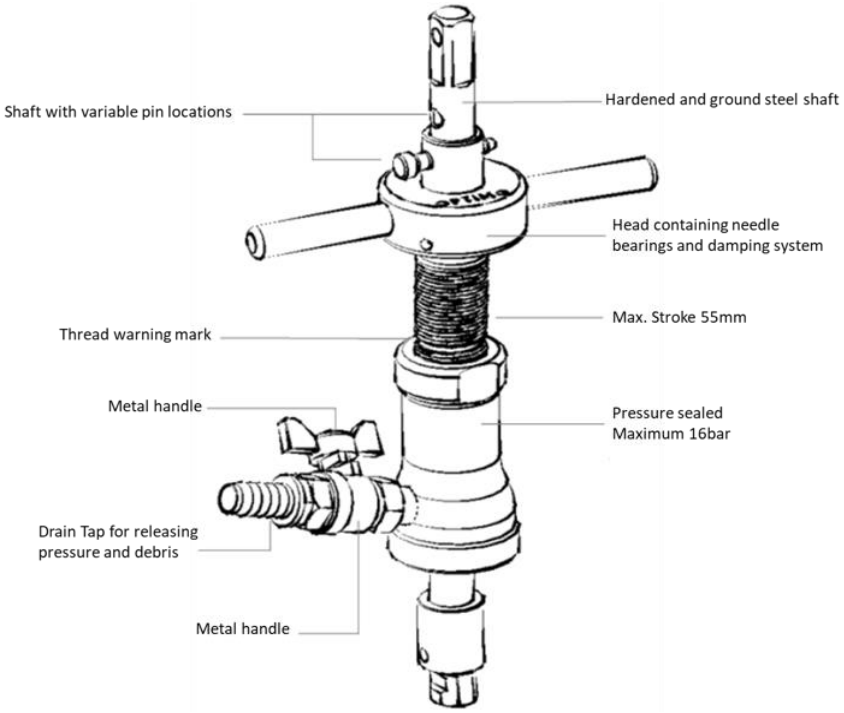
Instructions & Maintenance Guide
BF1912 / Q-TEE Drill Kit DN65 - DN100

Portable drilling kit designed for professional use to install tapping saddles on water and heat networks on Ductile Iron, PE, PVC-O and Fibre Cement pipes at a maximum of 16 bar pressure between 0°C to 100°C



BF1912 Main Body

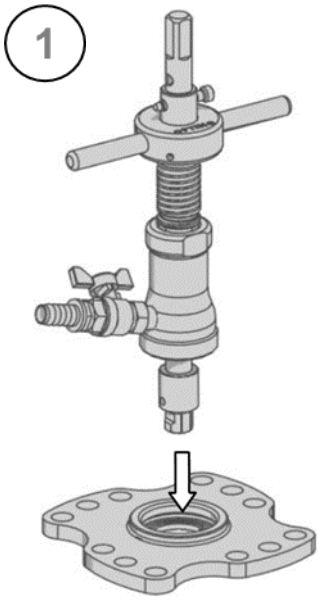
Design Features

- Suitable for drilling: Ductile Iron, Fibre Cement, PE & PVC-O pipes
- Maximum pressure 16bar
- Temperature range 0°C to 100°C
- Fitted with tightening O-ring seals and self-lubricating bearings
- Manufactured with materials and finishes of the highest quality
- Drain tap and hose to reduce debris from entering the pipe supply
- Designed for durable and efficient functionality
- Manual operation using supplied ratchet spanner
- Requires minimal maintenance
- Compact size
- Kits are supplied in a lightweight tool bag for portability and protection of the equipment

