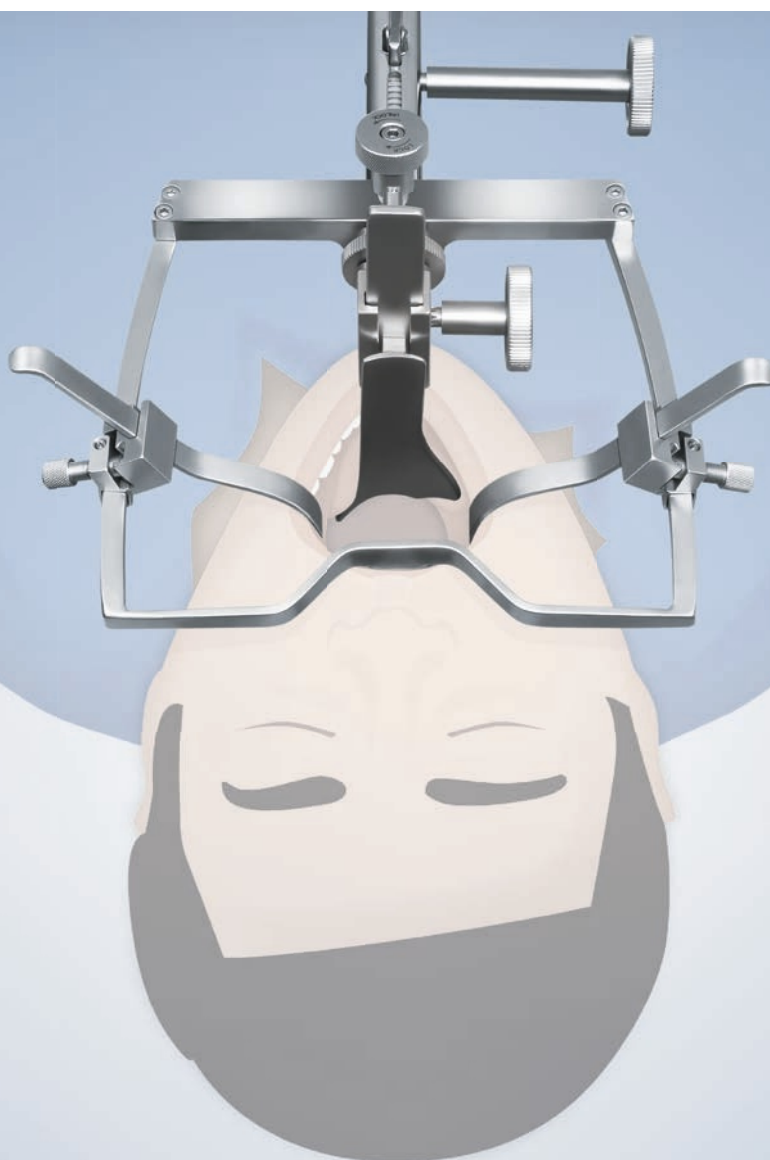


LARYNGOLOGY

## FK-WO TORS

Laryngo-pharyngoscope retractor



# NEW DIMENSIONS – IN TORS, ENDOSCOPIC LASER SURGERY AND CONVENTIONAL MICROSURGERY

Through its unrestricting design, the FK-WO TORS laryngo-pharyngoscope retractor offers unique exposition of the upper aerodigestive tract, especially during TORS (Trans-Oral Robotic Surgery), microsurgery or laser surgery of the base of tongue, larynx and hypopharynx. In comparison with the standard laryngoscopes, the non-tubular concept of this device allows a better view into the operating area, an improved access to it and easier manipulation of instruments.

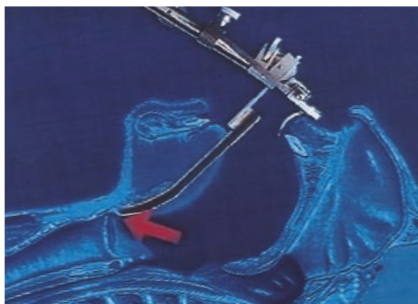
## Non-tubular design, frame construction with wide aperture

- The operating field is not restricted as is the case when using standard operation laryngoscopes
- Ample space is provided even for robotic instrument placement in TORS
- Movement and manipulation of instruments is facilitated

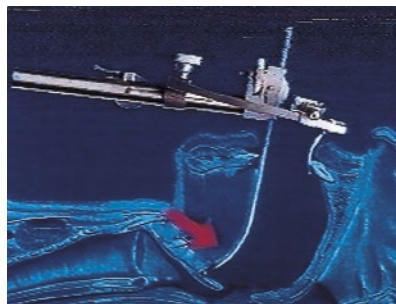
## Adjustable angles of the blades moving upwards and downwards

