Clevis Joints

Stocked to DIN 71752 in steel and stainless steel. Plain clevis joints or clevis joints and pin assemblies available in right and left hand threads zinc plated steel and stainless steel.

Sizes Steel from M4 up to M48, stainless from M4 up to M27.

Pages 16 - 38

Male Clevis Joints

Stocked in zinc plated steel and stainless steel, right and left hand threads.

Sizes M6 up to M20.

Pages 40 - 43

Clevis Mating Pieces

These are designed to fit in between our clevis joints to create a linkage where an angular offset is required. Available in zinc plated steel and stainless steel.

Sizes M4 up to M20.

Pages 44 - 47

Clevis Retention Clips

These are the most popular type of clip used with our clevis joints. They create a neat compact assembly, only available in zinc plated steel.

Sizes Available for clevis joints from 4mm up to 20mm.

Pages 49- 50

Clevis Pins and Clips

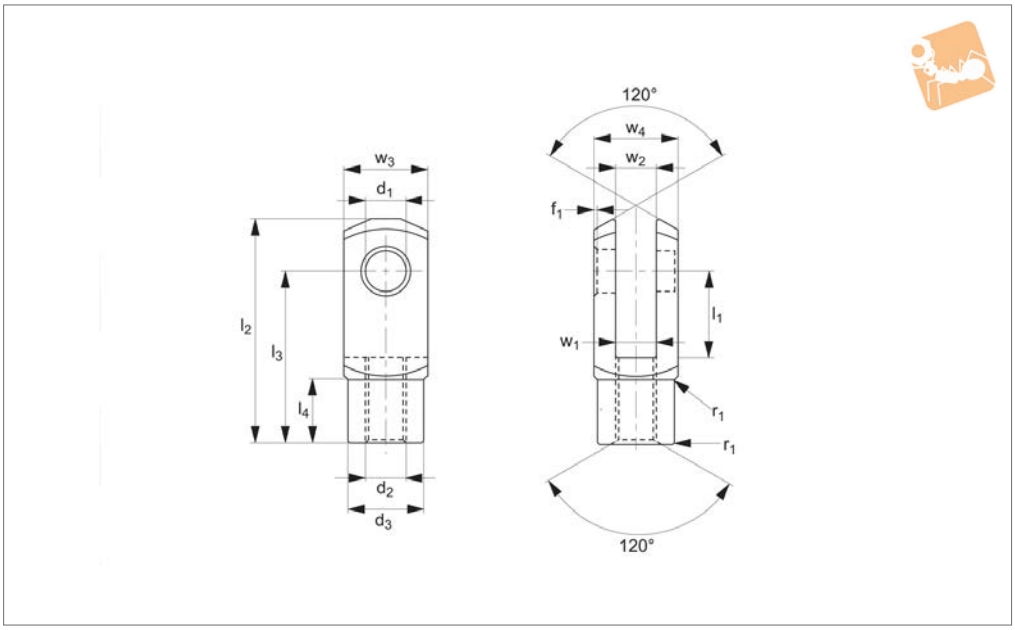
Various styles of pins and clips to suit clevis joints in zinc plated steel and stainless steel.

Sizes Available to suit all sizes of clevis joints we offer.

Pages 51 - 62

Steel Clevis Joints
silver zinc plated

R3385



Material
Steel 1.0718 (11SMnPb30k), silver zinc plated.

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M18-M48: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard.

Tips
For yellow zinc plated version see R3393, standard thread is right hand, (for left hand, see R3386).

Important Notes
For sizes M4-M12, f_1 and r_1 =0,5, for sizes M14-M16, f_1 and r_1 =1
For sizes M18-M20, f_1=1, r_1 = 1,5, for M24 f_1 and r_1 = 1,5, for sizes M27-M30, f_1 = 1,5, r_1 = 2
For M36 f_1 = 2, r_1 = 3, for sizes M42-M48, f_1 = 3, r_1 = 5, for r_1, radius or 45° bevelling.
Other Tolerances:-

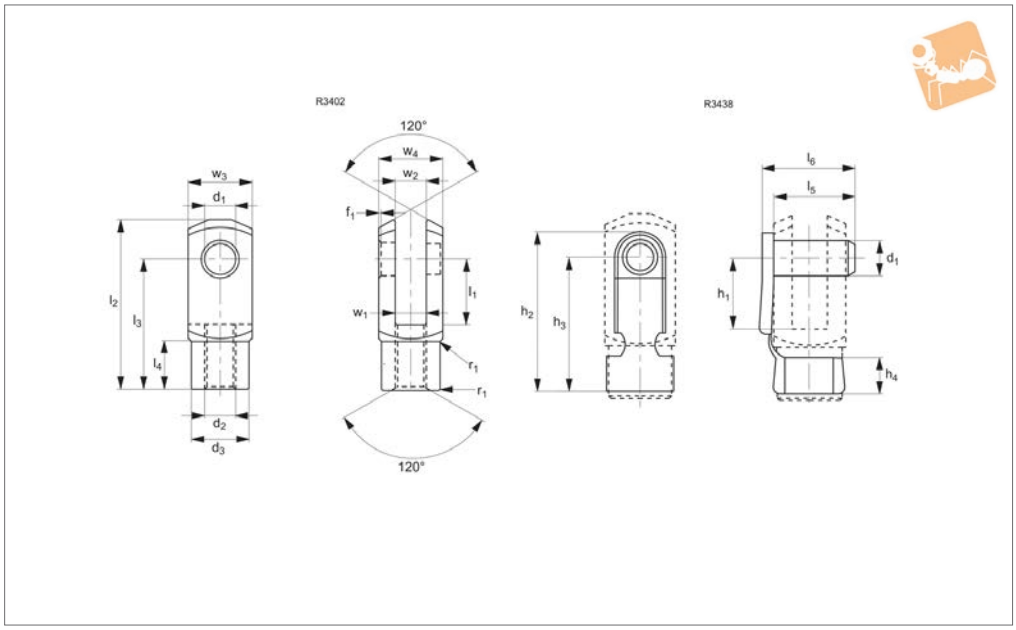
w_4: M4-M16 = +0,3 -0,16
M18-M48 = +0,5 -0,2
w_2: size 4x8-10x20 = B13
All others +0,7 +0,15
d_3: M4-M16 = ±0,3
l_2: size 4x8-6x12 = ±0,3
All others ±0,4
l_3: M4-M16 = ±0,2
M18-M48 = ±0,3
r_1: M18-M48 = ±0,5

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3385.R040	4x8	Right	Coarse	4	8	M4	8	21	16	6.0	4	4	8	8	5
R3385.R041	4x16	Right	Coarse	4	16	M4	8	29	24	6.0	4	4	8	8	7
R3385.R051	5x10	Right	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3385.R052	5x20	Right	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3385.R061	6x12	Right	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3385.R062	6x24	Right	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3385.R081	8x16	Right	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3385.R082	8x16	Right	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3385.R083	8x32	Right	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3385.R084	8x32	Right	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3385.R102	10x20	Right	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3385.R103	10x20	Right	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3385.R104	10x40	Right	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3385.R105	10x40	Right	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3385.R122	12x24	Right	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3385.R123	12x24	Right	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3385.R124	12x48	Right	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3385.R125	12x48	Right	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3385.R142	14x28	Right	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3385.R143	14x28	Right	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3385.R145	14x56	Right	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3385.R146	14x56	Right	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3385.R163	16x32	Right	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3385.R164	16x32	Right	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3385.R166	16x64	Right	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3385.R167	16x64	Right	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3385.R183	18x36	Right	Coarse	18	36	M18	30	94	72	27.0	18	18	36	36	390
R3385.R184	18x36	Right	Fine	18	36	M18x1,5	30	94	72	27.0	18	18	36	36	390
R3385.R204	20x40	Right	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3385.R205	20x40	Right	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3385.R208	20x80	Right	Coarse	20	80	M20	34	145	120	30.0	20	20	40	40	800
R3385.R209	20x80	Right	Fine	20	80	M20x1,5	34	145	120	30.0	20	20	40	40	800
R3385.R255	25x50	Right	Coarse	25	50	M24	42	132	100	36.0	25	25	50	50	1100
R3385.R256	25x50	Right	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100
R3385.R285	28x56	Right	Coarse	28	56	M27	48	148	112	40.0	28	28	55	55	1500
R3385.R286	28x56	Right	Fine	28	56	M27x2	48	148	112	40.0	28	28	55	55	1500
R3385.R305	30x54	Right	Fine	30	54	M27x2	48	148	110	40.0	30	30	55	55	1440
R3385.R306	30x60	Right	Coarse	30	60	M30	52	160	120	42.0	30	30	60	60	1970
R3385.R307	30x60	Right	Fine	30	60	M30x2	52	160	120	42.0	30	30	60	60	1970
R3385.R355	35x54	Right	Fine	35	54	M36x2	60	188	144	54.0	35	35	70	70	2930
R3385.R357	35x72	Right	Coarse	35	72	M36	60	188	144	54.0	35	35	70	70	2930
R3385.R358	35x72	Right	Fine	35	72	M36x2	60	188	144	54.0	35	35	70	70	2930
R3385.R367	36x72	Right	Coarse	35	72	M36	60	188	144	54.0	36	36	70	70	2930
R3385.R368	36x72	Right	Fine	35	72	M36x2	60	188	144	54.0	36	36	70	70	2930
R3385.R408	40x84	Right	Fine	40	84	M42x2	70	232	168	63.5	40	40	85	85	5640
R3385.R428	42x84	Right	Coarse	42	84	M42	70	232	168	63.5	42	42	85	85	5340
R3385.R429	42x84	Right	Fine	42	84	M42x2	70	232	168	63.5	42	42	85	85	5340
R3385.R509	50x96	Right	Coarse	50	96	M48	82	265	192	73.0	50	50	96	96	7860
R3385.R510	50x96	Right	Fine	50	96	M48x2	82	265	192	73.0	50	50	96	96	7860

RH Clevis Joints with Retention Clip
Stainless Steel

R3400



Material
Stainless steel 1.4305 AISI 303.

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M20: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard..

Tips
For left hand, see R3401.

Assembly made up using R3402 clevis joint and R3438 clevis retention clip.

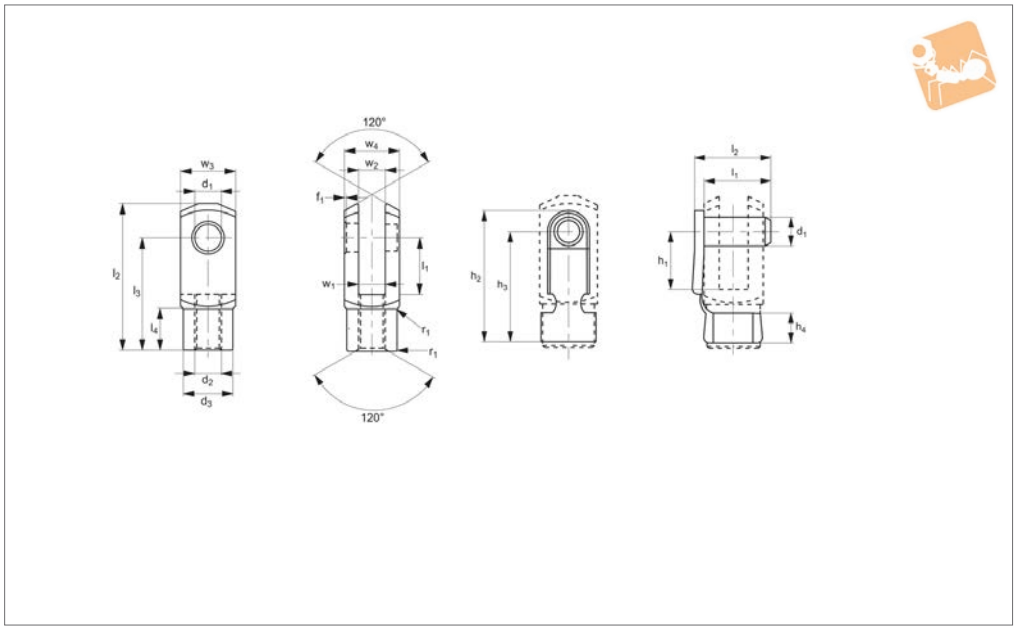
Important Notes
For sizes M4-M12, f1 and r1 =0,5, for sizes M14-M16, f1 and r1 =1
For sizes M18-M20, f1=1, r1 = 1,50ther Tolerances:-
w4: M4-M16 = +0,3 -0,16
M20
w2: size 4x8-10x20 = B13
All others +0,7 +0,15
d3: M4-M16 = ±0,3
l2: size 4x8-6x12 = ±0,3
All others ±0,4
l3: M4-M16 = ±0,2
M20

Order No.	Size	Thread hand	Thread type	d_1	l_1	d_2	d_3	l_2	l_3	Weight g
R3400.R040	4x8	right	Coarse	4	8	M 4	8	21	16	7
R3400.R051	5x10	right	Coarse	5	10	M 5	9	26	20	12
R3400.R052	5x20	Right	Coarse	5	20	M 5	9	36	30	16
R3400.R061	6x12	Right	Coarse	6	12	M 6	10	31	24	20
R3400.R062	6x24	Right	Coarse	6	24	M 6	10	43	36	27
R3400.R081	9x16	Right	Coarse	6	16	M 8	14	42	32	48
R3400.R082	8x16	Right	Fine	8	16	M 8x1	14	42	32	48
R3400.R083	8x32	Right	Coarse	8	32	M 8	14	58	48	54
R3400.R084	8x32	Right	Fine	8	32	M 8x1	14	58	48	54
R3400.R102	10x20	Right	Coarse	10	20	M10	18	52	40	74
R3400.R103	10x20	Right	Fine	10	20	M10x1,25	18	50	40	74
R3400.R104	10x40	Right	Coarse	10	40	M10	18	72	60	116
R3400.R105	10x40	Right	Fine	10	40	M10x1,25	18	72	60	116
R3400.R122	12x24	Right	Coarse	12	24	M12	20	62	48	121
R3400.R123	12x24	Right	Fine	12	24	M12x1,25	20	62	48	121
R3400.R124	12x48	Right	Coarse	12	45	M12	20	86	72	175
R3400.R125	12x48	Right	Fine	12	48	M12x1,25	20	86	72	175
R3400.R142	14x28	Right	Coarse	14	28	M14	24	72	56	178
R3400.R143	14x28	Right	Fine	14	28	M14x1,5	24	72	56	178
R3400.R145	14x56	Right	Coarse	14	56	M14	24	101	85	258
R3400.R146	14x56	Right	Fine	14	56	M14x1,5	24	101	85	258
R3400.R163	16x32	Right	Coarse	16	32	M16	26	83	64	282
R3400.R164	16x32	Right	Fine	16	32	M16x1,5	26	83	64	282
R3400.R166	16x64	Right	Coarse	16	64	M16	26	115	96	411
R3400.R167	16x64	Right	Fine	16	64	M16x1,5	26	115	96	411
R3400.R204	20x40	Right	Coarse	20	40	M20	34	105	80	550
R3400.R205	20x40	Right	Fine	20	40	M20x1,5	34	105	80	550

Order No.	l_4	l_5	l_6	h_1	h_2	h_3	h_4	w_1	w_2	w_3	w_4
R3400.R040	6	9	11	8	19	15	4	4	4	4	4
R3400.R051	7.5	9	15	10	23	19	4.5	5	5	10	10
R3400.R052	7.5	12	14	20	33	29	4.5	5	5	10	10
R3400.R061	9	14	16	12	28	23	6	6	6	12	12
R3400.R062	9	14	16	24	40	35	6	6	6	12	12
R3400.R081	12	19	23	16	37	31	8	8	8	16	16
R3400.R082	12	19	23	16	37	31	8	8	8	16	16
R3400.R083	12	19	23	32	53	47	8	8	8	16	16
R3400.R084	12	19	23	32	53	47	8	8	8	16	16
R3400.R102	15	23	27	20	46	39	10	10	10	20	20
R3400.R103	15	23	27	20	46	39	10	10	10	20	20
R3400.R104	15	23	27	40	66	59	10	10	10	20	20
R3400.R105	15	23	27	40	66	59	10	10	10	20	20
R3400.R122	18	28	32	24	55	46	12	12	12	24	24
R3400.R123	18	28	32	24	55	46	12	12	12	24	24
R3400.R124	18	28	32	48	79	71	12	12	12	24	24
R3400.R125	18	28	32	48	79	71	12	12	12	24	24
R3400.R142	22.5	31	35	28	62	52	14	14	14	27	27
R3400.R143	22.5	31	35	28	62	52	14	14	14	27	27
R3400.R145	22.5	31	35	56	92	82	14	14	14	27	27
R3400.R146	22.5	31	35	56	92	82	14	14	14	27	27
R3400.R163	24	36	40	32	72	62	16	16	16	32	32
R3400.R164	24	36	40	32	72	62	16	16	16	32	32
R3400.R166	24	36	40	64	103	92	16	16	16	32	32
R3400.R167	24	36	40	64	103	92	16	16	16	32	32
R3400.R204	30	44	48	40	88	72	16	20	20	40	40
R3400.R205	30	44	48	40	88	72	16	20	20	40	40

LH Clevis Joints with Retention Clip
stainless steel

R3401



Material
Stainless steel 1.4305

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M20: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard.

Tips
For right hand, see R3400.Assembly made up using R3403 clevis joint and R3438 clevis retention clip.

Important Notes
For sizes M4-M12, f1 and r1 =0,5, for sizes M14-M16, f1 and r1 =1
For sizes M18-M20, f1=1, r1 = 1,50ther Tolerances:-
w4: M4-M16 = +0,3 -0,16
M20
w2: size 4x8-10x20 = B13
All others +0,7 +0,15
d3: M4-M16 = ±0,3
l2: size 4x8-6x12 = ±0,3
All others ±0,4
l3: M4-M16 = ±0,2
M20

Order No.	Size	Thread hand	Thread type	d_1	l_1	d_2	d_3	l_2	Weight g
R3401.L040	4x8	Left	Coarse	4	8	M 4	8	21	7
R3401.L051	5x10	Left	Coarse	5	12	M 5	9	26	12
R3401.L052	5x20	Left	Coarse	5	20	M 5	9	36	16
R3401.L061	6x12	Left	Coarse	6	12	M 6	10	31	20
R3401.L062	6x24	Left	Coarse	6	24	M 6	10	43	54
R3401.L081	8x16	Left	Coarse	8	16	M 8	14	42	48
R3401.L082	8x16	Left	Fine	8	16	M 8x1	14	42	48
R3401.L083	8x32	Left	Coarse	8	32	M 8	14	58	54
R3401.L084	8x32	Left	Fine	8	32	M 8x1	14	58	54
R3401.L102	10x20	Left	Coarse	10	20	M10	18	52	74
R3403.L103	10x20	Left	Coarse	10	20	M10x1,25	18	52	74
R3401.L104	10x40	Left	Coarse	10	40	M10	18	72	116
R3401.L105	10x40	Left	Fine	10	40	M10x1,25	18	72	116
R3401.L122	12x24	Left	Coarse	12	24	M12	20	62	121
R3401.L123	12x24	Left	Fine	12	24	M12x1,25	20	62	121
R3401.L124	12x48	Left	Coarse	12	48	M12	20	86	175
R3401.L125	12x48	Left	Fine	12	48	M12x1,25	20	86	175
R3401.L142	14x28	Left	Coarse	14	28	M14	24	72	178
R3401.L143	14x28	Left	Fine	14	28	M14x1,5	24	72	178
R3401.L145	14x56	Left	Coarse	14	56	M14	24	101	258
R3401.L146	14x56	Left	Fine	14	56	M14x1,5	24	101	258
R3401.L163	16x32	Left	Coarse	16	32	M16	26	83	282
R3401.L164	16x32	Left	Fine	16	32	M16x1,5	26	83	282
R3401.L166	16x64	Left	Coarse	16	64	M16	26	115	411
R3401.L167	16x64	Left	Fine	16	64	M16x1,5	26	115	411
R3401.L204	20x40	Left	Coarse	20	40	M20	34	105	550
R3401.L205	20x40	Left	Fine	20	40	M20x1,5	34	105	550

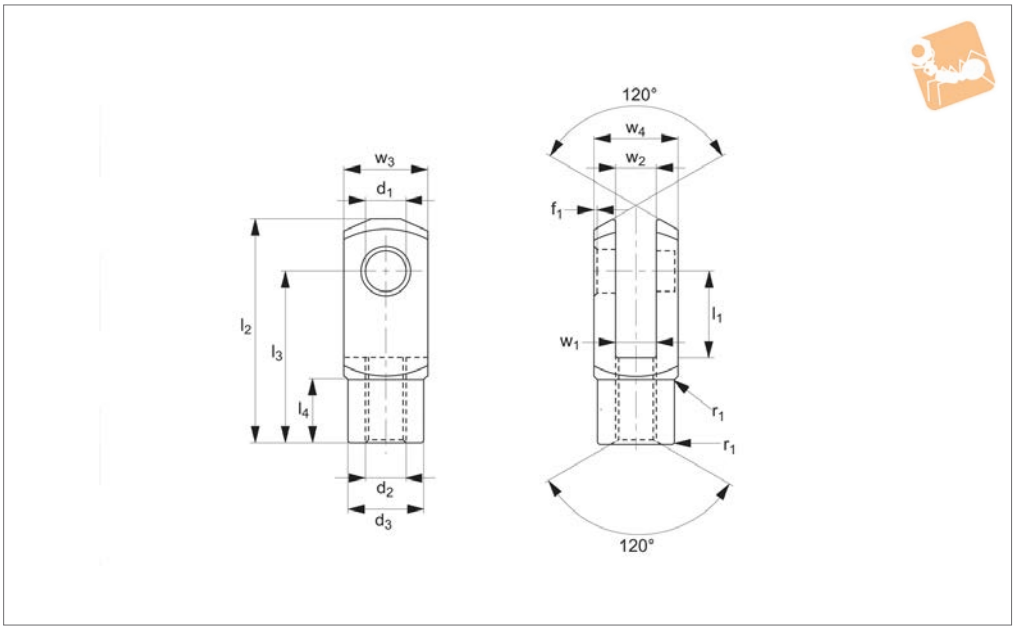
LH Clevis Joints with Retention Clip

stainless steel

Order No.	l_3	l_4	l_5	l_6	h_1	h_2	h_3	h_4	w_1	w_2	w_3	w_4
R3401.L040	16	6.0	9	11	8	19	15	4.0	4	4	8	8
R3401.L051	30	7.5	9	14	10	23	19	4.5	5	5	10	10
R3401.L052	30	7.5	12	14	20	33	29	4.5	5	5	10	10
R3401.L061	24	9.0	14	16	12	28	23	6.0	6	6	12	12
R3401.L062	36	9.0	14	16	24	40	35	6.0	6	6	12	12
R3401.L081	32	12.0	19	23	16	37	31	8.0	8	8	16	16
R3401.L082	32	12.0	19	23	16	37	31	8.0	8	8	16	16
R3401.L083	48	12.0	19	23	32	53	47	8.0	8	8	16	16
R3401.L084	48	12.0	19	23	32	53	47	8.0	8	8	16	16
R3401.L102	40	15.0	23	27	20	46	39	10.0	10	10	20	20
R3403.L103	40	15.0	23	27	20	46	39	10.0	10	10	20	20
R3401.L104	60	15.0	23	27	40	66	59	10.0	10	10	20	20
R3401.L105	60	15.0	23	27	40	66	59	10.0	10	10	20	20
R3401.L122	48	18.0	28	32	24	55	46	12.0	12	12	24	24
R3401.L123	48	18.0	28	32	24	55	46	12.0	12	12	24	24
R3401.L124	72	18.0	28	32	48	79	71	12.0	12	12	24	24
R3401.L125	72	18.0	28	32	48	79	71	12.0	12	12	24	24
R3401.L142	56	22.5	31	35	28	62	52	14.0	14	14	27	27
R3401.L143	56	22.5	31	35	28	62	52	14.0	14	14	27	27
R3401.L145	85	22.5	31	35	56	92	82	14.0	14	14	27	27
R3401.L146	85	22.5	31	35	56	92	82	14.0	14	14	27	27
R3401.L163	64	24.0	36	40	32	72	62	16.0	16	16	32	32
R3401.L164	64	24.0	36	40	32	72	62	16.0	16	16	32	32
R3401.L166	96	24.0	36	40	64	103	92	16.0	16	16	32	32
R3401.L167	96	24.0	36	40	64	103	92	16.0	16	16	32	32
R3401.L204	80	30.0	44	48	40	88	72	16.0	20	20	40	40
R3401.L205	80	30.0	44	48	40	88	72	16.0	20	20	40	40

Steel Clevis Joints
left hand - silver zinc plated

R3386



Material
Steel 1.0718 (11SMnPb30k), silver zinc plated.

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M18-M48: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard.

Tips
For yellow zinc plated version see R3394.

Important Notes
For sizes M4-M12, f_1 and r_1 =0,5, for sizes M14-M16, f_1 and r_1 =1
For sizes M18-M20, f_1=1, r_1 = 1,5, for M24 f_1 and r_1 = 1,5, for sizes M27-M30, f_1 = 1,5, r_1 = 2
For M36 f_1 = 2, r_1 = 3, for sizes M42-M48, f_1 = 3, r_1 = 5, for r_1, radius or 45° bevelling.
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M18-M48 = +0,5 -0,2
w_2: size 4x8-10x20 = B13
All others +0,7 +0,15
d_3: M4-M16 = ±0,3
l_2: size 4x8-6x12 = ±0,3
All others ±0,4
l_3: M4-M16 = ±0,2
M18-M48 = ±0,3
r_1: M18-M48 = ±0,5

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3386.L040	4x8	Left	Coarse	4	8	M4	8	21	16	6.0	4	4	8	8	5
R3386.L041	4x16	Left	Coarse	4	16	M4	8	29	24	6.0	4	4	8	8	7
R3386.L051	5x10	Left	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3386.L052	5x20	Left	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3386.L061	6x12	Left	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3386.L062	6x24	Left	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3386.L081	8x16	Left	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3386.L082	8x16	Left	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3386.L083	8x32	Left	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3386.L084	8x32	Left	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3386.L102	10x20	Left	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3386.L103	10x20	Left	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3386.L104	10x40	Left	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3386.L105	10x40	Left	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3386.L122	12x24	Left	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3386.L123	12x24	Left	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3386.L124	12x48	Left	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3386.L125	12x48	Left	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3386.L142	14x28	Left	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3386.L143	14x28	Left	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3386.L145	14x56	Left	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3386.L146	14x56	Left	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3386.L163	16x32	Left	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3386.L164	16x32	Left	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3386.L166	16x64	Left	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3386.L167	16x64	Left	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411

Steel Clevis Joints

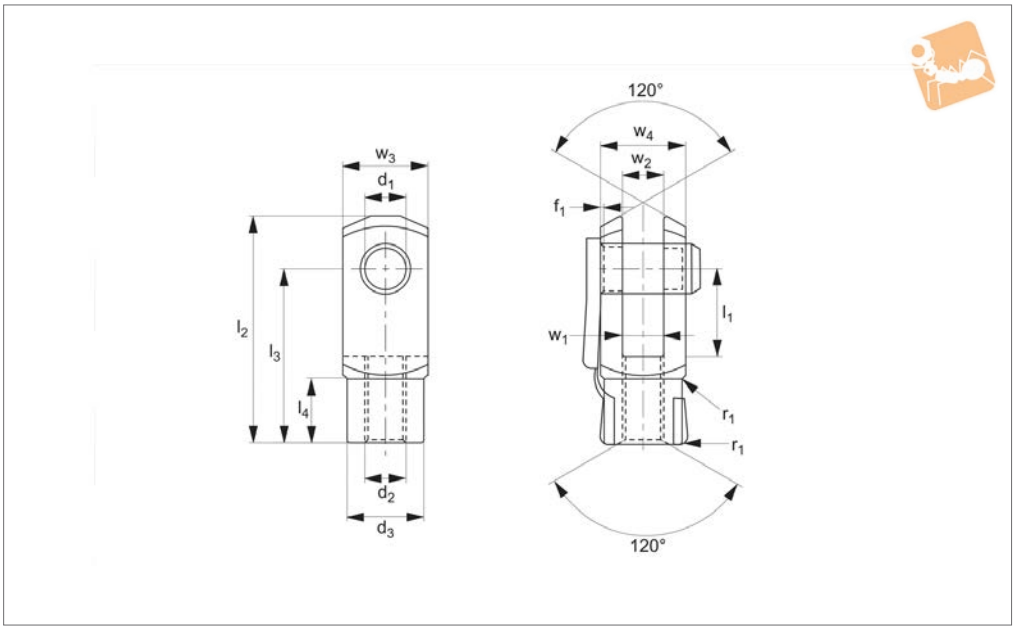
left hand - silver zinc plated

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3386.L183	18x36	Left	Coarse	18	36	M18	30	94	72	27.0	18	18	36	36	390
R3386.L184	18x36	Left	Fine	18	36	M18x1,5	30	94	72	27.0	18	18	36	36	390
R3386.L204	20x40	Left	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3386.L205	20x40	Left	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3386.L208	20x80	Left	Coarse	20	80	M20	34	145	120	30.0	20	20	40	40	800
R3386.L209	20x80	Left	Fine	20	80	M20x1,5	34	145	120	30.0	20	20	40	40	800
R3386.L255	25x50	Left	Coarse	25	50	M24	42	132	100	36.0	25	25	50	50	1100
R3386.L256	25x50	Left	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100
R3386.L285	28x56	Left	Coarse	28	56	M27	48	148	112	40.0	28	28	55	55	1500
R3386.L286	28x56	Left	Fine	28	56	M27x2	48	148	112	40.0	28	28	55	55	1500
R3386.L305	30x54	Left	Fine	30	54	M27x2	48	148	110	40.0	30	30	55	55	1440
R3386.L306	30x60	Left	Coarse	30	60	M30	52	160	120	42.0	30	30	60	60	1970
R3386.L307	30x60	Left	Fine	30	60	M30x2	52	160	120	42.0	30	30	60	60	1970
R3386.L355	35x54	Left	Fine	35	54	M36x2	60	188	144	54.0	35	35	70	70	2930
R3386.L357	35x72	Left	Coarse	35	72	M36	60	188	144	54.0	35	35	70	70	2930
R3386.L358	35x72	Left	Fine	35	72	M36x2	60	188	144	54.0	35	35	70	70	2930
R3386.L367	36x72	Left	Coarse	35	72	M36	60	188	144	54.0	36	36	70	70	2930
R3386.L368	36x72	Left	Fine	35	72	M36x2	60	188	144	54.0	36	36	70	70	2930
R3386.L408	40x84	Left	Fine	40	84	M42x2	70	232	168	63.5	40	40	85	85	5640
R3386.L428	42x84	Left	Coarse	42	84	M42	70	232	168	63.5	42	42	85	85	5340
R3386.L429	42x84	Left	Fine	42	84	M42x2	70	232	168	63.5	42	42	85	85	5340
R3386.L509	50x96	Left	Coarse	50	96	M48	82	265	192	73.0	50	50	96	96	7860
R3386.L510	50x96	Left	Fine	50	96	M48x2	82	265	192	73.0	50	50	96	96	7860

Steel Clevis Joints with Retention

silver zinc plated

R3387



Material
Steel 1.0718 (11SMnPb30k), silver zinc plated.

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M20: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard.

Tips
For yellow zinc plated version see R3398, standard thread is right hand, (for left hand, see R3388).

Assembly made up using R3385 clevis joint and R3435 clevis retention clip.

Important Notes
For sizes M4-M12, f_1 and r_1 =0,5, for sizes M14-M16, f_1 and r_1 =1
For sizes M18-M20, f_1=1, r_1 = 1,5, for M24 f_1 and r_1 = 1,5, for sizes M27-M30, f_1 = 1,5, r_1 = 2
For M36 f_1 = 2, r_1 = 3, for sizes M42-M48, f_1 = 3, r_1 = 5, for r_1, radius or 45° bevelling.
Other Tolerances:-

w_4: M4-M16 = +0,3 -0,16
M18-M48 = +0,5 -0,2
w_2: size 4x8-10x20 = B13
All others +0,7 +0,15
d_3: M4-M16 = ±0,3
l_2: size 4x8-6x12 = ±0,3
All others ±0,4
l_3: M4-M16 = ±0,2
M18-M48 = ±0,3
r_1: M18-M48 = ±0,5

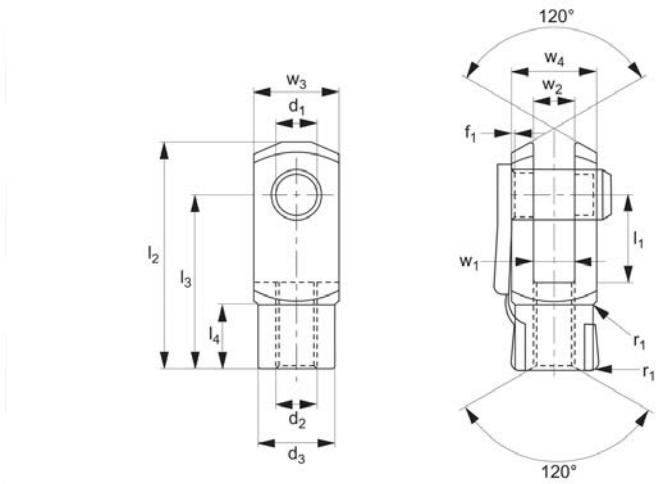
Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3387.R040	4x8	Right	Coarse	4	8	M4	8	21	16	6.0	4	4	8	8	5
R3387.R051	5x10	Right	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3387.R052	5x20	Right	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3387.R061	6x12	Right	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3387.R062	6x24	Right	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3387.R081	8x16	Right	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3387.R082	8x16	Right	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3387.R083	8x32	Right	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3387.R084	8x32	Right	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3387.R102	10x20	Right	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3387.R103	10x20	Right	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3387.R104	10x40	Right	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3387.R105	10x40	Right	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3387.R122	12x24	Right	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3387.R123	12x24	Right	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3387.R124	12x48	Right	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3387.R125	12x48	Right	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3387.R142	14x28	Right	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3387.R143	14x28	Right	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3387.R145	14x56	Right	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3387.R146	14x56	Right	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3387.R163	16x32	Right	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3387.R164	16x32	Right	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3387.R166	16x64	Right	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3387.R167	16x64	Right	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3387.R204	20x40	Right	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3387.R205	20x40	Right	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550

Steel Clevis Joints with Retention

left hand thread - silver zinc plated

R3388



Material
Steel 1.0718 (11SMnPb30k), silver zinc plated.

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M20: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard.

Tips
For yellow zinc plated version see R3399, assembly made up using R3386 clevis joint and R3435 clevis retention clip.

Important Notes
For sizes M4-M12, f_1 and r_1 =0,5
For sizes M4-M16, f_1 and r_1 =1
For sizes M20, f_1=1, r_1 = 1,5
For r_1, radius or 45° bevelling.

Other Tolerances:-

w_4: M4-M16 = +0,3 -0,16
M20 = +0,5 -0,2
w_2: size 4x8-10x20 = B13
All others +0,7 +0,15
d_3: M4-M16 = ±0,3
l_2: size 4x8-6x12 = ±0,3
All others ±0,4
l_3: M4-M16 = ±0,2
M20 = ±0,3
r_1: M20 = ±0,5

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3388.L040	4x8	Left	Coarse	4	8	M4	8	21	16	6.0	4	4	8	8	5
R3388.L051	5x10	Left	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3388.L052	5x20	Left	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3388.L061	6x12	Left	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3388.L062	6x24	Left	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3388.L081	8x16	Left	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3388.L082	8x16	Left	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3388.L083	8x32	Left	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3388.L084	8x32	Left	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3388.L102	10x20	Left	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3388.L103	10x20	Left	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3388.L104	10x40	Left	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3388.L105	10x40	Left	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3388.L122	12x24	Left	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3388.L123	12x24	Left	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3388.L124	12x48	Left	Course	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3388.L125	12x48	Left	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3388.L142	14x28	Left	Course	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3388.L143	14x28	Left	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3388.L145	14x56	Left	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3388.L146	14x56	Left	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3388.L163	16x32	Left	Course	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3388.L164	16x32	Left	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3388.L166	16x64	Left	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3388.L167	16x64	Left	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3388.L204	20x40	Left	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550

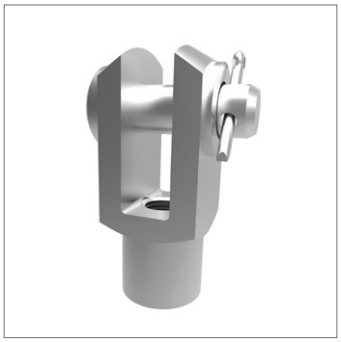
Steel Clevis Joints with Retention

left hand thread - silver zinc plated

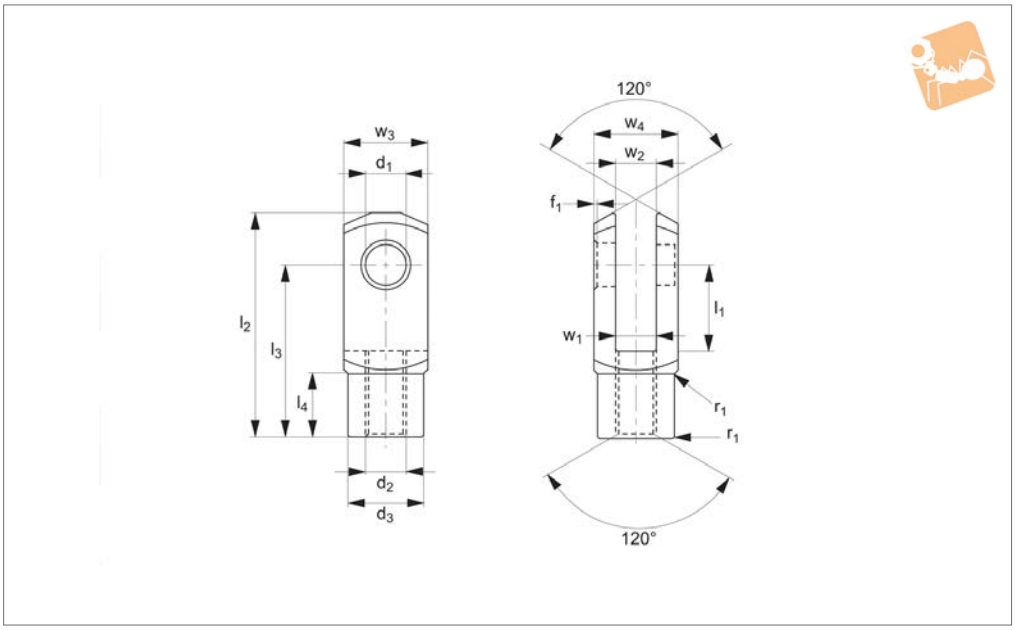
Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3388.L205	20x40	Left	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550

Steel Clevis Joint with Pin

silver zinc plated



R3389



Material
Steel 1.0718 (11SMnPb30k), silver zinc plated.

Technical Notes
M5-M16: DIN 71 752/DIN ISO 8140.
M18-M48: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard.

Tips
Standard thread is right hand, (for left hand, see R3390).
Assembly is made up using R3385 clevis joint, R3455 clevis pin, P0330 washer, and P1240 split cotter pin.

Important Notes
For sizes M4-M12, f_1 and r_1 =0,5, for sizes M14-M16, f_1 and r_1 =1
For sizes M18-M20, f_1=1, r_1 = 1,5, for M24 f_1 and r_1 = 1,5, for sizes M27-M30, f_1 = 1,5, r_1 = 2
For M36 f_1 = 2, r_1 = 3, for sizes M42-M48, f_1 = 3, r_1 = 5, for r_1, radius or 45° bevelling.
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M18-M48 = +0,5 -0,2
w_2: size 4x8-10x20 = B13
All others +0,7 +0,15
d_3: M4-M16 = ±0,3
l_2: size 4x8-6x12 = ±0,3
All others ±0,4
l_3: M4-M16 = ±0,2
M18-M48 = ±0,3
r_1: M18-M48 = ±0,5

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3389.R051	5x10	Right	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3389.R052	5x20	Right	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3389.R061	6x12	Right	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3389.R062	6x24	Right	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3389.R081	8x16	Right	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3389.R082	8x16	Right	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3389.R083	8x32	Right	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3389.R084	8x32	Right	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3389.R102	10x20	Right	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3389.R103	10x20	Right	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3389.R104	10x40	Right	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3389.R105	10x40	Right	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3389.R122	12x24	Right	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3389.R123	12x24	Right	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3389.R124	12x48	Right	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3389.R125	12x48	Right	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3389.R142	14x28	Right	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3389.R143	14x28	Right	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3389.R145	14x56	Right	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3389.R146	14x56	Right	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3389.R163	16x32	Right	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3389.R164	16x32	Right	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3389.R166	16x64	Right	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3389.R167	16x64	Right	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3389.R183	18x36	Right	Coarse	18	36	M18	30	94	72	27.0	18	18	36	36	390

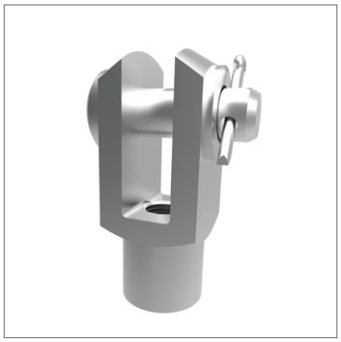
Steel Clevis Joint with Pin

silver zinc plated

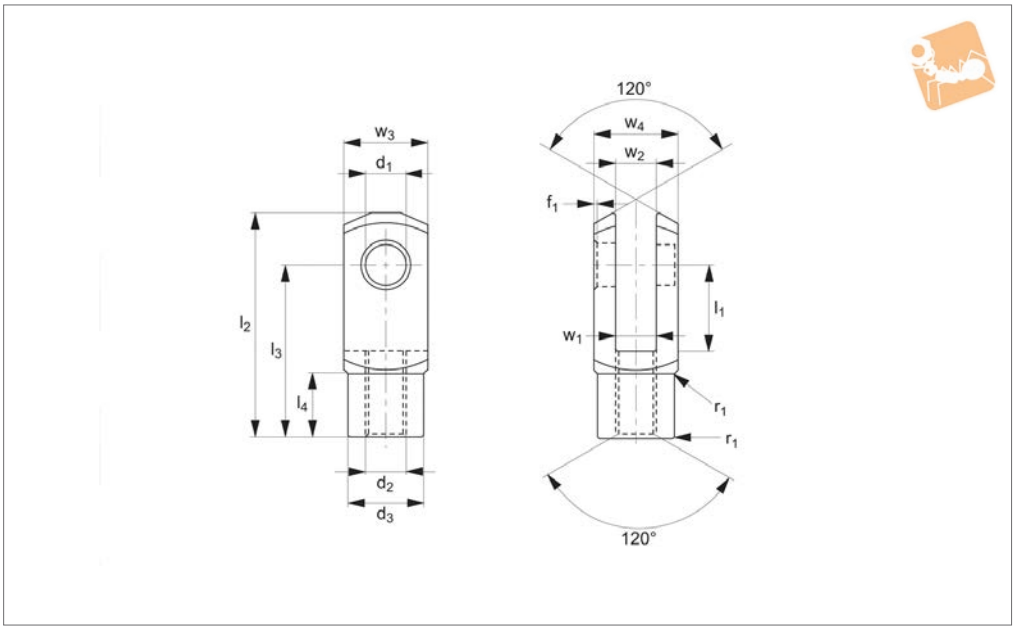
Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3389.R184	18x36	Right	Fine	18	36	M18x1,5	30	94	72	27.0	18	18	36	36	390
R3389.R204	20x40	Right	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3389.R205	20x40	Right	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3389.R208	20x80	Right	Coarse	20	80	M20	34	145	120	30.0	20	20	40	40	800
R3389.R209	20x80	Right	Fine	20	80	M20x1,5	34	145	120	30.0	20	20	40	40	800
R3389.R255	25x50	Right	Course	25	50	M24	42	132	100	36.0	25	25	50	50	1100
R3389.R256	25x50	Right	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100
R3389.R285	28x56	Right	Coarse	28	56	M27	48	148	112	40.0	28	28	55	55	1500
R3389.R286	28x56	Right	Fine	28	56	M27x2	48	148	112	40.0	28	28	55	55	1500
R3389.R305	30x54	Right	Fine	30	54	M27x2	48	148	110	40.0	30	30	55	55	1440
R3389.R306	30x60	Right	Coarse	30	60	M30	52	160	120	42.0	30	30	60	60	1970
R3389.R307	30x60	Right	Fine	30	60	M30x2	52	160	120	42.0	30	30	60	60	1970
R3389.R355	35x54	Right	Fine	35	54	M36x2	60	188	144	54.0	35	35	70	70	2930
R3389.R357	35x72	Right	Coarse	35	72	M36	60	188	144	54.0	35	35	70	70	2930
R3389.R358	35x72	Right	Fine	35	72	M36x2	60	188	144	54.0	35	35	70	70	2930
R3389.R367	36x72	Right	Coarse	35	72	M36	60	188	144	54.0	36	36	70	70	2930
R3389.R368	36x72	Right	Fine	35	72	M36x2	60	188	144	54.0	36	36	70	70	2930
R3389.R408	40x84	Right	Fine	40	84	M42x2	70	232	168	63.5	40	40	85	85	5640
R3389.R428	42x84	Right	Coarse	42	84	M42	70	232	168	63.5	42	42	85	85	5340
R3389.R429	42x84	Right	Fine	42	84	M42x2	70	232	168	63.5	42	42	85	85	5340
R3389.R509	50x96	Right	Coarse	50	96	M48	82	265	192	73.0	50	50	96	96	7860
R3389.R510	50x96	Right	Fine	50	96	M48x2	82	265	192	73.0	50	50	96	96	7860

Steel Clevis Joints with Pin

left hand thread - silver zinc plated



R3390



Material
Steel 1.0718 (11SMnPb30k), silver zinc plated.

