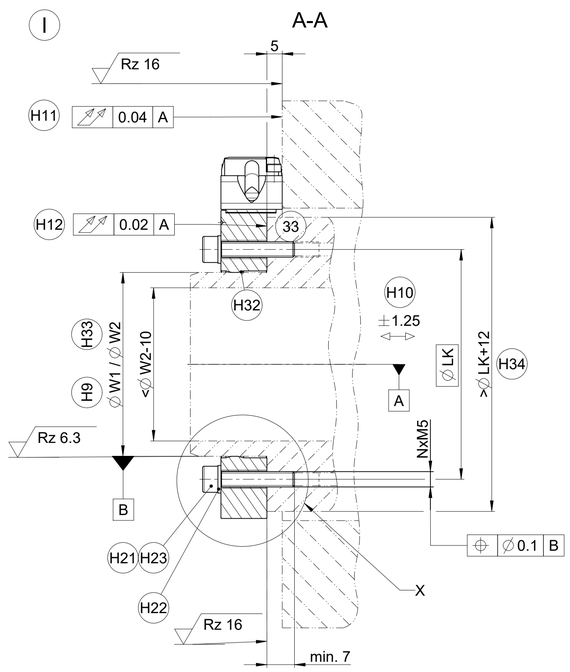
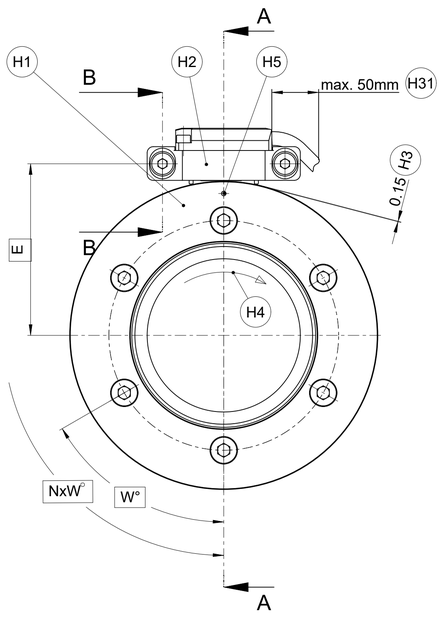
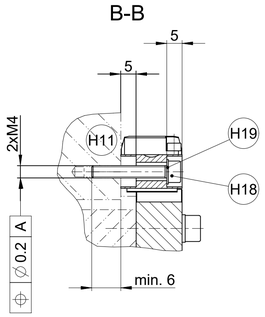
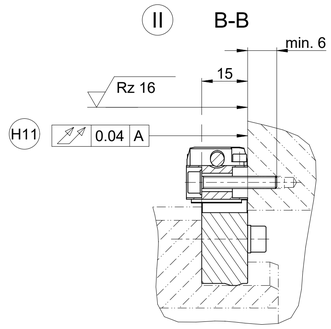
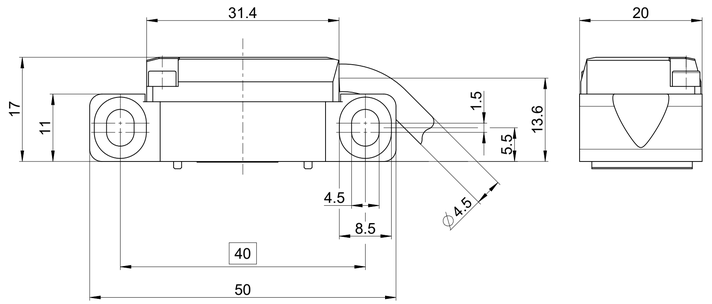




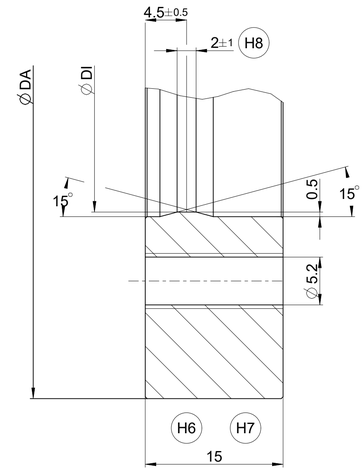




2:1 FODEA1=15 / RIANA1 = 6 H13 H16 H17



X 3:1



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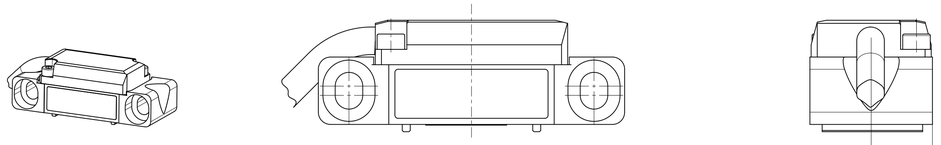

