EndoPilot *upgrade*

DAILY ENDO

DAILY ENDO

DOWNPACK

BACKFILL

DOWNPACK

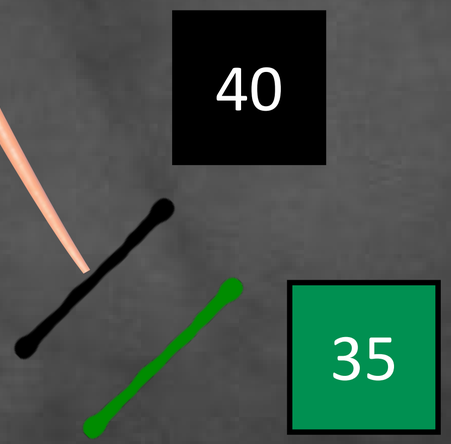
COMPATTAZIONE VERTICALE A CALDO

LA PROVA DEL CONO DI GUTTA

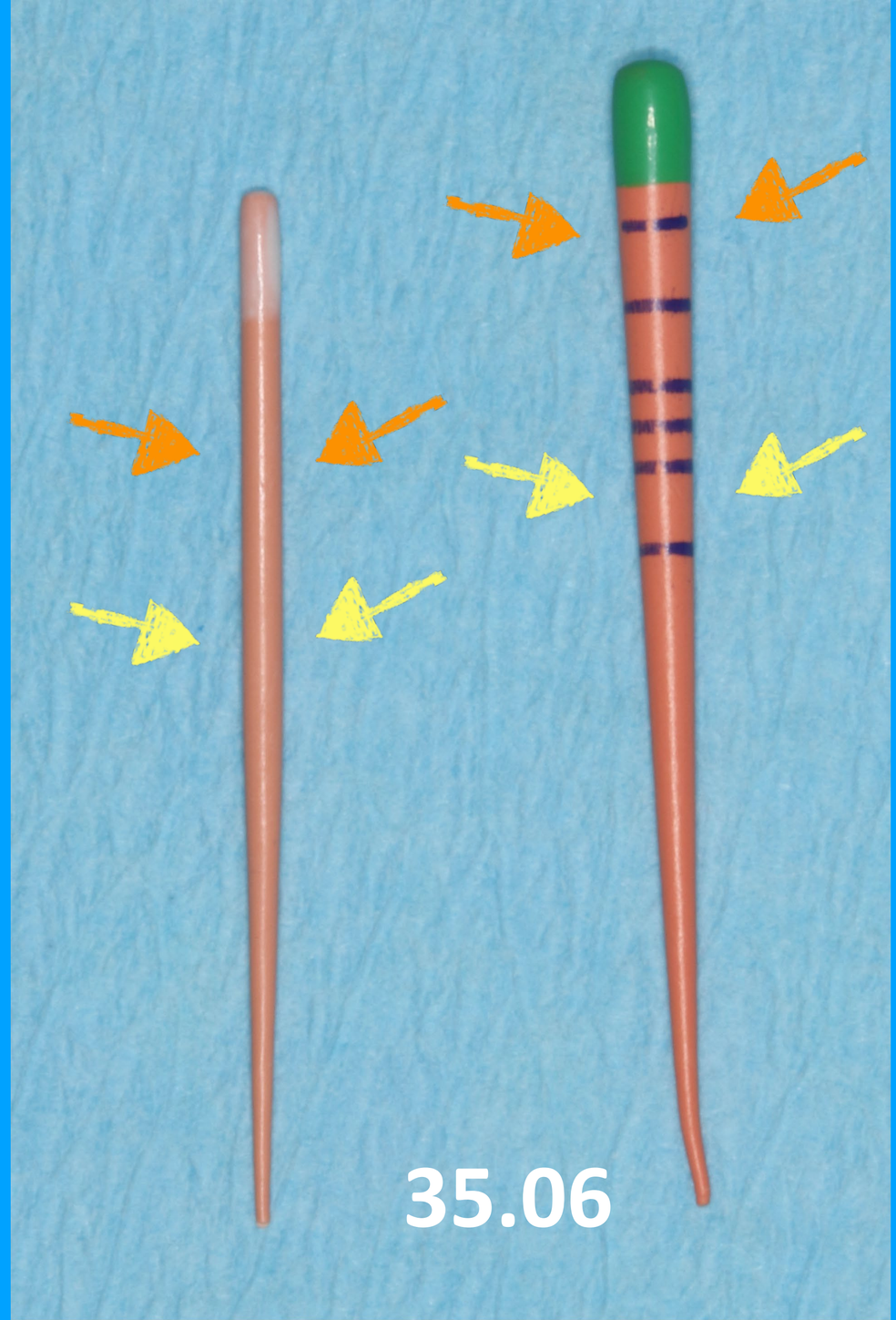
CONICITA’ SIMILE A QUELLA DELLA SAGOMATURA TUGBACK - FRIZIONE A CIRCA 0,5mm DAL TERMINE DEL CANALE

SCEGLIERE IL CONO DI GUTTA PIU’ GROSSO CHE RAGGIUNGE IL DIAMETRO SUCCESSIVO RISPETTO A QUELLO MISURATO AL FORAME

Se non venisse accorciato
la spinta verticale provocherebbe
fuoriuscita del cono dall’apice



Altra marca
06 Komet

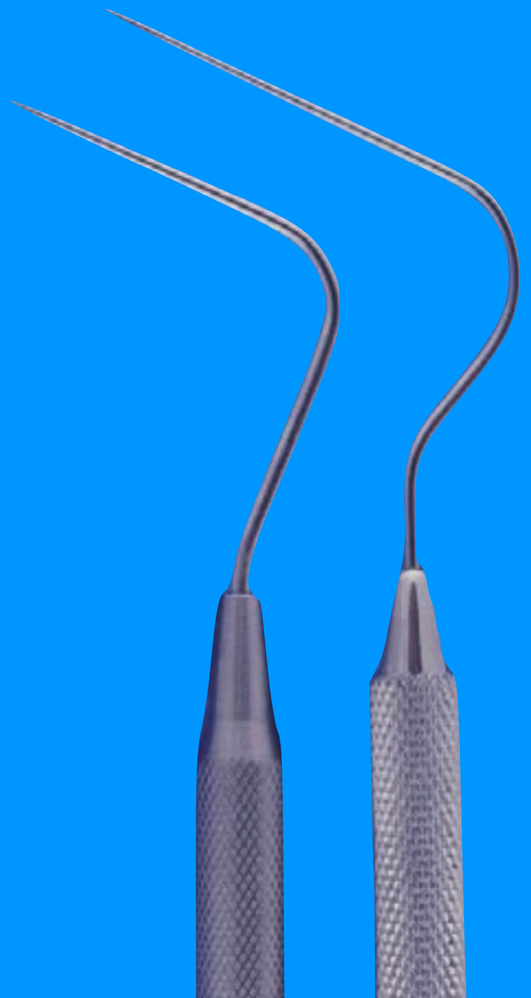

35.06

CALORE

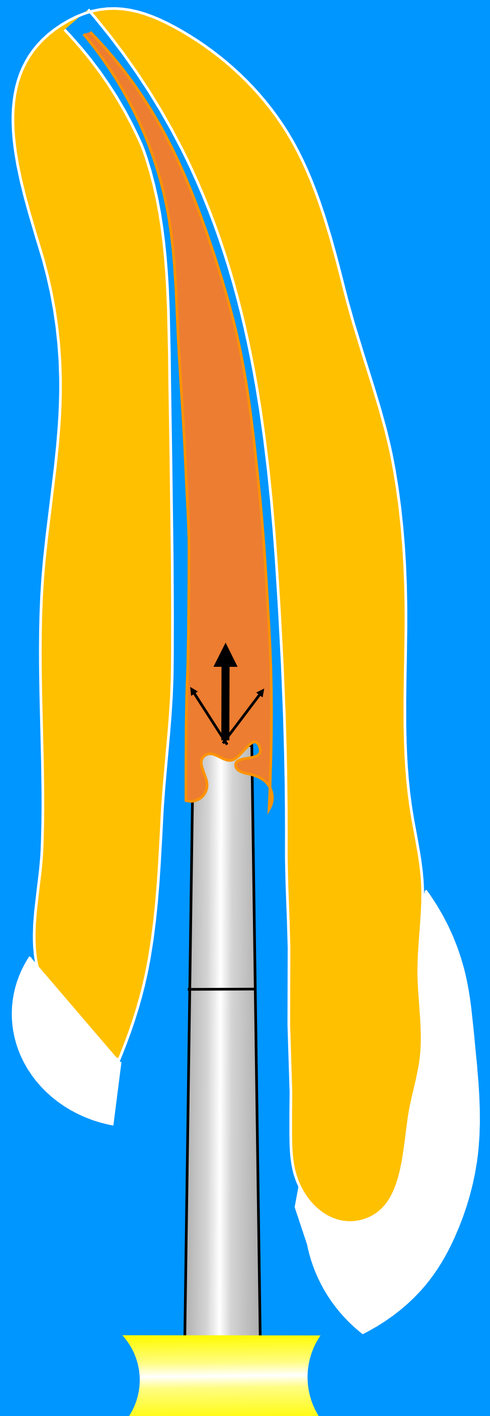
Rilascio di calore controllato e temporizzato
per evitare surriscaldamento
dei tessuti periradicolari

PORTATORE DI CALORE

heat carrier



Stessa forma e caratteristiche dello SPREADER usato nella tecnica laterale a freddo dove prende intimo contatto con le pareti dentinali, mentre qui serve solo a trasmettere calore alla massa di gutta

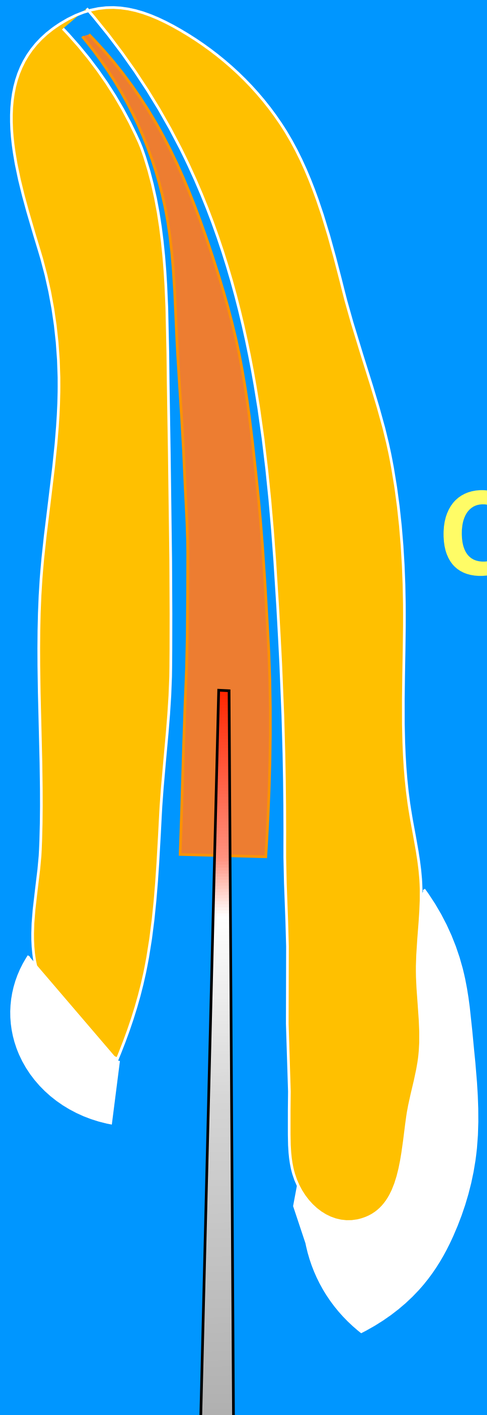


Per essere efficace deve catturare la maggior quantità possibile di gutta
Dimensione adeguata alla sezione di canale dove sta agendo

