

## Linear Modules Series IL

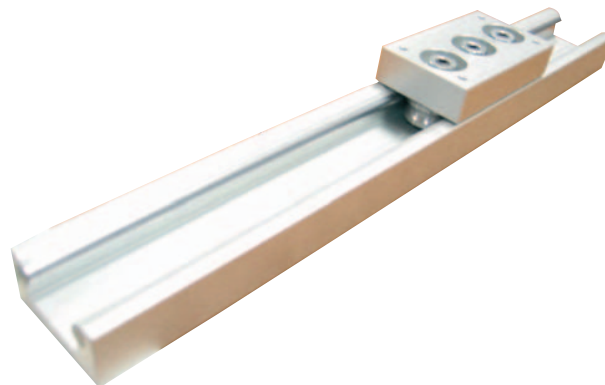
The linear modules series **IL** are especially suitable when smooth sliding in combination with high loading capacity and small dimensions are required. They are composed by an anodized aluminium extrusion within which the sliding bars are secured by means of rolling procedure.

The carriage is integrated within the guide volume and is equipped with three gothic arch shaped in-line **NIKO** rollers.

The central roller is mounted on an eccentric spindle to allow the carriage preloading.

The main features are:

- Small dimensions
- High translation speed
- No maintenance required
- Low noise level
- Interchangeability
- Easy installation
- Compact applications



