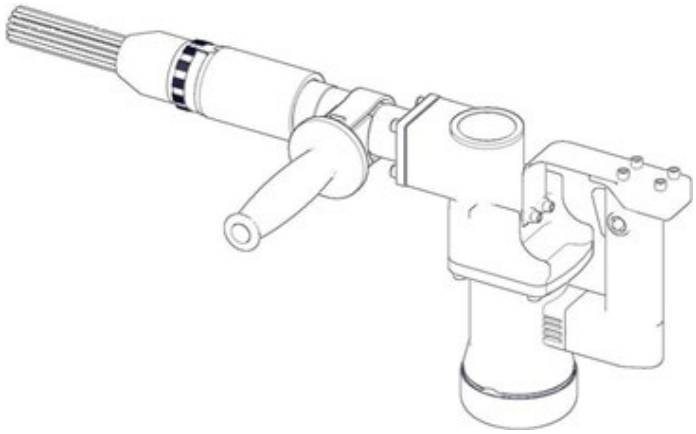
www.teryair.com

Operation and Maintenance Guide



ENS 100V / ENS 200V

Models	Descriptions	IMPA Code
ENS 100V	Electric Needle Scaler, 110V-1ph	59 12 01
ENS 200V	Electric Needle Scaler, 220V-1ph	59 12 03

Read this manual carefully before installing, operating or servicing this equipment. It's the responsibility of the employer to ensure this manual is read by the operator. Please preserve this manual.

This document is issued with Product Serial No

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Introduction

Teryair Electric Needle Guns are rugged tools. Designed to be easy to use and maintain. they are ideal for removing layers of paint, corrosion and chemical coatings from surfaces. Rotating handle can be fixed at any position to make operation easier.

Technical Data

Teryair Model No	ENS100V	ENS200V
IMPA Code	59 12 01	59 12 03
Power Supply (AC)	110V-1Ph	220V-1Ph
Overall length LxWxH mm	480 X 240 X 100	
Rated Power Consumption (W)	900	900
Rated Current (A)	6.0	3.0
Duty Cycle (Min)	10 - 12	10 - 12
Needle Stroke (mm)	20	20
Stroke Speed (Min)	2900	2900
Needles (Qty)	2mm X 53 pcs. Or 3mm X 23 pcs.	
Power Cord Length (Mtr)	2	2
Weight (Kg)	7	7

Note 1: Standard equipment includes one set of 3mm Needles, replacement needles sets available.

Note 2: Optional needles in 2mm with corresponding needle supporters can be ordered separately.

Intended Use

- Removal of Coatings.
- Hold cleaning, general deck and surface cleaning, removal of heavy rust on tankers, and dry dock applications.
- Tank descaling, Descaling of structures before painting.
- Paint removal.
- Other industrial coating removals from floors and other surfaces.
- Removal of concrete residue from re-bar Cleaning cement from plant and vehicles.
- Weld cleaning.

Prohibitive use

- Any use in an explosive atmosphere is prohibited.
- Use of materials containing asbestos is prohibited.
- Use by an underage, untrained, or person who is under the influence of drugs or alcohol.
- Use with non-genuine spare parts or accessories is prohibited.

Safety Instructions

Following symbols are used through out this manual.

⚠ Warning

This manual must be read and the operating instructions carefully followed.

⚠ Warning

Safety and protective clothing, eyewear, headgear, ear protection, gloves, and footwear to be worn during operation of this Electric Needle Scaler.

⚠ Warning

Operators under 18 are not allowed to operate this Electric Needle Scaler. Operators must be made familiar with the instructions in this manual before attempting to operate the Electric Needle Scaler. Ensure that the job site is clear of bystanders

Caution

Use only genuine Teryair or Teryair approved accessories.

⚠ Warning

This Electric Needle Scaler is not designed for use in an explosive environment.

⚠ Warning

Always use both hands during operation. Do not run the scaler continuously for more than 15 minutes to avoid overheating. Take must be taken to select the correct power supply as per the model.

