

OWNER'S MANUAL

DOUBLE CHAMBER BLAST MACHINE ABDC-2460 (300 LITRE) TWO OUTLETS

IMPORTANT WARNING FOR SAFER BLAST CLEANING

1. Use protective equipment: Abrasive-resistant clothing, safety shoes, leather gloves, ear protection, CE-approved air-fed helmet. Air for helmet must be supplied by a breathing air compressor or through a helmet air filter.
2. Check for possible silicosis hazards. Avoid dust.
3. Do not blast with damaged or worn equipment.
4. Point nozzle only at area being cleaned.
5. Use only proper dry and well-screened abrasives specifically intended for blasting.
6. Keep unprotected workers out of the blast area.
7. Before blasting:
 - Check fittings and hose for wear.
 - Safety-wire couplings together.
 - Check helmet filters and air supply.
 - Check pop-up valve for alignment.
 - Test remote controls.
 - Make sure blast machine is adequately grounded.
8. Do not weld on blast machine, this voids approval.
9. Do not substitute Airblast parts or modified equipment in any way.



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DOUBLE CHAMBER BLAST MACHINE ABDC-2460 (300 LITRE) TWO OUTLETS

1.0 INTRODUCTION: This manual covers the set-up, maintenance of the following pressure type of blast machine.

AIRBLAST model	CAPACITY	
	ltr.	lbs.
ABDC-2460	300	900

See page 3 and 4 for all basic components of the ABDC-Model double chamber blast machines.

2.0 OPERATION

2.1 To fill

In instances where the operator is not readily visible, or as an added safety precaution it is recommended that the inlet ball valve be closed prior to filling. This will prevent the operator from turning the unit on while it is being filled.

On units that have manual blowdown valves the inlet ball valve must be closed before filling the unit. Then open the blowdown ball valve, allowing the pot to depressurize.

Dump abrasive into the top head dish, being careful not to get pieces of the bag, etc. into the pot. An excessive amount of material piled on top of the pop-up valve from closing properly. Keep fingers clear of the pop-up valve.

2.2 To blast

Connect the twinline control hoses to the blast unit. Be sure the lever on the deadman is not depressed.

Close the blowdown ball valve.

Open the inlet ball valve.

Open the choke ball valve.

Push in the safety button and depress the lever on the deadman. Air and abrasive will flow into the blast hose.

The abrasive flow can be adjusted with the control knob on the abrasive metering valve. Turn clockwise for less abrasive and counter clockwise for more abrasive. Due to the length of the blast hose there will be a slight delay in

control of the abrasive at the nozzle so allow a few seconds before adjusting further.

2.3 How the system works

When the deadman is depressed air pressure passes from the red hose to the blue hose. The blue hose is connected to the control valve. When the control valve is activated it sends a signal that activates the automatic air valve and the Thompson valve at the same time. When pressurized the air valve will allow compressed air to pressurize the blast hose and the Thompson valve will provide an opening for the abrasive to fall into the air stream. The size of the abrasive opening is controlled by the knob on top of the Thompson valve.

When the deadman is released the air pressure in the red hose is blocked and the air pressure in the blue hose is vented. This vents the control valve, the air valve and the piston in the Thompson valve allowing them to spring return to their "normally closed" position. The blastpot remains under pressure when the air and abrasive valves are turned off.

**USE ONLY ABRASIVE SPECIFICALLY
MEANT FOR BLASTING, NEVER USE UN-
SCREENED OR MOIST ABRASIVES.**

3.0 MAINTENANCE

3.1 Replacement of the Pop-up valve

Remove the inspection door assembly in order to get access to the Pop-up valve. Unscrew the Pop-up guide (page 3, item 20) by counter-clockwise turning. Remove both Pop-up valve and guide from the blast machine. Put the new Pop-up valve in the valve guide and then install them inside of the machine.

It is recommended to replace the inspection door gasket at the same time.

Do not forget to tighten the inspection door assembly back onto the machine.

3.2 Replacement of the Pop-up O-ring

Put your fingers between the Pop-up O-ring and the retainer and slowly remove the old O-ring. If necessary, use a screwdriver.

