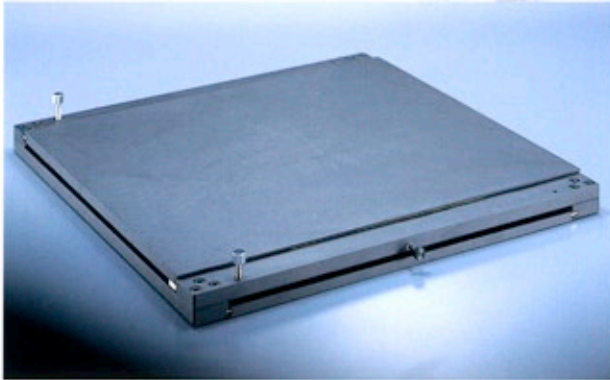


# STAGES AND ACCESSORIES



MA574

## LARGE SLIDING STAGE

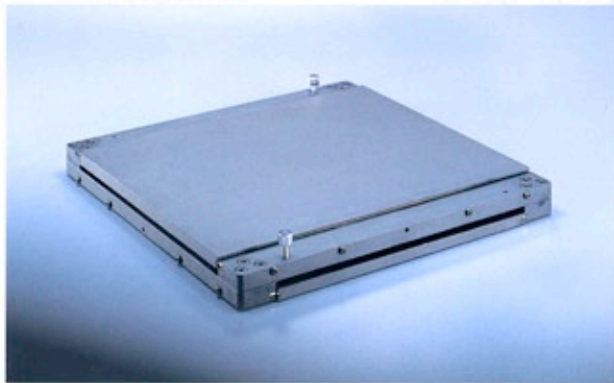
Large 395mm x 395mm (15.5"x 15.5") roller bearing stage with 350mm x 270mm (13.78"x 10.63") X-Y travel. Black anodized with X-Y lock down screws.

Catalog Number: MA574

## MEDIUM SLIDING STAGE

Medium 292mm x 235mm (11.5"x 9.24") roller bearing stage with 203mm x 101mm (8"x 4") X-Y travel. Black anodized with X-Y lock down screws.

Catalog Number: MA575



MA575



MA571

## OBLIQUE VIEWING ATTACHMENT

Designed specifically for the inspection of solder connections, rework and repair of electronic circuits and for mounting small electronic components. One-touch sliding movement allows the user to quickly change from vertical to oblique viewing. Rotatable 360°. Vertical working distance 110mm. Oblique working distance 130mm.

Note: For use with Zoom Stereo EMZ-5, EMZ-5TR, EMZ-2 and EMZ-2TR bodies only.

Catalog Number: MA571

## OBLIQUE VIEWING ATTACHMENT

Designed especially for the inspection of solder connections, rework and repair of electronic circuits and for mounting small electronic components. One-touch sliding movement allows the user to quickly change from vertical to oblique viewing. Rotatable 360°. Vertical working distance 110mm. Oblique working distance 130mm.

Note: For use with Zoom Stereo EMZ-8TR (Includes built-in 0.35X lens for oblique observation and 0.58X for vertical observation.)

Catalog Number: MA797



MA797

# ACCESSORIES



## Simple Polarizing Attachments

When used in conjunction with the MA667 polarizing plate the MA550 rotatable polarizing filter functions as an analyzer and is useful for viewing or detecting birefringent materials. (eg. mineral specimens, organic and inorganic crystal specimens, bone specimens, strained glass, etc.)

## EM Series Polarizing Filters In Rotatable Mounts

- MA550** Polarizing filter for EMZ Zoom stereo microscopes
- MA550/05** Polarizing filter for EMT-1, EMTR-1, EMT-2, EMTR-2, EMF-1, and EMF-2 stereo bodies
- MA550/10** Polarizing filter for EMT-3, EMTR-3, EMT-4, and EMTR-4 stereo bodies
- MA667** Polarizing plate for use with PB, PBH, PBM, AB, ABH, ABZH, ABE Transmitted Light Stand



## Protective Glass Attachments

Used to protect EM Series microscope objectives from harmful residue, vapors, solvents, debris etc.

- MA531** Protective glass for EMZ Zoom stereo microscopes
- MA532** Protective glass for EMZ Zoom stereo body with MA305 fluorescent illuminator
- MA533** Protective glass for EMT-1, EMTR-1, EMT-2, EMTR-2, EMF-1 and EMF-2
- MA537** Protective glass for EMT-3, EMTR-3, EMT-4 and EMTR-4



## Adapters For FL152 Annular Fiber Optic Illuminators

- MA553** Adapter to fit annular fiber optic ring illuminator on EMT-1, EMTR-1, EMT-2, EMTR-2, EMF-1, and EMF-2 (Fits 60mm I.D. ring illuminators)
- MA553/05** Adapter to fit annular fiber optic ring illuminator on EMT-3, EMTR-3, EMT-4 and EMTR-4



## Adapters For Fluorescent Illuminators

- MA302** Adapter to mount MA305 fluorescent illuminator on EMZ Zoom stereo microscope
- MA303** Adapter to mount MA305 fluorescent illuminator on MA507 and MA511 auxiliary lenses
- MA304** Adapter to mount MA305 fluorescent illuminator on EMT-1, EMTR-1, EMT-2, EMTR-2, EMF-1 and EMF-2
- MA307** Adapter to mount MA305 fluorescent illuminator on EMT-3, EMTR-3, EMT-4 and EMTR-4

# CONFIGURATION SAMPLES



**SMD INSPECTION SYSTEM** : EMZ-8TR Zoom stereo microscope, F Focus block, MA797 oblique viewing attachment, MA503 Super widefield 15X eyepieces, UL universal stand, MA574 sliding stage, FL151 dual arm 150W fiber optic illumination system, MA151/5N video "C" mount, CK3900 video camera and video monitor.

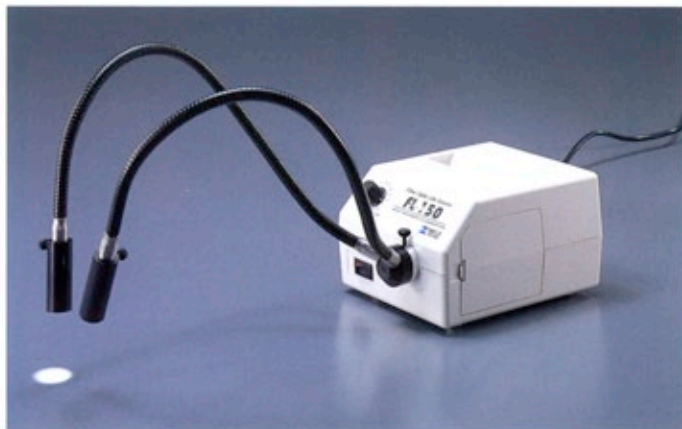


EMZ-5 / SWF10X / S-4100 / FL151



EMT-1 / SWF10X / KBL / MA305

# ILLUMINATION



FL151

## DUAL-ARM FIBER OPTIC ILLUMINATOR

150 Watt quartz halogen light source with self-supporting dual arm light guides, connecting adapter and focusing lenses. Rheostat controlled intensity. Color temperature 3200°K. UL listed and CSA approved.

Catalog Number: **FL151/100** (115V)  
**FL151/200** (220/240V)

## ANNULAR FIBER OPTIC ILLUMINATOR

150 Watt quartz halogen light source with 60mm I.D. annular light guide and connecting adapter. Rheostat controlled intensity. Color temperature 3200°K. UL listed and CSA approved.

