SPECIALITY VALVES

ngt

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NGT Design Advantages

Manual release and flush manual release option to release trapped air.

Internally lubricated seals for longer life without lubrication.

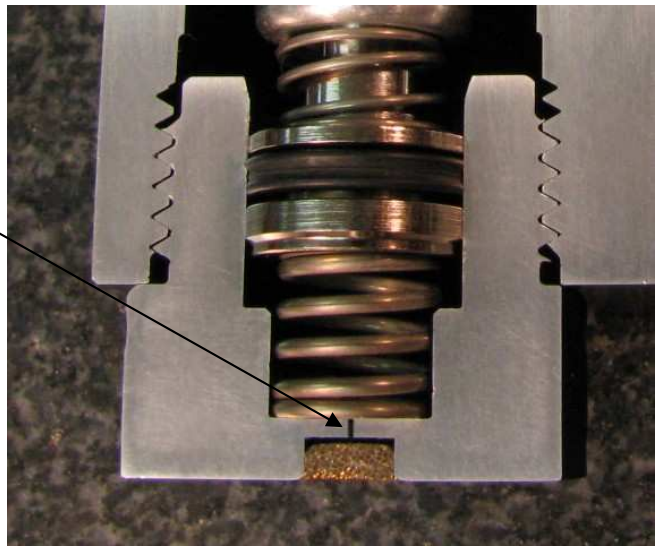
Balanced spool reduces impact and static forces on the poppet and reduces the size of the pilot piston, for a more compact design.

Seal molded to the poppet.

Hardcoat anodized aluminum with lubricant coating to reduce wear and increase seal life.

Nickel plated steel piston rod for greater strength and corrosion resistance.

Cushion design reduces impact force on the spool by reducing spool velocity. Air is forced through a small orifice when the spool shifts; causing the spool to slow down before impact.



NGT Design Advantages

Air Tight
The poppet is designed for little or no leaking and seals tighter with increased pressure. Leak rates of 1 psi in 30 days are common (1 cu in. volume).

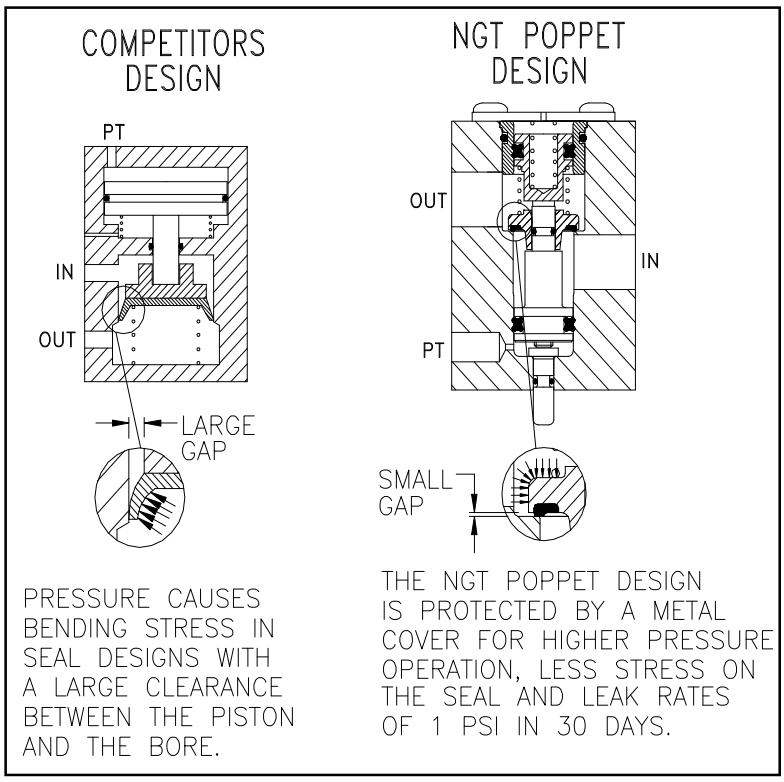
Less Seal Stress
Lip seal and ucup designs result in bending and flexing of the main seal in order to provide a checking function. The NGT design is a face seal molded to metal, so there is very little bending stress on the seal.

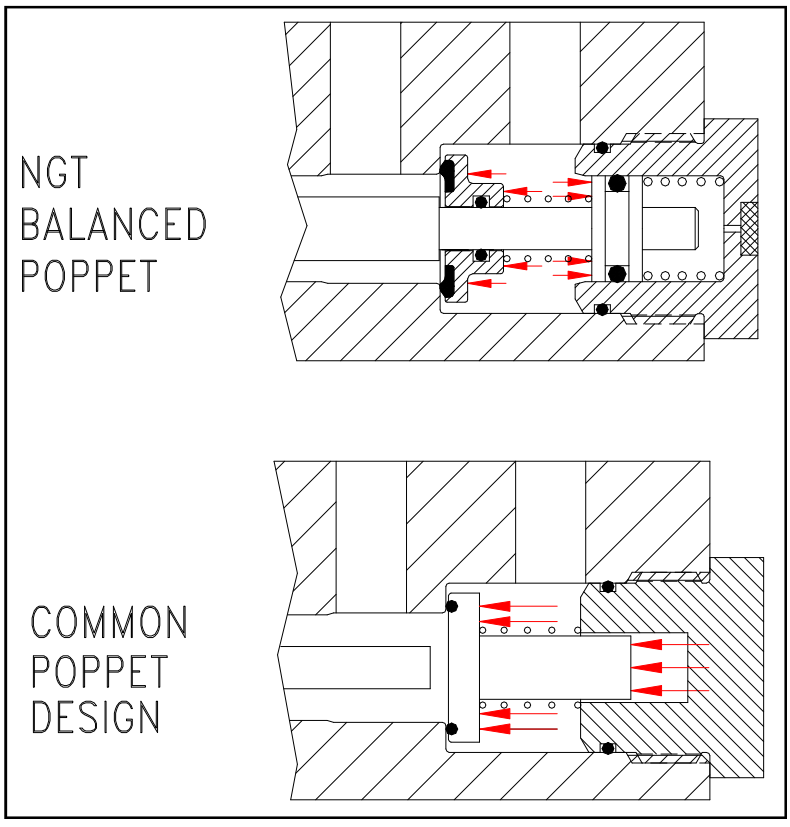
Lower Pilot Pressure
Pilot ratios of 2:1 (trapped pressure/pilot pressure), that is, 80 psi trapped pressure requires a minimum of 40 psi to pilot the valve open. NGT valves approach ratios of 4:1 with a special spring.

Higher Operating Pressure
Because of the balanced poppet and the seal bonded to metal design, the NGT pilot-operated check can operate at a higher pressures.

Manual Release
The manual release on the NGT pilot-operated check valve allows you to release the trapped air before servicing equipment.

Reduced Impact and Static Forces
The balanced poppet design reduces the load on the main poppet seal by pulling the poppet away from the face seal as the pressure increases. This reduces the wear on the poppet seal and allows the valve to operate at higher pressures.





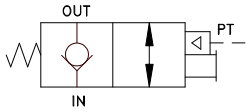
1/4 Tube Pilot-Operated Check Valve

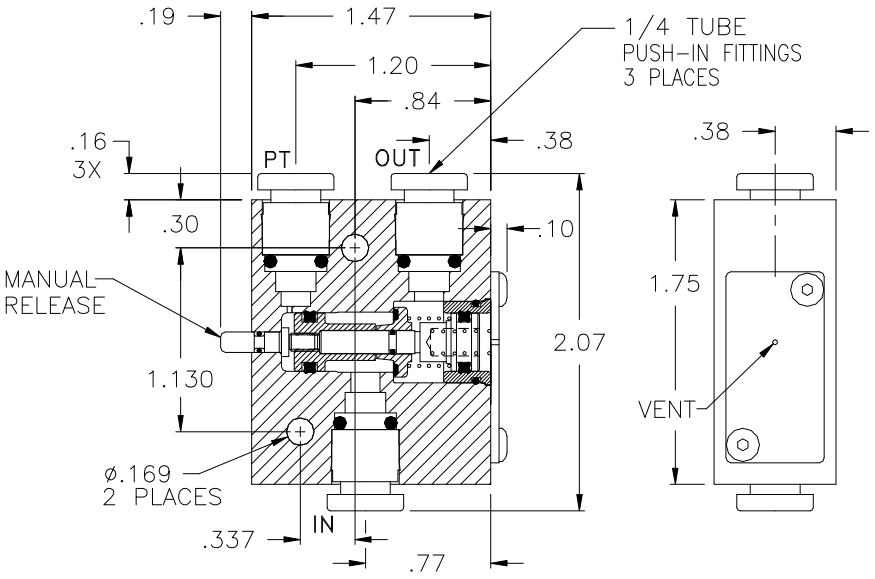
Patents Pending

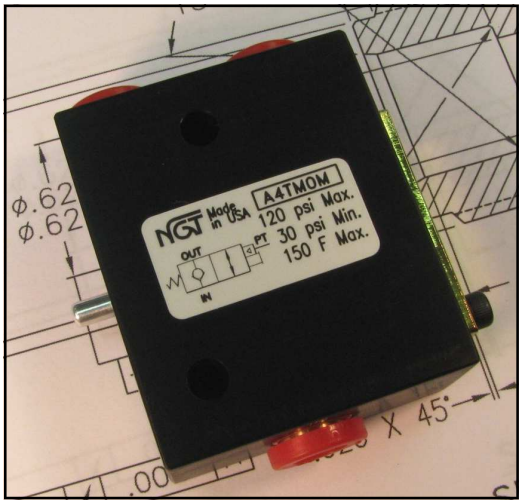
- **New Smaller Size**
- **Push-on Connectors**
- **Manual Release**
- **.000113 cc/min Leak Rate**

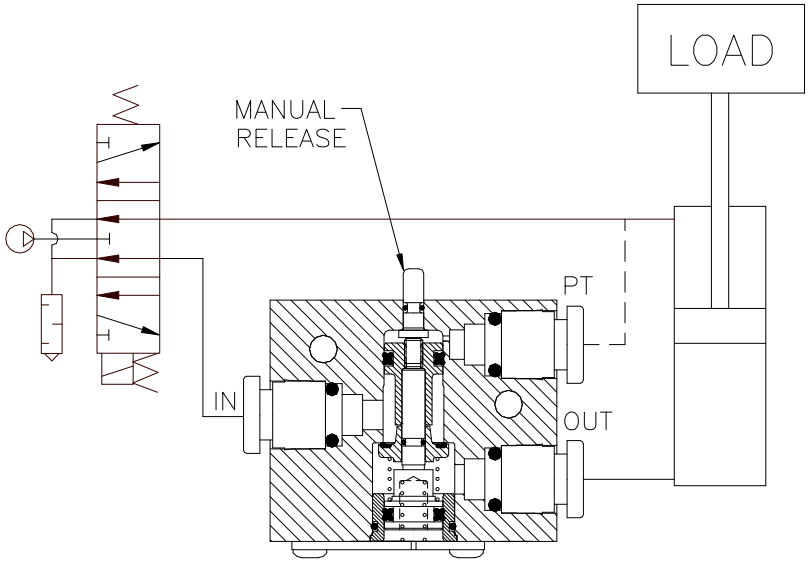
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release for exhausting trapped air before maintaining the system (OSHA Requirement).









Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	.50 max. (or I.D. tube)
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.

Model No.	1/4 Tube
Manual Release	**A4TM0M**

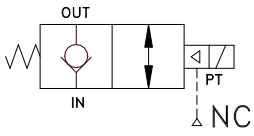
1/4 Tube Solenoid Air Pilot-Operated Locking Valves

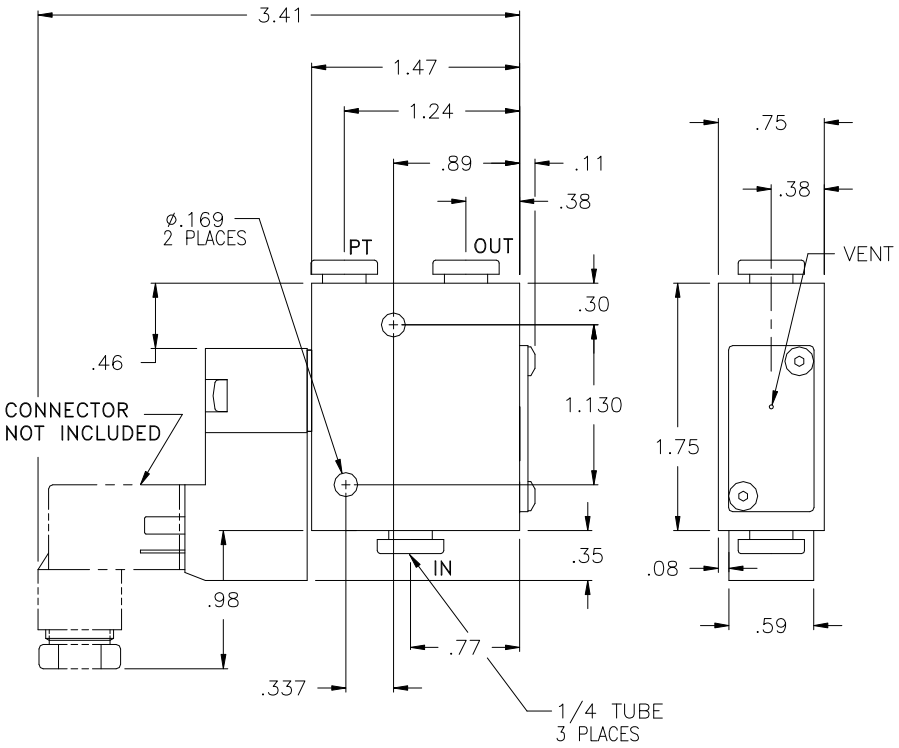
Patents Pending

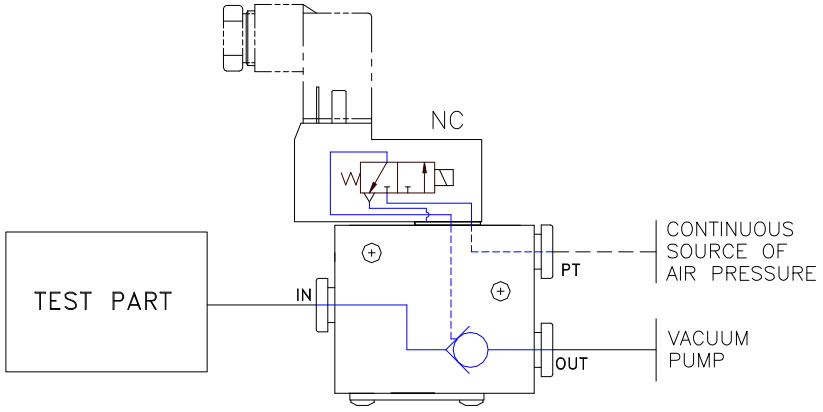
- New Smaller Size
- .000113 cc/min Leak Rate
- Solenoid Air Pilot (3/2 NC)
- No Fittings Required

Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. The pilot signal to the valve is controlled by a normally closed 3-way solenoid valve.







Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	.50
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.
Solenoid:	3/2 normally closed 24 vdc, 2.5 watt
- Temp Range:	14 - 122 F
- Protection Class:	NEMA 4 / IP 65 (EN 60529)
- Duty Rating:	Continuous
- Connector:	9.4 mm (DIN 43650)
- Pressure Rating:	145 psi max.

Model No.	1/4 Tube
24 vdc Solenoid	**A4TM00S24**

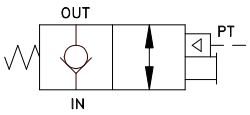
1/8 & 1/4 NPTF Pilot-Operated Locking Valves

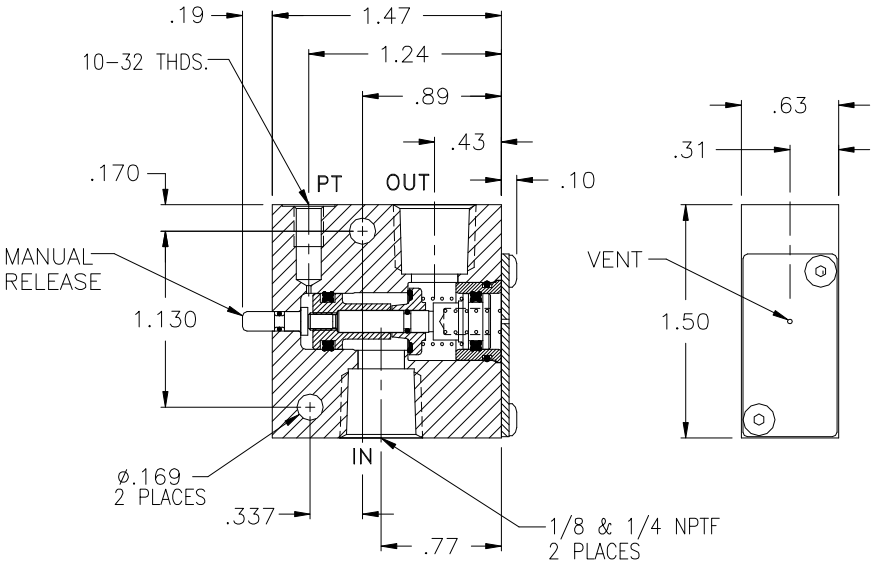
Patents Pending

- New Smaller Size
- Manual Release
- .000113 cc/min Leak Rate

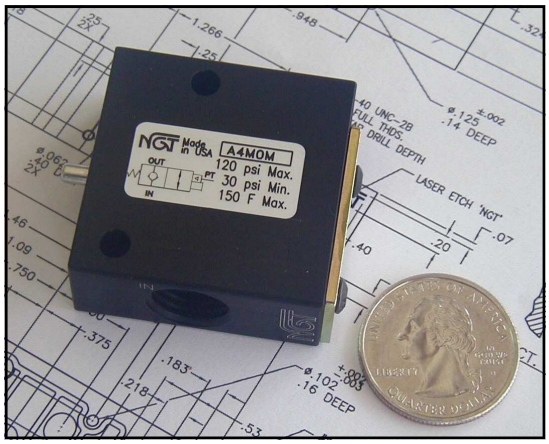
Basic Operation:

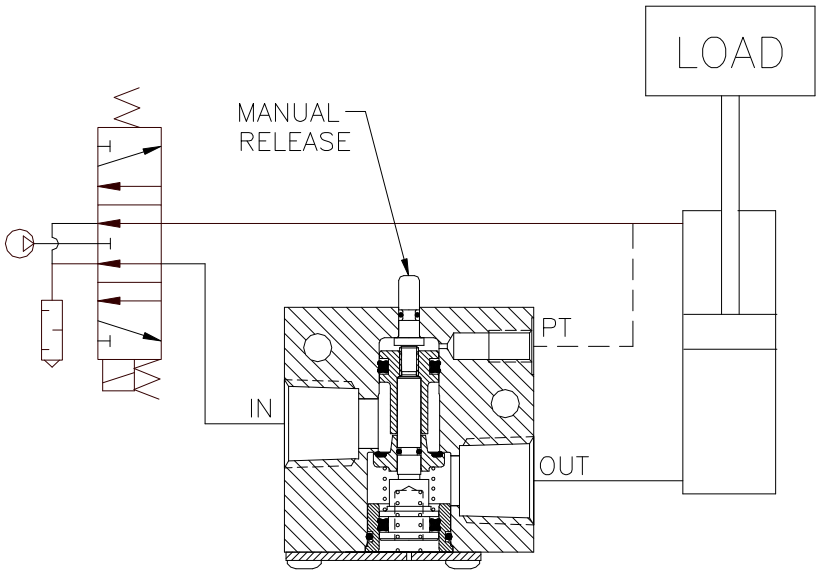
Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release for exhausting trapped air before maintaining the system (OSHA Requirement).





DIMENSIONS APPLY FOR
BOTH 1/8 AND 1/4 MODELS





Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.

Model No.	1/8 NPTF	1/4 NPTF
Manual Release	**A2M0M**	**A4M0M**

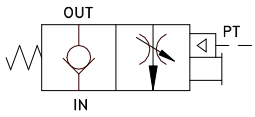
1/4 NPTF Pilot-Operated Locking Valves with Flow Controls

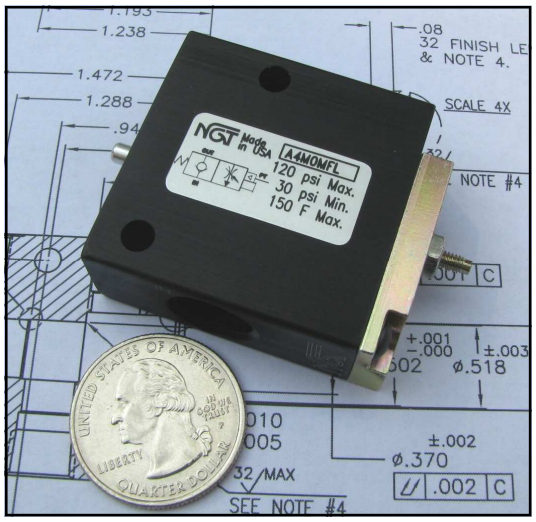
Patents Pending

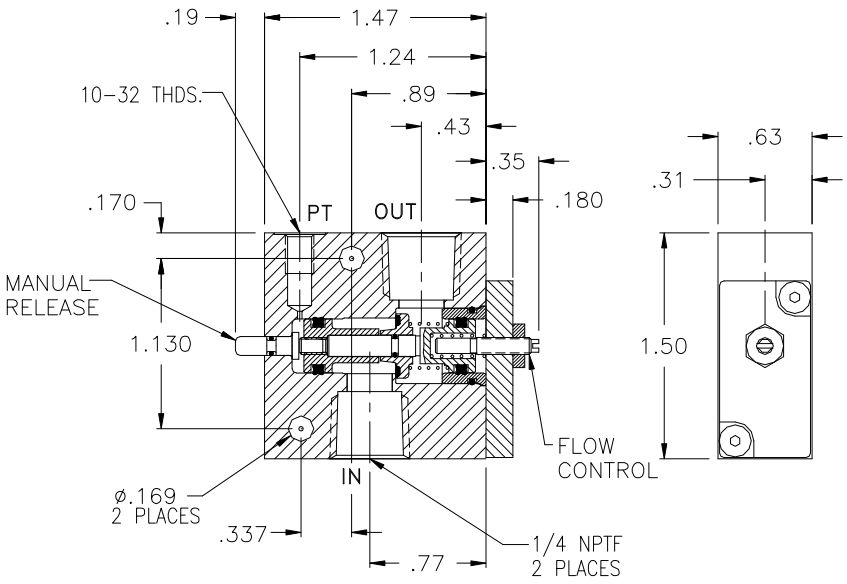
- Manual Release (Metered)
- .000113 cc/min - Leak Rate
- Lower Loads Slowly

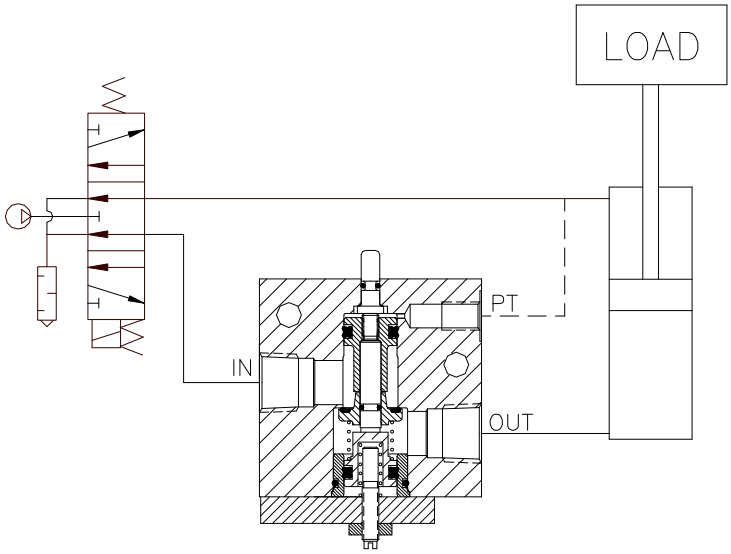
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Slowly lower the load when the valve is piloted open. The manual release for exhausting trapped air is also metered through the flow control, so the load is lowered slowly when the manual release is depressed.





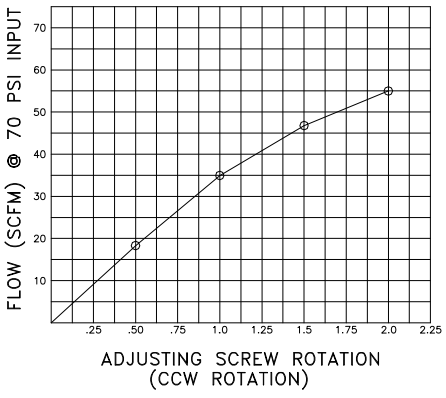




Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.

No. of Turns	Equivalent Diameter (in.)
.5	.12
1.0	.17
1.5	.21
2.0	.24
2.5	.27
3.0	.30



70 PSI INLET AT FULL PRESSURE DROP

Model No.	1/4 NPTF
Manual Release	**A4M0MFL**

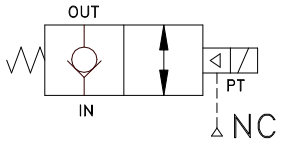
1/8 & 1/4 NPTF Solenoid Air Pilot-Operated Locking Valves

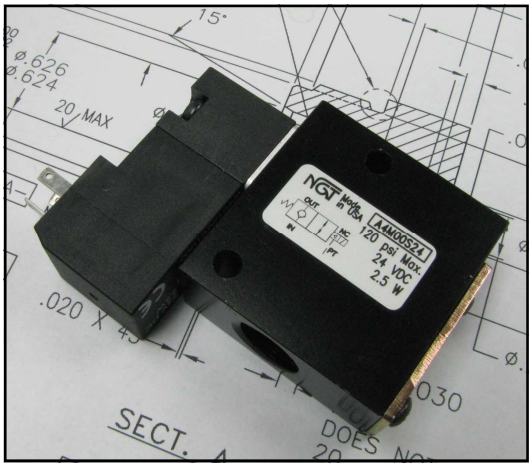
Patents Pending

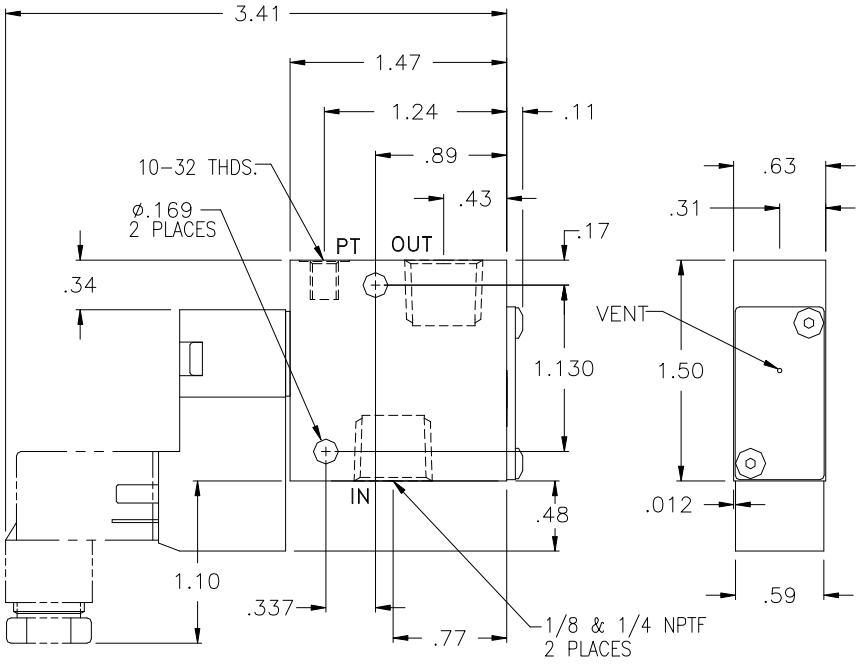
- New Smaller Size
- .000113 cc/min Leak Rate
- Solenoid Air Pilot (3/2 NC)

Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. The pilot signal to the valve is controlled by a normally closed 3-way solenoid valve.



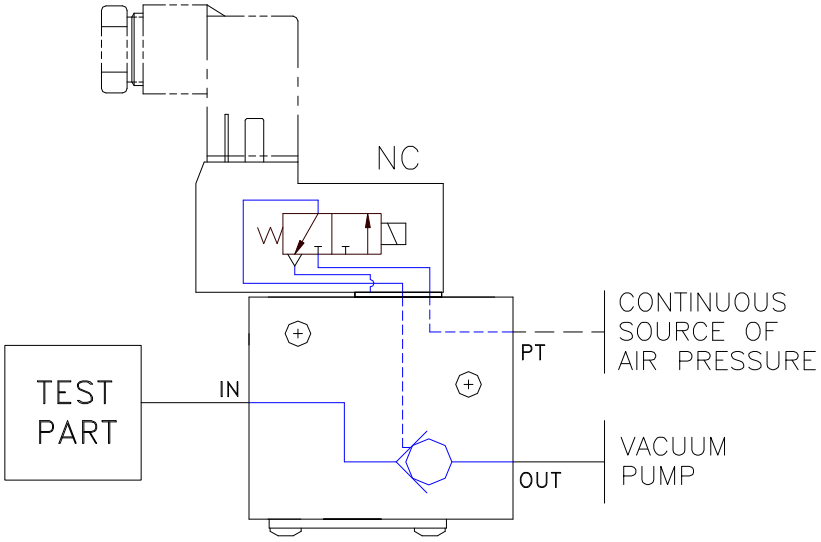




DIMENSIONS APPLY FOR
BOTH 1/8 AND 1/4 MODELS

Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated sir.
Solenoid:	3/2 normally closed 24 vdc, 2.5 watt
- Temp Range:	14 - 122 F
- Protection Class:	NEMA 4 / IP 65 (EN 60529)
- Duty Rating:	Continuous
- Connector:	9.4 mm (DIN 43650)
- Pressure Rating:	145 psi max.



