



PRODUCT OPERATING MANUAL

PANBLAST™

CB800 BLAST POT

Manual Number: ZVP-PC-0181-00

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BLAST POT SERIAL NUMBER:

1.0 GENERAL INFORMATION

1.1 Panblast notice to purchasers and users

1.1.1 All products and equipment designed and manufactured by Panblast are intended for use by experienced users of abrasive blasting equipment and its associated operations and abrasive blasting media.

1.1.2 It is the responsibility of the user to:

- Determine if the equipment and abrasive media is suitable for the users' intended use and application.
- Familiarize themselves with any appropriate laws, regulations and safe work practices, which may apply within the users working environment.
- Provide appropriate operator training and a safe working environment including operator protective equipment (PPE) such as, but not limited to, safety footwear, protective eyewear and hearing protection.

1.1.3 Panblast Standard Terms and Conditions of Sale apply. Contact your local Panblast office should you require any further information or assistance.

1.2 **⚠ ! WARNING ! - READ THIS SECTION CAREFULLY BEFORE USING THIS EQUIPMENT/APPARATUS.**

1.2.1 Heavy metal paint, asbestos and other toxic material dusts will cause serious lung disease or death without the use of properly designed and approved air supplied respiratory equipment (SAR) by blast operators and all personnel within the work site area.

1.2.2 The compressor must have adequate output and the plumbing between the compressor and the point of attaching the air supply hose must have sufficient capacity to supply the volume of air at the pressure required.

1.3 Standard safety precautions

1.3.1 Approved safety eyewear, hearing and footwear protection should be worn at all times by the operator and anyone else in the immediate area that may be exposed to any hazards generated by the abrasive blasting process.

1.3.2 Suitably approved respiratory protection should also be worn when handling abrasive media, abrasive refuse dust and when carrying out any service/maintenance work where any dust may be present.

1.3.3 Any work performed on electrical wiring or components must only be carried out by suitably qualified and registered electrical trades personnel.

1.3.4 Under no circumstances should any safety interlocks/lockouts or features be altered or disabled in any way.

1.3.5 All equipment must be isolated from the compressed air supply and electrical power prior to any service or maintenance work being carried out.

1.3.6 All care must be taken by the operator(s) when lifting or moving equipment or components in order to prevent injury. Blast pots must always be emptied of abrasive media before any attempt is made to move them.

1.3.7 Any modification of the equipment and/or components or use of non-genuine PanBlast™ replacement parts will void warranty.

1.3.8 Always check the Material Safety Data Sheet (MSDS) on the abrasive media being used to ensure that it is free of harmful substances, in particular, free silica, cyanide, arsenic or lead.

1.3.9 Test the surface to be blasted for harmful substances, taking the appropriate measures to ensure the safety of the operator and others

1.3.10 The operator should carry out a daily inspection of all related components prior to startup of all wearing and safety items to ensure they are in correct operating order.

In particular check all hose couplings and nozzle holders, ensuring that all hose couplings are fitted correctly and the safety locking pins are engaged and in good order. Always install safety whip check cables at every hose connection. Ensure that the blast nozzle has been securely screwed into the nozzle holder and the nozzle holder has been secured to the blast hose correctly and all screws are engaged.

NOTE: UNDER OSHA 1915:34(c)(1)(iv) DEAD MAN CONTROL. A DEADMAN CONTROL DEVICE SHALL BE PROVIDED AT THE NOZZLE END OF THE BLAST HOSE EITHER TO PROVIDE DIRECT CUTOFF OR TO SIGNAL THE POT TENDER BY MEANS OF A VISUAL AND AUDIBLE SIGNAL TO CUT OFF THE FLOW, IN THE EVENT THE BLASTER LOSES CONTROL OF THE HOSE. THE POT TENDER SHALL BE AVAILABLE AT ALL TIMES TO RESPOND IMMEDIATELY TO THE SIGNAL.

2.0 INITIAL SET UP INSTRUCTIONS

2.1 Double chamber blast pot initial set up

2.1.1 Position the blast pot at the location where it is to be used, preferably on a flat, level surface. Install the blast pot in a position that will allow the operator to access the valves and fittings to perform required service and maintenance.