COMPATTAZIONE VERTICALE A CALDO

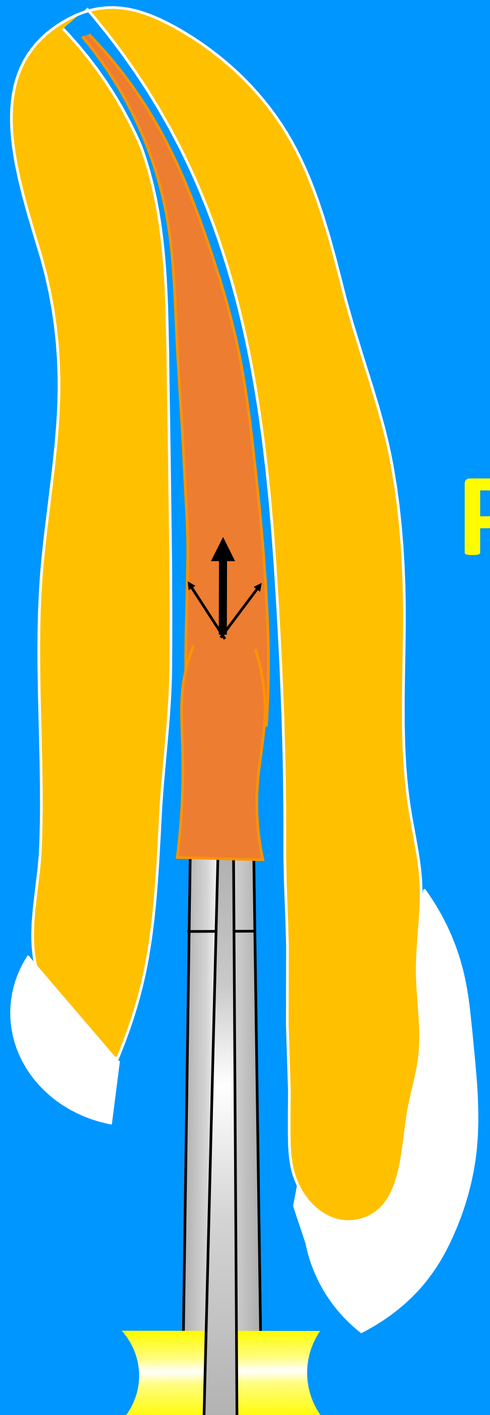
secondo Schilder

CALORE



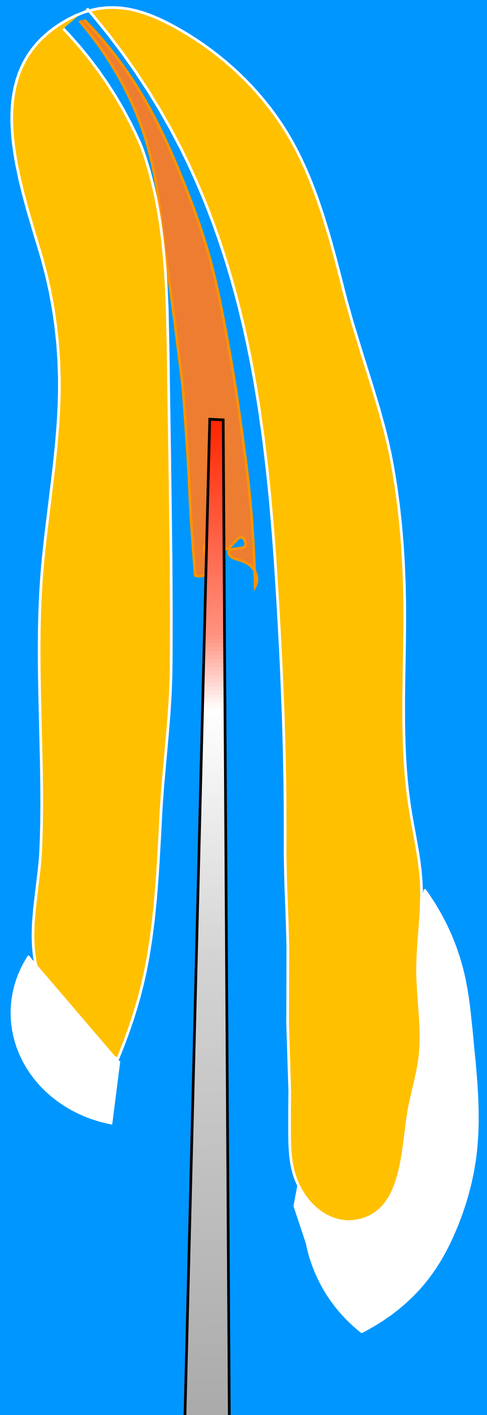
ALTERNANZA DI **CALORE** E **COMPATTAZIONE**

- RILASCIO DEL CALORE
- RIMOZIONE GUTTA
- COMPATTAZIONE

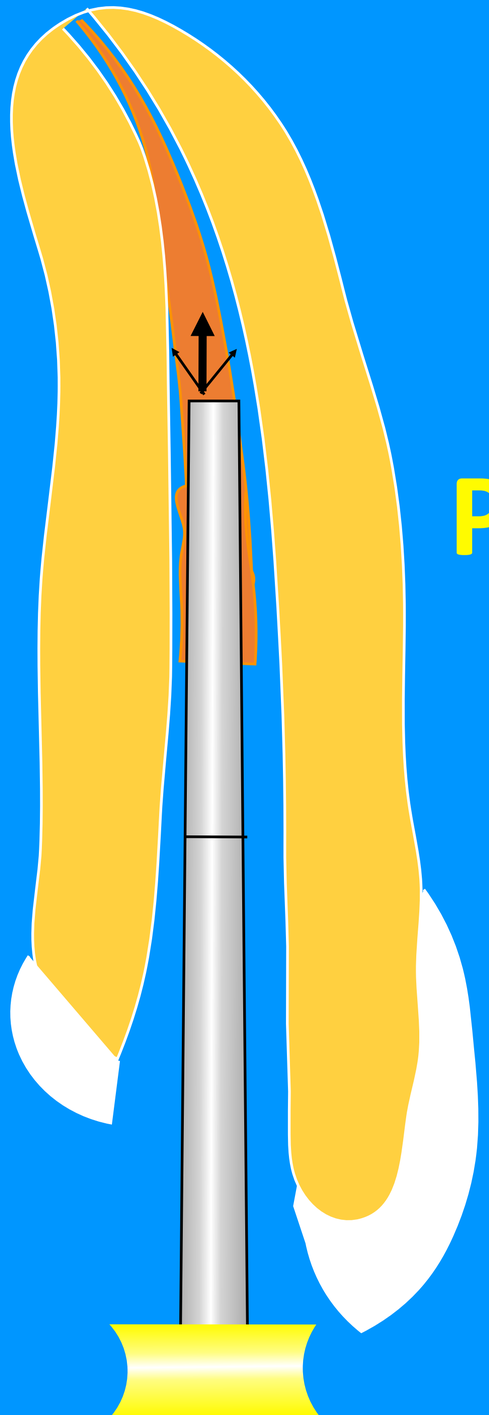


PLUGGER #10

CALORE

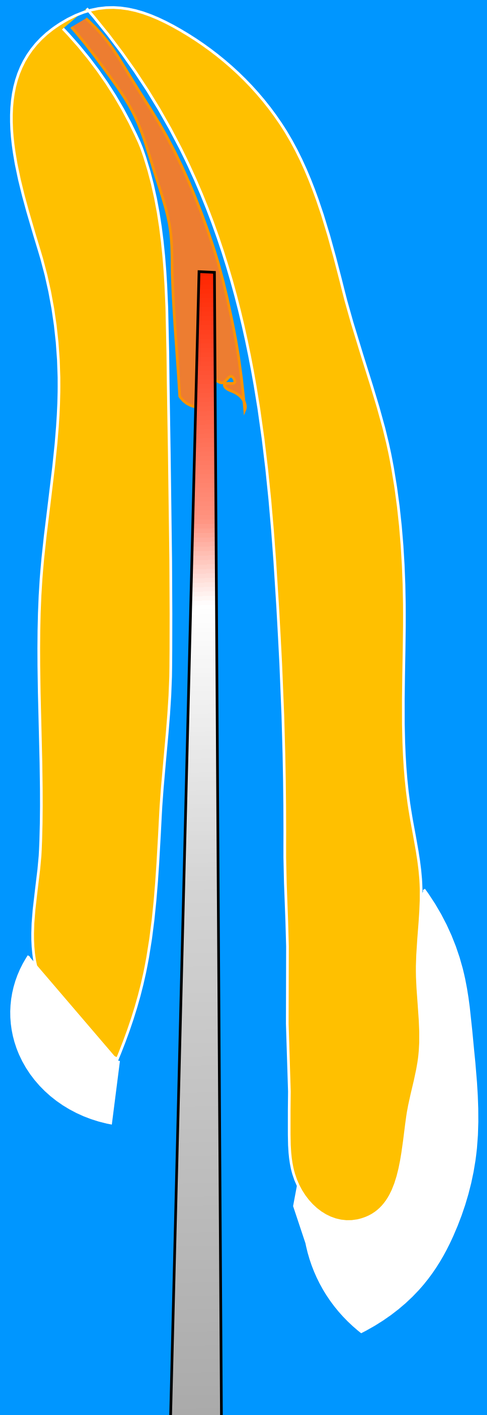


- RILASCIO DEL CALORE
- RIMOZIONE GUTTA
- COMPATTAZIONE

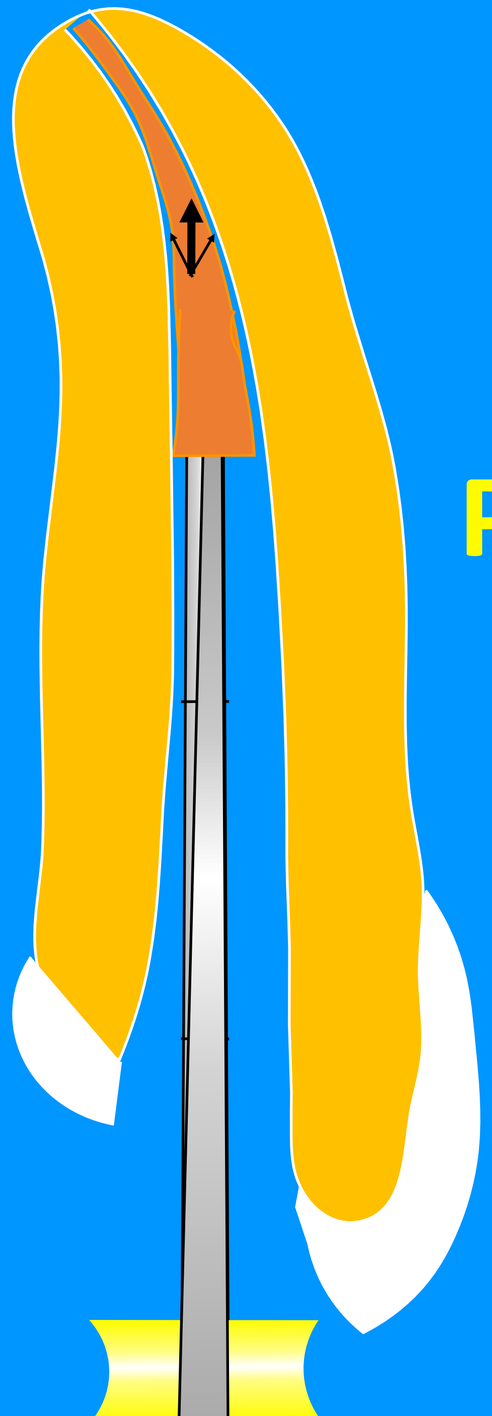


PLUGGER #09

CALORE



- RILASCIO DEL CALORE
- RIMOZIONE GUTTA
- COMPATTAZIONE



PLUGGER #08

ONDA CONTINUA DI CONDENSAZIONE

Secondo Buchanan

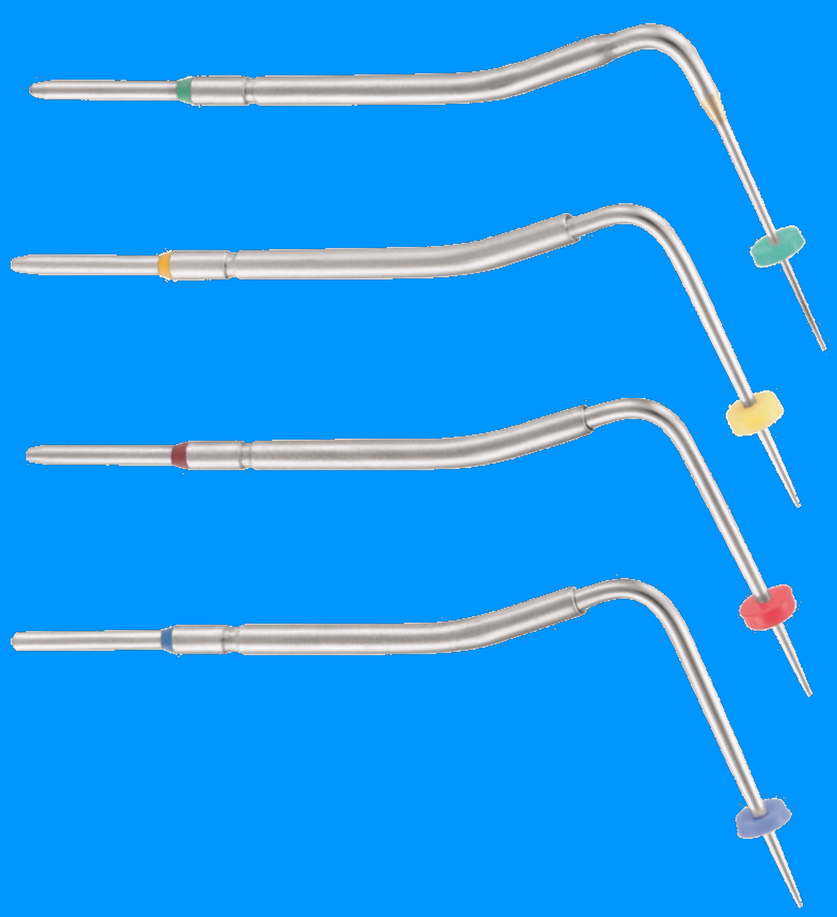
Il portatore di calore è disegnato per fungere allo stesso tempo da **plugger**

La gutta può essere **ammorbidita e condensata allo stesso tempo**

Buchanan LS. The continuous wave of obturation technique: centered condensation of warm gutta percha in 12 seconds.

