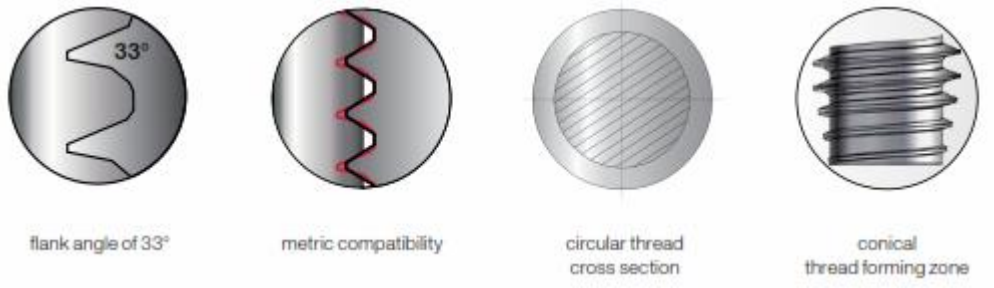
EJOT ALtracs® Plus

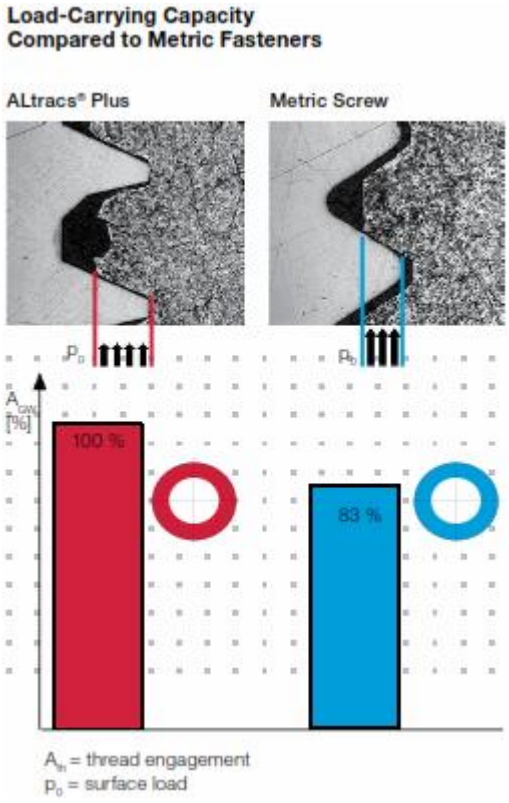
The Self-Tapping
Fastener for
Light Alloys

EJOT

EJOT ALtracs® Plus screws are thread-forming fasteners developed for maximum strength values in light alloy assem- blies and other non-ferrous metals such as zinc, copper, brass etc., up to 140 HB.



ALtracs® Plus forms a tight-fitting female thread in light metal alloy. Compared to pre-cut metric threads with a minus tolerance at the bolt and a plus tolerance at the female thread ALtracs® Plus achieves a higher thread engagement per thread pitch.
Along with the geometrically reinforced female thread, the result is a higher load capacity of every single turn of the thread, compared to pre-cut metric screw joints.
The ALtracs® Plus thread withstands high dynamic stress conditions without extra locking features.

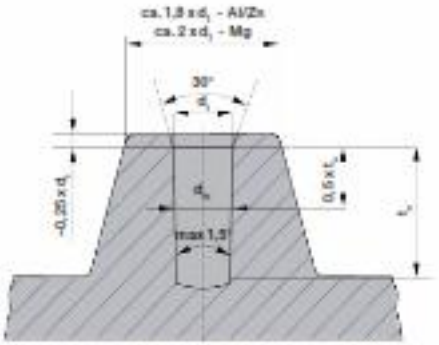


EJOT ALtracs® Plus

Design Recommendations

d_1 = nominal diameter of screw
d_m = hole diameter middle
d_2 = hole diameter top
t_{ins} = insertion depth

All indications in mm.
For pre-hole design please choose d_m or d_1

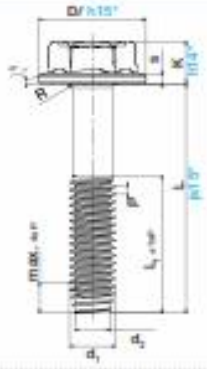


Recommendation for cast, drilled, punched or extruded pre-holes in aluminum, magnesium, zinc, copper, brass, bronce up to hardness of 140 HB

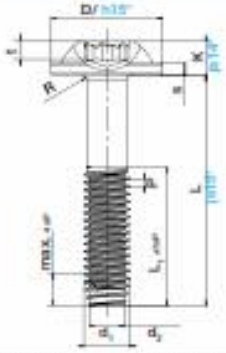
Hard-ness	50-85 HB			75-115 HB				110-140 HB		
t_{ins}	1,0 x d_1	1,5 x d_1	2,0 x d_1	0,5 x d_1	1,0 x d_1	1,5 x d_1	2,0 x d_1	0,5 x d_1	1,0 x d_1	1,5 x d_1
d_1	d_m	d_m [in]	d_m [in]	d_m	d_m	d_m [in]	d_m [in]	d_m	d_m	d_m [in]
1,6	1,48	1,48 [1,51]	t_{ins} = 1,5 x d_1	1,46	1,48	1,49 [1,52]	t_{ins} = 1,5 x d_1	1,48	1,49	1,51 [1,54]
1,8	1,63	1,65 [1,69]	t_{ins} = 1,5 x d_1	1,63	1,65	1,67 [1,71]	t_{ins} = 1,5 x d_1	1,65	1,67	1,68 [1,72]
2,0	1,83	1,85 [1,89]	t_{ins} = 1,5 x d_1	1,83	1,85	1,87 [1,91]	t_{ins} = 1,5 x d_1	1,85	1,87	1,89 [1,93]
2,2	1,98	2,00 [2,04]	2,03 [2,09]	1,98	2,00	2,03 [2,07]	t_{ins} = 1,5 x d_1	2,00	2,03	2,05 [2,09]
2,5	2,20	2,25 [2,30]	2,30 [2,37]	2,20	2,25	2,30 [2,35]	2,35 [2,42]	2,25	2,30	2,35 [2,40]
3,0	2,65	2,70 [2,76]	2,75 [2,83]	2,65	2,70	2,75 [2,81]	2,80 [2,88]	2,70	2,75	2,80 [2,86]
3,5	3,10	3,15 [3,22]	3,20 [3,29]	3,10	3,15	3,20 [3,27]	3,25 [3,34]	3,15	3,20	3,25 [3,32]
4,0	3,55	3,60 [3,68]	3,65 [3,75]	3,55	3,60	3,65 [3,73]	3,70 [3,80]	3,60	3,65	3,70 [3,78]
5,0	4,40	4,50 [4,60]	4,60 [4,73]	4,40	4,50	4,60 [4,70]	4,70 [4,83]	4,50	4,60	4,70 [4,80]
6,0	5,30	5,40 [5,52]	5,50 [5,66]	5,30	5,40	5,50 [5,62]	5,60 [5,76]	5,40	5,50	5,60 [5,72]
7,0	6,20	6,30 [6,44]	6,40 [6,58]	6,20	6,30	6,40 [6,64]	6,60 [6,78]	6,30	6,40	6,60 [6,74]
8,0	7,00	7,20 [7,36]	7,40 [7,61]	7,00	7,20	7,40 [7,56]	7,50 [7,71]	7,20	7,40	7,50 [7,66]
9,0	7,90	8,10 [8,28]	8,30 [8,54]	7,90	8,10	8,30 [8,48]	8,40 [8,64]	8,10	8,30	8,40 [8,59]
10,0	8,80	9,00 [9,20]	9,20 [9,46]	8,80	9,00	9,20 [9,40]	9,40 [9,66]	9,00	9,20	9,40 [9,60]
12,0	10,60	10,80 [11,04]	11,00 [11,31]	10,60	10,80	11,00 [11,24]	11,20 [11,51]	10,80	11,00	11,20 [11,44]
14,0	12,30	12,60 [12,87]	12,90 [13,27]	12,30	12,60	12,90 [13,17]	13,20 [13,57]	12,60	12,90	13,20 [13,47]

Designs

WN 5117

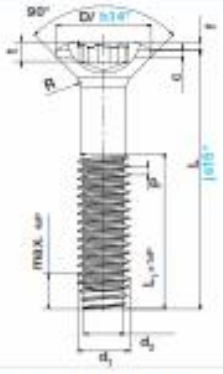


WN 5151



WN 5152

WN 5153



Drives

Hexagon Flange Head

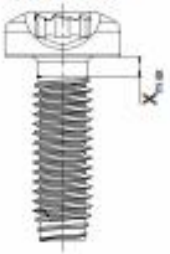
TORX plus® / AUTOSERT®

TORX®

Security Drive

Tamper Resistant TORX plus®

Thread run-out of full thread



EJOT ALtracs® Plus																
Nominal Ø		**16**	**18**	**20**	**22**	**25**	**30**	**35**	**40**	**50**	**60**	**[70]**	**80**	**[90]**	**100**	**120**	**140**
External thread-Ø	d_1	1,60	1,80	2,00	2,20	2,50	3,00	3,50	4,00	5,00	6,00	7,00	8,00	9,00	10,00	12,00	14,00
Thread core-Ø	d_2	1,12	1,32	1,45	1,61	1,88	2,30	2,66	3,02	3,87	4,59	5,56	6,23	7,20	7,86	9,86	11,86
Thread pitch	P	0,35	0,35	0,40	0,45	0,45	0,50	0,60	0,70	0,80	1,00	1,00	1,25	1,25	1,50	1,75	2,00
Thread run-out	X_{max}	0,70	0,70	0,80	0,90	0,90	1,00	1,20	1,40	1,60	2,00	2,00	2,50	2,50	3,00	3,50	4,00

WN 5117																
Head-Ø	D	no manufacturing at present								11,50	14,00	upon request	18,00	upon request		
Width across flats	SW									8,00	10,00		13,00			
Head height	K									4,80	5,50		7,50			
Washer thickness	s									1,00	1,10		1,20			
Radius	R_{max}									0,40	0,50		0,70			

WN 5151																
Head-Ø	D	upon request	5,00	5,50	6,00	7,50	9,00	10,00	11,50	14,50	upon request	19,00	upon request			
Head height	K		1,50	1,60	2,00	2,25	2,50	2,90	3,40	4,40		5,70				
Washer thickness	s		0,60	0,60	0,60	0,70	0,80	1,00	1,20	1,60		2,00				
Radius	R_{max}		0,30	0,30	0,30	0,40	0,40	0,50	0,50	0,60		0,80				
TORX plus® / AUTOSERT®			6IP	7IP	8IP	10IP	15IP	20IP	25IP	30IP		40IP				
	A_{ref}		1,75	2,05	2,40	2,80	3,35	3,95	4,50	5,60		6,75				
Insertion depth	t min.		0,65	0,70	0,90	1,00	1,10	1,30	1,50	1,90		2,60				
	t max.		0,85	0,85	1,10	1,30	1,40	1,65	1,85	2,30		3,10				

TORX PLUS®/AUTOSERT® is used as a standard recess.
All TORX® recesses from size 8 are available with combi recess.
Other recesses on request.

Example of Ordering:
Description of EJOT ALtracs® Plus screws with TORX PLUS®/AUTOSERT® recess, nominal Ø 6,0 mm and thread length 25 mm, shaft length 18 mm WN5151
EJOT ALtracs® Plus screw WN5151, AP 60 x 25/18