

Short Form
Catalogue

ControlAir

Precision
Pneumatic and
Electropneumatic
Controls



 **ControlAir Inc.** 

High Performance
Affordable
World-class
Quality Products



ControlAir



Current-to-Pressure
(I/P) Transducers

Voltage-to-Pressure
(E/P) Transducers

Precision Air
Pressure Regulators

Filter Regulators

Volume Boosters

Motorized Regulators

Friction-free
Diaphragm
Air Cylinders

Custom Engineered
Devices

ControlAir delivers precision pneumatic and electropneumatic controls like no one else in the business.

We offer world-wide distribution for companies that demand excellent service and outstanding technical support.

Our ISO-9001 registered quality system assures tightly controlled specifications and processes, resulting in high performance, dependable pneumatic controls.

Our dedication to a streamlined manufacturing process assures customers of product availability and on-time delivery.

ControlAir specializes in joint development projects and strategic design partnerships—customizing our products to meet the specific needs of our customers.

▲ AUTOMATED
INDUSTRIAL
EQUIPMENT

▲ PROCESS
CONTROL
SYSTEMS

▲ MEDICAL
EQUIPMENT

▲ LABORATORY
RESEARCH
AND ANALYSIS

▲ ENERGY
MANAGEMENT

▲ FLUID POWER

▲ ROBOTICS

▲ VALVE
AUTOMATION

Get the details on any ControlAir product—
log onto www.controlair.com

- ▲ Browse our entire product line
- ▲ View complete specifications and performance data
- ▲ Download product specs and drawings

Or call 603/886-9400 for more information
and a full product catalog

Regulator Products

Type 100

Multi-stage regulator provides the highest level of regulation accuracy and repeatability available. Output pressure is controlled to within 0.1% of full range.

- ▲ Very sensitive to changes in supply pressure and flow
- ▲ Able to hold set pressure over long periods of time
- ▲ High relief capacity, plunger operated, manifold mounted, and low range models are available



Precision Air Pressure Regulator

Flow Capacity SCFM (m3/hr)	14 (25)
Exhaust Capacity SCFM (m3/hr)	2 (3.4)
Sensitivity [Inch/WC (mm)]	0.125 (3.2)
Supply Pressure Max [PSIG (kPa)]	150 (1050)
Approximate Size (inches)	2.0 x 2.06 x 4.26
Approximate Size (mm)	52 x 52 x 108

Range PSIG (kPa)	Port Size NPT	Model#
2-40 (15-280)	1/8	100-AA
	1/4	100-BA
	3/8	100-CA
2-60 (15-420)	1/8	100-AB
	1/4	100-BB
	3/8	100-CB
2-120 (15-840)	1/8	100-AC
	1/4	100-BC
	3/8	100-CC

Also Available:

Type 100HR High Relief Capacity
Range: 0-120 (0-840)
Port Size: 1/4 - Model # 110-BC
Port Size: 3/8 - Model # 110-CC

Type 100LR Low Range
Range: 5-25 (3.5-175) / Port Size: 1/4
Model # 120-BA

Type 100M

Designed to provide precise pneumatic control by use of an electrical signal.



Motorized Precision Air Pressure Regulator

- ▲ Ideal for control from a remote location
- ▲ Regulation accuracy and sensitivity of the Type 100
- ▲ Maintains set output pressure in the event of a power failure
- ▲ Compact size

Type 1200

Reversible DC motor controls pressure by converting the DC signal to a variable pneumatic output.



Eltop Electric to Pneumatic Converter

- ▲ Explosion proof enclosure
- ▲ Fail-safe operation
- ▲ Stainless steel valve
- ▲ No power draw
- ▲ Ideal for control from a remote solar operated location

Type 300

Designed to provide clean, accurate air pressure to instruments, valves, and other control equipment. Durable materials of construction in combination with an epoxy paint finish provide long lasting corrosion resistance in harsh industrial environments.

- ▲ Provides constant control of pressure under variable flow rates and supply pressures
- ▲ High capacity, long lasting depth filter
- ▲ Epoxy finish is standard
- ▲ Low droop
- ▲ Through body mounting



Instrument Air Filter Regulator

Flow Capacity SCFM (m3/hr)	20 (33.6)
Exhaust Capacity SCFM (m3/hr)	0.1 (0.17)
Sensitivity [Inch/WC (mm)]	1.0 (25.0)
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Approximate Size (inches)	3.13 x 3.13 x 7.50
Approximate Size (mm)	80 x 80 x 190

Range PSIG (kPa)	Port Size NPT	Model#
0-10 (0-70)	1/4	300-BD
0-30 (0-210)	1/4	300-BA
0-60 (0-420)	1/4	300-BB
0-120 (0-840)	1/4	300-BC

Type 350SS

Designed to provide instrument quality air in corrosive environments. Will also provide precise pressure control of sour gases.

