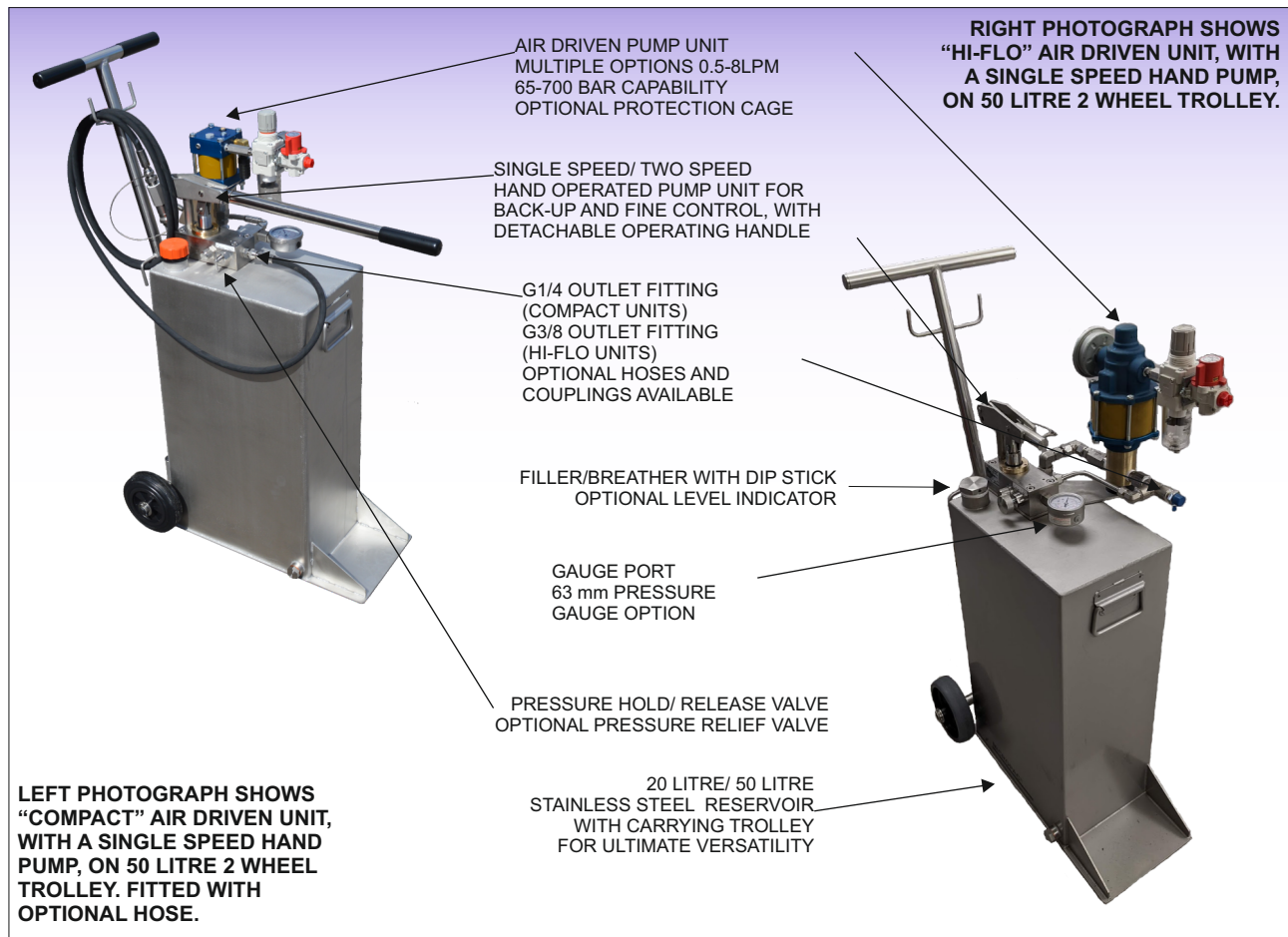




# Micropac® DUO series Portable Air Driven Hydrostatic Test Pump

Versatile and sturdy 2 wheel trolley based unit operating up to 700 bar with built in hand pump for real flexibility in all conditions.



Typical applications: hydrostatic pressure testing, charging, filling and dispensing from free flow up to 700 bar.

Please discuss any special applications with the factory; our technical support team will be happy to help you.

