

**Motic®**

# SMZ-168 Series

1:6.7 Zoom Ratio Stereomicroscope



# SMZ-168 STANDARD FEATURES

## OPTICAL SYSTEM

- High Resolution Stereo Image
- Zoom Magnification Click Stops
- Standard Observation angle of 35°  
**SMZ-168-BL (60) Observation angle of 60°**
- Diopter Adjustment on both eye tubes:  $\pm 5$
- Adjustable interpupillary distance: 52mm - 75mm  
**SMZ-168-BL (60) Adjustable interpupillary distance: 52.5mm ~ 75mm**
- Zoom Magnification Range: 0.75X - 5X
- Zoom Ratio: 1 : 6.7
- Working Distance: 113mm
- Anti-Fungus Properties

## EYEPIECES

- Widefield High Eye Point 10X/23

## FOCUSING BLOCK

- Ball bearing focusing mechanisms
- 50mm focusing range
- 76mm inner head mount
- 12V/10W Halogen incident light

## BASE STAND

- Streamlined base stand
- Large working area
- 12V/10W Halogen transmitted light [intensity control]
- Universal power input 110V - 220V



**SMZ-168-BL**  
Binocular Stereomicroscope



**SMZ-168-TL**  
Trinocular Stereomicroscope

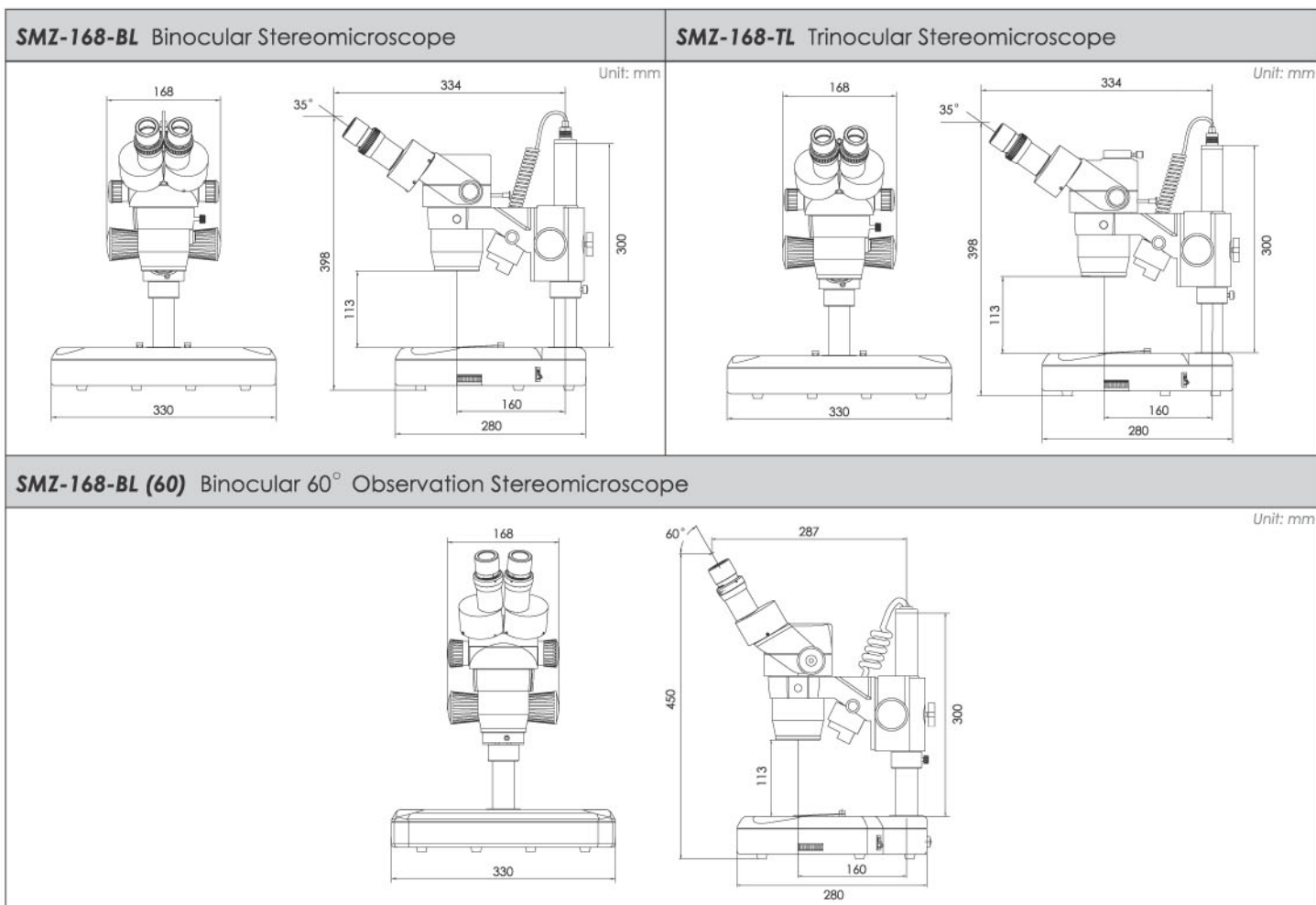


**SMZ-168-BL (60)**  
Binocular 60° Observation  
Stereomicroscope

## SMZ-168 Series Advanced Zoom Stereo Microscopes Standard Configuration

	Order Number	SMZ-168BL	SMZ-168TP	SMZ-168TL
Binocular zoom body	AX66.02601	●		
Trinocular zoom body	AX68.02601		●	●
Head holder with incident light halogen 12V/10W (**works only with AX40.00002**)	AX66.02605A	●		●
Head holder without incident light	AX66.02605B		●	
Streamlined base stand	SW01.09K3		●	
Streamlined base stand with transmitted light halogen 12V/10W	AK40.00007	●		●

## SMZ-168 SCHEMATIC DIAGRAM



## SMZ-168 SPECIFICATIONS

	SMZ-168 BL		SMZ-168 TL			SMZ-168 BL (60)	
<b>Optical System</b>	GREENOUGH						
<b>Magnification Range</b>	2.25X - 320X						
<b>Zoom body magnification</b>	0.75X - 5X						
<b>Zoom Ratio</b>	1 : 6.7						
<b>Eyepieces</b>	WF 10X/23 High eye point						