Catalog Number: **FL152 / 100** (115V)  
**FL152 / 200** (220/240V)



FL152

## ACCESSORIES FOR FL150 SERIES

- FL150/100** Light source for 100/120V, 50/60Hz operation, halogen lamp, 21V 150W, with light-intensity regulation, maximum color temperature 3200°K, with AC fan
- FL150/200** Light source for 220/240V, 50/60Hz operation, halogen lamp, 21V 150W, with light-intensity regulation, maximum color temperature 3200°K, with AC fan
- FL150/05** Dual arm light guide, self supporting, each arm with 5mm (0.20") dia. active fiber optic bundle
- FL150/10** Annular light guide, 60mm (2.36") dia. ring aperture, 9.5mm (0.373") dia. fiber bundle
- FL150/12** Flexible 914.4mm (36") single arm fiber light guide with special end tip to fit EMZ-12, EMZ-12TR, EMZ-12TRD
- FL150/15** Dual arm light guide, each arm with 4.75mm (0.187") diam. fiber optic bundle
- FL150/50** Lens, 28mm F.L. (for use with FL150/05 and FL150/75)
- FL150/65** Annular light guide for use with MS-3
- FL150/70** Spare bulb, 21V 150W (EKE)
- FL150/75** Single arm light guide (20" self-supporting) 0.25" (6.35mm) diameter fiber optic bundle. Require one FL150/50 lens
- FL150/80** Single arm light guide (flexible), 4.75mm (0.18") dia. fiber optic bundle
- FL150/85** Polarizer cap (fits FL150/50)
- FL150/95** Single arm light guide (36" flexible) 0.187" (4.75mm) diameter fiber optic bundle. For use with VM Series video microscopes.
- FL150/FUSE-A** Fuse 3A 5 x 20mm, slow blow (115V)
- FL150/FUSE-B** Fuse 2A 5 x 20mm, slow blow (230V)



MA305

### RING FLUORESCENT ILLUMINATOR

Provides 360° of cool white shadow-free illumination.  
 Lightweight, compact, rugged.  
 Light Output: 8W  
 Color Temperature: 6500K  
 Lamp Life: 1500 Hours

**Catalog Number:** MA305 / 100 (115V)  
 MA305 / 200 (220 / 240V)  
**Replacement Bulb:** MA305 / 05

### VERSATILE HALOGEN ILLUMINATOR

Versatile halogen illuminator with prefocused three lens collecting system, detachable articulating arm, with swivel joint. Provides sharply defined spot without color fringes. Rheostat control. Acid and reagent resistant. 6V 20W

**Catalog Number:** MA264H / 100 (115V) MA264H / 200 (220 / 240V)  
**Replacement Bulb:** MA260 / 05



MA264H

MA264

### VERSATILE TUNGSTEN ILLUMINATOR

Versatile tungsten illuminator with prefocused three lens collecting system, detachable articulating arm, with swivel joint. Provides sharply defined spot without color fringes. Rheostat control. Acid and reagent resistant. 6V 18W

**Catalog Number:** MA264 / 100 (115V) MA264 / 200 (220 / 240V)  
**Replacement Bulb:** MA264 / 05



MA263

### FREE STANDING ILLUMINATOR

High intensity, long life daylight, miniature flood-light bulb. Enclosed in a vented, adjustable lamphouse. Heat absorbing filter is built in. 30W

**Catalog Number:** MA263 / 100 (115V) MA263 / 200 (220 / 240V)  
**Replacement Bulb:** MA263 / 05 (115V) MA263 / 10 (220 / 240V)

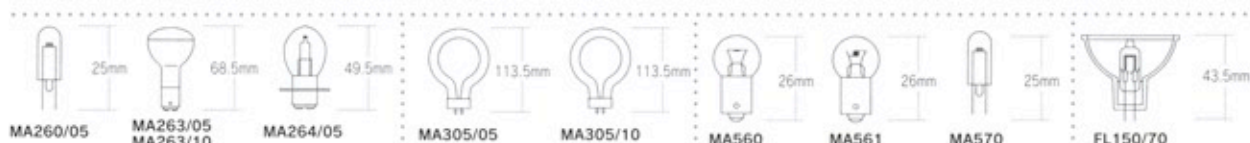
### SPARE BULBS

#### CAT, No DESCRIPTION

MA260/05	Halogen lamp, 6V 20W
MA263/05	Miniature flood bulb 115V 30W
MA263/10	Miniature flood bulb 220/ 240V 30W
MA264/05	Bulb 6.5V 2.75A
MA305/05	Ring fluorescent tube, Daylight/DL.8W, 6500°K
MA305/10	Ring fluorescent tube, Warm White/DL.8W, 3500°K
MA560	Bulb 6V 1.2A
MA561	Bulb 6V 1.2A
MA570	Halogen lamp, 6V 10W
MA590	Bulb 115V 15W frosted
FL150/70	Halogen lamp, 21V 150W

#### USE FOR

MA260, MA264, MA264EX illuminators
MA263 Free stand illuminators
MA263 Free stand illuminators
MA264 Versatile illuminators
MA305/100 and MA305/200 Ring fluorescent illuminators
MA305/100 and MA305/200 Ring fluorescent illuminators
Incident light of AB, ABZ, PB stands
Transmitted light of AB, ABZ, PB stands
Incident and Transmitted light of AB, ABZH, PBH stands
PBM stand
FL150 light source for fiber light guide



# CAMERAS FOR VIDEO MICROSCOPY

The Meiji Techno CCD color video cameras, high-resolution, single chip cameras offer a large array of features that make them ideal for industrial, medical, educational, or research applications. Durable, compact and lightweight these cameras are a perfect match for use with the EM Series Stereo Microscopes.

## COLOR VIDEO CAMERAS

### Model: CK3900N or CK3900P

Description: CCD color video camera

CCD: 1 / 2" Interline-Transfer type

Elements: 768(H) x 494(V) NTSC

752(H) x 582(V) PAL

TV System: NTSC or PAL

Lens Mount: "CS" mount

White Balance: 3200°K / 4600°K / 5600°K / ATW

AGC: 0dB~18dB

Shutter: Electronic, 1 / 60 (1/50)~1 / 10,000 second

Power: 12VDC + 10%

Horizontal Resolution: 450 TV lines

S/N: 50 dB

Video Output: VBS ( $\gamma=0.45$ )

Minimum Sensitivity : 0.3 lux on CCD surface  
(AGC on)

External Sync: HD/VD, Composite sync

Power Consumption 4.5W

Storage Temperature: -25°C~40°C

Operating Temperature: 0°C~40°C

Dimensions: 51mm(W) x 43mm(H) x 128mm(L)

Net Weight: 380g



**CK3900** Color Video camera mounted on **EMZ-5TR / PKL** stand and connected to color video monitor through **MA151/5N** video "C" mount.

## COLOR DIGITAL CAMERA

### Model: DK3000

3.0 megapixel, color digital video microscopy camera with high speed USB 2.0 interface, 1/2 format 6.5mm x 4.9mm image sensor with 2048 x 1536 resolution.