- ▲ 316 Stainless Steel Internal and External
- ▲ Viton® Seals
- ▲ NACE approved
- ▲ Large flow capacity
- ▲ Low air consumption



Stainless Steel Filter Regulator

Flow Capacity SCFM (m3/hr)	22 (37)
Exhaust Capacity SCFM (m3/hr)	1.0 (1.7)
Sensitivity [Inch/WC (mm)]	1.0 (25.0)
Supply Pressure Max [PSIG (kPa)]	290 (2100)
Approximate Size (inches)	2.05 x 2.05 x 7.29
Approximate Size (mm)	52 x 52 x 185

Range PSIG (kPa)	Port Size NPT	Model#
5-30 (3-210)	1/4	350-BA
	1/2	350-DA
5-60 (3-420)	1/4	350-BB
	1/2	350-DB
3-100 (20-700)	1/4	350-BC
	1/2	350-DC
3-150 (20-1050)	1/4	350-BD
	1/2	350-DD

Type 400

General purpose regulator provides reliable performance under variable operating conditions.

- ▲ Repeatable pressure output
- ▲ Corrosion-resistant construction
- ▲ Low cost makes this unit ideal for high volume OEM applications



General Service Pressure Regulator

Flow Capacity SCFM (m3/hr)	20 (33.6)
Exhaust Capacity SCFM (m3/hr)	0.1 (0.17)
Sensitivity [Inch/WC (mm)]	1.0 (25.0)
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Approximate Size (inches)	DIA 2.5 H 5.63
Approximate Size (mm)	DIA 63 H 143

Range PSIG (kPa)	Port Size NPT	Model#
0-10 (0-70)	1/4	400-BD
0-30 (0-210)	1/4	400-BA
0-60 (0-420)	1/4	400-BB
0-120 (0-840)	1/4	400-BC

Type 700

Ideal for applications that require high flow capacity and accurate pressure control.

- ▲ Allows flow capacity up to 80 SCFM
- ▲ Dampening action of aspirator tube provides stability under varying flow conditions
- ▲ Sensitive to minute changes in down stream pressure



Precision High Flow Pressure Regulator

Flow Capacity SCFM (m3/hr)	40-80 (68-140)
Exhaust Capacity SCFM (m3/hr)	4 (7.0)
Sensitivity [Inch/WC (mm)]	0.250 (6.4)
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Approximate Size (inches)	DIA 3.0 H 6.0
Approximate Size (mm)	DIA 76 H 152

Range PSIG (kPa)	Port Size NPT	Model#
0-2 (0-14)	1/4	700-BA
	3/8	700-CA
	1/2	700-DA
0-15 (0-105)	1/4	700-BC
	3/8	700-CC
	1/2	700-DC
0-30 (0-210)	1/4	700-BD
	3/8	700-CD
	1/2	700-DD
0-60 (0-420)	1/4	700-BE
	3/8	700-CE
	1/2	700-DE
0-150 (0-1050)	1/4	700-BF
	3/8	700-CF
	1/2	700-DF

Volume Boosters/Air Relays

Type 700BP

Provides sensitive protection against over pressurization in the downstream portion of a pneumatic system. Operates as a high precision relief valve with an adjustable set point.

- ▲ Provides quick response to controlled system pressure variation
- ▲ Flow capacity up to 50 SCFM
- ▲ Compensating flow control from venturi tube design



Precision Back Pressure Regulator

Flow Capacity SCFM (m3/hr)	50 (85)
Exhaust Capacity SCFM (m3/hr)	N/A
Sensitivity [Inch/WC (mm)]	0.125
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Approximate Size (inches)	DIA 3.0 H 6.0
Approximate Size (mm)	DIA 76 H 152

Range PSIG (kPa)	Port Size NPT	Model#
0-2 (0-14)	1/4	710-BA
	3/8	710-CA
	1/2	710-DA
0-15 (0-105)	1/4	710-BC
	3/8	710-CC
	1/2	710-DC
0-30 (0-210)	1/4	710-BD
	3/8	710-CD
	1/2	710-DD
0-60 (0-420)	1/4	710-BE
	3/8	710-CE
	1/2	710-DE
0-150 (0-1050)	1/4	710-BF
	3/8	710-CF
	1/2	710-DF

Type 800

Compact unit that supplies precise air pressure regulation for applications where space is limited.

- ▲ Flow capacity up to 50 SCFM
- ▲ Stable output
- ▲ Repeatable
- ▲ Self relieving
- ▲ Lightweight construction



Subminiature Precision Air Pressure Regulator

Flow Capacity SCFM (m3/hr)	5 (8)
Exhaust Capacity SCFM (m3/hr)	.4 (.68)
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Approximate Size (inches)	DIA 1.0 H 3.4
Approximate Size (mm)	DIA 24.5 H 86.4

Range PSIG (kPa)	Port Size 1/16 NPT	Port Size M5
0-5 (0-35)	800-AA	800-BA
0-15 (0-105)	800-AB	800-BB
0-30 (0-210)	800-AC	800-BC
0-60 (0-420)	800-AD	800-BD
0-100 (0-700)	800-AE	800-BE

Type 850/860

Air/Water regulator provides stable output pressure in a small, economical package.

- ▲ Relieving and non-relieving models
- ▲ Non-rising adjustment knob with locking capability
- ▲ Lightweight construction
- ▲ OEM friendly cost



Low Cost Miniature Air/Water Pressure Regulator

Flow Capacity SCFM (m3/hr)	24 (48.2)
Exhaust Capacity SCFM (m3/hr)	.5 (.85)
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Approximate Size (inches)	1.5 x 1.63 x 2.80
Approximate Size (mm)	38.1 x 38.1 x 71.1

Range PSIG (kPa)	Port Size NPT	Air Model#	Water Model#
0-15 (0-105)	1/8	850-AA	860-AAN
	1/4	850-BA	860-BAN
	1/2	850-AB	860-ABN
0-30 (0-210)	1/8	850-AB	860-ABN
	1/4	850-BB	860-BBN
	1/2	850-AC	860-ACN
0-60 (0-420)**	1/4	850-BC	860-BCN
	1/2	850-AD	860-ADN
	1/4	850-BD	860-BDN

Type 200

Pilot operated, multi-stage 1:1 relay with positive and negative biasing adjustment capability. It accurately and quickly reproduces a signal pressure with consistent repeatability.

- ▲ Output control to within 0.1% of full range
- ▲ Positive or negative bias up to 30 psig
- ▲ High relief capacity model available
- ▲ Compact unit



Precision Air Relay

Flow Capacity SCFM (m3/hr)	14 (25)
Exhaust Capacity SCFM (m3/hr)	2.0 (3.4)
Sensitivity [Inch/WC (mm)]	0.125 (3.2)
Supply Pressure Max [PSIG (kPa)]	150 (1050)
Output Pressure Range [PSIG (kPa)]	2-120 (15-840)
Approximate Size (inches)	2.06 x 2.06 x 2.88
Approximate Size (mm)	52 x 52 x 73

Port Size NPT	Signal/Output Ratio	Model #
1/4	1:1	200-BC
3/8	1:1	200-CC

Type 600

Utilizes a signal pressure to produce an output pressure with high flow capacity. Very resistant to output variation due to changing flow and supply pressure conditions.

- ▲ Flow capacity to 50 SCFM
- ▲ Available with 1:1, 1:3 and 1:6 signal to output ratio
- ▲ High relief capacity



Volume Booster

Flow Capacity SCFM (m3/hr)	50 (85)
Exhaust Capacity SCFM (m3/hr)	15.0 (26.0)
Sensitivity [Inch/WC (mm)]	.250 (6.4)
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Output Pressure Range [PSIG (kPa)]	0-150 (0-1050)
Approximate Size (inches)	DIA 3.0 H 3.5
Approximate Size (mm)	DIA 76 H 85

Port Size NPT	Signal/Output Ratio	Model #
1/4	1:1	600-BA
3/8	1:1	600-CA
1/4	1:3	600-BC
3/8	1:3	600-CC
1/4	1:6	600-BD
3/8	1:6	600-CD

Type 650

Signal-operated regulator provides an output pressure that is the sum of the input signal pressure plus an easily adjustable preset bias.

- ▲ Four bias ranges from 0-15 psig to 2-150 psig
- ▲ Flow capacity to 50 SCFM
- ▲ Relief capacity to 15 SCFM



Positive Bias Relay

Flow Capacity SCFM (m3/hr)	50 (85)
Exhaust Capacity SCFM (m3/hr)	15.0 (26.0)
Sensitivity [Inch/WC (mm)]	.250 (6.4)
Supply Pressure Max [PSIG (kPa)]	250 (1700)
Output Pressure Range [PSIG (kPa)]	0-150 (0-1050)
Approximate Size (inches)	DIA 3.0 H 3.5
Approximate Size (mm)	DIA 76 H 85

Port Size NPT	Signal/Output Ratio	Model #	Bias Range PSI
1/4	1:1	650-BF	2-150*
3/8	1:1	650-CF	2-150*

*Consult factory for other bias ranges and ratios.

Diaphragm Air Cylinders

These air cylinders utilize a rolling diaphragm to provide a low-friction dynamic seal. This design provides virtually frictionless conversion of fluid pressure to linear force.

- ▲ Low hysteresis
- ▲ No blow-by leakage
- ▲ Available with linear ball bearings
- ▲ Standard units are easily modified to meet individual customer requirements
- ▲ Various mounting options



Type 500X

This electronic pressure regulator converts a current or voltage input signal to a linearly proportional pneumatic output pressure.

- ▲ Output pressure from 3–15 psig to 3–120 psig
- ▲ NEMA-4X(IP65) Enclosure (optional)
- ▲ Integral volume booster
- ▲ Agency approvals
- ▲ Field reversible
- ▲ Easy span and zero adjustment



Also Available:

Type 500X High Pressure Range
 Flow Capacity SCFM (m3/hr) 20 (34.0)
 Terminal Based Linearity (% of span) ±1.5
 Supply Pressure Max [PSIG (kPa)] 150 (1050)

Input Signal	Output Range PSI (kPa)	Model#
4-20 mA	2-60 (14-420)	500-AG
4-20 mA	3-120 (20-830)	500-AH*
0-60 mA	2-120 (15-830)	500-BF*
0-5 V	2-60 (14-420)	500-CF
0-10 V	3-120 (20-830)	500-EH*

Transducer (I/P, E/P)

Flow Capacity SCFM (m3/hr)	4.5 (7.6)
Terminal Based Linearity (% of span)	±0.75
Repeatability (% of span)	<0.5
Supply Pressure Max [PSIG (kPa)]	100 (700)
Port Size (Pneumatic)	1/4 NPT
Port Size (Electric)	1/2 NPT
Approximate Size (inches)	2.18 x 2.18 x 4.24
Approximate Size (mm)	55.4 x 55.4 x 107.7

Input Signal	Output Range PSI (kPa)	Model#
4-20 mA	3-15 (20-100)	500-AC
4-20 mA	3-27 (20-185)	500-AD
4-20 mA	6-30 (40-200)	500-AE
4-20 mA	1-17 (7-117)	500-AF
10-50 mA	3-15 (20-100)	500-BC
10-50 mA	3-27 (20-185)	500-BD
10-50 mA	6-30 (40-200)	500-BE
0-5 V	3-15 (20-100)	500-CC
0-5 V	3-27 (40-185)	500-CD
0-5 V	6-30 (40-200)	500-CE
1-9 V	3-15 (20-100)	500-CD
1-9 V	3-27 (40-185)	500-DD
1-9 V	6-30 (40-200)	500-DE

*Possible output range span adjustment of 3-145 PSIG (20-1000kPa)

Type 900X

Internal feedback system provides accurate conversion of a variable electrical signal to a linearly proportional pneumatic output.

- ▲ Unit self-corrects to maintain precise control of output pressure



- ▲ Shock, vibration and position insensitive

- ▲ High accuracy
- ▲ Noninteractive zero and span

- ▲ NEMA-4X(IP65) Enclosure

- ▲ Supply pressures up to 100 psig

- ▲ Built-in volume booster

- ▲ Wall, panel, pipe, DIN rail (optional) or manifold (optional) mounting

- ▲ Direct / reverse acting, full / split range

Transducer (I/P, E/P)

Flow Capacity SCFM (m3/hr)	4.5 (7.6)
Terminal Based Linearity (% of span)	±0.10
Repeatability (% of span)	<0.10
Supply Pressure Max [PSIG (kPa)]	100 (700)
Port Size (Pneumatic)	1/4 NPT
Port Size (Electric)	1/2 NPT
Approximate Size (inches)	1.5 x 2.2 x 3.7
Approximate Size (mm)	38.1 x 38.1 x 93.7

Input Signal	Output Range PSI (kPa)	Model#
4-20 mA	3-15 (20-100)	900-ACA
4-20 mA	3-27 (20-185)	900-ADA
4-20 mA	6-30 (40-200)	900-AEA
4-20 mA	1-17 (7-117)	900-AAF
4-20 mA	2-60 (15-420)	900-AGA
4-20 mA	3-100 (20-700)	900-AHA
0-5 V	3-15 (20-100)	900-CCA
0-5 V	3-27 (20-185)	900-CDA
0-5 V	6-30 (40-200)	900-CEA
0-10 V	3-15 (20-100)	900-ECA
0-10 V	3-27 (20-185)	900-DEA
0-10 V	2-60 (15-420)	900-EGA
0-10 V	3-100 (20-700)	900-EHA

Type 550X

This electronic regulator provides accurate and economic control for proportional pressure applications.

