

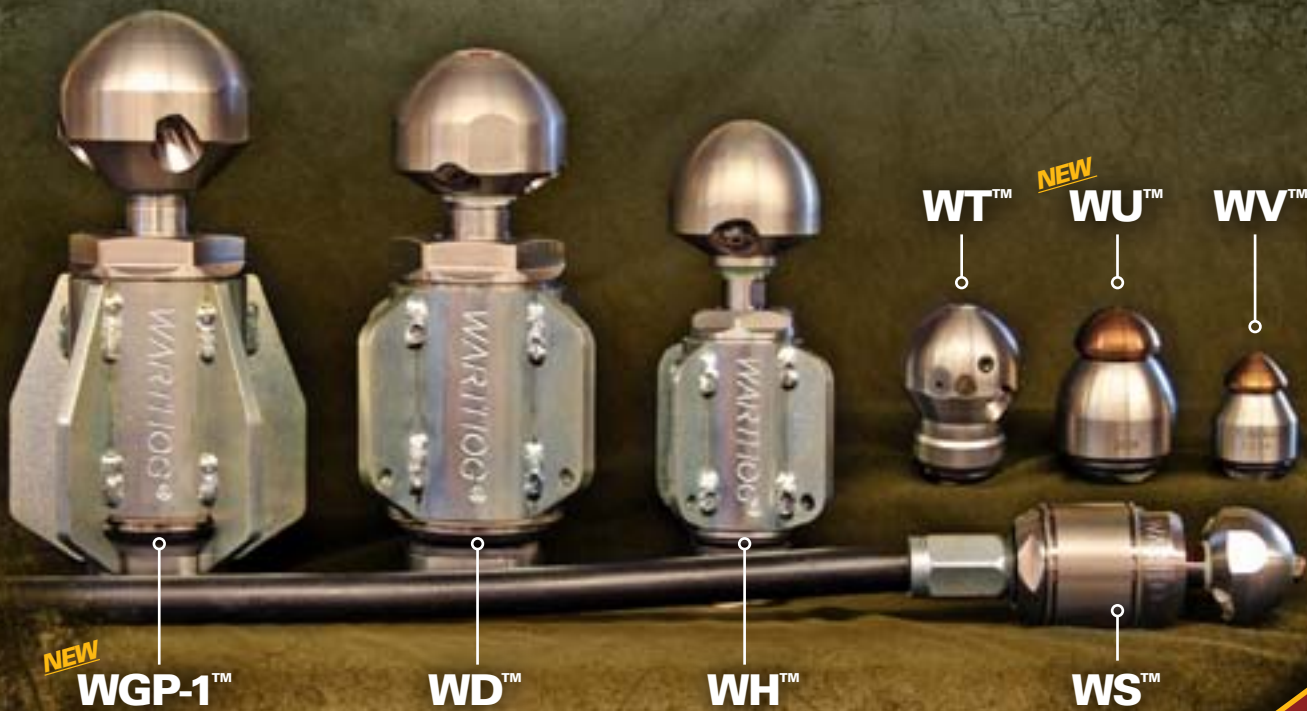


WARTHOG

2012
CATALOG

SEWER NOZZLES BY **STONEAGE**

THE INDUSTRY'S MOST POWERFUL AND DURABLE TOOLS



MAXIMUM PULLING POWER

The **NEW** WARTHOG® WGP-1™
With up to **40% MORE**
forward thrust

NEW! WARTHOG® WU™
A Powerful New WARTHOG® for 3" - 6" Sewer Lines



ToolTalk™ - New Tools and New Technologies for 2012

Classic Warthogs®



- For Tougher Lines & Blockages
- Patented Rotation Control
- Easy Field Maintenance
- Replaceable Nozzle Tips
- The Industry Standard

New Technology Warthogs®



- Excellent for General Cleaning
- High-Speed Rotation
- Low Maintenance Design
- Drilled Nozzle Ports
- No Fluids, No Seats or Seals

What is the new technology StoneAge® is now using in some of the smaller Warthog® models?

We have developed a new, patented, flow-through design that minimizes the moving parts, eliminates all high pressure seats and seals, and requires no viscous fluids. The result is a high-speed rotation nozzle that is perfect for general cleaning.

How does this affect the classic Warthog® models?

Not at all! We're still making the full line of trusted **Warthog**® nozzles. In fact we are offering a new 'Maximum Puller' model this year. (See opposite page at the bottom.) Tough, powerful and effective, these tools have become the industry standard for top-of-the-line performance.

When should contractors use the new Warthog® models?

Classic **Warthogs**® are still the workhorses of the industry, offering proven results in the toughest applications. Our new, flow-through models compliment the classic line by offering high-speed rotation that handles lighter loads in less time.



Big Brut
Cart Jetter
Courtesy of
Jettors
Northwest



Trailer Jetter
Courtesy of
O'Brien



Combination Truck
Courtesy of Hi-Vac



Special thanks to all the pump manufacturers who provided jetting imagery for this catalog, including Aquatech, Harben, Inc., Hot Jet USA, Jettors Northwest, Hi-Vac, Mongoose, O'Brien, Spartan, US Jetting, Vector & Vac-Con.



**Tools so mean only
a sewer could love 'em**



The **WARTHOG**® Line

This catalog is color-coded in sections by pipe size as shown below

**Small
Lines
2" - 6"
(51-152 mm)
Pages 2-9**

WV-1/4™



2" - 4" Lines for cart and trailer jettors. New, high-speed rotation technology for small lines with light to moderate blockages. Pages 2-3.

**WU-3/8™
WU-1/2™**

3" - 6" Lines for trailer jettors. Two models with new, high-speed rotation technology. 3/8" and 1/2" NPT & BSPP inlet options. Pages 4-5.

WT-3/8-C™

3" - 6" Lines for cart and trailer jettors. Now standard with carbide buttons for longer head life. Pages 6-9.

**Medium
Lines
4" - 18"
(102-457 mm)
Pages 10-16**

WS-1/2™



4" - 8" Lines for trailer jettors. Sold with a 2 ft. whip hose standard. Also jointed and rigid models, plus inlet options. Pages 10-12.

**WH-1/2™
WH-3/4™**



6" - 18" Lines. A real workhorse with 1/2" and 3/4" inlet options, both inlets available in NPT or BSPP. Pages 14-16.

**Large
Lines
8" - 36"
(203-914 mm)
Pages 18-25**

**WG-1™
WGP-1™**



8" - 36" Lines. WG-1 Classic™ and the new Maximum Puller WGP-1™. Designed for more pulling power. Pages 18-23.

WD 1-1/4™



8" - 36" Lines for Municipal jettors. This is a high flow model with up to 120 gpm (450 lpm) flows. Pages 24-25.

Accessories & Descaling Heads are on Page 13.



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2" - 4" Lines

A NEW Technology Tool



WARTHOG®
WV-1/4™

U.S. Patent No. 7,635,096, 8,016,210, 8,006,290
D626,624, D631,131 & D639,906
Patents Pending

Patented high-speed rotation combined with low maintenance creates a powerful new tool for 2-4" lines.

WV-1/4™ | Up to 4k psi (275 bar)
| 3-8 gpm Flows (11-30 l/min)
2" - 4" Lines (51-102 mm) | New High-Speed Technology

WV-1/4™

2" - 4" Lines with Elbows

The **WV-1/4™** uses the new flow-through technology and features a revolutionary high-speed design with no high pressure seals or bearings to service. It cleans lines as small as 2" with long sweeping elbows. This new design also features permanent, pre-drilled orifices. The tool operates from 2k-4k psi (100-275 bar) and 3-8 gpm (11-30 l/min). It has a 1/4" NPT pipe thread inlet and if a 1/4" NPT hose fitting is used the tool can pass through long radius elbows in 2" and larger lines. Contact **StoneAge®** for more information on the hose requirements. There are no maintenance or overhaul kits due to the low maintenance design. For more information and video clips of the tool at work visit our web site for **WARTHOG®** sewer nozzles at www.sewernozzles.com.

WV-1/4™ Specs

Maximum Pressure	4k psi	275 bar
Operating Pressure	2k-4k psi	100-275 bar
Rotation Speed	High-Speed	
Flow	3-8 gpm	11.4-30.3 l/min
Flow Rating	0.8 Cv	
Pulling Force	4-9 lb	40 N
Inlet Connection	1/4 NPT or BSPP	
Tool Diameter with Centralizer	1.3 in.	33 mm
Length	2.0 in.	51 mm
Nozzle Ports	3 Drilled	
Weight Complete	0.45 lb	.20 kg

WV-1/4™ Tool Head Options

Part Number	Front Jet	Back Jets	Flow
WV-1/4-A™	.024 in. .6 mm	2 x .052 in. 1.3 mm	7 - 8 gpm 26-30 l/min
WV-1/4-B™	.020 in. .5 mm	2 x .039 in. 1.0 mm	5 - 6 gpm 15-23 l/min
WV-1/4-C™	.018 in. .45 mm	2 x .032 in. .8 mm	4 - 4.5 gpm 15-17 l/min
WV-1/4-D™	.018 in. .45 mm	2 x .028 in. .7 mm	3 - 3.5 gpm 11-13 l/min

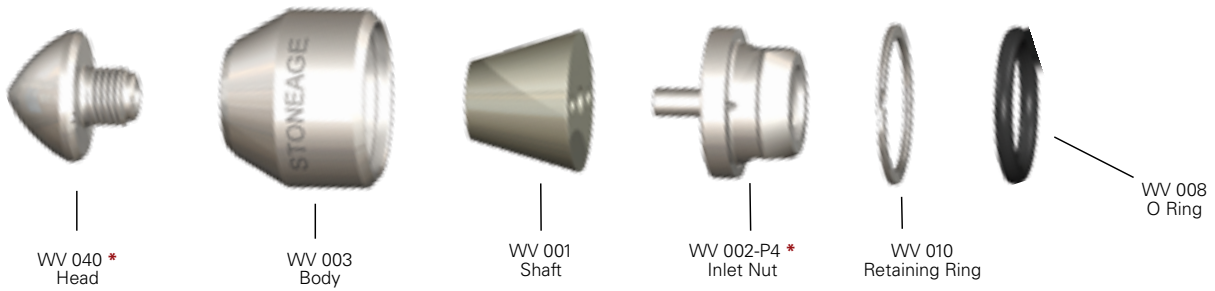


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WV-1/4™

U.S. Patent No. 7,635,096, 8,016,210, 8,006,290
D626,624, D631,131 & D639,906
Patents Pending

This model comes with permanent, pre-drilled orifices.
See the chart on the opposite page for standard head options.



