



# 天鹰 “万向手” Aquila "universal hand"

单孔腹腔镜万向型手术器械  
Single-port laparoscopic universal surgical instruments



专利 (Patent) :ZL201620045222.X

# 01 高端医疗，天鹰领航 Aquila Introduction



广州市天鹰精密工具有限公司是由集研发、生产、销售为一体的高新技术企业及科技型企业。公司成立于1990年，坐落于广州番禺，占地面积约13000平方米。公司以“为社会提供更高端的医疗器械！为医生减轻体力负担！为病人减轻痛苦”为使命。

Aquila Medical is a manufacturer with more than 35 years of experience in developing high-precision tools.

We specialize in orthopedics, neurosurgery, joint systems, spine, trauma, sports medicine, dentistry, ENT, and OEM custom medical devices and products.

We have passed ISO 13485, FDA and CE certification, the factory is located in Panyu, Guangzhou, all products are made of the best quality materials, with advanced production equipment.



## 02 微创腹腔镜手术 目前痛点



由于操作空间较为狭小且角度受到限制，难以有效抵达手术位置。

Due to the relatively small operating space and limited Angle, it is difficult to effectively reach the surgical location.



采用传统的直杆器械，无法进行精细的解剖与游离操作。

It is impossible to perform fine dissection and free operation with traditional straight instruments.



传统手术器械给医生的操作带来了不便。

Traditional surgical instruments bring inconvenience to the doctor's operation.

# 03 天鹰 万向钳研发背景 Background



微创

Minimally invasive

单孔腹腔镜技术作为现代腹腔科的重要里程碑，以其创伤小、恢复快、疼痛轻等优势，逐渐成为腹腔科手术的主流选择。

As an important milestone in modern abdominal surgery, single-hole laparoscopy has gradually become the mainstream choice of abdominal surgery for its advantages of less trauma, faster recovery and less pain.



灵活、精准

Flexible & accurate

而天鹰万向钳是在此基础上的一次重要突破，为单孔腹腔镜手术提供了更为灵活、精准的手术工具。

Aquila universal forceps is an important breakthrough on this basis, providing a more flexible and accurate operation for single-hole laparoscopic surgery instrument.



# 04 万向钳 升级产品 Upgrade products



全新 万向钳  
New



第一代万向钳  
First generation

# 05 天鹰 万向钳独特外观设计

Unique appearance design

全绝缘新型控制手柄，安全性能卓越

Fully insulated new control handle with excellent safety performance

全绝缘新型控制手柄  
New fully insulated control handle





# 05 天鹰 万向钳独特外观设计

Unique appearance design

符合人体工程学的握持设计，可单指操控，  
可与电刀同时操作

“Ergonomic grip design for single-finger control  
and simultaneous operation with electric knife.”

单指操控 Single  
finger control



# 05 天鹰 万向钳独特外观设计

Unique appearance design

可复消设计，成本可控，使用更放心

“ Reversible design, cost control, more assured use

”

可复消材料





# 05 天鹰 万向钳独特外观设计

Unique appearance design



全新齿轮导向，实现不同角度转向

“New gear guide for different Angle steering.”



# 05 天鹰 万向钳独特外观设计

Unique appearance design

钳头头部采用硬关节，手柄部位置一键锁住功能，方便操作者同时进行部位提拉、咬合。

“ The head of the forceps head adopts hard joint, and the position of the handle part is locked by a key, which is convenient for the operator to lift and bite the part at the same time.

”



一键锁住功能  
One-click lock  
function





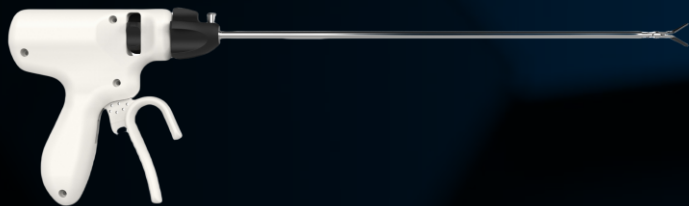
# 06 天鹰 万向钳独特结构设计-----万向调节功能

Unique structural design ----- universal adjustment function

关节可弯，  
360°旋转，医生在狭小空间也能精准操作

“ The joints can bend,  
360° rotation, doctors can operate accurately in tight  
Spaces.

”



# 06 天鹰 万向钳独特结构设计-----万向调节功能

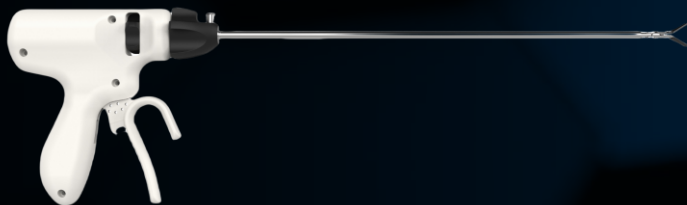
Unique structural design ----- universal adjustment function



多达17种钳型可选，满足不同术式使用需求

“ The forceps head part has up to 17 kinds of forceps design, respectively, tissue forceps, needle holding forceps, scissors, etc., applied to different departments: abdominal cavity, thoracic cavity, oncology, to meet a variety of needs in the surgical process. The doctor can clearly observe the grab during the operation, reducing the occurrence of accidents.