**DK3000** Color digital camera on **EMZ-5TR / PKL** stand and connected to PC through **MA151/5N** video "C" mount.

# VIDEO "C" MOUNTS

A video "C" mount is used to connect the CCD camera to the trinocular tube of the EM Series stereo microscope. Since their introduction CCD video imagers have continually decreased in size. CCD formats of 2/3", 1/2", 1/3", and 1/4" are common. The smaller the CCD imager the greater the video magnification. Choosing the correct "C" mount for your application allows you to control the magnification on the video monitor. Meiji Techno offers the following "C" mounts for the EM Series microscopes:



**MA151 / 5N**  
Adapter  
without lens

**MA151 / 35 / 04**  
Adapter with  
0.45 X lens

**MA151 / 35 / 20**  
Adapter with  
0.7 X lens

**MA151 / 35 / 15**  
Adapter with  
1.0 X lens

**MA151 / 35 / 25**  
Adapter with  
2.5 X lens

**MA151 / 8TR**  
0.6 X lens  
for **EMZ-8TR**  
**EMZ-12TR**  
**EMZ-13TR**

Note: MA151 adapters are designed to be used in conjunction with the existing trinocular tube with the exception of the MA151 / 5N, which replaces the trinocular tube.

The total magnification displayed on a video monitor is determined by the following formula:

**Total magnification = Objective magnification x "C" mount magnification x Video magnification**

To determine the objective magnification multiply the magnification number found on the zoom control or turret setting times the magnification power of any auxiliary lens being used. The video magnification is determined by dividing the diagonal (mm) measurement of the video monitor by the diagonal (mm) measurement of the CCD video camera chip. Tables of common CCD chip dimensions and video monitor magnifications are listed below.

**Common CCD Dimensions**

Chip Format	Height	Width	Diagonal
1/3"	3.6mm	4.8mm	6mm
1/2"	4.8mm	6.4mm	8mm
2/3"	6.6mm	8.8mm	11mm

**Common Video Magnifications**

	9"	12"	13"	19"	20"	27"
1/3"	38.1X	50.8X	55.0X	80.4X	84.7X	114.3X
1/2"	28.6X	38.1X	41.3X	60.3X	63.5X	85.7X
2/3"	20.8X	27.7X	30.0X	43.9X	46.2X	62.3X

Note: Top row denotes monitor screen size measured diagonally  
To convert from inches to mm multiply by 25.4

The actual size of a specimen can be determined by dividing the length of the specimen measured on the monitor by the total magnification of the monitor.

# PHOTOMICROSCOPY ACCESSORIES

Three parts are required for mounting a 35mm or Digital SLR camera body to the EM Series trinocular microscope bodies:

## 1. The appropriate T-2 adapter ring for your SLR camera body:

<b>T2-1</b> Cannon	<b>T2-2</b> Minolta
<b>T2-3</b> Pentax K (bayonet)	<b>T2-4</b> Pentax S (threaded)
<b>T2-5</b> Nikon	<b>T2-6</b> Olympus
<b>T2-7</b> Contax, Yashica	<b>T2-8</b> Konica
<b>T2-9</b> Cannon EOS	<b>T2-10</b> Minolta Alpha / Maxim 2000

The T2 adapter rings connect your camera body to one of the MA150 camera attachments.

## 2. A photo eyepiece, available in the following magnifications:

<b>MA512</b>	2.5X magnification
<b>MA500</b>	3.3X magnification (with reticle mount)
<b>MA508</b>	5X magnification

The photo eyepiece performs the same function as a standard 35mm or Digital SLR camera lens (i.e. focusing the image of the specimen onto the film plane).

## 3. One of two MA150 series camera attachments:

<b>MA150 / 50</b>	Straight-tube camera attachment
<b>MA150 / 60</b>	Camera attachment with built-in focusing eyepiece

Note: The MA150 / 60 is provided with a focusing eyepiece viewfinder for framing and parfocalizing the camera attachment to the microscope.



T2 Adapter Ring



Photo Eyepiece



MA150 / 50



MA150 / 60

# DIGITAL CAMERA ADAPTERS

For use with

NIKON Coolpix 950,990,995 and 5000

Olimpus Camedia C-3040Zoom, C-4040Zoom and C-4100

Fuji Finepix S602,4900Z, 6900Z



MA 151/30/50



Digital Camera Adapters and Couplers

MA151 / 30 / 50 and optional items of EMZ-8TR and NIKON Coolpix 950



# DIGITAL CAMERA ADAPTERS

DIGITAL CAMERAS MICROSCOPES	NIKON Coolpix 950,990,995	NIKON Coolpix 5000	Olympus Camedia C-3040 Zoom C-4040 Zoom C-4100	Fuji Finepix S602 4900Z, 6900Z
	Cat.No.	Cat.No.	Cat.No.	Cat.No.
<b>Fits a 23.2mm I.D./25.2mm O.D. Eye tube or Photo tube of:</b> EMTR-1, EMTR-2, EMTR-3, EMTR-4, EMZ-2TR, EMZ-5TR, EMZ-5TRD, EMZ-8TR, EMZ-8TRD, EMZ-12TR, EMZ-12TRD,	<b>MA151/30/50</b> 	<b>MA151/30/70</b> 	<b>MA151/30/60</b> 	<b>MA151/30/80</b> 
<b>Fits "C" mount thread, 25.4mm diameter</b> MA151/5N, MA151/35/03, MA151/35/04, MA151/35/15/, MA151/35/20, MA151/35/25, MA151/8TR, MA151/8TR/02, MA151/10	<b>MA151/40/50</b> 	<b>MA151/40/70</b> 	<b>MA151/40/60</b> 	<b>MA151/40/80</b> 
<b>Fits a 30.5mm I.D./34.0mm O.D. Eye tube of:</b> EMF-1, EMF-2, EMT-1, EMT-2, EMT-3, EMT-4, EMZ-1, EMZ-2, EMZ-5, EMZ-6, EMZ-9, EMZ-10, EMZ-12, Z-7000,	<b>MA151/45/50</b> 	<b>MA151/45/70</b> 	<b>MA151/45/60</b> 	<b>MA151/45/80</b> 

## COUPLERS

### The MA151/37

Digital camera coupler is used in conjunction with the MA151/30/50, MA151/40/50 and MA151/45/50 digital camera adapter. This coupler allows you to convert the M28 x 0.75 thread of the above adapters to a M37 x 0.75 internal thread.

### MA151/43

Digital camera coupler is used in conjunction with the MA151/30/50, MA151/40/50 and MA151/45/50 digital camera adapter. This coupler allows you to convert the M28 x 0.75 thread of the above adapters to a M43 x 0.75 internal thread.

## How to use

For photo tube of trinocular head, slip the adapter over the top of the tube and secure it with locking screw.

For eye tube of binocular head, insert the adapter into the eye tube until fully seated and secure the adapter with lock down screw.

For C mount, slip the adapter over the upper part of the C mount adapter and secure it with locking screw.

