# Palletized Fixtures: Clamp Holding Protection Options

Keeping fixtures **SAFE** from accidental loss of clamp holding

<table>
<thead>
<tr>
<th>Good</th>
<th>Better</th>
<th>Best</th>
<th>Ultimate</th>
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<td><strong>Standard Workholding Technology – Accumulator Protection</strong>&lt;br&gt;Pressure is required to maintain clamping forces.&lt;br&gt;While the fixture is in the machining center and disconnected from the power source, pressure protection is provided by a check or shut off valve and an accumulator.</td>
<td><strong>Standard Workholding Technology – Accumulator &amp; Safe Link Protection</strong>&lt;br&gt;<em>Same as “Good Solution” with added protection of Safe Link.</em>&lt;br&gt;Safe Link communicates the pressure status to the machine control. If pressure is lost, the fixture can be taken off line for repair – before loss of holding becomes an issue.</td>
<td><strong>Collet-Lok® – Depressurized Holding Technology Protection</strong>&lt;br&gt;<em>No Pressure Required to hold clamping – Inherently Safe!</em>&lt;br&gt;Collet-Lok® Depressurized Holding Technology uses pressure to initiate and release the clamping, not to hold the clamping.</td>
<td><strong>Collet-Lok® – Depressurized Holding Technology, Position Sensing &amp; Safe Link Protection</strong>&lt;br&gt;<em>Same as “Best Solution” with added protection of Safe Link</em>&lt;br&gt;To be absolutely sure operators have initiated clamping, this option provides a Safe Link confirmation that the part is clamped.</td>
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Collet-Lok® Swing Cylinders
- Threaded or flange style bodies
- 1,000 lb., 2,000 lb. and 8,500 lb. clamping capacities

Collet-Lok® Work Supports
- Threaded or flange style bodies
- 2,000 lb., 4,000 lb. and 10,000 lb. supporting capacities

Collet-Lok® Push Cylinders
- Threaded or flange style bodies
- 2,500 lb. or 5,000 lb. clamping capacities
- Can be used as a heavy duty work support

Enerpac Collet-Lok® products combine the automation of hydraulic actuation with an internal collet system that maintains the clamping force through a locking taper. The resulting mechanical retention of the clamping force is maintained without pressure until the cylinder is hydraulically unlocked. Whether used in a machining or welding fixture, Enerpac Collet-Lok® provides secure clamping of your work pieces for:
- Operator safety
- Machine safety
- Work piece safety

SLR-1 Receive Unit
- Provides 24VDC outputs to customer machine controller
- Output interrupted if fixture pressure is lost or clamp is not in clamped position

Send Unit
- SLS-1: Internal antenna
- SLS-2: External antenna
- Can be used with pressure or limit switch
- Sends signal to SLR-1 when pressure is OK
- Powered by internal 36VDC Lithium battery

Enerpac Safe Link wireless 2.4 GHz technology provides a communication link between your fixture and your machine control. You can verify that the operator properly activated the hydraulic clamps on all fixture faces or monitor the clamp status while parts are being machined.

Enerpac Safe Link adds:
- Operator safety
- Machine safety
- Work piece safety