



YD-315 Rotary Microtome

Service Manual



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B1

Introduction

In order to meet the rapid development of Pathology, the market put forward three higher demands: high precision, high automation, high efficiency and a lower energy consumption to medical devices. The product designed by our company, use a proprietary module circuit manufacturer and an advanced mechanical structure. For which, the company provide a product maintenance manual to users, in order to solve daily maintenance difficulties.

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Declaration

Statements, diagram and other information about the contents or technical details of this manual does not mean that we ensure that the product has these properties. The company's products continue to be updated in case we do notice reserves the right to change the company manufacturing technology.

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Technical parameter:

Environmental temperature +10℃ — +40℃

Environmental moisture 35% — 80%

Section thickness range : 0.5 — 60 um

Slice thickness adjustment	0 — 2 um	increment 0.5 um
	2 — 10 um	increment 1 um
	10 — 20 um	increment 2 um
	20 — 60 um	increment 5 um

Horizontal specimen stroke 25 mm

Vertical specimen stroke 59 mm

Specimen orientation

Horizontal 8°

Vertical 8°

Rotation ±90°

Movement range of blade holder

front and back ± 25mm

left and right ± 20mm

Dimension and weight

Length (460mm) ×width (276mm) ×high (278mm)

Height of cutting edge 105 mm

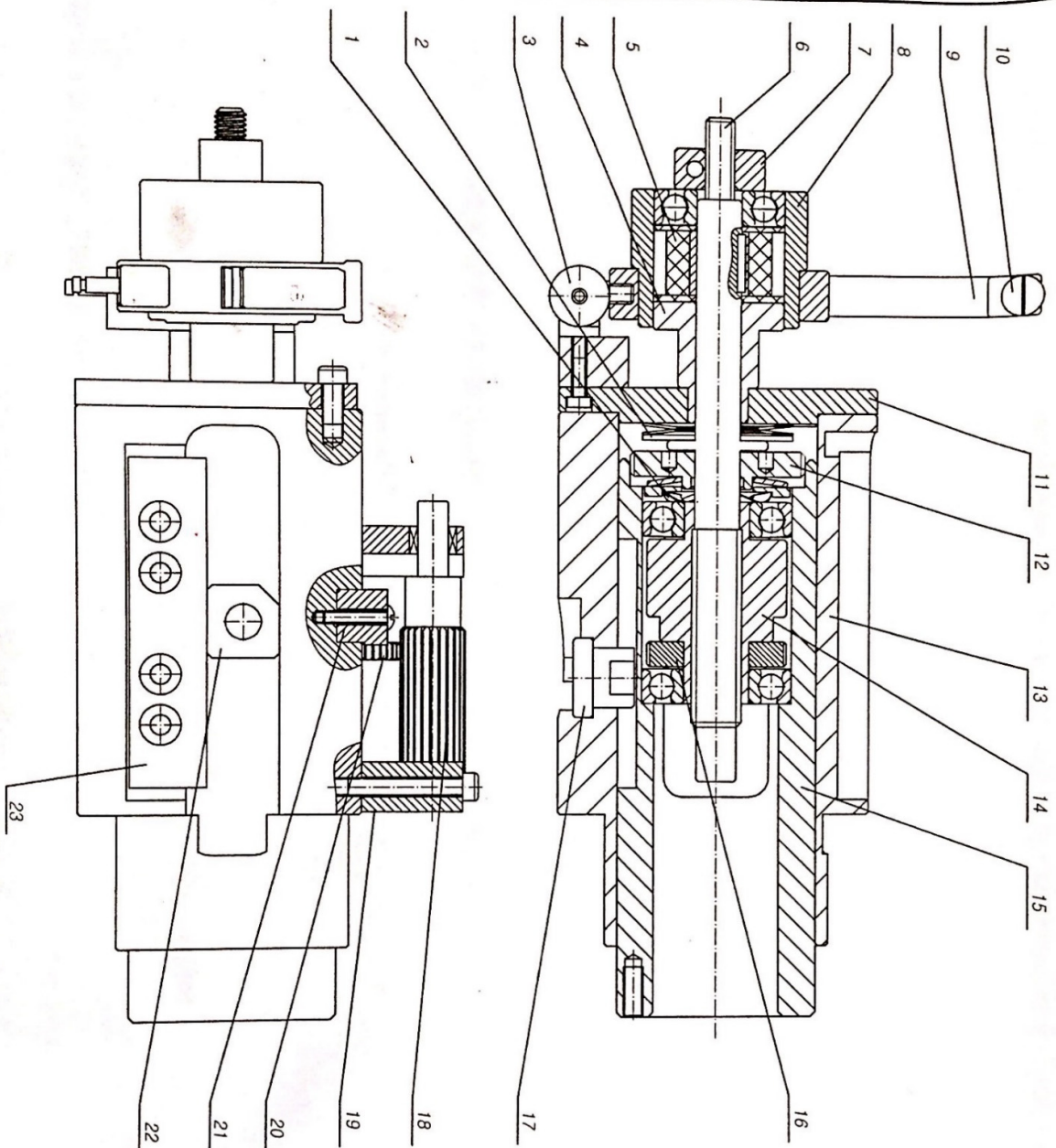
Net weight 29 kg

Gross weight 40 kg

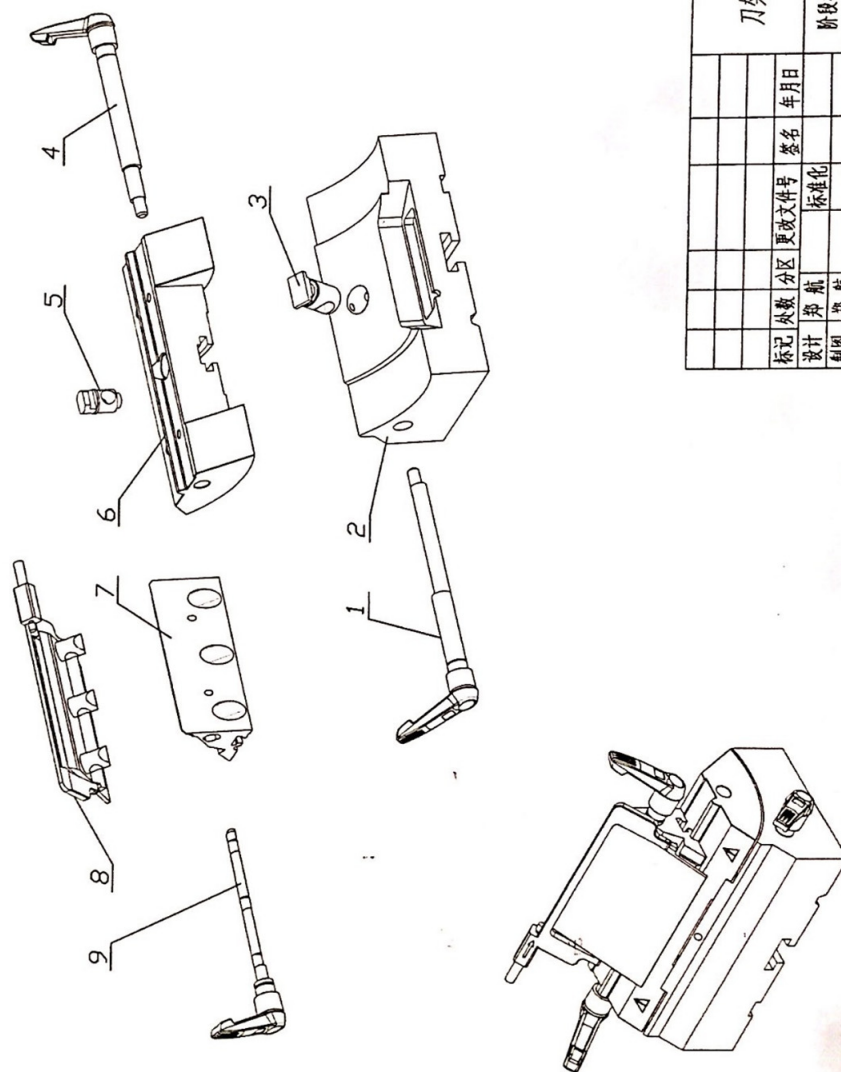
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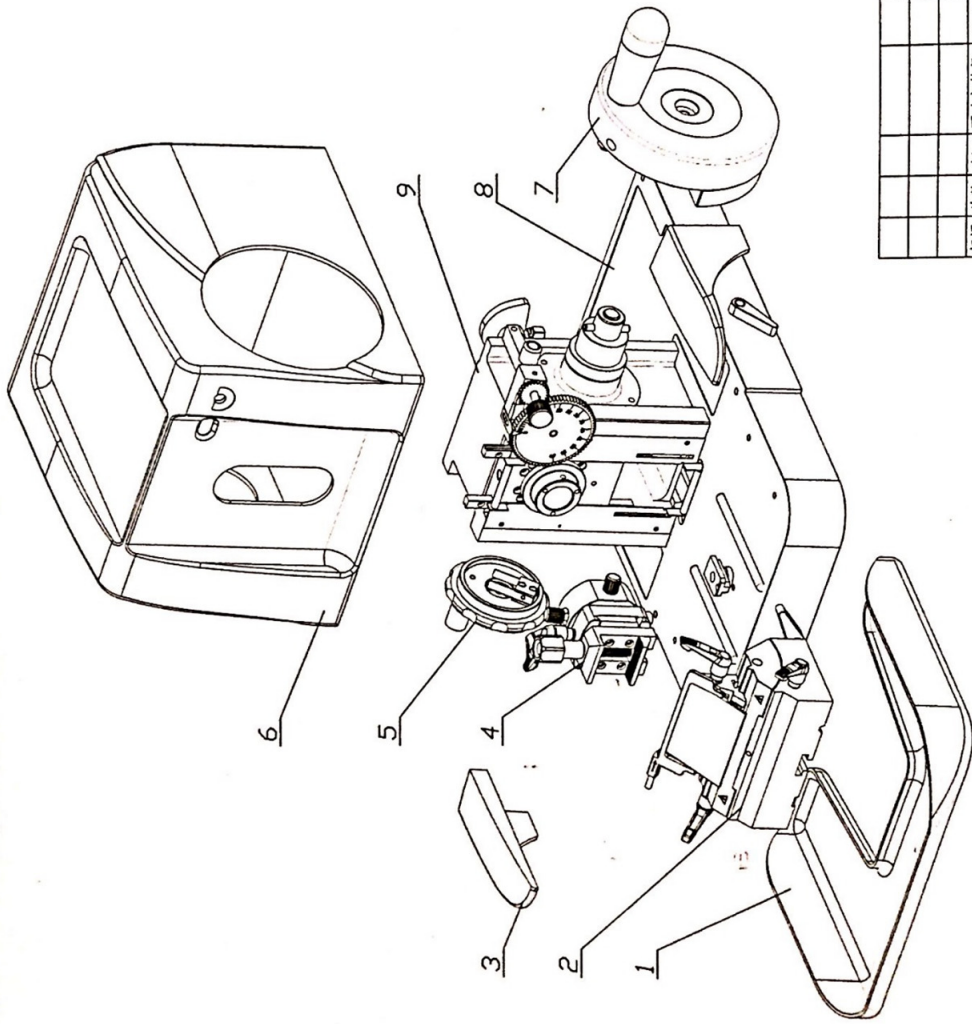
YD-315 Structure and Function Introduction

