NLB’s 286 series of water jet lances are designed for maximum operator protection and productivity. A patented trigger (U.S. patent no. 5,636,789) lets the operator dump pressure immediately by simply pushing forward. It can be operated with just 8-to-12 pounds of pressure, and a one-finger latch prevents accidental actuation.

This section features lances that work with a wide range of nozzles — dual-trigger, underwater dump, and shut-off models. All feature rigid stainless steel construction with quick-coupling hose hook-up.

Also in this section, you’ll find related accessories — a 40,000 psi rotating lance, vacuum attachment, lance stands, and whip hoses.

NOTE: Operators should not withstand back thrust of more than 1/3 their body weight for an extended time. Please refer to the thrust chart on Pages 98-99 and the formula on the back cover.

**286 SERIES HAS THE FEATURES YOU ASKED FOR**

NLB’s 286 series of water jet lances are designed for maximum operator protection and productivity. A patented trigger (U.S. patent no. 5,636,789) lets the operator dump pressure immediately by simply pushing forward. It can be operated with just 8-to-12 pounds of pressure, and a one-finger latch prevents accidental actuation.

The key is a quick-change cartridge that you can replace in the field in less than 60 seconds. This unique feature is available in all 9 models, with operating pressures as low as 10,000 psi (700 bar) and as high as 40,000 psi (2,800 bar). Please refer to the accompanying tables for features, benefits and key specifications and dimensions.

**Features and Benefits**

- Dump type helps protect operator
- Replace cartridge in under 60 seconds
- Lightweight
- Easy trigger actuation, 8 to 12 lbs. (3.6 to 5.5 kg)
- New trigger design allows operator to force lance into dump mode (Patent No. 5,636,789)
- One-finger latch to prevent accidental actuation
- Adjustable shoulder stock and hand grip
- Double trigger models require pressure on both triggers to actuate lance

Quick-change cartridge seal reduces downtime

60-second cartridge change

Light trigger pull reduces fatigue

Adjustable grip and shoulder stock are operator-friendly
**Operator-Friendly**

Quick-change cartridge and a choice of barrels

- 3/8" barrel is lightweight for easy handling
- 1/2" barrel is even more rugged and durable

**More Protection:**

Dual-trigger lance needs two hands to actuate

- Must squeeze both triggers, enhancing safety
- Lance can be forced into dump mode

**Underwater Lances**

Specially designed for underwater use

- Ideal for piers, pilings, barnacle removal
- Second nozzle at rear balances thrust of jetting action

---

### NCG10-286, NCG15-286

<table>
<thead>
<tr>
<th>Pressure Rating</th>
<th>Weight</th>
<th>Inlet Connection</th>
<th>Barrel Connection</th>
<th>Barrel Length</th>
<th>Replaceable Cartridge</th>
<th>Optional Whip Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000 psi (700 bar)</td>
<td>12 lbs. (5.5 kg)</td>
<td>3/8&quot; NPT Male</td>
<td>1/2&quot; NPT Male</td>
<td>36&quot; (91.5 cm)</td>
<td>BM15915</td>
<td>SW-15K-7</td>
</tr>
<tr>
<td>15,000 psi (1,035 bar)</td>
<td>12 lbs. (5.5 kg)</td>
<td>3/8&quot; NPT Male</td>
<td>3/8&quot; NPT Male</td>
<td>36&quot; (91.5 cm)</td>
<td>BM15915</td>
<td>SW-15K-7</td>
</tr>
</tbody>
</table>

Patent No. 5,636,789

### NCG10-286DT, NCG15-286DT

<table>
<thead>
<tr>
<th>Pressure Rating</th>
<th>Weight</th>
<th>Inlet Connection</th>
<th>Barrel Connection</th>
<th>Barrel Length</th>
<th>Replaceable Cartridge</th>
<th>Optional Whip Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>10,000 psi (700 bar)</td>
<td>16 lbs. (7.3 kg)</td>
<td>3/8&quot; NPT Male</td>
<td>1/2&quot; NPT Male</td>
<td>36&quot; (91.5 cm)</td>
<td>BM15915</td>
<td>SW-15K-7</td>
</tr>
<tr>
<td>15,000 psi (1,035 bar)</td>
<td>16 lbs. (7.3 kg)</td>
<td>3/8&quot; NPT Male</td>
<td>3/8&quot; NPT Male</td>
<td>36&quot; (91.5 cm)</td>
<td>BM15915</td>
<td>SW-15K-7</td>
</tr>
</tbody>
</table>

