NOVATEK™
CORPORATION
...IN IT FOR THE LONG HAUL

# Needle & Chisel Scalers

## Operations & Maintenance

12NS100/12CS100
19NS100/19CS100
19NS120/19CS120
28NS120/19CS120
28NS120/19CS120
35NS100

www.Novatekco.com

BUILT IN USA
FROM GLOBAL MATERIALS

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**Specifications subject to changes without notice!**

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# OPERATION AND MAINTENANCE MANUAL FOR

## NEEDLE AND CHISEL SCALERS

**NOTICE**

**FOR PROFESSIONAL USE ONLY**

**WARNING**

**IMPORTANT SAFETY INFORMATION ENCLOSED.**
**READ AND UNDERSTAND THIS MANUAL BEFORE OPERATING THIS PRODUCT.**

**IT IS YOUR RESPONSIBILITY TO MAKE THIS SAFETY INFORMATION AVAILABLE TO OTHERS THAT WILL OPERATE THIS PRODUCT.**

**FAILURE TO OBSERVE THE FOLLOWING WARNING COULD RESULT IN INJURY.**

## PLACING TOOL IN SERVICE

- **Always install, operate, inspect and maintain this product in accordance with all applicable standards and regulations (local, state, country, federal, etc.).**
- **Compressed air models always use clean, dry air at 90 psi (6.19ar/620kPa) maximum air pressure at the inlet. Higher pressure may result in hazardous situations including excessive speed, rupture, or incorrect output torque or force.**
- **Electric models must always utilize proper gauge, and rated electrical cords with correct connections.**
- **Be sure all hoses and fittings are the correctly sized and secured.**
- **Ensure an accessible emergency shut off valve has been installed in the air or electrical supply line. Make others aware of its location.**
- **Do not use damaged, frayed, or deteriorated air hoses and fittings.**
- **Always use proper gauge electrical cords with correct connections. (When applicable.)**
- **Electric models must not use damaged, frayed, or deteriorated electrical cords and connections.**
- **Keep clear of whipping air hoses. Shut off the compressed air before approaching a whipping hose.**
- **Always turn off and disconnect the tool from its power supply before installing, removing or adjusting any accessory, or before performing any maintenance on the tool.**
- **Do not lubricate tools with flammable or volatile liquids such as kerosene, diesel or jet fuel. Use only recommended lubricants.**
- **Keep work area clean, uncluttered, ventilated and illuminated.**
- **Keep all electrical connections clear of water or other liquids. (When applicable.)**
- **Do not operate the machine while flammable or volatile liquids such as gasoline, diesel or jet fuel are present. Failure to do so can result in explosion. (When applicable.)**
- **Do not remove any labels. Replace any damaged label.**

## USING THE TOOL

- **Always wear protection when operating or performing maintenance on this tool.**
- **Always wear hearing protection when operating this tool.**
- **Always use Personal Protective Equipment appropriate to the tool used and material worked. This may include dust mask or other breathing apparatus, safety glasses, ear plugs, gloves, apron, safety shoes, hard hat and other equipment,**
- **Prevent exposure and breathing of harmful dust and particles created by power tool use:**
  - **Some dust created by power sanding, sawing, and grinding, drilling, and other construction activities contains chemicals known to cause cancer, birth defects or other reproductive harm. Some examples of these chemicals are:**
  - **Lead from lead based paints,**
  - **Crystalline silica from bricks and cement and other masonry products, and**
  - **Arsenic and chromium from chemically treated lumber**

  **Your risk from these exposures varies, depending on how often you do this type of work. To reduce your exposure to these chemicals: work in a well ventilated area, and work with approved safety equipment, such as those dust masks that are specially designed to filter out microscopic particles.**
- **Keep others a safe distance from your work area, or ensure they use appropriate Personal Protective Equipment.**
- **This tool is not designed for working in explosive environments, including those caused by fumes and dust, or near flammable materials.**

