



TERAFLOAT

POWERDENTISTRY

Operator's Manual: Terafloat® ECO - LED - FLX

Lightweight Perfection

Swissvet Veterinary Products







Keep these instructions with the instrument.

If you have questions, or need additional copies, please contact us at
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1 GENERAL INFORMATION

1.1 ABOUT THE OPERATING MANUAL

This operating manual will instruct you to use the Terafloat in the safest and most efficient manner. Please read the operator's manual carefully before working with the Terafloat instruments. It is vital to safely operate the Terafloat by following all safety and operating procedures provided within this manual.

Store this manual in a safe, secure place for future reference.

Include this operating manual if the Terafloat is sold or passed on to third parties.

1.2 LIMITATION OF LIABILITY

The information provided in this manual is composed in accordance with applicable regulations and standards in conjunction with years of expertise/experience and state-of-the-art equipment.

The manufacturer will not assume liability for the damages caused by unapproved repairs, use of unapproved parts, repairs by unqualified personnel, failure to utilize this manual, improper use of equipment, technical modifications to instrument, and unauthorized retrofitting.

The components included may vary from the examples, illustrations, explanations, and images provided for specific models or custom models, or the most recent technical modifications.

The obligations agreed upon in the supply contract, Terms of Conditions, and Manufacturer's Terms of Delivery, also the Legal Requirements applicable at the time of conclusion should apply.

Swissvet reserves the right to introduce technical modifications to improve the efficiency and usability of the Terafloat and enhance it further.

1.3 COPYRIGHT

This operator's manual is protected by copyright and its intended use is for in-house purposes only.

Sending this manual to third-parties, duplications, using/disclosing the content of this manual without the manufacturer's consent is forbidden except for in-house purposes. Such violations will result in liability for damages. Additional claims will remain reserved.



2 TECHNICAL SPECIFICATIONS CHART: WEIGHT/DIMENSION/EMISSION/ORIGIN

The Terafloat is manufactured in Switzerland with added components.

The Terafloat is assembled in Switzerland, Germany, and USA.

Disc/Burr	SKU	Weight (g)	Weight (oz)	Length (cm)	Length (in)	Width (cm)	Width (in)	Origin
T2 Disc	T-0202	22	0.78	n/a	n/a	3.5	1.38	Swiss
T3 Disc	T-0206	18	0.63	n/a	n/a	3.1	1.22	Swiss
A2 Burr	T-0212	20	0.71	2.20	0.87	1.1-1.6	0.43-0.63	Swiss
A4 Burr	T-0217	22	0.80	2.20	0.87	1.1-1.6	0.43-0.63	Swiss
D1 Burr	T-0261	8	0.28	2.00	0.79	0.45	0.18	Swiss
D2 Burr	T-0262	10	0.35	3.20	1.26	0.45	0.18	Swiss
D3 Burr	T-0263	12	0.42	3.70	1.46	0.45	0.18	Swiss
P1 Burr	T-0283	6	0.20	2.00	0.79	1.0	0.39	Swiss
S1 Wheel	T-0285	24	0.90	n/a	n/a	5.0	1.97	Swiss
Z1 Burr	T-0221	18	0.63	0.28	0.11	1.3	0.51	Swiss

Individual Item or Set	SKU	Weight (g)	Weight (oz)	Length (cm)	Length (in)	Origin
Head with Guard	T-0181	70	2.47	4.00	1.57	Swiss
Head without Guard	T-0180	70	2.47	4.00	1.57	Swiss
ECO Shaft	T-0165	628	22.15	43	16.93	Swiss
LED Shaft	T-0154	684	24.13	43	16.93	Swiss
FLX Shaft	T-0142	644	22.72	45.72	18.00	Swiss
ECO Pony Shaft	T-0156	581	20.49	41.50	16.34	Swiss
LED Pony Shaft	T-0157	581	20.49	41.50	16.34	Swiss
Incisor Shaft	T-0159	270	9.5	15.5	6.10	Swiss



Batteries and Chargers	SKU	Weight (g)	Weight (oz)	Length (cm)	Length (in)	Origin
3.0(Ah) Battery	T-0122	176	6.21	8.6	3.39	Canada
6.0(Ah) Battery	T-0120	410	14.46	11	4.33	Canada
1 Bay Charger	T-0124	500	17.64	n/a	n/a	Canada
4 Bay Charger	T-0128	1120	39.51	n/a	n/a	Canada
ECO/FLX Motor (without battery)	T-0103	678	23.92	23	9.06	Swiss
LED Motor (without battery)	T-0101	678	23.92	23	9.06	Swiss

Case	SKU	Weight (g)	Weight (oz)	Length (cm)	Length (in)	Width (cm)	Width (in)	Height (cm)	Height (in)	Origin
Long Case	T-0303	1780	62.8	82.6	32.5	26.7	10.5	12.1	4.8	Italy
Large Case	T-0304	3120	110.1	72.4	28.5	47.6	18.8	17.8	7	Italy

Accessories	SKU	Weight (g)	Weight (oz)	Origin
Tool Bag	n/a	520	18.34	USA

Terafloat Set	Sound (dB)	Origin
Basic Set	75	Swiss
Basic Plus Set	75	Swiss
Standard Set	75	Swiss
Advanced Set	75	Swiss
Professional Set	75	Swiss



3 SAFETY AND WARNINGS

This section provides an overview of all important safety aspects necessary to keep man and animal perfectly safe and provide for hassle free and safe operation of the Terafloat. Failure to observe the manual may lead to serious danger.

3.1 EXPLANATION OF SYMBOLS

Please take the extra time and care to familiarize yourself with the following symbols that alert the user to notices, caution, warnings, dangers, hazardous situations, damages, injuries, and useful tips/recommendations while using the Terafloat.



Indicates a potentially hazardous situation which, if not avoided, may result in property damage.



Indicates a hazardous situation which, if not avoided, could result in minor to moderate injury.



Indicates a hazardous situation which, if not avoided, could result in serious injury or even death.



Indicates a hazardous situation which, if not avoided, may result in serious injury or even death.



Indicates dangers caused by electric current which, if not avoided, potentially could cause serious injury or death.



