



Valves



Poppet Valves
for Compressed Air and Vacuum
We're everywhere you need us to be!



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Poppet Valves NAF Series



For Compressed Air and Vacuum

The Numatics Poppet Valves are ideal for single acting cylinders, Air Bellows and vacuum material handling.

- CAD Drawings Available
- High Flow
- Rugged Design
- Bubble Tight
- Low Cost
- CSA and CE Approved

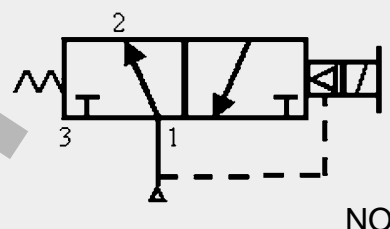
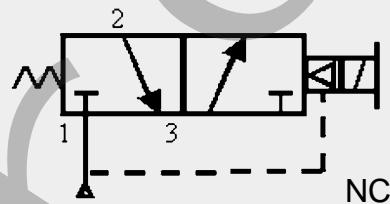
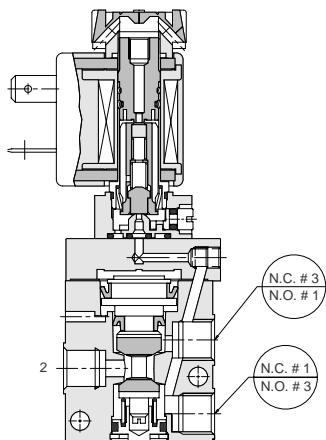




Poppet Valves NAF Series

Solenoid Pilot Actuated - 1/8" to 3/8"

- 3-way design
- Use with air or neutral gas
- AC & DC voltages available



NOTE: 3-ported, 2 position valve (1/8" to 3/8") can be converted to a 2 way valve by inserting a pipe plug into the exhaust port.

Technical Data

PORTS (NPTF)	1/8"	1/4"	3/8"
Cv	0.5	1.8	2
Flow Capacity	23 SCFM* (492 NI/min)**	83 SCFM* (1773 NI/min)**	93 SCFM* (1970 NI/min)**
	*80 PSIG upstream pressure to atmosphere downstream **6 Bar upstream to 5 Bar downstream		
Operating Pressure Range	24-145 PSIG (1.7 - 10 Bar)		
Temperature Range	23° to +122°F ambient (-5° to +50°C ambient)		
Coil Type	U1 Series Coil		

Operating Data

VOLTAGE	12VDC	24VDC	110 VAC 50-60Hz	220 VAC 50-60Hz
Power Consumption	3.5W	3.5W	max 5VA	max 5VA
In-rush Current	3.5W	3.5W	max 7.8VA	max 7.8VA

Plug Specifications: NEMA 4, IP 65 with plug-in connector
Solenoid Rating: Continuous Duty



RESPONSE TIME (SECONDS)	ENERGIZE	DE-ENERGIZE
1/8" (NC)	0.015	0.020
1/2" & 3/4" (NO)	0.030	0.023
1" (NC)	0.015	0.030

NC: normally closed NO: normally open

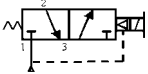
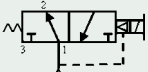
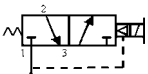
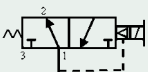
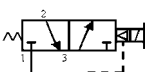
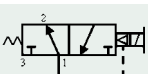


