FAIRCHILD
precision pneumatic & motion control

Instrumentation & Process Control Solutions for the

Pharmaceutical Industry

❶ *Laboratory*

Fairchild products are used extensively in research and laboratory applications in the development of new pharmaceuticals. For example, the Model 10 and 10VR are utilized to control pressure or vacuum in glove boxes to maintain critical conditions for the necessary reactions and processes.

❷ *Fermentation*

Various gase flow through Fairchild's Model 10 and 66 Regulators into the reactors during the fermentation process. Precision control of pressure and flow facilitates initial growth of pharmaceutical reagents and compounds.

❶ Laboratory

❷ Fermentation

❸ *Separation / Processing*
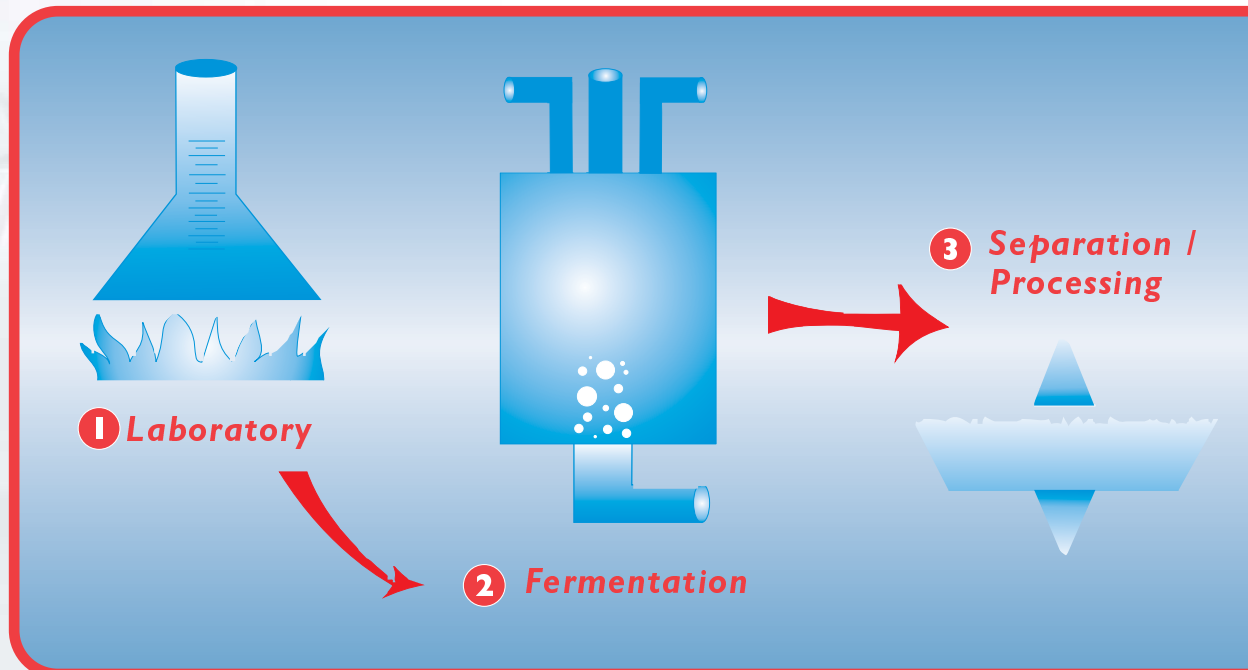
❹ Purification

Fairchild's I/P Transducers and Regulators are used in the purification process to maintain pressures and flow of the media through the distillation and purification steps. For example, the Model 4500 booster, having a flow rate of 150 SCFM, is often utilized to increase the flow of gas into purification vessels.

❺ Packaging

Vacuum packaging systems rely upon Fairchild's Vacuum Regulators, such as the Model 10 VR and Model 16 to maintain a constant vacuum during the packaging cycle to create a durable and tamper proof seal for bags, bottles and other packaging systems.
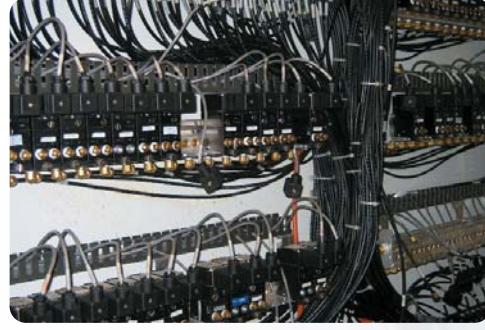
❷Fermentation

Fairchild's new Oxygen Service line of Regulator and Booster products are used to maintain precision introduction of Oxygen, Nitrogen or Hydrogen rich gases into the chamber to percolate and create the resultant product.

❸Processing

During the separation and further processing of the products, Fairchild's Regulators and transducers, such as the T6000 and T7800, are used throughout the facility to monitor, maintain, coordinate and control pressure and flow of many different media to create the desired for the reactions and products.