2.1.2 The blast pot is likely to be located under a large storage hopper. Ensure the abrasives weight in the hopper does not directly load on the upper pop up valve. Such protective shielding can be a cross beam or a raised cover that is large enough to protect and shield the opening.

⚠ ! WARNING ! - AN UN-SHIELDED OPENING MAY CAUSE THE POP VALVE NOT TO FUNCTION PROPERLY, AND THE POP UP VALVE MAY FAIL TO CLOSE AND SEAL THE OPENING AND WILL RESULT IN SEVERE DAMAGE TO THE BLAST POT.

2.1.3 The double chamber blast pot is provided with mounting holes at the bottom of the legs. These holes can be used for securing the blast pot to the floor or mounting structure.

2.1.4 Connect all the air hoses and safety whip check cables as per Figure 1.

2.1.5 Connect the ends of the twinline hose quick connect couplings to the control panel as per Figure 1.

2.1.6 Fit the blast hose coupling and nozzle holder to the blast hose, ensuring that the ends of the blast hose are cut square and flat. The blast hose coupling and nozzle holder must be pushed/twisted up onto the blast hose until the end of the blast hose is firmly up against the inside step located inside the blast hose coupling and nozzle holder. Then install the screws supplied with the blast hose coupling and nozzle holder to ensure that they are securely fitted to the blast hose.

⚠ ! WARNING ! - NEVER OPERATE/USE A BLAST HOSE WITHOUT THE BLAST HOSE COUPLING AND NOZZLE HOLDER FITTED IN THE CORRECT MANNER.

2.1.7 Once fitment of the blast hose fittings is completed, connect the blast hose coupling to the Corsa II valve coupling located on the bottom of the blast pot, making sure that the coupling safety locking pins are correctly fitted and form an airtight seal between the two couplings. Then lay the blast hose out flat for its full length.

2.1.8 Securely attach a suitably sized compressed air line to the blast pot main supply ball valve, ensuring that the main supply ball valve is in the closed position. It is preferable for the compressed air line to be at least one size larger than the piping size on the blast pot. Ensure that all coupling safety locking pins and/or locks are correctly fitted to the compressed air connection. Panblast recommends the use of a correctly sized safety whip check cables at all compressed air line connections.

2.1.9 Check that the nozzle holder rubber washer is correctly installed then screw the blast nozzle fully into the nozzle holder, ensuring that it forms a seal against the nozzle holder rubber washer.

