



Total Air Prep (TAP)

**TAP-3000****TAP-1000**

For a variety of cable options see our website www.AutomationDirect.com

The NITRA Total Air Prep (TAP) unit is the latest technology for compressed air preparation. A single, high flow unit contains an semi-automatic drain air filter with clogged filter indicator, relieving regulator, lockable shut-off valve, pressure gauge and air dump. Electric models also have an adjustable electric soft start / shut-off valve and an adjustable pressure switch with indicator LEDs. Interchangeable inlet and outlet port inserts allow the TAP to easily mount to most pipe sizes.

Features:

- 20 micron air filter with semi-automatic drain (optional 5 micron filter element sold separately)
- 7-116 psi operating range
- Units ship with 1/2" NPT inlet/outlet ports. Optional NPT or BSPP port inserts in sizes 1/4" thru 1" (sold separately). Any combination of port sizes all in one small footprint!
- Units ship with panel mounting hardware. Optional thru-panel mount hardware sold separately.

Nitra Total Air Prep (TAP) Units

Part No.	Price	Description	Weight	Insert Link	Manual Link
<u>TAP-3000</u>	\$376.00	NITRA pneumatic total air prep unit, 1/2in female NPT inlet(s), 1/2in female NPT outlet(s), 7-116 psi (0.5-8 bar) adjustable range, Rynite (PET) bowl, semi-automatic drain, clog indicator, manual shutoff valve, soft start valve, pressure switch.	3.0	<u>PDF</u>	<u>PDF</u>
<u>TAP-1000</u>	\$207.00	NITRA pneumatic total air prep unit, 1/2in female NPT inlet(s), 1/2in female NPT outlet(s), 7-116 psi (0.5-8 bar) adjustable range, Rynite (PET) bowl, semi-automatic drain, clog indicator, manual shutoff valve.	2.5	<u>PDF</u>	<u>PDF</u>

Nitra Total Air Prep (TAP) Unit Specifications

Specification	1/4" Units	3/8" Units	1/2" Units	3/4" Units	1" Units
Flow rate at 91psi (6.3 bar) Δp 7psi (0.5 bar)	78 scfm, 2200 NI/min	102 scfm, 2900 NI/min	127 scfm, 3600 NI/min		
Flow rate at 91psi (6.3 bar) Δp 14psi (1 bar)	85 scfm, 2400 NI/min	116 scfm, 3300 NI/min	141 scfm, 4000 NI/min		
Flow rate on discharge at 14psi (6 bar)	56 scfm, 1600 NI/min				
1/4" Port flow rate of non-regulated filtered air at 91psi (6.3 bar) Δp pressure 1 bar	64 scfm, 1800 NI/min				
Flow rate of each supplementary 1/4" filtered and regulated air port at 91psi (6.3 bar) Δp pressure 1 bar*	85 scfm, 2400 NI/min				
Fluid	Compressed air				
Setting Range	7-116 psi (0.5-8 bar)				
Degree of Filtration	5µm (yellow) or 20µm (white)				
Maximum Inlet Pressure	145psi (10 bar)				
Operating Temperature Range	-10 to 50°C (-14 to 122°F)				
Protection Class	IP 65 with connector				
Mounting	Front, with M5 x 75 screws or back with M6 x 70 screws (screws are included)				
Mounting Position	Vertical				
Direction of Flow	From left to right				
Approvals	CE				

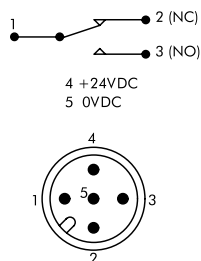
* Total flow rate from two supplementary outlets and the main one cannot exceed 4000 NI/min at 6.3 bar with $\Delta P = 1$



Total Air Prep (TAP)

Nitra Total Air Prep (TAP) Unit Specifications (TAP-3000 only)					
Specification	1/4" Units	3/8" Units	1/2" Units	3/4" Units	1" Units
Solenoid Valve Voltage	24VDC \pm 10%				
Solenoid Valve Power	3W / 0.3 Hold				
Pressure Interval Settable on the Pressure Switch	7 to 145 psi (0.5 to 10 bar)				
Pressure Switch Hysteresis (not adjustable)	6 to 12 psi (0.4 to 0.8 bar)				
Maximum Pressure Switch Current	0.5 A (protected against overload and short-circuit)				
Maximum Pressure Switch Voltage	3 to 30 VAC/VDC				
Pressure Switch Contacts	Normally Open (NO) and Normally Closed (NC)				
Rated Switching Cycles	5×10^6				
Protection Class	IP 65 with connector				
Solenoid Valve Insulation Class	Insulation class = F (155°C or 311°F)				
Switching Time	100% ED				
Electrical Connection	M12 x 1 5-pin to CEI IEC 60947-5-2				

Wiring



Cable Assembly Wiring Colors:

Pin 1 - Brown

Pin 2 - White

Pin 3 - Blue

Pin 4 - Black

Pin 5 - Yellow/Green

Note: wiring colors are based on AutomationDirect CD12L and CD12M 5-pole cable assemblies.

Version with solenoid valve and pressure switch

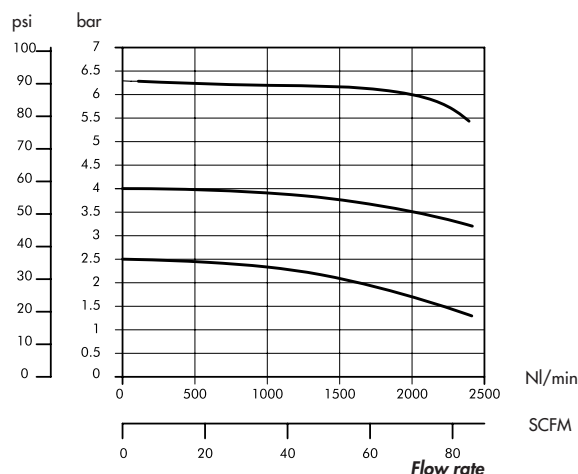


Total Air Prep (TAP)

Flow Charts:

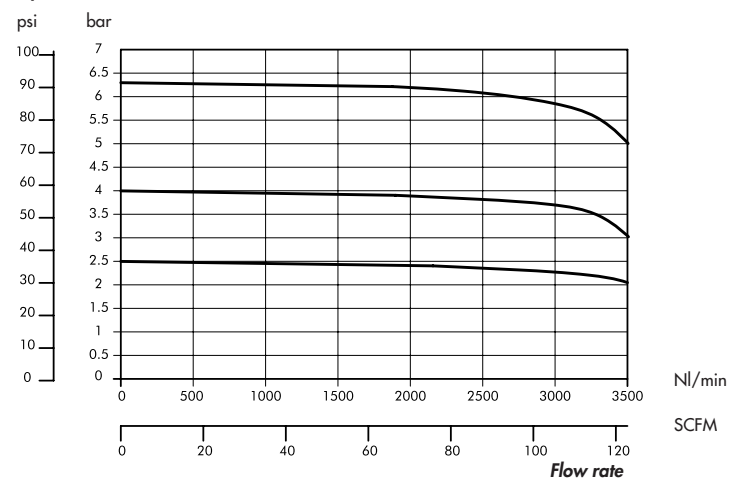
1/4"

Pm = 116 psi - 8 bar
Preset pressure



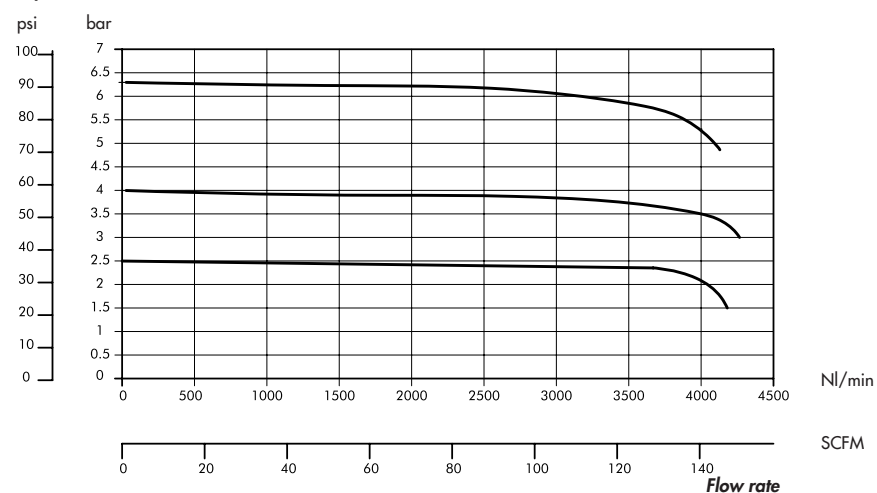
3/8"

Pm = 116 psi - 8 bar
Preset pressure



1/2" - 3/4" - 1"

Pm = 116 psi - 8 bar
Preset pressure

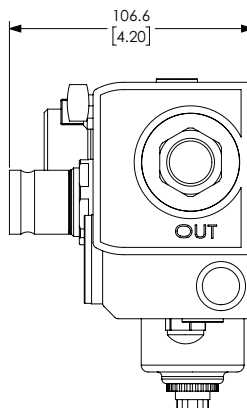
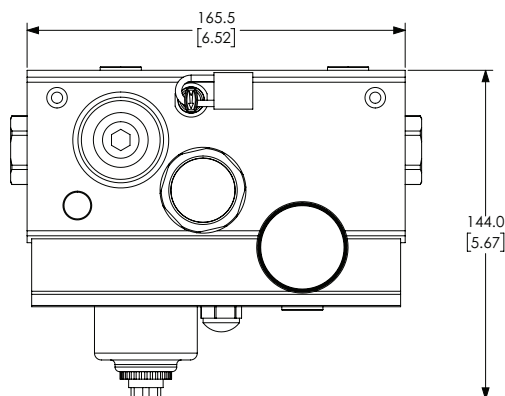
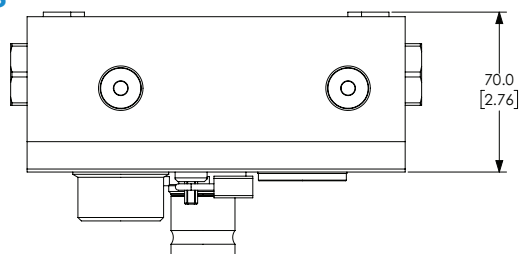




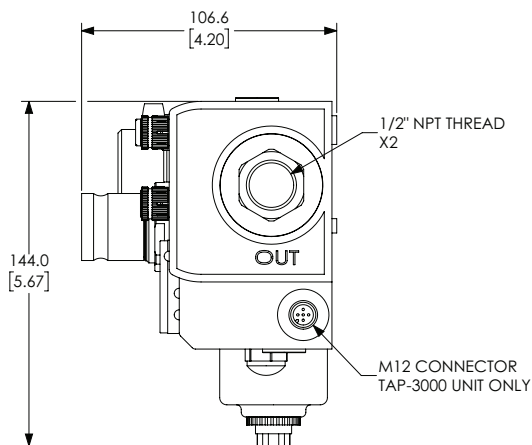
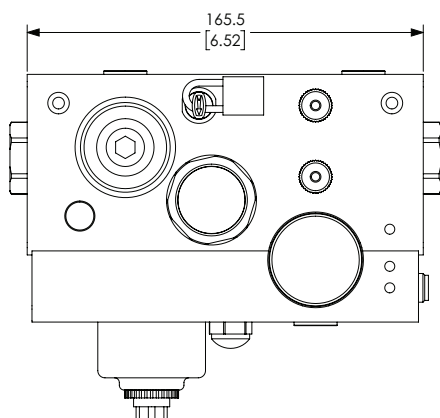
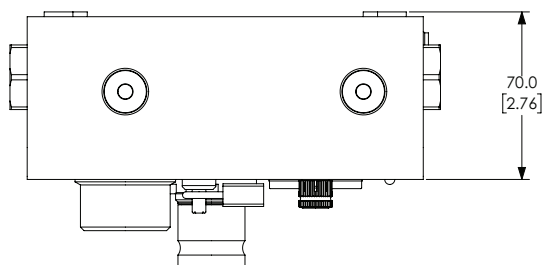
Total Air Prep (TAP)

Dimensions

mm [inches]



TAP-1000 Series



TAP-3000 Series

See our website www.AutomationDirect.com for complete Engineering drawings.



Total Air Prep (TAP) - Accessories

Total Air Prep (TAP) - Accessories				
Items	Part No.	Price	Description	Weight (lbs)
	<u>TAP-ACC01</u>	\$16.00	NITRA panel mounting brackets, plated steel. For use with TAP unit. Mounting hardware included.	0.2
	<u>TAP-ACC02</u>	\$8.75	NITRA filter element, replacement, 20 micron, ultra high molecular weight polyethylene (UHMWPE). For use with TAP unit.	0.2
	<u>TAP-ACC03</u>	\$19.00	NITRA regulator, replacement, 0-120 psi (0-8 bar) adjustable range, acetal. For use with TAP unit.	0.3
	<u>TAP-ACC04</u>	\$8.75	NITRA filter element, replacement, 5 micron, ultra high molecular weight polyethylene (UHMWPE). For use with TAP unit.	0.1
	<u>TAP-ACC05</u>	\$9.00	NITRA regulator diaphragm, replacement, brass. For use with TAP unit.	0.1
	<u>TAP-ACC06</u>	\$16.50	NITRA plug and filter element, replacement, 20 micron, acetal. For use with TAP unit.	0.1
	<u>TAP-ACC07</u>	\$18.50	NITRA port insert, 1/4in NPT, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC08</u>	\$18.50	NITRA port insert, G1/4 BSPP, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC09</u>	\$18.50	NITRA port insert, 3/8in NPT, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC10</u>	\$18.50	NITRA port insert, G3/8 BSPP, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC11</u>	\$22.50	NITRA port insert, replacement, 1/2in NPT, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC12</u>	\$22.50	NITRA port insert, G1/2 BSPP, anodized aluminum. For use with TAP unit.	0.3

Note: For power cables see our [Wiring Devices](#) section online at www.AutomationDirect.com



Total Air Prep (TAP) - Accessories

Total Air Prep (TAP) - Accessories				
Items	Part No.	Price	Description	Weight (lbs)
	<u>TAP-ACC13</u>	\$25.50	NITRA port insert, 3/4in NPT, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC14</u>	\$25.50	NITRA port insert, G3/4 BSPP, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC15</u>	\$30.00	NITRA port insert, 1in NPT, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC16</u>	\$30.00	NITRA port insert, G1 BSPP, anodized aluminum. For use with TAP unit.	0.3
	<u>TAP-ACC17</u>	\$5.25	NITRA regulator removal wrench, steel. For use with TAP unit.	0.3
	<u>TAP-ACC18</u>	\$44.50	NITRA solenoid valve, replacement. For use with TAP-3000 unit.	0.3
	<u>TAP-ACC20</u>	\$53.00	NITRA semi-automatic drain valve, replacement, acetal. For use with TAP unit.	0.3
	<u>TAP-ACC21</u>	\$11.00	NITRA padlock, replacement, brass. For use with TAP unit.	0.3
	<u>TAP-ACC23</u>	\$1.75	NITRA regulator knob, replacement, 0-120 psi (0-8 bar) adjustable range, acetal. For use with TAP unit.	0.1

Note: For power cables see our [Wiring Devices](#) section online at www.AutomationDirect.com



Pneumatic Air Preparation - AF Series Filters



Modular Assembly Example

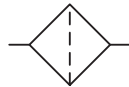
NITRA® pneumatic particulate and moisture separation air filters are available with 3/8" NPT female port sizes to meet a broad range of pneumatic air supply filtration applications. Available with either a manual, semi-automatic, or automatic drain. All-metal bowls with sight gauge are available on all sizes. Polycarbonate bowls are available on 3xx size, with metal bowl guards included on 3xx size. Replaceable 40-micron filter elements are standard. An optional 5-micron filter element (purchased separately and customer installable) is available when stricter filtration is required. Provided with a mounting bracket for stand-alone applications, the modular design also enables easy field assembly for combining with NITRA pneumatic regulators and lubricators (using modular assembly brackets purchased separately).

Features

- 3/8" NPT female port sizes
- 40-micron replaceable filter element standard; for stricter filtration an optional 5-micron filter element purchased separately is easily customer installable
- All-metal bowls with sight gauge available on all sizes. Polycarbonate bowls available on 3xx size, with metal bowl guards included on 3xx size.
- Manual, semi-automatic and automatic drains available
- Mounting bracket provided for stand-alone applications
- Modular design enables easy field assembly for combining with NITRA regulators and lubricators
- 2-year warranty



Mounting bracket included.



Air Filter



See www.AutomationDirect.com for a wide variety of fitting options

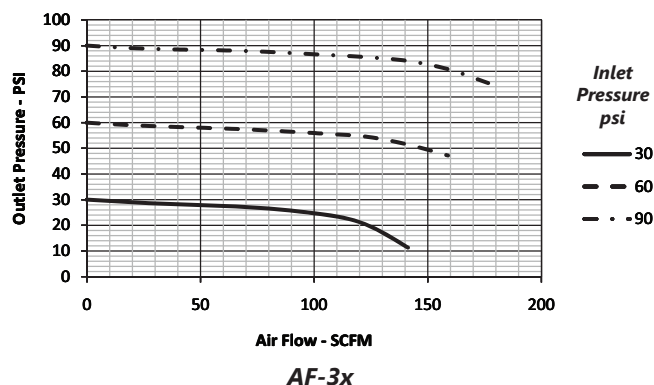


Pneumatic Air Preparation - AF Series Filters

AF Series Filters Cont.

Part No.	Price	Weight (lbs)	Port Size (FNPT)	Drain Bowl	Drain Type	Fluid	Temperature	Filtering Grade	Operating Pressure	Maximum Pressure	Proof Pressure
AF-333-MD	Retired	1.0	3/8"	40cc Metal with sight gauge	Manual	Air	23~140°F (-4~60°C)	40μ (5μ element can be ordered separately and field installed)	20~130psi (0.14~0.90MPa) (1.4~9.0 bar)	130psi (0.90MPa) (9.0 bar)	215psi (1.5MPa) (15 bar)

Performance Charts



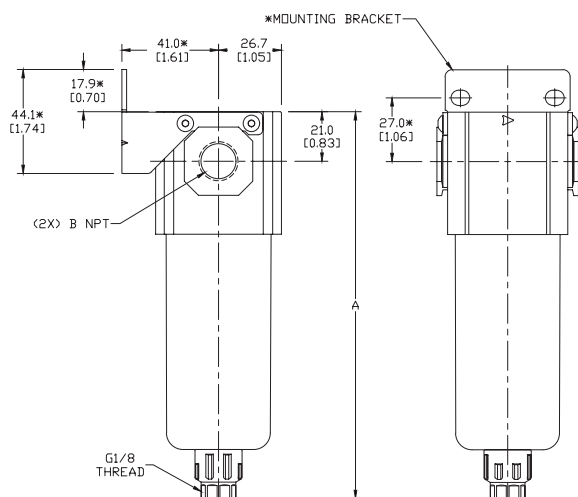
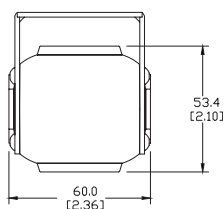
Dimensions

mm [inches]

AF-3x

*MOUNTING BRACKET INSTALLATION OPTIONAL

PART NO.	DIM A	B NPT
AF-323-A	164.0 [6.46]	
AF-323-AD	162.8 [6.41]	
AF-323-D	162.8 [6.41]	1/4
AF-323-M	164.0 [6.46]	
AF-323-MD	162.8 [6.41]	
AF-333-MD	162.8 [6.41]	3/8



Note: Unit dimensions are the same for listed models; port NPT varies based on model.

See our Web site www.AutomationDirect.com for complete Engineering drawings.



Pneumatic Air Preparation - AF2 Series Filters



Modular Assembly Example



AF2-683-D

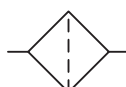
AF2-443-AN

AF2-323

AF2-213-N



Mounting bracket included.



Air Filter

NITRA® pneumatic particulate and moisture separation air filters are available with 1/8", 1/4", 3/8", 1/2", 3/4" or 1" NPT female port sizes to meet a broad range of pneumatic air supply filtration applications. Available with either a manual / semi-automatic or automatic drain. All-metal bowls with sight gauge are available in all sizes. Polycarbonate bowls with metal bowl guards are available in 2xx, 3xx and 4xx sizes, or nylon bowls with metal bowl guards. Replaceable 40-micron filter elements are standard. An optional 5-micron filter element (purchased separately and customer installable) is available when stricter filtration is required. Provided with a mounting bracket for stand-alone applications, the modular design also enables easy field assembly for combining with NITRA pneumatic regulators and lubricators (using modular assembly brackets purchased separately).

