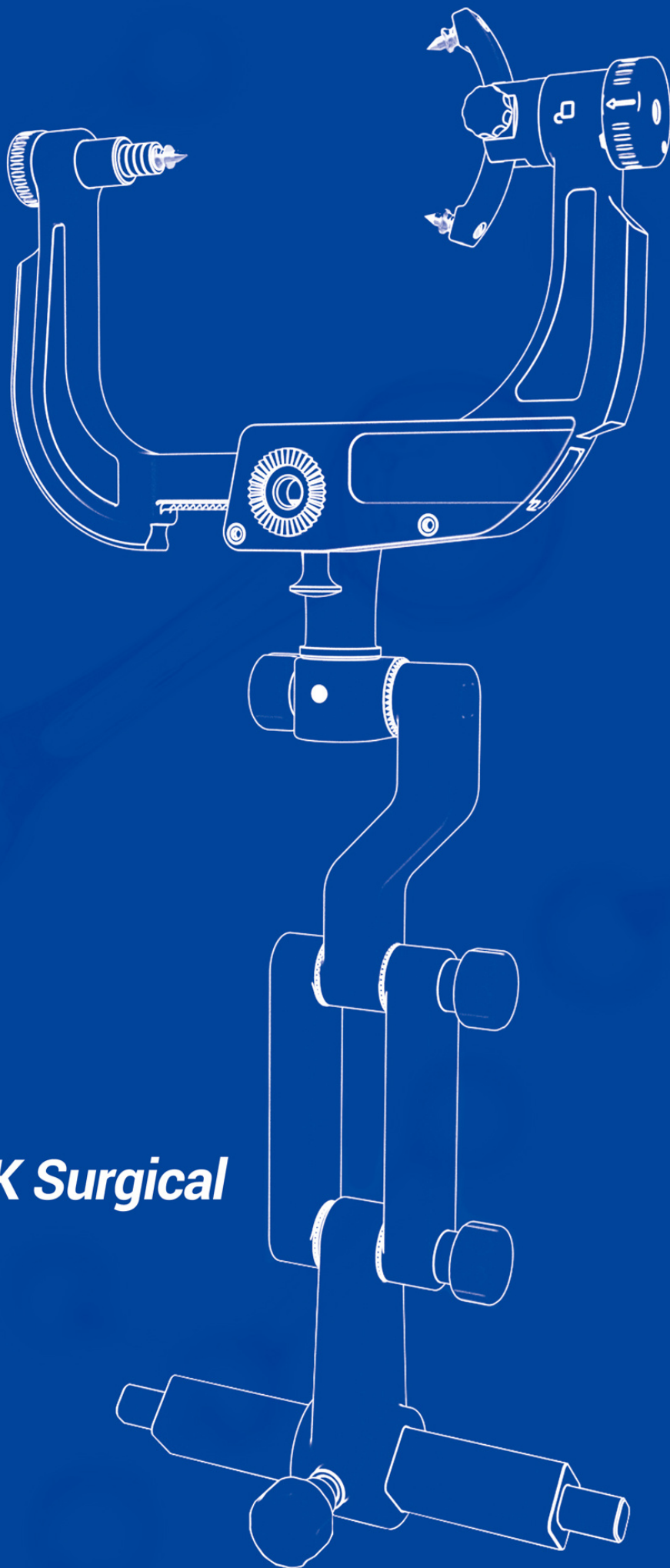




***Junhua Medical
Radiolucent PEEK Surgical
Head Frame***

Radiolucent PEEK Surgical Head Frame

The radiolucent PEEK surgical head frame is designed for CT, DSA, and X-ray fluoroscopy scans of the head and neck, as well as intraoperative MRI examinations.

The main frame (excluding cranial pins) is fabricated from PEEK5600CF30 carbon fiber-reinforced composite (comprising PEEK5600G matrix and 30% short carbon fiber reinforcement), offering superior strength and toughness compared to conventional carbon fiber materials.