Attached: (General assembly drawing, installment of the blade holder, Installment of the Inter-machine, Installment of the microtome, Installment of hand wheel, Installment of calibrate adjustment)



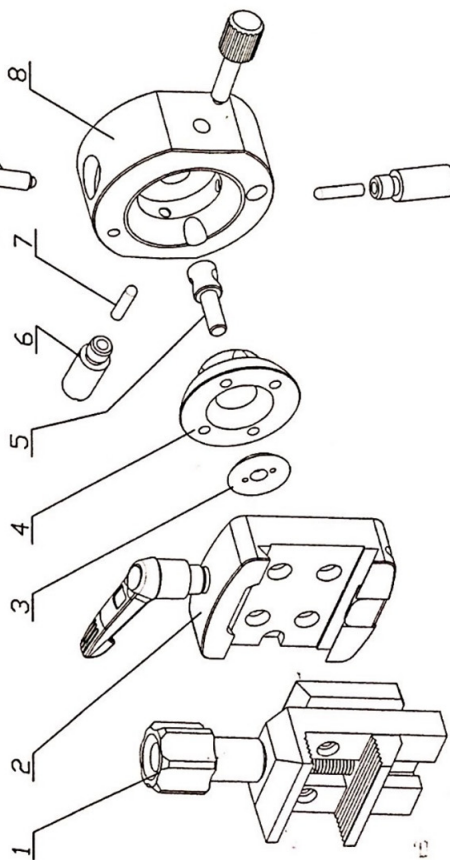
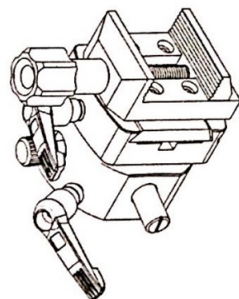
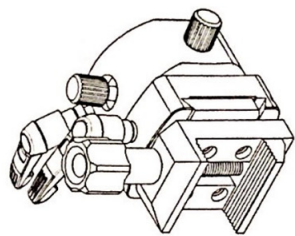
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1	轴	45#	1
2	轴承盖	HT12	1
3	轴承	HT12	1
4	销	HT12	1
5	衬套	HT12	1
6	螺母	HT12	1
7	垫圈	HT12	1
8	螺栓	HT12	1
9	法兰	HT12	1
10	板	HT12	1
11	支架	HT12	1
12	底座	HT12	1
13	框架	HT12	1
14	盖板	HT12	1
15	密封	HT12	1
16	垫片	HT12	1
17	隔套	HT12	1
18	紧固件	HT12	1
19	衬套	HT12	1
20	销	HT12	1
21	堵头	HT12	1
22	盖	HT12	1
23	密封	HT12	1