2.1.10 The blast pot is now ready for operation.

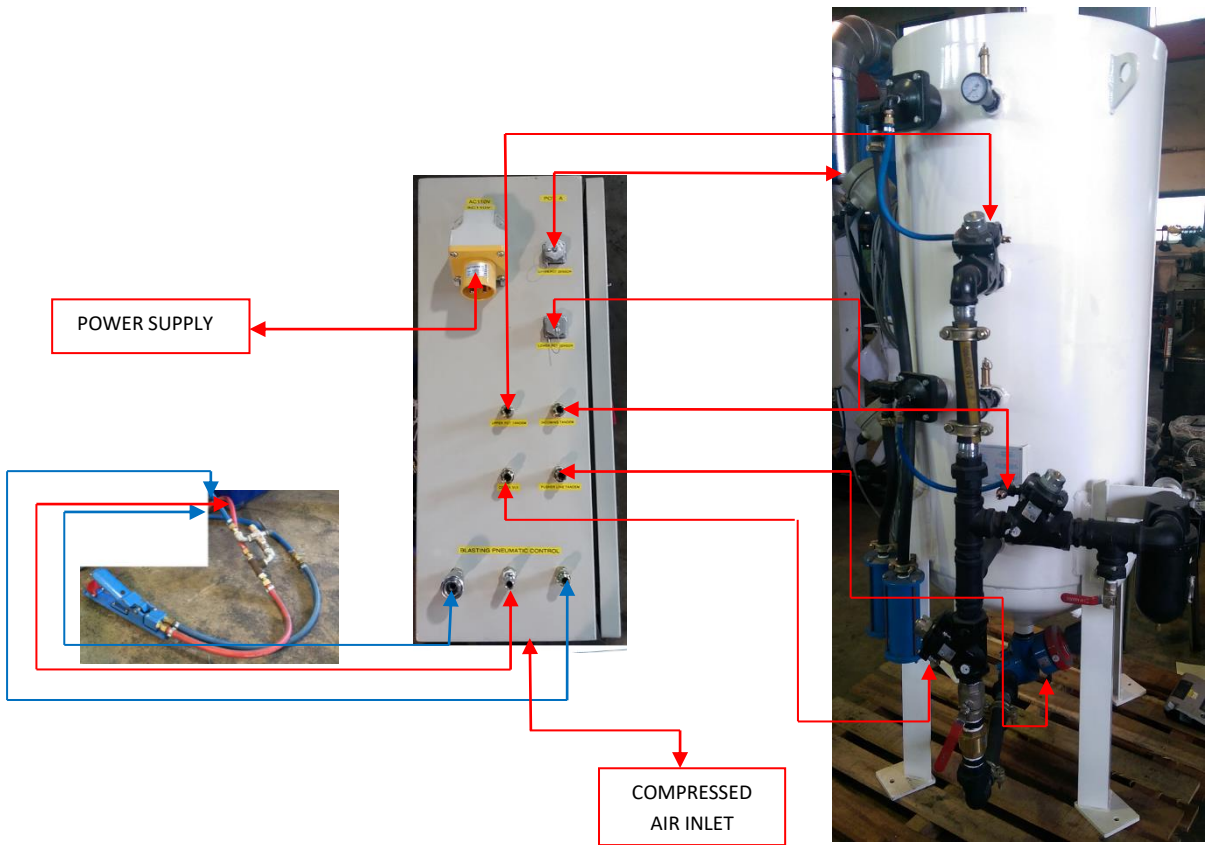


Figure 1

3.0 OPERATING INSTRUCTIONS

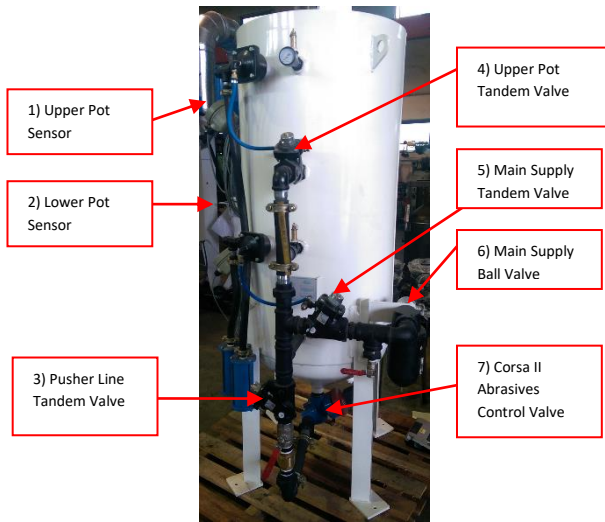


Figure 2



Figure 3

3.1 Blasting operating instructions

Blast pot operations

- 3.1.1 Ensure that the blast pot & air assembly has been set up as detailed in section 2.0 of this manual.
- 3.1.2 A double chamber blast pot will allow the operator to blast continuously without having to stop for blast abrasives refilling.
- 3.1.3 For initial abrasives setting of the Corsa II (Figure 2. no.7) located at the pot shell bottom, turn the control knob clockwise to the end, then turn knob four to five turns in anticlockwise direction. This will create a feed opening suitable for most applicable abrasives.
- 3.1.4 Check that all hose connections, fittings, safety locking pins etc. are all secure and in the proper location.
- 3.1.5 Start the air compressor, and allow the compressor to reach the desired operating pressure. Do not set the blast pressure below 621Kpa (90psi) as the blast system may not operate correctly (this is to ensure that the pop up valve will fully close).

⚠ ! WARNING ! - DO NOT EXCEED THE MAXIMUM OPERATING PRESSURE OF THE BLAST POT AT ANY TIME AS THIS COULD RESULT IN SERIOUS INJURY OR DEATH..

NOTE: THE SYSTEM IS NOW READY TO OPERATE AND THE BLAST POT WILL PRESSURIZE IF THE MAIN SUPPLY BALL VALVE IS TURNED ON.

