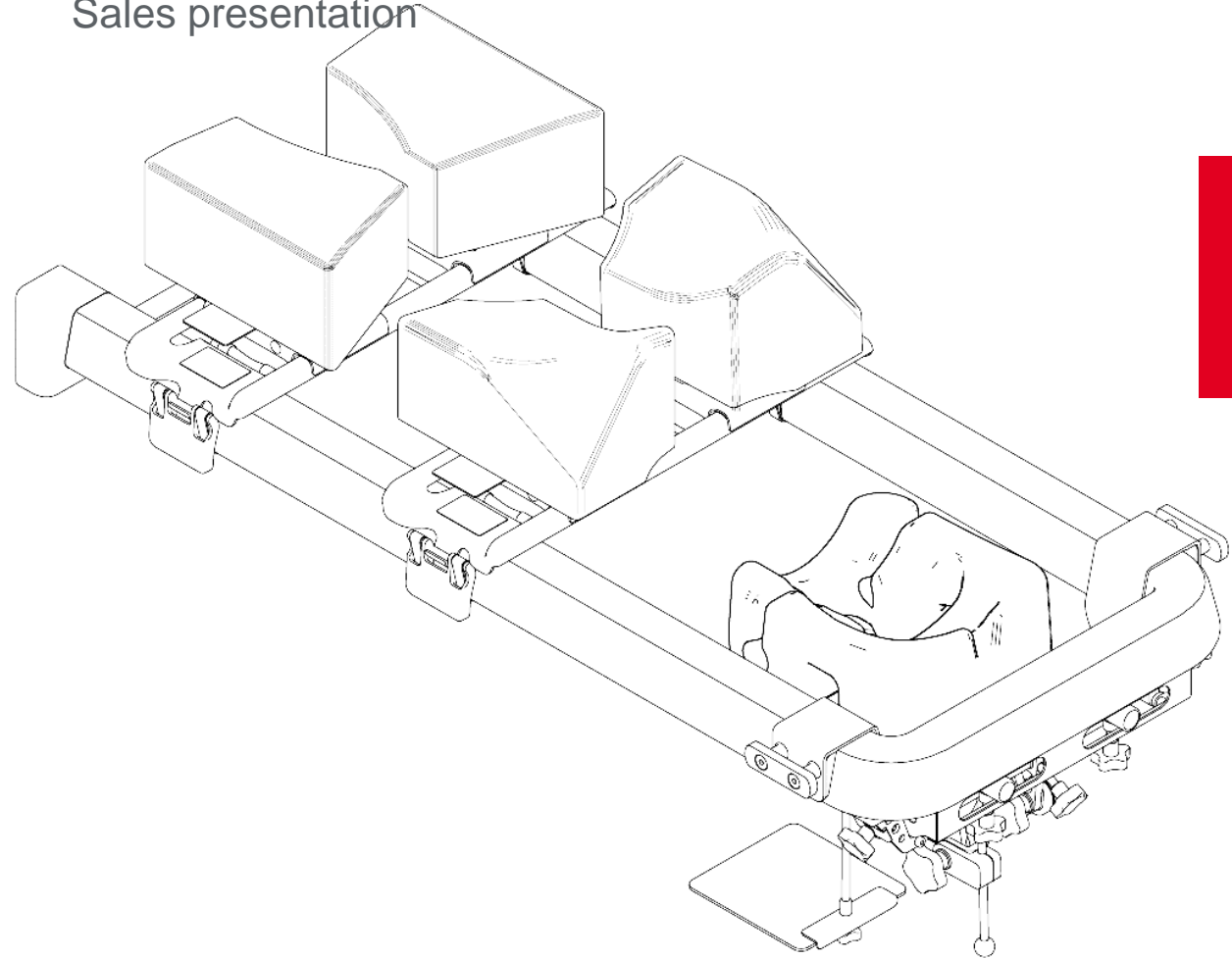


## **schaerer<sup>®</sup> Carbon Spine Frame (CSF)**

Sales presentation



## Why another spine solution?

Existing solutions on the market

### Prone positioning pad

#### Functions and Components:

- Consists of one or more cushions
- Cut-out for free abdomen
- Is placed on the table top
- Many different shapes and suppliers