- **Electrically powered tools are not insulated against electric shock.**
- **Be aware of buried, hidden or other hazards in your work environment. Do not contact or damage cords, conduits, pipes, or hoses that may contain electrical wires, explosive gases or harmful liquids.**
- **Keep hands, loose clothing, long hair and jewelry away from working end of tool.**
- **Power tools can vibrate in use. Vibration, repetitive motions or uncomfortable positions may be harmful to your hands and arms. Stop using any tool if discomfort, tingling feeling or pain occurs. Seek medical advices before resuming use.**
- **Keep body stance balanced and firm. Do not overreach when operating this tool. Anticipate and be alert for sudden changes in motion, reaction torques, or forces during startup and operation.**
- **Tool and/or accessories may briefly continue their motion after throttle is released,**
- **To avoid accidental starting – ensure tool in "off" position before applying air pressure or connecting to electricity. Avoid throttle when carrying, and release throttle with loss of air or electricity.**
- **Ensure work pieces are secure. Use clamps or vises to hold work piece whenever possible.**
- **Do not carry or drag the tool by the hose or power cord.**
- **Do not use power tools when tired, or under the influence of medication, drugs, or alcohol.**
- **Never us a damaged or malfunctioning tool or accessory,**
- **Do not modify the tool, safety devices, or accessories.**
- **Do not use this tool for purposed other than those recommended.**
- **Use accessories recommended by Novatek Corp.**
- **Never operate a tool with an accessory unless it is properly installed and the tool is held firmly against the work,**
- **Always use a retainer, when furnished, in addition to proper barriers to protect persons in surrounding or lower areas from possible ejected accessories.**
- **When wearing gloves and operating models with inside trigger, always be sure that the gloves will not prevent the trigger from being released.**
- **Wear safety shoes, hard hat, safety goggles, gloves, dust mask and any other appropriate protective clothing while operating the tool.**
- **Do no indulge in horseplay. Distraction can cause accidents.**
- **Keep hands and fingers away from the throttle lever until it is time to operate the tool.**
- **Never rest the tool on your foot.**
- **Never point the tool at anyone.**
- **Compressed air is dangerous. Never point an air hose at yourself or others.**
- **Never blow clothes free of dust with compressed air.**
- **Be sure all hose connections are tight. A loose hose not only leaks but can come completely off the tool and while whipping under pressure, can injure the operator and other in the area. Attach safety cables to all hosed to prevent injury in case a hose is accidentally broken.**
- **Never disconnect a pressurized air hose. Always turn off the air supply and bleed the tool before disconnecting a hose.**
- **When applicable, the operator must keep limbs and body clear of the chisel. If a chisel breaks, the tool with the broken chisel projecting from the tool will suddenly surge forward.**
- **Do not ride the tool with one leg over the handle. Injury can result if the chisel breaks while riding the tool.**
- **Know what is underneath the material being worked. Be alert for hidden water, gas, sewer, telephone or electric lines.**
- **Use only proper cleaning solvents to clean parts. Use only cleaning solvents which meet current safety and health standards. Use cleaning solvents in a well ventilated area.**
- **Do not flush the tool or clean any parts with diesel fuel. Diesel fuel residue will ignite in the tool when the tool is operated, causing damage to internal parts. When using models with outside triggers or throttle levers, take care when setting the tool down to prevent accidental operation.**
- **Do not operate the tool with broken or damaged parts.**
- **Never start the tool when it is lying on the ground.**
- **This tool is not designed for working in explosive atmospheres.**

# SECTION I

## GENERAL

These instructions are for your protection and convenience. Please read them carefully since failure to follow the precautions could result in injury. Whenever using electric powered equipment, basic safety precautions should be followed.

If after reading this manual anything seems unclear, contact a **NOVATEK** authorized distributor or **NOVATEK** directly by dialing 1-866-563-7800.

# SECTION II

## PRIOR TO USE

1. Place three drops of oil into the air inlet using light machine oil.
2. The compressed air should be free from moisture and contamination. The installation of an air filter/dryer, pressure regulator and inline lubricator is strongly recommended. Tools operated without these air preparation components could void the warranty.
3. Ensure that 3/8" bore airline is used and that all couplings are tight and in good condition.
4. Limit the length of airline to 50ft. Where extra length is necessary, for each additional 50ft of airline, the pressure drop is approximately 4psi at 100 psi (0.19ar at 6.9bar).

**NOTE: Correct operating pressure is 90psi (6.19ar).**

# SECTION III

## CHANGING NEEDLES

1. Before changing or replacing needles, disconnect the air supply to the tool.
2. Loosen the cap head screw on the intermediate tube and remove the tube assembly with compression spring inside.

   **NOTE: Models 12/19/19PG are grip threads and 28PG/35 are screw threads.**
3. Take note of how all the parts within the intermediate tube fit together as incorrect assembly will result in damage to the tool when used.
4. Remove the anvil from the needle holder and change the needles. Ensure that the small diameter of the anvil fits inside the needle holder.
5. Place this cartridge into the intermediate tube, refit the tube assembly onto the body and tighten the Allen screw.
6. As needles wear, the front tube must be pulled on the intermediate tube so that approximately 1" of needle length protrudes from the front tube. To do this, loose the Allen screw, adjust the front tube and re-tighten.

## FITTING THE CHISEL HOLDER

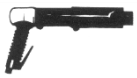
1. Before fitting the chisel holder, disconnect the air supply to the tool.
2. To fit the chisel holder, loosen the cap head screw on the intermediate tube and remove tubes complete with needles, needle holder, and anvil and compression spring.

**NOTE: Models 12/19/19PG are grip threads and 28PG/35 are screw threads.**

3. Fit the chisel holder onto the tool body or cylinder and tighten the cap head screw.
4. Turn the knurled collar until the retaining ball is visible, insert the selected chisel and locate the rebate on the ball. Give the collar half a turn to lock the chisel into the holder.

## SECTION IV

**PARTS BREAKDOWN**



| Description | 12<br>Part No. | 19<br>Part No. | 19PG<br>Part No. | 28PG<br>Part No. | 35<br>Part No. |
|---|---|---|---|---|---|
| Needle Scaler including Straight Front Tube and Chisel Tip Needles | 12NS100 | 19NS100 | 19NS120 | 28NS120 | 35NS100 |
| Chisel Scaler including 1/2" Square Chisel Holder and 3/4" Chisel | 12CS100 | 19CS100 | 19CS120 | 28CS120 | 35CS100 |
| Chisel Scaler 5/8" Hexagon Shank Chisel Holder | | | | 28CS130 | |
| Needle/Chisel Scaler Kit (1/2" Square Chisel Holder) | 12NS101 | 19NS101 | 19NS121 | 28NS121 | 35NS101 |
| Needle/Chisel Scaler Kit (5/8" Hex Chisel Holder) | | | | 28NS131 | |