Indicates useful tips or recommendations.

3.2 RESPONSIBILITIES OF USER

The Terafloat is designed for licensed, equine, experienced veterinarians. Understand that accidents are possible when working with horses. Make sure you have adequate training and experience with equine dentistry and that you are aware of the limits and boundaries of equine dentistry.

Please inform the client of the potential risks of dentistry procedures. Always use adequate sedation and a full mouth speculum for examination and treatment. The use of PPE items such as eye protection, masks, and gloves are required. Avoid loose clothing, loose jewelry, and protect long hair with a ponytail.

Make sure to carefully observe the safety instructions to prevent accidents as well as personal injury or property damage.

Ensure that all employees handling the machine have read and understand this manual.

Check all safety installations regularly for proper operation and completeness.

Must wear the proper PPE.



3.3 PERSONNEL REQUIREMENTS

Be aware of the Terafloat's dimensions and weight while using the machine.

Pay attention to third parties in the work area when utilizing the machine.

The person using this machine is obligated to comply with all safety, accident prevention as well as environmental and animal protection regulations applicable.

Qualified personnel have the expert skills required for the Terafloat's range of application and comply with all hygienic requirements.

Qualified personnel are capable of performing the tasks assigned to them in a safe manner thanks to their expert training, skills, and experience.

Qualified personnel are capable of independently detecting, assessing, and avoiding risks to themselves and the animal.



WARNING!

3.4 INTENDED USE

The Terafloat is designed and constructed exclusively for veterinary applications only.

The Terafloat may only be used specifically for the treatment of equine teeth.

Do not use the Terafloat for dental treatments without a full mouth speculum or incisor speculum.

Unless a full mouth speculum is used, there is a risk of injury to the user and/or the animal during the dental treatment.

3.5 PERSONAL PROTECTIVE EQUIPMENT

Working with the Terafloat requires that you wear PPE to minimize risks to the health of man or animal.

Use the following equipment when you work with the Terafloat:

- Non-Slip Shoes
- Suitable Work Clothes for Environment and Weather Conditions
- Protective Eyewear/Glasses/Goggles from Dental Debris, Flying Parts, or Liquids
- Mask for Dental Debris
- Hearing Protection
- Gloves for Hand Protection
- Pull back and tie loose hairs with hair band.



3.6 DANGERS

Follow all operating steps as specified by the instructions in this operating manual.

- **Electric Current:** There is danger of death when coming in contact with live, electric components.



DANGER!

- **Noise:** The noise level generated in the work area may cause hearing damage. Always wear hearing protection when working with the machine.



WARNING!

- **Rotating Disk or Burr:** Rotating rasping discs and burrs may cause injury by friction or abrasion. Do not reach onto the rotating disc while using the machine.



CAUTION!

- **Hot Surface:** Depending on the intensity of the pressure exerted on the rasping head and the duration of the grinding, the rasping disc or burr may become hot. Coming in contact with hot components may lead to burns.



CAUTION!

- **Improper Use:**
 - Improper use may lead to serious injury to a human, animal, or property.
 - Keep the work area tidy and clean. Components, such as tools or buckets, or debris lying loosely around may lead to accidents.
 - If used in a careless manner, third parties in the vicinity of the work area may also become injured.
 - Refrain under all circumstances from using the machine in human medicine.
 - Refrain from using the machine beyond the scope of veterinary medicine.



WARNING!



3.7 ENVIRONMENTAL PROTECTION

If environmentally hazardous substances are handled incorrectly, or if these substances have been unsuitably disposed of, damage may be caused to the environment. Take immediate steps if environmentally hazardous substances leak into the environment by accident. If in doubt, notify the responsible local authorities. Substances such as lubricants may contain toxic substances. They must not be introduced into the environment.



NOTICE!

3.8 ANIMAL PROTECTION

Risk of Infection: The gums of the animal might become irritated or hurt during the dental treatment; therefore, bacteria might enter the wounds and lead to infection. Make sure the animal patient is up to date on current vaccinations at the time of the dental treatment being performed; specifically, the Tetanus vaccine.



NOTICE!

Overheating: Depending on the intensity of pressure applied to the teeth with the disc/burr and duration of grinding, the disc/burr may become hot. If overheated, the disc/burr might burn the animal and damage the machine. Therefore, pause grinding at regular intervals and cool the rasping head by briefly immersing in water.



NOTICE!

Bleeding: There is no danger to the animal's health if mild bleeding of the gums occurs during the duration of a routine dental treatment. Bleeding may especially occur during the treatment of the teeth in the back of the mouth (M3), as these teeth are rather close to the gums.



IMPORTANT!



4 SETUP AND FUNCTION

4.1 ENTIRE MACHINE

1. Motor
2. Shaft
3. Head
4. Disc or Burr
5. Batteries
6. Charger
7. Elite/Specialty Shafts

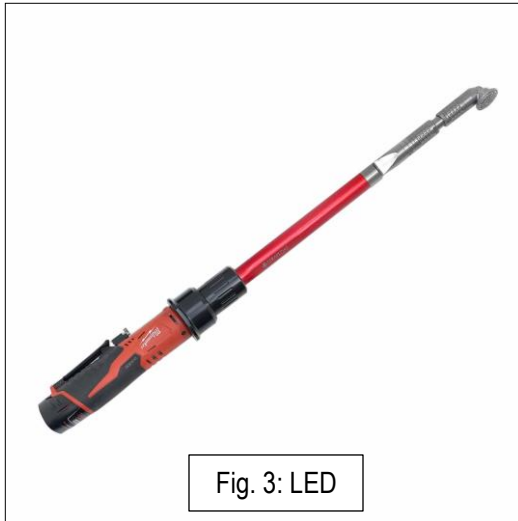
4.2 ECO/LED/FLX

The Terafloat comes in 3 different versions: **ECO**, **LED**, or **FLX**.

The **ECO** line has three parts: The motor, shaft, and head. The routine shafts include either the disc or apple core shafts. These shafts fit other burrs, as well. The elite shafts are the pony shaft and incisor shaft. The shaft screws onto the motor. The head screws onto the shaft. Each individual part (motor/shaft/head) has their own serial numbers. The ECO line is sold with 3.0Ah batteries.