#### Advantages:

- + Affordable
- + Can be used with every operating table
- + Space saving

#### Disadvantages:

- Difficult to get stability
- Very limited adjustability
- Additional head support needed
- No radiolucency if used on standard table top
- Limited abdomen pressure relief
- Big quality differences



## Why another spine solution?

Existing solutions on the market

### Andrews, Wilson or Bow Frame

#### Functions and components

- Two cushions on each side
- Flexion of the cushion can be adjusted
- Gap between the cushions can be adjusted
- Placed on the table top

#### Advantages:

- + Can be used with every operating table
- + Easy installation



#### Disadvantages:

- Abdominal pressure
- Limited adjustability (Tallness, weight...)
- No radiolucency on standard table top
- Additional head support needed
- Can damage the cushion

## Why another spine solution?

Existing solutions on the market

### 4 – Post systems

#### Function and components

- Four individual adjustable pads, positioned on a frame
- Two pads supporting chest area
- Two pads supporting pelvis area
- Highly adjustable



#### **Advantages:**

- + Reducing abdominal pressure
- + Individual adjustment according to patient
- + Offset of the column
- + Radiolucent
- + Better access to airways

#### **Disadvantages:**

- More expensive
- Floor support
- Storage space
- Space in the operating theatre
- Partially heavy components
- Complicate handling
- Limited to table movements or system movements
- Operating table not mobile
- Needs assistant to handle the system

# Why another spine solution?

Existing solutions on the market

## 4 – Post systems

„This is the logistically the most difficult positioning due to challenges associated with providing adequate oxygenation, ensure adequate ventilation... Access to patient airway is poor.“ (Rozet I, 2007: 636).

### Why reducing abdominal pressure?

Free movement of the abdominal is desirable for 3 reasons: 1) improved oxygenation ventilation, 2) a decrease in intraabdominal pressure and decreased surgical bleeding 3) and improvement of venous return from lower extremities and pelvis

(Rozet I, 2007: 637).

### Why airways access?

Eyes, nose and ears should be protected against pressure. Avoiding head down position, reduce risk of blindness.

### Why X-ray?

Surgery close to the spinal nerve require monitoring during surgery.

### Why individual adjustment of the pads?

To position different patients and to ensure a safe and comfortable positioning. Furthermore the abdominal pressure can be decreased.

## ■ What's the difference?

schaerer® Carbon Spine Frame



**No floor  
support!**

## What's the difference?

### Advantages of the schaeerer® Carbon Spine Frame

No floor support...

... these are your advantages

- Access for anaesthesia staff, equipment and C-arms
- Perioperative motorized table top adjustments, without additional adjustment
- Mobile operating table, even with frame attached and patient positioned
- No additional staff needed
- Very light weight
- No limitation of movement

## What's the difference?

Advantages of the schaeerer® Carbon Spine Frame

No floor support...

... these are your advantages

 Access for anaesthesia staff, equipment and C-arms





## What's the difference?

### Advantages of the schaerer® Carbon Spine Frame

No floor support...

... these are your advantages

- Perioperative motorized table top adjustments, without additional floor support adjustment



## What's the difference?

### Advantages of the schaeerer® Carbon Spine Frame

No floor support...

... these are your advantages

- Mobile operating table, even with frame attached and patient positioned
  - Effortless movement with motorized drive (Arcus)



## What's the difference?

### Advantages of the schaerer® Carbon Spine Frame

No floor support...

... these are your advantages

 No additional staff needed




## What's the difference?

### Advantages of the schaeerer® Carbon Spine Frame

No floor support...

... these are your advantages

-  Very light weight, due to carbon elements
  - Carbon Frame → 6.2 kg / 13.66 lbs
  - Head rest clamp, short side rail → 6.3 kg / 13.89 lbs
  - Head rest clamp, long side rail → 6.5 kg / 14.33 lbs

## What's the difference?

### Advantages of the schaerer® Carbon Spine Frame

No floor support...

