A rotork Brand

FAIRCHILD

precision pneumatic & motion control

The Widest Range of Products for Diverse Market Applications

For over 60 years, Fairchild Industrial Products Company has maintained an excellent reputation as a manufacturer of precision, high quality, pneumatic, and electro-pneumatic controls.

Our line of industrial control products offers one of the largest varieties of precision pneumatic and electro-pneumatic control devices available for process, machine tool, robotic and OEM applications. Our developing technology in four main product groups pneumatic pressure regulators, volume boosters, relays and electro-pneumatic transducers has been the basis for our growth and leadership.

Fairchild Industrial Products Company is ISO 9001 approved. We are authorized to display the CE mark on our electro-pneumatic products.

Many of our electro-pneumatic products are also approved for intrinsically safe, explosion-proof, and NEMA 4X (IP65) ratings by FM, CSA and ATEX.

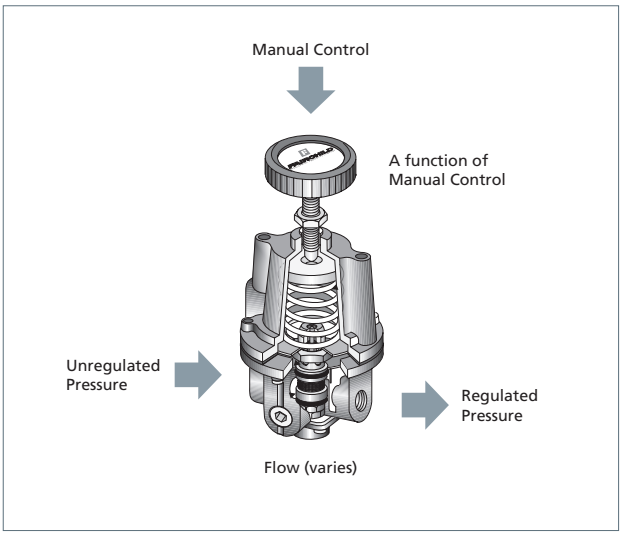
Our worldwide network of stocking distributors can assist you with application support at the local level. At the factory, our applications engineering staff can solve your problems with new or existing applications. We can work with your plant and design engineers to develop a custom product to suit a specific application.

At Fairchild Industrial Products Company, we have built our reputation on providing quality products, excellent customer service, quick delivery, and immediate response to customer emergencies.

	Oil & Gas	Chemical	Pharmaceutical	Industrial Automation	Medical/ Biotech	Food & Beverage	Power Generation	Pulp & Paper	Automotive	Textile Manufacturing
I/P and E/P Transducers and Actuators	T6000 T7800 TXI7800 PAX1	T5200 T6000 TXI7800 T9000 PAX1	T5700 T6000 T7800 TXI7800	T5220 T6000	T5700 T6000 T7800 TXI7800	T5220 T5700 T6000 T7800 TXI7800 T8000	T7800 TXI7800 T8000 PAX1	T5220 T5221 T6000 T7800 TXI7800 T8000 T9000	T5200 T5220 T6000 T7800 T9000	T5700 T6000 T7800 TXI7800
Pressure Regulators	10 10BP 63 65 100 PAX1	10BP 63 65 81 PAX1 4100A	17 18 55 65 66 66BP 70B 81 1600A	10 11 16 30 65 70 81 1000 1600A 4000A 4100A	17 18 55 65	10 30 65 200 2000 4000A	63 65 PAX1	10 16 30 65 70 80 81 85 100 4000A	10 16 30 65 70 80 81 1600A 4000A	10 30
Pneumatic Relays	14 24 90 91	24	24	-	15	14 24	-	14 15 21 22 25 90 91 1500	90 91	14 15 21
Volume boosters	20 200 200XLR 4500A 4800A	20 200 4500A 4800A	20 200 4500A	4500A 4900A	20 4500A 4900A	20 200 4500A 4900A	20 200 4500A 4800A	20 200 2000 4500A	20 200 4500A 4900A	20 4500A