”



...



无创抓钳（细钳）



无损小抓钳



尖头抓钳



抓钳



肠钳



肺叶钳



持针钳



活检钳



胃抓钳



剪刀钳



蛇形抓钳



万向无损夹钳



小报合口抓钳



小持针钳



分离针钳



分离钳



无创抓钳



# 06 天鹰 万向钳独特结构设计-----多种规格类型

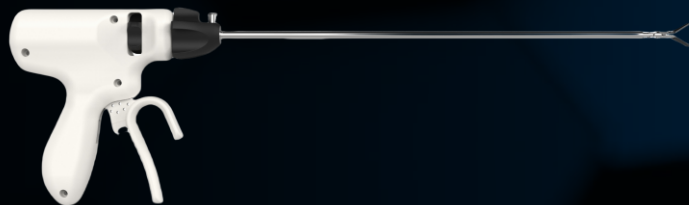
Multiple specification types

钳体直径(Dia.): 5MM/9MM

工作长度(Working Length): 260MM/330MM/370MM

“天鹰万向钳，拥有不同的钳体直径及工作长度。满足了手术过程中的多种需求。

With different diameter and working length. To meet the various needs of the surgical process.”



无创抓钳（细钳）



无损小抓钳



尖头抓钳



抓钳



肠钳



肺叶钳



持针钳



活检钳



胃抓钳



剪刀钳



蛇形抓钳



万向无损夹钳



小闭合口抓钳



小持针钳



分离针钳



分离钳



无创抓钳

# 06 天鹰 万向钳独特结构设计-----参数

Parameter



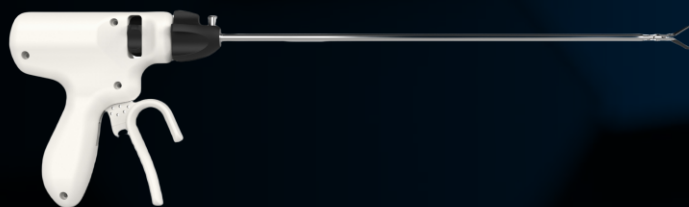
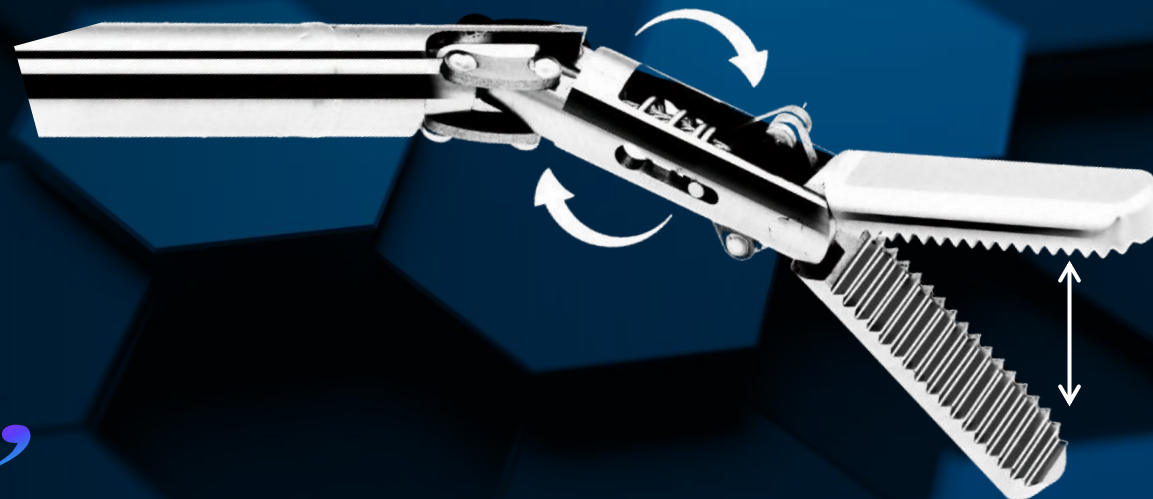
强大的咬合力 200NM $\approx$ 20KG

剪刀:可剪切2层21支纱布

缝线钳线可配合: 径为0.499~0.900mm的缝合线

“ Powerful bite force 200NM $\approx$ 20KG  
Scissors: can cut 2 layers of 21 gauze  
Suture pliers can be matched with: diameter of  
0.499~0.900mm suture.