... these are your advantages

#### No limitation of movement

- Full movement of the operating table
- No limitation due to range of motion of the floor support



Limited 635 mm – 965 mm

## **schaerer® Carbon Spine Frame**

### Components

The schaerer® Carbon Spine Frame consists of:

1. Carbon Frame
2. Pad holder
3. Male and Female pads
4. Head holder
5. Head pad
6. Mirror



## **schaerer® Carbon Spine Frame**

A detailed view

### Assembling

 Only four steps to assemble the schaeerer® Carbon Spine Frame

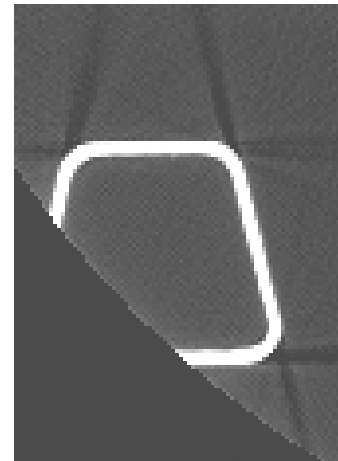
1. Attach carbon frame
2. Attach pad holders
3. Attach pads
4. Attach head rest clamps
5. Attach arm rests

## schaeerer® Carbon Spine Frame

A detailed view

### Carbon Frame

 Trapezium shape and rounded edges reduces interferences during X-ray pictures



 Very light weight, 6.2 kg (13.66 lbs)

 Total length of 1205mm, there from 1052mm completely metal-free




 Carbon material ensures high stability up to 240 kg patient weight capacity




# schaerer® Carbon Spine Frame

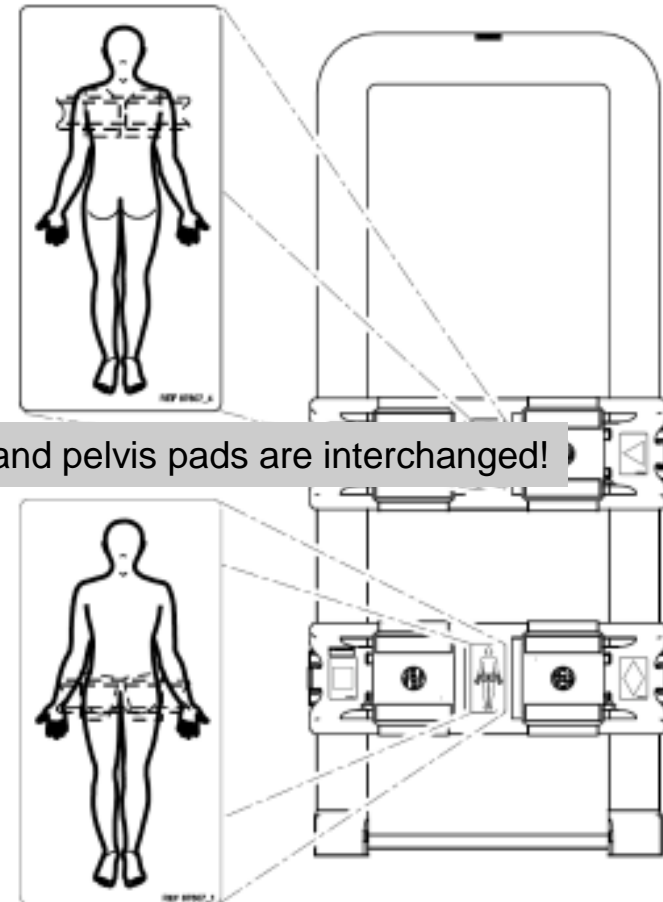
A detailed view

## Pad holder

-  Made of radiolucent material
-  Pelvis and chest pad holder
-  Labels for easy assembling and intuitive handling

**Note:** Place the pad holder correctly. Otherwise the chest and pelvis pads are interchanged!

-  Individual adjustment (angle, lateral and vertical displacement)



