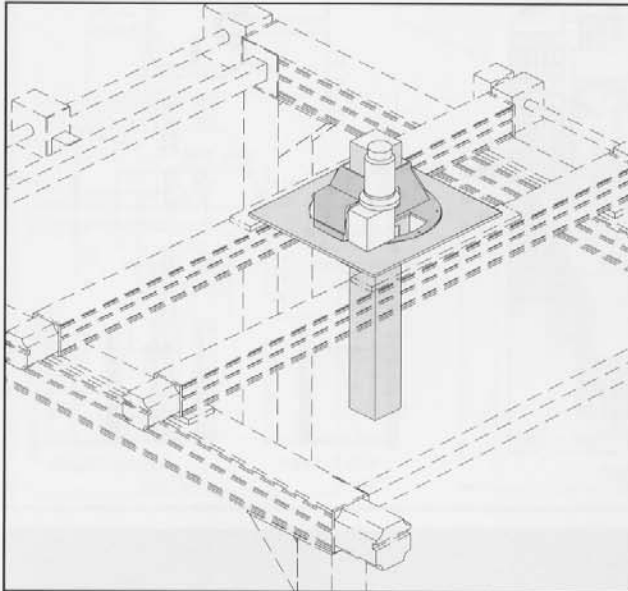
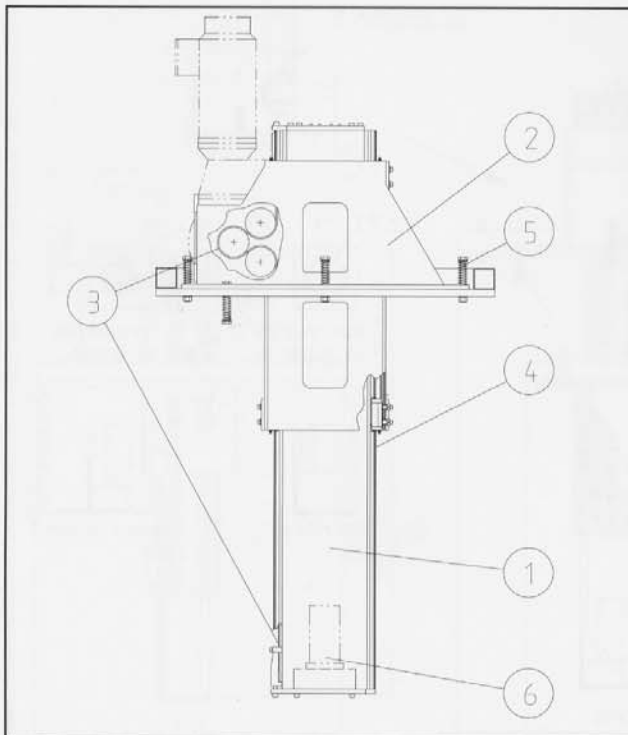


## Vertical units

- moving, guiding and positioning



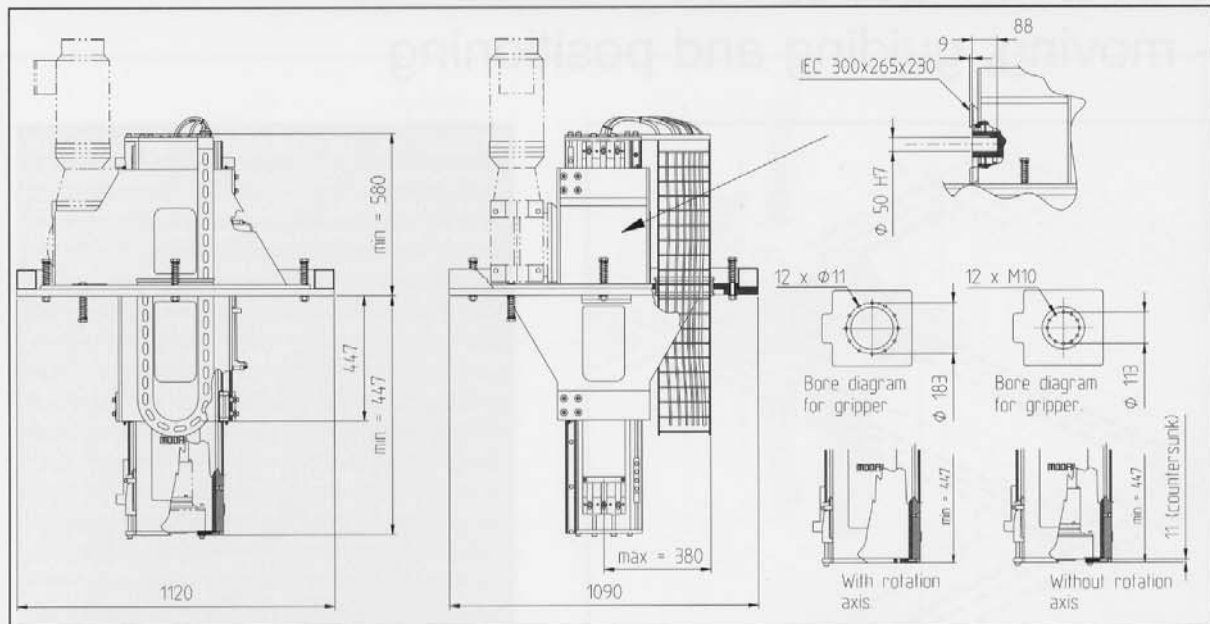
Modal is a modular system of components designed for automation and industrial robotics. The modules could be combined together, or with other systems of actuators available on the market. TZR is a range of modules, primarily dedicated for line- and box gantry robots. They are useful as vertical units, or Z-modules, though other directions is perfectly possible. They have the capacity for loads from about 30 kg up to 1 500 kg. When projecting new system located in existing buldings the height is a common problem. In these cases the telescopic versions of the TZR modules is the solution. The modules could be delivered with or without gearbox, motor and cable chain.



