

Patient assesment

Clinical examination

Diagnosis

Clinical examination

Hands on process of observing both normal and abnormal conditions.

Diagnosis

Determination and judgement of variations from normal.

Precautions

Standard precautions to avoid the transmission of disease.

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Sterilization of all instruments, supplies, disinfection of operatory surfaces, barrier techniques / gloves, masks, protective eyewear, gowns,

Cursory examination

Tooth alignment, occlusal relationship.

Charting and records

- Identification data
- Medical history
- Dental history
- Clinical examination
- Diagnosis
- Treatment planning
- Documentation of informed consent
- Completion notes

Charting and records

- Teeth denotation
- Periodontal status
- Oral mucosa status
- Systemic diseases
- Medication
- Other notes

Charting and records the most important notation

- Caries /
- Filling P
- Tooth for extraction X
- Extracted tooth +
- Crown □ □̄
- Pontic =
- Tooth in removable denture 0

Instruments for investigation – investigative instruments

Explorer (probe):

Sharp, straight or bow shaped:

Caries detection – light motion without any pressure: dental surfaces, fillings.

Periodontal explorer (probe): not sharp, calibrated, investigation of periodontal pockets

Instruments for investigation – investigative instruments

Mirror – flat or concave

- To see less available regions
- To illuminate
- To move off soft tissues (cheeks, tongue etc.)

Instruments for investigation – investigative instruments

Tweezer

To grip various instruments and supplies.

Examination

- Clinical
- Radiographic examination
- Adjunctive examination
illumination, percussion test, palpation,
thermal test, electric pulp test, test
preparation.

Instruments for cavity preparation

Hand instruments for cutting

Two main materials:

Stainless steel (loses keen edge)

Carbon steel (corrode)

Excavator

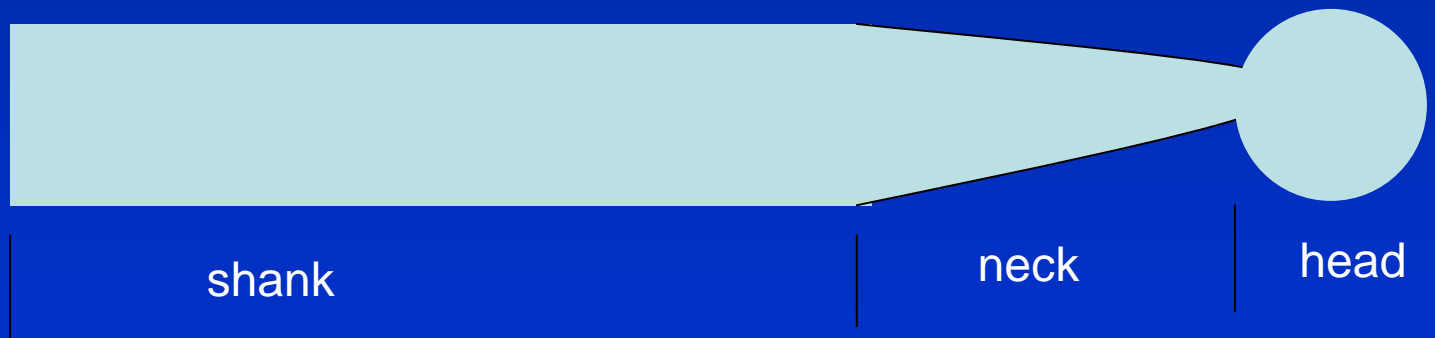
Chisel

Instruments for cavity preparation

Power driven instruments for cutting

- Rotary instruments

Comon design characteristics



Shank

- The part that fits into the handpiece
- Accepts the rotary motion from the
- handpiece
- Provides a bearing surface to control the
- alignment and concentricity of the
- instrument

Straight handpiece shank

- Simple cylinder
held in the handpiece in a metal chuck

Latch angle handpiece shank

- Shorter length – access to posterior regions

Handpiece – contra angle, metal bur tube.

The end of the instrument fits into D-shaped socket at the bottom of the bur tube. The *instrument* retained by a retaining latch that slides into the groove found at the shank end of the instruments.

Low and medium speed

Friction grip handpiece shank

Smaller design, simple cylinder.

Held in the handpiece by friction in plastic or metal chuck.

Neck design

Intermediate portion of an instrument that connects the head to the shaft
Tapered, shorter or longer.

