



E-series
Z-series

 **euromex**

The E-series and Z-series

Stereo microscopes are often used in science and industry for research, inspection, manufacturing or modification of extremely small objects.

Due to its high contrast and wide field of view, stereo microscopes are perfectly suitable for such. The E- and Z-series microscopes are used in a wide variety of applications for medical doctors, biologists, tooth technicians and renovators.

In the electronics, fine mechanical, galvanic, graphical and food industry these high quality microscopes series are used for research and quality control due to their brilliant optical performance.



Configuration: EE.1552 and ST.1740

Stereo heads E-series 45° tube, with 2 pair objectives in revolving nosepiece

EE.1521 - binocular	EE.1522 - binocular EE.1552 - trinocular	EE.1523 - binocular EE.1553 - trinocular	EE.1524 - binocular EE.1554 - trinocular
Objectives 0.5x and 1x Magnification 5x and 10x Field number 46 and 23 mm Free working distance 200 mm Specifically for stands ST.1715, ST.1720, ST.1770, ST.1780, ST.1785	Objectives 1x and 2x Magnification 10x and 20x Field number 23 and 11.5 mm Free working distance 110 mm	Objectives 1x and 3x Magnification 10x and 30x Field number 23 and 7.7 mm Free working distance 80 mm	Objectives 2x and 4x Magnification 20x and 40x Field number 11.5 mm and 5.7 mm Free working distance 63 mm

Stereo heads Z-series with zoom objective

ZE.1624 - binocular* ZE.1654 - trinocular*	ZE.1670 - binocular ZE.1671 - trinocular	ZE.1626 - binocular	ZE.1629 - binocular	ZE.1657 - trinocular	ZE.1659 - trinocular
Tube 45° Zoom objective 0.7x - 4.5x Magnification 7x - 45x Field number 32 - 5.1 mm Free working distance 93 mm	Tube 45° Zoom objective 1x - 7x Magnification 10x - 70x Field number 23 - 3.29 mm Free working distance 104 mm ZE.1671: when using photo tube the image remains visible in both eyepieces	Similar to ZE.1624 but with 60° tube, suitable to mount on instruments or machines Free working distance 93 mm	Similar to ZE.1624 but with 90° tube, suitable to mount on instruments or machines Free working distance 110 mm	Similar to ZE.1654 but when using photo tube the image remains visible in both eyepieces! Free working distance 104 mm	Similar to ZE.1657 but with Zoom objective 0.4x - 2.5x Magnification 4x - 25x Free working distance 185 mm With opening for flexible light conductor for semi coaxial illumination

* For click-stop versions, add suffix "-D" to article number



ZE.1629, ST.1710, LE.5210, LE.5214



ZE.1624, ST.1780, LE.1970



ZE.1659, ST.1770, AE.1950, LE.5210, LE.5218

Optical system

The super wide field eyepieces 10x/23 together with the highly light transmitting objectives provide an outstanding image clarity with a large field of view and high contrast. This results in comfortable viewing even after long hours of observation.

The E-series has two pairs of objectives mounted in a revolving nosepiece. The left tube has

dioptric adjustment. The magnification of the zoom objective of the Z-series can smoothly be adjusted through easy to operate ergonomic control knobs located on both sides of the microscope. Both tubes have dioptric adjustment.

Illumination

When using the microscope for longer periods it is essential to use a proper illuminator. One can choose to use a cold light illumination with several glass fibre light conductors, neon-fluorescence illumination or a LED ring illuminator. Euromex has a specific brochure with a detailed overview of the different type of illuminators.



EE.1554, ST.1750



EE.1522, ST.1760, LE.5210, LE.5246

Stands without illumination

ST.1710	ST.1715	ST.1717
210 mm stand post $\varnothing$ 20 mm Black/white object plate 2 object clamps Holder ST.1790 for height adjustment Size: 240x150x250 mm (l x w x h)	Similar to ST.1710, but with: Holder ST.1792 for stereo head with moveable lamp holder 250 mm stand post Size: 240x150x290 mm (l x w x h)	Similar to ST.1710, but with extra large base and an 250 mm long post. Size: 320x250x290 mm (l x w x h)

Stands with dark field illumination

ST.1750 stand, perfectly suitable to observe gems	ST.1760 stand, perfectly suitable to observe gems, contact lenses and other objects with poor contrast
Round base plate, $\varnothing$ 260 mm Tilted adjustable stand With moveable object holder AE.5446 The height adjustable holder is mounted to the arm. Size: 260x260x300 mm (l x w x h) Illumination: dark field 230 Volts, 40 Watt halogen, mounted in the stage. Light intensity can be adjusted with the iris diaphragm. Not for stereo head EE.1521	Stand post 210 mm, $\varnothing$ 20 mm With moveable object holder AE.5446 Holder ST.1790 for height adjustment Size: 240x150x260 mm (l x w x h) Illumination: transmitted illumination through fibre light conductor, which is connected to the 100 Watt cold-light source LE.5210. Attachable dark field set up AE.1878. An additional fibre light conductor can be supplied on request. Not for stereo heads EE.1521, ZE.1659

Stand with illumination

ST.1740
Base plate 60 mm height with telescopic arm Black/white and transparent object plate The height adjustable holder is mounted to the telescopic arm. Size: 240x160x290 mm (height 240-290 mm) (l x w x h) Adjustable halogen illumination 10 Watt. Incident illumination with blue filter, transmitted illumination with diffuse filter. The illuminators can be controlled separately and simultaneously. Built-in transformer 230 Volts Not for stereo head EE.1521

For the professional

The E- and Z-series microscopes can be configured in accordance with customers specification due to its modular components.

For each application it is possible to choose the right stereo head and stand and with the wide choice of supplementary objectives and eyepieces the desired magnifications can simply be constructed.

The robust metal frame of these microscopes guarantees a long life time.

Configuration: ZE.1654, ST.1720, LE.5210, LE.5239



Articulating arm stands with wide working space, without illuminator

ST.1720	ST.1770 suitable for SMD inspection
Base plate 270x270 mm, stand post 610 mm, ø 29 mm Holder ST.1794 for height adjustment, moveable in all directions, with holder for illuminator Stand size 780x270x650 mm, weight 19.5 kg	Base plate, black laminated 500x580 mm, stand post 360 mm, ø 29 mm Horizontal arm 340 mm adjustable Holder ST.1790 for height adjustment Size: 500x580x400 mm (l x w x h)

Articulating arm stands for table or wall mounting

ST.1780 for table mounting	ST.1785 for wall mounting
Stand post 560 mm, ø 28 mm with console for table mounting Holder ST.1790 for height adjustment Size 1100x100x560 mm (l x w x h)	Similar to ST.1780 but without stand post With console for wall mounting

Holders for stereo heads with height adjustment to attach on instruments or machines

ST.1790	ST.1792	ST.1794	ST.1796	ST.1798
Connection opening for base pillar ø 20 mm Internal diameter ring holder 84 mm Friction is adjustable	Similar to ST.1790 but with moveable holder for illuminator	Similar to ST.1792 but with hinge for movement in all directions	Similar to ST.1790 but with coaxial course and fine adjustment with scale	Similar to ST.1794 but with coaxial course and fine adjustment with scale

Optional accessories



Super wide field eyepieces, per pair

- AE.1835 SWF 5x / field number 26
AE.1836 SWF 10x / 23
AE.1834 SWF 12.5x / 20
AE.1837 SWF 15x / 16
AE.1838 SWF 20x / 11.5
AE.1840 SWF 30x / 7.5
AE.5439 Eyeshades, for all eyepieces
AE.5425 Eyeshades for spectacle wearers, for all eyepieces

SWF measuring eyepieces with adjustable eye lens, per piece

- AE.1839 SWF 10x / 21 with micrometer 10 mm/100 and cross hair
AE.1841 SWF 10x / 21 with reticule 10x10 mm in 400 squares
AE.1842 SWF 10x / 21 with image masks for photography

Object micrometers for calibration of measuring eyepieces

- AE.1110 Object micrometer 1 mm divided in 100 parts
AE.1111 Object micrometer 2 mm divided in 200 parts
Both micrometers are printed on glass plate 76 x 26 mm

Supplementary objectives for stereo microscopes

with 1x/2x and 1x/3x objectives

- AE.1846 Objective 0.5x, working distance (WD) 100 mm
AE.1847 Objective 0.75x, WD 63 mm
AE.1848 Objective 1.5x, WD 35 mm
AE.1849 Objective 2.0x, WD 21 mm

Supplementary objectives for stereo microscopes

with 2x/4x objectives

- AE.1851 Objective 0.5x, WD 100 mm
AE.1852 Objective 0.75x, WD 63 mm
AE.1853 Objective 1.5x, WD 35 mm
AE.1854 Objective 2.0x, WD 21 mm

Supplementary objectives for stereo head EE.1521 and ZE.1659

- AE.1850 Objective 0.7x, WD 300 mm for EE.1521, WD 233 mm for ZE.1659
AE.1822 Objective 0.57x, WD 300 mm for ZE.1659

Supplementary objectives for zoom stereo microscopes

with tube 45° or 60°

- AE.1855 Objective 0.3x, WD 250 mm, for stands ST.1720, ST.1770, ST.1780 and ST.1785
AE.1870 Objective 0.44x, WD 180 mm, for stands ST.1715, ST.1720, ST.1770, ST.1780 and ST.1785
AE.1856 Objective 0.5x, WD 150 mm, maximum object height for stand ST.1740 is 15 mm
AE.1857 Objective 0.75x, WD 97 mm
AE.1858 Objective 1.5x, WD 50 mm
AE.1859 Objective 2.0x, WD 34 mm

Supplementary objectives for zoom stereo microscope

with straight tube 90°

- AE.1805 Objective 0.3x, WD 330 mm, for stands ST.1720, ST.1770, ST.1780 and ST.1785
AE.1806 Objective 0.5x, WD 198 mm, for stands ST.1715, ST.1720, ST.1770, ST.1780 and ST.1785
AE.1807 Objective 0.75x, WD 125 mm
AE.1808 Objective 1.5x, WD 62 mm
AE.1809 Objective 2.0x, WD 42 mm

Supplementary objectives for zoom stereo microscope ZE.1657

- AE.1816 Objective 0.35x, WD 250 mm
AE.1817 Objective 0.5x, WD 174 mm
AE.1818 Objective 1.5x, WD 57 mm

Safety glasses. To be fitted below the objectives

- AE.1843 Safety glass for E-series with objectives 1x/2x of 1x/3x
AE.1844 Safety glass for E-series with objectives 2x/4x
AE.1845 Safety glass for Zoom stereo microscopes, except ZE.1659
AE.1825 Safety glass for EE.1521, ZE.1659. Can not be used in combination with supplementary objectives

SMD attachment

- AE.1940 Rotatable attachment for inspection of PCB etc. Soldered components can be inspected both vertically and angled. Built-in lens 0.3 x for angled and 0.44x for vertical observation. Working distances 110 mm and 80 mm. To be mounted below the objective of the zoom heads ZE.1624 and ZE.1654. Only for ST.1720 and ST.1770

Dark field

- AE.1878 Dark field attachment suitable for all stand with transmitted illumination
AE.1879 Iris diaphragm with adapter, fits on AE.1878
AE.1871 Object stage for dark field attachment. With using and object slide it is possible to observe a transparent object like a contact lens or gem. Only for stand ST.1760

Polarisation

- AE.1890 Analyser in rotatable mount. For stereo microscopes except ZE.1659
AE.1891 Polarizer in holder. For stands ST.1740, ST.1760
AE.1892 Retardation filter, gypsum red 1st order, fits on polarizer AE.1891

Mechanical stages

- AE.1876 Attachable mechanical stage with ball bearing. The top plate (145 x 115 mm) can be moved with horizontal coaxial control knobs. With scale and Vernier. Range 75 x 50 mm. For stands ST.1710, ST.1715, ST.1740
AE.1896 Similar to AE.1876, but centered glass plate for transmitted illumination. For stands ST.1740, ST.1760
AE.1877 Attachable top plate mechanical stage 170 x 155 mm. The top plate has ball bearing and can easily be moved by hand. X-Y translation 100 x 105 mm. Suitable for stands ST.1710, ST.1715, ST.1740
AE.1950 Large SMD mechanical stage with ball bearing, size 390 x 390 mm. X-Y translation 360 x 260 mm. Suitable for stands ST.1720, ST.1770, ST.1780 and ST.1785

Object stage

- AE.1884 Round object stage, high model, with diffuse glass filter. Exchangeable with dark field set up of stand ST.1760
AE.1885 Round object stage, high model, with diffuse glass filter. Exchangeable with object plate of stand ST.1740

Object plate, ø 94 mm

- AE.1880 Plexi glass object plate, transparent frosted
AE.1881 Transparent glass object plate
AE.1882 Black/white plastic object plate

Filters, ø 40 mm

- AE.1897 Diffuse glass filter
AE.1898 Blue frosted filter

Object clamp

- AE.5446 Moveable object clamp for gems etc. Exchangeable with object clamp

Cabinets for microscopes

- AE.1886 Cabinet with handle and lock for stands ST.1710, ST.1715, ST.1740
AE.1887 Cabinet with handle and lock for stand ST.1750

Spare bulbs and fuses

- SL.1868 Spare 30 Watt for transmitted illumination of stand ST.1750
SL.1869 Spare halogen bulb 6 Volts 10 Watt for illuminator of stand ST.1740
AE.3683 Glass fuses for stand ST.1740. Packed per 10 pieces

Accessories for photography and video cameras

- AE.5046 Photo eyepiece PH 3.3x with micrometer 10/100 mm
AE.5061 Photo eyepiece PH 2.5x / 16
AE.5062 Photo eyepiece PH 5.0x / 9.5
AE.5127 Adapter for SLR camera with T2 mount. To be used with a photo eyepiece
AE.5129 SLR camera-adapter with built-in optics and set up eyepiece with image mask. With T2 mount to be used with a photo eyepiece
AE.5018 C-mount adapter with built-in optics for CCD camera
AE.5006 C-mount adapter with lens 0.6x for models ZE.1657 and ZE.1659, optional with micrometer
AE.5059 Universal C-mount adapter with photo eyepiece 0.45x, optional with micrometer
AE.5063 Universal C-mount adapter with photo eyepiece 0.7x, optional with micrometer

On request we supply T2-adapters for AE.5127 and AE.5129 and adapters for digital photo cameras.

Please enquire for an overview of our camera and illuminator range.



Zacharias Janssen (1580 – 1638)

This Dutch spectacle maker put several lenses in a tube and made a very important discovery. The object near the end of the tube appeared to be greatly enlarged, much larger than any simple magnifying glass could achieve by itself! He had just invented the compound microscope (which is a microscope that uses two or more lenses).

This invention has once formed the basis for the high quality Euromex microscopes that are used today.



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