[illegible]



序号	名称	数量	材料	备注
9	壳体	1		
8	齿轮	1		
7	手轮	1		
6	罩壳	1		
5	复位弹簧	1		
4	传动轴	1		
3	轴套	2		
2	手柄	1		
1	底座	1		

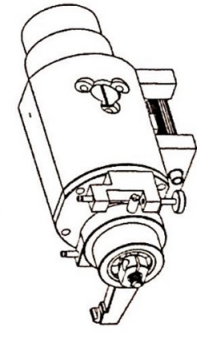
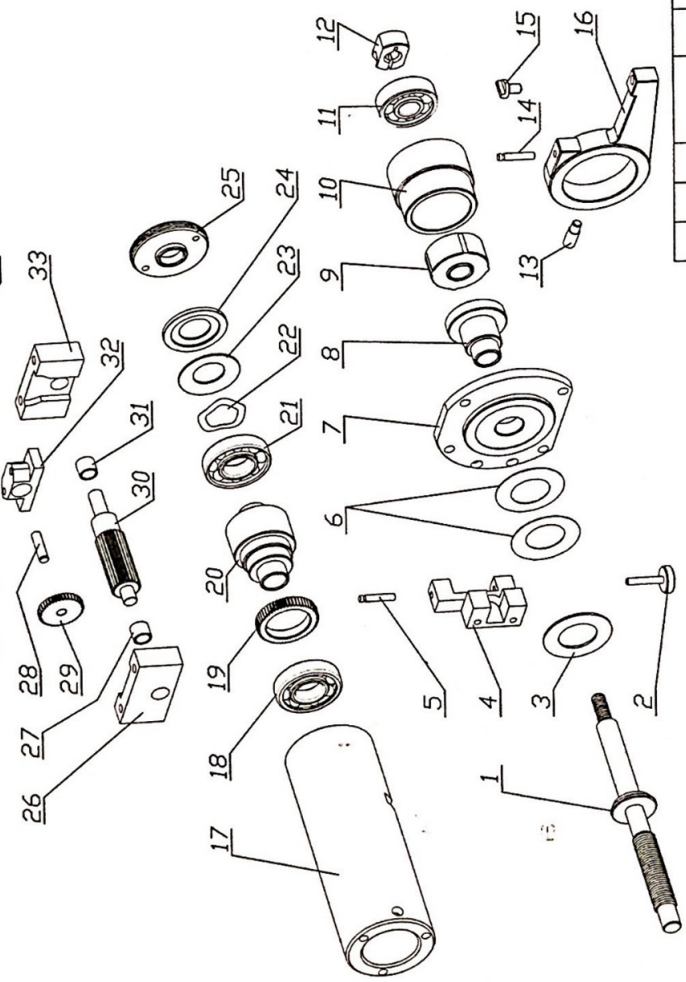
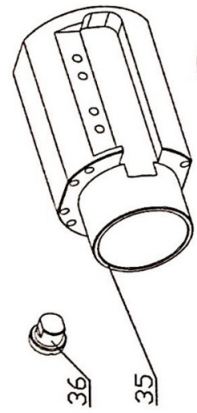
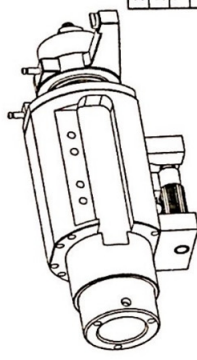
整机分解图				YD-315-01	
标记	数量	分区	更改文件号	签名	年月日
设计	郑航		标准		
制图	郑航				
审核					
工艺					
共 1 张 第 张			批准		
金华市益迪医疗设备厂					