Technical Notes
M5-M16: DIN 71 752/DIN ISO 8140.
M18-M48: Similar to DIN 71 752/DIN ISO 8140 and according to CETOP standard.

Tips
Assembly is made up using the R3386 clevis joint, R3455 clevis pin, P0330 washer, and P1240 split cotter pin.

Important Notes
For sizes M4-M12, f_1 and r_1 =0,5, for sizes M14-M16, f_1 and r_1 =1
For sizes M18-M20, f_1=1, r_1 = 1,5, for M24 f_1 and r_1 = 1,5, for sizes M27-M30, f_1 = 1,5, r_1 = 2
For M36 f_1 = 2, r_1 = 3, for sizes M42-M48, f_1 = 3, r_1 = 5, for r_1, radius or 45° bevelling.

Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M18-M48 = +0,5 -0,2
w_2: size 4x8-10x20 = B13
All others +0,7 +0,15
d_3: M4-M16 = ±0,3
l_2: size 4x8-6x12 = ±0,3
All others ±0,4
l_3: M4-M16 = ±0,2
M18-M48 = ±0,3
r_1: M18-M48 = ±0,5

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3390.L051	5x10	Left	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3390.L052	5x20	Left	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3390.L061	6x12	Left	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3390.L062	6x24	Left	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3390.L081	8x16	Left	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3390.L082	8x16	Left	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3390.L083	8x32	Left	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3390.L084	8x32	Left	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3390.L102	10x20	Left	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3390.L103	10x20	Left	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3390.L104	10x40	Left	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3390.L105	10x40	Left	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3390.L122	12x24	Left	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3390.L123	12x24	Left	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3390.L124	12x48	Left	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3390.L125	12x48	Left	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3390.L142	14x28	Left	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3390.L143	14x28	Left	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3390.L145	14x56	Left	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3390.L146	14x56	Left	Fine	14	56	M14x1,5	24	101	85	22.5	14	4	27	27	258
R3390.L163	16x32	Left	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3390.L164	16x32	Left	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3390.L166	16x64	Left	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3390.L167	16x64	Left	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3390.L183	18x36	Left	Coarse	18	36	M18	30	94	72	27.0	18	18	36	36	390
R3390.L184	18x36	Left	Fine	18	36	M18x1,5	30	94	72	27.0	18	18	36	36	390

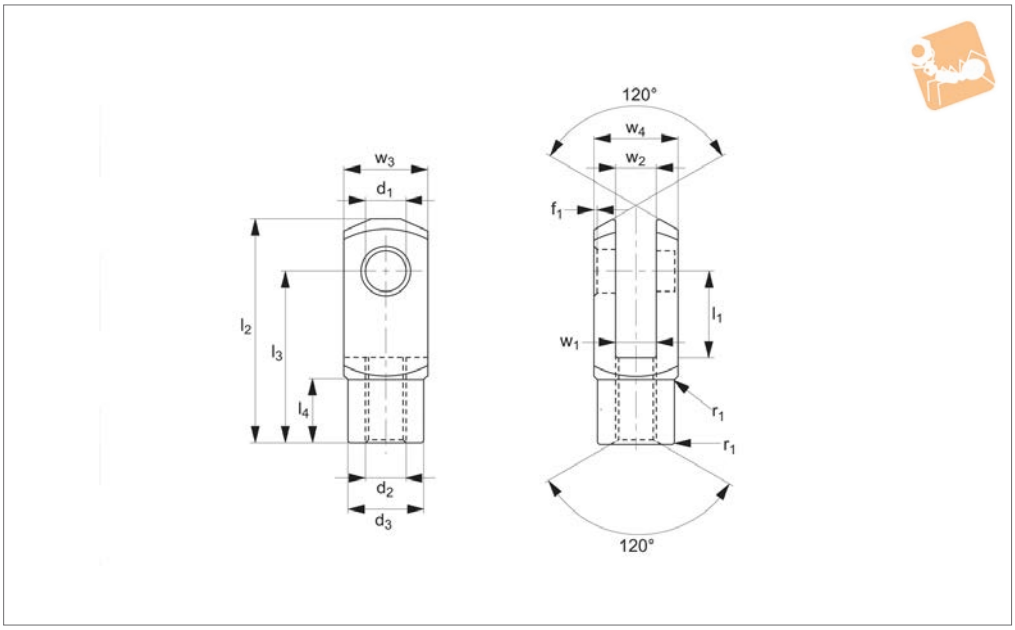
Steel Clevis Joints with Pin

left hand thread - silver zinc plated

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3390.L204	20x40	Left	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3390.L205	20x40	Left	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3390.L208	20x80	Left	Coarse	20	80	M20	34	145	120	30.0	20	20	40	40	800
R3390.L209	20x80	Left	Fine	20	80	M20x1,5	34	145	120	30.0	20	20	40	40	800
R3390.L255	25x50	Left	Coarse	25	50	M24	42	132	100	36.0	25	25	50	50	1100
R3390.L256	25x50	Left	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100
R3390.L285	28x56	Left	Coarse	28	56	M27	48	148	112	40.0	28	28	55	55	1500
R3390.L286	28x56	Left	Fine	28	56	M27x2	48	148	112	40.0	28	28	55	55	1500
R3390.L305	30x54	Left	Fine	30	54	M27x2	48	148	110	40.0	30	30	55	55	1440
R3390.L306	30x60	Left	Coarse	30	60	M30	52	160	120	42.0	30	30	60	60	1970
R3390.L307	30x60	Left	Fine	30	60	M30x2	52	160	120	42.0	30	30	60	60	1970
R3390.L355	35x54	Left	Fine	35	54	M36x2	60	188	144	54.0	35	35	70	70	2930
R3390.L357	35x72	Left	Course	35	72	M36	60	188	144	54.0	35	35	70	70	2930
R3390.L358	35x72	Left	Fine	35	72	M36x2	60	188	144	54.0	35	35	70	70	2930
R3390.L367	36x72	Left	Course	35	72	M36	60	188	144	54.0	36	36	70	70	2930
R3390.L368	36x72	Left	Fine	35	72	M36x2	60	188	144	54.0	36	36	70	70	2930
R3390.L408	40x84	Left	Fine	40	84	M42x2	70	232	168	63.5	40	40	85	85	5640
R3390.L428	42x84	Left	Coarse	42	84	M42	70	232	168	63.5	42	42	85	85	5340
R3390.L429	42x84	Left	Fine	42	84	M42x2	70	232	168	63.5	42	42	85	85	5340
R3390.L509	50x96	Left	Coarse	50	96	M48	82	265	192	73.0	50	50	96	96	7860
R3390.L510	50x96	Left	Fine	50	96	M48x2	82	265	192	73.0	50	50	96	96	7860

Stainless Clevis Joint

R3402



Material
Stainless steel (1.4305 AISI 303 X8CrNiS18-9).

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M20-M27: Similar to DIN 71 752 and according to CETOP standard.

Tips
Standard thread is right hand, (for left hand, see R3403).

Important Notes
For sizes M4-M12, f_1 and r_1 = 0,5, for sizes M14-M16, f_1 and r_1 = 1, for size M20, f_1=1, r_1 = 1,5
For M24, f_1 and r_1 = 1,5, for M27, f_1 = 1,5, r_1 = 2, for r_1, radius or 45° bevelling.
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M20-M27 = +0,5 - 0,2
w_2: Size 4x8-10x20 = B13
Size 10x40-30x54 = +0,7 +0,15
l_3: up to size 6x12 = ±0,3
From size 6x24 = ±0,4

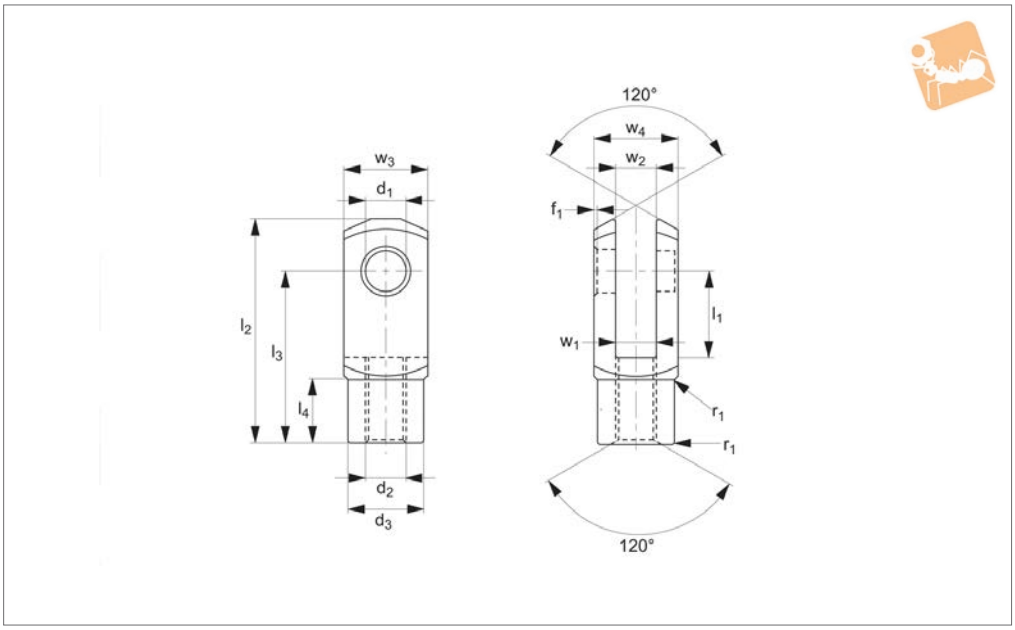
Order No.	Size	Thread hand	Thread type	d_1 tol. h9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 ±0.5	w_2	w_3 tol. h11	w_4	Weight g
R3402.R040	4x8	Right	Coarse	4	8	M 4	8	21	16	6.0	4	4	8	8	5
R3402.R041	4x16	Right	Coarse	4	16	M 4	8	29	24	6.0	4	4	8	8	7
R3402.R051	5x10	Right	Coarse	5	10	M 5	9	26	20	7.5	5	5	10	10	9
R3402.R052	5x20	Right	Coarse	5	20	M 5	9	36	30	7.5	5	5	10	10	13
R3402.R061	6x12	Right	Coarse	6	12	M 6	10	31	24	9.0	6	6	12	12	15
R3402.R062	6x24	Right	Coarse	6	24	M 6	10	43	36	9.0	6	6	12	12	21
R3402.R081	8x16	Right	Coarse	8	16	M 8	14	42	32	12.0	8	8	16	16	37
R3402.R082	8x16	Right	Fine	8	16	M 8x1	14	42	32	12.0	8	8	16	16	37
R3402.R083	8x32	Right	Coarse	8	32	M 8	14	58	48	12.0	8	8	16	16	54
R3402.R084	8x32	Right	Fine	8	32	M 8x1	14	58	48	12.0	8	8	16	16	54
R3402.R102	10x20	Right	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3402.R103	10x20	Right	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3402.R104	10x40	Right	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3402.R105	10x40	Right	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3402.R122	12x24	Right	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3402.R123	12x24	Right	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3402.R124	12x48	Right	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3402.R125	12x48	Right	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3402.R142	14x28	Right	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3402.R143	14x28	Right	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3402.R145	14x56	Right	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3402.R146	14x56	Right	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3402.R163	16x32	Right	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3402.R164	16x32	Right	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3402.R166	16x64	Right	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3402.R167	16x64	Right	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3402.R204	20x40	Right	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550

Order No.	Size	Thread hand	Thread type	d_1 tol. h9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 ±0.5	w_2	w_3 tol. h11	w_4	Weight g
R3402.R205	20x40	Right	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3402.R255	25x50	Right	Coarse	25	50	M24	42	132	100	36.0	25	25	50	50	1100
R3402.R256	25x50	Right	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100
R3402.R305	30x54	Right	Fine	30	54	M27x2	48	148	110	40.0	30	30	55	55	1440

Stainless Clevis Joint

A4 stainless steel

R3402.A4



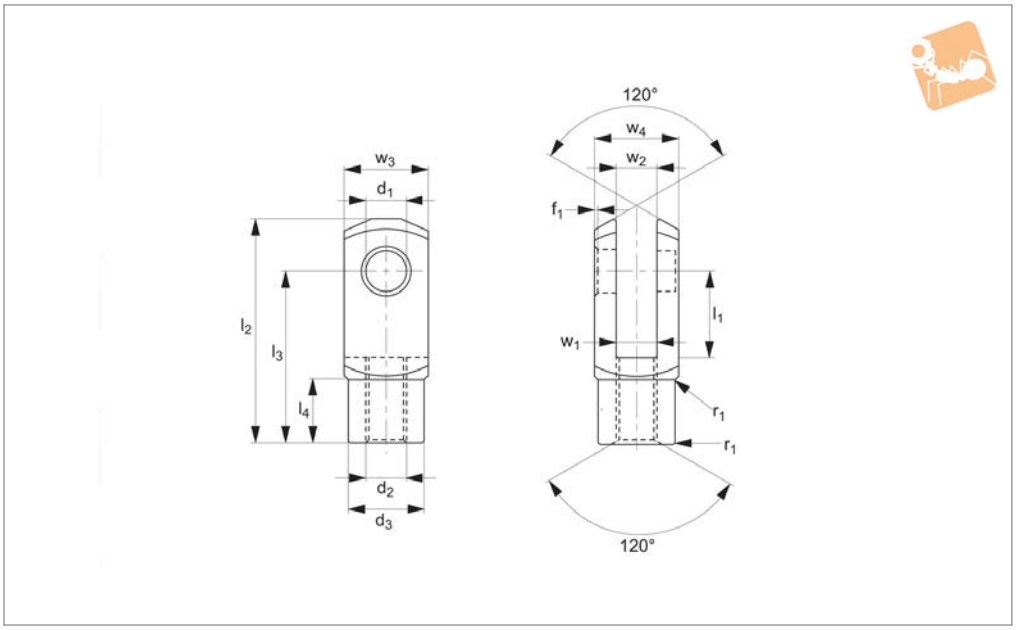
Material
Stainless steel (1,4404, AISI 316).

Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M20: Similar to DIN 71 752 and according to CETOP standard.

Tips
Standard thread is right hand, (for left hand, see R3403).

Important Notes
For sizes M4-M12, f and r = 0,5, for sizes M14-M16, f and r = 1, for size M20, f=1, r = 1,5
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M20 = +0,5 - 0,2
w_2: Size 4x8-10x20 = B13
Size 10x40-30x54 = +0,7 +0,15
l_3: up to size 6x12 = ±0,3
From size 6x24 = ±0,4

Order No.	Size	Thread hand	Thread type	d_1 tol. h9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 ±0.5	w_2	w_3 tol. h11	w_4	Weight g
R3402.R040-A4	4x8	Right	Coarse	4	8	M4	8	21	16	6.0	4	4	8	8	5
R3402.R051-A4	5x10	Right	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3402.R061-A4	6x12	Right	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3402.R081-A4	8x16	Right	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3402.R083-A4	8x32	Right	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3402.R102-A4	10x20	Right	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3402.R104-A4	10x40	Right	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3402.R122-A4	12x24	Right	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3402.R142-A4	14x28	Right	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3402.R163-A4	16x32	Right	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3402.R204-A4	20x40	Right	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550



R3403

Material
Stainless steel (1.4305 AISI 303 X8CrNiS18-9)

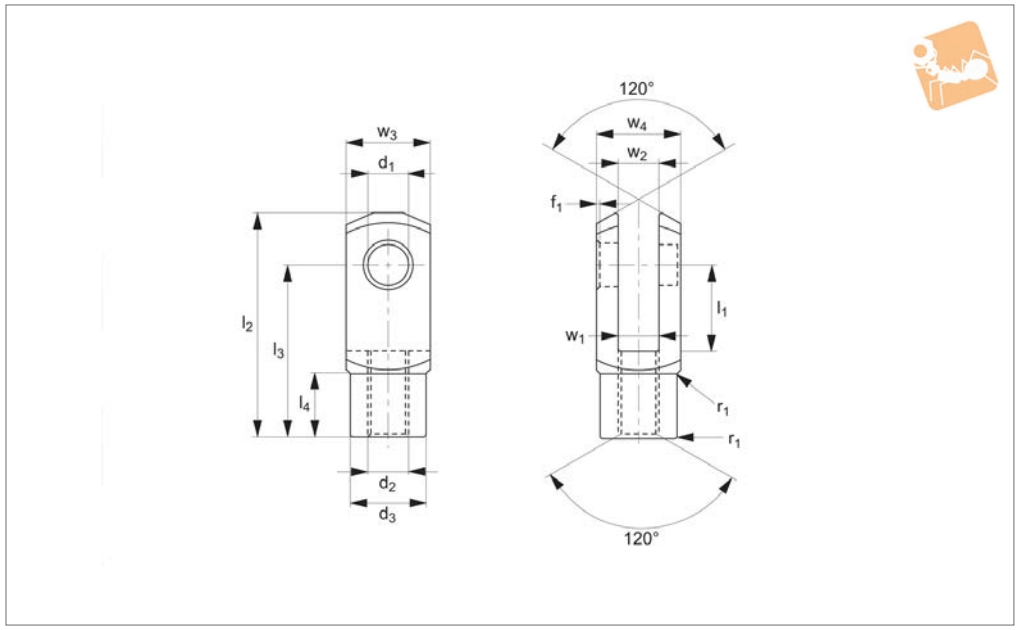
Technical Notes
M4-M16: DIN 71 752/DIN ISO 8140.
M20-M27: Similar to DIN 71 752 and according to CETOP standard.

Important Notes
For sizes M4-M12, f_1 and r_1 = 0,5, for sizes M14-M16, f_1 and r_1 = 1, for size M20, f_1=1, r_1 = 1,5
For M24, f_1 and r_1 = 1,5, for M27, f_1=1,5, r_1 = 2, for r_1, radius or 45° bevelling.
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M20-M27 = +0,5 - 0,2
w_2: Size 4x8-10x20 = B13
Size 10x40-30x54 = +0,7 +0,15
l_3: up to size 6x12 = ±0,3
From size 6x24 = ±0,4

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3403.L040	4x8	Left	Coarse	4	8	M4	8	21	16	6.0	4	4	8	8	5
R3403.L041	4x16	Left	Coarse	4	16	M4	8	29	24	6.0	4	4	8	8	7
R3403.L051	5x10	Left	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3403.L052	5x20	Left	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3403.L061	6x12	Left	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3403.L062	6x24	Left	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3403.L081	8x16	Left	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3403.L082	8x16	Left	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3403.L083	8x32	Left	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3403.L084	8x32	Left	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3403.L102	10x20	Left	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3403.L103	10x20	Left	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3403.L104	10x40	Left	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3403.L105	10x40	Left	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3403.L122	12x24	Left	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3403.L123	12x24	Left	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3403.L124	12x48	Left	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3403.L125	12x48	Left	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3403.L142	14x28	Left	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3403.L143	14x28	Left	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3403.L145	14x56	Left	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3403.L146	14x56	Left	Fine	14	56	M14x1,5	24	101	85	22.5	14	4	27	27	258
R3403.L163	16x32	Left	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3403.L164	16x32	Left	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3403.L166	16x64	Left	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3403.L167	16x64	Left	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3403.L204	20x40	Left	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3403.L205	20x40	Left	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3403.L255	25x50	Left	Coarse	25	50	M24	42	132	100	36.0	25	25	50	50	1100
R3403.L256	25x50	Left	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100

Stainless Clevis Joints
left hand thread

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3403.L305	30x54	Left	Fine	30	54	M27x2	48	148	110	40.0	30	30	55	55	1440



R3404

Material
Stainless steel (1.4305 AISI 303 X8CrNiS18-9)

Technical Notes
M5-M16: DIN 71 752/DIN ISO 8140.
M20-M24: Similar to DIN 71 752 and according to CETOP standard.

Tips
Standard thread is right hand (for left hand, see R3405).
Assembly is made up using R3402 clevis joint, R3456 pin, DIN 125A washer, and P1241 split cotter pin.

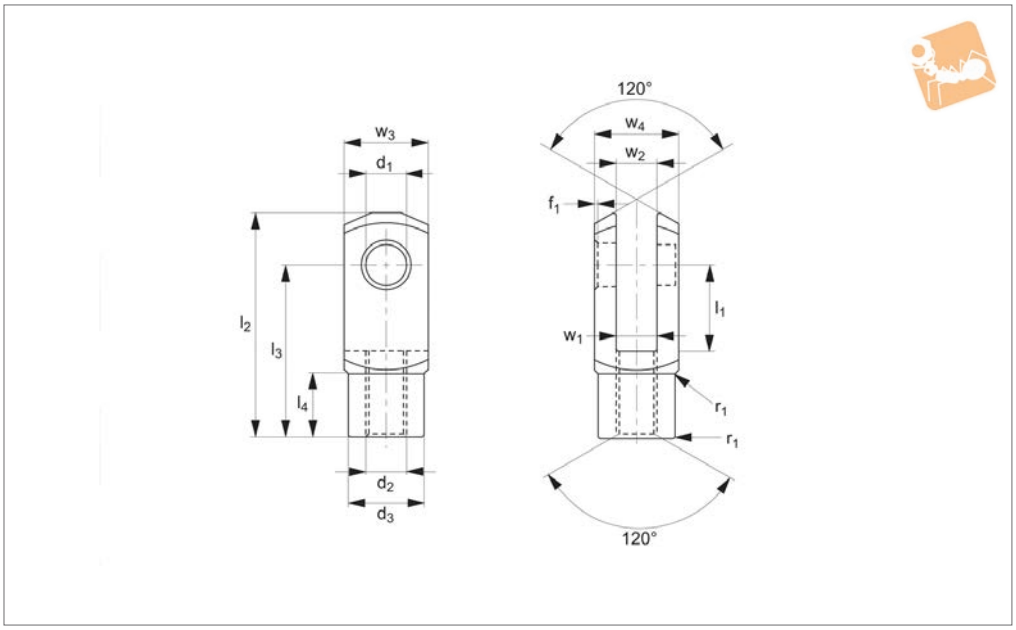
Important Notes
For sizes M5-M12, f_1 and r_1 = 0,5, for sizes M14-M16, f_1 and r_1 = 1
For size M20, f_1=1, r_1 = 1,5, for M24, f_1 and r_1 = 1,5, for r_1, radius or 45° bevelling.

Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M20-M24 = +0,5 - 0,2
w_2: Size 4x8-10x20 = B13
Size 10x40-25x50 = +0,7 +0,15
l_3: up to size 6x12 = ±0,3
From size 6x24 = ±0,4

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 ±0.5	w_2	w_3 tol. h11	w_4	Weight g
R3404.R051	5x10	Right	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3404.R052	5x20	Right	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3404.R061	6x12	Right	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3404.R062	6x24	Right	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3404.R081	8x16	Right	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3404.R082	8x16	Right	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3404.R083	8x32	Right	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3404.R084	8x32	Right	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3404.R102	10x20	Right	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3404.R103	10x20	Right	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3404.R104	10x40	Right	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3404.R105	10x40	Right	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3404.R122	12x24	Right	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3404.R123	12x24	Right	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3404.R124	12x48	Right	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3404.R125	12x48	Right	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3404.R142	14x28	Right	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3404.R143	14x28	Right	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3404.R145	14x56	Right	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3404.R146	14x56	Right	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3404.R163	16x32	Right	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3404.R164	16x32	Right	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3404.R166	16x64	Right	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3404.R167	16x64	Right	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3404.R204	20x40	Right	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3404.R205	20x40	Right	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3404.R255	25x50	Right	Coarse	25	50	M24	42	132	100	36.0	25	25	50	50	1100

Stainless Clevis Joint with Pin

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 ±0.5	w_2	w_3 tol. h11	w_4	Weight g
R3404.R256	25x50	Right	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100



R3405

Material
Stainless steel (1.4305 AISI 303 X8CrNiS18-9)

Technical Notes
M5-M16: DIN 71 752/DIN ISO 8140.
M20-M24: Similar to DIN 71 752 and according to CETOP standard.

Tips
Assembly is made up using R3403 clevis joint, R3456 pin, P0330 washer, and P1241 split cotter pin.

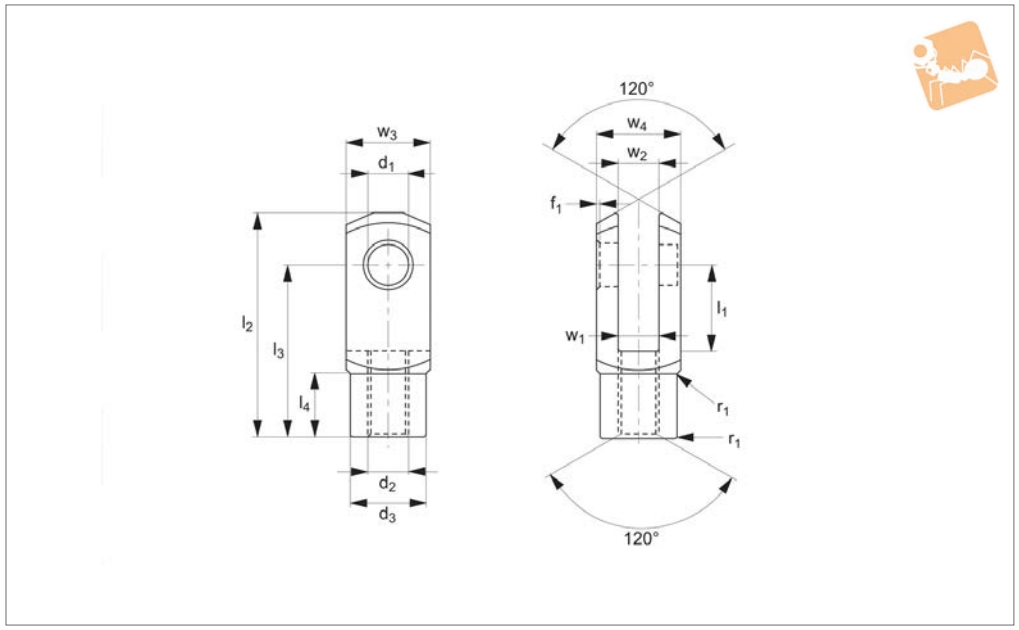
Important Notes
For sizes M5-M12, f_1 and r_1 = 0,5, for sizes M14-M16, f_1 and r_1 = 1
For size M20, f_1=1, r_1 = 1,5, for M24, f_1 and r_1 = 1,5, for r_1, radius or 45° bevelling.
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M20-M27 = +0,5 - 0,2
w_2: Size 4x8-10x20 = B13
Size 10x40-30x54 = +0,7 +0,15
l_3: up to size 6x12 = ±0,3
From size 6x24 = ±0,4

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3405.L051	5x10	Left	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3405.L052	5x20	Left	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3405.L061	6x12	Left	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3405.L062	6x24	Left	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3405.L081	8x16	Left	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3405.L082	8x16	Left	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3405.L083	8x32	Left	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3405.L084	8x32	Left	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3405.L102	10x20	Left	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3405.L103	10x20	Left	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3405.L104	10x40	Left	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3405.L105	10x40	Left	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3405.L122	12x24	Left	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3405.L123	12x24	Left	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3405.L124	12x48	Left	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3405.L125	12x48	Left	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3405.L142	14x28	Left	Coarse	14	28	M14	24	72	56	22.5	14	14	27	27	178
R3405.L143	14x28	Left	Fine	14	28	M14x1,5	24	72	56	22.5	14	14	27	27	178
R3405.L145	14x56	Left	Coarse	14	56	M14	24	101	85	22.5	14	14	27	27	258
R3405.L146	14x56	Left	Fine	14	56	M14x1,5	24	101	85	22.5	14	14	27	27	258
R3405.L163	16x32	Left	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3405.L164	16x32	Left	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3405.L166	16x64	Left	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3405.L167	16x64	Left	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3405.L204	20x40	Left	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3405.L205	20x40	Left	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550
R3405.L255	25x50	Left	Coarse	25	50	M24	42	132	100	36.0	25	25	50	50	1100

Stainless Clevis Joints with Pin

left hand thread

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3405.L256	25x50	Left	Fine	25	50	M24x2	42	132	100	36.0	25	25	50	50	1100



R3406

Material
Stainless steel (1.4305 AISI 303 X8CrNiS18-9)

Technical Notes
M5-M16: DIN 71 752/DIN ISO 8140.
M20: Similar to DIN 71 752 and according to CETOP standard.

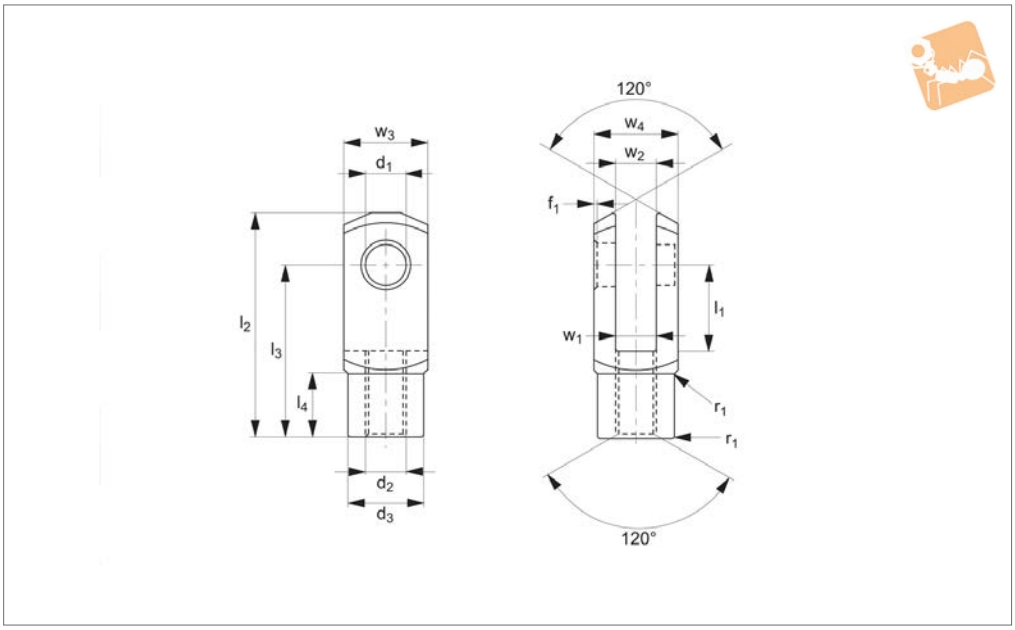
Tips
Standard thread is right hand, (for left hand, see R3407).
Assembly is made up using R3402 clevis joint, R3454 pin, and 2 off R3447 circlips.

Important Notes
For sizes M5-M12, f_1 and r_1 = 0,5, for sizes M16, f_1 and r_1 = 1
For size M20, f_1=1, r_1 = 1,5, for r_1, radius or 45° bevelling.
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M20 = +0,5 - 0,2
w_2: Size 4x8-10x20 = B13
Size 10x40-20x40 = +0,7 +0,15
l_3: up to size 6x12 = ±0,3
From size 6x24 = ±0,4

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 ±0.5	w_2	w_3 tol. h11	w_4	Weight g
R3406.R051	5x10	Right	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3406.R052	5x20	Right	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3406.R061	6x12	Right	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3406.R062	6x24	Right	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3406.R081	8x16	Right	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3406.R082	8x16	Right	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3406.R083	8x32	Right	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3406.R084	8x32	Right	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3406.R102	10x20	Right	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3406.R103	10x20	Right	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3406.R104	10x40	Right	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3406.R105	10x40	Right	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3406.R122	12x24	Right	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3406.R123	12x24	Right	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3406.R124	12x48	Right	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3406.R125	12x48	Right	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3406.R163	16x32	Right	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3406.R164	16x32	Right	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3406.R166	16x64	Right	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3406.R167	16x64	Right	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3406.R204	20x40	Right	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3406.R205	20x40	Right	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550

Stainless Clevis Joints with Pin
left hand thread

R3407



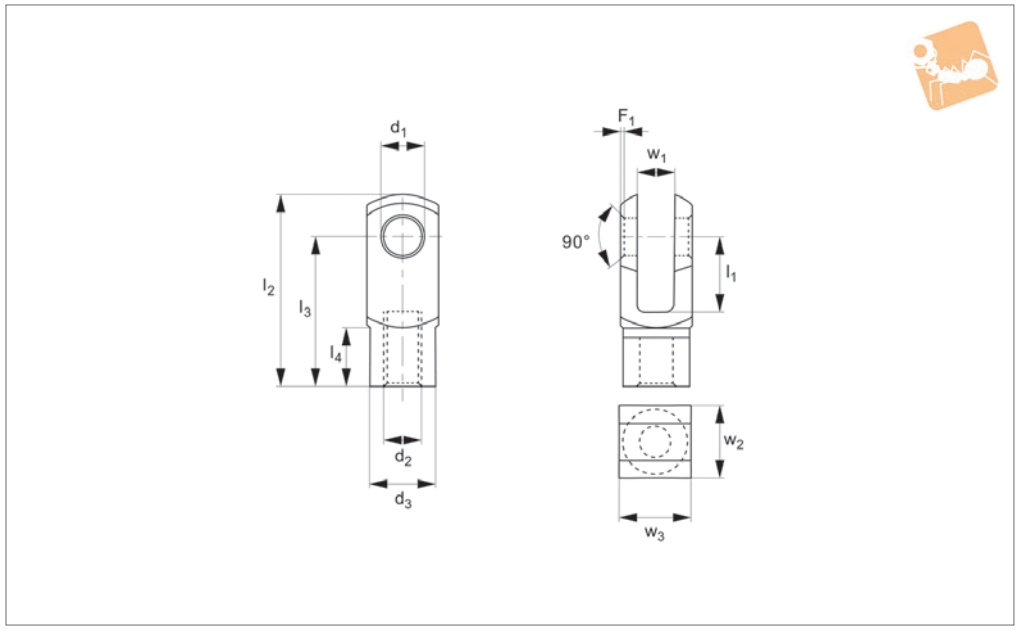
Material
Stainless steel (1.4305 AISI 303 X8CrNiS18-9)

Technical Notes
M5-M16: DIN 71 752/DIN ISO 8140.
M20: Similar to DIN 71 752 and according to CETOP standard.

Tips
Assembly is made up using R3403 clevis joint, R3454 pin, and 2 off R3447 circlips.

Important Notes
For sizes M5-M12, f_1 and r_1 = 0,5, for sizes M16, f_1 and r_1 = 1
For size M20, f_1=1, r_1 = 1,5, for r_1, radius or 45° bevelling.
Other Tolerances:-
w_4: M4-M16 = +0,3 -0,16
M20 = +0,5 - 0,2
w_2: Size 4x8-10x20 = B13
Size 10x40-20x40 = +0,7 +0,15
l_3: up to size 6x12 = ±0,3
From size 6x24 = ±0,4

Order No.	Size	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	d_3	l_2 ±0.5	l_3	l_4	w_1 tol. B13	w_2	w_3 tol. h11	w_4	Weight g
R3407.L051	5x10	Left	Coarse	5	10	M5	9	26	20	7.5	5	5	10	10	9
R3407.L052	5x20	Left	Coarse	5	20	M5	9	36	30	7.5	5	5	10	10	13
R3407.L061	6x12	Left	Coarse	6	12	M6	10	31	24	9.0	6	6	12	12	15
R3407.L062	6x24	Left	Coarse	6	24	M6	10	43	36	9.0	6	6	12	12	21
R3407.L081	8x16	Left	Coarse	8	16	M8	14	42	32	12.0	8	8	16	16	37
R3407.L082	8x16	Left	Fine	8	16	M8x1	14	42	32	12.0	8	8	16	16	37
R3407.L083	8x32	Left	Coarse	8	32	M8	14	58	48	12.0	8	8	16	16	54
R3407.L084	8x32	Left	Fine	8	32	M8x1	14	58	48	12.0	8	8	16	16	54
R3407.L102	10x20	Left	Coarse	10	20	M10	18	52	40	15.0	10	10	20	20	74
R3407.L103	10x20	Left	Fine	10	20	M10x1,25	18	52	40	15.0	10	10	20	20	74
R3407.L104	10x40	Left	Coarse	10	40	M10	18	72	60	15.0	10	10	20	20	116
R3407.L105	10x40	Left	Fine	10	40	M10x1,25	18	72	60	15.0	10	10	20	20	116
R3407.L122	12x24	Left	Coarse	12	24	M12	20	62	48	18.0	12	12	24	24	121
R3407.L123	12x24	Left	Fine	12	24	M12x1,25	20	62	48	18.0	12	12	24	24	121
R3407.L124	12x48	Left	Coarse	12	48	M12	20	86	72	18.0	12	12	24	24	175
R3407.L125	12x48	Left	Fine	12	48	M12x1,25	20	86	72	18.0	12	12	24	24	175
R3407.L163	16x32	Left	Coarse	16	32	M16	26	83	64	24.0	16	16	32	32	282
R3407.L164	16x32	Left	Fine	16	32	M16x1,5	26	83	64	24.0	16	16	32	32	282
R3407.L166	16x64	Left	Coarse	16	64	M16	26	115	96	24.0	16	16	32	32	411
R3407.L167	16x64	Left	Fine	16	64	M16x1,5	26	115	96	24.0	16	16	32	32	411
R3407.L204	20x40	Left	Coarse	20	40	M20	34	105	80	30.0	20	20	40	40	550
R3407.L205	20x40	Left	Fine	20	40	M20x1,5	34	105	80	30.0	20	20	40	40	550



R3409

Material
Black Plastic (Igumid G)

Technical Notes
Light weight, Universal corrosion resistance.
High tensile strength, vibration and noise dampening.
Can be used in conjunction with rod ends R3582 and R3583.

Tips
Standard thread is right hand thread.

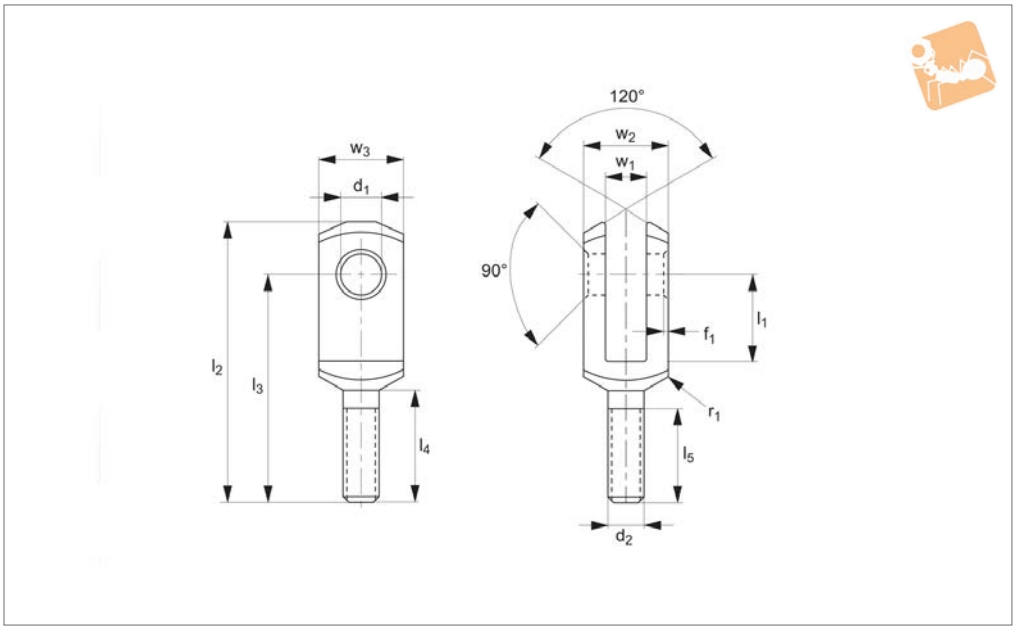
Important Notes
For pins and clips, see R3453 and R3446.