Poppet Valves NAF Series

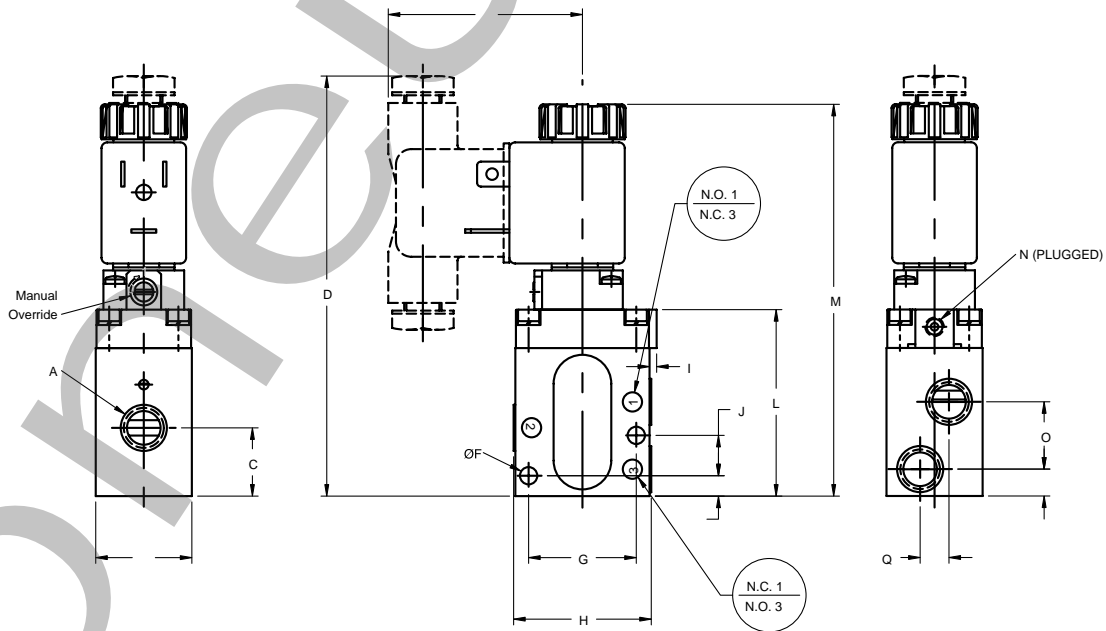


1/8" to 3/8" Model Selection for Solenoid Pilot Actuated

How To Order

NPTF PORT SIZE	TYPE	WITH MANUAL OVERRIDE & INTERNAL PILOT			
		24VDC	12VDC	110 V, 50-60 Hz	220 V, 50-60 Hz
1/8"	 (NC)	NAF250004N000F	NAF250004N000D	NAF250002N000P	NAF250002N000V
1/8"	 (NO)	NAF250104N000F	NAF250104N000D	NAF250102N000P	NAF250102N000V
1/4"	 (NC)	NAF251004N000F	NAF251004N000D	NAF251002N000P	NAF251002N000V
1/4"	 (NO)	NAF251104N000F	NAF251104N000D	NAF251102N000P	NAF251102N000V
3/8"	 (NC)	NAF252004N000F	NAF252004N000D	NAF252002N000P	NAF252002N000V
3/8"	 (NO)	NAF252104N000F	NAF252104N000D	NAF252102N000P	NAF252102N000V

1/8" Dimensions for Solenoid Pilot Actuated



1/8" NPT Dimensions

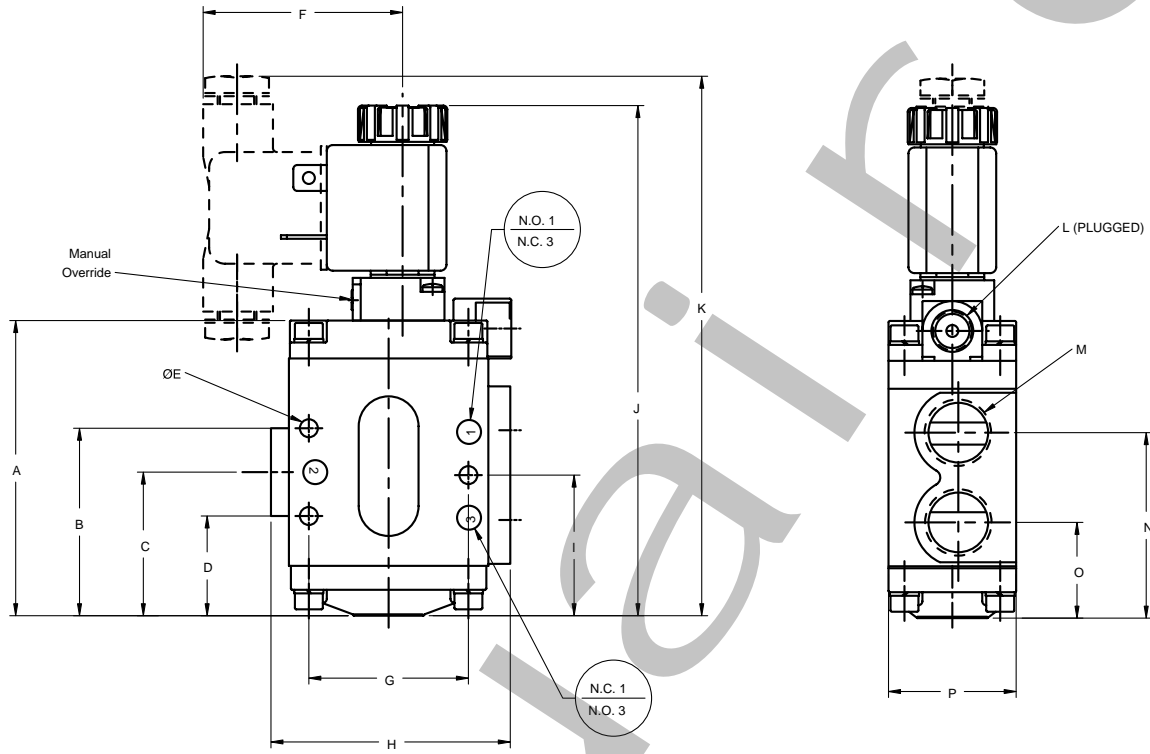
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1/8" NPT	0.984 (25.0)	0.699 (17.8)	4.488 (114.0)	1.969 (50.0)	0.177 (4.5)	1.102 (28.0)	1.417 (36.0)	0.073 (1.9)	0.413 (10.5)	0.209 (5.3)	1.909 (48.5)	4.016 (102.0)	(M5)	0.689 (17.5)	0.276 (7.0)	0.295 (7.5)

