

**Nikon**

**Stereoscopic Zoom Microscope**

**SMZ800**



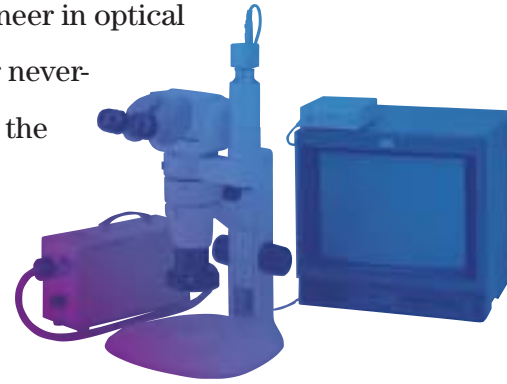
At Nikon, a world leader and pioneer in optical instruments, we are proud of our never-ending commitment to providing the very best in optical performance.

At the same time, we realize that this philosophy means nothing if we fail to create products

designed with the end-user in mind.

No matter how superior the technology used in a given product may be, that product has no real value unless it serves the needs of the customer.

That is why we design our products only after thorough market research and use the most up-



# The SMZ800 has it all.

Superb optical performance,  
easy handling and comfortable observation,  
plus a wide range of accessories allowing easy system upgrade.

to-date Nikon technologies to create microscopes that are unrivaled in the field.

The SMZ800 is a shining example of Nikon's commitment to excellence. By utilizing a new

ergonomic design to improve the

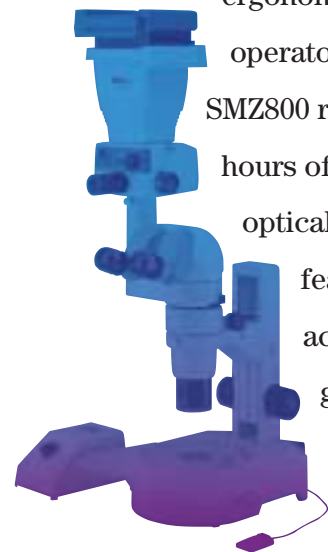
operator's posture while working, the

SMZ800 reduces fatigue caused by long hours of observation. In addition to superb

