



# Micropac® MTX series C16-2 Cavity Cartridge Hydraulic Hand Pump

**MTX-SA  
SINGLE ACTING**  
PUMPS ON DOWN  
STROKE ONLY

BOTH MODELS: NOVEL 'SWIVEL BEARING' -  
360° ROTATION OF HANDLE TO SUIT OPERATOR POSITION.  
REMOVABLE OPERATING HANDLE (NOT SHOWN)

**MTX-DA  
DOUBLE ACTING**  
PUMPS ON BOTH  
UP AND DOWN  
STROKES

LONG LIFE  
HARD CHROMED  
PISTON ROD

HARD CHROMED ROD,  
BRONZE BEARING,  
HARD ANODISED BARREL  
FOR DURABILITY

PLATED STEEL  
BODY & BEARING

HIGH STRENGTH  
HARD ANODISED  
ALLOY BODY

BOTH MODELS: C16-2 1-5/16"-12 UNF 2 PORT  
INDUSTRY STANDARD CAVITY MOUNTING  
INLET CONNECTION ON NOSE

**TYPICAL APPLICATION:**  
MANUAL BACK-UP FOR POWERED HYDRAULIC SYSTEMS

**Made in England**

## Compact and cost effective solutions for manual hydraulic power

### FEATURES

- Direct mounting into industry standard cavity
- Cost effective- no interconnecting pipework
- Suitable for use with mineral oil (nitrile seals)
- Single and double acting models available
- Single acting pumps on down stroke only
- Double acting pumps on both up & down stroke
- 'Swivel' handle- 360° rotation to suit operation
- Built in strainer on pump inlet for added reliability
- Hard chromed piston rod for long life
- Two single acting models for 80bar or 150bar
- Displacement/stroke 22cc (80bar), 11cc (150bar)
- Double acting 25cc/double stroke up to 200 bar
- Operating handle easily removable for storage
- 450mm/ 625mm handle length options
- Nitrile seals standard - optional EPDM / Viton®
- Operating temperature range -20°C to 80°C
- Tank connection on nose
- Inlet and outlet check valves built in

# INSTALLATION & MAINTENANCE

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## APPLICATION

The unit is suitable for any application requiring manual generation of hydraulic power eg operating hydraulic cylinders or actuators, piloting valves, charging accumulators or hydrostatic testing.

Single acting models: on the up stroke, fluid is drawn in through the strainer and inlet check valve on the body end; on the down stroke fluid is displaced out through body annulus to align with the cavity port. The outlet check valve maintains system pressure. This model is available in two versions: 22cc per stroke up to 80 bar or 11cc per stroke up to 80 bar. A detachable operating handle mounts into the clevis orifice.

Double acting models: on the up stroke, fluid is drawn in through the strainer and inlet check valve on the body end; a check valve built into the piston closes and the volume above the piston is displaced out through the outlet check valve into the body annulus and through the cavity port into the system. On the down stroke the inlet check valve closes and fluid flows from beneath the piston through the piston check valve and outlet check valve into the system. The outlet check valve closes when the pump is not in use, maintaining system pressure. This model displaces 25cc per double stroke up to 200 bar. A detachable operating handle mounts onto the clevis spigot.

Sealing options are nitrile, fluorocarbon and ethylene propylene elastomers, specified at time of ordering. Other options; please enquire.

Universal mounting orientation e.g vertical, horizontal.

## MATERIALS

Single acting models: zinc plated steel body & barrel, hard chrome plated steel piston rod, aluminium alloy swivel and handle clevis, other parts in zinc plated steel, UHMWP, PTFE, Polyurethane and elastomeric sealing. Zinc plated steel operating handle.

Double acting models: hard anodised aluminium alloy body, aluminium bronze bearing, hard chrome plated steel piston rod, zinc plated steel swivel and handle clevis, other parts in zinc plated steel, UHMWP, PTFE, Polyurethane and elastomeric sealing. 304 grade stainless operating handle.

## SAFETY

This unit is a component forming part of a hydraulic pressure system. If forming part of a permanent installation, the

## SAFETY cont'd

system should be designed, operated and maintained in accordance with statutory requirements and other relevant instructions. A risk assessment covering safe installation, operation and maintenance should always be carried out prior to use.

Under the EU Pressure Equipment Directive (PED) 2014/68/EU and the UK Pressure Systems (Safety) Regulations, the unit is not required to be CE or UKCA marked.

## INSTALLATION

Suitable for manifold mounting into an industry standard cavity type C16-2 (2 port, 1-5/16"-12UNF thread) with tank on nose, outlet to side port.