Model No.	1/8 NPTF	1/4 NPTF
24 vdc Solenoid	**A2M00S24**	**A4M00S24**

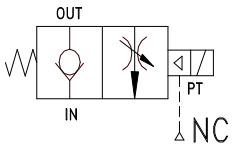
1/4 NPTF Solenoid Air Pilot-Operated Locking Valves with Flow Controls

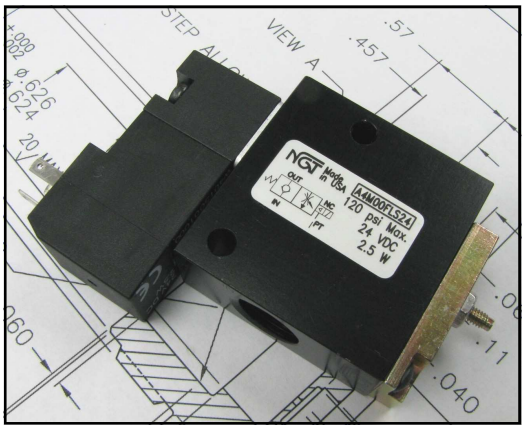
Patents Pending

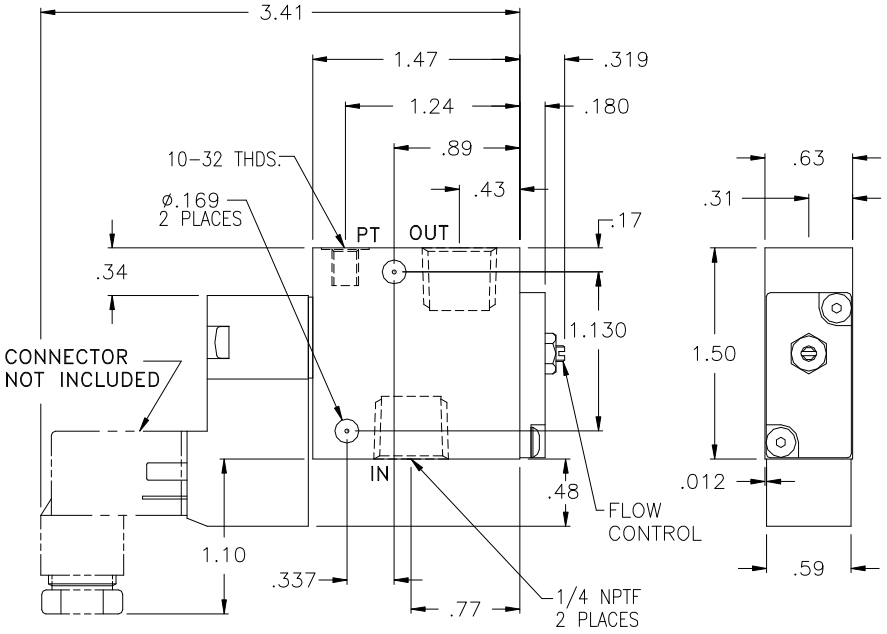
- **New Smaller Size**
- **.000113 cc/min Leak Rate**
- **Solenoid Air Pilot (3/2 NC)**
- **Lower Loads Slowly**

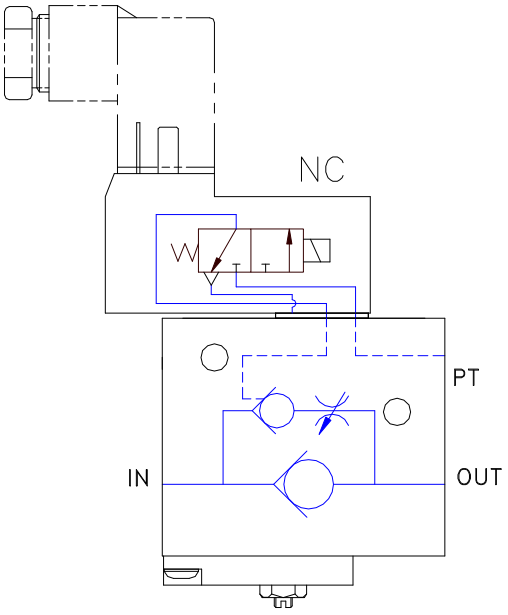
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. The pilot signal to the valve, is controlled by a normally closed 3-way solenoid valve. The flow is metered from output to input.









Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.
Solenoid:	3/2 normally closed 24 vdc, 2.5 watt
- Temp Range:	14 - 122 F
- Protection Class:	NEMA 4 / IP 65 (EN 60529)
- Duty Rating:	Continuous
- Connector:	9.4 mm (DIN 43650)
- Pressure Rating:	145 psi max.

No. of Turns	Equivalent Diameter (in.)
.5	.12
1.0	.17
1.5	.21
2.0	.24
2.5	.27
3.0	.30

Model No.	1/4 NPTF
24 vdc Solenoid	**A4M00FLS24**

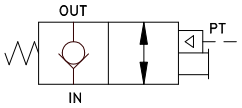
3/8 NPTF Pilot Operated Locking Valves

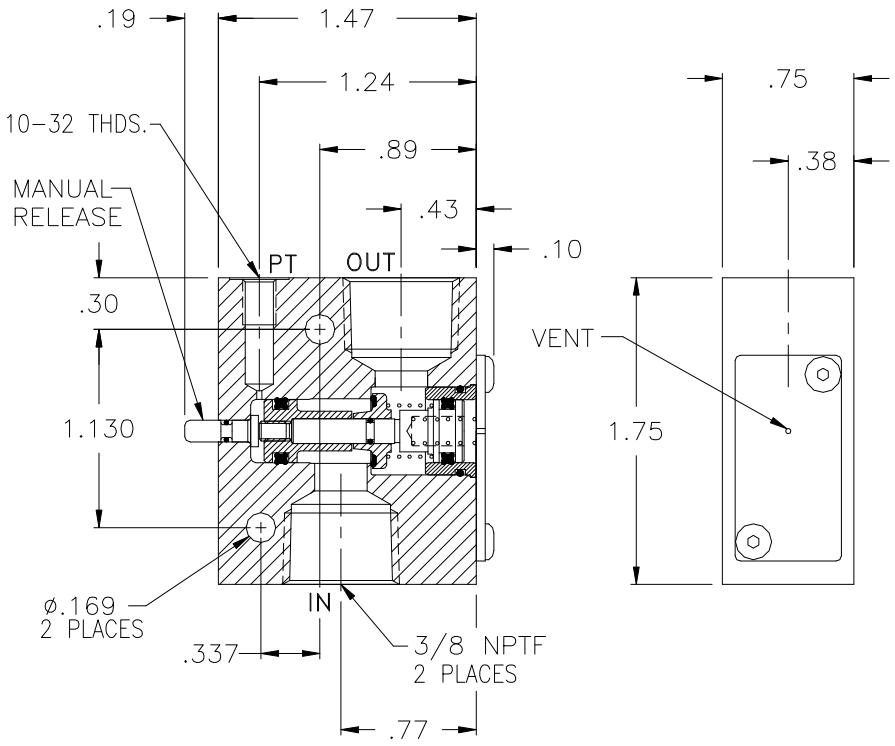
Patents Pending

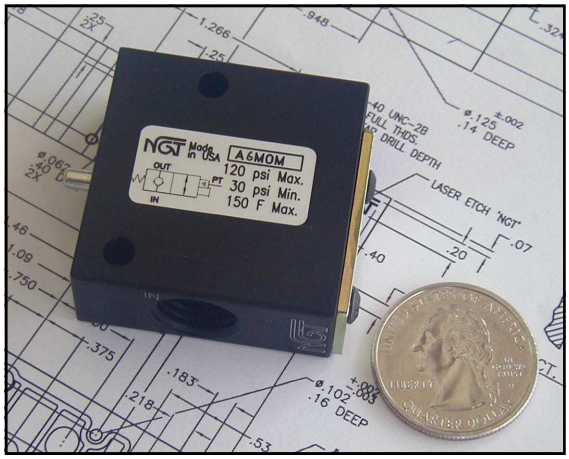
- New Smaller Size
- Manual Release
- .000113 cc/min Leak Rate

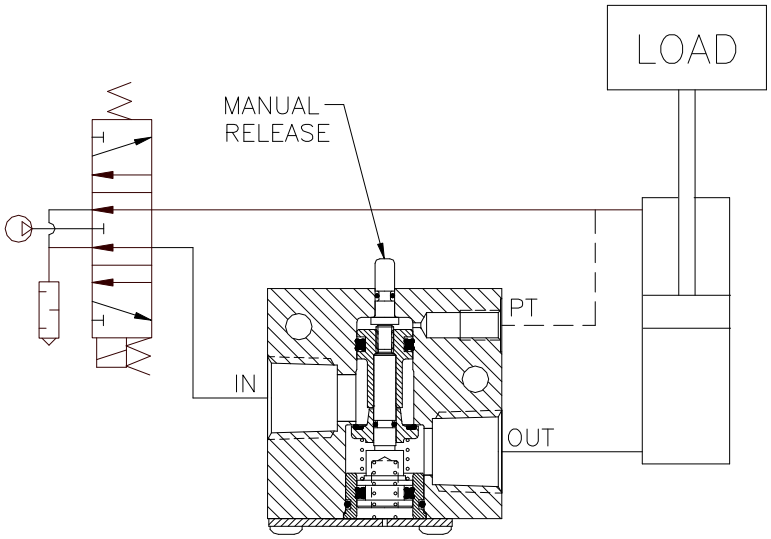
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release for exhausting trapped air before maintaining the system (OSHA Requirement).









Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.

Model No.	3/8 NPTF
Manual Release	**A6M0M**

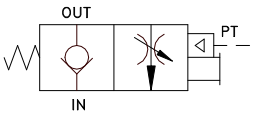
3/8 NPTF Pilot-Operated Locking Valve with Flow Control

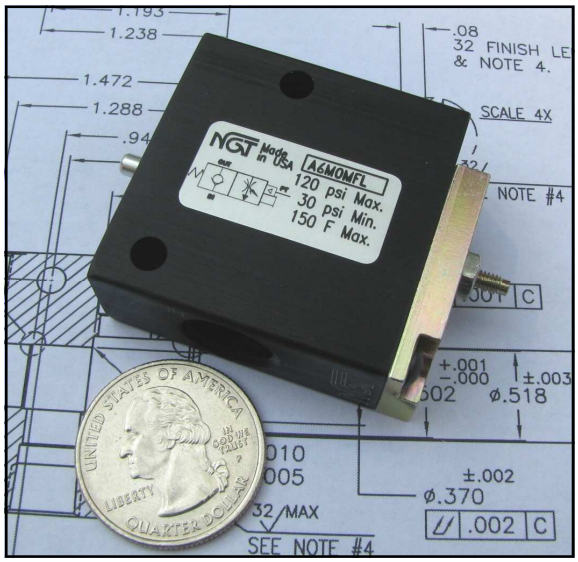
Patents Pending

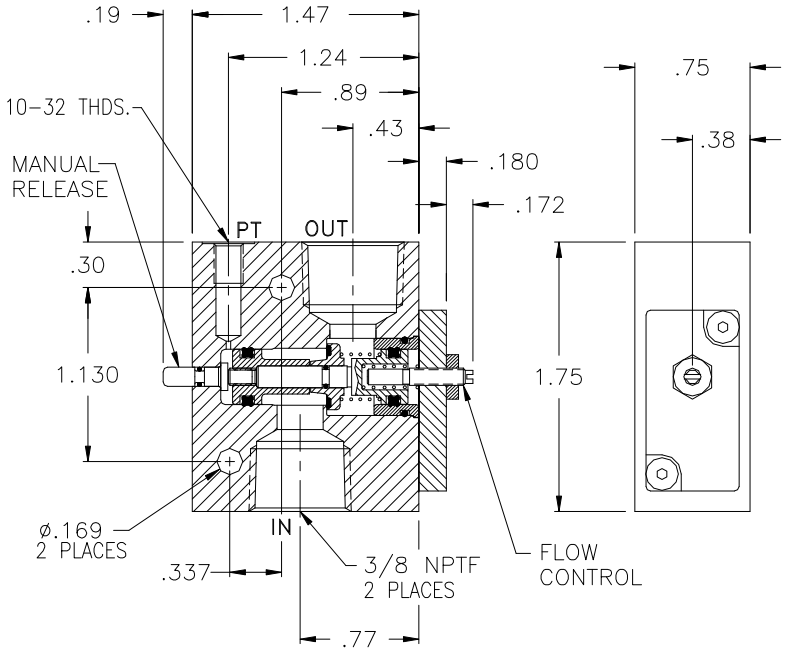
- Lower Loads Slowly
- Manual Release (metered flow)
- .000113 cc/min - Leak Rate

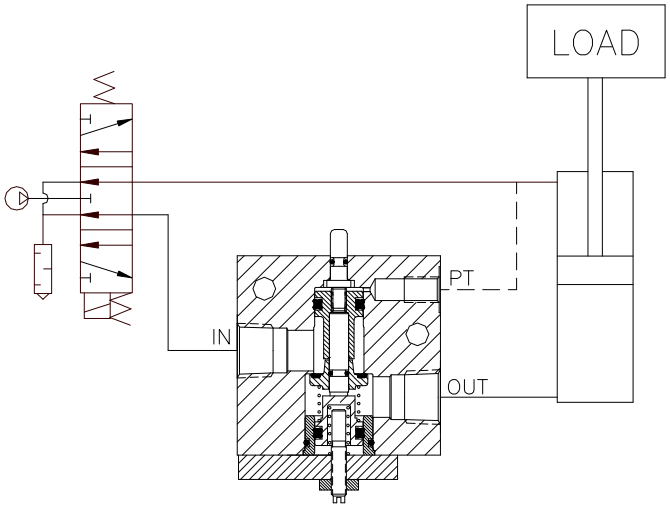
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Slowly lower the load when the valve is piloted open. The manual release for exhausting trapped air is also metered through the flow control, so the load is lowered slowly when the manual release is depressed.





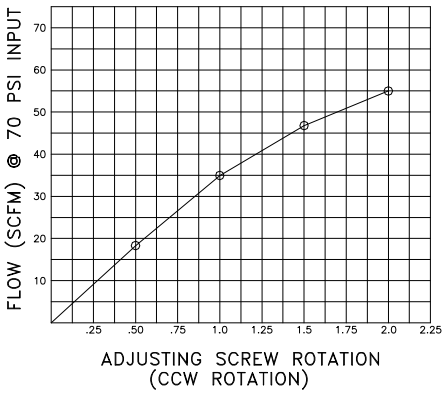




Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.

No. of Turns	Equivalent Diameter (in.)
.5	.12
1.0	.17
1.5	.21
2.0	.24
2.5	.27
3.0	.30



70 PSI INLET AT FULL PRESSURE DROP

Model No.	3/8 NPTF
Manual Release	**A6M0MFL**

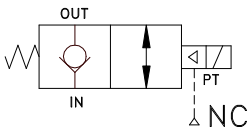
3/8 NPTF Solenoid Air Pilot-Operated Locking Valves

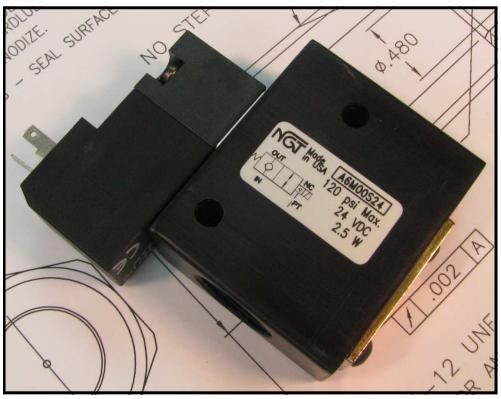
Patents Pending

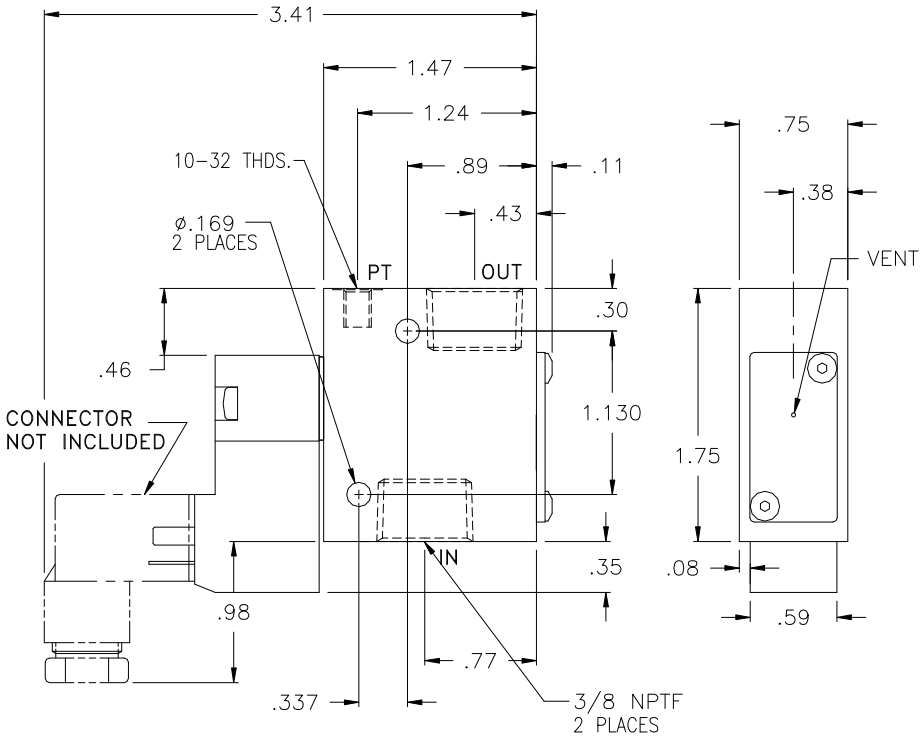
- New Smaller Size
- .000113 cc/min Leak Rate
- Solenoid Air Pilot (3/2 NC)

Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. The pilot signal to the valve is controlled by a normally closed 3-way solenoid valve.

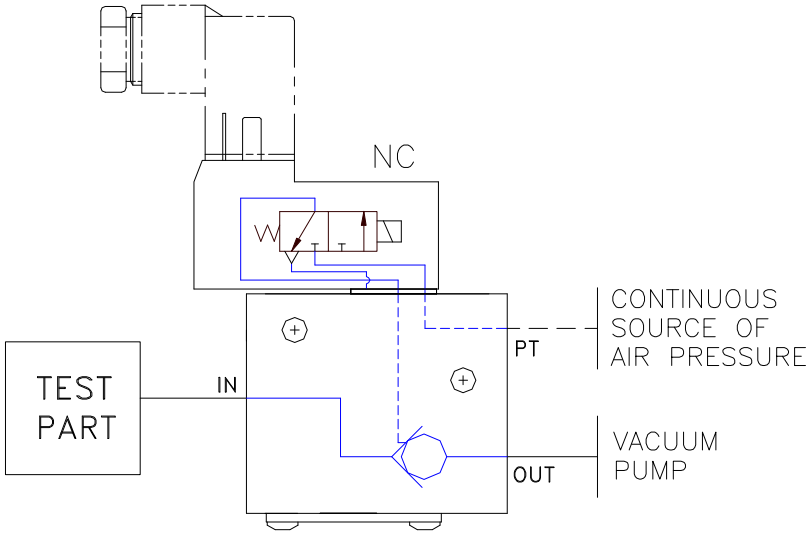






Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.
Solenoid:	3/2 normally closed 24 vdc, 2.5 watt
- Temp Range:	14 - 122 F
- Protection Class:	NEMA 4 / IP 65 (EN 60529)
- Duty Rating:	Continuous
- Connector:	9.4 mm (DIN 43650)
- Pressure Rating:	145 psi max.



Model No.	3/8 NPTF
24 vdc Solenoid	**A6M00S24**

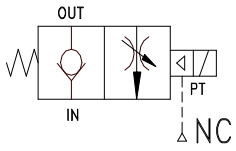
3/8 NPTF Solenoid Air Pilot-Operated Locking Valves with Flow Control

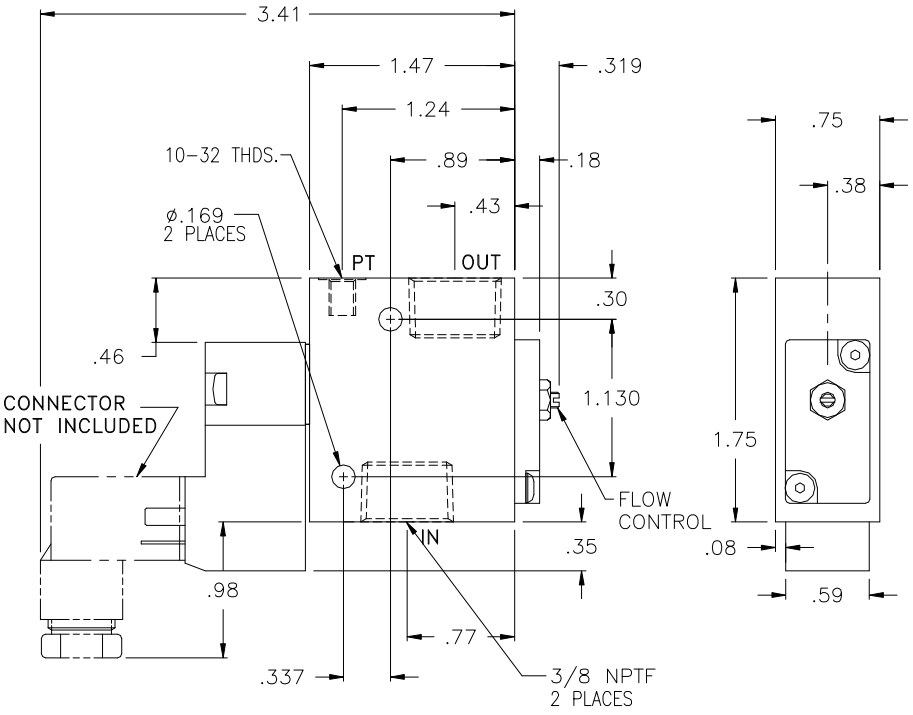
Patents Pending

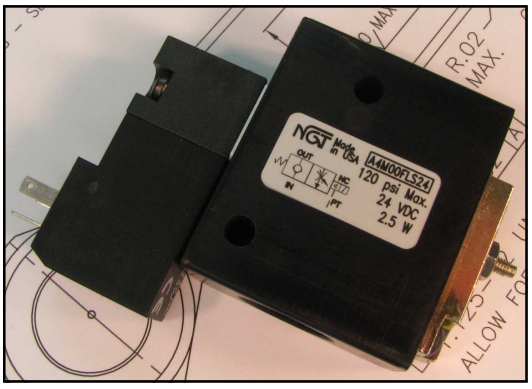
- **New Smaller Size**
- **.000113 cc/min Leak Rate**
- **Solenoid Air Pilot (3/2 NC)**
- **Lower Loads Slowly**

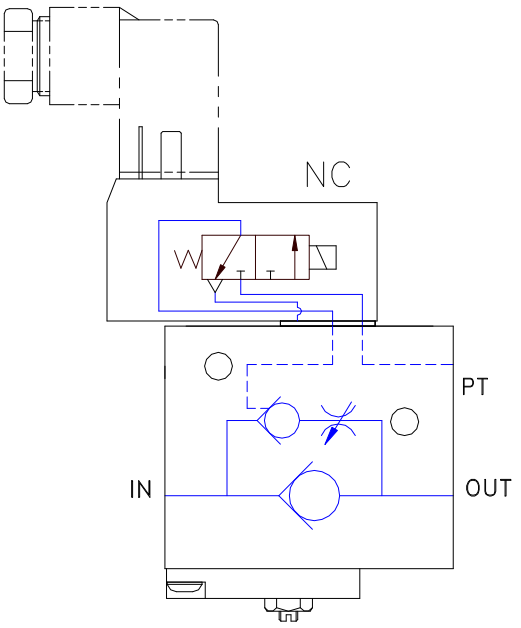
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. The pilot signal to the valve is controlled by a normally closed 3-way solenoid. The flow is metered from output to input.









Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.
Solenoid:	3/2 normally closed 24 vdc, 2.5 watt
- Temp Range:	14 - 122 F
- Protection Class:	NEMA 4 / IP 65 (EN 60529)
- Duty Rating:	Continuous
- Connector:	9.4 mm (DIN 43650)
- Pressure Rating:	145 psi max.

No. of Turns	Equivalent Diameter (in.)
.5	.12
1.0	.17
1.5	.21
2.0	.24
2.5	.27
3.0	.30

Model No.	3/8 NPTF
24 vdc Solenoid	**A6M00FLS24**

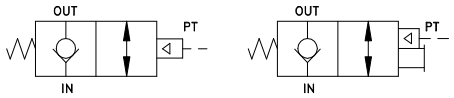
1/8, 1/4, 3/8 NPTF & G1/4, G3/8 BSPP Balanced Pilot Operated Check Valves

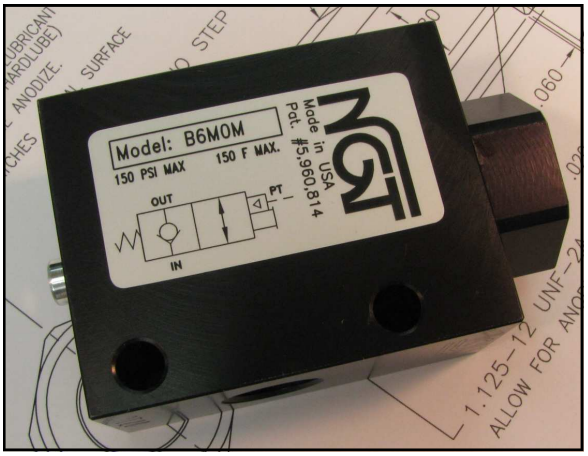
Patent 5960814

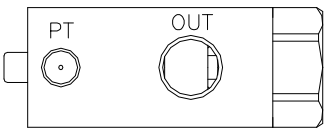
- **Immediate Checking**
- **Optional Manual Release**
- **.000052 cc/min Leak Rate**
- **316 Stainless Available**
- **Low & High Temp**
- **G1/4 & G3/8 BSPP In Stock**
- **Non-Ferrous In Stock**

Basic Operation:

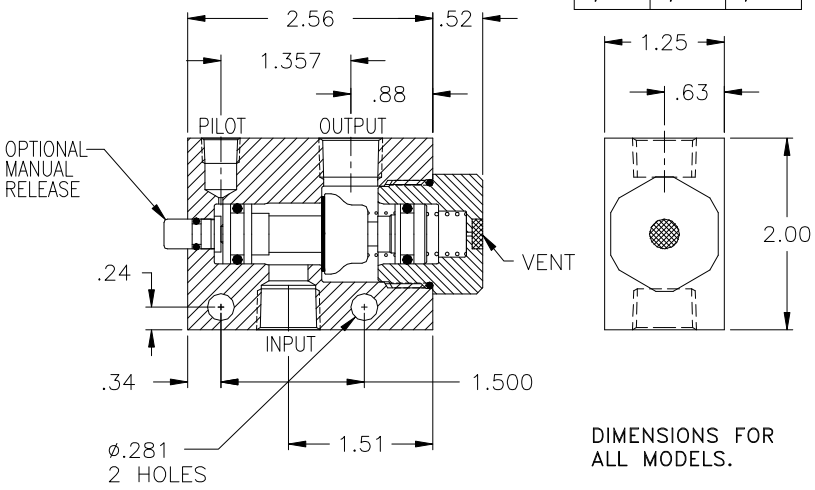
Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release for exhausting trapped air before maintaining the system (OSHA Requirement).

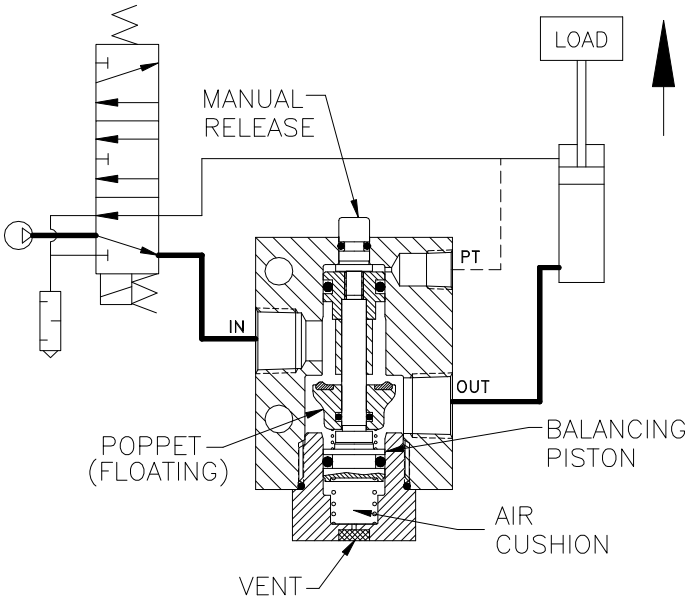






PORT SIZES		
PILOT	INPUT	OUTPUT
1/8 NPTF	1/8 NPTF	1/8 NPTF
1/8 NPTF	1/4 NPTF	1/4 NPTF
1/8 NPTF	3/8 NPTF	3/8 NPTF
G1/4 BSPP	G1/4 BSPP	G1/4 BSPP
G1/8 BSPP	G3/8 BSPP	G3/8 BSPP





Operating Data:

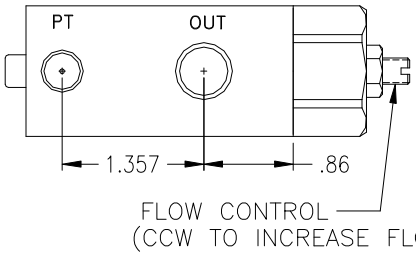
Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi
	25 psi (see table `–K18')
Leak Rate:	.0000522 cc/min
Temp. Range:	30-150 F
	30-350 F (see table '-V')
	-40 -150 F (see table '-T40')
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.7 (1/8 model)
	2.6 (1/4 and 3/8 models)
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

Model No.	1/8 NPTF	1/4 NPTF	3/8 NPTF	1/4 BSPP	3/8 BSPP
No Manual Release	**B2M00**	**B4M00**	**B6M00**	**BG4M00-1**	**BG6M00**
Manual Release	**B2M0M**	**B4M0M**	**B6M0M**	**BG4M0M-1**	**BG6M0M**
Flush Manual Release	**B2MFM**	**B4MFM**	**B6MFM**	**BG4MFM-1**	**BG6MFM**

For high temp seals add (-V) to the model # (ex. B2M0M-V).
For low temp seals add (-T40) to the model # (ex. B2M0M-T40).
For a lower pilot pressure add (-K18) to the model # (ex. B2M0M-K18).
For the non-ferrous model add (–NF) to the model # (ex. B2M0M-NF).

1/4, 3/8 NPTF & G1/4, G3/8 BSPP Pilot Operated Check Valves with Flow Controls Fast Advance and Slow Retract - Avoid Crash Landings

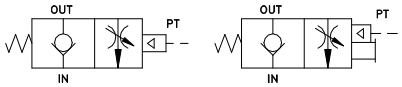
- **Avoid Crash Landings**
- **Optional Manual Release**
- **.000052 cc/min Leak Rate**
- **Non-Ferrous Available**

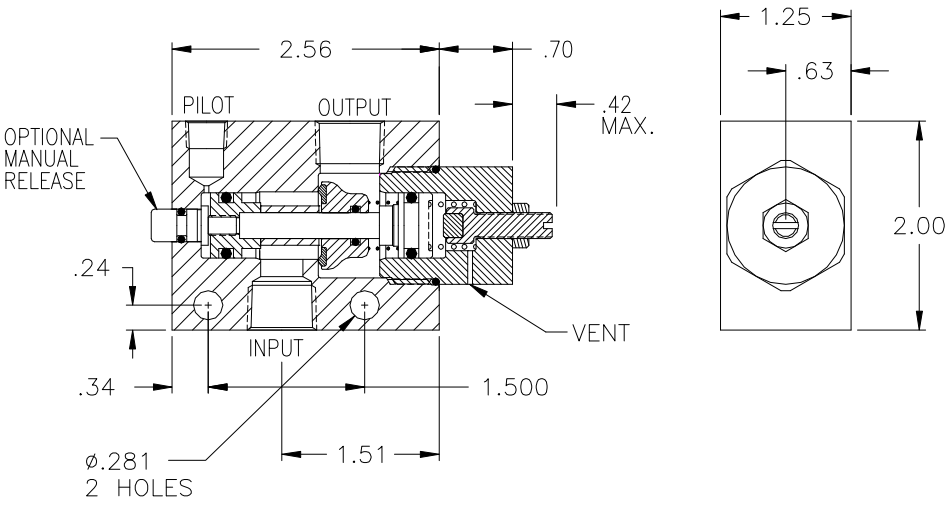


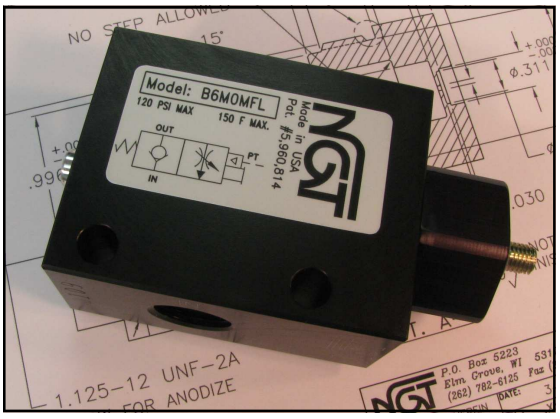
PORT SIZES		
PILOT	INPUT	OUTPUT
1/8 NPTF	1/4 NPTF	1/4 NPTF
1/8 NPTF	3/8 NPTF	3/8 NPTF
G1/4 BSPP	G1/4 BSPP	G1/4 BSPP
G1/8 BSPP	G3/8 BSPP	G3/8 BSPP

Basic Operation:

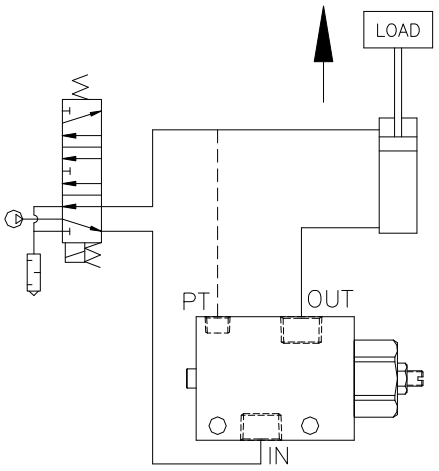
Hold position when a pressure drop or total loss of pressure occurs. Flow control meters air from the output to the input port. Manual release to exhaust trapped air before maintaining the system (OSHA Requirement).