THE OPERATOR SHOULD WEAR APPROVED SUPPLIED AIR RESPIRATORY EQUIPMENT (SAR) BEFORE ACTIVATING THE BLASTING MACHINE.

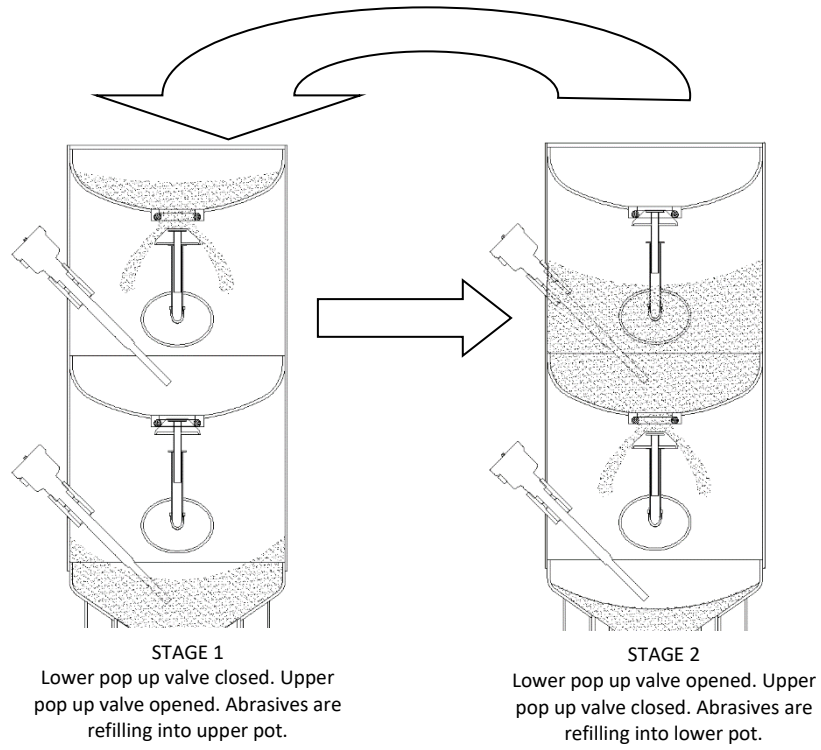
- 3.1.6 Toggle the required Power Switch to ON to power up the control. The abrasives level sensors on the pots are in turn energized and level indicator light are functioning. When the level indicator light is lit, it means no abrasives sensed.

NOTE: ENSURE THE EMERGENCY SWITCH IS NOT ACTIVATED. TURN KNOB TO RESET TO ALLOW POWER IN IF ACTIVATED.

Push the START button to activate the solenoid valves to open the incoming air Tandem valves and close the lower chamber exhaust diagram valve. The lower chamber will be pressurized immediately. If upper chamber is full, upper pop up valve will pop up. If it is empty, it will remain open and allow abrasives from hopper to flow into, and fill up the pot. The whole system is now ready for blasting and blow down operation.

NOTE: ENSURE THE INDICATING LIGHT “NO ABRASIVES” IS NOT LIT.

- 3.1.7 Pick up the blast hose at the nozzle end, and direct the nozzle at the surface/part to be blasted.
 - 3.1.8 The optimum abrasive flow rate will vary depending on actual operating conditions and the desired end result, but as a general rule, the abrasive should appear in the air stream as a fine mist. Once the desired abrasive flow rate has been achieved, the system is now set for ongoing blasting operations.
- NOTE: FOR FINE ABRASIVES, IT IS NECESSARY TO SLIGHTLY CLOSE THE PUSHER LINE CHOKE BALL VALVE TO INCREASE DIFFERENTIAL PRESSURE TO ASSIST ABRASIVES FLOW THROUGH THE ABRASIVES VALVE.**
- ⚠ ! WARNING ! - EXCESSIVE THROTTLING OF THE CHOKE VALVE WILL CAUSE HIGH WEAR ON THE ABRASIVES VALVE.**
- 3.1.9 The upper chamber pop up valve will stay open when the upper abrasives level sensor does not detect the presence of abrasives. It will remain open to allow abrasives to load in.



