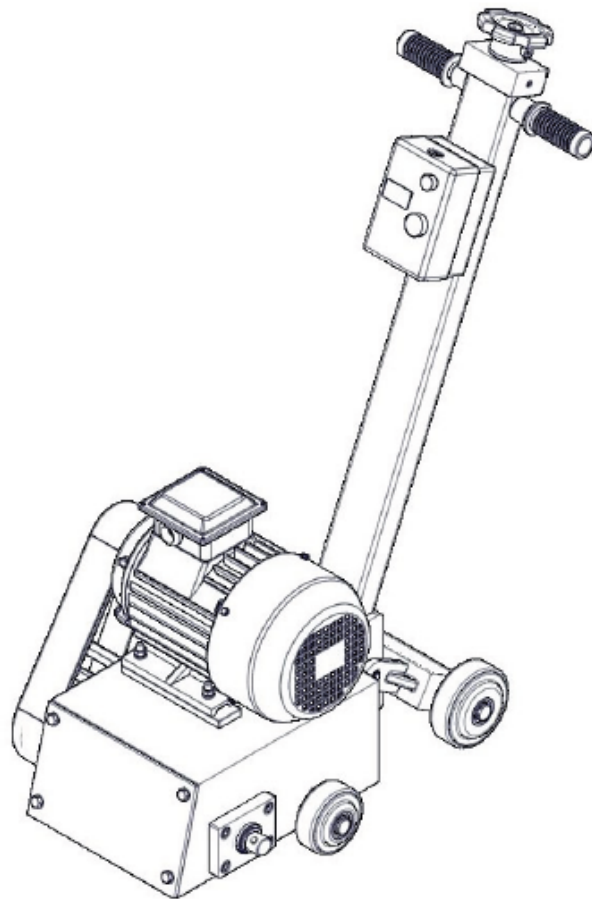


**Operation and Maintenance Guide**



ERDS 84

Models	Descriptions	IMPA Number
ERDS 84-220V3	Electric Rotary Deck Scaler, 220V-3ph, 2.2kW	59 04 09
ERDS 84-440V	Electric Rotary Deck Scaler, 440V-3ph, 2.2kW	59 04 09A
ERDS 84-110V	Electric Rotary Deck Scaler, 110V-1ph, 2.2kW	59 04 09B
ERDS 84-220V	Electric Rotary Deck Scaler, 220V-1ph, 2.2kW	59 04 09C

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.

## Table of Contents

3	Technical Data
3	Safety Instructions
4	Installation Instructions
7	Troubleshooting
7	Disassembly and Re-assembly
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13	Bill of Materials for ERDS 84
15	Test Certificate Of Materials, Performance
16	Eu Declaration Of Conformity
17	Warranty Certificate

## Technical Data

Specification	ERDS 84-220V3	ERDS 84-440V	ERDS 84-220V	ERDS 84-110V
Motor	220V-3Ph	440V-3Ph	220V-1Ph	110V-1Ph
Power rating	2.2kW	2.2kW	2.2kW	2.2kW
RPM	3500	3500	3000	3000
Drum Speed	1735	1735	1735	1735
Cutting width	205mm			
Wall to cutting path	127MM			
Dimensions fully assembled	97 x 82 x 43 cm	97 x 82 x 43 cm	97 x 82 x 43 cm	97 x 82 x 43 cm
Overall weight	74Kgs	74Kgs	74Kgs	74Kgs

### Intended And Prohibitive Use

#### Intended Use

Removal of paint, rust, scale, layers from surfaces such as ship structure, concrete slabs, metal platforms.

Removal of laitance from concrete layers. Can be used both indoors and outdoors

#### Prohibitive use

Any use in an explosive atmosphere is prohibited Use on materials containing asbestos is prohibited

Use by an underage, untrained or operator who is under the influence of drugs or alcohol. Use with non genuine spare parts or accessories is prohibited

Use with safety devices un functional or in need of service is prohibited Do not use it if operator is not familiar with the tool.

### Safety Instructions

Following symbols are used through out this manual.

#### Warning

Warning: If not followed could cause personal injuries

#### Caution

If not followed could result in damage to equipment.

#### Warning

This manual must be read and the operating instructions carefully followed, because of the high vibration developed, severe injuries can be caused by negligent operation.

#### Warning

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

#### Warning

Inspect the supply cable for any damage and that there are no exposed or loose wires.

#### Caution

Inspect rotating parts are in usable conditions and replace if necessary.

#### Warning

Completely turn off the Deck Scaler and disconnect power supply line before attempting any service. Read Assembly and Disassembly instructions.

#### Warning

Safety and protective clothing, eyewear, headgear, ear protection, gloves and footwear to be worn during operation of this Deck Scaler. Please see Table C at end of this section.

**Warning**

Before starting operation make sure to rotate the hand wheel completely counter clockwise so that cutter head don't touch the surface.

**Warning**

Never operate without a belt guard.

**Warning**

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

**Caution**

Use only genuine Teryair or Teryair approved accessories.

**Caution**

Always disconnect the power supply when not operating.

**Safety Wear Mandatory While Operating Deck Scaler**

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

Suitable gloves must be worn at all times during operation.

Operators must wear helmets of suitable strength at all times. Helmet must be able to withstand 10G in 8ms without fracturing.

Waterproof heavy duty outerwear and Shoes with toe cap protection are a must during operation

**Safety Instructions**

Safety check before operating the Rotary Deck Scaler

Un packing

1. Read section in "Operating and safety precautions".
2. Check the belt for correct for correct tension or damage. To adjust belt read

"Belt tensioning"

3. Make sure the electric supply is consistent with the electric motor requirements. The scaler comes with a standard cable length of 20 meters, avoid losing a conger cable to to avoid voltage drop.
4. Ensure that the job site is protected from water, this scaler is rated IP44.
5. The Male plug portion is connected to the Scaler (Factory fitted). The female side electrical connection to be made at customer end as per the model no. and supplied voltage.

