

spirit of excellence





For Application of HF-Instruments

... with unipolar high frequency connection

In instruments with unipolar connection the high frequency current flows through an electrode with small surface area into the tissue with a high current density. Once a cer-tain current density is achieved, coagulating will occur. The current returns over large cross sections of tissue - without coagulating effect - to the large area patient grounding pad/plate and finally back to the high frequency generator via the cable connection.

1. The maximum output power of the unit must match the application. Units with very high output power may not be able to be finely adjusted in the lower power ranges. In gastroenterology, gynecology and ENT, the unipolar output power should not exceed 120 watts, or in units with coagulation current source incorporated for blended current, 170 watts.

For urologic resection, units with 300-400 watts of matched output circuit for aqueous cutting are required. The neutral electrode should be grounded for high frequency current (no floating output).

 <u>Neutral electrode</u>: Do not use any bent or misshapen grounding pads / plates—fas-ten the pad to the patient's upper thigh. Ensure large-area contact with clean, hairless skin. It is beneficial to wipe the skin in advance with water. The patient should not come into contact with other metal parts (e.g. operating table, retainers) or damp materials (e.g. damp drapes or gowns).



- <u>Connection cables</u> to the neutral and active electrodes must be in good condition. The cables
 must be checked for current passage and for undamaged insulation and connecting plugs. Cables which are disinfected by soaking should be wiped dry inside and outside using a sterilized cloth. Connection cables supplied by Richard Wolf should be used.
- 4. If the patient is simultaneously connected to the high-frequency unit and a monitoring unit (e.g. ECG), special attention must be paid to the following: if both units are operated with grounded neutral electrodes, the neutral ECG cable must also be connected to the neutral surgery electrode. The high-frequency unit must not be used in the close vicinity of the ECG electrode (minimum distance 6 inches).
- 5. The insulation of the instruments and electrodes must be checked for damage prior to use. Damaged instruments and electrodes (even small marks or defects) may no longer be used Touch plastic coated handles with rubber gloves only.
- 6. The power on the unit should be set only as high as is required for the operation. Baseline values should be obtained extracorporeally. If the required coagulation or cutting effect is not achieved at the usual setting, the power may be increased, provided that: the neutral electrode is firmly in position; all lines and plug connections are in perfect condition; the instrument insulation has been checked; the metallic parts of the instruments and electrodes acting as the electrode are perfectly clean
- 7. High frequency current should be used in body cavities in which endogenous combustible gases are present (e.g. in the rectum) only if complete removal of these gases or rinsing with CO_2 is accomplished. N_2O is not flammable but aids combustion and, therefore, must not be used for rinsing in such cases

- The following points must be observed in order to prevent accidental coggulation:
- Do not turn the frequency current on until the instrument or electrode is in place on the tissue to be coagulated or cut. The live high-frequency electrode must not come into contact with any metallic
- parts of the endoscope.
- The tissue sections grasped by the high-frequency forceps or loop must not contact small areas of adjacent tissue.
- Tissue sections in strands (e.g. adhesions) should be coagulated at the thinnest point. If this is not achieved, secondary coagulation may occur at this thin point due to the high current density.
- Special care should be taken when using high-frequency instruments or electrodes on patients with pacemakers or electrodes. It is possible that the pacemaker will either be irreparably damaged or that its functioning will be affected (ventricular flut-
- 9. Information provided by the instrument manufacturer should always be consulted and followed

... with bipolar high frequency connections



- Use only high frequency electrosurgical units with a separate bipolar output circuit. The output for bipolar applications should be in the range of 40 to 80 watts. We recommend use of combined units with unipolar output circuit (maximum 120, and/or 170 watts and grounded electrode) and separate bipolar output circuit to control possible complications with the unipolar technique.
- The patient grounding pad is not necessary for the bipolar technique when using a combined unit as recommended above. However, the pad should always be attached in preparation for use of instruments with unipolar connection (Attaching of patient pad is described in paragraph 2 above).
- 3. Connection cables of bipolar instruments must be in perfect condition and be checked for solid electrical connection and undamaged insulation and plugs
- 4. Insulation of bipolar instruments must be checked before using them. Defective instruments must not be used.
- 5. <u>Set power</u> on the electrosurgical unit only as high as required for the application. Test the proper setting extracorporeally prior to application. If necessary, the power may be increased, provided that:

 - Insulation of the instrument has been checked All cable connections and plugs are perfect.
- The metal parts of the instruments are clean and free of debris
- 6. High frequency current should be used in body cavities in which endogenous combushible gases are present (e.g. in the rectum) only if complete removal of these gases or rinsing with CO₂ is accomplished. N₂O is not flammable but aids combustion and, therefore, must not be used for rinsing in such cases.

