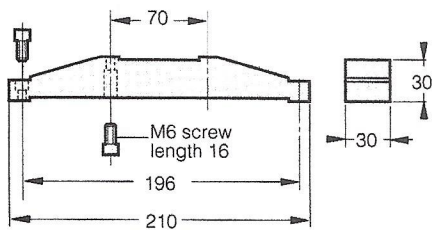
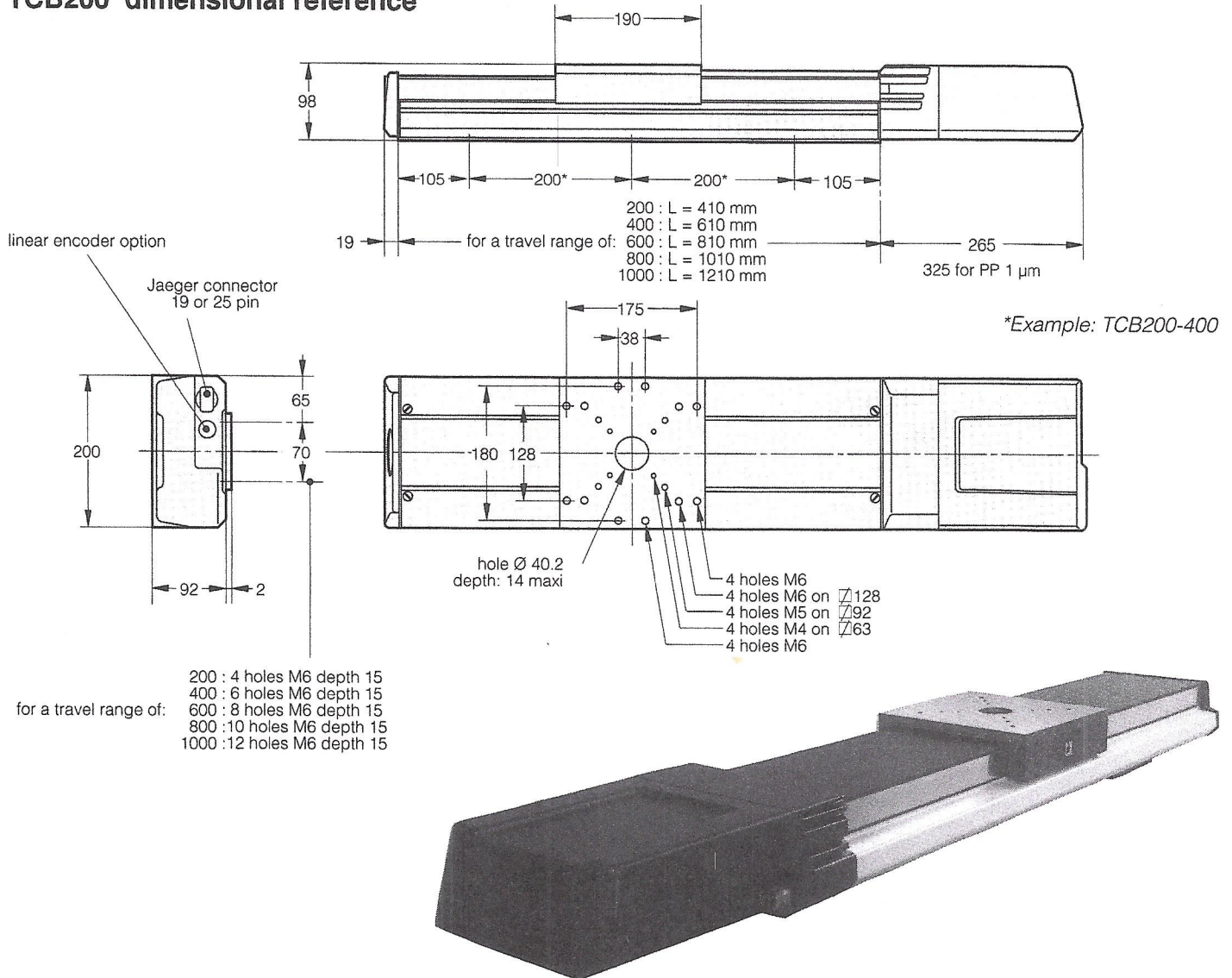


TCB200 dimensional reference



The tables can be used without legs. Legs must be ordered separately, and are supplied with 8 screws. **Cat. No. 356 220**

Interferometric measurement of accuracy, **Cat. No. 354 016.**

	Travel Range (mm)	Weight (kg)	Stepping PP (1 µm)	Motor PP (10 µm)	DC Motor CC (1 µm)	Linear Encoder (1 µm)
TCB200-200	200	27	356 100	356 200	356 210	385 930
TCB200-400	400	32	356 101	356 201	356 211	385 932
TCB200-600	600	37	356 102	356 202	356 212	385 934
TCB200-800	800	42	356 103	356 203	356 213	385 936
TCB200-1000	1000	47	356 104	356 204	356 214	385 938
Options						
—Origin at motor end*			385 905			
—Origin at center			385 904			
—Origin at end opposite motor*			385 903			
Shaft Encoders						
—For DC motor & ministepp operation			385 923			
—For full step operation			385 924			

*Positive or negative travel range shortened by 20 mm.

