

# Needle Scaler GNV-28

## PRODUCT INSTRUCTIONS & SAFETY INFORMATION



**MANUFACTURED  
IN SWEDEN**

### Warning

Failure to follow the safety warnings and instructions may result in **serious injury**. Remember to save these warnings and instructions for future reference.

## Table of Contents

Technical data .....	2
Thank you for choosing a tool from IPT Technologies.....	3
Intended use .....	3
Important safety notes.....	3
Warnings.....	3
Warranty .....	4
Instructions for use .....	4
Maintenance .....	6
Disposal .....	6
Accessories .....	7
Spare Parts.....	8

## Technical data

Length	290 mm	
Weight	3,0 kg	
Frequency of Strokes	91 Hz	
Maximum air Flow	135 l/min	
Air Pressure	6 - 7 bar	
Maximum Air Pressure	7 bar	
Maximum Air Temperature	35° C	
Hose Coupling	1/4 inch	
Size of Hose Recommended	10 mm	
Vibration Level according to ISO 28927-9	4,0 m/s <sup>2</sup>	Uncertainty 0,8 m/s <sup>2</sup>
Sound Pressure Level according to ISO 15744	93 dB (A)	Uncertainty 3 dB (A)
Sound Power Level according to ISO 15744	104 dB (A)	Uncertainty 3 dB (A)

**Warning.** Declared values obtained from lab testing according to standards can help compare tools. However, they are insufficient for accurate risk assessments. Actual exposure and risk of harm depend on additional factors.

# Thank you for choosing a tool from IPT Technologies

The GNV-28 Needle Scaler is extremely powerful, but the advanced green air drive system reduces vibrations to a very low level. No other tool is close to its high power and low vibration level combination. The low vibration level and relatively low weight minimize long-term health risks and lower fatigue, making it possible to use the tool for long periods. The noise level is also quite low compared to other tools, and the air consumption is very low!

## Intended use

This tool is intended for professional use only. Neither the tool nor its accessories must be modified in any way. If the product or accessories have sustained damage, do not use them. Installation, operation, and servicing should be carried out exclusively by qualified personnel. Safety and adherence to these guidelines are paramount.

This product is designed for rust and paint removal, weld dressing and scaling, deslagging and cleaning concrete.

## Important safety notes

All local safety rules regarding installation, operation, and maintenance shall always be followed. Always use adequate personal protective gear, such as safety goggles, noise protection, gloves, etc., as appropriate.

Always disconnect the tool from the air line before changing needles or making other adjustments.

Carefully blow the compressed air hose clean before connecting the tool to ensure there is no accumulation of water or dirt. The compressed air should be dry and clean. A filter unit should always be used.

## Warnings

- ⚠ Do not exceed 7 bar pressure. Use a regulator set to 6 to 7 bars.
- ⚠ Power tools are not insulated for encountering electric power sources.
- ⚠ Power tools shall not be used in explosive atmospheres.
- ⚠ Do not use needles or chisels that are broken, cracked, or deformed.
- ⚠ Use only accessories designed for this tool.
- ⚠ Stored compressed air may cause a hazard.
- ⚠ Long hair or loose clothing may be drawn in or trapped by the power tool.
- ⚠ Make sure that any sparks emitted are directed so as not to cause a hazard.
- ⚠ Be aware of the risk of a whipping compressed air hose.

⚠ Use a facemask or respirator if the work creates dust.

## Warranty

The GNV-28 Needle Scaler is warranted for 12 months from the date of purchase against faulty workmanship or materials provided the tool has not been opened by unauthorized persons and has always been lubricated and connected to a filtered air supply of the recommended pressure.

Please return any defective tool to your authorized supplier.

This warranty does not include repair or replacement required because of misuse, abuse, or normal wear and tear on wear parts.

Use only original IPT spare parts for any replacement. Other parts may result in hazardous conditions, decreased performance, and increased maintenance and wear.

## Instructions for use

### General Information

The Needle Scaler is designed to operate at an air pressure of 6 to 7 bar but will tolerate some additional variation without much change in performance. At higher air pressures, the operation may become irregular or stop completely. Connect to a 10 mm or larger hose.

The compressed air should be dry and clean. A filter unit should always be used. In-line lubrication is recommended. Where this is unavailable, apply a generous amount of oil in the air supply hose 2 to 3 m upstream of the tool every 2 to 4 hours of operation. This is considerably more efficient than supplying oil directly to the tool inlet.

### Operation

As the GNV-28 doesn't work exactly the same way as conventional tools, you need to get acquainted with the tool to fully take advantage of its advanced features.

The scaling efficiency depends somewhat on the force you apply on the tool. You will find that an intermediate force works best for efficient material removal. Don't be fooled by the fact that you don't feel a lot of vibrations. The tool is powerful and works fast. Look at the result on the surface you are working on!