Caution

Do not exert excessive pressure against the work surface. Keep wire cables in good condition. Check for any loose connection from the source.

Caution

- Be aware that these Electric Needle Scalers can create dust & flying debris.
- Keep hands & clothing away from moving parts.
- Store these Electric Needle Scalers in a secure & dry environment.
- Do not allow the Electric Needle Scaler to run unattended.
- Do not modify this Electric Needle Scaler in any way as this will invalidate the warranty and could lead to serious injury.
- Do not allow the Electric Needle Scaler to run continuously whilst not in contact with the surface being prepared.
- Do not hold the exposed needles whilst the Electric Needle Scaler is in use this could cause vibration damage to the hands.
- Do not drag this Electric Needle Scaler by the cable.

⚠ Warning

Do not use the Electric Needle Scaler in potentially explosive environments.

⚠ Warning

Eye and face and ear protection must be worn at all times during the operation of the Electric Needle Scaler. There is a chance of flying debris from the job site and the quality of wear should be such to protect against such flying debris such as flakes of the removed layer.

⚠ Warning

Suitable gloves must be worn at all times during operation. Safety Shoes with toe cap protection are a must during operation.

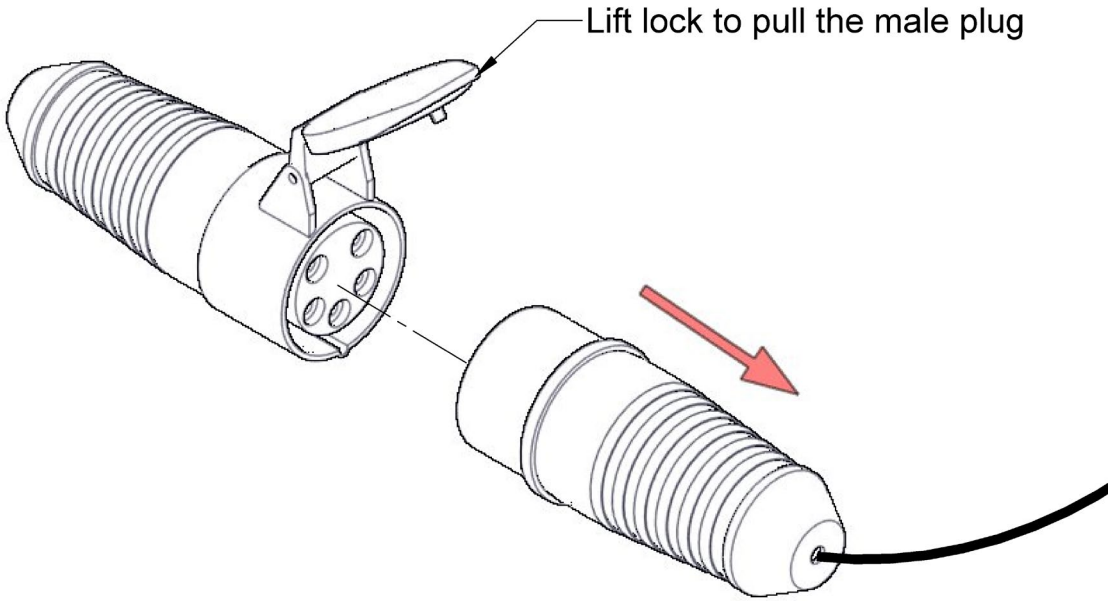
Operating Instructions

- Scalers are rugged dependable tools designed to give you years of satisfactory service. Follow the instructions mentioned here to enhance the life and performance of your scalers.
- Use genuine Teryair spares and if possible mention the serial number of the Electric Needle Scaler when ordering spares.

