Ingersoll Rand Industrial Technologies provides products, services, and solutions to enhance the efficiency and productivity of our commercial, industrial, and process customers. Our innovative products include air compressors, air systems components, tools, pumps, material and fluid handling systems, and microturbines.

(800) 376-TOOL • irtools.com

Pneumatic Dispensing Systems and Packages
LiteStream

Distributed by:

© 2007 Ingersoll-Rand Company IRPS-0607-025

Powered by ARO
Progress in Motion

For more than 100 years, we’ve helped drive innovation with revolutionary technology — creating new standards for how the world gets work done. We’ve done it by producing best-in-class Ingersoll Rand / ARO pump and dispensing technologies, and by knowing our customers’ industries and the demands placed on productivity and quality.

No matter what your product, process, or location, Ingersoll Rand / ARO offers a broad range of pumps and accessories, dispensing systems, and a world-wide distribution and service network guaranteed to solve any fluid handling challenge.

Dispensing for any application

Introducing LiteStream — a mid-range control system for fluid metering and dispensing sealants and adhesives. No matter what your product, process, or industry, our LiteStream systems offer a variety of attractive options, features, and benefits.

**LiteStream controller** delivers automatic adaptive viscosity control for precise, repeatable bead application.

**Easy-to-use operator interface** provides easy navigation, quick set-up and convenient log reporting of dispensed cycles and faults.

**Flow meter and shot meter dispense head configurations** permit unique dispensing options for materials, and flexibility for matching our systems to your application needs.

**Off-the-shelf, pre-configured packages** simplify component ordering, help lower costs, make installation easy and short lead times from purchase to delivery.

**Optional temperature control package** offers world class water-based conditioning for materials that dramatically change viscosities with small temperature changes — can be installed with original systems or added later.

**Highly efficient pumps** guarantee efficient and reliable movement of viscous materials to the point of application dispense, when coupled with our modular control packages.
Precise dispensing

Precise dispensing of sealants, adhesives, and mastics requires a flexible system, and one that can automatically handle material inconsistencies. That’s exactly what you get with a LiteStream system, with its many different set-up choices, process options, and application modes. Whether applying single component sealers, adhesives, sound deadeners, silicones, or grease, LiteStream is the right choice for applying a dependable, repeatable bead.

Processes

- **Streaming**: Material is applied to the surface by a thin jet which makes the process less sensitive to inconsistencies in the workpiece.
- **Extrusion**: Material is applied directly onto the surface where bead shape is critical to its performance.
- **Metered Ejection**: System injects precise and repeatable material volumes at pressure.
- **Spraying**: Airless application of materials in a wide pattern of consistent thickness.
- **String Dispersion**: Provides a wide application pattern without atomizing the material.

Sample Applications

- **Beads and ribbons**: For bonding joints in all industries.
- **Wide beads**: Penetrates to seal joints for water proofing and general sealing.
- **Shaped beads**: Uniquely shaped beads for gasketing and masking inconsistency in work pieces, dampening vibrations and numerous special applications.
- **Patches and coatings**: Sprayed patches for reinforcement, sound deadening, and waterproofing in sheet metal pieces, often replacing hand-applied patches.
- **Gum Drops (mastics)**: Reduces vibrations with droplets of materials (anti-flutter); aids assembly where grease is applied in droplets.

Markets and applications

The Ingersoll Rand LiteStream system is designed for the precise dispensing of adhesives, sealants and mastics; including, single component sealers, adhesives, sound deadeners, silicones, and grease.

