

# OWNER'S MANUAL

## CIRCLEBLAST CB-0

### 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.



## AIRBLAST B.V.

P.O. Box 1075  
1700 BB Heerhugowaard  
The Netherlands  
Tel. : + 31-72-5718002  
Fax : + 31-72-5714340  
E-mail : [info@airblast.com](mailto:info@airblast.com)  
Web : [www.airblast.com](http://www.airblast.com)

# CIRCLEBLAST CB-0

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## 1.0 INTRODUCTION

**1.1 General description.** The Circleblast Internal pipe cleaner Model CB-0 is designed to blast clean pipe ranging in size from 1¼" to 3" (32 to 76 mm) I.D. The tool connects to an abrasive blast machine in place of a standard nozzle. In operation, the Circleblast nozzle directs the air/abrasive mixture at a deflection tip. This tip causes the blast pattern to fan out into a wide, circular pattern, which cleans the inside of the pipe as the tool is passed through. Centering collars, available in various sizes, hold the tool in position during passes. The Circleblast tool is made from the finest materials available. However, some of its internal wear parts are of necessity rather brittle, due to their extreme hardness. The tool should therefore be handled carefully to avoid dropping it or giving it a sharp blow.

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## 2.0 SET-UP

**2.1 Basic equipment required.** Use of the Circleblast tool requires the same equipment as any other abrasive blast cleaning operation, i.e. an air compressor and an abrasive blast machine. The compressor must be able to supply 80 cfm (2.2 cbm<sup>3</sup>) at a pressure of 100 psi (6.8 bar) at the nozzle.

**2.2 Abrasives.** The abrasives must be well screened and dry. This is more important with the Circleblast CB-0 than with most blasting operations, because of the small clearances involved. Use 40 mesh abrasive or finer. Any of the common blasting abrasives can be used, although soft sands give poor result because too much energy is lost in break-up on the deflection tip. Aluminum oxide and silicon carbide should be avoided unless required by job specifications, since these abrasives cause accelerated wear.

**2.3 Set-up for blasting.** The Circleblast tool can be connected directly to the blast hose or a 3/8" (9 mm) pipe lance can be used. The lance is usually as long as the pipe to be cleaned. It should be square cut to allow it to butt neatly against the parts of the tool it touches. Screw one end of the pipe lance into the reducer and connect the other end to the stem support assembly, using the coupling and curled lock ring provided. Never connect the stem support assembly directly to the reducer.

Make sure the lance butts against the stem support assembly and bottoms against the tungsten carbide liner of the reducer. This will improve tool performance and increase the life of the parts. Select the pair of collars closest to the I.D. of the pipe being cleaned and attach them to the body. Set screws should be tightened into the grooves.

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## 3.0 OPERATION

**3.1 General instructions.** To blast clean the interior of a pipe, fit the Circleblast tool in the appropriate collars. Put the tool into the pipe, hold the tool firmly and pressurize the blast machine. **BE CAREFUL NOT TO HIT THE DEFLECTION TIP AGAINST THE PIPE.** Push the tool through the pipe. Abrasive and blasted material will be blown out the other end.

**3.2 Proper abrasive feed.** Too much abrasive seriously hampers the efficiency of the Circleblast tool and results in heavier wear on the parts, with lower production. When blasting at 100 psi (6.8 bar) the tool should use approximately 500 pounds of sand per hour of continuous blasting. Adjust abrasive feed if your rates differ significantly from these.

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## 4.0 MAINTENANCE

**4.1 General instructions.** Always take care not to drop the Circleblast tool or any of its internal wear parts. They are quite brittle due to their hardness and break easily. When inspecting or replacing parts, keep the tool clean and brush abrasive out of cracks, threads, etc.

