**Trenchless Products Catalog Layout**

**CCTV**

**IBOS**

**Overview Page**

**Notes:**

* Remove all part numbers and focus on product descriptions.

**Command Centers**

1. Command Console- Lite – ReBoss
   1. Technical Specifications
      1. 10" LCD color monitor, 800 x 600 resolution
      2. Digital video recorder included
      3. OSD (On-Screen Display) video card with the capability to save comments and titles into the video.
      4. Alphanumeric keyboard for easy input
      5. Distance measuring card
      6. Date, time, and distance indicator
      7. Video out option
      8. Ability to connect an external digital camera
2. Command Console – Lite – CamBoss (Hybrid)
   1. Technical Specifications
      1. \*Same features as above “\*
      2. plus has capabilities to control Ibos crawlers
      3. Control crawlers: Boss 100, Boss 150
      4. Compatible with all push cam models
      5. Compatible with camera heads: KA46, KZ60, KZ95CB
3. Command Console – PC
   1. Technical Specifications
      1. Battery powered mobile control console
      2. Control all push cameras Revi90,260,350,450
      3. Controls Boss100 or Boss150 (120v power needed)
4. Command Console – Built-in version
   1. Technical Specifications
      1. 22” LCD 1920x1080px industrial color screen with DVI and CVBS inputs
      2. Control panel with keyboard and mouse
      3. LCD shows actual camera image with option to switch to PC mode.
      4. Digi-Can software-enables inserting various information (data, time, cable length, inclination, pan, rotation, component pressure, etc.) and
      5. reports creation containing suspected areas images and commentary.

**Cameras**

1. **Comet Nano - Revi 90**
   1. Description:
      1. This compact and specialized camera system is tailored for inspecting small pipes, offering high resolution and efficient recording capabilities for detailed analysis. Suitable for pipes with diameters ranging from 1.5 in. to 2 in.
   2. Camera
      1. Housing Diameter
         1. 0.78 in.
      2. Length
         1. 1.10in plus 3.93in spring behind the camera head.
      3. Push Rod Lengths
         1. 33ft, 66ft, or 98ft
      4. Resolution
         1. 600 TVL (TV lines)
         2. Minimum lighting requirement: 0.5 LUX.
         3. Standard: PAL.
         4. Recording speed: 50 images per second
2. **Comet KA46**
   1. Description
      1. The KA46 camera head, provides robust and versatile capabilities for inspecting and monitoring home drainage systems and pipe networks
   2. Including connections in the range of 2" to 12".
   3. Features an axial camera head that is manually inserted into the pipe using a special reinforced cable.
   4. Material
      1. Stainless steel housing
   5. Axial, self-leveling color CCD camera
   6. Resolution
      1. 470 TVL (TV lines)
   7. Light sensitivity
      1. 1 lux
   8. Illumination
      1. Equipped with 6 LED lights
   9. Diagonal visual angle
      1. Approximately 68°
   10. Waterproof
       1. up to 1 bar
3. **Comet-Rotary KZ60**
   1. Description
      1. The KZ60 camera head offers enhanced functionality and versatility for monitoring pipes within the specified diameter range, with the KZ60 rotary camera head providing advanced features for comprehensive inspection tasks.
   2. The push-rod camera Comet 260 is equipped with a rotary camera head, KZ60, enabling monitoring of pipes with diameters ranging from 2" to 12".
   3. The camera head KZ60 can be easily replaced with the standard axial camera head KA46 via a connector.
   4. Swing and rotation are controlled via a touch joystick on the control panel, featuring the "Intelligent Control System" for seamless operation (zero position, automatic camera views, etc.).
   5. Material
      1. Stainless steel housing
   6. Color CCD camera
   7. Resolution
      1. 307,200 pixels
   8. Light sensitivity
      1. 0.3 lux at F1.2
   9. Illumination
      1. Equipped with 8 LED lights
   10. Range angle
       1. 50°
   11. Swing
       1. 2x125°
   12. Rotation
       1. 360° (infinity)
   13. Built-in pressure sensor
   14. Waterproof
       1. up to 1 bar
4. **KZ95 (Zoom Camera)**
   1. Material
      1. Stainless steel housing
   2. Color CCD camera
   3. Resolution
      1. 440,000 pixels
   4. Light sensitivity
      1. 0.25 lux
   5. Illumination
      1. Equipped with 24 superbright LED lights.
   6. Range angle
      1. 50°
   7. Zoom
      1. 10x optical and 12x digital
   8. Rotation
      1. 360° (infinity)
   9. Waterproof
      1. up to 1 bar

**Push-Rods**

1. **Comet Push-Rod – Revi 260**
   1. Description
      1. The Comet Push Rod is equipped with a rotary camera head KZ60, which enables monitoring of pipes in diameters 2" – 12". The camera head KZ60 can be easily replaced with standard axial camera head KA46 via connector. Controlling of swing and rotation is done by using the touch joystick on your control panel.
   2. Cable Drum
      1. Material
         1. Stainless Steel
      2. Capacity
         1. 328' (with 7.5mm push rod)
      3. Sensor to measure unwound cable length
      4. Axiel brake
      5. Weight
         1. 16 lbs. (without pushrod)
         2. 24 lbs. (with a 164
         3. ' pushrod)
   3. Push Rod
      1. Diameter Options
         1. 7.5 mm or 9 mm
      2. Standard lengths
         1. 164', 196', 262'
      3. Accessories
         1. include probes (33 kHz or 512 Hz) for location determination up to a depth of 10 ft
         2. centering devices
         3. antenna for inspection of connections
         4. flexible spacer for pipe knee inspection
         5. and others
2. **Shooting Star Push-Rod - Revi 350** 
   1. Description
      1. The Shooting Star Push-rod camera system designed for monitoring of pipes 2" – 12". The system can be used with axial camera head KA46 or rotary camera head KZ60 (also compatible with camera system Comet 260). The reel is equipped with wheels for easy handling. Designed for monitoring pipes ranging from 2" to 12".
      2. Compatible with both axial camera head KA46 and rotary camera head KZ60 (also compatible with Comet 260 camera system).
      3. Reel equipped with wheels for easy handling.
      4. Reel capacity up to 393', depending on cable diameter (7.5mm or 9mm).
      5. Top of reel can be equipped with a holder for fastening the control unit ReBoss, with transport holders for centering parts on the side.
   2. Cable Drum
      1. Material
         1. Stainless steel, Aluminum
      2. Capacity
         1. 328' (with 9mm push rod)
      3. Sensor to measure unwound cable length
      4. Axiel brake
      5. Weight
         1. 37 lbs. (without push rod and centering).
   3. Push Rod
      1. Diameter Options
         1. 7.5 mm or 9 mm
      2. Accessories
         1. probes (33 kHz or 512 Hz) for location determination up to a depth of 10 ft
         2. centering devices
         3. antenna for inspection of connections (compatible with KZ60 camera head)
         4. and others
3. **Coment Push-Rod W/ Wheels – Revi450**
   1. Description
      1. Wheeled for ease of transporting
         1. The reel is stainless steel, equipped with axial brake and sensor for measuring un-winded cable length.
      2. Designed for 7.5 or 9mm pushrod type cable with max 393ft /7.5mm or 328ft/9mm

**Mainline**

1. Explorer Crawlers Series
   1. Description
      1. The highest version of the series Explorer is available as portable or firmly integrated in a vehicle. The camera crawler has two motors with high performance 100 W, which enables easy turning and controlling. Thanks to the rear camera with sensitivity 0.25 lux is the way out from the pipe easy. High-lift pantograph, on which the camera head is mounted, enables lifting the camera up to the pipeline axis, which together with the LED auxiliary lights allows to make the pipe monitoring quickly and in high-quality. Pipe sizes start at 6 inch, the auxiliary chassis is determined for bigger diameters. The Explorer reel can be supplied with cable lengths from 655' to 1,640'. The control unit (eventually built in) is controlled via PC, which contains software including DigiCAN software.
2. Explorer
   1. Key Points
      1. Available as portable or firmly integrated into a vehicle.
      2. Rear camera with sensitivity of 0.025 lux facilitates easy navigation out of the pipe.
      3. High-lift pantograph allows lifting the camera up to the pipeline axis, coupled with LED auxiliary lights for quick and high-quality pipe monitoring.
      4. Auxiliary chassis designed for larger diameters.
      5. Explorer reel can be supplied with cable lengths ranging from 655' to 1,640'.
      6. Control unit (can be built-in) controlled via PC, with software including Digi CAN software.
   2. Drive
      1. 6x6, powered by 2 engines of 100W each
   3. Automatically balancing to prevent overturning.
   4. Basic Wheels
      1. Includes one set
   5. Waterproof
      1. up to 1 bar
3. ATEX (explosive environments) available
4. Accessories
   1. Lasers for camera head for measuring cracks, holes, and connections in the pipe
   2. Ovality module for continuous measuring of pipe ovality
   3. Electric pantograph with LED lights of 20W
   4. Manually elevating arm
   5. Auxiliary chassis (20"–40")
   6. Probe with 33 kHz frequency
   7. Wheels for various diameters
   8. Upper guiding for oval pipe profiles
   9. Extension chassis connector block to center camera in pipes 40” and larger
5. Explorer Micro
   1. Key Points
      1. Designed for pipe monitoring of diameters ranging from 4" to 12".
      2. Equipped with a camera crawler featuring two engines for simple turning and fluent drive in the pipe.
      3. Utilizes a rotating and pivoting camera head KZ60 for detailed pipe monitoring.
      4. Shares the same control unit as the higher camera version Explorer, allowing for easy substitution of cameras based on monitoring needs and pipe diameter.
   2. Material
      1. Brass
   3. Drive
      1. 6x6, powered by 2 engines of 20W each
   4. Automatically balancing to prevent overturning.
   5. Basic Wheels
      1. Includes one set
   6. Lowering Hook
   7. Waterproof
      1. up to 1 bar
   8. Accessories
      1. Wheels for diverse diameters
      2. LED light
      3. Light holder
      4. Probe (33 kHz or 512 Hz)
      5. Auxiliary arm for cable reel
      6. Hand control (cable drum Discovery)
      7. Guiding pulley for the pipe edge
      8. other

Top of FormBottom of FormBottom of Form**Cable Drums**

1. Navi3
   1. Automatic motorized reel, guide pulley for reducing the strain on the cable, sensor for measuring the length of un-winded cable, resistant against water splash.
      1. Cable length capacities 655ft -1640ft
2. Optional
   1. Cable drum gantry left v.2
      1. Special arm for Navi3 cable drum, including electric steel cable winch for crawler, working area LED light source, working voltage 12V
      2. Radio remote control. Controls cable drum, crawler, electric pantograph. The winch is controlled by a separate controller provided with winch.
      3. Also, optional models available to work with ATEX certified equipment

