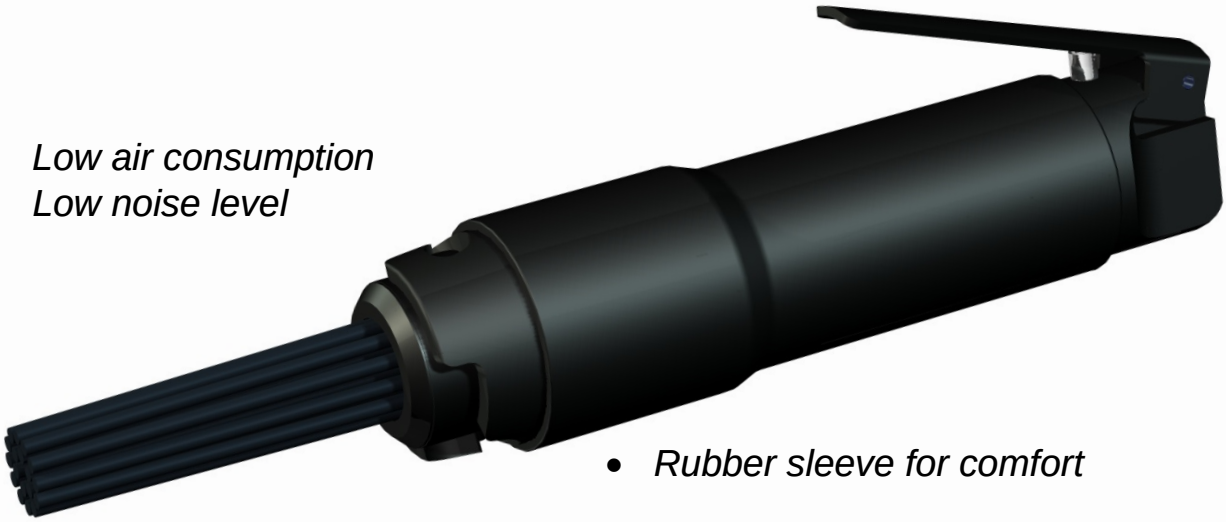
IPT Technologies AB

SNV-18 Straight Needle Scaler is without a doubt the premier straight needle scaler on the market! Although it is small and light-weight, it is very powerful and runs with hardly any vibrations due to the advanced, patented *green air drive system*. The low weight makes it possible to operate with one hand and the low vibration level minimizes long term health risks and lowers fatigue. This makes it possible to use the tool for long time periods. **The noise level is quite low compared to other tools and the low air consumption makes this tool a truly green choice!**

Following these simple instructions will ensure a long life of excellent operation. Note that **this tool needs generous lubrication**.

- *Low air consumption*
- *Low noise level*



- *Rubber sleeve for comfort*
- *Easy needle exchange*

Extremely low vibration!

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 not available, 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.

Address	Telephone	Telefax	Bankgiro	Bank
Tegeluddsvägen 92 S-115 28 STOCKHOLM	Nat 08-664 34 74 Int +46 8 664 34 74	Nat 08-664 21 55 Int +46 8 664 21 55	5799-4188	Handelsbanken Frihamnen

See page 6 for information regarding accessories.

Important safety notes

All local safety rules with regard to installation, operation and maintenance shall be adhered to at all times. Always use adequate personal protective gear, e.g. safety goggles, noise protection, gloves etc. as appropriate.

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

Make sure there is no accumulation of water or dirt in the compressed air hose by carefully blowing the hose clean before connecting the tool. 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 6.5 to 7 bars.
- Power tools are generally not insulated. Do not use near or in contact with 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 tool.
- Make sure that any sparks that may be 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 dust is created by the work.

Operation

The Needle Scaler is designed for rust and paint removal, weld dressing and scaling, deslagging, cleaning concrete, etc. It is powerful and has a very high scaling efficiency. The remarkably low vibration level makes it possible to work with higher precision than with other tools and the noise level is low compared to other needle scalers. With these ergonomic features you can work for longer periods without fatigue.

As the SNV-18 doesn't work exactly in the same way as conventional scalers, you need to get acquainted with the tool to be able to fully take advantage of the advanced features.

