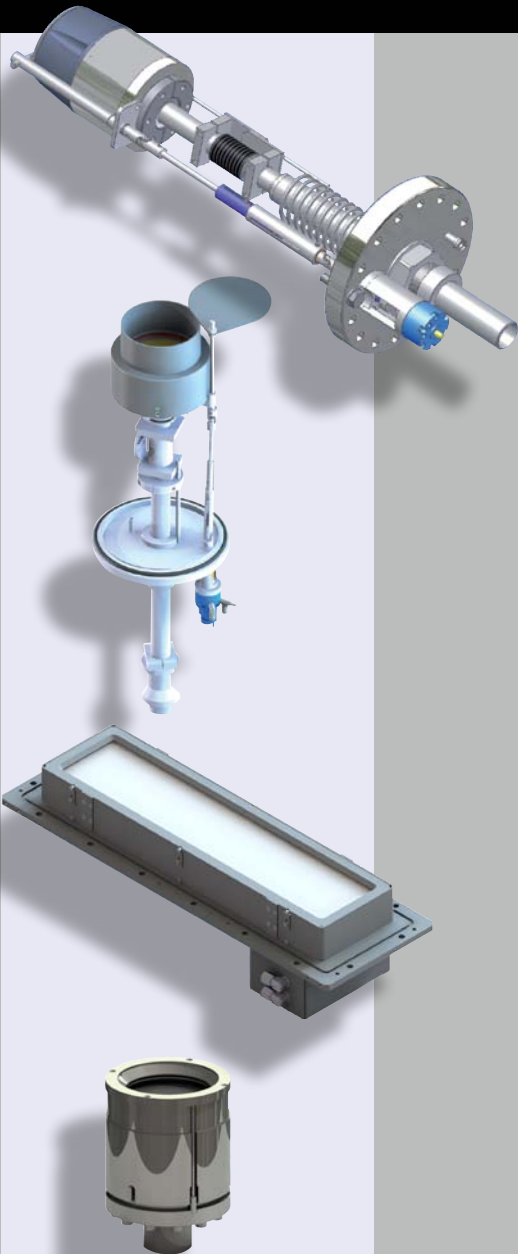


IONIX[®]

MAGNETRON SPUTTERING TECHNOLOGY



IONIX 2"UHV Magnetron Assemblies
Specifications and reference dwg

THIN FILM CONSULTING 

PLANAR MAGNETRON SPUTTERING SOURCE ION`X-2"UHV

» INTRODUCTION



- metallic vacuum sealing
- mounts on DN 63 / 16 CF
- adjustable target clamping
- bakeable 200 °C
- magnet array for ferromagnetic targets

» PRODUCT OVERVIEW

ULTRAHIGH VACUUM MAGNETRON				
ITEM	SIZE	PART NUMBER	DESCRIPTION	VACUUM INTERFACE
1.1	2" Ø	IX2U_9107	• 2" UHV magnetron on DN 63 CF • targets 2–6 mm thick, sliding anode • threaded target clamp • SmCo magnets, bakeable 200 °C • sputters ferromagnetic targets Ni 2 mm, Fe 1 mm • power connector 7/16-type • reference drawing IX2U_8107	DN 63 CF
1.2	2" Ø	IX2U_9201_CF16	• 2" UHV magnetron with DN 16 CF, internal mounting • targets 1–6 mm thick, sliding anode • SmCo magnets, bakeable 200 °C • sputters ferromagnetic targets Ni 2 mm, Fe 1 mm • reference drawing IX2U_8201	DN 16 CF

OPTIONS				
	2" Ø		• argon injection	
	2" Ø		• chimney	
	2" Ø		• ± 30° tilt	
	2" Ø		• extended flange mounting	