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Figure 4

3.1.10 When the upper level sensor detects the first signal of abrasives, it will trigger a delay timer (filling timer) allowing abrasives to continue loading into the pot while the bottom pop up valve is sealing. When the set delay time is reached, it will trigger the solenoid valve to close the upper exhaust diaphragm valve and open the upper Tandem valve. The pop up valve will activate and pressurize the upper pot. (Figure 4 Stage 2). The delay time can be adjusted to suit different abrasives used. The default delay time setting is 35 seconds.

3.1.11 Once the upper chamber pressure equals to the lower chamber, the lower pop up valve will fall allowing abrasive to transfer into the lower chamber.

3.1.12 When the abrasives in the upper chamber have drained out, the upper level sensor will detect no abrasive. It will send a signal to deactivate the relevant solenoid valves to open the exhaust diagram valve and close the upper Tandem valve. The pot is thus depressurized and the pop up valve will drop and open allowing abrasive to fill in again from the top (Figure 4. Stage 1). During this stage, lower chamber pop up valve is still closed and the pot is still under pressure. The blasting process is therefore not interrupted.

NOTE: THE LOWER CHAMBER IS CONSTANTLY PRESSURIZED DURING NORMAL OPERATION

3.2 Shutdown procedure

3.2.1 Close the main supply ball valve located on the blast pot.

3.2.2 Push the OFF button on the control panel and both the upper and lower blast chamber will depressurize.

Toggle the Power to Off.

3.2.3 Shut down the air compressor.

4.0 MAINTENANCE

⚠ ! WARNING ! - THE COMPRESSED AIR SOURCE MUST BE ISOLATED BEFORE PERFORMING ANY MAINTENANCE WORK. FAILURE TO DO SO MAY CAUSE SERIOUS INJURY OR DEATH.

4.1 On a daily basis

4.1.1 If fitted, drain any water/moisture from the moisture separator by opening the drain valve located on the bottom of the water trap bowl. Unscrew the retaining ring and remove the water trap bowl. Check the filter element for blockages and replace as required. Re-fit the bowl and locking ring, and close the bowl drain valve.

NOTE: IT IS RECOMMENDED THAT THE INCOMING PRESSURIZED AIR BE EQUIPPED WITH A DRYER SYSTEM TO ENSURE THE INLET AIR IS DRY.

4.1.2 Inspect the blast hose for wear by feeling along its full length for soft spots that indicate, wear, and replace the blast hose as necessary.

4.1.3 Check all blast hose couplings are secure and that all safety locking pins are correctly in place.

4.1.4 Remove the safety locking pins and disconnect the couplings by twisting the coupling counter

clockwise. Inspect the coupling gaskets for wear and correct seating. Replace the gaskets as required. Reconnect the coupling by engaging the lugs with the blast pot coupling and twisting the hose coupling until fully engaged, and then re-fit the safety locking pins.

4.2 On a weekly basis

4.2.1 Remove the blast nozzle from the nozzle holder by unscrewing the nozzle in a counter-clockwise direction, and inspect it for wear. Replace the nozzle if the internal diameter is worn by 1.5mm (1/16") from its original size, or if the liner is chipped or cracked.

4.2.2 Check the condition of the nozzle washer and replace as required, then re-fit/replace the blast nozzle by screwing it clockwise into the nozzle holder until it is fully sealed against the nozzle washer.

4.2.3 Check the condition of the nozzle holder, and inspect for any cracks or signs of damage. Replace if required as detailed in section 2.1.2.

4.3 On a monthly basis

4.3.1 Inspect the pop up valves located in the top of both upper and lower blast pot for wear in the form of cracks or grooves (section 6.1.1 item 5). If replacement is required, remove the blast pot shell inspection covers located on the front of the blast pot. Using a suitable pipe wrench, unscrew the vertical pipe section which houses the pop up valve, and remove both the pipe section and pop up valve through the inspection opening. Installation of the new pop up valve is a reversal of the removal procedure and ensures that the pop up valve is positioned directly below the top opening of the blast pot for correct sealing.



Figure 5

4.3.2 Check and inspect the pop up valve seating rings for wear (section 6.1.1 item 4). If replacement is necessary, use a large screw driver or similar tool to pry the seating rings out of the seat. When re-fitting the seating ring, ensure that it is correctly seated within the seating ring housing.