The following points must be observed in order to prevent accidental coagulation: • Do not turn the frequency current on until the instrument or electrode is in place on

- the tissue to be coagulated or cut. • The live high-frequency electrode must not come into contact with any metallic
- parts of the endoscope. The tissue sections grasped by the high-frequency forceps or loop must not contact small areas of adjacent tissue
- Tissue sections in strands (e.g. adhesions) should be coagulated at the thinnest point. If this is not achieved, secondary coagulation may occur at this thin point due to the high current density.
- 7. Information provided by the instrument manufacturer should always be consulted and followed



C-lime Profile Rotary Resectoscope

Resection

for continuous irrigation and intermittent irrigation sheaths

The Profile Rotary resectoscope from Richard Wolf sets new standards for simplicity of operation and patient comfort.

The 360° rotation makes endoscopic interventions simpler, less tiring and more economic. All working elements can be rotated through 360°, when used with either continuous irrigation or intermittent irrigation sheaths. The sheath remains stationary helping to avoid painful friction in the urethra. Trauma is further minimized by the specially developed grooves in the sheath of the resectoscope which retains the lubricant, ensuring an intervention that is gentle on the urethra.

Sheath diameter

- Reduction of the external diameter of continuous irrigation sheaths to 26 or 28 Fr.
- 26 Fr. sheath uses 24 Fr. electrodes
- 28 Fr. sheath uses 26 Fr. electrodes
- Working length increased to 197 mm

Profile Sheaths

- □ Special grooves on the sheath helps retain lubricant
- Retained lubricant reduces friction in the urethra
- Reduced axial and radial friction
- Smaller external diameter and increased working length
- Non-reflecting ceramic tips provides increased service life





C-line Profile Rotary Resectoscope

for continuous irrigation and intermittent irrigation sheaths



Handling

- Irrigation connections and sheath remain in the required position
- □ Reduced weight by using high-tech materials
- $\hfill\square$ Convenient snap lock connections
- Compatible with all Richard Wolf working elements and electrodes
- Rotation movements limited to one hand
- Result less tiring for the user

Rotation

- □ All working elements can be rotated 360°
- Rotation of the working element while guide hand and sheath remain stationary
- Functions equally well with both continuous irrigation and intermittent irrigation sheaths
- □ Simple, quick and less tiring to use

Figure shows 24 Fr. sheath with intermittent irrigation sheath.



Instruments for different Resection Techniques



Sheaths with oblique distal tip

Sheaths with an oblique distal tip allow a clear view of the operating field during resection when using 0°, 12° or 30° PANOVIEW endoscopes



Sheaths with a distal beak

Sheaths with a distal beak only allow a clear view of the operating field during resection when 30° PANOVIEW endoscope is used. The view is restricted with all other angles of view.



Resection with a loop electrode The depth of ablation is dependent on the diameter of the loop.



"BiVAP" – Bipolar Vaporization Electrode



Instruments for different Resection Techniques



 $\mathbf{0}^\circ$ PANOVIEW endoscopes with prograde angle of view



12°, 30° PANOVIEW endoscopes with oblique view



Suprapubic aspiration

Resectoscope with intermittent irrigation. To achieve a constant bladder pressure, aspiration through a suprapubic cannula is possible.



Continuous irrigation double-sheath system

Resectoscope with continuous irrigation. This double sheath system allows continuous inflow through the inner sheath and simultaneous outflow through the outer sheath.



Basic Set for Monopolar TUR

Endoscope *E-4* Telescope 4 mm, 12° and 30°, 26 Fr., passive, continuous irrigation

	Outer-Sheath, 26 Fr. Inner sheath, 24 Fr.	8655.374 8655.384
	Timberlake Obturator, 24 Fr.	8654.67
	Viewing Obturator, 24 Fr.	8415.12
	Working element, passive	8654.224
1	Endoscopo or 30°	8654.422
	12°	8654.431
		8424.1310
	Electrodes	8423.0405
		0424.1510
	HF monopolar connecting cable, reusable	815.033
	HF monopolar connecting cable, disposable	415.0030
	Suction pump	2207.011
	Bladder syringe Flexible connector	822.31 822.13
	Evacuator	8558.03



Basic Set for Monopolar TUR

Endoscope *Endoscope* Telescope 4 mm, 12° and 30°, 24 Fr., passive, intermittent irrigation

