

# Sponge-Jet RASP

## REMOTE AREA SURFACE PREPARATION



An alternative for SSPC SP-11  
Hand Power Tools



## “RASP”

### Remote Area Surface Profiling

- Portable backpack unit
- Blast and vacuum capabilities
- Filter unit for media recycling and reuse
- Operator **dead-man valve**
- Operates on contractor/pier side air
- Provides SSPC-11 Power Tool Clean, SSPC SP-10 Near White Metal or SSPC-5 White Metal Blast

# RASP Features

- Equipment features include the ability to:
  - Remove corrosion and paint products
  - Clean the surface
  - Produce a suitable profile
  - Contain blast media
  - Recycle blast media
  - Provide a smooth paint transition (feathering) without cracking or fracturing surrounding intact paint
  - Provide decreased noise resonance from conventional power tools methods

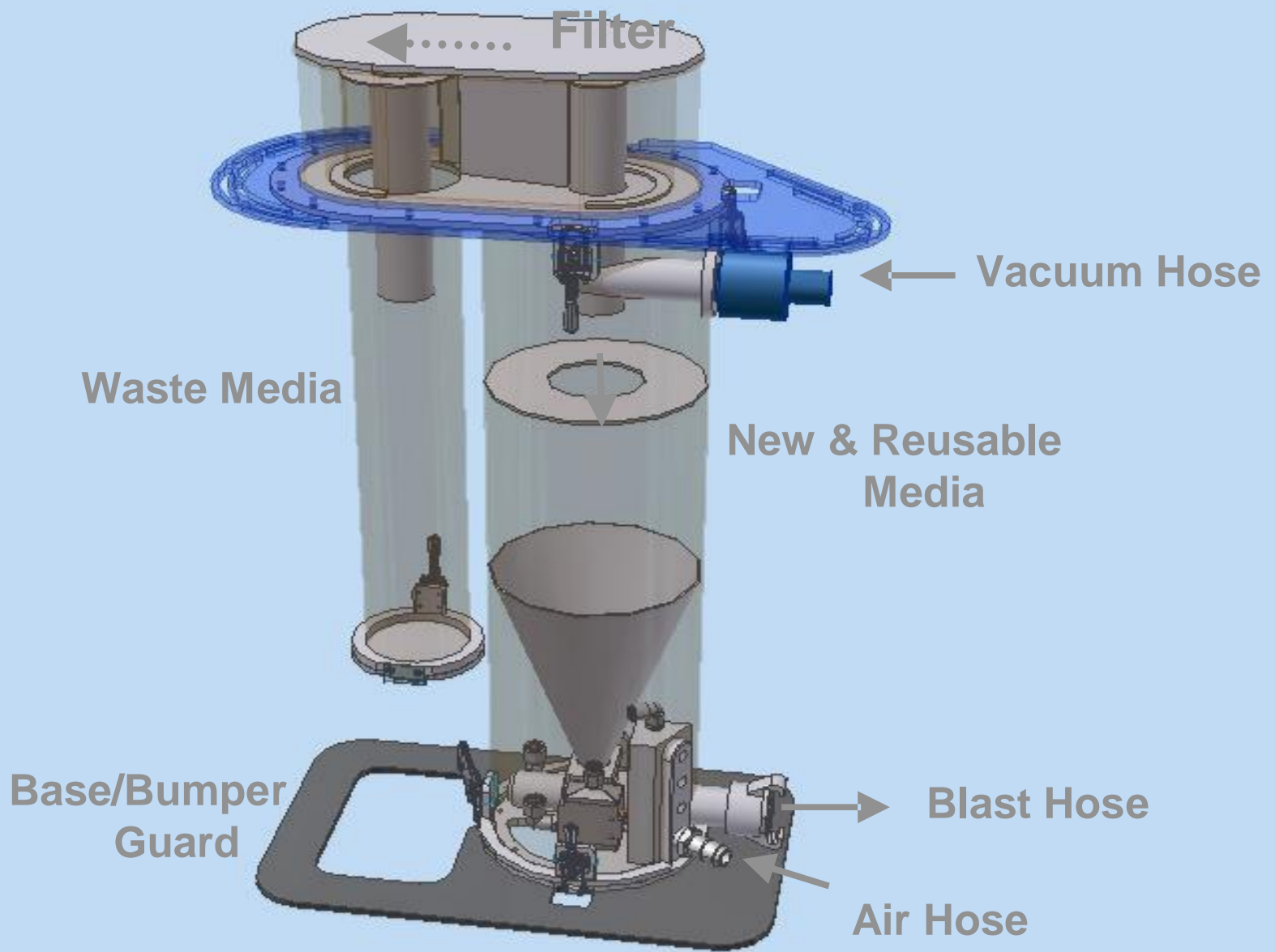
# Summary

- RASP provides portable closed loop sponge blasting for secondary surface preparation on remote areas with improved performance, worker safety, and surface quality
  - Coating breaches where undercutting occurs
  - Rust through
  - Coating wear
- RASP is not intended to compete with large abrasive media blasting
- RASP can provide the Navy and industry with a portable and efficient tool to replace SP-11 hand power tools

