

Contents

<u>Section</u>	<u>Page</u>
Keyhole power tools & accessories	2
Keyhole hand tools & drives	5
Keyhole tools for polyethylene pipe & fittings	12
Keyhole tools for elevated pressure systems	15
Air knives & excavating tooling	19
Corrosion protection tooling	22
Coring drums & accessories	26
Cameras & camera launch tooling	29
Window cutting equipment	31
Gas evacuator	33

Keyhole Power Tools & Accessories

Working in small-hole or keyhole excavations demands the use of power tools that are specifically designed for this unique working environment. Keyhole power tools should be light weight, pneumatically driven, specialized devices that are most often about 6 feet in length to allow the operator to stand above ground while performing tasks on underground piping systems that are approximately 3 feet below the surface of the street. It is also essential that the tool designs incorporate air motors that are small as possible, in diameter, to give the mechanic clear sight on the work being performed directly below his feet. Good design also demands that small-hole power tools are solid one piece tools without fittings or connections between the extension arm and the power head, which will fall apart after a few months of service. With all of these considerations in mind it is easy to see that the product line of **Tellus** power tools is the result of thoughtful design and many years of small-hole experience.



Pneumatic extension drill, ½ HP x 6 ft. long

Pneumatic extension ratchet, ½" drive x 6 ft. long

ALR-1250



BJE-1240



Keyhole Power Tools & Accessories

Pneumatic extension grinder, 6 ft. long

CPS-1410



Pneumatic extension saw, up to 2" pipe x 6' long

GTN-1010



Pneumatic extension chisel/scaler, 6 ft. long

ALR-1255



Pneumatic extension needle scaler, 6 ft. long

ALR-1258



Pneumatic scaling hammer, single head tool

BJE-1241



Machining tool pneumatic drive

SRW-3042



Keyhole Power Tools & Accessories

Sand-blasting extension tool: GTN-1028



Replacement abrasive wheel, 1" wide: CPS-1406



Wire wheel, full twist wire: CPS-1405



Cobalt drill bit, 21/64" split point: ALR-1252



Pneumatic hacksaw blade, 4½" long: GTN-1020



Keyhole Hand Tools & Drives

When working in an 18" diameter opening the gas mechanic has no reasonable ability to safely reach into a 3 to 4 foot deep excavation to correct a tooling deficiency. Conventional ratchets do not have sufficient swing space and standard wrenches cannot be turned horizontally from above. The only access available is from outside the excavation and this must be done with tools that are 5 to 7 feet in length. Keyhole hand tools cannot be merely "tools on a stick" but tools that have been designed and developed by experienced engineers and tool makers. They must be unique and unconventional devices that give the gas mechanic the ability to perform the standard gas maintenance functions safely and effectively.



¾" locking drive x 6 ft. long: GTN-1006



Tee handle ¾" drive w/ 3 ft. handle: GTN-1005



Keyhole Hand Tools & Drives

½"locking drive x 6 ft. long: GTN-1002



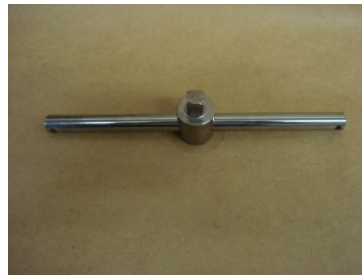
Tee handle ½" drive w/ 1 ft. handle: GTN-1022



¾"locking drive x 6 ft. long: GTN-1001



Tee handle ¾"drive w/ 6" handle: GTN-1021



Keyhole ratchet ¾" drive x 6 ft. long: GTN-1024 Keyhole ratchet ½" drive x 6 ft. long: GTN-1025



¼"hex drive releasing tool 6 ft. long: HEX-1011 Torque limit drive ½" x ½" x 50 ft.-lbs: CLR-1270



Keyhole Hand Tools & Drives

Sidewinder ratchet $\frac{1}{2}$ " drive 6 ft. long: SWW1210



Bonding clamps, $\frac{1}{2}$ " to 2" pipe: GTN-1017



Pipe plug socket, $\frac{3}{4}$ " plug x $\frac{3}{4}$ " drive: SAS-1301

Service tee socket, $\frac{3}{4}$ " tee x $\frac{3}{4}$ " drive: SAS-1306

Pipe plug socket, 1" plug x $\frac{3}{4}$ " drive: SAS-1302

Service tee socket, 1" tee x $\frac{3}{4}$ " drive: SAS-1307

Pipe plug socket, $1\frac{1}{4}$ " plug x $\frac{3}{4}$ " drive: SAS-1303

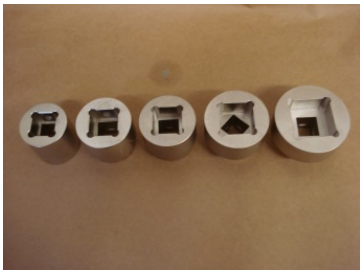
Service tee socket, $1\frac{1}{4}$ " tee x $\frac{3}{4}$ " drive: SAS-1308