TCB translation stages

The TCB units are long travel motorized linear translation stages designed for high stability under large loads. They feature the opposing double row recirculating bearing guide system housed within the moving carriage. The recirculating bearings are preloaded and ride on the fixed, precision ground center guide. The relatively large distance between the bearings allows for a high centered load capacity as well as improved support for cantilevered loads. Two types of drives are offered, either stepping or DC motors to meet varied acceleration and velocity requirements.

Normally the TCB stages are supplied with precision ground ball screws. However, lead screw are available for applications demanding higher friction at lower speeds, such as vertical motion units.

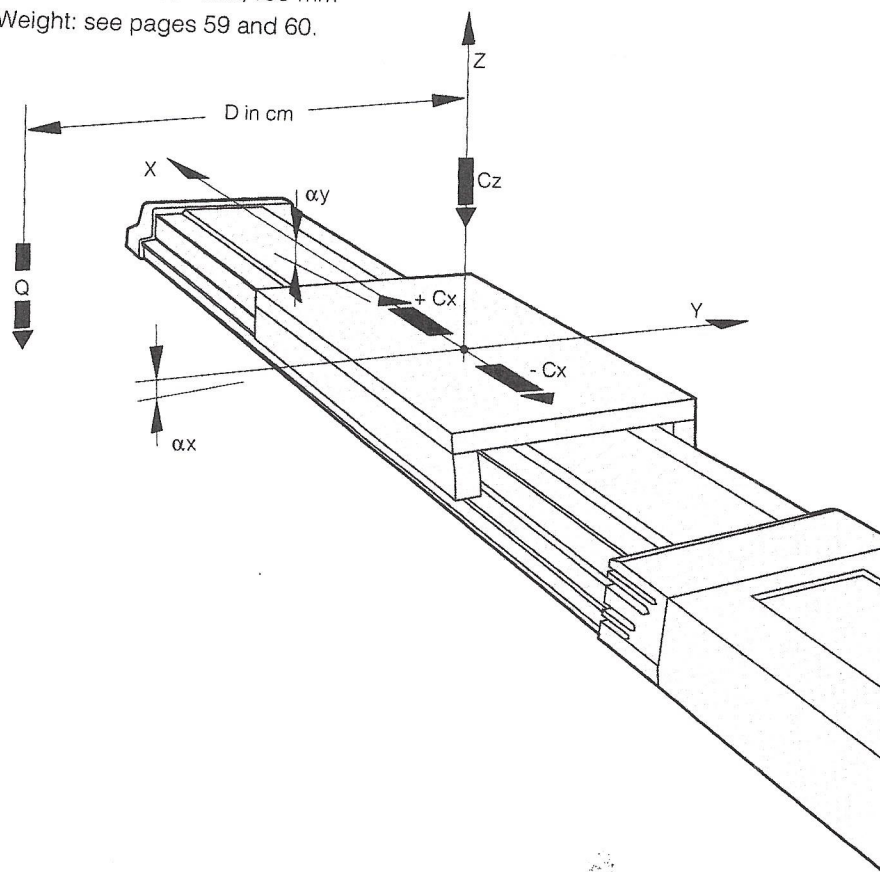
There are two module sizes of TCB's (TCB200 and TCB400). Each features travel ranges of 200 mm to 1000 mm. These tables may be assembled into multi-axis XY or XYZ configurations. In XY mode the Y axis (top) is limited to 400 mm of travel when the X axis is module TCB 200. For longer Y axis travel the TCB400 should be used as the bottom or X axis unit. All TCB stages feature a dustproof top cover and unique side covers which are pushed aside and then replaced by the moving carriage.

Characteristics

- Travel ranges: 200, 400, 600, 800, 1000 mm
- Resolution: 1 or 10 μm
- Hysteresis: 2 μm
- Typical accuracy: $5 \mu\text{m} + (\text{travel in mm} \times 10^{-2} \mu\text{m})$
- Straightness of travel:
 - Pitch, α_y (depending on support) at 2 points = $5 \times 10^{-5} \text{ rad./100 mm}$
 - Yaw, $\alpha_z = 1 \times 10^{-5} \text{ rad./100 mm}$
- Weight: see pages 59 and 60.

Optional accessories include linear encoders or shaft angle encoders (for position verification) and origin search "homing".

Compatible motor controllers are found on pages 141 through 158



load capacity

$C = Q \left(1 + \frac{D}{a}\right) \leq C_z$ with:	TCB200	TCB400	
C_z = maximum static load *	100	160	KgF*
C = load equivalent to central load			
Q = actual load			
D = offset distance (in cm)			
a = constant defined by module size and width of bearing track	5	11	
C_x = maximum direct axial load (for 10 μm step size)	20	20	KgF*
Maximum table load in vertical position	10	17	KgF*
Transversal deviation (roll) for $Q \times D = 1 \text{ cmN}$, α_x	2	0.5	10^{-8} rad
	1.7	1	10^{-8} rad

* Larger load capacities on request