Order No.	Size	Thread hand	Thread type	d_1 tol. h9	l_1 tol. h11	d_2 tol. 6H	d_3 +0.3|-0.3	f +0.3|-0.3	l_2 ±0.5	l_3 +0.3|-0.3	Weight g
R3409.R040	4x8	Right	Coarse	4	8	M3,5	8.0	0.5	21.0	16.0	0.8
R3409.R041	4x8	Right	Coarse	4	8	M4	8.0	0.5	21.0	16.0	0.8
R3409.R042	5x10	Right	Coarse	5	10	M4	9.0	0.5	25.5	20.0	1.5
R3409.R051	5x10	Right	Coarse	5	10	M5	9.0	0.5	25.5	20.0	1.5
R3409.R052	5x12	Right	Coarse	5	12	M5	10.0	0.5	30.6	24.0	2.7
R3409.R061	6x12	Right	Coarse	6	12	M6	10.0	0.5	30.6	24.0	2.7
R3409.R081	8x16	Right	Coarse	8	16	M8	14.0	0.5	41.6	32.0	6.3
R3409.R102	10x20	Right	Coarse	10	20	M10	18.0	0.5	51.3	40.0	13.1
R3409.R103	10x20	Right	Fine	10	20	M10x1,25	18.0	0.5	51.3	40.0	13.1
R3409.R122	12x24	Right	Coarse	12	24	M12	20.0	0.5	61.3	48.0	20.2
R3409.R123	12x24	Right	Fine	12	24	M12x1,25	20.0	0.5	61.3	48.0	20.2
R3409.R142	14x28	Right	Coarse	14	28	M14	24.0	0.5	71.3	56.0	29.6
R3409.R152	15x28	Right	Coarse	15	28	M14	24.0	0.5	71.3	56.0	30.0
R3409.R163	16x32	Right	Coarse	16	32	M16	26.0	1.0	81.9	64.0	43.3
R3409.R164	16x32	Right	Fine	16	32	M16x1,5	26.0	1.0	81.9	64.0	43.3
R3409.R173	17x32	Right	Coarse	17	32	M16	26.0	1.0	81.9	64.0	43.3
R3409.R174	17x32	Right	Fine	17	32	M16x1,5	26.0	1.0	83.0	64.0	43.3
R3409.R204	20x40	Right	Fine	20	40	M20x1,5	34.0	1.0	105.0	80.0	95.1
R3409.R205	20x40	Right	-	20	40	M20x2,5	34.0	1.0	105.0	80.0	95.1
R3409.L040	4x8	Left	Coarse	4	8	M3,5	8.0	0.5	21.0	16.0	0.8
R3409.L041	4x8	Left	Coarse	4	8	M4	8.0	0.5	21.0	16.0	0.8
R3409.L042	5x10	Left	Coarse	5	10	M4	9.0	0.5	25.5	20.0	1.5
R3409.L051	5x10	Left	Coarse	5	10	M5	9.0	0.5	25.5	20.0	1.5
R3409.L052	5x12	Left	Coarse	5	12	M5	10.0	0.5	30.6	24.0	2.7
R3409.L061	6x12	Left	Coarse	6	12	M6	10.0	0.5	30.6	24.0	2.7
R3409.L081	8x16	Left	Coarse	8	16	M8	14.0	0.5	41.6	32.0	6.3
R3409.L102	10x20	Left	Coarse	10	20	M10	18.0	0.5	51.3	40.0	13.1
R3409.L103	10x20	Left	Fine	10	20	M10x1,25	18.0	0.5	51.3	40.0	13.1
R3409.L122	12x24	Left	Coarse	12	24	M12	20.0	0.5	61.3	48.0	20.2
R3409.L123	12x24	Left	Fine	12	24	M12x1,25	20.0	0.5	61.3	48.0	20.2
R3409.L142	14x28	Left	Coarse	14	28	M14	24.0	0.5	71.3	56.0	29.6

Plastic Clevis Joints

Order No.	Size	Thread hand	Thread type	d_1 tol. h9	l_1 tol. h11	d_2 tol. 6H	d_3 +0.3|-0.3	f +0.3|-0.3	l_2 ±0.5	l_3 +0.3|-0.3	Weight g
R3409.L152	15x28	Left	Coarse	15	28	M14	24.0	0.5	71.3	56.0	30.0
R3409.L163	16x32	Left	Coarse	16	32	M16	26.0	1.0	81.9	64.0	43.3
R3409.L164	16x32	Left	Fine	16	32	M16x1,5	26.0	1.0	81.9	64.0	43.3
R3409.L173	17x32	Left	Coarse	17	32	M16	26.0	1.0	83.0	64.0	43.3
R3409.L174	17x32	Left	Fine	17	32	M16x1,5	26.0	1.0	83.0	64.0	43.3
R3409.L204	20x40	Left	Fine	20	40	M20x1,5	34.0	1.0	105.0	80.0	95.1
R3409.L205	20x40	Left	Fine	20	40	M20x2,5	34.0	1.0	105.0	80.0	95.1

Order No.	l_4 ±0.2	w_1 tol. B13	w_2 +0.3|-0.16	w_3 tol. B13	Static axial tensile strength (short term) N max.	Static axial tensile strength (long term) N max.	Torque strength Nm max.
R3409.R040	6.0	4	8	8	650	325	0.4
R3409.R041	6.0	4	8	8	650	325	0.4
R3409.R042	7.5	5	10	10	1000	500	0.4
R3409.R051	7.5	5	10	10	1000	500	0.5
R3409.R052	9.0	6	12	12	1200	600	0.5
R3409.R061	9.0	6	12	12	1400	700	1.5
R3409.R081	12.0	8	16	16	2700	1350	5.0
R3409.R102	15.0	10	20	20	4700	2350	15.0
R3409.R103	15.0	10	20	20	4700	2350	6.0
R3409.R122	18.0	12	24	24	5700	2850	20.0
R3409.R123	18.0	12	24	24	5700	2850	15.0
R3409.R142	22.5	14	27	27	6600	3300	25.0
R3409.R152	22.5	14	27	27	3200	1600	25.0
R3409.R163	24.0	16	32	32	7500	3750	30.0
R3409.R164	24.0	16	32	32	7500	3750	27.5
R3409.R173	24.0	16	32	32	3600	1800	30
R3409.R174	24.0	16	32	32	3600	1800	27.5
R3409.R204	30.0	20	40	40	9500	4750	60.0
R3409.R205	30.0	20	40	40	9500	4750	80.0
R3409.L040	6.0	8	8	4	650	325	0.4
R3409.L041	6.0	8	8	4	650	325	0.4
R3409.L042	7.5	10	10	5	1000	500	0.4
R3409.L051	7.5	10	10	5	1000	500	0.5
R3409.L052	9.0	12	12	6	1200	600	0.5
R3409.L061	9.0	12	12	6	1400	700	1.5
R3409.L081	12.0	16	16	8	2700	1350	5.0
R3409.L102	15.0	20	20	10	4700	2350	15.0
R3409.L103	15.0	20	20	10	4700	2350	6.0
R3409.L122	18.0	24	24	12	5700	2850	20.0
R3409.L123	18.0	24	24	12	5700	2850	15.0
R3409.L142	22.5	27	27	14	6600	3300	25.0
R3409.L152	22.5	27	27	14	3200	1600	25.0
R3409.L163	24.0	32	32	16	7500	3750	30.0
R3409.L164	24.0	32	32	16	7500	3750	27.5
R3409.L173	24.0	32	32	16	3600	1800	30.0
R3409.L174	24.0	32	32	16	3600	1800	27.5
R3409.L204	30.0	40	40	20	9500	4750	60.0
R3409.L205	30.0	40	40	20	9500	4750	80.0



R3410

Material
Steel (1.0718) silver zinc plated.

Technical Notes
Similar to DIN 71 752/DIN ISO 8140/CETOP standard.

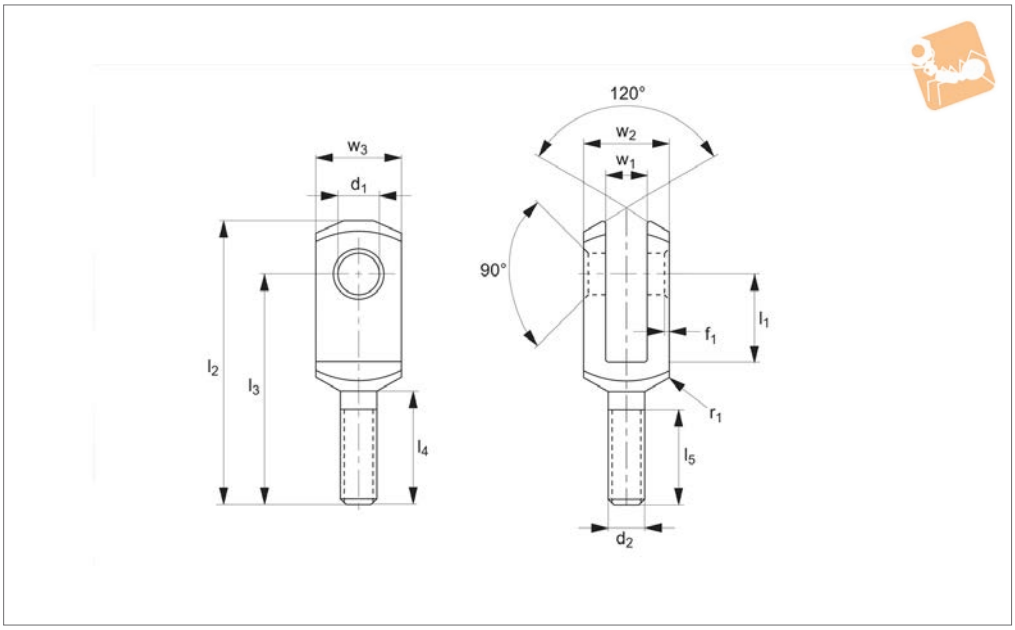
Tips
Standard thread is right hand, (for left hand, see R3411).

Other Tolerances: for r_1, radius or 45° bevelling.

Order No.	Size	Thread hand	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.2	l_3 ±0.4	l_4 ±0.2	l_5	w_1 +0.7|+0.15	w_2 +0.5|+0.2	w_3 tol. h11	f_1 ±0.2	r_1	Weight g
R3410.R006	6x12	Right	6	12	M6	44	37	20	15	6	12	12	0.5	0.8	15
R3410.R008	8x16	Right	8	16	M8	57	47	25	20	8	16	16	0.5	0.8	36
R3410.R010	10x20	Right	10	20	M10	69	57	30	25	10	20	20	0.5	0.8	68
R3410.R012	12x24	Right	12	24	M12	82	68	35	30	12	24	24	0.5	0.8	112
R3410.R014	14x28	Right	14	28	M14	94	78	40	35	14	27	27	1.0	1.2	171
R3410.R016	16x32	Right	16	32	M16	108	89	45	40	16	32	32	1.0	1.2	288
R3410.R020	20x40	Right	20	40	M20	134	109	55	50	20	40	40	1.0	1.5	550

Male Clevis Joints
left hand thread - silver zinc plated

R3411



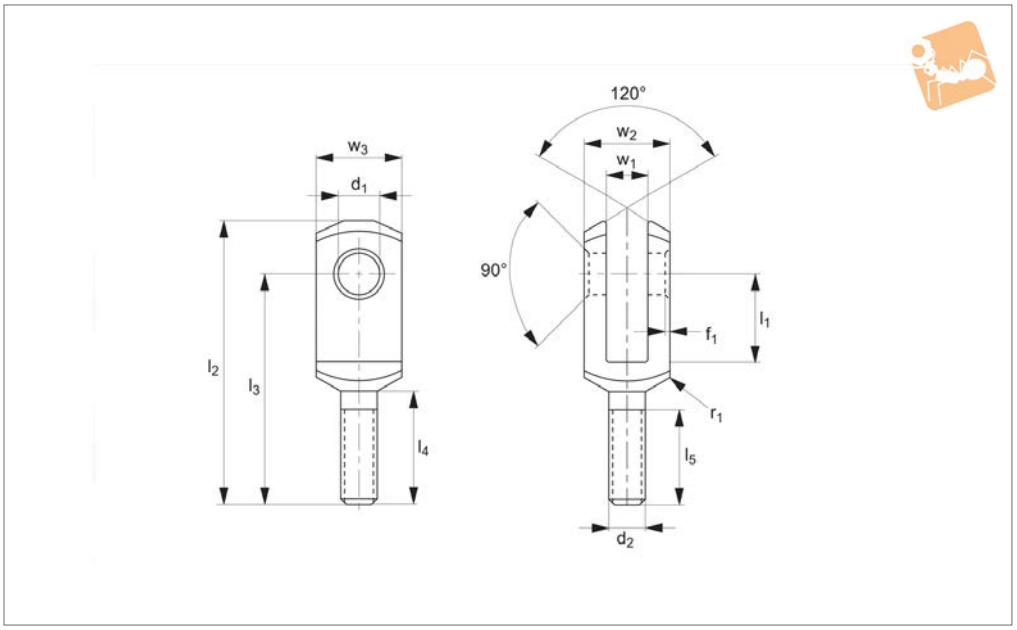
Material
Steel (1.0718) silver zinc plated.

Technical Notes
Similar to DIN 71 752/DIN ISO 8140/CETOP standard.

Tips
Standard thread is right hand, (for left hand, see R3411).

Other Tolerances: for r_1, radius or 45° bevelling.

Order No.	Size	Thread hand	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.2	l_3 ±0.4	l_4 ±0.2	l_5	w_1 +0.7|-0.15	w_2 +0.5|+0.2	w_3 tol. h11	f_1 ±0.2	r_1	Weight g
R3411.L006	6x12	Left	6	12	M6	44	37	20	15	6	12	12	0.5	0.8	15
R3411.L008	8x16	Left	8	16	M8	57	47	25	20	8	16	16	0.5	0.8	36
R3411.L010	10x20	Left	10	20	M10	69	57	30	25	10	20	20	0.5	0.8	68
R3411.L012	12x24	Left	12	24	M12	82	68	35	30	12	24	24	0.5	0.8	112
R3411.L014	14x28	Left	14	28	M14	94	78	40	35	14	27	27	1.0	1.2	171
R3411.L016	16x32	Left	16	32	M16	108	89	45	40	16	32	32	1.0	1.2	288
R3411.L020	20x40	Left	20	40	M20	134	109	55	50	20	40	40	1.0	1.5	550



R3416

Material
Stainless steel (1,4305 AISI 303).

Technical Notes
Similar to DIN 71 752/DIN ISO 8140/CETOP standard.

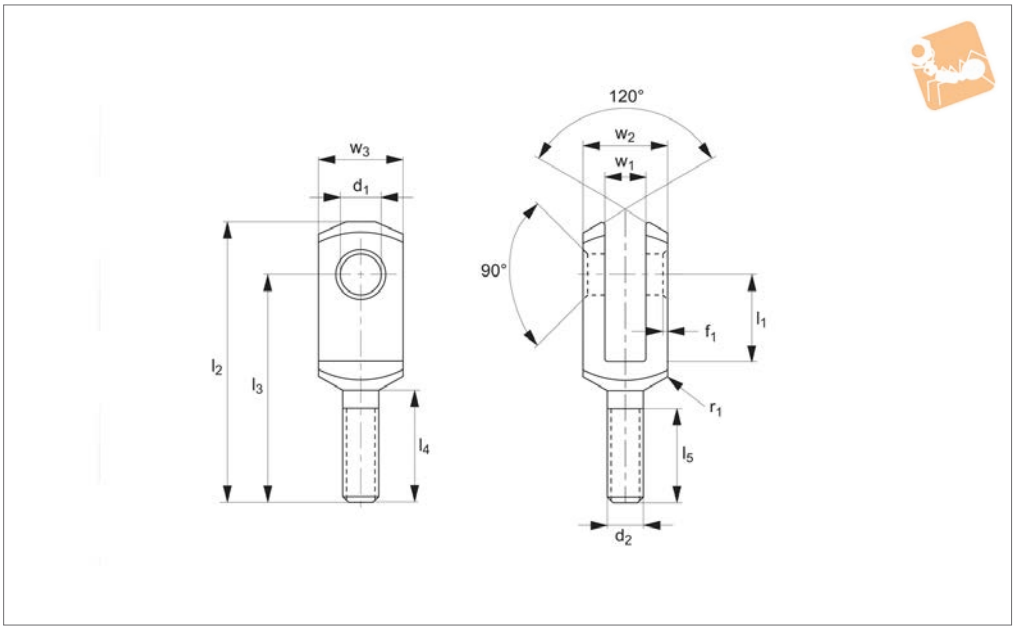
Tips
Standard is right hand thread, (For left hand see R3417).

Other Tolerances: For r_1, radius or 45° bevelling.

Order No.	Size	Thread hand	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.2	l_3 ±0.4	l_4 ±0.2	l_5	w_1 +0.7|-0.15	w_2 +0.5|+0.2	w_3 tol. h11	f_1 ±0.2	r_1	Weight g
R3416.R006	6x12	Right	6	12	M 6	44	37	20	15	6	12	12	0.5	0.8	15
R3416.R008	8x16	Right	8	16	M 8	57	47	25	20	8	16	16	0.5	0.8	36
R3416.R010	10x20	Right	10	20	M10	69	57	30	25	10	20	20	0.5	0.8	68
R3416.R012	12x24	Right	12	24	M12	82	68	35	30	12	24	24	0.5	0.8	112
R3416.R014	14x28	Right	14	28	M14	94	78	40	35	14	27	27	1.0	1.2	171
R3416.R016	16x32	Right	16	32	M16	108	89	45	40	16	32	32	1.0	1.2	288
R3416.R020	20x40	Right	20	40	M20	134	109	55	50	20	40	40	1.0	1.5	550

Stainless Male Clevis Joints
left hand thread

R3417

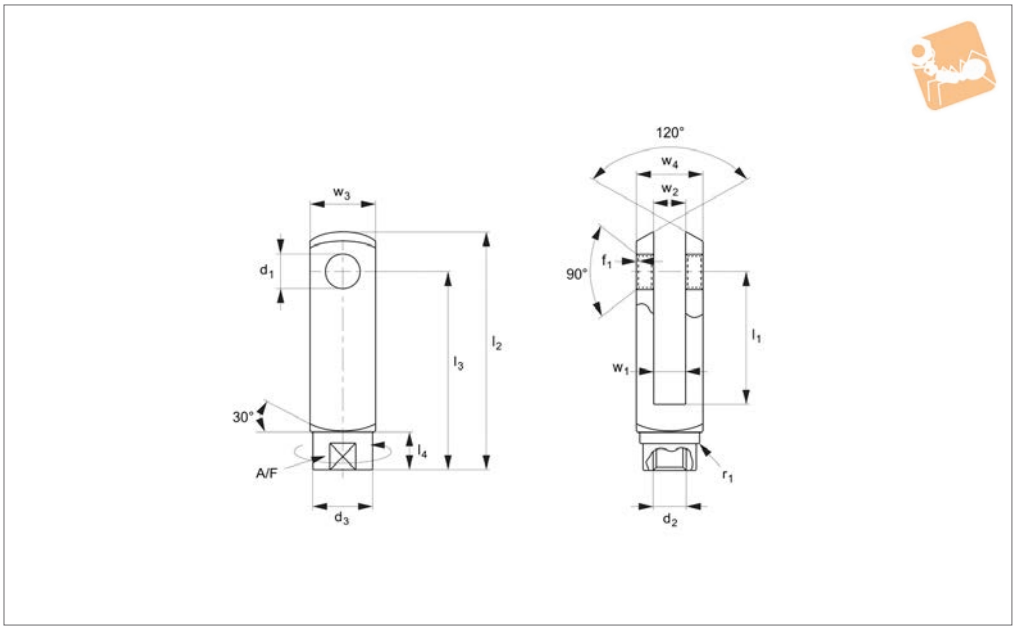


Material
Stainless steel (1,4305 AISI 303).

Technical Notes
Similar to DIN 71 752/DIN ISO 8140/CETOP standard.

Tips
Other Tolerances: For r_1, radius or 45° bevelling.

Order No.	Size	Thread hand	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.2	l_3 ±0.4	l_4 ±0.2	l_5	w_1 +0.7|-0.15	w_2 +0.5|+0.2	w_3 tol. h11	f_1 ±0.2	r_1	Weight g
R3417.L006	6x12	Left	6	12	M6	44	37	20	15	6	12	12	0.5	0.8	15
R3417.L008	8x16	Left	8	16	M8	57	47	25	20	8	16	16	0.5	0.8	36
R3417.L010	10x20	Left	10	20	M10	69	57	30	25	10	20	20	0.5	0.8	68
R3417.L012	12x24	Left	12	24	M12	82	68	35	30	12	24	24	0.5	0.8	112
R3417.L014	14x28	Left	14	28	M14	94	78	40	35	14	27	27	1.0	1.2	171
R3417.L016	16x32	Left	16	32	M16	108	89	45	40	16	32	32	1.0	1.2	288
R3417.L020	20x40	Left	20	40	M20	134	109	55	50	20	40	40	1.0	1.5	550



R3430

Material
Steel

Technical Notes
other tolerances: .R050 - .R060 l_3 = ±0,30.
.R061 - .R121 l_3 = ±0,40.

.R050 - .R100 w_2 = B13
.R102 - .R121 w_2 = +0,70

Order No.	d_1	l_1	d_2	d_3	l_2	l_4	w_1	w_3	w_4	A/F	Static load $_{da}$ N	Weight g
R3430.R050	5	10	M5x0,80	8.8	26	4.0	5	10	10	7	80	14
R3430.R051	5	20	M5x0,80	8.8	36	4.0	5	10	10	7	80	25
R3430.R060	6	12	M6x1,00	10.2	31	9.0	6	12	12	9	240	15
R3430.R061	6	24	M6x1,00	10.2	43	5.6	6	12	12	9	240	40
R3430.R081	8	16	M8x1,25	14.0	42	8.2	8	16	16	12	340	36
R3430.R082	8	32	M8x1,25	14.0	58	8.2	8	16	16	12	340	102
R3430.R100	10	20	M10x1,50	17.8	52	11.8	10	20	20	16	600	70
R3430.R102	10	40	M10x1,50	17.8	72	11.5	10	20	20	16	600	186
R3430.R120	12	24	M12x1,75	20.0	62	14.0	12	24	24	18	1400	121
R3430.R121	12	48	M12x1,75	20.0	86	14.0	12	24	24	18	1400	325

Technical Information

Clevis Joint Set-up Options

Clevis Joints from Automotion Components

Zinc plated steel

Clevis with retention clip
R3385 and R3386

Clevis with R3450 clevis pin
R3440 safety fastener

Clevis with R3450 clevis pins
and R3447 circlip

Clevis with clevis pin, washer and
cotter pin R3389 and R3390

Stainless steel

Clevis with clevis pin and circlips
R3406 and R3407

Clevis with clevis pin, washer and
cotter pin R3404 and R3405

Assembly options

Clevis with R3420 mating piece
and R3435 clevis retention clip

Clevis with R3554 rod end and
R3435 clevis retention clip

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Clevises M6 - M42

Clevis joints axially loaded.

Material

Leaded low carbon steel (AISI 12L14, 1.0718).

Clevis size	F min (kN)	F max (kN)	F average value (kN)	Avg. force when clevis starts to deform (kN)
6x24 M 6	16,0	19,5	17,6	15,3
8x32 M 8	33,2	35,6	34,6	29,3
10x40 M10	42,0	52,0	47,5	41,3
12x48 M12	53,0	68,5	61,1	50,2
14x56 M14	60,5	64,5	63,0	48,8
16x64 M16	133,5	146,0	140,2	115
20x40 M20	194,5	234,0	213,5	176
25x50 M25	311,0	336,0	328,0	260
30x60 M30	428,0	450,0	440,6	343
36x72 M36	566,0	573,0	569,5	300
35x72 M36	561,2	567,9	564,6	370
42x84 M42	904,6	904,6	904,6	420

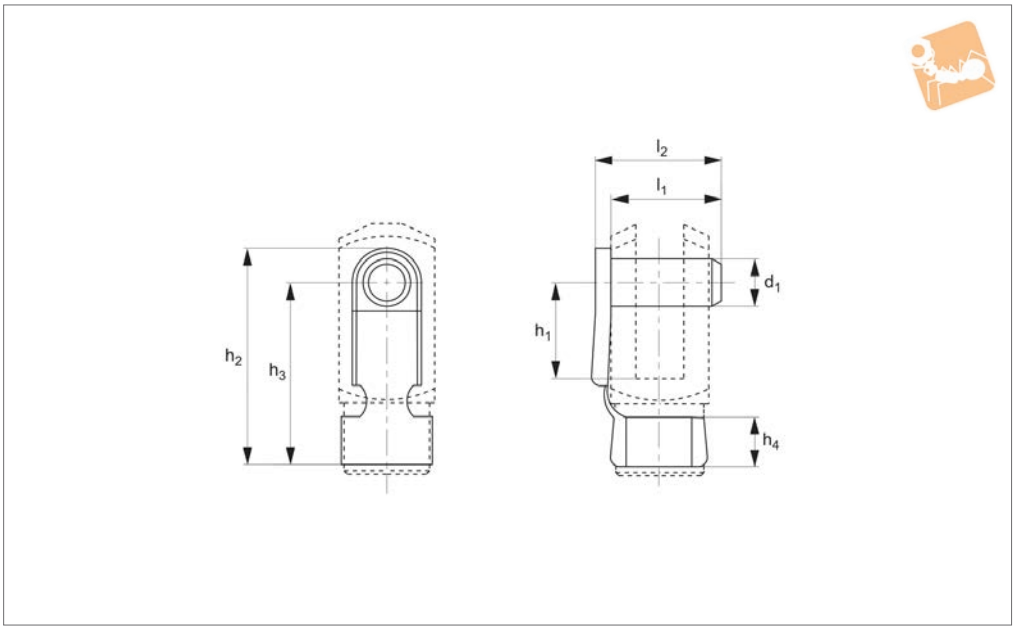
Information

Important note: values in this table are indicative only and should only be used as a rough guide. The Company cannot foresee the intended applications of their products and we accept no liability for any actions taken by third parties. Customers are advised to use their own safety factors and/or perform their own testing on the clevis joint to ensure it meets requirements for their application.

Clevis Joints from Automotion Components

Clevis Retention Clips
stainless steel

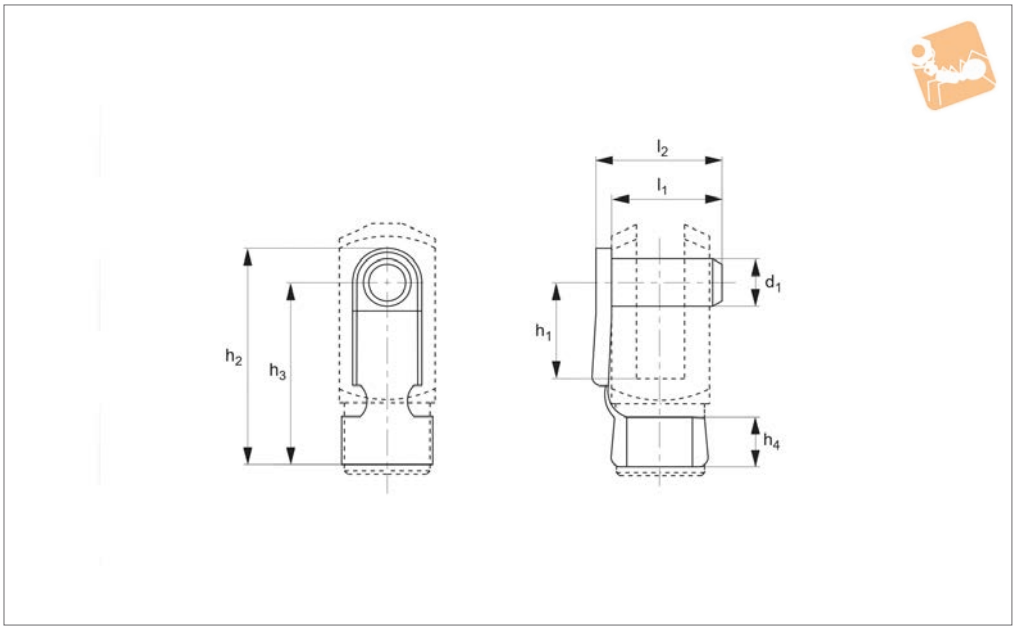
R3438



Material
Stainless Steel 1.4305 AISI 303

Tips
Clips on to base of clevis joint, for clevis joint see part numbers R3402 and R3403.

Order No.	Size	d_1	h_1	h_2	h_3	h_4	l_1	l_2	Weight g
R3438.048	4x8	4	8	19	15	4	9	11	2
R3438.051	5x10	5	10	23	19	4.5	9	14	3
R3438.052	5x20	5	20	33	29	4.5	12	14	3
R3438.061	6x12	6	12	28	23	6	14	16	5
R3438.062	6x24	6	24	40	35	6	14	16	6
R3438.081	8x16	8	16	37	31	8	19	23	11
R3438.083	8x32	8	32	53	47	8	19	23	12
R3438.102	10x20	10	20	46	39	10	23	27	19
R3438.104	10x40	10	40	66	59	10	23	27	20
R3438.122	12x24	12	24	55	46	12	28	32	32
R3438.124	12x48	12	48	79	71	12	28	32	34
R3438.142	14x28	14	28	62	52	14	31	34	47
R3438.145	14x56	14	56	92	82	14	31	34	50
R3438.163	16x32	16	32	72	62	16	36	41	67
R3438.166	16x64	16	64	103	92	16	36	39	74
R3438.204	20x40	20	40	88	72	16	44	49	130



R3435

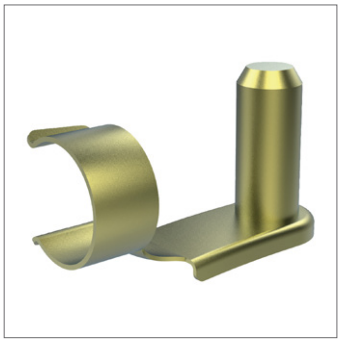
Material
Pin - steel (9SMnPb28), spring - carbon steel C70, silver zinc plated.

Tips
Clips on to base of clevis joint, for clevis joint see part numbers R3385 and R3386.

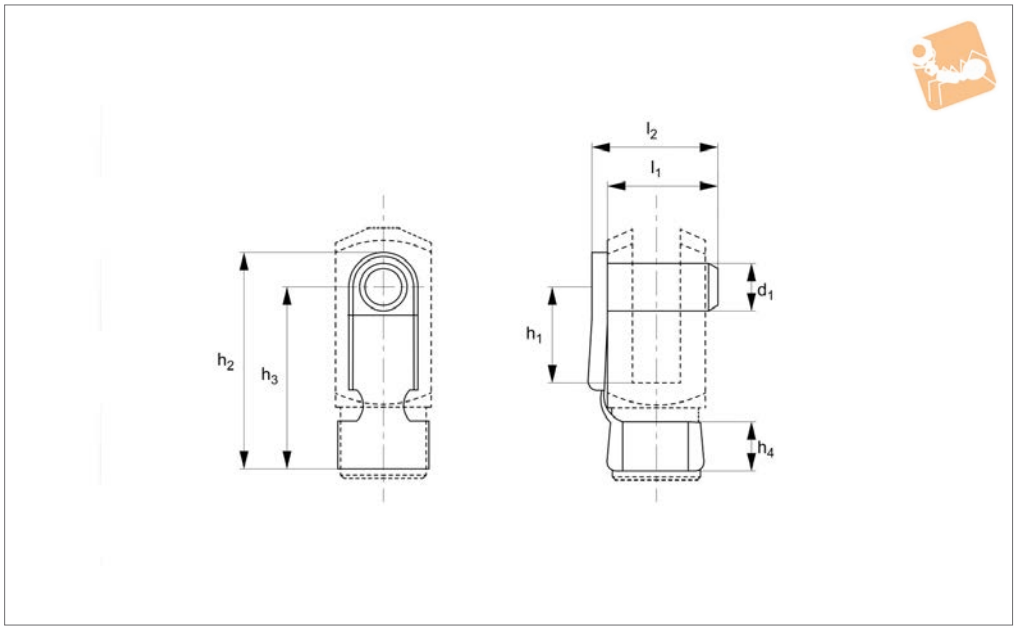
Order No.	Size	d_1 tol. H11	h_1	h_2	h_3	h_4	l_1	l_2	Weight g
R3435.048	4x8	4	8	19	15	4	9	11	2
R3435.051	5x10	5	10	23	19	4.5	12	14	3
R3435.052	5x20	5	20	33	29	4.5	12	14	3
R3435.061	6x12	6	12	28	23	6	14	16	5
R3435.062	6x24	6	24	40	35	6	14	16	5
R3435.081	8x16	8	16	37	31	8	19	23	11
R3435.083	8x32	8	32	53	47	8	19	23	12
R3435.102	10x20	10	20	46	39	10	23	27	19
R3435.104	10x40	10	40	66	59	10	23	27	20
R3435.122	12x24	12	24	55	46	12	28	32	32
R3435.124	12x48	12	48	79	71	12	28	32	34
R3435.142	14x28	14	28	62	52	14	31	34	47
R3435.145	14x56	14	56	92	82	14	31	34	50
R3435.163	16x32	16	32	72	62	16	36	41	67
R3435.166	16x64	16	64	103	92	16	36	39	74
R3435.204	20x40	20	40	88	72	16	44	49	130

Clevis Retention Clips - Imperial

(ESI + ESIL), for use with clevis joints



R3436.i



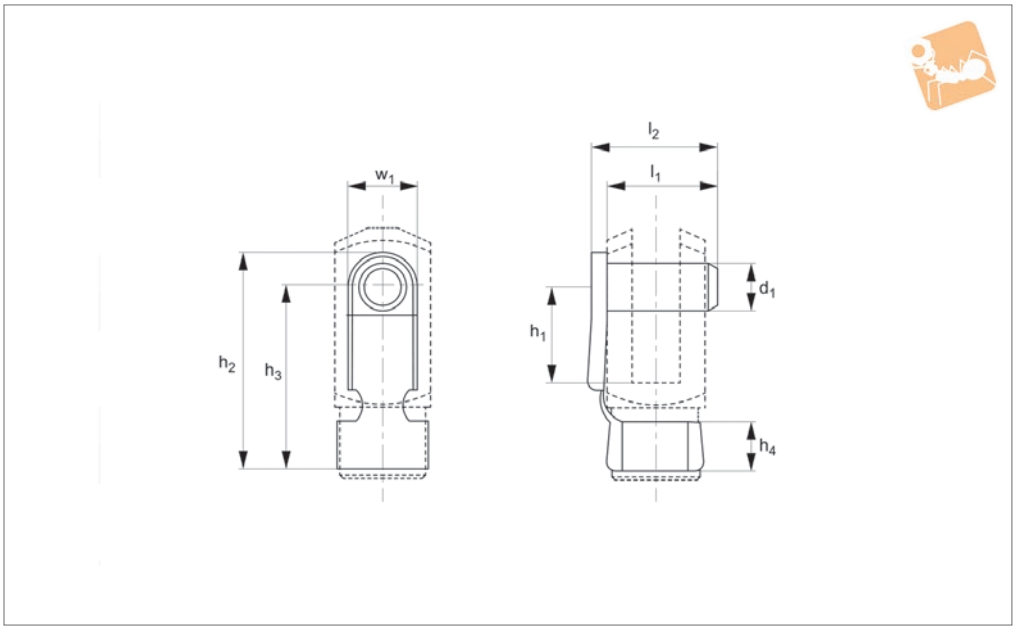
Material
Yellow zinc-plated steel

Technical Notes
Yellow zinc is not RoHS Compliant.

All measurements are in inches.

Tips
Equivalent to ESI and ESIL Springfix clips

Order No.	d	h_1	h_2	h_3	h_4	l_1	l_2	Weight g
R3436.I187	0.1875	0.394	0.90	0.75	0.22	0.43	0.49	3
R3436.IL187	0.1855	0.787	1.30	1.14	0.22	0.43	0.49	4
R3436.I250	0.2500	0.472	1.10	0.90	0.25	0.56	0.64	5
R3436.IL250	0.2470	0.945	1.57	1.38	0.25	0.56	0.64	6
R3436.I312	0.3125	0.630	1.43	1.18	0.31	0.70	0.79	11
R3436.IL312	0.3095	1.260	2.05	1.81	0.31	0.70	0.79	12
R3436.I375	0.3750	0.787	1.77	1.50	0.39	0.83	0.95	17
R3436.IL375	0.3720	1.575	2.56	2.28	0.39	0.83	0.95	18
R3436.I500	0.5000	1.102	2.44	2.05	0.55	1.09	1.21	40
R3436.IL500	0.4970	1.205	3.58	3.23	0.55	1.09	1.21	43



R3437

Material
Black plastic (Igumid G).

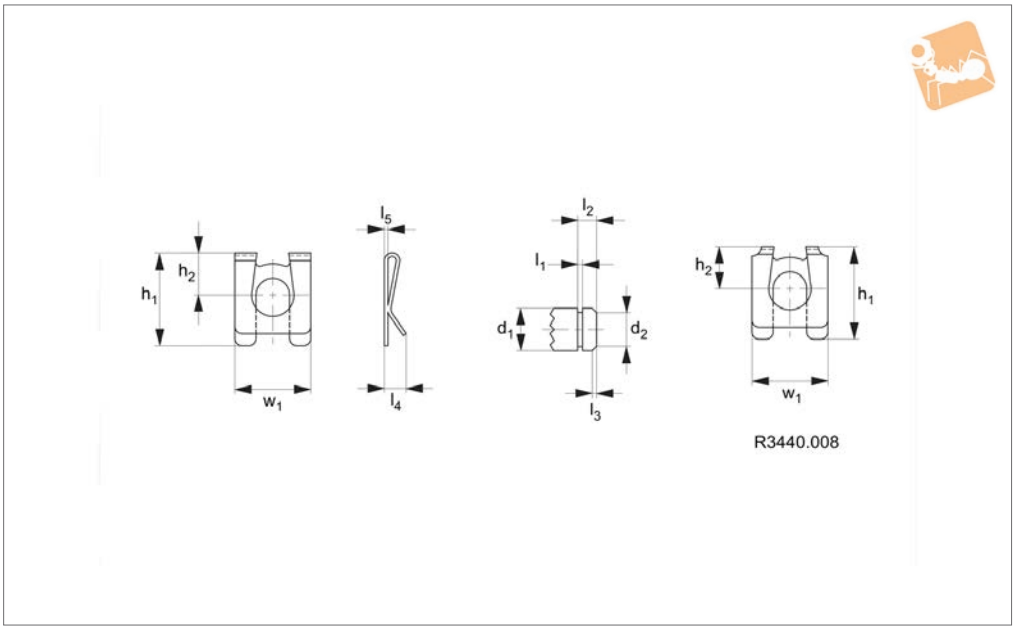
Technical Notes
Spring loaded pins.

Tips
Clips on to base of clevis joint, for clevis joint see part number R3409.

Order No.	Size	d_1 tol. h11	h_1 ±0.5	h_2	h_3	h_4	l_1	l_2	w_1
R3437.048	4x8	4	8	19.0	15	4.5	9.5	10.5	8
R3437.050	5x10	5	10	23.0	19	5.5	12	13.5	8
R3437.051	5x12	5	12	27.0	23	6.5	14	15.5	8
R3437.061	6x12	6	12	27.0	23	6.5	14	15.5	8
R3437.081	8x16	8	16	35.5	30	8.0	19	21.0	11
R3437.102	10x20	10	20	45.0	38	10.0	23	25.5	14
R3437.122	12x24	12	24	53.0	45	12.0	28	31.0	16
R3437.162	16x32	16	32	73.0	62	16.0	36	40.0	22

Safety Fastener (SLM)
silver zinc plated

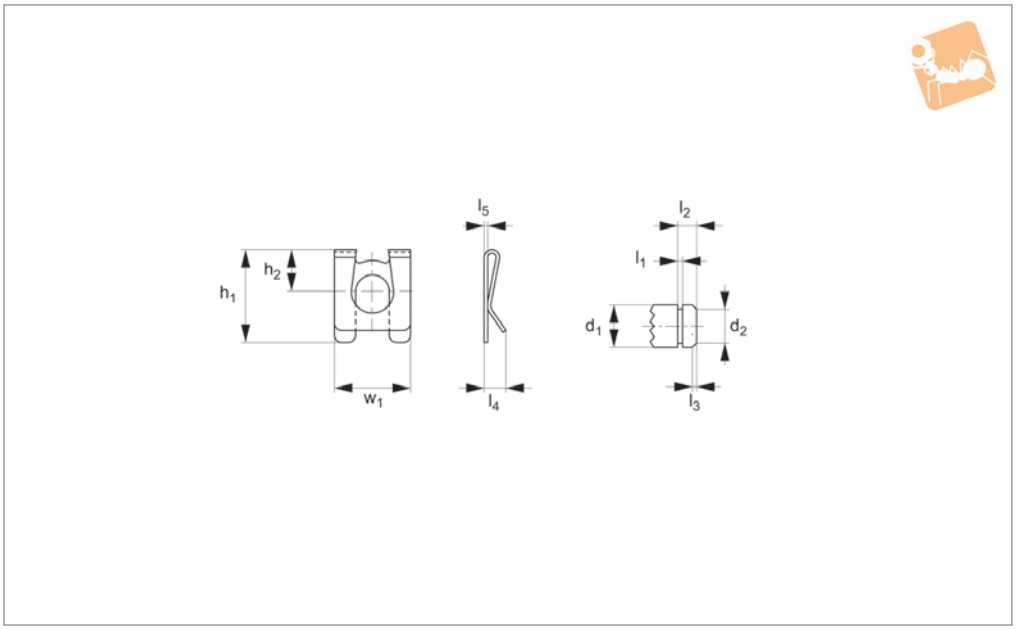
R3440

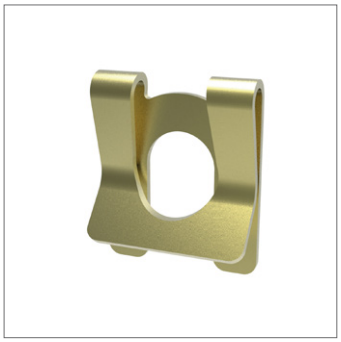


Material
Spring steel, silver zinc plated, hardened and annealed 1450 to 1600°C N/mm².

Tips
Easily assembled and removed by hand without special tools, compatible with clevis pins.
Safety lip prevents accidental removal.
Assembly „rattle“ is eliminated by the fasteners concave back holding the clevis pin under tension.

Order No.	d_1 tol. h11	d_2 tol. h11	h_1	h_2	l_1 +0.1	l_2	l_3	l_4	l_5	w_1	Axial thrust kN max.	Weight g
R3440.004	4	3.2	8.5	4.0	0.64	2.0	0.5	2.3	0.3	7	1.00	0.19
R3440.005	5	4.0	10.7	5.0	0.74	2.5	0.5	3.3	0.4	9	1.30	0.34
R3440.006	6	5.0	14.1	6.0	0.74	3.0	0.75	3.8	0.4	11	1.50	0.63
R3440.008	8	6.0	17.5	8.0	0.94	3.5	1.0	4.0	0.5	14	3.60	1.10
R3440.010	10	8.0	22.1	10.0	1.05	4.5	1.0	5.0	0.5	18	6.40	2.11
R3440.012	12	9.0	26.0	12.0	1.15	5.0	1.25	5.0	0.5	22	9.60	2.80
R3440.014	14	10.0	30.0	13.5	1.25	5.5	1.5	6.0	0.6	25	11.32	4.74
R3440.016	16	12.0	34.0	16.0	1.35	6.0	1.5	6.0	0.6	28	13.50	5.63





R3441.i

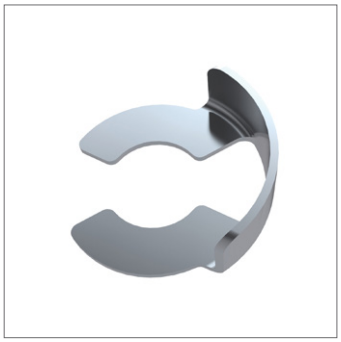
Material
Spring steel, yellow zinc plated, hardened and annealed 1450 to 160c N/mm² tensile strength.

Technical Notes
Yellow zinc is not RoHS Compliant

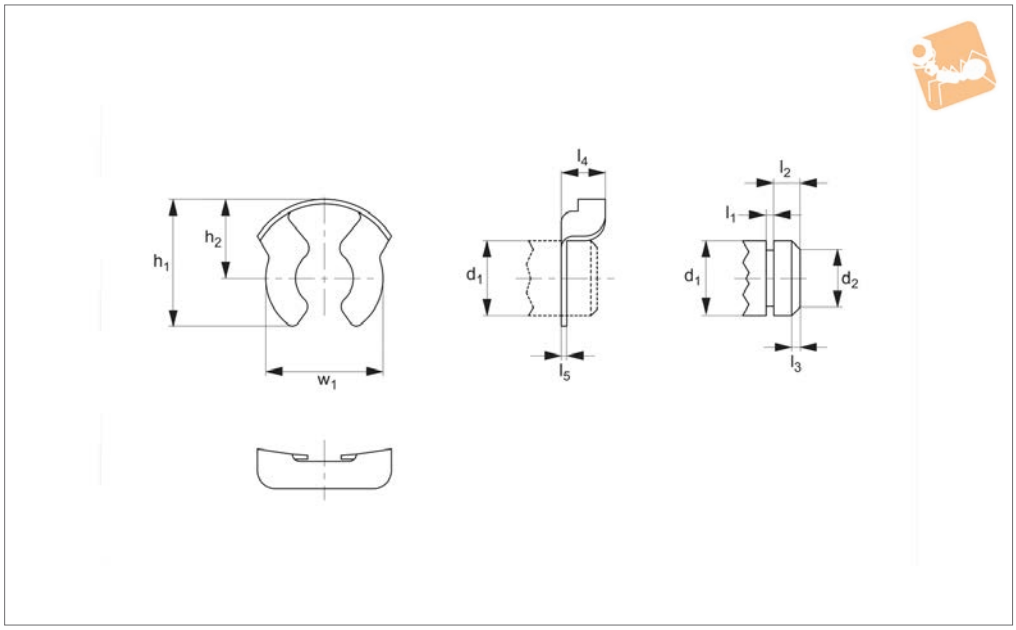
Tips
Easily assembled and removed by hand without special tools. Compatible with clevis pins. safety lip prevents accidental removal.
Assembly rattle is eliminated by the fasteners concave back holding the clevis pin under tension.

