



Fluid Power Specialist
Since 1948

LOGIC POPPET VALVES AND CARTRIDGE MANIFOLD SYSTEMS

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VERSION 15.0

RETURN POLICY

All returns must be made within 90 days of purchase.

A 20% restock charge will be assessed on all items approved for return in stock. A return authorization number will be required for all items returned and return freight will be prepaid by the customer. All items must be in new/undamaged condition for resale in order to obtain credit. All items returned will be for product credit only.

NO REFUNDS, CASH OR CHECK WILL BE ISSUED

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TABLE OF CONTENTS

	PAGE
INSERT	3
DIN 24342 Logic Poppet Valves	4
COVERS	7
Directional Control	8
Pressure Control.....	24
Flow Control.....	30
ACTIVE POPPETS	37
DIN 24342 Active Poppet Valves W/Limit Switch.....	40
SINGLE DIN CAVITY BLOCKS	43
UCB Blocks.....	43
80mm DIN Block.....	45
PILOT OPERATED DIRECTIONAL CONTROL VALVES CIRCUITS	49
Directional Circuit / Regen.....	50
Pump Circuit.....	51
90 Degree Flanged Valves	53
Check Valve.....	54
Dump Valve.....	56
Bi Directional Valve.....	58
Relief Valve.....	60
Load Relief Valve.....	62
Technical Information	65

INSERTS

DIN 24342 SLIP-IN LOGIC CARTRIDGE VALVES/INSERTS

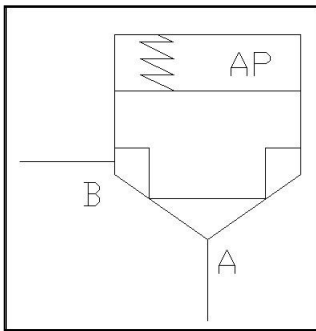
SIZES 16mm TO 80mm

6000 PSI

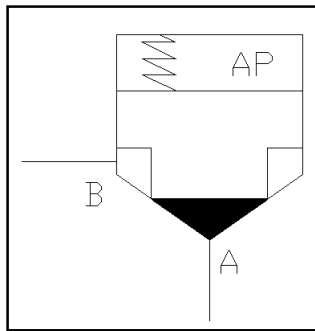
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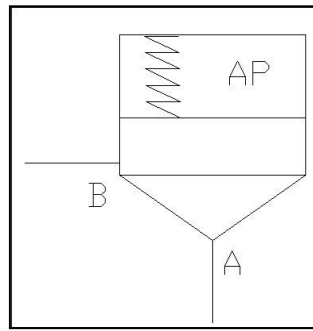
- ✓ Compatible with standard DIN 24342 cavities
- ✓ Sizes 16mm up to 80mm
- ✓ Two different area ratios available
- ✓ Dampening nose option
- ✓ Four spring pressures available
- ✓ Zero Leak seal between A & B
- ✓ Zero Leak seal between AP & B “Z option”
- ✓ Close fit tolerance between poppet & sleeve
- ✓ Excellent pressure drop characteristics
- ✓ Nose & Side removable orifice option



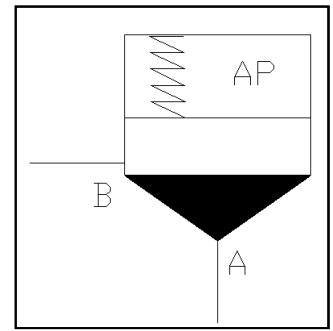
1.6:1 AP:A area ratio



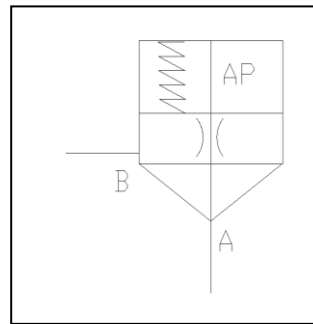
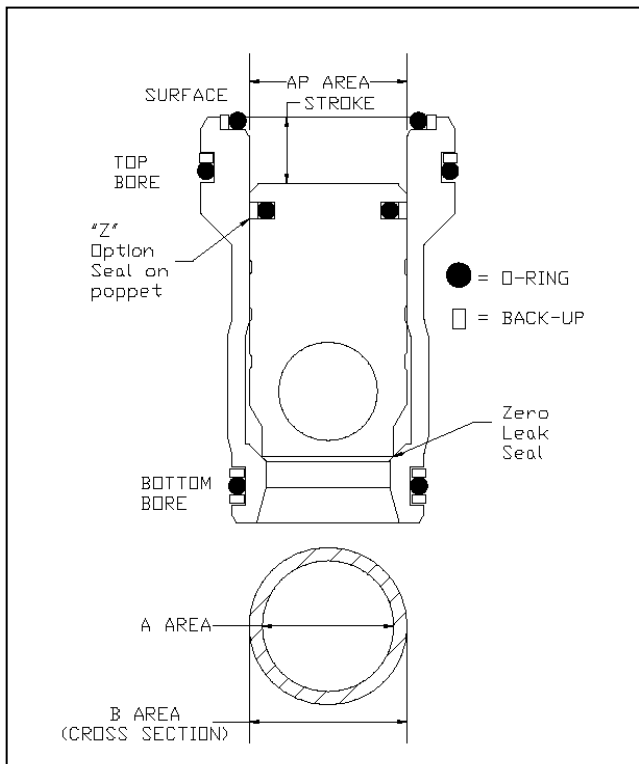
1.6:1 ratio w/ Dampening



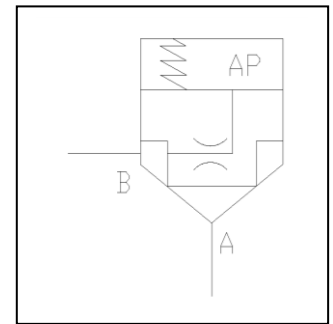
1:1 AP:A ratio



1:1 ratio w/ Dampening



1:1 AP:A ratio w/ Orifice



1:1.6 AP:B ratio w/ Orifice

FORCE BALANCE: (Force = Pressure*Area)

$$P_{AP} * A_{AP} + S_{ring}Force = P_A * A_A + P_B * A_B$$

Valve Open if,

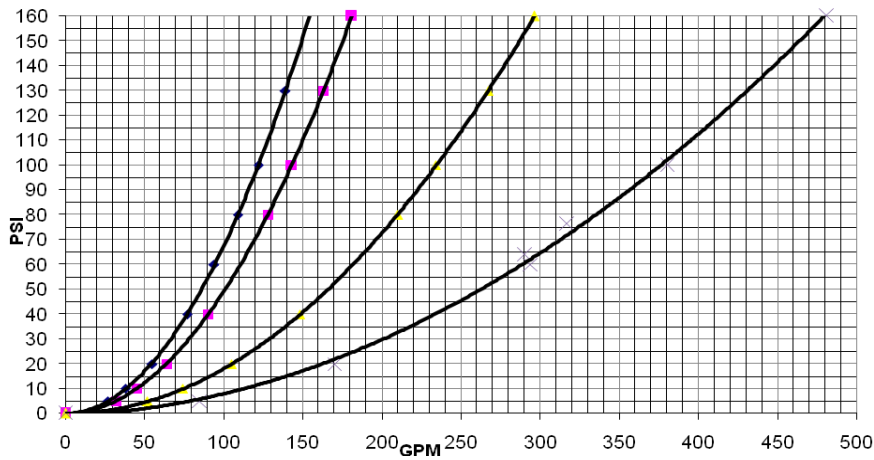
$$P_{AP} * A_{AP} + S_{ring}Force < P_A * A_A + P_B * A_B$$

Valve Closed if,

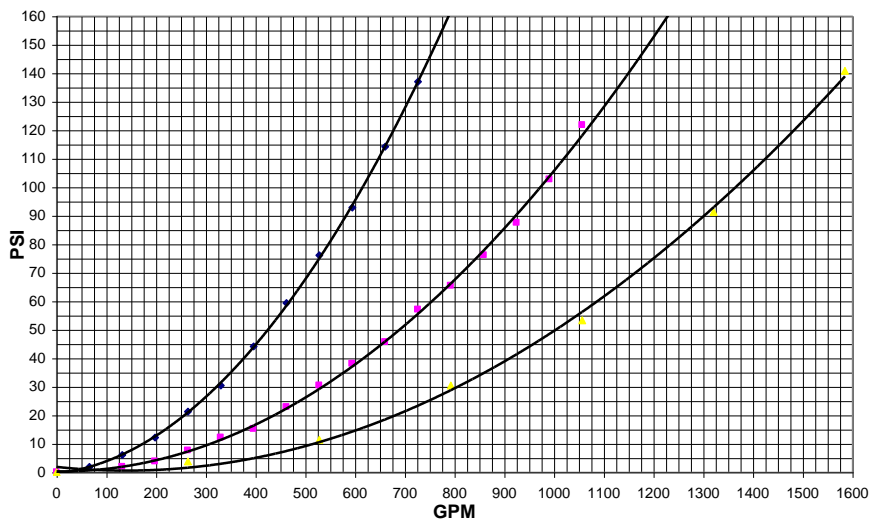
$$P_{AP} * A_{AP} + S_{ring}Force > P_A * A_A + P_B * A_B$$

Performance Curves

Pressure Drop vs. Flow Rate for LCV-16, LCV-25, LCV-32 & LCV-40
W/O Dampening, Viscosity = 225 SUS @ 100 F, T= 100 F



Pressure Drop vs. Flow Rate for LCV-50, LCV-63, & LCV-80
W/O Dampening, Viscosity = 225 SUS @ 100°F, T= 100°F



Pressure drops for Dampening Valves are on average 60% higher than flows shown.

Order Code

AMT-LCV-**-**-D-**-**-*

Almo Manifold & Tool

Logic Cartridge Valve

Size: **16, 25, 32, 40, 50, 63, 80**mm

1.6 = 1.6:1 AP:A area ratio
1 = 1:1 AP:A area ratio

Blank = NO Dampening Nose
D = Dampening Nose

5, 15, 30, or 60 psi Spring Cracking Pressure

Blank = No Orifice
Z = Seal on Poppet "Zero Leak"
OA = With Orifice AP to A
OB = With Orifice AP to B

Blank = Buna 90 O Rings
V = Viton O Rings

NOTES:

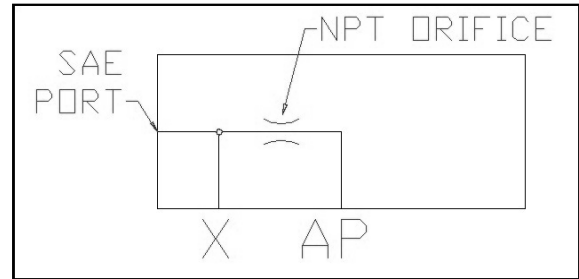
COVERS

DIN 24342 COVER FOR DIRECTIONAL CONTROL

SIZES 16mm TO 80mm

5000 PSI

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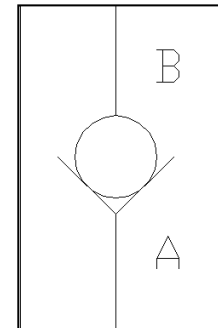
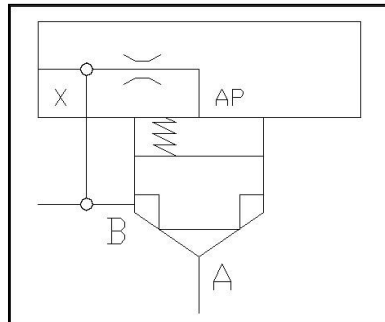


- ✓ Removable NPT orifice plug
- ✓ SAE O-ring port for access to NPT orifice, gauging, or remote piloting

Applications

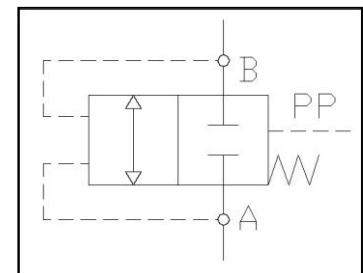
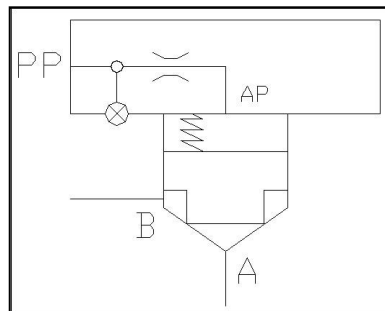
Check Valve

Provides free-flow from “A to B” & check function from “B to A” by connecting the “X” pilot to the “B” port of the valve insert.

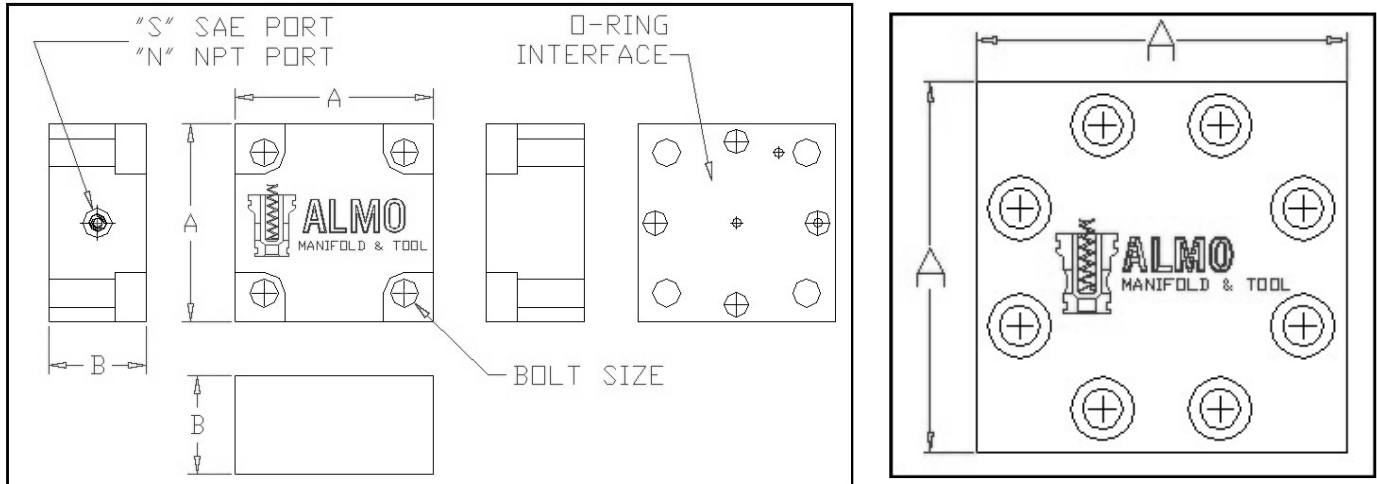


Manual/External Piloting

By not connecting the “X” pilot internally, a separate pilot pressure can be used via the SAE port to manually hold the valve closed. Pilot pressure & spring forces act to close the valve, forces at “A” & “B” act to open the valve.



General Layout

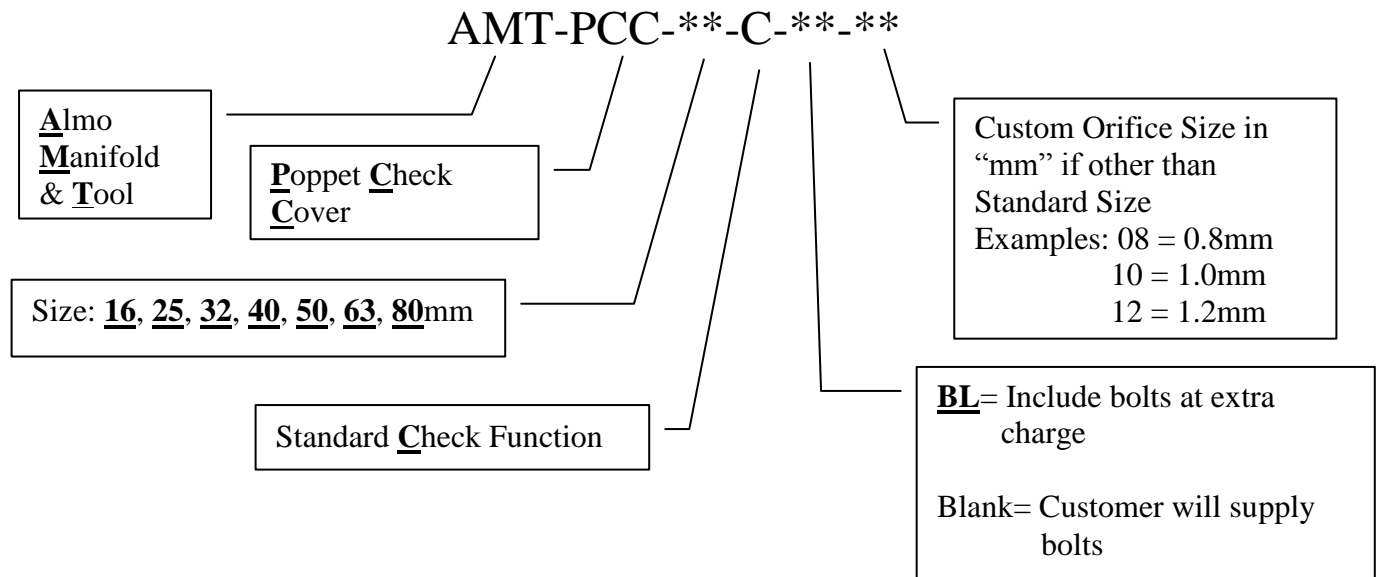


Sizes 25mm to 63mm

80mm "Top" face shown above

SIZE	A	B	"S" SAE	"N"		BOLTS
				NPT	ORIFICE	
16 mm	2.75"	1.40"	#4	1/16-27	1.0mm	5/16-18 X 1.50" (4)
25 mm	3.50"	1.50"	#4	1/16-27	1.2mm	1/2-13 X 1.50" (4)
32 mm	4.00"	2.00"	#4	1/16-27	1.3 mm	5/8-11 X 2.00" (4)
40 mm	5.00"	2.40"	#4	1/16-27	1.5 mm	3/4-10 X 2.50" (4)
50 mm	5.55"	2.75"	#4	1/16-27	1.8 mm	3/4-10 X 3.00" (4)
63 mm	7.00"	3.38"	#6	1/8-27	2.0 mm	1-1/4-7 X 3.50" (4)
80 mm	9.50"	3.50"	#6	1/8-27	2.8 mm	1-8 X 4.00" (8)

Order Code

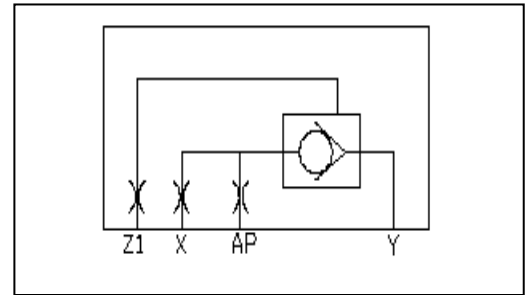


DIN 24342 COVER FOR DIRECTIONAL CONTROL

SIZES 16mm TO 80mm

5000 PSI

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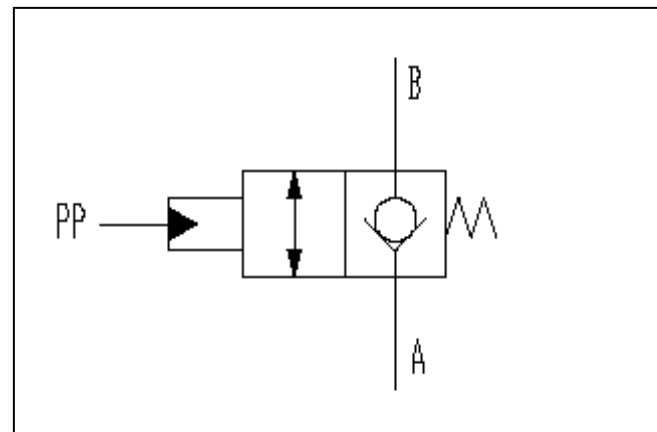
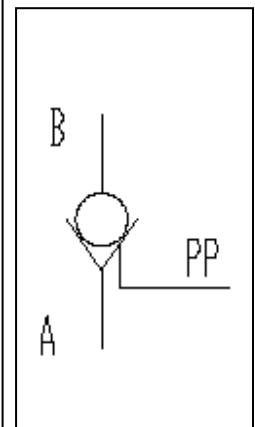
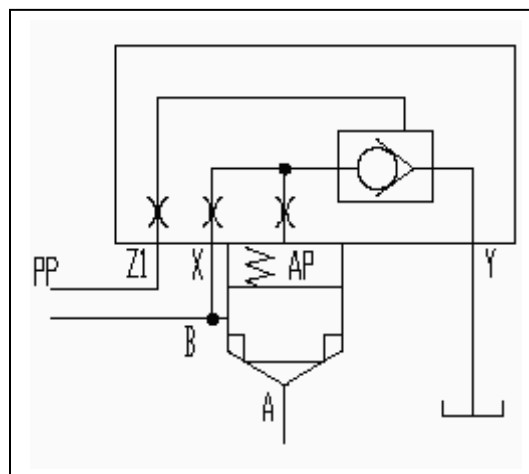


- ✓ Removable NPT orifice plug
- ✓ 3 to 1 pilot ratio

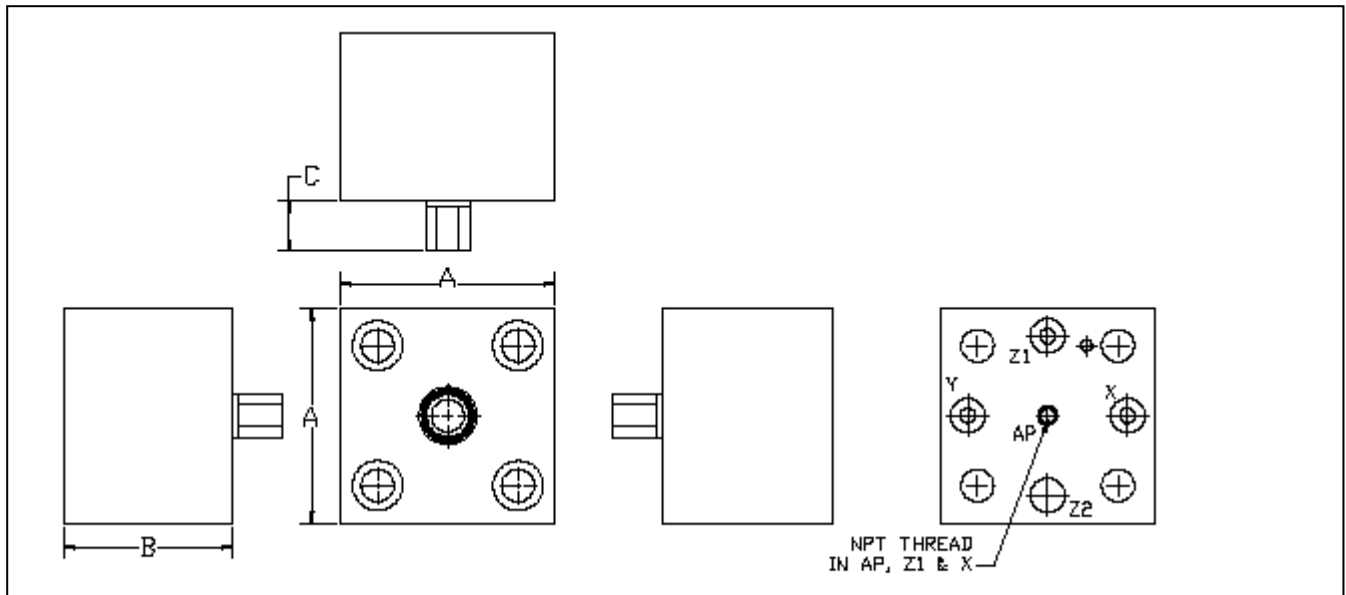
Applications

Pilot Operated Check Valve

Provides free-flow from “A to B” & check function from “B to A” by connecting the “X” pilot to the “B” port of the valve insert.
To achieve bi-directional flow, just Supply Z1 with pilot pressure. The Pilot ratio is 3 to 1.



