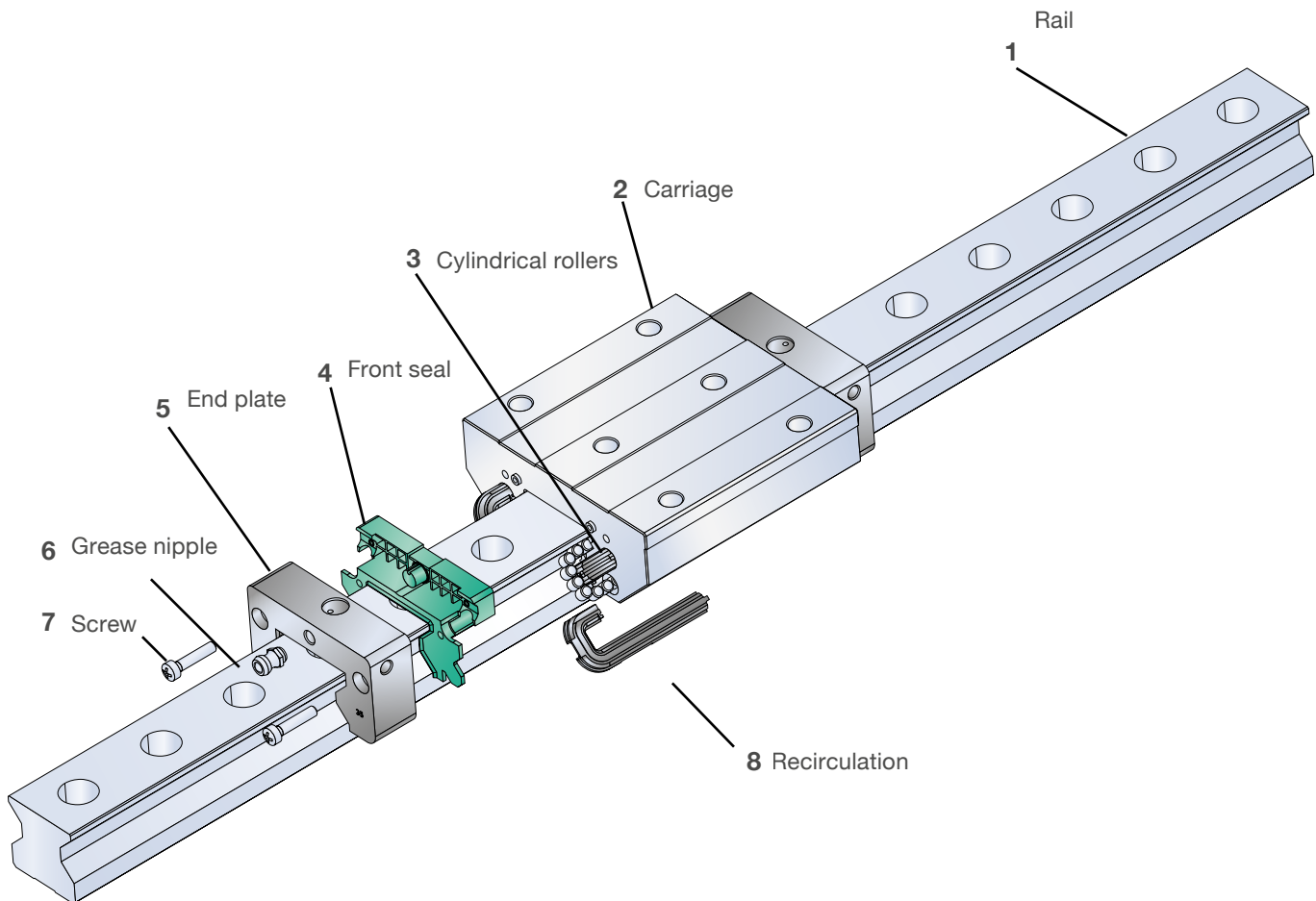


## 1.2.1 Components and material specifications

1





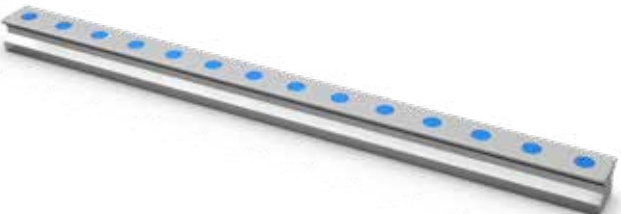
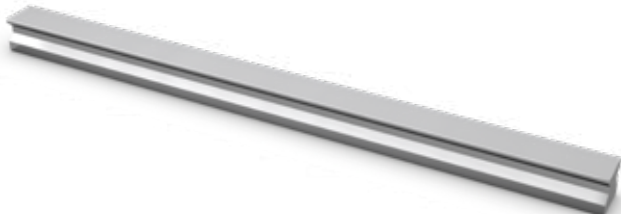

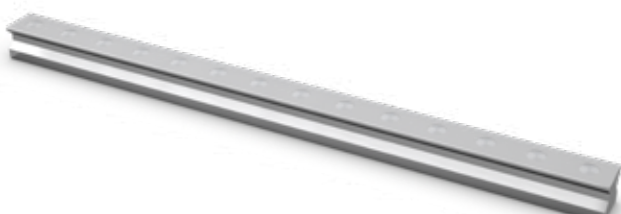


### Material specifications

1. Steel, inductive hardened
2. Steel, hardened raceways, outer surface phosphated
3. Bearing steel
4. Elastomer
5. GF reinforced polymer
6. Steel, coated
7. Stainless steel
8. Polymer

# 1.4 Product range

## 1.4.1 Product overview

<p><b>LLUHC ... A</b> Flanged carriage Standard length, standard height</p>	<p><b>LLUHC ... LA</b> Flanged carriage Extended length, standard height</p>	<p><b>LLUHU ... R</b> Slim-line carriage Standard length, extended height</p>	<p><b>LLUHC ... LR</b> Slim-line carriage Extended length, extended height</p>
 <p>Further information on <a href="#">page 36</a></p>	 <p>Further information on <a href="#">page 37</a></p>	 <p>Further information on <a href="#">page 38</a></p>	 <p>Further information on <a href="#">page 39</a></p>
<p><b>LLUHR</b> Profile rail with standard hole caps</p>  <p>Further information on <a href="#">page 40</a></p>	<p><b>LLUHR ... D4</b> Profile rail with blind holes</p>  <p>Further information on <a href="#">page 40</a></p>		
<p><b>LLUHR ... D6</b> Profile rail with brass hole plugs</p>  <p>Further information on <a href="#">page 40</a></p>	<p><b>LLUHR ... D8</b> Profile rail with steel hole plugs</p>  <p>Further information on <a href="#">page 40</a></p>		

## 1.4.2 Preferred range

Carriage and rail types mentioned on this page belong to the preferred range meaning they are usually available from stock for prompt delivery.

