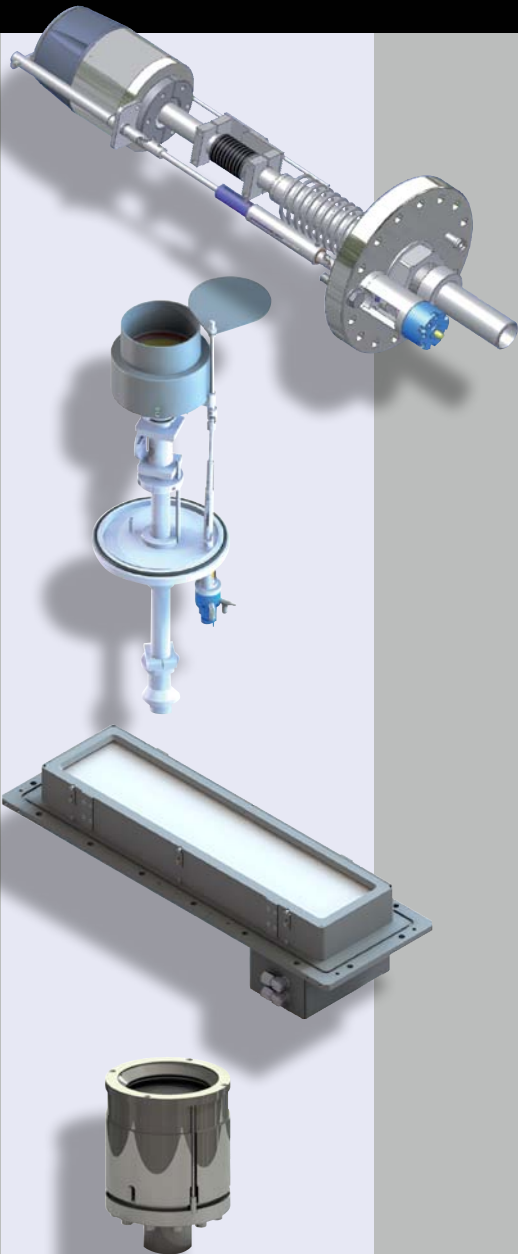


IONIX[®]

MAGNETRON SPUTTERING TECHNOLOGY



IONIX 3" Magnetron Assemblies
Specifications and reference dwg

THIN FILM CONSULTING 

PLANAR MAGNETRON SPUTTERING SOURCE ION`X-3" HV

» INTRODUCTION



- 3" target diameter
- DN 25 KF vacuum interface
- mounting on Ø 1" or Ø 3/4" tube
- optional magnet array for ferromagnetic targets

» PRODUCT OVERVIEW

HIGH VACUUM MAGNETRON

ITEM	SIZE	PART NUMBER	DESCRIPTION	VACUUM INTERFACE
2.1	3" Ø	IX3_9035_KF25	• 3" magnetron with DN 25 KF • targets 4–8 mm thick, threaded anode • discrete target clamp • integrated backing plate • water tubes 6/4 mm • power connector coaxial type • reference drawing IX3_80300	DN 25 KF
		T075_K25_300	• OD 3/4" tube x 300 mm with DN 25 KF	
		T100_K25_300	• OD 1" tube x 300 mm with DN 25 KF	

OPTIONS

2.2	3" Ø	IX3_9035-xx	• IX3_9035 with argon injection • 1/8" or 3 mm tube	
2.3	3" Ø	IX3_9039_xx	• IX3_9035 for ferromagnetic targets • 3 mm Ni, 1 mm Fe	
2.4	3" Ø	IX3_90xx_yyyy	• CF or ISO flange mounting on request	

ACCESSORIES

		QC_100_075	• quick coupling for 3/4" tube and 25.4 mm bore	
		QC_125_100	• quick coupling for 1" tube and 32 mm bore	
		RD3_5010	• RF- DC-connecting box, 7/16 jack, OD 1" tube	
		IFL5_9005-xx	• ± 45° tift gimbafl with DN 40 KF both ends	



2" HV
3" HV
4" HV
6" HV
8" HV
8" HV
10" HV

» SPECIFICATIONS

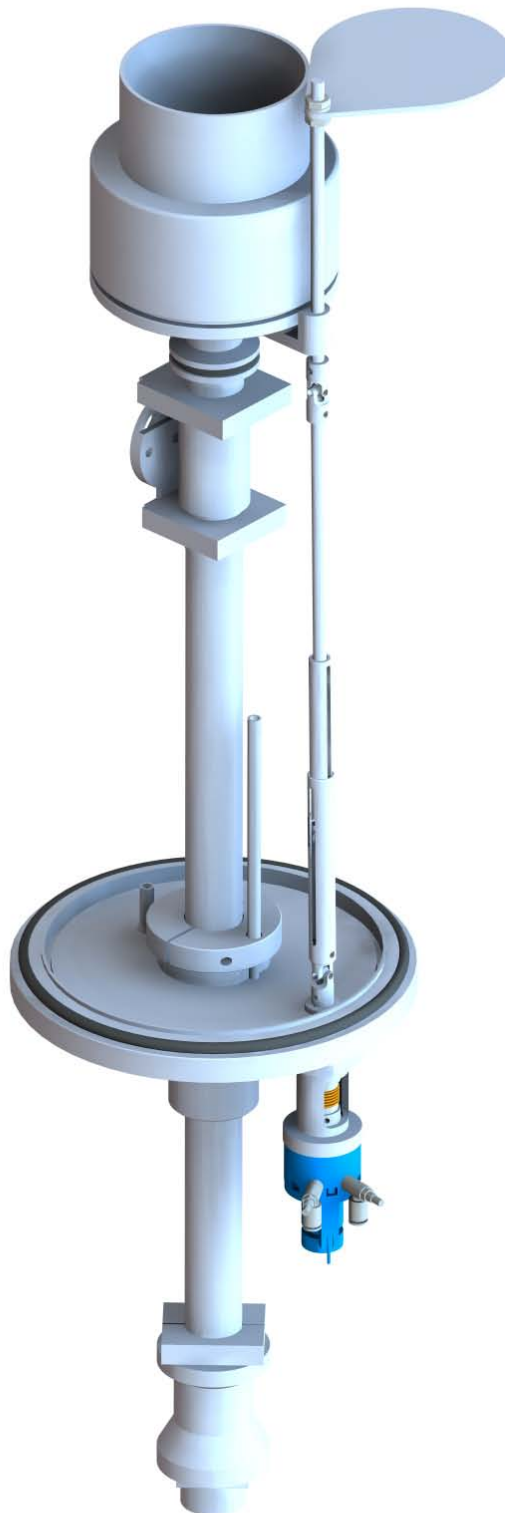
3" HIGH VACUUM MAGNETRON	
Model No.	IX3_9035
Target	
< form	circular/planar
< diameter	3" ± 0.25 mm
< thickness	4 mm to 8 mm
< cooling	indirect/direct
Operating pressure	
	argon
< nonmagnetic targets	3 x 10 ⁻³ to 1 x 10 ⁻¹ mbar
< best performance	5 x 10 ⁻³ to 5 x 10 ⁻² mbar
< vacuum sealing	FPM
Electrical specifications	
< max. power, watts DC/RF	1250 DC W / 750 W RF * **
< max. voltage DC	1000 V
< max. current DC	5 A
< rec. power supply	1500 W DC / 600 W RF
Power connector	
< DC / RF	7/16 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

3" HIGH VACUUM MAGNETRON	
Magnet array	permanent NdFeB
Bakeout temperature	
< max. temperature	60 °C
Magnetron dimensions	
< diameter	110 mm
< height	60 mm
< weight	3 kg
Interface	DN 25 KF
Proposed mounting style	tube Ø1" x 300 mm
Construction materials	stainless steel OFHC - type copper PTFE
Typical rates	
	Al, 14 Å/s, 1 kW DC, 100 mm
	Cu, 25 Å/s, 1 kW DC, 100 mm
Accessories & Options	
< mounting option	tube Ø 3/4" x 300 mm
< quick coupling feedthrough	for tube Ø 1" and Ø 3/4"
< argon injection	model no. IX3_9022/29
< power connector	N-type, HN-type
< magnet array for magnetic materials	Fe 1 mm, Ni 2 to 3 mm
< ± 30° tilt	✓
< flange mounting	✓
< SS target clamps for specified thickness	✓
< SS target clamps for bond targets	✓

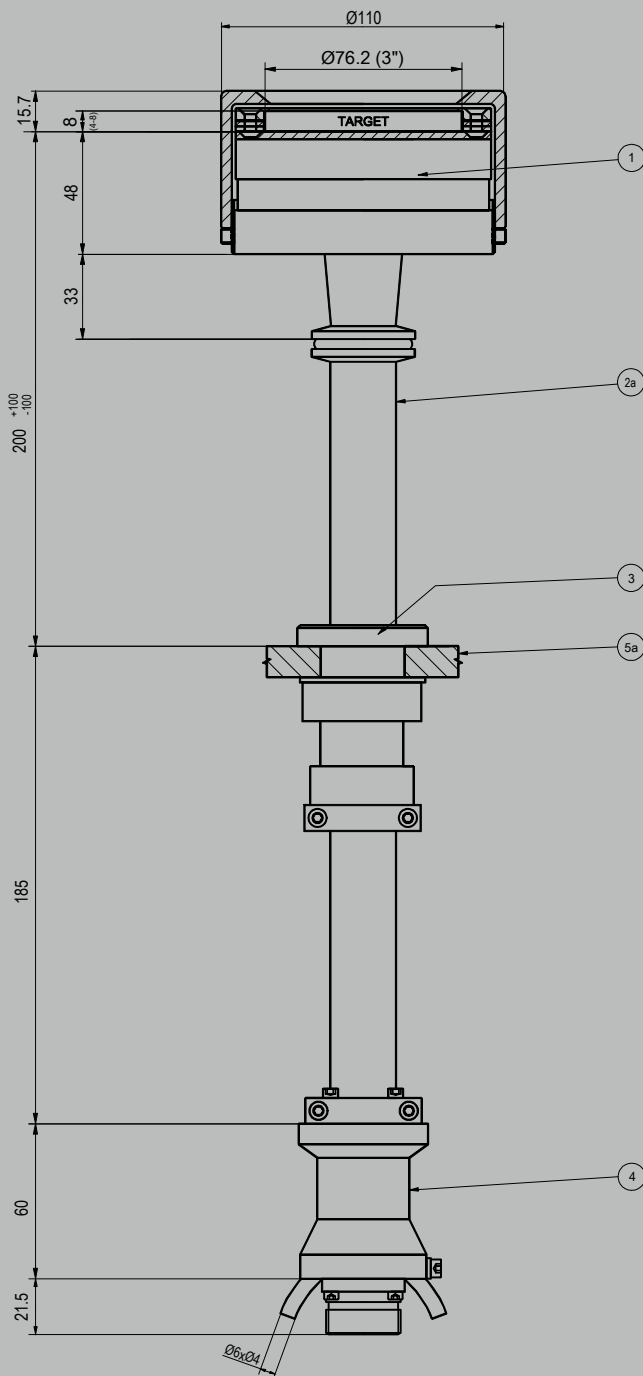
* This value refers to the magnetron itself. The maximum power is determined by the target material and bonding technique.

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

PLANAR MAGNETRON SPUTTERING SOURCE ION'X-3" HV



3" HV



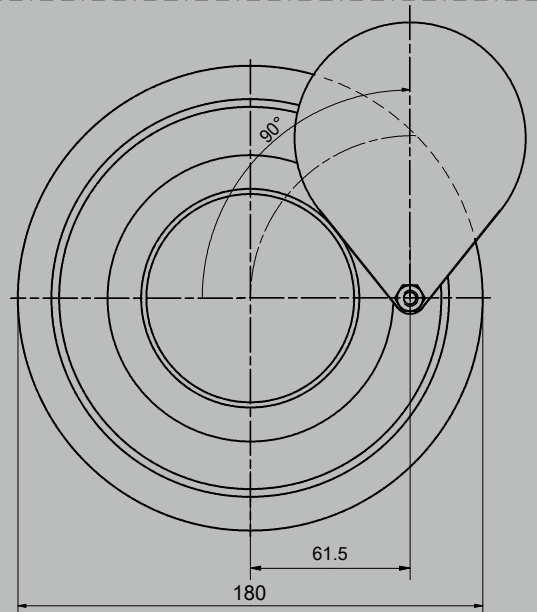
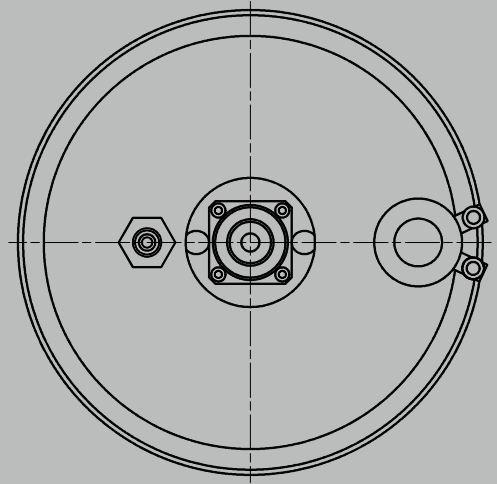
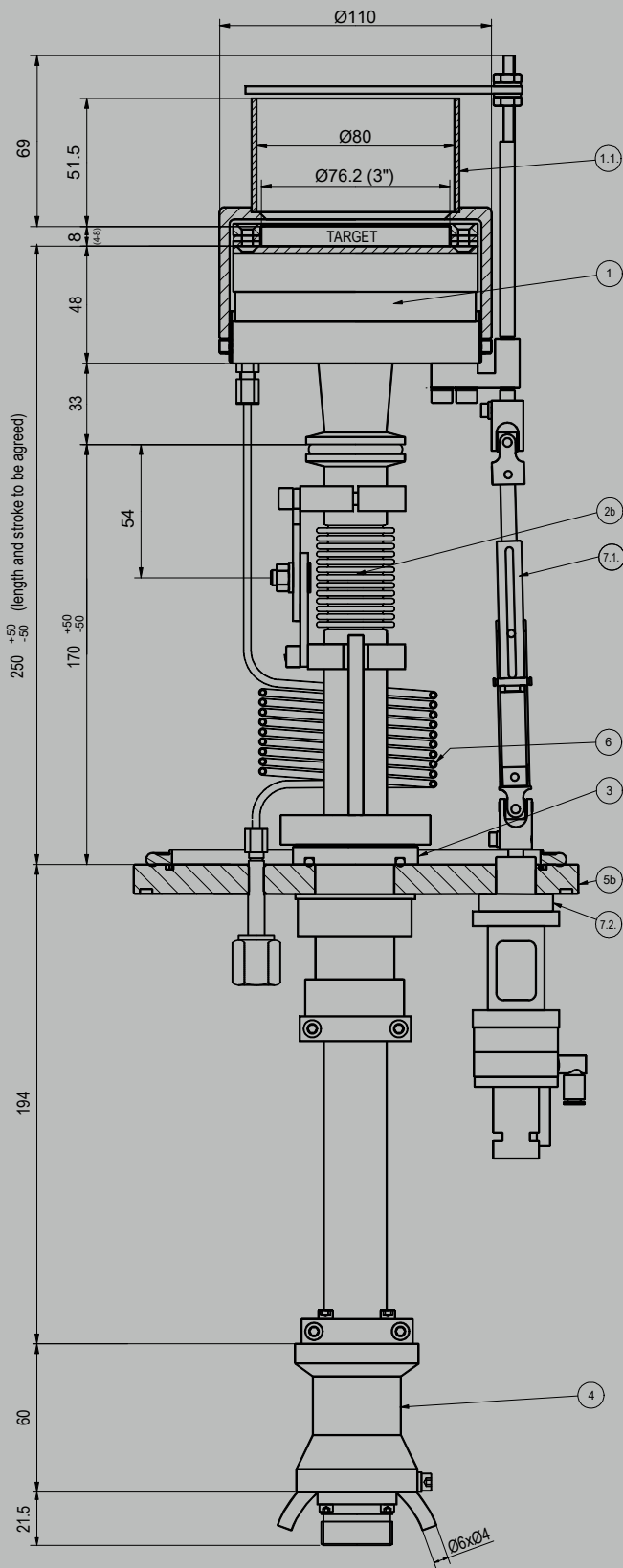
(*) Select magnetron model: _____

Standard targets (non-magnetic 4 ... 8 mm)
 IX3_9035: without chimney
 IX3_9036: with chimney
 for magnetic targets (Fe 1 mm, Ni 3 mm)
 IX3_9039: without chimney
 IX3_9040: with chimney

5a			Base plate or chamber wall
4	1	RD3_5010	RF-DC-connecting box with 7/16-jack
3	1	QC126_100	Quick coupling fit, 1"-tube, 32 mm-bore
2a	1	T100_K25_300	OD 1"-tube with KF25
1	1	IX2_9035 (*)	Planarmagnetron 3", non-magn. targets (*)
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 Assembly IONIX-3" with z-adjust and base plate feedthrough		
APPROVALS		DATE			
DRAWN DD		25.06.2015			
CHECKED					
CAD FILE IX3_80300-00		DWG SIZE A1		DWG NO. IX3_80300-00	
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				SHEET 1 OF 1	



(*) Select magnetron model: _____

Standard targets (non-magnetic 4 ... 8 mm)

IX3_9035: without chimney

IX3_9036: with chimney

for magnetic targets (Fe 1 mm, Ni 3 mm)

IX3_9039: without chimney

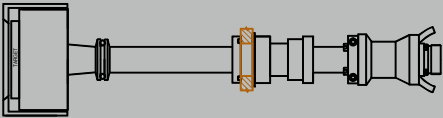
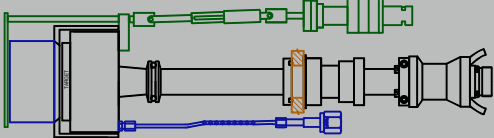
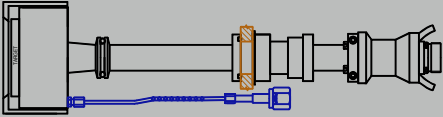
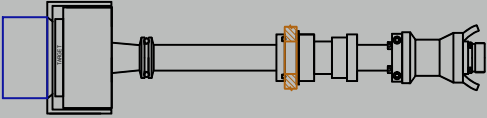
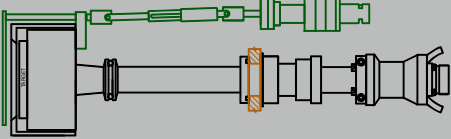
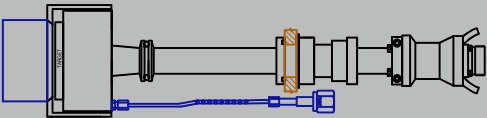
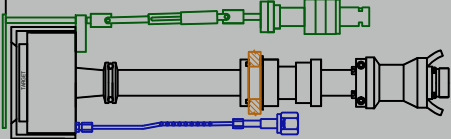
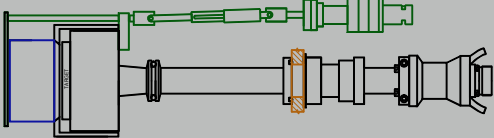
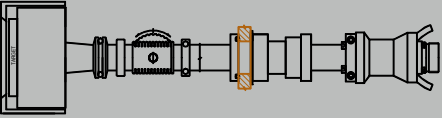
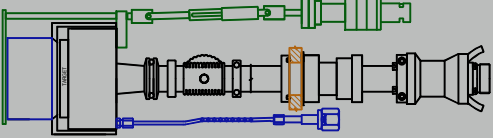
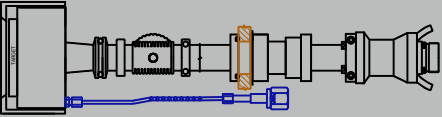
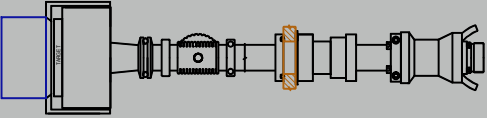
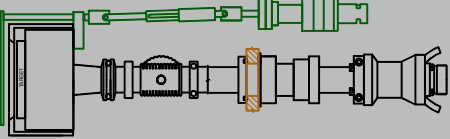
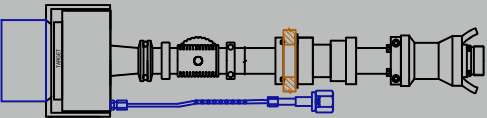
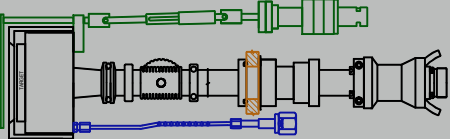
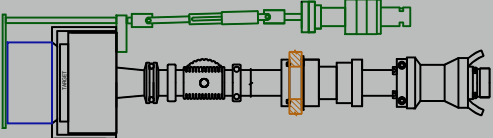
IX3_9040: with chimney

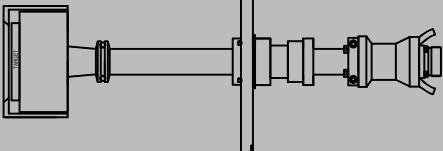
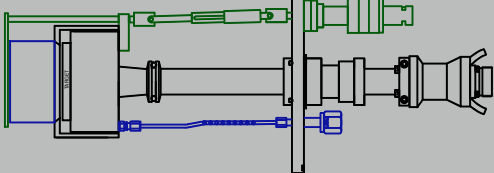
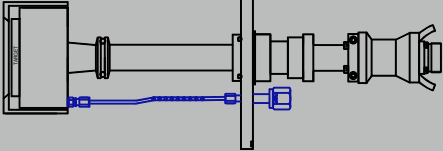
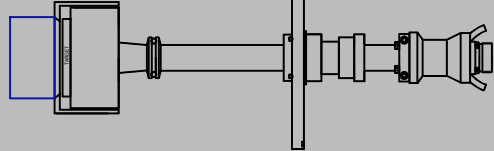
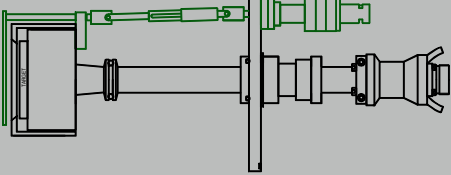
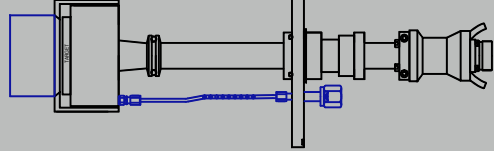
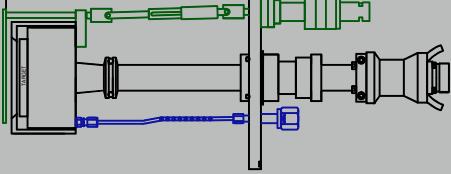
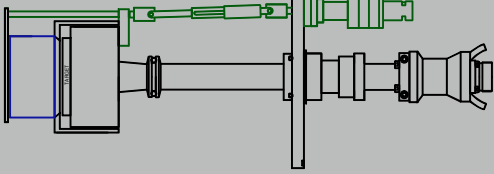
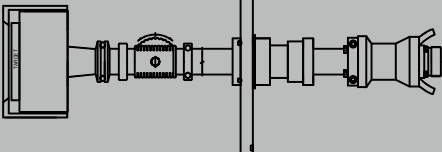
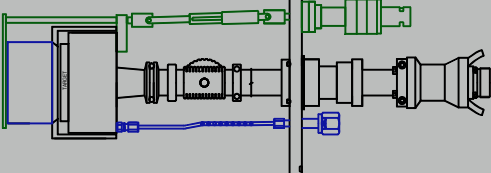
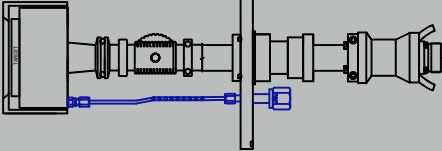
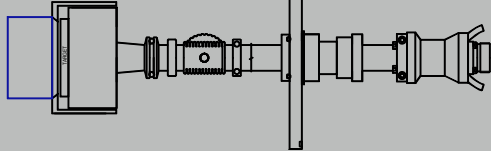
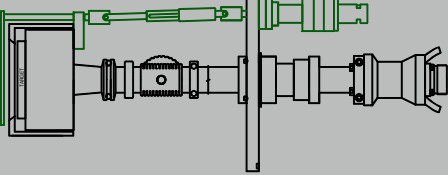
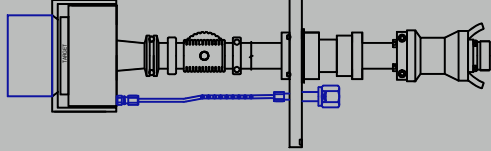
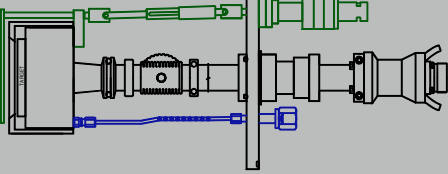
7.2.	1	SH2_5010	Rotary feedthrough
7.1.	1	SH2_502x	Cardan shaft, self-adjusting length, stroke 100 mm
7	1	SH2_9002-3-xx	Pneum. shutter, 90-180° adjustable
6	1	T003_5030-xx	Gas tube, stroke 100 mm
5b	1	ISO160_5010	Flange ISO160-K, gas inlet VCR-4
4	1	RD3_5010	RF-DC-connecting box with 7/16-jack
3	1	QC126_100	Quick coupling f/t, 1"-tube, 32 mm-bore
2b	1	IFL5_9005-xx	±45°-tilt with DN25KF and tube OD 1"
1.1	1	IX3_6120	Chimney, h = 46 mm
1	1	IX3_9036 (*)	Planarmagnetron 3", non-magn. targets, 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-3" with shutter, ±45°-tilt, z-adjust, chimney, gas inlet on ISO160-K	
APPROVALS			DATE	
DRAWN	DD	25.06.2015	DWG SCALE	1:1
CHECKED			DWG NO.	IX3_8A302-00
CAD FILE	IX3_8A302-00		DWG SIZE A1	SHEET 1 OF 1

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