

ION`X®

Rely on • quality • know-how • performance

| ION`X® UHV ROUND MAGNETRONS

- INTRODUCTION
- SPECIFICATIONS
- OPTIONS
- ACCESSORIES



THIN FILM CONSULTING 

→ ROUND MAGNETRONS → UHV MAGNETRONS → RECTANGULAR MAGNETRONS
→ РОУНД МАГНЕТРОНЫ → УНВ МАГНЕТРОНЫ → РЕКТАНГУЛЯР МАГНЕТРОНЫ

PLANAR MAGNETRON SPUTTERING SOURCE ION`X-4"UHV

» INTRODUCTION



- metallic vacuum sealing
- mounts on DN 160/63 CF
- bakeable up to 200 °C

ION`X[®]

Rely on • quality • know-how • performance

>> PRODUCT OVERVIEW

ULTRAHIGH VACUUM MAGNETRON				
ITEM	SIZE	PART NUMBER	DESCRIPTION	VACUUM INTERFACE
3.1	4" Ø	IX4U_9100_CF160	<ul style="list-style-type: none"> • 4" UHV magnetron on DN 160 CF • targets 4–10 mm thick • discrete target clamp • welded and brazed ceramic insulator • 1x FPM seal • SmCo magnets, bakeable 200 °C • reference drawing IX4U_8100 	DN 160 CF
3.2	4" Ø	IX4U_9150_CF160	<ul style="list-style-type: none"> • 4" UHV magnetron on DN 160 CF • targets 4–10 mm thick • discrete target clamp • welded and brazed ceramic insulator • 1x internal CF seal • SmCo magnets, bakeable 200 °C • reference drawing IX4U_8150 	DN 160 CF
3.3	4" Ø	IX4U_9200_CF63	<ul style="list-style-type: none"> • 4" UHV magnetron with DN 63 CF, internal mounting • targets 4–10 mm thick • welded and brazed ceramic insulator • 1x FPM seal • SmCo magnets, bakeable 200 °C • reference drawing IX4U_8200 	DN 63 CF
3.4	4" Ø	IX4U_9250_CF63	<ul style="list-style-type: none"> • 4" UHV magnetron with DN 63 CF, internal mounting • targets 4–10 mm thick • welded and brazed ceramic insulator • 1x internal CF seal • SmCo magnets, bakeable 200 °C • reference drawing IX4U_8250 	DN 63 CF

OPTIONS

4" Ø		• argon injection	
4" Ø		• ferromagnetic targets, 4 mm Ni, 2 mm Fe	
4" Ø		• chimney	
4" Ø		• ± 30° tilt	
4" Ø		• extended flange mounting	



2" UHV
 3" UHV
4" UHV
 5" UHV
 6" UHV
 8" UHV

» SPECIFICATIONS

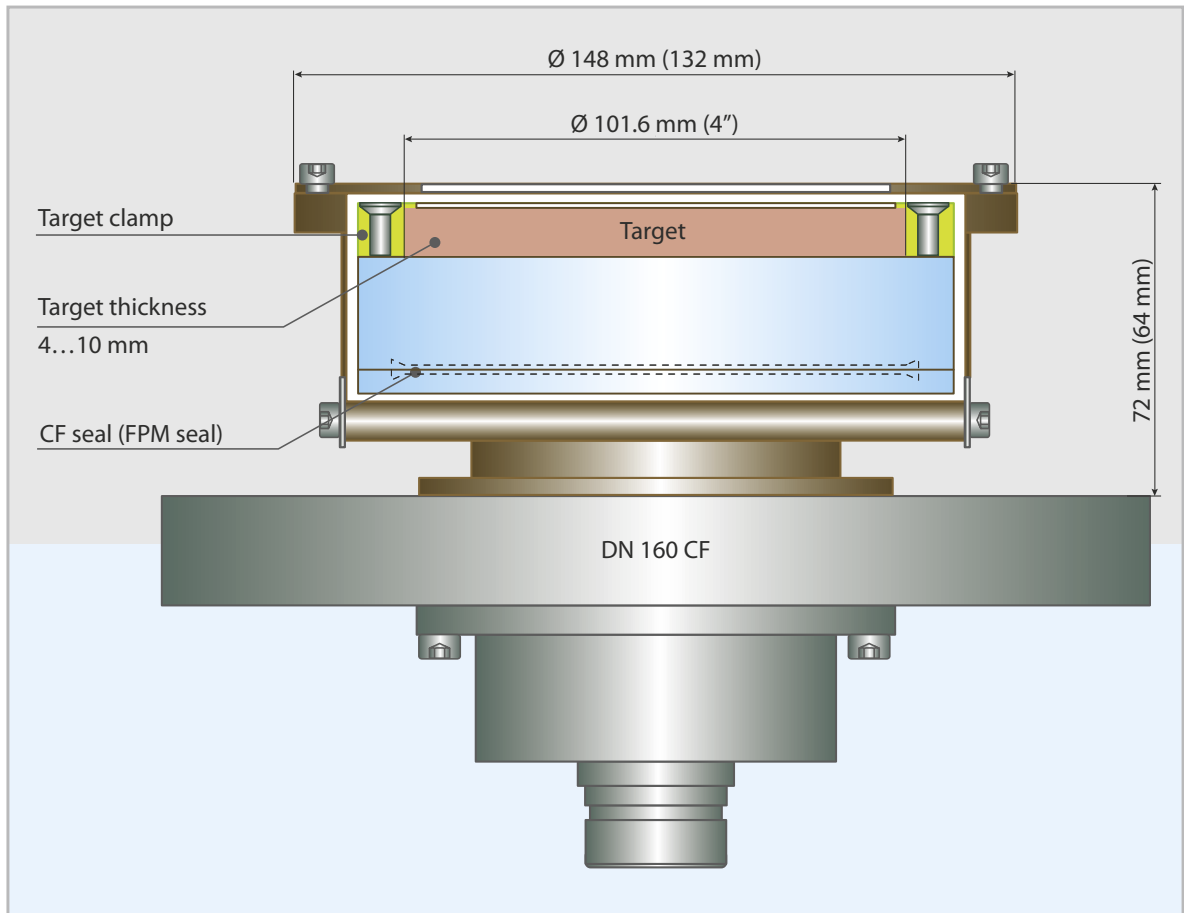
4" ULTRAHIGH VACUUM MAGNETRON				
Model No.	IX4U_9100	IX4U_9150	IX4U_9200	IX4U_9250
	4" UHV FLANGE MOUNTED		4" UHV INTERNAL	
Target				
< form	circular/planar			
< diameter	4" ± 0.25 mm			
< thickness	4 to 10 mm			
< cooling	indirect			
Operating pressure				
argon				
< nonmagnetic targets	3 x 10 ⁻³ to 10 ⁻¹ mbar			
< best performance	5 x 10 ⁻³ to 5 x 10 ⁻² mbar			
< vacuum sealing	welding, brazing, FPM	welding, brazing, CF	welding, brazing, FPM	welding, brazing, CF
Electrical specifications				
< max. power, watts DC/RF	1500 W DC / 1000 W RF * **			
< max. voltage DC	1000 V			
< max. current DC	10 A			
< rec. power supply	1.5 kW DC / 1 kW RF			
Power connector				
< connector DC/RF	7/16 type		custom type	
Cooling water				
< flow	1 l / (min x kW)			
< min. flow	1 l/min			
< max. inlet temperature	≤ 30 °C			
< max. pressure	≤ 2 bar open drain			
< water tubes	Ø 6 x Ø 4 mm PTFE			

4" ULTRAHIGH VACUUM MAGNETRON				
Model No.	IX4U_9100	IX4U_9150	IX4U_9200	IX4U_9250
Magnet array	permanent SmCo			
Bakeout temperature				
< max. temperature	200 °C			
Magnetron dimensions				
< diameter	132 mm	132 mm	132 mm	132 mm
< height	64 mm	72 mm	90 mm	98 mm
< weight	5,5 kg	8 kg	4,5 kg	5 kg
Vacuum interface	DN 160 CF		DN 63 CF	DN 63 CF
Proposed mounting style	DN 160 CF		_CF 160	_CF 160
Construction materials	stainless steel OFHC - type copper Al ₂ O ₃			
Typical rates				
	Mo, 7 Å/s, 1 kW DC, 200 mm Cu, 20 Å/s, 1 kW DC, 200 mm			
Accessories & Options				
< target diameter	100 mm			
< argon injection	✓		✓	
< power connector	N-type, HN-type		custom type	
< magnet array for magnetic materials	Fe 2 mm, Ni 4 mm		Fe 2 mm, Ni 4 mm	
< ± 30° tilt	n.a.		✓	
< flange mounting	DN 200 CF		DN 160 CF / DN 200 CF	
< SS target clamps for specified thickness	✓	✓	✓	✓
< SS target clamps for bond targets	✓	✓	✓	✓

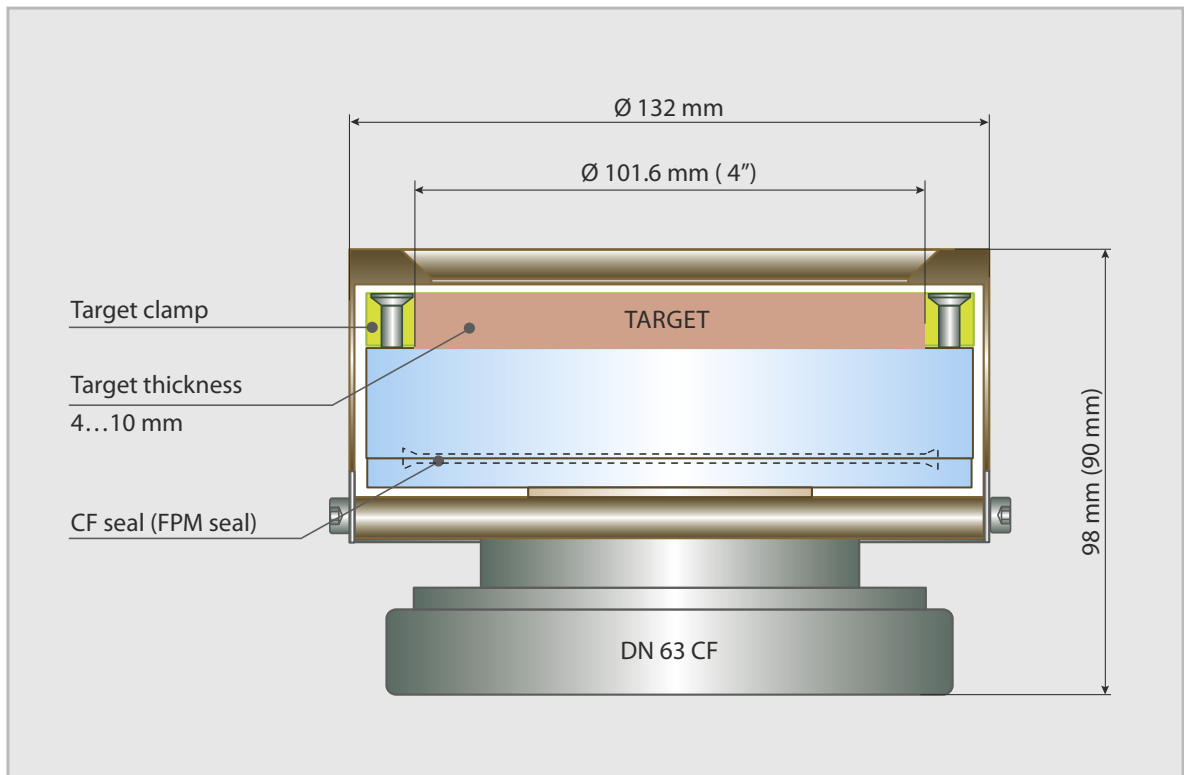
* This value refers to the magnetron itself. The maximum power is determined by the target material and bonding technique.

** RF-Version requires special connector and installation. More details on request.

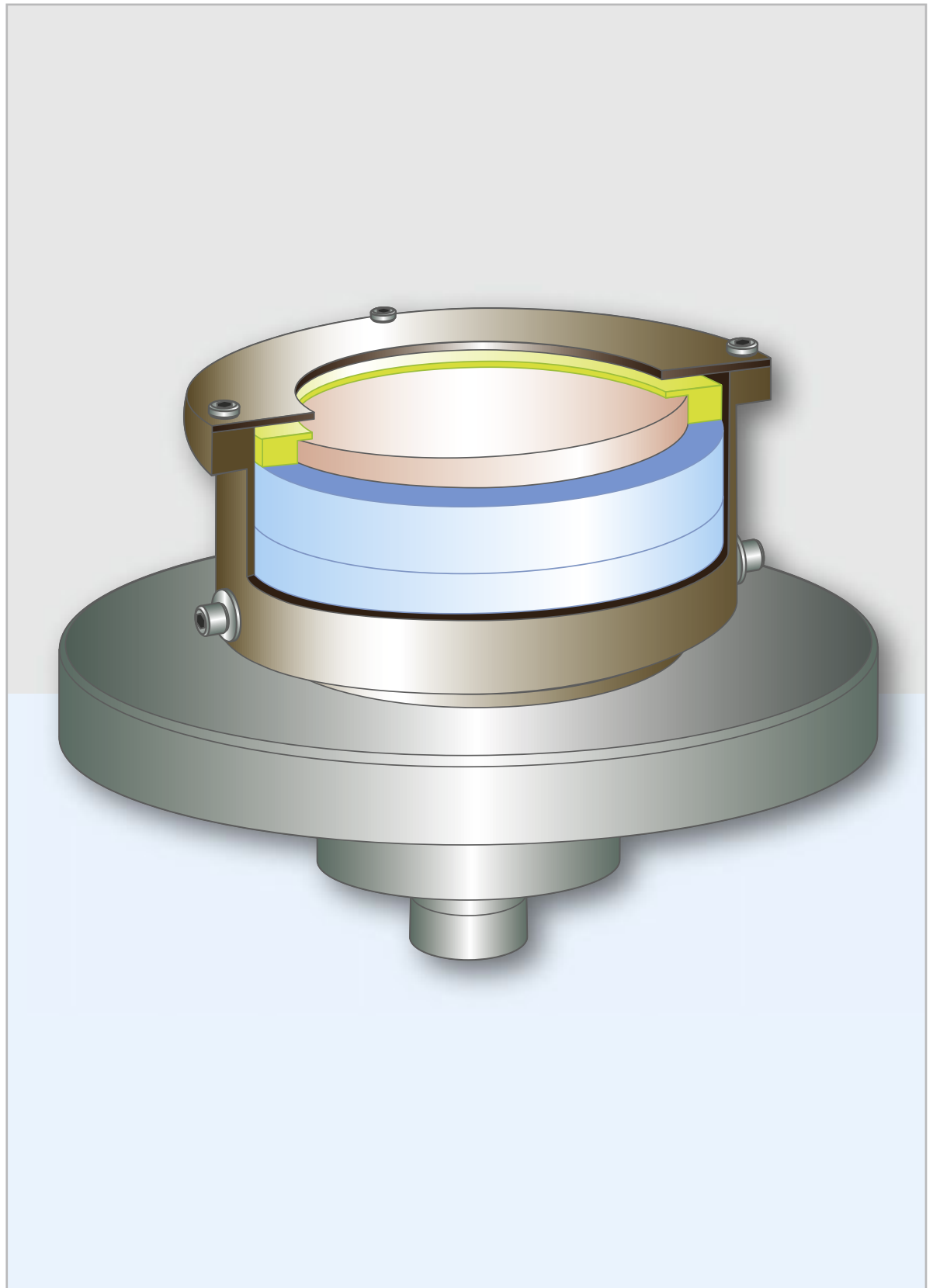
REFERENCE VIEW IX4U_81x0



REFERENCE VIEW IX4U_82x0



PLANAR MAGNETRON SPUTTERING SOURCE ION'X-4"UHV



4" UHV

ION`X®

Rely on • quality • know-how • performance

THIN FILM CONSULTING

Hermann Gebhardt

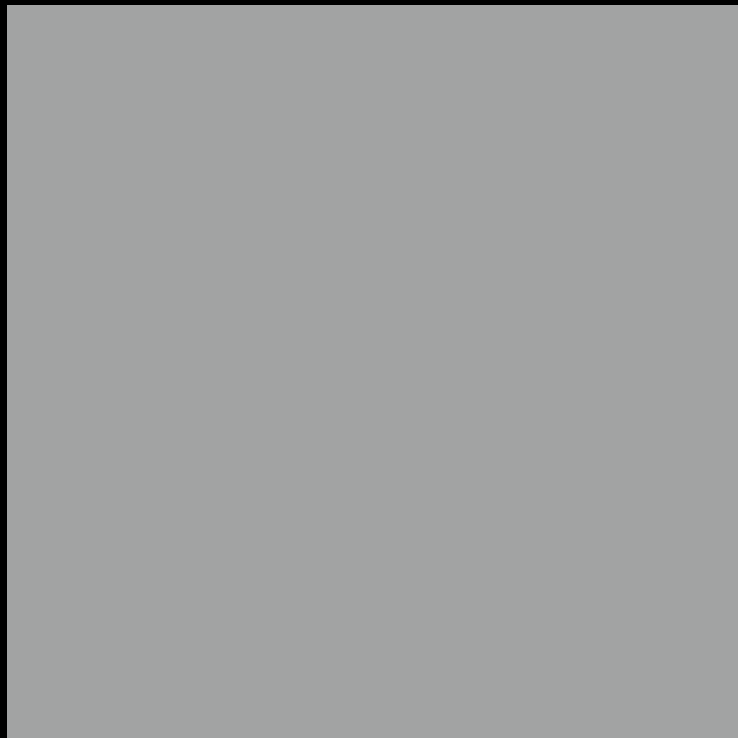
Robert Bosch Str. 11
D-72661 Grafenberg
GERMANY

Tel.: +49 (0) 71 23/9 36 66

Fax: +49 (0) 71 23/93 66 89

E-Mail: info@thfc.de

Web: www.thfc.de



THIN FILM CONSULTING 

→ ROUND MAGNETRONS → UHV MAGNETRONS → RECTANGULAR MAGNETRONS
→ ROUND MAGNETRONS → UHV MAGNETRONS → RECTANGULAR MAGNETRONS