



# WARTHOG

SEWER NOZZLES BY **STONEAGE**

2014/15  
CATALOG

## **CLASSIC SERIES**

## **NEW WGR MAGNUM**



THE INDUSTRY'S MOST  
**POWERFUL  
& DURABLE  
SEWER TOOLS**



## WARTHOG SEWER TOOLS BY STONEAGE

Specialists in high pressure waterblasting tools and equipment, our mission is to lead the world in providing innovative sewer cleaning tools and superior customer service.

## OVER 60 DEALERS IN 20 COUNTRIES

StoneAge authorized Warthog dealers are able to supply a complete range of high pressure pumps, systems and accessories.

## [WWW.SEWERNOZZLES.COM](http://WWW.SEWERNOZZLES.COM)

One of the most comprehensive websites in the industry. Featuring Tool Manuals, Jetting Charts, Service Videos and worldwide Dealer listings.

# THE WARTHOG LINE

SECTIONS ARE COLOR-CODED BY PIPE SIZE AS SHOWN BELOW

**2-6"**  
(51-152 mm)

## SMALL LINES

PAGES 4-7



**WV-1/4 2-4" Lines.** For cart and trailer jetters. New, high-speed rotation technology for small lines with light to moderate blockages. Pages 4-5.



**WT-3/8-C 3-6" Lines.** For cart and trailer jetters. Now standard with carbide buttons for longer head life. Pages 6-7.

**4-18"**  
(102-457 mm)

## MEDIUM LINES

PAGES 8-17



**WS-1/2 4-8" Lines.** For trailer jetters. Sold with a 2 ft. whip hose standard. Also jointed and rigid models, plus inlet options. Pages 8-9



**WH-1/2 6-18" Lines.** For trailer jetters with 1/2" and 3/4" inlet options, both inlets available in NPT or BSPP. Pages 10-11.



**WHP-3/4 6-18" Lines.** Maximum Puller WHP-3/4. Designed for more pulling power. Pages 12-13.

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

**NEW**

## LARGE LINES

PAGES 18-23



**WGR MAGNUM 6-36" Lines.** Our newest Warthog. Built from the ground up. Effectively handles recycled water. Pages 16-17.



**WG-1 & WGP-1 (Puller) 8-36" Lines.** WG-1 Classic and the Maximum Puller WGP-1. Designed for more pulling power. Pages 18-21.



**WD 1-1/4 8-36" Lines.** For Municipal jetters. This is a high flow model with up to 120 gpm (450 lpm) flows. Pages 22-23.

**NEW!**

## HYDRO EXCAVATION

PAGE 24



**HYDRO-X** Hydro-Excavation provides safe access to buried utilities by potholing or trenching with high pressure water. Page 24.

**MAXIMIZE  
YOUR WARTHOG**

## ACCESSORIES

PAGES 25-27



**MANHOLE CLEANER** Our latest modification kit to convert your Warthog into an effective Manhole Cleaner. Page 25.



**CENTRALIZERS** Several different styles available including multi-wheeled models for cleaning extra large pipes. Page 25.



# 2"-4" LINES

THE WV-1/4'S PATENTED HIGH-SPEED ROTATION COMBINED WITH LOW MAINTENANCE CREATES A POWERFUL TOOL FOR 2"-4" LINES.



## WV-1/4 CLASSIC

### 2"-4" Lines with Elbows

The **WV-1/4** uses StoneAge's flow-through technology and features a revolutionary high-speed rotating design with no high pressure seals or bearings to service. It cleans lines as small as 2" with long sweeping elbows. The head design also features permanent, pre-drilled orifices, rather than threaded nozzles.

The tool operates from 2-5k psi (140-350 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. There are no maintenance or overhaul kits due to the low maintenance design.

### WV-1/4

2"-4" Lines (51-102 mm)

Up to 5k psi (350 bar)

3-8 gpm Flows (11-30 l/min)

High-Speed Rotation

### NOW RATED UP TO 5000 PSI (350 BAR)

### WV-1/4 SPECS

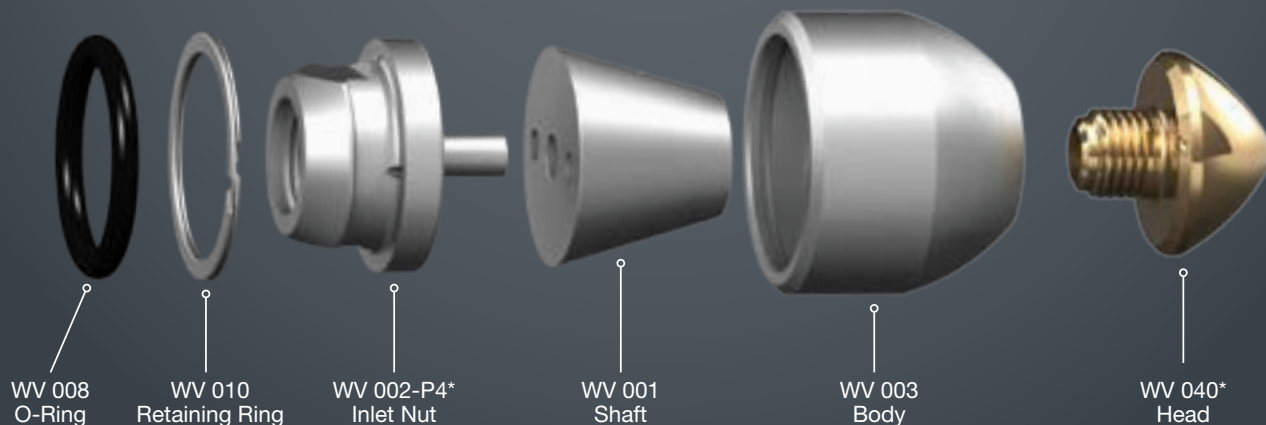
Maximum Pressure	5k psi	350 bar
Operating Pressure	2-5k psi	140-350 bar
Flow	3-8 gpm	11.4-30.3 l/min
Flow Rating	0.8 Cv	
Pulling Force	4-9 lb	40 N
Inlet Connection	1/4 NPT or BSPP	
Tool Diameter	1.3 in.	33 mm
Length	2.0 in.	51 mm
Nozzle Ports	3 Drilled	
Weight Complete	0.45 lb	0.20 kg

### 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

## WV-1/4

Exploded View - Part Names and Numbers



SMALL LINES

\*See charts on the opposite page for inlet nut and head 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.

## POTENTIAL HAZARD!

*If any Warthog is being used in pipes larger than the recommended 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 here) and come back toward the operator, causing serious injury or death.*

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



## ◀ CORRECT

This is an example of **WV-1/4** set up for correct usage in pipes larger than 4" in diameter. A rigid stinger should be installed between the tool inlet and the hose end. This helps to prevent the tool from turning around inside of the pipe and coming back toward the operator.

3”-6” LINES

WT-3/8-C WITH EXTENDED-LIFE CARBIDE BUTTONS, STANDARD ON EVERY MODEL.



WT-3/8-C  
CLASSIC

3”-6” Lines with Elbows

Our smaller Classic series **WARTHOG** models can negotiate elbows and clean-outs commonly found in laterals at homes, buildings, restaurants and other light commercial facilities. This tool is most commonly used on small capacity pumps and cart jetters. Also an excellent choice for cutting roots, clearing ice and removing blockages. The **WT-3/8-C** is designed specifically to handle 3”-6” lines and clean-outs.

Pipes made of cast iron and those that have sand or silt can act as abrasive agents that can aggressively wear out the tool. We’ve added permanent carbide buttons to the **WT-3/8-C** to increase head life. 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.

WT-3/8-C

3”-6” Lines (76-152 mm)

