

General Description of Disc or Annular Sputter Targets for EM Sputter Coaters



Our high purity sputter targets are compatible with a wide variety of desk top sputter coaters. The sputter coaters are used to sputter a very thin layer of conductive metal on non-conductive sample in order to investigate these samples with a scanning electron microscope (SEM). The EM-Tec sputter targets are compatible with the following sputter or ion coater brands: Agar, Anatech/Technics, Bal-Tec, Bio-Rad, Cressington, Denton, Edwards, Emitech, EMS, Emscope, Gatan, Hummer, ISI, JEOL, Leica, Polaron, Quorum and SPI. Targets are relatively expensive due to the high purity of the precious metals which require multiple refining steps. A purity of 99.99% or close is desired to avoid any artefacts either in imaging or with EDX analysis. Depending on your application, there is a choice of coating material, see the "Practical Information for Selecting Target Material to Coat SEM Samples". The target material you are using because it is installed in the sputter coater might not be the best choice and there are alternatives for many applications.

Disc Type Sputter Targets

Disc type sputter targets are made using high purity metal foils and are available in 60, 57, 54, 50 and 19mm diameter. Disc type sputter targets are widely used in all brands of sputter coaters. Most modern sputter coaters use a clamping ring to hold the target. Some older systems use a target support plate where the target needs to be bonded with the target plate by using silver paint or Indium. Use the Disc Sputter Target Selection Table to determine the target size for your coater (alternatively measure the target in your sputter coater) or go directly to ordering information for the target size:

- Ø60mm disc type high purity EM-Tec sputter targets for sputter coaters
- Ø57mm disc type high purity EM-Tec sputter targets for sputter coaters
- Ø54mm disc type high purity EM-Tec sputter targets for sputter coaters
- Ø50mm disc type high purity EM-Tec sputter targets for sputter coaters
- Ø19mm disc type high purity EM-Tec sputter targets for ion beam sputter coaters

EM-Tec Disc Type Sputter Target Selection Table

Manufacturer	Models	Ø60mm	Ø57mm	Ø54mm	Ø50mm	Ø19mm
Agar	Manual / Automatic		X			
Anatech/Technics	Hummer I / II / III / Jr				X	
Bal-Tec	SCD 005 / 040 / 050 / 500			X		
Bal-Tec	MED 10 / MED 20					
Bio-Rad	SC5200 / SC502		X			
Cressington	108manual / 108auto		X			
Cressington	108auto/SE		X			
Cressington	208HR		X			
Denton	Desk II / II / IV / V	X				
Edwards	150B / Scancoat	X				
Emitech	SC7620 / SC7610		X			
Emitech	K500X / K550X / K650X	X				
Emitech	K575XD / K675X / K675XD			X		
Emitech	K575X / Q150		X			
EMS	150R / 300R / SC7620		X			
Emscope	SC502		X			
Fullam	EffaCoater / EMS-76				X	
Gatan	681 Ion Beam Coater					X
Gatan	682 PECS Ion Beam Coater					X
Gatan	685 PECS II Ion Beam Coater					X
ISI	ISI 5400		X			
JEOL	JFC-1200 / 1300 / 1400 / 1600		X			
JEOL	JFC-2300HR		X			
Leica	EM SCD 005 / 050 / 500			X		
Leica	EM MED 020			X		
Leica	ACE 200 / ACE 600			X		
Pelco	SC4 / SC5 / SC6 / SC7		X			
Polaron / Bio-Rad	E5000 / E5200 / E5400 / E5800		X			
Polaron / Bio-Rad	PS 3		X			
Polaron / Quorum	SC7620 / SC7610		X			
Quorum	Q150R / Q150T / SC7620		X			
Quorum	Q300R / Q300T		X			
SPI	SPI-Module		X			
SPI	SPI Super				X	

Annular Type Sputter Targets

Annular sputter targets are less common than the disc type sputter targets. They are used on the older Polaron sputter coaters and on the Anatech/Technics Hummer sputter coaters. For the annular targets, the target material is attached to an aluminum support ring and they are supplied as complete assemblies. Available as targets with pure gold, gold/palladium, platinum, platinum/palladium, silver, copper and nickel. There are two sizes offered:

- Ø82mm OD x Ø60mm ID annular type high purity EM-Tec sputter targets for sputter coaters
- Ø3inch OD x Ø2inch ID annular type high purity EM-Tec sputter targets for sputter coaters

Use the Annular Sputter Target Selection Table to determine the target size for your sputter coater (alternatively measure the target in your sputter coater) or go directly to the Ordering Information.

Annular Type Sputter Target Selection Table

Manufacturer	Models	82mm O.D. X 60mm I.D.	3" O.D. X 2" I.D.
Anatech / Technics	Hummer V / VI / 6.2 / 8		X
Polaron / Biorad	E5100 / SC510 / SC515	X	
Polaron / Quorum	SC7640 / SC 7680	X	

Note 1: Polaron coaters have also been sold under the Bio-Rad, Fisons, VG Microtech, Thermo VG, Emscope and Quorum brand.