

Aluminium roller guide GDL-FD double rails GDL-FE single rails

Operating Instructions

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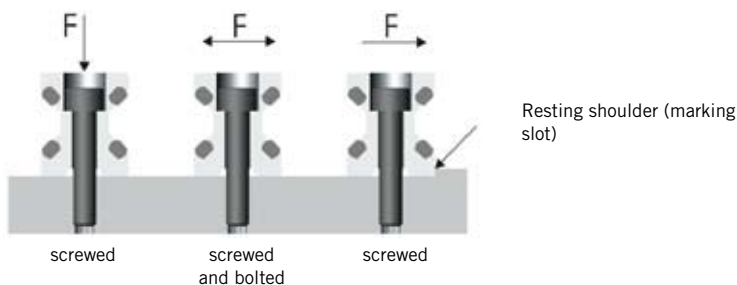
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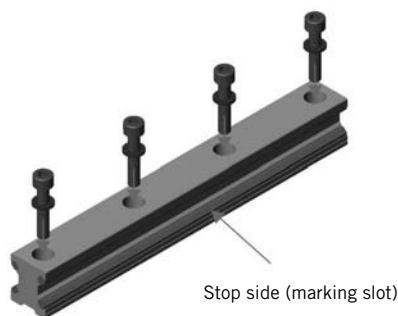
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1 Double rail assembly

Depending on the type of loading and application the double rails should rest in grooves or against a shoulder and be secured with screws (if necessary bolted). The stop side of the rail is identified by a marking slot.

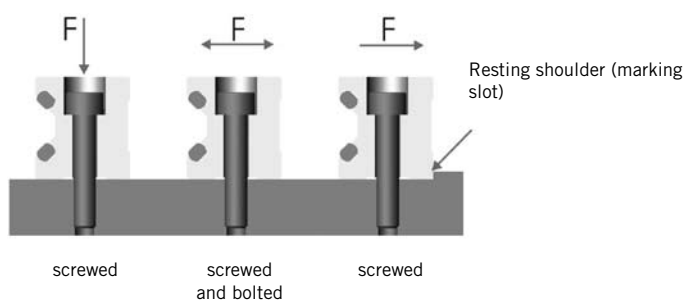


- Remove the cassette from the guide rail (mark layout as necessary).
- Check the resting surfaces of the rail and connection construction for soiling and damage.
- Rest the guide rail against the shoulder (take the stop side into account).
- Apply the screws loosely and check linearity (max. 0.5 mm/m tolerance).
- Now screw the rail starting from the centre and working outwards at alternate sides. Please observe the appropriate tightening torque (see table 1: tightening torques).
- As the final step run over the stroke section with the cassette. Ensure that the fixed side of the cassette is located at the stop side of the rails (marking slot). If even running is assured you may continue with the further assembly stages.



2 Single rail assembly

Depending on the type of loading and application the single rails should rest in grooves or against a shoulder and be secured with screws (if necessary bolted).



Mounting of the first rail (fixed side)

- Check the resting surfaces of the rail and connection construction for soiling and damage.
- Rest the guide rail against the shoulder (take the stop side into account).
- Apply the screws loosely and check linearity and parallelism of the rails (max. sum check error < 0.1 mm/m).
- Now screw the rail starting from the centre and working outwards at alternate sides. Please observe the appropriate tightening torque (see table 1: tightening torques).

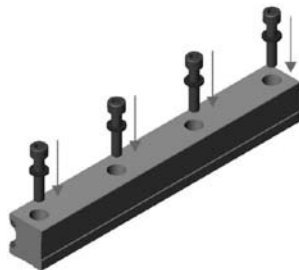


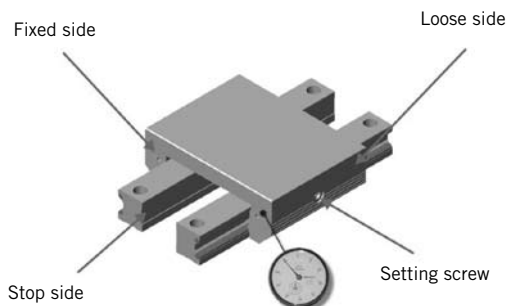
Table 1 : tightening torques in [Nm] for DIN 912 securing screws with DIN 433 washers

