

Short Operating Guidelines using Medium Pressure Nozzles TV500/00 and TV500/90 with System 2000 dry ice blast units.

Please note, the Operating Manual supplied with the blast unit must be studied in detail and fully understood before using these guidelines.

- 1. Air Supply:** Ensure the compressed air supply to the blast unit can provide at least 5.0 m³/min (175 cfm) of clean DRY air at a minimum pressure of 7.5 bar g. If the pressure drops below 7.5 bar when operating, the Blaster cleaning efficiency will be reduced.
- 2. Function Checks:** With the hopper lid open and no dry ice loaded:
 - Open the manual compressed air supply valve located on the side of the blaster.
 - Switch FUNCTION CONTROL to ICE ONLY position.
 - Turn KEY LOCK to the ON position.
 - Release EMERGENCY STOP button.
 - Press RESET button.
 - Press NOZZLE TRIGGER and check that the auger turns and the hammer operates. No air will be discharged on this setting.
- 3. Set Up:** Still without dry ice in the hopper
 - Ensure all personnel in vicinity are wearing ear and eye protection. Please refer to the Noise Guide in the Manual.
 - Switch FUNCTION CONTROL to RUN position.
 - Point BLAST NOZZLE to a safe area and press NOZZLE TRIGGER (TAKE CARE: BLAST AIR will be discharged from Nozzle). NEVER POINT THE NOZZLE AT ANY PERSON.
 - Set the dry ice feed rate to 1.0 bar whilst BLAST AIR is discharging.
 - If the inside of the dry ice hopper is wet blast into the hopper to ensure the hopper sides and the auger screw are blown dry with compressed air. Failing to do this properly will make the first load of dry ice clump together and block the blaster.
- 4. Testing:** Load only one scoop of dry ice and make a test blast. Increase or decrease the dry ice feed rate within the range 0.8 to 1.2 bar to obtain the best result. Always use the lowest possible setting.
- 5. Blasting:** Blast as near to 90 degrees to the surface being cleaned as possible at a minimum stand-off of between 40 and 80 mm. For less aggressive cleaning use up to 200 mm stand-off.

6. **Loading Dry Ice:** Load only enough dry ice for the job in hand. A full hopper will last 20 to 30 min. When the job is finished clean up the work area or the blast unit itself to empty the hopper.
7. **Handling Dry Ice:** Leaving dry ice in the hopper or an open storage container will allow time for condensation from the air to settle on the dry ice pellets and freeze the surface into a crust. In wet or humid conditions this takes only a few minutes, so ensure that the container and hopper lids remain closed.
8. **Freezing or Blocking:** This can occur after a long stoppage, if the compressed air and/or the dry ice is wet or the dry ice hose is twisted or squashed. The symptoms are:
 - 1.- The auger turns, but dry ice does not flow.
 - 2.- The auger turns and dry ice falls out of the rear of the unit.
 - 3.- The auger does not turn.

In case 1, remove the frozen dry ice crust from inside the open end of the auger tube and break up any crust on the dry ice in the hopper before re-starting to blast.

In case 2, turn FUNCTION CONTROL to BLAST ONLY and with the nozzle pointed at the floor pull the trigger. Once running push the exit of the nozzle to the floor. This will push compressed air back through the dry ice hose and clear the blockage. ENSURE NO PERSONELL ARE BEHIND THE BLASTER as dry ice will be blown out of the back of the unit at high speed.

In case 3, clear the auger tube and break up any dry ice crust in the hopper and re-start blasting in the RUN condition, whilst at the same time increasing the dry ice feed rate. As soon as a hammer knock is heard, which indicates that the auger is turning, turn the dry ice feed down to its previous level and then immediately clear the system as described in case 2, but in the RUN condition.

9. **Blocking:** When dry ice blocks the dry ice hose or the nozzle for any reason it stops dry ice being sucked out of the auger tube. This gives the false impression that the blockage is in the auger tube. Usually the blockage is caused by water ice formation in the nozzle and can be quickly released by taking the action described in Case 2 above.

Please refer to the Operating Manual for more information.