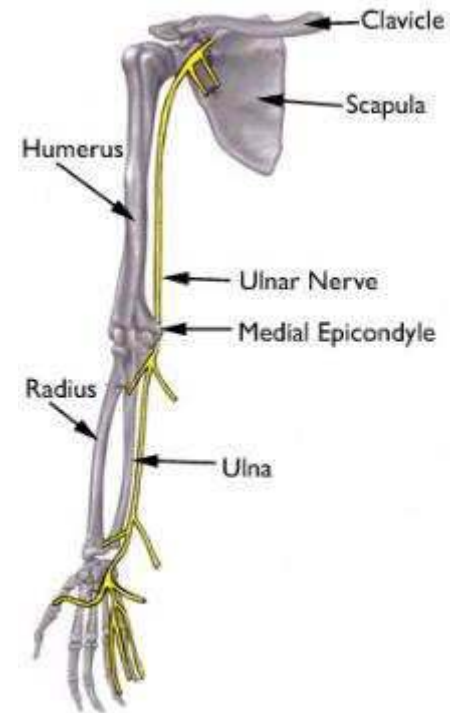
## schaerer® Carbon Spine Frame

A detailed view

### Male and Female pads

#### Anatomically shaped

- Protecting nerves due to anatomically shaped pads
- Versatile positioning of the arm boards



# schaerer® Carbon Spine Frame

A detailed view

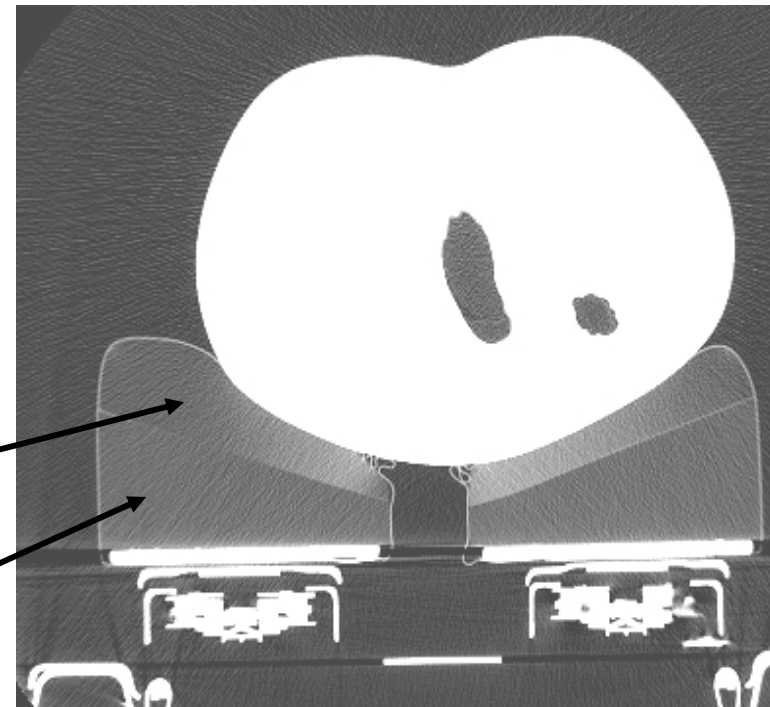
## Male and Female pads

- Two layers for save positioning of the patient
  - Support foam and memory foam