**Installation Instructions**

Un packing

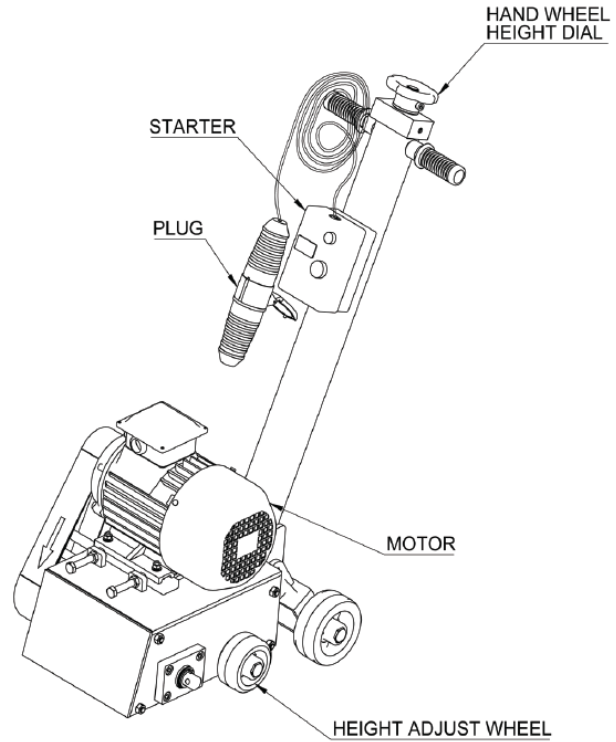
Identify all the components as below, contact your supplier if any parts are missing or damaged.

Be aware that minor visual differences may be noticed between actual motor because this component

vary depending on the model ordered. This illustration is for identification only.

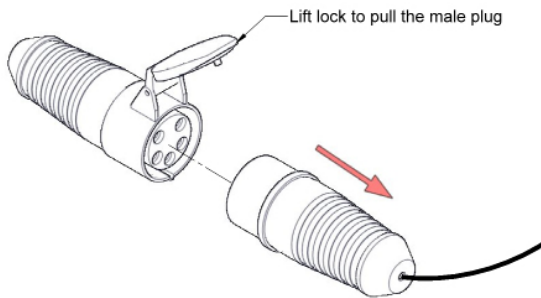
**Warning**

Motor must rotate as per shown arrow direction only.

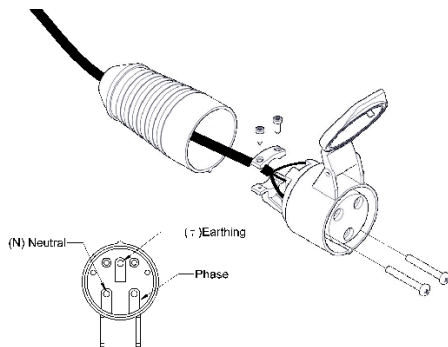


**Connection detail for 1-phase**

First disassemble the male & female plug by lifting spring loaded lock.



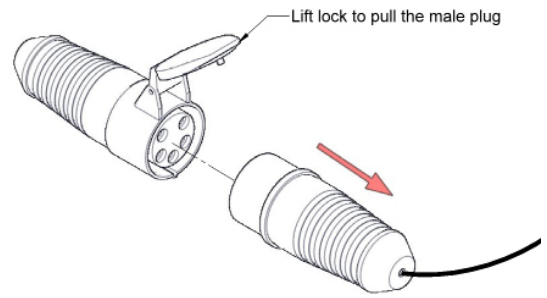
Now remove the two screws as shown to remove the rear cover of female plug to see the terminals.



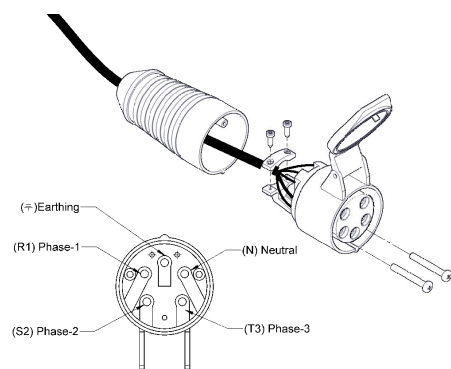
Connect the terminals as shown.

**Connection detail for 3-phase**

First disassemble the male & female plug by lifting spring loaded lock.



Now remove the two screws as shown to remove the rear cover of female plug to see the terminals.



Connect the terminals as shown.

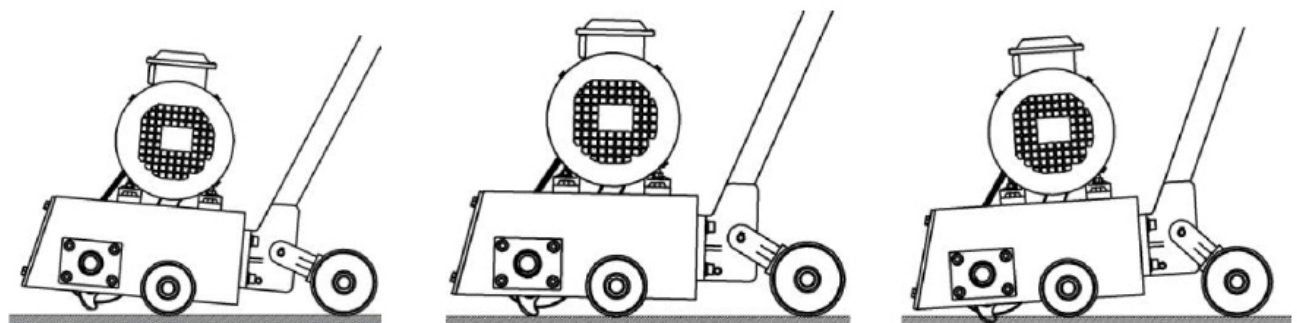
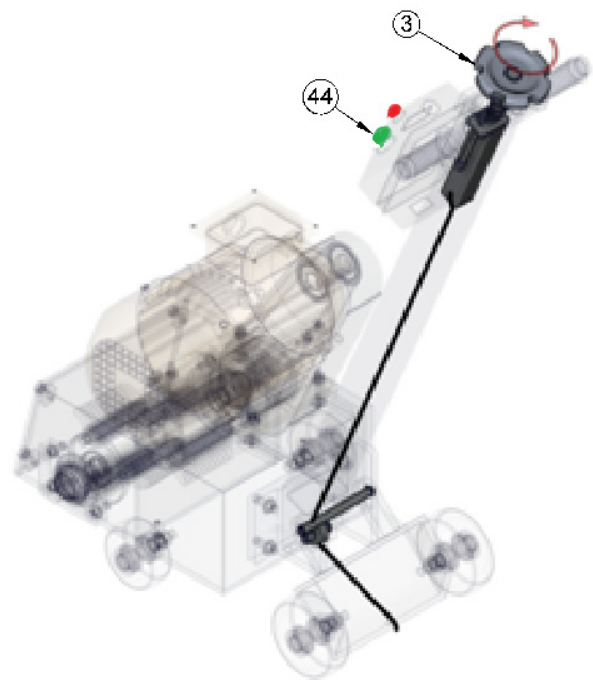
**Important Note**

- Please ensure socket side connections are correctly done. After connections, please ensure motor rotation is as indicated by the arrow on the product.
- If wiring connections are incorrectly done, the risk of reverse direction rotation of the motor will result in permanent damage to equipment and can be a hazard.
- For correct connections read the manual. This is applicable for 220V/440V (3Phase) motors.
- Before beginning operation always ensure that direction of rotation is as indicated by the arrow shown. Incorrect rotation will cause permanent damage to equipment and can be a hazard.