	Sheath, 24 Fr.	8661.374
	Timberlake obturator	8654.67
	Viewing-Obturator	8415.12
	Working element, passive	8654.224
	Endoscope, or <u>30°</u>	8654.422
		8654.431
		8424.1310
	Electrodes	8423.0405
· · · · · · · · · · · · · · · · · · ·		8424.1510
	HF monopolar connecting cable, reusable	815.003
	HF monopolar connecting cable, disposable	415.0030
	Bladder syringe Flexible connector	822.31 822.13
-B	Evacuator	8558.03

* contains latex



Monopolar Profile Rotary Resectoscope — — — for 4 mm Endoscope, 12° & 30°

with intermittent irrigation



Sheaths	Distal tip	Sheaths with distal Timberlake Obturator ceramic insulation 3 mm Luer stopcock		Cutting electrode
Fr., Color code			<u></u>	
24 Fr. yellow		8661.374	8654.67	8424.1310
26 Fr. black		8661.384	8654.68	8426.1320

rotatable collar for

Ø	Angle of view	With enlarged image and objective field	Endoscopes
4 mm	30°	8654.422	
4 11111	12°	8654.431	



AUTOGLAVE 134° C / 273° F

Sheaths	Distal tip	Sheaths	with distal ceramic in	Obturator	Cutting electrode	
		Rotating irrigation ring with 4 mm luer	3 mm fixed luer stopcock	Central tap		
Fr., Color code						
22 Fr.		8654.064*	_	8663.064*	8654.66	8422.1310
green	8654.014*	-	-	-	8422.1310	
24 Fr.		8654.074	8661.074	-	8654.67	8424.1310
yellow		8654.024	-	8663.024	-	8424.1310
26 Fr.		8654.084	-	8663.084	8654.68	8426.1320
black		8654.034	-	-	-	8426.1320

* = Standard fiber insulation

ø	Angle of view	With enlarged image and objective field	Endoscopes
4 mm	30°	8654.422	
4 11111	12°	8654.431	



Monopolar Profile Rotary Resectoscope for 4 mm Endoscope, 30°, 12°

with Continuous-Irrigation Double-Sheath System



Fr., Color code	Distal tip	Sheaths, inner sheath with Distal ceramic insulation	Timberlake Obturator	Cutting electrode
Sheaths		Outer sheath		
28 Fr. black		8655.394 (26 Fr.) (includes inner and outer sheath and rotatable collar)	8654.68	8426.1320

Ø	Angle of view	with enlarged image and objective field	Endoscopes
4 mm	30°	8654.422	
4 11111	12°	8654.431	4 pilling and the





Monopolar Resectoscope *Continues and the second se*

AUTOGLAVE 134° C / 273° F

Fr., Color code	Distal tip	Sheaths, inner sheath	n with Distal ceram	Timberlake Obturator	Cutting electrode	
Sheaths		Outer sheath			~~~~	
27 Fr.	6	8655.174	655.174 8655.184		8654.67	8424.1310
yellow	-	8655.074	8655.084	- (24 ri.)	-	8424.1310

* Standard-Fiber-Isolation

Ø	Angle of view	With enlarged image and objective field	Endoscopes
4 mm	30°	8654.422	
4 11111	12°	8654.431	- Allen (200





with Intermittent Irrigation



	Distal tip	Sheaths with distal	ceramic insulation	Obturator	Cutting electrode
Sheaths		4 mm Luer stopcock	3 mm Luer stopcock		
Fr., Color code					5
24 Fr. yellow		8654.374	8661.374	8654.17	8411.03
26 Fr. black		8654.384	8661.384	8654.18	-

rotatable connecting piece singly for

Ø	Angle of view	With enlarged image and objective field	Endoscope
4 mm	0°	8650.414	



Monopolar Resectoscope *E-lime* for 4 mm Endoscope, 0° with Intermittent Irrigation



	Distal tip Sheaths with distal ceramic insulation			nsulation	Obturator	Cutting electrode
Sheaths		Rotating irrigation ring with 4 mm capacity	3 mm fixed Luer stopcock	Central tap		
Fr., Color code				-		ý
22 Fr. green		8654.064*	_	8663.064*	8654.16	_
24 Fr. yellow		8654.074	8661.074	-	8654.17	8411.03
26 Fr. black		8654.084	_	8663.084	8654.18	_
28 Fr. red		8654.094*	-	-	_	_