## Linear Systems Series IL32

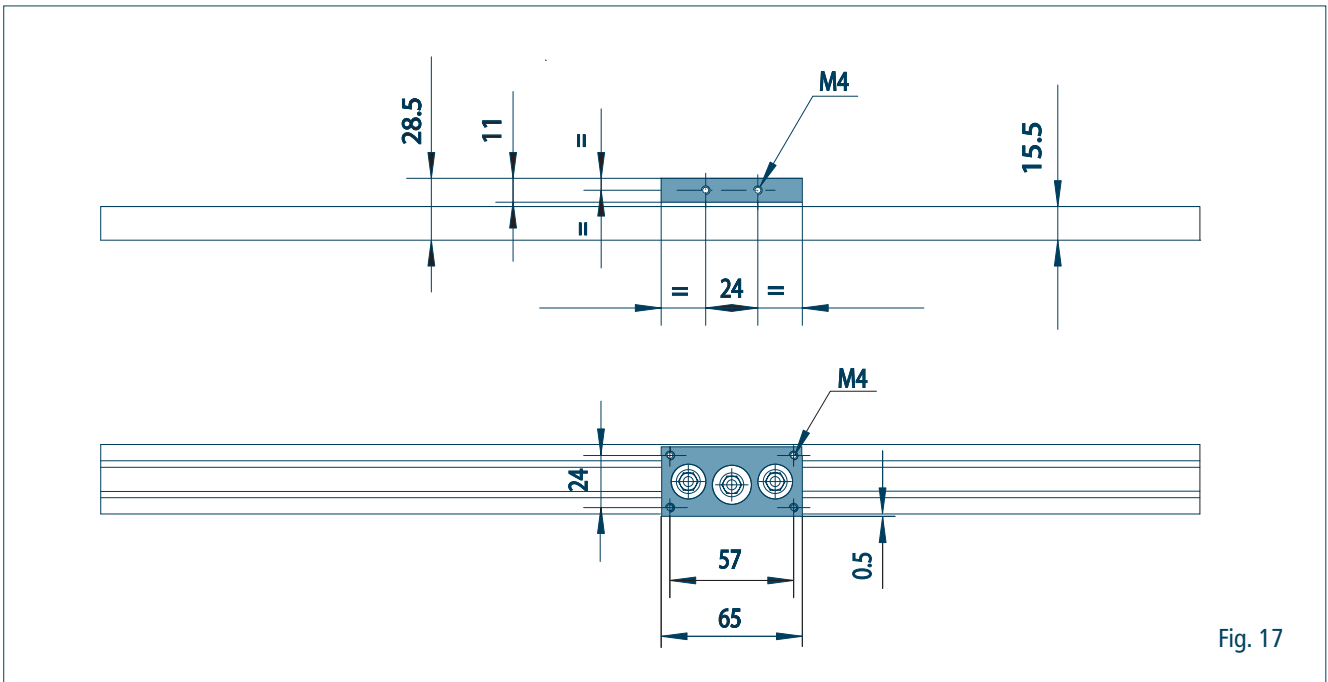


Fig. 17

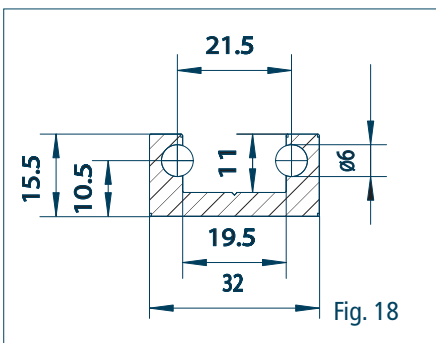


Fig. 18

### Guide Profile

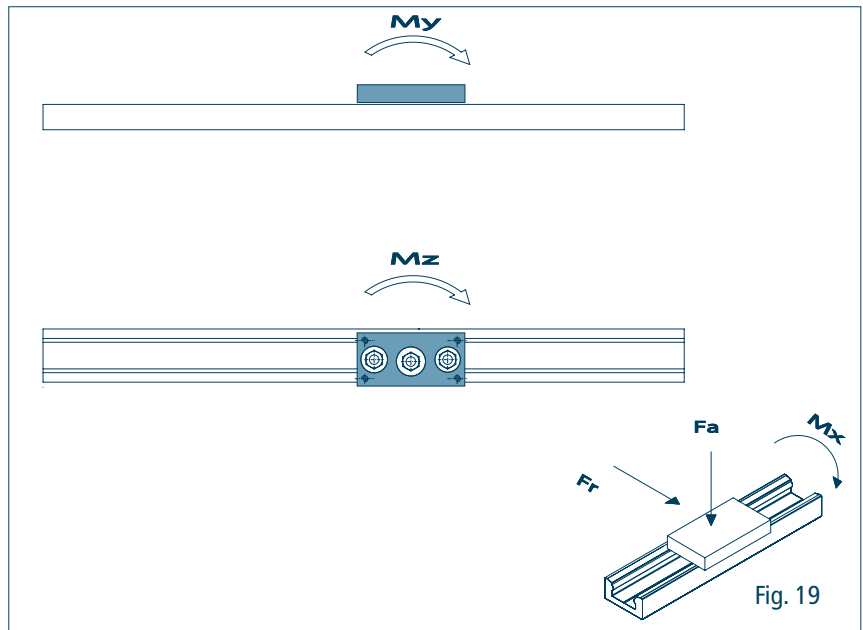


Fig. 19

### Static Moments and Limit Loads

Table 12

Components		Limit Load (N)		Static Moment (Nm)			Carriage Weight (kg)
Carriage	Rollers	Fr	Fa	My	Mz	Mx	
C32	RPC 17-RPE17	980	330	5,2	9	3,2	0.15

