



# 3G CIRCULAR MAGNETRON

The Gencoa 3G range of small circular magnetrons are perfectly-suited to R&D processes and small scale production, with gas injection and a rear utility box for DC, DC-pulsed, RF and HIPIMS processes included as standard.

## KEY FEATURES

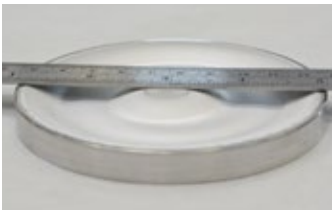
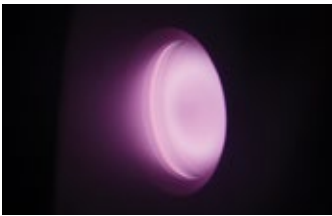
1. Unique low pressure sputtering down to  $10^{-5}$  mbar range
2. Easy target change (adapts 1-6mm target thickness)
3.  $\pm 45^\circ$  tilt adjustment with no bellows
4. High strength magnets for magnetic material sputtering
5. Indirect or direct target cooling
6. Compact size and low outgassing

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# 3G CIRCULAR

## APPLICATIONS

- Research and development of functional, optical and magnetic thin film materials
- Confocal deposition onto rotating substrates
- Multilayer, cluster and hybrid layer stacks



4" high yield (HY) target erosion

The 3G circular range of HV sources from Gencoa caters for applications from R&D to small scale production.

With newly-developed magnetic fields, the sources are capable of performing in the  $10^{-5}$  mbar range, delivering improvements to the deposition rate, reduced arcing, fewer impurities and a higher density coating.

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

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.

High yield (HY) magnetics can be fitted to target diameters of 4" and above for sputtering of precious metals, delivering target usage of >40%.



## MECHANICAL OPTIONS

All magnetrons in the 3G range are available for internal or external mount, with the following additional options: manual or pneumatic shutter, chimney, wallmount feedthrough, hidden/water-cooled anode.

## SPECIFICATIONS

	2" TARGET DIAMETER	3" TARGET DIAMETER	4" TARGET DIAMETER	5" TARGET DIAMETER
<b>TARGET SIZE (BONDED)</b>	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
<b>TARGET SIZE (MONOBLOCK)</b>	50.8mm OD x 1-6mm	76.3mm OD x 1-6mm	101.7mm OD x 1-10mm	127mm OD x 1-15mm
<b>INTERNAL MOUNT</b>	25.4mm OD 300mm/12" shaft	25.4mm OD 300mm/12" shaft	25.4mm OD 300mm/12" shaft	40mm OD 300mm/12" shaft
<b>EXTERNAL MOUNT</b>	DN80-ISO LF	DN100-ISO LF	DN160-ISO LF	DN200-ISO LF
<b>OPERATING PRESSURE</b>	$7 \times 10^{-4}$ mbar - $1 \times 10^{-2}$ mbar	$7 \times 10^{-4}$ mbar - $1 \times 10^{-2}$ mbar	$7 \times 10^{-4}$ mbar - $1 \times 10^{-2}$ mbar	$7 \times 10^{-4}$ mbar - $1 \times 10^{-2}$ mbar
<b>POWER CONNECTION</b>	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
<b>MAX. DC</b>	1kw, DC/pulsed DC	1.4kw, DC/pulsed DC	2Kw, DC/pulsed DC	5Kw, DC/pulsed DC
<b>MAX. RF</b>	200W	750W	1500W	2500W
<b>WATER TUBE</b>	1/4" Pu	1/4" Pu	1/4" Pu	3/8" Pu
<b>WATER FLOW RATE</b>	3.2 litre/min	3.4 litre/min	3.8 litre/min	5 litre/min
<b>GAS</b>	1/8" StSt tube	1/8" StSt tube	1/8" StSt tube	1/8" StSt tube
<b>TILT</b>	$\pm 45^\circ$	$\pm 45^\circ$	$\pm 45^\circ$	$\pm 45^\circ$
<b>MAGNETICS</b>	HS	HS	HS, HY	HS, HY

## FURTHER INFORMATION

Contact: [sales@gencoa.com](mailto:sales@gencoa.com) or visit  
[www.gencoa.com/3g-circular](http://www.gencoa.com/3g-circular)

