

# SELF CLEANING BLAST TIPS

**MODEL: 3111 - SCBT**

Revision : 0

**BULLETIN  
3111**

## FEATURES

- Uniform circular heat pattern
- Straight through ports -- no plugging
- High flame velocities -- blows dirt out
- Hex shell easy to install
- Stable firing
  - At high mixture pressures
  - High air velocities
- No piloting ports to plug



**4 SCBT**

## CAPACITY TABLE

Catalog Number	Pipe Size	1000 BTU/HR at Various Mixture Pressures - Inches W. C.													
		0.3	1.0	3.0	5.0	7.0	10.0	12.0	15.0	20.0	25.0	30.0	40.0	50.0	60.0
3 SCBT	3/8 NPT	0.7	1.3	2.3	3.0	3.5	4.2	4.6	5.2	6.0	6.7	7.3	8.4	9.4	10.3
4 SCBT	1/2 NPT	1.2	2.2	3.8	5.0	5.9	7.0	7.7	8.6	10.0	11.2	12.2	14.0	15.6	17.1
6 & 64 SCBT	3/4 NPT	1.9	3.5	6.1	8.0	9.4	11.2	12.3	13.7	16.0	17.7	19.5	22.4	25.0	27.2
8 & 84 SCBT	1" MPT	2.8	5.2	9.2	12.0	14.0	16.8	18.4	20.8	24.0	25.8	29.2	33.6	37.6	41.2

## DESCRIPTION

The SCBT Blast Tips are designed for direct flame impingement heating. The intense flames have a completely uniform circular heat pattern. This unique blast tip fires with main ports only eliminating the typical blast tip spear flame.

Manifolds of SCBT Blast Tips provide greater heat transfer into the work than spear flame models.

The unique flame retention mechanism assures smooth ignition over wide ranges of air-gas ratios and mixture pressures.

Air-gas mixture discharge ports are angularly spaced around the periphery of the tip. There are no trapped holes to make cleaning difficult.

Velocity controlled negative pressures at the base of the flames in the blast tips pull the discharging air-gas mixture stream towards the center, providing perfectly uniform flame discharge patterns.

Hex shells provide easy installation and low headroom requirements.

The SCBT Blast Tips are designed to eliminate operating problems normally encountered with direct flame impingement systems on foundry shell molding machines. The uniform heating patterns will produce cores more rapidly and without burned spots.

The simplified gas porting arrangement prevents clogging of resin bonded core shell sands. Wide air gas ratio tolerance, and high mixture pressure capability assures a steady uniform heating of shell molds without flame blow-off or blow-out. SCBT tips will tolerate high air velocities, such as air cleaning drafts without difficulty.

The unique controlled, flame geometry reduces shell heating and prolongs service life. The tips are available in carbon steel and stainless steel shell construction.

**CAUTION:** Operation of combustion equipment can be hazardous resulting in bodily injury or equipment damage. Each burner should be supervised by a combustion safeguard and only qualified personnel should install, make system adjustments and perform any required service.



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**NOTICE:** Pyronics practices a policy of continuous improvement in the design of its products. It reserves the right to change the specifications at any time without prior notice.

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## OPERATION AND DIMENSIONS

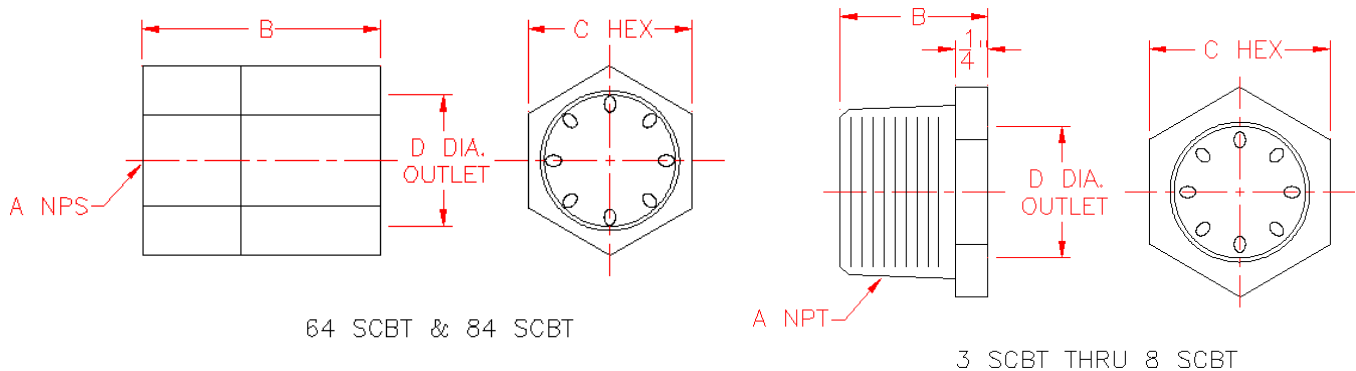
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### OPERATION

SCBT Blast Tips have excellent flame stability over air-gas mixture ranges of 60% to 80% primary aeration. Minimum mixture pressure is 0.1 inches W.C. and at 70% primary aeration, maximum mixture pressure before blow-off is 60 inches W.C. Ignition of individual tips is smooth at mixture pressures up to 20 inches W.C.

Recommended air-gas mixing systems for the SCBT Blast Tips on shell molding machines include flomixers with gas zero regulators, interconnected for constant mixture quality control, and air regulators arranged for mixture pressure control over wide burner area changes. This type of installation will permit smooth controllable operation of blast tips with changes in total installed burner area over a 90% range.

### DIMENSIONS



Catalog No.	A	B	C	D	Port Size Sq. In.	Weight in Ounces
3 SCBT	3/8" NPT	23/32"	11/16"	1/2"	0.00848	1/2
4 SCBT	1/2" NPT	25/32"	7/8"	5/8"	0.01696	1
6 SCBT	3/4" NPT	15/16"	1-1/4"	3/4"	0.0308	1
8 SCBT	1" NPT	1-1/8"	1-1/8"	1"	0.0464	1-1/2
64 SCBT	1/2" NPS	1-11/16"	1"	3/4"	0.0308	3
84 SCBT	3/4" NPS	1-13/16"	1-1/4"	1"	0.0464	6-1/2

\*Note: Material is CRS. For 304SS add suffix -A (Example: 4 SCBT-A)

### ORDERING INFORMATION

Orders should show the following:

1. Complete catalog number and quantity of each size Blast Tip required.