Push the new Pop-up O-ring through the filling port and fit it into the retainer.

Pull up on the O-ring in order to get it into position.

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4.0 TROUBLESHOOTING

Blockages

If neither abrasives nor air comes out of the blast nozzle, first depressurize the machine and then check if the nozzle is clogged. If only air comes out and no abrasive, fully open the abrasive valve and then quickly open and close the choke valve. If this fails, depressurize the machine, remove the inspection door assembly and check the inside of the machine for foreign objects (paper, etc.).

Abrasive surge

When starting up, surge of abrasive is normal to some extent. However, if the abrasive surge should continue, the flow of abrasive can usually be stabilized by the quick opening and closing of the choke valve.

an intermittent abrasive flow is sometimes caused by an excess of moisture in the blasting system. This problem in practice can be solved by installing a moisture/water separator in the air line, closest to the machine as possible.

Removal of moist abrasive

In order to remove moist abrasive from the system, the blast hose has to be disconnected and the rubber gasket in the quick coupling on the machine has to be removed. The next step is to close the choke valve and open the abrasive valve. Force out any moist abrasive by pressurizing the machine.

Air blast but no abrasive

The pot is empty.

The abrasive in the pot is wet. Try closing the choke valve until some abrasive is pumped out. Operating the unit in the "choked" condition will allow the media that is too damp to flow properly, but it greatly accelerate wear in the metering valve. Continuous running in the "choked" position also reduces productivity and therefore should be avoided if possible.

Foreign matter is plugging the abrasive metering valve. Try closing the choke valve

and opening the abrasive metering valve momentarily to see if that will blow the obstruction out. If that does not work then it will be necessary to de-pressure the pot and remove the obstruction by hand.

Reduced pressure at the nozzle (with or without abrasive flow).

Insufficient air compressor.

Air hose is too small.

Abrasive adjustment open too far.

Pop-up not seating properly.

Choke valve partially closed.

Unit is slow to turn on or will not turn on.

Air hose is too small. The air hose diameter should be at least three times the nozzle diameter (air blows out the blowdown but the pot does not pressurize).

Insufficient air compressor.

Check quick disconnect coupling on control hoses to be sure they are engaged properly.

Control hoses are leaking (the pot turns on slowly or does not turn on at all).

Control hoses are plugged.

Defective diaphragm in automatic air valve.

Defective diaphragm in blowdown valve.

