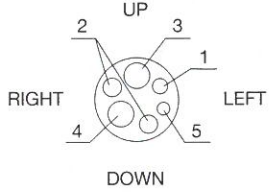
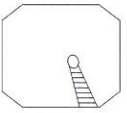
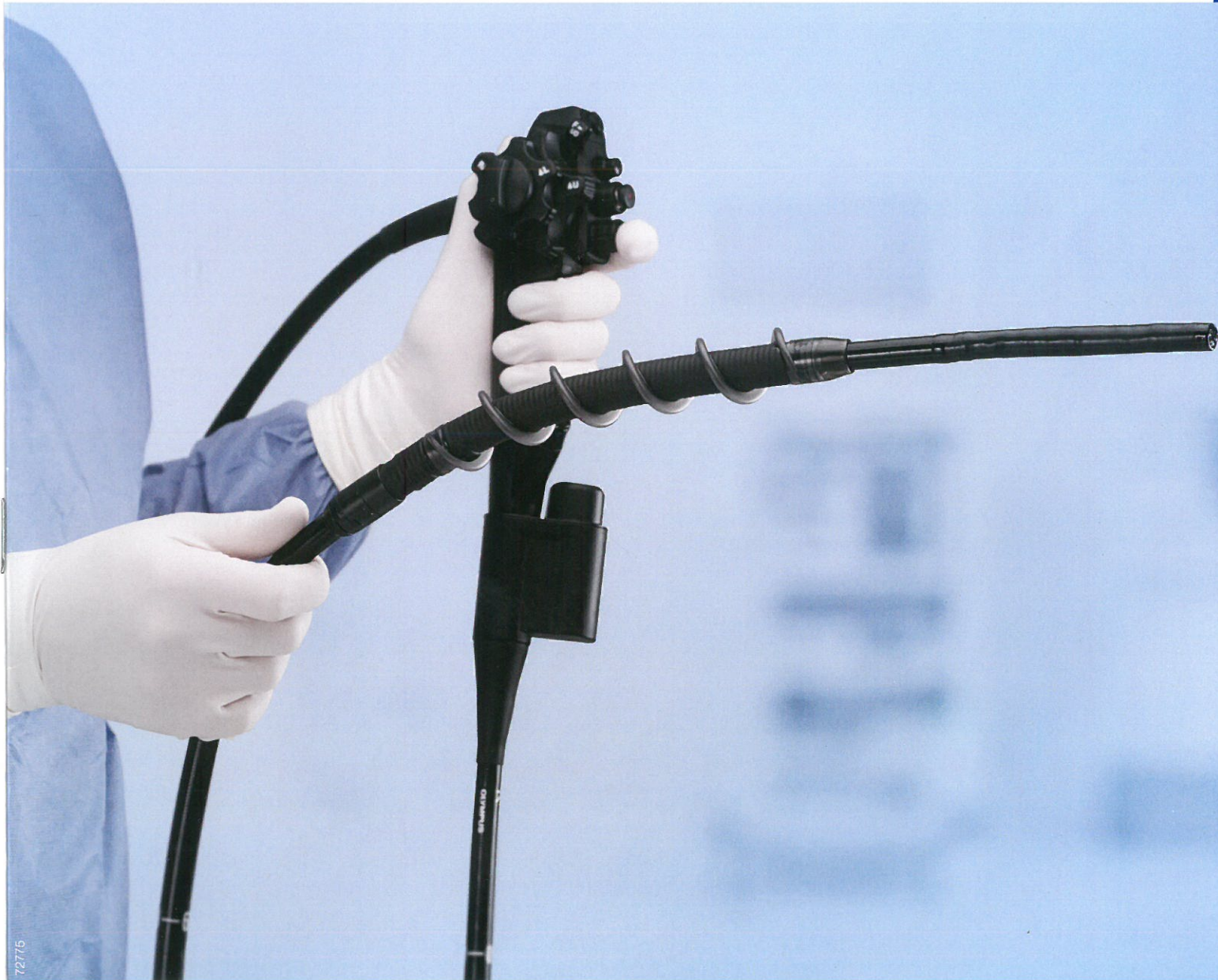


Product Specifications		
PSF-1		
Optical System	Field of view	140°
	Direction of view	Forward viewing
	Depth of field	2-100 mm
Insertion Section	Distal end outer diameter	ø 11.3 mm
	Enlarged distal end	
	Insertion tube outer diameter	
	Insertion section working length	
	Maximum rotation rate	
Instrument Channel	Channel inner diameter	ø 3.2 mm
	Minimum visible distance*1	3 mm
	Direction from which EndoTherapy accessories enter and exit the endoscopic image	
Airflow Rate*2		25 cm³/s
Bending Section		Angulation range
		UP 180°/DOWN 180°/ RIGHT 160°/LEFT 160°
Total Length		2,035 mm
*1 Distance from the distal end of the endoscope. *2 Standard when CLV-190 (high air pressure) is used.		
Single-Use PowerSpiral Tube		
Fin		Maximum outer diameter
		ø 31.1 mm
Tube		Outer diameter
		ø 18.1 mm
Total Length		240 mm
PowerSpiral Control Unit (Set)		
Power Input	Rated voltage	220-240 V AC
	Voltage fluctuation	Within ±10%
	Rated frequency	50/60 Hz
	Frequency fluctuation	Within ±1 Hz
	Power consumption	70 VA
Size	Fuse rating	5 A
	Dimensions	370 (W) × 69 (H) × 460 (D) mm
	Dimensions (maximum)	375 (W) × 75 (H) × 477 (D) mm
	Weight	6.1 kg
	Type of protection against electric shock	Class IIa
Classification (Medical Electrical Equipment)	Degree of protection against electric shock of applied part	TYPE BF applied part. Where no classification mark appears, the device is a TYPE BF applied part.
	Degree of protection against explosion	The PowerSpiral control unit should be kept away from flammable gases.
Rotation Control		
		Rotation speed control range
		30 rpm (at single-use PowerSpiral tube rotation speed)
		Rotation direction
		Forward and backward
		Control method
		Speed control
		Limit function
		The limit function stops the rotation of the single-use PowerSpiral tube when the electric current to the motor on the endoscope exceeds a set value.
Output of the Video Signal of the Force Gauge		Outputs the display of the force gauge as the video signal.
Output of the Video Signal	Signal format	PAL
	Output signal	Y/C
Included Items		
· PSCU · Force gauge · Force gauge cable · PowerSpiral foot switch · Communication cable 1.8M · CLV-UPD cable · Y/C cable		
Lubricant (ENDOLAN)		
Description	Gastroenterology lubricant gel: · Completely water soluble · Paraffin-, fat- and silicone-free composition · No anesthetics · 200 ml	ENDOLAN lubricant is the designated lubricant to be used with all PowerSpiral systems and procedures. ENDOLAN is easy to apply while ensuring enhanced lubrication. The pure anesthetic-, paraffin-, fat- and silicone-free composition is gentle on patients' tissues.

Specifications, design and accessories are subject to change without any notice or obligation on the part of the manufacturer.

PowerSpiral
Take Enteroscopy to the Next Level



Take Enteroscopy to the Next Level

The PowerSpiral Enteroscope

Revolutionary Technology That Takes Enteroscopy to the Next Level of Efficiency

The PowerSpiral allows for fast and gentle access to reach deep into the small intestine by pleating the small bowel onto the enteroscope using a spiral segment. This is achieved via the integrated motor, which rotates the single-use PowerSpiral overtube that is equipped with soft spiral-shaped fins that gently follow the mucosa. The motorization not only ensures smooth and safe insertion and withdrawal of the enteroscope, but, in comparison to conventional systems, it also improves maneuverability during therapeutic interventions. A large instrument channel extends the range of therapy.



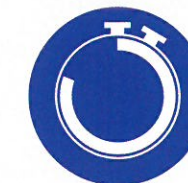
Smooth and Deep Insertion

The motorized advancement, combined with the soft fins of the spiral segment, enables excellent maneuverability and insertion, providing insight into the entire intestinal lumen, which makes it easier to penetrate deep into the small intestine.



Precise Positioning for Therapeutic Interventions

The motorized speed control and gentle grip on the mucosa between the soft fins of the spiral segment allow precise positioning of the endoscope and enable various well-controlled and stable therapeutic interventions to be performed.



Substantial Reduction in Procedure Time

Lesions may be reached more quickly. First study results demonstrated that procedure times with the PowerSpiral endoscope may be substantially reduced.^{1, 2}

“The motorized spiral enteroscope is the first active endoscope to reach deep into the small intestine in a relatively short time. For me, this new technology is a genuine milestone in endoscopy that allows smooth and fast insertion for effective treatment by using standard accessories.”

Prof. Dr. Horst Neuhaus

¹ Beyna T, Schneider M, Pullmann D, et al. Motorized spiral colonoscopy: a first single-center feasibility trial. *Endoscopy*. 2018; 50(5): 518-523.

² Mans L, Arvanitakis M, Neuhaus H, et al. Motorized Spiral Enteroscopy for Occult Bleeding. *Dig Dis*. 2018; 36(4): 325-327.

Versatile Features for a New Way of Enteroscopy

The PowerSpiral Enteroscope

Motorized Spiral Enteroscopy

The PowerSpiral enteroscope uses a unique technology where a user-controlled motor rotates the PowerSpiral overtube that is mounted on the enteroscope. The enteroscope itself does not rotate.

Soft Spiral-Shaped Fins

Soft spiral-shaped fins, which gently and protectively nestle against the mucosa, pull the intestine onto the enteroscope. The effect of this spiral working principle is stable guidance in the lumen of the small intestine and precise positioning of the enteroscope for treatment.

Efficient Control

The PowerSpiral control unit controls the rotational direction and speed of the spiral segment, which is displayed visually for monitoring on a force gauge. The force gauge provides the operator with a visual indication of the rotational direction and the motor current throughout the examination. The direction and speed of the rotation of the spiral segment are controlled by an easy-to-operate foot switch.



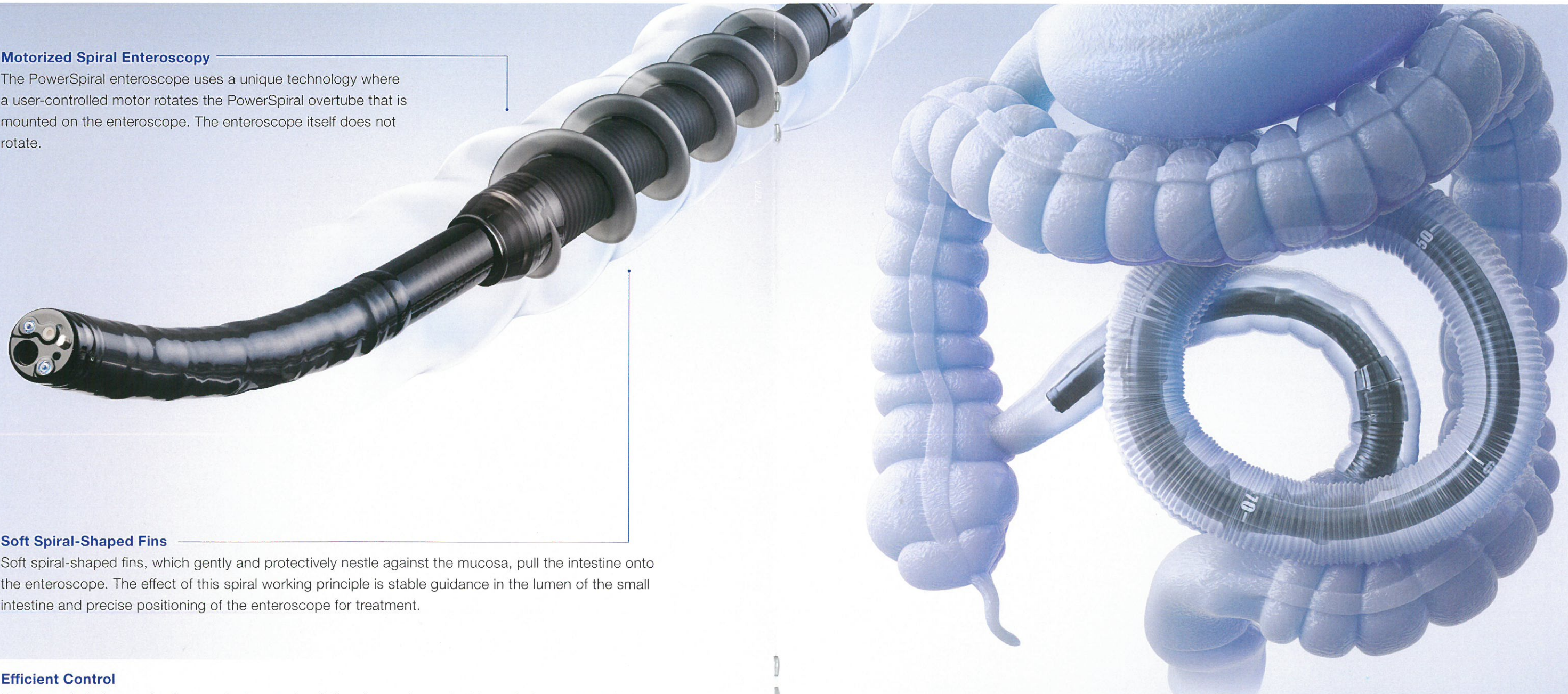
In addition, an automated limit function stops the rotation of the spiral segment when the motor current reaches a certain limit.

Water Jet Function

The water jet function improves the accuracy of observations and efficiency of treatment by easily removing mucus and other residues in the investigated intestinal areas. Bleeding can also be detected and treated more quickly.

Sharp and Clear HD Image

An HD image with sharper image quality helps to provide more efficient diagnoses and therapy.



Effective Treatment

ET Instruments and PowerSpiral System Components

Effective Treatment

Thanks to a 3.2 mm working channel and standard colonoscope length (1,680 mm), a great variety of compatible ET instruments from the large Olympus EndoTherapy portfolio can be used to perform various treatment procedures. Moreover, suction performance is retained while the treatment instrument is inserted, which improves efficiency.



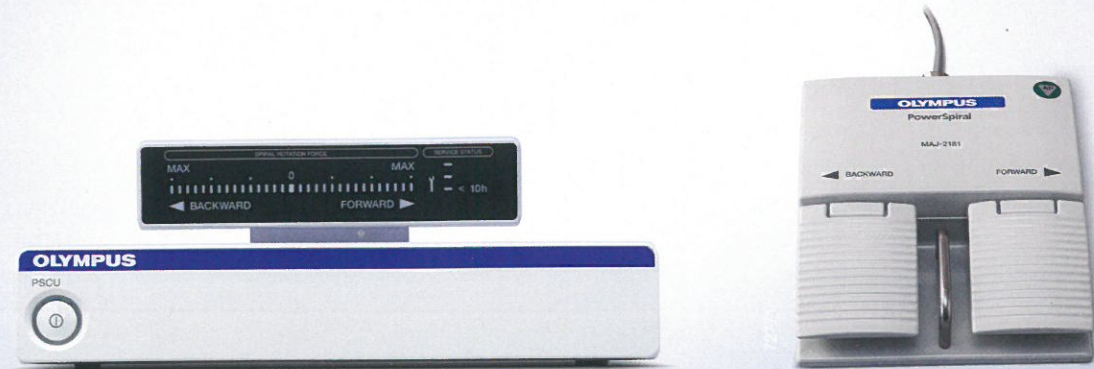
System Components

Single-use PowerSpiral tube (DPST-1)

- Overtube with soft spiral-shaped fins
- Attaches to the enteroscope by a plug and lock
- No twisting or turning — the enteroscope remains in the desired position

PowerSpiral control unit set contains:

- PowerSpiral control unit (PSCU), which drives the integrated motor
- Force gauge for visual indication of the rotational direction and the motor current
- Foot switch to control rotation movement
- Cables



Training Courses and Service Solutions

Training and Service for the PowerSpiral Enteroscope

Olympus does everything possible to intensively support the proper usage of this technological innovation, ensuring that the PowerSpiral enteroscope is used safely and reliably. Thus, Olympus has consulted with experienced physicians and made training mandatory prior to use.

Training Material

Olympus has worked intensively with experienced physicians to develop an extended set of materials. In addition to a procedural manual and a collection of cases, it contains various animation videos, example video cases, and an e-learning platform to familiarize the techniques of using this new technology. Of course, users receive this set before performing their first procedure using the PowerSpiral enteroscope.

Training Courses

Olympus offers face-to-face training for new users of the PowerSpiral enteroscope. The agenda also includes hands-on training sessions, live case observations and various presentations.

Comprehensive Service Solutions

Olympus provides a level of service support that extends beyond repairs. To make service easier and quicker, a counter on the device indicates when preventive maintenance is required. Further unique service solutions increase the system's uptime and keep processes running reliably so as to ensure a secure investment for customers.

