

Tolerance of 6az

Basic measurements of the screw thread before hot dip galvanization – tolerance group 6az according to ISO 10684/ISO 965-4

Thread	M6*	M8	M10	M12	M14 M16	M18 M22	M24 M27	M30 M33	M36 M39	M42 M45	M48 M52	M56 M60	M64
Upper limit dimensions [µm]	-290	-295	-330	-335	-340	-350	-360	-370	-380	-390	-400	-410	-420

* not regulated by standards

Min. tensile strength [N] for screws of the 6az tolerance

Property class Marking	8.8 8.8 U	10.9 10.9 U
M6*	14150	17687
M8	26600	34500
M10	42900	55700
M12	67400	87700
M16	125000	163000
M20	203000	255000
M24	293000	367000
M30	466000	583000
M36	678000	850000

* not regulated by standards

Proof loads [N] for nuts of the tolerance class 6AZ

Property class Marking	8 8 Z	10 10 Z
M6*	15934	19923
M8	25500	30600
M10	42200	50400
M12	74200	88500
M16	138200	164900
M20	225400	259700
M24	324800	374200
M30	516100	594700
M36	751600	866000

- After hot dip galvanization, the requirements of ISO 898-1 and ISO 898-2 apply to hot dip galvanized screws and nuts ≥ M12. For thread sizes M8 and M10, reduced resilience applies according to ISO 10684.
- **When assembly hot dip galvanized screws and nuts, especially with additional lubrication of the threading, different friction coefficients and tightening torques need to be reckoned with. DIN 18800-7/EN 1993 – 1 – 8 NA need to be considered for hot dip galvanized high-strength structural bolting assemblies.**
- The zinc coating may give a small excess to the outer measurements (head, shaft).
- Articles with hollow sections (e.g. keys for hexagon socket screws, cap nuts, etc.) are not suitable for hot dip galvanizing.
- The grey appearance of the hot dip galvanizing is dependent on the material and not characteristic for the quality of the corrosion protection. White rust and/or whitish to dark corrosion points (zinc-oxide) which can occur after hot dip galvanization, e.g. through dampness, do not usually impair the corrosion protection and no reason for rejection (ISO 1461, Section 6.1).
- A certain surface roughness and small dents in the thread tips are dependent on the procedure. For this reason, an assembly tool may be required for initial screwing. (DIN 18800-7, Section 8.3 (2)).