

FLEXI-LINE 645



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8.1 PRODUCT DESCRIPTION

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8.2 FWN SYSTEM

For light-medium loads

- Guide rails FWN
- Carriage TA4
- Carriage TB4

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8.3 MOUNTING EXAMPLE

FLEXI-LINE 645

PRODUCT DESCRIPTION

KEY BENEFITS

- Dimensions according to DIN 645 with flexible configuration
- For light and medium loads
- Ready-to-install

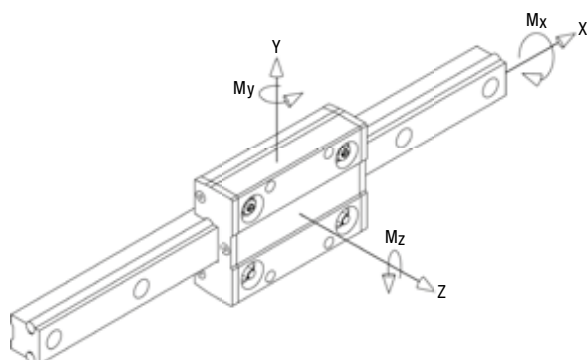


Aluminium guide rails FWN as well as carriages TA4 and TB4 are the components of this line. In addition to the standard dimensions that are DIN 645 compatible, the guide system can be adapted to customers' requirements. Bore holes and threads on the guide rails can be made in any distance required, the carriages may have over-lengths and a special hole pattern.

Compared to linear guides made of steel these guide rails and carriages weigh up to 45 % less and stand out due to their excellent running performance which minimises the driving power and reduces significantly the cost for motors and controls.

With eccentric bolts the guide rollers of the carriages are kept free from play. However the user also has the possibility to change the settings, for example in case of vibrations, and to apply an individual preload on the guide system. On both sides of the carriages end plates with oil-soaked felt seals can be mounted to ensure low-wear operation.

The following graph applies to the loads indicated in the tables:



DYNAMIC LOAD OF THE INDIVIDUAL CARRIAGE

The table below shows the load corresponding to the nominal working life of 100 km. The nominal working life of the carriage can be determined by the standard bearing formula.

$$L_{10} = (C_i / P_i)^3 \times 100 \text{ km}$$

C_i is the carrying capacity in a specific direction and P_i is the load applied in the same direction.

Carriage	C_y (N)	C_z (N)	C_{Mx} (Nm)	C_{My} (Nm)	C_{Mz} (Nm)
TA4 GLA 17.06 TB4 GLA 17.06	2596	1445	13	46	84
TA4 GLA 19.06 TB4 GLA 19.06	4920	2700	30	100	180

IMPORTANT REMARK

- Values are calculated on the basis of lubricated rails.
- For combined loads please proceed as indicated in the calculation examples at the end of the catalogue. In case of questions our application engineers will be pleased to assist you.

MAXIMUM LOAD ON INDIVIDUAL CARRIAGES

The table below shows the maximum load that can be applied to an individual carriage.

Carriage	F_y (N)	F_z (N)	M_x (Nm)	M_y (Nm)	M_z (Nm)
TA4 GLA 17.06 TB4 GLA 17.06	600	400	5	15	20
TA4 GLA 19.06 TB4 GLA 19.06	1700	960	19	33	70