Order No.	d_1	d_2	h_1	h_2	l_1	l_2	l_3	l_4	l_5	w	Weight g
R3441.I187	0.1875	0.140	0.429	0.195	0.020	0.090	0.030	0.084	0.015	0.355	0.3
R3441.I250	0.250	0.193	0.562	0.245	0.026	0.110	0.030	0.130	0.018	0.437	0.6
R3441.I312	0.312	0.240	0.679	0.315	0.033	0.130	0.030	0.138	0.020	0.551	1.1
R3441.I375	0.375	0.301	0.844	0.385	0.037	0.167	0.037	0.211	0.020	0.710	2.2
R3441.I500	0.500	0.388	1.200	0.520	0.046	0.208	0.037	0.263	0.020	1.000	5.1

Safety Fastener (KLM)
silver zinc plated



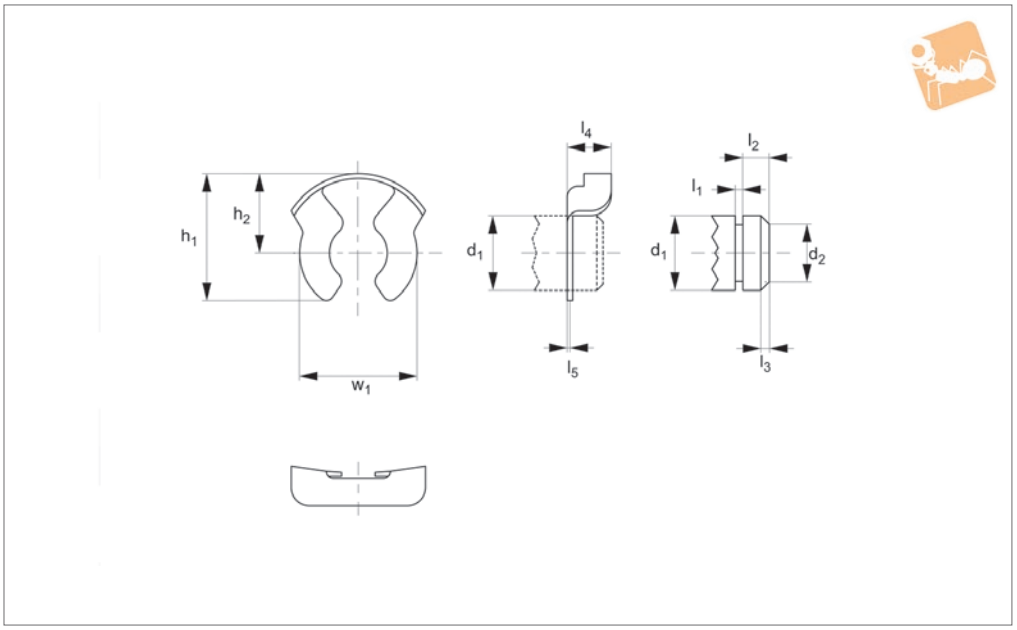
R3444



Material
Steel, silver zinc plated.

Tips
Easily assembled and removed by hand without special tools.

Order No.	d_1 tol. h11	d_2 tol. h11	h_1	h_2	l_1 +0.10	l_2	l_3	l_4	l_5	w	Axial force kN max.
R3444.004	4	3.2	7.2	4.3	0.64	2.0	0.5	2.8	0.4	6.6	1.50
R3444.005	5	4.0	8.4	5.2	0.74	2.5	0.5	2.8	0.5	7.5	3.00
R3444.006	6	5.0	11.25	6.8	0.74	3.0	0.75	3.5	0.5	10.6	4.85
R3444.008	8	6.0	11.9	7.4	0.94	3.5	1.0	4.5	0.5	11.5	5.50
R3444.010	10	8.0	16.3	9.5	1.05	4.5	1.0	5.9	0.6	15.5	9.50
R3444.012	12	9.0	18.0	10.5	1.15	5.5	1.25	6.2	0.6	16.8	10.70
R3444.014	14	10.0	20.0	12.2	1.25	5.5	1.5	6.8	0.7	19.2	12.70
R3444.016	16-18	12.0	24.0	14.3	1.35	5,5-6,0	1.5	7.6	0.8	22.7	14.00
R3444.024	20-25	16-18	34.0	19.0	1.80	5,5-6,5	1.5	9.8	1.0	34.0	16.00



R3445

Material
Steel, yellow zinc plated.

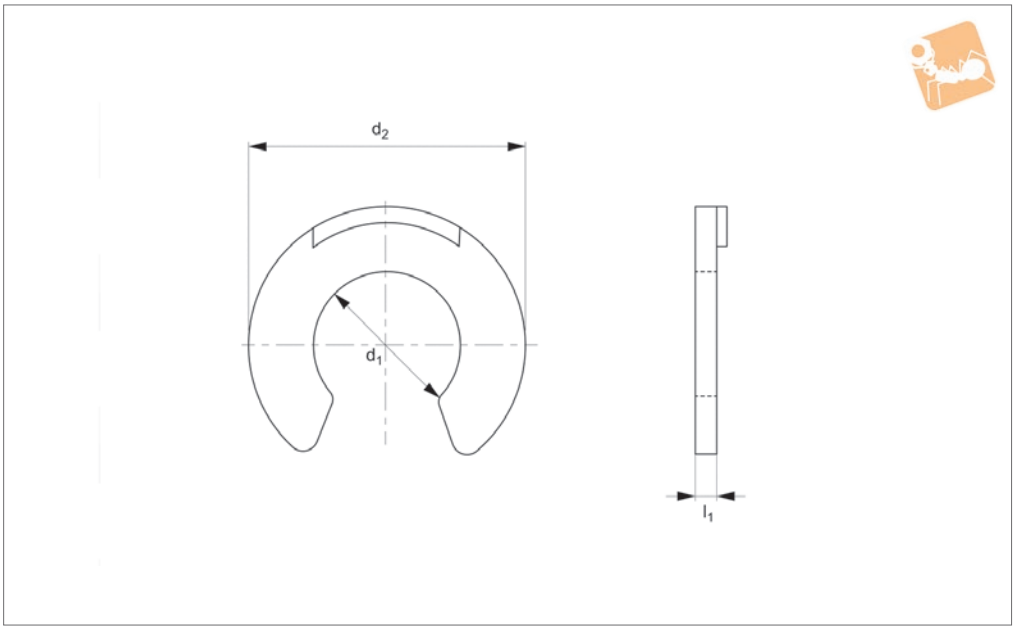
Tips
Easily assembled and removed by hand

without special tools, for yellow zinc plated version see R3445.

Order No.	d_1 tol. h11	d_2 tol. h11	h_1	h_2	l_1 +0.10	l_2	l_3	l_4	l_5	w	Axial force kN max.
R3445.004	4	3.2	7.2	4.3	0.64	2.0	0.5	2.8	0.4	6.6	1.50
R3445.005	5	4.0	8.4	5.2	0.74	2.5	0.5	2.8	0.5	7.5	3.00
R3445.006	6	5.0	11.25	6.8	0.74	3.0	0.75	3.5	0.5	10.6	4.85
R3445.008	8	6.0	11.9	7.4	0.94	3.5	1.0	4.5	0.5	11.5	5.50
R3445.010	10	8.0	16.3	9.5	1.05	4.5	1.0	5.9	0.6	15.5	9.50
R3445.012	12	9.0	18.0	10.5	1.15	5.5	1.25	6.2	0.6	16.8	10.70
R3445.014	14	10.0	20.0	12.2	1.25	5.5	1.5	6.8	0.7	19.2	12.70
R3445.016	16-18	12.0	24.0	14.3	1.35	5,5-6,0	1.5	7.6	0.8	22.7	14.00
R3445.020	20-25	16-18	34.0	19.0	1.80	5,5-6,5	1.5	9.8	1.0	34.0	16.00

Plastic Circlips

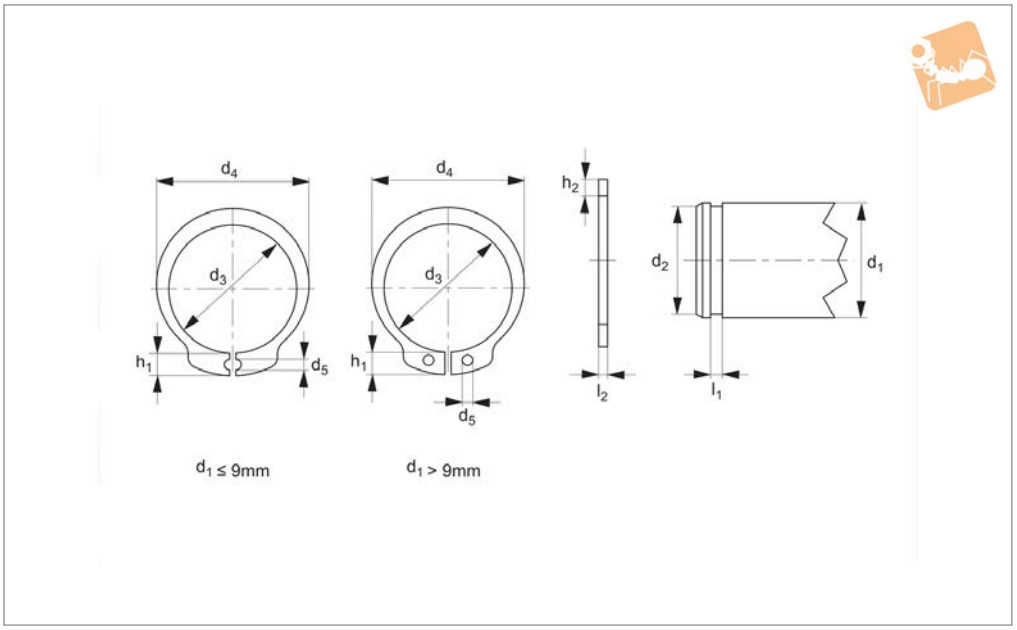
R3446



Material
Black plastic (POM).

Important Notes
For use with R3409 clevis joints and R3453 clevis pins.

Order No.	d_1	d_2	l_1
R3446.004	3.2	7.0	1.0
R3446.006	4.0	9.0	1.1
R3446.008	5.0	11.0	1.1
R3446.010	7.0	14.0	1.3
R3446.012	9.0	18.5	1.4
R3446.016	12.0	23.0	1.6
R3446.020	15.0	28.0	1.9



R3447

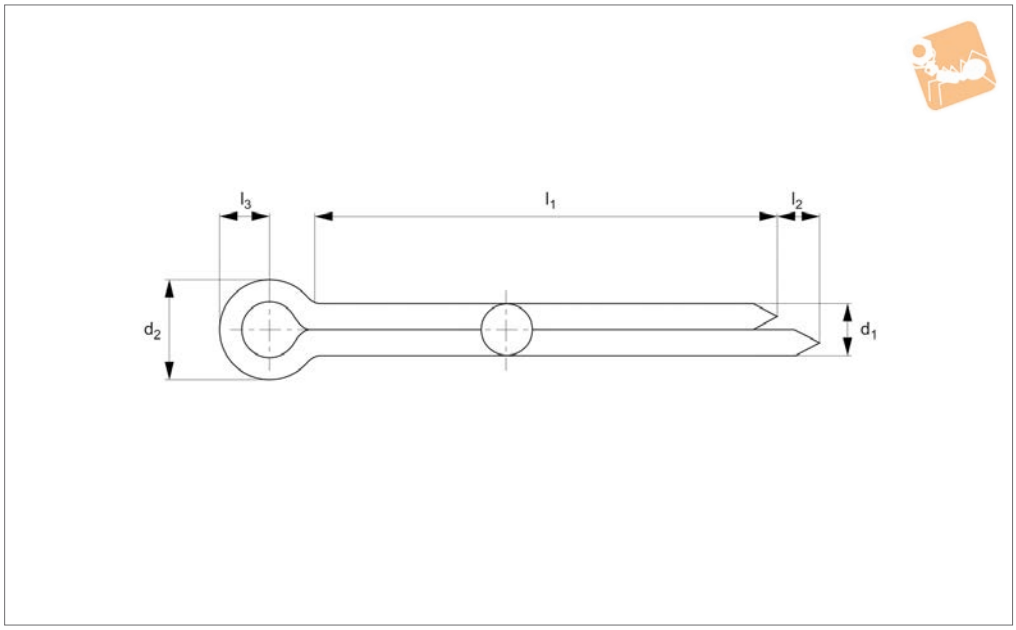
Material
Stainless steel (AISI 303).

Technical Notes
To DIN 471, for use with R3454 clevis pins and R3402-R3403 clevis joints.

Order No.	d_1	d_2	d_3	d_4	d_5 min.	h_1	h_2	l_1	l_2
R3447.005	5	4.8	3.7	6.2	1.0	2.5	1.1	0.7	0.6
R3447.006	6	5.7	5.6	7.5	1.15	2.7	1.3	0.8	0.7
R3447.008	8	7.6	7.4	9.6	1.2	3.2	1.5	1.1	0.8
R3447.010	10	9.6	9.3	12.7	1.7	3.3	1.8	1.1	1.0
R3447.012	12	11.5	11.0	7.7	1.7	3.3	1.8	1.1	1.0
R3447.016	16	15.2	14.7	12.2	1.7	3.7	2.2	1.1	1.0
R3447.020	20	19.0	18.5	16.2	2.0	4.0	2.6	1.3	1.2

Steel Cotter Pin

R3448



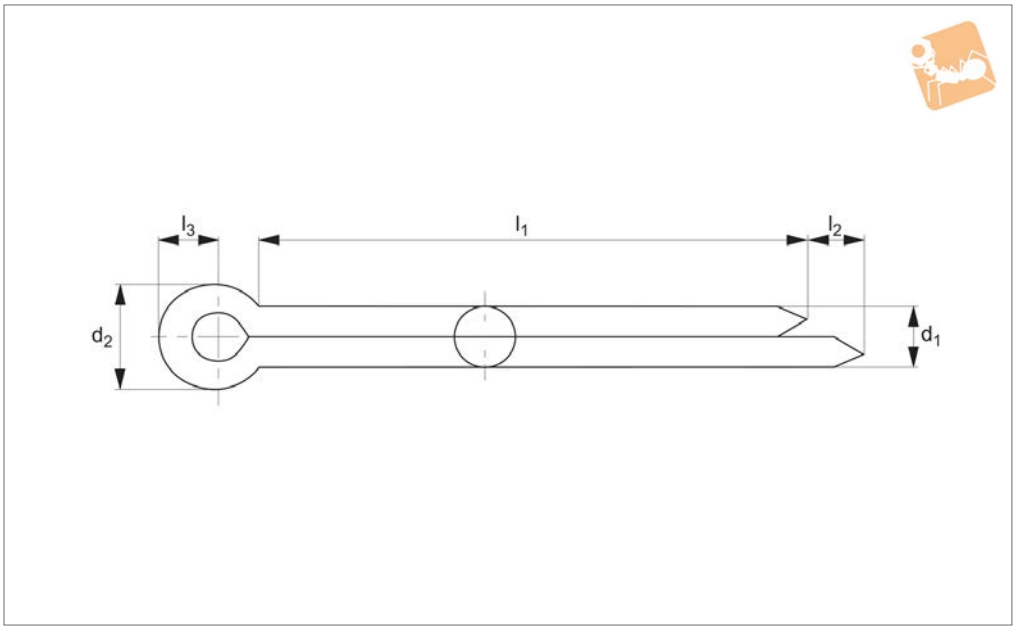
Material
Mild steel, silver zinc plated.

Technical Notes
To DIN 94 (equivalent to ISO 1234).

Cotter pins require a loose fit, and as a result the metric versions can also be for inch sizes.

Tips
Used with clevis pins as denoted in product table, with clevis joints R3385 and R3386, and washers R3457.

Order No.	d_1 nom.	d_1 min.	d_1 max.	d_2 min.	d_2 max.	l_1	l_2	l_3	For use with clevis pin
R3448.01.0-10	1.0	0.8	0.9	0.8	1.6	10	1.6	3	R3455.005
R3448.01.6-18	1.6	1.3	1.4	1.25	2.5	18	2.5	3.2	R3455.006
R3448.02-18	2.0	1.7	1.8	1.25	2.5	18	2.5	4.0	R3455.008
R3448.03.2-22	3.2	2.7	2.9	1.6	3.2	22	3.2	6.4	R3455.010
R3448.04-28	4.0	3.5	3.7	2.0	4.0	28	4	8	R3455.012-016
R3448.05-50	5.0	4.4	4.6	2.0	4.0	50	4	10	R3455.018-020
R3448.06.3-71	6.0	5.7	5.9	2.0	4.0	71	4	12.6	R3455.025-030
R3448.08-112	8.0	7.3	7.5	2.0	4.0	112	4	16	R3455.035-042
R3448.10-112	10.0	9.3	9.5	3.2	6.3	112	6.3	20	R3455.050



R3449

Material
Stainless steel (A2, DIN 1,4301).

Technical Notes
To DIN 94 (equivalent to ISO 1234).

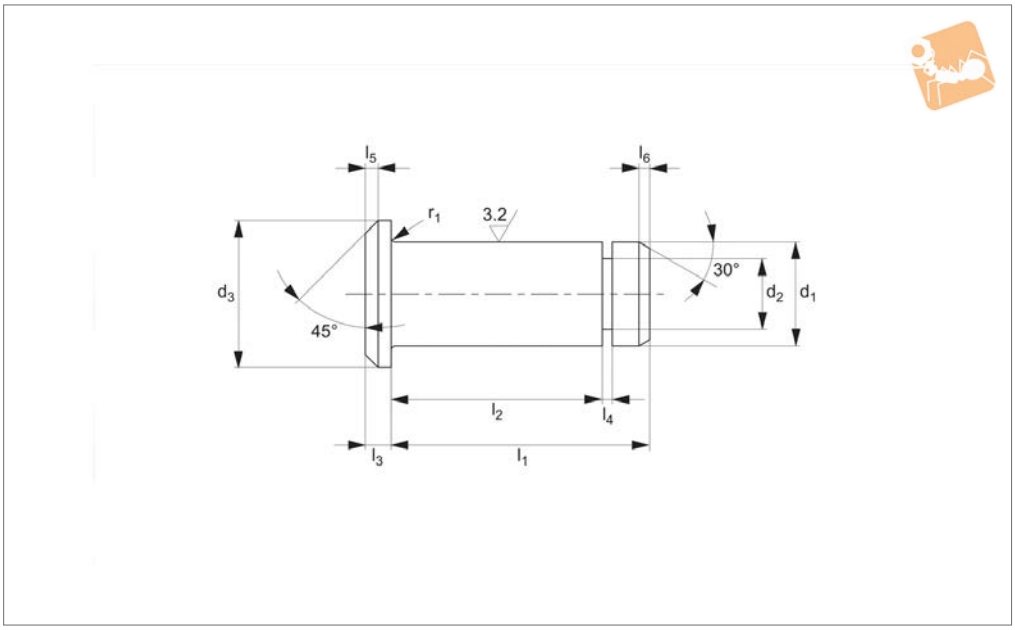
Cotter pins require a loose fit, and as a result the metric versions can also be for inch sizes.

Tips
Used with clevis pins as denoted in product table, with clevis joints R3402 and R3403 and washer R3458.

Order No.	d_1 nom.	d_1 min.	d_1 max.	d_2 min.	d_2 max.	l_1	l_2	l_3	For use with clevis pin
R3449.01.0-10	1.0	0.8	0.9	0.8	1.6	10	1.6	3	R3456.004-005
R3449.01.6-18	1.6	1.3	1.4	1.25	2.5	18	2.5	3.2	R3456.006
R3449.02.0-18	2.0	1.7	1.8	1.25	2.5	18	1.25	2.5	R3456.008
R3449.03.2-22	3.2	2.7	2.9	1.6	3.2	22	3.2	6.4	R3456.010
R3449.04-28	4.0	3.5	3.7	2.0	4.0	28	4	8	R3456.012-016
R3449.05-50	5.0	4.4	4.6	2.0	4.0	50	4	10	R3456.020
R3449.06.3-71	6.3	5.7	5.9	2.0	4.0	71	4	12.6	R3456.025

Clevis Pin

R3450

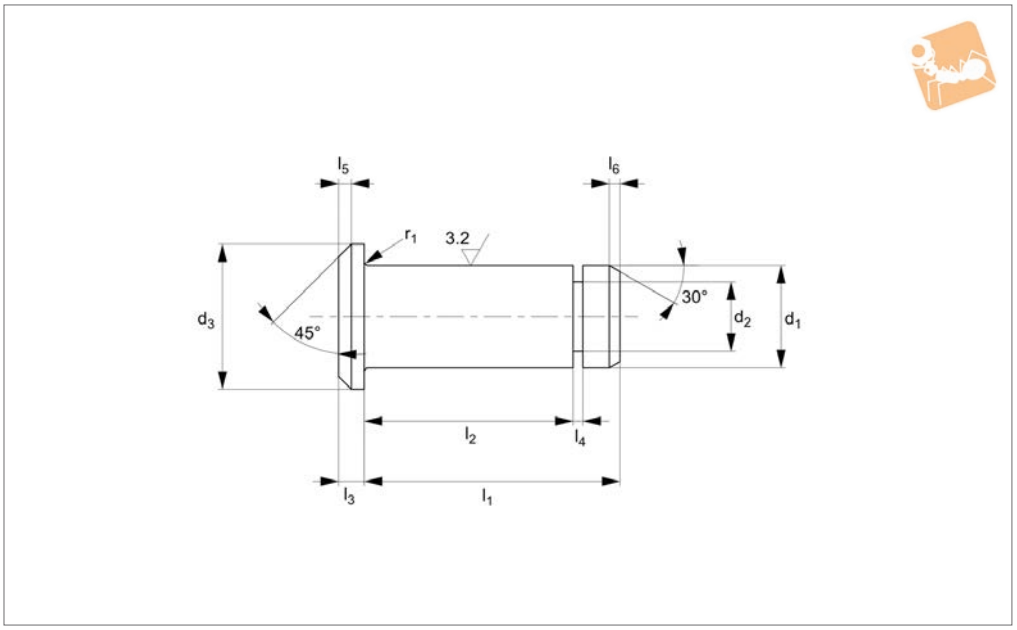


Material
Steel (9SMnPb28), silver zinc plated.
Stainless steel (A2, AISI 303).

Technical Notes
Designed for use with clevis joints.

Tips
For safety fasteners, see R3440-R3445.

Order No.	d_1 tol. h11	d_2 tol. h11	d_3 tol. h12	l_1	l_2 +0.30	l_3 tol. js14	l_4 +0.10	l_5	l_6	R	Weight g
R3450.004-ZP	4	3.2	6	10.5	8.5	1.0	0.64	0.5	0.5	0.3	2
R3450.005-ZP	5	4.0	8	13.0	10.5	1.5	0.74	0.5	0.5	0.5	3
R3450.006-ZP	6	5.0	9	15.5	12.5	1.5	0.74	0.5	0.75	0.5	4
R3450.008-ZP	8	6.0	12	20.0	16.5	2.0	0.94	1.0	1.0	0.5	9
R3450.010-ZP	10	8.0	14	25.0	20.5	2.0	1.05	1.0	1.0	0.5	17
R3450.012-ZP	12	9.0	17	30.0	24.5	3.0	1.15	1.25	1.25	0.5	30
R3450.014-ZP	14	10.0	19	33.0	27.5	3.0	1.25	1.5	1.5	1.0	48
R3450.016-ZP	16	12.0	20	38.5	32.5	3.0	1.35	1.5	1.5	1.0	67
R3450.020-ZP	20	17.5	26	46.0	40.5	4.0	1.8	2.0	1.5	1.0	125
R3450.025-ZP	25	18.0	32	57.0	50.5	5.0	1.8	2.0	1.5	1.0	260
R3450.004-A2	4	3.2	6	10.5	8.5	1.0	0.64	0.5	0.5	0.3	2
R3450.005-A2	5	4.0	8	13.0	10.5	1.5	0.74	0.5	0.5	0.5	3
R3450.006-A2	6	5.0	9	15.5	12.5	1.5	0.74	0.5	0.75	0.5	4
R3450.008-A2	8	6.0	12	20.0	16.5	2.0	0.94	1.0	1.0	0.5	9
R3450.010-A2	10	8.0	14	25.0	20.5	2.0	1.05	1.0	1.0	0.5	17
R3450.012-A2	12	9.0	17	30.0	24.5	3.0	1.15	1.25	1.25	0.5	30
R3450.014-A2	14	10.0	19	33.0	27.5	3.0	1.25	1.5	1.5	1.0	48
R3450.016-A2	16	12.0	20	38.5	32.5	3.0	1.35	1.5	1.5	1.0	67
R3450.020-A2	20	17.5	26	46.0	40.5	4.0	1.8	2.0	1.5	1.0	125
R3450.025-A2	25	18.0	32	57.0	50.5	5.0	1.8	2.0	1.5	1.0	260



R3451.i

Material
Steel (9SMnPb28) yellow zinc plated.

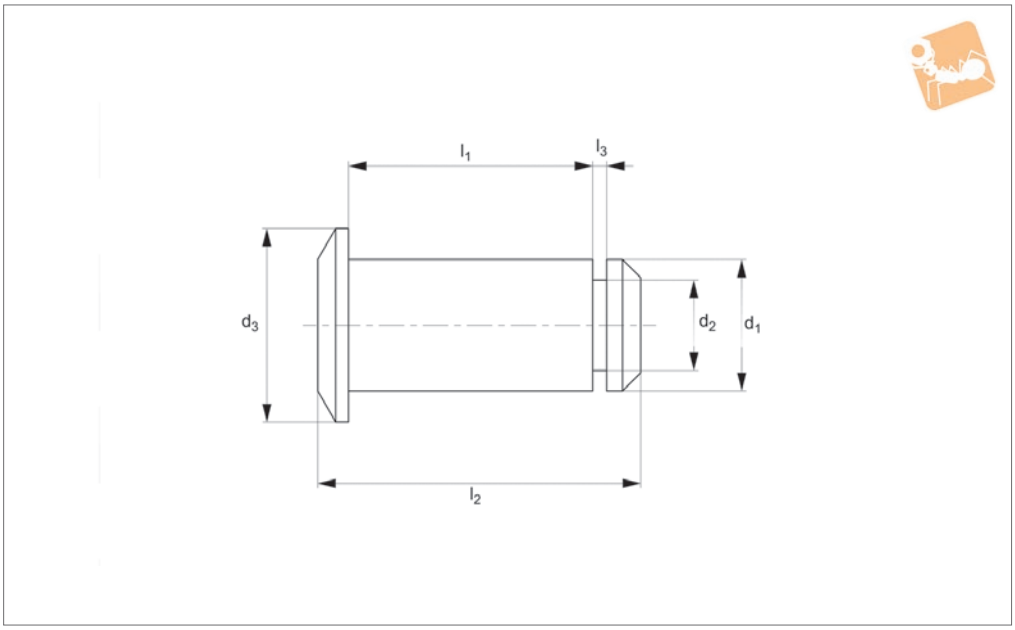
Technical Notes
Equivalent to Springfix NBI, designed for use with clevis joints, yellow zinc is not RoHS Compliant.

Tips
For safety fasteners, see R3441.

Order No.	d_1	d_2	d_3	l_1	l_2	l_3	l_4	Weight g
R3451.I187	0.1875	0.140	0.250	0.475	0.380	0.050	0.020	3
R3451.I250	0.250	0.193	0.343	0.620	0.505	0.062	0.026	4
R3451.I312	0.312	0.240	0.437	0.765	0.630	0.078	0.033	10
R3451.I375	0.375	0.301	0.500	0.927	0.755	0.090	0.037	17
R3451.I500	0.500	0.388	0.625	1.218	1.005	0.110	0.046	30

Plastic Clevis Pin

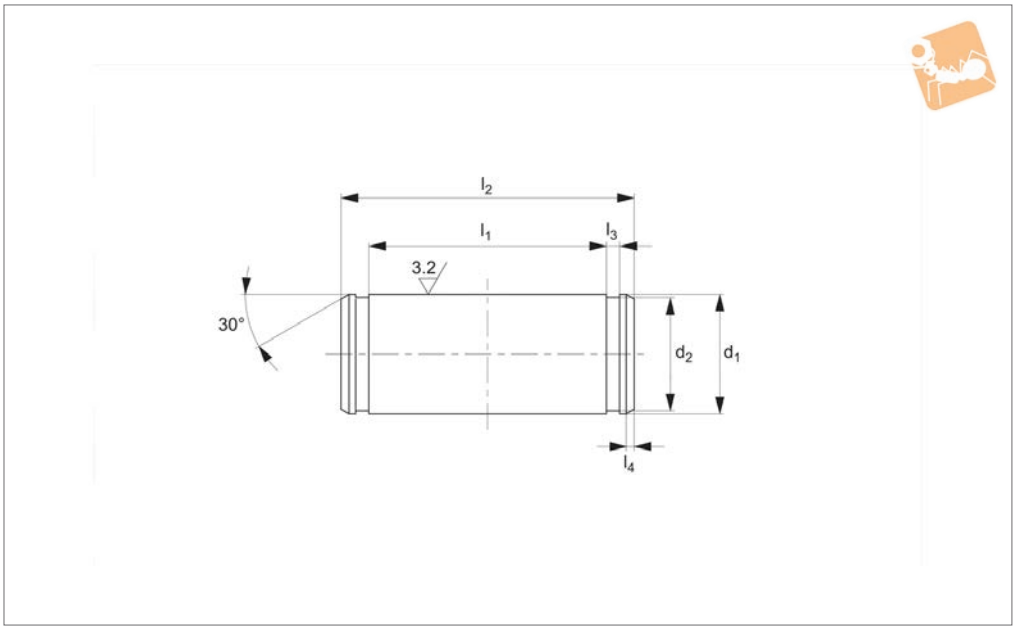
R3453



Material
Black plastic (Igumid G).

Important Notes
For use with R3409 clevis joints and R3446 circlips.

Order No.	d_1 tol. h11	d_2	d_3	l_1	l_2	l_3	Weight g
R3453.004	4	3.2	7	8	12.5	1.05	0.3
R3453.005	5	4.0	8	12	16.5	1.15	0.5
R3453.005-1	5	4.0	8	10	14.5	1.15	0.5
R3453.006	6	4.0	9	12	16.5	1.15	0.7
R3453.008	8	5.0	12	16	21.5	1.15	1.5
R3453.010	10	7.0	15	20	27.0	1.35	1.35
R3453.012	12	9.0	18	24	31.5	1.50	1.5
R3453.014	14	12.0	22	27	36.0	1.70	1.7
R3453.015	15	12.0	23	27	36.0	1.70	1.7
R3453.016	16	12.0	24	32	42.0	1.70	1.7
R3453.017	17	12.0	25	32	42.0	1.70	1.7
R3453.020	20	15.0	30	40	51.0	2.00	2.0



R3454

Material
Stainless steel (AISI 303).

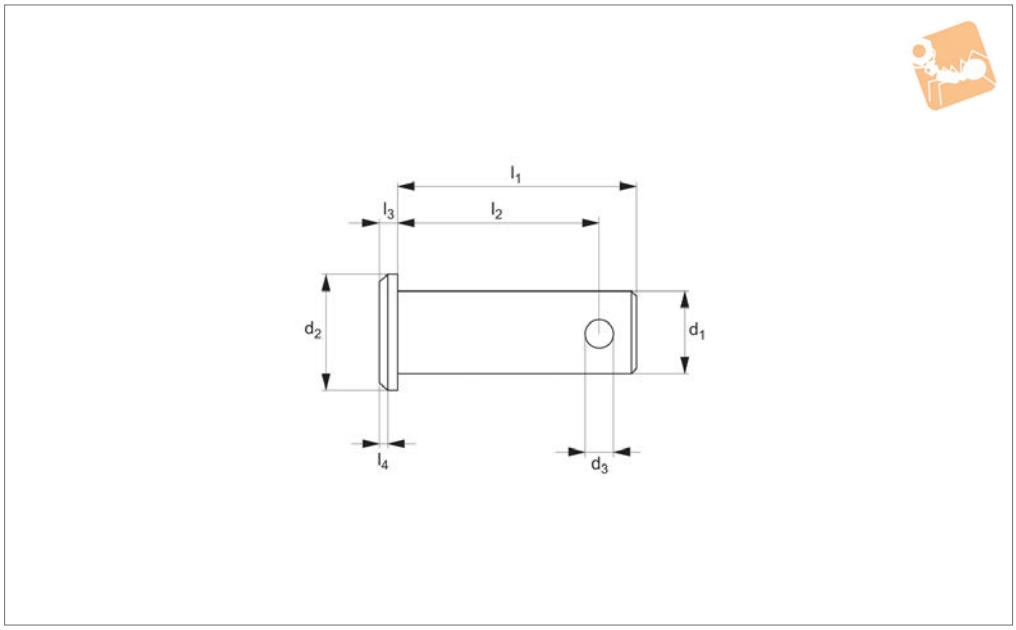
Technical Notes
For use with R3402-R3403 clevis joints and R3447 circlips.

Order No.	d_1 tol. h11	d_2 tol. h11	l_1 +0.30	l_2 +0.40	l_3 tol. h13	l_4	Weight g
R3454.005	5	4.8	10.5	15	0.7	1	3
R3454.006	6	5.7	12.2	17	0.8	1	5
R3454.008	8	7.6	16.5	20	0.9	1	8
R3454.010	10	9.6	20.5	25	1.1	1	15
R3454.012	12	11.5	24.5	30	1.1	1	26
R3454.016	16	15.2	32.5	39	1.1	1	61
R3454.020	20	19.0	40.5	48	1.3	1	118

Steel Clevis Pin With Hole

steel - zinc-plated

R3455



Material

Sizes 5-14 steel 1,0214 (QST 36-3).
Sizes 16-50 steel (1,0718 11SMnPb30+C).
Zinc-plated.

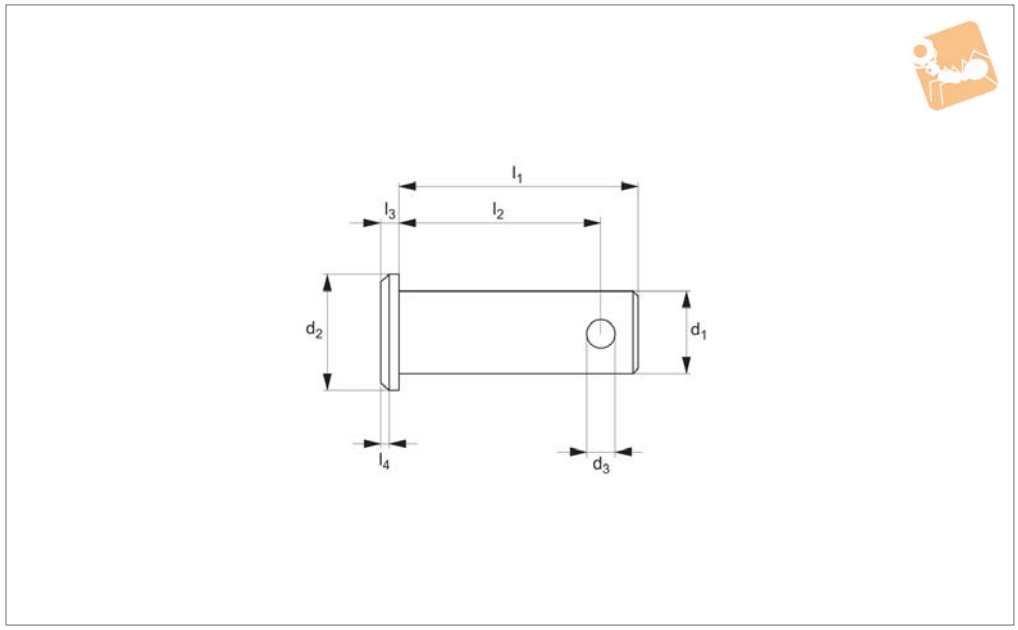
Technical Notes

Designed for use with clevis joints.

Tips

For use with clevis joints R3385 and R3386, for split cotter pins to suit see part number P1240.
For washers see part number P0330-ZP.

Order No.	d_1 tol. h11	d_2 tol. h14	d_3 tol. h14	l_1 tol. js15	l_2 +0.5	l_3 tol. js14	l_4	Weight g
R3455.005	5	8	1.0	15	12.3	1.5	0.5	2.6
R3455.006	6	9	1.6	18	15.3	1.5	0.5	4.6
R3455.008	8	12	2.0	23	19.5	2.0	1.0	10.0
R3455.010	10	14	3.2	29	24.5	2.0	1.0	19.0
R3455.012	12	17	4.0	35	29.5	3.0	1.5	34.0
R3455.014	14	19	4.0	40	32.5	3.0	1.5	53.0
R3455.016	16	20	4.0	45	38.2	3.5	1.5	72.0
R3455.018	18	25	5.0	50	43.5	3.5	1.5	104.0
R3455.020	20	28	5.0	53	47.0	4.0	1.5	139.0
R3455.025	25	34	6.3	67	59.0	5.5	1.5	266.0
R3455.028	28	34	6.3	72	63.2	5.5	2.0	361.0
R3455.030	30	36	6.3	77	68.2	5.5	2.0	428.0
R3455.035	35	45	8.0	87	76.5	7.0	2.0	677.0
R3455.040	40	48	8.0	100	90.0	6.0	5.0	1035.0
R3455.042	42	48	8.0	100	90.0	7.0	5.0	1151.0
R3455.050	50	58	10.0	115	103.0	7.0	6.0	1846.0



R3456

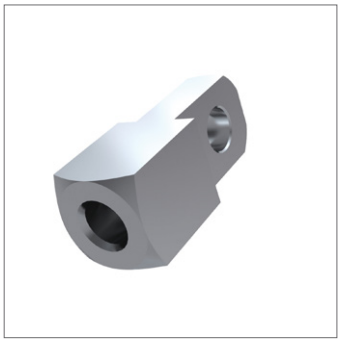
Material
Stainless steel (1.4305, X8CrNiS18-9), for sizes 6-8: stainless steel (1.4567, X3CrNiCu18-9-4).

Technical Notes
Designed for use with clevis joints.

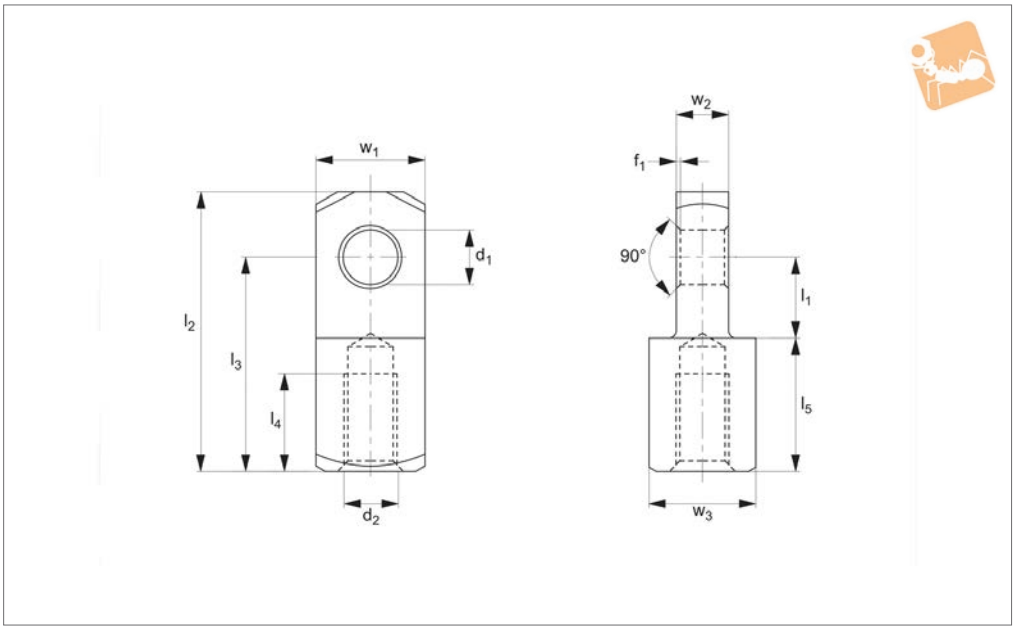
Tips
For use with clevis joints R3402 and R3403, for split cotter pins to suit see part number P1241.
For washers see part number P0330.A2.

Order No.	d_1 tol. h11	d_2 tol. h14	d_3 tol. H14	l_1 tol. js15	l_2 +0.5	l_3 tol. js14	l_4	Weight g
R3456.005	5	8	1.2	15	12.3	1.5	0.5	2.6
R3456.006	6	9	1.6	18	15.3	1.5	0.5	4.6
R3456.008	8	12	2.0	23	19.5	2.0	1.0	10.0
R3456.010	10	14	3.2	29	24.5	2.0	1.0	19.0
R3456.012	12	17	4.0	35	29.5	3.0	1.5	34.0
R3456.014	14	19	4.0	40	32.5	3.0	1.5	53.0
R3456.016	16	21	4.0	45	38.2	3.0	-	73.0
R3456.020	20	28	5.0	53	47.0	4.0	-	139.0
R3456.025	25	34	6.3	67	59.0	5.5	-	266.0

Mating Piece for Clevis Joints
silver zinc plated



R3420



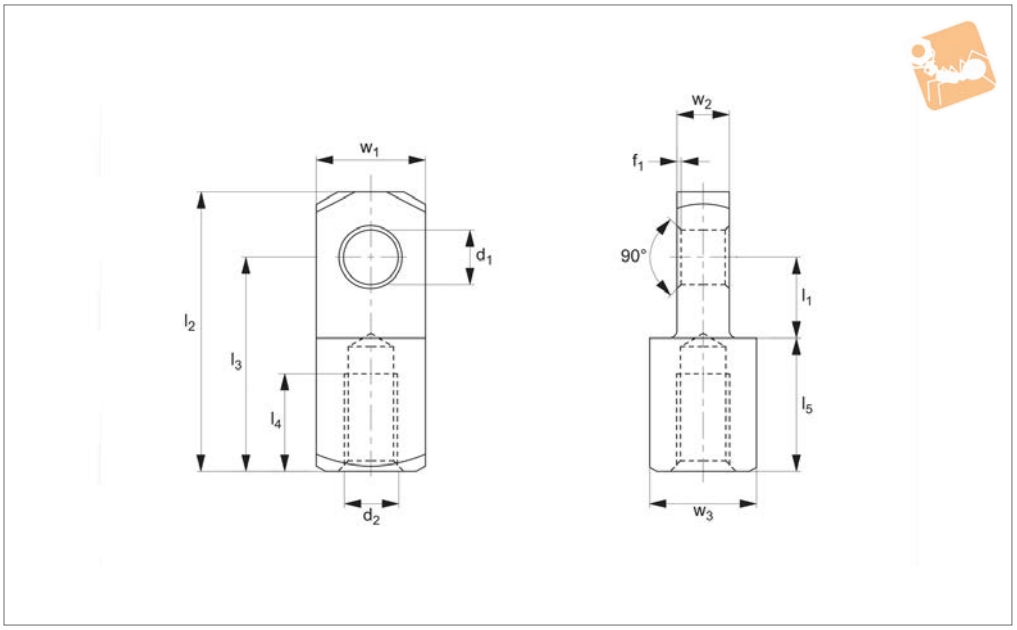
Material
Steel (1.0718), silver zinc plated.

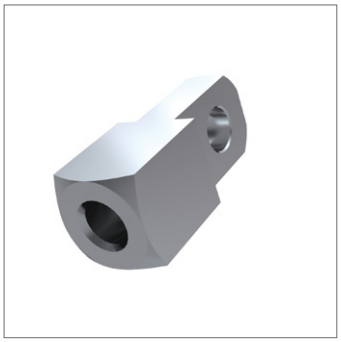
Tips
Standard thread is right hand, (for left hand thread, see R3421).
Thin end of mating piece is designed to fit in between forks of clevis joint.
Designed so thread size matches clevis joint, (e.g. M5 mating piece will fit on M5 clevis joint).

Order No.	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.5	l_3 ±0.5	l_4	l_5 ±0.2	w_1 tol. h11	w_2 -0,2	w_3 tol. h11	f_1 ±0.2	Weight g
R3420.R004	Right	Coarse	4	6.0	M4	21	16	6	10	8	4	8	0.5	6
R3420.R005	Right	Coarse	5	7.5	M5	26	20	8	12.5	10	5	10	0.5	12
R3420.R006	Right	Coarse	6	9.0	M6	31	24	11	15	12	6	12	0.5	21
R3420.R008	Right	Coarse	8	12.0	M8	42	32	14	20	16	8	16	0.5	51
R3420.R009	Right	Fine	8	12.0	M8x1	42	32	14	20	16	8	16	0.5	51
R3420.R010	Right	Coarse	10	15.0	M10	52	40	18	25	20	10	20	0.5	98
R3420.R011	Right	Fine	10	15.0	M10x1,25	52	40	18	25	20	10	20	0.5	98
R3420.R012	Right	Coarse	12	18.0	M12	62	48	22	30	24	12	24	0.5	168
R3420.R013	Right	Fine	12	18.0	M12x1,25	62	48	22	30	24	12	24	0.5	167
R3420.R014	Right	Coarse	14	21.0	M14	72	56	25	35	27	14	27	1.0	247
R3420.R015	Right	Fine	14	21.0	M14x1,5	72	56	25	35	27	14	27	1.0	245
R3420.R016	Right	Coarse	16	24.0	M16	83	64	30	40	32	16	32	1.0	397
R3420.R017	Right	Fine	16	24.0	M16x1,5	83	64	30	40	32	16	32	1.0	395
R3420.R020	Right	Coarse	20	30.0	M20	105	80	38	50	40	20	40	1.0	783
R3420.R021	Right	Fine	20	30.0	M20X1,5	105	80	38	50	40	20	40	1.0	776

Mating Piece for Clevis Joints

left hand thread - silver zinc plated





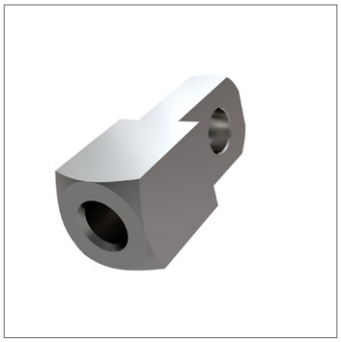
R3421

Material
Steel (1.0718), silver zinc plated.