No. of Turns	Equivalent Diameter (in.)
.25	.15
.50	.21
.75	.26
1.0	.30
1.25	.34
1.50	.37
1.75	.40



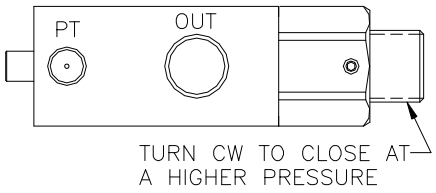
Operating Data:

Max. Pressure: 150 psi
Min. Pilot Press.: 40 psi
25 psi (see table)
Temp. Range: 30 - 150 F
Cycle Rate: 1 cycles/sec max.
Flow Capacity (Cv): 2.6 max
Cracking Pressure: 1-2 psi
Service: Properly filtered dry or lubricated air.

Model:	1/4 NPTF	3/8 NPTF	1/4 BSPP	3/8 BSPP
No Manual Release	**B4M00FL**	**B6M00FL**	**BG4M00FL-1**	**BG6M00FL**
Manual Release	**B4M0MFL**	**B6M0MFL**	**BG4M0MFL-1**	**BG6M0MFL**
Flush Manual Release	**B4MFMFL**	**B6MFMFL**	**BG4MFMFL-1**	**BG6MFMFL**
For a lower pilot pressure add (-K18) to the model # (ex. B4M0MFL-K18).				

1/8, 1/4, 3/8 NPTF & G1/4, G3/8 BSPP Adjustable Pilot-Operated Check Valve for Faster Stops or to Close at a Set Pressure.

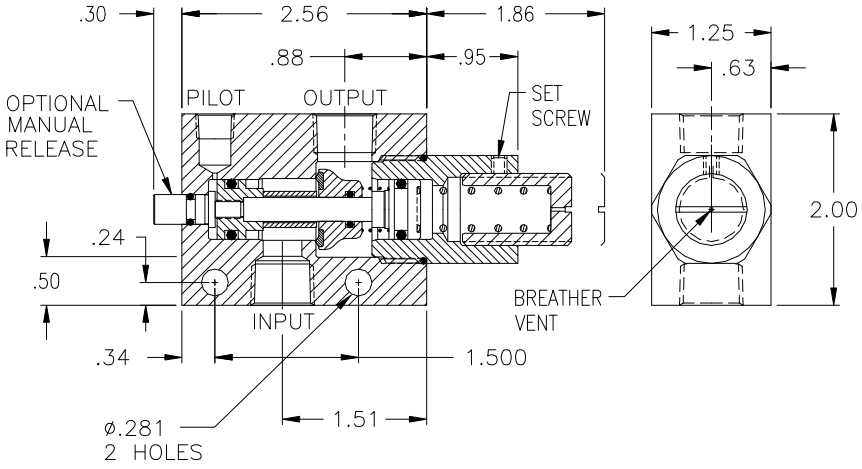
- **Adjustable Pilot Pressure**
- **Faster Stops**
- **.000052 cc/min Leak Rate**
- **Manual Release Option**

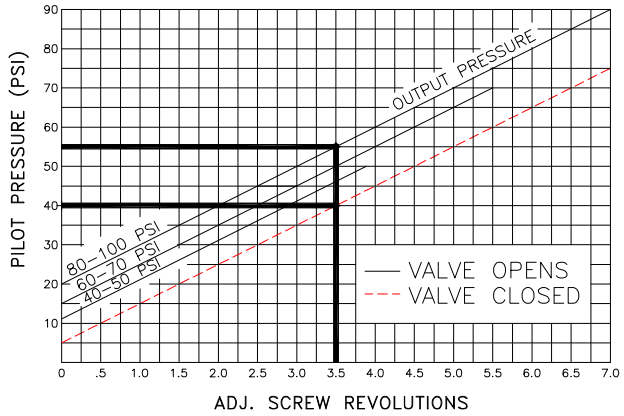


PORT SIZES		
PILOT	INPUT	OUTPUT
1/8 NPTF	1/4 NPTF	1/4 NPTF
1/8 NPTF	3/8 NPTF	3/8 NPTF
G1/4 BSPP	G1/4 BSPP	G1/4 BSPP
G1/8 BSPP	G3/8 BSPP	G3/8 BSPP

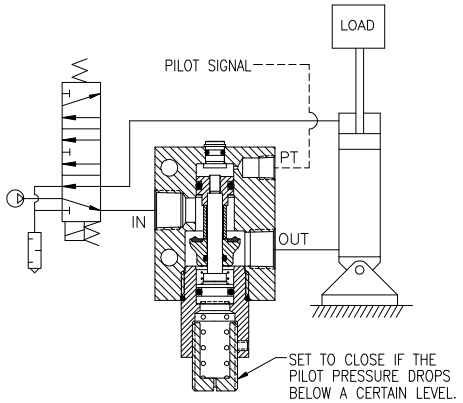
Basic Operation:

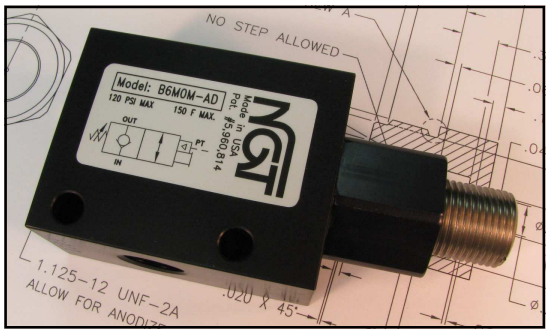
Locks any pneumatic device in position when a pressure drop or total loss of pressure occurs. Set the valve to close at a certain pressure. The pilot line reads the pressure and closes the valve when the pressure drops below the set pressure.





EXAMPLE: With the output pressure or trapped pressure at 80 psi the pilot pressure to open the valve must be a minimun of 55 psi. The valve will close when the back pressure drops to 40 psi.





Operating Data:

Max. Pressure: 120 psi
Min. Pilot Pressure: Adjustable
Leak Rate: .0000522 cc/min.
Temp. Range: 30-150 F
Cycle Rate: 1 cyc./sec.
Flow Capacity (Cv): 1.7 max. (1/8)
2.6 max. (1/4 & 3/8)
Cracking Pressure: 1-2 psi
Service: Properly filtered dry air or lubricated air.

Model No.	1/8 NPTF	1/4 NPTF	3/8 NPTF	1/4 BSPP	3/8 BSPP
No Manual Release	**B2M00AD**	**B4M00AD**	**B6M00AD**	**BG4M00AD-1**	**BG6M00AD**
Manual Release	**B2M0MAD**	**B4M0MAD**	**B6M0MAD**	**BG4M0MAD-1**	**BG6M0MAD**
Flush Manual Release	**B2MFMAD**	**B4MFMAD**	**B6MFMAD**	**BG4MFMAD-1**	**BG6MFMAD**

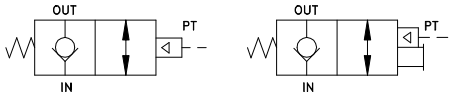
1/4 & 3/8 NPTF Balanced Pilot Operated Check Valves - All Ports on One Side

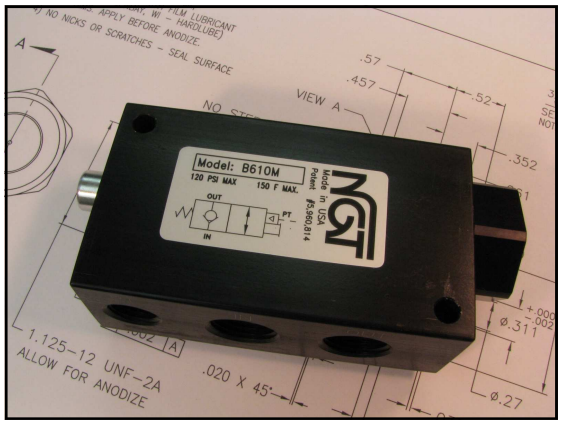
Patent 5960814

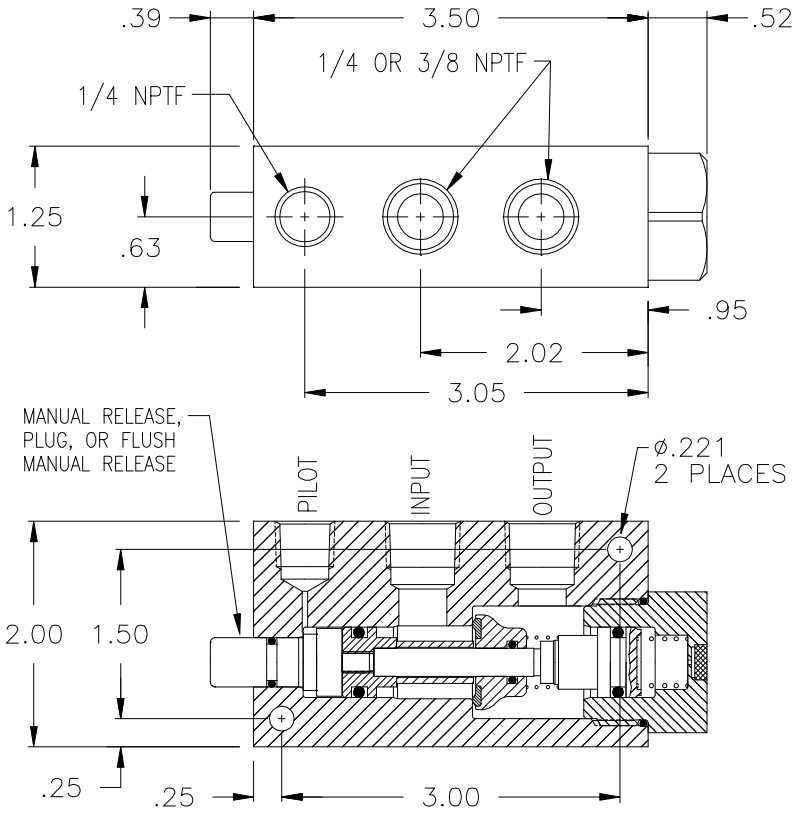
- Immediate Checking
- Optional Manual Release
- .0000522 cc/min Leak Rate
- Low & High Temp

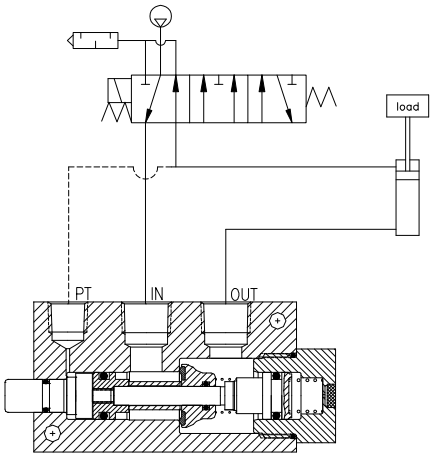
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release for exhausting trapped air before maintaining the system (OSHA Requirement).









Typical Locking Circuit

Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi
	25 psi (see table `-K18')
Leak Rate:	.0000522 cubic cm/min
Temp. Range:	30 -150 F
	30 - 350 F (see table `-V')
	-40 -150 F (see table `-T40)
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

Model No.	1/4 NPTF	3/8 NPTF
No Manual Release	**B4100**	**B6100**
Manual Release	**B410M**	**B610M**
Flush Manual Release	**B41FM**	**B61FM**

For a lower pilot pressure add (-K18) to the model # (ex. B610M-K18)
For high temp seals add (-V) to the model # (ex. B4100-V)
For low temp seals add (-T40) to the model # (ex. B4100-T40)

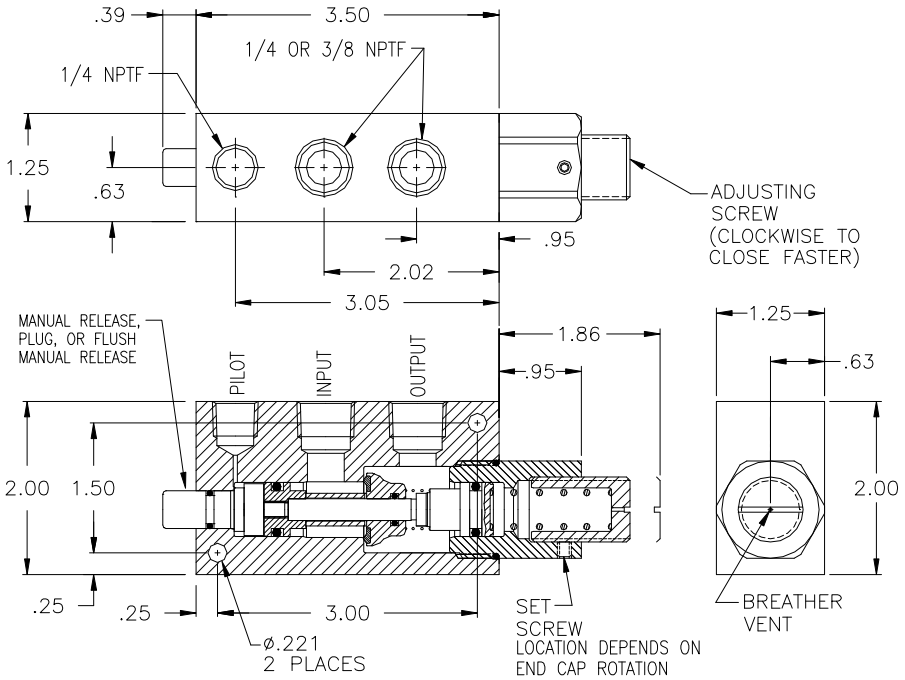
1/4 & 3/8 NPTF Adjustable 'Quick Stop' Pilot-Operated Check Valve for Faster Stops

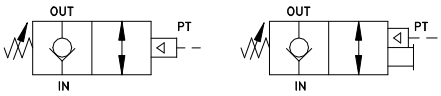
Patent s Pending

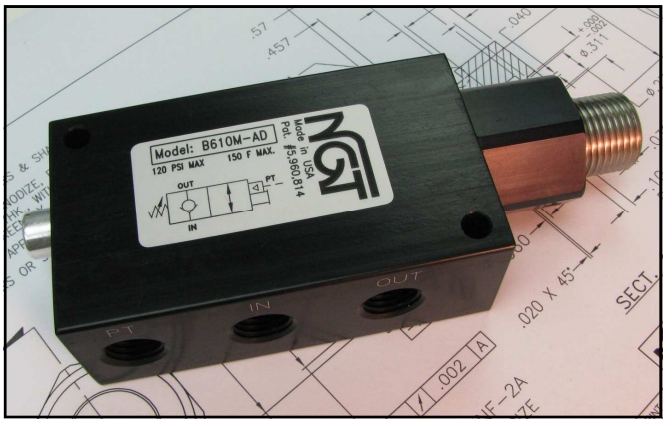
- **Adjustable Pilot Pressure**
- **Faster Stops**
- **.0000522 cc/min Leak Rate**
- **Manual Release Option**

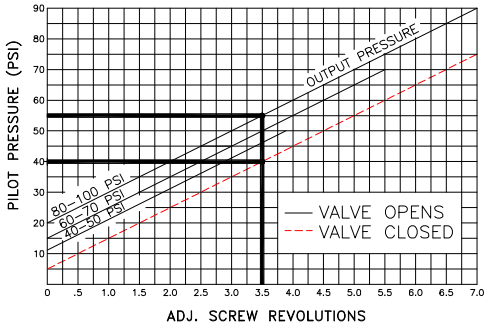
Basic Operation:

Locks any pneumatic device in position when a pressure drop or total loss of pressure occurs. Standard pilot-operated check valves will not close fast enough when back pressure is present in the pilot line. Increasing the spring pressure causes the valve to close before all the air exhausts, resulting in faster stops.

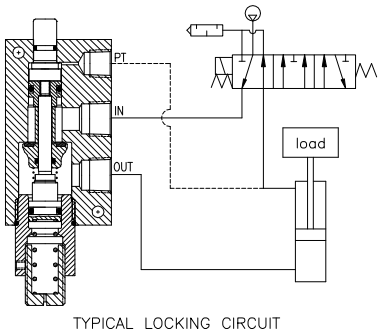








EXAMPLE: With the output pressure or trapped pressure at 80 psi the pilot pressure to open the valve must be a minimun of 55 psi. The valve will close when the back pressure drops to 40 psi.



TYPICAL LOCKING CIRCUIT

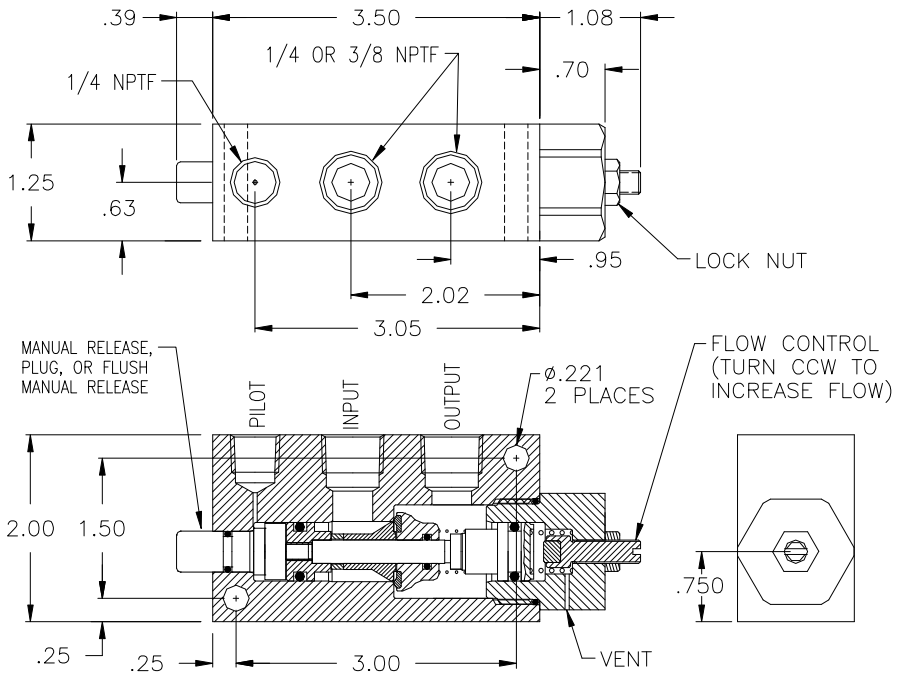
Operating Data:

Max. Pressure:	120 psi
Pilot Pressure:	Adjustable
Temp. Range:	30-150 F
Cycle Rate:	1 cyc./sec.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry or lubricated air.

Models:	1/4 NPTF	3/8 NPTF
No Manual Release	**B4100AD**	**B6100AD**
Manual Release	**B410MAD**	**B610MAD**
Flush Manual Release	**B41FMAD**	**B61FMAD**

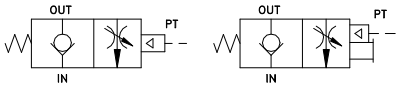
1/4 & 3/8 NPTF Pilot Operated Check Valves with Flow Controls
Fast Advance and Slow Retract - Avoid Crash Landings

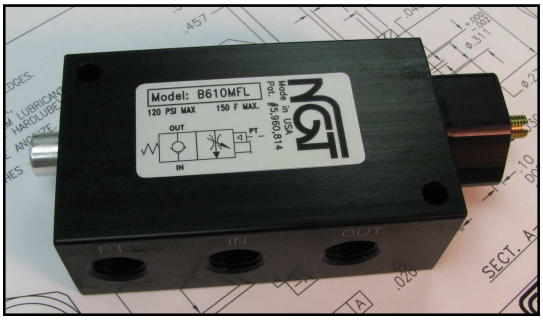
- Lower Loads Slowly
- Optional Manual Release
- .0000522 cc/min Leak Rate



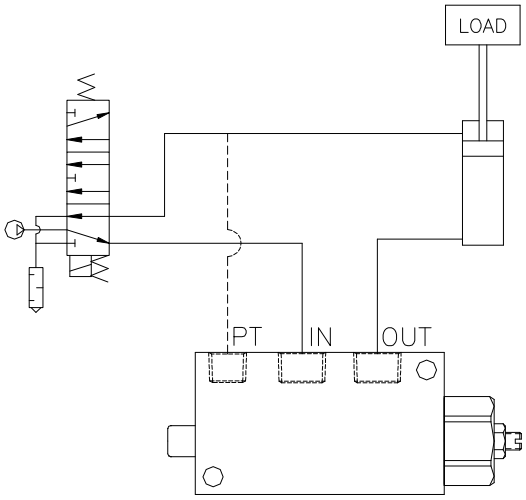
Basic Operation:

Hold position when a pressure drop or total loss of pressure occurs. Flow control meters air from the output to the input port. Manual release to exhaust trapped air before maintaining the system (OSHA Requirement).





No. of Turns	Equivalent Diameter (in.)
.25	.15
.50	.21
.75	.26
1.0	.30
1.25	.34
1.50	.37
1.75	.40



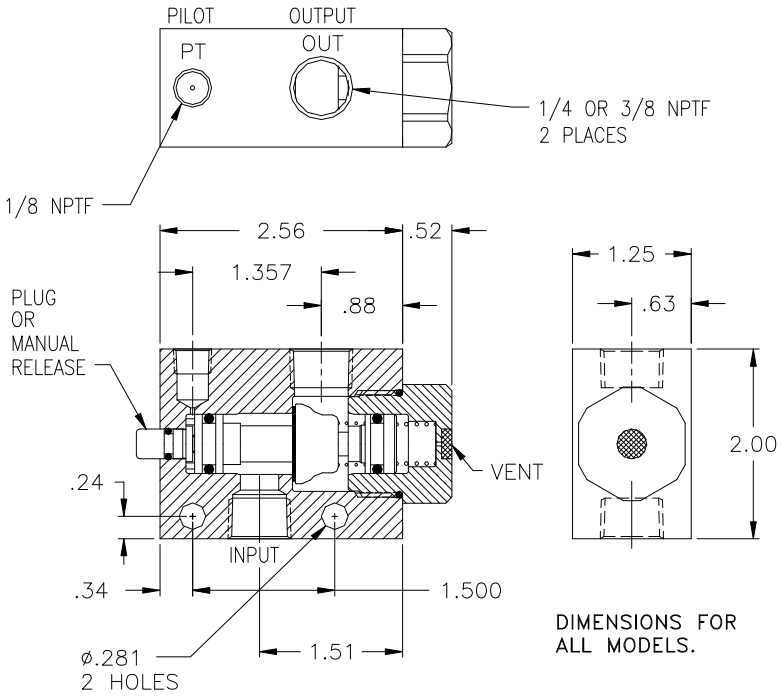
Operating Data:

Max. Pressure: 150 psi
Min. Pilot Press.: 40 psi
25 psi (see table)
Temp. Range: 30 - 150 F
Cycle Rate: 1 cycles/sec max.
Flow Capacity (Cv): 2.6 max.
Cracking Pressure: 1-2 psi
Service: Properly filtered dry or lubricated air.

Model:	1/4 NPTF	3/8 NPTF
No Manual Release	B4100FL	B6100FL
Manual Release	B410MFL	B610MFL
Flush Man. Release	B41FMFL	B61FMFL
For a lower pilot pressure add (-K18) to the model # (ex. B610MFL-K18).		

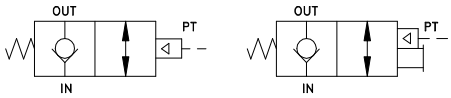
1/4 & 3/8 NPTF 316 Stainless Balanced Pilot Operated Check Valves

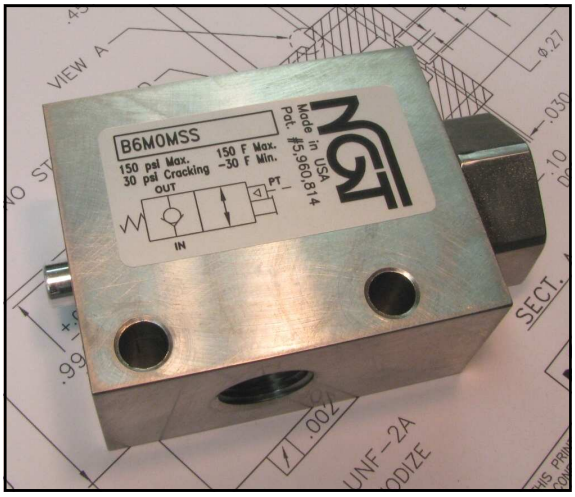
- **Immediate Checking**
- **Optional Manual Release**
- **.0000522 cc/min Leak Rate**
- **Low & High Temp**

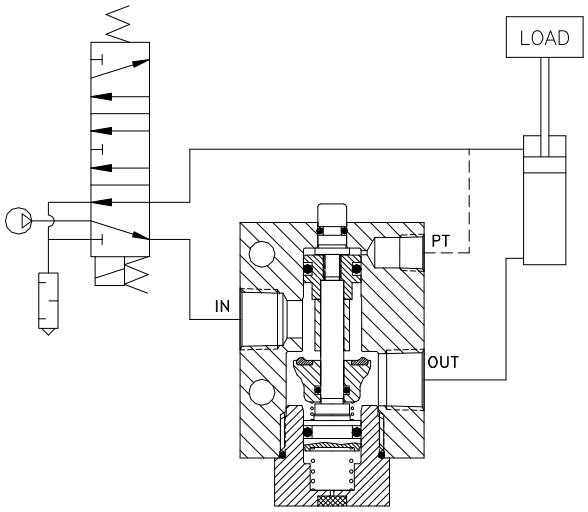


Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release for exhausting trapped air before maintaining the system (OSHA Requirement).







Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi
Leak Rate:	.0000522 cubic cm/min
Temp. Range:	30-150 F 30-350 F (see table '-V') -40-150 F (see table '-T40')
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

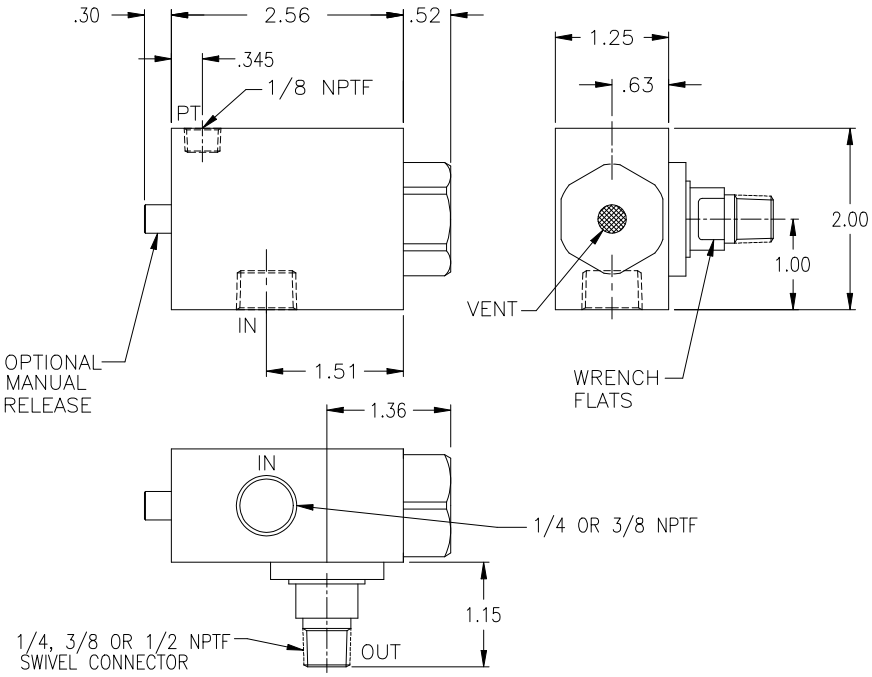
Model No.	1/4 NPTF	3/8 NPTF
No Manual Release	**B4M00SS**	**B6M00SS**
Manual Release	**B4M0MSS**	**B6M0MSS**
Flush Manual Release	**B4MFMSS**	**B6MFMSS**

For high temp seals add (-V) to the model # (ex. B4M0MSS-V).
For low temp seals add (-T40) to the model # (ex. B4M0MSS-T40).

- **Optional Manual Release**
- **.0000522 cc/min Leak Rate**
- **Direct Mounting Swivel**

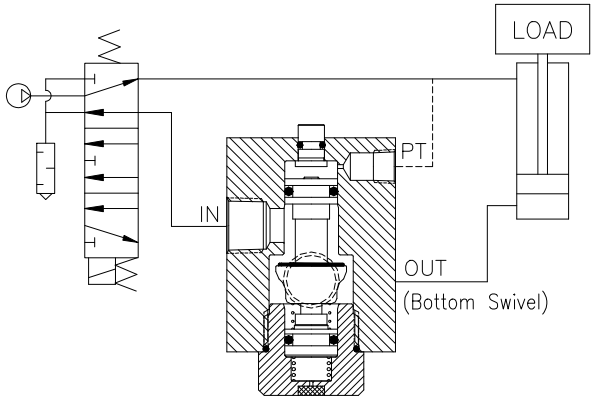
Basic Operation:

Locks any pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release removes trapped air before maintaining the system (OSHA requirement).



Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (see table)
Temp. Range:	30-150 F -40-150 F (low temp)
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.



