Centennial
Flow Charts and Control Positions

Variable Width Spraybar
with BT-1 Controls
## Etnyre Spray Bar Nozzles

<table>
<thead>
<tr>
<th>Ref.</th>
<th>Part No.</th>
<th>Description</th>
<th>Application Gallons Per Square Yard</th>
<th>Application (Metric) Liters Per Square Meter</th>
<th>US Flow Gallons Per Minute Per Foot</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>3353788</td>
<td>V Slot Tack Nozzle 1/8&quot; Rifle Bored</td>
<td>.05 - .20</td>
<td>.23 - .91</td>
<td>3.0 to 4.5</td>
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<tr>
<td></td>
<td>3351013*</td>
<td>V Slot Tack Nozzle 1/16&quot; Coin Slot</td>
<td>.05 - .20</td>
<td>.23 - .91</td>
<td>3.0 to 4.5</td>
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<td>3354904</td>
<td>V Slot Tack Nozzle 1/8&quot; Counterbored</td>
<td>.05 - .20</td>
<td>.23 - .91</td>
<td>3.0 to 4.5</td>
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<td>2</td>
<td>3351008</td>
<td>S36-4 V Slot</td>
<td>.10 - .35</td>
<td>.45 - 1.58</td>
<td>4.0 to 7.5</td>
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<tr>
<td>3</td>
<td>3351009</td>
<td>S36-5 V Slot</td>
<td>.18 - .45</td>
<td>.81 - 2.04</td>
<td>7.0 to 10.0</td>
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<tr>
<td>4</td>
<td>3352368</td>
<td>Multi-Material V Slot</td>
<td>.15 - .40</td>
<td>.68 - 1.81</td>
<td>6.0 to 9.0</td>
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<tr>
<td>5</td>
<td>3351015</td>
<td>3/32&quot; Coin Slot</td>
<td>.15 - .40</td>
<td>.68 - 1.81</td>
<td>6.0 to 9.0</td>
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<td>6</td>
<td>3352204</td>
<td>Multi-Material V Slot</td>
<td>.35 - .95</td>
<td>1.58 - 4.30</td>
<td>12.0 to 21.0</td>
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<td>7</td>
<td>3355154</td>
<td><strong>End Nozzle</strong> (use with 3352204 nozzle)</td>
<td>.35 - .95</td>
<td>1.58 - 4.30</td>
<td>12.0 to 21.0</td>
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<td>Multi-Material V Slot</td>
<td>.29 - .72</td>
<td>1.31 - 3.26</td>
<td>10.0 to 165</td>
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<td>Multi-Material V Slot</td>
<td>.20 - .55</td>
<td>.91 - 2.49</td>
<td>7.5 to 12.0</td>
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<td>10</td>
<td>3352210</td>
<td><strong>End Nozzle</strong> (use with 3352205 nozzle)</td>
<td>.20 - .55</td>
<td>.91 - 2.49</td>
<td>7.5 to 12.0</td>
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<td>11</td>
<td>3351014</td>
<td>3/16&quot; Coin Slot</td>
<td>.35 - .95</td>
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<td>12.0 to 21.0</td>
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<td>12</td>
<td>3351010</td>
<td>1/4&quot; Coin Slot</td>
<td>.40 - 1.10</td>
<td>1.81 - 4.98</td>
<td>15.0 to 24.0</td>
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</table>
The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Asphalt Distributor Operation, Maintenance and Safety manual for complete instructions.

This pamphlet is provided as a tool to aid personnel in the operation of the Etnyre Blacktopper Centennial Distributor, as with any type of construction equipment, there are certain hazards associated with improper or careless operation. The ability to read and understand the instructions should be a required qualification to become an operator. There are also functions that require a certain amount of physical strength to accomplish. Persons lacking the required strength may not only place themselves in jeopardy, but also others in the vicinity. **Read and understand the Safety precautions found in M-114-12R Centennial Asphalt Distributor Operation, Maintenance and Safety manual before operating this machine.**

If you have any questions regarding this pamphlet or the operation of your unit, contact your Etnyre dealer or the E. D. Etnyre Service Department at 1-800-995-2116.
Bar Suck Back Override

This optional feature is designed for quick in-cab switching between bar circulate and bar suck back for units equipped with automatic tank and bar suck back valves. When the SUCK BACK OVERRIDE switch is ON, all automatically controlled valves are set to their correct positions for SUCK BACK. This overrides any settings of the Function knob and stops the asphalt pump when the PUMP CONTROL switch is in AUTO.

The following steps are performed in the cab while the Function knob is turned to BAR CIRCULATE.
1. Turn the SUCK BACK OVERRIDE switch ON.
2. Press START. The pump will start turning at the desired rate. 200 GPM is recommended.
3. If complete bar suck back is desired, follow the instructions for bar suck back, beginning with the opening of the left bleeder valve. Otherwise continue to the next step.
4. Turn the SUCK BACK OVERRIDE switch OFF.
5. Press START. The pump will start turning at the desired circulation rate.