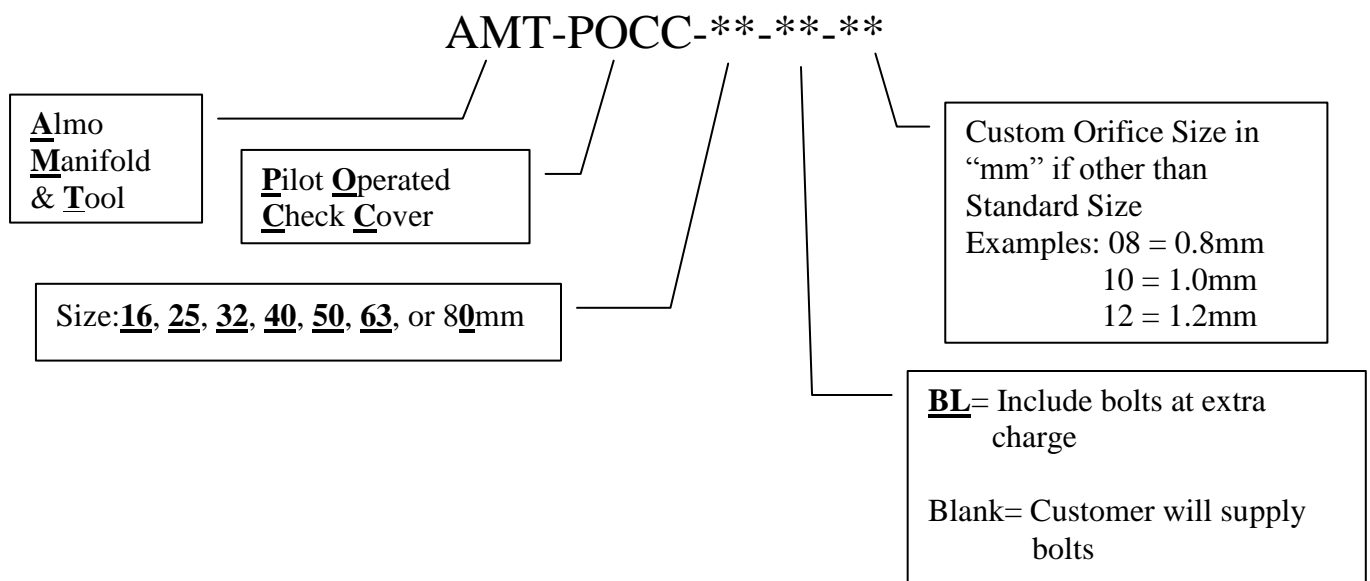
General Layout



Sizes 25mm to 63mm / 80mm not shown

SIZE	A	B	C	Thread	*Orifice Size		BOLTS
					X	AP	
16 mm	2.75"	2.75"	.60"	10-24	1.0mm	1.2mm	5/16-18 x 2.50" (4)
25 mm	3.50"	2.75"	.60"	1/16-27	1.0mm	1.2mm	1/2-13 X 2.75" (4)
32 mm	4.00"	2.75"	.60"	1/16-27	1.2 mm	1.3 mm	5/8-11 X 2.50" (4)
40 mm	5.00"	2.75"	.60"	1/16-27	1.3 mm	1.5 mm	3/4-10 X 2.75" (4)
50 mm	5.55"	2.75"	.60"	1/16-27	1.5 mm	1.8 mm	3/4-10 X 3.00" (4)
63 mm	7.00"	3.375"	.60"	1/8-27	1.8 mm	2.0 mm	1-1/4-7 X 3.50" (4)
80 mm	9.50"	3.50"	.60"	1/8-27	2.0 mm	2.8 mm	1-8 X 4.00" (8)

Order Code

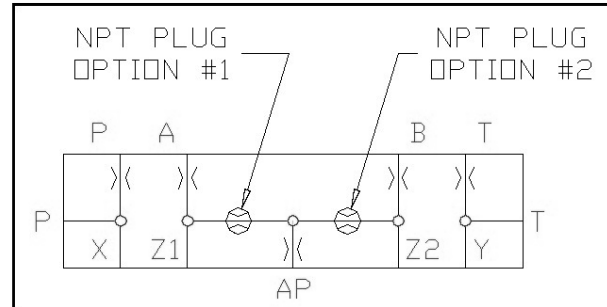


DIN 24342 COVER FOR DIRECTIONAL CONTROL

SIZES 16mm TO 40mm

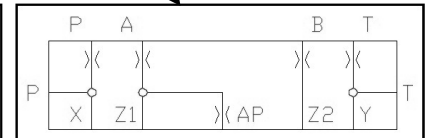
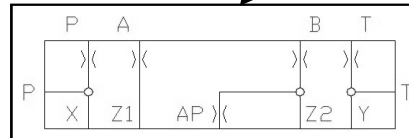
5000 PSI

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Plug option #1

Plug option #2

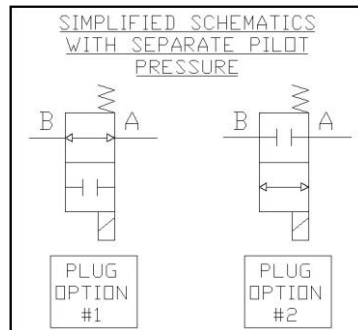
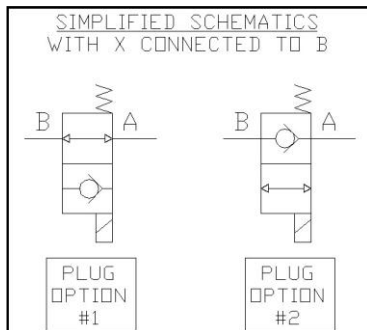
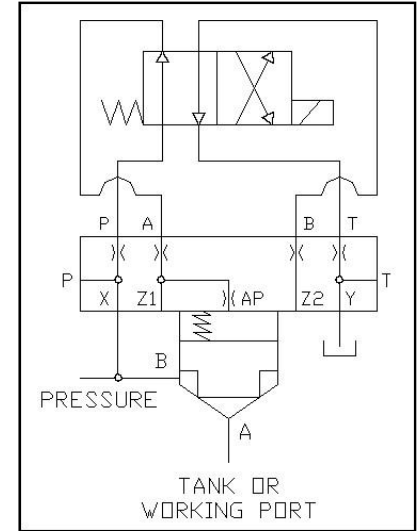
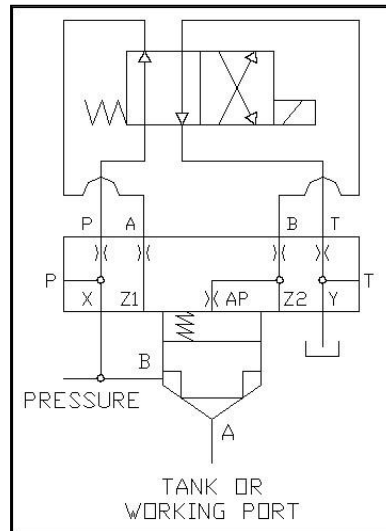


- ✓ Standard D03 interface
- ✓ SAE O-ring ports for access to P & T
- ✓ Removable orifice plug options
- ✓ Ships standard with an orifice installed in the “P” port & according to **Plug option #1**

Applications

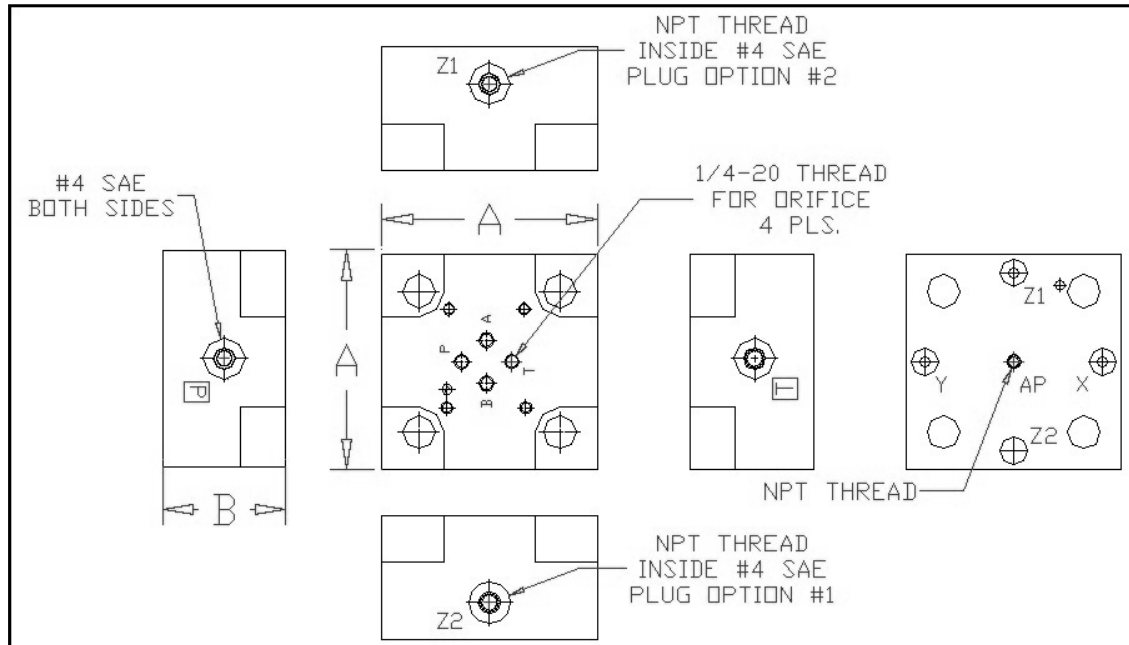
Dump Valve or ON/OFF valve

Can be used as a dump valve by Connecting ‘X’ to the ‘B’ port (side of insert) & connecting ‘Y’ to drain. The diagrams to the right show the two different plug options. Plug option #1 will allow the valve to dump in the de-energized state & Plug option #2 will allow the valve to dump in the energized state.



Note: If port “A” is connected to a working port, then connecting ‘X’ to the ‘B’ port as shown above does not prevent pressure at A from overcoming the forces acting to keep the valve closed. Flow could occur from A to B. To prevent this use a separate pilot pressure for X.

General Layout



SIZE	A	B	NPT	Orifice Size	Interface	BOLTS
16 mm	2.75"	1.40"	1/16-27	1.0mm	D03	5/16-18 X 1.50" (4)
25 mm	3.50"	1.50"	1/16-27	1.2mm	D03	1/2-13 X 2.00" (4)
32 mm	4.00"	2.00"	1/16-27	1.3 mm	D03	5/8-11 X 2.00" (4)
40 mm	5.00"	2.40"	1/16-27	1.5 mm	D03	3/10 X 2.50" (4)

Only one orifice installed in 'P' port of D03 interface. Other orifices are optional.

Order Code

AMT-PDBASH-**-**-**

Almo
Manifold
& **T**ool

Poppet Cover with
Directional Control Interface.
Basic Cover Design
H style configuration

Size: **16**, **25**, **32**, **40**mm

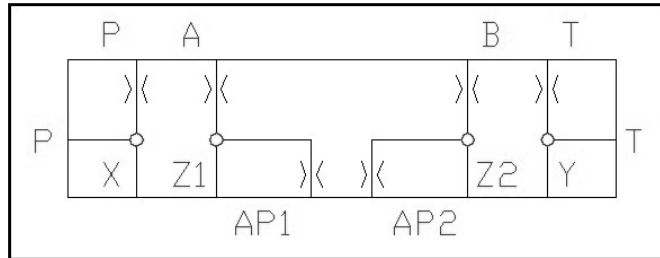
Custom Orifice Size in
"mm" if other than
Standard Size
Examples: 08 = 0.8mm
10 = 1.0mm
12 = 1.2mm

BL= Include bolts at
extra charge
Blank= Customer will
supply bolts

DIN 24342 COVER FOR DIRECTIONAL CONTROL

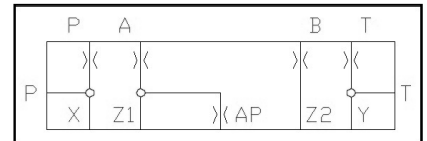
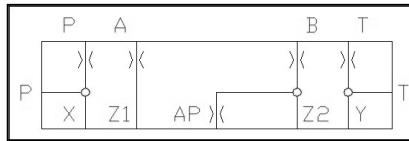
SIZES 50mm TO 80mm

5000 PSI



Plug option #1

Plug option #2

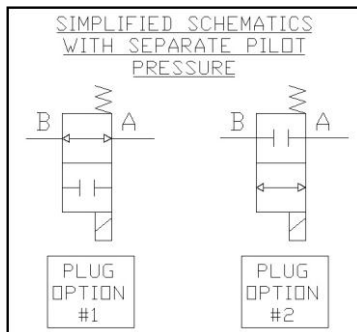
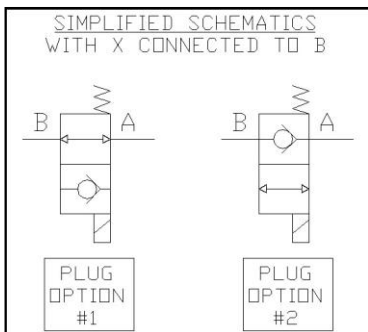
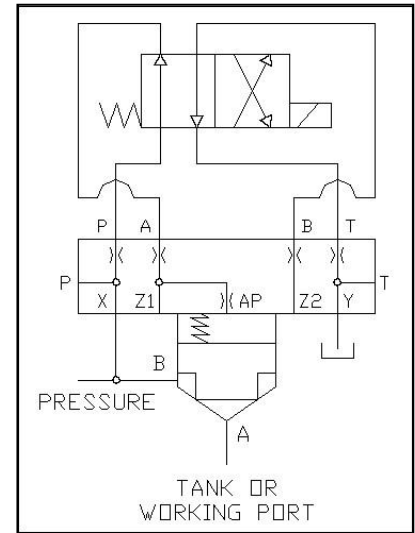
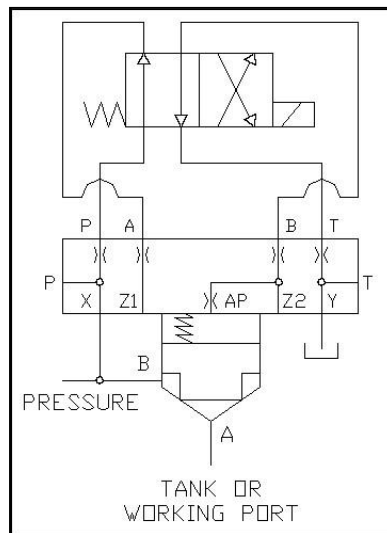


- ✓ Standard D05 interface, optional D03
- ✓ SAE O-ring ports for access to P & T
- ✓ Removable NPT orifice plug options
- ✓ Ships standard with an orifice installed in the “P” port & according to **Plug option #1**

Applications

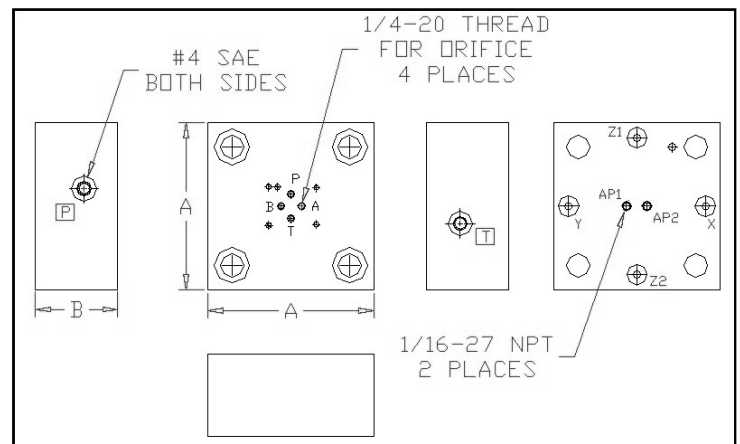
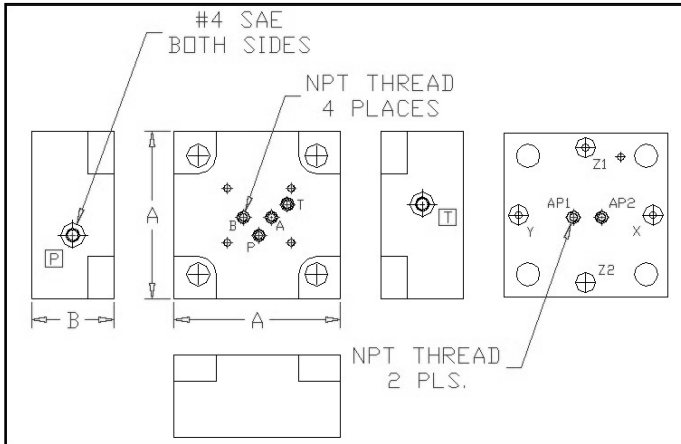
Dump Valve or ON/OFF valve

Can be used as a dump valve by connecting ‘X’ to the ‘B’ port (side of insert) & connecting ‘Y’ to drain. The diagrams to the right show the two different plug options. Plug option #1 will allow the valve to dump in the de-energized state & Plug option #2 will allow the valve to dump in the energized state.



Note: If port “A” is connected to a working port, then connecting ‘X’ to the ‘B’ port as shown above does not prevent pressure at A from overcoming the forces acting to keep the valve closed. Flow could occur from A to B. To prevent this use a separate pilot pressure for X.

General Layout



Standard D05 interface Layout (80mm not shown)

Optional D03 interface (80mm not shown)

Size	A	B	NPT	Orifice Size	Standard Interface	Bolts
50 mm	5.55"	2.75"	1/8-27	1.8 mm	D05	3/4-10 X 3.00" (4)
63 mm	7.00"	3.38"	1/8-27	2.0 mm	D05	1-1/4-7 X 3.50" (4)
80 mm	9.50"	3.50"	1/8-27	2.5 mm	D05	1-8 X 4.00" (8)

Chart for Standard D05 interface

Only one orifice installed in 'P' port of D05 interface. Other orifices are optional.

Order Code

AMT-PDBASH-**-**-**-**

Almo
Manifold
& **T**ool

Poppet Cover with
Directional Control Interface.
Basic Cover Design
H style configuration

Size: **50**, **63**, or **80**mm

Directional Control Interface:
Blank = Standard D05
3 = Optional D03 interface

Custom Orifice Size in
"mm" if other than
Standard Size
Examples: 08 = 0.8mm
10 = 1.0mm
12 = 1.2mm

BL= Include bolts at
extra charge

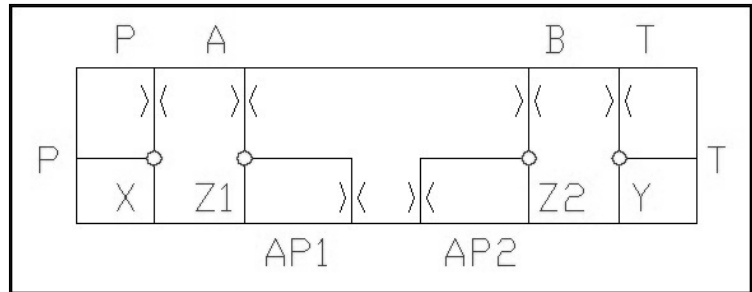
Blank= Customer will
supply bolts

DIN 24342 COVER FOR DIRECTIONAL CONTROL

SIZES 16mm TO 40mm

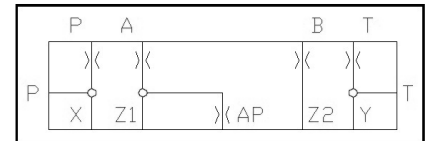
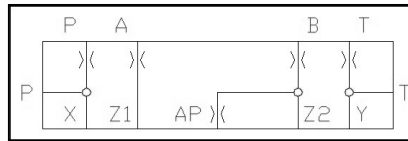
5000 PSI

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Plug option #1

Plug option #2

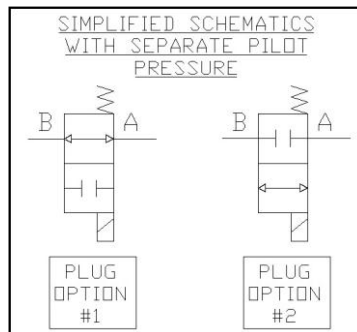
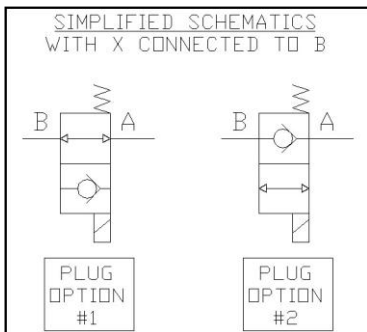
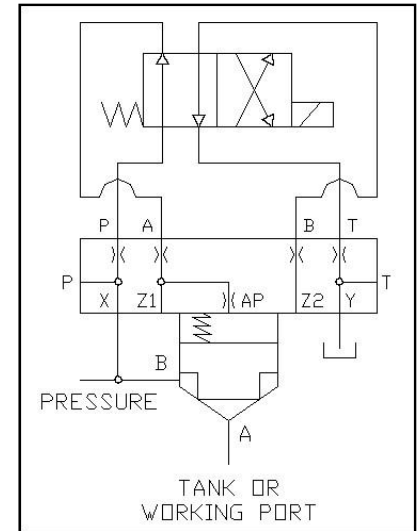
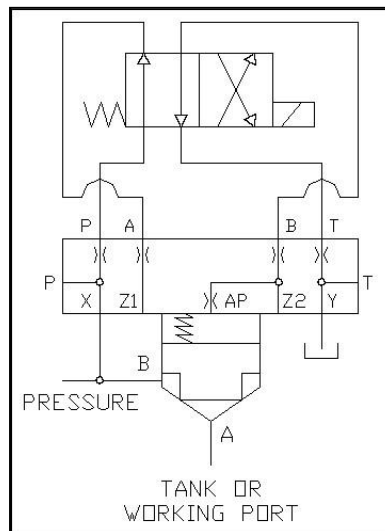


- ✓ Same as the PDBASH with D03 rotated 90 degrees to match industry standard
- ✓ Removable orifice plug options
- ✓ Ships standard with an orifice installed in the “P” port & according to **Plug option #1**

Applications

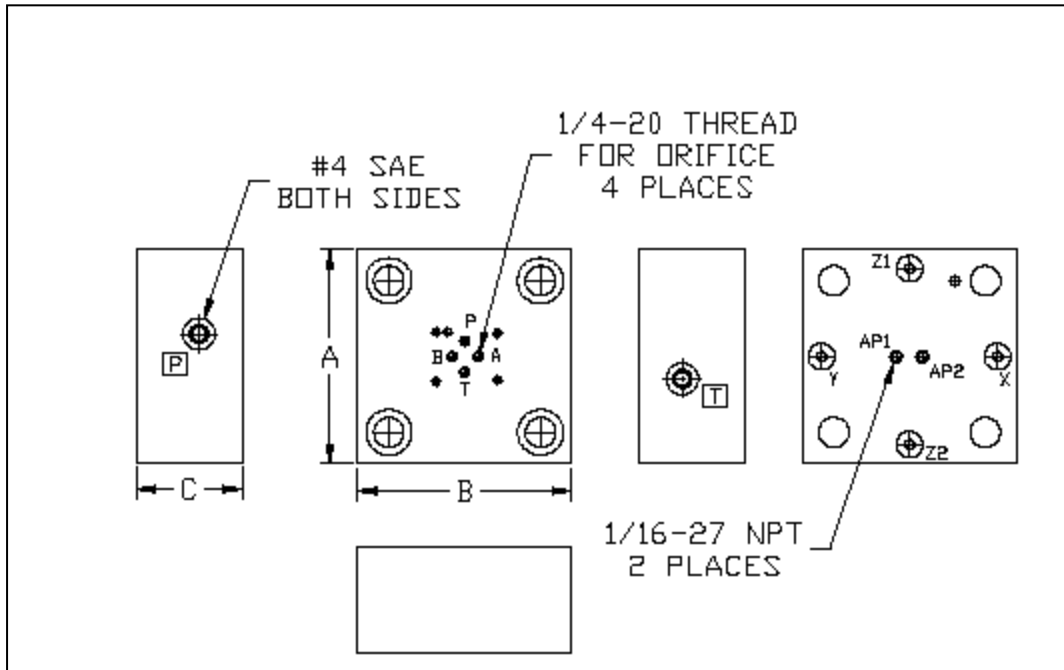
Dump Valve or ON/OFF valve

Can be used as a dump valve by Connecting ‘X’ to the ‘B’ port (side of insert) & connecting ‘Y’ to drain. The diagrams to the right show the two different plug options. Plug option #1 will allow the valve to dump in the de-energized state & Plug option #2 will allow the valve to dump in the energized state.



Note: If port “A” is connected to a working port, then connecting ‘X’ to the ‘B’ port as shown above does not prevent pressure at A from overcoming the forces acting to keep the valve closed. Flow could occur from A to B. To prevent this use a separate pilot pressure for X.

