Patient assesment

Clinical examination

Diagnosis

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Clinical examination

Hands on process of observing both normal and abnormal conditions.

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Diagnosis

Determination and judgement of variations from normal.

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Precautions

Standard precautions to avoid the transmission of disease.

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Standard precautions to avoid the transmission of disease.

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

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Cursory examination

Tooth alignment, occlusal relationship.

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Charting and records

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

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Charting and records

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

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Charting and records
the most important notation

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

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Instruments for investigation – investigative instruments

Explorer (probe):
Sharp, straight or bow shaped:
Caries detection – lght motion without any pressure: dental surfaces, fillings.

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

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Instruments for investigation – investigative instruments

Mirror – flat or concave

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

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Instruments for investigation – investigative instruments

Tweezer

To grip various instruments and supplies.

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Examination

- Clinical
- Radiografic examination
- Adjunctive examination

  illumination, percusion test, palpation, thermal test, electric pulp test, test preparation.

Instruments for cavity preparation

Hand instruments for cutting

Two main materuials:

Stainless steel (loses keen edge)

Carbon steel (corrode)

Excavator

Chisel

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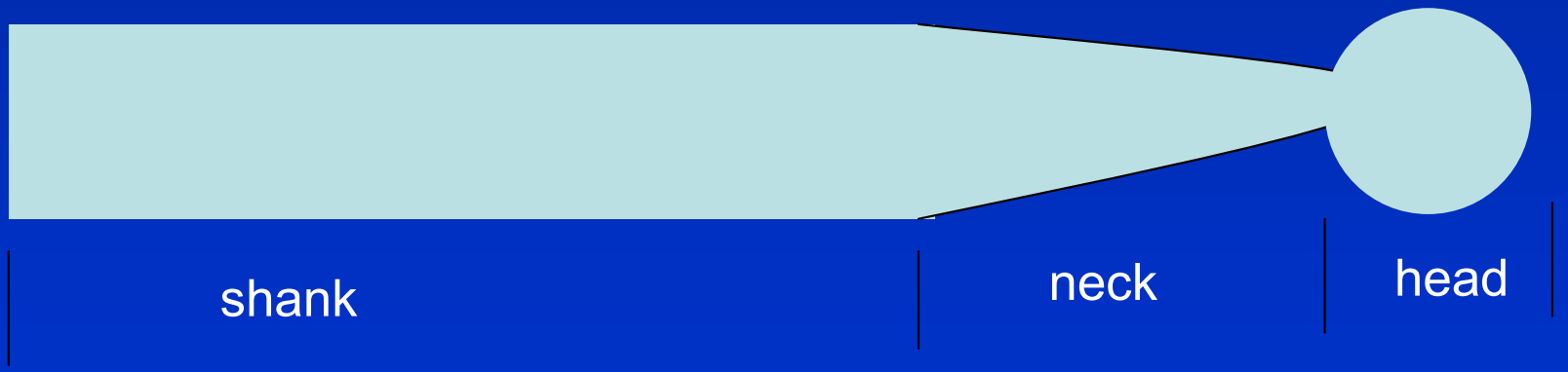
Instruments for cavity preparation

Power driven instruments for cutting

- Rotary instruments

Comon design characteristics



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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

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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.

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Neck design

Intermediate portion opf an instrument that connects the head to the shak

Tapered, shorter or longer.

