



USB-Sewer Equipment Corporation proudly distributes innovative, high quality sewer cleaning equipment, precision engineered and manufactured by the duly ISO EN 9001:2000 certified parent company USB Duesen in Germany to the highest technical standards.

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

USB sewer cleaning nozzles are manufactured with Advanced, Optimized 3D Hydro Mechanics™. That means, the water coming from the pressurized hose is smoothly turned around in the nozzle chamber and guided directly into the ceramic nozzle inserts by means of 5 axial CNC precision machined, duly debured channels, not tubes or grooves.

USB nozzles utilize tempered stainless steel and ceramic nozzle inserts thus providing unrivaled cleaning efficiency and durability. As a result USB nozzles can be used with recycled water too!

Our goal is to enable our customers to increase their productivity and lower their operating costs by consuming less water, less time and less gas for the jetter trucks.

USB sewer cleaning equipment is affordably priced. You get the most bang for your buck!

USB-Sewer Equipment Corporation is pleased to provide industry leading customer service and technical support.

USB-SEC's products include:

- Primus nozzles-3D
- Alphajet nozzles
- Standard nozzles
- Black Star nozzles
- Sewer cleaning nozzles with Advanced Optimized 3D Hydro Mechanics™
- Dredger nozzles-3D
- Venturi nozzles
- Turbo chain cutters
- Milling cutters
- Accessories



Advanced Optimized 3D Hydro Mechanics™



OVERVIEW

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PRIMUS NOZZLE™ - 3D

The Primus™ is a sewer cleaning nozzle with controlled rotation speed. Our Primus™ is operated by water coming from a pressurized hose. The controlled rotation occurs because the angle of jet incidence in the cleaning head works in conjunction with internal high performance ceramic clutch discs.

Advantages:

- No lubrication or replacement of internal mechanical parts within the first 12 months of operation, thus making this nozzle extremely user friendly
- Can be used in combination with a continuously adjustable flexible guide skid to center in the pipe
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Applications: Grease, scale, crusts and roots

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts in the head
- Replaceable threaded steel inserts in the rear
- Stainless steel body construction
- Rear angle of jet incidence is 15°
- Rear of the head jet incidence is 45°
- Forward jet is 18°
- ½"-1 ¼" hose connection
- Min. 14gpm @ ½"
- Max. 120gpm @ 1 ¼"





Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch
1 – 0500-1840-C	½"	5 M6	4" – 8"	4.0	4.50"
1 – 0501-5030-C	¾"	10 M6	6" – 12"	7.0	7.50"
1 – 0502-6020-C	1"	12 M6	6" – 15"	7.0	8.25"
1 – 0502-8020-C	1"	12 M6	6" – 15"	7.0	8.25"
1 – 0503-8020-C	1 ¼"	8 M6, 4 SW 14	12" & up	10.0	8.75"
1 – 0503-10020-C	1 ¼"	8 M6, 4 SW 14	12" & up	10.0	8.75"

GRAND SLAM – 3D NOZZLE

The Grand Slam nozzle-3D is impressive and able to clean and move material in an effective manner. The 8 rear jets provide powerful traction.

Advantages:

- Two different angles of rear jet incidence
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Applications: For all around sewer cleaning

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable ceramic nozzle inserts
- Stainless steel construction
- Rear angle of jet incidence is 12° and 18°
- ¾" – 1 ¼" hose connection
- Min. 50gpm @ ¾"
- Max. 120gpm @ 1 ¼"



**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0100-5030-C	¾"	8	6" – 15"	13.0	7.10"	3.75"
1 – 0101-6020-C	1"	8	6" – 15"	13.0	7.10"	3.75"
1 – 0101-8020-C	1"	8	6" – 15"	13.0	7.10"	3.75"
1 – 0102-10020-C	1 ¼"	8	6" – 15"	13.0	7.10"	3.75"



SUPER SLAM – 3D NOZZLE

The Super Slam-3D nozzle is a very powerful and impressive nozzle. The two different angles of rear jet incidence in combination with 12 jets offer extraordinary cleaning power and traction.

