



Hydraulic Hand Pump

ESP / THPA Series

Usable Oil Capacities 500 through to 5000 CC

Note: Operator must read and fully understand the operating instructions before using this product.

Products supplied comply with the essential health & safety requirements of the Machinery Directive 2006/42/EC, the Supply of Machinery (Safety) Regulations 2008 and the Health & Safety at Work etc Act 1974 section 6.

George Taylor & Company maintain a policy of progressive development of products and reserve the right to alter, without notice, the specifications shown within this manual.

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FOREWORD

This information in this manual is provided for the proper handling, operating, maintenance & general troubleshooting for Hydraulic Hand Pump - ESP & THPA Series.

The pump has been designed with safety as a primary consideration and being the most efficient of the pumps under your intended use, in accordance with the procedure detailed in this manual.

Before attempting to operate or service the product, carefully read this manual thoroughly and understand fully for your own safety and the efficiency of the product.

This manual and any other documents supplied with this product, are the property of Tecpos which reserves all right. They may not be reproduced in whole or in part, without prior written approval from Tecpos.

The product warranty will be void if any modifications to the product or using non-compatible oil is carried out without prior written approval from Tecpos.

Tecpos reserves the right to make changes to this manual contents described in it without notice. All specifications and information concerning products are subject to change without notice.

SAFETY WARNINGS

Safety warnings are defined in this manual as 'Danger', 'Warning' and 'Caution'. These regulations should be observed to ensure the prevention of personnel injury and damages or malfunctions or the product.

Please pay close attention to these signs, since they may indicate a potential hazard that may result in death, serious personal injuries or damages to the cylinder.

DANGER

Indicates an imminent hazardous situation which if not avoided, will result in death or serious injury.

WARNING

Indicates a potential hazardous situation which if not avoided, can result in death or serious injury.

CAUTION

Indicates a potential hazardous situation which if not avoided, will result in minor or moderate injury, or alerts against unsafe damage to the product.

The information in this publication does not cover all unexpected hazardous incidents. The manufacturer is not liable for incidental or consequential damages in connection with incorrect use of a product and not fully understanding the safety instructions within this manual.

FOR THIS MANUAL

The information in this manual is provided for reference and is believed to be accurate and complete. GT is not liable for incidental or consequential damage in connection with furnishing or use of the information in this manual, including but not limited to:

- Before each intervention on this product or unpacking, read this manual and ensure you fully understand before use.
- This manual should be read and understood fully before initial start up/operating and servicing the product by the assigned person to work the product.
- This manual can be used to assist/prepare on training of personnel, for proper and safety product operation & higher operation efficiency as well as constant maintenance of the product.
- If more than one operator is used, each operator shall be aware of the contents within this manual.
- The manufacturer does not hold any responsibility for damage to the product itself or injuries to the user arising out of incorrect use and not fully understanding the safety instructions described in this manual.
- This manual should be available to serve as a reference document for everyone who can see with ease, in an easily accessible location nearby the product that is in operation.
- To ensure the manual can always be read with ease, it is recommend that the manual is to always be kept in a very clean condition. if the condition of the manual is not clean or readable, you must advise your supervisor for corrective action.
- if this manual is not understood fully by the assigned personnel, it has to be informed to your supervisor for corrective action.

GENERAL SAFETY RULES

If improperly used, hydraulic pumps can be a source of risk or injury to the user and other personnel. To avoid danger it is important to read and apply the following safety rules.

CAUTION

Wear personal protective equipment correctly such as gloves, steel toe cap shoes etc. when using hydraulic equipment, otherwise injury by hydraulic oil may occur.

Keep hydraulic tools arranged clearly.

WARNING

Keep your hands and feet away from the working area of the cylinder, otherwise it may result in serious injury.

WARNING

Only use approved accessories and hydraulic fluid.

DANGER

Never exceed the rated capacities of the cylinders. Excess pressure may cause personal injury. Tecpos cylinders are designed for a hydraulic pressure rating of 700 bar.

WARNING

Before operating the pump, tighten all hose connections using the correct tools - take care not to overtighten.

WARNING

Only use the equipment after all parts of the system have been correctly set.

WARNING

Lift only deadweight loads, and stay clear of lifted loads.

WARNING

Prevent hydraulic hose from damage. The hydraulic hose should not be twisted or folded, especially if oil is flowing. If the hose is twisted or folded it may result in severe back pressure, damage to hose, shorten the life of the hose and cause internal damage.

DANGER

Only trained personnel should use hydraulic equipment.

WARNING

Any repairs or replacement parts must only be made by trained personnel and authorised by GT.

CAUTION

Store the pump and cylinders in a dry and secure area inside it's plastic packaging.

CAUTION

Do not put lifting object or heavy weight on the hose. The hose is not designed to withstand external weight and can cause serious injury.

