



FAIRCHILD

precision pneumatic & motion control



**High Technology & Process Control Solutions for the
Tire Manufacturing Industries**



1 Belt Forming

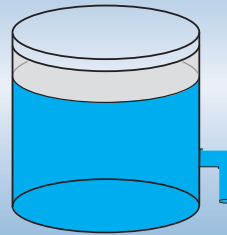
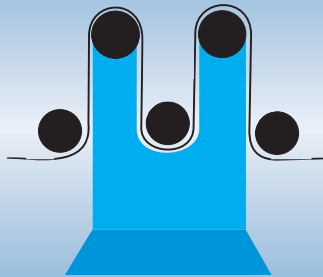
Fairchild products are used extensively in the belt forming operation. For example, the T6000 and T7800 Transducers control air pressures to maintain consistent belt tension as the tire support structures are created. Many newer tire facilities use robotics, with various Fairchild Transducers, Regulators and Boosters used to form and wind the tire carcass.



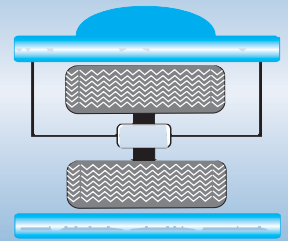
2 Compound Mixing

At this manufacturing stage, maintenance of the exact formula and proper temperatures is critical to proper formation. Fairchild Precision Regulators and Boosters, such as the Model 100 and 4500, are used in these areas of the facility.

1 Belt Forming



3 Tire Press

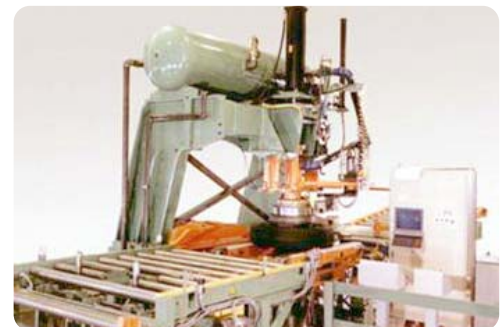


2 Compound Mixing

5 Tire Uniformity Testing

As the tires move through the finishing operations, they must be checked for uniformity of roundness as well as sidewall to sidewall variation. Fairchild's T6000 and T7800 Transducers are used in these areas to make certain the measurements are recorded with appropriate pressure applied to the tire. To maintain short cycle times, the tire inflation incorporates assistance from a Model 4500A Booster while the transducer controls the pressure.

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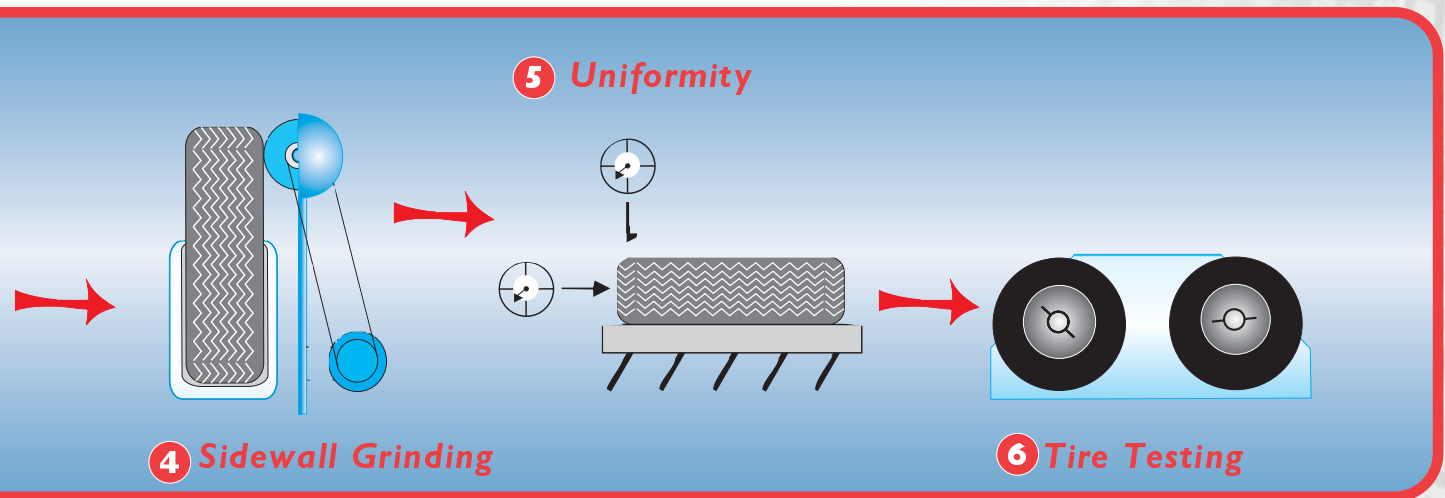
3 Tire Press

