

microscopes for advanced life sciences

Delphi-X Observer

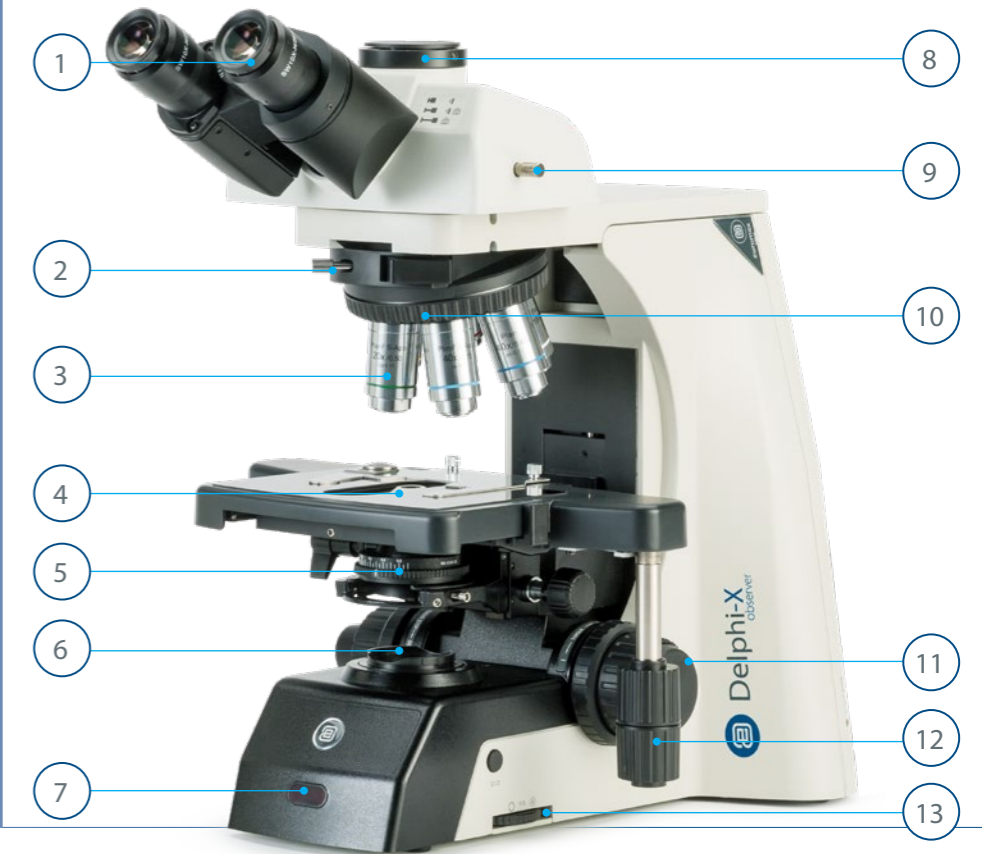
Superior imaging



State-of-the-art microscopes for advanced Life Science applications

The ergonomic design and outstanding state-of-the-art objectives make the Delphi-X Observer the ideal microscope for advanced Life Science applications such as cytology and anatomopathology

The 25 mm field of view of the eyepieces and the plan apochromatic objectives enable observations with perfect color rendering at high resolving power



FEATURES

- 1 | DIN Super Wide field SWF 10x/25 mm, Ø 30 mm
- 2 | For slider with 1 lambda retardation plate for observation of monosodium crystal deposition (gout) and for DIC slot (DIC ready)
- 3 | Infinity corrected 60 mm achromatic Plan, Plan Phase or Plan Semi-Apochromatic EIS objectives
- 4 | 300/190 x 152 mm stage with 78 x 32 mm integrated right-handed mechanical stage with scratch-resistant Gorilla glass
- 5 | Height adjustable N.A. 0.90 / 1.25 Abbe swing-out condenser
- 6 | 3 W LED or 100 W halogen light source
- 7 | iCare sensor for energy saving
- 8 | Universal photo tube
- 9 | 3-Position beamsplitter (100:0 / 80:20 / 0:100)
- 10 | Revolving sextuple reversed nosepiece on ball-bearings
- 11 | Precise coarse and fine adjustments
- 12 | Adjustable stage adjustment knobs
- 13 | Full Köhler diaphragm

OPTIONAL

- EWF 10x/22 mm eyepieces, Ø 30 mm
- Left-handed stage
- Stage with scratch-resistant Sapphire glass
- Ergonomic tilting head
- Face-to-face dual head
- Multi head with 2, 3,5 or 10 heads
- Motorized versions



Welcome

to the new world of advanced microscopy

With 25 mm field of view, unsurpassed 60 mm EIS objectives, sextuple revolver and a large rackless stage with scratch-resistant Gorilla glass, the Delphi-X Observer offers the absolute best available Life Science microscope on the market. Long working sessions will not be a problem due to the ergonomic design, low stage controls for either left or right-handed users and an optional ergonomic tilting head to match each user requirement

Trinocular head with universal 23.2 mm tube



EYEPIECES

- DIN Super Wide field SWF 10x/25 mm, Ø 30 mm eyepieces
- DIN Super Wide Field EWF 10x/22 mm, Ø 30 mm eyepieces also available on special request

HEAD

- Siedentopf trinocular with 30° inclined tubes
- Interpupillary distance adjustable between 47 and 78 mm
- 3-Position beamsplitter (100:0 / 80:20 / 0:100)
- Diopter adjustment on both eyepieces
- Optional: ergonomic tilting head, 0 - 35°
- Optional: face-to-face dual head
- Optional: multi head system with 2, 3, 5 or 10 heads

NOSEPIECE

Revolving sextuple reversed nosepiece on ball-bearings

MOTORISED NOSEPIECE

The Delphi-X Observer™ can be supplied with a motorized revolving sextuple reversed nosepiece. A precise step-motor allows the user to switch from objective by a simple push on a button. Another button allows quick switching between two preselected objectives. Standard with this nosepiece comes a motorized condenser



Optional: ergonomic tilting head



For slider with 1λ retardation plate for observation of monosodium crystal deposition (gout) and for DIC slot (DIC ready)

The Delphi-X Observer is equipped with a large rackless mechanical stage without sharp edges protruding from the sides of the microscope for improved safety