Advantages:

- Heavy Design
- Number of jets
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Applications: For use in large sewer- and stormwater lines.

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts
- Stainless steel construction
- Rear angle of jet incidence is 15° and 30°
- ¾"-1 ¼" hose connection
- Min. 55gpm @ ¾"
- Max. 120gpm @ 1 ¼"



**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0110-6020-C	1"	12	10" – 40"	19.0	7.50"	4.10"
1 – 0110-8020-C	1"	12	10" – 40"	19.0	7.50"	4.10"
1 – 0111-10020-C	1 ¼"	12	10" – 40"	19.0	7.50"	4.10"



SUPERIOR PENETRATOR - 3D NOZZLE

The Superior Penetrator nozzle – 3D has a specific design to successfully navigate over small voids in the pipe. The placement of the Advanced 3D Hydro Mechanics in the nozzle is no more than ¾” away from the hose connection. Thus, no turbulence inside the nozzle is created.

Advantages:

- Has a forward jet or pulling eye option
- Length of the nozzle
- Reduced water consumption
- Reduced operating costs

Applications: Pipe lines with off-sets, drop joints, voids etc.
Mud, silt and Sand

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts
- Stainless steel construction
- Rear jet incidence is 12⁰
- From ¾” – 1 ¼” threads
- Min. 30gpm @ ¾”
- Max. 120gpm @ 1 ¼”



**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0120-5030-C	¾”	9	6” – 15”	9.99	8.50”	2.75”
1 – 0121-6020-C	1”	9	6” – 15”	9.99	8.50”	2.75”
1 – 0121-8020-C	1”	9	6” – 15”	9.99	8.50”	2.75”
1 – 0122-10020-C	1 ¼”	9	6” – 15”	9.99	8.50”	2.75”



STANDARD NOZZLES WITH FORWARD JETS

The Standard nozzle is very basic. It has rear jets and one forward penetrating jet which can be blocked.

Advantages:

- Light, maneuverable version
- Inexpensive, yet highly efficient

Applications: All around cleaning

Technical Specifications:

- Stainless steel construction
- Rear jet incidence is 22^o
- ¼" – 1 ¼" hose connection
- Min. 10gpm @ ¼"
- Max. 120gpm @ 1 ¼"



Part No.	Hose Connection	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0130-0840	¼"	4"	0.07	0.80"	0.76"
1 – 0131-1830	½"	6"	0.30	2.00"	1.20"
1 – 0132-5030	¾"	8"	0.70	2.40"	1.50"
1 – 0133-6020	1"	6" – 10"	0.90	3.25"	2.20"
1 - 0133-8020	1"	6" – 10"	0.90	3.25"	2.20"
1 – 0134-8020	1 ¼"	8" – 12"	1.70	3.63"	2.30"



ROTOR NOZZLE

Uniform rotary motion of the rotor allows constant and thorough cleaning of the interior wall of the pipe.

Advantages:

- Doesn't require bushings or bearings
- Low maintenance, no lubrication

Applications: Grease, light crusts and roots

Technical Specifications:

- Replaceable threaded ceramic nozzle inserts
- Stainless steel body and non corrosive brass
- Rear jet incidence is 22⁰
- 45⁰, 90⁰ und 75⁰ rotor jet incidence
- ½"-1 ¼" hose connection
- Min. 13gpm @ 1 ¼"
- Max. 120gpm @ 1 ¼"



Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0140-1840-C	½"	6	4"	1.00	3.00"	1.50"
1 – 0141-5030-C	¾"	9	6"	6.50	4.25"	2.25"
1 – 0142-6020-C	1"	9	8" – 12"	5.00	4.25"	2.25"
1 – 0142-8020-C	1"	9	8" – 12"	5.00	4.25"	2.25"
1 – 0143-10020-C	1 ¼"	9	12" and up	9.99	5.75"	3.00"

Rocker Nozzle

The newly designed and engineered “Rocker Nozzle” from USB Duesen GmbH is a vibrating sewer cleaning nozzle. Similar in looks to the rotor nozzle the “Rocker” is able to remove the toughest deposits from the bottom of 4”-24” pipelines.

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!!!

Advantages

- Removal of solid material on the bottom without damaging the pipe
- Can be used in confined pipe areas where chain cutters cannot fit
- Low maintenance, no lubrication required
- Doesn't require bushings or bearings

Applications

- Landfills and also removal of concrete and deposits such as calcium



Technical Specs

- Replaceable threaded ceramic and stainless steel inserts
- Stainless steel body and non corrosive brass
- Rear jet incidence is 22°
- 1"-1 ¼" hose connection
- Min. 50gpm @ ¾"
- Max. 120gpm @ 1 ¼"

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1-0150-1840-C	½"	6	4"	0.50	3.00"	1.50"
1-0151-5030-C	¾"	9	6"	5.00	4.25"	2.25"
1-0152-6020-C	1"	9	8"-12"	8.00	4.25"	2.25"
1-0152-8020-C	1"	9	8"-12"	8.00	4.25"	2.25"
1-0153-10020-C	1 ¼"	9	12" and up	9.00	5.75"	3.00"



ANTI BLASTER - 3D NOZZLE

The Anti Blaster nozzle is just that!
The specially designed angle of jet incidence reduces the probability of blowing toilets.

Advantages:

- Less likely to blow toilets
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Applications: Shallow sewer lines and sewer lines close to homes

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts
- Stainless steel construction
- Rear jet incidence of 36°
- ¾"-1" threaded hose connection
- Min. 30gpm @ ¾"
- Max. 80gpm @ 1"



**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width inch
1-0362-6020-C	1"	9	6"-12"	4.0	4.00"	2.75"
1-0362-8020-C	1"	9	6"-12"	4.0	4.00"	2.75"

FJ PENETRATOR NOZZLE – 3D

The eggshaped Penetrator 3D nozzle has been designed to successfully navigate over offsets in the pipe. The FJ Penetrator removes obstructions and opens total blockages in no time.

Advantages:

- Increased performance and efficiency
- Reduced water consumption
- Reduced operating costs

Applications: Total blockage or obstruction in sewer lines

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts
- Stainless steel construction
- Forward jets 0° / 15°
- Propulsion jets 15° / 25°
- From ½" – 1" threads
- Min. 18gpm @ ½"
- Max. 80gpm @ 1"



**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1-0190-1840-C	½"	10	4"-8"	0.5	2.30"	1.55"
1-0191-5030-C	¾"	12	4"-12"	1.6	2.80"	2.14"
1-0192-6020-C	1"	12	4"-15"	1.6	4.00"	2.60"
1-0192-8020-C	1"	12	4"-15"	1.6	4.00"	2.60"

ALUMINUM FLYING NOZZLE – 3D

The 3D Aluminum flying nozzle is the ideal hydrodynamic tool in mountainous and difficult terrain. The narrow angle of jet incidence and light weight of the nozzle all combine to guarantee powerful cleaning and unsurpassed traction.

Advantages:

- Light weight
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Applications: Mountainous, steep terrain

Technical Specification:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded steel nozzle inserts
- Aluminum construction
- Rear jet incidence of 7°
- ¾"-1" threaded hose connection
- Min. 40gpm @ ¾"
- Max. 80gpm @ 1"



Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0160-5030-S	¾"	9	6" – 12"	1.50	5.20"	2.75"
1 – 0161-6020-S	1"	9	6" – 12"	1.50	5.20"	2.75"
1 – 0161-8020-S	1"	9	6" – 12"	1.50	5.20"	2.75"



FLYING NOZZLE - 3D

The 3D flying nozzle is an ideal tool for some of the toughest applications. The narrow angle of jet incidence gives this nozzle incredible traction and cleaning power.

