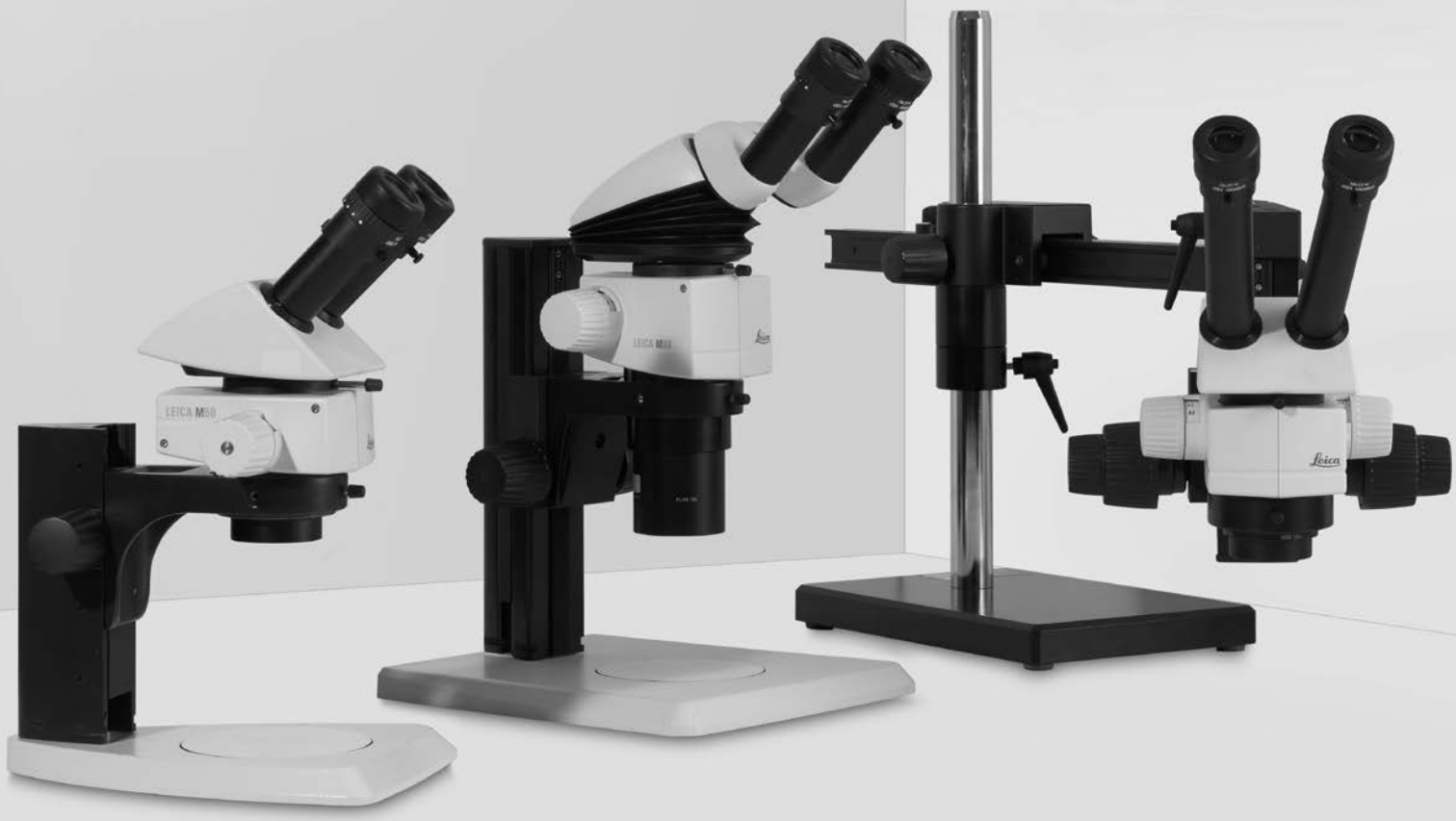
From Eye to Insight

Leica
MICROSYSTEMS

# Leica M50, Leica M60 & Leica M80

Stereomicroscopes | Technical Information



# Performance Characteristics
# Specifications



| | Leica M50 | Leica M60 | Leica M80 |
|---|---|---|---|
| **Optical Data** | | | |
| Zoom | 5:1 manual, stage changer | 6:1 manual, zoom | 8:1 manual, zoom |
| Data with standard optics (1× objective/10× eyepieces)<br>– Zoom range<br>– Resolution<br>– Working distance<br>– Object field | <br>Five stages: 6.3×, 10×, 16×, 25×, 40×<br>225 lp/mm<br>89.6 mm (achromatic 1×)<br>∅ 5.75 mm–36.5 mm | <br>6.3×–40×<br>225 lp/mm<br>89.6 mm (achromatic 1×)<br>∅ 5.75 mm–36.5 mm | <br>7.5×–60×<br>309 lp/mm<br>83.4 mm (planachromatic 1×)<br>∅ 3.8 mm–30.7 mm |
| Maximum values (based on optics combination)<br>– Magnification<br>– Resolution<br>– Visible structural width<br>– Numerical aperture<br>– Object field | <br>320×<br>450 lp/mm<br>1.11µm<br>0.15<br>∅ 116.8 mm | <br>320×<br>450 lp/mm<br>1.11 µm<br>0.15<br>∅ 116.8 mm | <br>480×<br>618 lp/mm<br>0.81 µm<br>0.206<br>∅ 98 mm |
| Working distances | 303 mm (achromatic 0.32×)<br>188.5 mm (achromatic 0.5×)<br>148 mm (achromatic 0.63×)<br>114 mm (achromatic 0.8×)<br>89.6 mm (achromatic 1×)<br>65.5 mm (achromatic 1.25×)<br>46 mm (achromatic 1.6×)<br>27.4 mm (achromatic 2.0×)<br>106.9 mm (planachromatic 0.8×)<br>83.4 mm (planachromatic 1.0×)<br>41.5 mm (planachromatic 1.6×) | 303 mm (achromatic 0.32×)<br>188.5 mm (achromatic 0.5×)<br>148 mm (achromatic 0.63×)<br>114 mm (achromatic 0.8×)<br>89.6 mm (achromatic 1×)<br>65.5 mm (achromatic 1.25×)<br>46 mm (achromatic 1.6×)<br>27.4 mm (achromatic 2.0×)<br>106.9 mm (planachromatic 0.8×)<br>83.4 mm (planachromatic 1.0×)<br>41.5 mm (planachromatic 1.6×) | 303 mm (achromatic 0.32×)<br>188.5 mm (achromatic 0.5×)<br>148 mm (achromatic 0.63×)<br>114 mm (achromatic 0.8×)<br>89.6 mm (achromatic 1×)<br>65.5 mm (achromatic 1.25×)<br>46 mm (achromatic 1.6×)<br>27.4 mm (achromatic 2.0×)<br>106.9 mm (planachromatic 0.8×)<br>83.4 mm (planachromatic 1.0×)<br>41.5 mm (planachromatic 1.6×) |
| **Optics carrier** | | | |
| Design principle | Multiple-coated optical system with two parallel beam paths and one main objective (CMO), lead-free | | |
| Specific surface resistivity (housing) | $2\times10^{11}$ Ω/mm²<br>discharge time <2 seconds<br>from 1,000 V to 100 V | $2\times10^{11}$ Ω/mm²<br>discharge time <2 seconds<br>from 1,000 V to 100 V | $2\times10^{11}$ Ω/mm²<br>discharge time <2 seconds<br>from 1,000 V to 100 V |
| Engageable zoom notches | – | 7 switchable positions,<br>for repetitive tasks | 8 switchable positions,<br>for repetitive tasks |

| | Leica M50 | Leica M60 | Leica M80 |
|---|---|---|---|
| **Accessories** | | | |
| Standard objective | Achromatic 1× | Achromatic 1× | Planachr. 1× |
| Additional objectives | Achromat: 0.32×, 0.5×, 0.63×, 0.8×, 1×, 1.25×, 1.6×, 2×<br>Planachromat: 0.8×, 1×, 1.6× | | |
| Binocular tubes, ergonomics | Various ErgoModules®, ErgoTube® with variable viewing angle 10°–50° | | |
| Interpupillary distance | Variable | | |
| Wide-field eyepieces for eyeglass wearers | 10×, 16×, 25×, 40×, with replaceable eyecups & click stop | | |

# Modular System

| | Leica M50, Leica M60 and Leica M80 |
|---|---|
| | **Stands, illuminators** |
| Transmitted light bases | Leica TL3000 ST: Bright field and dark field on one side – TL4000 BFDF: Bright and circular dark field – TL4000 RC / RCI™: Bright field, single-sided dark field, Rottermann Contrast – TL5000 Ergo: Bright field two-sided dark field, Rottermann Contrast |
| Incident light bases | Incident light base small or incident light base medium and large with black/white stage plate and antishock™ feet |
| Stages | Gliding stage, MATS heating stage, cup stage, rotatable polarization stage, Leica IsoPro™ Cross-stage (manual and motorized) |
| Illuminators | LED3000 RL, LED3000 SLI, LED3000 NVI, LED3000 MCI, LED3000 DI, LED3000 BLI, LED5000 CXI, LED5000 NVI, KL300 LED, Cold-light sources (halogen and LED versions) |
| | **Misc. accessories** |
| Photography, video | Digital image capture systems from Leica, various camera variants, e.g. integrated IC 80 HD or external DFC295, various adapters for commercially available analog and digital cameras |
| Image archiving, image processing | Leica Application Suite (LAS) software, consisting of basic program and many auxiliary modules, such as LAS Live Measurement, LAS Annotation, LAS Reticule and many more |
| Graticules | For length measurement and counting |
| Drawing tube | For left and right-handed users |
| Discussion tube for training for two observers | For two observers |