Patent No. 5,636,789

### NCG15-286UW

<table>
<thead>
<tr>
<th>Pressure Rating</th>
<th>Weight</th>
<th>Inlet Connection</th>
<th>Barrel Connection</th>
<th>Barrel Length</th>
<th>Replaceable Cartridge</th>
<th>Optional Whip Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>15,000 psi (1,035 bar)</td>
<td>12 lbs. (5.5 kg)</td>
<td>3/8&quot; NPT Male</td>
<td>3/8&quot; NPT Male</td>
<td>36&quot; (91.5 cm)</td>
<td>BM15915</td>
<td>SW-15K-7</td>
</tr>
</tbody>
</table>

Patent No. 5,636,789
Hand Lances

20K Underwater

- Ideal for underwater applications, such as barnacle removal and concrete hydrodemolition
- Balances thrust with a second nozzle at the rear

Up to 24,000 psi

Now the features that made NLB’s 10,000 psi hand lances so popular are available at 24,000 psi!

- High flow (up to 35 gpm / 133 lpm)
- Rebuild in 60 seconds

Dual-Trigger

The ultimate in operator protection:

- Requires two hands on the lance during operation
- Can be forced into dump mode with either trigger

### NCG24-286ZT

Now the features that made NLB’s 10,000 psi hand lances so popular are available at 24,000 psi!

- High flow (up to 35 gpm / 133 lpm)
- Rebuild in 60 seconds

### NCG24-286

Now the features that made NLB’s 10,000 psi hand lances so popular are available at 24,000 psi!

- High flow (up to 35 gpm / 133 lpm)
- Rebuild in 60 seconds

### NCG24-286DT

Now the features that made NLB’s 10,000 psi hand lances so popular are available at 24,000 psi!

- High flow (up to 35 gpm / 133 lpm)
- Rebuild in 60 seconds

---

<table>
<thead>
<tr>
<th>Pressure Rating</th>
<th></th>
<th>Weight</th>
<th>Inlet Connection</th>
<th>Barrel Connection</th>
<th>Barrel Length</th>
<th>Replaceable Cartridge</th>
<th>Optional Whip Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>24,000 psi (1,680 bar)</td>
<td></td>
<td>13.5 lbs. (16 kg)</td>
<td>9/16&quot; MP LHF</td>
<td>9/16&quot; MP LHF</td>
<td>36&quot; (91.5 cm)</td>
<td>BM15924</td>
<td>BM19662</td>
</tr>
</tbody>
</table>

Patent No. 5,636,789
**UHP with Quick-Change Cartridge**

UHP water jetting has never been so easy. This lance has all the easy-rebuild features as other NLB 286 accessories and:

- Lightweight, ergonomic design
- Can be used with NLB SRH40-77 to produce rotating water jets without compressed air

**Dry Shut-off**

- For lower pressure applications
- Requires unloader valve (p. 29)

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**NCG40-286**

<table>
<thead>
<tr>
<th>Pressure Rating</th>
<th>Weight</th>
<th>Inlet Connection</th>
<th>Barrel Connection</th>
<th>Barrel Length</th>
<th>Replaceable Cartridge</th>
<th>Optional Whip Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>40,000 psi (2,800 bar)</td>
<td>13.5 lbs. (6.4 kg)</td>
<td>9/16&quot; HP LHF</td>
<td>9/16&quot; HP LHF</td>
<td>36&quot; (91.5 cm)</td>
<td>BM20935</td>
<td>BM21403</td>
</tr>
</tbody>
</table>