**Needle Scaler Spares**

| Item No. | Description | 12<br>Part No. | 19<br>Part No. | 19PG<br>Part No. | 28PG<br>Part No. | 35<br>Part No. |
|---|---|---|---|---|---|---|
| 1 | Valve Cap | 28NS501 | 28NS501 | 28NS501 | 28NS501 | 28NS501 |
| 2 | Valve Cap 'O' Ring (Pack of 10) | 28NS502 | 28NS502 | 28NS502 | 28NS502 | 28NS502 |
| 3 | Valve Spring | 28NS503 | 28NS503 | 28NS503 | 28NS503 | 28NS503 |
| 4 | Valve Stem | 28NS504 | 28NS504 | 28NS504 | 28NS504 | 28NS504 |
| 5 | Valve Seat 'O' Ring (Pack of 10) | 28NS505 | 28NS505 | 28NS505 | 28NS505 | 28NS505 |
| 6 | Valve Body Assembly (comprises items 1-8) | 12NS506 | 19NS506 | 28NS506 | 28NS506 | 28NS506 |
| 7 | Throttle Lever | 28NS507 | 28NS507 | 28NS507 | 28NS507 | 28NS507 |
| 8 | Roll Pin (Pack of 10) | 28NS508 | 28NS508 | 28NS508 | 28NS508 | 28NS508 |
| 9 | Piston | 12NS509 | 19NS509 | 19NS509 | 28NS509 | 35NS509 |
| 10 | Cylinder | | | 19NS510 | 28NS510 | 35NS510 |
| 11 | 'O' Ring (Pack of 10) | | | 19NS517 | 28NS511 | |
| 12 | 'O' Ring (Pack of 10) | | | 19NS512 | 28NS512 | |
| 13 | Body | 12NS513 | 19NS513 | | | 35NS513 |
| 14 | Cover Assembly | | | 19NS514 | 28NS514 | |
| 15 | End Cap | | | | | 35NS515 |
| 17 | 'O' Ring (Pack of 10) | 19NS517 | 28NS512 | | | 28NS512 |
| 18 | Rubber Handle Grip | | | 28NS518P | 28NS518P | 28XP418 |
| 20 | Handle Tube | | | | | 28XP420 |
| 21 | Centre Tube | | | | | 28XP421 |
| 22 | Locknut | | | | | 28XP422 |
| 23 | Sealing Washer (Pack of 10) | | | | | 28NS523 |
| 24 | Anvil | 12NS524 | 19NS524 | 19NS524 | 28NS524 | 35NS524 |
| 25 | Needle Holder 2mm | 12NS525 | 11NS525 | 11NS525 | 28NS525 | |
| 25a | Needle Holder 3mm | 12NS526 | 19NS526 | 19NS526 | 28NS526 | 35NS525 |
| 25b | Needle Holder 4mm | | | | 28NS526C | 35NS526 |
| 27 | Spring - Compression | 12NS527 | 19NS527 | 19NS527 | 28NS527 | 35NS527 |
| 28 | Intermediate Tube (Includes Item 30) | 12NS528 | 19NS528 | 19NS528 | 28NS528 | 35NS528 |
| 29 | Straight Front Tube (Includes Item 30) | 12NS529 | 19NS529 | 19NS529 | 28NS529 | 35NS529 |
| 29a | Round Front Tube (Includes Item 30) | | | | | |
| 30 | Cap Head Screw (Pack of 10) | 12NS530 | 28NS530 | 28NS530 | 28NS530 | 35NS530 |
| 31 | Chisel Holder Assembly 1/2" Square (Includes Item 30) | 12NS531 | 19NS531 | 19NS531 | 28NS531S | 35NS531S |
| 31a | Chisel Holder Assembly 5/8" Hexagon (Includes Item 30) | | | | 28NS531H | |

