



# Needle & Chisel Scalers

## Operations & Maintenance

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



© Copyright 2014 by NOVATEK Corporation

All rights reserved printed in the United States of America. No part of this manual may be used or reproduced in any form or by any means, stored in data base or retrieval system, without prior written permission from NOVATEK Corporation.

Making copies of this manual for any purpose other than your own personal use is a violation of the United States copyright laws.

June 1, 2014 issue 1.0

**Specifications subject to changes without notice!**

If you have any questions, please contact us:

NOVATEK CORPORATION

216 Philips Road

Exton, PA 19341

USA

[www.novatekco.com](http://www.novatekco.com)

Toll Free 866 563-7800

Telephone: +1 610 363-7800

Fax +1 610 363-9620

Email: [Sales@Novatekco.com](mailto:Sales@Novatekco.com)

# 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 hoses 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



	12	19	19PG	28PG	35
Description	Part No.	Part No.	Part No.	Part No.	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 Part No.	19 Part No.	19PG Part No.	28PG Part No.	35 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					
6a	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	19NS524	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	

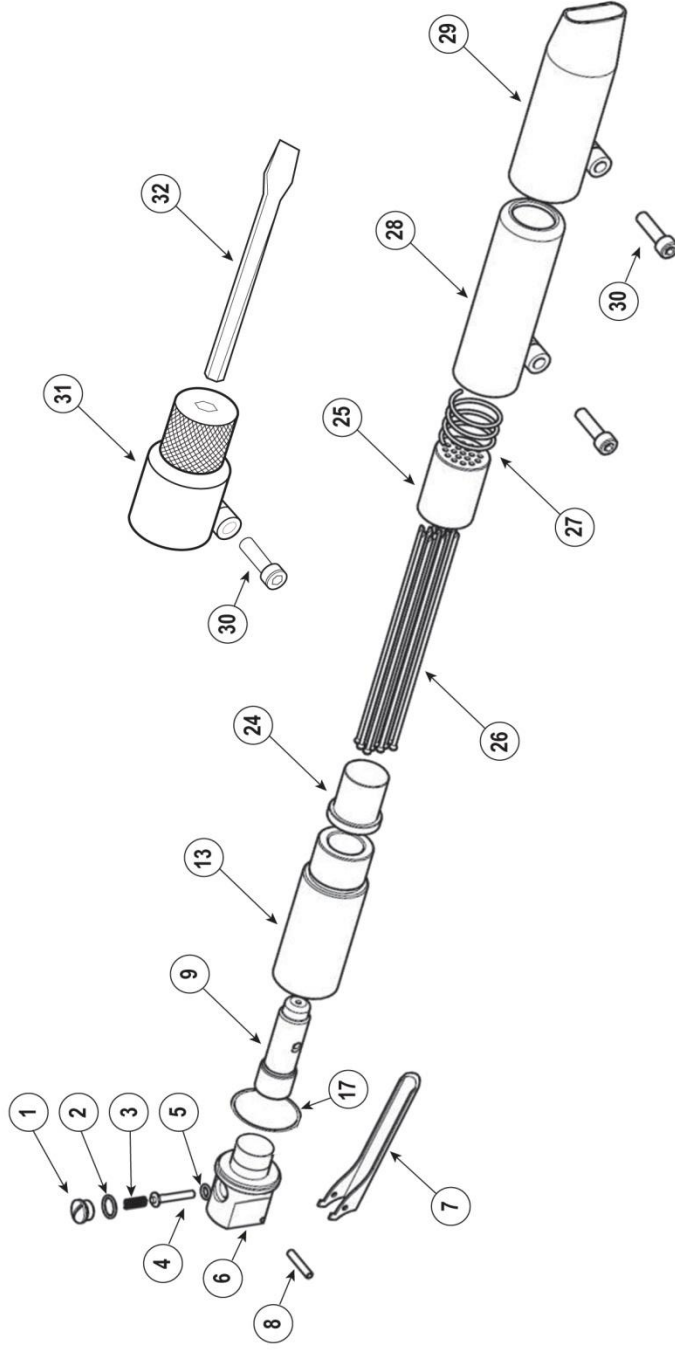
**NEEDLE SCALER CONSUMABLES**

	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) <b>Bulk Case</b>	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) <b>Bulk Case</b>	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) <b>Bulk Case</b>	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) <b>Bulk Case</b>	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) <b>Bulk Case</b>	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) <b>Bulk Case</b>	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
<b>Inline</b>	51	19	-
<b>19/PG</b>	51	19	-
<b>28/PG</b>	65	28	19
<b>35</b>	-	49	35

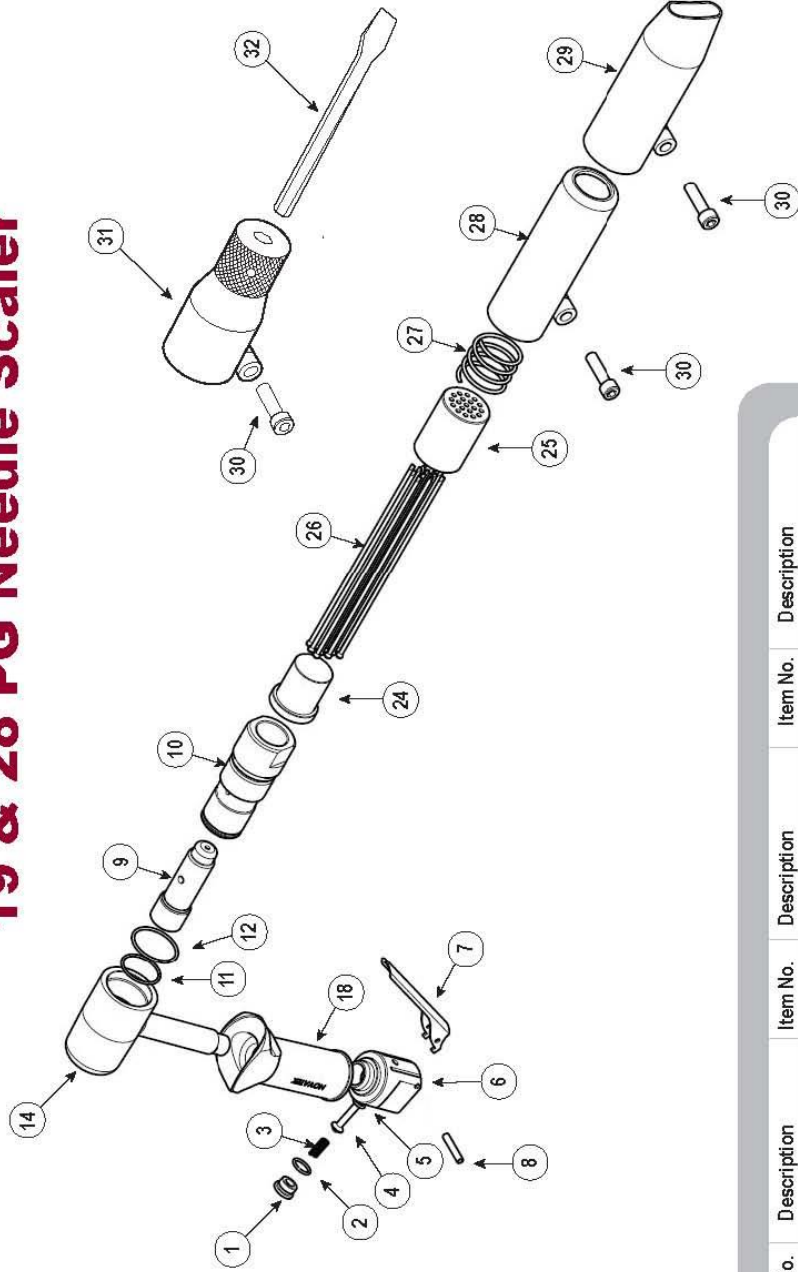
# 12 & 19 Inline Needle Scaler



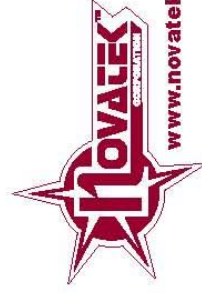
Item No.	Description	Item No.	Description	Item No.	Description
1	Valve Cap	9	Piston	25	Needle Holder
2	Valve Cap 'O' Ring	10-12	-	26	Needle
3	Valve Spring	13	Body/Cylinder	27	Compression Spring
4	Valve Stem	14	-	28	Intermediate Tube
5	Valve Stem 'O' Ring	15	-	29	Front Tube
6	Valve Body Assembly (Includes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