The **LED** line has three parts: The motor, shaft, and head. The routine shafts include either the disc or apple core shafts. These shafts fit other burrs, as well. The elite shafts are the pony shaft and incisor shaft. The shaft screws onto the motor. The head screws onto the shaft. Each individual part (motor/shaft/head) has their own serial numbers. The LED line is sold with 3.0Ah batteries.



The **FLX** line has four parts: The motor, the flex drive shaft cable, the shaft, and the head. The flex drive screws onto the motor and the connection to the shafts is magnetic. The head screws onto the shaft. The elite shafts are the pony shaft, incisor shaft, and profiling shaft. Each individual part (motor/shaft/head) has their own serial numbers. Extended use of motors with the FLX instrument will amplify wear on brushes and require more frequent replacement. The FLX instrument is worn on the waist with a carrying belt, clip, and holster, which is secured with a large O-ring to keep the motor clipped in place on the waist. (A spare O-ring is attached at the base of the motor clip.) The FLX line is sold with 6.0Ah batteries.



4.3 COMPONENTS AND DESCRIPTIONS

This machine is an equine power dentistry tool used to file tooth irregularities by means of a rotating diamond coated disc or burr. This machine is powered by a fully insulated Milwaukee motor and Milwaukee battery.

Each component of the **ECO**, **LED**, and **FLX** instruments is maintainable, serviceable, or replaceable.

Motor: The Milwaukee motor is equipped with an electronic limiter and turns off when working against a strong resistance. If this happens, release the trigger, and restart the instrument. The FLX drive cable and gears are sturdy enough to withstand the shut off resistance of the motor. However, repeated blockage of the grinding head eventually damages the instrument and must be avoided. Always use a speculum that allows sufficient opening of the mouth for your work. If you experience problems reaching caudal areas of the oral cavity with a disc, use the apple core burr instead of the disc. There are two Terafloat motors available: ECO, or the LED with electrical contacts for the LED shaft illumination. Otherwise, these motors are identical. The FLX line uses the ECO motor on a waist belt system with a pivoting motor attachment and a holster belt to carry the shaft when not working on a horse.



Fig. 7: Motor



Fig. 8: Motor



Fig. 9: LED Motor with Contacts



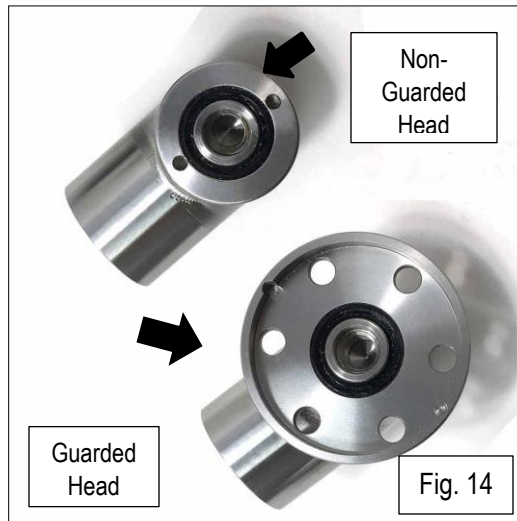
Fig. 10: ECO Motor WITHOUT Contacts



Shaft: The three Terafloat lines (ECO/LED/FLX) each have two routine shafts (disc shaft or apple core shaft) and the elite shafts (pony or incisor). The LED lights of the LED line turn on when the motor trigger is engaged and turn off automatically 5 seconds after stopping the motor. This allows convenient time for examination of the oral cavity.



Head: Two heads are available: one WITHOUT a guard and one WITH a guard. Guarded heads are standard for Terafloat sets and indicated by the letter G in the product number (i.e., T-0014G). The guarded head is used with the T3 disc only and protects the oral mucosa with floating. Non-Guarded Head is standard for all other burs and discs. There is a non-coated area on the T2 disc and the apple core, and the cylindrical burr. Make sure the oral mucosa and disc burs are wet, allowing the non-coated part to glide over the mucosa without causing damage.



Disc or Burr: A variety of discs and burrs are available. The T2 disc is used for the head without a guard, while the T3 disc is used exclusively with the guarded head. The discs are available with a coarse diamond coating. The burrs are A2 and A4, both apple core burrs. The Z1 is a large cylindrical burr, while the D1/D2/D3 are diastema burrs. Use these carefully.



Trigger Lock: The black toggle bar on the motor engages the variable speed trigger. The trigger lock in front of the black bar has three functions, depending on its position: no function, blocking function, or locking function. If locked, the motor runs at full speed of 5400 RPM. The locking pin is undone most easily with a flick of the thumb. The trigger lock must be in the locked position when using the incisor shaft or the FLX line.



Batteries and Charger: Each lithium battery needs between 45 minutes (3.0Ah) to 90 minutes (6.0Ah) to fully charge. The charging time is significantly shorter than the working time to drain a battery. The standard 3.0Ah battery is powerful enough for a routine treatment of 4-8 horses.



Elite Incisor Shaft: The incisor shaft is designed for work on a horse's incisor teeth and should only be used by licensed, experienced veterinarians. Corrections on incisors are controversial but may be appropriate after examination and clinical diagnosis. The incisor shaft can be used for grinding or cutting. This handpiece model is best used with the trigger lock on. Incisor work can be associated with heat development, especially when the tooth is cut off. Avoid head damage with careful, clean, and fresh grinding discs. Use a water-cooling syringe as needed. Do not touch a running grinding wheel! Blunt grinding wheels should be replaced at an early stage. Blunt or poorly cleaned discs increase the risk of thermal damage to the teeth.



Fig. 20: FLX Incisor



Fig. 21: ECO/LED Incisor

Elite Pony Shaft: The pony shaft has a very slim profile and designed for working in tight spaces. Recommended for smaller breeds and species such as miniature horses, camelids, or goats.