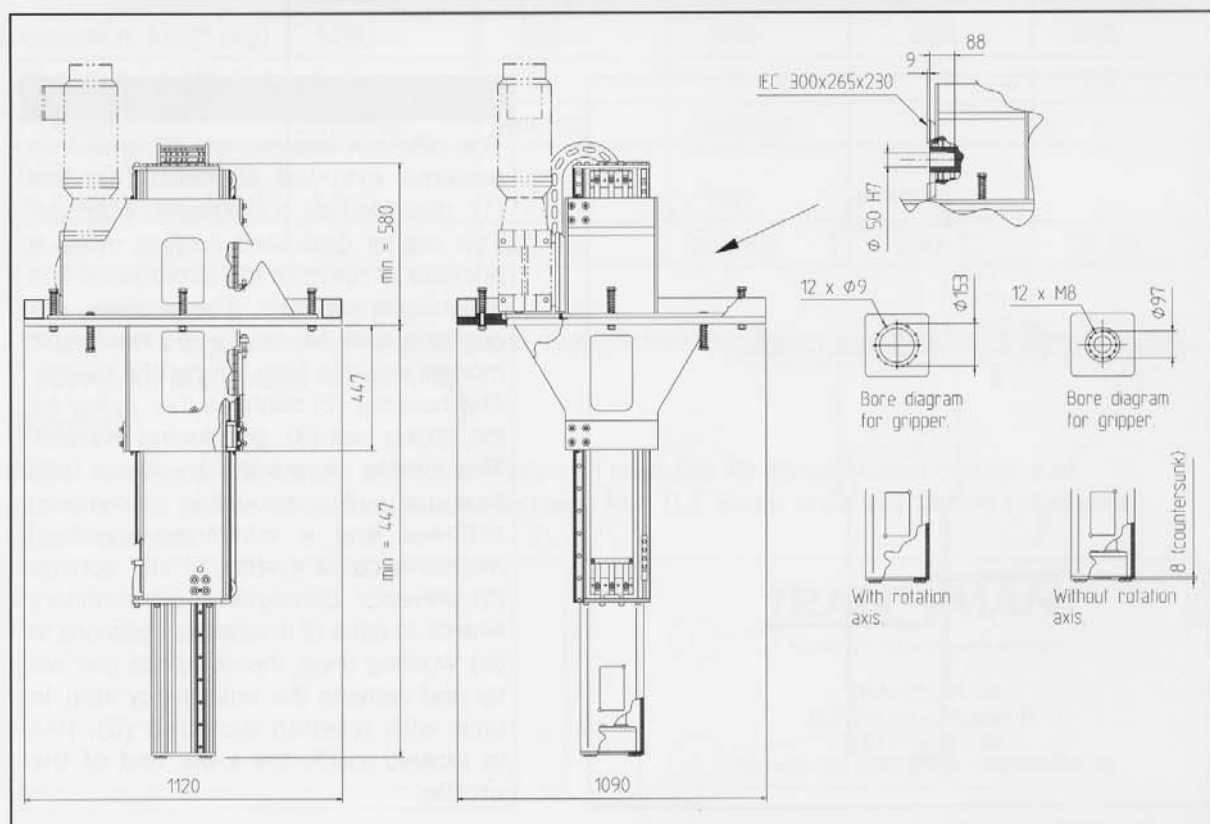
### Function

The different versions are all based on powerful extruded aluminium profiles (1), designed for this specific purpose. The use of dedicated profiles made it possible to optimize the dimensions and weight/stiffness-ratio. The profiles are compact and especially the telescopic models benefits from the careful design. The housing (2) contains the pulley for the timing belt (3), positioning the unit. The profile is guided by linear ball bearings (4), providing maximum stiffness and a minimized need of maintenance. A system of stiff springs (5) prevents damages at extraordinary events. In case of accidental collisions in the working area, the complete unit will tip and activate the emergency stop. In units with rotation included (6), this is located inside the lower end of the profile.