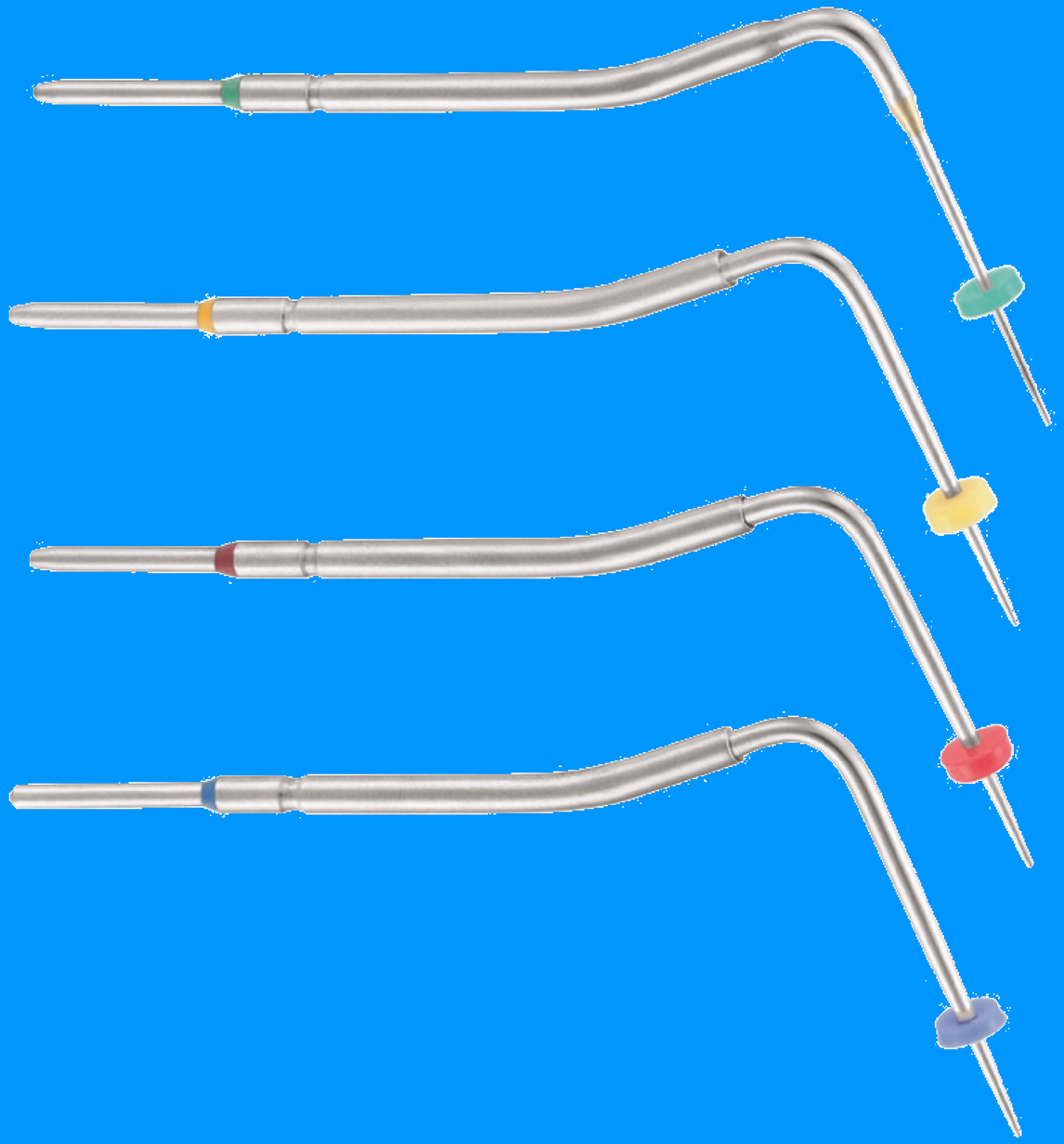
Dent Today. Jan 1996; 15:60-67

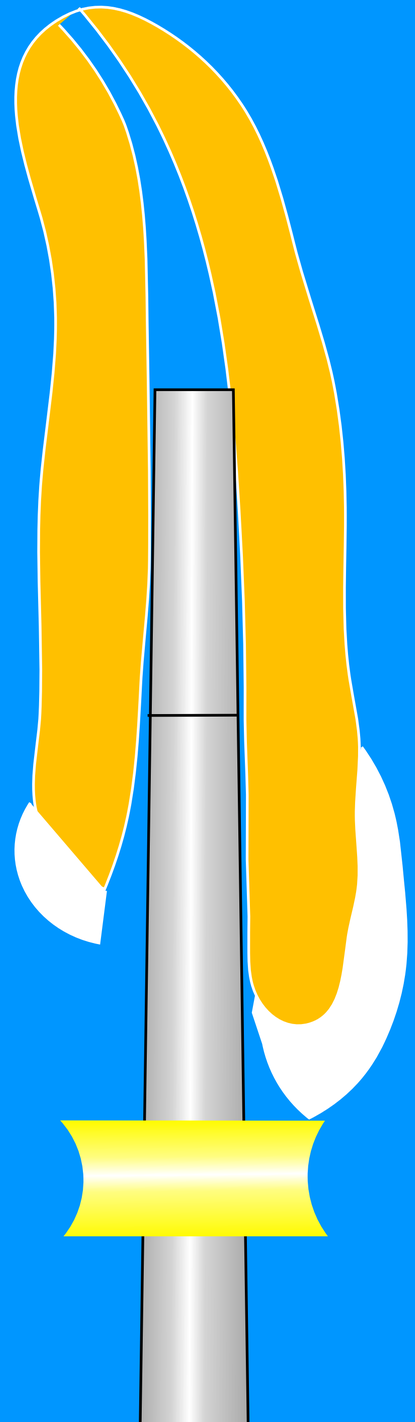
LA PROVA DEI **PLUGGER**

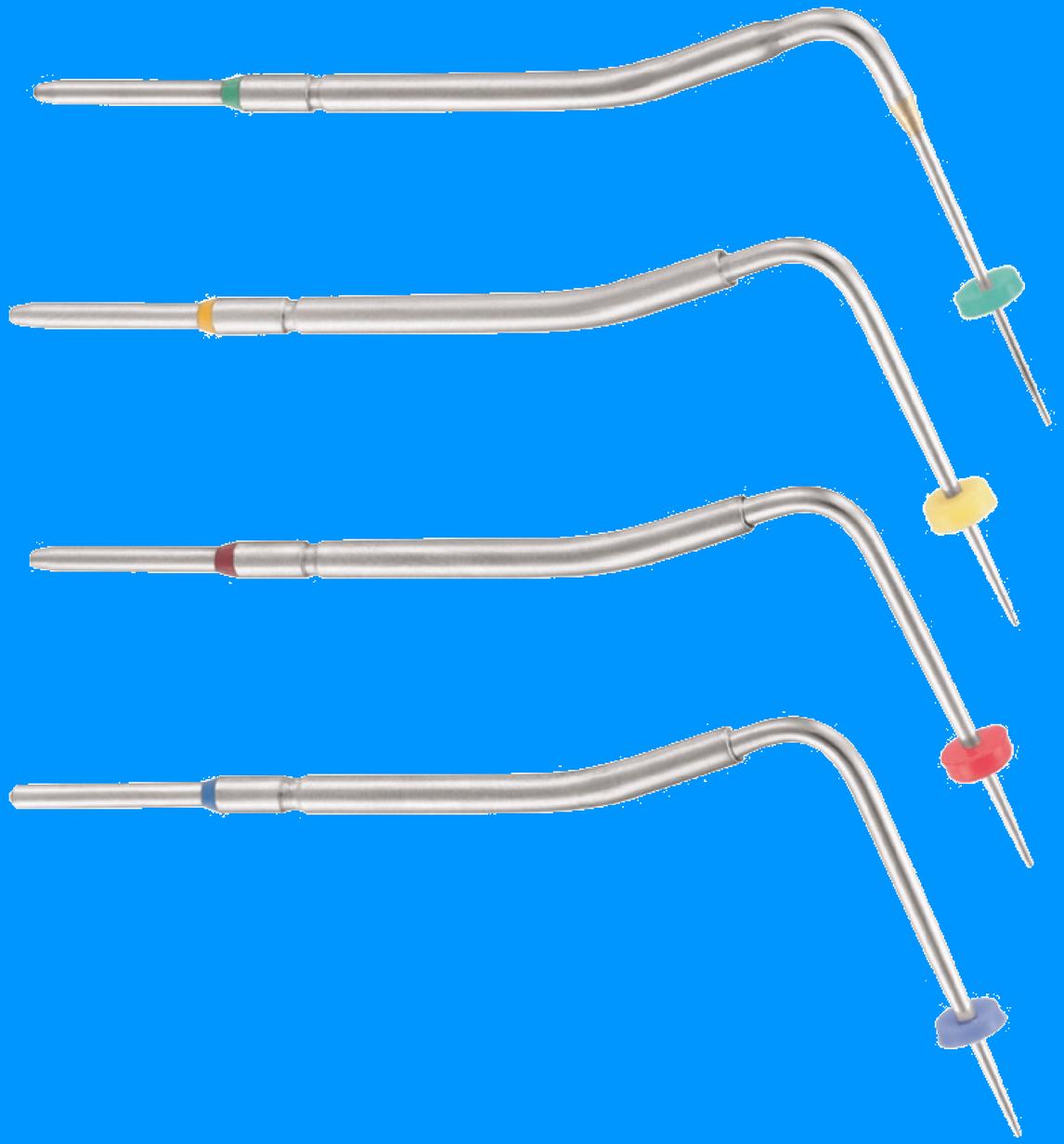


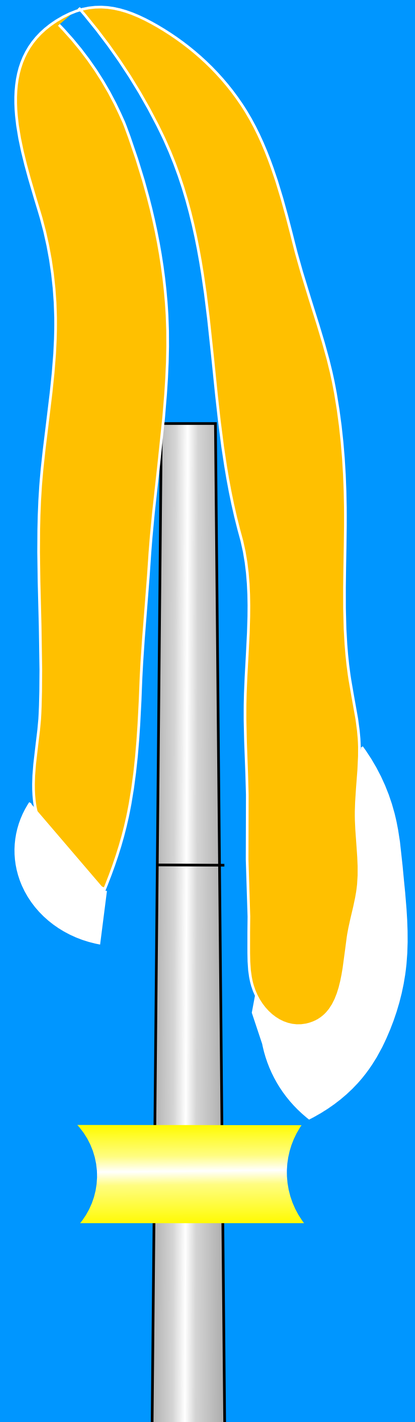
Plugger a conicità costante: 04 - 05 - 07 - 09