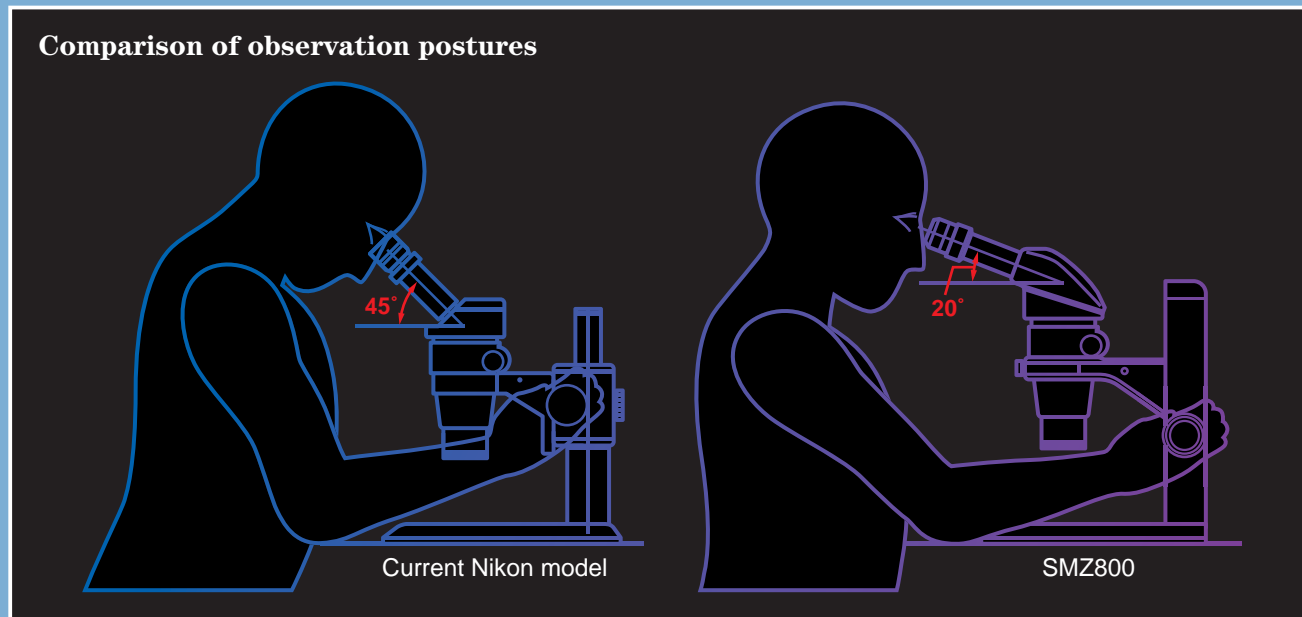
optical performance, this microscope

features an array of useful accessories, allowing the system to grow as your requirements change.

And perhaps the nicest thing of all is its affordable price.



# A new ergonomic design ensures a natural posture for observation, plus smooth, easy operation. The result: reduced fatigue during long hours of observation.

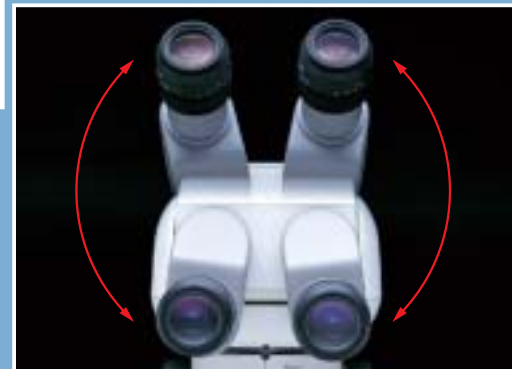


## 20° angle of inclination for eyepiece tube

The inclination of the standard eyepiece tube is 20°, allowing the operator to make observations with a straight back. This reduces fatigue during long hours of operation by lessening strain on the neck, shoulders, and back.



With the tilting eyepiece tube, the eye-level can be adjusted within a maximum range of 157mm (6.2"). This is accomplished by swinging the eyepieces up 180° as well as tilting them.



## Optimum eye-level positioning



Ergonomic objective (Plan 1X ERGO)

Nikon has also developed a new ergonomic objective (Plan 1X ERGO) that can be extended or retracted up to 40mm (1.6") to obtain the optimum operator eye-level without changing the magnification or working distance. Moreover, the low eye-level eyepiece tube enables a comfortable observation posture even when using a diascopic stand or when an intermediate tube is inserted. The tilting eyepiece tube makes it possible to adjust the eyepiece inclination between 0° and 30°. An eye-level riser is also available.



New ergonomic objective is extendible up to 40mm (1.6").



Eye-level riser (2 units)



Tilting eyepiece tube



Low eye-level eyepiece tube



## High-eyepoint eyepiece with a built-in diopter adjuster

The new high-eyepoint eyepiece features built-in diopter adjustment. This brings the image and the reticle into focus at the same time, making it easier to view images as well as reducing eye strain.

## Easy-to-use 6.3X zooming from 1X to 6.3X

By using a parallel-optics zoom system, the SMZ800 incorporates a 6.3X zoom ratio, enabling observations at just the right magnification required for the sample. The zooming knob also features click-stops at 1X intervals from 2X to 5X, eliminating the need to remove your eyes from the eyepiece while changing magnification. And since it is easy to maintain the same magnification, efficiency is ensured, whether you are using the microscope by yourself or sharing it in a laboratory situation.



## Comfortable viewing even after long hours of observation

The SMZ800 eliminates distortions on a par with Nikon's highest quality stereoscopic zoom microscope, the SMZ-U, ensuring images with minimal curvature of field.



## Large, streamlined base ensures easy operation

The Plain Focusing Stand features a low profile for easy handling of samples. Moreover, the base has a wide front and smooth curves, allowing operators to work while resting their arms in a natural position.



## Diascopic stand with large-diameter stage glass

The stage glass in the diascopic stand has been enlarged. This allows large Petri dishes to slide over its smooth surface with ease, making it possible to view samples up to their periphery. You can also rest your hands on the armrest to reduce stress while working.