<b>Interpupillary distance</b>	52mm - 75mm						
<b>Diopter adjustment</b>	±5°						
<b>Observation angle</b>	35°					60°	
<b>Working Distance</b>	113mm						
<b>Choice of eyepieces</b>	5X/23	6.25X/23	10X/21	15X/17	20X/13	30X/8	32X/8
<b>Additional objectives available</b>	0.3X WD = 324mm 0.5X WD = 192mm 0.63X WD = 156mm 0.75X WD = 127mm 1.5X WD = 50 mm 2X WD = 34.5 mm						
<b>Max. Magnification</b>	320X						
<b>Max. field of view</b>	102 mm						
<b>Max. working distance</b>	324 mm						
<b>Top light</b>	12V / 10W Halogen [Reflected]						
<b>Bottom Light</b>	12V / 10W Halogen						
<b>Photo and Video adapters</b>	2X Photo Adapter 0.35x CCD Adapter [for 1/3" CCD] 0.65x CCD Adapter [for 1/2" CCD]						

## CAMERA ADAPTERS

		
2X Photo Adapter 35mm SLR Camera AX6602603	0.35X CCD Adapter 1/3" CCD Camera AX6602602	0.65X CCD Adapter 1/2" CCD Camera SW0113R5

## AUXILIARY OBJECTIVES

		
		
0.3X W.D. 324mm AX6602607	0.5X W.D. 192mm AX6602608	0.63X W.D. 156mm AX6602643
0.75X W.D. 127mm AX6602609	1.5X W.D. 50mm AX6602610	2X W.D. 34.5mm AX6602611

## GLIDING STAGE

<ul style="list-style-type: none"> <li>■ Base stand mountable</li> <li>■ Hand movable</li> <li>■ 360° rotatable for various observations</li> </ul>	 SW010308
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## MECHANICAL STAGE

<ul style="list-style-type: none"> <li>■ Base stand mountable</li> <li>■ Max. X distance: 75mm</li> <li>■ Max. Y distance: 50mm</li> <li>■ Dimension in mm: 222.8(w) x 170(l) x 29.5(h)</li> </ul>	 SW010338K
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## EYEPIECES

WF6.25X / 23mm	SG02T0103	
WF10X / 23mm	SG02T0218	
WF15X / 17mm	SG02T0318	
WF20X / 13mm	SG02T0406	
WF32X / 8mm	SG02T0502	

## MEASURING EYEPIECES

			
360° : 10° [SG060314]	10mm:0.1mm [SG060312]	14mm : 0.2mm [SG060320]	14mm : 0.1mm [SG060315]


## POLARISING EQUIPMENT

<ul style="list-style-type: none"> <li>■ Base stand mountable 1-piece set</li> <li>■ 360° independently rotatable polariser [top]</li> <li>■ 360° independently rotatable analyser [bottom]</li> </ul>	 SP080013K
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## DARKFIELD ATTACHMENT

<ul style="list-style-type: none"> <li>■ Conical glossy central stop for diffracted light observation</li> <li>■ Iris diaphragm for controlling the shape of light</li> <li>■ Base stand mountable</li> </ul>	 SP090001
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## POLARISING SET

<ul style="list-style-type: none"> <li>■ Zoom body screw mount polariser</li> <li>■ Base stand mountable 360° rotatable analyser</li> </ul>	 AX6602633
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## JEWELLERY CLIP

<ul style="list-style-type: none"> <li>■ Easily attachable for jewellery or mineral observation</li> <li>■ Movable upon attachment</li> </ul>	 SW0199B3
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# SMZ-168 SERIES OPTICAL DATA

Eyepiece	Mag. (X)	Standard Objectives		Auxiliary Objectives											
				0.3X		0.5X		0.63X		0.75X		1.5X		2X	
		WD 113mm		WD 324mm		WD 192mm		WD 156mm		WD 127mm		WD 50mm		WD 34.5mm	
		Mag.	FD (mm)	Mag.	FD (mm)	Mag.	FD (mm)	Mag.	FD (mm)	Mag.	FD (mm)	Mag.	FD (mm)	Mag.	FD (mm)
5X/23	0.75	3.8	30.7	1.1	102.2	1.9	61.3	2.4	48.7	2.8	40.9	5.6	20.4	7.5	15.3
	1	5.0	23.0	1.5	76.7	2.5	46.0	3.2	36.5	3.8	30.7	7.5	15.3	10.0	11.5
	2	10.0	11.5	3.0	38.3	5.0	23.0	6.3	18.3	7.5	15.3	15.0	7.7	20.0	5.8
	3	15.0	7.7	4.5	25.6	7.5	15.3	9.5	12.2	11.3	10.2	22.5	5.1	30.0	3.8
	4	20.0	5.8	6.0	19.2	10.0	11.5	12.6	9.1	15.0	7.7	30.0	3.8	40.0	2.9
6.25X/23	0.75	4.7	30.7	1.4	102.2	2.3	61.3	3.0	48.7	3.5	40.9	7.0	20.4	9.4	15.3
	1	6.3	23.0	1.9	76.7	3.1	46.0	3.9	36.5	4.7	30.7	9.4	15.3	12.5	11.5
	2	12.5	11.5	3.8	38.3	6.3	23.0	7.9	18.3	9.4	15.3	18.8	7.7	25.0	5.8
	3	18.8	7.7	5.6	25.6	9.4	15.3	11.8	12.2	14.1	10.2	28.1	5.1	37.5	3.8
	4	25.0	5.8	7.5	19.2	12.5	11.5	15.8	9.1	18.8	7.7	37.5	3.8	50.0	2.9
10X/23	0.75	7.5	30.7	2.3	102.2	3.8	61.3	4.7	48.7	5.6	40.9	11.3	20.4	15.0	15.3