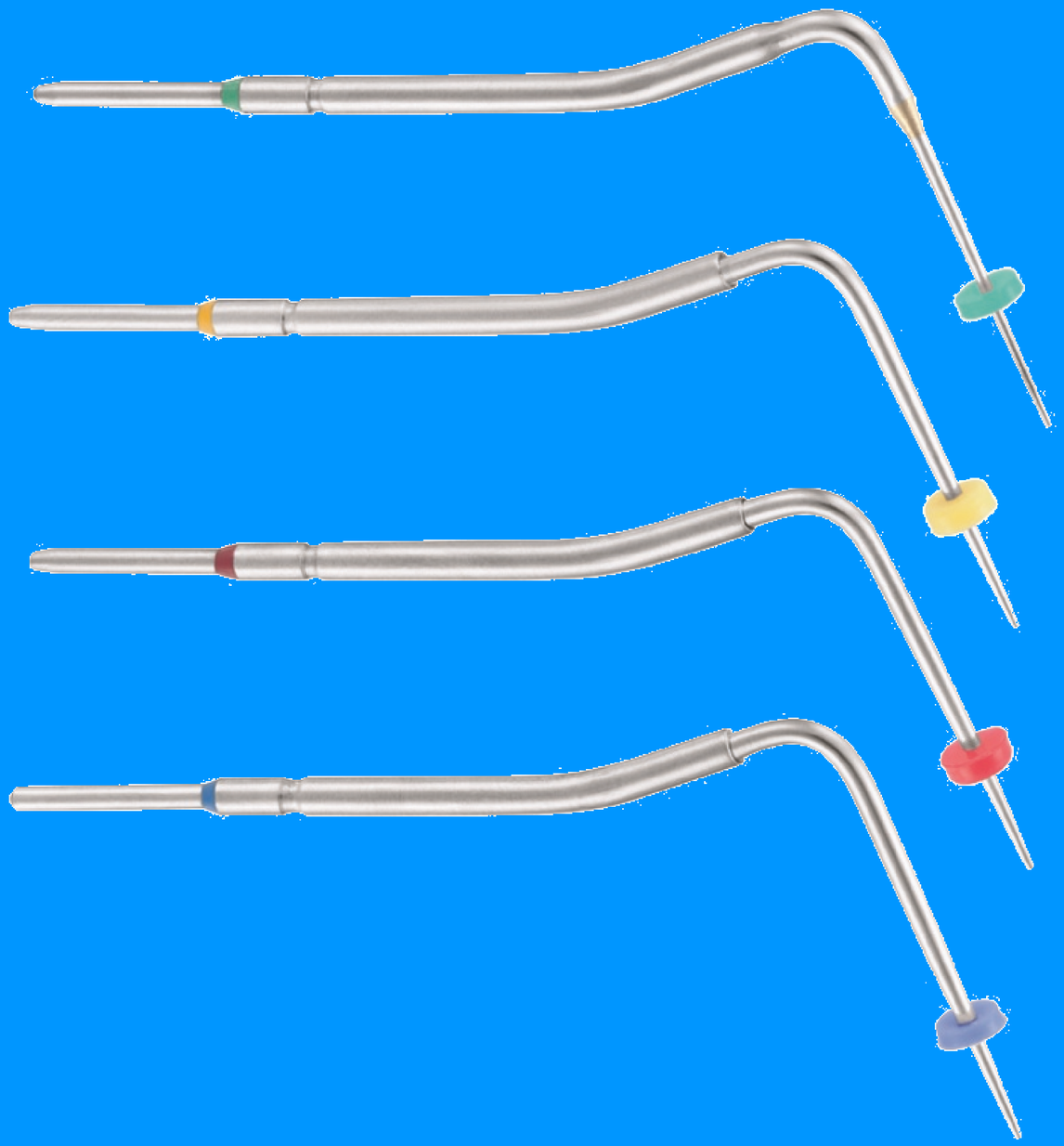
- eXtra Fine **40.04**
- Fine **50.04**
- Fine Medium **50.05**
- Medium **50.07**
- Medium Large **50.09**