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

The tool is strong but as it is also very low in vibration you can do precision work with the needles just touching the surface to be worked on. This is important for more delicate situations.

The discharge of the compressed air is through the front of the tool. Some air circulates in and out of the tool through a small hole at the end of the rear (20).

This tool is a low vibration tool. 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 that the tool has been pulled apart and not been assembled properly.

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

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Changing Needles (See separate Instructions for **Non-Spark** Needles.)

Note: Always disconnect the tool from the compressed air line when removing or charging 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 can now easily be pulled out as well as the Needles with the Needle Holder (4) and the Forward Spring (3).

Replace the Needles in the Needle Holder making sure that the orientation is correct. The heads of the Needles should be on the “top side” (wider side) of the Needle Holder, where each hole is provided with an entrance cone. Lubricate the new needles in the needle holder area.

Place the Forward Spring around the Needles and insert the package into the Housing. Follow with the Front, push and twist it into position in the bayonet. Make sure it snaps into position. The hold will become even more powerful when the air 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 quality needles. Inferior needles will wear quickly and break more easily. The SNV-18 is strong and doesn’t need any 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.

SNV-18 comes with 127 mm long needles (3.2 mm diameter) as standard. They give optimal performance both regarding scaling efficiency and vibration level. Shorter needles (102 mm) are the most efficient on larger flat areas. Longer needles (140 mm) can also be used in the tool. All needles mounted in a tool should be of the same length. Replace any needles that break or the tool will not work as intended. Use the full number of needles at all times. Grind down any replacement needle to match the length of the needles already in place. In addition to carbon steel needles there are also needles from stainless steel and non-spark needles from Beryllium Copper available.

Maintenance

Lubricate regularly (apply a generous amount of oil in the air supply hose 2 to 3 m upstream the tool, which is more effective than supplying oil at the air connection on the tool). Use only quality air tool oil. Use about 1 cm^3 (1 ml) for every 2 hours of continuous operation. If a continuous lubrication unit is used, it should be positioned within 3 to 5 m upstream the tool or it will not be effective. The flow of oil should be set to provide 1 drop of oil for every 150 litres of free air. **Lack of lubrication results in excessive wear of critical parts of the tool!**

> **Lack of lubrication** will result in
> **excessive wear of critical parts**
> inside the tool, and also 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 (20) using Loctite on the threads. Do not clamp the Housing into a vice! Deformation of the Housing will result in poor performance and increased levels of vibration.

Use only original IPT spare parts for any replacement! Other parts may result in decreased performance and/or increased wear and/or damages to the tool.

Warranty

The SNV-18 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 unauthorised persons, has always been lubricated and connected to a filtered air supply of the recommended pressure.

Please return any defective tool to your authorised 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 decreased performance and/or increased maintenance and wear and even damages!

Accessories

Needles, 3.2 mm diameter x 127 mm long, Set of 18 S-18-01

Spare Parts Ordering

See the exploded view on the last page for names and numbers of spare parts. For ordering, simply use the pre-fix S-18- followed by the number from the table. E.g. Needle Holder S-18-04.

Technical Data, Preliminary

Length	195	mm
Weight (incl. needles)	1.6	kg
Vibration Level[1]	3.1	m/s²
Uncertainty, K	0.8	m/s²
Sound pressure level of the work station, L_{pA} [2]	89	dB (A)
Uncertainty, K_{pA}	3	dB (A)
A-weighted sound power level, L_{WA} [2]	100	dB (A)
Uncertainty, K_{WA}	3	dB (A)
Frequency of Strokes	115	Hz
Maximum Air Flow	85	l/min
Air Pressure	6.5	bar
Maximum Air Pressure	7	bar
Maximum Air Temperature	35	°C
Hose Coupling	1/4	inch
Size Hose Recommended	10	mm

[1] Per ISO 28927-9 working on a mild steel plate. As shown in ISO 5349 there is a strong correlation between vibration level and vascular diseases such as e.g. “white fingers”. This is a very low value and doesn’t vary much for different working conditions. Most conventional tools have much higher vibration levels, when measured with the same methods. [2] Per ISO 15744 working on a hard rubber sheet. Note that for this type of tool, the process noise is often dominating.

This page for notes: