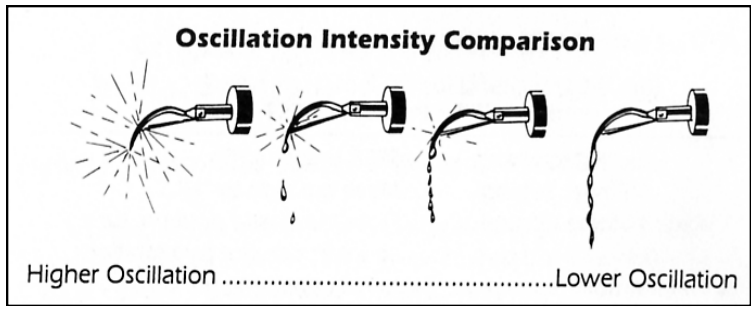
TROUBLE SHOOTING

If you have any difficulty operating this unit, please call OSADA, INC. at (800) 426-7232 during business hours, or fax your message to (310) 841-2221 at any time.

Trouble-Shooting

Condition		Probable Causes
Weak Oscillation		Tip is not tightly connected. File is not tightly chucked in on Endo-Tip. Tip is worn or threaded end is damaged.
	*	Handpiece is damaged at the threaded end.
No Oscillation		Check all of the above.
	*	Broken Handpiece end.
	**	Handpiece Hose Coupler is broken.
	**	If the unit is dropped or hit hard, broken PCB.
No Water Flow		Check water supply and connections. Each tubing to cassette is not installed correctly. Water Volume is closed. Water Switch is OFF. Handpiece Hose is pinched.
	**	Handpiece Hose is clogged with debris.
	**	Water Pump is not turning. Water Metal Pipe is not installed correctly in the Handpiece Hose End Coupler.
Water Drips when OFF		Water is leaking from the Handpiece. There is a pin hole in the tubing.

*Send Handpiece in for repair or replacement.
**Send ENAC Power Console and Handpiece in for testing and repair.



Please read this manual thoroughly before using any part of the OSADA ENAC Ultrasonic System.

I N T R O D U C T I O N

OSADA ENAC is an auto-tuned piezoelectric ultrasonic system (30kHz) specifically designed to produce bursting power suitable for OSTEOTOMY; and still provides accurate and stable oscillation for a wide range of endodontic and periodontic applications.
Its self-tuning circuit maintains optimum conditions regardless of the tips or changes in load, providing greater stability during quiet ultrasonic operations

GENERAL INSTRUCTIONS ON ENAC ULTRASONIC UNIT

- As with any delicate instrument, **handle with care** to prevent accidental shocks to the ENAC power console, handpiece and delicate tips and attachments.
- **When working with a loose tooth,** be particularly careful and use a lower than usual power setting.
- **Do not apply vibration directly to porcelain or case restorations** as they may be damaged.
- Always make sure that there is **sufficient water flow** to reach the tip end. With insufficient or **no irrigation**, be extra careful as the tip will become hot enough to cause discomfort or burn.
- **Do not apply pressure to the extent that it stops the oscillation**. Only light pressure is required to allow ultrasonic oscillation to work. Practice as necessary to develop your own technique. With surgical tips, water default setting is 10 to make sure there is enough water during surgery; adjust if necessary.
- **Follow the recommended power setting for each procedure** to avoid unnecessary breakage of files or loosening of the accessories. If used properly with appropriate pressure and irrigation, the tip or the handpiece will not heat up.
- Occasionally **check the connections** and make sure all connections are securely tightened, especially during a prolonged procedure as oscillation can cause some parts to become loose. Replace tips as needed. Worn tips cannot cut well.

C O N T E N T S

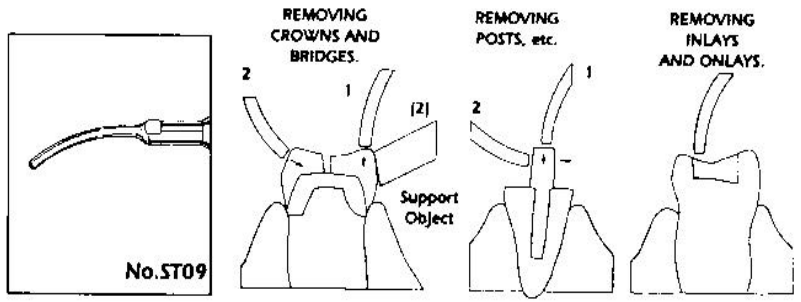
G. Restoration Removal:

POWER SETTING	TIPS AND ATTACHMENTS	
5 . . . 10	Scaler Tips	ST08, ST09, ST13
	Combination Tips	ST12A/QEH, ST12C/QEH ST17/QEH with
	Attachments	AP10 (3), SCP-4, SCP-5

Vibration should only be applied after a problem condition has been treated and inflammation has receded. Ultrasonic oscillation speeds up the removal procedure and minimizes discomfort to the patient. Removal usually takes 3 to 8 minutes.

Recommended for: Removal of cast restorations such as crowns and bridges, posts and pins, inlays and onlays, and other hard fillings.

Not recommended for: Restorations secured with zinc polycarboxylde cement, onomer cement, or plastic-based materials since flexible substances will absorb the vibrations.



For NEW SURGICAL TIPS
Please see the separate manual:
Piezo Powered Ultrasonic Scalpels (Page 10 & Page 11)

OSADA ENAC OEF15 is THE BONE CUTTING SPECIALIST

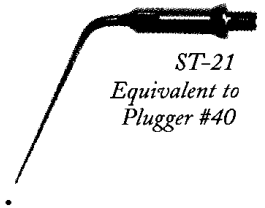
POWER SETTING	One Piece Structured TIPS
7 . . . 10. .15	Set of 6 Tips designed by Dr. Golz: ST70, ST71, ST72, ST73, ST74, ST75

And additional Surgical Tips:
ST70Z, ST82, ST83, ST83S, ST84, ST84S, ST85, ST86, ST87
ST91, ST92, ST93, ST94, ST95, ST96, ST97, ST98, ST99, ST100, ST106, ST107, ST108

F. Removal of Broken Fragments in Canal:

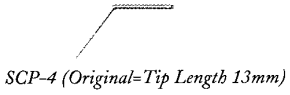
POWER SETTING		TIPS AND ATTACHMENTS
5 . . . 10	Tips	ST21, ST21B
	Combination Tips	ST12 Series /QEH with Pluggers
3 . . . 7		ST17/QEH with SCP4 Series

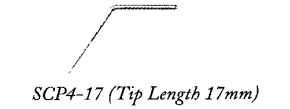
One-piece construction makes either **ST21** or **ST21B** an excellent instrument to remove silver point, post or broken files in the canal. However, **ST21B** is more often used to remove calcification in the canal and to straighten bent canals effectively.