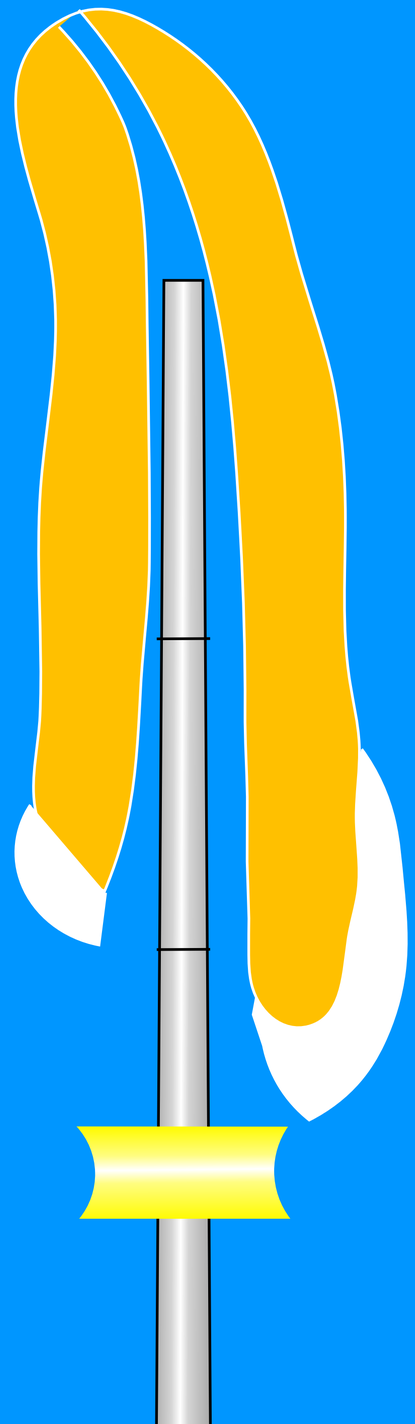




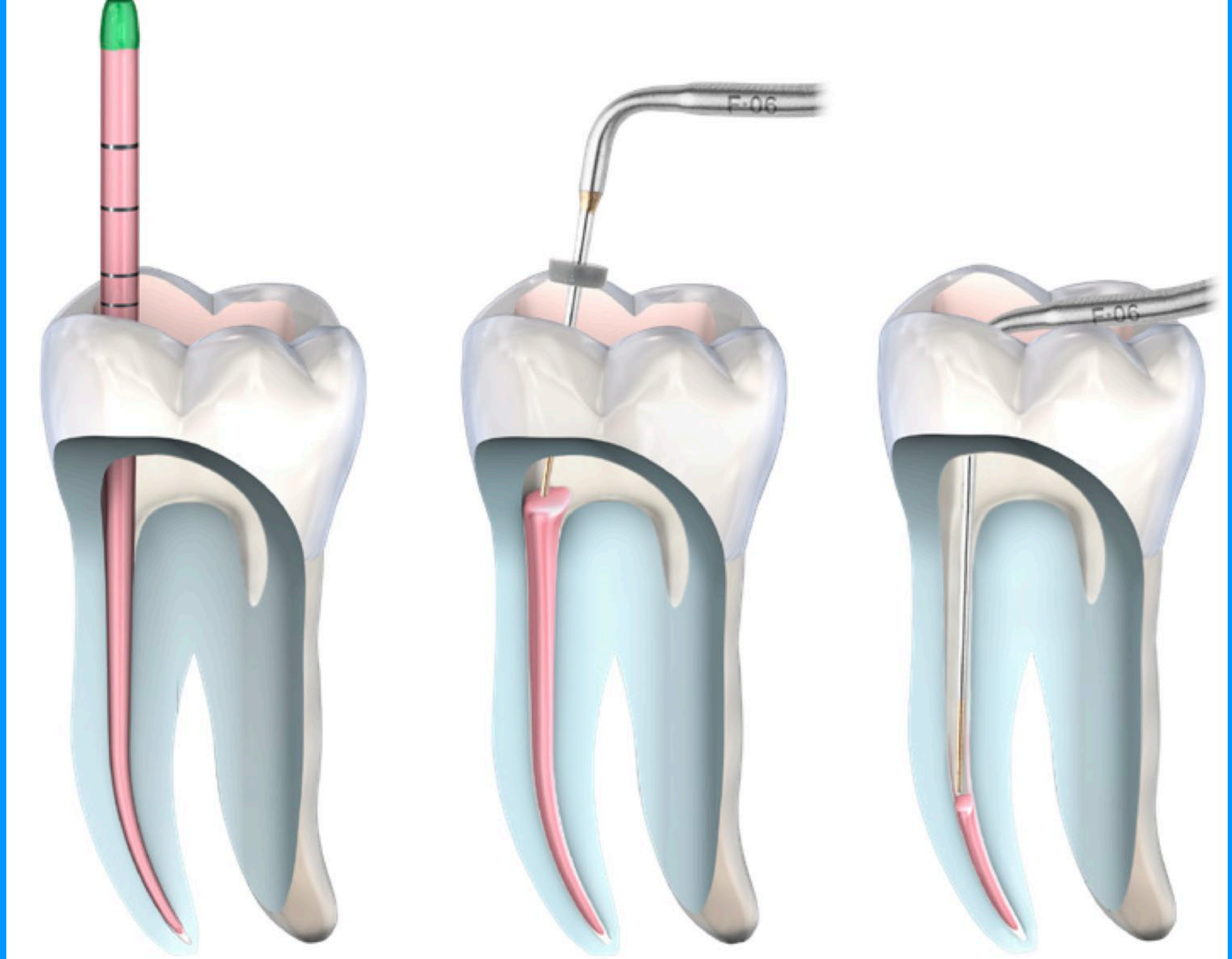






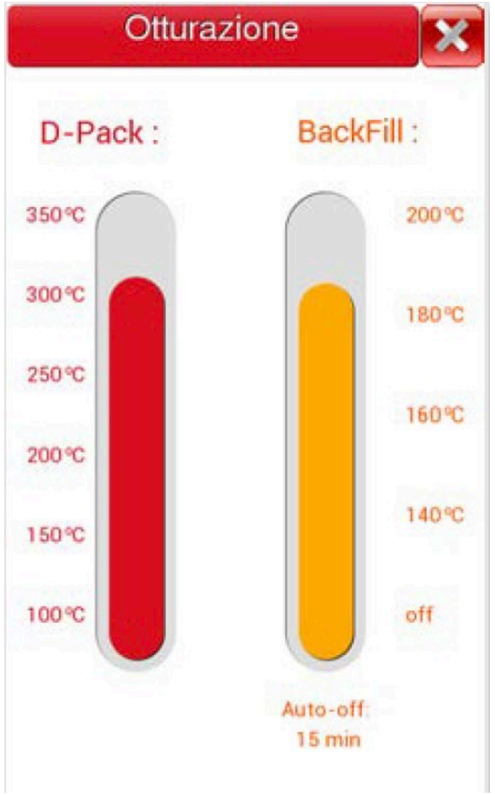


3-4mm
dalla LL


F-06
F-06

ONDA CONTINUA DI CONDENSAZIONE

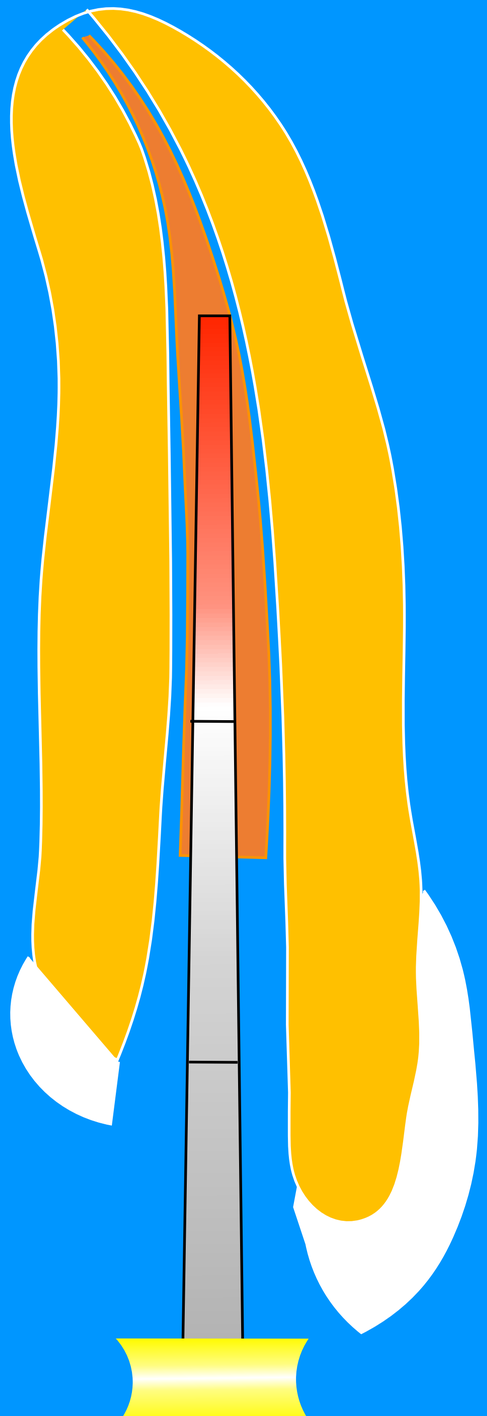
secondo Buchanan



* CALORE 200°-250°C - attivazione a pedale
* PORTARE IL PLUGGER IN DIREZIONE APICALE FINO A 3-4mm DAL PUNTO D’IMPEGNO
* RILASCIARE IL PULSANTE MANTENENDO LA PRESSIONE APICALE
* IL PLUGGER ARRIVERA’ AL PUNTO PRESTABILITO

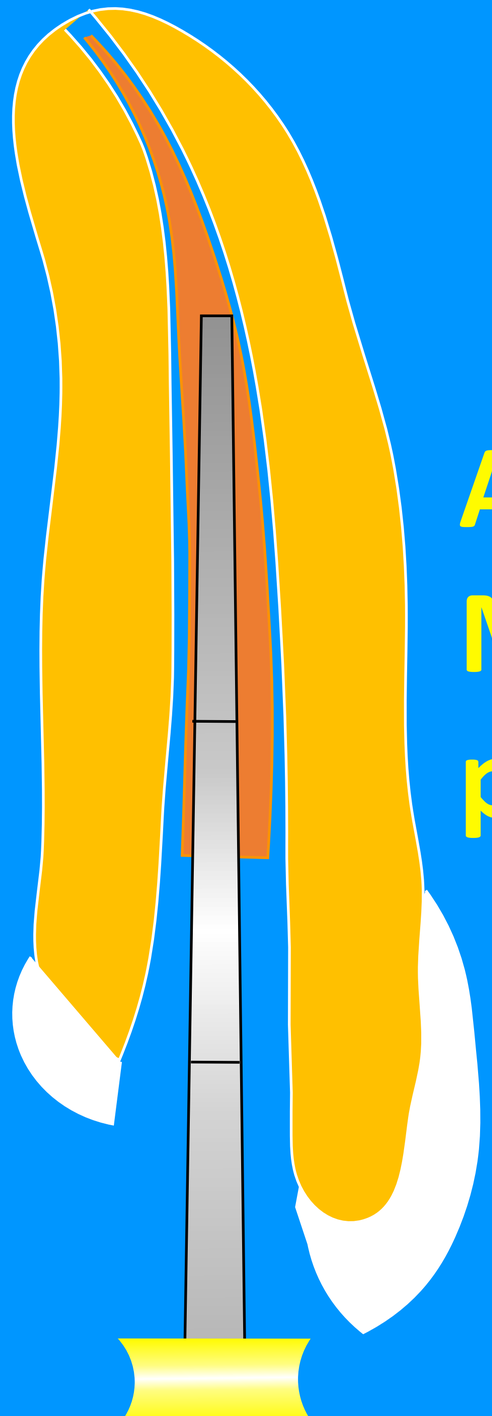
CALORE
&
COMPATTAZIONE

azioni simultanee



Rilascio calore

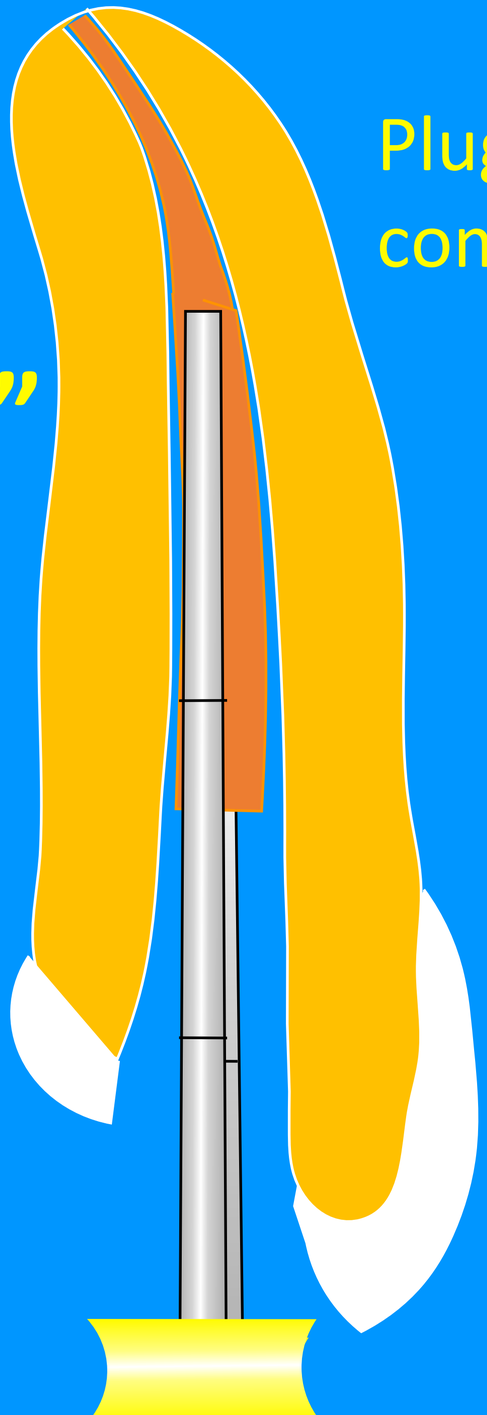
“solo”
compattazione



Attesa 10”
Mantenendo
pressione apicale

Plugger manuale #08 per completare adattamento

Calore di rilascio 1”



Rimozione plugger+gutta

DOWNPACK

DAILY ENDO

almeno 2 PLUGGER 50.05

DAILY ENDO

DOWNPACK

DAILY ENDO

VALORE AGGIUNTO

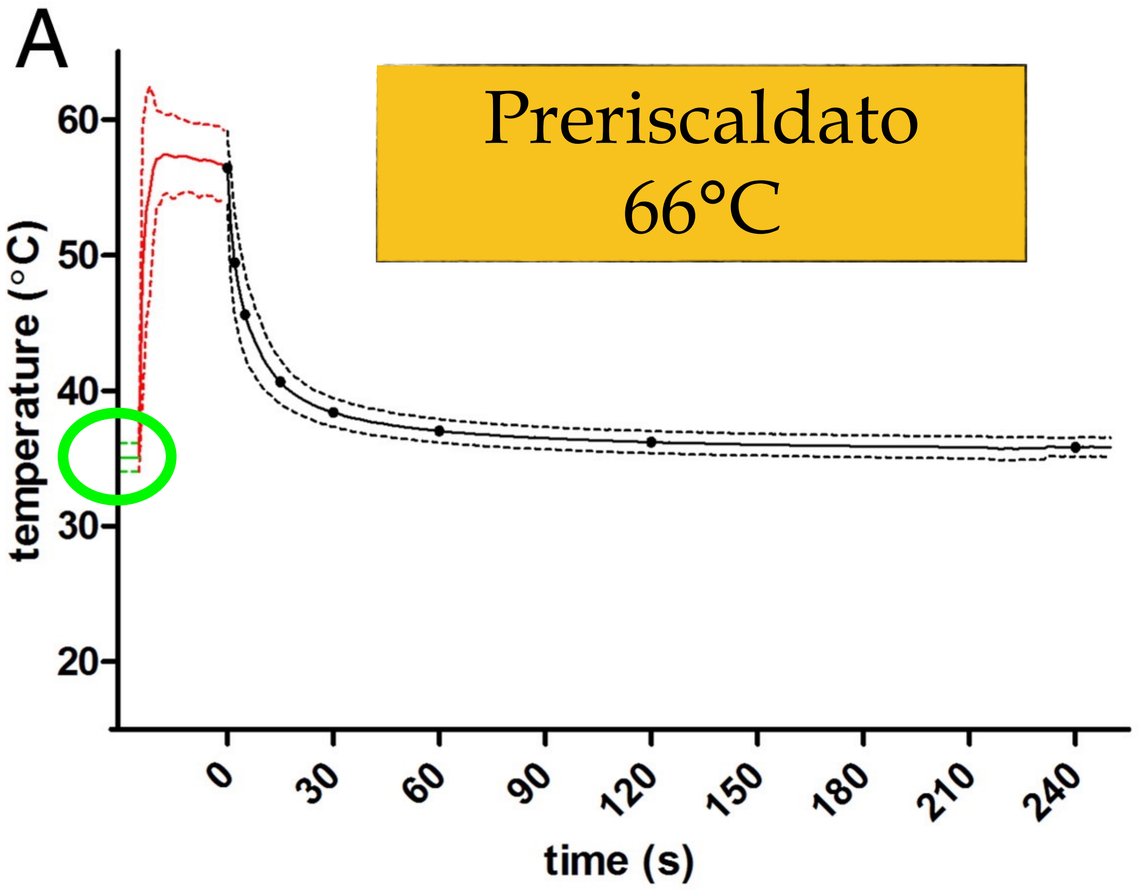
DETERSIONE CHIMICA

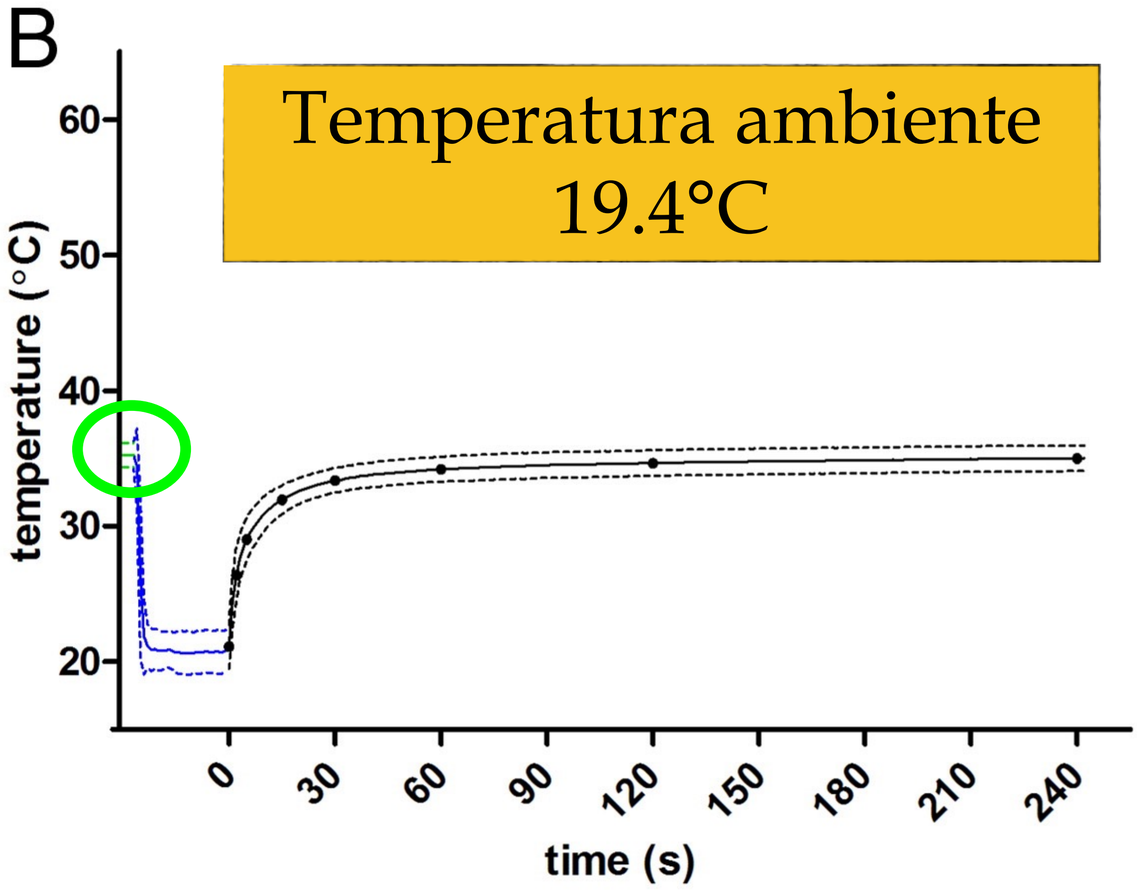
L’efficacia dell’ipoclorito di sodio può essere aumentata grazie al **riscaldamento** e all’**attivazione intracanalare**