”



咬合力  
Occlusal force  
**200NM $\approx$ 20KG**



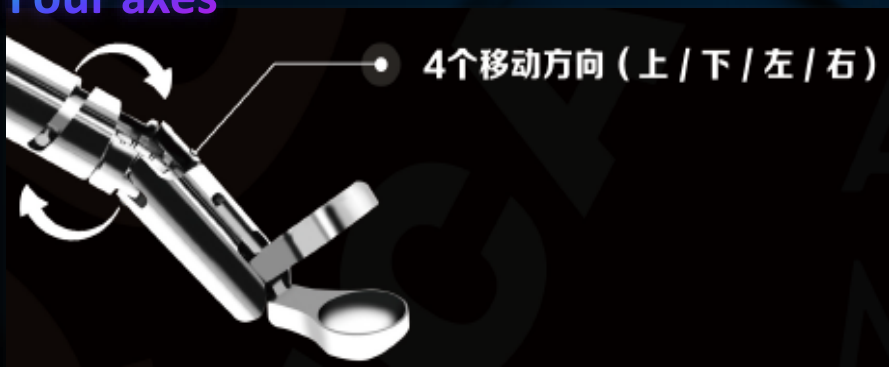
# 06 天鹰 万向钳独特结构设计-----四轴/六轴

Four axes/six axes



/四轴型 万向钳

Four axes

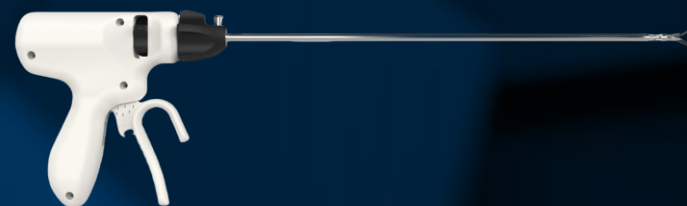
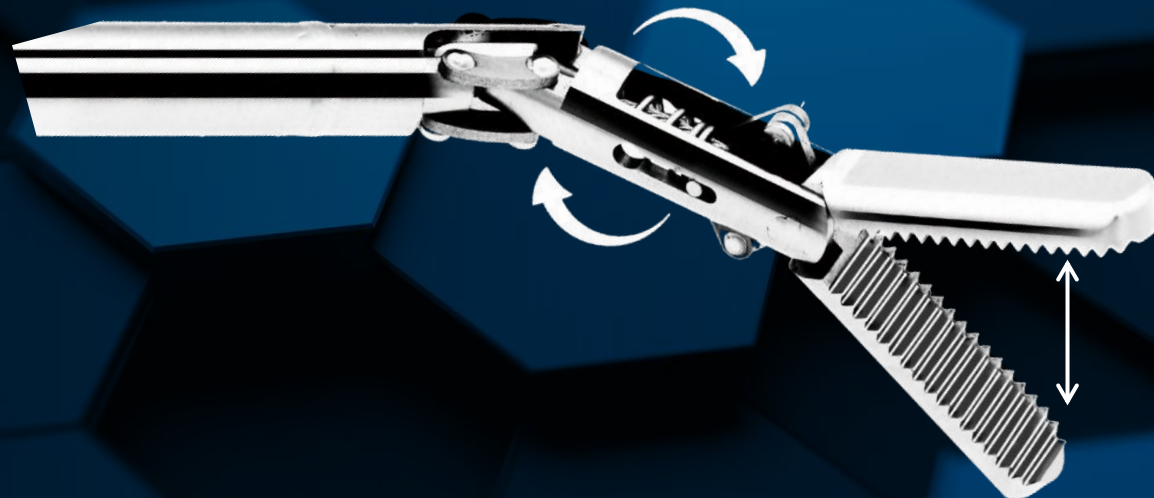


/六轴型 万向钳

Six axes

上下摆动幅度  
swing **70°**

左右摆动幅度 Left-right  
swing **120°**



# 07 天鹰 万向钳临床应用 Clinical application



## 目标科室 Target department:

胸外科、胃肠外科、肝胆外科、甲状腺外科、泌尿外科、肛肠科、肿瘤科等科系。Department of Thoracic Surgery, gastrointestinal surgery, hepatobiliary surgery, thyroid surgery, Urology surgery, anorectal surgery, oncology and other departments



# 07 天鹰 万向钳应用场景 Application scope



## 1. 多向张力协助暴露手术位置

Multi directional tension helps expose the surgical location;

## 2. 多角度提拉;

Multi-angle lifting;



## 3. 稳定张力协助游离;

Stable tension to assist dissociation;

## 4. 万向张力协助;

Universal tension assistance;

# 07 天鹰 万向钳手术视频 Viedo







谢谢观看  
Thank You