Dimensions = inches
(in parentheses) = mm



Poppet Valves NAF Series

1/4" to 3/8" Dimensions for Solenoid Pilot Actuated



1/4" to 3/8" NPT Dimensions

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P
2.913 (74.0)	1.850 (47.0)	1.417 (36.0)	0.984 (25.0)	0.177 (4.5)	2.028 (51.5)	1.575 (40.0)	2.362 (60.0)	1.398 (35.5)	5.079 (129.0)	5.354 (136.0)	1/8" NPT	1/4" or 3/8" NPT	1.850 (47.0)	0.945 (24.0)	0.945 (24.0)

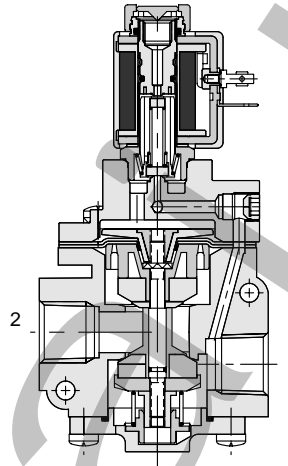
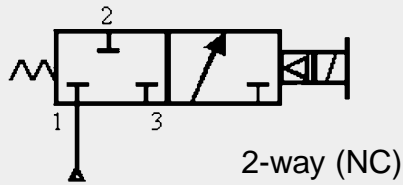
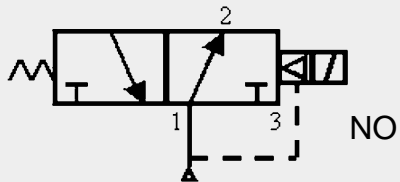
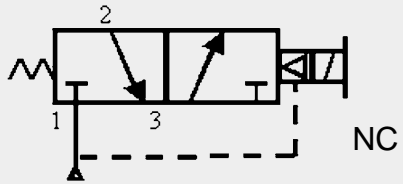
Dimensions = inches
(in parentheses) = mm

Poppet Valves NAF Series



Solenoid Pilot Actuated - 1/2" to 1-1/2"

- 3-way design & 2-way design
- Use with air or neutral gas
- Solenoid pilot actuated
- AC & DC voltages available



NOTE:

- Always Supply Port #1
- Manual override is not available on N/O (normally open) valves

NOTE: 1/2" to 1-1/2" valves cannot be converted to a 2 ported (2-way), 2 position valve. If a 2-way valve is required, it must be ordered as a 2-way.

Technical Data

PORTS (NPTF)	1/2"	3/4"	1"	1-1/2"
Cv	5	5.6	8.8	24
Flow Capacity	232 SCFM* (4924 NI/min)**	260 SCFM* (5515 NI/min)**	407 SCFM*** (8667 NI/min)**	1111 SCFM**** (23637 NI/min)**
	*80 PSIG upstream pressure to atmosphere downstream** **6 Bar upstream to 5 Bar downstream		***70 PSIG upstream pressure to atmosphere downstream ****60 PSIG upstream pressure to atmosphere downstream	
Operating Pressure Range	30-145 PSIG (2 - 10 Bar)		32-145 PSIG (2.2 - 10 Bar)	36-145 PSIG (2.5 - 10 Bar)
Temperature Range	23°F to +122°F ambient (-5°C to +50°C ambient)			
Coil Type	U2 Series Coil			

Operating Data

VOLTAGE	12VDC	24VDC	110 VAC 50-60Hz	220 VAC 50-60Hz
Power Consumption	11W	11W	max 10VA	max 10VA
In-rush Current	11W	11W	max 16VA	max 16VA

Plug Specifications: NEMA 4, IP 65 with plug-in connector
Solenoid Rating: Continuous Duty



RESPONSE TIME (SECONDS)	ENERGIZE	DE-ENERGIZE
1/2" & 3/4" (NC)	0.017	0.027
1/2" & 3/4" (NO)	0.030	0.022
1" (NC)	0.020	0.032
1" (NO)	0.028	0.023
1-1/2" (NC)	0.047	0.022
1-1/2" (NO)	0.055	0.020



Poppet Valves NAF Series

1/2" to 1-1/2" 3-way Model Selection for Solenoid Pilot Actuated

How To Order

NPTF PORT SIZE	TYPE	WITH MANUAL OVERRIDE ON NORMALLY CLOSED ONLY			
		24VDC	12VDC	110 V, 50-60 Hz	220 V, 50-60 Hz
1/2"	(NC)	NAF253004N000F	NAF253004N000D	NAF253002N000P	NAF253002N000V
1/2"	(NO)	NAF253104N000F	NAF253104N000D	NAF253102N000P	NAF253102N000V
3/4"	(NC)	NAF254004N000F	NAF254004N000D	NAF254002N000P	NAF254002N000V
3/4"	(NO)	NAF254104N000F	NAF254104N000D	NAF254102N000P	NAF254102N000V
1"	(NC)	NAF254504N000F	NAF254504N000D	NAF254502N000P	NAF254502N000V
1"	(NO)	NAF254604N000F	NAF254604N000D	NAF254602N000P	NAF254602N000V
1-1/2"	(NC)	NAF256504N000F	NAF256504N000D	NAF256502N000P	NAF256502N000V
1-1/2"	(NO)	NAF256104N000F	NAF256104N000D	NAF256102N000P	NAF256102N000V