Fig. 22: FLX/ECO/LED Pony Shafts

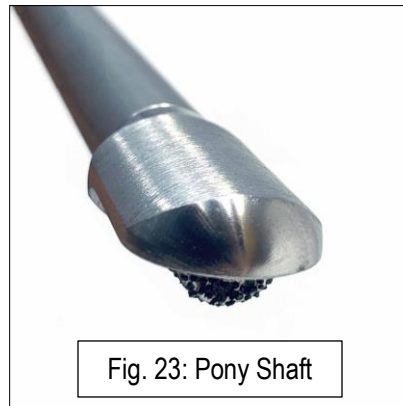


Fig. 23: Pony Shaft



Fig. 24: Pony Shaft



4.4 SERIAL NUMBERS

Motor: The motor has a serial number starting with the letter M and a four-digit number followed by a letter.



Fig. 25: Motor Serial Number

Shaft: The shaft has a four-digit serial number starting with letters and ending by one letter indicating the production series.



Fig. 26: Shaft Serial Number

Head: The head has a serial number starting with the letter K and a four-digit number followed by a letter.



Fig. 27: Head Serial Number



5 HOW TO USE

5.1 PRIOR TO USE

Fully charge each battery before dental appointments to avoid disrupting progress while your equine patient is sedated.



DANGER!



Each battery needs between 45 minutes (3.0Ah) to 90 minutes (6.0Ah) to fully charge. The charging time is significantly shorter than the working time to drain a battery. The standard 3.0Ah battery is powerful enough for a routine treatment of 6-8 horses.



Familiarize yourself with the three distinct positions of the trigger lock. The switch paddle can be unrestricted, locked, or blocked depending on the position to suit your preference.



5.2 DURING USE

These instructions are guidelines only. Please make sure to have adequate training in equine dentistry before using the Terafloat.

FLOAT RESPONSIBLY!

Use the Terafloat with a full mouth speculum when floating cheek teeth and an incisor speculum for incisor work. A horse biting on the Terafloat voids the warranty for the instrument and may result in tooth fractures.



WARNING!



Points on Lower Jaw and Upper Jaw: Use the apple core burr, place the burr at a 45-degree angle on the lingual (lower arcade) or vestibular (upper arcade) side of the cheek teeth where points need to be floated and move caudally.

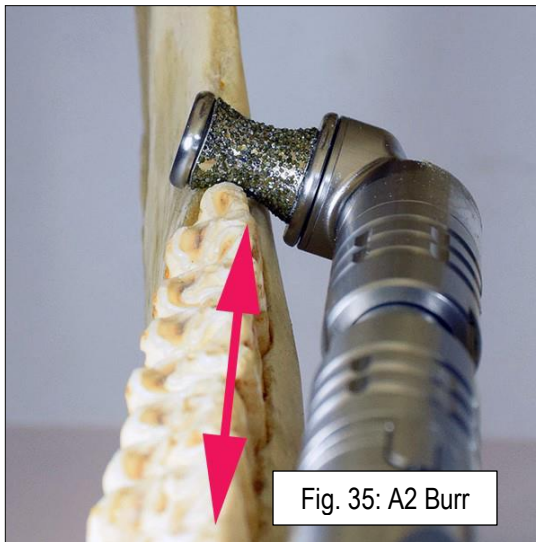


Fig. 35: A2 Burr

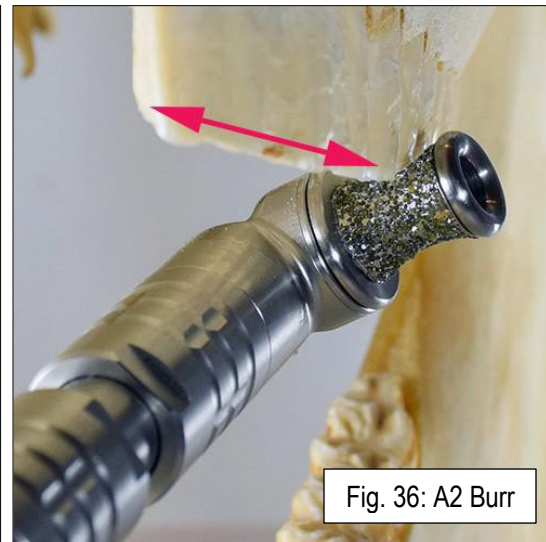


Fig. 36: A2 Burr

Hooks at Lower Jaw and Upper Jaw: Hooks can be reduced with the grinding disc, the apple core burr, or the large cylindrical burr depending on the type of lesion and the space between the upper and lower arcade. When floating caudal hooks, you may flex the shaft to the lingual side to push the tongue away, then hold the float straight or work your way from the lingual side onto the hooks. You may use your hand to guide the float to rostral hooks (1/206). Flexing the shaft downward helps avoid the incisor plates of the speculum. Consider the pony shaft if the space is limited or when working on small breeds.

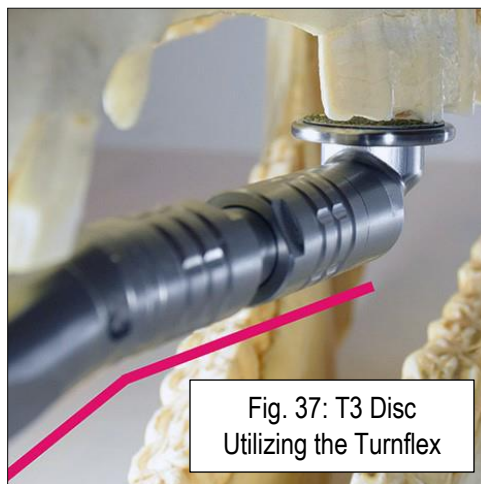


Fig. 37: T3 Disc
Utilizing the Turnflex

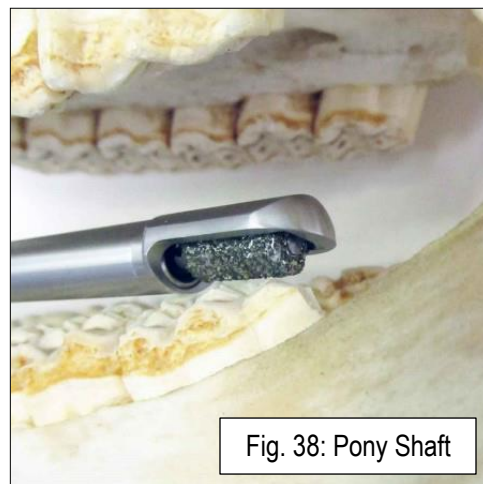


Fig. 38: Pony Shaft



Incisors: Incisor work is best done at the beginning of the dental work when sedation is the strongest. Use the grinding disc for working on incisors. Advanced users may consider the Terafloat incisor shaft.