NOTE: INSPECTION COVER FROM UPPER CHAMBER NEEDS TO BE OPEN TO PERFORM INSPECTION AND REPLACING THE SEATING RING OF THE LOWER CHAMBER.



Figure 6

4.3.3 If fitted, inspect the blast pot exhaust mufflers and exhaust line for wear or blockages, replace the worn or blocked muffler and exhaust line as necessary.

5.0 TROUBLE SHOOTING GUIDE

Item	Problem	Possible Cause	Corrective Action
1	Upper/Lower blast pot will not pressurize	No / inadequate compressed air supply	Check that air compressor is operational. Ensure air output and supply hose size is correct.
		Main supply ball valve (Figure 2. no.5) is closed	Open ball valve
		Pop up valves /seating rings worn or damaged	Inspect & replace as required
		Sensor detect no signal of abrasive inside chamber	Fill in abrasive
		Sensor faulty	Inspect & replace as required
		Solenoid valves faulty	Inspect & replace as required
		No compressed air to control panel to activate the solenoid valves	Ensure air supply is connect to the control panel
		Diagram valve fail	Check and repair
		Tandem Valve fail	Check and repair or replace.
2	No air and/or abrasive flow from blast nozzle	Blast nozzle blocked	Depressurize system & remove nozzle from its holder
			Check & clear any possible blockage.
			Re-fit nozzle
		Pusher line choke valve fully closed	Open and adjust the choke valve as necessary.
		Corsa II valve (Figure 2. no. 7) fully closed	Open and adjust Corsa II valve as required
		Pop up valve or seating ring worn or damaged	Inspect and replace as required
		Insufficient abrasive in blast pot	Refill with abrasive as required
		Excessive dust and fines in abrasive	Drain abrasive from blast pot and refill with clean abrasive
		Damp or wet abrasive in blast pot	Drain abrasive from blast pot and refill with clean abrasive
Pusher line Tandem valve not working	Check and repair or replace. Check relevant Solenoid valve and pilot control valves		
3	Intermittent abrasive flow	Excessive dust and fines in abrasive	Drain abrasive from blast pot and refill with clean abrasive
		Insufficient abrasive in blast pot	Refill with abrasive as required
		Damp or wet abrasive in blast pot	Drain abrasive from blast pot and refill with clean abrasive
		Excessive abrasive	Check and adjust air pressure as required.
		Compressed air supply pressure too low	
4	Excessive abrasive flow	Corsa II valve (Figure 2. no.7) fully opened	Adjust Corsa II valve (Figure 2. no. 7) as required
		Pusher line choke valve fully closed	Open & adjust choke valve as required
5	Excessive wear on blast hose	Blast hose kinked or coiled	Keep blast hose as straight as possible without being coiled.
		Blast nozzle excessively worn	Check the internal diameter of blast nozzle and replace if necessary.

