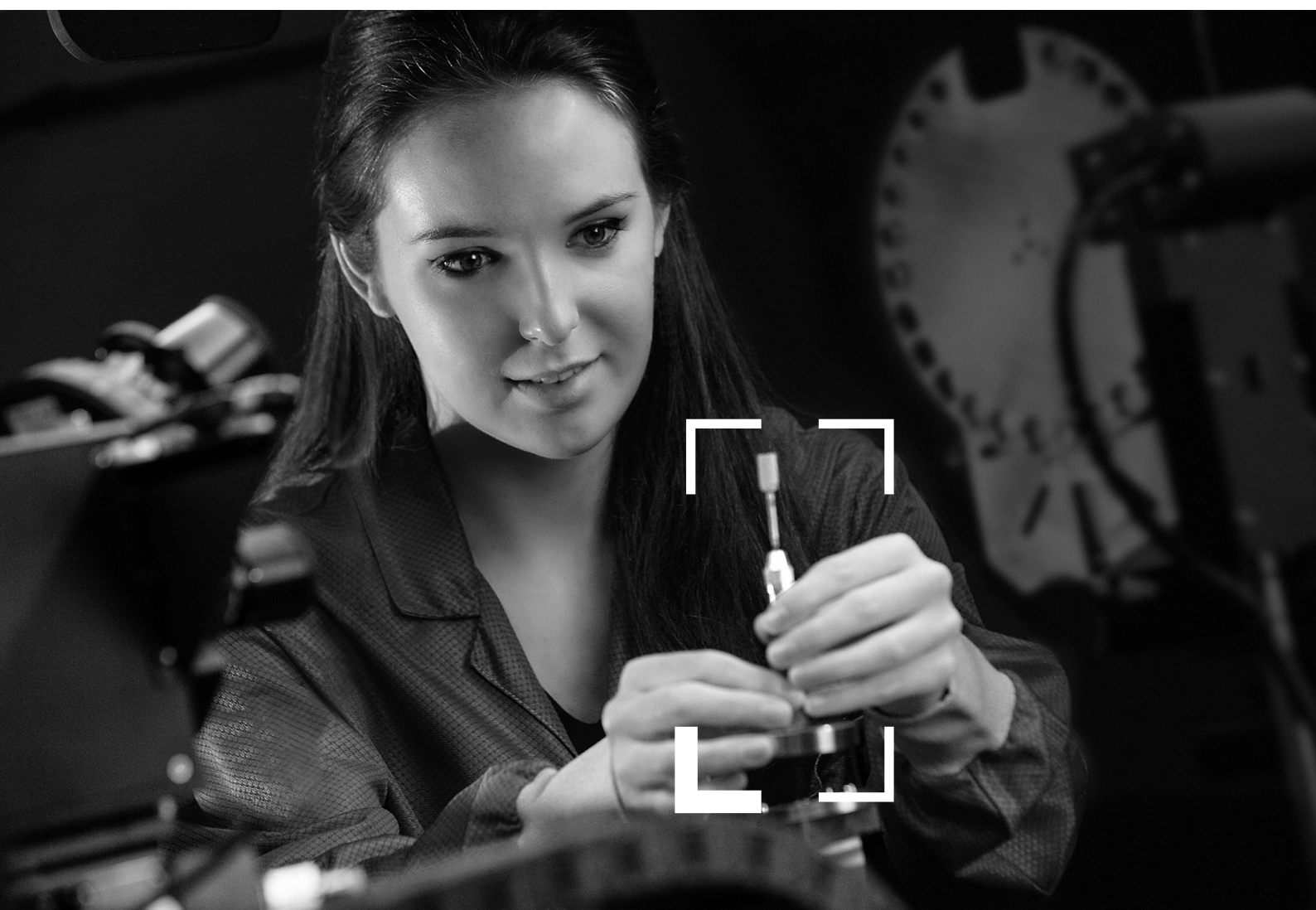




Seeing beyond



Sample holder catalog
for X-ray Microscopy

Sample Holder

for X-ray Microscopy

When you choose ZEISS microscopes, we make it our mission to help you achieve consistently brilliant results.