Ensure pump body seals are lubricated and required cleanliness is maintained. The pump body must be carefully inserted on the axis of the cavity and screwed into the cavity, ensuring the outlet check valve is not damaged or dislodged.

Recommended tightening torque when screwing pump body into cavity: 80-90 Nm.

## CONNECTIONS

Through cavity. As with any hand pump, the inlet line back to tank should be kept as short and unconstricted as possible for optimum performance.

## COMMISSIONING

Locate operating handle onto clevis orifice and orientate to suit operator position.

The pump should be operated after installation to leak test and bleed the hydraulic circuit. Failure to do so may result in reduced pump displacement and a spongy action.

## MAINTENANCE

**Maintenance operations should only be carried out by a competent service engineer.**

The inlet strainer is easily accessible for cleaning. The inlet and outlet check valves are also easily serviced. Seals are replaced using standard tools. Service kits are available. The external thread, seals and check valve components should all be protected from damage during storage or maintenance. Check that the outlet check valve has not been damaged or dislodged during maintenance.

Sarum Hydraulics Ltd also offer a servicing facility; please advise before returning the unit to us.

# SPECIFICATION

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Displacement/ stroke, max. operating pressure, max. flow:

MTX-SA-11: 11cc, 150 bar, 0.44 lt/min

MTX-SA-22: 22cc, 80 bar, 0.88 lt/min

MTX-DA-25: 25cc, 200 bar, 1 lt/min

Nom. operating hand load at maximum operating pressure:

MTX-SA: 482N (450mm handle); 348N (625mm handle)

MTX-DA: 440N (625mm handle)

Compatibility: mineral oil (nitrile seals).

Fluorocarbon and EPDM sealing options- check compatibility first; if in doubt, consult factory.

Ambient operating temperature range: -20 to 40°C

Media operating temperature range:

Nitrile: -35 to 80°C

Fluorocarbon: -26 to 80°C

EPDM: -50 to 80°C

Weight (excluding operating handle):