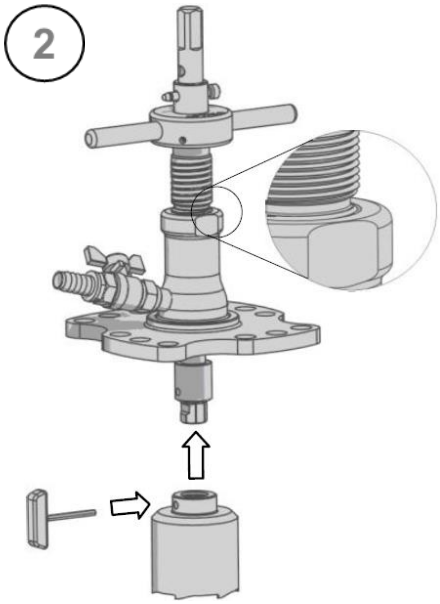
BEFORE COMMENCING ANY WORK – READ ALL WARNINGS, INSTRUCTIONS & MAINTENANCE

The information contained within this document is correct at date of issue. Version No: 2 Date of Issue 13/09/2023

Graphical Instructions

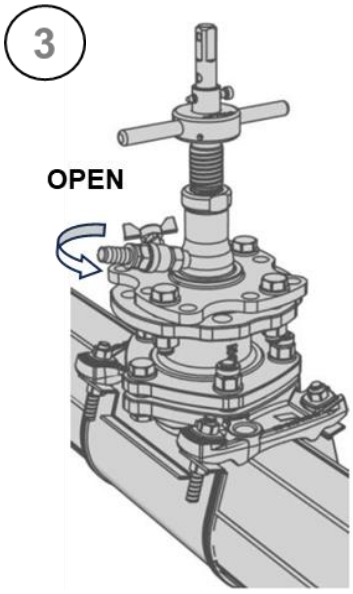


Thread drilling equipment onto flange

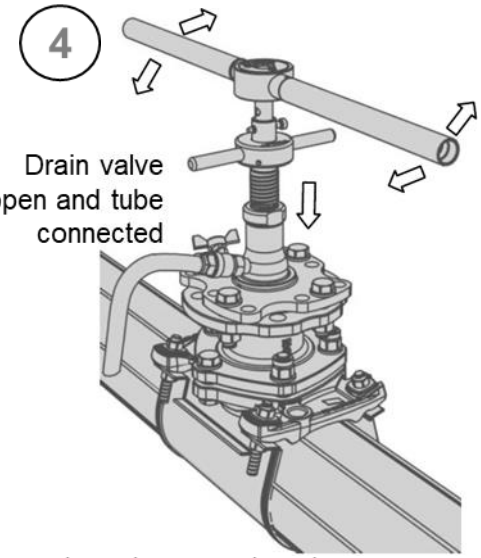


Wind back shaft to expose the thread marker as shown above and attach appropriate hole saw and fix in place with stud

IMPORTANT: Refer to kit contents diagram (page 7 or 8) for correct setup that will vary depending on pipe substrate and size of hole being cut

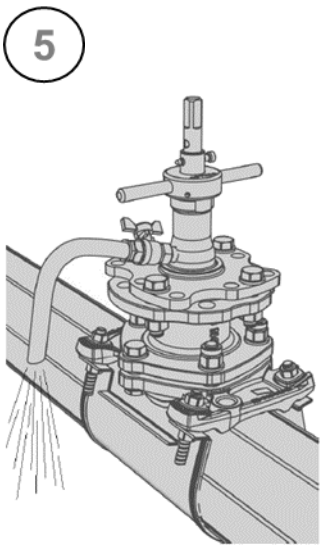


Attach drilling equipment to saddle, before drilling make sure shaft travel will be sufficient to safely complete the task, open drain valve and connect suitable tube

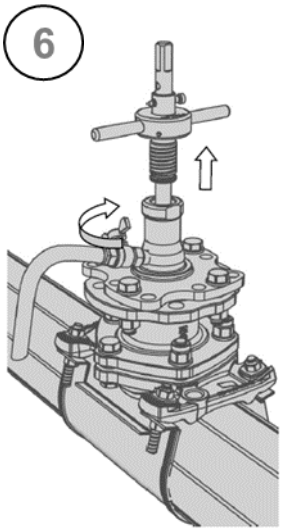


Attach ratchet wrench and rotate to perform cutting operation, pressure is applied by lowering the shaft onto the surface using the thread of the equipment