<table>
<thead>
<tr>
<th>KEY APPLICATIONS</th>
<th>END MARKETS</th>
<th>PROCESS</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sealing</td>
<td>Automotive Assembly</td>
<td>Interior Vehicle Trim</td>
</tr>
<tr>
<td>Structural Bonding</td>
<td>Exterior Vehicle Trim</td>
<td>Exterior Vehicle Trim</td>
</tr>
<tr>
<td>Joint Bonding</td>
<td>Hans Flange Sealing</td>
<td>Hans Flange Sealing</td>
</tr>
<tr>
<td>Structural Reinforcement</td>
<td>Doors - Lap Joint Bonding</td>
<td>Doors - Lap Joint Bonding</td>
</tr>
<tr>
<td>Weather Proofing</td>
<td>All “Closures” - Sealing</td>
<td>All “Closures” - Sealing</td>
</tr>
<tr>
<td>Reduces vibration</td>
<td>Underbody - Sound Deadening &amp; Sealing</td>
<td>Underbody - Sound Deadening &amp; Sealing</td>
</tr>
<tr>
<td>and finishing</td>
<td>Doors / Hoods - Body Panel Reinforcement</td>
<td>Doors / Hoods - Body Panel Reinforcement</td>
</tr>
<tr>
<td>Gum Drops (mastics)</td>
<td>Windshields / Sunroof - Urethane Process</td>
<td>Windshields / Sunroof - Urethane Process</td>
</tr>
</tbody>
</table>

- **TRANSPORTATION INDUSTRY**
  - **Marine**: Structural Bonding, Joint Sealing, Coatings and Finishing
  - **Windows & Doors**: Seam Sealing, Waterproofing, Glass / Wood Bonding
  - **Electronics**: Adhesives for Component Assembly
  - **Machinery**: Gasket Filling, Metal Joint Sealing, Adhesives for Component Assembly, Fastener Sealing
  - **Furniture Manufacturers**: Office, home, industrial, Structural Reinforcement & Sealing, Adhesives for Component Assembly, Fastener Sealing
  - **Appliances**: Panel Sound Deadening, Fastener Sealing, Structural Sealing / Bonding, Component Adhesives / Sealing, Vibration Reduction Processes
  - **Housewares**: Craft Silicone Filling and Potting, Wood Sealing, Metal Joint Sealing, Countertop Laminating and Sealing
Dispensing with flexibility

With LiteStream, you have the flexibility to design the type of set up that best serves your need — whether as a full system, or by selecting individual components. Each dispense head itself is sold as a package, including all pieces and parts necessary to install within the rest of your system layout.

Choose your dispense head
Select either a flow-meter or shot-meter dispense head configuration to match your particular application needs.

Choose your controller
The LiteStream controller delivers automatic adaptive viscosity control for precise, repeatable bead application. Select either DeviceNet or Discrete communication.

Choose your mounting dress-out
Whether you are using our shot-meter or our flow-meter dispense head, your dress out package is the same. Simply choose pedestal or robot package.

Choose your pump
Ingersoll Rand / ARO pumps guarantee efficient and reliable movement of viscous materials when coupled with our modular control packages.

Choose your cables and accessories
Select from a full line of cables and dispense accessories designed to help maximize your efficiency, precision, and productivity.

When specifying your system, start with your dispense head and work backwards to your pump selections — choosing pedestal or robot mounted, material hoses and cables, accessories, and pump.
Dispense head technology

Shot-meter package

The LiteStream shot meter package is ideal for single-component applications in which the overall volume of each dispense is less than 70cc. With this configuration, material is pre-filled and the material chamber is pressurized with a metering rod. Dispensing is constantly controlled and monitored by a pressure transducer that verifies material flow and continuously makes adjustments to maintain a consistent and uninterrupted flow-rate during application.

- Ability to process low volumes, shot sizes, and flow rates
- Excellent response for stop and start of beads
- Less destructive to glass bead and filled materials
- Accuracy within 2%
- Positive displacement

Package includes:

- Shot-meter dispense head
- Standard dispense valve with 3/4 – 16 nozzle
- Wiring harness for dispense head
- Air intensifier with 20-foot air hose
- 5-foot rubber material hose

Specifications

<table>
<thead>
<tr>
<th>115-175LS Shot-Meter dispense head kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume range:</td>
</tr>
<tr>
<td>Temperature range:</td>
</tr>
<tr>
<td>Max dispense pressure:</td>
</tr>
<tr>
<td>Required feed pressure:</td>
</tr>
<tr>
<td>Max flow rate:</td>
</tr>
</tbody>
</table>

Flow-meter package

The LiteStream flow meter package is ideal for single-component applications where the overall volume of each dispense exceeds 70cc in volume. Material is constantly controlled and monitored by a mastic regulator that verifies flow and continuously makes control adjustments to maintain a consistent and uninterrupted flow-rate during application.