**Accessories**

1. Detectors
   1. Description
      1. Used for locating and searching for failures in pipeline.
      2. A probe is attached to a comet camera and then is able to be located above ground.
      3. Detectors can also locate low voltage and telephone cables.
2. Cyclops Scanner
   1. Description
      1. A specially developed system for ovality measuring with sensors.
      2. Prepare graph and measured values with help of DigiCan software,
      3. Resolution of measuring is 0.5mm and is going on four points of pipe. Results are displayed directly in the picture.
      4. Measuring pipes size 8”-32”
3. Boat (S.S Sewer Seaker)
   * 1. Description
        1. Floating monitoring system for big pipe diameters and sewers.
        2. Contains 3 floats and superstructure with lights
        3. Camera head KZ95 not included
4. Explorer with Alien Prober
   1. Description
      1. Satellite extension of the crawler Discovery (6 x 6) for pipe inspection in 6" – 40".
      2. View camera is component of the satellite extension, inspection of pipe connections is enabled
5. Well 800
   * 1. Description
        1. This system is designed for bore monitoring with sizes ranging from 6”-32”
        2. Stainless steel camera can be lowered with tripod and pulley equipment
        3. 2 cameras rotating on its axis, camera for vertical views, second camera for side view. Cameras can be switched with controller
        4. Continuous display on monitor, create photos or recordings

**Cleaning**

**Renssi**

**Chain Knockers**

1. Chain Knockers
   1. Description
      1. Premium chain knockers featuring precision-engineered sawbits. For professionals seeking an aggressive cleaning solution to tackle hard, stubborn deposits and tree roots within various piping systems. The sawbits are designed to cut through these tough blockages efficiently, ensuring clear pipes and improved flow.
      2. Suitable for both commercial and residential applications, our chain knockers fit seamlessly with most pipe cleaning rigs. The adjustable design accommodates a range of pipe sizes, enhancing their versatility and usability across different environments.
   2. Key Features
      1. Sharp, durable saw bits for cutting through severe blockages.
      2. Compatible with diverse pipe cleaning machines and diameters.
      3. Quick and easy attachment enhances operational efficiency.
      4. Ideal for intensive cleaning tasks, including root intrusion.
      5. Suitable for a variety of pipe materials, such as cast iron, PVC, and concrete
   3. Product Variety
      1. Options
         1. 3-Chained
            1. Shaft Sizes Available

¼”;5/16”;3/8”;1/2”

* + - * 1. Pipe Size

1.5”,2”,3”,4”,5”,6”,8”,10”,12”

* + - 1. 2-Chaines
         1. Shaft Sizes Available

¼”;5/16”;3/8”;1/2”

* + - * 1. Pipe Size

1.5”,2”,3”,4”,5”,6”,8”,10”,12”

* + - 1. 1-Chaines
         1. Shaft Sizes Available

¼”;5/16”;3/8”;1/2”

* + - * 1. Pipe Size

1.5”,2”,3”,4”,5”,6”,8”,10”,12”

Product Variety:

Please complete the charts with all the variety available. Keep in mind the different shaft sizes. Also, any product number that ends with /1 will be

1-Chained option, /2 will be 2-Chained option, and anything without will be 3-chained option. Use the below for reference.

1. Chain Knockers with Sawbits
   1. Description
      1. Premium chain knockers featuring precision-engineered sawbits. These tools are crafted for professionals seeking an aggressive cleaning solution to tackle hard, stubborn deposits and tree roots within various piping systems. The sawbits are designed to cut through these tough blockages efficiently, ensuring clear pipes and improved flow.
      2. Suitable for both commercial and residential applications, our chain knockers fit seamlessly with most pipe cleaning rigs. Their robust construction and easy installation make them a reliable choice for maintenance and emergency cleanups. The adjustable design accommodates a range of pipe sizes, enhancing their versatility and usability across different environments.
   2. Key Features
      1. Sharp, durable sawbits for cutting through severe blockages.
      2. Compatible with diverse pipe cleaning machines and diameters.
      3. Quick and easy attachment enhances operational efficiency.
      4. Ideal for intensive cleaning tasks, including root intrusion.
      5. Suitable for a variety of pipe materials, such as cast iron, PVC, and concrete
2. Chain Knockers with Drill Head & Sawbits
   1. Description
      1. Unlock superior cleaning power with our advanced chain knockers, featuring integrated drill heads and sawbits for comprehensive pipe maintenance. Designed to address the most challenging blockages, these tools are perfect for cutting through heavy roots, hardened scale, and extensive debris in a variety of pipe systems. The combination of drill heads and sawbits ensures a multifaceted approach, providing both drilling and cutting actions to break down and remove obstructions efficiently.
      2. Our chain knockers are engineered for compatibility with a broad range of pipe cleaning equipment and are versatile enough for use in both residential and industrial settings. The robust construction ensures durability and longevity, while the easy-to-use design guarantees a smooth operation for professionals.
   2. Key Features
      1. Dual-action cleaning with both drill heads and sawbits for comprehensive pipe clearing.
      2. High-strength materials ensure durability and reliability under tough conditions.
      3. • Compatible with multiple pipe diameters and cleaning machines
      4. Quick installation and removal increase operational efficiency.
      5. Ideal for tackling heavy build-up, root intrusions, and hard deposits in various pipe materials, including steel, PVC, and clay.
      6. Equip your toolkit with our chain knockers with drill head & sawbits to enhance your cleaning capabilities and ensure optimal pipeline performance.
3. Chain Knockers with Starbits
   1. Description
      1. These tools are designed for efficient and effective cleaning of pipes clogged with grease, sludge, and other soft deposits. The starbits, with their unique geometry, provide multiple cutting edges that aggressively penetrate and clear blockages, while being gentle on pipe walls.
      2. Ideal for both residential and industrial applications, these chain knockers are versatile and compatible with a variety of pipe cleaning equipment. The robust design ensures durability and a long service life, while the easy installation feature allows for quick setup and operation, reducing downtime and increasing productivity.
   2. Key Features
      1. Unique starbit design for effective cleaning of soft deposits.
      2. Compatible with various pipe diameters and cleaning systems.
      3. Durable construction ensures prolonged tool life.
      4. Easy to attach and detach, enhancing operational efficiency.
      5. Suitable for a wide range of pipe materials, including PVC, cast iron, and clay.
      6. Enhance your cleaning processes with our chain knockers with starbits, and achieve thorough cleaning results with less effort and more efficiency.
4. Chain Knockers with Drill Head & Starbits
   1. Description:
      1. Designed for comprehensive pipe maintenance, this versatile tool combines the penetrating power of drill heads with the effective cleaning action of starbits. The drill heads effortlessly break through tough blockages, while the starbits provide multiple cutting edges to clear away soft deposits and debris, ensuring a thorough and efficient cleaning process.
      2. Perfect for a wide range of applications, including residential, commercial, and industrial settings, these chain knockers are compatible with most pipe cleaning equipment. Their durable construction guarantees a long service life, and the easy attachment system ensures quick setup and operation, minimizing downtime and maximizing productivity.
   2. Key Features
      1. Dual-action cleaning with both drill heads and starbits for comprehensive pipe maintenance.
      2. Durable materials ensure long-lasting performance and reliability.
      3. Compatible with various pipe diameters and cleaning machines.
      4. Quick and easy installation enhances operational efficiency.
      5. Effective in tackling tough blockages, grease, sludge, and other deposits in various pipe materials, such as PVC, cast iron, and clay
5. Chain Knockers without Carbide
   1. Description
      1. Our Chain Knockers Without Carbide are highly effective tools specifically designed for cleaning PVC pipes. These tools are perfect for a variety of pipe cleaning applications, providing an efficient solution while being delicate on PVC to prevent any damage.
   2. Key Features
      1. Robust Construction: Built with high-quality materials to ensure durability and longevity.
      2. PVC Pipe Friendly: Ideal for cleaning PVC pipes due to their gentle yet effective design that prevents damage to delicate surfaces.
      3. Versatile Use: Can also be used on other pipe materials such as cast iron and clay.
      4. Efficient Performance: Effectively dislodges and removes debris, roots, and other blockages from pipes.
6. Chain Knockers with Starbits / DR40 head
   1. Description
      1. Our Chain Knockers with Starbits / DR40 Head are powerful and versatile tools designed for rigorous pipe cleaning applications. These knockers are especially effective for removing tough obstructions and build-up within pipes, ensuring a thorough cleaning every time.
   2. Key Features
      1. Heavy-Duty Construction: Made with robust materials to withstand demanding pipe cleaning tasks.
      2. Enhanced Cleaning: Equipped with Starbits / DR40 Head, providing superior cleaning action to dislodge even the most stubborn debris.
      3. Versatile Applications: Suitable for use in a variety of pipe materials including cast iron, clay, and PVC.
      4. Precision Design: Ensures efficient and thorough cleaning without damaging the pipe interior.
7. Circular Chain Knockers / Sleeve
   1. Description
      1. Our Circular Chain Knockers / Sleeve are specifically designed for efficient and thorough pipe cleaning. The circular chain configuration ensures 360-degree coverage, making it a highly effective tool for removing debris, scale, and other obstructions from pipes.
   2. Key Features
      1. 360-Degree Cleaning: The circular chain design provides comprehensive cleaning coverage, effectively removing rust, dirt, and other debris from all sides of the pipe interior
      2. Durable Construction: Made with high-quality materials to withstand frequent use and tough cleaning jobs, ensuring long-lasting performance​
      3. Versatile Use: Suitable for cleaning various pipe materials, including PVC, cast iron, and clay, making it flexible for different cleaning tasks.
      4. Gentle on Pipes: Designed to clean effectively without damaging the pipe interior, making it particularly suitable for delicate materials like PVC.
8. Circular Chain Knockers with carbide coating
   1. Description
      1. Our Circular Chain Knockers with Carbide Coating are designed for robust and efficient pipe cleaning. The carbide coating enhances the cleaning power, making these knockers exceptionally effective at removing tough obstructions and build-up within pipes.
   2. Key Features
      1. Enhanced Cleaning Power: The carbide coating provides superior abrasive action, effectively removing hard deposits, scale, and rust from pipe interiors.
      2. 360-Degree Cleaning: The circular chain design ensures comprehensive cleaning coverage, reaching all sides of the pipe for thorough cleaning.
      3. Durable Construction: Built with high-quality materials and a durable carbide coating, these knockers are designed to withstand frequent and demanding use.
      4. Versatile Use: Ideal for cleaning various pipe materials, including cast iron, clay, and even PVC, while being gentle enough to avoid pipe damage.

**Brushes**

1. Nylon
   1. Description
      1. Nylon brushes are specialized tools designed for effective and efficient drain cleaning. These brushes feature high-quality nylon bristles that offer the perfect balance of flexibility and durability, ensuring thorough cleaning of various pipe systems without causing damage. Compatible with a wide range of drain cleaning machines.
   2. Key Features
      1. High-Quality Nylon Bristles: Engineered for strength and flexibility, the nylon bristles ensure effective cleaning while protecting the integrity of the pipe surfaces. Compatible with diverse pipe cleaning machines and diameters.
      2. Machine Compatibility: Designed to fit numerous pipe cleaning machines, offers versatility and ease of use across different setups and environments.
      3. Efficient Cleaning Performance: The bristles effectively scrub away debris and obstructions, ensuring pipes are clear and functional.
      4. Multiple Size Options: Available in various sizes to suit different pipe diameters, ensuring comprehensive cleaning coverage for all areas of the piping system.
   3. Product Variety
      1. Options
         1. Shaft Sizes
            1. ¼”;5/16”
         2. Pipe Size
            1. 1.5”,1.8”,2”,3”,4”,5”,6”,6.3”,8”,7”,12”
2. Nylon / Steel
   1. Description
      1. Nylon/steel brushes are robust and versatile tools designed for heavy-duty drain cleaning tasks. Combining the flexibility of nylon bristles with the strength of steel, these brushes provide superior cleaning power to tackle stubborn clogs and debris in various piping systems. Compatible with a wide range of cleaning machines, ensuring efficient and thorough cleaning performance.
   2. Key Features
      1. Dual Bristle Composition: Featuring a combination of flexible nylon and strong steel bristles, these brushes offer enhanced cleaning efficiency and durability.
      2. Effective for Tough Clogs: Ideal for removing stubborn blockages, grease, and debris, the steel bristles provide the necessary strength to break through tough obstructions.
      3. Wide Compatibility: Designed to fit a broad range of pipe cleaning machines, offers versatile use across different setups and environments.
      4. Comprehensive Cleaning: The dual bristle design ensures thorough cleaning, effectively scrubbing and clearing pipes to restore optimal flow.
      5. Range of Sizes: Available in multiple sizes to accommodate different pipe diameters, ensuring all areas of the piping system can be efficiently cleaned.
   3. Product Variety
      1. Options
         1. Shaft Sizes
            1. 5/16”
         2. Pipe Size
            1. 2.2”,3”,4.2”,5.1”,6.1”,7”,8.1”
3. Silicon Carbide
   1. Description
      1. Silicon carbide brushes are premium cleaning tools designed to handle the toughest drain cleaning challenges. With bristles made from high-grade silicon carbide, these brushes provide exceptional abrasiveness and durability, making them ideal for removing hard deposits and heavy blockages in various piping systems. Perfect for both residential and commercial applications, Silicon carbide brushes are compatible with a wide range of cleaning machines, ensuring efficient and thorough cleaning performance.
   2. Key Features
      1. High-Grade Silicon Carbide Bristles: The silicon carbide bristles offer superior abrasiveness and durability, ensuring effective removal of hard deposits and stubborn blockages.
      2. Heavy-Duty Cleaning: Designed to tackle the toughest cleaning tasks, these brushes can easily handle heavy deposits, scale, and other hard obstructions.
      3. Wide Compatibility: Compatible with a broad range of pipe cleaning machines, Silicon carbide brushes offer versatility and ease of use across different setups.
      4. Range of Sizes: Available in multiple sizes to fit different pipe diameters, ensuring that all areas of the piping system can be efficiently clean
   3. Product Variety
      1. Options
         1. Shaft Sizes
            1. 5/16” ; 3/8”; ½”
         2. Pipe Size
            1. 2”,3”,4.3”,5”,6.7”
4. Securing Ring for Brushes
   1. Description
      1. Securing rings are essential components for the effective use of drain cleaning brushes, ensuring that the brushes are securely attached to the cleaning equipment during operation. Designed to fit various types of brushes, including nylon, steel, and silicon carbide, these securing rings provide a stable and reliable connection, preventing detachment or slippage during cleaning tasks. Suitable for both residential and commercial applications, securing rings enhances the safety and efficiency of the drain cleaning process.
   2. Key Features
      1. Secure Attachment: Designed to firmly hold brushes in place, preventing detachment or slippage during cleaning operations.
      2. Compatibility: Suitable for use with a wide range of brush types, including nylon, steel, and silicon carbide, as well as different cleaning machines.
      3. Enhanced Safety: Ensures that brushes remain securely attached, reducing the risk of accidents or damage to the equipment and piping systems..
   3. Product Variety
      1. Options
         1. Shaft Sizes
            1. ¼”;5/16”;3/8”;1/2”
5. Brush Adaptors
   1. Description
      1. Brush adaptors are crucial accessories for connecting different types of cleaning brushes to drain cleaning machines. These adaptors ensure a secure and compatible fit, allowing for the seamless use of various brush types, including nylon, steel, and silicon carbide..
   2. Key Features
      1. Versatile Compatibility: Allows for the connection of various brush types (nylon, steel, silicon carbide) to different drain cleaning machines, enhancing versatility.
      2. Secure Fit: Ensures that brushes are firmly attached to the cleaning equipment, preventing detachment or slippage during use.
      3. Durable Construction: Made from high-quality materials, these adaptors are built to withstand rigorous use and provide long-lasting performance.
   3. Product Variety
      1. Options
         1. Shaft Sizes
            1. 3/8”/5/16” ; ½”/5/16”

**Cables**

1. Description
   * 1. ERC, TS, TS-01, TS-10, and TS-11 cables are high-quality, durable cables designed specifically for drain cleaning applications. These cables are engineered to withstand the rigors of frequent use in both residential and commercial settings, providing reliable performance for clearing clogs and maintaining pipe systems. Available in various lengths and shaft sizes, all cables are compatible with a wide range of drain cleaning machines, making them a versatile and essential tool for any maintenance toolkit.
2. Key Features
   * 1. Durable Construction: Made from robust materials, all cables are designed to endure the stresses of heavy-duty drain cleaning, ensuring long-lasting reliability.
     2. Flexibility: These cables are flexible enough to navigate through pipes and around bends, allowing for thorough cleaning in hard-to-reach areas.
     3. High Tensile Strength: Engineered for strength, all cables can handle tough clogs and blockages, ensuring effective cleaning.
     4. Compatibility: Available in multiple lengths and shaft sizes, all cables are designed to fit a variety of drain cleaning machines, enhancing their versatility.
     5. Corrosion Resistant: Constructed from materials resistant to corrosion, these cables maintain their integrity and performance over time, even with frequent exposure to water and debris.
     6. Ease of Use: The design ensures easy handling and operation, allowing for efficient setup and use in various cleaning scenarios.
     7. Variety of Sizes: Available in different lengths (e.g., 26’, 33’, 50’) and shaft sizes (e.g., ¼”, 5/16”), catering to a wide range of cleaning requirements.
     8. Reliable Performance: Designed to provide consistent and effective cleaning, all cables help maintain optimal flow and function in piping systems.
3. ERC Cables
   1. Description
      1. ERC-cable includes a cover, a cable, brass sleeves on both ends and a rotator shaft. We use Cross Layer Cable in ERC-cables.
   2. Product Variety
      1. Options
         1. Shaft Sizes
            1. ¼”;5/16”,3/8”,1/2”
         2. Cable Length
            1. 6.6’,10’,16.5’,26’,33’,50’,65’,82’,100’
4. TS Cables
   1. Description
      1. TS Cables includes a cable without steel sleeves or adaptors and nylon cover.
   2. Product Variety
      1. Options
         1. Shaft Sizes
            1. 5/16”,3/8”,1/2”
         2. Cable Length
            1. 3.3’,6.6’,10’,16.5’,20’,26’,33’,43’,50’,65’,75’,82’,100’,115’,121’,131’,160’
5. TS-01 Cables
   1. Description
      1. TS-01 Cables includes a cable with rotator end crimped and nylon cover.
   2. Product Variety
      1. Options
         1. Shaft Sizes
            1. ¼”,5/16”,3/8”,1/2”
         2. Cable Length
            1. 3.3’,6.6’,10’,16.5’,20’,26’,33’,43’,50’,65’,75’,82’,100’,115’,121’,125’,131’,160’
6. TS-10 Cables
   1. Description
      1. TS-10 Cables includes a cable with tool end crimped and nylon cover.
   2. Product Variety
      1. Options
         1. Shaft Sizes
            1. 5/16”,3/8”,1/2”
         2. Cable Length
            1. 3.3’,6.6’,10’,16.5’,20’,26’,33’,43’,50’,65’,75’,82’,100’,115’,121’,125’,131’,160’
7. TS-11 Cables
   1. Description
      1. TS-11 Cables includes a cable with both ends crimped and nylon cover.
   2. Product Variety
      1. Options
         1. Shaft Sizes
            1. ¼”,5/16”,3/8”,1/2”
         2. Cable Length
            1. 3.3’,6.6’,10’,16.5’,20’,26’,33’,43’,50’,65’,75’,82’,100’,115’,121’,125’,131’,160’
8. Rotating Cables
   1. Description
      1. Cross Layer Cable
   2. Product Variety
      1. Options
         1. Shaft Sizes
            1. 1/8”, ¼”,5/16”,3/8”,1/2”
9. Rotating Cables
   1. Description
      1. Spring Layer Cable with Max length of 65’
   2. Product Variety
      1. Options
         1. Shaft Sizes
            1. 5/16”,3/8”,1/2”
10. Rotating Cable Roll
    1. Description
       1. Cross Layer Cable
    2. Product Variety
       1. Options
          1. Shaft Sizes
             1. 5/16”,3/8”,1/2”
          2. Cable Length
             1. 820’,1312’,656’
11. Covers / Nylon
    1. Description
       1. Nylon Covers
    2. Product Variety
       1. Options
          1. Shaft Sizes
             1. 1/8”,1/4”,5/16”,3/8”,1/2”
          2. Cable Length for 50m Roll
             1. 164’
12. Covers / Pex
    1. Description
       1. Pex Covers
    2. Product Variety
       1. Options
          1. Shaft Sizes
             1. 5/16”,3/8”,1/2”
          2. Cable Rolls
             1. 200m,500m
          3. Cable Lengths
             1. 656’,1640’
13. Cable Carriers
    1. Description
       1. Transportation and handling of cable
    2. Product Variety
       1. Options
          1. Shaft Sizes
             1. ¼”,5/16”,3/8”, cable sold separately
          2. Cable Length
             1. 33’,50’, cable sold separately
14. Cable Cover Ball Bearings
    1. Description
       1. To minimize the friction between your tool and cable cover.
    2. Product Variety
       1. Options
          1. Shaft Sizes
             1. 5/16” / 12mm cover, 3/8” / 15mm cover”, ½” / 16mm cover, ½” / 18mm cover
15. Brass Ends / Hexagon
    1. Description
       1. Brass cover pipe sleeves
    2. Product Variety
       1. Options
          1. Shaft Sizes
             1. 5/16”, 3/8”, ½”
16. Brass Ends / Rounds
    1. Description
       1. Brass cover pipe sleeves
    2. Product Variety
       1. Options
          1. Shaft Sizes
             1. ¼”, 5/16”, 3/8”, ½”
17. Tools For Bearings
    1. Description
       1. Tools for CB-B8 / D10 / D12
18. Adjustable Clutch
    1. Description
       1. Clutch for a drill
       2. Includes crimp for 5/16”,3/8”, and 1//2” cables.
       3. Includes also CAT-set, CLT-25-014 and CRS-011.
       4. Drill is sold separately
19. Clutch Spare Parts
    1. Product Variety
       1. Options
          1. Adaptor for 14mm sleeve
          2. Adjustment tool kit for clutch
          3. Adjustment tool / hex
          4. Adjustment tool / spanner wrench
          5. Rotator shaft for clutch
          6. Hex key wrench set