* See charts on the opposite page for inlet nut and jetting options.

This is a low-maintenance tool. There are no maintenance or overhaul kits. However, the **WV 612** tool kit is available for easy tool disassembly.



Safety First!



If a **WV-1/4™** is being used in pipes larger than 4" in diameter, a rigid stinger should be installed between the tool inlet and the hose end. Otherwise the tool can turn around inside the line (as shown below) and come back toward the operator, causing serious injury or death.



Potential Hazard!

Stinger not in use here. Tool is backing out of the pipe.

WV-1/4™ in 8" pipe.



3" - 6" Lines

A NEW Technology Tool



WARTHOG®
WU™ Models

U.S. Patent No.
7,635,096, 8,016,210, 8,006,290
& D 638,912 • Patents Pending

The newest member of the **WARTHOG®** family comes with 3/8" & 1/2" inlet options, either NPT or BSPP.

NEW

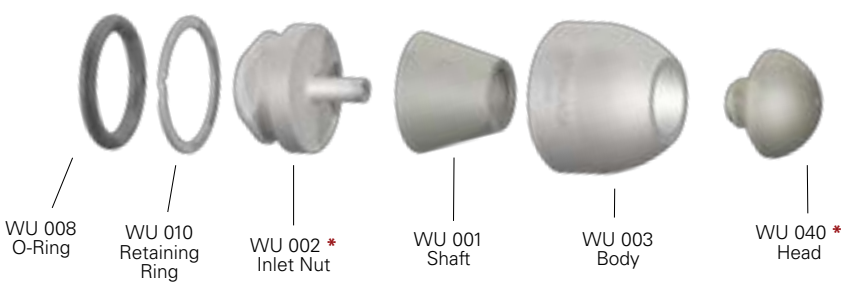
WU-3/8™ & WU-1/2™

WU-3/8™ & 1/2™
3" - 6" Lines (76-152 mm)

Up to 4k psi (275 bar)
5-18 gpm Flows (20-68 l/min)
New High-Speed Technology

3"- 6" Lines with Elbows

StoneAge® is proud to introduce the new **WU-3/8™** and **WU-1/2™** models. These tools operate in 3" - 6" ID lines and are available with 3/8" or 1/2" inlet ports, either NPT or BSPP. Both models have no bearings or viscous fluids and feature permanent, drilled jets. We tested the new **WU-3/8™** in a six foot tube plugged with ice, frozen grease and gravel. The tube was cleared in less than one minute. Visit our web site sewernozzles.com to view a video of the test. See the charts on the opposite page for standard jetting options.



* See chart at right for inlet nut options and opposite page for jetting specifications. This is a low-maintenance tool. There are no maintenance or overhaul kits. However, the **WV 612** Tool Kit tool is necessary for easy tool disassembly.

U.S. Patent No. 7,635,096 & D 638,912 • Design Patents Pending

WU-3/8™ & WU-1/2™ Specs

Maximum Pressure	4k psi	275 bar
Operating Pressure	2k-4k psi	138-275 bar
Rotation Speed	High Speed	
Flow	5-18 gpm	19-68 l/min
Flow Rating	0.9 Cv	
Pulling Force	7-23 lb	31-102 N
Inlet Connection	3/8 or 1/2 NPT	3/8 or 1/2 BSPP
Tool Diameter with Centralizer	2.0 in.	51 mm
Length	2.8 in.	71 mm
Nozzle Ports	3 Drilled	



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WU-3/8™ Jetting Charts

250 ft of 3/8" ID Hose	Part Number	Minimum Pump Output					
		2k psi	137 bar	3k psi	207 bar	4k psi	272 bar
	WU-3/8-F & WU-3/8-BSPP-F	4.5 gpm	17 l/min	6 gpm	23 l/min	7 gpm	26 l/min
WU-3/8-E & WU-3/8-BSPP-E	6.5 gpm	25 l/min	8 gpm	30 l/min	9.5 gpm	36 l/min	
WU-3/8-D & WU-3/8-BSPP-D	8 gpm	30 l/min	9.5 gpm	36 l/min	11 gpm	42 l/min	
WU-3/8-C & WU-3/8-BSPP-C	9 gpm	38 l/min	11 gpm	42 l/min	13 gpm	49 l/min	
WU-3/8-B & WU-3/8-BSPP-B	11 gpm	42 l/min	13 gpm	49 l/min	15 gpm	57 l/min	
WU-3/8-A & WU-3/8-BSPP-A	11.5 gpm	44 l/min	14 gpm	53 l/min	16 gpm	60 l/min	

500 ft of 3/8" ID Hose	Part Number	Minimum Pump Output					
		2k psi	137 bar	3k psi	207 bar	4k psi	272 bar
	WU-3/8-F & WU-3/8-BSPP-F	5 gpm	19 l/min	6 gpm	23 l/min	6.5 gpm	25 l/min
WU-3/8-E & WU-3/8-BSPP-E	6 gpm	23 l/min	7.5 gpm	28 l/min	8.5 gpm	32 l/min	
WU-3/8-D & WU-3/8-BSPP-D	7 gpm	26 l/min	8 gpm	30 l/min	10 gpm	38 l/min	
WU-3/8-C & WU-3/8-BSPP-C	9.5 gpm	36 l/min	10.5 gpm	40 l/min	12 gpm	45 l/min	
WU-3/8-B & WU-3/8-BSPP-B	Not Recommended		Not Recommended		Not Recommended		
WU-3/8-A & WU-3/8-BSPP-A	Not Recommended		Not Recommended		Not Recommended		

WU-1/2™ Jetting Charts

250 ft of 1/2" ID Hose	Part Number	Minimum Pump Output					
		2k psi	137 bar	3k psi	207 bar	4k psi	272 bar
	WU-1/2-F & WU-1/2-BSPP-F	5 gpm	19 l/min	6 gpm	23 l/min	7 gpm	26 l/min
WU-1/2-E & WU-1/2-BSPP-E	7 gpm	26 l/min	8.5 gpm	32 l/min	9.5 gpm	36 l/min	
WU-1/2-D & WU-1/2-BSPP-D	8 gpm	30 l/min	10 gpm	38 l/min	12 gpm	45 l/min	
WU-1/2-C & WU-1/2-BSPP-C	10.5 gpm	39 l/min	13 gpm	49 l/min	15 gpm	57 l/min	
WU-1/2-B & WU-1/2-BSPP-B	12 gpm	45 l/min	15 gpm	57 l/min	17 gpm	64 l/min	
WU-1/2-A & WU-1/2-BSPP-A	14 gpm	53 l/min	17 gpm	64 l/min	19 gpm	72 l/min	

500 ft of 1/2" ID Hose	Part Number	Minimum Pump Output					
		2k psi	137 bar	3k psi	207 bar	4k psi	272 bar
	WU-1/2-F & WU-1/2-BSPP-F	5 gpm	19 l/min	6 gpm	23 l/min	7 gpm	26 l/min
WU-1/2-E & WU-1/2-BSPP-E	7 gpm	26 l/min	8.5 gpm	32 l/min	9.5 gpm	36 l/min	
WU-1/2-D & WU-1/2-BSPP-D	7.5 gpm	28 l/min	10 gpm	38 l/min	11.5 gpm	44 l/min	
WU-1/2-C & WU-1/2-BSPP-C	10 gpm	38 l/min	12 gpm	45 l/min	14 gpm	53 l/min	
WU-1/2-B & WU-1/2-BSPP-B	11.5 gpm	44 l/min	14 gpm	53 l/min	16 gpm	60 l/min	
WU-1/2-A & WU-1/2-BSPP-A	13 gpm	49 l/min	16 gpm	60 l/min	18 gpm	68 l/min	



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3" - 6"
Lines



WARTHOG®
WT-3/8-C™

US Pat. No: 5,964,414

We now offer the **WT 210**,
an optional 100 ft. hose
with either 3/8" or 1/2"
inlet connections

A **WT-3/8-C™** with extended-life carbide buttons, now standard on every model.

WT-3/8-C™

3" - 6" Lines (76-152 mm)

Up to 4k psi (275 bar)

5-12 gpm Flows (20-45 l/min)

Classic Workhorse Model

WT-3/8-C™

3"- 6" Lines with Elbows

Our smaller classic **WARTHOG®** models have all the powerful features of the larger tools but can negotiate elbows and clean-outs commonly found in laterals at homes, buildings, restaurants and other light commercial facilities. The **WT-3/8-C™** is designed specifically to handle 3" - 6" lines and clean-outs. This tool is most commonly used on small capacity pumps and cart jettors. We've added permanent carbide buttons to the **WT-3/8-C™** model, specifically designed to handle demanding applications.