- Continuous flow with unlimited volume
- Automatic, real-time material viscosity adjustment

Package includes:

- Flow-meter dispense head
- Standard dispense valve with 3/4 – 16 nozzle
- Wiring harness for dispense head
- 5-foot rubber material hose

Specifications

<table>
<thead>
<tr>
<th>110-670LS Flow-Meter dispense head kit</th>
</tr>
</thead>
<tbody>
<tr>
<td>Volume range:</td>
</tr>
<tr>
<td>Temperature range:</td>
</tr>
<tr>
<td>Max dispense pressure:</td>
</tr>
<tr>
<td>Required feed pressure — dispense pressure + psi (bar):</td>
</tr>
<tr>
<td>Max flow rate:</td>
</tr>
</tbody>
</table>

LiteStream dispense heads are sold as packages, including all parts necessary to install within your existing system for precise, repeatable material application on a highly cost-effective basis. Your choice of either flow meter or shot meter dispense head packages will depend upon your application of materials, shot volume to be applied, and your process.
Controller packages

The LiteStream controller is specially designed to control the flow and pressures of various materials and viscosities, in applications such as sealing, bonding, gluing, and reinforcing. The controller runs in both automatic and manual modes, and interacts with the robot / automation system via discrete or DeviceNet communication.

The LiteStream system uses a patented method for continuous material viscosity compensation to apply an accurate, repeatable bead, regardless of changes in material viscosities caused by temperature changes, and inconsistencies in materials over time. Our continuous monitoring of the process for pressure and flow ensures that material is dispensed at a consistent flow-rate.

Model Numbers

<table>
<thead>
<tr>
<th>Model Numbers</th>
<th>Description</th>
<th>Specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>110-726</td>
<td>LiteStream controller with Discrete communication</td>
<td>- Graphical color-LCD screen - 8 lines x 40 characters - 16 digital inputs 24V DC 30mA - 16 digital outputs 24V DC 1.5 A - Supply voltage: 24VDC +/- 20% - Ambient temperature: 32° – 122° F (0° – 50° C) - Main controller power: 30VAC – 230VAC 1P - Certifications — CE</td>
</tr>
<tr>
<td>110-727</td>
<td>LiteStream controller with DeviceNet communication</td>
<td>- Five active system states — manual, auto, active cycle, purge, temperature mode - Control methods: pressure and flow control - 7 Programmable Styles - Simple Soft-Key user interface for easy set-up and navigation - Major and minor fault reporting and alerts - Integrated Temperature Conditioning control (with TCU package) - Integrated pump controls - Downloadable logs (optional)</td>
</tr>
</tbody>
</table>

- Five active system states — manual, auto, active cycle, purge, temperature mode
- Control methods: pressure and flow control
- 7 Programmable Styles
- Simple Soft-Key user interface for easy set-up and navigation
- Major and minor fault reporting and alerts
- Integrated Temperature Conditioning control (with TCU package)
- Integrated pump controls
- Downloadable logs (optional)
A configuration for any application

Our LiteStream packages can be configured as stationary systems where workpieces are manipulated during application and presented to the dispenser, or as robotic systems where the dispenser itself is manipulated. In either case, LiteStream is ideal for virtually any type of assembly application—bringing increased productivity and precision control to your dispensing operations, with our outstanding pneumatic packages.

**Footprint package includes:**
- 15-foot low-flex discrete cable (connects to wiring harness) (A)
- 15-foot air hose (C)
- Universal bracket for pedestal (E)
- Fittings and connections

**Robust dress-out kit**
110-723 20’ robust dress-out kit

**Robot package includes:**
- 15-foot high-flex discrete cable (connects to wiring harness) (A)
- 3-foot and 20-foot material hoses (B)
- 5-foot air hose (C)
- Bulkhead brackets (on top of robot to handle hoses and cables) (D)
- Universal robot mounting bracket (F)
- Fittings and connections

**Remote dispense valve mounting (optional)**
120-726LS Remote dispense valve for non-temperature conditioned system
120-727LS Remote dispense valve for temperature conditioned Shot-Meter
120-728LS Remote dispense valve for temperature conditioned Flow-Meter

Temperature conditioning is used to make high viscosity materials dispensable by conditioning them and making them easier to dispense at lower operating pressures. With our temperature control and TCU package, we are better as a medium to condition the material. Our TCU package gives you everything you need to integrate temperature conditioning into your dispense system—whether at initial installation, or by adding later.