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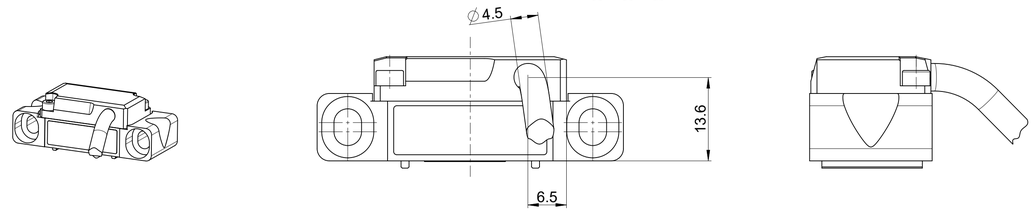

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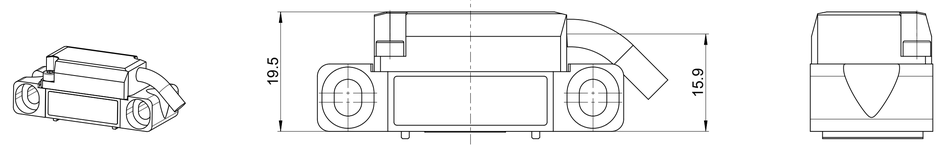

A	Bearing for customer shaft	A	Lagerung Kundenwelle
H1	Scale drum	H1	Teilungstrommel
H2	Scanning head	H2	Abtastkopf
H3	Mounting clearance 0.15 adjusted with spacer foil	H3	Montageabstand 0,15 mit Folie eingestellt
H4	Positive direction of rotation	H4	Positive Drehrichtung
H5	Reference mark position	H5	Referenzmarkenlage
H6	Main track	H6	Hauptspur
H7	Reference mark track	H7	Referenzspur
H8	Centering collar	H8	Zentrierbund
H9	Shaft fit without Mechanical Fault Exclusion; When this fit is used, the screws are to be secured against unintended loosening	H9	Wellentoleranz ohne mechanischem Fehlerausschluss; Bei Verwendung dieser Wellenpassung sind die Schrauben H21 gegen unbeabsichtigtes Lösen zu sichern
H10	Maximum allowable movement of the customer shaft wrt. track scanning	H10	Axialtoleranz Kundenwelle
H11	Mounting surface scanning head	H11	Montagefläche Abtastkopf
H12	Mounting surface scale drum	H12	Montagefläche Teilungstrommel
H13	Scanning head AK ERM 2420/2480	H13	Abtastkopf AK ERM 2420/2480
H14	Scanning head AK ERM 2410/2490M	H14	Abtastkopf AK ERM 2410/2490M
H16	RIANA1=3 cable outlet axial RIANA1=6 cable outlet tangential (right) RIANA1=7 cable outlet tangential (left)	H16	RIANA1=3 Kabelausgang axial RIANA1=6 Kabelausgang tangential (rechts) RIANA1=7 Kabelausgang tangential (links)
H17	FODEA1=15 Low cover, tangential cable outlet FODEA1=16 Low cover, axial cable outlet	H17	FODEA1=15 Deckel niedrig, Kabelausgang tangential FODEA1=16 Deckel niedrig, Kabelausgang axial
H18	Cylinder head screw ISO 4762 - M4 - 8.8, Tightening torque 2.0±0.1 Nm, friction coeffizient class B according to VDI 2230, tighten screws alternatingly and gradually	H18	Zylinderschraube ISO 4762 - M4 - 8.8, Anziehdrehmoment 2,0±0.1 Nm, Reibungszahlklasse B nach VDI 2230, abwechselnd schrittweise festschrauben
H19	Washer ISO 7092 - 4 - 200 HV	H19	Scheibe ISO 7092 - 4 - 200 HV
H21	Cylinder head screw ISO 4762 - M5 - 8.8, Tightening torque 5.05±0.25 Nm, friction coeffizient class B according to VDI 2230, mounting temperature 15 °C to 35 °C; after thermal joining, the scale drum must have cooled down to the permissible mounting temperature before fastening the screws	H21	Zylinderschraube ISO 4762 - M5 - 8.8, Anziehdrehmoment 5,05±0.25 Nm, Reibungszahlklasse B nach VDI 2230, Montagetemperatur 15 °C bis 35 °C; nach dem thermischen Fügen muss die Teilungstrommel vor der Schraubenmontage auf die zulässige Montagetemperatur abgekühlt sein
H22	Washer ISO 7092 - 5 - 200 HV	H22	Scheibe ISO 7092 - 5 - 200 HV
H23	Use all intended screws	H23	Alle vorgesehenen Schrauben verwenden
H24	Fatique strength (10^7load changes) as per FKM-Guideline under consideration of H9,H20,H21,H22,H23	H24	Dauerfestigkeit (10^7Lastwechsel) nach FKM-Richtlinie bei Beachtung von H9,H20,H21,H22,H23
H31	Cable support	H31	Kabelabstüzung
H32	Shaft fit; ensure full-surface contact	H32	Wellenpassung ganzflächige Kontaktfläche beachten
H33	Shaft tolerance with Mechanical Fault Exclusion	H33	Wellentoleranz mit mechanischem Fehlerausschluß
H34	Exception: For Drum type A59 =ØLK+10 applies	H34	Ausnahme: Für Trommelform A59 gilt =ØLK+10