7. Turn the height dial counter clockwise completely and make sure that the cutter wheels are off the ground.

- Grip the handle firmly and press the start button (Green) located on the starter (44).
- Once the deck scaler motor starts, slowly turn the height dial (3) clockwise until the rotating cutter engages with the surface. The scaler will begin to pull forward gently. Adjust the height dial (3) and the traverse speed to achieve the level of descaling required.
- To shut down, rotate the height dial (3) counter clockwise to disengage the drum and press the red button to stop the motor.

\* See how to adjust the cutting depth.



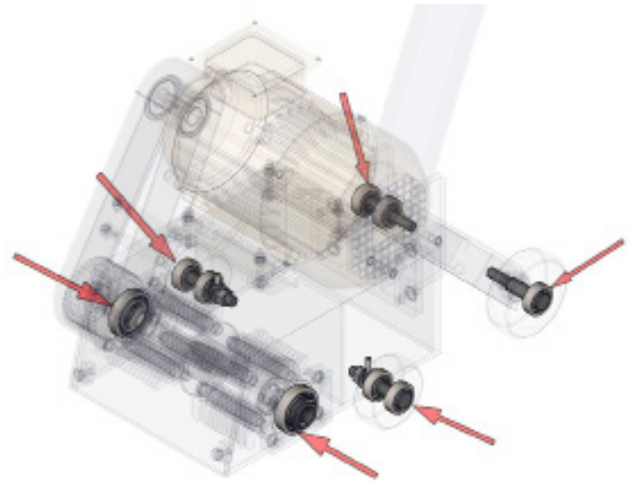
Cutter Head Dis-engaged

Cutter Head Light Engagement

Cutter Head Full Engagement

### Storage

- Disconnect the supply line and assemble the plug unit as shown on page no 5.
- Clean the machine, ideally using a high pressure washer, Do not direct water on electrical.
- Dry out and lubricate areas as shown.
- Cover it with tarp and store in a dry place.



### Troubleshooting

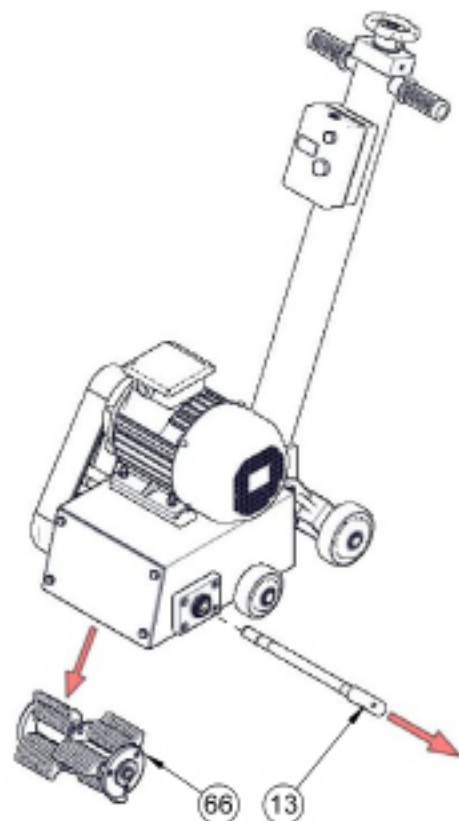
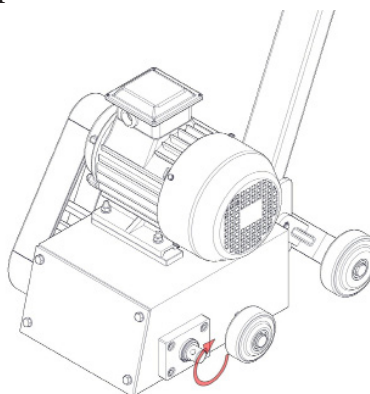
Problem	Cause Solution
The motor does not turn after energizing	A loose connection Check connections and retry
The motor hums but does not turn	Low voltage Check voltage and verify correct and re try
Insufficient descaling	Belt broken Replace Belt Worn out leaf or gear, worn out wheel. Replace Surface rough or uneven. In correct cutter depth setting.

### Disassembly and Re-assembly

#### Cutter drum replacement

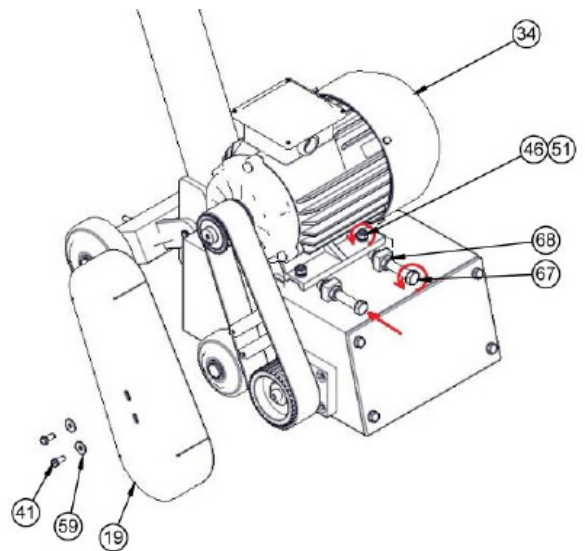
Follow instructions in “Shutting Down” section earlier in the manual.