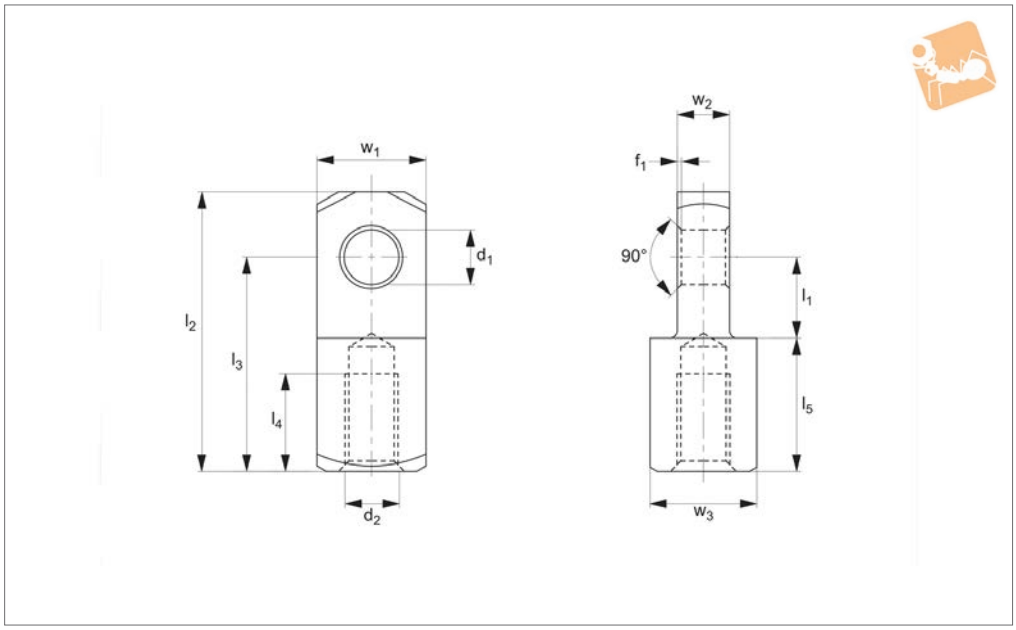
Tips
Thin end of mating piece is designed to fit in between forks of clevis joint.
Designed so thread size matches clevis joint, (e.g. M5 mating piece will fit on M5 clevis joint).

Order No.	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.5	l_3 ±0.5	l_4	l_5 ±0.2	w_1 tol. h11	w_2 -0,2	w_3 tol. h11	f_1 ±0.2	Weight g
R3421.L004	Left	Coarse	4	6	M4	21	16	6	10.0	8	4	8	0.5	6
R3421.L005	Left	Coarse	5	7.5	M5	26	20	8	12.5	10	5	10	0.5	12
R3421.L006	Left	Coarse	6	9	M6	31	24	11	15.0	12	6	12	0.5	21
R3421.L008	Left	Coarse	8	12	M8	42	32	14	20.0	16	8	16	0.5	51
R3421.L009	Left	Fine	8	12	M8x1	42	32	14	20.0	16	8	16	0.5	51
R3421.L010	Left	Coarse	10	15	M10	52	40	18	25.0	20	10	20	0.5	98
R3421.L011	Left	Fine	10	15	M10x1,25	52	40	18	25.0	20	10	20	0.5	98
R3421.L012	Left	Coarse	12	18	M12	62	48	22	30.0	24	12	24	0.5	168
R3421.L013	Left	Fine	12	18	M12x1,25	62	48	22	30.0	24	12	24	0.5	167
R3421.L014	Left	Coarse	14	21	M14	72	56	25	35.0	27	14	27	1.0	247
R3421.L015	Left	Fine	14	21	M14x1,5	72	56	25	35.0	27	14	27	1.0	245
R3421.L016	Left	Coarse	16	24	M16	83	64	30	40.0	32	16	32	1.0	397
R3421.L017	Left	Fine	16	24	M16x1,5	83	64	30	40.0	32	16	32	1.0	395
R3421.L020	Left	Coarse	20	30	M20	105	80	38	50.0	40	20	40	1.0	783
R3421.L021	Left	Fine	20	30	M20X1,5	105	80	38	50.0	40	20	40	1.0	776

Stainless Mating Piece for Clevis



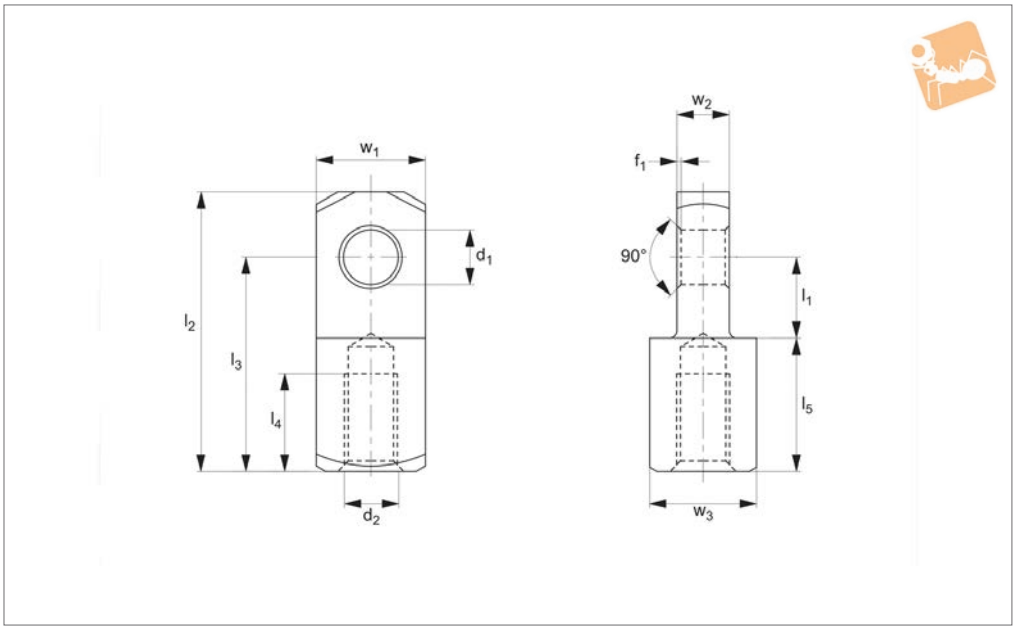
R3426

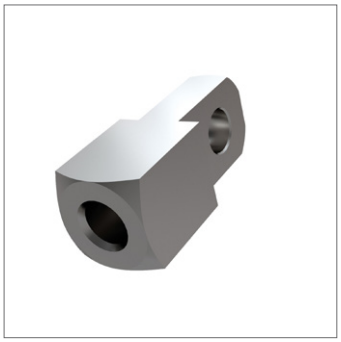


Material
Stainless steel (AISI 303 1.4305).

Tips
Standard thread is right hand, (for left hand thread see R3427).
Thin end of mating piece is designed to fit in between forks of clevis joint.
Designed so thread size matches clevis joint, (e.g. M5 mating piece will fit on M5 clevis joint).

Order No.	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.5	l_3 ±0.5	l_4	l_5 ±0.2	w_1 tol. h11	w_2 -0,2	w_3 tol. h11	f_1 ±0.2	Weight g
R3426.R004	Right	Coarse	4	6	M4	21	16	6	10.0	8	4	8	0.5	6
R3426.R005	Right	Coarse	5	7.5	M5	26	20	8	12.5	10	5	10	0.5	12
R3426.R006	Right	Coarse	6	9	M6	31	24	11	15.0	12	6	12	0.5	21
R3426.R008	Right	Coarse	8	12	M8	42	32	14	20.0	16	8	16	0.5	51
R3426.R009	Right	Fine	8	12	M8x1	42	32	14	20.0	16	8	16	0.5	51
R3426.R010	Right	Coarse	10	15	M10	52	40	18	25.0	20	10	20	0.5	98
R3426.R011	Right	Fine	10	15	M10x1,25	52	40	18	25.0	20	10	20	0.5	98
R3426.R012	Right	Coarse	12	18	M12	62	48	22	30.0	24	12	24	0.5	168
R3426.R013	Right	Fine	12	18	M12x1,25	62	48	22	30.0	24	12	24	0.5	167
R3426.R014	Right	Coarse	14	21	M14	72	56	25	35.0	27	14	27	1.0	247
R3426.R015	Right	Fine	14	21	M14x1,5	72	56	25	35.0	27	14	27	1.0	245
R3426.R016	Right	Coarse	16	24	M16	83	64	30	40.0	32	16	32	1.0	397
R3426.R017	Right	Fine	16	24	M16x1,5	83	64	30	40.0	32	16	32	1.0	395
R3426.R020	Right	Coarse	20	30	M20	105	80	38	50.0	40	20	40	1.0	783
R3426.R021	Right	Fine	20	30	M20X1,5	105	80	38	50.0	40	20	40	1.0	776





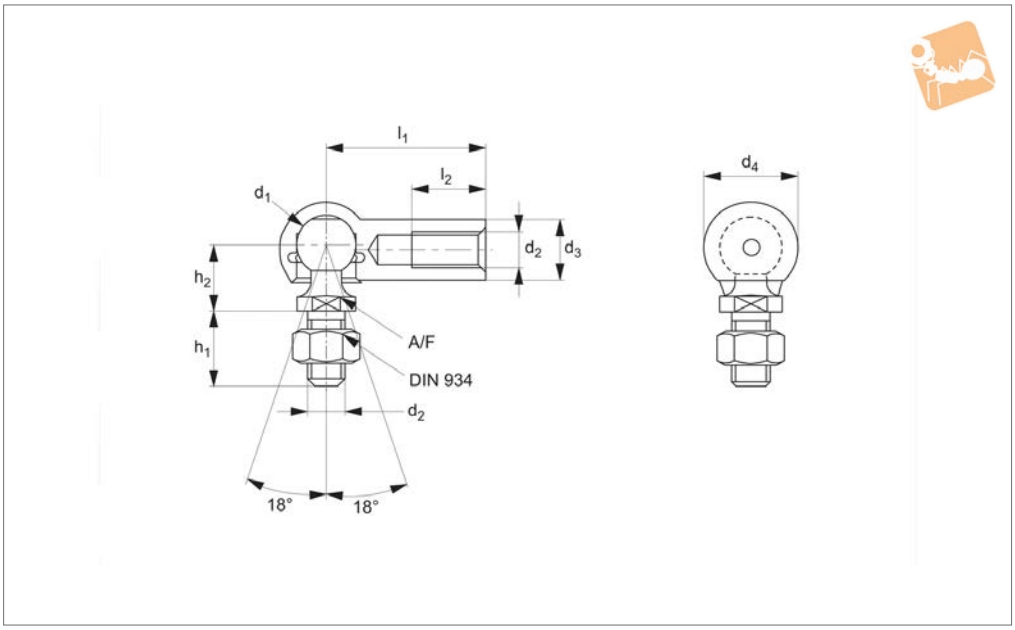
R3427

Material
Stainless steel (AISI 303 1.4305).

Tips
Thin end of mating piece is designed to fit in between forks of clevis joint.
Designed so thread size matches clevis joint, (e.g. M5 mating piece will fit on M5 clevis joint).

Order No.	Thread hand	Thread type	d_1 tol. H9	l_1 ±0.5	d_2	l_2 ±0.5	l_3 ±0.5	l_4	l_5 ±0.2	w_1 tol. h11	w_2 -0,2	w_3 tol. h11	f_1 ±0.2	Weight g
R3427.L004	Left	Coarse	4	6	M4	21	16	6	10.0	8	4	8	0.5	6
R3427.L005	Left	Coarse	5	7.5	M5	26	20	8	12.5	10	5	10	0.5	12
R3427.L006	Left	Coarse	6	9	M6	31	24	11	15.0	12	6	12	0.5	21
R3427.L008	Left	Coarse	8	12	M8	42	32	14	20.0	16	8	16	0.5	51
R3427.L009	Left	Fine	8	12	M8x1	42	32	14	20.0	16	8	16	0.5	51
R3427.L010	Left	Coarse	10	15	M10	52	40	18	25.0	20	10	20	0.5	98
R3427.L011	Left	Fine	10	15	M10x1,25	52	40	18	25.0	20	10	20	0.5	98
R3427.L012	Left	Coarse	12	18	M12	62	48	22	30.0	24	12	24	0.5	168
R3427.L013	Left	Fine	12	18	M12x1,25	62	48	22	30.0	24	12	24	0.5	167
R3427.L014	Left	Coarse	14	21	M14	72	56	25	35.0	27	14	27	1.0	247
R3427.L015	Left	Fine	14	21	M14x1,5	72	56	25	35.0	27	14	27	1.0	245
R3427.L016	Left	Coarse	16	24	M16	83	64	30	40.0	32	16	32	1.0	397
R3427.L017	Left	Fine	16	24	M16x1,5	83	64	30	40.0	32	16	32	1.0	395
R3427.L020	Left	Coarse	20	30	M20	105	80	38	50.0	40	20	40	1.0	783
R3427.L021	Left	Fine	20	30	M20X1,5	105	80	38	50.0	40	20	40	1.0	776

R3460



Material
Steel, silver zinc plated, ball stud: minimum tensile strength Rm=600N/mm². Housing: minimum tensile strength Rm=500N/mm².

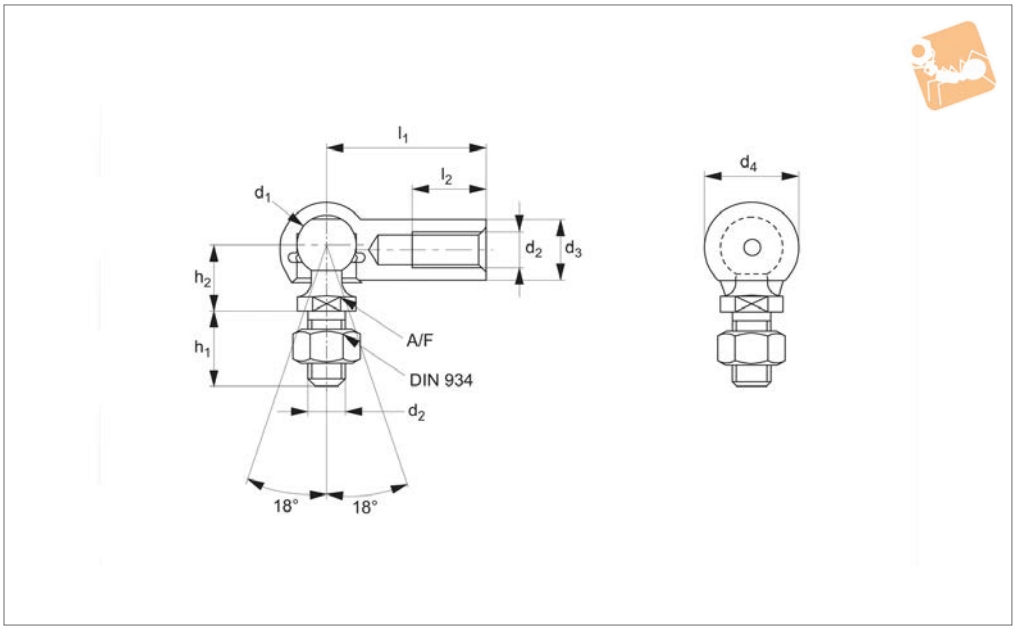
Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips
For sealing cap version, see R3470.
Standard thread is right hand, (for left hand thread see R3461).

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3460.R005	Right	8	22	M 5	8	12.8	10.2	15.2
R3460.R006	Right	10	25	M 6	10	14.8	12.5	25.2
R3460.R008	Right	13	30	M 8	13	19.3	16.5	53.1
R3460.R010	Right	16	35	M10	16	24.0	20.0	103.8
R3460.R012	Right	16	35	M12	16	24.0	20.0	103.8
R3460.R014	Right	19	45	M14x1,5*	22	30.0	28.0	220.9
R3460.R015	Right	19	45	M14	22	30.0	28.0	220.9
R3460.R016	Right	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3460.R005	9	10.2	7	3	50	20	3
R3460.R006	11	11.5	8	4	100	40	4
R3460.R008	13	14.0	11	6	200	80	6
R3460.R010	16	15.5	13	8	400	160	8
R3460.R012	16	15.5	13	8	400	160	8
R3460.R014	22	21.5	16	10	800	320	10
R3460.R015	22	21.5	16	10	800	320	10
R3460.R016	22	21.5	16	10	800	320	10



R3461

Material
Steel, silver zinc plated, ball stud: minimum tensile strength Rm=600N/mm².
Housing: minimum tensile strength Rm=500N/mm².

Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

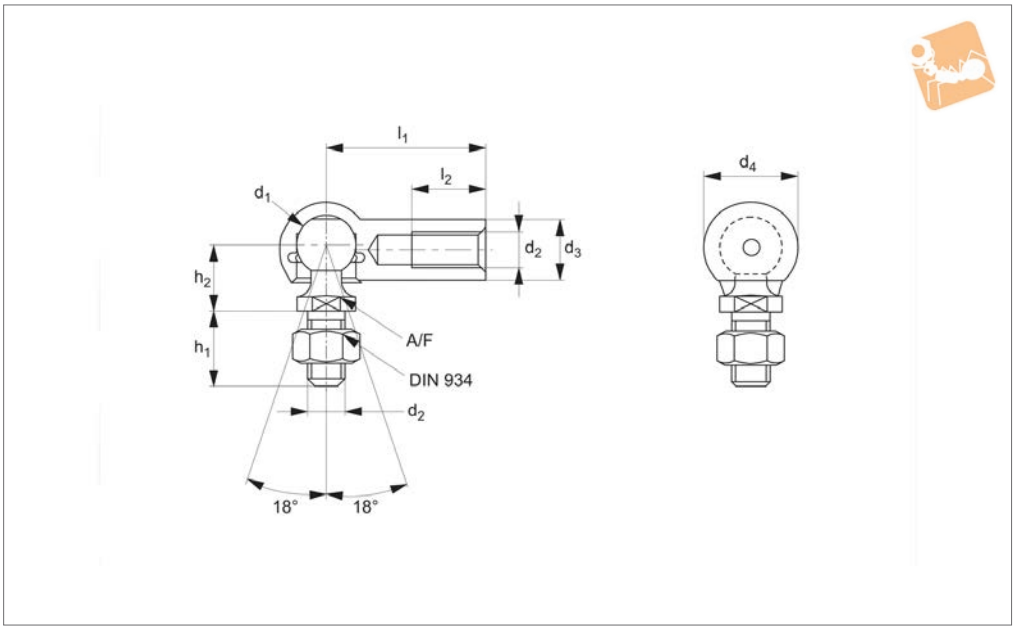
Tips
Stud: right hand thread.
Housing: left hand thread.
For sealing cap version, see R3471.

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3461.L005	Left	8	22	M 5	8	12.8	10.2	15.2
R3461.L006	Left	10	25	M 6	10	14.8	12.5	25.2
R3461.L008	Left	13	30	M 8	13	19.3	16.5	53.1
R3461.L010	Left	16	35	M10	16	24.0	20.0	103.8
R3461.L012	Left	16	35	M12	16	24.0	20.0	103.8
R3461.L014	Left	19	45	M14x1,5*	22	30.0	28.0	220.9
R3461.L015	Left	19	45	M14	22	30.0	28.0	220.9
R3461.L016	Left	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3461.L005	9	10.2	7	3	50	20	3
R3461.L006	11	11.5	8	4	100	40	4
R3461.L008	13	14.0	11	6	200	80	6
R3461.L010	16	15.5	13	8	400	160	8
R3461.L012	16	15.5	13	8	400	160	8
R3461.L014	22	21.5	16	10	800	320	10
R3461.L015	22	21.5	16	10	800	320	10
R3461.L016	22	21.5	16	10	800	320	10

R3466



Material
Stainless steel (A2, AISI 303).

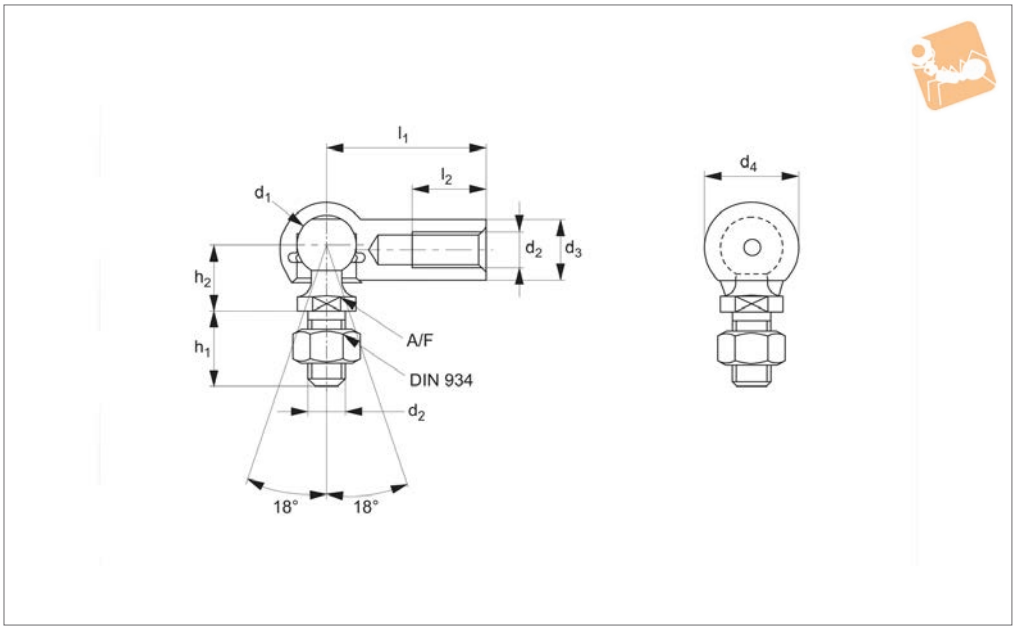
Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips
For sealing cap version, see R3476, standard thread is right hand, (for left hand thread see R3467).

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3466.R005	Right	8	22	M 5	8	12.8	10.2	15.2
R3466.R006	Right	10	25	M 6	10	14.8	12.5	25.2
R3466.R008	Right	13	30	M 8	13	19.3	16.5	53.1
R3466.R010	Right	16	35	M10	16	24.0	20.0	103.8
R3466.R012	Right	16	35	M12	16	24.0	20.0	103.8
R3466.R014	Right	19	45	M14x1,5*	22	30.0	28.0	220.9
R3466.R015	Right	19	45	M14	22	30.0	28.0	220.9
R3466.R016	Right	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3466.R005	9	10.2	7	3	50	20	3
R3466.R006	11	11.5	8	4	100	40	4
R3466.R008	13	14.0	11	6	200	80	6
R3466.R010	16	15.5	13	8	400	160	8
R3466.R012	16	15.5	13	8	400	160	8
R3466.R014	22	21.5	16	10	800	320	10
R3466.R015	22	21.5	16	10	800	320	10
R3466.R016	22	21.5	16	10	800	320	10



R3467

Material
Stainless steel (A2, AISI 303).

Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

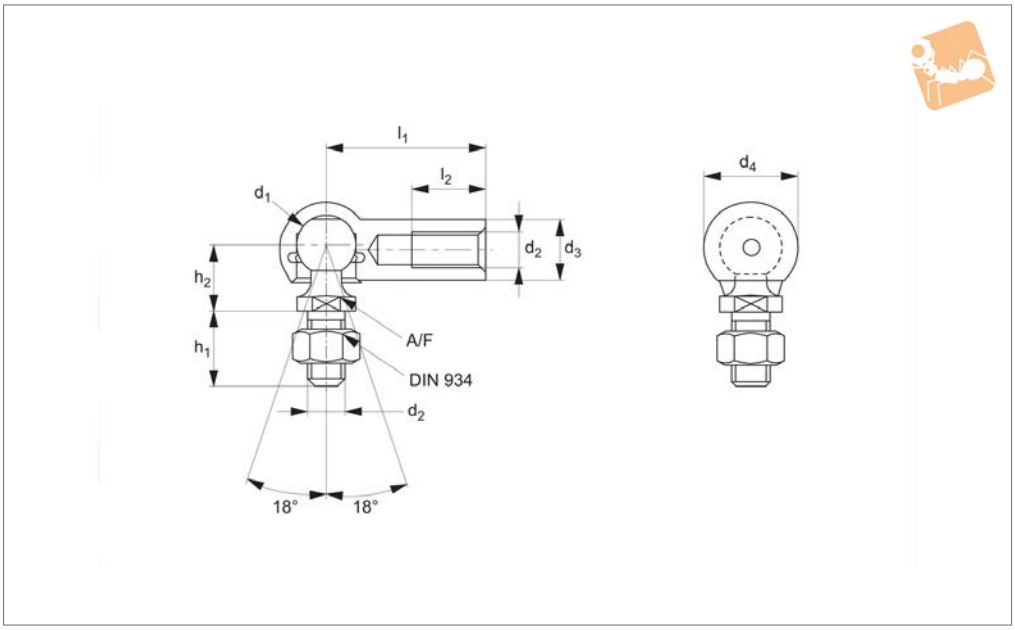
Tips
Stud: right hand thread.
Housing: left hand thread
For sealing cap version, see R3477.

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3467.L005	Left	8	22	M 5	8	12.8	10.2	15.2
R3467.L006	Left	10	25	M 6	10	14.8	12.5	25.2
R3467.L008	Left	13	30	M 8	13	19.3	16.5	53.1
R3467.L010	Left	16	35	M10	16	24.0	20.0	103.8
R3467.L012	Left	16	35	M12	16	24.0	20.0	103.8
R3467.L014	Left	19	45	M14x1,5*	22	30.0	28.0	220.9
R3467.L015	Left	19	45	M14	22	30.0	28.0	220.9
R3467.L016	Left	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3467.L005	9	10.2	7	3	50	20	3
R3467.L006	11	11.5	8	4	100	40	4
R3467.L008	13	14.0	11	6	200	80	6
R3467.L010	16	15.5	13	8	400	160	8
R3467.L012	16	15.5	13	8	400	160	8
R3467.L014	22	21.5	16	10	800	320	10
R3467.L015	22	21.5	16	10	800	320	10
R3467.L016	22	21.5	16	10	800	320	10

R3468



Material
Stainless steel (A4, AISI 316).

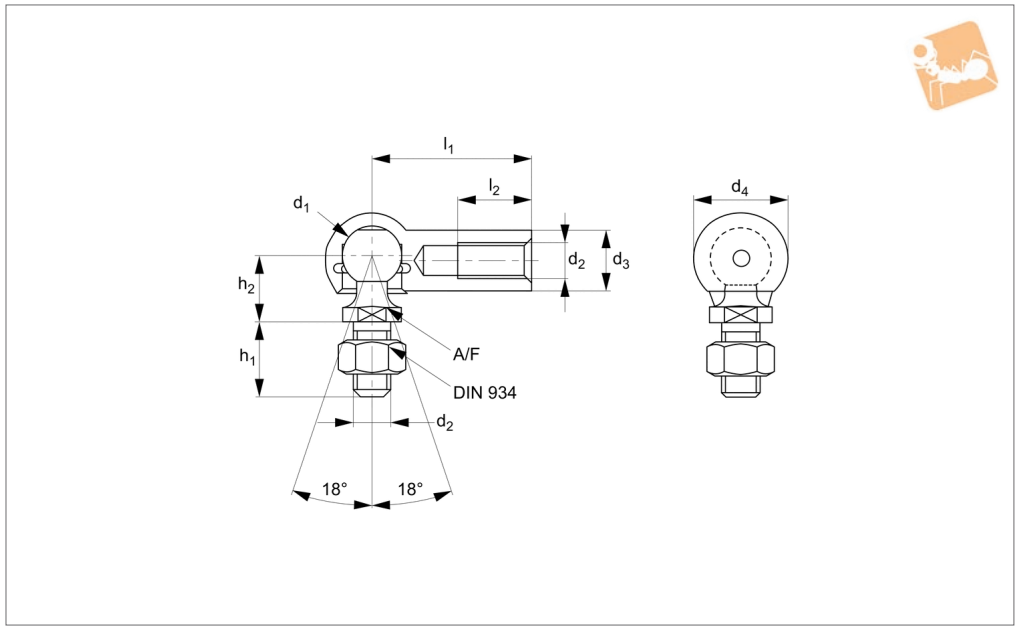
Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.

Tips
For sealing cap version, see R3476, standard thread is right hand, (for left hand thread see R3467).

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3468.R005	Right	8	22	M 5	8	12.8	10.2	15.2
R3468.R006	Right	10	25	M 6	10	14.8	12.5	25.2
R3468.R008	Right	13	30	M 8	13	19.3	16.5	53.1
R3468.R010	Right	16	35	M10	16	24.0	20.0	103.8

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3468.R005	9	10.2	7	3	50	20	3
R3468.R006	11	11.5	8	4	100	40	4
R3468.R008	13	14.0	11	6	200	80	6
R3468.R010	16	15.5	13	8	400	160	8



R3470

Material
Steel, silver zinc plated, ball stud: steel minimum tensile strength Rm=600N/mm². Housing: steel minimum tensile strength Rm=500N/mm²), sealing cap: neoprene.

Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips
Standard thread is right hand, (for left hand thread see R3471).

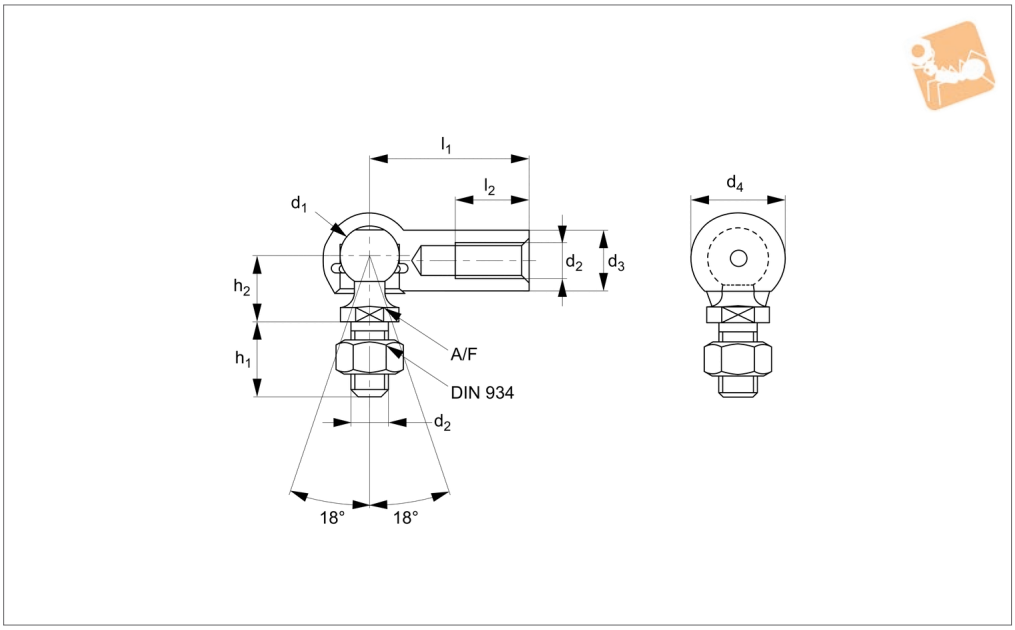
Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3470.R005	Right	8	22	M 5	8	12.8	10.2	15.2
R3470.R006	Right	10	25	M 6	10	14.8	12.5	25.2
R3470.R008	Right	13	30	M 8	13	19.3	16.5	53.1
R3470.R010	Right	16	35	M10	16	24.0	20.0	103.8
R3470.R012	Right	16	35	M12	16	24.0	20.0	103.8
R3470.R014	Right	19	45	M14x1,5*	22	30.0	28.0	220.9
R3470.R015	Right	19	45	M14	22	30.0	28.0	220.9
R3470.R016	Right	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3470.R005	9	10.2	7	3	50	20	3
R3470.R006	11	11.5	8	4	100	40	4
R3470.R008	13	14.0	11	6	200	80	6
R3470.R010	16	15.5	13	8	400	160	8
R3470.R012	16	15.5	13	8	400	160	8
R3470.R014	22	21.5	16	10	800	320	10
R3470.R015	22	21.5	16	10	800	320	10
R3470.R016	22	21.5	16	10	800	320	10

Ball and Socket Joints
with sealing cap - left hand thread

R3471



Material
Silver zinc plated, ball stud: minimum tensile strength Rm=600N/mm².
Housing: minimum tensile strength Rm=500N/mm², sealing cap: Neoprene.

Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

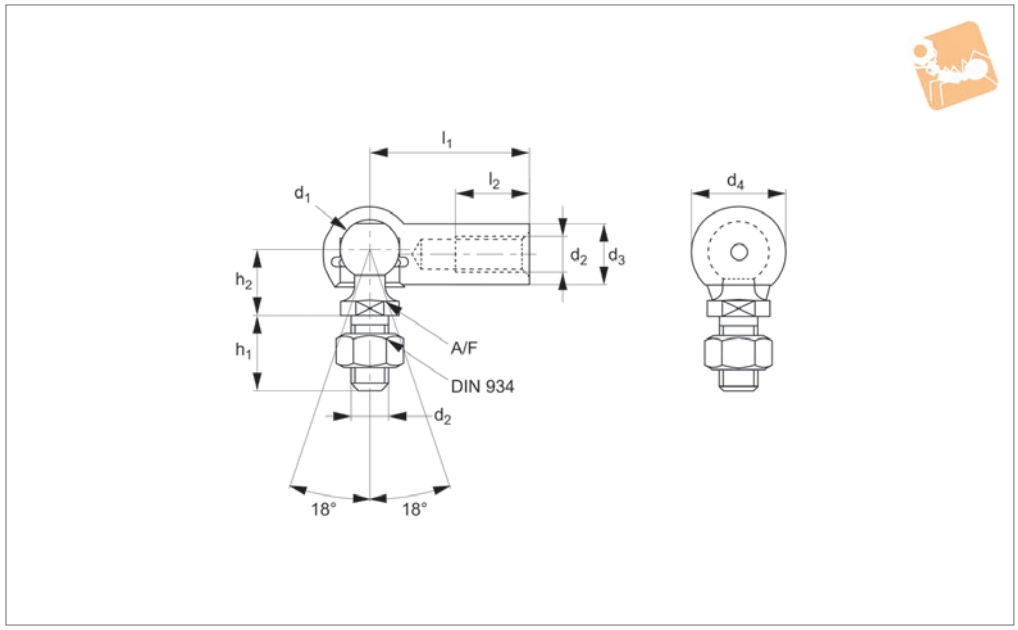
Tips
Stud: right hand thread.
Housing: left hand thread

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3471.L005	Left	8	22	M 5	8	12.8	10.2	15.2
R3471.L006	Left	10	25	M 6	10	14.8	12.5	25.2
R3471.L008	Left	13	30	M 8	13	19.3	16.5	53.1
R3471.L010	Left	16	35	M10	16	24.0	20.0	103.8
R3471.L012	Left	16	35	M12	16	24.0	20.0	103.8
R3471.L014	Left	19	45	M14x1,5*	22	30.0	28.0	220.9
R3471.L015	Left	19	45	M14	22	30.0	28.0	220.9
R3471.L016	Left	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3471.L005	9	10.2	7	3	50	20	3
R3471.L006	11	11.5	8	4	100	40	4
R3471.L008	13	14.0	11	6	200	80	6
R3471.L010	16	15.5	13	8	400	160	8
R3471.L012	16	15.5	13	8	400	160	8
R3471.L014	22	21.5	16	10	800	320	10
R3471.L015	22	21.5	16	10	800	320	10
R3471.L016	22	21.5	16	10	800	320	10

Stainless Ball and Socket Joint
with sealing cap



R3476

Material
Stainless steel (A2, AISI 303), sealing cap: neoprene.

Technical Notes
Supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips
Standard thread is right hand, (for left hand see R3477).

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

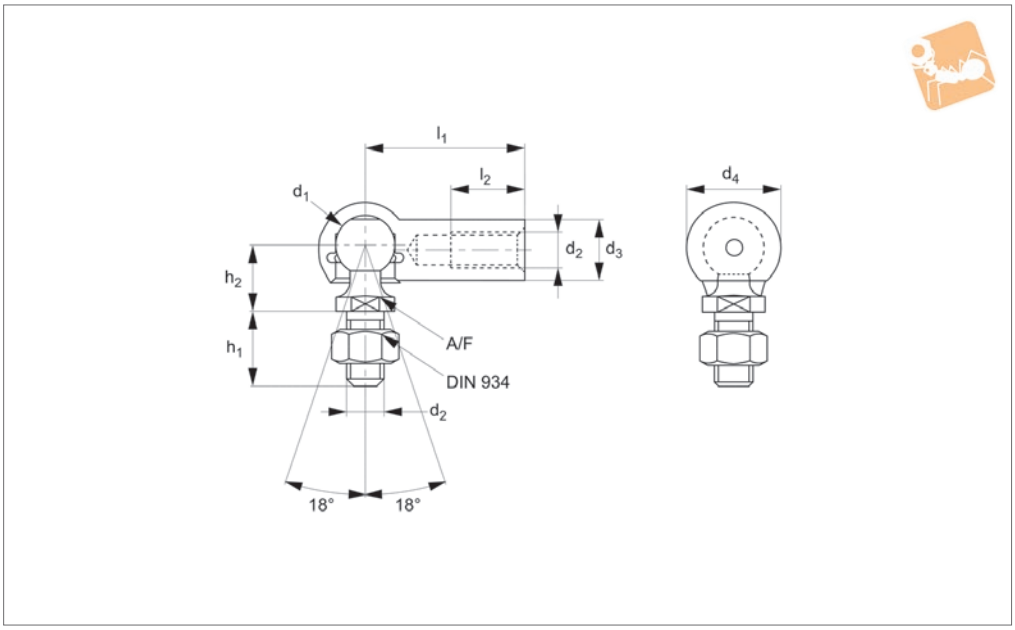
Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3476.R005	Right	8	22	M 5	8	12.8	10.2	15.2
R3476.R006	Right	10	25	M 6	10	14.8	12.5	25.2
R3476.R008	Right	13	30	M 8	13	19.3	16.5	53.1
R3476.R010	Right	16	35	M10	16	24.0	20.0	103.8
R3476.R012	Right	16	35	M12	16	24.0	20.0	103.8
R3476.R014	Right	19	45	M14x1,5*	22	30.0	28.0	220.9
R3476.R015	Right	19	45	M14	22	30.0	28.0	220.9
R3476.R016	Right	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3476.R005	9	10.2	7	3	50	20	3
R3476.R006	11	11.5	8	4	100	40	4
R3476.R008	13	14.0	11	6	200	80	6
R3476.R010	16	15.5	13	8	400	160	8
R3476.R012	16	15.5	13	8	400	160	8
R3476.R014	22	21.5	16	10	800	320	10
R3476.R015	22	21.5	16	10	800	320	10
R3476.R016	22	21.5	16	10	800	320	10

Stainless Ball and Socket Joint

with sealing cap - left hand thread

R3477



Material

Stainless steel (A2, AISI 303), sealing cap: neoprene.

Technical Notes

Supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips

Stud: right hand thread.
Housing: left hand thread

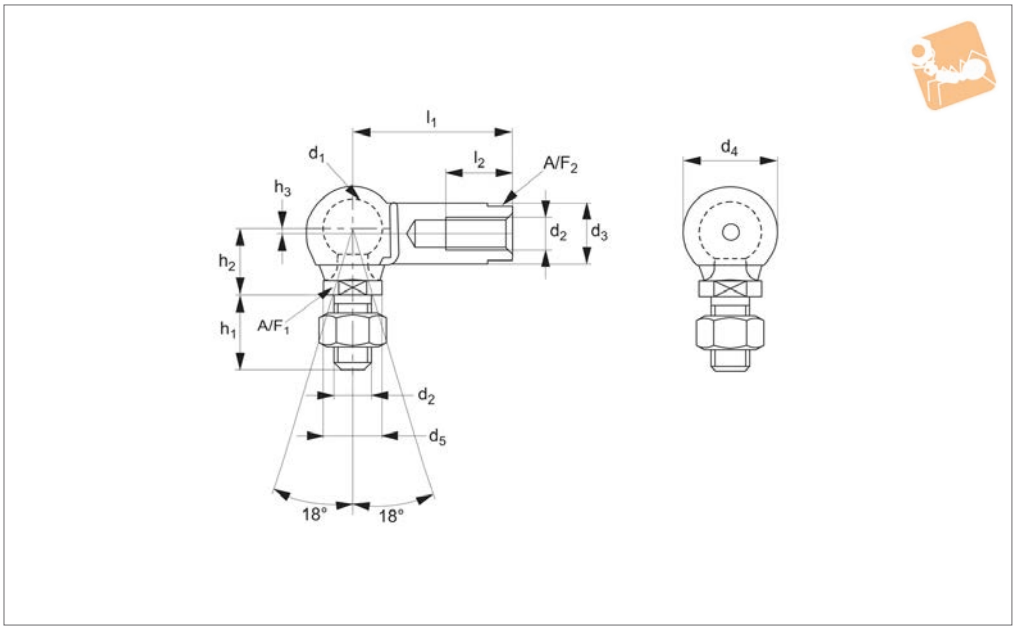
Important Notes

Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3	d_4	h_1 ±0.3	Weight g
R3477.L005	Left	8	22	M 5	8	12.8	10.2	15.2
R3477.L006	Left	10	25	M 6	10	14.8	12.5	25.2
R3477.L008	Left	13	30	M 8	13	19.3	16.5	53.1
R3477.L010	Left	16	35	M10	16	24.0	20.0	103.8
R3477.L012	Left	16	35	M12	16	24.0	20.0	103.8
R3477.L014	Left	19	45	M14x1,5*	22	30.0	28.0	220.9
R3477.L015	Left	19	45	M14	22	30.0	28.0	220.9
R3477.L016	Left	19	45	M16	22	30.0	28.0	220.9

Order No.	h_2 ±0.3	l_2 min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3477.L005	9	10.2	7	3	50	20	3
R3477.L006	11	11.5	8	4	100	40	4
R3477.L008	13	14.0	11	6	200	80	6
R3477.L010	16	15.5	13	8	400	160	8
R3477.L012	16	15.5	13	8	400	160	8
R3477.L014	22	21.5	16	10	800	320	10
R3477.L015	22	21.5	16	10	800	320	10
R3477.L016	22	21.5	16	10	800	320	10

Ball and Socket Joint
with flats on housing



R3490

Material
Stud: carbon steel, sealing cap: neoprene. Housing: steel (9sMnPb28), silver zinc plated.

Technical Notes
To DIN 71802 form CS, supplied without hexagon nut.

Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips
Standard thread is right hand, (for left hand thread see R3491).

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without a nut, then please consider a counterbore to accommodate the unthreaded shank.