Pipes made of cast iron and those that have sand or silt can act as abrasive agents that can aggressively wear out the tool. Our carbide buttons are available in all offsets and add up to 5 times the life compared to previous **WT-3/8™** models. It also features replaceable **AP2** nozzles.



Spartan Soldier
Courtesy of Spartan

WT-3/8-C™ Specs

Maximum Pressure	4,000 psi	275 bar
Operating Pressure	1,500-4,000 psi	100-275 bar
Rotation Speed	300-500 rpm	
Flow	5-12 gpm	20-45 l/min
Flow Rating	0.75 Cv	
Pulling Force	5-20 lb	22-90 N
Inlet Connection	3/8 NPT or BSPP	
Tool Diameter	1.9 in.	48 mm
Length	3.0 in.	76 mm
Nozzle Ports	3 x 1/8 NPT	
Weight Complete	1.2 lb	.54 kg

The **WT-3/8-C™** is your tool of choice for cutting roots, clearing ice and removing blockages.



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WT-3/8-C™

US Pat. No: 5,964,414



WT-3/8-C™ Maintenance & Overhaul Kits

WT 600 - Service Kit

- 1 BC 410 Syringe Assembly
- 1 BJ 026 Port Plug
- 1 BJ 048-S Visc. Fluid, Slow - 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 GP 025-P2 Hex Socket Plug
- 1 RJ 011-K Brass Seat
- 1 RJ 012-KTO H.P. Seal & O-Ring
- 1 WT 014 Wave Spring

WT 610 - Overhaul Kit

- 1 BJ 026 Port Plug
- 1 BJ 048-S Visc. Fluid, Slow - 6oz.
- 1 RJ 011-K Brass Seat
- 1 RJ 012-KTO H.P. Seal & O-Ring
- 1 WT 006 Seal
- 2 WT 007 Bearing, Ball
- 1 WT 008 O-Ring
- 1 WT 010 Seal
- 1 WT 014 Wave Spring
- 1 WT 032 Retaining Ring
- 1 WT 030 O Ring

WT 602 - Seal Kit

- 1 RJ 011-K Brass Seat
- 1 RJ 012-KTO H.P. Seal & O-Ring
- 1 WT 014 Wave Spring

WT 612 - Tool Kit

- 1 BA 100 Retaining Ring Pliers
- 1 WT 105 Tool



3" - 6" Lines

WT-3/8-C™ Jetting Chart

	Pump Pressure	Pump Output	Head Offset	Front Jet 15°	Rear Jets (2) 150°	
2,000 psi / 140 bar 150 ft Hose w/ 3/8" ID		5 gpm 19 l/min		R60	AP2 022	AP2 038
		6 gpm 22 l/min		R60	AP2 024	AP2 042
		7 gpm 26 l/min		R60	AP2 026	AP2 047
		8 gpm 30 l/min		R31	AP2 026	AP2 052
		9 gpm 34 l/min		R31	AP2 029	AP2 052
		10 gpm 38 l/min		R31	AP2 029	AP2 057
		11 gpm 42 l/min		R31	AP2 029	AP2 063
		12 gpm 45 l/min		R31	AP2 029	AP2 069
2,000 psi / 140 bar 300 ft Hose w/ 3/8" ID		5 gpm 19 l/min		R60	AP2 022	AP2 038
		6 gpm 22 l/min		R60	AP2 024	AP2 042
		7 gpm 26 l/min		R60	AP2 026	AP2 047
		8 gpm 30 l/min		R31	AP2 026	AP2 052
		9 gpm 34 l/min		R31	AP2 029	AP2 057
	10-12 gpm 38-45 l/min		R31	AP2 029	AP2 063	
3,000 psi / 210 bar 150 ft Hose w/ 3/8" ID		5 gpm 19 l/min		R60	AP2 022	AP2 035
		6 gpm 22 l/min		R60	AP2 024	AP2 038
		7 gpm 26 l/min		R60	AP2 026	AP2 042
		8 gpm 30 l/min		R60	AP2 026	AP2 042
		9 gpm 34 l/min		R31	AP2 029	AP2 047
		10-11 gpm 38-42 l/min		R31	AP2 029	AP2 052
	12 gpm 45 l/min		R31	AP2 029	AP2 057	
3,000 psi / 210 bar 300 ft Hose w/ 3/8" ID		5 gpm 19 l/min		R60	AP2 022	AP2 035
		6 gpm 22 l/min		R60	AP2 024	AP2 038
		7 gpm 26 l/min		R60	AP2 026	AP2 042
		8 gpm 30 l/min		R31	AP2 026	AP2 047
		9 gpm 34 l/min		R31	AP2 029	AP2 047
		10 gpm 38 l/min		R31	AP2 029	AP2 052
	11 gpm 42 l/min		R31	AP2 029	AP2 057	
	12 gpm 45 l/min		R31	AP2 029	AP2 063	
4,000 psi / 280 bar 150 ft Hose w/ 3/8" ID		5 gpm 19 l/min		R60	AP2 022	AP2 032
		6 gpm 22 l/min		R60	AP2 024	AP2 035
		7 gpm 26 l/min		R60	AP2 026	AP2 038
		8 gpm 30 l/min		R31	AP2 026	AP2 042
		9 gpm 34 l/min		R31	AP2 029	AP2 042
	10-11 gpm 38-42 l/min		R31	AP2 029	AP2 047	
	12 gpm 45 l/min		R31	AP2 029	AP2 052	
4,000 psi / 280 bar 300 ft Hose w/ 3/8" ID		5 gpm 19 l/min		R60	AP2 022	AP2 032
		6 gpm 22 l/min		R60	AP2 024	AP2 035
		7 gpm 26 l/min		R60	AP2 026	AP2 038
		8 gpm 30 l/min		R31	AP2 026	AP2 042
		9 gpm 34 l/min		R31	AP2 029	AP2 042
	10 gpm 38 l/min		R31	AP2 029	AP2 047	
	11-12 gpm 42-45 l/min		R31	AP2 029	AP2 052	



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3" - 6" Lines



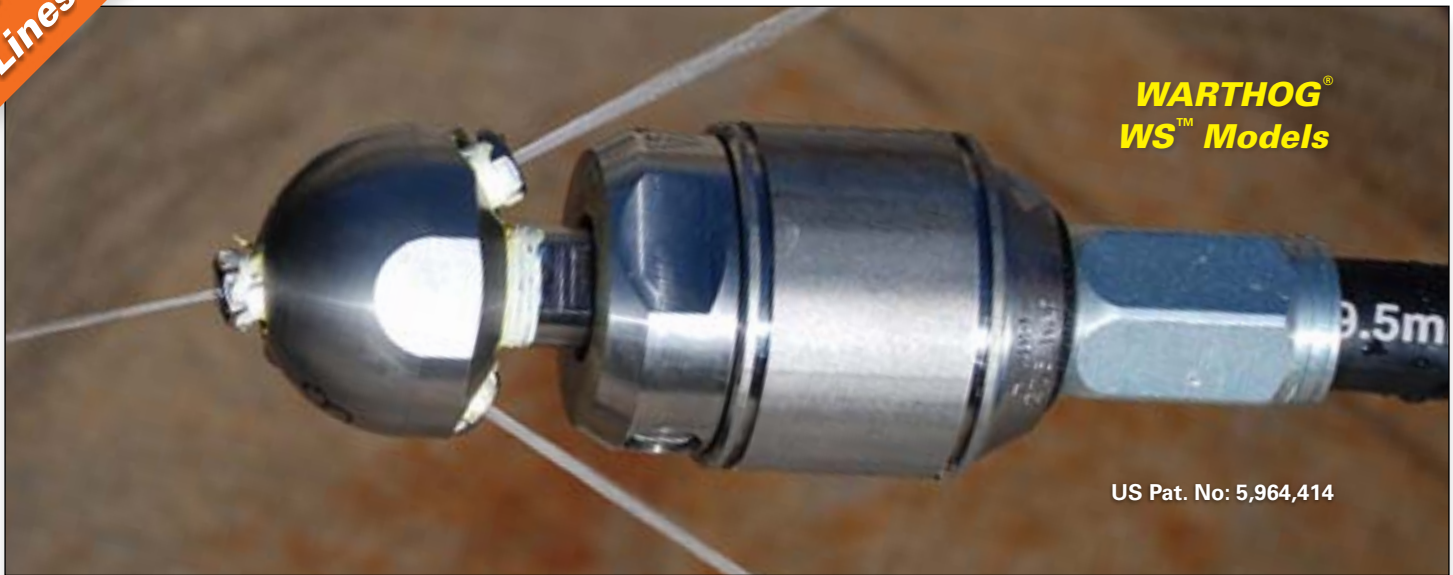
Trailer Jetter
Courtesy of US Jetting



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4" - 8" Lines



WARTHOG®
WS™ Models

US Pat. No: 5,964,414

The **WS-1/2™** features several inlet options, including jointed and rigid models, with or without a whip hose.

WS-1/2™

4" - 8" Lines

The **WS-1/2™** is designed to handle 4" - 8" lines and is most commonly used with trailer jettors. Operators use these tools to clean lines in restaurants, hospitals, multi-story apartment buildings, residential, and other applications. You can expect to remove grease, cut roots, ice and soil blockages. It is also available in a 1/2" BSPP inlet option.

WS-1/2™ 4" - 8" Lines (102-204 mm)	Up to 4k psi (275 bar)
	8-20 gpm Flows (30-76 l/min)
	3 Models Available

Jointed Inlet Models

These jointed options allow the inlet hose to bend to the side which shortens the rigid length of the tool and makes access into clean outs and limited access applications much easier. Inlet ports for this model are available in either a 1/2" NPT or BSPP.

