BANSHEE
Rotary Tube Cleaning

TOOL TALK



2.6–6.9 in. 65–180 mm

The Banshee line of tube cleaning tools use high pressure water as a liquid bearing, replacing ball bearings, seals or lubricant used in conventional rotary tools. This patented design features a straight flow path that delivers the highest quality jets for maximum cleaning power.

Banshee tools clean effectively at a wide range of pressures up to 40,000 psi (2800 bar). Each tool can be easily configured to suit any application by choosing from a variety of replaceable heads and inlet options.

COMPETITIVE ADVANTAGES

- Proven to be the most effective tube cleaning tools on the market
- Low cost, low maintenance bearing design
- Extensive tool selection for all major hose sizes and tube cleaning applications
- Multiple interchangeable head options for polishing, unplugging, and different flow capacities
- Replaceable sapphire inserts on 40k psi models
- Easy to pair with automated flex lance machines

FEATURES	BENEFITS
• Patented liquid bearing technology	• No bearings, seals or lubricant to replace — reduced maintenance costs
• Configurable head options	• Select the most effective cleaning configuration for a specific application
• Streamlined internal flow path	• Unlike labyrinth seal and cross jet pattern nozzles, Banshee tools deliver water in a straight path, generating the least amount of turbulence and highest quality jet power for better cleaning
• Shrouded head option (for use with automated drive equipment)	• Allows the head to continue to rotate when forced against a blockage

BANSHEE TOOL OVERVIEW

QUESTIONS TO ASK YOUR CUSTOMER

- What size and length of hose are you using?
- What pressure and flow are you operating?
- What are the length and diameter of tubes?
- What type of cleaning is required? Are the tubes plugged?
- Do you need an adapter?
- Do you need a stinger?
- Do you need a backout preventer?
  You should always use a backout preventer with high pressure tube cleaning tools.

OTHER INFORMATION

- The Banshee is a water-bearing tool, which means that the tool relies on a very thin “film” of water between shaft and body. It is critical that all lines are flushed prior to use to eliminate any debris which can cause the tool to misoperate.
- Water must be blown out of the Banshee after each use to avoid corrosion damage. It is also important to soak or bathe the tool in a very light oil such as WD-40 between applications.
- Pipe threads are rated to 15k psi (1000 bar) MAWP, M7 and MP threads are 22k psi (1500 bar) MAWP. Some BSP threads can rate as high as 22k psi (1500 bar), please refer to the tool manual for pressure ratings for each tool.
- Choose the appropriate head option for all cleaning applications. A universal head may not unplug or polish as effectively as the unplugger or polisher head specifically. Contact your StoneAge Customer Service for questions about specific applications, including the shrouded head option.
- The use of pipe wrenches and or pliers with “teeth” will void all tool warranty. All Banshee tube cleaning tools require the use of a correctly sized open-end wrench to fit the flats provided on the inlet nut when attaching the tool to the lance. Incorrect tools can crush or crack the hardened steel body, leading to failure or breakage during operation.

BACKOUT PREVENTION

The **VE-400 Safety Stop** is designed to protect the operator form a flex-lance exiting the tube sheet during cleaning operations. StoneAge recommends the VE-400 Safety Stop for horizontal or vertical back-out prevention.

TOOL SPECIFICATIONS — 22K PSI (1500 BAR) MODELS

PART ID	BN9.5	BN13	BN15	BN18	BN24	BN33
Tube ID Range	0.47–0.63 in. 12–16 mm	0.60–1.0 in. 15–25 mm	0.75–1.2 in. 19–30 mm	0.87–1.3 in. 22–33 mm	1.1–2.0 in. 28–51 mm	1.5–2.4 in. 38–60 mm
Pressure Range*	8k–22k psi 550–1500 bar	8k–22k psi 550–1500 bar	8k–22k psi 550–1500 bar	8k–22k psi 550–1500 bar	8k–22k psi 550–1500 bar	8k–22k psi 550–1500 bar
Flow Range	5–8 gpm 19–30 l/min	7–10 gpm 27–38 l/min	7–10 gpm 27–38 l/min	5–16 gpm 19–61 l/min	11–24 gpm 42–91 l/min	11–48 gpm 42–182 l/min
Inlet Connections	1/16" NPT (P1), 1/4"-28 MP Left Hand (MP4L), 1/4"-28 MP Right Hand (MP4R), M7 x 1" (M7)	1/8" NPT (P2), 1/4"-28 MP Left Hand (MP4L), 1/4"-28 MP Right Hand (MP4R), 3/8"-24 MP Left Hand (MP6L), 3/8-24 MP Right Hand (MP6R), 1/8" BSPP (BSPP2)	1/8" NPT (P2), 3/8"-24 MP Left Hand (MP6L), 3/8-24 MP Right Hand (MP6R), 1/8" BSPP (BSPP2)	3/8"-24 MP Left Hand (MP6L), 3/8-24 MP Right Hand (MP6R), 1/8" BSPP (BSPP2), 1/4" NPT (P4)	3/8" NPT (P6), 9/16"-18 MP Left Hand (MP9L), 9/16"-18 MP Right Hand (MP9R), 3/8"-24 MP Left Hand (MP6L)	9/16" Gland and Collar 13/16-16 (MP9)
Swivel Diameter	0.4 in. 10 mm	0.5 in. 13 mm	0.6 in. 15 mm	0.7 in. 18 mm	0.9 in. 24 mm	1.3 in. 33 mm
Swivel Length	2.6 in. 65 mm	2.9 in. 74 mm	3.0 in. 76 mm	3.8 in. 97 mm	5.1 in. 130 mm	6.9 in. 180 mm
Swivel Weight	0.05 lb 0.02 kg	0.10 lb 0.05 kg	0.15 lb 0.07 kg	0.25 lb 0.11 kg	0.60 lb 0.27 kg	1.8 lb 0.81 kg
Head Weight	0.01 lb .005 kg	0.05 lb 0.02 kg	0.08 lb 0.04 kg	0.08 lb 0.04 kg	0.10 lb 0.05 kg	0.25 lb 0.11 kg
Maximum Water Temperature	250 ºF 120 ºC	250 ºF 120 ºC	250 ºF 120 ºC	250 ºF 120 ºC	250 ºF 120 ºC	250 ºF 120 ºC

*The maximum working pressure for different Banshee swivels is dependent on the inlet connection.