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Head design

Burs – cut of steel or tungsten carbid

Diamond (diamond burs)– covered with the diamond bort

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Head design

Burs classification systém

Round
Inverted cone
Pear shaped
Straight fisure
Tapered fissure

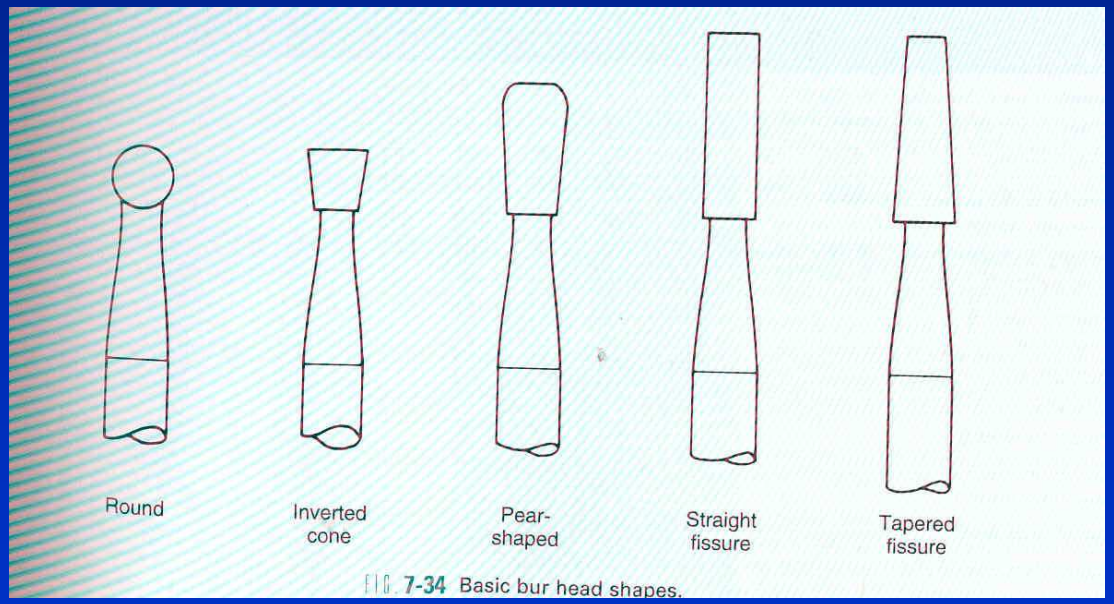

FIG. 7-34 Basic bur head shapes.

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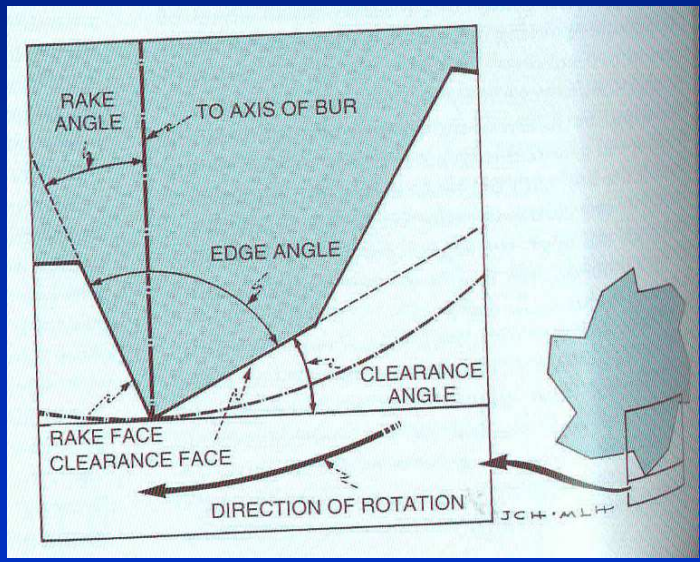
Bur blade design

