



# ALHK-01-ZENIT

AUTOMATED CO<sub>2</sub> LASER SURGICAL SYSTEM

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The system is designed to treat various gynecologic pathologies

### KEY POINTS :

A full scale computerized support during surgical interventions to improve accuracy and efficiency of laser interventions in biological tissues and reduce the likelihood of mistakes due to human factor.

ALHK-01-Zenit is favorably distinguished from its foreign counterparts by a 2.0 to 2.5-times larger imaging field of surgical beam in the operative field and by arbitrary scanning patterns within such field to allow for areal uniform vaporization of tissues inside an arbitrary contour.

### CO<sub>2</sub> LASER SET SPECIFICATION:

Parameter	Value
The power output of CO <sub>2</sub> laser surgical system is controlled, W:	
– in continuous mode;	from 0.1 to 30
– in repetitively-pulsed mode;	from 1 to 25
– in superpulsed mode	from 0.5 to 15
Beam spot size, μm	
– in the focus of surgical headpiece;	max. 200
– in the focus of laparoscope headpiece;	250 to 300
– in the focus of colposcope headpiece	300 to 500
Imaging field size in operative field, mm <sup>2</sup>	15x15
Scanning patterns	arbitrarily configured
Beam delivery unit of operative field	mirror-lens
Seven-knee manipulator with transmission coefficient of at least 0.85	
Main beam guidance system based on diode laser with wavelength λ=0.635 to 0.650 μm and controlled beam output power of 0 to 5 mW	
Maximum capacity of smoke removal and filtration system, dm <sup>3</sup> /s	30
Number of filtration levels of biological tissue vaporization products	3
Axes, deg	1 to 180 (with 1° steps)
Cornea diameter, mm	2.0 to 14.0 (with 0.1 mm steps)

### BINOCULAR COLPOSCOPE SPECIFICATION:

Parameter	Value
Working distance, mm	300
Magnification, X	7.5; 15; 30
Field of view diameter, mm	49; 24; 12
Interpupillary distance adjustment, mm	58~75
Diopter adjustment, D	-7 to +7
<b>Illumination system:</b>	
Illumination source	LED
Maximum luminance (adjustable), lux, at least	10000
Illuminated field diameter, mm, at least	70
<b>Integrated Digital Photo/Video Module:</b>	
CMOS Array Type and Size	1 /2.5
Max. Resolution	2592x1944
Connection	USB 2.0
Power Supply, mA, max.	500

*KNb-04-01-Zenit, a simplified configuration of binocular floor colposcope, is commercially available as well*



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