- Unscrew (Anti-Clockwise) Main Drive Shaft (13) using a rod to rotate to remove the main drive shaft assembly.
- Now remove the entire Hammer leaf assembly and replace them with new one (if found worn-out). Now assemble in reverse manner



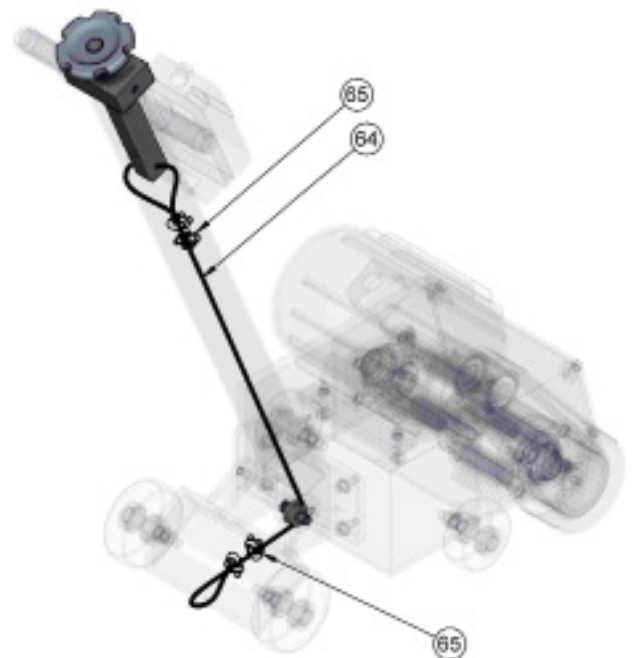
## Belt tensioning

- Unscrew Hex Bolts (41) and Plain Washers (59) to remove Belt Cover (19). Now Loosen all four Hex Nuts (46) afterwards loosen Hex Nuts (68) and tighten Hex Bolts (67) (Ensure that both Hex Bolts are fastened the same degree in order for them to travel the same distance.) to push the Motor (34).
- This will shift the motor position and tighten the belt tension. Now tighten Hex Nuts (46) and Hex Nut (67). Now assemble in reverse manner.



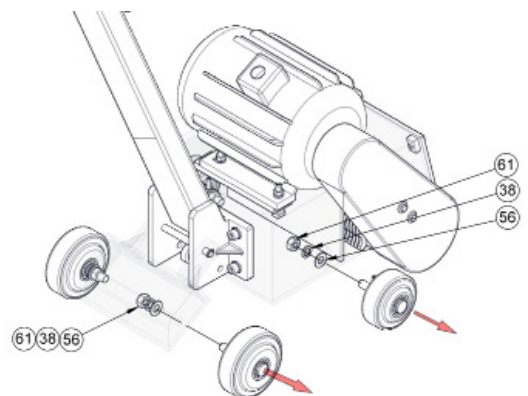
## Servicing of height adjustment mechanism

- First loosen the U-bolt Assembly's (65) at the bottom portion and pull out the Wire Rope (64).
- Now loosen the Allen Bolts (58) and pull out the height adjustment mechanism from the push handle (20). (refer Detail A)
- Now remove the U-bolt Assembly's (65) from other end also to replace the rope wire (64) with new one. Now assemble the same in reverse manner. Make sure to pass the wire rope through the pulley (5).
- Now assemble in reverse manner.



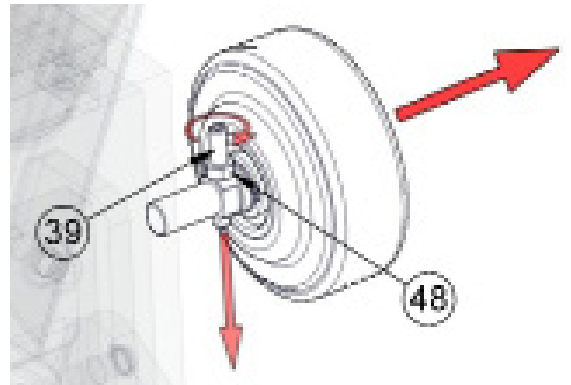
## Wheel replacement

- For changing wheels first invert the scaler to get access to the Hex Nut (61) unscrew it. Now Remove the Plain Washer (56), Spring Washer (38) and External Circlip (63) respectively. (refer Detail B)
- Remove the wheel assembly completely to replace with new one. Now assemble in reverse manner.



### Scaler height adjustment by small wheel

- a) There is a provision to adjust the height of scaler after the Wheel (Small) (2) worn out. The above procedure should be followed to remove the wheel assembly. Open both the wheel assembly.
- b) Now loosen the Hex Nut (48) on the Grub Screw (39). Now turn the Grub Screw (39) towards downwards as shown. After required turn made again tighten the Hex Nut (48) to fix the rotation of Grub Screw (39). Make sure you maintain same height of Grub Screw (39) below the Pin for Small Wheel (15) on both the wheels. Now