Für Mechanischen Fehlerausschluss obligatorisch For Mechanical Fault Exclusion is obligatory		
	Kundenwelle (Trommelanbindung) customer shaft	Kundenstator (Abtastkopfanbindung) mating stator
Werkstoff material	Stahl steel	Stahl, Gusseisen steel, cast iron
Zugfestigkeit R_m Tensile strength R_m	≧ 600 N/mm²	≧ 250 N/mm²
Scherfestigkeit τ_B Shearing strength τ_B	≧ 390 N/mm²	≧ 290 N/mm²
Elastizitätsmodul E Young's modulus E	200000 ... 215000 N/mm²	110000 ... 215000 N/mm²
Wärmeausdehnungskoeffizient α_T coefficient of thermal expansion α_T	10 ... 13 x10^{-6} 1/K	10 ... 13 x10^{-6} 1/K

A59	75,44	55 +0,015/+0,007	55 +0,010/+0,002	55 0/-0,008	43,4	6x60° /M6	65	600	18000
A57	484,07	450 +0,142/+0,122	450 +0,025/+0,005	450 0/-0,020	247,7	12x30° /M6	465	3850	3000
A56	64,37	40 +0,010/+0,003	40 +0,009/+0,002	40 0/-0,007	37,9	6x60° /M6	50	512	22000
A54	213,24	160 +0,049/+0,037	160 +0,015/+0,003	160 0/-0,012	112,3	6x60° /M6	175	1696	7000
A53	452,64	380 +0,119/+0,101	380 +0,022/+0,004	380 0/-0,018	232,0	12x30° /M6	395	3600	3000
A52	326,90	260 +0,082/+0,066	260 +0,020/+0,004	260 0/-0,016	169,2	6x60° /M6	275	2600	4500
A49	603.52	512 +0,161/+0,139	512 +0,027/+0,005	512 0/-0,022	307.5	12x30° /M6	528	4800	1600
A48	257,50	160 +0,049/+0,037	160 +0,015/+0,003	160 0/-0,012	134.5	6x60° /M6	170	2048	5000
A36	176,03	140 +0,044/+0,032	140 +0,015/+0,003	140 0/-0,012	93,7	6x60° /M6	155	1400	8500
A34	257,50	160 +0,049/+0,037	160 +0,015/+0,003	160 0/-0,012	134,5	6x60° /M6	175	2048	6000
A33	484,07	425 +0,134/+0,114	425 +0,025/+0,005	425 0/-0,020	247,7	12x30° /M6	445	3850	3000
A32	257,50	130 +0,041/+0,029	130 +0,015/+0,003	130 0/-0,012	134,5	6x60° /M6	145	2048	6500
A31	452,64	410 +0,130/+0,110	410 +0,025/+0,005	410 0/-0,020	232,0	12x30° /M6	425	3600	3000
A30	362,11	330 +0,105/+0,087	330 +0,022/+0,004	330 0/-0,018	186,8	12x30° /M6	345	2880	4000
A29	150,88	70 +0,019/+0,011	70 +0,010/+0,002	70 0/-0,008	81,2	6x60° /M6	85	1200	11000
A28	257,50	200 +0,063/+0,049	200 +0,018/+0,004	200 0/-0,014	134,5	6x60° /M6	215	2048	6000
A26	90,53	55 +0,015/+0,007	55 +0,010/+0,002	55 0/-0,008	51,0	6x60° /M6	70	720	18500
A25	484,07	450 +0,142/+0,122	450 +0,025/+0,005	450 0/-0,020	247,7	6x60° /M6	465	3850	3000
A23	257,50	120 +0,036/+0,026	120 +0,013/+0,003	120 0/-0,010	134,5	6x60° /M6	135	2048	6500
