

- Dynamic magnification range of 0.08-212X offers incredible versatility.
- High contrast images and vivid colors help your equipment perform better.
- 0.02-125.68 mm field coverage allows you to view a wide range of parts.
- Working distance can be varied from 36 to 356 mm.
- Add infinity corrected objective lenses to achieve unmatched edge flatness and clarity.



Zoom 6000

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E-Mail: bv@polytec.de

Zoom 6000

Zoom 6000



Flexibility by Design

A Workhorse to Fit Nearly Any Application

With a diverse selection of body tubes, accessory optics, motorized configurations and lighting techniques, the Zoom 6000 is Navitar's workhorse with unbeatable versatility. This modular zoom lens system has Navitar's world-renowned optics built in and the "building block design" can be configured to fit nearly any application.

6.5:1 Zoom Ratio, Long Working Distance and Large Field of View

The parfocal optical system of the Zoom 6000 has a 6.5:1 zoom ratio, a 0.7X to 4.5X zoom range, and total magnification (depending on lens adapters and attachments used) of 0.08X to 212X. The working distance can be varied from 36 mm (1.5") to 356 mm (14"). The achievable field of view can vary from 0.02 mm to 125.68 mm.



Unsurpassed Optical Performance

The optical system of the Zoom 6000 produces images of the finest optical quality. Chromatic aberration and distortion have been virtually eliminated. With the Zoom 6000 lenses, images are crisp and clear and display optimum contrast with a minimum flare over the entire field of view.

Manual or Detented for Calibrated Repeatability

The Zoom 6000 lenses are available in a manual design, as well as a detented version for calibrated repeatability.

Motorized for Automation

If you are building highly automated systems, you will like the Zoom 6000's DC or stepper motor options for motorized zoom and focus functions.

Navitar configures DC motors that allow continuous movement throughout the zoom or focus range. Stepper motor versions allow fine incremental movements or steps. A variety of optical and mechanical limit switches can be included to enhance the overall performance of the system.



Zoom 6000

Key Terms for Understanding the Matrix Charts

W.D.

Working Distance – clearance between the object and the lowest mechanical part of the system.

Field

Field of view for respective camera format (normally measured diagonally).

O-I

Object to Image Distance – total distance from the object to the sensor inside the camera (17.53 mm (0.69") inside the camera).