Advantages:

- Tremendous cleaning efficiency
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Application: Preventative maintenance and hilly, difficult terrain. Large debris removal

Technical Specification:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic inserts
- Stainless steel construction
- Rear jet incidence of 7°
- ½" – 1 ¼" threaded hose connection
- Min. 13gpm @ ½"
- Max. 120gpm @ 1 ¼"



Flying nozzle – 3D small



Flying nozzle – 3D large

**Extended warranty 36 months
with ceramic nozzle inserts**

FLYING NOZZLE – 3D SMALL

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0162-1840-C	½"	6	4" – 8"	1.00	2.50"	1.50"
1 – 0163-5030-C	¾"	8	6" – 10"	4.00	5.25"	2.60"
1 – 0164-6020-C	1"	8	6" – 12"	4.00	5.20"	2.75"
1 – 0164-8020-C	1"	8	6" – 12"	4.00	5.20"	2.75"

FLYING NOZZLE – 3D LARGE

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0165-5030-C	¾"	8	6" – 15"	11.50	7.30"	3.80"
1 – 0166-6020-C	1"	8	6" – 15"	11.50	7.30"	3.80"
1 – 0166-8020-C	1"	8	6" – 15"	11.50	7.30"	3.80"
1 – 0167-10020-C	1 ¼"	8	12" and up	11.50	7.30"	3.80"



RADIAL CLEANING NOZZLE - 3D

This high performance nozzle is perfect for removing hard grease and scale that may be encrusted on the interior wall of the pipe. The fan jets clean the pipe interior all around, while the propulsion nozzle inserts provide superior transportation of obstructions to the manhole.

Advantages:

- Streak free cleaning
- All around pipe coverage
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Application: Excellent for grease (encrusted), scale, sand and silt

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts
- Replaceable threaded steel fan jets
- Tempered stainless steel construction
- Rear jet incidence is 15°
- Rear fan jet incidence is 45°
- ¾"-1 ¼" hose connection
- Min. 40gpm @ ¾"
- Max. 120gpm @ 1 ¼"



**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0170-6020-C	1"	12	8" – 20"	11.50	7.20"	3.80"
1 – 0170-8020-C	1"	12	8" – 20"	11.50	7.20"	3.80"

CLEANING NOZZLE – 3D

The Cleaning Nozzle-3D is a perfect nozzle for preventative maintenance and all around sewer cleaning. The rear inserts are at two different angles of jet incidence. This permits the nozzle to move material back towards the manhole while continuing to clean and propel up the pipeline.

Advantages:

- Available in a large 10 jet version
- Capable of being used with recycled water consumption
- Reduced operating costs

Applications: Excellent choice for sand, mud, silt and grease application

Technical Specifications:

- Advanced, Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts
- Stainless steel construction
- Rear angle of jet incidence is 15° and 25°
- ½"-1 ¼" hose connection
- Min 12gpm @ ½"
- Max. 120gpm @ 1 ¼"



**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle insets	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0180-1840-C	½"	6	4"	1.00	2.39"	1.55"
1 – 0181-5030-C	¾"	8	6"	2.00	5.05"	2.73"
1 – 0182-6020-C	1"	8	6"	4.50	5.05"	2.73"
1 – 0182-8020-C	1"	8	6"	4.50	5.05"	2.73"
1 – 0183-6020-C	1"	10	6"	6.0	5.75"	3.12"
1 – 0183-8020-C	1"	10	6"	6.0	5.75"	3.15"

CHISEL NOZZLES

The Chisel nozzle performs excellently at difficult cleaning processes. The different forward jet options and sharp edges assure fast and reliable cleaning.

Advantages:

- The forward jet can be replaced with a heavy duty drill point
- Our 1" chisel nozzle has 8 rear jets for maximum propulsion and penetration
- Light weight, maneuverable
- Reduced water consumption
- Reduced operating costs

Applications: Total obstructions, blockages and pipe deformations

Technical Specifications:

- Replaceable threaded steel nozzle inserts
- Stainless steel construction
- Rear jet incidence is 22°
- Forward jet incidence is 0°
- Front jet incidence is 15°
- ½" - 1 ¼" hose connection
- Min. 14gpm @ ½"
- Max. 120gpm @ 1 ¼"



Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0200-1840-S	½"	4	4"	0.5	2.15"	1.18"
1 – 0201-5030-S	¾"	12	4" – 8"	0.5	2.94"	1.88"
1 – 0202-6020-S	1"	12	8" – 12"	1.5	3.58"	2.28"
1 – 0202-8020-S	1"	12	8" – 15"	1.5	3.58"	2.28"



Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0210-1840-S	½"	3	4"	0.5	3.1"	1.18"
1 – 0211-5030-S	¾"	11	4" – 8"	0.5	3.85"	1.88"
1 – 0212-6020-S	1"	11	8" – 12"	1.5	4.62"	2.28"
1 – 0212-8020-S	1"	11	8" – 15"	1.5	4.62"	2.28"

ULTIMATE CHISEL NOZZLE

The chisel nozzle with drill point performs excellently at difficult cleaning process. The drill point and sharp edges assure fast and reliable cleaning. The forward jets in combination with the drill point penetrates and removes total blockages.

Advantages:

- The forward jet can be replaced with a heavy duty drill point
- Our 1" chisel nozzle with drill point has 8 rear jets for maximum propulsion and penetration
- Light weight, maneuverable
- Reduced water consumption
- Reduced operating costs

Applications: Total obstructions, blockages and pipe deformations.

Technical specifications:

- Replaceable threaded steel nozzle inserts
- Stainless steel construction
- Rear jet incidence is 22⁰
- Front jet incidence is 15⁰
- ½"-1 ¼" hose connection
- Min 14gpm @ ½"
- Max 120gpm @ 1 ¼"



Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0220-6020-S	1"	10	6" – 15"	5.5	7.25"	2.93"
1 – 0220-8020-S	1"	10	6" – 24"	5.5	7.25"	2.93"
1 – 0221-10020-S	1 ¼"	10	12" and up	5.5	7.25"	2.93"

NOZZLE CASES

Our nozzle cases with 1" or 3/4" or 1/2" hose connections come with the sewer cleaning nozzles you'll need for all your applications



Nozzle case 1/2"

- Turbo 0
- Chisel nozzle w/ forward jet
- Cleaning nozzle – 3D
- Flying nozzle – 3D
- Flounder
- Pipe Wolf
- Rotor nozzle



- Primus Nozzle
- Flounder
- Chisel Nozzle
- Flying Nozzle – 3D
- Cleaning Nozzle – 3D



Nozzle Case 1”

- Pipe Wolf
- Rotor Nozzle
- Cleaning nozzle - 3D, 10 jet
- Chisel Nozzle
- Primus Nozzle
- Flying Nozzle – 3D



- Primus Nozzle
- Pipe Wolf
- Rotor Nozzle
- Grand Slam – 3D
- Ultimate Chisel Nozzle
- Superior Penetrator – 3D

Please note: Content of nozzle case may vary as per customers request!



DREDGER NOZZLE WITH 6, 8, 10 AND 14 NOZZLE INSERTS

The Dredger nozzles use Optimized Hydro Mechanics to take the water coming from a pressurized hose and convert it into unrivaled cleaning power. The roll bars allow the nozzle to upright itself in the line. All of the rear jets are concentrated on the bottom of the pipe.

Advantages:

- Can be used in tandem with another dredger nozzle
- Available in different sizes 6, 8, 10 or 14 jets
- Tremendous cleaning power
- Reduced water consumption
- Reduced operating costs

Application: For removal of heavy solids, silt, sand and sludge at bottom of a pipe.

Technical Specifications:

- Optimized Hydro Mechanics
- Replaceable threaded ceramic inserts
- Stainless steel construction
- $\frac{3}{4}$ " – 1 $\frac{1}{4}$ " hose connection





