

## Motorized Filter Wheel and Shutter Combo



FWSH102

- 6-Position Ø1" Filter Wheel With Built-in Beam Shutter
- Dual Position Control
- Directly Accepts Ø1" Filters Up to 0.25" Thick
- USB 2.0, BNC, TTL Signal or Manual Push-Button Interface
- External Trigger In (Increment Control)
- External Trigger Out (Provision From Software)
- 1/4-20 (M6) 8-32 (M4) Mounting Provisions

The FWSH102 Motorized Filter Wheel and Shutter Combination is based on the popular design of the 6-position Ø1" filter wheel, FW102B, and incorporates an aperture beam shutter. This filter wheel uses a rotary, electromechanical actuator to provide rapid shutter operation within a choice of two SM1 (1.035"-40) threaded ports. The motorized filter wheel has a built-in controller and a Ø4" filter housing that directly accepts six Ø1" filters up to

0.25" (6.4 mm) thick. In general operation, the shutter remains in the closed "A" position and then opens with a pulse control signal. As long as the control voltage to the shutter remains high, the shutter stays open, but if the voltage goes low, the shutter closes in the "B" position. An optional switch on the front panel toggles the shutter position between the A and B aperture. The rate at which the device is opened can be controlled using our SC10 Shutter Controller or the TSC001 T-Cube Solenoid Controller. The FWSH102 can be used for a host of automated applications, including color CCD photography, fluorescence microscopy, and photometry. A 5-Volt power supply is included with each unit.

ITEM#	\$	£	€	RMB	DESCRIPTION
FWSH102	\$ 1,485.00	£ 935.60	€ 1,381.10	¥ 14,181.80	Filter Wheel With Ø1" Shutter

## Motorized Fast-Change Filter Wheel

This motorized fast-change filter wheel has been designed for applications that require sequential observations with different filters inserted in the optical path, such as multi-wavelength fluorescence imaging. The mechanical interfacing of the wheel accepts SM1 lens tubes and 30mm cage systems for both input and output ports of the filter wheel housing. The housing contains a #8-32, M4 tapped hole to allow post mounting of the wheel. Up to six Ø1.0" (25mm) filters mounted in the standard housing (e.g. as per Thorlabs' FEL series) can be fitted onto the wheel. Access for the fitting of filters can be gained through a removable cover without needing to unmount the filter wheel from the optomechanical setup within which it sits. Choice of electronic controller for the FW103 depends on the required speed of operation. The FW103H incorporates FW103 with our BSC101, single-channel apt™ controller for applications requiring high-speed switching (<40ms) between adjacent filters. Where slower speed filter switching is desired, Thorlabs offers the FW103S, which combines the FW103 with our TST001, T-cube stepper motor controller. The TST001 controller offers two power supply options each sold separately: TPS001 when using a single TST001 T-Cube or TPS008 to power up to eight T-Cube. If the TST will be used with TCH002 T-Cube Controller Hub, no other source is required. These options provide the ability to fine-tune filter wheel acceleration and speed for optimum performance.



FW103

Post Sold Separately

### Features

- 55 ms Switching Time Between Adjacent Filters
- Holds up to Six Ø1.0" (25 mm) Filters up to 0.25" (6.4 mm) Thick
- High-Speed Operation Compatible with BSC101 Controller (See Page 366)
- Longer Transition Time Operation Compatible With TST001 T-Cube Stepper Motor Controller
- Light-Tight Design
- Integrates With Thorlabs' SM1 Lens Tube System, 30 mm Cage System, and Post Mounting System
- Easy Access to Add/Remove Filters from the Wheel
- Hall Effect Sensor to Indicate Successful Completion of Position Change

ITEM#	METRIC ITEM#	\$	£	€	RMB	DESCRIPTION
FW103	FW103/M	\$ 350.00	£ 220.50	€ 325,50	¥ 3,342.50	Fast Motorized Transition Filter Wheel
FW103H	FW103H/M	\$ 1,650.00	£ 1,039.50	€ 1,534,50	¥ 15,757.50	Fast Motorized Filter Wheel & High Current BSC101 Controller
FW103S	FW103S/M	\$ 850.00	£ 535.50	€ 790,50	¥ 8,117.50	Motorized Filter Wheel With Low Current TST001 Controller
BSC101*	BSC101*	\$ 1,351.50	£ 851.40	€ 1,256,90	¥ 12,906.80	One-Channel apt™ Stepper Motor Controller
TST001*	TST001*	\$ 637.50	£ 401.60	€ 592,90	¥ 6,088.10	T-Cube Single-Channel USB Stepper Motor Controller/Driver
TPS001*	TPS001*	\$ 25.50	£ 16.10	€ 23,70	¥ 243.50	15V Power Supply Unit for a Single T-Cube
TPS008*	TPS008*	\$ 187.00	£ 117.80	€ 173,90	¥ 1,785.90	15V Power Supply Unit for Up to 8 T-Cubes
TCH002*	TCH002*	\$ 765.00	£ 482.00	€ 711,50	¥ 7,305.80	T-Cube Controller Hub and Power Supply Unit

\*Universal Design, Imperial and Metric Compatible

Optical Rails

Mirror Mounts

Lens Mounts

Filter Mounts

Rotation Mounts

Adapters

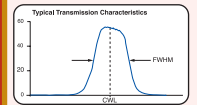
V-Mounts

Apertures & Iris Diaphragms

Lens Tubes

Cage Systems

### Laser Line Filters



See Page 842