AIRBLAST

OWNERS MANUAL

REDLINE POT

(MICRO VALVE)

BLAST MACHINE

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SAFETY INSTRUCTIONS

Only competent individuals who have read and understood this document should operate this equipment. If you are unsure of any point prior to operation ASK!

Only competent individuals who have read and understood this document should carry out maintenance on this equipment.

DO NOT overfill the pressure pot.

OVERFILLING will block both the blast lines and the remote control valve. The blast pot will have to be emptied before work can re-commence.

KEEP the grit below the mushroom level.

DO NOT tamper with the pneumatic fittings unless for maintenance reasons.

DO NOT allow oil or grease near pneumatics.

ALWAYS shut off air supply when the unit is not in use or when carrying out any form of maintenance.

PROTECTIVE CLOTHING must be worn when using the equipment.

DO NOT overfill the pressure pot.

NEVER exceed the maximum safe working pressure of 12 bar (174 psi).

ESCAPING AIR can be a danger and will reduce the efficiency of the operation.

DO NOT weld on blast machine, this voids warranty.

NOTE. This unit must be supplied with clean, dry air at a maximum recommended working pressure of 12 bar (174 psi). Under no circumstances must the pot be connected to an air supply of greater pressure. Failure to do so could result in an explosion.

NOTE. It is essential that the air hose couplings are secure and that any sealing gaskets required are in position. Escaping air can be a danger and will reduce the efficiency of the operation.

SET UP INSTRUCTION **(refer to drawing)**

IF IN DOUBT – ASK!

Only competent individuals who have read and understood this document should carry out installation of this equipment.

Start the compressor and run for around 10 - 15 minutes to reach operating temperature.

Connect a suitable length of hose to the compressor air outlet.

Carefully turn on the air to blow out any dirt or moisture from the air hose.

Turn off the air supply.

Locate the blast machine on a firm and level ground.

Connect the air hose to the blast pot air inlet nipple.

Close the abrasive metering valve.

Open the choke valve by positioning the handle in line with the body. This valve should remain open for all normal conditions.

Open the ball valve on the side of the remote control valve (ref 6).

Connect the two deadman air hoses to their respective couplings. Hose marked yellow connects between yellow connections on remote control valve (ref 6) and the deadmans handle. Hose marked red connects between red connections on the remote control valve (ref 6) and the deadmans handle. It is important to follow the colour coding when connecting these hoses.

Check that the coupling gasket in the quick release coupling (ref 16) at the base of the machine is in position and in good condition and that the correct number of blast hoses are connected.

Ensure all couplings are secured together with the locking wire in its hole. If no integral means of latching is available, use split pins in the corresponding holes.

Secure the deadmans handle to the blast hose close to the nozzle holder, ensuring that the rubber insert is in position and that the lever is allowed to open and close freely. Secure the Deadman hoses to the blast hose at short regular intervals using hose ties.

Select a suitable nozzle and fit to nozzle holder after checking that the nozzle gasket, is in position and in good condition.

OPERATING INSTRUCTIONS (refer to drawing)

Only competent individuals who have read and understood this document should operate this equipment. If you are unsure of any point prior to operation ASK!

Operators should always use full protective clothing including helmet. Air supply to the helmet is adjusted by the control valve on the operators belt.

Do not overfill the pots.

Overfilling the system will block blast lines and remote control valve causing the entire system to be emptied before re-commencing work.

Keep the abrasive/media below the level of the pop-up mushroom valve (ref 23).

Turn on the air at the compressor.

Fully open the steel grit metering valve (ref 17).

With the deadmans handle in the open position, close the ball valve on the side of the remote control valve (ref 6).

Adjust the drain cock on the moisture trap (ref 28) to give a constant bleed off of air/water vapour.

The operator must take a secure hold of the blast hose and nozzle holder and at all times direct the nozzle only at the work surface.

Pressurise the machine by closing the deadmans handle. The pop-up valve (ref 23) will close and seal against the sealing 'O' ring (ref 24). Air will then pass through the nozzle.

Allow air to pass through the machine for a short period to purge the machine of moisture from condensation which may have accumulated during storage.

Depressurise the machine by either releasing the deadmans handle or by opening the ball valve on the side of the remote control valve (ref 6). NOTE – This ball valve will depressurise the machine in an emergency even with a closed deadmans handle.

Close the abrasive metering valve.

Open ball valve on the side of the remote control valve (ref 6).

Ensure that the abrasive sieve is in position.

Load the selected abrasive/media into the machine through the sieve. The abrasive/media will flow through the filler hole in the centre of the concave head passing the pop-up valve and will fill the pot.