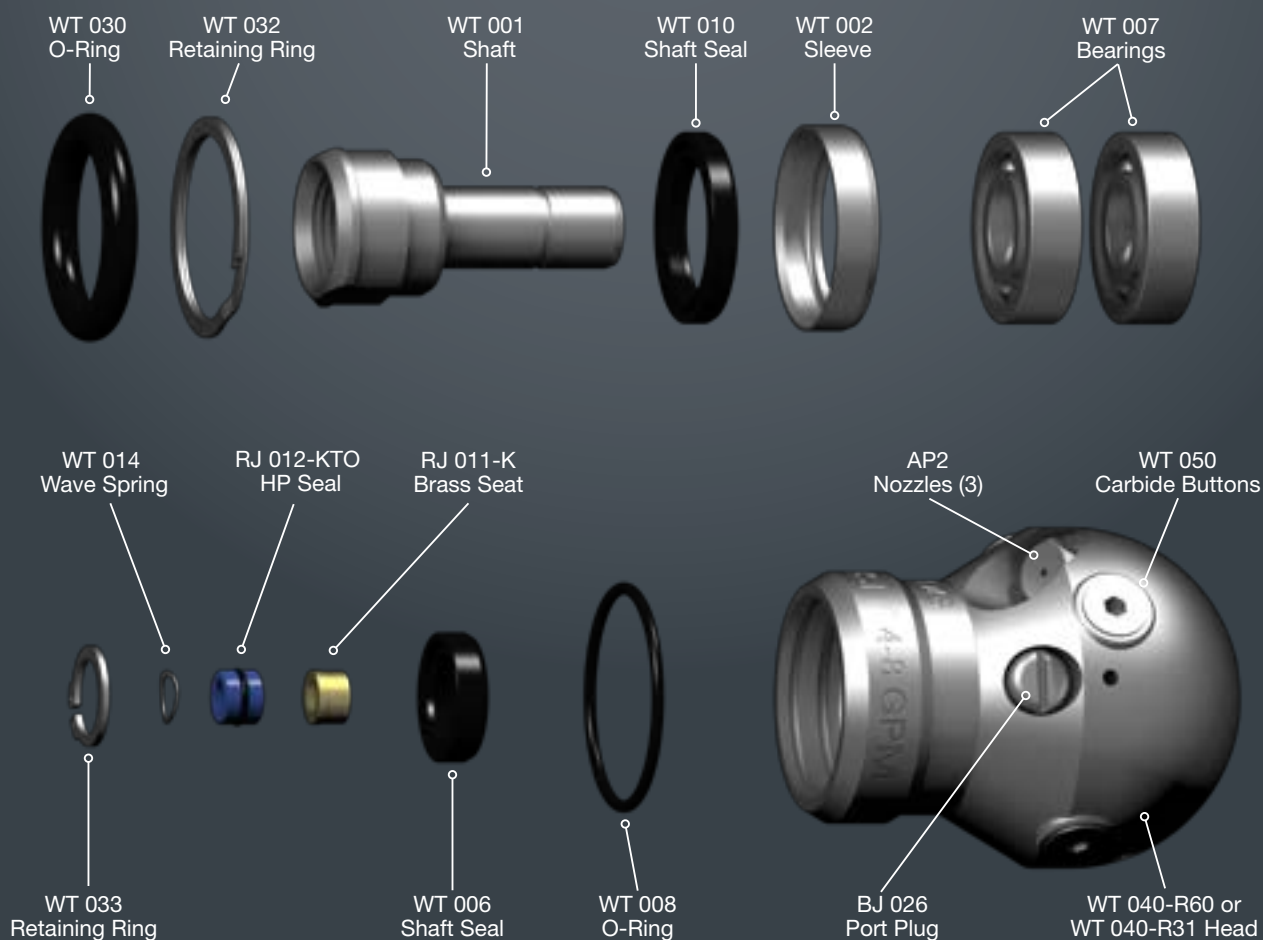
- Up to 5k psi (350 bar)
- 5-12 gpm Flows (20-45 l/min)
- Classic Workhorse Model

WT-3/8-C SPECS	
Maximum Pressure	5k psi 350 bar
Operating Pressure	1500-5k psi 100-350 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



## WT-3/8-C

Exploded View - Part Names and Numbers



### 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 HP Seal & O-Ring
- 1 WT 014 Wave Spring

#### WT 602 - SEAL KIT

- 1 RJ 011-K Brass Seat
- 1 RJ 012-KTO HP 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 HP 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 612 - TOOL KIT

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

**JETTING CHARTS FOR CUSTOMIZING THIS SEWER TOOL ARE AVAILABLE BY VISITING**  
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# 4"-8" LINES

JOINTED AND RIGID WS-1/2 MODELS ARE AVAILABLE WITH OR WITHOUT A WHIP HOSE.



## WS-1/2 CLASSIC

### 4"-8" Lines

The WS-1/2 is designed to handle 4"-8" lines and is most commonly used with trailer jetties. It is used to clean lines in restaurants, hospitals, multi-story apartment buildings, residential, and other applications. Easily removes grease, cut roots, ice and soil blockages.

### WS-1/2

4"-8" Lines (102-204 mm)

Up to 5k psi (350 bar)

8-20 gpm Flows (30-76 l/min)

3 Models Available

## JOINTED INLET MODELS

This model allows the inlet hose to bend to the side, shortening the rigid length of the tool and allowing limited access applications to be cleaned much easier. 1/2" NPT or BSPP inlet ports available.



## OPTIONAL RIGID INLETS

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



**Optional Descaling Head  
for the WS Line of Tools**

**WS 040-DS**

### WS-1/2 SPECS

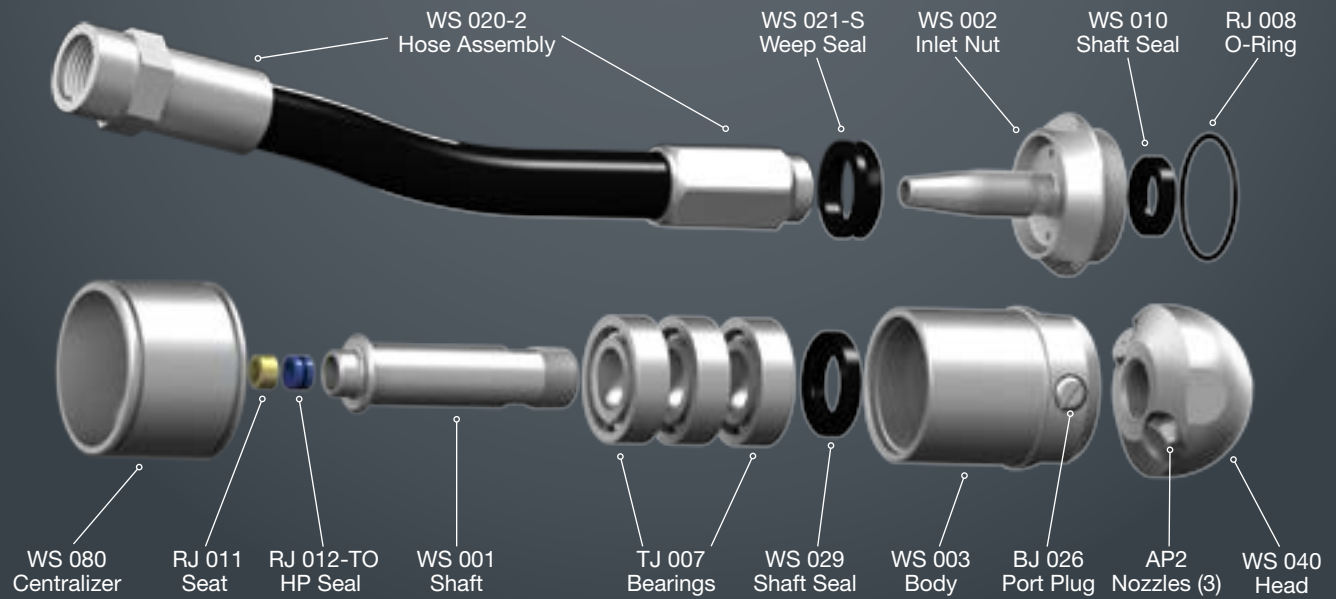
Maximum Pressure	5k psi	350 bar
Operating Pressure	1500-5k psi	100-350 bar
Rotation Speed	200-500 rpm	
Flow	8-20 gpm	30-76 l/min
Flow Rating	1.3 Cv	
Pulling Force	9-27 lb	40-120 N
Inlet Connection	1/2 NPT & BSPP	
Tool Diameter	1.9 in.	48 mm
Length	4.4 in.	112 mm
Nozzle Ports	3 x 1/8 NPT	
Weight Complete	2.95 lb	1.33 kg

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



## WS-1/2

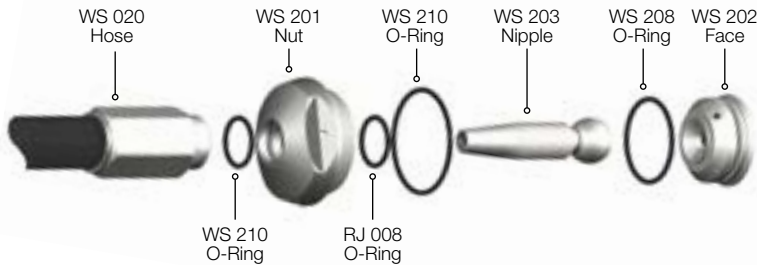
### Exploded View - Part Names and Numbers



MEDIUM LINES

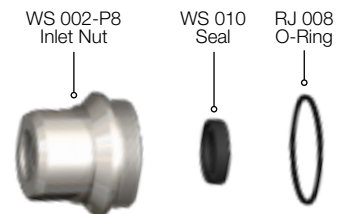
## WS-1/2-J

Inlet Area Parts



## WS-P8

Inlet Area Parts



## MAINTENANCE & 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 HP 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 HP 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 HP 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 HP Seal & O-Ring

# 6"-18" LINES

THE WH IS TOOL OF CHOICE FOR SMALLER MUNICIPAL LINES AND LARGER RESIDENTIAL LINES.



## WH-1/2 & WH-3/4 CLASSIC

6"-18" Lines

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 jetters. Descaling Heads are available for both models.