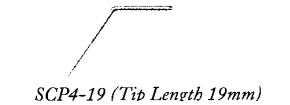


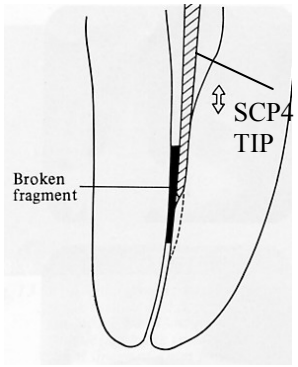
Chucked in the ST17 Endo-Tip with QEH Quick Endo Holder, **SCP4 Series tips** are best suited to remove silver points, posts or broken files embedded in narrow canals. The very finely pointed ends (ø0.2mm) provides excellent visibility and enables the user to place the ultrasonically vibrating instruments with swirling irrigant in extremely narrow spaces.

SCP4-19 attached to the ST17 Endo-Tip and QEH Quick Endo-Holder









ENAC OE-F15 ALL-IN-ONE ULTRASONIC UNIT

SPECIFICATIONS

Power Console	Model OE-F15
Handpiece (LED)	Model SE-15
Primary Voltage	AC 120V (fuse 1.0A)
Frequency	50/60 Hz
Water Supply	10-80ml/min
Water System	Peristaltic 1.0 Kg/cm²
Oscillation Frequency	30 ± 2kHz (Ultrasonic)
Control Unit Size	(W)216 x (H)474 x (D)269 mm
Handpiece Holder	35 x 13.5 x 38mm
Console Weight	3100 g
Handpiece Weight	50 g
Foot Switch	detachable; water proof

The **ENAC OE-F15** power console with a built-in irrigation system and **SE-15** steam-autoclavable handpiece with LED light is especially designed for specialists who require sterile equipment capable of multiple applications.

The **OE-F15 Power Console** provides auto-tuned piezoelectric ultrasonic vibration of 30 KHz with power settings of 1 through 10, and extra high power settings of 10 through 15 for Bone Cutting procedures.

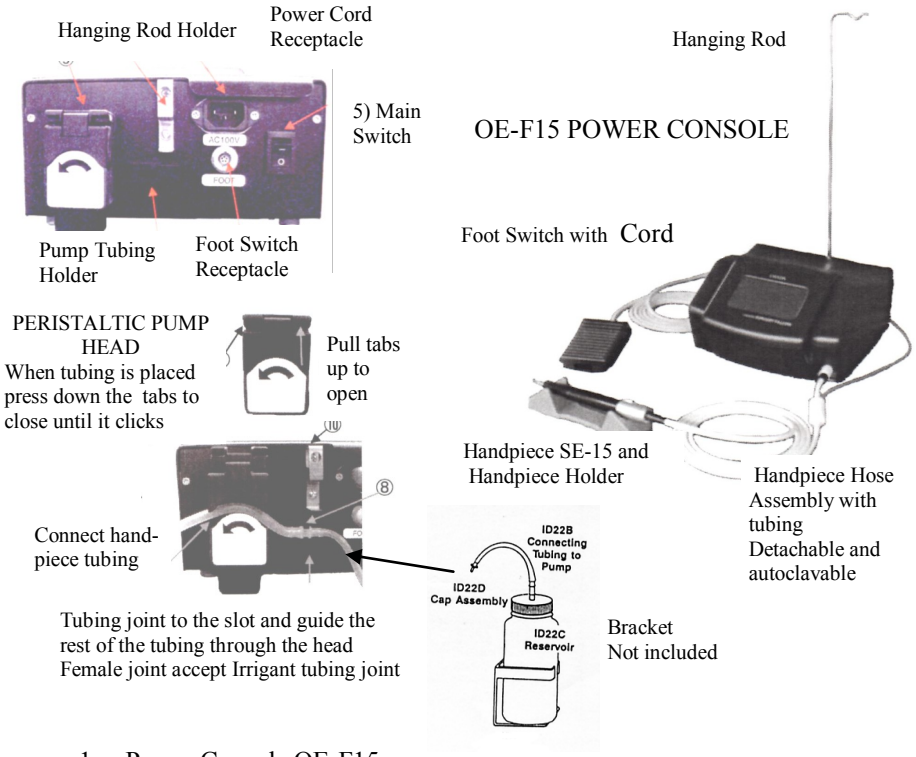
The **ENAC OE-F15 Power Console** is to be used only with the **SE-15 Handpiece.** The **SE-15 seamless black handpiece accepts all Osada tips and attachments.** A built-in Peristaltic Irrigation Pump dispenses the fluid of your choice from the reservoir or hanging bag.

NEW SURGICAL TIPS HAVE BEEN INTRODUCED. THE EXTRA HIGH POWER OE-F15 WITH SE15 HANDPIECE ARE DESIGNED SPECIFICALLY FOR ORAL SURGERY PROCEDURES.

PRECAUTIONS

If the patient or operator is using a **pacemaker**, check with the pacemaker manufacturer as to whether an ultrasonic device may be used.