Screw size quality 8.8	M3	M4	M5	M6	M8	M10	M12
Tightening torque	1,1	2,5	5,0	8,5	21,0	41,0	71,0

Mounting the second rail (loose side)

- Now position the second rail, align it and apply the screws loosely.
- Now align the second rail exactly parallel to the first rail thus subsequently assuring uniform slide resistance.
- Following the parallelism check the guiding rails may be tightly screwed, starting from the centre.
- Now run the trolley onto the guide rails and set the correct initial stress (see chapter 5) via the setting screw).
- Now run the cassette over the stroke section. If even running is assured you may continue with the further assembly stages.

Single rail



3 Coupled double / single rails

- Check the resting and support surfaces for soiling and damage.
- Loosely connect the rails. Assure the correct sequence of production numbers! (e.g. A-1/1 - 2/2 - E) The marking slot must be located continuously on the same side!



Attention

Coupled rails are especially harmonized. Indiscriminated coupling is not possible.

- Align the entire guide section without gaps and apply the screws loosely.
- Then align the transition points exactly. To do so use two approx. 200 mm long metal auxiliary cylinders. (See table 2 for diameter : „ cylinder diameter“)
- Insert the cylinders at the separating point in the guide and tighten both with the aid of a screw clamp.
- Finally screw the rails as described in chapter 1 and 2 „Mounting double or single rails“.

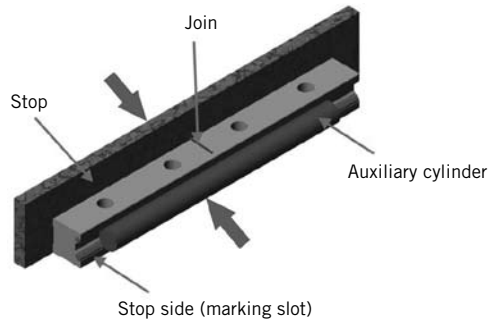
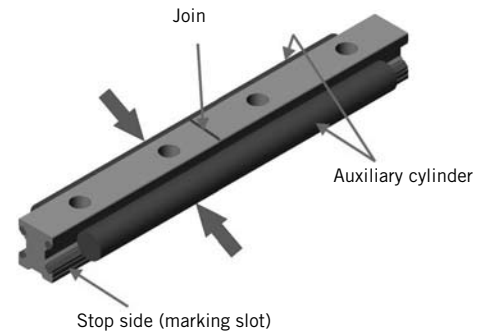
Single rail**Double rail**

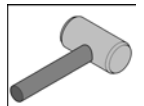
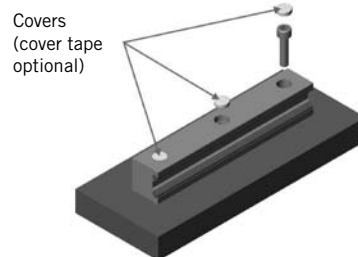
Table 2: cylinder diameter

Rail size	12	15	20	25	35	45
Ø Auxiliary cylinder	11	11	14	16	27	35

4 Mount screw cover

Please use the supplied covers to avoid damage to the cassette stripper.

- Insert the covers in the appropriate bore holes.
- Position a suitable plastic panel on top and hammer the covers evenly into the rail.

