Clemco Classic Blast Machines are rugged, reliable, and versatile. Models range in size from 0.5 cu ft to 20 cu ft, and come as the blast machine only or with a complete machine system. A complete system includes the blast machine, remote controls, a nozzle, couplings, blast hose, an Apollo Supplied-Air Respirator, an air filter, and spare parts — which are easy to install for quick maintenance.

Popular Uses
- Remove contamination, corrosion, mill scale, and coatings from most surfaces.
- Produce uniform surface textures.
- Create surface profiles to increase bonding for coatings and paints.

Popular Industries
- Construction and manufacturing
- Shipping and transportation
- Storage tank maintenance
- Road and bridge maintenance
- Water tower maintenance
- Petroleum and oil pipeline maintenance
- Contractors and industrial shops
Classic Blast Machines

Model 1028
0.5 cubic foot capacity

Clemco’s smaller machines are light, transportable, and industrial quality. Maximum working pressure 125 psi.

Model 1042
1 cubic foot capacity

Tall and slim, can be moved empty with ease from blast site to blast site. Maximum working pressure 125 psi.

Complete System

Clemco’s fully equipped and accessorized systems offer everything needed to blast except air and abrasive.

Blast Machine Construction

- Pressure vessels built to ASME code. Most models registered in most Canadian provinces.
- Concave head stores abrasive for loading.
- Conical bottom ensures smooth abrasive flow and complete emptying.
- Large inspection door for access to the interior.
- Wear-resistant, urethane-coated pop-up valve seals tight and lasts longer.

0.5-cuft and 1-cuft systems include the Apollo 20 Supplied-Air Respirator.
3-cuft and Larger Machines Have a 150-psi Working Pressure

**Model 2452**
6 cubic foot capacity
Clemco’s most popular blast machine. Ideal for professional blasting contractors, shipyards, railcar re-man facilities, and large-scale industrial production.

**Model 1648**
3 cubic foot capacity
A midsize blast machine, a favorite of rental yards.

**Model 2443**
6 cubic foot capacity Lo-Pot
The lower height of the Lo-Pot Blast Machine eases abrasive loading.

**Model 2463**
8 cubic foot capacity
Dual blast chambers permit continuous blasting. The 8-cuft machine can be equipped with twin outlets, allowing two operators to work without interruption.
Classic Blast Machines

Model 3680
20 cubic foot capacity
Stationary models adapt to fixed sites, or to custom truck-mounted or trailer-mounted systems.

Model 3661
10 cubic foot capacity
Stationary models are suitable for industrial use or applications requiring a large-volume, yet economical, blast machine.
Built for Years of Reliable Service

Semi-elliptical head for more abrasive storage.

Urethane-coated pop-up valve with external sleeve for long life and fast pressurization.

Large 6” x 8” inspection door for easy access to inside.

Pressure vessel designed for rugged field service. Built to ASME standards. Most models registered in most Canadian provinces.

Conical 35° bottom ensures total use of abrasive and uninterrupted abrasive flow.

45° abrasive flow into air stream – the natural way to uniformly mix air and abrasive. Eliminates premature wear found in 90° systems. A tough, stainless-steel plate meters precisely. Clean-out provides access to foreign matter.

Self-cleaning exhaust muffler greatly reduces bleed-off noise.

Pop-up valve umbrella (optional) relieves load pressure when hopper is in place.

Fast, safe TLR Remote Controls with solid brass valves built for years of dependability.

Chrome-plated, forged-brass ball valve with brass body for durability and long service life.

Flexible pusher line eases valve replacement and also guarantees air flow without pressure loss caused by elbows.