<b>WH-1/2 &amp; 3/4</b>	Up to 8k psi (550 bar)
	10-45 gpm Flows (40-170 l/min)
	2 Inlet Options

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

### WH-1/2 & WH-3/4 SPECS

Maximum Pressure	8k psi	550 bar
Operating Pressure	1500-8k psi	100-550 bar
Rotation Speed	150-300 rpm	
Flow	10-50 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

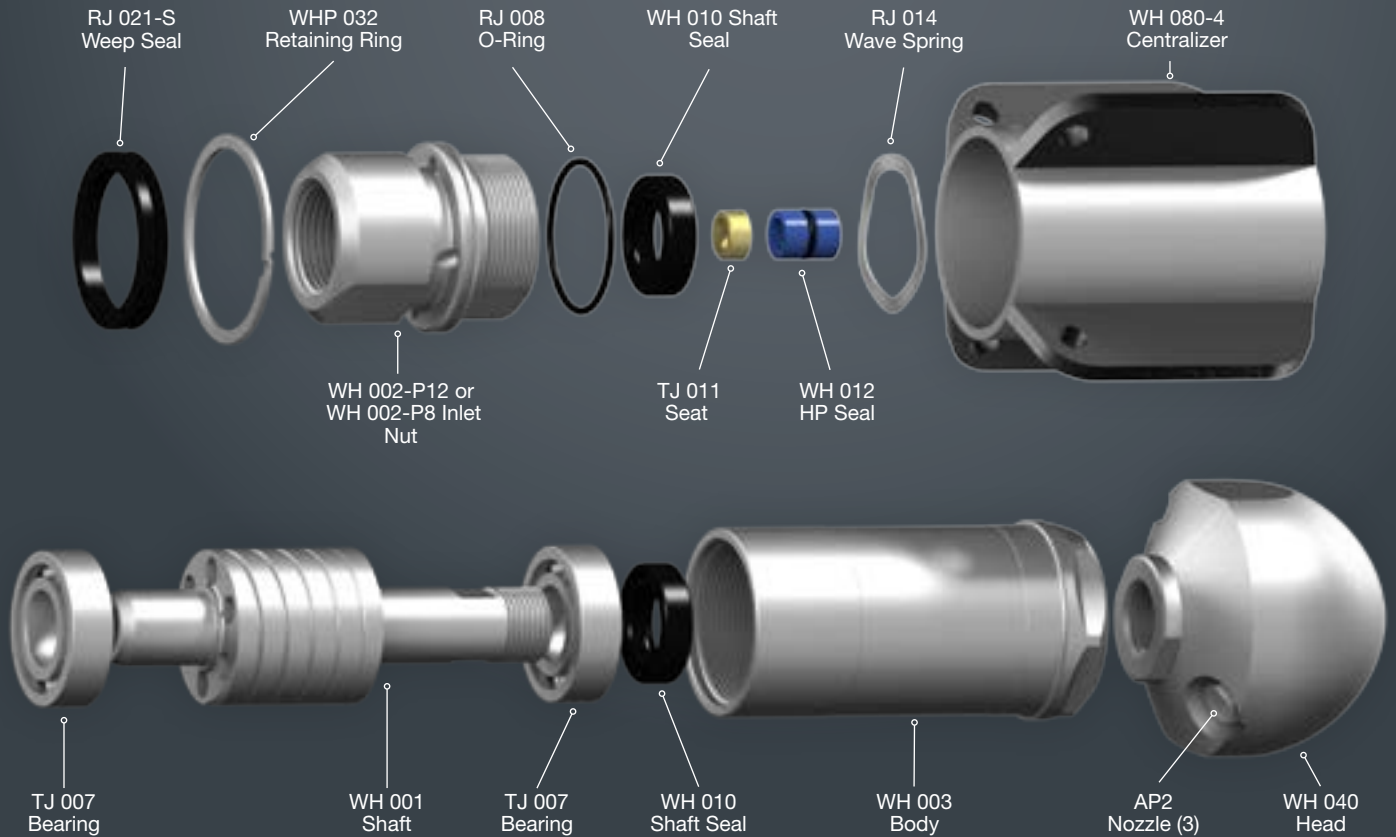


**Optional Descaling Head  
for the WH-1/2 & WH-3/4**

**WH 040-DS**

## WH-1/2 & WH-3/4

Exploded View - Part Names and Numbers



### MAINTENANCE & 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-O HP Seal & O-Ring

#### WH 602 - SEAL KIT

- 1 TJ 011 Brass Seat
- WH 012-O HP 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-O HP 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

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[JETTING.SEWERNOZZLES.COM](http://JETTING.SEWERNOZZLES.COM)  
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6"-18" LINES

THE WHP-3/4 IS EXCELLENT FOR LONGER LINES AND MODERATE INCLINES.



WHP-3/4  
CLASSIC

6"-18" Lines with Elbows

The **WHP-3/4** has been designed to produce more pulling power than other tools available on the market. The centralizer fins are streamlined to allow the rear facing jets to be angled more sharply, giving the tool more forward thrust. The result is more pulling power to handle longer lines and moderate inclines.

The **WHP-3/4** features 3 nozzle ports, including a boring jet offset at 15 degrees, and 2 jets at 162 degrees. The inlet port comes in either 3/4" NPT or BSPP.

WHP-3/4

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

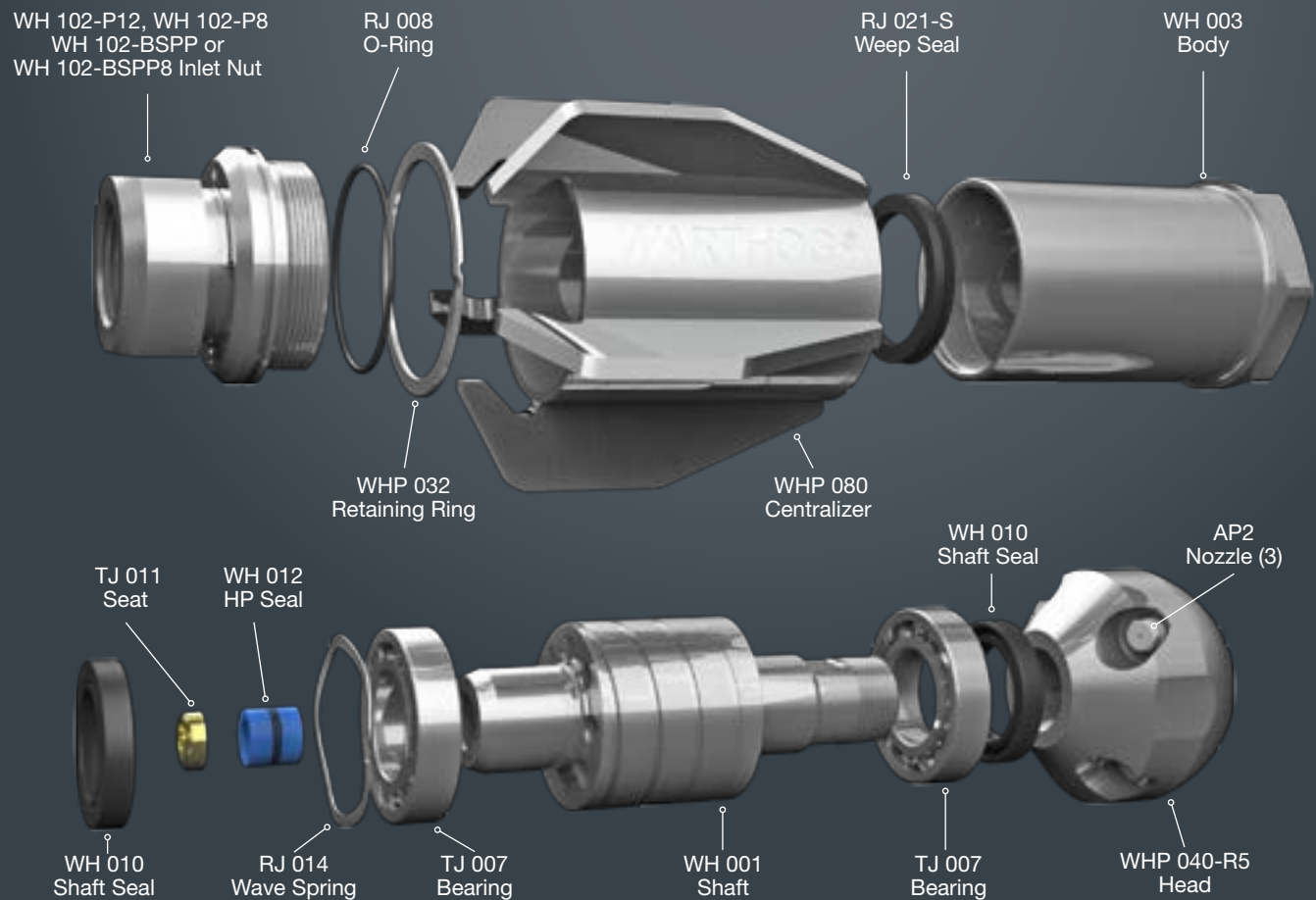
- Up to 8k psi (550 bar)
- 15-50 gpm Flows (60-190 l/min)
- Up to 40% More Thrust\*

WHP-3/4 SPECS		
Maximum Pressure	8k psi	550 bar
Operating Pressure	1500-4k psi	100-275 bar
Rotation Speed	150-300 rpm	
Flow	15-50 gpm	60-190 l/min
Flow Rating	3.0 Cv	
Pulling Force	45-90 lb	200-400 Nm
Inlet Port	1/2 NPT, 1/2 BSPP, 3/4 NPT, 3/4 BSPP	
Diameter Including Centralizer	3.4 in.	86 mm
Length	7.5 in.	190 mm
Nozzle Ports	3 x 1/8 NPT	
Weight Complete	4.7 lb	2.1 kg

\* With the front jet plugged.

## WHP-3/4

Exploded View - Part Names and Numbers



MEDIUM LINES

### MAINTENANCE & 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-O HP Seal & O-Ring

#### WH 602 - SEAL KIT

- 1 TJ 011 Brass Seat
- WH 012-O HP 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-O HP Seal & O-Ring
- 2 TJ 007 Ball Bearing
- 2 WH 010 Shaft Seal
- 1 RJ 021-S Weep Seal
- 1 RJ 014 Wave Spring
- 1 WHP 032

#### WH 612 - TOOL KIT

- 1 TJ 064 Fill Tube
- 1 WH 105 Tool

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NEW!