* = Standard fiber insulation

ø	Angle of view	With enlarged image and objective field	Endoscope
4 mm	0°	8650.414	



Monopolar Rotation Resectoscope for 4 mm Endoscope, 0°

with Continuous-Irrigation Double-Sheath System



Fr., Color code	Distal tip	Sheaths, inner sheath	with distal ceramic insulation	Obturator	Cutting electrode
Sheaths		Outer sheath	- Inner sheath		5
26 Fr. yellow		8655.374	8655.384 (24 Fr.)	8654.17	8411.03
28 Fr. black	and the second se	8655.393	8655.394 (26 Fr.)	8654.18	-

rotatable connecting piece singly for

24 Fr. (capacity	
26 Fr. o	capacity	

ø	Angle of view	With enlarged image and objective field	Endoscope
4 mm	0°	8650.414	

Meatal stop disc





Monopolar Resectoscope *E-line* for 4 mm Endoscope, 0°

with Continuous-Irrigation Double-Sheath System



Fr., Color code	Distal tip	Sheaths, inner sheat	h with distal ceramic insulation	Obturator	Cutting electrode
Sheaths		Outer sheath	-		6
27 Fr. yellow	6	8655.174	8655.184 (24 Fr.)	8654.17	8411.03

ø	Angle of view	With enlarged image and objective field	Endoscope
4 mm	0°	8650.414	





Monopolar High-Performance Resectoscope for 4 mm Endoscope, 0°, Oval with Intermittent Irrigation



Sheath	Distal tip	Sheaths with distal	Obturator	Cutting electrode	
Fr., Color code		Rotating irrigation ring with 4 mm capacity	central tap		
	_				~~~~~
25.5 Fr. yellow		8658.054	8657.054	8658.151	_

ø	Angle of view	With enlarged image and objective field	Endoscopes
4 mm	0°	8650.414	



Monopolar Resectoscope *E-ltage* for 4 mm Endoscope, 30°, Long Sheath with Intermittent Irrigation



	Distal tip	Sheath with distal ceramic insulation 4 mm luer rotating irrigation ring	Obturator	Cutting electrode
Sheath				Ç
24 Fr.	-	8668.024	8668.12	8439.03

ø	Angle of view		Endoscope
4 mm	30°	8668.433	

Monopolar Electrodes

for Resectoscopes, 4 mm Endoscope, 25°, Long Sheath

for sheath			24 Fr.
for continuous-irrigation sheath	Loop		26 Fr.
Cutting electrode		Branches	green
	0.3 mm		8439.03
V		Stem	red
Coagulating electrode		Branches	blue
al la l	-		8440.02
		Stem	red



Monopolar Working Elements

	Handle type	Cutting action	Туре
Manual cutting action with spring-assisted release	closed	active	8654.205
Manual cutting action with spring-assisted release	rotating	active	8654.234
Manual cutting action with spring-assisted release	open	active	8654.254
	open	passive	8654.224
Spring-assisted cutting action	closed	passive	8654.225



Monopolar Working Elements

for High-Performance Resectoscope --

	Handle type	Cutting action	Туре
Manual cutting action with spring-assisted release	open	active	8658.204
Spring-assisted cutting action	closed	passive	8658.225

for Resectoscope *Contractors* 4 mm Endoscope, 0°

	Handle type	Cutting action	Туре
Manual cutting action with spring-assisted release	open	active	8661.204
Spring-assisted cutting action	closed	passive	8661.225



Monopolar Working Elements

for Resectoscope *E-line* 4 mm Endoscope, 30°

	Handle type	Cutting action	Туре
Manual cutting action with spring-assisted release	open	active	8668.204
Spring-assisted cutting action	closed	passive	8668.225



Monopolar Electrodes





Monopolar Electrodes

for Resectoscopes, 4 mm Endoscope, 30°, 12°

for sheath			22 Fr.	24 Fr.	26 Fr.
for continuous-irrigation sheath	Loop		25.5 Fr.	27 Fr.	28.9 Fr.
Cutting electrode		Branches	blue	green	white
	0.3 mm		8422.1310	8424.1310	8426.1320*
		Stem	red	red	red
		Branches	blue		
	0.35 mm		8422.3510	-	-
V		Stem	red		
	0.4 mm	Branches		green	white
		-	-	8424.1410	8426.1420*
		Stem		blue	blue
Straight cutting electrode		Branches	bl	ue	
			8423	3.0405	-
		Stem	blue		

* Electrode with guide bar for better stabilization. Suitable only for working elements with guide groove.