# RASP Specifications

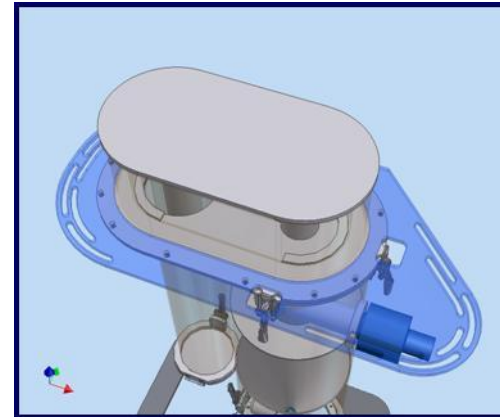
- Height = 37"
- Tank Weight= 38 lbs (empty)
  - Full charge sponge media=25 lbs
- Optimal Air Consumption
  - 95 cfm at 115 psi
    - 65 cfm for blast
    - 30 cfm for vacuum
- Technical Note: If the vacuum and blast nozzle are operating at the same time the air consumption is cumulative (95 cfm at 115 psi) but if using one at a time it is the smaller quantity listed above. **Also note that the unit will operate as low as 40 psi with proportionally less air consumption but with reduced efficiency.**





## RASP Filter

- Unit filters dust by separating smaller waste particles from larger reusable products
- Cyclone effect pulls heavier materials down for reuse
- Waste is separated and emptied after operation



# RASP Sponge Jet Media

- Sponge Jet Blast Media
  - Silver 30 DG (Double Grind) is the only media for which the RASP was designed to operate.
- Sponge media provides lower
  - Airborne dust
  - Rebound
  - Waste



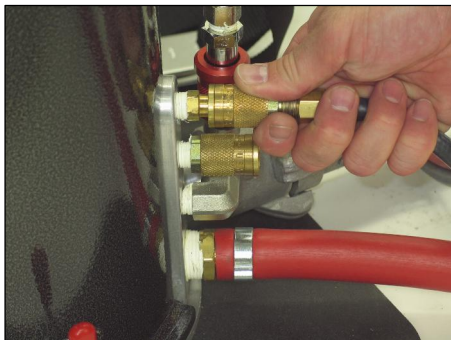
# RASP Operation - 1



- Check that the vacuum hose is secured and inspect for thin or damaged areas. Replace if damage or excessive wear is found.



- Check that filter Unit is securely fastened between the main RASP Body and the top Filter plate. Should the unit be dented or warp, add a small quantity of RTV silicone or other removable gasket material to the top and bottom of the filter and let it harden prior to engaging unit.

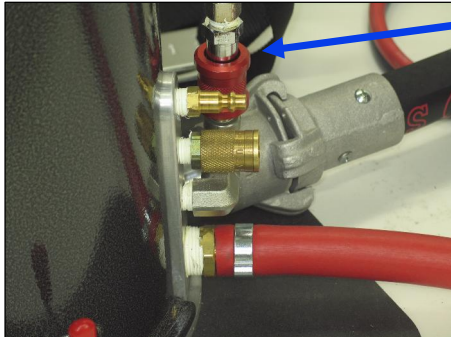


- Attach twin line from the dead man controller to the corresponding connections.

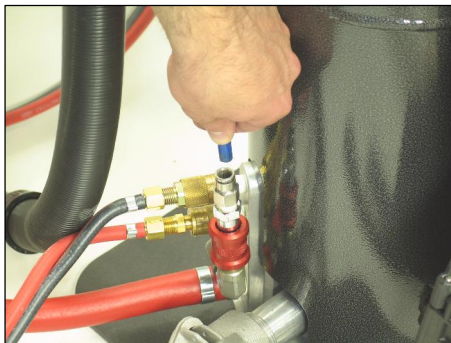
## RASP Operation - 2



- Secure the blast hose fitting to it's connection. Be sure to twist the coupling to it's locking position and insert the restraining clip.

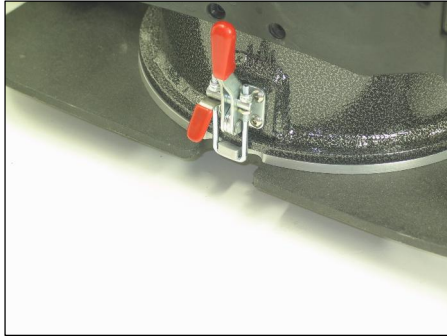


- The slide valve is used to control the vacuum unit. Slide the outer ring up and down to turn the vacuum unit off and on.



- Make sure the hose which connects to the slide valve is connected and secure. NOTE: *The hose connecting the vacuum slide valve to the vacuum educator must be removed when removing the filter assemble. To remove the hose, grasp it at its base and slide the outermost edge of the quick fitting away from the hose, pull on the hose and it should release. When re-installing the filter assemble reconnect the hose by inserting into the quick fitting.*

## RASP Operation - 3



- Check that all three base clamps are secured and that the base fits correctly into the main body.