## Low-position focus knob for quick, effortless focusing

The focus knob is located lower than before and is now within easy reach, eliminating the need to twist your shoulders while working on samples.



# Flexible upgrade path, thanks to the use of a parallel-optics zoom system

The SMZ800 adopts a parallel-optics zoom system, the same system used in the SMZ-U, Nikon's highest quality stereoscopic zoom microscope. This allows you to attach a vast array of exclusive Nikon accessories for building a system to meet your needs.



## New Plain/Diascopic Stands and SMZ-U Stands

The new Diascopic Stand makes for easy observation of the periphery of large Petri dishes, thanks to its large-diameter stage glass. Furthermore, a new Plain Focusing Stand is available, in addition to the current SMZ-U Stands and Teaching Head Stand. You also have a choice of three Focusing Mounts and three types of Universal Table Stands, depending on your applications.



## Powerful enough for photomicrography and CCTV monitoring

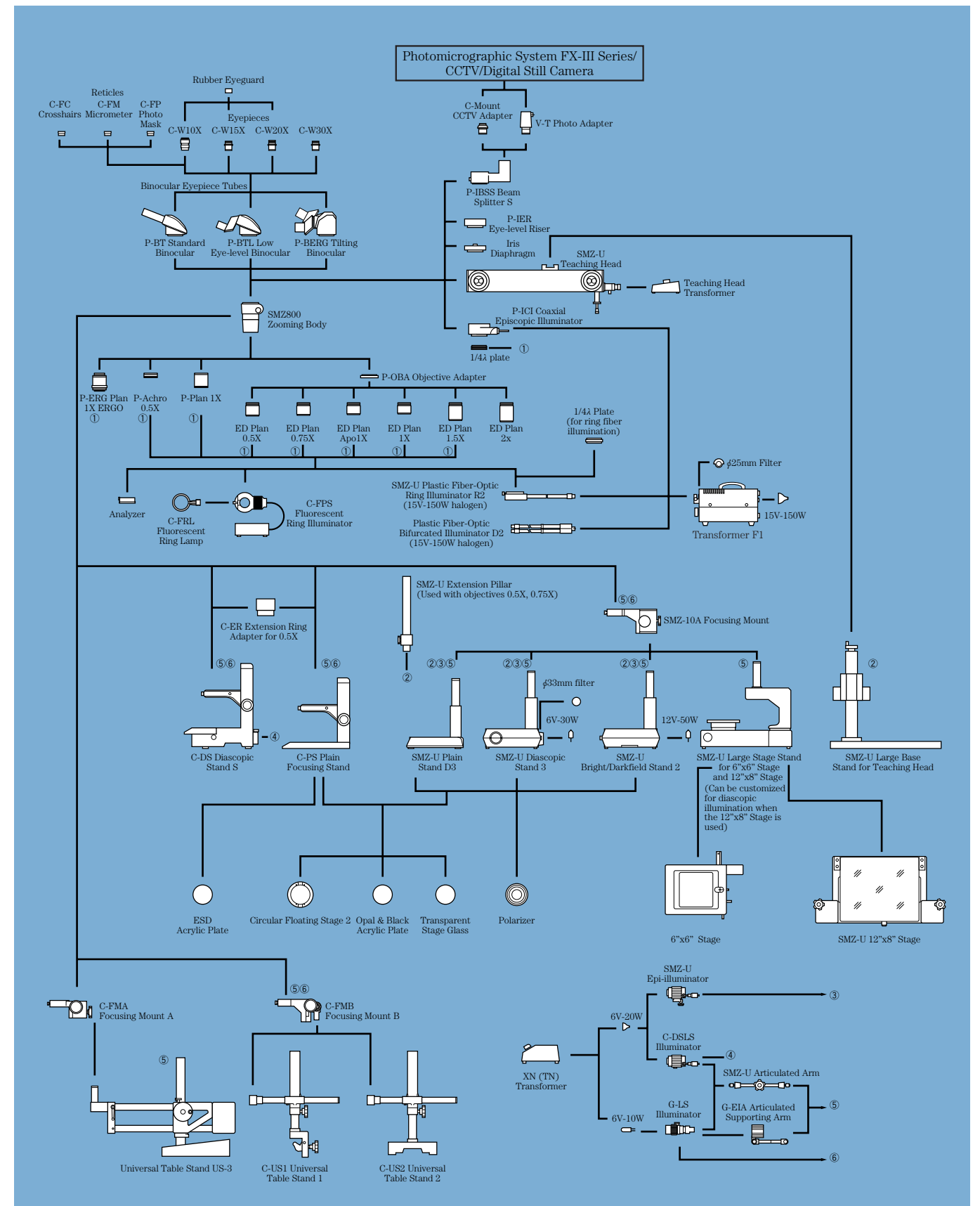
By using a beam splitter and adapter, FX-III Series Photomicrographic systems, a CCTV camera, or a digital still camera can be attached.