Monopolar Electrodes

for Resectoscopes, 4 mm Endoscope, 30°, 12°

for sheath	22 Fr.	24 Fr.	26 Fr.	28 Fr.		
for continuous-irrigation sheath		25.5 Fr.	25.5 Fr. 27 Fr.			
Large coagulating electrode	Branches	bl	ue	wł	nite	
5		8423	3.0205	8427	.0225*	
	Stem	re	d	re	ed	
Ball electrode, barrel-shaped	Branches		gre	een		
			8422	2.4355		
C	Stem	red				
Roller electrode, barrel-shaped	Branches		bro	wn		
			8423	8.0235		
	Stem		red			
Hook electrode	Branches	bl	ue			
		8423.0905 –		-		
	Stem	re	ed			
Knife electrode by Collins	Branches	bl	blue			
		8423	.1905	-	-	
37	Stem	re	d			

* Electrode with guide bar for better stabilization. Suitable only for working elements with guide groove.



Monopolar EVAP Electrodes Gold-Plated

for Resectoscopes, 4 mm Endoscope, 30°, 25°, 12°

for sheath	24 Fr.	26 Fr.	28 Fr.			
for continuous-irrigation sheath		27 Fr.	28.9 Fr.			
Barrel-shaped, with profile	Branches		green			
27172			8423.0315			
No.	Stem		blue			
Wing electrode, for combined cutting and vaporisation	Branches	green	white	-		
		8424.1510	8426.1510	-		
Loop shape	Stem	blue	blue	_		



Monopolar Electrodes

for Resectoscopes, 4 mm Endoscope, 0°

for sheath			24 Fr.	26 Fr.	28 Fr.
for continuous-irrigation sheath	Loop		27 Fr.	28.9 Fr.	
Cutting electrode		Branches	green	white	
	0.3 mm		8411.03	8412.03	-
		Stem	red	red	
		Branches	green		
0	0.4 mm		8411.04	-	-
		Stem	blue		
Straight cutting electrode		Branches		blue	
C 	_			8410.04	
		Stem		blue	

* Electrode with guide bar for better stabilization. Suitable only for working elements with guide groove.



Monopolar Electrodes

for Resectoscopes, 4 mm Endoscope, 0°

for sheath		22 Fr.	24 Fr.	26 Fr.	28 Fr.	
for continuous-irrigation sheath		25.5 Fr.	27 Fr.	28.9 Fr.		
Large coagulating electrode	Branches	bl	ue		•	
		841	0.02	-		
0	Stem	re	d			
Coagulating electrode	Branches					
đ		8407.01				
4	Stem	blue				
Coagulating ball electrode	Branches					
		8408.02				
5	Stem		blue			
Knife electrode	Branches	35				
~ <u> </u>		8420.19				
	Stem	blue				



Monopolar Electrodes

for High-Performance Resectoscopes by Marberger, Oval 4 mm Endoscope

for 4 mm Endoscope			30° / 25° / 12°		0° / 5°	
for sheath	Loop		25.5 Fr.		25.5 Fr.	
for continuous-irrigation sheath				27 Fr.		27 Fr.
Large coagulating electrode		Branches	bl	ue	bl	ue
	-		-		- 8410	
(Based)		Stem	red		red	
Coagulating electrode		Branches	bl	ue	blue	
			-		840	7.01
0		Stem	blue		blue	
Coagulating ball electrode						
	-				840	8.02
9					bl	ue



HF Monopolar Connecting Cables

Resection

Instrument fitting	Unit Fitting	Length	Types
WOLF - Resectoscopes			<i>,</i> ,
	ERBE T-Series	3 m	815.132
	Bovie / Valleylab / Erbe Int.	3 m	815.033
		3 m	415.0030*
)		5 m	815.053
WOLF Instruments		3 m	8106.132
	ERBE T-Series	3 m	4106.1320*
		3 m	8106.033
9 P		3 m	4106.0330*
	Bovie / Valleylab / Erbe Int.	5 m	8106.053

* Sterile, disposable, single patient use, HF connection cable, 10/pkg



HF Bipolar Connecting Cables

Resection



Contact your Covidien representative for information on connectors for Valleylab and Covidien generators.



Profile Rotary Resectoscope 🛎 - 🥙

Resection

for resectoscope	Fr.	Profile roto	ry sheaths		Obturators		
		intermittent irrigation	continuous irrigation	standard	timberlake	visual	
		straight	straight				
		-				<u> </u>	
Standard	24	8654.374 8661.374	_	8654.17	8654.67	8415.12	
	26	8654.384 8661.384	_	8654.18	8654.68	8415.13	
		-	8655.374 and 8655.384	8654.17	8654.67	8415.12	
	28	-	8655.393 and 8655.394	8654.18	8654.68	8415.13	

Obturators for



Obturators

for resectoscope Fr. Sheaths Obturators intermittent irrigation continuous irrigation standard timberlake visual distal oblique distal oblique beak tip distal tip beak tip distal tip \mathfrak{T} 6 1 100 Ċ, 1 Standard 8654.014 8415.01 8654.11 _ _ _ _ 22 8654.064 8654.16 8654.66 8415.11 _ _ _ 8663.064 8654.024 8654.12 8415.02 _ 8663.024 24 8654.074 _ _ 8661.074 8654.17 8654.67 8415.12 25.5 _ 8655.144 8654.16 8654.66 8415.11 _ _ 8654.13 8415.03 8654.034 _ _ _ 26 8654.084 8654.18 8654.68 8415.03 _ _ _ 8663.084 8655.074 8654.12 8415.02 _ _ and _ _ 8655.084 27 8655.174 _ _ _ and 8654.17 8654.67 8415.12 8655.184



Obturators

for resectoscope	Fr.	Sheaths				Obturators		
		intermitten	t irrigation	continuou	s irrigation	standard	timberlake	visual
		distal beak	oblique distal tip	distal beak	oblique distal tip		<u></u>	
Standard	28.9	-	-	-	_	8654.13	-	8415.03
	20.3	_	_	_	_	8654.18	8654.68	8415.13
small caliber	24	-	_	8656.034 and 8656.037	_	_	_	-
	27	-	-	-	8656.074 and 8656.077	-	_	-
Long sheath								
	24	8668.024	-	-	-	8668.12	_	-

by Marberger, oval	25.5	-	8657.054 8658.054	-	-	8658.151	-	-
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S(a) line Resectoscopes

for resection in NaCl

Electrodes

Special electrodes for bipolar resection of the prosate and bladder tumours are available. We recommend electrodes with a wire diameter of 0.3 mm with a high hemostasis effect for use in prostate operations. A wire diameter of 0.25 mm has been designed for use in bladder procedures to guarantee an extremely sharp and smooth cut. The structure of the electrodes ensures that the current flows from the loop to the electrode fork without causing thermal stress to the urethra. The electrode head was specially developed for bipolar vaporization technology.

The specific geometry of the electrode surface means that the high-energy plasma can be used in concentrated form for fast, effective tissue vaporization with minimal loss of blood.

Morever, the "stepped" gradation at the contact area of the electrode enables the energy density to be kept as low as possible and this avoids thermal damage to tissue.

No ridges are left behind during vaporization with our BiVAP electrode as a result of its flat bearing surface. A completely flat surface is created.

"BiVAP" Bipolar Vaporization Electrode







S(a)line Resectoscopes

Resection

for resection in NaCl

Working elements

The new R. WOLF S(a)line Resectoscopes are compatible with all inner resectoscope sheaths from 22 Fr. or 24.5 Fr. (continuous irrigation resectoscope sheaths), 4 mm standard telescopes from 0° to 30° can also be used. A new electrode guide permits the combination of a working element with both 0° and 30° telescopes.



A special "easy-click" lock between the electrode and the working element makes changing the electrode particularly fast and user-friendly. A neutral pin at the proximal end of the working element takes over the function of a neutral electrode and hence conducts the current through the bipolar cable.



Bipolar

Solution Resectoscope for 4 mm Telescope, 0°, 12°, 30°

for resection in saline

with continuous-irrigation double-sheath system



Fr., color code	Distal tip	Sheaths, inner sheath w	vith distal ceramic insulation	Obturator	Electrodes
Sheaths		Outer sheath	 Inner sheath 	ļ	J
24.5 Charr. / Fr. green		8655.334	8655.344 (22.5 Fr.)	8654.16	4622.1333
26 Charr. / Fr. yellow	D -G-11	8655.374	8655.384 (24 Fr.)	8654.17	4622.1313
28 Charr. / Fr. black		8655.393	8655.394 (26 Fr.)	8654.18	4624.1313

Rotatable connecting piece, for

22.5 Fr. capacity	.8654.3642
24 Fr. capacity	.8654.3742
26 Fr. capacity	.8654.3842

Ø	Viewing direction	with enlarged image and objective field	Endoscopes
	30°	8654.422	
4 mm	12°	8654.431	
	0°	8650.414	

Stop disc





Bipolar *Working Elements*

for Slaver resectoscopes 4 mm telescope, 0°, 12°, 30°

	Handle type	Cutting action	Туре
	open	active	8680.204
Manual cutting action with spring-assisted release	closed	active	8680.205
Spring-assisted cutting action	open	passive	8680.224

HF-Bipolar connecting cable for Erbe

3 m	8108.232
5 m	8108.252

Note: This working elements are suitable for all viewing directions!