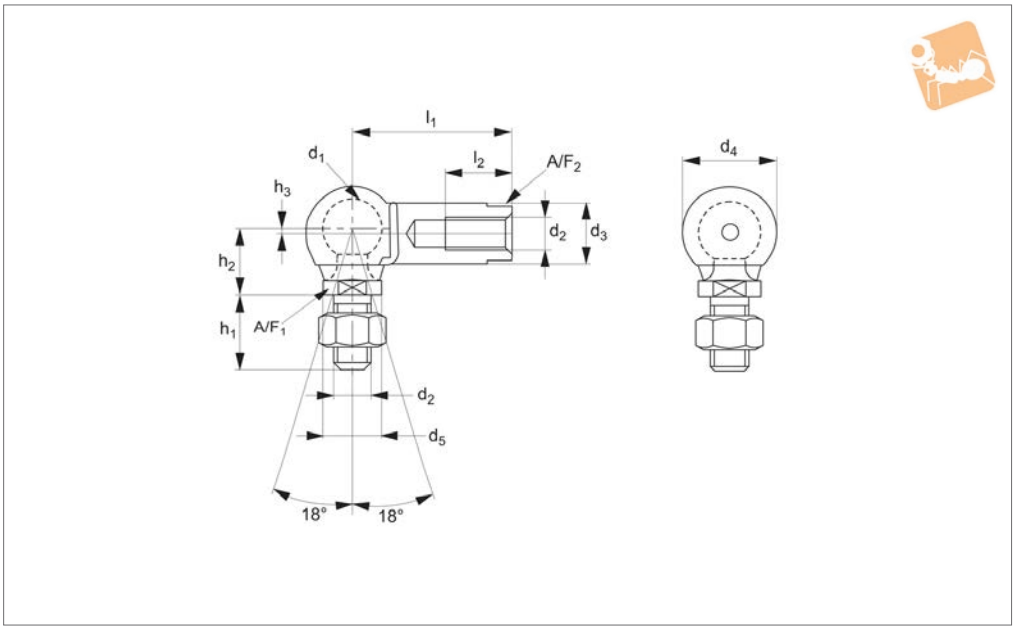
Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3 ±0.5	d_4 ±0.5	d_5 ±0.5	Weight g
R3490.R005	Right	8	22	M 5	8	12.8	8	15.2
R3490.R006	Right	10	25	M 6	10	14.8	10	25.2
R3490.R008	Right	13	30	M 8	13	19.3	13	53.1
R3490.R010	Right	16	35	M10	16	24.0	16	103.8
R3490.R012	Right	16	35	M12	16	24.0	16	103.8
R3490.R014	Right	19	45	M14x1,5*	22	30.0	22	220.9
R3490.R015	Right	19	45	M14	22	30.0	22	220.9
R3490.R016	Right	19	45	M16	22	30.0	22	220.9

Order No.	h_1 ±0.3	h_2 ±0.3	h_3	l_2 min.	A/F_1	A/F_2	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3490.R005	10.0	9	0.65	10.2	7	-	3	50	20	3
R3490.R006	12.5	11	0.70	11.5	8	-	4	100	40	4
R3490.R008	16.5	13	1.15	14.0	11	-	6	200	80	6
R3490.R010	20.0	16	1.15	15.5	13	-	8	400	160	8
R3490.R012	20.0	16	1.15	15.5	13	-	8	400	160	8
R3490.R014	28.0	20	0.50	21.5	16	19	10	800	320	10
R3490.R015	28.0	20	0.50	21.5	16	19	10	800	320	10
R3490.R016	28.0	20	0.50	21.5	16	19	10	800	320	10

Ball and Socket Joint

left hand thread- with flats on housing

R3491



Material

Stud: carbon steel, sealing cap: neoprene.
Housing: steel (9sMnPb28), silver zinc plated.

Technical Notes

To DIN 71802 form CS, supplied with hexagon nut.

Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips

Stud: right hand thread.
Housing: left hand thread

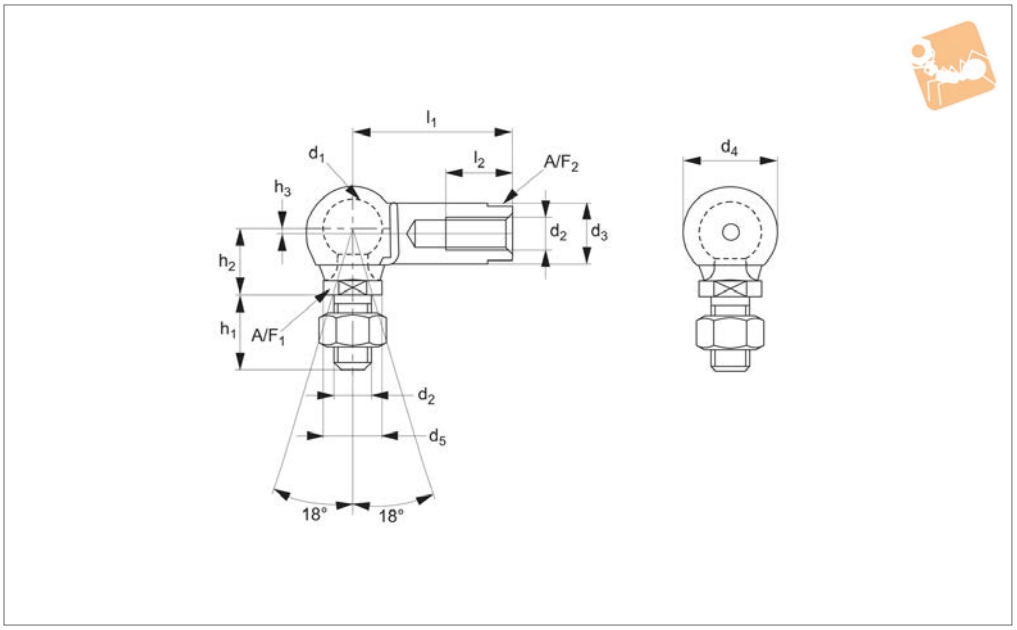
Important Notes

Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3 ±0.5	d_4 ±0.5	d_5 ±0.5	Weight g
R3491.L005	Left	8	22	M5	8	12.8	8	15.2
R3491.L006	Left	10	25	M6	10	14.8	10	25.2
R3491.L008	Left	13	30	M8	13	19.3	13	53.1
R3491.L010	Left	16	35	M10	16	24.0	16	103.8
R3491.L012	Left	16	35	M12	16	24.0	16	103.8
R3491.L014	Left	19	45	M14x1,5	22	30.0	22	220.9
R3491.L015	Left	19	45	M14	22	30.0	22	220.9
R3491.L016	Left	19	45	M16	22	30.0	22	220.9

Order No.	h_1 ±0.3	h_2 ±0.3	h_3	l_2 min.	A/F_1	A/F_2	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3491.L005	10.0	9	0.65	10.2	7	-	3	50	20	3
R3491.L006	12.5	11	0.70	11.5	8	-	4	100	40	4
R3491.L008	16.5	13	1.15	14.0	11	-	6	200	80	6
R3491.L010	20.0	16	1.15	15.5	13	-	8	400	160	8
R3491.L012	20.0	16	1.15	15.5	13	-	8	400	160	8
R3491.L014	28.0	20	0.50	21.5	16	19	10	800	320	10
R3491.L015	28.0	20	0.50	21.5	16	19	10	800	320	10
R3491.L016	28.0	20	0.50	21.5	16	19	10	800	320	10

Stainless Ball and Socket Joint
with flats on housing



R3496

Material
Stainless steel (A2, AISI 303), sealing cap: neoprene.

Technical Notes
To DIN 71802 form CS, supplied with hexagon nut.
Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips
Standard thread is right hand, (for left hand thread see R3497).

Important Notes
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

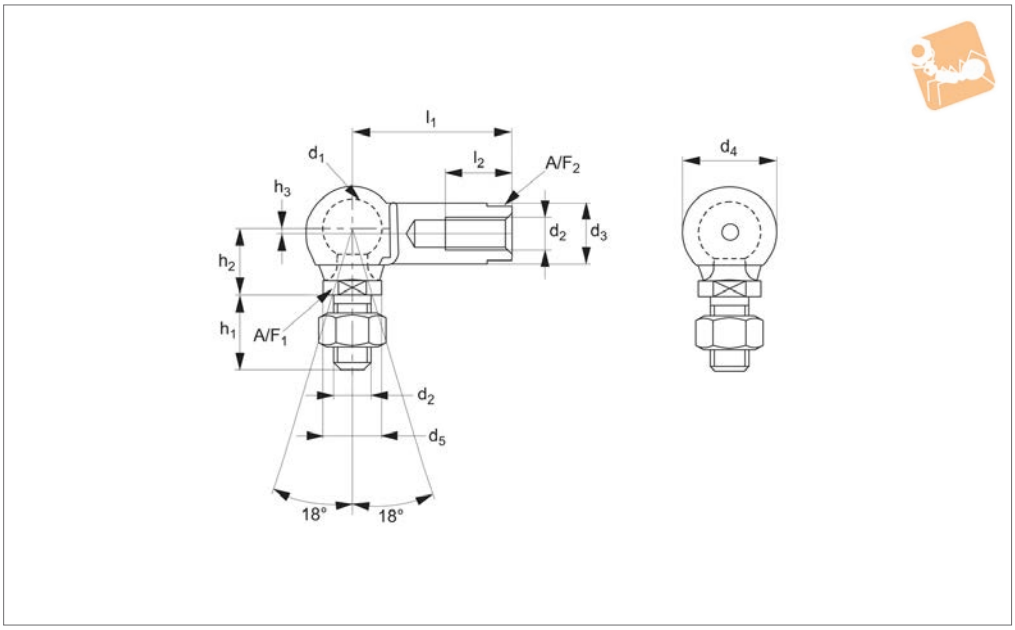
Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3 ±0.5	d_4 ±0.5	d_5 ±0.5	h_1 ±0.3	h_2 ±0.3	h_3	Weight g
R3496.R005	Right	8	22	M5	8	12.8	8	10.0	9	0.65	15.2
R3496.R006	Right	10	25	M6	10	14.8	10	12.5	11	0.70	25.2
R3496.R008	Right	13	30	M8	13	19.3	13	16.5	13	1.15	53.1
R3496.R010	Right	16	35	M10	16	24.0	16	20.0	16	1.15	103.8
R3496.R012	Right	16	35	M12	16	24.0	16	20.0	16	1.15	103.8
R3496.R014	Right	19	45	M14x1,5*	22	30.0	22	28.0	20	0.50	220.9
R3496.R015	Right	19	45	M14	22	30.0	22	28.0	20	0.50	220.9
R3496.R016	Right	19	45	M16	22	30.0	22	28.0	20	0.50	220.9

Order No.	l_2 min.	A/F_1	A/F_2	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3496.R005	10.2	7	-	3	50	20	3
R3496.R006	11.5	8	-	4	100	40	4
R3496.R008	14.0	11	-	6	200	80	6
R3496.R010	15.5	13	-	8	400	160	8
R3496.R012	15.5	13	-	8	400	160	8
R3496.R014	21.5	16	19	10	800	320	10
R3496.R015	21.5	16	19	10	800	320	10
R3496.R016	21.5	16	19	10	800	320	10

Stainless Ball and Socket Joint

left hand thread - with flats on housing

R3497



Material

Stainless steel (A2, AISI 303), sealing cap: neoprene.

Technical Notes

To DIN 71802 form CS, supplied with hexagon nut.

Safety ring aids the retention of the ball stud in the housing.
*M14x1,5 is a fine pitch thread.

Tips

Stud: right hand thread.
Housing: left hand thread

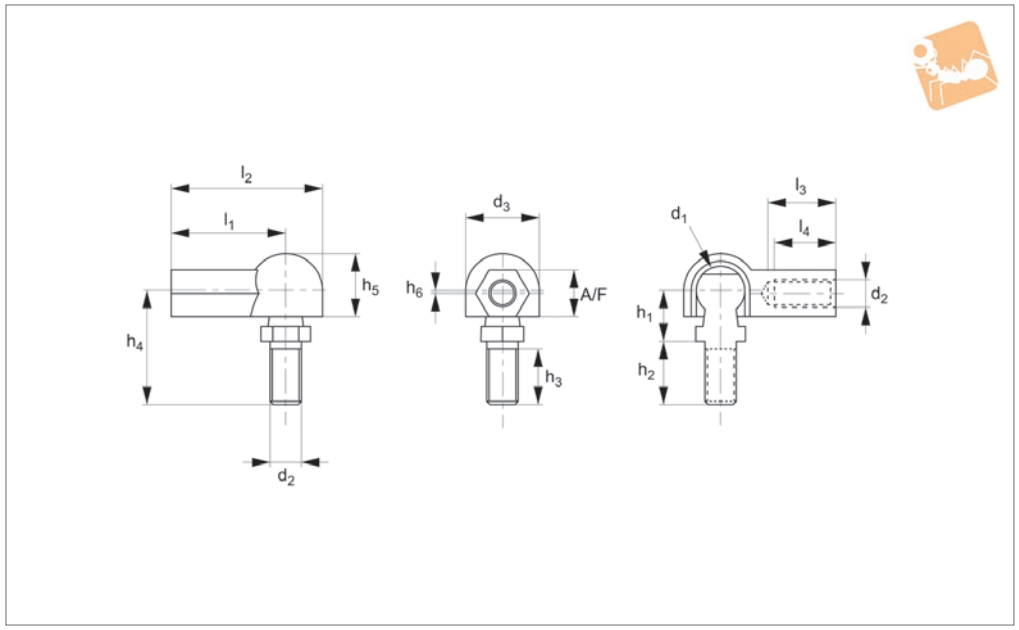
Important Notes

Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d_1	l_1 ±0.3	d_2	d_3 ±0.5	d_4 ±0.5	d_5 ±0.5	h_1 ±0.3	h_2 ±0.3	h_3	Weight g
R3497.L005	Left	8	22	M5	8	12.8	8	10.0	9	0.65	15.2
R3497.L006	Left	10	25	M6	10	14.8	10	12.5	11	0.70	25.2
R3497.L008	Left	13	30	M8	13	19.3	13	16.5	13	1.15	53.1
R3497.L010	Left	16	35	M10	16	24.0	16	20.0	16	1.15	103.8
R3497.L012	Left	16	35	M12	16	24.0	16	20.0	16	1.15	103.8
R3497.L014	Left	19	45	M14x1,5*	22	30.0	22	28.0	20	0.50	220.9
R3497.L015	Left	19	45	M14	22	30.0	22	28.0	20	0.50	220.9
R3497.L016	Left	19	45	M16	22	30.0	22	28.0	20	0.50	220.9

Order No.	l_2 min.	A/F_1	A/F_2	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
R3497.L005	10.2	7	-	3	50	20	3
R3497.L006	11.5	8	-	4	100	40	4
R3497.L008	14.0	11	-	6	200	80	6
R3497.L010	15.5	13	-	8	400	160	8
R3497.L012	15.5	13	-	8	400	160	8
R3497.L014	21.5	16	19	10	800	320	10
R3497.L015	21.5	16	19	10	800	320	10
R3497.L016	21.5	16	19	10	800	320	10

Plastic Ball and Socket Joint



R3520

Material
Housing: Black plastic (Igumid G).
Stud: Steel, silver zinc plated.

Technical Notes
Low weight.
Maintenance free.

Tips
Thread. Stud: Right Hand. Housing: .L for left hand, .R for right hand

Important Notes
Plastic stud available on request,
(add -PS to part number). Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread (housing)	d_1 ±0.1	l_1 ±0.3	d_2	d_3 ±0.5	h_1 ±0.2	h_2 ±0.3	h_3 min.	h_4 ±0.5	h_5 ±0.4	Weight g
R3520.R005	Right	8.0	22.0	M 5	12.8	9.0	10.2	8.2	25.6	10.8	2.6
R3520.R006	Right	10.0	25.0	M 6	14.8	11.0	12.5	10.5	30.9	12.3	4.0
R3520.R008	Right	13.0	30.0	M 8	19.3	13.0	16.5	13.5	38.8	16.2	8.2
R3520.R010	Right	16.0	35.0	M10	24.0	16.0	20.0	16.0	47.0	20.0	13.8
R3520.L005	Left	8.0	22.0	M 5	12.8	9.0	10.2	8.2	25.6	10.8	2.6
R3520.L006	Left	10.0	25.0	M 6	14.8	11.0	12.5	10.5	30.9	12.3	4.0
R3520.L008	Left	13.0	30.0	M 8	19.3	13.0	16.5	13.5	38.8	16.2	8.2
R3520.L010	Left	16.0	35.0	M10	24.0	16.0	20.0	16.0	47.0	20.0	13.8

Order No.	h_6 ±0.5	l_2 ±0.5	l_3	l_4 ±0.5	A/F	Recommended pivot angle	Pivot angle max.
R3520.R005	0.65	28.4	14.0	11.0	8	18°	25°
R3520.R006	0.70	32.4	16.0	13.0	9	18°	25°
R3520.R008	1.15	39.7	18.0	16.0	12	18°	25°
R3520.R010	1.15	47.0	20.0	18.0	14	18°	25°
R3520.L005	0.65	28.4	14.0	11.0	8	18°	25°
R3520.L006	0.70	32.4	16.0	13.0	9	18°	25°
R3520.L008	1.15	39.7	18.0	16.0	12	18°	25°
R3520.L010	1.15	47.0	20.0	18.0	14	18°	25°

Overview

Ball & Socket Joints

Ball and Socket Joints

Ball and socket joints to DIN 71802 available in zinc plated steel and stainless steel.
Right and left hand threads available.

Sizes M5 up to M16.

Pages 65 - 68

Ball and Socket Joints - with sealing caps

Ball and socket joints to DIN 71802 available in zinc plated steel and stainless steel.
Right and left hand threads available.

Sizes M5 up to M16.

Pages 69 - 72

Ball and Socket Joints - with sealing caps and spanner flats

Ball and socket joints to DIN 71802 available in zinc plated steel and stainless steel.
Right and left hand threads available. Spanner flats on housing to aid installation.

Sizes M5 up to M16.

Pages 73 - 76

Axial Ball and Socket Joints

In-line ball and socket joints to DIN 71802 available in zinc plated steel and stainless steel.

Sizes M5 up to M14 x 1,5.

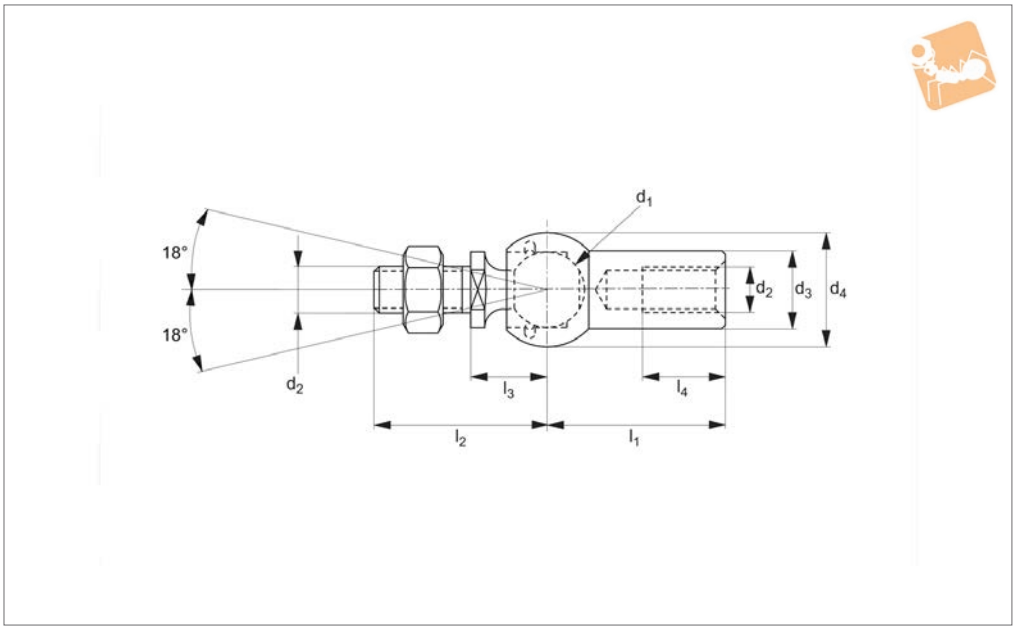
Pages 77 - 80

Threaded Ball Studs

Threaded ball studs to DIN 71803 form C available in zinc plated steel.

Sizes M5 up to M14.

Pages 87



R3500

Material
Steel, silver zinc plated, ball stud: minimum tensile strength Rm=600N/mm².
Housing: minimum tensile strength Rm=500N/mm².

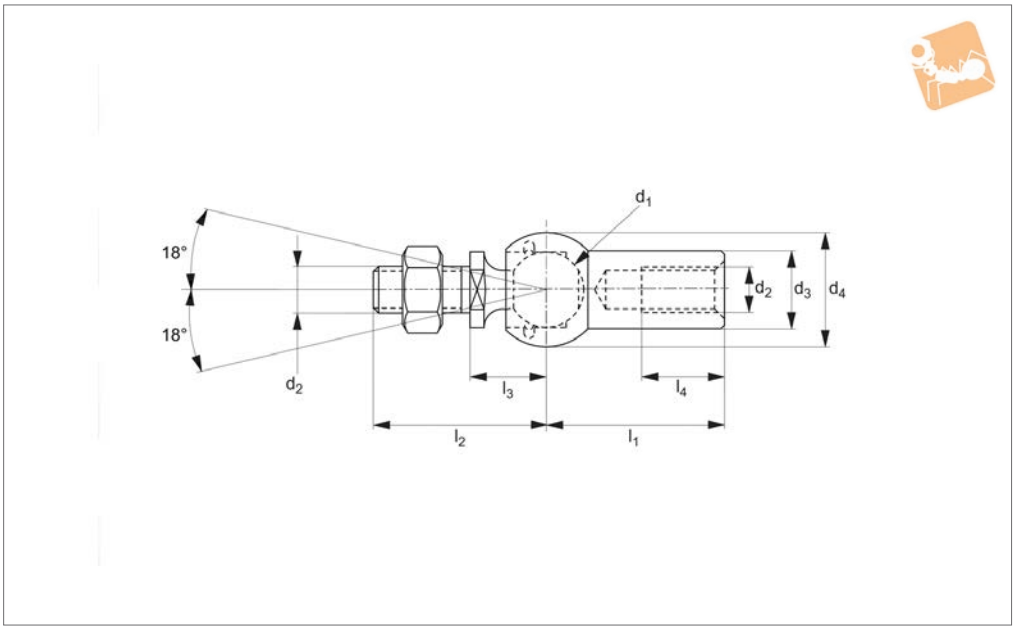
Technical Notes
Similar to DIN 71802, *M14x1,5 is a fine pitch thread.

Tips
Standard thread is right hand, (for left hand thread see R3501).
For stainless steel version see R3506.

Order No.	Thread hand	d_1 tol. h9	d_2	l_1	d_3 ±0.5	d_4 ±0.5	l_2	l_3	l_4	Extraction force N	Weight g
R3500.R005	Right	8	M 5	22	8	12.8	19.2	9	10.2	30	15.2
R3500.R006	Right	10	M 6	25	10	14.8	23.5	11	11.5	40	25.2
R3500.R008	Right	13	M 8	30	13	19.3	29.5	13	14.0	60	53.1
R3500.R010	Right	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
R3500.R014	Right	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9

Axial Ball and Socket Joints
left hand thread

R3501

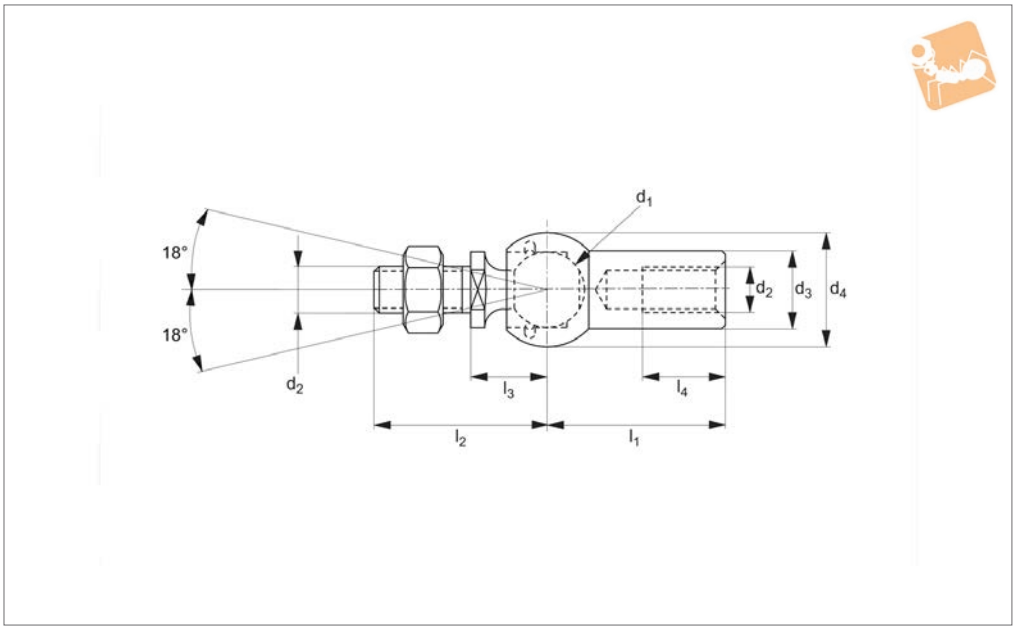


Material
Steel, silver zinc plated, ball stud: minimum tensile strength Rm=600N/mm². Housing: minimum tensile strength Rm=500N/mm².

Technical Notes
Similar to DIN 71802, *M14x1,5 is a fine pitch thread.

Tips
For stainless steel version see R3507.

Order No.	Thread hand	d_1 tol. h9	d_2	l_1	d_3 ±0.5	d_4 ±0.5	l_2	l_3	l_4	Extraction force N	Weight g
R3501.L005	Left	8	M5	22	8	12.8	19.2	9	10.2	30	15.2
R3501.L006	Left	10	M6	25	10	14.8	23.5	11	11.5	40	25.2
R3501.L008	Left	13	M8	30	13	19.3	29.5	13	14.0	60	53.1
R3501.L010	Left	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
R3501.L014	Left	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9



R3506

Material
Stainless steel (AISI 303).

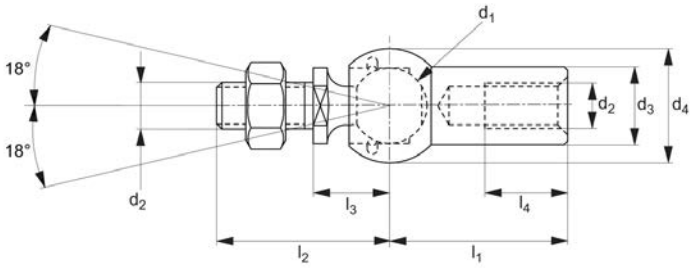
Technical Notes
Similar to DIN 71802, *M14x1,5 is a fine pitch thread.

Tips
Standard thread is right hand, (for left hand thread see R3507).

Order No.	Thread hand	d_1 tol. h9	d_2	l_1	d_3 ±0.5	d_4 ±0.5	l_2	l_3	l_4	Extraction force N	Weight g
R3506.R005	Right	8	M5	22	8	12.8	19.2	9	10.2	30	15.2
R3506.R006	Right	10	M6	25	10	14.8	23.5	11	11.5	40	25.2
R3506.R008	Right	13	M8	30	13	19.3	29.5	13	14.0	60	53.1
R3506.R010	Right	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
R3506.R014	Right	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9

Stainless Axial Ball and Socket Joints
left hand thread

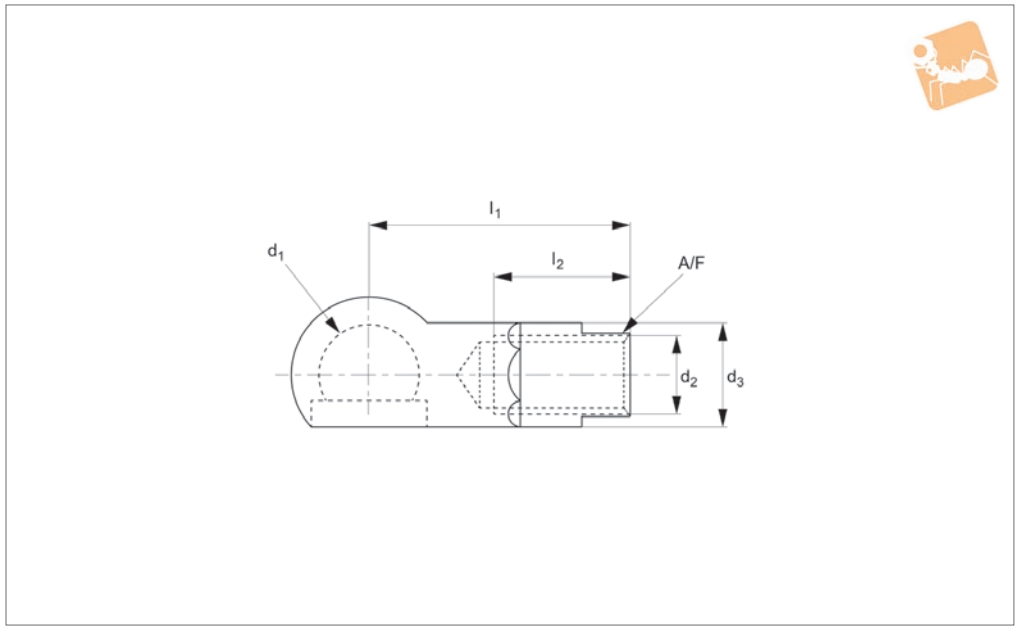
R3507



Material
Stainless steel (AISI 303).

Technical Notes
Similar to DIN 71802, *M14x1,5 is a fine pitch thread.

Order No.	Thread hand	d_1 tol. h9	d_2	l_1	d_3 ±0.5	d_4 ±0.5	l_2	l_3	l_4	Extraction force N	Weight g
R3507.L005	Left	8	M5	22	8	12.8	19.2	9	10.2	30	15.2
R3507.L006	Left	10	M6	25	10	14.8	23.5	11	11.5	40	25.2
R3507.L008	Left	13	M8	30	13	19.3	29.5	13	14.0	60	53.1
R3507.L010	Left	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
R3507.L014	Left	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9



R3524

Material
Low carbon steel, silver zinc plated.

Technical Notes
To DIN 71802.

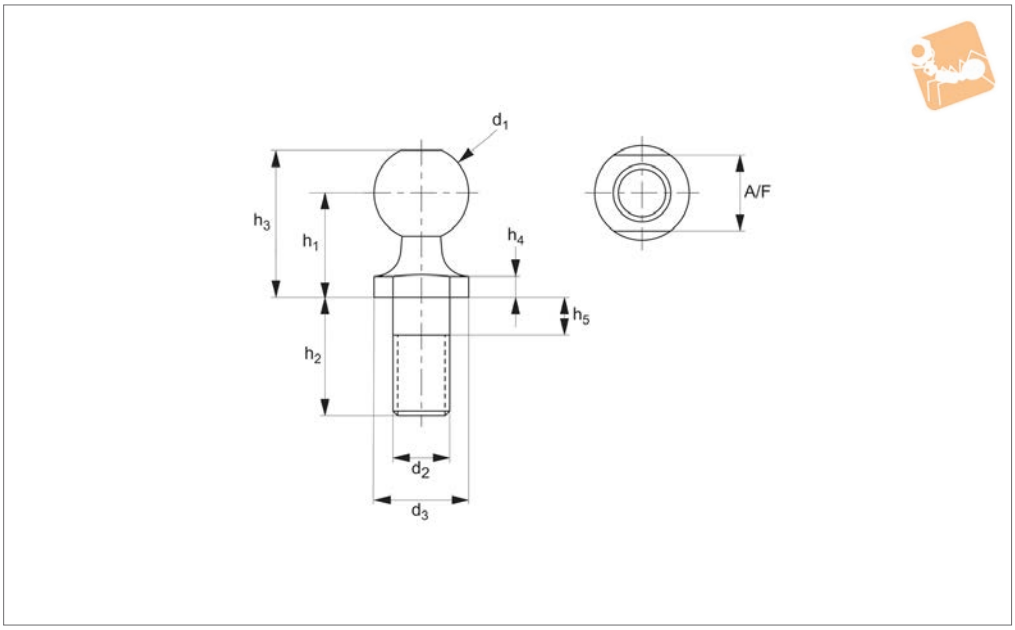
Tips
Standard thread is right hand thread.

Important Notes
These ball joints are used in light linkage applications where it is desired to have the ability to be able to remove the ball stud.

The ball joint is supplied WITHOUT the ball stud and retaining clip.

Order No.	Thread hand	d_1	d_2	l_1	l_2	d_3	A/F
R3524.R005	Right	8	M 5	22	10.2	8	7
R3524.R006	Right	10	M 6	25	11.5	10	9
R3524.R008	Right	13	M 8	30	14.0	13	11
R3524.R010	Right	16	M10	35	15.5	16	13
R3524.R012	Right	16	M12	35	15.5	16	13

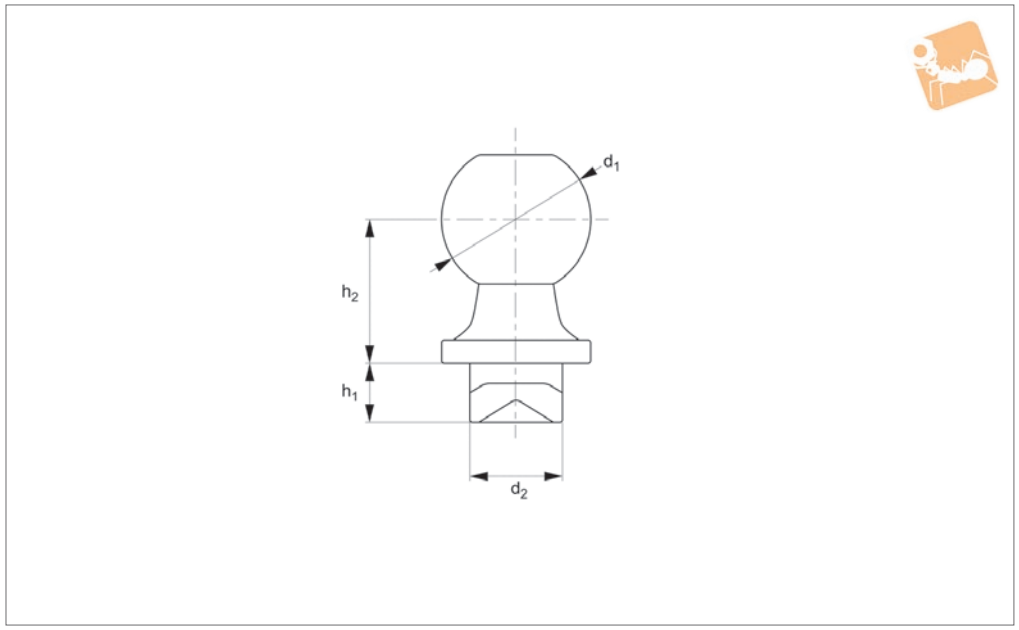
R3526



Material
Low carbon steel (1018), silver zinc plated.

Technical Notes
To DIN 71803 Form C, *M14x1.5 is a fine pitch thread.

Order No.	d_1 tol. h9	d_2	d_3 +0.0|-0.2	h_1 ±0.3	h_2 ±0.3	h_3 ±0.3	h_4 +0.4|-0.0	h_5 max.	A/F	Weight g
R3526.005	8.0	M5	8.0	9.0	10.2	12.5	2.0	4.0	7.0	4.5
R3526.006	10.0	M6	10.0	11.0	12.5	15.5	2.2	4.0	8.0	8.5
R3526.008	13.0	M8	13.0	13.0	16.5	18.5	2.4	5.3	11.0	17.7
R3526.010	16.0	M10	16.0	16.0	20.0	23.0	2.7	7.3	13.0	35.0
R3526.012	16.0	M12	16.0	16.0	20.0	23.0	2.7	7.3	13.0	35.0
R3526.014	19.0	M14 x 1.5*	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2
R3526.015	19.0	M14	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2
R3526.016	19.0	M16	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2



R3527

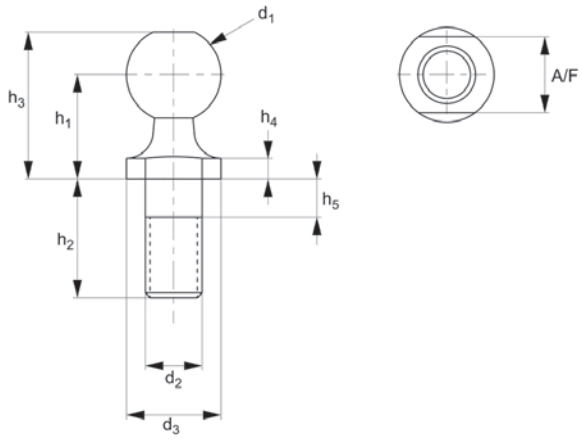
Material
Low carbon steel (1018), silver zinc plated.

Technical Notes
To DIN 71803 Form B
*M14x1.5 is a fine pitch thread.

Order No.	d_1	d_2 tol. h11	h_1 ±0.2	h_2 ±0.3
R3527.080-040	8.0	5.0	4.0	9.0
R3527.080-075	8.0	5.0	7.5	9.0
R3527.100-045	10.0	6.0	4.5	11.0
R3527.100-080	10.0	6.0	8.0	11.0
R3527.130-050	13.0	8.0	5.0	13.0
R3527.130-100	13.0	8.0	10.0	13.0
R3527.160-060	16.0	10.0	6.0	16.0
R3527.160-130	16.0	10.0	13.0	16.0

Stainless Threaded Ball Studs

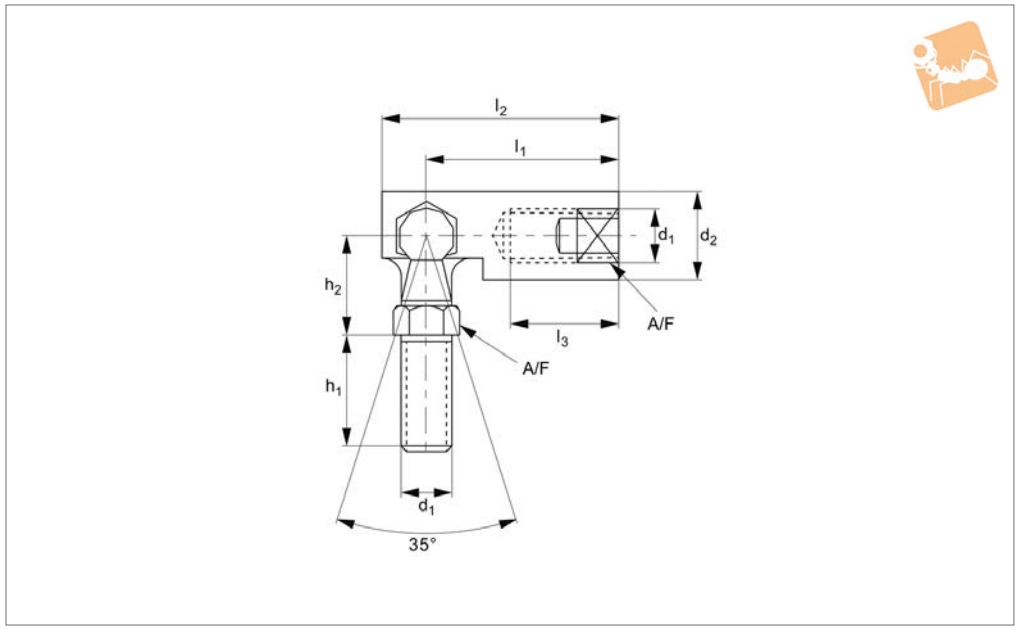
R3528

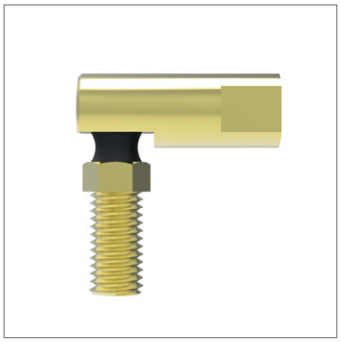


Material
Stainless steel (AISI 304)

Technical Notes
To DIN 71803 Form C
*M14x1.5 is a fine pitch thread.

Order No.	d_1 tol. H9	d_2	d_3 +0.0|-0.2	h_1 ±0.3	h_2 ±0.3	h_3 ±0.3	h_4 +0.4|-0.0	h_5 max.	A/F	Weight g
R3528.005	8.0	M5	8.0	9.0	10.2	12.5	2.0	4.0	7.0	4.5
R3528.006	10.0	M6	10.0	11.0	12.5	15.5	2.2	4.0	8.0	8.5
R3528.008	13.0	M8	13.0	13.0	16.5	18.5	2.4	5.3	11.0	17.7
R3528.010	16.0	M10	16.0	16.0	20.0	23.0	2.7	7.3	13.0	35.0
R3528.012	16.0	M12	16.0	16.0	20.0	23.0	2.7	7.3	13.0	35.0
R3528.014	19.0	M14 x 1.5*	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2
R3528.015	19.0	M14	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2
R3528.016	19.0	M16	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2





R3530

Material
Yellow zinc plated, ball stud is case hardened.
Body and ball stud low carbon steel (BS.970230M07Pb) or equivalent.

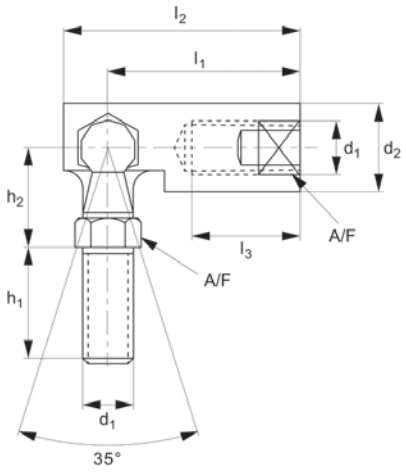
Technical Notes
The swaging of the body produces a permanent assembly and the fitted sealing cap helps resist dirt ingress.
The hexagon form of studs facilitates assembly, these are metric equivalents to SAE J490 Style 1.

Tips
Standard thread is right hand thread.

Order No.	Thread hand	d_1	d_2	l_1	l_2	h_1	h_2	l_3	A/F
R3530.R006	Right	M 6	11.13	24.61	30.96	14.30	11.91	12.70	9.53
R3530.R008	Right	M 8	12.70	28.58	35.71	17.48	13.49	14.30	11.13
R3530.R010	Right	M10	15.88	34.93	42.88	22.23	17.48	19.05	12.70
R3530.R012	Right	M12	19.05	49.23	60.33	28.58	22.23	25.40	15.88
R3530.L006	Left	M 6	11.13	24.61	30.96	14.30	11.91	12.70	9.53
R3530.L008	Left	M 8	12.70	28.58	35.71	17.48	13.49	14.30	11.13
R3530.L010	Left	M10	15.88	34.93	42.88	22.23	17.48	19.05	12.70
R3530.L012	Left	M12	19.05	49.23	60.33	28.58	22.23	25.40	15.88

Stainless DMG Ball and Socket Joint

R3532

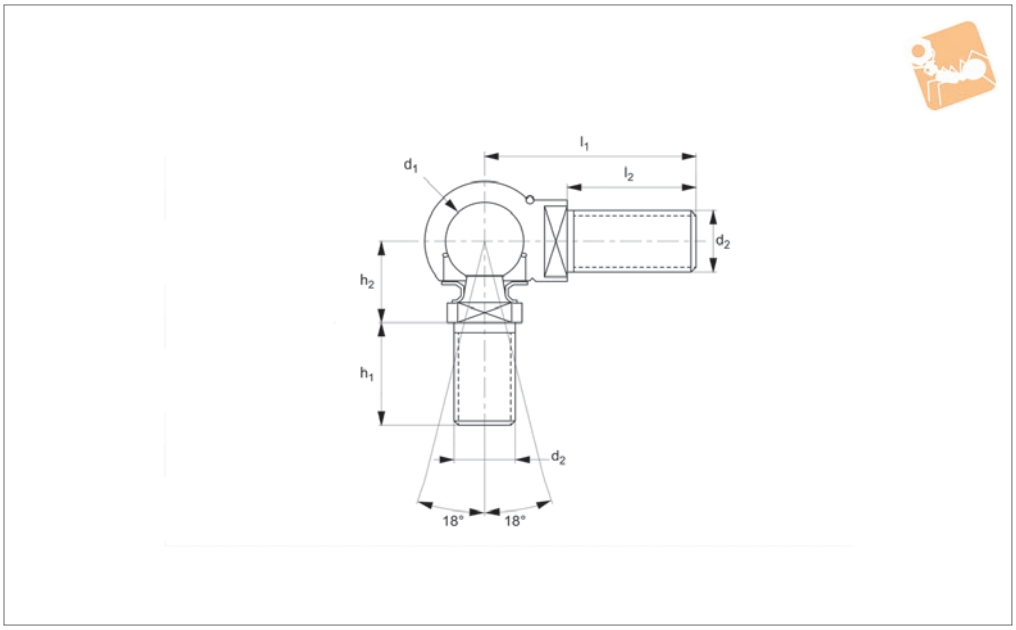


Material
Stainless steel (AISI 303).