**Equipment**

1. Description
   * 1. Our Cleaning Units are high-performance devices designed to provide efficient and reliable cleaning for various pipe diameters. Available in multiple configurations, these units are equipped with durable cables and powerful drills, ensuring thorough and effective cleaning. Whether you need a compact unit for smaller pipes or a robust system for larger diameters, RCM Cleaning Units offer the flexibility and performance required for a range of cleaning applications.
2. Key Features
   * 1. Versatile Cable Options: Available with 8mm, 10mm, and 12mm cables in different lengths, suitable for various cleaning requirements.
     2. Multiple Configurations: Offered in several models, including RCM-8, RCM-10, RCM-8-PLUS, RCM-10-PLUS, R-MILL-25, and R-MILL-36, to meet different cleaning needs.
     3. User-Friendly Design: Easy to operate with intuitive controls, making it suitable for both professionals and beginners.
     4. Portable and Compact: Lightweight and portable design for easy transportation and maneuverability in various job sites.
3. RCM-X
   * 1. Options
        1. RCM-8-X
           1. Cleaning unit with 50’ of 5/16” cable / WITHOUT drill
        2. RCM-10-X
           1. Cleaning unit with 32’ of 3/8” cable / WITHOUT drill
4. RCM-X-PLUS
   * 1. Options
        1. RCM-8-X-PLUS
           1. Cleaning unit with 82’ of 5/16” cable / WITHOUT drill
        2. RCM-10-X
           1. Cleaning unit with 82’ of 3/8” cable / WITHOUT drill
5. R-Miller
   * 1. Options
        1. R-Miller-25
           1. Milling unit with 82’ of 3/8” cable
        2. RCM-10-X
           1. Milling unit with 118’ of 1/2” cable

**Cutters**

1. Description
   * 1. The tools are designed to solve specific problems in the field. Tools can be used either with or without centering devices. You can open laterals, remove collapsed or damaged liners with cutter tools etc. There are cutters for branch connections, overshot pipe cutters and collapsed line drills in our collection. Check out and find the tool needed to solve the problems in pipe cleaning and relining process.
2. Key Features
   * 1. Flexible Usage: Can be used with or without centering devices, providing versatility in different cleaning scenarios..
     2. Variety of Cutter Types: Includes cutters for branch connections, overshot pipe cutters, and collapsed line drills, ensuring a suitable tool for every need.
     3. Precision Cutting: Engineered for accurate and efficient removal of blockages, ensuring thorough cleaning of pipes.
3. Hole Saws With T-Slide Connector
   * 1. Options
        1. 1 3/16” hole saw with 16mm t-slide connector
        2. 1 ½” hole saw with 16mm t-slide connector
        3. 2” hole saw with 16mm t-slide connector
        4. 2 3/8” hole saw with t-slide connector
        5. 2 ¾” hole saw with 16 t-slide connector
4. Collapsed Line Drill
   1. Product Variety
      * 1. Diameter
           1. 2”, 3”, 4”, 5”
        2. Options
           1. 5 inserts, 5 inserts and screws
5. Reinstatement Cutter Kits
   1. Product Variety
      * 1. Diameter
           1. 2”, 3”, 4”, 6”
6. Suppression Sleeves for Reinstatement Cutters
   1. Product Variety
      1. Options
         1. Cable Size
            1. 5/16”,3/8”,1/2”
         2. Pipe Size
            1. 2”, 3”, 4”, 6 “
7. Reinstatement Cutters
   1. Product Variety
      1. Options
         1. Diameter
            1. 2”, 3”, 4”, 6”
         2. Pipe Size
            1. 2”, 3”, 4”, 6 “
8. Drill Heads for Cables
   1. Product Variety
      1. Options
         1. Cable Size
            1. ¼”, 5/16”, 3/8”, ½”

**Sanding**

1. Description
   * 1. Our sandpaper grinder, with four sandpapers attached to its body. After cutting a lateral, you can finish the job with it. Use this with different size sandpapers, to match the pipe you are working with.
2. Key Features
   * 1. Efficient Grinding: Our sandpaper grinder can hold four sandpapers attached to its body, ensuring effective grinding and polishing of pipe interiors.
     2. Post-Cutting Finish: Ideal for finishing the job after cutting a lateral, providing a smooth and clean pipe surface.
     3. Versatile Sandpaper Sizes: Compatible with different size sandpapers to match the pipe you are working with, ensuring optimal performance.
     4. Multiple Size Options: Available in various sizes to fit different cable diameters, ensuring compatibility with a wide range of cleaning equipment.
3. Sandpaper Holders with Wedge
   1. Description
      1. For 4 papers
   2. Product Variety
      * 1. Width
           1. 1”, 2”, 3”, 4” 6”
        2. Cable Size
           1. 5/16”, 3/8”, ½”
4. Sandpapers With Wedge – SPB-B
   1. Description
      1. Sandpapers are sold in packages of 40
      2. SPB-B : Heavy grinding Zirconia alumina abrasive grain P24 grit
   2. Product Variety
      * 1. Width x Length
           1. 1”x3”, 2”x4”, 3”x4”, 2”x6”,3”x6”,4”x6”,6”x8”
5. Sandpapers With Wedge – SPB-R
   1. Description
      1. Sandpapers are sold in packages of 40
      2. SPB-R : Heavy grinding Ceramic abrasive grain P24 grit
   2. Product Variety
      * 1. Width x Length
           1. 1”x3”, 2”x4”, 3”x4”, 2”x6”,3”x6”,4”x6”,6”x8”
6. Sandpapers With Wedge – SPB-F
   1. Description
      1. Sandpapers are sold in packages of 40
      2. SPB-F – Finishing Grinding net P40 grit
         1. Width x Length
            1. 2”x4”, 3”x4”, 2”x6”,3”x6”,4”x6”

**Kits**

1. Grinding Kit
   1. Description
      1. Our Grinding Kit includes the most common chain knockers and one of each size sandpaper holder with sandpapers. With this kit you have all the accessories you need for a descaling job!
   2. Included
      1. Chain knocker – ½” Cable; 6” Pipe; 3-Chained (2pcs)
      2. Chain knocker – ½” Cable; 4” Pipe; 3-Chained (2pcs)
      3. Chain knocker – ½” Cable; 6” Pipe; w/ drill head; 3-Chained (2pcs)
      4. Chain knocker – ½” Cable; 3” Pipe; 3-Chained (2pcs)
      5. Chain knocker – 5/16” Cable; 3” Pipe; 3-Chained (2pcs)
      6. Chain knocker – 5/16” Cable; 2” Pipe; 2-Chained (2pcs)
      7. Sandpaper holder – 1” Wide; 5/16” Cable (1pc)
      8. Sandpaper holder – 2” Wide; 5/16” Cable (1pc)
      9. Sandpaper holder – 3” Wide; 3/8” Cable (1pc)
      10. Sandpaper holder – 2” Wide; 3/8” Cable (1pc)
      11. Sandpaper holder – 3” Wide; 3/8” (1pc)
      12. Sandpaper holder – 4” Wide; 1/2” (1pc)
      13. Sandpaper holder – 6” Wide; 1/2” (1pc)
      14. Sandpaper panel with wedge – 1”x3” (4pcs)
      15. Sandpaper panel with wedge – 2”x6” (4pcs)
      16. Sandpaper panel with wedge – 3”x6” (4pcs)
      17. Sandpaper panel with wedge – 2”x6” (4pcs)
      18. Sandpaper panel with wedge – 3”x6” (4pcs)
      19. Sandpaper panel with wedge – 4”x6” (4pcs)
      20. Sandpaper panel with wedge – 6”x8” (4pcs)
2. Cutter Kit
   1. Description
      1. Our Cutter Kit includes every cutting tool we have from 2” up to 4” including small drill heads, reinstatement cutters and collapsed line drills with centering devices and connectors.
   2. Included
      1. Lateral cutter with centering device – 2” Pipe (1pc)
      2. Lateral cutter with centering device – 3” Pipe (1pc)
      3. Lateral cutter with centering device – 4” Pipe (1pc)
      4. Collapsed line drill – 2” Pipe (1pc)
      5. Collapsed line drill – 3” Pipe (1pc)
      6. Collapsed line drill – 4” Pipe (1pc)
      7. Cable tip drill – ¼” Cable (1pc)
      8. Cable tip drill – 5/16” Cable (1pc)
      9. Cable tip drill – 3/8” Cable (1pc)
      10. Cable tip drill – ½” Cable (1pc)
      11. Connector – 2” centering device / 14mm sleeve (1pc)
      12. Connector – 3”,4”,6” centering device / 14mm sleeve (1pc)
      13. Connector – 3/8” cable to connect centering device (1pc)
      14. Connector – 1.2” cable to connect centering device (1pc)

**Adaptors And Sleeves**

1. Cable Connectors
   1. Description
      1. These connectors and sleeves ensure secure and durable joins between cables, enhancing the performance and longevity of the cleaning and rehabilitation equipment.
   2. Key Features
      1. Versatile Connectors: Options for extension and conversion connectors to suit different cable sizes and requirements.
      2. Comprehensive Options: Includes connectors for crimped sleeves and various crimp sleeve sizes.
   3. Options
      1. Cable Connectors – Extension
         1. For 6mm, 8mm, 10mm, and 12mm cables
      2. Cable Connectors – Conversion
         1. Connectors for converting 8mm to 10mm, 8mm to 12mm, and 10mm to 12mm cables
         2. Special connectors for attaching 10mm and 12mm cables to centering devices.
      3. Cable Connectors for Crimped Sleeve
         1. For 2” and 3”-6” centering devices with 14mm sleeves.
      4. Crimp Sleeves
         1. Available for 6mm, 8mm, 10mm, 12mm, 14mm, and 16mm cables
         2. Includes a ¼” female thread connector for 12mm cables.
      5. Connectors – 16mm Female
         1. For 8mm, 10mm, and 12mm cables
         2. Includes T-slide options and shackle with thread
            1. Examples

For 8mm cable.