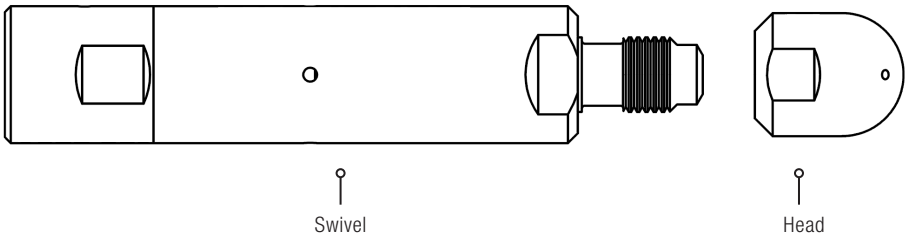
TOOL SPECIFICATIONS — 40K PSI (2800 BAR) MODELS

PART ID	BN13-40K	BN18-40K	BN27-40K
Tube ID Range*	0.60–1.0 in. 15–25 mm	0.87–1.3 in. 22–33 mm	1.25–2.0 32–51 mm
Pressure Range	20–40k psi 1400–2800 bar	20–40k psi 1400–2800 bar	20–40k psi 1400–2800 bar
Flow Range	4.5–9 gpm 17–34 l/min	5–14 gpm 19–53 l/min	5–9.5 gpm 19–36 l/min
Port Size	6-40 UNF (S2)	6-40 UNF (S2)	6-40 UNF (S2)
Nozzle Type	OS2	OS2	OS2
Inlet Connections	3/8"-24 Left Hand (H6L)	3/8"-24 Left Hand (H6L), 9/16"-18 HP Left Hand (H9L), 9/16"-18 HP Right Hand (H9R), M14x1-1/2" Left Hand (HM14L)	9/16"-18 HP Left Hand (H9L)
Swivel Diameter	0.5 in. 13 mm	0.7 in. 18 mm	1.06 in. 27 mm
Swivel Length	3.5 in. 89 mm	4.7 in. 120 mm	5.5 in. 140 mm
Swivel Weight	0.15 lb 0.07 kg	0.30 lb 0.14 kg	0.10 lb 0.05 kg
Head Weight	0.05 lb 0.02 kg	0.08 lb 0.04 kg	0.15 lb 0.68 kg
Maximum Water Temperature	250 ºF 120 ºC	250 ºF 120 ºC	250 ºF 120 ºC

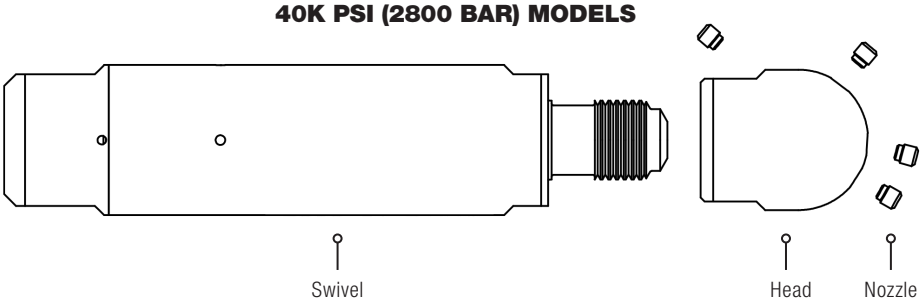
*When cleaning 5/8 in. diamerer tubes at 40k psi, please contact our technical support team for hose specifications.

BANSHEE TOOL CONFIGURATION

MODELS UP TO 22K PSI (1500 BAR)



40K PSI (2800 BAR) MODELS



A complete Banshee tool configuration requires the following components:

1. Swivel for required working pressure and inlet connection
2. Head with required jet configuration, pressure and flow

The following items may also be required:

- Suitable hose adapter
- Backout preventer

To configure a Banshee tool, the following information should be obtained:

- Pump pressure and flow
- Hose length and ID
- Hose/lance end fitting

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Banshee BN9.5 tool packages for the most commonly used configurations. All Banshee BN9.5 packages come fully assembled and include 1. Swivel, 2. Head.

The following table shows the configurations of standard Banshee BN9.5 tool packages:

MAXIMUM PRESSURE	INLET CONNECTION	PACKAGE CONTENTS	PACKAGE PART ID
15k psi 1000 bar	1/16 NPT Female	1 x BN9.5 Banshee swivel 1 x Polisher head	**BN9.5-NPT-POL-PKG**
		1 x BN 9.5 Banshee swivel 1 x Universal head	**BN9.5-NPT-UNI-PKG**
		1 x BN9.5 Banshee swivel 1 x Unplugger head	**BN9.5-NPT-UNP-PKG**
22k psi 1500 bar	M7 Female	1 x BN9.5 Banshee swivel 1 x Polisher head	**BN9.5-M7-POL-PKG**
		1 x BN 9.5 Banshee swivel 1 x Universal head	**BN9.5-M7-UNI-PKG**
		1 x BN9.5 Banshee swivel 1 x Unplugger head	**BN9.5-M7-UNP-PKG**
	1/4 LH Female, 1/4 RH Female	1 x BN9.5 Banshee swivel 1 x Polisher head	**BN9.5-MP-POL-PKG**
		1 x BN 9.5 Banshee swivel 1 x Universal head	**BN9.5-MP-UNI-PKG**
		1 x BN9.5 Banshee swivel 1 x Unplugger head	**BN9.5-MP-UNP-PKG**

When ordering a standard Banshee package, you should specify:

1. Package Part ID and inlet connection thread
2. Pump pressure and flow
3. Hose length and ID

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN9.5-MP-UNP-PKG**	BN9.5 package 1/4 LH inlet. 20,000 psi 6 gpm 30 ft 5/32” ID

BANSHEE BN9.5

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact your StoneAge Customer Service for questions about specific applications.

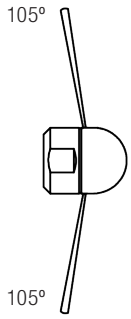
STEP 1 SWIVEL SELECTION

There are four Banshee BN9.5 swivel options available. The correct swivel is selected based on the maximum working pressure and inlet connection required.