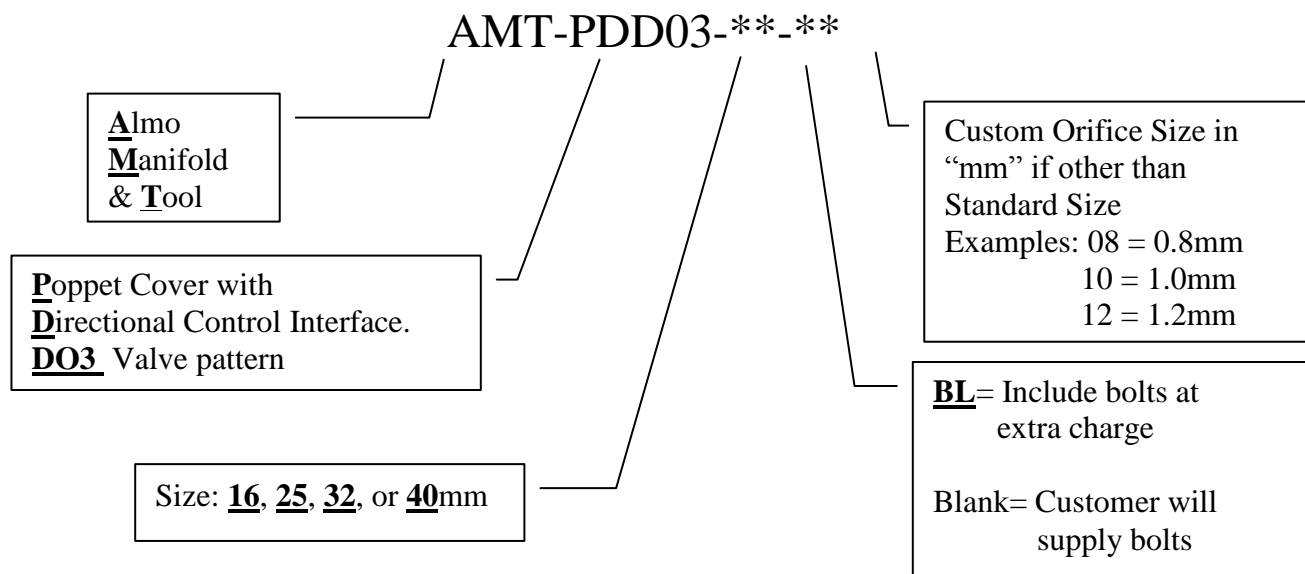
General Layout



SIZE	A	B	C	Interface	NPT	Orifice Size	BOLTS
16 mm	2.75"	3.00"	1.50"	D03	1/16-27	1.0 mm	5/16-18 X 1.50" (4)
25 mm	3.50"	3.50"	2.00"	D03	1/16-27	1.2 mm	1/2-13 X 2.00" (4)
32 mm	4.00"	4.00"	2.00"	D03	1/16-27	1.3 mm	5/8-11 X 2.00" (4)
40 mm	5.00"	5.00"	2.40"	D03	1/16-27	1.5 mm	3/4-10 X 2.50" (4)

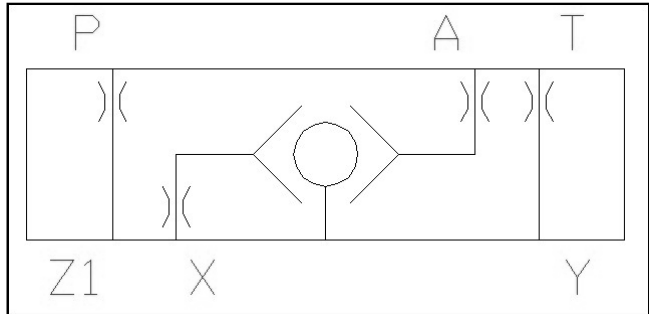
Only one orifice installed in 'P' port of D03 interface. Other orifices are optional.

Order Code



**DIN 24342 COVER
FOR DIRECTIONAL CONTROL**

SIZES 16mm TO 63mm	5000 PSI
--------------------	----------



- ✓ Shuttle valve senses the greater of two pressures
- ✓ Standard D03 interface on 16mm to 63mm sizes
- ✓ Standard orifice installed in X & A
- ✓ Removable orifice plug options

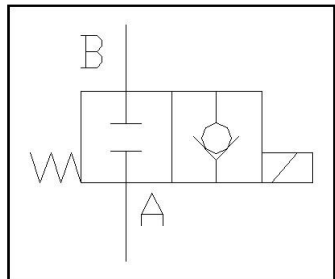
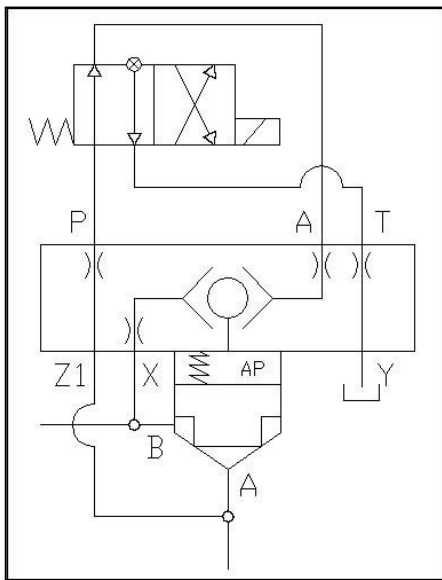
Applications

On/Off Check Valve

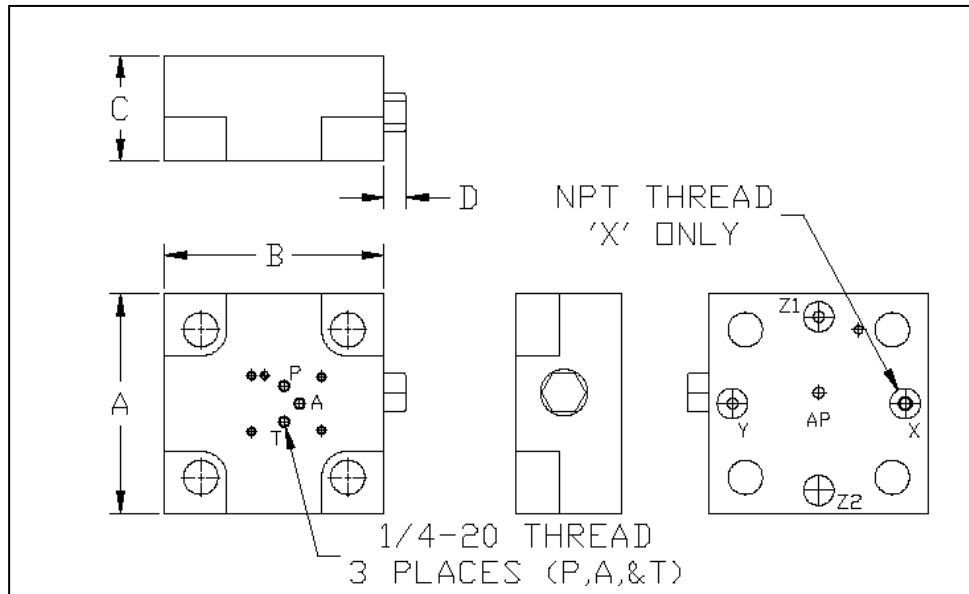
Will hold valve closed in one condition and serve as a check valve in the other condition.

Senses the greater of two pressures between the “X” pilot & the “A” pilot. The “X” pilot should be connected to the “B” port (side of insert) and the “Z1” port should be connected to the “A” port (nose of insert).

By using a standard D03 directional control with flow from “P to A” in the de-energized condition the shuttle will use the greater pressure to hold the valve closed. Energizing the solenoid prevents the shuttle from sensing the Z1 pilot, thereby establishing free flow from A to B & a check valve function from B to A.

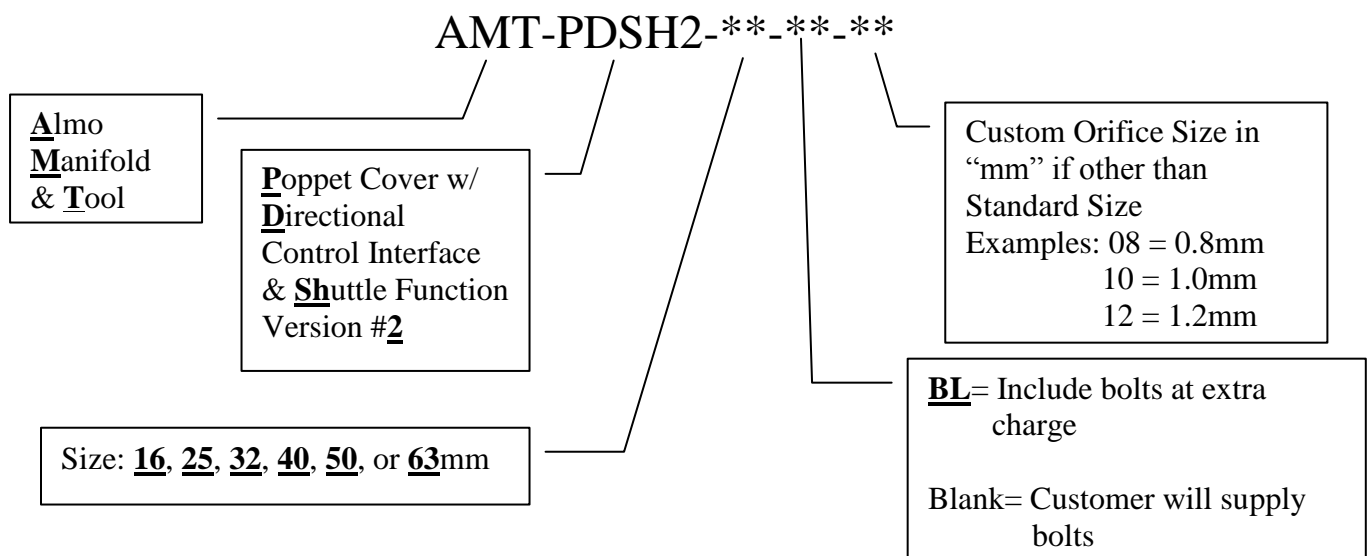


General Layout



SIZE	A	B	C	D	"X" NPT	Orifice Size	BOLTS
16 mm	2.75"	3.00"	3.00"	.75"	1/16-27	1.0 mm	5/16-18 X 3.00" (4)
25 mm	3.50"	3.50"	2.50"	.75"	1/16-27	1.2 mm	1/2-13 X 2.50" (4)
32 mm	4.00"	4.00"	2.00"	.75"	1/16-27	1.3 mm	5/8-11 X 2.00" (4)
40 mm	5.00"	5.00"	2.40"	.75"	1/16-27	1.5 mm	3/4-10 X 2.50" (4)
50 mm	5.55"	5.55"	2.75"	.75"	1/16-27	1.8 mm	3/4-10 X 3.00" (4)
63 mm	7.00"	7.00"	3.38"	.75"	1/8-27	2.0 mm	1-1/4-7 X 3.50" (4)

Order Code

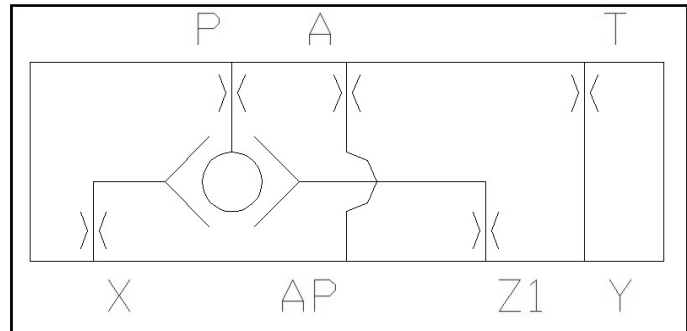
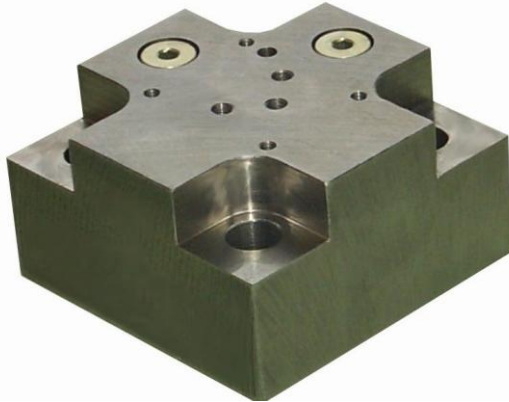


DIN 24342 COVER FOR DIRECTIONAL CONTROL

SIZES 25mm TO 80mm

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY



- ✓ Shuttle valve senses the greater of two pressures
- ✓ Standard D03 or D05 interface
- ✓ Standard orifice installed in P
- ✓ Removable orifice plug options

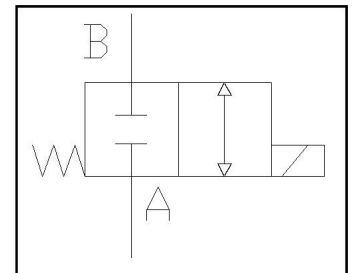
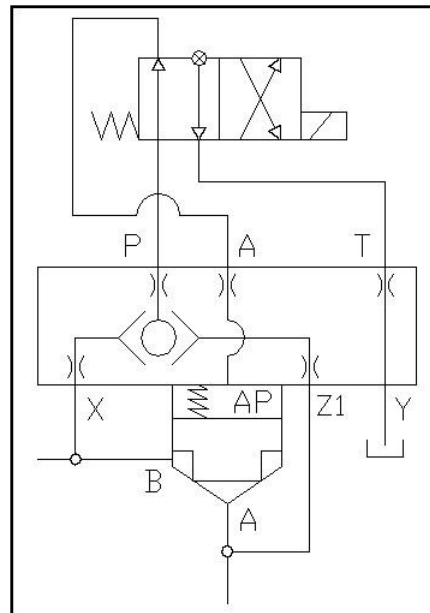
Applications

On/Off Valve

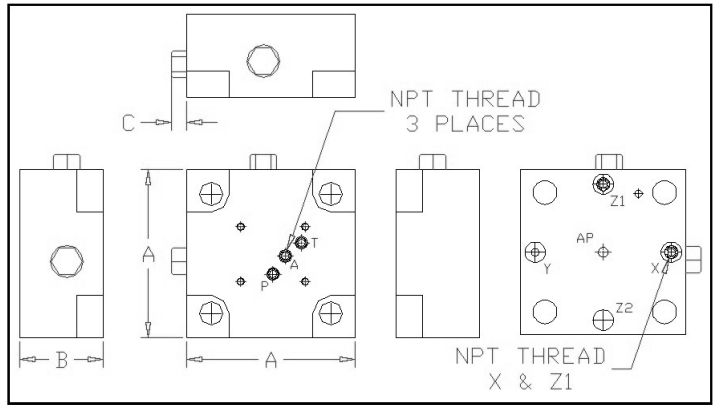
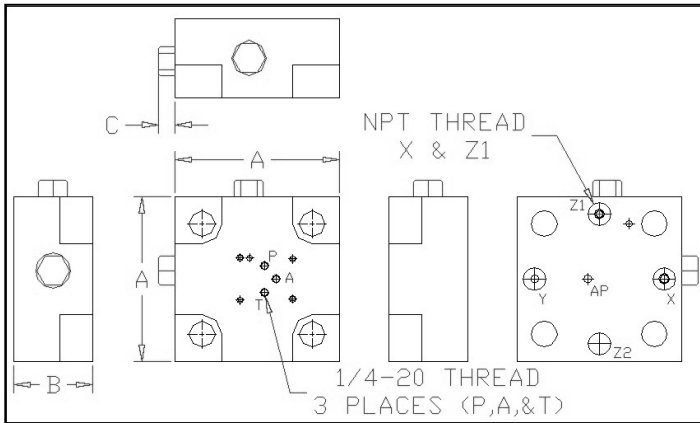
Will hold valve closed in one condition and will allow valve to open in the other condition.

Senses the greater of two pressures between the “X” pilot & the “Z1” pilot. The “X” pilot should be connected to the “B” port (side of insert) and the “Z1” port should be connected to the “A” port (nose of insert) or vice versa.

By using a standard D03 directional control with flow from “P to A” in the de-energized condition the shuttle will use the greater pressure to hold the valve closed. Energizing the solenoid vents the pressure above the valve insert to the drain. Flow can travel freely from A to B or from B to A as long as the spring force is overcome.



General Layout



Sizes 40mm to 50mm (C dimension for 40mm only)
 Sizes 25 & 32 discontinued.

Size 63mm (80mm not shown)

SIZE	A	B	C	Interface	NPT	Orifice Size	BOLTS
40 mm	5.00"	2.40"	.75"	D03	1/16-27	1.5 mm	3/4-10 X 2.50" (4)
50 mm	5.55"	2.86"	.75"	D03	1/8-27	1.8 mm	3/4-10 X 3.00" (4)
63 mm	7.00"	3.38"	.75"	D05	1/8-27	2.0 mm	1-1/4-7 X 3.50" (4)
80 mm	9.50"	3.50"	.75"	D05	1/8-27	2.5 mm	1-8 X 4.00" (8)

Order Code

AMT-PDSH3-**-**-**

Almo
Manifold
 & **T**ool

Poppet Cover w/
Directional
 Control Interface
 & **S**huttle Function
 Version #**3**

Custom Orifice Size in
 "mm" if other than
 Standard Size
 Examples: 08 = 0.8mm
 10 = 1.0mm
 12 = 1.2mm

Size: **40**, **50**, **63**, or **80**mm

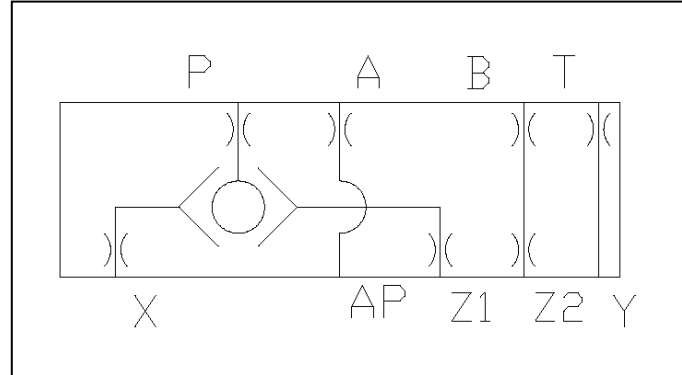
BL= Include bolts at extra
 charge
 Blank= Customer will supply
 bolts

DIN 24342 COVER FOR DIRECTIONAL CONTROL

SIZES 25mm TO 80mm

5000 PSI

ALMO
MANIFOLD & TOOL COMPANY



- ✓ Shuttle valve senses the greater of two pressures
- ✓ Standard D03 interface or D05
- ✓ Standard orifice installed in P
- ✓ Removable orifice plug options

Applications

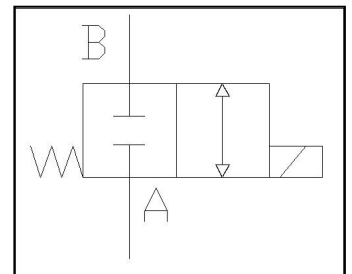
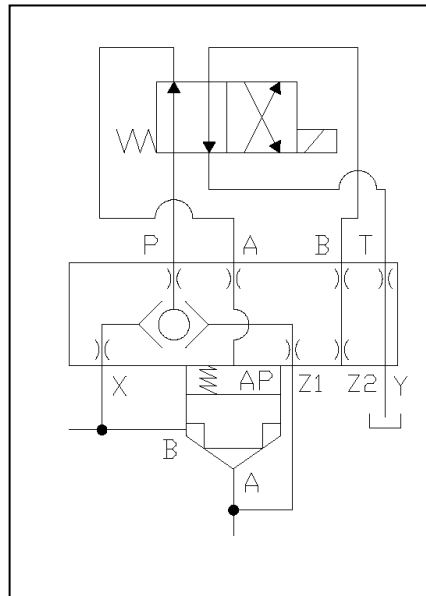
On/Off Valve

Will hold valve closed in one condition and will allow valve to open in the other condition.

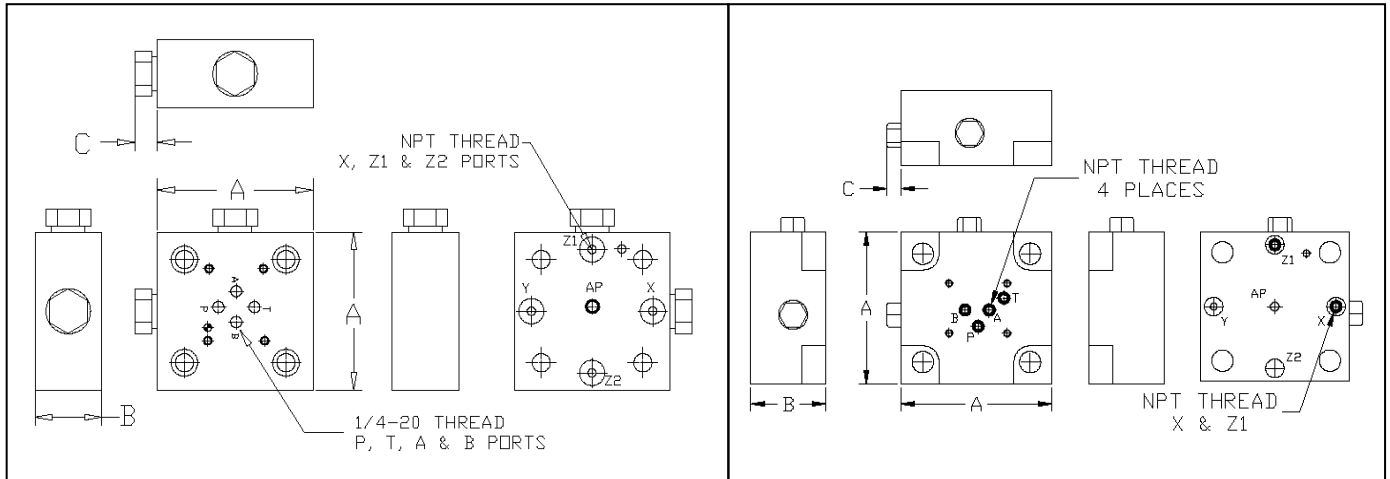
Senses the greater of two pressures between the “X” pilot & the “Z1” pilot. The “X” pilot should be connected to the “B” port (side of insert) and the “Z1” pilot should be connected to the “A” port (nose of insert) or vice versa.

By using a standard D03 directional control with flow from “P to A” in the de-energized condition the shuttle will use the greater pressure to hold the valve closed. Energizing the solenoid vents the pressure above the valve insert to the drain. Flow can travel freely from A to B or from B to A as long as the spring force is overcome.

“B” to “Z2” allows control of additional valve.



General Layout



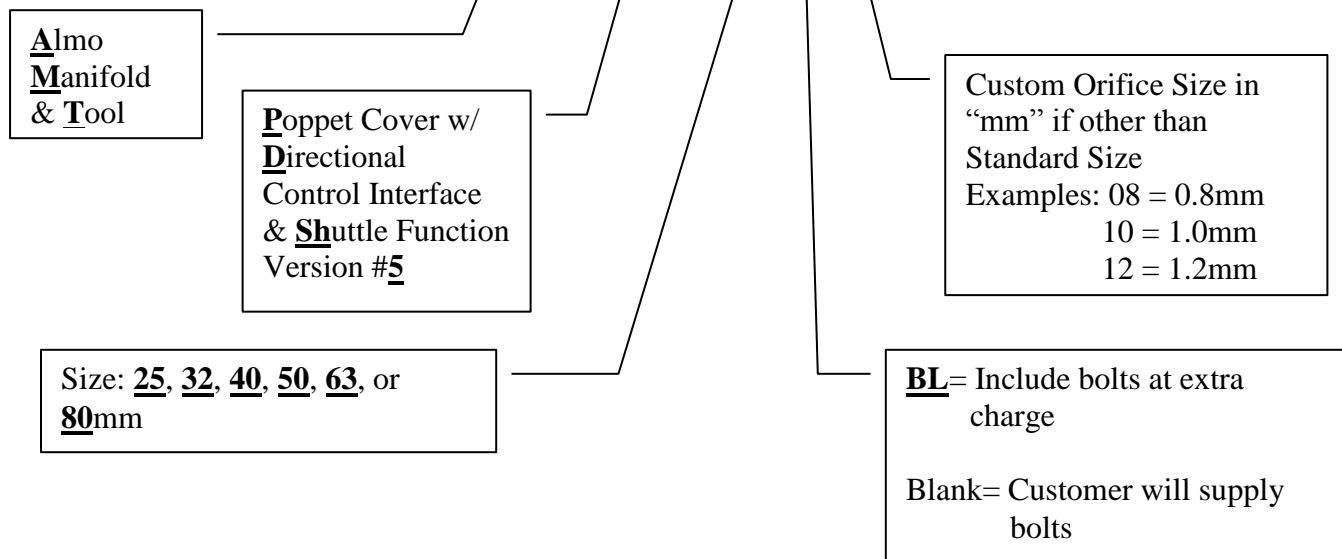
Sizes 25mm to 63

Sizes 50 to 63mm (80mm not shown)

SIZE	A	B	C	Interface	NPT	Orifice Size	BOLTS
25 mm	3.50"	2.00"	1.0"	D03	1/16-27	1.2 mm	1/2-13 X 2.25" (4)
32 mm	4.00"	2.00"	.75"	D03	1/16-27	1.3 mm	5/8-11 X 2.00" (4)
40 mm	5.00"	2.40"	.75"	D03	1/16-27	1.5 mm	3/4-10 X 2.50" (4)
50 mm	5.55"	2.86"	.75"	D03/D05	1/8-27	1.8 mm	3/4-10 X 3.00" (4)
63 mm	7.00"	3.38"	.75"	D03/D05	1/8-27	2.0 mm	1-1/4-7 X 3.50" (4)
80 mm	9.50"	3.50"	.75"	D05	1/8-27	2.5 mm	1-8 X 4.00" (8)

Order Code

AMT-PDSH5-**-**-**

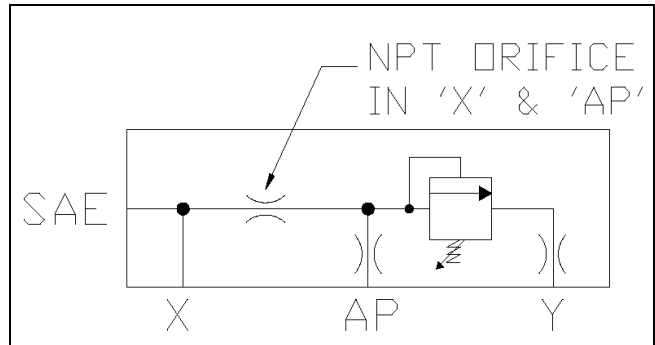
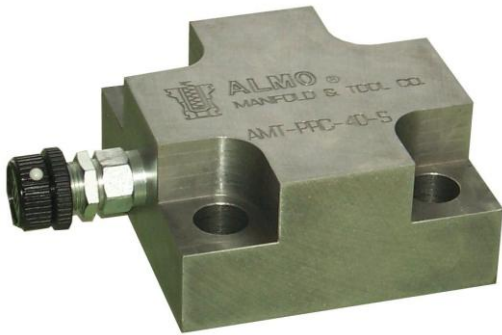