Electrodes for *S*(*A*)*E*₂ Resectoscopes



Recommended application for cutting electrodes with loop: 0.25 mm wire for papillary tumours 0.30 mm wire for adenomas

 ${}^{\pmb{\ast}}$ = all electrodes, that can be used for 30° can also be used for 25°

Bipolar Electrodes



for States resectoscopes, 4 mm telescope, 0°, 12°, 30° for resection in NaCl

for continuous-irrigation sheath	Loop		from 24.5 Fr.	from 26 / 27 Fr.	
Cutting electrode, round,		Branches	blue		
3 pcs., packea singly, sienie	0.25 mm		4622.2533	4622.2513	
		Stem	blue		
		Branches	blue	green	
	0.3 mm		4622.1333	4622.1313	
		Stem	blue	blue	
Cutting electrode, oval, 3 pcs., packed singly, sterile		Branches	blue		
(*************************************	0.3 mm		4609.0323	-	
		Stem	blue		
BiVAP, Bipolar Vaporization Electrode, 3 pcs., packed singly, sterile		Branches	blue	blue	
	-		4630.0223	46300243	
		Stern	blue	blue	
Hook electrode		Branches	bi	lue	
<u> </u>	-		862309		
- 25		Stem	yellow		



Bipolar HF Connecting Cables for States resectoscopes

Connector for instrument	Connector for unit	Length	Types
WOLF S(a)line Resectoscopes		3 m	8108.232
	ERBE	5 m	8108.252

Contact your Covidien representative for information on connectors for Valleylab and Covidien generators.



Richard Wolf Chip-E-Vac

bipolar resection system with automatic chip aspiration



Bipolar Connecting Cable

Suitable for ERBE-VIO 300 Generator
With Multifunction Port
3 M8108.232
5 M

Light Guide Cable

3.5 mm ø, 10	ft., straight	
instrument atta	chment	

Instrument Tray

Metal, 23" L x 11" W x 3.5	′D8585.023
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Richard Wolf Chip-E-Vac

bipolar resection system with automatic chip aspiration



Resection Pump 2228 Complete	2228.0012
Indudeo	
Includes:	
Pump unit	2228.011
Canister bracket	64030.125
Bottle bracket	64031.381
Chip collection bottles, sterile, 5 / box	4228.8015
Bottle Insert	8228.803
Large overflow canister with lid	8170.655
Vacuum tube	8170.6554
Pump filters, 50 / box	2221.901
Canister filters, 10 / box	2228.901
Sound absorbers	35100.115

Tubing Set for Resection Pump 2228

Consisting of:

Also available:

Cart

with 2 adjustable shelves,

21″ W x 21″ D x 37″ H	
optional drawer insert for cart	
optinal IV pole for cart	



Punch Lithotripsy

Resection



Curettes

for Resectoscope Sheaths, 22 - 28 Fr.

Curettes	Working element for sheaths	22 + 24 Fr.	26 + 28 Fr.
	Type 8654 12°, 30° Endoscope	8654.27	8654.29

Used with a working element this curette is suitable for removing small calculli, stone fragments after lithotripsy and residual tissue.



Warning!

The H.F. cable must not be connected when using a curette!



Additional Instrument Combinations

with Resectoscope Sheaths



Standard	Continuous irrigation for sheaths	via	Instruments as for cysto-urethroscopes 8650	for use in resectoscope sheaths	with Endoscope
Fr.	Fr.		Version	Туре	
24-28	27-28.9	only for diagnosis	Adapter with 1 instrument port	8652.264	0°, 12°, 30°, 70°
26-28	28.9	spacer 8652.704	Foreign body forceps	8650.654	0°, 12°, 30°
26-28	28.9	spacer 8652.704	Stone forceps	8650.664	0°, 12° , 30°
24-28	27+28.9	spacer 8652.704	Biopsy forceps, with spoon-shaped jaws, retrograde	8650.774	0°, 12° , 30°
24-28	27+28.9	spacer 8652.704	Biopsy forceps, "Marburg"	8650.614	0°, 12°