	1	10.0	23.0	3.0	76.7	5.0	46.0	6.3	36.5	7.5	30.7	15.0	15.3	20.0	11.5
	2	20.0	11.5	6.0	38.3	10.0	23.0	12.6	18.3	15.0	15.3	30.0	7.7	40.0	5.8
	3	30.0	7.7	9.0	25.6	15.0	15.3	18.9	12.2	22.5	10.2	45.0	5.1	60.0	3.8
	4	40.0	5.8	12.0	19.2	20.0	11.5	25.2	9.1	30.0	7.7	60.0	3.8	80.0	2.9
10X/21	0.75	7.5	28.0	2.3	93.3	3.8	56.0	4.7	44.4	5.6	37.3	11.3	18.7	15.0	14.0
	1	10.0	21.0	3.0	70.0	5.0	42.0	6.3	33.3	7.5	28.0	15.0	14.0	20.0	10.5
	2	20.0	10.5	6.0	35.0	10.0	21.0	12.6	16.7	15.0	14.0	30.0	7.0	40.0	5.3
	3	30.0	7.0	9.0	23.3	15.0	14.0	18.9	11.1	22.5	9.3	45.0	4.7	60.0	3.5
	4	40.0	5.3	12.0	17.5	20.0	10.5	25.2	8.3	30.0	7.0	60.0	3.5	80.0	2.6
15X/17	0.75	11.3	22.7	3.4	75.6	5.6	45.3	7.1	36.0	8.4	30.2	16.9	15.1	22.5	11.3
	1	15.0	17.0	4.5	56.7	7.5	34.0	9.5	27.0	11.3	22.7	22.5	11.3	30.0	8.5
	2	30.0	8.5	9.0	28.3	15.0	17.0	18.9	13.5	22.5	11.3	45.0	5.7	60.0	4.3
	3	45.0	5.7	13.5	18.9	22.5	11.3	28.4	9.0	33.8	7.6	67.5	3.8	90.0	2.8
	4	60.0	4.3	18.0	14.2	30.0	8.5	37.8	6.7	45.0	5.7	90.0	2.8	120.0	2.1
20X/13	0.75	15.0	17.3	4.5	57.8	7.5	34.7	9.5	27.5	11.3	23.1	22.5	11.6	30.0	8.7
	1	20.0	13.0	6.0	43.3	10.0	26.0	12.6	20.6	15.0	17.3	30.0	8.7	40.0	6.5
	2	40.0	6.5	12.0	21.7	20.0	13.0	25.2	10.3	30.0	8.7	60.0	4.3	80.0	3.3
	3	60.0	4.3	18.0	14.4	30.0	8.7	37.8	6.9	45.0	5.8	90.0	2.9	120.0	2.2
	4	80.0	3.3	24.0	10.8	40.0	6.5	50.4	5.2	60.0	4.3	120.0	2.2	160.0	1.6
30X/8	0.75	22.5	10.7	6.8	35.6	11.3	21.3	14.2	16.9	16.9	14.2	33.8	7.1	45.0	5.3
	1	30.0	8.0	9.0	26.7	15.0	16.0	18.9	12.7	22.5	10.7	45.0	5.3	60.0	4.0
	2	60.0	4.0	18.0	13.3	30.0	8.0	37.8	6.3	45.0	5.3	90.0	2.7	120.0	2.0
	3	90.0	2.7	27.0	8.9	45.0	5.3	56.7	4.2	67.5	3.6	135.0	1.8	180.0	1.3
	4	120.0	2.0	36.0	6.7	60.0	4.0	75.6	3.2	90.0	2.7	180.0	1.3	240.0	1.0
32X/8	0.75	24.0	10.7	7.2	35.6	12.0	21.3	15.1	16.9	18.0	14.2	36.0	7.1	48.0	5.3
	1	32.0	8.0	9.6	26.7	16.0	16.0	20.2	12.7	24.0	10.7	48.0	5.3	64.0	4.0
	2	64.0	4.0	19.2	13.3	32.0	8.0	40.3	6.3	48.0	5.3	96.0	2.7	128.0	2.0
	3	96.0	2.7	28.8	8.9	48.0	5.3	60.5	4.2	72.0	3.6	144.0	1.8	192.0	1.3
	4	128.0	2.0	38.4	6.7	64.0	4.0	80.6	3.2	96.0	2.7	192.0	1.3	256.0	1.0
5	160.0	1.6	48.0	5.3	80.0	3.2	100.8	2.5	120.0	2.1	240.0	1.1	320.0	0.8	