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

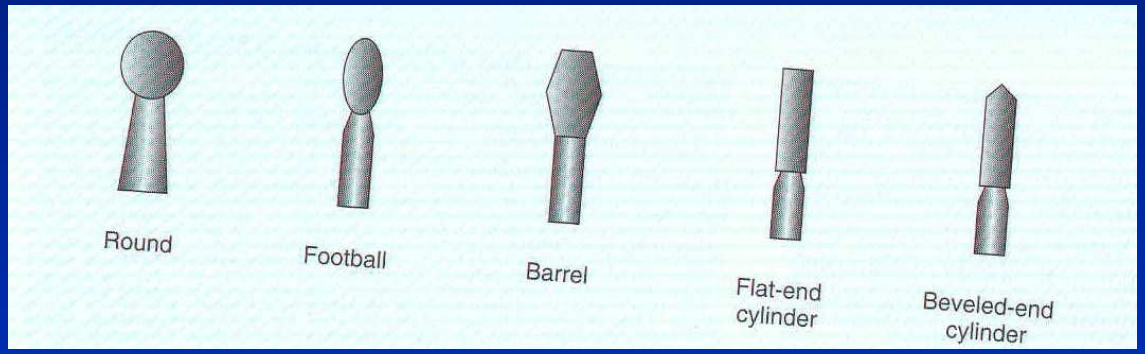


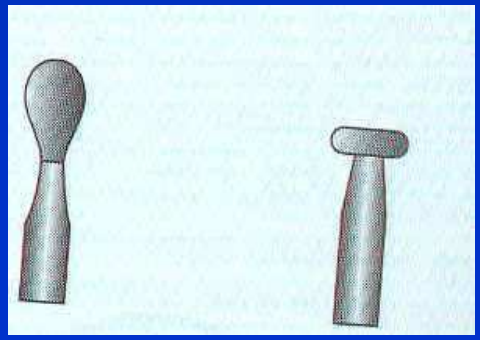
Rake angle – slightly negative
Edge angle – appr 90°
Clearence angle
Clearence face rounded or two surfaces.

Head design

Diamond classification systém

Round
Inverted cone
Pear shaped
Cylinder
Taper
Lens
Needle etc.





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Diamond abrasive instruments

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

Metal blank
Diamond powder
Metallic bonding material

Preparation speed

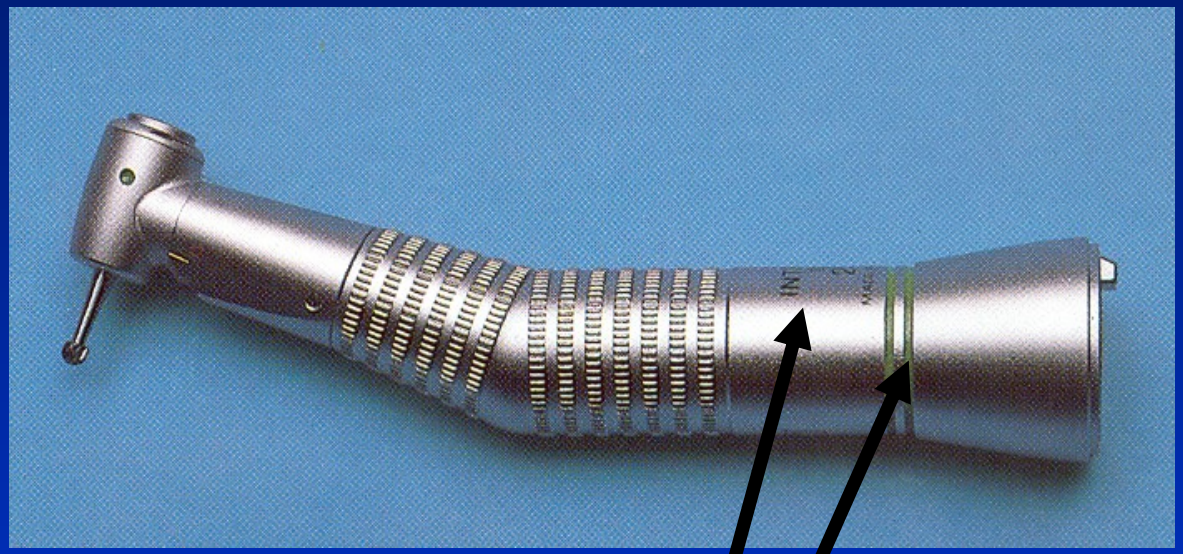
- Low (slow) speeds – below 12.000rpm
- Medium or intermediate speeds 12.000 – 200.000 rpm
- High or ultrahigh speeds above 200.000 rpm

