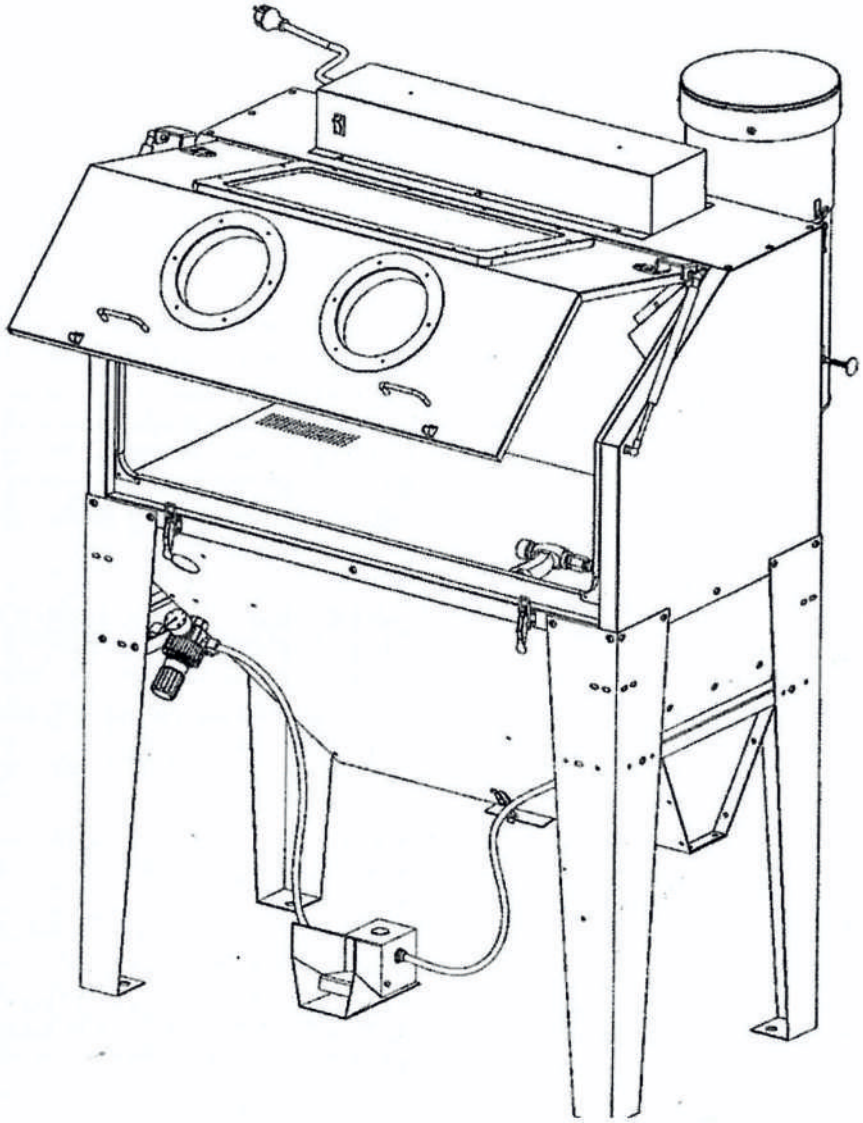
# PNEUMATIC SANDBLASTER WITH 420 LTS CYCLONIC VACUUM CLEANER WITH TOP OPENING DOOR

## 05.075.16

## OPERATING AND MAINTENANCE INSTRUCTIONS



MEMODERWA®
MÁQUINAS & EQUIPAMENTOS INDUSTRIAIS
Rua das Flores, Carreira D'Água

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## IMPORTANT WARNING

Read all instructions before using this equipment.

Remember:

1. Start up preparations:

- Supply air line should be sized according to the table shown on page 6. All hoses should be rated at least 125 PSI and an isolation valve should be installed so that supply air can be turned off and then disconnected from blast machine for servicing.
- Supply air should be dry and clean from oil and other contaminants. (I.e.use air dryer, coalescent filter, or moisture separator as needed.)
- The machine must be connected to an electrical outlet protected by indirect contacts, in compliance with the regulations in force in the country of use.