Fig. 39: T3 Disc

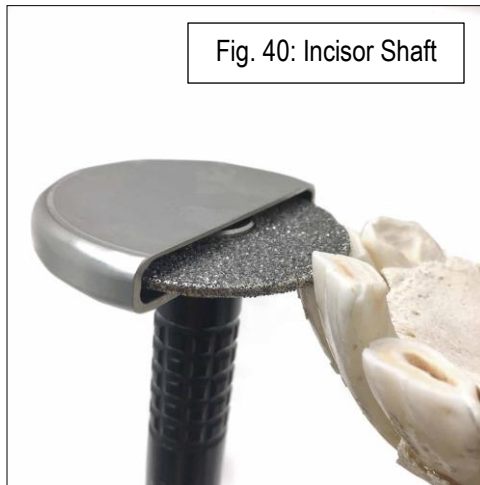


Fig. 40: Incisor Shaft

Canines: The apple core burr (A2 or A4) is used for smoothing the canines.

Bit Seat: Use the apple core burr to place a bit seat, guiding the instrument with your second hand for better control of the procedure. Make sure to not open the pulp during this procedure.

Waves and Steps: Use the grinding disc, or if space is very limited, the large cylindrical burr to reduce waves or steps. Do not accidentally open a pulp and do not take more than two cheek teeth out of occlusion at once to avoid excessive stress on the remaining teeth in occlusion.

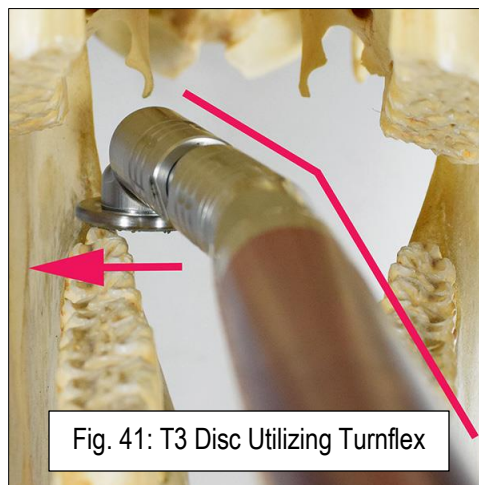


Fig. 41: T3 Disc Utilizing Turnflex



Interdental Space: Use the extra long (D3 maxillary), the long (D2 mandibular), or short conical-tipped (D1) diastema burr to enlarge interdental space, with precaution. Make sure you understand the risk of this procedure and perform it only if other treatments have failed.



Connecting and/or Removing the Shaft (ECO/LED/FLX): The shaft is secured to the motor with a black cap. It is important that the connection is tight and clean. Lubricate the threads of the connection with a grease, if needed. To remove the shaft, unscrew the shaft cap until completely free and pull the shaft from the motor. When re-connecting, make sure the two alignment marks, one on the black end portion of the shaft and one on the motor, are aligned. Rotate the disc slightly to engage the drive cable into the driver of the motor, if needed.



Connecting the Flex Drive to Shaft (FLX): The flexible drive shaft uses a magnetic connection to the grinding shafts (routine or elite). The connection is maintenance free and waterproof. Keep the connection clean and free of debris and use WD-40 or food grade grease to keep it lubricated, if needed.

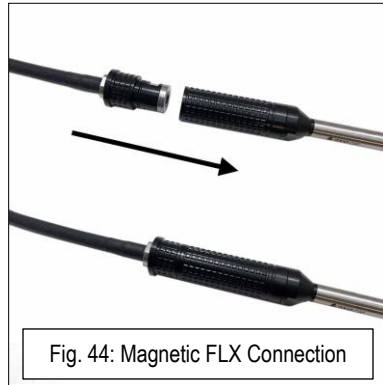


Fig. 44: Magnetic FLX Connection

Turnflex Joint (Routine Shafts): The turnflex mechanism allows the shaft to change from a straight to a flexed position. Pull the first turning sleeve forward, turn 180-degrees until the tongue moves into the second groove. Keep the turnflex mechanism clean and free of debris and use WD-40 or food grade grease to keep it lubricated, if needed.