# Leica M50 / M60 Optical Data

| **Objectives** | | **Achr. 0.32×** | | **Achr. 0.5×** | | **Achr. 0.63×** | | **Achr. 0.8×** | **Plan-achr. 0.8×** | **Achr. 1.0×** | **Plan-achr. 1.0×** | **Achr. 1.25×** | | **Achr. 1.6×** | **Plan-achr. 1.6×** | **Achr. 2.0×** | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Working distance** | | 303 mm | | 188.5 mm | | 148.2 mm | | 114 mm | 107 mm | 89.6 mm | 83.4 mm | 65.5 mm | | 46 mm | 41.5 mm | 27.4 mm | |
| **Eyepiece** | Mag. level | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ |
| **10×/23B** | 0.63 | 1.97 | 116.8 | 3.15 | 73 | 3.94 | 58.4 | 5.04 | 45.6 | 6.3 | 36.5 | 7.88 | 29.2 | 10.1 | 22.8 | 12.6 | 18.3 |
| | 1.0 | 3.13 | 73.6 | 5 | 46 | 6.25 | 36.8 | 8 | 28.8 | 10 | 23 | 12.5 | 18.4 | 16 | 14.4 | 20 | 11.5 |
| | 1.6 | 5 | 46 | 8 | 28.8 | 10 | 23 | 12.8 | 18 | 16 | 14.4 | 20 | 11.5 | 25.6 | 8.98 | 32 | 7.19 |
| | 2.5 | 7.81 | 29.4 | 12.5 | 18.4 | 15.6 | 14.7 | 20 | 11.5 | 25 | 9.2 | 31.3 | 7.36 | 40 | 5.75 | 50 | 4.6 |
| | 4.0 | 12.5 | 18.4 | 20 | 11.5 | 25 | 9.2 | 32 | 7.19 | 40 | 5.75 | 50 | 4.6 | 64 | 3.59 | 80 | 2.88 |
| **16×/15B** | 0.63 | 3.15 | 76.2 | 5.04 | 47.6 | 6.3 | 38.1 | 8.06 | 29.8 | 10.1 | 23.8 | 12.6 | 19 | 16.1 | 14.9 | 20.2 | 11.9 |
| | 1.0 | 5 | 48 | 8 | 30 | 10 | 24 | 12.8 | 18.8 | 16 | 15 | 20 | 12 | 25.6 | 9.38 | 32 | 7.5 |
| | 1.6 | 8 | 30 | 12.8 | 18.8 | 16 | 15 | 20.5 | 11.7 | 25.6 | 9.38 | 32 | 7.5 | 41 | 5.86 | 51.2 | 4.69 |
| | 2.5 | 12.5 | 19.2 | 20 | 12 | 25 | 9.6 | 32 | 7.5 | 40 | 6 | 50 | 4.8 | 64 | 3.75 | 80 | 3 |
| | 4.0 | 20 | 12 | 32 | 7.5 | 40 | 6 | 51.2 | 4.69 | 64 | 3.75 | 80 | 3 | 102 | 2.34 | 128 | 1.88 |
| **25×/10B** | 0.63 | 4.92 | 50.8 | 7.88 | 31.7 | 9.84 | 25.4 | 12.6 | 19.8 | 15.8 | 15.9 | 19.7 | 12.7 | 25.2 | 9.92 | 31.5 | 7.94 |
| | 1.0 | 7.81 | 32 | 12.5 | 20 | 15.6 | 16 | 20 | 12.5 | 25 | 10 | 31.3 | 8 | 40 | 6.25 | 50 | 5 |
| | 1.6 | 12.5 | 20 | 20 | 12.5 | 25 | 10 | 32 | 7.81 | 40 | 6.25 | 50 | 5 | 64 | 3.91 | 80 | 3.13 |
| | 2.5 | 19.5 | 12.8 | 31.3 | 8 | 39.1 | 6.4 | 50 | 5 | 62.5 | 4 | 78.1 | 3.2 | 100 | 2.5 | 125 | 2 |
| | 4.0 | 31.3 | 8 | 50 | 5 | 62.5 | 4 | 80 | 3.13 | 100 | 2.5 | 125 | 2 | 160 | 1.56 | 200 | 1.25 |
| **40×/6B** | 0.63 | 7.88 | 30.5 | 12.6 | 19 | 15.8 | 15.2 | 20.2 | 11.9 | 25.2 | 9.52 | 31.5 | 7.62 | 40.3 | 5.95 | 50.4 | 4.76 |
| | 1.0 | 12.5 | 19.2 | 20 | 12 | 25 | 9.6 | 32 | 7.5 | 40 | 6 | 50 | 4.8 | 64 | 3.75 | 80 | 3 |
| | 1.6 | 20 | 12 | 32 | 7.5 | 40 | 6 | 51.2 | 4.69 | 64 | 3.75 | 80 | 3 | 102 | 2.34 | 128 | 1.88 |
| | 2.5 | 31.3 | 7.68 | 50 | 4.8 | 62.5 | 3.84 | 80 | 3 | 100 | 2.4 | 125 | 1.92 | 160 | 1.5 | 200 | 1.2 |
| | 4.0 | 50 | 4.8 | 80 | 3 | 100 | 2.4 | 128 | 1.88 | 160 | 1.5 | 200 | 1.2 | 256 | 0.938 | 320 | 0.75 |

# Leica M80 Optical Data

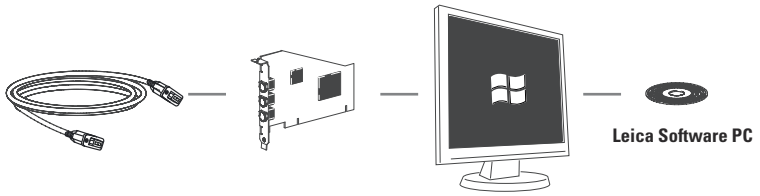
| Objectives | | Achr. 0.32× | | Achr. 0.5× | | Achr. 0.63× | | Achr. 0.8× | Plan-achr. 0.8× | Achr. 1.0× | Plan-achr. 1.0× | Achr. 1.25× | | Achr. 1.6× | Plan-achr. 1.6× | Achr. 2.0× | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| **Working distance** | | 303 mm | | 188.5 mm | | 148.2 mm | | 114 mm | 107 mm | 89.6 mm | 83.4 mm | 65.5 mm | | 46 mm | 41.5 mm | 27.4 mm | |
| **Eyepiece** | Zoom setting | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ | Total mag. × | Obj. field ∅ |
| **10×/23B** | 0.75 | 2.34 | 98.1 | 3.75 | 61.3 | 4.69 | 49.1 | 6.0 | 38.3 | 7.5 | 30.7 | 9.38 | 24.5 | 12.0 | 19.2 | 15.0 | 15.3 |
| | 1.0 | 3.13 | 73.6 | 5.0 | 46 | 6.25 | 36.8 | 8.0 | 28.8 | 10.0 | 23 | 12.5 | 18.4 | 16.0 | 14.4 | 20.0 | 11.5 |
| | 1.25 | 3.91 | 58.9 | 6.25 | 36.8 | 7.81 | 29.4 | 10.0 | 23 | 12.5 | 18.4 | 15.6 | 14.7 | 20.0 | 11.5 | 25.0 | 9.2 |
| | 1.6 | 5.0 | 46 | 8.0 | 28.8 | 10.0 | 23 | 12.8 | 18 | 16.0 | 14.4 | 20.0 | 11.5 | 25.6 | 8.98 | 32.0 | 7.19 |
| | 2.0 | 6.25 | 36.8 | 10.0 | 23 | 12.5 | 18.4 | 16.0 | 14.4 | 20.0 | 11.5 | 25.0 | 9.2 | 32.0 | 7.19 | 40.0 | 5.75 |
| | 2.5 | 7.81 | 29.4 | 12.5 | 18.4 | 15.6 | 14.7 | 20.0 | 11.5 | 25.0 | 9.2 | 31.3 | 7.36 | 40.0 | 5.75 | 50.0 | 4.6 |
| | 3.2 | 10.0 | 23 | 16.0 | 14.4 | 20.0 | 11.5 | 25.6 | 8.98 | 32.0 | 7.19 | 40.0 | 5.75 | 51.2 | 4.49 | 64.0 | 3.59 |
| | 4.0 | 12.5 | 18.4 | 20.0 | 11.5 | 25.0 | 9.2 | 32.0 | 7.19 | 40.0 | 5.75 | 50.0 | 4.6 | 64.0 | 3.59 | 80.0 | 2.88 |
| | 5.0 | 15.6 | 14.7 | 25.0 | 9.2 | 31.3 | 7.36 | 40.0 | 5.75 | 50.0 | 4.6 | 62.5 | 3.68 | 80.0 | 2.88 | 100.0 | 2.3 |
| | 6.0 | 18.8 | 12.3 | 30.0 | 7.67 | 37.5 | 6.13 | 48.0 | 4.79 | 60.0 | 3.83 | 75.0 | 3.07 | 96.0 | 2.4 | 120.0 | 1.92 |
| **16×/15B** | 0.75 | 3.75 | 64 | 6.0 | 40 | 7.5 | 32 | 9.6 | 25 | 12.0 | 20 | 15.0 | 16 | 19.2 | 12.5 | 24.0 | 10 |
| | 1.0 | 5.0 | 48 | 8.0 | 30 | 10.0 | 24 | 12.8 | 18.8 | 16.0 | 15 | 20.0 | 12 | 25.6 | 9.38 | 32.0 | 7.5 |
| | 1.25 | 6.25 | 38.4 | 10.0 | 24 | 12.5 | 19.2 | 16.0 | 15 | 20.0 | 12 | 25.0 | 9.6 | 32.0 | 7.5 | 40.0 | 6 |
| | 1.6 | 8.0 | 30 | 12.8 | 18.8 | 16.0 | 15 | 20.5 | 11.7 | 25.6 | 9.38 | 32.0 | 7.5 | 41.0 | 5.86 | 51.2 | 4.69 |
| | 2.0 | 10.0 | 24 | 16.0 | 15 | 20.0 | 12 | 25.6 | 9.38 | 32.0 | 7.5 | 40.0 | 6 | 51.2 | 4.69 | 64.0 | 3.75 |
| | 2.5 | 12.5 | 19.2 | 20.0 | 12 | 25.0 | 9.6 | 32.0 | 7.5 | 40.0 | 6 | 50.0 | 4.8 | 64.0 | 3.75 | 80.0 | 3 |
| | 3.2 | 16.0 | 15 | 25.6 | 9.38 | 32.0 | 7.5 | 41.0 | 5.86 | 51.2 | 4.69 | 64.0 | 3.75 | 81.9 | 2.93 | 102.0 | 2.34 |
| | 4.0 | 20.0 | 12 | 32.0 | 7.5 | 40.0 | 6 | 51.2 | 4.69 | 64.0 | 3.75 | 80.0 | 3 | 102.0 | 2.34 | 128.0 | 1.88 |
| | 5.0 | 25.0 | 9.6 | 40.0 | 6 | 50.0 | 4.8 | 64.0 | 3.75 | 80.0 | 3 | 100.0 | 2.4 | 128.0 | 1.88 | 160.0 | 1.5 |
| | 6.0 | 30.0 | 8 | 48.0 | 5 | 60.0 | 4 | 76.8 | 3.13 | 96.0 | 2.5 | 120.0 | 2 | 154.0 | 1.56 | 192.0 | 1.25 |
| **25×/10B** | 0.75 | 5.86 | 42.7 | 9.38 | 26.7 | 11.7 | 21.3 | 15.0 | 16.7 | 18.8 | 13.3 | 23.4 | 10.7 | 30.0 | 8.33 | 37.5 | 6.67 |
| | 1.0 | 7.81 | 32 | 12.5 | 20 | 15.6 | 16 | 20.0 | 12.5 | 25.0 | 10 | 31.3 | 8 | 40.0 | 6.25 | 50.0 | 5 |
| | 1.25 | 9.77 | 25.6 | 15.6 | 16 | 19.5 | 12.8 | 25.0 | 10 | 31.3 | 8 | 39.1 | 6.4 | 50.0 | 5 | 62.5 | 4 |
| | 1.6 | 12.5 | 20 | 20.0 | 12.5 | 25.0 | 10 | 32.0 | 7.81 | 40.0 | 6.25 | 50.0 | 5 | 64.0 | 3.91 | 80.0 | 3.13 |
| | 2.0 | 15.6 | 16 | 25.0 | 10 | 31.3 | 8 | 40.0 | 6.25 | 50.0 | 5 | 62.5 | 4 | 80.0 | 3.13 | 100.0 | 2.5 |
| | 2.5 | 19.5 | 12.8 | 31.3 | 8 | 39.1 | 6.4 | 50.0 | 5 | 62.5 | 4 | 78.1 | 3.2 | 100.0 | 2.5 | 125.0 | 2 |
| | 3.2 | 25.0 | 10 | 40.0 | 6.25 | 50.0 | 5 | 64.0 | 3.91 | 80.0 | 3.13 | 100.0 | 2.5 | 128.0 | 1.95 | 160.0 | 1.56 |
| | 4.0 | 31.3 | 8 | 50.0 | 5 | 62.5 | 4 | 80.0 | 3.13 | 100.0 | 2.5 | 125.0 | 2 | 160.0 | 1.56 | 200.0 | 1.25 |
| | 5.0 | 39.1 | 6.4 | 62.5 | 4 | 78.1 | 3.2 | 100.0 | 2.5 | 125.0 | 2 | 156.0 | 1.6 | 200.0 | 1.25 | 250.0 | 1 |
| | 6.0 | 46.9 | 5.33 | 75.0 | 3.33 | 93.8 | 2.67 | 120.0 | 2.08 | 150.0 | 1.67 | 188.0 | 1.33 | 240.0 | 1.04 | 300.0 | 0.833 |
| **40×/6B** | 0.75 | 9.38 | 25.6 | 15.0 | 16 | 18.8 | 12.8 | 24.0 | 10 | 30.0 | 8 | 37.5 | 6.4 | 48.0 | 5 | 60.0 | 4 |
| | 1.0 | 12.5 | 19.2 | 20.0 | 12 | 25.0 | 9.6 | 32.0 | 7.5 | 40.0 | 6 | 50.0 | 4.8 | 64.0 | 3.75 | 80.0 | 3 |
| | 1.25 | 15.6 | 15.4 | 25.0 | 9.6 | 31.3 | 7.68 | 40.0 | 6 | 50.0 | 4.8 | 62.5 | 3.84 | 80.0 | 3 | 100.0 | 2.4 |
| | 1.6 | 20.0 | 12 | 32.0 | 7.5 | 40.0 | 6 | 51.2 | 4.69 | 64.0 | 3.75 | 80.0 | 3 | 102.0 | 2.34 | 128.0 | 1.88 |
| | 2.0 | 25.0 | 9.6 | 40.0 | 6 | 50.0 | 4.8 | 64.0 | 3.75 | 80.0 | 3 | 100.0 | 2.4 | 128.0 | 1.88 | 160.0 | 1.5 |
| | 2.5 | 31.3 | 7.68 | 50.0 | 4.8 | 62.5 | 3.84 | 80.0 | 3 | 100.0 | 2.4 | 125.0 | 1.92 | 160.0 | 1.5 | 200.0 | 1.2 |
| | 3.2 | 40.0 | 6 | 64.0 | 3.75 | 80.0 | 3 | 102.0 | 2.34 | 128.0 | 1.88 | 160.0 | 1.5 | 205.0 | 1.17 | 256.0 | 0.938 |
| | 4.0 | 50.0 | 4.8 | 80.0 | 3 | 100.0 | 2.4 | 128.0 | 1.88 | 160.0 | 1.5 | 200.0 | 1.2 | 256.0 | 0.938 | 320.0 | 0.75 |
| | 5.0 | 62.5 | 3.84 | 100.0 | 2.4 | 125.0 | 1.92 | 160.0 | 1.5 | 200.0 | 1.2 | 250.0 | 0.96 | 320.0 | 0.75 | 400.0 | 0.6 |
| | 6.0 | 75.0 | 3.2 | 120.0 | 2 | 150.0 | 1.6 | 192.0 | 1.25 | 240.0 | 1 | 300.0 | 0.8 | 384.0 | 0.625 | 480.0 | 0.5 |

