



BLUE STAR

Nozzles made for Professionals

www.sewerproshop.com

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COMPANY OVERVIEW

SEWER PRO SHOP proudly distributes innovative, high quality sewer cleaning equipment, precision engineered by its parent company INTERSEWER and manufactured to the highest technical standards by ISO 9001:2008 certification in Germany. Our pride and success stem from the personal relationship we have forged and maintained over a period of more than 20 years with our loyal friends and customers in the sewer cleaning business.

Our goal is to enable our customers to increase their productivity and lower their operating costs by consuming less water, less time and less fuel for their jetter trucks. Furthermore, SEWER PRO SHOP is pleased to provide industry leading customer service and technical support.

These products are leaders in the sewer cleaning industry and include nozzles, chain cutters, milling cutters, specialty tools and accessories for the municipal and industrial markets.

OPTIMIZED 3D HYDRO MECHANICS

Bluestar sewer cleaning nozzles are manufactured with Optimized 3D Hydro Mechanics. That means, the water coming from the pressurized hose is smoothly turned around in the nozzle chamber through semi-circular hydro mechanics by means of 5 axial CNC precision machining and guided directly into the nozzle inserts.

Most Bluestar nozzles are manufactured in one piece to the highest safety rating.

Bluestar nozzles utilize case hardened steel / stainless steel with stainless steel and ceramic nozzle inserts thus providing unrivaled cleaning efficiency and durability. As a result, most Bluestar nozzles can also be used with recycled water.

SEWER PRO SHOP: EFFECTIVE SOLUTIONS, AFFORDABLY PRICED

PROFESSIONALS CLEAN WITH BLUE STAR NOZZLES

SEWER PRO SHOP












Arrow Nozzle

Precision engineered and manufactured of wear-resistant tempered steel, the Arrow Nozzle provides excellent performance in the most difficult cleaning applications, by cutting and breaking through total obstructions efficiently with four strong, concentrated forward jets and sharp cutting edges.

Technical Specifications:

- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Rear water jet angle 23°
- ✓ Forward water jet angle 0°
- ✓ Front water jet angle 15°
- ✓ ¾" – 1 ¼" hose connection
- ✓ 1 ¼" available as Spear Nozzle

Part No.				Inserts				
10209	1/4"	1.25"	0.75"	R: 4x drilled FJ: 3x drilled	23°/15°	min 6 - 10	2" - 6"	0.08
10210S	1/2"	2.2"	1.1"	R: 6x drilled / FJ 3x M5 ISK / 0° M6 ISK	0°/15°/23°	min 10	3" - 8"	0.3
10211S	3/4"	5.3"	2.4"	R: 8x M8 ASK / FJ: 3x M8 ASK / 0°: 1x M10 ASK	23°/15°/0°	min 35 - 60	6" -16"	2.6
10212S	1"	4.5"	2.4"	R: 8x M8 ASK / FJ 3x M8 ASK / 0° M10x1 ASK	0°/15°/23°	min 50	6" - 16"	2.2










Arrow Nozzle DP

Equipped with a drill point, precision engineered and manufactured of wear-resistant tempered steel, the Arrow Nozzle provides excellent performance in the most difficult cleaning application, by cutting and breaking through total obstructions efficiently with its strong, concentrated forward jets and sharp cutting edges.

Technical Specifications:

- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Rear water jet angle 23°
- ✓ Forward water jet angle 0°
- ✓ Front water jet angle 15°
- ✓ Drill Point equipped
- ✓ ½" – 1" hose connection
- ✓ 1 ¼" available as Spear Nozzle

Part No.				Inserts				
10210S-DP	1/2"	3"	1.1"	R: 6x drilled / FJ 3x M5 ISK / 0° M6 ISK	0°/15°/23°	min 10	3" - 8"	0.3
10211S-DP	3/4"	5.3"	2.4"	R: 8x M8 ASK / FJ: 3x M8 ASK	23°/15°	min 35 - 60	6" - 16"	2.6
10212S-DP	1"	5"	2.4"	R: 8x M8 ASK / FJ 3x M8 ASK / 0° M10x1 ASK	0°/15°/23°	min 50	6" - 16"	2.2



General Nozzle

Precision engineered and manufactured of wear-resistant tempered steel with one forward jet or blind plug, the General is a perfect nozzle for preventative maintenance and all-around sewer cleaning.