序号	名称	数量	材料	备注
10	销轴	1		
9	螺母	2		
8	弹簧	1		
7	衬套	2		
6	衬套	2		
5	衬套	1		
4	衬套	1		
3	衬套	1		
2	衬套	2		
1	衬套	1		

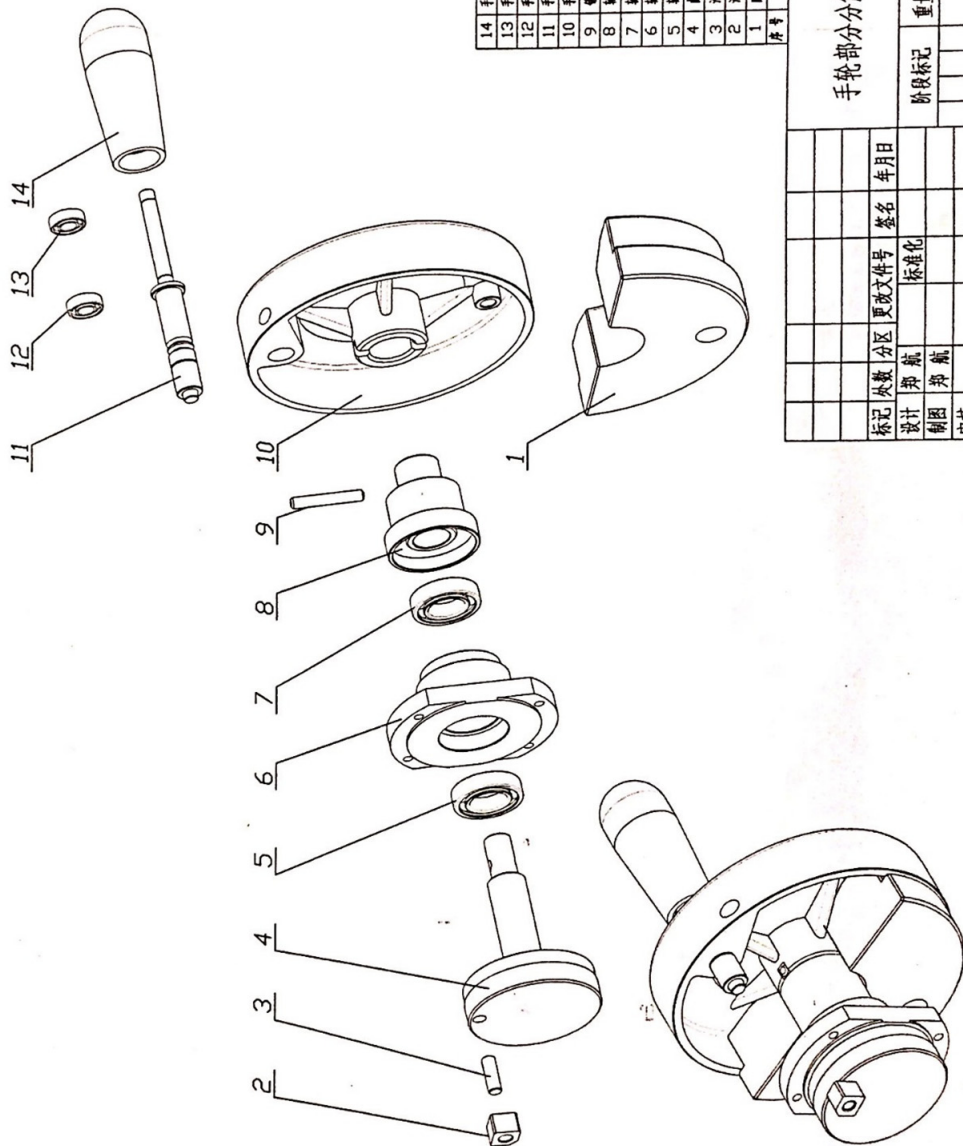
钳座调整部分分解图				YD-315-03	
标记	数量	分区	更改文件号	签名	年月日
设计	制图	审核	批准		
比例	重量	阶段标记	共 1 张 第 张		
金华市益迪医疗设备厂					