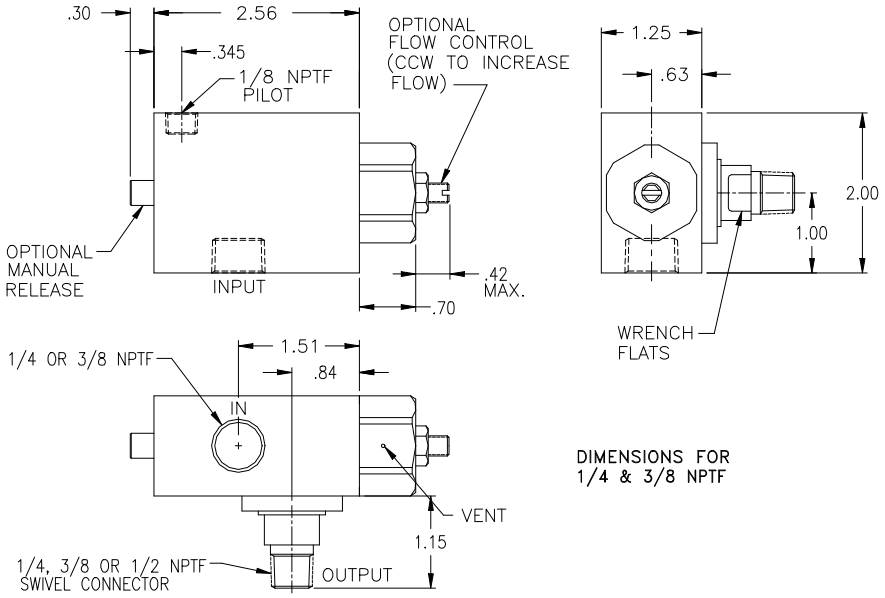
Models	1/4 Swivel	3/8 Swivel	1/2 Swivel
1/4 NPTF Input Port			
No Manual Release	**B4S00-25**	**B4S00-38**	**B4S00-50**
Manual Release	**B4S0M-25**	**B4S0M-38**	**B4S0M-50**
Flush Man. Release	**B4SFM-25**	**B4SFM-38**	**B4SFM-50**
3/8 NPTF Input Port			
No Manual Release	**B6S00-25**	**B6S00-38**	**B6S00-50**
Manual Release	**B6S0M-25**	**B6S0M-38**	**B6S0M-50**
Flush Man. Release	**B6SFM-25**	**B6SFM-38**	**B6SFM-50**

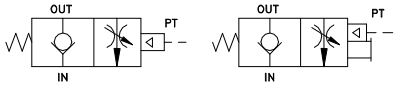
For low temp version add a (-T40) to the end of the model # (Ex: B4S00-25-T40).
For low pilot pressure add a (- K18) to the end of the model # (Ex: B4S00-K18).

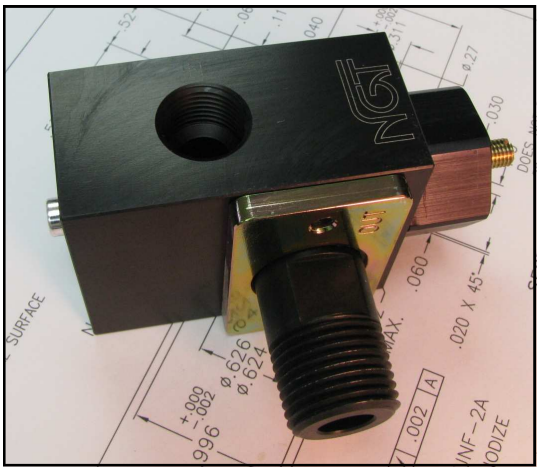
- **Optional Manual Release**
- **.0000522 cc/min Leak Rate**
- **Swivel Mount**
- **Lower Loads Slowly**

Basic Operation:

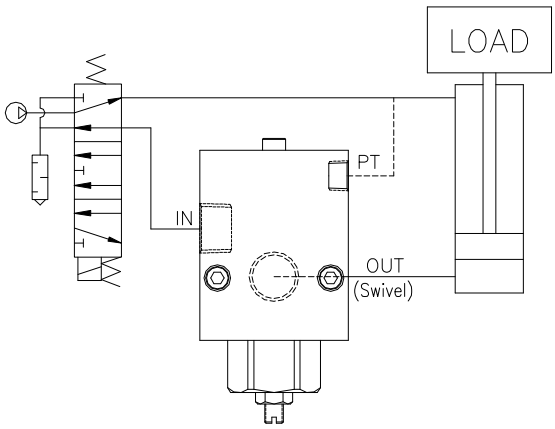
Hold position when a pressure drop or total loss of pressure occurs. Fast advance and slow retract to avoid crash landings. Manual release to exhaust trapped air before maintaining the system (OSHA Requirement).







No. of Turns	Equivalent Diameter (in.)
.25	.15
.50	.21
.75	.26
1.0	.30
1.25	.34
1.50	.37
1.75	.40



Operating Data:

Max. Pressure: 150 psi
Min. Pilot Pressure: 40 psi
25 psi (see table)
Cycle Rate: 1 cyc./sec.
Temp. Range: 30-150 F
Flow Capacity (Cv): 2.6 max.
Cracking Pressure: 1-2 psi
Service: Properly filtered and lubricated air or dry air.

Models:

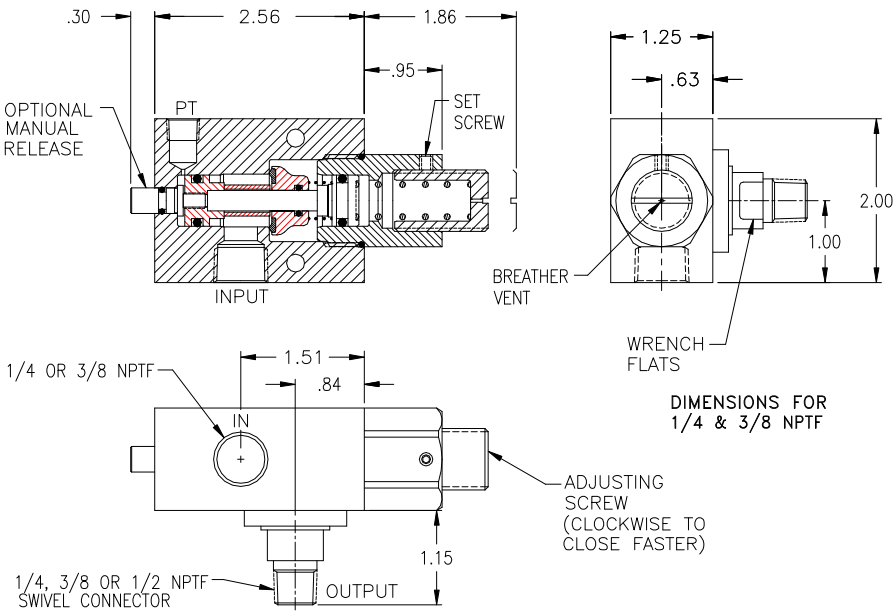
1/4 NPTF Input Port	1/4 Swivel	3/8 Swivel	1/2 Swivel
No Manual Release	**B4S00FL-25**	**B4S00FL-38**	**B4S00FL-50**
Manual Release	**B4S0MFL-25**	**B4S0MFL-38**	**B4S0MFL-50**
Flush Manual Release	**B4SFMFL-25**	**B4SFMFL-38**	**B4SFMFL-50**
3/8 NPTF Input Port	1/4 Swivel	3/8 Swivel	1/2 Swivel
No Manual Release	**B6S00FL-25**	**B6S00FL-38**	**B6S00FL-50**
Manual Release	**B6S0MFL-25**	**B6S0MFL-38**	**B6S0MFL-50**
Flush Manual Release	**B6SFMFL-25**	**B6SFMFL-38**	**B6SFMFL-50**
For a lower pilot pressure add (-K18) to the model # (Ex: B6S0MFL-25-K18)			

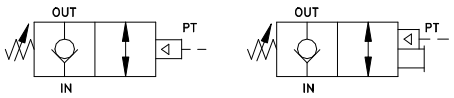
1/4, 3/8 and 1/2 NPTF Swivel Mount Pilot-Operated Check Valves with 'Quick Close' Adjustment

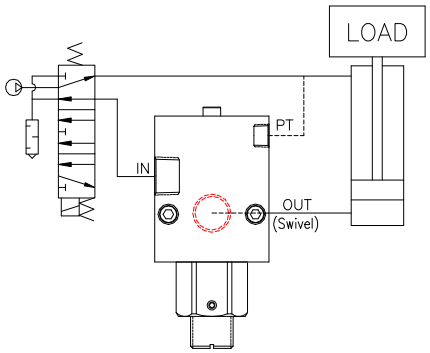
- Optional Manual Release
- .0000522 cc/min Leak Rate
- 'Quick Close' Operation
- Direct Mounting Swivel

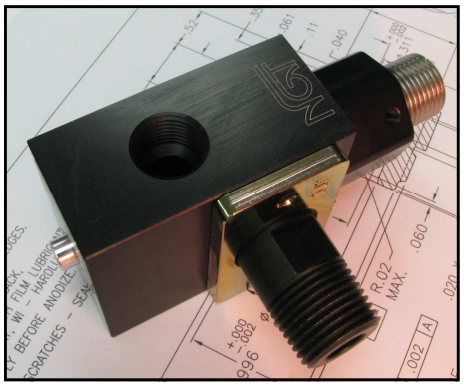
Basic Operation:

Locks any pneumatic device in position when a pressure drop or total loss of pressure occurs. Standard pilot-operated check valves will not close fast enough when back pressure is present in the pilot line. Increasing the spring pressure causes the valve to close at a higher pilot pressure or before all the air exhausts, resulting in faster stops. Optional manual and flush manual release.







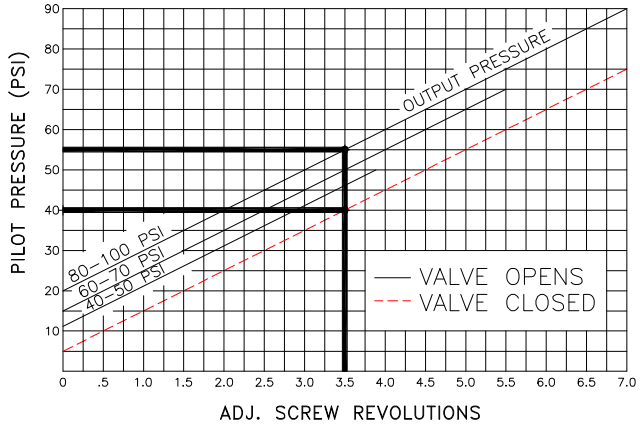


Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	Adjustable
Temp. Range:	30-150 F
Cycle Rate:	1 cyc./sec.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered and lubricated air.

MODELS			
1/4 NPTF Input Port			
	1/4 Swivel	3/8 Swivel	1/2 Swivel
No Manual Release	**B4S00AD-25**	**B4S00AD-38**	**B4S00AD-50**
Manual Release	**B4S0MAD-25**	**B4S0MAD-38**	**B4S0MAD-50**
Flush Release	**B4SFMAD-25**	**B4SFMAD-38**	**B4SFMAD-50**

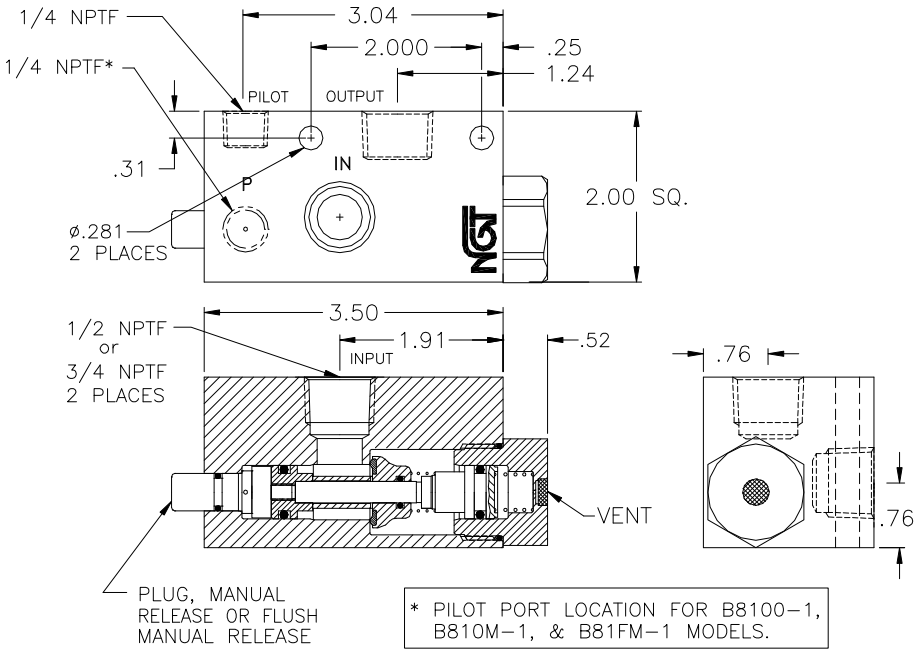
3/8 NPTF Input Port			
	1/4 Swivel	3/8 Swivel	1/2 Swivel
No Manual Release	**B6S00AD-25**	**B6S00AD-38**	**B6S00AD-50**
Manual Release	**B6S0MAD-25**	**B6S0MAD-38**	**B6S0MAD-50**
Flush Release	**B6SFMAD-25**	**B6SFMAD-38**	**B6SFMAD-50**



EXAMPLE: With the output pressure or trapped pressure at 80 psi the pilot pressure to open the valve must be a minimun of 55 psi. The valve will close when the back pressure drops to 40 psi.

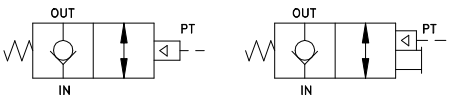
1/2 & 3/4 NPTF Balanced Pilot Operated Check Valves

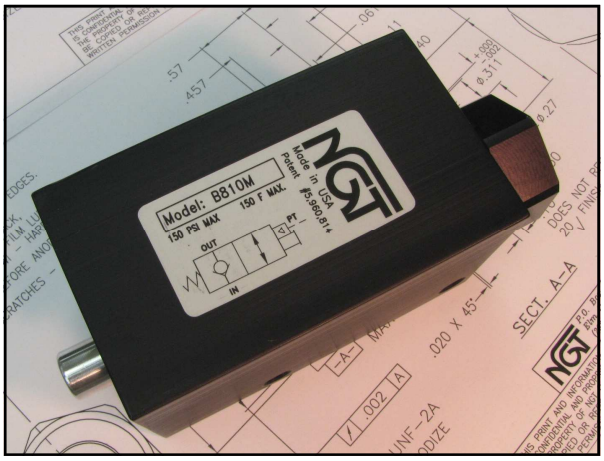
- **Immediate Checking**
- **Optional Manual Release**
- **.0000522 cc/min Leak Rate**
- **Low & High Temp**

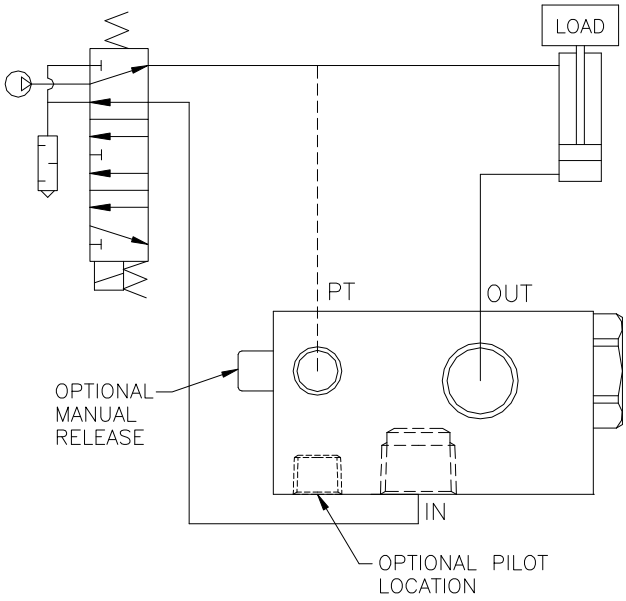


Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Manual release for exhausting trapped air before maintaining the system (OSHA Requirement).







Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi
	25 psi (see table '-K18')
Leak Rate:	.0000522 cc/min
Temp. Range:	30-150 F
	30-350 F (see table `-V')
	-40-150 F (see table `-T40')
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	3.8
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

Model No.	1/2 NPTF	1/2 NPTF*	3/4 NPTF
No Manual Release	**B8100**	**B8100-1**	**B12100**
Manual Release	**B810M**	**B810M-1**	**B1210M**
Flush Manual Release	**B81FM**	**B81FM-1**	**B121FM**

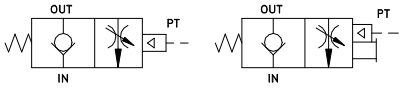
For a lower pilot pressure add (-K18) to the model # (ex. B810M-K18).
For high temp seals add (-V) to the model # (ex. B810M-V).
For low temp seal add (-T40) to the model # (ex. B810M-T40).
** Pilot port on the same side as the input port.*

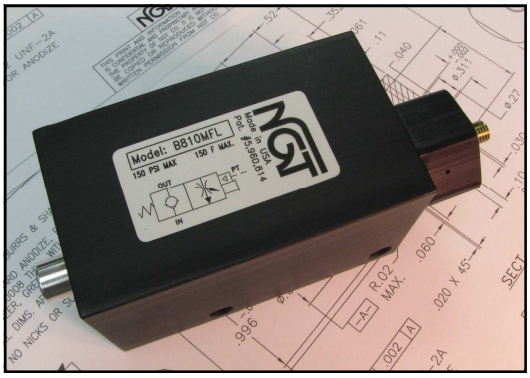
1/2 & 3/4 NPTF Pilot Operated Check Valves with Flow Controls
Fast Advance and Slow Retract - Avoid Crash Landings

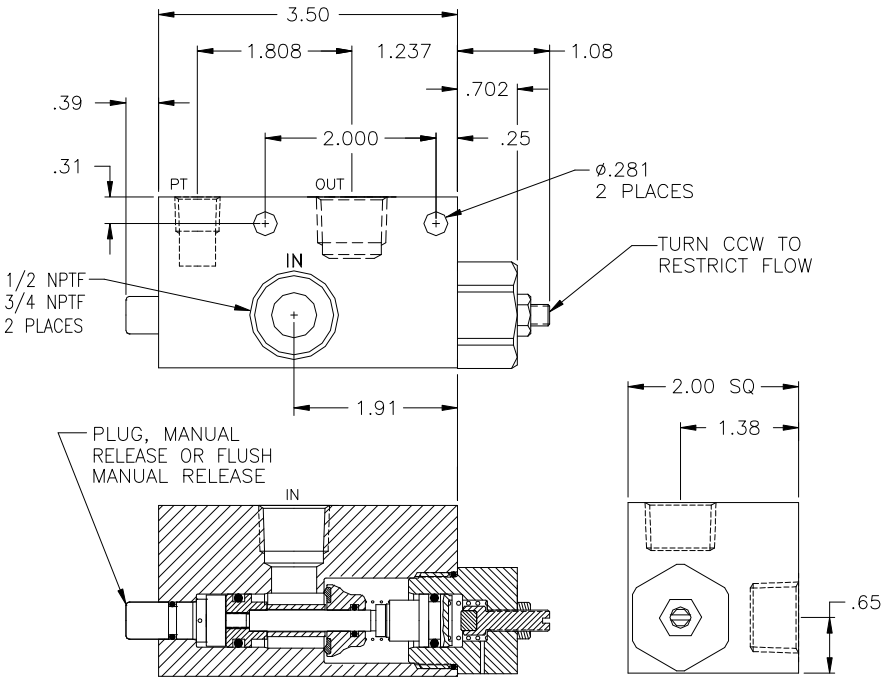
- Lower Loads Slowly
- Optional Manual Release
- .0000522 cc/min Leak Rate

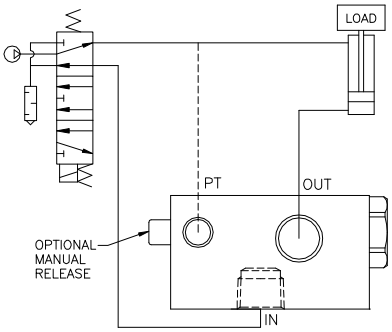
Basic Operation:

Hold position when a pressure drop or total loss of pressure occurs. Flow control meters air from the output to the input port. Manual release to exhaust trapped air before maintaining the system (OSHA Requirement).









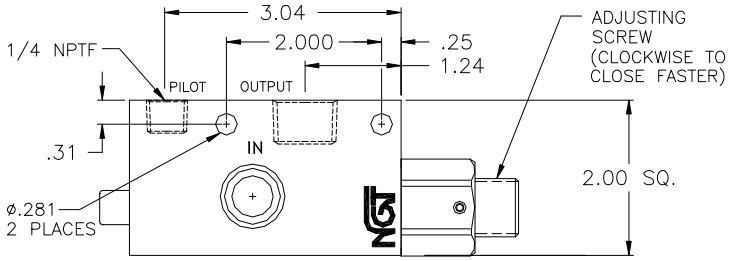
No. of Turns	Equivalent Diameter (in.)	No. of Turns	Equivalent Diameter (in.)
.25	.15	1.75	.40
.50	.21	2.00	.43
.75	.26	2.25	.45
1.0	.30	2.50	.48
1.25	.34	2.75	.50
1.50	.37		

Operating Data:

Max. Pressure:	150 psi
Min. Pilot Press.:	40 psi 25 psi (see table)
Temp. Range:	30 - 150 F
Cycle Rate:	1 cycles/sec max.
Flow Capacity (Cv):	3.8 max.
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry or lubricated air.

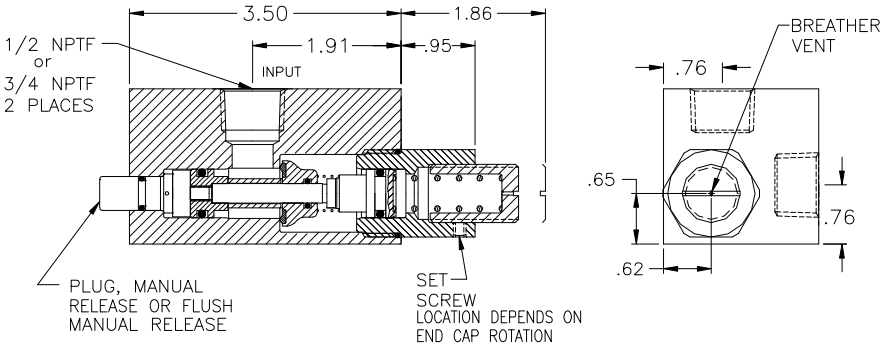
Model:	1/2 NPTF	3/4 NPTF
No Manual Release	**B8100FL**	**B12100FL**
Manual Release	**B810MFL**	**B1210MFL**
Flush Man. Release	**B81FMFL**	**B121FMFL**
For a lower pilot pressure add (-K18) to the model # (ex: B810MFL-K18).		

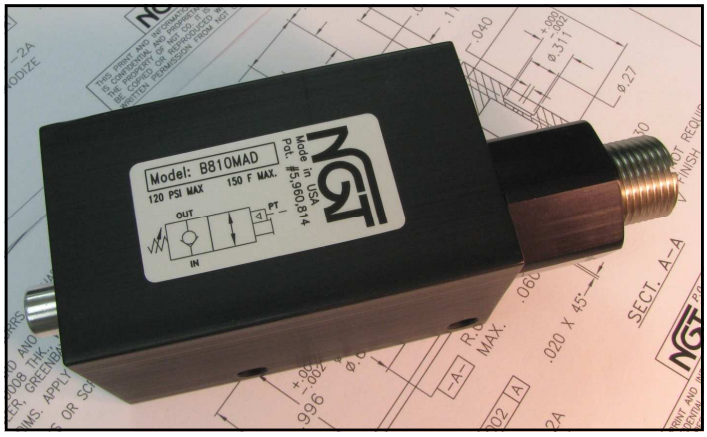
- **Adjustable Pilot Pressure**
- **Faster Stops**
- **.0000522 cc/min Leak Rate**
- **Manual Release Option**

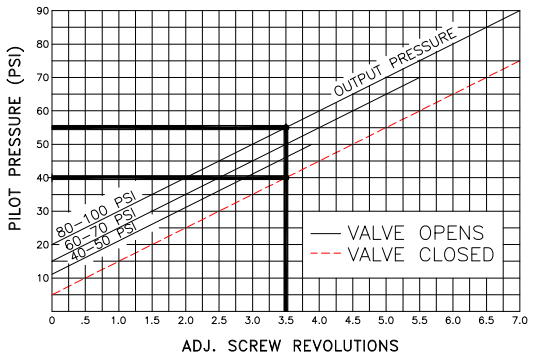


Basic Operation:

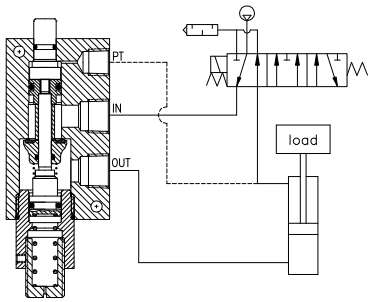
Locks any pneumatic device in position when a pressure drop or total loss of pressure occurs. Standard pilot-operated check valves will not close fast enough when back pressure is present in the pilot line. Increasing the spring pressure causes the valve to close before all the air exhausts, resulting in faster stops.







EXAMPLE: With the output pressure or trapped pressure at 80 psi the pilot pressure to open the valve must be a minimun of 55 psi. The valve will close when the back pressure drops to 40 psi.



TYPICAL LOCKING CIRCUIT

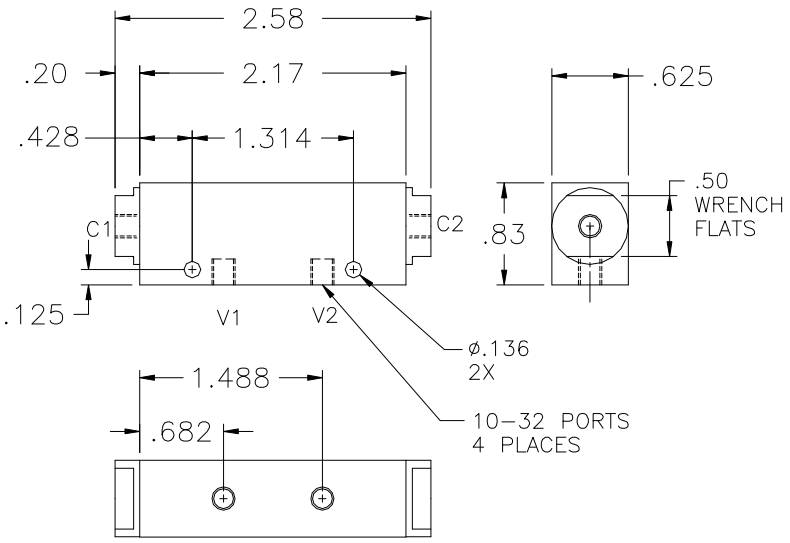
Operating Data:

Max. Pressure: 120 psi
Pilot Pressure: Adjustable
Temp. Range: 30-150 F
Cycle Rate: 1 cyc./sec.
Flow Capacity (Cv): 3.8 max.
Cracking Pressure: 1-2 psi
Service: Properly filtered and lubricated air.

Models:	1/2 NPTF	3/4 NPTF
No Manual Release	**B8100AD**	**B12100AD**
Manual Release	**B810MAD**	**B1210MAD**
Flush Manual Release	**B81FMAD**	**B121FMAD**

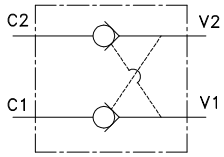
Miniature Dual Check Valve with 10-32 Ports

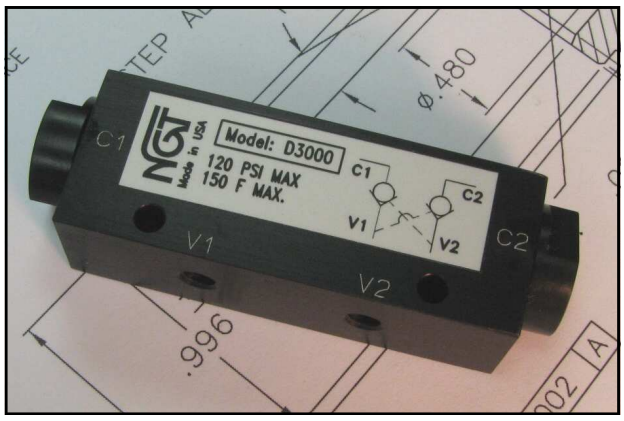
- **Air Tight Locking**
- **Small Package**
- **Faster Stops**
- **Less Bounce**

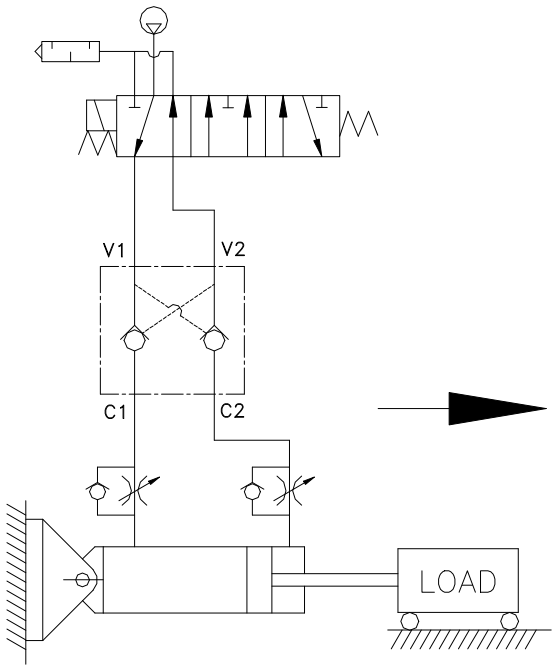


Basic Operation:

In the event of a pressure loss this unique valve maintains cylinder position by locking air in both cylinder ports. Eliminate drift due to leaky spool valves.







