



# Multicrete ICTUS M500 Grout Pump

## Technical Data Sheet

### Product Description

ICTUS M500 is an injection grout pump ideally used with the Multicrete TC3100 Mixer.

The ICTUS M500 series is a portable and lightweight robustly constructed grout pump, mainly used for full column grouting as in cable anchoring and for spraying materials, among many other applications. Combining the air motor with different riser-tube assemblies (fluid sections) will adapt the pump to suit a particular need.

All the pumps are equipped with a VFO lubricator/filter to ensure clean lubricating air operates the pump. The riser-tube is fitted with a clamp and allows removal of the tube for cleaning purposes without the need of special tools. The pump comes with hoses and fittings to suite the application. The pumps can handle a variety of mixes, from a thin liquid to a viscous grout (1:3 cement ratio.) Other models can be manufactured to meet special needs (i.e. coal mining.)



### Specifications

Weight (kg/lbs.)	16	21
Riser Tube Length (mm/in.)	650	26
Riser Tube Options (mm/in.)	375	15
Riser Tube Diameter (mm/in.)	72	2.9
Stroke Length (mm/in.)	80	3
Stroke per minute (5 Bar/psi)	180	-
Swept Volume (ml/cu.in)	163	9.9

### Pumping Capacity

Air Requirement / Minute	3	44
Delivery Pressure (Bar/psi) Air	110	1595
Consump. (cu.m/sec/cfm)	.0006	12
Horizontal Pump Distance (m/ft)	90	300
Vertical Pump Distance Max (m/ft)	14	46
Aggregate Size Max (mm/in.)	6	1/4



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### Air Supply

The ICTUS M500 Grout Pump typically requires an air supply of 2.5 bar (36 psi) minimum and 8.0 bar (116 psi) maximum for proper operation. It's maximum working pressure is 60 bar (870 psi.) The pump provides a maximum delivery rate of 26 liters per minute (7 gpm.)

### Application

- Pack spraying
- Anchors
- Void Filling
- Construction Foundation Piling
- Ventilation Walls
- Pipe Jacking
- Foundation Stabilization

### Features of the pump

- Easily portable
- Rugged construction helps withstand tough handling in mines and on construction sites
- Bottom feed – No hopper required, no transferring of material and no air-entrainment
- Air-operated motor with all parts sited internally
- Easy to maintain

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The ICTUS M500 Series pump is a reciprocating air-motor connected directly to a pump piston with a check valve. The graph detailed below in **Figure 1** gives some indication of the capability of the pump. The graphical information may vary depending on air pressure, volume and fluctuation. This is also co-dependent on the type of mix, state of the delivery hose, and the condition of the pump itself.

### Variable Results

0.33 Water: Cement Ratio

Vertical holes 20 metres (66ft) with full hole grouting (depending on underground conditions 10-30 holes can be completed per shift (1.8 – 2.5 m or 6 – 8 ft.) long holes up to 200 holes per shift.)

For spraying rock sealing or ground consolidation materials an average of 80 to 110 m (265 Sq. Ft.) per 6-hour shift can be achieved, with double that for thin materials

Thickness can be controlled from 1mm for thin materials and 10 mm ( $\frac{3}{8}$  in.) in a single pass. The materials which can be handled, range from pure cements to fibrous mixes and sands up to 1.5mm without additives and minus 4mm with plasticizers.

Coarser mixes such as minus 6 mm ( $\frac{1}{4}$  in.) crusher can require the use of the MK60 Pump and the inclusion of fly-ash in the mix.





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Figure 1