## FEATURES

- Portable source of hydraulic power
- Operates from shop air pressure; no electricity
- Double acting hand pump for back-up/ fine control
- Single speed or two speed hand pump options
- Compatible with water, oil, glycols and other fluids
- Poppet outlet check valve for very low leakage
- Soft seat inlet and release valves for durability
- All valve seats replaceable for long service life
- Optional 4 way valve for double acting cylinders
- 20 litre or 50 litre stainless steel reservoir on trolley
- Multiple air pump/ hand pump models:
- Air pumps from 8 lpm/ 65 bar to 0.5 lpm/ 700 bar
- Single speed hand pumps from 50-700 bar
- Two speed rapid fill hand pumps 450/700 bar
- Choose any combination above to suit application
- Pressure gauge port; optional pressure gauge
- Nitrile seals standard - optional EPDM / Viton®
- Enquiries welcomed for special applications

# INSTALLATION & MAINTENANCE

## APPLICATION

Under the Pressure Equipment Directive 2014/68/EU, this unit is suitable for use with group 1 liquids (liquids classified as explosive, extremely flammable, highly flammable, flammable, very toxic, toxic, oxidising) up to 500 bar and group 2 liquids (all other liquids) with no limit in pressure, subject to compatibility with seals and materials used in the equipment construction. Check carefully both seal and material compatibility prior to ordering; if in doubt, contact our technical support.

The unit requires dry shop air to operate the air driven pump; a manual back-up pump is connected into the same hydraulic circuit; there is no requirement to isolate one pump whilst the other is operating.

The maximum hydraulic pressure quoted for each model is based on an inlet air pressure of 6.9 bar (100 psi).

There is a low leakage outlet check valve to maintain system pressure, and pressure may be released back to the reservoir through a needle valve within the hand pump body. A pressure relief valve is also offered as an option; this is not a PED certificated safety device.

The unit is also available with a 4 way valve for operation of double acting cylinders e.g. trench shoring applications.

There is a G1/4 flat bottom pressure gauge port on the hand pump body; a range of direct mounted 63mm 316 stainless wetted parts/304 stainless case pressure gauges are available, range to suit application. All 316 stainless pressure gauges are also available.

The pumps are mounted onto a 20 litre or 50 litre portable reservoir with carrying trolley. The reservoir is filled through a filler/breather cap. There is an optional tubular cage available to offer protection against accidental damage of the air pump.

Connection to the external system is made via a G1/4 port in the hand pump body; a range of optional hydraulic hoses are also available, G1/4 swivel on free end.

## MATERIALS OF CONSTRUCTION

Seals: PTFE, UHMWP and Nitrile. The air driven pump has Nitrile seals, and a polyurethane main seal.

Optional alternative compounds are available - consult the factory.

## MATERIALS OF CONSTRUCTION CONT'D

Hand pump: anodised aluminium or stainless steel body, stainless wetted parts. Air driven pump: stainless wetted parts, anodised aluminium alloy and stainless air section.

## SAFETY

This unit is a component forming part of a hydraulic pressure system. The 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 be carried out prior to use.

## INSTALLATION

Site unit on a flat surface and fill reservoir with fluid. Make pressure connection to external system via G1/4 port in end of hand pump body. Make air connection to air driven pump.

## COMMISSIONING

Always set the air pressure back to zero on the regulator and switch the 2 way air shut off valve to its closed position before connecting shop air to the unit. Operate the air driven pump and hand pump to pressurise the system to its maximum working pressure. Air section pressure is limited by adjusting air inlet pressure via regulator on inlet to pump. Hand pump pressure is limited by relief valve (where fitted and set to maximum pump pressure unless otherwise specified). Check for leaks in the system.

To set relief valve on the hand pump, remove cap, adjust set screw whilst operating hand pump to achieve maximum pressure requirement, then refit cap.