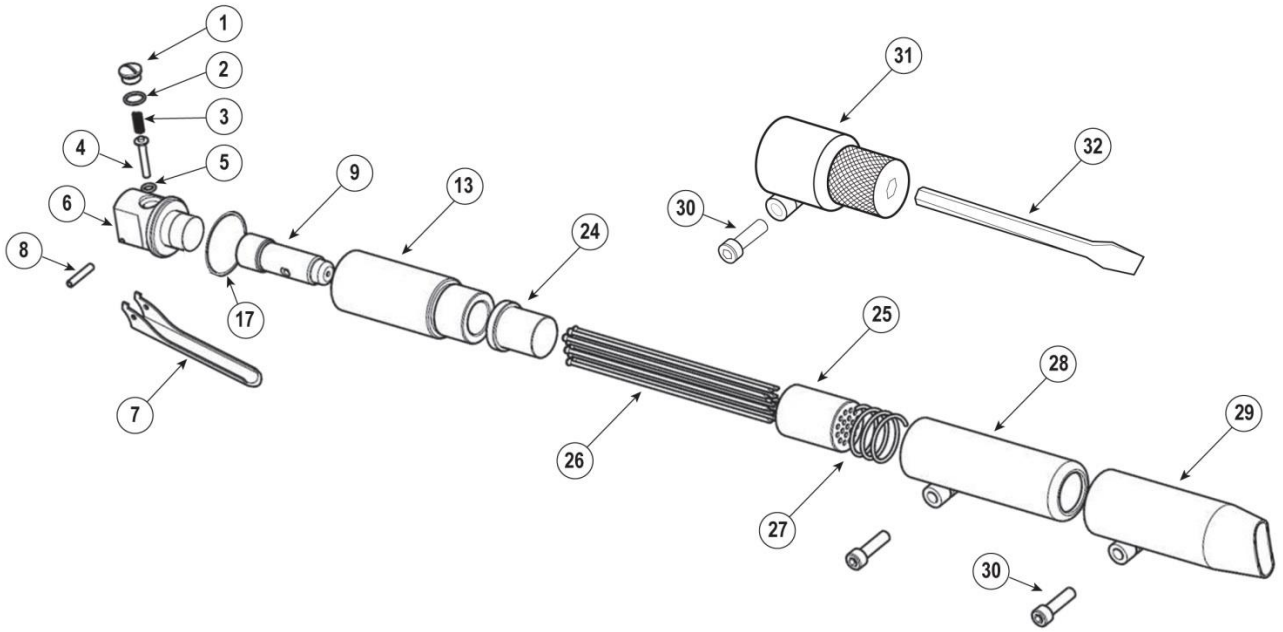
## NEEDLE SCALER CONSUMABLES

| | Description | Part No. |
|---|---|---|
| 26 | Pack of 100 2mm Needles (Flat Tip) | NPK2010 |
| 26a | Pack of 250 2mm Needles (Flat Tip) | NPK2015 |
| 26b | Pack of 500 2mm Needles (Flat Tip) | NPK2020 |
| 26c | Pack of 2000 2mm Needles (Flat Tip) **Bulk Case** | NB27FCS |
| 26d | Pack of 100 3mm Needles (Flat Tip) | NPK3040 |
| 26e | Pack of 250 3mm Needles (Flat Tip) | NPK3045 |
| 26f | Pack of 500 3mm Needles (Flat Tip) | NPK3050 |
| 26g | Pack of 1000 3mm Needles (Flat Tip) **Bulk Case** | NB37FCS |
| 26h | Pack of 100 3mm Needles (Chisel Tip) | NPK3120 |
| 26i | Pack of 250 3mm Needles (Chisel Tip) | NPK3125 |
| 26j | Pack of 500 3mm Needles (Chisel Tip) | NPK3130 |
| 26k | Pack of 1000 3mm Needles (Chisel Tip) **Bulk Case** | NB37CCS |
| 26p | Pack of 100 4mm Needles (Flat Tip) | NPK4010 |
| 26q | Pack of 250 4mm Needles (Flat Tip) | NPK4015 |
| 26r | Pack of 500 4mm Needles (Flat Tip) **Bulk Case** | NB47FCS |
| 26s | Pack of 100 4mm Needles (Chisel Tip) | NPK4120 |
| 26t | Pack of 250 4mm Needles (Chisel Tip) | NPK4125 |
| 26u | Pack of 500 4mm Needles (Chisel Tip) **Bulk Case** | NB47CCS |
| 26y | Pack of 50 3mm Needles (Beryllium Copper) | NPK3080 |
| 26z | Pack of 100 3mm Needles (Beryllium Copper) | NPK3085 |
| 26aa | Pack of 250 3mm Needles (Beryllium Copper) | NPK3090 |
| 26ab | Pack of 500 3mm Needles (Beryllium Copper) **Bulk Case** | NB37FBC |
| 32 | Chisel 1/2" Square 7" Long x 3/4" Blade | ACCS101 |
| 32a | Chisel 1/2" Square 7" Long x 2" Blade | ACCS103 |
| 319 | Chisel 1/2" Square 7" Long x Diamond Point | ACCS106 |
| 32c | Chisel 1/2" Square 10" Long x 3" Blade | ACCS107 |
| 32d | Chisel 1/2" Square Cranked 7" Long x 1 3/8" Blade | ACCS108 |
| 32e | Chisel 1/2" Square Spark Resistant Blade | ACCS110 |
| | Allen Key for Cap Head Screws | H0601 |