Features

- 1/8", 1/4", 3/8", 1/2", 3/4" and 1" NPT female port sizes
- 40-micron replaceable filter element standard; for stricter filtration, an optional 5-micron filter element purchased separately is easily customer installable
- All-metal bowls with sight gauge available on all sizes. Polycarbonate or nylon bowls with metal bowl guards available on 2xx, 3xx and 4xx sizes.
- Manual / semi-automatic and automatic drains available
- Mounting bracket provided for stand-alone applications
- Modular design enables easy field assembly for combining with NITRA regulators and lubricators
- 2-year warranty



See www.AutomationDirect.com for a wide variety of fitting options

AF2 Series Filters

AF2 Series Filters													
Part No.	Price	Weight (lbs)	Port Size (FNPT)	Drain Bowl	Drain Type	Fluid	Temp	Filtering Grade	Operating Pressure	Maximum Pressure	Proof Pressure	Drawing Link	
AF2-213-N	\$28.50	0.65	1/8"	25cc nylon with metal bowl guard	Manual/ Semi-Automatic	Air	-5°C to 70°C (23°F to 158°F)	40μ (5μ element can be ordered separately and field installed)	20~145psi (0.15~1.0MPa) (1.4~10.0 bar)	145psi (1.0MPa) (10.0 bar)	215psi (1.5MPa) (15 bar)	PDF	
AF2-213-D	\$35.50	0.67		25cc die-cast aluminum bowl w/ sight								PDF	
AF2-213	\$28.50	0.66		25cc polycarbonate with metal bowl guard								PDF	
AF2-223-N	\$28.50	0.64	25cc nylon with metal bowl guard	Automatic								PDF	
AF2-223-D	\$35.50	0.67	25cc die-cast aluminum bowl w/ sight										PDF
AF2-223	\$28.50	0.65	25cc polycarbonate with metal bowl guard										PDF
AF2-323-N	\$33.00	1.06	60cc nylon with metal bowl guard										PDF
AF2-323-D	\$40.50	1.1	60cc die-cast aluminum bowl w/ sight										PDF
AF2-323	\$33.00	1.08	60cc polycarbonate with metal bowl guard										PDF
AF2-323-AN	\$47.00	1.1	60cc nylon with metal bowl guard	Automatic	PDF								
AF2-323-AD	\$55.00	1.13	60cc die-cast aluminum bowl w/ sight			PDF							
AF2-323-A	\$47.00	1.12	60cc polycarbonate with metal bowl guard			PDF							

See our Web site www.AutomationDirect.com for complete Engineering drawings.



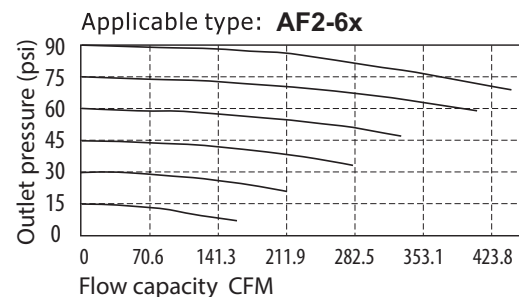
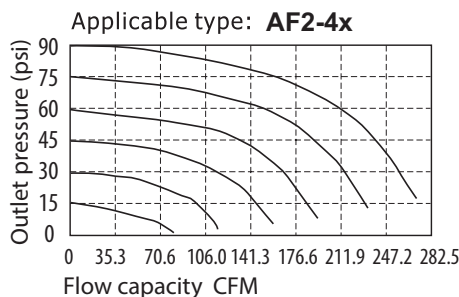
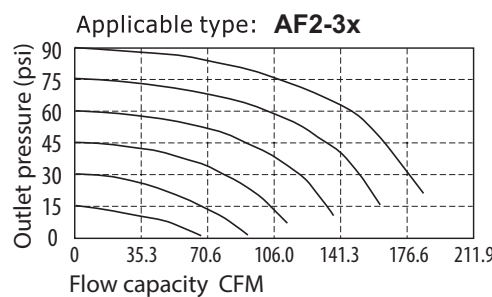
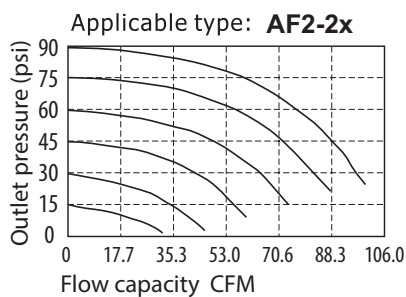
Pneumatic Air Preparation - AF2 Series Filters

AF2 Series Filters Cont.																		
Part No.	Price	Weight (lbs)	Port Size (FNPT)	Drain Bowl	Drain Type	Fluid	Temperature	Filtering Grade	Operating Pressure	Maximum Pressure	Proof Pressure	Drawing Link						
AF2-333-N	\$33.00	1.04	3/8"	60cc nylon with metal bowl guard	Manual/Semi-Automatic	Air	-5°C to 70°C (23°F to 158°F)	40μ (5μ element can be ordered separately and field installed)	20~145psi (0.15~1.0MPa) (1.4~10.0 bar)	145psi (1.0MPa) (10.0 bar)	215psi (1.5MPa) (15 bar)	PDF						
AF2-333-D	\$40.50	1.08		60cc die-cast aluminum bowl w/ sight								PDF						
AF2-333	\$33.00	1.05		60cc polycarbonate with metal bowl guard								PDF						
AF2-333-AN	\$47.00	1.07		60cc nylon with metal bowl guard	Automatic							PDF						
AF2-333-AD	\$55.00	1.11		60cc die-cast aluminum bowl w/ sight								PDF						
AF2-333-A	\$47.00	1.09		60cc polycarbonate with metal bowl guard								PDF						
AF2-443-N	\$48.50	1.74	1/2"	100cc nylon with metal bowl guard	Manual/Semi-Automatic							Air	-5°C to 70°C (23°F to 158°F)	40μ (5μ element can be ordered separately and field installed)	20~145psi (0.15~1.0MPa) (1.4~10.0 bar)	145psi (1.0MPa) (10.0 bar)	215psi (1.5MPa) (15 bar)	PDF
AF2-443-D	\$56.00	1.77		100cc die-cast aluminum bowl w/ sight														PDF
AF2-443	\$48.50	1.77		100cc polycarbonate with metal bowl guard														PDF
AF2-443-AN	\$63.00	1.77		100cc nylon with metal bowl guard	Automatic													PDF
AF2-443-AD	\$73.00	1.81		100cc die-cast aluminum bowl w/ sight														PDF
AF2-443-A	\$63.00	1.8		100cc polycarbonate with metal bowl guard														PDF
AF2-663-D	\$91.00	3.31	3/4"	205cc die-cast aluminum bowl w/ sight	Manual/Semi-Automatic	PDF												
AF2-663-AD	\$104.00	3.35		205cc die-cast aluminum bowl w/ sight	Automatic	PDF												
AF2-683-D	\$91.00	3.22	1"	205cc die-cast aluminum bowl w/ sight	Manual/Semi-Automatic	PDF												
AF2-683-AD	\$98.00	3.26		205cc die-cast aluminum bowl w/ sight	Automatic	PDF												

See our Web site www.AutomationDirect.com for complete Engineering drawings.

Performance Charts

Flow chart





Pneumatic Air Preparation - AC Series Coalescing Filters

**AC-444-AD****AC-334-N****AC-224****AC-214***Mounting bracket included.***Coalescing
Filter**

Typical installation example shows AF series particulate filter (left), AR series pressure regulator (center) and AC series coalescing filter (right).

NITRA® pneumatic coalescing air filters are available with 1/8", 1/4", 3/8" or 1/2" NPT female port sizes to meet pneumatic air supply filtration applications that require oil mist and moisture removal to provide the best performance of modern pneumatic system components. Available with either a semi-automatic/manual or automatic drain. All-metal bowls with sight gauge are available on 3xx and 4xx sizes. Polycarbonate or nylon bowls with metal bowl guards available on all sizes. Replaceable 0.3-micron filter elements are standard. An optional 0.01-micron filter element (purchased separately and customer installable) is available when stricter filtration is required. Provided with a mounting bracket for stand-alone applications, the modular design also enables easy field assembly for combining with NITRA pneumatic particulate filters and regulators (using modular assembly brackets purchased separately).

Features

- 1/8", 1/4", 3/8" and 1/2" NPT female port sizes
- 0.3-micron replaceable filter element standard; for stricter filtration an optional 0.01-micron filter element purchased separately is easily customer installable
- Polycarbonate and Nylon bowls with metal bowl guards available on all sizes. Metal bowls with sight gauge on 3xx and 4xx sizes.
- Semi-automatic/manual and automatic drains available
- Mounting bracket provided for stand-alone applications
- Modular design enables easy field assembly for combining with NITRA particulate filters and regulators
- 2-year warranty



See www.AutomationDirect.com for a wide variety of fitting options



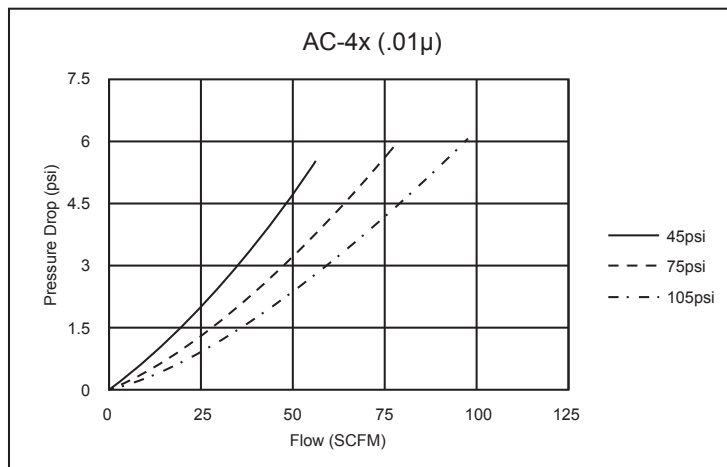
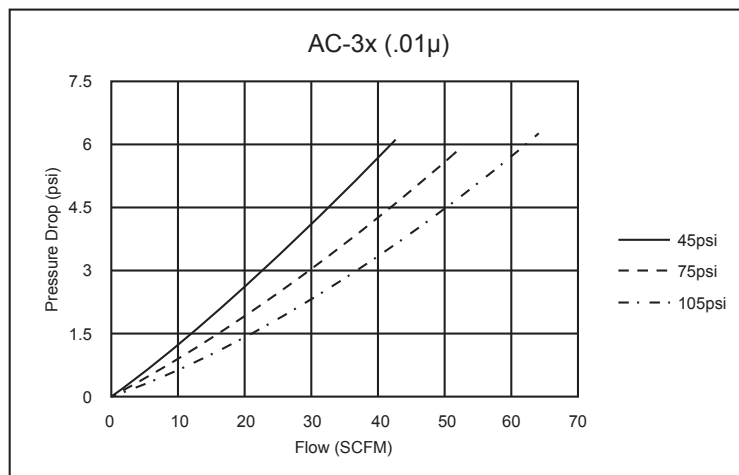
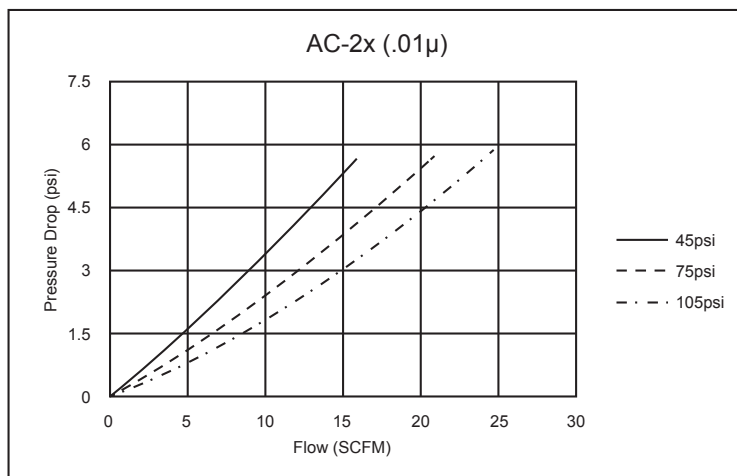
Pneumatic Air Preparation - AC Series Filters

AC Series Filters Cont.											
Part No.	Price	Weight (lbs)	Port Size (FNPT)	Drain Bowl	Drain Type	Fluid	Temperature	Filtering Grade	Operating Pressure	Maximum Pressure	Proof Pressure
AC-214	\$86.00	0.7	1/8"	19cc Polycarbonate with metal bowl guard	Manual/Semi-Automatic	Air	23~140°F (-4~60°C)	0.3μ, 99.9% efficiency (0.01μ, 99.9% efficiency element may be ordered separately and field installed)	20~145psi (0.14~1.0MPa) (1.4~10.0 bar)	145psi (1.0MPa) (10.0 bar)	215psi (1.5MPa) (15 bar)
AC-214-N	\$87.00	0.7		19cc Nylon with metal bowl guard							
AC-224	\$86.00	0.7	1/4"	19cc Polycarbonate with metal bowl guard							
AC-224-N	\$87.00	0.7		19cc Nylon with metal bowl guard							
AC-324	\$91.00	1.15		54.5cc Polycarbonate with metal bowl guard							
AC-324-N	\$94.00	1.15		54.5cc Nylon with metal bowl guard							
AC-324-D	\$95.00	1.2		54.5cc metal with sight gauge							
AC-324-A	\$119.00	1.15		54.5cc Polycarbonate with metal bowl guard	Automatic						
AC-324-AN	\$122.00	1.15		54.5cc Nylon with metal bowl guard							
AC-324-AD	\$124.00	1.2		54.5cc metal with sight gauge							
AC-334	\$91.00	1.15	3/8"	54.5cc Polycarbonate with metal bowl guard	Manual/Semi-Automatic						
AC-334-N	\$94.00	1.15		54.5cc Nylon with metal bowl guard							
AC-334-D	\$95.00	1.2		54.5cc metal with sight gauge							
AC-334-A	\$119.00	1.15		54.5cc Polycarbonate with metal bowl guard	Automatic						
AC-334-AN	\$122.00	1.15		54.5cc Nylon with metal bowl guard							
AC-334-AD	\$124.00	1.2		54.5cc metal with sight gauge							
AC-444	\$123.00	1.8	1/2"	89cc Polycarbonate with metal bowl guard	Manual/Semi-Automatic						
AC-444-N	\$127.00	1.8		89cc Nylon with metal bowl guard							
AC-444-D	\$127.00	1.8		89cc metal with sight gauge							
AC-444-A	\$152.00	1.8		89cc Polycarbonate with metal bowl guard	Automatic						
AC-444-AN	\$157.00	1.8		89cc Nylon with metal bowl guard							
AC-444-AD	\$136.00	1.8		89cc metal with sight gauge							



Pneumatic Air Preparation - AC Series Filters

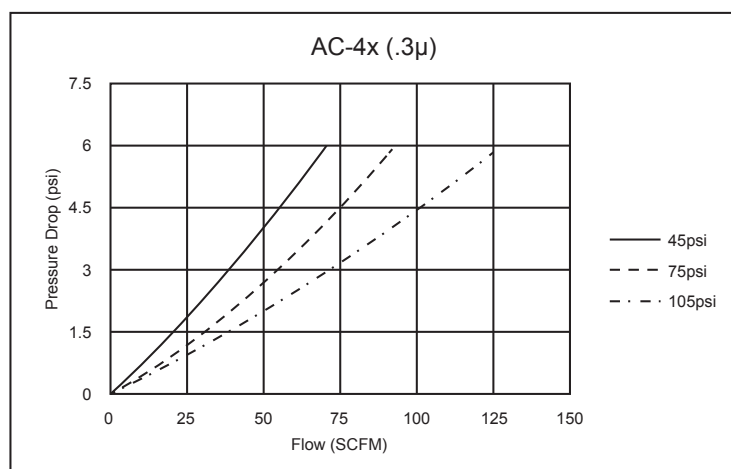
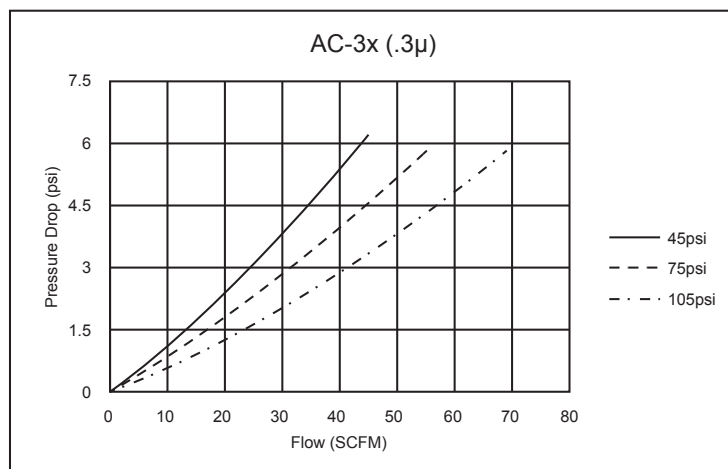
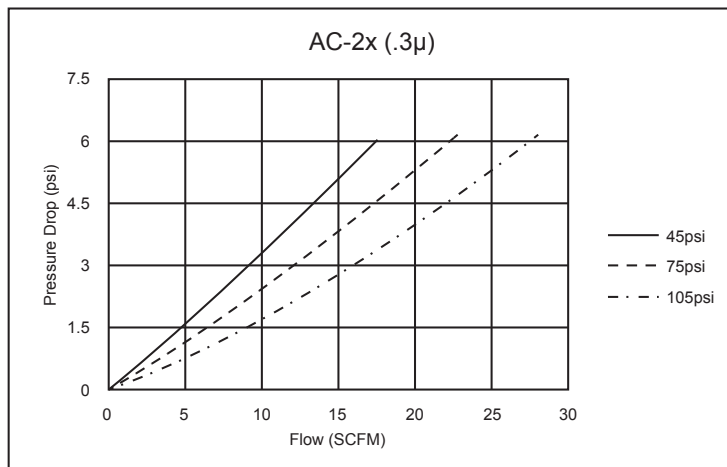
Performance Charts - .01μ Coalescing Filters





Pneumatic Air Preparation - AC Series Filters

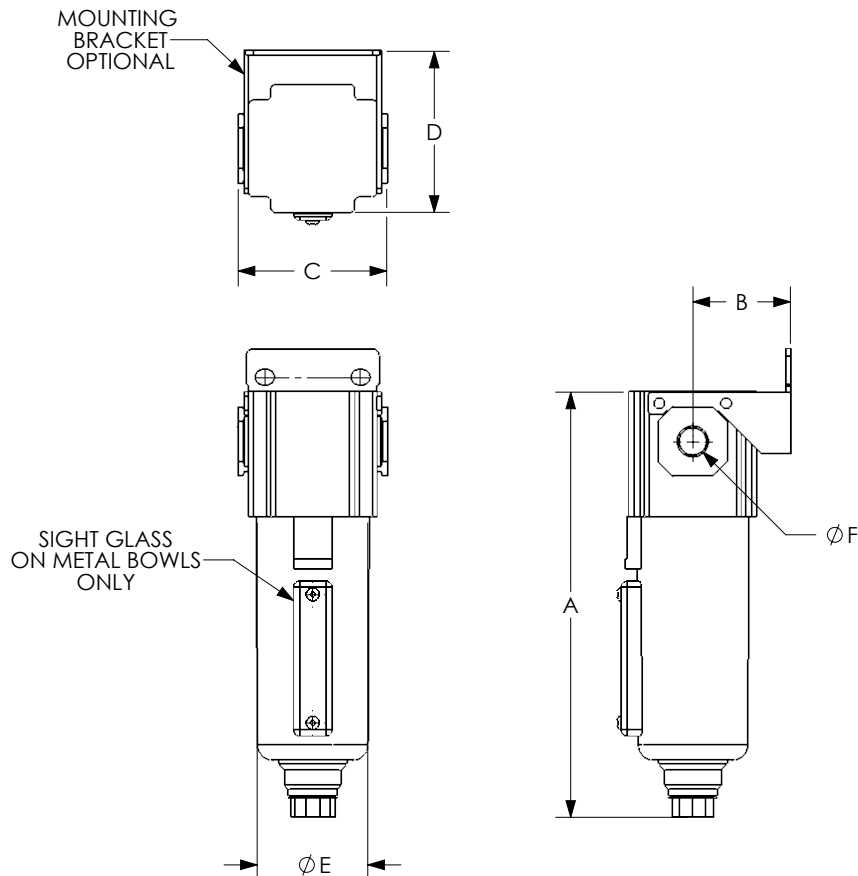
Performance Charts - .3μ Coalescing Filters





Pneumatic Air Preparation - AC Series Filters

AC Series Filter Dimensions - mm (inches)						
Part No.	A	B	C	D	ØE	ØF
AC-214	137.0 [5.39]	33.0 [1.30]	52.5 [2.07]	54.5 [2.15]	36.1 [1.42]	1/8
AC-214-N	137.0 [5.39]	33.0 [1.30]	52.5 [2.07]	54.5 [2.15]	36.1 [1.42]	1/8
AC-224	137.0 [5.39]	33.0 [1.30]	52.5 [2.07]	54.5 [2.15]	36.1 [1.42]	1/4
AC-224-N	137.0 [5.39]	33.0 [1.30]	52.5 [2.07]	54.5 [2.15]	36.1 [1.42]	1/4
AC-324	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	1/4
AC-324-N	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	1/4
AC-324-D	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	1/4
AC-324-A	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	1/4
AC-324-AN	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	1/4
AC-324-AD	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	1/4
AC-334	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	3/8
AC-334-N	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	3/8
AC-334-D	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	3/8
AC-334-A	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	3/8
AC-334-AN	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	3/8
AC-334-AD	179.0 [7.05]	41.0 [1.61]	62.5 [2.46]	67.8 [2.67]	46.5 [1.83]	3/8
AC-444	202.4 [7.97]	50.0 [1.97]	80.0 [3.15]	84.0 [3.31]	58.0 [2.28]	1/2
AC-444-N	202.4 [7.97]	50.0 [1.97]	80.0 [3.15]	84.0 [3.31]	58.0 [2.28]	1/2
AC-444-D	202.4 [7.97]	50.0 [1.97]	80.0 [3.15]	84.0 [3.31]	58.0 [2.28]	1/2
AC-444-A	202.4 [7.97]	50.0 [1.97]	80.0 [3.15]	84.0 [3.31]	58.0 [2.28]	1/2
AC-444-AN	202.4 [7.97]	50.0 [1.97]	80.0 [3.15]	84.0 [3.31]	58.0 [2.28]	1/2
AC-444-AD	202.4 [7.97]	50.0 [1.97]	80.0 [3.15]	84.0 [3.31]	58.0 [2.28]	1/2



Note: Unit dimensions are the same for listed models; port NPT varies based on model.

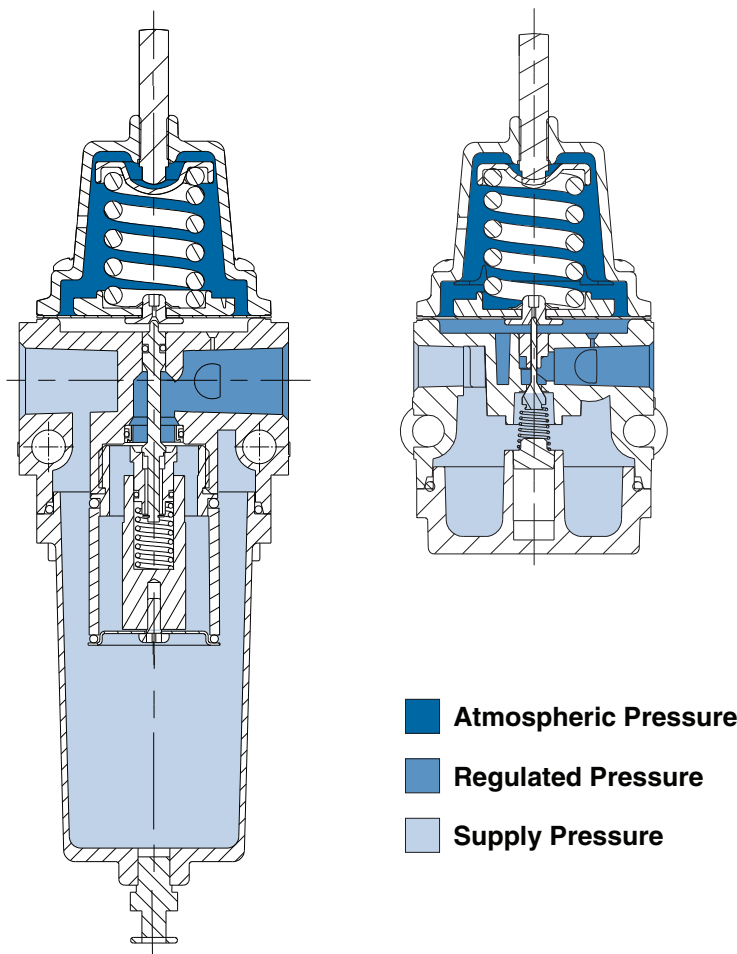
See our Web site
www.AutomationDirect.com
 for complete Engineering drawings.



Pneumatic Regulators

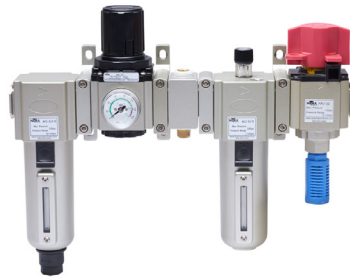
Principles of Operation - Standard vs. Precision Regulators

Turning the adjusting screw changes the force exerted by the range spring on the diaphragm assembly. In equilibrium of set pressure, the force exerted by the range spring is balanced by the force from the output pressure acting underneath the diaphragm assembly. An unbalanced state between the output pressure and the set pressure causes a corresponding reaction in the diaphragm and supply valve assemblies. If the output pressure rises above the set pressure, an upward force is exerted on the diaphragm assembly causing the relief seat to lift and open. Excess pressure is vented to atmosphere until equilibrium is reached. If the output pressure drops below the set pressure the unbalanced force of the range spring causes a downward force on the diaphragm assembly. The supply valve then opens until the pressure builds up once more to the equilibrium condition. Under forward flow conditions, the range spring force is balanced by the diaphragm pressure force, with the supply valve open just enough to maintain the required equilibrium pressure. When high flow occurs, a specially designed aspirator helps maintain downstream pressure and compensates for droop.





Pneumatic Air Preparation - AR2 Series Regulators



Modular Assembly Example



AR2-663



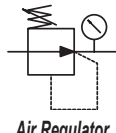
AR2-323



AR2-213



Mounting bracket included.



Air Regulator

NITRA® pneumatic air pressure regulators are available with 1/8", 1/4", 3/8", 1/2", 3/4" or 1" NPT female port sizes and adjustable pressure ranges of 7-130 psi or 7-60 psi to meet a broad range of pneumatic air supply pressure regulation applications. These regulators feature a locking pressure adjustment knob and integral pressure gauge. The regulators will relieve downstream pressure if the setpoint is reduced.

Regulators are provided with a mounting bracket for stand-alone applications. The modular design also enables easy field assembly for combining with NITRA pneumatic filters and lubricators (using modular assembly brackets purchased separately). The standard mounting orientation is with the adjustment knob up, however, they can be mounted with the adjustment knob down by moving the pressure gauge to the opposite side to maintain left-to-right flow direction.

Features

- 1/8", 1/4", 3/8", 1/2", 3/4" and 1" NPT female port sizes
- Adjustable ranges of 7-130 psi or 7-60 psi
- Locking pressure adjustment knob
- Integral pressure gauge
- Mounting bracket provided for stand-alone applications
- Modular design enables easy field assembly for combining with NITRA filters and lubricators
- 2 year warranty



See www.AutomationDirect.com for a wide variety of fitting options

AR2 Series Regulators

AR2 Series Regulators									
Part No.	Price	Weight (lbs)	Port Size (FNPT)	Fluid	Temperature	Operating Pressure	Maximum Pressure	Proof Pressure	Drawing Link
AR2-212	\$37.50	0.53	1/8"	Air	-20°C to 70°C (-4°F to 158°F)	7~60psi (0.05~0.41MPa) (0.5~4.1 bar)	60psi (0.41MPa) (4.1 bar)	215psi (1.5MPa) (15 bar)	PDF
AR2-213	\$37.50	0.54				7~130psi (0.05~0.90MPa) (0.5~9.0 bar)	130psi (0.90MPa) (9.0 bar)		PDF
AR2-222	\$37.50	0.53	1/4"			7~60psi (0.05~0.41MPa) (0.5~4.1 bar)	60psi (0.41MPa) (4.1 bar)		PDF
AR2-223	\$37.50	0.53				7~130psi (0.05~0.90MPa) (0.5~9.0 bar)	130psi (0.90MPa) (9.0 bar)		PDF
AR2-322	\$46.50	0.84				7~60psi (0.05~0.41MPa) (0.5~4.1 bar)	60psi (0.41MPa) (4.1 bar)		PDF
AR2-323	\$46.50	0.85				7~130psi (0.05~0.90MPa) (0.5~9.0 bar)	130psi (0.90MPa) (9.0 bar)		PDF
AR2-332	\$46.50	0.81				7~60psi (0.05~0.41MPa) (0.5~4.1 bar)	60psi (0.41MPa) (4.1 bar)		PDF
AR2-333	\$46.50	0.83	3/8"			7~130psi (0.05~0.90MPa) (0.5~9.0 bar)	130psi (0.90MPa) (9.0 bar)		PDF
AR2-443	\$66.00	1.58							1/2"
AR2-663	\$108.00	4.13	3/4"						PDF
AR2-683	\$108.00	4.07	1"						PDF

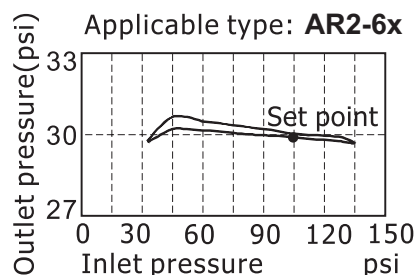
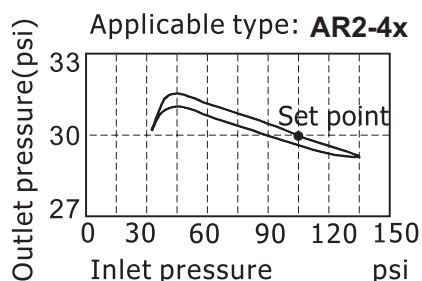
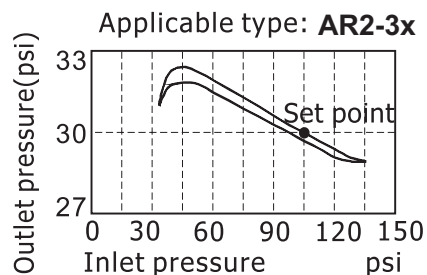
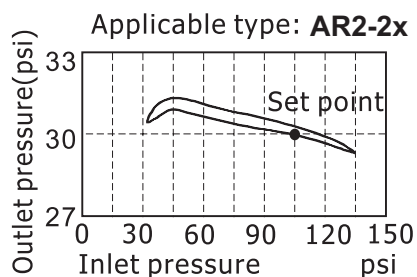
See our Web site www.AutomationDirect.com for complete Engineering drawings.



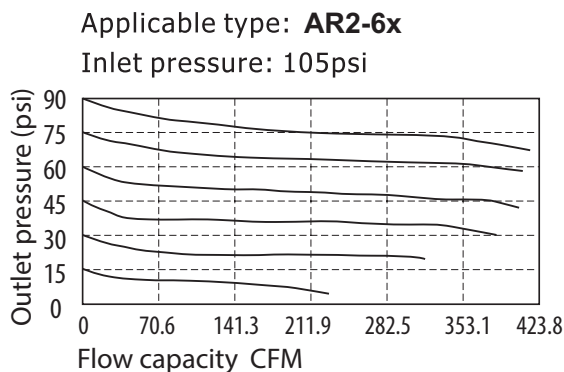
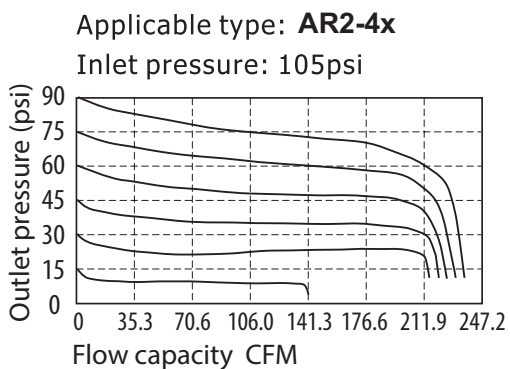
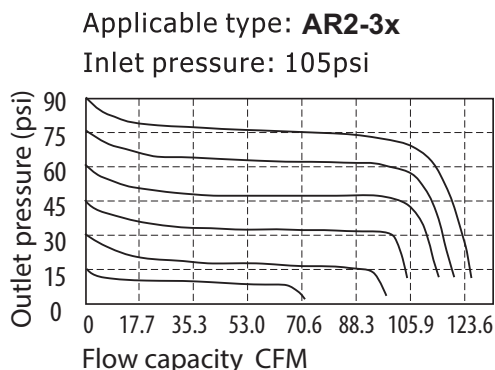
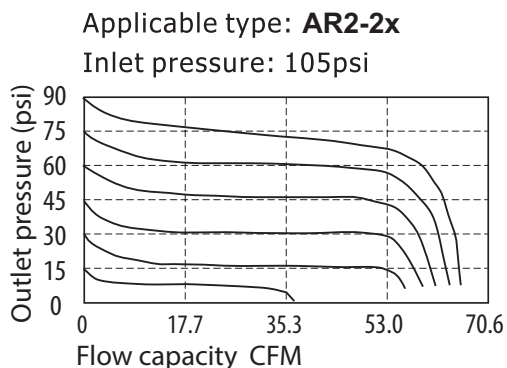
Pneumatic Air Preparation - AR2 Series Regulators

Performance Charts

Pressure chart



Flow chart





Precision Pneumatic - BR Series Regulators

NITRA® BR Series Precision Regulators are designed for use in systems that require clean, accurate instrument air. They are constructed of durable materials ideal for industrial environments.

Features

- Diecast aluminum alloy, irridite and baked epoxy finish body
- Nitrile elastomer and nylon fabric diaphragm
- Nitrile elastomer valve seat
- Additional build materials include: brass, zinc plated steel and acetal
- Mounting by pipe, bracket or through body direct
- 1/4" and 1/2" NPT ports available
- 3 pressure ranges available
- Made in the USA



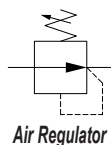
BR-323



BR-341



Mounting bracket not included.



Air Regulator



See www.AutomationDirect.com for a wide variety of fitting options

Precision Pneumatic BR Series Regulators

Part No.	Price	Weight (lbs)	Port Size (FNPT)	Fluid	Temperature	Operating Pressure	Maximum Supply Pressure	Cv	Exhaust Capacity	Sensitivity	Air Consumption	Effect of Supply Pressure Variation
BR-321	\$54.00	0.4	1/4"	Air & Inert gases	0~160°F (-18~71°C)	0-30 psi (0-0.21 MPa) (0-2 bar)	250psi (1.72 MPa) (17bar)	0.5 @ 150 psig supply and 80 psig setpoint	0.1 scfm (2.83 NI/min) with downstream pressure 5 psig (0.3 bar) above set point	1" of water	Less than 5 scfh (2.5 NI/min)	Less than 0.25 psig (0.017 bar) for 25 psig (1.7 bar) change
BR-322	\$54.00	0.4	1/4"			0-60 psi (0-0.41 MPa) (0-4 bar)						
BR-323	\$54.00	0.4	1/4"			0-120 psi (0-0.83 MPa) (0-8 bar)						
BR-341	\$99.00	0.4	1/2"			0-30 psi (0-0.21 MPa) (0-2 bar)		2.5 @ 150 psig supply and 80 psig setpoint				Less than 0.5 psig (0.035 bar) for 25 psig (1.7 bar) change
BR-342	\$99.00	0.4	1/2"			0-60 psi (0-0.41 MPa) (0-4 bar)						
BR-343	\$99.00	0.4	1/2"			0-120 psi (0-0.83 MPa) (0-8 bar)						

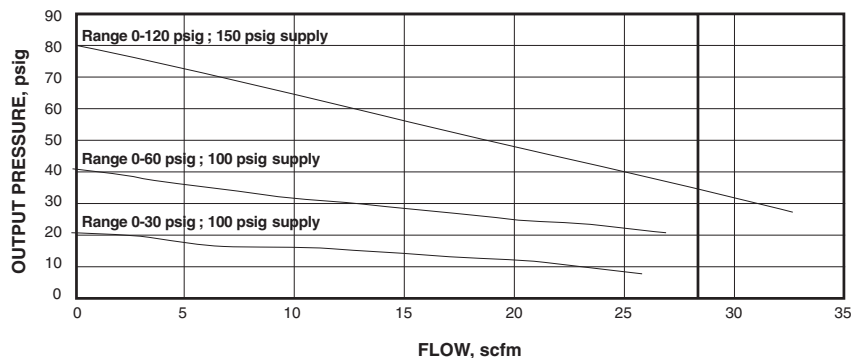
Note: A filter (40 micron or less) is recommended ahead of regulator. If lubricator is used, it should be downstream of regulator.



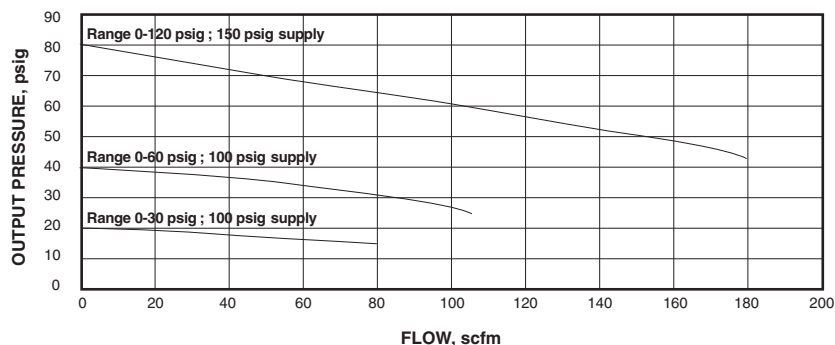
Precision Pneumatic - BR Series Regulators

Performance Charts

BR 1/4" NPT



BR 1/2" NPT



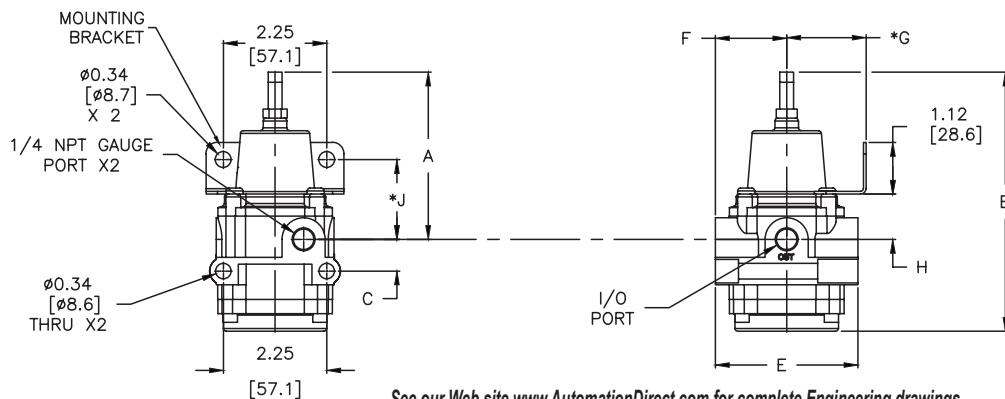
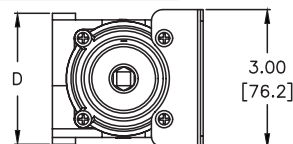
Dimensions

Inches [mm]

BR-X

PART NUMBER	A	B	C	D	E	F	G	H	J	I/O PORT	PSI RANGE
BR-321	3.64	5.64	.69	2.84	3.10	1.55	1.73	.98	1.73	1/4	0-30
BR-322	[92.4]	[143.2]	[17.5]	[72.2]	[78.7]	[39.4]	[43.9]	[25.0]	[44.1]		0-60
BR-323											0-120
BR-341	3.72	5.83	.70	2.87	3.00	1.50	1.73	1.15	1.90	1/2	0-30
BR-342	[94.6]	[148.2]	[17.8]	[73.0]	[76.2]	[38.0]	[44.1]	[29.2]	[48.3]		0-60
BR-343											0-120

*MOUNTING BRACKET
INSTALLATION OPTIONAL



See our Web site www.AutomationDirect.com for complete Engineering drawings.



Precision Pneumatic BR Series Accessories

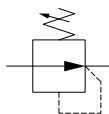
Part No.	Price	Description	Material	Weight (lbs)
BBKT-3	\$8.50	NITRA mounting bracket. For use with BFR-3 and BR-3 series air prep components.	Plated Steel	0.1



Precision Pneumatic - CR Series Regulators

**CR-735**

Mounting bracket not included.



Air Regulator

NITRA® CR Series Precision Regulators are designed for applications that require high flow capacity and accurate process control. A poppet valve balanced by a rolling diaphragm insures a constant output pressure even during wide supply pressure variations. Stability of regulated pressure is maintained under varying flow conditions through the use of an aspirator tube which adjusts the air supply in accordance with the flow velocity.