Close the ball valve on the side of the remote control valve (ref 6).

With the blast nozzle pointed at the work, close the deadmans handle. The machine will pressurise and air will pass through the nozzle.

The operator should gradually open the abrasive metering valve (ref 17) to introduce the abrasive/media into the air stream. Adjust the valve to maintain the minimum amount of abrasive /media into the air stream.

To close down or re-fill the blast machine, depressurise the machine either by releasing the deadmans handle or by opening the ball valve on the side of the remote control valve (ref 6).

Note! The ball valve must always be open before filling the machine to avoid accidental pressurisation.

Always empty the machine of abrasive/media after blasting. This will assist in obtaining a quick start when next using the machine by preventing any abrasive/media left in the system getting damp and causing a blockage. The machine must always be empty & castors fixed in the forward position prior to reclining.

MAINTENANCE

Only competent individuals who have read and understood this document should carry out maintenance on this equipment.

All blasting equipment is self-destructive when in operation. It is therefore essential to operate a preventative maintenance programme to ensure efficiency and safety. It is necessary when planning such a programme to classify the maintenance into a daily, weekly and monthly schedule.

Ensure that the air supply at the compressor is turned off and the air line is purged of pressure before maintenance work is carried out.

Check air hose and replace where necessary.

Visually check the condition of the sealing ring (ref 24). Replace if there is any sign of wear especially around the edge of the seating. The sealing ring can be replaced externally from the top of the machine.

Visually check the condition of the pop-up valve. Replace this item if there is any sign of wear.

Check condition of rubber gaskets in quick release coupling and replace if there is any sign of wear.

Check condition of nozzle gasket and replace if there is any sign of wear.

Check condition of nozzle and replace if necessary.

Check that the blast hose is running in loose curves. Tight curves and kinks cause turbulence resulting in inefficiency of the blast hose wall. Ensure that no transport passes over the hose.

WEEKLY CHECK

Check along the lengths of blast hose by hand pressure to detect any deterioration of wall thickness.

Check condition of all hose couplings and nozzle holder for any signs of wear or fracture. Whist checking the nozzle, pay attention to the securing screws.

Check the condition of the moisture trap (ref 28). Remove and clean the filter bowl and element if necessary.

Check condition of bleed manifold on the remote control valve (ref 6) and replace if any wear is found.

Remove inspection door assembly and clean out the machine, ie any type of foreign objects that could cause a blockage.

Check condition of the inspection door gasket. Replace if necessary. Replace and secure the inspection door assembly.

It is essential that all connections on the helmet air hoses are secure and under no circumstances should the helmet be used until the air supply has been turned on & found to be entering the helmet. Incoming air will be heard as a slight hiss as it enters the helmet.

Never exceed the maximum safe working pressure of 12 bar (174 psi).

EXAMPLES

For steel cleaning a pressure of 7 bar (100 psi) at the nozzle will produce the bet results.

For stone cleaning a lower pressure will be required. The ultimate working pressure will depend on the type of stone to be cleaned. Lower pressures can be obtained by use of a pressure regulator in the air supply line and protected by the water separator).

The volume of air will depend on the size of the nozzle orifice and pressure required.

FAULT ANALYSIS

Ensure that the air supply at the compressor is disconnected and that the air line is purged of any pressure before any repair work is carried out.

Symptom	Probable fault	Action required
No air or abrasive passes through the nozzle	Compressor no turned on. Water separator blocked. Remote control valve not working.	Turn on compressor. Check and clean. With ball valve and deadman handle closed, check remote control valve and long Recova hoses for air leaks and loose connections.
Air, but no abrasive passing through the nozzle.	Abrasive metering valve closed. Damp abrasive restricting flow at base of machine.	Open valve. Quickly close and open the choke valve. Remove inspection door assembly and clean out.
Intermittent flow of abrasive	Abrasive metering valve not adjusted correctly.	Check setting. Operate choke valve and clean out.
Abrasive surges from nozzle	Abrasive metering valve opened too fully. Choke valve not fully open.	Check setting Check and open choke valve
Pop up valve will not remain sealed against sealing ring.	Insufficient volume or pressure of air.	Check air supply from compressor with hypodermic needle gauge. Close choke valve, if pop-up valve seals insufficient air is available.
Pop-up valve will not drop after depressurisation.	Worn pop-up valve and / or worn sealing ring. Abrasive trapped in vertical pipework.	Replace as necessary. Remove inspection door assembly and pop-up valve and clean out.
Machine will not depressurise.	Blockage in deadmans handle. Faulty remote control valve.	Remove and clean out. Remove and repair.