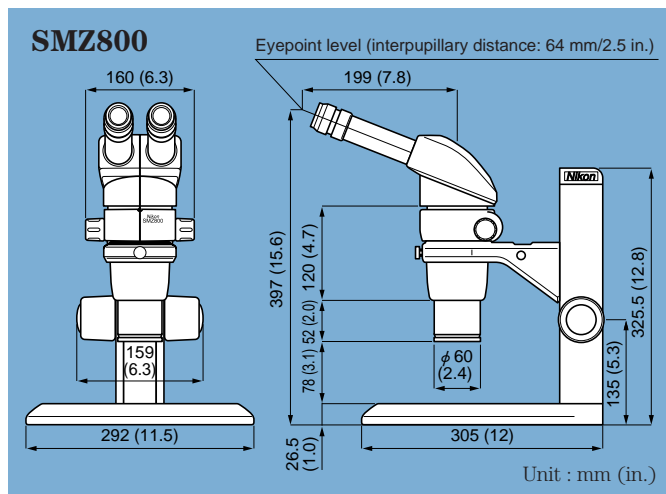
## Various types of illuminators provide proper illumination for a wide range of applications

Bright Fiber Optics are adopted for the new coaxial episcopic illuminator. It employs a 15V-150W halogen lamp, commonly used in the Plastic Fiber-Optic Ring Illuminator and Plastic Fiber-Optic Bifurcated Illuminator. You can also use the 6V-10W/20W Halogen Illuminator and the Fluorescent Ring Illuminator made exclusively for Nikon stereoscopic zoom microscopes.

## System Diagram



# Dimensions



# Magnification, Actual Field of View, Working Distance

Objectives	Working distance (mm)	10X eyepiece C-W10X (F.N. 22), Reticle (dia. ø25mm)		15X eyepiece C-W15X (F.N. 16), Reticle (dia. ø19mm)		20X eyepiece C-W20X (F.N. 12.5), Reticle (dia. ø19mm)		30X eyepiece C-W30X (F.N. 7), Reticle (dia. ø12mm)	
		Magnification	F.O.V. (ømm)	Magnification	F.O.V. (ømm)	Magnification	F.O.V. (ømm)	Magnification	F.O.V. (ømm)
<b>P-Plan 1×</b>	78	10.0	22.0	15.0	16.0	20.0	12.5	30	7.0
		63.0	3.5	94.5	2.5	126.0	2.0	189	1.1
<b>P-Achro 0.5×</b>	189	5.0	44.0	7.5	32.0	10.0	25.0	15	14.0
		31.5	7.0	47.3	5.1	63.0	4.0	94.5	2.2
<b>P-ERG Plan 1× ERGO</b>	50	10.0	22.0	15.0	16.0	20.0	12.5	30	7.0
		63.0	3.5	94.5	2.5	126.0	2.0	189	1.1
<b>ED Plan 0.5×</b>	155	5.0	44.0	7.5	32.0	10.0	25.0	15	14.0
		31.5	7.0	47.3	5.1	63.0	4.0	94.5	2.2
<b>ED Plan 0.75×</b>	117	7.5	29.3	11.3	21.3	15.0	16.7	22.5	9.3
		47.3	4.7	70.9	3.4	94.5	2.6	141.75	1.5
<b>ED Plan 1×</b>	84	10.0	22.0	15.0	16.0	20.0	12.5	30	7.0
		63.0	3.5	94.5	2.5	126.0	2.0	189	1.1
<b>ED Plan 1.5×</b>	50.5	15.0	14.7	22.5	10.7	30.0	8.3	45	4.7
		94.5	2.3	141.8	1.7	189.0	1.3	283.5	0.7
<b>ED Plan 2×</b>	40	20.0	11.0	30.0	8.0	40.0	6.3	60	3.5
		126.0	1.7	189.0	1.3	252.0	1.0	378	0.6
<b>ED Plan Apo 1×</b>	82	10.0	22.0	15.0	16.0	20.0	12.5	30	7.0
		63.0	3.5	94.5	2.5	126.0	2.0	189	1.1