1 : 1

Gear assembly

1:4 až 1:5

Speed increasing gear



1 Green ring: 2,7:1

2 Green rings: 7,4:1

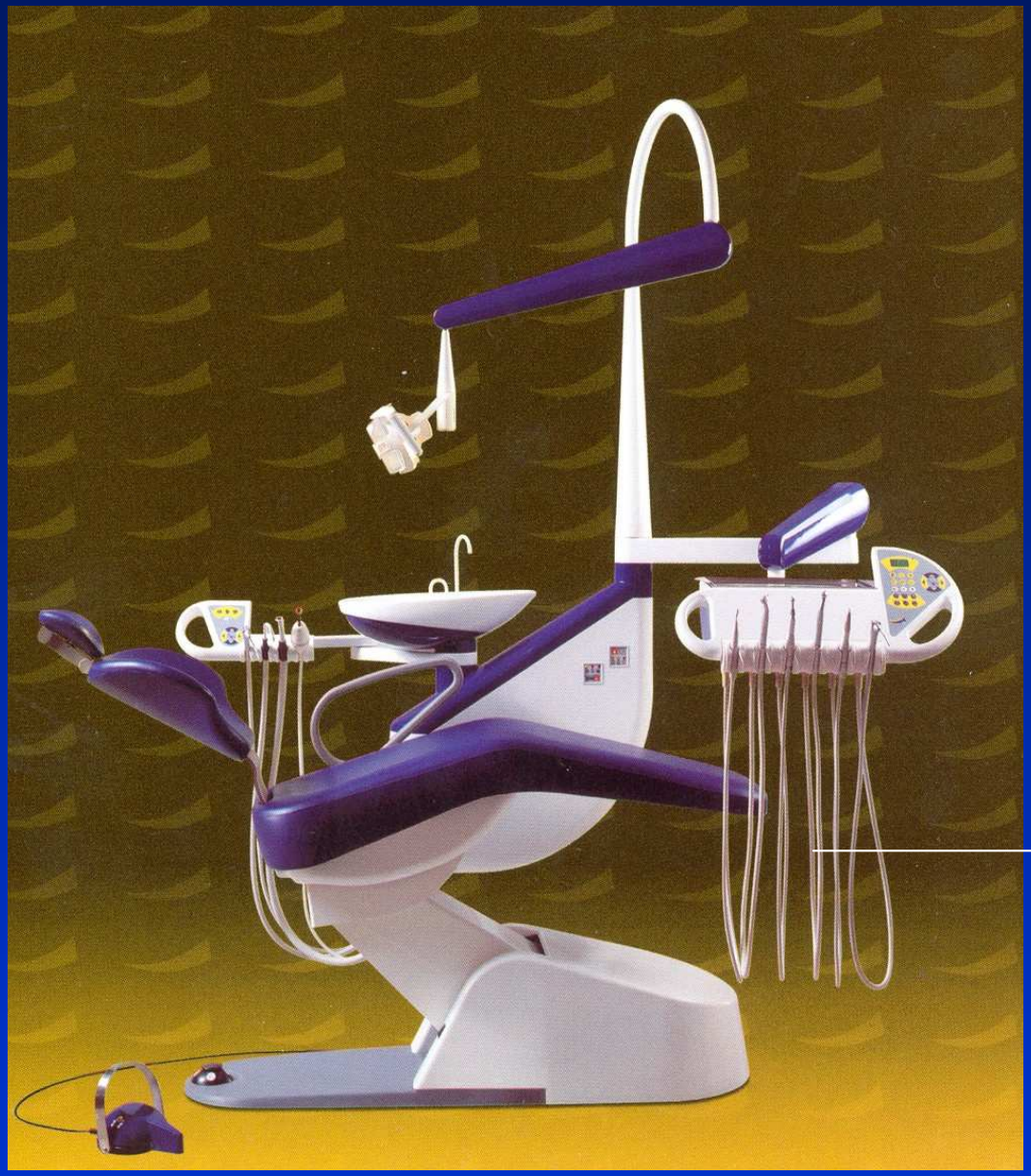
Speed decreasing gear