DIN 24342 COVER FOR PRESSURE CONTROL

SIZES 25mm TO 80mm

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY



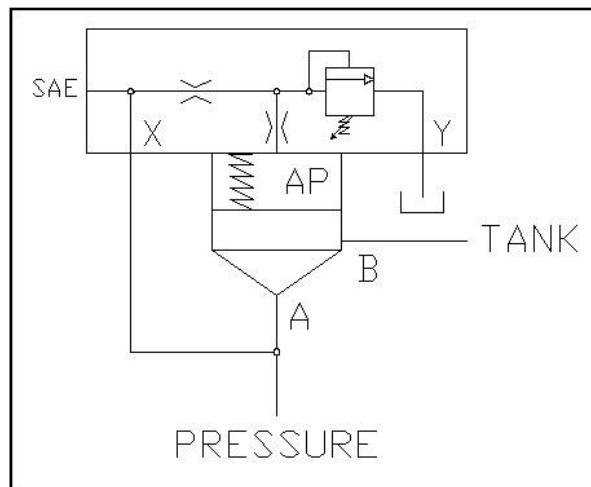
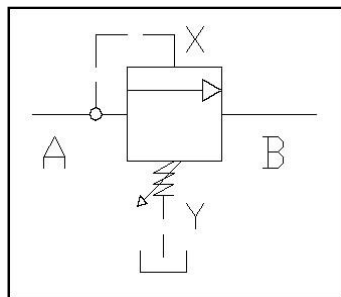
- ✓ Adjustable relief setting from 150 psi to 5000 psi
- ✓ Standard screw adjustment for relief setting. Handknob available upon request.
- ✓ Removable NPT orifice plug options
- ✓ SAE O-ring port for access to NPT orifice and gauging
- ✓ Pressure at “Y” is directly additive to relief setting

Applications

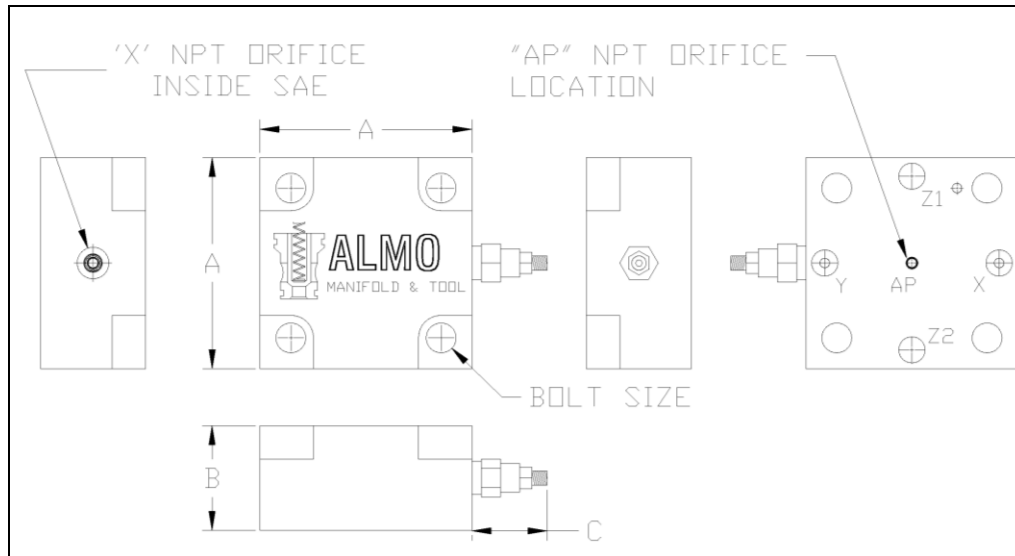
Relief, Back Pressure, or Sequence Valve

Provides relief function from “A to B” by connecting the “X” pilot to the “A” port of the valve insert. The ‘Y’ pilot can be connected to the “B” port but a separate drain connection is preferred.

This configuration uses a 1:1 ratio insert.



General Layout

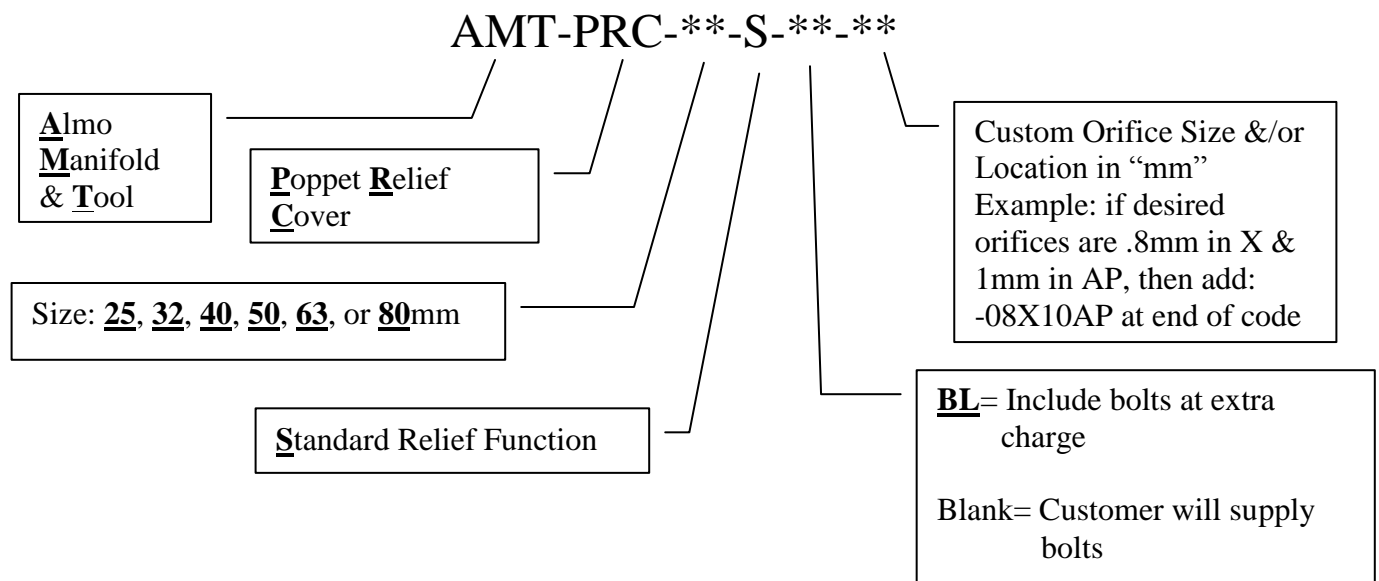


Sizes 25mm to 63mm (80mm not shown)

SIZE	A	B	C	SAE	NPT	*Orifice Size	BOLTS
25 mm	3.50"	2.00"	2.0"	#4	1/16-27	X .70 AP 1.0	1/2-13 X 2.25" (4)
32 mm	4.00"	2.00"	2.0"	#4	1/16-27	X .70 AP 1.0	5/8-11 X 2.00" (4)
40 mm	5.00"	2.40"	2.0"	#4	1/16-27	X .70 AP 1.0	3/4-10 X 2.50" (4)
50 mm	5.55"	2.75"	2.0"	#4	1/16-27	X .70 AP 1.0	3/4-10 X 3.00" (4)
63 mm	7.00"	3.38"	2.3"	#6	1/8-27	X .70 AP 1.0	1-1/4-7 X 3.50" (4)
80 mm	9.50"	3.50"	2.3"	#6	1/8-27	X .70 AP 1.0	1-8 X 4.00" (8)

*Orifices installed in "X" an "AP" ports only. Other orifice sizes and locations are optional.

Order Code

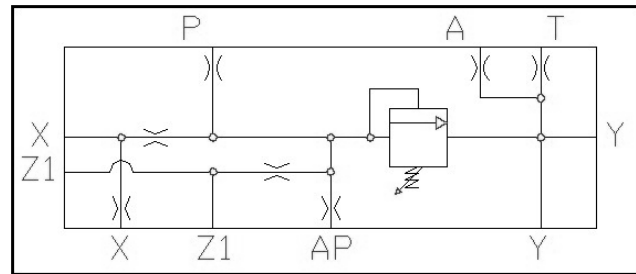
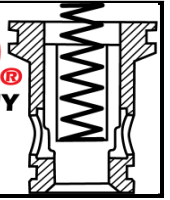


DIN 24342 COVER FOR PRESSURE CONTROL

SIZES 16mm TO 63mm

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY



- ✓ Adjustable relief setting from 150 psi to 5000 psi
- ✓ Standard screw adjustment for relief setting. Hand knob available upon request.
- ✓ Standard D03 interface for loading/venting on sizes 16mm to 40mm, D05 interface on 50mm to 80mm
- ✓ Removable orifice plug options
- ✓ SAE O-ring ports for access to NPT orifices, gauging, or remote piloting
- ✓ Pressure at “Y” is directly additive to relief setting

Applications

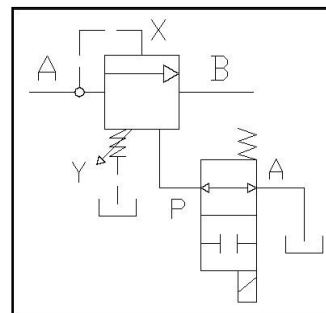
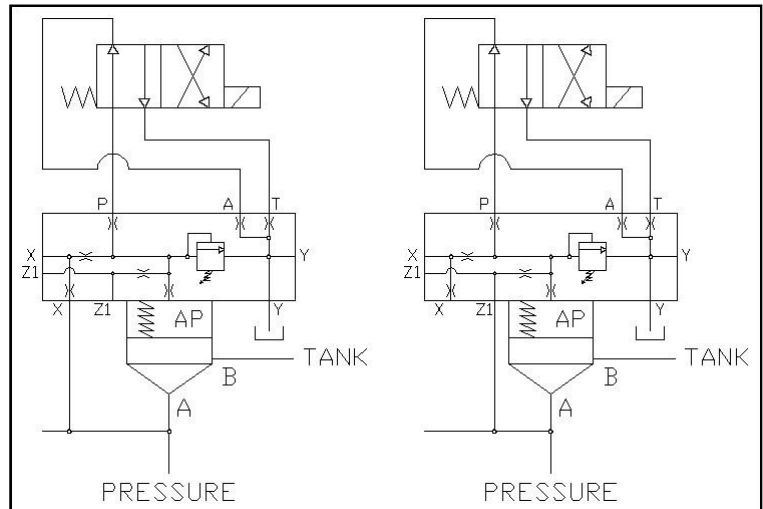
Solenoid-Loading Relief Valve

Provides relief function from “A to B” by connecting the “X” pilot to the “A” port of the valve insert (shown at left) or by connecting the “Z1” port to the “A” port (shown at right).

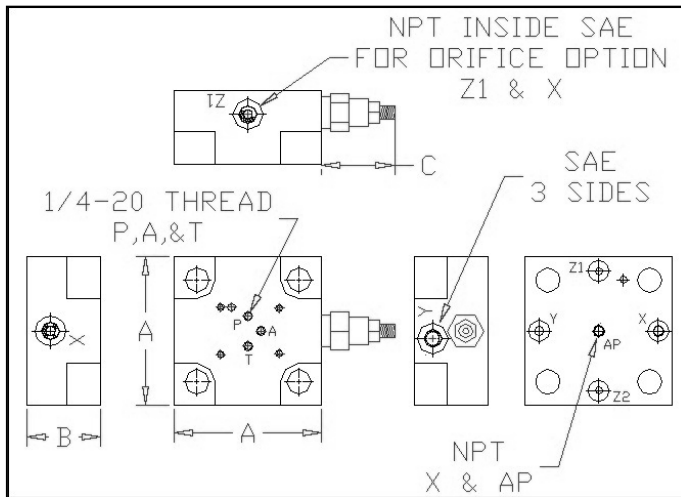
Using a standard directional control with flow from “P to A” in the de-energized condition will unload the valve. In the energized state the system will build pressure until the relief setting is reached. The valve can also be manually vented using the “X” SAE port.

The ‘Y’ pilot can be connected to the “B” port but a separate drain connection is preferred.

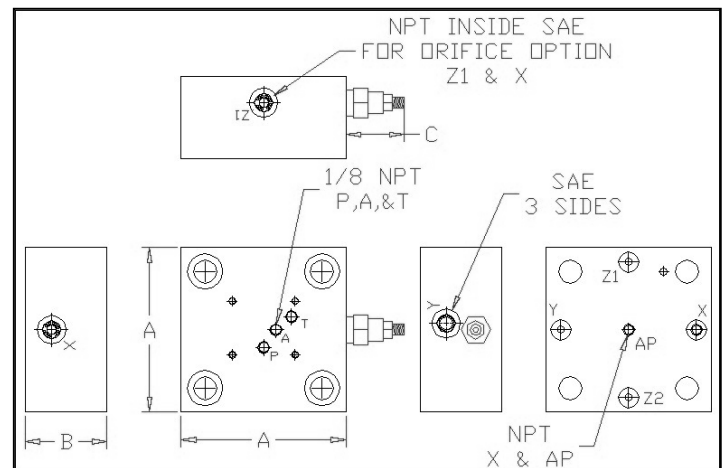
This configuration uses a 1:1 ratio insert.



General Layout



Sizes 16mm to 40mm



Sizes 50mm & 63mm (80 size not shown)

SIZE	A	B	C	X / Z1 PORT	Interface	X / AP	Orifice Size	BOLTS
16mm	2.75"	2.50"	2.0"	1/4-18 NPT	D03	1/4-20 / 1/16	X .70 AP 1.0	5/16-18 X 2.50" (4)
25mm	3.50"	2.25"	2.0"	#4 SAE	D03	1/16-27	X .70 AP 1.0	1/2-13 X 2.25" (4)
32mm	4.00"	2.00"	2.0"	#4 SAE	D03	1/16-27	X .70 AP 1.0	5/8-11 X 2.00" (4)
40mm	5.00"	2.40"	2.0"	#4 SAE	D03	1/16-27	X .70 AP 1.0	3/4-10 X 2.50" (4)
50mm	5.55"	2.75"	2.0"	#6 SAE	D05	1/8-27	X .70 AP 1.0	3/4-10 X 3.00" (4)
63mm	7.00"	3.38"	2.0"	#6 SAE	D05	1/8-27	X .70 AP 1.0	1-1/4-7 X 3.50" (4)
80mm	9.50"	3.50"	2.0"	#6 SAE	D05	1/8-27	X .70 AP 1.0	1-8 X 4.00" (8)

*Orifice installed in "X" an "AP" port only. Other orifice locations are optional.

Order Code

AMT-PRC-**-L-**-**

Almo
Manifold
& **T**ool

Poppet **R**elief
Cover

Size: **16**, **25**, **32**, **40**, **50**, **63**, or **80**mm

Solenoid **L**oading/Venting
Relief Function

Custom Orifice Size &/or
Location in "mm"
Example: if desired
orifices are .8mm in X &
1mm in AP, then add:
-08X10AP at end of code

BL= Include bolts at extra
charge

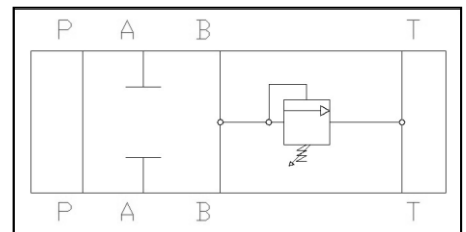
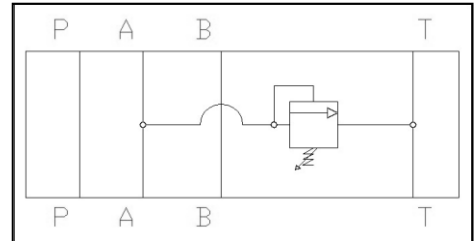
Blank= Customer will supply
bolts

D03 SANDWICH RELIEF ACCESSORY

NFPA D03, CETOP3

5000 PSI

ALMO
MANIFOLD & TOOL COMPANY



- ✓ Relief accessory for AMT-PRC-**-L relief covers
- ✓ Adjustable relief setting from 150 psi to 5000 psi
- ✓ Standard screw adjustment for relief setting.
- ✓ Pressure at “T” is directly additive to relief setting

Applications

High/Low Pressure Relief Valve

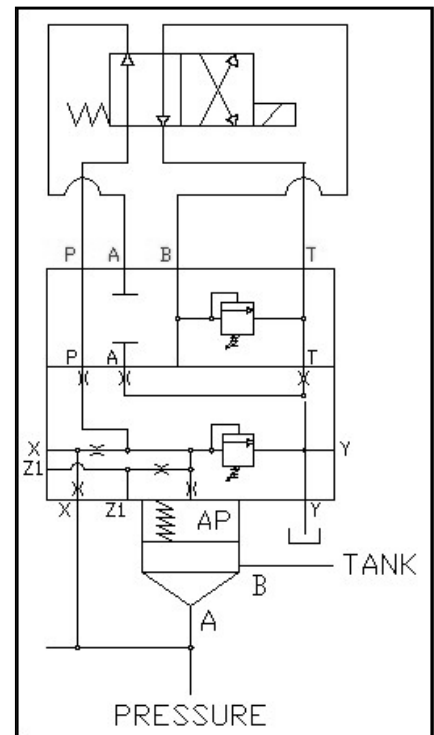
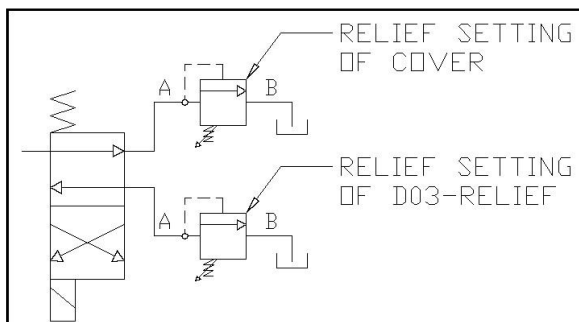
This D03 relief accessory can be combined with an AMT-PRC-**-L to create a high/low relief valve with two independent relief settings.

Using a standard directional control with flow from “P to A” in the de-energized condition will select the relief setting of the cover.

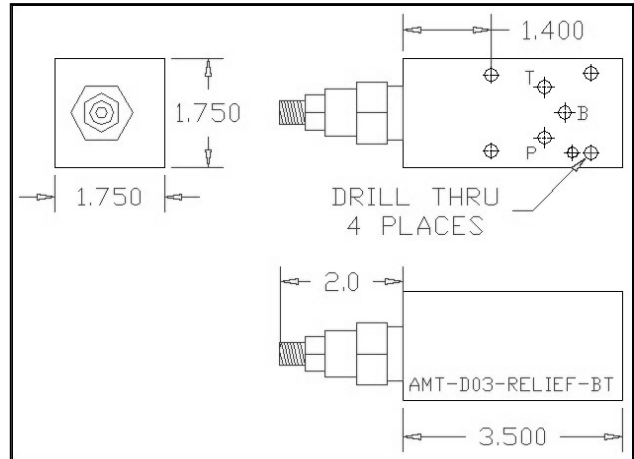
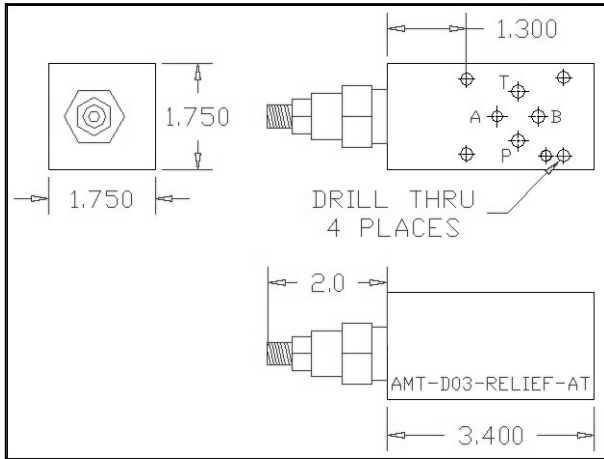
Energizing the pilot valve will switch the relief setting to the accessory.

Note: The relief setting of the accessory **MUST** be lower than the setting of the cover.

The ‘Y’ pilot can be connected to the “B” port but a separate drain connection is preferred. This configuration uses a 1:1 ratio insert.

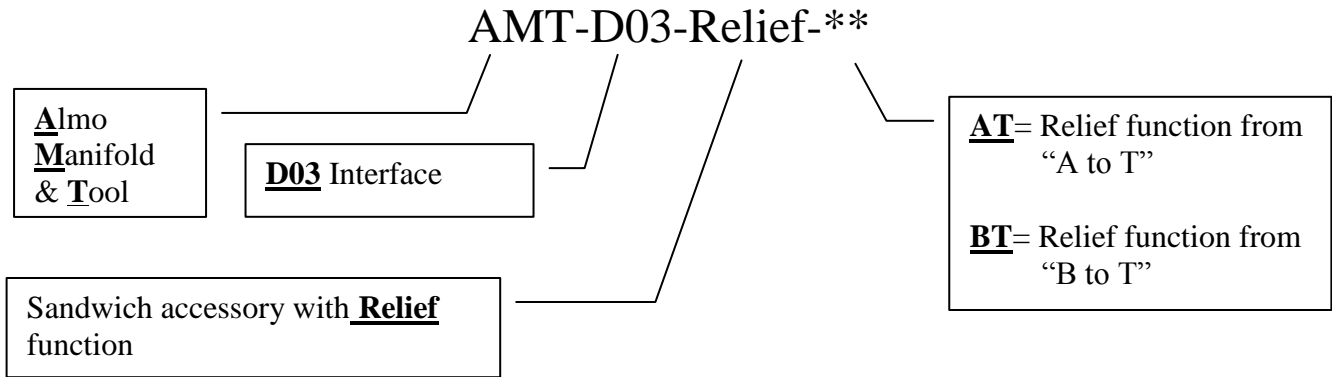


General Layout

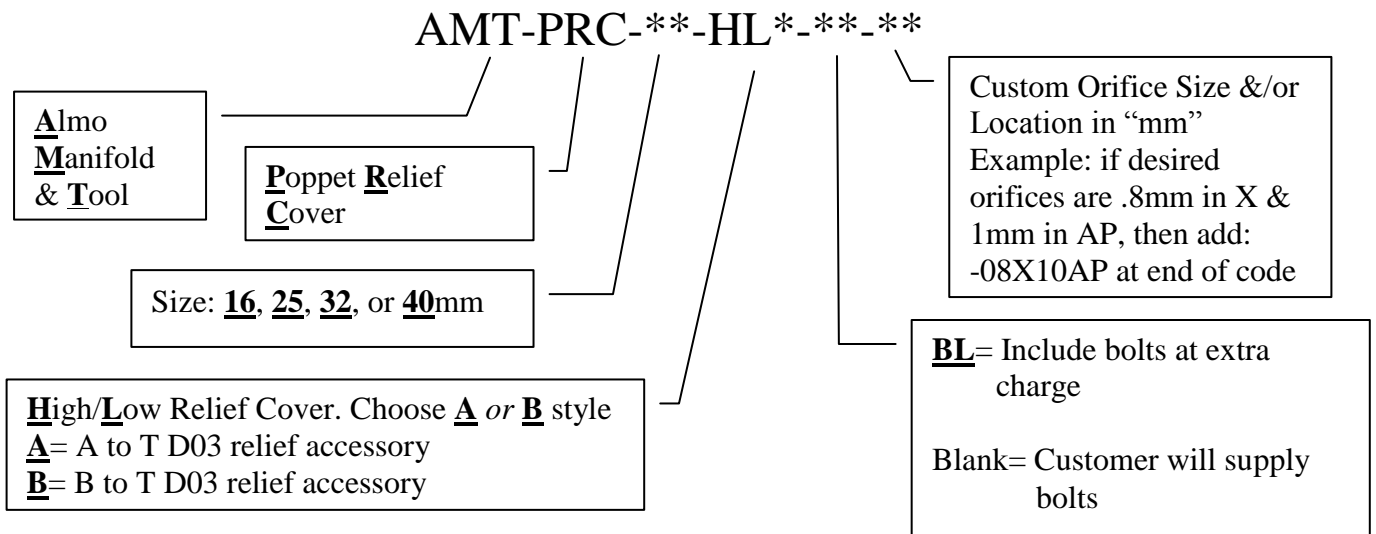


Order Code

To order the D03 relief accessory individually then use the following code:



To order a D03 relief accessory together with a DIN cover then use the code below:



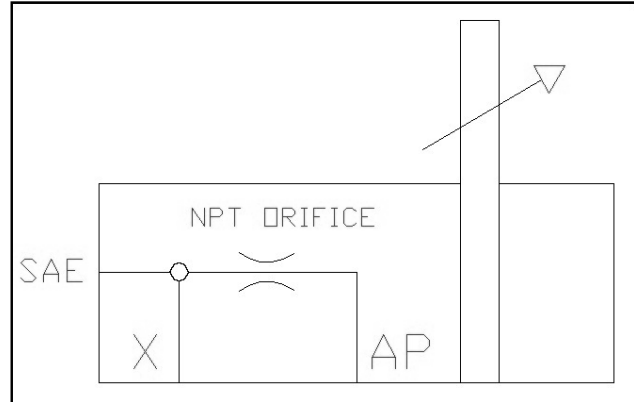
Note: The D03 accessory & DIN cover can be ordered separately. This code is for convenience only.