OSADA ENAC OE-F15 COMPONENTS & ASSEMBLY



1. Power Console OE-F15

FRONT PANEL

2. Handpiece SE-15 * Handpiece Hose Assembly with irrigation tubing set (detachable—autoclavable)

BACK PANEL

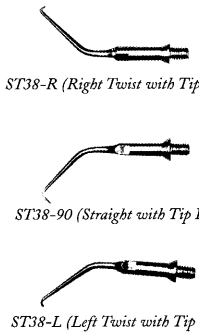
3. Power Cord 1.9m (detachable from P.C.) to back panel
4. Foot Switch with Cord (detachable-water proof)
5. Main Switch (on the back panel)
6. Irrigation Peristaltic Pump (built in) with tubing set

Irrigation Accessories

7. Handpiece Tubing Set (15A 6 ft / 15bc / 15d)
8. Irrigation Reservoir Bottle with Cap assembly and a Bold connecting tubing with 2 male-joints
9. Pump Head Tubing Set with 3 joints
10. Optional: Hanging Rod and Bold Tubing with 3 adaptor needles (for hanging bag/bottle—not included)

E1: Apicoectomy with ST38 Retro-Tip Series

POWER SETTING	TIPS AND ATTACHMENTS	
3 . . . 5 (7 max)	Retro-Tips	ST38-R (right twist) ST38-90 (straight) ST38-L (Left Twist)



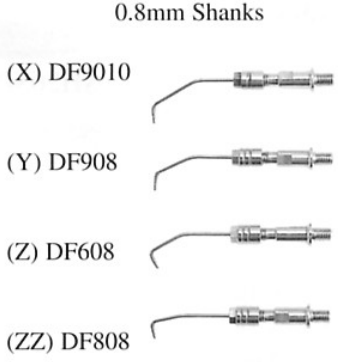
The ST38 Series tips are constructed in one piece with a very thin tip angled at 90° to provide excellent visibility in microscopic surgery. The cutting ability is so high (as that of the ST21) that the recommended power setting is "5" on all ENAC models. These delicate tips will easily break if vibrated in air so it is very important to place the tip in contact with tissue before activating the handpiece. ST38 series come in Straight Center, Left Twist, and Right Twist.

E2. Surgical Procedures with Combination Tips consisting of Endo-Tip, QEH and DF Series Files

POWER SETTING	COMBINATION TIPS AND ATTACHMENTS	
4 . . . 9	Endo-Tips	ST17, ST12A, ST12B, ST12C, ST12D
	With Endo-Holders	QEH Quick Endo Holder
	Attachments (diamond files)	DF-X (9010), DF-Y (908), DF-Z (608), DF-ZZ (808), DF-S, DF-C,
	Attachments (non-diamond points)	SCP-4, AP4-(60-90-120), AP10-(60-90-120)

Apicoectomy Diamond Files

To be used with ST17/QEH
Double Angled Diamond Files
0.8mm Shanks



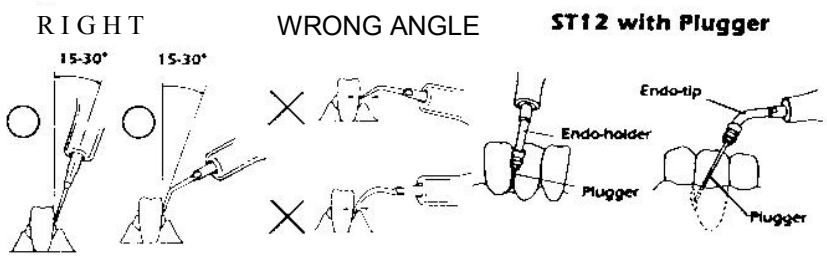
4 Diamond Files: DF (X, Y, Z, ZZ) are double-angled files with diamond coated tips designed for root end surgery. Each file is uniquely angled at the tip to accomplish tasks in Apicoectomy.

DF-C is a **120°**-angled file. **DF-S** is a diamond coated straight file.

Diamond coated files can effectively cut, providing a smoothly finished surface, efficiently loosening and flushing out debris in narrow surgical sites with a constantly penetrating irrigant.

Place the scaling tip against the surface of the tooth at an angle of about 15 degrees, never at a right angle.

Move the oscillation tip over the tooth surface as if brushing with the side of the scaling tip. The appearance of a blackish smear on the tooth surface indicates too much pressure or a bad angle.



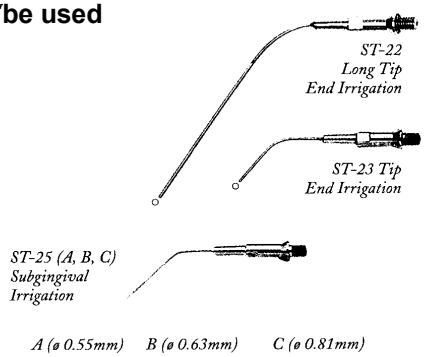
D. Special Tips with Irrigation:

POWER SETTING	TIPS AND ATTACHMENTS
3 . . . 5	Tips ST22, ST23, ST25A, ST25B, ST25C

ST22 & ST23 Tips have irrigation outlets at the tip ends to be used in endo-osseous implantology and cleansing after tooth extraction. ST23 is used for coincidental scaling and irrigation in periodontal pockets.

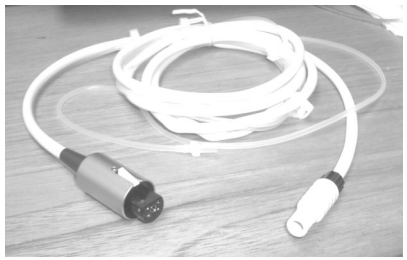
ST25 Tips have irrigation outlets at the side near the tip end to be used for subgingival irrigation in periodontal pockets.

ST25 tips are available in three tip diameter sizes:
ST25A = 0.55mm;
ST25B = 0.63mm; and
ST25C = 0.81mm.

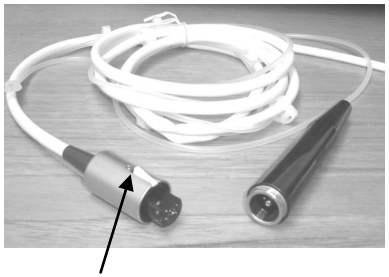


IMPORTANT ASSEMBLY and MAINTENANCE OF SE15 Handpiece and the Handpiece Hose

Follow this direction
Before turning ON the OE-F15 System



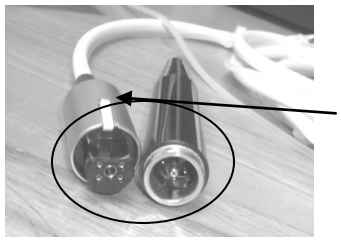
Handpiece Hose with Coupler [left] (for the handpiece SE15) and Plug [right] (to go to the receptacle on the front panel of the power console.)