6.0 ASSEMBLIES, PARTS LISTING & EXPLODED VIEW

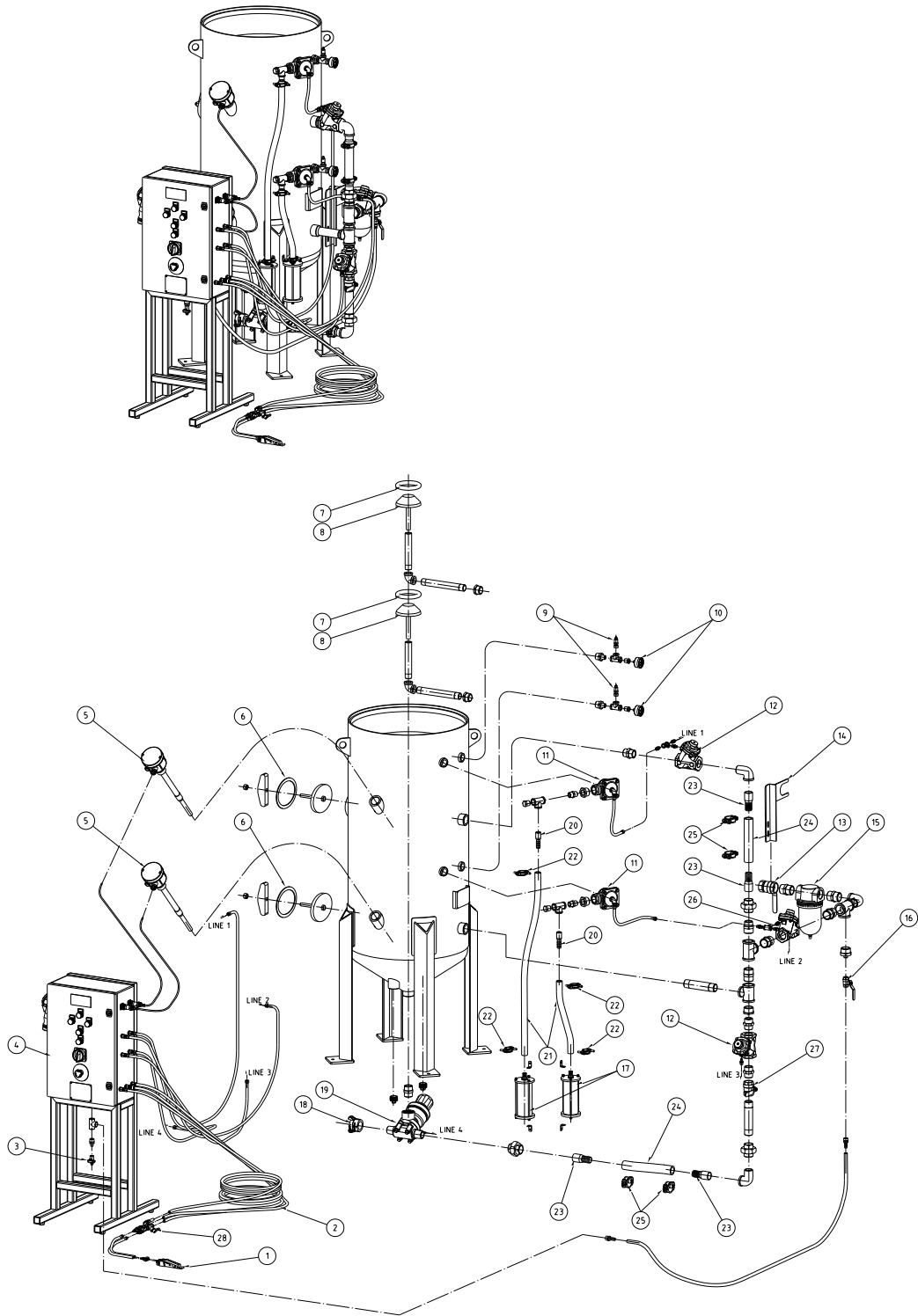
6.1 PanBlast™ CB800-S Blast Pot Assembly

Stock Code	Description	Dry Weight	Abrasive Capacity	Piping Size
BEP-PS-0017-00	CB800-S/BS Tandem Corsa II-TS DV	400 kg (881 lbs)	300 litres (10.6 ft³)	38 mm (1-1/2")