IMPORTANT: Read maintenance section in full for detailed guidelines to prolong the service life of equipment



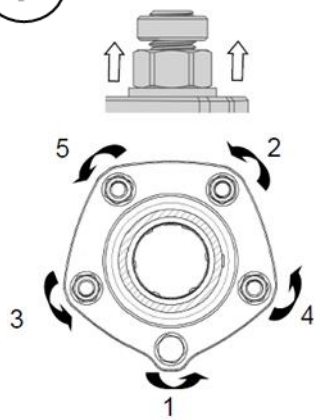
Drilling operation is completed



Shut-off drain valve and raise the shaft to its higher position by unscrewing

 Version No: 2 Date of Issue 13/09/2023

7



IMPORTANT: Gradually loosen bolts in the sequence as shown in the image above, to ensure seal remains seated correctly only partially loosen bolts and work around the sequence multiple times

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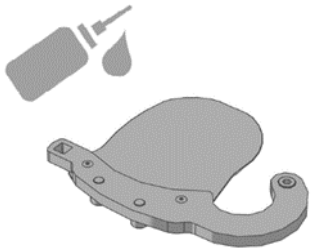

Apply lubricant suitable for potable water to surface of shut off blade

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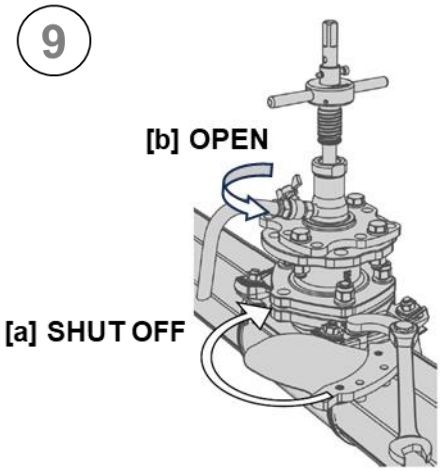
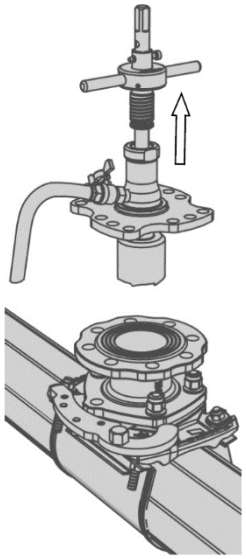


[a] Insert shut off blade to saddle pivot and shut off saddle supply, to ease removal of drilling equipment [b] open valve to reduce pressure inside of drilling chamber

10



Remove drilling equipment

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Tee connection, complete suitable connection as appropriate

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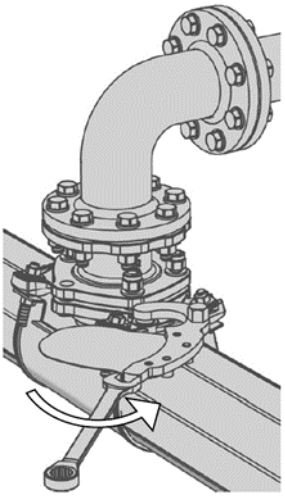

Remove shut off blade from saddle

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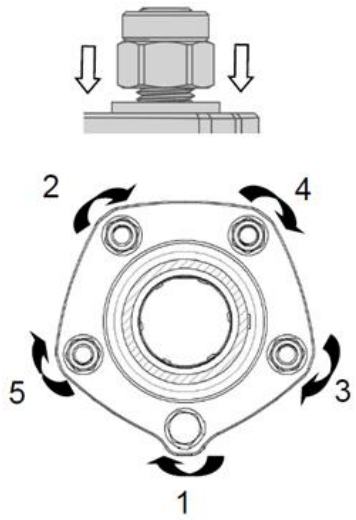
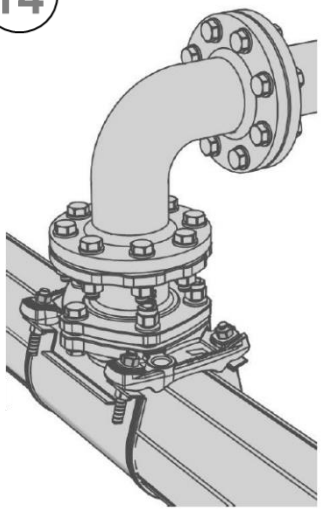