3 各连接螺钉



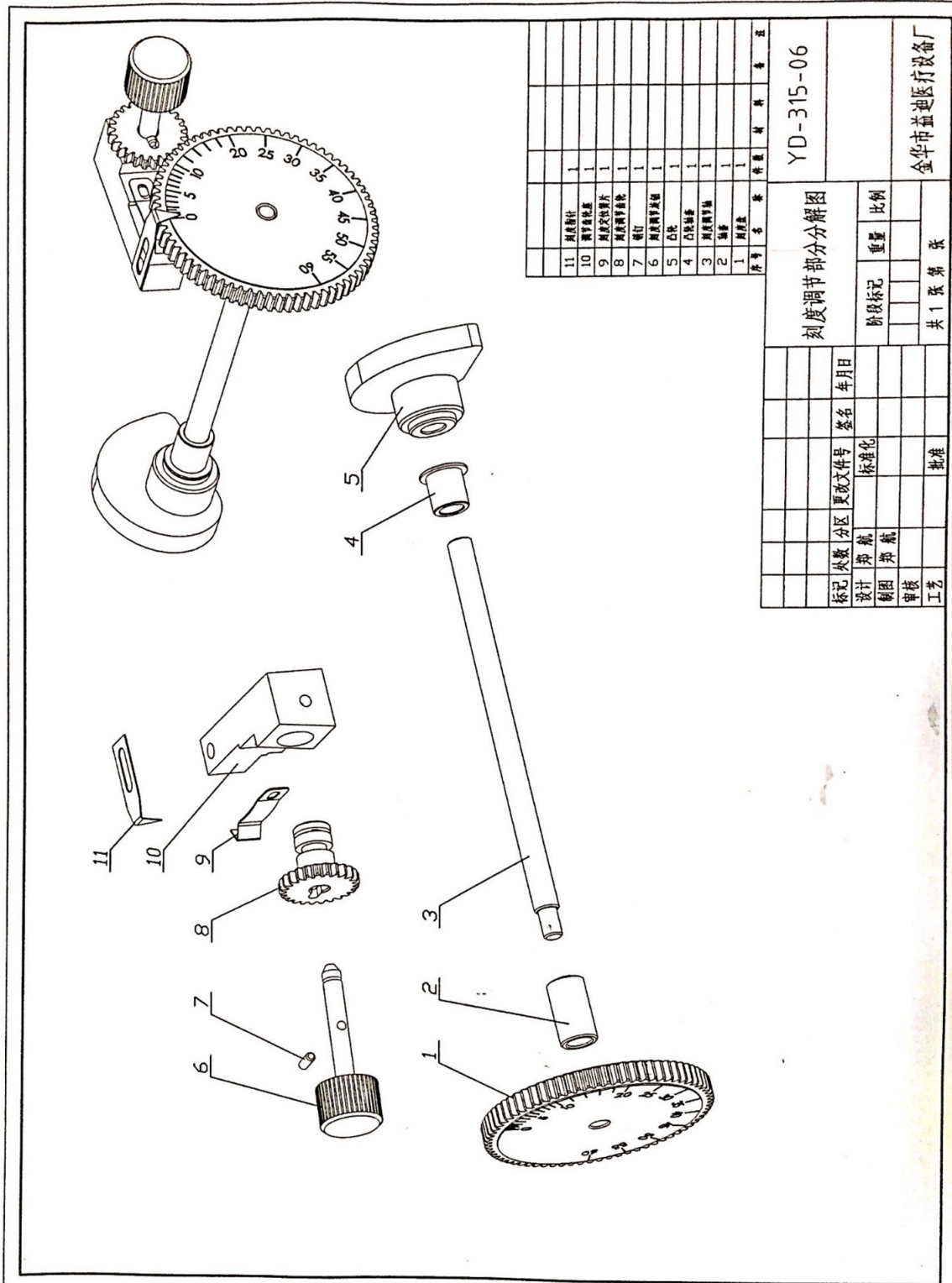
序号	名称	数量	材料	备注
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2	轴	1		
3	轴套	1		
4	轴套	1		
5	轴套	1		
6	轴套	1		
7	轴套	1		
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10	轴套	1		
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28	轴套	1		
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31	轴套	1		
32	轴套	1		
33	轴套	1		
34	轴套	1		
35	轴套	1		
36	轴套	1		