# EMZ Series OPTICAL DATA

Model	Zoom Range	SWF10X Eyepieces			SWF12.5X Eyepieces			SWF15X Eyepieces			SWF20X Eyepieces			SWF30X Eyepieces		
		Auxiliary Lens	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)
EMZ-2 EMZ-2TR EMZ-5 EMZ-5TR EMZ-9	0.7X-4.5X	None	7X~45X	32.8~5.1	8.75X~56.25X	28.5~4.4	10.5X~67.5X	22~3.4	14X~90X	16.4~2.5	21X~135X	11~1.7	93			
		0.3X	2.1X~13.5X	109~17	2.62X~16.87X	95~14.6	3.15X~20.25X	73~11.4	4.2X~27X	54.7~8.5	6.3X~40.5X	36.6~5.7	251			
		0.44X	3.08X~19.8X	74.5~11.5	3.85X~24.75X	64.7~10	4.62X~29.7X	50~7.7	6.16X~39.6X	37.2~5.9	9.24X~59.4X	25~3.8	171			
		0.5X	3.5X~22.5X	65.7~10.2	4.37X~28.12X	57~8.8	5.25X~33.75X	44~6.8	7X~45X	32.8~5.1	10.5X~67.5X	22~3.4	148			
		0.75X	5.25X~33.75X	43.8~6.8	6.56X~42.18X	38~5.8	7.87X~50.62X	29.3~4.5	10.5X~67.5X	21.9~3.4	15.75X~101.25X	14.6~2.2	97			
		1.5X	10.5X~67.5X	21.9~3.4	13.12X~84.37X	19~2.9	15.75X~101.25X	14.6~2.2	21X~135X	10.9~1.7	31.5X~202.5X	7.3~1.1	49			
		2.0X	14X~90X	16.4~2.5	17.5X~112.5X	14.2~2.2	21X~135X	11~1.7	28X~180X	8.2~1.2	42X~270X	5.5~0.8	33			
EMZ-10 Z-7100	0.7X-4.5X	None	7X~45X	32.8~5.1	8.75X~56.25X	28.5~4.4	10.5X~67.5X	22~3.4	14X~90X	16.4~2.6	21X~135X	11~1.7	110			
		0.3X	2.1X~13.5X	109~17	2.62X~16.87X	95~14.6	3.15X~20.25X	73~11.3	4.2X~27X	54.6~8.6	6.3X~40.5X	36.6~5.7	326			
		0.44X	3.08X~19.8X	74.5~11.5	3.85X~24.75X	64.7~10	4.62X~29.7X	50~7.7	6.16X~39.6X	37.2~5.9	9.24X~59.4X	25~3.8	247			
		0.5X	3.5X~22.5X	65.6~10.2	4.37X~28.12X	57~8.8	5.25X~33.75X	44~6.8	7X~45X	32.8~5.1	10.5X~67.5X	22~3.4	194			
		0.75X	5.25X~33.75X	43.8~6.8	6.56X~42.18X	38~5.8	7.87X~50.62X	29.3~4.5	10.5X~67.5X	21.8~3.4	15.75X~101.25X	14.6~2.2	127			
		1.5X	10.5X~67.5X	21.8~3.4	13.12X~84.37X	19~2.9	15.75X~101.25X	14.6~2.2	21X~135X	10.9~1.7	31.5X~202.5X	7.3~1.1	64			
		2.0X	14X~90X	16.4~2.5	17.5X~112.5X	14.2~2.2	21X~135X	11~1.7	28X~180X	8.2~1.2	42X~270X	5.5~0.8	44			
EMZ-8TR	0.7X-4.5X	None	7X~45X	32.8~5.1	8.75X~56.25X	28.5~4.4	10.5X~67.5X	22~3.4	14X~90X	16.4~2.6	21X~135X	11~1.7	104			
		0.35X	2.45X~15.75X	93.7~14.5	3.06X~19.68X	81.4~12.5	3.67X~23.62X	62.8~9.7	4.9X~31.5X	46.8~7.4	7.35X~47.25X	31.4~4.8	250			
		0.5X	3.5X~22.5X	65.6~10.2	4.37X~28.12X	57~8.8	5.25X~33.75X	44~6.8	7X~45X	32.8~5.1	10.5X~67.5X	22~3.4	174			
		1.5X	10.5X~67.5X	21.8~3.4	13.12X~84.37X	19~2.9	15.75X~101.25X	14.6~2.2	21X~135X	10.9~1.7	31.5X~202.5X	7.3~1.1	57			
EMZ-12 EMZ-12TR	0.4X-2.5X	None	4X~2.5X	57~9.2	5X~31.2X	50~8	6X~37.5X	38.5~6.1	8X~50X	28.7~4.6	12X~75X	19.2~3	185			
		0.7X	2.8X~17.5X	82.1~13.1	3.5X~21.8X	71.4~11.4	4.2X~26.2X	55~8.8	5.6X~35X	41~6.5	8.4X~46.2X	27.5~4.4	233			
EMZ-13 EMZ-13TR	1.0X-7.0X	None	10X~70X	23.0~3.20	12.5X~87.5X	17.6~2.51	15X~105X	14.66~2.09	20X~140X	11.0~1.57	30X~210X	7.33~1.04	90			
		0.3X	3X~21X	73.33~10.47	3.75X~26.25X	58.6~8.38	4.5X~31.5X	48.88~6.98	6.0X~42.0X	36.6~5.23	9.0X~63.0X	24.44~3.49	230			
		0.44X	4.4X~30.8X	50.0~7.13	5.5X~38.5X	40.0~4.5	6.6X~46.2X	33.1~4.5	8.8X~61.6X	25.0~3.5	13.2X~92.4X	16.5~2.3	167			
		0.5X	5X~35X	44.0~6.28	6.25X~43.75X	35.2~5.02	7.5X~52.5X	29.3~4.19	10.0X~70.0X	22.0~3.14	15.0X~105.0X	14.6~2.09	139			
		0.75X	7.5X~52.5X	29.3~4.19	9.37X~65.62X	23.47~3.35	11.25X~78.75X	19.55~2.79	15.0X~105.0X	14.66~2.09	22.5X~157.5X	9.77~1.39	92			
		1.5X	15.0X~105.0X	14.6~2.09	18.75X~131.25X	11.73~1.67	22.5X~157.5X	9.77~1.39	30.0X~210.0X	7.33~1.04	45.0X~315.0X	4.88~0.69	48			
		2.0X	20.0X~140.0X	11.0~1.57	25.0X~175.0X	8.8~1.25	30.0X~210.0X	7.33~1.04	40.0X~280.0X	5.50~0.78	60.0X~420.0X	3.66~0.52	32			