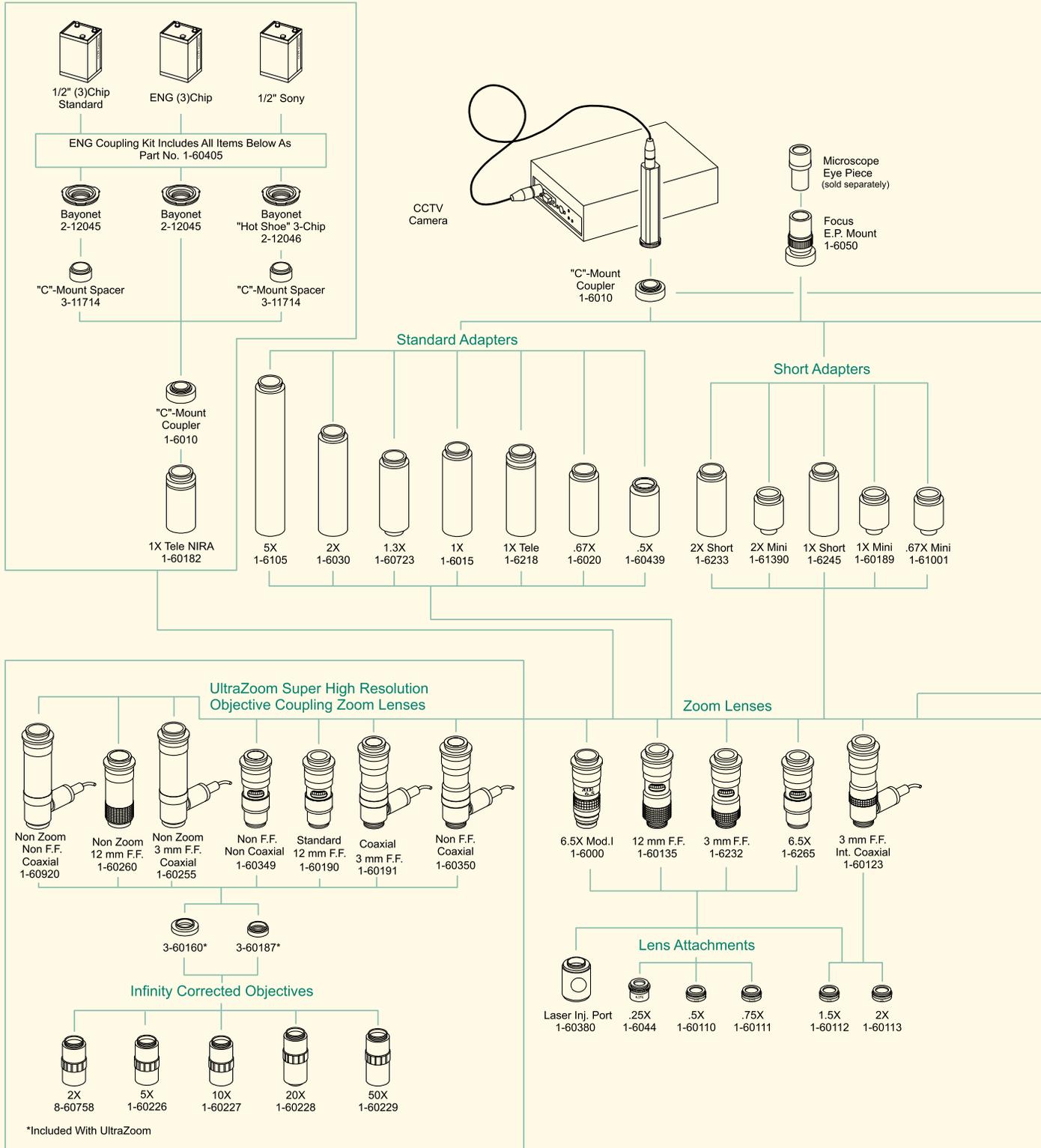
Mag

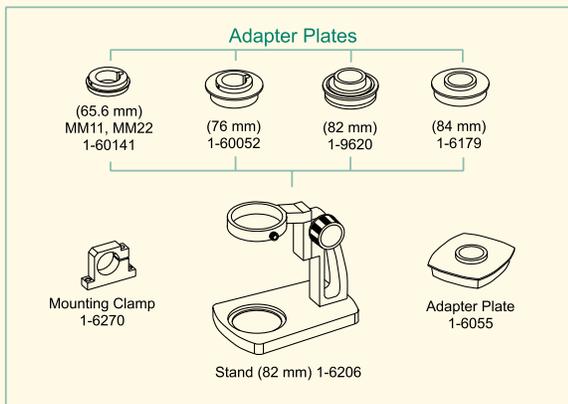
Magnification at Camera – final magnification on-screen depends on the CCTV system. (e.g. 2/3" camera with 9" monitor yields at 20.8X system factor.)



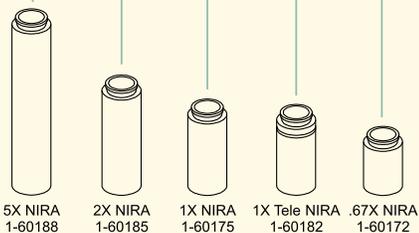
Zoom 6000 System Diagram

Zoom 6000

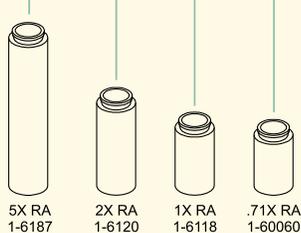




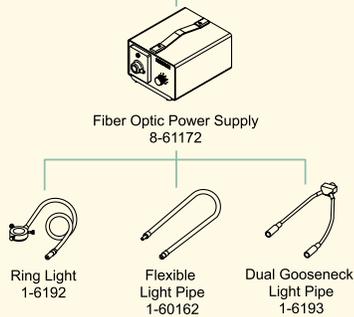
Non-inv. Right Angle Adapters



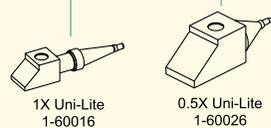
Right Angle Adapters



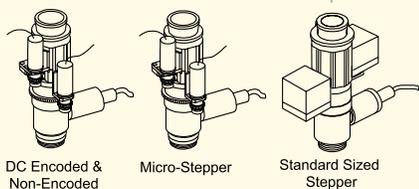
Fiber Optic Illumination**



External Co-axial Illumination



Motorized Zoom Options*

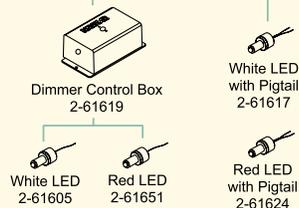


* All motorized systems are available with limit switch positioning and co-axial illumination. Motorized options available on zoom, focus or iris.

Motorized Zoom Control Boxes



LED Illumination



** Additional lighting options available. See the illumination section of the catalog or contact a Navitar sales representative for more information.

NOTE

Detents available on all manual zoom systems.
Iris diaphragm available on all manual zoom lenses.



Zoom 6000

Zoom 6000 Field of View Matrix (in mm)

Zoom 6000

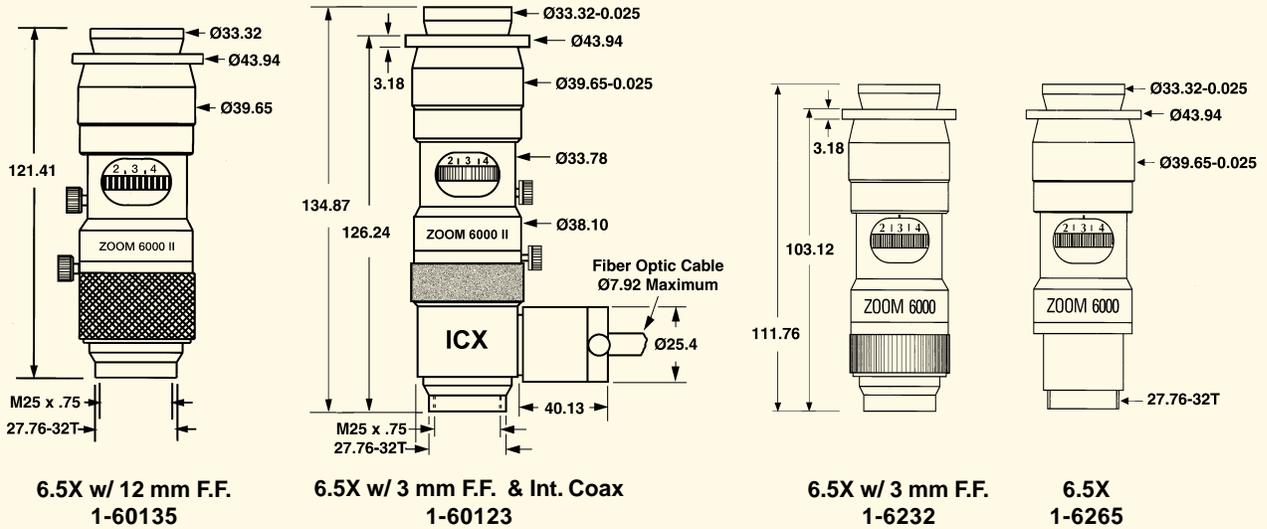
Lens Attachment	W.D.	Camera Format/ Parameters	.5X Adapter Low - High	.67X Adapter Low - High	1X Adapter Low - High	2X Adapter Low - High	5X Adapter Low - High
0.25X	–	Mag.	0.09X - 0.56X	0.12X - 0.75X	0.18X - 1.13X	0.35X - 2.25X	0.88X - 5.62X
	Max. 356*	Field 1/4"	45.70 - 7.12	34.03 - 5.33	22.85 - 3.56	11.42 - 1.78	4.54 - 0.72
	Max. 356*	Field 1/3"	68.64 - 10.64	51.12 - 8.04	34.32 - 5.32	17.16 - 2.66	6.88 - 1.08
	Max. 356*	Field 1/2"	91.36 - 14.16	68.06 - 10.66	45.68 - 7.08	22.84 - 3.54	9.12 - 1.44
	Max. 356*	Field 2/3"	125.68 - 19.52	93.62 - 14.66	62.84 - 9.76	31.42 - 4.88	12.56 - 1.96
		O-I	573	597	629	657	706
0.5X	–	Mag.	0.18X - 1.13X	0.24X - 1.50X	0.35X - 2.25X	0.70X - 4.50X	1.75X - 11.25X
	Max. 175	Field 1/4"	22.85 - 3.56	17.02 - 2.66	11.42 - 1.78	5.71 - 0.89	2.28 - 0.36
	Max. 175	Field 1/3"	34.32 - 5.32	25.56 - 4.0	17.16 - 2.67	8.58 - 1.33	3.43 - 0.53
	Max. 175	Field 1/2"	45.68 - 7.08	34.03 - 5.33	22.85 - 3.56	11.42 - 1.77	4.57 - 0.71
	Max. 175	Field 2/3"	62.84 - 9.76	46.81 - 7.33	31.43 - 4.89	15.71 - 2.44	6.29 - 0.98
		O-I	376	400	432	460	509
0.75X	–	Mag.	0.27X - 1.69X	0.35X - 2.25X	0.53X - 3.38X	1.05X - 6.75X	2.63X - 16.88X
	Max. 113	Field 1/4"	15.22 - 2.38	11.34 - 1.78	7.61 - 1.19	3.81 - 0.59	1.52 - 0.24
	Max. 113	Field 1/3"	22.86 - 3.56	17.04 - 2.67	11.43 - 1.78	5.72 - 0.89	2.29 - 0.35
	Max. 113	Field 1/2"	30.46 - 4.74	22.69 - 3.56	15.23 - 2.37	7.62 - 1.19	3.05 - 0.47
	Max. 113	Field 2/3"	41.90 - 6.52	31.21 - 4.89	20.95 - 3.26	10.48 - 1.63	4.19 - 0.65
		O-I	313	337	369	397	446
None	–	Mag.	0.35X - 2.25X	0.47X - 3.00X	0.70X - 4.50X	1.40X - 9.00X	3.50X - 22.50X
	Max. 92	Field 1/4"	11.42 - 1.78	8.51 - 1.33	5.71 - 0.89	2.86 - 0.45	1.14 - 0.18
	Max. 92	Field 1/3"	17.16 - 2.67	12.77 - 2.01	8.58 - 1.33	4.29 - 0.67	1.72 - 0.27
	Max. 92	Field 1/2"	22.85 - 3.56	17.01 - 2.67	11.42 - 1.77	5.71 - 0.89	2.28 - 0.36
	Max. 92	Field 2/3"	31.43 - 4.89	23.40 - 3.65	15.71 - 2.44	7.86 - 1.22	3.14 - 0.49
		O-I	289	313	345	373	422
1.5X	–	Mag.	0.53X - 3.38X	0.71X - 4.50X	1.05X - 6.75X	2.10X - 13.50X	5.25X - 33.75X
	Max. 51	Field 1/4"	7.61 - 1.19	5.67 - 0.89	3.81 - 0.59	1.91 - 0.30	0.76 - 0.12
	Max. 51	Field 1/3"	11.43 - 1.78	8.52 - 1.33	5.72 - 0.89	2.86 - 0.44	1.14 - 0.18
	Max. 51	Field 1/2"	15.23 - 2.37	11.34 - 1.77	7.62 - 1.19	3.81 - 0.59	1.52 - 0.24
	Max. 51	Field 2/3"	20.95 - 3.26	15.60 - 2.44	10.48 - 1.63	5.24 - 0.81	2.10 - 0.33
		O-I	250	274	306	334	383
2.0X	–	Mag.	0.70X - 4.50X	0.94X - 6.00X	1.40X - 9.00X	2.80X - 18.00X	7.00X - 45.00X
	Max. 36	Field 1/4"	5.71 - 0.89	4.26 - 0.67	2.86 - 0.45	1.43 - 0.23	0.57 - 0.09
	Max. 36	Field 1/3"	8.58 - 1.33	6.39 - 1.00	4.29 - 0.67	2.15 - 0.33	0.86 - 0.13
	Max. 36	Field 1/2"	11.42 - 1.77	8.51 - 1.33	5.71 - 0.89	2.86 - 0.44	1.14 - 0.18
	Max. 36	Field 2/3"	15.71 - 2.44	11.70 - 1.83	7.86 - 1.22	3.93 - 0.61	1.57 - 0.24
		O-I	259	283	315	343	387

*0.25X lens attachment provides working distance range of 216 mm - 356 mm when used with a 12 mm fine focus zoom lens (1-60135). The fields of view above are measured diagonally in millimeters (Horizontal = Diagonal x 0.8 and Vertical = Diagonal x 0.6).

Zoom 6000 System Dimensions

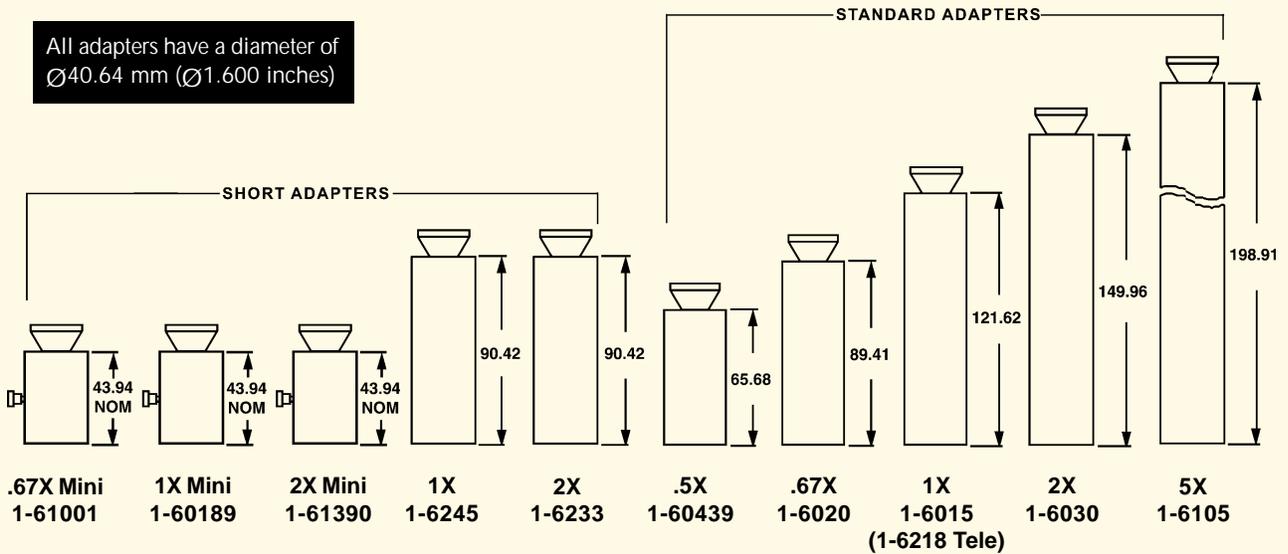
*All measurements are in mm unless otherwise specified.

Lenses*

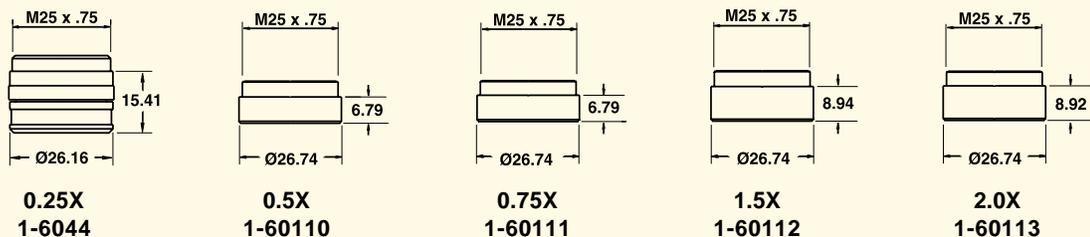


Adapters*

All adapters have a diameter of $\text{Ø}40.64$ mm ($\text{Ø}1.600$ inches)



Attachments*



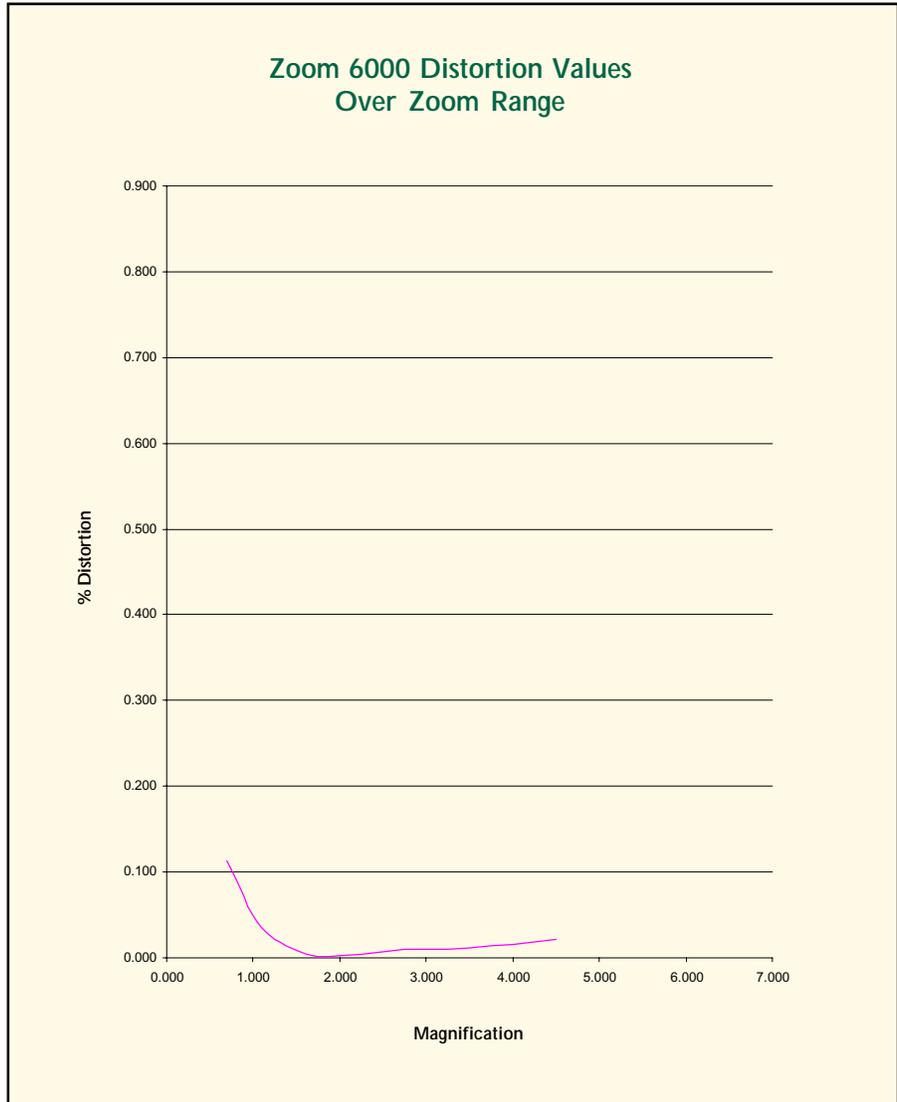


Zoom 6000 Specifications

Zoom 6000 Combinations Attachment + Zoom + Adapter Tube	W.D.	MTF Cutoff Frequency (lp/mm)		Object -to- Image Dis. (mm)	Resolvable Features (microns)		Matching Pixel Size (microns)		Depth of Field (mm)	
		Low Mag.	High Mag.		Low Mag.	High Mag.	Low Mag.	High Mag.	Low Mag.	High Mag.
0.25x + 6.5X Zoom + 0.5x	356	18	54	573	28	9	2	5	29.00	3.13
0.25x + 6.5X Zoom + 0.67x	356	18	54	597	28	9	3	7	29.00	3.13
0.25x + 6.5X Zoom + 1.0x	356	18	54	629	28	9	5	11	29.00	3.13
0.25x + 6.5X Zoom + 2.0x	356	18	54	657	28	9	10	21	29.00	3.13
0.25x + 6.5X Zoom + 5.0x	356	18	54	706	28	9	23	58	29.00	3.13
0.5x + 6.5X Zoom + 0.5x	175	35	106	376	14	5	2	5	7.31	0.80
0.5x + 6.5X Zoom + 0.67x	175	35	106	400	14	5	3	7	7.31	0.80
0.5x + 6.5X Zoom + 1.0x	175	35	106	432	14	5	5	11	7.31	0.80
0.5x + 6.5X Zoom + 2.0x	175	35	106	460	14	5	10	21	7.31	0.80
0.5x + 6.5X Zoom + 5.0x	175	35	107	509	14	5	23	216	7.29	0.79
0.75x + 6.5X Zoom + 0.5x	113	53	161	313	9	3	2	5	3.19	0.35
0.75x + 6.5X Zoom + 0.67x	113	53	161	337	9	3	3	7	3.19	0.35
0.75x + 6.5X Zoom + 1.0x	113	53	161	369	9	3	5	11	3.19	0.35
0.75x + 6.5X Zoom + 2.0x	113	53	161	397	9	3	10	22	3.19	0.35
0.75x + 6.5X Zoom + 5.0x	113	53	161	446	9	3	23	69	3.19	0.35
None + 6.5X Zoom + 0.5x	92	70	212	289	7	2	2	5	1.83	0.20
None + 6.5X Zoom + 0.67x	92	70	212	313	7	2	3	7	1.83	0.20
None + 6.5X Zoom + 1.0x	92	70	212	345	7	2	5	11	1.83	0.20
None + 6.5X Zoom + 2.0x	92	70	212	373	7	2	10	20	1.83	0.20
None + 6.5X Zoom + 5.0x	92	70	212	422	7	2	23	38	1.83	0.20
1.5x + 6.5X Zoom + 0.5x	51	103	311	250	5	2	2	5	0.85	0.09
1.5x + 6.5X Zoom + 0.67x	51	103	311	274	5	2	3	7	0.85	0.09
1.5x + 6.5X Zoom + 1.0x	51	103	311	306	5	2	5	10	0.85	0.09
1.5x + 6.5X Zoom + 2.0x	51	103	311	334	5	2	10	19	0.85	0.09
1.5x + 6.5X Zoom + 5.0x	51	103	311	383	5	2	23	31	0.85	0.09
2.0x + 6.5X Zoom + 0.5x	36	140	423	259	4	1	2	5	0.46	0.05
2.0x + 6.5X Zoom + 0.67x	36	140	423	283	4	1	3	7	0.46	0.05
2.0x + 6.5X Zoom + 1.0x	36	140	423	315	4	1	5	11	0.46	0.05
2.0x + 6.5X Zoom + 2.0x	36	140	423	343	4	1	10	19	0.46	0.05
2.0x + 6.5X Zoom + 5.0x	36	140	423	387	4	1	23	36	0.46	0.05

**Zoom 6000
Distortion Percentage**

Magnification	% Distortion
0.700	0.113
0.800	0.093
0.900	0.071
1.000	0.051
1.100	0.036
1.250	0.022
1.500	0.008
1.750	0.002
2.000	0.002
2.250	0.004
2.500	0.007
2.750	0.010
3.000	0.009
3.250	0.010
3.499	0.012
3.749	0.014
3.999	0.016
4.249	0.019
4.499	0.021



Zoom 6000

Zoom 6000 Motorized

A motorized Zoom 6000 is an excellent solution for highly automated applications. Choose from a variety of configurations to find the one that best suits your specific needs.

DC or Stepper Controlled

Navitar configures DC motors that allow continuous movement throughout the zoom or focus range. The zoom and focus functions are gear-driven with power supplied by individual 12 volt DC motors. Each gear train includes an all-metal slip clutch to prevent damage.

Stepper motors allow fine incremental movements or steps. This permits the user to program the exact desired location along the zoom or focus axis. A variety of optical and mechanical limit switches can be included to enhance the overall performance of the system.

Motorized Options

- Motorized zoom.
- Motorized focus.
- Stepping motors of various profiles.
- DC servo motors with or without magnetic encoders.
- Optical limit switches.
- Mechanical limit switches.
- Manual control boxes for DC motors.

Custom designs are also available at the customer's request.



Motorized Zoom Control Boxes

If you are using our Motorized Zoom 6000, you may need a Motorized Zoom Control Box to control the system's zoom and focus. Navitar's zoom control boxes have dual controls for zoom and focus and use a wall transformer for power. Motor speed is regulated by separate rheostats on the control panel.

Manual Driver Box (1-60564)

Individual momentary rocker switches control both zoom and focus. Remote switch closure access is available through a 9-pin d-sub connector on the panel.

Manual/Computer Driver Box (1-60731)

This unit is similar to the 1-60564 with the addition of internal relays in the remote circuit. These relays allow you to make closures using a suitably equipped computer* without damaging the computer circuits.

Computer Controlled Encoded Feedback Driver Box (1-60737)

This control box is similar to the 1-60731 with the addition of power inputs to the magnetic encoders and pulse transmitting leads. A remote 15-pin connector with isolating relays permits both driving and signal pickup with a suitably equipped computer*.



*Motor driver board required.



Zoom 6000 Internal Co-axial Zoom

Navitar's Zoom 6000 with Internal Co-axial Illumination (1-60123) is an ideal solution for applications involving highly reflective surfaces, such as wafers and polished samples. Designed to provide even illumination for higher magnification applications, it provides extremely detailed resolution under incident lighting, particularly when a high resolution camera is used. We suggest you use Navitar's fiber optic illuminator (8-61172) and cables for precision matching, however, any source and cable with an output end mounting diameter of .312" may be used. For more information on fiber optic illumination, see page 35.

Zoom 6000

Zoom 6000 Field of View Matrix for Internal Co-axial Zoom 1-60123 (in mm)

Lens Attachment	W.D.	Camera Format/Parameters	.5X Adapter Low - High	.67X Adapter Low - High	1X Adapter Low - High	2X Adapter Low - High	5X Adapter Low - High
None	–	Mag.	0.35X - 2.25X	0.47X - 3.00X	0.70X - 4.50X	1.40X - 9.00X	3.50X - 22.50X
	Max. 92	Field 1/4"	11.42 - 1.78	8.51 - 1.33	5.71 - 0.89	2.86 - 0.45	1.14 - 0.18
	Max. 92	Field 1/3"	17.16 - 2.67	12.77 - 2.01	8.58 - 1.33	4.29 - 0.67	1.72 - 0.27
	Max. 92	Field 1/2"	22.85 - 3.56	17.01 - 2.67	11.42 - 1.77	5.71 - 0.89	2.28 - 0.36
	Max. 92	Field 2/3"	31.43 - 4.89	23.40 - 3.65	15.71 - 2.44	7.86 - 1.22	3.14 - 0.49
	Max. 92	O-I	289	313	345	373	422
1.5X	–	Mag.	0.53X - 3.38X	0.71X - 4.50X	1.05X - 6.75X	2.10X - 13.50X	5.25X - 33.75X
	Max. 51	Field 1/4"	7.61 - 1.19	5.67 - 0.89	3.81 - 0.59	1.91 - 0.30	0.76 - 0.12
	Max. 51	Field 1/3"	11.43 - 1.78	8.52 - 1.33	5.72 - 0.89	2.86 - 0.44	1.14 - 0.18
	Max. 51	Field 1/2"	15.23 - 2.37	11.34 - 1.77	7.62 - 1.19	3.81 - 0.59	1.52 - 0.24
	Max. 51	Field 2/3"	20.95 - 3.26	15.60 - 2.44	10.48 - 1.63	5.24 - 0.81	2.10 - 0.33
	Max. 51	O-I	250	274	306	334	383
2.0X	–	Mag.	0.70X - 4.50X	0.94X - 6.00X	1.40X - 9.00X	2.80X - 18.00X	7.00X - 45.00X
	Max. 36	Field 1/4"	5.71 - 0.89	4.26 - 0.67	2.86 - 0.45	1.43 - 0.23	0.57 - 0.09
	Max. 36	Field 1/3"	8.58 - 1.33	6.39 - 1.00	4.29 - 0.67	2.15 - 0.33	0.86 - 0.13
	Max. 36	Field 1/2"	11.42 - 1.77	8.51 - 1.33	5.71 - 0.89	2.86 - 0.44	1.14 - 0.18
	Max. 36	Field 2/3"	15.71 - 2.44	11.70 - 1.83	7.86 - 1.22	3.93 - 0.61	1.57 - 0.24
	Max. 36	O-I	259	283	315	343	387

The internal coax will illuminate a circular area of about 11 mm in diameter. Any field of view larger than 11 mm will have darkened corners.



Zoom 6000 UltraZoom

Combine Infinity-Corrected Objectives for Maximum Resolution and Magnification

Navitar's UltraZoom is a high-performance zoom lens system ideal for semiconductor inspection or other high magnification applications. Its advanced design offers high resolution and outstanding contrast. This system incorporates infinity corrected, plan-apochromatic objectives providing long working distances and excellent edge flatness and clarity. The system's resolution varies from 420 to 1,650 lines per mm, depending on the microscope objective used. The UltraZoom is also available with fine focus and/or co-axial illumination.



Zoom 6000

Zoom 6000 UltraZoom Field of View Matrix for 1-60190, 1-60191, 1-60349 and 1-60350 (in mm)

Objective Lens (Mitutoyo) Ultra Long WD	W.D.	Camera Format/ Parameters	1X Adapter Low - High	2X Adapter Low - High
2X 0.055 NA 1-60758	—	Mag.	0.70X - 4.57X	1.39X - 9.14X
	34	Field 1/4"	5.75 - 0.87	2.87 - 0.44
	34	Field 1/3"	8.62 - 1.31	4.31 - 0.66
	34	Field 1/2"	11.49 - 1.75	5.75 - 0.87
	34	Field 2/3"	15.80 - 2.41	7.90 - 1.20
5X 0.14 NA 1-60226	—	Mag.	1.74X - 11.43X	3.48X - 22.86X
	34	Field 1/4"	2.30 - 0.35	1.15 - 0.17
	34	Field 1/3"	3.45 - 0.52	1.72 - 0.26
	34	Field 1/2"	4.60 - 0.70	2.30 - 0.35
	34	Field 2/3"	6.32 - 0.96	3.16 - 0.48
10X 0.28 NA 1-60227	—	Mag.	3.48X - 22.86X	6.96X - 45.72X
	33	Field 1/4"	1.15 - 0.17	0.57 - 0.09
	33	Field 1/3"	1.72 - 0.26	0.86 - 0.13
	33	Field 1/2"	2.30 - 0.35	1.15 - 0.17
	33	Field 2/3"	3.16 - 0.48	1.58 - 0.24
20X 0.42 NA 1-60228	—	Mag.	6.96X - 45.72X	13.92X - 91.40X
	20	Field 1/4"	0.57 - 0.09	0.29 - 0.04
	20	Field 1/3"	0.86 - 0.13	0.43 - 0.07
	20	Field 1/2"	1.15 - 0.17	0.57 - 0.09
	20	Field 2/3"	1.58 - 0.24	0.79 - 0.12
50X 0.55 NA 1-60229	—	Mag.	17.40X - 114.30X	34.80X - 228.60X
	13	Field 1/4"	0.23 - 0.03	0.11 - 0.02
	13	Field 1/3"	0.34 - 0.05	0.17 - 0.03
	13	Field 1/2"	0.46 - 0.07	0.23 - 0.04
	13	Field 2/3"	0.63 - 0.10	0.32 - 0.05

The UltraZoom Family

UltraZoom Part #	Fine Focus			
	3 mm	12 mm	Zoom	Co-ax
1-60191				
1-60190				
1-60350 (1)				
1-60349 (1)				
1-60255 (2)				
1-60260 (2)				
1-60920 (2)				

(1) These lenses do not incorporate fine focus mechanisms. Ideal for applications requiring maximum stability. Fine focus is achieved using stage or focus mount incorporating Z-travel.
 (2) These lenses provide single magnification, high resolution video image with fine focus and co-axial illumination. Additionally, a fixed magnification of 0.88X will be achieved with a non-zoom lens. Multiply 0.88 by the objective magnification and then by the adapter magnification to determine the final lens system magnification.



Zoom 6000 Detented System

Navitar's Detented Zoom 6000 system was developed for the comparator/metrology market. It provides four discrete detented positions in the zoom travel. Nominal positions at 1X, 2X, 3X and 4X on the zoom scale allow the end user to make an exact calibration repeatable within .05%. To order a detented zoom system, place a "D" after the standard part number.

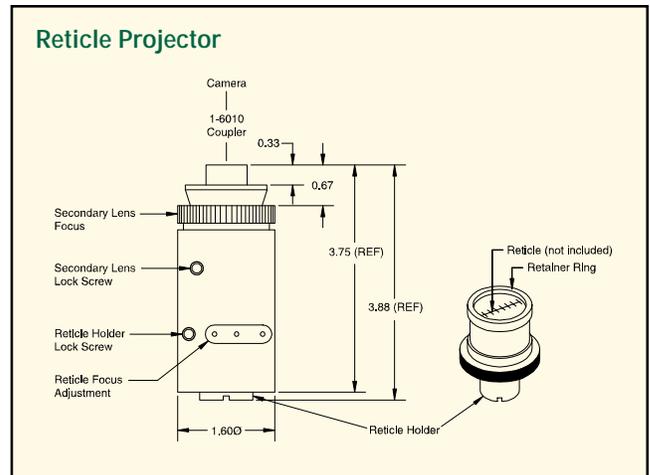
Zoom 6000

Reticle Projector

The Reticle Projector (1-60068) provides a means for superimposing a reticle (crosshair, micrometer scale, custom graphic) over the video image on the monitor. The information on the reticle must be contained to the size of the sensor. For example, if a 1/2" camera sensor is used, the reticle must have the information in a 4.8 x 6.4 mm area to be seen on the monitor. This reticle can then be used as a targeting device for measuring, machining, etc. (Reticles must be 21 mm in diameter and are sold separately.)

Advantages of Using a Reticle

- Enables quick identification of minute dimensions in small parts.
- Costs less than an electronic crosshair generator.
- The lines can be calibrated at various magnifications and assigned measuring values.
- Reticle pattern can be rotated on its center line to align with workpiece.



Zoom 6000 Accessories



Right Angle Attachment

The RA Attachment (1-6080) introduces a 90° bend in the optical axis, shortening the overall length of the system. The resulting image will be mirrored, thus erect and read backwards from right to left when viewed with a camera. The Zoom 6000 System uses the RA Adapters 1-60060 (.71X), 1-6118 (1X), 1-6120 (2X) and 1-6187 (5X).

Non-Inverting RA Attachment

The Non-Inverting RA Attachment (1-60165), like the 1-6080, introduces a 90° bend in the optical axis. The use of a penta prism results in an image that is erect and reads left to right. The Zoom 6000 system utilizes the NIRA Adapters 1-60172 (.67X), 1-60182 (1X Tele), 1-60175 (1X), 1-60185 (2X) and 1-60188 (5X).

3-Chip Capability

Navitar offers the capability of coupling new higher resolution 3-chip cameras to the Zoom 6000. All 3-chip, non c-mount cameras require the 1-6010 coupler and the 1-60182 adapter to work with the Zoom 6000. The bayonet and spacer requirements are determined by the specific camera format being used.

3-Chip Requirements

Camera Format	Requirements		
	Flange Dist.	Bayonet	Spacer
ENG (2/3")	48 mm	2-12045	—
3-Chip (1/2") Hitachi™ HV-C10 or equal	35.74 mm	2-12045	3-11714
3-Chip (1/2") Sony Hot Shoe™	38 mm	2-12046	3-11714

Assuming that one of the two available bayonets or C-thread is the means of mounting, may be possible to accommodate other flange distances that fall between the extremes.

Zoom 6000 Adapter Plates

Navitar offers a variety of different microscope converter plates so that you can use your zoom system with Nikon, Olympus, Meiji, Bausch & Lomb and Leica focus mounts.

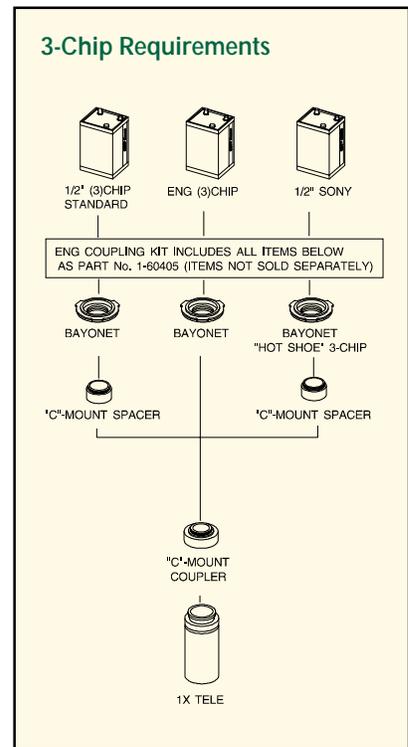
Laser Injection Port

Navitar's Laser Injection Port (1-60380) provides a means of introducing a laser beam into the Zoom 6000 system. It is normally used between the end of the zoom lens and an infinity corrected objective so that the objective condenses the laser beam into a highly concentrated spot. A beamsplitter cube, rather than a plate, is used to minimize aberrations. The port is also useful for projecting targeting devices onto the object.

Auxiliary Viewing Port

The Auxiliary Viewing Port (1-60370) provides a second output port for an additional camera or for direct vision using an eyepiece. A 50/50 beam splitter cube is used for minimal image degradation. This assembly has an optical path length so only the RA Adapter (1-60060, 1-6118, 1-6120, 1-6187) will provide a parfocal image. Adapters are required in both vertical and horizontal viewing arms.

3-Chip Requirements



Adapter Plates