Two different water jet angles (15 and 25 degrees) provide strong traction and highly efficient cleaning.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Rear water jet angles 15° and 25°
- ✓ 1 ¼" hose connection available with bushing

Part No.				Inserts				
10180S	1/2"	2.8"	1.8"	R: 6x M6 ISK / FJ M6 ISK	15°/25°	min 16	4" - 8"	1.5
10181S	3/4"	4.5"	2.3"	R: 8x M8 ASK / FJ: 1x M6 ISK	15°/25°/0°	min 35 - 60	6" - 16"	3.6
10182S	1"	6"	3.2"	R: 8x M10x1ASK / FJ M10x1 ISK	15°/25°	min 50	6" - 16"	9
10183S	1 1/4"	6"	3.2"	R: 8x M10x1ASK / FJ M10x1 ISK	15°/25°	min 60	6" - 16"	9










Power Pull Nozzle

Precision engineered and manufactured of wear-resistant tempered steel, the Power Pull Nozzle is an ideal tool for some of the toughest applications. The 7 degree jet provides tremendous traction and cleaning performance in mountainous, difficult terrain. This is a great nozzle to clean and remove sand, silt and large debris from sewer lines.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Rear water jet angle 7°
- ✓ 1 ¼" hose connection available with bushing

Part No.				Inserts				
10161S	1/2"	2.2"	1.8"	6x M6 ISK	7°	min 16	4" - 8"	1.5
10162S	3/4"	4.5"	2.3"	R: 8x M8 ASK	7°	min 35 - 60	6" - 10"	3.6
10163S	1"	6"	3.2"	8x M10x1ASK	7°	min 50	6" - 12"	8.8
10164S	1 1/4"	6"	3.2"	8x M10x1ASK	7°	min 60	12"≥	8.8



Aluminum Power Pull Nozzle



Due to its extra lightweight, this nozzle is perfect for extra long and steep lines. Tightly grouped 7 degree jets provide tremendous traction and cleaning performance in mountainous, difficult terrain. All these features make it a great nozzle to clean and remove sand, silt and large debris from sewer lines.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Rear water jet angle 7°

Part No.				Inserts				
10170S	1"	5.9"	3.2"	8x M10x1ASK	7°	min 35	6" - 12"	2.9









Standard Nozzle

Precision engineered and manufactured of wear-resistant steel, each Standard Nozzle includes one forward jet and blind plug (interchangeable). Water jet angle is 23 degrees. The Standard Cleaning Nozzle is light, maneuverable and highly efficient.

Technical Specifications:

- ✓ Optional front jet
- ✓ Rear water jet angle 23°

Part No.			\varnothing	Inserts		 gal/min		 lbs
10130S	1/4"	1.1"	0.7"	R: 6x drilled / FJ M5 ISK	23°	min 11	2" - 6"	0.2
10131S	1/2"	2"	1.2"	R: 6x drilled / FJ M5 ISK	23°	min 15	4" - 8"	0.3
10132S	3/4"	3.2"	2.4"	R: 8x M6 ISK / FJ M6 ISK	23°	min 35	6" - 8"	0.9
10133S	1"	3.2"	2.4"	R: 8x M6 ISK / FJ M6 ISK	23°	min 50	6" - 12"	1.8
10134S	1 1/4"	3.2"	2.4"	R: 8x M6 ISK / FJ M6 ISK	23°	min 60	8" - 12"≥	2.2









Flounder Nozzle

Precision engineered and manufactured of wear-resistant tempered steel, the Flounder nozzle is an excellent tool to clean the floor of pipes. The smooth design with rounded edges provides the nozzle with great gliding capability.

