

Gesswein

SKU: 5102981

ECO-Torque 280

Instruction Manual



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Eco-Torque Specifications

Model	ECO-Torque 280
Input Voltage	110V AC, 50/60Hz or 220V AC, 50/60Hz
Output Voltage	30V-DC/0.5A
Dimensions	112 mmW x 147 mmD x 78 mmH (4.4"W x 5.8"D x 3.1" H)
Weight	1.25kg (2.75 lbs.)

ECO-Torque 280 Controller

- The Gesswein ECO-Torque 280 Controller has a Voltage Selector Switch that lets you use it with either 110V or 220V electricity.
- Control the handpiece speed using the Dial Rheostat or the On/Off Foot Switch.
- Direct/Remote Switch - Set to HAND when controlling handpiece speed by Dial Rheostat. Set to FOOT when using the On/Off Foot Pedal.

QUICK TIPS

Before You Start

Check the Selector Switch to be sure it is set at the proper AC voltage.

Warm Up

Before first use, run the handpiece at a slower speed without any load for 30 minutes. This will help ensure a smooth operation.

Important Note

Always turn the machine OFF prior to changing the handpiece direction.

Front Panel Guide

- 1 **Main Power**
- 2 **Forward/Reverse Switch** - Handpiece runs counterclockwise in FWD, clockwise in REV. Turn Main Power Switch OFF before changing handpiece rotation direction.
- 3 **Handpiece Receptacle** - For Handpiece H37L1 or any Gesswein Power Hand 2X and Gesswein Power Hand 3 Handpieces.
- 4 **Dial Rheostat** - Controls handpiece speed from minimum to maximum RPM.



Fig. 1

Back Panel Guide

- 5 On/Off Foot Switch Input
- 6 Voltage Selector Switch – Ensure the switch is set at proper AC Voltage.
- 7 Foot Control/Hand Control Selector Switch
- 8 AC Power Cord and Plug

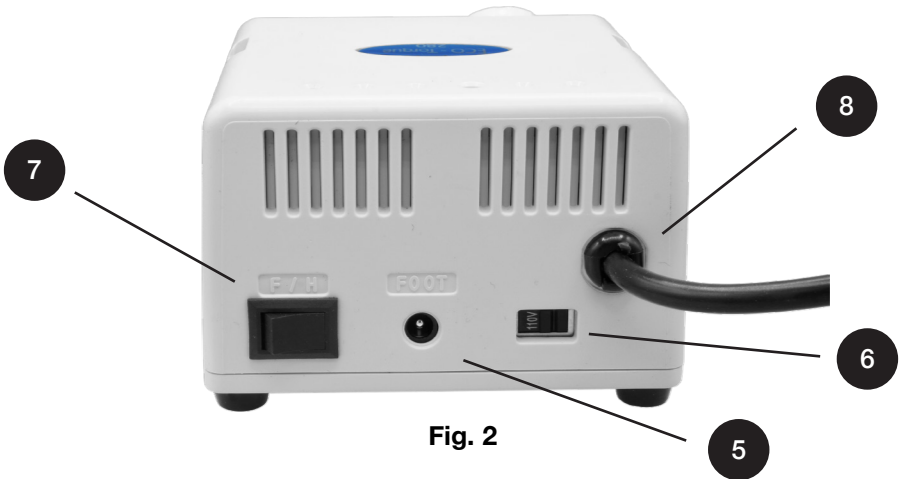


Fig. 2

Handpiece operation with On/Off Switch

1. Plug On/Off Foot Switch into its receptacle 5 on the rear of the controller.
2. Turn main power switch 1 on by pushing button.
3. Turn the Dial Rheostat 4 to a desired handpiece speed (0 min. - 35,000 max).
4. Depressing the Foot Switch brings the handpiece to the speed selected on the Dial Rheostat.
5. To change handpiece speed, select a new setting with the Dial Rheostat.

SDE-H37L1 Handpiece

The Handpiece H37L1 is supplied with a 3/32” (2.35 mm) Collet and a Test Pin*.

QUICK TIP

When not using the handpiece, leave the Test Pin or a 3/32” shank tool in the Collet to ensure optimal condition.

Changing Tools

1. Turn the Collet Release Ring* to the “R” release position until a “click” is heard (Fig. 3).
2. The Collet is now open and ready for a new tool.
3. Add a new tool in and secure by turning the Collet Release Ring to the “S” secure position until a “click” is heard.
4. After “click” the new tool is fully secure.

QUICK TIP

Do not turn the Collet Release Ring while the handpiece is running as damage may occur and the tool can fly loose from the Collet.