# EMF - EMT - EMTR - EMX OPTICAL DATA

Model	Objectives	Auxiliary Lens	SWF10X Eyepieces			SWF12.5X Eyepieces			SWF15X Eyepieces			SWF20X Eyepieces			SWF30X Eyepieces			Working Distance (mm)
			Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)	Total Magnification	Field Diameter (mm)		
EMF-1	1X	None	10X	23	12.5X	20	15X	15.4	20X	11.5	30X	7.7	108					
EMF-2	2X	None	20X	11.5	25X	10	30X	7.7	40X	5.7	60X	3.8	108					
EMT-1	1X, 2X	None	10X, 20X	23.0, 11.5	12.5X, 25X	20.0, 10.0	15X, 30X	15.3, 7.7	20X, 40X	11.5, 5.8	30X, 60X	7.6, 3.8	108					
EMTR-1		None	10X, 20X	23.0, 11.5	12.5X, 25X	20.0, 10.0	15X, 30X	15.3, 7.7	20X, 40X	11.5, 5.8	30X, 60X	7.6, 3.8	108					
EMT-2	1X, 3X	None	10X, 30X	23.0, 7.6	12.5X, 37.5X	20.0, 6.6	15X, 45X	15.4, 5.1	20X, 60X	11.5, 3.8	30X, 90X	7.7, 2.5	81					
		0.5X	5X, 15X	46.0, 15.3	6.25X, 18.75X	40.0, 13.0	7.5X, 22.5X	30.8, 10.2	10X, 30X	23.0, 7.6	15X, 45X	15.4, 5.1	108					
EMTR-2	1X, 3X	0.75X	7.5X, 22.5X	30.6, 10.22	9.37X, 28.12X	26.6, 8.8	11.25X, 33.75X	20.5, 6.8	15X, 45X	15.3, 5.1	22.5X, 67.5X	10.2, 3.4	72					
		1.5X	15X, 45X	15.3, 5.1	18.75X, 56.25X	13.3, 4.4	22.5X, 67.5X	10.2, 3.4	30X, 90X	7.6, 2.5	45X, 135X	5.1, 1.7	35					
		2.0X	20X, 60X	11.5, 3.8	25X, 75X	10.0, 3.3	30X, 90X	7.7, 2.5	40X, 120X	5.7, 1.9	60X, 180X	3.8, 1.2	21					
EMT-3	2X, 4X	None	20X, 40X	11.5, 5.7	25X, 50X	10.0, 5.0	30X, 60X	7.7, 3.8	40X, 80X	5.7, 2.8	60X, 120X	3.8, 1.9	63					
		0.5X	10X, 20X	23.0, 11.5	12.5X, 25X	20.0, 10.0	15X, 30X	15.3, 7.6	20X, 40X	11.5, 5.7	30X, 60X	7.6, 3.8	108					
		0.75X	15X, 30X	15.3, 7.6	18.75X, 37.5X	13.3, 6.6	22.5X, 45X	10.2, 5.1	30X, 60X	7.6, 3.8	45X, 90X	5.1, 2.5	72					
		1.5X	30X, 60X	7.7, 3.8	37.5X, 75X	6.6, 3.3	45X, 90X	5.1, 2.5	60X, 120X	3.8, 1.9	90X, 180X	2.5, 1.2	35					
EMTR-3		2.0X	40X, 80X	5.7, 2.8	50X, 100X	5.0, 2.5	60X, 120X	3.8, 1.9	80X, 160X	2.8, 1.4	120X, 240X	1.9, 0.9	22					
EMT-4	1X, 4X	None	10X, 40X	23.0, 5.7	12.5X, 50X	20.0, 5.1	15X, 65X	15.4, 3.8	20X, 80X	11.5, 2.8	30X, 120X	7.7, 1.9	63					
		0.5X	5X, 20X	46.0, 11.5	6.25X, 25X	38, 9.6	7.5X, 30X	30.8, 7.7	10X, 40X	23.0, 5.7	15X, 60X	15.4, 3.8	108					
		0.75X	7.5X, 30X	30.6, 7.6	9.37X, 37.5X	25.5, 6.5	11.25X, 45X	20.53, 5.1	15X, 60X	15.3, 3.8	22.5X, 90X	10.2, 2.5	72					
		1.5X	15X, 60X	15.3, 3.8	18.75X, 75X	13.1, 3.2	22.5X, 90X	10.2, 2.5	30X, 120X	7.6, 1.9	45X, 180X	5.1, 1.2	35					
EMTR-4		2.0X	20X, 80X	11.5, 2.8	25X, 100X	10.2, 2.3	30X, 120X	7.6, 1.9	40X, 160X	5.7, 1.4	60X, 240X	3.8, 0.9	22					
EMX-1	0.5X, 1.0X	None	5X, 10X	46, 23	6.25X, 12.5X	40.0, 20.0	7.5X, 15X	30.6, 15.3	10X, 20X	23.0, 11.5	15X, 30X	15.3, 7.6	225					
		0.7X	3.5X, 7X	69, 34	4.37X, 8.75X	61, 30	5.25X, 10.5X	48.5, 24	7X, 14X	35, 17.1	10.5X, 21X	22, 11	300					

# EM Series SYSTEM DIAGRAM PART 1

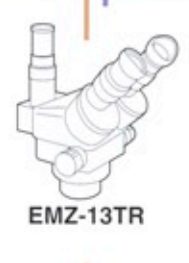
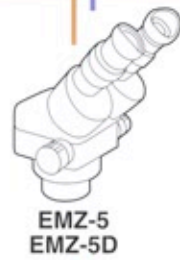
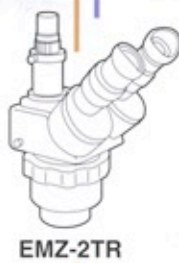
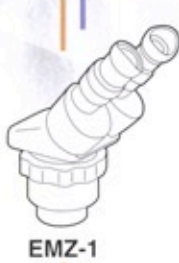
## ZOOM MODELS

Photo/Video attachments are show in Part 4, 5 (Page 41).



### Auxiliary lenses

<b>MA530</b> 0.3X	<b>MA525</b> 0.44X	<b>MA517</b> 0.5X	<b>MA526</b> 0.75X	<b>MA507</b> 1.5X	<b>MA511</b> 2.0X
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### STAND



**MA551**  
Extension pole

**MA551**  
Extension pole

**MA551**  
Extension pole

**MA551**  
Extension pole

**MA551**  
Extension pole

**MA551**  
Extension pole

**MA568**  
B/W Plastic  
stage plate

**MA567**  
Acrylic frosted  
stage plate

**MA567**  
Acrylic frosted  
stage plate

**MA568**  
B/W Plastic  
stage plate

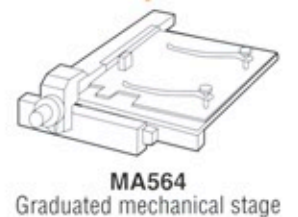
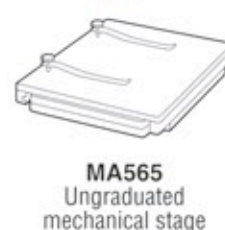
**MA568**  
B/W Plastic  
stage plate

**MA568**  
B/W Plastic  
stage plate

**MA568**  
B/W Plastic  
stage plate

**MA569**  
Clear glass  
stage plate

**MA569**  
Clear glass  
stage plate



## EYEPIECES, Paired

**MA501**  
SWF5X

**MA502**  
SWF10X

**MA520**  
SWF12.5X

**MA503**  
SWF15X

**MA535**  
HSWF15X

**MA504**  
SWF20X

**MA521**  
SWF30X

**MA519\***  
SWF10X-F  
\*(Piece)

**MA600**  
EYESHIELD

### Auxiliary lenses

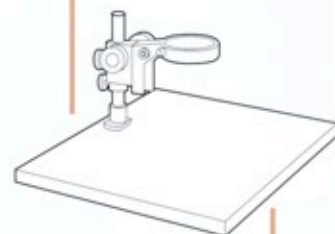
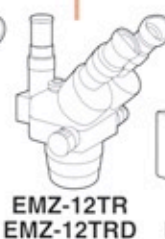
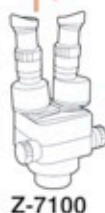
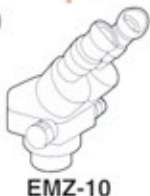
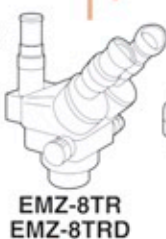
**MA791** **MA792** **MA794** **MA795**  
0.28X 0.35X 0.5X 1.5X

### Auxiliary lenses

**MA545** **MA558** **MA546** **MA547** **MA548** **MA549**  
0.3X 0.44X 0.5X 0.75X 1.5X 2.0X

### Auxiliary lenses

**MA652** **MA796**  
0.7X 0.57X



**MA551**  
Extension pole

**MA567**  
Acrylic frosted  
stage plate

**MA567**  
Acrylic frosted  
stage plate

**MA567**  
Acrylic frosted  
stage plate

**MA551**  
Extension pole

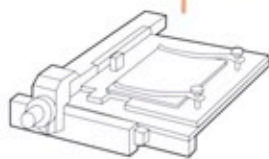
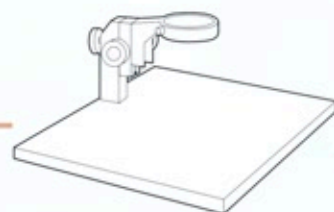
**MA569**  
Clear glass  
stage plate

