

VENUS®

GONIOMETER NAVIGATION



## Surgery technique

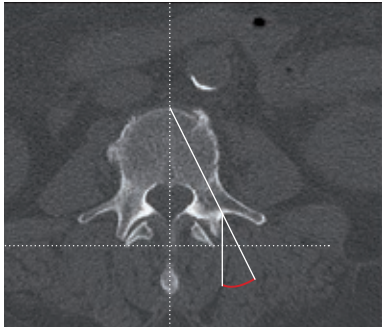


Fig. 1

### Determination of the entry point of the Goniometer Awl

Based on the MRI scan, drawing a vertical line through the vertebral body (midline of spinous process and anterior wall of the vertebral body). Copy that line parallel over the transverse process. Drawing a second line horizontally over the facet joints. Drawing a third line going from the middle of the anterior wall of the vertebral body (cross point of the vertical line and the anterior wall) through the middle of the pedicle. (Fig. 1)

Measuring the angle of the pedicle line to the copied line of the vertical line.

(marked red, Fig. 2)

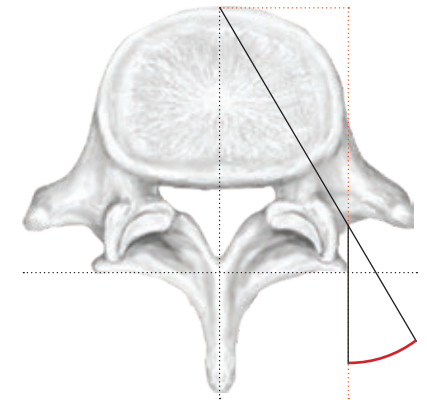


Fig. 2

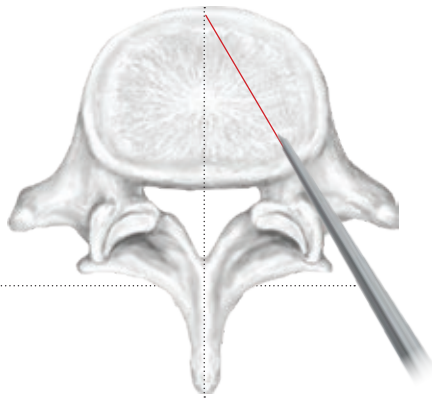


Fig. 3

### Usage of the Goniometer Awl

Placing the Goniometer Awl strictly vertical on the entry point of the pedicle. Adjust the Goniometer Awl to the appropriate angle by inclination laterally (Fig. 3) until the indicator hand of the protractor shows the measured angle.

(Fig. 4)

Penetration of the cortex using a hammer (keep the hammer blows light). The tip of the awl should be pushed inside the pedicle until the depth of at least 25 mm. Once the tip of the awl has been placed safely into the pedicle removal of the trokar and insertion of the K-wire into the vertebral body, ideally until the anterior cortex of the vertebral body.

(Fig. 5)

