

General Information LINEAR

INA Linear Roller Bearings Series RUS

INA linear roller bearings are manufactured in several basic types and meet the highest technical demands. Linear recirculating roller bearing systems are suitable for linear guidance systems in machine tools where high guidance and positioning accuracy with long strokes are required.

Linear roller bearings have the following advantages:

- Very high accuracy
- Increased compressive rigidity
- High load carrying capacity
- High functional reliability
- Very low frictional values compared to other linear guidance systems
- Very smooth running due to the special design of the supporting elements with compensation for bounce

Due to their robustness, linear roller bearings of series PR are also suitable for use at high temperatures as well as for extremely high velocities and accelerations.

With INA linear roller bearings of series RUSV..KS, there is no need for a separate adjusting gib. This gives advantages including:

- Fewer components
- Low section height
- Quicker, simpler mounting

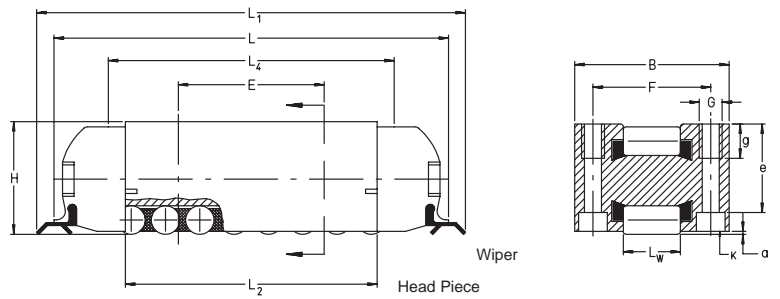
INA also supplies a setting device for exact, repeatable, quick and straightforward adjustment of preload in linear roller bearings.

INA Adjusting Gibs Series VUS and VUSZ

INA Adjusting Gibs of series VUS and VUSZ are used for height adjustment or preloading of linear roller bearings. They consist of two ground wedges which are guided together by a central key. A plate fixed on one end face supports the adjusting screw and the locking screw. Lubrication ducts in the adjusting gibs allow for the lubrication of the linear bearings through the rolling element return zone in their supporting face.



Linear Roller Bearings RUS, RUS..KS SERIES



RUS 19 069 to RUS 38 206

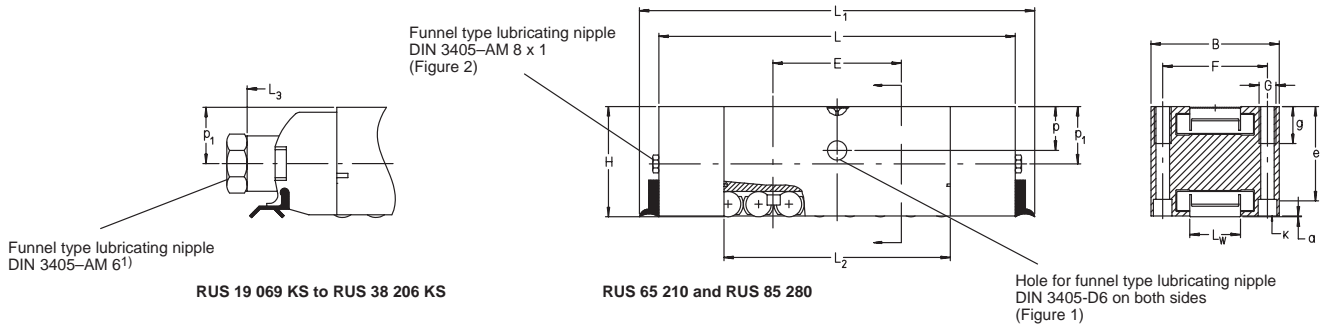
For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE - Dimensions in mm										
PART NUMBER		MASS kg	DIMENSIONS							
			H	L	B	L ₁	L ₂	L ₃	L _w	a
RUS 19 069		0.16	19	69	27	75	44	–	10	0.2
	RUS 19 069 KS	0.19	19	–	27	–	44	76	10	0.2
RUS 19 105		0.27	19	105	27	111	78.5	–	10	0.2
	RUS 19 105 KS	0.29	19	–	27	–	78.5	112	10	0.2
RUS 26 086		0.41	26	86	40	92	53	–	14	0.2
	RUS 26 086 KS	0.49	26	–	40	–	53	92	14	0.2
RUS 26 102		0.53	26	102	40	108	69	–	14	0.2
	RUS 26 102 KS	0.61	26	–	40	–	69	108	14	0.2
RUS 26 126		0.70	26	126	40	132	93	–	14	0.2
	RUS 26 126 KS	0.78	26	–	40	–	93	132	14	0.2
RUS 38 134		1.27	38	133	52	133	85	–	20	0.2
	RUS 38 134 KS	1.53	38	–	52	–	85	136	20	0.2
RUS 38 206		2.28	38	206	52	206	158	–	20	0.2
	RUS 38 206 KS	2.53	38	–	52	–	158	209	20	0.2
RUS 65 210		7.5	65	211	76	234	134	–	30	0.5
RUS 85 280*)		16	85	281	104	303	185	–	40	0.5