Features

- Diecast aluminum alloy body
- Stainless steel, brass, plated steel, and acetal internal components
- Buna-N elastomer, polyester fabric diaphragm
- Mounting by pipe or bracket
- High flow capacity
- High relief capacity
- 1/4", 3/8", and 1/2" NPT ports
- 2 pressure ranges available
- Made in the USA



See www.AutomationDirect.com for a wide variety of fitting options

Precision Pneumatic CR Series Regulators

Part No.	Price	Weight (lbs)	Port Size (FNPT)	Fluid	Temperature	Operating Pressure	Maximum Supply Pressure	Exhaust Capacity	Sensitivity	Air Consumption	Effect of Supply Pressure Variation
CR-724	\$99.00	1.5	1/4"	Air & Inert gases	-40~160°F (-40~71°C)	0-2 psi (0-0.14 MPa) (0-0.15 bar)	250psi (1.72 MPa) (17bar)	4 scfm (120 NI/min) with downstream pressure 5 psig (0.3 bar) above set point	1/8" [3.2mm] of water	Steady State: From 1.0 to 12.5 scfh (30 to 375 NI/min), depending on output pressure range	Less than 0.1 psi (0.007 bar) for 100 psi (6.7 bar) change
CR-725	\$92.00	1.5	1/4"			0-150 psi (0-1.03 MPa) (0-10 bar)					
CR-734	\$97.00	1.5	3/8"			0-2 psi (0-0.14 MPa) (0-0.15 bar)					
CR-735	\$92.00	1.5	3/8"			0-150 psi (0-1.03 MPa) (0-10 bar)					
CR-744	\$115.00	1.5	1/2"			0-2 psi (0-0.14 MPa) (0-0.15 bar)					
CR-745	\$110.00	1.5	1/2"			0-150 psi (0-1.03 MPa) (0-10 bar)					

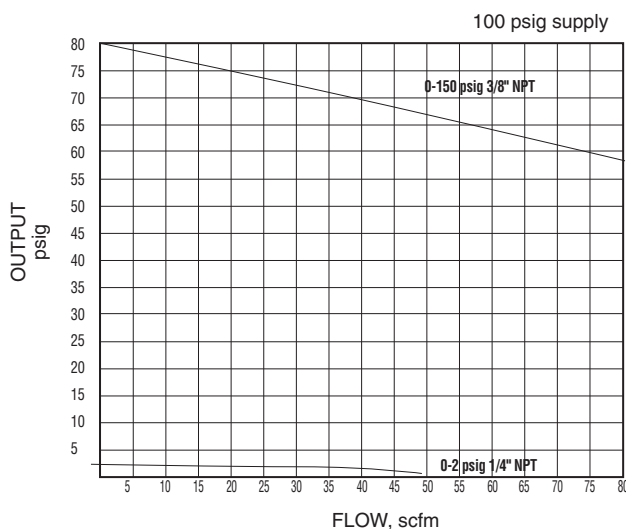
Note: A filter (40 micron or less) is recommended ahead of regulator. If lubricator is used, it should be downstream of regulator.



Precision Pneumatic - CR Series Regulators

Performance Chart

CR-X



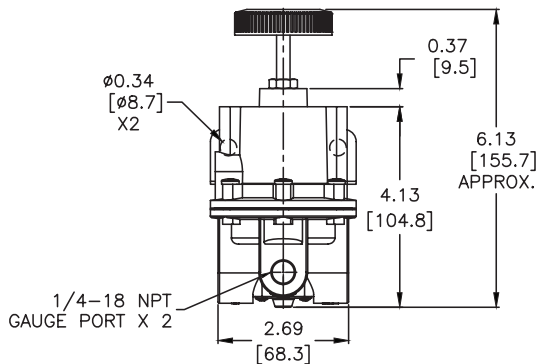
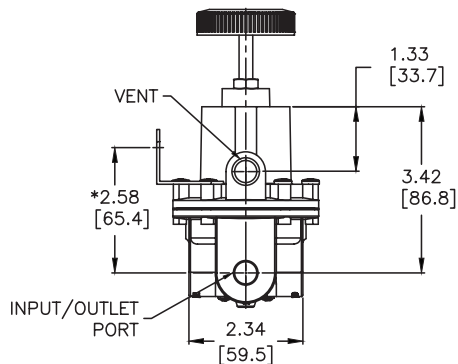
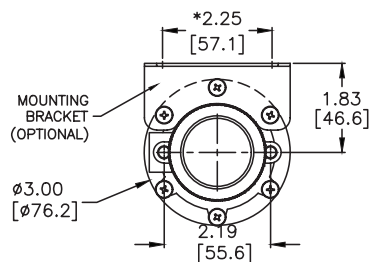
Dimensions

Inches [mm]

CR-X

PART NUMBER	PRESSURE RANGE PSI	INLET/OUTLET PORT SIZE
CR-724	0-2	1/4
CR-725	0-150	1/4
CR-734	0-2	3/8
CR-735	0-150	3/8
CR-744	0-2	1/2
CR-745	0-150	1/2

*DIMENSIONS TO MOUNTING HOLES FOR OPTIONAL BRACKET



See our Web site www.AutomationDirect.com for complete Engineering drawings.



Precision Pneumatic CR Series Accessories				
Part No.	Price	Description	Material	Weight (lbs)
CBKT-7	\$8.50	NITRA mounting bracket. For use with CR-7 series air prep components.	Plated Steel	0.1



Precision Pneumatic - DR Series Regulators

**DR-126**

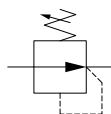
NITRA® DR Series Precision Regulators are well suited for processes that require precise regulation of air pressure in pipes and vessels. The DR Series is often used for: precision fluid control, air gauging, gas mixing, calibration standards, gate actuators, cylinder loading, and web tensioning.

Features

- Diecast zinc alloy body
- Stainless steel, brass, plated steel, and acetal internal components
- Buna-N elastomer, polyester fabric diaphragm
- Mounting by pipe or bracket
- (2) 1/4" NPT gauge ports
- 1/4" and 3/8" NPT ports
- Made in the USA



Mounting bracket not included.



Air Regulator



See www.AutomationDirect.com for a wide variety of fitting options

Precision Pneumatic DR Series Regulators

Part No.	Price	Weight (lbs)	Port Size (FNPT)	Fluid	Temperature	Operating Pressure	Maximum Supply Pressure	Pilot Pressure Chamber Bleed Rate	Exhaust Capacity	Sensitivity	Air Consumption	Effect of Supply Pressure Variation
<u>DR-123</u>	\$114.00	1.4	1/4"	Air & Inert gases	-20~160°F (-29~71°C)	2-120 psi (0.014-0.83 MPa) (0.138-8.27 bar)	150psi (1.03 MPa) (10.5 bar)	less than 0.08 scfm (2.4 NI/min)	3 scfm (90 NI/min) with downstream pressure 5 psig (0.3 bar) above set point	1/8" [3.2mm] of water	6 scfh (3 NI/min)	Less than 0.005 psi (0.003 bar) for 25 psig (1.7 bar) change
<u>DR-126</u>	\$135.00	1.4	1/4"			0.5-25 psi (0.003-0.17 MPa) (0.03-1.72 bar)	50psi (0.34 MPa) (3.4 bar)					
<u>DR-133</u>	\$114.00	1.4	3/8"			2-120 psi (0.014-0.83 MPa) (0.138-8.27 bar)	150psi (1.03 MPa) (10.5 bar)					

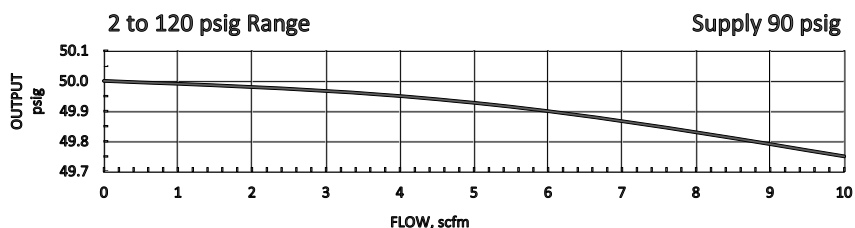
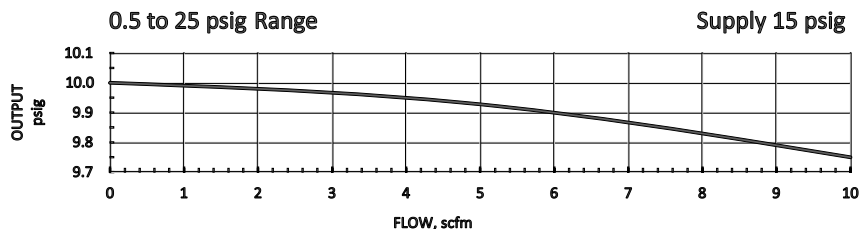
Note: A filter (40 micron or less) is recommended ahead of regulator. If lubricator is used, it should be downstream of regulator.



Precision Pneumatic - DR Series Regulators

Performance Charts

DR-X



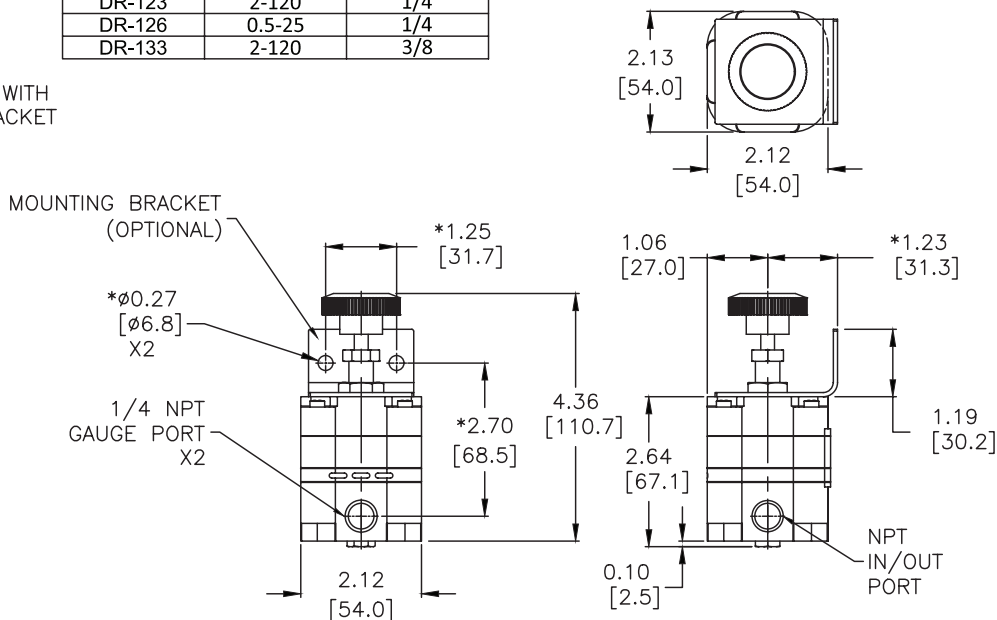
Dimensions

Inches [mm]

DR-X

PART NUMBER	PRESSURE RANGE PSI	INLET/OUTLET PORT SIZE NPT
DR-123	2-120	1/4
DR-126	0.5-25	1/4
DR-133	2-120	3/8

*DIMENSIONS WITH OPTIONAL BRACKET INSTALLED



See our Web site www.AutomationDirect.com for complete Engineering drawings.



Precision Pneumatic DR Series Accessories				
Part No.	Price	Description	Material	Weight (lbs)
DBKT-1	\$12.00	NITRA mounting bracket. For use with DR-1 series air prep components.	Plated Steel	0.1



Precision Pneumatic - ER Series Regulators

**ER-913**

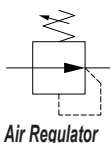
NITRA® ER Series Precision Regulators are miniature regulators that are designed to provide the highest level of regulation accuracy and repeatability available in a compact, lightweight housing. A force balanced pilot control maintains output pressure to within 0.05 psig (3.44 millibar) with minimal drift over time. They are ideal for applications that require exact pressure control and substantial flow capacity under variable operating conditions with limited space.

Features

- Diecast aluminum alloy, chromate and epoxy paint housing
- Nitrile elastomers
- Brass, aluminum, stainless steel and zinc plated internals
- Mounting by pipe or bracket
- (2) 1/8" NPT gauge ports
- Made in the USA



Mounting bracket not included.



Air Regulator



See www.AutomationDirect.com for a wide variety of fitting options

Precision Pneumatic ER Series Regulators

Part No.	Price	Weight (lbs)	Port Size (FNPT)	Fluid	Temperature	Operating Pressure	Supply Pressure Sensitivity	Maximum Supply Pressure	Exhaust Capacity	Sensitivity	Air Consumption	Repeatability
ER-911	\$85.00	0.4	1/8"	Air & Inert gases	0~160°F (-18~71°C)	0.7-30 psig (0.005-0.21 MPa) (0.048-2.07 bar)	0.5 psig (0.034 bar) for a 100 psig (6.9 bar) change	150psi (1.03 MPa) (10.5 bar)	7 scfm (199 NI/min)	1/4" [6.4mm] of water	6 scfh (170 NI/hr) @ 150psig (10 bar) supply	±0.3% of span
ER-913	\$85.00	0.4	1/8"			1.4-120 psig (0.010-0.83 MPa) (0.138-8.27 bar)						

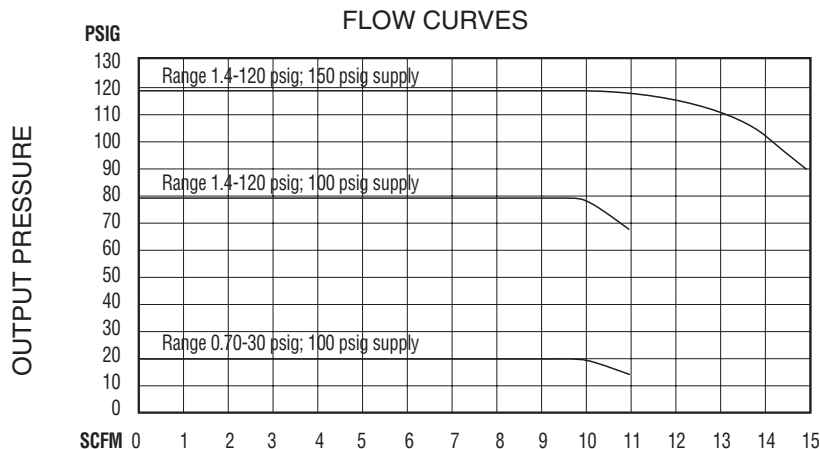
Note: A filter (40 micron or less) is recommended ahead of regulator. If lubricator is used, it should be downstream of regulator.



Precision Pneumatic - ER Series Regulators

Performance Charts

ER-X



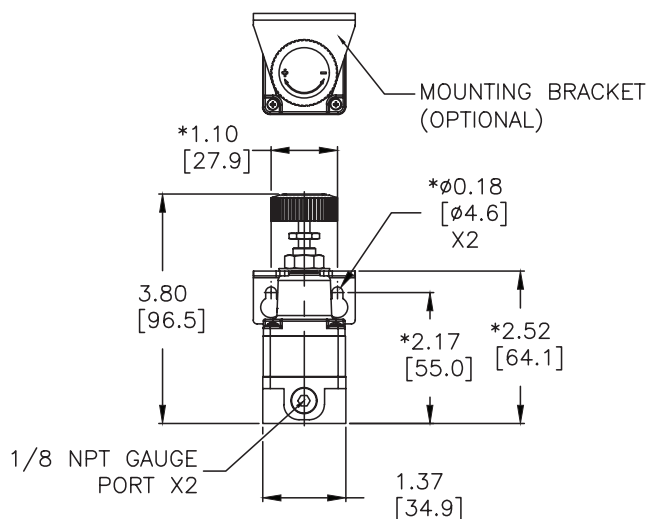
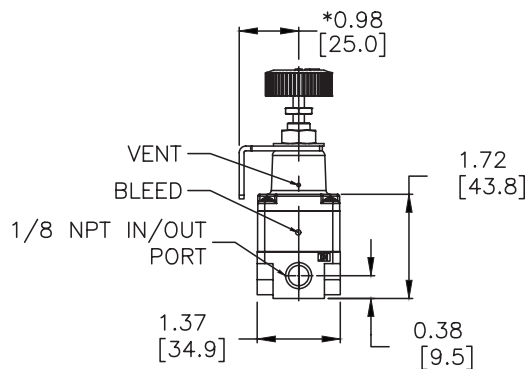
Dimensions

Inches [mm]

ER-X

PART NUMBER	PRESSURE RANGE PSI
ER-911	0.7-30
ER-913	1.4-120

*DIMENSIONS FOR
OPTIONAL BRACKET



See our Web site www.AutomationDirect.com for complete Engineering drawings.



Precision Pneumatic ER Series Accessories				
Part No.	Price	Description	Material	Weight (lbs)
EBKT-9	\$9.75	NITRA mounting bracket. For use with ER-9 series air prep components.	Plated Steel	0.1



Electropneumatic Transducers (I/P)

NCP1 Series



Part No. [NCP1-20-315N](#)



See www.AutomationDirect.com for a wide variety of fitting options

NITRA® NCP1 Series electropneumatic transducers (I/P) convert a 4-20 mA current signal(I) from a PLC or other controller to a linear pneumatic output pressure(P). Used in paper and paper converting, food and drug, petrochemical, HVAC, textile, and energy management industries, the NCP1 Series provides highly reliable and repeatable operation of pneumatic valve positioners, valve actuators, air cylinders, damper and louver actuators, web tensioners, clutches and brakes. The NCP1 Series is available in several output pressure ranges and includes an integral volume booster for high flow applications.

The NCP1 transducer housing can be direct or bracket mounted, comes with additional output ports for use with a pressure gauge, a 1/2" NPT female conduit connection with wire leads, and is NEMA 4X (IP65) rated for installation in NEMA 4X (IP65) environments. The NCP1 Series comes standard with Factory Mutual (FM) approval for intrinsically safe applications.

Features

- 4-20 mA input compatible with PLCs and other controllers
- Several output pressure ranges applicable for industrial pneumatic and process control applications
- Additional output ports for use with a pressure gauge
- 1/2" NPT female conduit connection with wire leads
- Direct or bracket mounting (bracket included)
- Zero and span adjustments
- Integrated volume booster
- Low air consumption
- Split ranging (3-15 psig model)
- FM Approved for Hazardous Locations
- Made in the USA



**Made
in the
USA**

NCP1 Series I/P Transducers					
Part Number	Price	Weight (lbs)	Input	Output Range	
				psig	bar
NCP1-20-315N	\$393.00	2.5	4-20 mA	3-15	0.2-1.0
NCP1-20-327N	\$393.00	2.5	4-20 mA	3-27	0.2-1.9
NCP1-20-630N	\$393.00	2.5	4-20 mA	6-30	0.4-2.0
NCP1-20-260N	\$393.00	2.5	4-20 mA	2-60*	0.14-4.0
NCP1-20-3120N	\$393.00	2.5	4-20 mA	3-120*	0.2-8.0

* Output shown is as calibrated at the factory. Large span adjustment capability allows recalibration to achieve output ranges of 3-35 psig (0.2-2.4 bar) with 2-60 psig unit or 3-145 psig (0.2-10 bar) with 3-120 psig unit.



Electropneumatic Transducers (I/P)

NCP1 Series

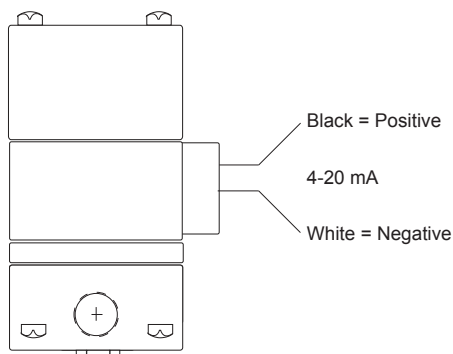
NCP1 Series I/P Transducers					
Part No.	<i>NCP1-20-315N</i>	<i>NCP1-20-327N</i>	<i>NCP1-20-630N</i>	<i>NCP1-20-260N</i>	<i>NCP1-20-3120N</i>
Functional Specifications					
Input	4-20 mA				
Outputs (psig - bar)	3-15* (0.2-1.0)	3-27 (0.2-1.8)	6-30 (0.4-2.0)	2-60 (0.14-4.0)	3-120 (0.2-8.0)
Supply Pressure (psig - bar)	18 min - 100 max (1.2 min - 6.7 max)	30 min - 100 max (2.0 min - 6.7 max)	33 min - 100 max (2.2 min - 6.7 max)	65 min - 150 max (4.3 min - 10.0 max)	125 min - 150 max (8.3 min - 10.0 max)
Air Consumption	0.05 scfm (1.4 NI/min) midrange typical			0.07 scfm (2 NI/min) midrange typical	
Flow Capacity	4.5 scfm (127 NI/min) at 25 psig (1.7 bar) supply 12.0 scfm (340 NI/min) at 100 psig (6.8 bar) supply			20.0 scfm (566 NI/min) at 150 psig (10.5 bar) supply	
Exhaust Capacity	2 scfm (56.6 NI/min) at 5 psig (0.34 bar) above 20 psig (1.3 bar) setpoint			7 scfm (198 NI/min) at 10 psig (0.7 bar) above 20 psig (1.3 bar) setpoint	
Temperature Limits	-20°F to +140°F (-30°C to +60°C)				
Impedance	180 Ohms	220 Ohms	220 Ohms	225 Ohms	260 Ohms
Performance Specifications**					
Linearity	<± 0.75% of span			<± 1.5% of span typical, ± 2.0% max.	
Hysteresis and Repeatability	< 1.0% of span; < 0.5% of span			< 0.5% of span; < 0.5% of span	
Supply Pressure Sensitivity	<± 0.1% of span per psig (<± 0.15% of span per 0.1 bar)			<± 0.04% of span per 1.0 psig (0.07 bar)	
Physical Specifications					
Pneumatic Port Sizes	1/4" NPT female				
Media	Oil free, clean dry air filtered to 40 micron				
Electrical Connections	Conduit 1/2" NPT female with 12" wire leads				
Mounting	Direct or bracket (bracket included)				
Housing	Chromate-treated aluminum with epoxy paint. NEMA 4X (IP65)				
Elastomers	Buna-N				
Trim	Stainless steel; brass; zinc-plated steel				
Environmental Ratings	NEMA 4X / IP65				
Approvals	FM (Haz-Loc)***				

* Can be recalibrated to provide 3-9 psig or 9-15 psig for split ranging applications.