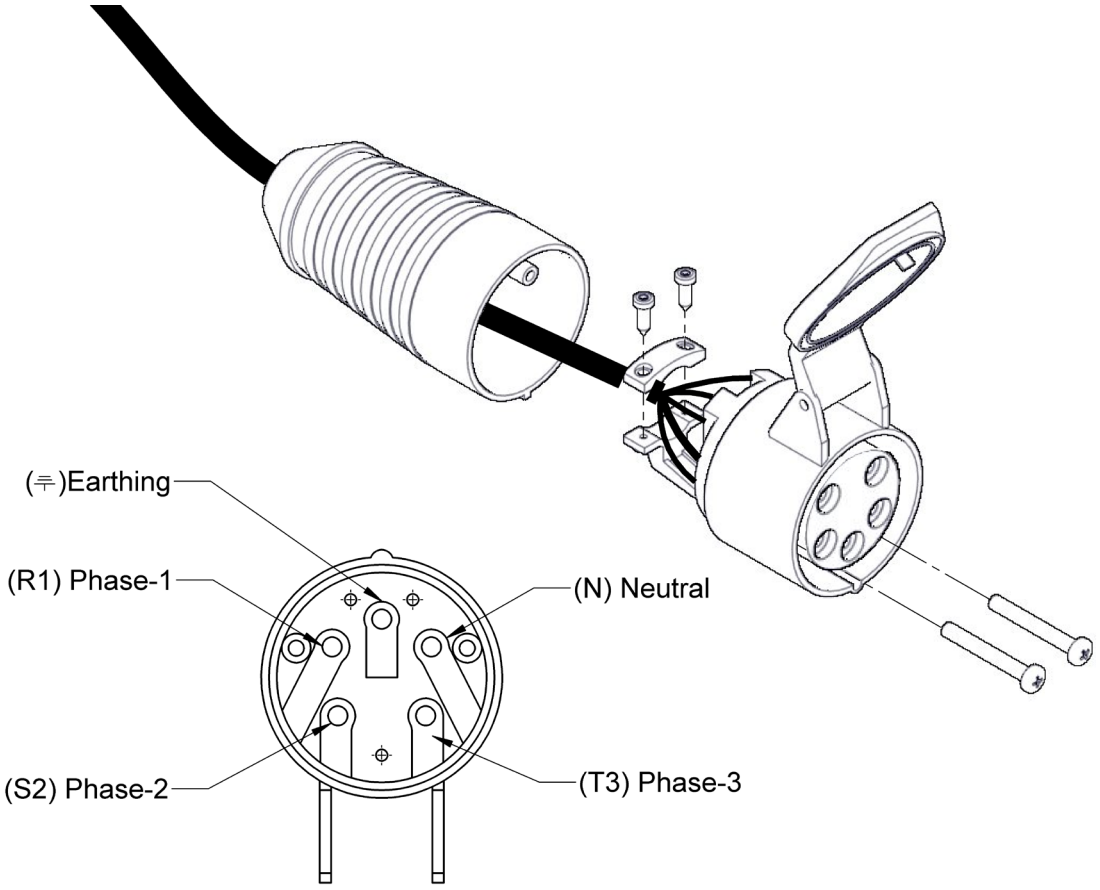
Safety check before operating the Needle Scaler

1. Read the section in “Operating and safety precautions”.
2. Make sure the electric supply is consistent with the electric motor requirements. The scaler comes with a standard cable length of 2.5 meters, avoid using a longer cable to avoid voltage drop.
3. Connect the supply cable as shown. The Male portion is connected to the Scaler (Factory fitted). The female side electrical connection is to be made at the customer end as per the model no. and supplied voltage.

- First, lift the cover and pull the plug from the assembly.
- Now remove the screws from the inner side of the female plug. This will allow removing the rear portion and connection points will available. Refer to the below figure for wire connection.
- Connection detail for 1-phase
- First, disassemble the male & female plug by lifting the spring-loaded lock.



- Now remove the two screws as shown to remove the rear cover of female plug to see the terminals.
- Insert the cable from the back of the cover through the holder and terminate the respective wire. Make sure to tighten the holder so that wiring conn. should not come out if the cable pulled from the cover.