Attach the SE15 Handpiece wide end [right] to the Coupler end of the hose assembly.
To detach the Handpiece from the hose coupler, make sure to depress the white latch [left] to release and gently pull away.

The white plug [right] has an arrow at the top . Insert the plug to the receptacle matching the top and push to connect with a click.
The male joint at the end of the 7-ft water tubing is to go to the female joint of the Pump Head tubing.
Assembled handpiece / handpiece hose . All parts are steam autoclavable.

KEEP THESE AREAS DRY.



MAINTENANCE AFTER THE SURGERY

- SEPARATE THE WATER SOURCE—by disconnecting the tubing from the top of the bottle (or hanging bag). Watch for dripping water.
- USE THE PUMP FLUSHING FACILITY on the Utility Panel to flush out irrigant remaining in the tubing and handpiece. Repeat as necessary.
- WIPE EXTERIOR with a dry cloth around the handpiece and the hose.
- SEPARATE THE HANDPIECE FROM THE HOSE COUPLER by depressing the White Latch on the top of the hose coupler.
- CLEAN WITH A DRY CLOTH to dry out the moisture as much as possible.
- KEEP THESE AREAS DRY.

IRRIGATION ACCESSORIES
For ENAC OE-F15
with Peristaltic Irrigation Pump

(#) marked parts are steam autoclavable

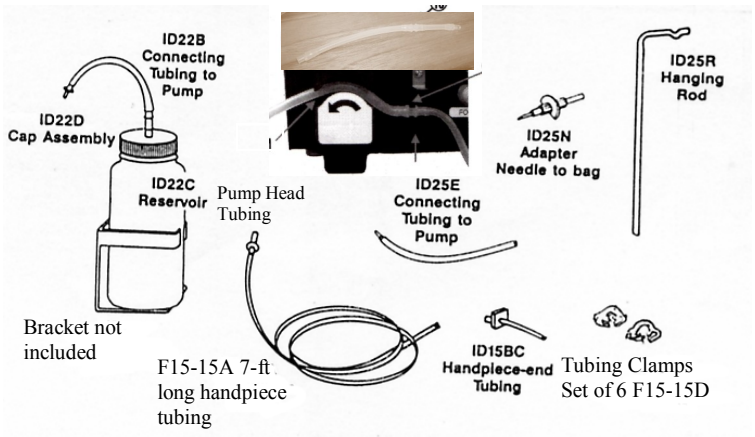
Part ID	*Description*
F15-PUMP	**Built-in Peristaltic Pump on Back Panel**
#F15-PHT	**Pump Head Tubing (Bold) with connectors Receptacles (Female) to each end with holding joint in the middle—to be placed onto the open pump head**
#F15-HTP	**Handpiece Tubing Packet**
#F15-15A	7-ft. Silicone Tubing (ø2.5mm) with Male Joint
#F15-15BC	Handpiece-End Tubing & Reducing Joint (ø1.02mm)
#F15-15D	Tubing Clamps (Set of 6)
#ID & F15	**Reservoir Set**
#ID-22B	Connecting Tubing to Pump w/2 Male Joints
#ID-22C	500cc Reservoir Bottle (no Cap)
#ID-22D	Reservoir Bottle Cap Assembly

#F15 Hanging Rod Set (w/Set of 3 Needles)

F15-HRL	Hanging Rod Long
#F15-25N	Bag Adapter Needle (disposable) / Each
#F15-25E	Connecting Tubing to Pump w/Male Joint

Optional Accessories:

#ID-11	500 cc Reservoir w/Plain Cap
#Miscellaneous Joints (specify as part of above parts)	

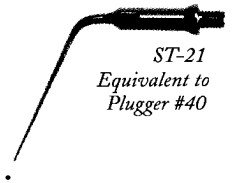


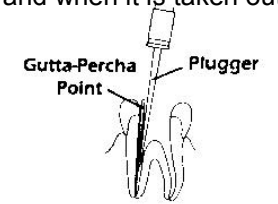
B. Root Canal Obturation (no water):

POWER SETTING	TIPS AND ATTACHMENTS	
1 . . . 5	Combination Tips	ST12A/QEH, ST12C/QEH
	With Special Tip	Pluggers ST21 (#40 Plugger size)

The frictional heat caused by ultrasonic oscillation will soften the gutta-percha point for lateral condensation. To prevent overheating, limit the use of the plugger for this work to two minutes.

For this purpose only, the ultrasonic oscillation should remain activated throughout the procedure, before the tip is inserted into the dry root canal with gutta-percha and when it is taken out.





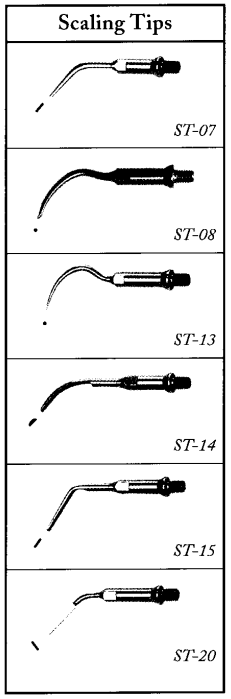
C. Scaling:

POWER SETTING 2 . . . 5

TIPS AND ATTACHMENTS

Scaling Tips; ST07, ST08, ST13, ST14, ST15, ST20, ST33, ST35, ST45

Combination Tips; ST12A/QEH, ST12C/QEH With Attachments; Pluggers and SC Points

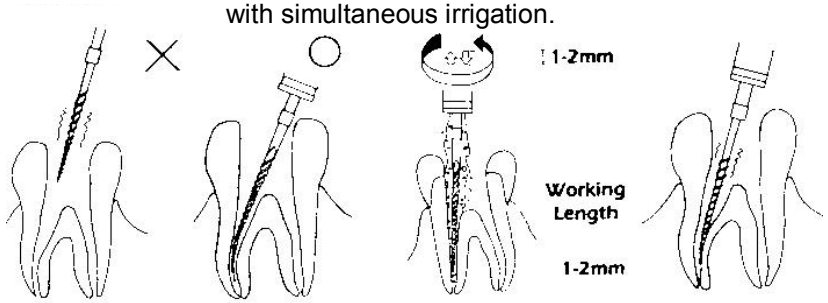


CAUTION: Do not activate until file is in the canal and in contact with the canal wall.

