

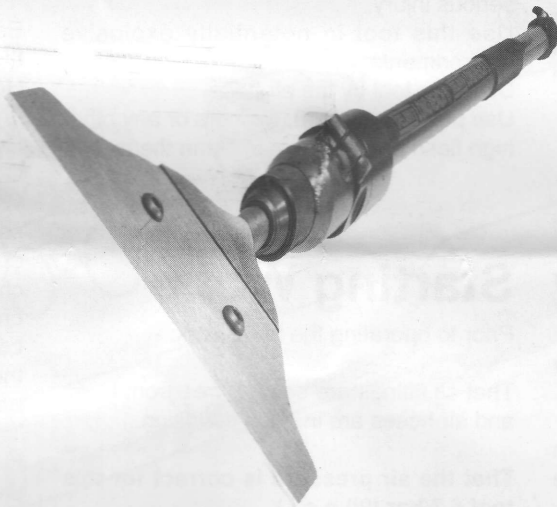


TRELAWNY

SURFACE PREPARATION TECHNOLOGY



**LONG REACH
SCALER**



**OPERATION &
MAINTENANCE**



THESE TOOLS ARE FOR PROFESSIONAL USE ONLY

OPERATION

General Information

Before operating the Long Reach Scaler this manual must be read and understood by the operator, if in any doubt ask your supervisor before using this equipment. Local safety regulations must be followed at all times. Failure to follow these instructions could result in damage to the Scaler and/or personal injury.

Trelawny Surface Preparation Technology disclaims all responsibility for damage to persons or objects arising as a consequence of incorrect handling of the tool, failure to inspect the tool for damage or other faults that may influence the operation prior to starting work, or failure to follow the safety regulations listed or applicable to the job site.

The tool is primarily designed to remove floor coatings, rust, general floor soiling, carpet tiles or concrete spillage and can be used both indoors and out.

Air Supply

The compressed air must be free from water and dirt. The installation of a filter/regulator/lubricator air preparation set (with moisture trap) adjacent to the tool is **strongly recommended**.

Always clear the air hose before connection to the tool. Ensure that no moisture (condensation) is present in the air hose.

Ensure that a minimum 10mm (3/8") bore air hose is used and that all couplings are secure, leak free and in good condition.

Limit the length of air hose to 10M (33ft). Where extra length is necessary, for each additional 15M (50ft) of air hose used, the pressure drop is approximately 0.16 bar at 6.9 bar (3psi at 100psi).

Correct operating pressure is 6.3 bar (90 p.s.i.). Air consumption is approximately 4.5cfm.

Do not let the operating pressure fall below 5.5 bar (80p.s.i.) or rise above 6.9 bar (100 p.s.i.). The compressor must be able to supply a minimum of 2.83 L/s (6cfm)

In particularly cold temperatures it is recommended that a proprietary anti-freeze lubricating oil is used.

Safety

Always, read instructions first before use.

Do

Store this tool in a secure and dry environment.

Keep hands and clothing away from moving parts.

Be aware that the tool can create dust and flying debris.

Be aware of others working around you.

Ensure that this tool is lubricated **daily**.

Wear Personal Protective Equipment including safety goggles, footwear, ear defenders and gloves. In some environments it will be necessary to wear facemasks or breathing apparatus.

Always observe safe-working practices at all times.

Do not

Allow the tool to run unattended.

Use the Scaler as a lever.

Modify this tool in any way, as this will invalidate the warranty and could lead to serious injury.

Use this tool in potentially explosive environments.

Drag this tool by the air hose.

Use petrol (gasoline), thinners or any other high flash point solvent to clean the tool.

Starting Work

Prior to operating the tool check: -

That all fittings are secure, free from leaks and air hoses are in good condition.

That the air pressure is correct for this tool 6.3 bar (90 p.s.i.).

Put a few drops of a recommended lubricant into the air inlet of the tool.

To operate the tool, pull the throttle lever towards the handle with the chisel in contact with the surface to be prepared. To switch off simply release the throttle lever.

