Components for linear motion



Sliding elements

Structural system XC includes one sliding element which uses the T-slot for guidance and two which use a special guide profile. The sliding elements are not designed to withstand bending moments. Therefore, always use two parallel slides to convert any moment into a centered force.

Sliding element for T-slot (1a)

Sliding element XCLB 20×30 is preferably used for light applications such as intermittent pushers or hand-operated doors and covers. The element should be mounted into the movable part. Secure the set screw with locking fluid.

Sliding element in guide profile (1b)

Sliding element XCLE 34×52 is used for sliding movements of higher frequency and load, such as constantly moving pushers and pick-and-place units together with pneumatic cylinders.

When mounting the guide profile (XCLP 44), tighten first only by hand and make the final adjustment with the sliding unit in position. Nominal life expectancy at maximum load and speed is 1 000 000 m.

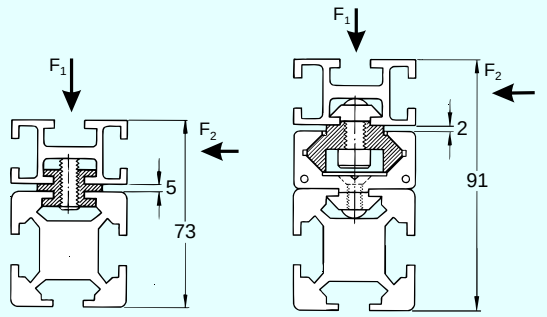
End cap (2)

The end cap for the guide profile is fastened after making an M5 thread in the two holes of the profile.

Technical data

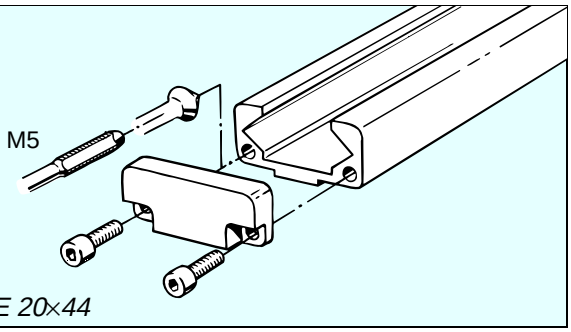
Sliding element type See Figure 1	XCLB 20×30	XCLE 34×52
Max normal static load (F_1)	100 N	600 N
Max normal static load (F_2)	50 N	600 N
Max normal dynamic load (F_1)	30 N	300 N
Max normal dynamic load (F_2)	15 N	300 N
Max speed	0,3 m/s	0,3 m/s
Friction coefficient	0,25	0,3
Max working temperature	45 °C	45 °C

1 *a* *b*



XCLB 20×30 *XCLE 34×52*

2



XCBE 20×44

Adjustable sliding element in guide profile (1, 2)

XCLE 34×80 A is an adjustable sliding element, i.e. the clearance between element and guide profile can be adjusted. This permits presetting of a desired clearance. The design is suitable for installation flat down or on the edge. Low-friction plastic inserts ensure smooth travel and a life expectancy at maximum load and speed of 1 000 000 m. Felt pads remove any dirt and provide lubrication.

For load limits and dry or lubricated usage, see the diagram (2). The diagram shows the maximum load on one slide block as a function of average slide block speed.

Rolling elements

Wheel, guide wheel, wheel yoke (3, 4)

For simple linear motion and movable frameworks, wheels XCAW 48/48 G and wheel yoke XCAY 44 can be used. The wheels are supplied complete with bearings and spacer sleeves which make it possible to mount directly into the T-slot.

An alternative is to mount the wheel into the wheel yoke which can be mounted either on the beam side or at the end of an XCBM 44 beam. The guide wheel is designed to run directly in the T-slot.

Steel shaft and runners (5)

Steel shafts and runners provide linear motion with high precision and load capacity. The bearing housings are mounted on an XCBM ..×44 beam. The housings exist in centric and eccentric versions. The shaft support profile and the steel shaft are mounted into any T-slot. The total load is determined by the choice of support beam. Additional security is obtained if a solid plate is used to connect the two beams upon which the bearing housings are mounted.

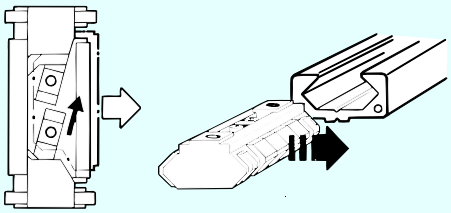
Technical data

Parameter	XCLU 10×44 F_1=F_2 (Fig. 5)	XCAW 48/48 G (Fig 4)
Max. speed	3 m/s	1 m/s
Max. normal load	800 N	–
Max. radial load F_1	–	100 N
Max axial load F_2	–	50 N
Friction coefficient	0,005	0,03
Static load rating C_0	4350 N	
Dynamic load rating C	8300 N	

Roller units

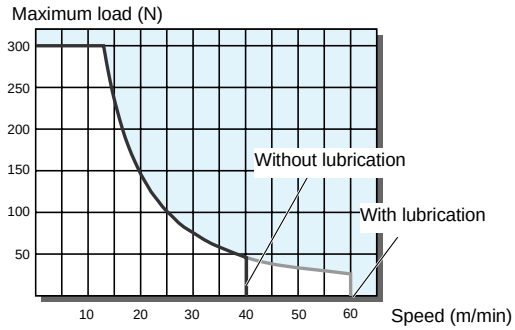
A roller unit is a roller module (saddle) combined with a special linear beam with integrated steel shafts. See page 58–59.

1



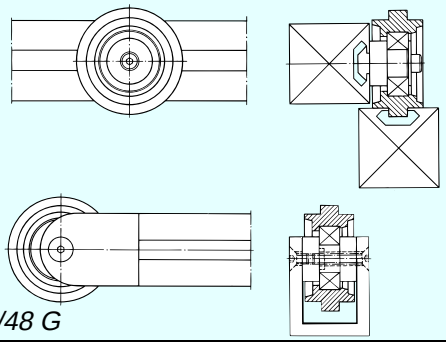
XCLE 34×80 A

2



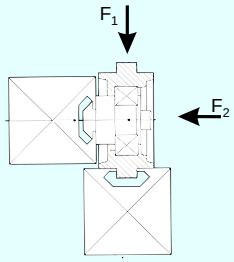
XCLE 34×80 A

3



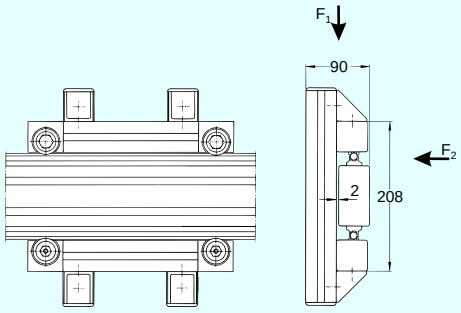
XCAW 48/48 G

4



XCAW 48 G

5

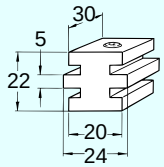


XCLU ../XCLJ 10×3 & XCLS

Sliding element for T-slot

XCLB 20×30

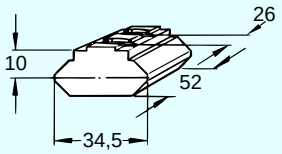
Sliding element for T-slot
Including set screw
Ultra-high molecular weight polyethylene



Sliding elements for guide profile

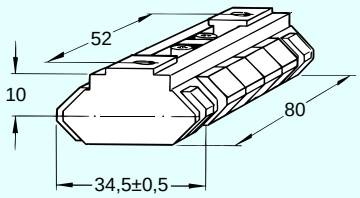
XCLE 34×52

Sliding element assembly for guide profile XCLP ..×44
Ultra-high molecular weight polyethylene



XCLE 34×80 A

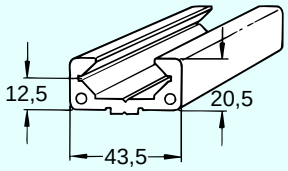
Sliding element assembly for guide profile XCLP ..×44
Die-cast aluminium with ultra-high molecular weight polyethylene slide inserts. Can also be mounted with a suitable M6 screw from the outside and an M6M 6 nut.



Guide profile

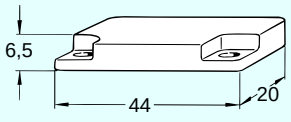
Guide profile
Aluminium, anodized
Mounting:
MF6S 6×12
XCAN 6

XCLP 3×44 Length 3 m
XCLP 6×44 Length 6 m
XCLP L×44 Length to order



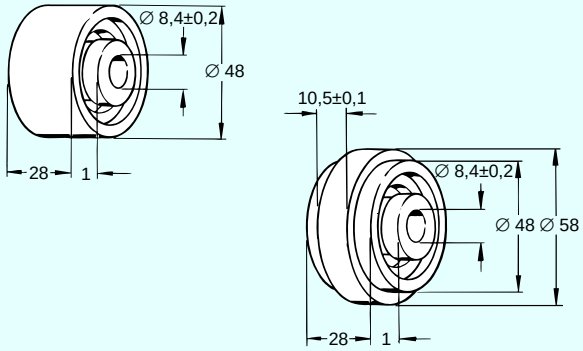
XCBE 20×44

End cap for guide profile XCLP ..×44
Polyamide
Mounting:
MLC6S 5×10 (2)

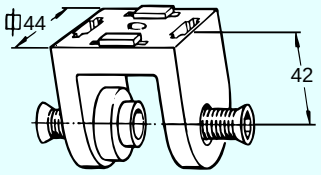


Wheels and wheel yoke

	Wheel, guide wheel Including bearing and spacer sleeve Polyamide Mounting: M6S 8×30 (1) BRB 8,4×16 (1) XCAN 8 (1)
XCAW 48	Wheel, diameter 48 mm
XCAW 48 G	Guide wheel, diameter 48 mm

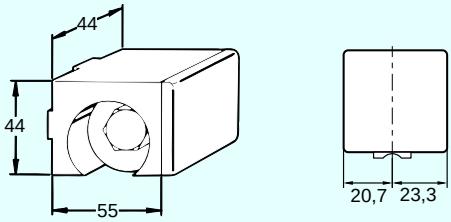


XCAY 44	Wheel yoke Including guide lugs Zinc, die-cast Mounting: MC6S 8×14 (1) and XCAN 8 (1) (beam side) or MC6S 8×30 (1) (beam end)

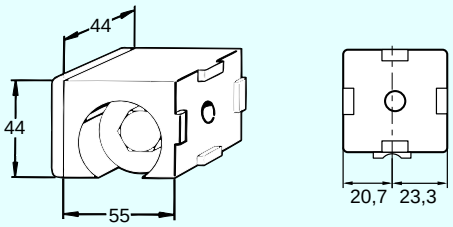


Bearing housing

	Bearing housing assembly Right-hand version Including runner and polyamide end cap Aluminium, anodized
XCLU 10×44 R	Centric bearing housing
XCLU 10×44 RE	Eccentric bearing housing



	Bearing housing assembly Left-hand version Including runner and polyamide end cap Aluminium, anodized
XCLU 10×44 L	Centric bearing housing
XCLU 10×44 LE	Eccentric bearing housing



Steel shaft

XCLJ 10×3	Steel shaft Length 3 m Steel, rounded and hard-ened
	Shaft support profile Predrilled every 200 mm Aluminium, anodized Mounting: MLC6S 5×10 XCAN 5
XCLS 10×3	Length 3 m
XCLS 10×L	Length to order