Single acting models: 2kg

Double acting model: 2kg

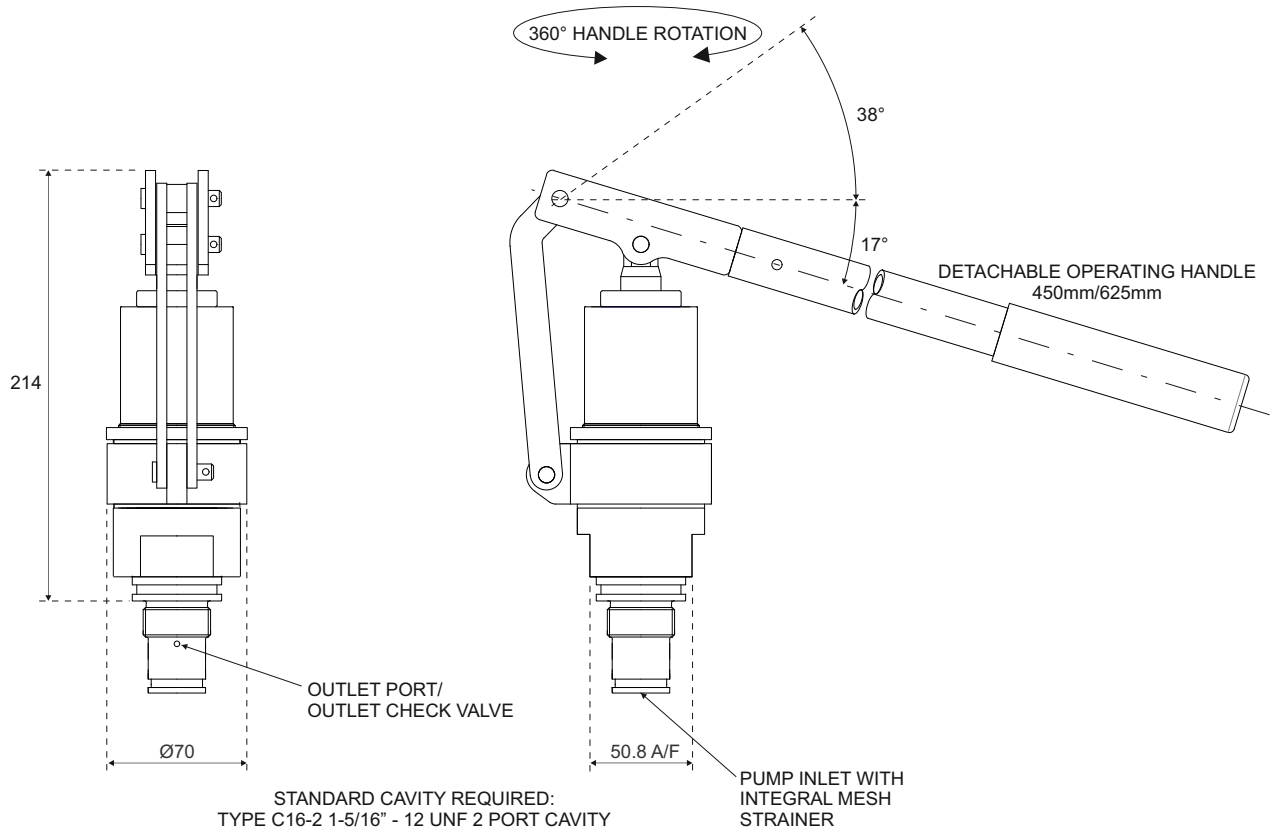
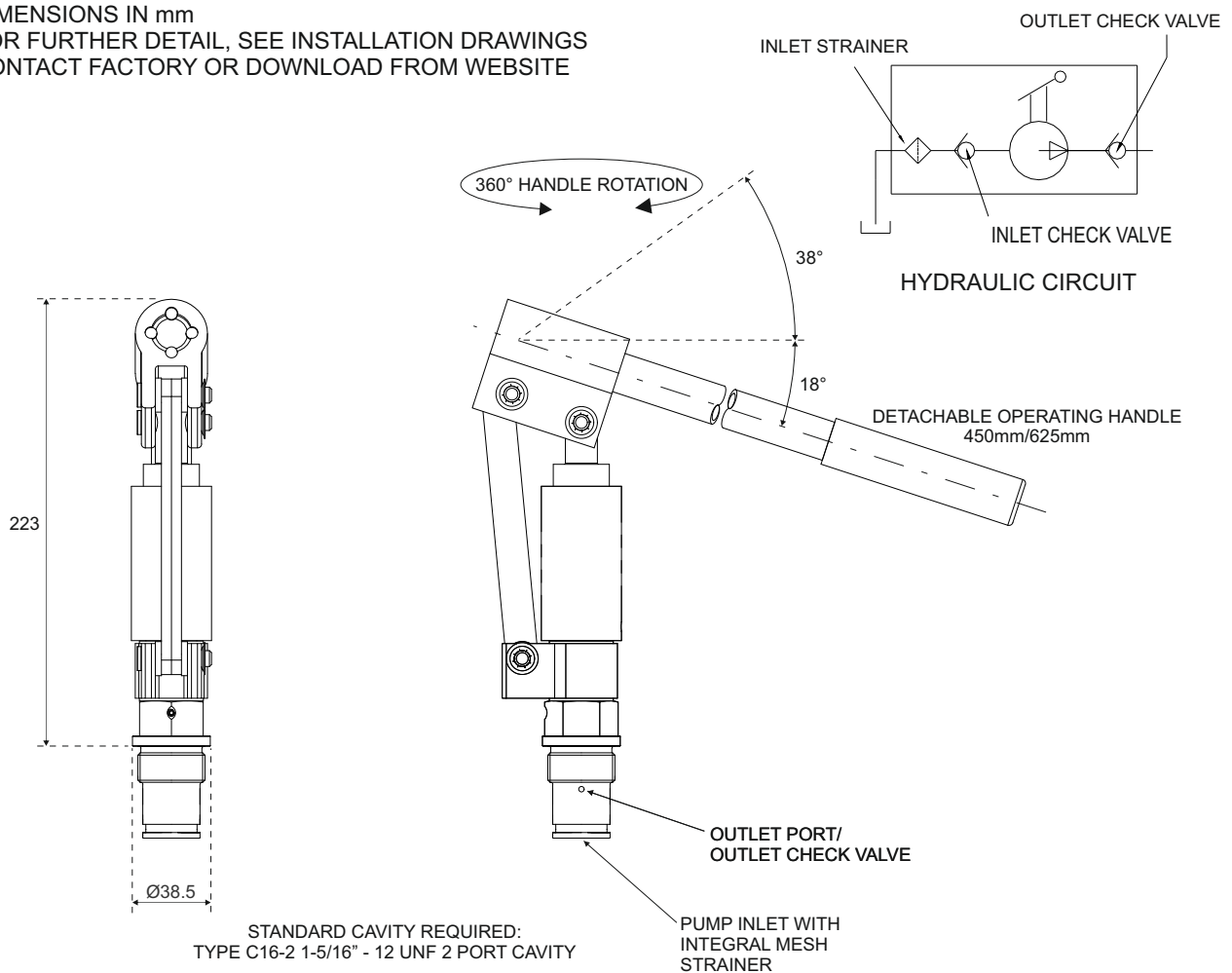
Operating handles:

Single acting: kg (450mm); kg (625mm)

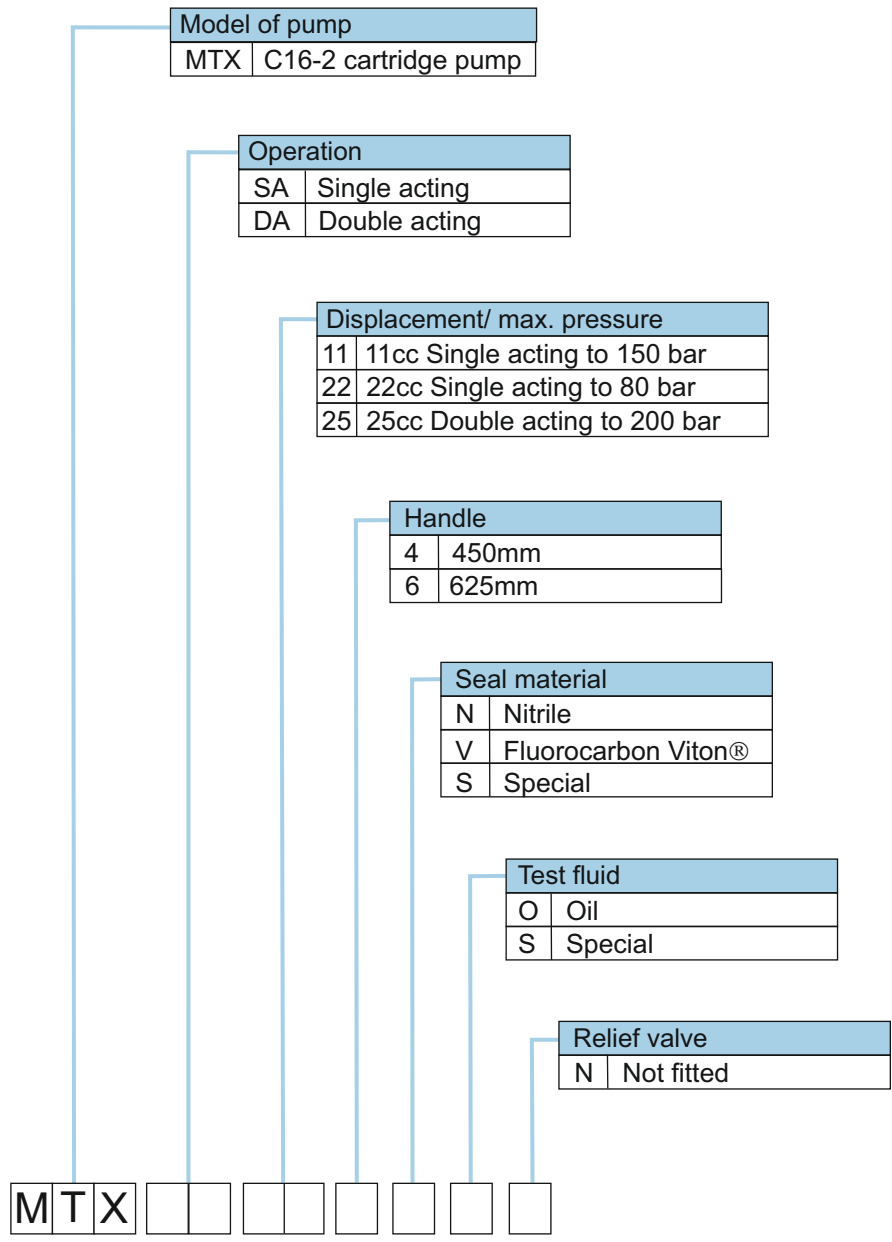
Double acting: kg (450mm); kg (625mm)

# DIMENSIONS

DIMENSIONS IN mm  
 FOR FURTHER DETAIL, SEE INSTALLATION DRAWINGS  
 CONTACT FACTORY OR DOWNLOAD FROM WEBSITE



# ORDERING CODES



We are a long established ISO 9001:2015 certificated designer and manufacturer of hydraulic equipment. Full details of other products in our range are available from:

**Sarum Hydraulics Limited**  
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