Technical Notes
The swaging of the body produces a permanent assembly and the fitted sealing cap helps resist dirt ingress.
The hexagon form of studs facilitates assembly.

Tips
Standard thread is right hand thread.

Order No.	Thread hand	d_1	d_2	l_1	l_2	h_1	h_2	l_3	A/F
R3532.R006	Right	M 6	11.13	24.61	30.96	14.30	11.91	12.70	9.53
R3532.R008	Right	M 8	12.70	28.58	35.71	17.48	13.49	14.30	11.13
R3532.R010	Right	M10	15.88	34.93	42.88	22.23	17.48	19.05	12.70
R3532.R012	Right	M12	19.05	49.23	60.33	28.58	22.23	25.40	15.88
R3532.L006	Left	M 6	11.13	24.61	30.96	14.30	11.91	12.70	9.53
R3532.L008	Left	M 8	12.70	28.58	35.71	17.48	13.49	14.30	11.13
R3532.L010	Left	M10	15.88	34.93	42.88	22.23	17.48	19.05	12.70
R3532.L012	Left	M12	19.05	49.23	60.33	28.58	22.23	25.40	15.88



R3538

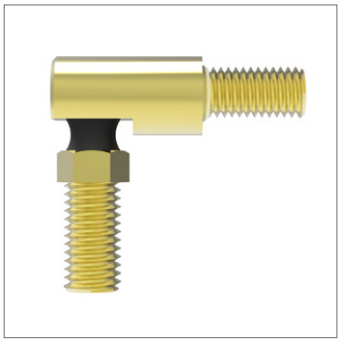
Material
Low carbon steel, silver zinc plated.

Technical Notes
Safety ring aids the retention of the ball stud in the housing.

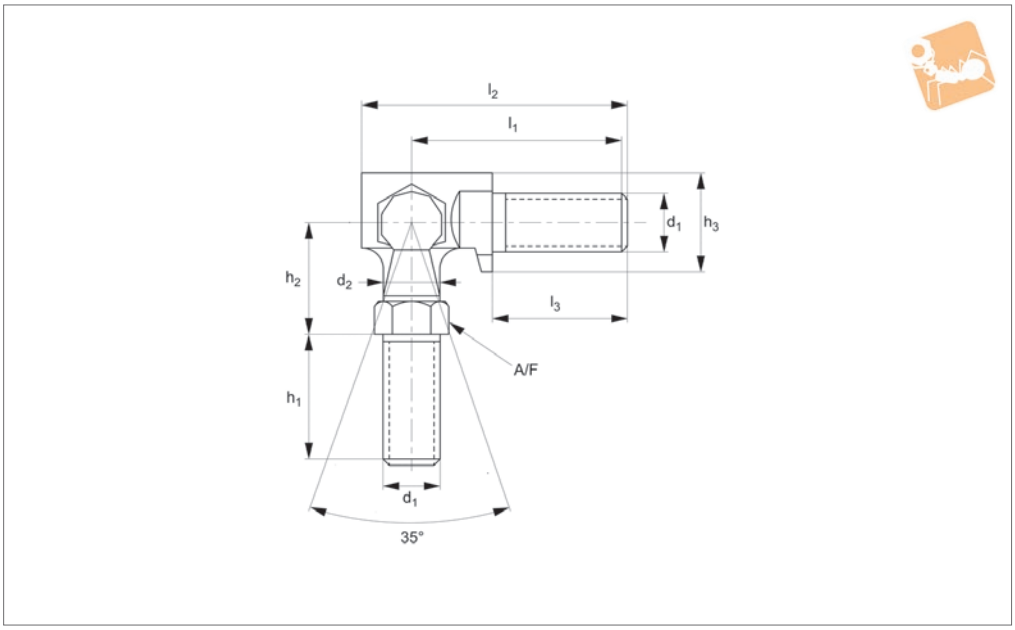
Tips
Standard thread is right hand thread.

Order No.	Thread hand	d_1	d_2	l_1	l_2	h_1	h_2
R3538.R005	Right	8	M 5	22.5	12.0	10.2	9
R3538.R006	Right	10	M 6	25.0	13.5	12.5	11
R3538.R008	Right	13	M 8	31.5	17.5	16.5	13
R3538.R010	Right	16	M10	37.5	21.5	20.0	16
R3538.R012	Right	16	M12	42.0	25.5	20.0	16
R3538.L005	Left	8	M 5	22.5	12.0	10.2	9
R3538.L006	Left	10	M 6	25.0	13.5	12.5	11
R3538.L008	Left	13	M 8	31.5	17.5	16.5	13
R3538.L010	Left	16	M10	37.5	21.5	20.0	16
R3538.L012	Left	16	M12	42.0	25.5	20.0	16

Male DMG Ball and Socket Joints



R3539

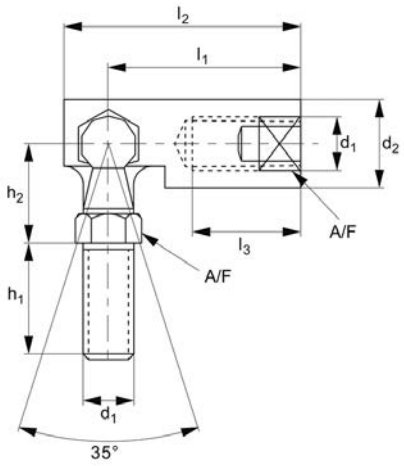


Material
Low carbon steel (1018), yellow zinc plated.

Technical Notes
The swaging of the body produces a permanent assembly and the fitted sealing cap helps resist dirt ingress.
The hexagon form of studs facilitates assembly.

Tips
Standard thread is right hand thread.

Order No.	Thread hand	d_1	d_2	l_1	l_2	h_1	h_2	h_3	l_3	A/F
R3539.R005	Right	M 5	4.37	22.23	27.00	11.13	11.13	9.53	12.04	7.95
R3539.R006	Right	M 6	4.90	24.61	30.96	14.30	11.91	11.13	12.85	9.53
R3539.R008	Right	M 8	5.89	28.58	35.71	17.48	13.49	12.70	16.03	11.13
R3539.R010	Right	M10	7.54	34.93	42.88	22.23	17.48	15.88	19.05	12.70
R3539.R012	Right	M12	10.59	49.23	60.33	28.58	22.23	19.05	25.40	15.88
R3539.L005	Left	M 5	4.37	22.23	27.00	11.13	11.13	9.53	12.04	7.95
R3539.L006	Left	M 6	4.90	24.61	30.96	14.30	11.91	11.13	12.85	9.53
R3539.L008	Left	M 8	5.89	28.58	35.71	17.48	13.49	12.70	16.03	11.13
R3539.L010	Left	M10	7.54	34.93	42.88	22.23	17.48	15.88	19.05	12.70
R3539.L012	Left	M12	10.59	49.23	60.33	28.58	22.23	19.05	25.40	15.88



R3530.i

Material
Yellow zinc plated steel, ball stud is case hardened.

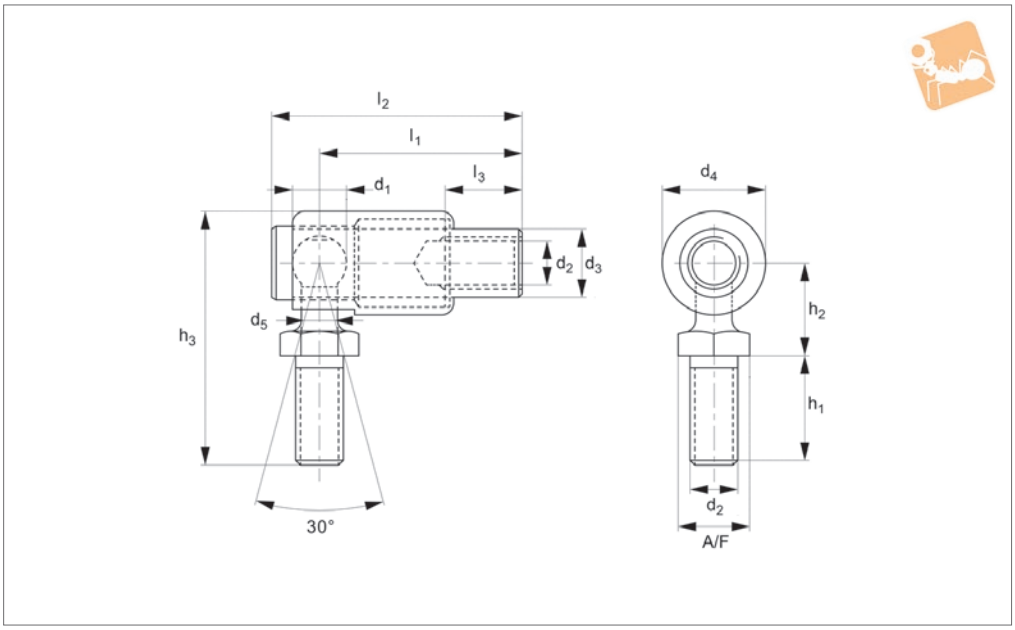
Technical Notes
The swaging of the body produces a permanent assembly and the fitted sealing cap helps resist dirt ingress.
The hexagon form of studs facilitates assembly, yellow zinc is not RoHS Compliant.

Tips
Standard Thread is Right hand thread, equivalent to Springfix DIG joints.

Order No.	Thread hand	d_1	d_2	l_1	l_2	h_1	h_2	l_3	A/F
R3530.I187	Right	10-32	0.375	0.875	1.063	0.438	0.438	0.438	0.313
R3530.I250	Right	1/4-28	0.438	0.969	1.219	0.563	0.469	0.500	0.375
R3530.I312	Right	5/16-24	0.500	1.125	1.406	0.688	0.531	0.563	0.438
R3530.I375	Right	3/8-24	0.625	1.375	1.688	0.875	0.688	0.750	0.500
R3530.I438	Right	7/16-20	0.750	1.938	2.375	1.125	0.875	1.000	0.625
R3530.I500	Right	1/2-20	0.750	1.938	2.375	1.125	0.875	1.000	0.625
R3530.I625	Right	5/8-18	0.875	2.063	2.578	1.125	1.000	1.000	0.750
R3530.IL187	Left	10-32 LH	0.375	0.875	1.063	0.438	0.438	0.438	0.313
R3530.IL250	Left	1/4-28 LH	0.438	0.969	1.219	0.563	0.469	0.500	0.375
R3530.IL312	Left	5/16-24 LH	0.500	1.125	1.406	0.688	0.531	0.563	0.438
R3530.IL375	Left	3/8-24 LH	0.625	1.375	1.688	0.875	0.688	0.750	0.500
R3530.IL438	Left	7/16-20 LH	0.750	1.938	2.375	1.125	0.875	1.000	0.625
R3530.IL500	Left	1/2-20 LH	0.750	1.938	2.375	1.125	0.875	1.000	0.625
R3530.IL625	Left	5/8-18 LH	0.875	2.063	2.578	1.125	1.000	1.000	0.750

Quick Release Ball Joints Imperial

R3535.i

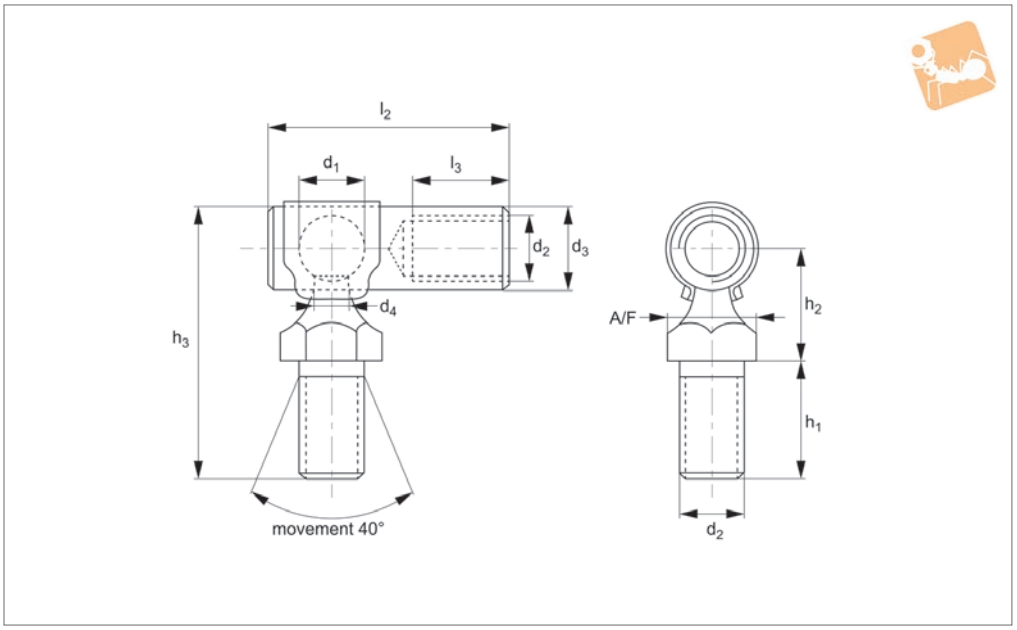


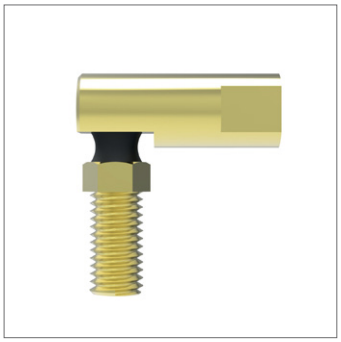
Material
Silver/Clear zinc plated steel

Technical Notes
The spring loaded outer shield allows both rapid release and reconnection of the ball stud.
Linkage assemblies can be installed or removed without disturbing pre-set centres.

Tips
Equivalent to Springfix QI ball joints

Order No.	d_1	d_2	l_1	l_2	d_3	d_4	d_5	h_1	h_2	h_3	l_3	A/F
R3535.I187	0.250	10-32	0.906	1.094	0.310	0.438	0.171	0.438	0.438	1.125	0.438	0.312
R3535.I250	0.311	1/4-28	0.969	1.250	0.370	0.562	0.194	0.562	0.469	1.312	0.531	0.375
R3535.I312	0.339	5/16-24	1.125	1.453	0.439	0.687	0.228	0.625	0.531	1.594	0.605	0.437
R3535.I375	0.421	3/8-24	1.375	1.750	0.556	0.875	0.269	0.750	0.687	1.969	0.812	0.500





R3536.i

Material
Yellow zinc plated steel.

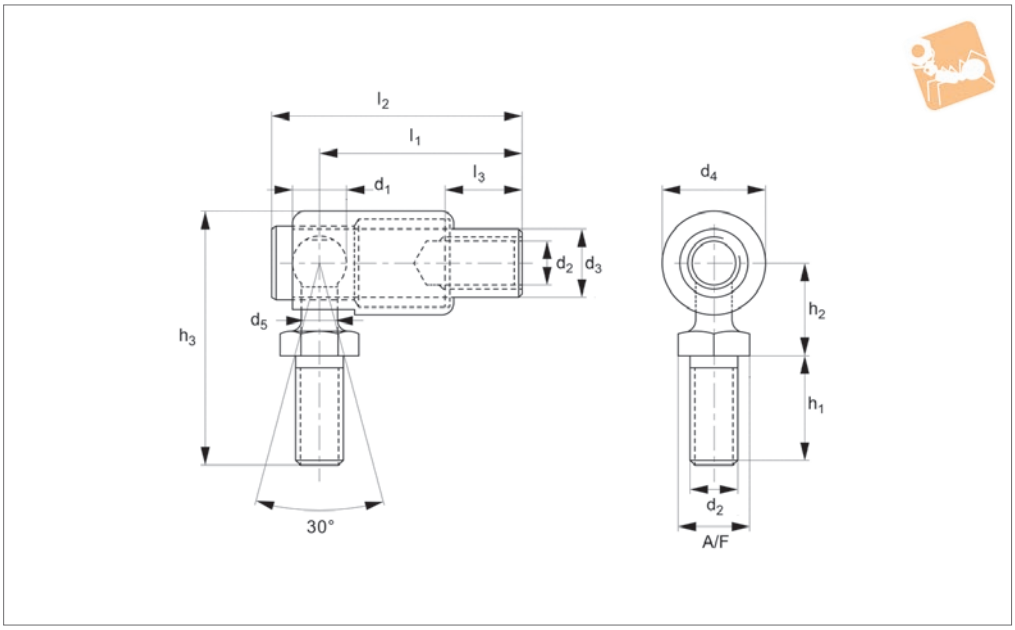
Technical Notes
Quick disconnect ball joints are used in light duty applications where the ball stud needs to be easily disconnected from the housing.
This is accomplished simply by pulling the ball stud out of the housing,
(takes approximately 10 to 20 pounds of force to remove the ball stud).
Quick disconnect ball joints are typically assembled in push-pull cables or rod linkages.

Order No.	d_1	d_2	l_1	l_2	d_3	d_4	h_1	h_2	h_3	l_3	A/F	Weight g
R3536.3-4	0.250	10-32	0.875	1.156	0.312	0.138	0.437	0.420	1.032	0.484	0.312	1300
R3536.4-4	0.250	10-32	0.875	1.156	0.312	0.138	0.562	0.420	1.156	0.484	0.312	1400
R3536.4-3	0.250	1/4	0.969	1.250	0.312	0.138	0.562	0.420	1.156	0.531	0.312	1300
R3536.4L-4L	0.250	1/4	0.969	1.250	0.312	0.138	0.437	0.420	1.032	0.531	0.312	1200
R3536.3-3	0.312	5/16	0.875	1.187	0.394	0.177	0.562	0.537	1.312	0.484	0.437	7200

Quick Release Ball Joints

A2 stainless and steel, zinc-plated

R3535



Material

Body: stainless steel (A2, AISI 303) or steel zinc-plated.
Shield and ball stud: carbon steel.
Body and ball stud: case hardened.
Spring: (302 S26) stainless steel or equivalent, zinc plated.

Technical Notes

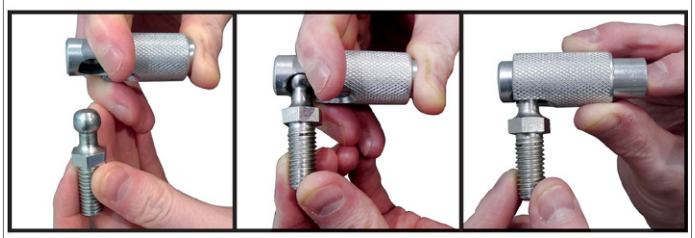
The spring loaded outer shield allows both rapid release and reconnection of the ball stud.
Linkage assemblies can be installed or removed without disturbing pre-set centres.

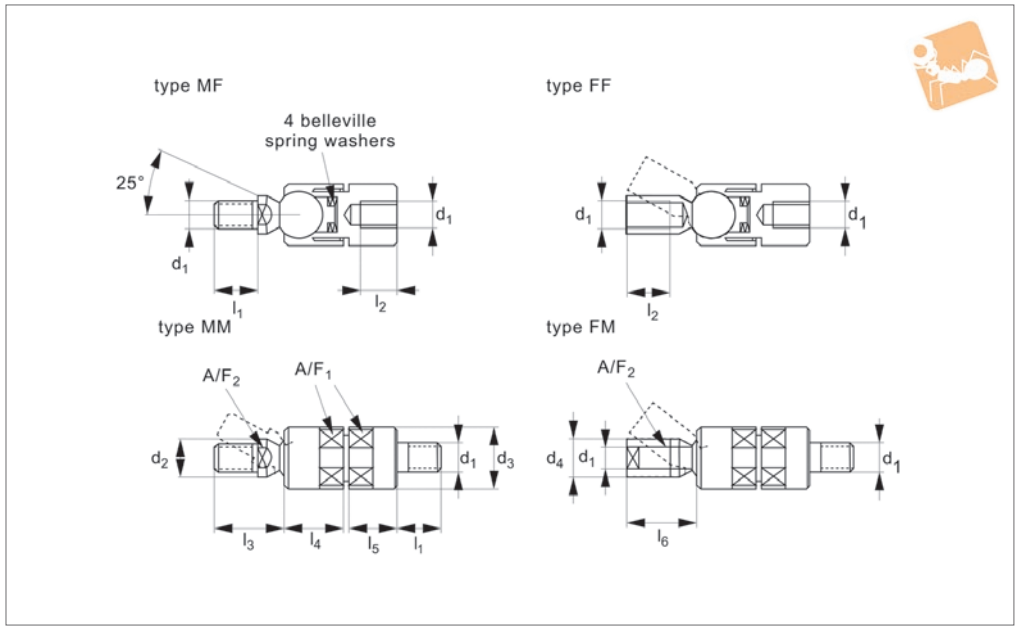
These are metric equivalents to SAE J 490 Style 1 quick release detachable ball joints.

Tips

Standard thread is a right hand thread.

Order No.	Thread hand	d_1	d_2	l_1	l_2	d_3	d_4	d_5	h_1	h_2	h_3	l_3	A/F	Weight g
R3535.005-ZP	Right	6.35	M 5	23.0	28	7.9	11.1	4.35	11.1	11.9	28.6	11.1	8	17
R3535.006-ZP	Right	7.9	M 6	24.6	30	9.4	13.0	4.95	12.6	12.6	33.4	13.0	10	25
R3535.008-ZP	Right	8.6	M 8	31.7	40	11.1	16.0	5.8	15.2	15.2	40.6	14.3	11	48
R3535.010-ZP	Right	10.7	M10	39.7	49	14.1	19.0	6.85	19.8	19.8	51.4	27.0	13	78
R3535.011-ZP	Right	10.7	M10	39.7	49	14.1	19.0	6.85	19.8	19.8	51.4	20.0	13	78
R3535.005-A2	Right	6.35	M 5	23.0	28	7.9	11.1	4.35	11.1	11.9	28.6	11.1	8	17
R3535.006-A2	Right	7.9	M 6	24.6	30	9.4	13.0	4.95	12.6	12.6	33.4	13.0	10	25
R3535.008-A2	Right	8.6	M 8	31.7	40	11.1	16.0	5.8	15.2	15.2	40.6	14.3	11	48
R3535.010-A2	Right	10.7	M10	39.7	49	14.1	19.0	6.85	19.8	19.8	51.4	27.0	13	78
R3535.011-A2	Right	10.7	M10	39.7	49	14.1	19.0	6.85	19.8	19.8	51.4	20.0	13	78





R3540

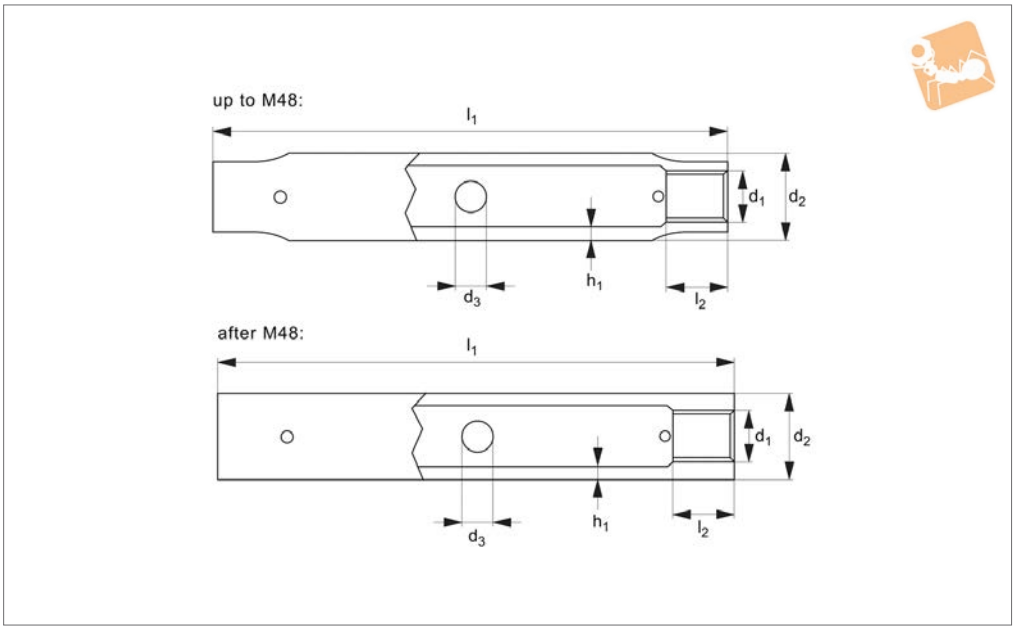
Material
Steel, (silver zinc plated). Brake piece technopolymer (polyamide PA).

Technical Notes
The clamping nut can be set to give a required thrust on the Belleville spring washers,
in order to increase resistance to the movement of the ball stud, the spring washers act as safety washers for the screws.
Once the max. thrust to the spring washers is reached the ball stud is firmly fixed in position.

Order No.	Type	d_1	l_1	d_2	d_3	l_2	l_3	l_4	l_5	l_6	A/F_1	A/F_2
R3540.MF008	MF	M8	12	11	19	10	19.5	18.5	15	-	17	9
R3540.MF010	MF	M10	15	13	21	12	23.5	21.5	17	-	19	11
R3540.MM008	MM	M8	12	11	19	-	19.5	18.5	15	-	17	9
R3540.MM010	MM	M10	15	13	21	-	23.5	21.5	17	-	19	11
R3540.FF008	FF	M8	-	11	19	10	19.5	18.5	15	-	17	9
R3540.FF010	FF	M10	-	13	21	12	23.5	21.5	17	-	19	11
R3540.FM008	FM	M8	12	11	19	-	19.5	18.5	15	18.5	17	9
R3540.FM010	FM	M10	15	13	21	-	23.5	21.5	17	20.5	19	11

Pipe Body Turnbuckles
steel

R3800



Material
Steel (1.0037), zinc-plated.
Hot dip galvanized, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3800.006-FZ.

Technical Notes
To DIN 1478.

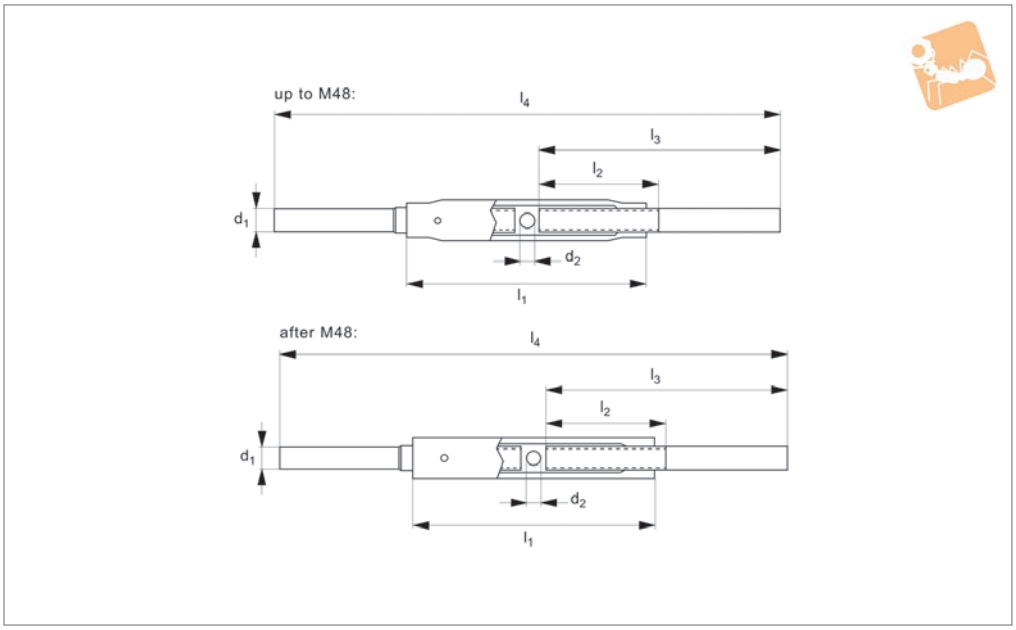
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	l_1	d_2	d_3 min.	d_3 max.	h_1	l_2	Adjustment	Weight kg
R3800.006-ZP	M 6	110	17.2	5.7	6.3	2.9	7.5	90	0.13
R3800.008-ZP	M 8	110	17.2	7.5	8.5	3.6	10	85	0.13
R3800.010-ZP	M10	125	21.3	7.5	8.5	4.0	12	95	0.18
R3800.012-ZP	M12	125	25.0	9.5	10.5	4.0	15	90	0.25
R3800.016-ZP	M16	170	30.0	9.5	10.5	4.5	20	120	0.45
R3800.020-ZP	M20	200	33.7	11.5	12.5	5.0	24	140	0.56
R3800.024-ZP	M24	255	42.4	11.5	12.5	5.6	29	180	1.08
R3800.030-ZP	M30	255	51.0	15.5	16.5	6.3	36	160	1.61
R3800.036-ZP	M36	295	63.5	15.5	16.5	8.0	43	180	2.35
R3800.042-ZP	M42	330	70.0	19.5	20.5	8.8	51	200	4.30
R3800.048-ZP	M48	355	82.5	19.5	20.5	10.0	58	210	5.50
R3800.056-ZP	M56	355	90.0	24.5	25.5	15.0	68	190	9.60
R3800.064-ZP	M64	425	100	24.5	25.5	16	77	240	14.00
R3800.072-ZP	M72x6	425	110	29.5	30.5	17	87	210	17.00
R3800.080-ZP	M80x6	440	120	29.5	30.5	18	96	210	21.00

Stud End Pipe Body Turnbuckles
steel



R3804

Material
Steel (1.0037 up to M48 then 1.0052), zinc-plated.
Hot dip galvanized, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1478.

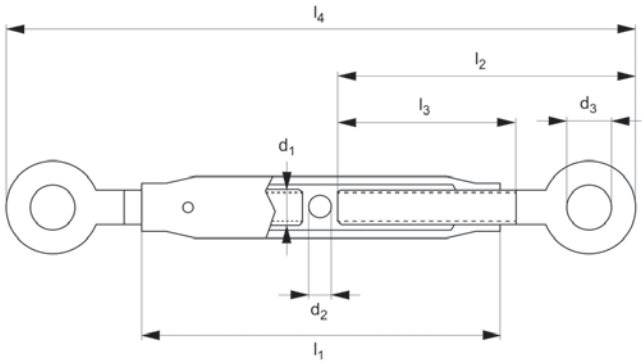
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	d_1	l_1	d_2	l_2	l_3	l_4 min.	l_4 max.	Weight kg
R3804.006-ZP	M 6	110	6	60	120	246	336	0.17
R3804.008-ZP	M 8	110	8	65	120	248	333	0.20
R3804.010-ZP	M10	125	8	75	150	309	404	0.32
R3804.012-ZP	M12	125	10	75	150	311	401	0.45
R3804.016-ZP	M16	170	10	100	200	410	530	0.97
R3804.020-ZP	M20	200	12	120	220	452	592	1.48
R3804.024-ZP	M24	255	12	150	260	533	713	2.62
R3804.030-ZP	M30	255	16	160	260	537	697	4.01
R3804.036-ZP	M36	295	16	180	300	617	797	6.35
R3804.042-ZP	M42	330	20	200	350	720	920	10.50
R3804.048-ZP	M48	355	20	220	380	781	991	14.30
R3804.056-ZP	M56	355	25	230	380	785	975	21.60
R3804.064-ZP	M64	425	25	300	425	875	1015	32.40
R3804.072-ZP	M72	425	30	270	400	831	1041	42.00
R3804.080-ZP	M80	440	30	270	400	830	1040	51.00

Eye End Pipe Body Turnbuckles
steel

R3808



Material
Steel (1.0037), zinc-plated.
Hot dip galvanized, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1478.

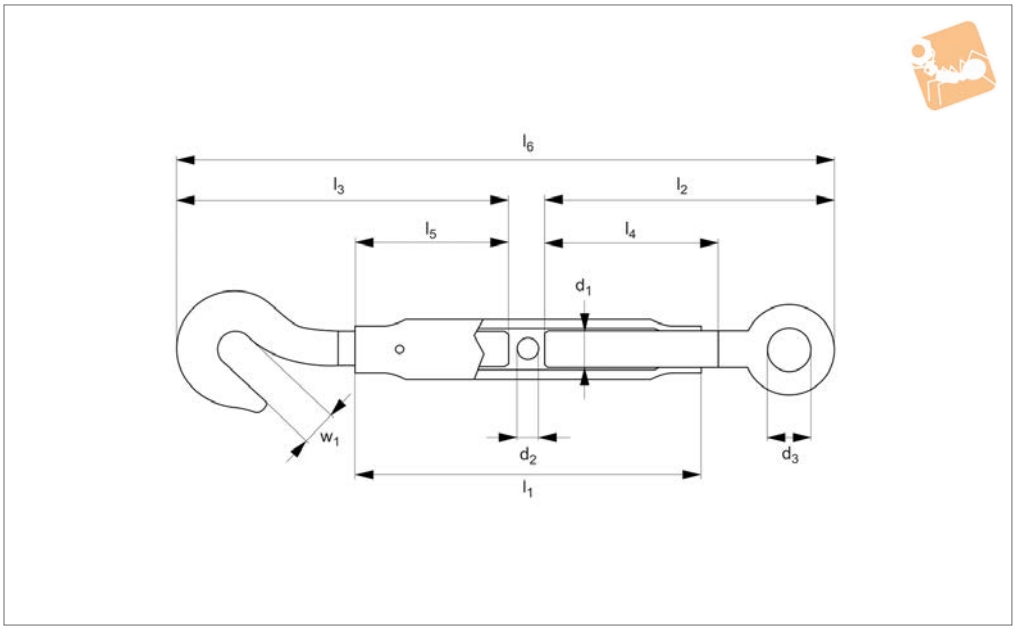
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	l_1	d_2	d_3	l_2	l_3	l_4 min.	l_4 max	Weight kg
R3808.006-ZP	M 6	110	6	10	74	50	154	244	0.16
R3808.008-ZP	M 8	110	8	11	80	52	168	253	0.18
R3808.010-ZP	M10	125	8	15	95	59	199	294	0.28
R3808.012-ZP	M12	125	10	17	107	66	225	315	0.42
R3808.016-ZP	M16	170	10	22	146	85	302	422	0.91
R3808.020-ZP	M20	200	12	24	170	100	352	492	1.36
R3808.024-ZP	M24	255	12	33	213	134	437	619	2.60
R3808.030-ZP	M30	255	16	39	255	150	527	687	3.75
R3808.036-ZP	M36	295	16	37	260	150	537	717	6.35
R3808.042-ZP	M42	330	20	48	285	165	590	790	10.50
R3808.048-ZP	M48	355	20	58	335	185	691	901	15.50

Hook & Eye Pipe Body Turnbuckles
steel



R3812

Material
Steel (1.0037 up to M48 then 1.0052), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1478.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

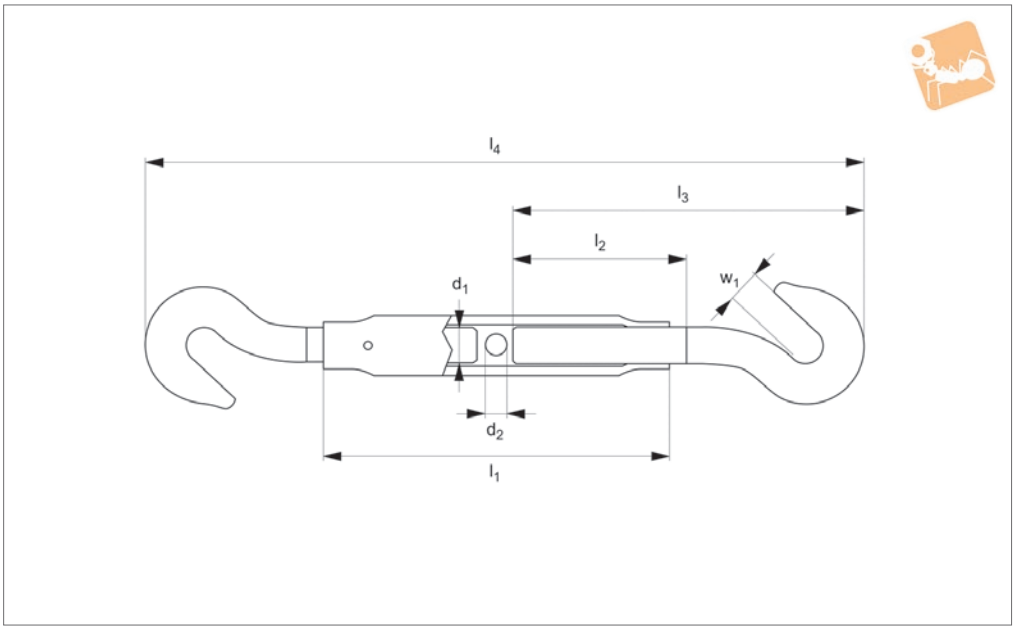
Important Notes
Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	d_1	l_1	d_2	d_3	l_2	l_3	l_4	l_5	l_6 min.	l_6 max.	w_1	Weight kg
R3812.006-ZP	M 6	110	6	10	74	77.0	50	50	157	247	9.5	0.16
R3812.008-ZP	M 8	110	8	11	80	98.0	52	60	186	271	11.0	0.19
R3812.010-ZP	M10	125	8	15	95	116.5	59	73	220	315	14.0	0.29
R3812.012-ZP	M12	125	10	17	107	146.0	66	90	264	354	18.0	0.45
R3812.016-ZP	M16	170	10	22	146	165.0	85	100	321	441	19.0	0.96
R3812.020-ZP	M20	200	12	24	170	180.0	100	105	362	502	21.0	1.38
R3812.024-ZP	M24	255	12	33	213	225.0	134	135	450	630	29.0	2.73
R3812.030-ZP	M30	255	16	39	255	255.0	150	140	527	687	31.0	3.92
R3812.036-ZP	M36	295	16	37	260	300.0	150	170	577	757	35.0	6.60

Hook End Pipe Body Turnbuckles

steel

R3816



Material

Steel (1.0037 up to M48 then 1.0052), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes

To DIN 1478.

Tips

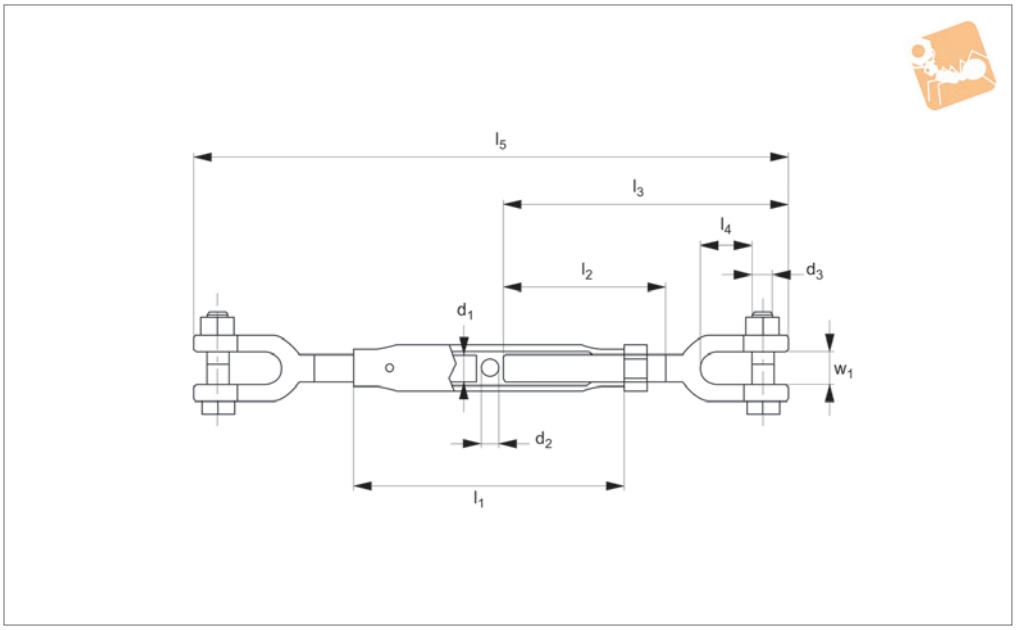
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes

Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	d_1	l_1	d_2	l_2	l_3	l_4 min.	l_4 max.	w_1	Weight kg
R3816.006-ZP	M 6	110	6	50	77.0	160	250	9.5	0.16
R3816.008-ZP	M 8	110	8	60	98.0	204	289	11.0	0.20
R3816.010-ZP	M10	125	8	73	116.5	241	336	14.0	0.30
R3816.012-ZP	M12	125	10	90	146.0	303	393	18.0	0.47
R3816.016-ZP	M16	170	10	100	165.0	340	460	19.0	1.01
R3816.020-ZP	M20	200	12	105	180.0	372	512	21.0	1.40
R3816.024-ZP	M24	255	12	135	225.0	463	543	29.0	2.86
R3816.030-ZP	M30	255	16	140	225.0	527	687	31.0	4.09
R3816.036-ZP	M36	295	16	170	300.0	617	697	35.0	6.85

Jaw End Pipe Body Turnbuckles
steel



R3820

Material
Steel body(1.0037) Jaws (1.0503), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1478.