# WARTHOG WGR MAGNUM

HIGH PERFORMANCE  
LESS MAINTENANCE  
LONGER LIFE

THE FIRST TOOL IN THE NEW WARTHOG MAGNUM SERIES



## WGR MAGNUM

Extended tool durability.

The **WGR MAGNUM** is the first tool in the Warthog Magnum series, specifically designed for extended tool durability and optimal handling of dirty or recycled water.

- Optimized speed control extends maintenance intervals
- Latest seal technology effectively handles dirty or recycled water for improved performance
- Flush style head protects front shaft seals for longer tool life
- Streamlined design keeps tool from catching inside pipe
- Carbide nozzles generate higher quality jets
- Descaling ports now come standard
- Hardened steel centralizer with 4x longer life
- Optional fin sizes for different pipe diameters
- Independently replaceable fins can be easily replaced as wear occurs without opening tool body
- Choose your rotation speed with 3 viscous fluid options

### WGR

6”-36” Lines (20-90 cm)	Up to 5k psi (350 bar)
	50-80 gpm Flows (190-300 l/min)
	Standard Descaler or Puller Descaler

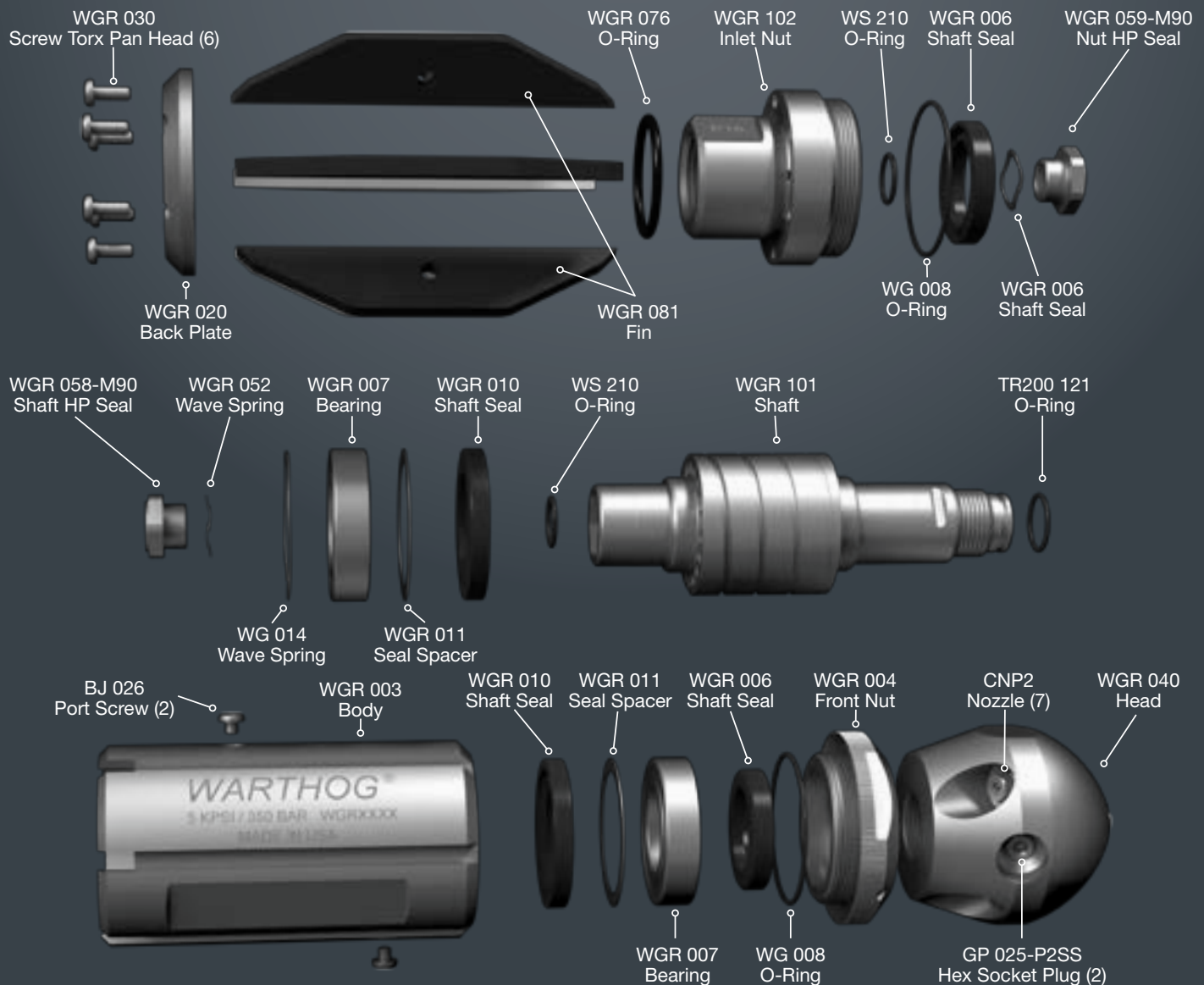
### WGR SPECS

Maximum Pressure	5k psi 350 bar
Operating Pressure	1500-5k psi 100-350 bar
Rotation Speed	150-300 rpm
Flow	50-80 gpm 190-300 l/min
Flow Rating	6 Cv
Inlet Connection	1 in. NPT or 1in. BSPP
Diameter	4.5 in. 114 mm
Length	10.25 in. 260 mm
Nozzle Ports	7 x 1/8 NPT
Weight Complete	13 lb 5.9 kg



## WGR MAGNUM

Exploded View - Part Names and Numbers



### MAINTENANCE & OVERHAUL KITS

#### WGR 601 - FLUID KIT

- 1 WGR 601 Fluid Service Kit
- 1 BC 410 Syringe
- 2 BJ 026 Port Screw
- 1 WGR 048 Visc Fluid, 6oz
- 3 Viscous Fluid Options Available

#### WGR 602 - HP SEAL KIT

- 1 BJ 062-S Antiseize, 2g
- 2 WGR 052 HP Seal Wave Spring
- 1 WGR 058 HP Seal - Shaft
- 1 WGR 059 HP Seal - Nut
- 2 WS 210 HP Seal O-Ring

#### WGR 610 - OVERHAUL KIT

- 2 BJ 026 Port Screw
- 1 BJ 062-S Antiseize, 2g
- 1 GP 025-P2 Front Jet Plug
- 1 TR200 121 Head - Shaft O-Ring
- 1 WG 008 Nut O-Ring
- 1 WG 014 Bearing Wave Spring
- 2 WGR 006 Shaft Seal - Outer
- 2 WGR 007 Bearing
- 2 WGR 010 Shaft Seal - Inner
- 2 WGR 011 Seal Spacer
- 6 WGR 030 Torx Screws
- 1 WGR 048 Visc Fluid, 6oz

- 2 WGR 052 HP Seal Wave Spring
- 1 WGR 058 HP Seal - Shaft
- 1 WGR 059 HP Seal - Nut
- 1 WGR 076 Weep Seal O-Ring
- 1 WGR 180 Torx L-Wrench
- 2 WS 210 HP Seal O-Ring

#### WGR 612 - TOOL KIT

- 1 WGR 180 Torx L-Wrench
- 1 WGR 181 Removal Press Tube
- 1 WGR 182 Installation Press Tube
- 1 WGR 183 Hex Tool
- 1 WGR 184 HP Seal Install Tool

# 8"-36" LINES

OUR CLASSIC WG-1  
MODEL IS A MUNICIPAL  
WORKHORSE.



## WG-1 CLASSIC

8"-36" Lines

The **WG-1** model is used in 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. This tool is predominately used in large combination trucks with 1" hose.



**Optional Descaling Head  
for the WG-1.**

**WG 040-DS-R5**

### WG-1 CLASSIC

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

Up to 5k psi (350 bar)