DIN 24342 COVER FOR FLOW CONTROL

SIZES 16mm TO 80mm

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY

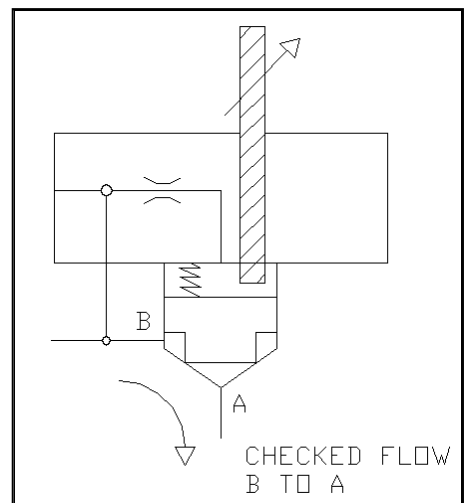
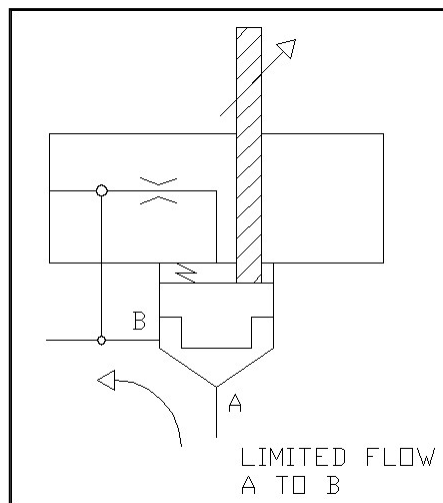


- ✓ Adjustable stroke-limiting cover for decreasing the traveling distance of poppet insert
- ✓ Set screws for locking
- ✓ SAE O-ring port for access to NPT orifice & gauging

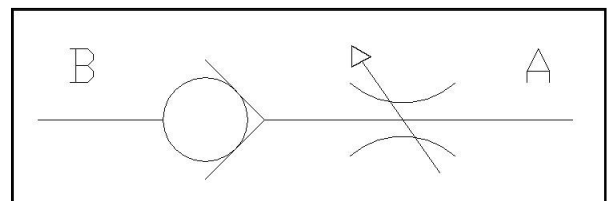
Applications

Check/Flow Control Valve

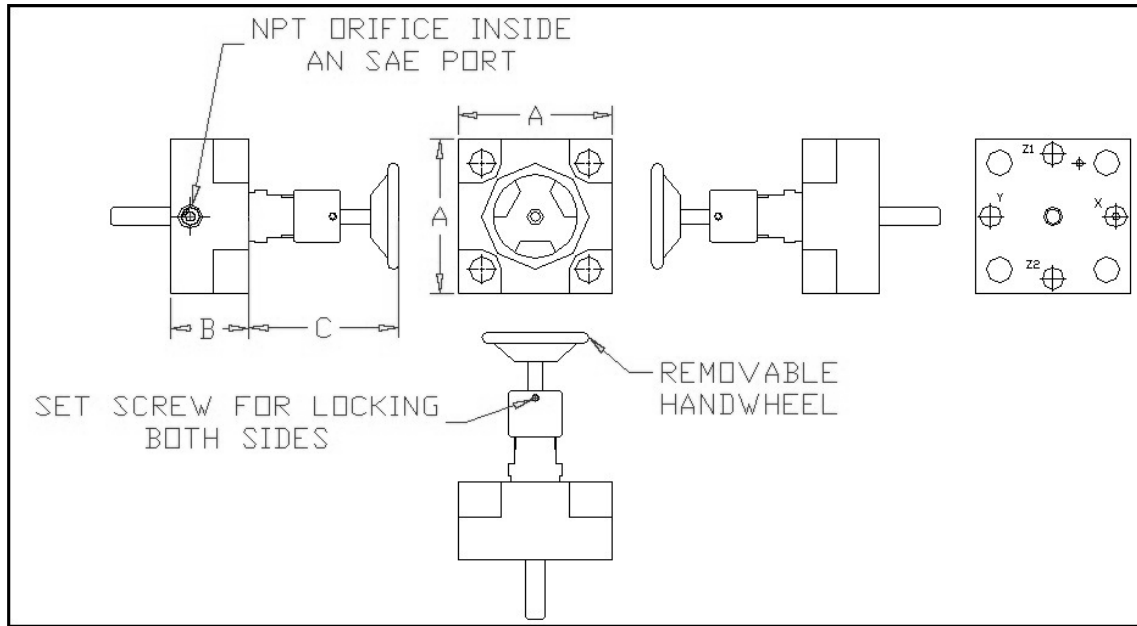
Provides metered-flow from “A to B” & check function from “B to A” by connecting the “X” pilot to the “B” port of the valve insert.



NOTE: To eliminate the check valve function & only use the metering capabilities then connect the “X” pilot to a drain line instead of connecting to the “B” port.



General Layout



Sizes 25mm to 63mm (80mm not shown)

SIZE	A	B	C	SAE	NPT	ORIFICE	BOLTS
16 mm	2.75"	1.50"	2.80"	#4	1/16-27	1.0mm	5/16-18 X 1.50" (4)
25 mm	3.50"	1.50"	4.00"	#4	1/16-27	1.2mm	1/2-13 X 2.00" (4)
32 mm	4.00"	2.00"	4.00"	#4	1/16-27	1.3 mm	5/8-11 X 2.00" (4)
40 mm	5.00"	2.40"	5.50"	#4	1/16-27	1.5 mm	3/4-10 X 2.50" (4)
50 mm	5.55"	2.75"	5.50"	#4	1/16-27	1.8 mm	3/4-10 X 3.00" (4)
63 mm	7.00"	3.38"	7.00"	#6	1/8-27	2.0 mm	1-1/4-7 X 3.50" (4)
80 mm	9.50"	3.50"	7.00"	#6	1/8-27	2.8 mm	1-8 X 4.00" (8)

Order Code

AMT-PSTK-**-**-**

Almo
Manifold
& **T**ool

Poppet **S**troke
Cover

Size: **16, 25, 32, 40, 50, 63, 80**mm

Custom Orifice Size in
"mm" if other than
Standard Size
Examples: 08 = 0.8mm
10 = 1.0mm
12 = 1.2mm

BL= Include bolts at extra
charge

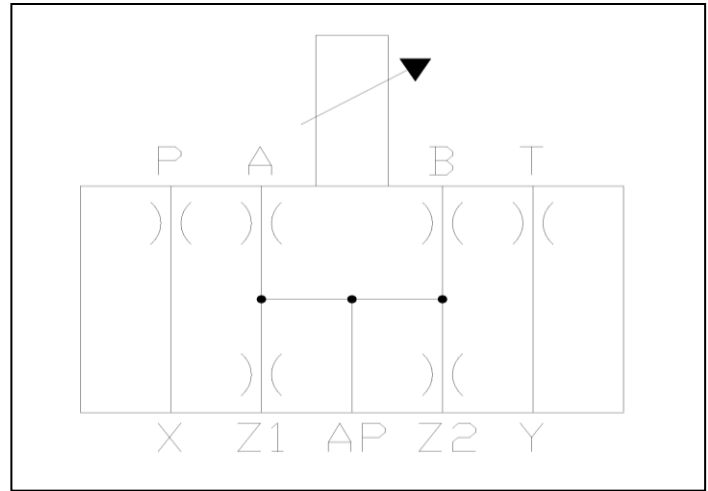
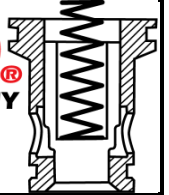
Blank= Customer will supply
bolts

DIN 24342 COVER FOR FLOW CONTROL

SIZES 25mm TO 80mm

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY

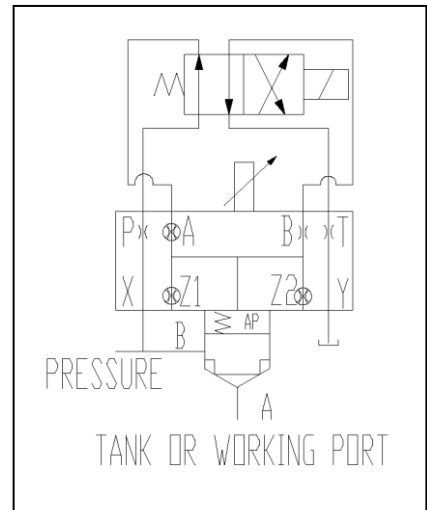
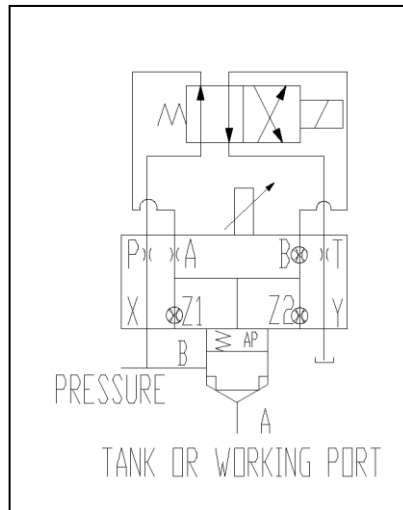


- ✓ Adjustable stroke-limiting cover for decreasing the traveling distance of poppet insert
- ✓ Set screws for locking
- ✓ A solenoid or B solenoid options
- ✓ Ships standard with an orifice installed in the “P” port & Z1,Z2, and B plugged
- ✓ Removable orifice/plug options

Applications

Directional / Flow control valve

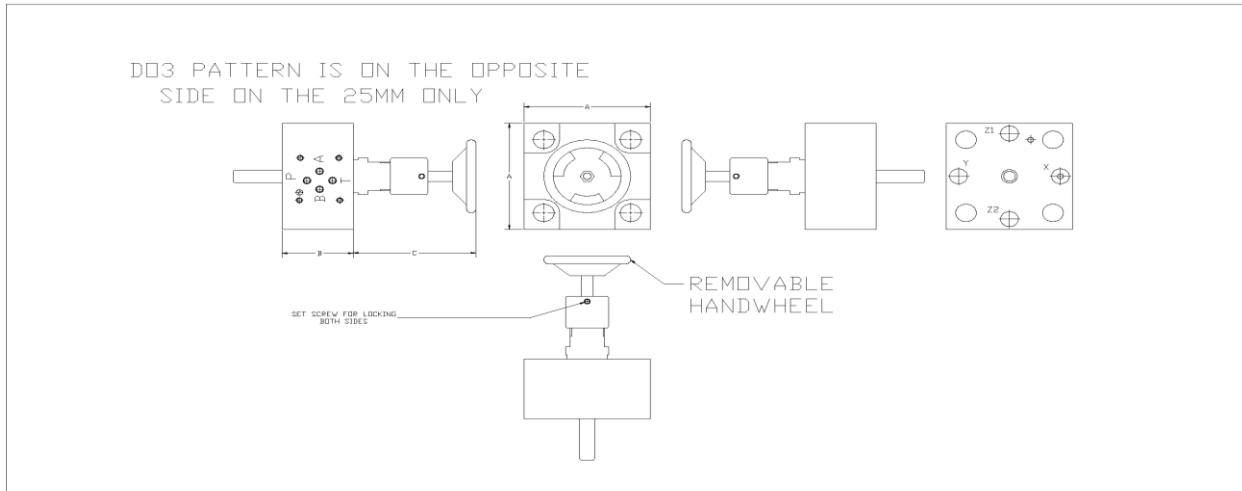
By connecting the “X” to the “B” port (side of insert) & connecting “Y” to drain you can create a Directional valve with flow control. Plug option 1 will allow the valve to dump in the energized state. Plug option 2 will allow the valve to dump in the de-energized state.



SIMPLIFIED CIRCUIT SYMBOLS WITH X CONNECTED TO B



General Layout



Sizes 25mm to 63mm (80mm with D05 not shown)

SIZE	A	B	C	SAE	NPT	Orifice Size	BOLTS
25 mm	3.50"	2.50"	4.00"	#4	1/16-27	1.2 mm	1/2-13 X 2.75" (4)
32 mm	4.00"	3.25"	4.00"	#4	1/16-27	1.3 mm	5/8-11 X 3.25" (4)
40 mm	5.00"	2.40"	5.50"	#4	1/16-27	1.5 mm	3/4-10 X 2.50" (4)
50 mm	5.55"	2.75"	5.50"	#4	1/16-27	1.8 mm	3/4-10 X 3.00" (4)
63 mm	7.00"	3.50"	7.00"	#6	1/8-27	2.0 mm	1-1/4-7 X 3.50" (4)
80 mm	9.50"	2.75"	7.00"	#6	1/8-27	2.5 mm	1-8 X 5.25" (8)

Order Code

AMT-PSTK-**-D03-**-**

Almo
Manifold
& **T**ool

Poppet **S**troke
Cover

Size: 25, 32, 40, 50, 63, or 80mm

BL= Include bolts at extra charge
Blank= Customer will supply bolts

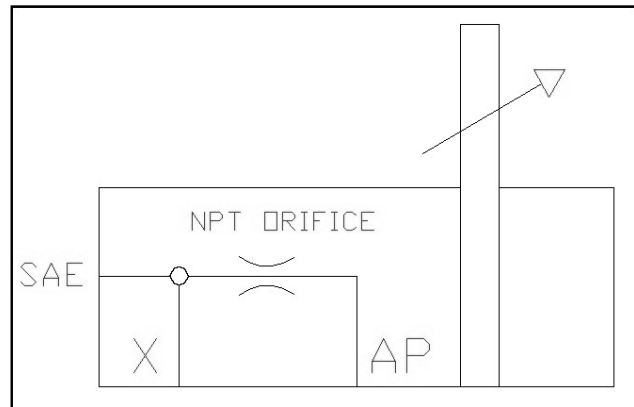
Custom Orifice Size in "mm" if other than Standard Size
Examples: 08 = 0.8mm
10 = 1.0mm
12 = 1.2mm

DIN 24342 COVER FOR FLOW CONTROL

SIZES 25mm TO 63mm

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY

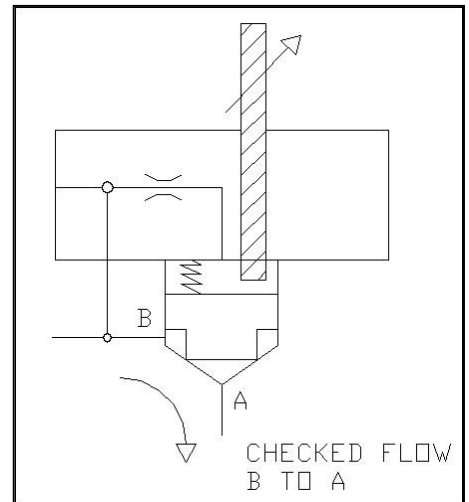
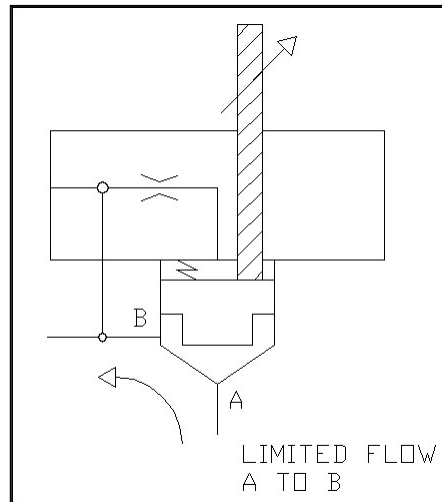


- ✓ Adjustable stroke-limiting cover for decreasing the traveling distance of poppet insert
- ✓ Stroke adjustment under SAE plug for tamper resistance and protection from elements.
- ✓ Jam Nut for locking
- ✓ SAE O-ring port for gauging & access to orifice.

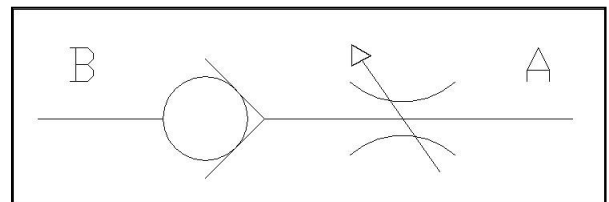
Applications

Check/Flow Control Valve

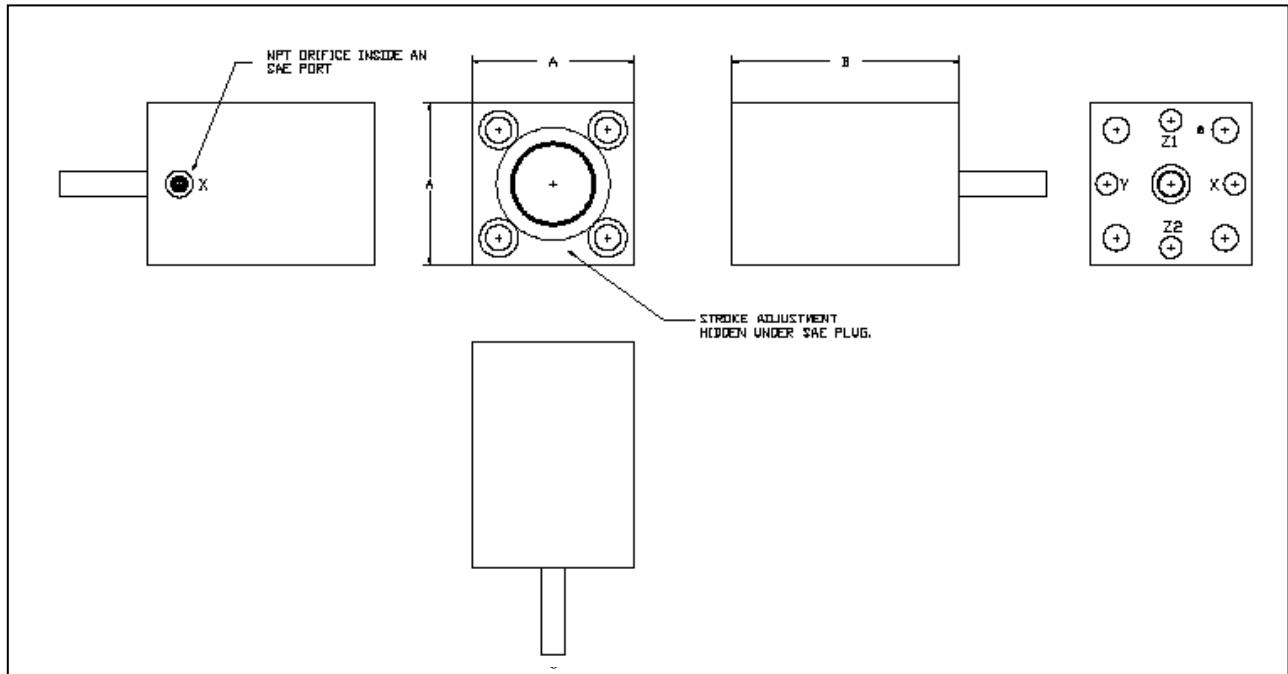
Provides metered-flow from “A to B” & check function from “B to A” by connecting the “X” pilot to the “B” port of the valve insert.



NOTE: To eliminate the check valve function & only use the metering capabilities then connect the “X” pilot to a drain line instead of connecting to the “B” port.



General Layout



SIZE	A	B	SAE	NPT	*Orifice Size	BOLTS
25 mm	3.50"	5.00"	#4	1/16-27	1.2mm	1/2-13 X 5.00" (4)
32 mm	4.00"	5.00"	#4	1/16-27	1.3 mm	5/8-11 X 5.00" (4)
40 mm	5.00"	7.00"	#4	1/16-27	1.5 mm	3/4-10 X 6.00" (4)
50 mm	5.55"	7.00"	#6	1/8-27	1.8 mm	3/4-10 X 6.00" (4)
63 mm	7.00"	7.00"	#6	1/8-27	2.0 mm	1-1/4-7 X 7.00" (4)

Order Code

AMT-PSLSH-**-**-**

Almo
Manifold
& **T**ool

Poppet **S**troke
Limiter **H**idden

Size: 25, 32, 40, 50, & 63

BL= Include bolts at extra charge

Blank= Customer will supply bolts

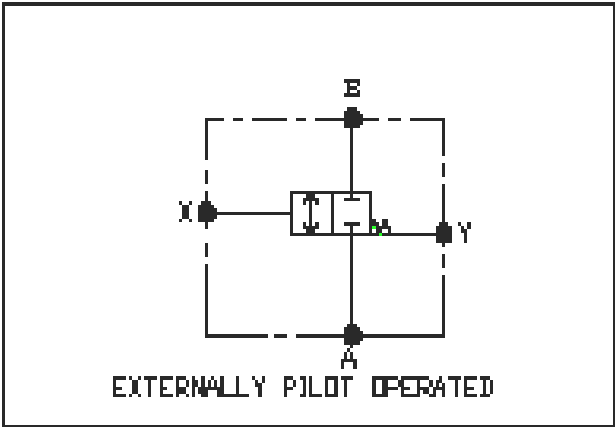
Custom Orifice Size in "mm" if other than Standard Size
Examples: 08 = 0.8mm
10 = 1.0mm
12 = 1.2mm



NOTES:

ACTIVE POPPETS

DIN 24342	
ACTIVE POPPET	
SIZES 25mm TO 50mm	5000 PSI

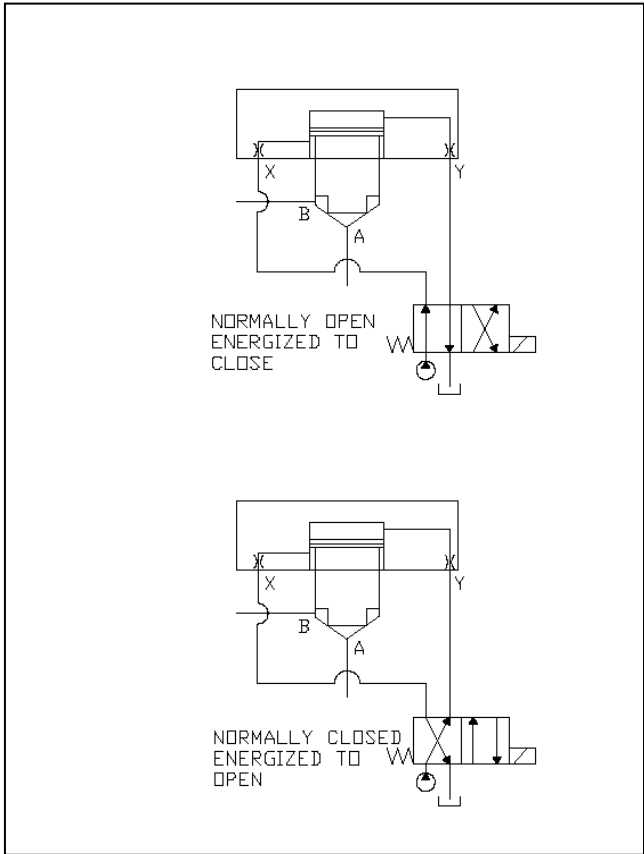


- ✓ Standard ISO 7368 and DIN 24342 cavity and porting.
- ✓ Control Areas provide fast response time.
- ✓ Can close poppet under high load pressure.