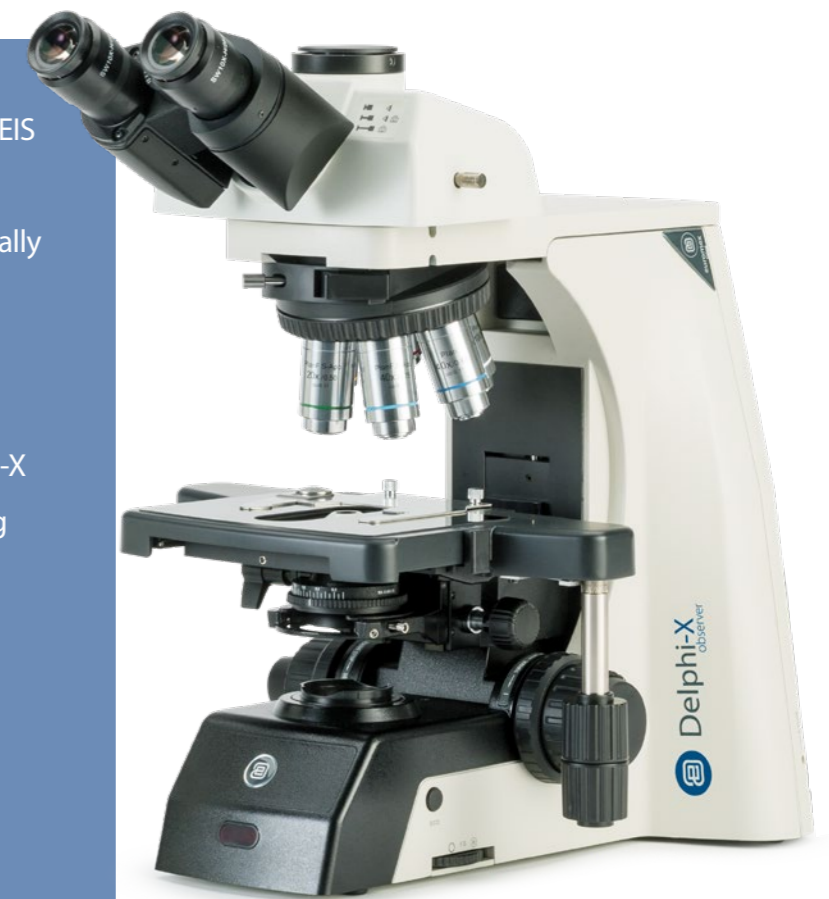
The standard supplied Gorilla glass makes this stage extremely scratch-resistant

The stage can be optionally supplied with Sapphire glass or as a left-handed version

Observe details

you have never seen before

The new design of infinity corrected Plan, Plan phase and Semi-Apochromatic 60 mm EIS objectives produce images with the highest possible resolving power and contrast. Virtually free of image distortion the image quality is absolutely superb and will let you observe details you have never seen before. With a field of view up to 25 mm, the Delphi-X Observer is suitable for the most demanding applications



DX.1153-PLI



The sextuple revolver allows users to choose six 60 mm EIS objectives with the highest possible resolving power and maximum contrast

Designed to be superior in accuracy and color reproduction, the EIS objectives are virtually free of aberrations

OBJECTIVES

Plan PLI EIS	2x/0.06 ⁽¹⁾	4x/0.10	10x/0.25	20x/0.40	S40x/0.65	S50x/0.95 oil ⁽¹⁾	S60x/0.80 ⁽¹⁾	S100x/1.25 oil	S100x/1.25 oil iris ⁽¹⁾
Plan Phase PLPHi EIS			10x/0.26	20x/0.41	S40x/0.66			S100x/1.25 oil	
Plan Semi-Apochromatic PLI-Apo EIS		4x/0.13	10x/0.30	20x/0.50	S40x/0.75			S100x/1.30 oil	

(1) Optional

ENHANCED INFINITY SYSTEM (EIS)

With 25 mm field of view, unsurpassed 60 mm Enhanced Infinity System (EIS) objectives, sextuple revolver and a large rackless stage with scratch-resistant Gorilla glass the Delphi-X Observer offers the absolute best available Life Science microscope on the market. Long working sessions will not be a problem due to the ergonomic design, low stage controls for either left or right handed users and an optional ergonomic tilting head to match each user requirement

All optics are anti-fungus treated and anti-reflection coated for maximum light throughput. The S40x, S50x, S60x and S100x objectives are spring loaded

OBJECTIVES

(Anatomo- and histopathology laboratories)

- Infinity corrected Plan Semi-Apochromatic EIS 4x/0.13 WD 16.5 mm, 10x/0.30 WD 8.1 mm, 20x/0.50 WD 2.1 mm, S40x/0.75 WD 0.70 mm, S100x/1.30 (oil immersion) 0.15 mm objectives

OBJECTIVES

(clinical routine laboratories)

- Infinity corrected Plan Achromatic EIS 4x/0.10 WD 30 mm, 10x/0.25 WD 10.2 mm, 20x/0.40 WD 12.0 mm, S40x/0.65 WD 0.7 mm, S100x/1.25 (oil immersion) WD 0.2 mm objectives
- Optional 2x/0.06 WD 7.5 mm, S50x/0.95 (oil immersion) WD 0.19 mm and S60x/0.80 WD 0.30 mm

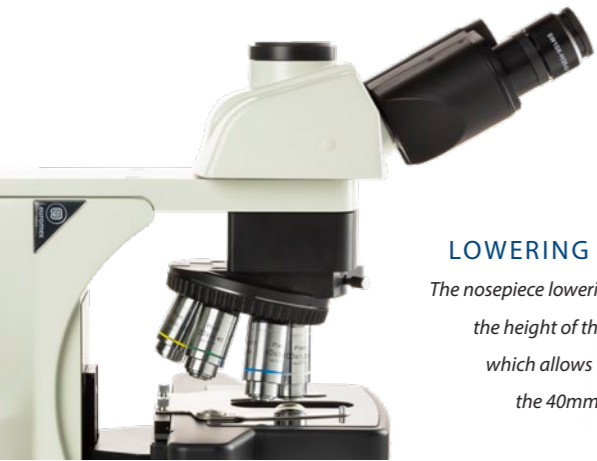
OBJECTIVES

(Phase contrast)

- Infinity corrected Plan Phase EIS 10x/0.25 WD 10.2 mm, 20x/0.40 WD 12 mm, S40x/0.65 WD 0.7 mm, S100x/1.25 (oil immersion). WD 0.2 mm objectives

WD = Working distance

Designed with ergonomics in mind



NOSEPIECE LOWERING ATTACHMENT

The nosepiece lowering attachment lowers the height of the revolver with 40 mm which allows the stage to be used in the 40mm lower position as well (DX.9887)



EYE-LEVEL RISER

The eye-level riser can raise the eye-point height by 25mm at one time (DX.9885)

