

### Olympus for ART - Life in Detail



# Optimized for a Smoother ICSI Workflow

As the demand for the use of intracytoplasmic sperm injection (ICSI) in assisted reproductive technology (ART) applications has increased, so has the burden of the microscopy work it involves. Olympus' IX73SC assisted reproduction microscope solution helps facilitate the ICSI workflow, improving the speed and efficiency of each procedure.

## Advantages of the IX73SC Solution

### Easy Oocyte Condition Checks through Spindle Visualization

Olympus' unique observation method enables you to easily view the metaphase II (MII) spindle through the microscope oculars with the touch of a button:

- Confirm the oocyte's maturity to facilitate the timing of the ICSI stage within the in vitro maturation (IVM) process. Never take your eye off the sample with single button operation of the visualization.
- Confirm the spindle's position relative to the polar body before inserting the pipette to decrease incidences of damage to the oocyte.
- Verify the spindles of vitrified oocytes are stable after thawing. Verification contributes to improved accuracy.

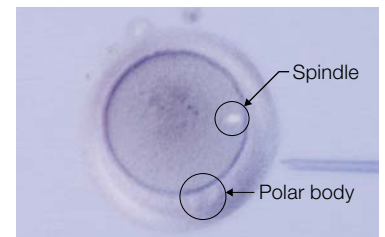
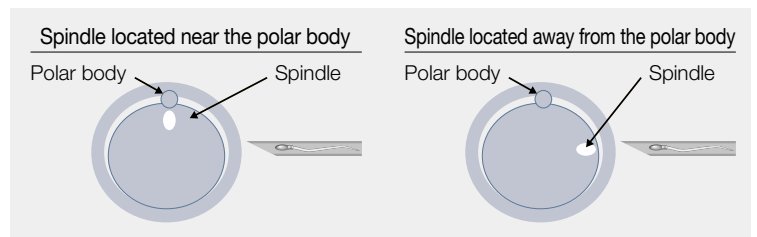


Image of polar body and spindle

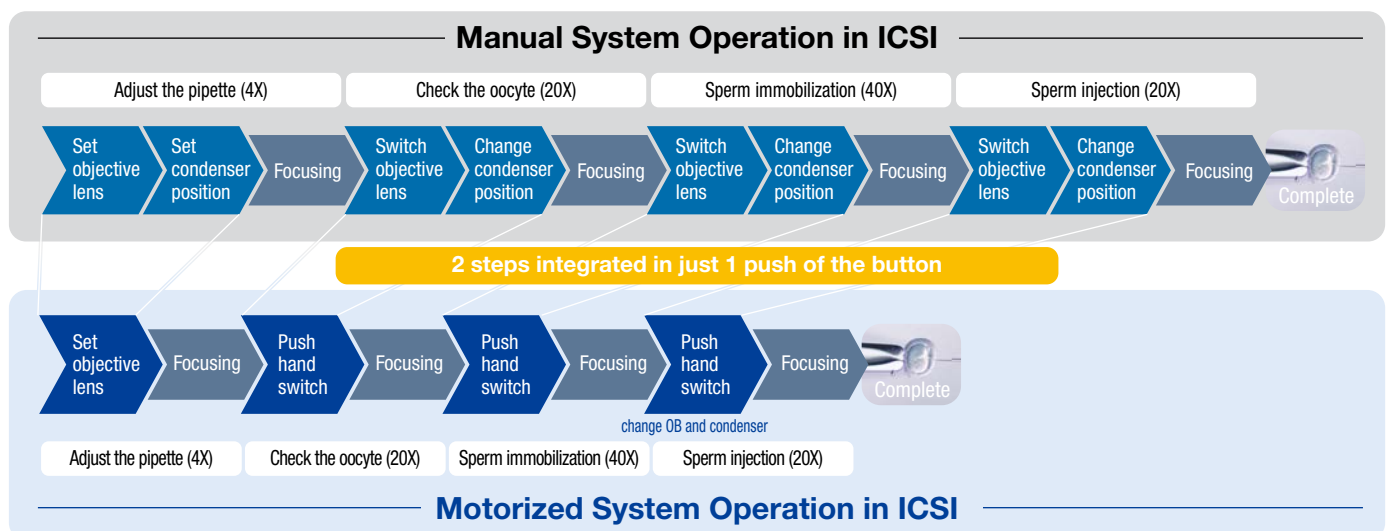


### Streamlined ICSI Steps through Motorized Operation

- Switch observation methods instantaneously and adjust the magnification with the press of a button on the integrated hand switch with Olympus' unique motorized unit.
- Improve your efficiency as motorized microscope adjustments reduce the number of steps required, enabling you to concentrate on the delicate work of operating the manipulator.
- Manual focusing can be easily performed with a high degree of sensitivity in conjunction with the motorized observation and magnification.



ICSI motorized unit



## Observation Methods

### Relief Contrast

- Unaffected by the polarizing effect of plastic dishes, Olympus' relief contrast enables 3D imaging of oocytes so you can check the condition of the zona pellucida.
- Correction collars on the 20X and 40X UIS2 objectives can optimize the image acquisition, based on the thickness of the bottom of the dish.

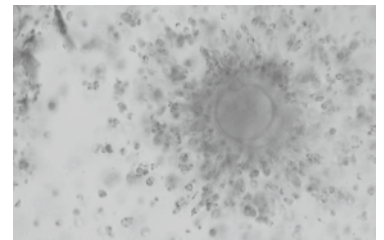


Relief contrast image in ICSI

### Polarization

- Observe the birefringence of spindles using polarized light.
- Adhesion of granulosa cells to the zona pellucida can be confirmed before the cumulus cells are even stripped.