Spitting box with amalgam separator

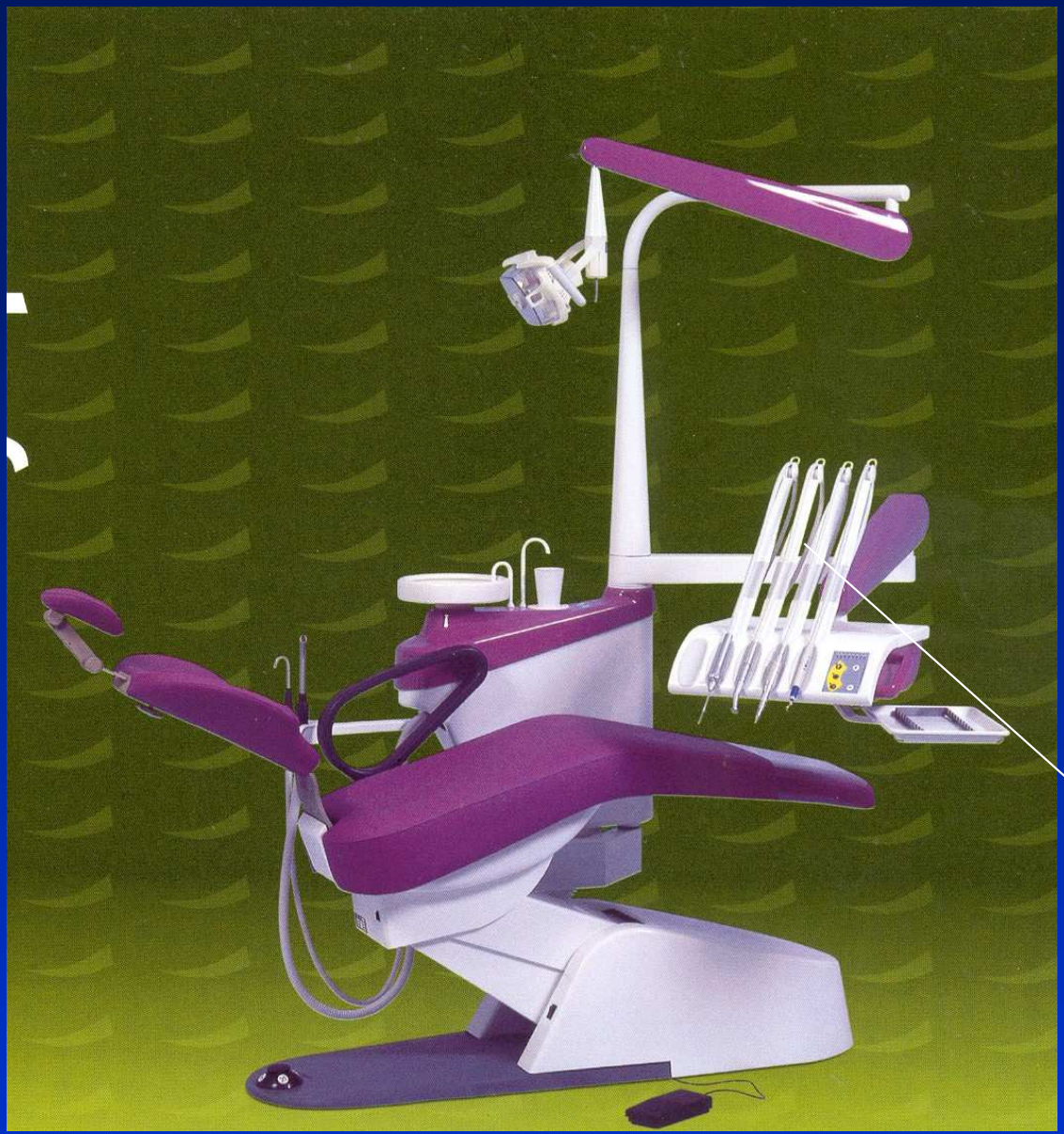
Light

Driving system

Tray



Hoses lower leading



Hoses – uper leading