WS-1/2-J™ & WS-1/2-J-BSPP™
Jointed Models



Optional Rigid Inlets

The **WS-P8™** is an excellent option for straight pipes. The need for a whip hose is eliminated, allowing you to connect the hose directly to the tool. It is available with a female 1/2" NPT or BSPP connection. In this configuration 4" 90° bends are no longer negotiable.

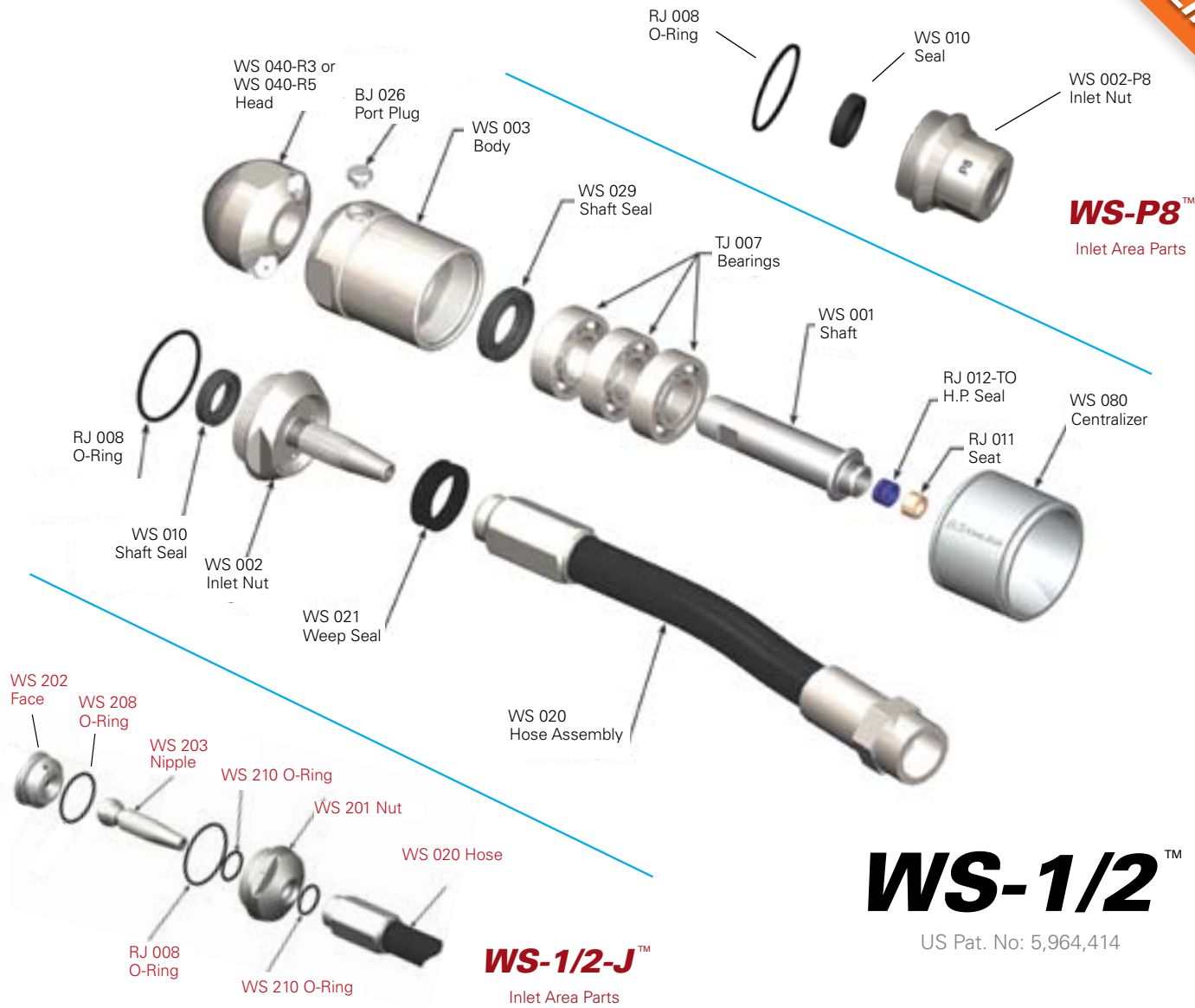


WS-1/2™ Specs		
Maximum Pressure	4,000 psi	275 bar
Operating Pressure	1,500-4,000 psi	100-275 bar
Rotation Speed	200-500 rpm	
Flow	8-20 gpm	30-76 l/min
Flow Rating	1.3 Cv	
Pulling Force	9-27 lb	40-120 N
Inlet Connection	1/2 npt & BSPP	
Tool Diameter	1.9 in.	48 mm
Length	4.4 in.	112 mm
Nozzle Ports	3 x 1/8 NPT	
Weight Complete	2.95 lb	1.33 kg

We now offer an optional 35 ft. **NEW** hose with a 1/2" NPT inlet. **WS 020-35**



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WS-P8™
Inlet Area Parts

WS-1/2™
US Pat. No: 5,964,414

WS-1/2-J™
Inlet Area Parts

WS-1/2™ Service & Overhaul Kits

WS 600 - Service Kit

- 1 BC 410 Syringe Assembly
- 1 BJ 048-S Visc. Fluid, 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 GP 025-P2 Hex Socket Plug
- 1 RJ 011 Brass Seat
- 1 RJ 012-TO H.P. Seal & O-Ring

WS 610 - Overhaul Kit

- 1 BJ 026 Port Plug
- 1 BJ 048-S Visc. Fluid, 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 RJ 008 O-Ring
- 1 RJ 011 Brass Seat
- 1 RJ 012-TO H.P. Seal & O-Ring
- 3 TJ 007 Ball Bearings
- 1 WS 010 Small Seal
- 1 WS 021-S Weep Seal
- 1 WS 029 Large Seal

WS 610-J - Overhaul Kit

- 1 BJ 026 Port Plug
- 1 BJ 048-S Visc. Fluid, 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 RJ 008 O-Ring
- 1 RJ 011 Brass Seat
- 1 RJ 012-TO H.P. Seal & O-Ring
- 3 TJ 007 Ball Bearings
- 1 WS 010 Small Seal
- 1 WS 029 Large Seal
- 1 WS 208 O-Ring
- 2 WS 210 O-Rings

WS 612 - Tool Kit

- 1 TJ 064 Fill Tube
- 1 WS 105 Tool

WS 602 - Seal Kit

- 1 RJ 011 Brass Seal
- 1 RJ 012-TO H.P. Seal & O-Ring



WS-1/2™

WS-1/2™ Jetting Chart

	Pump Pressure	Pump Output	Head Offset	Front Jet 15°	Rear Jets (2) 150°
2,000 psi / 140 bar 250 ft Hose w/ 1/2" ID		20 gpm 76 l/min	R3	AP2 038	AP2 090
		8 gpm 30 l/min	R5	AP2 026	AP2 052
		10 gpm 40 l/min	R5	AP2 029	AP2 057
		12 gpm 45 l/min	R5	AP2 032	AP2 063
2,000 psi / 140 bar 300-500 ft Hose w/ 1/2" ID		14 gpm 50 l/min	R3	AP2 032	AP2 075
		16-20 gpm 60-75 l/min	R3	AP2 035	AP2 082
		8 gpm 30 l/min	R5	AP2 026	AP2 047
		10 gpm 40 l/min	R5	AP2 029	AP2 052
2,500 psi / 170 bar 300-500 ft Hose w/ 1/2" ID		12 gpm 45 l/min	R5	AP2 029	AP2 057
		14 gpm 50 l/min	R3	AP2 032	AP2 063
		16 gpm 60 l/min	R3	AP2 035	AP2 069
		18 gpm 70 l/min	R3	AP2 038	AP2 075
3,000 psi / 210 bar 300-500 ft Hose w/ 1/2" ID		20 gpm 75 l/min	R3	AP2 038	AP2 082
		8 gpm 30 l/min	R5	AP2 026	AP2 042
		10 gpm 40 l/min	R5	AP2 029	AP2 047
		12 gpm 45 l/min	R3	AP2 029	AP2 057
3,500 psi / 240 bar 300-500 ft Hose w/ 1/2" ID		14 gpm 50 l/min	R3	AP2 032	AP2 063
		16 gpm 60 l/min	R3	AP2 035	AP2 069
		18 gpm 70 l/min	R3	AP2 038	AP2 069
		20 gpm 75 l/min	R3	AP2 038	AP2 075
4,000 psi / 280 bar 300-500 ft Hose w/ 1/2" ID		8 gpm 30 l/min	R5	AP2 026	AP2 042
		10 gpm 40 l/min	R5	AP2 029	AP2 047
		12 gpm 45 l/min	R3	AP2 029	AP2 052
		14 gpm 50 l/min	R3	AP2 032	AP2 057
		16 gpm 60 l/min	R3	AP2 035	AP2 063
		18 gpm 70 l/min	R3	AP2 038	AP2 069
		20 gpm 75 l/min	R3	AP2 038	AP2 075
		8 gpm 30 l/min	R5	AP2 026	AP2 042
		10 gpm 40 l/min	R5	AP2 029	AP2 047
		12 gpm 45 l/min	R3	AP2 029	AP2 052
		14 gpm 50 l/min	R3	AP2 032	AP2 057
		16 gpm 60 l/min	R3	AP2 035	AP2 063
		18 gpm 70 l/min	R3	AP2 038	AP2 069
		20 gpm 75 l/min	R3	AP2 038	AP2 075
		8 gpm 30 l/min	R5	AP2 026	AP2 042
		10 gpm 40 l/min	R5	AP2 029	AP2 047
		12 gpm 45 l/min	R3	AP2 029	AP2 052
		14 gpm 50 l/min	R3	AP2 032	AP2 057
		16 gpm 60 l/min	R3	AP2 035	AP2 063
		18 gpm 70 l/min	R3	AP2 038	AP2 069
		20 gpm 75 l/min	R3	AP2 038	AP2 075
		8 gpm 30 l/min	R5	AP2 026	AP2 042
		10 gpm 40 l/min	R5	AP2 029	AP2 047
		12 gpm 45 l/min	R3	AP2 029	AP2 052
		14 gpm 50 l/min	R3	AP2 032	AP2 057
		16 gpm 60 l/min	R3	AP2 035	AP2 063
		18 gpm 70 l/min	R3	AP2 038	AP2 069
		20 gpm 75 l/min	R3	AP2 038	AP2 075



Descaling Heads Maximize Cleaning Power

StoneAge® offers optional heads that allow you to change our standard nozzle configuration. Your existing **WARTHOG**® can easily be converted into a powerful descaling tool by simply changing the head. The descaling pattern features two additional jets at 105° combined with a plugged front port to ensure maximum power. The result is enhanced removal of scale, tuberculation, corrosion products, soap and minerals.



