

2 Guiding systems

Linear guiding system Speedi-Roll

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To complement its versatile range of linear motion products, SKF has introduced the LLE linear guiding system (→ **fig 21**), a highly efficient unit marketed under the name “Speedi-Roll”. In response to current market demands, this product was developed giving high priority to lightweight construction and ease of installation.

Speedi-Roll is a linear guiding system with high load-carrying capacity, rigidity and torque resistance, consisting of a guide rail and a carriage with either four or six rollers. The rail consists of a drawn and anodised aluminium profile with hardened steel angle raceways fitted to both sides.

The aluminium base plate of the carriage, which is also anodised, houses the factory-fitted rollers. A special feature of this roller design is the presence of elastic elements around the threaded bolt adjusting the rollers and fixing them in the base plate. This unique patented system avoids the risk of mounting errors, thus contributing to a more efficient and cost effective installation.

As standard, the units are supplied with light preload. In order to cover a wide range of applications, SKF offers three sizes: LLE 15, 25 and 35. This allows flexibility when selecting a system to meet the design parameters.

Speedi-Roll guides operate effortlessly and quietly. The high linear speed rating permits shorter cycle times, and

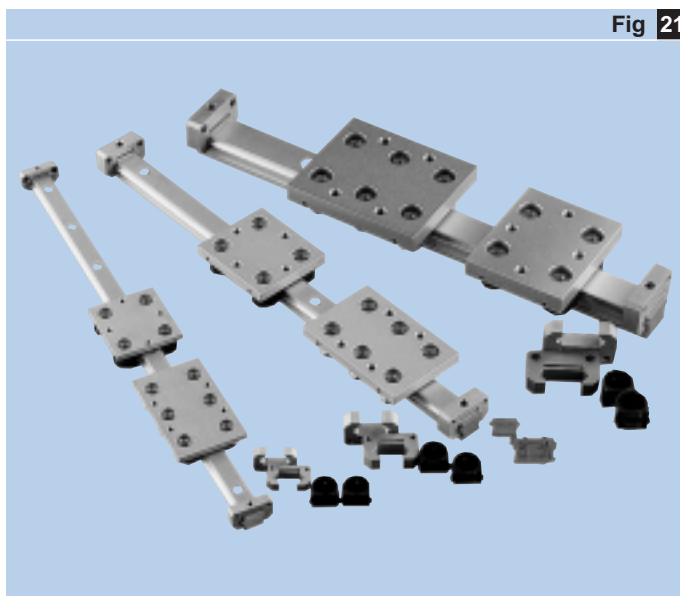


Fig 21

the low friction between rail and rollers allows less power input for driving the system. The hollow centre of size 25 and 35 rails helps to reduce the mass of the entire system. In addition, these “bores” can serve as wire or cable channels. The rollers are lubricated for life, greatly reducing the need for service.

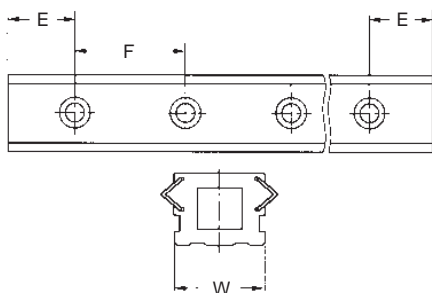
Roller covers and end stops are available to complete the product range. It is possible to produce customer specific configurations using the standard rollers and steel angle raceways in addition to the catalogue range.

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LLEHR ..

Rails in standard length



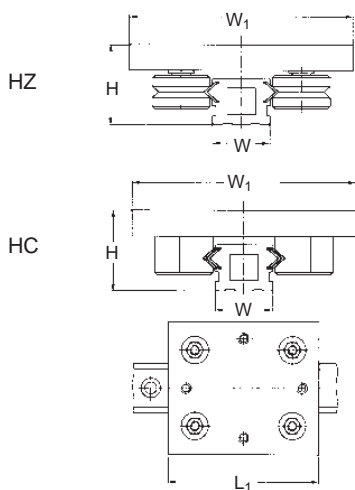
Designations	Dimensions		
	W	F	E
	mm		
LLEHR 15	18	62.5	31.25
LLEHR 25	23	125.0	62.5
LLEHR 35	36	250.0	125.0

LLEHC ..HZ/ ..HC

Standard carriages

LLEHC ..HZ without roller covers

LLEHC ..HC with roller covers



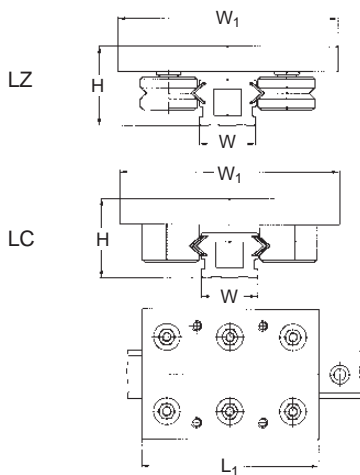
Designations	Dimensions			
	W	W ₁	H	L ₁
	mm			
LLEHR 15 HZ HC	18	65	25.0	70
LLEHR 25 HZ HC	23	80	35.5	90
LLEHR 35 HZ HC	36	120	54.3	100

LLEHC ..LZ/ ..LC

Long carriages

LLEHC ..LZ without roller covers

LLEHC ..LC with roller covers

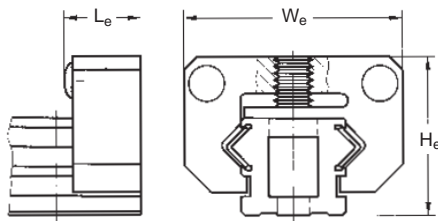


Designations	Dimensions			
	W	W ₁	H	L ₁
mm				
LLEHC 15 LZ LC	18	65	25.0	105
LLEHC 25 LZ LC	23	80	35.5	120
LLEHC 35 LZ LC	36	120	54.3	140

2

LLEHM

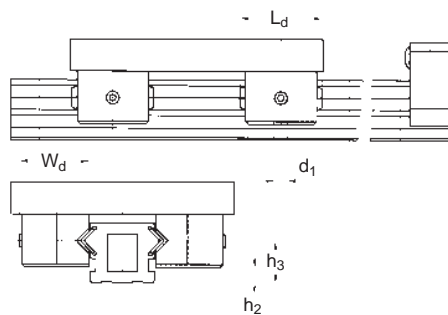
End stops



Designations	Dimensions		
	W _e	H _e	L _e
mm			
LLEHM 15	38	24.5	11.1
LLEHM 25	48	34.1	16.6
LLEHM 35	65	52.0	16.6

LLEHX

Roller covers



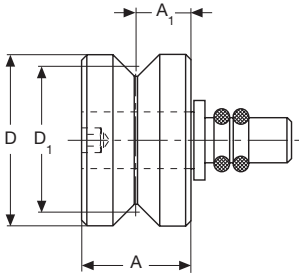
Designations	Dimensions				
	L _d	W _d	h ₂	h ₃	d ₁
mm					
LLEHX 15	29.2	25.1	1.65	10.75	2
LLEHX 25	29.2	25.1	5.60	14.70	2
LLEHX 35	31.8	27.8	10.95	22.75	2

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Linear guiding system Speedi-Roll/Profile rail guides

LLEHE ..Z

Rollers



Designations	Dimensions			
	D	D ₁	A	A ₁
	mm			
LLEHE 15 Z	20.5	17.75	14.00	8.2
LLEHE 25 Z	22.0	19.25	14.00	9.0
LLEHE 35 Z	24.5	21.75	20.25	12.1

System with	Designations	Basic load ratings dynamic static*	
		C	C ₀
		N	
Standard carriage	LLEHS 15 H	2000	1200
Long carriage	LLEHS 15 L	2600	1800
Roller only	LLEHE 15	2850	1400
Standard carriage	LLEHS 25 H	4000	2700
Long carriage	LLEHS 25 L	5200	4000
Roller only	LLEHE 25	2850	1400
Standard carriage	LLEHS 35 H	6000	4250
Long carriage	LLEHS 35 L	8000	6350
Roller only	LLEHE 35	4400	2200

* Data for radial direction, load angle 90° or 270°, with load centrally applied to the carriage