

Instruction manual & spare parts list



NS-PRO 28

**NS-PRO SERIES
AIR DRIVEN
NEEDLE SCALERS**

1. General Safety and Operation Instruction

1.1 Unpacking

When unpacking this product, carefully inspect for any damage that may have occurred during transit. Make sure any loose fittings, bolts, etc, are tightened before putting this product into service.

1.2 This product is a part of a high-pressure system and the following safety precautions must be followed at all times along with any other existing safety rules.

1.3 Read all manuals included with this product carefully. Be thoroughly familiar with the controls and the proper use of the equipment.

1.4 Only persons well acquainted with these rules of safe operation should be allowed to use the air tool.



Do not exceed maximum operation pressure of the air tool (6.2BAR/90 PSI).

The air tool could explode and result in death or serious personal injury.

1.5 Do not exceed any pressure rating of any component in the system.

1.6 Disconnect the air tool from air supply before changing tools or attachments, servicing and during non-operation.

1.7 Always wear safety glasses during operation.

1.8 Do not wear loose fitting clothing, scarves, or neck ties. Loose clothing maybe caught in moving parts and result serious personal injury.

1.9 Do not wear jewellery when operating any tool. Jewellery maybe caught in moving parts and result in serious personal injury.

1.10 Do not depress trigger when connecting the air supply hose.

1.11 Always use attachments designed for use with air powered tools.

Do not use damaged or worn attachments.

1.12 Never trigger the tool when not applied to a work object. Attachments must be securely attached. Loose attachments can cause serious injury.

1.13 Protect air lines from damage or puncture.

1.14 Never point an air tool at oneself or any other person. Serious injury could occur.

1.15 Check air hoses for weak or worn condition before each use. Make sure all connections are secured.



Release all pressure from the system before attempting to install, service, relocate or performs any maintenance.

1.16 Keep all nuts, bolts and screws tight and ensure equipment is in safe working condition.

1.17 Do not put hands near or under moving parts.

1.18 Air Hose

It is not recommended to install a quick coupler between the air tool's air inlet connection and air hose directly, as vibration may cause the connection to fail. Instead, add a leader hose (for example. P/N: 183418 Flexible Hose 30cm 3/8") and install any quick-change couplings further down the line. Using fittings or air hoses which are too small can create a pressure drop and reduce the power of the tool. For proper performance and more convenience, use a 9.525 mm (3/8") I.D. hose. Hoses longer than 15.24 m (50 feet) should have a 12.7 mm (1/2") I.D. Clean the hose with a blast of compressed air before connecting the hose to air tool. This will prevent both moisture and dust within the hose from entering the tool and causing possible rust or malfunction.



Never carry a tool by the hose or pull the hose to move the tool or a compressor. Keep hoses away from heat, oil and sharp edges. Replace any hose that is damaged, weak or worn.

1.19 Storage

The air tools must be lubricated before storing. Follow the air tools lubrication instructions with an exception to Step 3.3.4. Only run the air tools for 2 to 3 seconds instead of 20 to 30 seconds because more oil needs to remain in the air tools when storing.

2. Specific Safety Instruction

2.1 Information of Noise Level

2.1.1 The noise level at the operator's position is about:

Model No.:	A-weighted sound pressure level (L _{pf})	A-weighted sound power level (L _w)	Uncertainty K _{wA}
400-722025 NS-PRO 28	98.7(dB)	108.9(dB)	3(dB)

2.1.2 Reference standard: ISO 15744.

2.1.3 Always wear ear protectors during operation.

2.2 Information of Vibration Level

2.2.1 The vibration level at the handle is about:

Model No.:	Vibration Level (m/s ²)	Uncertainty K (m/s ²)
400-722025 NS-PRO 28	4.8	0.34

2.2.2 Reference standard: EN 28927-10.

2.3. Safety Information

2.3.1 General

- i. The power tools are not generally insulated against contact with electric power sources.
- ii. The power tools shall not be used in explosive atmospheres unless specially designed for that purpose.
- iii. The power tools shall be isolated from the energy source before changing the inserted tool.
- iv. Working with a percussive tool can generate dust which could be harmful to the operator and necessary safety precautions must be taken.
- v. The inserted tool on heavy duty non-rotary percussive power tools, e.g. breakers may break after a long period of use break due to fatigue or stress. Further, unsuitable working postures may not allow counteracting of normal or unexpected movement of the power tool. A safe working position should always be adopted when working the power tools to ensure protection against the unexpected tool movement or breakage of inserted tool which may cause injuries to the lower limbs, in particular to the operator's feet.
- vi. Holding the inserted tool by the free hand can be a source of vibration damage if operated continuously. Monitor and control the duration of operations and ensure well within the safety limit allowed.