Head design

Burs – cut of steel or tungsten carbide

Diamond (diamond burs)– covered with the diamond bort

Head design

Burs classification systém

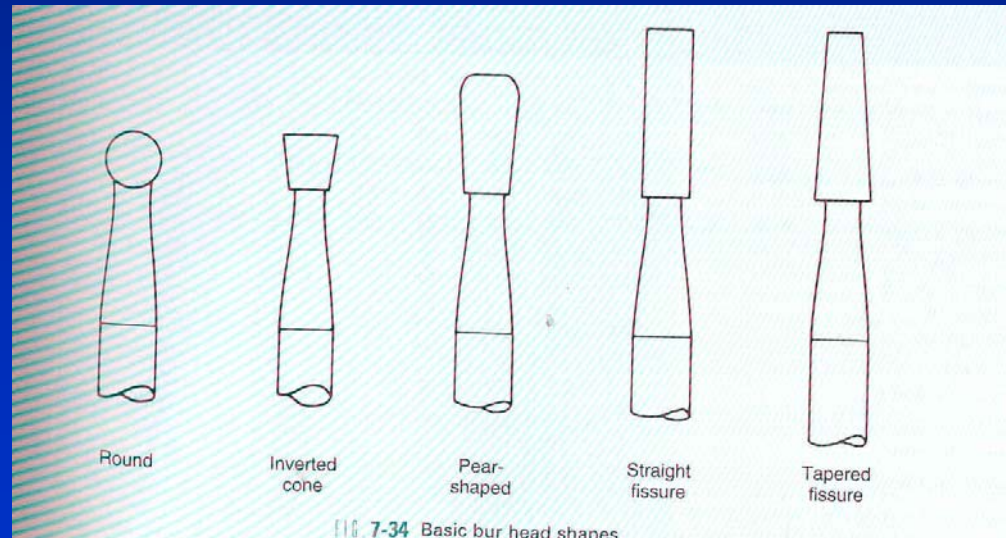
Round

Inverted cone

Pear shaped

Straight fissure

Tapered fissure



Bur blade design

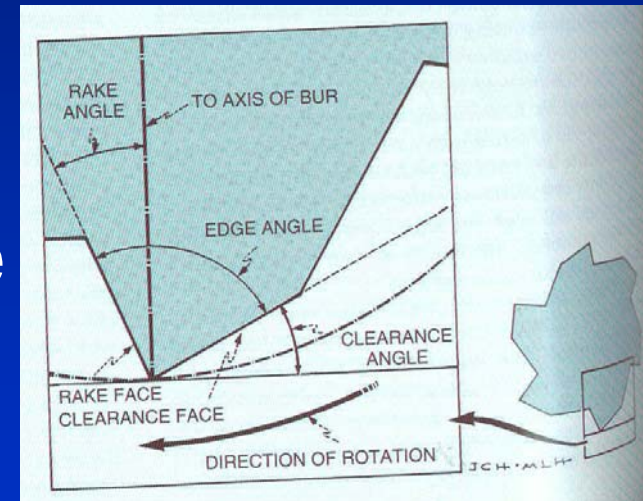
- Rake face (towards the direction of cutting)
- Clearance face

Rake angle – slightly negative

Edge angle – appr 90°

Clearance angle

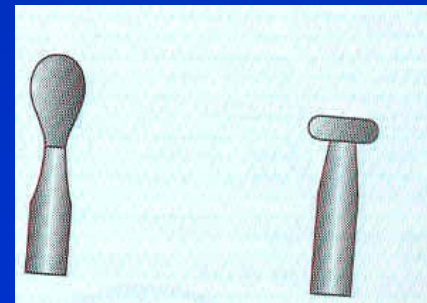
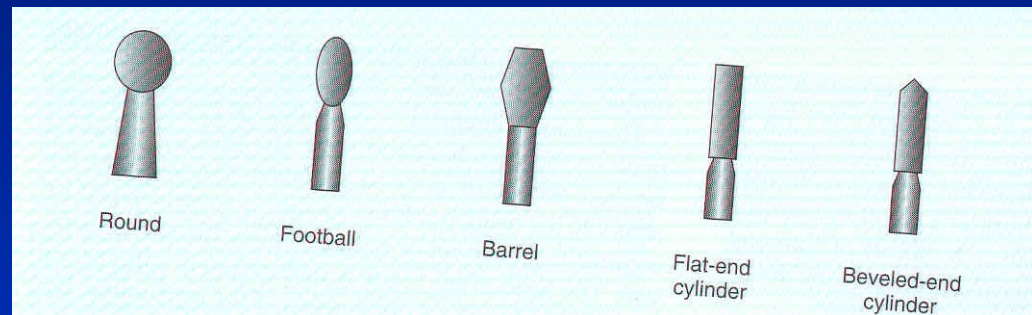
Clearance face rounded or two surfaces.



Head design

Diamond classification systém

Round
Inverted cone
Pear shaped
Cylinder
Taper
Lens
Needle etc.



Diamond abrasive instruments

Diamond bort – small sharp particles in softer matrix. Cutting occurs at a large number of points.