TEMPERATURA

In Vivo Intracanal Temperature Evolution during Endodontic Treatment after the Injection of Room Temperature or Preheated Sodium Hypochlorite

Ferdinand de Hemptinne, DDS, Gunter Slaus, DDS, Mathieu Vandendael, DDS,* Wolfgang Jacquet, PhD,*† Roeland J. De Moor, DDS, MMS, PhD,‡ and Peter Bottenberg, DDS, PhD**





T° in apice

In Vivo Intracanal Temperature Evolution during Endodontic Treatment after the Injection of Room Temperature or Preheated Sodium Hypochlorite

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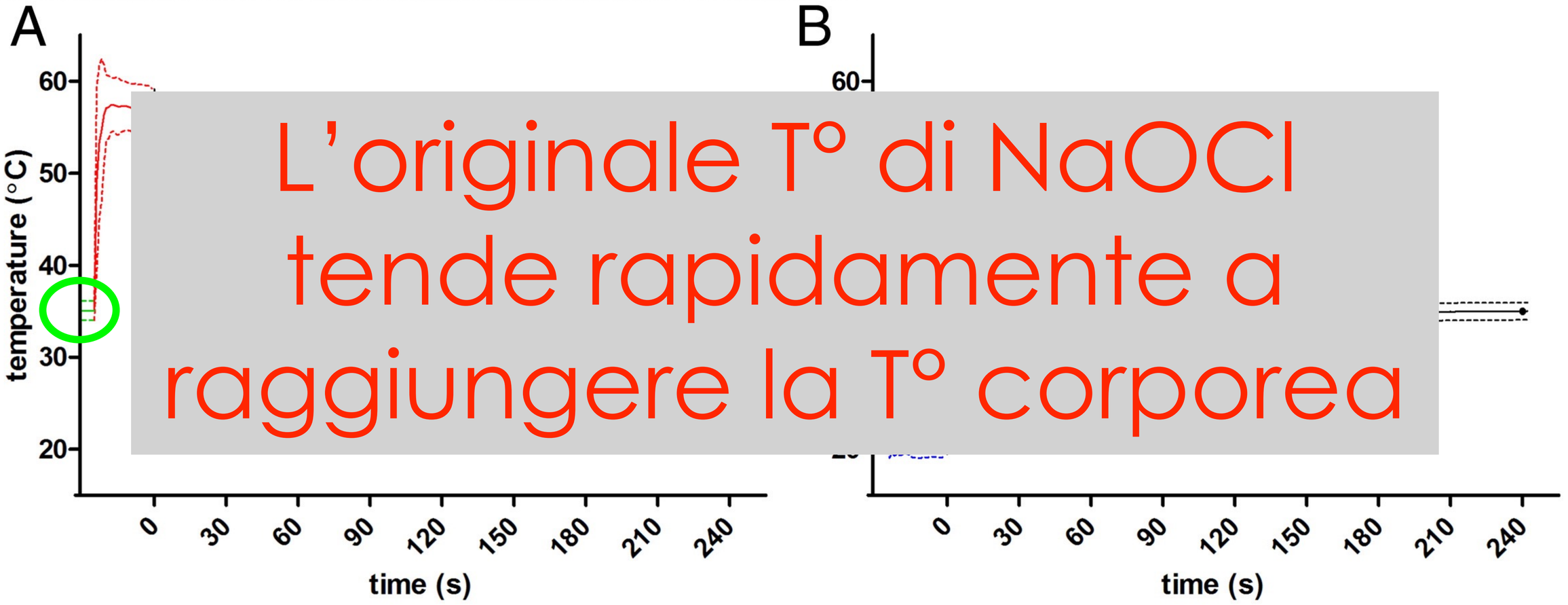


L'originale T° di NaOCl tende rapidamente a raggiungere la T° corporea

T° in apice

+24°

+ 3°

SCALDARE
INTRAOPERATIVAMENTE

Sirtes G et al. 2005

Sauk JJ et al. 1988

T° in apice

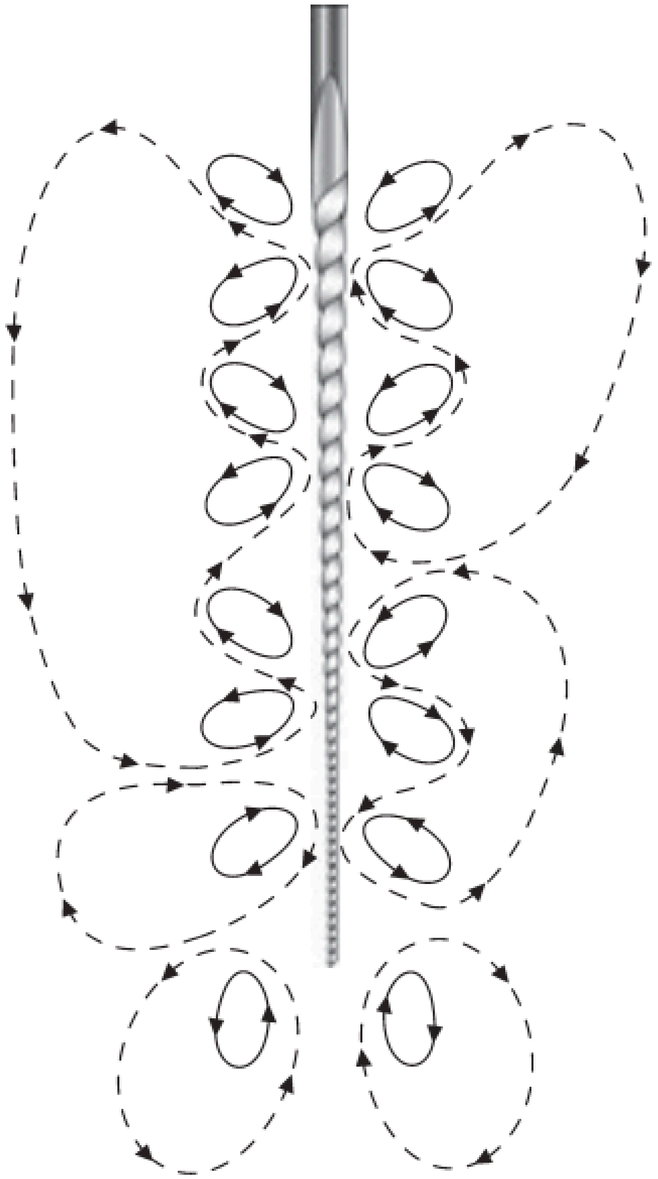
ATTIVAZIONE INTRACANALARE

Reazione chimica accelerata

Effetto cavitazionale

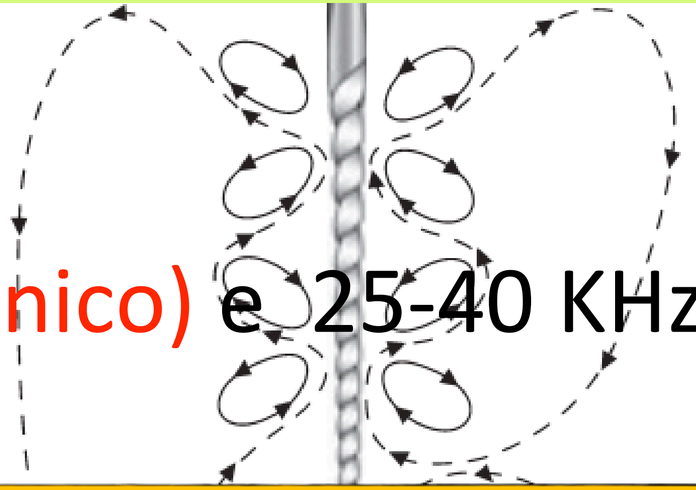
Acoustic streaming

Maggiore attività detergente



Attivazione sonica e ultrasonica

Vibrazioni comprese tra 1-6 KHz (Sonico) e 25-40 KHz (US)



Tre cicli da 10-20 secondi per ogni canale
sembrano essere sufficienti
per una buona detersione
(rinnovare ogni volta l’irrigante)

IRRIGAZIONE CANALARE

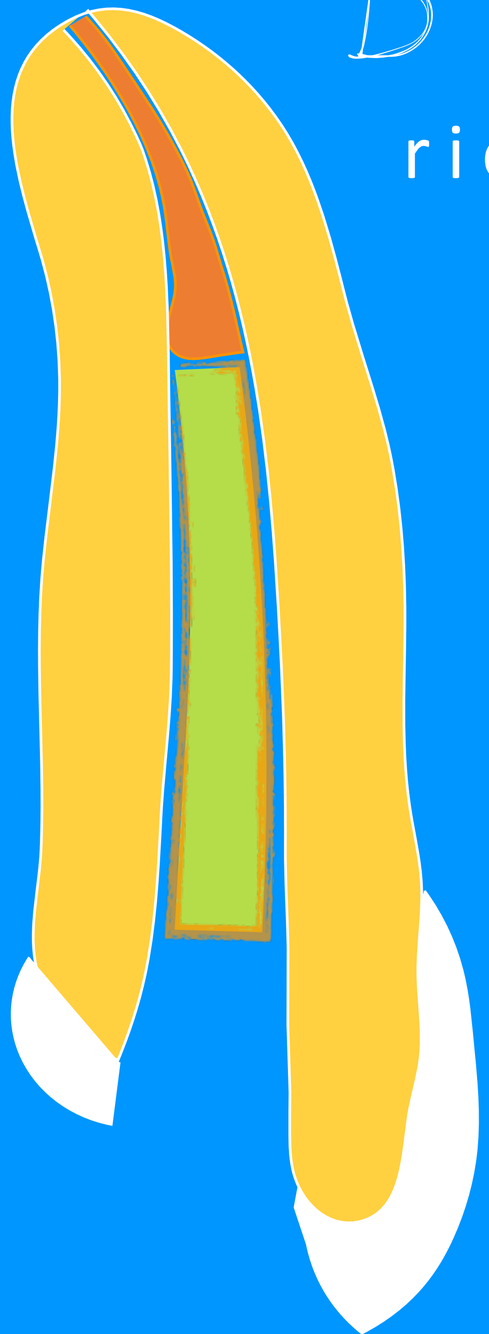
protocollo

- **CALORE** 4-5” 150°
- **2mm corto** rispetto WL
- Brevi escursioni verticali (2-3mm)
- 20” **attivazione SONICO - US**
- **Rinnovo ipoclorito** di sodio 5,25%
- Passaggi ripetuti 5-6 volte