- 1) If the lubricating nipple is replaced by tube or pipe connections, the thread length must not exceed 6 mm.
- 2) Minimum length to be supported
- 3) UG guideway for RUS 85 280 available on request
- *) Available on request





BASIC LOAD RATINGS		MOUNTING DIMENSIONS								K FOR FIXING SCREWS TO DIN 912	MATCHING ADJUSTING GIBS	MATCHING GUIDEWAYS
dyn. C N	stat. C ₀ N	L ₄ ²⁾	E ± 0.1	F ± 0.1	G	e	g	p	p ₁			
42,000	33,000	50	25.5	20.6	M4	15.5	6	-	-	M3	VUS 19 069	UG 6628 UV 5323 UFA 3210 UFK 3210 UFB 4710
42,000	33,000	50	25.5	20.6	M4	15.5	6	-	10	M3	VUS 19 069	
68,000	61,000	85	50	20.6	M4	15.5	6	-	-	M3	VUS 19 105	
68,000	61,000	85	50	20.6	M4	15.5	6	-	10	M3	VUS 19 105	
76,000	56,000	63	28	30	M6	21	10	-	-	M4	VUS 26 086	UG 9741 UV 7532 UFA 4710 UFK 4710 UFB 6412
76,000	56,000	63	28	30	M6	21	10	-	13.5	M4	VUS 26 086	
95,000	75,000	79	44	30	M6	21	10	-	-	M4	VUS 26 102	
95,000	75,000	79	44	30	M6	21	10	-	13.5	M4	VUS 26 102	
122,000	103,000	103	68	30	M6	21	10	-	-	M4	VUS 26 126	
122,000	103,000	103	68	30	M6	21	10	-	13.5	M4	VUS 26 126	
179,000	133,000	100	51	41	M8	31	14	-	-	M6	VUS 38 134	UG 12 553 UV 9542 UFA 6412 UFK 6412 UFB 7812
179,000	133,000	100	51	41	M8	31	14	-	19.5	M6	VUS 38 134	
305,000	265,000	172	102	41	M8	31	14	-	-	M6	VUS 38 206	
305,000	265,000	172	102	41	M8	31	14	-	19.5	M6	VUS 38 206	
465,000	345,000	-	76	62	M10	55	22	26	34	M8	VUS 65 210	UG 16 260 UV 13 863 UFA 8815 UFK 8815 UFB 10 615
840,000	620,000	-	101.5	82.5	M14	73	30	33	45	M10	VUS 85 280	UG... ³⁾ UV 16 977 UFA 11 518 UFK 11 518 UFB 14 0185

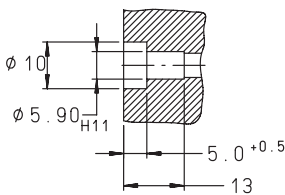


Figure 1

Lubrication holes are provided on both sides for funnel type grease nipples DIN 3405-D6 (supplied with the bearing) or either tube or pipe connection. If no lubrication connection is to be provided the holes should be plugged with the lubricating nipples.

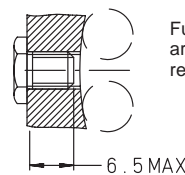


Figure 2

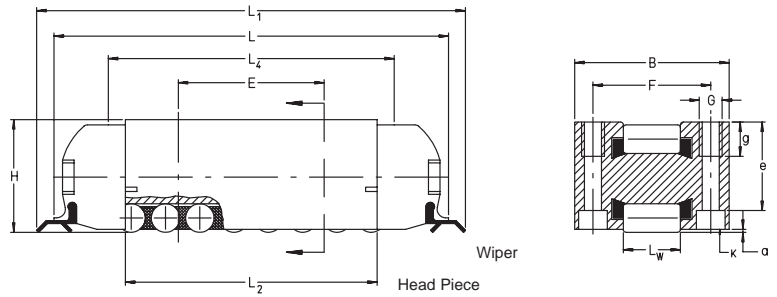
Funnel type lubricating nipples DIN 3405-AM 8x1 are mounted in the head pieces. They can be replaced by tube or pipe connections.