To form the proper shape and consistency of the raw tire, Fairchild T6000 and T7900 Transducers and 4500 Boosters are employed to make certain correct pressure and shaping result from in the tire press operations.



4 Side Wall Grinding

During the grinding process, the tire receives its first truing of the sidewall. At this point, Fairchild Transducers, such as the T6000, are used along with Fairchild Boosters, such as the Model 20 and 4500, to ensure the first grinding pass is square and accurate.



6 Tire Testing

Fairchild products are used throughout the quality control areas of a tire facility. For example, Fairchild's Precision Regulators and Transducers, such as the Model 100 and the T7900, are used in tire testing to press the tire tread to a rotating surface to simulate road conditions.



From Belt Forming Through Testing

Fairchild products are used extensively throughout the operations of the Tire Manufacturing Industries, from forming of belts to final testing.

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

- High Supply Pressure
- Precise Pressure Control
- High Flow Capacity

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

Model 100 Precision Regulator



Specifications

Flow Capacity: SCFM (m³/HR) Supply = 100 psig	>1500 (2550) *
Exhaust Capacity: SCFM (m³/HR) Downstream Pressure 5 psig above 20 psig setpoint	44 (75)
Sensitivity: Inch/WC (cm)	0.5" (1.27)
Supply Pressure Effect: psig, [BAR], (kPa)	<0.1, [.007], (0.7)
Supply Pressure Maximum: psig, [BAR], (kPa)	250, [17], (1700)

* 1 1/2" NPT Connection 40 psig, [2.8 BAR], (280 kPa)

Features

- Venturi-type aspirator tube to aid stability to minimize downstream pressure droop under flowing conditions
- Balanced supply valve to minimize effect of supply pressure variation
- High flow capacity

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

- High output flow for faster downstream pressure
- Can be serviced while mounted
- Separate control chamber eliminates hunting or buzzing

Model T6000 Voice Coil Pressure Transducer



Specifications

Flow Capacity: SCFM (m³/HR) Supply = 120 psig	9 (15.3)
Exhaust Capacity: SCFM (m³/HR) Downstream Pressure 5 psig above 9 psig setpoint	2 (3.4)
Output Pressure: psig, [BAR], (kPa)	3-15, 0-120 [.2-1.0], [0-8.0] (20-100), (0-800) 6 Ranges
Maximum Air Consumption	5.0 to 17.0 (0.14) to (0.48) Varies with Model
Supply Pressure Maximum: psig, [BAR], (kPa)	120-150, [8.0-10.0], (800-1000)

Features

- Field reversible
- RFI/EMI Protection
- Compact size for restricted space
- Optional explosion-proof NEMA 4X, IP65, Type 4 enclosure for indoor/outdoor installations

Model T7900 High Flow Transducers



Specifications

Flow Capacity: SCFM (m³/HR) Supply = 100 psig	100 (17.0)
Exhaust Capacity: SCFM (m³/HR) Downstream Pressure 5 psig above 9 psig setpoint	50 (85)
Output Pressure: psig, [BAR], (kPa)	0-30, 0-75, 0-150 [0-2.0], [0-5.0], [0-10.0] (0-200), (0-500), (0-1000)
Maximum Air Consumption	0 @ steady state
Supply Pressure Maximum: psig, [BAR], (kPa)	200, [14.0], (1400)

Features

- High flow capacity
- Select current or voltage input signals using keypad
- Select current or voltage feedback output signal using keypad
- Independently adjustable PID tuning coefficients
- Set operation parameters with keypad
- Liquid crystal display