## Linear Systems Series IL42

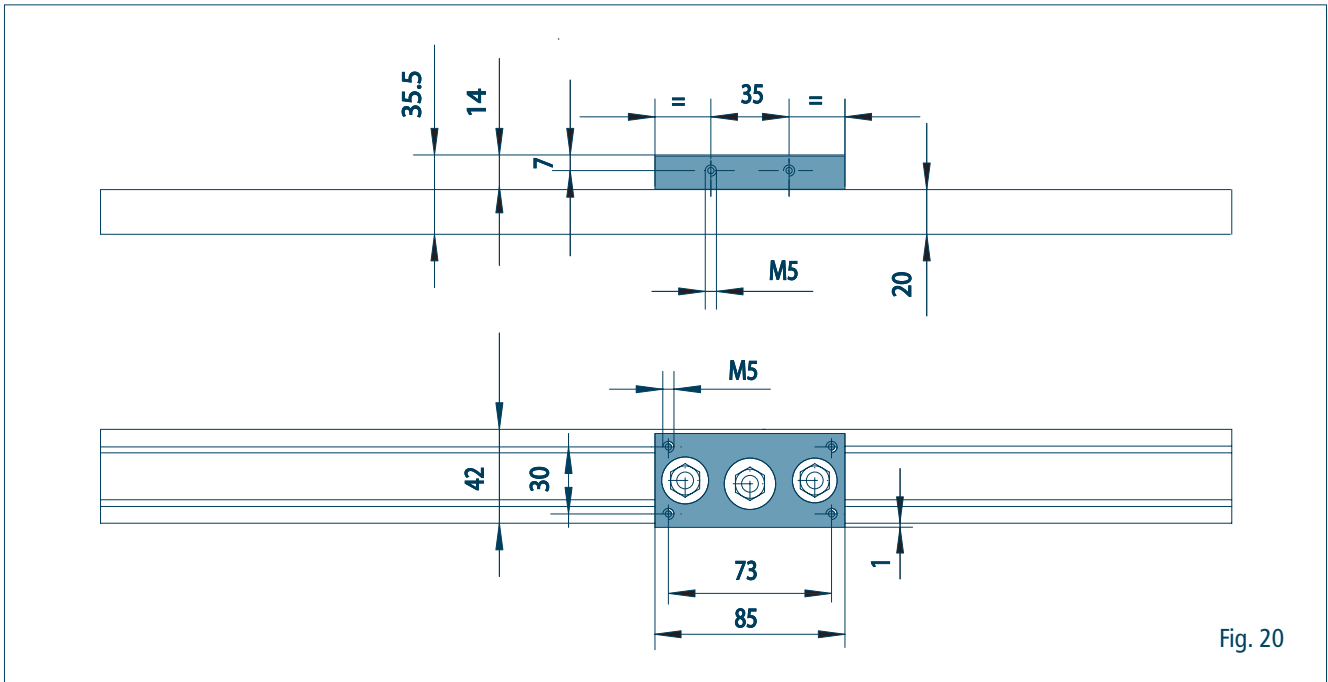


Fig. 20

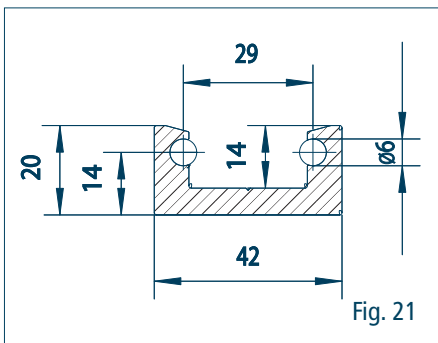


Fig. 21

### Guide Profile

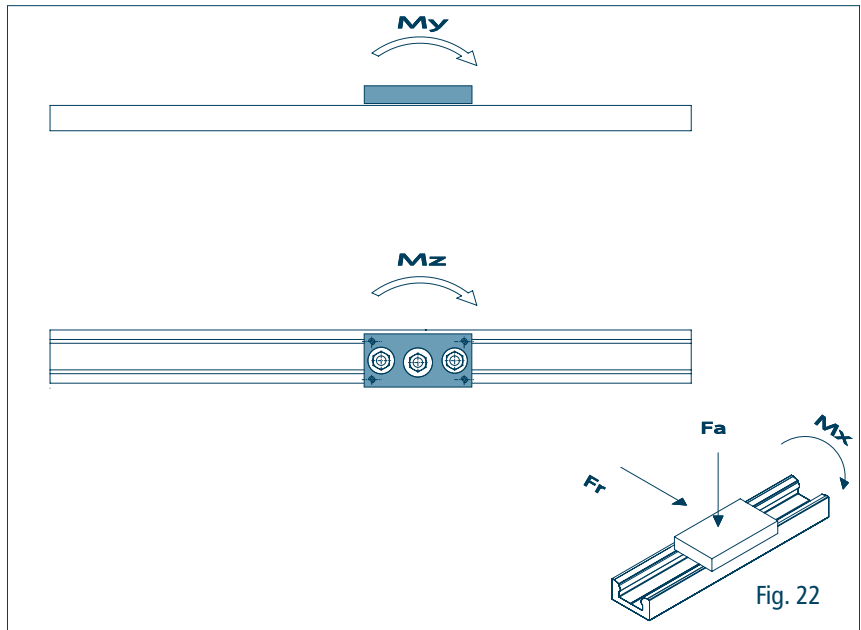


Fig. 22

### Static Moments and Limit Loads

Table 13

Components		Limit Load (N)		Static Moment (Nm)			Carriage Weight (kg)
Carriage	Rollers	$F_r$	$F_a$	$M_y$	$M_z$	$M_x$	
C42	RPC24-RPE24	1680	500	14,5	25	7,5	0.30