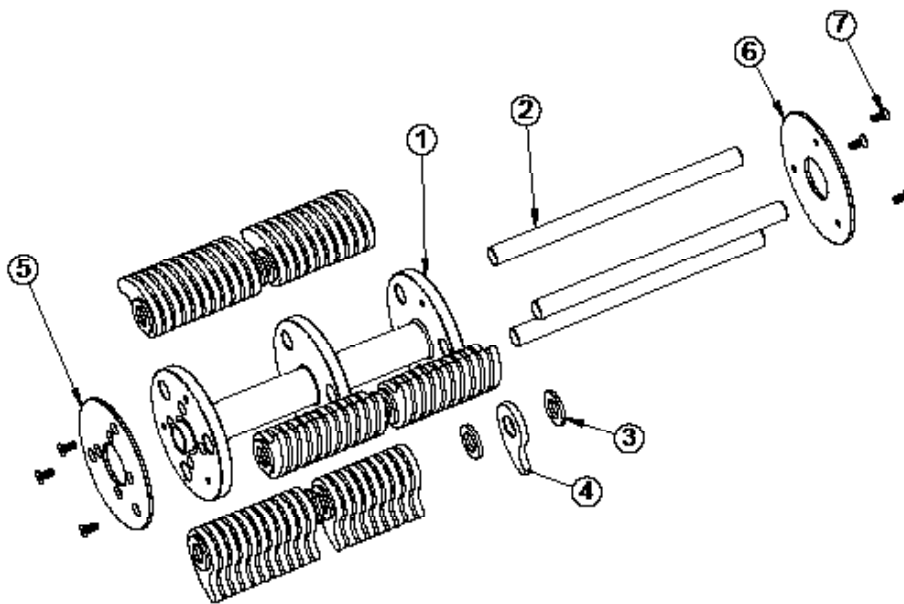


### Bearing Replacement

- a. Unscrew (Anti-Clockwise) Main Drive Shaft (13) using a rod to rotate to remove the main drive shaft assembly. (Refer Detail B and C )
- b. Now unscrew Allen Bolt (36) and Spring Washer (52) from Bearing Cover (23). Now remove External Circlip (35) using circlip plier.
- c. Now remove Spacer For Drive Assembly. (7) and Ball Bearing (30) and replace it with new ones.
- d. Now Unscrew Hex Bolts (41) and Plain Washers (59) to remove Belt Cover (19). Now remove Timing Belt (29) and unscrew Allen Bolt (36) to remove Plain Washer (53), Timing Pulley (33) and Spacer For Drive Assembly (7).
- e. Now Follow Steps 6.b & 6.c from Bearing Replacement.
- f. Now assemble in reverse manner

### Hammer leaf replacement

- a. Follow the procedure for Leaf Drum Replacement to remove the cutter assembly. Firmly grip the leaf stand (1) and unscrew the allen screw (7) with top cap (6) and bottom cap (5).
- b. Now remove the leafs (4), washers (3) from the pin (2) and replace with new one.
- c. Now assemble in reverse manner.

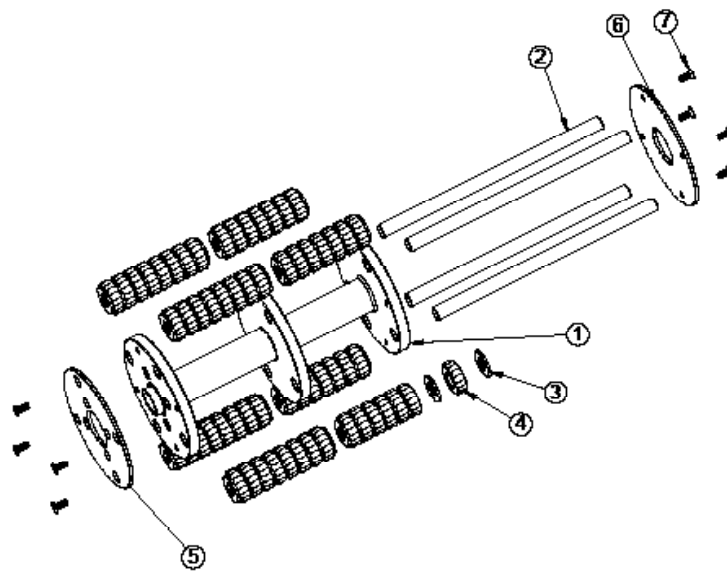


### Hammer Leaf Assembly - 653 97 01

Sr.No	Description	Part Number	Qty
1	DRUM FOR LEAF ASSEMBLY	653 33 02	1
2	PIN	653 21 25	3
3	PLAIN WASHER	653 90 16	72
4	CHIPPING HAMMER LEAF	340.347	63
5	CAP FOR BOTTOM FLANGE	653 31 15	1
6	CAP FOR TOP FLANGE	653 31 16	1
7	ALLEN SCREW	653 90 21	6

### Cutter Gear replacement

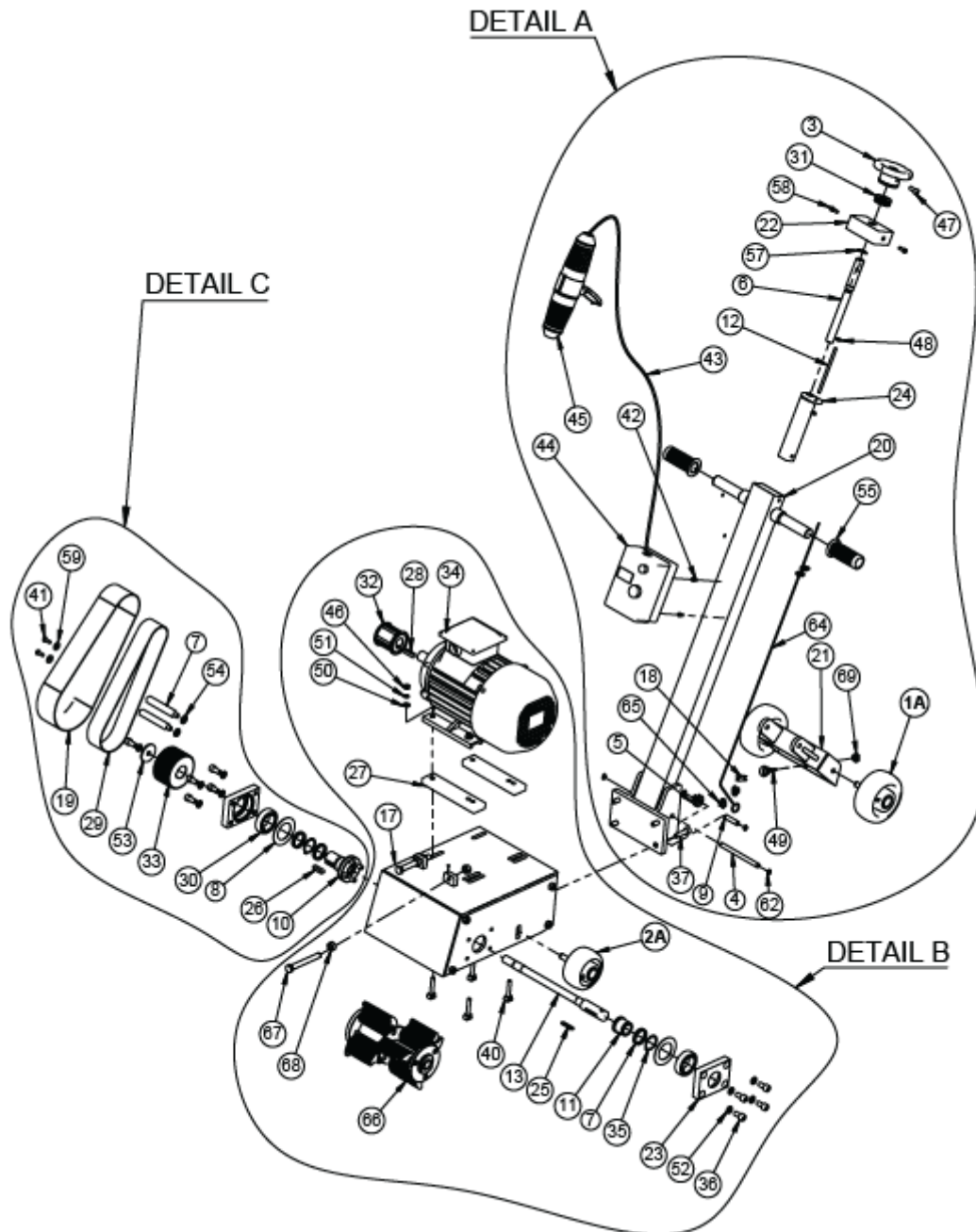
- a. Follow the procedure for Cutter Drum Replacement to remove the cutter assembly. Firmly grip the leaf stand (1) and unscrew the allen screw (7) with top cap (6) and bottom cap (5).
- b. Now remove the cutter gear (4), washers (3) from the pin (2) and replace with new one.
- c. Now assemble in reverse manner.