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

» SPECIFICATIONS

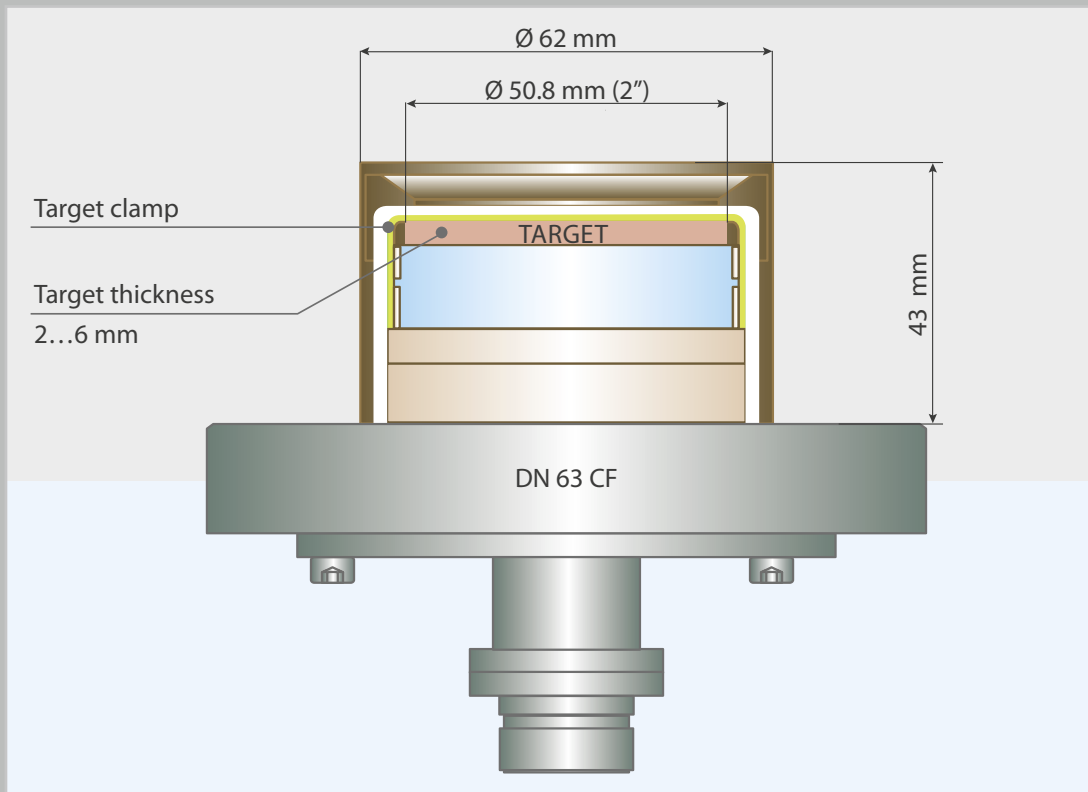
2" ULTRAHIGH VACUUM MAGNETRON		
Model No.	IX2U_9107	IX2U_9201
	2" UHV FLANGE MOUNTED	2" UHV INTERNAL
Target		
< form	circular/planar	
< diameter	2" ± 0.1mm	
< thickness	2 to 6 mm	
< cooling	indirect	
Operating pressure	argon	
< nonmagnetic targets	3 x 10 ⁻³ to 10 ⁻¹ mbar	
< best performance	5 x 10 ⁻³ to 5 x 10 ⁻² mbar	
< vacuum sealing	welding, brazing, CF	
Electrical specifications		
< max. power, watts DC/RF	400 W DC / 400 W RF * **	
< max. voltage DC	1000 V	
< max. current DC	5 A	
< rec. power supply	500 W DC / 600 W RF	
Power 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	

2" ULTRAHIGH VACUUM MAGNETRON		
Target	2" UHV FLANGE MOUNTED	2" UHV INTERNAL
Magnet array	permanent SmCo	
Bakeout temperature		
< max. temperature	200 °C	
Magnetron dimensions		
< diameter	62 mm	64 mm
< height	43 mm	82 mm (+ 40 mm CF 16)
< weight	2 kg	1.5 kg
Vacuum interface	DN 63 CF	DN 16 CF
Proposed mounting style	DN 63 CF	DN 63 CF / DN 100 CF
Construction materials	stainless steel OFHC - type copper Al ₂ O ₃	
Typical rates		
	Al, 8 Å/s, 300 W DC, 100 mm	
	Cu, 15 Å/s, 300 W DC, 100 mm	
Accessories & Options		
< target diameter	50 mm	
< argon injection	✓	✓
< power connector	N-type, HN-type	custom type
< magnet array for magnetic materials	Fe 2 - 3 mm, Ni 5 mm	Fe 2 - 3 mm, Ni 5 mm
< ± 30° tilt	n.a.	✓
< flange mounting	DN 100 CF	DN 63 CF / DN 100 CF
< SS target clamps for specified thickness	n.a.	n.a.
< SS target clamps for bond targets	n.a.	n.a.