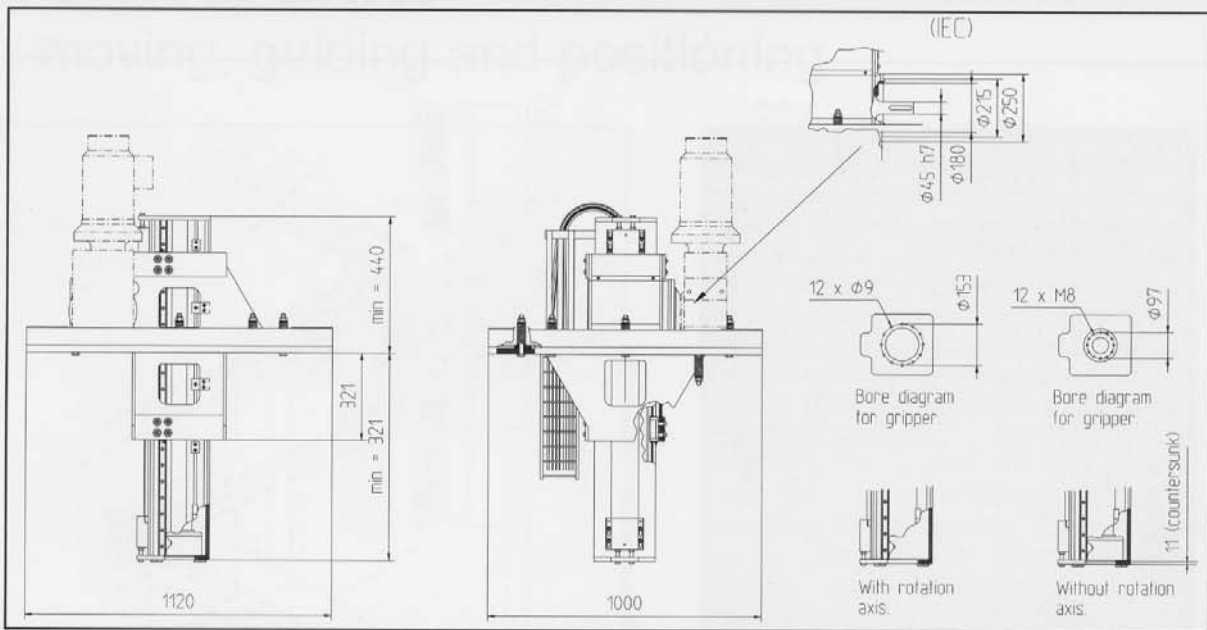
## TZR 270



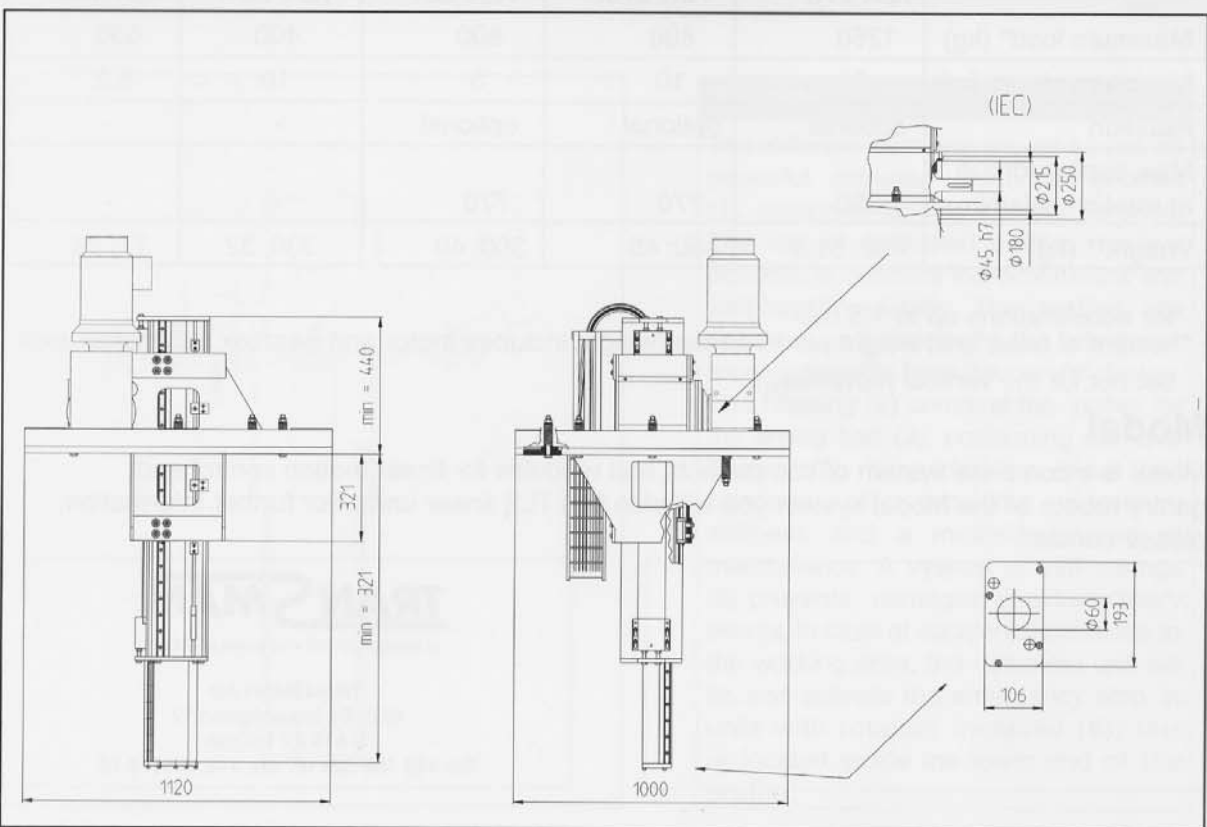
## TZR 270t



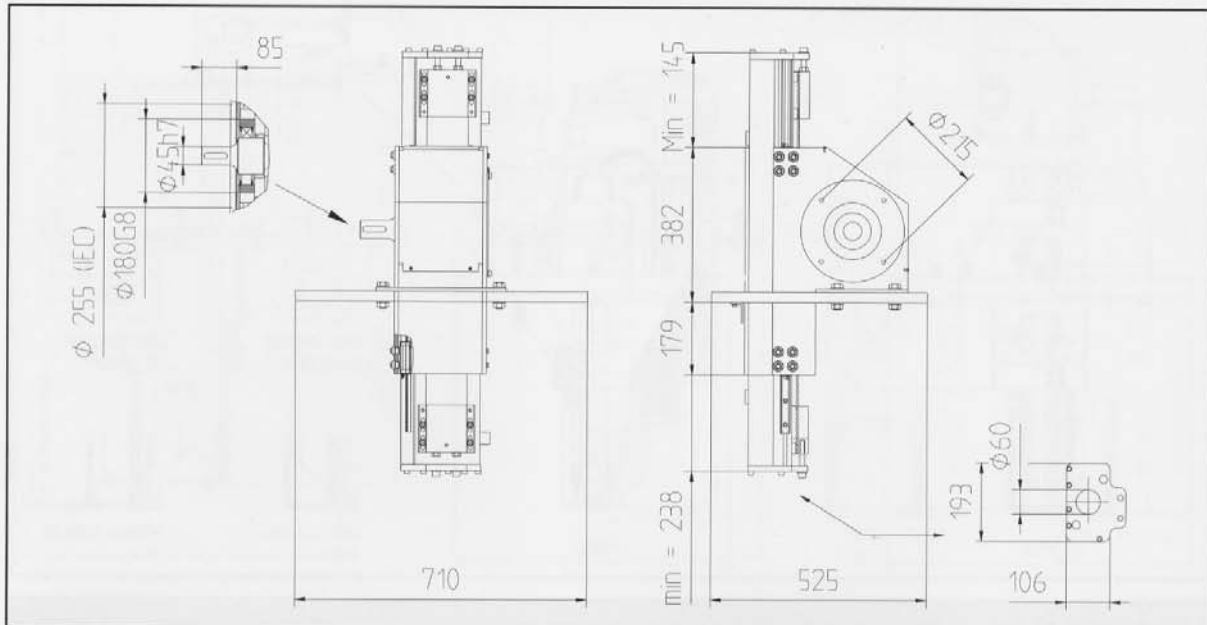
**TZR 224**



**TZR 224t**



## TZR 194



	TZR 270	TZR 270t	TZR 224	TZR 224t	TZR 194
Maximum load* (kg)	1250	800	800	400	650
Maximum stroke (m)	5	10	5	10	5,2
Rotation	optional	optional	optional	-	-
Max. tipping torque at rotation axis(Nm)	1 350	770	770	-	-
Weight** (kg)	432; 51,5	460; 45	300; 40	330; 32	77; 23

\*for accelerations up to 1,5 m/s<sup>2</sup>

\*\*weight of base unit; weight per m stroke (weight includes motor and gearbox for rotation axis, but not for the vertical movement).

### Modal

Modal is a complete system of components and modules for linear motion control and gantry robots. In the Modal system you will also find TLE linear units. For further information, please contact:



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