Fig. 45: Turnflex

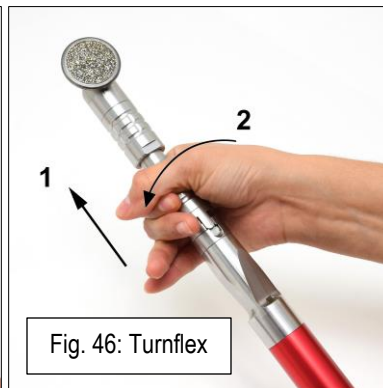


Fig. 46: Turnflex

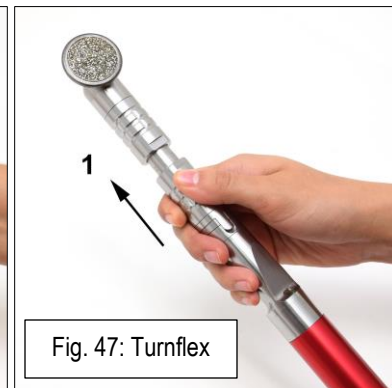


Fig. 47: Turnflex



Fig. 48: Turnflex

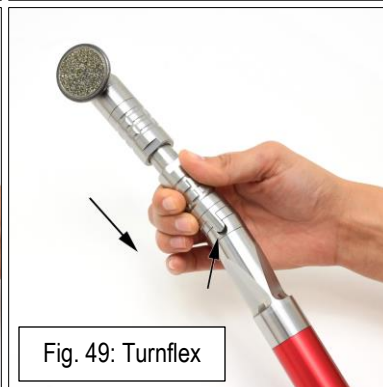


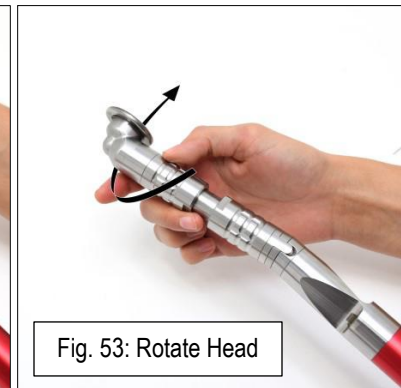
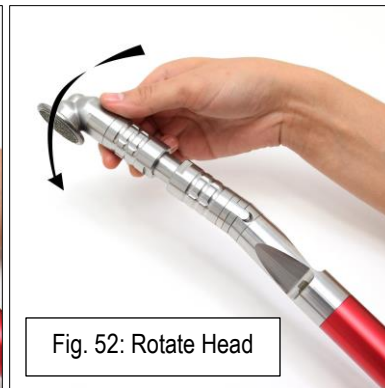
Fig. 49: Turnflex



Fig. 50: Turnflex



Rotating the Head (Routine Shafts): When using the routine shaft in a flex position, it is important for the grinding head with a disc or burr to have an appropriate position in relation to the shaft. The head can be rotated in 90-degree increments. Pull the head forward and turn the head with the lower turning sleeve until the desired position of the head has been reached. Keep the inner tube between the two turn cylinders clean and lubricate with WD-40 or food grade grease, if needed. Make sure you don't unscrew the sleeve when rotating the head.



5.3 AFTER USE

Clean and disinfect after every use. There is risk of infection caused by micro-organisms passed on from animal to man, or animal to animal if the Terafloat is not properly cleaned and disinfected after each use.

Recharge the used batteries after each dental appointment.

Unplug the charger when not in use and remove charged batteries once the charger indicator light has turned green. A single bay charger is standard for the Terafloat sets. The 4-bay charger offers a convenient option in a clinical setting to charge all batteries overnight. A car charger with a 12V cigarette plug is available as an option.



WARNING!

and



IMPORTANT!



6 CLEANING AND MAINTENANCE

It is strongly recommended to clean the instrument thoroughly after each use. Once dry, the dental debris is very difficult to remove, and dirty instruments may spread pathogens.

Clean all moving parts with a brush and water, then lubricate with WD-40 or generic grease, as needed. No other daily maintenance is required.

There is risk of infection caused by micro-organisms passed on from animal to man or animal to animal if the machine is not properly cleaned and disinfected.

Shaft/Head: The shaft and grinding head are water resistant. However, make sure the head is screwed on tightly.

Motor: Avoid water or dental debris from entering the motor. The motor is NOT water resistant.

Batteries: The batteries MUST be removed when storing the instrument in the carrying case. Only clean and dry instruments should be placed in the case for storage.



6.1 CLEANING

Clean and disinfect the disc/burr, head, and shaft after each use as described below:

Use the included plastic brush to remove dental debris.

Use standard cleaning agents or disinfectants, such as Nolvasan/Chlorhexidine.

Use clear water to rinse cleaning agents and disinfectants off thoroughly.

NEVER leave an instrument sitting in a bucket of water.

Please follow the instructions regarding the contact times and concentrations of the cleaning agents or disinfectants provided by those manufacturers.

Wear gloves protecting against micro-organisms while using, cleaning, or disinfecting the machine.

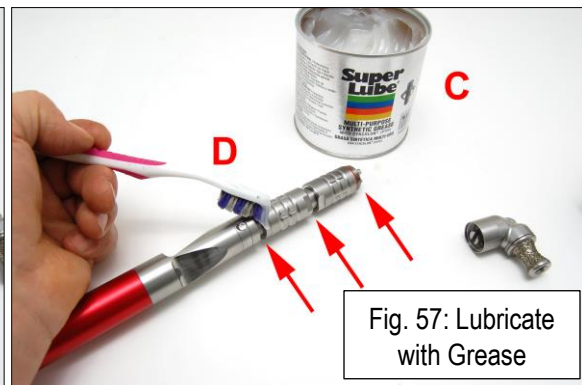
6.2 MAINTENANCE

Clean the disc/burr with the included plastic brush and water.

Wipe the instrument dry and store in a plastic carrying case.

Keep moving parts clean and lubricated with WD-40 or food-grade grease, as needed.

Other suggested lubricants include: "Super Lube Food Grade" or "Dupont Molykote Multi-Purpose Synthetic Grease."



6.3 HOW TO CHANGE DISC, BURR, OR WHEEL

Tools and Parts Needed: The stainless-steel hex tool with two pins, (red) gear/head blocking tool, new disc or burr, adjustable pliers, and protective bio-thane strip. For the guarded head only: hex tool with two pins.



Fig. 58:
Accessory Bag
with Tools

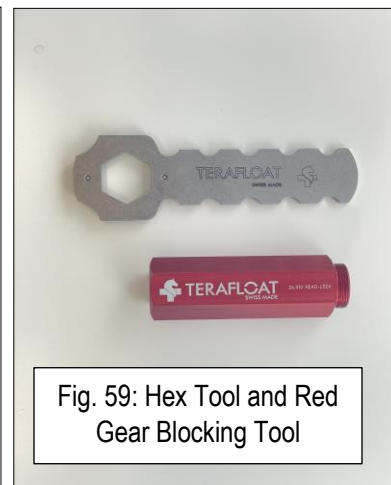


Fig. 59: Hex Tool and Red
Gear Blocking Tool

Preparation: First, clean the head, then remove the head by unscrewing the turning sleeve and remove the top of the head. Next, screw the red gear blocking tool carefully onto the head, being careful not to cross thread, and do not tighten. To change discs or burrs, follow the instructions in the section below:



Fig. 60: Unscrew
the Head from Shaft



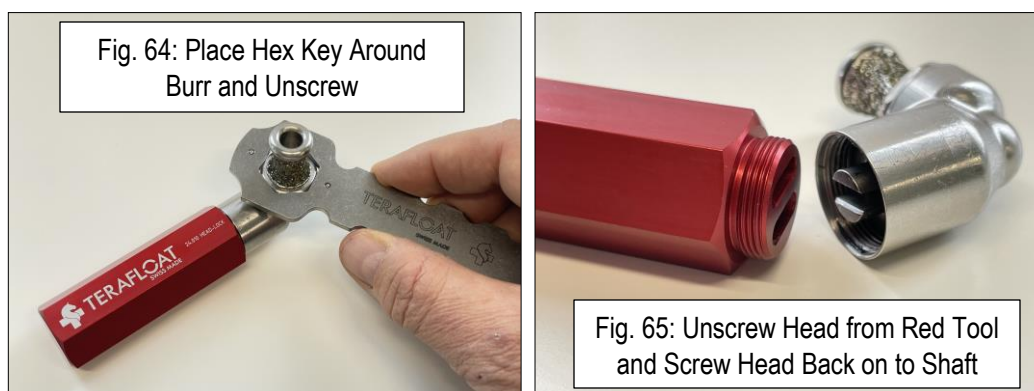
Fig. 61: Screw the Red
Gear Blocking Tool onto the
Head



Grinding Heads WITH Guard: Principle: block the disc and loosen the gear. Once the red gear blocking tool is screwed onto the head, rotate it until the half circle spaces in the disc and the guard form two holes. Insert the two pins of the hex tool into these two holes to block the disc and hold it tight. Unscrew the head blocking tool to loosen the gears. Once loose, unscrew the disc by hand and replace it.



Grinding Heads WITHOUT Guard: Principle: block the gear to unscrew the disc or burr. Once the gears are blocked with the red gear locking tool, unscrew the disc or burr. If needed, use the locking pliers. Use the bio-thane strap to protect the diamond coating when using the pliers. Once loose, unscrew the disc.



Lastly, make sure the threads of the new disc or burr are clean, screw it onto the head and tighten it by hand. Finally, put the head back onto the shaft. Again, make sure the threads are clean and lubricate them with WD-40 or food-grade grease, if needed. Make sure the turning sleeve is completely tightened onto the head before going back to work.



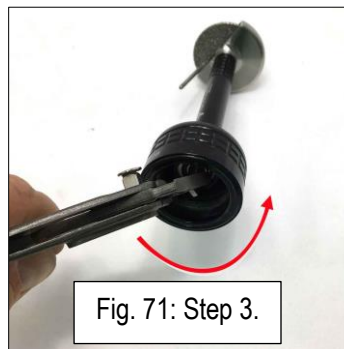
Changing Elite Incisor Shaft Wheel:

Items Required: Replacement incisor wheel S1 disc (T-0285), blocking pin, pliers, and the 17mm Terafloat key wrench.



Instructions:

1. Remove the shaft from the motor or flexdrive shaft.
2. Block the disc. Put the pin through the hole in the wheel disc.
3. Loosen the axis from the disc with the help of pliers, do not fully unscrew.
4. Loosen the protection from the shaft with the 17mm wrench, do not fully unscrew.
5. Unscrew both parts, both disc and protection, at the same time.
6. Change the wheel disc.
7. Screw the new wheel disc back on in reverse order.



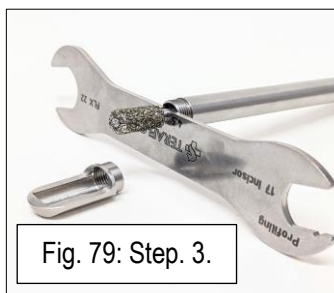
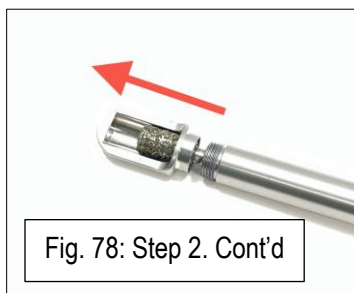
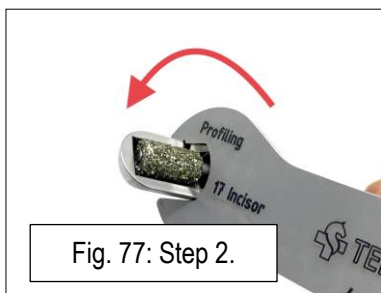
Changing the Elite Pony Shaft Burr:

Items Required: 17mm Terafloat key wrench, replacement PI burr (T-0283), pliers, and optional protective bio-thane strip.



Instructions:

1. Remove the pony shaft from the motor or flexdrive cable.
2. Remove the protective guard of the grinding burr. The Terafloat wrench key has small nick labeled “profiling” to lock into the edge of the guard. Unscrew the guard, you may have to hold the shaft with pliers to prevent it from turning. Consider using the protective bio-thane strip to avoid damage of the diamond coated burr.
3. Balance the shaft into the small nick labeled “4.5” on the Terafloat wrench key to remove the small pony burr.
4. Make sure the threads are clean and screw the new burr onto the axle. Tighten by hand, only.
5. Make sure the threads are clean and screw the protective guard onto the shaft.
6. Hand tighten or use the key, but careful not to overtighten.
7. The burr is durable and does not require frequent replacement. However, it is important to keep it clean and remove dental debris after every use. Once dry, it is difficult to remove.



7 TROUBLESHOOTING

7.1 SAFETY

Unless specified otherwise, the troubleshooting steps described in this chapter can be performed by the operator. Some troubleshooting steps may only be performed by trained experts of the manufacturer. The description of each fault will specify the personnel requirements for correcting the fault. Contact the manufacturer if the information provided in this manual is not sufficient to correct the fault you are experiencing.



WARNING!

7.2 SCENARIOS, ISSUES, AND SOLUTIONS

Before commencing troubleshooting work, switch off the power supply to prevent it from coming back on while troubleshooting.

- **General Mechanical Issue: Head Blockage**
 - Head blockage is mostly caused by a shattered internal bearing or debris impeding disc movement. The motor will attempt to operate the shaft's drive cable, but the torque limit will prevent operation. Removing the disc and cleaning the surface of the head will fix impediment issues.
- **General Mechanical Issue: Head Overheating**
 - Build-up of enamel and debris can cause friction between the disc and the retaining ring of the head. Following the instructions in Section 6.4: remove the burr, clean, and reset the head to reduce heat issues.
- **General Mechanical Issue: Motor Fails to Engage**
 - Motor malfunction of this kind is caused by the corrosion of internal circuitry or a faulty battery. This is indicated by flashing alternating lights or no lights on the motor's battery display. If issue persists with a tested battery, the circuit board will require replacement.
- **Lighting Circuitry Issue: LED Lights Fail to Engage**
 - If LED lights fail to engage and the shaft appears to be free of moisture, try using malfunctioning shaft on another operational motor. Now, test operational motor with a working shaft to verify if it still functions normally.