(Material: PEEK5600CF30 or CF/PEEK)

Key Features of PEEK5600CF30

- 80% lighter than metallic alternatives
- Radiolucent properties for enhanced imaging clarity
- Extended service life with resistance to aging and degradation
- High-temperature stability (resists deformation/melting)
- Versatile processability via injection molding, extrusion, or machining
- Biocompatibility compliant with medical standards (no tissue rejection)



PEEK5600CF30 Technical Specifications

Property/Type	Unit	PEEK5600CF30	Test Standard
Carbon Fiber Content		30%	-
Tensile Strength	MPa	220	ISO 527-1/-2
Tensile Modulus	GPa	21	ISO 527-1/-2
Elongation at Break	%	1.7	ISO 527-1/-2
Flexural Strength	MPa	321	ISO 178
Flexural Modulus	GPa	17.9	ISO 178
Unnotched Impact Strength	J/m	637	ISO 180/IU
Heat Deflection Temp (1.82 MPa)	°C	315	ISO 75-1/-2
Linear Thermal Expansion (Flow)	ppm/°C	7	ISO11359-1/-2
Linear Thermal Expansion (Transverse)	ppm/°C	56	ISO11359-1/-2
Water Absorption (24h)	%	0.1	ISO 62
Specific Gravity	g/cm ³	1.41	ISO 1183

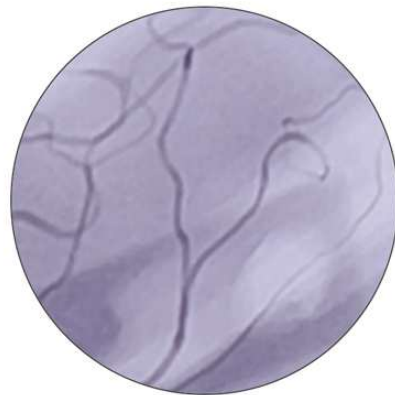
Three-Pin Fixation System (Minimal Artifacts)

Head clip (without head nail)

- **Triangular Pin Distribution:** Three pins arranged isoscelestriangularly ensure uniform cranial stabilization.
- **Lateral Single-Pin Design:** Simplifies operation and maximizes surgical field visibility.
- **Adjustable Pressure:** Adult (60 lb) and pediatric (40 lb) settings; adjustable up to 80 lb max.
- **Quick-Mount Rails:** Compatible with retractors and navigation accessories; zero metallic components to minimize imaging artifacts.



Pressure Gauge (0-80 lb) – Clinically optimized for intuitive use.



DSA Imaging with Radiolucent PEEK Head Frame

Standard Accessories

- 360° Rotational Axis: Enables multi-angle positioning and fine adjustments.
- Dual-Arm Stabilizing Bracket: Reinforced locking mechanism for enhanced safety.
- Universal Connector: Direct attachment to surgical tables without adapters.



Rotational Axis



Stabilizing Bracket



Universal Connector

Optional Accessories



Radiolucent PEEK Headrest (Gel-Free)

- High strength, durability, and minimal artifacts.
- Supports prone/supine positioning for adults and older children.
- Adjustable base for varied head sizes.

- Detachable Force Applicator: Reduces artifacts during X-ray imaging.
- Traction Rod: Integrates with the headrest for intraoperative traction.



Detachable Force Applicator



Traction Rod

Applications

The surgical head frame stabilizes patient positioning, ensuring minimal head movement during procedures. Its modular design allows customization of shape, size, and height to accommodate diverse clinical needs.



Competitive Advantages

- > 18+ Years of Expertise: Specialized in PEEK R&D and medical applications.
- > Ten million imported profile extrusion equipment.
- > 5,000 m² Facility: Including ISO Class 100,000 cleanrooms for medical-grade extrusion.
- > Certifications: ISO 13485, FDA, RoHS, and ISO 10993 compliance.
- > Full-Scale PEEK Solutions: Integrated supply chain for end-to-end support.



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