**MA569**  
Clear glass  
stage plate

**MA569**  
Clear glass  
stage plate

**MA567**  
Acrylic frosted  
stage plate

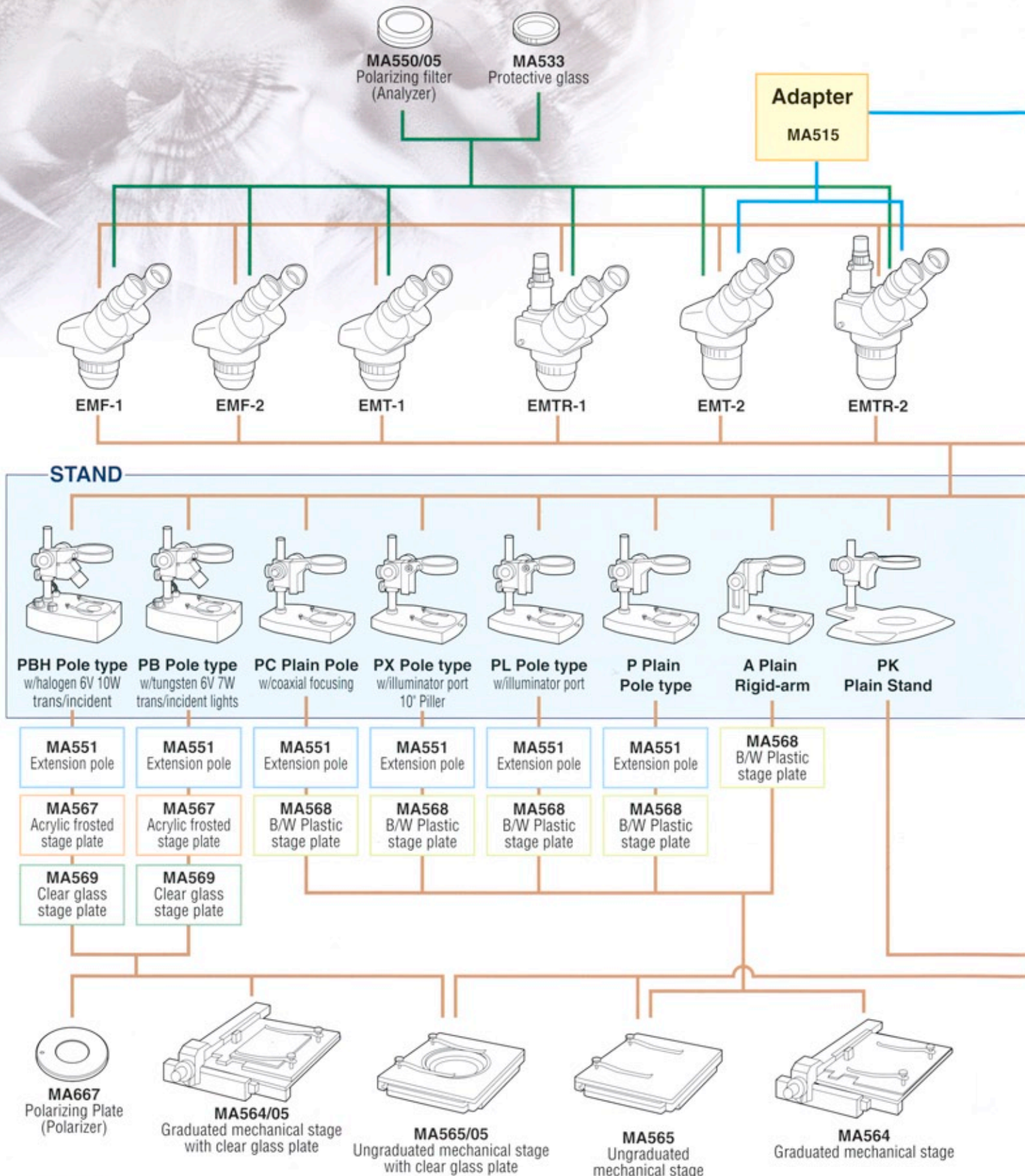
**MA569**  
Clear glass  
stage plate



# EM Series SYSTEM DIAGRAM PART 2

## EMF, EMT, EMTR, EMX

Photo/Video attachments are show in Part 4, 5 (Page 41).



## EYEPIECES, Paired

MA501 SWF5X    MA502 SWF10X    MA520 SWF12.5X    MA503 SWF15X    MA535 HSWF15X    MA504 SWF20X    MA521 SWF30X    MA519\* SWF10X-F \*(Piece)    MA600 EYESHIELD

### Auxiliary lenses

MA518 0.5X    MA527 0.75X    MA513 1.5X    MA514 2.0X

MA550/10  
Polarizing filter  
(Analyzer)

MA537  
Protective glass

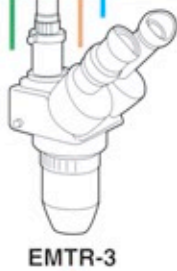
### Auxiliary lens

MA658  
Protective glass

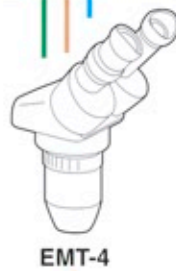
MA652  
0.7X



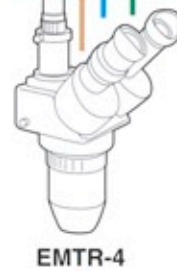
EMT-3



EMTR-3



EMT-4



EMTR-4



EMX\*

\*Need to use PX stand or Pole type stand with MA551 Extension pole.



PKL  
LED Stand



ABZ Rigid-arm  
w/tungsten 6V 7W  
trans/incident lights



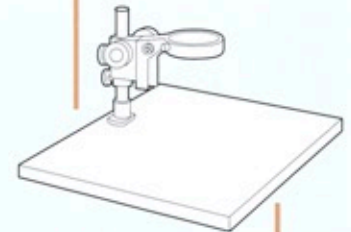
ABZH Rigid-arm  
w/halogen 6V 10W  
trans/incident lights



ABE Extendable  
w/halogen 6V 10W  
trans/incident lights



BX Stand  
w/mirror for B/D  
(light not included)



KBL Pole type  
w/illuminator port  
on flat base

MA551  
Extension pole

MA567  
Acrylic frosted  
stage plate

MA567  
Acrylic frosted  
stage plate

MA567  
Acrylic frosted  
stage plate

MA551  
Extension pole

MA569  
Clear glass  
stage plate

MA569  
Clear glass  
stage plate

MA569  
Clear glass  
stage plate

MA567  
Acrylic frosted  
stage plate

MA569  
Clear glass  
stage plate



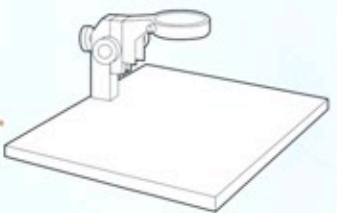
MA564/05  
Graduated mechanical stage  
with clear glass plate



MA565/05  
Ungraduated mechanical stage  
with clear glass plate



MA667  
Polarizing Plate  
(Polarizer)