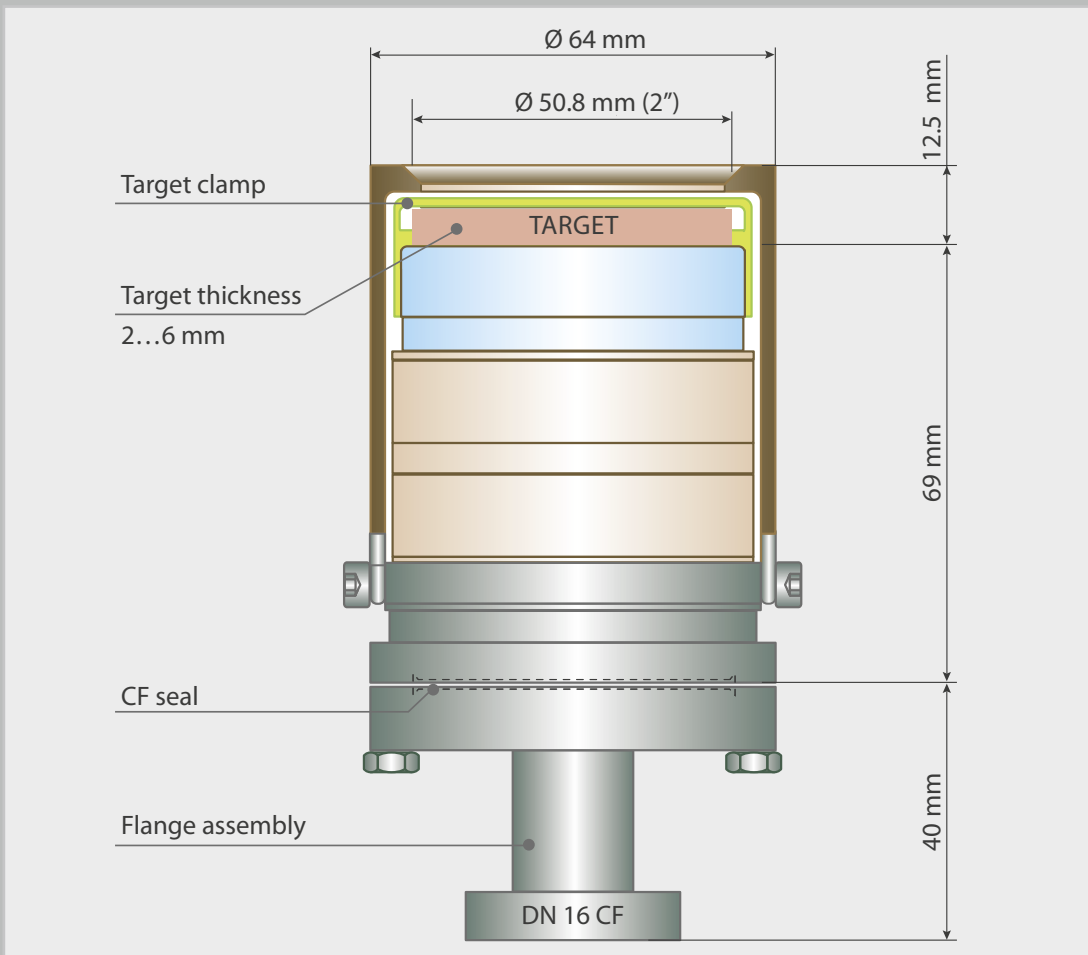
* This value refers to the magnetron itself. The maximum power is determined by the target material and bonding technique.