6.1.1 PanBlast™ CB800-S Blast Pot Parts Listing

Item	Stock Code	Description	Qty
1	BAC-RC-PB-0084	AirStop Pneumatic Control Handle	1
2	BAC-RC-PB-0012	20m (66') Twinline Hose Assembly	1
3	YAC-PF-PB-0167	Mini Ball Valve	1
4	BAC-RC-0626-00	CB800 Cycle Controller Pneu1	1
5	BAC-BF-0381-00	Level Sensor	2
6	YAC-BF-0231-00	Blast Pot-H/Hole 192x144-Sealing Gasket	2
7	BAC-BF-PB-0013	Pop Up Valve Seating Ring	2
8	BAC-BF-PB-0012	Pop Up Valve - Stem Type	2
9	BAC-PF-0274-00	1/2" BSP - 125 PSI Pressure Relief Valve	2
10	BAC-PF-PB-0031	6mm (1/4") Pressure Gauge - Rear Entry	2
11	BAC-RC-PB-0361	1" NPT Diaphragm Dump Valve	2
12	BAC-RC-PB-0276	1 1/4" Tandem NPT Valve Assembly	2
13	BAC-PF-PB-0008	38mm (1-1/2") Ball Valve	1
14	YAC-BF-0382-00	Support Bracket	1
15	BAC-AF-PB-0058	38mm (1-1/2") Port Moisture Separator	1
16	BAC-PF-PB-0001	13mm (1/2") Ball Valve	1
17	BAC-RC-PB-0022	Exhaust Muffler	2
18	BAC-HC-PB-0009	NTC-1 Nylon Threaded Pot Coupling	1
19	BAC-VA-PB-0089	Corsa II 1-1/4" With Tungsten Sleeve	1
20	YAC-PF-PB-0186	KC Nipple	2
21	BAC-HB-PB-0002	Blast Hose 19mm x 34mm x 20m L2	1.4 m
22	YAC-FN-PB-0242	Hose Clamp	4
23	YAC-PF-PB-0184	KC Nipple	4
24	BAC-AF-0413-00	32mm (1-1/4") Air Supply Hose	0.5 m
25	YAC-FN-PB-0244	Hose Clamp	4
26	BAC-RC-PB-0277	1 1/2" Tandem NPT Valve Assembly	1
27	BAC-PF-PB-0006	32mm (1-1/4") Ball Valve	1
28	YAC-PF-0412-00	3 Way Ball Valve	1

6.1.2 PanBlast™ CB800-S Blast Pot Exploded View



6.2 PanBlast™ CB800-D Blast Pot Assembly

Stock Code	Description	Dry Weight	Abrasive Capacity	Piping Size
BEP-PS-0082-00	CB800-D/BS Tandem Corsa-II-TS DV	415 kg (915 lbs)	300 litres (10.6 ft ³)	38 mm (1-1/2")

6.2.1 PanBlast™ CB800-D Blast Pot Parts Listing

Item	Stock Code	Description	Qty
1	BAC-RC-PB-0084	AirStop Pneumatic Control Handle	2
2	BAC-RC-PB-0012	20m (66') Twinline Hose Assembly	2
3	YAC-PF-PB-0167	Mini Ball Valve	1
4	BAC-RC-0659-00	CB800 Cycle Controller Pneu2	1
5	BAC-BF-0381-00	Level Sensor	2
6	YAC-BF-0231-00	Blast Pot-H/Hole 192x144-Sealing Gasket	2
7	BAC-BF-PB-0013	Pop Up Valve Seating Ring	2
8	BAC-BF-PB-0012	Pop Up Valve - Stem Type	2
9	BAC-PF-0274-00	1/2" BSP - 125 PSI Pressure Relief Valve	2
10	BAC-PF-PB-0031	6mm (1/4") Pressure Gauge - Rear Entry	2
11	BAC-RC-PB-0361	1" NPT Diaphragm Dump Valve	2
12	BAC-RC-PB-0276	1 1/4" Tandem NPT Valve Assembly	3
13	BAC-PF-PB-0008	38mm (1-1/2") Ball Valve	1
14	YAC-BF-0382-00	Support Bracket	1
15	BAC-AF-PB-0058	38mm (1-1/2") Port Moisture Separator	1
16	BAC-PF-PB-0001	13mm (1/2") Ball Valve	1
17	BAC-RC-PB-0022	Exhaust Muffler	2
18	BAC-HC-PB-0009	NTC-1 Nylon Threaded Pot Coupling	2
19	BAC-VA-PB-0089	Corsa II 1-1/4" With Tungsten Sleeve	2
20	YAC-PF-PB-0186	KC Nipple	2
21	BAC-HB-PB-0002	Blast Hose 19mm x 34mm x 20m L2	1.5 m
22	YAC-FN-PB-0242	Hose Clamp	4
23	YAC-PF-PB-0184	KC Nipple	6
24	BAC-AF-0413-00	32mm (1-1/4") Air Supply Hose	1 m
25	YAC-FN-PB-0244	Hose Clamp	6
26	BAC-RC-PB-0277	1 1/2" Tandem NPT Valve Assembly	1
27	BAC-PF-PB-0006	32mm (1-1/4") Ball Valve	2
28	YAC-PF-0412-00	3 Way Ball Valve	2

6.2.2 PanBlast™ CB800-D Blast Pot Exploded View