Note: The pump can be stopped and the automatic tank valve can be closed immediately at any time during operation by turning the POWER switch OFF. Before turning the POWER switch back ON, turn the PUMP SPEED to zero if the PUMP CONTROL switch is in MANUAL, to prevent the pump from turning.
1. **SPRAY Switch**
Turning this switch to ON when the Function knob (rear panel) is turned to BAR CIRCULATE or BAR SUCK BACK, opens all activated spray valves.

2. **START Button**
Starts the asphalt pump turning at the target pump rate or starts calibration operations in the setup screens.

3. **POWER Switch**
Both POWER switches, front and rear, must be ON for the system to be ON. The entire system can be shut down by turning either POWER switch to OFF. Before turning either POWER switch to ON be sure you know what will automatically activate.

4. **PUMP SPEED Control Knob**
When MANUAL PUMP CONTROL is selected, turning this knob to the right (clockwise) increases the asphalt pump speed. It is possible to over-speed the asphalt pump in MANUAL control since the asphalt pump speed is also dependent on the engine speed.

Always turn the knob back to the left (counter-clockwise) before selecting AUTO PUMP CONTROL or turning ON either POWER switches (front or rear).

5. **Function knob**
When the desired operation is selected through this knob, the asphalt pump stops turning if the PUMP CONTROL is in AUTO, and all automatic valves (tank valve, 4-way valve, bar suck back valves, and balance valves) are set for the desired operation. The asphalt pump rate is set to the stored preset for the desired operation.

The factory pump rate presets are:
- LOAD/TRANSFER - 100 GPM
- TANK CIRCULATE - 150 GPM
- BAR SUCK BACK - 200 GPM
- BAR FLUSH - 100 GPM
- UNLOAD - 100 GPM
- HAND SPRAY - 50 GPM

When BAR CIRCULATE is selected, the asphalt pump rate is calculated based on the displayed spray width, application rate, and the setting of the %CIRC factor.

6. **PUMP CONTROL Switch**
With the switch turned to AUTO, the asphalt pump speed is controlled at the desired rate through the computer.
With the switch turned to MANUAL, the asphalt pump speed is controlled with the PUMP SPEED control knob at the desired rate for a specific engine speed.
Load through Manhole

Handspray Valve Positions

- OFF
- HANDSPRAY
- SUCKBACK

Transfer Line Suck Back Valve Closed
Transfer Line cap on and secured
Load Line cap on and secured
Flush Valve Closed

Transfer Valve Closed

Return Valve Open

Suck Back Valve Closed

Master Handspray Valves Off

Tank Valve Closed

Hand Spray Valve Closed

4 Way Valve HOME
(Keyway in 12 o’clock position)

Cab Panel
- POWER Switch OFF

Rear Panel
- Function Switch to HOME position
- POWER Switch OFF

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.
Load through Load Line

Cab Panel
- POWER Switch ON
- 100 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to LOAD position
- Push “START” switch

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Circulate In Tank

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.

Cab Panel
- POWER Switch ON
- 100 to 150 GPM - adjust using VALUE switch
- Push “START” switch

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to BAR CIRCULATE position
- 4 Way Valve TANK CIRCULATE (Keyway in 12 o’clock position)
- Transfer Line Suck Back Valve Closed
- Transfer Line cap on and secured
- Load Line cap on and secured
- Handspray Valve Positions
- OFF
- HANDSPRAY
- SUCKBACK
- Suck Back Valve Closed
- Return Valve Open
- Master Handspray Valves Off
- Tank Valve Open
- 4 Way Valve Closed

Transfer Valve Closed

Hand Spray Valve Closed
Circulate In Bar

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.

**Cab Panel**
- POWER switch ON
- SPRAY switch OFF
- Set the application rate with a MEMORY switch or by using the VALUE switch
- Set spray width with One Foot switches

**Rear Panel**
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to BAR CIRCULATE position
- Push “START” switch

**Handspray Valve Positions**
- OFF
- HANDSPRAY
- SUCKBACK

- Suck Back Valve Closed
- Return Valve Open
- Master Handspray Valves Off
- Transfer Valve Closed
- Transfer Line cap on and secured
- Transfer Line Suck Back Valve Closed
- 4 Way Valve BAR CIRCULATE (Keyway in 9 o’clock position)
- Load Line cap on and secured
- Hand Spray Valve Closed
- Tank Valve Open
Spray

NOTE: Unit should already be operating in Bar Circulate and circulating oil to be ready to spray

Cab Panel
- Spraybar Switches (as desired) "ON"
- When the spray bar reaches the beginning of the shot, turn the SPRAY switch ON, turn the switch OFF at the end of shot.

Rear Panel
- Function Switch to BAR CIRCULATE position

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.
Open bleeder valve at the end of one of the wings. Leave it open until you hear a positive indication of vacuum at the valve. After closing the valve, repeat the procedure on the opposite wing.