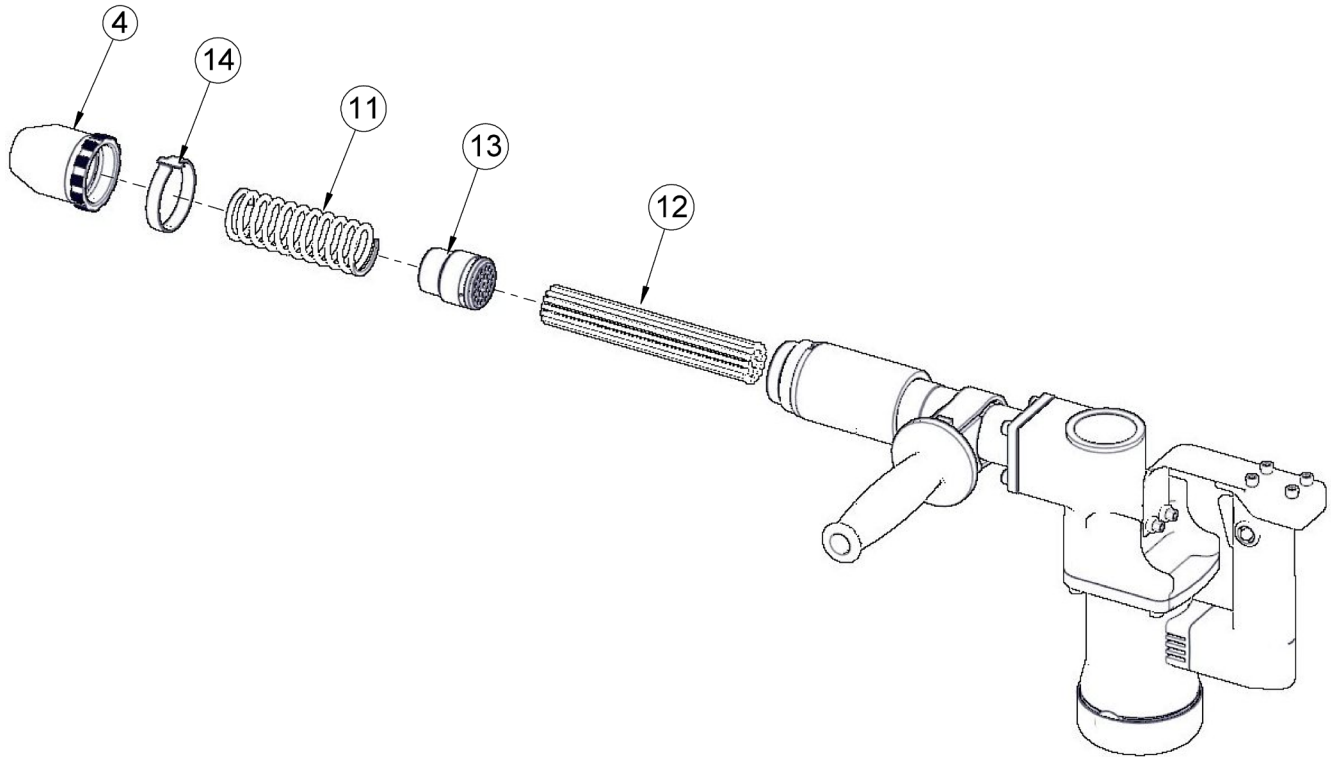


Diassembly and Re-assembly for ENS 100V & ENS 200V

Disconnect the plug & switch off power supply from the source.