1/2" — 1-1/2" 2-way Model Selection for Solenoid Pilot Actuated

How To Order

NPTF PORT SIZE	TYPE	WITH MANUAL OVERRIDE			
		24VDC	12VDC	110 V, 50-60 Hz	220 V, 50-60 Hz
1/2"	(NC)	NAF253204N000F	NAF253204N000D	NAF253202N000P	NAF253202N000V
3/4"	(NC)	NAF254204N000F	NAF254204N000D	NAF254202N000P	NAF254202N000V
1"	(NC)	NAF254704N000F	NAF254704N000D	NAF254702N000P	NAF254702N000V
1-1/2"	(NC)	NAF256704N000F	NAF256704N000D	NAF256702N000P	NAF256702N000V

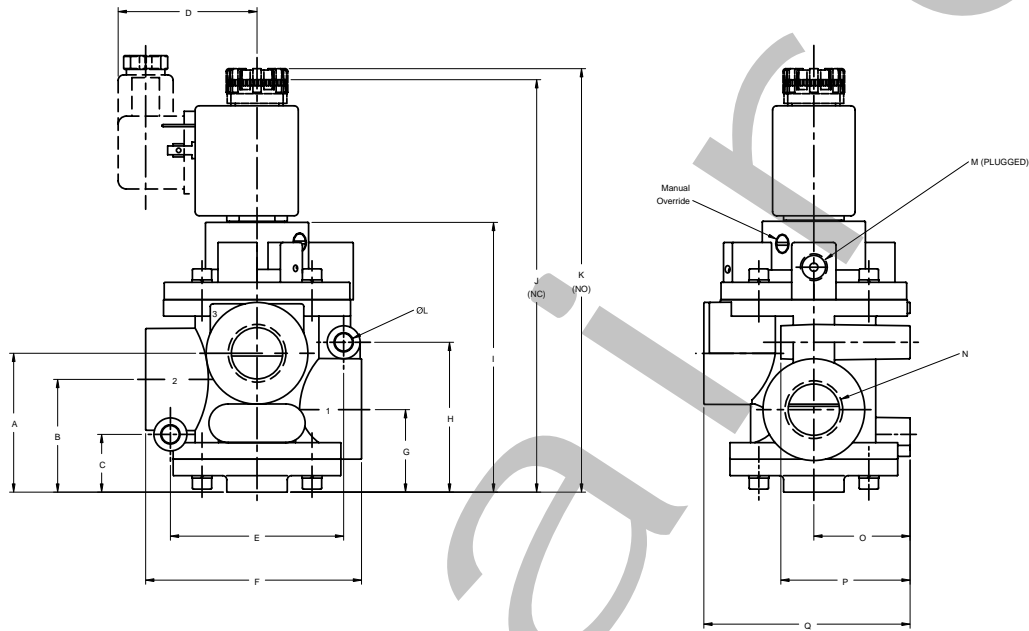
NOTE: All 2-way valves come complete with breather vent plug in Port #3



Poppet Valves NAF Series

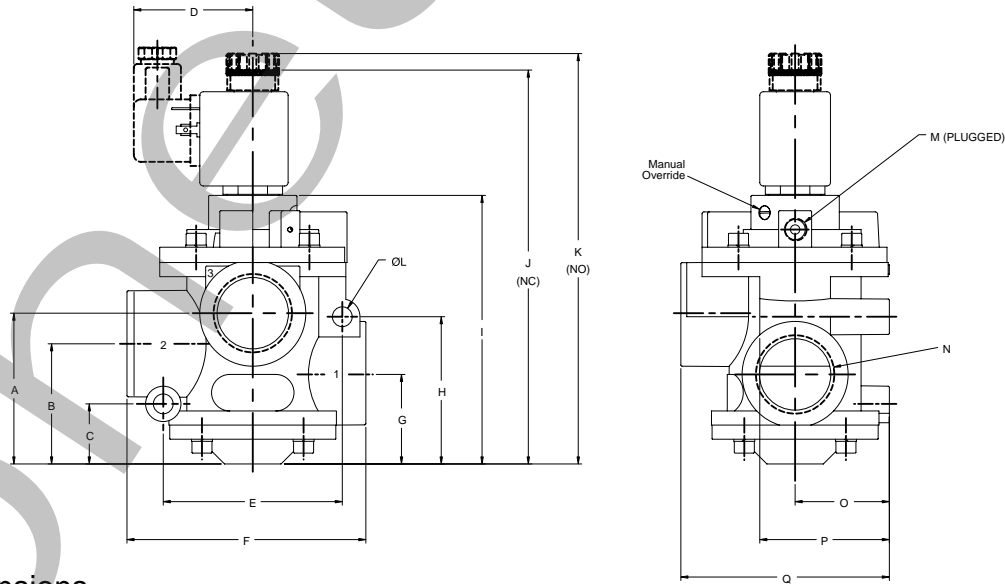


1/2" to 1" Dimensions for Solenoid Pilot Actuated



1/2" & 3/4" NPT Dimensions

A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
1.988 (50.0)	1.614 (41.0)	0.827 (21.0)	1.988 (50.5)	2.480 (63.0)	3.091 (78.5)	1.181 (30.0)	2.146 (54.5)	3.996 (101.5)	5.906 (150.0)	6.063 (154.0)	0.252 (6.4)	1/8" NPT	1/2" to 3/4" NPT	1.378 (35.0)	1.850 (47.0)	2.953 (75.0)



1" NPT Dimensions

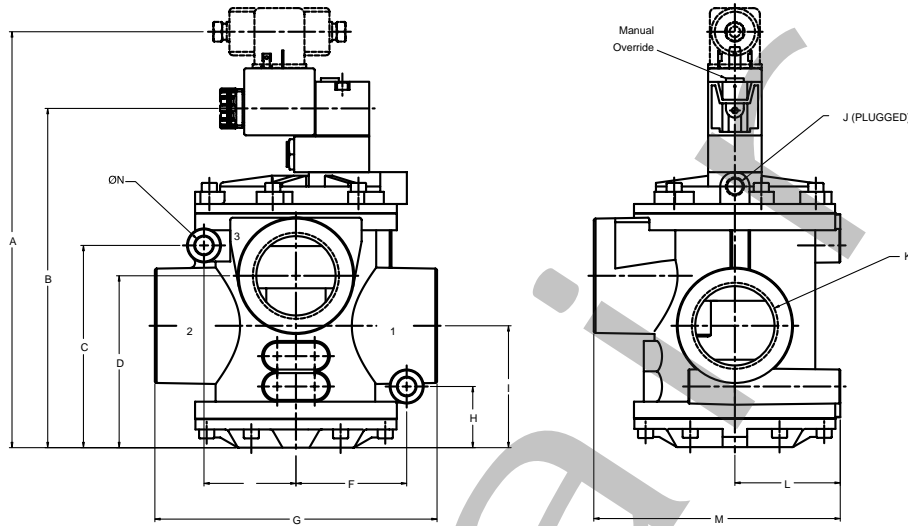
A	B	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q
2.520 (64.0)	2.008 (51.0)	1.004 (25.5)	1.969 (50.0)	2.992 (76.0)	3.976 (101.0)	1.496 (38.0)	2.461 (62.5)	4.528 (115.0)	6.575 (167.0)	6.850 (174.0)	0.331 (8.4)	1/8" NPT	1" NPT	1.575 (40.0)	2.165 (55.0)	3.504 (89.0)

Dimensions = inches
(in parentheses) = mm



Poppet Valves NAF Series

1-1/2" Dimensions for Solenoid Pilot Actuated



1-1/2" NPT Dimensions

A	B	C	D	E	F	G	H	I	J	K	L	M	N
9.173 (233.0)	7.480 (190.0)	4.449 (113.0)	3.780 (96.0)	2.028 (51.5)	2.441 (62.0)	6.220 (158.0)	1.339 (34.0)	2.677 (68.0)	1/8" NPT	1-1/2" NPT	2.323 (59.0)	5.433 (138.0)	0.394 (10.0)

Dimensions = inches
(in parentheses) = mm

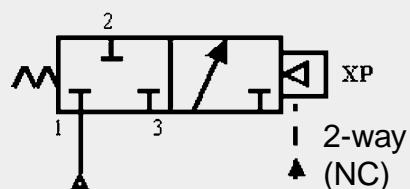
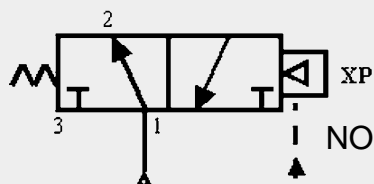
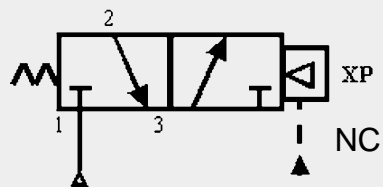


Poppet Valves NAF Series

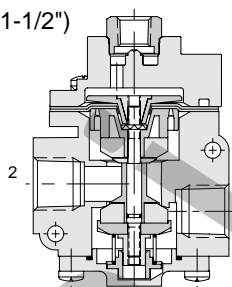


Air Pilot Actuated Valves - 1/8" to 1-1/2"

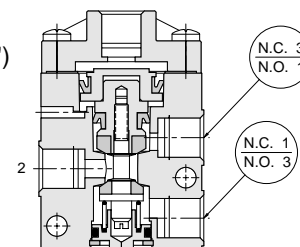
- 3-way & 2-way design
- Air pilot actuated
- Use with air or neutral gases
- For lubricated or non-lubricated service



(1/2" to 1-1/2")



(1/8" to 3/8")



NOTE: 1/2" to 1-1/2" not available in (NO).

