

Coring Equipment Catalogue



The cutting edge in keyhole technologiesTM

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Utilicor Technologies Inc. is the world's largest fully integrated, specialty manufacturer of field-proven, keyhole pavement coring and reinstatement system, used by more than 50 major gas and other utilities and their contractors throughout the United States, Canada, the United Kingdom, Ireland, France and Australia.

The Utilicor process combines a purpose-built, field-proven Utilicor coring unit with Utilibond™ which has been specifically developed for the permanent reinstatement of cored pavement coupons ("keyholes") in all types of paved roads and sidewalks.

Tested and approved by the National Research Council of Canada, the United States Army Corps of Engineers, and by AASHTO approved laboratories and testing facilities of the Department of Engineering of the University of Illinois, the Utilicor core reinstatement process has fast become the industry standard.

With over 500,000 successfully cored and reinstated cores in both roadways and sidewalks, Utilicor is helping the utility industry increase its internal efficiencies, achieve a greater return on their investments, increase safety for their crews, reduce the impact of utility construction practices on the travelling public, and at the same time helping utility companies and their contractors worldwide become greener and cleaner while safely performing necessary utility repairs and maintenance to buried underground infrastructure.

Utilicor Technologies Inc. has become the world leader in providing the equipment necessary for the proper implementation of the keyhole coring and reinstatement process for natural gas, water and other utilities and their contractors, and has successfully helped those companies launch and maintain a cost effective keyhole program to address all their small hole needs.



Why Keyhole Technology Makes Sense

With keyhole techniques, maintenance activities are conducted through small cored pavement openings, resulting in significant cost savings, reduced public inconvenience, and more efficient repairs.

With excavation and restoration expenses costing North American utility companies and their contractors more than \$1 billion annually, these companies are now turning to keyhole methods as a way to reduce overall maintenance costs. Currently, excavation and pavement restoration costs are typically 50% less when keyhole technologies are used. Keyhole technology provides a cost-saving alternative to common repair methods, which often require large "open" excavations, followed by the removal and disposal of unwanted pavements and soils. These conventional practices - usually performed using several large pieces of equipment (backhoes, dump trucks, pavement breakers) - can account for 80% of the total cost of a repair job.

The process includes a robust, purpose-built coring unit that quickly and accurately cores a 12", 18" or 24" diameter hole, up to 22" in depth, through asphalt, asphalt-concrete and reinforced concrete road systems and sidewalks. Vacuum systems are then used to excavate down to buried plant, and routine service or maintenance is performed from road level using specialized long-handled tools. Keyhole Technology eliminates the need for jackhammers and backhoes, is physically less demanding on work crews, and reduces the cost of these conventional operations by up to 50%.

Because the original core, or coupon, is reinstated with Utilicor's Utilibond Core Bonding Compound, after the repair the pavement restoration costs are limited to the labour and materials necessary to reinstate the core permanently. No temporary patching or repaving is required. This process results in a permanent repair with cost savings up to 60% or more over current excavation and restoration practice.

While utility operations can realize significant savings using keyhole technologies, consumers and the general public also benefit through less disruption and noise, quicker repair times, fewer and shorter service interruptions, and reduced traffic inconveniences. Not only is it better for the community in which it is used, it is a better process for those using it, the crew, and perhaps most importantly for the planet on which we all live. It is a green technology that results in a dramatically smaller carbon footprint when compared to traditional construction techniques. Ultimately, it saves tax payers and utility companies millions of dollars when compared to traditional methods of utility patch repair.



Keyhole Applications:

- ✓ Test holes (pot-holing / daylighting)
- ✓ Sacrificial anode installation
- ✓ Subsurface Utility Engineering (S.U.E.)
- ✓ Low pressure service cut offs
- ✓ Cast iron main joint repair
- ✓ Installation of new services / connecting laterals
- ✓ Gas cap replacements
- ✓ Abandoned gas main sectionalizing
- ✓ Water and gas valve box installations
- ✓ Pipeline Integrity Inspection
- ✓ Horizontal Directional Drilling through a Keyhole
- ✓ Camera Insertion for Pipeline Inspection

Manufacturing Philosophy



Utilicor Technologies entire fleet of field-proven, keyhole coring equipment is engineered, designed and manufactured in its state-of-the-art fabrication facilities.

From our affordable **Minicor-2** and **MC-450** skid steer coring attachments, to our multi-directional MD-300 coring truck, to our heavy-duty **Series 500** coring truck, to our versatile multi-platform **MPX-SS** coring unit, and finally to our innovative **Trailicor Rover** towable and self-propelled coring unit, all of our equipment is manufactured to the highest standards in the industry which assures the end user years of dependable use.

Our designs are the result of 15 years of rigorous testing in the field, refined by direct feedback from our customers. This valuable input ensures that all of our equipment models incorporate features and options that can increase the keyhole crew's productivity and make the coring equipment more durable, safer, and easier to use.

No request is too great, and no detail too small for our skilled fabrication and assembly crews. From fabrication and fit up - hydraulic system installation and calibration - water and electrical system set up - Utilicor does it all to ensure that you and your crews receive the best, most robust, safest and easiest to use piece of coring equipment available on the market today. A variety of options are available and custom fabrication is available, including fleet specific requirements like special lighting, towing options, on-board electrical inverter and custom manufactured storage solutions.

Typical lead times for **Series 500**, **MD-300**, and **Rover** coring units are 10-12 weeks from receipt of purchase order. The **Minicor-2™** and **MC-450** skid steer attachments and **MPX-SS** coring unit will often be available for shipment within two weeks from time of purchase.



Final assembly underway on two Series 500 heavy duty coring units at Utilicor's manufacturing facilities.

Operationally Superior Coring Equipment

Utilicor's complete line up of keyhole coring equipment includes a number of innovative design features not found on any other type of coring equipment in the utility construction market place today. Basic coring equipment commonly used to cut circular holes through concrete or other paved surfaces has been designed to cut the core with no thought to the extraction of the core or the possible reuse of the cored coupon in the cost-effective restoration of the substrate from which it was extracted. Where the core diameter is larger (up to 24" in diameter), or the material to be cut is thicker (up to 18" or more in depth) or reinforced with re-bar, a stable and robust piece of coring equipment capable of accurate and finite adjustment should be used to safely and accurately cut the core.

With this in mind, all Utilicor coring units are designed and manufactured to achieve the three fundamentals of a successful core cutting program: (1) a stable and robust coring platform; (2) a coring mechanism that is fully adjustable in both the horizontal and vertical planes to ensure that every core is cut perpendicular and true, or plumb, with the horizon and not the road surface; and (3) a means - the center pilot hole - to safely extract the core or coupon cut from the roadway, and if desired, to safely and accurately manipulate it during the reinstatement process.

Stability of the Coring Unit



Because springs are integral to most wheeled vehicles, it is important that the suspension of the truck or trailer on which the unit is mounted, be isolated during the coring process. Otherwise, much of the downward pressure or vertical force required to initiate and sustain the coring action will be lost or absorbed by the suspension causing poor or erratic cutting action.

This problem can be solved by utilizing hydraulic stabilizers fixed to the deck or frame of the vehicle, on either side of the core drill. When deployed, these stabilizers take the spring action out of the suspension and concentrate the weight of the vehicle down through the core drum for an accurate and precise cut. The stabilizers can also be individually adjusted to accurately orient the core drill so that it is perpendicular to the horizon in the plane that parallels the width of road.

Orientation of the Core Drum



Utilizing the stabilizers as described above, together with the capacity to tilt the coring mast in the vertical plane, Utilicor coring equipment can be properly adjusted to compensate for both the transverse camber or slope of the roadway, as well as its longitudinal angle or grade. Proper orientation of the core drum perpendicular to the horizon is essential to cutting a core that can be properly reinstated.

When the coring drum is set up perpendicular to the horizon, *NOT the road surface*, the effect of gravity on the core is eliminated which reduces the chance of the core getting stuck inside the coring drum. Proper orientation of the core cutting process will also ensure that the sides of the hole are plumb so that gravity will not interfere with the uniform flow of the bonding compound around the reinstated core, or cause the material to pool on one side or the other, resulting in a potential void during reinstatement.

Manipulation of the Core



An important feature, central to all Utilicor coring equipment, is the unique center pilot bit that simultaneously cuts a pilot hole through the center of the core while the circumference of the core is being cut by the coring drum. This pilot hole created during the coring process allows for the insertion of a special core puller tool that extends through all the layers of the core and allows for safe and efficient extraction of the core from the roadway.

The rubber stopper on the core puller tool, when adjusted, expands to become friction-tight inside the pilot hole allowing the core to be easily and safely removed from the roadway - and when the work is complete, reinstated back into the roadway. A typical 18" diameter core 10" deep weighs 215 lbs., while larger diameter core will weigh considerably more. By inserting a bar through the eye of the core puller, two men can share the load and lift heavier cores, or utilize a truck mounted core lift system to assist the crews in safely extracting and replacing heavy cores.

Keyhole Coring Equipment - Truck Mounted & Trailer Mounted

Series 500 Coring Unit



The Series 500 - *Heavy Duty Coring Unit* - is the most robust coring truck available on the market today. Used by dozens of gas utilities and their contractors for more than a decade, the Series 500 allows its users to quickly cut keyholes through roadways and sidewalks at a rate of one inch per minute due to its 5000 lbs. of down-force focused on the coring drum and center pilot bit assembly.

Two independently operated hydraulic stabilizers allows the suspension of the truck to be isolated from the coring process, ensuring quick and accurate core cuts.

MD-300 Coring Unit

The MD-300 - *Heavy Duty Multi-Directional Coring Unit* - is equipped with the Travesacor™ core-zone extension system, that allows the core drill to extend 12" out from the back of the truck and travel across the full width of the deck, facilitating precise set up and giving the crew the flexibility to core anywhere within a 22 square foot area behind the truck without repositioning the vehicle.

Like all Utilicor coring equipment, the powerful core drill effortlessly and accurately cuts up to 24" diameter cores through all kinds of pavement up to 22" deep with an integral central pilot bit that simultaneously cuts a pilot hole to simplify extraction and reinstatement of the core.



MPX-SS Coring Unit - Truck or Trailer Mounted

MPX-SS – *Multi Platform Coring Unit* – easily mounts on a variety of platforms: pickup trucks, flat deck trucks, service bodies or trailers.

Built on a universal base that fits within the width of even the narrowest of pickup trucks, the MPX -SS is a truly revolutionary design. The new, dual-stage mast deployment system accommodates a variety of deck or trailer heights. From low trailers to higher flat decks, the MPX-SS fits them all.

The side-shift positioning system on the MPX-SS Coring Unit allows the core drill to be shifted side-to-side across the width of the coring unit, giving the crew the flexibility to adjust the coring location behind the truck or trailer without repositioning the vehicle.





Trailicor ROVER

Trailicor ROVER The Trailicor Rover is the first self-propelled, towable coring unit that can be towed at highway speeds. No trailers or skid steers required. Powered by a 26.5 hp Electronic Fuel Injected Kohler gasoline engine and a smooth, professional grade, hydrostatic propulsion system, the Rover turns on a dime and can be precisely positioned in tight urban spaces to cut cores up to 24-inches in diameter through all types of pavement in just minutes. The Rover comes equipped with a forward looking video camera and a crystal clear dash mounted display for easy and accurate set up.

With no trailer to park or maneuver, when you're done, just drop the tow-bar, hook-up to the tow vehicle and you are off to the next job site.

Minicor-3™ Skid Steer Coring Attachment **

The Minicor - Skid Steer Coring Attachment - works on sidewalks or in other confined spaces where larger truck-mounted machines won't fit.

The Minicor works with all skid steer loaders with a Rated Operating Capacity of 1550 lbs. and a hydraulic flow rate of at least 16 G.P.M. (Standard Flow).

Compact size and mobility means fast, accurate work in tight spaces. The large 65 gallon water tank allows you to core a day's work with one fill-up. The integral, universal quick-attach coupler system and quick-connect hydraulic and electrical hook-up, lets you "plug and play" and be ready to core in minutes.

**can be installed on mini track loaders with optional adapter plate.



MC-450™ Mini Track Loader Coring Attachment

The MC-450 Coring Attachment fits Ditch Witch SK 850 and Vermeer S800XT mini track loaders, or any other mini track loader with a minimum R.O.C. of 840 lbs, as well as any skid steer with the addition of an adaptor plate.

This powerful keyhole coring attachment is the perfect addition for any utility contractor looking to perform quick and efficient pavement core cuts commonly used for daylighting or potholing purposes during Horizontal Directional Drilling (HDD) operations.

The MC-450 cuts pavement cores from 8" up to 18" in diameter. Due to the MC-450's narrow width coring in tight spaces or up close to buildings or other structures is also possible.



Series 500 Coring Unit - Specifications

Understructure:

6" structural channel sills, running the full deck length with six bolt-on hold-down assemblies.

Decking:

Full 1/8" checker plate decking, 96" wide, running the full length of the bed with formed structural deck reinforcements.

Coring and Manipulator Assembly:

25" diameter rotating turret assembly with worm gear rotation. 270° rotation, hydraulically operated vertical arm assembly, with hydraulic control ring hold-down system. 12" to 24" diameter wet drilling core bit capacity with 48" travel stroke, linear glide system and proportional orbital hydraulic drum feed control system.

Water system:

100 USG plastic water tank. Hydraulically driven high-pressure water pump, 5.5 G.P.M. @ 1500 P.S.I. with 15 ft of 3/8" hose and high-pressure handgun. Electric water pump, 3 G.P.M. @ 30 P.S.I. and includes 1/2" diameter water hose running to gland assembly on cutter drive shaft for cooling of cutter head and auxiliary hose for cleaning and cooling outside of cutter.

Stabilizers:

Two rear mounted hydraulic stabilizers.

Drive system:

Power take-off installed on truck transmission.

Hydraulic System:

Hydraulic load-sense pump, drive line mounted to PTO with MH3 HydraPak hydraulic cooling system complete with 15 gallon hydraulic reservoir. Includes suction and return lines, sight glass, temperature gauge, fill port, drain port and oil filter.

Control System:

Plug in remote pendant control with 15 foot cable extension for operation of manipulator/cutter assembly and stabilizers, with boom-mounted control panel emergency shutdown switch, and digital coring drum R.P.M. read out.

Tool Boxes:

Two under-deck mounted toolboxes. (48" L x 18" H x 18" D) Optional upgrade for long handled tools.

Paint:

Sand-blasted, powder-coated primer and finish coat (50% gloss black)

Standard:

- Spare core drum holder
- Dual LED flashing amber strobe lights
- Deck mounted general storage



Basic Coring Package (extra):

12", 18" or 24" ProCor diamond segment coring drum with "A" flange drive adapter, steel pilot shaft, pilot bit, pavement protection impact plate, standard core-puller, and Utilibond mixing paddle.

Recommended Vehicle Specifications:

- FORD F 450 or F550 4x2 Chassis Cab (or equivalent)
- Cab to Axle: 108"
- Rear Overhang (AF): 47.5
- 99R: 6.4L V-8 Diesel or Gas Engine
- 44B: Torqshift 5-speed Auto Transmission
- 62R: Transmission PTO Provision

Coring Unit Weight:

- Weight (water tank empty): 6000 lbs.
- Weight (water tank full): 6834 lbs.

Capacities:

- Water Tank: 100 Gallons
- Drum Speed: 0 - 280 RPM
- Coring Drum Diameter: up to 24"
- Coring Drum Depth: up to 22"

Available Coring Unit Options:

- Core Hoist (500 lbs. capacity)
- Winterizing System
- "Stabilizer Deployed" warning system
- Deck mounted access steps
- Long Handled tool box upgrade
- Inverter: DC/AC 3000 watt, sine wave
- Slide Master slide out storage. (36" x 70" x 8")
- Custom tool boxes
- Slurry recovery system
- Towing, heavy duty towing package (30,000 lbs.)

MD 300 Coring Unit - Specifications

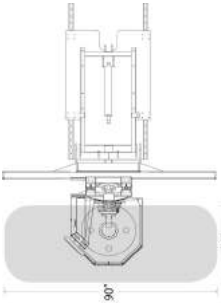
Understructure:

6" structural channel sills, running the full deck length with six bolt-on hold-down assemblies.

Decking:

Full 1/8" decking, 96" wide, running the full length of the bed with formed structural deck reinforcements.

Coring and Manipulator Assembly:



Fully manoeuvrable, multi-directional, Traversacor™ core-zone extension system (Patented). Core drill can move in-and-out up to 12" off the back of the truck and side to side 90° across the width of the truck to allow crew to core anywhere in 24 sq. ft. area without repositioning the vehicle. Accommodates 12" to 24" diameter wet drilling core bits.

Linear glide system and proportional orbital hydraulic drum feed system for ease of operation.

Water system:

100 USG plastic water tank. Hydraulically driven high-pressure water pump, 5.5 G.P.M. @ 1500 P.S.I. with 15 ft of 3/8" hose and high-pressure handgun. Electric water pump, 3 G.P.M. @ 30 P.S.I. and includes 1/2" diameter water hose running to gland assembly on cutter drive shaft for cooling of cutter head and auxiliary hose for cleaning and cooling outside of cutter.

Stabilizers:

Two rear mounted hydraulic stabilizers.

Hydraulic System:

Hydraulic load sense pump, drive line mounted to PTO with MH3 HydraPak hydraulic cooling system complete with 15 gallon hydraulic reservoir. Includes suction and return lines, sight glass, temperature gauge, fill port, drain port and oil filter.

Control System:

Plug in remote pendant control with 15 foot cable extension for operation of manipulator/cutter assembly and stabilizers, with boom-mounted control panel emergency shutdown switch, and digital coring drum R.P.M. read out.

Optional Storage:

- Five Lockable Aluminum Storage Compartments: (approx. 108 cu ft in total): Two 84"x20"x20" under deck long-handled tool storage boxes with bottom hinged doors; Two 84"x36"x18" deck mounted, twin compartment, general storage boxes with adjustable shelving and side hinged doors; One 32"x17"x18" deck mounted box with side hinged doors. Other custom options available.
- Slide-master slide out storage tray with 2000 lbs. distributed weight capacity. (30" x 70")



Included:

- Spare core drum holder
- Dual LED flashing amber strobe lights
- Heavy core extraction package
- Deck mounted general storage box (open)

Paint:

Sand blasted, powder coated primer and finish coat. (50% gloss black)

Basic Coring Package (extra):

12", 18" or 24" diameter ProCor diamond segment coring drum with "A" flange drive adapter, steel pilot shaft, pilot bit, pavement protection impact plate, standard core-puller, and Utilibond mixing paddle.

Recommended Vehicle Specifications:

- FORD F 450 or F550 4x2 Chassis Cab (or equivalent)
- Cab to Axel: 108"
- Rear Overhang (AF): 47.5"
- 99R: 6.4L V-8 Diesel or Gas Engine
- 44B: Torqshift 5-speed Auto Transmission
- 62R: Transmission PTO Provision

Coring Unit Weight:

- Weight (water tank empty): 7500 lbs.
- Weight (water tank full): 8334 lbs.

Capacities:

- Water Tank: 100 Gallons
- Drum Speed: 0 - 280 RPM
- Coring Drum Diameter: up to 24"
- Coring Drum Depth: up to 22"

Available Coring Unit Options:

- Core Hoist (500 lbs. capacity)
- Winterizing System
- "Stabilizer Deployed" warning system
- Deck mounted access steps
- Long Handled tool box upgrade
- Inverter: DC/AC 3000 watt, sine wave
- Slide Master slide out storage. (36" x 70" x 8")
- Custom tool boxes
- Slurry recovery system
- Towing, heavy duty towing package (30,000 lbs.)

MPX-SS Coring Unit (Truck or Trailer Mount) - Specifications

Understructure:

Steel tubing, running the full deck length with six bolt down assemblies for installation onto truck or trailer.

Coring and Manipulator Assembly:

Dual stage mast deployment system accommodates a variety of deck levels or trailer heights. Up to 24" diameter wet drilling core bit capacity with linear glide system and proportional orbital hydraulic drum feed system.

Side Shift Feature:

The side-shift positioning system allows the core drill to be shifted side-to-side 20-inches across the width of the MPX-SS Coring Unit. Hydraulically actuated.

Water system:

100 USG plastic water tank. Electric water pump, 3 G.P.M. @ 30 P.S.I. and includes 1/2" diameter water hose running to gland assembly on cutter drive shaft for cooling of cutter head and auxiliary hose for cleaning and cooling outside of cutter.

Stabilizers:

Two rear mounted hydraulic stabilizers.

Hydraulic System:

26.5 H.P. gas engine creates over 18 GPM of hydraulic flow at 2200 PSI. Hydraulic gear pump, hydraulic cooling system complete with 15 gallon hydraulic reservoir. Includes suction and return lines, sight glass, temperature gauge, fill port, drain port and oil filter, with proportionate hydraulic valves.

Control System:

Plug in remote pendant control with 15ft cable extension for operation of manipulator/cutter assembly and stabilizers, with boom mounted control panel, emergency shutdown switch and digital coring drum R.P.M. read out.

Paint:

Sand blasted, powder coated primer and powder coated finish coat. (50% gloss black)

Rear Bumper (optional): Truck mount only

Integrated wrap around checker plate bumper with licence plate mount and light.

Storage (optional): Trailer mount only

Two side-mounted locking storage boxes. (36"W x 20"D x 10"H)

Core Hoist (optional):

500 lb capacity core hoist. (12V)

Winterizing System (optional):

Glycol wintering system for operation in colder climates.

High Pressure Wash System (optional):

Hydraulically driven high-pressure water pump, 5.5 G.P.M. @ 1500 P.S.I. with 15 ft of 3/8" hose and high-pressure handgun.



Basic Coring Package (extra):

12", 18" or 24" diameter ProCor diamond segment coring drum with "A" flange drive adapter, steel pilot shaft, pilot bit, pavement protection impact plate, standard core-puller, and Utilibond mixing paddle.

Recommended Vehicle Specifications:

- Pick up truck or flat bed truck
- GVRW 9900 lbs. or greater
- 8 foot truck bed (min.)

Coring Unit Weight:

- Weight (water tank empty): 3400 lbs.
- Weight (water tank full): 4234 lbs.

Accommodates Deck Heights:

- 26" up to 40" (specify deck height on order)

Dimensions:

- Length: 102"
- Width: 65"

Capacities:

- Water Tank: 100 Gallons
- Drum Speed: 0 - 280 RPM
- Coring Drum Diameter: up to 24"
- Coring Drum Depth: up to 22"
- Side Shift Capacity - 10" either side of center

Available Coring Unit Options:

- Core Hoist (500 lbs. capacity)
- Winterizing System
- High pressure wash system
- Stabilizer "deployed" warning system
- Diesel Engine / Upgrade
- Bumper for pick up truck
- Storage boxes for trailer

Utilicor Trailer Specifications (Optional)

- Tandem axle trailer with 5500 lbs. capacity
- Axles: 2 x 3500 lbs.
- Axle type: spring with double eye overslung
- Electric brakes (both axles)
- Breakaway switch with battery kit
- NATM certified
- Connector: 7 pin commercial
- Weight: 1200 lbs.
- Dimensions: 98"L x 72"W (trailer bed)

Trailcor Rover - Specifications

Shell:

Structural tubing main frame with steel shell and integrated tow arm.

Coring and Manipulator Assembly:

Dual stage mast deployment system. Up to 24" diameter wet drilling core bit capacity with linear glide system and proportional orbital hydraulic drum feed system.

Water system:

Two 20 gallon plastic water tanks. Electric water pump, 3.0 G.P.M. @ 30 P.S.I. and includes 1/2" diameter water hose running to gland assembly on cutter drive shaft for cooling of cutter head and auxiliary hose for cleaning and cooling outside of cutter. Winterizing system, quick drain port and water level gauge.

Stabilizers:

Four, hydraulically operated stabilizers.

Hydraulic System:

26.5 H.P. water cooled EFI Kohler gas engine creates 18 G.P.M. of hydraulic flow at 2200 PSI. Hydraulic gear pump, hydraulic cooling system complete with 15 gallon hydraulic reservoir. Includes suction and return lines, sight glass, temperature gauge, fill port, drain port and oil filter.

Propulsion System:

Dual drive levers control tandem precision drive propulsion system via two variable displacement bi-directional axial piston pumps.

Brakes:

Electric over hydraulic disc brakes.

Control Station Drivers Cab:

Dash mounted control panel, with emergency shutdown switch, engine start, engine R.P.M. gauge and hour meter, cold start function, momentary brake button, manual hydraulic levers for stabilizer and primary mast operation.

Paint:

Sand blasted, powder coated primer and powder coated finish coat. (50% gloss black)

Lighting:

Safety Beacon: Amber L.E.D. Work Lights, front and rear facing. Stop / tail / turn lights with 7 pin harness.

Operator Safety:

Yellow handles for safe mounting and dismounting of drivers seat. LCD monitor with forward facing camera with 120° angled view. High-mount driver's seat with arm rests and seatbelt, safety grab handles, and integrated protective roll cage. Safe-T-Bar coring mast lock system for transport.



Basic Coring Package (extra):

12", 18" or 24" ProCor diamond segment coring drum with "A" flange drive adapter, steel pilot shaft, pilot bit, pavement protection impact plate, standard core-puller, and Utilibond mixing paddle.

Towing:

Tow bar with pintle. Breakaway brake control included. Titan powered electric over hydraulic disc brakes controlled by tow vehicle.

Hubs:

Free wheel for towing or locked for drive mode.

Required Tow Vehicle Specifications:

- Pintle
- Class 3 trailer hitch
- 7-pin connector SAE- J560 - commercial

Dimensions:

- Length: Core mode 137" / Tow mode 178"
- Width: Core mode 98" / Tow mode 77"
- Height (including beacon): Tow mode 96"
- Weight (water tank empty): 4120 lbs.
- Weight (water tank full): 4535 lbs.

Capacities:

- Water tanks: 40 gallons
- Fuel Capacity: 11 gallons
- Drum Speed: 0 - 280 RPM
- Coring Drum Diameter: up to 24"
- Coring Drum Depth: up to 22"
- Maximum Speed: 5 M.P.H.

Available Coring Unit Options:

500 lb capacity core hoist. (12V)

Minicor-3 Coring Attachment - Specifications

Shell:

Fully welded from 10 gauge steel, with integrated universal quick attach for skid steer.

Coring Assembly:

8" to 24" diameter wet drilling core bit capacity with linear glide system and hydraulic proportionate orbital hydraulic drum feed system.

Water system:

60 gallon integrated steel water tank - coated to resist corrosion. Electric water pump, 3.0 G.P.M. @ 30 P.S.I. and includes 1/2" diameter water hose running to gland assembly on cutter drive shaft for cooling of cutter head and additional hose for cleaning and cooling outside of cutter. Winterizing hose included. Quick drain port included. Water level site gauge included.

High Pressure Wash (Optional)

Hydraulically driven high-pressure water pump, 5.5 G.P.M. @ 1500 P.S.I. with 20 ft of 3/8" hose and high-pressure handgun.

Hydraulic System:

16 - 18 G.P.M provided from the skid steer auxiliary hook-up at 2000 P.S.I. Integrated Hydraulic manifold block. Equiped with easy drum speed adjustment knob.

Control System:

Coring drum ON/OFF, low pressure water ON/OFF switches with E-STOP emergency shut off. (Hydraulic flow is diverted directly to tank on the skid Steer. Digital coring drum R.P.M. read out.

Tool Box:

One locking storage box. (23"W x 9"D x 9"H) with side mounted tool carrier

Paint:

Sand blasted, powder coated primer and powder coated finish coat. (50% gloss black)

Safety Beacon:

Amber L.E.D. (Included)

Basic Coring Package (extra):

18" diameter ProCor diamond segment coring drum with "A" flange drive adapter, steel pilot shaft, PDC pilot bit, pavement protection impact plate, standard core-puller, and Utilibond mixing paddle.



Required Skid Steer Specifications:

- Rated operating capacity 1600 lbs. (min.)
- Hydraulic flow rate 15 G.P.M. (min.)
- Quick attach system
- Quick connect hydraulic couplers (specify size required)
- 12 volt power source supplied from the skid steer (20 amp.)
- Hydraulic Pressure: (Min/Max) 2000 psi / 3500 psi

Minicor-3™ Dimensions:

- Length: 48"
- Width: 44"
- Height (including beacon): 90 inches
- Weight (water tank empty): 1100 lbs.
- Weight (water tank full): 1580 lbs.

Capacities:

- Water Tank: 60 gallons
- Drum Speed: 0 – 280 RPM
- Core Drum Diameter: up to 12-24 inch
- Maximum Coring Depth: 22"

Available Coring Unit Options:

- High Pressure wash system

MC-450 Coring Attachment - Specifications

Shell:

Fully welded from 1/4" gauge steel, with integrated universal quick attach for mini track loader.

Coring Assembly:

12" to 18" diameter wet drilling core bit capacity with linear glide system and proportionate orbital hydraulic drum feed system.

Water system:

30 gallon integrated steel water tank. Electric water pump, 1.8 G.P.M. @ 30 P.S.I. and includes 1/2" diameter water hose running to gland assembly on cutter drive shaft for cooling of cutter head and auxiliary hose for cleaning and cooling outside of cutter. Winterizing hose, drain port and water level site gauge included.

Hydraulic System:

15 G.P.M provided from the skid steer or mini track loader auxiliary hook- up at 2000 P.S.I. (Min.)

Control System:

Coring drum orbital feed system with rotational and feed pressure gauges.

Paint:

Sand blasted, powder coated primer and powder coated finish coat. (50% gloss black)

Basic Coring Package (extra):

12" or 18" diameter ProCor diamond segment coring drum with "A" flange drive adapter, steel pilot shaft, pilot bit, pavement protection impact plate, standard core-puller, and Utilibond mixing paddle.



Required Skid Steer / Mini Track Loader Specifications:

- Rated operating capacity 840 lbs. (min.)
- Hydraulic flow rate 15 G.P.M. (min.)
- Quick attach system designed for mini track loader / adaptor required for skid steer attachment / sold separately
- Quick connect hydraulic couplers (specify size required / included)
- 12 volt power source supplied from the skid steer or mini track loader (7 amp.)
- Hydraulic Pressure: (Min/Max) 2000 psi / 3500 psi

Dimensions:

- Length: 36 inches
- Width: 32 inches
- Height: 82 inches
- Weight (water tank empty): 655 lbs.
- Weight (water tank full): 895 lbs.

Capacities:

- Water Tank: 30 gallons
- Drum Speed: 0 – 280 RPM
- Core Drum Diameter: up to 18"
- Maximum Coring Depth: 22"

Available Coring Unit Options:

- Adaptor plate for accommodating skid steer quick attach connection plate

Coring Unit Options - Truck Mounted Storage

Slidemaster™ Heavy Duty Slide-Out Storage Tray

For convenient on-deck storage and easy access to heavy materials the heavy-duty (2000 lb distributed load) deck mounted Slidemaster™ slide-out tray is the answer. The slide-out tray is 72" long by 30" wide and made of powder-coated steel. It rolls easily on sealed, steel bearings and can hold spare drums, road plates, Utilibond and other tools or materials. Ergonomically designed, it can extend over 4-feet beyond the curbside of the deck to give the crew safe and easy access to all stored items. It comes equipped with a spring lock device that automatically locks in the open and closed positions, and a removable end gate to keep the contents on board.



Under-Deck Mounted Aluminum Storage Boxes

Instead of the two standard 48" Long x 18" High x 18" Deep (9 cu. ft) painted steel, under-deck storage boxes, these optional aluminum storage boxes double the available under-deck storage capacity. Constructed from heavy duty, aluminum checker-plate, these storage boxes are 84" Long x 20" High x 18" Deep (17.5 cu. ft.) These units come in two configurations: *General Storage* and *Long Handled Tools*. The *General Storage* unit on the street side of the vehicle is divided in two, with one door 69" wide, and the other 10" wide to accommodate the control pendants and other small items. On the curb side of the vehicle is the *Long Handled Tool* unit with a single door 82" wide to accommodate long handled keyhole tools. All doors are equipped with lockable, heavy duty stainless steel handles.



Deck-Mounted Storage Boxes

Deck mounted storage boxes allow for the crews to carry a wide variety of tools and auxiliary equipment. Depending on requirements, custom modifications are available. Custom manufactured storage boxes for other deck/coring unit configurations available on request. *Note: These may also fit on an MPX mounted on a standard 8-foot wide flat deck.*

36" Long x 17" High x 18" Deep (Shelving included / Two Doors)
84" Long x 36" High x 18" Deep (Shelving included / Four Doors)



Deck-Mounted Storage Box - Roll Up Door Opening

Allowing for storage of an extensive array of tooling and supply items, this large deck mounted storage box is water proof and lockable. A convenient roll up style door eliminates doors which protrude into traffic or pedestrian walking areas. The large and durable roll out style trays allow for easy access to both tooling and supplies. Heavy duty corrosion resistant aluminum is both light weight and durable.

84" Long x 48" High x 24" Deep (Shelving included / Roll Up Door)



"Stabilizer Deployed" Warning System for Series 500, MD-300 & MPX

To minimize the possibility that the operator will drive off with the stabilizer(s) in contact with the ground or not fully retracted, this system employs specially designed proximity sensors to detect the position of the stabilizers and to signal that condition to the driver in the cab by means of a bright warning light prominently displayed just inside the driver's door.

When the stabilizers are deployed or not fully retracted, the system automatically senses that condition and energizes the warning light in the cab, alerting the driver that the stabilizers are not retracted thereby reducing the potential for damage.



500-lb. Core Hoist for Series 500, MD-300, MPX-SS & Rover

To avoid workplace injury of crews working with heavy or larger cores many purchasers also choose an optional Core Hoist. This powerful, core hoist is available to help the operator safely hoist and manipulate cores weighing up to 500-pounds.

A typical 18" diameter core, 8" deep, weighs about 170 lbs., and a core 12" deep, more than 250 pounds, making the core hoist an option most purchasers select.



DC/AC 3000 Watt Inverter for Series 500 & MD-300

3000 watt True Sine-Wave AC unit with high-surge capability that can provide the necessary current to start-up demanding electrical loads. The unit also includes an innovative USB connection for providing power to most USB chargeable devices and an automatic shut down.

The compact size allows it to be conveniently installed in the cab behind the seat where it is protected from the weather. In addition to dual GFCI AC receptacles on the unit itself, heavy duty cabling carries the source of AC to an all weather receptacle at the rear deck area to provide power for all types of electrical loads including, variable speed power tools for mixing Utilibond and electrical appliances, such as the core heater for cold weather reinstatement work.



Deck Mounted Access Steps for Series 500 & MD-300

Best Safety Practices and some Government Regulations recommend or require all commercial or industrial vehicles that require personnel to climb up on and down from the deck area to have access steps and handholds, that allow the user to have at least 3 limbs in contact with the vehicle while doing so.

Utilicor offers a permanently affixed, steel ladder and handholds or supports, installed on the curbside of the vehicle forward on the deck, or at the rear corner of the deck, that generally comply with the essential elements of SAE J-185 "Access Systems for Construction and Industrial Equipment".



Coring Unit Options - Convenience

Heavy Duty Tow Option

The heavy duty towing package includes a 1/2 inch integrated pintle plate with gussets and braces for added strength, bolted and welded to chassis and a 30,000 lbs. capacity pintle hook installed with Grade 8 fasteners. Depending on the towing capacity of the vehicle, the package is rated up to 30,000 lbs. The hitch is adjustable from 20 to 28 inch. Also included are two 5/8 D type swivel lashing rings for trailer safety chains and a 7-pin SAE-J560 trailer electrical socket.



Trailer for MPX-SS

Custom built trailer for MPX coring unit. This tandem axle trailer has a 5600 pound capacity and is equipped with tandem 3500 pound capacity axles. Electric brakes on both axles and a breakaway switch with battery are included. NATM certified and ready to hook up with adjustable pintle and a 7-pin commercial connector. Dimensions: 98" L x 72" W with and overall length of 149".



Cold Weather Winterizing System for Series 500, MD-300, MPX-SS

During cold or freezing temperatures, to prevent frozen water lines and valves, Utilicor offers a self contained, easy access, glycol based Winterizing System consisting of an 8-gallon auxiliary glycol tank and connections to the unit's pressurized water system that allows the operator to completely winterize all of the water lines and valves on the coring unit when the vehicle is in transit, or shut down between jobs.



High Pressure Wash System

The optional high pressure wash system on the MPX allows for area wash down after coring removing slurry and other foreign debris from the work site. It is also useful to keep the coring unit clean after a day's work in the field. A hydraulically driven motor provides power to the wash pump, with pressure set to 1300 P.S.I. The system includes a durable wash wand with easy to use trigger actuated wash gun.

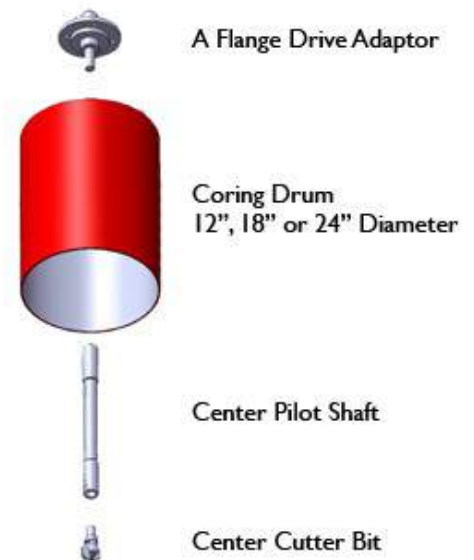


Cold Weather Reinstatement System

For use in reinstating cores even under freezing conditions, the core heater system is recommended when ambient temperatures drop below 40-50°F. Available to fit 18" or 24" diameter cores, the specially designed baffle allows both the hole and core to be heated simultaneously to 70°F in minutes for effective cold weather core reinstatements. System includes 35,000 BTU 110V or battery driven propane heater.



Core Extraction & Basic Coring Package



Utilicor's coring process utilizes a coring drum that is fitted with a pilot drill in its center that can cut the center hole at the same time that the core is cut. Think of a hole saw for the installation of a door knob assembly.

This center pilot bit, not only stabilizes the coring operation, but allows for the insertion of a special core puller tool that extends through all the layers, right to the bottom of the core. It has a rubber stopper that expands, friction-tight, inside the pilot hole, allowing the worker to quickly and easily lift the core out by himself.

An 18-inch diameter core, 10 inches deep, can weigh almost 215 pounds. Besides the weight, pavement cores sometimes have the tendency to delaminate – or separate – between the asphalt top layer or layers and the concrete base. Sinking a lag bolt, or the like, into the top of a core only lifts out that top layer and is an unsafe procedure as it can easily pull out of the core and cause injury, especially on warm days when the asphalt surface becomes soft.

Utilizing Utilicor's unique center pilot hole coring process in conjunction with a core puller tool is the safest and most efficient means of manipulating pavement cores.

When the core is deeper or a larger diameter deeper, a long bar can be inserted through the ring at the top of the core puller, and the lifting load can be shared with a co-worker. For extremely heavy cores opt for using an electric truck mounted core hoist.



Coring Package - Parts Breakdown



ProCor Professional Grade Coring Drums

- All ProCor coring drum are manufactured to exceed industry standards
- Utilicor's custom manufactured diamond segments allow for increased cutting life through both asphalt and concrete
- ProCor coring drums stock length is 22" and come in diameters of 12", 18" and 24"
- Custom sizes are available on request
- Part #'s CD-12, CD-18, CD-24



A-Flange Drive Adapter

- Accommodates Utilicor's ProCor coring drums
- 1 1/4" x 7 T.P. I. threads
- Zinc coated
- Part # CP-AFLNG



Center Pilot Shaft

- Allows for use of center pilot bit
- Sizes available: 15.5", 16.5", 17.5" or 18.5"
- Stock size for 22" drum length: 18.5" with 1/2" spacer (19" overall length)
- Zinc coated
- Part # CP-SHAFT



PDC Center Bit

- Simultaneously cuts center hole when cutting core
- 2 3/8" polycrystalline diamond
- AW-ROD threads
- Superior penetration rates
- Recommended for tough concrete applications
- Part # CP-PDC



Roller Cone Center Bit

- Simultaneously cuts center hole when cutting core
- 2 3/8" carbide or 2 1/2" steel toothed
- AW-ROD threads
- Part # CP-BC

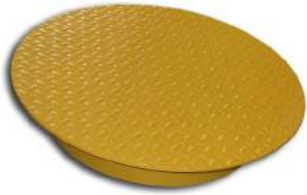


Carbide Center Bit

- Simultaneously cuts center hole when cutting core
- 2 3/8" carbide toothed
- AW-ROD threads
- Part # CP-TT

Accessories and Tools

Road Plates / Core Hole Covers / Standard



- Allows for roadway to be opened temporarily
- Durable 1/4" thick checker plated top
- Precise collar that fits snugly into cored opening
- Will not tip or spin out of cored hole
- Painted safety yellow for visibility
- Part # 12" / AC-12RP, 18" / AC-18RP, 24" / AC-24RP

Road Plates / Core Hole Covers / Securable



- Allows for roadway to be opened for longer durations
- Durable 1/4" thick checker plated top
- Precise expansion gasket of polyurethane expands to secure road plate in place
- Five sided penta style bolt resists tampering
- Painted safety yellow for visibility
- Part # 12" / AC-12RPS, 18" / AC-18RPS, 24" / AC-24RPS



Reinstatement Tool Set

- Tools set required to complete core reinstatements
- Includes: 5' lift bar, two flat trowels, one small pointed trowel, sponge, white wash brush, pail opener and Utilibond mixing blade
- Part # AC-SET



Core Puller Tool

- Specifically designed for keyhole core extraction and core reinstatement process
- 2-1/4" rubber expansion plug
- Plated black
- Top mounted eyelet for insertion of lifting bar
- High tensile threaded rod for durability
- Part # AC-PULLER



Utilibond Mixing Blade

- Four bar mixing blade for proper Utilibond mix
- Fits 1/2" drill chuck
- Part # AC-MIX



Pavement Protection Plate

- Protects top of core from impact when core is stuck inside coring drum
- Part # AC-10IP (12"), AC-16IP (18"), AC-22IP (24")



Core Drum Extraction Tool

- Allows for easy and safe extraction of core drums which have become stuck in the pavement during the coring process
- Bolts onto A-Flange style coring drums
- Removable handle for easy storage
- **Part # AC-EXTRACT**

Water System - Parts



Complete Pillow Block / Water Swivel Assembly

- Allows water to be channeled to center pilot cutter and coring drum
- Hydraulic motor mounts to top
- 1 1/4 x 7 T.P.I spindle shaft
- Specify shim size in accordance to type of hydraulic motor used (.350 or .420)
- Part # PB-COMP



Pillow Block Spindle Shaft

- Replacement shaft for Pillow block / water swivel
- 1 1/4 x 7 T.P.I spindle shaft
- Part # CP-SHAFT



Pillow Block Water Seals

- Replacement water seals
- Sold as each / two required
- Leather
- Part # PB-WS



Pillow Block Tapered Bearings

- Replacement bearings
- Sold as each / two required
- Tapered
- Part # PB-TB



Pillow Block Bearing Race

- Replacement tapered bearing race
- Sold as each / two required
- Part # PB-BR



12 Volt Water Pump

- Self priming
- Run dry capable
- Available in 1.8 G.P.M. or 3.2 G.P.M.
- Part # TR-FLOW



Water Filter

- Banjo style
- 50 Micron filter (washable)
- Part # TR-FILTER





Utilicor Technologies Inc.

49 Sheffield Street
Toronto, ON, Canada
M6M 3E5
TEL: 416-391-3901

www.utilicor.ca
email: info@utilicor.ca

Toll Free 1-888-572-6666