# Major User Segments

| | **Natural science** |
|---|---|
| Embryology | Veterinary science: animal husbandry |
| Pharmacology | Pharmaceutical research and industry, pharmacology laboratories |
| Anatomy | Departments of anatomy, histology and pathology at universities,<br>schools of medical and veterinary sciences,<br>pharmaceutical research institutes, cancer research institutes |
| Microbiology | Microbiology departments and laboratories at universities<br>Food industry |
| Botany | Natural science institutes and museums |
| | Botanical gardens, herbariums |

| | **Industry** |
|---|---|
| Earth sciences | Departments of geology, mineralogy, paleontology |
| Physics | Departments of experimental physics, optics, solid-state physics |
| Semiconductors | Quality control, production, process control, research and development |
| Microtechnology | Mask manufacturers, manufacturers of integrated circuits, assembly of microchips |
| Materials development | Development and test labs, quality control |
| Synthetic materials | Research and development, manufacturers of synthetic products, colleges and universities |

| | **Criminology** |
|---|---|
| Criminological examinations | Crime labs, investigation and law enforcement, evidence and forensics |



**Leica Software PC**

**Cables**
11 600 269, FW-b-b
11 600 254, FW-a-b
12 730 211, HDMI-cable
12 730 530, USB3-cable

**PC Cards**
12 730 446, FW-b, notebook kit
12 730 447, FW-b, PCI express
12 730 495, USB3, PCI express



**MC170 HD**
12 730 465
**MC190 HD**
12 730 520

**DMC4500**
12 730 411
**DMC2900**
12 730 466
**DFC295**
12 730 469

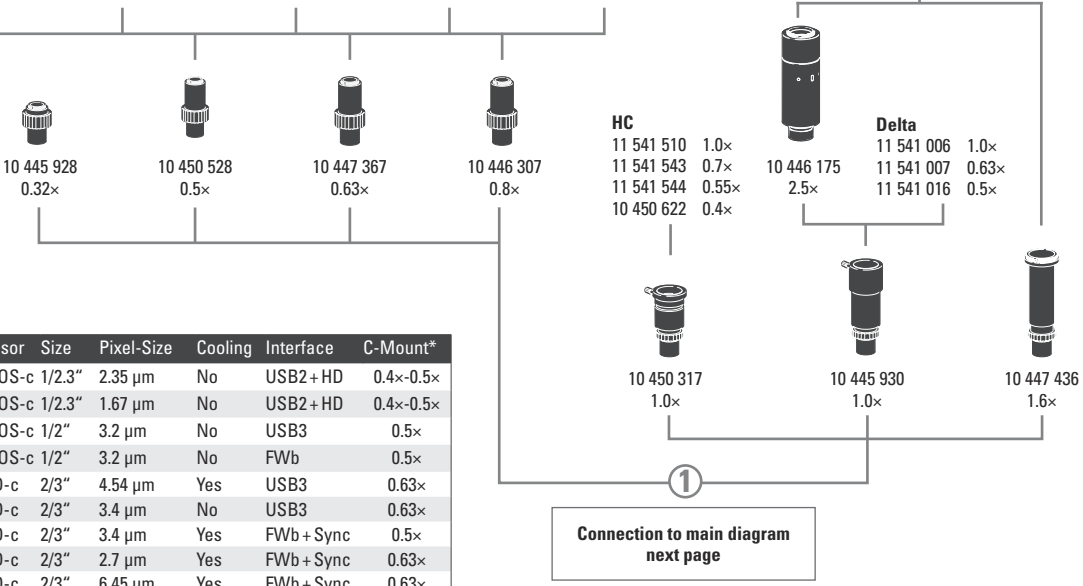
**DFC3000 G**
11 547 005
**DFC450 C**
12 730 412
**DFC495**
12 730 471

**DFC7000 T**
11 547 106
**DFC365 FX**
11 547 004

**DFC550**
12 730 455

**D-SLR**

10 447 319



10 445 928
0.32×

10 450 528
0.5×

10 447 367
0.63×

10 446 307
0.8×

**HC**
11 541 510 1.0×
11 541 543 0.7×
11 541 544 0.55×
10 450 622 0.4×

10 446 175
2.5×

**Delta**
11 541 006 1.0×
11 541 007 0.63×
11 541 016 0.5×

10 450 317
1.0×

10 445 930
1.0×

10 447 436
1.6×

①

**Connection to main diagram next page**

| Name | MPixel | Sensor | Size | Pixel-Size | Cooling | Interface | C-Mount* |
|---|---|---|---|---|---|---|---|
| MC170 HD | 5 | CMOS-c | 1/2.3" | 2.35 µm | No | USB2 + HD | 0.4×-0.5× |
| MC190 HD | 10 | CMOS-c | 1/2.3" | 1.67 µm | No | USB2 + HD | 0.4×-0.5× |
| DMC2900 | 3 | CMOS-c | 1/2" | 3.2 µm | No | USB3 | 0.5× |
| DFC295 | 3 | CMOS-c | 1/2" | 3.2 µm | No | FWb | 0.5× |
| DFC7000T | 2.8 | CCD-c | 2/3" | 4.54 µm | Yes | USB3 | 0.63× |
| DMC4500 | 5 | CCD-c | 2/3" | 3.4 µm | No | USB3 | 0.63× |
| DFC450 C | 5 | CCD-c | 2/3" | 3.4 µm | Yes | FWb + Sync | 0.5× |
| DFC495 | 8 | CCD-c | 2/3" | 2.7 µm | Yes | FWb + Sync | 0.63× |
| DFC550 | 12.5 | CCD-c | 2/3" | 6.45 µm | Yes | FWb + Sync | 0.63× |
| DFC3000 G | 1.3 | CCD-m | 1/3" | 3.75 µm | No | USB3 + Sync | 0.35×-0.4× |
| DFC365 FX | 1.4 | CCD-m | 2/3" | 6.45 µm | Yes | FWb + Sync | 0.7× |

-c: color / -m: monochrome / * recommended



# ARTICLE DESCRIPTIONS

**Digital camera systems**

12 730 465 Leica MC170 HD camera kit
12 730 520 Leica MC190 HD camera kit
12 730 517 Leica DMC4500 camera kit
12 730 466 Leica DMC2900 camera kit
12 730 469 Leica DFC295 camera kit
12 730 412 Leica DFC450 C camera kit
12 730 471 Leica DFC495 camera kit
12 730 455 Leica DFC550 camera kit

11 547 005 Leica DFC3000 G camera kit
11 547 004 Leica DFC365 FX camera kit
11 547 106 Leica DFC7000T camera kit

12 730 521 Leica IC90 E camera (incl. USB-cable and Leica software) not recommended for MZ10 F / M165 FC / M205 FA
12 730 528 Leica stand alone kit (HDMI cable, SD card, USB power supply, remote control RC3, ethernet cable) for IC90 E
12 730 229 Hand or foot switch with 2 m cable for IC90 E

**Digitale camera system accessories**

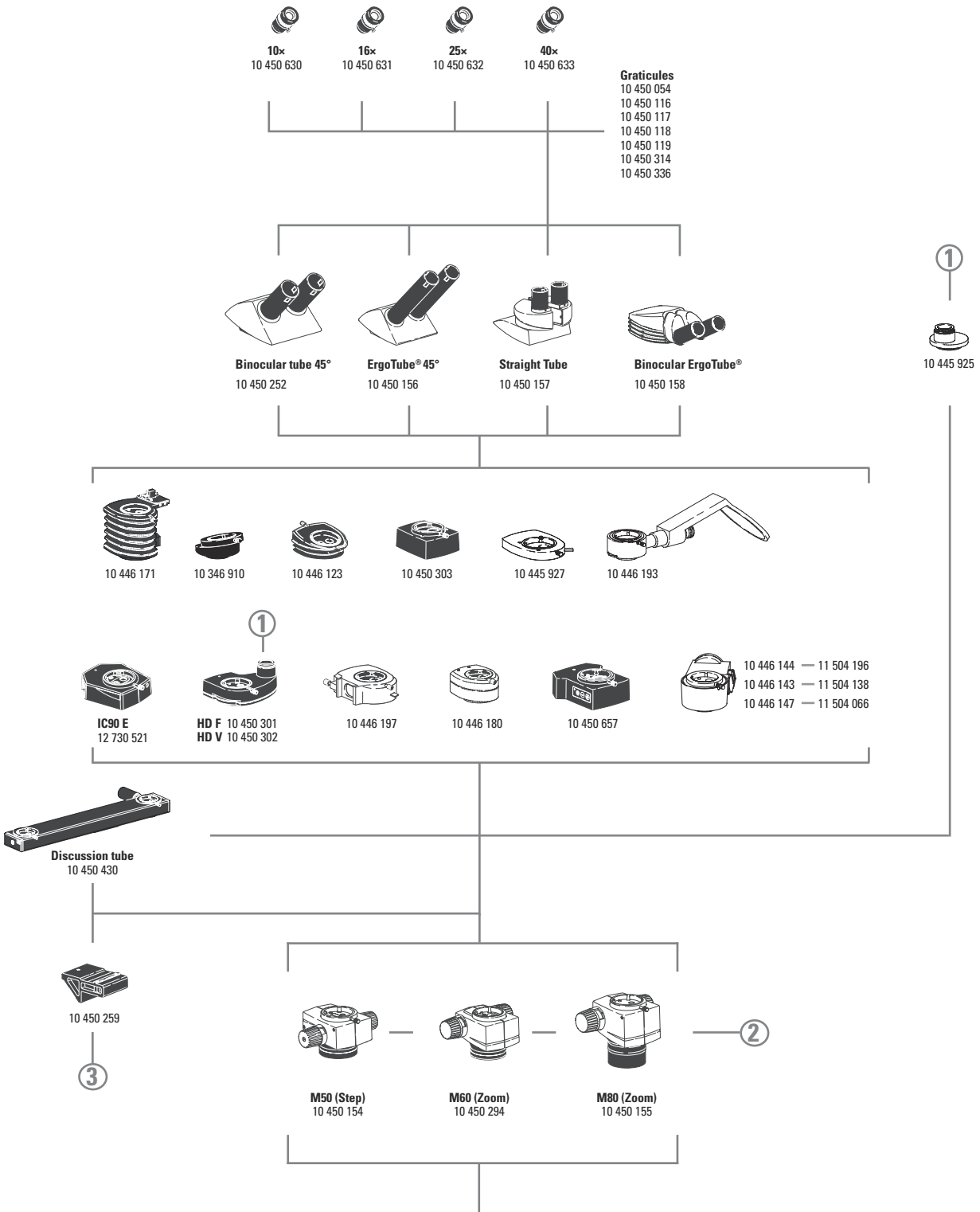
11 600 269 FireWire cable, FW-b-b, 2.5 m, 9-pin to 9-pin
11 600 254 FireWire cable, FW-a-b, 2.5 m, 6-pin to 9-pin
12 730 211 HDMI-cable, 3 m, HDMI 2x standard-A
12 730 530 USB3-cable, 3 m standard-A to micro-B
12 730 446 FW-b, notebook kit (includes PCcard express, power suppy: 100–240 V, 24 W, adapter FW-b-a)
12 730 447 FW-b, PCI express card
12 730 495 USB3, PCI express card