## Forward and backward movement of the blade for deep or less deep introduction

- Excellent view of the anatomic structures as the operating field can be ideally exposed
- Head reclination only moderate



*Exposure of oropharynx*



*Exposure of larynx*



*Exposure of hypopharynx and upper esophagus*

## Blade variety covering all applications

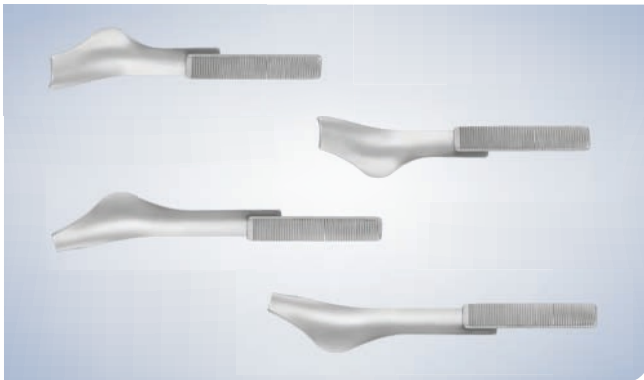
A large selection of blades ensures an optimal exposure of the operating single site within the upper aerodigestive tract. The adapted design of the blades (length and shape) allows use in TORS procedures (Trans-Oral Robotic Surgery): The different blades can be adjusted in their angles and their insertion depth for creating sufficient space in the operating site. Additionally, their adjustability allows an optimal opening of the mouth and thus ideal exposure towards the upper aerodigestive tract.



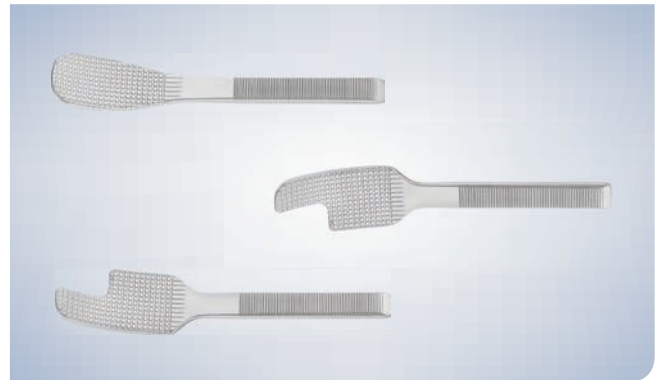
## Blades

### Large variety of blades

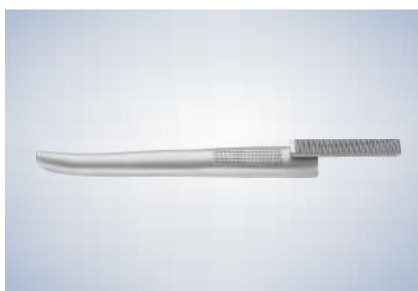
- Management of all procedures in laryngeal, pharyngeal and oral surgery



*TORS blades acc. to Weinstein-O'Malley for exposing the supraglottis and piriform sinuses and tongue base lesions*



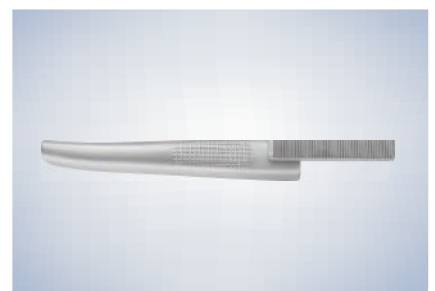
*Tongue blades for mouth cavity and oropharynx*



*Diverticle blade for hypopharynx/esophagus*



*Mandible blade for tumor surgery inside of the oral cavity*



*Laryngeal blade*

### Additional self-holding instruments

Additional instruments can be attached to the frame, to enable maximum hand freedom for the surgeon. The self-holding light clip represents an important tool for a good illumination of the operating site. Protruding parts of the cheek and tongue are held aside by the cheek retractors. Further self-holding instruments like the smoke suction tube and the tumor grasping forceps support the surgeon during the operation.



*Light clip for connection to the blade and direct illumination of the operation field and better view during insertion*



*Cheek retractors connecting to the frame for holding aside of the patient's cheek*



*Suction tube for smoke evacuation*



*Self-retaining tumor grasping forceps*

### Attachment of assisting tools

- Hand freedom
- Illumination, retraction, suction and grasping function

### Flexible Tension Arm

A flexible tension arm provides an easy and convenient way to secure the retractor into the desired orientation/position to best accommodate standard and robotic procedures.