- Align and secure the top filter assembly by way of the three top clamps.



- Secure the waste cover located on the bottom of the tube section of the filter assembly. Use the single clamp to secure this lid. Opening this clamp will allow collected waste to dump from the unit. This waste is minimal as the majority is recycled into the main hopper for repeated blasting.

# RASP Operation - 4



- Connect the supplied nozzle to the RASP. The nozzle dimensions are matched to the RASP unit; other size nozzles will cause malfunction of the RASP.

**!! AS WITH ALL ABRASIVE BLASTING SYSTEMS. GROUND THE RASP UNIT DIRECTLY TO A SECURE GROUND AND THE WORK PIECE.**

- Prior to connecting the unit to the main air supply:
  - Be sure to be wearing appropriate personal protective clothing including full face protection, gloves and approved breathing apparatus.
  - The RASP may be operated on your back or placed on the ground near by.
  - Check that the dead man controller is not activated.
  - Connect Main Air supply to the quick Connect, activate air supply.
- Prior to loading abrasive into the unit, test operation.
  - Slide vacuum slide valve into the on position and test that the vacuum works correctly
  - Close the handle on the deadman controller to active the blast nozzle (DO NOT POINT IT AT ANY INDIVIDUAL OR SURFACE WHICH YOU DO NOT WANT TO BLAST)

# RASP Operation - 5

- Release Deadman Controller
- No air should be flowing from the unit.
- Be sure that the media you are about to load into the RASP is Silver 30DG and is clean and without clumps. If clumps exist, break them up prior to putting it into the RASP or clogging may occur.
- Add Sponge Media Silver 30 DG to the RASP. This can be done by either pouring into the main body (with filter assembly removed) or by vacuuming the material into the RASP.
- If pouring the material:
  - Remove Filter assembly by opening the three clamps and release the plastic hose which connects the vacuum slide valve to the vacuum eductor. Lift filter assembly off.
  - Pour the sponge media into tank. Do not fill past the height of the internal disrupter ring.
  - Replace filter assembly
  - **BE SURE TO RECONNECT HOSE to the vacuum eductor.**
- If vacuuming the material (Do not exceed full charge approx. 20 lbs):
  - Slide the vacuum slide valve to the on position to activate.
  - Vacuum the Sponge Media. Shut off slide valve when finished.
  - **Heavy, static proof gloves are recommended as the vacuum hose may build it's own static charge. If this poses a significant isse for you application the vacuum hose may be replaced with a static disipating hose. These type of hoses however, do not offer the flexibility and extension / contraction capability of the standard RASP vacuum hose.**

## RASP Operation - 6

- Blasting may begin by depressing the handle on the Deadman controller.
- Blast, vacuum, and recovery can be accomplished simultaneously if the blasting area is contained and the media can be effectively vacuumed from the containment bottom.
- Alternatively, the media can be vacuumed from the area after blasting have been accomplished.
- The filter assembly recycles media by separating waste from reusable media
- Waste tube on the filter assembly collects small debris and waste for disposal.
- Media can be recycled about 7 times depending on the acceptable dust levels. Periodically, every 30 – 60 minutes of blast operation all media in the RASP should be dumped as waste and new media loaded.

## RASP Operation - 7

- If the flow of media seems slow or sporadic it is likely caused by a clog and the bottom of the main body.
- First attempt to clear this clog by holding the nozzle opening (while blasting) against the surface to be blasted. Do this for approximately 1 second. This creates a back pressure which will often clear the blockage.
- If after two to three attempts this does not work – you should clear the blockage by opening the top (removing the filter assembly ) and dumping all the media.
- Either replace the media with new or manually remove any oversized particles (greater than 2 mm in diameter).
- **!! PERIODICLLY INSPECT ALL PARTS FOR WEAR OR MALFUNCTION. DO NOT OPERATE UNTIL UNIT IS REPAIRED !!**

# Typical Operation

- Average Productivity Rates
  - 8 ½ square feet per hour
- Average Vacuum Clean up Rates
  - 3 min 30sec
- Specification Achieved
  - SP-5/SP-6/SP-10
- Profile Achieved
  - 2.5 - 3 mils
- Open loop operations of RASP should be conducted with the use of containment shielding, which can be magnetically attached to any steel surface
- Sponge media will settle below the plastic to be vacuumed after the area has been profiled





## Additional Points

- Maximum production on heavy or thick coatings can be achieved when combined with power tool stripping to remove the bulk of the coating and use the RASP to effect the desired surface profile and cleanliness.

# Key Performance Advantages

- RASP can impart a 50 – 75 micron (2-3-mil) surface profile and a near-white SP-10 finish
  - Facilitates superior adhesion of high performance coatings
- RASP can profile (rough-up) old paint without fracturing the aged coating.
- Compared to Power Tools the RASP:
  - Provides superior inter coat adhesion between the old coating and the new one.
  - Allows a smooth transition from old (aged) coatings to new
  - Prevents under film corrosion