DAILY ENDO

BACKFILL

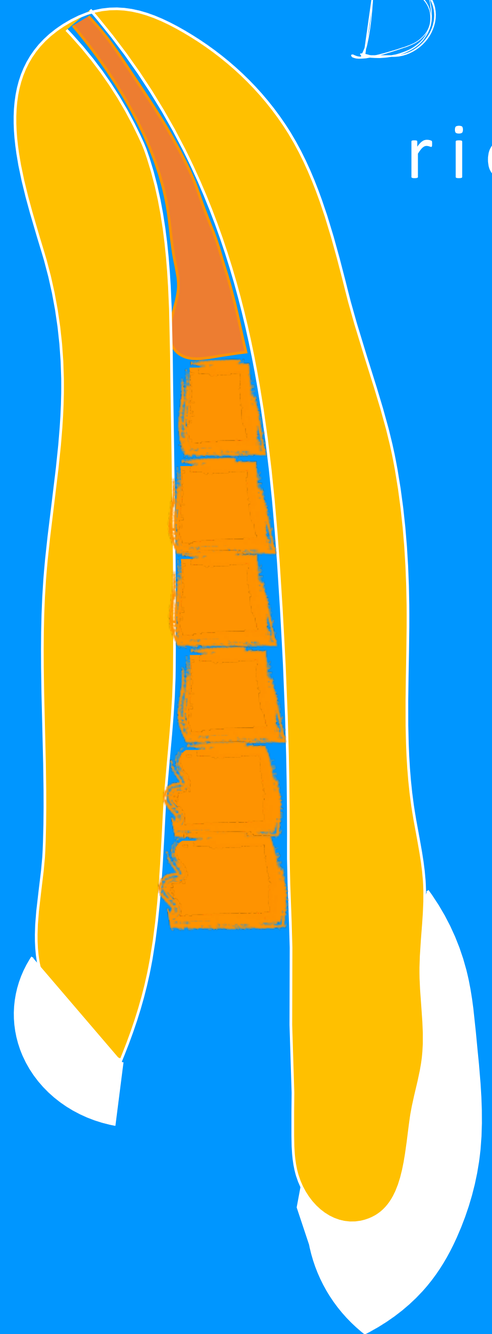
riempimento a ritroso

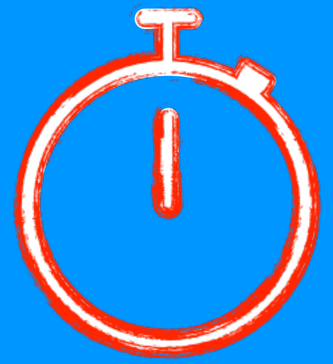


Il canale **NON** deve essere lasciato vuoto

BACKFILL

riempimento a ritroso





manuale

Aggiungere tanti piccoli pezzetti di guttaperca scaldati e compattati fino a raggiungere la parte coronale del canale

BACKFILL

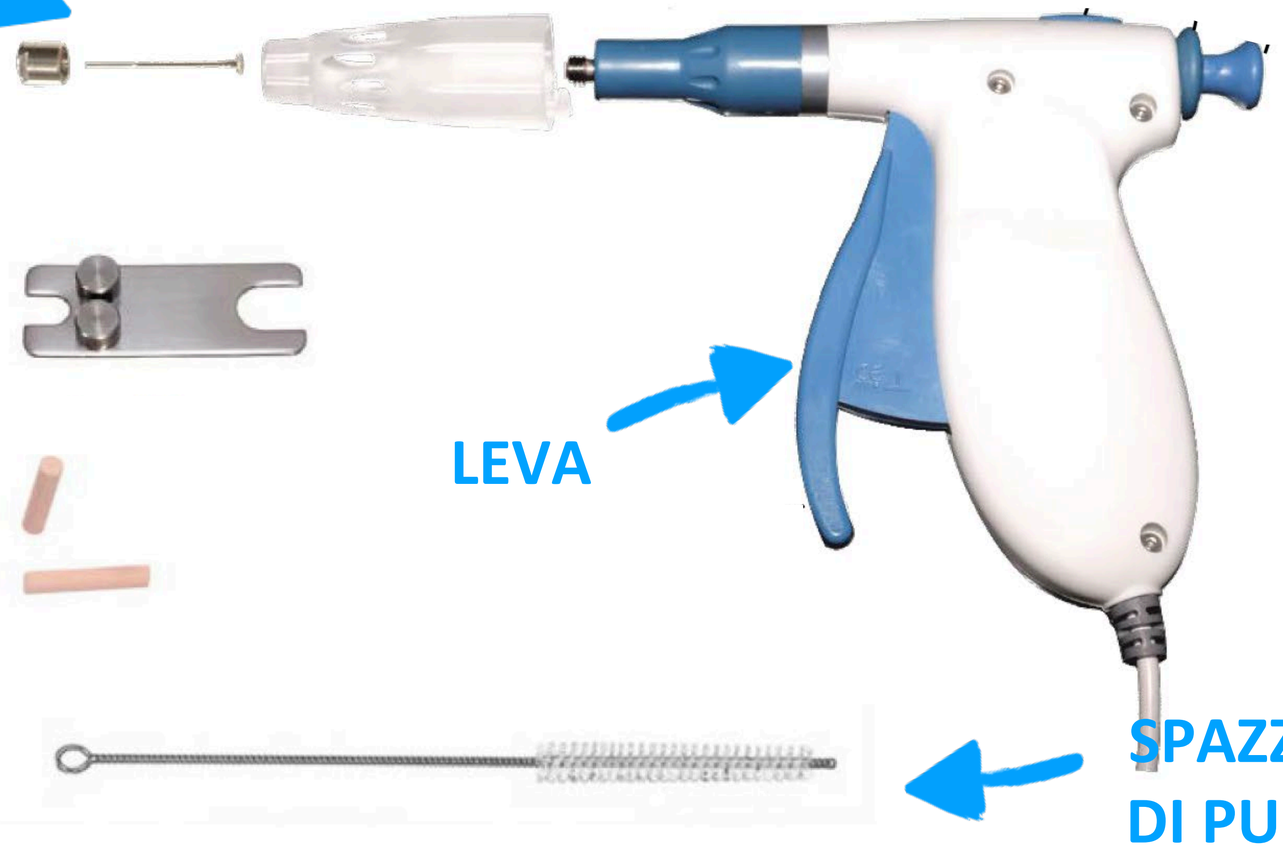
Dispositivo dedicato
al riempimento a ritroso