**Cab Panel**
- POWER switch ON
- 200 GPM - adjust using VALUE switch

**Rear Panel**
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to SUCKBACK position
- Push “START” switch
Handspray

Handspray Valve Positions

ON
HANSPRAY
OFF
SUCKBACK

Rear Panel

- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to HANDSPRAY position
- Push “START” switch

Cab Panel

- POWER switch ON
- 50 GPM - adjust using VALUE switch

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Handspray Suckback

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.

**Handspray Valve Positions**

- **OFF**
- **HANDSPRAY**
- **SUCKBACK**

**Rear Panel**

- **POWER switch (E Stop) ON**
- **PUMP CONTROL switch AUTO**
- **PUMP SPEED knob zero (fully counterclockwise)**
- **Function Switch to SUCKBACK position**
- **Push “START” switch**

**Cab Panel**

- **POWER switch ON**
- **200 GPM - adjust using VALUE switch**

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**Transfer Line**

- **Suck Back Valve Closed**
- **Closed**
- **Transfer Line cap on and secured**
- **Load Line cap on and secured**

**4 Way Valve**

- **SUCCBACK** (Keyway in 12 o’clock position)

**Master Handspray Valves**

- **Suckback**
- **Flush Valve Closed**
- **Return Valve Open**
- **Hand Spray Valve Open**
- **Tank Valve Closed**

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Unload with External Pump or (Gravity)

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.

Rear Panel

- POWER switch (E Stop) ON
- PUMP CONTROL switch MANUAL
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to TANK CIRCULATE position
- Push “START” switch
- Operate pump @ 10 GPM in Manual to allow pump to circulate material to prevent pump from getting too cold (if possible).

Cab Panel

- POWER Switch ON

Connect Load Line to the Storage Tank pump or distributor you wish to transfer to. Do not remove Load Line cap if front or rear tank valve is open.

The diagram shows a section of the rear panel with various switches and controls, including a POWER switch (E Stop), PUMP CONTROL switch, and PUMP SPEED knob.

The diagram also includes a section for the front panel with additional controls and indicators, such as a manifold valve and a pump control knob.

The text provides detailed instructions for operating the pump and transferring materials, emphasizing the importance of maintaining proper flow and temperature to avoid issues with the pump.

Handspray Valve Positions

- OFF
- HANDSPRAY
- SUCKBACK

The handspray valve positions are shown in the diagram with illustrations of each position, indicating the different settings available for controlling the flow of material.

The diagram illustrates the relationship between the handspray valves and the pump, showing how they interact to ensure proper circulation and transfer of materials.

A 4 Way Valve is also highlighted in the diagram, indicating its position and functions as part of the tank circulation system.

The text and diagrams together provide a comprehensive guide for operating the equipment safely and effectively, ensuring efficient transfer and circulation of materials.
unload (with pump)

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refer to m-114-12r centennial operation manual for complete instructions.

**cab panel**
- power switch on
- 100 gpm - adjust using value switch

**rear panel**
- power switch (e stop) on
- pump control switch auto
- pump speed knob zero (fully counterclockwise)
- function switch to unload position
- push “start” switch
Transfer

Storage

Supply

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.

Cab Panel
- POWER Switch ON
- 100 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to TRANSFER position
- Push “START” switch

Handspray Valve Positions

ON
OFF
HANDSPRAY
SUCKBACK

Return Valve Closed
Suck Back Valve Closed
Transfer Valve Open
Flush Valve Closed

Do not remove Transfer Line cap if front or rear tank valve is open or if asphalt pump is turning.

Do not remove Load Line cap if front or rear tank valve is open.

4 Way Valve TRANSFER
(Keyway in 12 o’clock position)

Tank Valve Closed
Hand Spray Valve Closed
Transfer Line Suck Back Valve Closed

Master Handspray Valves Off

Transfer Line

Rear Panel

Cab Panel
Flush Pump

The instructions represented here are a guide and not designed to be comprehensive. Refer to M-114-12R Centennial Operation Manual for complete instructions.

Cab Panel
- POWER switch ON
- 100 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to LOAD position
- Push “START” switch
- WASH PUMP switch (optional) - ON
Flushing Bar

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**Cab Panel**
- **POWER Switch ON**
- **100 GPM** - adjust using **VALUE switch**

**Rear Panel**
- **POWER switch (E Stop) ON**
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to FLUSH position
- Push “START” switch
- WASH PUMP switch (optional) - ON

**Handspray Valve Positions**

- OFF
- HANDSPRAY
- SUCKBACK

- Master Handspray Valves Off
- Transfer Valve Closed
- Suck Back Valve Closed
- Return Valve Open
- Load Line cap on and secured
- Transfer Line cap on and secured
- Tank Valve Closed

- Hand Spray Valve Closed

4 Way Valve FLUSH
(Keyway in 9 o'clock position)
Front Load
(optional equipment)

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Cab Panel
- POWER Switch ON
- 100 GPM - adjust using VALUE switch

Rear Panel
- POWER switch (E Stop) ON
- PUMP CONTROL switch AUTO
- PUMP SPEED knob zero (fully counterclockwise)
- Function Switch to LOAD position
- FRONT LOAD switch (optional) - OPEN
- Push “START” switch