**Phototubes and C-mounts**

10 447 319 Adapter T2, Canon EOS
10 447 436 1.6× DSLR tube with T2 thread (APS-C sensor)
10 446 175 2.5× DSLR tube with T2 thread (24×36 mm sensor)
10 445 928 0.32× video objektive with C-mount for 1/3" digital cameras
10 450 528 0.5× video objektive with C-mount for 1/2" digital cameras
10 447 367 0.63× video objektive with C-mount for 2/3" digital cameras
10 446 307 0.8× video objektive with C-mount for 2/3" digital cameras
10 445 930 1.0× video-/photo objektive
10 450 317 1.0× C-mount adapter for HC

**Eyepieces and tubes**

10 450 630 Wide-field eyepieces for eyeglass wearers 10×/23, distortion-free, dioptric correction, with eyecups*
10 450 631 Wide-field eyepieces for eyeglass wearers 16×/15, distortion-free, dioptric correction, with eyecups*
10 450 632 Wide-field eyepieces for eyeglass wearers 25×/9.5, distortion-free, dioptric correction, with eyecups*




# ARTICLE DESCRIPTIONS

10 450 633 Wide-field eyepieces for eyeglass wearers 40×/6, distortion-free, dioptric correction, with eyecups*
* replaceable

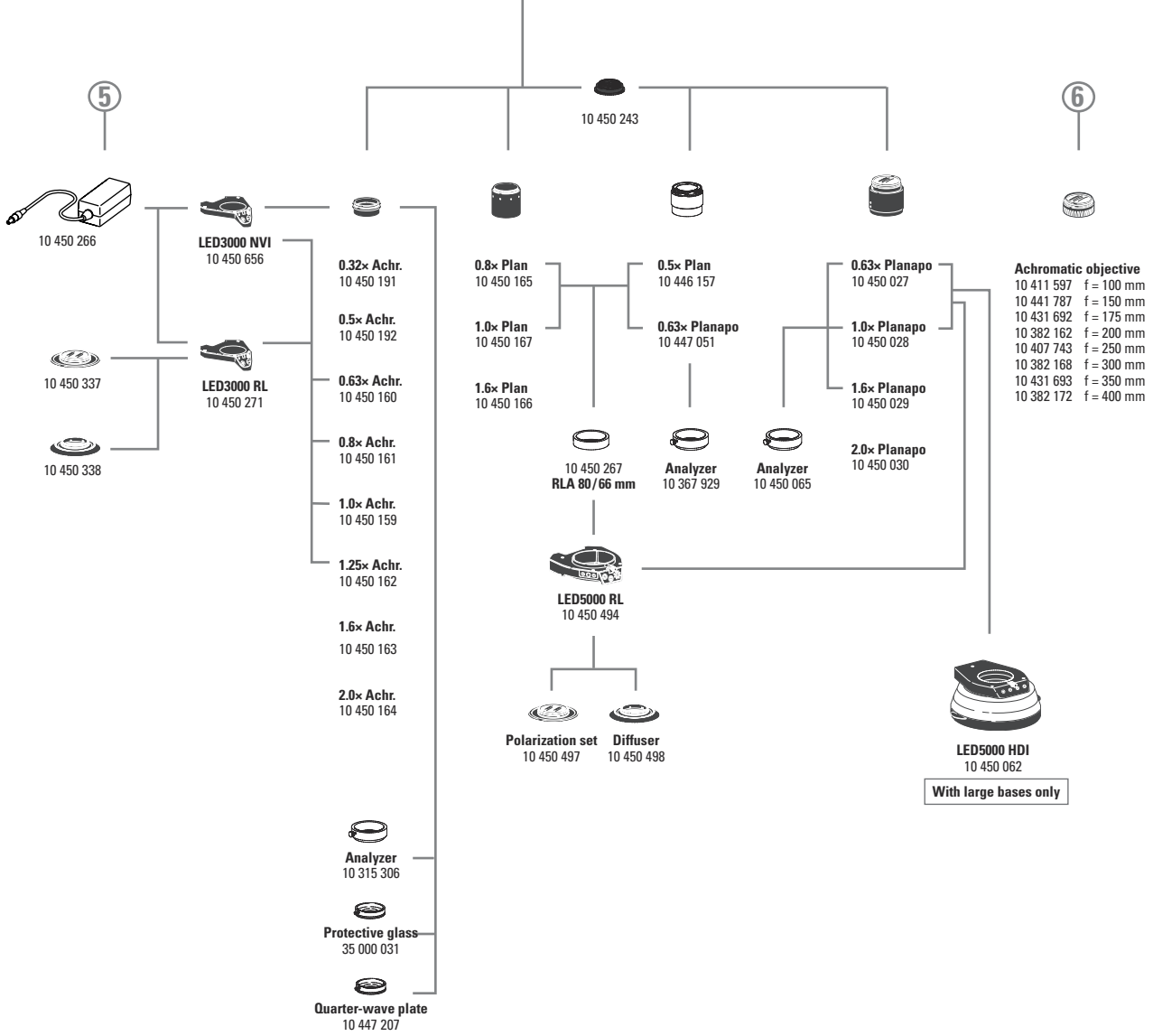
10 450 054 Reticule for M-series with encoding
10 450 116 Reticule, 5 mm / 0.05 mm
10 450 117 Reticule 10 mm / 0.1 mm
10 450 118 Graticule, 100 scale intervals / 0.001"
10 450 119 Graticule, crosshair
10 450 314 Blank graticule glass for individual marking, with holder
10 450 336 Graticule 12 mm
10 450 252 Inclined binocular tube, 45° viewing angle
10 450 156 Binocular ErgoTube® with 45° viewing angle and long tubes
10 450 157 Straight binocular tube with 90° viewing angle
10 450 158 Binocular ErgoTube® with variable 10° – 50° viewing angle
10 446 123 ErgoWedge® 5° – 25°
10 346 910 ErgoWedge® ±15
10 450 303 ErgoModule® 50 mm
10 446 197 Video/phototube HD-50
10 450 301 Video/phototube HD-F, 50 %, 50 %
10 450 302 Video/phototube HD-V, 100 %, 50 %, 50 %, 100 %
12 730 521 Leica IC90 E camera kit
10 446 180 Coaxial incident light housing for fiber-optic light
10 445 925 Video/phototube A
10 446 193 Drawing tube
10 445 927 Double-iris diaphragm
10 446 171 ErgoModule® 30 mm – 120 mm

**Zoom systems and accessories**

10 450 154 Leica M50 optics carrier with five-step mag. changer
10 450 294 Leica M60 optics carrier with zoom mag. changer 6:1
10 450 155 Leica M80 optics carrier with zoom mag. changer 8:1
10 450 104 Microscope carrier for MZ series instruments
10 450 106 Microscope carrier for Leica M50/M80, as well as S and Z-series

**Objectives and optical accessories**

10 450 191 Achromatic objective 0.32×, working distance 303 mm, ∅ 58 mm
10 450 192 Achromatic objective 0.5×, working distance 188.5 mm, ∅58 mm
10 450 160 Achromatic objective 0.63×, working distance 148 mm, ∅58 mm
10 450 161 Achromatic objective 0.8×, working distance 114 mm, ∅58 mm
10 450 159 Achromatic objective 1.0×, working distance 89.6 mm, ∅58 mm
10 450 162 Achromatic objective 1.25×, working distance 65.5 mm, ∅58 mm
10 450 163 Achromatic objective 1.6×, working distance 46 mm, ∅58 mm
10 450 164 Achromatic objective 2×, working distance 27.4 mm, ∅58 mm
10 446 157 Planachromatic objective 0.5×, working distance 135 mm, ∅66 mm
10 450 165 Planachromatic objective 0.8×, working distance 107 mm, ∅66 mm
10 450 167 Planachromatic objective 1.0×, working distance 83.4 mm, ∅66 mm
10 450 166 Planachromatic objective 1.6×, working distance 41.5 mm, ∅66 mm
10 447 051 Planapochromatic objective 0.63×, working dist. 97 mm, ∅ 66 mm
10 450 027 Planapochromatic objective 0.63×, working dist. 67 mm, ∅ 80 mm