### Carriages

Size	Precision class	Preload class	Carriage type	Designations
25	P1	T2	A	LLUHC 25 A T2 P1
			LA	LLUHC 25 LA T2 P1
			R	LLUHC 25 R T2 P1
	P3	T2	A	LLUHC 25 A T2 P3
			LA	LLUHC 25 LA T2 P3
			R	LLUHC 25 R T2 P3
35	P1	T2	A	LLUHC 35 A T2 P1
			LA	LLUHC 35 LA T2 P1
			R	LLUHC 35 R T2-P1
	P3	T2	A	LLUHC 35 A T2 P3
			LA	LLUHC 35 LA T2 P3
			R	LLUHC 35 R T2 P3
45	P1	T2	A	LLUHC 45 A T2 P1
			LA	LLUHC 45 LA T2 P1
			R	LLUHC 45 R T2 P1
	P3	T2	A	LLUHC 45 A T2 P3
			LA	LLUHC 45 LA T2 P3
			R	LLUHC 45 R T2 P3

### Rails

Size	Precision class	Rail length	Special	Designations
25	P1	4000		LLUHR 25 4000 P1
	P3	4000		LLUHR 25 4000 P3
	P1	4000	D4	LLUHR 25 4000 P1 D4
	P3	4000	D4	LLUHR 25 4000 P3 D4
35	P1	4000		LLUHR 35 4000 P1
	P3	4000		LLUHR 35 4000 P3
	P1	4000	D4	LLUHR 35 4000 P1 D4
	P3	4000	D4	LLUHR 35 4000 P3 D4
45	P1	4000		LLUHR 45 4000 P1
	P3	4000		LLUHR 45 4000 P3
	P1	4000	D4	LLUHR 45 4000 P1 D4
	P3	4000	D4	LLUHR 45 4000 P3 D4

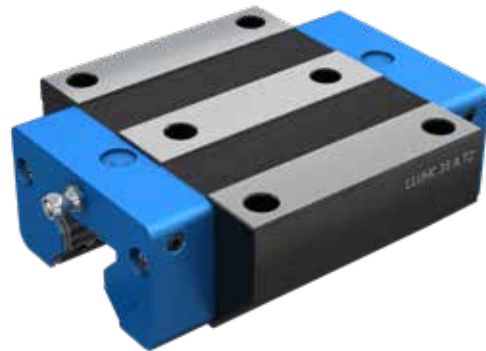
### 3.1.1 Carriage LLUHC ... A

Flanged carriage

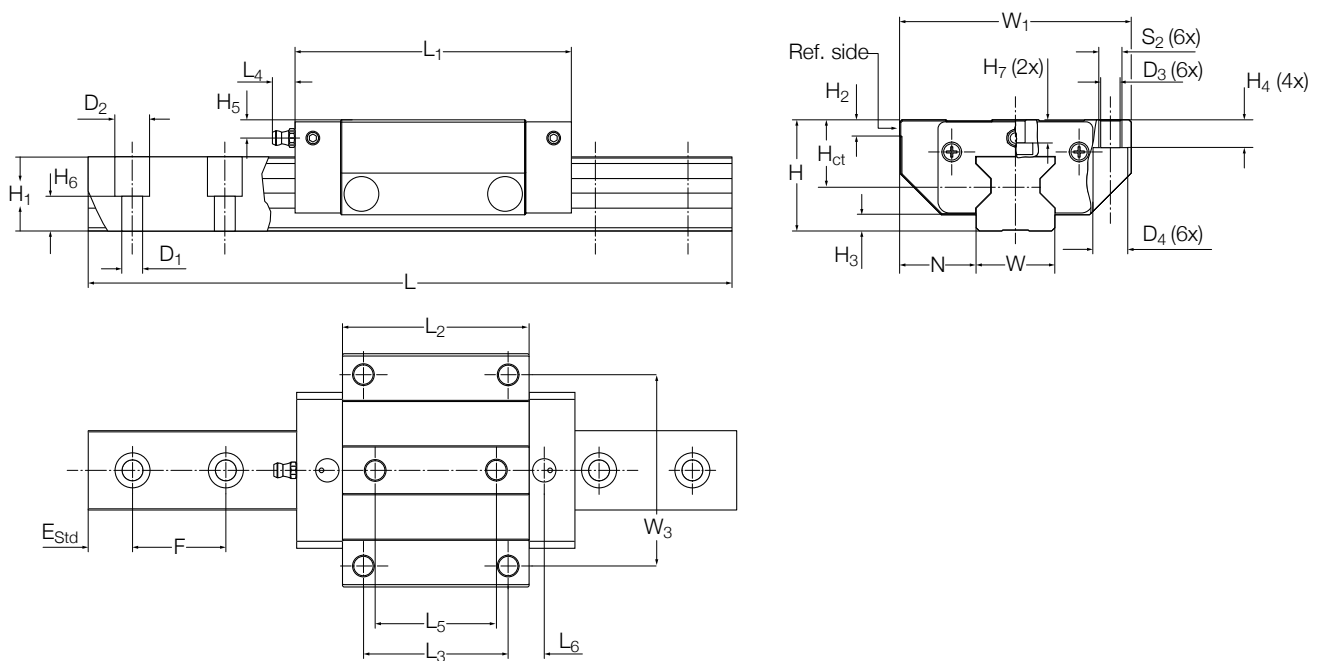
Standard length, standard height

For designation, refer to

Ordering key carriages (↳ page 63).



#### Dimensional drawing



Size	Assembly dimensions						Carriage dimensions													
	W <sub>1</sub>	N	H	H <sub>2</sub>	H <sub>3</sub>	H <sub>ct</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub> <sup>1)</sup>	W <sub>3</sub>	H <sub>4</sub>	H <sub>5</sub>	H <sub>7</sub>	D <sub>3</sub>	D <sub>4</sub>	S <sub>2</sub>	
-	mm																			
25	70	23,5	36	7,5	6,5	21	90,2	62	45	9,8	40	14	57	9	5,5	6,5	6,8	11	M8	
35	100	33	48	8	7	28,5	119,3	80	62	9,8	52	15,5	82	12	7,9	10	8,5	15	M10	
45	120	37,5	60	10	10	35,5	147,3	101,3	80	9,8	60	17,65	100	15	8	12	10,5	18	M12	
55	140	43,5	70	12	13	40,5	173	120	95	9,8	70	21,5	116	18	9,5	13,5	12,5	20	M14	
65	170	53,5	90	15,5	12	58	221,8	159,8	110	9,8	82	31,8	142	22	15	19,5	14,5	23	M16	

Size	Rail dimensions							Weight carriage rail	Load ratings dynamic static	Moments					
	W	H <sub>1</sub>	H <sub>6</sub>	F	D <sub>1</sub>	D <sub>2</sub>	E <sub>Std</sub>			C	C <sub>0</sub>	dynamic M <sub>xC</sub>	static M <sub>xC0</sub>	dynamic M <sub>yC</sub> = M <sub>zC</sub>	static M <sub>yC0</sub> = M <sub>zC0</sub>
-	mm							kg	kg/m	kN		Nm			
25	23	24,35	12,85	30	7	11	12,5	0,7	3,4	27,0	57,6	431	863	285	570
35	34	32	15	40	9	15	17,5	1,7	6,5	53,3	99,0	1 179	2 192	674	1 253
45	45	39,85	20,85	52,5	14	20	23,75	3,3	10,7	95,0	184,0	2 617	5 070	1 538	2 979
55	53	47,8	25,8	60	16	24	27,5	5,1	15,2	132,6	256,0	4 503	8 707	2 576	4 981
65	63	55	29	75	18	26	35	9,3	22,5	212,0	414,0	8 100	15 780	5 210	10 140

<sup>1)</sup> For size 65, L<sub>6</sub> in the table is valid only with top lubrication adaptor mounted, which is not shown on the drawing.