Operating Data:

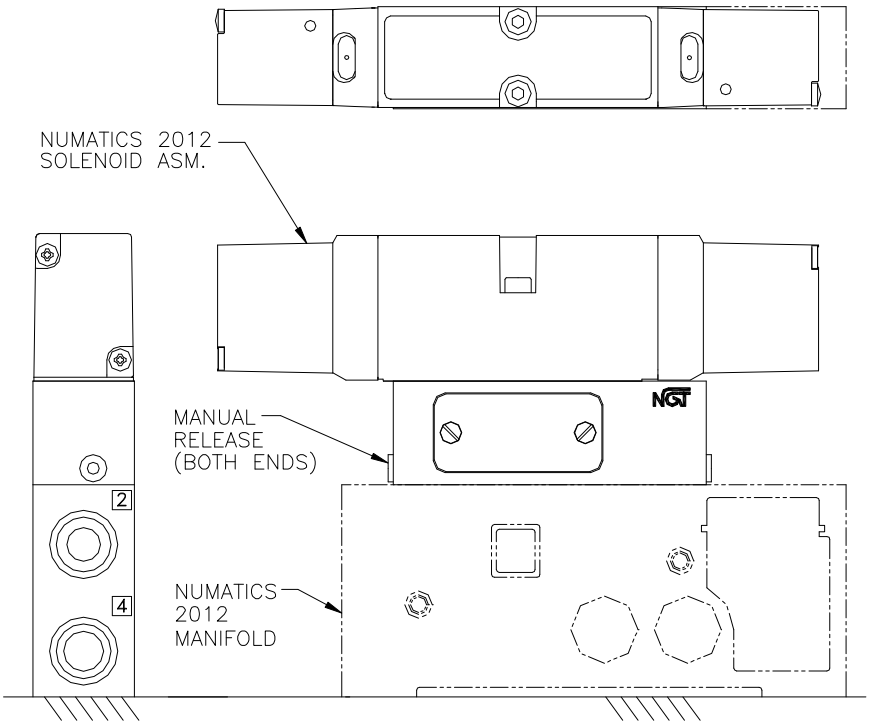
Min / Max. Pressure:	25-120 psi
Temp. Range:	30-150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	.25
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

Model No.	D3000

Dual Locking Valve w/ Manual Release for Numatics 2012 & ISO 15407 Manifold

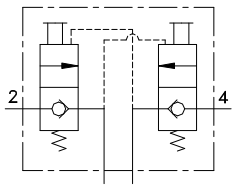
Patents Pending

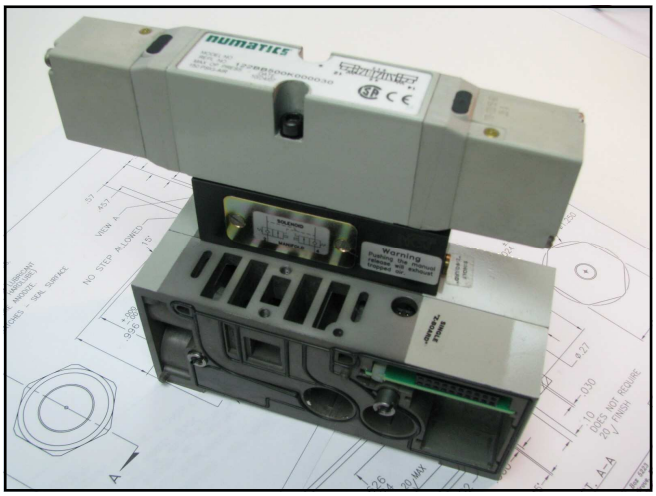
- Dual Manual Release (to Atm.)
- .000113 cc/min. Leak Rate
- Direct Mount to 2012 Manifold
- Locks in 2 Directions
- Compact Design
- No Extra Plumbing
- Quick Assembly (3 min)

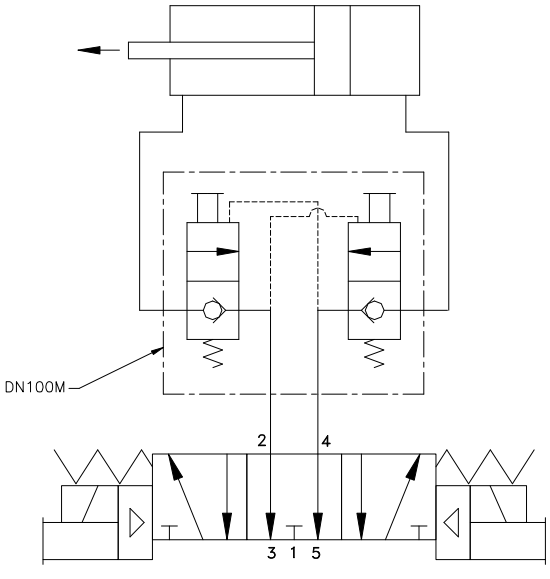


Basic Operation:

In the event of a pressure loss air pressure is locked in both the output ports (2 and 4). Eliminates drift due to leaky spools. The manual release allows the release of trapped air from both ports independently to atmosphere (OSHA requirement).







DOUBLE SOLENOID AIR PILOT
3 POSITION 4–WAY OPEN CENTER

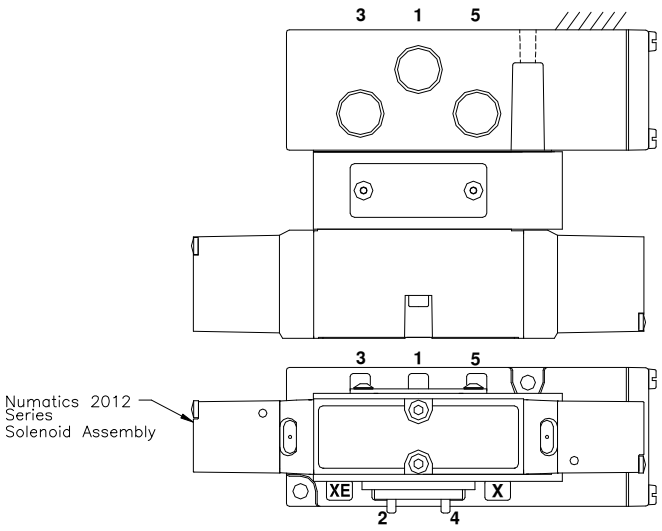
Operating Data:

Min. / Max. Pressure:	30 / 150 psi
Temp. Range:	20-150 F
Leak Rate:	1 cyc./sec. max.
Cycle Rate:	.000113 cc/min.
Flow Capacity (Cv):	1.0
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.
Solenoid:	3-position 4-way open center

Dual Locking Valve w/ Manual Release - For Numatics 2012 Series Valves

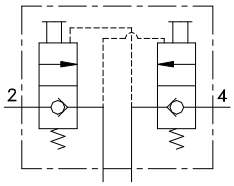
Patents Pending

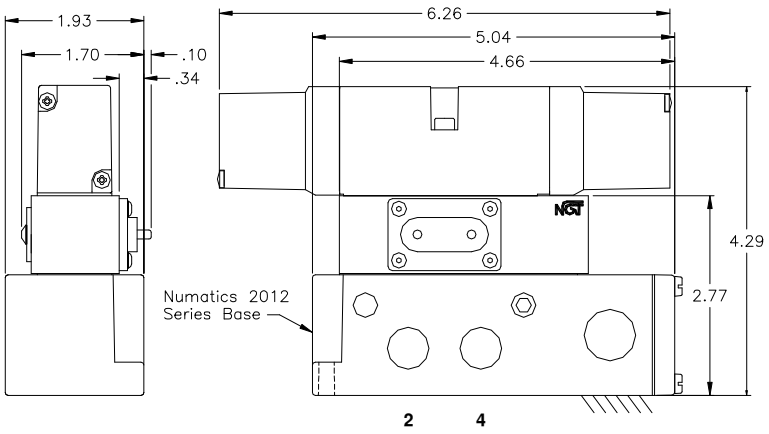
- Dual Manual Release
- .000113 cc/min Leak Rate
- Direct Mount to 2012 Single Base
- Locks in 2 Directions
- Compact Design
- No Extra Plumbing
- Quick Assembly (5 min)



Basic Operation:

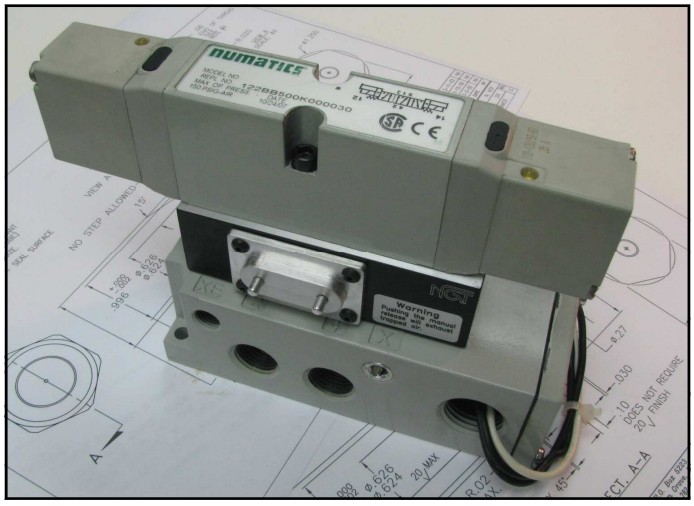
In the event of a pressure loss air pressure is locked in both the output ports (2 and 4). Eliminates drift due to leaky spools. The manual release allows the release of trapped air from both ports independently (OSHA requirement).

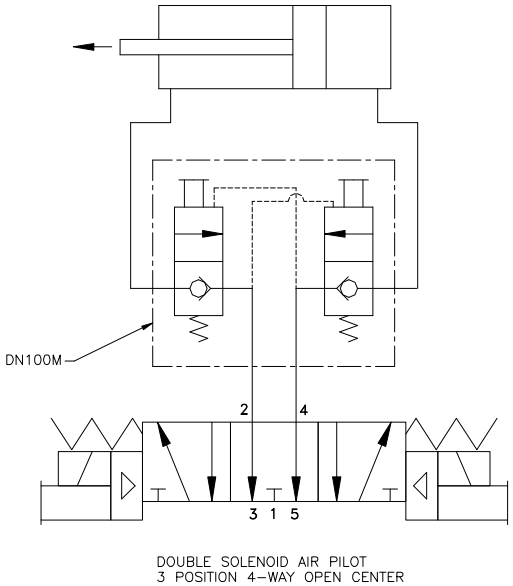




Operating Data:

Min. / Max. Pressure:	30 /150 psi
Temp. Range:	20-150 F
Leak Rate:	.000113 cc/min.
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.
Solenoid:	3-position 4-way open center



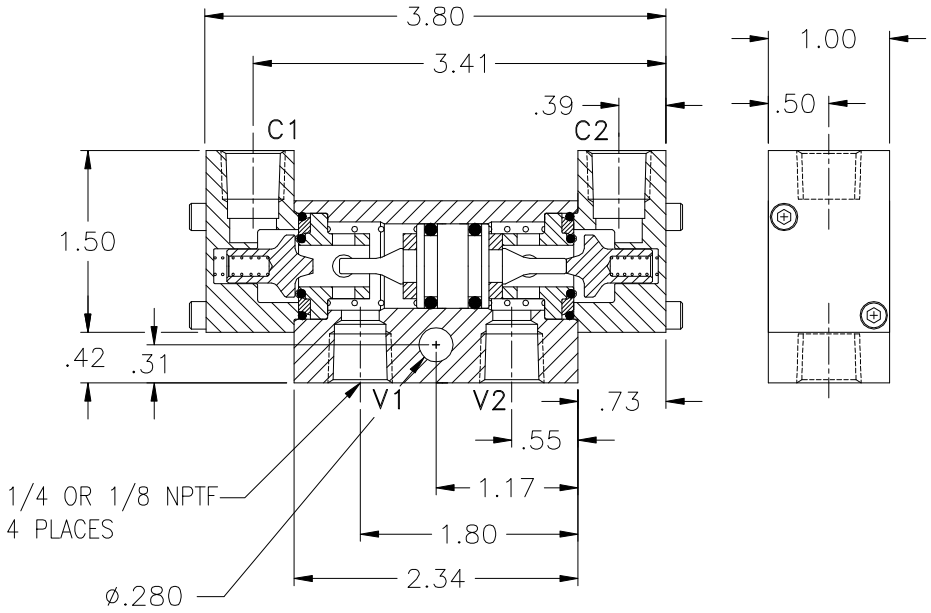


DOUBLE SOLENOID AIR PILOT
3 POSITION 4-WAY OPEN CENTER

Model No.	DN100M

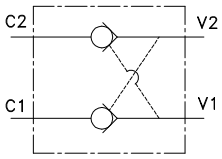
1/4 NPTF Dual Check Valves

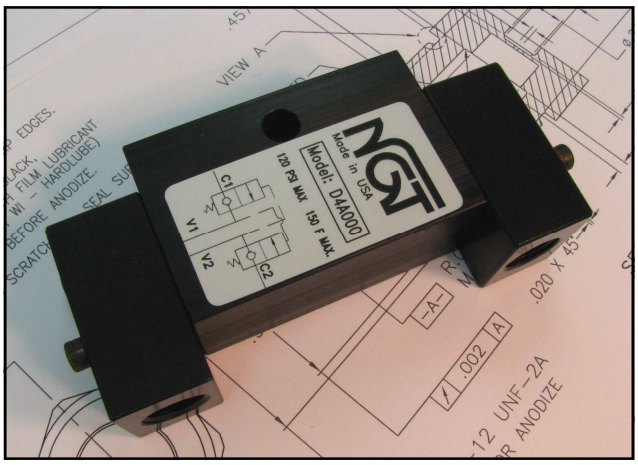
- **Air Tight Locking**
- **Small Package**
- **Faster Stops**
- **Less Bounce**

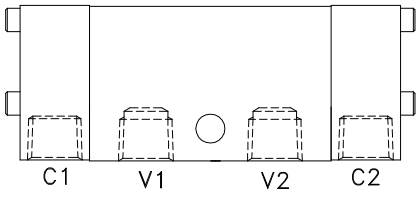


Basic Operation:

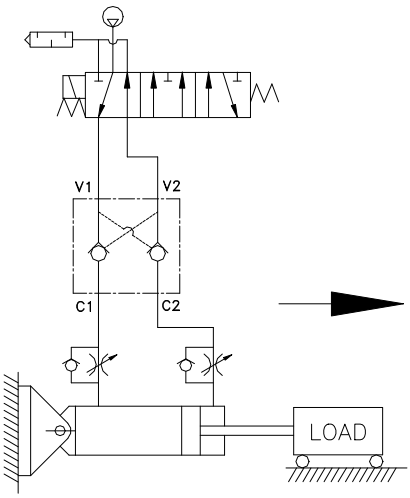
In the event of a pressure loss this unique valve maintains cylinder position by locking air in both cylinder ports. Eliminate drift due to leaky spool valves.







All ports on one side



Operating Data:

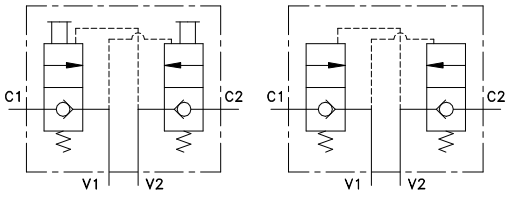
Min / Max. Pressure:	20-120 psi
Temp. Range:	30-150 F -40 to 150 F (see table)
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.5
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

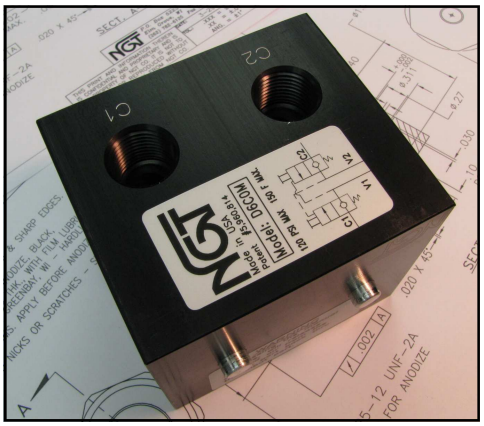
Model No.	1/4 NPTF
Ports Opposite Sides	**D4A000**
Ports Same Side	**D4AS00**
Add '-T40' suffix for low temp. model	

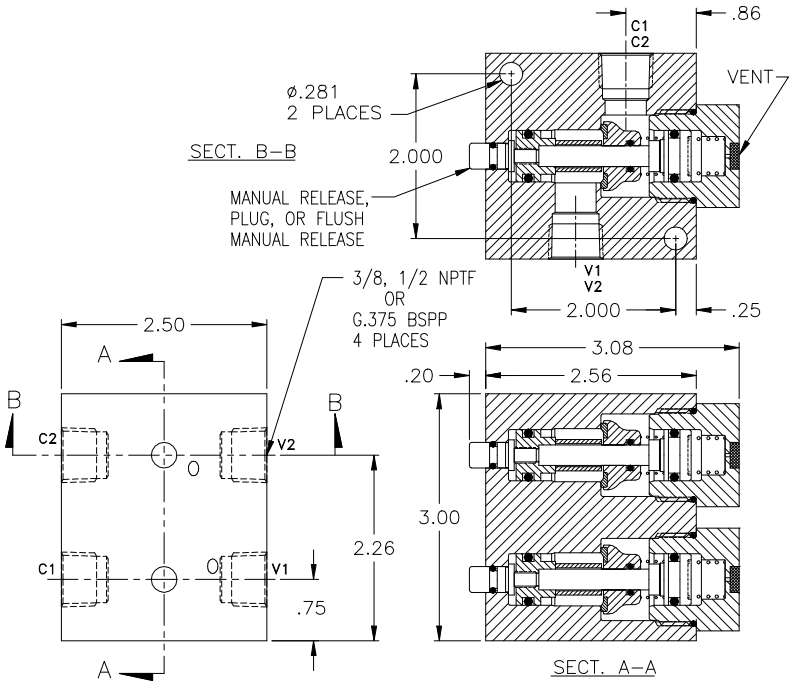
- **Dual Manual Release**
- **.0000522 cc/min Leak Rate**
- **High Temp Available**
- **G.375 BSPP In Stock**

Basic Operation:

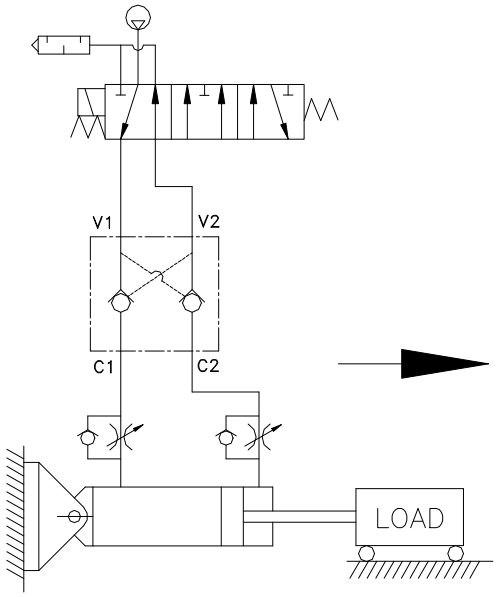
In the event of a pressure loss this unique valve maintains cylinder position by locking air in both cylinder ports. Eliminate drift due to leaky spool valves. A manual release is available to release trapped air from both ports independently.







DIMS. APPLY TO BOTH 3/8 & 1/2 NPTF & BSPP MODELS



Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (see table '-K18')
Adv & Retract Ratio:	The pressure ratio of advance/ retract or retract/advance should not be greater than 2.
Temp. Range:	-20 -150 F 30 - 350 F (see table)
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	3.8
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

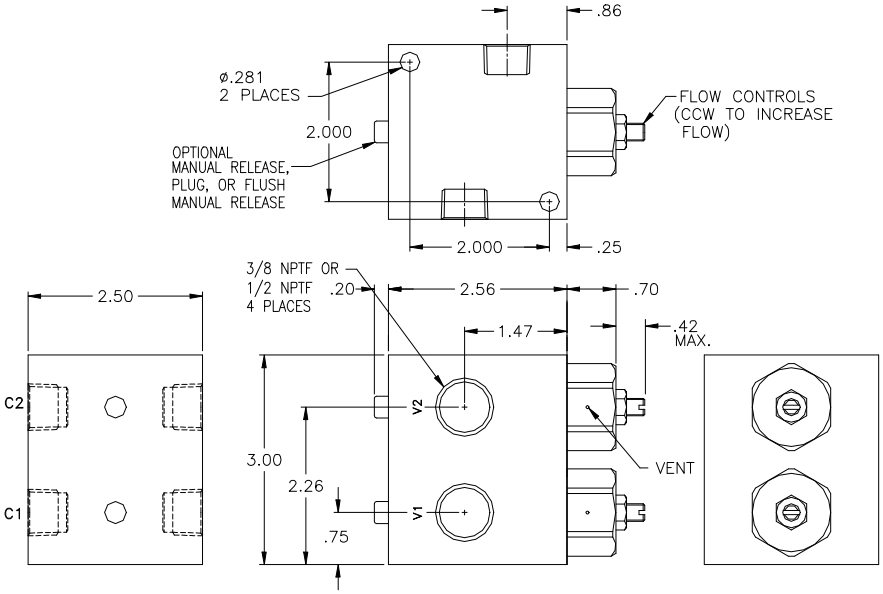
Model No.	3/8 NPTF	3/8 BSPP	1/2 NPTF
No Manual Release	**D6C00**	**DG6C00**	**D8C00**
Manual Release	**D6C0M**	**DG6C0M**	**D8C0M**
Flush Manual Release	**D6CFM**	**DG6CFM**	**D8CFM**

For high temp seals add (-V) to the model # (ex. D6C0M-V).
For low pilot pressure add (-K18) to the model # (ex. D6C0M-K18)

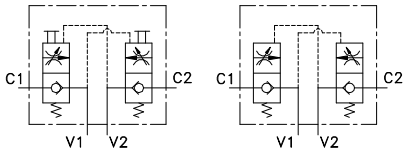
- **Dual Manual Release**
- **.0000522 cc/min Leak Rate**
- **G.375 BSPP In Stock**
- **Lower Loads Slowly**

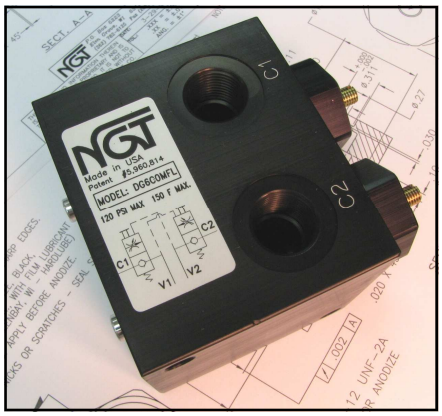
Basic Operation:

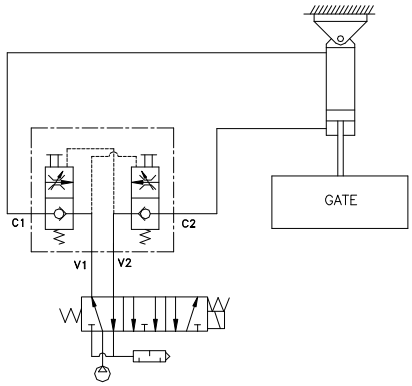
In the event of a pressure loss this unique valve maintains cylinder position by locking air in both cylinder ports. The internal flow controls meter air out of the cylinder. A manual release is available to release trapped air from both ports independently.



DIMS. APPLY TO BOTH 3/8 & 1/2 NPTF MODELS







Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (see table '-K18')
Adv & Retract Ratio:	The pressure ratio of advance/ retract or retract/advance should not be greater than 2.
Temp. Range:	-20 -150 F 30 - 350 F (see table)
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	3.8
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

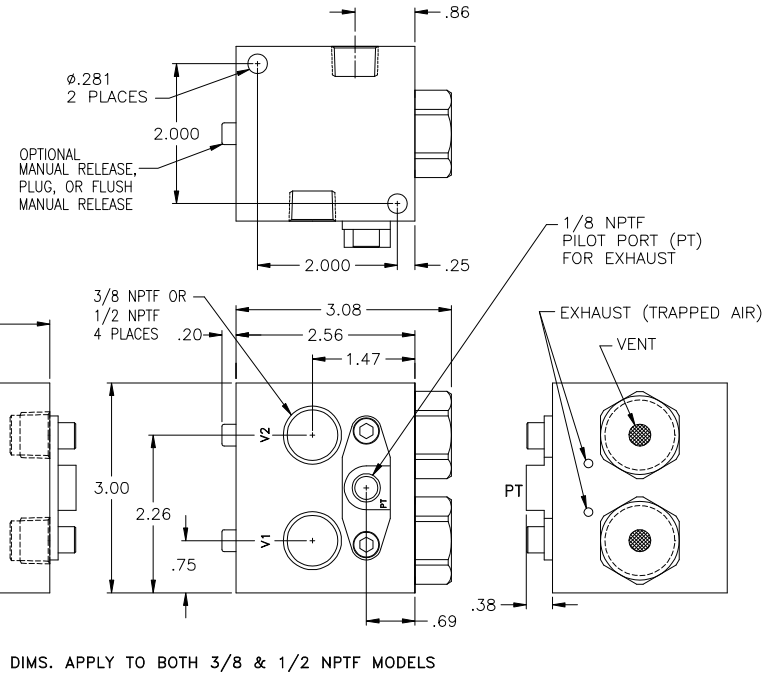
No. of Turns	Equivalent Diameter (in.)	No. of Turns	Equivalent Diameter (in.)
.25	.15	1.75	.40
.50	.21	2.00	.43
.75	.26	2.25	.45
1.0	.30	2.50	.48
1.25	.34	2.75	.50
1.50	.37		

Model No.	3/8 NPTF	3/8 BSPP	1/2 NPTF
No Manual Release	**D6C00FL**	**DG6C00FL**	**D8C00FL**
Manual Release	**D6C0MFL**	**DG6C0MFL**	**D8C0MFL**
Flush Manual Release	**D6CFMFL**	**DG6CFMFL**	**D8CFMFL**
For 25 psi pilot pressure add (-K18) to the model # (ex. D6C0MFL-K18)			

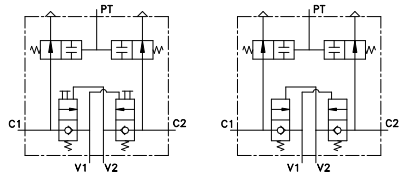
- Dual Manual Release
- .0000522 cc/min Leak Rate
- Remote Release

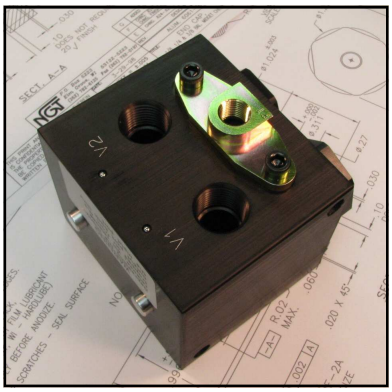
Basic Operation:

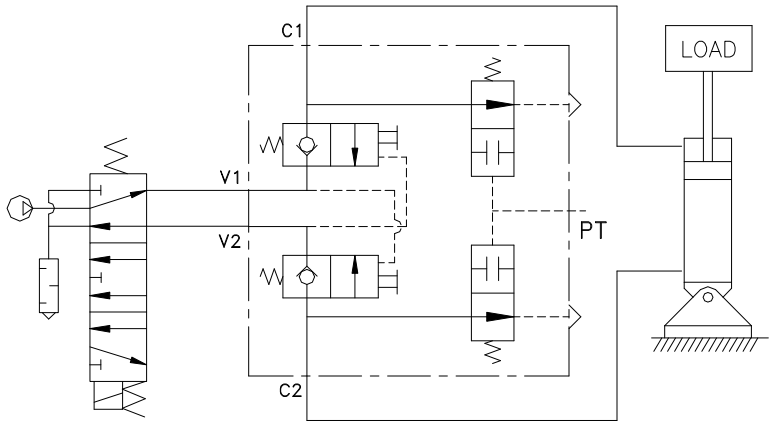
This valve was designed for equipment where the valve cannot be easily accessed. In the event of a pressure loss, both output ports will lair tight, as long as pressure is applied to the pilot port 'PT'. Releasing pressure to the pilot port 'PT' will release trapped air to atmosphere. Optional manual release and flow controls are also available with this model.



DIMS. APPLY TO BOTH 3/8 & 1/2 NPTF MODELS







Operating Data:

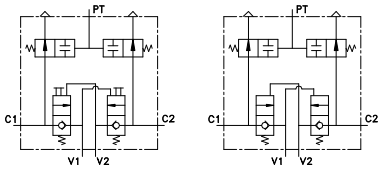
Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (see table '-K18')
Adv & Retract Ratio:	The pressure ratio of advance/retract or retract/advance should not be greater than 2.
Temp. Range:	-30 -150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	3.9
Cracking Pressure:	1-2 psi
Auto Exhaust:	At 80 psi trapped air, the pilot port 'PT' must drop to 30 psi to exhaust.
Service:	Properly filtered dry air or lubricated air.

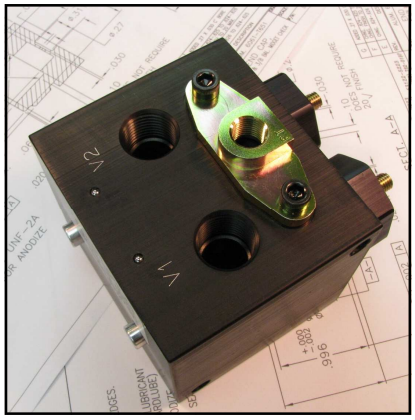
Model No.	3/8 NPTF	1/2 NPTF
No Manual Release	**D6C00EA**	**D8C00EA**
Manual Release	**D6C0MEA**	**D8C0MEA**
Flush Manual Release	**D6CFMEA**	**D8CFMEA**
For a lower pilot pressure add (-K18) to the model # (ex. D6C0MEA-K18).		

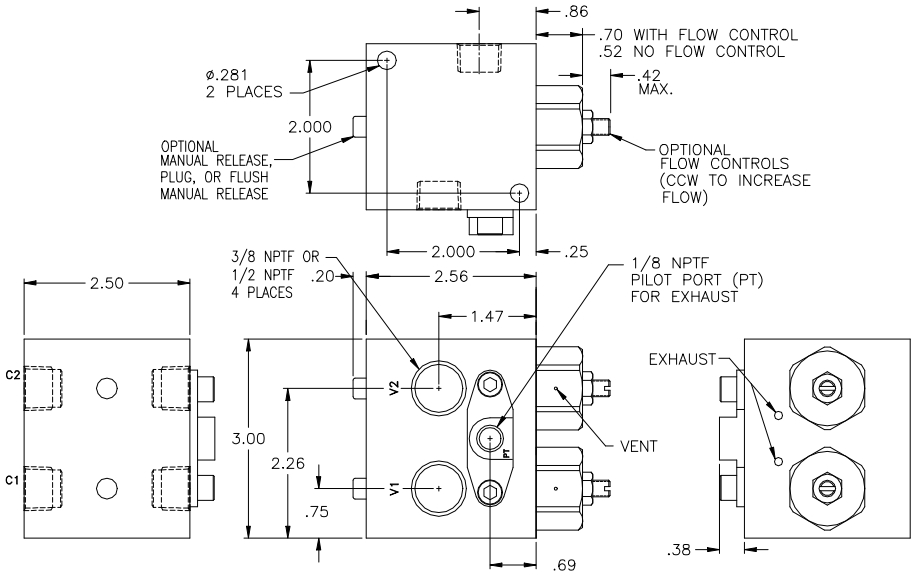
- **Dual Manual Release**
- **.0000522 cc/min Leak Rate**
- **Remote Release**
- **Dual Flow Controls**

Basic Operation:

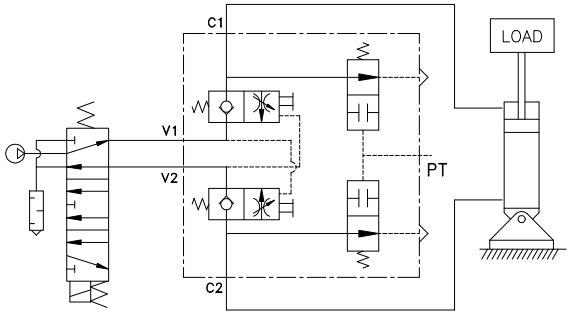
This valve was designed for equipment where the valve cannot be easily accessed. In the event of a pressure loss, both output ports will lock air tight, as long as pressure is applied to the pilot port 'PT'. Releasing pressure to the pilot port 'PT' will release trapped air to atmosphere. Manual release is also available with this model.







DIMS. APPLY TO BOTH 3/8 & 1/2 NPTF MODELS



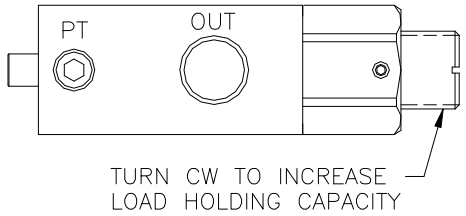
Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (see table '-K18')
Adv & Retract Ratio:	The pressure ratio of advance/retract or retract/advance should not be greater than 2.
Temp. Range:	-30 -150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	3.9
Cracking Pressure:	1-2 psi
Auto Exhaust:	At 80 psi trapped air, the pilot port 'PT' must drop to 30 psi to exhaust.
Service:	Properly filtered dry air or lubricated air.