Needle Replacement

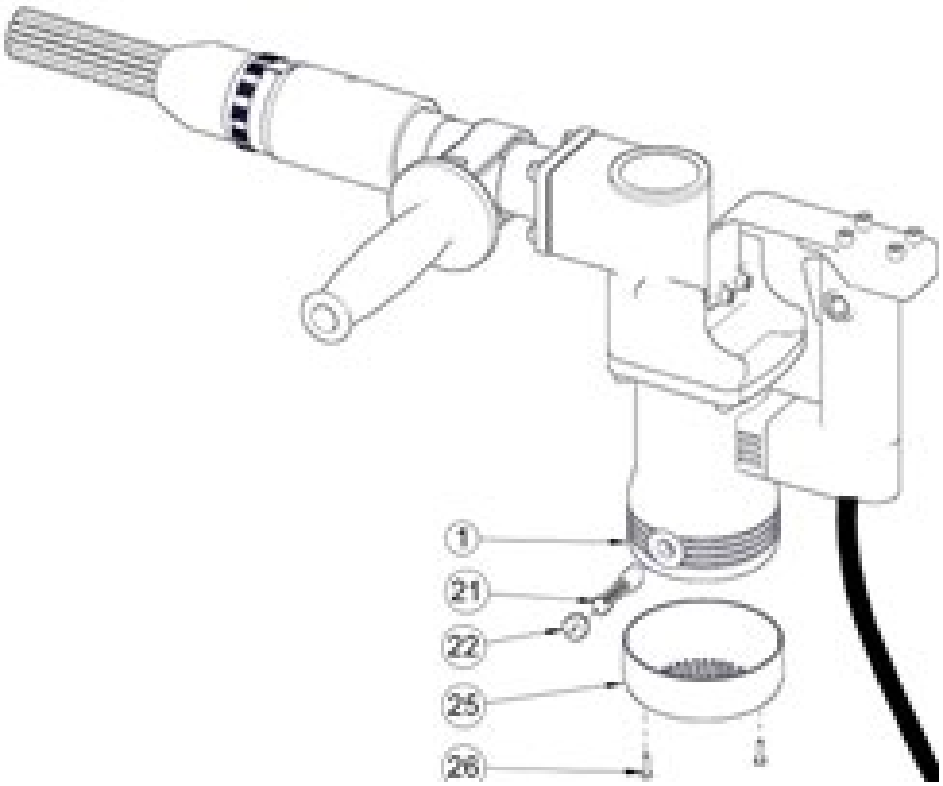
- First remove the Lock (14).
- Now rotate the front cover (4) counter clockwise.
- Now slide out the needle supporter (13) along with needles (12) and spring (11).
- Push the worn out needles (12) from the front side to remove from the needle supporter (13).
- Replace the old needles with new one and assemble in reverse manner.



Needle size	Needle Part no.	Needle Supporter
Ø2	022 90 08 (53 No.s)	022 40 47
Ø3	022 90 04 (23 No.s)	022 40 45

Carbon Brush Replacement

- Remove the screws (26) from the bottom to disassemble the cover(25).
- Now remove the cap (22) and pull the carbon brush (21).
- Replace with new one and assemble in a reverse manner.



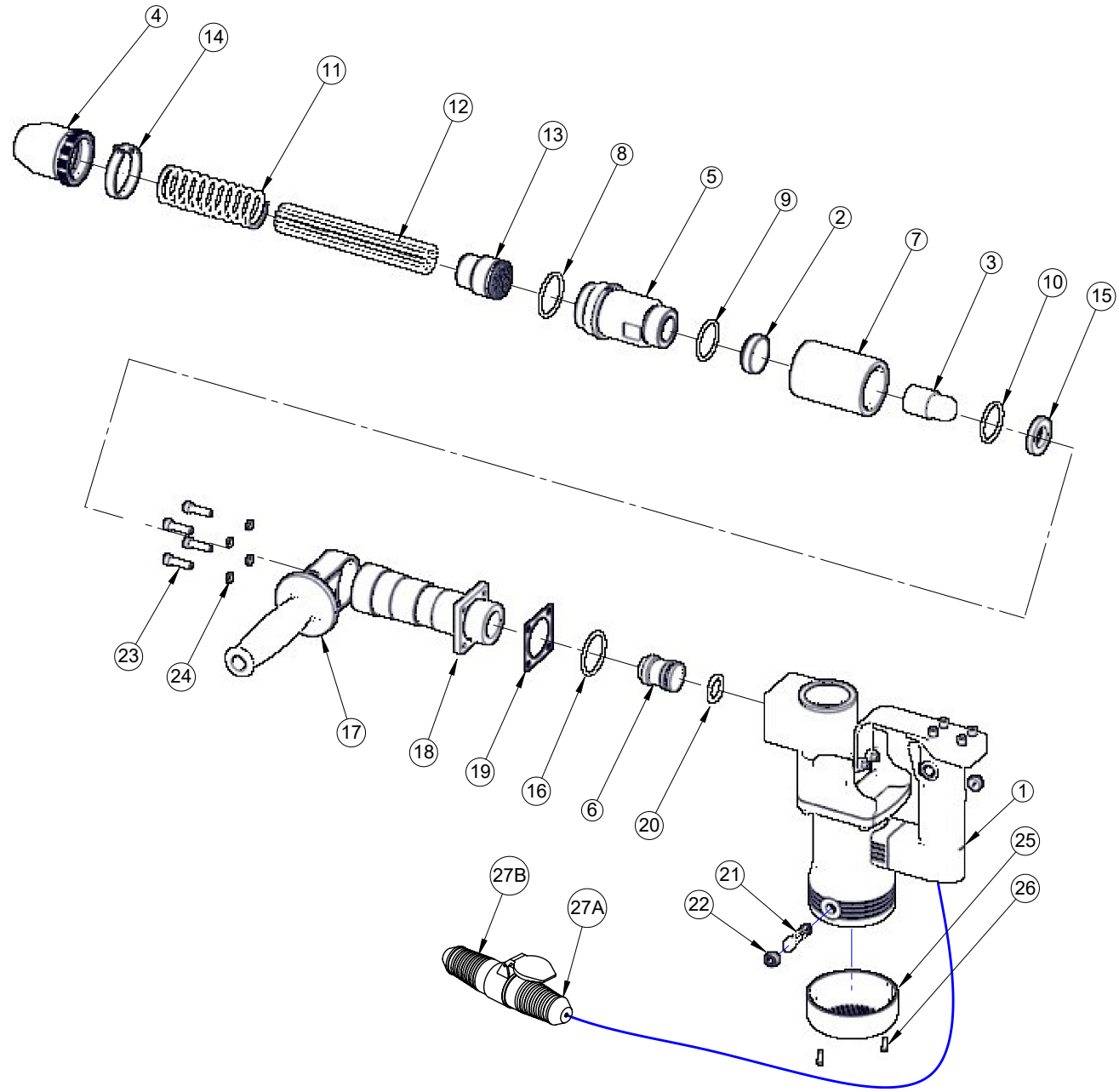
Bill of Materials for ENS 100V & ENS 200V

Illustration Number	Part Number	Description	ENS 100V	ENS 200V
1	655 91 01	MAIN HOUSING-100V	1	-
1	655 91 02	MAIN HOUSING-200V	-	1
2	655 21 01	ANVIL	1	1
3	655 21 02	STRIKER	1	1
4	655 21 03	FRONT TUBE	1	1
5	655 21 04	MAIN BODY	1	1
6	655 21 05	INNER ANVIL	1	1
7	655 40 01	RUBBER GRIP	1	1
8	655 40 02	'O' Ring	1	1
9	655 40 03	'O' Ring	1	1
10	655 40 04	'O' Ring	1	1
11	655 51 01	SPRING	1	1
12	022 90 04OL	NEEDLE (Ø3mm x 180mm)	23	23
13	022 40 45	NEEDLE SUPPORTER (Ø3mm)	1	1
14	022 90 13	SAFETY BAND	1	1
15	655 21 06	SPACER	1	1
16	655 40 05	'O' Ring	1	1
17	655 97 01	GRIP HANDLE ASSEMBLY	1	1
18	655 21 07	FLANGE HOUSING	1	1
19	655 40 06	GASKET	1	1
20	655 40 07	'O' Ring	1	1
21	655 98 01	SPRING WITH CARBON BUSH	2	2
22	655 08 02	CAP	2	2
23	150 40 26	ALLEN BOLT	4	4
24	536 90 04	SPRING WASHER	4	4
25	655 31 01	BACK GUARD	1	1
26	655 90 01	SELF TAPPING SCREW	2	2
27A	653 91 03	PLUG	1	1
27B	653 91 04	SOCKET	1	1