Technical Specifications:

- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Water jet angles 5°/20°
- ✓ Hose Connection 1/2" – 1"

Part No.			Inserts				
10330S	1/2"	6" x 3,5" x 1,6"	4x M8 ASK	5°/20°	min 15	6" - 12"	4.4
10331S	3/4" - 1"	7,5" x 3,9" x 2"	6x M8 ASK	0°/ 5°/20°	min 40 - 60	12" - 24"	11.5









Spear Nozzle

Precision engineered and manufactured of wear-resistant tempered steel, the Spear Nozzle is a bigger, heavier version of the Arrow Nozzle to cut, break and remove total blockages rapidly with its 4 strong concentrated forward jets, drill point and sharp edges in larger pipes.

Technical Specifications:

- ✓ Heavy duty construction
- ✓ Drill point can be replaced with an additional nozzle insert
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Rear water jet angle 23°
- ✓ Front water jet angle 15°

Part No.			\varnothing	Inserts		 gal/min		 lbs
10220S	1"	7.5"	2.9"	R: 6x SW14 ASK / FJ 4x M8 ASK / 0° M10x1 ASK	0°/15°/23°	min 60	8" - 24"	6.2
10221S	1 1/4"	7.5"	2.9"	R: 6x SW14 ASK / FJ 4x M8 ASK / 0° M10x1 ASK	0°/15°/23°	min 60	8" - 24"≥	6.2





Emperor Nozzle

Precision engineered and manufactured of wear resistant tempered steel. The Emperor's two different water jet angles of 15 and 30 degrees (six jets each) provide highly effective cleaning performance and traction in large sewer and stormlines.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Heavy design for large pipes
- ✓ Water jet angles 15° and 30°
- ✓ 1 ¼" hose connections available with bushing

Part No.			\varnothing	Inserts		 gal/min		 lbs
Artikel-Nr.				Einsätze				
10110S	1"	7.5"	4.3"	12x SW14 ASK	15°/30°	min 80	12" - 30"	19.8
10111S	1 ¼"	7.5"	4.3"	12x SW14 ASK	15°/30°	min 80	12" - 30"	19.8




Emperor 360 Nozzle

This high performance nozzle is perfect for removing hard grease and scale that may be encrusted on the circumference of the pipe. The fan jets clean the pipe interior streak free 360°, while the propulsion nozzle inserts provide superior movement of obstructions such as encrusted grease, scale etc. to the manhole. The Emperor 360 nozzle is an indispensable hydromechanic tool prior to video inspection.

Technical Specifications:

- ✓ Streak free cleaning
- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Rear water jet angle 15°
- ✓ Rear fan water jet angle 30°
- ✓ 1" – 1 ¼" hose connection
- ✓ Rated for 60 – 120 GPM @ 4000PSI max.

Part No.				Inserts				
Artikel-Nr.			∅	Einsätze		gal/min		lbs
10115S	1" - 1 ¼"	7.5"	4.3"	R: 6x SW14 ASK FJ 6x SW 14 ASK	15°/30°	min 60 - 120	12" - 30"	19.8









Anti Blower Nozzle

Precision engineered and manufactured of wear-resistant tempered steel, the specially designed water jet angles of this nozzle - in conjunction with reduced pressure - effectively eliminates blown toilets.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Water jet angle 36°
- ✓ 1/2" – 1" hose connection (with bushings available in Accessories)

Part No.			\varnothing	Inserts		 gal/min		 lbs
10360S	1/2"	2.6"	1.75"	R: 6x M6 ASK / FJ: 1x M6 ISK	25°/0°	min 10 - 25	3" - 8"	1.4
10361S	3/4"	4.5"	2.3"	R: 8x M8 ASK / FJ: 1x M8 ISK	36°/0°	min 35 - 60	6" - 16"	3.6
10362S	1"	6"	3.2"	R: 8x M10x1ASK / FJ M10x1 ISK	36°	min 50	6" - 16"	8.8



Penetrator Nozzle



Precision engineered and manufactured of wear-resistant tempered steel, the Penetrator Nozzle is specifically designed to successfully navigate over small voids in pipes.

