## E | , ,

 MEDIZINTECHN

01 Company Profile

02 Diagnostic
0.6 Periodontology

04 Conservation

0-5 Extraction

06 Oral Surgery

07 Implantology
08
Microsurgery

09
Crown Instruments

10
Maintenance
11
Index



Professor Ferdinand Sauerbruch became famous for a special surgical technique that he had developed. As a surgeon, he had rather clear-cut ideas regarding the characteristics and quality of the surgical instruments he used. It was no simple matter to meet his invariably ultrastringent demands.
The well-known surgeon turned to Zepf, an instrument maker in Seitingen that back then was still a rather young company, to make the surgical instruments he wanted, as well as special prototype arm and leg prostheses. Isidor Zepf, who had founded the company in 1921, and his wife Rosa, who was surely one of the first female surgical instrument makers, were able to make the Berlin professor's products the way he wanted. Their back in those days somewhat unusual collaboration formed the cornerstone for Zepf's successful development effort and demonstrated what is even today Zepf's hallmark: rapidly implementing innovations in the field of medical instruments, working in collaboration with well-known physicians and developing these innovations into exemplary solutions.

The company developed manufacturing methods that would allow both manufacturing larger numbers of units and employing better quality materials. In the 1930's, Zepf increasingly specialized in manufacturing dental instruments, thereby forming the basis for the present company.



The new HELINUT ZEPF $\bullet|O \cap| \longmapsto$ Handle corresponds with the demand of an anatomically adjusted handle for prophylaxis The perfect shape regarding power transmission and sensitivity enables a tactile scaling and cleaning.

The adaptation of the practice-oriented requirements regarding communication, hygienics and flexibility make the HELINUT ZEPF $৮ \mid O \cap \Vdash$ Handle the perfect instrument holder not only for dental diagnosis and prophylaxis, but also for surgery, implantology and microsurgery.

Handle colors helmut Zepf
Њ $\mid \cap \cap \Vdash$ Universal Handles:
26.193.01
26.193.02
26.193.03
26.193.04
26.193.05
26.193.06
26.193.07
26.193.08
26.193.09
26.193.10

These handles are light, manufactured from top-quality plastic with a satin surface finish, available in ten colors. Suited for all threaded tips, such as dental probes, PA-probes, brush holders, mirrors, etc. Desinfectable and sterilizable by using any standard procedure.

See page 03-02 and 03-03 for all $৮ \mid \bigcirc \cap \| \vdash$ Handles available!

Handle colors of HELMUT ZEPF $\biguplus|O \cap| \Vdash$ Universal Handles:


See page 03-02 and 03-03 for the article numbers of all $\measuredangle \mid \cap \cap \Vdash$ Handles available.


## Mouth Mirrors

Due to the standardized thread dimensions, all mirrors available from HELINUT ZEPF are compatible with any handle supplied by HELINUT ZEPF and can of course be desinfected and sterilized by all usual methods. For fitting handles, please refer to pages 02-03, 02-05 and for the fitting ZEPF $\measuredangle \mid \cap \cap \| \longmapsto$ Handle, please refer to page 03-03.

Lipcare Mouth Mirror acc. to Dr. Preusse
The Lipcare Mouth Mirror / Retractor Combination is distinguished by the following features:

- optimal ergonomic working for the user
- patient-friendly, atraumatic, extensive retraction of the cheek


### 24.062.24 QTY 5

- Titanium Mirror, Ø 24 mm, for best visibility
24.062.24. QTY 1
- possibility of preparation with all usual cleaning methods
- sterilizable up to $273^{\circ} \mathrm{F} / 134^{\circ} \mathrm{C}$
plane, QTY 12

24.072.22


## Back Surface

These mirrors have their reflective coatings on their rear surfaces.

## Front Surface

These mirrors have their reflective coating on their front surface, yielding undistorted imaging with no disturbing double images.

Handle colors of the HELIIUT ZEPF
All-purpose Handles:


Light, manufactured from top-quality plastic with a satin surface finish, ergonomically designed, flexible, suitable for ultrasonic cleaning, sterilizable, and compatible with any standard insert with an M2.5 metric thread.


### 37.445.01 QTY 1

Retractor acc. to Hilger
This retractor's ergonomically curved surface allows retracting cheeks and tongue under all kinds of working conditions and is also very comfortable for patients, thanks to its convex rear surface and rounded edges.

## Interchangeable Probe Tips

Probe Tips, interchangeable. Compatible with any standard handle with an M2.5 metric thread.

The two ZEPF Safety Keys to exchange tool ends are illustrated on page 03-05.

For fitting handles, please refer to pages 02-03, 02-05 and for the ZEPF $\sqcup \mid \cap \cap \Vdash$ Handle, please refer to page 03-03.


## ZEPF Retractor and Mouth Mirror by Dentist Beck

The ZEPF $\forall I O \cap \Vdash$ Retractor and Mouth Mirror is available in two sizes, featuring a heart-shaped, ergonomic and highly polished design.
The instrument is available in the sizes 24 and 27 mm .

## It is universally applicable as:

- Mouth mirror, cheek or tongue retractor, mucoperiosteal flap retractor.
- Its innovative heart shape allows ergonomic adaption in all quadrants.
- Due to its reflective surface, the retractor allows an optimal illumination of the surgical site.
- The large contact surfaces make the retractor very patient-friendly.


37.448.10
37.448 .20


ZEPF $\bullet|\cap \cap| \longmapsto$ Retractor and Mouth Mirror, size 1, 24 mm , ZETFF $b \mid O \cap \|$ Universal Handle, PEEK, single-ended, signal orange

## ZEPF Medical Probes

Those HELInUT ZEPF Probes shown in figures 8, 9, $\mathbf{1 7}$ and $\mathbf{2 3}$ are available in octagonal and cylindrical versions, both of which are pleasantly lightweight. Our ergonomically designed octagonal handles are comfortable to hold, and provide precision fingertip control.
Their thin, unbreakable, yet flexible tips manufactured from special alloy steel have an extremely long duration of life.

## Octagonal Handle

Cylindrical Handle
?

\# 8



24.112.05 \# 5, cylindrical handle

## ZEPF Dental Tweezers

All HELINUT ZEPF Dental Tweezers have guide pins that prevent their tips from crossing.

The broader version and their somewhat shorter tips allow exerting pressures in excess of those of common tweezers.


22.011.03 London-College Tweezers, serrated long tips, 15 cm

22.051.03 Meriam Tweezers, serrated tips, 16 cm

## ZEPF Ergonomic Dental Tweezers

Our extra comfortable HELITUT ZEPF Ergonomic Dental Tweezers are pleasant to hold and have been specially designed for use in lengthy, otherwise tiring, applications.

The broader version and their somewhat shorter tips allow exerting pressures in excess of those of common tweezers.


### 22.025.03

grooved tips, 15 cm

22.025.03D
 diamond-tipped, 15 cm

22.024.04 London College Cotton \& Dressing Pliers, modif., 15 cm , approx. $20^{\circ}$

reddot design award winner 2010



## ZEPF Periodontal Probes

The perio-diagnostics should be done regularly to have a permanent record to make sure that gingival and especially periodontal inflammations are diagnosed early.
The benefit for the patient is that either the periodontal health can be confirmed or infection is detected early. Like that suitable dental actions can take place to cure the infection or to stop the progression. With the new Contrast PA Probe Inserts an even easier visualisation is guaranteed during the examination.
The band ( 3 mm ) of the probe stays visible at the deepest point of the sulcus of all sextants teeth. Calculus or defective restoration margins cannot be detected, the tissue of the gingival is healthy, no bleeding after (careful) probing = no treatment necessary, further preventive care. Deeper measurements (> 3 mm ) indicate a gingivitis. According to the depth further evaluation and documentation must take place according to the rules of the PSI.

See page 03-06 for article numbers of the different ZEPF Contrast Probes.

reddot design award winner 2010
$\measuredangle|O \cap| \vdash$ Universal Handle Universal Handle made of PEEK high-tech plastic material - guarantees an ideal power transmission with formerly unknown sensitivity. The handle is available in 10 different, fresh basic colors.
$\biguplus|\cap \cap| \vdash$ Universal Handle
QUICKFIX, double-ended
yellow
signal orange
red-purple
signal purple
lightred-magenta
turquoise-brightblue
cobalt-blue
yellow green
grey
black


$৮|O \cap| \longmapsto$ ID Plug for an individual color coding of the handle series.
Material: PEEK high-tech plastic.

Optional, the handle is available with a different colored ID Plug.
When placing an order of $৮ \mid \cap \cap \Vdash$
Handles please indicate the desired
ID-Plug separately according to the listing below.

ゅO円円
Universal Handle
single－ended
QUICKFIX for all com－ mon curette and scaler tips including 1 end cap


もO円ル
Universal Handle single－ended for exchangeable inserts M2．5，for all common probes and mouth mirrors including 1 end cap and 1 reduction insert


Comparison of the handles
with exchangeable working tips M4×0.5 mm

26.180.13 ZEPF-Line, stainless steel, 100 mm
26.181.03 ZEPF-Line, titanium, 100 mm

26.181 .01

Capstan, titanium, 100 mm
26.193.10

ZEPF $\measuredangle I O \cap \|$ Universal Handle, PEEK, 105 mm

ZEPF Safety Keys
with and without side wings

The Safety Key holds the tips firmly in place. The side wings (only $\mathbf{2 4 . 7 5 5 . 0 2 ) ~ p r o t e c t ~ f r o m ~ p o t e n t i a l ~ i n j u r i e s ~}$ due to the extremly sharp cutting edges of the tips.


## Contrast PA Probe Inserts

The new ZEPF Contrast PA Probes are made of plastic material and dispose of a flexible working tip which adapts optimally to the anatomy of the pocket depth when measuring.
Colorstable, black markings on the white basic material guarantee a very good contrast for reading.
The sterilizable, exchangeable tips are available in different common graduations.
They are suited to determine the parodontal status and especially to be used on implants. Scratching of implant surfaces is avoided with these probes.

The tips are reusable until they bend, the color fades or the graduation is not readable any more.

### 24.451 .00

 \# 1graduation $3 / 6 / 8 / 11 \mathrm{~mm}$ M4 x 0.5 mm , QTY 12 pieces

### 24.451 .01

 \# CPG 12
graduation $3 / 6 / 9 / 12 \mathrm{~mm}$
 M $4 \times 0.5 \mathrm{~mm}$, QTY 12 pieces

### 24.451 .02

\# CPNG 22

graduation 2/4/6/8/10/12 mm M $4 \times 0.5 \mathrm{~mm}$, QTY 12 pieces


### 24.451.03 \# PCPG 11.5


graduation $3.5 / 5.5 / 8.5 / 11.5 \mathrm{~mm}$ $\mathrm{M} 4 \times 0.5 \mathrm{~mm}$, QTY 12 pieces

### 24.451.06 \# CNC


graduation 1-15 in mm steps,
North Carolina
$\mathrm{M} 4 \times 0.5 \mathrm{~mm}$, QTY 12 pieces



### 24.451.02

\# CPNG 22
Periodontal Probe exchangeable graduation 2/4/6/8/10/12 mm M4 x 0.5 mm , QTY 12 pieces
26.193.15
$৮ \mid \cap \cap \Vdash$ Universal Handle single-ended
QUICKFIX, lightred-magenta, incl. 1 end cap
The handle is available in 10 different colors.
See page 03-02 and 03-03 for the article numbers of all $\biguplus|\bigcirc \cap| \longmapsto$ Handles available.

24.455.06 CNC North Carolina

Periodontal Probe exchangeable graduation 1-15 in mm steps $\mathrm{M} 4 \times 0.5 \mathrm{~mm}$

### 26.193.10 $\quad \mid \cap \cap \Vdash$ Universal Handle single-ended

QUICKFIX, black, incl. 1 end cap
The handle is available in 10 different colors.
See page 03-02 and 03-03 for the article numbers of all $৮|\bigcirc \cap| \vdash$ Handles available.


### 24.453.15 Furcation Probe by Nabers

with graduation, double-ended, rolled, 5.5 mm

## Universal Handle Endo-Control

acc. to Dr. Carsten Franke

With the HELIMUT ZEPF Endo-Control Mouth Mirror Handle it is possible to simply determine the necessary working length due to the laser-marked measuring scale. The measuring precision can be adjusted to 0.5 mm . The sandblasted surface reduces reflections on the Endo-Control instrument surface.


Application ZEPF Endo-Control

24.454.03 CPG 11.5 (WHO)

Periodontal Probe exchangeable, M2.5 graduation 3.5/5.5 /8.5/11.5 mm
26.180.07 Universal Handle

ZEPF Design, single-ended, M 2.5 with endo calibration

## Periodontal Probes

All HELINUT ZEPF Periodontal Probes are high-speed machined. Their tips are thus very fine and dimensionally accurate to within very high tolerances. All our PA-Probes have markings that withstand ultrasonic cleaning.
Our WHO Periodontal Probes have spherical tips.

## They are particularly ideal for:

- determining papillary
- bleeding indices, and their "stops" (the balls on their tips) prevent injuries when measuring the depths of pockets, i.e., they are more atraumatic than other types of PA Probes.


### 24.453.03 CP 11.5 (WHO)

graduation 3.5/5.5 /8.5/11.5 mm

### 24.453.12 CPG 12

graduation 3/6/9/12 mm

graduation 1-15 mm, in mm steps

## Periodontal Screening Index, PSI

For using the periodontal screening index, it is necessary to use the WHO probe. The steel ball at the distal end of the probe features a diameter of 0.5 mm .

The steel ball avoids not only injuries but allows to discover rough surfaces and edges of dental fillings. The first measurement area of the probe is a black 2 mm band, which shows the depth from 3.5 mm up to 5.5 mm . For further information, please check the relevant description of the periodontal screening index (PSI).

### 24.454.01 CPG 12

graduation 3/6/9/12 mm
The ZEPF $\sqcup|\cap \cap| \longmapsto$ Handle is available in 10 different colors.
See page 03-02 and 03-03 for the article numbers of all $\biguplus|\cap \cap| \longmapsto$ Handles available.
graduation 2/4/6/8/10/12 mm

### 24.454.03 CPG 11.5

graduation 3.5/5.5/8.5/11.5 mm

### 24.454.05

graduation 1/2/3/5/7/8/9/10 mm

### 24.454.06

graduation 1-15 in mm steps, North Carolina

### 24.454.06TI CNC

graduation 1-15 in mm steps, North Carolina, titanium


## ZEPF ৮IO $\cap \longmapsto$ Prophylaxis-Set 'Gracey'

The four most common Gracey Curettes and one Universal Scaler are all you need for the prophylaxis in all quadrants.
All inserts are exchangeable. QUICKFIX

### 24.990.50

ZEPF $\bullet \mid O \cap \|$
Prophylaxis Set 'Gracey',
consisting of Gracey $5 / 6,7 / 8,11 / 12,13 / 14$,
Scaler 204S and 1/3 Washtray

The set 'Gracey'
consists of the following instruments:


GRA 5/6 Special Curette for front teeth/premolars,
24.751.106G more sharply angled, red-purple

24.751.111G

GRA 11/12 Special Curette for use on all mesial surfaces of
24.751.112G premolars/molars. Skewed to allow optimal placement, signal purple



## ZEPF b|O $\cap \longmapsto$ Prophylaxis Set 'M5 Deep Scaling'

HELInUT ZEPF M5 Curettes have a 1 st shaft which is about 3 mm longer. The sharpened instrument tip is shortened as to allow a special subgingival curettage for tight and deep pockets as well as narrow root surfaces. All inserts are exchangeable. QUICKFIX

### 24.990.55

## ZEPF $\bullet \mid O \cap \|$

Prophylaxis Set 'M5 Deep Scaling', consisting of Gracey $1 / 2 \mathrm{M} 5$, 7/8 M5, 11/12 M5, 13/14 M5, Scaler 204S and $1 / 3$ Washtray

The set 'M5 Deep Scaling' consists of following instruments:

24.201.01GM5

GRA 1/2 M5 Special Curette for front teeth, slightly angled, yellow

24.751.101GM5
24.751.102GM5
 more sharply angled, lightred-magenta

24.204.11GM5

24.751.111GM5

GRA 11/12 M5 M5 Special Curette for use on all mesial surfaces
24.751.112GM5 of premolars/molars. Skewed to allow optimal placement, signal purple


| $8-4$ | $4-8$ |
| ---: | ---: |
| $8-4$ | $4-8$ |

24.207.13GM5

GRA 13/14 M5 Special Curette for use on all distal surfaces
24.751.114GM5 of premolars/molars. Skewed to allow optimal placement, cobalt blue



## ZEPF bIO円ß Prophylaxis Set 'Universal'

Unlike Gracey Curettes, HELInUT ZEPF Universal Curettes have two working surfaces or cutting edges. The Universal Set allows a quick and efficient prophylaxis treatment.

### 24.990.60

## ZEPF $ا \bigcirc \cap \Vdash$

Prophylaxis Set 'Universal',
consisting of Langer 1/2, 3/4, 5/6, M23
Scaler 204S and 1/3 Washtray.
QUICKFIX

The 'Universal' Set
consists of the following instruments:

24.751.101L

Langer, \# L 1/2,
24.751.102L

Universal Curette for use on lower molars and premolars, black

24.208.04S


Sickle Scaler, \# 204 S, for removing dental plaque from interdental spaces in the molar area, yellow-green


## ZEPF $\bullet \mid O \cap \|$ Prophylaxis Set 'Bionik'

ZEPF $\bullet \mid O \cap \Vdash$
Prophylaxis Set 'Bionik', consisting of Gracey 5/6, 7/8, 11/12, 13/14, Hygienist 6/7, Scaler 204S, PA Probe CPG 12 with $৮ \mid \bigcirc \cap \|$ Universal Handle and $1 / 2$ Washtray. QUICKFIX

The 'Bionik' Set consists of the following instruments:

24.204.11G


GRA 11/12 Special Curette for use on all mesial surfaces of
24.751.112G premolars/molars. Skewed to allow optimal placement, signal purple

24.207.13G
24.751.111G


GRA 13/14 Special Curette for use on all distal surfaces of premolars/molars. Skewed to allow optimal placement, cobalt blue

24.751.113G

reddot design award winner 2010

## ZEPF $\bullet|O \cap| \longmapsto$ Gracey Special Curettes

HELINUT ZEPF Gracey Curettes are special Curettes that have just a single working surface or cutting edge, and are thus suitable for removing concrementations or dental plaque only.
The ZEPF $\sqcup \mid \bigcirc \cap \| \longmapsto$ Handles are available in 10 different colors.
See page 03-02 and 03-03 for article numbers of the different color and handle versions. QUICKFIX

$$
\begin{array}{l|l|}
\hline 3-1 & 1-3 \\
\hline 3-1 & 1-3
\end{array}
$$


24.201.01G
cs
24.536.01G

| $5-1$ | $1-5$ |
| :--- | :--- |
| $5-1$ | $1-5$ |



| $5-\left.1\right\|_{1-5} ^{1-5}$ |
| :---: |
| $5-\left.1\right\|_{1-5}$ |


| $8.4 / 4.8$ |
| :--- |
| 8.44 .8 |


24.203.05G
cs
24.536.05G

GRA $7 / 8$ Special Curette for front teeth/premolars,
buccal//lingual, more sharply angled, red-purple
24.205.07G
cs
24.537.07G
24.202.03G
cs
24.536.03G

$$
\begin{array}{c|c}
8-4 & 4-8 \\
\hline 8-4 & 4-8
\end{array}
$$

GRA 9/10 Special Curette for premolars/molars,

Color Coding ZEPF $\quad \mid O \cap \Vdash$ Gracey Special Curettes


$$
\begin{array}{r|l}
8-4 & 4-8 \\
\hline 8-4 & 4-8
\end{array}
$$

$$
\begin{array}{c|c}
8-4 & 4-8 \\
\hline 8-4 & 4-8
\end{array}
$$



### 24.207.13G

cs
24.534.13G

## Premolars / Molars



$$
\begin{gathered}
8-4 \\
\hline 8.4 \\
\hline 8.8 \\
\hline
\end{gathered}
$$

 premolars/molars. Skewed to allow optimal placement, cobalt blue


premolars/molars. Skewed like 13/14, opposite working surface, signal purple


GRA 17/18 Special Curette for use on premolars/molars. Triple-skewed for optimal access

to distal surfaces or deep pockets. Provides good access, even when mouth openings are restricted, cobalt blue

reddot design award winner 2010

## ZEPF $\mapsto \cap \cap \longmapsto$ Universal Curettes

Unlike Gracey Curettes, HELInUT ZEPF Universal Curettes have two working surfaces or cutting edges, and thus allow using the same instrument on teeth's mesial and distal surfaces. All inserts are exchangeable.
The ZEPF $৮ \mid \bigcirc \cap \| \longmapsto$ Handles are available in 10 different colors.
See page 03-02 and 03-03 for the article numbers of all $\sqcup \mid \bigcirc \cap \| \longmapsto$ Handles available.
QUICKFIX



| $8-1$ | $1-8$ |
| :---: | :---: |
| $8-1$ | $1-8$ |


24.207.02C
cs
24.534.02C

51.113C
24.751.113C Columbia University, \# CU 13/14,
Universal Curette suitable for all types of use, cobalt blue
24.207.13C
cs
24.534.13C
24.207.04C
cs 0
24.534.04C

24.210.01L
cs
24.538.01L

24.208.03L
cs 0
24.532.03L


| $8-4$ | $4-8$ |
| :---: | :---: |
| $8-4$ | $4-8$ |



Langer, \# L 5/6,
Universal Curette for use on upper and lower front teeth, yellow

supragingival dental plaque. Slim version, cobalt blue

reddot design award winner 2010

## ZEPF $\bullet \mid O \cap \|$ Universal Titanium Curettes $\underset{\sim}{u}$

Universal Curettes with exchangeable, very delicate titanium inserts from
HELINUT ZEPF, to remove the accumulated plaque film on the implant necks.
The titanium inserts are exchangeable.
The ZEPF $\sqcup \mid \bigcirc \cap \| \longmapsto$ Handles are available in 10 different colors.
See page 03-02 and 03-03 for article numbers of the different color and handle versions. QUICKFIX


| $8-4$ | $4-8$ |
| ---: | :--- |
| $8-4$ | $4-8$ |


24.207.04C-TI


## ZEPF $\bullet \cap \cap \|$ M5 Titanium Curettes $2 \hat{K i}^{3}$

HELINUT ZEPF M5 Curettes have a 1st shaft which is about 3 mm longer.
To remove the accumulated plaque film on the implant necks.
The titanium inserts are exchangeable.
The ZEPF $\sqcup \mid \bigcirc \cap \| \longmapsto$ Handles are available in 10 different colors.
See page 03-02 and 03-03 for article numbers of the different color and handle versions. QUICKFIX

IL-SWפZOL•LSL'も






| $8-4$ | $4-8$ |
| :--- | :--- |
| $8-4$ | $4-8$ |



24.751.112GM5-TI

## surfaces of premolars/molars. Skewed to allow optimal placement, signal purple

GRA 13/14 M5 Special Curette, for use on all distal
surfaces of premolars/molars. Skewed to allow optimal placement, cobalt blue
24.205.07GM5-TI
24.204.11GM5-TI
24.207.13GM5-TI
reddot design award winner 2010

## ZEPF |O $\mid \longmapsto$ Scaler

HELINUT ZEPF Sickle Scalers have ultrafine tips for supragingival use. Unlike Jacquette scalers, they have curved facial surfaces. With blunt tips, for general use. All inserts are exchangeable.
The ZEPF $\sqcup|\bigcirc \cap| \longmapsto$ Handles are available in 10 different colors.
See page 03-02 and 03-03 for article numbers of the different color and handle versions. QUICKFIX

24.208.30S
cs
24.532.30S

| $5-1$ | $1-5$ |
| :--- | :--- |
| $5-1$ | $1-5$ |


| $5-1$ | $1-5$ |
| :---: | :---: |
| $5-1$ | $1-5$ |

?
24.751 .107 H

Hygienist, \# H 6/7, Sickle Scaler with opposed tips,
for front teeth and premolars, yellow-green
24.208.06H
cs
24.532.06H

| $8-1$ | $1-8$ |
| :--- | :--- |
| $8-1$ | $1-8$ |



Hygienist, \# H 6/7, Sickle Scaler with opposed tips, very fine version,
for front teeth and premolars, yellow-green

or plastic, cement, or adhesive residues from all interdental spaces, yellow-green

| $8-1$ | $1-8$ |
| :---: | :---: |
| $8-1$ | $1-8$ |

## Lin <br> Sickle Scaler, \# U 135, with small facial surfaces matched to tooth contours for use in all interdental spaces, yellow-green

24.208.02CI
cs
24.532.02CI
24.208.35U
cs
with blunt tips for general use, grey


Special Curettes




| $8-4$ | $4-8$ |
| ---: | :--- |
| $8-4$ | $4-8$ |


| $8-4$ | $4-8$ |
| ---: | :--- |
| $8-4$ | $4-8$ |


| $8-4$ | $4-8$ |
| :---: | :---: |
| $8-4$ | $4-8$ |


| $8-4$ | $4-8$ |
| ---: | :--- |
| $8-4$ | $4-8$ |



$$
\begin{array}{c|c}
- & - \\
\hline 8-4 & 4-8
\end{array}
$$


\# L 3/4
Langer Curette, for use on upper molars and premolars
\# L 5/6
Langer Curette, for use on upper and lower front teeth

Hirschfeld
Periodontic Files
For removing very hard dental plaque, concrementations, and deposits on root surfaces and for smoothing.



## Periodontal Files




Original Arkansas Sharpening Stones

### 24.914.10

$100 \times 10 / 1 \mathrm{~mm}$, conical

24.926.10

## Magnetic Sticks

Once the first shaft is fixed in a right angle (use a vise with "Rounded Swing Head" for this purpose) the magnet stick is placed onto the facial surface. This will be carried out automatically. In so doing, you achieve the sharpening angle simply and accurately. As such you can now sharpen the curettes with precision. Best results can be obtained with Natural Stone (Original Arkansas) and wetting slightly with Sharpening Oil 24.950.00.


## Original Arkansas Stone

The diameter of the Original Arkansas Stone is designed to fit the contour of the working ends of our luxation elevator 17.006.01 to 04 and those of our ZEPF Xtool-Elevator 17.007 .01 to 07.

So do sharpen your luxation elevators regularly! The best results can be obtained in combination with our Sharpening Oil 24.950.00.

### 24.923.10

$110 \times 10 \mathrm{~mm}$, round

## ZEPF Sharpening Stones

Just sharp instruments! Oxide ceramic sharpening stone with extraordinary hardness. Highest resistance to wear and tear and to deformation, to achieve an excellent surface quality when grinding. The low wear properties provide attractive economic advantages in comparison to customary Arkansas sharpening stones.


### 24.914.30

$100 \times 30 \times 7 / 2 \mathrm{~mm}$, wedge shape, medium


### 24.914.40

$100 \times 10 \mathrm{~mm}$, round, medium


### 24.914.35

$125 \times 25 \times 10 \mathrm{~mm}$, flat, medium
24.914.45
$100 \times 5 \times 2 \mathrm{~mm}$, conical, fine
'India' Sharpening Stone


24.725.05
24.751.113C

Columbia, Universal Curette 13/14

24.725.07

24.725.20

## ,

24.751.104


## Anatomical Plate Forceps acc. to Dr. Dirk Brozio



### 22.107.21

Anatomical Plate Forceps acc. to Dr. Dirk Brozio
The planar contact generated by compressing the tweezers, ensures a safe support in each grip angle. The Plate Forceps are featuring a much higher safety when gripping, holding and positioning fine and delicate objects. This problem has been solved by the patented design of the Plate Forceps as their working tips have circular surfaces with additional serrations inside. Easy and relaxed handling due to low holding forces to allow a safe and fast treatment.

### 19.561 .13

## Nerve-Canal Pliers

Nerve-Canal Pliers for grasping fractured root-canal instruments or silver pins. The very fine, concave cutout on the working tip allows to remove even deep-lying fractured files.


24.074.13 $\varnothing 3.0 \mathrm{~mm}$
24.074.15 Ø 5.0 mm


### 24.074.16

 $7.0 \times 2.0 \mathrm{~mm}$

## Micro-Mirrors

Micro-Mirror with rhodium front surface coating, for a distortion-free mirror image, without double reflection.
The Micro-Mirrors are excellent aids in microsurgery and endodontics. Suitable for usage with enlarging glasses or OP-Microscopes.

All mirrors fit into commercially available mouth mirror handles with a diameter of M 2.5 mm (see page 02-02).

Plugger for the vertical condensation technique in endodontics

## 

19.509.10 Endo Plugger $3 / 5$, yellow color marking $=3^{\circ}$, red color marking $=5^{\circ}$, length of the tips $28 \mathrm{~mm}, \varnothing 0.3 \mathrm{~mm}$
tratrmothe:
19.509.20

Endo Plugger 7/10, blue color marking $=7^{\circ}$, grey color marking $=10^{\circ}$,
length of the tips $28 \mathrm{~mm}, \varnothing 0.3 \mathrm{~mm}$

## Peet Splinter Forceps

The Peet Splinter Forceps is a clamp with perfect grip due to diamond coating. The universal S-curve, as known from La Grange Scissors, makes it particularly flexible in usage. The Peet Splinter Forceps 22.523.90D has a stronger curve $\left(90^{\circ}\right)$, which increases accessibility into the molar areas.


## Root Canal Instruments

All figures are very flexible.

19.521.00 Root Canal Explorer DG 16 double-ended, round handle

Root Canal Spreader
tip 23 mm

19.513.03 Root Canal Spreader $\varnothing 0.3 \mathrm{~mm}$

19.513.04

Root Canal Spreader $\varnothing 0.4 \mathrm{~mm}$
19.513.05 Root Canal Spreader $\varnothing 0.5 \mathrm{~mm}$

## Root Canal Plugger

$40^{\circ}$, graduation 5/10/15/20 mm
19.512.13 Luks Root Canal Plugger $\varnothing 0.3 \mathrm{~mm}$

19.512.14 Luks Root Canal Plugger $\varnothing 0.4 \mathrm{~mm}$

19.512.19 Luks Root Canal Plugger $\varnothing 0.9 \mathrm{~mm}$

## Root Canal Plugger

$65^{\circ}$, graduation 5/10/15/20 mm


ZEPF blO Composite Sets

All Composite Tips feature the special ZEPF Onyx coating.
The reflection-free ZEPF Onyx coating is extra smooth, harder and more scratch-resistant than conventionally coated composite instruments. The popular handles in the ZEPF $৮ \mid O \cap \| \longmapsto$ design are made of lightweight, highquality plastic material.

The ZEPF $\biguplus I O \cap \Vdash$ Handles are available in 10 different colors. See page 03-02 and 03-03 for article numbers of the different color and handle versions.
reddot design award winner 2010

## The ZEPF b|Oค|๒ Composite Sets

26.120.01Ti Small Composite Set
26.120.00Ti Big Composite Set
19.202 .00

CompoSMOOTH Set
The sets contain the accordingly marked Composite Instruments $\mathbf{X} X$ :
26.120.11Ti

X $X$
26.120.12Ti

X D)
26.120.21Ti
X
X

\# 2, Spatula 2.4 mm / Burnisher $\varnothing 1.9 \mathrm{~mm}$ (pear-shaped)
24.751.325Ti combination, large

## $\square$

$\sqrt{5}$
X


### 26.120.10Ti

(

CompoSMOOTH
THE SURFACE IS THE KEY...


### 19.202.00

CompoSMOOTH Complete Set in the box incl. waschtry $1 / 2$, with brush holder, $3 \times 12$ Soft Application Inserts und 4 composite instruments


The new CompoSMOOTH, a special silicone brush, allows an effortless adaptation and modelling of the composite surface before polymerization. Even "sticky" composites can be adapted in an optimal way. The perfect surface morphology is created almost automatically by slight pressure. The tooth shape is modeled in a way that reduces the subsequent polishing work to a minimum... and the result - optimal!



Pear-shaped Plugger

$\varnothing 1.5$


\footnotetext{


26.428.01
plastic
26.428.02
plastic
26.428.03
metal

26.428.04

Ball-shaped Plugger
26.200.01 \# 1


Spatel


## Condenser

HELINUT ZEPF Filling Instruments are well-balanced, i.e., the offsets of their blades are symmetric about the longitudinal axes of their handle, which keeps their blades from twisting under load.