Warning! This tool will run on for a few seconds after switching off, It is recommend that this tool remain in contact with the work surface for a few seconds until the air in the tube of the cover assembly is exhausted.

Gloves and personal protective equipment **must** be worn when using this tool. Care must be taken to avoid damaging or tripping over the air hose.

Maintain contact with the work surface with sufficient pressure only to keep the tool from bouncing off. Excessive pressure can prevent the tool from working to its full capacity. Handled correctly the Long Reach Scaler will work quickly and efficiently.

Excessive operator pressure will not improve the tool efficiency but will cause premature tool failure and operator fatigue.

Do not use the Scaler as a lever, if the Chisel becomes embedded in the material being removed, withdraw and try again.

Never allow the tool to run continuously whilst not in contact with the surface being prepared.

Chisels

Various sizes of chisels are available. See Parts List for details.

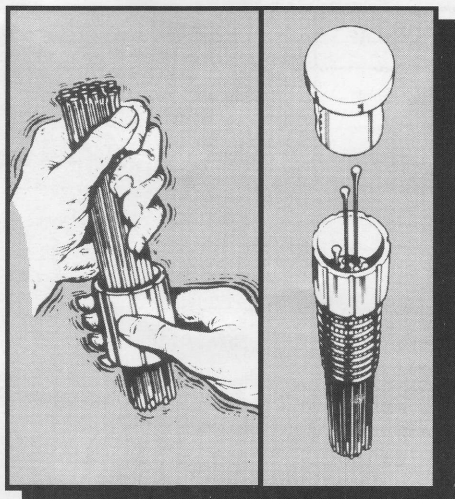
Fitting the Chisel Holder

Before fitting the Chisel Holder, disconnect the tool from the air supply. To fit the Chisel Holder ensure the pinch bolt on the holder is free, screw the holder fully on to the Cylinder. Turn the knurled collar on the Chisel Holder until the retaining ball is fully visible, insert the chisel into the holder and select the nearest position to align the blade of the chisel with the throttle lever. If the chisel does not line up, it may require the chisel holder to be unscrewed slightly. Locate the shank on the chisel and position the rebate on the shank with the retaining ball and turn the collar half a turn to lock. Tighten the pinch bolt using a 6mm AF Allen Key. To release the chisel reverse the above procedure

Fitting the Needle Scaling Attachment

Before fitting the Needle Scaling Attachment, disconnect the air supply to the tool. Assemble the parts, Anvil (24), Needle Holder (25), Needles (26), Spring (27) as shown on the service layout and place inside the Intermediate Tube (28), thread this tube assembly onto the Cylinder (10) and tighten Cap Head Screw (30), fit Front Tube (29) onto the Intermediate Tube (28) until 25mm (1") of needle length protrudes from the Front Tube (29) and tighten Cap Head Screw (30). When changing take care to note how all parts fit together within the Intermediate Tube (28) as incorrect assembly of these parts will result in damage to the tool. As needles wear adjust front tube so that 25mm (1") of needles is always protruding.

MAINTENANCE



Hold the needles loosely and shake the holder, needles will fall into location holes

The correct position of parts when changing needles

Maintenance must only be carried out by a competent person, in a suitably equipped workshop.

Disconnect the tool from the air supply before carrying out any of the following operations.

Clean all debris from the exterior of the tool.

Piston and Cylinder Removal

Remove the Chisel Holder/Needle Scaling Attachment as described above. Clamp the Cylinder firmly in a vice using the flats provided. Using the spanner flats provided and a suitable wrench, unscrew the cover from the cylinder. This may need some extra effort initially to break the bond, unscrew until free. With the cylinder free of the Cover Assembly, the piston can be pushed out of the cylinder. With the two parts separated, check the piston and cylinder for wear or damage. Remove the two 'O'Rings on the cylinder.