**Extended warranty 36 months
with ceramic nozzle inserts**

Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch	Height in inch
1 – 0300-6020-C	1"	6	8" – 15"	22.0	20.80"	8.10"	6.70"
1 – 0300-8020-C	1"	6	8" – 15"	22.0	20.80"	8.10"	6.70"
1 – 0301-6020-C	1"	8	12" – 24"	40.0	19.50"	9.00"	7.50"
1 – 0301-8020-C	1"	8	12" – 24"	40.0	19.50"	9.00"	7.50"
1 – 0302-6020-C	1"	10	18" – 36"	56.0	20.50"	11.30"	9.25"
1 – 0302-8020-C	1"	10	18" – 36"	56.0	20.50"	11.30"	9.25"
1 – 0303-8020-C	1"	14	20" and up	59.0	19.80"	11.80"	9.80"
1 – 0303-10020-C	1" – 1 ¼"	14	20" and up	59.0	19.80"	11.80"	9.80"



ALPHAJET MANHOLE CLEANING NOZZLE

The Alphajet cleaning nozzle is designed to clean lift stations and manholes prior to rehabilitations. The Alphajet is actuated by water coming from the pressurized hose of the jetter truck. Four driving nozzles cause the 360° revolution in a horizontal plane.

Advantages:

- No confined space entry needed
- No lubrication or replacement of internal mechanical parts within the first 12 months of operation, thus making this nozzle extremely user friendly
- Controlled rotation
- Driving nozzles can be extended to accommodate various sizes of manholes/lift stations

Applications: Grease, sludge and crusts

Technical Specifications:

- Replaceable threaded, stainless steel / ceramic nozzle inserts
- Stainless steel construction
- 1" hose connection
- Min. 30gpm – Max. 60gpm @ 1"
- ¾" – 1" hose connection



Part No.	Hose Connection	Weight in lbs
1 – 0350	¾" - 1"	9.0

VENTURI NOZZLE

Venturi nozzles, also known as ejector nozzles, use the water coming from a pressurized hose. The water is smoothly turned around into an ejector thus creating a vacuum in the suction barrel. The high performance of the Venturi nozzle is only guaranteed if sufficient operating water is available. That means, depending on the size of the sewer or stormwater line, the Venturi nozzle has to be completely submerged underwater because the water level drops significantly once the Venturi nozzle has been put into operation. USB Sewer Equipment Corporation utilizes one concentrated water jet (one thick bundled jet provides a much higher efficiency than six small, thin water jets). The ejector connected to the high pressure stainless steel pipe is centered in front of the suction pipe and secured with flat, stainless steel bars. This eliminates the risk of debris blocking the suction pipe and/or damaging the ejector.

Advantages:

- The vacuum is able to remove large quantities of material towards the manhole
- Can clean large pipelines with high flow
- Doesn't require high PSI to operate
- Reduced water consumption
- Reduced operating costs

Applications: Large sewer lines 32" + with sand, silt, mud

Technical Specifications:

- Replaceable threaded nozzle tip
- Tempered stainless steel contraction
- Min. 60gpm @ 1"
- Max. 120gpm @ 1 1/4"



Part No.	Hose Connection	Weight in lbs
1 – 0310-6012	1"	62.0
1 – 0311-8012	1"	66.0
1 – 0312-8012	1 1/4"	76.0
1 – 0312-10012	1 1/4"	76.0



PIPE WOLF

The Pipe Wolf is a unique nozzle. A tempered stainless steel head is turbine driven and spins at approx. 6000-12000 rpm. For extreme applications, this is a highly efficient tool. The Pipe Wolf succeeds where standard hydrodynamic tools fail, thus increasing your productivity and reducing your operating cost. The Pipe Wolf should be a standard sewer cleaning tool on your truck, it is very impressive.

Advantages:

- Low maintenance, no lubrication required
- Capable of being used with recycled water
- Reduced water consumption
- Reduced operating costs

Applications: Total obstructions and blockages caused by roots, silt, grease etc.