Upon moving hydraulic equipment, do not hold the hose or coupler for movement. Use the handle.

Do not place the hydraulic equipment near open flames or overheating areas. The packing and sealing inside will soften and cause oil leakage. Excessive heat will weaken the hose and materials within. Never use the equipment in humid or wet areas.

CAUTION

Do not touch your skin after working with oil. Hydraulic oil may seep into your skin and result in severe condition. Ensure oil residue is completely cleaned off you after use, if left on can be hazardous to your health. If health is affected due to poor care when working with oil, seek medical attention.

TWO STAGE HYDRAULIC PUMP

Tecpos Hydraulic Hand Pumps are two stage. The low pressure first stage of the pump unloads at 300PSI.

The high pressure second stage of the pump takes over when the pressure on the cylinder becomes more than 300PSI and will develop pressure to the maximum 10,000PSI (700 bar).

Low & high pressure will delivery different volumes of oil per full stroke.

Product Code	Volume Per Stroke cc/cycle	
	High	Low
ESP05	2.47	20.9
ESP08	2.47	20.9
ESP17	2.47	32.7
ESP25	2.94	41
ESP50	2.94	41
THPA1B	2	13
THPA1C	2	16.5

VALVE OPERATION

The two way pump is equipped with a two way valve for use on single acting cylinders.

To extend a single acting cylinder, the valve should be turned in a clockwise to close the valve so that the oil is pumped to the cylinder.

To return the cylinder, the valve should be turned anticlockwise to open the valve so that the oil is directed back to the reservoir.

HOSE CONNECTION

All hoses, fittings, couplers and accessories must be the correct size.

Clean the areas around the valve port to remove all dust and grit.

Remove the pipe plug from the pump body and connect hose or fitting from cylinder to the pump body port.

When a cylinder is connected to the pump, the cylinder should remain lower than the pump and should be extended three times and retracted three times to remove any air that may have been in the cylinder and the hose.

The reservoir oil level should be checked after bleeding the ram and hose of air. This is especially true on double acting cylinders because the return side of the cylinder acts as a reservoir.

HYDRAULIC HOSE PRECAUTIONS

Avoid straight tubing connections in short runs. Straight line runs do not provide for expansion or contraction due to pressure or temperature changes.

Eliminate stress in the tube lines. Long tubing runs should be supported by brackets or clips. Tube through bulkheads must have bulkhead fittings. This makes easy removal possible and helps support the tubing.

Before operating the pump, all hose connections must be tightened with the correct tools. Do not overtighten. Connection should be secure and leak-free.

Should a hydraulic hose burst, rupture or need to be disconnected, immediately shut off the pump. Never attempt to grasp a leaking hose under pressure with your hands. The force of the escaping hydraulic fluid could cause serious injury.

Do not allow the hose to be exposed to potential hazards and elements such as fire, extreme heat or cold, sharp surfaces or heavy impact.

Do not twist, curl or bend the hose so tight as to that the oil flow within the hose is blocked or reduced. Periodically inspect the hose for wear because any of these conditions can damage the hose and may result in personal injury.

Upon moving hydraulic equipment, do not hold the hose or coupler for movement. Use the handle.

Hose material and coupler seals must be compatible with the hydraulic fluid used. Hoses also must not come in contact with corrosive materials, hose deterioration may result in personal injury.

Before painting a hose consult the manufacturer.

Never paint couplers.

CYLINDER PRECAUTIONS

The operator must be familiar with the correct operation, maintenance and use of the cylinder. Lack of knowledge in any of these areas may cause personal injury.

Use only approved accessories and approved hydraulic fluid and hoses.

Never exceed the rated capacities of the cylinders. Excess pressure may cause personal injury.

Do not use cylinders if they are damaged, altered or in poor condition.

Do not use cylinders with bent or damaged couplers or damaged port threads.

Do not set poorly balanced or off centred loads on a cylinder. The load may tip and cause personal injury.

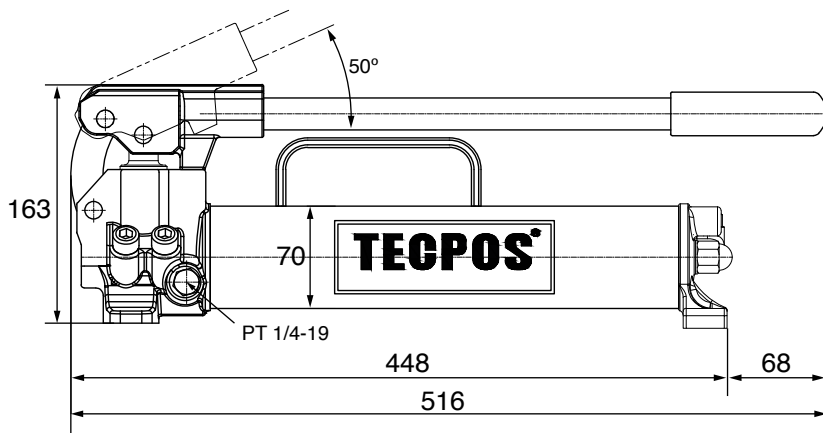
To prevent material fatigue from continuous application, the loads should not exceed 80% of the rated cylinder capacity.