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

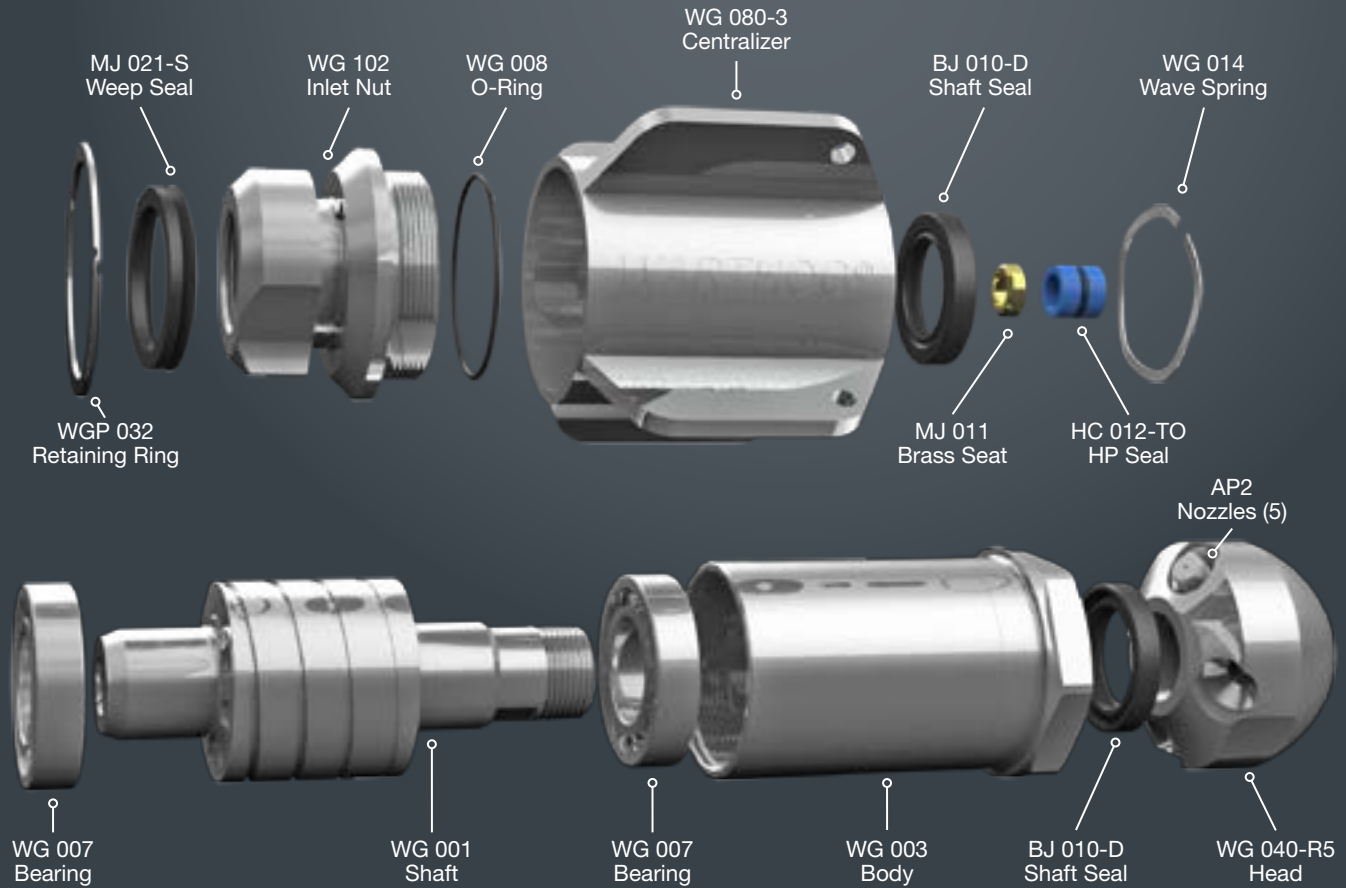
Classic WG-1 Model

### WG-1 CLASSIC SPECS

MODEL	WG-1 CLASSIC	
Maximum Pressure	5k psi	350 bar
Operating Pressure	1500-5k psi	100-350 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 Nm
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

Exploded View - Part Names and Numbers



LARGE LINES

### MAINTENANCE & 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 HP 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 HP Seal & O-Ring
- 2 WG 007 Ball Bearings
- 1 WG 008 O-Ring
- 1 WG 014 Wave Spring
- 1 MJ 021-S Weep Seal
- 1 WGP 032 Retaining Ring

#### 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 HP Seal & O-Ring

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8"-36" LINES

THE WGP-1 IS EXCELLENT FOR LONGER LINES AND MODERATE INCLINES.



WGP-1 CLASSIC

Maximum Pulling Power

Our **WGP-1** is designed to produce up to 40% more pulling power\* than our **WG-1**. The rear facing jets are angled more sharply and the centralizer fins have been streamlined. The result is more pulling power to navigate longer lines and moderate inclines, plus makes retrieval of the tool easier.

WGP-1

Up to 5k psi (350 bar)
50-80 gpm Flows (190-300 l/min)
Up to 40% More Thrust*

8"-36" Lines (152-457 mm)



Optional Descaling Head for the WGP-1

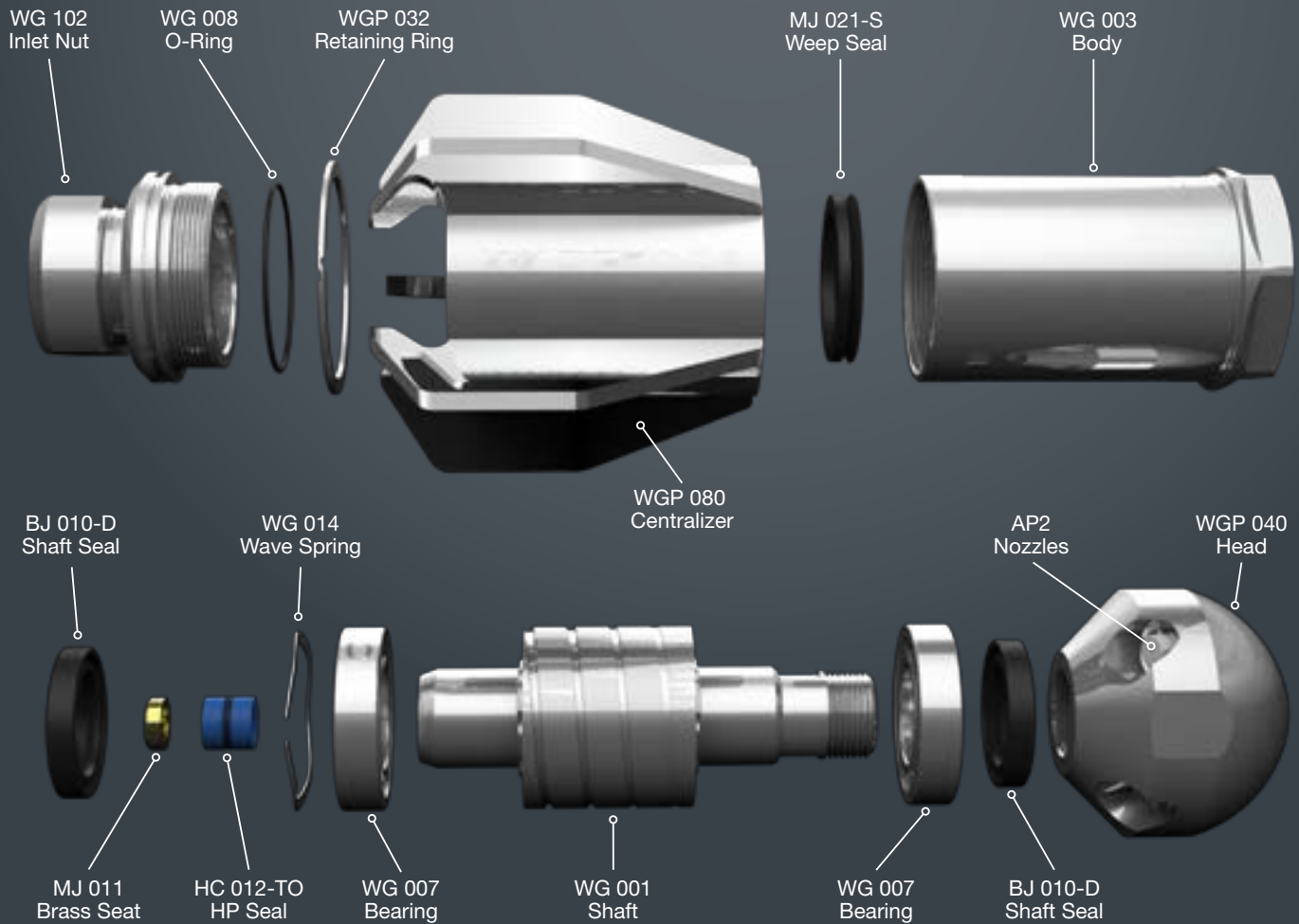
WGP 040-R8-DS

WGP-1 SPECS		
Maximum Pressure	5k psi	350 bar
Operating Pressure	1500-5k psi	100-350 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

\* With the front jet plugged.

## WGP-1

Exploded View - Part Names and Numbers



LARGE LINES

### MAINTENANCE & 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 HP 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 HP Seal & O-Ring
- 2 WG 007 Ball Bearings
- 1 WG 008 O-Ring
- 1 WG 014 Wave Spring
- 1 MJ 021-S Weep Seal
- 1 WGP 032 Retaining Ring

