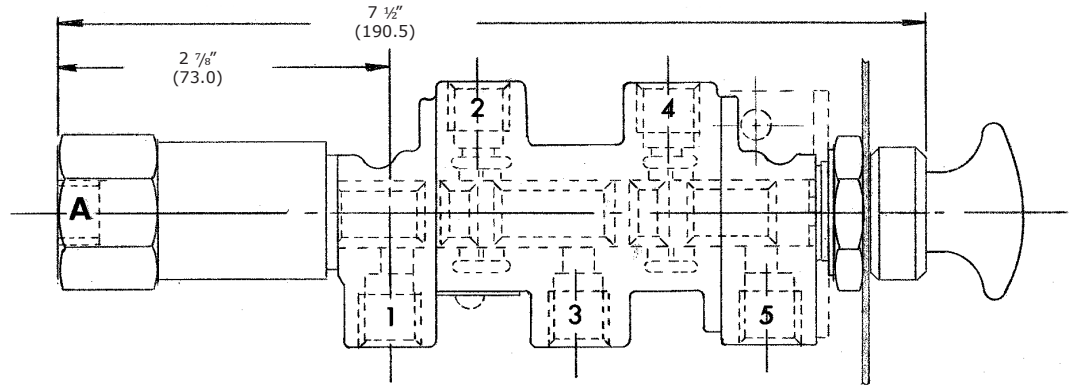
Type CA: Manual operated - 2.27 kg (5 lbs) force required

Type CB: Manual pull spring return - 6.8 kg (15 lbs) force required

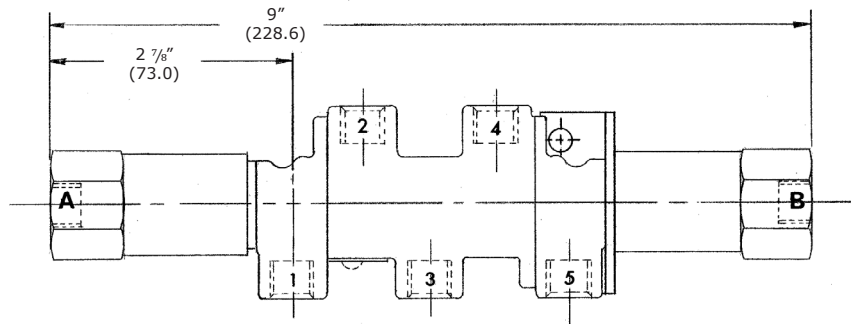


Type CD: Manual or pressure operated manual return - 0.69 bar (10 psi) pressure or 2.72 kg (6 lbs) force required

