



Genco: perfect your process

3G Circular Magnetron



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A 3rd generation of circular cathodes by Genco.

The 3G range of small circular magnetrons from Genco includes $\pm 45^\circ$ tilt adjustment with no bellows, gas injection and a rear utility box for DC, DC-pulsed, RF and HIPIMS processes – all as standard.



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Gencoa offer a comprehensive range of circular planar magnetrons, catering for applications from R&D to production.

The 3G range of HV sources feature an ultra-compact low outgassing design, indirect or direct target water cooling, $\pm 45^\circ$ tilt adjustment, and internal gas injection.

A key advantage is the low pressure working range. The minimal use of polymer and newly-developed magnetics allows the source to work in the 10^{-6} Torr range, leading to improvements to the deposition rate, reduced arcing, less impurities on coating and a higher density coating.

The sources can be fitted with a choice of magnetic and mechanical options, leading to performance benefits appropriate for differing applications, and are built to reliably work with DC, RF, pulsed DC and HIPIMS power supplies.

Key features

- $\pm 45^\circ$ tilt angle adjustment (1° accuracy) with no bellows
- Low pressure sputtering
- Internal gas injection as standard
- Rear utility box as standard for RF and HIPIMS
- Easy target change and choice of target thickness (1-6mm)
- High strength magnetics for sputtering of magnetic material
- Indirect or direct target cooling (pre-configured)

Mechanical options

Gencoa 3G circular magnetrons come with a wide choice of mechanical options. All magnetrons are available for internal or external mount, with the following additional options: manual or pneumatic shutter, chimney, wallmount feedthrough, hidden and water-cooled anode.

Specifications

	2" target diameter	3" target diameter	4" target diameter	5" target diameter
Target size (bonded)	50.8mm (2") OD x 1-3mm 3mm (1/8") backing plate	76.3mm (3") OD x 1-3mm 3mm (1/8") backing plate	101.7mm (4") OD x 1-6mm 3mm (1/8") backing plate	127mm (5") OD x 1-10mm 6mm (1/4") backing plate
Target size (monoblock)	50.8mm OD x 1-6mm	76.3mm OD x 1-6mm	101.7mm OD x 1-10mm	127mm OD x 1-15mm
Internal mount	25.4mm OD 300mm/12" shaft	25.4mm OD 300mm/12" shaft	25.4mm OD 300mm/12" shaft	40mm OD 300mm/12" shaft
External mount	DN80-ISO LF	DN100-ISO LF	DN160-ISO LF	DN200-ISO LF
Operating pressure	7×10^{-4} mbar - 1×10^{-2} mbar	7×10^{-4} mbar - 1×10^{-2} mbar	7×10^{-4} mbar - 1×10^{-2} mbar	7×10^{-4} mbar - 1×10^{-2} mbar
Power connection	N type or 7/16 or HN	N type or 7/16 or HN	N type or 7/16 or HN	N type or 7/16 or HN
Max. DC	1kw, DC/pulsed DC	1.4kw, DC/pulsed DC	2Kw, DC/pulsed DC	5Kw, DC/pulsed DC
Max. RF	200W	750W	1500W	2500W
Water tube	1/4" Pu	1/4" Pu	1/4" Pu	3/8" Pu
Water flow rate	3.2 litre/min	3.4 litre/min	3.8 litre/min	5 litre/min
Gas	1/8" StSt tube	1/8" StSt tube	1/8" StSt tube	1/8" StSt tube
Tilt	$\pm 45^\circ$	$\pm 45^\circ$	$\pm 45^\circ$	$\pm 45^\circ$
Magnetics	HS	HS	HS, HY	HS, HY