2. Operator's responsibilities before staring:

- Inspect fittings and hoses for damage and wear.
- Check the seal on all doors. Only operate the blast cabinet with all doors securely closed and dust collection system running.
- Clean dust from dust collector and clean filter as needed.

3. Caution:

- Watch for silicosis (from dust created when using silica sand as a blast media) or toxic dust hazard. DO NOT USE MEDIA CONTAINING FREE SILICA.
- Unless otherwise specified, working pressure of blast machine and related components must not exceed 125 PSI.
- Keep blast nozzle controlled and aimed at the work.

4. Maintenance

- Keep your machine in good repair. Use original parts and do not substitute or modify supplied items.

7. Place foot pedal between front legs.

8. Attach metering valve (#14) using three self-tapping screws to back bottom on cabinet. Snap closed with door catch.

9. Attach left and right doors (#6) with four nuts.

10. Loosen bolts on door catches (#20) and move out to full extent and tighten bolts. Moving them in slightly will tighten door seal.

11. Place glass (#19) on top of cabinet.

12. Place light fixture (#1) on glass with light switch on right side. Fasten to cabinet with four 1/4 x 3/4" bolts and flat washers.

13. Dust Collector
    a) Attach body of dust collector to rear panel (right side) aligning pipe with hole. Use 1/4" x 3/4" bolts and flat washers.
    b) Place top of dust collector (with motor and filter) into top of unit. Do up the 2 catches.
    C) Remove inlet box that covers the dust collector pipe inside the cabinet and place a bead of caulking around pipe to seal it. Replace inlet box.

14. Tighten all bolts, nuts and screws.

15. Place floor grate with cut out corner to front right of cabinet. Bring hoses through opening.

16. Plug dust collector into female plug coming from light. Then connect to a 230V 50Hz plug protected against indirect contacts. Turn on switch on vacuum, the switch on cabinet will turn on light and vacuum or dust collector.

17. Put media into cabinet through floor grate. (approx. 1/4 bag.)

## OPERATING INSTRUCTIONS

1. **Preparing parts for blasting**
   All parts processed must be free of oil, grease and moisture. Make sure parts are dry before putting into the cabinet for cleaning.

2. **Air pressur**
   Operating Pressure: from 50 to 80 PSI. (pounds per square inch)(higher pressures (up to 125) can be used but this breaks down some types of media's prematurely).(ex. glass bead)
   Set air pressure to 80 PSI. Most parts for blast cleaning can be blasted at 80 PSI. For light gauge steel, Aluminum, and other more delicate parts, start at lower pressure and gradually increase the pressure until the desired finish is achieved.
   **WARNING:**
   DO NOT CONNECT TO HIGH PRESSURE BOTTLE GAS, RUPTURE AND EXPLOSION CAN OCCUR.

3. **Gun angle and distance**
   Direct gun at parts at 45-60 degree angle with ricochet towards the back of the cabinet. Do not hold gun at 90 degree angle to parts being processed. This will cause the media blast to bounce back into the blast stream and slow blasting action. Also 90 degree angle will cause excessive wear on gun and viewing window. Hold gun approximately 6 inches from parts being blasted.

WARNING:
GUN MUST ALWAYS BE POINTED AWAY FROM THE OPERATOR AND TOWARDS ITEMS BEING PROCESSED. NEVER BLAST WITH ANY OF THE CABINET DOORS OPEN. WHILE LOADING AND UNLOADING, NO ONE SHOULD BE AT THE OPERATOR STATION, AT THE FRONT OF THE BLAST CABINET.

Cabinets are available with safety doors so that the gun cannot be operated unless the doors are closed. Contact your supplier for further information.

Media

Media should be of good quality and dry. Moisture will cause the media not to flow and will clog metering valve and hopper.