#### Connection for flexible tension arm

##### Only one central set screw

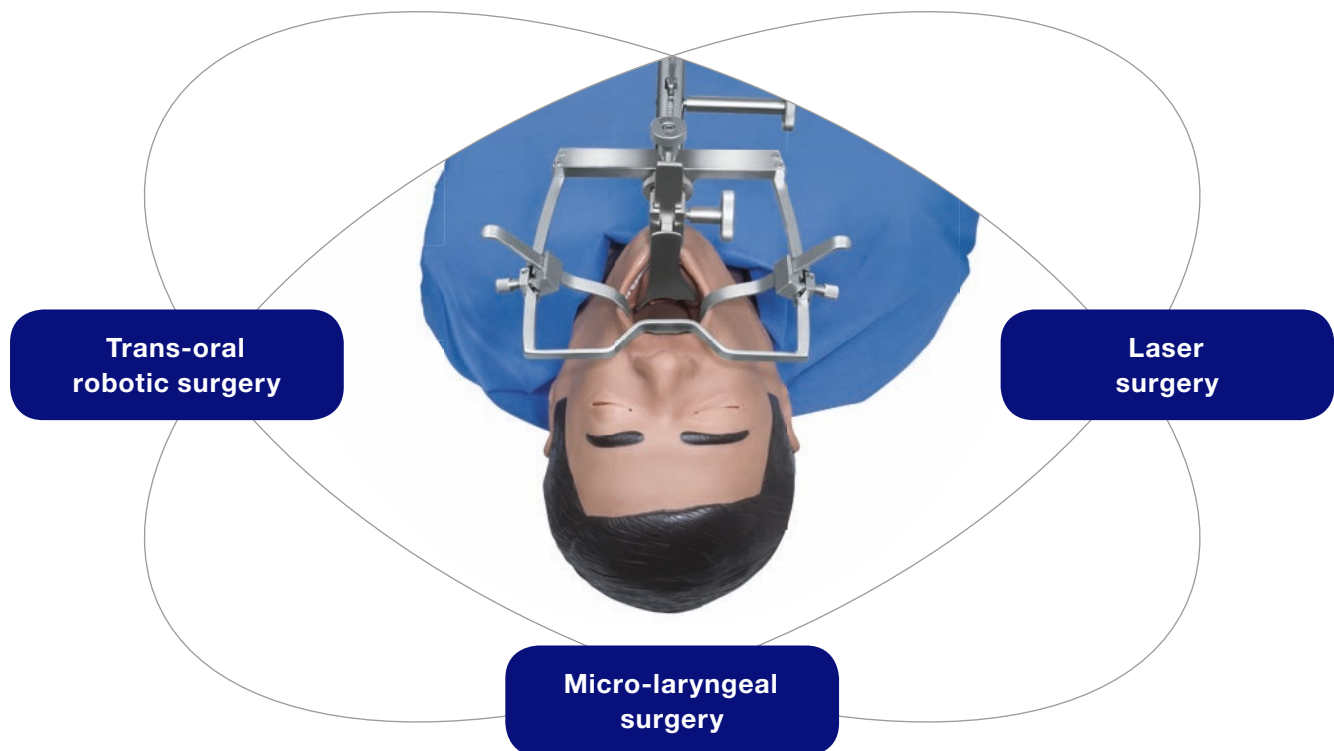
- Safe and easy positioning/orientation of the FK-WO TORS Retractor
- Best accommodation for TORS procedures
- Fast and stable fixing with powerful holding force
- Universally applicable



*Connection of flexible tension arm to retractor*

## A DEVICE OFFERING UNIQUE EXPOSITION

Providing ample space for robotic arm placement, the FK-WO TORS Laryngo-Pharyngoscope Retractor allows adequate exposure in Trans-Oral Robotic Procedures (TORS). With specially developed blades, this is the only retractor system which provides exposure to the supraglottis and piriform sinuses, as well as to more difficult to reach tongue base lesions during TORS. This retractor also plays an essential role in improving and easing standard micro-laryngeal procedures and laser surgery of the upper aerodigestive tract and helps expose all relevant anatomical areas for a thorough, safe and time-saving operation. Especially in base of tongue operations, it provides outstanding exposure and advantages versus other laryngoscopes.