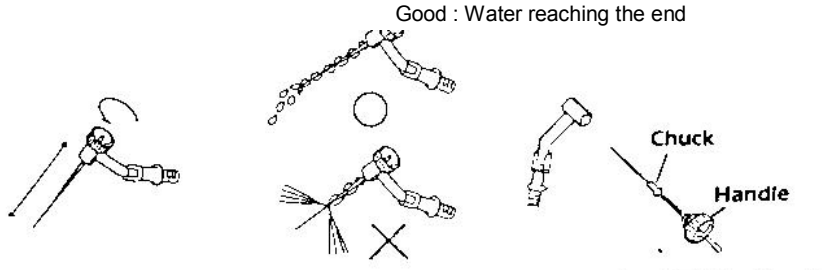
(1) Insert the file into the canal. Adjust the marker for working length. While holding the file stationary, activate ultrasonic oscillation at power setting "1" for 10 seconds or until a slight loosening of the canal is felt.

(2) Slowly move the file up and down about 1-2mm against the canal wall. Note that severely curved canals may require a stationary position for entire filing.

Increase the power as needed and move on to the next file size; however, when using the ultrasonic mode, it is common to skip file sizes due to gentle but more effective filing with simultaneous irrigation.



ST24 Handle Chuck Endodontic Tip is a special Endo-Tip with a handle at the top which can tighten the special chuck inside to hold the file. Power setting should be slightly higher than usual ("3" through "5"); however, if the setting is too high, oscillation may loosen the file while in use.



NOTE: Do not rotate the handle to tighten this ST24 chuck without a file in it as this may damage the chuck. It is best to keep a file chucked in all the time so that the chuck inside is protected from damage and will stay on the file even when the handle is unscrewed. A weakened or worn chuck should be replaced. (Use a file as a tool to handle this small part).

MAINTENANCE

ENAC OE-F15 PARTS ARE ALL STEAM AUTOCLAVABLE EXCEPT FOR THE POWER CONSOLE, FOOT SWITCH AND HANGING ROD.

ENAC OE-F15 POWER CONSOLE

Wipe the Power Console and non-autoclavable parts with a damp towel to keep clean. Damp cloth with alcohol can be used to wipe clean and sanitize the external surfaces of the Power Console, Foot Switch, Cords, Hanging Rod, etc.. Avoid harsh chemical solutions such as germicides to sanitize the surfaces. Do not spray liquid to clean/sanitize.

THE SE-15 HANDPIECE, HANDPIECE HOSE ASSEMBLY, TIPS, TOOLS, ATTACHMENTS AND IRRIGATION PARTS ARE ALL STEAM AUTOCLAVABLE

Recommended Sterilization Methods:

(1) Steam Autoclave (Follow the manufacturer's direction.)

Sample A.	**135°C (=275°F) max.**	**3 min. or longer**
Sample B.	**132°C (=270°F)**	**5 min. or longer**
Sample C.	**121°C (=250°F)**	**20 min. or longer**

Followed by 15-30 min. drying cycle

Use a protective envelope or wrapped in gauze.

(2) Gas Chamber with Ethylene Oxide

(3) Ethanol (Alcohol) can be used to dampen the cloth and wipe external debris and sanitize. Do not leave the soiled parts unattended. Do not let it solidify.

Keep this instrument clean and dry.

DO NOT USE THE FOLLOWING METHODS:

(1) Chemi-clave (with chemical vapor)
(2) Dry heat sterilization (temperature is too high)
(3) Immersion in water or chemical solution

PREPARATION

We would recommend a practice or two using this equipment before attempting to do the actual surgery. This is a very easy to use instrument, however, practice makes it more enjoyable to attain efficient results smoothly.

Preparation
BEFORE A PROCEDURE STARTS:

♦ Assembly of the Handpiece to the Handpiece Hose Set

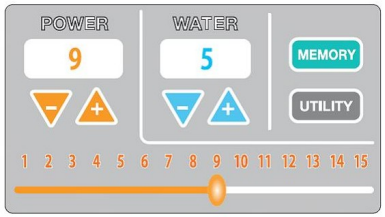
Attach the SE15 Handpiece to the Handpiece Hose Coupler (see Page 5). Keep this connection secure until procedure is over, in order to keep this connection free of wetness. Securely attach a selected surgical tip on to the handpiece (see Page 12).

Make sure that the tubing is properly attached from the handpiece hose coupler to the Female joint of the pump head on the back panel and to the Reservoir Bottle or the hanging bag.

♦ Turning ON the OE-F15 and Preparing Irrigation

Turn on the MAIN SWITCH on the back panel = wait about 15 seconds for the Main Panel to appear.

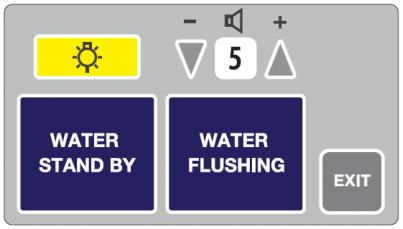
MAIN PANEL



Power Setting Bar

TOUCH Utility = (Utility Panel) {light ON, alarm volume}

UTILITY PANEL



♦ Filling the tubing with irrigant

TOUCH Water Stand By on the Utility Panel = This activates the Pump only for a few seconds to fill the tubing with water. If water is not coming out of the handpiece end (tip end), repeat this action until enough water is dispensing.

CHECK THE TUBING AND CONNECTIONS: Water bottle with sufficient water —tubing--pump head tubing through the pump head—handpiece tubing to the handpiece and handpiece hose assembly.

