

Clamping Cylinders WMT-39, WMT-40, WMT-88, WMT-89

L1332 Rev. O 02/03

Repair Parts Sheets for this product are available from the Enerpac web site at www.enerpac.com, or from your nearest Authorized Enerpac Service Center or Enerpac Sales office.

1.0 IMPORTANT RECEIVING INSTRUCTIONS

Visually inspect all components for shipping damage. Shipping damage is not covered by warranty. If shipping damage is found, notify carrier at once. The carrier is responsible for all repair and replacement costs resulting from damage in shipment.

SAFETY FIRST

2.0 SAFETY ISSUES



Read all instructions, warnings and cautions carefully. Follow all safety precautions to avoid personal injury or property damage during system operation. Enerpac cannot be responsible for damage or injury resulting from unsafe product use, lack of maintenance or incorrect product and/or system operation. Contact Enerpac when in doubt as to the safety precautions and operations. If you have never been trained on high-pressure hydraulic safety, consult your distribution or service center for a free Enerpac Hydraulic safety course.

Failure to comply with the following cautions and warnings could cause equipment damage and personal injury.

A **CAUTION** is used to indicate correct operating or maintenance procedures and practices to prevent damage to, or destruction of equipment or other property.

A **WARNING** indicates a potential danger that requires correct procedures or practices to avoid personal injury.

A **DANGER** is only used when your action or lack of action may cause serious injury or even death.



WARNING: Wear proper personal protective gear when operating hydraulic equipment.



WARNING: Stay clear of loads supported by hydraulics. A cylinder, when used as a load lifting device, should never be used as a load holding device. After the load has been raised or lowered, it must always be blocked mechanically.



DANGER: To avoid personal injury keep hands and feet away from cylinder and workpiece during operation.



WARNING: Do not exceed equipment ratings. Never attempt to lift a load weighing more than the capacity of the cylinder. Overloading causes equipment failure and possible personal injury. The cylinders are designed for a max. pressure of 350 bar [5,000 psi]. Do not connect a jack or cylinder to a pump with a higher pressure rating.



Never set the relief valve to a higher pressure than the maximum rated pressure of the pump. Higher settings may result in equipment damage and/or personal injury.



WARNING: The system operating pressure must not exceed the pressure rating of the lowest rated component in the system. Install pressure gauges in the system to monitor operating pressure. It is your window to what is happening in the system.



CAUTION: Avoid damaging hydraulic hose. Avoid sharp bends and kinks when routing hydraulic hoses. Using a bent or kinked hose will cause severe back-pressure. Sharp bends and kinks will internally damage the hose leading to premature hose failure.



WMT-39



Do not drop heavy objects on hose. A sharp impact may cause internal damage to hose wire strands. Applying pressure to a damaged hose may cause it to rupture.



IMPORTANT: Do not lift hydraulic equipment by the hoses or swivel couplers. Use the carrying handle or other means of safe transport.



CAUTION: Keep hydraulic equipment away from flames and heat. Excessive heat will soften packings and seals, resulting in fluid leaks. Heat also weakens hose materials and packings. For optimum performance do not expose equipment to temperatures of 65 °C [150 °F] or higher. Protect hoses and cylinders from weld spatter.



DANGER: Do not handle pressurized hoses. Escaping oil under pressure can penetrate the skin, causing serious injury. If oil is injected under the skin, see a doctor immediately.



WARNING: Only use hydraulic cylinders in a coupled system. Never use a cylinder with unconnected couplers. If the cylinder becomes extremely overloaded, components can fail catastrophically causing severe personal injury.



IMPORTANT: Hydraulic equipment must only be serviced by a qualified hydraulic technician. For repair service, contact the Authorized ENERPAC Service Center in your area. To protect your warranty, use only ENERPAC oil.



WARNING: Immediately replace worn or damaged parts by genuine ENERPAC parts. Standard grade parts will break causing personal injury and property damage. ENERPAC parts are designed to fit properly and withstand high loads.