Linear Roller Bearings

RUSZ, RUSZ..KS SERIES

ALMOTION



RUS 19 069 to RUS 38 206

For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

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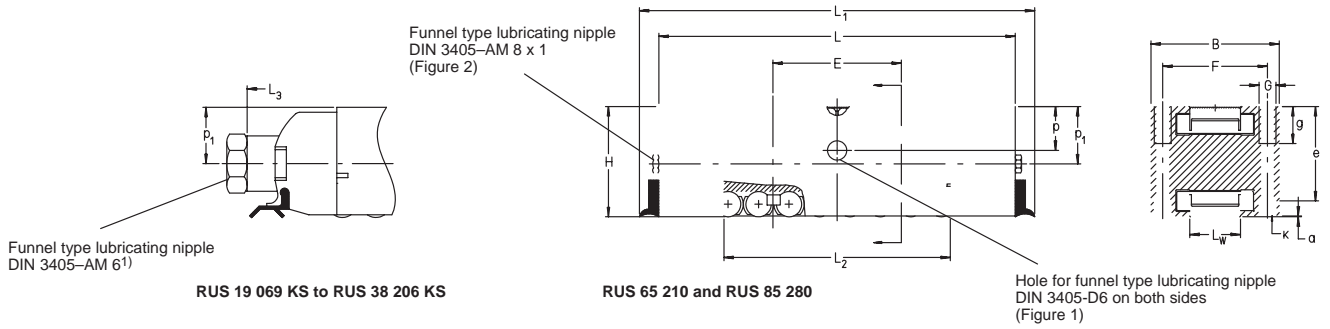
DIMENSION TABLE - Dimensions in mm

PART NUMBER	DIMENSIONS							
	H	L	B	L ₁	L ₂	L ₃	L _w	a
RUSZ 12044	19.05	69	25.4	75	44	—	10	0.2
RUSZ 18059	28.57	94	38.1	100	60	—	14	0.2
RUSZ 24084	38.1	133	50.8	133	85	—	20	0.2
RUSZ 12044 KS	19.05	69	25.4	75	44	76	10	0.2
RUSZ 18059 KS	28.57	94	38.1	100	60	132	14	0.2
RUSZ 24084 KS	38.1	133	50.8	133	85	136	20	0.2

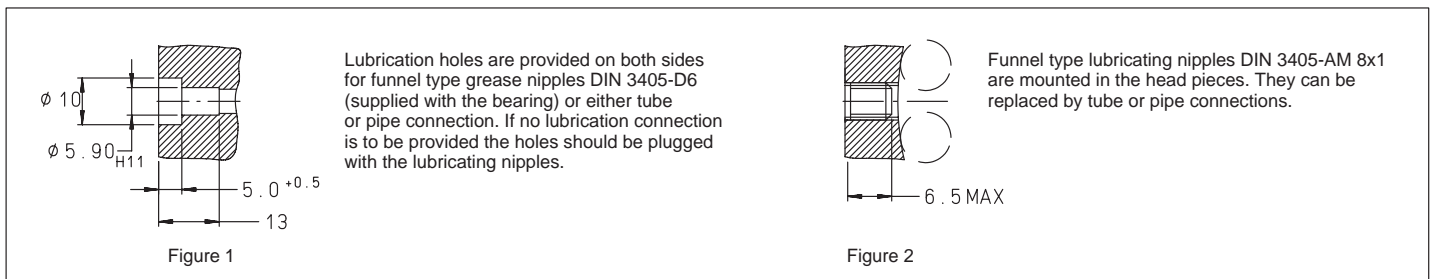
1) If the lubricating nipple is replaced by tube or pipe connections, the thread length must not exceed 6 mm.