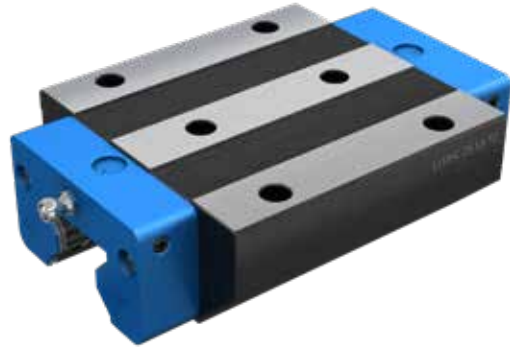
### 3.1.2 Carriage LLUHC ... LA

Flanged carriage

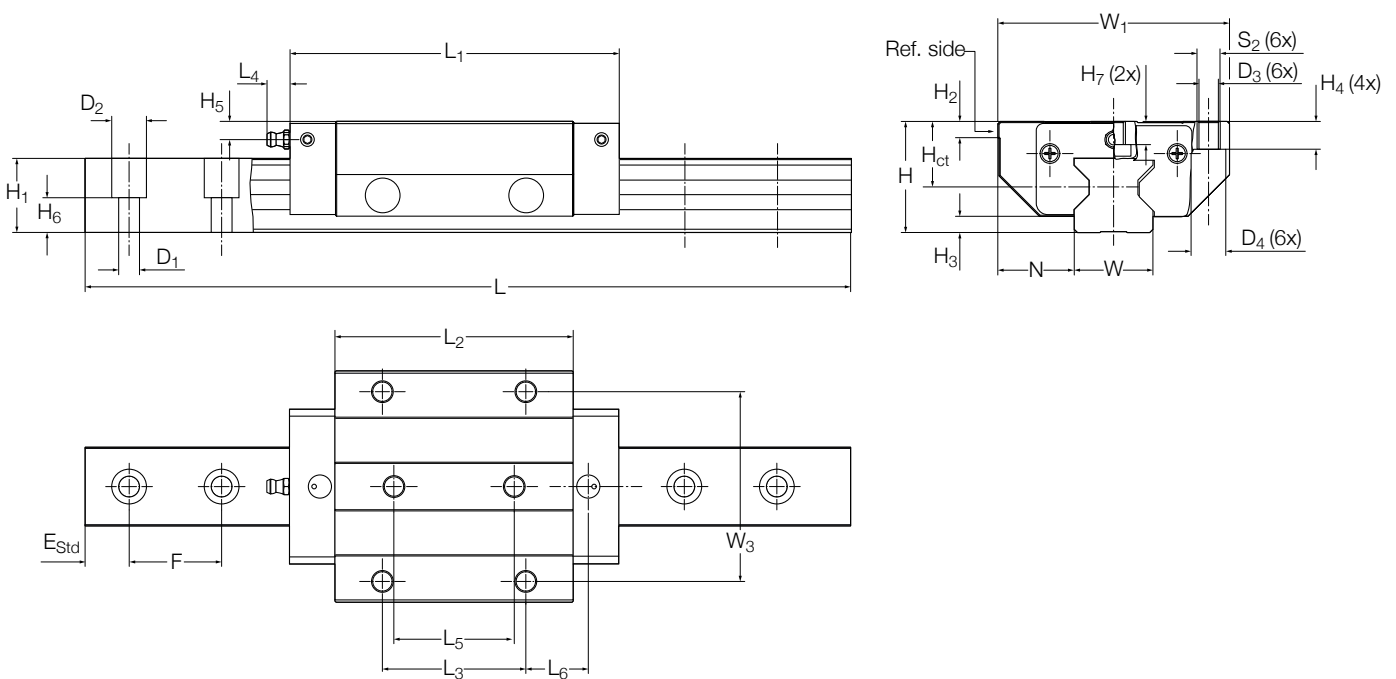
Extended length, standard height

For designation, refer to

Ordering key carriages (L→ page 63).



#### Dimensional drawing



Size	Assembly dimensions						Carriage dimensions													
	W <sub>1</sub>	N	H	H <sub>2</sub>	H <sub>3</sub>	H <sub>ct</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>5</sub>	L <sub>6</sub> <sup>1)</sup>	W <sub>3</sub>	H <sub>4</sub>	H <sub>5</sub>	H <sub>7</sub>	D <sub>3</sub>	D <sub>4</sub>	S <sub>2</sub>	
-	mm																			
25	70	23,5	36	7,5	6,5	21	109,7	81,5	45	9,8	40	23,75	57	9	5,5	6,5	6,8	11	M8	
35	100	33	48	8	7	28,5	142,3	103	62	9,8	52	27	82	12	7,9	10	8,5	15	M10	
45	120	37,5	60	10	10	35,5	179,8	133,8	80	9,8	60	33,9	100	15	8	12	10,5	18	M12	
55	140	43,5	70	12	13	40,5	215	162	95	9,8	70	42,5	116	18	9,5	13,5	12,5	20	M14	
65	170	53,5	90	15,5	12	58	272,3	210,3	110	9,8	82	57,1	142	22	15	19,5	14,5	23	M16	

Size	Rail dimensions							Weight carriage rail	Load ratings dynamic static	Moments					
	W	H <sub>1</sub>	H <sub>6</sub>	F	D <sub>1</sub>	D <sub>2</sub>	E <sub>Std</sub>			C	C <sub>0</sub>	dynamic M <sub>xc</sub>	static M <sub>xc0</sub>	dynamic M <sub>yc</sub> = M <sub>zc</sub>	static M <sub>yc0</sub> = M <sub>zc0</sub>
-	mm							kg	kg/m	kN		Nm			
25	23	24,35	12,85	30	7	11	12,5	0,9	3,4	36,5	76,8	583	1 150	491	970
35	34	32	15	40	9	15	17,5	2,2	6,5	72,6	136,0	1 595	3 014	1 187	2 243
45	45	39,85	20,85	52,5	14	20	23,75	4,3	10,7	119,5	242,2	3 293	6 672	2 444	4 951
55	53	47,8	25,8	60	16	24	27,5	7,0	15,2	176,0	351,0	5 977	11 915	4 470	8 910
65	63	55	29	75	18	26	35	13,5	22,5	276,0	579,0	10 530	22 100	8 980	11 840

<sup>1)</sup> For size 65, L<sub>6</sub> in the table is valid only with top lubrication adaptor mounted, which is not shown on the drawing.

### 3.1.3 Carriage LLUHC ... R

Slim-line carriage

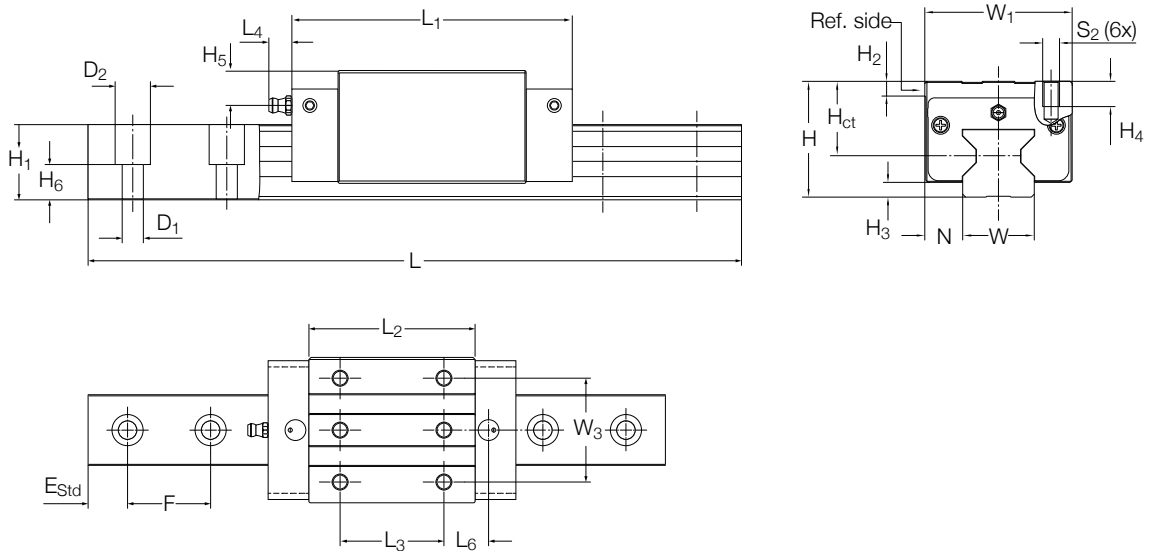
Standard length, extended height

For designation, refer to

Ordering key carriages (↳ page 63).