# 19 & 28 PG Needle Scaler

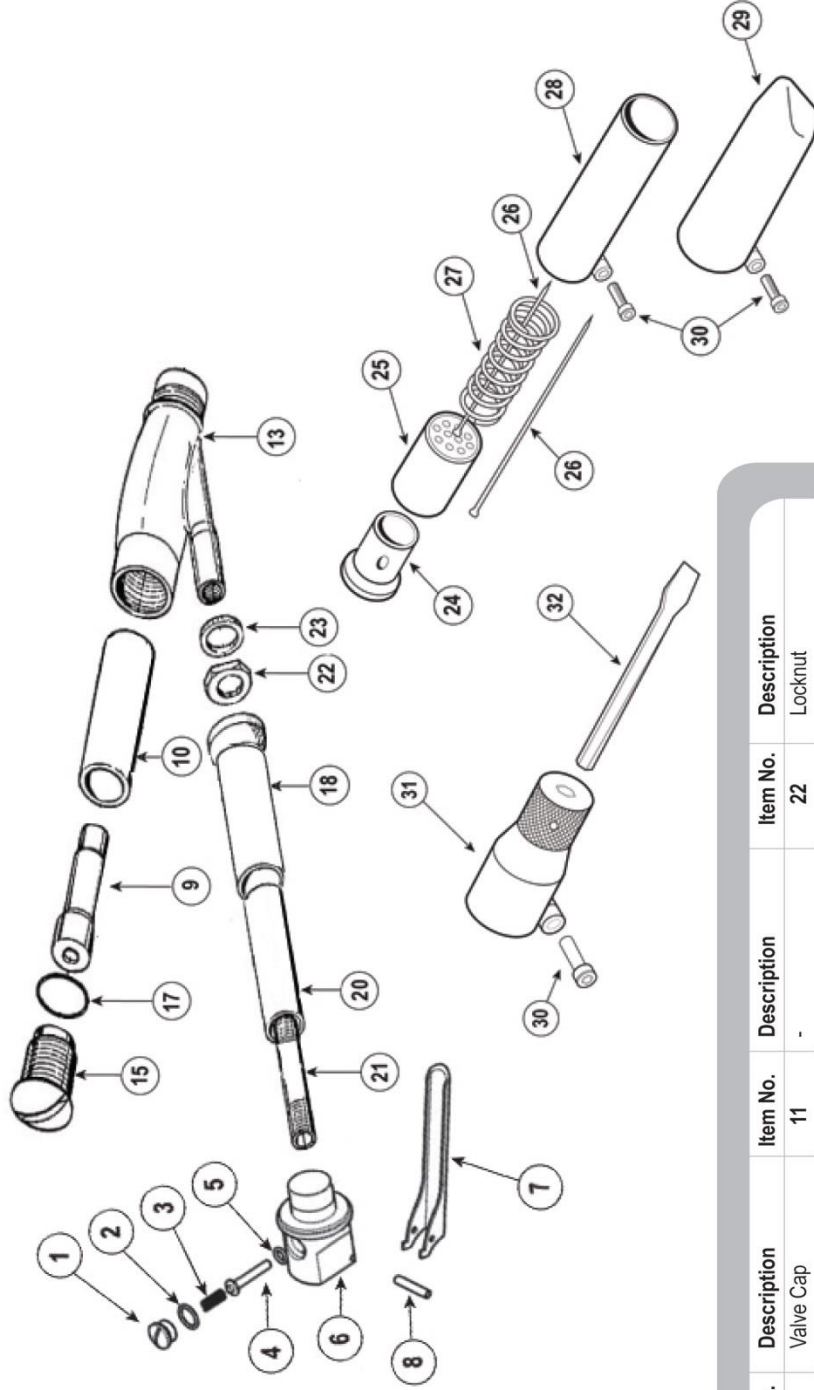


Item No.	Description	Item No.	Description	Item No.	Description
1	Valve Cap	10	Cylinder	24	Anvil
2	Valve Cap 'O' Ring	11	'O' Ring	25	Needle Holder
3	Valve Spring	12	'O' Ring	26	Needle
4	Valve Stem	13	-	27	Compression Spring
5	Valve Stem 'O' Ring	14	Cover Assembly	28	Intermediate Tube
6	Valve Body Assembly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



www.novatekco.com

# 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	End Cap	25	Needle Holder
5	Valve Stem 'O' Ring	15	-	26	Needle Set
6	Valve Body Assembly (Includes items: 1-8)	16	'O' Ring	27	Compression Spring
7	Throttle Lever	17	Rubber Handle Grip	28	Intermediate Tube
8	Roll Pin	18	-	29	Front Tube
9	Piston	19	Handle Tube	30	Cap Head Screw
10	Cylinder	20	Centre Tube	31	Chisel Holder Assembly
		21		32	Chisel



## 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**  
**216 Philips Road**  
**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.