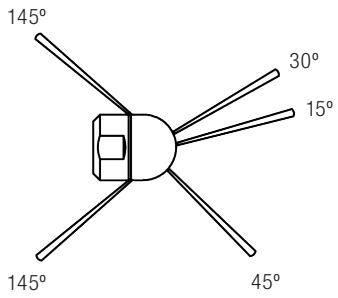
MAXIMUM PRESSURE	INLET CONNECTION	SWIVEL PART ID
15k psi 1000 bar	1/16 NPT Female	**BN9.5-P1**
22k psi 1500 bar	M7 Female	**BN9.5-M7**
	1/4 LH Female	**BN9.5-MP4L**
	1/4 RH Female	**BN9.5-MP4R**

STEP 2 HEAD SELECTION

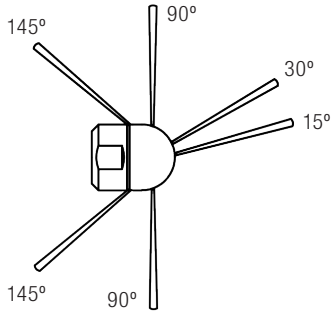
There are three standard head configurations for the BN9.5 swivel. Custom heads are available on request.



POLISHER
2 Ports:
2 @ 105º



UNPLUGGER
5 Ports:
1 @ 15º
1 @ 30º
1 @ 45º
2 @ 145º



UNIVERSAL
6 Ports:
1 @ 15º
1 @ 30º
2 @ 90º
2 @ 145º

The following table lists head selection approximations of common jetting scenarios for Banshee BN9.5 swivels:

SWIVEL	HEAD STYLE	PRESSURE RANGE	FLOW RANGE	HEAD PART ID
BN9.5	Polisher	10–15k psi 700–1000 bar	5–6 gpm 19–23 l/min	**BN9.5 042-A**
		15–22k psi 1000–1500 bar	5–6 gpm 19–23 l/min	**BN9.5 042-B**
	Unplugger	10–15k psi 700–1000 bar	5–6 gpm 19–23 l/min	**BN9.5 043-A**
		15–22k psi 1000–1500 bar	5–6 gpm 19–23 l/min	**BN9.5 043-B**
	Universal	15–22k psi 1000–1500 bar	7–8 gpm 27–30 l/min	**BN9.5 044-1**

STEP 3 MAINTENANCE RESOURCES

StoneAge provides a tool kit for the Banshee BN9.5. This kit contains required wrenches for the BN9.5 swivel.

SWIVEL	TOOL KIT	MANUAL
BN9.5 (22k)	**BN9.5 612**	**PL 505**

Kit components and tool maintenance/assembly videos are available on the StoneAge website:
WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs, please contact your StoneAge Customer Service.

When ordering a Banshee BN9.5 tool by line item, you should specify:

1. Swivel Part ID
2. Head Part ID
3. Part IDs of spare heads or maintenance items, if required

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN9.5-M7**	Banshee swivel 9.5 mm M7 connection
3	**BN9.5 042-A**	Polisher head
3	**BN9.5 043-A**	Unplugger head

BANSHEE BN13

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Banshee BN13 tool packages for the most commonly used configurations. All Banshee BN13 packages come fully assembled and include 1. Swivel, 2. Head.

The following table shows the configurations of standard Banshee BN13 tool packages:

MAXIMUM PRESSURE	INLET CONNECTION	PACKAGE CONTENTS	PACKAGE PART ID
15k psi 1000 bar	1/8 NPT Female	1 x BN13 Banshee swivel 1 x Polisher head	**BN13-NPT-POL-PKG**
		1 x BN13 Banshee swivel 1 x Universal head	**BN13-NPT-UNI-PKG**
		1 x BN13 Banshee swivel 1 x Unplugger head	**BN13-NPT-UNP-PKG**
18k psi 1250 bar	1/8 BSPP Female	1 x BN13 Banshee swivel 1 x Polisher head	**BN13-BSPP-POL-PKG**
		1 x BN13 Banshee swivel 1 x Universal head	**BN13-BSPP-UNI-PKG**
		1 x BN13 Banshee swivel 1 x Unplugger head	**BN13-BSPP-UNP-PKG**
22k psi 1500 bar	1/4 LH Female, 1/4 RH Female, 3/8 LH Female, 3/8 RH Female	1 x BN13 Banshee swivel 1 x Polisher head	**BN13-MP-POL-PKG**
		1 x BN13 Banshee swivel 1 x Universal head	**BN13-MP-UNI-PKG**
		1 x BN13 Banshee swivel 1 x Unplugger head	**BN13-MP-UNP-PKG**
40k psi 2800 bar	1/4 LH Female, 1/4 RH Female, 3/8 LH Female, 3/8 RH Female	1 x BN13 Banshee swivel 1 x Polisher head	**BN13-HP-POL-PKG**
		1 x BN13 Banshee swivel 1 x Unplugger head	**BN13-HP-UNP-PKG**

When ordering a standard Banshee BN13 package, you should specify:

1. Package Part ID and inlet connection thread
2. Pump pressure and flow
3. Hose length and ID

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN13-BSPP-UNI-PKG**	BN13 universal package 1000 Bar 30 l/min 10 m 5 mm ID hose 1/8 BSPP

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact your StoneAge Customer Service for questions about specific applications.

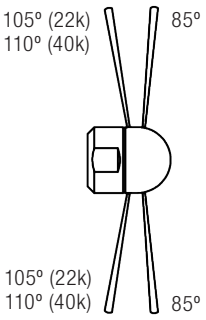
STEP 1 SWIVEL SELECTION

There are ten Banshee BN13 swivel options available. The correct swivel is selected based on the maximum working pressure and inlet connection required.

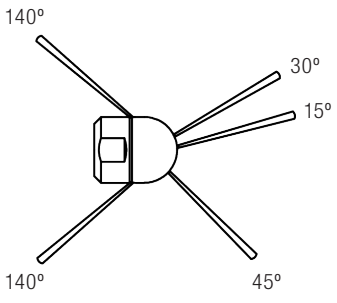
MAXIMUM PRESSURE	INLET CONNECTION	SWIVEL PART ID
15k psi 1000 bar	1/8 NPT Female	**BN13-P2**
18k psi 1250 bar	1/8 BSPP Female	**BN13-BSPP2**
22k psi 1500 bar	1/4 LH Female	**BN13-MP4L**
	1/4 RH Female	**BN13-MP4R**
	3/8 LH Female	**BN13-MP6L**
	3/8 RH Female	**BN13-MP6R**
40k psi 2800 bar	1/4 LH Female	**BN13-H4L**
	1/4 RH Female	**BN13-H4R**
	3/8 LH Female	**BN13-H6L**

STEP 2 HEAD SELECTION

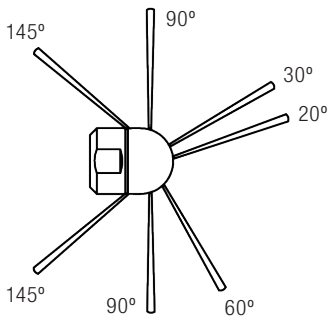
There are three standard head configurations for the BN13 swivel. Custom heads are available on request.



