Lances and nozzle headers

Sanitary Retractable Lances
Standard Flanged Lances
Tank Cleaning Lances
STAMM® Showers
Pneumatic Atomizing
Air Blowoff
Quick Disconnect
Flat Fan
Plastic
Specialty
Lances

Custom fabricated for your application

**Fabricated Lances**
Whereas a header or spray bar is a pipe containing multiple nozzles, a lance is a pipe in which one nozzle is attached to the end of it (see photos). The lance can then be inserted into the target area. This could be a tank, a larger pipe, or a gas or fluid system. The purpose of the lance is to spray at a specific target (such as to clean a tank) or inject fluid into the system (such as gas conditioning). Lechler can fabricate a nozzle lance to perform any spray requirement you may have. Here are some examples:

<table>
<thead>
<tr>
<th>Sanitary retractable lance</th>
<th>Applications</th>
<th>Features</th>
</tr>
</thead>
</table>
| ![Sanitary retractable lance](image) | • Tank cleaning | • Manually inserts and retracts into tank for a non-CIP sanitary application  
• Accepts a variety of nozzle types  
• Polished finish for sanitary applications |

<table>
<thead>
<tr>
<th>Industrial retractable lance</th>
<th>Applications</th>
<th>Features</th>
</tr>
</thead>
</table>
| ![Industrial retractable lance](image) | • Fluid injection | • Manually inserts; retracts into vessel or pipe  
• Flexibility; accepts a variety of nozzles, adjusts to various size flanges; has variable insertion lengths |

<table>
<thead>
<tr>
<th>Standard flanged lance</th>
<th>Applications</th>
<th>Features</th>
</tr>
</thead>
</table>
| ![Standard flanged lance](image) | • Tank cleaning  
• Fluid injection | • Inserts into tank for CIP applications  
• Accepts a variety of nozzle types |

<table>
<thead>
<tr>
<th>Standard flanged Sanitary Lance</th>
<th>Applications</th>
<th>Features</th>
</tr>
</thead>
</table>
| ![Standard flanged Sanitary Lance](image) | • Tank cleaning  
• Fluid injection | • Inserts into tank for CIP applications  
• Accepts a variety of nozzle types  
• Materials and connections suitable for sanitary applications |

<table>
<thead>
<tr>
<th>Pneumatic Twin Fluid lance</th>
<th>Applications</th>
<th>Features</th>
</tr>
</thead>
</table>
| ![Pneumatic Twin Fluid lance](image) | • Gas treatment  
• Spray drying  
• Fluidized bed granulation  
• Atomizing of liquids to small droplets  
• Combustion of liquids | • Two styles: solid jet atomization and pre-atomization  
• Solid jet atomization (for higher viscosity fluids)  
  — Single atomization of solid fluid jet  
  — Maximum free passage (less clogging risk)  
  — Suitable for medium to high viscosity fluids  
• Pre-atomization (for highest atomization efficiency)  
  — Atomization of previously atomized cone spray  
  — Finest droplets possible due to double atomization |

CIP=Clean-in-Place
Lances

Custom fabricated for your application

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**ANSI flanged lance**

**Applications**
- Tank cleaning
- CIP applications

**Features**
- Accepts a variety of sizes
- Flanged connection for more permanent installation of nozzle and lance
- 90° elbow allows for side entry

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**Tri-clamp connection lance**

**Applications**
- Tank cleaning
- Fluid injection

**Features**
- Accepts a variety of nozzles
- Quick disconnect for easier use in non-CIP applications

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**Branched flanged lance**

**Applications**
- Tank cleaning
- Chemical processing

**Features**
- Accepts a variety of nozzles
- Dual arms allow spraying in multiple directions

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**CenterJet full cone lance**

**Applications**
- Surface spraying
- Quench cooling
- Fire suppression
- Chemical processing
- CIP applications

**Features**
- Accepts a variety of nozzle types
- Available in various materials for maximum chemical resistance
### Fabricated Headers — Our Specialty
In addition to single nozzles and accessories, Lechler can make fabricated headers in any size or shape for any application you may have in mind. With our knowledge of nozzles and applications, we can design and build a header specifically to perform the task you need for your process. Here are some examples of systems we have designed over the years:

<table>
<thead>
<tr>
<th>Headers</th>
<th>Applications</th>
<th>Features</th>
</tr>
</thead>
</table>
| STAMM® Headers (without a self-cleaning device) | • Cleaning  
• Coating | • Renowned STAMM® quality  
• Self-aligning nozzles  
• Easy nozzle replacement |
| AirMist Atomizing Headers | • Coating  
• Lubricating  
• Humidification | • AirMist atomizing nozzles  
• Optional pneumatic valves for operational control  
• Sprays water-like fluids  
• Simplifies installation |
| ViscoMist Atomizing Headers | • Coating  
• Lubricating | • ViscoMist atomizing nozzles  
• Standard pneumatic valves for operational control  
• Sprays more viscous fluids (e.g. oils, syrups)  
• Simplifies installation |
| Air Blowoff Headers | • Air blowoff  
• Cooling  
• Drying | • WhisperBlast air nozzles  
• ABS Plastic header pipe |
### Spray headers