CAMERA DI RISCALDAMENTO

PULSANTE DI RILASCIO STANTUFFO

AGO

MULTIUTILITA’
piegatura ago
avvitamento



STANTUFFO

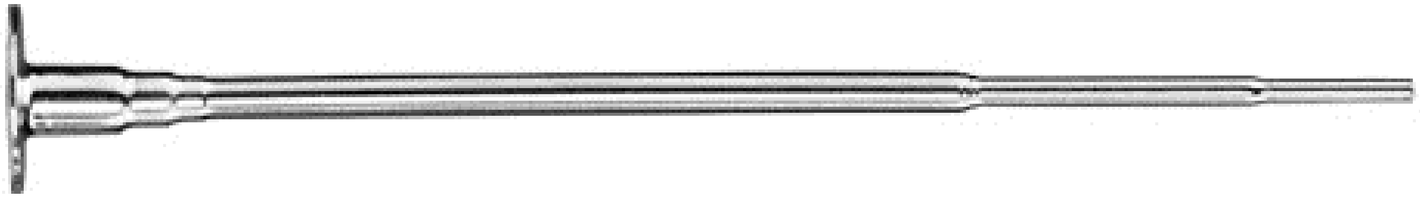
LEVA

CARTUCCE GUTTA

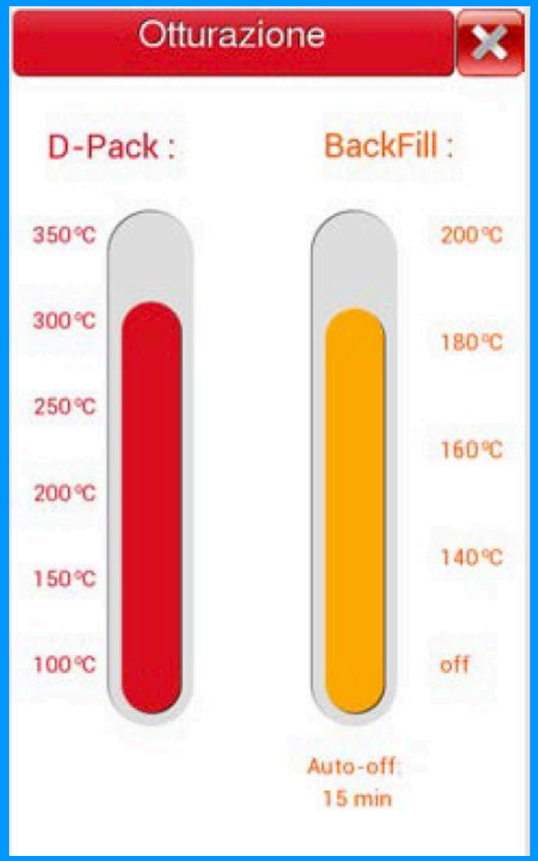
SPAZZOLA DI PULIZIA

DAILY ENDO

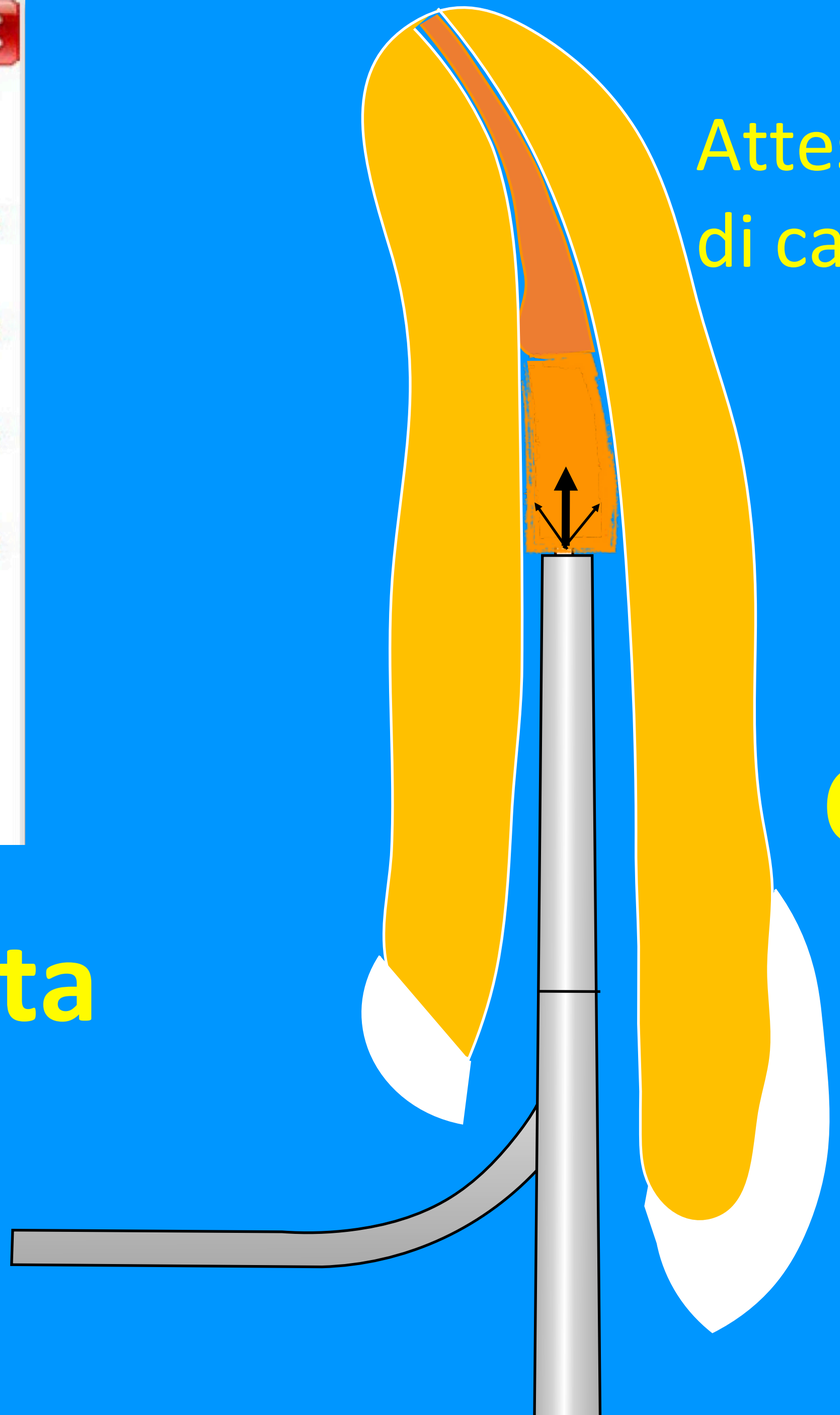
BACKFILL accessori



20 23 25 **Gauge**



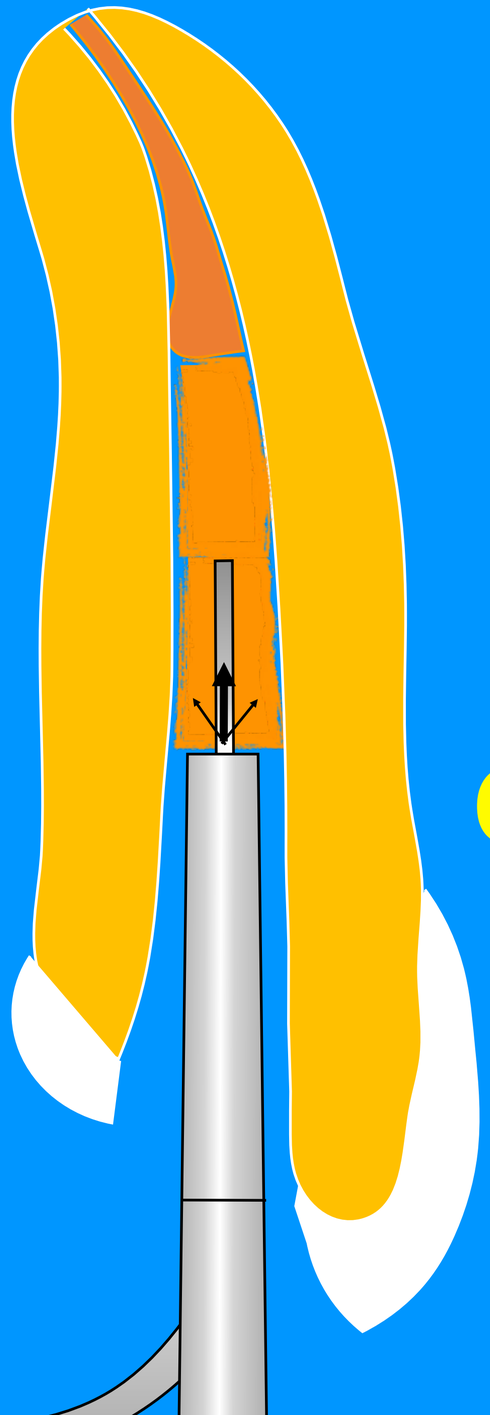
Attesa 5” per ridurre dispersione di calore



Compattazione

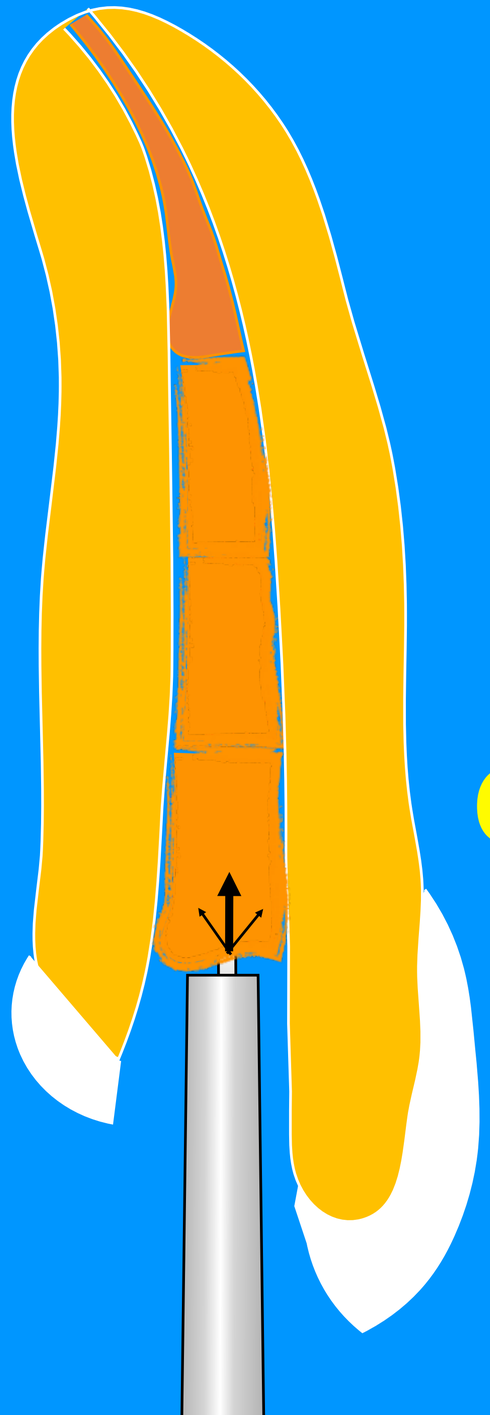
Estrusione gutta

Estrusione gutta

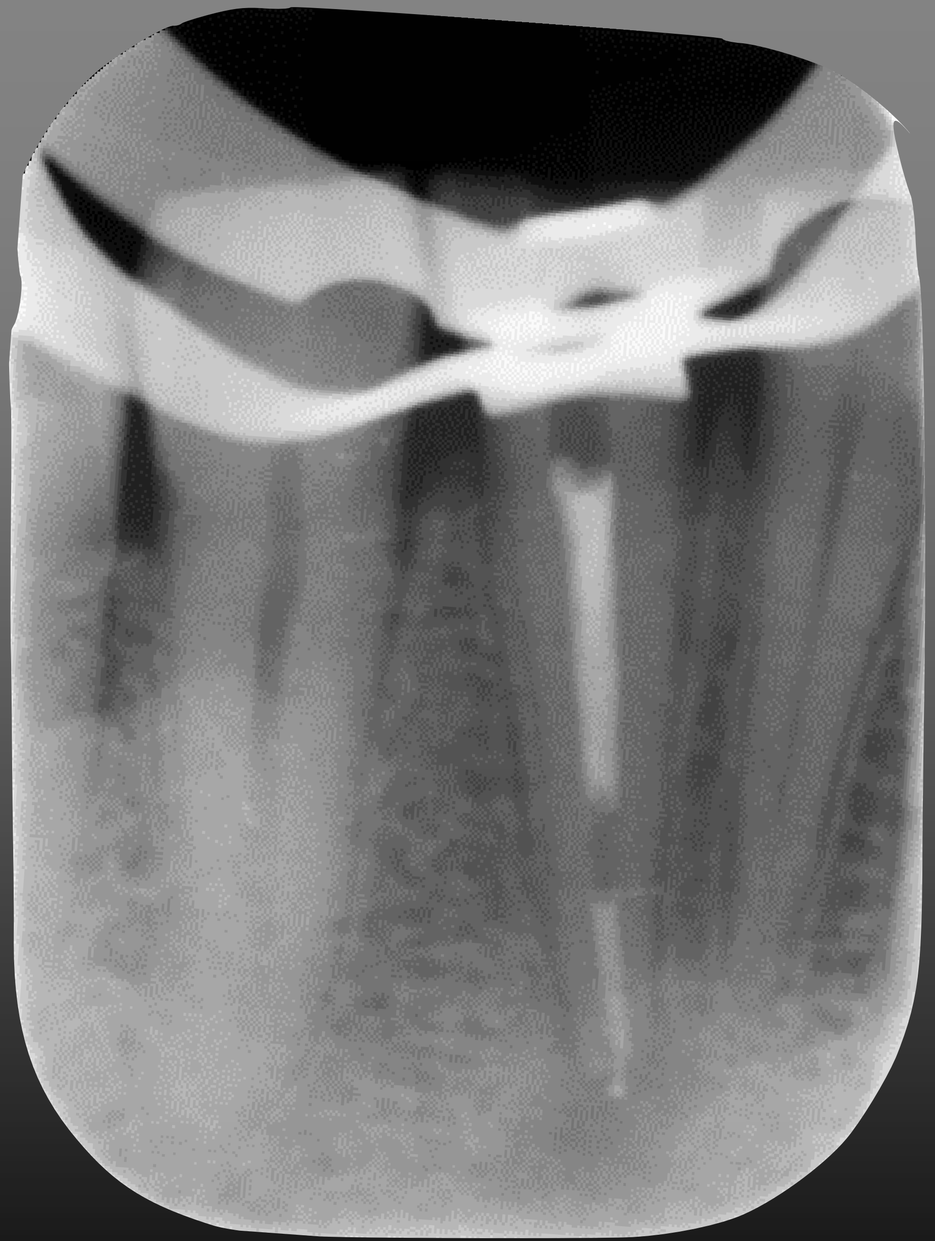


Compattazione

Estrusione gutta



Compattazione



BACKFILL manutenzione necessaria !!!

AGHI DI RICAMBIO (25 Gauge)
ESAGONO E CUSCINETTI
PULIZIA PERIODICA (solvente)

BACKFILL

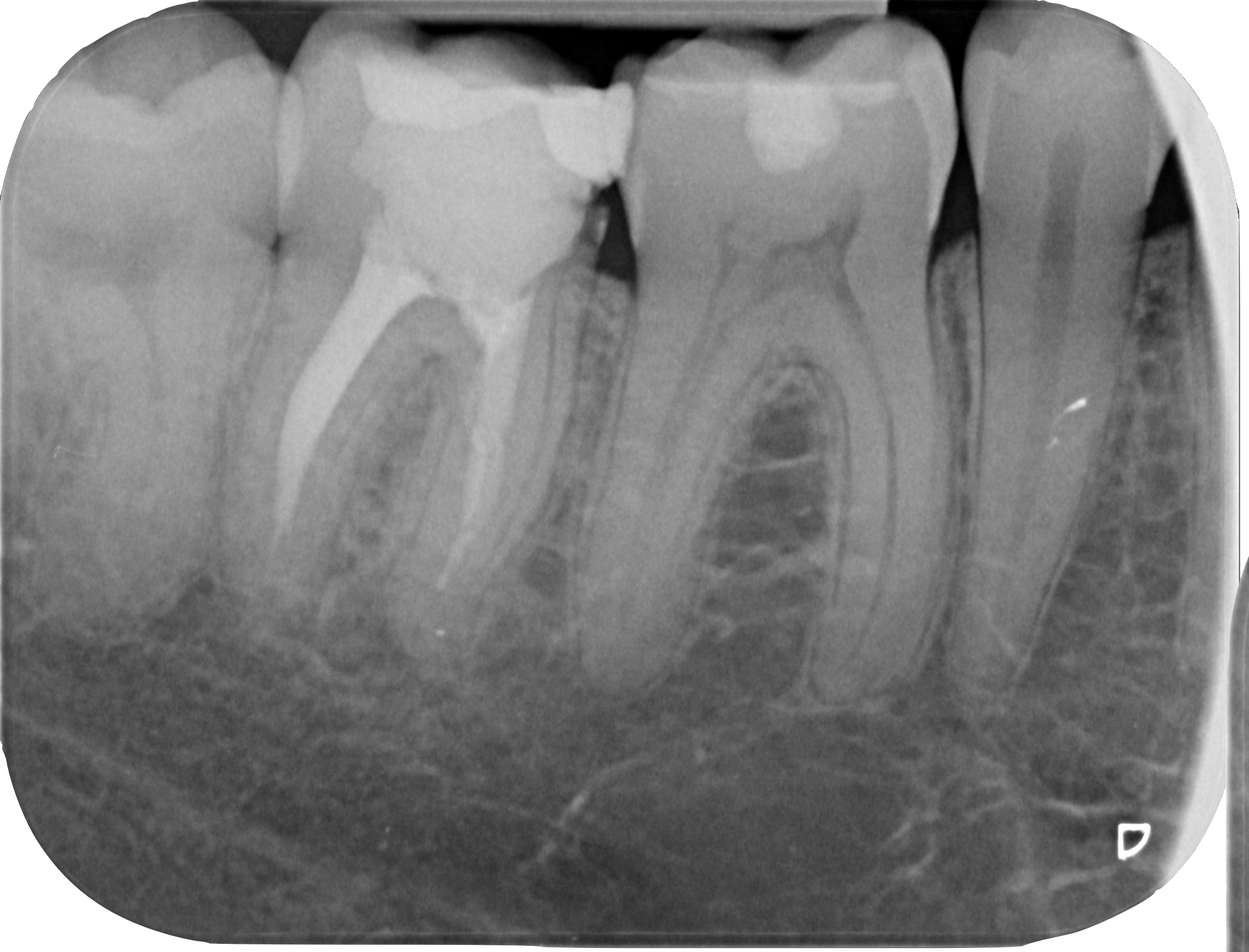
INDICAZIONI

BACK FILL - riempimento a ritroso

CANALI NON NEGOZIABILI

CONELESS TECHNIQUE

Coneless



Coneless