WS 040-DS™
For the WS-1/2™



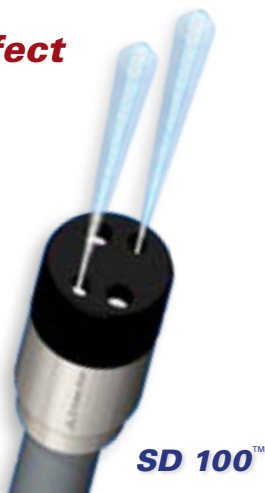
WH 040-DS™
For the WH-1/2™ & WH-3/4™



WG 040-DS™
For the WG-1™

Soft Dig Heads are Perfect for Hydro-Excavation

Hydro-Excavation is a rapidly growing technology in the vacuum truck industry, allowing contractors to utilize their vacuum trucks to replace manual digging. Hydro-Excavation eliminates the need for heavy industrial equipment to locate utility lines. **StoneAge**® has designed a simple and inexpensive assembly with two 1/4" NPT **Attack Tip™** nozzles and a protective guard installed into a stainless steel head. The head threads directly onto the end of your 3/4" NPT pressure gun and allows for safe and effective excavation. The guard prevents abrasive splashback from damaging the stainless steel head. The **Attack Tips™** are replaceable, allowing operators to make quick adjustments from truck to truck.



SD 100™

Soft Dig Specs	
MODEL	SD 100™
Max. Pressure	10k psi 700 bar
Length (Assembled)	3.5 in. 89 mm
Weight (Assembled)	1 lb .45 kg
Outside Diameter	1.75 in. 44.5 mm
Inlet	3/4 in. 19 mm
Nozzle Ports (2)	1/4 NPT

See More Centralizers on Page 20

WARTHOG® Super Centralizers



Super Centralizers are available for all **WARTHOGS**® except the **WV™**, **WU™** and the **WT™** models. Centralizers provide several benefits:

- Keeps tool centered in pipe
- Reduces wear on the tool
- Provides standoff for jets

Super Centralizers		
MODEL	Part #	Diameter
WS-1/2™	WS 084	4.5 in. 114 mm
WH-1/2™ & WH 3/4™	WH 085	5.5 in. 140 mm
WG-1™	WG 085	6.85 in. 174 mm
WD 1-1/4™	WG 085	6.85 in. 174 mm



6" - 18" Lines



WARTHOG®
WH™ Models

The tool of choice for smaller municipal lines and larger residential lines.

WH-1/2™ & WH-3/4™ 6" - 18" Lines

WH-1/2™ & 3/4™

6" - 18" Lines (152-457 mm)

- Up to 8k psi (550 bar)
- 10-45 gpm Flows (40-170 l/min)
- 2 Inlet Options

The **WH-1/2™** and the **WH-3/4™** are the same tool offered with different inlet ports, either 1/2" or 3/4" NPT or BSPP. The **WH™** models are best for 6"-18" lines (152-457 mm). These tools are most commonly used with small capacity combination trucks and large trailer jettors. Descaling Heads are available for both models. Please see page 13 for examples.



Trailer Jetter Courtesy of Mongoose

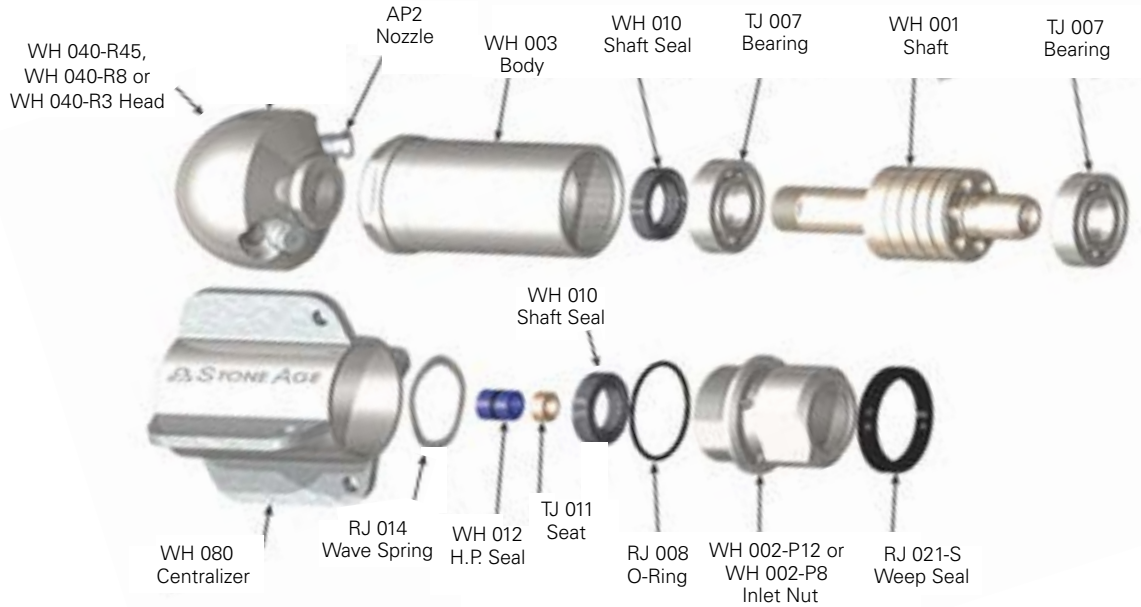
WH-1/2™ & WH-3/4™ Specs		
Maximum Pressure	8,000 psi	550 bar
Operating Pressure	1,500-8,000 psi	100-550 bar
Rotation Speed	150-300 rpm	
Flow	10-45 gpm	40-170 l/min
Flow Rating	3.0 Cv	
Pulling Force	18-50 lb	80-220 N
Inlet Connection	1/2 NPT or BSPP & 3/4 NPT or BSPP	
Length	7.5 in.	191 mm
Diameter Incl. Cent.	3.4 in.	86 mm
Nozzle Ports	3 x 1/8 NPT	
Weight Complete	4.7 lb	2.1 kg



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WH-1/2™ & WH-3/4™

6" - 18" Lines



WH-1/2™ & WH-3/4™ Service & Overhaul Kits

WH 600 - Service Kit

- 1 BJ 048-F Viscous Fluid, Fast 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 GP 025-P2 Hex Socket Plug
- 1 TJ 011 Brass Seat
- 1 WH 012-0 H.P. Seal & O-Ring

WH 610 - Overhaul Kit

- 1 BJ 048-F Viscous Fluid, Fast- 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 RJ 008 O Ring
- 1 TJ 011 Brass Seat
- 1 WH 012-0 H.P. Seal & O-Ring
- 2 TJ 007 Ball Bearing
- 2 WH 010 Shaft Seal
- 1 RJ 021-S Weep Seal
- 1 RJ 014 Wave Spring

WH 612 - Tool Kit

- 1 TJ 064 Fill Tube
- 1 WH 105 Tool

WH 602 - Seal Kit

- 1 TJ 011 Brass Seat
- WH 012-0 H.P. Seal & O-Ring



Combination Truck Courtesy of Harben, Inc.



WH-1/2™ & WH-3/4™

WH-1/2™ Jetting Chart

	Pump Pressure	Pump Output	Head Offset	15° Front Jet	150° Rear Jets (2)
2,000 psi / 140 bar 300-500 ft Hose w/ 1/2" ID		11-12 gpm 40-45 l/min	R8	AP2 035	AP2 082
		10 gpm 35 l/min	R8	AP2 029	AP2 052
		12 gpm 45 l/min	R8	AP2 032	AP2 057
3,000 psi / 210 bar 300-500 ft Hose w/ 1/2" ID		14 gpm 55 l/min	R8	AP2 032	AP2 063
		16 gpm 60 l/min	R8	AP2 035	AP2 069
		18 gpm 70 l/min	R8	AP2 038	AP2 075
4,000 psi / 280 bar 300-500 ft Hose w/ 1/2" ID		20 gpm 75 l/min	R8	AP2 038	AP2 082
		10 gpm 40 l/min	R8	AP2 029	AP2 047
		12 gpm 45 l/min	R8	AP2 032	AP2 052
		14 gpm 50 l/min	R8	AP2 032	AP2 057
		16 gpm 60 l/min	R8	AP2 035	AP2 063
		18 gpm 65 l/min	R6	AP2 038	AP2 069
	20 gpm 75 l/min	R45	AP2 038	AP2 075	
	25 gpm 95 l/min	R45	AP2 042	AP2 082	