KBE Rigid-extendable  
arm on flat base

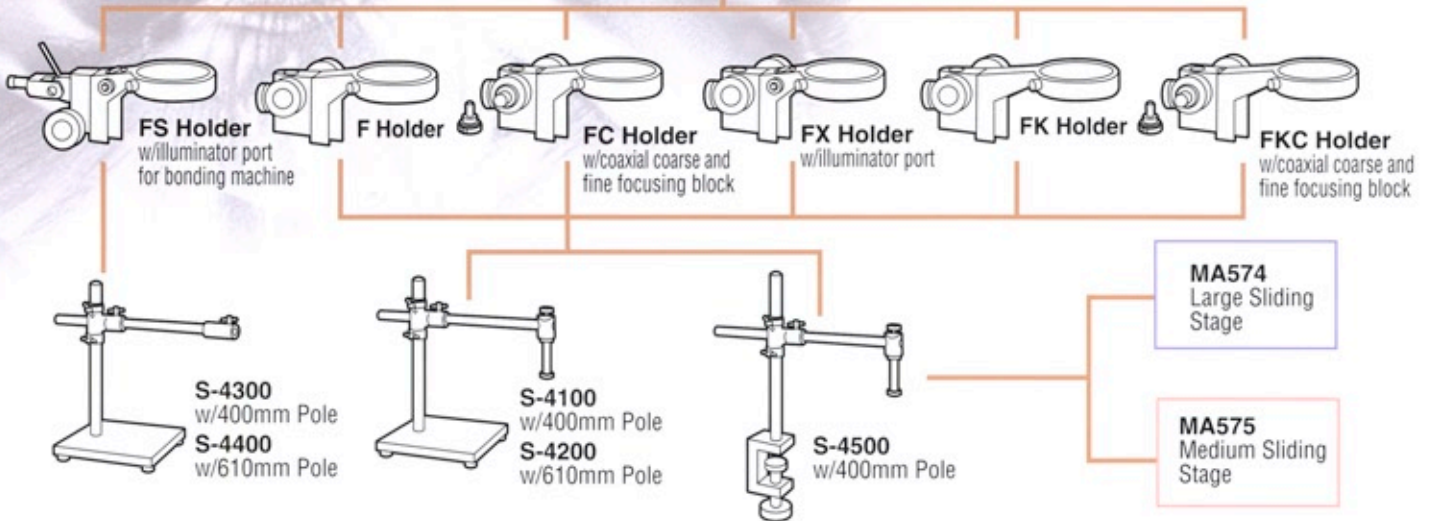
# EM Series SYSTEM DIAGRAM PART 3

## SPECIAL STANDS

### ZOOM HEADS

EMZ-1, EMZ-2, EMZ-5, EMZ-5D, EMZ-6, EMZ-9, EMZ-10, Z-7100, EMZ-2TR, EMZ-5TR, EMZ-5TRD, EMZ-8TR, EMZ-8TRD, EMZ-8U, EMZ-8UD, EMZ-8TRU, EMZ-12, EMZ-12D, EMZ12TR, EMZ-12TRD, EMZ-13, EMZ-13TR

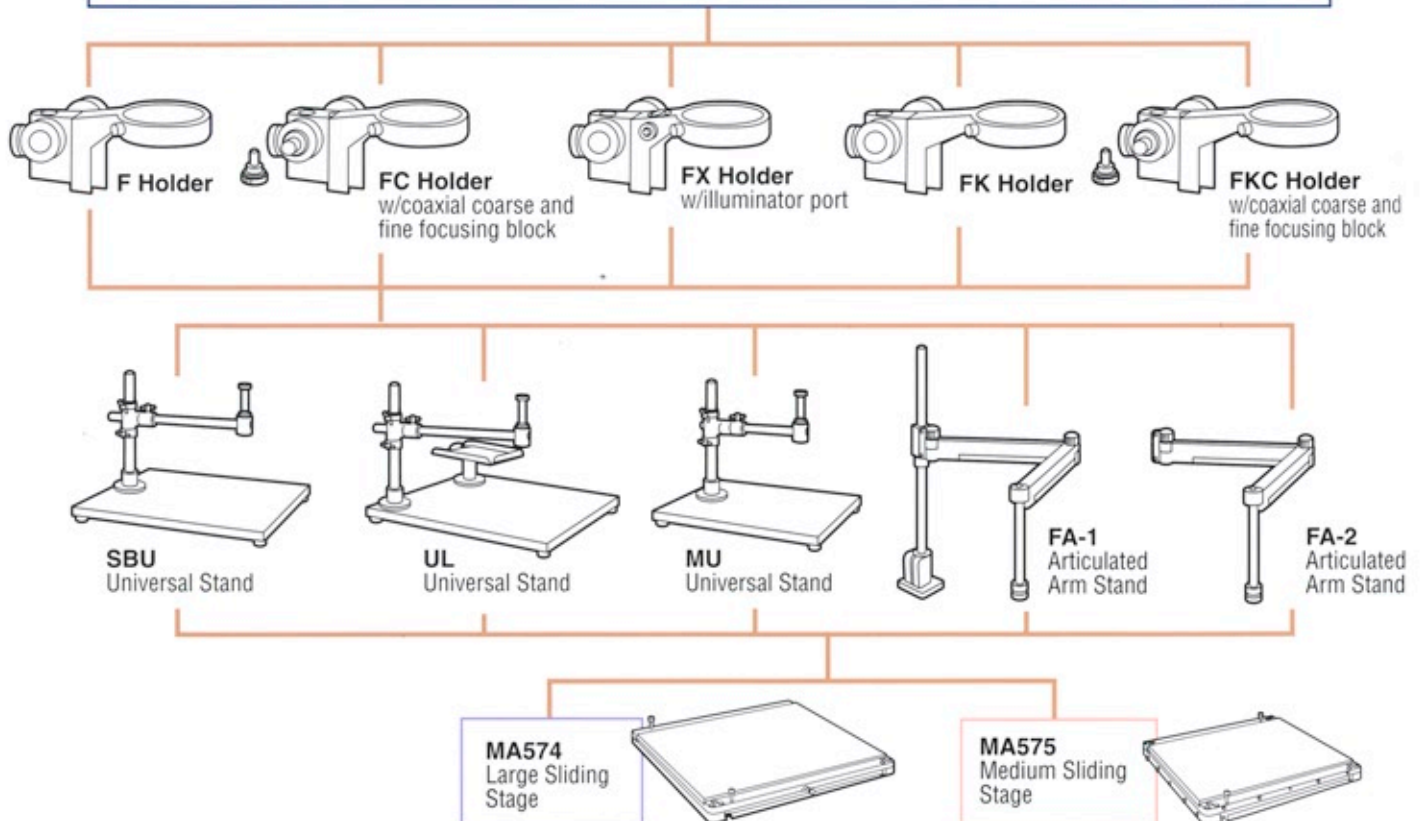
EMF, EMT VIEWING HEADS: EMF-1, EMF-2, EMT-1, EMT-2, EMT-3, EMT-4, EMTR-1, EMTR-2, EMTR-3, EMTR-4,