Note : "WD" represents Working Distance, "Mag." represents Magnification, "FD" represents Field Diameter.

# SMZ-168 SERIES ILLUMINATION / STANDS

## K2401 FLUORESCENT RING ILLUMINATOR

- Colour Temperature: 6400K
- Even white light
- 12W power consumption
- Specifically designed attachment for SMZ-168



## MLC-150 COLD LIGHT SOURCE

- Colour Temperature Indication
- Colour Temperature Range: 2500K - 3200K
- Remote or local intensity control
- 21V / 150W switching power
- Filter holder



## LIGHT GUIDE OPTIONS



Flexible ring light guide  
SP990074



1 Arm gooseneck type light guide  
SP990075



2 Arm gooseneck type light guide  
SP990076

## SMZ-168 SERIES CHOICE OF BASE STANDS

### Universal Stand



- Diameter of base 380mm
- Diameter of vertical pole 25mm
- Height of pole 200mm
- Diameter of pole for focusing mount 32mm

### Special Universal Stand



- Length of base 250mm
- Height of pole 373mm
- Width of base 250mm
- Diameter of pole for focusing mount 32mm

### Ball Bearing Boom Stand



- Diameter of vertical pole 36mm
- Diameter of pole for focusing mount 32mm

### Ball Bearing Boom Stand



- Diameter of vertical pole 36mm
- Diameter of pole for focusing mount 32mm

### Articulating Arm Boom Stand



- Diameter of vertical pole 36mm
- Diameter of pole for focusing mount 32mm

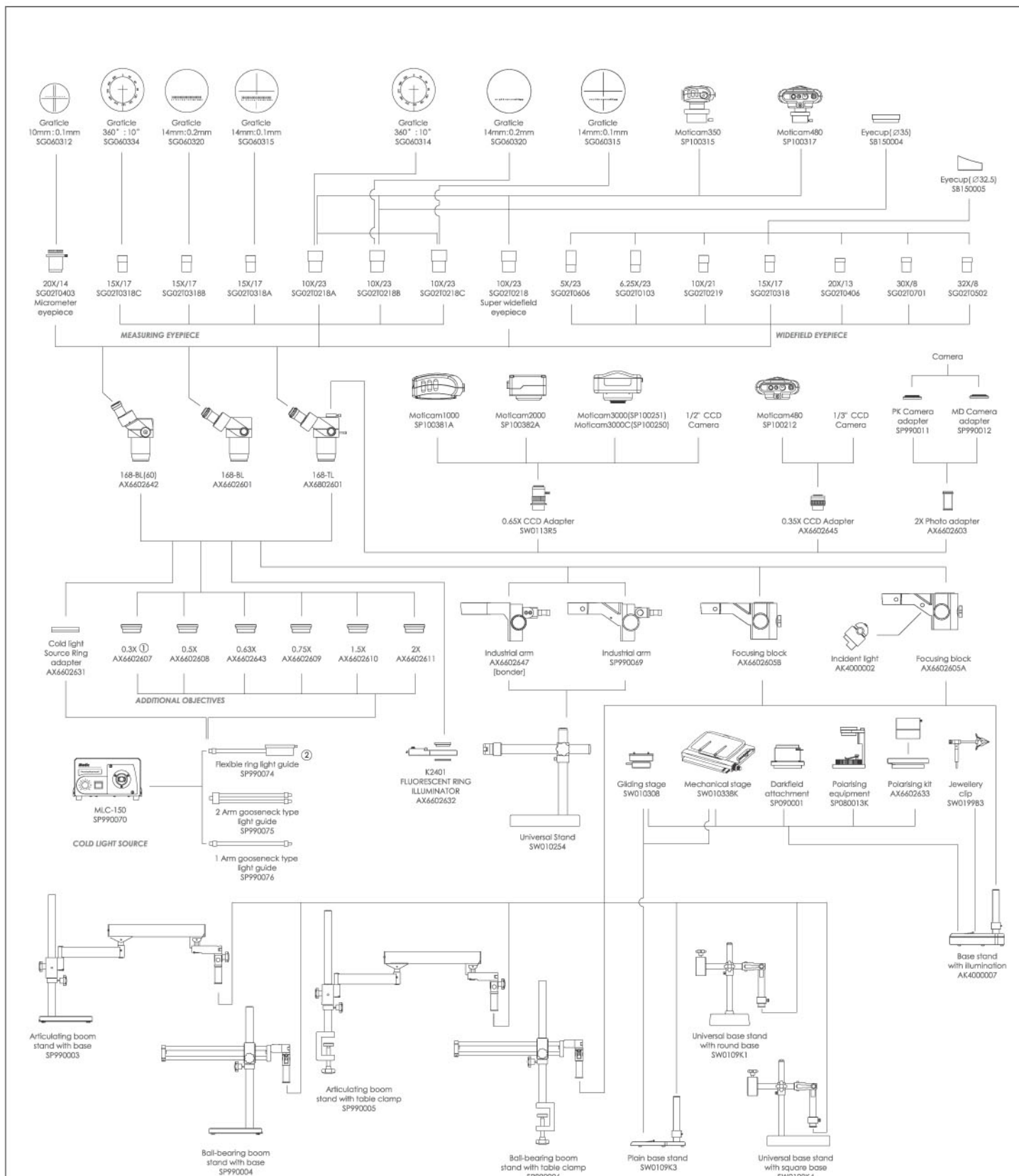
### Articulating Arm Boom Stand



- Diameter of vertical pole 36mm
- Diameter of pole for focusing mount 32mm

□ Some illuminators and stands may not be available in your area. Please check with your local sales office.

# SMZ-168 SERIES SYSTEM DIAGRAM



① Special long pole of 450mm required to use with 0.3X objective.

② When using the cold light source ring light guide, you need to select item number AX6602631 for proper fit

\* When selecting the fluorescent ring illuminator, please note the country plug and voltage required.