WARNING: Seal all NPT pipe connections with a high-grade pipe thread sealer. Teflon tape is an excellent thread sealer; however, if not properly applied, pieces may enter the hydraulic system and cause malfunctioning or damage.

3.0 DESCRIPTION

Clamping cylinder models WMT-39, WMT-40, WMT-88 and WMT-89 can be used for holding, positioning and ejecting operations.

Hydraulic pressure advances and retracts the piston.

The threaded steel body has 1.375 - 18 UNEF threads or 1.875 - 16 UN. Plunger threads are .250 - 28 UNF.

Mounting flanges are available, AW-5 for WMT-39 and WMT-40, AW-89 or AW-88 for WMT-88 and WMT-89 models.

4.0 OPERATION

Available clamping force varies. See chart in Figure 1 for the force vs. pressure.

5.0 INSTALLATION

Install the clamping cylinders as close to the work piece as possible to provide maximum clamping force. Use mounting flanges or suitable fixtures to provide a stable, secure mounting.

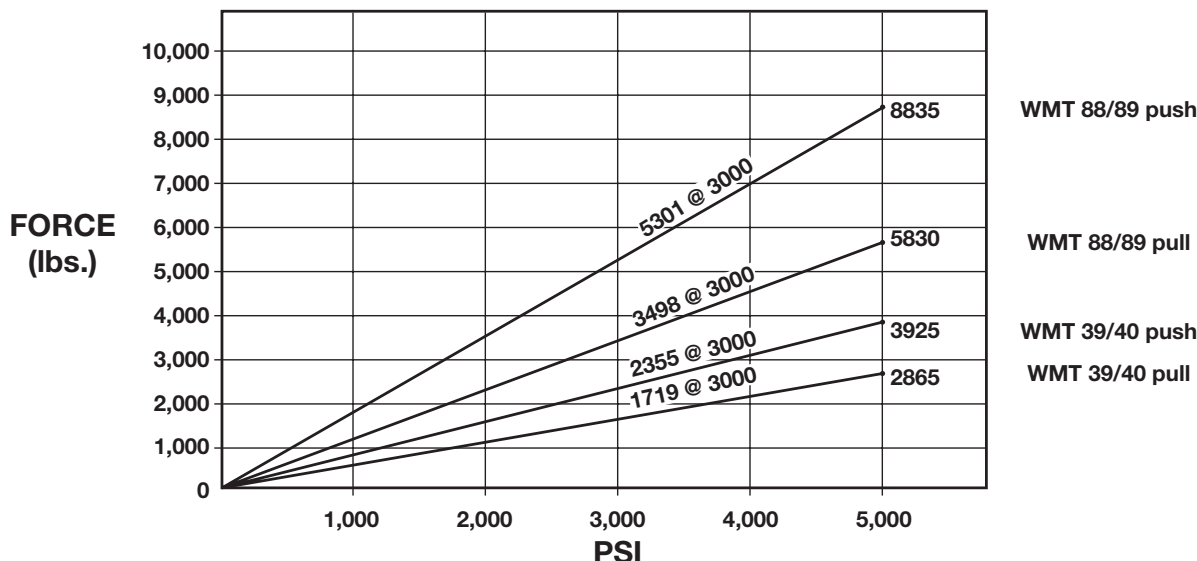
Cylinder hydraulic ports are .125 - 27 NPTF side and bottom and can use hydraulic hose or pipe. Be sure fittings and lines are suitable for 5,000 psi hydraulic pressure. Seal all fitting connections with high grade pipe compound or teflon tape.



CAUTION: TO AVOID CYLINDER DAMAGE, DO NOT SUBJECT THE PLUNGER TO SEVERE SIDE-LOADING. THE CYLINDER IS DESIGNED TO RECEIVE EQUAL LOADING TO MAINTAIN EFFECTIVE CLAMPING.

All clamping cylinder models are double-acting using hydraulic pressure to apply working forces and to release them.

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