**Custom fabricated for your application**

<table>
<thead>
<tr>
<th>Spray headers</th>
<th>Applications</th>
<th>Features</th>
</tr>
</thead>
</table>
| Flat Fan Nozzle Headers | • Cleaning  
  • Coating  
  • Cooling  
  • Lubricating | • Any style of flat fan nozzles  
  • Threaded tip (with base and cap)  
  • Split eyelet (with base and cap) |
| Full Cone Nozzle Headers | • Cleaning  
  • Dust suppression  
  • Surface spraying | • Axial or tangential full cones  
  • Nozzles cover an area; target does not need to move through spray to get covered |
| Quick Disconnect Nozzle Headers | • Surface treatment  
  • Parts washing  
  • Phosphating lines | • Easy Clips clamp to pipe  
  • Split eyelets tighten around pipe  
  • Twistloc nozzles apply with a hand twist |
| Custom Specialty Headers | • Foam control (circular header)  
  • Surface spraying (inverted U header)  
  • Poultry processing (custom-shaped header) | • Custom-made for application  
  • Nozzles aimed only at target regardless of header shape |
STAMM®
shower headers
with built-in cleaning device

Engineered and manufactured by Lechler Inc. in the USA under license by the STAMM® Company in Germany, these shower headers with built-in cleaning device are recognized worldwide as the original “brush and flush” shower system. Shower pipe and nozzles remain clog-free due to the unique flush system design. A simple turn of the handwheel sweeps contaminants away from the nozzle orifices and directs the debris down the flush-out valve. Since these showers eliminate costly down time for cleaning, they are especially cost-effective in applications subject to high fluid contamination. Some features of the self-cleaning shower system are:
- Header pipe available in sizes from 1 1/2” to 6” in diameter.
- Contaminants flushed via special valve, preventing them from clogging orifices or reaching showered surface.
- System accommodates wide range of flow rates.
- Stainless steel construction throughout.
- Highly efficient, interchangeable nozzles are self-aligning.
- Systems are tailored to your specific application.

Refer to the next page for a selection of nozzles specifically designed for use in STAMM® showers.

Standard shower models (Other configurations also available; note that models #7–10 have no cleaning device)

#1
With cleaning device and threaded pipe end

#2
With cleaning device (wall-mounting flange) and threaded pipe end

#3
With cleaning device and 90° elbow-hose-coupling

#4
With cleaning device (wall-mounting flange) and 90° elbow-hose-coupling

#5
With cleaning device and pipe flange

#6
With opposite cleaning device

#7
With threaded pipe ends

#8
With threaded pipe end and blind coupling

#9
With 90° elbow-hose-coupling and blind coupling

#10
With pipe flange and blind coupling

Typical applications:
- Cleaning of wires and felts
- Humidification
- Knock-off
- Lubrication
**Designed specifically for STAMM® shower headers, these nozzles can serve as replacements or to change the flow rate of an existing unit. Self aligning when used with STAMM® or Lechler bases. 317 LN stainless steel construction for long service life. Available in 75°, 60°, 30°, and 15° flat fans or 0° solid stream (“needle jet”) versions.**

**Applications:**
- For use on STAMM® showers
- Paper production
- Belt filter press cleaning in wastewater treatment

**Notes:** Also available upon request are: (1) nozzles with other flow rates and (2) solid stream nozzles (0°) with a ruby tip orifice. The number in the Equiv. Orifice Diam. column represents the nozzle # and spray angle stamped on each nozzle; e.g., the nozzle stamped 1.0 / 60 refers to 626.364.1F.37. Lechler has blank shower nozzles with no orifices which can be used on STAMM® showers when a particular nozzle opening needs to be blocked. The part number for this blank nozzle is 006.261.1F.00.

**Conversion formula for the above series:**

\[ v_2 = v_1 \sqrt{\frac{P_2}{P_1}} \]

(See page 12 for symbol definitions.)