Customized sample holders

To ensure that your microscope continues to deliver first-class results and provides ease of use handling in accordance with your demands and applications, ZEISS provides a variety of sample holders for a wide range of customer application needs in electron microscopy.

For applications beyond the current offerings, custom holders can be designed using our existing Sample Holder Base. The Sample Holder Base drawing can be made available upon request from your local service representative.

Learn more!

If you would like to have any additional information or if you have any questions, please do not hesitate to contact us by sending your request to:

microscopy@zeiss.com

We will get back to you!



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Xradia Versa Family / VersaXRM-500 / Context microCT

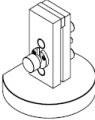
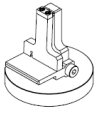
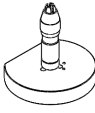

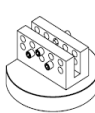

Standard sample holders

Screw Clamp	Part-No.	345360-0000-028	
	Description	Screw clamp type sample holder and adaptor base	
	Dimensions*	90mm height; Jaw gap up to 10mm	
	Applications	Semiconductor or flat sample. Sample should be no thicker than 10mm	
Spring Clip	Part-No.	345360-0000-029	
	Description	Spring clip type sample holder and adaptor base	
	Dimensions*	91mm height; Clamp gap up to 5mm	
	Applications	Semiconductor, flat, or rigid material. Sample should be thin and flat, no thicker than 5mm	
Tall Aluminum Base	Part-No.	345360-0000-032	
	Description	Cylindrical aluminum mounting rod sample holder and adaptor base	
	Dimensions*	80mm height; 15mm diameter	
	Applications	Smaller solid material (such as rock core samples) that requires a stable 15mm flat mounting surface	
Short Aluminum Base	Part-No.	345360-0001-485	
	Description	Cylindrical aluminum mounting rod sample holder and adaptor base	
	Dimensions*	35mm height; 19mm diameter	
	Applications	Tall solid material (such as rock core samples) that requires a stable 19mm flat mounting surface	
Sample Holder Base	Part-No.	345360-0000-026	
	Description	Standard adaptor base	
	Dimensions*	10mm height; Standard kinematic mount	
	Applications	To build or use your own sample holders and to mount the custom holder to our tomography stage	

*Height includes the adaptor base height.

MicroXCT-200/400

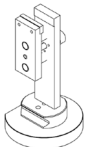
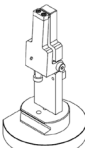
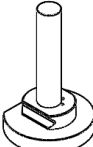

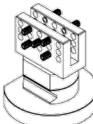
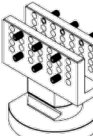
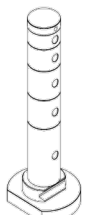
Compatible with Xradia Versa Family / Context microCT

Screw Clamp	Part-No. Description Dimensions* Applications	345360-0000-072 Screw clamp type sample holder and adaptor base 55mm height; Jaw gap up to 10mm Semiconductor or flat sample. Sample should be no thicker than 10mm	
Spring Clip	Part-No. Description Dimensions* Applications	345360-0000-073 Spring clip type sample holder and adaptor base 57mm height; Clamp gap up to 5mm Semiconductor, flat, or rigid material. Sample should be thin and flat, no thicker than 5mm	
Pin Vise (1.3-3.2mm vise diameter)	Part-No. Description Dimensions* Applications	345360-1004-509 Pin vise type sample holder and adaptor base 58mm height; Pin vise opening 1.3 to 3.2mm Solid material (such as rock core samples, or thin, long pieces of material). Sample (or toothpick or rod) should be 3mm or less in diameter	
Pin Vise (up to 0.6mm vise diameter)	Part-No. Description Dimensions* Applications	345360-1004-749 Pin vise type sample holder and adaptor base 63mm height; pin vise opening up to 0.6mm Special use case for holding very narrow post. Mounting (or toothpick or rod) should be 0.6mm or less in diameter	
Small Cradle	Part-No. Description Dimensions* Applications	345360-0000-030 Small cradle type sample holder and adaptor base 29mm height; Clamp gap up to 5mm width; 14mm clamp gap depth Flat objects like PC boards or flat materials	
Sample Holder Base	Part-No. Description Dimensions* Applications	345360-0000-026 Standard adaptor base 10mm height; Standard kinematic mount To build or use your own sample holders and to mount the custom holder to our tomography stage	