** The unit must be calibrated in the plane it is mounted in.

*** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

Wiring





A detailed cross-sectional diagram of a piezoelectric injector. The diagram shows the internal components and fluid paths. Labels with green arrows point to the following parts:

- Magnet
- Coil
- Circuit Board
- Flexure
- Nozzle
- Fixed Orifice
- Exhaust Port
- Exhaust Valve
- Supply Valve

A legend on the right side of the diagram defines the pressure levels represented by different shading patterns:

- Pilot Pressure (light gray)
- Supply Pressure (hatched pattern)
- Atmospheric Pressure (medium gray)
- Output Pressure (dark gray)

inches [mm]



Electropneumatic Transducers (I/P)

NCP2 Series

Part No. [NCP2-20-315D](#)Part No. [NCP2-20-315N](#)

See www.AutomationDirect.com for a wide variety of fitting options

NITRA® NCP2 Series electropneumatic transducers (I/P) convert a 4-20 mA current signal(I) from a PLC or other controller to a linear pneumatic output pressure(P). Used in paper and paper converting, food and drug, petrochemical, HVAC, textile, and energy management industries, the NCP2 Series provides highly reliable and repeatable operation of pneumatic valve positioners, valve actuators, air cylinders, damper and louver actuators, web tensioners, clutches and brakes. The NCP2 Series is available in several output pressure ranges and includes an integral volume booster for high flow applications.

The NCP2 compact transducer housing is an excellent solution for space-constrained or high density panel installations and is NEMA 4X (IP65) rated for installation in NEMA 4X (IP65) environments. These transducers can be direct or bracket mounted and optional pipe and DIN rail mounting kits are also available. Models are offered with either a 1/2" NPT female conduit connection with wire leads or a field wireable DIN 43650 electrical connector. The NCP2 Series comes standard with Factory Mutual (FM) and CSA approval for intrinsically safe applications.

Features

- Compact transducer housing
- 4-20 mA input compatible with PLCs and other controllers
- Several output pressure ranges applicable for industrial pneumatic and process control applications
- Flexible pneumatic connection with input/output pressure ports on front and back
- Models with 1/2" NPT female conduit connection and wire leads or field wireable DIN 43650 electrical connector
- Direct or bracket mounting (bracket included)
- Optional pipe and DIN rail mounting kits available
- Zero and span adjustments
- Integrated volume booster
- Low air consumption
- FM and CSA Approved for Hazardous Locations
- Made in the USA



Made in the USA

NCP2 Series I/P Transducers						
Part Number	Price	Weight (lbs)	Input	Electrical Connection	Output Range	
					psig	bar
NCP2-20-315N	\$377.00	1.6	4-20 mA	1/2" female NPT with 12" wire leads	3-15	0.2-1.0
NCP2-20-327N	\$377.00	1.6	4-20 mA	1/2" female NPT with 12" wire leads	3-27	0.2-1.9
NCP2-20-630N	\$377.00	1.6	4-20 mA	1/2" female NPT with 12" wire leads	6-30	0.4-2.0
NCP2-20-260N	\$377.00	1.6	4-20 mA	1/2" female NPT with 12" wire leads	2-60*	0.14-4.0
NCP2-20-3120N	\$377.00	1.6	4-20 mA	1/2" female NPT with 12" wire leads	3-120*	0.2-8.0
NCP2-20-315D	\$384.00	2.5	4-20 mA	DIN 43650 Connector	3-15	0.2-1.0
NCP2-20-327D	\$384.00	2.5	4-20 mA	DIN 43650 Connector	3-27	0.2-1.9
NCP2-20-630D	\$384.00	2.5	4-20 mA	DIN 43650 Connector	6-30	0.4-2.0
NCP2-20-260D	\$384.00	2.5	4-20 mA	DIN 43650 Connector	2-60*	0.14-4.0
NCP2-20-3120D	\$442.00	2.5	4-20 mA	DIN 43650 Connector	3-120*	0.2-8.0

* Output shown is as calibrated at the factory. Large span adjustment capability allows recalibration to achieve output ranges of 3-35 psig (0.2-2.4 bar) with 2-60 psig unit or 3-145 psig (0.2-10 bar) with 3-120 psig unit.



Electropneumatic Transducers (I/P)

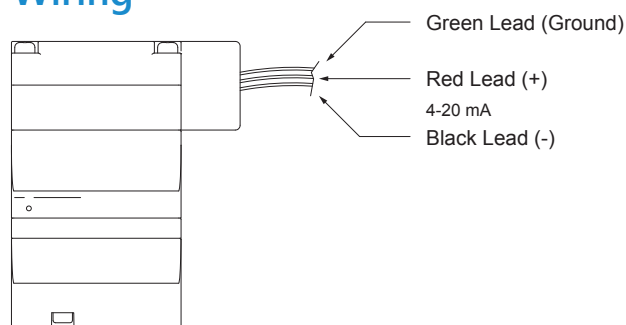
NCP2 Series

Part No.	<u>NCP2-20-315N</u> <u>NCP2-20-315D</u>	<u>NCP2-20-327N</u> <u>NCP2-20-327D</u>	<u>NCP2-20-630N</u> <u>NCP2-20-630D</u>	<u>NCP2-20-260N</u> <u>NCP2-20-260D</u>	<u>NCP2-20-3120N</u> <u>NCP2-20-3120D</u>
Functional Specifications					
Input	4-20 mA				
Outputs (psig - bar)	3-15 (0.2-1.0)	3-27 (0.2-1.8)	6-30 (0.4-2.0)	2-60 (0.14-4.0)	3-120 (0.2-8.0)
Supply Pressure (psig - bar)	20 min - 100 max (1.3 min - 6.7 max)	32 min - 100 max (2.1 min - 6.7 max)	35 min - 100 max (2.3 min - 6.7 max)	65 min - 150 max (4.3 min - 10.0 max)	125 min - 150 max (8.3 min - 10.0 max)
Air Consumption	0.03 scfm (0.9 NL/min) at mid range typical			0.07 scfm (2 NL/min) at mid range typical	
Flow Capacity	4.5 scfm (127 NL/min) at 25 psig (1.7 bar) supply pressure 12.0 scfm (340 NL/min) at 100 psig (6.9 bar) supply pressure			12.0 scfm (340 NL/min) at 100 psig (6.9 bar) supply pressure	20.0 scfm (566 NL/min) at 150 psig (10.0 bar) supply pressure
Exhaust Capacity	2 scfm (56.6 NL/min) at 5 psig (0.34 bar) above 20 psig (1.3 bar) setpoint			7 scfm (198 NL/min) at 10 psig (0.7 bar) above 20 psig (1.3 bar) setpoint	
Temperature Limits	-40°F to 158°F (-40°C to +70°C)				
Impedance	180 Ohms	240 Ohms	240 Ohms	245 Ohms	280 Ohms
Performance Specifications*					
Linearity	<± 0.5% of span			<± 2.0% of span	
Hysteresis and Repeatability	< 0.5% of span			< 0.5% of span	
Supply Pressure Sensitivity	< 0.1% of span per 1.0 psig (0.07 bar)			< 0.4% of span per 1.0 psig (0.07 bar)	
Physical Specifications					
Pneumatic Port Sizes	1/4" NPT female				
Media	Clean, dry, oil-free, instrument air, filtered to 40 micron				
Electrical Connections	Conduit 1/2" NPT female with 12" wire (NCP2-20-xxx-N) leads or DIN 43650 (NCP2-20-xxxD)				
Mounting	Direct, bracket (bracket included), optional 1-1/2" / 2" pipe mount kit (<u>NCP2-P</u>) or optional DIN rail mount kit (<u>NCP2-D</u>)				
Housing	Chromate-treated aluminum with epoxy paint. NEMA 4X (IP65)				
Elastomers	Buna-N				
Trim	Stainless steel; brass; zinc-plated steel				
Environmental Ratings	NEMA 4X / IP65				
Approvals	CSA File # 269584, FM (Haz-Loc)**				

* The unit must be calibrated in the plane it is mounted in.

** To obtain the most current agency approval information, see the Agency Approval Checklist section on the specific part number's web page.

Wiring



NCP2-20-xxxN units with wire leads



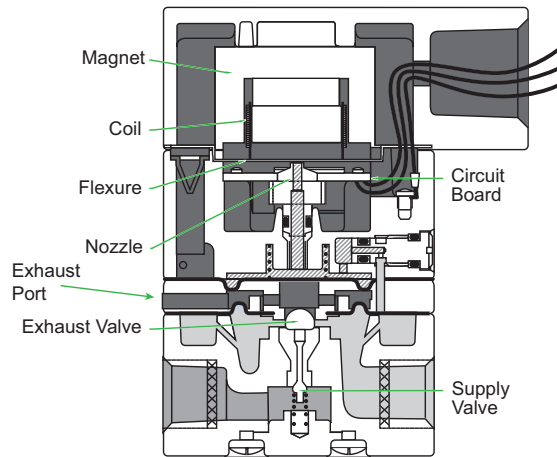
NCP2-20-xxxD units with DIN 43650 Connector

Terminal	4-20 mA Connection
1	Positive (+)
2	Negative (-)
3	Not Used
\perp	Ground (\perp)



Electropneumatic Transducers (I/P)

NCP2 Series

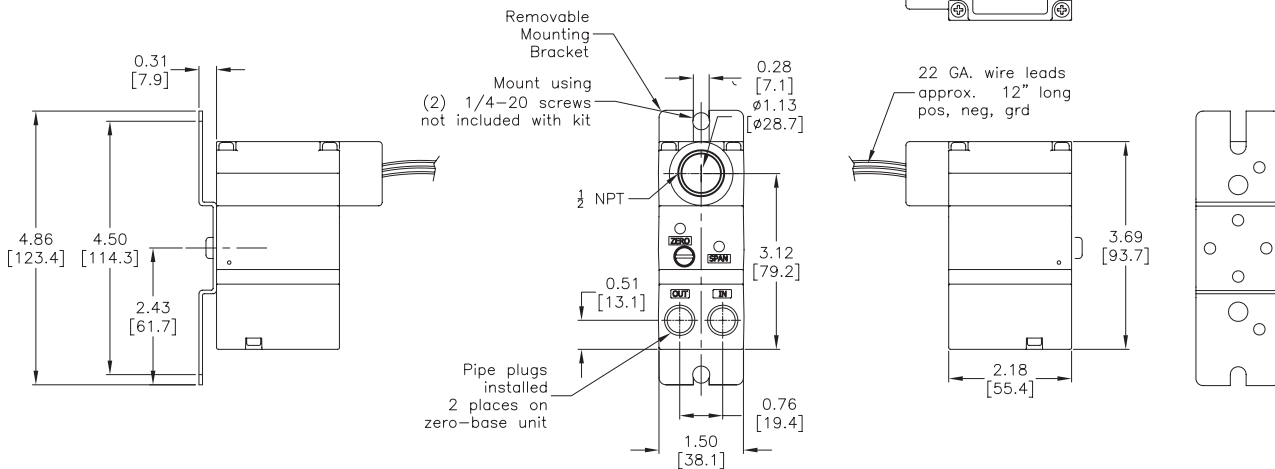


- Supply Pressure
- Output Pressure
- ▨ Pilot Pressure
- Atmospheric Pressure

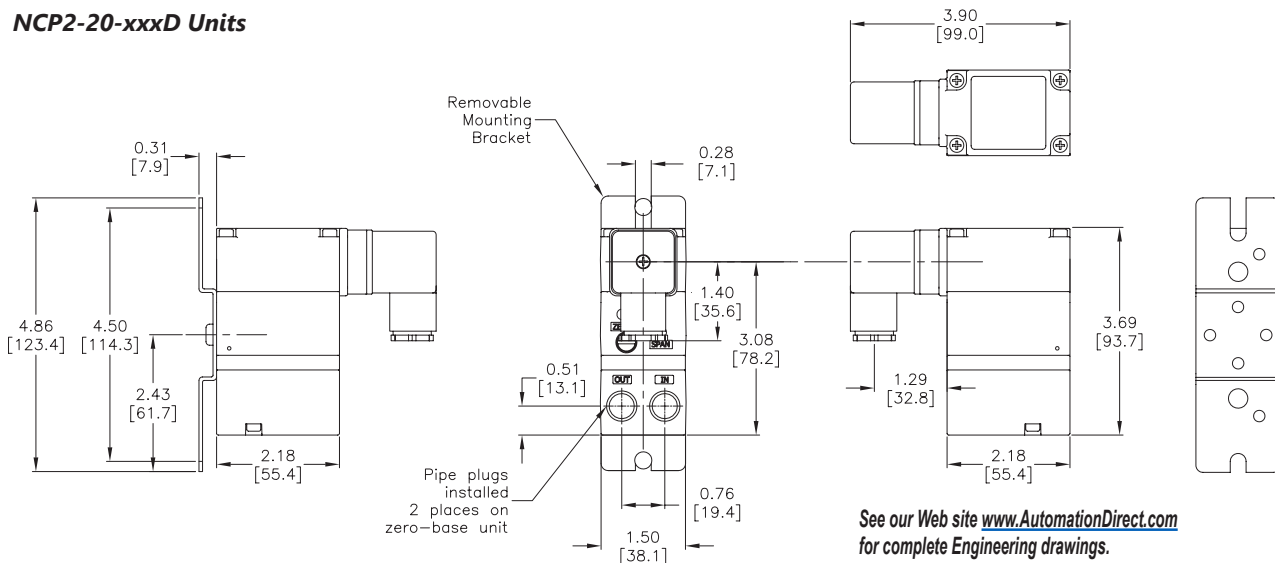
Dimensions

inches [mm]

NCP2-20-xxxN Units



NCP2-20-xxxD Units



See our Web site www.AutomationDirect.com for complete Engineering drawings.



Electropneumatic Transducers (I/P)

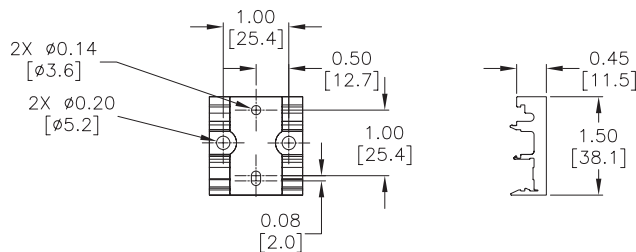
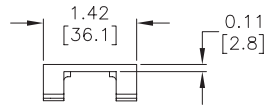
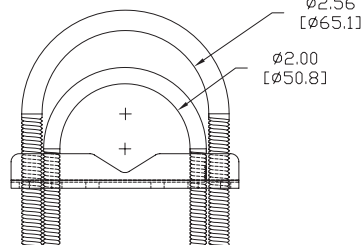
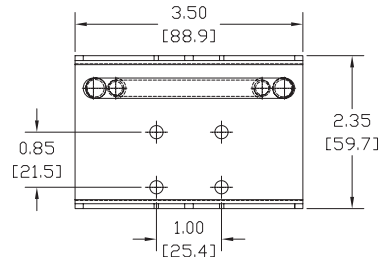
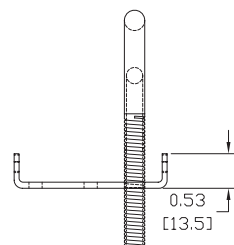
NCP2 Series - Accessories

Part No. NCP2-DPart No. NCP2-P

NCP2 Series I/P Transducers Accessories			
Part Number	Description	Price	Weight (lbs)
<u>NCP2-D</u>	NITRA DIN rail mount adapter, for use with NCP2 series IP transducers. Includes: 1) Bracket 2) 10-32 Machine Screws 2) 6-32 Machine Screws	\$7.75	0.1
<u>NCP2-P</u>	NITRA pipe mounting hardware, for use with NCP2 series IP transducers. Includes: 1) Bracket 2) 2.0 inch U-Bolt w/nuts 2) 2.5 inch U-Bolt w/nuts	\$27.00	0.6

Dimensions

inches [mm]

Part No. NCP2-DPart No. NCP2-P

See our Web site
www.AutomationDirect.com
 for complete Engineering
 drawings.



Regtronic Pneumatic Transducers



Part No.
5520500



Part No.
5521500U

Metal Work Regtronic Series electropneumatic transducers utilize two internal solenoid valves to convert an electronic signal from a PLC or other controller to a regulated precision linear pneumatic output pressure. Used in paper and paper converting, food and drug, petrochemical, HVAC, textile, and energy management industries, Regtronic Series transducers provide highly reliable and repeatable operation of pneumatic valve positioners, valve actuators, air cylinders, damper and louver actuators, web tensioners, clutches and brakes.

The Regtronic Series can be controlled from analog input signals of 4-20 mA, 0-5 V or 0-10 V, as well as, RS232 communication or the integral keypad. The minimum and maximum output pressure range can be configured up to a maximum pressure of 145 psig. Models are available with low flow and exhaust capacity for controlling small volume pneumatic loads without overshoot, and high flow and exhaust capacity for fast response time with

large volume pneumatic loads. Each Regtronic transducer includes a 0-10 VDC or 4-20 mA output signal, model dependent, representative of the output pressure and two digital output switches that can be set as alarm points at high or low output pressures. The integral digital display eliminates the need for external pressure gauges and the pushbuttons enable menu driven configuration of all operating parameters without requiring air pressure to be connected to the device. Additional settable performance parameters include regulation speed control to dampen overshoot of the output pressure, an analog input filter to prevent excessive internal solenoid valve cycling due to small changes in input signal, and noise dampening filter to eliminate unwanted pressure regulation due to input signal noise. Regtronic transducers can be easily panel mounted using the optional mounting bracket accessories, use an 8-pin, M12 quick disconnect cable, and have an environmental protection rating of IP65.

Features

- Compact transducer housing
- 4-20 mA, 0-5 V, and 0-10 V input compatible with PLCs and other controllers
- Settable minimum and maximum pressure range up to a maximum of 145 psi applicable for industrial pneumatic and process control applications
- Models with low flow and exhaust capacity for controlling small volume pneumatic loads without overshoot, and high flow and exhaust capacity for fast response time with large volume pneumatic loads
- Internal dual solenoid design eliminates continuous supply air consumption
- Models with M5, 1/8 NPT, and 1/4 NPT female pneumatic connections available
- Integral digital display eliminates the need for external pressure gauges
- 4-20 mA or 0-10 VDC output and two switch outputs provided
- Operating parameter configuration is easily accomplished using the pushbuttons without needing air connected
- 8-pin M12 quick disconnect electrical connection
- Optional mounting brackets available
- IP65 environmental rating



See www.AutomationDirect.com for a wide variety of cable and fitting options



Metal Work Regtronic Pneumatic Transducers

Part No.	Price	Weight (lbs)	Input	Output	Inlet(s)	Outlet(s)	Drawing Link	Manufacturer Specs	Manufacturer Manual
5520500	\$380.00	0.57	4-20 mA, 0-5 VDC, 0-10 VDC, RS232, or Keypad	0.05 to 10 bar adjustable output pressure, 0-10 VDC, switch (N.O./N.C.) PNP/NPN output	M5 x 0.8 female	M5 x 0.8 female	PDF	PDF	PDF
5540500	\$380.00	0.57		0.05 to 10 bar adjustable output pressure, 4-20 mA, switch (N.O./N.C.) PNP/NPN output			PDF		
5521500U	\$525.00	1.0		0.05 to 10 bar adjustable output pressure, 0-10 VDC, switch (N.O./N.C.) PNP/NPN output	1/8in female NPT	1/8in female NPT	PDF		
5541500U	\$525.00	1.0		0.05 to 10 bar adjustable output pressure, 4-20 mA, switch (N.O./N.C.) PNP/NPN output			PDF		
5522500U	\$525.00	1.0		0.05 to 10 bar adjustable output pressure, 0-10 VDC, switch (N.O./N.C.) PNP/NPN output	1/4in female NPT	1/4in female NPT	PDF		
5542500U	\$525.00	1.0		0.05 to 10 bar adjustable output pressure, 4-20 mA, switch (N.O./N.C.) PNP/NPN output			PDF		

For additional details see manufacturer's technical specifications, manuals and inserts (where applicable).