Additional Instrument Combinations

Resection

with Resectoscope Sheaths



Standard	Continuous irrigation for sheaths	via	Instruments as for cysto-urethroscopes 8650 for use	in resectoscope sheaths	with Endoscope
5.	5.	W	Mania	Ture	
Fr.	Fr.		Version	Туре	
24-28	27+28.9	spacer 8652.704	Scissors "Wuppertal"	8650.644	0°, 12°
24-28	27+28.9	spacer 8652.704	Coagulating biopsy forceps by Tauber	8650.624	0°, 12°
24-28	27+28.9	without spacer	Insert with Albarran deflector, with one or two instrument ports	8650.204 or 8650.214	12°, 30°, 70°
24-28	27+28.9	spacer 8652.704	Biopsy forceps, spoon-shaped, both jaws opening	8650.604	0°, 12°
24-28	27+28.9	spacer 8652.704	Grasping forceps, both jaws opening	8650.684	0°, 12°



Suprapubic Aspiration Set with Automatic Seal

Automatic seal prevents water escaping when removing the trocar					
Trocar sleeve 16 Fr., with pressure measuring channel and adjustable stabilising disc		8518.04			
Trocar, with pyramid tip	X	8518.11			
Trocar, with cannula tip	——————————————————————————————————————	8518.12			
Aspiration cannula		8518.02			
Overflow cannula, for pressure stabilisation by Schmeller		8518.07			
Guide sleeve, "Freiburg" with lateral opening for inserting a suprapu- bic balloon catheter after TUR		8518.03			
Stabilisation disc, with lateral opening	THE REAL PROPERTY IN THE REAL PROPERTY INTO THE REAL PR	8518.93			
Membrane ventil, pack of 10	0	89.103			

During TURP with sheaths without continuous irrigation the view can be impaired and pressure fluctuations can occur. The special suprapubic aspiration set from R. Wolf allows continuous outflow of liquid from the bladder during resection. The access to the bladder created with the standard set can be used postoperatively for a suprapubic bladder catheter.



Roller Suction Pump 2207

Resection



For continuous aspiration of irrigation fluid and resected tissue.

- Adjustable evacuation flow rates from 0.25 2.5 I/min
- Suction control for pressure setting between
 -0.1 and -0.6 bar
- Secretion trap for collecting irrigation solution and smaller particles

Roller suction pump......2207.KIT

Includes:

- ultrasound generator (2271.004)
- us transducers 2 (2271.501)
- suction pump (2207.011)

Accessories:

- collecting bottle (4172.501)
- twist-lock bottle top with connections (2207.976)
- complete tubing set (8170.121)
- replacement roller pump tubing (pack of 5) (64226.014)
- collecting bottle holder (2232.841)
- flow sensor (2207.966) and flow sensor cable (2207.961)
- low pressure suction measuring hose (8170.411)
- power cable (N710154)
- synchronization cable to 2271 US Generator (2207.991)
- hygiene filters, sterile, single patient use, 10/pkg (2148.95)
- CAN bus connecting cable, 0.6 m, for 2207.12 (103.701)

Technical Data

Roller Suction Pump 2207

Туре	2207.011 / 2207.012
Safety class complying with UL 2601-1 / CSA C22.2 No. 601.1 - for USA	I
Classification	BF
Directive Medical Device Products 93/42EEC	Class Ila
Interference suppression complying with DIN CDE 0871	Limit class B
Low pressure range	-0.1 bar to -0.6 bar
Fuse	T2.0L
Power supply	100 - 230 VAC, 50/60 Hz
Compacity load	70 VA
Capacity	0.25 - 2.5 I / min
Dimensions (w x h x d)	320 x 105 x 405 mm
Weight	18.7 lbs (8.5 kg)
Space required with bottle (w x h x d)	430 x 300 x 405 mm



Stopcocks and Tubing Connector

Resection

For Resectoscope Sheaths with 4 mm Endoscopes

		Irrigation ring	Sheath			
Accessories				- Çi		-
		For 8654 sheaths, 3 mm luer fitting with shut off valve	With standard 4 mm luer rotatable irrigation ring	With rotatable 3 mm luer irrigation ring	With fixed tap with luer connector	With central two-way tap
Two-way stopcock	3 mm	15209.042 \$01	_	883.00	883.00	-
Stopcock	3 mm	15209.042 \$01	_	884.00	884.00	_
3	4 mm	_	884.01	_	_	_
Tubing connector		_	889.01	889.01	889.01	889.01