

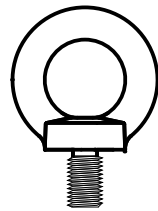
SAFETY REGULATIONS FOR THE USE OF EYE BOLTS AND EYE NUTS



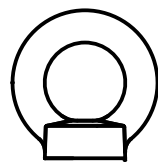
MEC-WOLF

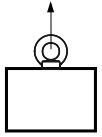
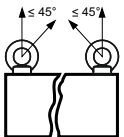
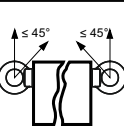
The following working loads (WLL) are valid for eye bolts DIN 580:2010 and for eye nuts DIN 582:2010 made of C15E steel and A2/A3/A4 stainless steel.

DIN 580:2010



DIN 582:2010



METRIC THREAD SIZE		M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56	M64	M72	M80	M100	
LIFTING CAPACITY (WLL) decimal point is comma	Lifting capacity axial (WLL) per lifting eye bolt KG 0°		140	230	340	700	1.200	1.800	3.200	4.600	6.300	8.600	11.500	16.000	20.000	28.000	40.000
	Lifting capacity per lifting eye bolt ≤45° KG 45°		100	170	240	500	860	1.290	2.300	3.300	4.500	6.100	8.200	11.000	14.000	20.000	29.000
	Lifting capacity per lifting eye bolt fitted at sides of load ≤45° KG 90°		70	115	170	350	600	900	1.600	2.300	3.150	4.300	5.750	8.000	10.000	14.000	20.000

INSTRUCTIONS FOR USE.



Lifting eye bolts or -nuts shall be completely tightened. The permissible working load limit (WLL) is allowed only if the bolt or nut is tightened to the part it's lifting. If you use mechanical tools for tightening, make sure not to over-strain the shank. Before lifting make sure that the rope and/or hook is stretched.

Lifting eye bolts -nuts must not be used with the ring's side pull.



The permissible working load limit (WLL) marked on bolts and nuts is valid only for straight lifting. The permissible working load limit for lifting on an angle at 45° or for orthogonal lifting at 90° is mentioned on the packing label (see dwg. at point 9 and 10). During lifting with more bolts or nuts, all rings shall be aligned by tightening. To achieve this, it may be necessary to use washers with at least the same diameter as the bearing area.

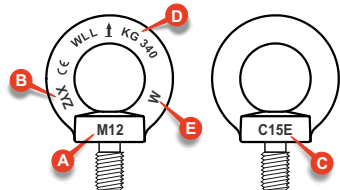
The permissible working load limit (WLL) applies to temperatures between -20°C to +200°C (-4°F to +392°F).

Before re-use make sure there are no surface flaws (ie: pits, voids, folds and seams, deformation of the ring, missing or broken threads, rust, etc.).

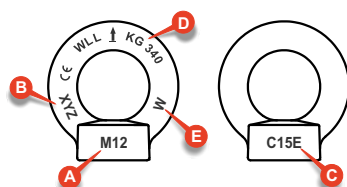
LEGEND OF THE LETTERS ON THE FASTENERS:

- A** Thread / Dimension.
- B** Lot.
- C** Material.
- D** Permissible working load limit (WLL) for straight lifting.
- E** Manufacturer's Mark.

DIN 580:2010



DIN 582:2010



MANDATORY DOCUMENTATION:

Ensure that the pack always contains the user instructions and test certificate 3.1 EN 10204 relative to the production lot of Lifting Eye Bolts or -Nuts you are purchasing or installing.

For lifting eye bolts and lifting eye nuts to bear the CE marking, the manufacturer must issue a Declaration of Conformity stating that the parts meet the requirements of Machinery Directive 2006/42/EC (unless supplied separately, the declaration is included in certificate 3.1 EN 10204).

The chemical analysis of the hot-moulded Lifting Eye Bolts or -Nuts made of C15E steel must show an aluminium content (min. 0.025% - max. 0.050%).

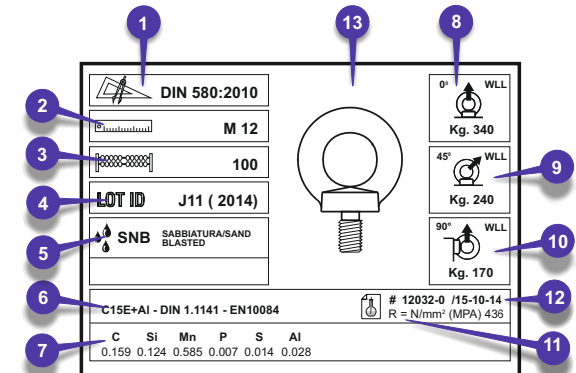
Stainless steel Lifting Eye Bolts and -Nuts must be passivated and this surface treatment must be stated in certificate 3.1 EN 10204. Please note: stainless steel Lifting Eye Bolts and -Nuts must be hot-moulded and not die-cast.

If the Lifting Eye Bolts and -Nuts are to be exported (as equipment and/or machinery components) a Declaration of Origin issued by the manufacturer must also be provided. In this case too, unless supplied separately this declaration is usually included in certificate 3.1 EN 10204.

Please note: Lifting Eye Bolts and -Nuts are LIFTING ACCESSORIES and are not classed as common hardware. Safety regulations provide for a product's good quality as well as for the examination by the user of the product's compliance with the technical requirements provided for by the standards of reference and by Community regulation 2006/42/EC. Compliance must be declared by the manufacturer in certificate EN 3.110204.

LEGEND OF THE SYMBOLS ON THE LABELS:

- 1 Standard / Table.
- 2 Type and dimension of thread.
- 3 Number of pieces per packing.
- 4 Lot number (year of manufacturing).
- 5 Surface treatment.
- 6 Material.
- 7 Chemical Analysis.
- 8 Permissible working load limit (WLL) (straight lifting) in kilograms - kg
- 9 Permissible working load limit (WLL) at 45° in kilograms - kg
- 10 Permissible working load limit (WLL) for orthogonal lifting at 90° in kilograms - kg
- 11 Tensile Strength (on the specimen).
- 12 Analysis Number/Certificate Number.
- 13 Draft of the fastener in the box.



MEC-WOLF

MEC WOLF SRL - Via Cascina California, 39
I-22036 ERBA (Co), ITALY
Ph. 0039-031-33303 - Fax 0039-031-3330411
infomec@wolf.it www.mecwolf.it

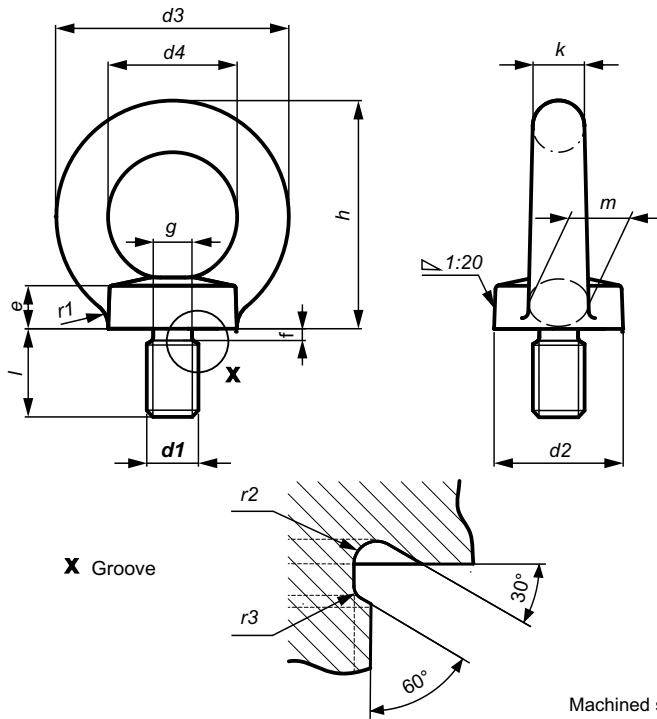
DIMENSIONS OF LIFTING EYE BOLTS -NUTS



MEC-WOLF

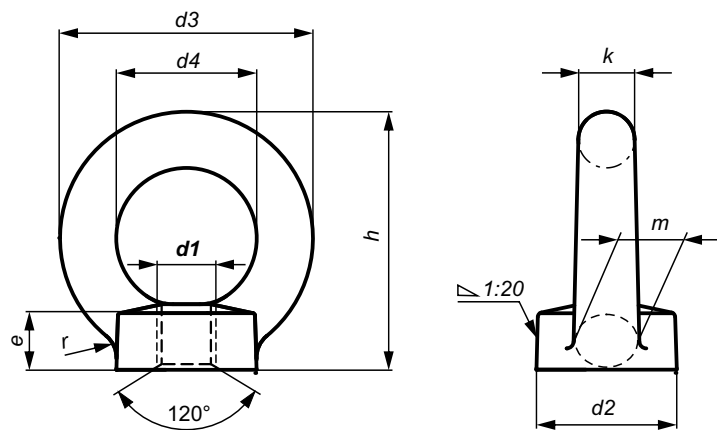
Dimensions in millimetres

LIFTING EYE BOLT DIN 580:2010



d1 THREAD SIZE	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56	M64	M72x6	M80x6	M100x6
d2 Nominal size	20	25	30	35	40	50	65	75	85	100	110	120	150	170	190
d2 min.	19,5	24,5	29,5	34,5	39,5	49,4	64,3	74,3	84,3	99,2	108,9	118,9	148,8	168,5	188,5
d2 max.	20,9	25,9	30,9	36,1	41,1	51,2	66,3	76,5	86,5	101,7	112,1	122,1	152,4	173	193
d3 Nominal size	36	45	54	63	72	90	108	126	144	166	184	206	260	296	330
d3 min.	35,5	44,5	53,5	62,5	71,5	89,4	107,3	125,2	143,2	164,9	182,8	204,8	258,5	294,3	328,3
d3 max.	37,1	46,1	55,1	64,1	73,1	91,2	109,5	127,7	145,7	168,1	186,4	208,4	263	299,3	333,3
d4 Nominal size	20	25	30	35	40	50	60	70	80	90	100	110	140	160	180
d4 min.	19,1	24,1	29,1	33,9	38,9	48,8	58,7	68,5	78,5	88,3	98,1	107,9	137,6	157,3	177
d4 max.	20,5	25,5	30,5	35,5	40,5	50,6	60,7	70,7	80,7	90,8	100,9	111,1	141,2	161,3	181,5
e Nominal size	6	8	10	12	14	18	22	26	30	35	38	42	50	55	60
e min.	5,5	7,5	9,5	11,5	13,5	17,5	21,4	25,3	29,3	34,2	37,1	41,1	48,9	53,8	58,8
e max.	6,9	8,9	10,9	12,9	14,9	19,1	23,2	27,3	31,3	36,7	39,9	43,9	52,1	57,4	62,4
f MAX	2,5	3	3,5	4	5	6	7	8	9	10	11	12	12	12	12
g h13 Nominal size	6	7,7	9,4	13	16,4	19,6	25	30,3	35,6	41	48,3	55,7	63,7	71,7	91,7
g h13 min.	5,82	7,48	9,18	12,73	16,13	19,27	24,67	29,91	35,21	40,61	47,91	55,24	63,24	71,24	91,16
g h13 max.	6	7,7	9,4	13	16,4	19,6	25	30,3	35,6	41	48,3	55,7	63,7	71,7	91,7
h Nominal size	36	45	53	62	71	90	109	128	147	168	187	208	260	298	330
h min.	35,5	44,5	52,5	61,5	70,5	89,4	108,3	127,2	146,2	166,9	185,8	206,8	258,5	296,3	328,3
h max.	37,1	46,1	54,1	63,1	72,1	91,2	110,5	129,7	148,7	170,1	189,4	210,4	263	301,3	333,3
k Nominal size	8	10	12	14	16	20	24	28	32	38	42	48	60	68	75
k min.	7,5	9,5	11,5	13,5	15,5	19,5	23,4	27,3	31,3	37,2	41,1	47,1	58,9	66,8	73,8
k max.	8,9	10,9	12,9	14,9	16,9	21,1	25,2	29,3	33,3	39,7	43,9	49,9	62,1	70,4	77,4
l ±½ IT15 Nominal size	13	17	20,5	27	30	36	45	54	63	68	78	90	100	112	130
l min.	12,65	16,65	20,08	26,58	29,58	35,5	44,5	53,5	62,4	67,4	77,4	89,3	99,3	111,3	129,2
l max.	13,35	17,35	20,92	27,42	30,42	36,5	45,5	54,5	63,6	68,6	78,6	90,7	100,7	112,7	130,8
m Nominal size	10	12	14	16	19	24	28	32	38	46	50	58	72	80	88
m min.	9,5	11,5	13,5	15,5	18,5	23,5	27,4	31,3	37,3	45,2	49,1	57,1	70,9	78,8	86,8
m max.	10,9	12,9	14,9	16,9	19,9	25,1	29,2	33,3	39,5	47,7	51,9	59,9	74,1	82,4	90,4
r1 ~	4	4	6	6	8	12	15	18	20	22	25	25	35	35	40
r2 ~	1	1	2	2	2	2	3	3	3	4	4	4	4	4	4
r3 ~	1	1	1,2	1,2	1,6	2	2	2	2,5	2,5	3	3	3	3	3

LIFTING EYE NUT DIN 582:2010



d1 THREAD SIZE	M8	M10	M12	M16	M20	M24	M30	M36	M42	M48	M56	M64	M72x6	M80x6	M100x6
d2 Nominal size	20	25	30	35	40	50	65	75	85	100	110	120	150	170	190
d2 min.	19,5	24,5	29,5	34,5	39,5	49,4	64,3	74,3	84,3	99,2	108,9	118,9	148,8	168,5	188,5
d2 max.	20,9	25,9	30,9	36,1	41,1	51,2	66,3	76,5	86,5	101,7	112,1	122,1	152,4	173	193
d3 Nominal size	36	45	54	63	72	90	108	126	144	166	184	206	260	296	330
d3 min.	35,5	44,5	53,5	62,5	71,5	89,4	107,3	125,2	143,2	164,9	182,8	204,8	258,5	294,3	328,3
d3 max.	37,1	46,1	55,1	64,1	73,1	91,2	109,5	127,7	145,7	168,1	186,4	208,4	263	299,3	333,3
d4 Nominal size	20	25	30	35	40	50	60	70	80	90	100	110	140	160	180
d4 min.	19,1	24,1	29,1	33,9	38,9	48,8	58,7	68,5	78,5	88,3	98,1	107,9	137,6	157,3	177
d4 max.	20,5	25,5	30,5	35,5	40,5	50,6	60,7	70,7	80,7	90,8	100,9	111,1	141,2	161,3	181,5
e Nominal size	8,5	10	11	13	16	20	25	30	35	40	45	50	60	70	80
e min.	8	9,5	10,5	12,5	15,5	19,5	24,4	29,3	34,3	39,2	44,1	49,1	58,9	68,8	78,8
e max.	9,4	10,9	11,9	13,9	16,9	21,1	26,2	31,3	36,5	41,7	46,9	51,9	62,1	72,4	82,4
h Nominal size	36	45	53	62	71	90	109	128	147	168	187	208	260	298	330
h min.	35,5	44,5	52,5	61,5	70,5	89,4	108,3	127,2	146,2	166,9	185,8	206,8	258,5	296,3	328,3
h max.	37,1	46,1	54,1	63,1	72,1	91,2	110,5	129,7	148,7	170,1	189,4	210,4	263	301,3	333,3
k Nominal size	8	10	12	14	16	20	24	28	32	38	42	48	60	68	75
k min.	7,5	9,5	11,5	13,5	15,5	19,5	23,4	27,3	31,3	37,2	41,1	47,1	58,9	66,8	73,8
k max.	8,9	10,9	12,9	14,9	16,9	21,1	25,2	29,3	33,3	39,7	43,9	49,9	62,1	70,4	77,4
m Nominal size	10	12	14	16	19	24	28	32	38	46	50	58	72	80	88
m min.	9,5	11,5	13,5	15,5	18,5	23,5	27,4	31,3	37,3	45,2	49,1	57,1	70,9	78,8	86,8
m max.	10,9	12,9	14,9	16,9	19,9	25,1	29,2	33,3	39,5	47,7	51,9	59,9	74,1	82,4	90,4
r ~	4	4	6	6	8	12	15	18	20	22	25	25	35	35	40