## Linear Systems Series IL65

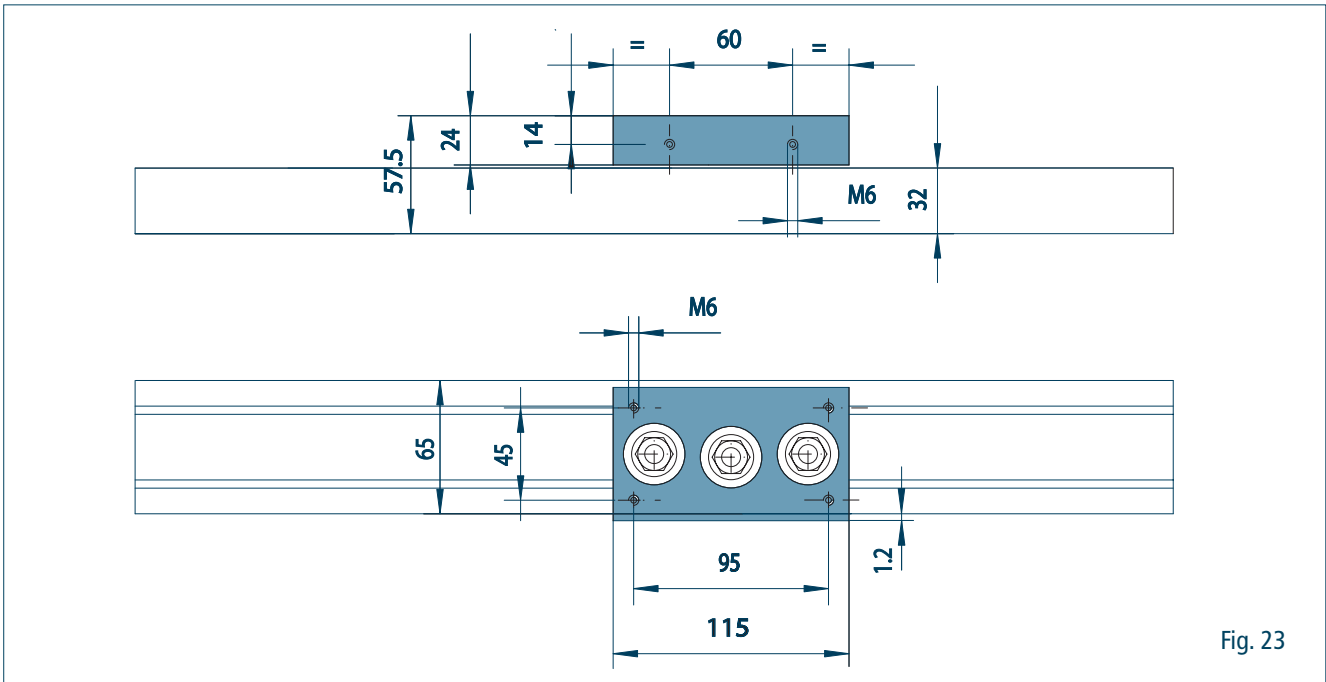


Fig. 23

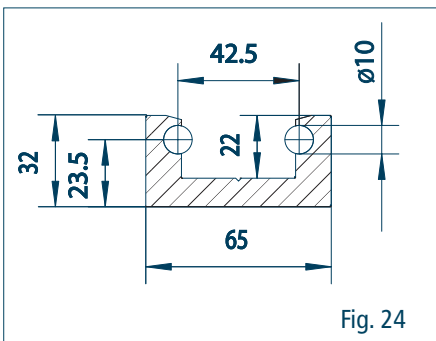


Fig. 24

### Guide Profile

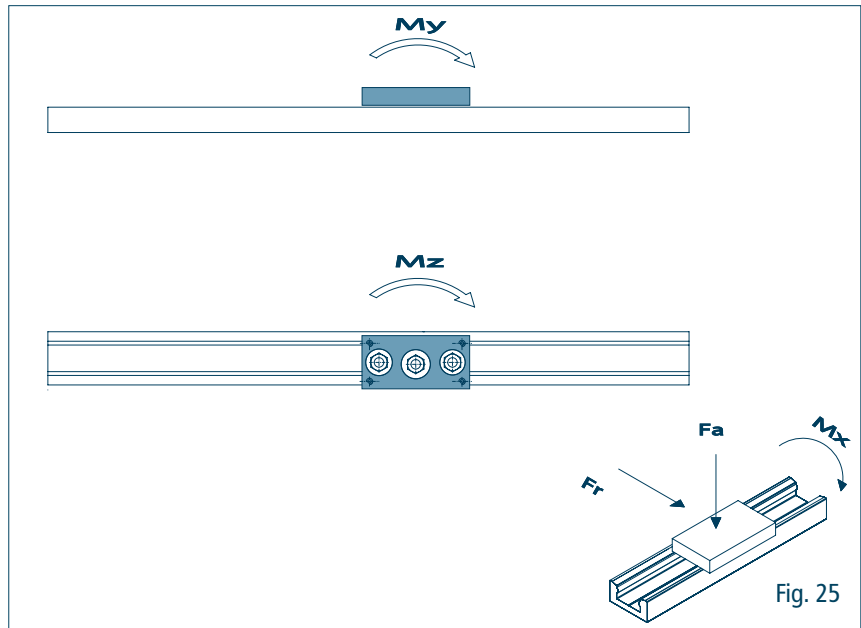


Fig. 25

### Static Moments and Limit Loads

Table 14

Components		Limit Load (N)		Static Moment (Nm)			Carriage Weight (Kg)
Carriage	Roller	Fr	Fa	My	Mz	Mx	
C65	RPC35-RPE35	3930	1160	44	76	25,5	0.80

## Driven Linear Modules Series ILM

The driven linear modules series **ILM** are especially suitable when handling accuracy and compactness are required. The modules series **ILM** are composed by the following parts:

### Driving Head

Anodized aluminium unit with leading sheave housing.

### Idle Head

Anodized aluminium unit with loose pulley housing. The pulley is mounted on bearings and eccentric spindle for the belt tensioning.

### Supporting Profile

It is a special aluminium ribbed extrusion with an internal channel for the drive belt and grooves on three (two for the **ILM32** type) sides allowing the guide fastening, the sensors, brackets, stops mounting. The **IL** series guide is positioned on the profile upper side. It is equipped with carriage and belt clamping plate.



### Drive Belt

It is a special toothed belt, either **AT** type with 5 mm pitch (or **AT** type with 10 mm pitch for the **ILM65** guide). It is made of polyurethane and is reinforced with steel strands to increase its loading capacity.

### Special Components

The driven modules series **ILM** can also be equipped with:

- Stainless steel shafts
- Steel and custom designed carriages
- Custom designed shafts for gearmotor assembly
- Gearmotors adapter plates
- Production upon custom specifications