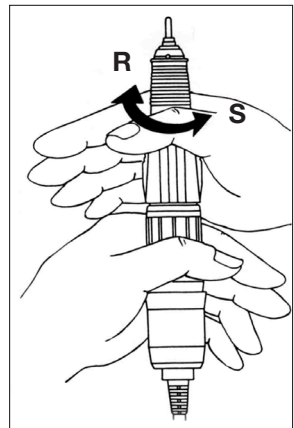


Fig. 3

Collet Removal*

1. Turn the Collet Release Ring fully to “R”
2. Place the triangular cutout of the Collet Wrench over the Collet (Fig. 4)
3. Turn counterclockwise to loosen or clockwise to tighten.
4. Tighten the Collet with the Collet Wrench until just tight.

* Reducing Collets can be used in lieu of removing/ changing a Handpiece Collet to accommodate a different size shank tool.

Having trouble loosening the tight Collet? Check the next page for help.

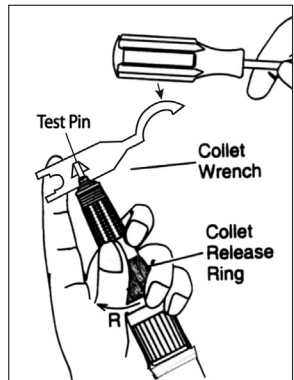


Fig. 4

Loosening the Collet

A tight collet can be loosened by placing the wrench over the collet and tapping the wrench with a solid tool. (Fig. 5)

Removing the Hand Cap

If the previous procedures do not loosen a tight collet then the Hand Cap must be removed using the following steps:

1. Turn the Collet Release Mechanism to the “S” position (Fig. 5).
2. Unscrew the hand cap by turning it counterclockwise while holding the handpiece (Fig. 6).
3. Keep the Coil Spring in the Collet Release Ring.
4. Insert the Chuck Joint Wrench fully into the Connector.
5. Hold the Hand Cap and Chuck Joint Wrench in one hand, and with the Collet Wrench in place on the Collet, loosen by turning the Wrench counterclockwise (Fig. 6).
6. Tighten the Collet by turning the Collet Wrench clockwise until snug.

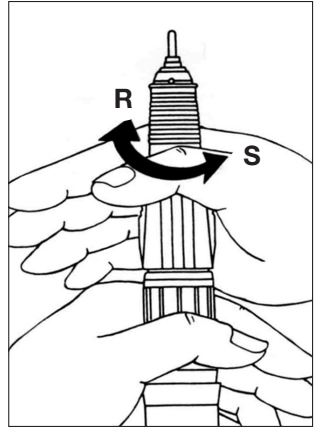


Fig. 5

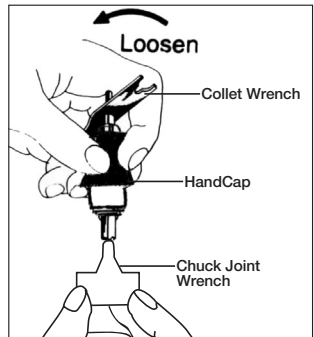


Fig. 6

Replacing the Hand Cap

To replace the Hand Cap, screw it into the Collet Release Ring in a clockwise direction until fully seated.

Proper Collet Installation

Check proper Collet installation:

1. Set the Collet Release Mechanism to “S”, and rotate the Collet by hand
2. If the Collet does not rotate freely, it is not fully seated in the Joint Shaft.
3. Repeat the Collet removal-replacement procedure.

Carbon Brushes

Expected brush life is 800–1,000 hours. Worn brushes should be replaced when the handpiece no longer runs at maximum speed or sounds as though it is “running out of gas.”

Replacing Carbon Brushes

Replacement Carbon Brushes

SKU: 5105094

1. Be sure to replace both brushes at the same time. Replacement of only one carbon brush will cause motor damage.
2. To replace worn brushes, unscrew the Carbon Brush Housing Cover in a clockwise direction (Fig. 7).
3. Using a small Phillips Screwdriver, unscrew each brush assembly.
4. The brush tension spring will push the assembly out of the brush well so it can be lifted clear.
5. The two new Carbon Brushes should be installed by gently pushing them into the brush well.
6. Screw the assembly in securely, and replace the Carbon Brush Housing Cover

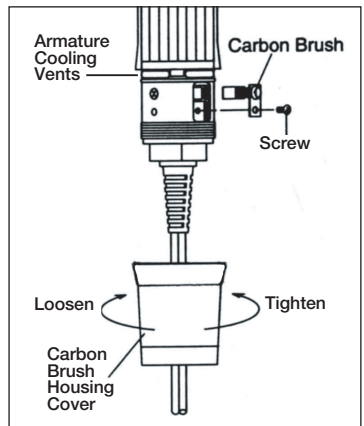


Fig. 7

Safety Precautions

Read all safety precautions thoroughly to ensure proper and safe use.