IMPORTANT: Gradually tighten bolts in the sequence as shown in the image above, to ensure seal remains seated correctly only partially tighten bolts and work around the sequence multiple times

14



Perform inspection and pressure checks to ensure a successful connection has been achieved

WARNINGS

THE USER IS OBLIGED TO KEEP THE INSTRUCTIONS AVAILABLE FOR PERSONNEL RESPONSIBLE FOR THE USE AND MAINTENANCE OF THE EQUIPMENT

THE INSTRUCTIONS ARE AN INTEGRAL PART OF THE EQUIPMENT AND SHOULD BE AVAILABLE FOR REFERENCE FOR THE ENTIRE USE OF THE EQUIPMENT LIFECYCLE

THE MANUFACTURER'S LIABILITY IS LIMITED TO THE CORRECT USE OF THE EQUIPMENT WITHIN THE LIMITS INDICATED IN THESE INSTRUCTIONS

DRILLING EQUIPMENT IS INTENDED FOR PROFESSIONAL USE ONLY.
SEEK RELEVANT HEALTH AND SAFETY PROCEDURES TO ENSURE APPROPRIATE CONSIDERATIONS AND OBLIGATIONS HAVE BEEN MET

THE LUBRICATION USED MUST BE SUITABLE FOR USE WITH POTABLE WATER WHERE APPROPRIATE

CASCADE / WOLSELEY DO NOT ACCEPT RESPONSIBILITY FOR INJURY TO PEOPLE, DAMAGE TO PROPERTY, CAUSED BY IMPROPER USE OF THE EQUIPMENT OR NOT IN ACCORDANCE WITH THE INSTRUCTIONS

IT IS THE RESPONSIBILITY OF THE USER TO MAKE SURE THE CONNECTION IS SECURE, DRILLING EQUIPMENT IS STABLE, THE PIPE / METHOD OF ANCHORING IS SUITABLE AND ADEQUATELY SUPPORTED DURING THE DRILLING OPERATION

WASTE MATERIAL PRODUCED FROM DRILLING OPERATIONS SHOULD BE DISPOSED OF IN ACCORDANCE WITH LOCAL ENVIRONMENTAL REGULATIONS. CASCADE / WOLSELEY DO NOT ACCEPT RESPONSIBILITY FOR CONTAMINATION FROM DRILLING OPERATIONS ENTERING INTO THE SUPPLY

DO NOT STAND OVER, OR COVER THE DRILL WITH ANY PART OF YOUR BODY WHEN DRILLING UNDER PRESSURE

ALWAYS CHECK THAT THERE IS SUFFICIENT SHAFT TRAVEL AND HOLE SAW DEPTH TO COMPLETE THE TASK BEFORE DRILLING PIPE SAFELY

USE CAUTION WHEN LIFTING AND MOVING

IT IS THE RESPONSIBILITY OF THE USER TO ENSURE THAT APPROPRIATE CONSIDERATION OF ANY LIQUID OR HOT LIQUID IS MANAGED APPROPRIATELY, AND SEEK RELEVANT HEALTH AND SAFETY PROCEDURES TO ENSURE APPROPRIATE CONSIDERATIONS AND OBLIGATIONS HAVE BEEN MET

Transport & Handling

The transportation must be carried out by appropriate means.
The equipment is protected with the supplied bag to offer protection during transport.
To avoid equipment damage keep the bag in an upright position.

DURING WORK OPERATIONS IT IS RECOMMENDED YOU USE THE REQUIRED PPE:

PROTECTIVE GLOVES (HAND PROTECTION)
EN 388 - PROTECTIVE GLOVES AGAINST MECHANICAL RISKS
EN 21420 - PROTECTIVE GLOVES - GENERAL REQUIREMENTS AND TEST METHODS

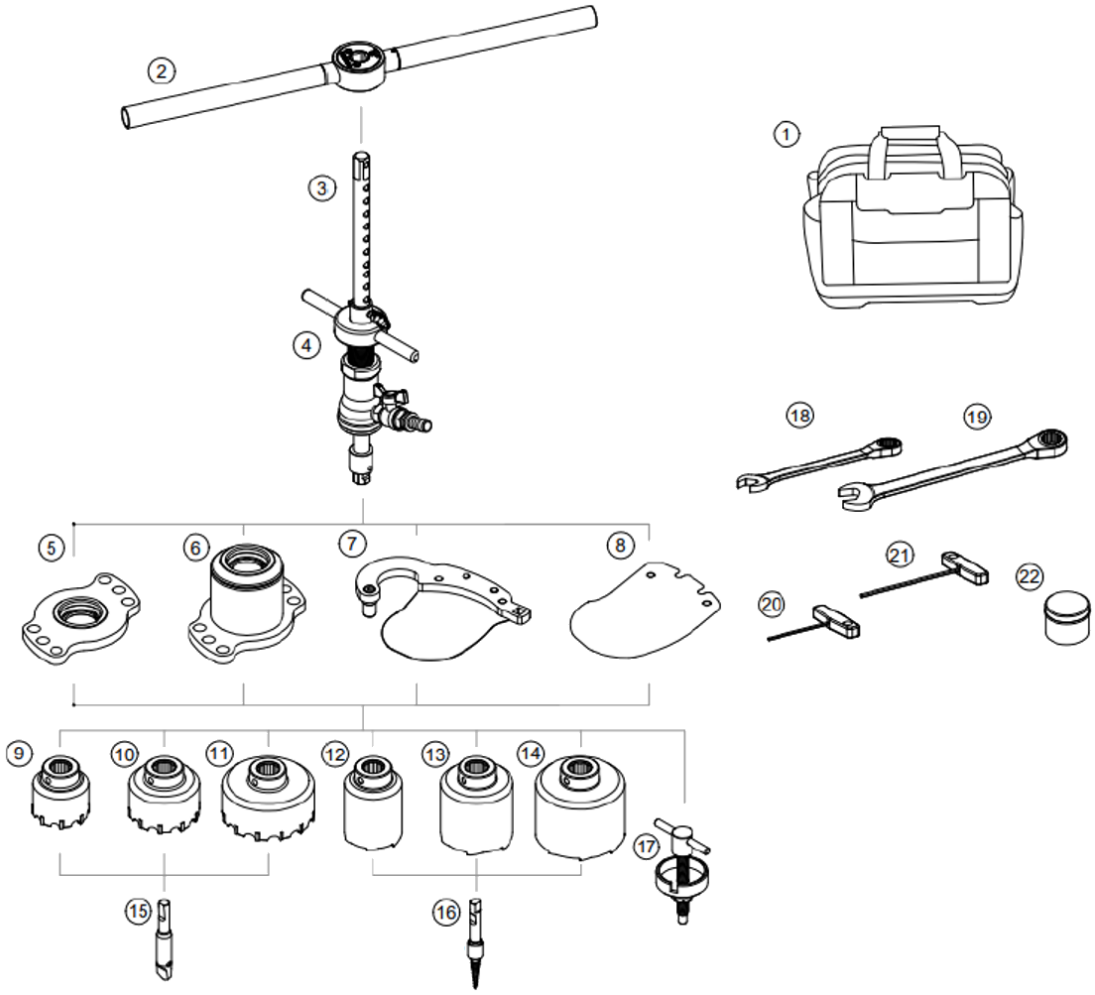
SAFETY SHOES (FOOT PROTECTION)
EN 20345 - PERSONAL PROTECTIVE EQUIPMENT - SAFETY FOOTWEAR

PROTECTIVE SUIT (BODY PROTECTION)
EN 13688 - PROTECTIVE CLOTHING - GENERAL REQUIREMENTS
EN 510 - SPECIFICATION FOR PROTECTIVE CLOTHING FOR USE WHERE THERE IS A RISK OF ENTANGLEMENT WITH MOVING PARTS

PROTECTIVE HELMET (HEAD PROTECTION)
EN 397 - INDUSTRIAL SAFETY HELMETS

EYE PROTECTION
SAFTEY GLASSES OR GOOGLES

Kit Contents - BF1912 / Q-TEE Drill Kit DN65 - DN100 + VALVE



Item	Description	Quantity	Function
1	Tool bag	1	Keeping all components together and protected
2	Ratchet Wrench	1	Actuating the device shaft manually
3	CL20 Shaft	1	Drilling through - Slimline and hot flanged saddles, DN65, 80 and 100 Slimline saddles plus F4 and F5 gate valve
4	"Classic" Tapping Device	1	To be used with Shaft CL20 for saddle installation
5	Flanged-Adapter	1	Fitting drilling device into hot tapping saddles. Sizes: DN65, 80 and 100
6	Bell-Adapter	1	Drilling under pressure through a gate valve. Sizes: DN65, 80 and 100
7	DN65/80 Shut-off Blade	1	Shutting off water flow in DN65 and DN80 saddles
8	DN100 Blade	1	To replace DN65 and DN80 blade when installing DN100 saddles
9	2½" DI/FC Hole Cutter DN65	1	Drilling iron and fibre cement pipes
10	3" DI/FC Hole Cutter DN80	1	
11	4" DI/FC Hole Cutter DN100	1	
12	2½" PE/PVC-O Hole Cutter DN65	1	Drilling PE and PVC-O pipes
13	3" PE/PVC-O Hole Cutter DN80	1	
14	4" PE/PVC-O Hole Cutter DN100	1	
15	Ø14 (DI/FC) Centre Drill	1	To facilitate the drilling and retain the disk in 2½", 3" & 4" DI/FC cutters
16	Ø10 (PVC-O/PE) Retaining Screw	1	Preventing 2½", 3", 4" PVC-O and "size on size" PE disks fall into the pipe
17	2½"-4" Extractor (PE/PVC-O)	1	Ejecting the PE disc inside the PE/PVC-O hole cutters from 2½" to 4"
18	19 mm Ring Ratchet Spanner	1	Tightening the nuts M.12 of the straps
19	24 mm Ring Ratchet Spanner	1	Loosening and tightening the nuts of the flanged saddles
20	3 mm T-Handle Hex Key	1	Tightening the shaft studs and PE/PVC-O cutter studs
21	4 mm T-Handle Hex Key	1	Tightening the shaft studs and PE/PVC-O cutter studs

22	Spare Part Box (flanged saddles)	1	1 Pin Shaft, 2 O-rings 21x3, 4 Studs DIN913 A2 M8x10
23	2m long drain tube (no image above)	1	Drain tube for draining swarf and releasing pressure

Maintenance

Drilling Equipment

1. After each working day it is important to clean and dry the components of the drilling equipment, removing the shaft to clean and lightly lubricate, as well as the thread between the body and the threaded section

2. To lubricate the shaft and the internal O-rings, use lithium or silicone grease, avoid the use of greases with graphite or molybdenum sulphide

3. Although all components are made of hardened steel, they must be treated with care to avoid damage

4. Due to prolonged use, the O-ring inside the body of the drilling equipment wears out and loses its sealing properties, it must be replaced with a new one, either from those contained in the Spare Parts Box, or by purchasing a new one:

» O-ring material: NBR rubber, hardness 70° Shore A
» Dimensions of the O-ring of the QTEE: OR 21x3mm

5. In the event of loss of the shaft stud used to hold the hole cutters, it must be replaced with a new one, either from the ones contained in the Spare Parts Box, or by purchasing it. The stud type, material and dimensions are as follows:

» For Classic shafts with 15mm octagonal: DIN 913 – A2 – M.6x10
» For Classic shafts with 20mm octagonal: DIN 913 – A2 – M.8x12

Adapters: Threaded and flanged

1. After each use adaptors must be carefully cleaned and dried

2. Avoid damaging adaptors, especially the threads

3. To prolong service life of the adapters carefully remove O-rings periodically to clean and dry before reinstalling with care

4. Due to prolonged use, the O-rings will require replacement, they must be replaced with a new one of the same characteristics:
   - » Material: NBR rubber, hardness 70° Shore A
   - » Dimensions of the upper O-ring: 47x3 (on all adapters)
   - » Dimensions of the lower O-rings:
     - ¾” thread: OR 23x3,5
     - 1” thread: OR 29x3,5
     - 1¼” thread: OR 37x3,5
     - 1½” thread: OR 44x3,5
     - 2” thread: OR 55x3,5
     - Flanged adapter (DN65, 80 y 100): OR 92x7
     - Flanged adapter (DN150): OR 155,6x6,99
     - Bell adapter (DN65, 80 & 100): OR 100x7

Drill Bits and DI/FC Hole Cutters

1. Must be carefully cleaned and dried after each use

2. The cutting edge of the hole cutters must be handled carefully so as to avoid injury or damaging the hole cutters

3. DI/FC hole cutters must be treated carefully to avoiding forcing them during operation, to avoid jamming of the hole cutter care must be taken not to excessively advance the hole cutter or intermittent cutting caused by the curvature of the tube. If a jam occurs the hole cutter must be raised by unscrewing the advance screw before carefully resuming cutting.

4. Appropriate use and treatment of the drill bits and hole cutters will have an impact on the service life, excessive force can cause the tungsten carbide inserts to break and will significantly shorten the service life of the cutter

5. In case of loss of the studs, it must be replaced by a new one, either from the ones contained in the Spare Parts Box, or by purchasing a replacement. Stud type, material and dimensions are as follows:

» 1" and 1¼" drill bits: DIN 913 – A2 – M.6x6
» 1½" and 2" hole cutters: DIN 913 – A2 – M.6x12
» 2½", 3", 4" and 6" hole cutters: DIN 913 – A2 – M.8x10

PE/PVC Hole Cutters

1. Must be carefully cleaned and dried after each use

2. The cutting edge of the hole cutters must be handled carefully so as to avoid injury or damaging the hole cutters

3. After drilling PE (polyethylene) pipes, the extractor tool must be used to force the PE plug out of the inside of the hole cutter

4. For optimal use, we recommend lubricating the outside of PE hole cutter, especially those larger than 2½", lubricant used must be approved for use with potable drinking water

5. When drilling PVC (polyvinyl chloride) pipes, the retaining screw must be used so that the PVC disc is fixed to the crown, preventing it from contaminating the pipe

6. In case of loss of the studs, it must be replaced by a new one, either from the ones contained in the Spare Parts Box, or by purchasing a replacement. Stud type, material and dimensions are as follows:

» 1" and 1¼" hole cutters: DIN 913 – A2 – M.6x6
» 1½" and 2" hole cutters: DIN 913 – A2 – M.6x12
» 2½", 3", 4" and 6" hole cutters: DIN 913 – A2 – M.8x10

Shut-Off Blades

1. Check and retighten screws as required if they loosen after prolonged use

2. The shut-off blades are made of hardened stainless steel. However, they should be treated with care to avoid knocks, especially on the edge of the blade

Warranty

2 Years from date of purchase. Proof of purchased required. Warranty is only valid for manufacturing defects and under the following conditions:

- The equipment has been solely used for the application described in the instructions
- The maintenance of the equipment has taken place in accordance with the instructions

The warranty does not include cover for consumable or serviceable materials and fluids, e.g. lubricant, hole saws or 0-rings.

Contact your local Branch for After Sales Support or alternatively Cascade using the details below:

Telephone Number: 01424 777102
Email Address: aftersalescascade@wolseley.co.uk