*Height includes the adaptor base height.

Xradia Versa Family / VersaXRM-500 / Context microCT

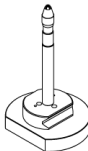
Sample holders (Autoloader compatible)

Screw Clamp	Part-No. Description Dimensions* Applications	345360-0000-038 Screw clamp sample holder and adaptor base 100mm height; Jaw gap up to 10mm Semiconductor or flat sample. Sample should be no thicker than 10mm	
Spring Clip	Part-No. Description Dimensions* Applications	345360-0000-037 Spring clip type sample holder and adaptor base 101mm height; Clamp gap up to 5mm Semiconductor, flat, or rigid material. Sample should be thin and flat, no thicker than 5mm	
Tall Aluminum Base	Part-No. Description Dimensions* Applications	345360-0000-039 Cylindrical aluminum mounting rod sample holder and adaptor base 90mm height; 15mm diameter Smaller solid material (such as rock core samples) that requires a stable 15mm flat mounting surface	
Sample Holder Base	Part-No. Description Dimensions* Applications	345360-0000-034 Adaptor base with kinematic grip Autoloader kinematic mount To build or use your own sample holders to use with the ZEISS autoloader	
Small Cradle	Part-No. Description Dimensions* Applications	345360-0000-177 Small cradle sample holder 56mm height; Clamp gap up to 6.35mm width Flat objects like PC boards or flat materials	
Large Cradle	Part-No. Description Dimensions* Applications	345360-0000-176 Large cradle sample holder 62mm height; Clamp gap up to 12.7mm width Flat objects like PC boards or flat materials	
Stackable Post	Part-No. Description Dimensions* Applications	345360-0000-178 25mm diameter stackable post sample holder 20mm base with post height of 6.35mm, 12.5mm, 19mm, 25mm, 50mm from top to bottom Solid material (such as rock core samples) that requires a stable 25mm flat mounting surface. Stackable for sample height adjustments. Can be used with 345360-000-172/173/174 to increase mount diameter up to 100mm	

*Height includes the adaptor base height.

Xradia Versa Family / VersaXRM-500 / Context microCT

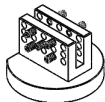
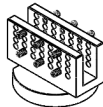
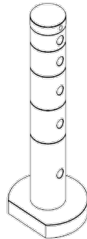
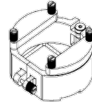

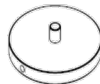
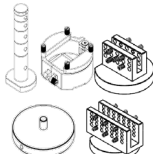
Sample holders (Autoloader compatible)