Eight individual 12 degree water jets provide tremendous traction and cleaning performance. An optional pulling eye is available. Also perfect for cleaning egg-shaped pipes. For bigger pipes, a larger version is also available.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Optional front jet
- ✓ Rear water jet angle 12°
- ✓ 3/4" – 1 1/4" hose connection

Part No.			\varnothing	Inserts		 gal/min		 lbs
10121S	3/4" -1"	7.9"	3.1"	R: 8x M10x1ASK / FJ M10x1ASK	12°	min 50	6" - 16"	15.4
10122S	1 1/4"	9.8"	3.9"	R: 8x M10x1ASK / FJ M10x1ASK	12°	min 80	12" - 48"	30.9



Stealth Nozzle

Precision engineered and manufactured of wear-resistant tempered steel. The Stealth's two different water jet angles of 12 and 18 degrees (four jets each) provide powerful traction and effective cleaning performance to remove sand, silt and obstructions from sewer or stormlines.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Rear water jet angles 12° and 18°

Part No.				Inserts				
10100S	3/4" - 1"	5.9"	3.1"	8x M10x1 ASK	12°/18°	min 60	8" - 24"	8.4
10101S	1"	7.5"	3.9"	8x SW14 ASK	12°/18°	min 60	8" - 24"	17.6
10102S	1 1/4"	7.5"	3.9"	8x SW14 ASK	12°/18°	min 60	8" - 24"	17.6



Power Pull Nozzle LRG

Precision engineered and manufactured of wear-resistant tempered steel, the Power Pull Nozzle is an ideal tool for the toughest applications. Its pattern of narrow, 7 degree water jets provides tremendous traction and cleaning performance in mountainous, difficult terrain. It's a proven nozzle which cleans and removes sand, silt and large debris from sewer lines.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded stainless steel nozzle inserts
- ✓ Ceramic nozzle inserts available
- ✓ Rear water jet angle 7°
- ✓ 1 ¼" hose connection available with bushing

Part No.			\varnothing	Inserts		 gal/min		 lbs
10166S	1"	7.5"	3.9"	8x SW14 ASK	7°	min 60	8" - 24"	17









Raptor Nozzle

The Raptor Nozzle is a powerful nozzle capable of removing heavy obstructions caused by roots, grease, or any other solid organic material quickly. Its tempered stainless steel drill head is turbine-driven and spins in the range of 6000 and 12000 rpm, depending on water flow and pressure. The Raptor Nozzle succeeds where standard hydromechanic tools fail!

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded ceramic nozzle inserts
- ✓ Stainless steel nozzle body with tempered stainless steel drill head
- ✓ Rear water jet angle 22°
- ✓ No lubrication required

Part No.			\varnothing	Inserts		 gal/min		 lbs
10320SC	1/2"	4.3"	2.2"	3x M6 ISK F 3x M6 ISK R	22°	min 18	4" - 8"	2.4
10321SC	3/4" - 1"	5.9"	2.8"	3x M6 ISK F 6x M6 ASK R	25°	min 40 - 80	6" - 12"	5.2









Raptor Plus Nozzle

The Raptor+ Nozzle is a highly efficient nozzle capable of removing severe obstructions from large sewer- stormwater lines, caused by root, grease, or any other solid organic material fast. Its tempered stainless steel drill head is turbine-driven and doesn't require any lubrication.

The Raptor+ Nozzle succeeds where standard hydromechanic tools fail!

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded ceramic nozzle inserts
- ✓ Stainless steel nozzle body with tempered, replaceable stainless steel drill head
- ✓ Rear water jet angle 20°







Part No.			\varnothing	Inserts		 gal/min		 lbs
10322SC	1 1/4"	8.5"	3.9"	6x M10 ISK R 3x M10 ISK F	20°	min 60 - 100	up to 12"	16.2



Raptor Chain Cutter

The Raptor Nozzle can be converted from a total blockage remover to a chain cutter with rigid guide skids capable of operating in 4" – 6" sewer lines (1/2" Raptor Chain Cutter) and 6" – 8" sewer lines (1" Raptor Chain Cutter) by unscrewing the drill head and attaching a chain retainer with chains.

The Raptor Nozzle is a powerful nozzle capable of removing heavy obstructions caused by roots, grease, or any other solid organic material quickly. Its tempered stainless steel drill head is turbine-driven and spins in the range of 6000 and 12000 rpm, depending on water flow and pressure. The Raptor Nozzle succeeds where standard hydromechanic tools fail!

Part No.			\varnothing	Inserts		 gal/min		 lbs
10322	1/2"	4.3"	2.2"	3x M6 ISK F 3x M6 ISK R	22°	min 18	4" - 6"	3.5
10323	3/4" - 1"	5.9"	2.8"	3x M6 ISK F 6x M6 ASK R	22°	min 40 - 80	6" - 8"	6.8



Raptor Chain Cutter with flexible Guide Skid

The Raptor Chain Cutter is an extremely powerful and innovative tool capable of removing heavy obstructions caused by roots, grease, mineral deposits or other solid organic material swiftly.

The Chain Retainer is driven by a high performance turbine which doesn't require any lubrication. Off sets? No problem! The Raptor Chain cutter utilizes a unique guide skid, continuously adjustable in 1/16" increments from 6" – 12".

This highly effective hydrodynamic tool is made of tempered stainless steel and comes with ceramic nozzle inserts.

The Raptor Chain Cutter can easily be converted from a root cutter to a total blockage remover by unscrewing the chain retainer and assembling the drill head.

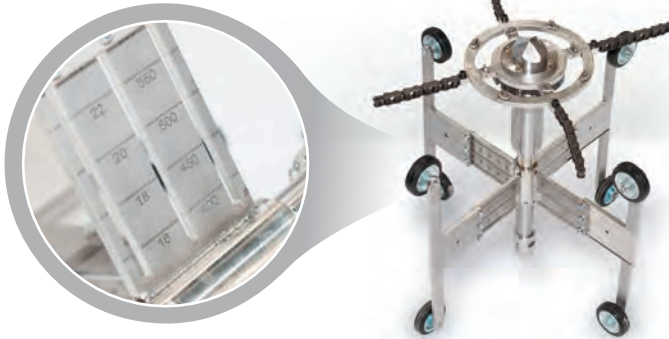
Part No.						
10324	1"	19"	22°	min 40	6" - 12"	14.3





✓ Chain Cutter min. 10" – max. 48"






✓ Convertible to big diameter pipes



Viper Chain Cutter

The Viper Chain Cutter is an extremely powerful and innovative tool to remove heavy obstructions caused by roots, grease, mineral deposits or other solid organic material promptly. This highly effective hydrodynamic tool is made of tempered stainless steel and utilizes ceramic nozzle inserts.

The Chain Retainer is driven by a high performance turbine which doesn't require any lubrication. Offsets? No problem! The Viper Chain Cutter utilizes a unique, continuously adjustable guide skid, available in three different sizes (10" – 16", 16" – 28" and 28" – 48").

Part No.					
N/A	1" - 1 1/4"	25.6"	min 40 gal/min	10" - 16"	45.2 lbs
10400SC	1" - 1 1/4"	25.6"	min 80 gal/min	16" - 28"	54.0 lbs
N/A	1" - 1 1/4"	25.6"	min 80 gal/min	28" - 48"	65.0 lbs










Typhoon Nozzle

The uniform rotary motion of the rotor in conjunction with our Optimized 3D Hydro Mechanics provide a continuous removal of grease, mineral deposits and light roots, as well as thorough cleaning of the entire interior of the pipe.

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, threaded ceramic nozzle inserts
- ✓ Stainless steel body and rotor
- ✓ Rear water jet angle 25°
- ✓ Water jet angles at the rotor 90°/85°
- ✓ Do not use with recycled water
- ✓ No lubrication required

Part No.				Inserts				
10140SC	1/4"	1.3"	0.6"	10x M6 ASK	90°/85°/25°	min 9	2" - 4"	0.08
10141SC	1/2"	3.1"	1.7"	7x M6 ISK	90°/85°/25°	min 18	4" - 6"	1.4
10142SC	3/4"	4"	2"	10x M6 ASK	90°/85°/25°	min 40 - 80	6" - 16"	2.8
10143SC	1"	4.8"	2.7"	10x M6 ASK	90°/85°/25°	min 40 - 80	6" - 16"	5.4



Typhoon Rocker



The Typhoon Rocker Nozzle is a vibrating sewer cleaning nozzle. Similar in looks to the Typhoon nozzle the “Rocker” is able to remove the toughest deposits from the bottom of pipes. The offset rotation of the rotor causes aggressive vibration which breaks up the deposits.

