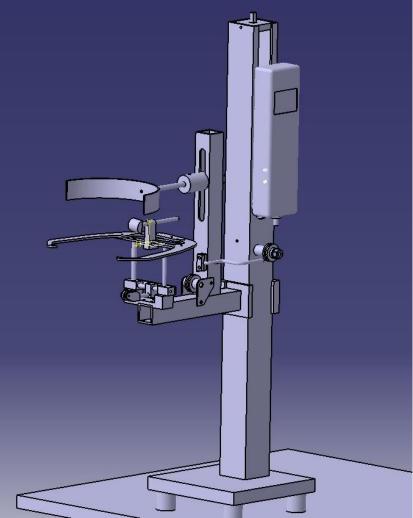
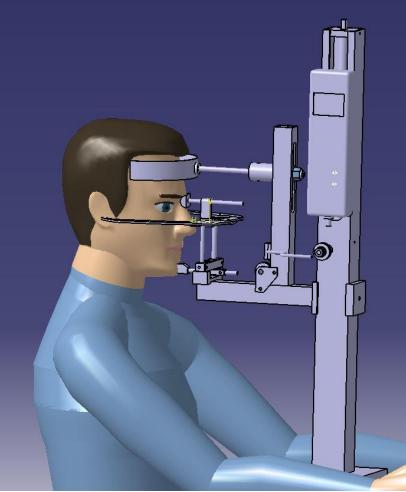
RETENTION FORCE MEASUREMENT OF DENTURE

Problem definition: in order to design and produce the best fitting denture for a patient, the retention force should be measured.

Challenges: measurement must be accomplished inside the patient's mouth. Volume is very limited. The force that needed to be measured is very low. Precise measurements are required. Designed set up must be perfect ergonomically. There must be 5 degree of freedom that should be controlled Materials must be antiallergic and compatible with human tissue.

Solution: sub mm parts are designed. Low friction micro bearings are used. Ergonomics is optimized by Catia ergonomics design. Force arm analyzed by FEM. Materials are assigned with respect to their hygiene and allergenic characteristics. Force gauge is calibrated for precise measurement.

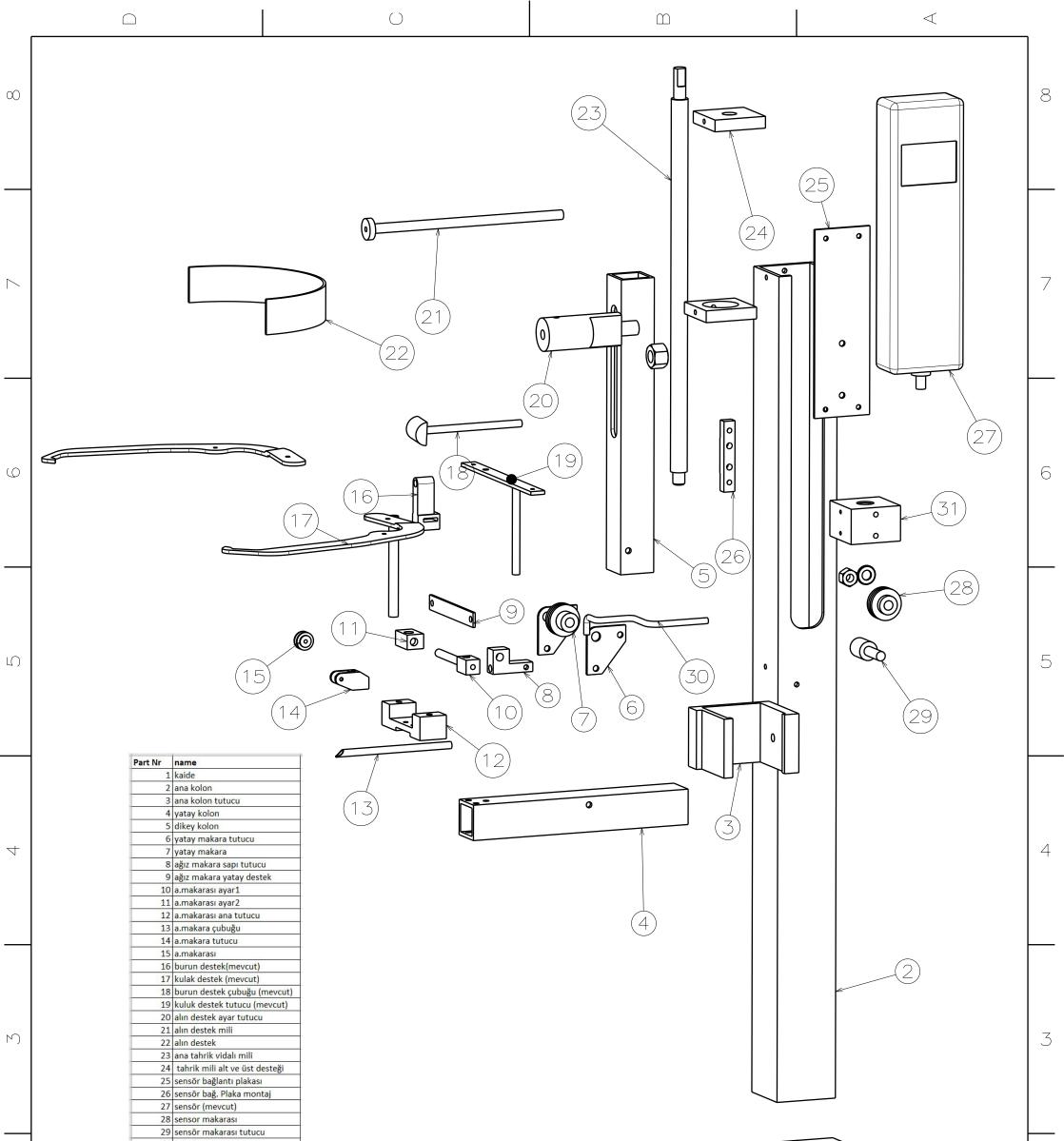












| 30 ip hattı borusu 31 kayar blok | 1) | | | | | | | |
|-------------------------------------|---|--------------------|------------|----------|------------|----------|-------|-----|
| | hacettepe university dept. of mechanical eng. Measurement of Denture | | | | | | | |
| | DRAWN BY | DATE | DRAWIN | NG TITLE | | | | |
| | R.KARAKUS | 29.03.2019 | ana montaj | | | | | |
| | CHECKED BY | DATE | SIZE | DRAWIN | G NUMBER | <u> </u> | | REV |
| | | 01.04.2019 | A3 | A3 1/1 X | | | | X |
| | designed by R.KARAKUS | DATE 15.03.2019 | SCALE | 1:1 | WEIGHT(kg) | XXX | SHEET | 1/2 |
| D | | | | | \neg | | A | |

 \bigcirc

2