- **LiteStream controller can be mounted directly on the TCU unit to save floor space.**
- **System requires less maintenance than other options (e.g., heated hoses) which often need frequent attention.**
- **Our system conditions material all the way to the point of application—ensuring better performance and repeatability of bead placement.**
- **Controls are integrated into the LiteStream controller for convenient set-up and ease of operation.**

Use the model number chart to help you select a shot-meter or flow-meter package for either 50-foot or 100-foot dress out—matching the distance from your dispense head out to your pumps. The TCU will be integrated between your pump(s) and dispense head. If mounting the LiteStream controller onto the TCU, your dress-out should match the length of your discrete cable. Select optional extensions for 5-foot of additional material hose conditioning.

**Model Numbers**
- 110-702 Shot-meter TCU package — 50’ dress out
- 110-703 Shot-meter TCU package — 100’ dress out
- 110-738 Flow-meter TCU package — 50’ dress out
- 110-739 Flow-meter TCU package — 100’ dress out
- 110-747 Pedestal extension for additional 5’ of conditioning (optional)
- 110-755 Robot extension for additional 5’ of conditioning (optional)

**Temperature Conditioning Package**

- **TCU with mounting platform for LiteStream controller.**
- **Water jacketed hoses with connection block for your dispense head.**
- **Control cable to connect TCU to control panel.**

**Specifications**
- **Power:** 230V AC
- **Conditioning range:** 60 – 120° F (16 – 50° C)
- **Refrigerant:** R134A
Cables, accessories, and options

Ingersoll Rand / ARO offers a full line of cables and dispense accessories to help maximize your efficiency, precision, and productivity.

**Robot Interface Cables**
- Choose 30' or 60' depending upon distance from robot controller to your LiteStream controller.
- 110-728 30' Discrete robot interface cable
- 110-729 60' Discrete robot interface cable
- 110-730 30' DeviceNet robot interface cable
- 110-731 60' DeviceNet robot interface cable

**Discrete Cables** (from dispense head to controller)
- 110-700 50' Discrete cable kit
- 110-701 100' Discrete cable kit

**DeviceNet Cables**
- 110-736LS 20' Pump interface cable
- 110-737LS 50' Pump interface cable

**Manual Dispensing Kits**
- 300-963 Manual flow gun only
- 110-547 Manual dispensing kit

**Valve and Filter Components**
- 364-538 Ball Valve 3/8" NPT Locking
- 360-639 Ball Valve 1" NPD Locking
- 110-547 Filter w/ Ball Valve Assembly
- 105B038A Ball & seat valve with 3/4-16 standard nozzle
- 105B038C Ball & seat valve with 7/8-14 standard nozzle
- 105B038D Ball & seat valve with 7/8-14 alignment slot nozzle
- 110-907 Standard filter assembly
- 110-908 3/8" pipe to single ball valve

**Nozzles**
- 400-723 Nozzle .093 orifice
- 400-724 Nozzle .125 orifice
- 400-725 Nozzle .187 orifice
- 400-726 Nozzle .250 orifice

**LiteStream Controller Stands and Pedestals**
- Universal stand can be used for filters, regulators and/or additional shut-off with ball valves if needed for dual pump set ups, etc.
- 110-391 LiteStream controller stand
- 110-392 LiteStream pedestal — for dispense head mounting
- 110-393 Universal stand only — for filters, ball valves, Y pipes, etc.

**Manual Dispense Kit**
- 300-963 Manual flow gun only
- 110-547 Manual dispensing kit

**Pump Controls (controls only)**
- 110-201 LiteStream Single Pump Pneumatics
- 110-202 LiteStream Dual Pump Pneumatics
- 110-203 LiteStream single pump interface
- 110-204 LiteStream dual pump interface
- 110-205 LiteStream dual pump Deluxe interface

**LiteStream Controller Stands and Pedestals**
- Universal stand can be used for filters, regulators and/or additional shut-off with ball valves if needed for dual pump set ups, etc.
- 110-391 LiteStream controller stand
- 110-392 LiteStream pedestal — for dispense head mounting
- 110-393 Universal stand only — for filters, ball valves, Y pipes, etc.
Material delivery pumps and controls

Nothing gets dispensed until it has been pumped, and nobody has more experience with hard-to-pump industrial materials than Ingersoll Rand / ARO. For more than 60 years, our pumps have been time-proven workhorses that deliver precise, reliable performance day after day with minimal maintenance. We also produce pump packages for 5-gallon and 55-gallon systems — from basic single pneumatics to integrated dual options with deluxe controls.

