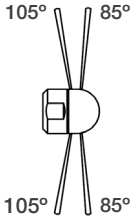
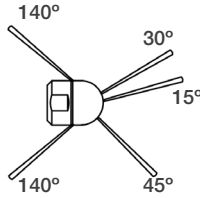


22K PSI (1500 BAR) BANSHEE HEAD CONFIGURATIONS

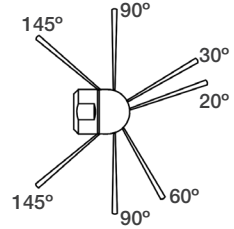
The BANSHEE tool diameter and inlet nut connection determine the operating pressure and part number. BANSHEE tools can be used at operating pressures ranging from 1000psi (69 Bar) to 22,000psi (1500 Bar). The pull of the three standard heads ranges from 3 to 5 pounds and is capable of a range of pressures and flows.



POLISHER 042
4 Ports: 2 @ 85°, 2 @ 105°



UNPLUGGER 043
5 Ports: 1 @ 15°, 1 @ 30°
1 @ 45°, 2 @ 145°



UNIVERSAL 044
7 Ports: 1 @ 20°, 1 @ 30°
1 @ 60°, 2 @ 90°, 2 @ 145°

*BSPP=British Standard Pipe LH= Left Hand RH=Right Hand
MP=Medium Pressure NPT=National Pipe Thread

Table 1 - Tool Specifications

Part Number	*Inlet Connection	Max Pressure
BN9.5-P1	1/16 NPT	15kpsi / 1035 bar
BN9.5-M7	M7-1.0	22kpsi / 1500 bar
BN9.5-MP4L	1/4-28 LH	22kpsi / 1500 bar
BN9.5-MP4R	1/4-28 RH	22kpsi / 1500 bar
BN13-P2	1/8 NPT	15kpsi / 1035 bar
BN13-BSPP2	1/8 BSPP	18kpsi / 1250 bar
BN13-MP4L	1/4-28 LH	22kpsi / 1500 bar
BN13-MP4R	1/4-28 RH	22kpsi / 1500 bar
BN13-MP6L	3/8-24 LH	22kpsi / 1500 bar
BN13-MP6R	3/8-24 RH	22kpsi / 1500 bar
BN15-P2	1/8 NPT	15kpsi / 1035 bar
BN15-BSPP2	1/8 BSPP	18kpsi / 1250 bar
BN15-MP6L	3/8-24 LH	22kpsi / 1500 bar
BN15-MP6R	3/8-24 RH	22kpsi / 1500 bar
BN18-P4	1/4 NPT	15kpsi / 1035 bar
BN18-BSPP4	1/4 BSPP	20kpsi / 1400 bar
BN18-MP9L	9/16-18 LH	22kpsi / 1500 bar
BN18-MP9R	9/16-18 RH	22kpsi / 1500 bar
BN24-P6	3/8 NPT	15kpsi / 1035 bar
BN24-BSPP6	3/8 BSPP	22kpsi / 1500 bar
BN24-MP9L	9/16-18 LH	22kpsi / 1500 bar
BN24-MP9R	9/16-18 RH	22kpsi / 1500 bar
BN33-P8	1/2 NPT	15kpsi / 1035 bar
BN33-BSPP8	1/2 BSPP	22kpsi / 1500 bar
BN33-MP9	9/16 MP	22kpsi / 1500 bar

Table 2 - Head Options

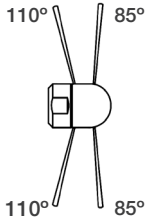
Part Number	Pressure Range	Flow
BN9.5-A	10,000 -15,000 psi	5-6 gpm
-B	15,000 -22,000 psi	5-6 gpm
BN13-A	8,000 -15,000 psi	7-10 gpm
-C	12,000 -22,000 psi	7-10 gpm
BN15-A	8,000 -15,000 psi	7-10 gpm
-C	12,000 -22,000 psi	7-10 gpm
BN18-A	8,000 -15,000 psi	11-14 gpm
-B	8,000 -15,000 psi	8-10 gpm
-C	12,000 -22,000 psi	11-14 gpm
-D	12,000 -22,000 psi	8-10 gpm
BN24-A	8,000 -15,000 psi	19-24 gpm
-B	8,000 -15,000 psi	14-18 gpm
-C	8,000 -15,000 psi	11-13 gpm
-D	12,000 -22,000 psi	17-20 gpm
-E	12,000 -22,000 psi	14-16 gpm
-F	12,000 -22,000 psi	11-13 gpm
BN33-A	8,000 -15,000 psi	39-48 gpm
-B	8,000 -15,000 psi	32-38 gpm
-C	8,000 -15,000 psi	25-31 gpm
-D	8,000 -15,000 psi	19-24 gpm
-E	8,000 -15,000 psi	14-18 gpm
-F	12,000 -22,000 psi	21-25 gpm
-G	12,000 -22,000 psi	17-20 gpm
-H	12,000 -22,000 psi	14-16 gpm
-I	12,000 -22,000 psi	11-13 gpm