<table>
<thead>
<tr>
<th>Nozzle Orifice</th>
<th>PRESSURE AT THE NOZZLE (psi)</th>
<th>Air (cfm) Abrasive Use Compressor HP</th>
</tr>
</thead>
<tbody>
<tr>
<td>No. 2 (1/8&quot;)</td>
<td></td>
<td>Compressor HP</td>
</tr>
<tr>
<td>No. 3 (3/16&quot;)</td>
<td></td>
<td>Compressor HP</td>
</tr>
<tr>
<td>No. 4 (1/4&quot;)</td>
<td></td>
<td>Compressor HP</td>
</tr>
<tr>
<td>No. 5 (5/16&quot;)</td>
<td></td>
<td>Compressor HP</td>
</tr>
<tr>
<td>No. 6 (3/8&quot;)</td>
<td></td>
<td>Compressor HP</td>
</tr>
<tr>
<td>No. 7 (7/16&quot;)</td>
<td></td>
<td>Compressor HP</td>
</tr>
<tr>
<td>No. 8 (1/2&quot;)</td>
<td></td>
<td>Compressor HP</td>
</tr>
</tbody>
</table>

Compressed-Air and Abrasive Consumption
Remote Controls

TLR 300C Pressure-Release Pneumatic Systems feature an abrasive cutoff system (ACS), which enables operators to shut off the abrasive flow for clearing the blast hose and for blowing down surfaces after blasting. These remote control systems include inlet and outlet valves, an abrasive trap, and the air-operated normally closed Quantum Abrasive Metering Valve. Also available in electric models. (See next page.)

Quantum Pressure-Hold Pneumatic Remote Controls are designed for applications that require frequent starts and stops. Operators manually pressurize and depressurize machines equipped with these remote controls. Operators can then keep the machines pressurized regardless of how often they start and stop blasting. The remote control handle can close the abrasive valve independently of the air valve so that only air exits the nozzle. This step permits clearing the blast hose and blowing down surfaces after blasting. Also available in electric models. (See next page.)

OSHA’s requirements for safe remote-controlled blasting lie at the heart of Clemco remote control systems:

“Abrasive blast cleaning nozzles shall be equipped with an operating valve which must be held open manually.”

OSHA 1926.302 (b) (10) and 29CFR 1910.244 (b)

“A ‘deadman’ control device shall be provided at the nozzle end of the blasting hose ... to provide direct cut-off (of abrasive to the blast hose) in the event the blaster loses control of the hose.”

OSHA 1915.34 (c) (1) (iv)

Apart from respiratory protection, the most important blasting safety accessory is the remote control. All Clemco remote control systems meet OSHA requirements for remote-controlled blasting.
Critical Operator Safety Accessory

TLR 300 Pressure-Release Pneumatic Systems operate on the return-air principle. A handle installed at the nozzle connects pneumatically to inlet and outlet valves on the blast machine. With the safety petcock on the inlet valve closed, the operator depresses the handle which then opens the inlet valve and closes the outlet valve to start blasting. Releasing the handle, intentionally or unintentionally (such as dropping the hose), reverses the process and blasting stops. After the blast session is over, the safety petcock is opened to prevent activation, even when the handle is depressed. The diaphragm outlet valve is recommended for aggressive or fine-mesh abrasive applications. The TLR 50 System (not shown) is for 1/2” piped machines.

EAC 300 and EDC 300 Pressure-Release Electric Remote Control Systems are available for applications in extremely cold weather or when a continuous length of 100 ft or more of blast hose is used. An electric switch instantly sends a signal through an electric cord to open and close the inlet and outlet valves, avoiding the delay that would occur with a pneumatic system. Electric systems feature an antifreeze injector accessory, which is optional on pneumatic systems. The EAC 300 operates off a 120-volt AC power supply, and the EDC 300 operates off a 12-volt DC power supply. With both systems, only 12-volt power reaches the handle for the safety of the operator. The diaphragm outlet valve is an option with these remotes and is recommended for aggressive or fine-mesh abrasive applications.
Metering Valves: Precise Abrasive Metering

One of the most important components of a blast machine is its abrasive metering valve. The correct valve for your application will promote efficient blasting and reduce maintenance requirements on the machine. The Manual Quantum, Auto Quantum, and FSV Valves feed abrasive into the air stream at a 45° angle. This design eliminates turbulence, minimizes wear on fittings, and ensures smooth, consistent media flow.

