

# **EXCHANGER CLEANING**

## **BANSHEE®**

Banshee tube cleaning nozzles are the industry standard for effective tube cleaning. They use high pressure water as a liquid bearing, thereby eliminating ball bearings, seals or lubricant used in conventional rotary tools. Each tool is easily configured to suit any application by choosing from a variety of replaceable heads and inlet options.

#### **FEATURES:**

Patented liquid bearing design means no bearings, seals, or lubricants to replace

Stainless steel construction for extreme durability and longevity

Multiple inlet options & replaceable heads make configurations easy

 Shrouded model keeps head protected and rotating when tool is pushed against a plug

#### **IDEAL FOR:**

- Unplugging, cleaning, and polishing tubes, such as those found in heat exchangers and industrial tube bundles
- Effectively removes thin, hard scale, carbons, coke,
- Ideal for manual and powered lancing operations

| BANSHEE SPECIFICATIONS 22K PSI (1500 BAR) |                           |                           |                               |                           |  |                    |                  |
|---|---------------------------|---------------------------|-------------------------------|---------------------------|--|--------------------|------------------|
|   | Tube I.D. Range           | Max. Pressure             | Max. Pressure<br>(BSPP Inlet) | Flow Range                | Inlet Connections  | Diameter           | Length           |
| BN9.5                                     | 0.47-0.63 in.<br>12-16 mm | 22k psi<br>1500 bar       | N/A                           | 4.5-8 gpm<br>17-30 l/min  | M7, 1/16 NPT,<br>1/4 LH or 1/4 RH                          | 0.37 in.<br>9.5 mm | 2.6 in.<br>65 mm |
| BN13                                      | 0.60-1.0 in.              | 22k psi                   | 18k psi                       | 7-10 gpm                  | 1/8 NPT, 1/8 BSPP, 1/4 LH, 1/4 RH,                         | 0.50 in.           | 2.9 in.          |
|   | 15-25 mm                  | 1500 bar                  | 1250 bar                      | 27-38 l/min               | 3/8 LH or 3/8 RH   | 13 mm              | 74 mm            |
| BN15                                      | 0.75-1.2 in.              | 22k psi                   | 18k psi                       | 8-10 gpm                  | 1/8 NPT, 1/8 BSPP,   | 0.6 in.            | 3.0 in.          |
|   | 19-30 mm                  | 1500 bar                  | 1250 bar                      | 30-38 l/min               | 3/8 LH/RH  | 15 mm              | 76 mm            |
| BN18                                      | 0.87-1.3 in.              | 22k psi                   | 20k psi                       | 8-14 gpm                  | 1/4 NPT, 1/4 BSPP,   | 0.69 in.           | 3.8 in.          |
|   | 22-33 mm                  | 1500 bar                  | 1400 bar                      | 30-53 l/min               | 9/16 LH or 9/16 RH   | 18 mm              | 97 mm            |
| BN24                                      | 1.1-2 in.                 | 22k psi                   | 22k psi                       | 12-25 gpm                 | 3/8 NPT, 3/8 BSPP,   | 0.93 in.           | 5.1 in.          |
|   | 28-51 mm                  | 1500 bar                  | 1500 bar                      | 45-95 l/min               | 9/16 LH or 9/16 RH   | 24 mm              | 130 mm           |
| BN33                                      | 1.5-2.4 in.               | 22k psi                   | 15k psi                       | 12-49 gpm                 | 1/2 NPT, 1/2 BSPP,   | 1.3 in.            | 6.9 in.          |
|   | 38-60 mm                  | 1500 bar                  | 1000 bar                      | 45-190 l/min              | or 9/16 MP   | 33 mm              | 180 mm           |
| BT12                                      | 0.60-1.0 in.<br>15-25 mm  | 22k psi<br>1500 bar       | N/A                           | Up to 8.5 gpm<br>32 I/min | P1, M7, MPL4, MPR4   | 0.50 in.<br>13 mm  | 1.3 in.<br>33 mm |
| BT18                                      | 0.87-1.3 in.              | 22k psi                   | 18k psi                       | Up to 11 gpm              | P1, P2, BSPP2, MPL6, MPR6,                                 | 0.69 in.           | 1.5 in.          |
|   | 22-33 mm                  | 1500 bar                  | 1250 bar                      | 42 I/min                  | MPL4, MPR4   | 18 mm              | 39 mm            |
| BT25                                      | 1.2–3.0 in.<br>30–76 mm   | 8–22k psi<br>550–1500 bar | N/A                           | 8–20 gpm<br>30–76 l/min   | 1/8 NPT, 1/4 NPT, 1/4 BSPP,<br>3/8-28 LH/RH, 9/16-18 LH/RH | 1.0 in.<br>26 mm   | 1.9 in.<br>48 mm |



# **12 MODELS AVAILABLE**

UP TO 40K PSI (2800 BAR)



**BN33** I.D. Tubes (38-60 mm)



1.25-2.0 in. I.D. Tubes (32-51 mm)



1.1-1.8 in. I.D. Tubes (28-46 mm)





0.87-1.3 in. I.D. Tubes (22-33 mm)

BN18-40K



0.87-1.3 in. I.D. Tubes (22-33 mm)

0.75-1.2 in. I.D. Tubes (19-30 mm)



BN13-40K

0.60-1.0 in. I.D. Tubes (15-25 mm)



**BN13-SHROUDED** 

0.60-1.3 in. I.D. Tubes (15-33 mm)



0.60-1.0 in. I.D. Tubes (15-25 mm)



0.47-0.63 in. I.D. Tubes (12-16 mm)



**NEW BT25 - EXCELLENT FOR CURVED TUBES** 1.2-3.0 in. I.D. Tubes (30-76 mm)



**BT18 - EXCELLENT FOR CURVED TUBES** 

0.87-1.3 in. ID Tubes (22-33 mm)



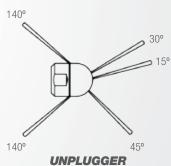
**BT12 - EXCELLENT FOR CURVED TUBES** 

0.60-1.0 in. I.D. Tubes (15-25 mm)

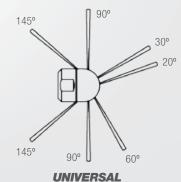
### **3 STANDARD HEAD CONFIGURATIONS**



**POLISHER 4 PORTS:** 2 @ 85°, 2 @ 105°



**5 PORTS:**1 @ 15°, 1 @ 30° 1 @ 45°, 2 @ 145°



**7 PORTS:** 1 @ 20°, 1 @ 30° 1 @ 60°, 2 @ 90°, 2 @ 145°