POLISHER
4 Ports:
2 @ 85º
2 @ 105º
(22k psi/1500 bar models)
— or —
2 @ 110º
(40k psi/2800 bar models)



UNPLUGGER
5 Ports:
1 @ 15º
1 @ 30º
1 @ 45º
2 @ 140º



UNIVERSAL
7 Ports:
1 @ 20º
1 @ 30º
1 @ 60º
2 @ 90º
2 @ 145º

BANSHEE BN13

The following table lists head selection approximations of common jetting scenarios for Banshee BN13 swivels:

SWIVEL	HEAD STYLE	PRESSURE RANGE	FLOW RANGE	HEAD PART ID	NOZZLES FITTED	
					FRONT	BACK
BN13	Polisher	8–15k psi 550–1000 bar	7–9 gpm 27–34 l/min	**BN13 042-A**	N/A	N/A
		12–22k psi 830–1500 bar	7–9 gpm 27–34 l/min	**BN13 042-C**	N/A	N/A
		30–40k psi 2100–2800 bar	5.5–6 gpm 21–23 l/min	**BN13 442-C**	2 x **OS2 014**	2 x **OS2 015**
			4.5–5 gpm 17–19 l/min	**BN13 442-D**	2 x **OS2 010**	2 x **OS2 014**
	Unplugger	8–15k psi 550–1000 bar	7–9 gpm 27–34 l/min	**BN13 043-A**	N/A	N/A
		12–22k psi 830–1500 bar	7–9 gpm 27–34 l/min	**BN13 043-C**	N/A	N/A
		30–40k psi 2100–2800 bar	5.5–6 gpm 21–23 l/min	**BN13 443-C**	3 x **OS2 010**	2 x **OS2 016**
			4.5–5 gpm 17–19 l/min	**BN13 443-D**	3 x **OS2 009**	2 x **OS2 015**
	Universal	8–15k psi 550–1000 bar	8–10 gpm 30–38 l/min	**BN13 044-A**	N/A	N/A
		12–22k psi 830–1500 bar	7–8 gpm 27–30 l/min	**BN13 044-C**	N/A	N/A

STEP 3 MAINTENANCE RESOURCES

StoneAge provides a tool kit for the Banshee BN13. This kit contains required wrenches for the BN13 swivel.

SWIVEL	TOOL KIT	MANUAL
BN13 (22k)	**BN13 612**	**PL 505**
BN13 (40k)	**BN13 612-H**	**PL 507**

Kit components and tool maintenance/assembly videos are available on the StoneAge website:
WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs,
please contact your StoneAge Customer Service.

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Banshee BN15 tool packages for the most commonly used configurations. All Banshee BN15 packages come fully assembled and include 1. Swivel, 2. Head.

The following table shows the configurations of standard Banshee BN15 tool packages:

MAXIMUM PRESSURE	INLET CONNECTION	PACKAGE CONTENTS	PACKAGE PART ID
15k psi 1000 bar	1/8 NPT Female	1 x BN15 Banshee swivel 1 x Polisher head	**BN15-NPT-POL-PKG**
		1 x BN15 Banshee swivel 1 x Universal head	**BN15-NPT-UNI-PKG**
		1 x BN15 Banshee swivel 1 x Unplugger head	**BN15-NPT-UNP-PKG**
18k psi 1250 bar	1/8 BSPP Female	1 x BN15 Banshee swivel 1 x Polisher head	**BN15-BSPP-POL-PKG**
		1 x BN15 Banshee swivel 1 x Universal head	**BN15-BSPP-UNI-PKG**
		1 x BN15 Banshee swivel 1 x Unplugger head	**BN15-BSPP-UNP-PKG**
22k psi 1500 bar	1/4 LH Female, 1/4 RH Female, 3/8 LH Female, 3/8 RH Female	1 x BN15 Banshee swivel 1 x Polisher head	**BN15-MP-POL-PKG**
		1 x BN15 Banshee swivel 1 x Universal head	**BN15-MP-UNI-PKG**
		1 x BN15 Banshee swivel 1 x Unplugger head	**BN15-MP-UNP-PKG**

When ordering a standard Banshee BN15 package, you should specify:

1. Package Part ID and inlet connection thread
2. Pump pressure and flow
3. Hose length and ID

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN15-MP-UNP-PKG**	BN15 unplugger package 30 ft 3/16 ID hose 3/8 LH

BANSHEE BN15

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact your StoneAge Customer Service for questions about specific applications.

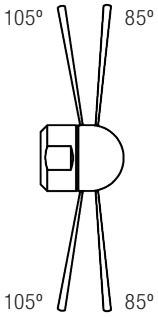
STEP 1 SWIVEL SELECTION

There are six Banshee BN15 swivel options available. The correct swivel is selected based on the maximum working pressure and inlet connection required.

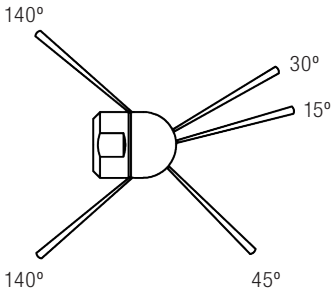
MAXIMUM PRESSURE	INLET CONNECTION	SWIVEL PART ID
15k psi 1000 bar	1/8 NPT Female	**BN15-P2**
18k psi 1250 bar	1/8 BSPP Female	**BN15-BSPP2**
22k psi 1500 bar	3/8 LH Female	**BN15-MP6L**
	3/8 RH Female	**BN15-MP6R**

STEP 2 HEAD SELECTION

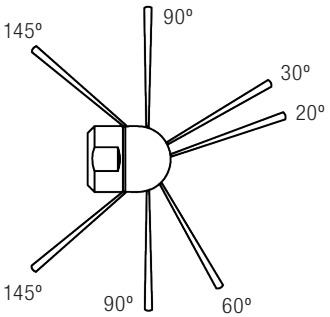
There are three standard head configurations for the BN15 swivel. Custom heads are available on request.