No. of Turns	Equivalent Diameter (in.)	No. of Turns	Equivalent Diameter (in.)
.25	.15	1.75	.40
.50	.21	2.00	.43
.75	.26	2.25	.45
1.0	.30	2.50	.48
1.25	.34	2.75	.50
1.50	.37		

Model No.	3/8 NPTF	1/2 NPTF
No Manual Release	**D6C00EAFL**	**D8C00EAFL**
Manual Release	**D6C0MEAFL**	**D8C0MEAFL**
Flush Manual Release	**D6CFMEAFL**	**D8CFMEAFL**
For a lower pilot pressure add (-K18) to the model # (ex. D6C0MEAFL-K18).		

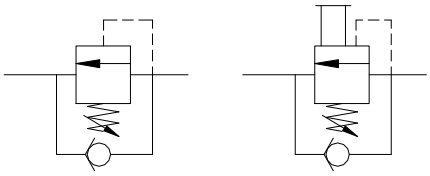
- Optional Manual Release
- .0000522 cc/min Leak Rate
- Adjustable Load Setting

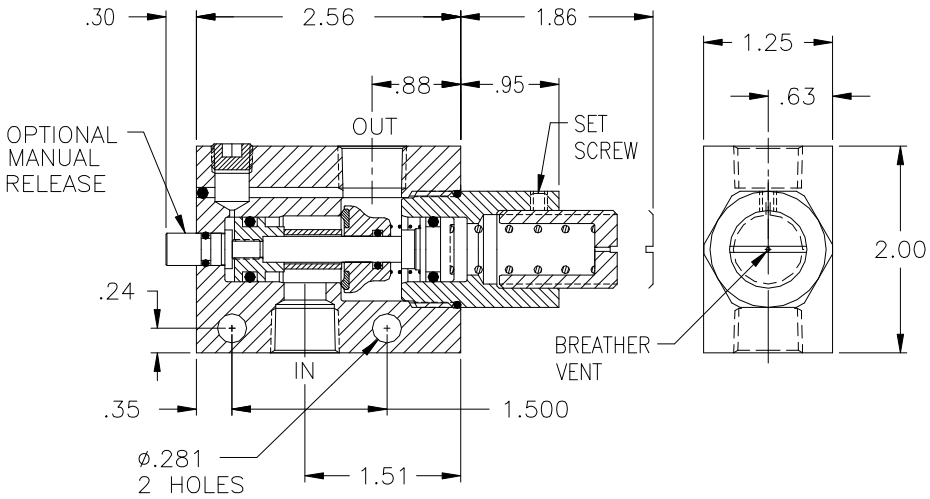


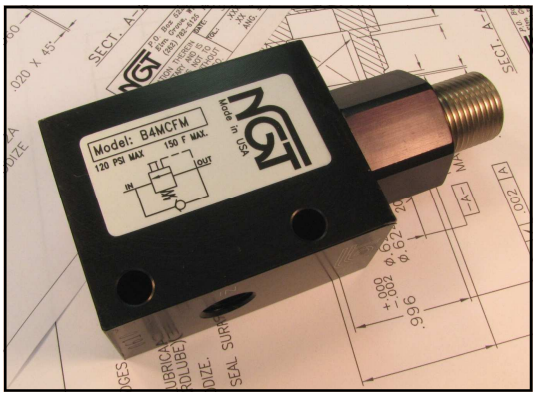
PORT SIZES	
INPUT	OUTPUT
1/4 NPTF	1/4 NPTF
3/8 NPTF	3/8 NPTF
G1/4 BSPP	G1/4 BSPP
G3/8 BSPP	G3/8 BSPP

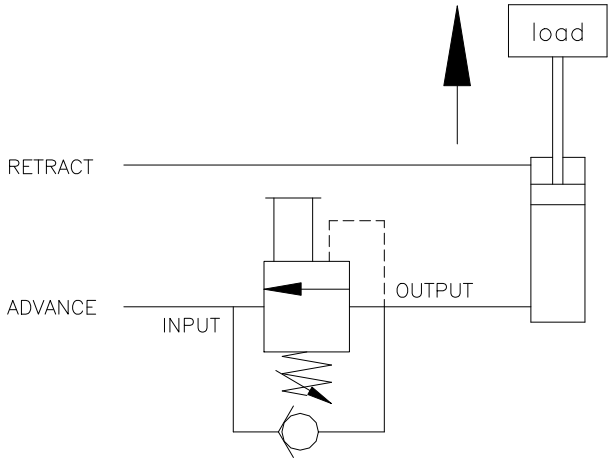
Basic Operation:

The counterbalance valve will hold a load in position until pressure or an external force is applied to move the load. Turning the adjusting screw clockwise will increase the load carrying capacity of the valve. Optional manual and flush manual release.









Operating Data:

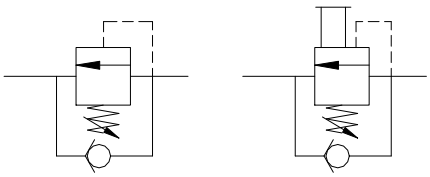
Max. Pressure: 120 psi
Leak Rate: .0000522 cc/min.
Temp. Range: 30-150 F
Cycle Rate: 1 cyc./sec.
Flow Capacity (Cv): 2.6
Cracking Pressure: 1-2 psi
Service: Properly filtered dry or lubricated air.

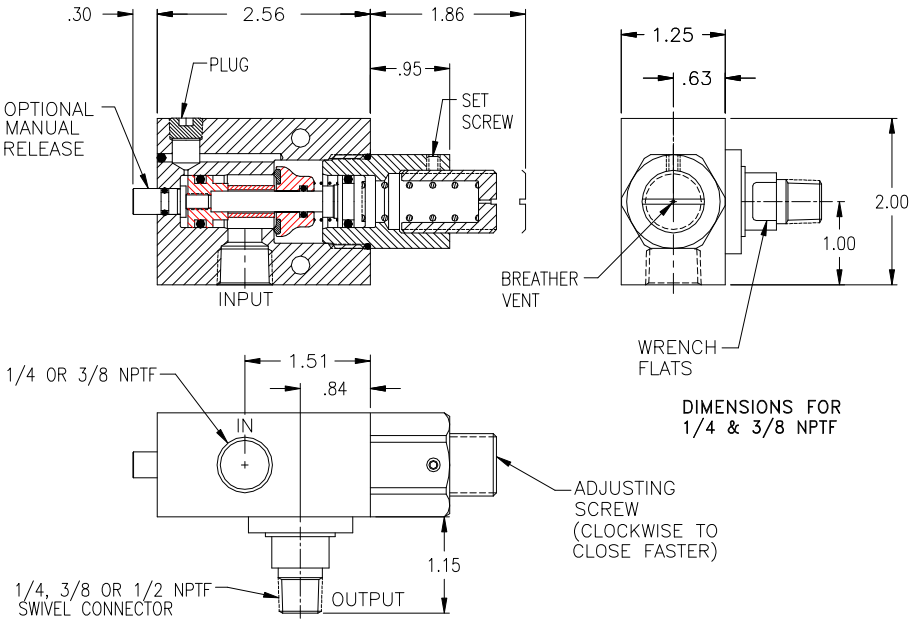
MODELS:	1/4 NPTF	3/8 NPTF	1/4 BSPP	3/8 BSPP
No Manual Release	**B4MC00**	**B6MC00**	**BG4MC00**	**BG6MC00**
Manual Release	**B4MC0M**	**B6MC0M**	**BG4MC0M**	**BG6MC0M**
Flush Release	**B4MCFM**	**B6MCFM**	**BG4MCFM**	**BG6MCFM**

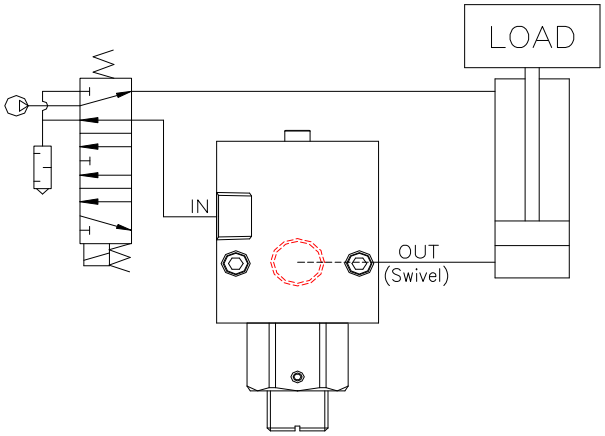
- **Optional Manual Release**
- **.0000522 cc/min Leak Rate**
- **Adjustable Load Setting**
- **Direct Mounting Swivel**

Basic Operation:

The counterbalance valve will hold a load in position until pressure or an external force is applied to move the load. Turning the adjusting screw clockwise will increase the load carrying capacity of the valve. Optional manual and flush manual release.







Operating Data:

Max. Pressure:	120 psi
Leak Rate:	.0000522 cc/min.
Temp. Range:	30-150 F
Cycle Rate:	1 cyc./sec.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry or lubricated air.

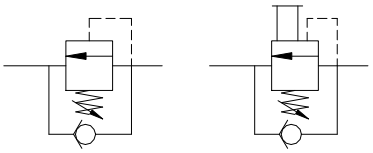
MODELS			
1/4 NPTF Input Port			
	1/4 Swivel	3/8 Swivel	1/2 Swivel
No Manual Release	**B4SC00-25**	**B4SC00-38**	**B4SC00-50**
Manual Release	**B4SC0M-25**	**B4SC0M-38**	**B4SC0M-50**
Flush Release	**B4SCFM-25**	**B4SCFM-38**	**B4SCFM-50**

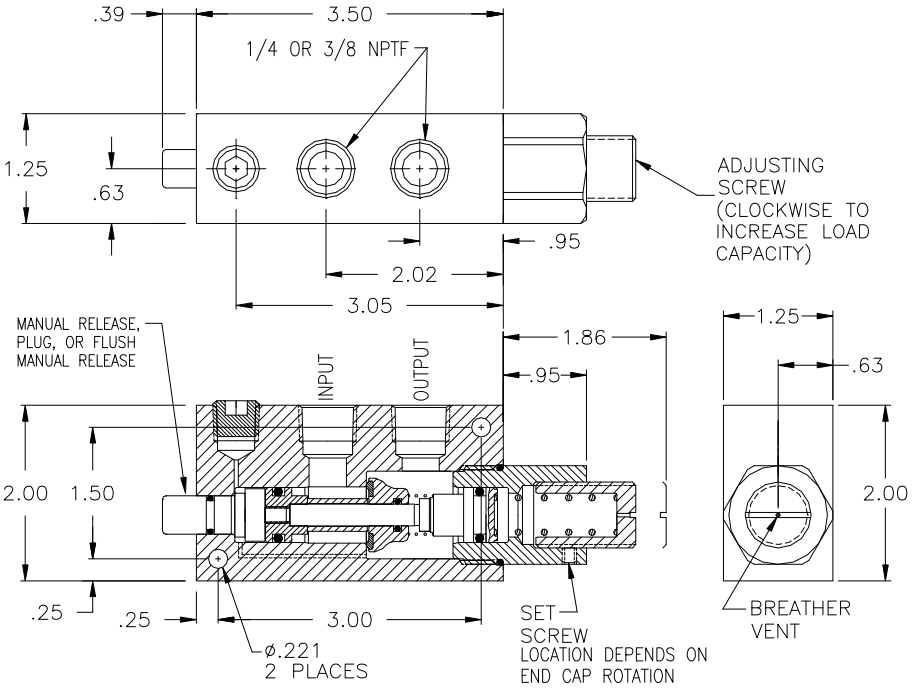
3/8 NPTF Input Port			
	1/4 Swivel	3/8 Swivel	1/2 Swivel
No Manual Release	**B6SC00-25**	**B6SC00-38**	**B6SC00-50**
Manual Release	**B6SC0M-25**	**B6SC0M-38**	**B6SC0M-50**
Flush Release	**B6SCFM-25**	**B6SCFM-38**	**B6SCFM-50**

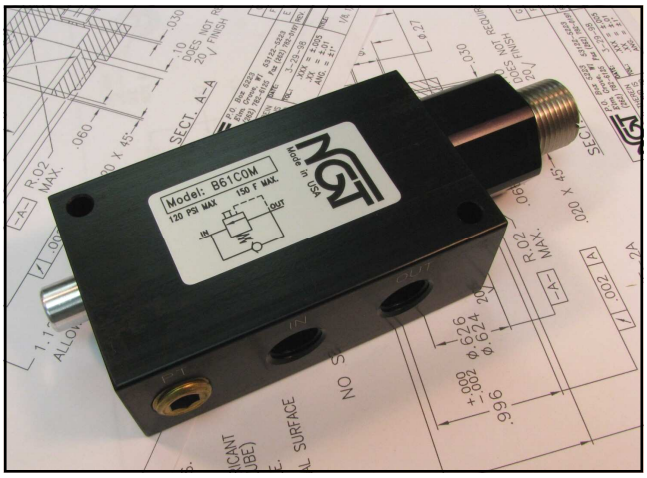
- Optional Manual Release
- .0000522 cc/min Leak Rate
- Adjustable Load Setting

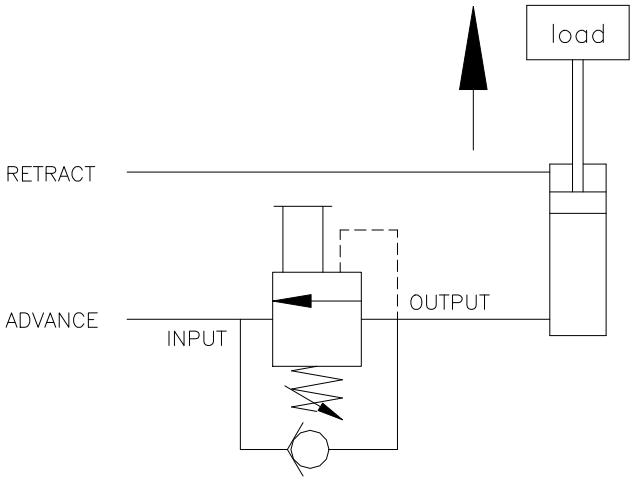
Basic Operation:

The counterbalance valve will hold a load in position until pressure or an external force is applied to move the load. Turning the adjusting screw clockwise will increase the load carrying capacity of the valve. Optional manual and flush manual release.









Operating Data:

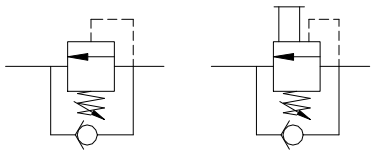
Max. Pressure:	120 psi
Leak Rate:	.0000522 cc/min.
Temp. Range:	30-150 F
Cycle Rate:	1 cyc./sec.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry or lubricated air.

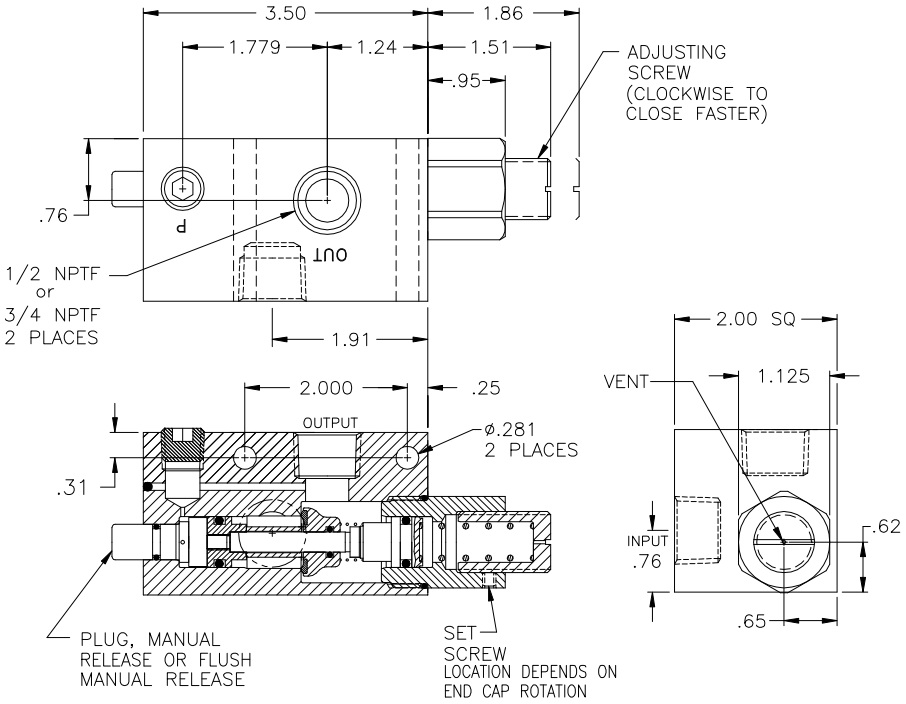
MODELS:	1/4 NPTF	3/8 NPTF
No Manual Release	**B41C00**	**B61C00**
Manual Release	**B41C0M**	**B61C0M**
Flush Release	**B41CFM**	**B61CFM**

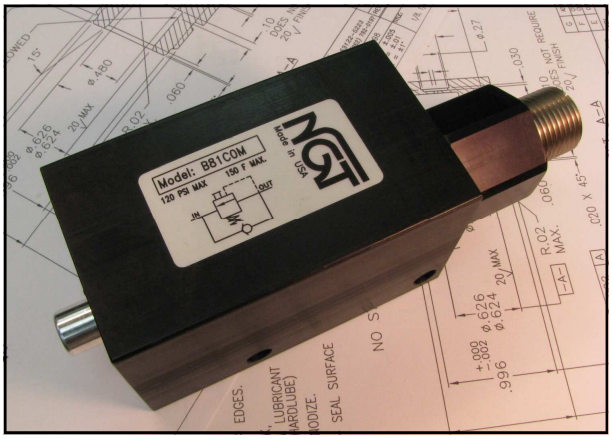
- Optional Manual Release
- .0000522 cc/min Leak Rate
- Adjustable Load Setting

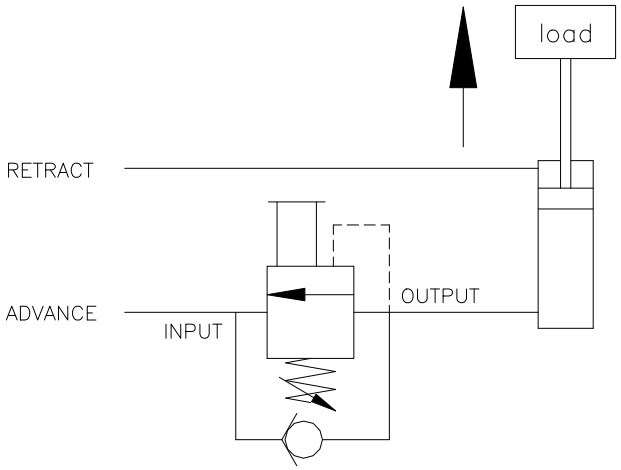
Basic Operation:

The counterbalance valve will hold a load in position until pressure or an external force is applied to move the load. Turning the adjusting screw clockwise will increase the load carrying capacity of the valve. Optional manual and flush manual release.









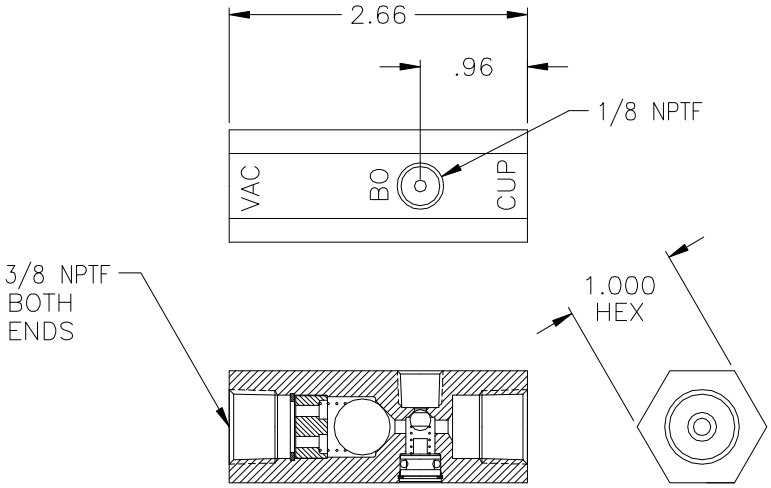
Operating Data:

Max. Pressure: 120 psi
Leak Rate: .0000522 cc/min.
Temp. Range: 30-150 F
Cycle Rate: 1 cyc./sec.
Flow Capacity (Cv): 3.8
Cracking Pressure: 1-2 psi
Service: Properly filtered dry or lubricated air.

MODELS:	1/2 NPTF	3/4 NPTF
No Manual Release	**B81C00**	**B121C00**
Manual Release	**B81C0M**	**B121C0M**
Flush Release	**B81CFM**	**B121CFM**

3/8 NPTF Vacuum-Loc Valve

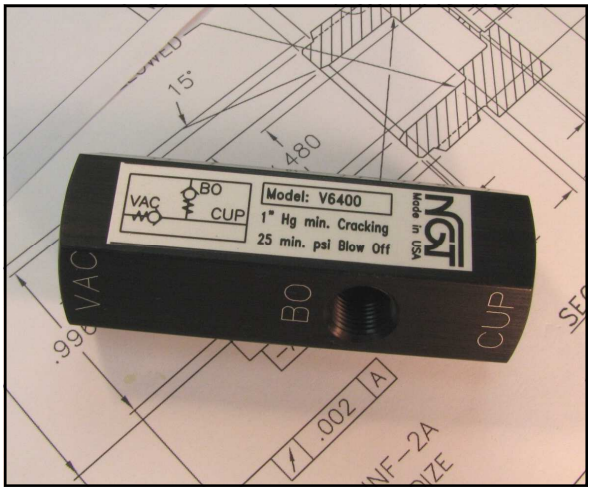
- Air-Tight
- Small Package

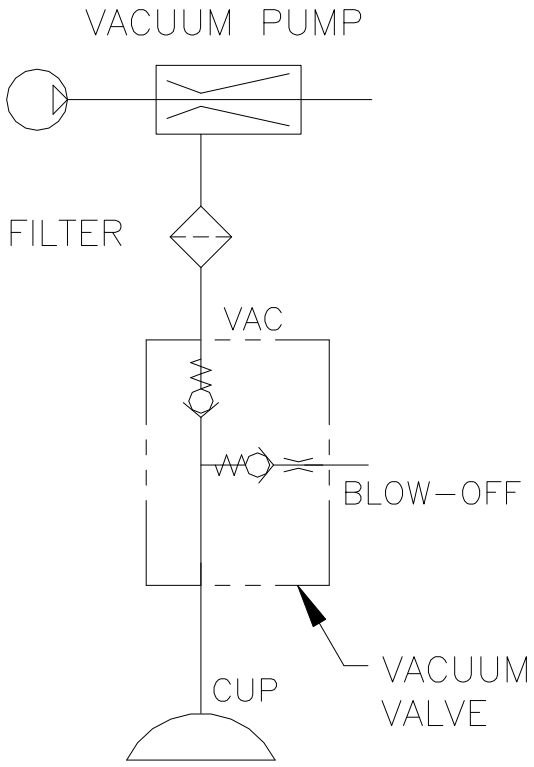


Basic Operation:

Vacuum is applied to the vacuum port in order to pick up a part. Pressure is applied to eject the part from the vacuum cup. The internal check maintains vacuum when the supply is removed.

THIS MODEL REPLACES THE V6000





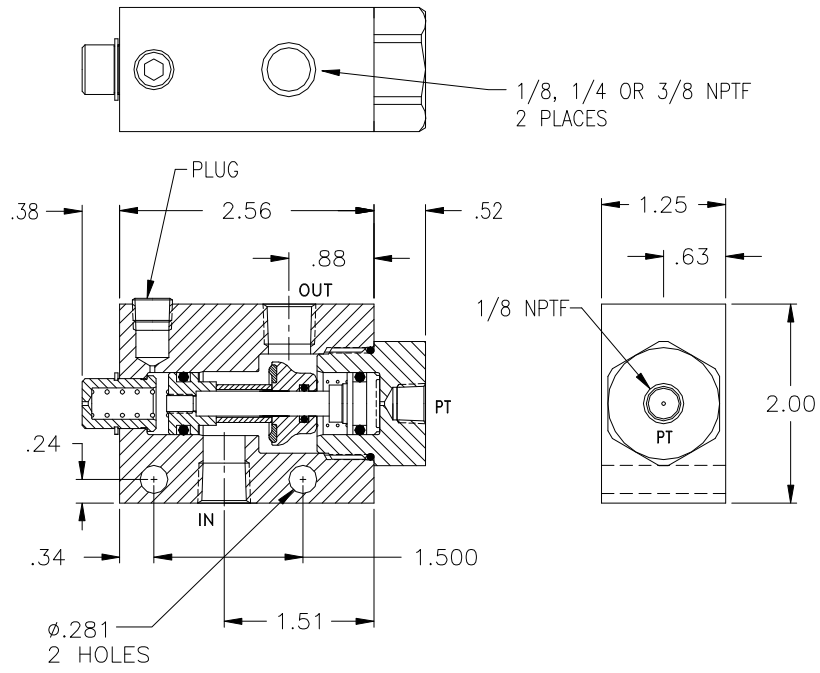
Operating Data:

Min Blow Off:	25 psi
Temp. Range:	30-150 F
Vacuum Cracking:	1 in Hg.
Flow Capacity (Cv):	.6
Service:	Properly filtered dry air or lubricated air.

Model No.
V6400

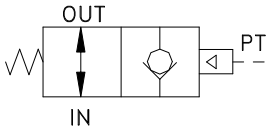
1/8, 1/4 & 3/8 NPTF 2-Way Normally Open, Pilot to Close with Floating Check

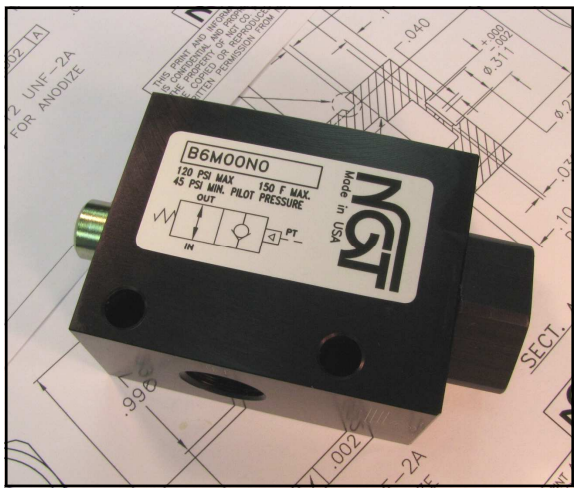
- **.0000522 cc/min Leak Rate**
- **Pilot to Close**
- **Checks in One Direction**

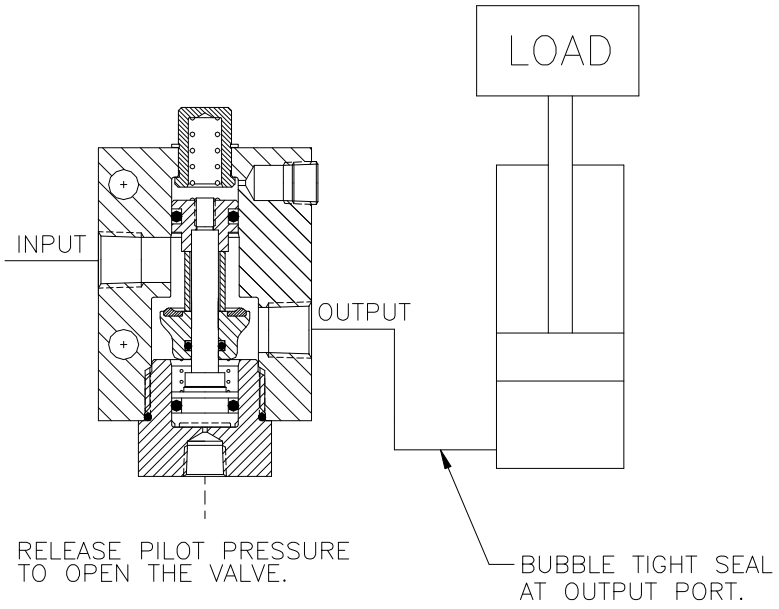


Basic Operation:

Normally open valve that closes when pressure is applied to the pilot port. To open the valve, release the pilot pressure. Internal check allows free flow from input to output.







Operating Data:

Max. Pressure:	120 psi
Pilot to Close:	45 psi min.
Leak Rate:	.0000522 cubic cm/min
Temp. Range:	-20 F to 150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	1.7 (1/8 model) 2.6 (1/4 and 3/8 models)
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

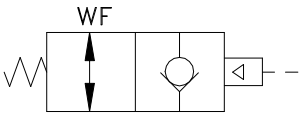
Model No.		
1/8 NPTF	1/4 NPTF	3/8 NPTF
B2M00N0	**B4M00N0**	**B6M00N0**

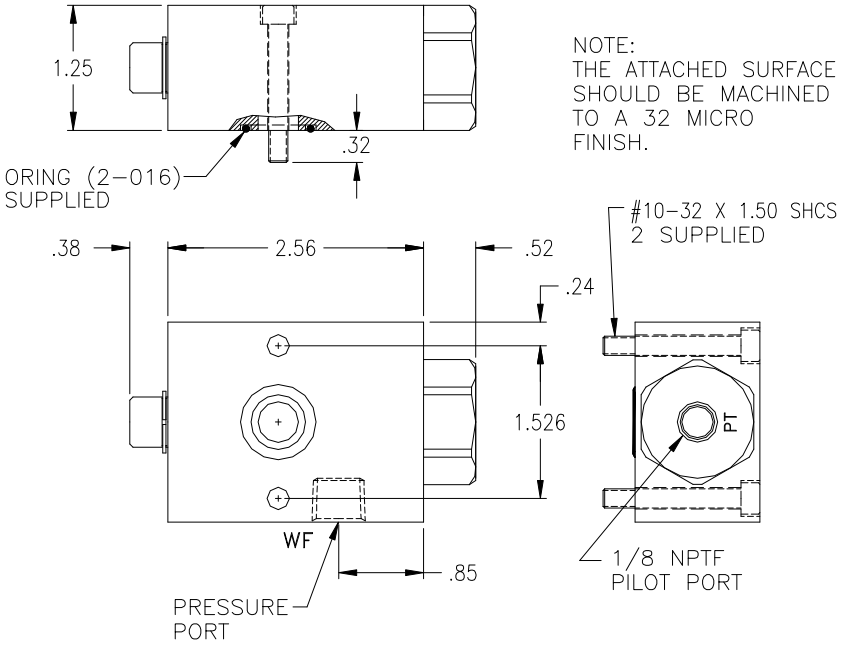
1/4 NPTF Direct Mount Normally Open Valve

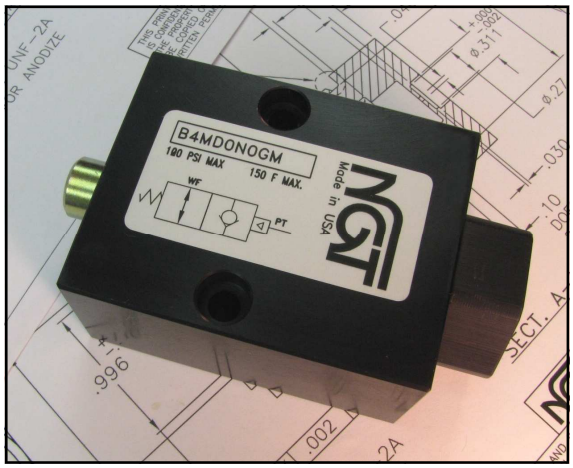
- **Direct Mount**
- **.000522 cc/min Leak Rate**
- **High Flow**
- **Air Pilot to Close**
- **Checks in One Direction**

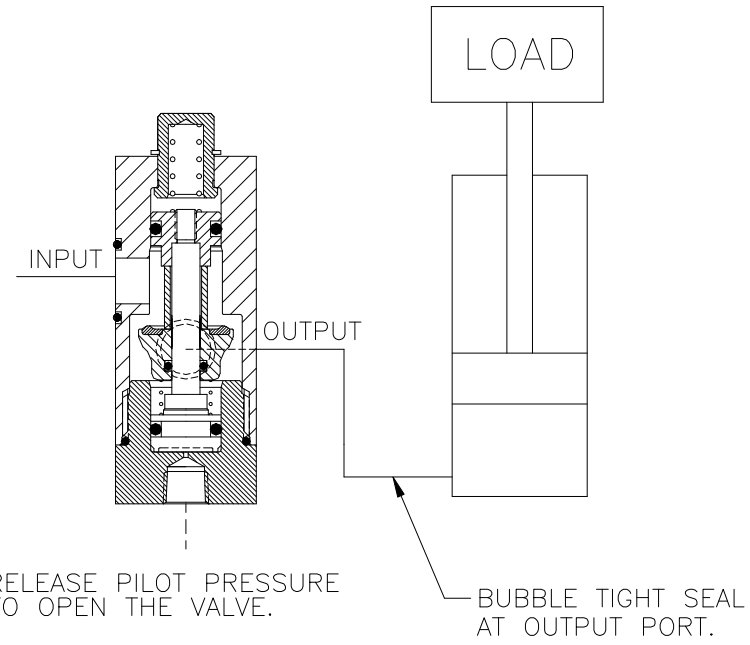
Basic Operation:

Normally open valve can be mounted directly to a manifold, air cylinder or any pneumatic device with a flat surface. Use where air tight operation is required. Pilot to close the valve. Internal check allows free frow in one direction.