Technical Specifications:

- Advanced Optimized 3D Hydro Mechanics™
- Replaceable threaded ceramic nozzle inserts
- Stainless steel body and tempered stainless steel head
- Rear angle of jet incidence is 22°



Part No.	Hose Connection	Pipe Ø	Weight in lbs	Length in inch	Width in inch
1 – 0320-1840-C	½"	4" – 6"	1.0	4.50"	2.10 "
1 – 0321-5030-C	¾"	6" – 15"	1.0	6.40"	2.60"
1 – 0321-6020-C	1"	6" – 15"	4.0	6.40"	2.60"
1 – 0321-8020-C	1"	6" – 15"	4.0	6.40"	2.60"

TURBO CHAIN CUTTERS

This innovative, highly reliable and efficient product is made of tempered stainless steel and offers superior drive and thrust efficiency. The chain retainer is driven by a high performance turbine thus achieving unsurpassed results in the removal of roots, grease and mineral deposits from 4" – 36" sewer lines.

The chains are not rigid, and do not damage the pipes in any way.

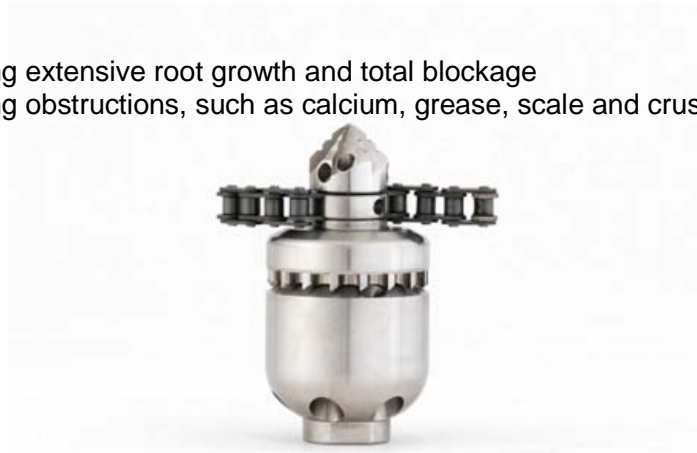
Off sets? No problem with our Turbos II – IV with continuously adjustable guide skid!

Advantages:

- Low maintenance (lubrication is not necessary)
- Easy and fast changeable chain retainers
- Low operating costs, inexpensive replacement chains
- Unique, continuously adjustable guide skids 6" – 12" (Turbo II), 8"-16" up to 24" (Turbo S400), 10" – 29" (Turbo III) and 15" – 36" (Turbo IV) sewer lines
- Threaded ceramic nozzle inserts
- For use with difficult pipes (off-sets, drop-joints etc.)
- Usable with recycled water

Application:

- For removing extensive root growth and total blockage
- For removing obstructions, such as calcium, grease, scale and crust



Turbo 0



Turbo II w/ flexible guide skid



Turbo S 400 8"-16"



Turbo flexible guide skid



Turbo II w/ rigid guide skid



Turbo III w/ flexible guide skid



Turbo II flexible w/ accessories



Turbo IV



Accessories for Turbo

Part No.	Description	Hose Connection	Pipe Ø	Weight in lbs	Length in inch
1-0400-1840-C	Turbo 0	1/2"	4"	1.50	4.00"
1-0402-5030-C	Turbo II w/ rigid guide skid 6"	3/4"	6" – 12"	7.00	11.50"
1-0402-6020-C	Turbo II w/ rigid guide skid 6"	1"	6" – 12"	7.00	11.50"
1-0402-8020-C	Turbo II w/ rigid guide skid 6"	1"	6" – 12"	7.00	11.50"
1-0403-5030-C	Turbo II w/ flexible guide skid	3/4"	6" – 12"	16.50	22.60"
1-0403-6020-C	Turbo II w/ flexible guide skid	1"	6" – 12"	16.50	22.60"
1-0403-8020-C	Turbo II w/ flexible guide skid	1"	6" – 12"	16.50	22.60"
1-0480-6020-C	Turbo S 400 w/ flexible guide skid	1"	8" – 16"	28.00	22.60"
1-0480-8020-C	Turbo S 400 w/ flexible guide skid	1"	8" – 16"	28.00	26.50"
1-0404-6020-C	Turbo III w/ flexible guide skid	1"	10" – 20"	43.00	32.50"
1-0404-8020-C	Turbo III w/ flexible guide skid	1"	10" – 20"	43.00	32.50"
1-0404-10020-C	Turbo III w/ flexible guide skid	1"	10" – 20"	43.00	32.50"
1-0405-8020-C	Turbo IV w/ flexible guide skid	1"	15" – 36"	80.00	41.00"
1-0405-10020-C	Turbo IV w/ flexible guide skid	1 1/4"	15" – 36"	80.00	41.00"

BLACK BLASTER

The Black Blaster is an exceptional nozzle and a great alternative to a stainless steel nozzle. This nozzle offers high cleaning efficiency.