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**Table:**

<table>
<thead>
<tr>
<th>Spray angle</th>
<th>Ordering no.</th>
<th>Equiv. Orifice Diam.</th>
<th>Flow Rate (Gallons Per Minute)</th>
</tr>
</thead>
<tbody>
<tr>
<td>75°</td>
<td>626. 485. 1F. 37</td>
<td>-</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>626. 565. 1F. 37</td>
<td>-</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>626. 725. 1F. 37</td>
<td>-</td>
<td>3.0</td>
</tr>
<tr>
<td>60°</td>
<td>626. 364. 1F. 37</td>
<td>-</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>626. 404. 1F. 37</td>
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<tr>
<td></td>
<td>626. 564. 1F. 37</td>
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<tr>
<td></td>
<td>626. 564. 1F. 37</td>
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</tr>
<tr>
<td></td>
<td>626. 564. 1F. 37</td>
<td>-</td>
<td>3.0</td>
</tr>
<tr>
<td>30°</td>
<td>626. 362. 1F. 37</td>
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<td>1.0</td>
</tr>
<tr>
<td></td>
<td>626. 482. 1F. 37</td>
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</tr>
<tr>
<td></td>
<td>626. 562. 1F. 37</td>
<td>-</td>
<td>2.0</td>
</tr>
<tr>
<td></td>
<td>626. 642. 1F. 37</td>
<td>-</td>
<td>2.5</td>
</tr>
<tr>
<td></td>
<td>626. 722. 1F. 37</td>
<td>-</td>
<td>3.0</td>
</tr>
<tr>
<td></td>
<td>626. 802. 1F. 37</td>
<td>-</td>
<td>4.0</td>
</tr>
<tr>
<td>15°</td>
<td>626. 361. 1F. 37</td>
<td>-</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>626. 561. 1F. 37</td>
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<td>2.0</td>
</tr>
<tr>
<td></td>
<td>626. 721. 1F. 37</td>
<td>-</td>
<td>3.0</td>
</tr>
<tr>
<td>0°</td>
<td>5SW. 300. 1F. 00</td>
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<td>0.7</td>
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<td>5SW. 320. 1F. 00</td>
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<td>0.8</td>
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<td>5SW. 340. 1F. 00</td>
<td>-</td>
<td>0.9</td>
</tr>
<tr>
<td></td>
<td>5SW. 360. 1F. 00</td>
<td>-</td>
<td>1.0</td>
</tr>
<tr>
<td></td>
<td>5SW. 390. 1F. 00</td>
<td>-</td>
<td>1.2</td>
</tr>
<tr>
<td></td>
<td>5SW. 460. 1F. 00</td>
<td>-</td>
<td>1.5</td>
</tr>
<tr>
<td></td>
<td>5SW. 540. 1F. 00</td>
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<td>2.0</td>
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<tr>
<td></td>
<td>5SW. 620. 1F. 00</td>
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<td>5SW. 680. 1F. 00</td>
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<td>5SW. 780. 1F. 00</td>
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<tr>
<td></td>
<td>5SW. 860. 1F. 00</td>
<td>-</td>
<td>5.0</td>
</tr>
</tbody>
</table>
### Automatic Cleaning Device and Oscillators for STAMM® Headers

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Stroke length</th>
<th>Shower size</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>10.900</strong> Automatic Cleaning Device</td>
<td>Automatic regular cleaning of nozzles at programmable intervals; existing showers can be retrofitted with this device.</td>
<td>N/A</td>
<td>All sizes</td>
</tr>
<tr>
<td><strong>10.200 E Oscillator</strong></td>
<td>Oscillator with electro-mechanical crank drive for side-to-side movement by a sliding block and axial guide rail.</td>
<td>200 mm Non-adjustable</td>
<td>2” to 4”</td>
</tr>
</tbody>
</table>
| **10.510 LSE-R Oscillator** | Oscillator with electro-mechanical gear motor that rotates a double ball screw spindle which converts rotation into linear stroke movement. | 2” to 3”:
  - 206.4 mm or 301.4 mm
4” to 6”:
  - 203.2 mm or 304.2 mm | One size for 2” to 3” diameter
One size for 4” to 6” diameter |
| **10.510 EC Oscillator** | Oscillator with electro-mechanical step motor with a planetary gear reducer to drive a ball screw spindle. | 1-200 mm
Infinitely adjustable | 2” to 6” |
## Automatic cleaning device and oscillators for STAMM® headers

<table>
<thead>
<tr>
<th>Part Number</th>
<th>Description</th>
<th>Stroke length</th>
<th>Shower size</th>
</tr>
</thead>
<tbody>
<tr>
<td>10.591 S</td>
<td>Oscillator</td>
<td>50–200 mm</td>
<td>2” to 6”</td>
</tr>
<tr>
<td>Oscillator</td>
<td>Oscillator with oil-hydraulic drive with infinitely adjustable stroke speed provided by micro-flow control valve.</td>
<td>50–300 mm</td>
<td>Infinitely adjustable</td>
</tr>
<tr>
<td>10.691 S</td>
<td>Oscillator</td>
<td>1–200 mm</td>
<td>2” to 6”</td>
</tr>
<tr>
<td>Oscillator</td>
<td>Oscillator with oil-hydraulic drive with electronic oil flow control for automatic adjustment of stroke speed.</td>
<td>1–300 mm</td>
<td>Infinitely adjustable</td>
</tr>
<tr>
<td>10.700</td>
<td>Oscillator bearing</td>
<td>N/A</td>
<td>All sizes</td>
</tr>
<tr>
<td>Oscillator bearing</td>
<td>Wear-resistant bearing made of stainless steel; installs in any position and fits all drive alternatives.</td>
<td>N/A</td>
<td></td>
</tr>
</tbody>
</table>