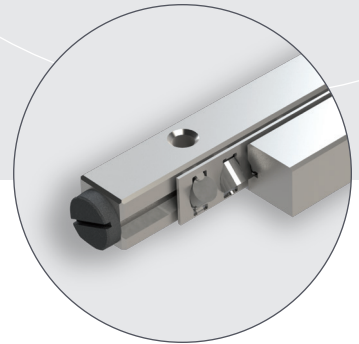
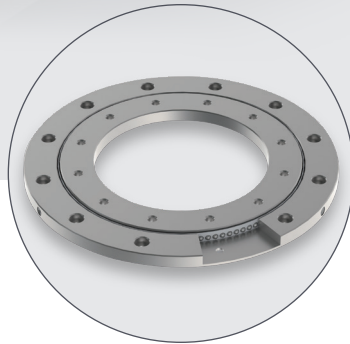
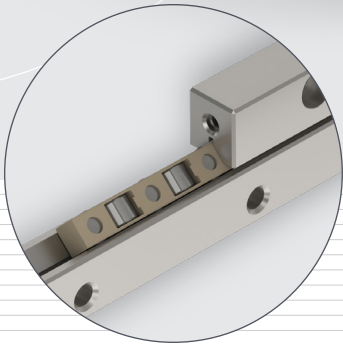
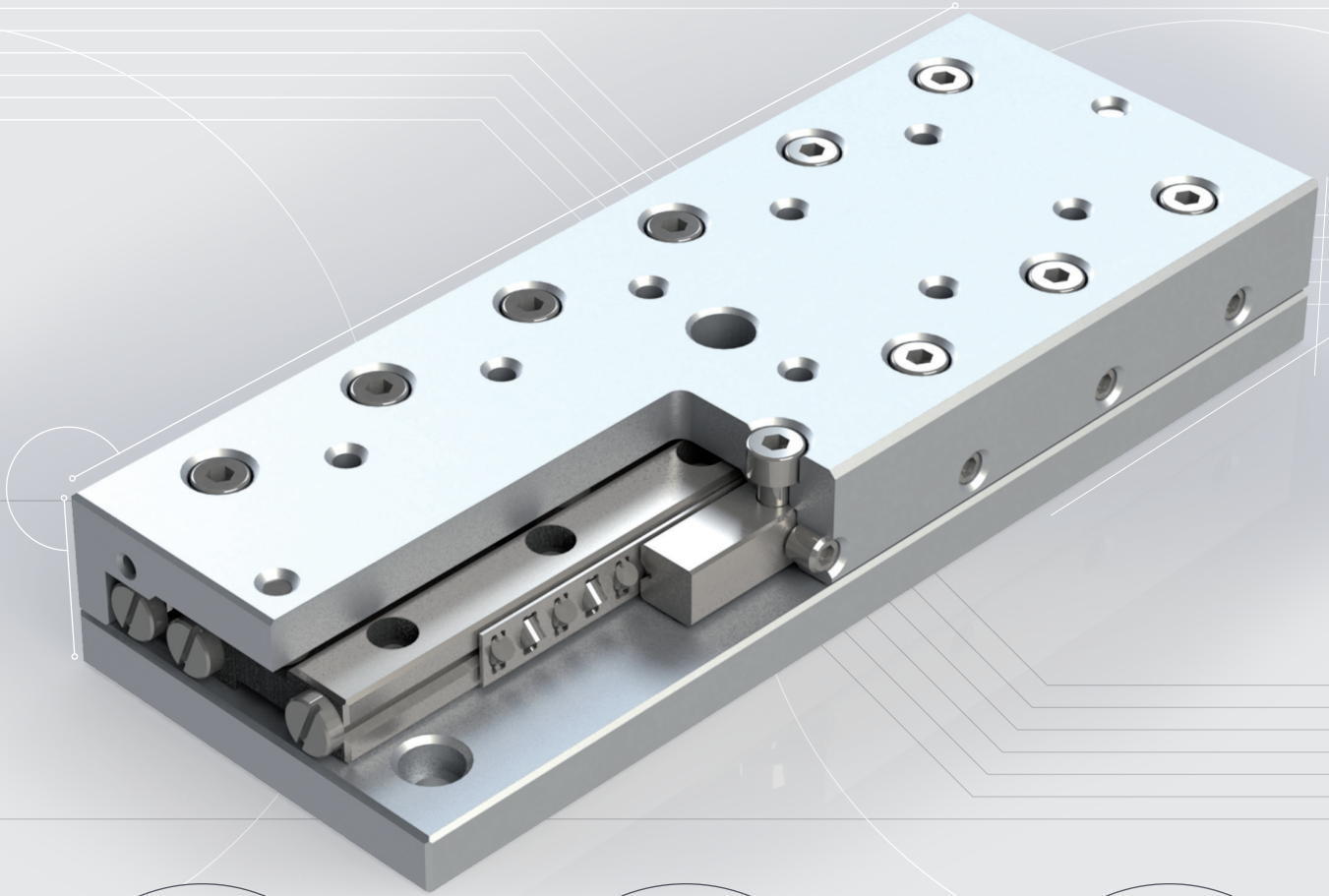


OVER  
**50**  
YEARS  
*of success*



## Linear bearings RNG with anti-cage creep technology



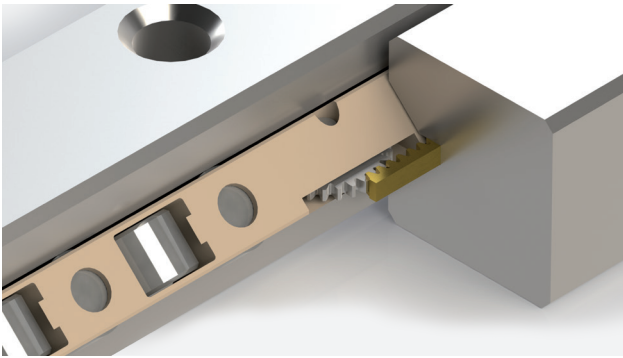
**Zero cage creep**

**High acceleration (up to 15G)**

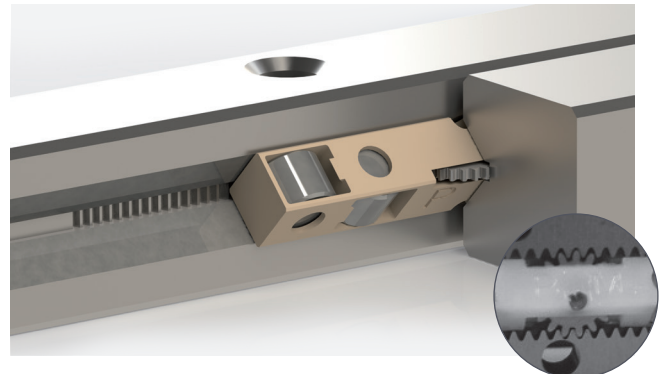
**Compact & cost saving design**

**Integrated in crossed roller bearing design  
(All metal design)**

**Also available for stainless steel with integrated rack  
machined by Electrical Chemical Machining often  
called ECM (UHV compatible)**



ACC include a robust brass rack attached in the bottom of the groove.



ACCI anti-cage creep technology for stainless steel rails, made by ECM. Is on request available in selected rail types.

### **THE PROBLEM CREEPING OF THE CAGE**

Shorter production times constantly push machine designers to reach higher speeds, decrease the size and weight of their designs, while increasing machine travel and positioning accuracy to its limits.

Cage creep can occur in non-recirculating linear bearing applications where vibrations, improper mounting, very high-acceleration and de-acceleration, inadequate tolerances on the mounting surfaces, uneven preloading or moment loading is present.

As the cage creeps out from original position there is an increase of friction, reduction of travel length and premature wear of the linear bearings. This shortens the lifetime and can lead to premature failures.

### **OUR SOLUTION = THE ACC-SOLUTION**

Our engineers refreshed a superior solution for use in high-tech and extreme dynamic applications. The ACC solution has proven its ability for decades to prevent cage creep in the most demanding applications and under the most severe environment conditions. The ACC system is integrated in the design of the linear bearing without influencing the external boundary or mounting dimensions. This allows you to replace the bearings in existing problem applications with the ACC solution.

#### **THE TEST RESULT PROVE**

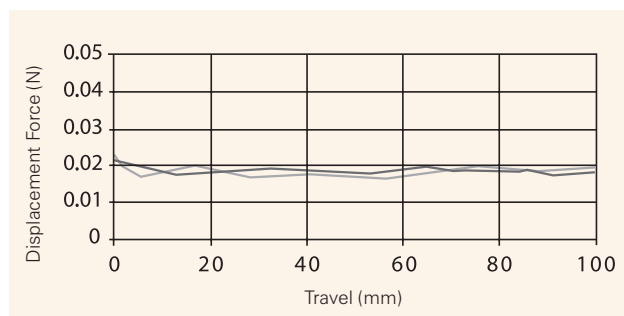
- No increase of friction
- No reduction of accuracy
- No influence of lubrication
- Increase operational life to its limits
- Zero cage creeping
- For all mounting orientations
- Easy to assemble



The ACC system is the best and most effective solution available. Precision rail with ACC option are currently available with the RSDE-series in all accuracy grades.

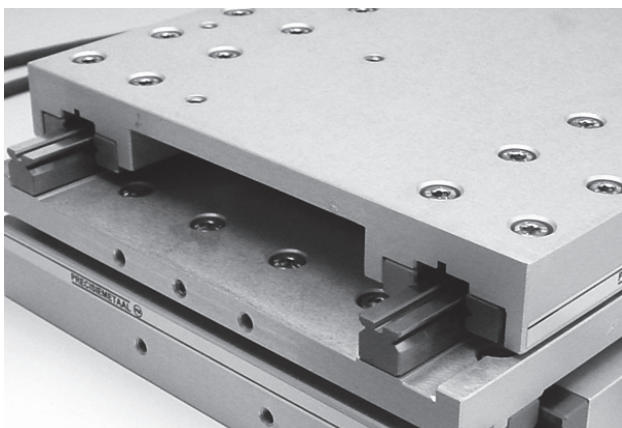
## FRICTION FORCE

The ACC solution is designed and manufactured with the greatest care. Therefore, as you can see on the graph below, the force that must be applied to overcome friction is essentially unchanged.



## APPLICATIONS

The ACC solution is well suited for the high speed, high precision demands of the electronics and semiconductor industry for applications like wire bonding stages and pick-and place units



## OPERATING TEMPERATURE

Linear bearings with ACC solution can operate under temperatures of -40°C up to +80°C. This is a significant advantage over similar systems using plastic components.

## ACCELERATION

Max. acceleration 150 m/s<sup>2</sup> (15G)

Standard linear bearing rail set with ACC solution consist of:

- 4 pcs. rail type RSDE with ACC
- 2 pcs. roller cages type KRE(V) with ACC (rollers retained)

End screws not necessary

Optional:

End screws GB and mountingscrews GD

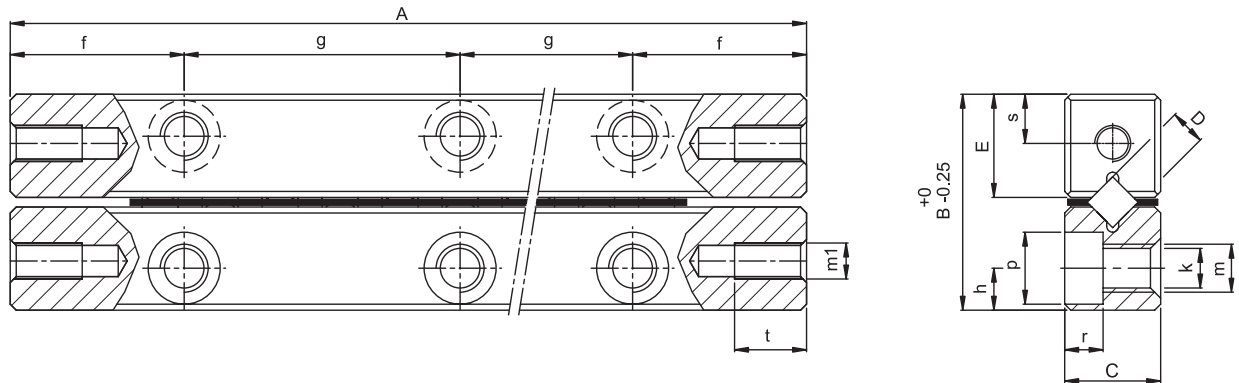
Leading global manufacturers have chosen the PM ACC

### LENGTH RAILS WITH ACC

Type RSDE - ACC, from page 84

Compact type RNG - ACC, from type 88

solution as the best solution on the market.

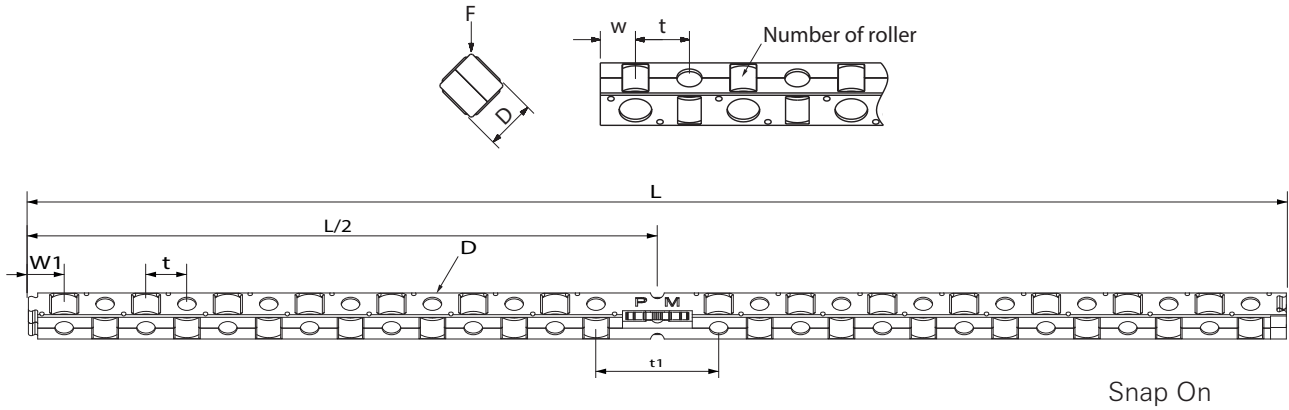


One set consist of: 4 rails + 2 roller cages, both with ACC option

RNG-ACC Kit	Main dimensions					Mounting holes							End holes		
	A	B	C	E	D	f	g	h	k	m	p	r	m1	s	t
RNG-4050x6KRE-ACC	50						1x25								
RNG-4075x10KRE-ACC	75						2x25								
RNG-4100x14KRE-ACC	100						3x25								
RNG-4125x18KRE-ACC	125						4x25								
RNG-4150x22KRE-ACC	150	19	9	9	4	12.5	5x25	3.5±0.2	2.65	M3	5.5	2.7	M3	3.5	6
RNG-4175x26KRE-ACC	175						6x25								
RNG-4200x28KRE-ACC	200						7x25								
RNG-4225x30KRE-ACC	225						8x25								
RNG-4250x34KRE-ACC	250						9x25								
RNG-6100x8KRE-ACC	100						3x25								
RNG-6150x14KRE-ACC	150						5x25								
RNG-6200x16KRE-ACC	200						7x25								
RNG-6250x22KRE-ACC	250	25	12	12	6	12.5	9x25	5±0.2	3.3	M4	7	3.2	M3	3.5	6
RNG-6300x28KRE-ACC	300						11x25								
RNG-6350x32KRE-ACC	350						13x25								
RNG-6400x38KRE-ACC	400						15x25								

**Bold** = Short lead time item

Regular = Long lead time item - please request for price and delivery time



Weight (g)	C <sub>dyn</sub> in (N)	Roller cage							Stroke	Type
		D	t	t1	w	w1	Z	L		
130	5495						8	36.4	27	RNG-4050x6KRE-ACC
210	8635						14	54.0	40	RNG-4075x10KRE-ACC
280	11775						16	71.6	55	RNG-4100x14KRE-ACC
350	14915						22	89.2	70	RNG-4125x18KRE-ACC
420	18055	4	4.4	13.2	2.8	3.85	28	106.8	85	RNG-4150x22KRE-ACC
490	21195						32	124.4	100	RNG-4175x26KRE-ACC
550	23550						38	133.2	130	RNG-4200x28KRE-ACC
615	25120						44	146.6	155	RNG-4225x30KRE-ACC
690	27475						48	164.2	180	RNG-4250x34KRE-ACC
470	17650						8	68	60	RNG-6100x8KRE-ACC
695	28240						14	107.6	80	RNG-6150x14KRE-ACC
905	35300						16	120.8	150	RNG-6200x16KRE-ACC
1130	44125	6	6.6	19.8	4.3	6.3	22	160.4	170	RNG-6250x22KRE-ACC
1365	54715						28	200	200	RNG-6300x28KRE-ACC
1595	63540						32	234.4	230	RNG-6350x32KRE-ACC
1830	70600						38	274	250	RNG-6400x38KRE-ACC

F = Load direction according to picture.

Units: mm



# PM RESEARCH AND PRODUCTION FACILITY



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