The Delphi-X Observer's design provides more comfort and convenience for professional microscopists

The double fine and coarse focus control knobs can be switched from left to right as per user preference. The anti-slip coated adjustment knobs provide maximum user comfort during displacement of the sample. Switching of the neutral density filters, setting the Köhler diaphragm and adjusting light intensity can all be controlled without lifting your hands to prevent fatigue



STAGE

- 300/190 x 152 mm stage with 78 x 32 mm integrated right-handed mechanical stage
- Left-handed mechanical stage available on request
- Standard supplied with robust and scratch-resistant Gorilla glass
- Optional Sapphire glass available on request
- Optional stage lowering unit

FOCUSING

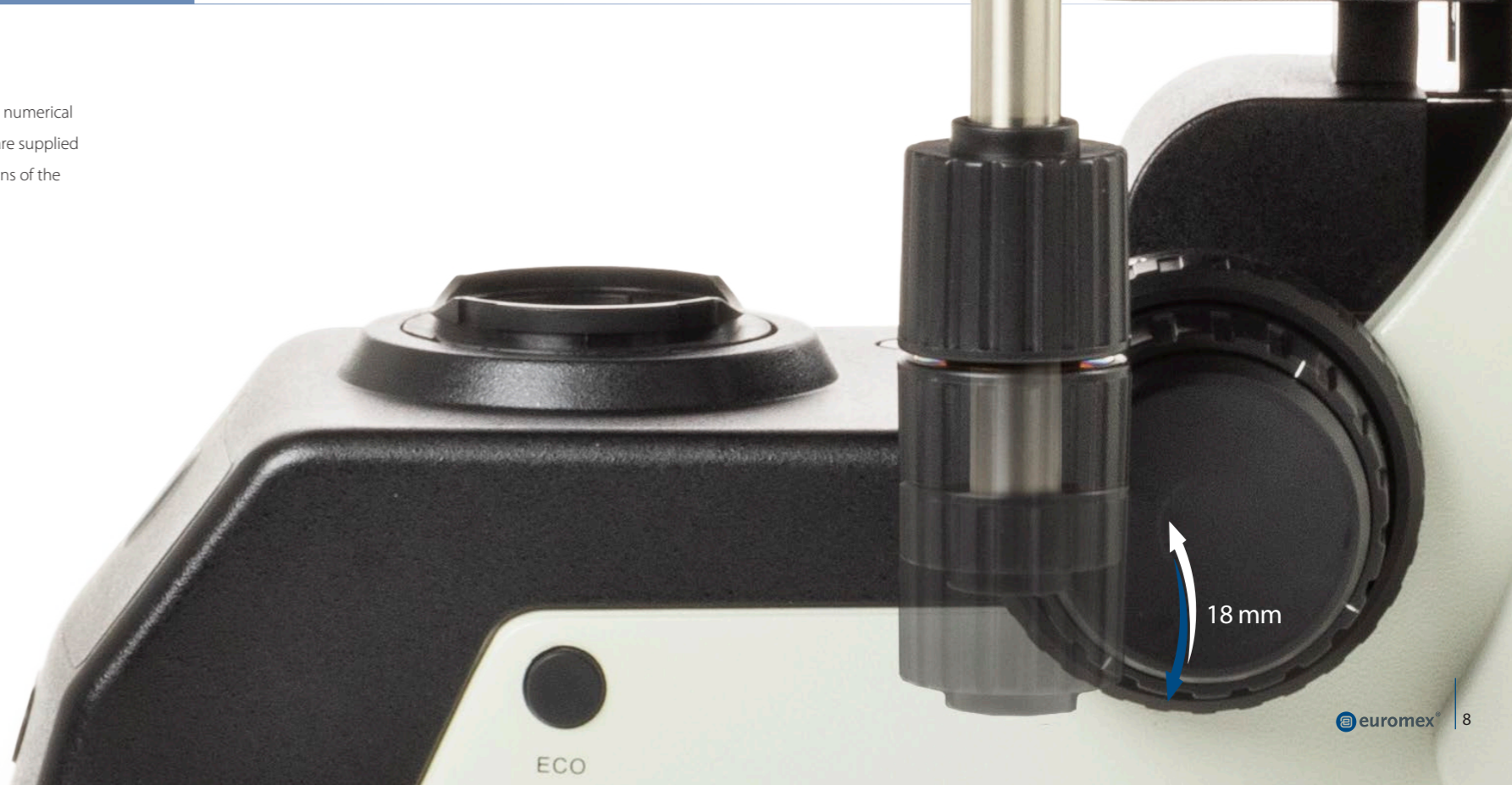
- Coaxial coarse and fine adjustment, 100 graduations, 1 μm precision, 100 μm per rotation, total travel approximately 35 mm
- Supplied with an adjustable rack stop to prevent damage to sample and objectives
- The coarse adjustments are equipped with friction control

CONDENSER FOR BRIGHTFIELD

In height adjustable N.A. 0.90/1.25 Abbe swing-out condenser with numerical aperture identification marks. Models with a motorized nosepiece are supplied with a motorized condenser that automatically flips out the front lens of the condenser when the 4x objective is used

CONDENSER FOR PHASE CONTRAST

In height adjustable N.A. 1.25 Zernike phase contrast condenser with phase annuli for 10/20/S40x and S100x-oil objectives





The carrying grip at the back of the microscope ensures safe transportation of the microscope and the integrated tool & holder make sure the right tool is always available

DX.1153-PLPHi



iCare sensor for energy saving



Filter selection on halogen versions

NEOLED

The innovative NeoLED™ design is a combination of a custom LED and a specially designed thin lens with a short focal length in order to obtain three main benefits:

- More oblique light from the LED light source can be captured, which increases the light output significantly
- Less energy is required to achieve this level of light intensity
- The larger aperture of NeoLED™ allows the optical system of the microscope to produce images at higher resolutions, very close to the theoretical diffraction limit of the optics

ICARE SENSOR

The unique iCare Sensor is developed to avoid unnecessary loss of energy. The illumination of the microscope automatically switches off shortly after microscopists step away from their position

PACKAGING

Supplied with power cord, dust cover, spare fuse, user manual and a bottle of 5 ml immersion oil

DIASCOPIC ILLUMINATIONS

Two illumination versions are available for the Delphi-X Observer microscope:

- Diascopic intensity adjustable 3 W NeoLED™ illumination with internal 100-240 Vac power supply. The diascopic NeoLED™ illumination comes with 1 neutral density filter
- Diascopic intensity adjustable 100 W halogen illumination with internal 100-240 Vac power supply. The diascopic halogen illumination comes with 2 push-in/push-out neutral density filters for smooth attenuation of the light intensity for all kind of samples

