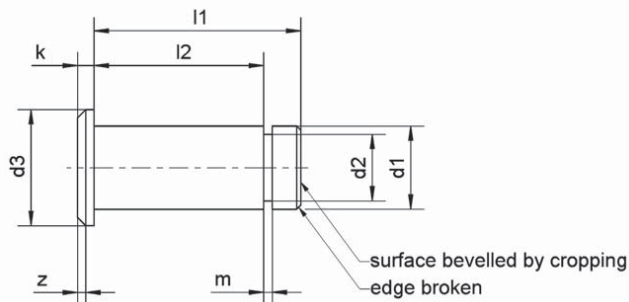


Bolts, stamped or lathe work (clevis pins)

for retainers, suitable for clevises



Example for ordering:

Bolt version BEK of diameter d1 = 10 mm, length l1 = 25 mm and length l2 = 20.5 mm; Bolt BEK 10 x 25 x 20.5
Order number: 10 77 0000 0010

mbo standard 77
BEK/BEG

mbo identifier	Order number	Suitable		Nom. size d1 h11	Head diameter d3 h14	Length		k js 14	d2 -0.2	m +0.1	z	Mass (kg) 100 pieces
		KL ₁)	SL ₂)			l1 js 15	l2 +0.3					
BEG 4 x 10.5 x 8.5*	10 77 0000 0004	4	4	4	6	10.5	8.5	1	3.2	0.64	0.5	0.12
BEG 5 x 13 x 10.5*	10 77 0000 0005	5	5	5	8	13	10.5	1.5	4	0.74	0.5	0.24
BEK 6 x 15.5 x 12.5	10 77 0000 0006	6	6	6	9	15.5	12.5	1.5	5	0.74	0.5	0.42
BEK 8 x 20 x 16.5	10 77 0000 0008	8	8	8	12	20	16.5	2	6	0.94	1	0.9
BEK 10 x 25 x 20.5	10 77 0000 0010	10	10	10	14	25	20.5	2	8	1.05	1	1.7
BEK 12 x 30 x 24.5	10 77 0000 0012	12	12	12	17	30	24.5	3	9	1.15	1.5	2.95

* lathe work: material 1.0718 (11SMnPb30+C)
1) mbo standard 09 (see mbo catalog page 13_02)
2) mbo standard 08 (see mbo catalog page 13_01)

Material:

1.0214 (QSt36-3)

Retaining:

with retainers (mbo catalog section 13);
also see clevis joint combinations (mbo catalog section 11)

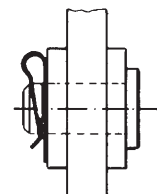
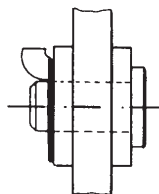
Surface protection:

phosphatized and oiled;
optional: electroplated galvanized,
passivated in white-blue (silver/clear)
or yellow

Examples of application:

mbo standard 09
KL-retainer
(see mbo catalog page 13_02)

mbo standard 08
SL-retainer
(see mbo catalog page 13_01)



Special versions:

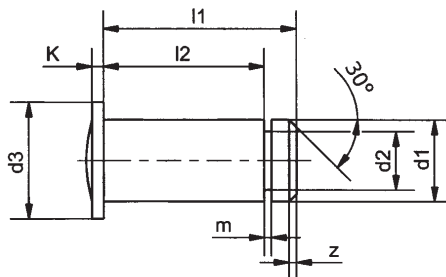
as to length and tolerance upon request;
hardened bolts upon request

Bolts with riveted head (clevis pins)

for retainers, suitable for clevises



head version at
manufacturer's choice



mbo standard 07
BEN

Example for ordering:

Bolt version BEN of diameter $d1 = 16$ mm,
length $l1 = 38.5$ mm and length $l2 = 32.5$ mm; Bolt BEN 16 x 38.5 x 32.5
Order number: 10 07 0000 0016

mbo BEN identifier	Order number	Suitable retainer		Nom. size $d1$ $h11$	Head diameter $d3$	Length		$\approx K$	$d2$ $h11$	m + 0.1	z	Mass (kg) per 100 pcs
		KL ¹⁾	SL ²⁾			$l1$ $js 15$	$l2$ $+ 0.3$					
14 x 33 x 27.5	10 07 0000 0014	14	14	14	20	33	27.5	2.5	10	1.25	1.25	4.1
16 x 38.5 x 32.5	10 07 0000 0016	16	16	16	20	38.5	32.5	3.5	12	1.35	1.5	6.2
18 x 42 x 36.5	10 07 0000 0018	16	-	18	25	42	36.5	3.5	13	1.35	1.5	8.95
20 x 46 x 40.5	10 07 0000 0020	24	-	20	28	46	40.5	4	17.5	1.8	1.5	12.1
25 x 57 x 50.5	10 07 0000 0025	24	-	25	34	57	50.5	5.5	18	1.8	1.5	23.1

¹⁾ mbo standard 09 (see mbo catalog page 13_02)

²⁾ mbo standard 08 (see mbo catalog page 13_01)

Material:

undercut steel 1.0718 (11SMnPb30+C)

Retaining:

with retainers (mbo catalog section 13);
also see clevis joint combinations (mbo catalog section 11)

Surface protection:

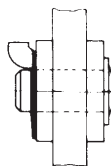
phosphatized and oiled
optional: electroplated galvanized, passivated in
white-blue (silver/clear)

Special versions:

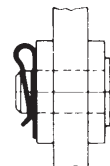
as to length, tolerance and material upon request;
hardened bolts upon request

Examples of application:

mbo standard 09
KL-retainer
(see mbo catalog
page 13_02)