### ZOOM HEADS

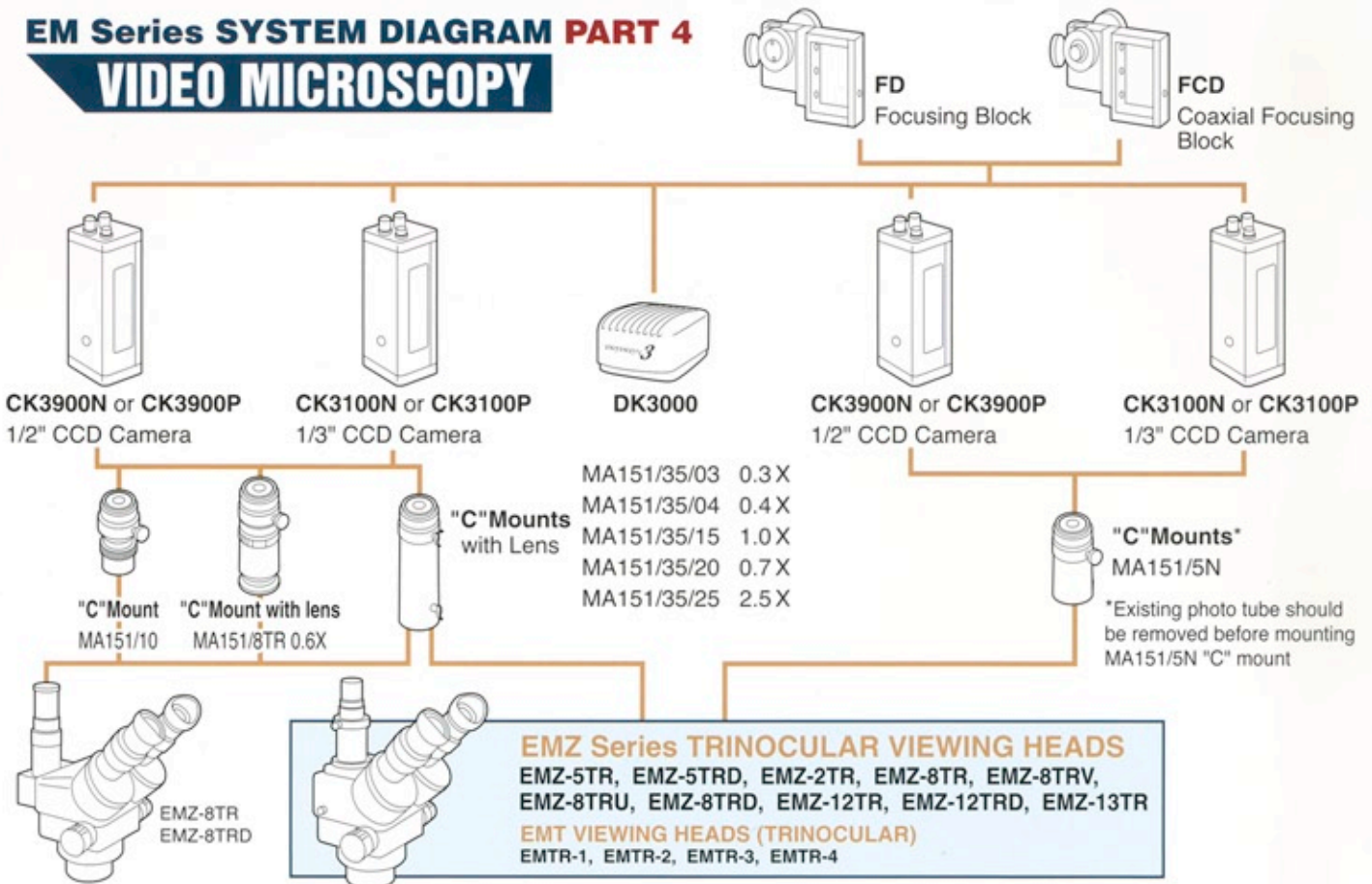
EMZ-1, EMZ-2, EMZ-5, EMZ-5D, EMZ-6, EMZ-9, EMZ-10, Z-7100, EMZ-2TR, EMZ-5TR, EMZ-5TRD, EMZ-8TR, EMZ-8TRD, EMZ-8U, EMZ-8UD, EMZ-8TRU, EMZ-12, EMZ-12D, EMZ12TR, EMZ-12TRD, EMZ-13, EMZ-13TR

EMF, EMT VIEWING HEADS: EMF-1, EMF-2, EMT-1, EMT-2, EMT-3, EMT-4, EMTR-1, EMTR-2, EMTR-3, EMTR-4,

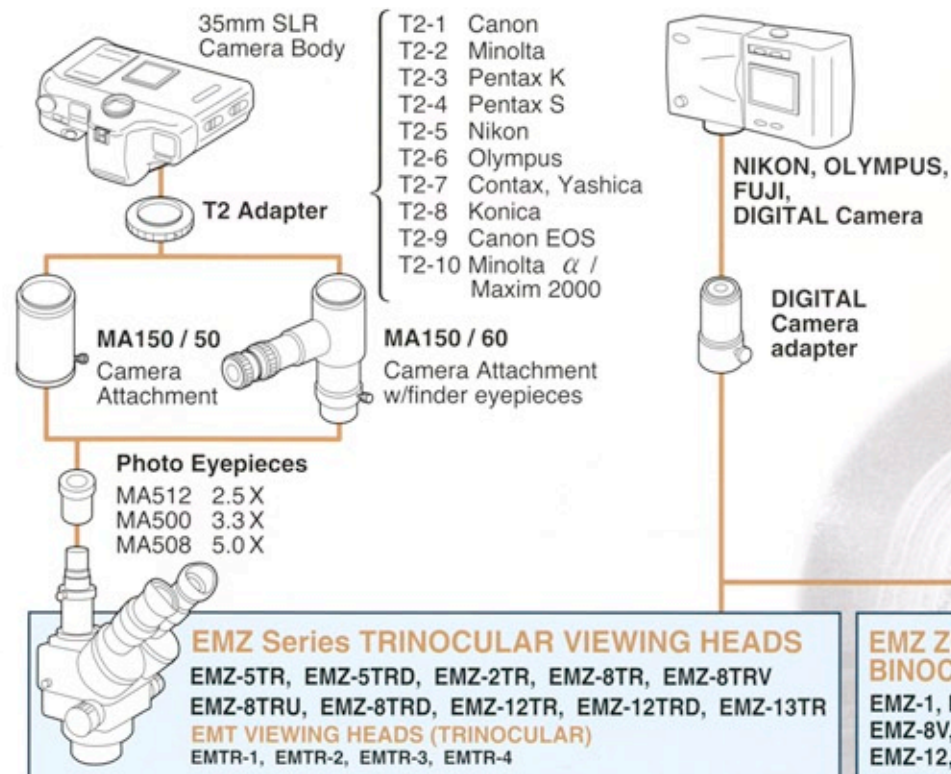




# EM Series SYSTEM DIAGRAM PART 4 VIDEO MICROSCOPY



# EM Series SYSTEM DIAGRAM PART 5 PHOTO MICROSCOPY



DIGITAL CAMERAS	MICROSCOPES	
	Fits a 23.2mm I.D./25.2mm O.D. Eye tube or EMZ-TR ZOOM TRINOCULAR HEADS:	Fits a 30.5mm I.D./34.0mm O.D. Eye tube of:
NIKON Coolpix 950, 990, 995	EMZ-2TR, EMZ-5TR, EMZ-5TRD, EMZ-8TR, EMZ-8TRD, EMZ-12TR, EMZ-12TRD	EMZ ZOOM HEADS: EMZ-1, EMZ-2, EMZ-5, EMZ-6, EMZ-9, EMZ-10, EMZ-12, Z-7000
NIKON Coolpix 5000	EMTR HEADS: EMTR-1, EMTR-2, EMTR-3, EMTR-4	EMT, EMF HEADS: EMF-1, EMF-2, EMT-1, EMT-2, EMT-3, EMT-4
Olympus Camedia C-3040 Zoom, C-4040 Zoom, C-3100		
Fuji Finepix S602, 4900Z, 6900Z		
	MA151/30/50	MA151/45/50
	MA151/30/70	MA151/45/70
	MA151/30/60	MA151/45/60
	MA151/30/80	MA151/45/80

**EMZ ZOOM Series BINOCULAR HEADS**  
 EMZ-1, EMZ-2, EMZ-5  
 EMZ-8V, EMZ-8U  
 EMZ-12, EMZ-13