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

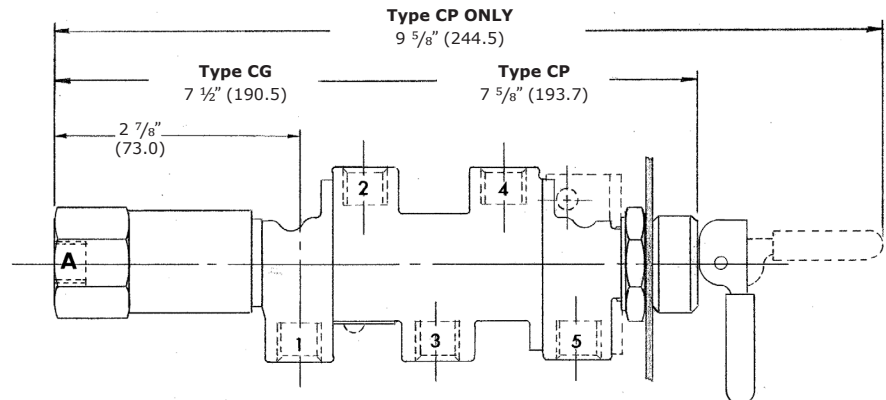


Type CF: Double pilot operated - 0.69 bar (10 psi) pressure required



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

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

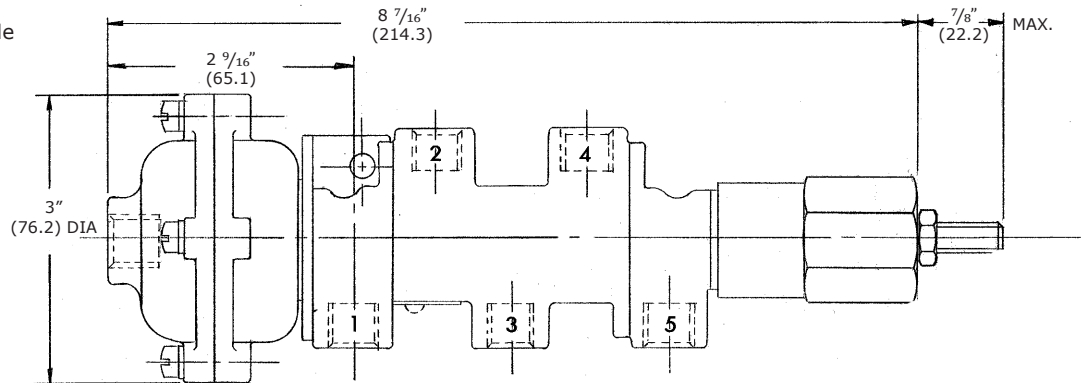


4-Way Pilot Valves - Models 4058D/4458A

Dimensions Continued

Dimensions - inches (mm)

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



Maintenance and Service Parts

Over time, exposure to foreign chemicals and particulate matter as well as prolonged operation at extreme conditions may reduce the effectiveness of the valve. At such time, AMOT Pilot Valves can be restored to original performance simply by installing an AMOT pilot valve service kit. Service kits include all new seals and diaphragm required for normal maintenance.

When these valves are used in safety control systems, it is recommended that the system be checked MONTHLY for proper functioning. The unit must be kept clean and free of dust. The end cap is to be regularly inspected for signs of damage or rust and replaced if necessary.

How to order service kits

Service kits are available with seals and diaphragm required to service the valve. Order service kits by the service kit model number which is identified by the basic valve model and operator, finish and thread code found in the AMOT valve part number.

Ensure that regular inspections of the valve and end cap are carried out to ensure that it is kept clean and free from wear, damage or rust. If the valve shows signs of process fluid leakage, examine the seals. If the valve is subjected to prolonged periods of high vibration at low temperatures, it is possible that wear may occur to the disc assembly and it is recommended that the valve is isolated and safely removed from the system, and returned to AMOT for examination.

AMOT designs and tests all its products to ensure that high quality standards are met. For good product life, carefully follow AMOT's installation and maintenance instructions; failure to do so could result in damage to the equipment being protected or controlled.

Refer to the AMOT valve part number printed on the valve nameplate and the AMOT valve part number structure in the how to order section on page 4.

4-Way Pilot Valves - Models 4058D/4458A

Maintenance and Service Parts Continued

Service kit model number structure

- 1) Identify the basic valve model, located in the Basic model (A) section of the AMOT valve part number.
- 2) Identify the operator, finish and thread code, located in the Operator, finish and thread (B) section of the AMOT valve part number.
- 3) Use those codes in the service kit identification table below to identify the proper service kit needed to service the valve. Two examples are shown in the table below.

Service kit identification				
Basic model (A)	Operator, finish and thread (B) ¹			Service kit model number
4458A	010B			9129X001
	009B			
	007E			
	006E			
	005H			
	004E			
	003E			
4058D	011B			9130X001
	012B			
	014E			
	015E			
	016H			
	017E			
	018E			
	019L			
Examples				
Valve part number				Service kit model number
4058D	019L	1	-AA	9130X001
4458A	010B	1	-AA	9129X001

Service parts (refer to diagrams on page 8)

Service kit parts			
Ref no.	Qty. ²		Description
	9129X001	9130X001	
3	6	6	Spool seals
4	2	-	Piston seals
47	-	1	Diaphragm
48	-	1	Thread seal

NOTES:

¹ If your operator, finish and thread code does not correspond with the given values, please contact the facility to confirm your operator, finish and thread code.

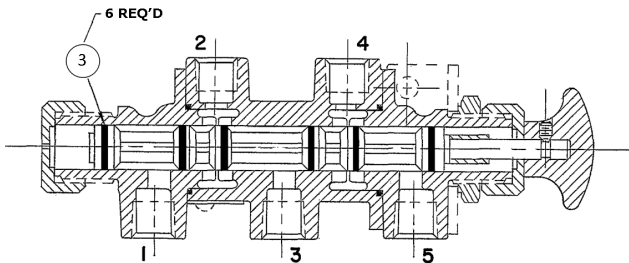
² Service kit 9129X001 contains extra parts when used with valve types CA, CB, CD, CE, CG and CP. Please discard of any extra parts.