Tips, Attachments, and Sample Applications

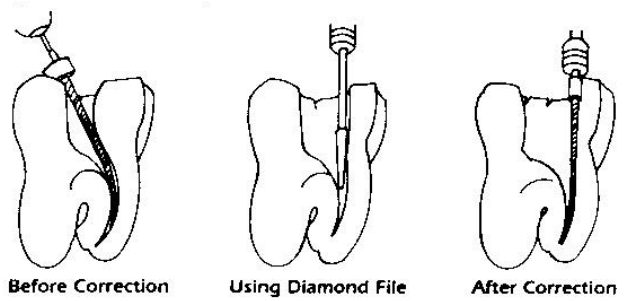
A. Root Canal Enlargement and Simultaneous Debridement:

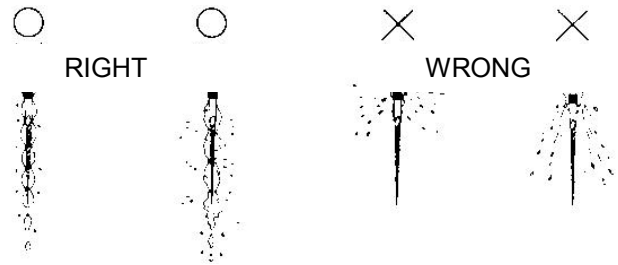
POWER SETTING		TIPS AND ATTACHMENTS
1 . . .3	Combination Tips	ST12A/QEH, ST12C/QEH, ST24
	Attachments	Color-coded U-Files, Diamond Files
	Optional	ST12 WITH Color-coded EH & Files

Ultrasonic method should be used concurrently with manual filing:

(1) Open the canal manually to #15 size and suitable shape.
(2) Bend the file to follow the canal curvature as needed and apply ultrasonic filing with a #15 U-File or #10 file at "1" setting.
(3) Check the canal size and go to the next size.

Note: Extremely curved canals must first be straightened for a U-file to work properly. A diamond file on an endo-tip can be used to smoothly file canals open.





The working length can be marked on the file using a small piece of red rubber stopper. Make sure that sufficient water is reaching the tip of the file.

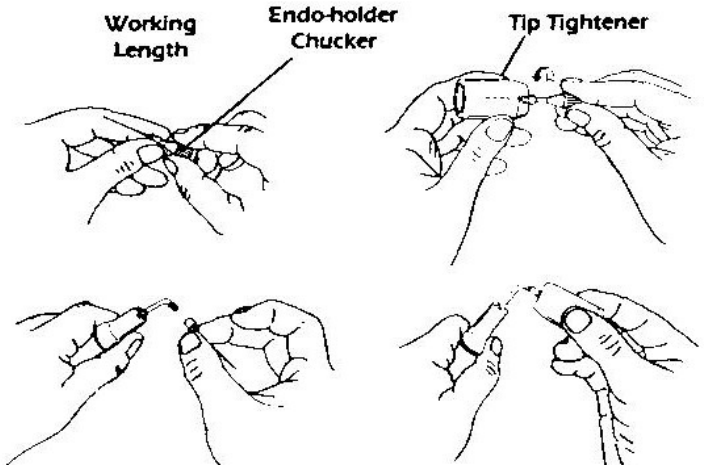
SKIP THIS SECTION IF USING QEH QUICK ENDO-HOLDER

Color-Coded EH Endo-Holders (Optional):

EH Endo-Holders are color-coded according to ISO standard to match and identify the size of U-Files used. EH Endo-Holder must be prepared with a color-coded U-File chucked in before being attached on to the Endo-Tip on the handpiece.

To chuck a U-File (#30 blue) into an EH (blue), insert the shank end of the U-File into the smaller end of the EH. Insert the Endo-Holder Chucker into the other end of the EH. Using the black ETT Tightener to hold the EH, rotate the Chucker to securely tighten the chuck.

Attach an assembled EH with U-File to the Endo-Tip with an ETT tightener or a spanner.



Color coded Endo-Holders come with chucks in two sizes: 0.8mm for size #10 through #40 U-Files, and 1.0mm for U-Files over #45. The chuck in the EH can be unscrewed with the Endo-Holder Chucker and replaced with a new chuck or one of a different size.

RED RUBBER STOPPER: Cut a piece about 1 to 2mm long and slip onto a U-File or plugger to mark working length.

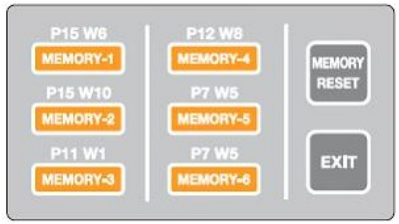
AUTOCLAVING: Attachment parts are all steam-autoclavable. Remove any pieces of red rubber stopper from files before autoclaving.

OPERATION of ENAC OE-F15

♦ Setting the Power and Water Intensity

Select the power setting by TOUCHING the number on the POWER BAR at the bottom of the Main Panel = **Default Water is 10, because it is important to have ample water with the surgical tips**. (Adjust by TOUCHING the Up/Down triangles to change, if needed).

If you want to memorize the setting you have, TOUCH the Memory to go to Memory Panel—TOUCH Memory Reset—TOUCH Memory #. of your choice. To recall the saved setting, TOUCH Memory #.



♦ Activation of OE-F15 with SE15 Handpiece and tip

Depress the front half of the Foot Switch to activate simultaneously the vibration and irrigation. **LED on the Handpiece illuminates during the operation and 5 more seconds after the Foot Switch is released.**
Do not depress the footswitch unless you are ready to vibrate the tip. Release the footswitch when you want to change the power setting and depress to get changed setting.

♦ Flushing out the irrigant after the Operation

After the operation, disconnect the water source first.
TOUCH UTILITY on the Main Panel, TOUCH Water Flushing on the Utility Panel, repeat as needed to clear all irrigant in the tubing.

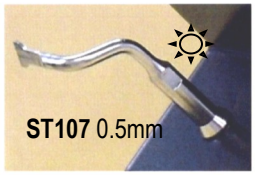
If Saline Solution is used, place the disconnected needle and tubing into a bottle with clean water directly, and repeat water flushing a few times to clear the remaining saline. Take out the needle and the tubing out of the bottle, and TOUCH Water Flushing to clear.