Adjustable Angle	Part-No.	345360-0000-179	
	Description	Adjustable angle sample holder	
	Dimensions*	102.8mm by 30mm face surface with max. angle range of 45 deg.	
	Applications	Adjustable angle base for attaching flat samples to allow tilting for better FOV	
Pin Vise (up to 0.6mm vise diameter)	Part-No.	345360-1004-685	
	Description	Pin vise type sample holder and adaptor base	
	Dimensions*	108mm height; Pin vise opening up to 0.6mm	
	Applications	Solid material (such as rock core samples, or thin, long pieces of material). Mounting (or toothpick or rod) should be 0.6mm or less in diameter	
Pin Vise (up to 1.0mm vise diameter)	Part-No.	345360-1004-437	
	Description	Pin vise sample holder and adaptor base	
	Dimensions*	98mm height; Pin vise opening up to 1.0mm	
	Applications	Solid material (such as rock, core samples, or thin, long pieces of material). Sample (or pin or rod) should be 1mm or less in diameter	
Pin Vise (0.8-1.6mm vise diameter)	Part-No.	345360-1004-438	
	Description	Pin vise sample holder and adaptor base	
	Dimensions*	98mm height; Pin vise opening 0.8mm to 1.6mm	
	Applications	Solid material (such as rock core samples, or thin, long pieces of material). Sample (or pin or rod) should be 1.6mm or less in diameter	
Pin Vise (1.3-3.2mm vise diameter)	Part-No.	345360-1004-416	
	Description	Pin vise sample holder and adaptor base	
	Dimensions*	98mm height; Pin vise opening 1.3mm to 3.2mm	
	Applications	Solid material (such as rock core samples, or thin, long pieces of material). Mounting (toothpick or rod) should be 3mm or less in diameter	
Pin Vise (2.9-4.8mm vise diameter)	Part-No.	345360-1004-439	
	Description	Pin vise sample holder and adaptor base	
	Dimensions*	98mm height; Pin vise opening 2.9mm to 4.8mm	
	Applications	Solid material (such as rock core samples, or thin, long pieces of material). Sample (or pin or rod) should be 4.8mm or less in diameter	

*Height includes the adaptor base height.

Xradia Versa Family / VersaXRM-500 / Context microCT

Sample holders

Small Cradle	Part-No. Description Dimensions* Applications	345360-0000-170 Small cradle sample holder 35mm height; Clamp gap up to 6.35mm width Flat objects like PC boards or flat materials	
Large Cradle	Part-No. Description Dimensions* Applications	345360-0000-171 Large cradle sample holder 41.75mm height; Clamp gap up to 12.7mm width Flat objects like PC boards or flat materials	
Stackable Post	Part-No. Description Dimensions* Applications	345360-0000-168 25mm diameter stackable post sample holder 10mm base with post height of 6.35mm, 12.5mm, 19mm, 25mm, 50mm from top to bottom Solid material (such as rock core samples) that requires a stable 25mm flat mounting surface. Stackable for sample height adjustments. Can be used with 345360-0000-172/173/174 to increase mount diameter up to 100mm	
Sample Base Clamp	Part-No. Description Applications	345360-0000-169 Sample stage to sample base clamp. Thumb screw tightened Clamp sample holders to the stage while scanning very large unbalanced samples	
Adjustable Angle	Part-No. Description Dimensions* Applications	345360-0000-175 Adjustable angle sample holder 102.8mm x 30mm face surface, with max. angle range of 45 deg. Adjustable angle base for attaching flat samples to allow tilting for better FOV	
Sample Mount Disk	Part-No. Description Dimensions* Applications	345360-0000-172; 345360-0000-173; 345360-0000-174 Sample holder accessory - flat mounting disks 50.8mm, 72.6mm, 101.6mm diameter, with 6.35mm height To be used with 345360-0000-168. These disks provide mounting surfaces for solid material (such as rock core samples) that requires a stable flat surface from 50-100mm in diameter	
FPX Sample Holder Kit	Part-No. Description Dimensions* Applications	345360-0000-167 Sample holder kit, consisting of: 345360-0000-168 / 169 / 170 / 171 / 172 / 173 / 174 Refer to specifications of individual part Comes standard with FPX optional imaging module	

*Height includes the adaptor base height.