机壳部分分解图				YD-315-04	
标记	数量	分区	更改文件号	签名	年月日
设计	郑航	标准			
制图	郑航	标准			
审核					
工艺					
批准					
共 1 张 第 张					
金华市益迪医疗设备厂					



序号	名称	数量	材料	备注
14	手柄	1		
13	手柄轴	1		
12	手柄轴套	1		
11	手柄轴	1		
10	手柄	1		
9	销子	1		
8	轴套	1		
7	轴套	1		
6	轴套	1		
5	轴套	1		
4	轴套	1		
3	轴套	1		
2	轴套	1		
1	轴套	1		

手轮部分分解图				YD-315-05	
标记	外数	分区	更改文件号	签名	年月日
设计	郑 航		标准		
制图	郑 航				
审核					
工艺					
阶段标记				重量	比例
共 1 张 第 张					
金华市益迪医疗设备厂					



序号	名称	数量	材料	备注
1	刻度盘	1		
2	销	1		
3	刻度调整轴	1		
4	凸块	1		
5	凸块	1		
6	刻度调整轴	1		
7	销	1		
8	刻度调整轴	1		
9	刻度调整轴	1		
10	刻度调整轴	1		
11	刻度调整轴	1		

YD-315-06			
刻度调节部分分解图			
标记	外数	分区	更改文件号
设计	郑航	标准	年月日
制图	郑航	标准	
审核		批准	
工艺			
共 1 张 第 张		金华市益地医疗设备厂	

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Please do follow steps to check the microtome if any trouble happen with Microtome

a) check trouble phenomenon

b) check service manual, adjust the cause of the failure

c) trouble shooting

Problems	Possible causes	Corrective action
Non-even of sections: The section thickness varies from one section to another. In extreme cases, sections are skipped meaning that a section is not obtained.	-Insufficient knife/blade inclination; consequently the Clearance angle is too small. -Insufficient clamping of specimen and/or knife. -Blunt knife/blade.	-Systematically try several Clearance angle adjustments until the optimum angle is found. -Check if all clamps are locked and screws are tightened on the specimen and knife carrier systems. Retighten the clamps and screws if necessary.] -Use a different part of the cutting edge or use a new knife/blade.
Compressed sections The sections are extremely compressed, wrinkled or jammed together.	-Blunt knife/blade. -Specimen too warm. -Clearance angle too big. -Sectioning speed too high.	-Use a different part of the cutting edge or use a new knife/blade. -Cool the specimen on a cold plate. - Clearance angle adjustment; systematically decrease the Clearance angle until the optimum adjustment is obtained. -Rotate the hand wheel at a lower speed.
The knife "rings" on the cutting specimen when slicing hard specimens. Sections exhibit scratches and chatter marks.	-Sectioning speed too high. -Clearance angle too big. -Insufficient clamping of paraffin forceps or knife carrier.	-Rotate the hand wheel at a lower speed. -Clearance angle adjustment; systematically decrease the clearance angle until the

		optimum adjustment is obtained. -Check if all levers are locked and screws are tightened on the specimen and knife carrier systems. Retighten the clamps and screws if necessary.
No more specimen advance and consequently no section produced.	1. Specimen reached the front feed limit. 2. The coarse feed wheel cannot rotate freely.	1. Turn the coarse feed wheel in the appropriate direction to move the specimen towards the clearance limit. 2. Remove and obstruction.
Not lighting-up and no display when turn-on the power supply switch.	Fuse is burned	Replace the fuse