#### Dimensional drawing



Size	Assembly dimensions						Carriage dimensions									
	W <sub>1</sub> mm	N	H	H <sub>2</sub>	H <sub>3</sub>	H <sub>ct</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>6</sub> <sup>1)</sup>	W <sub>3</sub>	H <sub>4</sub>	H <sub>5</sub>	S <sub>2</sub>	
-																
25	48	12,5	40	7,5	6,5	25	90,2	62	35	9,8	19	35	9	9,5	M6	
35	70	18	55	8	7	35,5	119,3	80	50	9,8	21,5	50	12	14,9	M8	
45	86	20,5	70	10	10	45,5	147,3	101,3	60	9,8	27,65	60	18	18	M10	
55	100	23,5	80	12	13	50,5	173	120	75	9,8	31,5	75	19	19,5	M12	
65	126	31,5	90	15,5	12	58	221,8	159,8	70	9,8	51,8	76	22	15	M16	

Size	Rail dimensions							Weight carriage rail		Load ratings		Moments			
	W mm	H <sub>1</sub>	H <sub>6</sub>	F	D <sub>1</sub>	D <sub>2</sub>	E <sub>Std</sub>	kg	kg/m	dynamic C	static C <sub>0</sub>	dynamic M <sub>xc</sub> Nm	static M <sub>xc0</sub>	dynamic M <sub>yc</sub> = M <sub>zc</sub>	static M <sub>yc0</sub> = M <sub>zc0</sub>
-															
25	23	24,35	12,85	30	7	11	12,5	0,6	3,4	27,0	57,6	431	863	285	570
35	34	32	15	40	9	15	17,5	1,6	6,5	53,3	99,0	1 179	2 192	674	1 253
45	45	39,85	20,85	52,5	14	20	23,75	3,1	10,7	95,0	184,0	2 617	5 070	1 538	2 979
55	53	47,8	25,8	60	16	24	27,5	4,7	15,2	132,6	256,0	4 503	8 707	2 576	4 981
65	63	55	29	75	18	26	35	8,5	22,5	212,0	414,0	8 100	15 780	5 210	10 140

<sup>1)</sup> For size 65, L<sub>6</sub> in the table is valid only with top lubrication adaptor mounted, which is not shown on the drawing.

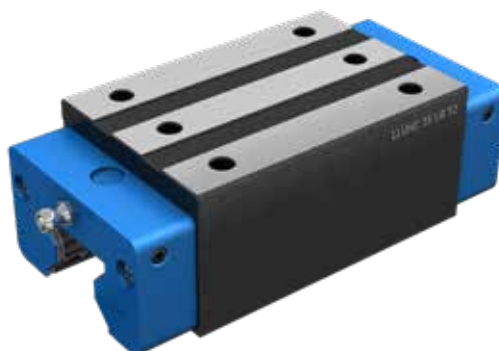
### 3.1.4 Carriage LLUHC ... LR

Slim-line carriage

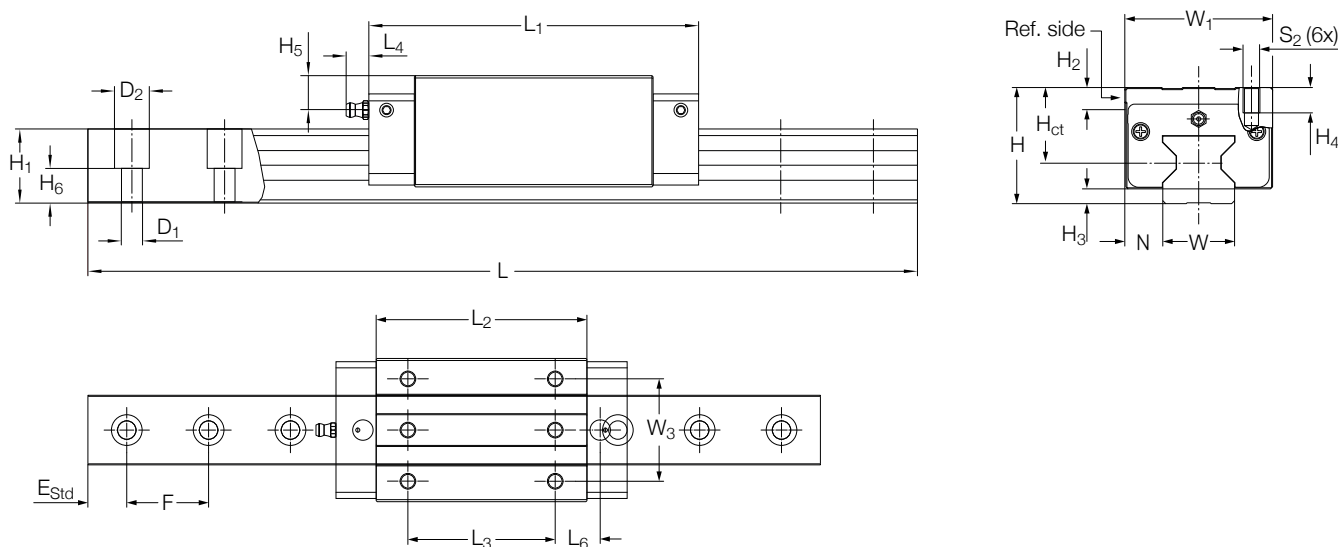
Extended length, extended height

For designation, refer to

Ordering key carriages (L→ page 63).



#### Dimensional drawing



Size	Assembly dimensions						Carriage dimensions									
	W <sub>1</sub> mm	N	H	H <sub>2</sub>	H <sub>3</sub>	H <sub>ct</sub>	L <sub>1</sub>	L <sub>2</sub>	L <sub>3</sub>	L <sub>4</sub>	L <sub>6</sub> <sup>1)</sup>	W <sub>3</sub>	H <sub>4</sub>	H <sub>5</sub>	S <sub>2</sub>	
-																
25	48	12,5	40	7,5	6,5	25	109,7	81,5	50	9,8	21,25	35	9	9,5	M6	
35	70	18	55	8	7	35,5	142,3	103	72	9,8	22	50	12	14,9	M8	
45	86	20,5	70	10	10	45,5	179,8	133,8	80	9,8	33,9	60	18	18	M10	
55	100	23,5	80	12	13	50,5	215	162	95	9,8	42,5	75	19	19,5	M12	
65	126	31,5	90	15,5	12	58	272,3	210,3	120	9,8	52,05	76	22	15	M16	