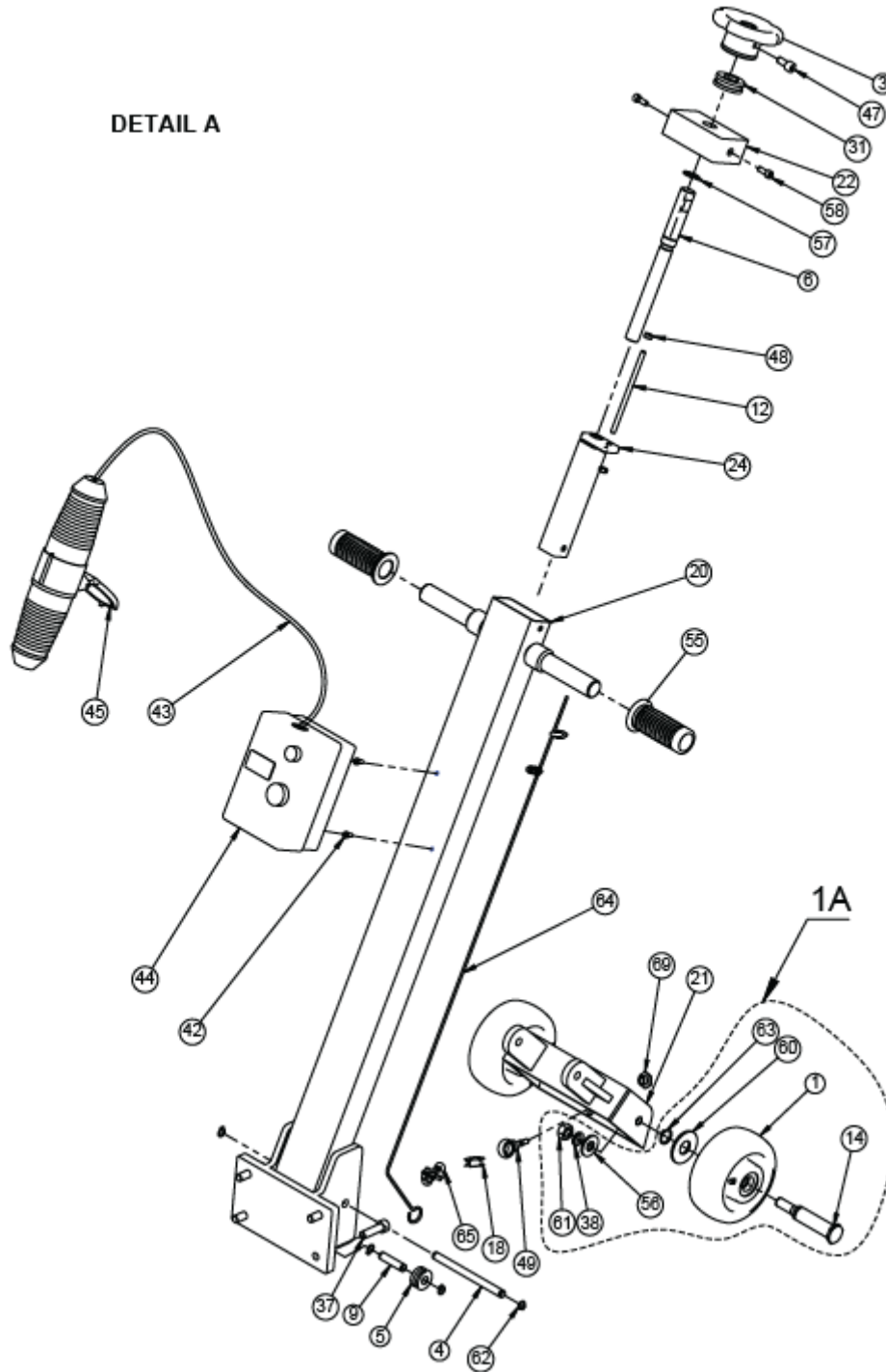
### Cutter Gear Assembly - 653 97 02

Sr.No	Description	Part Number	Qty
1	DRUM FOR CUTTER ASSEMBLY	653 33 03	1
2	PIN	653 21 26	4
3	PLAIN WASHER	653 90 17	68
4	CUTTER GEAR	59.12.56	60
5	CAP FOR BOTTOM FLANGE	653 31 17	1
6	CAP FOR TOP FLANGE	653 31 18	1
7	ALLEN SCREW	653 90 21	8