7.3 USER ERROR

Claims of any kind for damage caused by improper use shall be excluded. Improper troubleshooting may lead to serious injury to man and animals, as well as property.



WARNING! and



IMPORTANT!



8 CUSTOMER SERVICE

Our customer service will assist you with any technical questions you may have. Moreover, our employees are always interested in gaining new information and experience resulting from the use of our products, which may help improve the quality of our machines.

8.1 WARRANTY

Terafloat comes with a one-year limited warranty for manufacturing defects. Inappropriate use and unapproved repairs of the instrument can limit or void the warranty. It is important to keep the connections between the motor and shaft, flexible drive shaft/shaft of the FLX line, turnflex mechanism, grinding shaft/head, and head/disc clean and dry. Make sure the connections are always tightened and that you do not unscrew the head accidentally while rotating the head. Scenarios such as a horse biting on the Terafloat voids the warranty for the instrument and may result in tooth fractures.

8.2 YEARLY SERVICE

After the one-year warranty, we recommend the Terafloat be sent to Swissvet each year for maintenance to prolong its lifespan and to minimize the risk of a malfunction. If your float is well taken care of and serviced each year, annual service should be minimal to replace worn seals, bearings, etc. The most common problems seen with floats arise from not cleaning the float immediately after use. We recommend using the brush included in the tool bag to scrub off dental debris, because it is harder to clean when dental debris is dried. The float can resist water, but it should never sit in a bucket of water to prevent any corrosion.

Terafloat Service Protocol: Please send your entire instrument, motor, shaft, and head(s), in the hard carrying case, without any batteries or chargers. Please use the Terafloat cardboard box or at least tape a make-shift cardboard box around the case. Please write a short note stating your name and what you think is wrong with it, if anything, and whether you would like new grinding burrs or discs.

8.3 REMINDERS

We provide the service of yearly email reminders to service your Terafloat according to our records, and we also place reminder stickers on your Terafloat case once your yearly service in our shop is complete.

8.4 LOANER

We can provide a loaner Terafloat while a client's Terafloat is being serviced, for an additional fee, plus two-way shipping costs.



9 TRANSPORTING, PACKAGING, AND STORAGE

9.1 TRANSPORT INSPECTION

Upon arrival, immediately inspect the shipment for completeness and any damage that may have occurred during transport.

In the event of visible damages that occurred during shipment: proceed as follow:

- Record and take note of the extent of the damage, delivery carrier/provider, and any delivery messages from the carrier.
- Do not accept the shipment or accept it under coercion.
- Initiate and file a complaint with our customer service.

9.2 PACKAGING

The Terafloat is packaged in a plastic carrying case and cardboard shipping box according to the expected transport and typical storage conditions. The packaging's intended use is to protect the Terafloat from damage in transport, weather conditions, delivery carrier attentiveness, and any other types of damage.



9.3 STORAGE

Store the Terafloat in a safe, secure place in the plastic carrying case under the following conditions when not in use:

- Protect the machine from sun exposure.
- Protect the machine in a dry, dust-free environment.
- Keep away from minors.
- Avoid storing in a moist climate.
- Store indoors.
- Avoid exposing the machine to harsh media.
- The batteries **MUST** be removed when storing the instrument in the carrying case.
- Only clean and dry instruments should be placed in the case for storage.



10 SPARE PARTS

10.1 SPARE PARTS

Incorrect or defective spare parts may affect safety and cause damage, malfunctions, or total loss. Therefore, only use the original spare parts made by the manufacturer. Different spare parts may not be used without consulting the manufacturer.



WARNING!

10.2 ORDERING

Purchase spare parts from your authorized Terafloat distributor or directly from the manufacturer. When ordering spare parts, include the serial number of the motor/shaft/head, and specific numbers of discs or burrs.

10.3 PARTS LIST AND ITEMS

Spare Parts List and SKU Numbers:

- 1 Bay Charger (T-0124)
- 4 Bay Charger (T-0128)
- Small Battery 3.0Ah (T-0122)
- Large Battery 6.0Ah (T-0120)
- Terafloat ECO Motor (T-0103)
- Terafloat LED Motor (T-0101)
- Terafloat Head with Guard (T-0181)
- Terafloat Head without Guard (T-0180)
- Terafloat Case – Long (T-0303)
- Terafloat Case – Large (T-0304)
- Discs/Burrs: Rotary Disc T2-C10 (T-0202), Rotary Disc T3-C10 (T-0206), Apple Core Burr A2 (T-0212), Apple Core Burr with Canine Coating A4 (T-0217), Diastema Burr (Short) D1 (T-0261), Diastema Burr (Medium) D2 (T-0262), Diastema Burr (Long) D3 (T-0263), Incisor Wheel S1 (T-0285), and Small Burr P1 for Pony (T-0283)

(Each component of the **ECO**, **LED**, and **FLX** instrument is maintainable, serviceable, or replaceable.)



11 DISPOSAL

Consult your local authorities or specialized waste management companies for information on environmentally safe disposal.



NOTICE!

11.1 PACKAGING MATERIAL DISPOSAL

Dispose of packaging materials in compliance with all applicable statutory and local regulations.

Packaging materials are valuable resources and, in many cases, suitable for continued use, reused, or recycled.

Dispose of packaging materials in an environmentally friendly and safe manner.

Observe the local waste disposal regulations.

11.2 MACHINERY DISPOSAL

Unless a return and disposal agreement has been made, recycle disassembled components as follows: scrap metals, plastic components, and any remaining components in accordance with the material of which they are made.

11.3 BATTERY DISPOSAL

Electronic scrap, electronic components, lubricants, and other supplies must be treated as hazardous waste and disposed of only by certified expert companies.



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