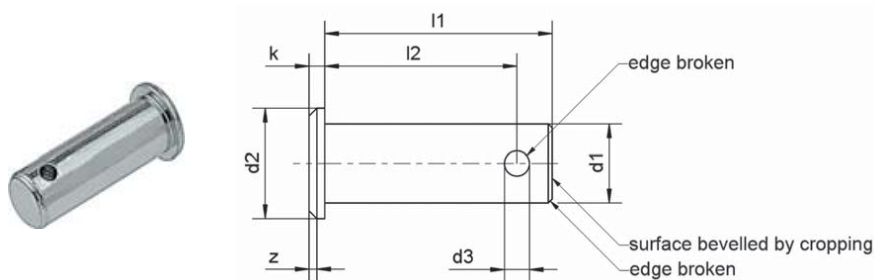


mbo standard 08
SL-retainer
(see mbo catalog page
13_01)



Bolts, stamped or lathe work with hole (clevis pins)

suitable for clevises



Example for ordering:

Bolt version BKL of diameter $d1 = 10$ mm,
length $l1 = 29$ mm and length $l2 = 24.5$ mm; Bolt BKL 10 x 29 x 24.5
Order number: 34 00 0000 0010

mbo standard
BKL/BGL

mbo identifier	Order number	Nom. size $\varnothing d1$ h11	Head diameter $d2$ h14	$d3$ H14	Length		k js 14	z	Mass (kg) 100 pieces
					$l1$ js 15	$l2$ +0.5			
BGL 4 x 12 x 10*	34 00 0000 0004	4	6	1	12	10	1	0.5	0.13
BGL 5 x 15 x 12.3*	34 00 0000 0005	5	8	1	15	12.3	1.5	0.5	0.26
BKL 6 x 18 x 15.3	34 00 0000 0006	6	9	1.6	18	15.3	1.5	0.5	0.46
BKL 8 x 23 x 19.5	34 00 0000 0008	8	12	2	23	19.5	2	1	1
BKL 10 x 29 x 24.5	34 00 0000 0010	10	14	3.2	29	24.5	2	1	1.9
BKL 12 x 35 x 29.5	34 00 0000 0012	12	17	4	35	29.5	3	1.5	3.4
BKL 14 x 40 x 32.5	34 00 0000 0014	14	19	4	40	32.5	3	1.5	5.3

* lathe work, material 1.0718 (11SMnPb30+C)

Material:

1.0214 (QSt 36-3)

Special version:

as to length, tolerance and material upon request;
hardened bolts upon request

Surface protection:

phosphatized and oiled
optional: electroplated galvanized, passivated in
white-blue (silver/clear) or yellow

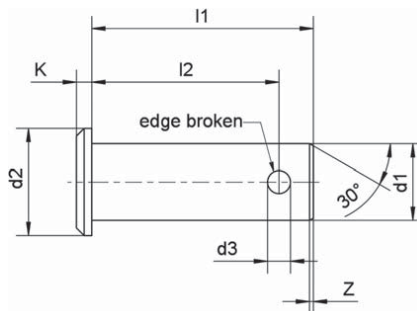
Retaining:

with washer and cotter pin;
also see clevis joint combinations (mbo catalog
section 11)

04_03
01/2007

Bolts with riveted head/lathe work (clevis pins)

suitable for clevises

head version at
manufacturer's choicembo standard
BNL/BGL

Example for ordering: Bolt version BNL of diameter $d_1 = 16$ mm
length $l_1 = 45$ mm and length $l_2 = 38.2$ mm; Bolt BNL 16 x 45 x 38.2
Order number: 54 00 0000 0016

mbo identifier	Order number	Nom. size $\varnothing d_1$ h11	Head diameter d_2	d_3 H ₁₄	Length		k	z	Mass (kg) per 100 pcs
					l1 js 15	l2 +0.5			
BNL 16 x 45 x 38.2	54 00 0000 0016	16	20	4	45	38.2	3.5	1.5	7.2
BNL 18 x 50 x 43.5	54 00 0000 0018	18	25	5	50	43.5	3.5	1.5	10.4
BNL 20 x 53 x 47	54 00 0000 0020	20	28	5	53	47	4	1.5	13.9
BNL 25 x 67 x 59	54 00 0000 0025	25	34	6.3	67	59	5.5	1.5	26.6
BNL 28 x 72 x 63.2	54 00 0000 0028	28	34	6.3	72	63.2	5.5	2	36.1
BNL 30 x 67 x 59*	54 30 0067 0059	30	36	6.3	67	59	5.5	2	38.3
BNL 30 x 77 x 68.2	54 00 0000 0030	30	36	6.3	77	68.2	5.5	2	42.8
BNL 35 x 87 x 76.5	54 00 0000 0035	35	45	8	87	76.5	7	2	67.7
BGL 40 x 100 x 90**	34 00 0000 0040	40	48	8	100	90	6	5	103.5
BGL 42 x 100 x 90**	34 00 0000 0042	42	48	8	100	90	7	5	115.1
BGL 50 x 115 x 103**	34 00 0000 0050	50	58	10	115	103	7	6	184.6

*) suitable for clevis G 30 x 54 according to CETOP standard

**) lathe work

04_04
01/2007**Material:**

undercut steel 1.0718 (11SMnPb30+C)

Special version:as to length, tolerance and material upon request;
hardened bolts upon request**Surface protection:**

phosphatized and oiled

optional: electroplated galvanized, passivated
in white-blue (silver/clear) or yellow**Retaining:**

with washer and cotter pin;

also see clevis joint combinations (mbo catalog section 11)