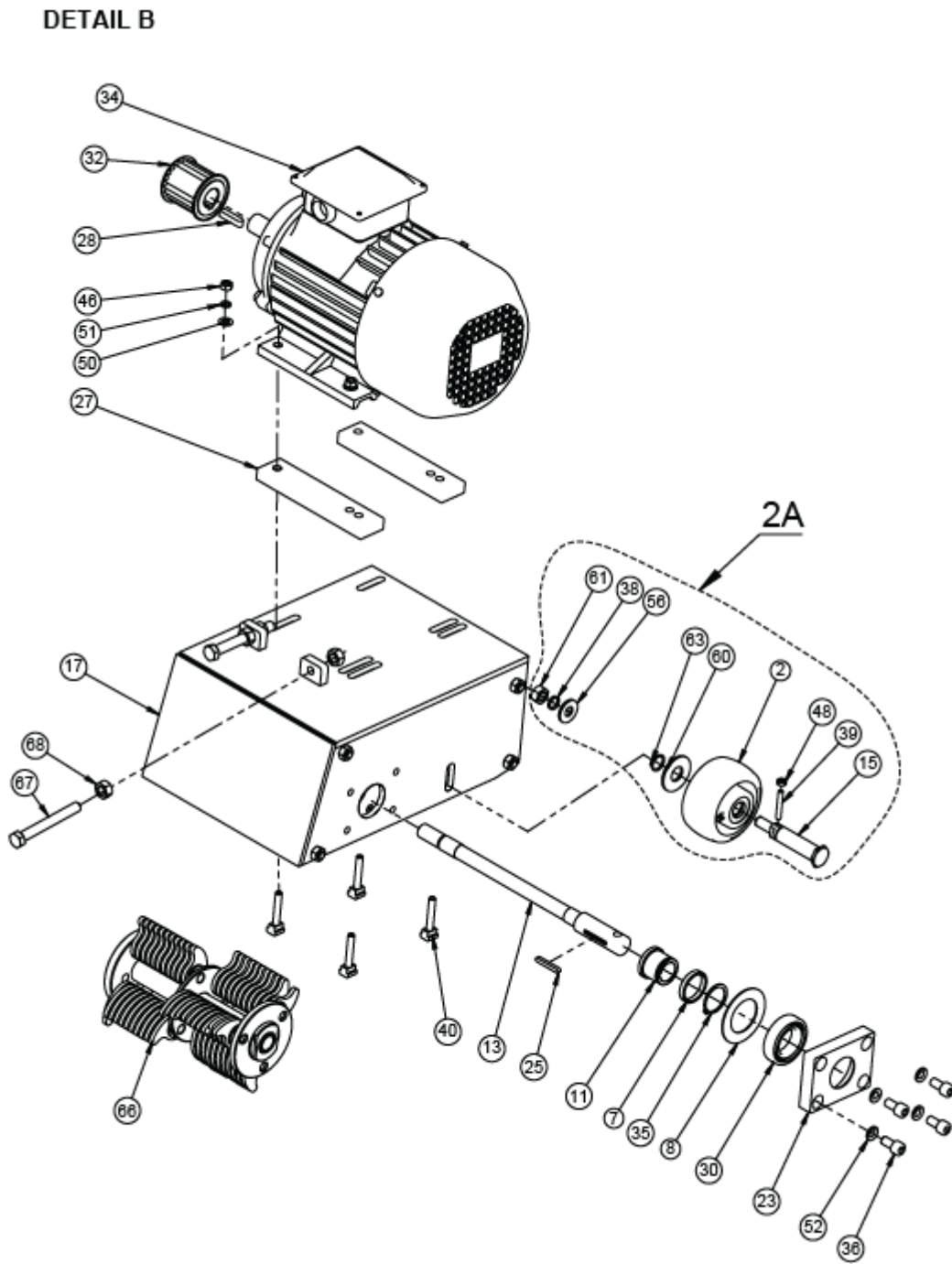
### Exploded View for ERDS 84



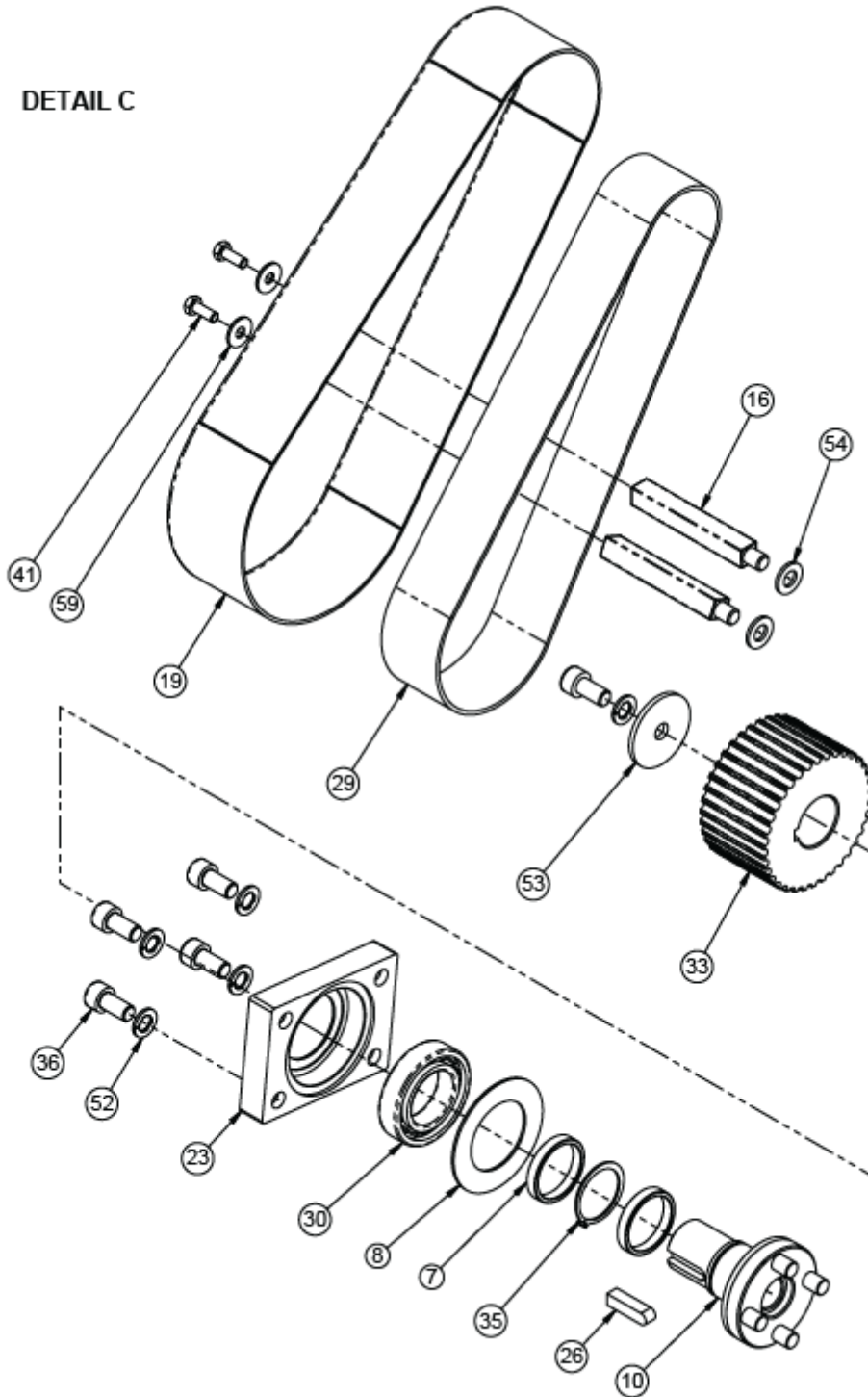
### Exploded View Detail-A for ERDS 84



### Exploded View Detail-B for ERDS 84



### Exploded View Detail-C for ERDS 84



### Bill of Materials for ERDS 84

Sr.No	Description	Part Number	ERDS 84			
			220V3	440V	110V	220V
1A	BIG WHEEL ASSEMBLY	653 97 07	2	2	2	2
1	Wheel (Big)	653 08 01	2	2	2	2
2A	SMALL WHEEL ASSEMBLY	653 97 08	2	2	2	2
2	Wheel (Small)	653 08 02	2	2	2	2
3	Height Dial	653 10 01	1	1	1	1
4	Pin For Push Handle	653 21 01	1	1	1	1
5	Pulley For Push Handle	653 21 02	1	1	1	1
6	Threaded Shaft	653 21 03	1	1	1	1
7	Spacer For Drive Assly.	653 21 04	3	3	3	3
8	Bearing Cover	653 21 05	2	2	2	2
9	Pin	653 21 06	1	1	1	1
10	Drive Spindle	653 21 07	1	1	1	1
11	Sleeve For Bearing	653 21 08	1	1	1	1
12	Stud For Sliding Guide	653 21 09	1	1	1	1
13	Main Drive Shaft	653 21 10	1	1	1	1
14	Pin For Big Wheel	653 21 16	2	2	2	2
15	Pin For Small Wheel	653 21 17	2	2	2	2
16	Square Stud	653 23 01	2	2	2	2
17	Housing	653 31 01	1	1	1	1
a	Lug	653 31 01-01	2	2	2	2
b	Spring Washer	536 90 04	4	4	4	4
18	Thimble m5	653 50 10	1	1	1	1
19	Belt Guard	653 31 03	1	1	1	1
20	Push Handle	653 33 01	1	1	1	1
21	Wheel Mounting Tray	653 31 05	1	1	1	1
22	Sliding Block	653 31 06	1	1	1	1
23	Bearing Block	653 31 07	2	2	2	2
24	Pipe For Sliding Guide	653 31 08	1	1	1	1
25	Key For Drive Shaft	653 31 09	1	1	1	1
26	Key For Drive Spindle	653 31 10	1	1	1	1
27	Motor Plate	653 31 11	2	2	2	2
28	Key For Motor	653 31 12	1	1	1	1
29	Timing Belt	653 40 01	1	1	1	1
30	Ball Bearing	653 50 01	2	2	2	2
31	Thurst Bearing	653 50 02	1	1	1	1
32	Timing Pulley	653 50 03	1	1	1	1
33	Timing Pulley	653 50 04	1	1	1	1
34	Motor (220V-1ph)	653 50 05	-	-	-	1
34	Motor (110V-1ph)	653 50 07	-	-	1	-
34	Motor (440V-3ph)	653 50 06	-	1	-	-
34	Motor (220V-3ph)	653 50 09	1	-	-	-
35	Ext. Circlip	653 90 01	2	2	2	2

**Bill of Materials for ERDS 84**

Sr.No	Description	Part Number	ERDS 84			
