

### Introduction

The M-RM40 is a simple, all metal sealed, linear-rotary feedthrough for ultra high vacuum applications. It's main purpose is to transport samples in between UHV chambers. A set of rare earth magnets on the air and vacuum side provides the necessary force to ensure a rigid coupling from the handle to the inner shaft. Slide bearings guarantee for smooth operation even after numerous bakeout cycles. Hollow Shaft, version, in vacuum brake & belt drive versions also available.

### Specifications:

#### Materials

All UHV compatible

#### Vacuum Range

CF flanged atm to  $1 \times 10^{-11}$  mbar

#### Temperature Range\*

CF flanged -196 to 150°C

#### Load

Linear force 70N typical

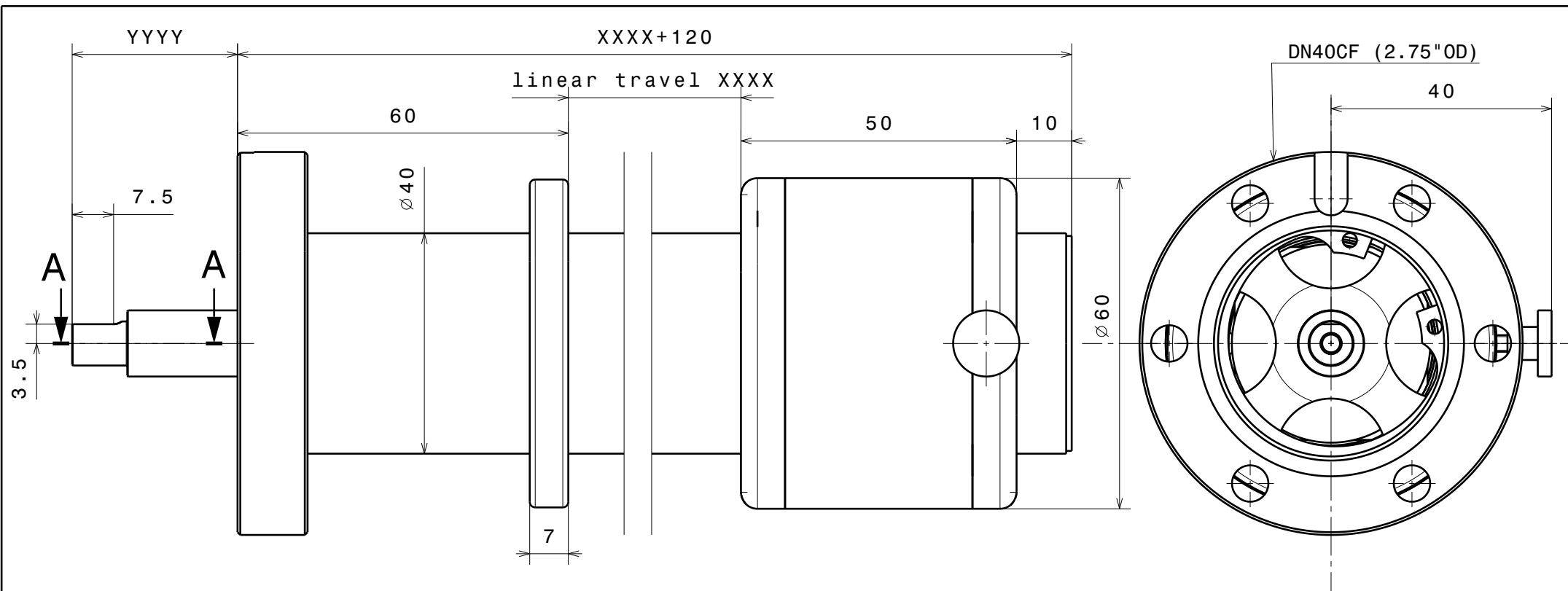
Torque 5Nm typical

#### Retracted Shaft Length

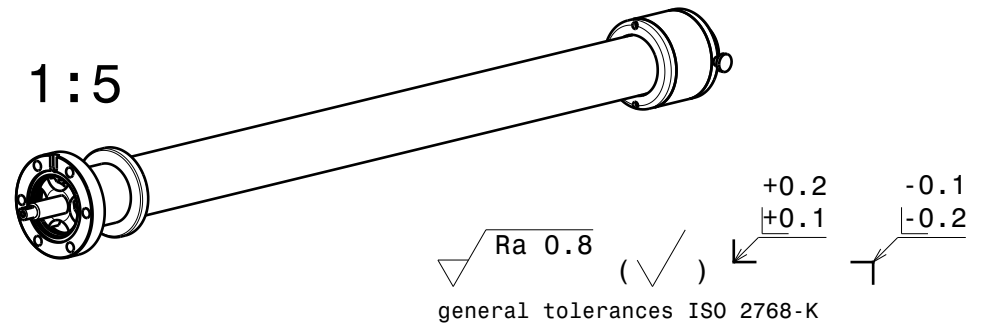
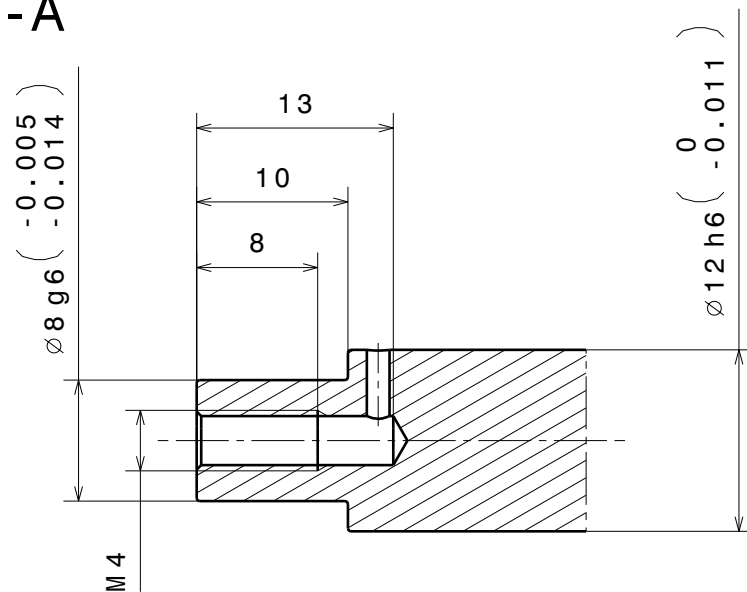
Single shaft 30mm



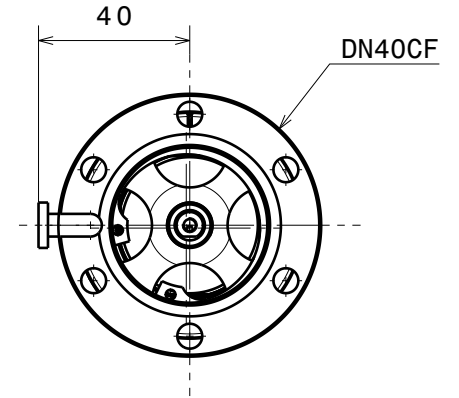
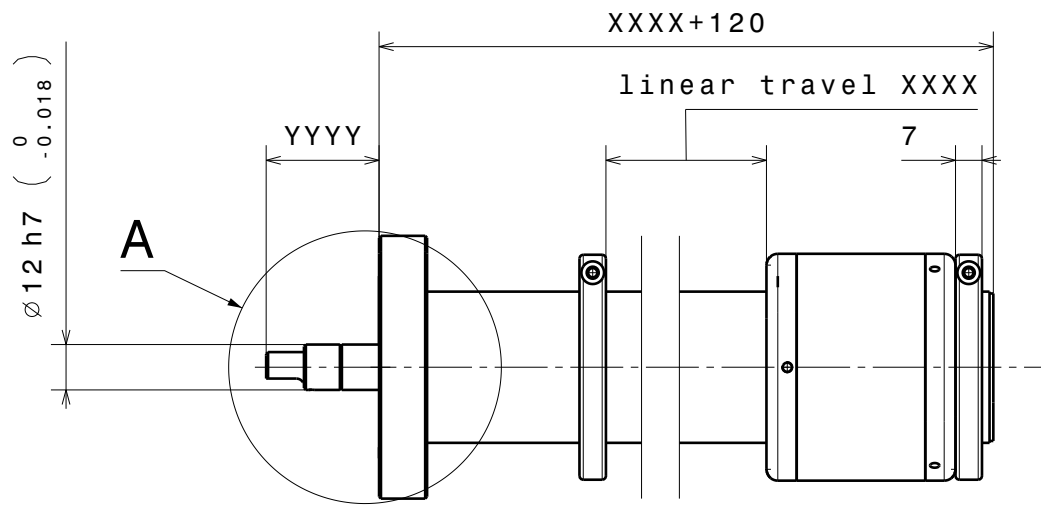
Description	Part Code
Single shaft magnetic linear/rotary transporter with slide bearings 500mm linear 30mm retracted DN40CF	M-RM40-500-30
Single shaft magnetic linear/rotary transporter with slide bearings 750mm linear 30mm retracted DN40CF	M-RM40-750-30
Single shaft magnetic linear/rotary transporter with slide bearings 1000mm linear 30mm retracted DN40CF	M-RM40-1000-30
SSingle shaft magnetic linear/rotary transporter with slide bearings 1250mm linear 30mm retracted DN40CF	M-RM40-1250-30
Single shaft magnetic linear/rotary transporter with slide bearings Xmm linear Ymm retracted DN40CF	M-RM40-X-Y
Single hollow shaft magnetic linear/rotary transporter with slide bearings Xmm linear Ymm retracted DN40CF	M-RMHS40-X-Y
Single hollow shaft magnetic linear/rotary transporter with slide bearings with in vacuum brake Xmm linear Ymm retracted DN40CF	M-RMHS40-X-Y-IVBR
Single hollow shaft magnetic linear/rotary transporter with slide bearings with in vacuum brake and belt drive Xmm linear Ymm retracted DN40CF	M-RMHS40-X-Y-IVBR-TSRMBD



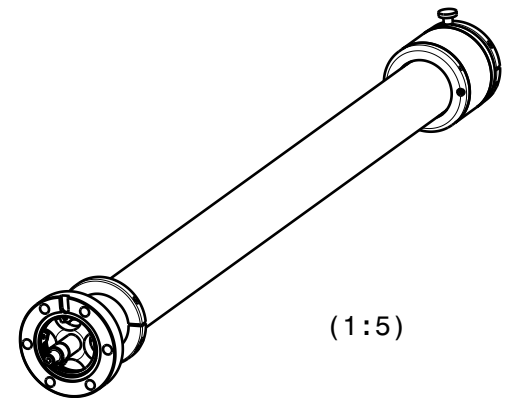
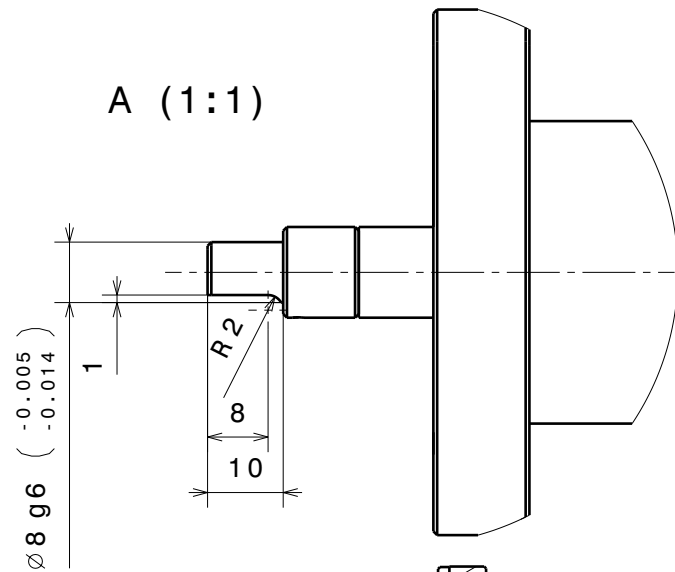
A-A



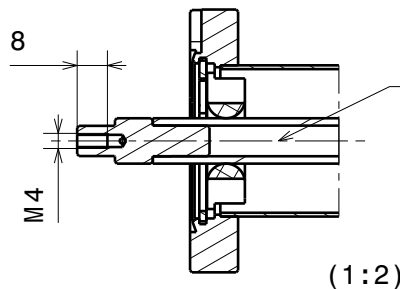
Material: ...		nominal over		1	6	30	100	300	1000
<b>Sample Transporter DN40CF</b>		dimension up to		6	30	100	300	1000	2000
		tolerance ±		0.05	0.1	0.3	0.5	0.8	1.2
		Scale		Drawn		U. Maier			
<b>Single shaft with slide bearings</b>		1:2		Date		13.06.2014			
				changed		.....			
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		Rev. A		sheet 1/1					



A (1:1)



(1:5)



hollow shaft (complet closed weldet ends)

(1:2)

Material: all UHV compatible

Sample Transporter with hollow shaft

RMHS40

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CH-8050 Zurich

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nominal dimension up to	1	6	30	100	300	1000
tolerance ±	0.05	0.1	0.3	0.5	0.8	1.2

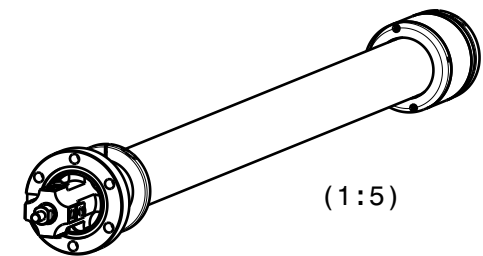
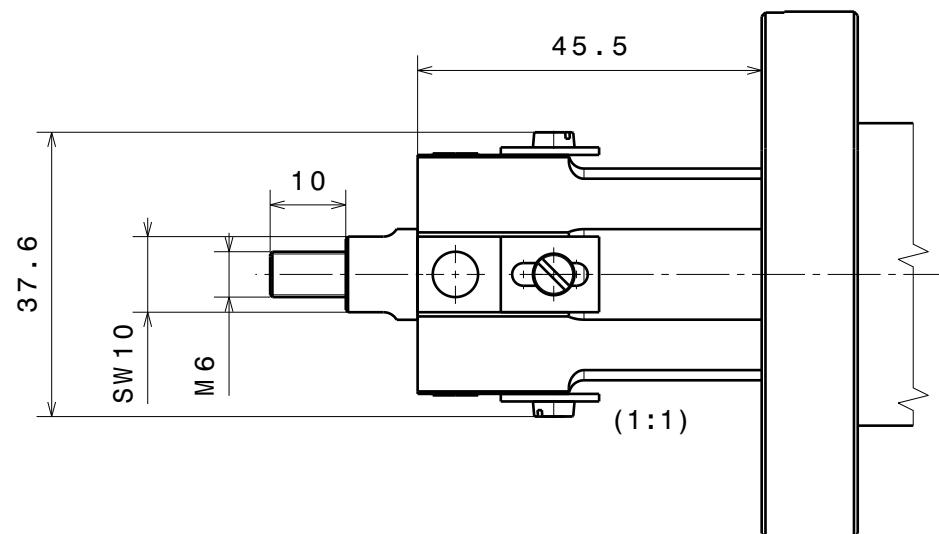
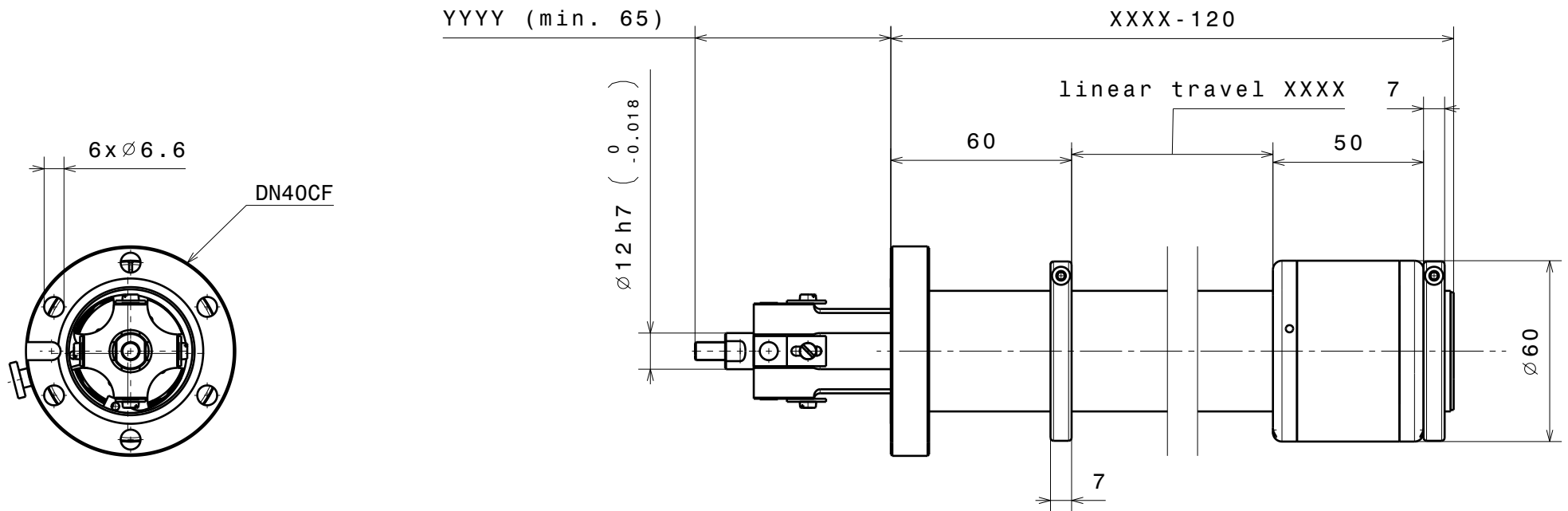
Scale	Drawn	D.Rechsteiner
Date	11.08.2014	
changed	08.10.18	CW

1:2  
(1:1)  
(1:5)

Rev. D

**RMHS40**

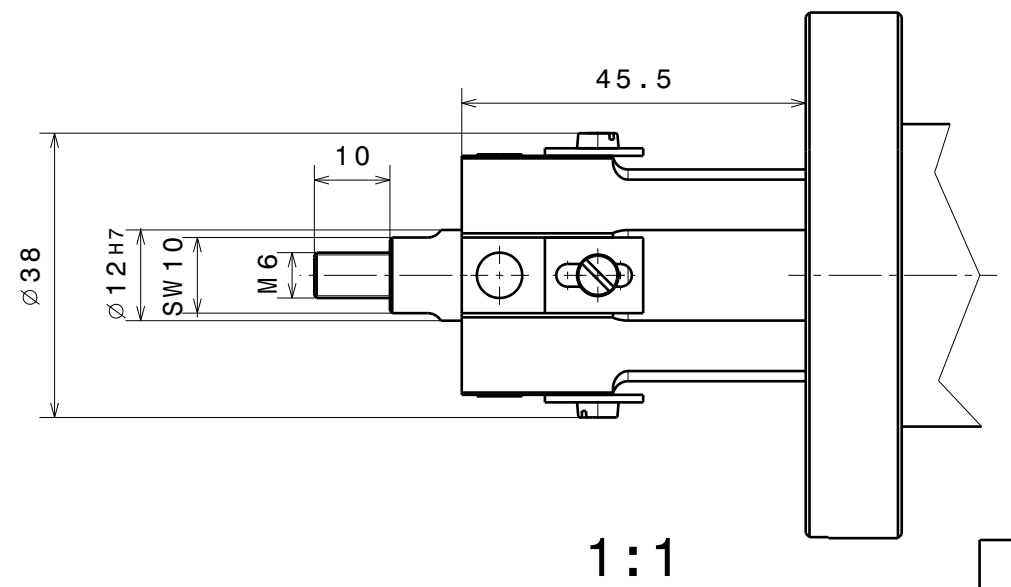
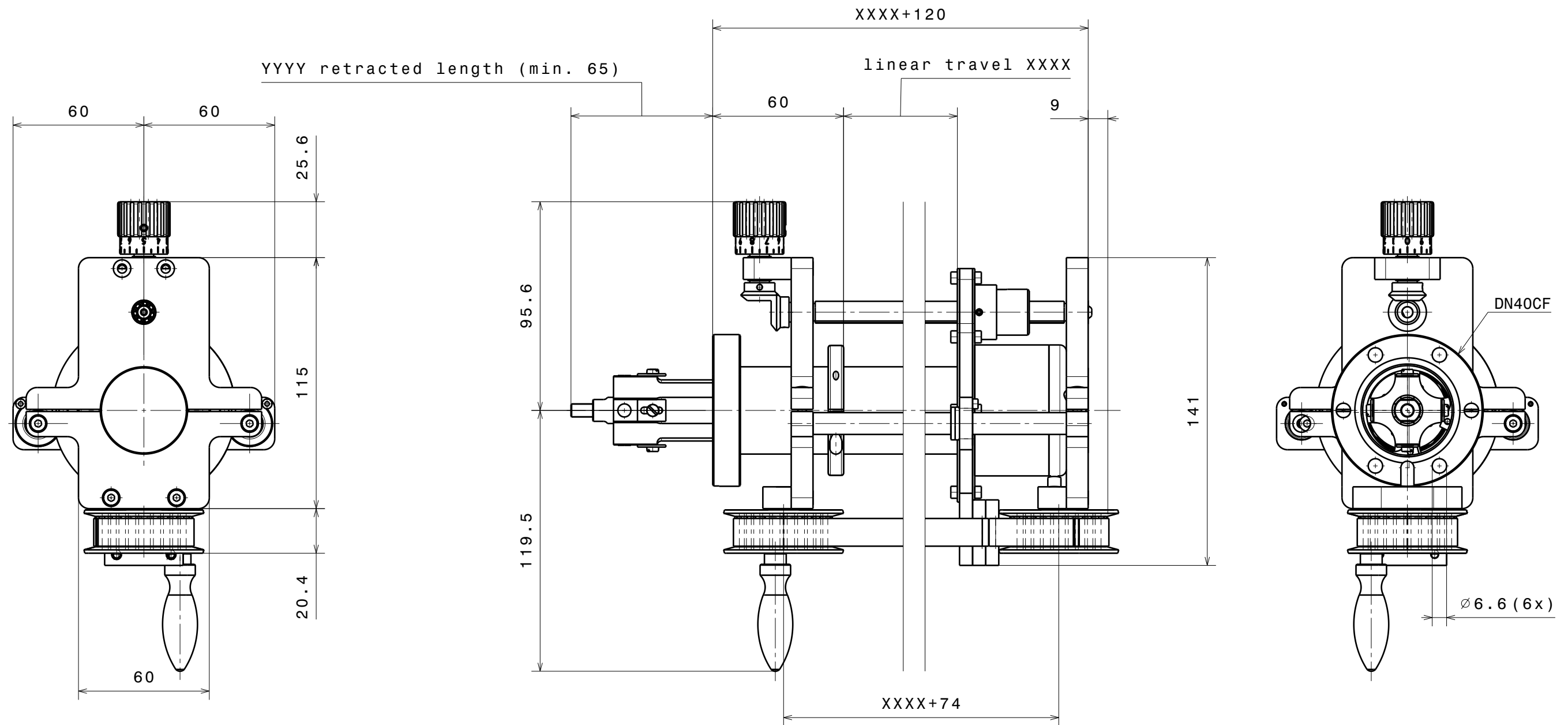
sheet 1/1



Material: all UHV compatible		nominal	over	1	6	30	100	300	1000
Holoshaft Sample Transporter With Invacuumbrake		dimension up to		6	30	100	300	1000	2000
		tolerance ±		0.05	0.1	0.3	0.5	0.8	1.2
		Scale	Drawn		D.Rechsteiner				
RMHS40-IVBR		1:2 (1:1) (1:5)	Date	11.08.2014					
			changed	16.02.16 CW					
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		Rev. B	RMHS40-IVBR sheet 1/1						

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$\nabla$  Ra 0.8 ( $\nabla$ )  $\begin{matrix} +0.2 \\ +0.1 \end{matrix}$   $\begin{matrix} -0.1 \\ -0.2 \end{matrix}$   
 general tolerances ISO 2768-K

Material: fully UHV compatible		nominal dimension	over up to	1	6	30	100	300	1000
Hollow Shaft Sample Transporter with In-Vacuum Brake and Belt Drive		tolerance	$\pm$	6	30	100	300	1000	2000
RMHS40-XXXX-YYYY-IVBR-TSRMBD				0.05	0.1	0.3	0.5	0.8	1.2
Scale		Drawn		C.Weiss					
1:2 (2:1)		Date		17.02.2016					
Rev. A		Changed		.....					
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