*Patent No. 5,636,789*

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<table>
<thead>
<tr>
<th>Pressure Rating</th>
<th>Weight</th>
<th>Inlet Connection</th>
<th>Barrel Connection</th>
<th>Barrel Length</th>
<th>Rebuild Kit</th>
<th>Optional Whip Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>NSG-300A</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10,000 psi (700 bar)</td>
<td>14 lbs. (6.4 kg)</td>
<td>1/2&quot; NPT Female</td>
<td>3/8&quot; NPT Male</td>
<td>36&quot; (91.5 cm)</td>
<td>300ARBKT</td>
<td>SW-15K-7</td>
</tr>
<tr>
<td><strong>NSG-600</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6,000 psi (415 bar)</td>
<td>7 lbs. (3.2 kg)</td>
<td>1/2&quot; NPT Female</td>
<td>1/2&quot; NPT 14BSP Male</td>
<td>36&quot; (91.5 cm)</td>
<td>600RBKT</td>
<td>SW-15K-7</td>
</tr>
<tr>
<td><strong>NSG-700</strong></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4,000 psi (275 bar)</td>
<td>7 lbs. (3.2 kg)</td>
<td>3/8&quot; NPT Female</td>
<td>1/4&quot; NPT Male</td>
<td>36&quot; (91.5 cm)</td>
<td>700RBKT</td>
<td>SW-15K-7</td>
</tr>
</tbody>
</table>

*Patent No. 5,636,789*
The field-repairable NLB Bi-Mode™ valve can significantly improve UHP system productivity. It uses the same quick-change cartridge valve as our 286 series lances and foot controls. User-friendly features include:

- 60-second cartridge replacement
- switch from 1-lance to 2-lance operation with a simple nozzle change
- rounded frame for easier carrying

A DM14150 hose assembly is required to connect a rotating lance to a Bi-Mode™ valve.

### Rotating Lances

For ultra-high pressure water jetting in a wider spray pattern, the best choice is usually a rotating lance with one of our specially-designed multi-orifice heads. The NCG8450A-3 and NCG8450LA-3 lances feature an air-driven swivel that drives the nozzle assembly. Use requires a Bi-Mode™ valve and a DM14150 hose assembly to connect them. A Bi-Mode™ valve lets two operators run lances from a single pump unit. (Dual lance operation also requires a CM13027 "Y" adapter. See Page 28.)

Key features of the NCG8450A-3 rotating lance include:

- Variable speed rotation, up to 3,000 rpm
- Field-repairable
- Dual-trigger actuation for operator protection
- Instant dump to low pressure when trigger is released
- Lightweight, ergonomic design

### Bi-Mode™ Valve

The field-repairable NLB Bi-Mode™ valve can significantly improve UHP system productivity. It uses the same quick-change cartridge valve as our 286 series lances and foot controls. User-friendly features include:

- 60-second cartridge replacement
- switch from 1-lance to 2-lance operation with a simple nozzle change
- rounded frame for easier carrying

A DM14150 hose assembly is required to connect a rotating lance to a Bi-Mode™ valve.
**UHP Rotating Heads**

NLB offers a wide selection of multi-orifice heads for the NCG8450A-3 rotating lance. All use our standard BN3539 0° nozzles and BA3894 nozzle.

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Orifices</th>
<th>Applications</th>
<th>Features/Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>BM16592</td>
<td>2</td>
<td>Thick coatings, heavy deposits</td>
<td>Greater nozzle stand-off for operator flexibility</td>
</tr>
<tr>
<td>BN10096-1</td>
<td>3</td>
<td>Medium coatings</td>
<td>Can remove coatings one layer at a time</td>
</tr>
<tr>
<td>BN10096-2</td>
<td>4</td>
<td>Thin-to-medium coatings and deposits</td>
<td>Smaller orifices reduce impact, simplify removal in layers</td>
</tr>
<tr>
<td>BN10096-3</td>
<td>5</td>
<td>Quick removal of thin coatings</td>
<td>Ideal for steel and other flat substrates</td>
</tr>
<tr>
<td>DN12560</td>
<td>5</td>
<td>Quick removal of thin coatings</td>
<td>Offset nozzle pattern (15° and 60° off centerline) ideal for irregular surfaces</td>
</tr>
<tr>
<td>CN12094-1</td>
<td>4</td>
<td>I-beams, H-beams, interior corners</td>
<td>Two 15° orifices, two 60° orifices</td>
</tr>
<tr>
<td>CN12094-2</td>
<td>4</td>
<td>I-beams, H-beams, interior corners</td>
<td>Two 15° orifices (different offsets), two 60° orifices</td>
</tr>
<tr>
<td>CN12094-3</td>
<td>4</td>
<td>Tight spaces - I-beams, H-beams, interior corners</td>
<td>Two 15° orifices, two 90° orifices</td>
</tr>
<tr>
<td>CM27174</td>
<td>1</td>
<td>Extra-thick coatings</td>
<td>Single orifice maximizes impact force</td>
</tr>
</tbody>
</table>