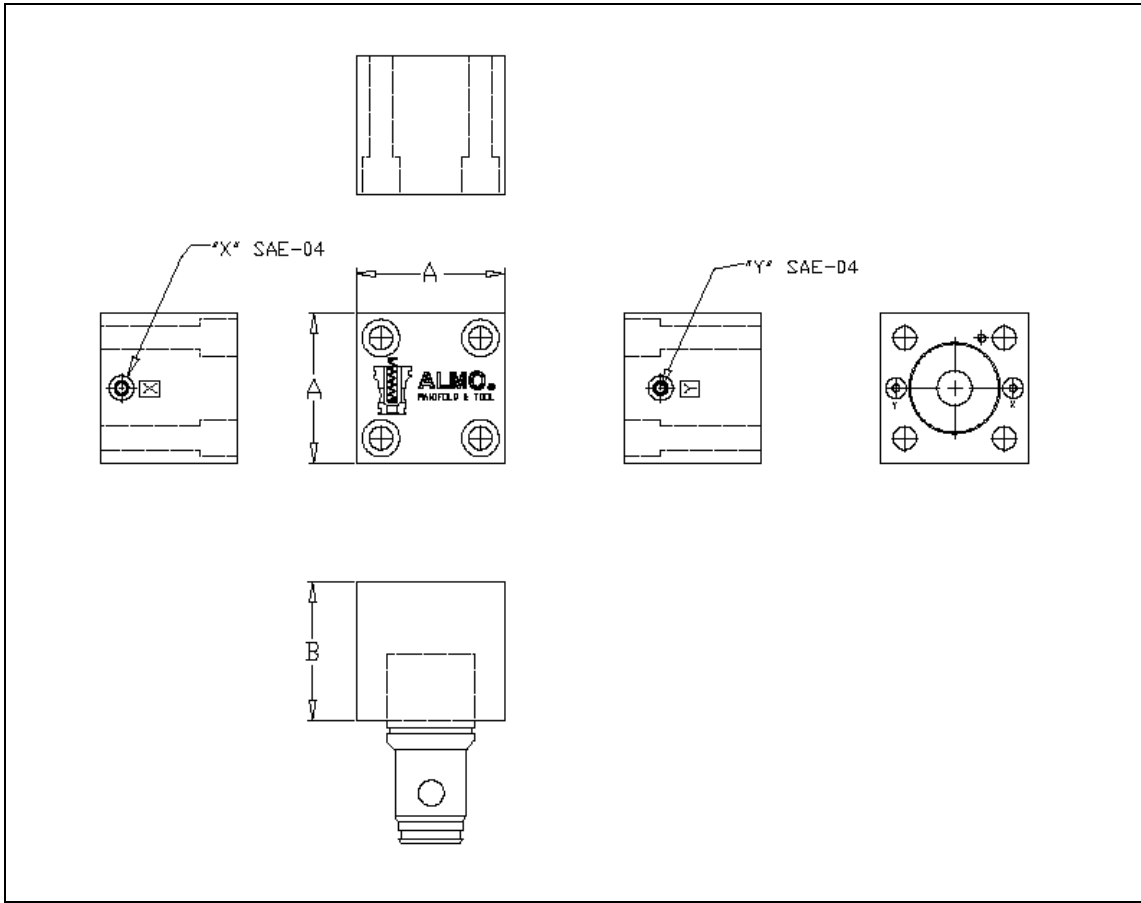
Applications

Active Poppet

The active poppet is pilot operated to cut off the main hydraulic supply to the circuit. In some circumstances can be used as a prefill valve.

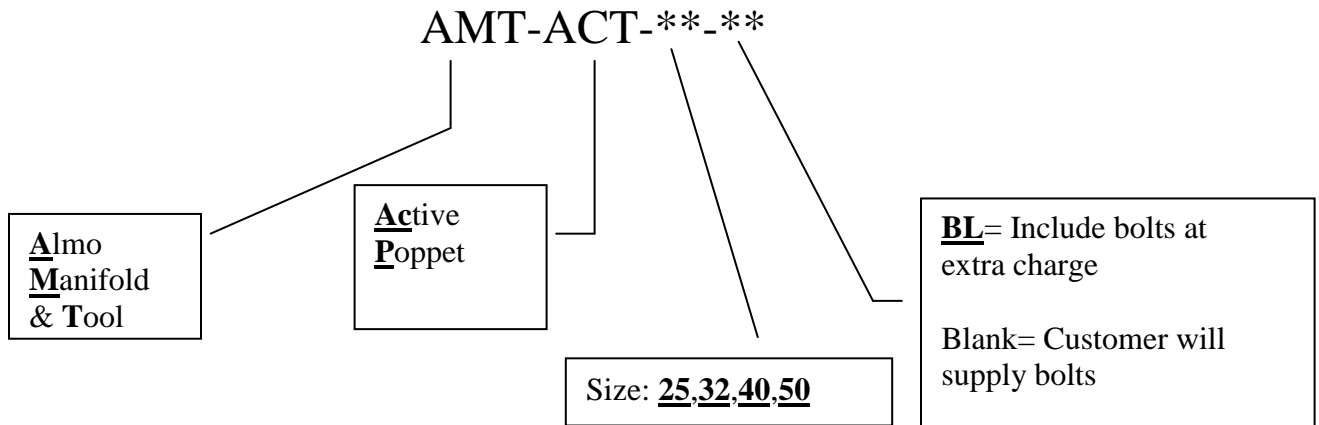


General Layout



Size	Flow GPM	A	B	Bolts
25 mm	100	3.50	3.30	1/2"-13X3.50
32 mm	200	4.00	3.40	5/8"-11X3.50
40 mm	350	5.00	4.60	3/4"-10X4.50
50 mm	450	5.55	5.00	3/4"-10X5.00

Order Code

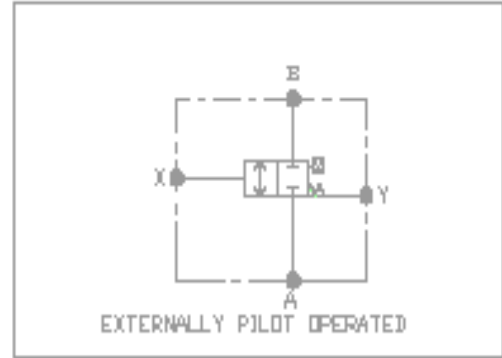


DIN 24342 SAFETY ACTIVE POPPET

SIZES 25mm TO 50mm

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY



- ✓ Standard ISO 7368 and DIN 24342 cavity and porting.
- ✓ Control Areas provide fast response time.
- ✓ Can close poppet under high load pressure.
- ✓ Built-in limit switch provides position feedback of Main Cartridge, AC or DC.

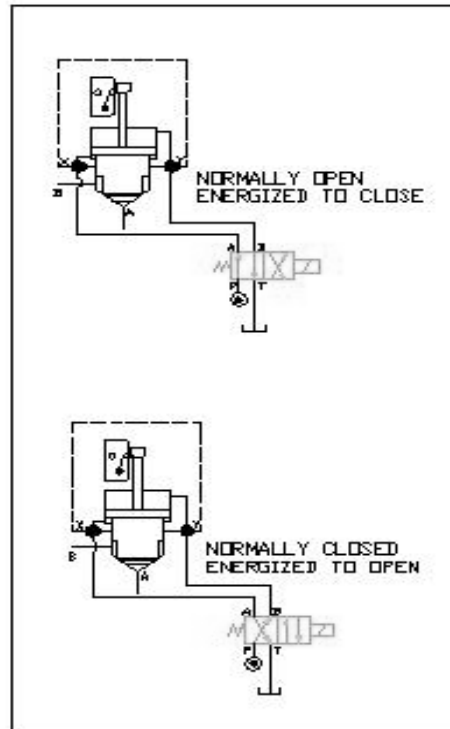
Applications

Safety Active Poppet

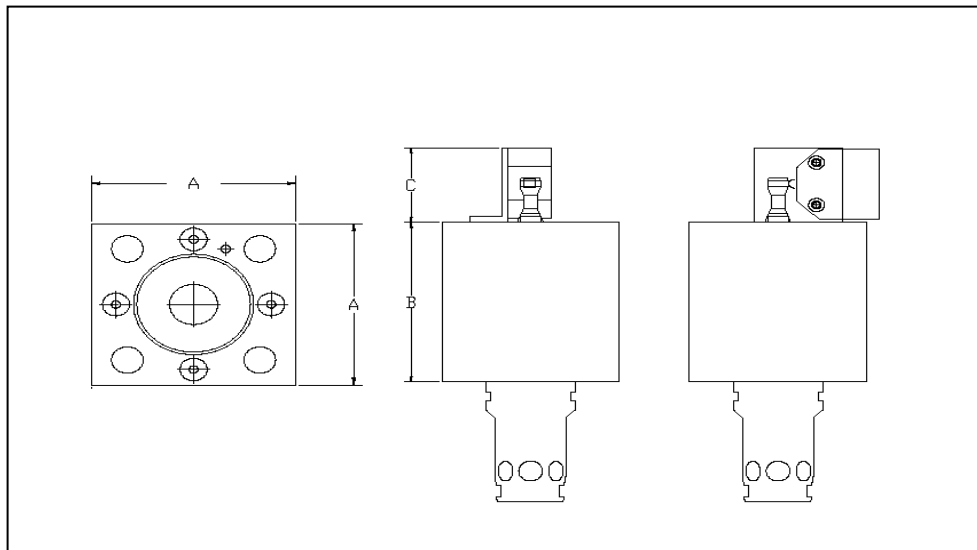
Serves to add required protection for clamp circuits. The active poppet is pilot operated to cut off the main hydraulic supply to the clamp circuit. Also used for control press closing.

MEETS ANSI B11.2-1995

Incorporating two Active Poppets used in series meet the ANSI B11.2-1995 Safety requirements for Hydraulic Power Press clamp circuits. Contact Engineering for more details.

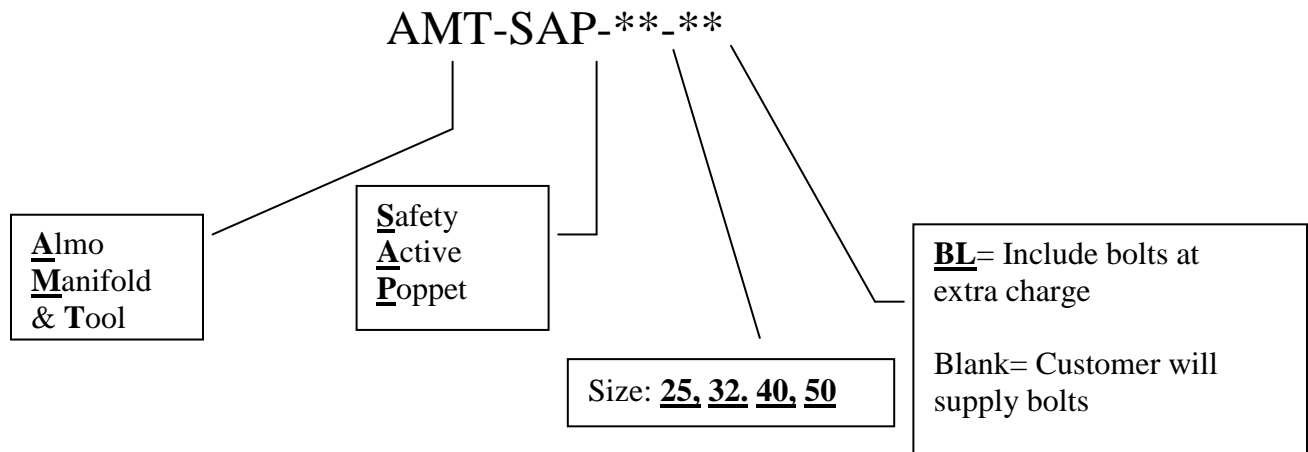


General Layout



Size	Flow GPM	A	B	C	Bolts
25 mm	100	3.50	3.00	2.0	1/2"-13X3.50
32 mm	200	4.00	4.11	2.0	5/8"-11X3.50
40 mm	350	5.00	5.00	2.0	3/4"-10X5.00
50 mm	450	5.75	5.46	2.0	3/4"-10X5.00

Order Code



NOTES:

SINGLE DIN CAVITY BLOCKS

SINGLE DIN CAVITY BLOCKS (ALMO "UCB" BLOCKS)

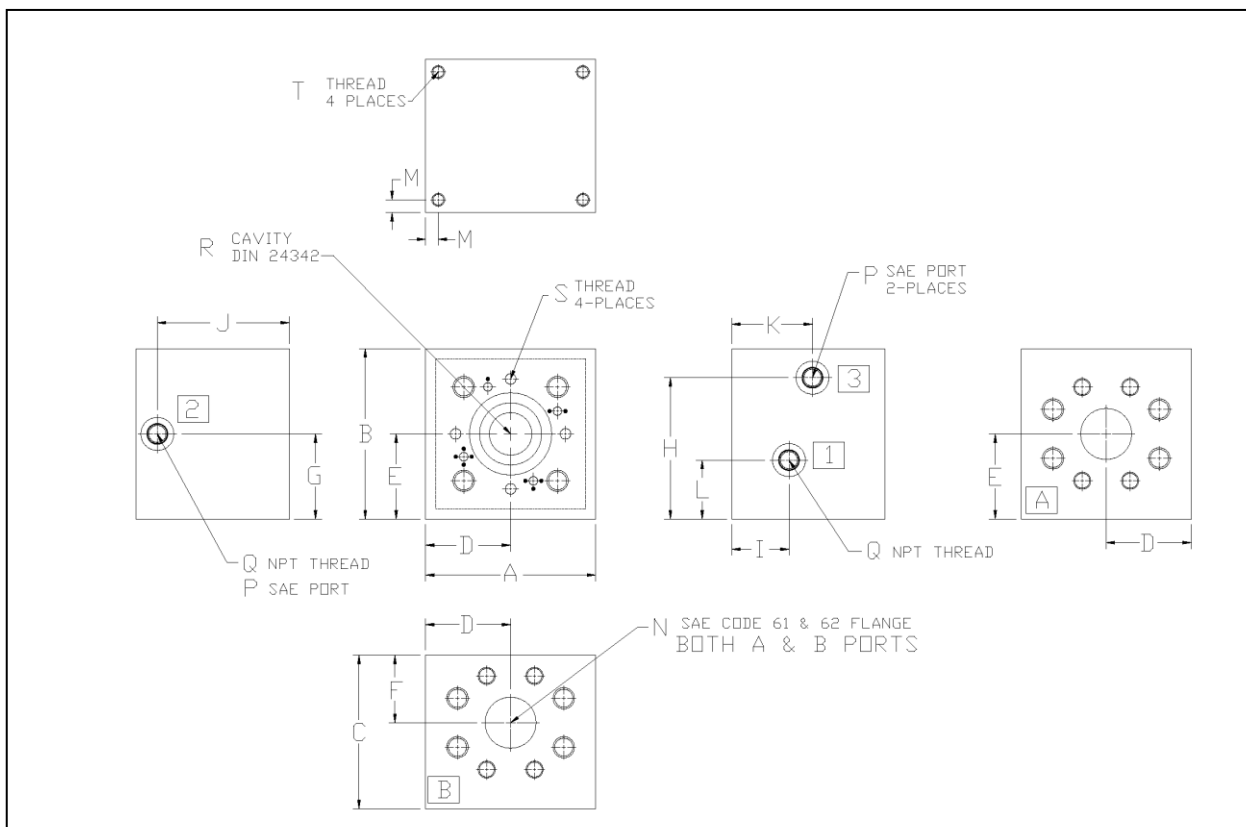
SIZES 16mm TO 63mm

6000 PSI



- Our single DIN 24342 cavity manifolds offer pilot circuit flexibility simply by rotating the valve cover 90°. The four active locating positions & pilot port designations are shown below, along with the general layout & dimensional specifications.
- Each manifold will be supplied with 4 plugs for the valve face, 2 NPT plugs for internal plumbing, & 3 SAE plugs for ports 1, 2, & 3. None of these plugs are installed upon shipment.

Dimensions

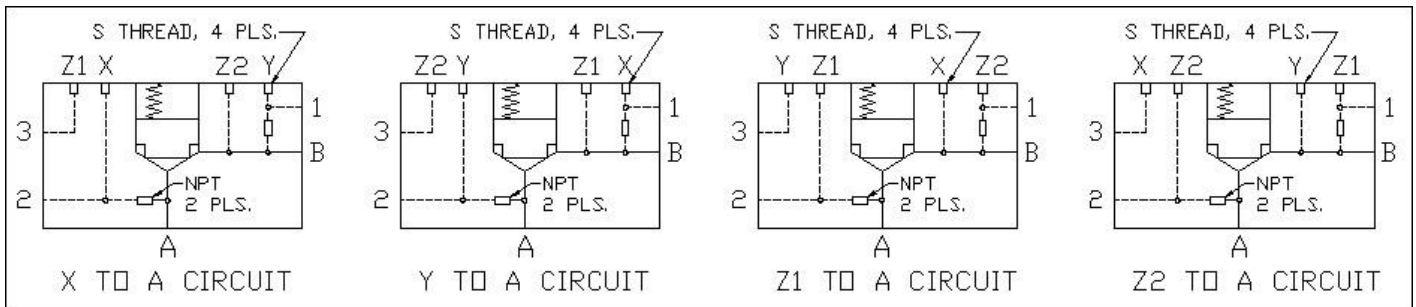


DIMENSIONAL SPECIFICATIONS IN INCHES

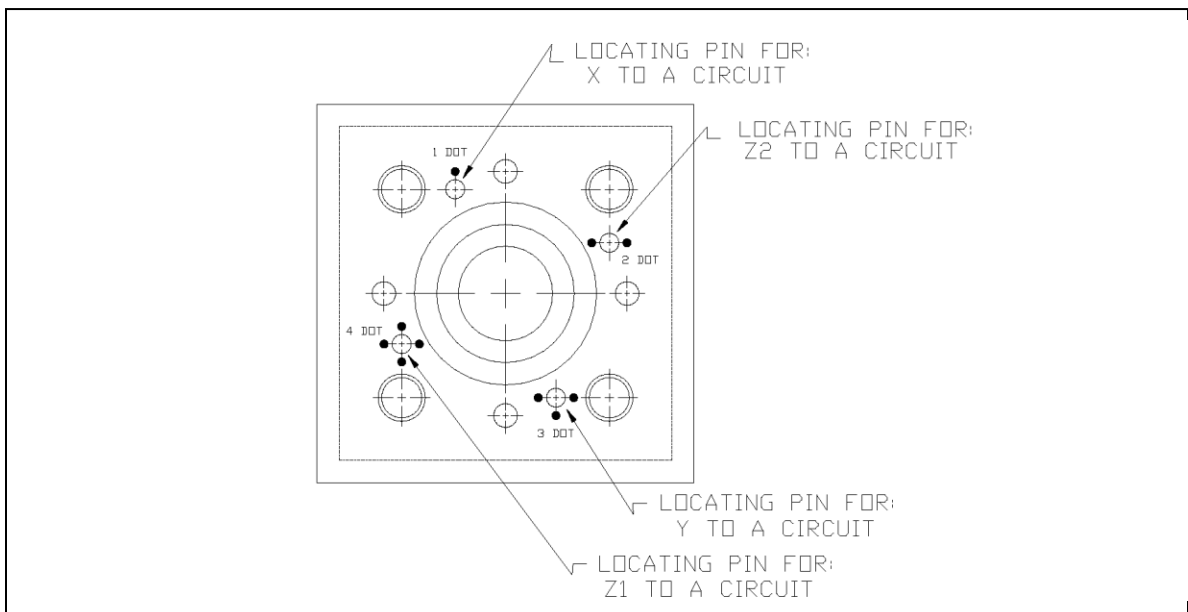
DIN SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
16	3.25	3.25	3.38	1.63	1.63	1.39	1.63	2.68	1.39	2.88	1.39	0.75	0.30
25	4.00	4.00	4.00	2.00	2.00	1.64	2.00	3.30	1.50	3.25	2.13	1.50	0.38
32	5.00	5.00	4.50	2.50	2.50	1.98	2.50	4.15	1.68	3.88	2.37	1.73	0.38
40	6.00	6.00	5.25	3.00	3.00	2.42	3.00	4.98	2.00	4.68	2.85	2.30	0.38
50	7.00	7.00	6.25	3.50	3.50	2.73	3.50	5.90	2.25	5.58	3.58	2.50	0.50
63	9.00	9.00	7.50	4.50	4.50	3.53	5.25	8.33	3.00	6.75	4.13	3.75	0.63

DIMENSIONAL SPECIFICATIONS IN INCHES							
DIN SIZE	'N' CODE 61 & 62 FLANGE	'P' SAE	'P' THREAD	'Q' NPT THREAD	'R' DIN SIZE	'S' THREAD	'T' MOUNTING THREAD
16	1.00"	-04	7/16-20 UNF	1/16-27 NPT	16mm	10-24 UNC	3/8-16 UNC
25	1.25"	-04	7/16-20 UNF	1/16-27 NPT	25mm	1/4-20 UNC	3/8-16 UNC
32	1.50"	-06	9/16-18 UNF	1/16-27 NPT	32mm	1/16-27 NPT	3/8-16 UNC
40	2.00"	-06	9/16-18 UNF	1/16-27 NPT	40mm	1/16-27 NPT	3/8-16 UNC
50	2.50"	-08	3/4-16 UNF	1/8-27 NPT	50mm	1/8-27 NPT	1/2-13 UNC
63	3.00"	-08	3/4-16 UNF	1/8-27 NPT	63mm	1/8-27 NPT	5/8-11 UNC

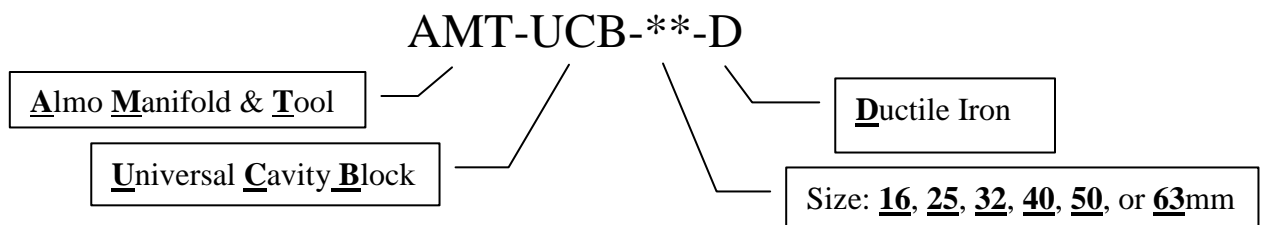
Circuit Options



Installation



Order Code



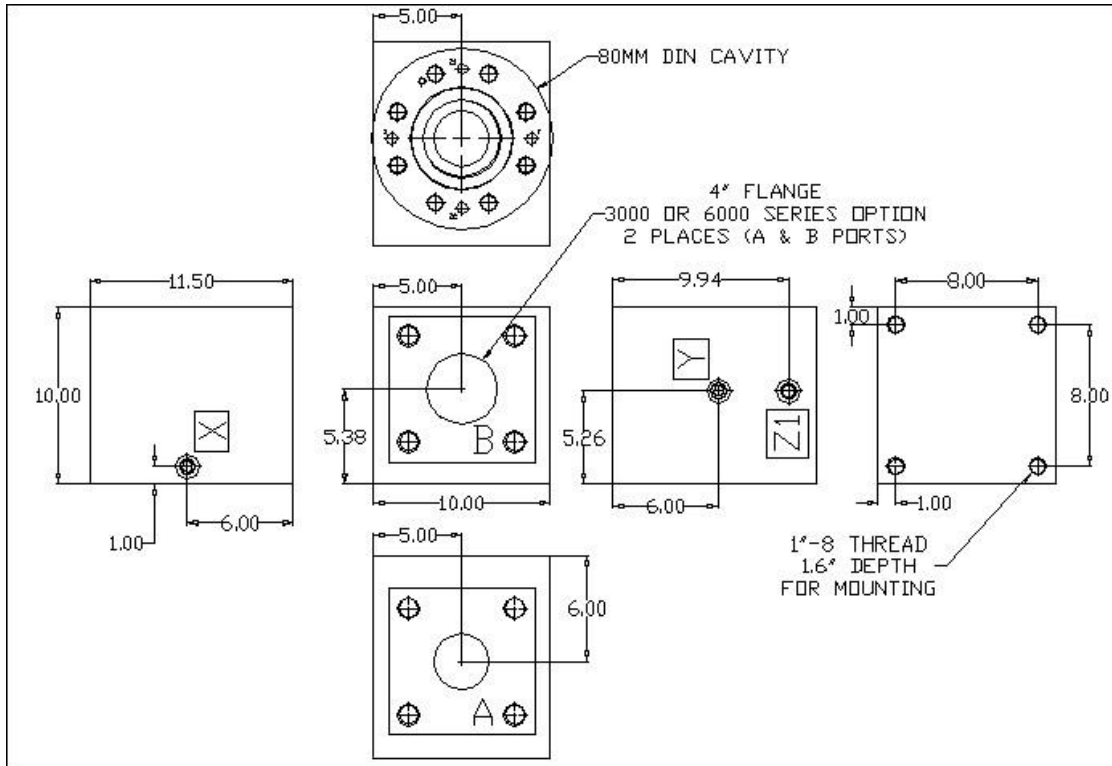
80 MM DIN CAVITY BLOCK

3000 PSI OR 6000 PSI OPTION

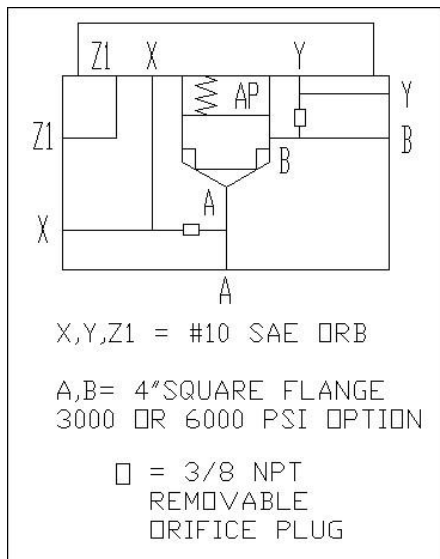


- Our single DIN 24342 80mm cavity manifold offers one circuit with the option of internally isolating the 'X' or 'Y' pilot ports.
- Each manifold will be supplied with 2 NPT plugs for internal plumbing, & 3 SAE plugs for ports X, Y, & Z1. None of these plugs are installed upon shipment.