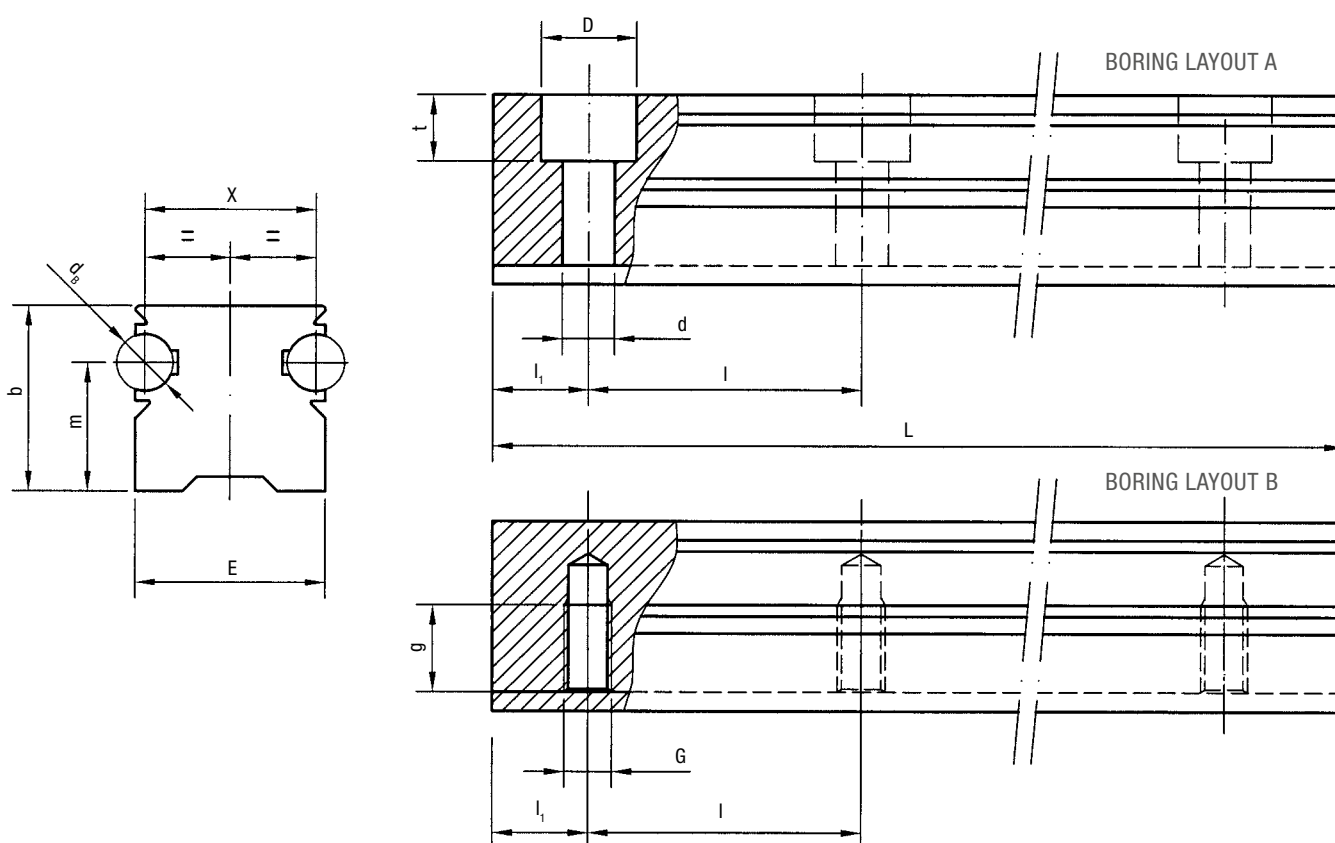
FLEXI-LINE 645 – FWN SYSTEM

GUIDE RAILS FWN

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Rail composed by an aluminium body and two shafts in steel, with two raceways. Dimensions according to DIN 645.

Available in stainless steel version.



Type	Dimensions (mm)												Weight (kg/m)
	d_B	E	X	D	d	G	g	m	t	b	l_1	l	
FWN 20	6	20	18	10	5.5	M6	12	13.5	7	19.5	30	60	1.3
FWN 25	6	23	21	11	6.6	M6	12	18.0	8.5	25.5	30	60	1.8

Max. length in single element $L = 5800$ mm. Longer rails are supplied in sections with ground butt joints and, on request, with pin connection

HOLE LAYOUT

- Holes according to DIN (A or B)
- Finishes to drawing (NZ)
- Without holes (NF)

OPTIONAL FEATURES

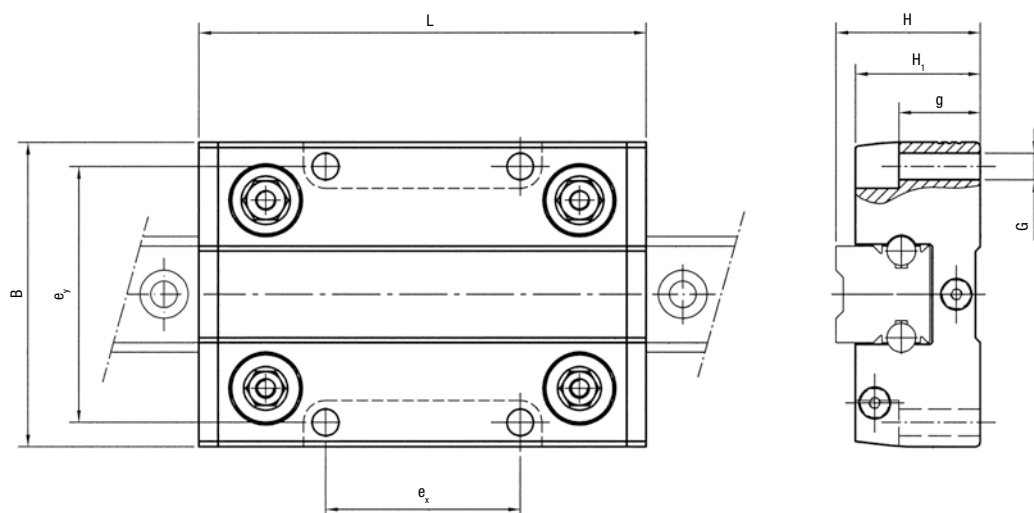
- Ground one end: side of the first hole (1R), side of the last hole (2R)
- Ground both ends (RR)
- Stainless steel shafts (NX)
- Chromium plated shafts (CH)
- Pin based shaft connection (G)

Example of standard designation: FWN 20/1000 A

FLEXI-LINE 645 – FWN SYSTEM

CARRIAGE TA4 AND TB4

Carriages with anodised aluminium body
with four guide rollers type GLA for FWN rails.
Dimensions according to DIN 645.

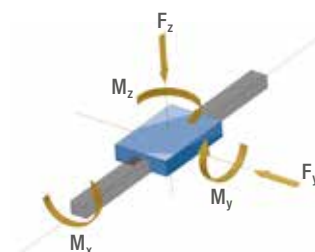


Type	Dimensions (mm)								Weight (kg)	Suggested combinations
	B	G	H	H ₁	L	e _x	e _y	g		
TA4 GLA 17.06	63	M6	30	26	92	40	53	12	0.3	FWN 20
TA4 GLA 19.06	70	M8	36	31	104	45	57	16	0.4	FWN 25
TB4 GLA 17.06	63	5,5	30	26	92	40	53	17	0.25	FWN 20
TB4 GLA 19.06	70	6,6	36	31	104	45	57	23,5	0.35	FWN 25

Longer carriages on request

MAX. LOAD ON A SINGLE CARRIAGE

Carriage	F _y (N)	F _z (N)	M _x (Nm)	M _y (Nm)	M _z (Nm)
TA4 GLA 17.06	600	400	5	15	20
TA4 GLA 19.06	1700	960	19	33	70
TB4 GLA 17.06	600	400	5	15	20
TB4 GLA 19.06	1700	960	19	33	70



OPTIONAL FEATURES

- Available with felts for lubrication, non lubricated (UU).
On request the felts can be supplied lubricated

FLEXI-LINE 645

MOUNTING EXAMPLE

Medical equipment
Flexi-Line

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