**Vacuum Lances**

The NLB VacLance attachment turns any NCG8450A-3 hand lance into a vacuum recovery surface preparation tool. This kit (DM16546) provides all the required components to convert any existing NCG8450A-3 series lance into a vacuum recovery UHP hand lance. The unit requires approximately 100 CFM at 1 to 2 inches of vacuum. It will attach to a vacuum source via NLB’s 2” vac hose (PM16758).
**Hand Lances**

## Whip Hoses

NLB Whip Hoses help protect hand lance operators from potentially dangerous hose failures. Each whip hose assembly consists of a short length of hose (usually 10 feet or less) covered with a heavy, dense fabric or reinforced plastic tubing designed to diffuse the energy released by a hose failure.

NLB offers whip hoses for all popular pressures, from 10,000 to 40,000 psi (700 to 2,800 bar).

### SW-10K

<table>
<thead>
<tr>
<th>Whip Hose</th>
<th>Working Pressure</th>
<th>Connection to Lance</th>
<th>Connection to Hose</th>
</tr>
</thead>
<tbody>
<tr>
<td>SW-10K</td>
<td>10,000 psi (700 bar)</td>
<td>NQC-22 Male</td>
<td>NQC-22 Male</td>
</tr>
<tr>
<td>SW-15K-7</td>
<td>15,000 psi (1,035 bar)</td>
<td>1/2&quot; MNPT</td>
<td>1/2&quot; MNPT</td>
</tr>
<tr>
<td>275-31</td>
<td>20,000 psi (1,400 bar)</td>
<td>3/4&quot; MP Male</td>
<td>3/4&quot;-16 Type M Swivel</td>
</tr>
<tr>
<td>BM19682</td>
<td>24,000 psi (1,680 bar)</td>
<td>9/16&quot; MP Male</td>
<td>1&quot;-12 UNF Type M Male</td>
</tr>
<tr>
<td>BM21403</td>
<td>40,000 psi (2,800 bar)</td>
<td>9/16&quot; HP Male</td>
<td>9/16&quot;-18 Type M Includes BM21400 for connection to 5/16 HP Hose</td>
</tr>
<tr>
<td>DM14150</td>
<td>40,000 psi (2,800 bar)</td>
<td>9/16&quot; HP Male</td>
<td>1-1/8&quot;-12 Female (to Bi-Mode™ Valve)</td>
</tr>
</tbody>
</table>
Lance Stands

NLB mobile lance stands let operators share the load of holding a pressurized lance, reducing both strain and risk. Personnel can therefore be rotated less frequently. Models are available in 10,000 psi, 20,000 psi and 40,000 psi (700, 1,400 and 2,800 bar), some with shields for additional operator protection.

NLB lance stands have many advantages:

• Absorb back thrust, minimizing fatigue
• Allows use of greater volume and pressure
• Instantaneous dump to low pressure upon lance trigger release
• 60° pivot point allows broad coverage (horizontal and vertical), for fewer station moves
• Easy maintenance
• Non-skid surface reduces risk of injury
• On wheels to go from job to job

<table>
<thead>
<tr>
<th>Model (Type)</th>
<th>Max. Pressure</th>
<th>Max. Flow</th>
<th>Height Adjustment</th>
<th>Nozzle Adjustment</th>
<th>Horizontal Movement</th>
</tr>
</thead>
<tbody>
<tr>
<td>MLS-10000-1A</td>
<td>10,000 psi (700 bar)</td>
<td>43 gpm (163 lpm)</td>
<td>36” to 50” (.9 to 1.3 m)</td>
<td>0-8” (0-20 cm)</td>
<td>60 degrees</td>
</tr>
<tr>
<td>MLS-20000-1A</td>
<td>20,000 psi (1,400 bar)</td>
<td>21 gpm (79 lpm)</td>
<td>36” to 50” (.9 to 1.3 m)</td>
<td>0-8” (0-20 cm)</td>
<td>60 degrees</td>
</tr>
<tr>
<td>MLS-36000-1A</td>
<td>40,000 psi (2,800 bar)</td>
<td>11 gpm (42 lpm)</td>
<td>41” to 53” (1 to 1.3 m)</td>
<td>0-8” (0-20 cm)</td>
<td>60 degrees</td>
</tr>
</tbody>
</table>

Model MLS-10000-1A is also available as a dry shut-off unit.