#### WG 612 - TOOL KIT

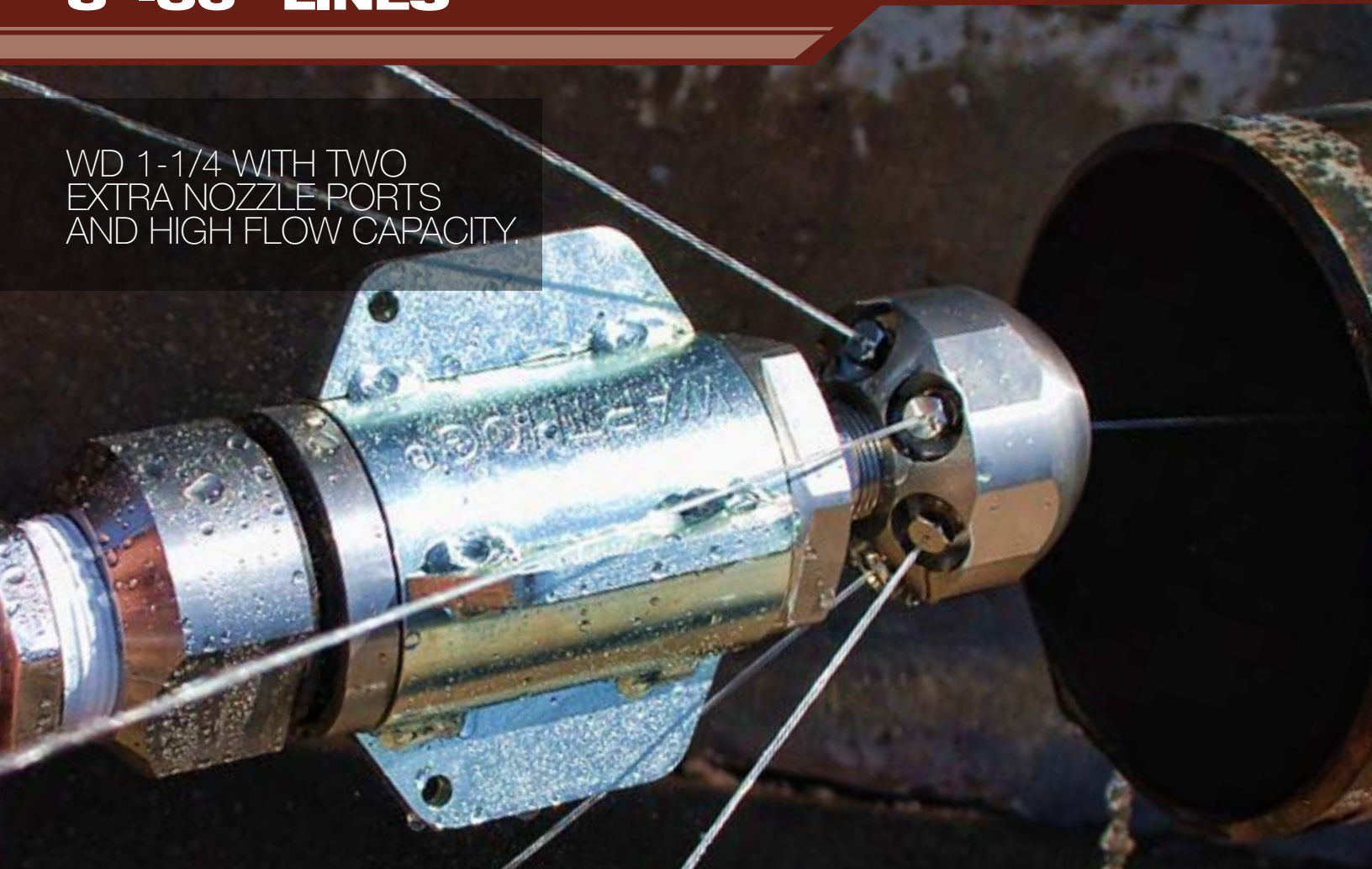
- 1 HC 064 Fill Tube
- 1 BJ 105 Tool

#### WG 602 - SEAL KIT

- 1 MJ 011 Brass Seat
- 1 HC 012-TO HP Seal & O-Ring

JETTING CHARTS FOR CUSTOMIZING THIS SEWER TOOL ARE AVAILABLE BY VISITING  
[JETTING.SEWERNOZZLES.COM](http://JETTING.SEWERNOZZLES.COM)  
 OR GIVE US A CALL AT 1-970-259-2869

WD 1-1/4 WITH TWO  
EXTRA NOZZLE PORTS  
AND HIGH FLOW CAPACITY.



**WD 1-1/4  
CLASSIC**

High Flow Model For 8"-36" Lines

The **WD 1-1/4** is designed to handle the same applications as the **WG-1** but at higher flows. The 1-1/4" inlet combined with seven ports effectively distribute more water.

Descaling heads are not available for this model.

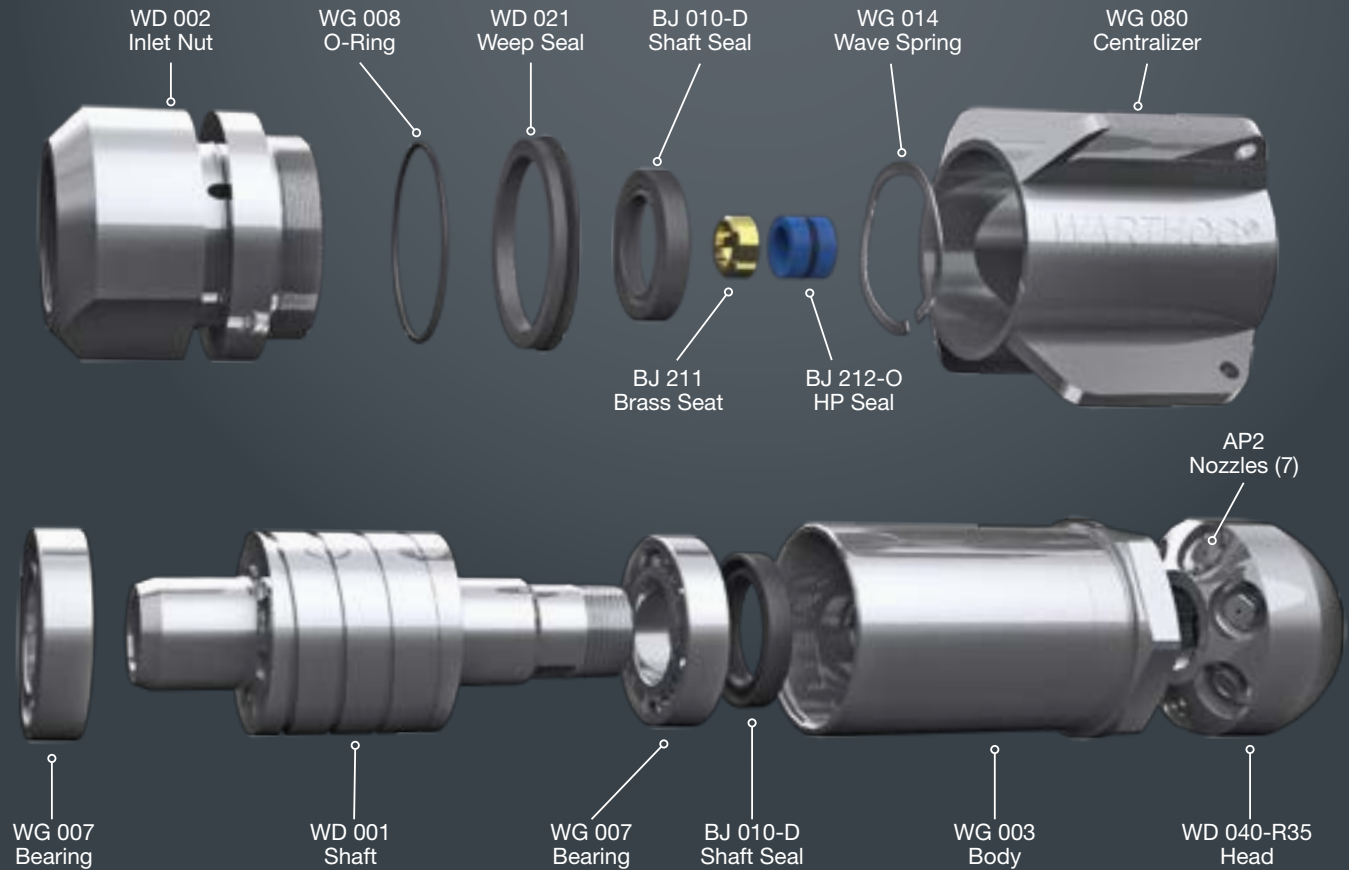
<b>WD 1-1/4</b> 8"-36" Lines (152-457 mm)	Up to 5k psi (350 bar)
	80-120 gpm Flows (300-450 l/min)
	High Flow Model

WD 1-1/4 SPECS		
MODEL	WD 1-1/4	
Maximum Pressure	5k psi	350 bar
Operating Pressure	1500-5k psi	100-350 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 Nm
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

Exploded View - Part Names and Numbers



LARGE LINES

### MAINTENANCE & 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 HP Seal & O-Ring

#### WD 602 - SEAL KIT

- 1 BJ 211 Brass Seat
- 1 BJ 012-O HP 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 HP Seal & O-Ring
- 2 WG 007 Ball Bearings
- 1 WD 021 Seal
- 1 WG 008 O-Ring
- 1 WG 014 Wave Spring

#### WG 612 - TOOL KIT

- 1 HC 064 Fill Tube
- 1 BJ 105 Tool

JETTING CHARTS FOR CUSTOMIZING THIS SEWER TOOL ARE AVAILABLE BY VISITING  
[JETTING.SEWERNOZZLES.COM](http://JETTING.SEWERNOZZLES.COM)  
 OR GIVE US A CALL AT 1-970-259-2869

# HYDRO EXCAVATION



The included high visibility urethane guards are replaceable by removing three bolts.



Hydro-Excavation provides a safe means to precisely excavate an area with high pressure water.

## HYDRO-X

### Hydro Excavation Tools

**STONEAGE** is proud to offer a new line of Hydro-Excavation jetting tools. Hydro-Excavation is a safe alternative for providing access to buried utilities by potholing or trenching with high pressure water. There are three options available for different applications.

**NOTE:** Each of these assemblies are jetted to match your pumps pressure and flow. The **Waterjet Technology Association** recommends limiting the thrust on hand held jetting applications to no more than 1/3 of the operators weight. Contact our Customer Service Team for any jetting questions.

### HYDRO-X

Up to 5k psi

Up to 12 gpm Flows

4 Options Available

HYDRO EXCAVATION



#### HX-101 - SINGLE HEAD ASSEMBLY

This option provides a replaceable single OC1H 1/4" NPT carbide nozzle at 0°. Using a single nozzle allows all of your pump power to be directed in one direction for the most digging power. The high visibility urethane guard is replaceable by removing three bolts. The head has a 1/2" NPT inlet connection to attach to the operating wand.