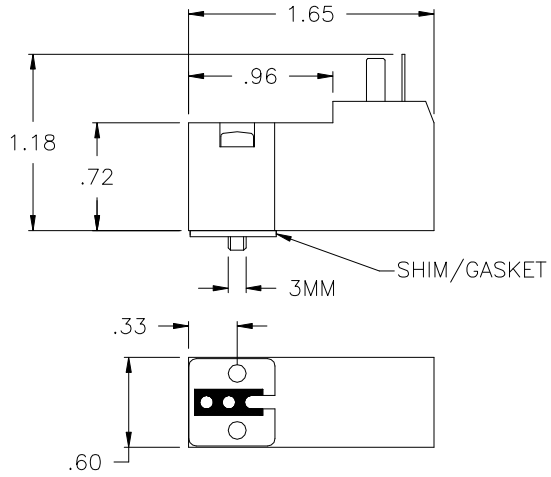
Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	45 psi
Leak Rate:	.0000522 cc/min.
Temp. Range:	30-150 F
Cycle Rate:	1 cyc./sec. max.
Flow Capacity (Cv):	2.6
Cracking Pressure:	1-2 psi
Service:	Properly filtered dry air or lubricated air.

Model No.
B4MDONOGM

Coils, Connectors & Replacement Cartridges for Valves

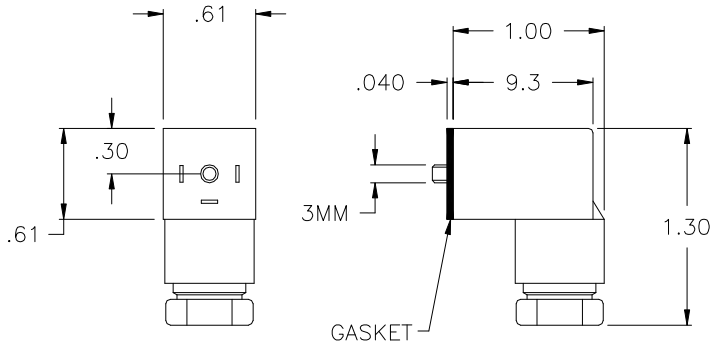
Coil for 1/8, 1/4, 3/8 and 1/4 Tube Model Valves



Description:
Temp range: 14-122 F
NEMA 4 / IP 65 (EN 60529)
Continuous Duty
Normally Closed
Filtered lubricated or dry air operation
9.4 mm Pin Spacing

Model No.	Watt	Max Pressure	Voltage
A4M13	2.5	145 psi	24 VDC

Connector for 9.4 mm Pin Spacing



Description:
9.4 mm pin spacing
Will accept .16 to .26 diameter cable

Model No.	Description
A4M16	Standard black
A4M17	24 vdc, transparent with LED

Replacement Cartridges for A, B & D Series Valves

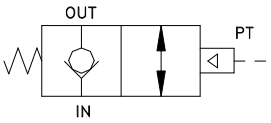
Model No.			
First 3 Characters of Model Number	Standard	High Temp	Low Temp
A2M, A4M, A6M, A4TM	BC100	-	-
B2M, B4M, B6M, BG6	BC400	BC400V	BC400T40
B41, B61, B81, B12	BC510	BC510V	
D6C, D8C - (2 Required)	BC400	BC400V	BC400T40

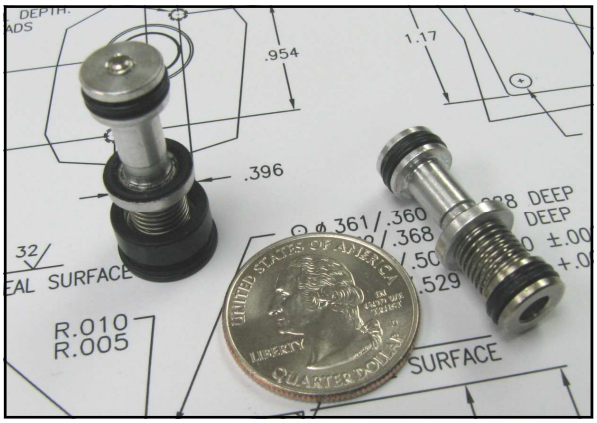
Pneumatic Cartridge Valve for a Manifold, Cv=1.2

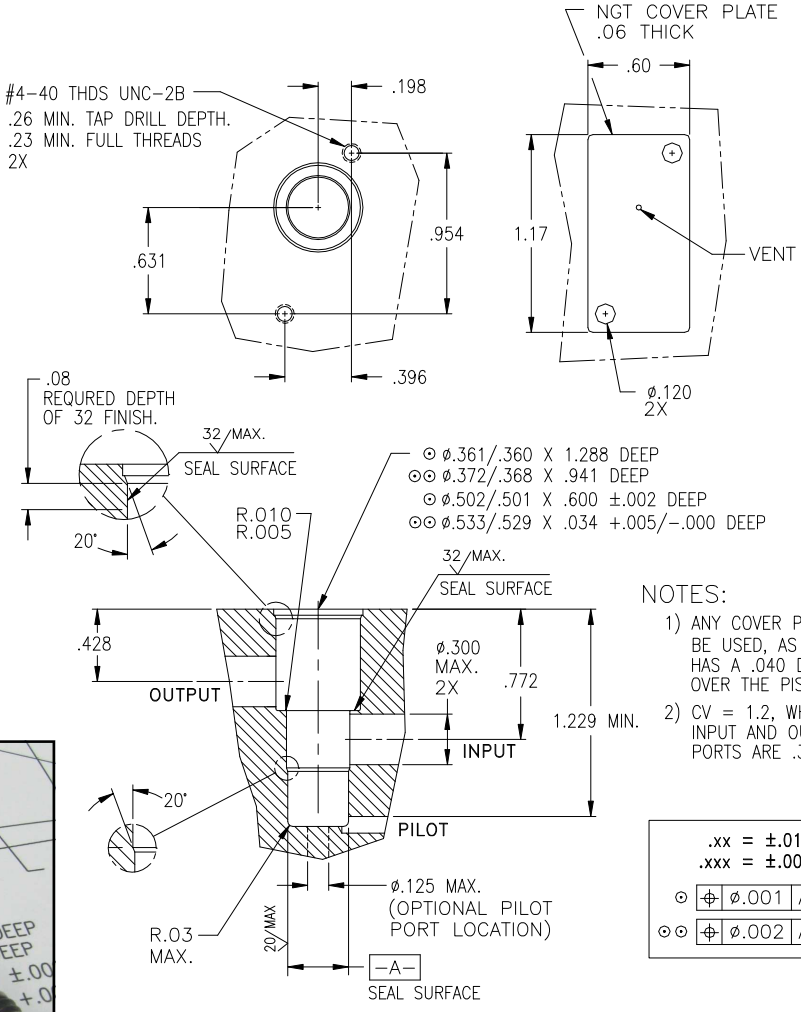
- **.000113 cc/min Leak Rate**
- **Inserts From One Side**
- **Easy Repair**
- **Small Size**
- **100% Tested**

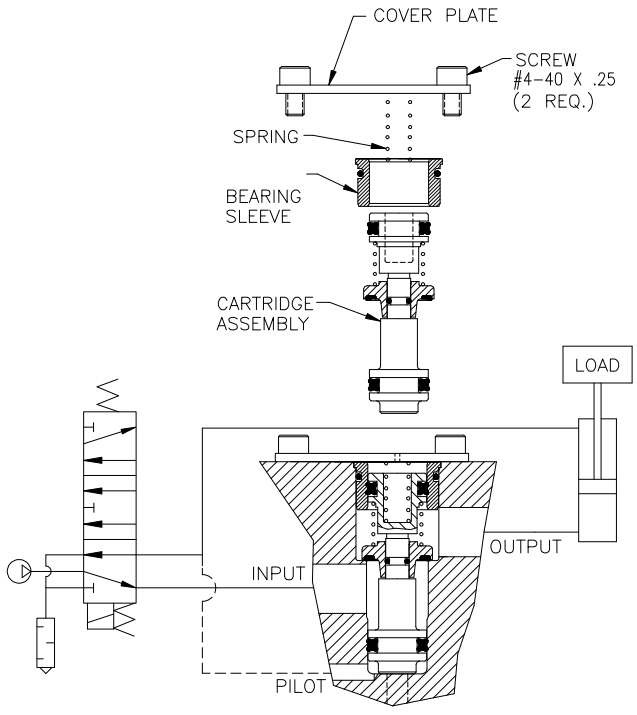
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Good for leak testing. Insert a cartridge assembly into a machined cavity and attach a cover for easy assembly.









Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.

Description	Standard
Cartridge, Bearing, Cover, Spring & Screws	**BC1MNAS**
Cartridge, Bearing & Spring	**BC1MNB**
Cartridge & Spring	**BC1MN**

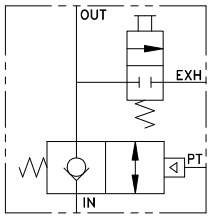
NGT LLC P.O Box 5223, Elm Grove, WI 53122-5223 (Tel) 262-782-6125 (Fax) 262-782-0197 www.ngtvalves.com

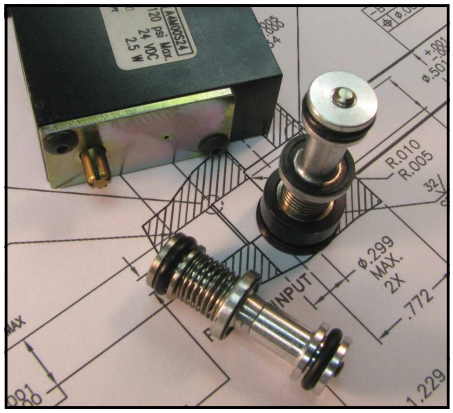
Pneumatic Cartridge Valve for a Manifold, Cv=1.2, with Manual Release

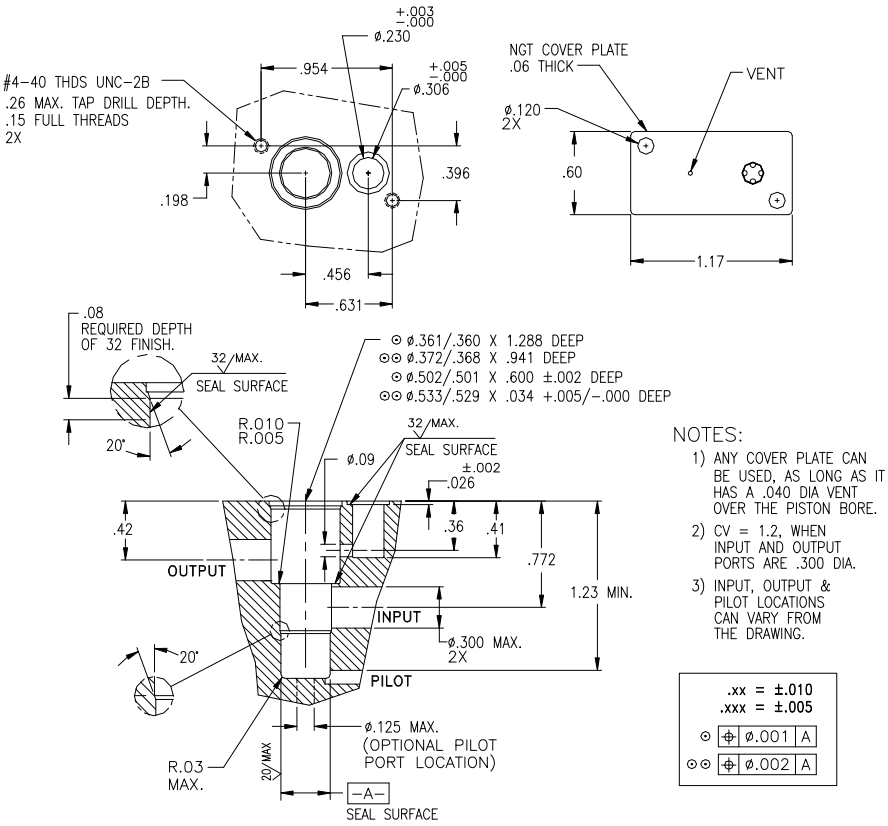
- **Leak Rate .000113 cc/min**
- **Inserts From One Side**
- **Easy Repair**
- **Small Size**
- **Manual Release to Atm.**

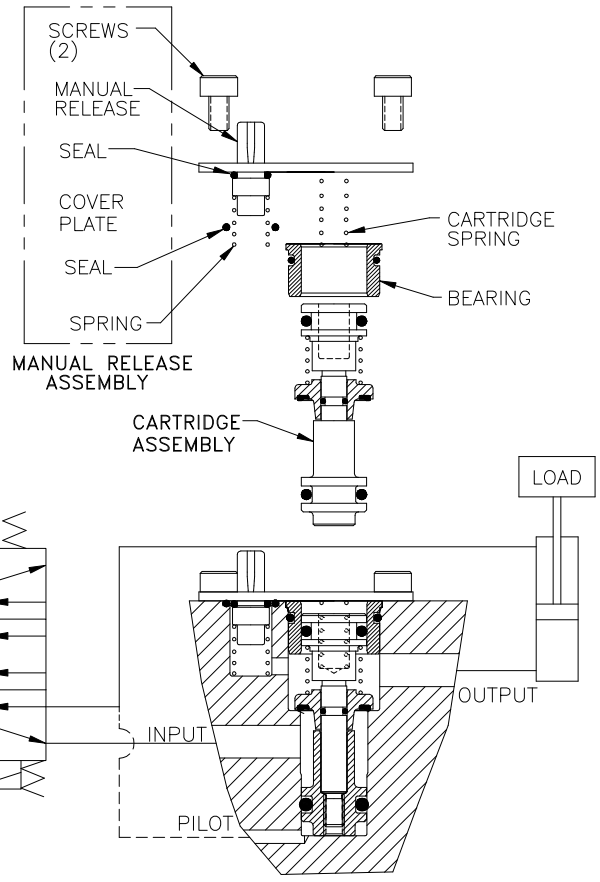
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Insert a cartridge assembly into a machined cavity and attach a cover for easy assembly. The manual release exhausts trapped air to atmosphere.









Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.

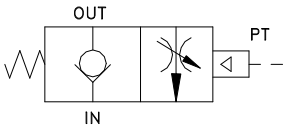
Description	Model
Cartridge Asm., Bearing, Cartridge Spring & Manual Release Asm.	**BC1MNAS-1**
Cartridge Asm., Bearing & Cartridge Spring	**BC1MNB**
Cartridge Asm. & Cartridge Spring	**BC1MN**

Pneumatic Cartridge Valve for a Manifold, Cv=1.2, with Flow Control

- **Leak Rate .000113 cc/min**
- **Inserts From One Side**
- **Easy Repair**
- **Compact Size**
- **Metered Output to Input**

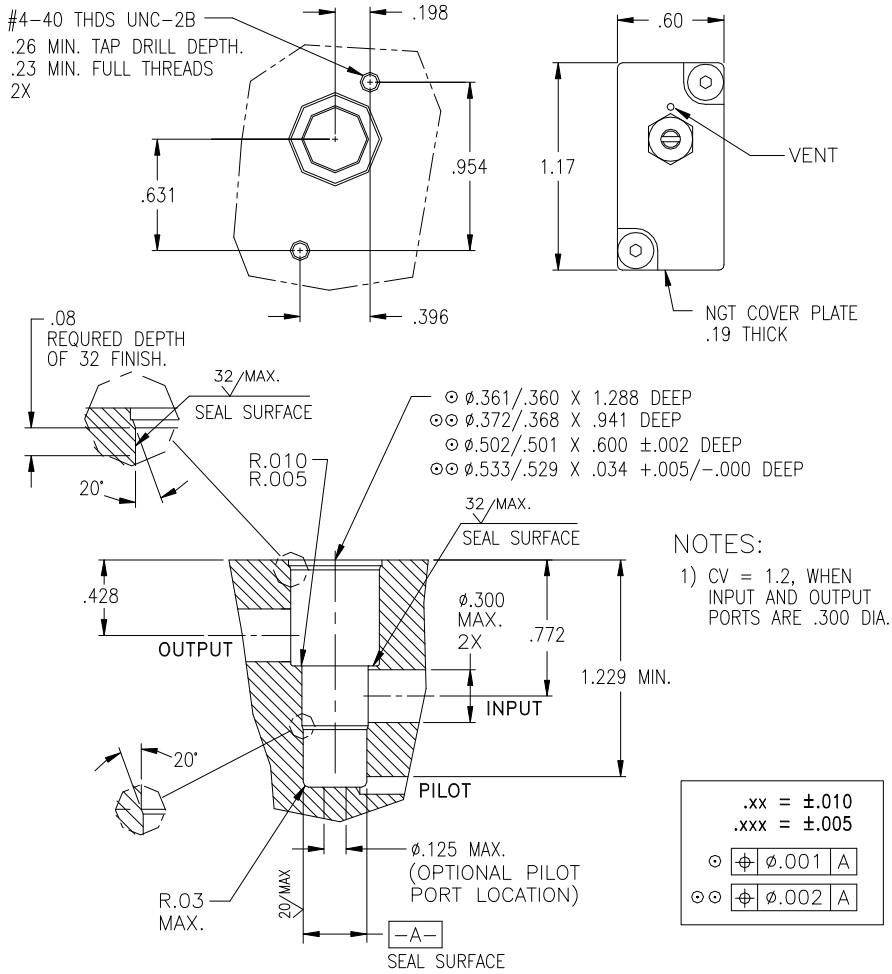
Basic Operation:

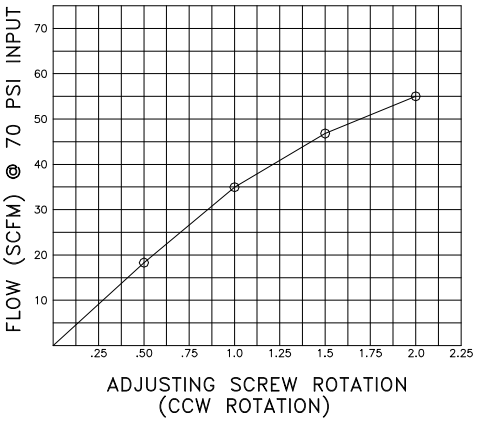
Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Control the speed of the air device with the flow control.



Operating Data:

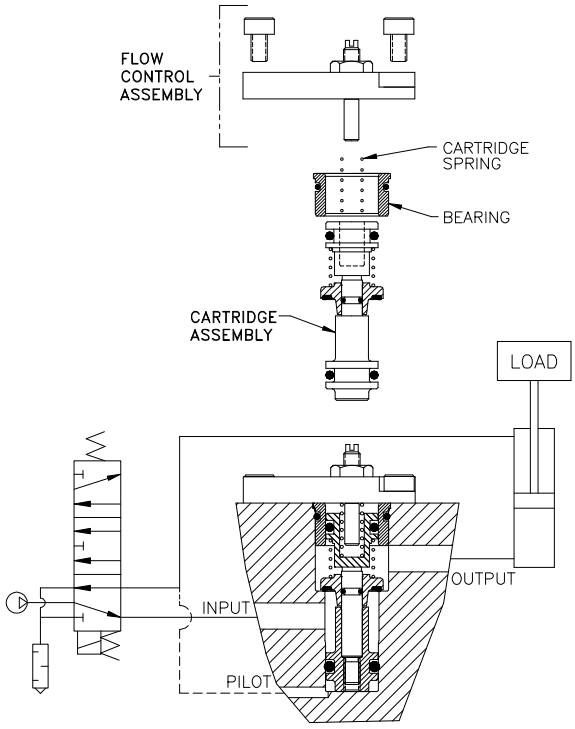
Max. Pressure:	120 psi
Min. Pilot Pressure:	30 psi @ 80 psi
Leak Rate:	.000113 cc/min
Temp. Range:	30 - 150 F
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	1.2
Cracking Pressure:	2-3 psi
Service:	Properly filtered dry air or lubricated air.





70 PSI INLET AT FULL PRESSURE DROP

No. of Turns	Equivalent Diameter (in.)
.5	.12
1.0	.17
1.5	.21
2.0	.24
2.5	.27
3.0	.30



Description	Model
Cartridge Asm., Bearing, Cartridge Spring & Flow Control Asm.	**BC1MNAS-2**
Cartridge Asm., Bearing & Cartridge Spring	**BC1MNB**
Cartridge Asm. & Cartridge Spring	**BC1MN**

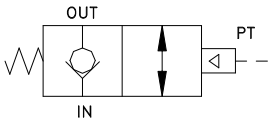
NGT LLC P.O Box 5223, Elm Grove, WI 53122-5223 (Tel) 262-782-6125 (Fax) 262-782-0197 www.ngtvalves.com

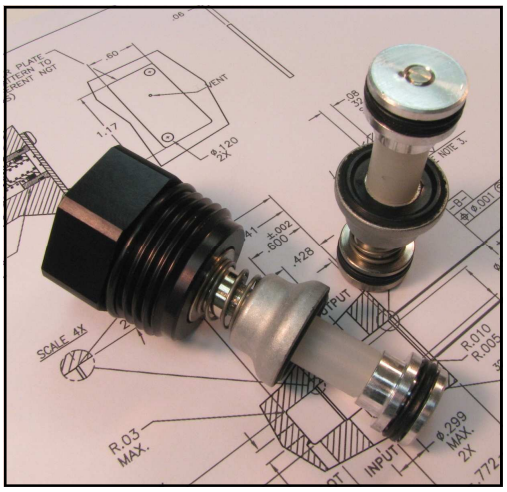
Pneumatic Cartridge Valve for a Manifold, Cv=2.6

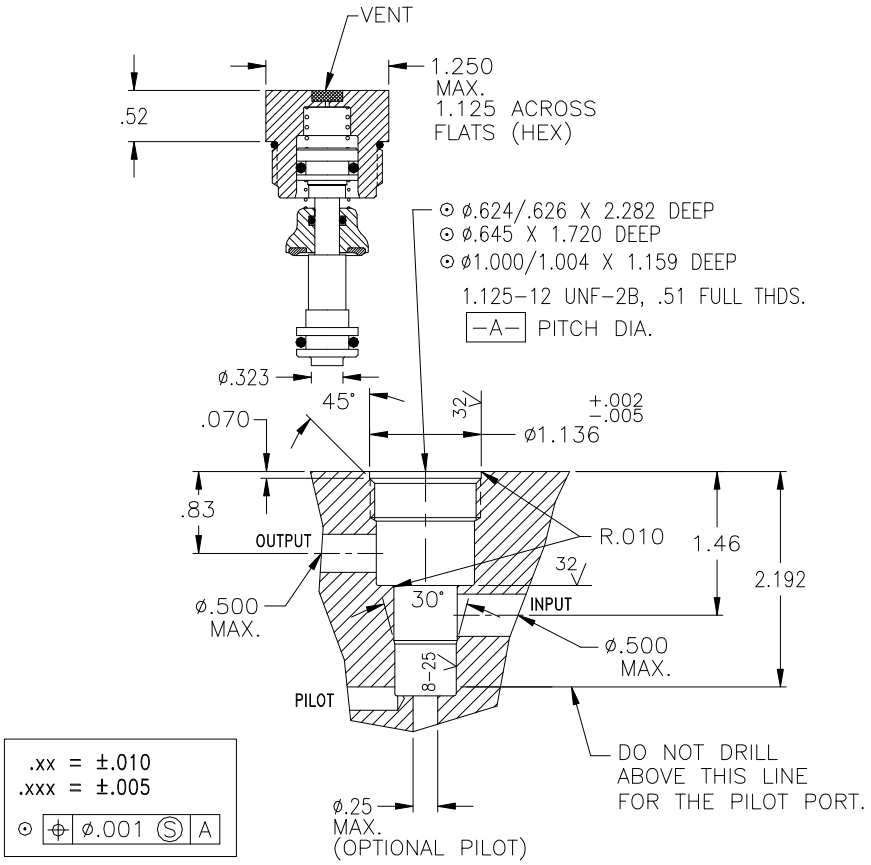
- **High Flow**
- **High & Low Temp**
- **.000113 cc/min Leak Rate**
- **Insert From One Side**
- **Easy Repair**

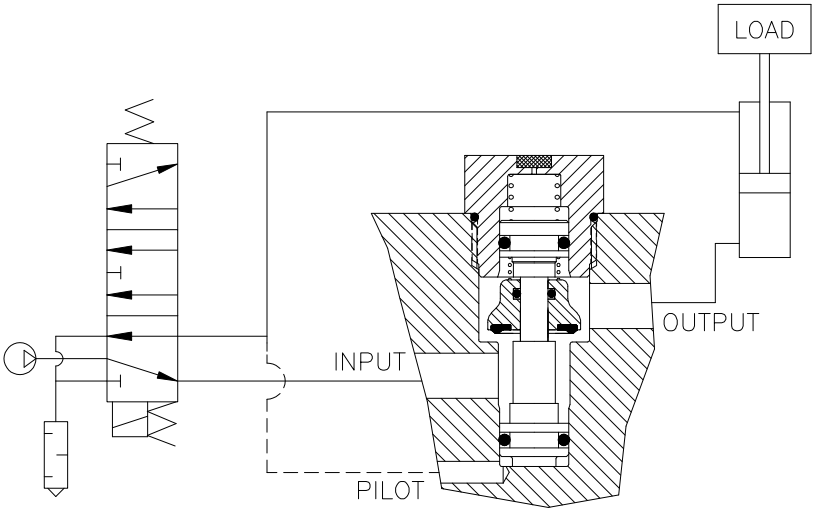
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs.









Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (see table)
Leak Rate:	.000113 cc/min
Temp. Range:	-20 to 150 F (Nitrile) 30 to 350 F (FKM) -40 to 150 F (EPDM)
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	2.6
Cracking Pressure:	1-3 psi
Service:	Properly filtered dry air or lubricated air.

Description	Standard	Low Temp*	High Temp
Cartridge, End Cap & Spring	**BC4MNAS**	**BC4MNAST40**	**BC4MNASV**
Cartridge & Spring	**BC4MN**	**BC4MNT40**	**BC4MNV**

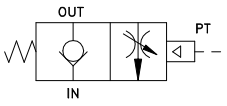
** No petroleum based lubricants. Comes lubricated with a silicone based lubricant. Add (-K18) to the model number for a lower pilot pressure (Ex: BC4MNAS-K18).*

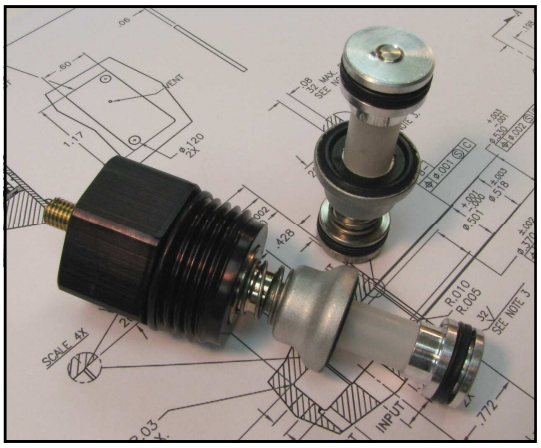
Pneumatic Cartridge Valve with Flow Control for a Manifold, Cv=2.6

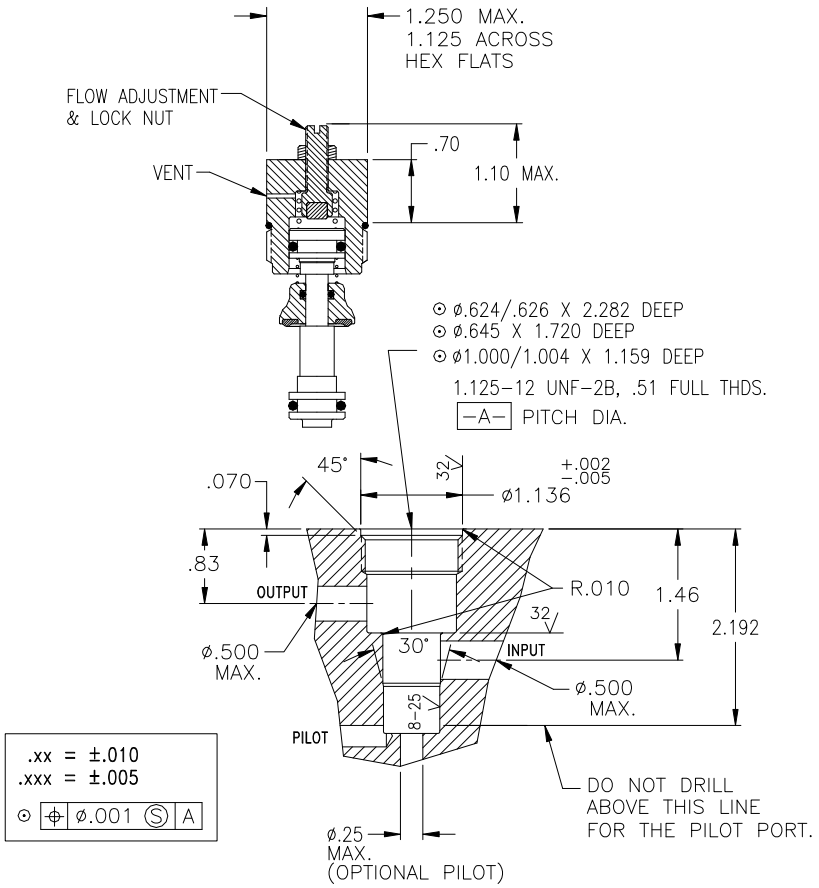
- **High Flow**
- **Flow Control**
- **.000113 cc/min Leak Rate**
- **Insert From One Side**
- **Easy Repair**

Basic Operation:

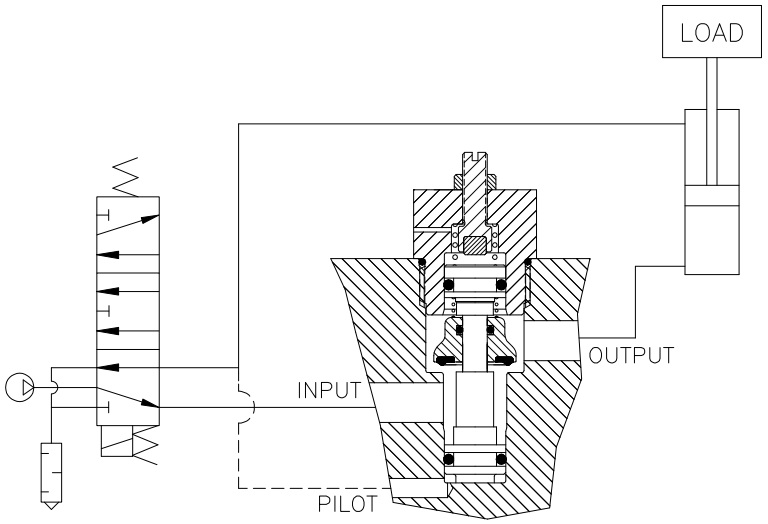
Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Air flow is metered from the Output to the Input port.