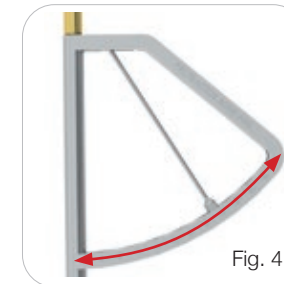


Fig. 4

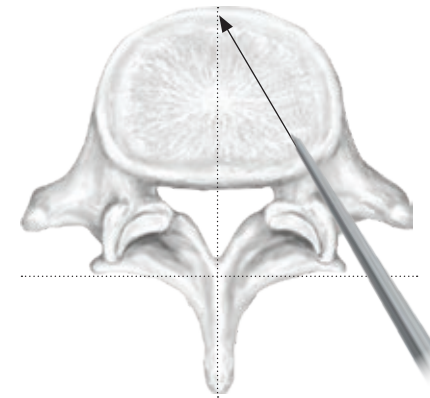
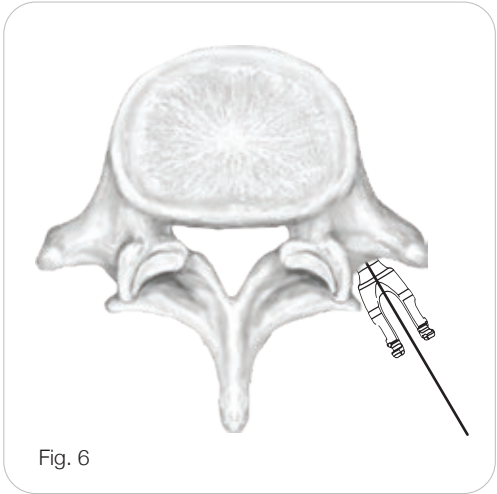
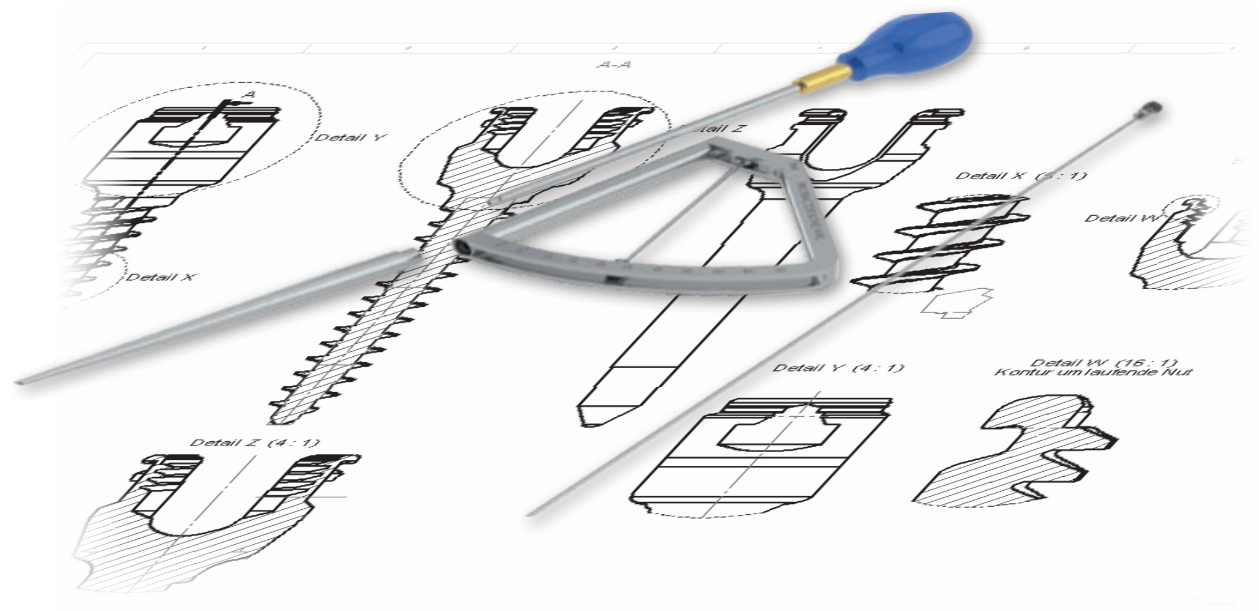