When the load is lifted, use blocking and cribbing to protect from a failing load.

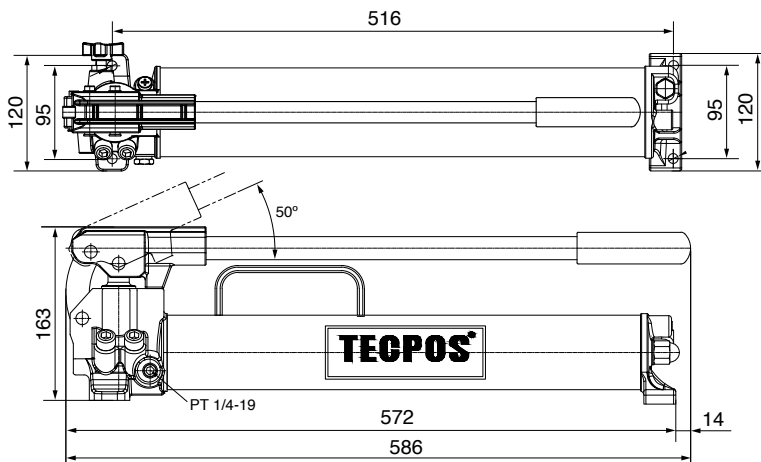
Do not allow personnel to go under or work on a load before it is properly cribbed or blocked.

Never use extreme heat to disassemble a hydraulic cylinder. Metal fatigue can cause dangerous conditions.

ESP05



ESP08



TECPOS®

573

120

95

95

120

50°

182.5

590

632

TECPOS

PT 3/8-19
(Return to Tank Port)

PT 1/4-19
(Gauge Port)

The technical drawing illustrates the dimensions of the TECPOS 6000 pump assembly in two orientations.

Top View Dimensions:

- Total length: 576
- Left end flange height: 95
- Right end flange height: 95
- Overall height at both ends: 120

Side View Dimensions:

- Height from base to top of pump head: 200.5
- Angle of the pump head cover: 50°
- Distance from left end to the start of the handle: 636.5
- Distance from left end to the right end flange: 644
- Right end flange height: 7.5

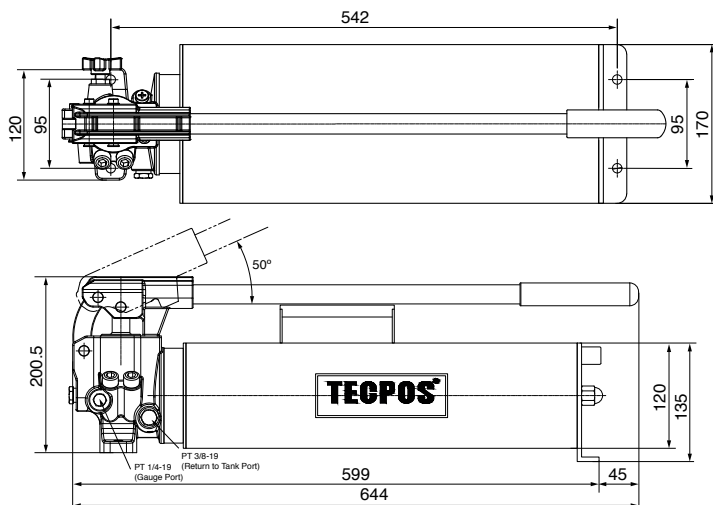
Labels and Features:

- TECPOS®**: Brand name prominently displayed on the side panel.
- PT 3/8-19 (Return to Tank Port)**: Label pointing to one of the ports on the left end.
- PT 1/4-19 (Gauge Port)**: Label pointing to another port on the left end.

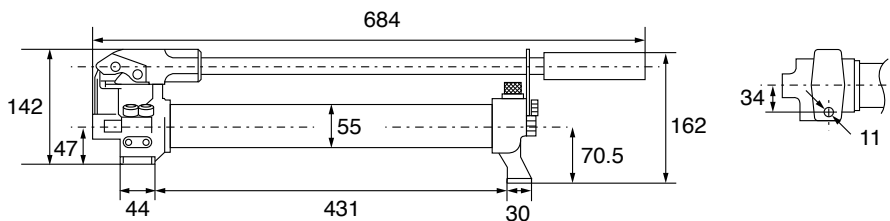
Specifications

TECPOS[®]

ESP50



THPA1B



THPA1C