\*1: Reticle can be inserted into C-W10X, 15X, 20X, and 30X eyepieces.  
 \*2: Dedicated reticles C-FC, C-FM and C-FP are available for C-W10X.  
 \*3: P-OBA Objective Adapter is necessary when using ED Plan and ED Plan Apo series objectives.

Specifications and equipment are subject to change without any notice or obligation on the part of the manufacturer. June 1999.

WARNING
TO ENSURE CORRECT USAGE, READ THE CORRESPONDING MANUALS CAREFULLY BEFORE USE.

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# Specifications—SMZ800

<b>Optical system</b>	Parallel-optics zoom system
<b>Total magnification</b>	5X to 378X depending on eyepiece and objective used. (15X to 283X when coaxial episcopic illuminator is attached)
<b>Eyepiece tubes</b>	Standard Binocular, Low Eye-level Binocular, Tilting Binocular
<b>Eyepiece inclination</b>	20° (Standard Binocular)/20° (Low Eye-level Binocular)/0-30° (Tilting Binocular)
<b>Interpupillary distance adjustment</b>	48-75mm (1.9-3.0 in.)
<b>Eyepieces (with diopter adjustment)</b>	C-W10X (F.N. 22), C-W15X (F.N. 16), C-W20X (F.N. 12.5), C-W30X (F.N. 7)
<b>Zooming range</b>	1X to 6.3X
<b>Zooming ratio</b>	6.3 : 1
<b>Objectives</b>	P-Plan 1X, P-Achro 0.5X, P-ERG Plan 1X ERGO, ED Plan 0.5X, 0.75X, 1X, 1.5X, 2X; ED Plan Apo 1X
<b>Working distance</b>	Please refer to the table on the left
<b>Illumination systems</b>	P-ICI Coaxial Episcopic Illuminator (15V-150W halogen) (Not usable with 0.5X or 2X objectives) Intermediate Magnification 1.5X G-LS 6V-10W Illuminator G-LS 6V-10W Illuminator (with G-EIA Articulated Supporting Arm or SMZ-U Articulated Arm) C-DSLS 6V-20W Illuminator (with SMZ-U Articulated Arm) 6V-20W SMZ-U Epi-Illuminator C-FPS Fluorescent Ring Illuminator SMZ-U Plastic Fiber-Optic Ring Illuminator R2 (15V-150W halogen) Plastic Fiber-Optic Bifurcated Illuminator D2 (15V-150W halogen)
<b>Stands</b>	C-PS Plain Focusing Stand C-DS Diascopic Stand S SMZ-U Plain Stand D3 SMZ-U Diascopic Stand 3 SMZ-U Bright/Darkfield Stand 2 SMZ-U Large Stage Stand (for 6"x6" Stage, 12"x8" Stage) SMZ-U Large Base Stand for Teaching Head
<b>Focusing mount</b>	C-FMA Focusing Mount A, C-FMB Focusing Mount B, SMZ-10A Focusing Mount
<b>Photomicrographic/CCTV system</b>	Nikon Photomicrographic System FX-III Series or CCTV camera can be attached through Beam Splitter and Adapter (beam split ratio between Binocular and Phototube=100:0/50:50).



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