

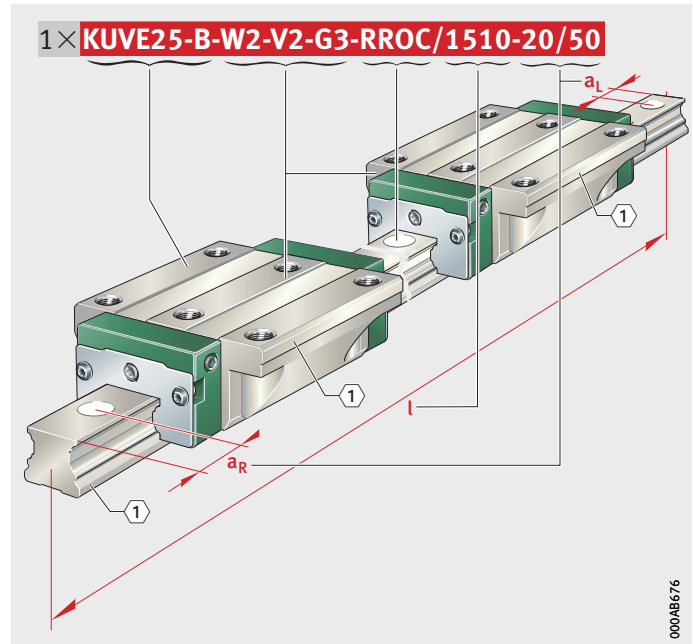
Four-row linear recirculating ball bearing and guideway assemblies

Ordering example, ordering designation

Unit, guideway with asymmetrical hole pattern:

Unit	Linear recirculating ball bearing and guideway assembly with two carriages per guideway	KUVE
Size		25
Carriage type, full complement		B
Number of carriages per unit		W2
Preload class		V2
Accuracy class		G3
With Corrotect coating		RROC
Length of guideway		1 510 mm
a_L		20 mm
a_R		50 mm

Ordering designation **example** 1× KUVE25-B-W2-V2-G3-RROC/1510-20/50, Figure 28

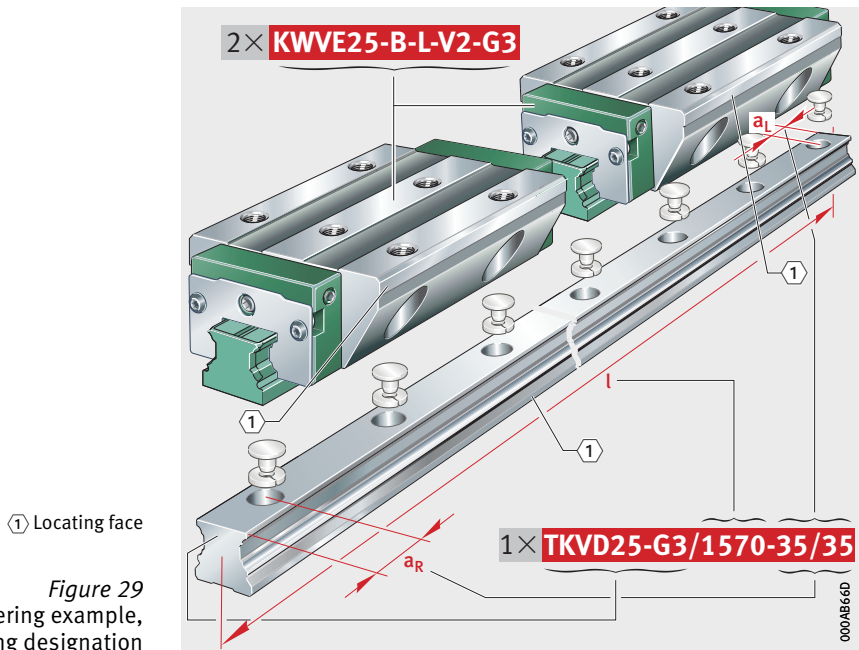
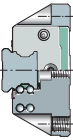


① Locating face

Figure 28
Ordering example,
ordering designation

Carriage and guideway separate, guideway with symmetrical hole pattern:

Carriages	Carriage for four-row linear ball bearing and guideway assembly	KWVE
	Size	25
	Carriage type, full complement	B
	Long carriage	L
	Preload class	V2
	Accuracy class	G3
Ordering designation	2×KWVE25-B-L-V2-G3, Figure 29	
Guideway	Guideway for carriage	TKVD
	Size	25
	Accuracy class	G3
	Length of guideway	1570 mm
	a_L	35 mm
	a_R	35 mm
Ordering designation	1×TKVD25-G3/1570-35/35, Figure 29	



Four-row linear recirculating ball bearing and guideway assemblies

Operating temperature

As standard, four-row linear recirculating ball bearing and guideway assemblies can be used at operating temperatures from -10 °C to $+80\text{ °C}$.

Corrosion-resistant design

Four-row linear recirculating ball bearing and guideway assemblies KUV...-B are available in the accuracy class G3 and also in a corrosion-resistant design with the special coatings Corrotect (with the preload class V1 or V2) and Protect A (with the preload class V2), see page 56.

Designs

Linear recirculating ball bearing and guideway assemblies KUV...-B are available in numerous designs, see table.

Available designs

Design	Description
–	Standard carriage
E	Expanded design (carriage without screw threads)
EC	Expanded design, short carriage (carriage without screw threads)
ES	Expanded design, narrow carriage
ESC	Expanded design, short, narrow carriage
H	High carriage
HL	High, long carriage
HS	High-Speed
E-HS	High-Speed, expanded design
ES-HS	High-Speed, expanded design, narrow carriage
H-HS	High-Speed, high carriage
N-HS	High-Speed, low carriage
S-HS	High-Speed, narrow carriage
SN-HS	High-Speed, narrow, low carriage
L	Long carriage
N	Low carriage
NL	Low, long carriage
S	Narrow carriage
SL	Narrow, long carriage
SN	Narrow, low carriage
SNL	Narrow, low, long carriage

Wide linear recirculating ball bearing and guideway assemblies are available in two designs, see table.

Available designs

Design	Description
W	Wide carriage and wide guideway
WL	Wide, long carriage and wide guideway

Design and safety guidelines

Preload

Linear recirculating ball bearing and guideway assemblies KUBE are available in the preload classes V0, V1 and V2, see table.

Preload classes

Preload class	Preload setting
V0	Very small clearance to clearance-free
V1 ¹⁾	0,04 · C
V2 ²⁾	0,1 · C

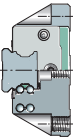
¹⁾ Standard preload class.

²⁾ Not for design High-Speed.

Influence of preload on the linear guidance system

The preload of a linear guidance system defines the rigidity of the system. The four-row linear recirculating ball bearing and guideway assembly KUBE can be obtained in the preload classes V0 to V2, where the preload class V1 is the standard preload class. If special requirements are present, the alternative preload classes may be used.

Increasing the preload increases the rigidity of the guidance system. The preload influences not only the rigidity but also the displacement force of the guidance system. The higher the preload, the larger the displacement force. Furthermore, preload also influences the operating life of the guidance system.



Friction

The coefficient of friction is dependent on the ratio C/P, see table.

Coefficient of friction

Load C/P		Coefficient of friction μ_{KUBE}	
from	to	from	to
4	20	0,0007	0,0015

Rigidity

The deflection curves show the deformation of the linear recirculating ball bearing and guideway assembly KUBE, including the deformation of the screw connections to the adjacent construction, *Figure 3*, page 290 to *Figure 18*, page 297.



The rigidity curves are valid only for screw mounting in accordance with the mounting manual MON 38 and the standard preload class V1.