Regtronic Pneumatic Transducers

Metal Work Regtronic Pneumatic Transducer Specifications							
Part No.		<u>5520500</u>	<u>5540500</u>	<u>5521500U</u>	<u>5541500U</u>	<u>5522500U</u>	<u>5542500U</u>
Media	Filtered, unlubricated air						
Inlet and Outlet Port Size	M5 x 0.8 female			1/8in female NPT		1/4in female NPT	
Minimum Inlet Pressure	Regulation pressure + 1 bar						
Maximum Inlet Pressure	11 bar						
Temp Range	0 to 50°C						
Pressure Regulation Range	0.05 to 10 bar, adjustable						
Flow Rate at 6.3 bar ΔP 0.5	10 NI/min			1300 NI/min		1500 NI/min	
Flow Rate at 6.3 bar ΔP 1	10 NI/min			1450 NI/min		1700 NI/min	
Exhaust flow rate at 6.3 bar with 0.1 bar Overpressure	2 NI/min			600 NI/min		1300 NI/min	
Exhaust flow rate at 6.3 bar with 0.5 bar Overpressure	9 NI/min			1000 NI/min		1500 NI/min	
Response Time with ΔP = 1 bar	Volume	100cc		100/1000cc		100/1000cc	
	From 6 to 7 bar	0.5s		0.1s/0.15s		0.1s/0.15s	
	From 7 to 6 bar	0.55s		0.1s/0.15s		0.1s/0.15s	
Class of Protection	IP65						
Supply Voltage Range	10.8 to 31.2 VDC						
Maximum Admissible Voltage	32VDC (Note: Voltage greater than 32VDC will damage the unit irreparably.)						
Current Absorption	Max 220mA at 12VDC						
Input Signal (Input Impedence)	Voltage	0 to 5 VDC, 0 to 10 VDC (approx. 6.3KΩ)					
	Current	4 to 20 mA (approx. 100Ω)					
Communication	RS232						
Output Signal	Voltage	0 to 10 VDC (1 VDC = 1 bar) - 1mA max	N/A	0 to 10 VDC (1 VDC = 1 bar) - 1mA max	N/A	0 to 10 VDC (1 VDC = 1 bar) - 1mA max	N/A
	Current	N/A	4 to 20 mA (4mA = 0 bar, 20mA = 10bar)	N/A	4 to 20 mA (4mA = 0 bar, 20mA = 10bar)	N/A	4 to 20 mA (4mA = 0 bar, 20mA = 10bar)
	Digital	PNP open collector output: max 24VDC, 60mA NPN open collector output: max 24VDC, 60mA					
Hysteresis	± 0.2% (full scale)						
Repeatability	± 0.2% (full scale)						
Sensitivity / Dead-band	Setting range 10 to 300 mbar						
Display Accuracy	± 0.3% (full scale)						
Display Unit of Measurement	Bar, MPa, psi, selectable						
Display Minimum Resolution	0.01 bar - 0.001 MPa - 0.01 psi						
Analog Output Accuracy	± 0.1% of the reading						
Temperature Characteristics	Max 2mbar / °C						
Installation Position	Any position						
Electrical Connection	8-pin M12 quick disconnect						

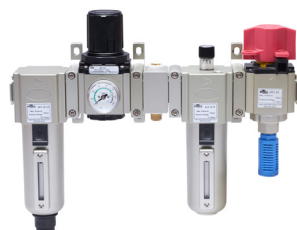


Regtronic Pneumatic Transducer Accessories

Metal Work Regtronic Pneumatic Transducer Accessories							
<i>Item Photo</i>	<i>Part No.</i>	<i>Price</i>	<i>Weight (lbs)</i>	<i>Description</i>	<i>Drawing Link</i>	<i>Manufacturer Specs</i>	<i>Manufacturer Manual</i>
	<u>9200711</u>	\$3.00	0.04	Metal Work mounting bracket, for use with Regtronic pneumatic transducers with M5 ports.	<u>PDF</u>	<u>PDF</u>	<u>PDF</u>
	<u>9200710</u>	\$12.00	0.06	Metal Work mounting bracket, for use with Regtronic pneumatic transducers with NPT ports.	<u>PDF</u>		



Pneumatic Air Preparation - AL2 Series Lubricators



Modular Assembly Example



AL2-66-D



AL2-44-N



AL2-32



Mounting bracket included.



Air Lubricator

NITRA® pneumatic mist type air lubricators are available with 1/8", 1/4", 3/8", 1/2", 3/4" or 1" NPT female port sizes and a lubrication rate adjustment with sight gauge to meet a broad range of pneumatic air supply lubrication applications. All-metal bowls with sight gauge are available in all sizes. Polycarbonate or nylon bowls with metal bowl guards are available in 2x, 3x and 4x sizes.

Provided with a mounting bracket for stand-alone applications, the modular design also enables easy field assembly for combining with NITRA pneumatic filters and regulators (using modular assembly brackets purchased separately).

Features

- 1/8", 1/4", 3/8", 1/2", 3/4" and 1" NPT female port sizes
- All-metal bowls with sight gauge available on all sizes. Polycarbonate or nylon bowls with metal bowl guards available on 2x, 3x and 4x sizes.
- Adjustable lubrication rate
- Mounting bracket provided for stand-alone applications
- Modular design enables easy field assembly for combining with NITRA filters and regulators
- Lubricators can be filled while pressurized
- 2 year warranty



See www.AutomationDirect.com for a wide variety of fitting options

AL2 Series Lubricators											
Part No.	Price	Weight (lbs)	Port Size (FNPT)	Bowl	Fluid	Temperature	Operating Pressure	Maximum Pressure	Proof Pressure	Recommended Lubricant	Drawing Link
AL2-21-N	\$31.50	0.64	1/8"	36cc nylon with metal bowl guard	Air	-5°C to 70°C (23°F to 158°F)	7~145psi (0.05~1.0MPa) (0.5~10.0 bar)	145psi (1.0MPa) (10.0 bar)	215psi (1.5MPa) (15 bar)	ISO VG32 or equivalent	PDF
AL2-21-D	\$40.00	0.66		36cc die-cast aluminum bowl w/ sight							PDF
AL2-21	\$31.50	0.65		36cc polycarbonate with metal bowl guard							PDF
AL2-22-N	\$31.50	0.63	1/4"	36cc nylon with metal bowl guard							PDF
AL2-22-D	\$40.00	0.65		36cc die-cast aluminum bowl w/ sight							PDF
AL2-22	\$31.50	0.64		36cc polycarbonate with metal bowl guard							PDF
AL2-32-N	\$49.00	1.08		98cc nylon with metal bowl guard							PDF
AL2-32-D	\$40.00	1.12		98cc die-cast aluminum bowl w/ sight							PDF
AL2-32	\$49.00	1.1		98cc polycarbonate with metal bowl guard							PDF
AL2-33-N	\$49.00	1.08	3/8"	98cc nylon with metal bowl guard							PDF
AL2-33-D	\$40.00	1.12		98cc die-cast aluminum bowl w/ sight							PDF
AL2-33	\$47.50	1.09		98cc polycarbonate with metal bowl guard							PDF

See our Web site www.AutomationDirect.com for complete Engineering drawings.



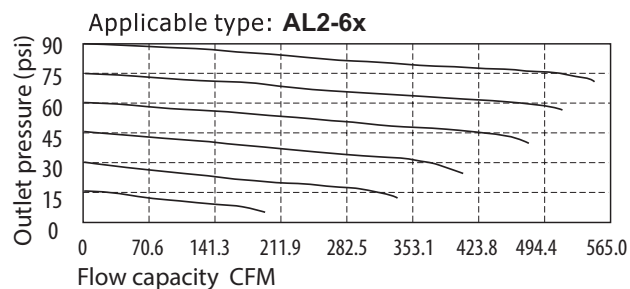
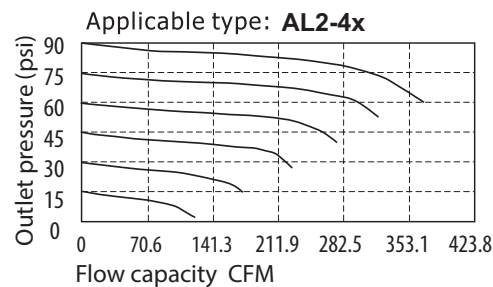
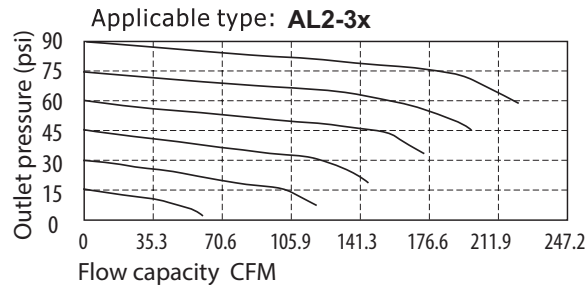
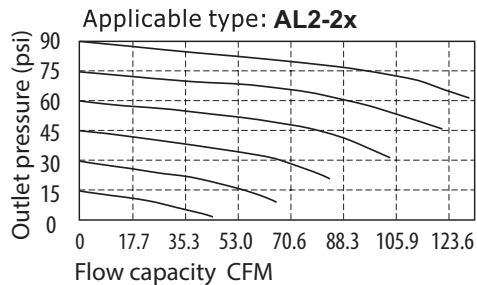
Pneumatic Air Preparation - AL2 Series Lubricators

AL2 Series Lubricators Cont.											
Part No.	Price	Weight (lbs)	Port Size	Bowl	Fluid	Temperature	Operating Pressure	Maximum Pressure	Proof Pressure	Recommended Lubricant	Drawing Link
AL2-44-N	\$61.00	1.8	1/2"	185cc nylon with metal bowl guard	Air	-5°C to 70°C (23°F to 158°F)	7~145psi (0.05~1.0MPa) (0.5~10.0 bar)	145psi (1.0MPa) (10.0 bar)	215psi (1.5MPa) (15 bar)	ISO VG32 or equivalent	PDF
AL2-44-D	\$64.00	1.83		185cc die-cast aluminum bowl w/ sight							PDF
AL2-44	\$69.00	1.82		185cc polycarbonate with metal bowl guard							PDF
AL2-66-D	\$112.00	3.31	3/4"	410cc die-cast aluminum bowl w/ sight							PDF
AL2-68-D	\$112.00	3.27	1"	410cc die-cast aluminum bowl w/ sight							PDF

See our Web site www.AutomationDirect.com for complete Engineering drawings.

Performance Charts

Flow chart





Pneumatic Air Preparation - AFR2 Series Combination Filter and Regulators



Modular Assembly Example



AFR2-6633-AD



AFR2-3233-D



AFR2-2133-N

NITRA[®] pneumatic combination particulate/moisture separation air filters and adjustable pressure regulators are available with 1/8", 1/4", 3/8", 1/2", 3/4" or 1" NPT female port sizes to meet a broad range of pneumatic air supply filtration and regulation applications all in a single convenient unit. Available with either a manual / semi-automatic or automatic drain. All-metal bowls with sight gauge are available in all sizes. Polycarbonate or nylon bowls with metal bowl guards are available in 2xxx, 3xxx and 4xxx sizes. Replaceable 40-micron filter elements are standard. An optional 5-micron filter element (purchased separately and customer installable) is available when stricter filtration is required.

The pressure regulator features a locking pressure adjustment knob, integral pressure gauge and is available in adjustable pressure ranges of 20 - 60 psi or 20 - 130 psi. The regulator will relieve downstream pressure if the setpoint is reduced.

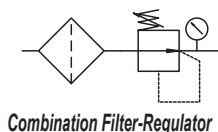
Provided with a mounting bracket for stand-alone applications, the modular design also enables easy field assembly with NITRA pneumatic lubricators (using modular assembly brackets purchased separately).

Features

- Air filtration and regulation all in a single convenient unit
- 1/8", 1/4", 3/8", 1/2", 3/4" and 1" NPT female port sizes
- 40-micron replaceable filter element standard; for stricter filtration an optional 5-micron filter element purchased separately is easily customer installable
- All-metal bowls with sight gauge available on all sizes. Polycarbonate or nylon bowls with metal bowl guards available on 2xxx, 3xxx and 4xxx sizes.
- Manual / semi-automatic and automatic drains available
- Adjustable ranges of 20 - 60 psi and 20-130 psi
- Locking pressure adjustment knob
- Integral pressure gauge
- Mounting bracket provided for stand-alone applications
- Modular design enables easy field assembly with NITRA lubricators
- 2 year warranty



Mounting bracket included.



Combination Filter-Regulator



See www.AutomationDirect.com for a wide variety of fitting options



Pneumatic Air Preparation - AFR2 Series

Combination Filter and Regulators

AFR2 Series Combination Filter and Regulators														
Part No.	Price	Weight (lbs)	Port Size (FNPT)	Drain Bowl Capacity	Drain Type	Fluid	Temperature	Filtering Grade	Operating Pressure	Maximum Pressure	Proof Pressure	Drawing Link		
AFR2-2132-N	\$62.00	0.82	1/8"	25cc nylon with metal bowl guard	Manual/ Semi-Automatic	Air	-5°C to 70°C (23°F to 158°F)	40μ (5μ element can be ordered separately and field installed)	20~60psi (0.14~0.41MPa) (1.4~4.1 bar)	60psi (0.41MPa) (4.1 bar)	215psi (1.5MPa) (15 bar)	PDF		
AFR2-2132-D	\$72.00	0.85		25cc die-cast aluminum bowl w/ sight								PDF		
AFR2-2132	\$62.00	0.83		25cc polycarbonate with metal bowl guard								PDF		
AFR2-2133-N	\$62.00	0.83		25cc nylon with metal bowl guard					20~130psi (0.14~0.90MPa) (1.4~9.0 bar)	145psi (1.0MPa) (10 bar)		PDF		
AFR2-2133-D	\$72.00	0.86		25cc die-cast aluminum bowl w/ sight								PDF		
AFR2-2133	\$62.00	0.84		25cc polycarbonate with metal bowl guard								PDF		
AFR2-2232-N	\$62.00	0.82	25cc nylon with metal bowl guard	Automatic					20~60psi (0.14~0.41MPa) (1.4~4.1 bar)	60psi (0.41MPa) (4.1 bar)		PDF		
AFR2-2232-D	\$72.00	0.84	25cc die-cast aluminum bowl w/ sight									PDF		
AFR2-2232	\$62.00	0.82	25cc polycarbonate with metal bowl guard									PDF		
AFR2-2233-N	\$62.00	0.83	25cc nylon with metal bowl guard						20~130psi (0.14~0.90MPa) (1.4~9.0 bar)	145psi (1.0MPa) (10 bar)		PDF		
AFR2-2233-D	\$72.00	0.86	25cc die-cast aluminum bowl w/ sight									PDF		
AFR2-2233	\$62.00	0.84	25cc polycarbonate with metal bowl guard									PDF		
AFR2-3232-N	\$71.00	1.34	60cc nylon with metal bowl guard						Automatic	20~60psi (0.14~0.41MPa) (1.4~4.1 bar)		60psi (0.41MPa) (4.1 bar)		PDF
AFR2-3232-D	\$81.00	1.38	60cc die-cast aluminum bowl w/ sight											PDF
AFR2-3232	\$71.00	1.35	60cc polycarbonate with metal bowl guard											PDF
AFR2-3232-AN	\$88.00	1.37	60cc nylon with metal bowl guard											PDF
AFR2-3232-AD	\$98.00	1.41	60cc die-cast aluminum bowl w/ sight											PDF
AFR2-3232-A	\$88.00	1.39	60cc polycarbonate with metal bowl guard											PDF
AFR2-3233-N	\$71.00	1.36	60cc nylon with metal bowl guard	Manual/ Semi-Automatic	20~130psi (0.14~0.90MPa) (1.4~9.0 bar)				145psi (1.0MPa) (10 bar)			PDF		
AFR2-3233-D	\$81.00	1.39	60cc die-cast aluminum bowl w/ sight									PDF		
AFR2-3233	\$71.00	1.37	60cc polycarbonate with metal bowl guard									PDF		
AFR2-3233-AN	\$88.00	1.39	60cc nylon with metal bowl guard	Automatic								PDF		
AFR2-3233-AD	\$98.00	1.42	60cc die-cast aluminum bowl w/ sight									PDF		
AFR2-3233-A	\$88.00	1.4	60cc polycarbonate with metal bowl guard									PDF		
AFR2-3332-N	\$71.00	1.33	60cc nylon with metal bowl guard	Manual/ Semi-Automatic	20~60psi (0.14~0.41MPa) (1.4~4.1 bar)				60psi (0.41MPa) (4.1 bar)			PDF		
AFR2-3332-D	\$81.00	1.37	60cc die-cast aluminum bowl w/ sight									PDF		
AFR2-3332	\$71.00	1.35	60cc polycarbonate with metal bowl guard									PDF		
AFR2-3332-AN	\$88.00	1.36	60cc nylon with metal bowl guard	Automatic								PDF		
AFR2-3332-AD	\$98.00	1.38	60cc die-cast aluminum bowl w/ sight									PDF		
AFR2-3332-A	\$88.00	1.38	60cc polycarbonate with metal bowl guard									PDF		

See our Web site www.AutomationDirect.com for complete Engineering drawings.



Pneumatic Air Preparation - AFR2 Series

Combination Filter and Regulators

AFR2 Series Combination Filter and Regulators Cont.

Part No.	Price	Weight (lbs)	Port Size (FNPT)	Drain Bowl Capacity	Drain Type	Fluid	Temperature	Filtering Grade	Operating Pressure	Maximum Pressure	Proof Pressure	Drawing Link
AFR2-3333-N	\$52.00	1.34	3/8"	60cc nylon with metal bowl guard	Manual/Semi-Automatic	Air	-5°C to 70°C (23°F to 158°F)	40μ (5μ element can be ordered separately and field installed)	20~130psi (0.14~0.90MPa) (1.4~9.0 bar)	145psi (1.0MPa) (10 bar)	215psi (1.5MPa) (15 bar)	PDF
AFR2-3333-D	\$81.00	1.39		60cc die-cast aluminum bowl w/ sight								PDF
AFR2-3333	\$71.00	1.37		60cc polycarbonate with metal bowl guard								PDF
AFR2-3333-AN	\$88.00	1.37		60cc nylon with metal bowl guard	Automatic							PDF
AFR2-3333-AD	\$98.00	1.42		60cc die-cast aluminum bowl w/ sight								PDF
AFR2-3333-A	\$88.00	1.4		60cc polycarbonate with metal bowl guard								PDF
AFR2-4433-N	\$111.00	2.33	1/2"	100cc nylon with metal bowl guard	Manual/Semi-Automatic							PDF
AFR2-4433-D	\$125.00	2.41		100cc die-cast aluminum bowl w/ sight								PDF
AFR2-4433	\$111.00	2.4		100cc polycarbonate with metal bowl guard								PDF
AFR2-4433-AN	\$95.00	2.4		100cc nylon with metal bowl guard	Automatic							PDF
AFR2-4433-AD	\$142.00	2.42		100cc die-cast aluminum bowl w/ sight								PDF
AFR2-4433-A	\$128.00	2.28		100cc polycarbonate with metal bowl guard								PDF
AFR2-6633-D	\$190.00	5.26	3/4"	205cc die-cast aluminum bowl w/ sight	Manual/Semi-Automatic	PDF						
AFR2-6633-AD	\$154.00	5.29			Automatic	PDF						
AFR2-6833-D	\$190.00	5.13	1"		Manual/Semi-Automatic	PDF						
AFR2-6833-AD	\$207.00	5.27			Automatic	PDF						

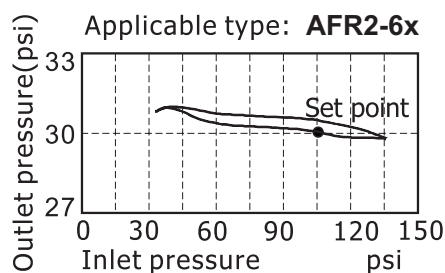
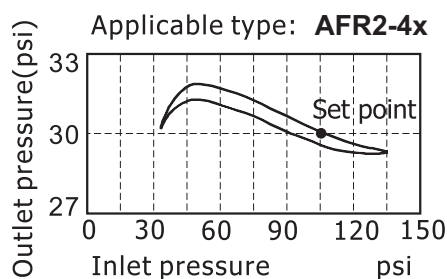
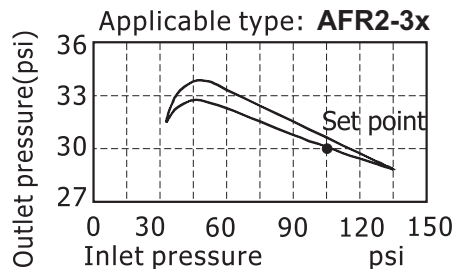
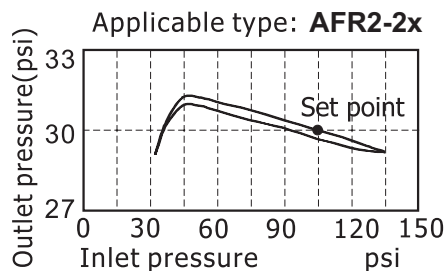
See our Web site www.AutomationDirect.com for complete Engineering drawings.