NEVER USE SAND

There are many types and sizes of media for different finishes. If you are having a problem selecting a media for a specific job, contact your distributor for recommendations.

Metering Valve

The metering valve adjusts the amount of media being pulled into the venturi gun. This valve, located at the bottom of the hopper, has the media stored on top of it. When air is sent to the gun from the foot pedal a vacuum is created that sucks air and media up into the gun through the clear media hose. A 7/16" bolt on the top of the metering valve can be adjusted to vary the amount of air that is sucked in through the holes. If the holes are too far closed, the mixture will have too much media and the gun will pulsate. If the holes are too far opened, too little media will go to the gun and production will decrease.

Nozzle Size

By changing to the next larger size of nozzle, production can increase significantly. Larger sized nozzles produce a larger cleaning pattern. This, however, requires more air (your compressor must be able to provide this)

## MAINTENANCE INSTRUCTIONS

Blasting Gun

After 10-12 hours of blasting time, the nozzle should be checked. If it shows uneven wear it s hould be turned 1/4 turn every 10 hours of use.

Caking of media

Media caking is caused by moisture in the air supply or from oily and greasy parts. If this is n ot corrected media will not flow evenly and will plug up in the metering valve and the gun. Ch eck air supply; if water is present install a good moisture trap. If oily or greasy parts are being blasted, you should degrease and dry the parts first.

Reverse pressure

If media stops flowing occasionally, place thumb over nozzle (hold tight) and push foot pedal down for a couple of seconds. This will cause the system to back blast through the gun and up the media hose. This will help loosen any clogs.

Gun air pressure drop

Set the air pressure to 80 PSI on the air gauge at regulator. Push the foot pedal while holding gun and see if the gauge pressure drops significantly. If the pressure drops, this indicates that there is a restriction is the supply line. This could be hose that is too small, a reducer or quick coupler, a plugged filter, or other piping that doesn't allow enough air through. Also if the cabinet is too far from the air compressor, a pressure drop will occur. Air supply line should be 1/2" or larger.

5. Poor visibility-Excessive dust:
   Air inlet at front left above regulator, should be free to allow air into cabinet.
   Dust container full and needs to be cleaned and emptied. (latch at bottom of dust collector or remove black cover on vacuum.
   Dust cartridge contaminated. (clean or replace filter in dust collector, part #29)
   Media breakdown; Eventually the media becomes so small that it is essentially dust. Replace media and clean dust collector.

6. Poor visibility-Viewing window
   Windows come with a clear plastic protector on them. As these become pitted they can be easily replaced to extend the life of the window. The window can also be easily replaced.

7. Poor media flow
   Check for moisture as indicated above. Install moisture trap as needed, Replace damp media and clean hoses and sump.
   Holes in media hose will cause poor media delivery. Replace hose.
   Debris in media. Replace or screen media.

## MAINTAIN SUCTION EFFICIENCY WITH SIMPLE STEPS

The most common problem customers have with their suction (venturi) blast cabinets is a decrease in production rates. A properly maintained suction cabinet should provide years of constant service. When production rates fall the operator can usually locate the problem by checking

1. Air supply
   If the pressure gauge on the regulator shows an adequate no-load supply (when the blaster is not running), press the foot pedal. If the pressure drops more than a few PSI your air supply is restricted or inadequate. Clean filters and moisture separators all the way back to the air compressor. Straighten any kinky lines. Use a master gauge to check the air pressure or replace existing gauge if you suspect it is giving you false readings.

2. Blast pun
   The nozzle will wear out eventually. Replace it if it measures 1/16" over its original size or if it shows uneven wear. Adjust as needed for different media and conditions. A properly working gun will pull 15-17 inches of mercury on a manometer.

3. Dust collector
   Inadequate cabinet ventilation results in reduced cleaning power at the nozzle as well as diminished view of the work in progress. Use the dust collectors shaker every 20-30 minutes when the cabinet is turned off, (more often in dusty conditions. Empty dust collector at least once a day. Remove filter and blow out occasionally to keep the dust collector or vacuum working efficiently. Replace as needed.

