

New Office Building at Herzogenaurach, Germany



Description

The office building accommodates with its 50'000m² area modern workplaces for about 2000 employees.

Well about 2m above ground, the 12'500t weighing steel structure was set up on 233 Hebetec «MegaTube» columns, on an area measuring about two soccer fields.

The impression of a floating building evolves by hoisting the structure another 12m. For this lift Hebetec Engineering utilised 76 jacks with 600mm stroke and 4 strand jacks H-140 with a total 38'560t lifting capacity. Grouped at four jacks each totally 19 lifting towers were arranged carrying the building load. The minutely level lifting into installation position was achieved by a synchronised hydraulic system.



13 bracings with four strand jacks H-40 each and a centre column stabilised the steel structure during lifting horizontally. By hydraulically synchronised bracings minimal deviations of $\leq 2\text{mm}$ in longitudinal and lateral axis were achieved.

Facts

Steel construction weight:	12'500	t
Steel construction length:	138	m
Steel construction width:	113	m
Lifting height:	12	m
Total lifting and bracing capacity	40'640	t

Handling equipment

Double acting jack DP500-600:	76	pcs
Strand jack H-140 (lifting):	4	pcs
Strand jack H-40 (bracing):	52	pcs
Hydraulic aggregates	18	pcs
Hebetec «MegaTube»	approx. 500	t



One of four columns of the total 19 lifting towers at final lifting height.