2.3.2 Further safety information

- i. Pay attention to the risk of a whipping compressed air hose.
- ii. Release the start and stop device in the case of an interruption of the energy supply.
- iii. Only lubricants recommended by the manufacturer shall be used.

2.4 Explanations of warning signs used for this tool

		
The operator's instruction manual must be read before using the tools	Hearing protection must be worn	Eye protection must be used, or safety glasses worn

2.5 Application

Power tool driving a rotating spindle on which a bonded abrasive product is mounted for surface preparation use.

2.6 The weight of the air tools as follow:

Model No.:	400-722025 NS-PRO 28
Weight	3.5 kg

Note: The following attention shall be paid to :

2.6.1 Be sure that you can afford the weight.

2.6.2 Be sure to wear foot protection, to prevent the risk of impact due to the drop of tool.

3. Maintenance Instructions

3.1 Lubrication

Proper lubrication is the owner's responsibility. Failure to lubricate the air tool properly will dramatically shorten the life of the tool and will void the warranty.



This air tool (Needle Scaler) requires lubrication before the initial use and before and after each additional use.

3.2 The air tools require lubrication throughout the life of the tool and must be lubricated in two separate areas: the air motor and the scaling mechanism.

3.3 Air Motor Lubrication

The motor must be lubricated only once daily.



Disconnect the air tools from the air supply before lubricating.

3.3.1 Disconnect the air tools from the air supply.

3.3.2 Turn the tool upside down.

3.3.3 Simultaneously (at the same time), pull the trigger and pour a teaspoon of oil in the air inlet.

3.3.4 Reconnect the air supply to the air tools and run for 5 to 10 seconds.



After an air tool has been lubricated, oil will discharge through the exhaust port during the first few seconds of operation. Thus, the exhaust port must be covered with a towel before applying air pressure. Failure to cover the exhaust port can result in serious injury.

3.4 Connect the air tools to the air supply and cover the exhaust port with a towel.

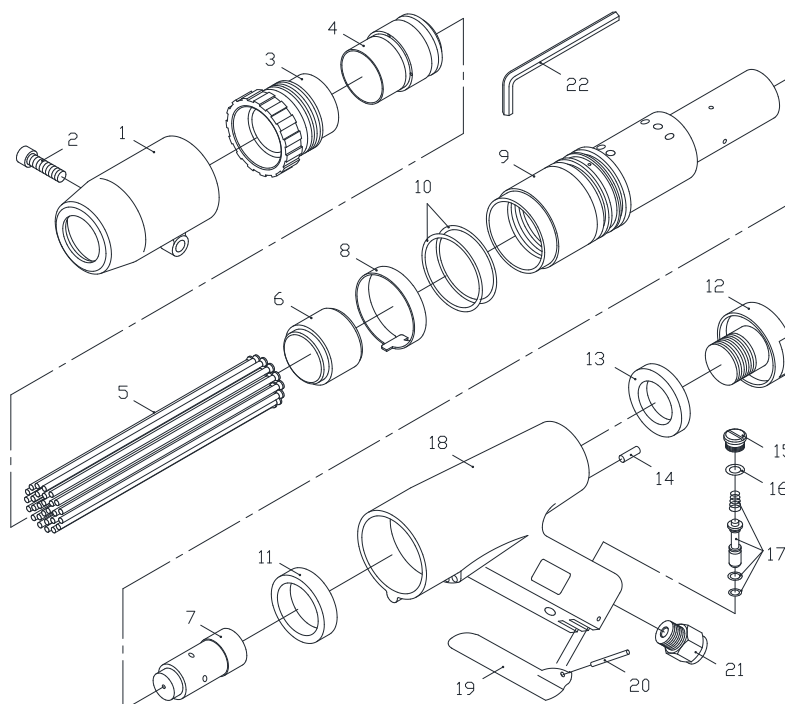
Run the air tools and oil will discharge from the exhaust port when air pressure is applied.

3.5 Scaling mechanism lubrication: The scaler should be lubricated monthly.

4. General Troubleshooting Guide

Symptom	Possible Cause(s)	Corrective Action
Tool runs slowly or will not operate	- Grit or gum in tool - No oil in tool - Low air pressure - Air hose leaks - Pressure drops	- Flush the tool with air tool oil, gum solvent, or an equal mixture of SAE # 10 motor oil and kerosene. Lubricate the tool after cleaning - Lubricate the tool according to the lubrication instructions in this manual. - Adjust the compressor regulator to tool maximum while the tool is running free. - Tighten and seal hose fittings if leaks are found. - Ensure the air hose is of proper size. Long hoses or tools using large volumes of air may require a hose with an I.D. of 9.5 mm (3/8") or larger depending on the total length of the hose. - Do not use a multiple number of hoses connected together with quick connect fittings. This causes additional pressure drops and reduces the tool power. Connect the hoses directly together.
Moisture blowing out of tool	- Water in tank - Water in the air lines/hoses	- Drain tank. (See air compressor manual) Oil tool and run until no water is evident. Oil tool again and run 1-2 seconds. - Install a water separator/filter. Note: Separators only work properly when the air passing through the separator is cool. Locate the separator / filter as far as possible from the compressor - Install an air dryer.