For most applications of sealants and adhesives, you can use either our ARO S1 series pump for lower volumes and highly viscous materials, or our ARO high volume pump for low to medium viscosity materials. Each pump is available in 5-gallon and 55-gallon configurations.

Choose:
- Low volume or high volume pump
- 55-gallon or 5-gallon units
- Control package — single or dual pneumatics and interface

**Low Volume / Highly Viscous**
ARO S1 Series / 65:1

**Features and benefits:**
- For high viscosity materials (up to 15,000,000 cps)
- Unique design for handling the most abrasive materials
- All metal pump valving and rod — no lower seals
- Can be heated to 400° F
- Recirculating lubrication kit for packing and giving longer life (optional)

**High Volume / Low to Medium Viscous**
ARO Standard 65:1

**Features and benefits:**
- For medium viscosity materials (up to 1,000,000 cps)
- Poly pak seals for improved endurance
- Abrasion-resistant chrome-plated plungers
- Tie-rod design for fast access

---

Pump Control Package Kits

**Single Pump Pneumatic Package**
This kit is a pneumatic package that will operate the elevator and the air motor, and will pneumatically cross-over from pump A to pump B when a drum is empty. There is no communication between the pump controls and the LiteStream controller.

**Dual Pump Pneumatic Package**
This kit is a pneumatic package that will operate the elevators and air motors, and will pneumatically cross-over from pump A to pump B when a drum is empty. There is no communication between the pump controls and the LiteStream controller.

**Single Pump Interface Package**
This is a pump interface add-on kit. It includes a “material low” warning signal, a “pump active” signal, and a single beacon light (drum A or drum B). This kit does not include any drum empty warning. There is a single communication line between the pump control box and the LiteStream controller. Requires single pump pneumatic package 900-200.

**Standard Dual Pump Interface Package**
This is a dual pump interface add-on kit. It includes a drum A empty signal, a drum B empty signal, a “pump active” signal (high if either pump A or pump B are on) and a single beacon light (drum A or drum B). This package does not include a “drum low” warning signal. There is a single communication line between the pump control box and the LiteStream controller. Requires dual pump pneumatic package 900-201.

**Deluxe Dual Pump Interface Package**
This is a dual pump interface add-on kit. It includes a drum A empty signal, a drum B empty signal, a “pump active” signal (high if either pump A or pump B are on), a single beacon light (drum A or drum B), an empty drum warning (drum A or drum B), and a solenoid valve that will turn the pumps on or off (controlled by the LiteStream controller). Requires dual pump pneumatic package 900-201.

---

**110-650**
Single Pump Interface Package

**110-651**
Standard Dual Pump Interface Package

**110-652**
Deluxe Dual Pump Interface Package

**110-736LS**
20’ pump interface cable

**110-737LS**
50’ pump interface cable

**Pump Interface Cable**
Required for any interface package above

---

**Low Volume - S1 Series 65:1**

<table>
<thead>
<tr>
<th>Air Source</th>
<th>30</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>65:1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Available Pressure Range</th>
<th>30 – 150 psi (2 – 10 bar)</th>
<th>30 – 500 psi (2 – 35 bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Fluid Pressure Range</td>
<td>1500 – 3000 psi (10 – 20 bar)</td>
<td></td>
</tr>
<tr>
<td>Max. Rate of Cycles per Minute</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Temperature for Cycle</th>
<th>80°F (27°C)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rate @ 70°F (21°C)</td>
<td>2 GPM (8 lpm)</td>
</tr>
</tbody>
</table>

**High Volume - Std. ARO 65:1**

<table>
<thead>
<tr>
<th>Air Source</th>
<th>30</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ratio</td>
<td>65:1</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Available Pressure Range</th>
<th>30 – 150 psi (2 – 10 bar)</th>
<th>30 – 500 psi (2 – 35 bar)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Max. Fluid Pressure Range</td>
<td>1950 – 5850 psi (135 – 403 bar)</td>
<td></td>
</tr>
<tr>
<td>Max. Rec’d Cycles per minute</td>
<td>70</td>
<td></td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Displacement Per Cycle</th>
<th>8 cubic in.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Flow @ 70 Cycles / Min</td>
<td>2 GPM (9 lpm)</td>
</tr>
</tbody>
</table>
LiteStream System Component Ordering

LiteStream dispense heads are sold as packages. To configure your particular system package, start with the dispense head, then select the other components including controller, mounting dress-out, cables, temperature conditioning, and pump.

Selecting the appropriate components for a shot-meter or flow-meter configuration is easier by referring to the following color codes.

- **Flow-Meter**
- **Shot-Meter**
- **Both**

### Dispense Heads

- **Flow-Meter**
  - 115-175S
  - 110-670S

- **Shot-Meter**
  - 110-175S
  - 110-670S

### Controllers

- **Flow-Meter**
  - 110-720
    - LiteStream controller with Discrete communication

- **Shot-Meter**
  - 110-723
    - LiteStream controller with DeviceNet communication

- **Both**
  - 110-724
    - LiteStream controller with DeviceNet communication

### Dress-out

- **Flow-Meter**
  - 110-726
    - Remote dispense valve for non-temperature conditioned system

- **Shot-Meter**
  - 110-727
    - Remote dispense valve for temperature conditioned Shot-Meter

- **Both**
  - 110-728
    - Remote dispense valve for temperature conditioned Flow-Meter

- **Controllers Dress-out**
  - 110-726
    - LiteStream controller with Discrete communication

- **Robot**
  - 110-727
    - LiteStream controller with DeviceNet communication

- **Robot Mounting Kits**
  - 410-333
    - Flow-Meter robot mounting bracket
  - 410-334
    - Shot-Meter robot mounting bracket
  - 120-726LS
    - Remote dispense valve for non-temperature conditioned system
  - 120-727LS
    - Remote dispense valve for temperature conditioned Shot-Meter
  - 120-728LS
    - Remote dispense valve for temperature conditioned Flow-Meter

- **Robot Dress-out Kit**
  - 20' Robot dress-out kit
    - (Must also choose robot bracket below for your dispense head)
LiteStream System Component Ordering

LiteStream dispense heads are sold as packages. To configure your particular system package, start with the dispense head, then select the other components including controller, mounting dress-out, cables, temperature conditioning, and pump.

**Dispense Heads**

- 115-17555: Shot-Meter dispense head kit
- 110-3838: Flow-Meter dispense head kit

**Selecting the appropriate components for a shot-meter or flow-meter configuration is easier by referring to the following color codes.**

- **Flow-Meter**
- **Shot-Meter**
- **Both**

**Complete Package and/or Controls**

- 110-706: Single ARO 5-gallon package with pneumatics
- 110-707: Single ARO 5-gallon package with pneumatics and pump interface
- 110-708: Single ARO 5-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-709: Single ARO 55-gallon package with pneumatics
- 110-710: Single ARO 55-gallon package with pneumatics and pump interface
- 110-711: Single ARO 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-712: Dual ARO 5-gallon package with pneumatics
- 110-713: Dual ARO 5-gallon package with pneumatics and pump interface
- 110-714: Dual ARO 5-gallon package with pneumatics and deluxe pump interface
- 110-715: Dual ARO 55-gallon package with pneumatics
- 110-716: Dual ARO 55-gallon package with pneumatics and pump interface
- 110-717: Dual ARO 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-718: Dual ARO 55-gallon package with pneumatics and deluxe pump interface
- 110-719: Dual ARO 55-gallon package with pneumatics and deluxe pump interface and deluxe pump interface

**Cables**

- 110-710: 50' discrete cable kit
- 110-711: 100' discrete cable kit
- 110-712: 30' discrete robot interface cable
- 110-713: 60' discrete robot interface cable
- 110-714: 30' DeviceNet robot interface cable
- 110-715: 60' DeviceNet robot interface cable
- 110-716: 20' pump interface cable
- 110-717: 50' pump interface cable
- 110-718: 20' pump interface cable
- 110-719: 50' pump interface cable