A22	75,44	40 +0,010/+0,003	40 +0,009/+0,002	40 0/-0,007	43,4	12x30° /∅5,2	50	600	19000
A21	128,75	70 +0,019/+0,011	70 +0,010/+0,002	70 0/-0,008	70,1	6x60° /M6	95	1024	14000
A20	150,88	95 +0,029/+0,019	95 +0,013/+0,003	95 0/-0,010	81,2	6x60° /M6	110	1200	11000
A19	257,50	140 +0,044/+0,032	140 +0,015/+0,003	140 0/-0,012	134,5	6x60° /M6	155	2048	6500
A18	150,88	110 +0,033/+0,023	110 +0,013/+0,003	110 0/-0,010	81,2	6x60° /M6	125	1200	10500
A17	326,90	295 +0,093/+0,077	295 +0,020/+0,004	295 0/-0,016	169,2	6x60° /M6	310	2600	4500
A16	128,75	90 +0,027/+0,017	90 +0,013/+0,003	90 0/-0,010	70,1	6x60° /M6	105	1024	12500
A15	128,75	65 +0,018/+0,010	65 +0,010/+0,002	65 0/-0,008	70,1	6x60° /M6	80	1024	13000
A14	128,75	95 +0,029/+0,019	95 +0,013/+0,003	95 0/-0,010	70,1	6x60° /M6	110	1024	12500
A12	176,03	130 +0,041/+0,029	130 +0,015/+0,003	130 0/-0,012	93,7	6x60° /M6	145	1400	9000
A11	128,75	60 +0,016/+0,008	60 +0,010/+0,002	60 0/-0,008	70,1	6x60° /M6	75	1024	13000
A08	257,50	220 +0,069/+0,055	220 +0,018/+0,004	220 0/-0,014	134,5	6x60° /M6	235	2048	6000
A07	150,88	105 +0,031/+0,021	105 +0,013/+0,003	105 0/-0,010	81,2	6x60° /M6	120	1200	10500
A06	150,88	80 +0,022/+0,014	80 +0,010/+0,002	80 0/-0,008	81,2	6x60° /M6	95	1200	11000
A05	113,16	70 +0,019/+0,011	70 +0,010/+0,002	70 0/-0,008	62,3	6x60° /M6	85	900	14500
A04	257,50	180 +0,055/+0,043	180 +0,015/+0,003	180 0/-0,012	134,5	6x60° /M6	195	2048	6000
A03	150,88	120 +0,036/+0,026	120 +0,013/+0,003	120 0/-0,010	81,2	6x60° /M6	135	1200	10500
A02	128,75	80 +0,022/+0,014	80 +0,010/+0,002	80 0/-0,008	70,1	6x60° /M6	95	1024	13000
A01	75,44	40 +0,010/+0,003	40 +0,009/+0,002	40 0/-0,007	43,4	6x60° /M6	50	600	19000
Trommelform Drum type	∅DA DIA DA	∅W2 (H33) DIA W2	∅W1 (H9) DIA W1	∅DI DIA DI	E	NxW° /G	∅LK	Signalperiode Signal period	Drehzahl min^{-1} (H24) Shaftspeed rpm

		ID number:	
		Change No.	C166199-30
		Phase:	Serie
Original drawing Scale / Format	ERM 24x0 Axx mFA ERM 24x0 Axx MFE	Tolerances as per ISO 8015	
Dimensions in mm: 1:1 / A1	Anschlussmaße / Mating Dimensions	General Tolerances ISO 2768:1989-mH	≦6mm:±0,2

HEIDENHAIN
DR. JOHANNES HEIDENHAIN GmbH
83301 Traunreut, Germany

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