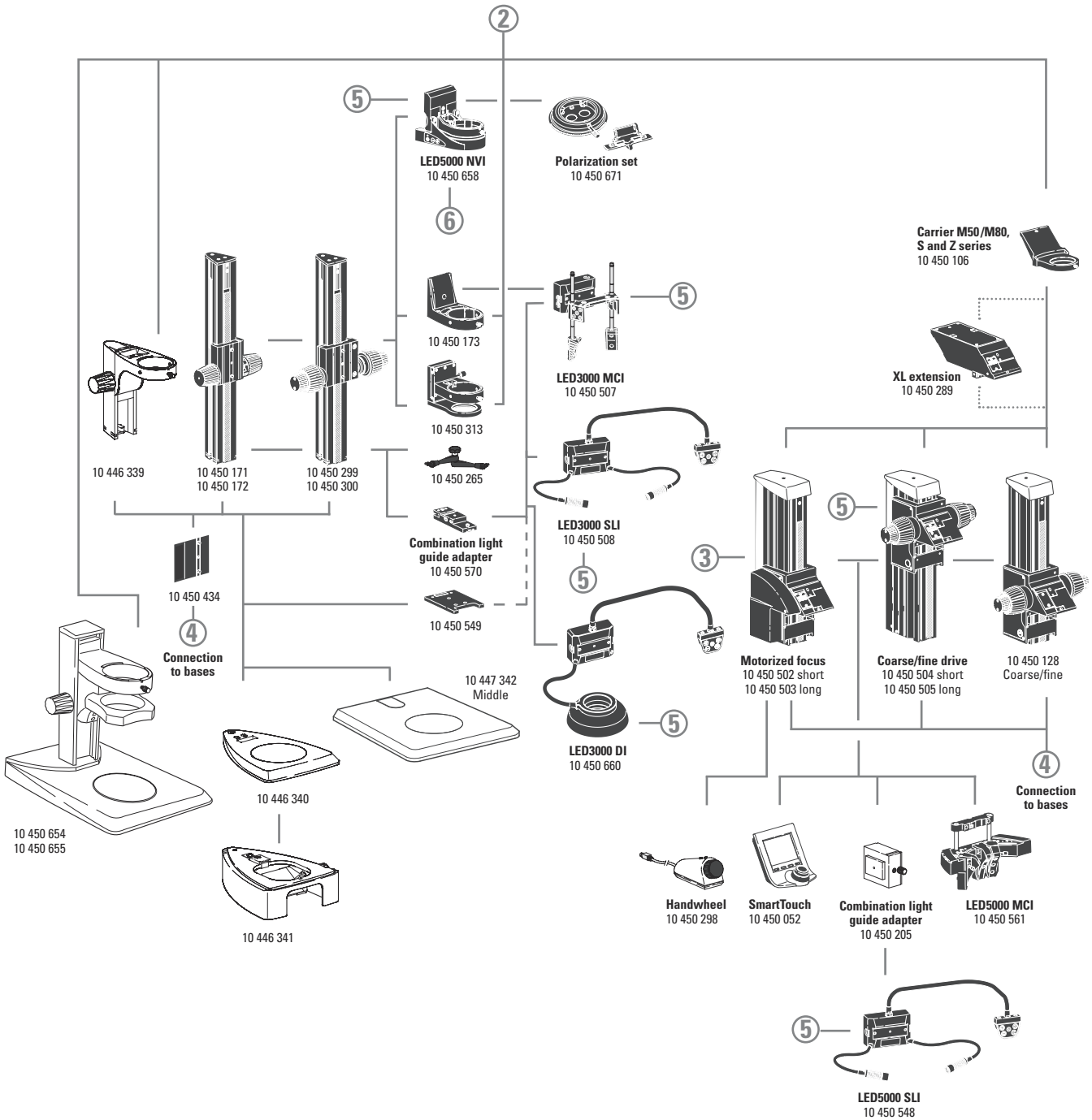



# ARTICLE DESCRIPTIONS

| | |
|---|---|
| 10 450 028 | Planapochromatic objective 1.0×, working dist. 61.5 mm, ∅ 80 mm |
| 10 450 029 | Planapochromatic objective 1.6×, working dist. 30.5 mm, ∅ 80 mm |
| 10 450 030 | Planapochromatic objective 2×, working dist. 20.1 mm, ∅ 85 mm |
| 10 411 597 | Achromatic objective f = 100 mm |
| 10 441 787 | Achromatic objective f = 150 mm |
| 10 431 692 | Achromatic objective f = 175 mm |
| 10 382 162 | Achromatic objective f = 200 mm |
| 10 407 743 | Achromatic objective f = 250 mm |
| 10 382 168 | Achromatic objective f = 300 mm |
| 10 431 693 | Achromatic objective f = 350 mm |
| 10 382 172 | Achromatic objective f = 400 mm |
| 10 447 207 | Quarter-wave plate, ∅ 58 mm |
| 35 000 031 | Protective glass holder ∅ 58 mm with protective glass |
| 10 315 306 | Analyzer, ∅ 58 mm |
| 10 450 065 | Analyzer in rotatable mount, ∅ 80 mm, for planachromat and planapochromat ∅ 80 mm |
| 10 367 929 | Analyzer in revolving mount for planachromatic and planapochromatic ∅ 66 mm |
| 10 450 243 | Adapter with outer diameter M60 × 1 / inner ∅ M65 × 1.5 |
| 10 450 430 | Discussion tube |
| 10 450 259 | Carrier for discussion tube |
| 10 446 144 | UV fluorescence module |
| 10 446 143 | GFP LP fluorescence module |
| 10 446 147 | RFP LP fluorescence module |
| 11 504 196 | LED module 365 nm |
| 11 504 138 | LED module 470 nm |
| 11 504 066 | Lamp housing 106 z, Hg 50 W |
| 10 450 265 | Articulated arm; M5/M6 |

**Illumination**

| | |
|---|---|
| 10 450 271 | LED3000 RL – ring illuminator, for ∅ 58 mm objectives, 24 power LEDs |
| 10 450 337 | Polarization set for Leica LED3000 RL |
| 10 450 338 | Diffuser for Leica LED3000 RL |
| 10 450 656 | LED3000 NVI – vertical illuminator for ∅ 58 mm objectives, for 60–150 mm working distance |
| 10 450 501 | RLA 58/66 ring light adapter for LED3000 RL and LED3000 NVI to objectives with ∅ 66 mm |
| 10 450 508 | LED3000 SLI, spotlight illuminator, double-armed gooseneck 300 mm long, with 2 power LEDs, 5,600 K color temperature |
| 10 450 507 | LED3000 MCI, multi-contrast illumination with 4 power LEDs |
| 10 450 660 | LED3000 DI, diffuse illumination |
| 10 450 549 | LED3000 SLI/MCI adapter for installation between the focusing column and baseplate |
| 10 450 570 | Combination light guide-adapter to focusing columns of the routine M series, for LED3000 SLI and LED3000 MCI |
| 10 450 494 | LED5000 RL-80/40 – ring illuminator, for ∅ 80 mm objectives, 40 LEDs |
| 10 450 497 | Polarization set for Leica LED5000 RL-80/40 |
| 10 450 498 | Diffuser for Leica LED5000 RL-80/40 |
| 10 450 267 | RLA 80/66 ring illuminator adapter for objectives with ∅ 66 mm |




# ARTICLE DESCRIPTIONS

| | |
|---|---|
| 10 450 658 | LED5000 NVI, near-vertical illumination for routine stereomicroscopes |
| 10 450 671 | Polarization set for LED5000 NVI |
| 10 450 548 | LED5000 SLI, spotlight illuminator, double-armed gooseneck 500 mm long, with 2 power LEDs, 5,600 K color temperature |
| 10 450 561 | LED5000 MCI, multi contrast illumination with 9 power LEDs, |
| 10 450 657 | LED5000 CXI – coaxial LED incident-light illuminator, 1.5× magnification factor |
| 10 450 062 | LED5000 HDI, diffuse illumination, FlexiDome, ideal for highly reflective specimens |
| 10 450 205 | Combination light guide-adapter to focusing columns of the high-performance M series, for LED5000 SLI |
| 10 450 266 | Power supply for LED3000/LED5000 |

**Focusing drive**

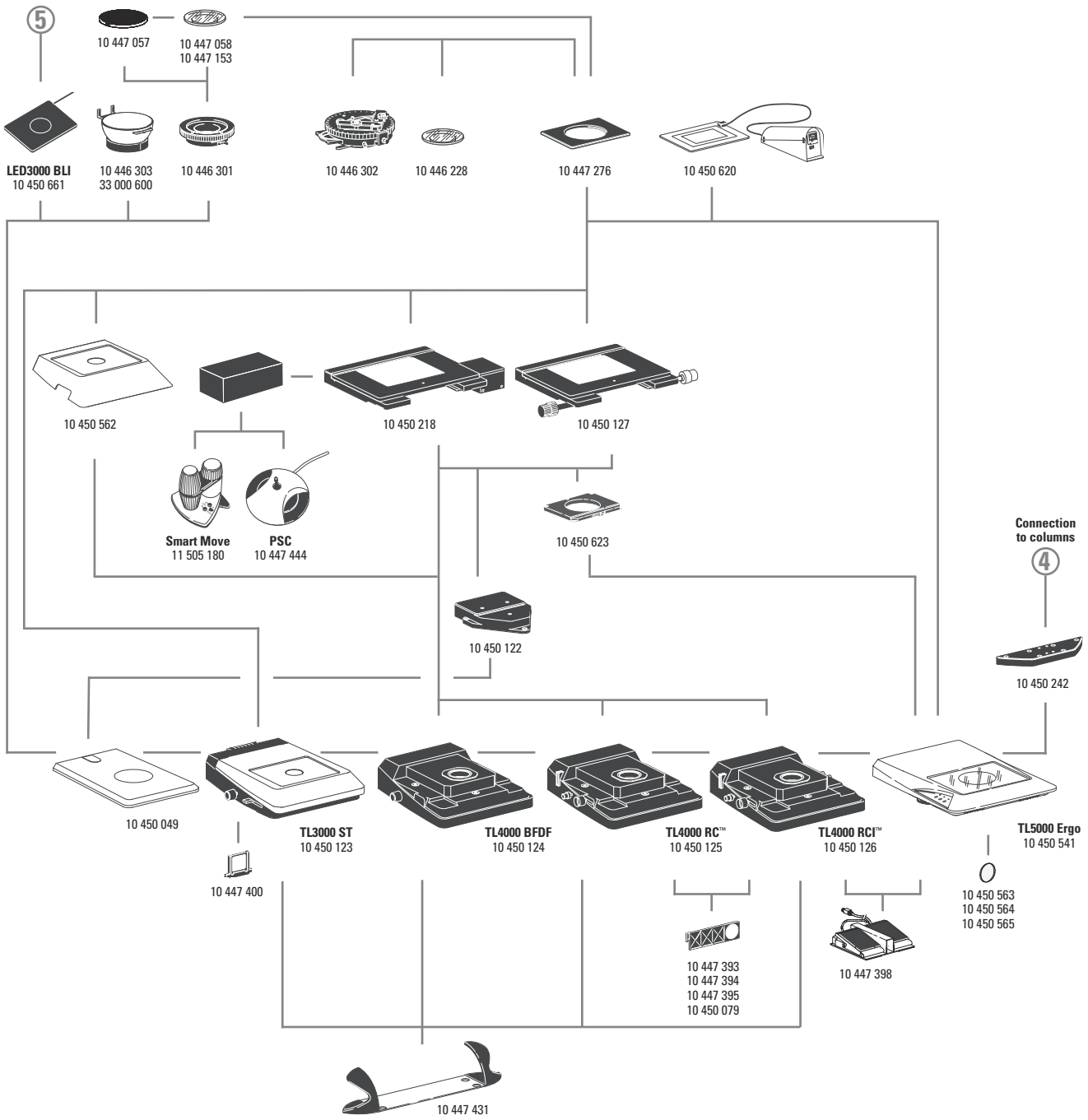
| | |
|---|---|
| 10 450 504 | Coarse/fine focusing drive with profile column 420 mm |
| 10 450 505 | Coarse/fine focusing drive with profile column 620 mm |
| 10 450 502 | Motorized focus with profile column 420 mm |
| 10 450 503 | Motorized focus with profile column 620 mm |
| 10 450 128 | Coarse/fine focusing drive with profile column 420 mm, for M125 |
| 10 450 171 | Coarse focusing drive with profile column 300 mm |
| 10 450 172 | Coarse focusing drive with profile column 500 mm |
| 10 450 299 | Coarse/fine focusing drive with profile column 300 mm |
| 10 450 300 | Coarse/fine focusing drive with profile column 500 mm |
| 10 450 173 | Microscope carrier for M-Series with 76 mm interface |
| 10 450 313 | Microscope carrier AX |
| 10 446 339 | Focusing drive with integrated microscope carrier |
| 10 450 434 | Spacer for routine columns on high-performance bases |

**Controls**

| | |
|---|---|
| 11 505 180 | Leica Smart Move control unit for Leica IsoPro™ motorized cross-stage |
| 10 447 444 | Leica PSC control unit for Leica IsoPro™ motorized stage |
| 10 450 052 | SmartTouch, external control unit with integr. touchscreen for controlling all functions |
| 10 450 298 | Manual controller for motorized focus |
| 10 447 398 | Footswitch for motorized stereomicroscopes |

**Incident light and transmitted light bases**

| | |
|---|---|
| 10 450 049 | Incident light base large |
| 10 447 342 | Incident light base medium |
| 10 446 340 | Incident light base small |
| 10 446 341 | Sub-base for transmitted light with reflector for 10 446 340 Cold light source with light guide required |
| 10 450 654 | LED2000 incident light stand |
| 10 450 655 | LED2500 incident and transmitted light stand |
| 10 450 123 | Transmitted light base TL3000 ST with bright field (HF) and single-sided dark field (DF) |

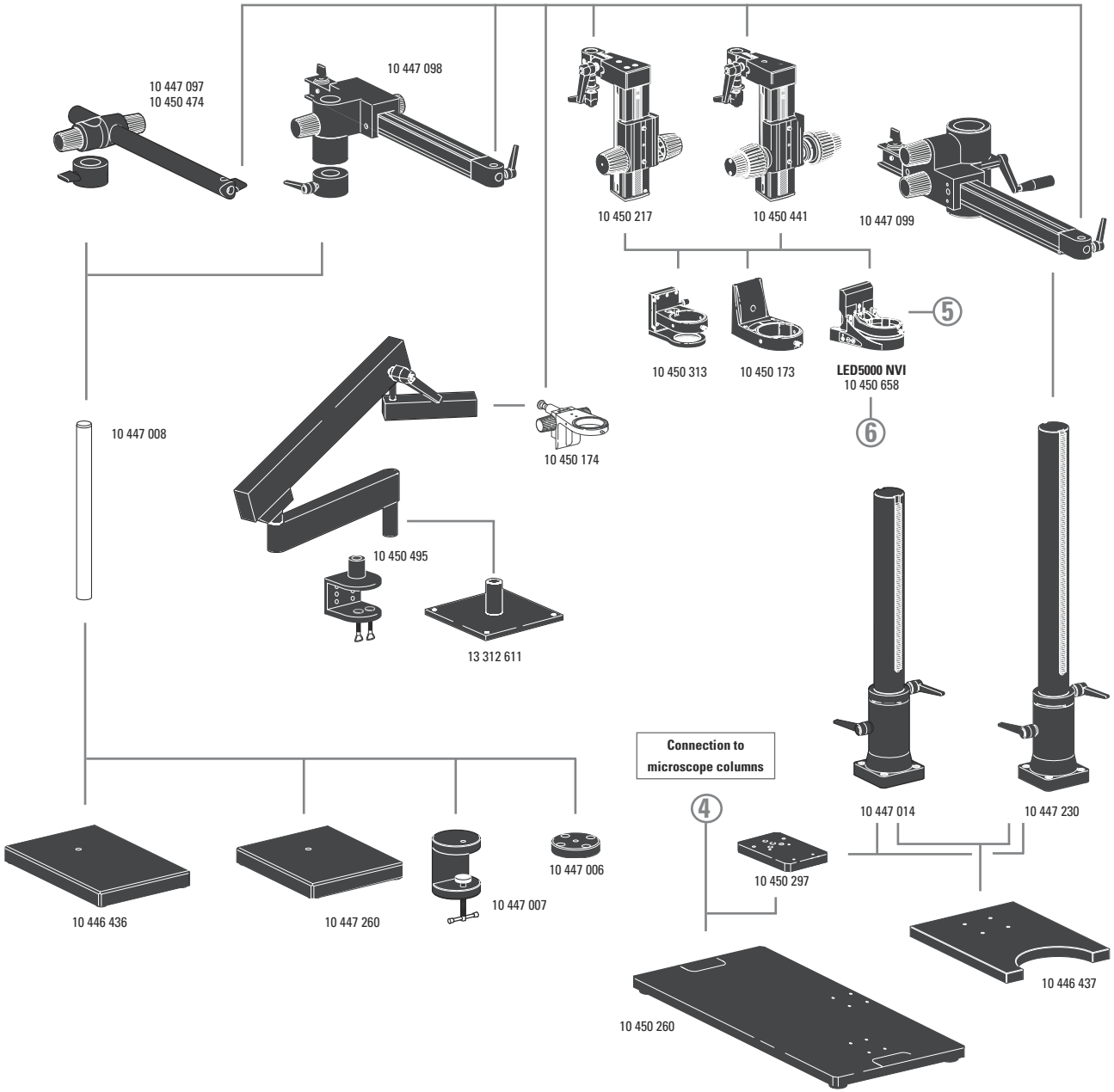



# ARTICLE DESCRIPTIONS

10 447 400 Daylight filter for TL3000 ST base
10 450 124 TL4000 BFDF transmitted light base for external cold-light sources with HF and circular DF
10 450 125 Transmitted light base TL4000 RC™ for external cold-light sources with HF, single-sided DF and Rottermann Contrast™ (RC)
10 450 126 Transmitted light base TL4000 RCI™ with HF, DF, RC
10 447 393 Filter ND (gray filter) for base TL4000 RC™/RCI™
10 447 394 BG38 filter for base TL4000 RC™/RCI™
10 447 395 UV filter for TL4000 RC™/RCI™ base
10 450 079 Daylight filter for base TL4000 RCI™
10 450 541 Transmitted light base TL5000 Ergo with integrated LED illumination, automatic contrasting, HF, double-sided DF and RC
10 450 563 Milk-glass filter for base TL5000 Ergo
10 450 564 Green filter for base TL5000 Ergo
10 450 565 Polarization filter for base TL5000 Ergo
10 450 242 Standard adapter plate between column and transmitted light base
10 450 260 XL Universal Base for specimens up to 300 × 300 mm
10 450 297 Adapter for base 10 450 260 for all swinging-arm columns
10 450 289 XL extension – for positioning Leica stereomicroscopes on universal base 10 450 260
10 447 431 Leica ErgoRest™ handrest for fatigue-free working

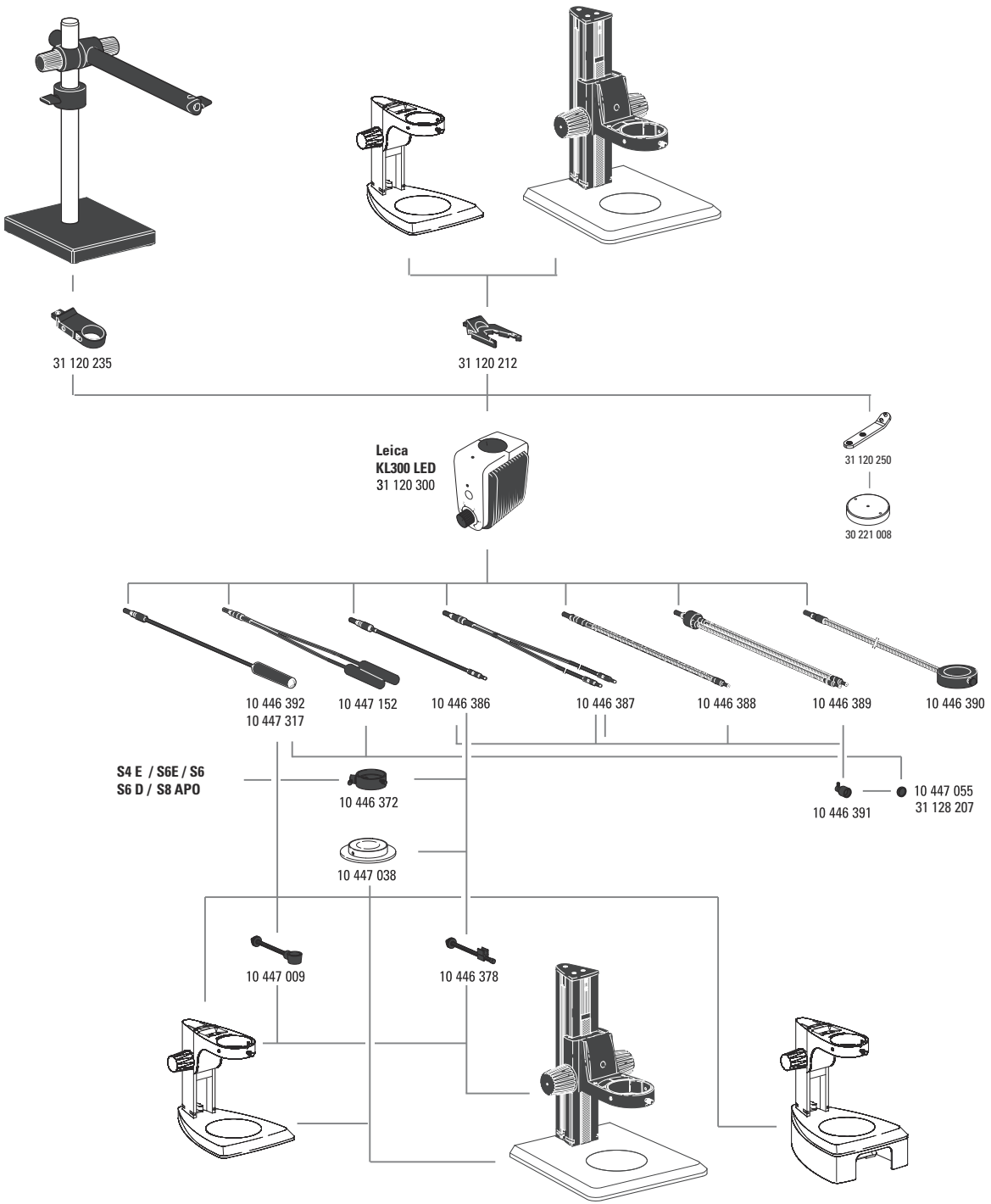
**Stages**

10 450 562 Standard stage for transmitted light bases TL4000 BFDF, TL4000 RC™ and TL4000 RCI™
10 450 127 Leica IsoPro™ Manual Cross-stage *
10 450 059 Additional buttons for IsoPro™ Manual Cross-stage
10 450 218 Leica IsoPro™ Motorized Cross-stage*
*For TL4000 BFDF, TL4000 RC™, TL4000 RCI™ transmitted light bases and incident light base (with adapter 10 450 122)
10 450 122 Adapter between cross-stage and incident light base 10 450 049
10 450 623 Adapter between cross-stages 10 450 218 / 10 450 127 and TL5000 Ergo
10 450 620 Leica MATS TL heating stage insert with control unit for TL bases
10 447 276 Adapter for stages with ∅120 mm
10 446 301 Gliding stage, ∅120 mm
10 447 153 Glass plate matte, ∅ 120 mm
10 450 057 Stage plate black/white, ∅ 120 mm
10 450 058 Stage plate b/w for TL bases, ∅ 120 mm
10 446 302 Polarization stage, ∅ 120 mm
10 382 130 Attachable mechanical stage for polarization stage
10 361 719 Red compensator 1 for Pol rotating stage
10 446 303 Cup stage, ∅ 120 mm
33 000 600 Cup stage, ∅ 120 mm, surface ∅ 150 mm, revolving
10 446 228 Glass stage plate with Pol, ∅ 120 mm; 170×220 mm
10 450 661 LED3000 BLI; backlight illumination for ∅ 120 mm; 170×220 mm




# ARTICLE DESCRIPTIONS

| | |
|---|---|
| 10 447 260 | Baseplate, small |
| 10 446 436 | Baseplate, medium |
| 10 447 008 | Vertical column 470/35 mm |
| 10 447 097 | Horizontal arm ESD, 500 mm |
| 10 450 474 | Horizontal arm ESD, 290 mm |
| 10 447 098 | Standard horizontal arm |
| 10 447 006 | Flange |
| 10 447 007 | Stage clamp |
| | |
| 10 446 437 | Baseplate, large |
| 10 447 014 | Vertical column 560/57 mm |
| 10 447 230 | Vertical column 800/57 mm |
| 10 447 099 | Horizontal arm, large |
| | |
| 10 450 495 | Flex-arm stand with table clamp |
| 13 312 611 | Table holder for flex-arm stand |
| | |
| 10 450 174 | Inclinable focusing drive |
| 10 450 217 | Focusing drive with inclinable column, not with baseplate small |
| 10 450 441 | Coarse/fine focusing drive with inclinable column, not with baseplate small |
| 10 450 173 | Microscope carrier for focusing drive 10 450 217 |
| 10 450 313 | Microscope carrier AX |
| 10 450 260 | Universal plate XL for specimens up to 300 × 300 mm |
| 10 450 297 | Adapter for universal plate 10 450 260 for all swing arm columns |
| 10 450 289 | XL extension – for positioning Leica stereomicroscopes on the universal base XL 10 450 260 |




# ARTICLE DESCRIPTIONS

**Leica KL300 LED illumination**

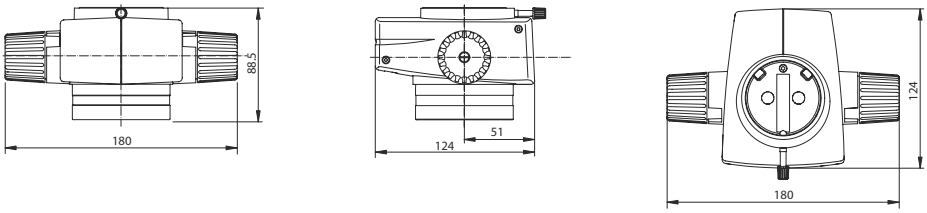
| | |
|---|---|
| 31 120 300 | KL300 LED cold-light LED source with power supply unit |
| 31 120 212 | KL300 LED adapter for focusing column |
| 31 120 235 | KL300 LED adapter for swing-arm stand |
| 31 120 250 | KL300 LED adapter for baseplate 30 221 008 |
| 30 221 008 | Base plate for KL300 LED |

| | |
|---|---|
| 10 446 392 | Universal light guide, 600 mm |
| 10 447 317 | Universal light guide, 1,000 mm |
| 10 447 152 | Universal light guide, 2-arm, 600 mm |
| 10 446 386 | Flexible light guide, 1-arm, 550 mm |
| 10 446 387 | Flexible light guide, 2-arm, 750 mm |
| 10 446 388 | Gooseneck light guide 1-arm, 500 mm |
| 10 446 389 | Gooseneck light guide 2-arm, 500 mm |
| 10 446 390 | 6-point ring illuminator, inner diameter 58 mm, 750 mm |
| 10 447 038 | Transmitted light stage |
| 10 446 391 | Auxiliary focusing lens |
| 10 447 055 | Daylight filter for auxiliary focus |
| 31 128 207 | Warm light filter for focus lens |
| 10 446 378 | Arm for flexible light guide |
| 10 447 009 | Arm for universal light guide |
| 10 446 372 | Vertical illumination |

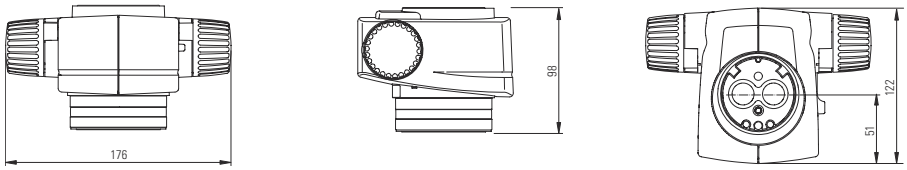
**Spare parts for Leica L2**

| | |
|---|---|
| 10 447 056 | Halogen lamp 8 V/20 W, L2 |
| 10 447 015 | Leica L2 transformer, 90–250 V (not shown) |