**Temperature Conditioning**

- 110-702: Shot-meter TCU package — 50' dress-out
- 110-703: Shot-meter TCU package — 100' dress-out
- 110-738: Flow-meter TCU package — 50' dress-out
- 110-739: Flow-meter TCU package — 100' dress-out
- 110-740: Robot extension for additional 5' of conditioning
- 110-747: Pedestal extension for additional 5' of conditioning

**ARO Standard 65:1 Pump Packages and Controls**

- 110-706: Single ARO 5-gallon package with pneumatics
- 110-707: Single ARO 5-gallon package with pneumatics and pump interface
- 110-708: Single ARO 55-gallon package with pneumatics
- 110-709: Single ARO 55-gallon package with pneumatics and pump interface
- 110-710: Single ARO 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-711: Single ARO 55-gallon package with pneumatics and deluxe pump interface
- 110-712: Dual ARO 5-gallon package with pneumatics
- 110-713: Dual ARO 5-gallon package with pneumatics and pump interface
- 110-714: Dual ARO 5-gallon package with pneumatics and deluxe pump interface
- 110-715: Dual ARO 55-gallon package with pneumatics
- 110-716: Dual ARO 55-gallon package with pneumatics and pump interface
- 110-717: Dual ARO 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-718: Dual ARO 55-gallon package with pneumatics and deluxe pump interface
- 110-719: Dual ARO 55-gallon package with pneumatics and deluxe pump interface and deluxe pump interface

**ARO S1 Series 65:1 Pump Packages and Controls**

- 110-706: Single S1 5-gallon package with pneumatics
- 110-707: Single S1 5-gallon package with pneumatics and pump interface
- 110-708: Single S1 55-gallon package with pneumatics
- 110-709: Single S1 55-gallon package with pneumatics and pump interface
- 110-710: Single S1 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-711: Single S1 55-gallon package with pneumatics and deluxe pump interface
- 110-712: Dual S1 5-gallon package with pneumatics
- 110-713: Dual S1 5-gallon package with pneumatics and pump interface
- 110-714: Dual S1 5-gallon package with pneumatics and deluxe pump interface
- 110-715: Dual S1 55-gallon package with pneumatics
- 110-716: Dual S1 55-gallon package with pneumatics and pump interface
- 110-717: Dual S1 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-718: Dual S1 55-gallon package with pneumatics and deluxe pump interface
- 110-719: Dual S1 55-gallon package with pneumatics and deluxe pump interface and deluxe pump interface
- 110-710: 50' discrete cable kit
- 110-711: 100' discrete cable kit
- 110-712: 30' discrete robot interface cable
- 110-713: 60' discrete robot interface cable
- 110-714: 30' DeviceNet robot interface cable
- 110-715: 60' DeviceNet robot interface cable
- 110-716: 20' pump interface cable
- 110-717: 50' pump interface cable
- 110-718: 20' pump interface cable
- 110-719: 50' pump interface cable

**Complete Package and/or Controls (optional)**

- 110-706: Single ARO 5-gallon package with pneumatics
- 110-707: Single ARO 5-gallon package with pneumatics and pump interface
- 110-708: Single ARO 55-gallon package with pneumatics
- 110-709: Single ARO 55-gallon package with pneumatics and pump interface
- 110-710: Single ARO 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-711: Single ARO 55-gallon package with pneumatics and deluxe pump interface
- 110-712: Dual ARO 5-gallon package with pneumatics
- 110-713: Dual ARO 5-gallon package with pneumatics and pump interface
- 110-714: Dual ARO 5-gallon package with pneumatics and deluxe pump interface
- 110-715: Dual ARO 55-gallon package with pneumatics
- 110-716: Dual ARO 55-gallon package with pneumatics and pump interface
- 110-717: Dual ARO 55-gallon package with pneumatics and pump interface and deluxe pump interface
- 110-718: Dual ARO 55-gallon package with pneumatics and deluxe pump interface
- 110-719: Dual ARO 55-gallon package with pneumatics and deluxe pump interface and deluxe pump interface

**Pump Interface**

- 110-710: 20' pump interface cable
- 110-711: 50' pump interface cable