❺ Packaging

❹ Purification
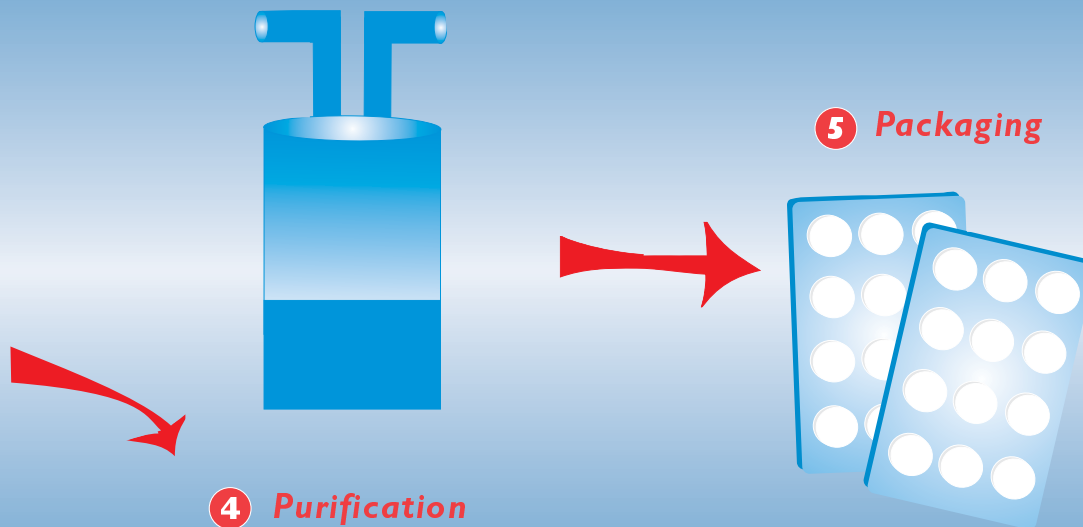
❺Packaging

Fairchild's Vacuum Regulators, such as the Model 10 VR are also employed in the testing of blister pack products. When exposed to the vacuum maintained by the Regulator, any leaks in the blister pack collapse the blister bubble, providing a fast and cost effective means to confirm the quality and integrity of the outgoing product.

From Laboratory Through Packaging

Fairchild products are used extensively throughout the operations of the Pharmaceutical Industries, from research and development to processing and packaging.

Our dedicated technology base of products meets and exceeds the needs of even the toughest applications with:

- **Oxygen Compatible Constant**
- **Stainless Trim**
- **High Supply Pressure**
- **Precise pressure control**
- **High Flow**

You can rely on Fairchild to provide the highest quality products and innovative technology to handle your precision pressure control and flow applications.

PRESSURE REGULATORS

Fairchild's workhorse is the Model 10 Series Regulator.

Model 10
Precision Regulator

Specifications

Flow Capacity: SCFM (m³/HR) Supply = 100 psig	40 (68)
Exhaust Capacity: SCFM (m³/HR) Downstream Pressure 5 psig above 20 psig setpoint	5.5 (9.4)
Sensitivity: Inch/WC (cm)	0.125 (0.32)
Supply Pressure Effect: psig, [BAR], (kPa) For Supply Change: 100 psig	<0.1, [<.007], (<0.7)
Supply Pressure Maximum: psig, [BAR], (kPa)	500, [35.0], (3500)
Ambient Temperature	-40°F to +200°F

Features

- Hard Epoxy Coated Exterior
- Stainless Trim
- Handles High Supply Pressure
- High Precision Pressure Control
- Accurately Holds Set Point
- **Oxygen service unit available with Z20128 suffix**

The Model 66 Regulator is a tough, heavy duty all Stainless Steel bodied Regulator.

Model 66
Stainless Regulator

Specifications

Flow Capacity: SCFM (m³/HR) Supply = 100 psig	22 (37.4)
Exhaust Capacity: SCFM (m³/HR) Downstream Pressure 5 psig above 20 psig setpoint	1.0 (1.7)
Sensitivity: Inch/WC (cm)	1.0 (2.54)
Supply Pressure Effect: psig, [BAR], (kPa) For Supply Change: 25 psig	<0.1, [<.007], (<0.7)
Supply Pressure Maximum: psig, [BAR], (kPa)	500, [35], (3500)
Ambient Temperature	-85°F to +300°F (-65°C to +149°C)

Features

- Stainless Steel Construction
- Handles High Supply Pressure
- Viton Elastomers with Teflon on Control Side for Corrosion Resistance
- Separate Control Chamber Eliminates Hunting or Buzzing

VOLUME BOOSTERS

The Model 20 Booster is designed for Oxygen Service use.

Model 20
Precision Booster

Specifications

Flow Capacity: SCFM (m³/HR) Supply = 100 psig	45 (76.5)
Exhaust Capacity: SCFM (m³/HR) Downstream Pressure 5 psig above 20 psig setpoint	7.5 to 11 (12.8 and 18.7) Varies with ratio
Sensitivity: Inch/WC (cm)	.25 to 1.50 (.64 to 3.8) Varies with ratio
Supply Pressure Effect: psig, [BAR], (kPa)	0.1 to 0.60 [.007 to .041] (0.7 to 4.0) Varies with ratio
Supply Pressure Maximum: psig, [BAR], (kPa)	250, [17], (1700)

Features

- Hard Epoxy Coated Exterior
- Stainless Trim
- High Output Flow for Quick Downstream Pressure
- Can be Serviced while Mounted
- Separate Control Chamber Eliminates Hunting or Buzzing
- **Oxygen service unit available with Z20129 suffix**

A larger capacity Booster, the Model 4500 Series is one tough unit.

Model 4500
High Flow No Bleed Design Booster

Specifications

Flow Capacity: SCFM (m³/HR) Supply = 100 psig	150 (255)
Exhaust Capacity: SCFM (m³/HR) Downstream Pressure 5 psig above 20 psig setpoint	40 (65.2)
Sensitivity: Inch/WC (cm)	1.0 to 3.0 (2.54 to 7.62) Varies with ratio
Supply Pressure Effect: psig, [BAR], (kPa)	<0.1 to 0.3 [.007 to .021] (0.7 to 2.1) Varies with ratio
Supply Pressure Maximum: psig, [BAR], (kPa)	250, [17], (1700)

Features

- Hard Epoxy Coated Exterior
- Stainless Trim
- Super High Output Flow for Faster Downstream Pressure
- Can be Serviced while Mounted
- Separate Control Chamber Eliminates Hunting or Buzzing
- **Oxygen service unit available with Z20131 suffix**

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04/2006