WH-3/4™ Jetting Chart

	Pump Pressure	Pump Output	Head Offset	15° Front Jet	150° Rear Jets (2)
2,000 psi / 140 bar 300-500 ft Hose w/ 3/4" ID		25 gpm 95 l/min	R45	AP2 042	AP2 090
		30 gpm 115 l/min	R45	AP2 042	AP2 106
		40 gpm 150 l/min	R3	AP2 047	AP2 135
3,000 psi / 210 bar 300-500 ft Hose w/ 3/4" ID		20 gpm 75 l/min	R45	AP2 038	AP2 075
		25 gpm 95 l/min	R45	AP2 042	AP2 080
		30 gpm 115 l/min	R45	AP2 042	AP2 090
		35 gpm 130 l/min	R3	AP2 042	AP2 106
4,000 psi / 280 bar 300-500 ft Hose w/ 3/4" ID		40 gpm 150 l/min	R3	AP2 047	AP2 115
		45 gpm 170 l/min	R3	AP2 047	AP2 125
		20 gpm 75 l/min	R45	AP2 038	AP2 069
		25 gpm 95 l/min	R45	AP2 042	AP2 075
		30 gpm 115 l/min	R3	AP2 042	AP2 082
		35 gpm 130 l/min	R3	AP2 042	AP2 090
	40 gpm 150 l/min	R3	AP2 047	AP2 098	
	45 gpm 170 l/min	R3	AP2 047	AP2 106	



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ToolTalk™ - Maximizing Your Pump's Power

Preserving Jet Quality

The first prerequisite for a successful job is excellent quality jets. A jet is the stream of water after it has been forced through an orifice via high pressure. The orifice is nothing more than a shaped restriction in the



Trailer Jetter
Courtesy of Jetters Northwest

flow channel that forces the water to accelerate, converting potential energy (pressure) into kinetic energy (velocity). The orifice shape, materials and upstream flow turbulence are all important to delivering maximum energy to the work.

The powerful, cohesive, high-velocity jet is established in the first 8 to 25 orifice diameters downstream from the orifice. Farther away, the outside surface of the jet is slowed by drag through the air. Even the best jet deteriorates with air drag. It is possible, though, to lose as much as half the jet's power at the start due to excessively turbulent flow upstream of the nozzle tip.

the first 8 to 25 orifice diameters downstream from the orifice. Farther away, the outside surface of the jet is slowed by drag through the air. Even the best jet deteriorates with air drag. It is possible, though, to lose as much as half the jet's power at the start due to excessively turbulent flow upstream of the nozzle tip.

Managing the Numbers

The second important principle is to use the fewest jets possible. If one good jet doesn't cut through the deposits, then more of them will not do better. Greater power is delivered to the surface with fewer, more powerful jets, rotated to cover the entire surface in a helical jet path. For example, in a nozzle using three or five jets, each jet is 2 to 2.5 times as powerful as the non-rotating alternative.

Controlled Rotation

Thirdly, the bigger the diameter of pipe, the slower the rotation required. Large pipes or vessels may require air-motor-powered gearboxes to keep rotation slow enough to maintain the necessary

transverse velocity at the wall. A good rule of thumb is to provide about 15 mph transverse jet velocity along the surface being cleaned. This rule works whether the tool is cleaning a one-inch diameter heat exchanger tube, a 12-inch sewer pipe or a 40-foot-diameter crude oil storage facility.



Ultimate Warrior
Courtesy of Spartan

Hose Pressure Drop

A fourth important factor is to balance hose pressure drop for the pump being used. Hose pressure drop is a direct, proportional loss in power caused by friction as water molecules slide across the wall of the hose and against other water molecules in the hose. The only way to reduce pressure drop is to use a shorter or a larger-diameter hose. Sewer cleaning requires relatively long hoses and large-diameter hose is heavier and therefore more difficult to pull through the pipe. So even in the best case, 20 to 25 percent of a jetter's power is lost to hose pressure drop. If you notice more powerful jetting with a shorter hose, that's because there is less pressure drop. It can make sense to buy shorter lengths as replacements.

Safety

Finally, safety should always be a top priority on the job and that's especially true when working with high pressure jetting nozzles. To prevent a tool from "backing out" and turning toward the operator, we recommend using a rigid pipe "stinger". Centralizers can also eliminate the possibility of tool turn around, as well as improving performance by allowing for nipple extensions to deliver the jet power closer to the pipe wall, and protecting the head of the tool from hitting the side walls.



Combination Truck Courtesy of VAC-CON



8" - 36"
Lines



WARTHOG[®]
WG-1 Classic[™]

The **WG-1 Classic[™]** is a municipal workhorse, handling 8" - 36" lines (203-914 mm) with 50-80 gpm flows (190-300 l/min).

WG-1 Classic[™]

Up to 3k psi (200 bar)

50-80 gpm Flows (190-300 l/min)

8" - 36" Lines (203-914 mm)

Classic Warthog Model

WG-1 Classic[™]

8" - 36" Lines

We offer three larger **WARTHOG[®]** models to handle municipal, industrial and commercial drain cleaning applications. By installing replaceable **AP2** nozzle tips that are sized to maximize the efficiency and effectiveness of your pump, these tools are highly productive. They eliminate the need for using several types of specialty tools to complete the job. The **WG-1 Classic[™]** is the proven choice for municipalities who are faced with cleaning pipes from 8" - 36" (203-914 mm). Large combination trucks with 1" hose use this tool predominately. Municipalities around the world rely on this tool to handle their biggest challenges. Descaling head options are shown on page 13.

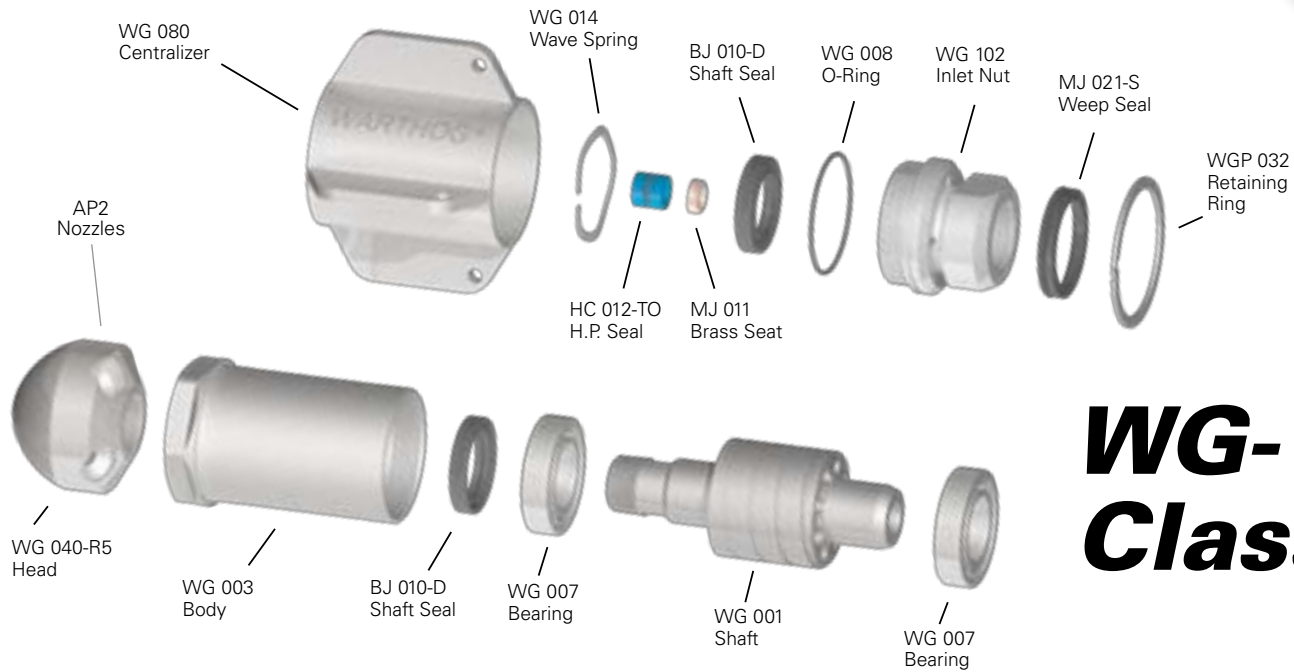


Combination Truck Courtesy of Vactor

WG-1 Classic[™] Specs

MODEL	WG-1 Classic[™]	
Maximum Pressure	3,000 psi	200 bar
Operating Pressure	1,500-3,000 psi	100-200 bar
Rotation Speed	150-300 rpm	
Flow	50-80 gpm	190-300 l/min
Flow Rating	4.6 Cv	
Pulling Force	70-100 lb	310-450 N
Inlet Connection	1 NPT or BSPP	
Length	9.1 in.	231 mm
Diameter Incl. Cent.	4.8 in.	122 mm
Nozzle Ports	5 x 1/8 NPT	
Weight Complete	10.9 lb	4.9 kg





WG-1 Classic™

WG-1™ & WGP-1™ Service & Overhaul Kits

WG 600 - Service Kit

- 1 BJ 048-F Visc. Fluid, Fast - 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 GP 025-P2 Hex Socket Plug
- 1 MJ 011 Brass Seat
- 1 HC 012-TO H.P. Seal & O-Ring

WG 610 - Overhaul Kit

- 2 BJ 010-D Shaft Seals
- 1 BJ 048-F Visc. Fluid, Fast - 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 MJ 011 Brass Seat
- 1 HC 012-TO H.P. Seal & O-Ring
- 2 WG 007 Ball Bearings
- 1 WG 008 O-Ring
- 1 WG 014 Wave Spring
- 1 MJ 021-S Weep Seal

WG 612 - Tool Kit

- 1 HC 064 Fill Tube
- 1 BJ 105 Tool

WG 602 - Seal Kit

- 1 MJ 011 Brass Seat
- 1 HC 012-TO H.P. Seal & O-Ring



WG-1 Classic™

WG-1 Classic™ Nozzle Selection Guide

Pump Pressure	Pump Output	Head Offset	15° Front Jet	142° Rear Jets (2)	142° Rear Jets (2)
1,500 psi / 100 bar 500-600 ft Hose w/ 1" ID	60 gpm 225 l/min	R5	AP2 052	AP2 115	AP2 125
	65 gpm 245 l/min	R5	AP2 057	AP2 125	AP2 125
	80 gpm 300 l/min	R5	AP2 057	AP2 135	AP2 125
2,000 psi / 140 bar 500-600 ft Hose w/ 1" ID	50 gpm 190 l/min	R5	AP2 047	AP2 090	AP2 098
	55 gpm 210 l/min	R5	AP2 047	AP2 098	AP2 106
	60 gpm 225 l/min	R5	AP2 052	AP2 106	AP2 106
2,000 psi / 140 bar 800-900 ft Hose w/ 1" ID	65 gpm 245 l/min	R5	AP2 057	AP2 115	AP2 115
	80 gpm 300 l/min	R5	AP2 063	AP2 135	AP2 125
	60 gpm 225 l/min	R5	AP2 052	AP2 115	AP2 106
2,500 psi / 170 bar 500-600 ft Hose w/ 1" ID	65-80 gpm 245-300 l/min	R5	AP2 057	AP2 125	AP2 115
	60 gpm 225 l/min	R5	AP2 052	AP2 098	AP2 098
	65 gpm 245 l/min	R5	AP2 057	AP2 106	AP2 106
3,000 psi / 210 bar 500-600 ft Hose w/ 1" ID	80 gpm 300 l/min	R5	AP2 063	AP2 125	AP2 115
	50 gpm 190 l/min	R5	AP2 047	AP2 090	AP2 082
	60 gpm 225 l/min	R5	AP2 052	AP2 098	AP2 090
3,000 psi / 210 bar 500 ft Hose w/ 3/4" ID	65 gpm 245 l/min	R5	AP2 057	AP2 098	AP2 098
	80 gpm 300 l/min	R5	AP2 063	AP2 115	AP2 115
	50 gpm 190 l/min	R5	AP2 047	AP2 090	AP2 098

Centralizers for the WG-1 Classic™

**6-Wheel
Adjustable Centralizer**
WG-286-M-P16™

For 13-36" diameters (330-915 mm).



Ask our customer service specialists about adding extension arms for maximum effectiveness.

WG-070™ - Poly-Fin

Available in 6", 8", 10" & 12" interchangeable skid sizes.

(152 mm, 203 mm, 254 mm & 305 mm)



Super Centralizers
WG-085™
6.85" diameter

For 7" (178 mm) minimum pipe ID.



We offer several different styles of centralizers including multi-wheeled models as shown above left, poly-fin models in the center, and our super centralizers, shown right, that connect directly on to the body of the tool.

8" - 36"
Lines



Combination Truck Courtesy of Vector

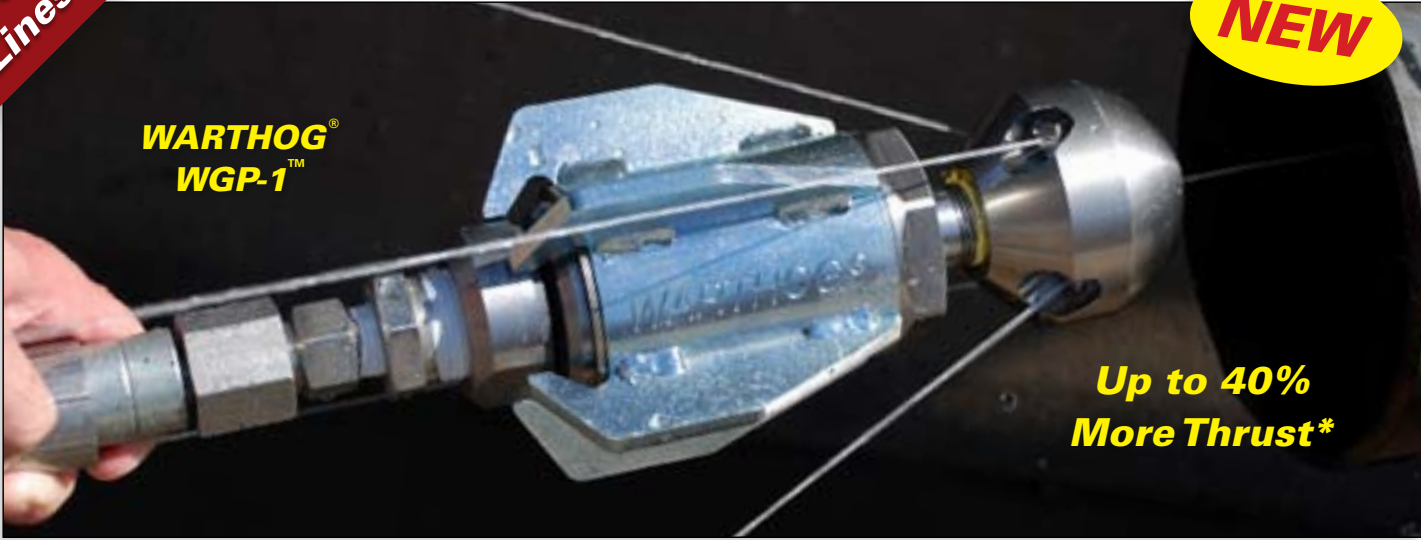


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8" - 36" Lines

NEW



**WARTHOG®
WGP-1™**

**Up to 40%
More Thrust***

Note the streamlined centralizer fins, designed to accommodate the more severe rear facing jets and also provide easier retrieval of the tool in sewer lines.

NEW

WGP-1™

New Maximum Puller

Our new **WGP-1™** is designed to produce up to 40% more pulling power* than our **WG-1 Classic™**. The rear facing jets are angled more sharply and the centralizer fins have been streamlined. We've also added two more centralizer fins for a total of six. The result is more pulling power to navigate longer lines and moderate inclines, plus easier retrieval of the tool. It features 5 jet ports, with a boring jet offset at 15° and four jets at 155°, plus the inlet port is available in either 1" NPT or BSPP. This tool will greatly benefit contractors with operating pressures of 2,500 psi or less (172 bar or less).



Trailer Jetter Courtesy of Hot Jet USA

WGP-1™	Up to 3k psi (206 bar)
	50-80 gpm Flows (190-300 l/min)
	8" - 36" Lines (152-457 mm)
	Up to 40% More Thrust*

* with the front jet plugged.

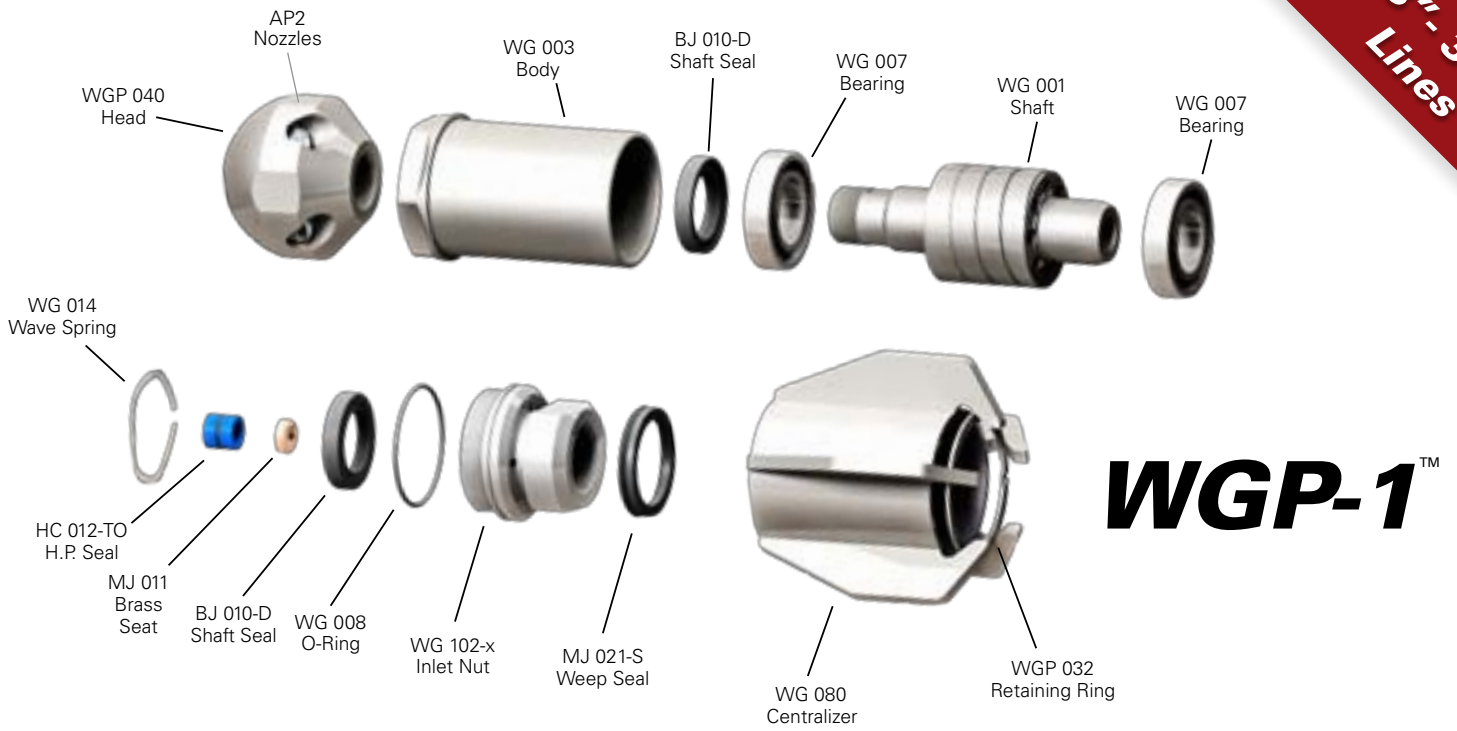
NOTE

The Service and Overhaul Kits for this model are the same as the WG-1. Please see page 19.