ATTENTION: The “Rocker Nozzle” is intended for use in plastic (HDPE, PVC etc...) and cast iron pipes only. Never use it in clay and concrete pipes!!!

Technical Specifications:

- ✓ Low maintenance, no lubrication required
- ✓ Replaceable threaded ceramic and stainless steel inserts
- ✓ Stainless steel body and non corrosive brass
- ✓ Rear water jet angle 25°
- ✓ ½” - 1 ¼” hose connection

We decline every demand for warranty!

Part No.				Inserts				
10146SC	1/2" - 1 1/4"	4.8"	2.7"	10x M6 ASK	90°/85°/25°	min 40 - 80 gal/min	6" - 16"	5.4 lbs








Bigfoot Nozzle

The Bigfoot Nozzle utilizes Optimized 3D Hydro Mechanics to convert the water coming from a pressurized sewer hose into unrivaled cleaning power. The roll over bars allow the nozzle to upright itself in the line. All rear water jets are concentrated on the bottom of the pipe to remove large debris, sand, silt, sludge etc. The Bigfoot Nozzle can be used in tandem with an additional Bigfoot Nozzle for large sewer lines or culverts and is available in four different sizes (6, 8, 10 or 14 jets).

Technical Specifications:

- ✓ Optimized 3D Hydro Mechanics
- ✓ Replaceable, one-piece threaded ceramic nozzle inserts
- ✓ ¾" – 1 ¼" hose connection
- ✓ Rear water jet angles 5° - 20°
- ✓ Operating pressure up to 4000 PSI

Part No.			Inserts	 gal/min		 lbs
10300SC	1"	17.5"	6x SW14	min 50	12" - 32"	33.1
10301SC	1"	17.5"	8x SW14	min 60	15" - 35"	39.7
10302SC	1" - 1 ¼"	17.5"	10x SW14	min 60	19" - 55"	52.9
10303SC	1" - 1 ¼"	17.5"	14x SW 14	min 80	24"≥	56.2



Twister Nozzle









The Twister rotary sewer nozzle is designed for cleaning 6" to 24" sewer and stormwater pipes. The Twister nozzle is operated by water coming from a pressurized hose and is comprised of three components: The drive contains propulsion jets, is constructed of stainless steel and requires no lubrication. The cleaning head includes multiple high performance ceramic inserts including one in front for opening blockages. The nozzle comes equipped with a rigid skid. The Twister nozzle is designed to operate in the toughest conditions such as grease, scaling, roots and tuberculation.

Advantages:

- ✓ Adjustable guide skid available as an option
- ✓ Unrivalled performance, high efficiency
- ✓ Can be used with recycled and potable water
- ✓ Low maintenance, no lubrication required

Technical Specifications:

- ✓ Replaceable threaded ceramic nozzle inserts
- ✓ Stainless steel body
- ✓ Reduced operating costs

Part No.			\varnothing	Inserts		 gal/min		 lbs
10890SC	3/4"	9.5"	3.75"	4xM8 ASK 6xM6 ISK	60°/12°/18°	min 40	4" - 16"	7.9
10990SC	1"	9.5"	5.75"	4xM8 ASK 6xM6 ISK	60°/12°/18°	min 60	6" - 24"	7.9



Alphajet Nozzle

The Alphajet cleaning nozzle is designed to clean lift stations and manholes prior to rehabilitations.