For 10mm cable.

For 12mm cable.

T-slide, shackle with M4 thread.

T-slide, shackle with M5 thread.

To CC-connector

For 10mm POM shaft, stainless steel.

* + 1. Connectors – 16mm Male
       1. For 8mm, 10mm, and 12mm cables
       2. Includes T-slide options
          1. Examples:

For 8mm cable.

For 10mm cable.

For 12mm cable.

For 10mm POM shaft, stainless steel.

For 10mm cable with set screws

* + 1. Connectors – 20mm Female
       1. For 8mm, 10mm, and 12mm cables.
       2. Includes T-slide options and shackle with thread
          1. Examples:

For 8mm cable.

For 10mm cable.

For 12mm cable.

T-slide, shock with M5 thread.

To CC-connector.

For 10mm POM shaft, stainless steel.

* + 1. Connectors – 20mm Male
       1. For 10mm, 12mm, and 16mm cables
       2. Includes T-slide options
          1. Examples

For 10mm cable.

For 12mm cable.

For 16mm POM shaft, stainless steel.

* + 1. Drill Adaptors
       1. For 6mm, 8mm, 10mm, and 12mm cables
       2. Rotator shaft options.
       3. Rotator shaft for TS Cable.
    2. T-Slide Adapters
       1. Adapter for 16mm ⅜” female to 20mm male.
       2. Adapter for 16mm ⅜” male to 20mm female.
    3. Miscellaneous Accessories
       1. Adapter for various cable and shaft configurations.
       2. Adapter for 8mm 7/16” cable and UNF ¼” male thread.
       3. Adapter for 8mm ⅓” POM shaft with G⅛ male thread.
       4. Adapter for 10mm ⅜” POM shaft with G⅛ male thread.
       5. Adapter for 12mm ½” POM shaft with G⅛ male thread.
       6. Adapter for 16mm ⅜” POM shaft with G⅛ male thread.
       7. Rotator shaft for drill with M16 male thread.
    4. Whips
       1. For 8mm, 10mm, and 12mm cables.
       2. Adapter for ¼” W thread with 10mm ⅜” cable adapter.
       3. Adapter for ¼” W thread with 12mm ½” cable adapter.

**Lining**

**Renssi**

**Silicon Bladders**

1. Silicon Bladders
   1. Manufacturer
      1. Renssi
   2. Description
      1. Renssi silicon bladders are designed for efficient and reliable pipe rehabilitation at various angles, providing a robust solution for both main and branch connections. These bladders are available in configurations to fit pipes with 90° and 45° angles, ensuring versatile application options for different project requirements. Made from high-quality silicon, these bladders offer excellent flexibility, durability, and performance, making them an essential tool for trenchless pipe rehabilitation.
   3. Key Features
      1. Angle Options: Available in configurations for 90° and 45° angles, allowing for precise fitting and effective rehabilitation of both main and branch connections.
      2. Wide Range of Sizes: Offered in various sizes to accommodate different pipe dimensions, from small to large diameters, ensuring versatility and adaptability to different projects.
      3. High-Quality Silicon: Constructed from durable silicon material, these bladders provide excellent flexibility and resilience, ensuring long-lasting performance in pipe rehabilitation.
      4. Easy Installation: Designed for easy and secure installation, Renssi silicon bladders facilitate efficient and quick rehabilitation processes, saving time and labor costs.
   4. Options
      * 1. Silicon Bladders with 90° Angle
           1. Sizes range from 70/50-90 to 250/150-90
        2. Silicon Bladders with 45° Angle
           1. Sizes range from 50/50-45 to 250/150-45
        3. Silicon Bladders with 90° Angle, Long
           1. Sizes range from 100/100-90 to 375/100-90
           2. Main length: 1350mm (53”), Lateral length: 500mm (20”)
        4. Silicon Bladders with 45° Angle, Long
           1. Sizes range from 100/45-45 to 225/100-45
           2. Main length: 1350mm (53”), Lateral length: 500mm (20”)
        5. Curved Silicon Bladders
           1. Sizes include 100/70-45, 100/70-90, 100/90-45, and 100/90-90.
        6. T-Bladders
           1. Sizes include 100/100-45-T and 100/100-90-T
        7. Tubes
           1. Sizes range from 50mm to 150mm, with a maximum length of 2m (79”)

**Packers and Accessories**

1. Packers And Accessories
   * 1. Manufacturer
        1. Renssi
     2. Description
        1. A comprehensive range of packer assemblies and heads designed for effective pipe rehabilitation. These products are available in various configurations, including single and double rod assemblies, to accommodate different pipe sizes and rehabilitation needs. Made from high-quality materials, these packers ensure durability, reliability, and efficient performance for various trenchless pipe repair projects.
     3. Key Features
        1. Rod Options: Available in configurations with single or double rods.
        2. Easy Installation: Designed for quick and secure attachment, facilitating efficient pipe rehabilitation.
     4. Options
        1. Packer Assemblies with a Single Rod
           1. Sizes range from 30mm to 90mm in head diameter.
           2. Length options: 720mm to 1350mm.
           3. Rod diameter options: 8mm to 10mm.
        2. Packer Assemblies with Two Rods
           1. Sizes: 40mm and 60mm in head diameter.
           2. Length: 1500mm.
           3. Rod diameter: 8mm.
        3. Packer Heads for a Single Rod:
           1. Sizes range from 30mm to 90mm in head diameter.
           2. Information

30mm: Shackle M4, air pressure plug G1/4, available in standard and shorter versions

40mm: Shackle M5, air pressure plug G1/4.

60mm: Shackle M6, air pressure plug G1/4 or blind plug G1/4.

90mm: Blind plug G1/4.

* + - 1. Packer Heads for Two Rods
         1. Sizes: 40mm and 60mm in head diameter
         2. Information

40mm: Shock M5, air pressure plug G1/4 or blind plug G1/4.

60mm: Shock M6, air pressure plug G1/4 or blind plug G1/4.

* + - 1. Packer Middle Bars
         1. Length options: 500mm to 1500mm
         2. Information

Length 500mm to 720mm: Rod diameter 8mm.

Length 1350mm: Rod diameter 8mm or 10mm

Length 3040mm to 1500mm: Rod diameter 10mm.

* + - 1. Pressure Holders
         1. Sizes for 50mm, 75mm, 100mm, and 150mm liners.
      2. Push Rods
         1. 10mm or 16mm diameter, length 1.5m
      3. Adapters and Accessories
         1. Air connectors and pressure plugs
         2. Packer keys with 16mm or 20mm male T-slides