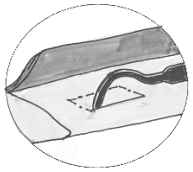
♦ **Follow the instruction on Page 5 for Handpiece Maintenance**

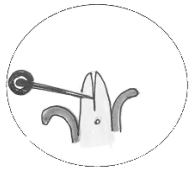
Introducing .....***OSADA'S NEW SURGICAL TIPS***

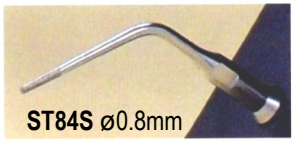
Please see the separate manual for the surgical tips
MOST EFFECTIVE WHEN USED ON THE MODEL OEF15

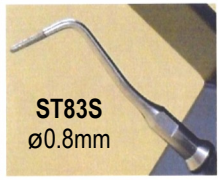
Serrated cutting tips

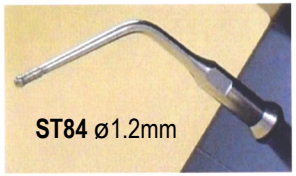




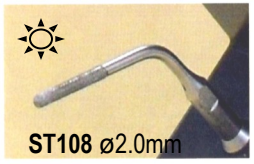








Diamond Ball Tips



Detailed pictures of these surgical tips are available at the website

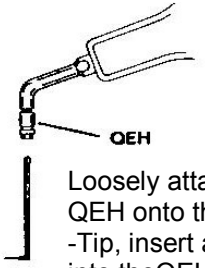
WWW.OSADAUSA.COM
(800) 426-7232

ASSEMBLY (B2)

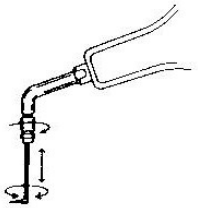
How to Secure an Attachment to the Endo-Tip (on the Handpiece) via QEH

Chucking the File into QEH and Endo-Tip

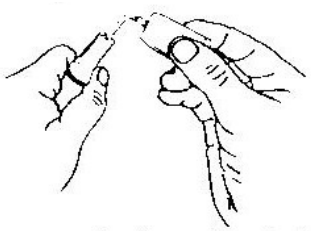
Loosely attach a QEH onto an Endo-Tip. Insert the back end of a file (e.g., U-File #30) into the QEH, manually twist the QEH to hold the file, and securely tighten it with the new TTT tool or STT spanner, catching its hexagonal end.

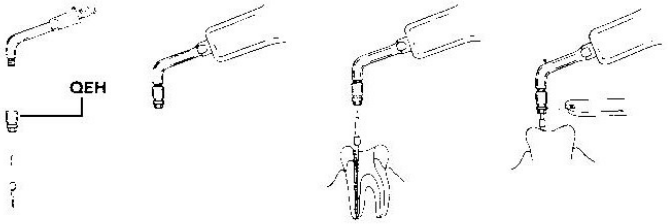


Loosely attach QEH onto the Endo -Tip, insert a file into theQEH, and twist QEH to hold.



Use TTT, STT, or ETT to secure a file onto QEH/ Endo-Tip. (Caution: Do not over-tighten if using STT OR ETT.)



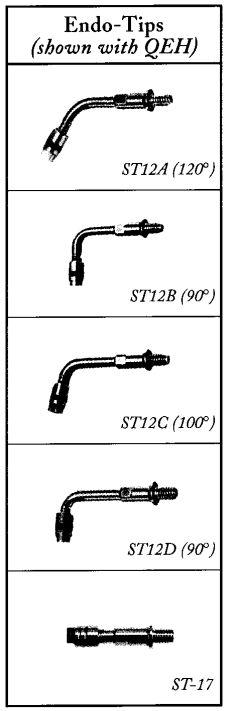


The length and direction of the file (if an angled attachment is used) can be adjusted while the QEH is finger-tightened. This is particularly convenient in surgical procedures.

ASSEMBLY (B1) Combination Tips

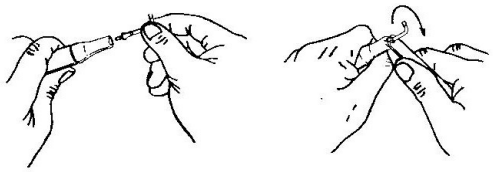
How to Attach Endo Tips to Handpiece ST12 Series and ST17 with QEH

TOOLS: With ENAC OE-W10 a new tool has been introduced —
TTT Torque-controlled Tip Tightener provides perfect tightness every time, never too tight.
ETT (grey Endo Tip Tightener) and **STT** (Spanner Tip Tightener) can be also used but the user must control the tightness.



Attaching the Endo-Tip to the Handpiece:

(1) Manually screw in the rimmed end of an Endo-Tip ST17 or ST12 to the narrow threaded end of the handpiece.
2) Insert the open end of the Endo-Tip through the hole of the TTT to engage the tool with the parallel cut of the tip near the base.
3) Hold the handpiece in one hand and rotate the TTT clockwise until you feel resistance. Continue tightening until the grip slips, indicating the required torque has met and the tip is secured.



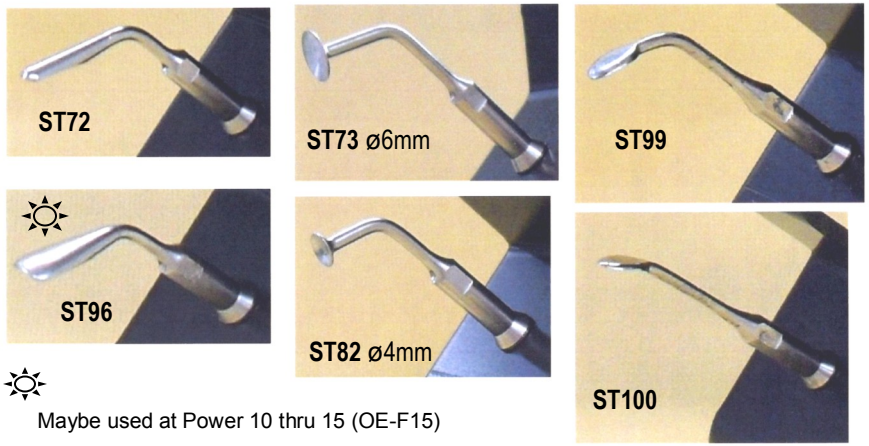
QEH Quick-Chuck Endo-Holders:

The QEH Quick-Chuck Endo-Holder has a hexagonal end and can be used with any file or point that has a shank diameter matching the chuck size of the QEH (standard 0.8mm). The QEH can be considered part of an Endo-Tip because it can remain loosely connected to the Endo-Tip, ready for an attachment. The QEH was originally designed to enable the user to apply ultrasonic oscillation through a file already inserted in a tooth.