(Application information and image are courtesy of David F. Albertini, Ph.D., Center for Human Reproduction, NY)

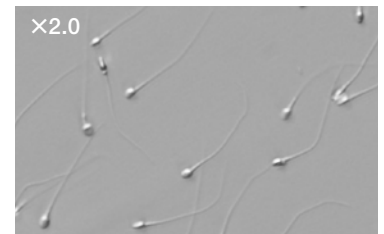
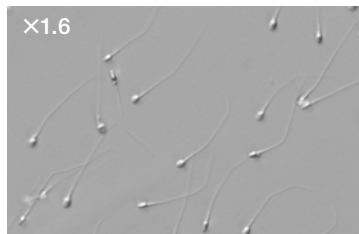
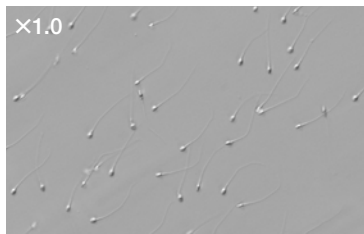


Oocyte with cumulus cells

## Morphological Evaluation of Sperm at High Magnification

Improve the sperm selection process:

- Smooth zooming from 1x, 1.6x, to 2x using the adjustment lever..
- Combine the zoom with the 40X objective lens to observe the morphology and internal structure of the sperm head in detail.



## Ease Lab Work with a Comfortable Design

- Adjust the oculars to the position that is most convenient and comfortable for you—the vertical setting enables you do a quick check on the oocyte and embryo while standing.





Example of an Assisted Reproduction System

\*The IX73SC system includes the microscope only. Peripheral items are not provided by Olympus.

# System Configurations

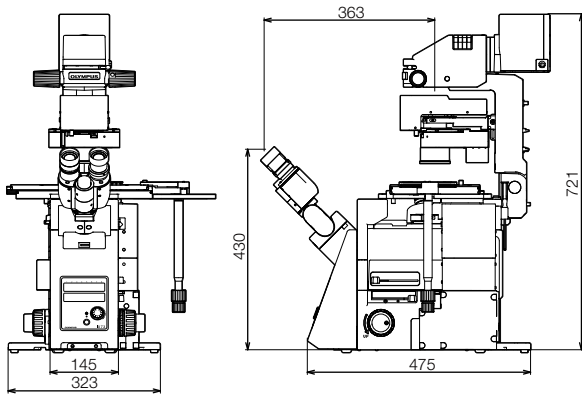
In addition to the motorized IX73SC microscope, a manual-operation IX73SC microscope is available.

## IX73SC SPECIFICATIONS

	Motorized System	Manual System
		
Microscope Frame	IX73 Two-Deck Frame	
Transmitted Light Illuminator	12 V, 100 W halogen bulb	12 V, 100 W halogen bulb, high color reproductive LED light source
Observation Tube	Widefield tilting binocular (FN22) with 10X eye pieces	
Mechanical Stage with Right Handle	Stage stroke: X: 114 mm × Y: 75 mm, stage position locking function	
Condenser	NA 0.5, W.D. 45 mm, 4 positions for optical devices (motorized)	NA 0.5, W.D. 45 mm, 4 positions for optical devices (manual)
Objective Lenses	4X (NA 0.13, W.D. 17 mm) 20X (NA 0.45, W.D. 6.6–7.8 mm) 40X (NA 0.60, W.D. 3.0–4.2 mm)	4X (NA 0.13, W.D. 17 mm) 10X (NA 0.30, W.D. 9 mm) 20X (NA 0.45, W.D. 6.6–7.8 mm) 40X (NA 0.60, W.D. 3.0–4.2 mm)
Operating Environment	Indoor use	
	Ambient temperature: 5 °C to 40 °C (41 °F to 104 °F)	
	Maximum relative humidity: 80% for temperatures up to 31 °C (88 °F), decreasing linearly through 70% at 34 °C (93 °F), 60% at 37 °C (99 °F), to 50% relative humidity at 40 °C (104 °F)	
Available Observation Methods	Polarization, relief contrast, brightfield	Relief contrast, brightfield

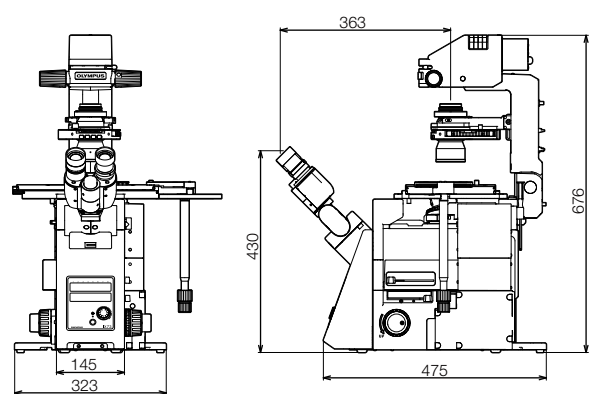
## DIMENSIONS

IX73SC Motorized System



(Unit: mm)

IX73SC Manual System (LED Model)



(Unit: mm)

- EVIDENT CORPORATION is ISO14001 certified.
- EVIDENT CORPORATION is ISO9001 certified.
- EVIDENT CORPORATION is ISO13485 certified.
- Illumination devices for microscope have suggested lifetimes. Periodic inspections are required. Please visit our website for details.

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