NOTE: Always supply Port 1.

NOTE: 3-ported, 2 position valve (1/8" to 3/8") can be converted to a 2 way valve by inserting a pipe plug into the exhaust port.

NOTE: 1/2" to 1-1/2" valves cannot be converted to a 2 ported (2-way), 2 position valve. If a 2-way valve is required, it must be ordered as a 2-way.

Technical Data

PORTS (NPTF)	1/8"	1/4"	3/8"
Cv	0.5	1.8	2
Flow Capacity	23 SCFM* (492 NI/min)**	83 SCFM* (1773 NI/min)**	93 SCFM* (1970 NI/min)**
Operating Pressure Range	24-145 PSIG (1.7 - 10 Bar)		
Pilot Pressure	Minimum 58% of Operating Pressure		Minimum 67% of operating pressure
Temperature Range	23° to +122°F ambient (-5° to +50°C ambient)		

PORTS (NPTF)	1/2"	3/4"	1"	1-1/2"
Cv	5	5.6	8.8	24
Flow Capacity	232 SCFM* (4924 NI/min)**	260 SCFM* (5155 NI/min)**	407 SCFM*** (8667 NI/min)**	407 SCFM**** (8667 NI/min)**
Operating Pressure Range	32-145 PSIG (2.2 - 10 Bar)		36-145 PSIG (2.5 - 10 Bar)	
Pilot Pressure	Minimum 67% of operating pressure			
Temperature Range	23° to +122°F ambient (-5° to +50°C ambient)			

RESPONSE TIME (SECONDS)	ENERGIZE	DE-ENERGIZE
1/8" (NC, NO)	0.005	0.008
1/4" & 3/8" (NC, NO)	0.005	0.007
1/2" & 3/4" (NC)	0.007	0.010
1" (NC)	0.010	0.012
1-1/2" (NC)	0.036	0.015

NC: normally closed NO: normally open



Poppet Valves NAF Series

1/8" to 1-1/2" 3-way Model Selection for Air Pilot Actuated

How To Order

NPTF PORT SIZE	TYPE	
1/8"	(NC)	NAF260000N14AO
1/8"	(NO)	NAF270000N14AO
1/4"	(NC)	NAF260100N14AO
1/4"	(NO)	NAF270100N14AO
3/8"	(NC)	NAF260600N14AO
3/8"	(NO)	NAF270600N14AO
1/2"	(NC)	NAF260300N14AO
3/4"	(NC)	NAF261000N14AO
1"	(NC)	NAF261500N14AO
1-1/2"	(NC)	NAF262000N14AO

1/2" to 1-1/2" 2-Way Model Selection for Air Pilot Actuated

How To Order

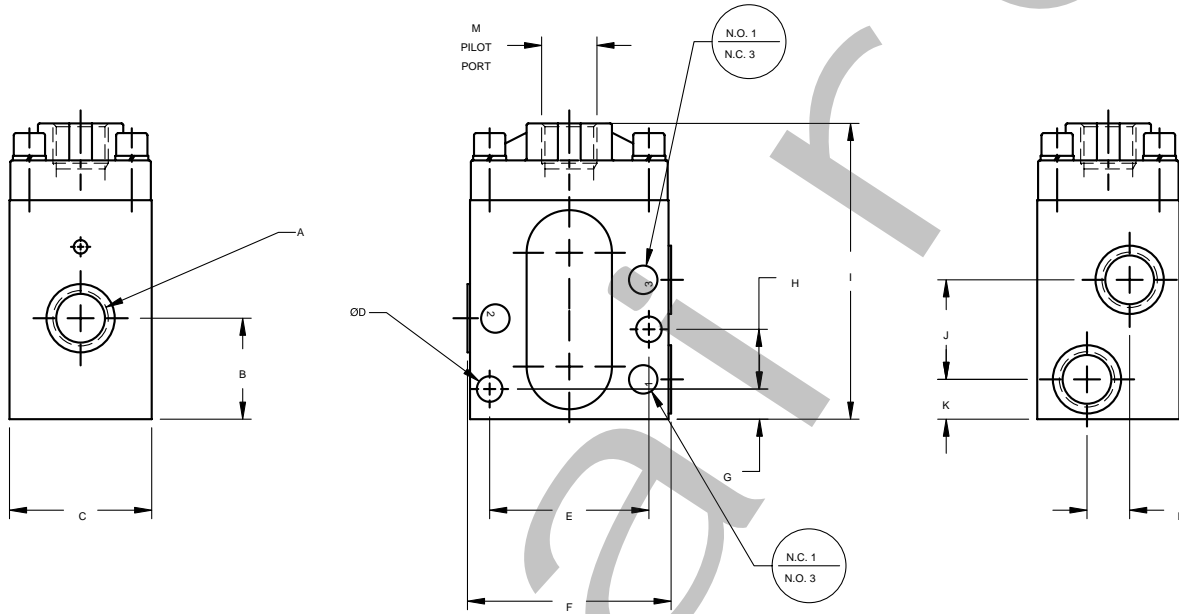
NPTF PORT SIZE	TYPE	
1/2"	(NC)	NAF2603A0N14AO
3/4"	(NC)	NAF2610A0N14AO
1"	(NC)	NAF2615A0N14AO
1-1/2"	(NC)	NAF2620A0N14AO