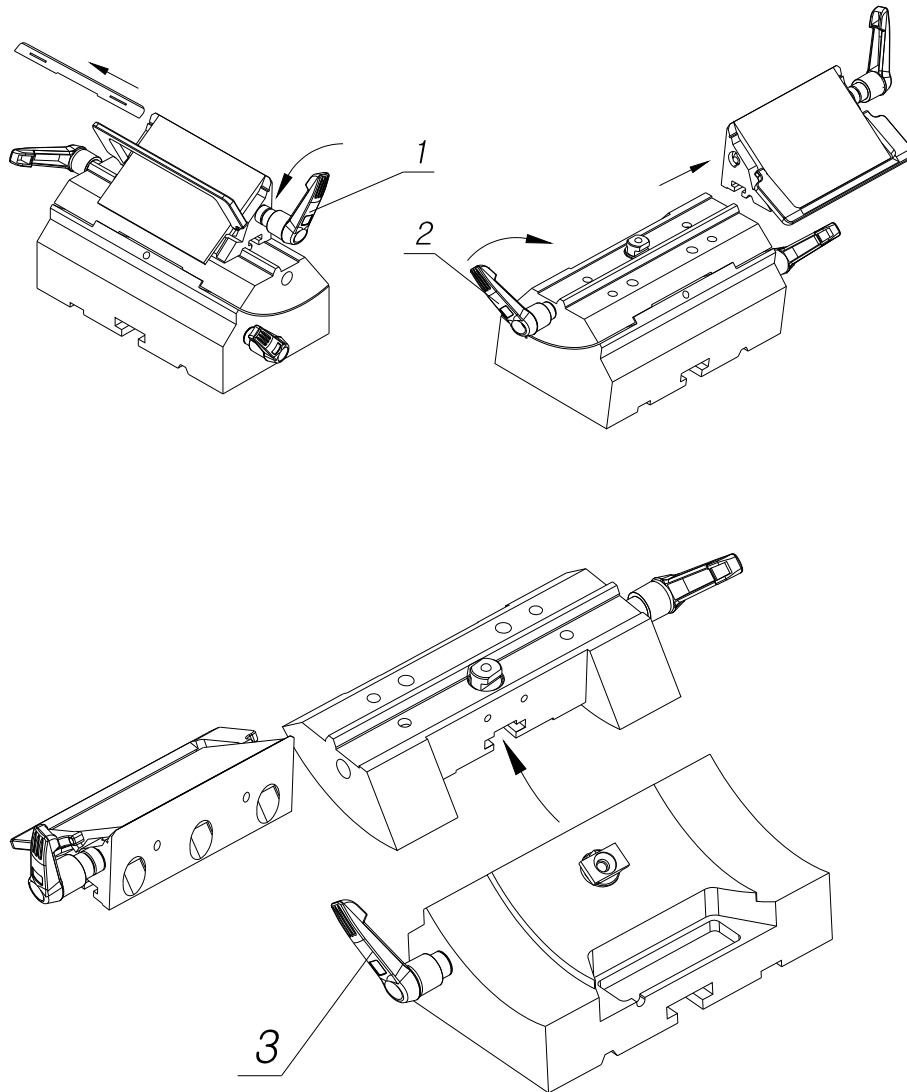
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Cleaning and maintenance

Warn. must lock hand wheel before cleaning and maintenance instrument, and unload blade holder and blade.

6.1 Disassembly of blade holder

1. Release the set lever of blade holder on the foundation bed, carry down subassembly of blade holder
2. Release set lever of blade (1), remove blade carefully
3. Release set lever of blade (2), pull out blade holder lateral direction
4. Release set lever of slide carriage (3), unload slide carriage of blade holder



6.2 Cleaning

1. Lock handwheel before cleaning the microtome
2. Remove slice waste
3. Unload waste bath, dump slice waste
4. Unload subassembly of blade holder; remove dirty paraffin from clamping part between disposable blade and blade holder carefully.

5. Cleaning the instrument is just like Family routine Health, remove dirty paraffin around blade holder carefully.
6. Only use mild commercial detergents or soap solution for cleaning. Do not use solvent containing acetone and benzene!
7. Use dry fabric, with a little detergent to clean the surface of the instrument.
8. Make sure, no detergent or liquid enter the instrument during the cleaning. After cleaning, dry the surface of the instrument with a soft cloth.
9. Keep cleaning all parts of the instrument after use. Use the blade holder to move on the sliding rail, infuse the detergent lubricant. Good maintenance to the instrument will prolong the life of the instrument.

Warning: Allow to use normal commercial detergents or soap solution for disinfection. Do not use solvent that contain gasoline, acetone and benzene! Do not allow liquid to flow inside the instrument

10. When cleaning is over, install entire subassembly of blade holder and waste bath according opposite procedure
11. Microtome can work long term without daily care, however,

to operate normally, we suggest cleaning the instrument after end of work. For best results, lubricate the parts of blade holder by lubricating with oil provided monthly (Lock Handle shaft, slipper block, pressed compact, dump rail etc.).