2) Minimum length to be supported



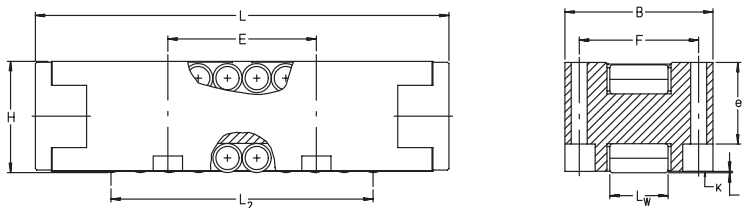


BASIC LOAD RATINGS		MOUNTING DIMENSIONS								K FOR FIXING SCREWS TO DIN 912	MATCHING ADJUSTING GIBS	MATCHING GUIDEWAYS
dyn. C N	stat. C ₀ N	L ₄ ²⁾	E ± 0.1	F ± 0.1	G	e	g	p	p ₁			
42000	33000	50	25.5	20.6	-	15.5	-	-	-	M3x22	VUSZ 12044	UG6628 UV5323 UFA/UFK3210 UFB4710
86000	65000	71	38	31	-	23.6	-	-	-	M4x30	VUSZ 18059	UG9745 UV7532 UFA/UFK4710 UFB6412
179000	133000	100	51	41	-	32.1	-	-	-	M5x45	VUSZ 24084	UG12553 UV9542 UFA/UFK6412 UFB7812
42000	33000	50	25.5	20.6	-	15.5	-	-	-	M3x22	VUSZ 12044	UG6628 UV5323 UFA/UFK3210 UFB4710
86000	65000	71	38	31	-	23.6	-	-	-	M4x30	VUSZ 18059	UG9745 UV7532 UFA/UFK4710 UFB6412
179000	133000	100	51	41	-	32.1	-	-	-	M5x45	VUSZ 24084	UG12553 UV9542 UFA/UFK6412 UFB7812



Linear Roller Bearings

PR SERIES



For details on part numbers, descriptive suffixes and various technical references, please refer to front of this section.

For engineering or technical information contact your local sales representative or call Distributor Sales (800)523-6572 or Linear Sales (800)462-3399.

DIMENSION TABLE - Dimensions in mm

PART NUMBER	MASS kg	DIMENSIONS					
		H	L	B	L ₂	L _w	a
PR 14 032	0.095	14.285	51	22.23	31	9	0.2
PR 14 044	0.2	19.05	69	25.4	42	10	0.35
PR 14 061	0.65	28.57	96	38.1	58.5	16	0.35
PR 14 089	1.75	38.1	142	50.8	90	20	0.4
PR 14 135	5.65	57.15	196	76.2	126	30	0.5
PR 14 182	13.25	76.2	264	101.6	167	40	0.6

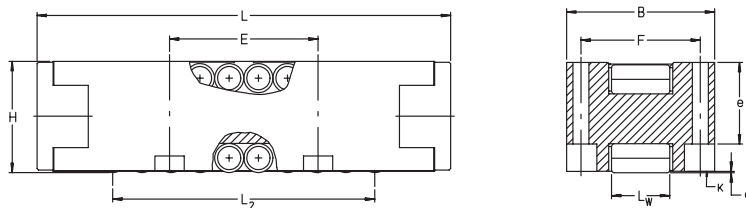
- 1) UG guideway for PR 14 182 available on request
- 2) Not available from stock. Please check delivery time.

Ordering examples:

Linear roller bearing PR 14 061
with a tolerance for the nominal height H of -10 to -15 µm:
PR 14 061 -10 -15

Linear roller bearing PR 14 135
with a tolerance for the nominal height H of -10 to -20 µm:
PR 14 135 -10 -20

Linear Roller Bearings PR SERIES



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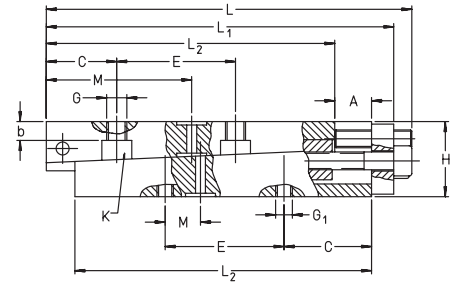
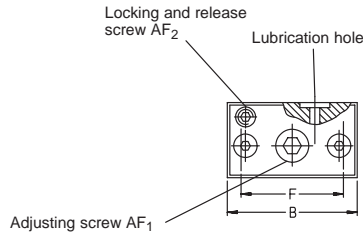
BASIC LOAD RATINGS		MOUNTING DIMENSIONS			K FOR FIXING SCREWS TO DIN 912	MATCHING ADJUSTING GIBS	MATCHING GUIDEWAYS	
dyn. C N	stat. C ₀ N	E ±0.1	F ±0.1	e				
21,700	17,600	19	17.1	10	M2.5	–	UG 6628 UV 5323	UFA 3210 UFK 3210
44,000	37,500	25.5	20.6	14	M3	VUSZ 12 044	UG 6628 UV 5323	UFA 3210 UFK 3210 UFB 4710
107,000	86,000	38	31	20.8	M4	VUSZ 18 059	UG 9741 UV 7532	UFA 4710 UFK 4710 UFB 6412
205,000	171,000	51	41	28	M5	VUSZ 24 084	UG 12 553 UV 9542	UFA 6412 UFK 6412 UFB 7812
435,000	345,000	76.2	62	42	M6	VUSZ 36 135 ²⁾	UG 16 260 UV 13 863	UFA 8815 UFK 8815 UFB 10 615
790,000	620,000	101.6	82.5	56	M8	VUSZ 48 182 ²⁾	UG.... ¹⁾ UV 16 977	UFA 11 518 UFK 11 518 UFB 14 018



Adjusting Gibs

VUS, METRIC SIZES SERIES

VUSZ, INCH SIZES SERIES



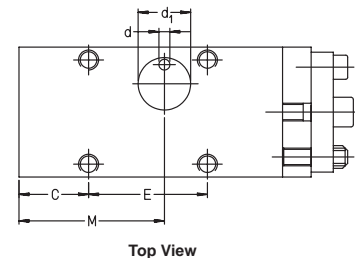
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DIMENSION TABLE - Dimensions in mm										
PART NUMBER	MASS kg	DIMENSIONS			MOUNTING DIMENSIONS					
		B	H min.	L max.	L ₁ max.	L ₂	E ± 0.1	F ± 0.1	b	C
VUS 19 069	0.24	26.5	16	78	73	62	25.5	20.6	4	16.5
VUS 19 105	0.32	26.5	16	123	119	100	50	20.6	3.5	25
VUS 26 086	0.6	39.5	25	97	89	75	28	30	6	20.5
VUS 26 102	0.71	39.5	25	113	105	91	44	30	6	20.5
VUS 26 126	0.9	39.5	25	137	129	115	68	30	6	20.5
VUS 38 134	1.47	51.5	30	141	131	115	51	41	7	28
VUS 38 206	2.1	51.5	25	250	240	200	102	41	5	49

DIMENSION TABLE - Dimensions in mm										
PART NUMBER	MASS kg	DIMENSIONS			MOUNTING DIMENSIONS					
		B	H min.	L max.	L ₁ max.	L ₂	E ± 0.1	F ± 0.1	b	C
VUSZ 12 044	0.19	25	16	78	73	62	25.5	19 ¹⁾	4	16.5
VUSZ 18 059	0.63	37.6	25	107	99	85	38	31	6	20.5
VUSZ 24 084	1.38	50	30	141	131	115	51	41	7	28

1) Distance between the mounting holes in the top wedge of the gib; deviates from the bottom wedge





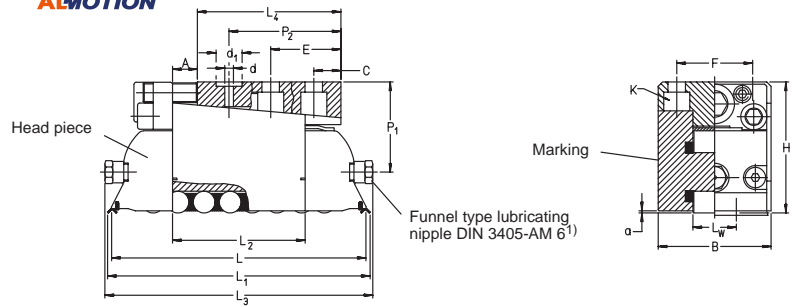
DIMENSION TABLE - Dimensions in mm										
M	d	d ₁	A max.	G	G ₁ , K FOR FIXING SCREW TO DIN 912	HEIGHT CHANGE		ADJUSTING SCREW AF ₁	LOCKING AND RELEASE SCREW AF ₂	MATCHING LINEAR ROLLER BEARINGS
						ΔH max.	PER SCREW ROTATION			
16.5	3.5	12	7	M 4	M 3	0.35	0.035	3	2	RUS 19 069
29	3.5	12	15	M 4	M 3	0.5	0.023	3	2.5	RUS 19 105
19.5	5	16	8	M 6	M 4	0.4	0.05	6	3	RUS 26 086
27.5	5	16	8	M 6	M 4	0.4	0.05	6	3	RUS 26 102
39.5	5	16	8	M 6	M 4	0.4	0.05	6	3	RUS 26 126
30.5	5	22	8	M 8	M 6	0.4	0.062	8	4	RUS 38 134
61	5	22	30	-	M 6	1	0.05	8	5	RUS 38 206

DIMENSION TABLE - Dimensions in mm										
M	d	d ₁	A max.	G	G ₁ , K FOR FIXING SCREW TO DIN 912	HEIGHT CHANGE		ADJUSTING SCREW AF ₁	LOCKING AND RELEASE SCREW AF ₂	MATCHING LINEAR ROLLER BEARINGS
						ΔH max.	PER SCREW ROTATION			
16.5	3.5	12	7	-	M 3	0.35	0.035	3	2	PR 14 044
20	5	16	8	-	M 4	0.4	0.05	6	3	PR 14 061
30.5	5	22	8	-	M 5	0.4	0.062	8	4	PR 14 089



Linear Roller Bearings With Integral Adjusting Gib

RUSV..KS SERIES



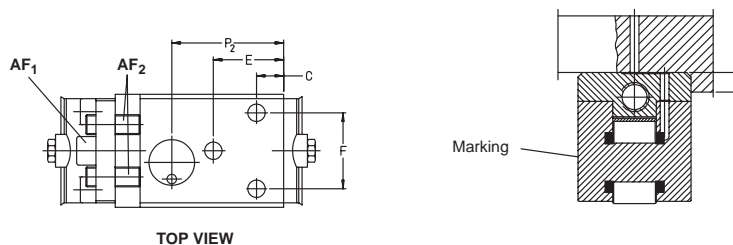
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DIMENSION TABLE - Dimensions in mm													
PART NUMBER	MASS kg	DIMENSIONS										BASIC LOAD RATINGS	
		H	L	B	L _w	a	L ₁ ≈	L ₂	L ₃	L ₄	d ₁	dyn. C N	stat. C ₀ N
RUSV 30 069 KS	0.32	30	69	27	10	0.3	75	43.5	82	45	12	42,000	33,000
RUSV 30 105 KS	0.46	30	105	27	10	0.3	111	78.5	117	79	12	68,000	61,000
RUSV 42 086 KS	0.81	42	86	40	14	0.3	92	52.4	98	54	16	76,000	56,000
RUSV 42 102 KS	0.99	42	102	40	14	0.3	108	68.4	114	70	16	95,000	75,000
RUSV 42 126 KS	1.26	42	126	40	14	0.3	132	92.4	138	94	16	122,000	103,000
RUSV 60 134 KS	2.25	60	134	52	20	0.3	133	85	143	86	22	179,000	133,000
RUSV 60 206 KS	3.47	60	206	52	20	0.3	206	158	216	159	22	305,000	265,000

1) If the lubricating nipple is replaced by tube or pipe connections, the thread length must not exceed 6mm.





DIMENSION TABLE - Dimensions in mm															
MOUNTING DIMENSIONS									ADJUSTING SCREW AF ₁	LOCKING AND RELEASE SCREW AF ₂	HEIGHT CHANGE			MATCHING LINEAR ROLLER BEARINGS	MATCHING GUIDEWAY
C	E	F	i	P ₁	P ₂	P ₃	d	K			A	ΔH	PER SCREW ROTATION		
										max.	max.				
5	25	19	4	21	33	9	2.5	M 4	3	7	0.37	0.035	RUS 19 069 KS	UG 6628	
5	45	19	4	21	53	9	2.5	M 4	3	7	0.37	0.023	RUS 19 105 KS	UV 5323 UFA 3210 UFG 3210 UFB 4710	
8	23	26	6	29.5	38	14.5	3	M 6	6	10	0.52	0.05	RUS 26 086 KS	UG 9741	
8	38	26	6	29.5	53	14.5	3	M 6	6	10	0.52	0.05	RUS 26 102 KS	UV 7532	
8	58	26	6	29.5	73	14.5	3	M 6	6	10	0.52	0.05	RUS 26 126 KS	UFA 4710 UFG 4710 UFB 6412	
10	45	35	8	41.5	65	18	4	M 8	8	15	0.78	0.062	RUS 38 134 KS	UG 12 553	
10	115	35	8	41.5	145	18	4	M 8	8	15	0.78	0.05	RUS 38 206 KS	UV 9542 UFA 6412 UFG 6412 UFB 7812	