Heidemann Spatula


Cement Spatula
26.130.02
 6.0 mm

## Excavators

Excavators in different angles to remove softened dentine during cavity preparation.




## Anatomic Ehricke for Upper Jaw

The choice of the impression tray and the impression technique will influence the final result significantly.
If polyethers are used, we are recommending non-perforated impression trays.


Edentulous (UO)


| 28.634.01 | 28.634.02 | 28.634.03 |
| :--- | :--- | :--- |
| $a=65 \mathrm{~mm}$, | $\mathrm{a}=68 \mathrm{~mm}$, | $\mathrm{a}=72 \mathrm{~mm}$, |
| $\mathrm{b}=56 \mathrm{~mm}$, | $\mathrm{b}=61 \mathrm{~mm}$, | $\mathrm{b}=65 \mathrm{~mm}$, |
| SUP U1 | SUP U2 | SUP U3 |


| Partials, depressed centers (PO) |  |  |  |
| :---: | :---: | :---: | :---: |
|  | 28.632.01 | 28.632.02 | 28.632.03 |
|  | $\begin{aligned} & a=62 \mathrm{~mm}, \\ & b=51 \mathrm{~mm}, \\ & \text { SUPP1 } \end{aligned}$ | $\begin{aligned} & a=72 \mathrm{~mm}, \\ & b=54 \mathrm{~mm}, \\ & \text { SUPP2 } \end{aligned}$ | $\begin{aligned} & a=73 \mathrm{~mm}, \\ & b=60 \mathrm{~mm}, \\ & \text { SUP P3 } \end{aligned}$ |
| Functional impressions (FO) |  |  |  |
|  | 28.633.01 | 28.633.02 | 28.633.03 |
|  | $\begin{aligned} & a=61 \mathrm{~mm}, \\ & b=50 \mathrm{~mm}, \\ & \text { SUPF1 } \end{aligned}$ | $\begin{aligned} & a=67 \mathrm{~mm}, \\ & b=55 \mathrm{~mm}, \\ & \text { SUP F2 } \end{aligned}$ | $\begin{aligned} & a=77 \mathrm{~mm}, \\ & b=63 \mathrm{~mm}, \\ & \text { SUP F3 } \end{aligned}$ |



## Anatomic Ehricke for Lower Jaw

The choice of the impression tray and the impression technique will influence the final result significantly.
If polyethers are used, we are recommending non-perforated impression trays.

Regulars (BU)


### 28.636.00

$\mathrm{a}=61 \mathrm{~mm}$,
$\mathrm{b}=44 \mathrm{~mm}$, INFB0

### 28.636.03

$\mathrm{a}=82 \mathrm{~mm}$,
$\mathrm{b}=58 \mathrm{~mm}$, INFB3
28.636.01
$a=72 \mathrm{~mm}$,
$\mathrm{b}=51 \mathrm{~mm}$, INFB1
28.636.04
$\mathrm{a}=83 \mathrm{~mm}$,
$\mathrm{b}=65 \mathrm{~mm}$, INFB4
28.636.02
$a=78 \mathrm{~mm}$,
$\mathrm{b}=54 \mathrm{~mm}$, INFB2

Edentulous (UU)


### 28.638.01

$\mathrm{a}=71 \mathrm{~mm}$,
$\mathrm{b}=58 \mathrm{~mm}$, INFU1
28.638.02
$\mathrm{a}=70 \mathrm{~mm}$,
$\mathrm{b}=58 \mathrm{~mm}$, INFU2
28.638.03
$a=74 \mathrm{~mm}$, $\mathrm{b}=59 \mathrm{~mm}$, INF U3

Partials, depressed centers (PU)

### 28.637.01

$\mathrm{a}=64 \mathrm{~mm}$,
$\mathrm{b}=53 \mathrm{~mm}$,
INFP1

### 28.637.02

$\mathrm{a}=71 \mathrm{~mm}$,
$\mathrm{b}=59 \mathrm{~mm}$, INFP2
28.637.03
$a=80 \mathrm{~mm}$,
$b=59 \mathrm{~mm}$ INFP3

Modeling Knife for Impressions
Silicone Knife with cutting loop.


## Perforated Anatomic Ehricke for Upper Jaw

A-Silicone putties can be applied in perforated impression trays, as the perforation intensifies the rotation of the material in the impression tray.
Regulars (BO)

Edentulous (UO)


| 28.604 .01 | $\mathbf{2 8 . 6 0 4 . 0 2}$ | 28.604 .03 |
| :--- | :--- | :--- |
| $a=65 \mathrm{~mm}$, | $a=68 \mathrm{~mm}$, | $a=72 \mathrm{~mm}$, |
| $b=56 \mathrm{~mm}$, | $b=61 \mathrm{~mm}$, | $b=65 \mathrm{~mm}$, |
| SUP U1 | SUP U2 | SUP U3 |




## Perforated Anatomic Ehricke for Lower Jaw

A-Silicone putties can be applied in perforated impression trays, as the perforation intensifies the rotation of the material in the impression tray.

Regulars (BU)


### 28.606.00

$\mathrm{a}=61 \mathrm{~mm}$,
b $=44 \mathrm{~mm}$,
INF B0

### 28.606.03

$a=82 \mathrm{~mm}$,
$\mathrm{b}=58 \mathrm{~mm}$,
INFB3
28.606.01
$\mathrm{a}=72 \mathrm{~mm}$,
$\mathrm{b}=51 \mathrm{~mm}$, INFB1

### 28.606.04

$\mathrm{a}=83 \mathrm{~mm}$,
$\mathrm{b}=65 \mathrm{~mm}$,
INFB4
28.606.02
$a=78 \mathrm{~mm}$,
b = 54 mm ,
NFB2

Edentulous (UU)


### 28.608.01

$a=71 \mathrm{~mm}$,
$\mathrm{b}=58 \mathrm{~mm}$, INFU1
28.608.02
$a=70 \mathrm{~mm}$,
$\mathrm{b}=58 \mathrm{~mm}$, INF U2
28.608.03
$a=74 \mathrm{~mm}$,
$\mathrm{b}=59 \mathrm{~mm}$, INF U3

Partials, depressed centers (PU)

### 28.607 .01

$a=64 \mathrm{~mm}$,
$\mathrm{b}=53 \mathrm{~mm}$,
INFP1
28.607.02
$a=71 \mathrm{~mm}$,
b $=59 \mathrm{~mm}$, INFP2
28.607.03
$a=80 \mathrm{~mm}$,
$\mathrm{b}=59 \mathrm{~mm}$, INFP3

## Impression Trays for Implantology acc. to Helfgen

- simple handling
- open and closed implant impression
- putty-wash impression possible
- precision enhancement
- also universally usable in case of special indications
- only one impression session required
- sterilizable
- different sizes
- time and cost efficient



### 28.640.03

SUP 3

### 28.640.04

SUP 4

Functionality of the Impression Trays for Implantology acc. to Helfgen

28.645 .01

INF 1

### 28.645.02

INF 2
28.645.03

INF3
28.645.04

INF 4

5. The tray cover is removed and the impressed screw channel is extended with the perforator.

6. For undisturbed repositioning, the perforated channel may be extended further using a super-coarse mill.

7. After the impression areas have been surrounded by ligth-body material, the repositioned impression may be filled additionally via the perforations of the cap channels, if required.

8. Once the material has cured, the positioning screws are loosened, and the finished impression can be removed.

Impression Tray for Partial Impressions

28.661.01
\# L1, A = 46 mm
28.661.02
\# L2, A = 50 mm
28.661.03
\# L3, A = 55 mm

28.662.01
\# R1, A = 46 mm
28.662.02
\# R2, $A=50 \mathrm{~mm}$
28.662.03
\# R3, A = 55 mm


Stolley with screw

$$
28.671 .00
$$

perforated


Stolley with bolt


19.037.01

Ivory Rubber Dam Forceps,
jaw width 30 mm , twisted handle

19.010.00

## Ainsworth

Rubber Dam
Punch Forceps
stainless steel

## Brush Holder dbgm

## Its most important features...

Our ZEPF Brush Holder is used for applying liquid treatment agents (enamel or dentine adhesion agents, acids, lacquers, or fluoridation agents) to dental surfaces or cavities.


## Its features at a glance

- Includes a dual brush receptacle and an original ZEPF lamed handle.
- Suitable for all types of use on both upper and lower jaws and on all dental surfaces and cavities.
- Eliminates all need for using plastic applicators (reduces waste).
- May be desinfected and sterilized by using any standard procedure.
- Virtually unlimited service life.
- Designed for optimal ergonomy and general-purpose use.
- Accepts any standard disposable brush insert.
- Used in all areas of dentistry, especially adhesive restoration work.

Separation Forceps pat. pend. by Dr. Peter Müller, Ebersbach

## Their benefits...

- Innovative, functional design.
- Rapid, safe, efficient spreading.
- Adjustable rest allows supporting them on teeth.
- Good access to interdental spaces during spreading.
- For general-purpose use on upper or lower jaws.
- Substantial time savings.
- Secure, one-handed control.
- For right-handed and left-handed persons.
- Desinfectable and sterilizable by using any standard procedure.


The adjustable rest may also be used to support the teeth at locations remote from the intervention point.
19.099 .00

Separation Forceps

Spread the teeth and insert a matrix into the interdental space.

## Tofflemire Matrix Retainer

Manufactured from stainless steel.

19.060.00

Universal

19.063.01 Junior 1, straight

19.062.00

## Tofflemire Matrix Bands for 19.060.00

Manufactured from top-quality, 0.035 mm gauge, stainless steel, packaging unit: 12 ea. of each size.


Articulating Paper Forceps

## ZEPF Easy Matrix Setter

 by Dr. A. Schmidt, Oberndorf, DBGM
## Forceps for Placing Partial Matrix

Problem: There are many different suppliers for partial matrix systems. These matrixes are special,largely strainless metal bands which can be widened punctually.

## Therefore they allow:

- the anatomically correct reconstruction of the outer tooth shape (convexity)
- the strainless resting of the band against the neighbouring tooth in order to achieve the correct contact point

When teeth are very close together, the matrix is often damaged when applied from occlusal because up to now there has not been an instrument on the market for the secure applying of matrixes. For this purpose Dr. A. Schmidt (Oberndorf) and HELmUT ZEPF developed mesial and distal applicators.

### 19.080.12D

ZEPF Easy Matrix Setter by Dr. Schmidt

Clamp for placing partial matrixes, 12 cm , angled $90^{\circ}$, distal


The instruments have a modified jaw to fit matrix shape, like this a secure gripping and applying of the matrix is possible without damaging them.

For this purpose the matrix is fixed in the forceps at both ends. Because of the secure fixing the inserting from occlusal is possible without bending the matrix especially when the teeth are close together.
19.080.12M

ZEPF Easy Matrix Setter by Dr. Schmidt Clamp for placing partial matrixes, 12 cm , angled $90^{\circ}$, mesial

### 19.080.12

Set, ZEPF Easy Matrix Setter by Dr. Schmidt

Clamp Set consisting of:

## Universal Finishing Clamp "Work smart not hard"



The ZEPF Finishing Clamp is an innovative holding instrument for finishing strips of all kinds. The instrument has been designed with ergonomics and functionality uppermost and contributes significantly to easing work involving finishing strips.
The treatment is pleasant for the patient because the tongue area is not restricted by the dentist's fingers and does not aggravate choking. Its main application is in the area of approximate composite fillings; apart from this the instrument is well suited for separation, the correction of filling surpluses in approximal area as well as the application of dental floss.

## Fields of Application:

1) Completion of approximal composite fillings.
2) Separating by means of steel-carbon strips or diamond skived steel strips.
3) Correction of filling over-hangs in the approximal area.
4) Removal of matrix strips after laying fillings.
5) Clamping dental floss for interdental plaque removal, especially in difficult access spots in the lateral tooth area.
6) Clamping dental floss for removal of cement residues from the interdental area after cementing crowns / bridges.

23.120.12

ZEPF Finishing Clamp, QTY 2 pieces DBGM by Dr. Peter Müller, Ebersbach

## Universal Forceps \& Universal Tweezers

No treatment unit should lack these Universal HELITUT ZEPF Pliers and Tweezers.
They are used for securely grasping provisional plastic items, bridges, nerve instruments,
impacted matrices, attaching inlays, setting interdental wedges, etc.
Usable on both upper and lower teeth. Their TC-jaws provide a secure grip.


Peet Splinter Forceps


### 22.523.13

11.5 cm , diamond coated, La Grange curved
22.523.90D $11 \mathrm{~cm}, 90^{\circ}$, diamond coated, La Grange curved



## Extraktion System

## Bene入ㅇII

acc. to Dr. med., med. dent. Benno Syfrig

Pursuing logically the quest of gentle extraction, HELIIUI ZFPF Medizintechnik GmbH has developed a new, patented
(Pat. No. CH 696458 ) Beneג * extraction
system in close collaboration with Benno
Syfrig Dr. med., med. dent from Switzer-
land. You will find further information,
application examples and the Benex user
forum at:
www-benex-dent.com


Picture 1
Longitudinal extraction with Benex"II step by step:
Pivot tooth extracted due to root fracture


Picture 2
Longitudinal extraction with Benex"II step by step:
Axial removal


Picture 3
Longitudinal extraction with Benex"II step by step: Soft and hard tissues preserved


Picture 4
Longitudinal extraction with Benex'II step by step:
Soft tissue,
12 weeks after extraction


## Picture 5

Longitudinal extraction with Benex"II step by step:
Alveolar ridge,
12 weeks after extraction

## Extraction System

## BenexIII

acc. to Dr. med., med. dent. Benno Syfrig


In modern dental treatment, implantology following extraction is increasingly favoured. Consistent with the principle of minimal invasion, conserving soft and hard tissue structures is a must. Starting with extraction. The modified BenexiII guarantees a gentle and simple extraction of roots in the whole mouth. It is nearly impossible to harm the soft tissue and the surrounding bone. Due to the longitudinal extraction, Benex. III is an optimal basis for direct implantation. It is also a valuable help for retarded implantation after the extraction with the Benex* II system. Studies made after the use of Benex* $I I$ prove that the reossification of the extraction alveole is advancing optimally. This is a great advantage for the retarded implantation.

The new Benex:II is now available in a washtray complying with the RKI guidelines. That way, the requirements of optimal cleanability and sterilization were taken into account. You will find further information, application examples and the Benex* user forum at: www.benex-dent.com

12.302.00 Benex:II Extraction System


## Alveolar Ridge Preservation with Benex์II

## What does it mean？

Alveolar Ridge Preservation means the treatment of the dental alveole after extraction． 3 months after the Benex extraction you find a considerably better ridge relation than with conventional gentle extractions．
The Benex゙ finds its successful application in both，private practices and universities．The Benex：has achieved an excellent status worldwide as basis for a subsequently successful implantation．
The new support for the dismounted Benex．System in a washtray guarantees an optimal cleanability of Benex．in a washing machine or in an ultrasonic bath．All components can be fixed safely in the support．

Upon cleaning，the system can be sterilized in assembled condition．
In addition to the Benex゙ components，an optional periotome，an Xtool and an optional Benex゙ Pole Extractor can be placed in the support．


Benex：III Extraction System consisting of： see $\frac{A}{s}$ in the table of page 05－04／05

## 12．303．00

Benex゙II Basic Kit consisting of： see ${ }^{-1}$－in the table of page 05－04／05

Optional Instrumentary


## Illustration


$\qquad$

$\qquad$


## Article Description

## 12．303．00

BenexIII Basic Kit consisting of： Extractor，Pullrope 48 mm ，Driver Guide， Screw short $1.6 \mathrm{~mm}+2.1 \mathrm{~mm}$ ， Screw long $1.6 \mathrm{~mm}+2.1 \mathrm{~mm}$ ，
1 Drill ea．for $1.6 \mathrm{~mm}+2.1 \mathrm{~mm}$ Screws， Quadrant Support，85．194．00 Washtray with Lid

## 85．194．10

Washtray $1 / 2$ with Lid and Press Button Lock

## 12．302．00

Benex์II Extraction System consisting of：
Benex゚II Extractor，Pullrope 48 mm ，Driver Guide，
Screw short $1.6 \mathrm{~mm}+2.1 \mathrm{~mm}$ ，
Screw long 1.6 mm ， 1 Drill ea．for 1.6 mm ，
2.1 mm Screws，Quadrant Support，

85．185．00 Washtray with Lid，
12．302．01 Tray／Rack for Benex゙II

## 12．302．01

Benex゙II Tray／Rack

### 85.195 .00

Washtray $1 / 1$ with Lid

## 12．300．08

Benex゙II Extractor

## 12．300．15

Replacement Support Disc， 8 mm （PTFE）

## 12．300．17

Support Disc，diagonally left

## 12．300．16

Support Disc，diagonally right

12．300．20
Pullrope， 48 mm

Order Quantity

1 piece

1 piece

1 piece

1 piece
$\qquad$

1 piece
$\qquad$

1 piece
$\qquad$

1 piece
$\qquad$

1 piece
$\qquad$

1 piece
$\qquad$

2 pieces


## Benex <br> Pat.No. CH 696458



## Application of the Extraction System

1. Anaesthesia. Cutting periodontal fibres (Sharpey fibres) in the sulcus by using the Periotome or the HELIMUT ZEPF X tod.
2. Strong, large roots must be loosened / luxated by axial movements within 30 sec., using a slim elevator / twister ( $\mathbf{N}$ tod from HELIMUT ZEPF). Without using transversal movements. In case of multi-rooted teeth, the roots are divided and extracted separately.
3. Drilling with the diamond coated twist drill should be in the axis and center of the root fragment. It should be approx. 7 mm in the hard tissue, deeper drilling will not be necessary. Drilling is performed with water-cooling. In order to remove drilling chips more easily, an inward and outward movement is recommended for deep drilling.

## Recommended rpm:

500-700 rpm
REFF 12.300 .30 max. 3000 rpm
[REF 12.300 .35 max. 2200 rpm
4. According to circumstances, the short or long extraction screw with screwing support EEFF 12.300.47 is inserted.
5. The extractor is positioned on the adjacent crowns: The opening of the round, revolvable segment plate is adjusted in vestibular direction ensuring a good view of the extraction screw. After the pullrope has been hooked into the extraction screw, it is guided over the reverse roller and fixed to the hook of the extraction slide. Under slight traction - so that the rope does not hang out - the instrument is placed on the adjacent teeth by turning the hand screw.
During positioning it is important to see that both the screw and the rope do have the same axial direction.
6. Once the extractor is positioned properly, the extraction is carried out by turning the hand screw. In case of strong, long roots the periodontal fibres have to be pre-stretched during 30 seconds by applying a sub-maximum traction.



## Extracting Forceps



## Diamond-Coating

All extracting forceps are available with diamond-coating for better grip. For ordering etc. just add to the item number the letter $\mathbf{D}$.


## Teflon Disc

The wear-resistant Teflon Disc eliminates wear and tear in the joints and provides a light action at all times.


## Grooved Gripping Surfaces

Grooved gripping surfaces provide a secure grip and prevent slipping.



\# 2

(A) 12.017.00Z
(S) 10.017 .00

(A) 12.018.00Z
(S) 10.018 .00

\# 67LX


\# 67RX



The slim, compact design of these ${ }^{\text {zefF }} \boldsymbol{\lambda}$ cision Extraction Forceps allows easy accessing molar areas, even when mouth openings are restricted.
\# 73A

\# 67A



\# 51A




(A) $12.067 .95 Z$




## Secure-Line

Our special HELINUT ZEPF Extracting Forceps in our modern ${ }^{\text {Iep }} \boldsymbol{\lambda}$ C̄isich Design have tapered jaw tips. Their fine, sharp tips which have been anatomically shaped to match perfectly the teeth and allow to reach deep and large contact areas, which in turn provides better mechanical advantages and a more secure grip. Since these special HELINUT ZEPF Extracting Forceps have been designed for performing luxations, they have longitudinal grooves only on their jaws' gripping surfaces. The ease of handling and superior "feel" of all our ${ }^{\text {ImFF }} \boldsymbol{\lambda}$ Ccision Lines of Extracting Forceps are particularly pronounced on these special forceps!


## Rescue-Line

No reason to panic! These forceps will allow you to complete any
 extraction and work more efficiently even if complications arise. If teeth break during extraction, these are the tools you need to rapidly, safely, solve your problems.
These forceps have special all-purpose jaws designed to cover a broad range of applications and have sharp pointed tips that allow separating the tips of roots from surrounding tissues by lightly twisting them and then securely trapping the extracted roots in the gaps between their jaws. The article numbers of extracting forceps with serrated edges are amended by 'ZS'.

\# 67A
(A)
12.067.90Z
(S)

\# 79
(A)
12.079.90Z
(S)
12.079 .90


(S)

(A) 12.051.15Z 12.051.15ZS
(S) 12.051.15


A $\mathbf{X C i s i o n}$


Special Wisdom Routurier Extracting Forceps

Their offset design will allow you to reach around obstacles and protect the corners of patients' mouths whenever their mouth openings are restricted or their jaws have been firmly clamped in position. Their slim compact design allows readily accessing molar areas.

(A)
12.522.15Z \# 22 1/2 L

(A)
12.522.16Z \# 22 1/2R

## Witzel All-Purpose Root-Splinter Forceps diamond-tipped

Our special forceps for extracting root splinters from both upper and lower gums have diamond-tipped jaws for the best possible grip, and are the ideal complement to our Rescue-Line.
If their diamond tips should ever become worn, simply contact our retipping service, who will put new diamond tips on them for a fixed charge.


(A) 12.059.00Z

Root- and Splinter Forceps Sequester ${ }^{\text {zer }} \boldsymbol{\lambda} \boldsymbol{\lambda}$ cisicm-Design

(A) $14.700 .10 Z$


NTM

The ${ }^{\text {IEPF }}$ twist $\mathbf{3 \lambda}$ Kit



### 12.079.95Z <br> Twist Ex 5

Extracting Forceps for lower molars, deep-grip

## Extracting Forceps, American Pattern

## Diamond Version

All forceps are also available in the diamond version. For ordering etc., just add a D to the article number



## Extracting Forceps, American Pattern



\# 151
Cryer
14.151 .00
14.151.00D

## Extracting Forceps, American Pattern




## Pedodontic Extracting Forceps

These pedodontic extracting forceps have been designed to be as small as possible in order to avoid frightening younger patients with large, aggressive-looking instruments, thereby providing relaxed working conditions.

Further RoBa-Design Pedodontic Extracting Forceps are illustrated on page 05-32!

\# 33

\# 13

\# 51


# Z二: 7 <br> roba EDITION <br> PATENTED 

## - ontave

## ZEPF RoBa-Edition

by dentist Beck

Dedicated to the long-standing employees Mr. Horst Roos and Mr. Reinhold Bacher, who worked for Helmut Zepf for more than 50 years since their time as trainee.
The ZEPF RoBa-Edition completes the innovative advancement of the famous
${ }^{\text {zepr }} \boldsymbol{\lambda}$ cisionn Extracting Forceps. It has been developed under the aspects of a secure and gentle appliance.

The problem of tooth fractures during extraction is considerably reduced due to the innovative geometry of the beaks.

The new ONYX coating makes the im-pact-resistant surface of these extracting forceps almost indestructible.

Compared with other methods, in ONYX coating the carrier material is applied in a more gentle way, as ONYX coating in comparison to other coatings is performed with significantly less influence of heat.

The surface shows excellent sliding features to reliably counteract contamination. An incrustation of proteins etc. is not possible.

The matt-finished black surface not only prevents reflection of the OT light, but also guarantees an optimal contrast in the OR environment during extraction.

## ZEPF <br> 



With the patented RoBa-Edition HELIIUT ZEPF introduces a new generation of extracting forceps. Deduced from the ${ }^{\text {zepr }} \boldsymbol{\lambda}$ cision Instruments the RoBa-Edition has been especially developed in consideration of easy and gentle extraction.

The patented RoBa-Edition according to Dentist Beck is the consequential advancement of conventional extracting forceps with the advantages of the tapered deep-grip extracting forceps. The modified beaks according to Dentist Beck fit exactly on the teeth which ensures a maximum grip in the appliance. These new beaks are available for all figures in upper- and lower jaw (incisors, premolars, molars and wisdom teeth).

Due to the fact that all teeth show a convex crown contour (upper jaw: labial, buccal, palatal and in lower jaw: labial, buccal, lingual), the beaks have been developed under this anatomical actuality. The handle is a protected design from HELIIUT ZEPF, which was developed in cooperation with Dr. Maty, Germany.
(1) The billow-grind claws radially into the teeth and avoids a "riding" in-between the tooth crown and the inner contour of the beak.
(2) Concavely elaborated inner contours of the forceps beak fit in the convex tooth contour. With deep grip in the alveolus on the neck of the tooth or on the crown, the RoBa Edition ensures a parallel and maximum grip in any situation. Root fracture almost can be excluded.
(3) The different deeply elaborated inner contours ensure maximal adaptation on the teeth in different actualities. No tilting of the teeth while rotary and / or lifting movement.
(4) Tapered outside contour of the beak affords deep grip even subgingival.

## onyd

Black Finish Coating

## Design meets functionality

Users with highest demands will appreciate the elegant, black finish providing the instrument with a non-reflecting, extremely smooth and scratch-resistant surface. The article number is amended by $\mathbf{T I}$.




## CrilctenForceps RoBa-Edition

Extracting Forceps modif. by Dentist Beck
These deciduous teeth extraction forceps have been designed to be as small as possible in order to avoid frightening younger patients with large, aggressive-looking instruments, thereby providing relaxed working conditions.

The patented Deciduous teeth RoBa-Edition Forceps according to Beck are the consequential advancement of conventional extracting forceps with the advantages of the tapered deep-grip extracting forceps. The modified beaks according to Beck fit exactly onto the teeth which ensures a maximum grip during the appliance.




## ex- Extracting Forceps



The exLog Forceps offer an excellent anatomic fit and only need enough pressure so they do not slip out of the hand. The forceps guarantee a balanced axial luxation, better periodontal fibre dilatability and increased sense of touch. They reduce traumata of surrounding tissue.
The assimilated handles allow an individual and equal power transmission for left- and right-handed surgeons during pressing, pulling and turning movements.
Due to the smooth handle areas and the demountability the exLog Forceps can be cleaned extremely well. So there are no hygiene-critical areas any more like they are known from forceps with conventional lock. Especially with automatic conditioning in a washtray the demountability is a great advantage as they need less space.


## All Advantages on One View:


excellent anatomic fit on the tooth surface

- tapered beaks for less traumata and protection of the alveolar loculus
- linear serrated jaws for equal axial luxation
- better fibre dilatability and increased sense of touch
- optimal cleaning through the demountability of the forceps into two parts (RKI-compliant)
- long lasting, patented, high precision joint for radial and axial mechanical load
- made out of one piece (5-axis CNC-milling) for ultra high precision
- no servicing of the joint necessary

Focus on the exLog, the standard of tomorrow.

## ex'0G



## ZEPFIO <br> EDITION <br> PATENTED

## ZEPF EXLOG RoBa Edition Extracting Forceps

The exLos RoBa Edition from ZEPF is a new generation of "patented" extracting forceps in which two patents have been combined in one series of extracting forceps.

The EXLOG Forceps are featured by the patented dismountability, and the RoBa Forceps by patented beaks.

It made sense to combine the advantages of both patents, as this results in a type of forceps which can be cleaned as thoroughly as never before. And the main purpose: With these forceps, the practitioner is offered a functional extraction instrument that leaves no desires unfulfilled.

These patented forceps are the consequential advancement of conventional extracting forceps, featuring the advantages of the tapered deep-gripping extracting forceps. The modified beaks fit exactly on the teeth and assure a maximum grip during application.

ZEPF EXLOG RoBa Edition Extracting Forceps<br>exLog<br>$\square \square$<br>$\underset{\text { EEPFObG }}{\text { EOMON }}$ PATENTED



| 3.2 .1 | 1.2 .3. |
| :--- | :--- |
|  |  |

15.234.07
15.234.07D
\# 34N



## exㄴg

## ZEPF EXLOG RoBa Edition Extracting Forceps

This new development concerns all figures of extracting forceps for the maxilla and the mandible (forceps for incisors, premolars, molars and wisdom teeth). As all teeth show a convex crown shape (in the maxilla: labial, buccal, palatal - in the mandible: labial, buccal, lingual), the beaks have been developed in consideration of these anatomical conditions.

- excellent anatomic fit on the tooth surface
- tapered beaks for less traumata and protection of the alveolar loculus
- better fiber dilatability and increased sense of touch
- optimal cleaning due to demountability of the forceps into two parts (RKI compliant)
- long-lasting, patented, high precision joint for radial and axial mechanical load
- made out of one piece (5-axis CNC milling) for ultra-high precision
- no servicing of the joint required


The following problems might occur if the extracting forceps do not fit:

- root fracture
- crown fracture
- damage to the soft tissues caused by bruise
- damage to the alveolar ridge and the buccal bone lamella



## Advantages of deep-gripping extracting forceps:

- the inner contours of the sharpened beaks allow a safe subgingival placing (below the gingival margin)
- parallel contact to the root
- atraumatic, as the soft tissues are not bruised
- reduction of root fractures
- slim exterior design, allowing a subgingival placing without bruise of the soft tissues
 THE ORIGINAL

In the illustrations an extraction under use of the $\mathbf{~}$ Nod Instruments is shown.

IMPORTANT: Complete removal of all inflammable and convective tissue structures.
(1)

Initial loosening of the desmodontal fibres. Apply the X-Desmo-Tool first approximally then buccally and palatinally (pencil handle).
(2)

Then progressive luxation with the X-Luxa-Tool (first narrow then wide). Ideal positions: Approximal (mesial or distal) to the tooth which should be extracted
(3) Complete luxation of an upper right molar with support of a wide X-LuxaTool. Gentle extraction without root fractures!
(4)

Inspection of the empty tooth socket and curettage with support of the X-Spoon.


## 入tod Instruments

DBGM by Dr. Detlef Hildebrand

## THE ORIGINAL

The implantology with immediate insertion after the tooth extraction is more and more a focus of interest in modern dentistry. It appears to be more than necessary to protect soft and hard tissue structures already during the extraction phase and to follow the principles of minimal invasiveness. Here is an ideal complement for this:

The $\mathbf{\lambda}$ tod Instruments! In contrast to existing instruments this clearly arranged and universal Xtool Set supports you during the gentle and uncomplicated extraction of teeth which cannot be preserved.

## Modern therapy methods require modern instruments!

- Color coding for clear handling.
- Universal and complete extraction instruments in one tray.
- Ergonomic handle design (pencildesign) prevents unintended slipping during usage.
- Direct and controlled power transmission to prevent tooth and root fractures.
- Non-traumatic tooth extraction without injuring surrounding structures.

$\boldsymbol{\lambda}$-Luxa-Tool, straight, $4.0 \mathrm{~mm}, 4.0 \mathrm{~mm}$, for initial loosening of the desmodontal fibres, yellow metallic






curved
curved

17.008.05

curved
17.008.06
curved




## $\boldsymbol{\lambda}$-Syndesmotome, curved right, 4.0 mm , for lingual/ buccal luxation, yellow metallic <br>  curved

4.0


-

curved

-



## - X-Desmo-Tool (yellow):

The $X$-Desmo-Tool easily enters into the periodontal gap with its pointed tip and initially loosens the Sharpey's Fibres. The modified pencil handle and the handy shaft shape offer a depth sensibility like never experienced before without destroying related structures.

- X-Luxa-Tool-3 (blue):
bent + narrow
for tooth loosening
- X-Luxa-Tool-1 (green):
straight + narrow:
A delicate and controlled power transmission guarantees a specific loosening and luxation of the tooth without any risk of crown or root fractures.
Ideal position: approximal (mesial or distal) to the tooth whichis to be extracted.


## - X-Luxa-Tool-2 (green):

straight + wide:
Complete, non-traumatic luxation of upper molars (e.g. tooth 16). The ergonomic instrument shape ensures a gentle extraction without tooth fractures or any damage to the alveolar wall.

## - X-Luxa-Tool-4 (blue):

bent + wide:
for tooth luxation

## - Lucas Schaber ZEPF-Line:

Inspection and curettage of the empty dental alveolus. Complete removal of all inflamed and connective tissue fibres.