P/N:400-722025 NEEDLE SCALER NS-PRO 28



SPECIFICATIONS :

* BLOW PER MIN ----- 3500 BPM
 * AIR CONSUMPTION ----- 12 CFM
 * AIR PRESSURE ----- 6.2 bar
 * AIR INLET ----- 3/8-PT

* PISTON SIZE ----- 28x26x56 mm
 * WEIGHT ----- 3.5 kg
 * HOSE SIZE ----- 10 mm

To get maximum performance and life of your tool, replace the whole set of parts included in the Spare Part kits :

- | | | |
|---------------------|-----------------------------|--------------------------|
| 1. Part No: 779065 | Throttle valve overhaul kit | : (15,16,17) x 1 set |
| 2. Part No : 740308 | General overhaul kit | : (3,8,10,12,17) x 1 set |

Needle Overhaul Kit

- | | | |
|--------------------|-------------------------|--|
| 3. Part No: 728634 | 2mm needle overhaul kit | : (1,2,4C,6,8) x 1 set ; 4C – Needle supporter 2mm |
| 4. Part No: 722991 | 3mm needle overhaul kit | : (1,2,4A,6,8) x 1 set ; 4A – Needle supporter 3mm |
| 5. Part No: 728626 | 4mm needle overhaul kit | : (1,2,4B,6,8) x 1 set ; 4B – Needle supporter 4mm |

Needles (Part Position No. 5)

- | | |
|--------------------|-------------------|
| 3. Part No: 728766 | Needle (Ø3×180mm) |
| 4. Part No: 728774 | Needle (Ø4×180mm) |
| 5. Part No: 728758 | Needle (Ø2×180mm) |

Throttle Valve Overhaul Kit consists of the following items (779065)

No.	Part Description	WSS Part No.
15	VALVE CAP	779065
16	O-RING (d7.6 x W2.62) (VALVE PACKING)	
17	THROTTLE VALVE ASSY	

2mm Needle Holder Kit consists of the following items (728634)

No.	Part Description	WSS Part No.
1	FRONT TUBE (ROUND NEEDLE GUIDE)	728634
2	BOLT (HEXAGON SOCKET HEAD) M8 x25L	
4C	NEEDLE SUPPORTER 2MM	
6	THROTTLE ANVIL	
8	SAFETY BAND	

3mm Needle Holder Kit consists of the following items (722991)

No.	Part Description	WSS Part No.
1	FRONT TUBE (ROUND NEEDLE GUIDE)	722991
2	BOLT (HEXAGON SOCKET HEAD) M8 x25L	
4A	NEEDLE SUPPORTER 3MM	
6	THROTTLE ANVIL	
8	SAFETY BAND	

4mm Needle Holder Kit consists of the following items (728626)

No.	Part Description	WSS Part No.
1	FRONT TUBE (ROUND NEEDLE GUIDE)	728626
2	BOLT (HEXAGON SOCKET HEAD) M8 x25L	
4B	NEEDLE SUPPORTER 4MM	
6	THROTTLE ANVIL	
8	SAFETY BAND	

General Overhaul Kit consists of the following items (740308)

No.	Part Description	WSS Part No.
3	STOP RING	740308
8	SAFETY BAND	
10	O-RING (d50.39xW3.53)	
12	REAR BOLT ASS'Y	
17	THROTTLE VALVE ASS'Y	

NS-Pro 28 Spare Parts (On-Request Basis Only)

No.	Part Description	WSS Part No.
7	NS-PRO 28/ PISTON	728642
9	NS-PRO 28/ CYLINDER	1000115
11	NS-PRO 28/ FRONT PU WASHER	1000116
13	NS-PRO 28/ REAR PU WASHER	1000118
14	NS-PRO 28/ CYLINDER LOCK PIN	1000119
19	NS-PRO 28/ THROTTLE LEVER	1000121
20	NS-PRO 28/ SPRING PIN (Ø3 x 28L)	1000122
21	NS-PRO 28/ REDUCER	1000123

Note: Part Position No. 18 & No. 22 not supplied as spares

Attention

**Please use these Unitor products exclusively for the purpose indicated by
WSS and only if the operator fully understands current practices
and procedures. If any further information or assistance is required
please contact your local WSS specialist.**

www.wilhelmsen.com