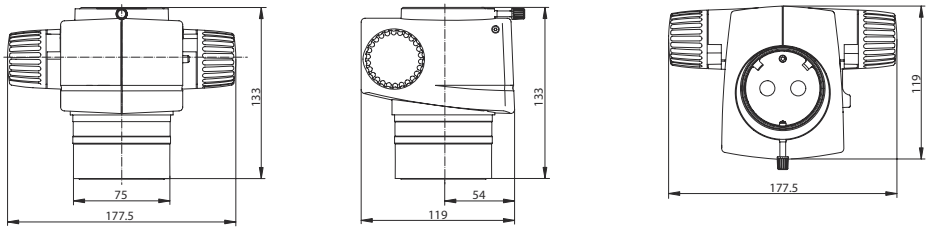
## Leica M50



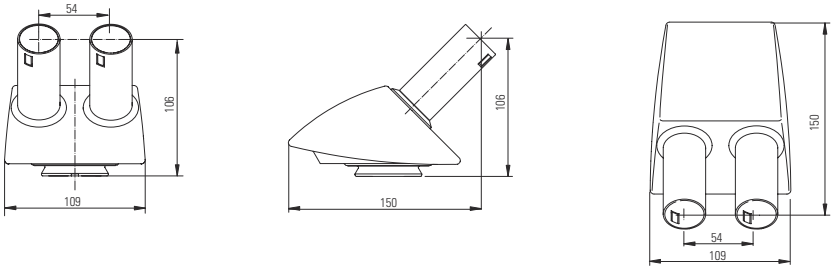

## Leica M60



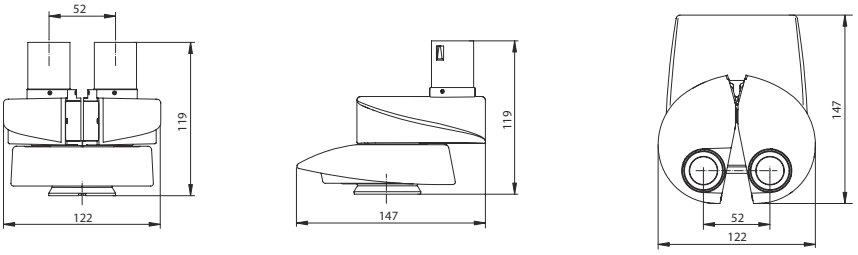

## Leica M80



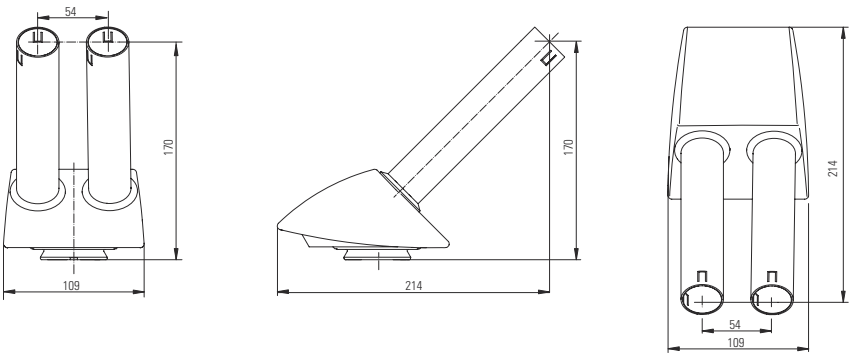

## 45° tube




## Straight tube



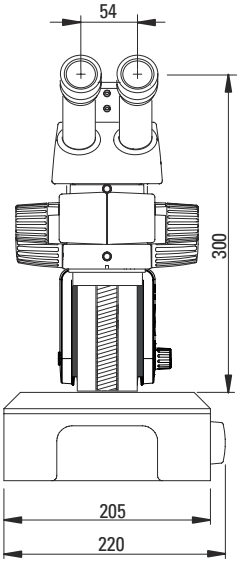

## Binocular ErgoTube®

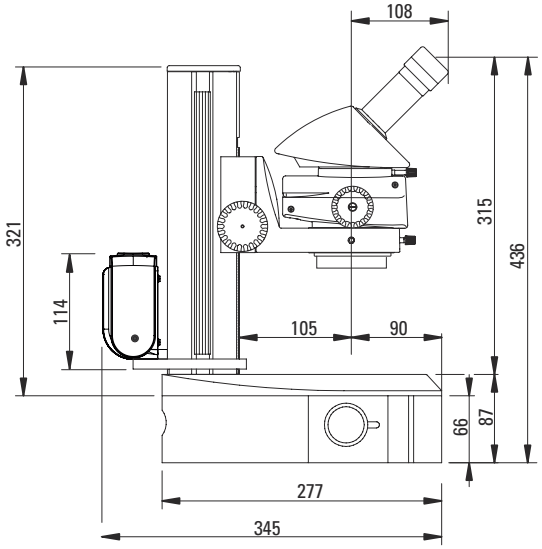


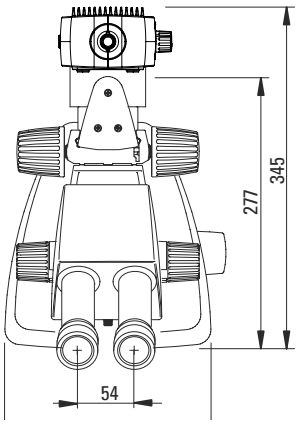

Dimensions in mm

# Leica M50

**with small incident light base, transmitted light base, Leica KL300 illumination and 45° binocular tube**

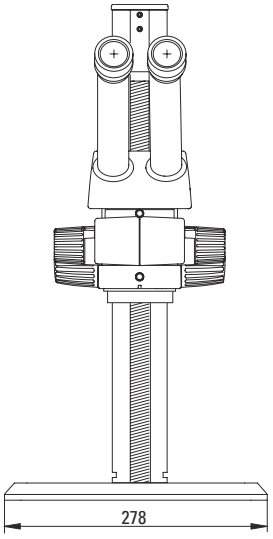


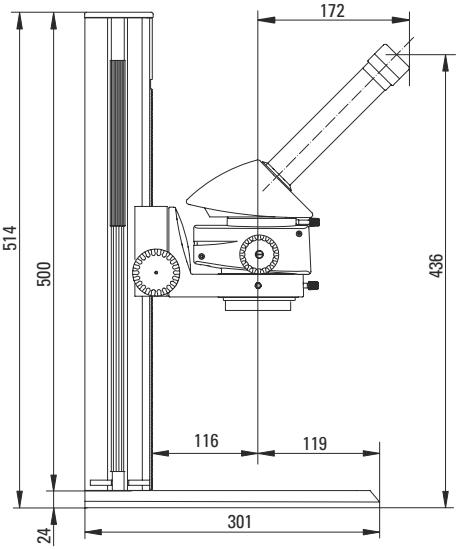



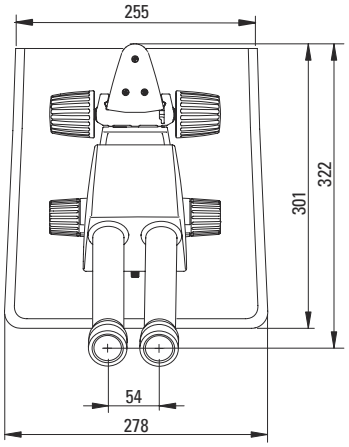




# Leica M50

**with large incident light base and ErgoTube® 45°**



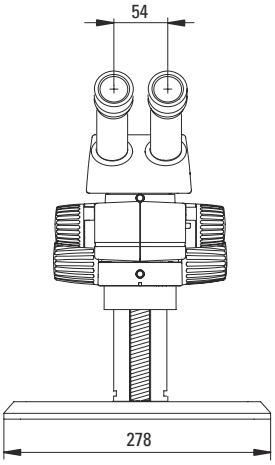



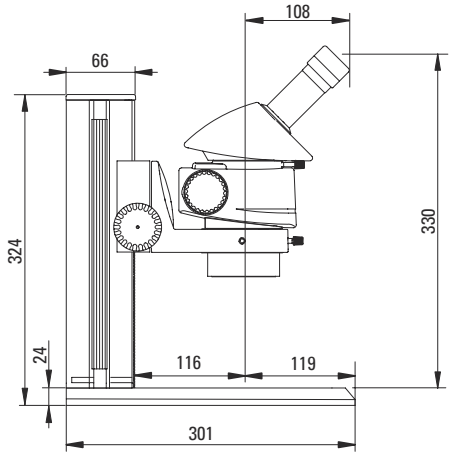



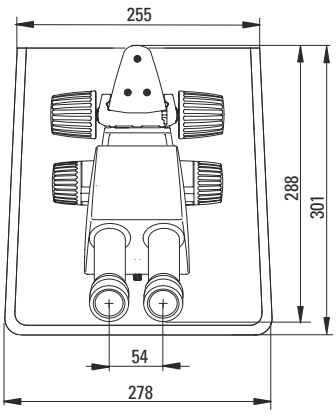

Dimensions in mm

# Leica M60

**with large incident light base and 45° binocular tube**

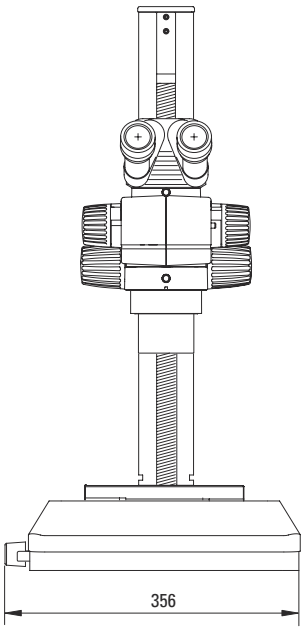


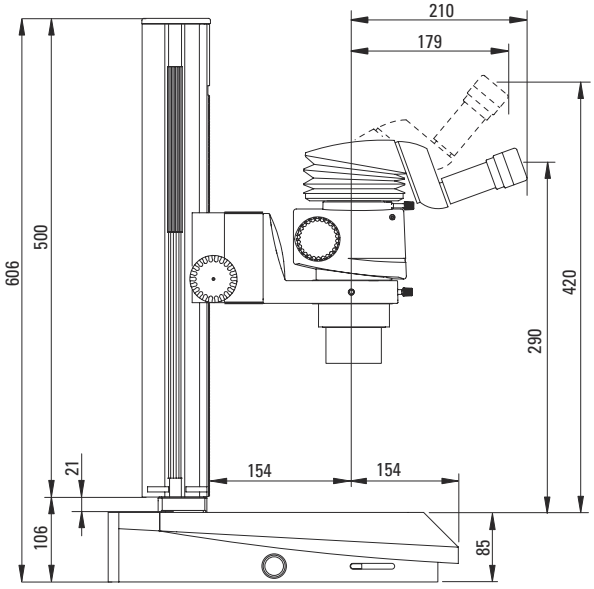



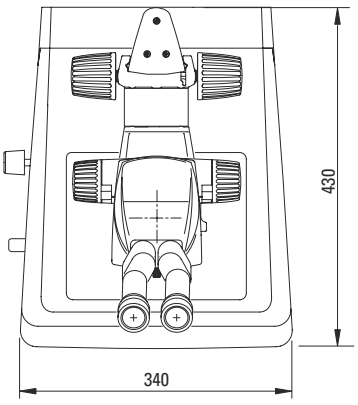




# Leica M80

**with TL3000 ST transmitted light base and binocular ErgoTube®**

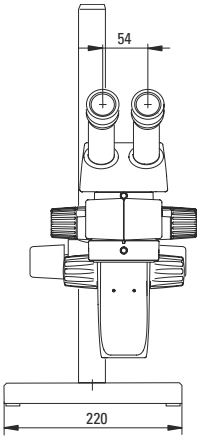


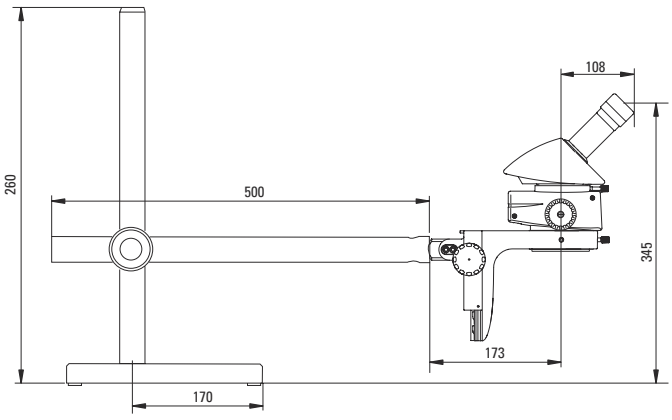



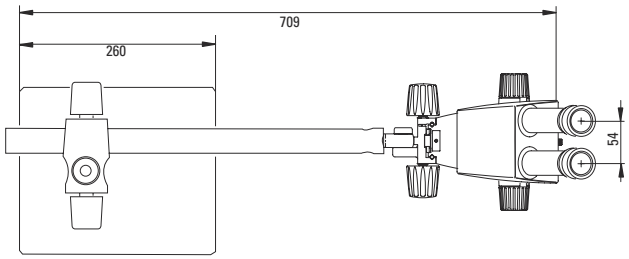



# Leica M50

**with small swing arm stand and 45° binocular tube**

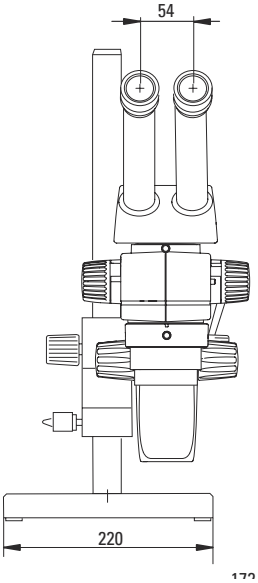


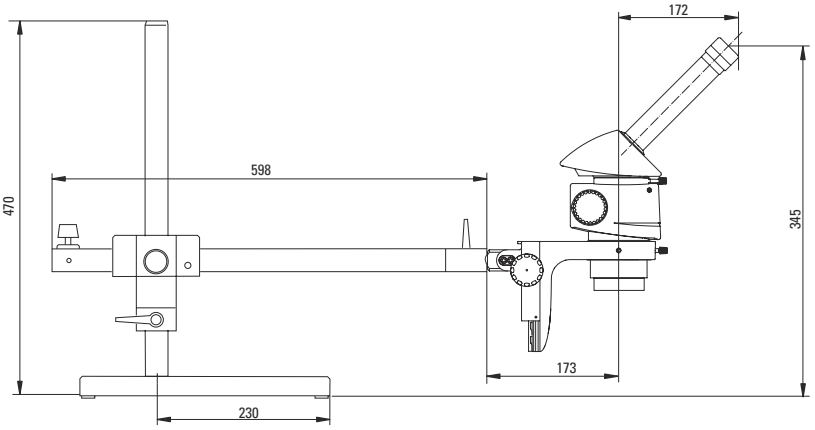



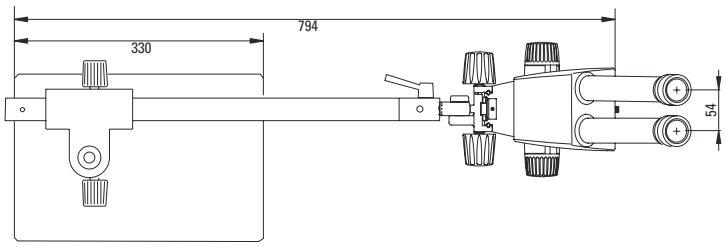




# Leica M80

**with standard swing arm stand and 45° binocular tube**



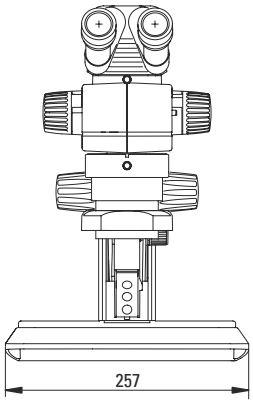



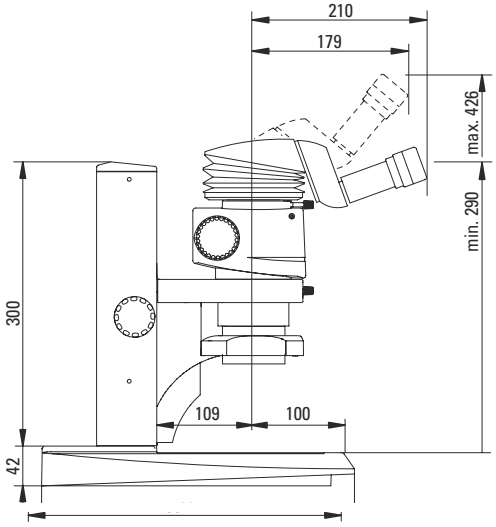



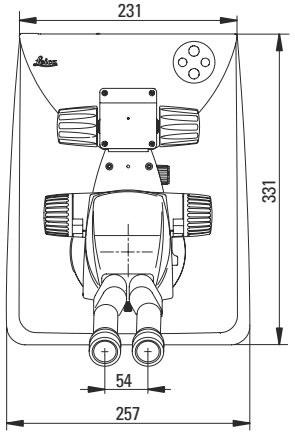

Dimensions in mm

# Leica M80

**with Leica LED2500 and binocular ErgoTube®**

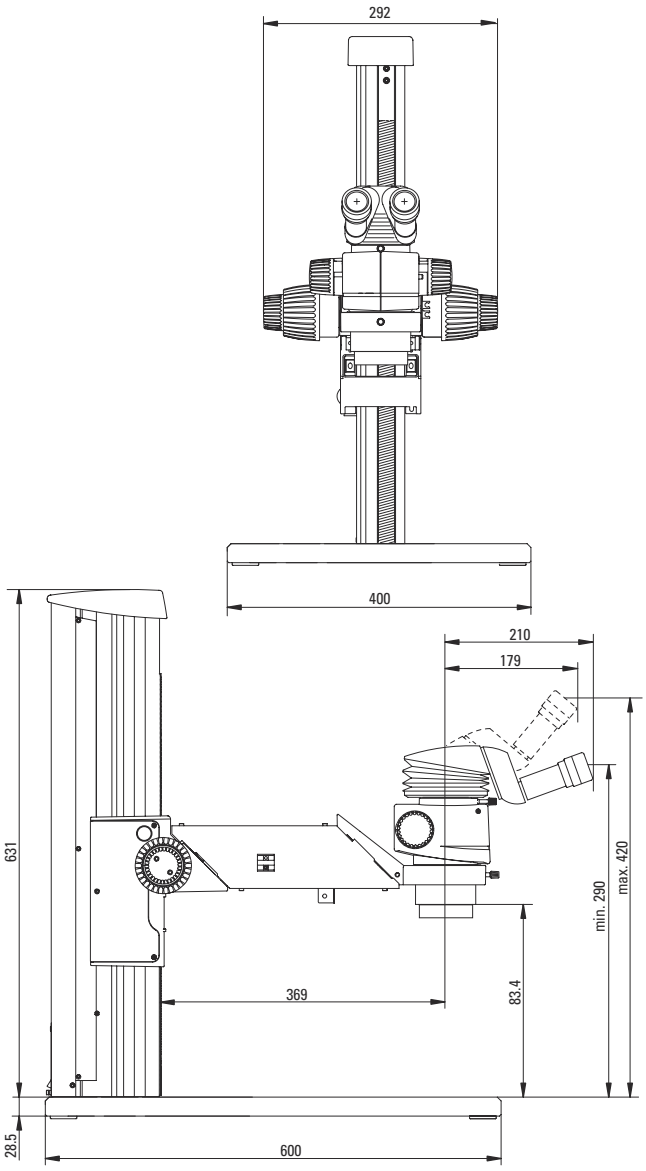


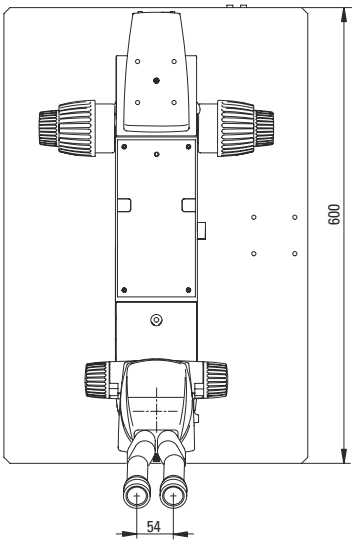




# Leica M80

**with XL Universal Base, XL extension and Binocular ErgoTube®**



Leica
MICROSYSTEMS

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