**Note:** Pad needs about one minute to adapt

Memory foam


Support foam

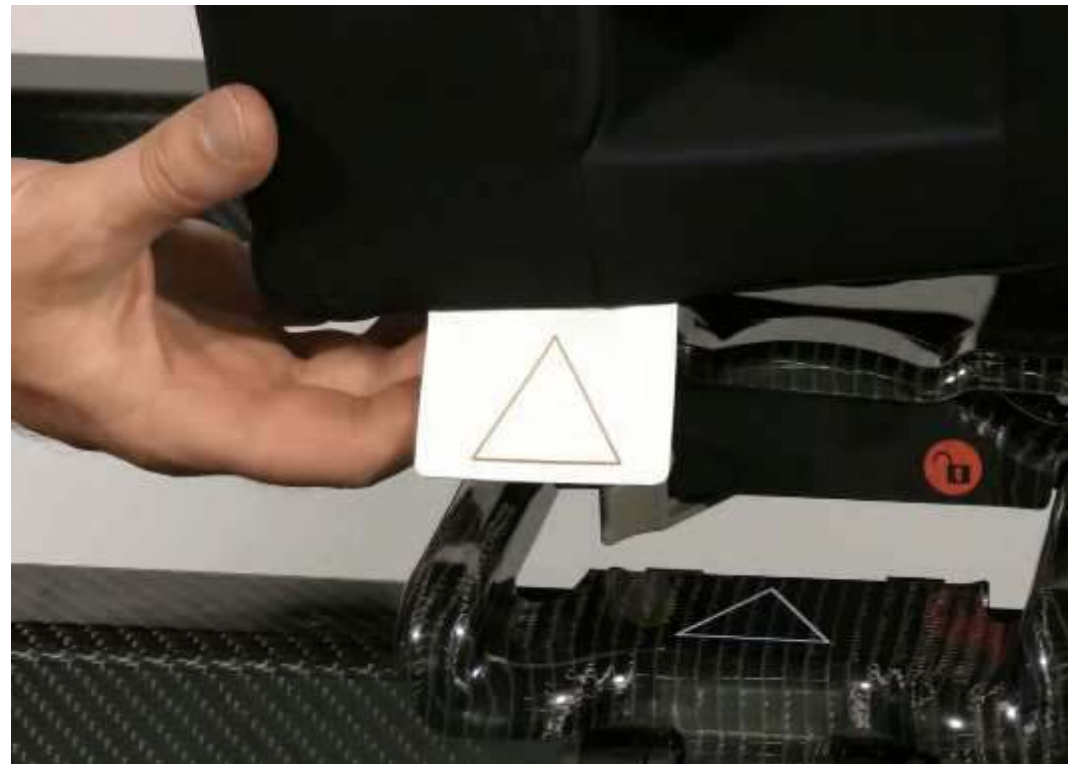


## **schaerer® Carbon Spine Frame**

A detailed view

Male and Female pads








-  Labels for easy assembling and intuitive handling



## **schaerer® Carbon Spine Frame**

A detailed view




### Head rest clamp

-  Height adjustment
-  Lateral displacement
-  Transparent head plate for visibility to the head of the patient
-  Flexible mirror which can be attached on left and right side
-  Head pad to reduce pressure to the eyes, ears and nose.
-  Standard connection for base units, aluminum and radiolucent (DORO®, MAYFIELD®)
-  Additional side rail adapter



## Additional information

### Good to know...

-  For schaeerer® axis tables, stability support is mandatory
  - Art. Nr 91774 or 90776
  
-  Position the patient **inside** the CSF
  - Including Neurosurgery accessories such as DORO® head rest clamp
  
-  Read instruction for use carefully

## Competitors

### What's on the market

#### Direct Competitors

- Maquet Universal Frame [www.maquet.com](http://www.maquet.com)
- Mizuho OSI Insite [www.mizuhosi.com](http://www.mizuhosi.com)
- Allen Spine System [www.allenmedical.com](http://www.allenmedical.com)

#### Competitive systems

- Allen advance table [www.allenmedical.com](http://www.allenmedical.com)
- Mizuho OSI Trios [www.mizuhosi.com](http://www.mizuhosi.com)

#### Specialized positioning systems

- Mizuho Axis pro [www.mizuhosi.com](http://www.mizuhosi.com)
- Allen advance table [www.allenmedical.com](http://www.allenmedical.com)