Poppet Valves NAF Series

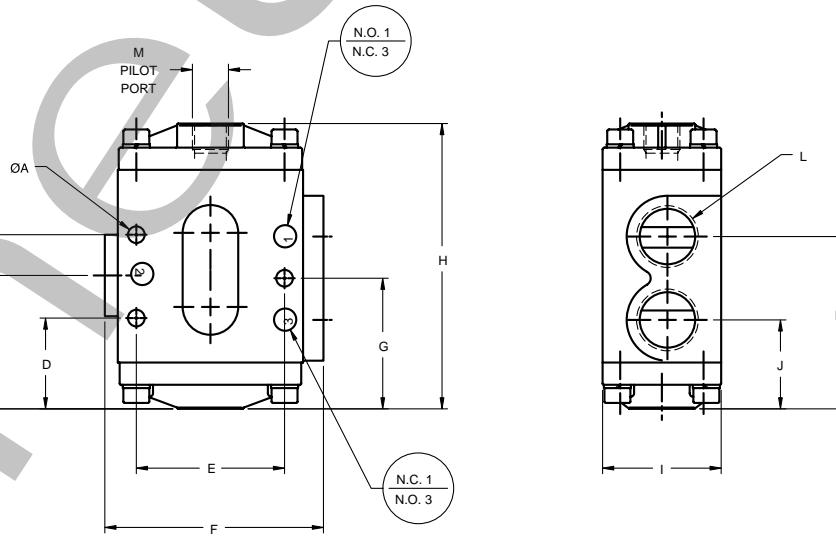


1/8" to 3/8" Dimensions for Air Pilot Actuated



1/8" NPT Dimensions

A	B	C	D	E	F	G	H	I	J	K	L	M
1/8" NPT	0.699 (17.8)	0.984 (25.0)	0.177 (4.5)	1.102 (28.0)	1.417 (36.0)	0.209 (5.3)	0.413 (10.5)	1.988 (50.5)	0.689 (17.5)	0.276 (7.0)	0.295 (7.5)	1/8" NPT



1/4" & 3/8" NPT Dimensions

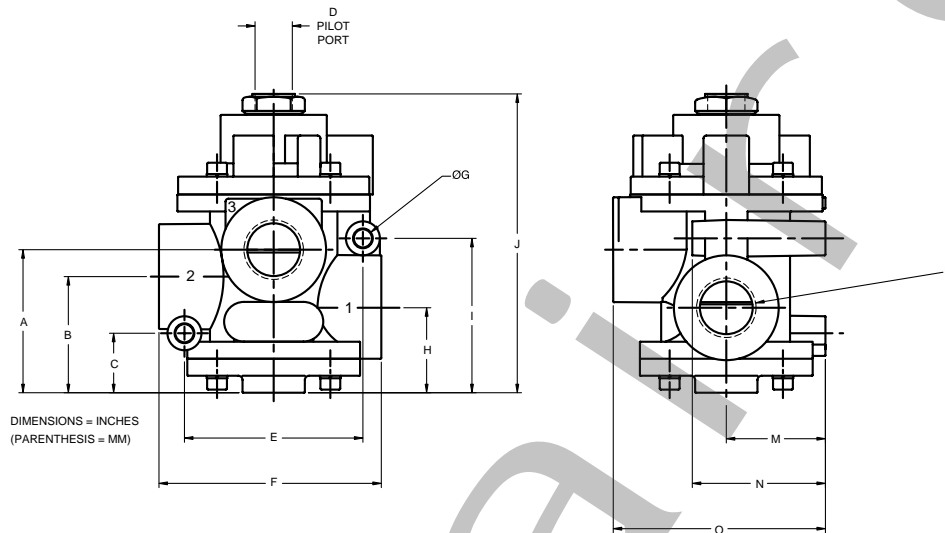
A	B	C	D	E	F	G	H	I	J	K	L	M
0.177 (4.5)	1.850 (47.0)	1.417 (36.0)	0.945 (24.0)	1.575 (40.0)	2.362 (60.0)	1.398 (35.5)	3.031 (77.0)	1.260 (32.0)	0.945 (24.0)	1.850 (47.0)	1/4" or 3/8" NPT	1/8" NPT