The **Manual Quantum Valve (MQV)** handles all types of media: mineral, slag, and metallic. Its design allows for precise metering and easy maintenance. It fits machines with 3-cuft to 20-cuft pressure vessels.

The **FSV**, an original Clemco design, is the tried-and-true workhorse of the industry. It is among the most imitated Clemco components. It is standard on machines with 3-cuft to 20-cuft pressure vessels.

The **MSV** is a manual valve suited for expendable media. It is designed for Clemco 0.5-cuft and 1-cuft blast machines.

The **LPV** is a low-profile valve for mineral and slag abrasives. It is designed for Lo-Pot blast machines.

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### CLEMCO ABRASIVE METERING VALVES APPLICATION GUIDE

<table>
<thead>
<tr>
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<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>MSV</td>
<td>0.5-cuft and 1-cuft Classic Machines</td>
<td>01247</td>
<td>Manual</td>
<td>Pressure-Release</td>
<td>Expendable mineral and slag abrasives; not recommended for use with fine-mesh media or glass bead media.</td>
</tr>
<tr>
<td>FSV</td>
<td>Classic Blast Machines, 3 cuft and Larger</td>
<td>02427</td>
<td>Manual</td>
<td>Pressure-Release</td>
<td>Expendable mineral and slag abrasives; not suitable for metallic media.</td>
</tr>
<tr>
<td>MQV</td>
<td>Contractor and Classic Machines, 3 cuft &amp; Larger</td>
<td>22845</td>
<td>Manual</td>
<td>Pressure-Release</td>
<td>All common abrasives: mineral, slag, or metallic.</td>
</tr>
<tr>
<td>AQV</td>
<td>Contractor and Classic Pressure-Hold Remotes or ACS</td>
<td>24447</td>
<td>Pneumatic</td>
<td>Pressure-Hold or Pressure-Release and ACS</td>
<td>All common abrasives: mineral, slag, or metallic; requires 80 psi to fully open plunger.</td>
</tr>
</tbody>
</table>
## Remote Control Specifications

<table>
<thead>
<tr>
<th>Machine Piping Size</th>
<th>Pressure-Release</th>
<th>Pressure-Release w/ACS</th>
<th>Pressure-Hold</th>
<th>Pneumatic or Electric</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Pneumatic</td>
<td>Electric</td>
<td>Pneumatic</td>
<td>Electric</td>
</tr>
<tr>
<td>1/2&quot;</td>
<td>TLR 50</td>
<td>—</td>
<td>—</td>
<td>—</td>
</tr>
<tr>
<td>1-1/4&quot;</td>
<td>TLR 300</td>
<td>EAC 300 or EDC 300</td>
<td>TLR 300C</td>
<td>EAC 300C or EDC 300</td>
</tr>
</tbody>
</table>

### NOTES:
Remote control systems have valves that match the sizes of blast machine piping, and they come in models that vary to suit blasting applications. Pneumatic remote controls work best with blast hose lengths up to 100 ft. Electric remotes (pneumatic valves controlled electrically) are for hose lengths greater than 100 ft. TLR 300D and 300DC Remote Controls feature a diaphragm outlet valve. The diaphragm outlet valve is recommended when using aggressive abrasive or fine-mesh abrasive (50-mesh or finer).

**Piping Size:** Size varies with pressure vessel capacity. Choose larger diameter piping for high-production operations.

**Pressure-Release Remote Controls:** Pressurize/depressurize machine by pressing/releasing handle—simplest system to operate.

**Pressure-Release Remotes with Abrasive Cutoff System:** Allows the operator to stop the flow of abrasive to blow off surfaces after blasting.

**Pressure-Hold Remote Controls:** Keep the blast machine under pressure for frequent starting and stopping.