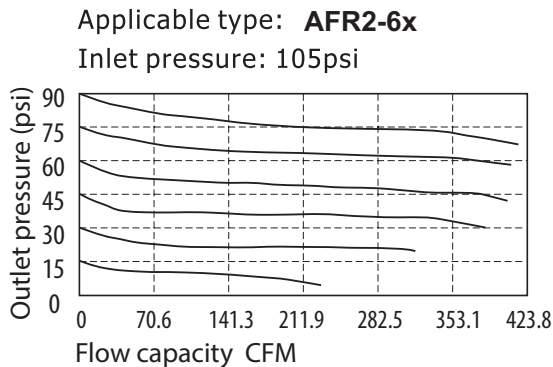
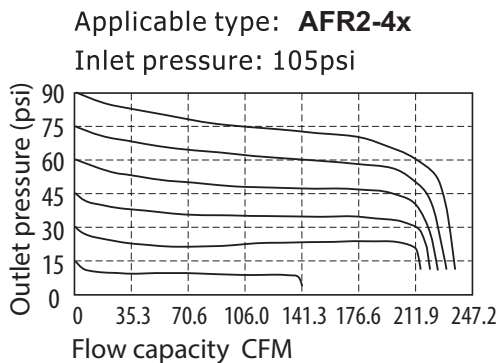
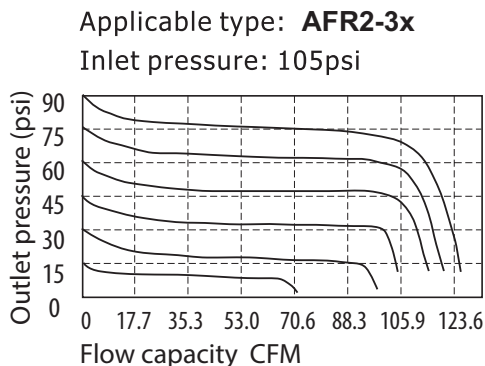
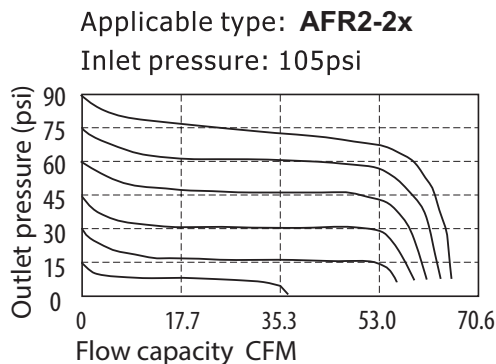
Pneumatic Air Preparation - AFR2 Series Combination Filter and Regulators

Performance Charts

Pressure chart



Flow chart

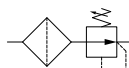




Precision Pneumatic - BFR Series Combination Filter and Regulators

**BFR-3233****BFR-3431**

Mounting bracket not included.



Air Filter / Regulator

NITRA® BFR Series Precision combination filter and regulators are designed for use in systems that require clean, accurate instrument air. They are constructed of durable materials ideal for industrial environments.

Features

- Diecast aluminum alloy, irridite and baked epoxy finish body
- Nitrile elastomer and nylon fabric diaphragm
- Nitrile elastomer valve seat
- Additional build materials include: brass, zinc plated steel and acetal
- Mounting on pipe, bracket or through body direct
- 40 micron polyethylene filter (5 micron optional)
- 1/4" and 1/2" NPT ports
- (2) 1/4" NPT gauge ports
- Manual drain
- Made in the USA

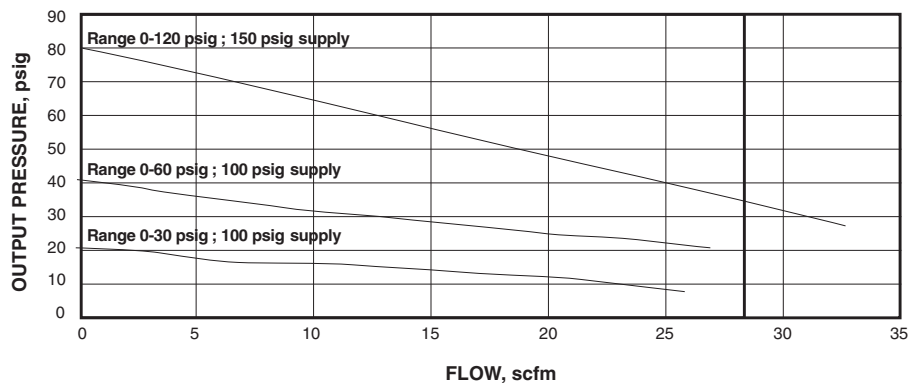


See www.AutomationDirect.com for a wide variety of fitting options

Precision Pneumatic BFR Series Filter / Regulators											
Part No.	Price	Weight (lbs)	Port Size (FNPT)	Fluid	Temperature	Operating Pressure	Maximum Supply Pressure	Exhaust Capacity	Sensitivity	Air Consumption	Effect of Supply Pressure Variation
BFR-3231	\$60.00	0.4	1/4"	Air & Inert gases	0~160°F (-18~71°C)	0-30psi (0-0.21 MPa) (0-2 bar)	250psi (1.72 MPa) (17bar)	0.1 scfm (2.83 NI/min) with downstream pressure 5 psig (0.3 bar) above set point	1" of water	Less than 5 scfh (2.5 NI/min)	Less than 0.25 psig (0.017 bar) for 25 psig (1.7 bar) change
BFR-3232	\$60.00	0.4	1/4"			0-60psi (0-0.41 MPa) (0-4 bar)					
BFR-3233	\$60.00	0.4	1/4"			0-120psi (0-0.83 MPa) (0-8 bar)					
BFR-3431	\$122.00	0.4	1/2"			0-30psi (0-0.21 MPa) (0-2 bar)					Less than 0.5 psig (0.035 bar) for 25 psig (1.7 bar) change
BFR-3432	\$122.00	0.4	1/2"			0-60psi (0-0.41 MPa) (0-4 bar)					
BFR-3433	\$122.00	0.4	1/2"			0-120psi (0-0.83 MPa) (0-8 bar)					

Performance Chart

BFR 1/4" NPT

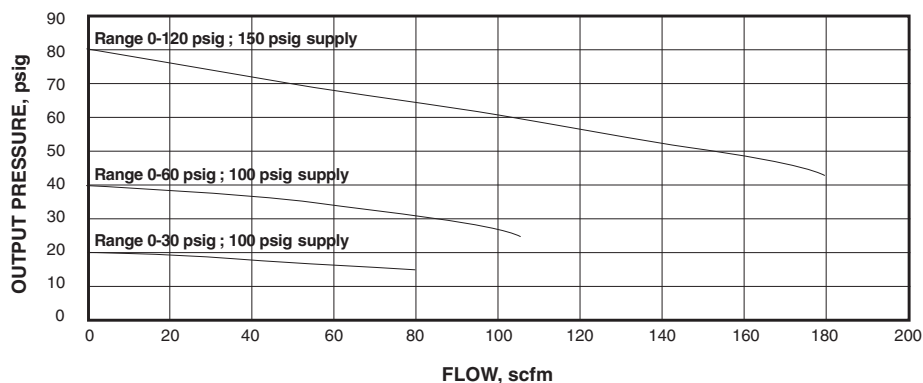




Precision Pneumatic - BFR Series Combination Filter and Regulators

Performance Chart

BFR 1/2" NPT



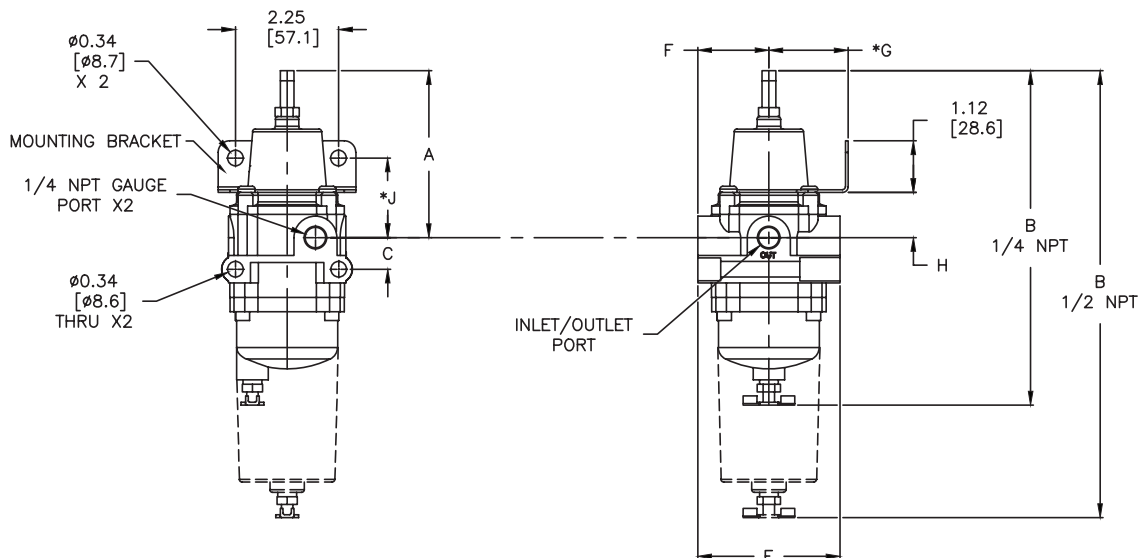
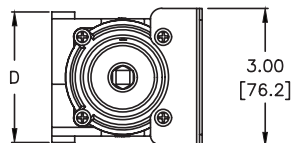
Dimensions

Inches [mm]

BFR-X

PART NUMBER	A	B	C	D	E	F	G	H	J	I/O PORT	PSI RANGE
BFR-3231	3.64	7.29	0.69	2.84	3.10	1.55	1.73	.98	1.73	1/4	0-30
BFR-3232	[92.4]	[185.2]	[17.5]	[72.2]	[78.7]	[39.4]	[43.9]	[25.0]	[44.1]		0-60
BFR-3233											0-120
BFR-3431	3.72	9.78	.70	2.87	3.00	1.5	1.73	1.15	1.90	1/2	0-30
BFR-3432	[94.6]	[248.4]	[17.8]	[73.0]	[76.2]	[38.0]	[44.1]	[29.2]	[48.3]		0-60
BFR-3433											0-120

*MOUNTING BRACKET
INSTALLATION OPTIONAL



See our Web site www.AutomationDirect.com for complete Engineering drawings.



Precision Pneumatic - BFR Series Combination Filter and Regulators

**BFE-43****BBKT-3**

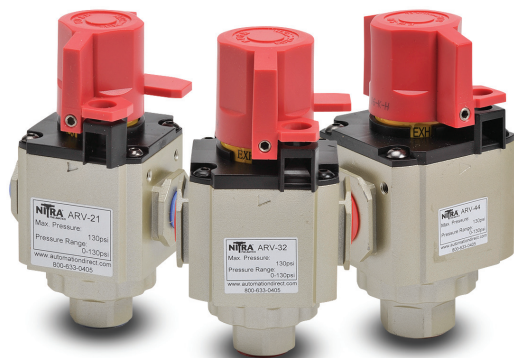
Pneumatic BFR Series Accessories

<i>Part No.</i>	<i>Price</i>	<i>Description</i>	<i>Material</i>	<i>Weight (lbs)</i>
<u>BFE-31</u>	\$13.50	NITRA particulate filter element, replacement, 5 micron, polyethylene. For use with BFR-32 series filter regulators.	Polyethylene (PE)	0.1
<u>BFE-33</u>	\$13.50	NITRA particulate filter element, replacement, 40 micron, polyethylene. For use with BFR-32 series filter regulators.	Polyethylene (PE)	0.1
<u>BFE-41</u>	\$13.50	NITRA particulate filter element, replacement, 5 micron, polyethylene. For use with BFR-34 series filter regulators.	Polyethylene (PE)	0.1
<u>BFE-43</u>	\$13.50	NITRA particulate filter element, replacement, 40 micron, polyethylene. For use with BFR-34 series filter regulators.	Polyethylene (PE)	0.1
<u>BBKT-3</u>	\$8.50	NITRA mounting bracket. For use with BFR-3 and BR-3 series air prep components.	Plated Steel	0.1



Pneumatic Air Preparation - ARV Series

Manual Shut-off Pressure Relief Valves

**ARV-21****ARV-32****ARV-44**

Mounting bracket included.



Modular Assembly Example



Manual Shut-off Relief Valve

Features

- 1/8", 1/4", 3/8", and 1/2" NPT female port sizes
- Three-way, two-position (3 threaded ports) design is used to shut off upstream pressure and relieve down-stream pressure
- Manually rotated knob can be locked out with the provided padlock
- Mounting bracket provided for stand-alone applications
- Modular design enables easy field assembly with NITRA filters, regulators, lubricators and combination filter regulators
- 2 year warranty



See www.AutomationDirect.com for a wide variety of fitting options

ARV Series Valves

Part No.	Price	Weight (lbs)	Port Size	Fluid	Acting Type	Valve Type	Temperature	Operating Pressure	Maximum Pressure	Proof Pressure	Operation Angle
ARV-21	\$35.00	0.6	1/8"	Air	Manual	3 way 2 position (3 threaded ports)	-5~60°C (23~140°F)	20~130psi (0.15~0.90 MPa) (1.5~9.0 bar)	130psi (0.90MPa) (9.0 bar)	215psi (1.5MPa) (15 bar)	90°
ARV-22	\$35.00	0.6	1/4"								
ARV-32	\$39.50	1.3	1/4"								
ARV-33	\$39.50	1.3	3/8"								
ARV-44	\$52.00	2.1	1/2"								

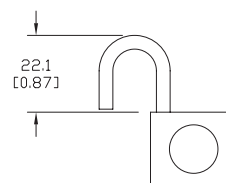
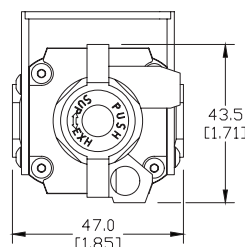
*MOUNTING BRACKET INSTALLATION OPTIONAL

Dimensions

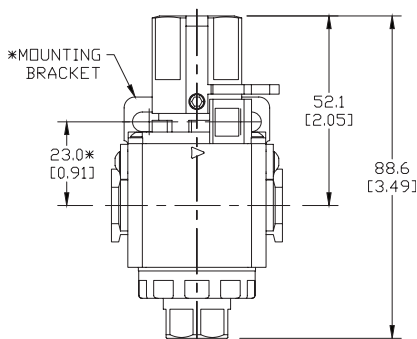
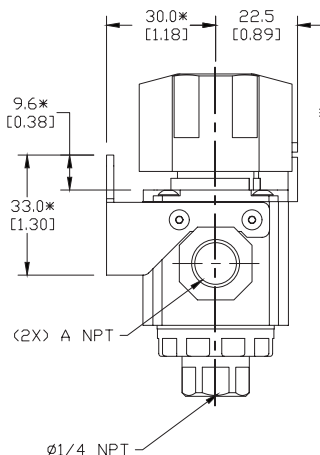
mm [inches]

ARV-2x

PART NO.	A NPT
ARV-21	1/8
ARV-22	1/4



Note: lock included with valve



Note: Unit dimensions are the same for listed models, port NPT varies based on model.

See our Web site www.AutomationDirect.com for complete Engineering drawings.



Pneumatic Air Preparation - ARV Series

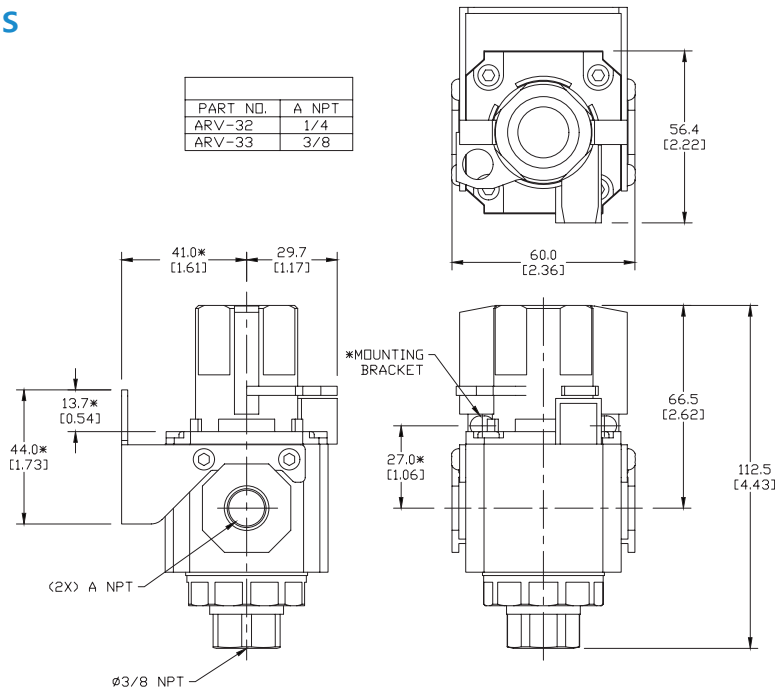
Manual Shut-off Pressure Relief Valves

Dimensions

mm [inches]

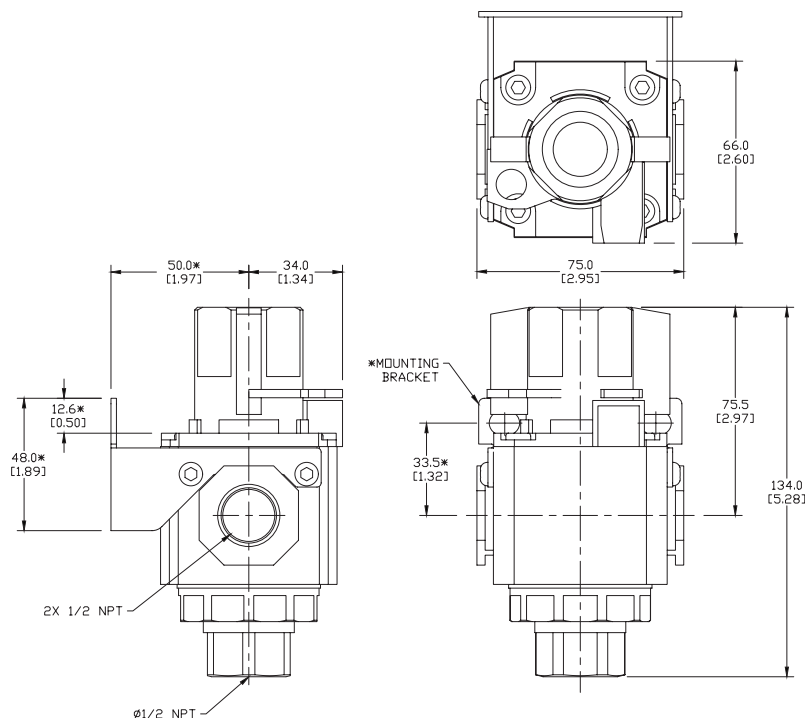
ARV-3x

*MOUNTING BRACKET INSTALLATION OPTIONAL



ARV-4x

*MOUNTING BRACKET INSTALLATION OPTIONAL



Note: Unit dimensions are the same for listed models, port NPT varies based on model. See our Web site www.AutomationDirect.com for complete Engineering drawings.

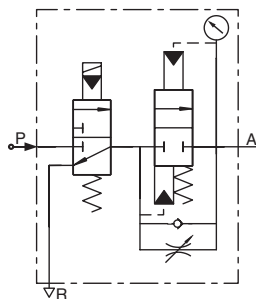


Pneumatic Air Preparation - ASD Series

Soft-Start/Dump Valves



ASD Series Valves



NITRA® pneumatic soft start/dump valves are available with 1/8", 1/4", 3/8" or 1/2" NPT female port sizes and 24VDC or 120VAC solenoid voltages to meet a broad range of pneumatic air supply applications. The three-way, two-position (3 threaded ports) design is used to gradually increase air pressure downstream when the solenoid is energized and to shut off upstream pressure and relieve downstream pressure when it is de-energized.