Dimensions = inches
(in parentheses) = mm



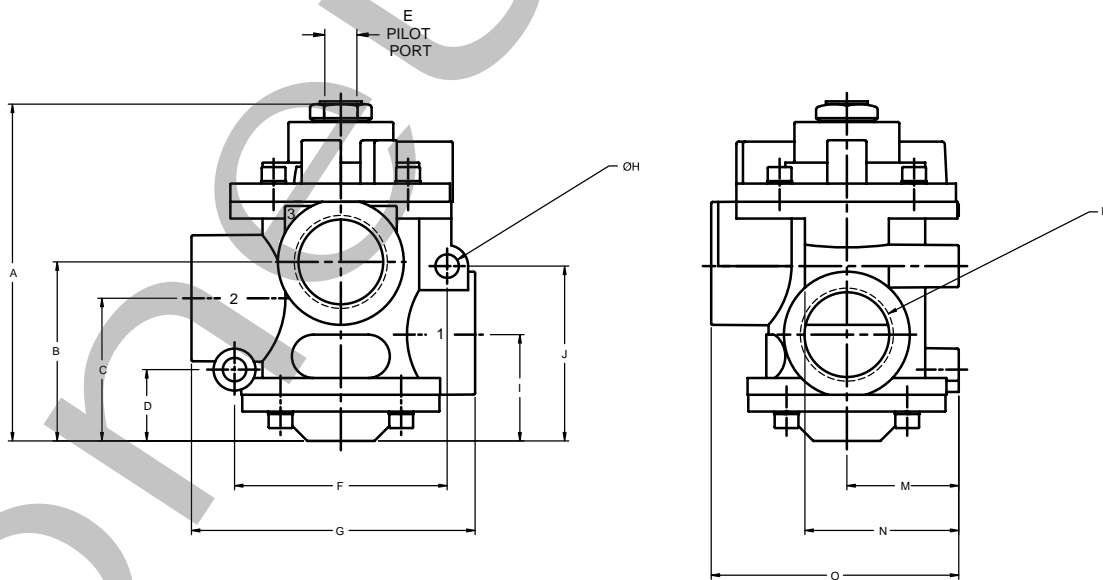
Poppet Valves NAF Series

1/2" to 1" Dimensions for Air Pilot Actuated



1/2" & 3/4" NPT Dimensions

A	B	C	D	E	F	G	H	I	J	L	M	N	O
1.988 (50.5)	1.614 (41.0)	0.827 (21.0)	1/4" NPT	2.480 (63.0)	3.091 (78.5)	0.252 (6.4)	1.181 (30.0)	2.146 (54.5)	4.134 (105.0)	1/2" TO 3/4" NPT	1.378 (35.0)	1.850 (47.0)	2.953 (75.0)



1" NPT Dimensions

A	B	C	D	E	F	G	H	I	J	L	M	N	O
4.744 (120.5)	2.520 (64.0)	2.008 (51.0)	1.004 (25.5)	1/4" NPT	2.992 (76.0)	3.976 (101.0)	0.331 (8.4)	1.496 (38.0)	2.461 (62.5)	1" NPT	1.575 (40.0)	2.165 (55.0)	3.484 (88.5)

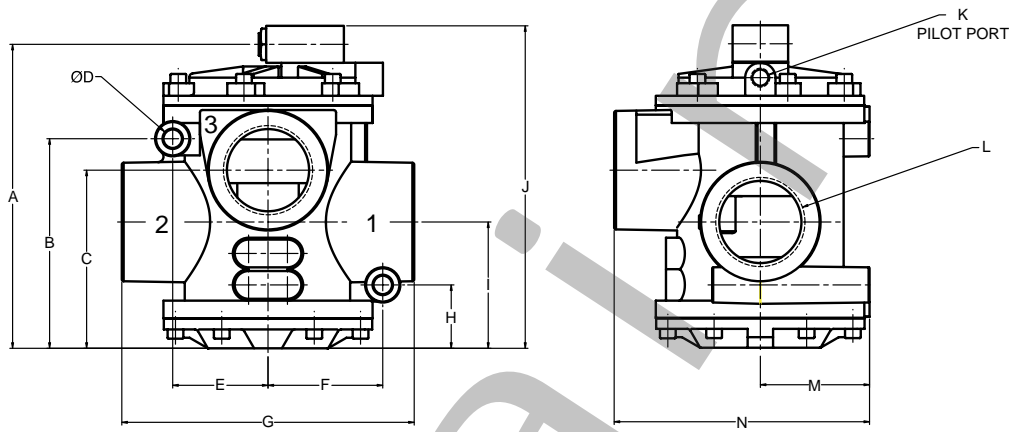
Dimensions = inches
(in parentheses) = mm



Poppet Valves NAF Series



1-1/2" Dimensions for Air Pilot Actuated



1-1/2" NPT Dimensions

A	B	C	D	E	F	G	H	I	J	K	L	M	N
6.467 (164.3)	4.449 (113.0)	3.780 (96.0)	0.433 (11.0)	2.028 (51.5)	2.441 (62.0)	6.220 (158.0)	1.339 (34.0)	2.677 (68.0)	6.860 (174.3)	1/8" NPT	1-1/2" NPT	2.323 (59.0)	5.433 (138.0)

Dimensions = inches
(in parentheses) = mm