## ZEPF-Ntod-Tray <br> DBGM by Dr. Detlef Hildebrand

## "Extraction in its most pleasant way"

The ZEPF- $\boldsymbol{\text { Yod }}$ d-Tray offers a universal instrument set for medical tooth extraction. The $\mathbf{X}$ Yod instrumentation includes six different instruments:


ZEPF FLEX-EX Power Periotome


While using new materials, we were successful in the development of the ZEPF FLEX-EX Power Periotome, a symbiosis of Power Periotome, Elevator and Xtool.

The flexible working tip will enable you to build up a phenomenal pressure for the luxation in a radial direction and a perfect match to the contour of the tooth at the same time without bending. The name stands for the excellent product features united in this instrument.

## ZEPF Power Periotome

The Power Periotomes allow a gentle loosening of ligaments in the sulcus.
The handle allows optimal power transmission and controlled luxation.


## Ergonomical and heavy

Heavy, ergonomic handle design with exchangeable tips,
for optimal access to all quadrants.
26.182.01

P1, straight, $\varnothing 2.5 \mathrm{~mm}$, $2.5 \times 17.8 \mathrm{~mm}$
26.182.02

P2, straight, $\varnothing 2.5 \mathrm{~mm}$, $1.7 \times 14 \mathrm{~mm}$


P3, angulated, $\varnothing 2.5 \mathrm{~mm}$,
$1.7 \times 12.5 \mathrm{~mm}$
26.182.04

P4, mesial/distal angulated,
$\varnothing 2.5 \mathrm{~mm}, 1.7 \times 12.5 \mathrm{~mm}$

41.834.11 Hemingway Sharp Spoon, double-ended, exchangeable, stainless steel, ZEPF -Line
17.045.05 Approximal Desmotom, \# 5, mesial bending, 3 mm , exchangeable, $\mathrm{M} 4 \times 0.5$, single-ended

## ZEPF-Line 2 in 1 Periotomes

The 2 in 1 Periotomes acc. to Dr. Karl-Ludwig Ackermann are saving time as they are reducing the annoying exchange of instruments.


### 26.182.23 Periotome Combination P3/P2

ZEPF-Line, double-ended, exchangeable inserts

26.182.24 Periotome P4 / straight Sharp Spoon $\varnothing 3.0 \mathrm{~mm}$

ZEPF-Line, double-ended, exchangeable inserts

## ZEPF-Line Periotomes

For the Separation of the Sharpey's Fibers in the Sulcus

Before the usage of any root elevator or extraction forceps it is necessary to separate the Sharpey's Fibers in the sulcus with a periotome in order to do an atraumatic tooth extraction. To do so, the periotome is to be drawn through the sulcus.
The correct application saves the gingiva and the periosteum. The special design in the grip area guarantees a pleasant grip and extremely easy handling.

### 26.182.11 ZEPF-Line, exchangeable

26.182.12 ZEPF-Line, exchangeable

## Root Elevators

Root elevators are used for the surgical tooth extractions. They are used to luxate the tooth in the osseous alveolus and to expand the alveolus walls. They are also used to open the gingival sulcus prior to the tooth extraction.

Straight instruments are used in the anterior region and in the maxillary area. Curved root elevators are ideal for the back teeth in the mandible.

## The Workmanship

The shafts of HELIMUT ZEPF Root Elevators are welded onto their hollow handles, and each and every one is checked for leakage at their welded joints.
This manufacturing method virtually eliminates the leakage compared to cheap root elevators with pressed-in shafts.

## The Handle Versions

Except for the Xtool-Series, the Elevators from
HELTUT ZEPF mainly differ in their 6 different handle designs such as: 'Bein', 'Carpal', 'Standard', 'Flohr', 'Mini'.

These are handle versions which can be assigned easily due to their letter coding:


B Bein


C Carpal

$\mathbf{S}$ Standard


F Flohr



Bein
(B) 17.001 .01
(S) 17.001.11

Bein
(B) 17.001 .00
(S) 17.001 .10


Gärtner
(B)
17.013 .00


Gärtner
(B) 17.013 .01


Gärtner
(B) 17.013.02

(1) Because of the elliptical shape of the instrument tip, it is easy to penetrate the interdental space with this instrument.
(2) Due to the shape, by turning the instrument through $180^{\circ}$ it is possible to luxate in four directions:
$2 x$ mesially and $2 x$ distally.
(3) Attention! These instruments must not be used as a lever, as shown e.g. in picture 3. Due to the special shape, an over-strengthening of the tip can cause breakage. We cannot be held responsible for damages caused by improper use.

(F) 17.053.02

## Heidbrink Root-Splinter Elevators

All-purpose instruments for gently extracting root splinters.

Straight (without picture):
(M) 17.051 .01
(S) 17.052 .01

## Angled:



## ZEPF-Line Heidbrink Root-Splinter Elevators

The fine working tips of the Heidbrink Root-Splinter Elevators allow the palpation and mobilization even of small root remnants.

Example for serrations:

| 17.055 .01 | Heidbrink |
| :---: | :--- |
| 17.056 .01 | Heidbrink, serrated |


| 17.055 .02 | Heidbrink |
| :---: | :--- |
| 17.056 .02 | Heidbrink, serrated |


| 17.055 .03 | Heidbrink |
| :---: | :--- |
| 17.056.03 | Heidbrink, serrated |

Root Elevator No. 195

The drop-shaped, blunt working end makes the new ZEPF Root Elevator No. 195 ideal for the separation and luxation of roots. The tapered working end allows its special use in the molar region in all quadrants. It can also be used for initial loosening of the desmodontal connection.


Due to its geometry and smooth luxation and rotary motion, the root fragment to be removed will be moved very easily in "crestal direction" (in relative terms!). The luxated fragment can therefore be grasped easily with deep-gripping forceps or with Luer bone rongeur forceps.


Picture:
Courtesy of Dr. Florian Steck


## Lindo-Levien Root Elevators

The LINDO-LEVIEN Root Elevators are pushed into the periodontal gap in apical direction until the serrations will grip on the roots. The root is extracted via a barb effect by straight pulling without leverage.



### 24.923.10

Original Arkansas Stone
For further information,
please refer to page 03-31!


## Carpal Root Elevators

acc. to Gärtner

The Carpal Root Elevators fig. 0, 1 and 2 are disposing of flat, sharp tips in the diameters $2.5 \mathrm{~mm}, 3.5 \mathrm{~mm}$ and 4.5 mm .

This shape of the 5 cm long blades allows an axial penetration of the alveolus. The Carpal Handle allows an ergonomic and user-friendly working.

(S) 17.006 .02 straight $5.0 \mathrm{~mm} \square$



Gärtner and Hylin Root Elevators


Gärtner 12.5 cm
(B) 17.014 .00

$\qquad$

Apical Root Elevators



Revolving Chisel Vienna Pattern
41.540.02WM straight, 2 mm

41.540 .04 WM straight, 4 mm
41.540 .05 WM straight, 5 mm


## Root Elevators Cryer and Winter

Claw elevators are ideal to extract molars in the mandible after separation of the roots


The bend of the working ends, combined with the shortened tips, allows a gentle lifting of the opposite root without contact to the neighboring crown.

The special claw elevators are ideal to luxate roots if an apical access is possible from the neighboring alveolus, e.g. if a root has already been removed and if the empty alveolus can be used as access. It is recommended first to remove the root which is bent less.


(S)
17.100 .39 Cryer
(S) 17.100 .40

Cryer



HELIIUT ZAPF Oral Surgery
and Maxillofacial Instruments

This chapter for Cranio-Maxillo-Facial
Surgery includes all instruments required for reconstruction of traumata, diseases, bone fractures, malformations and deformations of the teeth, the oral cavity and for the jaw as well as the face.

## The ZEPF Forceps



Atraumatic Tissue Forceps by Dentist Beck


### 22.824.17 17.5 cm

Due to their specially shaped working tips, the Tissue Forceps allow an easy and gentle grip and fixation of the tissue flap. There is no additional traumatism of the soft tissue. The Atraumatic Tissue Forceps can be used in all fields of dentistry and odontology (in surgery, parodontology and implantology).


Tissue Forceps, fine $1 \times 2$ teeth

|  | $\mathbf{2 2 . 4 0 8 . 1 1}$ | 11.5 cm | $\mathbf{2 2 . 4 0 8 . 1 6}$ | 16 cm |
| :--- | :--- | :--- | :--- | :--- |
| A | $\mathbf{2 2 . 4 0 8 . 1 3}$ | 13 cm | $\mathbf{2 2 . 4 0 8 . 2 0}$ | 20 cm |
|  | $\mathbf{2 2 . 4 0 8 . 1 4}$ | 14.5 cm |  |  |

Tissue Forceps, standard $1 \times 2$ teeth

(4) | $\mathbf{2 2 . 4 0 0 . 1 3}$ | 13 cm |
| :---: | :---: |
| 22.400 .14 | 14.5 cm |



Micro-Adson
22.272.15 15 cm






$\varepsilon \|$
$\stackrel{\varepsilon}{g} \|$
$\stackrel{Q}{\circ} \mathbb{P}$

## Adson

22.486.12

12 cm
22.486.15 15 cm




## The ZEPF Retractor

pat. pend. by Dr. Peter Müller, Ebersbach


## Clear, non-tiring retraction in every situation

Retraction of the cheek, lips, tongue and mucoperiosteal flap. The ZEPF Retractor is a "quality product from Tuttlingen" and bears the name HELINUT ZEPF as seal of quality.

- ergonomic handle
- low-weight, very well-focused instrument
- innovative design
- multipurpose usage
- good view

- smooth surface, manufactured from one piece
- all common disinfection and sterilization methods possible


Retractor, for all Mouth Mirror
Handles Ø 2.5 mm

chromium-plated, not stainless

37.437.17 16.5 cm

Vestibulum Retractor by Dr. Müller, Tuttlingen

Working end made of stainless steel, handle M 4.5 mm ,
Dr. Ti, made of titanium.

The Vestibulum Retractor by Dr. Müller, Tuttlingen can be used in the dental field for all activities for which it is necessary to have a very good view as well as the best possible dryness.


The application in periodontology as well as in oral surgery is possible as the Vestibulum enables you to retract a complete quadrant. This offers a very good view on your field of work. The instrument can also be used to model the edges in the acrylic technique. The relative drying is possible with one hand which offers a better moulding.

The instrument can be used in many ways and is very easy to apply. This makes it very economical.

## Special features of the

 Maty Cheek and Lip Rectractors:- suitable for a wide variety of uses
- lightweight
- easy to use
- patient-friendly
- no traumatization of the oral cavity
- usable on upper or lower jaws
- ergonomically designed, saves time, thereby cutting costs
- does not need to be removed when work is interrupted since design prevents the dropping out
37.454 .00

Maty Cheek and Lip Rectractor, 17.5 cm

## Maty Cheek and Lip Retractor

The light weight, versatility and anatomically shaped jaws of this instrument makes it suitable for use in a wide variety of uses in all areas of dentistry.
In prosthodontics, for reliably taking casts, determining upper/lower jaw mismatches, fitting crowns, bridges, inlays, etc

- In orthodontics, for fitting brackets, etc.
- In general dentistry, for filling teeth, root-canal work, etc.
- In oral surgery, for outpatient surgery (apicoectomy, osteotomy, tumor and bone surgery, etc.), preprosthodontic surgery, traumatology, implantology (enossal implants, sinus lifting, GBR techniques, etc.)

Due to its broad applicability and easy handling (no specialists required to retract lips, cheeks etc.) the retractor also contributes significantly to cost-efficiency.

Quality MADE IN GERMANY.
Our all-purpose cheek and lip retractor is yet another top-quality, high-precision, all-purpose instrument
"Made by HELInUT ZEPF Medizintechnik GmbH".


### 38.452.00

Bowdler-Henry's
Rake Retractor for impacted lower wisdoms


Retractor for mouth, jaw and face surgery, flexible, 15.5 cm


Obwegeser Retractor for mouth, jaw and face surgery, flexible, 16 cm
38.467.08 8 mm
38.467.10 10 mm

Tinerimerim Pr

Wieder Tongue Depressor
37.426.01 \# 1, small
37.426.02 \# 2, big

38.471.15 Tessier 15 cm

Mobilization Hook, left


## Kocher-Langenbeck

Retractor, 21.5 cm

38.426.07 $14 \times 70 \mathrm{~mm}$


Combined Retractor and Cheek Retractor by Schäfer

## 1 instrument - 2 functions!

The combined retractor is suited for an optimized retraction of laps and the cheek during surgery like implantations and root-tip resections.

Schäfer Retractor and Cheek Retractor
37.440.00 23 cm
38.430.06 $13 \times 42 \mathrm{~mm}$

38.430.05 $11 \times 50 \mathrm{~mm}$

38.430.04 $11 \times 40 \mathrm{~mm}$

38.430.03 $16 \times 30 \mathrm{~mm}$

38.430.02 $14 \times 30 \mathrm{~mm}$

38.430.01
$11 \times 30 \mathrm{~mm}$


## Obwegeser

Soft Tissue Hook, curved, 22 cm

38.428.06 $16 \times 80 \mathrm{~mm}$
38.428.05 $14 \times 70 \mathrm{~mm}$



38.428.04
$12 \times 55 \mathrm{~mm}$
38.428.04

38.428.02 $10 \times 31 \mathrm{~mm}$
 -


Retractor, $11 \times 70 \mathrm{~mm}, 22 \mathrm{~cm}$


## Obwegeser

Retractor, curved, concave blade, 22 cm

38.445.06 $14 \times 70 \mathrm{~mm}$


38.445.05 $12 \times 55 \mathrm{~mm}$


Kocher Retractor, 21.5 cm
38.427.01
$12 \times 20 \mathrm{~mm}$
38.427.02 $14 \times 21 \mathrm{~mm}$

## ZEPF Vestibulum Retractor

 by KapogianniThe HELITUT ZEPF Vestibulum Retractor according to Kapogianni is mainly used for the region of the lateral teeth in the upper jaw.

It is meant for the atraumatic holding of the prepared mucoperiosteal flap which is usually retracted in the area of the crista zygomaticoalveolaris. The crista often develops a distinctive osseous bow which makes it impossible to hold it away with a straight retractor.

This instrument is of great advantage especially during operations like the direct sinus lift, big augmentative interventions or other operations in the area from the cuspid to the rear lateral teeth.

Because of the three-dimensional arrangement of both retracting elements of this Vestibulum Retractor, the mucosa is retracted safely and a trauma due to continuous slipping is excluded. Of course, this retractor can be used for anatomically similar bone structures for safe and atraumatic working.

by Kapogianni, to retract the prepared mucoperiosteal flap


## Hemingway Sharp Spoon



## Hemingway

Sharp Spoon,
16.5 cm
41.845.11
\# 11, 2.5 mm
41.845 .22
\# 22, 3.0 mm
41.845.33
\# 33, 3.5 mm


Hemingway
Sharp Spoon, modified, 17.5 cm
41.846.11
2.5 mm
41.846.22
3.0 mm
41.846.33
3.5 mm

Williger Raspatories


## Elevators

Freer 41.864.01 Elevator, \#1, $4 \mathrm{~mm}, 18.5 \mathrm{~cm}$
쓰를

ZEPF -Raspatories

## Perfectly done.

HELINUT ZEPF Periosteal Elevators are featured by a well-balanced design. The lame-design handles have a very handy shape. They are extremely easy to rotate, and due to the smooth surface, hygiene problems known from conventional handles are avoided.


## Raspatory

extra wide,
very flat ( 1 mm )
light concavity


## Prichard

## An arrester and raspatory, all in one.

Usable in all types of periodontic surgery, osteotomy, or root-tip resections. Its sharp, rounded tip is used for preparing papilla / loose tissue for excision. In periodontic treatments, its blunt tip allows arresting several flaps of loose tissue simultaneously. The curvature of its blunt tip makes it also a popular choice for osteotomies in the molar area (8-area), as well as for mirror raspas, since its contacting surfaces are highly polished. Lingual surfaces may be very easily reached.


## Glickmann

## Periosteal Elevator and Flap

 Knife in one instrument.The flap knife is as sharp as a scalpel. (It has to be resharpened regularly!). Small additional cuts can be made in the interdental area. You do not have to switch to a standard scalpel. The delicate, round and sharp working tip is used to peel off / to cut the flap.

## Combination-Instruments

Spiculum Raspatory and
round Periosteal Elevator, 17.5 cm

## Micro Friedmann

Micro Bone Rongeur Forceps


Micro Friedmann
Bone Rongeur Forceps



Bone Rongeur Forceps, 15.5 cm


Bone Rongeur Forceps, 15 cm


Mini Friedmann
Bone Rongeur Forceps



Beyer 18 cm
Bone Rongeur Forceps, double action

Zaufal-Jansen 18 cm Bone Rongeur Forceps, double action



Ruskin 18 cm
Bone Rongeur Forceps,
double action, curved


Rongeurs 17 cm
Bone Rongeur Forceps,
bajonet, \# 18


Ruskin-Liston 18.5 cm
Bone Cutting Forceps, double action


Böhler 15 cm
Bone Rongeur Forceps and Bone
Cutting Forceps, double action

Antrum Punch Forceps

Antrum Punch Forceps, $90^{\circ}$
shank diameter 7 cm

ค 42.380.01 bite width 4 mm


Cohen Soft Tissue Nippers


Cohen 10 cm
Cohen Soft Tissue Nipper


Controlled dropping off the blade

## ZEPF Blade Holder

The ZEPF Drop-Control Blade Holder combines the design of the regular blade holder 46.007 .00 with a new and revolutionary function. With reference to the mechanism of a ball pen, the blade will be dropped off by pushing the button at the end.

The object of this development was a simplified application with the same diameter of the blade holder. Therefore there is no need to adapt to a new application / ergonomics for our regular blade holder! The ZEPF ‘Drop-Control’ Blade Holder perfectly fits into our ZEPF Design product range for surgery, implantology and microsurgery thanks to its diameter, design and ergonomics.

By pressing the button at the end of the blade holder the mechanism which lifts the blade is triggered off. The blade is pushed forward so that it falls safely and controlled in a tray or cup.

Afterwards the one-hand ejection function moves back in its initial position. After cleaning and sterilization you can insert a new blade - as usual.

The advantage lies in the fact that the used blade can be removed in a safe and controllable way in order to prevent a contaminated injury or infection.


IIDrop-Control

## 06

## Scalpel Blades

Supplied in packs of 100 pieces, sterile



Safety Blade Remover
46.005 .65

This practical tool allows safe replacing of scalpel blades.


Place the blade remover


Press the blade remover


Lever the blade upwards


Pull the blade forward and throw it in a containment

# Micro Surgical Scalpel Blades 



Klingex
46.005.70

Safety Blade Remover


Place the blade


Lift the blade by pressing


[^0]
## ZEPF-Line Instruments

By PD Dr. Weng, 17.5 cm


ZEPF 3D-Blade Holder


Our HELTIUT ZEPF 3D-Blade Holder will allow you to position blades easier than ever before!

In designing this blade holder, particular attention was devoted to make it easy to use, clean and sterilize.

### 46.007.05

3D-Blade Holder Handle ZEPF-Line, 12.5 cm

### 46.007.50

Pivoted Head for 3D-Blade Holder, exchangeable, incl. Allen key M2.5

### 46.007.10

3D-Blade Holder Handle with Pivoted Head, 12.5 cm

Attachments by Dr. Hildebrand, Berlin

## Blade Holder

46.007.20

For standard blades \# 10-15

Gingiva-Retractor



## ZEPF Onyx Scissors

The Onyx coating offers a 3-5 times higher surface hardness compared to traditional scissors. In combination with the "Supercut" grinding (see page 06-34), this guarantees an extremely long product life and application as well as a very high precision and attrition resistance.

The extraordinary surface smoothness is leading to an easy slide of the scissor blades even under highest strain. Due to the physical / chemical combination of the coat, no undesirable reaction will be caused during sterilization or appliance of solvents. Furthermore, the anti-glare surface avoids disturbing light deflections.


## What is

SC stands for "Supercut" and means that scissors with that designation have been specially ground, not only to make them sharper than ordinary scissors, but yields a much better cutting angle (cf. the accompanying illustrations).

## What is $\bar{〔}$ ?

TC stands for "Tungsten Carbide", a material whose superior strength wear resistance and hardness are its major properties that distinguish it from conventional materials.


Supercut

La Grange
double curved, 11.5 cm


Iris Scheren
extra large rings, 11.5 cm
curved:
straight:


| curved: | 46.051 .11 | 46.051 .11 SC | 46.051.11TC 46.051.11TISC |
| :--- | :--- | :--- | :--- | :--- | :--- |
| straight: | 46.050 .11 | 46.050 .11 SC | 46.050.11TC 46.050.11TISC |



## Fine Preparation Scissors

The curved blunt Preparation Scissors are used for preparation in the least traumatic way of separating tissue into connective tissue layers.

The surgeon pushes the scissors parallel to the skin or to the level of the layers which should be separated (picture 2), opens and pulls them back opened. The tissue layers are separated by spreading movements of the scissor blades and the required layer is open (picture 3). The point of the scissors is usually facing the less sensitive structures.

Only the second usage of the preparation scissors is to cut.

46.069.11

Fine Preparation Scissors
curved, 11.5 cm


## Goldman-Fox

curved, 13 cm
curved:
straight:

46.121.17

## Scissors



\# 1, blunt / blunt, curved, 14 cm

46.431.14
46.431.14TISC

tapered tips, curved, 12 cm

46.221.12
blunt/blunt, round, 14.5 cm

straight:
46.516.14
curved:
46.517.14


Surgical Scissors
\# 2, straight, blunt / blunt



Surgical Scissors
\# 3, straight, pointed / pointed

46.404.13
46.404.14

46.885.12TC

## Universal Crown Scissors

12 cm


## Beebee

Crown Scissors, straight, pointed, 10 cm


## Beebee

Crown Scissors,
curved, pointed, 10 cm

46.675.10

## Needle Holder

## Lichtenberg



Lichtenberg-Ryder 3/0-4/0
straight, with detent and latching mechanism


## Needle Holder

## Swedish Model

A very fine needle holder which can also be used as micro needle holder. The flexible grip ends increase tactile feeling and reduce the "cracking" of the three-step lock.


15 cm : 41.246.15TC



Surgical Aspirators
Curved, with slot against sucking in, 17.5 cm

### 19.649.15 Ø 1.5 mm

19.649 .30
$\varnothing 3.0$ mm
19.649 .50
$\varnothing 5.0 \mathrm{~mm}$

## JİUus-line

The specially bent Sinus-Line Aspirators with titanium tip were developed by Dr. Maty.
19.651 .13
19.651 .14

Surgical Aspirator, with slot, titanium tip, $\varnothing 1.5 \mathrm{~mm}$
Surgical Aspirator, with slot, titanium tip, $\varnothing 3.0 \mathrm{~mm}$


Surgical Micro Aspirator, titanium tip, $\varnothing 1.5 \times 15 \mathrm{~mm}$, modified tip by Dr. Shakibaie-M.


## Retraction-Thread Plugger

The ergonomic curve of the instrument tips allows plugging of the thread even in difficult spots.

The notch at the tips make it substantially easier to tie the thread around the tooth, the thread remains in the pocket and does not stick to the instrument.

The plugger is made out of stainless steel and has the new ZEPF $\bullet \mid \cap \cap \Vdash$ Handle.

24.548.01 Retraction-Thread Plugger, exchangeable

Bowman Probes, buttoned, 13 cm , German Silver


## Luniatschek



Miller Bone- \& Alveolotomy File

Parallel cut, 17.5 cm

31.760.11

Wire Cutting Pliers,
max. 0.7 mm ,
TC inserts,
12.5 cm

31.178.17 16.5 cm

Korkhaus Wire and Ligature Pliers

Mirrors for Interoral Photography

Titanium-coated front surface for very clear picture.


### 24.058.01

Mirror for adults, palatal pictures, width 6.8 cm


### 24.058.03

Mirror for lateral pictures,
width 3.5 cm
24.058.02

Mirror for children, palatinal pictures, width 5.5 cm

Mirror for lingual
pictures,
width 5.4 cm


Mead Hammer with exchangeable Teflon inserts, 19 cm

41.500.17 Hammer, lead-filled, Ø $20 \mathrm{~mm}, 140 \mathrm{~g}, 16.5 \mathrm{~cm}$
41.500.17M Hammer, massive, $\varnothing 20 \mathrm{~mm}, 130 \mathrm{~g}, 16.5 \mathrm{~cm}$


### 41.501.01

with exchangeable plastic inserts,
$\varnothing 25 \mathrm{~mm}$, light metal handle, by Dr. Vollmer

## Hammer, Ferrozell

Big hammer lying perfectly in the hand. Due to its (woodlike) material consistency, it offers a superior feeling in osteotomizing. No feel of metal, no loosening plastic inserts - You always have the feeling of hitting perfectly and of regulating the pressure and the speed...
A true miracle of dental surgery and a must for each OT Set - not only for "big" surgeons!





Bone Splitting System
by Dr. Vollmer \& Dr. Valentin

A successful implantation primarily depends on sufficient bone in the region of the alveolar process and especially on the quality of the bone. Only a stable bone structure can guarantee a safe anchorage of the implant.

In addition to modern augmentation methods, the bone splitting technique is becoming more and more important.

The principle is based on the creation of a L
$\square$
$\square$ similar alveolar cavity in the maxillary crest with a good potential of regeneration.
For this indication, the experienced implantologists Dr. Vollmer and Dr. Valentin have developed exactly adapted system components for different anatomical situations in co-operation with the company

## HELIMUT ZAPF

### 47.099.50

Bone Splitting System
by Dr. Vollmer \& Dr. Valentin


## Bone Splitting System

 by Dr. Vollmer \& Dr. ValentinAt first, the maxillary crest which has become too small due to atrophy is being separated in its longitudinal direction by diamond discs. Thereafter, it is split carefully by means of chisels. In doing so, the lateral cortical bone lamellae are preferably displaced in labial direction.


After these preparatory steps, small wedges are inserted in the gap. In each case, two wedges are used as placeholders for the drilling of the implant bed and the insertion of the implant.

While drilling, the bone lamellae are reliably prevented from springing back. Upon insertion of the implants and removal of the inter-implantatory wedges, the remaining gaps can be filled with augmentation material in order to allow an augmentation and, in opportune cases, an immediate and simultaneous implantation.

47.949.12 Pointed Chisel 6 mm

Hammer
 exchangeable plastic inserts $\varnothing 25 \mathrm{~mm}$

Separating Discs


Wedge Applicator

## Inter-Implantatory Wedges



### 47.099.31

Wedge $2 \mathrm{~mm} /$ 2.2 mm , green

47.099.32

Wedge 2 mm / 3.5 mm , red

47.099.33

Wedge $3 \mathrm{~mm} /$
2.2 mm , yellow

47.099 .34

Wedge $3 \mathrm{~mm} /$ 3.5 mm , blue

## Bone Fitting Set

by Dr. Hohl \& Dr. Hildebrand

Bone chisels are used to gain bone chips, to shape bone structures and to widen bones from cranial side. The pointed chisels are used for the first widening of the maxillary crest. The flat chisels smoothen and shape bone structures.

47.949.95

Bone Fitting Set:



## Bone Condensing Set <br> nach Dr. Hohl \& Dr. Hildebrand

During implant preparation, osteotomes are used instead of rotating instruments as they do not cause any loss of bone substance. They come with concave or rounded tool ends.
As a result of condensing local bone material, they maintain the bone substance, thus providing an optimised primary stability of the inserted implants. The lateral and apical condensation of the bone is achieved by pressing, turning and, as the case may be, by using a hammer for tapping the osteotomes into the bone.

47.949.90

Bone Condensing Set:
round

47.949.03 ( 2.8 - 3.3 mm )

## Osteotome Set

### 47.940.00

Osteotome Set, straight

### 47.940.01

Osteotome Set, angulated
always including

### 85.180.00

Washtray 1/1,
for max. 16 hand instruments incl. 2 silicone rubbers and instrument retainer, $275 \times 178 \times 24 \mathrm{~mm}$


Widener straight
(1)
()
 $\varnothing 5.0$ straight (for 5.0)
47.940.60 $\varnothing 6.0$ straight (for 6.0)

Widener angulated
(I)
47.941 .50
$\varnothing 5.0$ angulated (for 5.0)
(I)
47.941 .60 $\varnothing 6.0$ angulated (for 6.0)

| ( | 47.943.20 | $\varnothing 2.0$ (for 2.0) |
| :---: | :---: | :---: |
| ( | 47.943.28 | $\varnothing 2.3$ / 2.8 (for 2.8 / 3.3) |
|  | 47.943.33 | $\varnothing 2.8$ / 3.3 (for 3,3/3,8) |
| ( | 47.943.38 | $\varnothing 3.4$ / 3.8 (for 4.3) |
| (3) | 47.943.43 | $\varnothing 3.9$ / 4.3 (for 5.0 / 6.0) |

convex angulated

### 47.945.20

$\varnothing 2.0$ (for 2.0)47.945.28 Ø 2.3 / 2.8 (for $2.8 / 3.3$ )47.945.33 Ø $2.8 / 3.3$ (for $3.3 / 3.8$ )47.945.38 $\varnothing 3.4$ / 3.8 (for 4.3)47.944.38 Ø 3.4 / 3.8 (for 4.3)
(I)
47.944.43 $\varnothing 3.9$ / 4.3 (for 5.0 / 6.0)


## Hollow Cylinder Osteotomes by Dr. Vollmer \& Dr. Valentin

With the ejector, which will positioned at the distal end, the gained bone material can be implanted efficiently in another place. Comparable with solid osteotomes it comes to a condensing of the bone in order to get a better primary stability for the implant in a spongy-bone region.


## Back Action Chisel

Modified as Bone Scraper in different widths, to gain autologous bone during operation.


## Bone Scraper

Winning of autologous bone transplantation.

In the oral surgery bone replacements and bone structures are often combined with autologous bone pieces during augmentations in order to use their osteoinductive effect. The Bone Scraper is the perfect instrument for the easy and quick winning of autologous bone structures. It enables you to scrape, collect and transplant the patient's own bone. Everything can be done without the usage of any bone filter, trephine bur, saw or bone mill.

The blade makes a winning of cortical and spongiose bone possible. The bone is collected in a chamber during the scraping and at the same time the bone is being mixed with blood. The bone material can be implanted directly out of the Bone Scraper which has been sterilized before.

47.957.00 $\varnothing 10 \mathrm{~mm}$, ZEPF-Line, in closed position, 15.6 cm

Open position, the bone material can easily be taken out of the chamber


## Spare blades

## 3D One Step Augmentation \& Implantation

 by Dr. Bernd GiesenhagenIn co-operation with Dr.Giesenhagen, the company HELITUT ZEPF has developed a new Set for the One Step Vertical Augmentation with ring-shaped bone transplants.

The aim of this development is an accelerated implant treatment. Thereby, the security of the implantological success as well as the convincing result for the patient and the user have priority. In many cases, this new augmentation method can be used to build up the bone base for the insertion of one or more implants.

Particularly suitable for the vertical augmentation of the highly atrophied and distal mandible (pic. 2). With this newly introduced technique, perfectly fitting ringshaped bone transplants are removed from the chin-, retro-molar region or from the palatal area (pic. 1) by means of trephines and fixed immediately in the receiving area with a screw implant.


Dr. Bernd Giesenhagen, the inventor of this procedure, and HELInUT ZEPF have selected a special range of instrumentation for precise and time-saving steps of treatment in order to ensure an optimal function.

## Application

The local cortical bone structure with spongious parts of vital cells guarantees a safe fixation with short healing time.

The filling of possibly existing cavities is usually made by spongious chips taken from the donor area or by bone substitutes.

For an additional coverage of the augmented area with a barrier membrane we recommend our HELIMUT ZEPF Augmentation Kit 47.966.00.


## 

47.520.23

Adenoid Curette $\varnothing 3 \mathrm{~mm}$


Trephines, short

| $08.910 .13 S$ | inner $\varnothing 5 \mathrm{~mm}$ |
| :--- | :--- |
| 08.910 .08 S | inner $\varnothing 6 \mathrm{~mm}$ |
| 08.910 .09 S | inner $\varnothing 7 \mathrm{~mm}$ |
| $\mathbf{0 8 . 9 1 0 . 1 0 S}$ | inner $\varnothing 8 \mathrm{~mm}$ |
| 08.910 .11 S | inner $\varnothing 9 \mathrm{~mm}$ |




Trephines, with fixation support

| $08.910 .13 F$ | inner $\varnothing 5 \mathrm{~mm}$ |
| :--- | :--- |
| 08.910 .08 F | inner $\varnothing 6 \mathrm{~mm}$ |
| $\mathbf{0 8 . 9 1 0 . 0 9 F}$ | inner $\varnothing 7 \mathrm{~mm}$ |
| $\mathbf{0 8 . 9 1 0 . 1 0 F}$ | inner $\varnothing 8 \mathrm{~mm}$ |
| $\mathbf{0 8 . 9 1 0 . 1 1 F}$ | inner $\varnothing 9 \mathrm{~mm}$ |



### 47.099.26

Metal Ring for Ring Applicator 47.099.25 - for holding bigger bone rings with $\varnothing 9 \mathrm{~mm}$

## Trephines

Trephines are used for a gentle and precise removal of an implant. They are used to win bone texture and to excavate implants accurately. The trephines are manufactured out of stainless steel. The grading is visibly laser-marked onto the burs and guarantees a secure depth orientation.

The windows in the body offer a better view for the excavation of the implants and make it easier to reject fragments. The bur stand offers a safe and perfectly clean storing and easy positioning through a snap-in system.
The marking of the rack allows a fast and uncomplicated identification of the trephines.

85.070 .01 8.5 $\times 5.0 \mathrm{~cm}$
for 6 burs, shaft $\varnothing 2.35 \mathrm{~mm}$
85.070.05 $8.5 \times 4.5 \mathrm{~cm}$
for 6 short burs, shaft $\varnothing 2.35 \mathrm{~mm}$

|  | Ø Inside | $\varnothing$ Outside | Teeth | Body Length | Grading |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 08.910.01 | 1.7 mm | 2.3 mm | 7 | 22 mm | 7/10/13/16 |
| 08.910.02 | 2.3 mm | 2.8 mm | 7 | 22 mm | 7/10/13/16 |
| 08.910.03 | 2.8 mm | 3.3 mm | 9 | 22 mm | 7/10/13/16 |
| 08.910.04 | 3.3 mm | 3.8 mm | 9 | 22 mm | 7/10/13/16 |
| 08.910.05 | 4.0 mm | 4.5 mm | 11 | 22 mm | 7/10/13/16 |
| 08.910.06 | 4.3 mm | 4.8 mm | 11 | 22 mm | 7/10/13/16 |
| 08.910.07 | 4.8 mm | 5.8 mm | 9 | 22 mm | 7/10/13/16 |
| 08.910.13 | 5.0 mm | 6.0 mm | 11 | 22 mm | 7/10/13/16 |
| 08.910.08 | 6.0 mm | 7.0 mm | 12 | 22 mm | 7/10/13/16 |
| 08.910.09 | 7.0 mm | 8.0 mm | 18 | 22 mm | 7/10/13/16 |
| 08.910.10 | 8.0 mm | 9.0 mm | 18 | 22 mm | 7/10/13/16 |
| 08.910.11 | 9.0 mm | 10.0 mm | 18 | 22 mm | 7/10/13/16 |
| 08.910.12 | 10.0 mm | 11.0 mm | 19 | 22 mm | 7/10/13/16 |

08.912.75

|  | Ø Inside | Shaft |
| :--- | :--- | :--- |
| Description |  |  |
| $\mathbf{0 8 . 9 1 1 . 3 0}$ | $\mathbf{3 . 0} \mathrm{mm}$ | $2.35 \times 15 \mathrm{~mm}$ |
| $\mathbf{0 8 . 9 1 2 . 5 0}$ | 5.0 mm | Trephine short |
| $\mathbf{0 8 . 9 1 2 . 7 5}$ | $\mathbf{7 . 5 \mathrm { mm }}$ | $2.35 \times 15 \mathrm{~mm}$ |
| $\mathbf{0 8 . 9 1 2 . 1 0}$ | 10.0 mm | Trephine short |
| $\mathbf{y y y y}$ | $2.35 \times 15 \mathrm{~mm}$ | Trephine short |

Mucosa Membrane Punches suitable for hand piece (Dimensions are the inner diameter)

85.070.05 Suitable Bur Stand
for 6 Mucosa Membrane Punches


| $\mathbf{0 8 . 9 2 0 . 0 3}$ | $\varnothing 3.0 \mathrm{~mm}$ | 08.920 .06 |
| ---: | ---: | ---: |
| $\mathbf{0 8 . 9 2 0 . 0 4}$ | $\varnothing 4.0 \mathrm{~mm}$ | $\mathbf{0 8 . 9 2 0 . 1 3}$ |
| $\mathbf{0 8 . 9 2 0 . 0 5}$ | $\varnothing 5.0 \mathrm{~mm}$ |  |

## ZEPF Bone Crusher

This Bone Crusher introduces a wellexperienced alternative to the bone mill which requires considerably more effort. Insert the bone piece into the crusher and use the pestle in order to crush the bone. If necessary, you may additionally use the hammer 41.509.00.


### 47.955 .00

Bone Crusher, Body, Sleeve, Pestle, Baseplate Ø 20 mm, stainless steel

### 47.955.10

Teflon Support for Bone Crusher
After using the hammer, turn the pestle $90^{\circ}$ and crush again. With this movement the cutting edge is turned on the bone. After that, the desired result should be achieved.

## Bone Mill Forceps

## For gaining autogenic bone material.

In order to correct bone defects, an intraoral harvesting of bone is often necessary. Pieces of bone may be gained with trephines or chisels. It is the aim of the Bone Mill Forceps to cut bone material into small pieces so that a maximum volume of bone chips can be achieved. The "grainy" consistency of bone chips created will ensure that it is adapted most favourably to osseous embedding.

### 47.958.03

Handle Bar with Screw
47.958.01

Upper Titanium Milling Part

47.958.04

Lower Titanium Milling Part, rotating

## Advantages of the

 Bone Mill Forceps:- Titanium Bone Mill Inserts
- Mill Inserts are detachable and exchangeable
- no loss of bone material
- conform to the RKI guidelines because of easy cleaning
- specially designed new forceps, which allow parallel closing of the working parts, which allows a maximum milling result
- stop screw avoids direct contact of the milling parts, due to this protection the milling parts will last


### 47.958.00

ZEPF Bone Mill Forceps, Titanium Milling Part, demountable longer


## ZEPF Bone Mill

Bone Mill, to crush autologous bones. To correct bone defects, often an interior bone removing on another place is necessary. Bigger bone pieces or boneblocks can be removed by using trephines. The ZEPF Bone Mill allows to crush bone in order to produce the greatest possible volume of bone graft. The grainy consistence of the produced bone graft guarantees an optimal adaption on the bone.

The extension bar which can be adapted on the rotary handle facilitates an optimized power transmission and torque. The new Bone Mill with helical toothed milling part makes milling easier.

Advantages of the HELINUT ZEPF Bone Mill:

- easy handling
- quick assemby / disassembly without additional tools
- no loss of bone material (even in the case of small quantities)
- easy cleaning

Sinus Elevators
by Dr. Meiselbach

The 3 Sinus Elevators by Dr. Meiselbach enable a gentle and atraumatic sinus floor elevation in all areas.

Due to their special shaping the Elevators are an ideal addition to the Universal Sinus Instruments.

41.848.51 Sinus Elevator 1 by Dr. Meiselbach, 2.3 mm , blunt

41.848.52 Sinus Elevator 2 by Dr. Meiselbach, $3.0 \mathrm{~mm} / 2.3 \mathrm{~mm}$, blunt
41.848.53 Sinus Elevator 3 by Dr. Meiselbach, 2.3 mm , blunt
41.868.07 Plugger by Kirsch, Titanium ZEPF-Line,

Sinus 7, double-ended, 17.5 cm , Spoon $8 \times 10$


Universal Sinus Instruments

For implantological treatment in the maxilla, in case of missing vertical bone in the direction of sinus maxillaris.

## Advantages:

- angled instruments ergonomically and anatomically optimised
- preparation and lifting the sinus mucosa possible in an atraumatic way
- effective working possible due to a wide range of different angles

Sinus Lift Instrument Set
for microscopically guided elevation of the sinus bottom Dr. Shakibaie-M. incl. $1 \times$ washbasket 85.195 .00 and instruments illustrated on page 07-16 /17

## Microsurgical Sinus Lift Instruments

For microscopically guided elevation of the sinus bottom by Dr. Behnam Shakibaie-M.

For the development of the new microsurgical sinus lift instruments by Dr. Shakibaie-M., we reverted to the approved conventional shapes of sinus lift instruments.

The new instruments are approx. 60\% smaller, they were sharpened and the surface was abraded. Under corresponding optical magnification and illumination of the operation field (operation microscope or magnifying glass), those features offer the following essential advantages:

- The reduction of the instrument size allows the preparation of a minimalized antral window without restricting the qualities of elevation or augmentation.
- The sharpening of the instruments allows a precise initial fracture of the bone layer which is as thin as parchment. The initial fracture is possible as soon as the window is prepared by rotating the instrument, without injuring the Schneider's membrane.
- The delicate coarseness of the surface of the instruments prevents the unpleasant reflection of light from the operating microscope or the magnifying glass.

In addition, the working tips of the instruments were bent in accordance with the reduced sinus lift window.

Finally, the instruments were also numbered and colorcoded to allow an easy, chronological use.

Thus, the surgeon is able to increase the safety during elevation of the sinus bottom and to apply this technique in a minimally invasive way for the patient.

Pictures by Dr. Behnam Shakibaie-M.

Microsurgical Sinus Lift Instruments by Dr. Shakibaie-M.

### 41.847.00

Sinus Lift Instrument Set for microscopically guided elevation of the sinus bottom double-ended, by Dr. Shakibaie-M. contains following components:

## ]mak. Zद्वF 41847.08 Made in Germany (ein7/07 by Dr. Shahibain-M

41.847.08 Sinus Lift Instrument \# 1, sharp, 2.9 / 2.4 mm , green

41.847.01 Sinus Lift Instrument \# 2, sharp, 2.9 / 2.9 mm, black

41.847.05 Sinus Lift Instrument \# 3, sharp, $2.8 / 2.9 \mathrm{~mm}, 45^{\circ}$ curved, blue

InaH. zepF 41.847 .02 Made in Germany Cel07/07 by Dr. Shakibaie-M.


Duwh.Zare 41.647.03 Made in Germany ( $¢ 107 / 07$ by Dr. Shakibaie-M.
41.847.03 Sinus Lift Instrument \# 5, sharp, 3.6 / 4,2 mm, orange

## 

41.847.10 Sinus Lift Instrument \# 6, sharp, 2.3 / 2.3 mm, red

## InUH.ZEPF 41.847 .09 Mado in Germany Ce107/07 by Dr. Shakibaie-M.

### 08.906.014C

Diamond, 014C, round, $\varnothing 1.4$ mm


Diamond, 016C, round, $\varnothing 1.6$ mm


### 08.906.018C

Diamond, 018C, round, Ø 1.8 mm


Sinus Instrument Set by Dr. Stiller

Immediate sinus floor elevation
with or without bone cover

The Sinus Instrument Set has been developed together with Dr. Stiller and is particulary suited for difficult maxillary sinus structure (septa, maxillary pillars, scarred mutations in change with intact maxillary sinus mucosa).


## Advantages of the system:

- Instruments which are adapted and adjusted perfectly to the anatomical conditions in the maxillary sinus.
- Flexible working ends (instruments are pre-bended for the normal enantral anatomy).
- Two different kinds of instruments with blunt and sharp edges for dissecting mucosa on plane and rough internal surface of the maxillary sinus.


Mixing Cup, stainless steel, with plastic lid, $\varnothing 40 \mathrm{~mm}$

### 08.906.029C

Diamond, 029C, round, Ø 2.9 mm

### 08.906.023C

Diamond, 023C, round, Ø 2.3 mm

### 08.902.031HF

## Sinus Instrument Set by Dr. Kirsch

### 24.995.00

Complete Set incl. $1 \times$ washbasket with lid 85.195.00 and partition for Sinus Instrument Set by Dr. Kirsch

Washtrays and washbaskets,
Tray-in-Tray-System,
see pages 10-01 to 10-05!


85.251.03

Mixing Cup, stainless steel, with plastic lid, Ø 40 mm


Reasons for reconstruction of alveolar ridge occur due to defects in the jaw ridge areas. The most frequent causes are: Atrophy of the alveolar ridge and extraction defects.

Out of aesthetic reasons alone, in visible areas, these defects need to be reconstructed.

The augmentation is carried out with autologous bone and titanium foil. The bone implants are covered with a titanium foil after application. To avoid dislocation of the augmentation material below the membrane, the membrane is fixed with at least 2 pins.

The titanium pins with 3 mm or 5 mm length are taken out of the storage box by means of the applicators and pressed into the bones through the foil or membrane.


## Illustration





$\qquad$


## Article Description

47.966 .00

Augmentation Kit, consisting of:
Pin Membrane Probe, Pin Applicator,
Perforation Raspatory, Sinus 7 Instrument, Titanium Pin 3 mm (10 pieces) / 5 mm (5 pieces), Sinus Elevator \# 2, Mixing Cup, Storage Box

### 47.520.00

Pin Membrane Probe with lame design handle

| $\mathbf{4 7 . 5 2 0 . 0 1}$ |
| :--- |
| Pin Applicator |
| $\mathbf{4 7 . 5 2 0 . 0 2}$ |
| Perforation Raspatory |

### 47.520.03

Sinus 7 Instrument acc. to Kirsc, Spoon Ø 6.0 mm / flexible Plugger Ø 5.0 mm

### 47.560.03

Titanium Pin, 3 mm (10 pieces included in the set)
47.560.05

Titanium Pin, 5 mm (5 pieces included in the set)

### 47.847.11

Sinus Elevator \# 2, single-ended, flexible

### 85.251 .04

Mixing Cup, stainless steel, with plastic lid, Ø 4 cm

### 85.255 .00

Storage Box for 15 titanium pins

### 85.255 .02

Storage Box for 10 titanium pins, optional

Order Quantity

1 set

1 piece

1 piece

1 piece
$\qquad$
1 piece

5 pieces

5 pieces

1 piece
$\qquad$
1 piece

1 piece

1 piece

## ZEPF Augmentation Material Applicator



The Augmentation Material Applicator supports the fractional filling of the subantral space with particulate augmentation material. To compact the augmentation material you use a sinus plugger.

The instrument with diameter of 5 mm is loaded laterally.

The augmentation material can be applicated precisely with the injecting mechanism.
The instrument can be taken apart for optimal cleaning.

### 19.714.16

ZEPF Augmentation Material Applicator $\varnothing 5 \mathrm{~mm}$, straight,

19.714.01



## ZEPF Implant Holding Tweezers

Implants, abutments and small parts fall down and it is not possible anymore to take them up safely? With the Implant Holding Tweezers this unpleasant part during work is a thing of the past.

### 22.013.04

Implant Holding Tweezers,
titanium, 16 cm

Due to the optimized three-finger-grip it is assured to take up small parts safely. Titanium is the material of choice to prevent the surface of the implant and abutment from damages.


### 08.915 .02

outer Ø: 3.5 mm ; inner Ø: 2.55 mm ; length: 10 mm (10 pieces)


## ZEPF Flag Holder

Flag Holder for easy and rapid control of parallelism of implant drillings.


Flag Holder Kit consisting of 08.917.05-. 20 in bur stand

for front teeth and premolars

for molars

for checking a bridge; 2 piles as implant and bridge link, premolar

for checking a rack supply in the lower front with a minimal distance of 20 mm for both implants

# Krekeler Sliding Caliper 



Sliding Caliper acc. to Prof. Dr. med. dent. Gisbert Krekeler for measuring of implants with locating screw

By Prof. Dr. med. dent. Gisbert Krekeler
Modif. Dr. med. dent. Sven Marcus Beschnidt

The Sliding Calipers combine a variety of functions in one instrument, thus facilitating the positioning of implants and enlarging the precision.

The measuring rods have a thickness of exactly 1.5 mm and allow immediate control of the maximum diameter of the implant which has to be inserted. (In order to assure maximum stability, please chose the largest diameter). Scientific examinations proved that the wall of the bone should have a thickness of at least 1.5 mm in order to avoid bone resorption after implantation. If the sliding caliper with its two measuring rods is inserted in the interproximal gap and opened in such a way that the measuring rods touch the respective root of the neighbor teeth, the maximum possible diameter of the future implant can be read off from the vernier marked IN. The upper marking OUT shows the determined outside dimension.

The new locating screw, at the end of the caliper, allows a fixation of the measured result. This practice-oriented development represents a significant relief with regard to a more precise, quick and and secure work.


OUT shows the determined outside dimension ( $\varnothing 1.5 \mathrm{~mm}$ ), IN shows the inner diameter.


Locating screw for a safe fixation of the measured result.


The hole serves as drilling gauge and drilling guide. The marking allows the determination of the ridge.

Sliding Calipers and Metal Ruler


## Bone Caliper



### 31.691 .13

Bone Caliper for measuring the maxillary bone, radial scaling on the shanks of the ring handles, 13 cm




## Double-Action Instruments



The HELInUT ZEPF Double-Action Instruments are consisting of a Micro Needle Holder and a pair of Micro Forceps.

The instruments were technically modified in the region of the instrument lock. The usual parallel screw lock has been replaced by a new axially turned lock to reliably prevent the suture material from sticking to the needle holder during knotting.

## Advantages of the Double-Action Instruments

- double transmission to allow tactile handling
- made of special stainless steel
- needle holder with tungsten carbide insert to guarantee a long service life
- due to the round shape, the rotation is considerably facilitated, in particular during suturing, contrary to usual flat micro needle holders
- the turned design prevents threads from getting stuck


## onyx

## ZEPF Micro Scissors

Onyx-coated scissors offer a 3-5 times higher surface hardness. In combination with the "Supercut" grinding, this guarantees an extremely long product life and application as well as a very high precision and attrition resistance. The extraordinary surface smoothness is leading to an easy slide of the scissor blades even under highest strain.

Furthermore, the anti-glare surface avoids disturbing light deflections. The extremely smooth surface prevents adhesion of proteins.


Micro Scissors sharp /sharp, curved, $\mathbf{Z E P F F}$-Line, 17 cm
46.319.17 stainless steel
46.319.17TISC Onys

Suture Removal Scissors by Dentist Beck

## Spin Lock

The newly developed HELInUT ZEPF
Suture Removal Scissors are combining two functions in one instrument.

## Sectioning and Retaining

The curved micro scissors won recognition for periodontal microsurgery.
They are qualified for controlled cuts in the soft tissue and their main task is the sectioning of the suture (ill. 1).

They are curved for an ideal access to all oral regions. One blade of the scissors is micro-serrated to prevent the soft tissue and the thread from slipping off (ill. 2).

The new trademarked gripping function allows the scissors to be used for the sectioning of the suture and subsequent thread removal without requiring a second instrument (ill. 2).


### 46.319.17N

Suture Removal Scissors with retaining function for suture removal by Dentist Beck, micro-serrations, sharp / sharp, ZEPF-Line, curved, SpinLock, 17.5 cm

Needle Holder by Dr. Kirsch


Needle Holder by Dr. Kirsch,
lock, double spring,
SpinLock, 17.5 cm, TC

41.200.17TC-K straight

41.201.17TC-K
curved

## Spiotock

$\square$
41.010.17TC-M Macro Needle Holder 18 cm , TC
macro bit $11 \times 2.0 \mathrm{~mm}$, straight, ZEPF-Line, titanium, lock

## 4

What is TC ?

TC stands for "Tungsten Carbide", a material whose superior strength wear resistance and hardness are its major properties that distinguish it from conventional materials.

Micro Needle Holder
ZEPF-Line, with lock and protected inner spring, SpinLock, TC

41.200.15TC stainless steel, 15 cm
41.200.17TC stainless steel, 17.5 cm

41.201.15TC
41.201.17TC stainless steel, 15 cm stainless steel, 17.5 cm


## Micro Needle Holder



M

### 41.010.17TC Micro Needle Holder

TC, straight, $\overline{\mathbf{Z}} \mathbf{E P} \mathbf{F}-$-Line, lock, SpinLock, 17.5 cm


### 41.011.17TC Micro Needle Holder

TC, curved, ZEPTF-Line, lock, SpinLock, 18 cm


### 41.015.17

## Micro Needle Holder

Hold'n'Cut by PD Dr. Weng, combined with scissors, SpinLock, TC


The front part of the Hold'n'Cut Micro Needle Holder holds the end of the needle when entering the flap.


The front part of the needle holder, together with the micro surgical tweezers, holds the thread ends when knotting.


The back part of the Hold'n'Cut Micro Needle Holder offers scissors for the cutting of the thread without changing the instrument or needing any additional scissors.

Micro Forceps with Diamond Coating

Some forceps can also be ordered with diamond coated tips for better grip.


## Micro Forceps with Diamond Coating

Some forceps can also be ordered with diamond coated tips for better grip.


ImpacTray by PD Dr. Weng, Starnberg

The ImpacTray by PD Dr. Weng makes micro as well as macro surgical operations possible in implantology, periodontology and augmentation surgery.

The amount of necessary instruments is reduced to a minimum by developing and putting together an efficient mainly double-ended and partially exchangeable instrument set.

The set composition is illustrated on the following two pages.


24.114.00

Probe combination by PD Dr. Weng, Starnberg

desmodontal fibres, titanium

### 24.747.04 Prichard Raspatory

24.747.06 Kirkland \# 15/16, exchangeable
.

titanium, Z्EPFr-Line, 13 cm
46.007.00 Scalpel Handle, $\overline{\text { İRPr}}$-Line,


Capstan-Line, with Mirror 24.071.22

## Papilla Elevators



### 46.035.05 <br> PapillEx Papilla Elevator by PD Dr. Weng, Starnberg



The blunt working end of the PapillEx is lentiform and allows gentle elevation of the tip of the papilla by turning the instrument while positioned adjacently to the the cervical part of the tooth.
The sharp working end, which is slightly bigger, is used to remove the periosteum from the bone along the sulcular or vertical incision.
Both working ends are exchangeable and can be removed from the instrument shank if necessary.

46.035.00

Papilla Elevater to prepare fine soft tissue structures,
ZEPF-Line, exchangeable inserts, 17.5 cm

Micro Scalpel Handles zePF-Line, 13 cm


Micro Scalpel Blades for Micro Blade Holders, supplied in packs of 25 pieces
4 46.016.03 \# 63, sterile

ZEPF Soft Tissue Micro Instrument Basic Set

### 24.967.05

ZEPF Soft Tissue Micro Instrument Basic Set

### 85.180.00

Incl. washtray 1/1, with 2 instrument supports and 1 longitudal instrument retainer, dimensions: $275 \times 178 \times 24 \mathrm{~mm}$

## containing:

## 1) 22.810 .17

Tissue Forceps, straight, stainless steel,
ZEPF-Line, with guide pin, $1 \times 2$ teeth, 17.5 cm
(2) 41.200.17TC-K

Needle Holder by
Dr. Kirsch, straight, TC, lock, double spring,
SpinLock, 17.5 cm
(3)
41.864.13

Raspatory, ZEPF-Line
(4)
46.319.17

Suture Removal Scissors with micro-serrations sharp/sharp, curved, ZEPF-Line, stainless steel, 17 cm
(5) 46.013.00Z

Micro Surgical Scalpel Handle, ZEPF- Line, light version, titanium, 13 cm


## ZAPF Crown-Spreading Pliers

The H=LInUT ZEPF Crown-Spreading Pliers are perfectly designed for spreading of crowns without pressure on the root and neigbour tooth.

Sturdy, with a spring handle which holds the instrument securely in the hand.
A set screw keeps the jaws in perfect alignment.

### 19.277.01Z

Crown-Spreading Pliers by Bauer, modified DBGM, 14.5 cm

## Universal Forceps

These HELInUT ZEPF All-purpose Pliers should be on hand at any treatment unit. They may be used for securely grasping temporary plastic crowns, bridges, nerve instruments, stuck matrices, fixing inlays, setting interdental wedges, etc., and may be used on both upper and lower jaws.

Their tungsten carbide steel jaws provide a secure grip.

## ZEPF Tele-Grip <br> Easy and thus precise adjustment!

There is always a demand for a precise and above all a sensitive adjustment of a Tele-Grip, to avoid a high tension (damage caused by deformation) in critical situations.

The previous function was only partly given, especially in bigger spreading ranges it was only possible under restrictive conditions. Thus, the durability was affected due to the resulting thread damages.

The HELINUT ZEPF Tele-Grip has a movable threaded bearing. As a result, the adjusting screw can be aligned easily and in a most sensitive way throughout the setting range.
gently opening in every position

moveable thread bushings for a gentle and precise opening and adjusting without causing thread damages

Tele-Grip, Telescope Crown Forceps, curved, exchangeable, 15 cm

Inlay Forceps

### 19.274.60

Self-retaining Inlay Forceps, exchangeable jaws, 15 cm , incl. 10 pairs plastic jaws

19.274 .50

Inlay Forceps,
exchangeable jaws, 15 cm ,
incl. 10 pairs plastic jaws

Crown-Tractor Crown-Extraction Pliers with interchangeable plastic tips

Adjust the screw on the plier so that it fits nicely over the crown to be removed


After adjusting the plier, tips should be moistened with diamond powder


The crown can now be removed in a safe way

### 19.274.00

CROWN-TRACTOR Set "Exclusive" Extraction Pliers with thumbscrew detent and retaining spring, 16 cm
20 Plastic Polymer Tips,
10 g DIATRAC adhesive powder

### 19.274.01

CROWN-TRACTOR Set
"Economical" Extraction Pliers without thumbscrew detent and retaining spring, 16 cm

20 Plastic Polymer Tips, 10 g DIATRAC adhesive powder


Replacement Kit: 10 g DIATRAC adhesive powder, gamma irradiated and 40 Plastic Polymer Tips

## 09

Crown Butler

##  <br> 

## 品

### 19.275 .00

Crown-Butler, automatic crown
remover, incl. 2 inserts
19.275.01 and 19.275.02

Miller Crown Ring Remover


Miller
Crown Ring Remover
19.272.00
with 3 inserts
(\# 1-3)
and weight
19.272.10
with weight
19.273 .00
with 3 inserts
(\# 1-3),
weight and spring

For Temporary Bridges and Crowns


## Telecrown-Grip

These Telescoping-Jaw Pliers allow using three types of configuration in a single plier.
Their adjustable and rigid tips have a first-class, anatomically correct friction coefficient.

The design of the contacting surfaces of their diamondtipped jaws significantly extends jaw service life.
The choice of configurations allows adapting them to suit patients' anatomies.

diamond-tipped jaws with
exchangeable tips, 1 movable tip,
incl. Allan Key, 13 cm


### 31.185.04

Telecrown-Grip,
rigid, 2.35 mm , diamond-tipped jaws with exchangeable tips,
incl. Allan Key, 13 cm

## Spare Parts

## Modeling Instruments - Precision in Perfection

Quality MADE IN GERMANY for the quality-conscious technician.

28.161.13

Wax Carver, Fahnenstock, stainless steel, 12 cm


## 

## The Modular Hygiene System

Flexible, efficient and approved safe. The ZEPF -Care Universal Silicone Profile allows an easy placement of the instruments after a surgery. For sterilization and cleaning, the instruments are inserted in the profile according to their diameter and are immediately secured.

Additionally, we have equipped the ZEPF-Tray and BasketSystem with silicone base. Therefore the tray guarantees an anti-slip position and the stacking stability is improved at the same time.

Suitable for standardized sterilization containers, it's
 available in four different sizes for an ideal working potential. Placesaving, secure and very practical and with a removable lid.


Profile, low


## ZEPF cirstem $^{\text {arem }}$

The ZEPF -Care-System increases your efficiency, as you can assemble your trays in a process-oriented way and work accordingly.
You will meet the requirements of the RKI and the accident prevention regulation.
It doesn't matter whether you are cleaning your instruments manually or automatically.

Washtrays

$275 \times 178 \times 24$

## 

 (2)

## Advantages

- The meshes of the bottom and the lid are designed in a broad shape. Consequently dead zones are minimized.
- The diagonal profile of the mesh simplifies the identificaton of the parallel arranged instruments in the profile.
- The meshes on the edge of the tray are designed in a narrow shape and thus enhance the stability of the tray.
- The risk of injury is reduced.

Profile, high, universal

85.181.03
85.181.04
85.181.05
(3) 1 nair

Washbaskets

## 1313 1313!313


$\square$ $178 \times 135 \times 37$

## 


$\square$ $275 \times 86 \times 37$
แน山แณมщ
 143 (x)


#  <br> Profile, high, universal 

 (example see picture 1)
## a


flexible


## Arranged in a practiceoriented way

As a result of the high and low configuration of the profile sections, the instruments can be placed in a space-saving way and can be removed easily.

It is possible to place two instruments above each other in one profile section. Contact of the instruments should be avoided in order to prevent contact corrosion.

## Tip:

The following instrument combinations are possible should they contact each other:

- plastic / plastic $V$
- plastic / metal $V$
- titanium / titanium $V$
- titanium / metal $V$

In case of contact, the following instrument combination is not possible:

- metal / metal $\boldsymbol{X}$

The modular concept of the three different lengths can be tailored according to your request.

The 'universal profile' is compatible with the 'low profile' in order to ensure a secure hold of different instrument diameters and variations.

For special cases, we recommend the assembly of our press pad in the lid.

There are no limits set regarding design of your personalized tray.


Lid Instrument Fixation for wash basket fixing scissors / needle holders

85.182.08


ZEPF-Care Washbasket the Space Wonder

Example: equipped wash basket 1/1


## ZEPF|careu

## Aluminium <br> Sterilization Container in 5 Sizes

Through the integrated filter in the lid and the base the Sterilization Containers are suitable for all steam sterilization methods:

- fractionized vacuum method
- fractionized steam method
- gravitation method
- pre-vacuum method

Different dimensions and stackability allow easy handling and optimal organization. The containers can be used for storing sterile goods and also for disposing contaminated instruments.

The newly developed latch system prevents accidental opening of the container and assures a simplified handling for the sterilization preparation.

The optimized sealing system assures a safe fixing of the filter.

## Accessories

85.327 .50
85.327 .60

Paper Filter with indicator
$235 \times 118 \mathrm{~mm}$
PU 100 pieces

Teflon ${ }^{\circledR}$ permanent Filter $215 \times 145 \mathrm{~mm}$ PU 2 pieces



### 85.327 .70

Latch Seal for sterilization containers, plastic, blue, PU 100 pieces

Bottom and lid is perforated, optimized latch system, incl. 2 long-term textile filters Dimensions in mm :

## Outside:

Width 310 / Depth 190 / Height X

## Inside:

Width 280 / Depth 182 / Height X


## Dental-Tray Cassette DIN 13999

All Dental-Tray Cassettes are compatible to our Washtray and Washbasket System, shown on pages 10-02 to 10-04.


Drill holder inserts, assorted in 9 colors
(5 pieces ea. per packing unit)
85.183.40 with bigger inner diameter for piezo instruments, available only in black color.


### 85.145.00 <br> 85.145 .00

Norm-Tray-Cover 1/1, non perforated, $280 \times 180 \times 25 \mathrm{~mm}$

### 85.150.00

Norm-Tray-Bottom 1/1, perforated, $284 \times 183 \times 17 \mathrm{~mm}$

### 85.140.00

Norm-Tray-Bottom 1/1, non perforated, $284 \times 183 \times 19 \mathrm{~mm}$
85.142.20

Norm-Tray-Cover 1/2,
non perforated, $180 \times 140 \times 25 \mathrm{~mm}$

### 85.142.10

Norm-Tray-Bottom 1/2, perforated, $180 \times 140 \times 19 \mathrm{~mm}$

### 85.252.25

Medicine Cup, stainless steel, 25 ccm


Mixing Cup, stainless steel, with plastic lid, $\varnothing 4 \mathrm{~cm}$
85.251.03

Mixing Cup with Lid
85.251.10 Lid
85.251.13 Mixing Cup

### 85.251.04

Mixing Cup, stainless steel, with plastic lid, Ø 4 cm

System drill rack for max. 14 drills, incl. mixing cup with lid and silicone bushings


## Optimum Cleaning with

## ZEPF care

ZEPF-Care protects your instruments! As an instrument manufacturer, the company HELInUT ZEPF developed a product line for the optimum processing of dental instruments, in close cooperation with a renowned manufacturer of disinfectant and cleaning agents.

An underestimated part of the instruments in a dental practice is damaged during the daily hygiene cycle; sometimes the instruments are nearly completely destroyed.

## $8^{8: 1: 7 n}$ <br> AdCon

## Cleansing foam

for an intensive but not protein fixated pre-cleaning of all instruments

### 65.893 .00

Spray bottle, 500 ml


### 65.893.06

Packing unit: 6 bottles

AdCon is a surface-active and germ-reducing cleaning foam.

AdCon undercuts protein residues as well as body fluids. These particular characteristics prevent organic residues from drying as these residues could result in incrustation with crevice corrosion and pitting corrosion. By carrying out a pre-treatment with AdCon, the cleaning will be much more efficient and gentle - no matter if you clean your instruments manually or automatically!

AdCon is the ideal solution for users who have to consider longer periods before cleaning. 80\% of the instruments' damages are due to crevice corrosion and pitting corrosion. The reasons are protein incrustations. So far, aggressive cleaning agents have been used in order to remove incrustations which resulted in several other disadvantages.
With AdCon such handling errors are actively prevented. The cleanings become more gentle and efficient. The lifetime of your instruments will be considerably improved.
Sray botle, 500 m

The potential reasons are widely spread and need a close observation. The use of abrasive cleaning agents, metal brushes, the failure to comply with specified timelines etc. are only an extract of possible reasons.

In order to support the practice team or the hygiene manager in particular, we now offer care products for an optimal and safe processing with our products

## AdCon, NCDC-Cleanser and

 ProActive-Cleanser.For further information:
zepf-dental.com



Medical White Oil

## Medical White Oil

in a dispensing bottle and in an oil pen

### 24.950.10

Dispensing bottle, 50 ml
24.950.12

Oil Pen, 12 ml


ProActiveCleanser
liquid acid concentrate
in a dispensing bottle

### 65.895.00

Dispensing bottle, 1 L , gives you
20 to 100 litres ready-to-use solution

### 65.895.04

Packing unit: 4 bottles

The ProActive-Cleanser is an acid high performance cleanser for all dental and surgical instruments.
One litre of the liquid concentrate gives you 50-100 litres ready-to-use solution. As acid basic cleaning or heavy contamination 20 litres.

The ProActive Solution is ideal for pre-cleansing of new products. In a higher concentration as acid basic cleanser to clean already incrusted residues, e.g. protein, flash rust, lime and oil.

ProActive activates the chrome components of high-alloy medical steel, whereby the development of the natural chromium oxide layer is accelerated and intensified. The instruments are therefore again resistant to corrosion. Cleaning and passivation in one step.


PROBLEM: Incrustations
Incrustations occur and the cleaning is additionally harder, because of an exceeded immersion time after the usage of the instruments.

## SOLUTION: Pre-treatment

Please treat the instruments with AdCon the latest 15 minutes after usage in order to prevent incrementations.

## PROBLEM: Metal brushes

They destroy the passive layer of the instrument surface!

SOLUTION: Brushes with nylon bristles



Alphabetical Index Pages 11-02 to 11-08

Numerical Index Pages 11-07 to 11-19


Terms of
Delivery and Payment Page 11-20



| C |  |
| :---: | :---: |
| Cannula, Syringe | 06-43 |
| Carpal Root Elevator | 05-55 |
| Cartridge Syringe | 06-43 |
| Carving Instrument | 09-07 |
| Cawood-Minnesota Cheek Retractor | $r$ 06-09 |
| Cement Spatula | 04-09 |
| Cheek and Lip Rectractor | 06-10-06-11 |
| Cheek Retractor | 06-09, 06-15 |
| Chisel | 07-02, 07-04 |
| Chompret Syndesmotome | 05-56 |
| Cleaning ZEPF-Care | 10-10-10-11 |
| Cleveland Bone Cutting Forceps | 06-27 |
| Cleveland Bone Rongeur Forceps | 06-25 |
| Cohen Cohen Soft Tissue Nipper | 06-28 |
| Cohen Soft Tissue Nipper | 06-28 |
| Columbia Universal Curette | 03-16-03-17 |
| Composite Instrument | 04-02-04-05 |
| Composite Set | 04-01 |
| CompoSMOOTH | 04-01. 04-04-04-05 |
| Condenser | 04-08 |
| Cooley Micro Forceps | 08-07 |
| Cotton Plugger | 06-44 |
| Cow Horn Probe | 02-07 |
| Cream Cannula | 06-43 |
| Crile-Wood Needle Holder | 06-41 |
| Crown Butler | 09-04 |
| Crown Forceps | 09-02 |
| Crown Holding Pliers | 09-05 |
| Crown Lever | 09-05 |
| Crown Remover automatic | 09-04 |
| Crown Ring Remover | 09-04 |
| Crown Scissors | 06-38, 06-45 |
| Crown-Extraction Pliers | 09-03 |
| Crown-Spreading Pliers | 09-01 |
| Crown-Tractor | 09-03 |
| Cryer Root Elevator | 05-59 |
| Curette Gracey bionik | 03-10, 03-14-03-15 |
| Curette Titanium | 03-18-03-19 |
| Curette Universal bionik 03-12, | 03-16-03-18, 03-32 |
| Curette Universal stainless steel | 03-24 |
| D |  |
| De Bakey Forceps | 06-02 |
| Dean Scissors | 06-35 |
| Denhart Mouth Retractor | 06-11 |
| Derf Needle Holder | 06-41 |
| Desmotome | 05-44-05-45 |
| Diamond Drill | 07-17, 07-19 |
| Diamond-Tipped Jaws | 09-06 |
| Diatrac | 09-03 |
| Disimpaction Forceps | 06-11 |
| Double-Action Instrument | 08-02 |
| Dressing Forceps | 06-06, 08-08 |
| Drill Rack | 10-08 |
| Drilling Sleeve | 07-25 |
| Drop-Control Blade Holder | 06-29 |
| E |  |
| Easy Matrix Setter | 04-23 |
| Elevator | 06-21 |
| Endo Handle | 03-07 |
| Endo Set | 03-32-03-33 |
| Endodontic Mirror | 03-35 |
| Excavator | 04-10-04-11 |
| Exlog Extracting Forceps | 05-33-05-36 |
| Exlog RoBa Extracting Forceps | 05-37-05-40 |


| Extracting Forceps | $05-07-07-40$ |
| :--- | ---: |
| Extracting Forceps, American Pattern | $05-20-05-25$ |
| Extraction System Benex | $05-01-05-06$ |
| F |  |
| Fahnenstock | $09-07$ |
| Fedi Periodontal File | $03-28$ |
| Filling Instrument Composite | $04-02-04-05$ |
| Finger Protector | $06-08$ |
| Finishing Clamp | $04-24$ |
| Flag Holder Set | $07-25$ |
| FLEX-EX Power Periotome | $05-47$ |
| Flohr Root Elevator | $05-54$ |
| Forceps | $06-02-06-05,08-08$ |
| Forceps Anatomic | $06-02$ |
| Forceps Atraumatic | $06-03-06-04$ |
| Forceps Micro Cooley | $08-07$ |
| Forceps Surgical | $06-02-06-05$ |
| Fracture Splint | $06-46$ |
| Frazier Suction Cannula | $06-43$ |
| Freer Periosteal Elevator | $06-21$ |
| Furcation Probe | $03-07$ |

G

| Gärtner Root Elevator 05-50-05-56 |  |
| :--- | ---: |
| Gerald Forceps | $06-05$ |

Giesenhagen One Step Augmentation \& Implantation 07-08-07-09
Gillies Forceps 06-05

Gingiva-Retractor
Gingivectomy Knive
Glickmann Raspatory
Goldman-Fox Gingivectomy Knive
Goldman-Fox Scissors
Gracey Curette bionik
Gracey Curette stainless steel
Gracey M5 Titanium Curette
Gross Dressing Forceps

## H

Haemostatic Forceps
Halstead Micro Haemostatic Forceps
Halstead-Mosquito Haemostatic Forceps
Hammer
Handle bionik M2.5
Handle bionik M4 $\times 0.5$
Handle Comparison M2.5
Handle Comparison M4 $\times 0.5$
Handle Universal M2.5
Handle Universal M4 $\times 0.5$ Hartmann Haemostatic Forceps
Heidbrink Root-Splinter Elevator
Heidemann Spatula
Hemingway Sharp Spoon
Hildebrand Luxation Elevator Hilger Retractor
Hirschfeld Periodontic Files
Hohl Hildebrand Bone Condensing Set
Hohl Hildebrand Bone Fitting Set
Hold'n'Cut Micro Needle Holder
Hollow Cylinder Osteotome
Hygienist Scaler bionik
Hygienist Scaler stainless steel
Hylin Root Elevator

06-06-06-07
06-07
06-07
06-48, 07-03
02-02, 03-03
02-02
02-03
03-04
02-05
03-02
06-07
05-52
04-09
05-48, 06-20
05-41-05-46
02-05, 06-08
03-26
07-04
07-04
08-06, 08-10
07-06
03-13, 03-20
03-25
05-56

| ID Plug | 03-02 |
| :---: | :---: |
| Impac Tray by PD Dr. Weng | 08-09-08-11 |
| Implant Holding Tweezers | 07-25 |
| Impression Tray | 04-12-04-18 |
| Inlay Forceps | 09-03 |
| Instrument Rack universal | 07-21 |
| Iris Scissors | 06-34 |
| Ivory | 04-06 |
| Ivory Rubber Dam Set | 04-19 |
| J |  |
| Jones Towel Clamp | 06-07 |
| Joseph Scissors | 06-34 |
| Junior Matrix Retainer | 04-22 |
| K |  |
| Kaplan Mini Scaler | 03-20 |
| Kapogianni Vestibulum Retractor | 06-19 |
| Kelly Haemostatic Forceps | 06-06 |
| Kelly Scissors | 06-36 |
| Kerrison Antrum Punch Forceps | 06-28 |
| Kirkland Gingivectomy Knive | 03-26 |
| Kirsch Micro Needle Holder | 08-04 |
| Kirsch Sinus Lift Set | 07-20-07-21 |
| Kirsch Spoon | 07-19 |
| Kirsch Spoon Instrument | 07-13 |
| Klingex Safety Blade Remover | 06-31 |
| Kocher Haemostatic Forceps | 06-07 |
| Kocher Retractor | 06-18 |
| Kocher-Langenbeck Retractor | 06-14 |
| Korkhaus Wire and Ligature Pliers | 06-46 |
| Krekeler Sliding Caliper | 07-264 |
| L |  |
| La Grange Scissors | 06-34 |
| Langenbeck Finger Protector | 06-08 |
| Langenbeck Retractor | 06-15 |
| Langenbeck-Ryder Needle Holder | 06-39 |
| Langer Universal Curette | 03-17 |
| Langer Universal Curette stainless stee | el 03-24 |
| Lichtenberg-Ryder Needle Holder | 06-39 |
| Ligature Scissors | 06-37 |
| Lindo-Levien Root Elevator | 05-53 |
| Lipcare Mouth Mirror | 02-04 |
| Locklin Scissors | 06-36 |
| London College Tweezers 02 | 02-08-02-09, 03-34 |
| Lucas Scraper | 05-46, 06-20 |
| Luer Bone Rongeur Forceps | 06-25 |
| Luer-Lock Syringe | 06-43 |
| Luniatschek Cotton Plugger | 06-44 |
| M |  |
| M5 Deep Scaling Set | 03-11 |
| M5 Titanium Curette | 03-19 |
| Macro Needle Holder | 08-05 |
| Magnetic Stick | 03-30 |
| Mathieu Needle Holder | 06-39 |
| Matrix Band | 04-22 |
| Matrix Retainer | 04-22 |
| Maty Cheek and Lip Rectractor | 06-10 |
| Maty Suction Tube | 07-19 |
| Mayo-Hegar Needle Holder | 06-40 |
| McCall Universal Curette | 03-16 |
| Mead Hammer | 06-48 |
| Medical White Oil | 10-11 |
| Medicine Cup | 10-08 |



0
Obwegeser Retractor 06-12, 06-17-06-18
Obwegeser Soft Tissue Hook
03-28-03-29
Ochsenbein Periodontal Chisel
07-08-07-09
06-33, 08-03
07-05-07-06

| P |  |
| :--- | ---: |
| PA Probe | $03-06-03-09$ |
| Papilla Elevator | $06-32,08-12$ |
| Papillex | $06-32$ |
| Pear-shaped Plugger | $04-06$ |
| Pedodontic Extracting Forceps | $05-26,05-32$ |


| Peet Splinter Forceps | 03-35, 04-25 |
| :---: | :---: |
| Perforation Raspatory | 07-23 |
| Periodontal Chisel | 03-28-03-29 |
| Periodontal Probe | 03-08 |
| Periodontal Probe exchangeable | 03-06-03-07, 03-09 |
| Periodontal Set | 03-13 |
| Periodontic Files | 03-26 |
| Periosteal Elevator | 06-21 |
| Periotome | 05-47-05-49 |
| Periotome, exchangeable inserts | 05-48 |
| Photography Mirror | 06-47 |
| Pin Applicator | 07-23 |
| Pin Membrane Probe | 07-23 |
| Plain Milling Cutter | 07-09 |
| Plate Forceps | 03-34 |
| Plugger | 04-06 |
| Potts Smith Forceps | 06-05 |
| Power Periotome | 05-47 |
| Preparation Scissors | 06-35-06-36 |
| Press Pad | 10-05 |
| Prichard Raspatory | 06-23 |
| ProActive-Cleanser | 10-11 |
| Probe | 02-07, 06-44 |
| Probe Tip interchangeable | 02-05 |
| Profile | 10-02-10-03 |
| Profile, individual | 10-05 |
| Prophylaxis Set 'Bionik' | 03-13 |
| Prophylaxis Set 'M5 Deep Scaling' | 03-11 |
| Prophylaxis Set 'Universal' | 03-12 |
| Prophylaxis-Set 'Gracey' | 03-10 |
| Proximator Xtool Elevator | 05-43-05-45 |
| Q |  |
| QuickFix | 03-02 |
| R |  |
| Ragnell-Davis Retractor | 06-13 |
| Rake Retractor | 06-12 |
| Ramus Retractor | 06-16 |
| Raspatory | 06-23 |
| Raspatory / Periosteal Elevator | 06-21-06-24 |
| Removing Pliers | 09-05 |
| Rescue-Line | 05-15 |
| Retraction-Thread Plugger | 06-44 |
| Retractor | 02-05, 06-08-06-19 |
| Retractor and Mouth Mirror | 02-06 |
| Revolving Chisel Vienna Pattern | 05-58 |
| Rhodes Back Action Chisel | 03-29 |
| Ring Applicator | 07-09 |
| Ring Breaker | 07-09 |
| RoBa Extracting Forceps | 05-27-05-32 |
| RoBa Pedodontic Extracting Forceps | s 05-32 |
| Rochester-Pean Haemostatic Forceps | ss 06-07 |
| Rongeurs Bone Rongeur Forceps | 06-26 |
| Root- and Splinter Forceps | 05-17 |
| Root Canal Explorer | 03-36 |
| Root Canal Plugger | 03-36-03-37 |
| Root Canal Spreader | 03-36 |
| Root Elevator | 05-50-05-57, 05-59 |
| Root Elevator No. 195 | 05-53 |
| Root-Splinter Elevator | 05-52 |
| Rowe Disimpaction Forceps | 06-11 |
| Rubber Dam Forceps | 04-19 |
| Rubber Dam Frame | 04-19 |
| Rubber Dam Punch Forceps | 04-19 |
| Ruler | 07-27 |
| Ruskin Bone Rongeur Forceps | 06-26 |



| Zaufal-Jansen Bone Rongeur Forceps | $06-26$ |
| :--- | ---: |
| Zepf, Original Sharpening Stone | $03-31$ |
| ZEPF-Care Instrument Processing | $10-09$ |
| ZEPF-Care Processing | $10-10-10-11$ |
| ZEPF-Care System | $10-01-10-08$ |

Numerical Index
Pages 11-10 to 11-20

All medical devices according to the Medical Device Directive 93/42/EEC are marked with CE in the numerical index. All CE marked medical devices that have to be provided with the notified body are marked with * next to the CE mark, in the numerical index. The notified body is available through our latest valid certificates. These are available per request or download from zepf-dental.com.


| 08．902．031HF | 07－19 | く ＊ |
| :---: | :---: | :---: |
| 08．906．014C | 07－17 | く ＊$^{*}$ |
| 08．906．016C | 07－17 | く ＊$^{\text {c }}$ |
| 08．906．018C | 07－17 | く ＊$^{\text {c }}$ |
| 08．906．023C | 07－19 | く $\epsilon^{*}$ |
| 08．906．029C | 07－19 | （ $\epsilon^{*}$ |
| 08.910 .01 | 07－10 | C ＊ |
| 08．910．02 | 07－10 | く ＊ |
| 08.910 .03 | 07－10 | C ＊ |
| 08．910．04 | 07－10 | く ＊$^{*}$ |
| 08.910 .05 | 07－10 | （ $\epsilon^{*}$ |
| 08.910 .06 | 07－10 | く ＊$^{*}$ |
| 08.910 .07 | 07－10 | く ＊ |
| 08．910．08 | 07－10 | C ＊ |
| 08．910．08F | 07－09 | く ＊ |
| 08．910．08S | 07－09 | く ＊ |
| 08．910．09 | 07－10 | C ${ }^{*}$ |
| 08．910．09F | 07－09 | C ＊ |
| 08．910．09S | 07－09 | く ＊ |
| 08.910 .10 | 07－10 | C ＊$^{*}$ |
| 08．910．10F | 07－09 | C ＊ |
| 08．910．10S | 07－09 | C $\epsilon^{*}$ |
| 08.910 .11 | 07－10 | C ＊$^{\text {＊}}$ |
| 08．910．11F | 07－09 | c ${ }^{*}$ |
| 08．910．11S | 07－09 | C ＊ |
| 08.910 .12 | 07－10 | C ＊$^{\text {＊}}$ |
| 08.910 .13 | 07－10 | く ＊ |
| 08．910．13F | 07－09 | C $\epsilon^{*}$ |
| 08．910．13S | 07－09 | C ＊ |
| 08.911 .30 | 07－10 | く ＊ |
| 08.912 .10 | 07－10 | く ＊ |
| 08．912．50 | 07－10 | く ＊$^{*}$ |
| 08.912 .75 | 07－10 | C ＊ |
| 08.915 .02 | 07－25 | C ＊$^{\text {＊}}$ |
| 08.915 .05 | 07－25 | c ${ }^{*}$ |
| 08．917．00 | 07－25 | c $\epsilon$ |
| 08.917 .05 | 07－25 | C $\epsilon$ |
| 08.917 .07 | 07－25 | c $\epsilon$ |
| 08．917．13 | 07－25 | C $\epsilon$ |
| 08．917．20 | 07－25 | C $\epsilon$ |
| 08．920．03 | 07－10 | く ＊ |
| 08.920 .04 | 07－10 | く ＊ |
| 08．920．05 | 07－10 | C ＊$^{\text {c }}$ |
| 08.920 .06 | 07－10 | C ${ }^{*}$ |
| 08.920 .13 | 07－10 | C ＊$^{\text {＊}}$ |
| 08.920 .16 | 07－10 | c ${ }^{*}$ |
| 10.002 .00 | 05－09 | c $\epsilon$ |
| 10.007 .00 | 05－09 | C $\epsilon$ |
| 10.013 .00 | 05－10 | C $\epsilon$ |
| 10.017 .00 | 05－09 | C $\epsilon$ |
| 10.018 .00 | 05－09 | C $\epsilon$ |
| 10.022 .00 | 05－11 | C $\epsilon$ |


| 10.033 .01 | 05－10 | c $\epsilon$ |
| :---: | :---: | :---: |
| 10.051 .01 | 05－10 | c $\epsilon$ |
| 10．067．01 | 05－10 | c $\epsilon$ |
| 10．067．17 | 05－09 | c $\epsilon$ |
| 10．067．18 | 05－09 | c $\epsilon$ |
| 10．073．01 | 05－10 | c $\epsilon$ |
| 10.079 .00 | 05－11 | c $\epsilon$ |
| 10.087 .00 | 05－11 | c $\epsilon$ |
| 10.681 .07 | 05－26 | c $\epsilon$ |
| 10．681．13 | 05－26 | c $\epsilon$ |
| 10．681．22 | 05－26 | c $\epsilon$ |
| 10.681 .29 | 05－26 | c $\epsilon$ |
| 10.681 .33 | 05－26 | c $\epsilon$ |
| 10.681 .51 | 05－26 | c $\epsilon$ |
| 10.681 .52 | 05－26 | c $\epsilon$ |
| 10.685 .07 | 05－32 | c $\epsilon$ |
| 10．685．13 | 05－32 | c $\epsilon$ |
| 10．685．22 | 05－32 | c $\epsilon$ |
| 10．685．29 | 05－32 | c $\epsilon$ |
| 10.685 .33 | 05－32 | c $\epsilon$ |
| 10．685．51 | 05－32 | c $\epsilon$ |
| 10.685 .52 | 05－32 | C $\epsilon$ |
| 12．002．00Z | 05－09 | C $\epsilon$ |
| 12．007．00Z | 05－09 | c $\epsilon$ |
| 12．013．00Z | 05－10 | c $\epsilon$ |
| 12．017．00Z | 05－09 | c $\epsilon$ |
| 12．018．00Z | 05－09 | c $\epsilon$ |
| 12．021．90Z | 05－12 | C $\epsilon$ |
| 12．022．00Z | 05－11 | c $\epsilon$ |
| 12．033．01Z | 05－10 | c $\epsilon$ |
| 12．034．00Z | 05－12 | c $\epsilon$ |
| 12．034．00Z | 05－18 | C $\epsilon$ |
| 12．034．01Z | 05－12 | c $\epsilon$ |
| 12．034．07Z | 05－14 | c $\epsilon$ |
| 12．034．08Z | 05－14 | c $\epsilon$ |
| 12．035．00Z | 05－12 | c $\epsilon$ |
| 12．035．00Z | 05－18 | C |
| 12．035．01Z | 05－12 | C $\epsilon$ |
| 12．035．07Z | 05－14 | c $\epsilon$ |
| 12．035．08Z | 05－14 | c $\epsilon$ |
| 12．036．00Z | 05－13 | C $\epsilon$ |
| 12．036．00Z | 05－19 | C $\epsilon$ |
| 12．036．01Z | 05－13 | C $\epsilon$ |
| 12．036．01Z | 05－19 | c $\epsilon$ |
| 12．036．07Z | 05－14 | c $\epsilon$ |
| 12．036．08Z | 05－14 | c $\epsilon$ |
| 12．044．15Z | 05－15 | c $\epsilon$ |
| 12.045 .15 | 05－15 | c $\epsilon$ |
| 12．045．15Z | 05－15 | c $\epsilon$ |
| 12．045．15ZS | 05－15 | C $\epsilon$ |
| 12．045．15ZS | 05－31 | c $\epsilon$ |
| 12．045．15ZSTI | 05－31 | c $\epsilon$ |


| 12．051．01Z | 05－10 | c $\epsilon$ |
| :---: | :---: | :---: |
| 12.051 .15 | 05－15 | c $\epsilon$ |
| 12．051．15Z | 05－15 | c $\epsilon$ |
| 12．051．15ZS | 05－15 | C $\epsilon$ |
| 12．051．15ZS | 05－31 | c $\epsilon$ |
| 12．051．15ZSTI | 05－31 | c $\epsilon$ |
| 12．059．00Z | 05－17 | C $\epsilon$ |
| 12．067．01Z | 05－10 | C $\epsilon$ |
| 12．067．17Z | 05－09 | c $\epsilon$ |
| 12．067．18Z | 05－09 | C $\epsilon$ |
| 12.067 .90 | 05－15 | C $\epsilon$ |
| 12．067．90Z | 05－15 | C $\epsilon$ |
| 12．067．95Z | 05－13 | C $\epsilon$ |
| 12．067．95Z | 05－19 | C $\epsilon$ |
| 12．073．01Z | 05－10 | C $\epsilon$ |
| 12．079．00Z | 05－11 | c $\epsilon$ |
| 12.079 .90 | 05－15 | c $\epsilon$ |
| 12．079．90Z | 05－15 | C $\epsilon$ |
| 12．079．95Z | 05－13 | C $\epsilon$ |
| 12．079．95Z | 05－19 | C $\epsilon$ |
| 12．087．00Z | 05－11 | C $\epsilon$ |
| 12．213．00Z | 05－30 | C $\epsilon$ |
| 12．213．00ZD | 05－30 | C $\epsilon$ |
| 12．213．00ZTI | 05－30 | c $\epsilon$ |
| 12．217．00Z | 05－31 | C $\epsilon$ |
| 12．217．00ZD | 05－31 | C $\epsilon$ |
| 12．217．00ZTI | 05－31 | c $\epsilon$ |
| 12．218．00Z | 05－31 | C $\epsilon$ |
| 12．218．00ZD | 05－31 | C $\epsilon$ |
| 12．218．00ZTI | 05－31 | C $\epsilon$ |
| 12．221．90Z | 05－31 | C $\epsilon$ |
| 12．221．90ZD | 05－31 | C $\epsilon$ |
| 12．221．90ZTI | 05－31 | C $\epsilon$ |
| 12．222．00Z | 05－31 | C $\epsilon$ |
| 12．222．00ZD | 05－31 | c $\epsilon$ |
| 12．222．00ZTI | 05－31 | C $\epsilon$ |
| 12．234．07Z | 05－30 | C $\epsilon$ |
| 12．234．07ZD | 05－30 | C $\epsilon$ |
| 12．234．07ZTI | 05－30 | C $\epsilon$ |
| 12．234．08Z | 05－30 | C $\epsilon$ |
| 12．234．08ZD | 05－30 | C $\epsilon$ |
| 12．234．08ZTI | 05－30 | c $\epsilon$ |
| 12．235．07Z | 05－30 | C $\epsilon$ |
| 12．235．07ZD | 05－30 | C $\epsilon$ |
| 12．235．07ZTI | 05－30 | C $\epsilon$ |
| 12．235．08Z | 05－31 | C $\epsilon$ |
| 12．235．08ZD | 05－31 | C $\epsilon$ |
| 12．235．08ZTI | 05－31 | C $\epsilon$ |
| 12．236．07Z | 05－30 | C $\epsilon$ |
| 12．236．07ZD | 05－30 | C $\epsilon$ |
| 12．236．07ZTI | 05－30 | C $\epsilon$ |
| 12．236．08Z | 05－30 | C $\epsilon$ |


| 12.236.08ZD | 05-30 | C $\epsilon$ |
| :---: | :---: | :---: |
| 12.236.08ZTI | 05-30 | C $\epsilon$ |
| 12.267.01Z | 05-31 | C $\epsilon$ |
| 12.267.01ZD | 05-31 | C $\epsilon$ |
| 12.267.01ZTI | 05-31 | c $\epsilon$ |
| 12.279.90Z | 05-30 | C $\epsilon$ |
| 12.279.90ZD | 05-30 | C $\epsilon$ |
| 12.279.90ZTI | 05-30 | C $\epsilon$ |
| 12.300 .08 | 05-01 | C $\epsilon$ |
| 12.300 .08 | 05-04 | C $\epsilon$ |
| 12.300 .11 | 05-03 | C $\epsilon$ |
| 12.300 .11 | 05-05 | C $\epsilon$ |
| 12.300 .15 | 05-04 | C $\epsilon$ |
| 12.300 .16 | 05-04 | C $\epsilon$ |
| 12.300 .17 | 05-04 | C $\epsilon$ |
| 12.300 .20 | 05-04 | c $\epsilon$ |
| 12.300 .30 | 05-05 | C $\epsilon$ |
| 12.300 .35 | 05-05 | C $\epsilon$ |
| 12.300 .45 | 05-03 | C $\epsilon$ |
| 12.300 .45 | 05-05 | C $\epsilon$ |
| 12.300 .47 | 05-05 | C $\epsilon$ |
| 12.300 .60 | 05-05 | C $\epsilon$ |
| 12.300 .65 | 05-05 | C $\epsilon$ |
| 12.300 .70 | 05-05 | C $\epsilon$ |
| 12.300 .75 | 05-05 | C $\epsilon$ |
| 12.300 .80 | 05-05 | C $\epsilon$ |
| 12.302 .00 | 05-02 | C $\epsilon$ |
| 12.302 .00 | 05-03 | C $\epsilon$ |
| 12.302 .00 | 05-04 | C $\epsilon$ |
| 12.302 .01 | 05-04 | C $\epsilon$ |
| 12.303 .00 | 05-02 | C $\epsilon$ |
| 12.303 .00 | 05-03 | C $\epsilon$ |
| 12.303 .00 | 05-04 | C $\epsilon$ |
| 12.522.15Z | 05-16 | C |
| 12.522.16Z | 05-16 | C |
| 12.701.00Z | 05-18 | C |
| 14.001 .00 | 05-20 | C $\epsilon$ |
| 14.001 .01 | 05-20 | C $\epsilon$ |
| 14.010 .09 | 05-20 | C |
| 14.010 .11 | 05-25 | C $\epsilon$ |
| 14.016 .00 | 05-21 | C |
| 14.017 .00 | 05-21 | C $\epsilon$ |
| 14.018 .15 | 05-21 | C |
| 14.018 .16 | 05-20 | C $\epsilon$ |
| 14.023 .00 | 05-20 | C $\epsilon$ |
| 14.053 .15 | 05-21 | C |
| 14.053 .16 | 05-21 | C |
| 14.065 .00 | 05-22 | C $\epsilon$ |
| 14.069 .00 | 05-22 | C |
| 14.088 .15 | 05-22 | C |
| 14.088 .16 | 05-22 | C |
| 14.101 .00 | 05-22 | C $\epsilon$ |


| 14.150 .00 | 05-23 | c $\epsilon$ |
| :---: | :---: | :---: |
| 14.150.00D | 05-23 | c $\epsilon$ |
| 14.150 .05 | 05-23 | C $\epsilon$ |
| 14.150 .10 | 05-24 | C $\epsilon$ |
| 14.150.11 | 05-24 | c $\epsilon$ |
| 14.151 .00 | 05-23 | c |
| 14.151.00D | 05-23 | C $\epsilon$ |
| 14.151.01 | 05-23 | c $\epsilon$ |
| 14.151 .05 | 05-23 | C $\epsilon$ |
| 14.151 .10 | 05-25 | c $\epsilon$ |
| 14.151.11 | 05-24 | C $\epsilon$ |
| 14.210 .05 | 05-24 | c $\epsilon$ |
| 14.217 .00 | 05-24 | c $\epsilon$ |
| 14.222 .00 | 05-25 | c $\epsilon$ |
| 14.222.11 | 05-25 | C |
| 14.700.01 | 05-16 | C $\epsilon$ |
| 14.700.10Z | 05-17 | c $\epsilon$ |
| 14.701.10Z | 05-17 | c $\epsilon$ |
| 15.021 .90 | 05-35 | c $\epsilon$ |
| 15.034 .00 | 05-34 | C $\epsilon$ |
| 15.034.01 | 05-34 | C $\epsilon$ |
| 15.035 .00 | 05-34 | C $\epsilon$ |
| 15.035.01 | 05-34 | C $\epsilon$ |
| 15.036 .00 | 05-35 | c $\epsilon$ |
| 15.036.01 | 05-35 | C $\epsilon$ |
| 15.045 .15 | 05-35 | C $\epsilon$ |
| 15.051.15 | 05-35 | C $\epsilon$ |
| 15.067.90 | 05-34 | c $\epsilon$ |
| 15.079 .90 | 05-35 | c $\epsilon$ |
| 15.213 .00 | 05-39 | C $\epsilon$ |
| 15.213.00D | 05-39 | C $\epsilon$ |
| 15.217 .00 | 05-39 | C $\epsilon$ |
| 15.217.00D | 05-39 | C $\epsilon$ |
| 15.218 .00 | 05-39 | C $\epsilon$ |
| 15.218.00D | 05-39 | C $\epsilon$ |
| 15.222 .00 | 05-39 | C $\epsilon$ |
| 15.222.00D | 05-39 | C |
| 15.234 .07 | 05-38 | C $\epsilon$ |
| 15.234.07D | 05-38 | C $\epsilon$ |
| 15.234 .08 | 05-38 | C $\epsilon$ |
| 15.234.08D | 05-38 | C $\epsilon$ |
| 15.235 .07 | 05-38 | C $\epsilon$ |
| 15.235.07D | 05-38 | C $\epsilon$ |
| 15.235 .08 | 05-38 | C $\epsilon$ |
| 15.235.08D | 05-38 | C $\epsilon$ |
| 15.236 .07 | 05-39 | C $\epsilon$ |
| 15.236.07D | 05-39 | C $\epsilon$ |
| 15.236 .08 | 05-39 | C $\epsilon$ |
| 15.236.08D | 05-39 | C $\epsilon$ |
| 15.267.01 | 05-39 | C $\epsilon$ |
| 15.267.01D | 05-39 | C |
| 15.279.90 | 05-39 | C $\epsilon$ |


| 15.279.90D | 05-39 | C $\epsilon$ |
| :---: | :---: | :---: |
| 17.001 .00 | 05-50 | C |
| 17.001 .01 | 05-50 | c $\epsilon$ |
| 17.001.02 | 05-50 | C $\epsilon$ |
| 17.001 .03 | 05-50 | C $\epsilon$ |
| 17.001 .10 | 05-50 | c $\epsilon$ |
| 17.001.11 | 05-50 | c $\epsilon$ |
| 17.001.12 | 05-50 | C $\epsilon$ |
| 17.001 .13 | 05-50 | C $\epsilon$ |
| 17.006 .01 | 05-55 | c $\epsilon$ |
| 17.006 .02 | 05-55 | C $\epsilon$ |
| 17.006 .03 | 05-55 | C |
| 17.006 .04 | 05-55 | C $\epsilon$ |
| 17.007 .00 | 05-46 | C |
| 17.007 .01 | 05-42 | c $\epsilon$ |
| 17.007 .01 | 05-46 | C |
| 17.007 .02 | 05-42 | c $\epsilon$ |
| 17.007 .02 | 05-46 | C |
| 17.007 .03 | 05-42 | c $\epsilon$ |
| 17.007 .03 | 05-46 | C $\epsilon$ |
| 17.007 .04 | 05-43 | C $\epsilon$ |
| 17.007 .04 | 05-46 | C $\epsilon$ |
| 17.007 .05 | 05-43 | C $\epsilon$ |
| 17.007 .05 | 05-46 | C $\epsilon$ |
| 17.007 .06 | 05-43 | C $\epsilon$ |
| 17.007 .07 | 05-43 | C $\epsilon$ |
| 17.008 .01 | 05-43 | C $\epsilon$ |
| 17.008 .02 | 05-44 | C $\epsilon$ |
| 17.008 .03 | 05-44 | C $\epsilon$ |
| 17.008 .04 | 05-44 | C $\epsilon$ |
| 17.008 .05 | 05-44 | C $\epsilon$ |
| 17.008 .06 | 05-44 | C $\epsilon$ |
| 17.008 .08 | 05-45 | C $\epsilon$ |
| 17.008 .09 | 05-45 | C |
| 17.008 .10 | 05-45 | C $\epsilon$ |
| 17.008 .11 | 05-45 | C $\epsilon$ |
| 17.008 .90 | 05-45 | C $\epsilon$ |
| 17.010.02 | 05-54 | C $\epsilon$ |
| 17.010 .03 | 05-54 | C $\epsilon$ |
| 17.013 .00 | 05-50 | c $\epsilon$ |
| 17.013 .01 | 05-50 | C $\epsilon$ |
| 17.013 .02 | 05-50 | c $\epsilon$ |
| 17.014 .00 | 05-56 | C $\epsilon$ |
| 17.014 .01 | 05-56 | C $\epsilon$ |
| 17.014 .02 | 05-56 | c $\epsilon$ |
| 17.020 .01 | 05-56 | C |
| 17.020 .02 | 05-56 | C $\epsilon$ |
| 17.045 .00 | 05-48 | C $\epsilon$ |
| 17.045 .04 | 05-48 | C |
| 17.045 .05 | 05-48 | C |
| 17.051 .01 | 05-52 | C $\epsilon$ |
| 17.051 .02 | 05-52 | C $\epsilon$ |


| 17.051 .03 | 05-52 | c $\epsilon$ |
| :---: | :---: | :---: |
| 17.052 .01 | 05-52 | c $\epsilon$ |
| 17.052 .02 | 05-52 | c $\epsilon$ |
| 17.052 .03 | 05-52 | c $\epsilon$ |
| 17.053 .02 | 05-52 | $c \epsilon$ |
| 17.053 .03 | 05-52 | C $\epsilon$ |
| 17.055 .01 | 05-52 | c $\epsilon$ |
| 17.055 .02 | 05-52 | C $\epsilon$ |
| 17.055 .03 | 05-52 | C $\epsilon$ |
| 17.056 .01 | 05-52 | c $\epsilon$ |
| 17.056 .02 | 05-52 | C $\epsilon$ |
| 17.056 .03 | 05-52 | c $\epsilon$ |
| 17.100 .08 | 05-55 | c $\epsilon$ |
| 17.100 .09 | 05-55 | C $\epsilon$ |
| 17.100 .10 | 05-55 | c $\epsilon$ |
| 17.100 .11 | 05-55 | c $\epsilon$ |
| 17.100 .35 | 05-54 | C $\epsilon$ |
| 17.100 .39 | 05-59 | c $\epsilon$ |
| 17.100 .40 | 05-59 | C $\epsilon$ |
| 17.100 .46 | 05-54 | C $\epsilon$ |
| 17.100 .57 | 05-54 | C $\epsilon$ |
| 17.100 .60 | 05-54 | C $\epsilon$ |
| 17.100 .61 | 05-54 | c $\epsilon$ |
| 17.100 .62 | 05-54 | C $\epsilon$ |
| 17.101 .60 | 05-54 | C $\epsilon$ |
| 17.101 .61 | 05-54 | C $\epsilon$ |
| 17.101 .62 | 05-54 | c $\epsilon$ |
| 17.195 .00 | 05-53 | C $\epsilon$ |
| 17.200 .01 | 05-51 | c $\epsilon$ |
| 17.200 .02 | 05-51 | C $\epsilon$ |
| 17.200 .03 | 05-51 | C $\epsilon$ |
| 17.201 .01 | 05-51 | C $\epsilon$ |
| 17.201 .02 | 05-51 | C $\epsilon$ |
| 17.220 .00 | 05-55 | c $\epsilon$ |
| 17.220 .01 | 05-55 | c $\epsilon$ |
| 17.220 .02 | 05-55 | C $\epsilon$ |
| 17.220 .69 | 05-55 | C $\epsilon$ |
| 17.301 .00 | 05-57 | c $\epsilon$ |
| 17.302 .00 | 05-57 | C $\epsilon$ |
| 17.303 .00 | 05-57 | C $\epsilon$ |
| 17.304 .00 | 05-57 | C $\epsilon$ |
| 17.336 .15 | 05-59 | C $\epsilon$ |
| 17.336 .16 | 05-59 | C $\epsilon$ |
| 17.337 .15 | 05-59 | C $\epsilon$ |
| 17.337 .16 | 05-59 | c $\epsilon$ |
| 17.395 .01 | 05-53 | c $\epsilon$ |
| 17.395 .02 | 05-53 | C $\epsilon$ |
| 17.395 .03 | 05-53 | C $\epsilon$ |
| 17.396 .01 | 05-53 | c $\epsilon$ |
| 17.396 .02 | 05-53 | C $\epsilon$ |
| 17.396 .03 | 05-53 | C $\epsilon$ |
| 17.410.03 | 05-56 | C $\epsilon$ |


| 17.677 .16 | 05-57 | c |
| :---: | :---: | :---: |
| 17.700 .00 | 07-06 | C $\epsilon$ |
| 17.700 .40 | 07-06 | c $\epsilon$ |
| 17.700 .45 | 07-06 | C |
| 19.010 .00 | 04-19 | C $\epsilon$ |
| 19.015 .00 | 04-19 | C |
| 19.015 .50 | 04-19 | C |
| 19.037 .01 | 04-19 | C |
| 19.060 .00 | 04-22 | C $\epsilon$ |
| 19.061 .01 | 04-22 | C $\epsilon$ |
| 19.061 .02 | 04-22 | C $\epsilon$ |
| 19.061 .03 | 04-22 | c $\epsilon$ |
| 19.061 .13 | 04-22 | C |
| 19.062 .00 | 04-22 | C |
| 19.063 .01 | 04-22 | C |
| 19.099 .00 | 04-21 | C $\epsilon$ |
| 19.125 .00 | 04-19 | C $\epsilon$ |
| 19.080 .12 | 04-23 | C |
| 19.080.12D | 04-23 | C |
| 19.080.12M | 04-23 | C $\epsilon$ |
| 19.199 .00 | 04-20 | C $\epsilon$ |
| 19.200 .00 | 04-04 | C $\epsilon$ |
| 19.201 .11 | 04-04 | c $\epsilon$ |
| 19.201 .21 | 04-04 | C $\epsilon$ |
| 19.201 .31 | 04-04 | C $\epsilon$ |
| 19.202 .00 | 04-01 | C $\epsilon$ |
| 19.202 .00 | 04-04 | C $\epsilon$ |
| 19.270 .50 | 06-11 | C $\epsilon$ |
| 19.272 .00 | 09-04 | C $\epsilon$ |
| 19.272 .01 | 09-04 | C $\epsilon$ |
| 19.272 .02 | 09-04 | C $\epsilon$ |
| 19.272 .03 | 09-04 | C $\epsilon$ |
| 19.272 .10 | 09-04 | C $\epsilon$ |
| 19.273 .00 | 09-04 | C $\epsilon$ |
| 19.274 .00 | 09-03 | c $\epsilon$ |
| 19.274 .01 | 09-03 | c $\epsilon$ |
| 19.274 .13 | 09-03 | c $\epsilon$ |
| 19.274 .50 | 09-03 | C $\epsilon$ |
| 19.274 .60 | 09-03 | C $\epsilon$ |
| 19.275 .00 | 09-04 | C $\epsilon$ |
| 19.275 .01 | 09-04 | c $\epsilon$ |
| 19.275 .02 | 09-04 | C $\epsilon$ |
| 19.275 .04 | 09-04 | C $\epsilon$ |
| 19.277.01Z | 09-01 | C $\epsilon$ |
| 19.279 .00 | 09-05 | C $\epsilon$ |
| 19.281.15TC | 04-25 | C $\epsilon$ |
| 19.281.15TC | 09-02 | C $\epsilon$ |
| 19.281 .16 | 09-05 | C $\epsilon$ |
| 19.509 .10 | 03-35 | C $\epsilon$ |
| 19.509 .20 | 03-35 | C $\epsilon$ |
| 19.512 .03 | 03-37 | C $\epsilon$ |
| 19.512.04 | 03-37 | C $\epsilon$ |


| 19.512 .06 | 03-37 | c $\epsilon$ |
| :---: | :---: | :---: |
| 19.512 .09 | 03-37 | c $\epsilon$ |
| 19.512.13 | 03-37 | c $\epsilon$ |
| 19.512.14 | 03-37 | C $\epsilon$ |
| 19.512.16 | 03-37 | c $\epsilon$ |
| 19.512.19 | 03-37 | c $\epsilon$ |
| 19.513 .03 | 03-36 | c $\epsilon$ |
| 19.513 .04 | 03-36 | C $\epsilon$ |
| 19.513 .05 | 03-36 | c $\epsilon$ |
| 19.516 .00 | 03-36 | C $\epsilon$ |
| 19.521 .00 | 03-36 | C $\epsilon$ |
| 19.561 .13 | 03-34 | C $\epsilon$ |
| 19.572 .00 | 06-44 | C $\epsilon$ |
| 19.572.12 | 06-44 | C $\epsilon$ |
| 19.572 .34 | 06-44 | C $\epsilon$ |
| 19.600 .18 | 06-44 | C $\epsilon$ |
| 19.600 .25 | 06-44 | C $\epsilon$ |
| 19.641 .02 | 06-43 | C $\epsilon$ |
| 19.641 .03 | 06-43 | C |
| 19.649 .15 | 06-42 | C |
| 19.649.30 | 06-42 | c $\epsilon$ |
| 19.649 .50 | 06-42 | C $\epsilon$ |
| 19.651 .13 | 06-42 | C |
| 19.651 .13 | 07-19 | C |
| 19.651 .14 | 06-42 | c $\epsilon$ |
| 19.651 .14 | 07-19 | C |
| 19.651 .15 | 06-42 | C |
| 19.651.15M | 06-42 | C $\epsilon$ |
| 19.651.15M | 07-17 | C |
| 19.651 .30 | 06-42 | C $\epsilon$ |
| 19.700 .00 | 06-43 | C $\epsilon$ |
| 19.700 .05 | 06-43 | C $\epsilon$ |
| 19.700 .10 | 06-43 | C $\epsilon$ |
| 19.710 .18 | 06-43 | c $\epsilon$ |
| 19.714 .01 | 07-24 | C $\epsilon$ |
| 19.714 .02 | 07-24 | C $\epsilon$ |
| 19.714 .03 | 07-24 | C $\epsilon$ |
| 19.714.04 | 07-24 | C $\epsilon$ |
| 19.714.16 | 07-24 | C $\epsilon$ |
| 19.750 .00 | 06-43 | C $\epsilon$ |
| 19.762 .00 | 06-43 | C $\epsilon$ |
| 22.011 .03 | 02-08 | C |
| 22.013 .04 | 07-25 | C $\epsilon$ |
| 22.014 .03 | 02-08 | C $\epsilon$ |
| 22.024 .03 | 02-09 | C |
| 22.024 .04 | 02-09 | C $\epsilon$ |
| 22.025 .03 | 02-09 | C $\epsilon$ |
| 22.025 .03 | 08-11 | C |
| 22.025.03D | 02-09 | C |
| 22.031 .08 | 03-34 | C $\epsilon$ |
| 22.051 .03 | 02-08 | C $\epsilon$ |
| 22.100 .15 | 04-22 | c $\epsilon$ |


| 22.101 .15 | 04-22 | c $\epsilon$ |
| :---: | :---: | :---: |
| 22.106 .01 | 06-02 | C $\epsilon$ |
| 22.107 .21 | 03-34 | C $\epsilon$ |
| 22.200 .12 | 06-02 | C $\epsilon$ |
| 22.200 .13 | 06-02 | C $\epsilon$ |
| 22.200 .14 | 06-02 | C $\epsilon$ |
| 22.200 .15 | 06-02 | C $\epsilon$ |
| 22.200.20 | 06-02 | C $\epsilon$ |
| 22.230 .13 | 06-02 | C $\epsilon$ |
| 22.230.14 | 06-02 | C $\epsilon$ |
| 22.270 .12 | 06-05 | C |
| 22.272 .15 | 06-04 | C $\epsilon$ |
| 22.278 .12 | 06-02 | C $\epsilon$ |
| 22.278 .15 | 06-02 | C $\epsilon$ |
| 22.279 .15 | 06-02 | C $\epsilon$ |
| 22.281.15TC | 04-25 | C $\epsilon$ |
| 22.310 .12 | 06-05 | C $\epsilon$ |
| 22.310 .15 | 06-05 | C $\epsilon$ |
| 22.400 .13 | 06-03 | C $\epsilon$ |
| 22.400 .14 | 06-03 | C $\epsilon$ |
| 22.408 .11 | 06-03 | C $\epsilon$ |
| 22.408 .13 | 06-03 | C $\epsilon$ |
| 22.408 .14 | 06-03 | C $\epsilon$ |
| 22.408 .16 | 06-03 | C $\epsilon$ |
| 22.408 .20 | 06-03 | C $\epsilon$ |
| 22.416 .15 | 06-05 | C $\epsilon$ |
| 22.430 .17 | 06-05 | C $\epsilon$ |
| 22.450 .18 | 06-05 | C $\epsilon$ |
| 22.480 .12 | 06-03 | C $\epsilon$ |
| 22.480 .15 | 06-03 | C $\epsilon$ |
| 22.481 .12 | 06-03 | C $\epsilon$ |
| 22.481 .15 | 06-03 | C $\epsilon$ |
| 22.486 .12 | 06-05 | C $\epsilon$ |
| 22.486 .15 | 06-05 | C $\epsilon$ |
| 22.488 .12 | 06-04 | C $\epsilon$ |
| 22.488 .15 | 06-04 | C $\epsilon$ |
| 22.488 .20 | 06-05 | C $\epsilon$ |
| 22.489 .00 | 06-04 | C $\epsilon$ |
| 22.489.00M | 06-04 | C $\epsilon$ |
| 22.489.00M | 08-11 | C $\epsilon$ |
| 22.489 .01 | 06-04 | C $\epsilon$ |
| 22.523 .13 | 03-35 | C $\epsilon$ |
| 22.523 .13 | 04-25 | C $\epsilon$ |
| 22.523.90D | 03-35 | C $\epsilon$ |
| 22.523.90D | 04-25 | C $\epsilon$ |
| 22.810 .17 | 08-07 | C $\epsilon$ |
| 22.810 .17 | 08-11 | C |
| 22.810 .17 | 08-13 | C $\epsilon$ |
| 22.810.17D | 08-07 | C $\epsilon$ |
| 22.811 .17 | 08-07 | C |
| 22.811.17D | 08-07 | C |
| 22.812 .17 | 08-08 | C $\epsilon$ |


| 22.814 .17 | 08-08 | c $\epsilon$ |
| :---: | :---: | :---: |
| 22.815 .17 | 08-07 | c $\epsilon$ |
| 22.816.17 | 08-07 | c $\epsilon$ |
| 22.820.17 | 08-08 | C $\epsilon$ |
| 22.820.17D | 08-08 | c $\epsilon$ |
| 22.820.17TC | 08-08 | c $\epsilon$ |
| 22.821 .17 | 08-08 | c $\epsilon$ |
| 22.821.17D | 08-08 | C $\epsilon$ |
| 22.824.17 | 06-03 | C $\epsilon$ |
| 22.830 .17 | 08-02 | c $\epsilon$ |
| 23.050 .10 | 06-07 | C $\epsilon$ |
| 23.051 .10 | 06-07 | c $\epsilon$ |
| 23.054.12 | 06-07 | c $\epsilon$ |
| 23.055.12 | 06-07 | c $\epsilon$ |
| 23.058.12 | 06-07 | C $\epsilon$ |
| 23.059.12 | 06-07 | c $\epsilon$ |
| 23.060 .12 | 06-07 | c $\epsilon$ |
| 23.061.12 | 06-07 | c $\epsilon$ |
| 23.062.12 | 06-07 | C $\epsilon$ |
| 23.063.12 | 06-07 | c $\epsilon$ |
| 23.098.14 | 06-06 | c $\epsilon$ |
| 23.099.14 | 06-06 | C $\epsilon$ |
| 23.104.14 | 06-07 | c $\epsilon$ |
| 23.105 .14 | 06-07 | c $\epsilon$ |
| 23.106 .14 | 06-07 | c $\epsilon$ |
| 23.106 .16 | 06-07 | C $\epsilon$ |
| 23.106 .18 | 06-07 | c $\epsilon$ |
| 23.107 .14 | 06-07 | c $\epsilon$ |
| 23.107 .16 | 06-07 | c $\epsilon$ |
| 23.107 .18 | 06-07 | C $\epsilon$ |
| 22.120 .12 | 04-24 | c $\epsilon$ |
| 23.705 .09 | 06-07 | C $\epsilon$ |
| 23.709.11 | 06-06 | C $\epsilon$ |
| 23.740.20 | 06-06 | c $\epsilon$ |
| 23.741 .20 | 06-06 | C $\epsilon$ |
| 23.781 .15 | 06-06 | C $\epsilon$ |
| 23.782 .15 | 06-06 | c $\epsilon$ |
| 24.058.01 | 06-47 | c $\epsilon$ |
| 24.058 .02 | 06-47 | C $\epsilon$ |
| 24.058.03 | 06-47 | c $\epsilon$ |
| 24.058.04 | 06-47 | C $\epsilon$ |
| 24.058 .10 | 06-47 | c $\epsilon$ |
| 24.061 .22 | 02-04 | C $\epsilon$ |
| 24.061.24 | 02-04 | C $\epsilon$ |
| 24.062.24 | 02-04 | C $\epsilon$ |
| 24.062.24. | 02-04 | C $\epsilon$ |
| 24.062.30 | 02-06 | C $\epsilon$ |
| 24.062.31 | 02-06 | C $\epsilon$ |
| 24.067 .22 | 02-04 | c $\epsilon$ |
| 24.067.24 | 02-04 | C $\epsilon$ |
| 24.070.22 | 02-04 | c $\epsilon$ |
| 24.070.24 | 02-04 | C $\epsilon$ |


| 24.071 .22 | 02-04 | c $\epsilon$ |
| :---: | :---: | :---: |
| 24.071 .24 | 02-04 | c $\epsilon$ |
| 24.072.22 | 02-04 | c $\epsilon$ |
| 24.074 .13 | 03-35 | c $\epsilon$ |
| 24.074.15 | 03-35 | $\epsilon$ |
| 24.074 .16 | 03-35 | c $\epsilon$ |
| 24.074.17 | 03-35 | c |
| 24.075 .22 | 02-04 | c $\epsilon$ |
| 24.075 .24 | 02-04 | c $\epsilon$ |
| 24.080 .01 | 02-03 | C |
| 24.086 .01 | 02-03 | C |
| 24.087 .00 | 02-03 | c $\epsilon$ |
| 24.087 .02 | 08-11 | C $\epsilon$ |
| 24.089 .02 | 02-03 | c $\epsilon$ |
| 24.089 .02 | 06-08 | c $\epsilon$ |
| 24.099 .08 | 02-05 | c $\epsilon$ |
| 24.099 .09 | 02-05 | c $\epsilon$ |
| 24.099 .17 | 02-05 | C $\epsilon$ |
| 24.099 .23 | 02-05 | C $\epsilon$ |
| 24.099 .25 | 02-05 | C $\epsilon$ |
| 24.101 .08 | 02-07 | c $\epsilon$ |
| 24.101 .09 | 02-07 | C $\epsilon$ |
| 24.101 .17 | 02-07 | c $\epsilon$ |
| 24.101 .23 | 02-07 | c $\epsilon$ |
| 24.102.03A | 02-07 | c $\epsilon$ |
| 24.102 .08 | 02-07 | c $\epsilon$ |
| 24.102 .09 | 02-07 | c $\epsilon$ |
| 24.102 .17 | 02-07 | c $\epsilon$ |
| 24.102 .23 | 02-07 | c $\epsilon$ |
| 24.112 .05 | 02-07 | c $\epsilon$ |
| 24.114 .00 | 08-11 | c $\epsilon$ |
| 24.124 .06 | 02-07 | c $\epsilon$ |
| 24.201.01G | 03-14 | C $\epsilon$ |
| 24.201.01GM5 | 03-11 | C $\epsilon$ |
| 24.201.01GM5-TI | 03-19 | C $\epsilon$ |
| 24.201.05L | 03-12 | c $\epsilon$ |
| 24.201.05L | 03-17 | C $\epsilon$ |
| 24.201.05L | 08-10 | C $\epsilon$ |
| 24.201.05L-TI | 03-18 | c $\epsilon$ |
| 24.202.03G | 03-14 | C $\epsilon$ |
| 24.203.05G | 03-10 | C $\epsilon$ |
| 24.203.05G | 03-13 | C $\epsilon$ |
| 24.203.05G | 03-14 | C $\epsilon$ |
| 24.204.11G | 03-10 | C $\epsilon$ |
| 24.204.11G | 03-13 | c $\epsilon$ |
| 24.204.11G | 03-15 | C $\epsilon$ |
| 24.204.11GM5 | 03-11 | C $\epsilon$ |
| 24.204.11GM5-TI | 03-19 | C $\epsilon$ |
| 24.204.15G | 03-15 | C $\epsilon$ |
| 24.205.07G | 03-10 | c $\epsilon$ |
| 24.205.07G | 03-13 | C $\epsilon$ |
| 24.205.07G | 03-14 | c $\epsilon$ |


| 24.205.07GM5 | 03-11 | c $\epsilon$ |
| :---: | :---: | :---: |
| 24.205.07GM5-TI | 03-19 | C |
| 24.206.09G | 03-14 | c $\epsilon$ |
| 24.207.02C | 03-16 | c $\epsilon$ |
| 24.207.04C | 03-16 | c $\epsilon$ |
| 24.207.04C-TI | 03-18 | c $\epsilon$ |
| 24.207.13C | 03-16 | c $\epsilon$ |
| 24.207.13G | 03-10 | c $\epsilon$ |
| 24.207.13G | 03-13 | c $\epsilon$ |
| 24.207.13G | 03-15 | c $\epsilon$ |
| 24.207.13GM5 | 03-11 | C $\epsilon$ |
| 24.207.13GM5-TI | 03-19 | c $\epsilon$ |
| 24.207.13MC | 03-16 | c $\epsilon$ |
| 24.207.17G | 03-15 | c $\epsilon$ |
| 24.207.17MC | 03-17 | C $\epsilon$ |
| 24.207.23 | 03-12 | $\mathrm{C} \epsilon$ |
| 24.207.23 | 03-17 | c $\epsilon$ |
| 24.208.02CI | 03-20 | c $\epsilon$ |
| 24.208.02T | 03-21 | $\mathrm{C} \epsilon$ |
| 24.208.03L | 03-12 | c $\epsilon$ |
| 24.208.03L | 03-17 | C $\epsilon$ |
| 24.208.03L | 08-10 | c $\epsilon$ |
| 24.208.03L-TI | 03-18 | C |
| 24.208.04S | 03-10 | c $\epsilon$ |
| 24.208.04S | 03-11 | C $\epsilon$ |
| 24.208.04S | 03-12 | C $\epsilon$ |
| 24.208.04S | 03-13 | C $\epsilon$ |
| 24.208.04S | 03-21 | C |
| 24.208.04SD | 03-21 | c $\epsilon$ |
| 24.208.06H | 03-13 | $c \epsilon$ |
| 24.208.06H | 03-20 | C $\epsilon$ |
| 24.208.06HF | 03-20 | C $\epsilon$ |
| 24.208.23A | 03-21 | c $\epsilon$ |
| 24.208.30S | 03-20 | C $\epsilon$ |
| 24.208.35U | 03-20 | C $\epsilon$ |
| 24.209.04GX | 03-21 | C $\epsilon$ |
| 24.210.01L | 03-12 | c $\epsilon$ |
| 24.210.01L | 03-17 | $\mathrm{C} \epsilon$ |
| 24.210.01L | 08-10 | c $\epsilon$ |
| 24.210.01L-TI | 03-18 | c $\epsilon$ |
| 24.353.02 | 09-07 | c |
| 24.437.01 | 03-26 | c $¢$ |
| 24.437.02 | 03-26 | c $\epsilon$ |
| 24.437.03 | 03-27 | c $\epsilon$ |
| 24.437.04 | 03-27 | c $\epsilon$ |
| 24.437.07 | 03-27 | c $\epsilon$ |
| 24.451 .00 | 03-06 | c $\epsilon$ |
| 24.451 .01 | 03-06 | c $\epsilon$ |
| 24.451 .02 | 03-06 | c $\epsilon$ |
| 24.451 .02 | 03-07 | c $\epsilon$ |
| 24.451 .03 | 03-06 | c $\epsilon$ |
| 24.451 .06 | 03-06 | c $\epsilon$ |


| 24.453 .03 | 03-08 | c $\epsilon$ |
| :---: | :---: | :---: |
| 24.453.12 | 03-08 | c $\epsilon$ |
| 24.453 .15 | 03-07 | c $\epsilon$ |
| 24.453.22 | 03-08 | c $\epsilon$ |
| 24.453.23 | 03-08 | c |
| 24.454.01 | 03-09 | c $\epsilon$ |
| 24.454.01 | 03-13 | c $\epsilon$ |
| 24.454 .02 | 03-09 | c $\epsilon$ |
| 24.454.03 | 03-07 | c $\epsilon$ |
| 24.454 .03 | 03-09 | c $\epsilon$ |
| 24.454 .05 | 03-09 | c $\epsilon$ |
| 24.454 .06 | 03-09 | c $\epsilon$ |
| 24.454.06TI | 03-09 | c $\epsilon$ |
| 24.455 .06 | 03-07 | c $\epsilon$ |
| 24.488.01 | 03-26 | c $\epsilon$ |
| 24.488 .02 | 03-26 | c $\epsilon$ |
| 24.490.01 | 03-28 | c $\epsilon$ |
| 24.490 .02 | 03-28 | c |
| 24.491 .01 | 03-29 | C |
| 24.491 .02 | 03-29 | c $\epsilon$ |
| 24.493 .01 | 03-28 | C $\epsilon$ |
| 24.493.02 | 03-28 | c |
| 24.493.03 | 03-28 | c |
| 24.494 .00 | 03-29 | C $\epsilon$ |
| 24.495 .01 | 03-29 | c $\epsilon$ |
| 24.495 .01 | 07-07 | C |
| 24.495 .02 | 03-29 | c $\epsilon$ |
| 24.495.02 | 07-07 | c $\epsilon$ |
| 24.495 .03 | 03-29 | c $\epsilon$ |
| 24.495 .03 | 07-07 | c |
| 24.532.02CI | 03-20 | c $\epsilon$ |
| 24.532.02T | 03-21 | c $\epsilon$ |
| 24.532.03L | 03-17 | C |
| 24.532.04S | 03-21 | c $\epsilon$ |
| 24.532.04SD | 03-21 | c $\epsilon$ |
| 24.532.06H | 03-20 | c $\epsilon$ |
| 24.532.23A | 03-21 | c $\epsilon$ |
| 24.532.30S | 03-20 | c $\epsilon$ |
| 24.532.35U | 03-20 | c $\epsilon$ |
| 24.534.02C | 03-16 | c $\epsilon$ |
| 24.534.04C | 03-16 | c $\epsilon$ |
| 24.534.13C | 03-16 | c $\epsilon$ |
| 24.534.13G | 03-15 | c $\epsilon$ |
| 24.534.13MC | 03-16 | C |
| 24.534.17G | 03-15 | c $\epsilon$ |
| 24.534.17MC | 03-17 | c $\epsilon$ |
| 24.534.23 | 03-17 | c $\epsilon$ |
| 24.535.11G | 03-15 | c $\epsilon$ |
| 24.535.15G | 03-15 | C |
| 24.536.01G | 03-14 | c $\epsilon$ |
| 24.536.03G | 03-14 | C $\epsilon$ |
| 24.536.05G | 03-14 | C $\epsilon$ |


| 24.536.05L | 03-17 | $C \epsilon$ |
| :---: | :---: | :---: |
| 24.537.04GX | 03-21 | C $\epsilon$ |
| 24.537.07G | 03-14 | c $\epsilon$ |
| 24.537.09G | 03-14 | C $\epsilon$ |
| 24.538.01L | 03-17 | c $\epsilon$ |
| 24.548 .01 | 06-44 | c $\epsilon$ |
| 24.551 .01 | 03-22 | c $\epsilon$ |
| 24.551.03 | 03-22 | c $\epsilon$ |
| 24.551 .05 | 03-22 | C $\epsilon$ |
| 24.551 .07 | 03-22 | c $\epsilon$ |
| 24.551 .09 | 03-23 | c $\epsilon$ |
| 24.551.11 | 03-23 | c $\epsilon$ |
| 24.551 .13 | 03-23 | C $\epsilon$ |
| 24.551 .15 | 03-23 | C $\epsilon$ |
| 24.551.17 | 03-23 | C $\epsilon$ |
| 24.551.24S | 03-25 | c $\epsilon$ |
| 24.553.01 | 03-24 | c $\epsilon$ |
| 24.553 .03 | 03-24 | C $\epsilon$ |
| 24.553 .05 | 03-24 | C $\epsilon$ |
| 24.561.67 | 03-25 | c $\epsilon$ |
| 24.565.33 | 03-25 | c $\epsilon$ |
| 24.708.25 | 04-10 | c $\epsilon$ |
| 24.708.27 | 04-10 | C $\epsilon$ |
| 24.708.29 | 04-10 | c $\epsilon$ |
| 24.708.31 | 04-10 | c $\epsilon$ |
| 24.709 .35 | 04-11 | C $\epsilon$ |
| 24.709.39 | 04-11 | C $\epsilon$ |
| 24.709.41 | 04-11 | c $\epsilon$ |
| 24.709 .45 | 04-11 | c $\epsilon$ |
| 24.711.43 | 04-10 | c $\epsilon$ |
| 24.711 .44 | 04-10 | C $\epsilon$ |
| 24.711 .45 | 04-10 | c $\epsilon$ |
| 24.725 .00 | 03-32 | C $\epsilon$ |
| 24.725.05 | 03-32 | C $\epsilon$ |
| 24.725.07 | 03-32 | C $\epsilon$ |
| 24.725 .08 | 03-32 | C $\epsilon$ |
| 24.725 .09 | 03-32 | C $\epsilon$ |
| 24.725.20 | 03-32 | C $\epsilon$ |
| 24.725.21 | 03-33 | c $\epsilon$ |
| 24.725.58 | 03-33 | C $\epsilon$ |
| 24.725.70 | 03-33 | C $\epsilon$ |
| 24.725.71 | 03-33 | c $\epsilon$ |
| 24.725 .72 | 03-33 | C $\epsilon$ |
| 24.725.73 | 03-33 | C $\epsilon$ |
| 24.725.74 | 03-33 | C $\epsilon$ |
| 24.725 .86 | 03-33 | C $\epsilon$ |
| 24.733 .18 | 04-11 | C $\epsilon$ |
| 24.733 .19 | 04-11 | c $\epsilon$ |
| 24.733.20 | 04-11 | C $\epsilon$ |
| 24.747.03 | 07-21 | c $\epsilon$ |
| 24.747.04 | 08-11 | C $\epsilon$ |
| 24.747.06 | 08-11 | C $\epsilon$ |


| 751.101G | 03-14 | c |
| :---: | :---: | :---: |
| 24.751.101GM5 | 03-11 | c $\epsilon$ |
| 24.751.101GM5-TI | 03-19 | C |
| 24.751.101L | 03-12 | C $\epsilon$ |
| 24.751.101L | 03-17 | c |
| 24.751.101L-TI | 03-18 | c $\epsilon$ |
| 24.751.102CI | 03-20 | C $\epsilon$ |
| 24.751.102G | 03-14 | C |
| 24.751.102GM | 11 | c $\epsilon$ |
| 24.751.102GM5-TI | 03-19 | c $\epsilon$ |
| 24.751.102L | 03-12 | c $\epsilon$ |
| 24.751.102L | 03-1 | c |
| 24.751.102LC | 03-16 | c $\epsilon$ |
| 24.751.102RC | 3-1 | c $\epsilon$ |
| 24.751.102L-TI | 03-18 | C |
| 24.751.102TA | 03-21 | c $\epsilon$ |
| 24.751.103CI | 03-2 | C $\epsilon$ |
| 24.751.103G | 03-14 | C |
| 24.751.103L | 03-12 | c $\epsilon$ |
| 24.751.103L | 03-17 | c $\epsilon$ |
| 24.751.103L-TI | 03-18 | c $\epsilon$ |
| 24.751.103TA | 03-21 | c $\epsilon$ |
| 24.751.104 | 03-32 | C $\epsilon$ |
| 24.751.104G | 03-14 | C |
| 24.751.104L | 03-12 | c $\epsilon$ |
| 24.751.104L | 03-17 | c $\epsilon$ |
| 24.751.104LC | 03-16 | c |
| 24.751.104LC-TI | 03-18 | c $\epsilon$ |
| 24.751.104L-TI | 03-18 | c $\epsilon$ |
| 24.751.104RC | 03-16 | c |
| 24.751.104RC-TI | 03-18 | C $\epsilon$ |
| 24.751.104XL | 3-21 | c |
| 24.751.104XR | 03-21 | c $\epsilon$ |
| 24.751.105 | 03-32 | c $\epsilon$ |
| 24.751.105G | 03-10 | c |
| 24.751.105G | 03-13 | C $\epsilon$ |
| 24.751.105G | 03-14 | C |
| 24.751.105L | 03-12 | c $\epsilon$ |
| 24.751.105L | 03-17 | C |
| 24.751.105L-TI | 03-18 | c $\epsilon$ |
| 24.751.106G | 03-10 | c $\epsilon$ |
| 24.751.106G | 03-13 | C |
| 24.751.106G | 03-14 | c $\epsilon$ |
| 24.751 .106 H | 03-13 | c $\epsilon$ |
| 24.751.106H | 03-20 | c $\epsilon$ |
| 24.751.106HF | 03-20 | c $\epsilon$ |
| 24.751.106L | 03-12 | C |
| 24.751.106L | 03-17 | c |
| 24.751.106L-TI | 03-1 | c |
| 24.751.107G | 03-10 | C |
| 24.751.107G | 03-13 | c |
| 24.751.107G | 03-14 | C |


| 24.751.107GM5 | 03-11 | c | 24.751.123L | 03-17 | c |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 24.751.107GM5-TI | 03-19 | c $\epsilon$ | 24.751.123R | 03-12 | c $\epsilon$ |
| 24.751.107H | 03-13 | c $\epsilon$ | 24.751.123R | 03-17 | c |
| 24.751.107H | 03-20 | c $\epsilon$ | 24.751.130 | 03-20 | c $\epsilon$ |
| 24.751.107HF | 03-20 | c $\epsilon$ | 24.751.131 | 03-20 | c |
| 24.751.108 | 03-33 | c $\epsilon$ | 24.751.135UL | 03-20 | c $\epsilon$ |
| 24.751.108G | 03-10 | c $\epsilon$ | 24.751.135UR | 03-20 | C |
| 24.751.108G | 03-13 | c $\epsilon$ | 24.751.148 | 03-33 | C |
| 24.751.108G | 03-14 | c $\epsilon$ | 24.751.149 | 03-33 | c |
| 24.751.108GM5 | 03-11 | c $\epsilon$ | 24.751.153 | 03-33 | $\epsilon$ |
| 24.751.108GM5-TI | 03-19 | c $\epsilon$ | 24.751.167 | 03-33 | c $¢$ |
| 24.751.109 | 03-33 | c $\epsilon$ | 24.751.168 | 03-33 | c $\epsilon$ |
| 24.751.109G | 03-14 | c $\epsilon$ | 24.751.169 | 03-33 | c |
| 24.751.110 | 03-32 | c $\epsilon$ | 24.751.170 | 03-33 | c $\epsilon$ |
| 24.751.110G | 03-14 | c $\epsilon$ | 24.751.171 | 03-33 | c |
| 24.751.111 | 03-32 | c | 24.751.172 | 03-33 | c |
| 24.751.111G | 03-10 | c $\epsilon$ | 24.751.173 | 03-33 | c |
| 24.751.111G | 03-13 | c $\epsilon$ | 24.751.179 | 03-33 | c $\epsilon$ |
| 24.751.111G | 03-15 | C $\epsilon$ | 24.751.204L | 03-10 | c $¢$ |
| 24.751.111GM5 | 03-11 | c $\epsilon$ | 24.751.204L | 03-11 | c $\epsilon$ |
| 24.751.112G | 03-10 | c $\epsilon$ | 24.751.204L | 03-12 | c |
| 24.751.112G | 03-13 | c $\epsilon$ | 24.751.204L | 03-13 | c $\epsilon$ |
| 24.751.112G | 03-15 | C $\epsilon$ | 24.751.204L | 03-21 | c $¢$ |
| 24.751.112GM5 | 03-11 | c $\epsilon$ | 24.751.204LD | 03-21 | c |
| 24.751.112L | 03-32 | c $\epsilon$ | 24.751.204R | 03-10 | c |
| 24.751.112R | 03-32 | c $\epsilon$ | 24.751.204R | 03-11 | c |
| 24.751.113C | 03-16 | c $\epsilon$ | 24.751.204R | 03-12 | C |
| 24.751.113C | 03-32 | c $\epsilon$ | 24.751.204R | 03-13 | c |
| 24.751.113G | 03-10 | c $\epsilon$ | 24.751.204R | 03-21 | c $\epsilon$ |
| 24.751.113G | 03-13 | c $\epsilon$ | 24.751.204RD | 03-21 | c $\epsilon$ |
| 24.751.113G | 03-15 | C $\epsilon$ | 24.751.318Ti | 04-02 | c $¢$ |
| 24.751.113GM5 | 03-11 | c $\epsilon$ | 24.751.319Ti | 04-03 | c |
| 24.751.113GM5-TI | 03-19 | c $\epsilon$ | 24.751.319Ti | 04-05 | c |
| 24.751.113L | 03-32 | c $\epsilon$ | 24.751.320Ti | 04-03 | c $\epsilon$ |
| 24.751.113MC | 03-16 | c $\epsilon$ | 24.751.320Ti | 04-05 | c |
| 24.751.113R | 03-32 | c $\epsilon$ | 24.751.321Ti | 04-02 | c |
| 24.751.114C | 03-16 | c $\epsilon$ | 24.751.322Ti | 04-02 | c |
| 24.751.114C | 03-32 | c $\epsilon$ | 24.751.323Ti | 04-02 | C |
| 24.751.114G | 03-10 | c | 24.751.323Ti | 04-02 | c |
| 24.751.114G | 03-13 | c $\epsilon$ | 24.751.323Ti | 04-05 | c |
| 24.751.114G | 03-15 | c $\epsilon$ | 24.751.324Ti | 04-02 | c $\epsilon$ |
| 24.751.114GM5 | 03-11 | C $\epsilon$ | 24.751.325Ti | 04-02 | C |
| 24.751.114GM5-TI | 03-19 | c $\epsilon$ | 24.751.325Ti | 04-05 | c |
| 24.751.114MC | 03-16 | c $\epsilon$ | 24.751.326Ti | 04-02 | c $\epsilon$ |
| 24.751.115G | 03-15 | c $\epsilon$ | 24.751.327Ti | 04-02 | c $\epsilon$ |
| 24.751.116G | 03-15 | C $\epsilon$ | 24.751.328Ti | 04-03 | c $\epsilon$ |
| 24.751.117MC | 03-17 | c $\epsilon$ | 24.751.329Ti | 04-03 | c |
| 24.751.118G | 03-15 | c $\epsilon$ | 24.751.3307i | 04-03 | c $\epsilon$ |
| 24.751.118MC | 03-17 | C $\epsilon$ | 24.751.331Ti | 04-03 | c $¢$ |
| 24.751.123AL | 03-21 | c $\epsilon$ | 24.751.332Ti | 04-03 | c $\epsilon$ |
| 24.751.123AR | 03-21 | c $\epsilon$ | 24.751.333Ti | 04-03 | c $\epsilon$ |
| 24.751.123L | 03-12 | c $\epsilon$ | 24.751.401Ti | 04-03 | c $\epsilon$ |


| 24.751.402Ti | 04-03 | c $\epsilon$ |
| :---: | :---: | :---: |
| 24.751.403Ti | 04-03 | C $\epsilon$ |
| 24.751.404Ti | 04-03 | c $\epsilon$ |
| 24.755 .02 | 03-05 | c $\epsilon$ |
| 24.755.03 | 03-05 | c $\epsilon$ |
| 24.914.10 | 03-30 | c $\epsilon$ |
| 24.914.25 | 03-30 | C $\epsilon$ |
| 24.914.30 | 03-31 | c $\epsilon$ |
| 24.914.35 | 03-31 | c $\epsilon$ |
| 24.914 .40 | 03-31 | C $\epsilon$ |
| 24.914.45 | 03-31 | c $\epsilon$ |
| 24.916 .10 | 03-30 | c $\epsilon$ |
| 24.918 .15 | 03-31 | c $\epsilon$ |
| 24.919 .15 | 03-31 | C $\epsilon$ |
| 24.923 .10 | 03-31 | c $\epsilon$ |
| 24.923 .10 | 05-54 | c $\epsilon$ |
| 24.926 .10 | 03-30 | C $\epsilon$ |
| 24.926 .75 | 03-30 | C $\epsilon$ |
| 24.950 .00 | 03-30 | c $\epsilon$ |
| 24.950 .10 | 10-11 | c $\epsilon$ |
| 24.950 .12 | 10-11 | C $\epsilon$ |
| 24.951 .01 | 03-30 | c $\epsilon$ |
| 24.967 .05 | 08-13 | C $\epsilon$ |
| 24.971 .00 | 08-09 | c $\epsilon$ |
| 24.971 .00 | 08-10 | C $\epsilon$ |
| 24.990.35 | 03-13 | c $\epsilon$ |
| 24.990 .50 | 03-10 | C $\epsilon$ |
| 24.990 .55 | 03-11 | C $\epsilon$ |
| 24.990 .60 | 03-12 | c $\epsilon$ |
| 24.995 .00 | 07-20 | c $\epsilon$ |
| 24.995.01 | 07-18 | C |
| 26.120.00Ti | 04-01 | C |
| 26.120.01Ti | 04-01 | c $\epsilon$ |
| 26.120.10Ti | 04-03 | C $\epsilon$ |
| 26.120.10Ti | 04-05 | C $\epsilon$ |
| 26.120.11Ti | 04-02 | C $\epsilon$ |
| 26.120.121Ti | 04-02 | c $\epsilon$ |
| 26.120.121Ti | 04-05 | c $\epsilon$ |
| 26.120.122Ti | 04-02 | C $\epsilon$ |
| 26.120.122Ti | 04-05 | C $\epsilon$ |
| 26.120.12Ti | 04-02 | c $\epsilon$ |
| 26.120.12Ti | 04-05 | C $\epsilon$ |
| 26.120.20Ti | 04-02 | C $\epsilon$ |
| 26.120.21Ti | 04-02 | c $\epsilon$ |
| 26.120.25Ti | 04-02 | C $\epsilon$ |
| 26.120.25Ti | 04-05 | C $\epsilon$ |
| 26.120.30Ti | 04-02 | C $\epsilon$ |
| 26.120.31Ti | 04-03 | C $\epsilon$ |
| 26.120.321Ti | 04-03 | c $\epsilon$ |
| 26.120.321Ti | 04-05 | c $\epsilon$ |
| 26.120.322Ti | 04-03 | C $\epsilon$ |
| 26.120.322Ti | 04-05 | c $\epsilon$ |


| 26.120.32Ti | 04-03 | c | 26.193 .09 | 03-02 | $c \epsilon$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| 26.120.32Ti | 04-05 | C $\epsilon$ | 26.193 .10 | 02-01 | C $\epsilon$ |
| 26.120.40Ti | 04-03 | C | 26.193 .10 | 02-02 | $c \epsilon$ |
| 26.120.50Ti | 04-03 | c $\epsilon$ | 26.193 .10 | 03-02 | c $\epsilon$ |
| 26.120.60Ti | 04-03 | C $\epsilon$ | 26.193 .10 | 03-04 | c $\epsilon$ |
| 26.120.70Ti | 04-03 | C $\epsilon$ | 26.193 .10 | 03-07 | C $\epsilon$ |
| 26.130 .01 | 04-09 | C | 26.193 .11 | 03-03 | C $\epsilon$ |
| 26.130 .02 | 04-09 | C $\epsilon$ | 26.193 .12 | 03-03 | C $\epsilon$ |
| 26.130 .03 | 04-09 | C | 26.193 .13 | 03-03 | C $\epsilon$ |
| 26.180 .06 | 02-03 | C $\epsilon$ | 26.193 .14 | 03-03 | $c \epsilon$ |
| 26.180 .07 | 03-07 | C | 26.193 .15 | 03-03 | C $\epsilon$ |
| 26.180 .13 | 03-04 | C $\epsilon$ | 26.193 .15 | 03-07 | C $\epsilon$ |
| 26.181 .01 | 03-04 | c $\epsilon$ | 26.193 .16 | 03-03 | c $\epsilon$ |
| 26.181 .03 | 03-04 | C $\epsilon$ | 26.193 .17 | 03-03 | c $\epsilon$ |
| 26.181 .04 | 02-03 | c $¢$ | 26.193 .18 | 03-03 | C $\epsilon$ |
| 26.182 .00 | 05-48 | C $\epsilon$ | 26.193 .19 | 03-03 | c $\epsilon$ |
| 26.182 .01 | 05-48 | C | 26.193.20 | 02-02 | C $\epsilon$ |
| 26.182.02 | 05-48 | C | 26.193 .20 | 03-03 | C $\epsilon$ |
| 26.182 .03 | 05-48 | C | 26.194 .01 | 03-03 | C $\epsilon$ |
| 26.182 .04 | 05-48 | C | 26.194 .02 | 03-03 | C $\epsilon$ |
| 26.182.11 | 05-49 | C | 26.194 .03 | 03-03 | C $\epsilon$ |
| 26.182 .12 | 05-49 | C | 26.194.04 | 03-03 | C $\epsilon$ |
| 26.182 .13 | 05-49 | C | 26.194 .05 | 03-03 | C $\epsilon$ |
| 26.182.23 | 05-49 | C | 26.194 .06 | 03-03 | C $\epsilon$ |
| 26.182 .24 | 05-49 | C $\epsilon$ | 26.194 .06 | 03-13 | c $\epsilon$ |
| 26.183 .00 | 08-11 | C | 26.194 .07 | 03-03 | C $\epsilon$ |
| 26.191 .01 | 02-03 | C | 26.194 .08 | 03-03 | C $\epsilon$ |
| 26.191 .01 | 02-05 | C $\epsilon$ | 26.194 .09 | 03-03 | c $\epsilon$ |
| 26.191 .02 | 02-03 | C | 26.194 .10 | 02-02 | C $\epsilon$ |
| 26.191 .02 | 02-05 | C $\epsilon$ | 26.194 .10 | 03-03 | C $\epsilon$ |
| 26.191 .03 | 02-03 | C | 26.194 .11 | 03-03 | C $\epsilon$ |
| 26.191 .03 | 02-05 | C | 26.194 .12 | 03-03 | C $\epsilon$ |
| 26.191 .04 | 02-03 | C | 26.194 .13 | 03-03 | C $\epsilon$ |
| 26.191 .04 | 02-05 | c | 26.194 .14 | 03-03 | C $\epsilon$ |
| 26.192.07 | 03-04 | C $\epsilon$ | 26.194 .15 | 03-03 | c $\epsilon$ |
| 26.193 .01 | 02-01 | C | 26.194 .16 | 03-03 | C $\epsilon$ |
| 26.193 .01 | 03-02 | C | 26.194 .17 | 03-03 | C $\epsilon$ |
| 26.193 .02 | 02-01 | C | 26.194 .18 | 03-03 | C $\epsilon$ |
| 26.193 .02 | 03-02 | C $\epsilon$ | 26.194.19 | 03-03 | c $\epsilon$ |
| 26.193 .03 | 02-01 | c $\epsilon$ | 26.194 .20 | 02-02 | C $\epsilon$ |
| 26.193 .03 | 03-02 | C $\epsilon$ | 26.194 .20 | 03-03 | C |
| 26.193 .04 | 02-01 | C | 26.195 .01 | 03-02 | C $\epsilon$ |
| 26.193 .04 | 03-02 | C | 26.195 .02 | 03-02 | C $\epsilon$ |
| 26.193 .05 | 02-01 | c $\epsilon$ | 26.195 .03 | 03-02 | c $\epsilon$ |
| 26.193 .05 | 03-02 | c $\epsilon$ | 26.195 .04 | 03-02 | c $\epsilon$ |
| 26.193 .06 | 02-01 | C $\epsilon$ | 26.195 .05 | 03-02 | c $\epsilon$ |
| 26.193 .06 | 03-02 | C | 26.195 .06 | 03-02 | C $\epsilon$ |
| 26.193 .07 | 02-01 | C | 26.195 .07 | 03-02 | C $\epsilon$ |
| 26.193 .07 | 03-02 | C $\epsilon$ | 26.195 .08 | 03-02 | c $\epsilon$ |
| 26.193 .08 | 02-01 | C $\epsilon$ | 26.195 .09 | 03-02 | c $\epsilon$ |
| 26.193 .08 | 03-02 | C | 26.195 .10 | 03-02 | C $\epsilon$ |
| 26.193 .09 | 02-01 | C | 26.200.00 | 04-07 | c $\epsilon$ |


| 26.200.01 | 04-07 | c $\epsilon$ |
| :---: | :---: | :---: |
| 26.200 .02 | 04-07 | c $\epsilon$ |
| 26.200.03 | 04-07 | c $\epsilon$ |
| 26.200 .04 | 04-07 | C $\epsilon$ |
| 26.200 .13 | 04-08 | C $\epsilon$ |
| 26.200 .17 | 04-06 | c $\epsilon$ |
| 26.200 .18 | 04-06 | c $\epsilon$ |
| 26.200 .19 | 04-06 | C $\epsilon$ |
| 26.200 .35 | 04-08 | c $\epsilon$ |
| 26.200 .36 | 04-08 | c $\epsilon$ |
| 26.200 .37 | 04-08 | C $\epsilon$ |
| 26.260 .00 | 04-09 | C $\epsilon$ |
| 26.260 .01 | 04-09 | c $\epsilon$ |
| 26.260 .02 | 04-09 | c $\epsilon$ |
| 26.262 .00 | 04-09 | c $\epsilon$ |
| 26.262 .01 | 04-09 | c $\epsilon$ |
| 26.262 .02 | 04-09 | C $\epsilon$ |
| 26.426 .45 | 04-06 | c $\epsilon$ |
| 26.428.01 | 04-07 | c $\epsilon$ |
| 26.428 .02 | 04-07 | C $\epsilon$ |
| 26.428.03 | 04-07 | c $\epsilon$ |
| 26.428.04 | 04-07 | c $\epsilon$ |
| 26.430 .21 | 04-06 | c $\epsilon$ |
| 26.690 .01 | 05-47 | c $\epsilon$ |
| 26.690 .02 | 05-47 | c $\epsilon$ |
| 26.690 .03 | 05-47 | C $\epsilon$ |
| 26.690 .10 | 05-47 | c $\epsilon$ |
| 28.110 .01 | 09-07 | C $\epsilon$ |
| 28.111 .01 | 09-07 | c $\epsilon$ |
| 28.114 .00 | 09-07 | c $\epsilon$ |
| 28.116 .00 | 09-07 | c $\epsilon$ |
| 28.121 .00 | 04-13 | c $\epsilon$ |
| 28.130 .00 | 09-07 | c $\epsilon$ |
| 28.161 .13 | 09-07 | c $\epsilon$ |
| 28.161 .17 | 09-07 | c $\epsilon$ |
| 28.601 .00 | 04-14 | C $\epsilon$ |
| 28.601 .01 | 04-14 | C $\epsilon$ |
| 28.601 .02 | 04-14 | c $\epsilon$ |
| 28.601 .03 | 04-14 | c $\epsilon$ |
| 28.601 .04 | 04-14 | c $\epsilon$ |
| 28.602 .01 | 04-14 | C $\epsilon$ |
| 28.602 .02 | 04-14 | C $\epsilon$ |
| 28.602 .03 | 04-14 | c $\epsilon$ |
| 28.603 .01 | 04-14 | C $\epsilon$ |
| 28.603 .02 | 04-14 | c $\epsilon$ |
| 28.603 .03 | 04-14 | c $\epsilon$ |
| 28.604 .01 | 04-14 | c $\epsilon$ |
| 28.604 .02 | 04-14 | C $\epsilon$ |
| 28.604 .03 | 04-14 | C $\epsilon$ |
| 28.606 .00 | 04-15 | C $\epsilon$ |
| 28.606 .01 | 04-15 | C $\epsilon$ |
| 28.606.02 | 04-15 | C $\epsilon$ |


| 28.606 .03 | 04-15 | c $\epsilon$ |
| :---: | :---: | :---: |
| 28.606.04 | 04-15 | C |
| 28.607 .01 | 04-15 | C |
| 28.607 .02 | 04-15 | C |
| 28.607 .03 | 04-15 | c $\epsilon$ |
| 28.608 .01 | 04-15 | C |
| 28.608 .02 | 04-15 | c $\epsilon$ |
| 28.608 .03 | 04-15 | C $\epsilon$ |
| 28.631 .00 | 04-12 | C $\epsilon$ |
| 28.631 .01 | 04-12 | c $\epsilon$ |
| 28.631 .02 | 04-12 | C |
| 28.631 .03 | 04-12 | C |
| 28.631 .04 | 04-12 | C $\epsilon$ |
| 28.632 .01 | 04-12 | C |
| 28.632 .02 | 04-12 | C |
| 28.632 .03 | 04-12 | C |
| 28.633 .01 | 04-12 | C |
| 28.633 .02 | 04-12 | C $\epsilon$ |
| 28.633 .03 | 04-12 | C |
| 28.634 .01 | 04-12 | C $\epsilon$ |
| 28.634 .02 | 04-12 | C |
| 28.634 .03 | 04-12 | C |
| 28.636 .00 | 04-13 | C $\epsilon$ |
| 28.636 .01 | 04-13 | C $\epsilon$ |
| 28.636 .02 | 04-13 | C $\epsilon$ |
| 28.636 .03 | 04-13 | C $\epsilon$ |
| 28.636 .04 | 04-13 | C $\epsilon$ |
| 28.637 .01 | 04-13 | c $\epsilon$ |
| 28.637 .02 | 04-13 | C $\epsilon$ |
| 28.637 .03 | 04-13 | C $\epsilon$ |
| 28.638 .01 | 04-13 | C $\epsilon$ |
| 28.638 .02 | 04-13 | C $\epsilon$ |
| 28.638 .03 | 04-13 | C |
| 28.640 .01 | 04-16 | C |
| 28.640 .02 | 04-16 | C |
| 28.640 .03 | 04-16 | C |
| 28.640 .04 | 04-16 | C |
| 28.640 .10 | 04-17 | C |
| 28.645 .01 | 04-17 | c $\epsilon$ |
| 28.645 .02 | 04-17 | C |
| 28.645 .03 | 04-17 | c $\epsilon$ |
| 28.645 .04 | 04-17 | C |
| 28.661 .01 | 04-18 | C $\epsilon$ |
| 28.661 .02 | 04-18 | C |
| 28.661 .03 | 04-18 | C |
| 28.662 .01 | 04-18 | C $\epsilon$ |
| 28.662 .02 | 04-18 | C $\epsilon$ |
| 28.662 .03 | 04-18 | C |
| 28.663 .02 | 04-18 | C |
| 28.663 .03 | 04-18 | C |
| 28.664 .02 | 04-18 | C |
| 28.664 .03 | 04-18 | c $\epsilon$ |


| 28.671 .00 | 04-18 | C |
| :---: | :---: | :---: |
| 28.672 .00 | 04-18 | c $\epsilon$ |
| 28.681 .00 | 04-18 | C |
| 28.682 .00 | 04-18 | c $\epsilon$ |
| 31.178 .17 | 06-46 | C $\epsilon$ |
| 31.182.01 | 09-02 | c $\epsilon$ |
| 31.184 .01 | 09-06 | c $\epsilon$ |
| 31.184.13 | 09-05 | c $\epsilon$ |
| 31.185 .00 | 09-06 | c $\epsilon$ |
| 31.185 .01 | 09-06 | C |
| 31.185 .02 | 09-05 | c $\epsilon$ |
| 31.185 .04 | 09-06 | c $\epsilon$ |
| 31.185 .10 | 09-06 | c $\epsilon$ |
| 31.185 .12 | 09-06 | c $\epsilon$ |
| 31.691 .13 | 07-27 | C |
| 31.692 .00 | 07-27 | C $\epsilon$ |
| 31.693 .10 | 07-26 | C |
| 31.760 .11 | 06-45 | C $\epsilon$ |
| 37.258 .40 | 06-08 | C |
| 37.258 .43 | 06-08 | C |
| 37.261.11 | 06-11 | c $\epsilon$ |
| 37.261 .14 | 06-11 | C |
| 37.271 .00 | 06-11 | C |
| 37.351.02 | 06-08 | C $\epsilon$ |
| 37.426.01 | 06-12 | c $\epsilon$ |
| 37.426.02 | 06-12 | C $\epsilon$ |
| 37.429.12 | 06-11 | c $\epsilon$ |
| 37.429 .14 | 06-11 | C $\epsilon$ |
| 37.429 .16 | 06-11 | c $\epsilon$ |
| 37.437.15 | 06-09 | c $\epsilon$ |
| 37.437.17 | 06-09 | C $\epsilon$ |
| 37.440.00 | 06-15 | c $\epsilon$ |
| 37.441 .01 | 06-13 | C $\epsilon$ |
| 37.441 .02 | 06-13 | C $\epsilon$ |
| 37.443 .00 | 06-08 | c $\epsilon$ |
| 37.444.01 | 06-09 | C $\epsilon$ |
| 37.445.01 | 02-05 | c $\epsilon$ |
| 37.445.01 | 06-08 | c $\epsilon$ |
| 37.448 .10 | 02-06 | く * |
| 37.448 .20 | 02-06 | く * $^{\text {* }}$ |
| 37.454 .00 | 06-10 | c $\epsilon$ |
| 37.454.02 | 06-10 | c $\epsilon$ |
| 38.074.14 | 06-13 | C $\epsilon$ |
| 38.076 .16 | 06-13 | c $\epsilon$ |
| 38.078.16 | 06-13 | c $\epsilon$ |
| 38.426.01 | 06-14 | c $\epsilon$ |
| 38.426.02 | 06-14 | C $\epsilon$ |
| 38.426.03 | 06-14 | C $\epsilon$ |
| 38.426.04 | 06-14 | C $\epsilon$ |
| 38.426 .05 | 06-14 | C $\epsilon$ |
| 38.426.06 | 06-14 | c $\epsilon$ |
| 38.426.07 | 06-14 | C $\epsilon$ |


| 38.426 .08 | 06-14 | C $\epsilon$ |
| :---: | :---: | :---: |
| 38.426.09 | 06-14 | C $\epsilon$ |
| 38.427.01 | 06-18 | C |
| 38.427 .02 | 06-18 | C |
| 38.427 .22 | 06-17 | c $\epsilon$ |
| 38.428.01 | 06-16 | C |
| 38.428 .02 | 06-16 | c $\epsilon$ |
| 38.428 .03 | 06-16 | C |
| 38.428 .04 | 06-16 | C $\epsilon$ |
| 38.428 .05 | 06-16 | C |
| 38.428 .06 | 06-16 | C |
| 38.428 .22 | 06-16 | C |
| 38.430 .01 | 06-15 | C |
| 38.430 .02 | 06-15 | C |
| 38.430 .03 | 06-15 | C |
| 38.430 .04 | 06-15 | C |
| 38.430 .05 | 06-15 | C |
| 38.430 .06 | 06-15 | C |
| 38.438.01 | 06-17 | C |
| 38.438 .02 | 06-17 | C |
| 38.438 .03 | 06-17 | C |
| 38.438.04 | 06-17 | C |
| 38.438 .05 | 06-17 | C |
| 38.438 .06 | 06-17 | C |
| 38.438 .07 | 06-17 | C |
| 38.445.02 | 06-18 | C |
| 38.445 .03 | 06-18 | C |
| 38.445 .04 | 06-18 | C |
| 38.445 .05 | 06-18 | C |
| 38.445 .06 | 06-18 | C |
| 38.445 .07 | 06-18 | C |
| 38.448 .50 | 06-19 | C |
| 38.452 .00 | 06-12 | C |
| 38.465 .15 | 06-12 | C |
| 38.467 .08 | 06-12 | C |
| 38.467 .10 | 06-12 | C |
| 38.471 .15 | 06-13 | C |
| 38.473 .15 | 06-13 | C $\epsilon$ |
| 41.010.17TC | 08-06 | C $\epsilon$ |
| 41.010.17TC-M | 08-05 | C |
| 41.011.17TC | 08-06 | c $\epsilon$ |
| 41.015 .17 | 08-06 | C |
| 41.015 .17 | 08-10 | c $\epsilon$ |
| 41.017 .17 | 08-02 | C |
| 41.200.15TC | 08-05 | c $\epsilon$ |
| 41.200.17TC | 08-05 | C |
| 41.200.17TC | 08-05 | C |
| 41.200.17TC-K | 08-04 | C |
| 41.200.17TC-K | 08-13 | c $\epsilon$ |
| 41.201.15TC | 08-05 | c $\epsilon$ |
| 41.201.15TC | 08-05 | C |
| 41.201.17TC | 08-05 | c $\epsilon$ |


| 41.201.17TC-K | 08-04 | c $\epsilon$ |
| :---: | :---: | :---: |
| 41.240 .12 | 06-41 | c $\epsilon$ |
| 41.246.15TC | 06-40 | C $\epsilon$ |
| 41.250 .15 | 06-41 | C $\epsilon$ |
| 41.252.15TC | 06-41 | c $\epsilon$ |
| 41.252.15TC | 08-10 | c $\epsilon$ |
| 41.252.18TC | 06-41 | c $\epsilon$ |
| 41.256 .14 | 06-40 | C $\epsilon$ |
| 41.256 .16 | 06-40 | c $\epsilon$ |
| 41.256 .18 | 06-40 | c $\epsilon$ |
| 41.258.14TC | 06-40 | c $\epsilon$ |
| 41.258.16TC | 06-40 | c $\epsilon$ |
| 41.258.18TC | 06-40 | C $\epsilon$ |
| 41.262.14 | 06-39 | C $\epsilon$ |
| 41.262.17 | 06-39 | C $\epsilon$ |
| 41.264 .14 | 06-39 | C $\epsilon$ |
| 41.264.17 | 06-39 | $C \epsilon$ |
| 41.310.14TC | 06-39 | C $\epsilon$ |
| 41.310.17TC | 06-39 | C $\epsilon$ |
| 41.317.17TC | 06-39 | C $\epsilon$ |
| 41.318.17TC | 06-39 | C $\epsilon$ |
| 41.352.15TC | 06-41 | c $\epsilon$ |
| 41.362.12 | 06-41 | c $\epsilon$ |
| 41.368 .16 | 06-39 | C $\epsilon$ |
| 41.368 .18 | 06-39 | c $\epsilon$ |
| 41.369 .16 | 06-39 | C $\epsilon$ |
| 41.369 .18 | 06-39 | C $\epsilon$ |
| 41.500 .17 | 06-48 | C $\epsilon$ |
| 41.500.17M | 06-48 | C $\epsilon$ |
| 41.501 .01 | 06-48 | C $\epsilon$ |
| 41.501 .01 | 07-03 | c $\epsilon$ |
| 41.503 .00 | 06-48 | C $\epsilon$ |
| 41.506 .17 | 06-48 | C $\epsilon$ |
| 41.540.02WM | 05-58 | C $\epsilon$ |
| 41.540.03WM | 05-58 | C $\epsilon$ |
| 41.540.04WM | 05-58 | c $\epsilon$ |
| 41.540.05WM | 05-58 | C $\epsilon$ |
| 41.541.02WM | 05-58 | C $\epsilon$ |
| 41.541.03WM | 05-58 | C $\epsilon$ |
| 41.541.04WM | 05-58 | C $\epsilon$ |
| 41.541.05WM | 05-58 | C $\epsilon$ |
| 41.822 .01 | 07-18 | C |
| 41.822 .02 | 07-18 | C $\epsilon$ |
| 41.822 .03 | 07-18 | C |
| 41.822.04 | 07-18 | C $\epsilon$ |
| 41.822 .05 | 07-19 | C |
| 41.822 .11 | 07-19 | C |
| 41.822 .22 | 07-19 | C $\epsilon$ |
| 41.822 .33 | 07-19 | C $\epsilon$ |
| 41.834.11 | 05-48 | C $\epsilon$ |
| 41.845 .11 | 06-20 | C $\epsilon$ |
| 41.845.22 | 06-20 | C |


| 41.845 .33 | 06-20 | c $\epsilon$ |
| :---: | :---: | :---: |
| 41.846 .11 | 06-20 | c $\epsilon$ |
| 41.846 .22 | 06-20 | C $\epsilon$ |
| 41.846 .33 | 06-20 | c $\epsilon$ |
| 41.847.00 | 07-15 | c $\epsilon$ |
| 41.847 .00 | 07-16 | c $\epsilon$ |
| 41.847 .01 | 07-16 | c $\epsilon$ |
| 41.847.02 | 07-16 | c $\epsilon$ |
| 41.847 .03 | 07-16 | c $\epsilon$ |
| 41.847 .05 | 07-16 | c $\epsilon$ |
| 41.847 .08 | 07-16 | c $\epsilon$ |
| 41.847 .09 | 07-16 | c $\epsilon$ |
| 41.847 .10 | 07-16 | C $\epsilon$ |
| 41.848 .01 | 07-14 | c $\epsilon$ |
| 41.848 .02 | 07-14 | C $\epsilon$ |
| 41.848 .03 | 07-14 | C $\epsilon$ |
| 41.848 .05 | 07-14 | c $\epsilon$ |
| 41.848 .08 | 07-14 | c $\epsilon$ |
| 41.848 .08 | 08-10 | c $\epsilon$ |
| 41.848 .51 | 07-13 | c $\epsilon$ |
| 41.848 .52 | 07-13 | c $\epsilon$ |
| 41.848 .53 | 07-13 | c $\epsilon$ |
| 41.855.00Z | 06-20 | C $\epsilon$ |
| 41.855.01Z | 05-46 | c $\epsilon$ |
| 41.855.01Z | 06-20 | c $\epsilon$ |
| 41.855.02Z | 06-20 | c $\epsilon$ |
| 41.855.04Z | 06-20 | C $\epsilon$ |
| 41.862.11 | 06-22 | c $\epsilon$ |
| 41.862 .12 | 06-22 | c $\epsilon$ |
| 41.862 .13 | 06-22 | c $\epsilon$ |
| 41.862.14 | 06-24 | C $\epsilon$ |
| 41.862 .21 | 06-23 | c $\epsilon$ |
| 41.864 .01 | 06-21 | C $\epsilon$ |
| 41.864 .02 | 06-21 | C $\epsilon$ |
| 41.864.13 | 06-22 | c $\epsilon$ |
| 41.864 .13 | 08-13 | c $\epsilon$ |
| 41.864 .20 | 06-32 | C $\epsilon$ |
| 41.864.30 | 06-24 | C $\epsilon$ |
| 41.864 .40 | 06-24 | c $\epsilon$ |
| 41.864.50 | 06-24 | C $\epsilon$ |
| 41.864 .60 | 06-22 | C $\epsilon$ |
| 41.868 .01 | 07-20 | c $\epsilon$ |
| 41.868 .02 | 07-20 | c $\epsilon$ |
| 41.868 .03 | 07-20 | c $\epsilon$ |
| 41.868 .04 | 07-20 | C $\epsilon$ |
| 41.868 .05 | 07-21 | C $\epsilon$ |
| 41.868 .06 | 07-21 | C $\epsilon$ |
| 41.868 .07 | 07-13 | c $\epsilon$ |
| 41.868 .07 | 07-19 | C $\epsilon$ |
| 41.868 .07 | 07-21 | c $\epsilon$ |
| 41.868 .08 | 07-21 | c $\epsilon$ |
| 41.868.08M | 07-17 | C $\epsilon$ |


| 41.868.09 | 07-17 | C $\epsilon$ |
| :---: | :---: | :---: |
| 41.874 .04 | 06-21 | C $\epsilon$ |
| 41.874 .14 | 06-21 | C $\epsilon$ |
| 41.874.16 | 06-21 | C $\epsilon$ |
| 41.877 .23 | 06-21 | C $\epsilon$ |
| 41.878 .11 | 06-23 | C $\epsilon$ |
| 41.878.12 | 06-23 | C $\epsilon$ |
| 41.878 .13 | 06-23 | C $\epsilon$ |
| 41.878 .14 | 06-23 | C $\epsilon$ |
| 41.881 .01 | 06-45 | C $\epsilon$ |
| 41.881 .02 | 06-45 | C $\epsilon$ |
| 41.888 .16 | 06-22 | C $\epsilon$ |
| 41.905 .00 | 06-46 | C $\epsilon$ |
| 41.914 .16 | 06-46 | C $\epsilon$ |
| 41.916 .15 | 06-46 | C $\epsilon$ |
| 41.917 .15 | 06-46 | C $\epsilon$ |
| 42.315 .16 | 06-24 | C $\epsilon$ |
| 42.315.16S | 06-24 | C $\epsilon$ |
| 42.316 .15 | 06-24 | C $\epsilon$ |
| 42.320 .14 | 06-25 | C $\epsilon$ |
| 42.320 .15 | 06-25 | C $\epsilon$ |
| 42.321 .90 | 06-25 | C $\epsilon$ |
| 42.324 .15 | 06-25 | C $\epsilon$ |
| 42.326 .15 | 06-25 | C $\epsilon$ |
| 42.328.15 | 06-25 | C $\epsilon$ |
| 42.332 .14 | 06-25 | C $\epsilon$ |
| 42.334 .17 | 06-25 | C $\epsilon$ |
| 42.338 .17 | 06-26 | C $\epsilon$ |
| 42.358.15 | 06-25 | C $\epsilon$ |
| 42.360 .15 | 06-25 | C $\epsilon$ |
| 42.362 .15 | 06-25 | C $\epsilon$ |
| 42.380 .01 | 06-28 | C $\epsilon$ |
| 42.404 .16 | 06-27 | C $\epsilon$ |
| 42.406 .14 | 06-27 | C $\epsilon$ |
| 42.412 .15 | 06-27 | C $\epsilon$ |
| 42.413 .15 | 06-27 | C $\epsilon$ |
| 42.620 .18 | 06-27 | C $\epsilon$ |
| 42.621 .18 | 06-27 | C $\epsilon$ |
| 42.646 .15 | 06-27 | C $\epsilon$ |
| 42.647 .15 | 06-27 | C $\epsilon$ |
| 42.650 .18 | 06-26 | C $\epsilon$ |
| 42.652 .18 | 06-26 | C $\epsilon$ |
| 42.654 .18 | 06-26 | C $\epsilon$ |
| 46.005.65 | 06-30 | C $\epsilon$ |
| 46.005.70 | 06-31 | C $\epsilon$ |
| 46.007 .00 | 06-30 | C $\epsilon$ |
| 46.007 .00 | 08-11 | C $\epsilon$ |
| 46.007.01 | 06-30 | C $\epsilon$ |
| 46.007 .02 | 06-29 | C $\epsilon$ |
| 46.007.05 | 06-32 | C $\epsilon$ |
| 46.007 .10 | 06-32 | C $\epsilon$ |
| 46.007.20 | 06-32 | C $\epsilon$ |


| 46.007 .30 | 06-32 | c $\epsilon$ |
| :---: | :---: | :---: |
| 46.007.31 | 06-32 | C $\epsilon$ |
| 46.007 .40 | 06-30 | C $\epsilon$ |
| 46.007.45 | 06-30 | c $\epsilon$ |
| 46.007 .50 | 06-32 | C $\epsilon$ |
| 46.010 .03 | 06-31 | c $\epsilon$ |
| 46.013.00Z | 06-31 | c $\epsilon$ |
| 46.013.00Z | 08-11 | c $\epsilon$ |
| 46.013.00Z | 08-12 | c $\epsilon$ |
| 46.013.00Z | 08-13 | c $\epsilon$ |
| 46.013 .05 | 06-31 | C $\epsilon$ |
| 46.013 .05 | 08-12 | c $\epsilon$ |
| 46.013.05Z | 06-31 | c $\epsilon$ |
| 46.014.10 | 06-30 | c $\epsilon^{*}$ |
| 46.014.11 | 06-30 | C * $^{*}$ |
| 46.014.12 | 06-30 | c $\epsilon^{*}$ |
| 46.014.12D | 06-30 | c $\epsilon^{*}$ |
| 46.014.15 | 06-30 | c * $^{*}$ |
| 46.014.15C | 06-30 | C * $^{*}$ |
| 46.016.03 | 06-31 | C $\epsilon^{*}$ |
| 46.016 .03 | 08-12 | c $\epsilon^{*}$ |
| 46.016 .04 | 06-31 | C * $^{*}$ |
| 46.016 .04 | 08-12 | c $\epsilon^{*}$ |
| 46.016 .07 | 06-31 | く * $^{*}$ |
| 46.016 .07 | 08-12 | c $\epsilon^{*}$ |
| 46.016 .09 | 06-31 | C * $^{*}$ |
| 46.016 .09 | 08-12 | C $\epsilon^{*}$ |
| 46.035 .00 | 06-32 | C |
| 46.035 .00 | 08-12 | C $\epsilon$ |
| 46.035 .05 | 06-32 | c $\epsilon$ |
| 46.035 .05 | 08-10 | C $\epsilon$ |
| 46.035 .05 | 08-12 | C |
| 46.035 .20 | 08-01 | C |
| 46.040 .00 | 08-01 | C $\epsilon$ |
| 46.040 .01 | 08-01 | C $\epsilon$ |
| 46.040 .02 | 08-01 | c $\epsilon$ |
| 46.050 .11 | 06-34 | C $\epsilon$ |
| 46.050.11SC | 06-34 | C $\epsilon$ |
| 46.050.11TC | 06-34 | c $\epsilon$ |
| 46.050.11TISC | 06-34 | C $\epsilon$ |
| 46.051 .11 | 06-34 | c $\epsilon$ |
| 46.051.11SC | 06-34 | C $\epsilon$ |
| 46.051.11TC | 06-34 | C $\epsilon$ |
| 46.051.11TISC | 06-33 | C $\epsilon$ |
| 46.051.11TISC | 06-34 | C $\epsilon$ |
| 46.057.11 | 06-34 | C $\epsilon$ |
| 46.057.11SC | 06-34 | C $\epsilon$ |
| 46.057.11TISC | 06-33 | C $\epsilon$ |
| 46.057.11TISC | 06-34 | C $\epsilon$ |
| 46.069.11 | 06-35 | c $\epsilon$ |
| 46.077 .16 | 06-36 | C $\epsilon$ |
| 46.077.16SC | 06-36 | C $\epsilon$ |


| 46.081 .16 | 06-34 | $c \epsilon$ |
| :---: | :---: | :---: |
| 46.081.16SC | 06-34 | c $\epsilon$ |
| 46.081.16SC | 08-11 | c $\epsilon$ |
| 46.081.16TISC | 06-33 | C $\epsilon$ |
| 46.081.16TISC | 06-34 | C $\epsilon$ |
| 46.111 .16 | 06-36 | c $\epsilon$ |
| 46.111.16SC | 06-36 | c $\epsilon$ |
| 46.121.17 | 06-35 | c $\epsilon$ |
| 46.123 .17 | 06-35 | c $\epsilon$ |
| 46.200 .13 | 06-35 | c $\epsilon$ |
| 46.200.13SC | 06-35 | C $\epsilon$ |
| 46.200.13TC | 06-35 | c $\epsilon$ |
| 46.201 .13 | 06-35 | C $\epsilon$ |
| 46.201.13SC | 06-35 | C $\epsilon$ |
| 46.201.13TC | 06-35 | C $\epsilon$ |
| 46.201.13TISC | 06-33 | c $\epsilon$ |
| 46.201.13TISC | 06-35 | c $\epsilon$ |
| 46.221 .12 | 06-37 | c $\epsilon$ |
| 46.319 .17 | 08-03 | C $\epsilon$ |
| 46.319.17 | 08-13 | c $\epsilon$ |
| 46.319.17N | 08-04 | c $\epsilon$ |
| 46.319.17TISC | 08-03 | $c \epsilon$ |
| 46.321 .16 | 08-03 | C $\epsilon$ |
| 46.321.16TISC | 08-03 | C |
| 46.402 .13 | 06-38 | C $\epsilon$ |
| 46.402.14 | 06-38 | C $\epsilon$ |
| 46.404 .13 | 06-38 | C $\epsilon$ |
| 46.404 .14 | 06-38 | C $\epsilon$ |
| 46.431 .14 | 06-36 | c $\epsilon$ |
| 46.431.14TISC | 06-33 | C $\epsilon$ |
| 46.431.14TISC | 06-36 | C $\epsilon$ |
| 46.482 .10 | 06-28 | C $\epsilon$ |
| 46.484 .10 | 06-28 | C $\epsilon$ |
| 46.516 .14 | 06-37 | C $\epsilon$ |
| 46.517.14 | 06-37 | C $\epsilon$ |
| 46.640 .09 | 06-37 | c $\epsilon$ |
| 46.640 .13 | 06-37 | c $\epsilon$ |
| 46.674 .10 | 06-38 | C $\epsilon$ |
| 46.675 .10 | 06-38 | C $\epsilon$ |
| 46.685 .12 | 06-38 | C |
| 46.685.12 | 06-45 | C $\epsilon$ |
| 46.885.12TC | 06-38 | C $\epsilon$ |
| 46.885.12TC | 06-45 | C $\epsilon$ |
| 47.099 .08 | 07-03 | c $\epsilon$ |
| 47.099 .10 | 07-03 | C $\epsilon$ |
| 47.099 .20 | 07-03 | C $\epsilon$ |
| 47.099 .25 | 07-09 | C $\epsilon$ |
| 47.099 .26 | 07-09 | C $\epsilon$ |
| 47.099 .31 | 07-03 | C $\epsilon$ |
| 47.099.32 | 07-03 | C $\epsilon$ |
| 47.099 .33 | 07-03 | c |
| 47.099 .34 | 07-03 | C $\epsilon$ |


| 47.099 .50 | 07-01 | c $\epsilon$ |
| :---: | :---: | :---: |
| 47.500 .31 | 07-08 | c $\epsilon$ |
| 47.520 .00 | 07-23 | C $\epsilon$ |
| 47.520 .01 | 07-23 | c $\epsilon$ |
| 47.520 .02 | 07-23 | く $\epsilon^{*}$ |
| 47.520 .03 | 07-23 | c $\epsilon$ |
| 47.520 .22 | 07-09 | C |
| 47.520 .23 | 07-09 | C $\epsilon$ |
| 47.520 .25 | 07-09 | c $\epsilon$ |
| 47.525 .50 | 05-03 | c $\epsilon$ |
| 47.525 .50 | 05-05 | C $\epsilon$ |
| 47.525 .55 | 05-03 | c $\epsilon$ |
| 47.525 .55 | 05-05 | C $\epsilon$ |
| 47.530 .00 | 07-13 | c $\epsilon$ |
| 47.560 .03 | 07-23 | C ${ }^{*}$ |
| 47.560 .05 | 07-23 | C ${ }^{*}$ |
| 47.750 .03 | 07-06 | C |
| 47.750 .04 | 07-06 | C $\epsilon$ |
| 47.750 .13 | 07-06 | c $\epsilon$ |
| 47.750 .14 | 07-06 | C $\epsilon$ |
| 47.847 .11 | 07-23 | c $\epsilon$ |
| 47.940 .00 | 07-05 | C $\epsilon$ |
| 47.940 .01 | 07-05 | C $\epsilon$ |
| 47.940 .50 | 07-05 | C $\epsilon$ |
| 47.940 .60 | 07-05 | c $\epsilon$ |
| 47.941 .50 | 07-05 | C $\epsilon$ |
| 47.941 .60 | 07-05 | C $\epsilon$ |
| 47.942 .20 | 07-05 | c $\epsilon$ |
| 47.942 .28 | 07-05 | C $\epsilon$ |
| 47.942 .33 | 07-05 | c $\epsilon$ |
| 47.942 .38 | 07-05 | C $\epsilon$ |
| 47.942 .43 | 07-05 | C $\epsilon$ |
| 47.943 .20 | 07-05 | C $\epsilon$ |
| 47.943 .28 | 07-05 | C $\epsilon$ |
| 47.943 .33 | 07-05 | C $\epsilon$ |
| 47.943 .38 | 07-05 | C $\epsilon$ |
| 47.943 .43 | 07-05 | C $\epsilon$ |
| 47.944 .20 | 07-05 | C $\epsilon$ |
| 47.944 .28 | 07-05 | c $\epsilon$ |
| 47.944.33 | 07-05 | C $\epsilon$ |
| 47.944 .38 | 07-05 | C $\epsilon$ |
| 47.944 .43 | 07-05 | C $\epsilon$ |
| 47.945 .20 | 07-05 | C $\epsilon$ |
| 47.945 .28 | 07-05 | C $\epsilon$ |
| 47.945 .33 | 07-05 | C $\epsilon$ |
| 47.945 .38 | 07-05 | C $\epsilon$ |
| 47.945 .43 | 07-05 | C $\epsilon$ |
| 47.949 .01 | 07-04 | C $\epsilon$ |
| 47.949 .02 | 07-04 | C $\epsilon$ |
| 47.949 .03 | 07-04 | C $\epsilon$ |
| 47.949 .04 | 07-04 | C $\epsilon$ |
| 47.949 .05 | 07-04 | c $\epsilon$ |


| 47.949 .06 | 07-04 | c $\epsilon$ |
| :---: | :---: | :---: |
| 47.949 .07 | 07-04 | c $\epsilon$ |
| 47.949.11 | 07-02 | c $\epsilon$ |
| 47.949.11 | 07-04 | c $\epsilon$ |
| 47.949.12 | 07-02 | c $\epsilon$ |
| 47.949.12 | 07-04 | C $\epsilon$ |
| 47.949.13 | 07-02 | c $\epsilon$ |
| 47.949.13 | 07-04 | C $\epsilon$ |
| 47.949.21 | 07-04 | c $\epsilon$ |
| 47.949.22 | 07-04 | c $\epsilon$ |
| 47.949.23 | 07-04 | C $\epsilon$ |
| 47.949.90 | 07-04 | C $\epsilon$ |
| 47.949 .95 | 07-04 | C $\epsilon$ |
| 47.954 .01 | 07-12 | c $\epsilon$ |
| 47.954.35 | 07-12 | c $\epsilon$ |
| 47.954 .55 | 07-12 | c $\epsilon$ |
| 47.955 .00 | 07-11 | c $\epsilon$ |
| 47.955 .10 | 07-11 | c $\epsilon$ |
| 47.957 .00 | 07-07 | C $\epsilon$ |
| 47.957.01 | 07-07 | c $\epsilon$ |
| 47.958 .00 | 07-11 | C $\epsilon$ |
| 47.958 .01 | 07-11 | C $\epsilon$ |
| 47.958 .03 | 07-11 | c $\epsilon$ |
| 47.958 .04 | 07-11 | c $\epsilon$ |
| 47.959 .00 | 07-07 | c $\epsilon$ |
| 47.959 .01 | 07-07 | c $\epsilon$ |
| 47.961 .00 | 07-06 | C $\epsilon$ |
| 47.961 .20 | 07-06 | c $\epsilon$ |
| 47.961 .28 | 07-06 | c $\epsilon$ |
| 47.961 .33 | 07-06 | C $\epsilon$ |
| 47.961 .38 | 07-06 | c $\epsilon$ |
| 47.961 .43 | 07-06 | C $\epsilon$ |
| 47.962 .20 | 07-06 | c $\epsilon$ |
| 47.962.28 | 07-06 | c $\epsilon$ |
| 47.962.33 | 07-06 | c $\epsilon$ |
| 47.962.38 | 07-06 | C $\epsilon$ |
| 47.962 .43 | 07-06 | C $\epsilon$ |
| 47.962 .50 | 07-06 | c $\epsilon$ |
| 47.963 .50 | 07-06 | c $\epsilon$ |
| 47.963 .60 | 07-06 | C $\epsilon$ |
| 47.966 .00 | 07-23 | C $\epsilon$ |
| 48.286 .08 | 07-27 | c $\epsilon$ |
| 48.666 .20 | 07-27 | C $\epsilon$ |
| 50.226 .16 | 06-02 | C $\epsilon$ |
| 50.229.16 | 06-02 | C $\epsilon$ |
| 53.034.19 | 06-06 | C $\epsilon$ |
| 53.034.25 | 06-06 | c $\epsilon$ |
| 60.150 .24 | 06-11 | c $\epsilon$ |
| 60.151.24 | 06-11 | C $\epsilon$ |
| 65.893 .00 | 10-10 | く ${ }^{*}$ |
| 65.893 .06 | 10-10 | ( * $^{*}$ |
| 65.894 .00 | 10-10 | ( ${ }^{*}$ |


| 65.894 .04 | 10-10 | C ${ }^{*}$ |
| :---: | :---: | :---: |
| 65.895.00 | 10-11 | C $\epsilon^{*}$ |
| 65.895.04 | 10-11 | C $\epsilon^{*}$ |
| 85.070.01 | 07-10 | C $\epsilon$ |
| 85.070 .05 | 07-10 | C |
| 85.070 .05 | 07-10 | C $\epsilon$ |
| 85.140 .00 | 10-08 | C $\epsilon$ |
| 85.142 .10 | 10-08 | C $\epsilon$ |
| 85.142.20 | 10-08 | C $\epsilon$ |
| 85.145 .00 | 10-08 | C $\epsilon$ |
| 85.150.00 | 10-08 | C $\epsilon$ |
| 85.180 .00 | 07-05 | C |
| 85.180 .00 | 08-13 | C $\epsilon$ |
| 85.180.00 | 10-02 | C $\epsilon$ |
| 85.180.03 | 10-02 | C $\epsilon$ |
| 85.180 .04 | 10-02 | C $\epsilon$ |
| 85.180 .05 | 10-02 | c $\epsilon$ |
| 85.180 .10 | 10-02 | C |
| 85.181 .00 | 10-02 | C $\epsilon$ |
| 85.181 .03 | 10-03 | C $\epsilon$ |
| 85.181 .04 | 10-03 | C |
| 85.181 .05 | 10-03 | C $\epsilon$ |
| 85.181.09 | 10-05 | C $\epsilon$ |
| 85.182 .00 | 10-02 | C $\epsilon$ |
| 85.182 .03 | 10-05 | C $\epsilon$ |
| 85.182.04 | 10-05 | C $\epsilon$ |
| 85.182 .05 | 10-05 | C |
| 85.182 .08 | 10-05 | C |
| 85.183 .40 | 10-08 | C $\epsilon$ |
| 85.183 .41 | 10-08 | C |
| 85.183 .42 | 10-08 | C |
| 85.183 .43 | 10-08 | C |
| 85.183.44 | 10-08 | C |
| 85.183.45 | 10-08 | C |
| 85.183 .46 | 10-08 | C $\epsilon$ |
| 85.183 .47 | 10-08 | C |
| 85.183 .48 | 10-08 | C |
| 85.183 .49 | 10-08 | C $\epsilon$ |
| 85.190.10 | 07-21 | C $\epsilon$ |
| 85.192.50 | 10-03 | C $\epsilon$ |
| 85.194 .00 | 10-03 | C |
| 85.194 .10 | 05-04 | C $\epsilon$ |
| 85.194.50 | 10-03 | C |
| 85.195 .00 | 05-04 | C $\epsilon$ |
| 85.195.00 | 10-03 | C $\epsilon$ |
| 85.251 .00 | 10-08 | C |
| 85.251 .03 | 07-17 | C |
| 85.251 .03 | 07-19 | C |
| 85.251 .03 | 07-21 | C $\epsilon$ |
| 85.251 .03 | 10-08 | C |
| 85.251 .04 | 07-09 | C |
| 85.251 .04 | 07-23 | C $\epsilon$ |


| 85.251 .04 | 10-08 | c $\epsilon$ |
| :---: | :---: | :---: |
| 85.252.25 | 08-10 | c $\epsilon$ |
| 85.252.25 | 10-08 | c $\epsilon$ |
| 85.255.00 | 07-23 | c $\epsilon$ |
| 85.255 .02 | 07-23 | c $\epsilon$ |
| 85.312.00 | 10-07 | c $\epsilon$ |
| 85.312 .01 | 10-07 | c $\epsilon$ |
| 85.312.02 | 10-07 | c $\epsilon$ |
| 85.312.03 | 10-07 | c $\epsilon$ |
| 85.312.04 | 10-07 | C $\epsilon$ |
| 85.312.05 | 10-07 | c $\epsilon$ |
| 85.312.07 | 10-07 | c |
| 85.312.08 | 10-07 | C $\epsilon$ |
| 85.312.09 | 10-07 | c $\epsilon$ |
| 85.327.00 | 10-07 | c $\epsilon$ |
| 85.327 .10 | 10-07 | c $\epsilon$ |
| 85.327.15 | 10-07 | c $\epsilon$ |
| 85.327 .20 | 10-07 | c $\epsilon$ |
| 85.327 .30 | 10-07 | C $\epsilon$ |
| 85.327.50 | 10-07 | c $\epsilon$ |
| 85.327.60 | 10-07 | C $\epsilon$ |
| 85.327.70 | 10-07 | c $\epsilon$ |
| 85.703 .00 | 10-08 | C $\epsilon$ |
| 85.903 .01 | 10-11 | C $\epsilon$ |
| 85.903.03 | 10-11 | c $\epsilon$ |
| 85.903 .04 | 10-11 | c $\epsilon$ |
| 99.130 .00 | 06-42 | C $\epsilon$ |

## Terms of Delivery and Payment

Helmut Zepf Medizintechnik GmbH

## 1. Offers and order acceptance

Our offers are always subject to confirmation and without obligation. Telephone and verbal agreements and arrangements with our agents shall become legally valid only after they have been confirmed by us in writing. Deviations in the orders of the buyers relative to our terms of delivery and payment shall not be binding for us, if we have not declared our approval in writing. The subsequent correction of potential errors in offers and invoices shall be permitted for us explicitly and in every case.

## 2. Delivery

All our data on delivery times shall be approximate only and non-binding.

## 3. Calculation

The prices agreed upon are net prices plus the respective legally applicable value-added tax.

## 4. Warranty

Within a period of one year we shall grant warranty for defects, which are caused by manufacturing or material faults. Potential defects shall have to be indicated to the supplier in writing immediately, at the latest, however, within eight days after receipt of the delivery. In case of justified notification of defects, the supplier shall be obligated to rework or replace as chosen. Any exceeding warranty claims, in particular for damage which has not been caused to the supplied goods themselves shall be ruled out, provided no intent or gross negligence can be substantiated. Our obligation of warranty shall not apply, if the defect or modification of the goods supplied is caused by incorrect intervention of the ordering or third parties. Moreover the warranty obligation shall not apply in case of incorrect handling or excessive wear of the goods by the ordering or third parties.

## 5. Packaging

If the order does not define the packaging, we shall choose the packaging at our discretion.

## 6. Delivery / shipment

The delivery is made ex works. The goods shall be transported to the place of destination always at the costs and risk of the buyer, no matter by which route and which means of transportation is chosen. The road tolls, provided they are not paid by us in case of freight-paid fob or cif deliveries, shall be borne by the buyer. Neither do we assume any obligation for delivery in time nor for the full utilization of loading capacity of the means of transportation. Moreover, the buyer shall bear the costs of the transport insurance.

## 7. Payment

Our invoices shall be due for payment without deduction within thirty days after invoicing. In case of payment within eight days we grant a discount of two per cent. Repairs and interest shall be payable immediately and without deduction. Cheques and bills of exchange shall be accepted only in lieu of payment, the latter only after previous arrangement. Costs for bills of exchange and discount charges shall be borne by the ordering party.

Payments shall be considered made as from the day, at which the supplier can avail himself of the invoiced amount in cash without any loss. In case of default in payment of the ordering parts we shall be permitted to charge default interest of 5 per cent above the respective basic interest rate of the European Central Bank as from the occurrence of default, and to declare due any amounts potentially deferred. Before complete payment of all invoices due including default interest, the supplier shall not be obligated to any further deliveries from a current contract. A complaint, even when justified, shall not permit the buyer to delay payment or to change the terms of payment.

## 8. Retention of title

Until complete redemption of all obligations from the business relationship, also of others and future businesses of the buyer with us, the goods supplied shall remain our property. For the duration of the retention of title of the seller, the buyer obligates himself to handle the goods correctly and with care. Within the framework of his normal standard business operation, the buyer may sell and process the goods. The claims of the buyer from the sales of the goods subject to retention of title shall be assigned to us now already until our claims from good delivery are paid off completely, irrespective of whether the goods subject to retention of title have been sold without or after processing or whether they have been sold to one or several buyers. The assigned claims serve as our security, however only to the value of the respectively sold goods subject to retention of title. The buyer is entitled to sell the goods subject to retention of title only in keeping with the agreement hereinbefore on the assignment of the purchase price claim. In case of seizure of the goods or the transfer of the purchase price claim to a third party in their place, the buyer is obligated to inform us immediately. We obligate ourselves to return or to transfer back the securities assigned to us at our discretion in keeping with the conditions mentioned hereinbefore, provided the value exceeds the claims to be secured by 20 per cent.

## 9. Place of performance and venue

The place of performance and venue shall be D-78532 Tuttlingen in Germany for all rights and obligations arising from the business relationship with us. The law of the Federal Republic of Germany shall apply exclusively for all legal matters under exclusion of the conflict of laws and the agreement of the United Nations on Contracts of the International Sale of Goods (CISG).

## 10. Data storage

We are permitted to save and process personal data of the ordering party.

## 11. Final clauses

The potential ineffectiveness of individual stipulations of these terms of business shall not affect the validity of the other stipulations

AESTHETIC IS THE RESULT


[^0]:    Pull the blade forward