POLISHER
4 Ports:
2 @ 85º
2 @ 105º



UNPLUGGER
5 Ports:
1 @ 15º
1 @ 30º
1 @ 45º
2 @ 145º



UNIVERSAL
7 Ports:
1 @ 20º
1 @ 30º
1 @ 60º
2 @ 90º
2 @ 145º

The following table lists head selection approximations of common jetting scenarios for Banshee BN15 swivels:

SWIVEL	HEAD STYLE	PRESSURE RANGE	FLOW RANGE	HEAD PART ID
BN15	Polisher	8–15k psi 550–1000 bar	7–9 gpm 27–34 l/min	**BN15 042-A**
		12–22k psi 830–1500 bar	7–9 gpm 27–34 l/min	**BN15 042-C**
	Unplugger	8–15k psi 550–1000 bar	7–9 gpm 27–34 l/min	**BN15 043-A**
		12–22k psi 830–1500 bar	7–9 gpm 27–34 l/min	**BN15 043-C**
	Universal	8–15k psi 550–1000 bar	7–9 gpm 27–34 l/min	**BN15 044-A**
		12–22k psi 830–1500 bar	8–10 gpm 30–38 l/min	**BN15 044-C**

STEP 3 MAINTENANCE RESOURCES

StoneAge provides a tool kit for the Banshee BN15. This kit contains required wrenches for the BN13 swivel.

SWIVEL	TOOL KIT	MANUAL
BN15 (22k)	**BN15 612**	**PL 505**

Kit components and tool maintenance/assembly videos are available on the StoneAge website:
WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs, please contact your StoneAge Customer Service.

When ordering a Banshee BN15 tool by line item, you should specify:

1. Swivel Part ID
2. Head Part ID
3. Part IDs of spare heads or maintenance items, if required

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN15-P2**	Banshee swivel 13 mm 1/8 NPT connection
3	**BN15 042-A**	Polisher head
2	**BN15 044-A**	Universal head

BANSHEE BN18

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Banshee BN18 tool packages for the most commonly used configurations. All Banshee BN18 packages come fully assembled and include 1. Swivel, 2. Head.

The following table shows the configurations of standard Banshee BN18 tool packages:

MAXIMUM PRESSURE	INLET CONNECTION	PACKAGE CONTENTS	PACKAGE PART ID
15k psi 1000 bar	1/4 NPT Female	1 x BN18 Banshee swivel 1 x Polisher head	**BN18-NPT-POL-PKG**
		1 x BN18 Banshee swivel 1 x Universal head	**BN18-NPT-UNI-PKG**
		1 x BN18 Banshee swivel 1 x Unplugger head	**BN18-NPT-UNP-PKG**
20k psi 1400 bar	1/4 BSPP Female	1 x BN18 Banshee swivel 1 x Polisher head	**BN18-BSPP-POL-PKG**
		1 x BN18 Banshee swivel 1 x Universal head	**BN18-BSPP-UNI-PKG**
		1 x BN18 Banshee swivel 1 x Unplugger head	**BN18-BSPP-UNP-PKG**
22k psi 1500 bar	9/16 LH Female, 9/16 RH Female	1 x BN18 Banshee swivel 1 x Polisher head	**BN18-MP-POL-PKG**
		1 x BN18 Banshee swivel 1 x Universal head	**BN18-MP-UNI-PKG**
		1 x BN18 Banshee swivel 1 x Unplugger head	**BN18-MP-UNP-PKG**
40k psi 2800 bar	3/8 LH Female, M14 LH Female, 9/16 LH Female, 9/16 RH Female	1 x BN18 Banshee swivel 1 x Polisher head	**BN18-HP-POL-PKG**
		1 x BN18 Banshee swivel 1 x Unplugger head	**BN18-HP-UNP-PKG**

When ordering a standard Banshee BN18 package, you should specify:

1. Package Part ID and inlet connection thread
2. Pump pressure and flow
3. Hose length and ID

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN18-HP-POL-PKG**	BN18 polisher package 40k psi 6 gpm 30 ft 5 mm ID hose 3/8 LH

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact your StoneAge Customer Service for questions about specific applications.

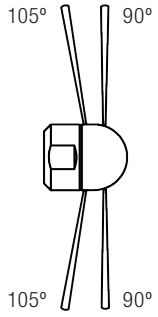
STEP 1 SWIVEL SELECTION

There are six Banshee BN18 swivel options available. The correct swivel is selected based on the maximum working pressure and inlet connection required.

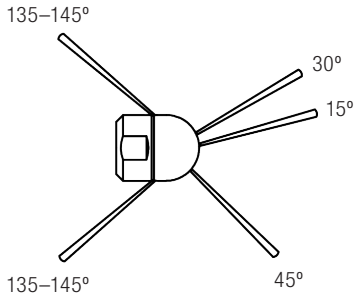
MAXIMUM PRESSURE	INLET CONNECTION	SWIVEL PART ID
15k psi 1000 bar	1/4 NPT Female	**BN18-P4**
20k psi 1400 bar	1/4 BSPP Female	**BN18-BSPP4**
22k psi 1500 bar	9/16 LH Female	**BN18-MP9L**
	9/16 RH Female	**BN18-MP9R**
40k psi 2800 bar	3/8 LH Female	**BN18-H6L**
	M14 LH Female	**BN18-HM14L**
	9/16 LH Female	**BN18-H9L**
	9/16 RH Female	**BN18-H9R**

STEP 2 HEAD SELECTION

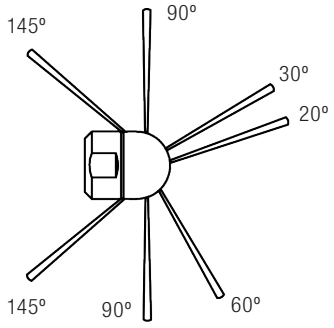
There are three standard head configurations for the BN18 swivel. Custom heads are available on request.