The discharge of the compressed air is through the front of the tool. Some air circulates in and out of the tool through an opening between the rear (21) and the housing cover (23). This circulation is directed towards one side and downwards, but the cover's opening can be rotated to direct the circulation flow as desired.

This tool is low vibration. If you can feel that the vibration level has increased, stop using the tool! Increased vibrations indicate that something is wrong, and continued operation might damage or destroy internal parts. The reason for more vibrations can be a damaged housing, a broken spring, or other part. It can also depend on the tool having been pulled apart and then improperly reassembled.

## Changing Needles

Note: Always disconnect the tool from the compressed air line when removing or changing needles. Work on a workbench to prevent parts from falling on the floor. Do not point the tool downwards when removing the needles. Parts can then fall out and cause damage.

Push in the Front (2) and twist to release the bayonet grip. The Front and needles can now easily be pulled out with the Needle Holder (4) and the Forward Spring (3).

Replace the Needles in the Needle Holder, ensuring the orientation is correct. The heads of the Needles should be on the "top side" (wider side) of the Needle Holder, where each hole has an entrance cone. Lubricate the new needles in the needle holder area.

Place the Forward Spring around the Needles and insert the package inside the Housing. Follow with the Front, pushing and twisting it into position in the bayonet. Make sure it snaps into position. The hold will become more powerful when the air pressure is turned on.

Be careful not to scratch the Forward Spring. A scratch or other damage to a spring can make it fail later.

Use only 3,2 mm cone-head quality needles. Inferior needles will wear quickly and break more easily. The GNV-28 is strong and doesn't need chisel-shaped needles for normal applications. It comes with flat-end needles as standard. Chisel-shaped ends, when used in a strong tool, can easily leave deep marks on the surface you work on, and the chisel-shaped ends dull rapidly and thus need to be re-sharpened frequently.

GNV-28 comes with 140 mm long needles (3.2 mm diameter). They give optimal performance both regarding scaling efficiency and vibration level. Longer needles can also be used in the tool. All needles mounted in the tool should be of the same length. Replace any needles that break, or the tool will not work as intended. Always use the full number of needles. Grind down any replacement needle to match the length of the needles already in place.

In addition to carbon steel needles, stainless steel needles, as well as non-spark needles from Beryllium Copper, are available. Note that a specific needle holder is required for Beryllium Copper needles.

It may be advantageous to connect the tool to an industrial vacuum cleaner for applications that produce a lot of dust. This can be done via a vacuum attachment that fits around the front part of the housing.

The GNV-28 can also be fitted with a chisel adapter for occasional chisel work.

## Maintenance

Lubricate regularly (apply a generous amount of oil in the air supply hose 2 to 3 m upstream of the tool). Use only quality air tool oil. If a continuous lubrication unit is used, it should be positioned 3 to 5 m upstream of the tool, or it will not be effective. The oil flow should be set to provide one drop of oil for every 150 liters of free air.

**Lack of lubrication will result in excessive wear of critical parts inside the tool, as well as of the needles and the needle holder.**

Note: Do not open the tool (except for changing needles), as it will void the warranty!

The Housing (5) is threaded into the Rear (21) using Loctite on the threads. Do not clamp the Housing into a vice! Deformation of the Housing will result in poor performance and increased vibration levels.

## Disposal



This tool is designed and manufactured to last a long time if properly maintained, and all parts are available as spare parts. If you would like to recycle it for any reason, please dismantle it completely, degrease it, and send the different materials separately for recycling according to local laws and regulations.

## Accessories

GNV-28 is delivered with 140 mm needles. Extra needles are available in different lengths and materials so that you can choose the optimal needles for your job.