**Fabcob**

**Packers**

1. Bendy Packer
   1. Manufacturer
      1. Fabcob
   2. Description
      1. Bendy Packer is an advanced tool designed for efficient and effective pipe repair. Its flexible design allows it to navigate through corners and bends, making it ideal for a wide range of pipe rehabilitation projects.
   3. Key Features
      1. Flexible Design: Easy access through corners and bends, increasing the versatility of repair projects.
      2. Conical Tail and Head Style: Designed for enhanced movement and ease of insertion.
      3. High Elasticity: Increased flexibility ensures better adaptation to pipe contours.
      4. Extended Repair Length: Allows for longer sections of pipe to be repaired in a single application.
      5. Wide Range of Sizes: Available in multiple sizes to fit various pipe diameters and repair needs.
      6. Temperature Resistant: Can operate efficiently in temperatures up to 176°F.
   4. Options
      1. Nominal Sizes: Available in sizes ranging from 1.2 inches to 12 inches
      2. Product Diameters: Diameters range from 0.9 inches to 5.7 inches (24mm to 145mm).
      3. Lengths: Total length of 53 inches (1350mm) with a rubber length of 49 inches (1250mm).
      4. Working Pressure: Can handle up to 3 bar (43.5 psi).
      5. Repair Length: Repair lengths range up to 43.7 inches
      6. Weight: Product weights range from 0.7 lbs to 12.1 lbs
2. Multi-Size Flexible Packer with Bypass and Wheels
   1. Manufacturer
      1. Fabcob
   2. Description
      1. Multi Size Flexible Packer with Bypass and Wheels packer features a flexible design with integrated bypass and wheels, allowing it to navigate through various pipe sizes and bends with ease. Constructed from high-quality materials, this packer ensures durability, reliability, and long-lasting.
   3. Key Features
      1. Flexible Design: Adapts to various pipe sizes and bends, enhancing the versatility of repair projects.
      2. Integrated Bypass and Wheels: Facilitates movement through pipes and allows for continuous flow during repair.
      3. Temperature Resistant: Can operate efficiently in temperatures up to 176°F (80°C).
      4. Wide Range of Sizes: Available in multiple sizes to fit various pipe diameters and repair needs.
   4. Options
      1. Nominal Sizes: Available in sizes ranging from 4 inches to 48 inches
      2. Product Diameters: Diameters range from 2.4 inches to 21.8 inches
      3. Lengths: Rubber body lengths range from 12 inches to 50 inches
      4. Total lengths range from 20 inches to 61 inches (500mm to 1550mm).
      5. Working Pressure: Required inflation pressure ranges from 14.5 psi to 50.8 psi (1 to 3.5 bar).
      6. Repair Length: Repair lengths range up to 15.7 inches (400mm).
      7. Bypass Diameter: Bypass diameters range from ½ inch to 3 inches.
      8. Weight: Product weights range from 5.5 lbs to 141 lbs (2.5kg to 64kg).
3. Multi-Size Bendy Packer
   1. Manufacturer
      1. Fabcob
   2. Description
      1. Multi Size Bendy Packer’s flexible design allows it to navigate through corners and bends with ease, making it suitable for a wide range of pipe rehabilitation projects. This packer features a conical rubber head and offers a greater expansion range than standard packers.
   3. Key Features
      1. Flexible Design: Allows easy access through corners and bends, enhancing repair versatility.
      2. Conical Rubber Head: Ensures smooth insertion and effective sealing.
      3. High Expansion Range: More expansion range than standard packers for better adaptability.
      4. Temperature Resistant: Operates efficiently in temperatures up to 176°F (80°C).
      5. Wide Range of Sizes: Available in multiple sizes to fit various pipe diameters and repair needs.
   4. Options
      1. Nominal Sizes: Available in sizes ranging from 1.2 inches to 16 inches (30mm to 400mm).
      2. Product Diameters: Diameters range from 0.9 inches to 13.4 inches (24mm to 340mm).
      3. Lengths: Total length ranges from 57 inches to 63.8 inches (1450mm to 1620mm).
      4. Working Pressure: Can handle up to 3 bar (43.5 psi).
      5. Repair Length: Repair lengths range up to 39.4 inches (1000mm).
      6. Weight: Product weights range from 0.7 lbs to 22 lbs (0.3kg to 10kg).
4. Conical Multi Size Packer
   1. Description
      1. Conical Multi Size Packer packer features a superior expansion range compared to normal packers, allowing it to be used in a wide range of pipe sizes. Its conical design ensures a tight seal and effective repairs in various applications.
   2. Key Features
      1. Superior Expansion Range: Provides greater expansion capability, making it suitable for a wide range of pipe sizes.
      2. Conical Design: Ensures a tight seal and effective repairs.
      3. Durable Construction: Made from high-quality materials to withstand high working pressures.
      4. Temperature Resistant: Operates efficiently in temperatures up to 176°F (80°C).
      5. Wide Range of Sizes: Available in multiple sizes to fit various pipe diameters and repair needs.
   3. Options
      1. Nominal Sizes: Available in sizes ranging from 1.4 inches to 16 inches (35mm to 400mm).
      2. Product Diameters: Diameters range from 1.1 inches to 10.6 inches (28mm to 270mm).
      3. Lengths: Rubber body lengths range from 7.9 inches to 55.1 inches (200mm to 1400mm). Total lengths range from 13.4 inches to 61 inches (340mm to 1550mm).
      4. Working Pressure: Required inflation pressure ranges from 1 to 3 bar (14.5 psi to 43.5 psi).
      5. Repair Length: Repair lengths at minimum diameter range up to 9.4 inches (240mm). Repair lengths at maximum diameter range up to 43.7 inches (1100mm).
      6. Weight: Product weights range from 0.9 lbs to 41.9 lbs (0.4kg to 19kg).
5. Corner Packer
   1. Manufacturer
      1. Fabcob
   2. Description
      1. Corner Packer is specifically designed to provide easy access and a better fix in pipe corners. This packer allows for effective repairs in challenging areas where normal packers may not fit as well. Its advanced design ensures a tight seal and reliable performance. Constructed with high-quality materials, the Corner Packer offers durability, flexibility, and long-lasting performance.
   3. Key Features
      1. Easy Access in Corners: Designed for effective repairs in pipe corners where standard packers may struggle.
      2. Better Fix: Ensures a tight seal and effective repair in challenging areas.
      3. Durable Construction: Made from high-quality materials to withstand high working pressures.
      4. Temperature Resistant: Operates efficiently in temperatures up to 176°F (80°C).
      5. Wide Range of Sizes: Available in multiple sizes to fit various pipe diameters and repair needs.
   4. Options
      1. Nominal Sizes: Available in sizes ranging from 1.4 inches to 8 inches (35mm to 200mm).
      2. Product Diameters: Diameters range from 1 inch to 6.1 inches (25mm to 155mm).
      3. Lengths: Rubber body lengths range from 12.8 inches to 61 inches (325mm to 1545mm). Total lengths range from 15.2 inches to 63 inches (385mm to 1600mm).
      4. Working Pressure: Required inflation pressure ranges from 2 to 3.5 bar (29 psi to 50.8 psi).
      5. Repair Length: Repair lengths at minimum diameter range up to 15.7 inches (400mm). Repair lengths at maximum diameter range up to 32.3 inches (820mm).
      6. Weight: Product weights range from 0.4 lbs to 33.3 lbs (0.2kg to 15.1kg)
6. Multi-Size Lateral Packer
   1. Manufacturer
      1. Fabcob
   2. Description
      1. Multi-Size Lateral Packer is a versatile tool designed for efficient pipe repair in lateral connections. Its flexible design allows it to navigate through various pipe sizes and bends with ease, making it suitable for a wide range of pipe rehabilitation projects.
   3. Key Features
      1. Flexible Design: Allows easy access through various pipe sizes and bends, enhancing repair versatility.
      2. Durable Construction: Made from high-quality materials to withstand high working pressures.
      3. Temperature Resistant: Operates efficiently in temperatures up to 176°F (80°C).
      4. Wide Range of Sizes: Available in multiple sizes to fit various pipe diameters and repair needs
      5. Easy Installation: Designed for quick and secure attachment, facilitating efficient pipe rehabilitation.
   4. Options
      1. Nominal Sizes: Available in sizes ranging from 1 inch to 40 inches (25mm to 1000mm).
      2. Product Diameters: Diameters range from 0.7 inches to 21.8 inches (18mm to 555mm).
      3. Lengths: Rubber body lengths range from 7.9 inches to 50.4 inches (200mm to 1280mm). Total lengths range from 11.4 inches to 61 inches (290mm to 1550mm).
      4. Working Pressure: Required inflation pressure ranges from 1 to 3.5 bar (14.5 psi to 50.8 psi).
      5. Repair Length: Repair lengths at minimum diameter range up to 15.7 inches (400mm). Repair lengths at maximum diameter range up to 59 inches (1500mm).
      6. Weight: Product weights range from 0.9 lbs to 132 lbs (0.4kg to 60kg).
7. Other Pipe Plugs and Packers
   1. Manufacturer
      1. Fabcob
   2. Description
      1. Fab-Cob offers a comprehensive range of pipe plugs and packers designed to meet various pipe repair and testing needs. These products are available upon request and include multi-size flexible pipe test plugs, conical packers, corner packers, multi-size lateral packers, protective sleeves for pipe plugs, pillow packers, and egg-shaped pipe test plugs.
   3. Available Products
      1. Multi-Size Flexible Pipe Test Plugs: Designed for flexible testing applications, available in various sizes and pressure ratings.
      2. Conical Multi Size Packer: Provides superior expansion capabilities for effective repairs in various pipe sizes.
      3. Corner Packer: Specially designed for easy access and better fixes in pipe corners
      4. Multi-Size Lateral Packer: Suitable for lateral connections with flexible design and high durability.
      5. Protective Sleeve for Pipe Plugs: Offers added protection and durability for pipe plugs, available in various sizes.
      6. Pillow Packer: Versatile packer for large diameter pipes, providing quick inflation and deflation.
      7. Egg Shape Pipe Test Plugs: Multi-size plugs for testing, designed for efficient sealing and pressure handling.
      8. Multi-Size Conical Test Plugs: Special layers provide extra sealing, suitable for various pipe sizes with quick inflation and deflation.
      9. Multi-Size Conical Pipe Plugs: Efficient for large size pipes, offering quick inflation and deflation for big sizes.
      10. Multi-Size Conical Head Pipe Plugs: Suitable for multiple sizes with conical head design for better sealing.
      11. Pillow Packer with Flowthrough Hose: Ideal for large diameter pipes, equipped with a flowthrough hose and quick inflation system.
      12. Multi-Size Pipe Plugs with Large Bypass & Metal Core: Designed for high durability with large bypass and metal core for various pipe sizes.
      13. Multi-Size Short Pipe Test Plugs: Compact design suitable for short pipe sections, providing effective sealing.
      14. Small Pipe Test Plugs with Bypass: Suitable for small diameter pipes, offering efficient testing with bypass feature.
      15. Multi-Size Pipe Plugs with Bypass & Metal Core: High-quality pipe plugs with bypass and metal core, suitable for a wide range of pipe sizes.
      16. Multi-Size Flexible Pipe Test Plugs 1.5 Bar: Versatile plugs designed for a range of sizes and pressure conditions.
      17. Alu Mechanical Single Size Pipe Plug with High Test Pressure with Side bolt: Durable pipe plugs designed for high-pressure testing.
      18. Alu Mechanical Single Size Pipe Plug with High Test Pressure without Side bolt: Similar to the above but without side bolt, providing high-pressure testing capabilities.
      19. Multi-Size Short Pipe Plugs: Compact design suitable for various short pipe sections, ensuring efficient sealing.
      20. Small Pipe Plugs 2.5 Bar: High-pressure small pipe plugs suitable for various testing application

**Calibration Tube**

1. Clear Cal Tube (light duty)
   1. Description
      1. Our light duty calibration tube is clear and highly flexible. The tube is intended for use with ambient and UV curing applications.
   2. Product Specs
      1. constructed of high density polyethylene
      2. temperature resistant up to 140 degrees F.
      3. All calibration tube rolls are 328 ft.
2. Purple Cal Tube (heavy duty)
   1. Description
      1. Our heavy duty calibration tube is purple and versatile for multiple curing systems.
   2. Product Specs
      1. compatible with UV, ambient, hot water, and steam curing system
      2. constructed of high density polyethylene
      3. temperature resistant up to 176 degrees F.
      4. All calibration tube rolls are 328 ft