Optional Accessories

Part No	Description	Qty
022 90 08	NEEDLE (Ø2mm x 180mm)	53
022 40 47	NEEDLE SUPPORTER ((Ø2mm)	1

Exploded View for ENS 100V & ENS 200V



EU DECLARATION OF CONFORMITY

We hereby certify that the Listed Product stipulated below comply with all relevant provisions of the machinery directive (2006/42/EC) and the national laws and regulations adopting this directive.

Description :

Model Number :

Date :

Serial Number :

Is in conformity with the provisions of the following European Directives: (2006/42/EC) Machinery Safety and Harmonized standards

ISO 12100-1: 2010: Safety of Machinery –general Principles for Design –Risk Assessment and Risk Reduction.

Registered Office : 416 Gundecha Industrial Complex, Akuril Road,
Kandivali East, Mumbai – 400101, Maharashtra, India.

Web site : www.teryair.com

Works : A-1, Tirupati Udyog Nagar, Sativali Road, Vasai East,
Palghar – 401208, Maharashtra, India.

CE certification registration no – C E 16831

Issued by – BMQR Certifications Pvt Ltd.
www.cemarking-india.com

Valid Till – 03/11/2021

Signed for and on behalf of

TERYAIR EQUIPMENT PVT. LTD.

Place of Issue:
Date:

www.teryair.com

Warranty Certificate

Every product manufactured by Teryair
is built to meet the highest standards of quality.

Teryair warrants that the Products, accessories and parts manufactured or supplied by the company be free from defects in material and workmanship for a period of six months from date of Teryair authorized dealer invoice to customer, or one year from date of Teryair invoice to dealer, whichever is earlier. Failure due to normal wear, misapplication, or abuse is, of course, excluded from this warranty.

Since the use of Teryair products and parts is beyond our control, Teryair cannot guarantee the suitability of any product or part for a particular application and Teryair shall not be liable for any consequential damage or expense arising from the use or misuse of its products on any application. Teryair does not warranty bought out products or components such as electric motors and hardware but will assist in directing warranty queries to the dealer/manufacturer responsible. Teryair responsibility is limited solely to replacement or repair of defective Teryair products or components.

Dealer/End User shall have no right or remedy and Teryair shall have no liability or obligation under the warranty, if: (i) a Product is altered, changed, modified or tampered with in any way, (ii) a Product is damaged after deposit with the transporter for shipment; (iii) a Product is not properly preserved, packaged, stored, processed or handled after receipt; (iv) a Product is not used and maintained in accordance with Teryair's recommended operating and maintenance manuals, instructions and procedures, if any; (v) a Product is not properly incorporated or installed in, or not properly combined with, an Other Product; (vi) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, a failure, substandard performance or other issue with another product, material, component or part not supplied by Teryair; (vii) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, compliance with any design, specification or other specific requirement of Dealer/End User; (viii) a Product is used in a manner, with a substance or for a purpose other than the normal manner, substance and purpose for which it is intended or is otherwise subjected to abnormal use or service; (ix) a Product is subjected to a power surge, brown out or other similar occurrence; (x) the issue with a Product is directly or indirectly attributable to, or directly or indirectly results from or arises out of, normal wear and tear of such Product (including, without limitation, things such as worn seals, diaphragms, balls, O rings, gaskets, chisels, cutters, hoses and other such wearing components; (xi) the issue with a Product is directly or indirectly.

Dated :

Product Model Number :

Product Serial Numbar :

Ajay Bhagat, Q.A. Manager

(Company Seal)

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