- ▲ Compact size, accessible porting and easy adjustments for space constrained applications
- ▲ DIN rail, manifold, pipe, wall or panel mounting available
- ▲ NEMA 4X / IP65 housing
- ▲ DIN 43650, terminal block or conduit electrical connections
- ▲ Zero based and high pressure versions available



Transducer (I/P, E/P)

Flow Capacity SCFM (m3/hr)	12.0 (20.4)
Terminal Based Linearity (% of span)	<±0.5
Repeatability (% of span)	<0.5
Supply Pressure Max [PSIG (kPa)]	100 (6.90 BAR)
Port Size (Pneumatic)	1/4 NPT
Approximate Size (inches)	1.5 x 2.2 x 3.7
Approximate Size (mm)	38.1 x 55.4 x 93.7

Input Signal	Output Range PSI (kPa)	Model#
4-20 mA	3-15 (20-100)	550-ACA
4-20 mA	3-27 (20-185)	550-ADA
4-20 mA	6-30 (40-200)	550-AEA
4-20 mA	2-60 (15-420)	550-AGA
4-20 mA	3-120 (20-800)	550-AHA
0-10 V DC	2-60 (15-420)	550-EGA
0-10 V DC	3-120 (20-800)	550-EHA

Also Available:

Type 550X Zero Based Range
 Flow Capacity SCFM (m3/hr) 20 (34.0)
 Terminal Based Linearity (% of span) <±1.0
 Repeatability (% of span) <1.0
 Supply Pressure Max [PSIG (kPa)] 150 (10.0 BAR)
 Port Size (Pneumatic) 1/4 NPT
 Approximate Size (inches) 1.5 x 2.2 x 5.1
 Approximate Size (mm) 38.1 x 55.4 x 13.0

Input Signal	Output Range PSI (kPa)	Model#
4-20 mA	0-30 (0-200)	550-AIA
4-20 mA	0-60 (0-400)	550-AJA
4-20 mA	0-120 (0-800)	550-AKA
0-10 V DC	0-30 (0-200)	550-EIA
0-10 V DC	0-60 (0-400)	550-EJA
0-10 V DC	0-120 (0-800)	550-EKA

Type 925



Multi-Function Supply Manifold

Provides a common supply port for the Type 550 or Type 900X I/P, E/P. Individual shut-offs allow in use service.

- ▲ One supply line for multiple outlets
- ▲ Patented individual shut-off valve
- ▲ DIN rail mountable
- ▲ Easy set-up
- ▲ Adaptable to provide common output for solenoid valves

Type 950XP

Compact I/P transducer in an explosion-proof housing delivers reliable performance in hazardous areas. Internal electronic feedback system maintains accurate control of output pressure.

- ▲ Explosion-proof NEMA-4X(IP65) enclosure.

- ▲ RFI, EMI protected

- ▲ Shock, vibration and position insensitive.

- ▲ Field-selectable outputs (optional)

- ▲ Highly tolerant of impure air

- ▲ Easy wiring



Explosion-Proof Transducer (I/P)

Flow Capacity SCFM (m3/hr)	4.5 (7.6)
Terminal Based Linearity (% of span)	±0.10
Repeatability (% of span)	<0.10
Supply Pressure Max [PSIG (kPa)]	100 (700)
Port Size (Pneumatic)	1/4 NPT
Port Size (Electric)	1/2 NPT
Approximate Size (inches)	DIA 3.50 H 4.60
Approximate Size (mm)	DIA 88.9 H 116.6

Input Signal	Output Range PSI (kPa)	Model#
4-20 mA	3-15 (20-100)	950-AC
4-20 mA	3-27 (20-185)	950-AD
4-20 mA	6-30 (40-200)	950-AE
4-20 mA	1-17 (7-117)	950-AF



ControlAir Inc.

8 Columbia Drive / Amherst, NH 03031 USA
Website: www.controlair.com
Email: sales@controlair.com
603/886-9400 Fax: 603/889-1844