40K PSI (2800 BAR) BANSHEE HEAD CONFIGURATIONS

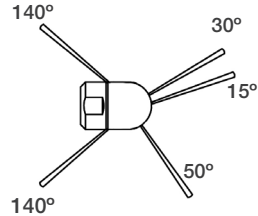
The 40k psi (2800 bar) BANSHEES are self-rotating swivels designed for tube cleaning. The diameter of the tool and inlet nut connection determine the model and part number. The tool can be used at operating pressures from 25,000 psi to 40,000 psi, depending on the inlet connection and head jetting. Unlike the lower pressure Banshees, the 40k psi (2800 bar) BANSHEE heads come with threaded replaceable sapphire nozzle inserts

NOZZLE HEADS:

Two standard head designs are available and both are capable of a range of pressure and flows. The nozzles in all heads are all OS2 Sapphire nozzles. Different orifice sizes in the nozzles accommodate different pressure and flow combinations. Refer to TABLE 7 for Head Jetting and Flow specifications. The pull of the standard heads ranges from 3.5 to 4 pounds.



POLISHER 442
4 Ports: 2 @ 85°, 2 @ 110°



UNPLUGGER 443
5 Ports: 1 @ 15°, 1 @ 30°
1 @ 50°, 2 @ 140°

Table 6 - Tool Specifications

Part Number	*Inlet Connection	Max Pressure
BN13-H4L	14-28 LH	40kpsi / 2800 bar
BN13-H6L	3/8-24 LH	40kpsi / 2800 bar
BN18-H6L	3/8-24 LH	40kpsi / 2800 bar
BN18-H9L	9/16-18 LH	40kpsi / 2800 bar
BN18-H9R	9/16-18 RH	40kpsi / 2800 bar
BN18-HM14L	M14 x 1.5 LH	40kpsi / 2800 bar
BN27-H9L	9/16-18 LH	40kpsi / 2800 bar
BN27-HM14L	M14 x 1.5 LH	40kpsi / 2800 bar

*BSPP=British Standard Pipe LH= Left Hand RH=Right Hand
MP=Medium Pressure NPT=National Pipe Thread

Table 7 - Head Options

Part Number	OS2-0XX Front Jet Size	OS2-0XX Back Jet Size	Flow
BN13 442-C	2 x .014	2 x .015	5.5-6 gpm
-D	2 x .010	2 x .014	4.5-5 gpm
BN13 443-C	3 x .010	2 x .016	5.5-6 gpm
-D	3 x .009	2 x .015	4.5-5 gpm
BN18 442-A	2 x .020	2 x .017	8-8.5 gpm
-B	2 x .018	2 x .017	7-7.5 gpm
-C	2 x .015	2 x .015	6-6.5 gpm
-D	2 x .010	2 x .014	5-5.5 gpm
BN18 443-A	3 x .014	2 x .020	8-8.5 gpm
-B	3 x .013	2 x .019	7-7.5 gpm
-C	3 x .011	2 x .016	6-6.5 gpm
-D	3 x .009	2 x .014	5-5.5 gpm
BN27 442-A	2 x .018	2 x .018	8-8.5 gpm
-B	2 x .015	2 x .016	7-7.5 gpm
-C	2 x .011	2 x .015	6-6.5 gpm
-D	2 x .009	2 x .013	5-5.5 gpm
BN27 443-A	3 x .013	2 x .019	8-8.5 gpm
-B	3 x .011	2 x .017	7-7.5 gpm
-C	3 x .009	2 x .014	6-6.5 gpm
-D	3 x .006	2 x .013	5-5.5 gpm