**Number of Needles for Each Tool**

| | 2mm | 3mm | 4mm |
|---|---|---|---|
| **Inline** | 51 | 19 | - |
| **19/PG** | 51 | 19 | - |
| **28/PG** | 65 | 28 | 19 |
| **35** | - | 49 | 35 |

# 12 & 19 Inline Needle Scaler




| Item No. | Description | Item No. | Description | Item No. | Description |
|---|---|---|---|---|---|
| 1 | Valve Cap | 9 | Piston | 25 | Needle Holder |
| 2 | Valve Cap 'O' Ring | 10-12 | - | 26 | Needle |
| 3 | Valve Spring | 13 | Body/Cylinder | 27 | Compression Spring |
| 4 | Valve Stem | 14 | - | 28 | Intermediate Tube |
| 5 | Valve Stem 'O' Ring | 15 | - | 29 | Front Tube |
| 6 | Valve Body Assembly | 16 | - | 30 | Cap Head Screw |
| | (Includes items: 1-8) | 17 | O' Ring | 31 | Chisel Holder Assembly |
| 7 | Throttle Lever | 18-23 | - | 32 | Chisel |
| 8 | Roll Pin | 24 | Anvil | | |

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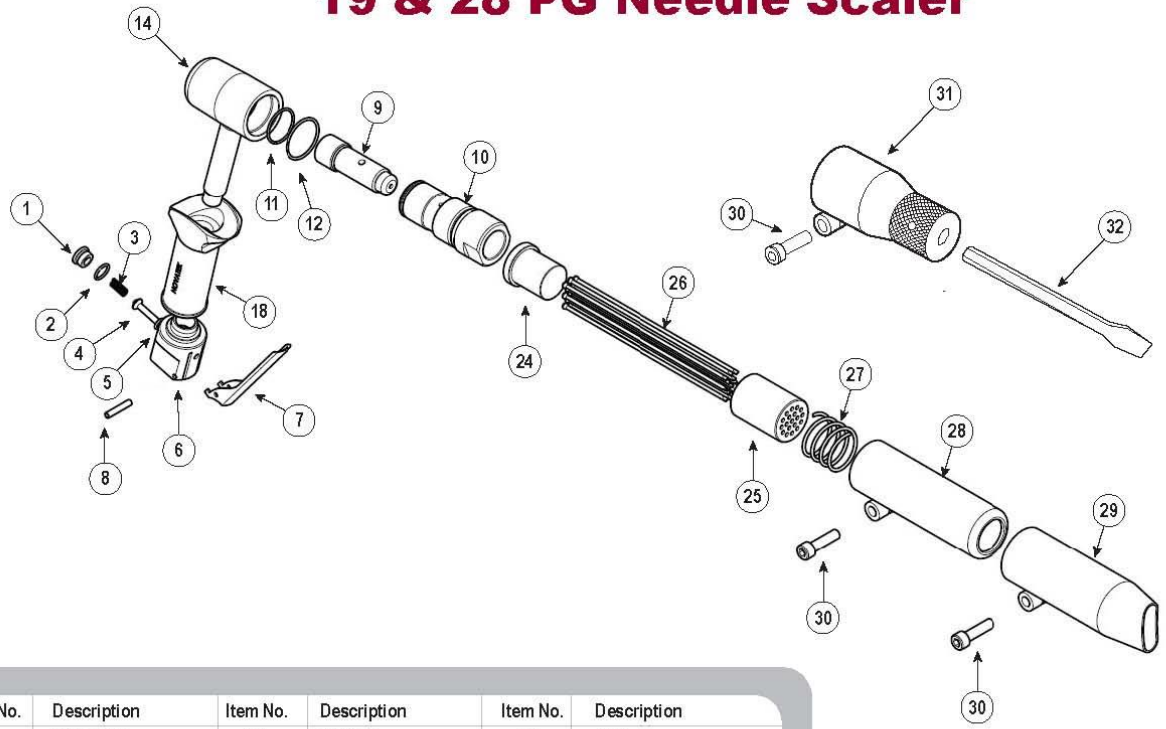
# 19 & 28 PG Needle Scaler