Metal blank

Diamond powder

Metallic bonding material



Preparation speed

- Low (slow) speeds – below 12.000rpm
- Medium or intermediate speeds 12.000 – 200.000 rpm
- High or ultrahigh speeds above 200.000 rpm



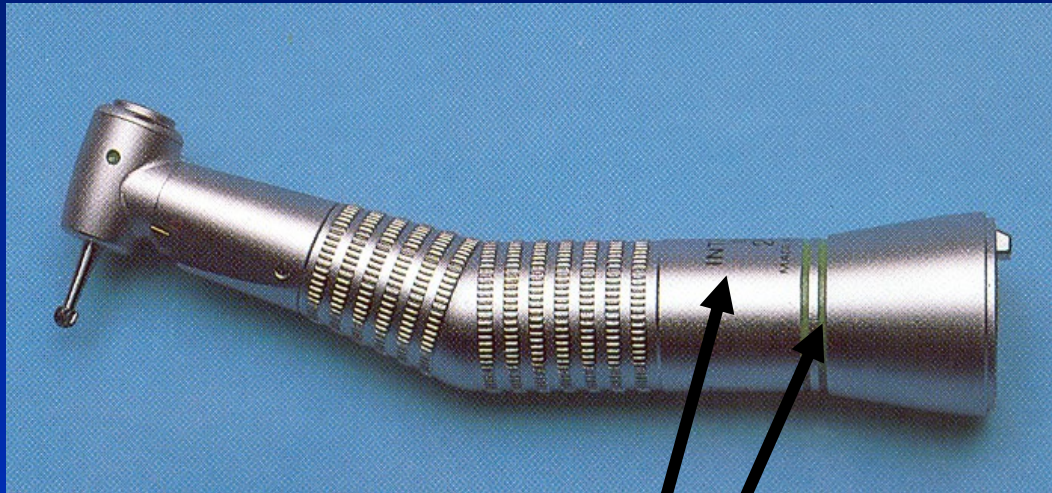
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Gear assembly



1:4 až 1:5

Speed increasing gear



1 Green ring: 2,7:1

2 Green rings: 7,4:1

Speed decreasing gear

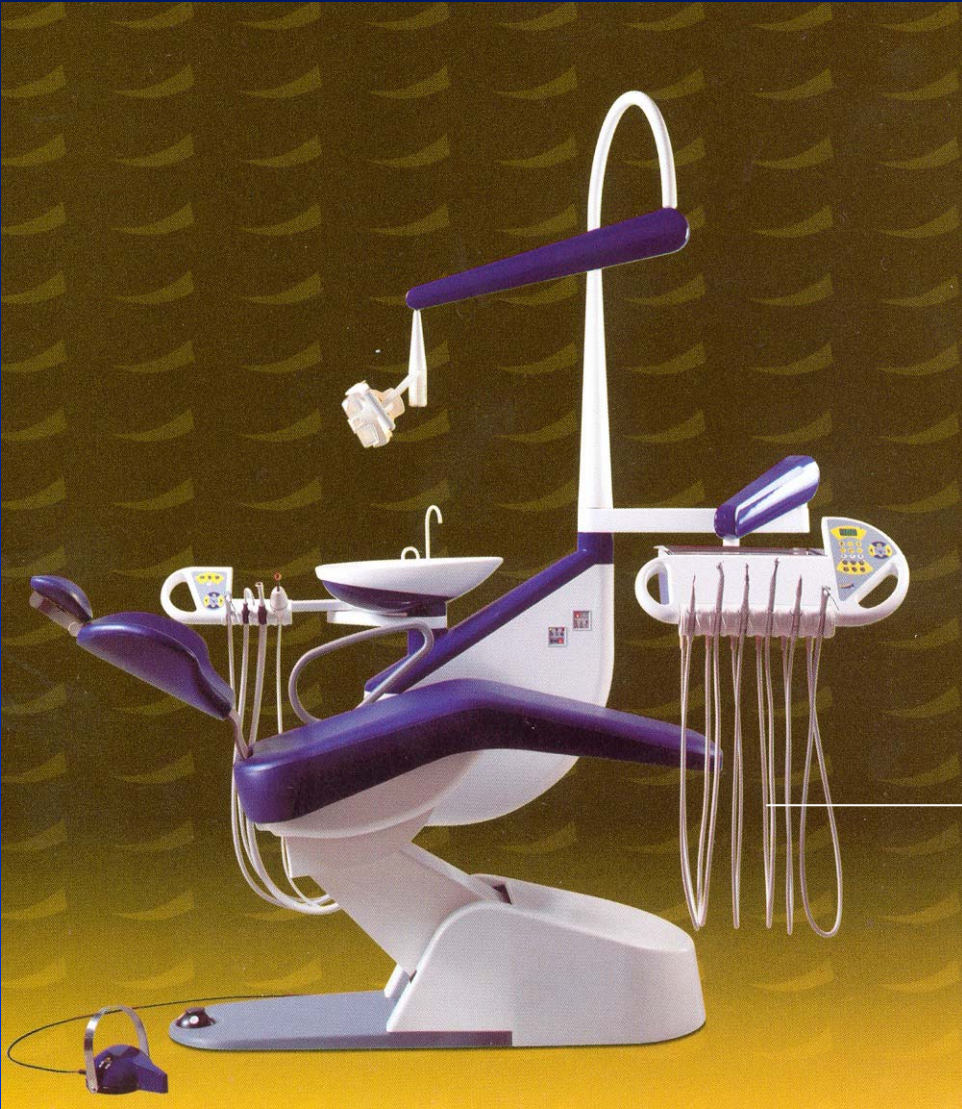


Spitting box
with amalgam
separator

Light

Driving system

Tray



Hoses lower leading



Hoses – upper leading