			220V3	440V	110V	220V
36	Allen Bolt	653 90 02	9	9	9	9
37	Allen Bolt	653 90 03	4	4	4	4
38	Spring Washer	653 90 04	4	4	4	4
39	Grub Screw	653 90 05	2	2	2	2
40	T -Stud	653 90 06	4	4	4	4
41	Hex Bolt	653 90 07	2	2	2	2
42	Cheese Head Screw	653 90 08	2	2	2	2
43	Cable - 1ph	342 91 27	-	-	1	1
43	Cable - 3ph	653 91 02	1	1	-	-
44	Starter -1ph	653 91 03	-	-	-	1
44	Starter -1ph	653 91 08	-	-	1	-
44	Starter -3ph (440V)	653 91 04	-	1	-	-
44	Starter -3ph (220V)	653 91 07	1	-	-	-
45	Plug -1ph	653 91 05	-	-	1	1
45	Plug -3ph	653 91 06	1	1	-	-
46	Hex Nut	022 40 21	4	4	4	4
47	Allen Bolt	500 90 41	5	5	5	5
48	Hex. Nut	150 40 25	4	4	4	4
49	Eye Bolt	653 90 11	1	1	1	1
50	Plain Washer	171 90 50	4	4	4	4
51	Spring Washer	199 90 47	4	4	4	4
52	Spring Washer	210 90 35	13	13	13	13
53	Plain Washer	298 00 53	1	1	1	1
54	Plain Washer	330 90 26	6	6	6	6
55	Rubber Handle	340 30 24/03	2	2	2	2
56	Plain Washer	653 90 19	4	4	4	4
57	Ext Circlip Light	500 90 42	1	1	1	1
58	Allen Bolt	500 90 51	2	2	2	2
59	Plain Washer	536 90 07	6	6	6	6
60	Plain Washer	653 90 24	4	4	4	4
61	Hex. Nut	552 90 14	4	4	4	4
62	Ext Circlip	612 51 34	4	4	4	4
63	Ext Circlip	653 90 23	4	4	4	4
64	Wire Rope	653 90 10	1	1	1	1
65	U' Bolt Assly.	653 98 01	4	4	4	4
66	Hammer Leaf Assly.	653 97 01	1	1	1	1
67	Hex. Bolt	653 90 13	2	2	2	2
68	Hex. Nut	653 90 12	4	4	4	4
69	Hex Insert	653 23 02	1	1	1	1

## 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** : Electric Rotary Deck Scaler

**Model Number** : ERDS84 Series

**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 16831/2

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

Valid Till – 03/11/2025

Signed for and on behalf of



TERYAIR EQUIPMENT PVT. LTD.

Place of Issue : Vasai



# 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.

Model Number : ERDS84 Series

M. Yadav, Q.A. Manager  
(Company Seal)

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