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

REFERENCE VIEW IX2U_8107



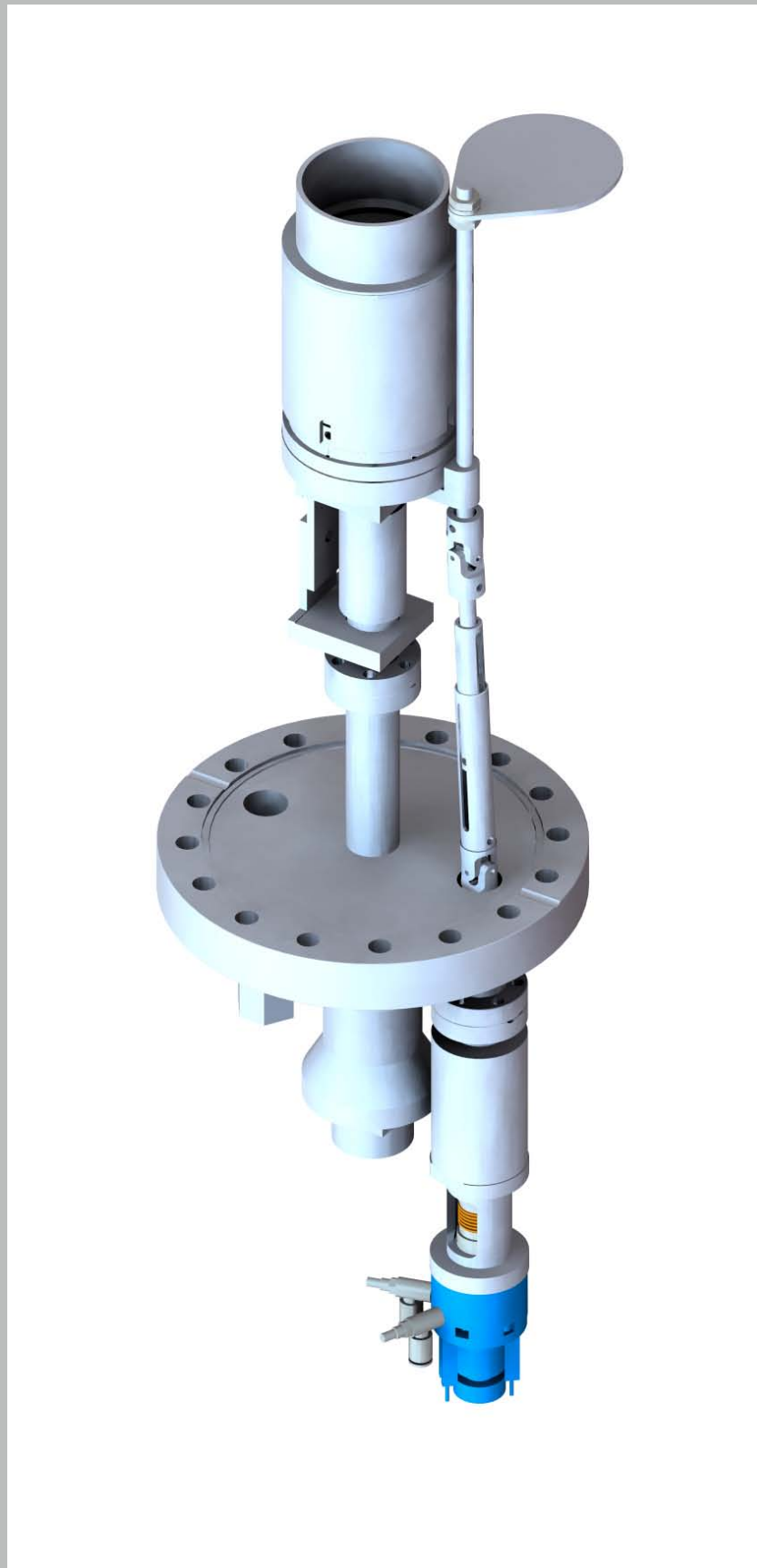
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