| Item No. | Description | Item No. | Description | Item No. | Description |
|---|---|---|---|---|---|
| 1 | Valve Cap | 10 | Cylinder | 24 | Anvil |
| 2 | Valve Cap 'O' Ring | 11 | 'O' Ring | 25 | Needle Holder |
| 3 | Valve Spring | 12 | 'O' Ring | 26 | Needle |
| 4 | Valve Stem | 13 | - | 27 | Compression Spring |
| 5 | Valve Stem 'O' Ring | 14 | Cover Assembly | 28 | Intermediate Tube |
| 6 | Valve Body Assembly | 15 | - | 29 | Front Tube |
| | (Includes items: 1-8) | 16 | - | 30 | Cap Head Screw |
| 7 | Throttle Lever | 17 | - | 31 | Chisel Holder Assembly |
| 8 | Roll Pin | 18 | Rubber Handle Grip | 32 | Chisel |
| 9 | Piston | 19-23 | - | | |

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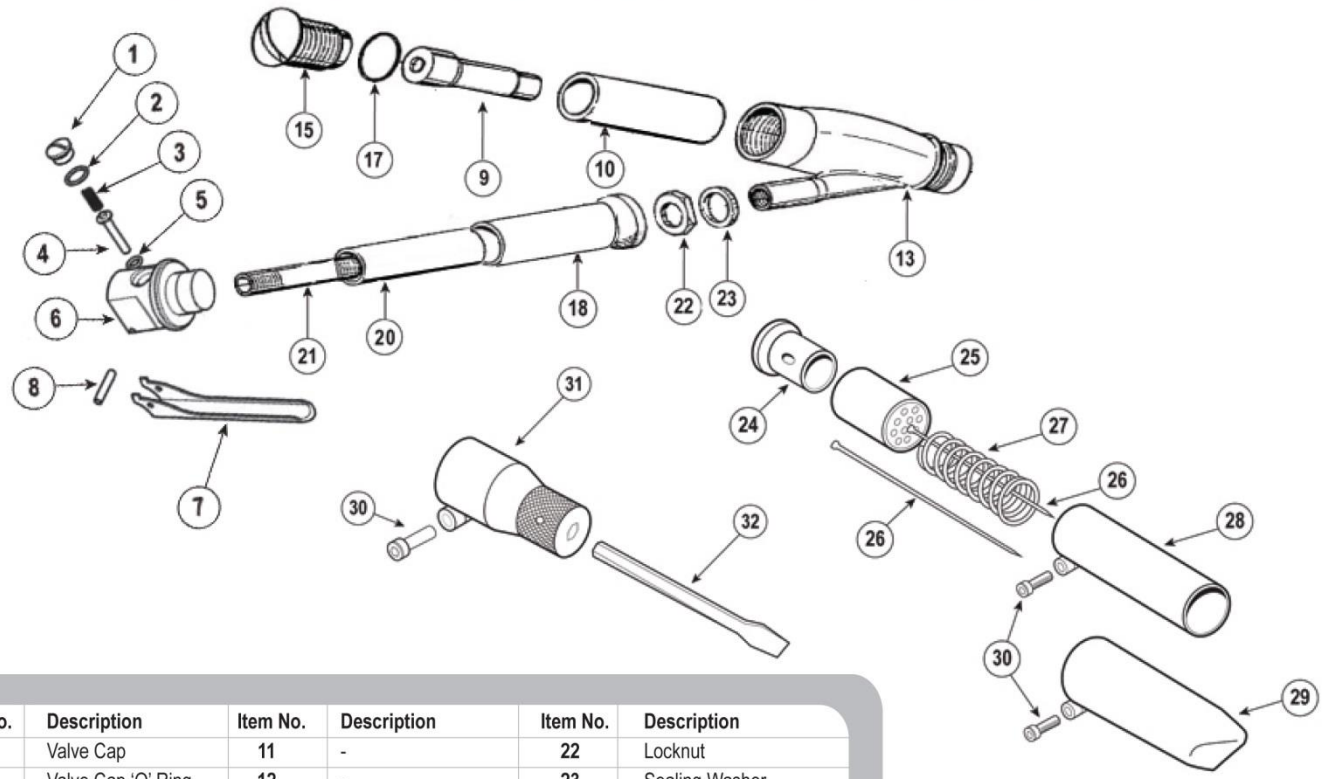
# 35 Modified Offset Needle Scaler