**Liners**

1. Straight/Scrim
   1. Manufacturer
      1. LATERAL REPAIR
   2. Description
      1. Our Standard Straight Liner is a Needle punched polyester fiber liner with polypropylene coating. This is best for straight shots with sweeping bends up to 45 degrees. It is heat resistant up to 248 degrees and designed for single size pipe.
   3. Diameter Range
      1. 4” – 12”
      2. Other dimensions upon request
   4. Undersized
      1. 10%
   5. Thickness
      1. 3mm-6mm
   6. Cure
      1. Hot Water/Steam/Ambient/UV
2. Flex
   1. Manufacturer
      1. LATERAL REPAIR
   2. Description
      1. Needle punched polyester felt (PES-plush/knitted) and brushed with one sided polyurethane coating w/stitched seam. Seam construction with PES Yarn and sealed with a PUR-Tape. This product is highly flexible and is capable of inverting through multiple bends up to 90 degrees without wrinkles. We recommend this liner for single size pipe circumference
   3. Diameter Range
      1. 1.5” – 10”
      2. Other dimensions upon request
   4. Undersized
      1. 5%/9%/18%
   5. Thickness
      1. 3mm
   6. Cure
      1. Hot Water/Steam/Ambient/UV
3. Expendable
   1. Manufacturer
      1. Lateral Repair
   2. Description
      1. Needle-punched polyester felt liner with a polyurethane coating. This is a size changing expandable liner that can be cured with any technique and able to navigate multiple turns with a maximum bend of 90 degrees and very limited longitudinal stretch.
   3. Expansion
      1. 4’-6’
      2. 6”-8”
   4. Bends
      1. 90 degrees
4. Stitched Transitional Liners (Custom Order)
   1. Manufacturer
      1. Lateral Repair
   2. Description
      1. For those looking to hit their transition marks precisely, we can custom order any size/length transitional order upon request.
5. Woven
   1. Manufacturer
      1. Webbing Industries
   2. Description
      1. PET textile tube coated with TPU-foil. Textile and coating are seamless. Coating material is a thermoplastic Polyurethane. This is our most flexible liner, capable of being cured with hot water, steam, UV.
   3. Undersized
      1. 10%
   4. Bends
      1. Multiple 90 degrees
6. Woven - Expandable
   1. Manufacturer
      1. Webbing Industries
   2. Description
      1. PET textile tube coated with TPU-foil. Textile and coating are seamless. Coating material is a thermoplastic Polyurethane. This woven liner is not only extremely flexible but is also capable of multiple size changes and turns when required.
   3. Expansion
      1. 3”-4”
      2. 4”-6”
      3. 6”-8”
   4. Undersized
      1. 10%
   5. Bends
      1. Multiple 90 degrees
7. Woven Reinforced
   1. Manufacturer
      1. Webbing Industries
   2. Description
      1. PET textile tube coated with TPU-foil. Textile and coating are seamless. Coating material is a thermoplastic Polyurethane.
   3. Expansion
      1. 3”-4”
      2. 4”-6”
      3. 6”-8”
   4. Undersized
      1. 10%
   5. Bends
      1. Multiple 90 degrees
   6. Reinforced
      1. Fiberglass
   7. Roll
      1. 50m
8. Glass Reinforced
   1. Manufacturer
      1. Scott & Fyfe
   2. Description
      1. Consistent thickness with no stretch to ensure predictable installation lengths. The Alphashield technology used to create this extremely flexible liner helps to virtually eliminate all wrinkles and folds. The fiberglass formula used in this liner helps to deliver a stronger structure with greater strength, higher modulus, and lower elongation. The glass component in the textile allows the liners to be thinner which helps to reduce install time and resin consumption on an average of 30%.
      2. Available with pre-installed rope for pull in place lining methods upon request.
   3. Diameters
      1. 3”,4”,6”
   4. Expansion
      1. 50%
   5. Thickness
      1. 2 layers & 3 layers
   6. High Pressure
9. Connection Liners
   1. Manufacturer
      1. Renssi
   2. Description
      1. Renssi connection liners are designed for efficient and reliable pipe rehabilitation at various angles, providing a robust solution for both main and branch connections. They are available in configurations for 90° and 45° angles to suit various installation needs.
   3. Key Features
      1. Versatile Applications: Suitable for various pipe materials, including plastic, cast iron, stainless steel, and concrete, making them versatile for different rehabilitation projects.
      2. Efficient Installation: Engineered for quick and easy installation, Renssi connection liners facilitate efficient rehabilitation processes, saving time and labor costs.
      3. High Pressure Resistance: Capable of withstanding high pressure and various environmental stresses, ensuring reliable performance in demanding conditions.
      4. Customizable Sizes: Available in multiple sizes to fit different pipe diameters and connection types, providing a tailored solution for each specific project.
   4. Options
      1. Connection Liners with 90° Angle
         1. Sizes range from 70/50-90 to 200/150-90
      2. Connection Liners with 45° Angle
         1. Sizes range from 60/40-45 to 225/200-45
      3. Curved Connection Liners
         1. Sizes range from 100/70-45 to 100/100-90
      4. Connection Liners with 45° Angle - Long
         1. Sizes range from 100/100-45 to 300/100-45
         2. Main length: 900mm (35”), Lateral length: 400mm (16”).
      5. Connection Liners with 90° Angle, Long
         1. Sizes range from 100/100-90 to 375/100-90
         2. Main length: 900mm (35”), Lateral length: 400mm (16”)

**Resin**

**UV**

1. RayCure UA
   1. Description
      1. Low viscosity, highly reactive UV curing resin based on methacrylate esters. Styrene Free. Developed for UV curing pipe rehabs. Suited for both on-site and pre impregnated liners
      2. All components have a high flash point of >95 degrees Celsius. This guarantees no VOCs emission or high levels of smell.
2. Polinvent
3. TYVcure UVM
   1. Description
      1. Developed for UV cured pipe rehab process. The resin works for both inversion lining and short liner repair. Can be used for on-site and pre-impregnated liners.
      2. Methacrylate based, one component system that contains the necessary UV initiator. Styrene free.
   2. Approximate absorption
      1. DN150 (2-3mm) thick liner
         1. requires 1.5kg/m
   3. For customers who want additional strength and performance from we also offer
      1. TYV Cure UVMH
      2. UVMO
      3. UVMX

**Epoxy**

1. Hexion Epon Resin
   1. Part A
      1. Description
      2. Undiluted clear difunctional bisphenol A/epichlorohydrin derived liquid epoxy resin.
   2. Part B
      1. Description
      2. Can be offered for Hot Mix, Regular Mix or Cold Mix depending on the preferred amount of working time and temperature conditions in which you are working. Hot Mix will offer the quickest set up/hardening while Cold Mix will offer the longest amount of working time.
2. **Silicate**
3. Silicate Resin
   1. - 2 component synthetic resin for rapid curing/bonding short liners, tophats, T wraps.
   2. - Silicate resin and hardener are provided in containers with matching quantities. Components must be mixed together homogenously using slow running stirring equipment. Mixing ratio is 2:1 by volume (resin:hardener)
   3. - Silicate is applied manually to substrate
   4. - Curing time is between 20 minutes – 3 hours. Higher heat and ambient temperature accelerate cure times.
      1. Curing time at 20 degrees Celsius w/resin W01 – 20 minutes
      2. Curing time at 15 degrees Celsius w/resin W – 115 minutes
      3. Curing time at 15 degrees Celsius w/resin S – 260 min

**Spot Repair**

1. Spot Repair Kits
   1. Descriptions
      1. Point repair is a solution for a variety of issues seen in diverse types of pipes. It can be used in conjunction with CIPP installations or as a stand-alone application over offset joints, pipe separations, and damaged siphons, as well as used to seal off interior drops and cap off unwanted laterals.
      2. Trenchless Pipe Repair Kit is a state-of-the-art solution that offers a revolutionary approach to pipe repair, eliminating the need for disruptive digging by employing a no-dig, trenchless technology. Specifically designed for quick and effective repair of damaged pipelines, this kit integrates seamlessly, providing a durable repair solution that minimizes downtime and maintains flow efficiency.
   2. Key Features
      1. Trenchless Technology: Utilizes a cured-in-place pipe method that repairs pipes internally without excavation, preserving landscape and infrastructure.
      2. Quick Cure Time: Features a fast cure resin that allows for repair completion in significantly reduced times, ensuring minimal disruption.
      3. Environmental Safety: Contains no VOCs or Styrene, making it safe for use in sensitive environments such as hospitals and schools.
      4. High Compatibility: Capable of repairing pipes from 4” up to 52inches in diameter and 30 ft in length, suitable for both residential and commercial applications.
   3. Package Contents
      1. Fiber Glass
      2. Plastic Mat
      3. Spatula
      4. Packer Wrap
      5. Safety glasses
      6. Gloves
      7. Instructions
      8. Towel
      9. Tape
2. T Wraps
   1. Descriptions
      1. One seamless piece of continuous main and lateral CIPP connection liner. Once installed, system creates a smooth transition from Tee & Wye lateral connections into the mainline. Designed to extend 6” – 10” into the lateral.
         1. Designed for 4” – 6” laterals & 6” – 12” mainlines
         2. Lateral pipe is accessed from the main pipe. Once the lining is properly impregnated with silicate resin, the liner is pressed against the host pipe using a pressurized bladder and held in place until the resins have cured.

**Installation Equipment**

**Inversion Drum**

1. Kraso Drum M
   1. Description
      1. for manual inversions up to DN400
      2. Made in both aluminum & stainless steel
      3. for curing with Air, steam, hot water, UV
      4. can be converted to KrasoSluice continuous shooter with addition of Kraso Sluice Module
2. Kraso Sluice Continuous Shooter
   1. Description
      1. suited for continuous inversion without pressure loss
      2. protects your liner from unwanted stretching, dents, wrinkles, folds
      3. Direct inversion without the need to spool your liner
      4. Optional with drive and data recording
      5. used for all curing methods
3. Speedy Drum 600
   1. Description
      1. Manual inversion drum for liners up to DN250
      2. Carbon Fiber, Aluminum Frame, Rubber wheels
4. RID-600-S
   1. Description
      1. The RID-600-S Inversion Drum is an advanced, slim-designed tool engineered to facilitate the efficient inversion and curing of pipe liners. This inversion drum is equipped with a larger window for enhanced visibility and control.
   2. Key Features
      1. Slim Design: The new slim profile improves maneuverability and ease of use in confined spaces, making it suitable for various job sites.
      2. Larger Window: A bigger window provides better visibility and control, allowing for more precise and efficient liner inversion operations.
      3. Compact Dimensions: With dimensions of 83 cm (32.5”) in length, 59 cm (23”) in width, and 98 cm (38.5”) in height, the RID-600-S is compact yet powerful.
      4. Durable Construction: The drum weighs 49.5 kg (109 lbs) and is built for durability and long-lasting performance, ensuring it can withstand demanding use.
      5. High Capacity: Capable of holding up to 45 meters (145 ft) of 100 mm (4”) liner or 20 meters (65 ft) of 150 mm (6”) liner, accommodating various relining needs.
      6. High Pressure: Handles a maximum pressure of 1.5 bar, ensuring effective and secure inversion of liners.
      7. Versatile Nozzle Connection: Features 6” Storz or 6” Camlock nozzle connections, offering flexibility in different relining setups.
      8. Additional Curing Methods: Supports steam and water curing methods, providing versatility in tackling various relining challenges.

**Wet Out Tables**

1. KrasoWalk M
   1. Description
      1. Compact and light weight impregnation system with electric roller drive. Made for liner sizes up to DN300.
      2. made of high-quality aluminum and stainless steel
      3. Synchronized motion of both calibration rollers with special coating for easy clean up
      4. Forward and reverse rotation
      5. Gap adjustment via setting wheel display with adjustments to the .1mm
      6. Folding rollers for compact storage

**Sluice**

1. Kraso Sluice Continuous Shooter
   1. Description
      1. suited for continuous inversion without pressure loss
      2. protects your liner from unwanted stretching, dents, wrinkles, folds
      3. Direct inversion without the need to spool your liner
      4. Optional with drive and data recording
      5. used for all curing methods

**Rehab Equipment**

**UV Systems**

1. SpeedyLight +
   1. Description
      1. UV LED curing system with revolutionary LED technology
      2. Increases jobsite working efficiency by up to 6 times.
      3. Curing speeds vary from 0.2 to 1.0m/minute depending on the LED head being used and pipe diameter.
         1. head
      4. Working diameters start at DN 100 up to DN 300
      5. Mobile & portable design
      6. designed for both horizontal and vertical piping.
      7. integrated CCTV camera
      8. can navigate 90 degree bends and several 45 degree bends.

**Spray Systems**

1. ElastoTec
   1. Description
      1. The Elastotec M Spray Machine is a cutting-edge tool designed for efficient and precise pipe rehabilitation using the spray coating method. This advanced system is perfect for service and maintenance projects, as well as spot repairs. It offers portability, ease of use, and high performance. With its compact design and advanced features, it ensures thorough and consistent application of coatings, enhancing the durability and functionality of piping systems.
   2. Key Features
      1. Compact and Lightweight Design: Weighing only 83 lbs (without tanks) and measuring 31 in. x 18 in. x 12 in., the Elastotec M is easy to transport and maneuver on various job sites.
      2. High Resin Capacity: Equipped with two removable 2.5-gallon material tanks, providing ample capacity for extended operation.
      3. Long Working Distance: Capable of operating up to 65 feet, allowing for flexibility and reach in various applications.
      4. Advanced User Interface: Features a touchscreen user interface with six language options, remote control, and an indicator light with an audible alarm for easy operation.
      5. Detachable Modules: Designed with detachable modules for easy maintenance and quick setup.
      6. Data Management: Allows material consumption data to be downloaded onto a USB stick for efficient budgeting, purchasing, and reporting.
      7. Moisture Insensitivity: The HelpoFlake coating used with the Elastotec M is highly resistant to moisture, making it suitable for use in extremely humid conditions.
      8. Durable Coating: The HelpoFlake polyurea coating provides excellent chemical, abrasion, and corrosion resistance, ensuring long-lasting protection and performance.
      9. Efficient Curing: The fast-curing HelpoFlake coating sets in approximately 5 minutes at 25°C, allowing for quick project turnaround.
      10. Environmental Compatibility: Suitable for various pipe materials, including plastic, steel, concrete, and more, providing versatile application options.
      11. Handling Bends: The Elastotec M is capable of coating pipes with multiple bends, including:
          1. 2” pipes with 45° and 90° bends
          2. 3” pipes with 45° and 90° bends, as well as multiple 90° bends
          3. 4” pipes with 45° and 90° bends, as well as multiple 90° bends
          4. 5” pipes with 45° and 90° bends, as well as multiple 90° bends
          5. 8” pipes with 45° and 90° bends, as well as multiple 90° bends
      12. Environmental Compatibility: Suitable for a wide range of pipe materials, including:
          1. Plastic pipes
          2. Cast iron pipes
          3. Stainless steel pipes
          4. Concrete pipes
          5. Asbestos/fiber cement pipes
          6. Stoneware pipes
          7. CRP (Composite Reinforced Plastic) pipes
          8. PP (Polypropylene) pipes
          9. PE (Polyethylene) pipes
          10. PVC (Polyvinyl Chloride) pipes
          11. Copper pipe
   3. Helpoflake Spray Material
      1. Description
         1. HelpoFlake is a high-performance polyurea resin specifically formulated for internal pipe coating applications. This advanced material is designed to provide exceptional durability, flexibility, and resistance to harsh conditions, making it ideal for use in pipe rehabilitation projects. HelpoFlake coating ensures a seamless, strong, and long-lasting protective layer inside pipes, enhancing their structural integrity and extending their service life.
      2. Key Features
         1. Moisture Insensitivity: HelpoFlake can be applied effectively even in extremely humid conditions.
         2. High Elasticity and Flexibility: The coating bridges gaps and adapts to temperature variations, making it suitable for substrates prone to cracking.
         3. Durable and Resistant: Offers excellent resistance to chemicals, abrasion, and corrosion, ensuring long-lasting protection.
         4. Quick Setting Time: Cures in approximately 5 minutes at 25°C, allowing for rapid project completion.
         5. Versatile Application: Suitable for various substrates, including plastic, steel, and concrete, and can handle pipes with multiple bends.
         6. High Impact Strength: Designed to withstand mechanical shocks and impacts, maintaining its integrity under harsh conditions.
         7. Corrosion and Wear Protection: Provides long-lasting protection against corrosion and wear, enhancing the lifespan of pipes.

**Reinstatement Equipment**

1. **CLIMBOLINO E**
   1. Description
      1. Decades of experience in milling robots has paved the way for the CLIMBOLINO®E house connection robot. The milling robot was specially developed for present-day conditions in sewer rehabilitation. Featuring a powerful electric milling spindle, plus exceptional bending capabilities, in nine sizes with only one system, the service connection robot has truly revolutionized sewer rehabilitation
   2. Key Features
      1. Practical, Ergonomic, and Compact:
         1. Space-saving design for easy handling.
      2. Attachments for Every Application:
         1. Specially designed milling tools for every material.
      3. Perfect View and Monitoring:
         1. Sophisticated control unit and extra-large display.
   3. Specifications
      1. Powerful Electric Milling Spindle:
         1. Maximum 1 kW output.
      2. Battery Operation:
         1. Operates on a 56V battery.
      3. 12" LED Display
         1. Ensures stress-free work
      4. 30m Extendible Hose Reel:
         1. Convenient for various work sites
      5. Adjustable Camera Angles
         1. Provides flexibility for monitoring.
      6. Compact Hygienic Hose Box:
         1. Maintains cleanliness during operation.
      7. Energy Efficiency
         1. 90% energy saving compared to conventional milling robots.
      8. Nine Available Sizes
         1. Ranging from 2.5” to 12".
      9. German Engineering:
         1. Decades of experience in milling robots.
   4. Benefits
      1. Efficiency
         1. Maximum output in minimum space.
      2. Convenience
         1. Everything at hand with the integrated tool set.
      3. Independence
         1. Operates with independent power.
   5. Accessories
      1. 30’ controller extension
      2. 30’ extension cutter cable
      3. 98’ extension cutter cable
      4. Trolly –(wheeled)for Pipe sizes 6”-12” with Axle extension
      5. Bladder bracing for pipe sizes 6”-8”
      6. Service Pro Pack- has all the necessary repair parts to quickly fix any breakdowns on the job.

Kits includes:

-complete camera unit (plug and play for quick on the job site repair)

-Rotor with upper and lower bearings

-motor for milling head (up and down)

-Air lock deflection for camera lens cleaning.

1. **SDT** 
   1. Description
      1. Today's state-of-the-art robot technologies have made sewer rehabilitation fast and cost-effective. The tooling used plays a crucial role in the rehab process: The best robot is only as good as the tooling it is used with.
      2. We offer a variety of product lines with a wide range of high-quality premium and standard tooling. Users can select the best tooling for the job at hand in accordance with the robots used and the materials to be processed.
   2. Options
      1. N-TecII
         1. Key Features
            1. Field-proven standard diamond tools with outstanding value for purchase investment. Materials to be processed: Reinforced concrete, concrete, deposits/fouling, cast iron and vitrified clay.
            2. Available in 1.6-inch-wide milling ball, and half ball 1.4-2.0 inch wide.
      2. Black -line
         1. Key Features
            1. High-tech milling tools made of PCD with unbeatable cutting and stock removal performance for almost every material.
            2. materials to be processed: UV CIPP, roots, PVC and felt CIPP
            3. Milling Ball and Half ball cutter ranging in size 1.2 -1.6 inch wide.
      3. Black-line Proview
         1. Key Features
            1. available in ball and double cone style ranging in sizes 1.3-2.0 inch wide
            2. ProView will give more visibility while cutting
      4. Liner CUT Pro
         1. Absolutely smooth running and precise PCD cutting tools for opening CIPP-Optimized for UV CIPP
         2. Materials to be processed: UV CIPP, PVC and felt CIPP
         3. milling ball sizes 1.2-1.6 inch wide
         4. liner CUTPro 2.0 also available
      5. D-Grit
         1. Key Features
            1. . Milling tools with diamond granules for opening CIPP-Optimal for UV CIPP and lined cast iron pipes
            2. Materials to be processed: UV CIPP, PVC and Felt CIPP
            3. Milling ball sizes 1.2-1.6 inch wide
      6. HM-Line
         1. Key Features
            1. Cost efficient milling tools with carbide granulate tipping for opening and reworking CIPP
            2. Materials to be processed: UV CIPP, Roots, PVC and Felt CIPP.
            3. Milling ball and half ball sizes 1.2-1.6 inch wide
      7. VHM-Line
         1. Key Features
            1. Special Milling tools for processing steel and cast iron only!
            2. Oval shaped milling tool .06 x2.2 inch
            3. Ball shaped milling tool 1.0x2.2 inch
      8. Accessories and tools
         1. Key Features
            1. CNC fabricated Stainless steel collet chuck for 1/4 “commercial shank tools. (brushes, grinders, sanders etc.)
            2. Stainless Steel Adapter for mounting 2-wheel brushes (finishing work on CIPP liners and PVC)
            3. Hand tools are available for removing milling balls and accessories.
         2. Options
            1. High quality brushes
            2. Adapters
            3. extensions and more.

Top of Form

Bottom of Form