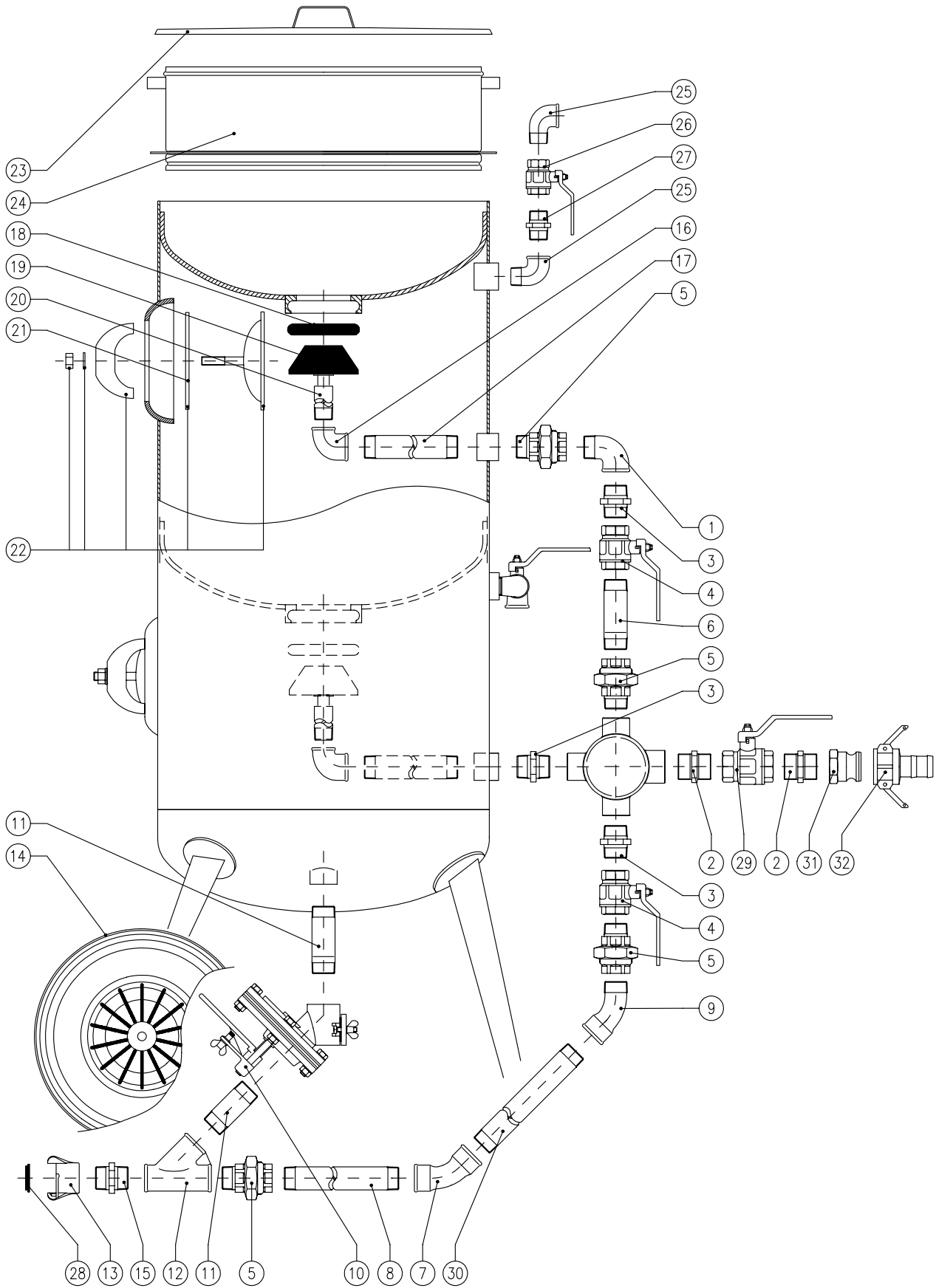
Unit turns on accidentally.

The lever on the deadman is worn out, replace the lever.

The safety button on the deadman is missing.

Bleeder type deadman has been installed. A bleeder type deadman is unsafe because a piece of dirt from the air hose can plug the hole in the deadman and cause the blast unit to turn on.