| Item No. | Description | Item No. | Description | Item No. | Description |
|---|---|---|---|---|---|
| 1 | Valve Cap | 11 | - | 22 | Locknut |
| 2 | Valve Cap 'O' Ring | 12 | - | 23 | Sealing Washer |
| 3 | Valve Spring | 13 | Body | 24 | Anvil |
| 4 | Valve Stem | 14 | | 25 | Needle Holder |
| 5 | Valve Stem 'O' Ring | 15 | End Cap | 26 | Needle Set |
| 6 | Valve Body Assembly | 16 | - | 27 | Compression Spring |
| | (Includes items: 1-8) | 17 | 'O' Ring | 28 | Intermediate Tube |
| 7 | Throttle Lever | 18 | Rubber Handle Grip | 29 | Front Tube |
| 8 | Roll Pin | 19 | - | 30 | Cap Head Screw |
| 9 | Piston | 20 | Handle Tube | 31 | Chisel Holder Assembly |
| 10 | Cylinder | 21 | Centre Tube | 32 | Chisel |

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# NOVATEK CORPORATION LIMITED WARRANTY

The **TOOLS** manufactured by **NOVATEK CORPORATION** are warranted to be free from defects in material and workmanship for a period of **One Year** from the date of purchase. This warranty does not apply to accessories. All electrical components of the tool are also warranted to be free from defects in material and workmanship for a period of **180 DAYS.**

This warranty applies only to **TOOLS** purchased new from **NOVATEK CORPORATION** or one of its authorized distributors. This warranty does not apply to any **TOOL** which has been abused, misused, modified or repaired by someone other than **NOVATEK CORPORATION** or its authorized repair center.

If a **TOOL** proves defective in material or workmanship within the specified warrantee period, it should be returned to **NOVATEK CORPORATION**, transportation pre-paid. The return must be authorized by a **RETURN MERCHANDISE AUTHORIZATION NUMBER (R.M.A. #)** obtained from **NOVATEK CORPORATION** prior to returning the **UNIT**. All packages must show clearly on the outside the return merchandise authorization number. All packages received without any R.M.A. # on the outside will be refused by **NOVATEK CORPORATION** receiving department.

Warranty claims will only be considered upon adequate proof of date of purchase. **NOVATEK CORPORATION** will, at its option, **REPAIR or REPLACE DEFECTIVE PARTS**. Repairs or replacements are warranted as above for the remainder of the original warranty period. The sole liability of **NOVATEK CORPORATION** and the user's exclusive remedy under this warranty is limited to the repair or replacement of the defective product.

THERE ARE NO OTHER WARRANTIES EXPRESSED OR IMPLIED AND **NOVATEK CORPORATION** SHALL NOT BE LIABLE FOR INCIDENTAL, CONSEQUENTIAL OR SPECIAL DAMAGES OR ANY OTHER EXPENSES OR REPAIR OR REPLACEMENT AS DESCRIBED ABOVE.

All warranty claims should be forwarded to:

**NOVATEK CORPORATION**
**254 Welsh Pool Rd**
**Exton, PA 19341**

**ATTENTION: CLAIM AND SERVICE DEPARTMENT**
**R.M.A. #** _____

**CALL Toll Free at 1-866-563-7800 for your RMA number prior to shipping.**

Also include a brief description of the problem as well as a phone number, contact name and return address in case **NOVATEK CORPORATION** service personnel has to get in contact with you.