



FISCHERSCOPE® X-RAY model Order no.	XDL®-B 603-450	XDL®-B Z 603-451	XDLM®-C4 Z 603-434	XDL®-B XYm 603-452	XDL®-B XYmZ 603-453	XDLM®-C4 XYmZ 603-435	XDL®-B XYZp 603-454	XDL®-B XYZp-T8 603-573	XDLM®-C4 XYZp 603-436	XDLM®-C4 PCB 603-413
X-RAY head dim.	Outside dimensions: Width = 570 mm, Depth = 740 mm, Height = 650 mm									
X-RAY head mass	90 kg	95 kg	100 kg	105 kg	105 kg	110 kg				
Measurement chamber	Slotted chamber with large, upward opening, transparent, door. Effective internal dimensions: Width = 460 mm, Depth = 500 mm, effective Height see sections "z-axis" and "Max. height of the specimen".									
Measurement direction	↓ (Primary X-ray beam top down)									
X-ray tube W: tungsten tube MW: micro-focal W	W	MW	W	MW	W	MW				
High voltage	Adjustable by software to optimize applications: 50 kV; 40 kV; 30 kV									
Detector	Xenon gas filled proportional counter, internal 4096 channel ADC for spectrum processing, external spectrum display of 256 channels									
Primary filters (selectable by software)	---	2 primary filters (Ni and Al)	---	2 primary filters (Ni and Al)	---	2 primary filters (Ni and Al)	2 primary filters (Ni and Al)			
Absorber (optional) Cobalt absorber (p/n 603-430) Nickel abs. (no. 603-561)	---	<i>Optional:</i> Cobalt or Nickel absorber	---	<i>Optional:</i> Cobalt or Nickel absorber	---	<i>Optional:</i> Cobalt or Nickel absorber	<i>Optional:</i> Cobalt or Nickel absorber			
XDL®-B: Standard collimator(s) XDLM®-C4: Standard collimator block II	ø 0.3 mm	ø 0.1 mm ø 0.2 mm ø 0.3 mm 0.3 x 0.05 mm	ø 0.3 mm	ø 0.1 mm ø 0.2 mm ø 0.3 mm 0.3 x 0.05 mm	ø 0.3 mm	ø 0.1 mm ø 0.2 mm ø 0.3 mm 0.3 x 0.05 mm	ø 0.1 mm ø 0.2 mm ø 0.3 mm 0.3 mm x 0.05 mm			
XDL®-B: opt. collimator(s) XDLM®-C4: opt. collimator block I	one size selectable: ø 0.1 mm or ø 0.2 mm or 0.3 x 0.05 mm or 0.4 x 0.4 mm (p/n 603-456)	ø 0.1 mm ø 0.2 mm 0.05 x 0.05 mm 0.2 x 0.03 mm (p/n 603-595)	one size selectable: ø 0.1 mm or ø 0.2 mm or 0.3 x 0.05 mm or 0.4 x 0.4 mm (p/n 603-456)	ø 0.1 mm ø 0.2 mm 0.05 x 0.05 mm 0.2 x 0.03 mm (p/n 603-595)	ø 0.1 mm ø 0.2 mm 0.05 x 0.05 mm 0.2 x 0.03 mm (p/n 603-595)	one size selectable: ø 0.1 mm or ø 0.2 mm or 0.3 x 0.05 mm or 0.4 x 0.4 mm (p/n 603-456)	ø 0.1 mm ø 0.2 mm 0.05 mm x 0.05 mm 0.2 mm x 0.03 mm (p/n 603-595)			
Spot size of standard collimator(s). Approximate values at minimum meas. distance.	ø 0.67 mm	ø 0.15 mm ø 0.26 mm ø 0.38 mm 0.38 x 0.09 mm	ø 0.67 mm	ø 0.15 mm ø 0.26 mm ø 0.38 mm 0.38 x 0.09 mm	ø 0.67 mm	ø 0.15 mm ø 0.26 mm ø 0.38 mm 0.38 x 0.09 mm	ø 0.15 mm ø 0.26 mm ø 0.38 mm 0.38 mm x 0.09 mm			
Spot size of opt. collimator(s). Approximate values at minimum meas. distance.	ø 0.16 mm ø 0.30 mm 0.34 x 0.67 mm 0.45 x 0.45 mm	ø 0.15 mm ø 0.26 mm 0.09 x 0.09 mm 0.26 x 0.07 mm	ø 0.16 mm ø 0.30 mm 0.34 x 0.67 mm 0.45 x 0.45 mm	ø 0.15 mm ø 0.26 mm 0.09 x 0.09 mm 0.26 x 0.27 mm	ø 0.16 mm ø 0.30 mm 0.34 x 0.67 mm 0.45 x 0.45 mm	ø 0.15 mm ø 0.26 mm 0.09 x 0.09 mm 0.26 x 0.27 mm	ø 0.15 mm ø 0.26 mm 0.09 mm x 0.09 mm 0.26 mm x 0.07 mm			



FISCHERSCOPE® X-RAY model Order no.	XDL®-B 603-450	XDL®-B Z 603-451	XDLM®-C4 Z 603-434	XDL®-B XYm 603-452	XDL®-B XYmZ 603-453	XDLM®-C4 XYmZ 603-435	XDL®-B XYZp 603-454	XDL®-B XYZp-T8 603-573	XDLM®-C4 XYZp 603-436	XDLM®-C4 PCB 603-413
Test stage	Fixed test piece support plate with removable insert.			Manual XY-stage			Motorized, programmable XY-stage. Controlled by joystick or left (with point&shoot function) and right (usable as joystick) mouse button. Easy specimen positioning by means of a laser marker beam.			
Stage: useful dimensions	463 mm x 500 mm			420 mm x 450 mm			250 mm x 250 mm	300 mm x 350 mm	250 mm x 250 mm	300 mm x 350 mm
Stage loading and test piece positioning	Specimen is placed directly below the collimator. Manual positioning by means of the video image.			For easy loading the stage is pulled out of the chamber; the specimen is positioned by means of a marker laser beam.			Manual positioning of stage-support plate for loading. Progr.stage sits on this support plate.	Automatic loading function or manual joystick-controlled loading. Laser marker beam.	Manual positioning of stage-support plate for loading. Programmable stage sits on this support plate.	Automatic loading function or manual joystick-controlled loading. Laser marker beam.
XY-stage travel	---			95 mm x 150 mm			100 mm x 100 mm	For state "Loading function <b>OFF</b> "; for specimen height 5 mm > H > 140 mm: <b>236 x 235 mm</b> For flat specimens 0 mm > H > 5 mm: <b>256 x 235 mm</b> The Y-value for state "Loading function <b>ON</b> " will decrease from 235 to 140 mm.	100 mm x 100 mm	For state "Loading function <b>OFF</b> "; for specimen height 5 mm > H > 140 mm: <b>236 x 235 mm</b> For flat specimen 0 mm > H > 5 mm: <b>256 x 235 mm</b> The Y-value for state "Loading function <b>ON</b> " will decrease from 235 to 140 mm.
XY-stage specs	---			Max. load: 20 kg			Max. load: 20 kg v <sub>max</sub> : 5 mm/s Precision (unidirectional): 0.2 mm that means: repeatability with approach from one direction.	Max. load: 5 kg v <sub>max</sub> : 25 mm/s Precision (unidirectional): i.e repeatability with approach from one direction.	Max. load: 20 kg v <sub>max</sub> : 5 mm/s Precision (unidirectional): 0.2 mm that means: repeatability with approach from one direction.	Max. load: *) with reduced precision up to 20 kg v <sub>max</sub> : Precision (unidirectional): that means: repeatability with approach from one direction.
Travel Z	0-300 mm	0 - 140 mm		0-300 mm	0 - 140 mm		0 - 140 mm			
Z-axis	fixed	Motor. X-ray head travel			fixed	Motor. X-ray head travel		Motorized, programmable X-ray head travel		
Max. height of the specimen	upper: <sup>(1)</sup> 300 mm mid: <sup>(1)</sup> 235 mm lower: <sup>(1)</sup> 170 mm	0 to 294 mm			upper: <sup>(1)</sup> 140 mm mid: <sup>(1)</sup> 85 mm lower: <sup>(1)</sup> 20 mm	0 to 140 mm				



FISCHERSCOPE® X-RAY model Order no.	XDL®-B 603-450	XDL®-B Z 603-451	XDLM®-C4 Z 603-434	XDL®-B XYm 603-452	XDL®-B XYmZ 603-453	XDLM®-C4 XYmZ 603-435	XDL®-B XYZp 603-454	XDL®-B XYZp-T8 603-573	XDLM®-C4 XYZp 603-436	XDLM®-C4 PCB 603-413
Measurement chamber keyboard	2 buttons: Start, Stop	5 buttons: Start, Stop, ↓, ↑, Fast, 1 joystick		2 buttons: Start, Stop	5 buttons: Start, Stop, ↓, ↑, Fast		5 buttons: Start, Stop, ↓, ↑, Fast, 1 joystick			
Measuring distance Md	Measuring distance Md (calibrated range): 0 mm ≤ Md ≤ 80 mm Md max. = 80 mm									
Measuring distance correction method	The patented DCM-method ( <b>D</b> istance <b>C</b> ontrolled <b>M</b> easurement) is working over the whole Md-range (see „Measuring distance“). The measurement value is mathematically corrected, dependent on the measurement distance Md after focussing of the test spot by means of the video picture. DCM is patented: US 6,038,280 (USA patent); UK GB 2323164 B (UK Patent); France; Germany (No. 19710420).									
View control of the measurement spot	High resolution color video camera. Picture in picture presentation of the video image in the WinFTM® main window. Brightness control by an on-screen control bar on the video image. The electronically inserted true-to-scale crosshairs with the shown image of the actual measurement spot dimensions (not collimator dimensions!) allows for exact positioning. Measurement spot and measurement location are shown in the video image true to scale at any measurement distance. Electronically generated crosshairs with calibrated recticle and test spot size indication.									
Magnification	Optical: 20-45x; digital in steps 1x, 2x, 3x and 4x Totally 20 – 180x; dependent on measurement distance; related to a 17" TFT flat monitor.									
Control computer	Computer FMC-XPENT: Intel Pentium or comparable processor, frame grabber board, hard disk, CD-RW drive, 3 1/2" floppy drive, mouse, Windows® keyboard XK. <i>Optional:</i> Handscanner (p/n 603-678).									
Operating system	<i>Standard:</i> Windows® XP professional <i>Optional:</i> Windows® 2000 (available in various language versions)									
Monitor	<i>Standard:</i> 15" flat screen TFT monitor <i>or</i> <i>Optional:</i> 17" flat screen TFT monitor (p/n 603-286).									
Printer	<i>Optional:</i> EPSON ink jet-type color printer (p/n 602-555)									
Accessories	Pure Element Calibration Set; Tooling- and Cable set, diverse small accessory parts									
Service for Instrumentation	HELMUT FISCHER-owned/operated world-wide service team.									
Application Service	Hotline for application questions. Service for creation of Def.MA-data sets i.e. parameter sets for special customer applications.									
X-RAY training	Several times a year there are training seminars which give information about the X-ray fluorescence method and the practical application of X-RAY instrumentation.									
Software	<i>Standard:</i> WinFTM® V.6 BASIC <i>Optional:</i> WinFTM® V.6 LIGHT <i>Optional, supplemental software:</i> WinFTM® PDM for expanded product management and results documentation. WinFTM® SUPER for the experienced user. Cf. separate data sheet "WinFTM® V.6" for complete software features (p/n 952-049)									

<sup>(1)</sup> please advise required height in your order papers