DOUBLE CHAMBER BLAST MACHINE
ABDC-2460 (300 LITRE) TWO OUTLETS



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5.0 SPARE PARTS

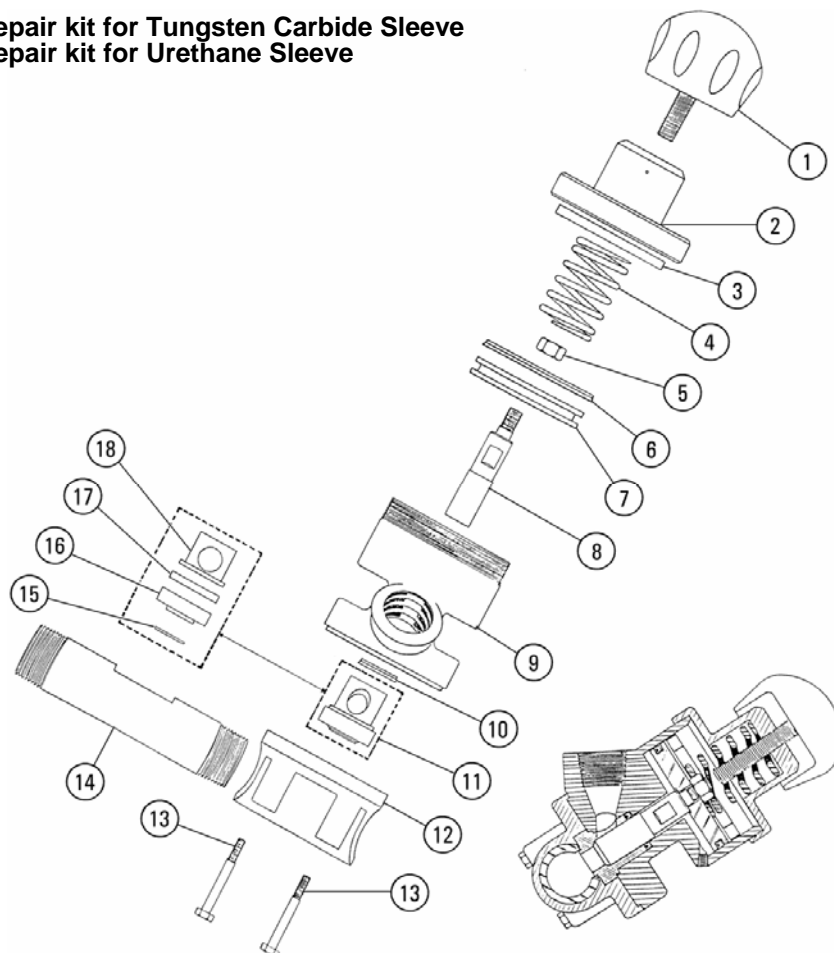
ART.NR.	MODEL	DESCRIPTION
Specification of parts for double chamber blast machine with 1¼" machine piping:		
1)	21996	Elbow 1¼" FM no. 92 (1)
2)	22257	Hex nipple 1½" (1)
3)	22256	Hex nipple 1¼" (5)
4)	11930	Air valve 1¼" (3)
5)	22496	Union 1¼" FM no. 341 (6)
6)	10351	Pipe 1¼" x 170 mm (2)
7)	21936	Elbow 1¼" FF no. 41 (2)
8)	13415	Pipe 1¼" (2)
9)	21916	Elbow 1¼" FM no. 40 (2)
10)	60010	Abrasive valve 1¼" (2)
11)	10460	Pipe 1¼" x 100 mm, rubber lined (4)
12)	10440	Y-piece 1¼", rubber lined (2)
13)	21630	CFT Quick coupling 1¼" thread, cast iron (2)
14)	10680	Wheel (2)
15)	10450	P-32 Hex nipple 1¼", rubber lined (2)
16)	22596	Elbow 1¼" x 1" FF no. 90 (2)
17)	10270	Inner pipe 1¼" (2)
18)	11920	P-5 Pop-up O-ring (2)
19)	11880	P-2F Pop-up valve with shaft, flat (2)
	11881	P-2R Pop-up valve with shaft, round (2)
	11890	pop-up valve only, flat (2)
	11891	pop-up valve only, round (2)
	11900	washer 21 mm (2)
	11910	pipe ½" x 165 mm (2)
20)	10520	Pipe 1" x 160 mm (2)
21)	10470	Inspection door gasket (2)
22)	10480	Inspection door assy (2)
23)	10590	Cover (1)
24)	10550	Screen (1)
25)	21995	Elbow 1" FM no. 92 (4)
26)	11130	Air valve 1" (2)
27)	22255	Hex nipple 1" (2)
28)	21650	CQG Rubber coupling gasket (2)
29)	11131	Air valve 1½" (1)
30)	13395	Pipe 1¼" (2)

All parts required in quantities shown ()

**THOMPSON VALVE
 ABRASIVE METERING VALVE – PNEUMATIC CONTROL
 NORMALLY CLOSED**

ART.NR.	MODEL	DESCRIPTION
60880	PGV - 25 /TC	1" Valve with Tungsten Carbide Sleeve, complete
60885	PGV - 25 /U	1" Valve with Urethane Sleeve, Complete
60890	PGV - 32 /TC	1¼" Valve with Tungsten Carbide Sleeve, Complete
60895	PGV - 32 /U	1¼" Valve with Urethane Sleeve, Complete
60900	PGV - 38 /TC	1½" Valve with Tungsten Carbide Sleeve, Complete
60905	PGV - 38 /U	1½" Valve with Urethane Sleeve, Complete
1) 60910		Knob
2) 60911		Cap
3) 60912		Bump Ring
4) 60913		Spring
5) 60914		Nut
6) 60915	* **	Piston Seal
7) 60916		Piston
8) 60917	* **	Tungsten Carbide Plunger
9) 60918		Cylinder
10) 60919	* **	Plunger Seal
11) 60920	**	Urethane Sleeve
12) 60921		Base
13) 60922		Bolt
14) 60923		Pipe Nipple, 1" x 8"
60924		Pipe Nipple, 1¼" x 8"
60925		Pipe Nipple, 1½" x 8"
15) 60926	*	O-Ring
16) 60927	*	Insert
17) 60928	*	Seat
18) 60929	*	Tungsten carbide Sleeve
60930		Repair kit with Tungsten Carbide Sleeve
60931		Repair kit with Urethane Sleeve