Provided with a mounting bracket for stand-alone applications, the modular design also enables easy field assembly with NITRA pneumatic filters, regulators and lubricators (using modular assembly brackets purchased separately).

Features

- 1/8", 1/4", 3/8" or 1/2" NPT ports
- 24 VDC or 120 VAC solenoid coils
- 11 mm DIN style wiring connector w/LED indication
- Modular design enables easy field assembly with other NITRA components
- Maximum pressure 130psi
- 2 year warranty



See www.AutomationDirect.com for a wide variety of fitting options

ASD Soft-Start/Dump Valve Series Specifications

Model	ASD-21-24D	ASD-21-120A	ASD-22-24D	ASD-22-120A	ASD-32-24D	ASD-32-120A	ASD-33-24D	ASD-33-120A	ASD-44-24D	ASD-44-120A
Price	\$83.00	\$83.00	\$83.00	\$83.00	\$91.00	\$91.00	\$91.00	\$91.00	\$151.00	\$143.00
Weight (lbs)	0.9	0.9	0.9	0.9	1.4	1.4	1.4	1.4	2.0	2.0
Fluid	Air									
Port Size (FNPT)	1/8"			1/4"				3/8"		1/2"
Exhaust Size			1/4"				3/8"			1/2"
Flow Coefficient (Cv)	7.0		7.5			12		15		24
Acting Type	Solenoid Operated, 3/2 Soft-Start									
Temperature	0 to 160°F (-18 to 71°C)									
Operating Pressure	35-130 psi, (0.24~0.90 MPa), (2.4~9.0 bar)									
Maximum Pressure	145 psi, (1.0 MPa), (10 bar)									
Proof Pressure	215 psi, (1.5 MPa), (15 bar)									
Power Connection	11 mm DIN									
Voltage	24 VDC	120 VAC	24 VDC	120 VAC	24 VDC	120 VAC	24 VDC	120 VAC	24 VDC	120 VAC
Voltage Range	-15% to +10%									
Insulation	B class									
Power Consumption	3.0 W	3.5 VA	3.0 W	3.5 VA	3.0 W	3.5 VA	3.0 W	3.5 VA	3.0 W	3.5 VA



Pneumatic Air Preparation - ASD Series

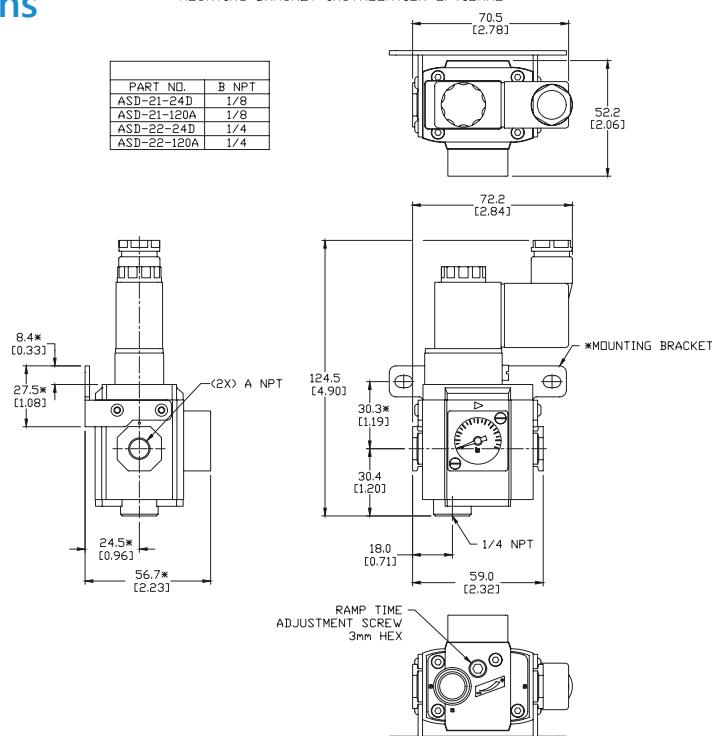
Soft-Start/Dump Valves

Dimensions

mm [inches]

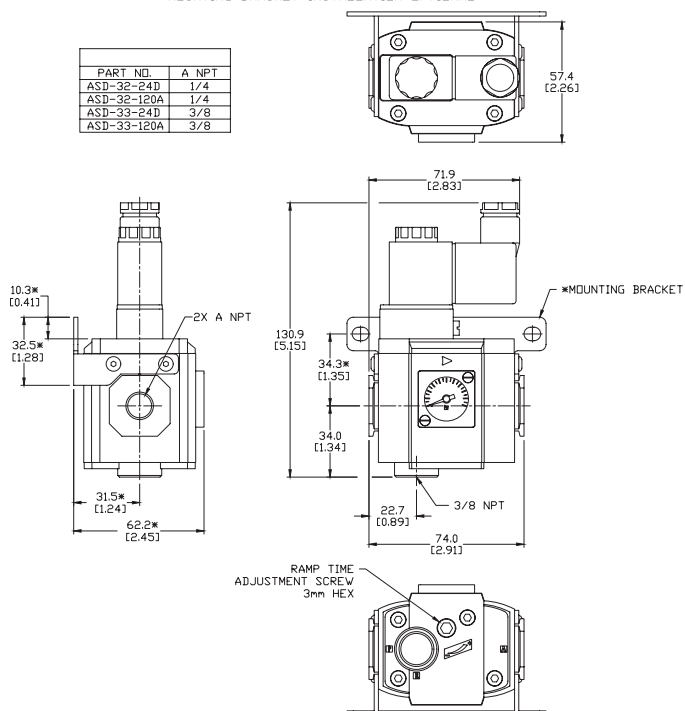
ASD-2x

*MOUNTING BRACKET INSTALLATION OPTIONAL



ASD-3x

*MOUNTING BRACKET INSTALLATION OPTIONAL



See our Web site www.AutomationDirect.com for complete Engineering drawings.

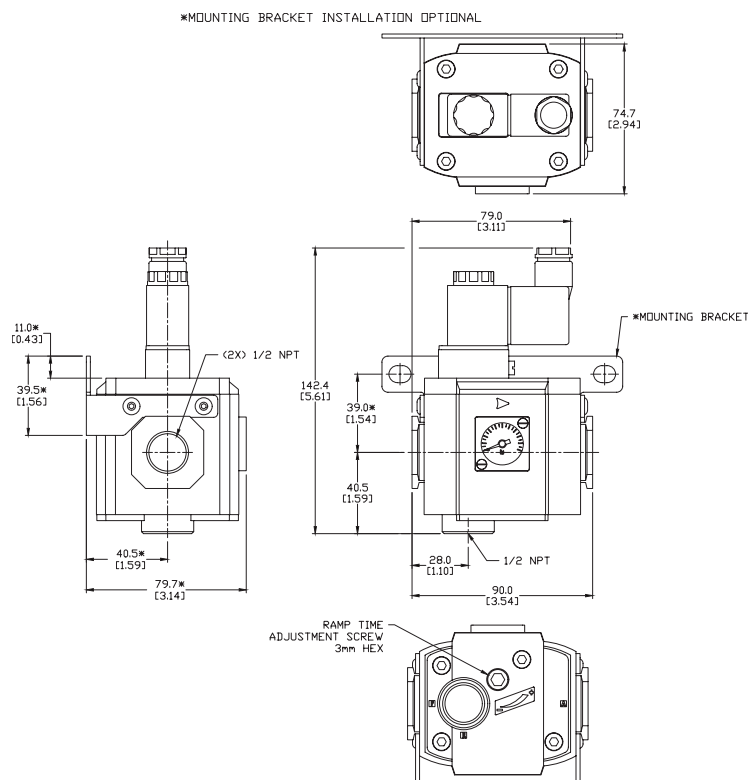


Pneumatic Air Preparation - ASD Series Soft-Start/Dump Valves

Dimensions

mm [inches]

ASD-4x



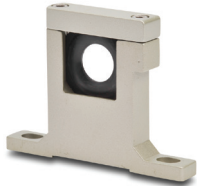
See our Web site www.AutomationDirect.com for complete Engineering drawings.



Pneumatic Air Preparation Accessories



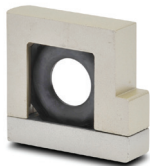
Part No. [ADB-21](#)



Part No. [AB-4T](#)



Part No. [AB-4L](#)



Part No. [AB-4U](#)

Pneumatic Air Preparation Accessories			
Part No.	Price	Description	Weight (lbs)
ADB-21	\$18.00	NITRA pneumatic distribution block, 1/8in female NPT inlet(s), (3) 1/8in female NPT outlet(s). For use with Ax-21 series air prep components.	0.1
ADB-22	\$18.00	NITRA pneumatic distribution block, 1/4in female NPT inlet(s), (3) 1/4in female NPT outlet(s). For use with Ax-22 series air prep components.	0.1
ADB-32	\$25.50	NITRA pneumatic distribution block, 1/4in female NPT inlet(s), (3) 1/4in female NPT outlet(s). For use with Ax-32 series air prep components.	0.2
ADB-33	\$25.50	NITRA pneumatic distribution block, 3/8in female NPT inlet(s), (3) 3/8in female NPT outlet(s). For use with Ax-33 series air prep components.	0.2
ADB-44	\$27.00	NITRA pneumatic distribution block, 1/2in female NPT inlet(s), (3) 1/2in female NPT outlet(s). For use with Ax-44 series air prep components.	0.4
AB-2T	\$16.50	NITRA modular T-bracket, for use with Ax-2 series air prep components.	0.2
AB-2L	\$16.50	NITRA modular L-bracket, for use with Ax-2 series air prep components.	0.2
AB-2U	\$16.50	NITRA modular U-bracket, for use with Ax-2 series air prep components.	0.1
AB-3T	\$18.00	NITRA modular T-bracket, for use with Ax-3 series air prep components.	0.3
AB-3L	\$18.00	NITRA modular L-bracket, for use with Ax-3 series air prep components.	0.3
AB-3U	\$18.00	NITRA modular U-bracket, for use with Ax-3 series air prep components.	0.2
AB-4T	\$22.00	NITRA modular T-bracket, for use with Ax-4 series air prep components.	0.5
AB-4L	\$22.00	NITRA modular L-bracket, for use with Ax-4 series air prep components.	0.5
AB-4U	\$22.00	NITRA modular U-bracket, for use with Ax-4 series air prep components.	0.4
AB-6T	\$32.00	NITRA modular T-bracket, for use with Ax-6 series air prep components.	1.3
AB-6L	\$30.00	NITRA modular L-bracket, for use with Ax-6 series air prep components.	1.2
AB-6U	\$28.50	NITRA modular U-bracket, for use with Ax-6 series air prep components.	0.8



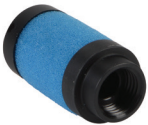
Pneumatic Air Preparation Accessories



Part No. [AFE2-43](#)



Part No. [AFE2-41](#)



Part No. [AFE-24](#)



Part No. [AFE-35](#)

Pneumatic Air Preparation Accessories			
Part No.	Price	Description	Weight (lbs)
NITRA Gen 2 Particulate Filters			
AFE2-23	\$1.50	NITRA particulate filter element, replacement, 40 micron particles, high-density polyethylene (HDPE). For use with AF-2 series filters or AFR-2 series filter regulators.	0.01
AFE2-33	\$3.00	NITRA particulate filter element, replacement, 40 micron particles, high-density polyethylene (HDPE). For use with AF-3 series filters or AFR-3 series filter regulators.	0.01
AFE2-43	\$4.25	NITRA particulate filter element, replacement, 40 micron particles, high-density polyethylene (HDPE). For use with AF-4 series filters or AFR-4 series filter regulators.	0.01
AFE2-63	\$11.00	NITRA particulate filter element, replacement, 40 micron particles, high-density polyethylene (HDPE). For use with AF-6 series filters or AFR-6 series filter regulators.	0.04
AFE2-21	\$1.50	NITRA particulate filter element, replacement, 5 micron particles, high-density polyethylene (HDPE). For use with AF-2 series filters or AFR-2 series filter regulators.	0.01
AFE2-31	\$3.00	NITRA particulate filter element, replacement, 5 micron particles, high-density polyethylene (HDPE). For use with AF-3 series filters or AFR-3 series filter regulators.	0.01
AFE2-41	\$4.25	NITRA particulate filter element, replacement, 5 micron particles, high-density polyethylene (HDPE). For use with AF-4 series filters or AFR-4 series filter regulators.	0.01
AFE2-61	\$11.00	NITRA particulate filter element, replacement, 5 micron particles, high-density polyethylene (HDPE). For use with AF-6 series filters or AFR-6 series filter regulators.	0.04
NITRA Coalescing Filters			
AFE-24	\$20.50	NITRA coalescing oil removal filter element, replacement, 0.3 micron particles, borosilicate glass microfiber. For use with AC-2 series coalescing filters.	0.05
AFE-34	\$25.50	NITRA coalescing oil removal filter element, replacement, 0.3 micron particles, borosilicate glass microfiber. For use with AC-3 series coalescing filters.	0.05
AFE-44	\$40.50	NITRA coalescing oil removal filter element, replacement, 0.3 micron particles, borosilicate glass microfiber. For use with AC-4 series coalescing filters.	0.1
AFE-25	\$20.50	NITRA coalescing oil removal filter element, replacement, 0.01 micron particles, borosilicate glass microfiber. For use with AC-2 series coalescing filters.	0.04
AFE-35	\$25.50	NITRA coalescing oil removal filter element, replacement, 0.01 micron particles, borosilicate glass microfiber. For use with AC-3 series coalescing filters.	0.05
AFE-45	\$40.50	NITRA coalescing oil removal filter element, replacement, 0.01 micron particles, borosilicate glass microfiber. For use with AC-4 series coalescing filters.	0.1



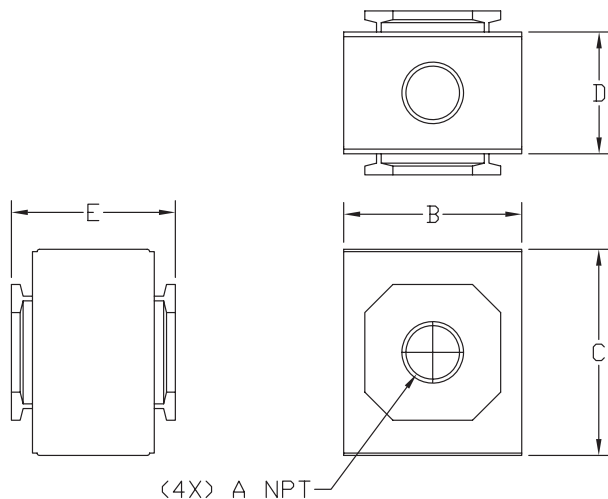
Pneumatic Air Preparation Accessories

Dimensions

mm [inches]

ADB-x

PART NO.	A NPT	DIM B	DIM C	DIM D	DIM E
ADB-21	1/8	30.0 [1.18]	36.0 [1.42]	19.5 [0.77]	28.5 [1.12]
ADB-22	1/4	30.0 [1.18]	36.0 [1.42]	19.5 [0.77]	28.5 [1.12]
ADB-32	1/4	38.0 [1.50]	44.0 [1.73]	26.0 [1.02]	35.0 [1.38]
ADB-33	3/8	38.0 [1.50]	44.0 [1.73]	26.0 [1.02]	35.0 [1.38]
ADB-44	1/2	52.0 [2.05]	52.0 [2.05]	30.0 [1.18]	42.0 [1.65]



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Pneumatic Air Preparation Accessories

Dimensions

mm [inches]

AB-xT

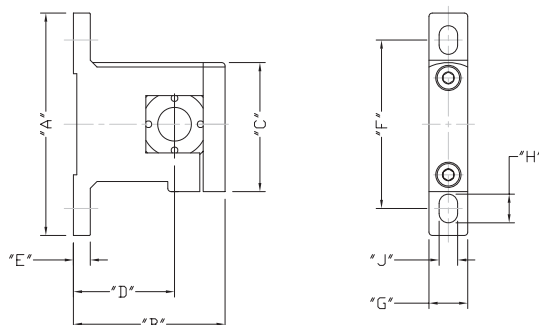


TABLE 1

PART NUMBER	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "F"	DIM "G"	DIM "H"	DIM "J"
AB-2T	66.0 [2.60]	45.0 [1.77]	38.3 [1.51]	30.0 [1.18]	5.0 [0.20]	50.0 [1.97]	11.5 [0.45]	8.5 [0.33]	5.5 [0.22]
AB-3T	88.0 [3.46]	60.5 [2.38]	49.3 [1.94]	41.5 [1.63]	7.0 [0.28]	70.0 [2.76]	12.5 [0.49]	9.0 [0.35]	6.5 [0.26]
AB-4T	104.0 [4.09]	76.0 [2.99]	58.5 [2.30]	50.0 [1.97]	7.0 [0.28]	80.0 [3.15]	15.5 [0.61]	12.0 [0.47]	8.6 [0.34]
AB-6T	128.0 [5.04]	104.0 [4.09]	79.5 [3.13]	70.0 [2.76]	10.0 [0.39]	100.0 [3.94]	19.5 [0.77]	16.0 [0.63]	11.0 [0.43]

AB-xL

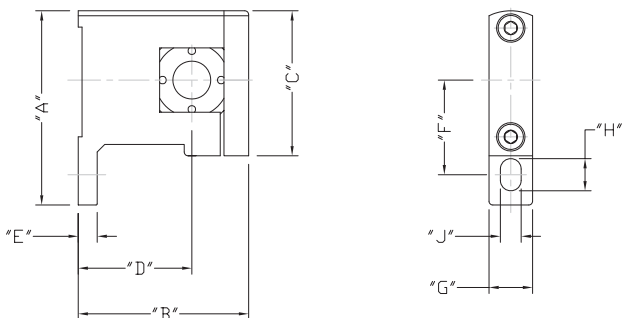


TABLE 1

PART NUMBER	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"	DIM "F"	DIM "G"	DIM "H"	DIM "J"
AB-2L	51.3 [2.02]	45.0 [1.77]	38.3 [1.51]	30.0 [1.18]	5.0 [0.20]	25.0 [0.98]	11.5 [0.45]	8.5 [0.33]	5.5 [0.22]
AB-3L	68.6 [2.70]	60.5 [2.38]	49.3 [1.94]	41.5 [1.63]	7.0 [0.28]	35.0 [1.38]	12.5 [0.49]	9.0 [0.35]	6.5 [0.26]
AB-4L	79.5 [3.13]	76.0 [2.99]	58.5 [2.30]	50.0 [1.97]	7.0 [0.28]	40.0 [1.57]	15.5 [0.61]	12.0 [0.47]	8.6 [0.34]
AB-6L	103.5 [4.07]	104.0 [4.09]	79.5 [3.13]	70.0 [2.76]	10.0 [0.39]	50.0 [1.97]	19.5 [0.77]	16.0 [0.63]	11.0 [0.43]

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Pneumatic Air Preparation Accessories

Dimensions

mm [inches]

AB-xU

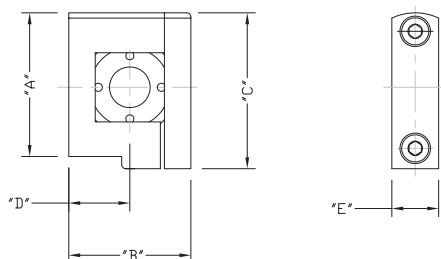


TABLE 1

PART NUMBER	DIM "A"	DIM "B"	DIM "C"	DIM "D"	DIM "E"
AB-2U	35.5 [1.39]	30.0 [1.18]	38.3 [1.51]	15.0 [0.59]	11.5 [0.45]
AB-3U	43.8 [1.72]	38.0 [1.50]	49.3 [1.94]	19.5 [0.75]	12.5 [0.49]
AB-4U	52.5 [2.07]	52.0 [2.05]	58.5 [2.30]	26.0 [1.02]	15.5 [0.61]
AB-6U	76.5 [3.01]	68.0 [2.68]	79.5 [3.13]	34.0 [1.34]	19.5 [0.77]

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GEN 2 Pneumatic Air Prep Accessories



Part No. [AGP2-21](#)



Part No. [AGP2-31](#)



Part No. [AGP2-42](#)

GEN 2 Pneumatic Air Preparation Accessories				
Part No.	Price	Description	Weight (lbs)	Drawing Link
AGP2-21	\$5.25	NITRA pneumatic gauge port adapter plate, 1/8in female NPT connection(s), aluminum. For use with Ax-2 series air prep components. (3) o-rings included.	0.02	PDF
AGP2-31	\$6.75	NITRA pneumatic gauge port adapter plate, 1/8in female NPT connection(s), aluminum. For use with Ax-3 series air prep components. (3) o-rings included.	0.04	PDF
AGP2-42	\$7.50	NITRA pneumatic gauge port adapter plate, 1/4in female NPT connection(s), aluminum. For use with Ax-4 and Ax-6 series air prep components. (3) o-rings included.	0.04	PDF