Pipe plug socket, $1\frac{1}{2}$ " plug x $\frac{3}{4}$ " drive: SAS-1304

Service tee socket, $1\frac{1}{2}$ " tee x $\frac{3}{4}$ " drive: SAS-1309

Pipe plug socket, 2" plug x $\frac{3}{4}$ " drive: SAS-1305

Service tee socket, 2" tee x $\frac{3}{4}$ " drive: SAS-1310



Tee stub extractor $\frac{3}{4}$ " tee x $\frac{3}{4}$ " drive: SAS-1311

Plug starter socket $\frac{3}{4}$ " plug x $\frac{3}{4}$ " drive: SAS-1316

Tee stub extractor 1" tee x $\frac{3}{4}$ " drive: SAS-1312

Plug starter socket 1" plug x $\frac{3}{4}$ " drive: SAS-1317

Tee stub extractor $1\frac{1}{4}$ " tee x $\frac{3}{4}$ " drive: SAS-1313

Plug starter socket $1\frac{1}{4}$ " plug x $\frac{3}{4}$ " drive: SAS-1318

Tee stub extractor $1\frac{1}{2}$ " tee x $\frac{3}{4}$ " drive: SAS-1314

Plug starter socket $1\frac{1}{2}$ " plug x $\frac{3}{4}$ " drive: SAS-1319

Tee stub extractor 2" tee x $\frac{3}{4}$ " drive: SAS-1315

Plug starter socket 2" plug x $\frac{3}{4}$ " drive: SAS-1320



Keyhole Hand Tools & Drives

Gas stopper ¾" tee x ¼" hex drive: SAS-1321

90° stopper ¾" service x ¼" hex drive: SAS-1326

Gas stopper 1" tee x ¼" hex drive: SAS-1322

90° stopper 1" service x ¼" hex drive: SAS-1327

Gas stopper 1¼" tee x ¼" hex drive: SAS-1323

90° stopper 1¼" service x ¼" hex drive: SAS-1328

Gas stopper 1½" tee x ¼" hex drive: SAS-1324

90° stopper 1½" service x ¼" hex drive: SAS-1329

Gas stopper 2" tee x ¼" hex drive: SAS-1325

90° stopper 2" service x ¼" hex drive: SAS-1330



Broken tee stopper ¾" to 1" tee: SAS-1035

Grommet insertion tool ½" to 1¼" pipe: SRP-1204

Broken tee stopper 1" to 1¼" tee: SAS-1036

Grommet insertion tool 1½" to 2" pipe: SRP-1205

Broken tee stopper 1½" tee: SAS-1037

Broken tee stopper 2" tee: SAS-1038



Soap brush w/ ¼" hex drive: SRP-1206



Tapered reamer ¾" to 2" pipe x ½" drive: SRP-1203



Keyhole Hand Tools & Drives

Steel pipe chamfer tool $\frac{3}{4}$ " pipe: SRW-3026



Steel pipe chamfer tool 1" pipe: SRW-3052



$\frac{3}{4}$ " Mueller cap installation tool: SRW-3027



1" Mueller cap installation tool: SRW-3054



Service run cap install tool $\frac{1}{2}$ " drive: SRW-3043



Screw driver bit, #3 x $\frac{3}{8}$ " drive: SRW-3059



$\frac{13}{16}$ " magnetic saddle nut socket: SAS-1347



Hairy hook, 6 foot long: LRE-1016



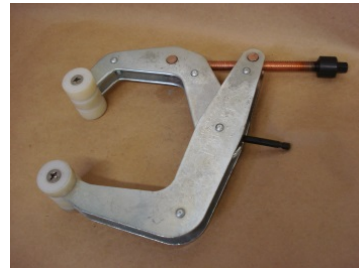
Keyhole Hand tools & Drives

Band clamp sleeve ass'y tool 2" mains: CLR-1272

Band clamp closing tool 2" mains: CLR-1261

Band clamp sleeve ass'y tool 4" mains: CLR-1273

Band clamp closing tool 4" mains: CLR-1262



Outer band clamp ass'y tool 2" mains: CLR-1274

Magnetic carriage bolt handler: SAS-1350

Outer band clamp ass'y tool 4" mains: CLR-1275



Continental service tee cap wrench: SAS-1350

Drive adapter, 3/4" female to 1/2" male: GTN-1051



3/4" elbow socket, 3/4" drive: SAS-1331

Drive adapter, 1/2" female to 3/4" male: GTN-1350



Keyhole Hand Tools & Drives

Three position pipe wrench x 6 ft. long: GTN-1016 Hex bit socket, $\frac{3}{8}$ " hex x $\frac{1}{2}$ " drive: SRP-1240



"U" bolt holding tool 2" clamp: SRP-1281 Saddle positioning tool $\frac{3}{4}$ " pipe thread: SRP-1280

"U" bolt holding tool 4" clamp: SRP-1282



Universal, spring supported $\frac{1}{2}$ " drive: CLR-1269 5" mirror w/ $\frac{1}{4}$ " hex drive: GTN-1014



Bell joint face scrapper: LRE-1017



Keyhole Tools for Polyethylene Pipe & Fittings

The majority of the latest gas distribution systems are now built using polyethylene piping and fittings. In addition, many of the new services that are being added or renewed on existing steel gas distribution systems are also being fabricated with polyethylene pipe and components. The tooling shown in this section of this keyhole tooling catalog are proven devices designed for use in the installation of plastic services through small-hole excavations.



Plastic pipe cutter ½" & ¾" pipe size: SRP-1260

Plastic pipe cutter ½" & 1" CTS size: SRP-1202

Plastic pipe cutter 1¼" pipe size: SRP-1212



Plastic pipe marker tool: SRP-1205



Keyhole Tools for Polyethylene Pipe & Fittings

Plastic pipe & pipe fitting handler: SRP-1201



Perfection chamfer tool holder: SRP-1207



Crowfoot wrench for 3/4" tee base: SRP-1235



Hex bit wrench 1/2" hex w/ 1/2" drive: SRP-1209



Perfection tee cap assembly tool: SRP-1210



Torque limit drive 3/8" x 3/8" x 5 ft.-lbs: CLR-1271



Lightweight pressure chamber: SRP-1242



Central tee cap assembly tool: SRP-1221



Keyhole Tools for Polyethylene Pipe & Fittings

Chuck type cap tool, up to 2¼": SPP-1286



Keyhole Tools for Elevated Pressure Systems

As gas distribution systems have evolved the operating pressures have been steadily increasing. With increased pressure there has been a rise in demand to address personnel safety and operating economies that will result from use of “no-blow” methods in maintaining these systems. Tellus has developed service retirement and service renewal tooling to cover just about all of the hardware found on existing gas distribution systems. Have Tellus review the hardware that is on your medium or high-pressure distribution system. Our staff will put together the tooling and methods necessary to give you the ability to perform these safe, cost effective no-blow procedures.



2" tool launch chamber, 5 ft. long: SRW-3001

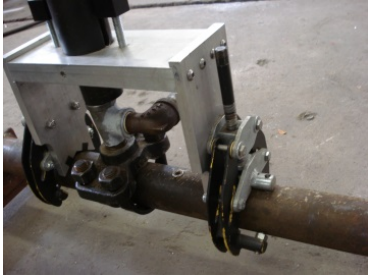


Adapter, flat flange x 2" chamber: SRW-3020



Keyhole Tools for Elevated Pressure Systems

Main clamp, 2" main x 2" platform: SRW-3011



Studded flange adapter, 3/4" NPT: SRW-3021



Main clamp, 3" to 6" main x 2" platform: SRW-3012 Cap seal adapter, 3/4" service tee: SRW-3040



Chamber camera w/2" chamber seal: SAS-1341 Chamber seal adapter, 3/4" banded tee: SAS-1336



Pressure chamber lever assembly: SRN-3003



Cap machining tool drive: SRW-3057



Keyhole Tools for Elevated Pressure Systems

Cap machining tool, 1" Mueller tee: SRW-3064 Cap machining tool, 3/4" Mueller tee: SRW-3041



Completion plug tool, 3/4" & 1": SRW-3024



Completion plug socket, 1/2" drive: SRW-3051



Extension reamer, 7/16" plug x 2" chamber: SAS-1340 Plug machining tool, 3/4" plug: SRW-3064



1/4" extension magnetic hex wrench: SAS-1339



7/16" extension tap w/chamber seal: SAS-1341



Keyhole Tools for Elevated Pressure Systems

7/16" tap tool w/1/2" locking drive: SAS-1338

3/8" locking drive w/chamber seal 6ft.: GTN-1011



1/2" locking drive w/chamber seal 6 ft.: GTN-1012

Expansion plug installation tool: SRW-3025



Air Knives & Excavating Tooling

The process of “Soft Excavation” employs the use of compressed air to break up the soil and a powerful vacuum to remove the dirt from the excavation. Air knives are used to deliver a jet of compressed air to fracture and displace soil without causing damage to the underground infrastructure. If there is any risk of making contact with electrical lines a “non-conductive” air knife is utilized. Air knives can also be fitted with extensions to facilitate digging to depths as much as 20 feet deep. This catalog section also includes tools used to cut through frozen and non-porous clay soils and also tools for the compaction of soil during excavation restoration.



Aluminum air knife w/safety throttle: GTN-1100



Air lance replacement nozzle: GTN-1105



Air Knives & Excavating Tooling

Non-conductive air knife: GTN-1111



Air lance extension 4 ft. long: GTN-1113



Air lance 90 degree adapter: GTN-1114



Air lance 45 degree adapter: GTN-1116



Digging tube head, 4" hose: TAS-8003



Rock rake 6 ft. long: CDN-4016



Air Knives & Excavating Tooling

Digging tube aluminum 5 ft. long: TAS-8005



Digging tube aluminum, 7 ft. long: TAS-8007



Air Tamper: GTN-1055



Pneumatic clay spade: TAS-8047



Rock grabber tool: GTN-1056



Automatic dump valve w/ cart: TAS-8011



Corrosion Protection Tooling

Corrosion protection processes using keyhole methods and tools range from the thermite welding of anodes and test station wires, to ultra-sonic pipe inspection procedures and corrosion encapsulation processes. There are keyhole tools to perform standard corrosion inspection procedures that provide the inspector the ability to assess the thickness and pitting of steel mains at all positions (360 degrees) around the main. Keyhole corrosion enclosures are also available for those situations in which corrosion protection material must be replaced on service tees and band clamps. These keyhole tools and enclosures are available to protect a wide variety of existing steel fitting.



Cadweld control unit w/15 ft. leads: CPS-1416

Cadweld lead wires, 15 ft. long: CPS-1415



Corrosion Protection Tooling

Cadweld replacement furnace to 3½": CPS-1413



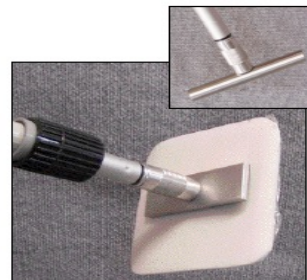
Cadweld plus welding shots: CPS-1419



Cadweld replacement furnace, 4"plus: CPS-1414



Trenton patch applicator tools: CPS-1408



ThermOweld control unit: CPS-1430



ThermOweld EZ lite igniter: CPS-1413



Corrosion Protection Tooling

Corrosion inspection tool holder: CLR-1286



Ultra-sonic thickness probe holder: CLR-1287



Ultra-sonic measurement tool: CLR-1289



Pitting gauge holder: CLR-1288



Pitting measurement tool: CLR-1290



Corrosion enclosure installation tool: CPS-1430



Corrosion Protection Tooling

Corrosion tape wrapping tool: CPS-1432



Corrosion primer heating blanket: CPS-1434



Corrosion enclosure closing tool: CPS-1431



Corrosion primer hand pump: CPS-1433



Coring Drums & Accessories

Cored excavations have become a primary component of “keyhole technology”. In the 1980’s and 90’s small hole technology consisted of cutting the excavations with jackhammers and excavated using vacuum trucks, thus providing the operational and safety advantages of traditional keyhole technology. In the early 2000’s coring was introduced and provided the added advantage of eliminating all of the costs and inconvenience associated with pavement restoration. Today’s keyhole techniques provide significant cost savings, efficient repairs, a dramatic reduction in public inconvenience and unprecedented operator safety.



Core drum 18” dia. (new) w/rect. segments: CDN-4218

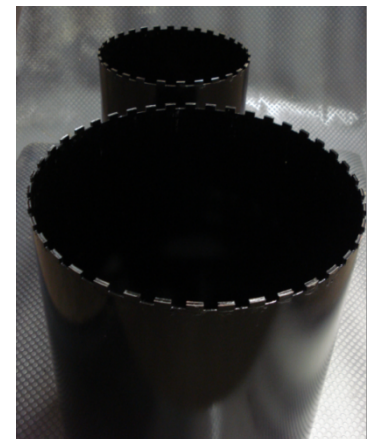
Core drum 18” dia. (new) w/single pt. segments: CDN-4318

Core drum 18” dia. (new) w/double pt. segments: CDN-4118

Core drum 18” dia.(resegmented) w/rect. segments: CDR-4218

Core drum 18” dia.(resegmented) w/single pt. segments: CDR-4318

Core drum 18” dia.(resegmented) w/double pt. segments: CDR-4118



Coring Drums & Accessories

Core drum 24" dia. (new) w/rect. segments: CDN-4224

Core drum 24" dia. (new) w/single pt. segments: CDN-4324

Core drum 24" dia. (new) w/double pt. segments: CDN-4124

Core drum 24" dia.(resegmented) w/rect. segments: CDR-4224

Core drum 24" dia.(resegmented) w/single pt. segments: CDR-4324

Core drum 24" dia.(resegmented) w/double pt. segments: CDR-4124



Core extractor tool w/ 1½" insert: CDN-4009



Core puller insert 1½" dia.: CDN-4010



Core extractor tool for 12" cores: CDN-4012



Street cover plate, 18" non-locking: CDN-4015

Street cover plate, 24" non-locking: CDN-4016



Core drums & Accessories

Street cover plate, 18" locking: CDN-4020

Core drum drive adapter, 1¼"-7 to flg: CDN-4008

Street cover plate, 24" locking: CDN-4021



Cored hole guard, 18" dia: CDN-4018

Cored hole guard, 24" dia: CDN-4019



Cameras & Camera Launch Tooling

Camera inspection of mains is proving to be an important asset in the maintenance and repair of gas distribution systems. Cameras can be launched into live mains and pushed more than 200 feet in both directions of the launch point. Using these cameras operators can locate intersecting mains, service connections and off-sets in the main. They can also be used to inspect damage and restrictions in the mains. This catalog section includes camera cable seal chambers, known as stuffing boxes, which are used as the point of entry into the main.



Stuffing box, Hathorn 1" camera: TCL-4201

Replacement gasket set, 1" camera: CLK-4211



Cameras & Camera Launch Tooling

Chamber camera, 1½" seal x 22" long: TCL-4301 Chamber camera, 2" seal x 6ft. long: TCL-4302

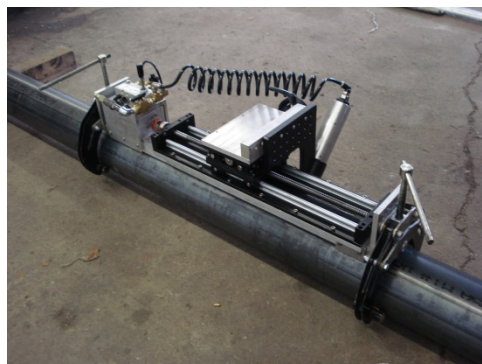


Window Cutting Equipment

The underground utility industry has developed a trenchless method for the installation of new polyethylene mains by inserting the new mains inside retired steel or cast iron mains. Before the insertion process is started sections of the old main are cut out to accommodate connection of the services that are planned on the new plastic main. Sometimes it is necessary to add services in positions on the main where the old steel or cast iron main has not been cut to allow an access point for a new service connection on the plastic main. This process is known in the gas industry as window cutting and Tellus has developed the equipment to perform this process quickly, safely and with no damage to the inserted plastic main.



Window cutting machine: TAS-8034



Window Cutting Equipment

End cut tool for 2" pipe: TAS-8042



End cut tool for 4" pipe: TAS-8044



End cut tool for 6" pipe: TAS-8046



1/4" diameter steel pipe cutter: TAS-8041



Gas Evacuator

The “gas evacuator” is a device that is designed to be used in conjunction with a vacuum excavation system for the quick removal of leaked underground gas that has become entrapped under developed areas such as streets and sidewalks. It consists of a main manifold and a number of headers that are positioned over bar holes that have been drilled through the pavement. When it is connected to a high-flow/high vacuum-level source it has the ability to draw entrapped gas from below pavement and vent it safely into the atmosphere.



Gas Evacuator System, 4" vacuum line: GTN-1015