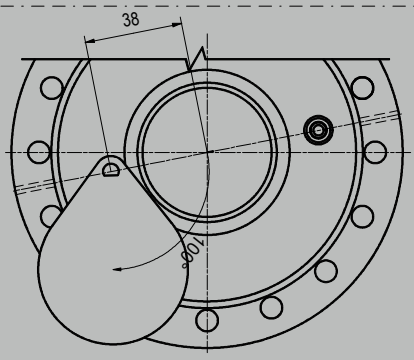
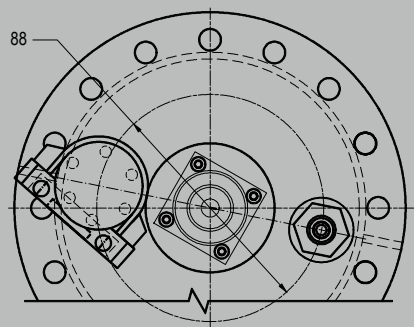
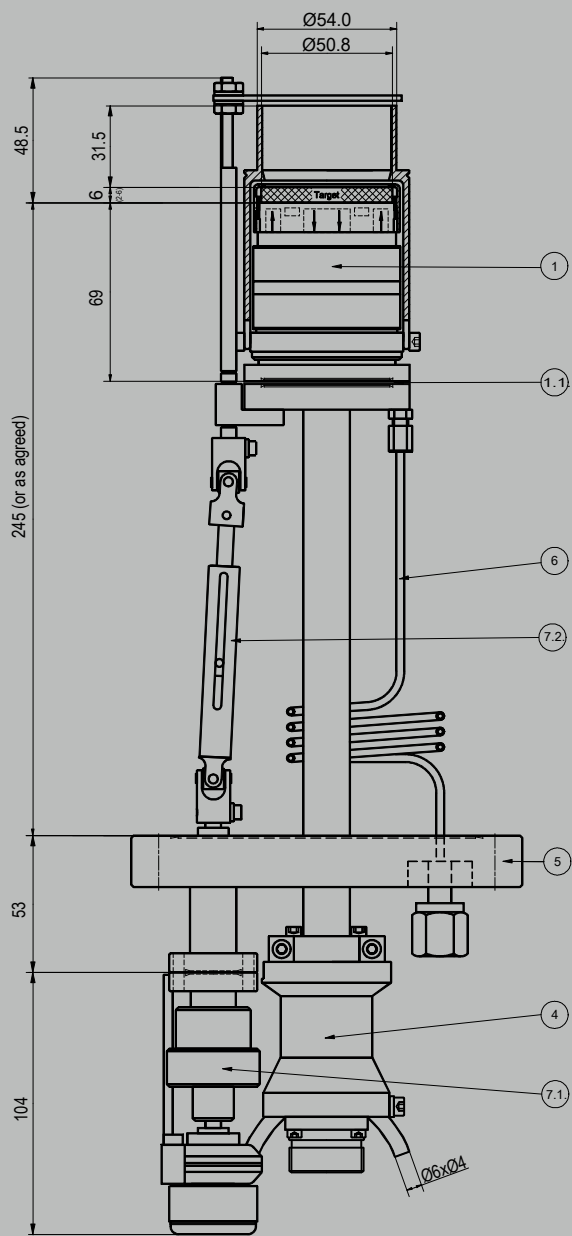