## Driven Linear Modules Series ILM32

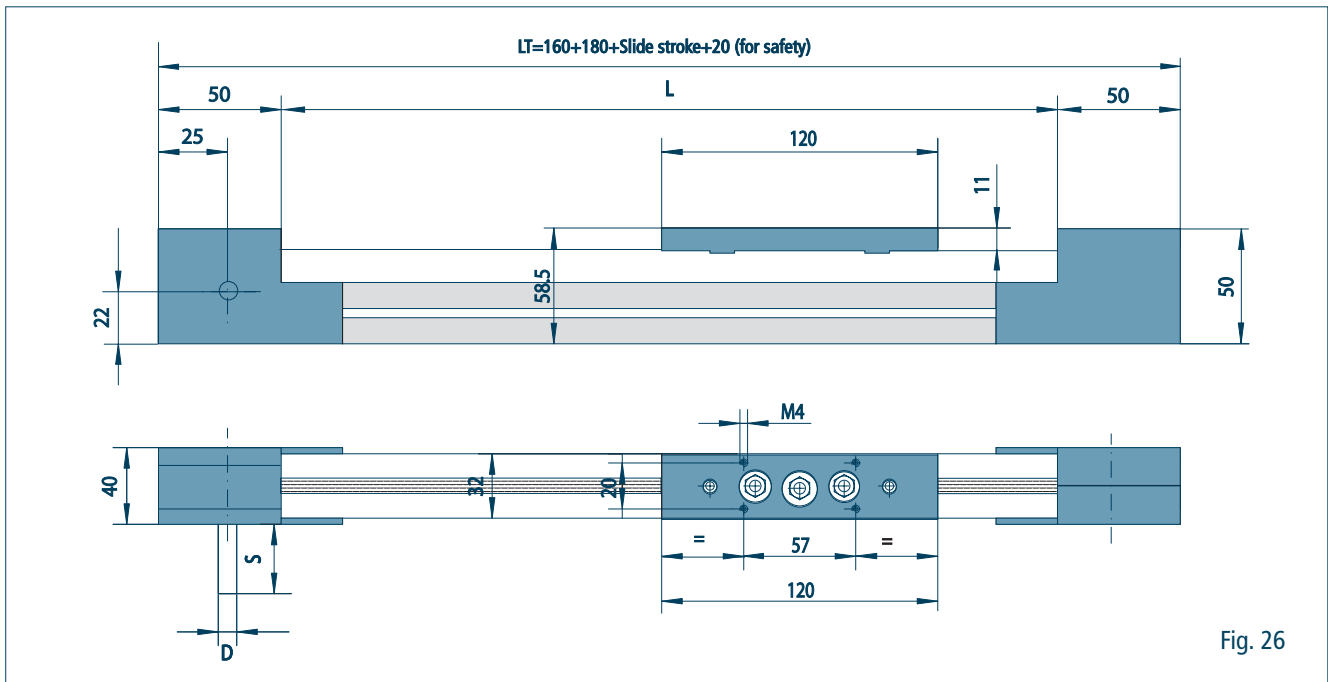


Fig. 26

Table 15

Type	Drive belt		Belt Tensioning Range	Motor Pulley		Main Shaft			
	Tension Load	Breaking Load		Type	Length	Standard S	D	Custom S	D
10AT5	630N	1960 N	5mm	Z 22AT5	110mm/revol	40mm	Ø8	To specify	

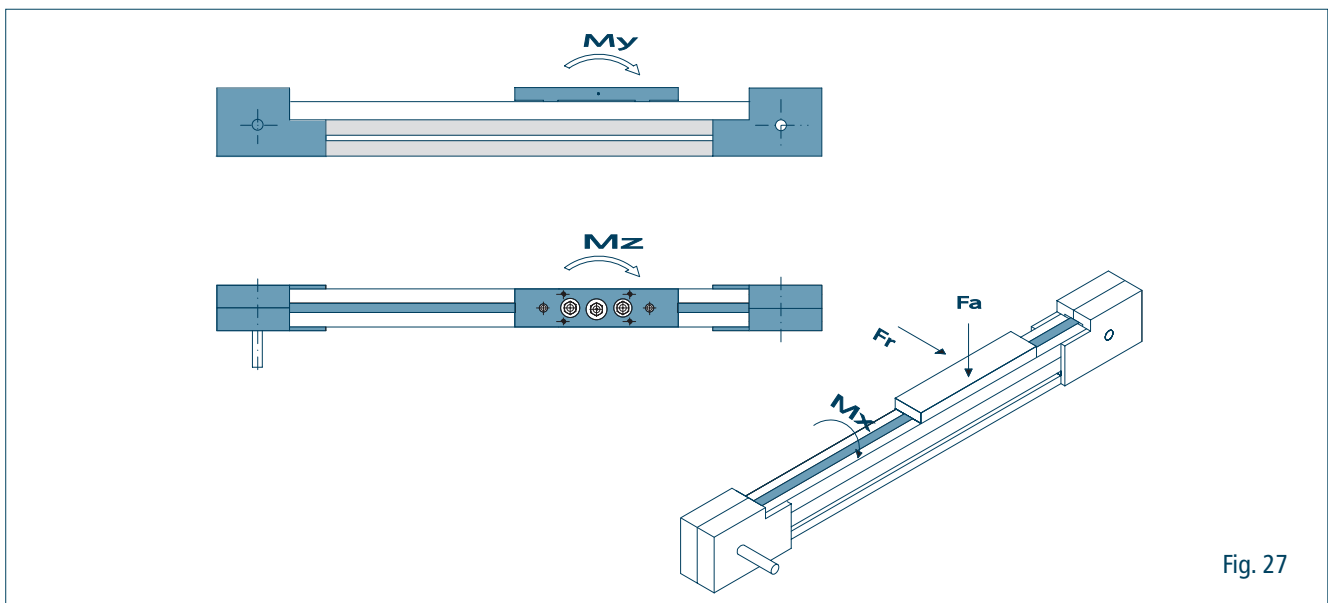


Fig. 27

### Static Moments and Limit Loads

Table 16

Components		Limit Load (N)		Static Moment (Nm)		
Carriage	Rollers	Fr	Fa	My	Mz	Mx
C32M	RPC 17-RPE17	980	330	5,2	9	3,2