# Competitors

## Comparison technical specification

Comparison technical specification				
Specification	Schaerer® Carbon Spine frame	Mizuho OSI Insite	Allen Spine System	Maquet universal frame
Patient weight capacity kg (lbs)	up to 240 kg (529)	205 (450)	227 (500)	180 kg (396 lbs)
Lateral tilt	up to 20°	20°	20°	-
lowest position	595 mm	810 mm	635 mm	640 mm (without body supports)
highest position	1200 mm	1070 mm	965 mm	940 mm (without body supports)
Trendelenburg	30°	15°	20°	-
Reverse Trendelenburg	30°	15°	20°	-
Metal free area	1052 mm	1395 mm	1220 mm	1135 mm
Motorized table top movements		4 3	according to operating	5
Floor support	No	No	Yes	Yes
Motorized intraoperative movement?	Yes	No motorized joint	limited (adjust floor support)	limited (adjust floor support)
Can be used as standard operating table?	Yes	No	Yes	Yes
Body Tom	Yes	Yes	limited	limited
Overall length	1205 mm	1400 mm	1220 mm + floor support	1400 mm + floor support
Weight	heaviest component 6.5 kg	-	-	35 kg universal frame
Trolley	No	No	Yes	Yes
O-arm	Yes	Yes	limited	limited



# Competitors

## What's on the market

### Maquet Universal Frame

#### General

- Carbon frame with floor support. Possible to connect body supports or carbon insertions.
- Connection for Maquet head holder (square shape) or neuro base unit.
- Side rails to connect different accessories
- Body supports can be positioned in three levels, laterally, vertically and in height.

#### Positions

- Prone position on supporting pads
- Lateral position (just flat)
- Supine position (just flat)

#### Technically

- Can be used for current Maquet tables

#### Disadvantages

- Floor support (limited access!)
- Only 180 kg patient weight
- Rectangular carbon frame (can cause problems when using C-arm)
- No inclination of the pads
- No specialized head support
- Limited movements
- XLIF not possible



## Make an offer

How to get access to the hospital?

Price:

CSF list price → 29'500 EUR

Allen spine system (Japan) → 32'000 EUR (40% discount)

**Note:** Your price input is important

Following an instruction on how to get access to the hospitals and what questions have to be asked.

[questionnaire.doc](#)

# Competitors

## What's on the market

### Mizuho OSI Insite

#### General

- Complete system with table included (frame can not be removed)
- Carbon frame without floor support.
- Elements to create a closed surface (for lateral and supine position).

#### Positions

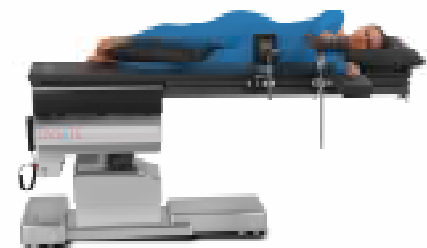
- Prone position on supporting pads
- Lateral position (just flat)
- Supine position (just flat)

#### Technically

- Can only be used in combination with Mizuho table

#### Disadvantages

- Rectangular carbon frame (can cause problems when using C-arm)
- No motorized joint
- Limited movements
- XLIF not possible



# Competitors

## What's on the market

### Allen spine system

#### General

- Carbon frame with floor support.
- Side rails to connect different accessories
- Body supports can be positioned individually

#### Positions

- Prone position on supporting pads
- Lateral position on supporting pads (XLIF)

#### Technically

- Is connected to the side rail
- Can be used with almost every table

#### Disadvantages

- Floor support (limited access!)
- Rectangular carbon frame (can cause problems when using C-arm)
- Limited movements
- Depending from the operating table used
- Needs more space in the operating theatre



## Exhibitions

### Argue during an exhibition

- 4 – post system for individual positioning and abdominal pressure reduction
- Access for anaesthesia staff, equipment and C-arms, due to no floor support
- Motorized intraoperative movement
- 3D X-ray window
- Can be used with Axis and Arcus operating table
- Can be converted to a standard operating table
- No part heavier than 6.5 kg (14.33 lbs)
- High weight capacity
- Intuitive handling
- Can be used with BodyTom and O-arm

## **schaerer® Carbon Spine Frame in the future**

### Further improvements

#### XLIF, lateral decubitus position

- Lateral position is not tested with the CSF
- For the time being the lateral position can only be done with and arcus 601 and short carbon plate or and axis 500 with long carbon plate and axis 600 with short carbon plate.

#### Trolley for storage

## References

List of references:

Rozet, I., Rozet, M., & Vavilala, S. (September 2007). Risks and Benefits of Patient Positioning During Neurosurgical Care. *Anesthesiol Clin.*, S. 631 - x.

Thank you for your attention.