Pneumatic Pressure Regulators

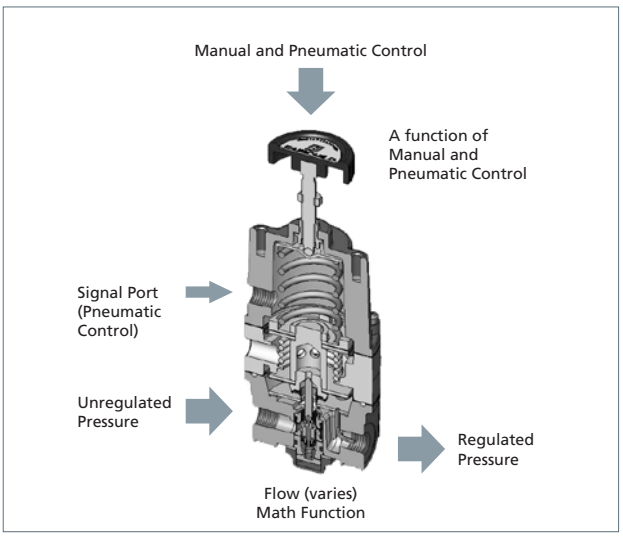
A pressure regulator reduces an unregulated high input pressure to a regulated lower output pressure. Its primary function is to maintain the regulated output pressure under flowing and non-flowing conditions.



Pneumatic Relays

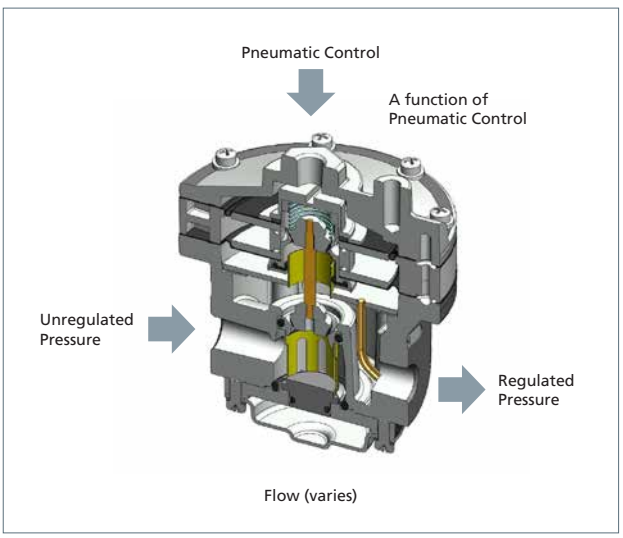
Pneumatic relays perform mathematical functions on one or more input signals that result in a single regulated pneumatic output including:

- Average
- Sum
- Differential
- Multiplying
- Dividing
- High / Low Selection
- Reversing
- Snap-acting (NC or NO)



Pneumatic Volume Boosters

A pneumatic air volume booster reproduces a low flow control signal with a greater flow regulated output pressure. It uses an unregulated input pressure to maintain a regulated output pressure under flowing and non-flowing conditions.

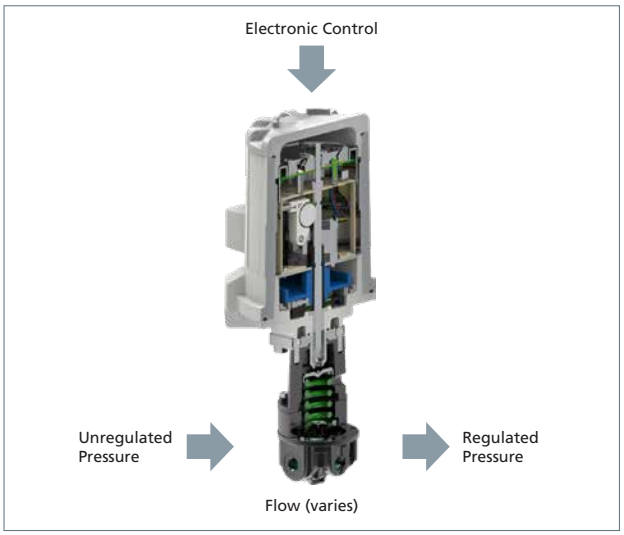


Product Range – Methods of Operation

Electronic Control of Pressure

In today's world of computerized electronic control of processes, there exist the need for electronically controlled devices for controlling pressure. These devices form the important interface between the electronic world and the pneumatic world.

Rotork Fairchild has a number of products employing different technologies for electronic control of pressure.