*Setting the angle of the blade*



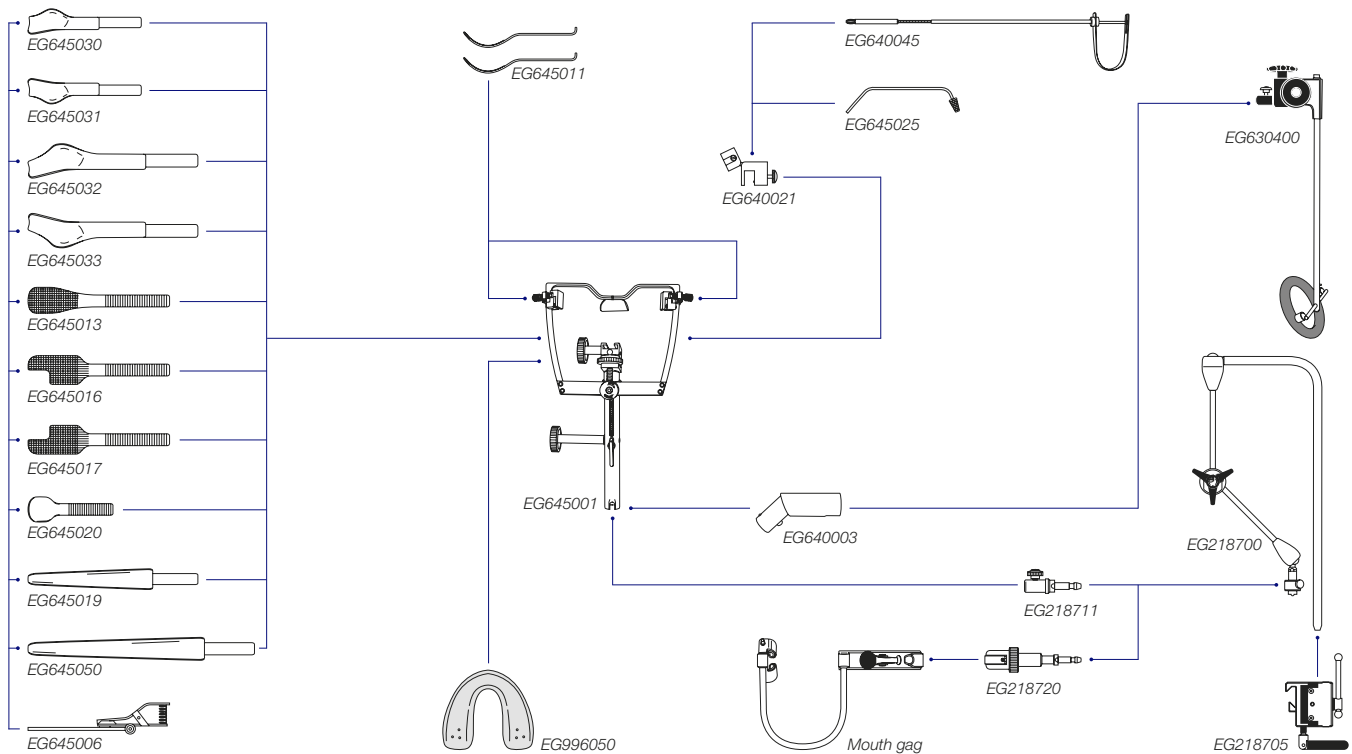
*Adjusting the insertion depth of the blade*



*Adjusting the retraction space*

# FK-WO TORS

## System chart



## FK-WO TORS set

**EG645000** FK-WO TORS laryngo-pharyngoscope retractor complete set

**EG645001** FK-WO TORS basic frame, with adapter 640003

**EG640003** Adapter, for FK-WO TORS basic frame

TORS blade, acc. to Weinstein-O'Malley

**EG645030** small, left

**EG645031** small, right

**EG645032** small, left

**EG645033** small, right

Tongue blade

**EG645013** curved

**EG645016** curved, right side open

**EG645017** curved, left side open

**EG645019** Laryngeal blade, 17 cm, concave

**EG645020** Mandible blade, 11 cm

**EG645006** Light clip, with lateral cable connection

**EG645011** Cheek retractor, curved, two pcs.

**EG640021** Adapter, for tumor grasping forceps or suction tube

**EG645025** Suction tube, 4.0 x 170 mm, for smoke

**EG996050** Teeth protector, latex free, not autoclavable, ten pcs.

**EG806450** Container, for FK-WO TORS retractor

## Accessories

**EG640045** FK self retaining tumor grasping forceps, flexible, with three grasping teeth, working length 23 cm, 4.0 mm shaft diameter

**EG645050** Diverticle blade, concave, working length 22 cm

**EG630400** Laryngoscope holder and chest support, with rod for adults, with rod fixation screw, for use with the laryngoscopes, 9.5 cm diameter of ring, rod length 34 cm

**EG630500** Rod for children (not shown), 9.5 cm diameter of ring, rod length 24 cm

**EG218700** Flexible tension arm, L-stand, 470 x 170 mm, 18.5" x 6.7" with lock

**EG218705** Clamp socket, for 218700, electrical isolated up to 4.5 kV AC, for rail 25–35 x 8–10 mm

**EG218711** Adapter, for retractor/laryngoscope

**EG218720** Adapter, for retractor/optic/mouth gag

Specifications, design, and accessories are subject to change without any notice or obligation on the part of the manufacturer.

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