POLISHER
4 Ports:
2 @ 90º
2 @ 105º



UNPLUGGER
5 Ports:
1 @ 15º
1 @ 30º
1 @ 45º
2 @ 135º or 145º



UNIVERSAL
7 Ports:
1 @ 20º
1 @ 30º
1 @ 60º
2 @ 90º
2 @ 145º

BANSHEE BN18

The following table lists head selection approximations of common jetting scenarios for Banshee BN18 swivels:

SWIVEL	HEAD STYLE	PRESSURE RANGE	FLOW RANGE	HEAD PART ID	NOZZLES FITTED	
					FRONT	BACK
BN18	Polisher	8–15k psi 550–1000 bar	11–14 gpm 42–53 l/min	**BN18 042-A**	N/A	N/A
			8–10 gpm 30–38 l/min	**BN18 042-B**	N/A	N/A
		12–22k psi 830–1500 bar	11–14 gpm 42–53 l/min	**BN18 042-C**	N/A	N/A
			8–10 gpm 30–38 l/min	**BN18 042-D**	N/A	N/A
		30–40k psi 2100–2800 bar	8–8.5 gpm 30–32 l/min	**BN18 442-A**	2 x **OS2 020**	2 x **OS2 017**
			7–7.5 gpm 27–28 l/min	**BN18 442-B**	2 x **OS2 018**	2 x **OS2 017**
			6–6.5 gpm 23–25 l/min	**BN18 442-C**	2 x **OS2 015**	2 x **OS2 015**
			5–5.5 gpm 19–21 l/min	**BN18 442-D**	2 x **OS2 010**	2 x **OS2 014**
	Unplugger	8–15k psi 550–1000 bar	11–14 gpm 42–53 l/min	**BN18 043-A**	N/A	N/A
			8–10 gpm 30–38 l/min	**BN18 043-B**	N/A	N/A
		12–22k psi 830–1500 bar	11–14 gpm 42–53 l/min	**BN18 043-C**	N/A	N/A
			8–10 gpm 30–38 l/min	**BN18 043-D**	N/A	N/A
		30–40k psi 2100–2800 bar	8–8.5 gpm 30–32 l/min	**BN18 443-A**	3 x **OS2 014**	2 x **OS2 020**
			7–7.5 gpm 27–28 l/min	**BN18 443-B**	3 x **OS2 013**	2 x **OS2 019**
			6–6.5 gpm 23–25 l/min	**BN18 443-C**	3 x **OS2 011**	2 x **OS2 016**
			5–5.5 gpm 19–21 l/min	**BN18 443-D**	3 x **OS2 009**	2 x **OS2 014**
	Universal	8–15k psi 550–1000 bar	11–16 gpm 42–53 l/min	**BN18 044-A**	N/A	N/A
			8–10 gpm 30–38 l/min	**BN18 044-B**	N/A	N/A
		12–22k psi 830–1500 bar	11–14 gpm 42–53 l/min	**BN18 044-C**	N/A	N/A

STEP 3 MAINTENANCE RESOURCES

StoneAge provides a tool kit for the Banshee BN18. This kit contains required wrenches for the BN18 swivel.

SWIVEL	TOOL KIT	MANUAL
BN18 (22k)	**BN18 612**	**PL 505**
BN18 (40k)	**BN18 612-H**	**PL 507**

Kit components and tool maintenance/assembly videos are available on the StoneAge website:
WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs,
please contact your StoneAge Customer Service.

When ordering a Banshee BN18 tool by line item, you should specify:

1. Swivel Part ID
2. Head Part ID
3. Part IDs of spare heads or maintenance items, if required

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN18-HM14L**	Banshee swivel 18 mm M14 LH connection
3	**BN18 442-A**	Polisher head

BANSHEE BN24

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Banshee BN24 tool packages for the most commonly used configurations. All Banshee BN24 packages come fully assembled and include 1. Swivel, 2. Head.

The following table shows the configurations of standard Banshee BN24 tool packages:

MAXIMUM PRESSURE	INLET CONNECTION	PACKAGE CONTENTS	PACKAGE PART ID
15k psi 1000 bar	3/8 NPT Female	1 x BN24 Banshee swivel 1 x Polisher head	**BN24-NPT-POL-PKG**
		1 x BN24 Banshee swivel 1 x Universal head	**BN24-NPT-UNI-PKG**
20k psi 1400 bar	3/8 BSPP Female	1 x BN24 Banshee swivel 1 x Polisher head	**BN24-BSPP-POL-PKG**
		1 x BN24 Banshee swivel 1 x Universal head	**BN24-BSPP-UNI-PKG**
22k psi 1500 bar	9/16 LH Female, 9/16 RH Female	1 x BN24 Banshee swivel 1 x Polisher head	**BN24-MP-POL-PKG**
		1 x BN24 Banshee swivel 1 x Universal head	**BN24-MP-UNI-PKG**

When ordering a standard Banshee BN24 package, you should specify:

1. Package Part ID and inlet connection thread
2. Pump pressure and flow
3. Hose length and ID

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN24-MP-POL-PKG**	BN24 polisher package 20k psi 16 gpm 50 ft 10 mm ID hose 9/16 LH

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact your StoneAge Customer Service for questions about specific applications.

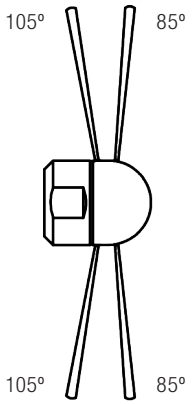
STEP 1 SWIVEL SELECTION

There are four Banshee BN24 swivel options available. The correct swivel is selected based on the maximum working pressure and inlet connection required.

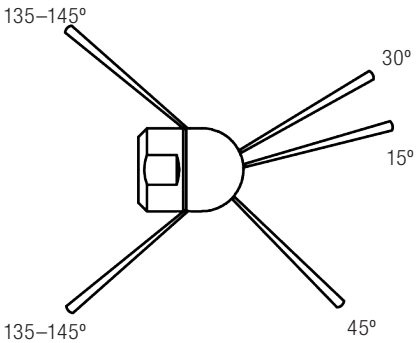
MAXIMUM PRESSURE	INLET CONNECTION	SWIVEL PART ID
15k psi 1000 bar	3/8 NPT Female	**BN24-P6**
20k psi 1400 bar	3/8 BSPP Female	**BN24-BSPP**
22k psi 1500 bar	9/16 LH Female	**BN24-MP9L**
	9/16 RH Female	**BN24-MP9R**

STEP 2 HEAD SELECTION

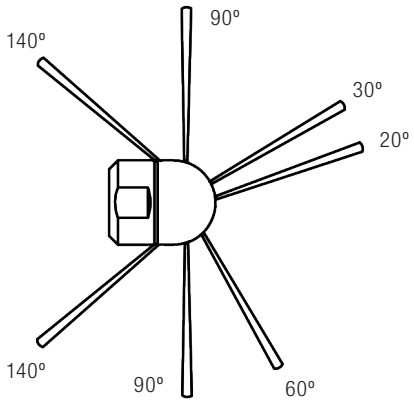
There are three standard head configurations for the BN24 swivel. Custom heads are available on request.