Simultaneous observation of specimens

Hospitals, medical centers and universities highly appreciate the unique Delphi-X Observer multi head systems. The high quality image can simultaneously be observed up to 10 colleagues or students at the same time

All systems are equipped with a dual color (green or red) laser pointer that allows the main user to point out areas of interest across the entire field of views of all heads by using the built-in joystick

Delphi-X Observer face-to-face dual head system - DX.1154-PLi



FACE-TO-FACE DUAL HEAD SYSTEM

The Delphi-X Observer can also be equipped with a face-to-face trinocular head for 2 users allowing simultaneous observation

Supplied with 30° inclined tubes and plan infinity corrected IOS objectives. The central attachment is equipped with a joystick to move a green or red laser pointer across the entire field of views of the 2 heads. The trinocular head is supplied with extended wide field EWF 10x/25 mm eyepieces and the second binocular head is supplied with extended wide field EWF 10x/22 mm eyepieces

MULTI HEAD SYSTEM

The Delphi-X Observer can be extended with a unique multi head system for in total 2, 3, 5 or 10 heads allowing simultaneous observation of specimens

The central attachment is equipped with a trinocular head and with a joystick to move a green or red laser pointer across the entire field of views of all heads. Configurations with one, two, four or nine additional binocular heads, 30° inclined tubes and infinity corrected IOS objectives.

The trinocular head is supplied with extended wide field EWF 10x/25 mm eyepieces. Each extra binocular head is supplied with extended wide field plan EWF 10x/25 mm eyepieces except for the model with 9 binocular heads (10 users) that is supplied with EWF 10x/22 mm eyepieces



DX.2156-PLi/3



DX.2156-PLi/5



DX.2156-PLi/10

The unique multi head systems for in total 2, 3, 5 or 10 heads are equipped with a central trinocular head with camera option and up to 9 additional binocular heads. The 2 head version is available as side by side and as face-to-face version

Designed to make life easy

The motorized version of the Delphi-X observer improves an already great microscope. Quickly change objectives or capture an image without moving your hands. There is no need to adjust light intensity with the Automatic Brightness Memory function. These functions make this version of the Delphi-X Observer the most user efficient workstation available

LIGHT INTENSITY MEMORY FUNCTION

LIM automatically saves preferred brightness while changing magnifications. It eliminates the need for adjusting lamp brightness when changing magnification. This allows maintaining preferred brightness at each magnification, thus improving user efficiency significantly and reducing eye strain. Standard on all models with a motorized nosepiece, for other models see ordering instructions below

*For ordering Automatic light intensity memory function
Example: DX.1153-PLi = DX.1153-PLi/LIM model but with automatic light control*

MOTORIZED MAGNIFICATION CHANGING

Quickly change objectives with the push of a button. A motorized encoded sextuple nosepiece and condenser allow easy exchange of magnification. Switch between all six objectives or switch between two selectable objectives of choice

The switch buttons are placed at two ergonomic locations, at both sides near the focus control knobs and in front of the microscope body. This enables users to choose between control locations of objectives and allows magnification change without taking their eyes off the specimen. With the standard supplied automated low magnification condenser users can change the objectives in the range from 2X to 100X, the top lens switches automatically at low magnifications

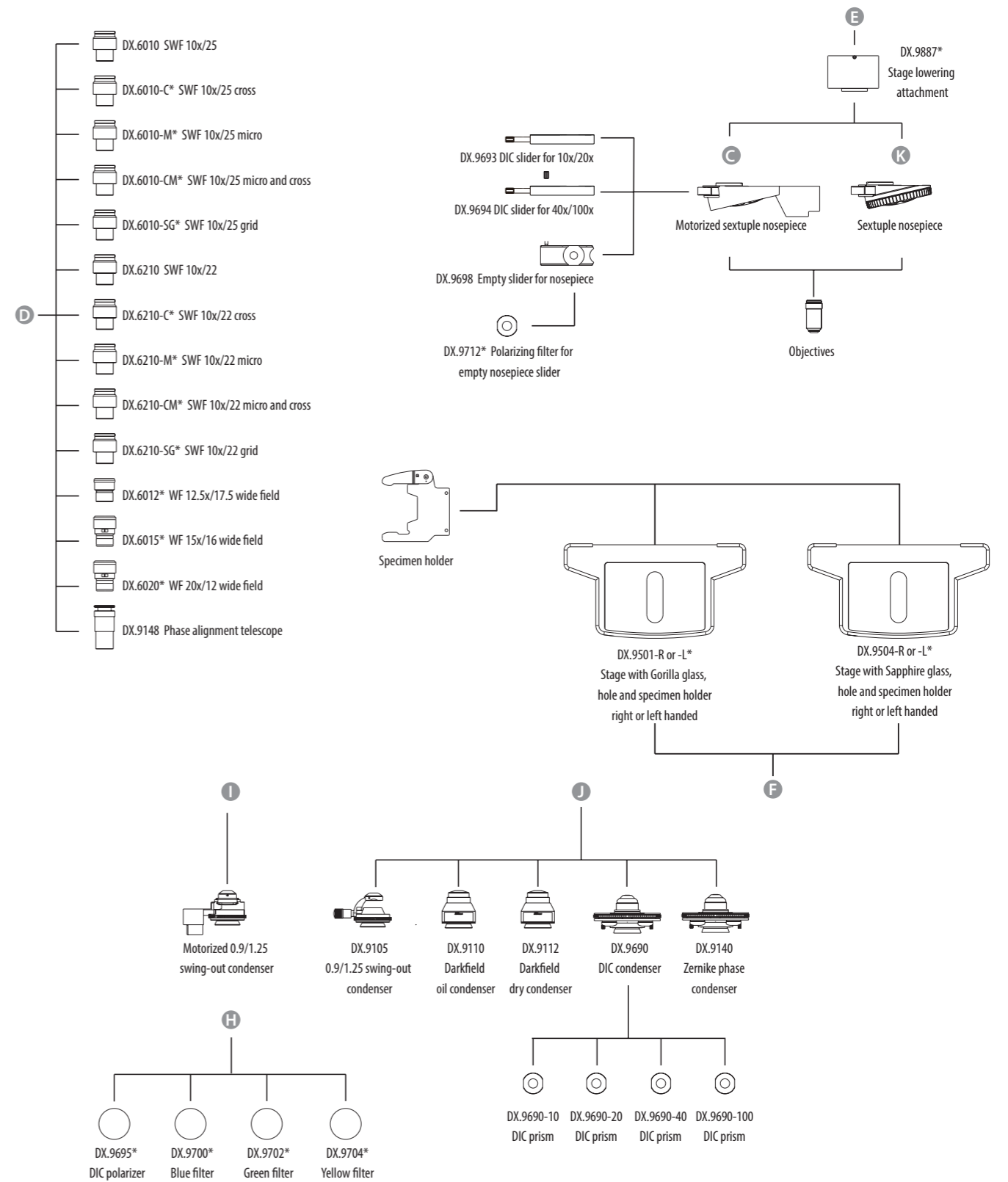
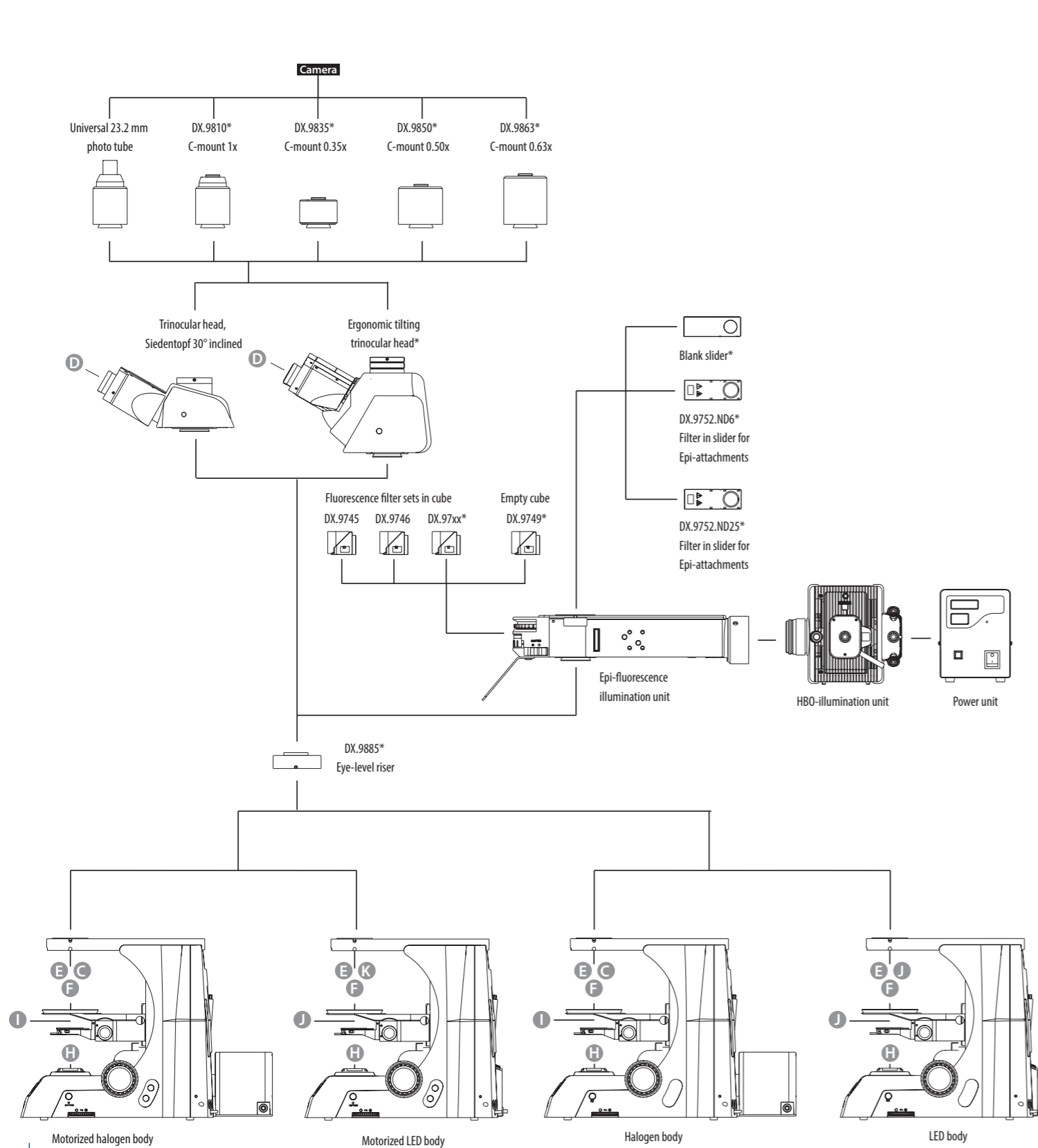
MOTORIZED MODELS

	Ergonomic tilting head	SWF 10x/25 mm eyepieces	Sextuple nosepiece	Plan 4/10/20/540/ S100x oil EIS objectives	Plan semi-apo 4/10/20/540/ S100x oil EIS objectives	Plan phase 10/20/540/ S100x oil EIS objectives	3 W NeoLED™ Köhler	100 W 24 V halogen Köhler
DX.1173-PLi		•	•	•			•	
DX.1178-PLi	•	•	•			•		
DX.1173-APLi		•	•		•		•	
DX.1178-APLi	•	•	•	•		•		
DX.2173-PLi		•	•	•				•
DX.2178-PLi	•	•	•		•		•	
DX.2173-APLi		•	•		•		•	•
DX.2178-APLi	•	•	•	•			•	

*For ordering more motorized models, substitute the third digit "5" of the model reference with the digit "7"
Example: DX.1173-PLi = DX.1153-PLi model but with motorized nosepiece, flip-down condenser and automatic light control*



Schematics





MODELS WITH TRINOCULAR HEAD

	Trinocular	SWF 10x/25 mm eyepieces	Sextuple nosepiece	Plan 4/10/20/540/S100 oil EIS objectives	Plan Semi-Apochromatic 4/10/20/540/S100 oil EIS objectives	Plan Phase 10/20/540/S100 oil EIS objectives	3 W NeoLED Köhler	100 W 24 V halogen Köhler
DX.1153-PLi	•	•	•	•			•	
DX.1153-APLi	•	•	•		•		•	
DX.1153-PLPHi	•	•	•			•	•	
DX.2153-PLi	•	•	•	•				•
DX.2153-APLi	•	•	•		•		•	•
DX.2153-PLPHi	•	•	•			•	•	•

MODELS WITH ERGONOMIC TRINOCULAR TILTING HEAD

	Trinocular	SWF 10x/25 mm eyepieces	Sextuple nosepiece	Plan 4/10/20/540/S100 oil EIS objectives	Plan Semi-Apochromatic 4/10/20/540/S100 oil EIS objectives	Plan Phase 10/20/540/S100 oil EIS objectives	3 W NeoLED Köhler	100 W 24 V halogen Köhler
DX.1158-PLi	•	•	•	•			•	
DX.1158-APLi	•	•	•		•		•	
DX.1158-PLPHi	•	•	•			•	•	
DX.2158-PLi	•	•	•	•				•
DX.2158-APLi	•	•	•		•		•	•
DX.2158-PLPHi	•	•	•			•	•	•

MULTI HEAD SYSTEMS

	Total users	Trinocular SWF 10x/25 mm eyepieces	Binocular SWF 10x/25 mm eyepieces	Binocular SWF 10x/22 mm eyepieces	Plan 4/10/20/540/S100 oil EIS objectives	Plan Semi-Apochromatic 4/10/20/540/S100 oil EIS objectives	Plan Phase 10/20/540/S100 oil EIS objectives	3 W NeoLED Köhler	10 W NeoLED Köhler	100 W 24 V halogen Köhler	iCare sensor
DX.1156-PLi/2	2	1	1	-	•			•			•
DX.1156-APLi/2	2	1	1	-		•		•			•
DX.1156-PLPHi/2	2	1	1	-			•	•			•
DX.2156-PLi/2	2	1	1	-	•					•	•
DX.2156-APLi/2	2	1	1	-		•				•	•
DX.2156-PLPHi/2	2	1	1	-			•			•	•
DX.1156-PLi/3	3	1	2	-	•			•			•
DX.1156-APLi/3	3	1	2	-		•		•			•
DX.1156-PLPHi/3	3	1	2	-			•	•			•
DX.2156-PLi/3	3	1	2	-	•					•	•
DX.2156-APLi/3	3	1	2	-		•				•	•
DX.2156-PLPHi/3	3	1	2	-			•			•	•
DX.1156-PLi/5	5	1	4	-	•			•			•
DX.1156-APLi/5	5	1	4	-		•		•			•
DX.1156-PLPHi/5	5	1	4	-			•	•			•
DX.2156-PLi/5	5	1	4	-	•					•	•
DX.2156-APLi/5	5	1	4	-		•				•	•
DX.2156-PLPHi/5	5	1	4	-			•			•	•
DX.1156-PLi/10	10	1	-	9	•					•	
DX.1156-APLi/10	10	1	-	9		•				•	
DX.1156-PLPHi/10	10	1	-	9			•			•	
DX.2156-PLi/10	10	1	-	9	•					•	•
DX.2156-APLi/10	10	1	-	9		•				•	•
DX.2156-PLPHi/10	10	1	-	9			•			•	•

FACE-TO-FACE DUAL HEAD SYSTEMS

	Total users	Trinocular SWF 10x/25 mm eyepieces	Binocular EWF 10x/22 mm eyepiece	Sextuple nosepiece	Plan 4/10/20/540/S100 oil EIS objectives	Plan Semi-Apochromatic 4/10/20/540/S100 oil EIS objectives	Plan Phase 10/20/540/S100 oil EIS objectives	3 W NeoLED Köhler	100 W 24 V halogen Köhler
DX.1154-PLi	2	1	1	•	•			•	
DX.1154-APLi	2	1	1	•		•		•	
DX.1154-PLPHi	2	1	1	•			•	•	
DX.2154-PLi	2	1	1	•	•				•
DX.2154-APLi	2	1	1	•		•		•	•
DX.2154-PLPHi	2	1	1	•			•	•	•

Left-handed mechanical stage available on request



ALL MODELS

- DX.6010** Super wide field SWF 10x/25 mm eyepiece, Ø 30 mm tube
- DX.6010-C** Super wide field SWF 10x/25 mm eyepiece with cross-hair, Ø 30 mm tube
- DX.6010-M** Super wide field SWF 10x/25 mm eyepiece with micrometer, Ø 30 mm tube
- DX.6010-CM** Super wide field SWF 10x/25 mm eyepiece with micrometer and cross-hair, Ø 30 mm tube
- DX.6010-SG** Super wide field SWF 10x/25 mm eyepiece with 20 x 20 square grid reticle, Ø 30 mm tube

- DX.6210** Super wide field SWF 10x/22 mm eyepiece, Ø 30 mm tube
- DX.6210-C** Super wide field SWF 10x/22 mm eyepiece with cross-hair, Ø 30 mm tube
- DX.6210-M** Super wide field SWF 10x/22 mm eyepiece with micrometer, Ø 30 mm tube
- DX.6210-CM** Super wide field SWF 10x/22 mm eyepiece with micrometer and cross-hair, Ø 30 mm tube
- DX.6210-SG** Super wide field SWF 10x/22 mm eyepiece with 20 x 20 square grid reticle, Ø 30 mm tube

- DX.6012** Wide field WF 12.5x/17.5 mm eyepiece, Ø 30 mm tube
- DX.6015** Wide field WF 15x/16 mm eyepiece, Ø 30 mm tube
- DX.6020** Wide field WF 20x/12 mm eyepiece, Ø 30 mm tube
- DX.6099-L** Eyecups for eyepieces

- DX.7202** Plan achromatic PLi 2x/0.06 infinity corrected objective. WD 7.5 mm
- DX.7204** Plan achromatic PLi 4x/0.10 infinity corrected objective. WD 30 mm
- DX.7210** Plan achromatic PLi 10x/0.25 infinity corrected objective. WD 10.2 mm
- DX.7220** Plan achromatic PLi 20x/0.40 infinity corrected objective. WD 12 mm
- DX.7240** Plan achromatic PLi S40x/0.65 infinity corrected objective. WD 0.7 mm
- DX.7250** Plan achromatic PLi S50x/0.95 oil immersion infinity corrected objective. WD 0.19 mm
- DX.7260** Plan achromatic PLi S60x/0.80 infinity corrected objective. WD 0.3 mm
- DX.7200** Plan achromatic PLi S100x/1.25 oil immersion infinity corrected objective. WD 0.2 mm
- DX.7200-I** Plan achromatic PLi S100x/1.25 oil immersion infinity corrected objective with built-in iris diaphragm. For darkfield applications. WD 0.2 mm

- DX.7304** Plan Semi-Apochromatic PLi-Apo 4x/0.13 infinity corrected objective. WD 16.5 mm
- DX.7310** Plan Semi-Apochromatic PLi-Apo 10x/0.30 infinity corrected objective. WD 8.1 mm
- DX.7320** Plan Semi-Apochromatic PLi-Apo 20x/0.50 infinity corrected objective. WD 2.1 mm
- DX.7340** Plan Semi-Apochromatic PLi-Apo S40x/0.75 infinity corrected objective. WD 0.7 mm
- DX.7300** Plan Semi-Apochromatic PLi-Apo S100x/1.3 oil immersion infinity corrected objective. WD 0.15 mm

- DX.7710** Plan Phase PLPHi 10x/0.25 infinity corrected objective. WD 10.2 mm
- DX.7720** Plan Phase PLPHi 20x/0.40 infinity corrected objective. WD 12 mm
- DX.7740** Plan Phase PLPHi S40x/0.65 infinity corrected objective. WD 0.7 mm
- DX.7700** Plan Phase PLPHi S100x/1.25 oil immersion infinity corrected objective. WD 0.2 mm

- DX.9105** Abbe condenser 0.9/1.25 with swing-out front lens
- DX.9126** Zernike phase contrast set with Plan Phase PLPHi 10/20/S40/S100x objectives, phase contrast condenser, telescope and green filter
- DX.9140** Zernike Phase contrast Abbe condenser with 4 phase annuli
- DX.9148** Telescope for phase contrast alignment, Ø 30 mm tube

- DX.9660** Simple polarization kit, consisting of polarizer in slider and analyzer on lamp house
- DX.9662** Simple polarization kit with 1λ retardation plate for identification of gout crystals (monosodium urate)

- DX.9501-LG** Option for left-handed stage with Gorilla glass. Only with new Delphi-X Observer microscopes (DX.xx5x-xxx/LG)
- DX.9504-RS** Option for right-handed stage with Sapphire glass. Only with new Delphi-X Observer microscopes (DX.xx5x-xxx/RS)
- DX.9504-LS** Option for left-handed stage with Sapphire glass. Only with new Delphi-X Observer microscopes (DX.xx5x-xxx/LS)

- DX.9700** Blue filter, Ø 45 mm, fits on lamphouse
- DX.9702** Green filter, Ø 45 mm, fits on lamphouse
- DX.9704** Yellow filter, Ø 45 mm, fits on lamphouse

- DX.9885** 25.4 mm eye-level riser (1 inch)
- DX.9887** 40 mm nosepiece and stage lowering attachment

- DX.9930** NeoLED™ replacement unit
- SL.3680** 100 W 24 Vac halogen replacement bulb
- SL.1385** 100 W HBO mercury vapor lamp

- AE.5214** Fuses 500 mA 250 V, 10 pieces (For Delphi-X Observer models with LED)
- AE.5216** Fuses 5 A 250 V, 10 pieces (For Delphi-X Observer models with 100 W halogen)

- AE.5130** Universal Ø 23.2 mm tube adapter with built-in 2x lens for SLR photo camera with APS-C sensor. Needs T2 adapter
- AE.5025** T2 ring for Nikon D SLR digital camera
- AE.5040** T2 ring for Canon EOS SLR digital camera

- PB.5155** Microscope slides 76 x 26 mm, ground edges, 50 pieces
- PB.5165** Cover glasses 18 x 18 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5168** Cover glasses 22 x 22 mm, thickness 0.13-0.17 mm, 100 pieces
- PB.5245** Lens cleaning paper, 100 sheets per pack
- PB.5255** Immersion oil, n = 1.482 (25 ml)
- PB.5274** Isopropyl alcohol 99% (200 ml)
- PB.5275** Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

WD = working distance

Delphi-X Observer

Superb in fluorescence

For biological, medical or biotechnology applications, fluorescence microscopes are used to observe living cells or tissues with help of fluorophores, which act as biomarkers in the cells or tissues to be observed. When exposed to a fluorescence light source, excitation energy is absorbed and starts emitting so-called emission light that can be observed through the eyepieces of the microscope

The state-of-the-art optics and mechanical components make the Delphi-X Observer suitable for routine and advanced fluorescence applications in Life Science, Biotechnical and Medical fields



six filtercube cassette



ILLUMINATION FOR FLUORESCENCE

The Delphi-X Observer for fluorescence is equipped with a 6-position rotating attachment with 100 W mercury vapor light source for broad powerful light spectrum, UV protection shield, integrated safety shutter and a 100-240 Vac external power supply with indication of the lifetime of the 100 W HBO lamp

The 6-position rotating attachment can be supplied with general purpose fluorescence filters for routine applications for blue, green, violet and ultra-violet excitation or with advanced fluorescence filters optimized for specific fluorophores

All Delphi-X Observer fluorescence filter sets are supplied with state-of-the-art sputtered and hard coated band-pass excitation filters, high-efficiency dichroic mirrors with very high slopes for superior spectral separation and high blocking long-pass emission filters, all mounted in anodized metal cubes

Fluorescence attachment with integrated field and aperture iris diaphragms



DX.1153-PLFi



Filter set for blue excitation mounted in filter cube for 6-position fluorescence attachment

DX.9745 / DX.9749

SELECTION OF FLUORESCENCE FILTER SETS

Choosing the appropriate filter set is a very important step before ordering your filters. It is essential to match the spectral characteristics of excitation and emission filters and dichroic mirror with the fluorophores used in your fluorescence microscopy application

The most important characteristics for the selection of fluorescence filter sets are:

- The separation between excitation and emission wavelengths
- The slope of the dichroic mirror
- The optical density of the emission filters
- The type of emission filter: longpass or bandpass in terms of color discrimination
- The transmission percentage of the excitation and emission filters
- The type of coating applied to the filters in terms of durability

These filter sets are perfect for routine fluorescence and for most applications requiring precise color discrimination and excellent out-of-band blocking.

For applications requiring the highest possible signal intensities, optimized and optimized premium filter sets are recommended

Optimized and optimized premium fluorescence filter sets. These filter sets feature the highest throughput sputter coatings with maximum transmission levels. The filters have very steep transitions and very high optical density suitable for modern fluorophores with short Stokes shifts (difference between absorption and emission maxima) and very little spectral separation between excitation and emission bands

The high hardness and excellent durability of the coatings enables these fluorescence filter sets to be used in high heat and humidity

6-POSITION FLUORESCENCE ROTATING ATTACHMENT

The 6-position rotating attachment can be supplied with standard fluorescence filters for routine applications for blue, green, violet and ultra-violet excitation or advanced fluorescence filters optimized for specific fluorophore(s)

STANDARD FLUORESCENCE FILTER SETS

Our standard fluorescence filter sets consists out of standard sputtered bandpass filter sets, high sharp slope dichroic mirrors for excellent separation and emission filters with a high transmission level above 90%. These filter sets are offered at an affordable price and have a high hardness and excellent durability

FLUORESCENCE MODELS

	Trinocular	SWF 10x/25 mm eyepieces	Diopter adjustable (both sides)	Plan 4/10/20/40/ S100x EIS objectives	Plan Fluorex 4/10/20/40/ S100x objectives	100 W HBO fluorescence	Filter sets (blue&green)	3 W NeoLED	100 W 24 V halogen
DX.3153-PLi	•	•	•	•		•	•	•	
DX.3153-PLFi	•	•	•		•	•	•	•	
DX.3153-PLi/HAL	•	•	•	•		•	•		•
DX.3153-PLFi/HAL	•	•	•		•	•	•		•

Left-handed mechanical stage available on request

STANDARD FLUORESCENCE FILTER SETS

Needs empty filter block

- DX.9745** Filter set for blue excitation, EX: 460-490 nm BP, DM: 500 nm, EM: 520 nm LP
- DX.9746** Filter set for green excitation, EX: 510-550 nm BP, DM: 570 nm, EM: 590 nm LP
- DX.9747** Filter set for violet excitation, EX: 400-410 nm BP, DM: 455 nm, EM: 460 nm LP
- DX.9748** Filter set for ultra-violet excitation, EX: 330-385 nm BP, DM: 400 nm, EM: 420 nm LP

OPTIMIZED FLUORESCENCE FILTER SETS

Needs empty filter block

- DX.9750.39001** Filter set EX435 (BP20) DM455 (LP) EM480 (BP30) AmCyan, Atto 425, Cerulean, CFP, ECFP fluorophore

DX.9750.39002

Filter set EX480 (BP30) DM505(LP) EM535 (BP40) Acridine Orange + DNA, Alexa Fluor 488™, Atto 488, Azami Green, BODIPY FL/pH7.2, Calcein, Calcium Green™-1, Cy2™, DiO, DyLight 488, EGFP, Emerald GFP, FAM, FITC, Fluo-4, GFP, LysoTracker Green/pH 5.2, MitoTracker Green, FM/MeOH, mWasabi, Oregon, Green™ 488, SYBR® Green I, SYTO 9/DNA, ZsGreen fluorophore

DX.9750.39003

Filter set EX495 (BP20) DM515 (LP) EM540 (BP30) Alexa Fluor 514™, Citrine, EYFP/pH 7, F/IAsh-CCPFCC, mCitrine, Oregon Green™ 514, Rhodamine 123, Topaz

DX.9750.39004

Filter set EX540 (BP25) DM565 (LP) EM605 (BP55) Alexa Fluor 546™, Alexa Fluor 555™, Atto 550, CAL Fluor® Red 590, Cy3™, DiI, DsRed, DyLight 549, MitoTracker Orange/MeOH, Resorufin, Rhod-2, TagRFP, TAMRA, tdTomato, Tetramethylrhodamine isothiocyanate, TRITC

DX.9750.39005

Filter set EX540 (BP25) DM565 (LP) EM 620 (BP60) TRITC-red-shifted, Ethidium homidimer-1/DNA, Propidium Iodide

DX.9750.39007

Filter set EX620 (BP50) DM655 (LP) EM 690 (BP50) Alexa Fluor 647™, Allophycocyanin (APC), Atto 647N, Cy5™, DiD, Draq5, DayLight 649, MitoTracker Deep Red 633/MeOH, Nile Blue, Quasar® 670, SYTO® 60, TO-PRO™-3

DX.9750.39008

Filter set EX420 (BP40) DM455 (LP) EM 535 (BP40) Lucifer Yellow/ Tetracycline/AlexaFluor 430

DX.9750.39009

Filter set EX480 (BP30) DM505 (LP) EM 620 (BP60) for Acridine Orange + RNA, Di-8-ANEPP S non-ratiometric, DiA, Ethidium, Bromide, FM™ 1-43, LysoTracker Yellow HCK-123, Pulsar™ 650

OPTIMIZED PREMIUM FLUORESCENCE FILTER SETS

Needs empty filter block

DX.9750.0401

Premium filter set EX440 (BP21), DM455 (LP), EM480 (BP30) CFP, Cerulean, CyPet, SpectrumAqua

DX.9750.0403

Premium filter set EX380 (BP50), DM410 (LP), EM450 (BP60) BFP, BFP2, DAPI, Alexa Fluor 350, Hoechst 33342 & 33258, BFP

DX.9750.0404

Premium filter set EX470 (BP40), DM500 (LP), EM535 (BP50) Alexa Fluor 488, CoralHue Azami Green, Cy2, eGFP, FITC, GFP (sapphire), Emerald

DX.9750.0407

Premium filter set EX635 (BP30), DM660 (LP), EM710 (BP80) Cy5, Alexa Fluor647. Also compatible with TO-PRO-3, TOTO-3, Kodak, X-Sight 650

DX.9750.0412

Premium filter set EX500 (BP25), DM252 (LP), EM545 (BP35) Acridine Orange (+DNA), Rhodamine Green, CL NERF, (hi pH), YFP. Also compatible with Alexa Fluor 532

DX.9750.0414

Premium filter set EX560 (BP55), DM505 (LP), EM645 (BP75) Texas Red, Texas Red-X, CryptoLight CF-6. Also compatible with Cy3.5, HcRed, mRaspberry, MitoTracker Red

OTHER

DX.9200-6

Fluorescence attachment, 6 position, UV shield; 100 W HBO mercury vapor lamp, with collimating lens, with external PSU BUT without objectives, without filter sets and empty cubes

DX.9749 Empty filter cube for 6-position fluorescence attachment

DX.9930 3 W NeoLED™ replacement unit

SL.3680 100 W 24 Vac halogen replacement bulb

SL.1385 100 W HBO mercury vapor lamp

AE.5130 Universal Ø 23.2 mm tube adapter with built-in 2x lens for SLR photo camera with APS-C sensor. Needs T2 adapter

AE.5025 T2 ring for Nikon D SLR digital camera

AE.5040 T2 ring for Canon EOS SLR digital camera

PB.5155 Microscope slides 76 x 26 mm, ground edges, 50 pieces

PB.5165 Cover glasses 18 x 18 mm, thickness 0.13-0.17 mm, 100 pieces

PB.5168 Cover glasses 22 x 22 mm, thickness 0.13-0.17 mm, 100 pieces

PB.5245 Lens cleaning paper, 100 sheets per pack

PB.5255 Immersion oil, n = 1.482 (25 ml)

PB.5274 Isopropyl alcohol 99% (200 ml)

PB.5275 Cleaning kit: lens cleaning fluid, lint free lens tissue, brush, air blower, cotton swabs

Delphi-X
observer



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