4. Media
   Use quality blast media sized to the job. Damp or dirty media can bring blasting to an instant halt. Store media in a dry area and load the appropriate quantity. Add enough media through the flooring to have 6" deep of media on top of the metering valve. If you run out of media as you are blasting add enough so it keeps circulating to the gun. The media will eventually break down or get too contaminated to use. The less there is in the system, the less you will have to replace.

5. Media delivery

Replace any media hose that has soft spots or visible wear. Adjust the metering valve to provide adequate flow. A mixture that is too rich will cause pulsating at the gun. An unusually loud noise while blasting means the mixture is too lean. A rich mixture can result in lower impact velocities, while a lean mixture reduces the number of impacts. Both reduce your cleaning rate.

If everything is adjusted right and you are still not getting the production levels needed, contact your distributor. The suction system may be operating properly, it may be time to get a cabinet with a media reclaimed or a pressure system. Many upgrades are available.

## AIR REQUIREMENTS

SUPPLY AIR PIPE SIZE in inches

| Line | Voltume of air through pipe (cfm) | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| Length | 25 | 30 | 35 | 40 | 50 | 60 | 70 | 80 | 100 | 125 |
| 25' | .75 | .75 | .75 | .75 | 1 | 1 | 1 | 1.25 | 1.26 | 1.25 |
| 50' | .75 | .75 | .75 | 1 | 1 | 1 | 1 | 1.25 | 1.25 | 1.25 |
| 75 | .75 | .75 | 1 | 1 | 1 | 1 | 1 | 1.25 | 1.25 | 1.25 |
| 100' | .75 | .75 | 1 | 1 | 1 | 1 | 1.25 | 1.25 | 1.25 | 1.25 |
| 150' | .75 | 1 | 1 | 1 | 1 | 1.25 | 1.25 | 1.5 | 1.5 | 1.5 |
| 200' | 1 | 1 | 1 | 1 | 1 | 1.25 | 1.25 | 1.5 | 1.5 | 1.5 |
| 250' | 1 | 1 | 1 | 1 | 1 | 1.25 | 1.25 | 1.5 | 1.5 | 1.5 |
| 300' | 1 | 1 | 1 | 1 | 1 | 1.25 | 1.25 | 1.5 | 1.5 | 1.5 |

Parts listing for 05.075.16

| itme # | description |
|---|---|
| 1 | windows frame cover |
| 2 | plastic board |
| 3 | glass |
| 4 | protection film ,PE |
| 5 | sealing tape ,view window |
| 6 | mounting ring ,gloves |
| 7 | sealing tape ,gloves |
| 8 | clamp ,gloves |
| 9 | gloves |
| 10 | handle |
| 11 | web |
| 12 | fixing seat |
| 13 | pressure gauge |
| 14 | air regulator |
| 15 | foot pedal complete |
| 16 | cover |
| 17 | leg |
| 18 | brace |
| 19 | latch |
| 20 | air inlet fitting |
| 21 | latch |
| 22 | brace |
| 23 | sealing tape ,door |
| 24 | cabinet |
| 25 | main support poles |
| 26 | dust collector |
| 27 | fixing seat |
| 28 | sealing tape,light |
| 29 | protection film ,PE |
| 30 | glass |
| 31 | light |
| 32 | lamp fixture,2 bulbs |
| 33 | lamp housing |
| 34 | switch |
| 35 | nozzle holding nut ,brass |
| 36 | nozzle |
| 37 | o-ring ,nozzle |
| 38 | gun body |
| 39 | sleeve ,air jet |
| 40 | air jet hex nut,brass |
| 41 | air jet |
| 42 | air inlet fitting |
| 43 | air inlet fitting |
| 44 | air inlet fitting |
| 45 | clamp |
| 46 | hose,media |

# PARTS DIAGRAM