4-Way Pilot Valves - Models 4058D/4458A

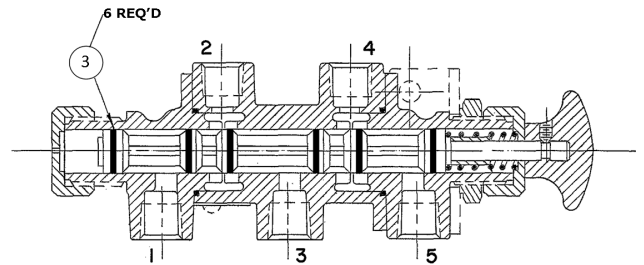
Maintenance and Service Parts Continued

Service parts continued

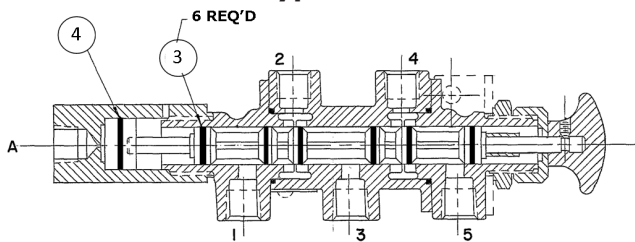
Type CA



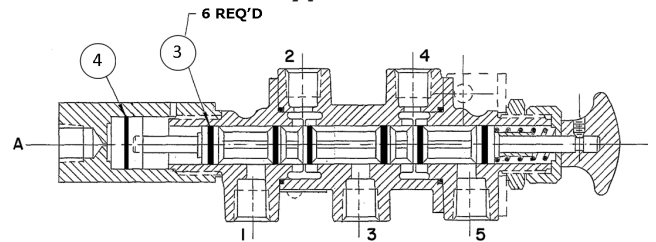
Type CB



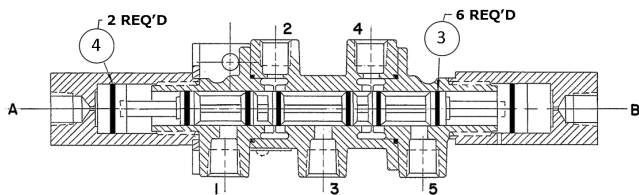
Type CD



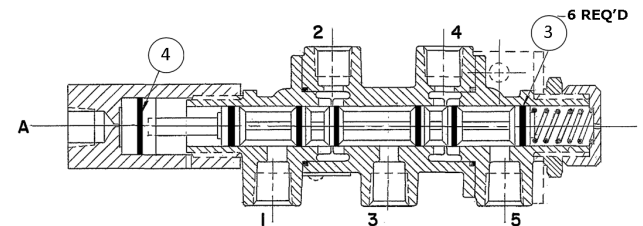
Type CE



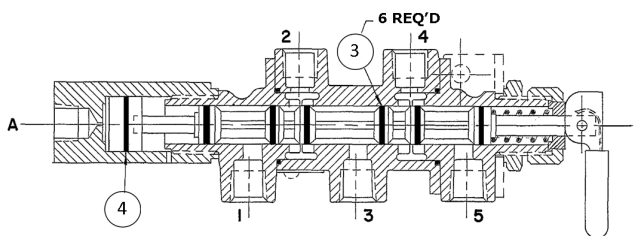
Type CF



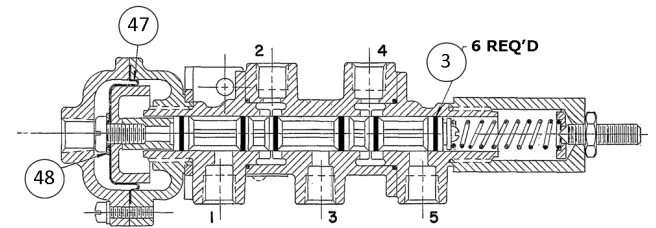
Type CG



Type CP



Type CT



4-Way Pilot Valves - Models 4058D/4458A

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WARNING

This product can expose you to chemicals including Lead, which is known to the state of California to cause cancer and birth defects or other reproductive harm. For more information go to www.P65Warnings.ca.gov.