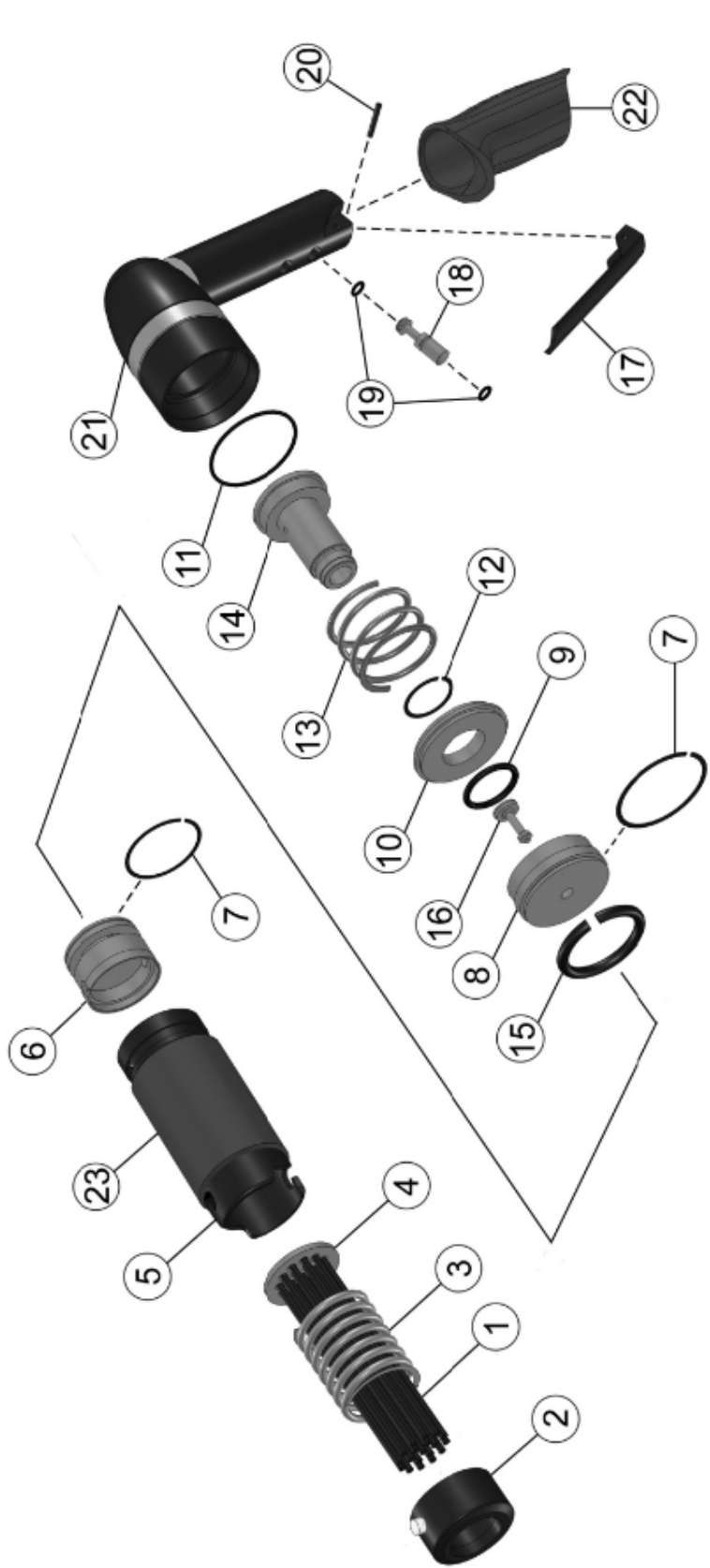
Stainless steel needles are primarily used where surface contamination from carbon steel needles is undesirable.

Non-sparking Beryllium copper needles are used in areas where it is essential to avoid flying sparks.

Part number	Description	Material
G-28-01	Needle set, 28 pcs 3.2x140 mm	Carbon Steel
N-28-6028	Needle set, 28 pcs 3.2x178 mm	Carbon Steel
G-28-01SS	Needle set, 28 pcs 3.2x140 mm Stainless steel	Stainless steel
N-28-6028SS	Needle set, 28 pcs 3.2x178 mm Stainless steel	Stainless steel
G-28-01BC	Needle set, 28 pcs 3.2x140 mm Beryllium Copper	Beryllium Copper
N-28-6028BC	Needle set, 28 pcs 3.2x178 mm Beryllium Copper	Beryllium Copper
G-28-50	Chisel adapter for Cleco-style chisels.  See the separate list of accessories for available chisels.	
G-28-90	Vacuum Attachment  It fits around the front part of the housing and should be connected to an industrial vacuum cleaner.	

# Spare Parts

Use only original IPT spare parts for any replacement! Other parts may result in hazardous conditions, decreased performance, increased wear, and damage to the tool.



- |                              |                               |                           |
|------------------------------|-------------------------------|---------------------------|
| 1. Needles 140 x 3,2 mm (28) | 7. G-28-07 Piston Ring        | 19. G-28-19 O-ring (2)    |
| 2. G-28-02 Front             | 8. G-28-08 Balance            | 20. G-28-20 Pin           |
| 3. G-28-03 Forward Spring    | 9. G-28-09 O-ring             | 21. G-28-21 Rear          |
| 4. G-28-04 Needle Holder     | 10. G-28-10 Divider           | 22. G-28-22 Handle Cover  |
| 5. G-28-05 Housing           | 11. G-28-11 Rear O-ring       | 23. G-28-23 Housing Cover |
| 6. G-28-06 Piston            | 12. G-28-12 Seal Ring         |                           |
|                              | 13. G-28-13 Rear Spring       |                           |
|                              | 14. G-28-14 Balance Extension |                           |
|                              | 15. G-28-15 Limit Ring        |                           |
|                              | 16. G-28-16 Valve             |                           |
|                              | 17. G-28-17 Lever             |                           |
|                              | 18. G-28-18 Valve Stem        |                           |