WGP-1™ Specifications	
MODEL	WGP-1™
Maximum Pressure	3,000 psi 200 bar
Operating Pressure	1,500-3,000 psi 100-200 bar
Rotation Speed	150-300 rpm
Flow	50-80 gpm 190-300 l/min
Flow Rating	4.6 Cv
Pulling Force	100-140 lb 450-623 N
Inlet Connection	1 NPT or BSPP
Length	9.1 in. 231 mm
Diameter Incl. Cent.	4.8 in. 122 mm
Ports	5 x 1/8 NPT
Weight Complete	10.9 lb 4.9 kg



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WGP-1™

WGP-1™ Nozzle Selection Guide

Pump Pressure	Pump Output	Head Offset	15° Front Jet	155° Rear Jets (2)	155° Rear Jets (2)
2,000 psi / 138 bar 500-600 ft Hose 1" ID	60 gpm 227 l/min	R8	Plugged	AP2 115	AP2 106
	60 gpm 227 l/min	R8	AP2 052	AP2 106	AP2 106
	65 gpm 246 l/min	R8	Plugged	AP2 125	AP2 115
	65 gpm 246 l/min	R8	AP2 057	AP2 115	AP2 115
	80 gpm 303 l/min	R8	Plugged	AP2 145	AP2 135
	80 gpm 303 l/min	R8	AP2 063	AP2 135	AP2 135
2,000 psi / 138 bar 800-900 ft Hose 1" ID	60 gpm 227 l/min	R8	Plugged	AP2 115	AP2 115
	60 gpm 227 l/min	R8	AP2 052	AP2 115	AP2 106
	65 gpm 246 l/min	R8	Plugged	AP2 125	AP2 125
	65 gpm 246 l/min	R8	AP2 057	AP2 125	AP2 115
	80 gpm 303 l/min	R8	Plugged	AP2 135	AP2 125
	80 gpm 303 l/min	R8	AP2 057	AP2 125	AP2 125
2,500 psi / 172 bar 500-600 ft Hose 1" ID	60 gpm 227 l/min	R8	Plugged	AP2 106	AP2 098
	60 gpm 227 l/min	R8	AP2 052	AP2 098	AP2 098
	65 gpm 246 l/min	R8	Plugged	AP2 115	AP2 106
	65 gpm 246 l/min	R8	AP2 057	AP2 106	AP2 106
	80 gpm 303 l/min	R8	Plugged	AP2 125	AP2 115
	80 gpm 303 l/min	R8	AP2 063	AP2 125	AP2 115
2,500 psi / 172 bar 800-900 ft Hose 1" ID	60 gpm 227 l/min	R8	Plugged	AP2 106	AP2 106
	60 gpm 227 l/min	R8	AP2 052	AP2 106	AP2 098
	65 gpm 246 l/min	R8	Plugged	AP2 115	AP2 115
	65 gpm 246 l/min	R8	AP2 057	AP2 106	AP2 115
	80 gpm 303 l/min	R8	Plugged	AP2 135	AP2 125
	80 gpm 303 l/min	R8	AP2 063	AP2 125	AP2 125



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8" - 36" Lines



A **WD 1-1/4™** with two extra nozzle ports and a high flow capacity.

WD 1-1/4™

High Flow Model For 8" - 36" Lines

The **WD 1-1/4™** is designed to handle the same applications as the **WG-1 Classic™** but at higher flows. The 1-1/4" inlet combined with 7 ports effectively distribute more water. Descaling heads are not available for this model.

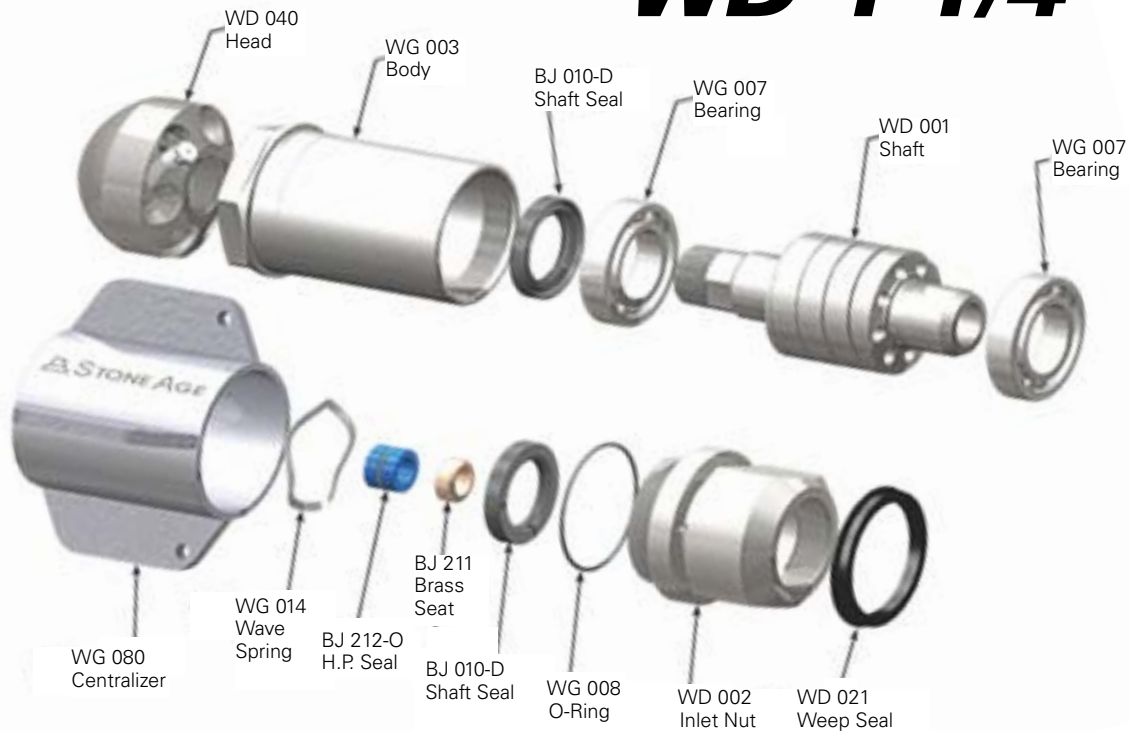
WD 1-1/4™ 8" - 36" Lines (152-457 mm)	Up to 3k psi (206 bar)
	80-120 gpm Flows (300-450 l/min)
	High Flow Model

WD 1-1/4™ Specs	
MODEL	WD 1-1/4™
Maximum Pressure	3,000 psi 200 bar
Operating Pressure	1,500-3,000 psi 100-200 bar
Rotation Speed	150-300 rpm
Flow	80-120 gpm 300-450 l/min
Flow Rating	7.6 Cv
Pulling Force	130-190 lb 600-850 N
Inlet Connection	1-1/4 NPT or BSPP
Length	9.1 in. 231 mm
Diameter Incl. Cent.	4.8 in. 122 mm
Nozzle Ports	7 x 1/8 NPT
Weight Complete	11 lb 5.0 kg



WD 1-1/4™

8" - 36" Lines



WD 1-1/4™ High Flow Nozzle Guide

Pump Pressure	Pump Output	Head Offset	15° Front Jet	145° Rear Jets (3)	145° Rear Jets (3)
	90 gpm 340 l/min	R35	AP2 063	AP2 106	AP2 106
	95-100 gpm 360-380 l/min	R35	AP2 069	AP2 115	AP2 106
	105 gpm 400 l/min	R35	AP2 069	AP2 115	AP2 115
	110 gpm 415 l/min	R35	AP2 069	AP2 125	AP2 115
	115 gpm 435 l/min	R35	AP2 075	AP2 125	AP2 125
	120 gpm 455 l/min	R35	AP2 075	AP2 135	AP2 125

2,000 psi / 140 bar
500-600 ft Hose
w/ 1-1/4" ID

WD 1-1/4™ Service & Overhaul Kits

WD 600 - Service Kit

- 1 BJ 048-F Viscous Fluid, Fast - 6oz.
- 1 BJ 062-S Antiseize, 2g
- 1 GP 025-P2 Hex Socket Plug
- 1 BJ 211 Brass Seat
- 1 BJ 212-O H.P. Seal & O-Ring

WD 610 - Overhaul Kit

- 1 BJ 048-F Viscous Fluid, Fast - 6oz.
- 2 BJ 010-D Shaft Seals
- 1 BJ 062-S Antiseize, 2g
- 1 BJ 211 Brass Seat
- 1 BJ 012-O H.P. Seal & O-Ring
- 2 WG 007 Ball Bearings
- 1 WD 021 Seal
- 1 WG 008 O-Ring
- 1 WG 014 Wave Spring

WD 602 - Seal Kit

- 1 BJ 211 Brass Seat
- 1 BJ 012-O H.P. Seal & O-Ring

WG 612 - Tool Kit

- 1 HC 064 Fill Tube
- 1 BJ 105 Tool



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Tools that LAST.

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