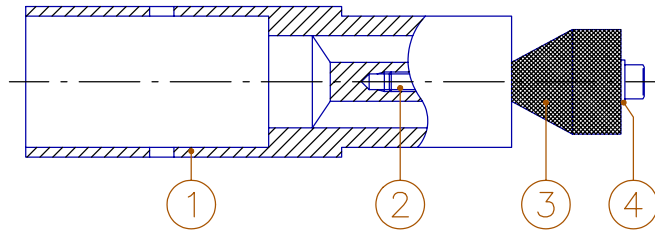
**4.2 Deflection tip and sleeve replacement.** The deflection tip should be replaced when the head is 75% worn away. The stem sleeves should be replaced before they wear through. These parts can easily be reached by removing the knurled throat rod nut, unscrewing the body and lifting off the nozzle and o-ring. When replacing the sleeves, make sure that no abrasive or dirt particles gets between them. Do not use great force when tightening the throat rod nut. Hand tightening is preferable.

**4.3 Nozzle replacement.** The nozzle should be replaced when the I.D. reaches 0.330".

# CIRCLEBLAST CB-0

## 5.0 SPARE PARTS

ART.NR.	MODEL	DESCRIPTION
01)	30025	Housing
02)	30026	Bolt
03)	30160 CB-110 / 1	Deflection tip, Tungsten Carbide
04)	30280 CB-122	Washer brass



PIPEDIAMETER (mm)	TOOL	TOOL RANGE (mm)	CENTERING DEVICE	REQUIRED NOZZLE	AIR CONSUMPTION (cfm) (m <sup>3</sup> /min)	
1¼" – 3" (32 – 76 mm)	CB-0	1¼" – 3" (35 – 76 mm)	-	-	400	11.3
3" – 12" (76 – 305 mm)	CB-1 CB-2	3" – 5" (76 – 127 mm)	CBC-1	AHBN-8 AHBN-10	225 400	6.4 11.3
	CB-1 CB-2	5" – 12" (127 – 305 mm)	CBC-2	AHBN-8 AHBN-10	225 400	6.4 11.3
8" – 36" (204 – 915 mm)	SB-636-A	8" – 10" (204 – 254 mm)	SPB-19/12 Use 120 mm legs	2 x ASB-13 2 x ASB-14 2 x ASB-16	200 300 400	5.7 8.5 12.8
	SB-636-A	10" – 15" (254 – 381 mm)	SPB-19/19 Use 190 mm legs	2 x ASB-15	300	8.5
	SB-636-A	15" – 23" (381 – 584 mm)	SPB-19/29 Use 290 mm legs	2 x ASB-16	450	12.8
	SB-636-A	23" – 36" (584 – 915 mm)	SPB-19/46 Use 290 mm legs	2 x ASB-17	450	12.8

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P.O. Box 1075  
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The Netherlands  
Tel. : + 31 72 5718002  
Fax : + 31 72 5714340  
E-mail: info@airblast.com  
Web : www.airblast.com

### **Airblast Middle East L.L.C.**

P.O. Box 33419  
Dubai  
United Arab Emirates  
Tel. : + 971 4 3242776  
Fax : + 971 4 3242778  
E-mail: airblast@emirates.net.ae

### **Airblast Saudi Arabia**

P.O. Box 30476  
Al-Khobar 31952  
Kingdom of Saudi Arabia  
Tel. : + 966 3 8473178  
Fax : + 966 3 8471430  
E-mail: info@airblast.com.sa

### **Asia Airblast Pte Ltd.**

56, Tech Park Crescent  
Tuas Tech Park  
Singapore 638085  
Tel. : + 65 6266 6010  
Fax : + 65 6266 6968  
E-mail: airblastsg@singnet.com.sg

### **AB Corrosion Control Equipment Sdn Bhd**

No. 33, Jalan Permas 3/18  
Bandar Baru Permas Jaya  
81750 Masai, Johor Darul Takzim  
Malaysia  
Tel. : + 60 7357 7989  
Fax : + 60 7357 7689  
E-mail: airblastmy@airblastasia.org