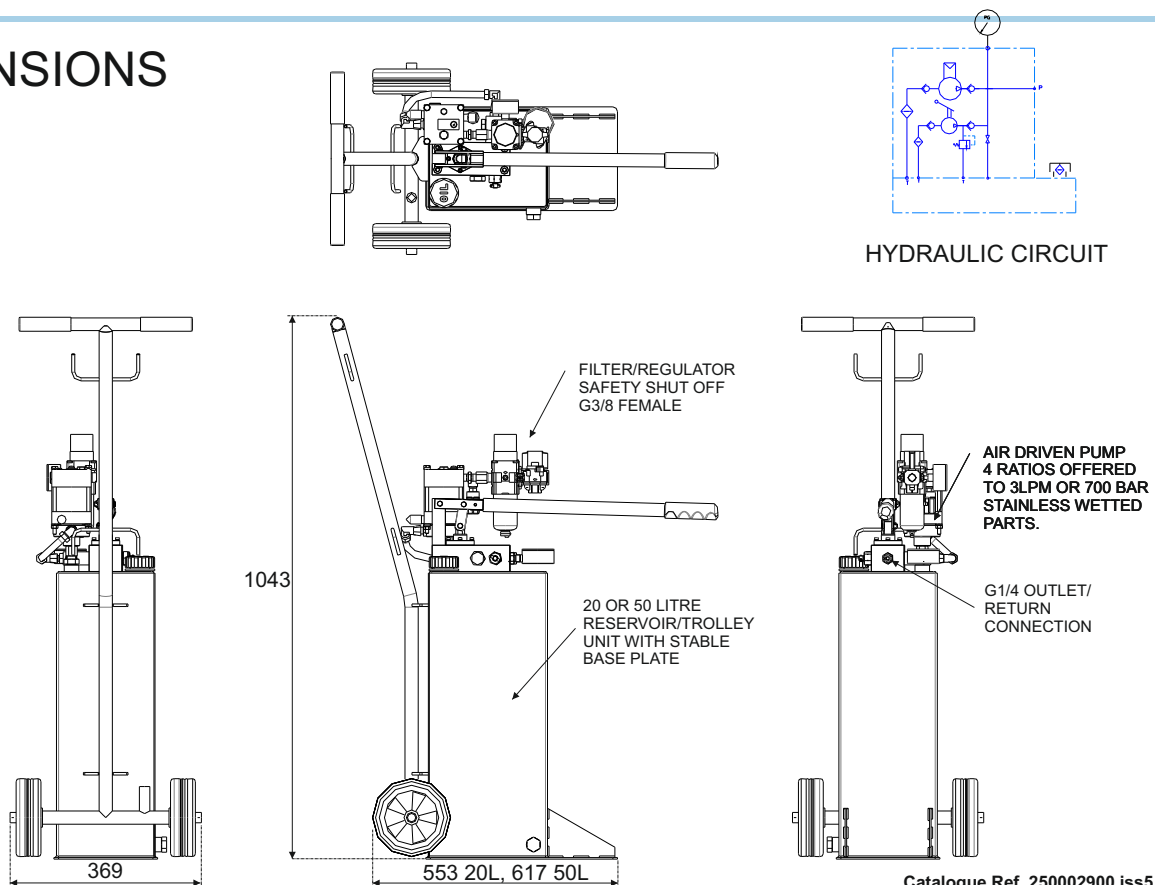
On an air driven pump which has a small displacement per stroke, always make provision for cycling the unit and bleeding flow back to the reservoir or end of hose to prime it.

An air driven pump will struggle to prime against a closed check valve.

## MAINTENANCE

Service kits can be supplied for both the air driven pump and the hand pump. These comprise all seals, seats, springs and fitting instructions. Maintenance should only be undertaken by a competent authorised person.

## DIMENSIONS



# ORDER CODE FOR MICROPAC® DUO AIR DRIVEN PRESSURE TESTING UNIT



Model

Air Driven Pump Model (choose best fit for max. pressure and free flow requirement)

"Compact" Air Driven Pump models:			"Hi-Flo" Air Driven Pump models:		
15	125 bar max.	3.6 litre/min free flow	Fitted to 50L trolleys only (-5T)		
25	190 bar max.	2.7 litre/min free flow	05	65 bar max.	8.2 litre/min free flow
35	235 bar max.	2.1 litre/min free flow	10	125 bar max.	4.5 litre/min free flow
45	330 bar max.	1.6 litre/min free flow			
65	480 bar max.	1.2 litre/min free flow			
105	740 bar max.	0.6 litre/min free flow			

Hand pump body material

A	Alloy / Stainless
3	Stainless / Bronze

Hand pump displacement per double stroke/ maximum pressure.

SINGLE SPEED MW-PUMP				TWO SPEED MD-PUMP (stainless)			
7	7cc / 700 bar (all-stainless only)			First stage - second stage figures			
12	12cc / 400 bar	25	25cc / 200 bar	45	45cc / 60 bar	-	4.7cc / 450 bar
49	49cc / 102 bar	10	100cc / 50 bar	70	45cc / 60 bar	-	3.8cc / 700 bar

Handle

4	450mm Short
6	625mm Long
O	No Handle

Seal material

N	Nitrile	E	EPDM
V	Viton	S	Special

Test fluid

W	Water	S	Special
O	Oil		

Release valve

R	Release valve fitted
4	4 way valve fitted
S	Special

Pressure gauge

O	No Gauge
G	Normal*
S	Special

Relief valve (hand pump)

O	No Relief
R	Normal*
S	Special

Reservoir size

2T	20 Litre on trolley 316
5T	50 Litre on trolley 316

Hose, stainless fittings G1/4

-	No hose required
3	Hose 3 metres overall

\* relief valve factory setting and pressure gauge range are to suit maximum pump pressure. For alternative setting and alternative pressure gauge ranges/ all 316 construction, please specify at time of ordering

DUO

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