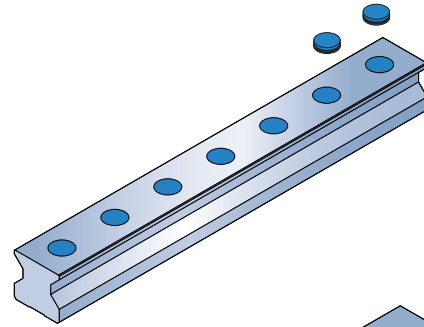
Size	Rail dimensions							Weight		Load ratings		Moments			
	W mm	H <sub>1</sub>	H <sub>6</sub>	F	D <sub>1</sub>	D <sub>2</sub>	E <sub>Std</sub>	carriage kg	rail kg/m	dynamic C	static C <sub>0</sub>	dynamic M <sub>xC</sub> Nm	static M <sub>xC0</sub>	dynamic M <sub>yC</sub> = M <sub>zC</sub>	static M <sub>yC0</sub> = M <sub>zC0</sub>
-															
25	23	24,35	12,85	30	7	11	12,5	0,8	3,4	36,5	76,8	583	1 150	491	970
35	34	32	15	40	9	15	17,5	2,0	6,5	72,6	136,0	1 595	3 014	1 187	2 243
45	45	39,85	20,85	52,5	14	20	23,75	4,1	10,7	119,5	242,2	3 293	6 672	2 444	4 951
55	53	47,8	25,8	60	16	24	27,5	6,2	15,2	176,0	351,0	5 977	11 915	4 470	8 910
65	63	55	29	75	18	26	35	12,7	22,5	276,0	579,0	10 530	22 100	8 980	11 840

<sup>1)</sup> For size 65, L<sub>6</sub> in the table is valid only with top lubrication adaptor mounted, which is not shown on the drawing.

## 3.2 Rail data

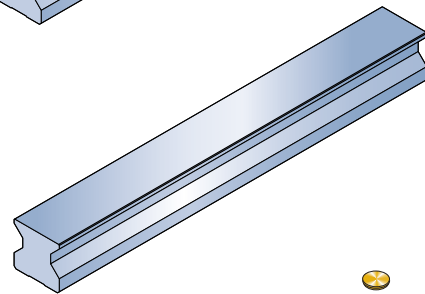
### LLUHR rails

Standard rail, always supplied with protective plastic caps for mounting from above.



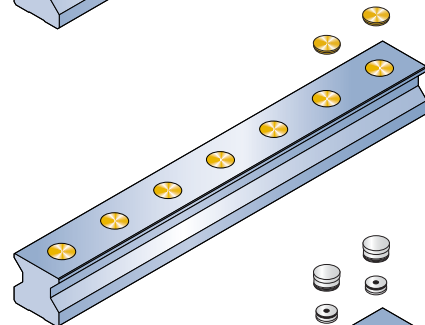
### LLUHR ... D4 rails

With blind holes for mounting from below.



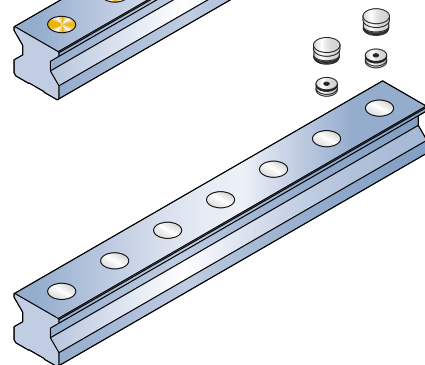
### LLUHR ... D6 rails

Standard rail supplied with protective brass plugs for mounting from above.



### LLUHR ... D8 rails

Standard rail supplied with protective steel plugs for mounting from above.



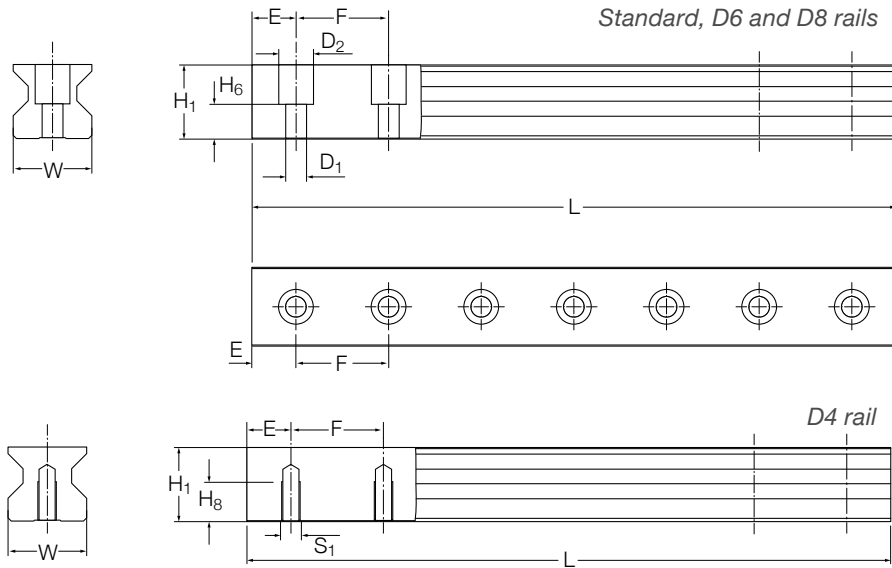
Protective metal plugs ensure that no residues of dirt, swarf, cooling water and other contaminants remain in the area of the attachment holes. After insertion, these plugs align flush with the surface of the profile rail guide to provide effective wiping. The use of additional scraper plates in combination with these protective metal plugs is an option which will further enhance protection.

Size-specific mounting tools for installing the protective brass and steel plugs are available from Ewellix. Please refer to **page 65** to order the mounting tool.

**NOTE:** If a rail length is required that exceeds the maximum length available, joint rails can be ordered. These rails are manufactured to match seamlessly with each other.

To determine the rail length and calculate specific equidistant E values see formulae on the following page (**L** → **page 41**).





Size	Rail dimensions										E <sub>Std</sub> -0.75	E <sub>min</sub> -0.75	E <sub>max</sub> -0.75	L <sub>max</sub> <sup>1)</sup> -1.5
	W	H <sub>1</sub>	H <sub>6</sub>	F	D <sub>1</sub>	D <sub>2</sub>	H <sub>8</sub>	S <sub>1</sub>						
-	mm													
25	23	24,35	12,85	30	7	11	12	M6	12,5	10	22	3 985		
35	34	32	15	40	9	15	15	M8	17,5	12	30	3 995		
45	45	39,85	20,85	52,5	14	20	19	M12	23,75	15	40	3 985		
55	53	47,8	25,8	60	16	24	22	M14	27,5	17	46	3 955		
65	63	55	29	75	18	26	25	M16	35	18	60	3 970		

<sup>1)</sup> Calculated by using E<sub>Std</sub>  
For the designation of the different rails refer to Ordering key rails (L→ page 64).

The “E” dimension designates the distance between the end face and the center of the first mounting hole of the rail.

With suffix “ES” in the ordering key, the holes at both rail ends will be positioned equidistantly from either end of the rail using the E<sub>Std</sub> dimension. This results in predefined rail lengths that should be preferred when ordering:

$$L = nF + 2 E_{Std}$$

With suffix “E0”, the rail is produced with the shortest possible symmetrical “E” dimension on both rail ends.

With suffix “Exx”, the “E” dimension has to be specified.