Dimensions

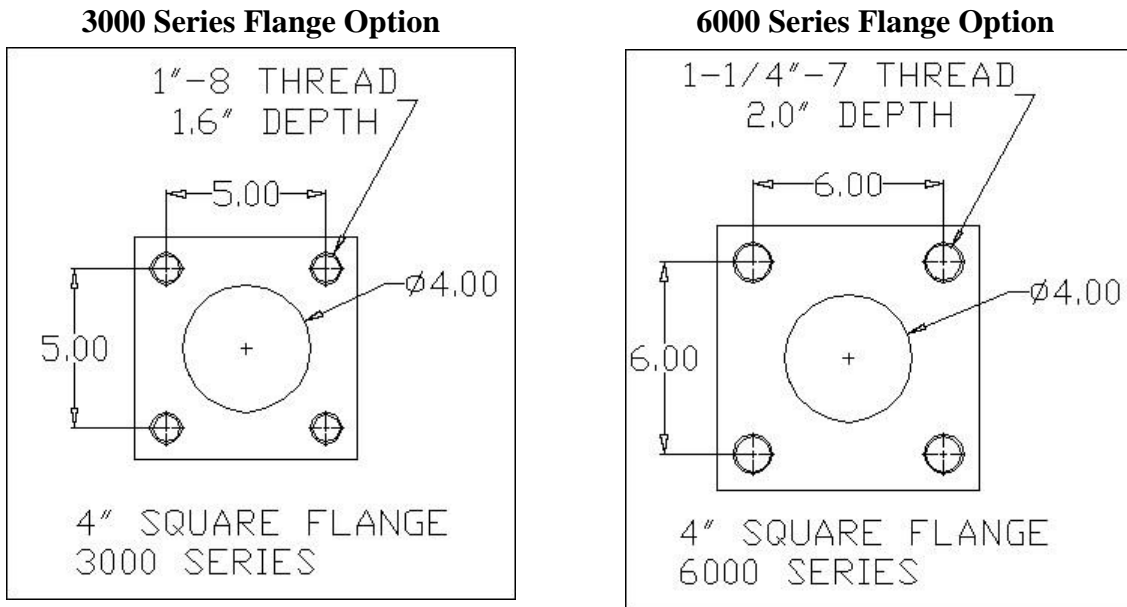


Circuit

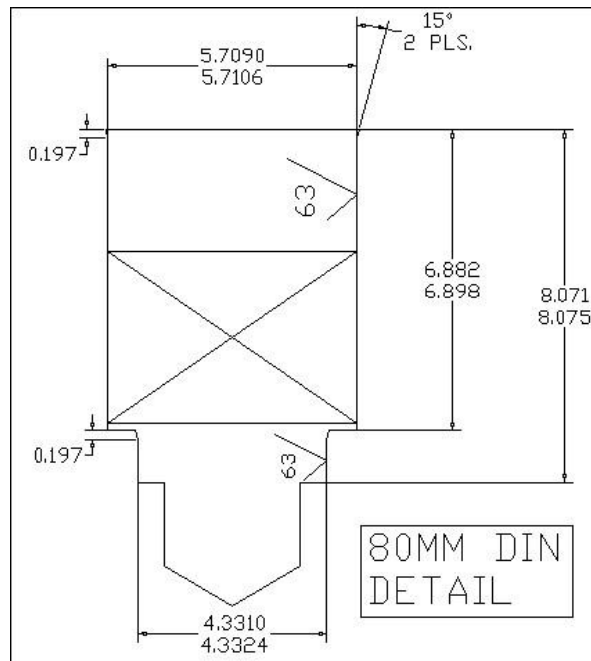


- Port A:** Connects to Nose of Cartridge
- Port B:** Connects to Side of Cartridge
- Pilot X:** Connects to Port A & Port X or
Isolated from A & Connected to X
- Pilot Y:** Connects to Port B & Port Y or
Isolated from B & Connected to Y
- Pilot Z1:** Connect to Port Z1, Isolated from circuit

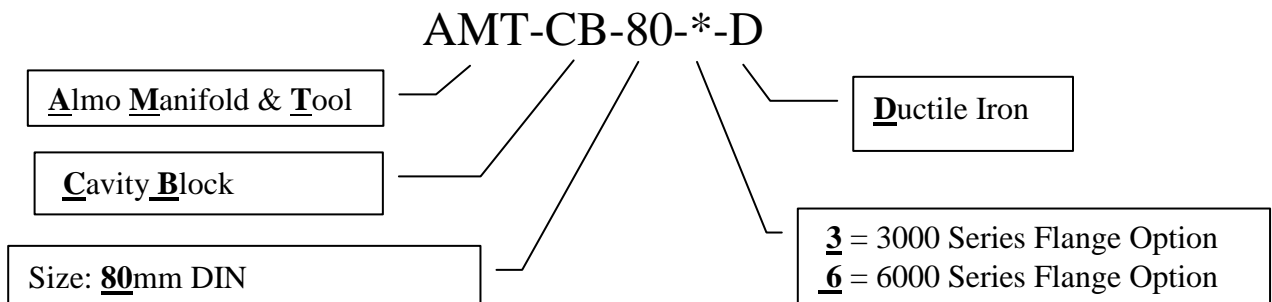
Flange Option



Cavity Specifications



Order Code



NOTES:

PILOT OPERATED
DIRECTIONAL
CONTROL VALVE
CIRCUITS

PILOT OPERATED DIRECTIONAL CONTROL VALVE CIRCUITS

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MANIFOLD & TOOL COMPANY



CUSTOM MANIFOLD

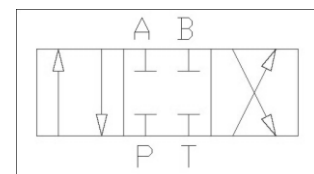
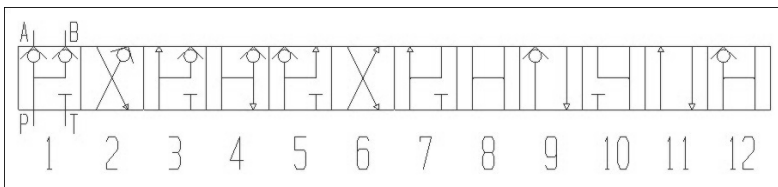
5000 PSI



- Custom Manifolds that mount directly to a Standard D08/D10 interface or can be designed to accept porting of any size.
- Utilizes Almo Slip-In Cartridge Valves Instead of a Conventional Spool
- Poppet Valve Technology Provides for:
 - Incredible Control
 - Softer Shifting
 - Less Shock
 - Increased Longevity
- Individual Pilot Controls for each Slip-In Valve & Easily Accessible Removable Orifice Plugs Allow Precise Timing for each Application

Schematic

Standard
Directional
Schematic



Standard Model: Spool positions shown above can be obtained by energizing or de-energizing the individual solenoid valves

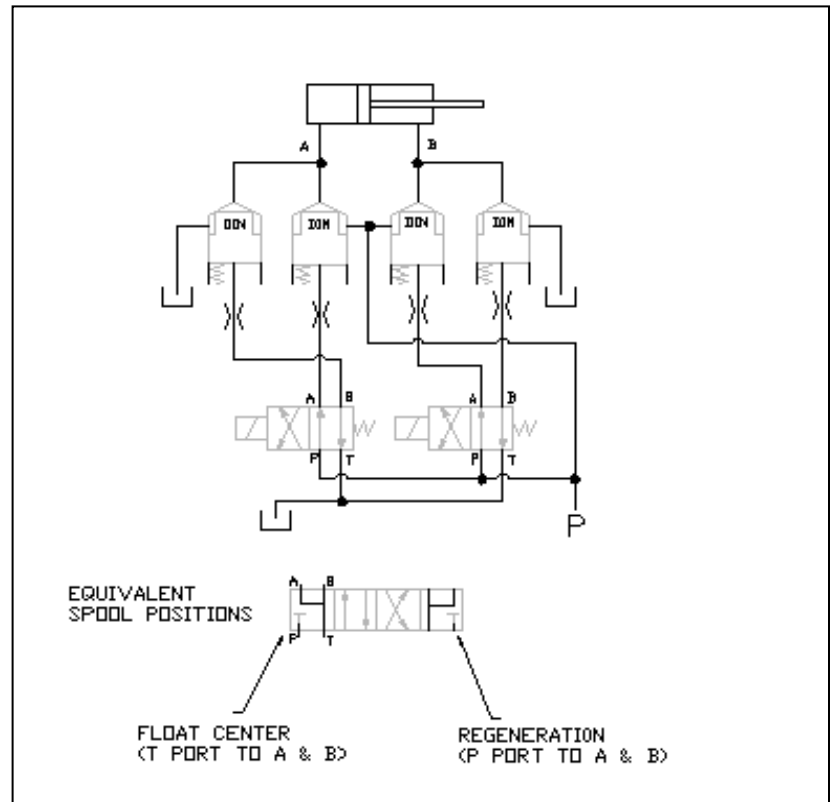
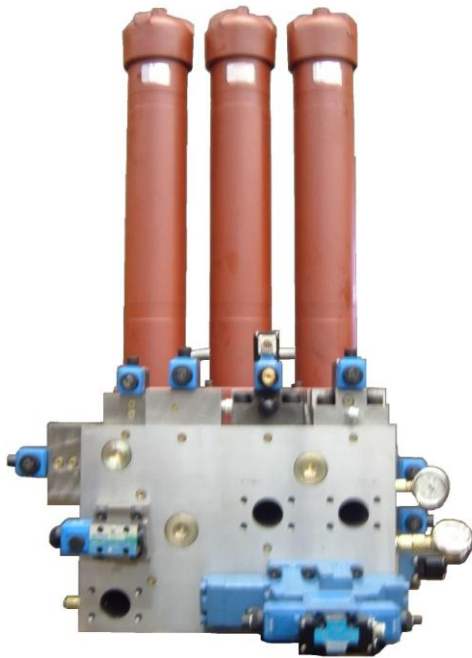
Closed Center Option

HIGH FLOW DIRECTIONAL REGEN & PUMP CIRCUITS

CUSTOM MANIFOLD

5000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY



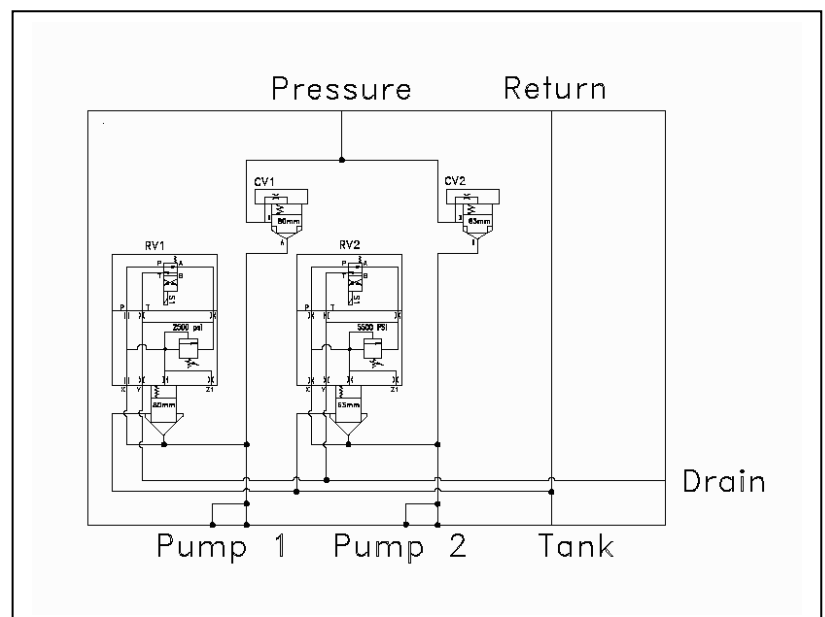
High Flow Directional Control Circuit
Functions as a 4-Way, 4-Position
Valve

With Extend, Retract, Regeneration,
& Float Positions

Utilizes Standard Slip-In Din Cavities

High Flow Pump Control Circuit
provides Unloading Relief function
along with check valves eliminating
back flow and one pump over
powering the other.

Pictured above is the combination of a
directional circuit and three pump
circuits all in one manifold, creating a
clean compact system.





NOTES:

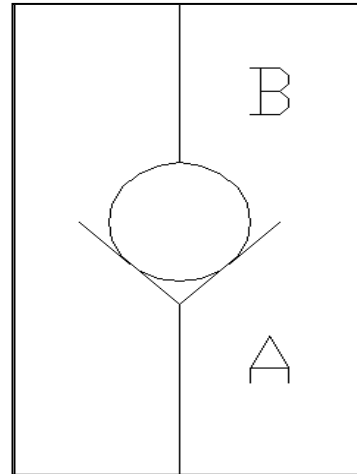
90 Degree Flanged Valves

90 DEGREE FLANGED HIGH FLOW CHECK VALVE

SIZES 1 1/4" thru 4.0"

6000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY

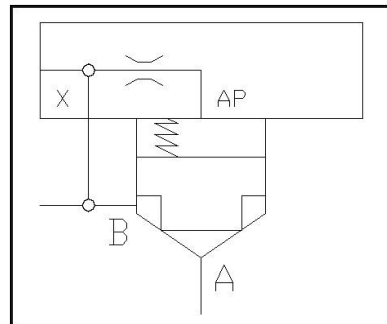


- ✓ Removable NPT orifice
- ✓ SAE O-ring port for access to NPT orifice, gauging, or remote piloting

Applications

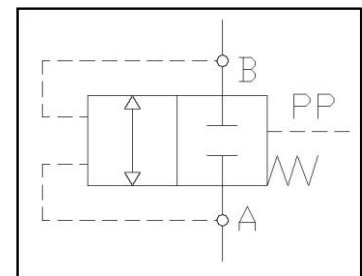
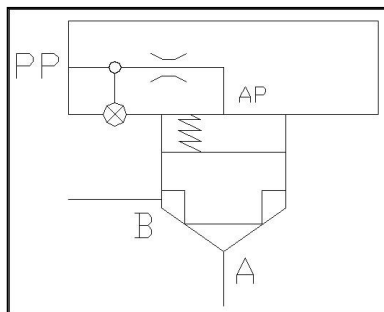
Check Valve

Provides free-flow from "A to B"
& check function from "B to A"

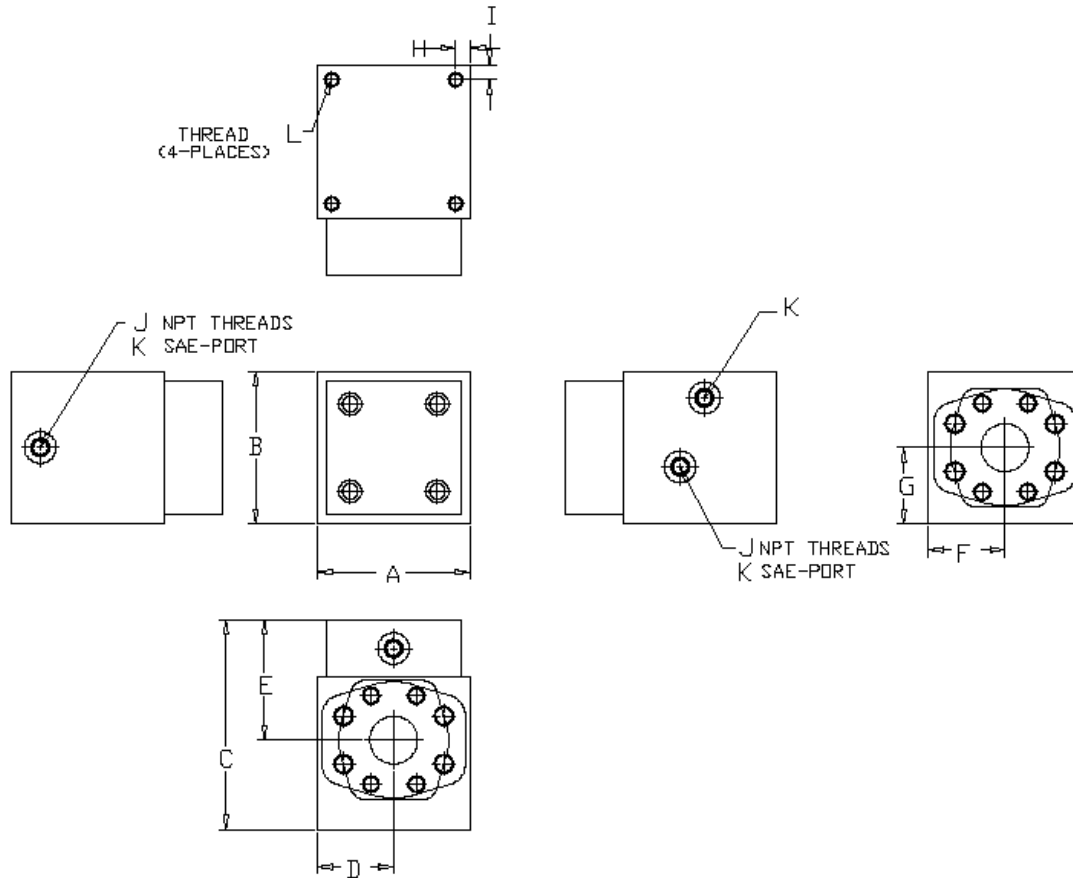


Manual/External Piloting

By blocking the "X" pilot internally, a separate pilot pressure can be used via the SAE port to manually hold the valve closed. Pilot pressure & spring forces act to close the valve, forces at "A" & "B" act to open the valve.



General Layout



Sizes 1 1/4" to 4.0"

(4.0" size not shown contact Almo for further information)

DIMENSIONAL SPECIFICATIONS IN INCHES													
VALVE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
1.25	4.00	4.00	5.50	2.00	3.14	2.00	2.00	.38	.38	1/16	#4	3/8-16	N/A
1.50	5.00	5.00	6.50	2.50	3.98	2.50	2.50	.38	.38	1/16	#6	3/8-16	N/A
2.00	6.00	6.00	7.65	3.00	7.42	3.00	3.00	.38	.38	1/16	#6	3/8-16	N/A
2.50	7.00	7.00	9.00	3.50	5.48	3.50	3.50	.50	.50	1/8	#8	1/2-13	N/A
3.00	9.00	9.00	10.9	4.50	6.91	4.50	4.50	.63	.63	1/8	#8	5/8-11	N/A
4.00	10.0	11.5	13.5	5.00	8.12	6.00	5.00	1.00	1.00	3/8	#10	1"-8	N/A

Order Code

AMT-9-***-CK-**

Almo
Manifold
& Tool

90 DEGREE

CRACKING PRESSURE
5, 15, 30, 60 p.s.i.

Size: **125, 150, 200, 250, 300, 400.**

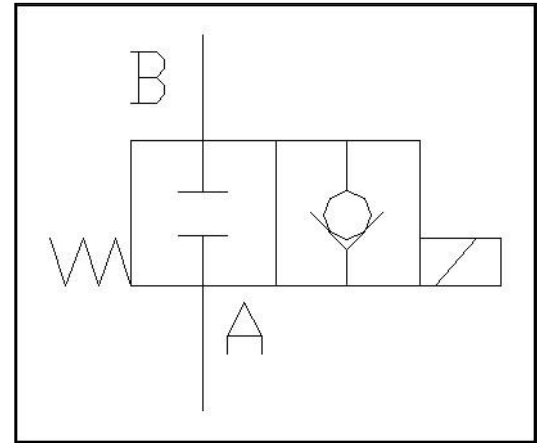
CHECK VALVE

90 DEGREE FLANGED HIGH FLOW DUMP VALVE

SIZES 1 1/4" thru 4.0"

6000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY

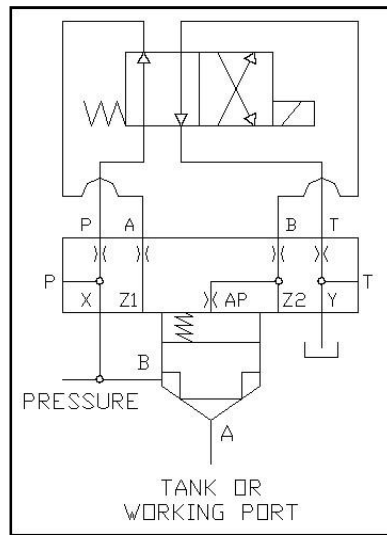


- ✓ Standard D03 interface on the 1 1/4" thru 2.0"
- ✓ Standard D05 interface on the 2.50" thru 4.0"
- ✓ SAE O-ring ports for access to P & T
- ✓ Ships standard with an orifice installed in the "P" port.

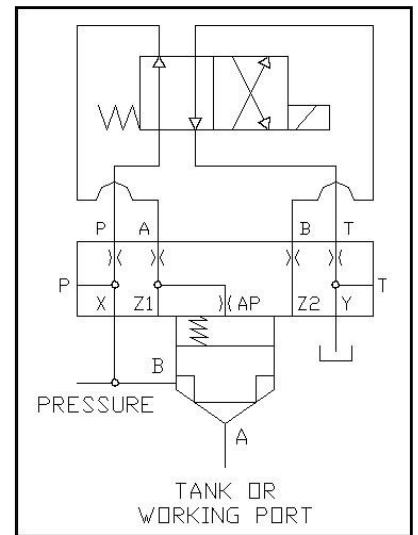
Applications

Dump Valve or ON/OFF valve

The diagrams to the right show the two options. The normally open option will allow the valve to dump in the de-energized state. The normally closed option will allow the valve to dump in the energized state.

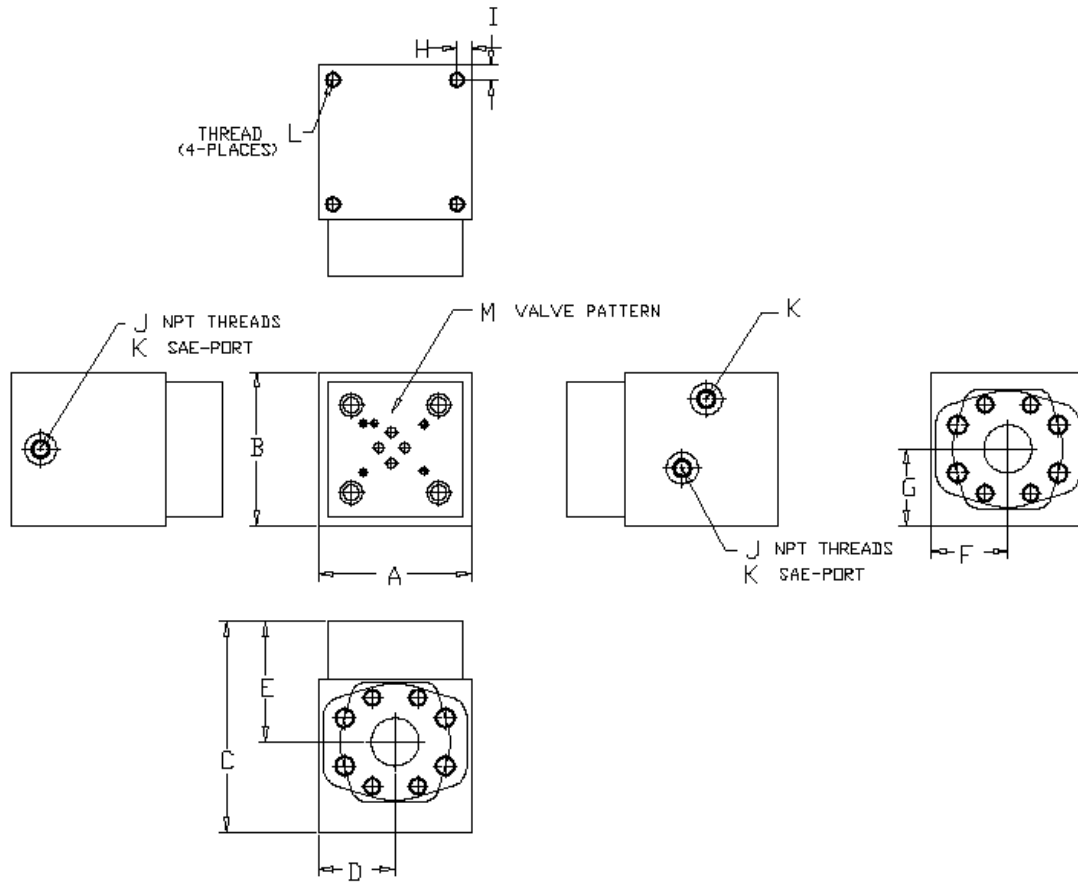


Normally Open



Normally Closed

General Layout



Sizes 1 1/4" to 4.0"

(4.0" size not shown contact Almo for further information)

DIMENSIONAL SPECIFICATIONS IN INCHES													
VALVE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
1.25	4.00	4.00	6.00	2.00	3.64	2.00	2.00	.38	.38	1/16	#4	3/8-16	D03
1.50	5.00	5.00	6.50	2.50	3.98	2.50	2.50	.38	.38	1/16	#6	3/8-16	D03
2.00	6.00	6.00	7.65	3.00	7.42	3.00	3.00	.38	.38	1/16	#6	3/8-16	D03
2.50	7.00	7.00	9.00	3.50	5.48	3.50	3.50	.50	.50	1/8	#8	1/2-13	D05
3.00	9.00	9.00	10.9	4.50	6.91	4.50	4.50	.63	.63	1/8	#8	5/8-11	D05
4.00	10.0	11.5	13.5	5.00	8.12	6.00	5.00	1.00	1.00	3/8	#10	1"-8	D05

Order Code

AMT-9-***-DV-**

Almo
Manifold
& Tool

90 DEGREE

NO for normally open
NC for normally closed

Size: **125, 150, 200, 250, 300, 400.**

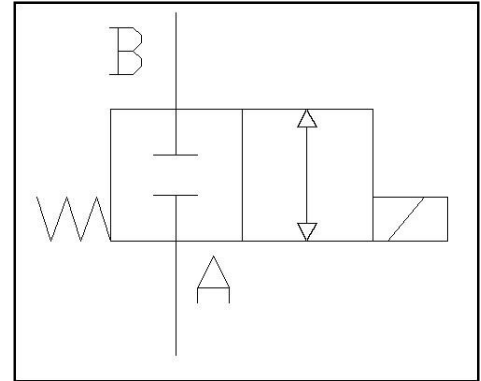
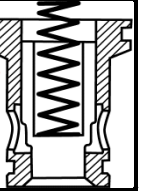
DUMP VALVE

90 DEGREE FLANGED BI DIRECTIONAL VALVE

SIZES 1 1/4" thru 4.0"

6000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY



- ✓ Shuttle valve senses the greater of two pressures
- ✓ Standard D03 interface or D05
- ✓ Standard orifice installed in P
- ✓ Removable orifice plug options

Applications

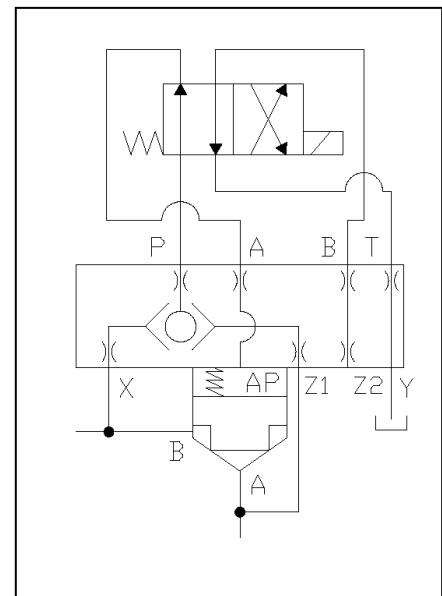
On/Off Valve

Will hold valve closed in one condition and will allow valve to open in the other condition.

