

CROSSCHEK™ Inspection System



⚠ WARNING!

Read this Operator's Manual carefully before using this tool. Failure to understand and follow the contents of this manual may result in electrical shock, fire and/or serious personal injury.

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Safety Symbols


In this operator's manual and on the product, safety symbols and signal words are used to communicate important safety information. This section is provided to improve understanding of these signal words and symbols.


 This is the safety alert symbol. It is used to alert you to potential personal injury hazards. Obey all safety messages that follow this symbol to avoid possible injury or death.


 **DANGER** DANGER indicates a hazardous situation which, if not avoided, will result in death or serious injury.

 **WARNING** WARNING indicates a hazardous situation which, if not avoided, could result in death or serious injury.

 **CAUTION** CAUTION indicates a hazardous situation which, if not avoided, could result in minor or moderate injury.

 **NOTICE** NOTICE indicates information that relates to the protection of property.

 This symbol means read the operator's manual carefully before using the equipment. The operator's manual contains important information on the safe and proper operation of the equipment.

 This symbol means always wear safety glasses with side shields or goggles when handling or using this equipment to reduce the risk of eye injury.

CROSSCHEK™ Inspection System Safety Warnings

⚠ WARNING

This section contains important safety information that is specific to these tools.

Read these precautions carefully before using the RIDGID® CROSSCHEK™ Inspection System to reduce the risk of electrical shock or other serious personal injury.

SAVE THESE INSTRUCTIONS!

Keep this manual with the equipment for use by the operator.

- **Do not use with pressurized hoses. Connect and disconnect pressure-free hoses only.** Pressurized hoses can whip, causing striking and other serious injuries. Always turn OFF the compressor and bleed all air before connecting or disconnecting hoses.
- **Do not use in the presence of energized electrical systems.** This will reduce the risk of electrical shock.
- **Do not operate in explosive atmospheres, such as in the presence of flammable liquids, gases, or dust.** Tools can create sparks which may ignite the dust or fumes.
- **Always use appropriate personal protective equipment while handling and using the CROSSCHEK Inspection System.** Appropriate personal protective equipment always includes safety glasses, and may include equipment such as gloves, face shields, goggles, protective clothing, respirators and steel-toed footwear.
- **Follow instructions on proper use of this equipment.** Do not use for other purposes. Other uses or modifying this equipment for other applications may increase the risk of serious injury.
- **Read and understand the instructions and warnings for all equipment being used including boring tools, cameras and reels before operating the CROSSCHEK Inspection System.** Failure to follow all instructions and warnings may result in property damage or serious personal injury.

The EC Declaration of conformity (890-011-320.10) will accompany this manual as a separate booklet when required.

Description, Specifications and Standard Equipment

Description

The RIDGID® CROSSCHEK Inspection System is designed for use with the SeeSnake® microDrain™, nanoReel, microReel and rM-200 Inspection System. It is used to inspect the straight bores produced by pneumatic underground piercing/boring tools.

The CROSSCHEK Inspection System mounts to the camera head and pushrod. Once a bore is completed, the air hose is attached to the CROSSCHEK Inspection System and used to pull the camera head through the bore for inspection. Once the inspection is completed, a rope is used to retrieve the unit from the bore and pull the utility to be installed into place.

Specifications

Bore Capacity

nanoReel 1³/₄" to 3" (45 to 75mm)
Diameter

microDrain, microReel &
rM-200 2" to 3" (50 to 75mm)
Diameter

Inspection Length....Based on SeeSnake System

Dimension 1¹/₂" D x 25¹/₄" L
(38mm D x 641mm L)

Weight

CROSSCHEK unit
only 1.4 lb (0.63 kg)

Standard Equipment

The RIDGID® CROSSCHEK Inspection System comes with the following items:

- CROSSCHEK Inspection System, (See Figure 1)
- 100' (30m) of Rope, ³/₃₂" Hex Wrench
- Operator's Manual Pack



Figure 1 – CROSSCHEK Inspection System

NOTICE The CROSSCHEK Inspection System and SeeSnake equipment is used to inspect bores produced by pneumatic underground piercing/boring tools. The use of this system does not guarantee the detection of cross bores or other bore features. The action of moving this equipment through the bore may cause the bore to deform or collapse which could cause the bore to be unusable or trap and damage the inspection equipment, requiring the equipment to be dug up to be removed.

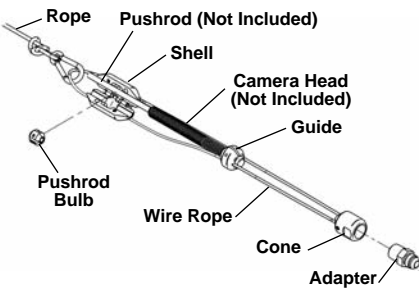


Figure 2 – CROSSCHEK Inspection System

Assembly

⚠ WARNING

To reduce the risk of serious injury during use, follow these procedures for proper assembly.

1. Make sure to use the correct CROSS-

CHEK unit for your system (microDrain™, nanoReel, microReel and rM-200). The diameter and color of the guide will determine which camera system the CROSSCHEK unit can be used on. (See Figure 3.)

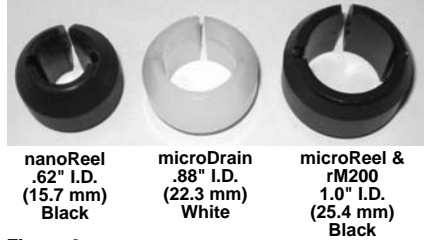


Figure 3

2. Securely install the adapter into the cone (Figure 4). The adapter allows attachment of the air hose to the CROSSCHEK Inspection System. The CROSSCHEK Inspection System can then be pulled through the bore with the air hose, and the utility (pipe, cable, etc.) can be pulled back through the bore after the inspection with the CROSSCHEK Inspection System. Other adapters can be installed as long as they have a ¹/₂" NPT male thread for attachment.



Figure 4 – Installing Adapter Into Cone

3. Place the bulb halves around the pushrod 1.5" (38mm) from the end of the camera spring. Insert and securely tighten the two screws. The bulb halves should securely grip the camera pushrod. A small gap between the halves is acceptable as long as the pushrod is held securely. Do not damage the pushrod.

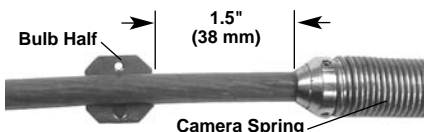


Figure 5 – Position Bulb On Pushrod

4. Open the pushrod shell on the CROSSCHEK unit and place the pushrod bulb, (with pushrod attached), into the opening making certain the grooves in the bulb line up with the wire rope. (Figure 6) Close the shell and tighten the two screws.



Figure 6 – Locate Pushrod Bulb In Shell

5. Slide the guide onto the camera head making sure the wire rope is in the grooves in the guide. Place the guide onto the camera head so that approximately $\frac{1}{8}$ " (3.2mm) of the camera head is exposed and tighten the clamp screw (Figure 7).



Figure 7 – Installing Guide On Camera Head

6. Securely tie the rope to the spring clip and attach to the wire rope loop as shown in Figure 8.

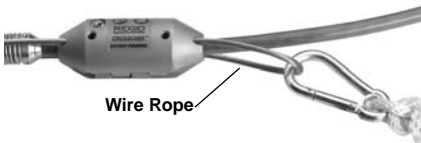


Figure 8 – Attachment of Rope

Pre-Operation Inspection

⚠ WARNING

Before each use, inspect your CROSSCHEK Inspection System and correct any problems to reduce the risk of injury and prevent tool damage.

1. Clean any oil, grease or dirt from the CROSSCHEK Inspection System including the cone and adapter.
2. Check that the correct adapter is fitted for the type of air hose available.
3. Inspect the CROSSCHEK Inspection System for the following:
 - Proper assembly, maintenance and completeness.
 - Any broken, worn, missing, misaligned or binding parts.
 - Presence and readability of the warning label (Figure 9).
 - Any other condition which may prevent safe and normal operation.

If any problems are found, do not use the equipment until the problems have been repaired.



Figure 9 – Warning Label

4. Inspect and maintain any other equipment being used per its instructions to make sure it is functioning properly.

Set-Up and Operation

⚠ WARNING



Set up and operate the CROSSCHEK Inspection System and work area according to these procedures to reduce the risk of injury from electric shock, entanglement and other causes, and to prevent tool damage.

1. Set up and use the underground piercing/boring tool as per its instructions.

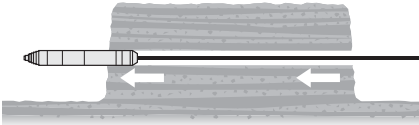


Figure 10 – Bore Made In Soil

2. Once the bore is complete, turn off the air supply and wait for pressure to bleed out of the tool and hose. Depressurize the air hose and remove the piercing tool from the air hose as per the piercing tool instructions.
3. Examine the bore and make sure that the CROSSCHEK Inspection System is the appropriate tool for the application. The bore should be between 1 3/4" (45mm) and 3" (75mm) and generally straight. The bore should be self-supporting – soil should not be falling into the bore. This can prevent passage of the CROSSCHEK Inspection System and could damage the equipment.
4. Confirm that the CROSSCHEK Inspection System is properly assembled and inspected.
5. Securely connect the air hose to the adapter on the cone of the CROSSCHEK Inspection System (Figure 11). Air hose must have a rotating swivel connection to prevent binding and kinking. Do not twist CROSSCHEK/Pushrod while attaching air hose.

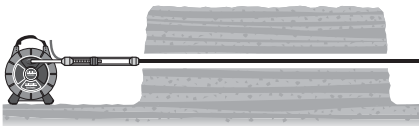


Figure 11 – Connect Air Hose To The CROSSCHEK Inspection System

6. Switch ON the Reel and Camera as per its instructions.
7. Operating the CROSSCHEK Inspection System generally requires two people – one person at each end of the bore. Two-way radios or similar devices may be needed to coordinate the movement of the CROSSCHEK Inspection System through the bore. Slowly pull the air hose back through the bore, pulling the in-

spection equipment behind it. As the air hose is pulled through the bore, carefully feed the camera pushrod and rope into the bore to reduce the risk of bore damage. Do not force the CROSSCHEK Inspection System through the bore, this could damage the equipment or cause the hole to collapse.

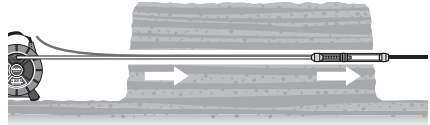


Figure 12 – CROSSCHEK Inspection System Pulled Through With Air Hose

As the camera moves through the bore, carefully monitor the bore walls. If at any time, you see any indication that the bore has contacted electrical, natural gas or other systems that could be hazardous, move away from the bore area and use proper precautions for the hazard. If needed, repeat inspection in any suspect areas.



Figure 13 – Typical Crossbore Into Sewer Line

RIDGID SeeSnake systems are equipped with a Sonde (In-Line Transmitter) just behind the camera head. If equipped with a Sonde, a locating unit can be used to detect the Sonde and locate features in the bore being inspected. See the "Locating the Sonde" section of your SeeSnake system manual.

If at any time, the bore collapses around the CROSSCHEK Inspection System, camera, pushrod or any other part of the system, stop pulling the unit. Continued pulling of the unit could damage the equipment. If the equipment becomes trapped in the bore, it may need to be dug up to be removed.

- When the Inspection equipment comes out through the bore, remove the air hose. If needed, attach the utility (pipe, cable, etc.) to the CROSSCHEK Inspection System with appropriate adapters (*Figure 14*). Do not twist CROSSCHEK/Pushrod while attaching utility.

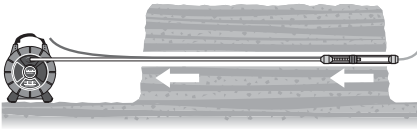


Figure 14 – Connect Utility Line To CROSSCHEK Inspection System

- Using the rope, pull the CROSSCHEK Inspection System back through the bore with slow, steady force (*Figure 15*). Do not use excessive force, this could damage the equipment. If desired, the inspection can be repeated as the unit is pulled back. This may allow better inspection results.

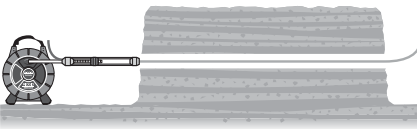


Figure 15 – Utility Line Pulled Through Bore

- Once the inspection is complete, disconnect the CROSSCHEK Inspection System from the utility.

Storage

To prevent damage, the CROSSCHEK Inspection System should be removed from the camera system when storing.

Service and Repair

⚠ WARNING

Improper service or repair can make the CROSSCHEK Inspection System unsafe to operate.

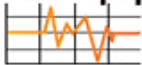
Service and repair of the RIDGID CROSSCHEK Inspection System must be performed by a RIDGID® Independent Authorized Service Center.

For information on your nearest RIDGID Independent Service Center or any service or repair questions.

Disposal

Parts of the RIDGID CROSSCHEK Inspection System contain valuable materials and can be recycled. There are companies that specialize in recycling that may be found locally. Dispose of the components in compliance with all applicable regulations. Contact your local waste management authority for more information.

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