Motor Set Pressure Regulator

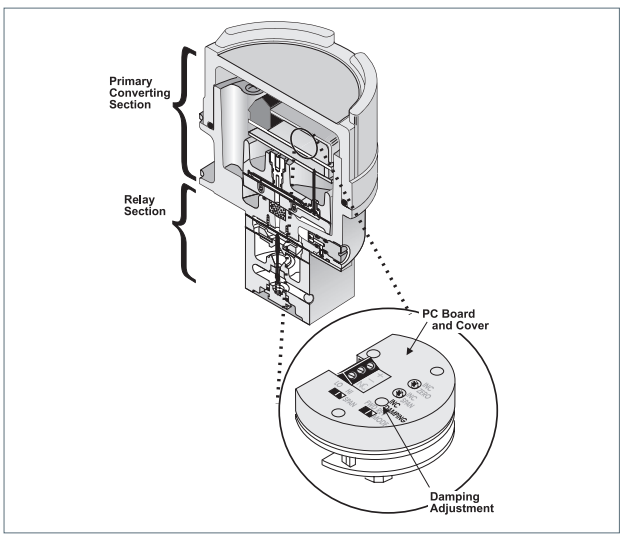
Rotork Fairchild's Motorized Pressure Regulator provides the utmost in bullet proof electronic pressure control. Inherently lock in last place and coupled with virtually any of Rotork Fairchild's time proven pressure regulators, these devices can endure the harshest of pneumatic pressure control environments. The actuator portion of these instruments are housed in an explosion proof, IP66 & IP68 enclosure. Digital pulse as well as analog control, fully configurable end travel limits and NO & NC position limit switches round out the control interface.

Electro-Pneumatic Transducers

Rotork Fairchild's Electro-pneumatic transducers employ simple but highly robust voice coil Flapper Nozzle technology as the primary electro-mechanical converting element for controlling pressure. This is a cost effective, signal powered solution to many electro-pneumatic interface applications. These compact, light weight I/P and E/P transducers are offered in a variety of inputs, outputs and connection options that enable solutions to virtually any application.

Electronic Feedback Transducers

Rotork Fairchild's feedback Electronic transducers are a step up from the voice coil flapper nozzle controlled pressure transducers. These piezo-ceramic flapper nozzle transducers feature vibration resistant piezo-ceramic actuator and high accuracy closed loop pressure feedback control of the output pressure. A high accuracy pressure sensor monitoring the output pressure provides highly accurate and stable feedback pressure control. These transducers are available in a variety of inputs and outputs, and connection methods. These are offered in IP66 intrinsic safety, and explosionproof versions for satisfying both general industrial and hazardous area applications.



Product Range – Methods of Operation

Microprocessor Controlled Pressure Controllers

Rotork Fairchild's microprocessor controlled pressure controllers are feature rich PID controlled pressure controllers. Primarily intended for machine control applications, these have a push button and LCD display user interface providing the utmost in flexibility and configurability. The feed and bleed solenoid valve technology primary pressure control system is highly accurate and efficient and can be configured to be non-consuming in steady state conditions. This technology is also resistant to vibration and shock and changes in position. These pressure controllers feature optional electronic feedback output and are offered in three pressure ranges up to 10 bar.

Product Range – Accessories and Service Kits

Accessories

Fairchild offers a variety of accessories for product support.

These items are:

- Mounting brackets
- Automatic drain filters are available to remove dirt, water, oil and other foreign matter from supply air lines.
- Manifold and rack kits for high density mounting T6000, T7800, T8000 and T9000 Series transducers.

Service Kits

Service kits are available for most products. These kits include elastomers and other wear items that are necessary to restore the unit to it's original operating condition.