Technical Specifications:

- ✓ Replaceable ceramic nozzle inserts
- ✓ Stainless steel construction
- ✓ Min 18 GPM @ 1/2"
- ✓ Max 60 GPM @ 1"
- ✓ 3/4" – 1" hose connection

Part No.		 gal/min	 lbs
10870SC	3/4" – 1"	18 – 60	8.0









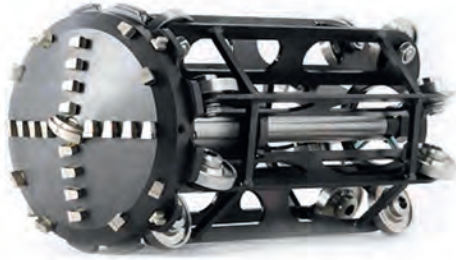
Raven Nozzle

The Raven nozzle is an excellent tool for hydro-excavating. It is available with a single forward water jet or fan jet, no rear water jets. This allows for the maximum excavating and penetrating power.

Technical Specifications:

- ✓ High grade stainless steel construction
- ✓ Threaded, replaceable ceramic nozzle insert or fan jet
- ✓ 1/2" - 1" hose connection
- ✓ Rated for 18GPM @ 4000PSI, 60GPM @ 2500 PSI
- ✓ Forward water jet angle 0°

Part No.				Inserts			
10138S	1/2" - 1"	3.15	2.35	1x SW 14 ceramic or 1x SW SS fan jet	0°	min 10	2.6



Milling Cutters

INTERSEWER's innovative, reliable milling cutter is made of tempered steel and offers superior drive and thrust efficiency. The drive itself is made of tempered stainless steel comprised of one shaft and two double sealed bearings. This eliminates the need for any hydraulic motors and therefore any lubrication, ensuring years of low maintenance operation.

Milling cutter heads come complete with carbide bits duly bonded onto stainless steel bodies, one diamond center bit with a cooling device and optional diamond bits are available (additional costs may apply). A turbine ring with fins increases torque and provides straight tracking ability.

All milling cutters are capable of removing the toughest deposits such as hardened grease, concrete and scale of all kinds, even tuberculation in cast iron pipes. Protruding tabs are cut gently without damaging a line.

Part No.	Type	Bore Ø	Pipe Ø	
203000	II	3.7"	4"	17.7
203001	III	3.9"	5"	17.7
203003	IV	5.5"	6"	26.5
203004	V175	5.9"	7"	30.9
203005	V200	7.2"	8"	35.3
203006	VI	8.8"	10"	41.9
203007	VII	11.1"	12"	44.1

Bigger Milling Cutters for large pipes up to Ø20" are available upon request.





Tiger Tails

High-quality edge protection for jetting hoses made of Polyethylene.

Part No.	Ø	length	rope length
TIGER2	2"	35.4"	239.8"
TIGER3	3"	35.4"	239.8"

STANDARD BUSINESS TERMS & CONDITIONS

1. Prices and Validity

Current list prices supersede all previous prices. List prices shown are subject to change without any prior notice.

Prices quoted are List Prices valid for 60 days from the date of the quotation.

2. Taxes

All prices as shown in the price list and in quotations exclude any federal, state, or local taxes where applicable. Any applicable tax will be added to the invoice.

3. Title and Transportation/Handling

Prices are to be understood ex warehouse Marietta, Georgia.

Lacking the buyer's specific instruction, Sewer Pro Shop, LLC will ship via DHL, UPS or FedEx carriers and arrange for adequate transport insurance. All shipping and insurance costs shall be borne by the buyer.

Sewer Pro Shop, LLC retains a security interest in the goods until the purchase price is paid in full.

4. Terms of Payment and Credit Approval

Standard payment term is 30 days net from the invoice date. Any exception to this rule is subject to written approval. The acceptance of all purchase orders is subject to the approval of the Credit Department of Sewer Pro Shop, LLC. No shipment of merchandise will be made to customers who have invoices that have not been paid within 60 days from the date of the invoice. Finance charges of 1.5% per month will be assessed on any unpaid invoices past days due 45.

5. Billing or Shipping Errors

Billing or shipping errors and disputed invoices must be brought to the attention of Sewer Pro Shop, LLC, not later than 10 days of the invoice date.