No. of Turns	Equivalent Diameter (in.)	No. of Turns	Equivalent Diameter (in.)
.25	.15	1.25	.34
.50	.21	1.50	.37
.75	.26	1.75	.40
1.0	.30		



Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (K18 suffix)
Leak Rate:	.000113 cc/min
Temp. Range:	-20 to 150 F (Nitrile)
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	2.6
Cracking Pressure:	1-3 psi
Service:	Properly filtered dry air or lubricated air.

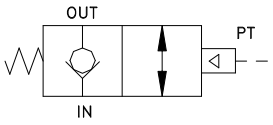
Description	Model
Cartridge, Adjustable Cap, & Spring	**BC4MNFL**
Cartridge, Adjustable Cap, & Low Pressure Spring	**BC4MNFLK18**

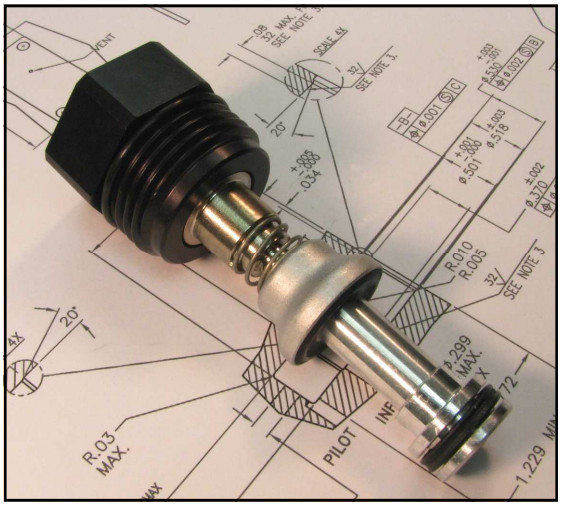
Pneumatic Cartridge Valve for a Manifold, Cv=4

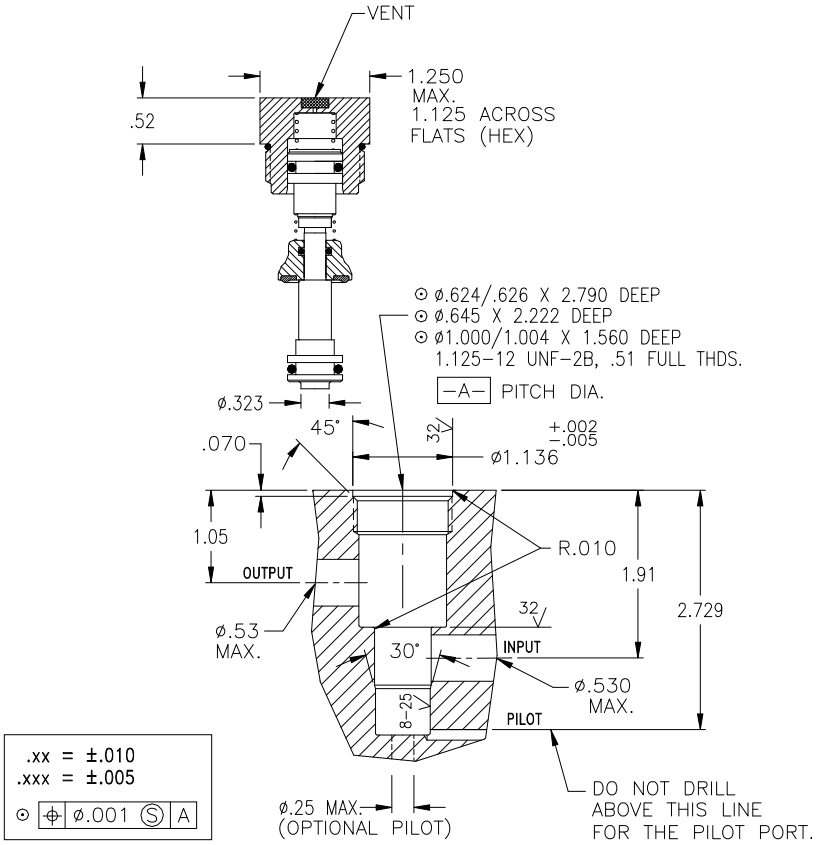
- **High Flow**
- **High & Low Temp**
- **.000113 cc/min Leak Rate**
- **Insert From One Side**
- **Easy Repair**

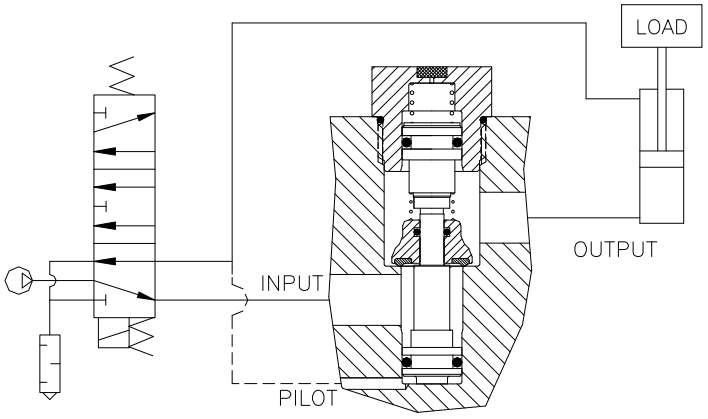
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs.









Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (see table)
Leak Rate:	.000113 cc/min
Temp. Range:	-20 to 150 F (Nitrile) 30 to 350 F (FKM) -40 to 150 F (EPDM)
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	4.0
Cracking Pressure:	1-3 psi
Service:	Properly filtered dry air or lubricated air.

Description	Standard	Low Temp*	High Temp
Cartridge, End Cap & Spring	**BC5MNAS**	**BC5MNAST40**	**BC5MNASV**
Cartridge & Spring	**BC5MN**	**BC5MNT40**	**BC5MNV**

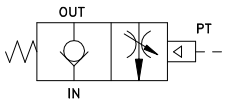
** No petroleum based lubricants. Comes lubricated with a silicone based lubricant. Add (-K18) to the model number for a lower pilot pressure (Ex: BC5MNAS-K18).*

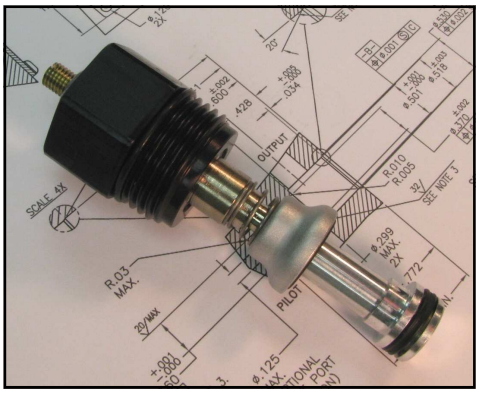
Pneumatic Cartridge Valve with Flow Control for a Manifold, Cv=4

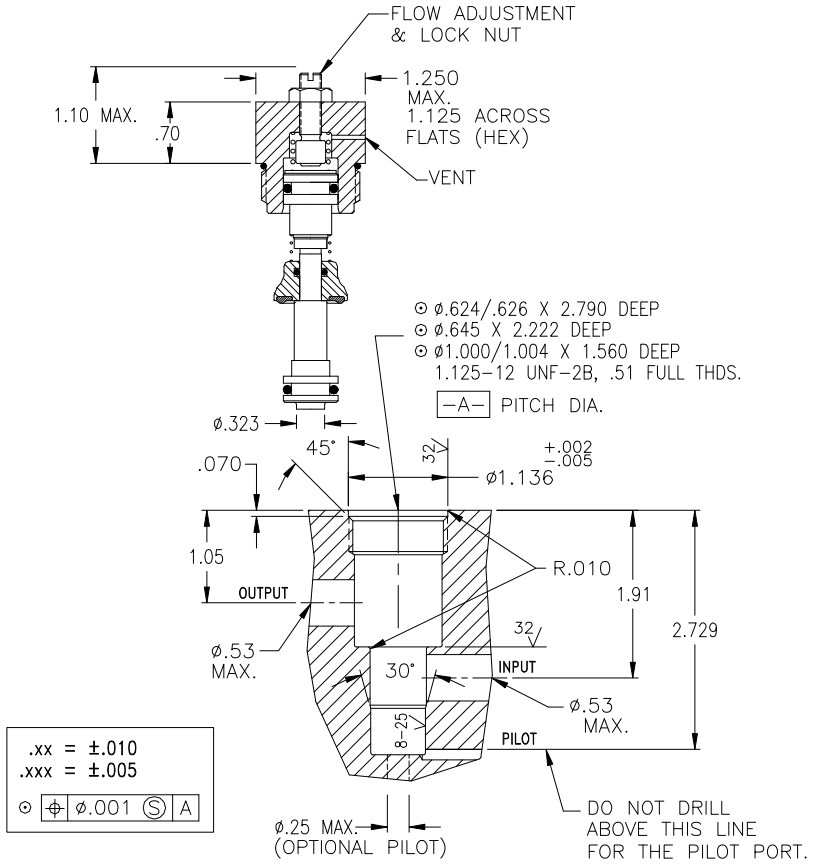
- **High Flow, Cv=4 Max.**
- **Flow Control**
- **.000113 cc/min Leak Rate**
- **Insert From One Side**
- **Easy Repair**

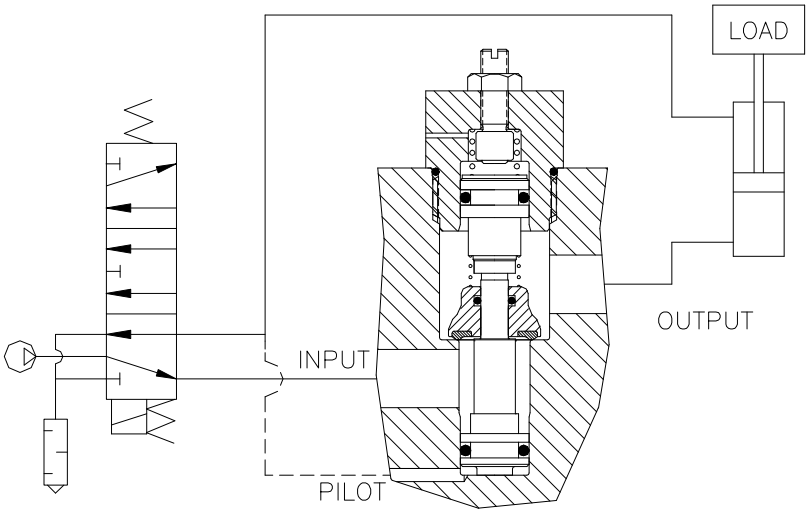
Basic Operation:

Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. Air flow is metered from the Output to the Input port.









No. of Turns	Equivalent Diameter (in.)	No. of Turns	Equivalent Diameter (in.)
.25	.15	1.75	.40
.50	.21	2.00	.43
.75	.26	2.25	.46
1.0	.30	2.50	.48
1.25	.34	2.75	.50
1.50	.37	3.00	.53

Operating Data:

Max. Pressure:	150 psi
Min. Pilot Pressure:	40 psi 25 psi (K18 suffix)
Leak Rate:	.000113 cc/min
Temp. Range:	-20 to 150 F (Nitrile)
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	4.0
Cracking Pressure:	1-3 psi
Service:	Properly filtered dry air or lubricated air.

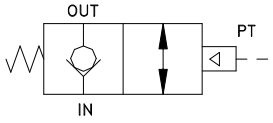
Description	Model
Cartridge, Adjustable Cap, & Spring	**BC5MNFL**
Cartridge, Adjustable Cap, & Low Pressure Spring	**BC5MNFLK18**

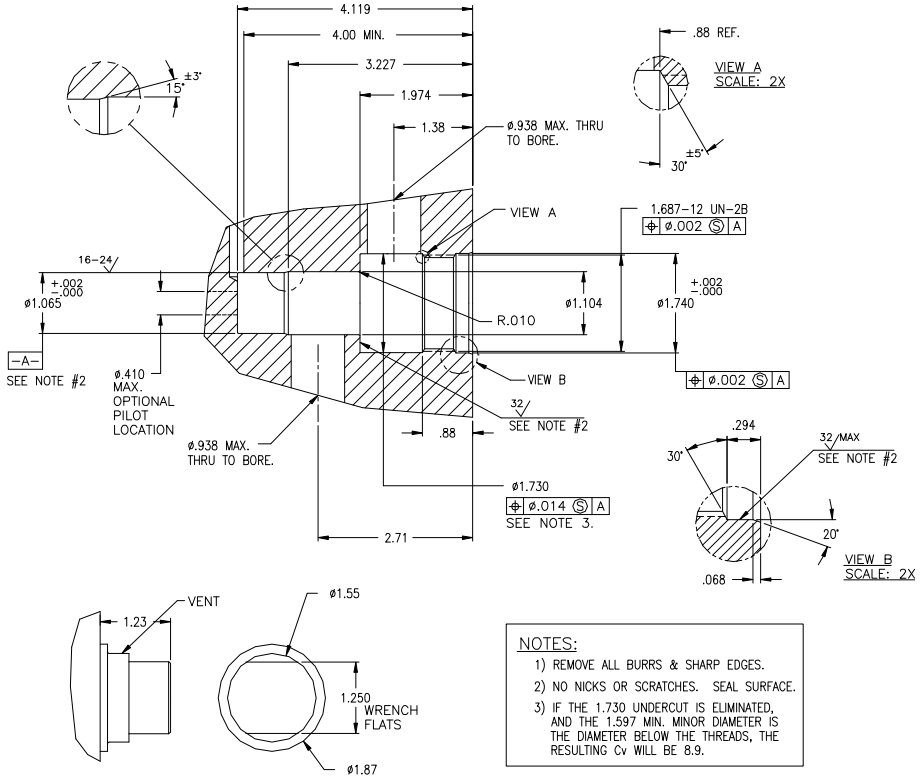
Pneumatic Cartridge Valve for a Manifold, Cv=16

- **High Flow**
- **Low Leak Rate**
- **Insert From One Side**
- **Easy & Quick Repair**

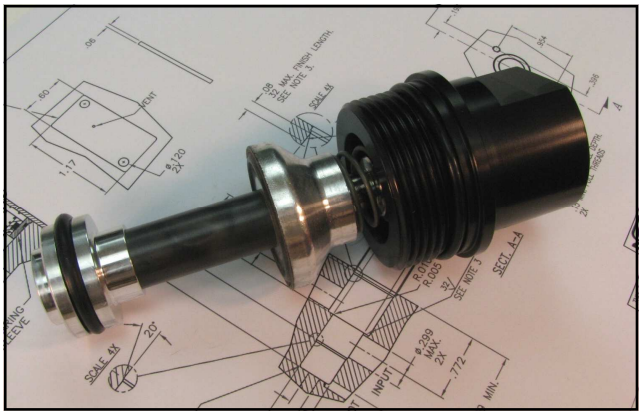
Basic Operation:

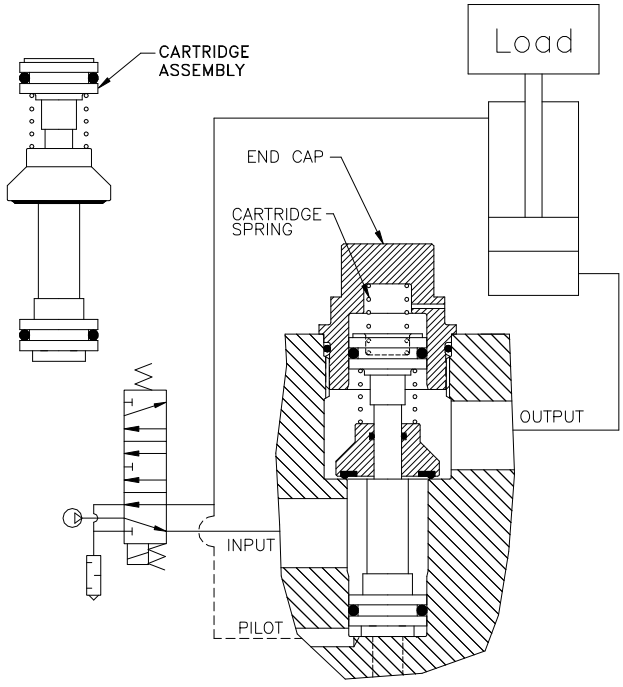
Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. The valve only allows air flow from the input to the output port unless air is supplied to the pilot to open the valve. The pilot line is usually connected to the opposite side of the air cylinder that is locked.





NOTES:
1) REMOVE ALL BURRS & SHARP EDGES.
2) NO NICKS OR SCRATCHES. SEAL SURFACE.
3) IF THE 1.730 UNDERCUT IS ELIMINATED, AND THE 1.597 MIN. MINOR DIAMETER IS THE DIAMETER BELOW THE THREADS, THE RESULTING Cv WILL BE 8.9.





Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	20 psi @ 80 psi
Temp. Range:	0 to 150 F
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	16
Cracking Pressure:	3.5 psi
Service:	Properly filtered dry air or lubricated air.

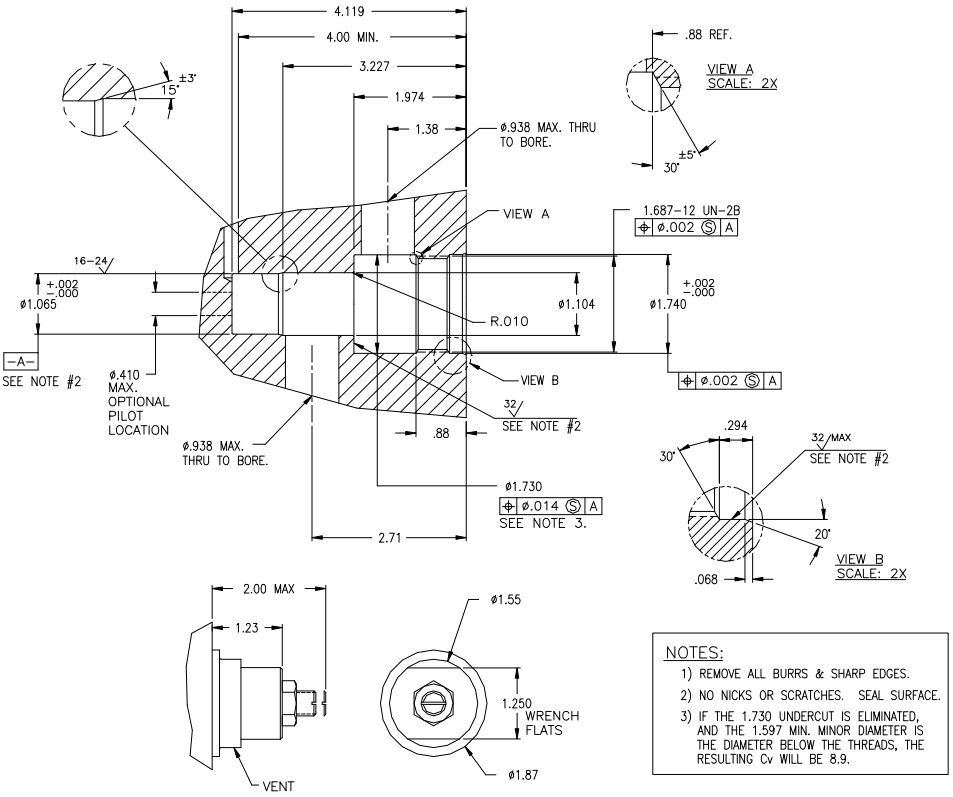
Description	Standard
Cartridge, End Cap & Cartridge Spring	**BC16MNAS**
Cartridge & Cartridge Spring	**BC16MN**

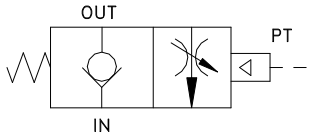
Pneumatic Cartridge Valve for a Manifold, Cv=16, with Flow Control

- **High Flow**
- **Insert From One Side**
- **Easy & Quick Repair**
- **100% Tested**

Basic Operation:

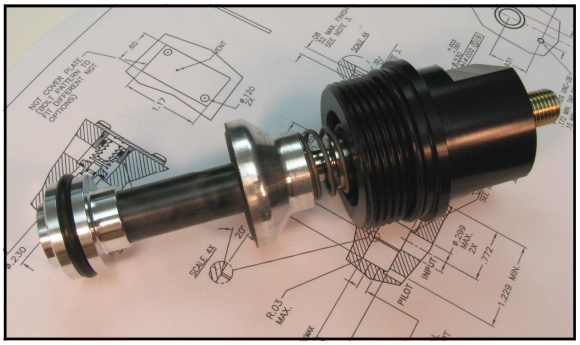
Lock your pneumatic device in position when a pressure drop or total loss of pressure occurs. The valve only allows air flow from the input to the output port unless air is supplied to the pilot to open the valve. The pilot line is usually connected to the opposite side of the air cylinder that is locked.



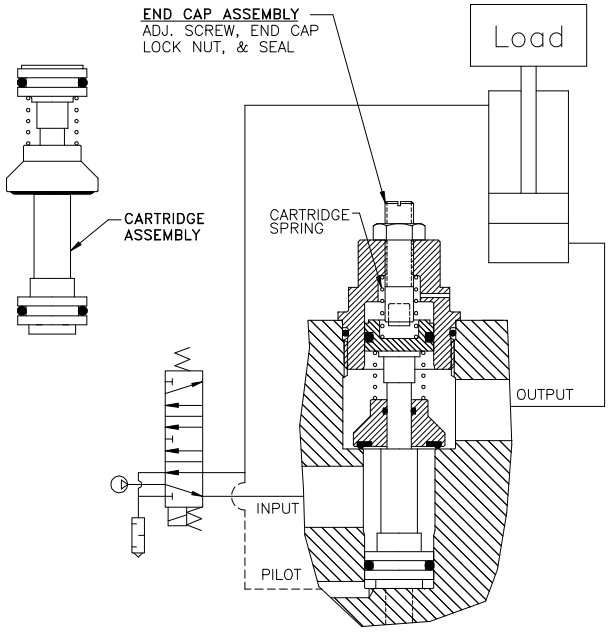


NOTES:

1) REMOVE ALL BURRS & SHARP EDGES.
2) NO NICKS OR SCRATCHES. SEAL SURFACE.
3) IF THE 1.730 UNDERCUT IS ELIMINATED, AND THE 1.597 MIN. MINOR DIAMETER IS THE DIAMETER BELOW THE THREADS, THE RESULTING Cv WILL BE 8.9.



No. of Turns	Equivalent Dia. (in.)
.5	**.33**
1.0	**.47**
1.5	**.58**
2.0	**.66**
2.5	**.74**
3.0	**.81**
3.5	**.88**
4.0	**.94**



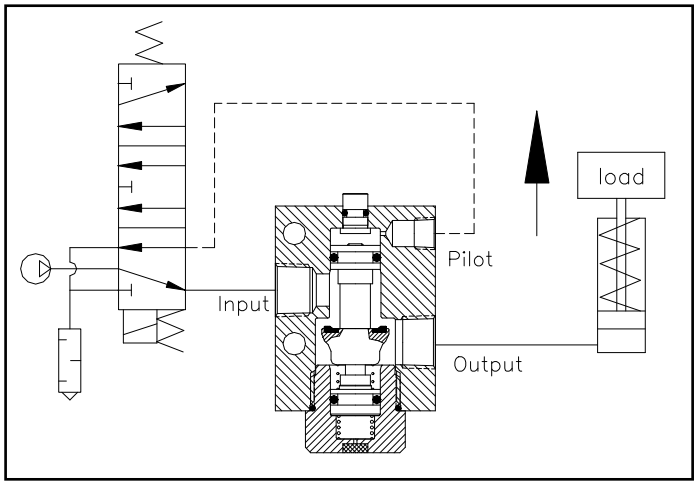
Operating Data:

Max. Pressure:	120 psi
Min. Pilot Pressure:	20 psi @ 80 psi
Temp. Range:	0 to 150 F
Cycle Rate:	1 cyc./sec. max.
Max. Flow Capacity (Cv):	16
Cracking Pressure:	3.5 psi
Service:	Properly filtered dry air or lubricated air.

Description	Standard
Cartridge Asm., End Cap Asm. & Cartridge Spring	**BC16MNFL**
Cartridge Asm. & Cartridge Spring	**BC16MN**

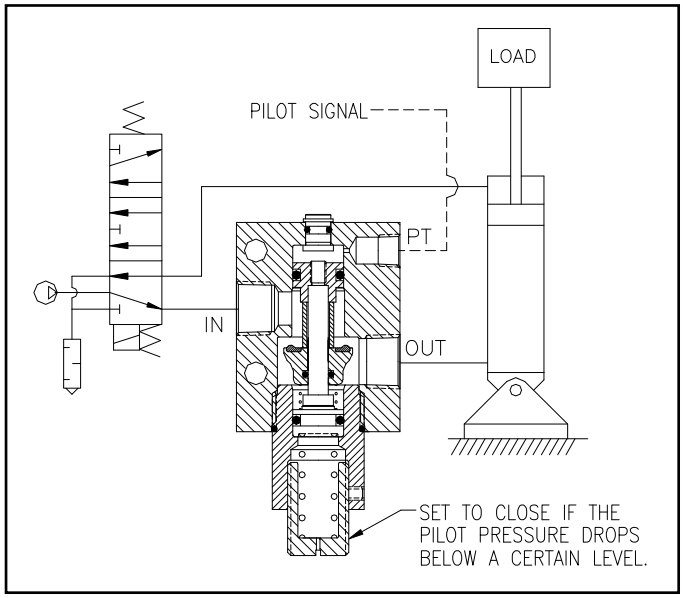
Single Acting Circuit

A cylinder with a spring or gravity return can be locked in place with this circuit. Air pressure advances the cylinder and gravity or the spring will retract the cylinder.



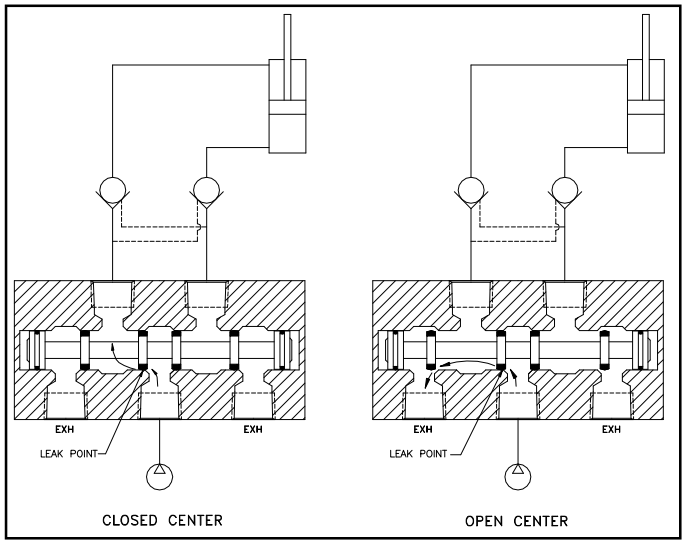
Quick Stop

Back pressure in the pilot line may cause the poppet to remain open longer, resulting in the cylinder drifting a small amount before stopping. Using a pilot-operated check valve with an adjustable spring can decrease drift, by closing the valve faster. This will also increase the pilot pressure required to open the valve.



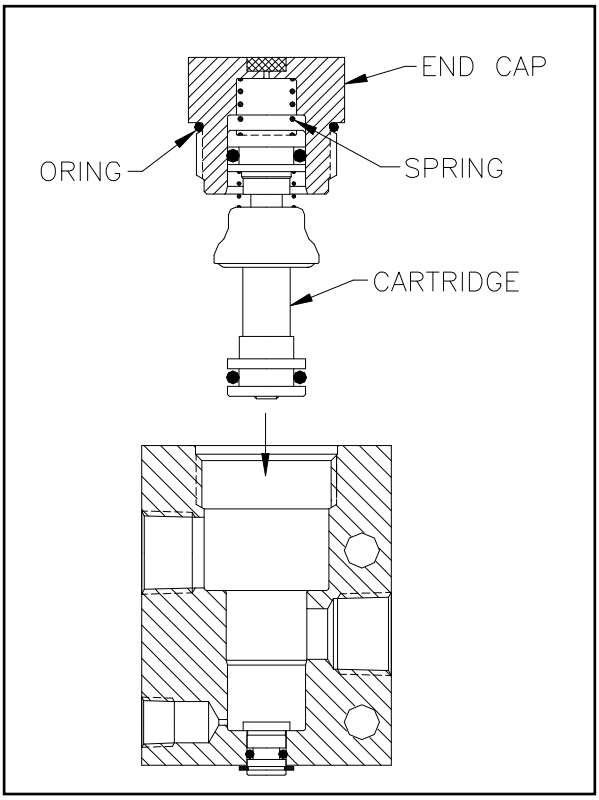
Why Use a Center Exhaust Control Valve?

The control valve should be a center exhaust unless you can guarantee that the spool in the control valve does not leak. A leaking control valve with a center exhaust will not affect the NGT valve because the leak goes to atmosphere. A leaking closed center valve may cause the NGT valve to slowly pilot open resulting in cylinder drift.



Cartridge & Spring Replacement

To replace the cartridge & spring, make sure all the pressure is released from the circuit. Remove the end cap, spring, and cartridge. Clean out any debris in the valve body and end cap. Inspect for excessive wear and scratches in the valve body and end cap. If there is excessive wear then the entire valve needs to be replaced. Lubricate the 2 piston seals. The main poppet seal does not require lubrication. Insert the new spring and cartridge into the end cap. The seal friction will hold the whole assembly together. Screw the entire assembly back into the valve body and tighten to 20 ft lb.



Dual Check Circuit Ratio

A dual check should not be used if the difference between the advance and retract pressures is 50% (2:1). If pressure #1 on the rod side is 80 psi, you will need a minimum pressure of 40 psi on the advance side of the cylinder, a ratio of 2 to 1, in order to function properly.