REFERENCE VIEW

IX2U_8107

2"UHV





(*) Select magnetron model: _____

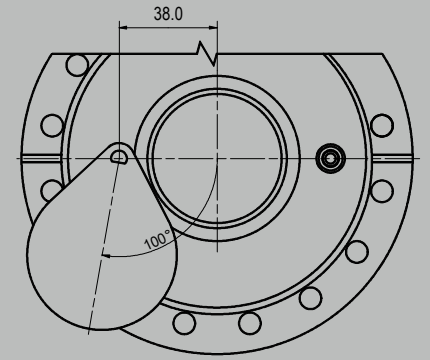
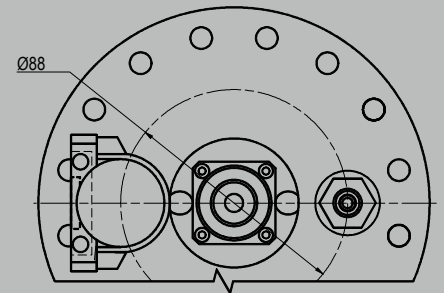
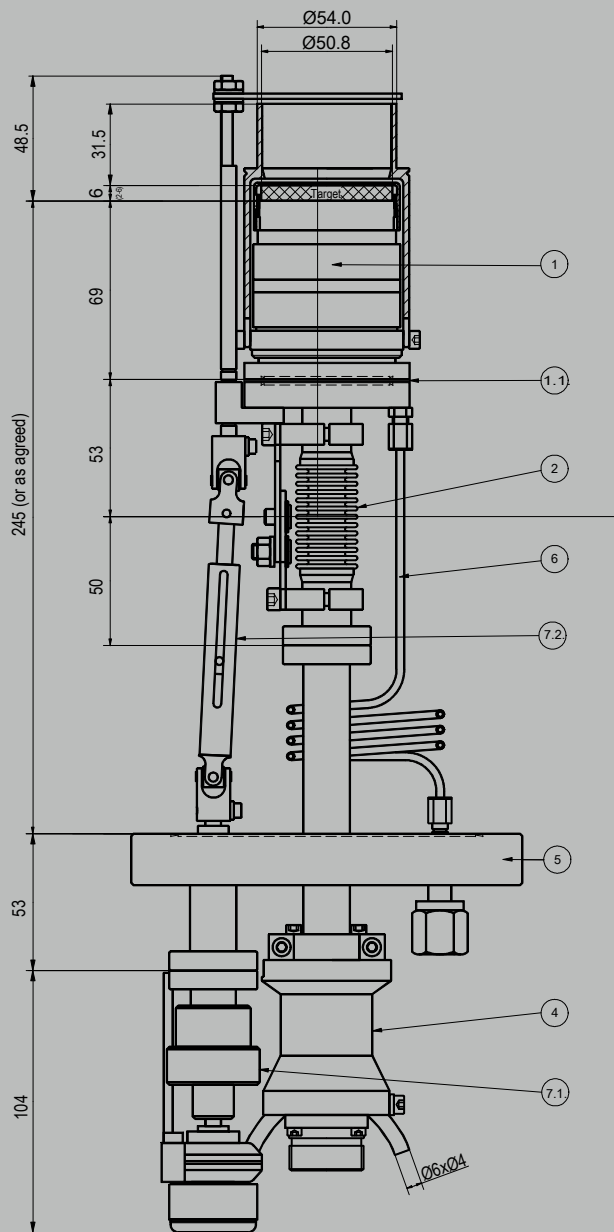
- 1) Standard targets (non-magnetic, Fe 1 mm, Ni 2 mm)
IX2U_9201: no chimney; O.D. 64 + 8 (2x screw head M4)
IX2U_9203: with chimney, gas inlet; O.D. 64 + 8
IX2U_9204: with chimney, gas inlet; O.D. 64

- 2) Magnetic targets (Fe 2 - 3 mm, Ni 5 mm)
IX2U_9250: no chimney; O.D. 64 + 8 (2x screw head M4)
IX2U_9253: with chimney, gas inlet; O.D. 64 + 8
IX2U_9254: with chimney, gas inlet; O.D. 64

7.2.	1	SH2_5021-xx	Cardan shaft, self-adjusting length
7.1.	1		UHV rotary feedthrough, magnetic coupling
7	1	SH2U_9010-2-xx	Pneumatic shutter, 180° adjustable
6	1	T003_5021-xx	Gas tube
5	1	CF100_5020-xx	Flange CF100 with 1x CF16, 1x VCR-4 and 1x IX2U
4	1	RD3_5011	RF-DC-connecting box with 7/16-jack
3	1		
2	1		
1.1.	1	IX2U_0E15	CF-seal (non-standard)
1	1	IX2U_9203 (*)	Planarmagnetron 2"UHV with chimney (*)
ITEM	QTY	PART NUMBER	TITLE

Parts List

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MM			COMPANY THIN FILM CONSULTING D-72661 Grafenberg		
SURFACE ROUGHNESS 				Magnetron Flange Assembly IONIX-2" UHV with shutter, chimney, gas inlet on CF100	
APPROVALS		DATE			
DRAWN	DD	29.07.2015		DWG SCALE	DWG NO.
CHECKED				1:1	IX2U_8A303-00
CAD FILE		IX2U_8A303-00		DWG SIZE A1	SHEET 1 OF 1
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4		5		6	



(*) Select magnetron model:

1) Standard targets (non-magnetic, Fe 1 mm, Ni 2 mm)
 IX2U_9201: no chimney; O.D. 64 + 8 (2x screw head M4)
 IX2U_9203: with chimney, gas inlet; O.D. 64 + 8
 IX2U_9204: with chimney, gas inlet; O.D. 64

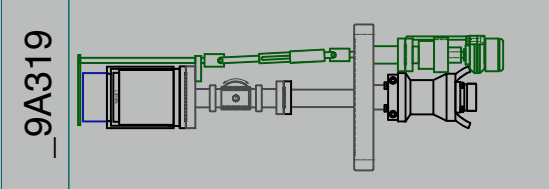
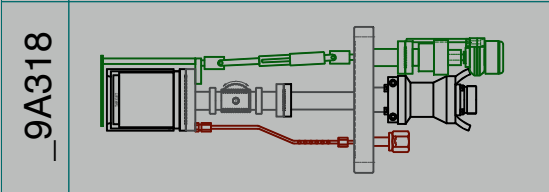
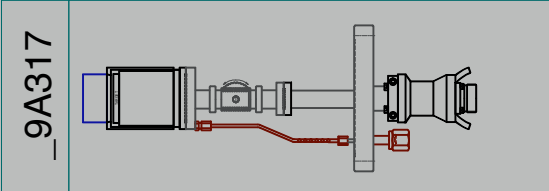
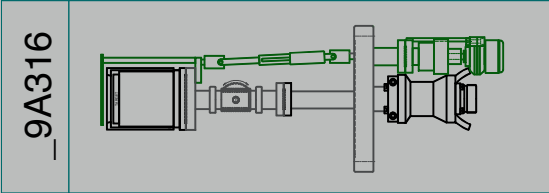
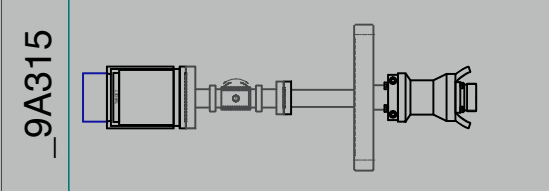
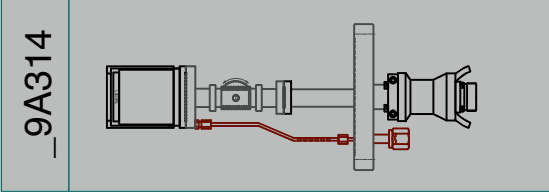
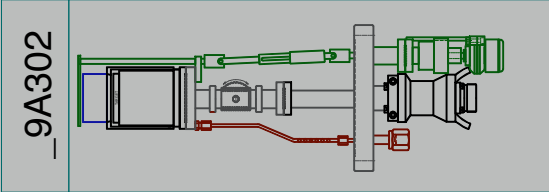
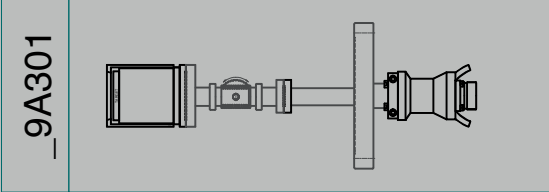
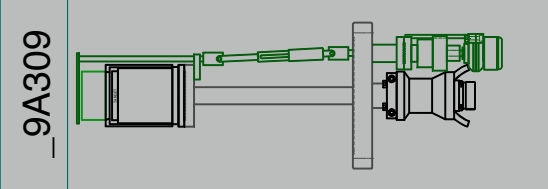
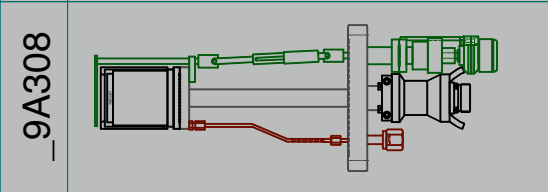
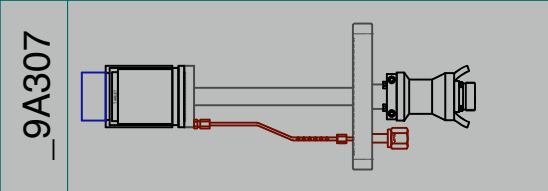
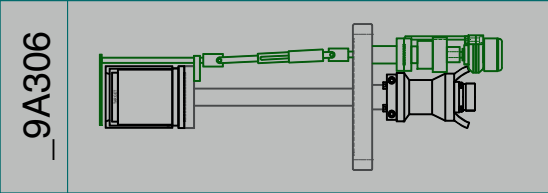
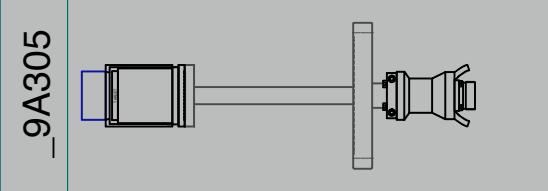
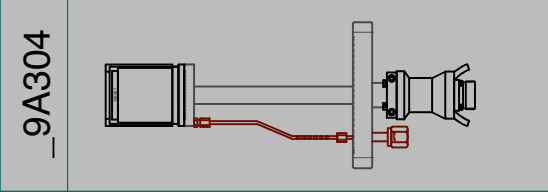
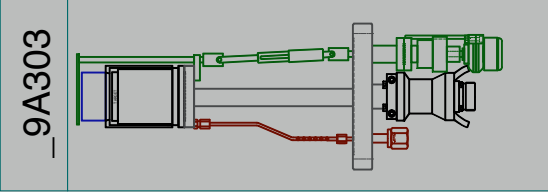
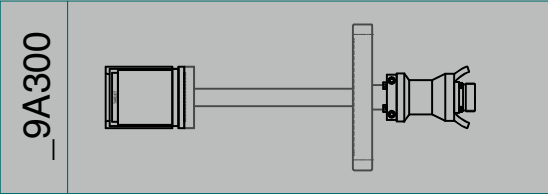
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 IX2U_9254: with chimney, gas inlet; O.D. 64

7.2.	1	SH2_5021-xx	Cardan shaft, self-adjusting length
7.1.	1		UHV rotary feedthrough, magnetic coupling
7	1	SH2U_9010-2-xx	Pneumatic shutter, 180° adjustable
6	1	T003_5021-xx	Gas tube
5	1	CF100_5025-xx	Flange CF100 with 2x CF16 and 1x VCR-4
4	1	RD3_5011	RF-DC-connecting box with 7/16-jack
3	1		
2	1	IFL4_9404-xx	±45°-tilt with CF16 rotatable
1.1.	1	IX2U_OE15	CF-seal (non-standard)
1	1	IX2U_9203 (*)	Planarmagnetron 2"UHV with chimney (*)
ITEM	QTY	PART NUMBER	TITLE

Parts List

UNLESS OTHERWISE SPECIFIED ALL DIMENSIONS ARE IN MM		COMPANY THIN FILM CONSULTING D-72661 Grafenberg	
SURFACE ROUGHNESS		Magnetron Flange Assembly IONIX-2" UHV with shutter, ±45°-tilt, chimney, gas inlet on CF100	
APPROVALS		DATE	
DRAWN	DD	29.07.2015	
CHECKED			
CAD FILE	IX2U_8A302-00	DWG SCALE	1:1
		DWG NO.	IX2U_8A302-00
		DWG SIZE	A1
		SHEET 1 OF 1	

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IONIX UHV Magnetron Assemblies with z-Manipulator IONIX UHV-Flanschbaugruppen mit z-Manipulator UHV-Flansch-Bgr_1z-020.4.2015 HG	
THIN FILM CONSULTING ADVANCING MAGNETRON SPUTTERING TECHNOLOGY	