POLISHER
2 Ports:
2 @ 85º
2 @ 105º



UNPLUGGER
5 Ports:
1 @ 15º
1 @ 30º
1 @ 45º
2 @ 135º or 145º



UNIVERSAL
7 Ports:
1 @ 20º
1 @ 30º
1 @ 60º
2 @ 90º
2 @ 140º

BANSHEE BN24

The following table lists head selection approximations of common jetting scenarios for Banshee BN24 swivels:

SWIVEL	HEAD STYLE	PRESSURE RANGE	FLOW RANGE	HEAD PART ID
BN24	Polisher	8–15k psi 550–1000 bar	19–24 gpm 72–91 l/min	**BN24 042-A**
			14–18 gpm 53–68 l/min	**BN24 042-B**
			11–13 gpm 42–49 l/min	**BN24 042-C**
		12–22k psi 830–1500 bar	17–20 gpm 64–76 l/min	**BN24 042-D**
			14–16 gpm 53–61 l/min	**BN24 042-E**
			11–13 gpm 42–49 l/min	**BN24 042-F**
	Unplugger	8–15k psi 550–1000 bar	19–24 gpm 72–91 l/min	**BN24 043-A**
			14–18 gpm 53–68 l/min	**BN24 043-B**
			11–13 gpm 42–49 l/min	**BN24 043-C**
		12–22k psi 830–1500 bar	17–20 gpm 64–76 l/min	**BN24 043-D**
			14–16 gpm 53–61 l/min	**BN24 043-E**
			11–13 gpm 42–49 l/min	**BN24 043-F**
	Universal	10–15k psi 700–1000 bar	19–24 gpm 72–91 l/min	**BN24 044-A**
			14–18 gpm 53–68 l/min	**BN24 044-B**
			11–13 gpm 42–49 l/min	**BN24 044-C**
		15–22k psi 1000–1500 bar	17–20 gpm 64–76 l/min	**BN24 044-D**
			14–16 gpm 53–61 l/min	**BN24 044-E**
			11–13 gpm 42–49 l/min	**BN24 044-F**

STEP 3 MAINTENANCE RESOURCES

StoneAge provides a tool kit for the Banshee BN24. This kit contains required wrenches for the BN24 swivel.

SWIVEL	TOOL KIT	MANUAL
BN24 (22k)	**BN24 612**	**PL 505**

Kit components and tool maintenance/assembly videos are available on the StoneAge website:
WWW.STONEAGETOOLS.COM

When ordering a Banshee BN24 tool by line item, you should specify:

1. Swivel Part ID
2. Head Part ID
3. Part IDs of spare heads or maintenance items, if required

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN24-P6**	Banshee swivel 24 mm 3/8 NPT connection
3	**BN24 044-E**	Polisher head
1	**BN24 612**	Tool Kit

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Banshee BN27 tool packages for the most commonly used configurations. All Banshee BN27 packages come fully assembled and include 1. Swivel, 2. Head.

The following table shows the configurations of standard Banshee BN27 tool packages:

MAXIMUM PRESSURE	INLET CONNECTION	PACKAGE CONTENTS	PACKAGE PART ID
40k psi 2800 bar	9/16 LH Female	1 x BN27 Banshee swivel 1 x Polisher head	**BN27-HP-POL-PKG**
		1 x BN27 Banshee swivel 1 x Unplugger head	**BN27-HP-UNP-PKG**
	M14 LH Female	1 x BN27 Banshee swivel 1 x Polisher head	**BN27-MHP-POL-PKG**
		1 x BN27 Banshee swivel 1 x Unplugger head	**BN27-MHP-UNP-PKG**

When ordering a standard Banshee BN27 package, you should specify:

1. Package Part ID and inlet connection thread
2. Pump pressure and flow
3. Hose length and ID

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN27-HP-POL-PKG**	BN27 polisher package 40k psi 7.5 gpm 50 ft 8 mm ID hose 9/16 LH

BANSHEE BN27

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact your StoneAge Customer Service for questions about specific applications.

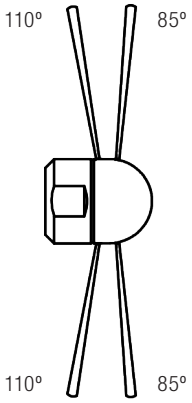
STEP 1 SWIVEL SELECTION

There are two Banshee BN27 swivel options available. The correct swivel is selected based on the maximum working pressure and inlet connection required.

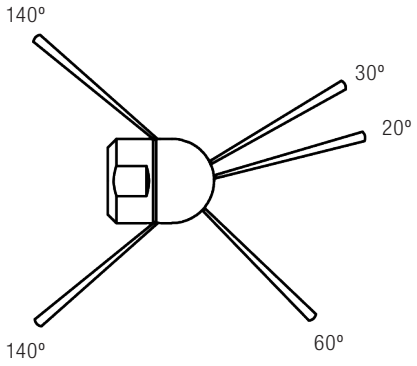
MAXIMUM PRESSURE	INLET CONNECTION	SWIVEL PART ID
40k psi 2800 bar	9/16 LH Female	**BN27-H9L**
	M14 LH Female	**BN27-HM14L**

STEP 2 HEAD SELECTION

There are two standard head configurations for the BN27 swivel. Custom heads are available on request.