Safety Precautions	Suggestions
Set Voltage Selector Switch	Before operating, be sure that the Voltage Selector Switch is set to the voltage you will be running the unit from.
Suggested Temperature and Environment	Suggested temperature range: 32–104°F (0–40°C). Avoid use in dusty, warm, or humid environments to prevent controller damage.
F/H Switch	Make sure you have the F/H Switch on the proper mode based on intended use.
Clear Controller Ventilation	Ensure the Controller Ventilation Vents on the back of the unit are not obstructed.
Prevent Stalling and Damaging Motor	Ensure the Collet Release Ring is in the secure “S” position before operating the handpiece. Operating with the ring in the “R” release position may stall the motor and cause damage.
Prevent Damage To Motor	Avoid altering tools or rotating the Collet Release Ring during handpiece operation, as it may cause the motor to abruptly stop which can result in damage to both parts and the motor itself.
Prevent Carbon Brush and Motor Armature Commutator Wear	Avoid stalling the motor by pushing too hard on the workpiece or exceeding the torque capacity of the handpiece motor. This will cause excessive carbon brush and motor armature commutator wear.
Do Not Exceed Max RPM	Do not exceed the maximum rotation speed (RPM) specified by the manufacturer/distributor of the tool being used and adhere to the safe/ maximum operating speeds.
Check Proper Shank Size	Handpiece Collets are manufactured to close tolerances. Use tools with a shank size that corresponds to the Collet being used.

Safety Precautions (con't)

Safety Precautions	Suggestions
Prevent Shank From Bending	Insert a tool fully into the Collet until it bottoms at the back of the Collet. Using a tool not fully inserted is dangerous and can cause the tool to vibrate or the tool shank to bend.
Tool Precaution	Never use tools out-of-round or with bent shanks.
Consistently Tighten Collet	Periodically check to see that the Collet is fully tightened. A loose Collet will cause the handpiece to run slower.
Do Not Use Water or Oil to Clean Handpiece	Avoid using the handpiece in water or oil and keep foreign matter out of the inner casing. This includes dirt and excessive wood dust. Failure to do so may result in damage to the ball-bearing assemblies. Refer to Maintenance for cleaning instructions.
Forward/Reverse Selector Switch to OFF	Before operating the Forward/Reverse Selector Switch, turn the controller OFF. Make the selection, then turn the unit back ON
Do Not Drop Handpiece	Take care not to drop the handpiece. Handpiece bearings may be damaged and tool shanks bent.
Prevent Electric Shock	To avoid electric shock, never plug or unplug the Power Cord with wet hands.
Proper Safety Glasses or Goggles	While operating the handpiece, wear protective safety glasses or goggles at all times. Eyewear should meet ANSI Z87.1 and GSA Z94.3 standards.
When Not in Use	Put the handpiece on the rubber cradle rest provided or into the handpiece holder on the side of the unit. Put a tool or Test Pin in the Collet when not using the handpiece.
No Overload Notification	Please note: there is no overload alert. Overloading may cause the handpiece to continue until it stops providing power. To restart, turn off the unit briefly before restarting. Monitor usage to prevent overloading and damage to handpiece.

Maintenance and Cleaning

ECO-Torque 280 Controller Ventilation

Ensure vents (on back) are clear of any obstructions/blockages.

CLEANING TIP

If compressed air is available, use it on the vents. If air is not available, blow into the vents and use a soft, dry brush to remove excess dust.

Carbon Brush Housing Cover

Periodically remove excessive dust that accumulates in cover.

CLEANING TIP

To remove this dust, unscrew the Cover in a clockwise direction. Blow air into the Cover and the Armature Cooling Vents (See Fig. 7 on page 8).

- Dust can also be removed with a soft, dry brush.
- If necessary, use a clean cloth moistened with detergent to clean the Carbon Housing Cover inside and out.
- Do **not** use any volatile liquid as a cleaner (i.e., paint thinner or alcohol).

Handpiece Collet

To ensure ease in changing Collets, it is recommended to periodically clean the inner threads of the handpiece Collet.

CLEANING TIP

Twist a clean rolled-up piece of tissue paper in and out of the Collet threads.

- Do **not** lubricate your handpiece. All handpiece bearings are sealed and permanently lubricated.

Warranty

From the date of purchase, the **ECO-Torque 280 controller** (SKU 5102981) is covered under a 12-month warranty.

6 months coverage is included for non-wear parts of the handpiece, such as the cover, power cord, and other miscellaneous non-wear parts within the handpiece mechanism.

There is also a standard mechanical handpiece warranty of 90 days for parts (bearings, motor brushes, and DC motors) subject to wear.

Contact Us

We're Here to Help

If you encounter any issues or have any questions about your new product, please contact our customer support team with the information below.

Customer Support

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