#### NEW HX-102 - DOUBLE HEAD ASSEMBLY

This option utilizes two CNP2 Carbide Attack Tips which are 1/8" NPT. This jetting option divides your pump power into two jets for a wider jet pattern with less impact power than the HX-101 Assembly. The high visibility urethane guard is replaceable by removing three bolts. The head has a 1/2" NPT inlet connection to attach to the operation wand.



#### HX-103S - TRIPLE STRAIGHT HEAD ASSEMBLY

This option utilizes three CNP2 Carbide Attack Tips which are 1/8" NPT. This in-line pattern give operators the ability to jet with a wider spray pattern to trench material faster. The high visibility urethane guard is replaceable with three bolts. The head has a 1/2" NPT inlet connection to attach to the operating wand.



#### HX-200 - HYDRO-X LANCE ASSEMBLY

Similar to the HX-101, this option uses a replaceable single OC1H 1/4 NPT carbide nozzle at 0°. However, this option includes a 60" lance which allows extra reach for digging deep, focused holes. This assembly includes a guard and collar system to protect the nozzle. The connecting point for this Lance is 1/2" NPT male.

## CENTRALIZERS

Maximize the cleaning effectiveness of Warthog sewer nozzles for specific job requirements. Ask our Account Representatives about configuration options and extensions.



### 6 AND 8-WHEEL ADJUSTABLE CENTRALIZERS

- **WG 286-M-P16 - STRAIGHT PIPES**  
13"-36" diameters (330-915 mm)
- **WG 288-S-P16 - PIPES W/BENDS**  
16.5"-22" diameters (420-560 mm)



### POLY-FIN CENTRALIZERS

- **WG-070**  
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

## MANHOLE CLEANERS

Turn your Warthog pipe cleaning tool into an effective Manhole Cleaner

The benefit of using this design is that the jets are directed at the manhole walls at all times which makes it much more effective and safer than 3D tools. The conversion is simple and requires exchanging the standard **WG 040** head with our **MANHOLE CLEANER** head kits. The head conversion kits include a head with 1/2" extension arms and nozzles. Call our Customer Service team for kit options. We recommend the use of manhole cover plates for increased safety.





## TERMS AND CONDITIONS

**1. Acceptance of Terms and Conditions.** These Terms and Conditions shall operate as Seller's acceptance of Buyer's purchase order, and such acceptance is made expressly conditional on assent by Buyer to the Terms and Conditions. Such assent shall be deemed to have been given unless written notice of objection to any of such Terms and Conditions (including inconsistencies between Buyer's purchase order and this acceptance) is given by Buyer to Seller promptly on receipt hereof.

Seller desires to provide its Buyer with prompt and efficient service. However, to negotiate individually the terms of each sales contract would substantially impair Seller's ability to provide such service. Accordingly, products furnished and services rendered by Seller are sold only on the Terms and Conditions stated herein. Notwithstanding any Terms or Conditions on Buyer's order, Seller's performance of any contract is expressly made conditional on Buyer's agreement to Seller's Terms and Conditions of sale unless otherwise specifically agreed to in writing by Seller. In the absence of such agreement, commencement of performance, shipment and/or delivery shall be for Buyer's convenience only and shall not be deemed or construed to be an acceptance of Buyer's Terms and Conditions.

***PRODUCTS SOLD BY SELLER ARE DESIGNED AND INTENDED TO BE USED AT HIGH PRESSURES AND SPEEDS, AND MAY BE DANGEROUS IF OPERATED IMPROPERLY OR WITHOUT THE USE OF APPROPRIATE SAFETY DEVICES AND GUARDS. BUYER IS CAUTIONED TO CAREFULLY READ AND UNDERSTAND THESE TERMS AND CONDITIONS, AS THEY HAVE IMPORTANT LEGAL CONSEQUENCES.***

**2. Payment/Prices.** Unless other arrangements have been made in writing between Seller and Buyer, payment for product delivered shall be made upon receipt of invoice. The prices shown on the face hereof are those currently in effect. Prices invoiced shall be per price list in effect at the time of shipment. Prices are subject to increase for inclusion of any and all taxes which are applicable and which arise from the sale, delivery or use of Seller's products or services and for the collection of which Seller is or may be responsible to any governmental authority unless acceptable exemption certificates are provided by Buyer in accordance with law. Buyer shall pay all charges for transportation and delivery and all excise, order, occupation, use or similar taxes, duties, levies, charges or surcharges applicable to the equipment or services being purchased, whether now in effect or hereafter imposed by any governmental authority, foreign or domestic.

**3. Warranty.** Subject to the limitations and conditions hereinafter set forth, Seller warrants to the original Buyer that its products are free from defects in workmanship and material for a period of twelve (12) months from shipment. Seller's obligation under this warranty shall be limited to repairing, replacing or issuing a credit for, at Seller's option, any products or services it finds to be defective in material or workmanship. In no event shall Seller be liable for any incidental, consequential or indirect damages of any kind. THIS WARRANTY SHALL BE IN LIEU OF ANY OTHER WARRANTY, EXPRESSED OR IMPLIED, INCLUDING ANY WARRANTY FOR MERCHANTABILITY OR FITNESS FOR ANY PARTICULAR PURPOSE. No statement or recommendation made by Seller or its representative to Buyer or User shall constitute a warranty by Seller or a waiver or modification to any of the provisions hereof or create any liability for Seller. All warranty claims are subject to the exclusions and limitations set forth below:

a. The warranty shall not apply if the product or service (1) has been subject to misuse, negligence or accident; (2) has not been installed or operated in accordance with Seller's recommendations; (3) has been operated under more severe conditions than those specified for the particular product or service; (4) has been operated beyond the rated capacity of the product; or (5) has been repaired or altered outside Seller's facilities or in any way so as, in Seller's judgment, to affect its stability or reliability.

b. Products that Seller furnishes, but does not manufacture, carry only the warranty of the manufacturer of such products. Where other manufacturers' or suppliers' products used in Seller's products or services prove defective, Seller's liability shall exist only to the extent that Seller is able to recover from such manufacturers or suppliers for such defects.

c. Any warranty granted by Seller to the Buyer shall be deemed void if any goods covered by such warranty are used for any purpose not recommended or permitted. In addition, the Buyer shall indemnify Seller and hold Seller harmless from and against any and all claims, damages, losses, costs, expenses and other liability of whatever nature that Seller suffers or incurs by reason of any such unintended use.

d. Notice of defective product or service must be given in writing to Seller by Buyer or User within fifteen (15) business days following receipt of goods. Buyer or User shall keep such products or services in an unaltered condition for examination by Seller's representative. No goods may be returned for credit or adjustment without prior written permission from Seller.

**4. Product Liability.** Buyer specifically acknowledges that the products being purchased may be operated at high speeds and/or pressures, and that as such they may be inherently dangerous if not used correctly. Buyer shall be solely responsible for the safe operation of the products at all times and for determining the safety devices and guards that may be required for the safe operation of the products. Buyer shall undertake to specify and order all safety devices and guards necessary for the safe operation of the equipment covered. All safety devices and guards offered in Seller's quotations are recommended for purchase. Seller may provide necessary safety devices and guards not offered in this quotation at an extra price in accordance with the specifications of Buyer. Buyer shall at all times use and require its employees to use all necessary and appropriate safety devices, guards and proper safe operating procedures. Buyer shall not remove or modify any such devices, guards or warning signs and shall insist on safe operating practices on the part of its personnel. In no event shall Seller be responsible for any injuries to persons or property caused by defects in any equipment, including by way of illustration and not limitation, any pumps, compressors, fittings, connections, components, piping or hoses up to the point that same are connected to the product. Buyer agrees to indemnify and to save Seller harmless from any and all liability or obligation incurred by or against Seller, including costs and attorneys' fees, to or by any persons injured directly or indirectly in the operation of the equipment furnished under the following conditions:

- a. if Buyer fails to purchase and use necessary and appropriate safety devices and guards as determined and/or recommended by Seller;
- b. if Buyer fails to maintain in good working order such safety devices and guards as are purchased from Seller;

- c. if Buyer adds, omits, repairs, modifies, replaces or substitutes any components on the equipment without permission from Seller;
- d. if Buyer exceeds at any time the maximum safe loads, pressures or speeds recommended by Seller for the equipment furnished hereunder without the specific written consent of Seller; or
- e. if Buyer otherwise fails to operate the product or equipment in accordance with Seller's printed instructions or otherwise negligently operates the equipment.

**5. Delivery.** Seller is not obligated to make delivery by a specified date, but will always use its best efforts to make delivery within the time requested. All deliveries are based on F.O.B. Seller's factory, unless specifically agreed otherwise, and Buyer shall pay all shipping costs and insurance from that point. Seller, in its sole discretion, will determine and arrange the means and manner of transportation of the products. Responsibility of Seller shall cease and Buyer assumes all risk of loss or damages upon Seller's delivery to and receipt by a common carrier. Carriers shall be responsible for goods lost or damaged in transit and Buyer shall immediately notify the carrier in writing of such loss or damage. At Buyer's request Seller will offer its assistance.