6. Returns for Credit

Goods and merchandise to be returned are subject to Returned Goods Authorization (RGA) number prior to shipment. At our discretion Sewer Pro Shop, LLC reserves the right to apply a 25% re-stocking charge. Merchandise returned must be identified to original invoice number and date purchased. All return shipments are at the cost and risk of the buyer. Any credit is subject to the inspection for damage and wear of the returned goods used or obsolete goods are not accepted for return credit. Credits for returned merchandise may be used against further purchases. All claims for shipping errors, damages and shortages must be reported immediately.

Sewer Pro Shop, LLC reserves the right to put customers on COD who have not paid its invoices within 45 days.

7. Minimum Purchase Order

The minimum order amount is US\$ 100.00 net invoice



WARRANTY TERMS

1. Sewer Pro Shop, LLC

Sewer Pro Shop, LLC products and models, covered in this product brochure, are warranted by Sewer Pro Shop, LLC (S.P.S.) to the original user against defects in materials or workmanship under normal use. Any part which is determined to be defective in material or workmanship and returned to an authorized service location, as designated by S.P.S., and prepays shipping costs, will be, as an exclusive remedy, repaired or replaced, at S.P.S.' Option. For limited warranty claim procedures, see section titled, „PROMPT DISPOSITION“ below. This limited warranty gives purchaser specific legal rights which vary from jurisdiction to jurisdiction. Any S.P.S. nozzle that spins has a one (1) year warranty. S.P.S. aluminum nozzles have a one year warranty. S.P.S. stainless steel nozzles fitted with ceramic inserts will have a three (3) year limited warranty.

2. Limitation of Liability

To the extent allowable under applicable law, S.P.S.' liability for consequential and incidental damages is expressly disclaimed. SPS' liability in all events is limited to and shall not exceed the purchase price paid.

3. Warranty Disclaimer

A diligent effort has been made to provide product information and illustrate the products in this literature accurately; however, such information and illustrations are for the sole purpose of identification and do not express or imply a warranty that the products are MERCHANTABLE or FIT FOR A PARTICULAR PURPOSE, or that the products will necessarily conform to the illustrations or descriptions. Except as provided below, no warranty or affirmation of fact, expressed or implied, other than as stated in the „LIMITED WARRANTY“ above is made or authorized by S.P.S., LLC.

4. Product Suitability

Many jurisdictions have codes and regulations governing sales, construction, installation and/or use of products for certain purposes, which may vary from those in neighboring areas. While attempts are made to assure that S.P.S. products comply with such codes, S.P.S. cannot guarantee compliance, and cannot be responsible for how the product is installed or used. Before purchase and use of a product is made, review the product application(s) and all applicable national and local codes and regulations, and be sure that the product, installation and use will comply with them.

Certain aspects of disclaimers are not applicable to consumer products; e.g., (a) some jurisdictions do not allow the exclusion or limitation of incidental or consequential damages, so the above limitation or exclusion may not apply to you; (b) also, some jurisdictions do not allow a limitation on how long an implied warranty lasts, consequentially the above limitation may not apply to you; and (c) by law, during the period of this LIMITED WARRANTY, any implied warranties of implied merchantability or fitness for a particular purpose applicable to consumer products purchased by consumers, may not be excluded or otherwise disclaimed.

5. Prompt Disposition

S.P.S. will make a good faith effort for prompt correction or other adjustment with respect to any product which proves to be defective within limited warranty. For any product believed to be defective within limited warranty, first write, e-mail or call authorized distributor from whom the product was purchased. Authorized distributor will give additional directions. If unable to resolve issue with authorized dealer satisfactorily, write, e-mail or call S.P.S. at address below, giving authorized distributor's name, address, date and number of authorized distributor's invoice and a description of the nature of defect. Title and risk of loss pass to the buyer on delivery to common carrier. If product was damaged in transit to buyer, the buyer is responsible for filing loss and/or damage claim with carrier.



TOLL FREE 1-877-864-9394

P 470-592-1717

F 770-984-2802

info@sewerproshop.com

YOUR LOCAL DEALER