Product Specifications – High Precision Pressure Regulators

	Standard (Pneumatic) Pressure Range				
					
	10	**30**	**80D**	**81**	**1000**
Flow Capacity - SCFM (m^3/hr) @ Supply Pressure of 100 psig (700 kPa)	40 (68)	40 (68)	14 (24)	50 (85)	50 (85)
Exhaust Capacity - SCFM (m^3/hr) Downstream pressure 5 psig (35 kPa) above 20 psig (150 kPa) set point	5.5 (9.4)	2.0 (3.4)	2.5 (4.2)	5.5 (9.4)	8 (13.6)
Sensitivity - inches of WC (cm of WC)	0.125 (0.32)	0.25 (0.63)	< 0.125 (< 0.32)	< 0.1 (< 0.254)	0.5 (1.27)
Supply Pressure Variation - psig (kPa) For Supply Pressure Change - psig (kPa)	<0.1 (<0.7) 100 psig (700 kPa)	<0.2 (<1.4) 100 psig (700 kPa)	< 0.2 (< 1.4) 100 psig (700 kPa)	< 0.2 (< 1.4) 100 psig (700 kPa)	< 0.1 (< 0.7) 100 psig (700 kPa)
Maximum Supply Pressure - psig (kPa)	500 (3500)[1]	250 (1700)	150 (1000)	150 (1000)[2]	250 (1700)
Dimensions (Approx.) - Inches (mm)	Dia. 3" H 6½" (Dia. 76 H 165)	2½" x 1¾" x 5¼" (57 x 44 x 133)	2⅛"x 1¾" x 5⅜" (57 x 45 x 137)	Dia. 3" H 6¼" (Dia. 76 H 160)	2⅛"x 2⅛" x 5" (54 x 54 x 127)
Output Pressure Range - psig (kPa)	0-2 (0-15) 0-10 (0-70) 1-20 (7-150) 0.5-30 (3-200) 1-60 (7-400) 2-150 (15-1000) 3-200 (20-1500) 5-300 (35-2100) 5-400 (35-2800) 5-500 (35-3500)[1]	0-2 (0-15) 0-10 (0-70) 0.5-30 (3-200) 1-60 (7-400) 2-100 (15-700)	0-20 (0-150) 1-60 (7-400) 1-100 (7-700)	0-2 (0-15)[2] 0-5 (0-35)[2] 0-20 (0-150) 0.5-60 (3.5-400) 0.5-100 (3.5-700)	0.5-10 (3.5-70) 0.5-30 (3.5-200) 1-60 (7-400) 2-150 (15-1000)
Port Size (NPT, BSPT or BSPP)	¼", ⅜", ½"	¼", ⅜"	⅛", ¼", ⅜"	¼"	¼", ⅜"

[1] - Maximum Supply Pressure for 5-500 psig ("A" Range) is 525 psig (3620 kPa)
[2] - Maximum Supply Pressure for 0-2 & 0-5 psig ranges is 100 psig (700 kPa)

	Standard (Pneumatic) Pressure Range		Low Pressure	
				
	4000A	**100**	**11**	**4100A**
Flow Capacity - SCFM (m^3/hr) @ Supply Pressure of 100 psig (700 kPa)	150 (255)	1500 (2550)	20 (34)	25 (42)
Exhaust Capacity - SCFM (m^3/hr) Downstream pressure 5 psig (35 kPa) above 20 psig (150 kPa) set point	40 (65.2)	44 (75)	0.5 (0.85)[3]	1.5 (2.55)[3]
Sensitivity - inches of WC (cm of WC)	0.5 (1.27)	0.5 (1.27)	0.05 (0.127)	0.05 (0.127)
Supply Pressure Variation - psig (kPa) For Supply Pressure Change - psig (kPa)	< 0.1 (< 0.7) 100 psig (700 kPa)	< 0.5 (< 3.5) 100 psig (700 kPa)	< 0.01 (< 0.07) 100 psig (700 kPa)	< 0.01 (< 0.07) 100 psig (700 kPa)
Maximum Supply Pressure - psig (kPa)	250 (1700)	250 (1700)	150 (1000)	150 (1000)
Dimensions (Approx.) - Inches (mm)	Dia. 4½" H 8" (Dia. 114 H 203)	Dia. 5½" H 11¼" (Dia. 133 H 286)	Dia. 5¼" H 7 3/32" (Dia. 133 H 180)	Dia. 8½" H 8 5/8" (Dia. 216 H 220)
Output Pressure Range - psig (kPa)	0.5-10 (3.5-70) 0.5-30 (3.5-200) 1-60 (7-400) 2-150 (15-1000) 5-250 (35-1700)	0-10 (0-70) 0.5-30 (3.5-200) 1-60 (7-400) 2-100 (15-700) 2-150 (15-1000)	0-0.5 (0-3.5) 0-2 (0-15) 0-4 (0-30) 0-6 (0-40) 0-12 (0-80)	0-0.7 (0-4.8) 0-1.4 (0-9.7) 0-3 (0-21) 0-5 (0-35)
Port Size (NPT, BSPT or BSPP)	⅜", ½", ¾"	1", 1½"	¼", ⅜", ½"	⅜", ½", ¾"

[3] - Downstream pressure is 0.1 psig (0.7 kPa) above 1.0 psig (7 kPa) set point