To calculate specific equidistant “E” dimensions, following formulae are used:

**Calculation of number of attachment holes in rail guide**

(1)  $n_{real} = \frac{L}{F}$

(2) Round down of n<sub>real</sub> to n

(3) n + 1 = z

- F = Distance of attachmentholes
- L = Rail length
- n<sub>real</sub> = Real calculation value for number of hole distances
- z = Number of attachment holes in rail

**Determination of E dimension based on z**

(4)  $E_{real} = \frac{L - F(z - 1)}{2}$

E<sub>real</sub> = Real calculation value for E-dimension

E<sub>min</sub> = Minimum E-dimension according to catalogue

E<sub>Std</sub> = Standard value for E-Dimension

**Comparison with catalogue value of E<sub>min</sub>**

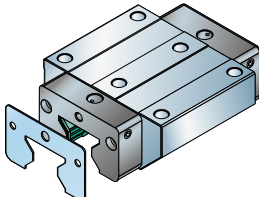
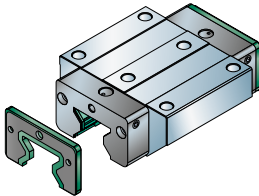
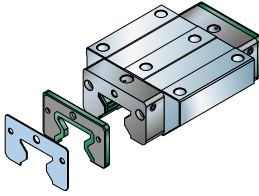
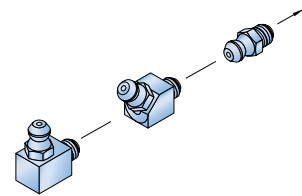
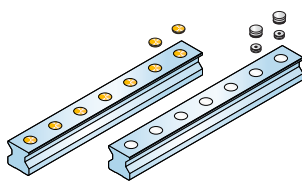
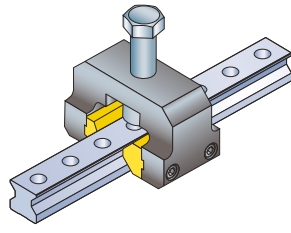
(4.1) If E<sub>real</sub> ≥ E<sub>min</sub>  
Usage of E<sub>real</sub> from **formula 4**

(4.2) If E<sub>real</sub> < E<sub>min</sub>  
Calculation of E<sub>real</sub> according to **formula 5**

(5)  $E_{real} = \frac{L - F(z - 2)}{2}$



# 3.3 Accessories

Accessories Item name	Illustration <sup>1)</sup>	Purpose
<b>Scraper plate</b> LLTHZ ... S1		Scraper plates are spring-steel, non-contact components. They protect the front seal from coarse contaminants or hot metal chips. Lubrication adaptors can be used without modifications. Longer mounting screws are supplied with the scraper plate
<b>Additional front seal</b> LLTHZ ... S7		Additional front seals are contact seals that can be attached to the carriage end faces. They are single-lip seals consisting of special heavy-duty material with rubber (NBR) seal lips (S7) or fluoroelastomere (FKM) seal lips (S4). Both offer additional protection against liquids and smaller contaminants. The FKM seal has a better chemical resistance, e.g. against aggressive coolants. One lubrication connector and longer screws are supplied with the seal.
<b>Seal kit</b> LLTHZ ... S3 LLTHZ ... S8		The seal kit consists of a metal scraper and an additional front seal. It is intended for applications involving exposure to coarse and fine dirt as well as liquids. One lubrication connector and longer screws are supplied with the seal kit.
<b>Lubrication adaptors</b> LLUHZ VN ...		To connect different lubrication devices to the carriage, several lubrication adaptors are available.
<b>Protective metal plugs from brass or steel</b> LLUHZ ... TD6 / TD8		Metal plugs protect carriage and rail from damages caused by high thermal and mechanical exposure, e.g. chip formation.
<b>Assembly tool for metal plugs</b> LLUHZ ... D6		Rail size specific assembly tools are available for proper installation of protective metal plugs. There are two sizes available, one covering the range of size 25-45 and one covering size 45-65.

<sup>1)</sup> Appearance can vary slightly depending on the size

## 3.3.1 Scraper plate

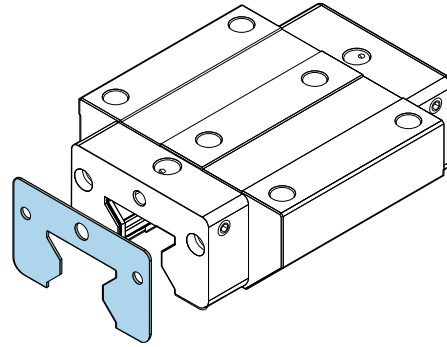
### LLUHZ ... S1

- Material: Spring steel according to DIN EN 10088
- Appearance: Steel grey
- Designed with a specified maximum gap of ~ 50 µm

### Mounting

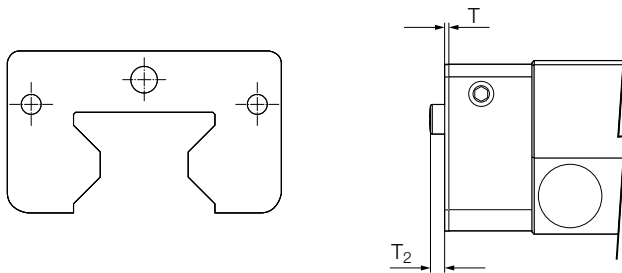
The standard grease nipple still fits. Longer mounting screws are supplied with the scraper plate. When mounting, be sure there is an even space between the rail and scraper plate.

**NOTE:** Can be ordered in combination with an additional front seal as a kit, designation S3 or S8.



Appearance can vary slightly depending on the size.

### Dimensional drawing



Carriage size	T mm	T <sub>2</sub>
–		
25	1	2,6
35	1	3,3
45	1,5	4
55	1,5	4,8
65	2	8

### 3.3.2 Additional front seal

#### LLUHZ ... S7

- Material: Elastomer (NBR) on steel carrier
- Design: Single-lip seal

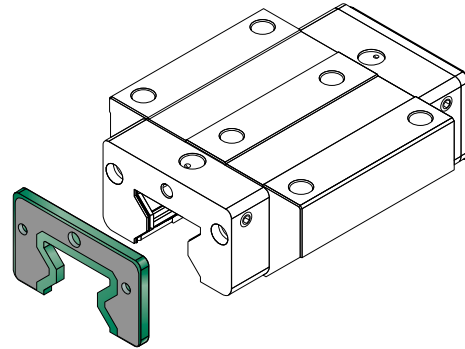
#### LLUHZ ... S4

- Material: Fluoroelastomer (FKM) on steel carrier
- Good chemical resistance e.g. against aggressive coolants
- Design: Single-lip seal

#### Mounting

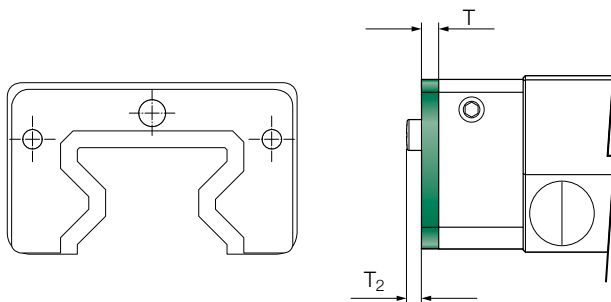
One lubrication connector and longer mounting screws are supplied with the seal. For dimensions of the lubrication connector please refer to **table 1** (↳ **page 47**)

**NOTE:** Can be ordered in combination with an additional scraper plate as a kit, designation S3 or S8.



Appearance can vary slightly depending on the size.

#### Dimensional drawing



Carriage size	T mm	T <sub>2</sub>
-	mm	
25	6	2,6
35	6	3,3
45	6	4
55	6	4,8
65	7	8

### 3.3.3 Seal kit

#### LLUHZ ... S3

The seal kit consists of the following components:

- Scraper plate
- Additional front seal S7 (NBR)

#### LLUHZ ... S8

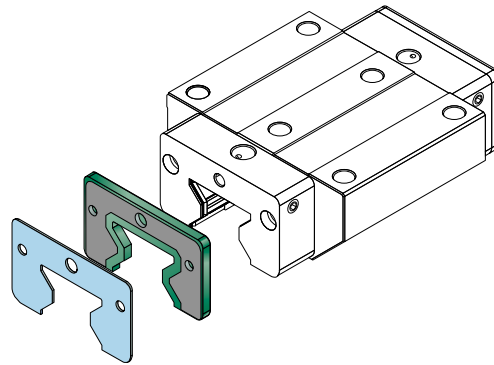
The seal kit consists of the following components:

- Scraper plate
- Additional front seal S4 (FKM)

#### Mounting

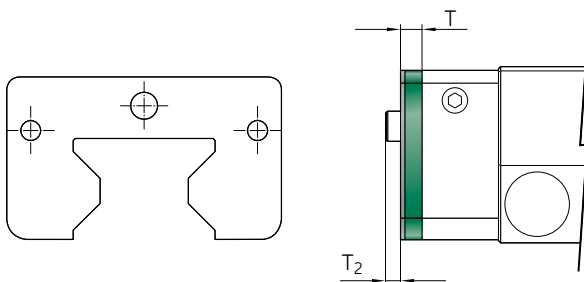
One lubrication connector and longer mounting screws are supplied with the seal kit. For dimensions of the lubrication connector please refer to **table 1** (L→ **page 47**).

When mounting, be sure there is an even space between the rail and scraper plate.



Appearance can vary slightly depending on the size.

#### Dimensional drawing



Carriage size	T mm	T <sub>2</sub>
–		
25	7	2,6
35	7	3,3
45	7,5	4
55	7,5	4,8
65	9	8

### 3.3.4 Lubrication adaptors

All lubrication adaptors are standardized with a M6 thread for secure attachment to the carriages of all sizes. For our range of grease nipples, couplings and fittings, please refer to **table 1**.

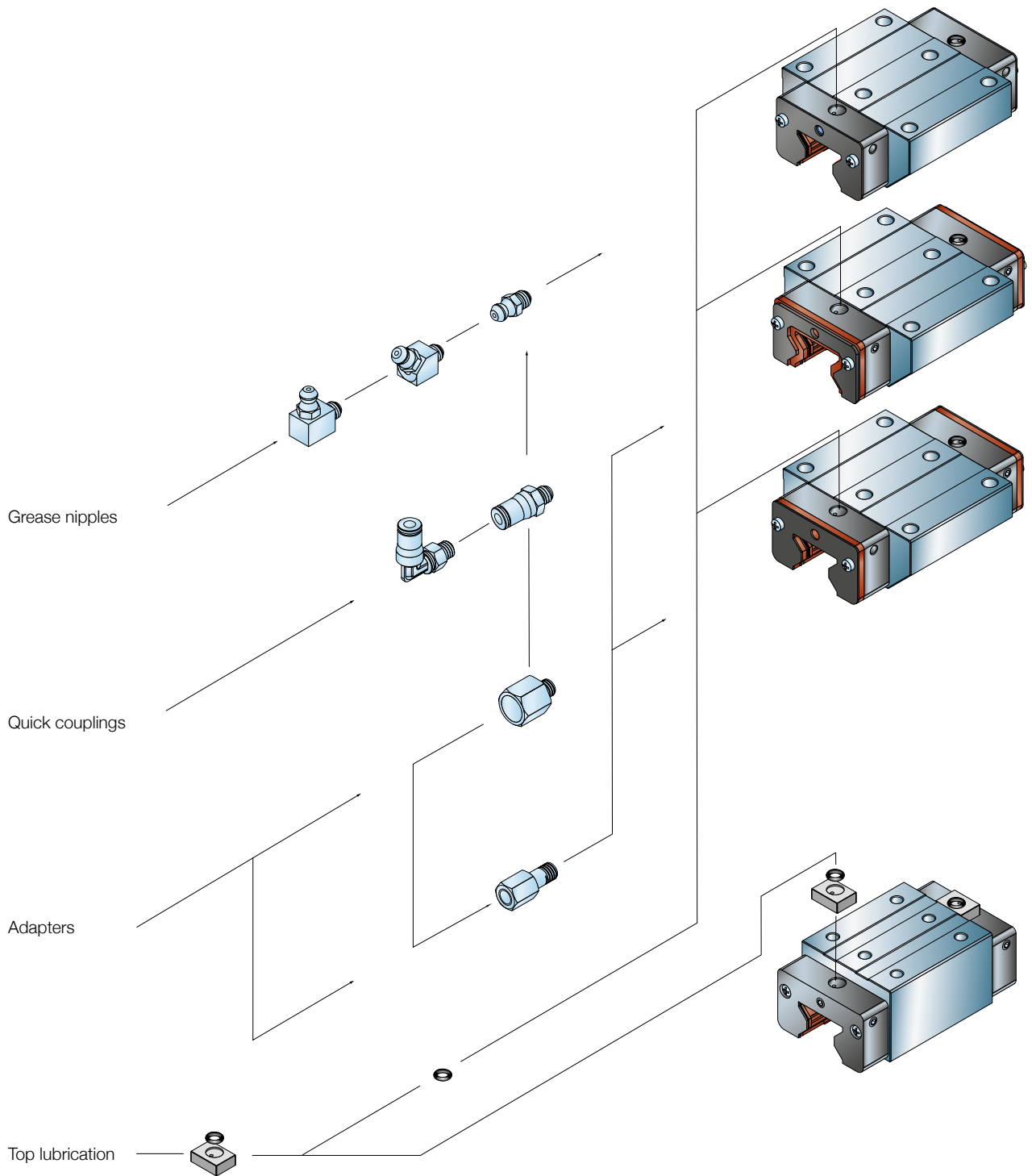
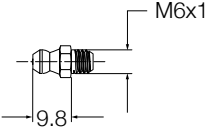
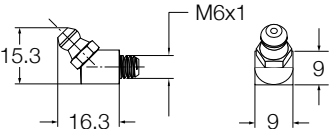
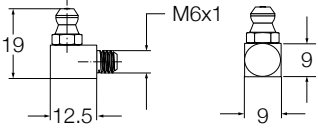
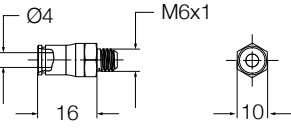
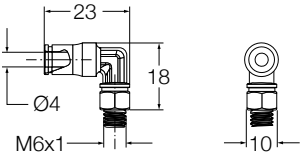
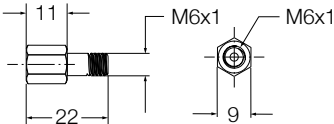
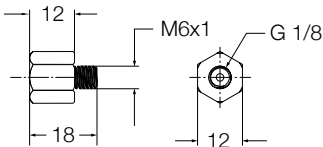
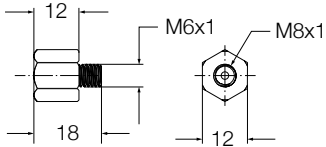
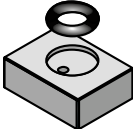


Table 1

	Item name Ordering key	Size	Description
	Grease nipple straight LLUHZ VN-M6	Steel, coated	Is supplied with the carriage as standard.
	Grease nipple 45° LLUHZ VN-M6-45	Steel, coated	
	Grease nipple 90° LLUHZ VN-M6-90	Steel, coated	
	Quick coupling straight LLUHZ VN SC	Steel, coated	To connect 4 mm outer diameter plastic pipe. Max. operating pressure: 30 bar
	Quick coupling 90°, adjustable LLUHZ VN AC	Steel, coated	Coupling can be rotated 360°. To connect 4 mm outer diameter plastic pipe. Max. operating pressure: 30 bar
	Lubrication connector LLUHZ VN UA	Stainless steel	Needed when using seal kit S3, S8 and seal S7, S4.
	Reduction fitting LLUHZ VN UB	Stainless steel	Reduction from G1/8 to M6 when connection to a pipe system is needed.
	Reduction fitting LLUHZ VN UC	Stainless steel	Reduction from M8x1 to M6.
	Adaptor for top lubrication LLUHZ VN TL	Aluminium and O-rings	Supplied with top lubrication option. Separately only if needed as a spare part.

LLUH	S	35	R	2	T2	1000	P01	A	D4	E0	M	S1	C	TLL	M
------	---	----	---	---	----	------	-----	---	----	----	---	----	---	-----	---

**System (Carriage mounted on rail)**

- If not selected, no code
- M Yes

**Additional sealing, as part of the system (for separate parts see Ordering Key Accessories)**

- S1 Scraper plate
- S3 Seal kit, additional front seal NBR with scraper plate
- S4 Additional front seal FKM
- S7 Additional front seal NBR
- S8 Seal kit, additional front seal FKM with scraper plate

**Number of additional seals**

- C Two additional seals per carriage
- S Two additional seals per system, only outer sides of carriages are additionally sealed

**Top lubrication (details and definition see page 48)**

- If not selected, no code
- TLL Left end plate modified plus adaptor for lubrication from top
- TLR Right end plate modified plus adaptor for lubrication from top
- TLB Both end plates modified plus two adaptors for lubrication from top

**Mounting of accessories<sup>4)</sup>**

- Not mounted, no code
- M Accessories mounted on the carriages

**Preferred range**

<sup>1)</sup> When ordered separately (not in a system)  
<sup>2)</sup> System can consist of one rail, one or more carriages and accessories  
<sup>3)</sup> For details and more information please refer to **page 41**  
<sup>4)</sup> Can only be selected when option "Carriage mounted on rail" is ordered

## 4.3.2 Ordering key LLU carriages

LLUH	C	35	R	T2	P01	TLL
------	---	----	---	----	-----	-----

**Carriage size**

25, 35, 45, 55, 65

**Carriage type**

- A** Flanged carriage, standard length, standard height
- LA** Flanged carriage, extended length, standard height
- R** Slim-line carriage, standard length, extended height
- LR** Slim-line carriage, extended length, extended height

**Preload class**

- T2** Medium preload, 8% C
- T3** Heavy preload, 13% C

**Precision class**

- P3** Medium
- P1** High
- P01 Super
- P001 Ultra<sup>1)</sup>

**Top lubrication (details and definition see page 48)**

- If not selected, no code
- TLL Left end plate modified plus adaptor for lubrication from top
- TLR Right end plate modified plus adaptor for lubrication from top
- TLB Both end plates modified plus adaptor for lubrication from top

**Preferred range**

<sup>1)</sup> Can only be ordered as a complete system





### 4.3.3 Ordering key LLU rails

LLUH	R	35	1000	P01	A	D4	E0
------	---	----	------	-----	---	----	----

**Rail size**

25, 35, 45, 55, 65

**Rail length**

Maximum rail length without joint: 4000 mm; in 1 mm increments<sup>1)</sup>

**Precision class**

- P3 Medium
- P1 High
- P01 Super
- P001 Ultra<sup>5)</sup>

**Joint rails<sup>2)</sup>**

- If not selected, no code
- A Yes

**Rail<sup>3)</sup>**

- Standard rail with plastic caps, no code
- D4 Rail with blind holes
- D6 Rail with brass plugs<sup>4)</sup>
- D8 Rail with steel plugs<sup>4)</sup>
- D Rail, if customized according to drawing number

**Distance between end face and the center of the first mounting hole of the rail<sup>1)</sup>**

- ES The holes at both rail ends will be positioned equidistantly from either end of the rail using the EStd dimension. This results in predefined rail lengths, details see **page 41**.
- E0 The holes at both rail ends will be positioned equidistantly from either end of the rail with the shortest possible "E" dimension.
- Exx "E" dimension to be specified.

<sup>1)</sup> For details and more information please refer to **page 41**  
<sup>2)</sup> Only if required rail length exceeds the maximum available rail length  
<sup>3)</sup> Plastic and metal plugs are available as spare parts, please see **Ordering Key Accessories**  
<sup>4)</sup> Mounting Tools are separately available, please see **Ordering Key Accessories**  
<sup>5)</sup> Can only be ordered as a complete system

■ Preferred range

## 4.3.4 Ordering key LLU accessories

LLUH	Z	35	S1
------	---	----	----

**Size**

25, 35, 45, 55, 65

**Accessories:**

**Additional sealing options**

S1	Scraper plate
S3	Seal kit, additional front seal NBR with scraper plate
S4	Additional front seal FKM
S7	Additional front seal NBR
S8	Seal kit, additional front seal FKM with scraper plate

**Assembly tools for metal plugs**

25-45 D6	Assembly tool for sizes 25, 35 and 45
45-65 D6	Assembly tool for sizes 45, 55 and 65

**Caps and plugs as spare parts**

VP	Set of 40 plastic caps
TD6	Set of 40 brass plugs
TD8	Set of 40 steel plugs

**Grease nipples<sup>1)</sup>**

25-65 VN-M6	Standard grease nipple, straight
25-65 VN-M6-45	Grease nipple, 45 degrees
25-65 VN-M6-90	Grease nipple, 90 degrees

**Adaptors<sup>1)</sup>**

25-65 VN UA	Lubrication connector, extension M6 to M6
25-65 VN UB	Reduction fitting, from G1/8 to M6
25-65 VN UC	Reduction fitting, from M8x1 to M6

**Quick lubrication couplings<sup>1)</sup>**

25-65 VN SC	Lubrication coupling, straight
25-65 VN AC	Adjustable coupling, 90 degrees

**Adaptors for top lubrication (as spare part)**

VN TL1	for A, LA carriage, O-ring (size 25 - 55), O-ring + adaptor (size 65)
VN TL2	for R, LR carriage, O-ring + adapter



## Product details

Product designation (if already known)

Carriage type



LLUHC-A



LLUHC-LA



LLUHC-R

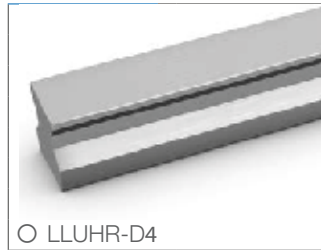


LLUHC-LR

Rail type



LLUHR



LLUHR-D4



LLUHR-D6



LLUHC-D8

Preload class

T2 (8% C)

T3 (13% C)

Precision class

P3 (Medium)

P1 (High)

P01 (Super)

P001 (Ultra)

Needed accessories (for details see SKF publication 16404 Roller profile rail guide LLU)

- Grease nipple straight (standard) (25-65 VN-M6)
- Grease nipple 45° (25-65 VN-M6-45)
- Grease nipple 90° (25-65 VN-M6-90)
  
- Quick coupling straight (25-65 VN SC)
- Quick coupling 90°, adjustable (25-65 VN AC)
  
- Lubrication connector, extension M6 to M6 (25-65 VN UA)
- Reduction fitting, from G 1/8 to M6 (25-65 VN UB)
- Reduction fitting, from M8x1 to M6 (25-65 VN UC)
  
- Assembly tools for metal plugs (LLUHZ ... D6)