Advantages:

- Relatively inexpensive
- Can be pulled
- Reduced water consumption
- Reduced operating costs

Applications: General sewer cleaning

Technical Specifications:

- Optimized Hydro Mechanics
- Replaceable threaded steel inserts
- Hardened tool steel construction
- Rear jet incidence is 18⁰
- ¾"-1" hose connection
- Min. 30gpm @ ¾"
- Max. 80gpm @ 1"



Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width inch
2-0100-6020-S	¾" / 1"	9	6" – 15"	5.5	3.65" w/o skid	3.05 w/o skid
2-0100-8020-S	1"	9	8" – 20"	5.5	3.65" w/o skid	3.05 w/o skid



BLACK STAR

The Black Star nozzle is an excellent choice for general sewer lines cleaning at affordable pricing.

Advantages:

- Relatively inexpensive
- Reduced water consumption
- Reduced operating costs

Application: General sewer cleaning

Technical Specifications:

- Optimized Hydro Mechanics
- Hardened tool steel
- Rear jet incidence is 15° and 25°
- ¾" – 1 ¼" hose connection
- Min. 40gpm @ ¾"
- Max. 120gpm @ 1 ¼"



Part No.	Hose Connection	Nozzle inserts	Pipe Ø	Weight in lbs	Length in inch	Width in inch
2-0200-6020-S	¾" / 1"	10	6" – 15"	8.0	7.5"	3.13"
2-0200-8020-S	1"	10	8" – 20"	8.0	7.5"	3.13"

MILLING CUTTER TYPE II – XII

This 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 comprising 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.

The milling heads come complete with carbide bits duly bonded onto stainless steel bodies, one diamond center bit with cooling device and diamond bits. The Turbine ring with fins does not only increase the torque but also provides a straight tracking ability.

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



Milling cutter, type V



Milling cutter, type VII

Part No.	Description	Bore Ø	Pipe Ø	Weight in lbs	Length in inch
2-03000	Type II	3.8"	4.0"	18.0	17 ½"
2-03001	Type IV/1	5.4"	6.0"	26.0	17 ¾"
2-03002	Type V/1	6.2"	8.0"	30.0	17 ¾"
2-03003	Type V	7.3"	8.0"	34.0	19 ¾"
2-03004	Type VI	8.9"	10.0"	42.0	20.0"
2-03005	Type VII	11.25"	12.0"	42.0	29.0"
2-03006	Type VIII	14.4"	15.0"-16.0"	80.0	29.0"
2-03007	Type X	17.0"	18.0"	109.0	30.0"
2-03008	Type XII	19.0"	20.0"	111.0	



NOTES / QUOTATION

Company:

Customer PO:

Ordered by:

Phone:

Ship to:

Bill to:

Address:

Address:

City:

City:

State: Zip:

State: Zip:

Qty.	Part #	Flow Rate Gpm	Pump Press. PSI	Pipe Ø Inch	Connecting thread	Price U\$



Standard 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

All prices are to be understood FOB warehouse Marietta, Georgia.
Lacking the buyer's specific instruction, USB-Sewer Equipment Corporation 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.
USB-Sewer Equipment Corporation 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 USB-Sewer Equipment Corporation. No shipment of merchandise will be made to customers who have invoices that have not been paid within 60 days. 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 USB-Sewer Equipment Corporation, 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 USB-Sewer Equipment Corporation 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 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.
USB-Sewer Equipment Reserves the right to put customers on COD who have not paid



USB-SEC's invoices within 45 days.

7. Minimum Purchase Order

The minimum order amount is U\$ 100.00 net invoice