***THE PROPOSED SHIPMENT DATE IS AN ESTIMATE. UNDER NO CIRCUMSTANCES SHALL SELLER HAVE ANY LIABILITY WHATSOEVER FOR LOSS OF USE OR FOR ANY DIRECT OR CONSEQUENTIAL DAMAGES RESULTING FROM DELAY REGARDLESS OF THE REASON(S).***

Shortages or errors must be reported within fifteen (15) business days from receipt of shipment to secure adjustment. No merchandise may be returned without securing written approval from Seller. Seller will notify Buyer promptly of any material delay and will specify the revised delivery date as soon as practicable. Seller shall not be liable for any delay in delivery or performance, or for any failure to manufacture, deliver or perform due to (a) any cause beyond its reasonable control; (b) any act of God, act of Buyer, act of civil or military authority, governmental priority, strike or other labor disturbance, flood, epidemic, war, riot, delay in transportation or car shortage; or (c) inability on account of any cause beyond the reasonable control of Seller to obtain necessary materials, components, services or facilities. In the event of any such delay, the date of delivery or of performance shall be extended for a period equal to the time lost by reason of the delay.

**6. Technical Advice.** All technical advice, recommendations and services of Seller are intended for use by persons having adequate skill, at their own risk, and Seller assumes no responsibility, and Buyer hereby waives all claims against Seller, for results obtained or damages incurred from the use of Seller's advice, recommendations and services.

**7. Modification.** These Terms and Conditions are intended by Seller and Buyer to constitute a final, complete and exclusive expression of agreement and cannot be supplemented or amended without Seller's prior written approval. Seller's waiver of any breach, or failure to enforce any of the Terms and Conditions at any time, shall not in any way affect, limit or waive Seller's right thereafter to enforce and compel strict compliance with every Term and Condition thereof. If any provisions

of these Terms and Conditions are held to be invalid or unenforceable, such invalidity or unenforceability shall not affect the validity or enforceability of the other portions hereof.

**8. Disputes.** Buyer and Seller shall attempt in good faith promptly to resolve any dispute arising under these Terms and Conditions by negotiations between representatives who have authority to settle the controversy. If unsuccessful, Buyer and Seller shall further attempt in good faith to settle the dispute by nonbinding third-party mediation, with fees and expenses of such mediation apportioned equally to each side. Any dispute not so resolved by negotiation or mediation may then be submitted to a court of competent jurisdiction in accordance with the terms hereof. These procedures are the exclusive procedures for the resolution of all such disputes between the parties.

All sales, agreements for sale, offers to sell, proposals, acknowledgments and contracts of sale, including, but not limited to, purchase orders accepted by Seller, shall be considered a contract under the laws of the State of Colorado and the rights and duties of all persons, and the construction and effect of all provisions hereof shall be governed by and construed according to the laws of such state. A state or federal court located within the State of Colorado shall have sole and exclusive jurisdiction over any litigation concerning any such matters as well as any alleged defects of any products or equipment covered thereby or damages sustained as a result of such alleged defects.

If any litigation is commenced between Seller and Buyer, or their personal representatives, concerning any provision hereof, the party prevailing in the litigation shall be entitled, in addition to such other relief that is granted, to a reasonable sum as and for their attorneys' fees and costs in such litigation or arbitration.

## **STONEAGE TRADEMARK LIST**

View the list of StoneAge's trademarks and service marks and learn how the trademarks should be used. Use of StoneAge trademarks may be prohibited, unless expressly authorized.

<http://www.sewernozzles.com/trademark-list/>

## **STONEAGE PATENT DATA**

View the list of StoneAge's current U.S. patent numbers and descriptions.

<http://www.sapatents.com>

## 1-866-795-1586 (TOLL FREE IN THE U.S.)

**PHONE: 970-259-2869 • EMAIL: SALES@STONEAGETOOLS.COM**

**HOURS: 8:00 AM - 5:00 PM MONDAY - FRIDAY (USA MOUNTAIN TIME)**

### TECHNICAL SUPPORT

**STONEAGE** offers the products listed in this catalog through its dealer network only. For a list of our current dealers please visit **WWW.SEWERNOZZLES.COM**. Our Technical Support team is available during the hours listed above. They are also available for custom projects, see **STONEAGE SOLUTIONS** below.

### MANUALS

**OPERATOR'S MANUALS** for all equipment are available online. They illustrate tools, identify parts, and detail maintenance and overhaul procedures. Additional copies of the manuals, repair videos and CD's are available at a nominal charge.

### REPAIRS

**REPAIR & MAINTENANCE SERVICE** is available by the same technicians who build and test our tools. We try to complete repairs and test every tool within three days of receipt. Call first so we can record all the information necessary to begin work as soon as the tool arrives. Make sure you include contact information. Send tool to:

**STONEAGE INC.** Attention Repairs, 466 S. Skylane Dr., Durango CO 81303, USA

**SERIAL NUMBER DATABASE** is maintained on all equipment sold. If a serial number is provided when ordering parts, we can verify that the right parts are specified.

### LEAD TIME

**PARTS AND SERVICE KITS** are available to ship same day as ordered. Standard tools can usually be shipped the next day. Custom porting of heads usually requires 3-4 days to schedule through the factory. More complicated systems like Lancing Machines are built when ordered, which can take several weeks depending on factory backlog. Check availability and place orders early enough to avoid scheduling conflicts.

### ORDERING

**CALL OR EMAIL YOUR ORDER** to an authorized dealer with purchase order number, shipping and billing addresses, and delivery date. Check datasheet to ensure specifications are complete. Advise whether we should hold shipment until all items are available.

### SHIPPING

**SHIPPING IS PRE-PAID** and invoiced with order but may be charged directly to the customer's account with selected courier by special instruction. Most orders are shipped via UPS or Fed Ex couriers; specify a preference if you wish. Lancing Systems, Floor Cleaners, Telebooms and other large equipment must be shipped by truck or air freight. Either party may make the arrangements. Airline counter-to-counter delivery is not reliable from our mountain location.

### PAYMENT

**MAJOR CREDIT CARDS OR BANK TRANSFERS ARE ACCEPTED.** Pre-payment is required to ship custom equipment.

### RETURNS

Any parts returned for credit or warranty must be accompanied by a StoneAge RMA number. Please contact a Customer Service Specialist to obtain an RMA number. A minimum restocking fee of 15% applies to standard items returned unused. Returns will only be accepted on unused items returned 6 months or less from invoice date. All returns and restocking fees are subject to StoneAge final decision. Returns of custom products and obsolete items are not accepted.



# THE STONEAGE TEAM

## SALES AND SHIPPING



Carrie

Valoree

Frank

Kent

Tim



Jeff

Daniel

Kevin

Alan

Mike

## EXECUTIVES



John



KP



Jerry

## FABRICATION, ASSEMBLY AND REPAIR



Jed

Jacob

Jack

Cody

Jim

Erick

Lee



Keith

David

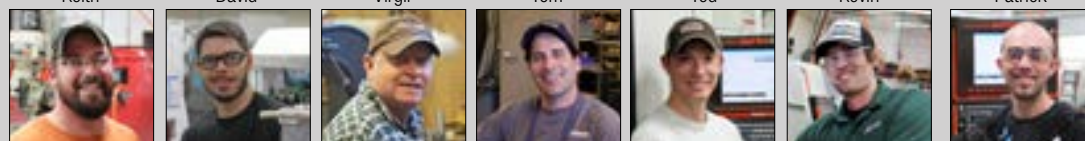
Virgil

Tom

Ted

Kevin

Patrick



Kevin

Robbie

Lynn

John

Greg

Eric

Eric

## ADMINISTRATION



Sara



Carolyn



Maria



Janet



Brenda



Amy



Betsy



David

## INFORMATION SYSTEMS



Will

Mark

Chester

Ed

Brian

## ENGINEERING



Travis

John

Joe

Colton

Stirling



Rawlin

Todd

Doug

Jeff

Rick

## MARKETING AND SOLUTIONS



Chris

Bill

Randy

Margaret

Mike

## PRODUCTION, INVENTORY AND QUALITY CONTROL

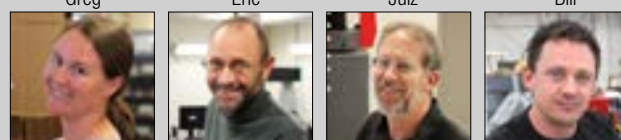


Greg

Eric

Julz

Bill



Chrissi

Hugh

Tom

Jim

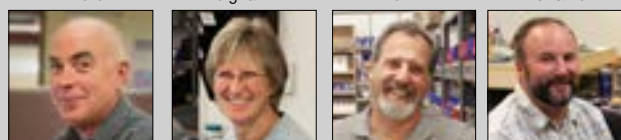


Derek

Leighann

Teri

Charlie



David

Deanna

Ron

Andy



## ► LOOKING FOR A DEALER?

All Warthogs are sold through StoneAge authorized dealers only.

Go to [www.sewernozzles.com/dealers](http://www.sewernozzles.com/dealers) and choose your State or Country to find a dealer near you.

### UNITED STATES

- Alabama
- Arizona
- Arkansas
- California
- Colorado
- Connecticut
- Delaware
- Florida
- Georgia
- Idaho
- Illinois
- Indiana
- Iowa
- Kansas
- Kentucky
- Louisiana
- Maryland
- Mass
- Michigan
- Minnesota
- Mississippi
- Missouri
- Nebraska
- New Jersey
- New York

- North Carolina
- Ohio
- Oklahoma
- Oregon
- Pennsylvania
- South Carolina
- Texas
- Utah
- Virginia
- Washington
- Wisconsin

### INTERNATIONAL

- Africa
- Austrailia
- Canada
- China
- Denmark
- France
- Italy
- Netherlands
- New Zealand
- Sweden
- United Kingdom



**WARTHOG**  
SEWER NOZZLES BY **STONEAGE**®

**Tools that WORK.**  
**Tools that LAST.**

**WWW.SEWERNOZZLES.COM**

Proudly Manufactured



in the United States