Introducing .....***OSADA'S NEW SURGICAL TIPS***

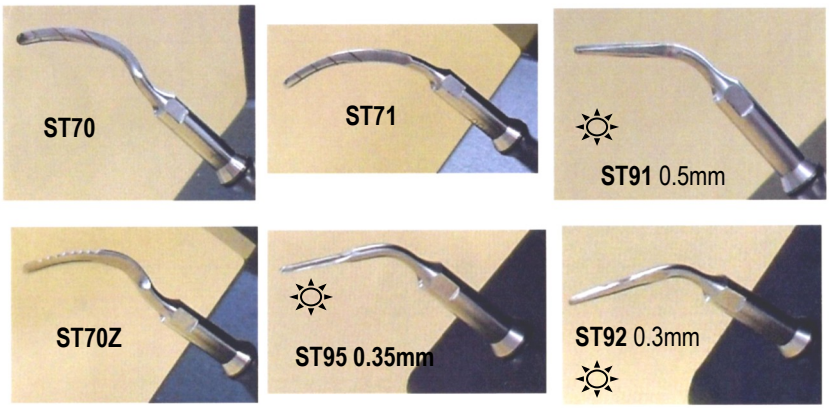
Please see the separate manual for the surgical tips

Scrapers and Separators



☼ Maybe used at Power 10 thru 15 (OE-F15)

Sword tips



ASSEMBLY (A)

How to Attach Scaler Tips to Handpiece ST08 or One Piece Tips

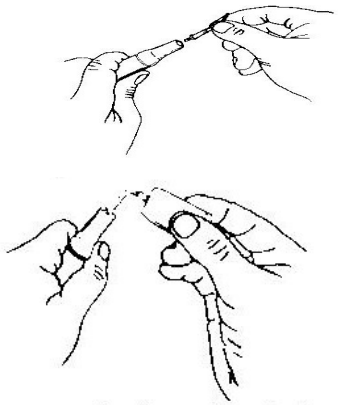
IMPORTANT: The tip-to-handpiece connection is crucial to ENAC's optimum performance. The user must learn how to secure tips to the handpiece properly. Make sure that the tips are made for Osada ENAC.

TOOLS: With ENAC OE-W10, a new tool has been introduced — TTT: Torque-controlled Tip Tightener provides perfect tightness every time, never too tight.

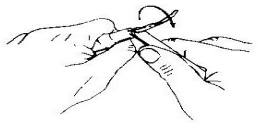
OPTIONAL TOOLS: STT Spanner or ETT Endo Tip Tightener: Tighten the tip until resistance is felt (end of the thread). Continue tightening a little more to secure. DO NOT OVERTIGHTEN (especially with the Spanner) as this may cause damage to the delicate threaded ends.

NOTE: If a tip does not smoothly screw into the end of the handpiece, DO NOT FORCE IT. Unscrew it and try again.

1) Manually screw in the rimmed end of an ST09 Vibrator Tip or an ST08 Universal Scaling Tip to the narrow threaded end of the handpiece.
2) Insert the sharp end of the tip through the hole of the TTT to engage the tool with the parallel cut of the tip near the handpiece end.
3) Hold the handpiece in one hand and rotate the TTT clockwise until you feel resistance. Continue tightening until the tool slips, indicating the required torque has met and the tip is secured.



With an STT spanner, twist and turn to tighten until resistance is felt. Tighten a little more to secure.



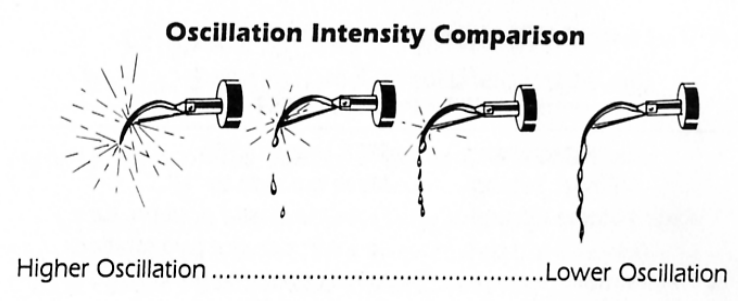
With a torque-controlled TTT or GTT (larger), twist and turn to tighten until you hear a CLICK.

Initial Testing with ST08 or ST09

NOTE: Do not use delicate surgical tips for this test

Set-Up for Testing

Attachment	**ST08 Universal Tip** on SE10 Handpiece
Main Switch	Turn ON to light beam on the power dial
Power Setting	Rotate the power dial to "10"
Water in reservoir or bag	Ensure all irrigation tubing is in place
Water Switch	Push in the water switch to turn on
Water Volume Control	Rotate the water volume to adjust
Foot Switch	Step on the Foot Switch to activate



The combination of sufficient water flow and fine ultrasonic oscillation at "10" power setting creates a sphere of fine spray mist surrounding the tip. If the power seems too weak, make sure that the tip is properly secured and not worn or damaged.

Oscillation can be heard or felt when the tip is in contact with a metal object (eg., penny, STT spanner).

OE-W10 has a safety device that will not allow the user to change the intensity by rotating the dial while the footswitch is being depressed. To change intensity, release the footswitch and then rotate the power dial to the desired intensity. Depress the footswitch again to activate. When the power is set lower, observe the change in intensity as the sphere of mist decreases and dripping increases.

IMPORTANT: Water should reach the extreme end of the tip to prevent the tip from overheating. This also enables the user to continue working without temperature increase.

To Test: Hold the handpiece with a tip attached over a sink and depress the foot switch to simultaneously activate the water flow and oscillation. (Allow a moment to let the water fill the tubing the first time.)