## Driven Linear Systems Series ILM42

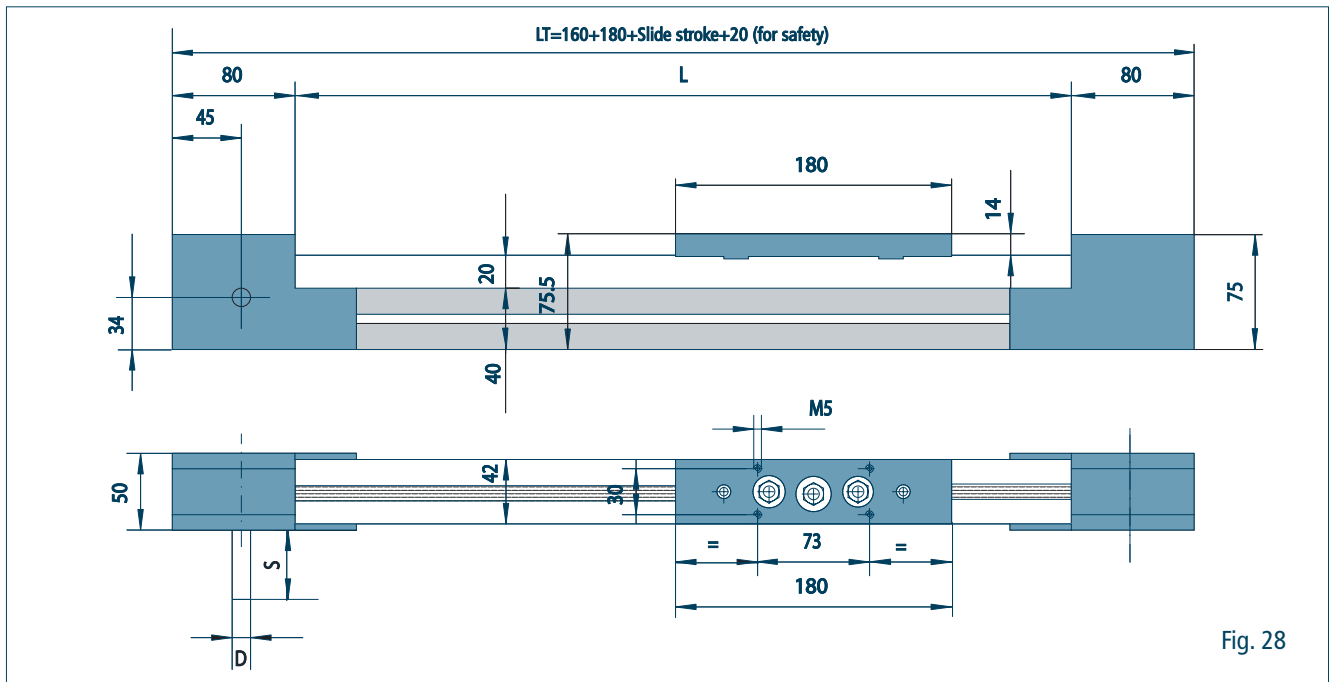


Fig. 28

Table 17

Type	Drive belt		Belt Tensioning Range	Motor Pulley		Main Shaft			
	Tension Load	Breaking Load		Type	Length	Standard S	D	Custom S	D
10AT5	630N	1960 N	5mm	Z 32AT5	160mm/revol.	50mm	Ø12	To specify	

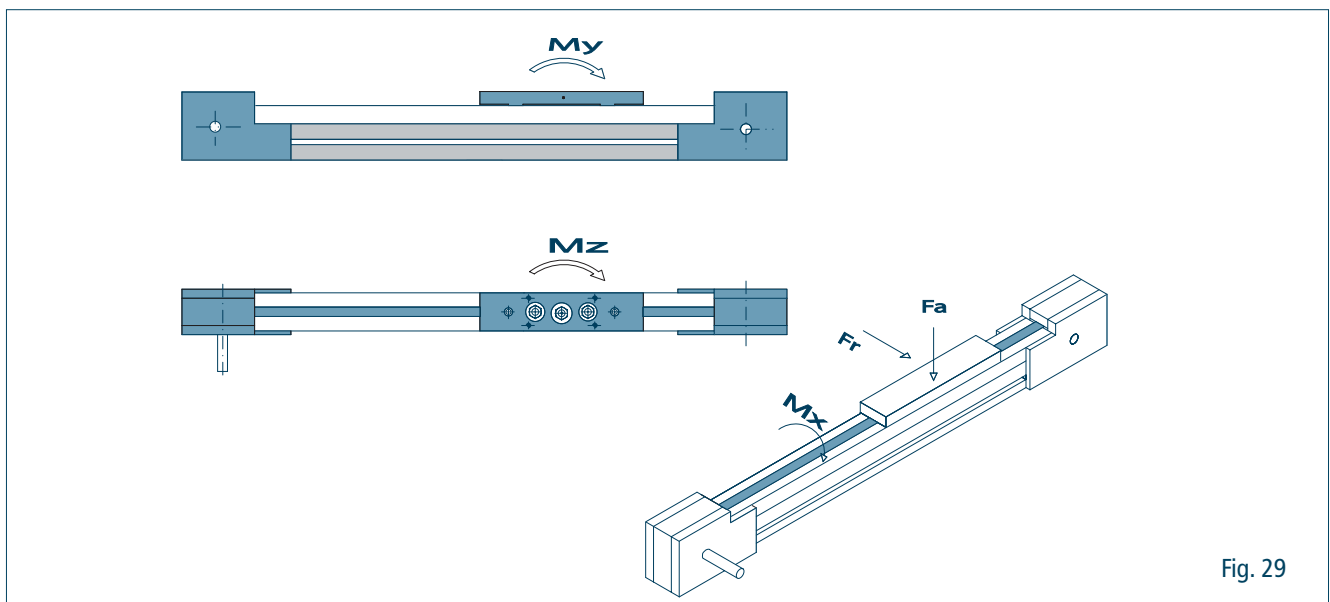


Fig. 29

Table 18

### Static Moments and Limit Loads

Components		Limit Load (N)		Static Moment (Nm)		
Carriage	Rollers	$F_r$	$F_a$	$M_y$	$M_z$	$M_x$
C42M	RPC24-RPE24	1680	500	14,5	25	7,5

## Driven Linear Systems Series ILM65

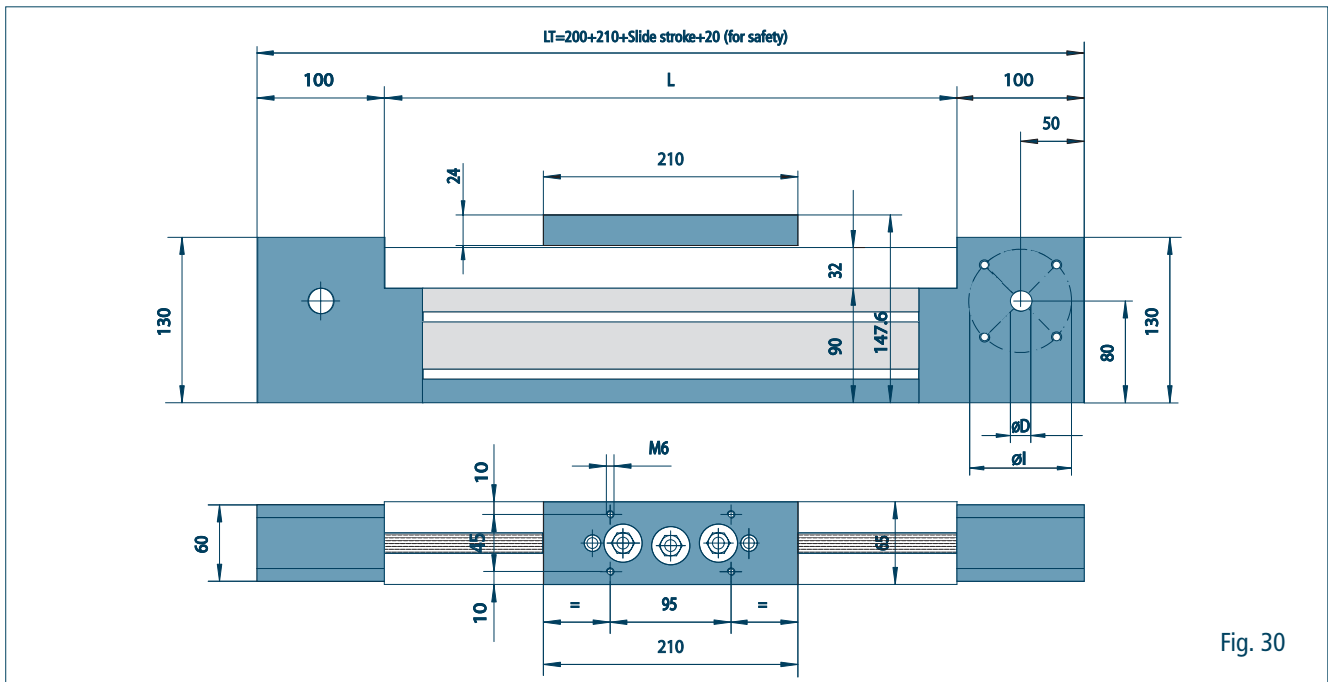


Fig. 30

Table 19

Drive Belt		Tensioning Range Type	Motor Pulley		Gearmotor Mounting Holes	
Type	Tension Load		Belt Breaking Load	Length	ØI	56 4 holes M5 90° RMI 28 FL 87 4 holes M8 90° RMI 40 F1
16AT10	2190N	7480 N	14mm	Z 20AT10	200mm/revol	ØD H7 14-19

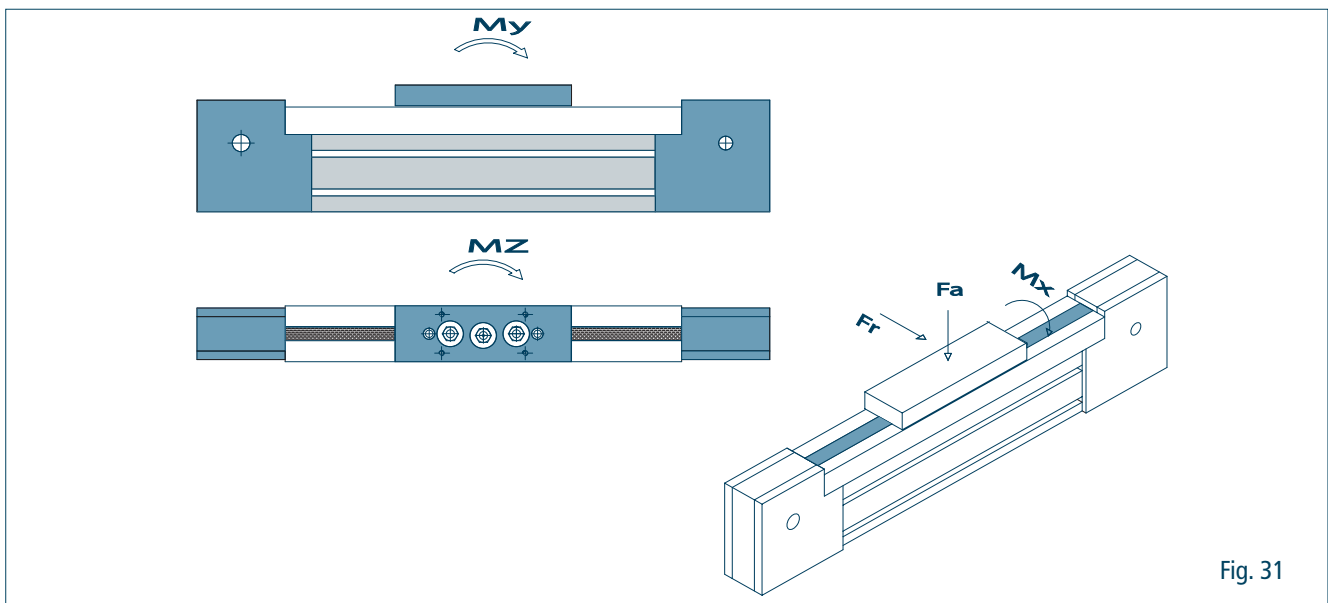
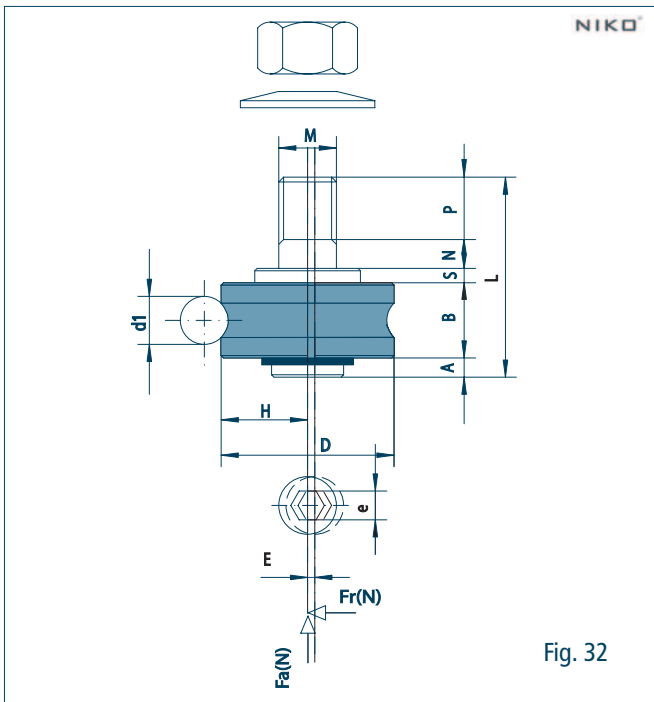


Fig. 31

### Static Moments and Limit Loads

Table 20

Components		Limit Load (N)		Static Moment (Nm)		
Carriage	Rollers	Fr	Fa	My	Mz	Mx
C65M	RPC35-RPE35	3930	1160	44	76	25,5



### Rollers for Linear Systems IL-ILM

The **RPC** and **RPE** type rollers for the **IL-ILM** system have gothic arch shaped rolling surface. Table 21 lists the rollers' dimensions and maximum allowable loads (see Fig.32)

**Table 21**

Roller Type	Guide Type	Dimensions												Axial Load Fa (N)	Radial Load Fr (N)
		A	B	S	N	P	L	M	H	D	E	e	d <sub>1</sub>		
<b>RPC17</b>	<b>IL-ILM32</b>	1.5	8	3	5	5.5	23	5	10.5	17	-	2.5	6	250	520
<b>RPE17</b>	<b>IL-ILM32</b>	1.5	8	3	5	5.5	23	5	10.5	17	0.5	2.5	6		
<b>RPC24</b>	<b>IL-ILM42</b>	1.8	11	2	6	7	27.8	8	14	24	-	4	6	820	1590
<b>RPE24</b>	<b>IL-ILM42</b>	1.8	11	2	6	7	27.8	8	14	24	0.5	4	6		
<b>RPC35</b>	<b>IL-ILM65</b>	3.1	15.9	2	12	11	44	10	20.6	35	-	5	10	1090	2390
<b>RPE35</b>	<b>IL-ILM65</b>	3.1	15.9	2	12	11	44	10	20.6	35	0.75	5	10		