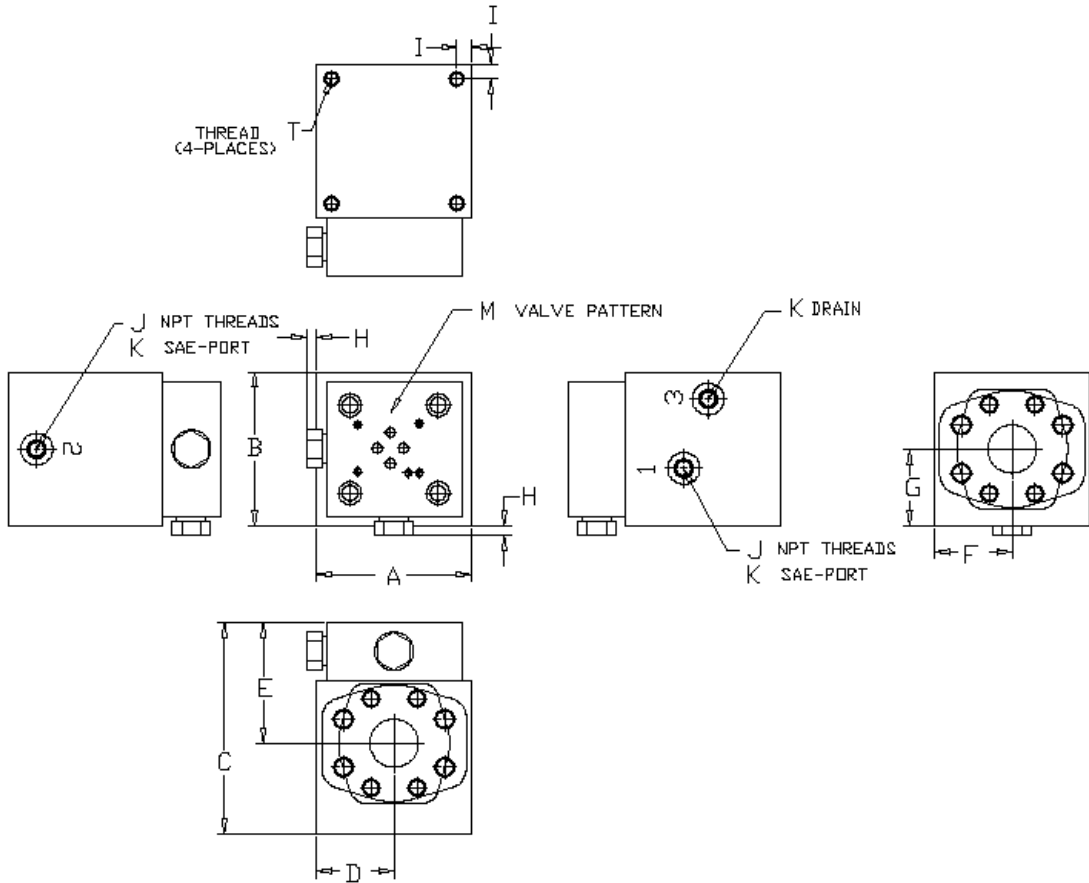
Senses the greater of two pressures between the "X" pilot & the "Z1" pilot. The "X" pilot should be connected to the "B" port (side of insert) and the "Z1" port should be connected to the "A" port (nose of insert) or vice versa.

By using a standard D03 directional control with flow from "P to A" in the de-energized condition the shuttle will use the greater pressure to hold the valve closed. Energizing the solenoid vents the pressure above the valve insert to the drain. Flow can travel freely from A to B or from B to A as long as the spring force is overcome.

"B" to "Z2" allows control of additional valve at port 1.



General Layout



Sizes 1 1/4" to 4.0"

(4.0" size not shown contact Almo for further information)

DIMENSIONAL SPECIFICATIONS IN INCHES													
VALVE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
1.25	4.00	4.00	6.00	2.00	3.64	2.00	2.00	.50	.38	1/16	#4	3/8-16	D03
1.50	5.00	5.00	6.50	2.50	3.98	2.50	2.50	.50	.38	1/16	#6	3/8-16	D03
2.00	6.00	6.00	7.65	3.00	7.42	3.00	3.00	.50	.38	1/16	#6	3/8-16	D03
2.50	7.00	7.00	9.00	3.50	5.48	3.50	3.50	.50	.50	1/8	#8	1/2-13	D03
3.00	9.00	9.00	10.9	4.50	6.91	4.50	4.50	.50	.63	1/8	#8	5/8-11	D03
4.00	10.0	11.5	13.5	5.00	8.12	6.00	5.00	.50	1.00	3/8	#10	1"-8	D05

Order Code

AMT-9-***-BD-**

90 DEGREE

Size: 125, 150, 200, 250, 300, 400.

ED for external drain

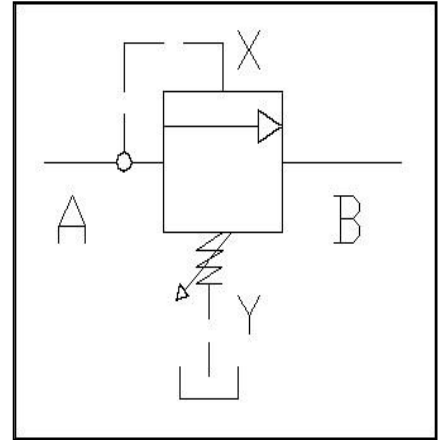
Bi Directional

90 DEGREE FLANGED HIGH FLOW RELIEF VALVE

SIZES 1 1/4" thru 4.0"

6000 PSI

ALMO[®]
MANIFOLD & TOOL COMPANY



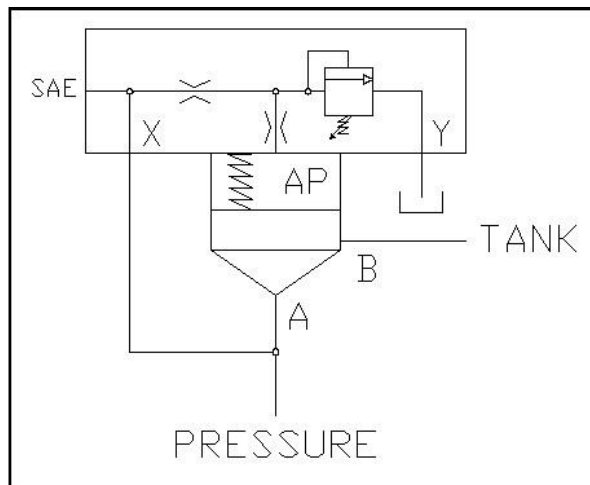
- ✓ Adjustable relief setting from 150 psi to 6000 psi
- ✓ Standard screw adjustment for relief setting.
- ✓ Removable NPT orifice plug options
- ✓ SAE O-ring port for gauging
- ✓ Pressure at "Y" is directly additive to relief setting

Applications

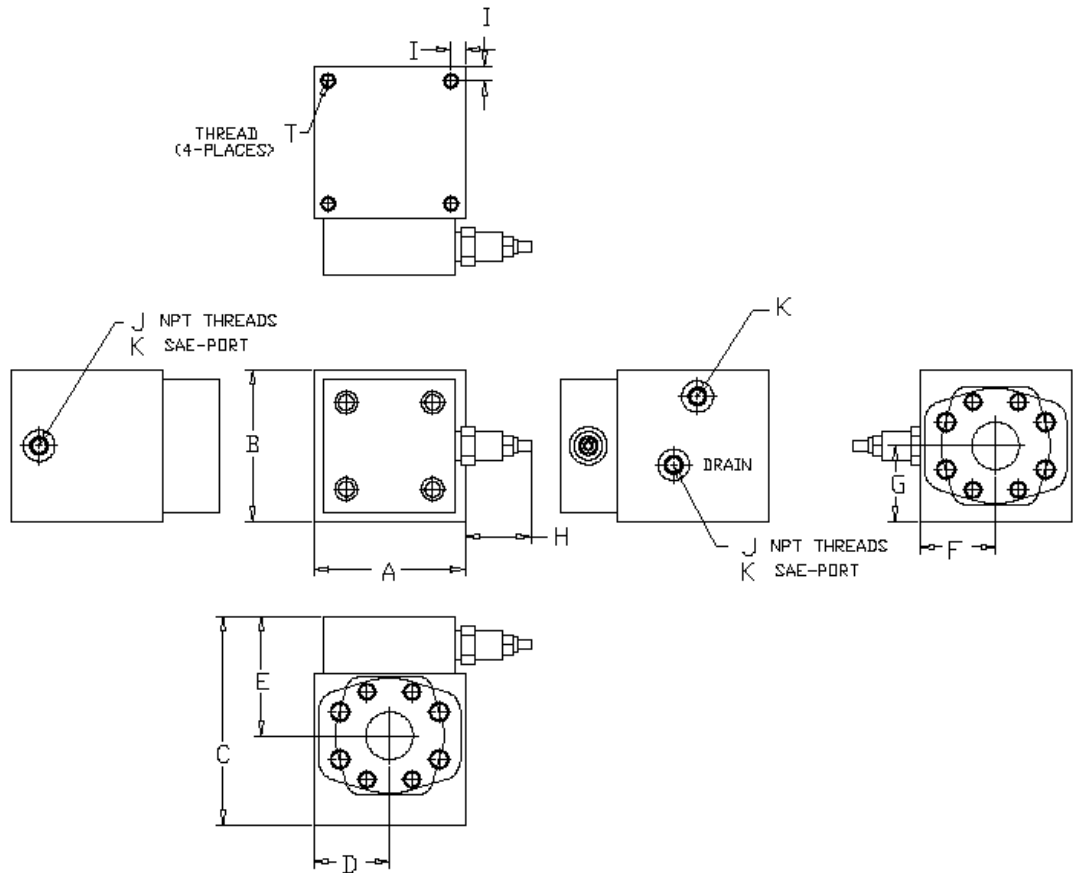
Relief, Back Pressure, or Sequence Valve

Provides relief function from "A to B" by connecting the "X" pilot to the "A" port of the valve insert. The 'Y' pilot can be connected to the "B" port but a separate drain connection is preferred.

This configuration uses a 1:1 ratio insert.



General Layout



Sizes 1 1/4" to 4.0"

(4.0" size not shown contact Almo for further information)

DIMENSIONAL SPECIFICATIONS IN INCHES													
VALVE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
1.25	4.00	4.00	6.00	2.00	3.64	2.00	2.00	2.00	.38	1/16	#4	3/8-16	N/A
1.50	5.00	5.00	6.50	2.50	3.98	2.50	2.50	2.00	.38	1/16	#6	3/8-16	N/A
2.00	6.00	6.00	7.65	3.00	7.42	3.00	3.00	2.00	.38	1/16	#6	3/8-16	N/A
2.50	7.00	7.00	9.00	3.50	5.48	3.50	3.50	2.00	.50	1/8	#8	1/2-13	N/A
3.00	9.00	9.00	10.9	4.50	6.91	4.50	4.50	2.30	.63	1/8	#8	5/8-11	N/A
4.00	10.0	11.5	13.5	5.00	8.12	6.00	5.00	2.30	1.00	3/8	#10	1"-8	N/A

Order Code

AMT-9-***-RV-**

Almo
Manifold
& Tool

90 DEGREE

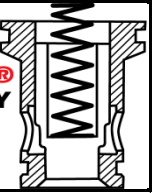
ID for internal drain
ED for external drain

Size: 125, 150, 200, 250, 300, 400.

RELIEF VALVE

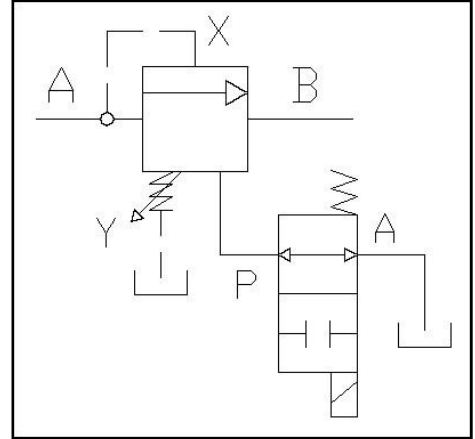
90 DEGREE FLANGED HIGH FLOW LOAD RELIEF VALVE

ALMO[®]
MANIFOLD & TOOL COMPANY



SIZES 1 ¼" thru 4.0"

6000 PSI



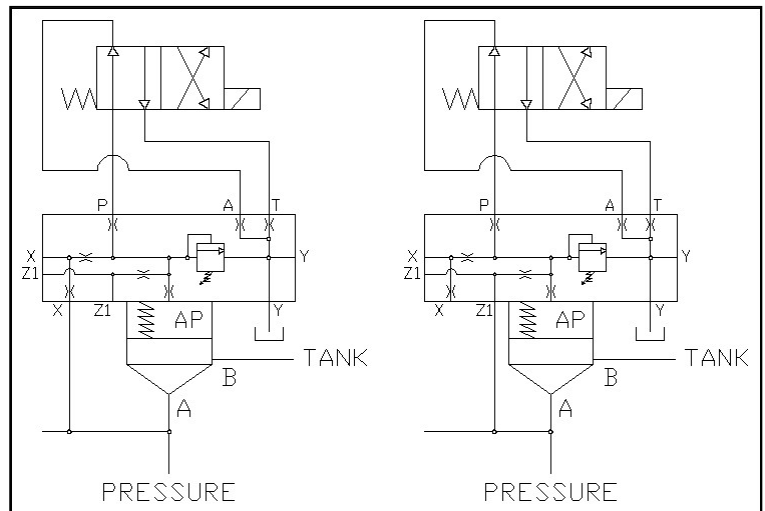
- ✓ Adjustable relief setting from 150 psi to 6000 psi
- ✓ Standard screw adjustment for relief setting.
- ✓ SAE O-ring port for gauging
- ✓ Pressure at "Y" is directly additive to relief setting

Applications

Solenoid-Loading Relief Valve

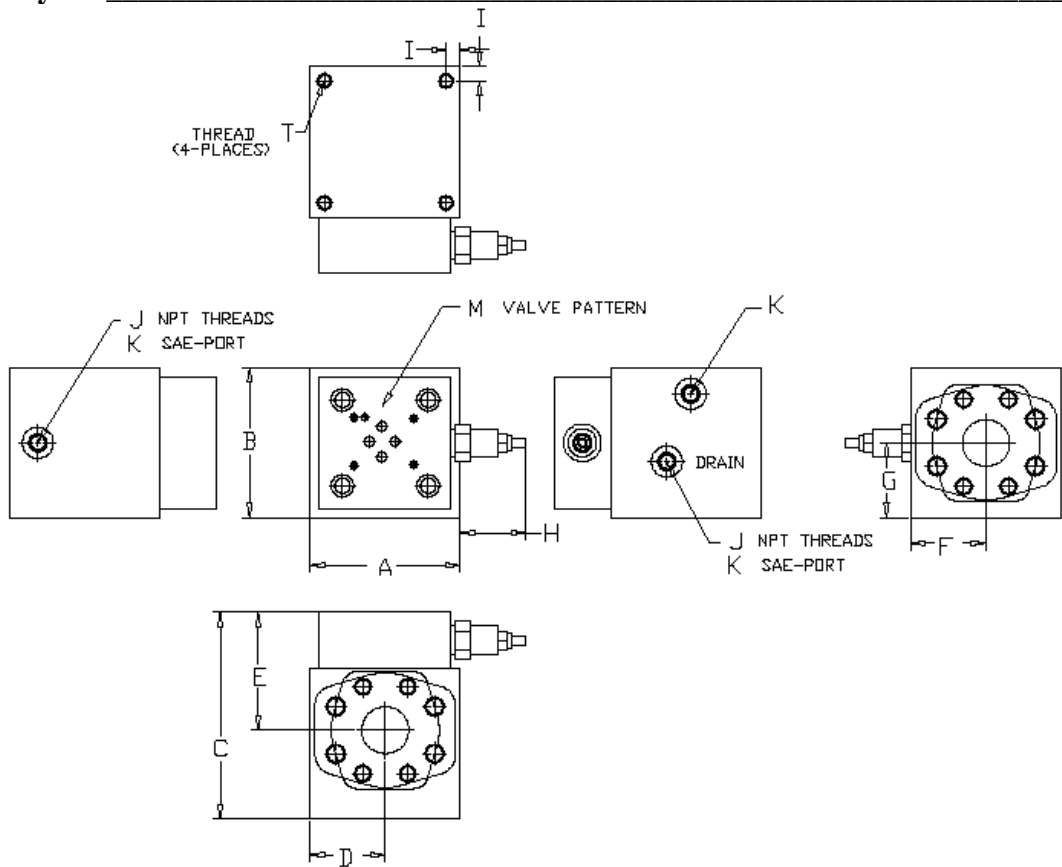
Provides relief function from "A to B" by connecting the "X" pilot to the "A" port of the valve insert (shown at left) or by connecting the "Z1" port to the "A" port (shown at right).

Using a standard directional control with flow from "P to A" in the de-energized condition will unload the valve. In the energized state the system will build pressure until the relief setting is reached. The valve can also be manually vented using the "X" SAE port.



The 'Y' pilot can be connected to the "B" port but a separate drain connection is preferred. This configuration uses a 1:1 ratio insert.

General Layout



Sizes 1 1/4" to 4.0"

(4.0" size not shown contact Almo for further information)

DIMENSIONAL SPECIFICATIONS IN INCHES													
VALVE SIZE	A	B	C	D	E	F	G	H	I	J	K	L	M
1.25	4.00	4.00	6.00	2.00	3.64	2.00	2.00	2.00	.38	1/16	#4	3/8-16	D03
1.50	5.00	5.00	6.50	2.50	3.98	2.50	2.50	2.00	.38	1/16	#6	3/8-16	D03
2.00	6.00	6.00	7.65	3.00	7.42	3.00	3.00	2.00	.38	1/16	#6	3/8-16	D03
2.50	7.00	7.00	9.00	3.50	5.48	3.50	3.50	2.00	.50	1/8	#8	1/2-13	D05
3.00	9.00	9.00	10.9	4.50	6.91	4.50	4.50	2.30	.63	1/8	#8	5/8-11	D05
4.00	10.0	11.5	13.5	5.00	8.12	6.00	5.00	2.30	1.00	3/8	#10	1"-8	D05

Order Code

AMT-9-***-LR-**

Almo
Manifold
& Tool

90 DEGREE

ID for internal drain
ED for external drain

Size: **125, 150, 200, 250, 300, 400.**

LOADING RELIEF VALVE

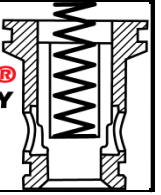


NOTES:

TECHNICAL INFOMATION

Poppet Valve Removal

ALMO
MANIFOLD & TOOL COMPANY



SIZES 16MM THRU 80MM



Recommended Tools

- 1) Heavy Allen wrench
- 2) Bolt from cover
- 3) Vise grips
- 4) Rubber/Dead blow Mallet



Use the bolt from the cover to work as the fulcrum. The vise grip is the lever.

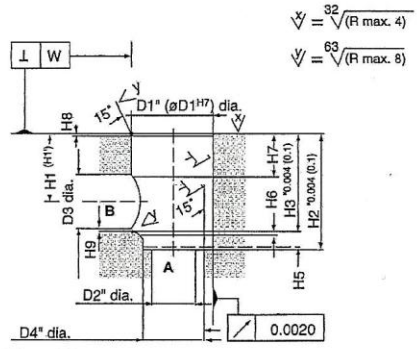


Hook the Allen wrench inside the "B" hole of the sleeve. Hit the back of the vise grip with a mallet. Once the sleeve pops out, just finish taking everything apart and prep cavity for reinstallation.

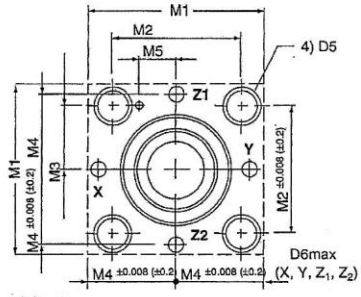
Installation Dimensions to Modified DIN 24342 Cartridge Valves



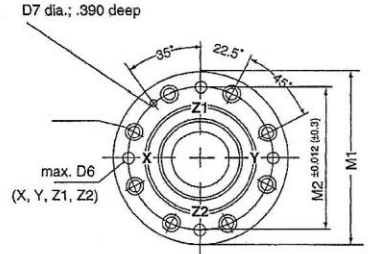
SIZES 16MM THRU 100MM



Sizes 16 ... 63



Sizes 80, 100



Size	16mm	25mm	32mm	40mm	50mm	63mm	80mm	100mm
D1 min.	1.2598	1.7717	2.3622	2.9528	3.5433	4.7244	5.7088	7.0868
D1 max.	1.2608	1.7726	2.3633	2.9539	3.5447	4.7258	5.7104	7.0884
D2 max.	.630	.984	1.260	1.575	1.969	2.480	3.150	3.937
D3 min.	.630	.984	1.260	1.575	1.969	2.480	3.150	3.937
D3 max.	.984	1.260	1.575	1.969	2.480	3.150	3.937	4.921
D4 min.	.9843	1.3386	1.7716	2.6653	2.6772	3.5443	4.3312	5.3153
D4 max.	.9851	1.3396	1.7727	2.1665	2.6783	3.5447	4.3326	5.3168
D5 Thread	5/16-18	1/2-13	5/8-11	3/4-10	3/4-10	1-1/4-7	1-8	1-1/8-7
D6 max.	.157	.236	.314	.393	.393	.472	.630	.787
D7 pin hole	.157	.236	.236	.236	.315	.315	.394	.394
H1	1.338	1.732	2.047	2.519	2.834	3.740	5.118	6.103
H1 to D3 max.	1.161	1.594	1.889	2.322	2.578	3.404	4.724	5.591
H2	2.204	2.834	3.346	4.133	4.803	6.103	8.070	9.646
H3	1.692	2.283	2.755	3.425	3.937	5.118	6.882	8.260
H4							6.898	8.276
H5	.433	.472	.511	.590	.669	.787	.984	1.142
H6	.078	.098	.098	.118	.118	.157	1.97	.197
H7	.787	1.181	1.181	1.181	1.377	1.574	1.574	1.969
H8	.079	.098	.098	.118	.157	.157	.197	.197
H9	.059	.059	.059	.118	.118	.118	.177	.177
M1	2.559	3.346	4.016	4.921	5.512	7.087	9.843	11.811
M2	1.811	2.284	2.755	3.347	3.937	4.921	7.874	9.646
M3	.906	1.142	1.377	1.674	1.969	2.461	-	-
M4	.984	1.299	1.614	1.969	2.284	2.953	-	-
M5	.414	.630	.669	.906	1.181	1.496	-	-
W	.0020	.0020	.0039	.0039	.0039	.0079	.0079	.0079

Valve Size	Bolt Size	Torque	Allen Size
16mm	5/16-18	22 ft-lbs.	1/4"
25mm	1/2-13	81 ft-lbs.	3/8"
32mm	5/8-11	210 ft-lbs.	1/2"
40mm	3/4-10	370 ft-lbs.	5/8"
50mm	3/4-10	429 ft-lbs.	5/8"
63mm	1 1/4-7	888 ft-lbs.	7/8"
80mm	1-8	800 ft-lbs.	3/4"

NOTES: