

Traversing Units



3D ILA Traversing System
900x900x900 mm

ILA offers customized systems of traversing units that fit any application, enabling us to build a system even if the space at the customer's side is challenging.

ILA is using only DC servo motors, which are more accurate and reliable compared to the other available motors. In addition, we are designing our own DC driver boards based on Maxon Motors reliable technology. For the longer traversing lengths (>1000mm) ILA is using belt driven traversing units due to the lower weight and the acceptable overall accuracy.

The traversing systems are well bundled in all ILA products through the in-house designed holders and are suitable for completely automatized measurement sessions.

Specifications

Narrow unit

Technical specifications

Moment of inertia I_x	107.711 cm ⁴
Moment of inertia I_y	125.843 cm ⁴
Weight with steel shafts and spindles	7.6 kg/m
No load running torques	15 Ncm

* at 500rpm and 2.5 spindle pitch

Load factors

C_0	2576.65 N
C	1451.15 N
F_1 stat.	2200.67 N
F_2 stat.	2576.65 N
M_x stat.	36.45 Nm
M_y stat.	82.16 Nm
M_z stat.	96.20 Nm

$$F_r(\alpha) = \frac{F_2}{\cos \alpha}$$

$$F_r(\alpha) = \frac{F_1}{\sin \alpha}$$

Broad unit

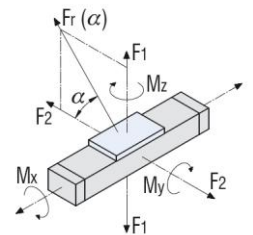
Technical specifications

Moment of inertia I_x	707.100 cm ⁴
Moment of inertia I_y	212.200 cm ⁴
Weight with steel shafts and spindles	12.8 kg/m
No load running torques	17 Ncm

* at 500rpm and 2.5 spindle pitch

Load factors

C_0	5153.30 N
C	2319.41 N
F_1 stat.	4401.33 N
F_2 stat.	5153.30 N
M_x stat.	211.54 Nm
M_y stat.	164.31 Nm
M_z stat.	95.21 Nm



permissible spindle speeds

Profile length L [mm]	Spindle pitch [mm] max. permissible feed speed [rpm]	2.5	4	5	10	20
		max. permissible feed speed v permissible [mm/s]				
490	4000	167	267	333	667	1333
990	3000	125	200	250	500	1000
1930*	1500	63	100	125	250	500
1490*	3000	125	200	250	500	1000

* with spindle support