Valve Body Removal

Clamp the Valve Body firmly in a vice using the flats provided and with the Throttle Lever uppermost. Using a 3mm diameter pin punch, remove the throttle lever pin, and then remove the throttle lever. Rotate the tool 180 degrees in the vice to access the valve. Unscrew the Valve Cap using a Screwdriver, check the Valve Cap 'O'Ring,

remove the spring, push out the Valve Stem and remove the valve seat 'O'Ring. Check the valve and 'O'Ring for wear.

Assembly

Before any assembly takes place, ensure all parts are clean and are coated in a thin film of recommended air tool lubricant. It is strongly recommended that all 'O'Rings and worn parts are replaced using genuine Trelawny spares.

Valve Body Assembly

Clamp the Valve Body firmly in a vice using the flats provided, insert Valve Stem 'O'Ring into Valve Body, followed by the Valve stem, Spring, then the Valve Cap complete with its 'O'Ring, tighten the Valve Cap with a Screwdriver. Rotate assembly 180 degrees in vice. Using a 3mm diameter pin punch locate and align the Throttle Lever in position, then drive in the Throttle Lever pin into the Lever pin location.

Piston and Cylinder Assembly

Fit new 'O'Rings to the Cylinder. Lubricate the Piston and Cylinder bore, push the Piston into the Cylinder bore. Ensure that the threads on the cylinder are clean and dry, screw the cylinder into the cover and screw in until hand tight. Clamp the Cylinder firmly in a vice using the flats provided. Using the spanner flats provided and a suitable wrench, tighten the cover onto the Cylinder and torque to 100 lbs/ft. Re-fit Chisel Holder/Needle Scaling Attachment as described above.

Lubrication

Oil the tool daily before use. Put a few drops of one of the following zinc free air tool lubricants through the air inlet.

SHELL	S22 or R10
CASTROL	Hyspin ZZ32

Cleaning

At intervals of no more than 100 hours or if operation becomes unproductive and the piston shows signs of sticking, dismantle and clean with a proprietary degreasing fluid.

Immediately after cleaning, thoroughly oil the tool with one of the recommended lubricants.

Disposal

When the tool and its accessories are taken out of service for disposal, it is recommended that:-

-They are rendered unusable to prevent improper re-use

-The tool is to be dismantled into component form, segregated according to material composition and disposed of using waste recycling processes specified by local regulations.

NOTE:

Flammable material such as plastic, rubber or composite materials must NOT be incinerated but should be subject to normal industrial waste disposal processes.

Noise & Vibration

Noise level tested in accordance with PN8NTC1.2

Vibration value tested in accordance with BS EN ISO8662 parts 1 & 14.

Declared values were obtained under laboratory conditions in compliance with the stated standards and do not necessarily represent values obtainable in service.

UK employers should be aware of their duties under the Health & Safety at Work act 1974 and the guidance given regarding hand arm vibration in the HSE publication HS(G)88.

Employers in the rest of the world should be aware of their duties and responsibilities as specified in local regulations.

The employer is responsible for assessing the risk to the employee under actual working conditions.

Machinery Directive Information

This machine has been designed and produced in accordance with the following directives – 98/37/EC Machinery Directive. If your company has a problem or would like to discuss the possibility of an improvement being made to the machine, then please do not hesitate to contact us. Your comments are both important and appreciated.

SPECIFICATION

MODEL TYPE	LR2	LR4	LR4 Lite	LR5	LR5 Lite	LR6	LR6 Lite
Piston Diameter	28.6mm	28.6mm	28.6mm	28.6mm	28.6mm	28.6mm	28.6mm
Piston Stroke	39mm	39mm	39mm	39mm	39mm	39mm	39mm
Blows per Minute	2200	2200	2200	2200	2200	2200	2200
Air Consumption	2.1 lps (4.5cfm)	2.1 lps (4.5cfm)	2.1 lps (4.5cfm)	2.1 lps (4.5cfm)	2.1 lps (4.5cfm)	2.1 lps (4.5cfm)	2.1 lps (4.5cfm)
Overall Length	740mm (29")	1100mm (43")	1100mm (43")	1400mm (55")	1400mm (55")	1710mm (67")	1710mm (67")
Net Weight	3.7kg (8.2 lbs)	4.9kg (10.8 lbs)	3.0kg (6.6 lbs)	5.5kg (12.2 lbs)	3.4kg (7.5 lbs)	6.1kg (13.5 lbs)	3.8kg (8.4 lbs)
Noise Level LpA db(A) - Chisel Scaler	84.3	83.5	88.8	85.9	84.2	84.3	84.2
Noise Level LpA db(A) - Needle Scaler	103.1	103.5	104.7	103	104.5	103.5	104.5
Noise Level LwA db (A) - Chisel Scaler	-	101.8	-	98.9	-	-	-
Noise Level LwA db(A) - Needle Scaler	116.1	117.7	116.5	116	117.5	116.5	117.5
Vibration Level AEQ - Chisel Scaler H1*	4.2	8.9	13.0	11.4	10.3	7.8	10.4
Vibration Level AEQ - Chisel Scaler H2*	5.5	9.5	13.2	10.2	10.9	9.8	11.6
Vibration Level AEQ - Needle Scaler H1*	15.4	11.7	25.1	12.3	19.3	12.3	16.2
Vibration Level AEQ - Needle Scaler H2*	12.9	12.2	19.3	11.9	18.8	12.2	18.9

H1, Indicates test taken from the primary hand grip location
H2, Indicates test taken from the secondary hand grip location
*All vibration values k = ± 40% (k = factor of uncertainty)

Vibration values for both hand positions (for tools requiring two handed operation)

The values for the first hand position are in all cases taken in a position on the grip approximately half way along the trigger (one hand has to grip the operating trigger for the tool to operate). The values for the second hand position are taken either on the second hand grip, or when a second grip is not provided, where we consider the operator would normally grip the tool. (At present the Standards are being revised and there is no defined position – our experience is that operators use a hand position that is comfortable and provides good control of the tool and we have used such a position in our tests).

All Trelawny tools are vibration tested either in accordance with BS EN ISO 8662 parts 1 & 14:1993 & 1997 (respectively) or, where this Standard is not applicable, in accordance with BS EN ISO 5349-2:2000.

All our quoted vibration values are 'averaged' tri-axial values



INVESTOR IN PEOPLE



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ADDENDUM

Long Reach Range

Revised Vibration Figures

Trelawny Surface Preparation Technology Ltd operates a policy of continuous product development and refinement and therefore reserves the right to change technical specifications and product designs without giving prior notice.

Due to small changes in the manufacture of the Long Reach Range the recorded vibration readings have changed slightly compared to those indicated in the operation & maintenance manual. The revised figures for those that have changed are shown in bold in the table below:

Model Type	LR2	LR4	LR4 Lite	LR5	LR5 Lite	LR6	LR6 Lite
Vibration Level AEQ - Chisel Scaler H1* (k)	4.	8.9	13.0	11.4	10.3	7.7	10.4
Vibration Level AEQ - Chisel Scaler H2* (k)	5.4	9.5	13.2	10.1	10.8	9.8	11.6
Vibration Level AEQ - Needle Scaler H1* (k)	15.3	11.7	25.1	12.3	19.3	12.5	16.2
Vibration Level AEQ - Needle Scaler H2* (k)	12.9	12.2	19.2	11.8	18.7	12.2	18.8

H1, Indicates test taken from the primary handgrip location.

H2, Indicates test taken from the secondary handgrip location.

* All vibration values $k = \pm 40\%$ (k = factor of uncertainty), which allows for variations in measurement and production. Vibration data figures are tri-axial, which gives the total vibration emission.

Risk of Hand Arm Injury

The vibration varies with the task, the operators grip and air pressure employed.

Trelawny tools are thoroughly tested under specified conditions in accordance with applicable internationally recognised standards. When a tool is used on site the conditions may not be the same as those used in our tests.

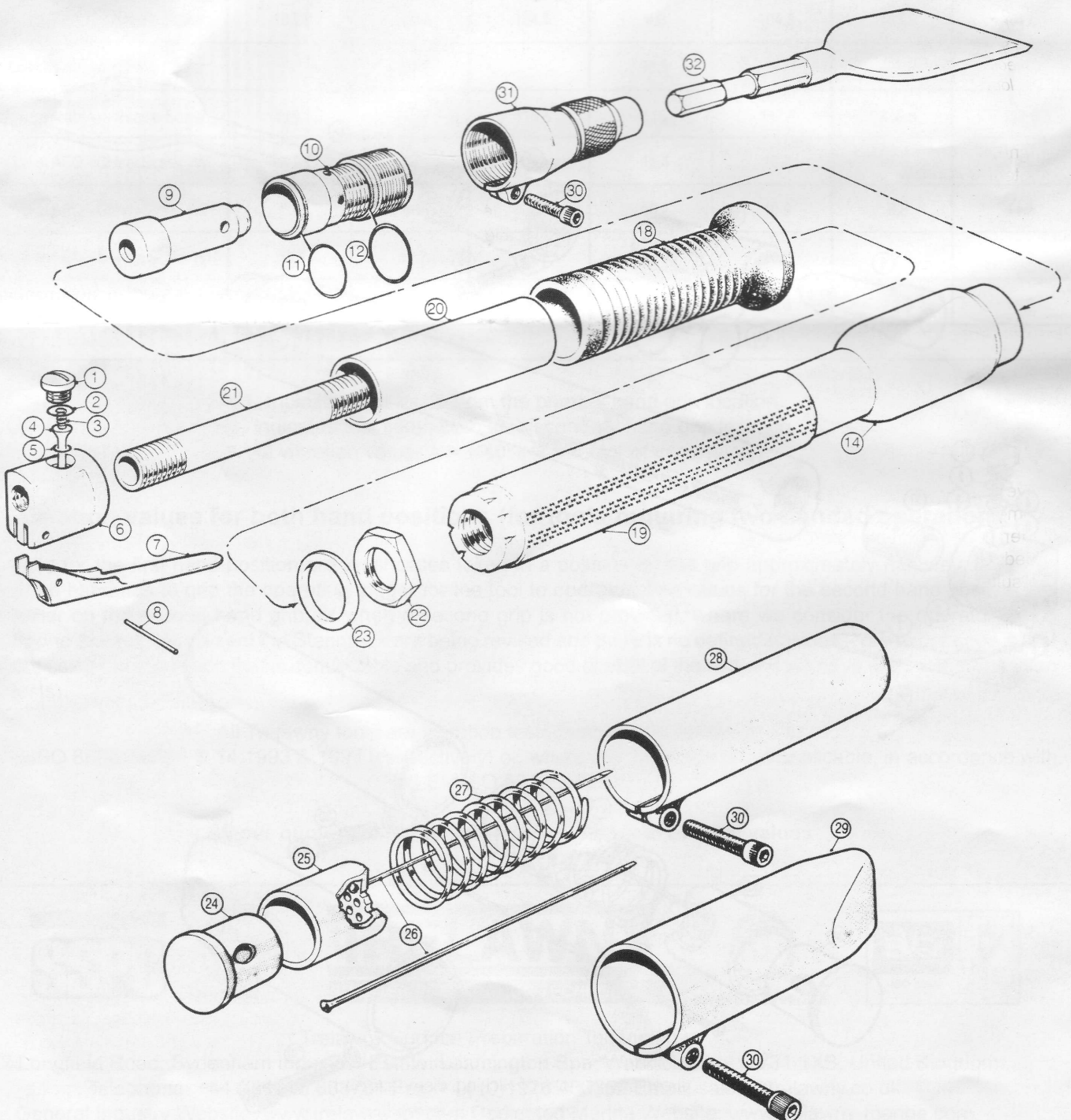
Carbon steel chisels are not intended for use in potentially explosive atmospheres. In such atmospheres, Beryllium Copper or Copper/Alloy Chisels are available. Contact Trelawny Surface Preparation Technology for advice before use.

6.1.05

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Part No. 735.3510

SERVICE LAYOUT - Standard Scaler

ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION	ITEM NO.	DESCRIPTION
1	Valve Cap	9	Piston	23	Sealing Washer
2	'O' Ring - Valve Cap	10	Cylinder	24	Anvil
3	Valve Spring	11	'O' Ring	25	Needle Holder
4	Valve Stem	12	'O' Ring	26	Needle Set
5	'O' Ring - Valve Seat	14	Cover Assembly - Steel	27	Compression Spring
6	Valve Body	18	Rubber Handle Grip	28	Intermediate Tube
6a	Valve Body Assembly (Comprises items 1-8)	19	Grip - Cover Assembly	29	Front Tube
7	Throttle Lever	20	Handle Tube	30	Cap Head Screw
8	Roll Pin	21	Centre Tube	31	Chisel/Scraper Holder
		22	Locknut	32	Chisel/Scraper





Novatek Corporation
 Pickering Creek Industrial Park, 155 Philips Road, Exton, PA. 19341

SPARE PARTS LIST

MODEL: Long Reach Scaler Standard & "LITE"

Ref No.	Part No.	Description
1	615.3021	Cap (Valve)
2	809.0139	'O' Ring (Valve Cap)
3	712.3022	Spring (Valve)
4	618.3022	Stem (Valve)
5	809.0089	'O' Ring (Valve Seat)
6	616.3521	Valve Body NPT
6a	423.3521	Valve Body Assembly (Comprises items 1 to 8 inclusive)
7	716.3021	Throttle Lever
8	813.0108	Roll Pin
9	612.3001	Piston
10	513.3101	Cylinder (Body)
11	809.0289	'O' Ring (Cylinder)-Small
12	809.0299	'O' Ring (Cylinder)-Large
14	425.3225	2Ft (610 mm) Cover Assembly - Standard Model
or	425.3425	4Ft (1220 mm) Cover Assembly - Standard Model
or	425.3498	4Ft (1220 mm) Cover Assembly - 'LITE' Model
or	425.3525	5Ft (1525 mm) Cover Assembly - Standard Model
or	425.3598	5Ft (1525 mm) Cover Assembly - 'LITE' Model
or	425.3625	6Ft (1830 mm) Cover Assembly - Standard Model
or	425.3698	6Ft (1830 mm) Cover Assembly - 'LITE' Model
18	717.3011	Grip Handle
19	717.3501	Grip Secondary
20	624.3001	Tube-Steel for Handle
21	623.3001	Centre Tube (Standard Model)
21	627.3598	Threaded Adaptor ('LITE' Model)
22	625.3001	Locknut-Steel for Handle
23	810.9000	Washer (Copper Sealing)
24	610.3001	Anvil
25	601.3003	Needle Holder 3mm
or	601.3002	Needle Holder 2mm
or	601.3004	Needle Holder 4mm
26	445.2010	2mm Flat Tip Needles Pack of 100
or	445.3040	3mm Flat Tip Needles Pack of 100
or	445.3120	3mm Chisel Tip Needles Pack of 100
or	445.3135	3mm Pointed Tip Needles Pack of 100
or	445.4010	4mm Flat Tip Needles Pack of 100
or	445.4025	4mm Chisel Tip Needles Pack of 100
or	445.4040	4mm Pointed Tip Needles Pack of 100
27	712.3001	Compression Spring
28	416.3132	Intermediate Tube
29	417.3032	Straight Front Tube
or	418.3032	Round Front Tube
30	806.0830	Cap Head Screw
31	419.3541	Chisel Holder [8TPI for 5/8" (16 mm) Hex. Shank Chisels/Scrapers]
32	705.1102	Chisel 5/8" (16 mm) Hex. Shank Steel Straight 8" x 4" (200mm x 100mm) Blade
or	705.2102	Chisel 5/8" (16 mm) Hex. Shank Steel Cranked 8" x 4" (200mm x 100mm) Blade