POLISHER
4 Ports:
2 @ 85º
2 @ 110º



UNPLUGGER
5 Ports:
1 @ 20º
1 @ 30º
1 @ 60º
2 @ 140º

The following table lists head selection approximations of common jetting scenarios for Banshee BN27 swivels:

SWIVEL	HEAD STYLE	PRESSURE RANGE	FLOW RANGE	HEAD PART ID	NOZZLES FITTED	
					FRONT	BACK
BN27	Polisher	30–40k psi 2100–2800 bar	8–8.5 gpm 30–32 l/min	**BN27 442-A**	2 x **OS2 018**	2 x **OS2 018**
			7–7.5 gpm 27–28 l/min	**BN27 442-B**	2 x **OS2 015**	2 x **OS2 016**
			6–6.5 gpm 23–25 l/min	**BN27 442-C**	2 x **OS2 011**	2 x **OS2 015**
			5–5.5 gpm 19–21 l/min	**BN27 442-D**	2 x **OS2 009**	2 x **OS2 013**
	Unplugger	30–40k psi 2100–2800 bar	8–8.5 gpm 30–32 l/min	**BN27 443-A**	3 x **OS2 013**	2 x **OS2 019**
			7–7.5 gpm 27–28 l/min	**BN27 443-B**	3 x **OS2 011**	2 x **OS2 017**
			6–6.5 gpm 23–25 l/min	**BN27 443-C**	3 x **OS2 009**	2 x **OS2 014**
			5–5.5 gpm 19–21 l/min	**BN27 443-D**	3 x **OS2 006**	2 x **OS2 013**

STEP 3 MAINTENANCE RESOURCES

StoneAge provides a tool kit for the Banshee BN27. This kit contains required wrenches for the BN27 swivel.

SWIVEL	TOOL KIT	MANUAL
BN27 (40k)	**BN27 6120H9L**	**PL 507**

Kit components and tool maintenance/assembly videos are available on the StoneAge website:
WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs, please contact your StoneAge Customer Service.

When ordering a Banshee BN27 tool by line item, you should specify:

1. Swivel Part ID
2. Head Part ID
3. Part IDs of spare heads or maintenance items, if required

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN27-H9L**	Banshee swivel 27 mm 9/16 LH connection
3	**BN27 443-C**	Unplugger head

BANSHEE BN33

ORDERING A STANDARD PACKAGE

StoneAge offers standardized Banshee BN33 tool packages for the most commonly used configurations. All Banshee BN33 packages come fully assembled and include 1. Swivel, 2. Head.

The following table shows the configurations of standard Banshee BN33 tool packages:

MAXIMUM PRESSURE	INLET CONNECTION	PACKAGE CONTENTS	PACKAGE PART ID
15k psi 1000 bar	1/2 NPT Female	1 x BN33 Banshee swivel 1 x Universal head	**BN33-NPT-UNI-PKG**
22k psi 1500 bar	1/2 BSP Female	1 x BN33 Banshee swivel 1 x Universal head	**BN33-BSPP-UNI-PKG**
	9/16 MP Female	1 x BN33 Banshee swivel 1 x Universal head	**BN33-MP-UNI-PKG**

When ordering a standard Banshee BN33 package, you should specify:

1. Package Part ID and inlet connection thread
2. Pump pressure and flow
3. Hose length and ID

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN33-MP-UNI-PKG**	BN33 universal package 9/16 MP inlet 15k psi 15 gpm 50 ft 10 mm ID hose

ORDERING BY LINE ITEM

Complete tools can be configured by following the steps outlined below.
Contact your StoneAge Customer Service for questions about specific applications.

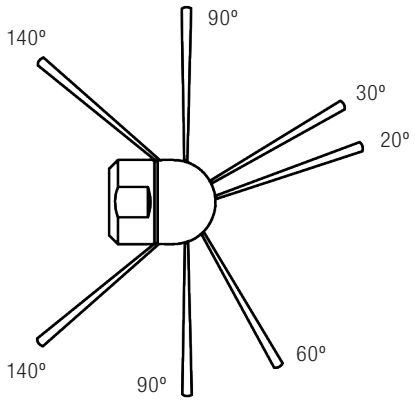
STEP 1 SWIVEL SELECTION

There are six Banshee BN33 swivel options available. The correct swivel is selected based on the maximum working pressure and inlet connection required.

MAXIMUM PRESSURE	INLET CONNECTION	SWIVEL PART ID
15k psi 1000 bar	1/2 NPT Female	**BN33-P8**
22k psi 1500 bar	1/2 BSPP Female	**BN33-BSPP8**
	9/16 MP Female	**BN33-MP9**

STEP 2 HEAD SELECTION

There is one standard head configurations for the BN33 swivel. Custom heads are available on request.



UNIVERSAL
7 Ports:
1 @ 20º
1 @ 30º
1 @ 60º
2 @ 90º
2 @ 140º

BANSHEE BN33

The following table lists head selection approximations of common jetting scenarios for Banshee BN33 swivels:

SWIVEL	HEAD STYLE	PRESSURE RANGE	FLOW RANGE	HEAD PART ID
BN33	Universal	8–15k psi 550–1000 bar	39–48 gpm 148–182 l/min	**BN33 044-A**
			32–38 gpm 121–142 l/min	**BN33 044-B**
			25–31 gpm 95–117 l/min	**BN33 044-C**
			19–24 gpm 72–91 l/min	**BN33 044-D**
			14–18 gpm 53–68 l/min	**BN33 044-E**
		12–22k psi 830–1500 bar	21–25 gpm 79–95 l/min	**BN33 044-F**
			17–20 gpm 64–76 l/min	**BN33 044-G**
			14–16 gpm 53–61 l/min	**BN33 044-H**
			11–13 gpm 42–49 l/min	**BN33 044-I**

STEP 3 MAINTENANCE RESOURCES

StoneAge provides a tool kit for the Banshee BN33. This kit contains required wrenches for the BN33 swivel.

SWIVEL	TOOL KIT	MANUAL
BN33 (22k)	**BN33 612**	**PL 505**

Kit components and tool maintenance/assembly videos are available on the StoneAge website:
WWW.STONEAGETOOLS.COM

For questions or help with a specific application, configuration or tool repairs, please contact your StoneAge Customer Service.

When ordering a Banshee BN33 tool by line item, you should specify:

1. Swivel Part ID
2. Head Part ID
3. Part IDs of spare heads or maintenance items, if required

FOR EXAMPLE:

QTY	PART ID	DESCRIPTION
1	**BN33-P8**	Banshee swivel 33 mm 1/2 NPT connection
3	**BN33 044-C**	Universal head