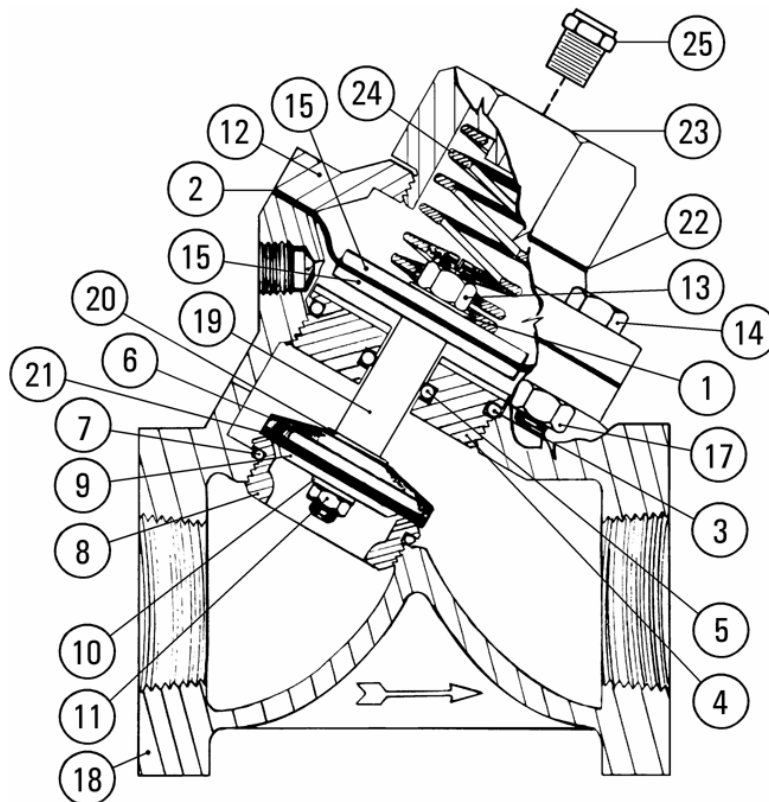
* Included in repair kit for Tungsten Carbide Sleeve
 ** Included in repair kit for Urethane Sleeve



AIR VALVE – NORMALLY CLOSED PNEUMATIC CONTROL

ART.NR.	MODEL	DESCRIPTION
61000	AAV - 32	1¼" Air valve, normally closed, pneumatic control
61010	AAV - 38	1½" Air valve, normally closed, pneumatic control
1) 61020	*	Gasket
2) 61021	*	Diaphragm
3) 61022	*	O-Ring
4) 61023		Retainer Bushing
5) 61024	*	O-Ring
6) 61025		Disc Retainer
7) 61026	*	O-Ring
8) 61027		Seat
9) 61028		Disc Plate
10) "Deleted"		Lock Washer, Internal
11) 61030	*	Lock Nut
12) 61031		Cap
13) 61032	*	Lock Nut
14) 61033		Cap Screw
15) 61034		Diaphragm Plate
17) 61035		Lock Nut
18) 61036		Body, 1¼"
61037		Body, 1½"
19) 61038		Shaft
20) 61039	*	Gasket
21) 61040	*	Disc
22) 61041		Gasket
23) 61042		Spring Retainer
24) 61043		Spring
25) 61044		Vent, ⅛" (not included)
61045		Repair kit

* Included in repair kit



The above valve is also available in 1" ID, 2" ID and "normally open" executions.

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