Xradia Versa Family / VersaXRM-500 / Context microCT

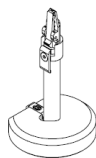
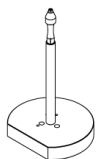
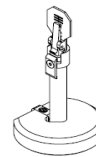

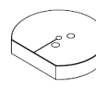
Sample holders

Pin Vise (up to 0.6mm vise diameter)	Part-No. Description Dimensions* Applications	345360-1004-684 Pin vise type sample holder and adaptor base 98mm height; Pin vise opening up to 0.6mm Solid material (such as rock core samples, or thin, long pieces of material). Mounting (or toothpick or rod) should be 0.6mm or less in diameter	
Pin Vise (up to 1.0mm vise diameter)	Part-No. Description Dimensions* Applications	345360-1004-422 Pin vise sample holder and adaptor base 98mm height; Pin vise opening up to 1.0mm Solid material (such as rock core samples, or thin, long pieces of material). Sample (or pin or rod) should be 1mm or less in diameter	
Pin Vise (0.8-1.6mm vise diameter)	Part-No. Description Dimensions* Applications	345360-1004-426 Pin vise sample holder and adaptor base 98mm height; Pin vise opening 0.8mm to 1.6mm Solid material (such as rock core samples, or thin, long pieces of material). Sample (or toothpick or rod) should be 1.6mm or less in diameter	
Pin Vise (1.3-3.2mm vise diameter)	Part-No. Description Dimensions* Applications	345360-1004-414 Pin vise sample holder and adaptor base 98mm height; Pin vise opening 1.3mm to 3.2mm Solid material (such as rock core samples, or thin, long pieces of material). Sample (or toothpick or rod) should be 3.2mm or less in diameter	
Pin Vise (2.9-4.8mm vise diameter)	Part-No. Description Dimensions* Applications	345360-1004-428 Pin vise sample holder and adaptor base 98mm height; Pin vise opening 2.9mm to 4.8mm Solid material (such as rock core samples, or thin, long pieces of material). Sample (or toothpick or rod) should be 4.8mm or less in diameter	

*Height includes the adaptor base height.

Xradia Ultra Family / UltraXRM-L200

Sample holders

Spring Clip	Part-No.	345360-0000-129	
	Description	Spring clip style sample holder. For use with Xradia 800/810 Ultra and UltraXRM-L200. Includes extension for use with Xradia Versa	
	Dimensions*	41mm height	
	Applications	Pin-mounted or rigid sample. Sample should be no thicker than 2mm to be clipped directly. Pin should be no thicker than 2mm and no longer than 30mm	
Pin Vise (up to 0.6mm vise diameter)	Part-No.	345360-1004-684	
	Description	Pin vise sample holder. For use with Xradia 800/810 Ultra and UltraXRM-L200. Includes extension for use with Xradia Versa	
	Dimensions*	41mm height	
	Applications	Pin-mounted sample. Pin should be no thicker than 0.6mm and no longer than 15mm	
Flat-Backed Clip	Part-No.	345360-0000-131	
	Description	Flat back sample holder. For use with Xradia 800 Ultra and UltraXRM-L200. Not compatible with Xradia 810 Ultra. Includes extension for use with Xradia Versa	
	Dimensions*	41mm height	
	Applications	Chip or other large, flat sample. Sample should be no thicker than 1mm and no larger than 25mm x 25mm	
SEM Stub	Part-No.	345360-0000-137	
	Description	Sample holder for standard SEM stubs (recommended TedPella Part#16188). For use with Xradia 800/810 Ultra and UltraXRM-L200	
	Dimensions*	41mm height	
	Applications	Samples mounted on standard SEM stubs for easy transfer between SEM or FIB-SEM and Xradia Ultra. Samples that can be attached to a flat horizontal surface	
Sample Holder Base	Part-No.	345360-0000-130	
	Description	Adaptor base for custom designed sample holders	
	Dimensions*	Standard kinematic mount	
	Applications	To build or use your own sample holders and to mount the custom holder to Xradia tomography stage	

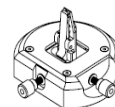
*Height includes the adaptor base height.

Xradia nanoXCT-100

Sample holders

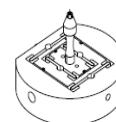
Spring Clip

Part-No.	345360-0000-121
Description	Spring clip style sample holder with adjustable base. For use with Xradia nanoXCT-100. Also compatible with Xradia 800/810 Ultra and UltraXRM-L200
Dimensions*	41mm height
Applications	Pin-mounted or rigid sample. Sample should be no thicker than 2mm to be clipped directly. Pin should be no thicker than 2mm and no longer than 30mm



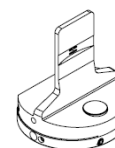
Pin Vise (up to 0.6mm vise diameter)

Part-No.	345360-0000-122
Description	Pin vise sample holder with adjustable base. For use with Xradia nanoXCT-100. Also compatible with Xradia 800/810 Ultra and UltraXRM-L200
Dimensions*	41mm height
Applications	Pin-mounted sample. Pin should be no thicker than 0.6mm and no longer than 15mm



Flat-Backed Clip

Part-No.	345360-0000-123
Description	Flat back sample holder with adjustable base. For use with Xradia nanoXCT-100. Also compatible with Xradia 800 Ultra and UltraXRM-L200 (not Xradia 810 Ultra)
Dimensions*	41mm height
Applications	Chip or other large, flat sample. Sample should be no thicker than 1mm



*Height includes the adaptor base height.

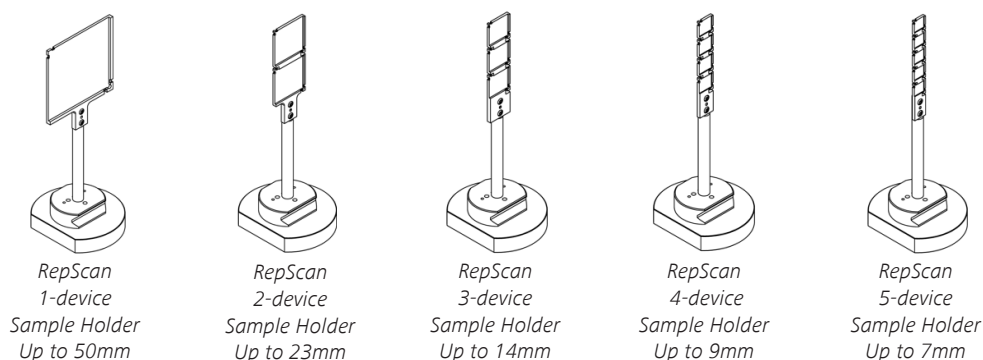
RepScan Multi-site sample holders

For X-ray Microscopy

RepScan module

RepScan is an optional module for the ZEISS Xradia Versa X-ray microscope that is primarily focused on streamlining the workflow for semiconductor packaging analysis in applications for low-, medium-, and high-volume 3D high-resolution repetitive imaging of identical packages. RepScan is optimally used with the ZEISS Xradia Autoloader – a hardware option with 14 stations that supports robotic automated sample handling, improving system utilization and minimizing operator interaction. RepScan sample holders enable mounting up to five devices on a single sample holder, depending on device dimensions. Devices are accurately and easily placed onto the relief features of the sample mount and secured precisely using radiation-stable bands.

With RepScan, the instrument user creates an imaging protocol that contains registration information of the device. This allows the Xradia Versa to automatically and precisely locate the region of interest for scanning. Then, this imaging protocol can be applied to all similarly designed parts in a job queue. The 14 stations of the Autoloader may be populated with five parts per sample holder, supporting automated repetitive imaging of 70 devices, with no further interaction once the job queue is started.



RepScan Multi-site sample holders

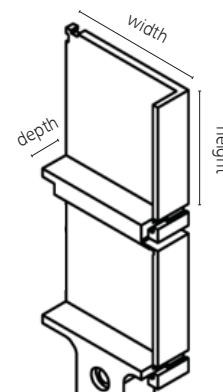
Typical devices are high aspect ratio, having a relatively square width and length, and are thin. ZEISS has designed five different sample holder types distinguished by the number of devices that can be held. The sample holders can hold devices up to 50 mm in the lateral dimension. Custom holders can be made available on special request. Contact your local ZEISS X-ray sales representative for details.

See the sample holder designs shown above, and refer to the table on the next page for the full range of sample holder designs optimized for fastest scan times.

RepScan Multi-site sample holders

Individual designs

Part number	# Sites	Width [mm]	Height [mm]	Depth [mm]
345360-1004-878	5	5	7	0.5
345360-1004-880	5	6	7	0.5
345360-1004-882	5	7	7	0.5
345360-1004-884	4	7	9	0.5
345360-1004-886	4	8	9	0.5
345360-1004-888	4	9	9	0.5
345360-1004-948	3	8	14	1
345360-1004-890	3	10	14	1
345360-1004-892	3	11	14	1
345360-1004-894	3	12	14	1
345360-1004-896	3	13	14	1
345360-1004-898	3	14	14	1
345360-1004-902	2	16	23	1
345360-1004-904	2	18	23	1
345360-1004-906	2	20	23	1
345360-1004-908	2	22	23	1
345360-1004-910	1	25	50	1.5
345360-1004-912	1	27	50	1.5
345360-1004-914	1	30	50	1.5
345360-1004-916	1	32	50	1.5
345360-1004-918	1	35	50	1.5
345360-1004-920	1	37	50	1.5
345360-1004-922	1	40	50	1.5
345360-1004-924	1	45	50	1.5
345360-1004-926	1	50	50	1.5



2-device sample holder shown

Please note that the device should be placed with the smaller length in the horizontal orientation.

Securing your sample: The Elastic Band Kit comes with radiation-resistant elastic bands and appropriate tweezers to quickly secure and release your parts from the sample holders. We offer high capacity and low capacity Elastic Kits as shown below.

Elastic band kits

Part number	Description
345360-1004-775	High Capacity, Qty 200, 10 diameters, 2 sets of tweezers
345360-1005-149	Low Capacity, Qty 50, 10 diameters, 1 set of tweezers

RepScan Multi-site sample holders

Developer kits

Kit	Part number	# Sites	Width [mm]	Height [mm]	Depth [mm]	Qty per Kit
Full range [345360-1004-744]	345360-1004-890	3	10	14	1	3
	345360-1004-902	2	16	23	1	3
	345360-1004-906	2	20	23	1	3
	345360-1004-914	1	30	50	1.5	3
	345360-1004-922	1	40	50	1.5	3
	345360-1004-926	1	50	50	1.5	3
Small format [345360-1004-745]	345360-1004-948	3	8	14	1	3
	345360-1004-890	3	10	14	1	3
	345360-1004-894	3	12	14	1	3
	345360-1004-902	2	16	23	1	3
	345360-1004-906	2	20	23	1	3
Medium format [345360-1004-746]	345360-1004-910	1	25	50	1.5	3
	345360-1004-890	3	10	14	1	3
	345360-1004-898	3	14	14	1	3
	345360-1004-904	2	18	23	1	3
	345360-1004-908	2	22	23	1	3
	345360-1004-914	1	30	50	1.5	3
Large format [345360-1004-747]	345360-1004-918	1	35	50	1.5	3
	345360-1004-906	2	20	23	1	3
	345360-1004-910	1	25	50	1.5	3
	345360-1004-918	1	35	50	1.5	3
	345360-1004-922	1	40	50	1.5	3
	345360-1004-924	1	45	50	1.5	3
	345360-1004-926	1	50	50	1.5	3

All Developer kits include High Capacity Elastic Band kit (part number 345360-1004-775).



microscopy@zeiss.com
www.zeiss.com/microscopy