Fig. 5

# Surgery technique

## Insertion of the pedicle screw

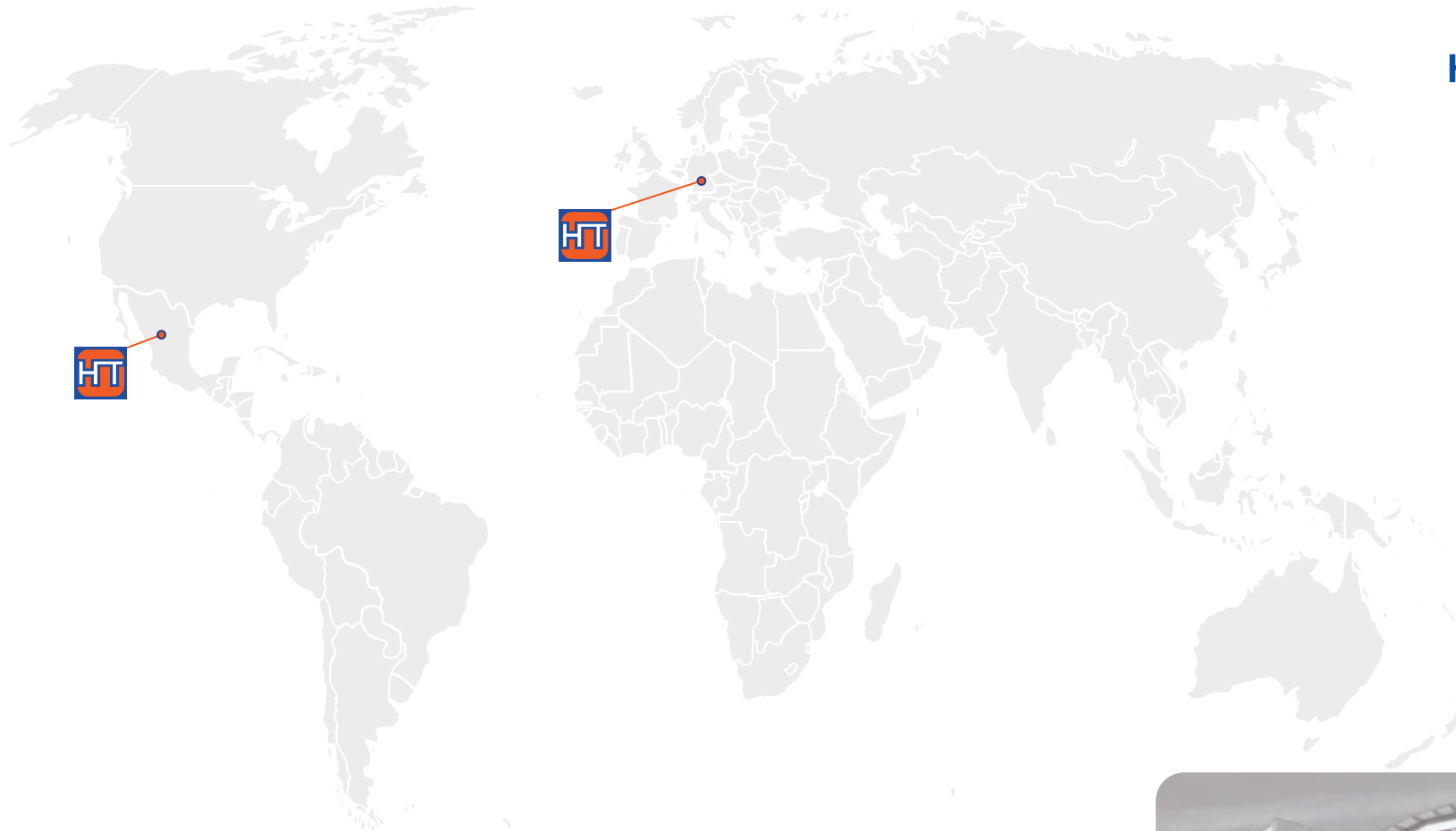
Insertion of the pedicle screw over the K-wire by using x-ray to ensure the correct course of the screw.  
(Fig. 6)



VENUS®



Art.No.	Description
1007010052	Goniometer-Awl



## Manufacturer and Sales

HumanTech Spine GmbH

Gewerbestr. 5  
D-71144 Steinenbronn

Germany

Phone: +49 (0) 7157/5246-71  
Fax: +49 (0) 7157/5246-66  
sales@humantech-spine.de  
www.humantech-spine.de

## Sales for Latin America

HumanTech Mexico, S. DE R.L. DE C.V.

Rio Mixcoac No. 212-3  
Acacias del Valle  
Del. Benito Juárez  
C.P. 03240 Mexico, D.F.  
Mexico

Phone: +52 (0) 55/5534 5645  
Fax: +52 (0) 55/5534 4929  
info@humantech-solutions.mx  
www.humantech-spine.de



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