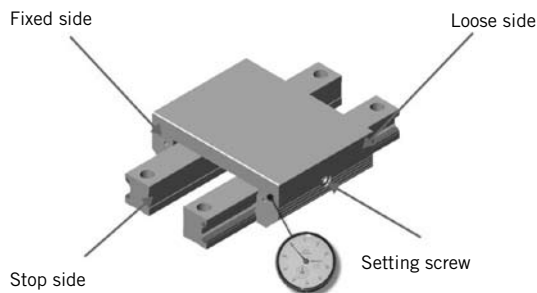
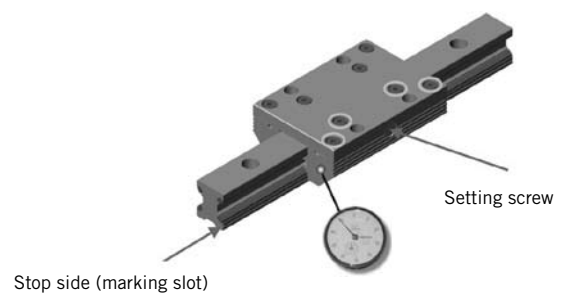


- Remove the ridge.

5 Setting the cassette

Ex works mounted cassettes are set without any play. Once cassettes or trolleys have been set once they should not be replaced at will. Slack cassettes must be adjusted to the respective rail.

- Loosen the four securing screws (yellow) at the setting side and set them in again loosely.
- Now set the required slide resistance. The slide resistance (initial stressing) may be set by turning the setting screw (red).
- Retighten the four screws (yellow) and check the slide resistance you have set with the aid of a spring balance. Please also observe table 3: „Guidelines for slide resistances“.

Single rail**Double rail**

- Repeat steps 1 to 3 until the required slide resistance is set.

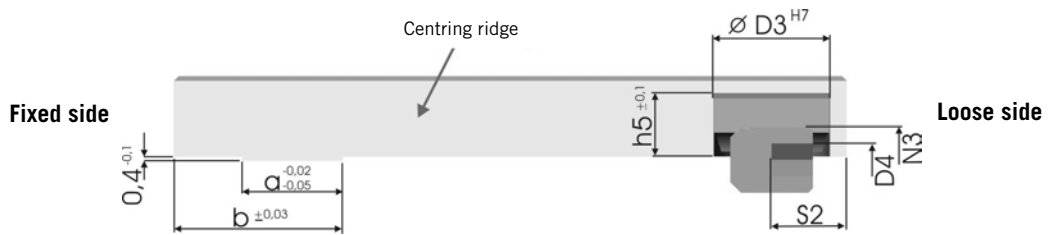
Aluminium roller guide

Table 3: guidelines for slide resistances in Newton [N] (without stripper)

Size	12		15		20		25		35		45	
Series	min	max	min	max	min	max	min	max	min	max	min	max
Standard	0.2	0.4	0.5	2.0	1.0	2.5	1.5	3.0	2.0	4.0	2.5	5.0
Low-Cost	0.2	0.4	1.0	0,5	0.5	1.5	0.5	2.0	1.0	2.5	2.0	4.0
Rustproof	0.5	1.0	0.5	2.0	1.0	2.5	1.5	3.0	3.0	9.0	3.5	10.5

6 Roller shoe assembly

The roller shoes feature a centring groove at the fixed side to assure improved securing. Please therefore furnish the connection plate with a corresponding centre ridge.



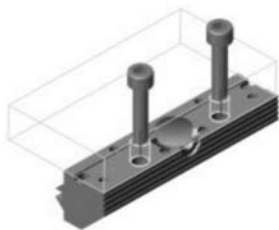
Dimensions for threaded piece and countersunk boring in mm					
Size	D3	D4	h5	N3	S2
12	8	3	4	M4	4,9
15	10	4	5	M6	5,9
20	10	4	5	M6	5,9
25/35/45	14	6	7	M8	8,9

Dimensions for centring ridge in mm						
Size	12	15	20	25	35	45
a	4,5	5,0	7,5	10,5	12,5	15,5
b	9,6	12,6	16,1	17,6	26,1	31,1

Roller shoe assembly

Once the customer's plate is finished you may mount the roller shoe. Together with the roller shoes the customer plate forms the trolley.

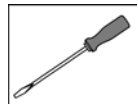
- Check the resting surfaces of the roller shoe and customer plate for soiling and damage.
- Apply the roller shoe to the customer plate from below and screw to the two parts together from above.



Please mind the fixed and loose sides!

7 Stripper assembly

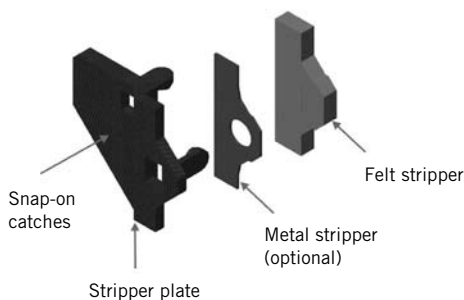
- If this has not already been done so at the factory, impregnate the felt stripper with oil.
- Insert the felt stripper in the stripper plate so that the plate lock may be guided through the slot in the felt stripper (first insert the metal stripper if featured).
- Now clip the thus pre-assembled stripper to the front of the roller shoe via the catches.
- **Please ensure that you do not damage the stripper !**



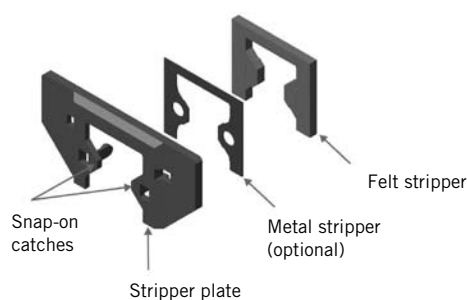


At the latest after covering 6000 km the felt stripper should be replaced.

Single rail



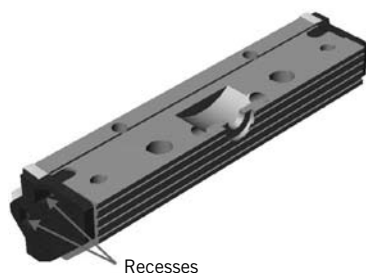
Double rail



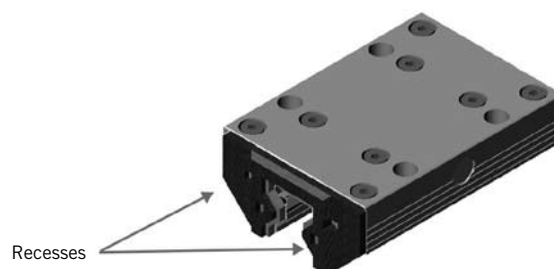
8 Dismantle stripper

- Remove the cassette or trolley from the rail.
- With one hand insert a screwdriver into one of the recesses on the stripper and thus release the snap-on catch.
- With the other hand, hold the side that has just been unlatched and repeat the process for the other recesses.
- You may now remove the stripper.

Single rail (roller shoe)



Double rail (cassette)

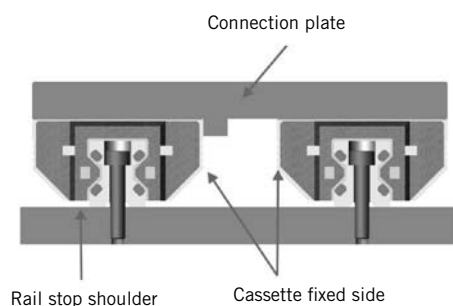


9 Lubrication

On aluminium roller guides the cassettes and roller shoes are lubricated for the extent of their useful lives. In special implementation cases the standard version is available with a relubrication feature (central lubrication). Lubricating nipples are attached at the front for this purpose. Lubrication is ex works using Shell Retinax LX2 lithium soap grease.

10 Assembly of multi-lane arrangements

- Mount both cassettes on the connection plate.
- Mount the first rail (guide rail) as described in chapter 1.
- Now position the second rail, align it roughly and apply the screws loosely.
- Push the trolley (cassettes with connection plate) onto the rails.
- In order to align the second rail exactly parallel, now run the trolley along the rails. Secure the screws just behind the trolley by the appropriate tightening torque, (max. deviance of parallelism 0.1 mm/m).



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