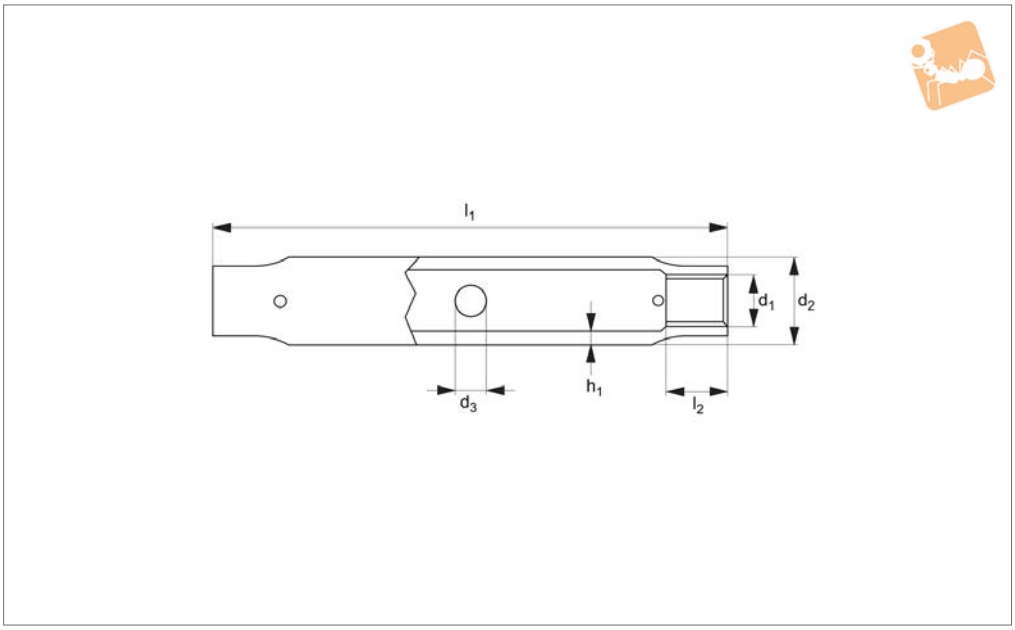
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	d_1	l_1	d_2	d_3	l_2	l_3	l_4	l_5 min.	l_5 max.	w_1	Weight kg
R3820.008-ZP	M 8	110	8.5	8.5	68	125	28.75	258	343	9.0	0.30
R3820.010-ZP	M10	125	8.5	8.5	82	139	29.25	287	382	10.7	0.43
R3820.012-ZP	M12	125	10.5	10.5	90	160	44.75	331	421	15.5	0.69
R3820.016-ZP	M16	170	10.5	12.5	102	186	45.25	382	502	20.0	1.31
R3820.020-ZP	M20	200	12.5	17.0	115	205	59.5	422	562	23.5	2.02
R3820.024-ZP	M24	255	12.5	20.5	125	240	62.75	493	673	26.0	3.9
R3820.030-ZP	M30	255	16.5	25.0	150	290	89.5	613	773	34.0	7.01

Pipe Body Turnbuckles
stainless steel

R3802



Material
Stainless steel (A4)

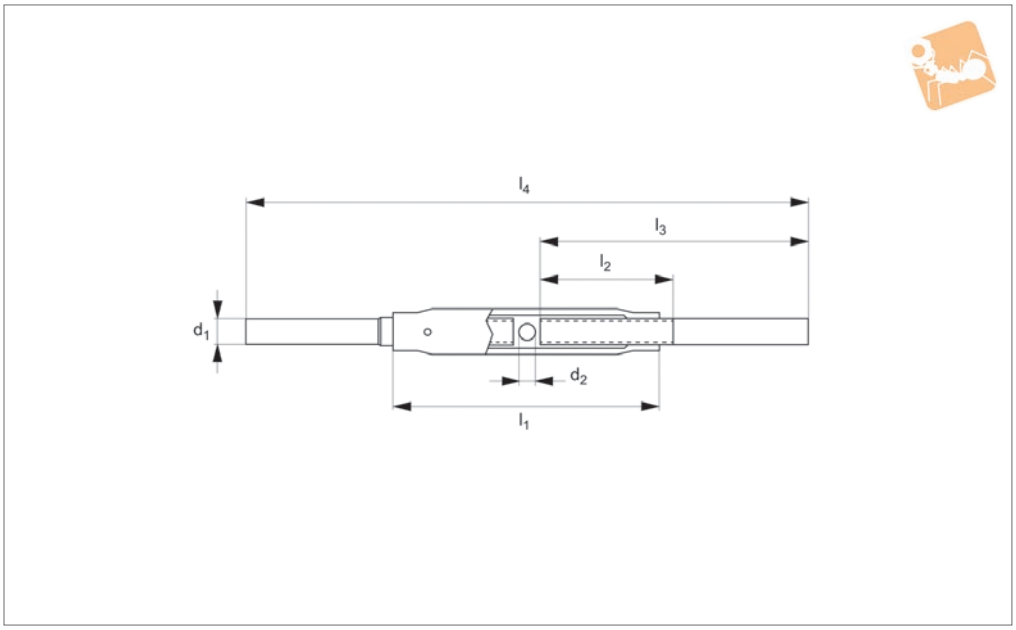
Technical Notes
To DIN 1478.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	d_3 min.	d_3 max.	h_1	l_1	l_2	Adjustment	Weight kg
R3802.006-A4	M 6	17.2	5.7	6.3	2.9	110	7.5	90	0.13
R3802.008-A4	M 8	17.2	7.5	8.5	3.6	110	10	85	0.13
R3802.010-A4	M10	21.3	7.5	8.5	4.0	125	12	95	0.18
R3802.012-A4	M12	25.0	9.5	10.5	4.0	125	15	90	0.25
R3802.016-A4	M16	30.0	9.5	10.5	4.5	170	20	120	0.45
R3802.020-A4	M20	33.7	11.5	12.5	5.0	200	24	140	0.56
R3802.024-A4	M24	42.4	11.5	12.5	5.6	255	29	180	1.08
R3802.030-A4	M30	51.0	15.5	16.5	6.3	255	36	160	1.61
R3802.036-A4	M36	63.5	15.5	16.5	8.0	295	43	180	2.35



R3806

Material
Stainless steel (A4)

Technical Notes
To DIN 1478.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

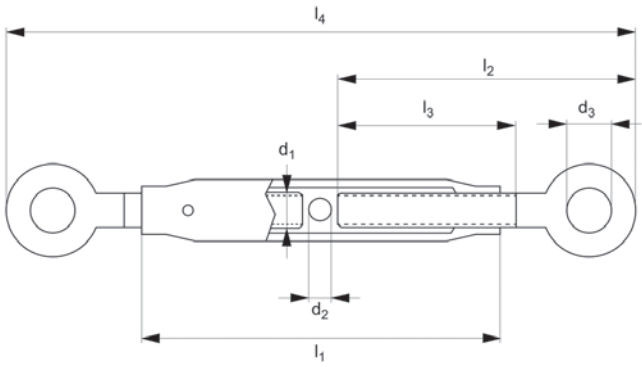
Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	l_1	l_2	l_3	l_4 min.	l_4 max.	Weight kg
R3806.006-A4	M 6	6	110	60	120	246	336	0.17
R3806.008-A4	M 8	8	110	65	120	248	333	0.20
R3806.010-A4	M10	8	125	75	150	309	404	0.32
R3806.012-A4	M12	10	125	75	150	311	401	0.45
R3806.016-A4	M16	10	170	100	200	410	530	0.97
R3806.020-A4	M20	12	200	120	220	452	592	1.48
R3806.024-A4	M24	12	255	150	260	533	713	2.62
R3806.030-A4	M30	16	255	160	260	537	697	4.01
R3806.036-A4	M36	16	295	180	300	617	797	6.35

Eye End Pipe Body Turnbuckles
stainless steel

R3810



Material
Stainless steel (A4)

Technical Notes
To DIN 1478.

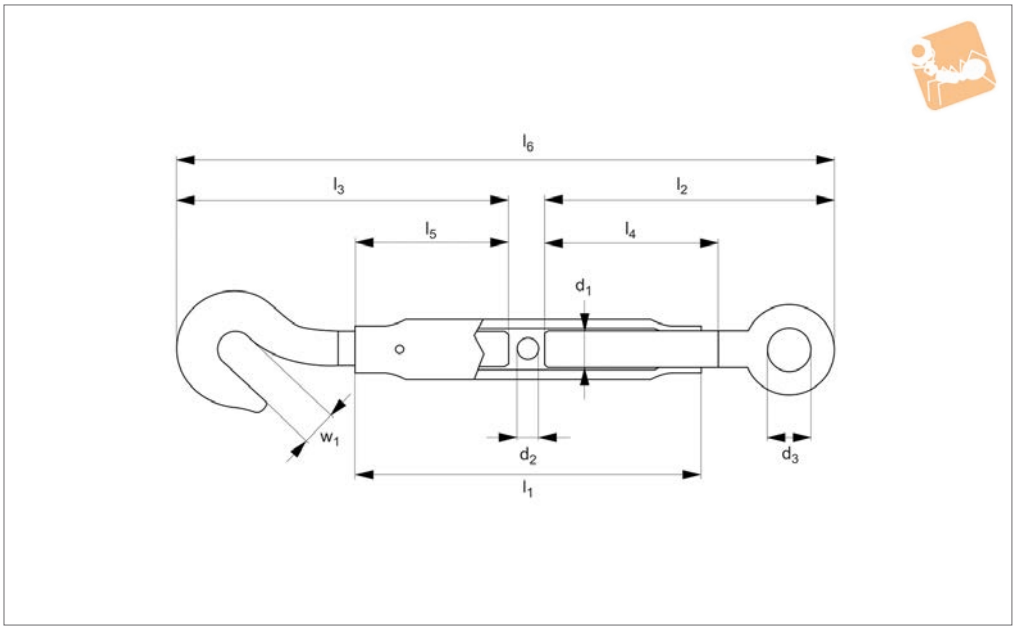
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	d_3	l_1	l_2	l_3	l_4 min.	l_4 max.	Weight kg
R3810.006-A4	M 6	6	10	110	74	50	154	244	0.16
R3810.008-A4	M 8	8	11	110	80	52	168	253	0.18
R3810.010-A4	M10	8	15	125	95	59	199	294	0.28
R3810.012-A4	M12	10	17	125	107	66	225	315	0.42
R3810.016-A4	M16	10	22	170	146	85	302	422	0.91
R3810.020-A4	M20	12	24	200	170	100	352	492	1.36

Hook & Eye Pipe Body Turnbuckles
stainless steel



R3814

Material
Stainless steel (A4)

Technical Notes
To DIN 1478.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

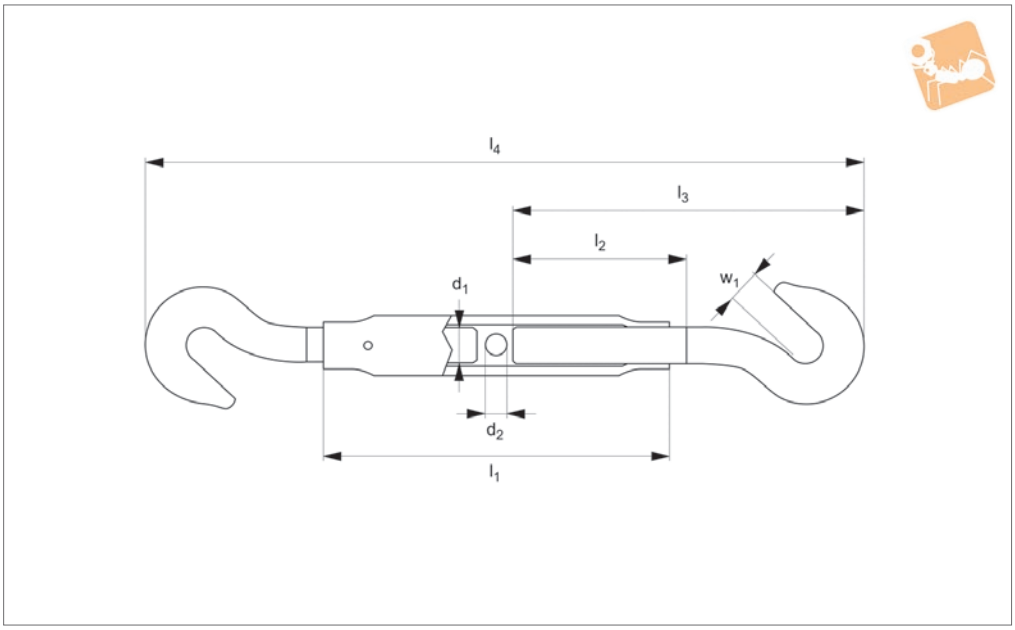
Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	d_3	l_1	l_2	l_3	l_4	l_5	l_6 min.	l_6 max.	w_1	Weight kg
R3814.006-A4	M 6	6	10	110	74	77.0	50	50	157	247	9.5	0.16
R3814.008-A4	M 8	8	11	110	80	98.0	52	60	186	271	11.0	0.19
R3814.010-A4	M10	8	15	125	95	116.5	59	73	220	315	14.0	0.29
R3814.012-A4	M12	10	17	125	107	146.0	66	90	264	354	18.0	0.45
R3814.016-A4	M16	10	22	170	146	165.0	85	100	321	441	19.0	0.96

Hook End Pipe Body Turnbuckles
stainless steel

R3818



Material
Stainless steel (A4)

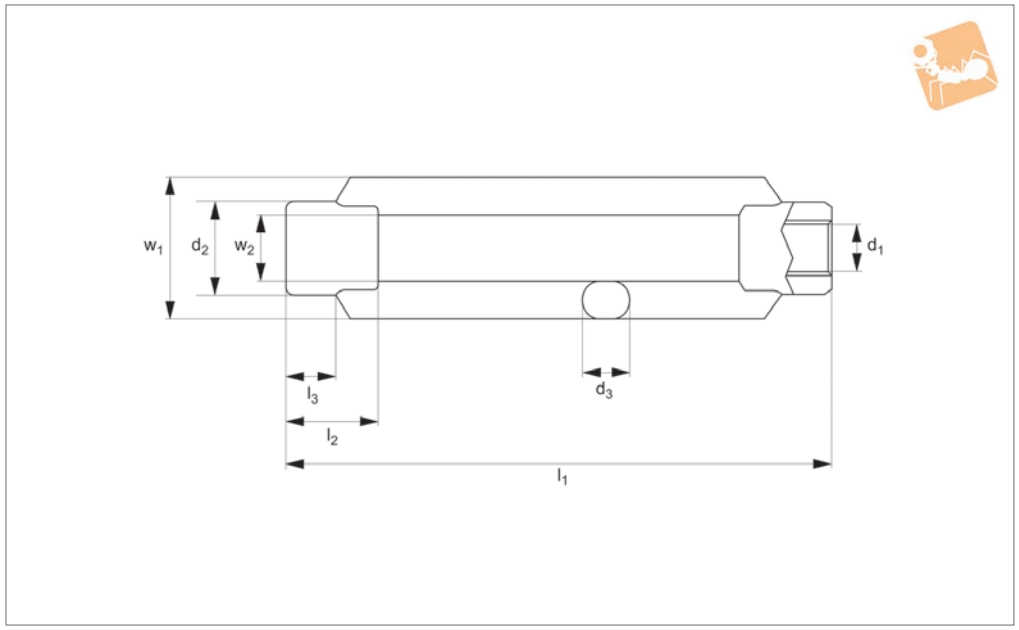
Technical Notes
To DIN 1478.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	l_1	l_2	l_3	l_4 min.	l_4 max.	w_1	Weight kg
R3818.006-A4	M 6	6	110	50	77.0	160	250	9.5	0.16
R3818.008-A4	M 8	8	110	60	98.0	204	289	11.0	0.20
R3818.010-A4	M10	8	125	73	116.5	241	336	14.0	0.30
R3818.012-A4	M12	10	125	90	146.0	303	393	18.0	0.47
R3818.016-A4	M16	10	170	100	165.0	340	460	19.0	1.01



R3830

Material
Steel (1.0037), zinc-plated.
Hot dip galvanized, available on request providing increased protection against corrosion.

Technical Notes
To DIN 1480.

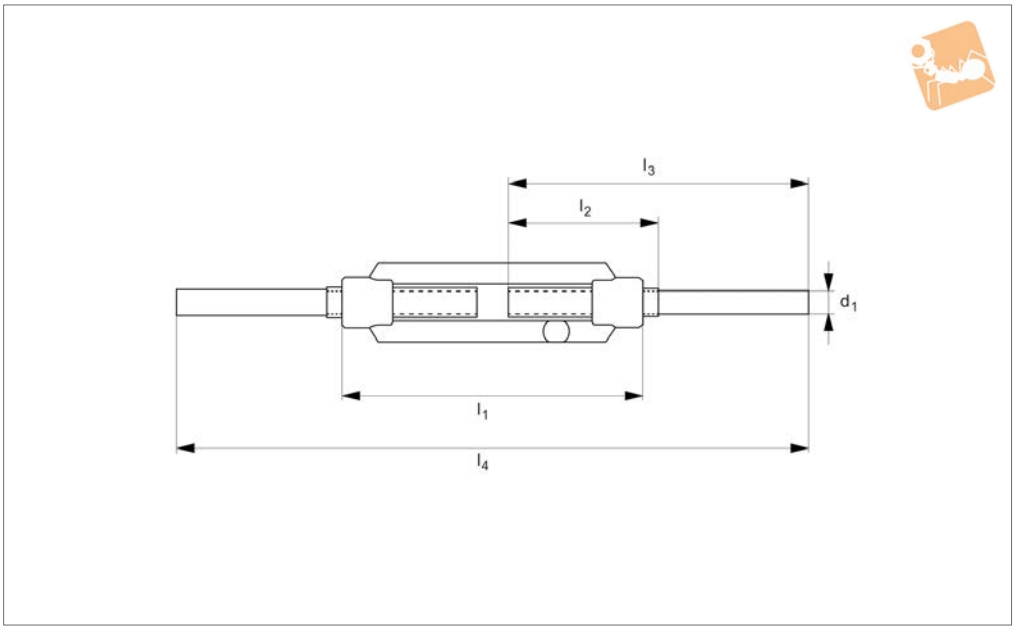
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.
Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	d_2	d_3	w_1	w_2	Adjustment	Weight kg
R3830.006-ZP	M 6	110	12	6	12	6	19	9	80	0.06
R3830.008-ZP	M 8	110	15	8	15	8	23	11	75	0.09
R3830.010-ZP	M10	125	18	9	18	9	30	14	85	0.15
R3830.012-ZP	M12	125	21	11	21	11	34	16	80	0.20
R3830.016-ZP	M16	170	27	14	27	14	42	20	110	0.44
R3830.020-ZP	M20	200	34	17	34	17	52	24	130	0.44
R3830.024-ZP	M24	255	39	20	39	20	60	28	170	1.20
R3830.030-ZP	M30	255	45	23	45	23	74	34	160	1.80
R3830.036-ZP	M36	295	55	28	55	28	86	40	180	3.20
R3830.042-ZP	M42	330	63	32	63	32	104	50	200	4.50
R3830.048-ZP	M48	355	78	39	80	40	135	65	195	9.10
R3830.056-ZP	M56	355	78	39	80	40	135	65	195	8.00

Stub End Turnbuckles
steel

R3834



Material
Steel (1.0037), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

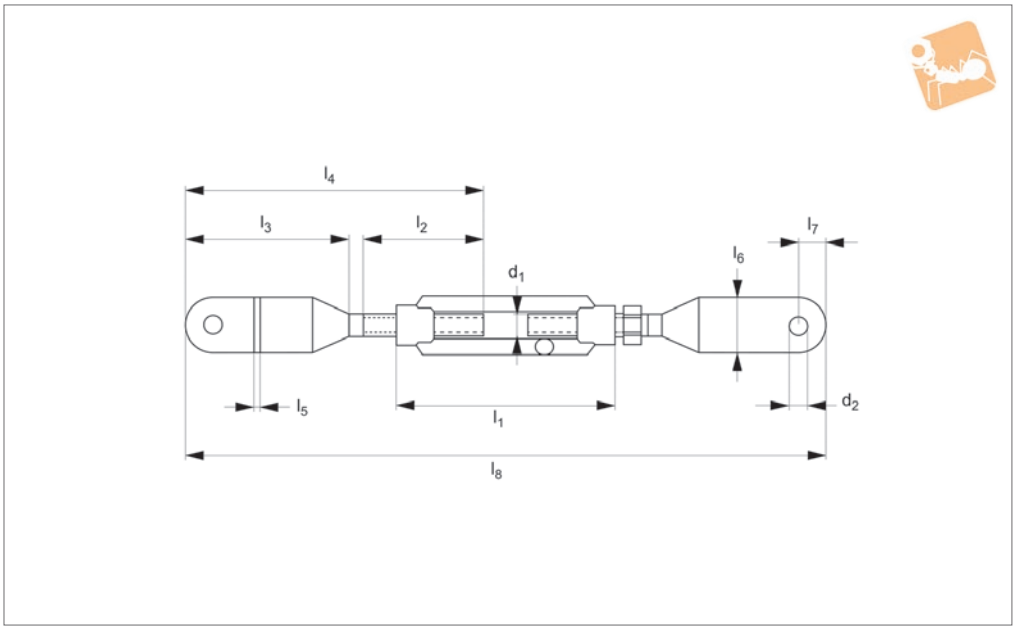
Technical Notes
To DIN 1480 stub end.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4 min.	l_4 max.	Weight kg
R3834.006-ZP	M 6	110	60	120	240	320	0.10
R3834.008-ZP	M 8	110	65	120	240	315	0.16
R3834.010-ZP	M10	125	75	150	301	386	0.30
R3834.012-ZP	M12	125	75	150	301	381	0.40
R3834.016-ZP	M16	170	100	200	400	510	0.96
R3834.020-ZP	M20	200	120	220	440	570	1.74
R3834.024-ZP	M24	255	150	260	521	691	2.74
R3834.030-ZP	M30	255	160	260	521	681	4.20
R3834.036-ZP	M36	295	180	300	601	781	7.20
R3834.042-ZP	M42	330	200	350	700	900	10.70
R3834.048-ZP	M48	355	220	380	761	956	17.90
R3834.056-ZP	M56	355	230	380	761	956	20.00



R3838

Material
Steel (1.0037 up to M48 then 1.0052), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1480 plain ends.

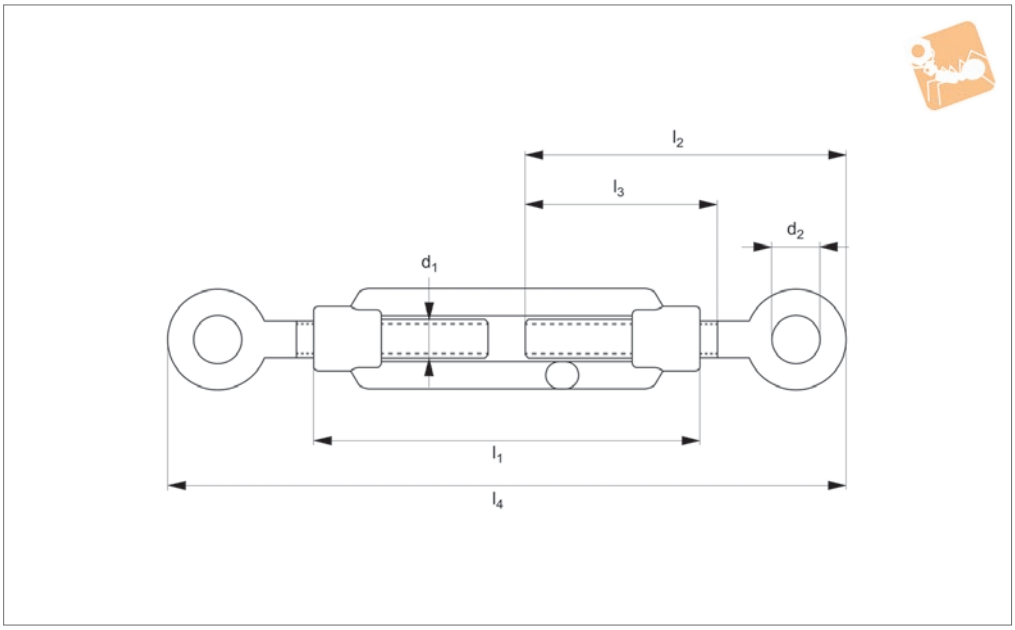
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4	d_2	l_5	l_6	l_7	l_8 min.	l_8 max.	Weight kg
R3838.008-ZP	M 8	110	75	50	125	9.0	4	20	11	250	325	0.19
R3838.010-ZP	M10	110	90	60	150	10.5	4	25	13	300	385	0.30
R3838.012-ZP	M12	125	91	74	165	13.0	5	30	16	331	411	0.48
R3838.016-ZP	M16	125	105	135	240	14.0	8	40	20	481	591	1.14
R3838.020-ZP	M20	200	105	135	240	17.0	9	44	26	480	610	1.84
R3838.024-ZP	M24	255	160	145	305	22.0	10	70	43	611	781	3.10

Eye End Turnbuckles
steel

R3840



Material
Steel (1.0037), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

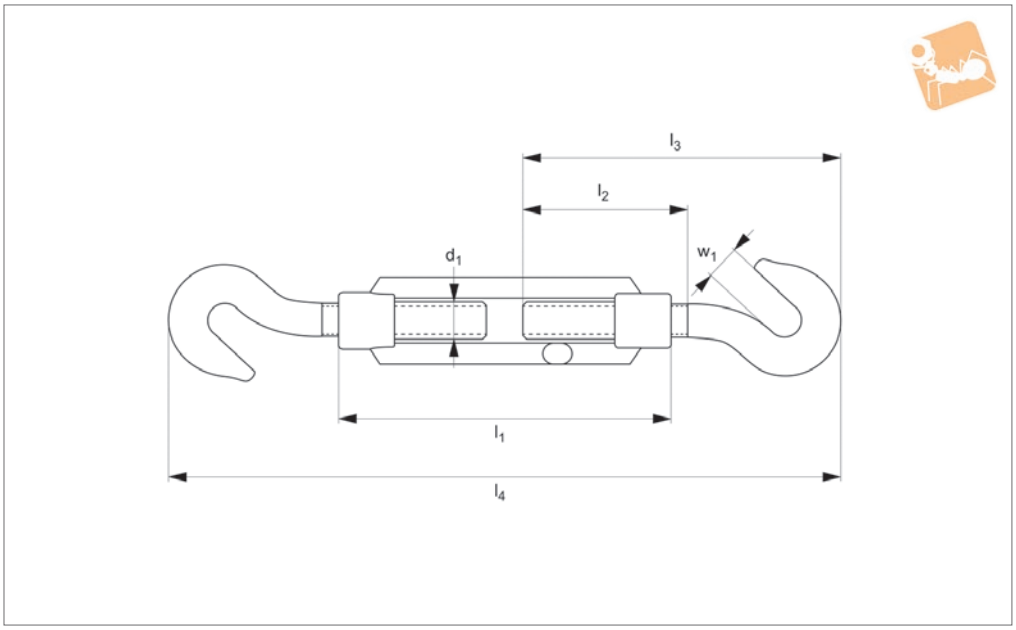
Technical Notes
To DIN 1480 eye to eye.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4 min.	l_4 max.	d_2	Weight kg
R3840.006-ZP	M 6	110	74	50	148	228	10	0.09
R3840.008-ZP	M 8	110	80	52	160	235	11	0.14
R3840.010-ZP	M10	125	95	59	191	276	15	0.25
R3840.012-ZP	M12	125	107	66	215	295	17	0.37
R3840.016-ZP	M16	170	146	85	292	402	22	0.90
R3840.020-ZP	M20	200	170	100	340	470	24	1.62
R3840.024-ZP	M24	255	213	134	427	597	33	2.72
R3840.030-ZP	M30	255	255	150	511	671	39	3.94
R3840.036-ZP	M36	295	260	150	521	701	37	7.20
R3840.042-ZP	M42	330	285	165	570	770	48	10.70
R3840.048-ZP	M48	355	335	185	671	866	58	19.10



R3844

Material
Steel (1.0037), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1480 hook to hook.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

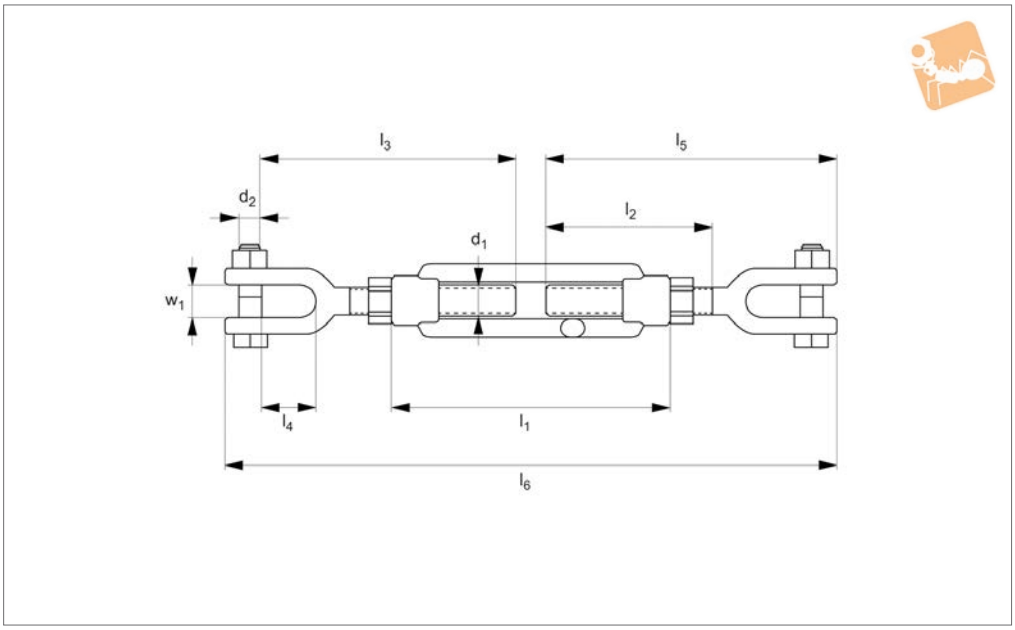
Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4 min.	l_4 max.	w_1	Weight kg
R3844.006-ZP	M 6	110	50	77.0	154	234	8.0	0.09
R3844.008-ZP	M 8	110	60	98.0	196	271	10.0	0.16
R3844.010-ZP	M10	125	73	116.5	233	318	12.5	0.27
R3844.012-ZP	M12	125	90	146.0	293	373	16.0	0.42
R3844.016-ZP	M16	170	100	165.0	330	440	16.0	1.00
R3844.020-ZP	M20	200	105	180.0	360	490	18.0	1.66
R3844.024-ZP	M24	255	135	225.0	451	621	30.0	2.98
R3844.030-ZP	M30	255	140	255.0	451	611	30.0	4.28
R3844.036-ZP	M36	295	170	300.0	601	781	32.0	7.70

Jaw End Turnbuckle

steel

R3848



Material

Steel body (1.0037), jaws (1.0503), zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes

To DIN 1480 jaw to jaw.

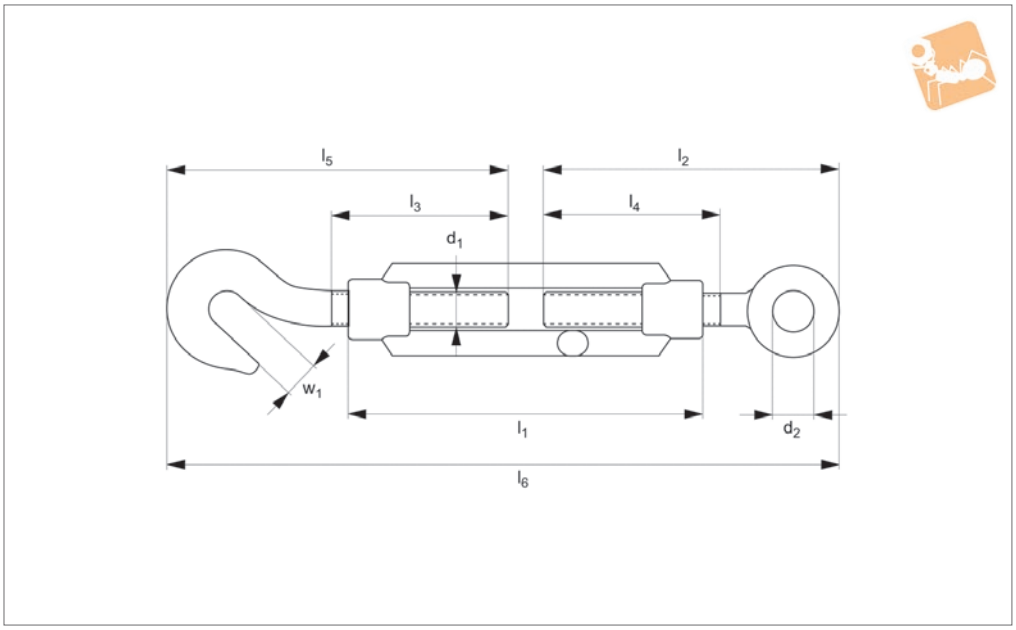
Tips

Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes

Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4	d_2	l_5	l_6 min.	l_6 max.	w	Weight kg
R3848.008-ZP	M 8	110	68	116	28.75	8.5	125	250	325	9.0	0.14
R3848.010-ZP	M10	125	82	130	29.25	8.5	139	279	364	10.7	0.26
R3848.012-ZP	M12	125	90	150	44.75	10.5	160	321	401	15.5	0.40
R3848.016-ZP	M16	170	102	172	45.25	12.5	186	372	482	20.0	0.64
R3848.020-ZP	M20	200	115	185	59.50	17.5	205	410	540	23.5	1.30
R3848.024-ZP	M24	255	125	215	62.75	20.5	240	481	651	29.0	2.28
R3848.030-ZP	M30	255	150	255	89.50	25.5	290	581	741	34.0	4.02



R3850

Material
Steel (1.0037),zinc-plated.
Hot dip galvanized body, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1480 hook & eye.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

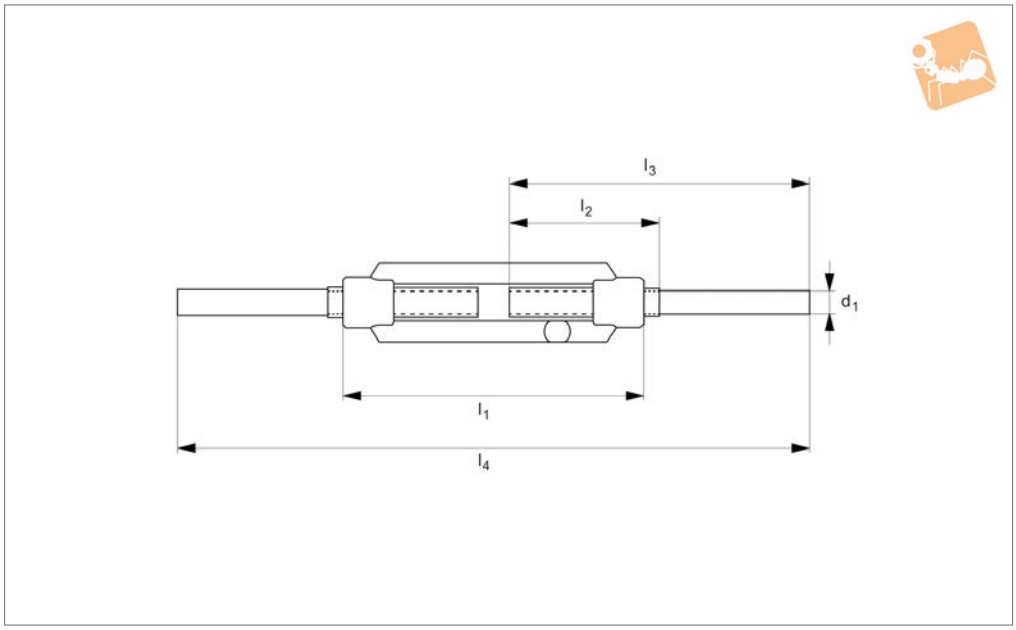
Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4	d_2	l_5	l_6 min.	l_6 max.	w_1	Weight kg
R3850.006-ZP	M 6	110	74	50	50	10	77.0	151	231	8.0	0.09
R3850.008-ZP	M 8	110	80	60	52	11	98.0	172	253	10.0	0.15
R3850.010-ZP	M10	125	95	73	59	15	116.5	212	297	12.5	0.26
R3850.012-ZP	M12	125	107	90	66	17	146.0	264	344	16.0	0.40
R3850.016-ZP	M16	170	146	100	85	22	165.0	311	421	16.0	0.95
R3850.020-ZP	M20	200	170	105	100	24	180.0	350	480	18.0	1.64
R3850.024-ZP	M24	255	213	135	120	33	225.0	439	609	30.0	2.85
R3850.030-ZP	M30	255	255	140	135	39	255.0	511	671	30.0	4.11
R3850.036-ZP	M36	295	260	170	140	37	300.0	561	741	32.0	7.45

Stub End Turnbuckles
stainless steel

R3836



Material
Stainless steel (A4).

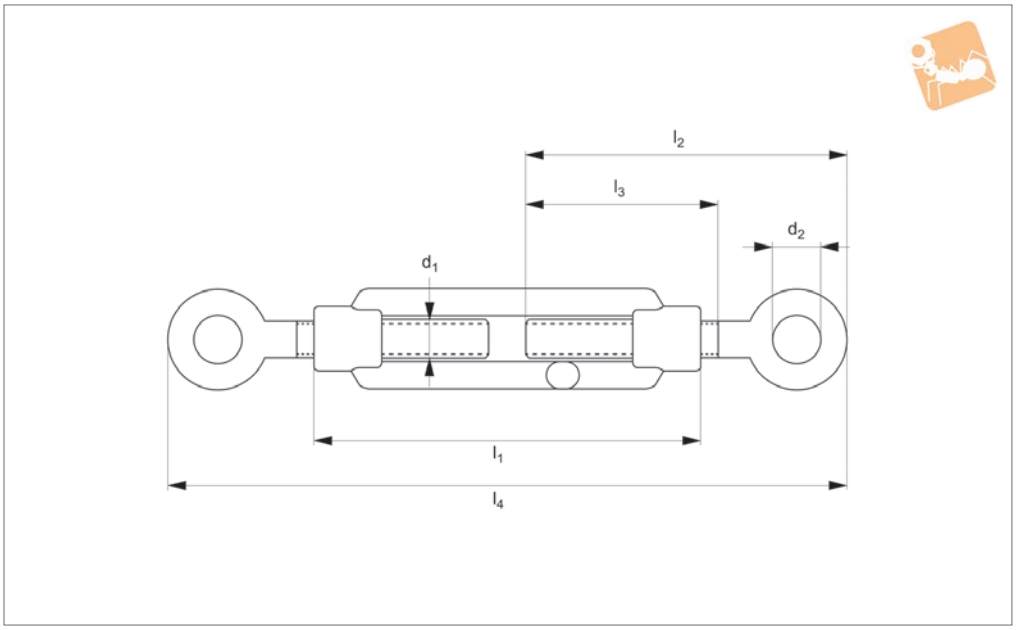
Technical Notes
To DIN 1480 stub end.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4 min.	l_4 max.	Weight kg
R3836.006-A4	M 6	110	60	120	240	320	0.10
R3836.008-A4	M 8	110	65	120	240	315	0.16
R3836.010-A4	M10	125	75	150	301	386	0.30
R3836.012-A4	M12	125	75	150	301	381	0.40
R3836.016-A4	M16	170	100	200	400	510	0.96
R3836.020-A4	M20	200	120	220	440	570	1.74
R3836.024-A4	M24	255	150	260	521	691	2.74



R3842

Material
Stainless steel (A4).

Technical Notes
To DIN 1480 eye to eye.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

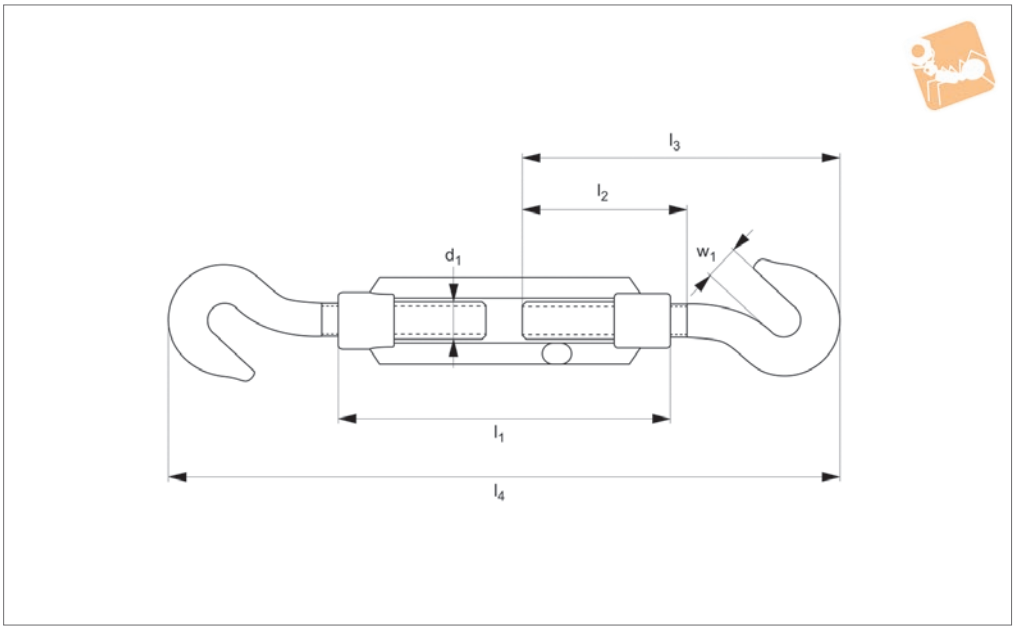
Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	l_1	l_2	l_3	l_4 min.	l_4 max.	Weight kg
R3842.006-A4	M 6	10	110	74	50	148	228	0.09
R3842.008-A4	M 8	11	110	80	52	160	235	0.14
R3842.010-A4	M10	15	125	95	59	191	276	0.25
R3842.012-A4	M12	17	125	107	66	215	295	0.37
R3842.016-A4	M16	22	170	146	85	292	402	0.90
R3842.020-A4	M20	24	200	170	100	340	470	1.62

Hook End Turnbuckles
stainless steel

R3846



Material
Stainless steel (A4).

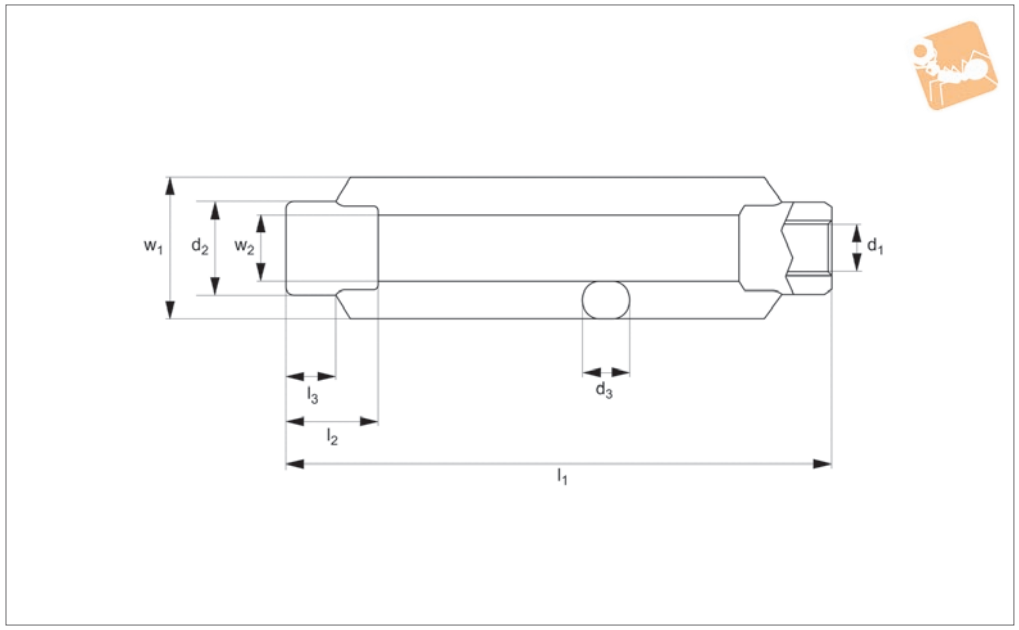
Technical Notes
To DIN 1480 hook to hook.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	l_1	l_2	l_3	l_4 min.	l_4 max.	w_1	Weight kg
R3846.006-A4	M 6	110	50	77.0	154	234	8.0	0.09
R3846.008-A4	M 8	110	60	98.0	196	271	10.0	0.16
R3846.010-A4	M10	125	73	116.5	233	318	12.5	0.27
R3846.012-A4	M12	125	90	146.0	293	373	16.0	0.42
R3846.016-A4	M16	170	100	165.0	330	440	16.0	1.00



R3832

Material
Stainless steel (A4).

Technical Notes
To DIN 1480.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

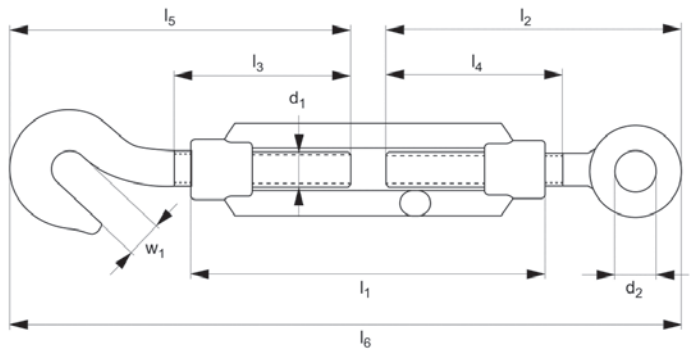
Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	d_3	l_1	l_2	l_3	w_1	w_2	Adjustment	Weight kg
R3832.050-070-A4	M 5	-	-	70	-	-	-	-	-	
R3832.060-110-A4	M 6	12	6	110	12	6	19	9	80	0.06
R3832.060-090-A4	M 6	8	6	90	12	6	19	9	80	0.06
R3832.080-110-A4	M 8	15	8	110	15	8	23	11	75	0.09
R3832.100-125-A4	M10	18	9	125	18	9	30	14	85	0.15
R3832.100-150-A4	M10	16	9	150	18	9	30	14	85	0.15
R3832.120-125-A4	M12	21	11	125	21	11	34	16	80	0.20
R3832.120-200-A4	M12	18	11	200	21	11	34	16	80	0.20
R3832.160-170-A4	M16	27	14	170	27	14	42	20	110	0.44
R3832.160-250-A4	M16	26	14	250	27	14	42	20	110	0.44
R3832.200-200-A4	M20	34	17	200	34	17	52	24	130	0.44
R3832.200-300-A4	M20	30	17	300	34	17	52	24	130	0.44
R3832.240-255-A4	M24	39	20	255	39	20	60	28	170	1.20

Hook & Eye Turnbuckles
stainless steel

R3852



Material
Stainless steel (A4).

Technical Notes
To DIN 1480 hook & eye.

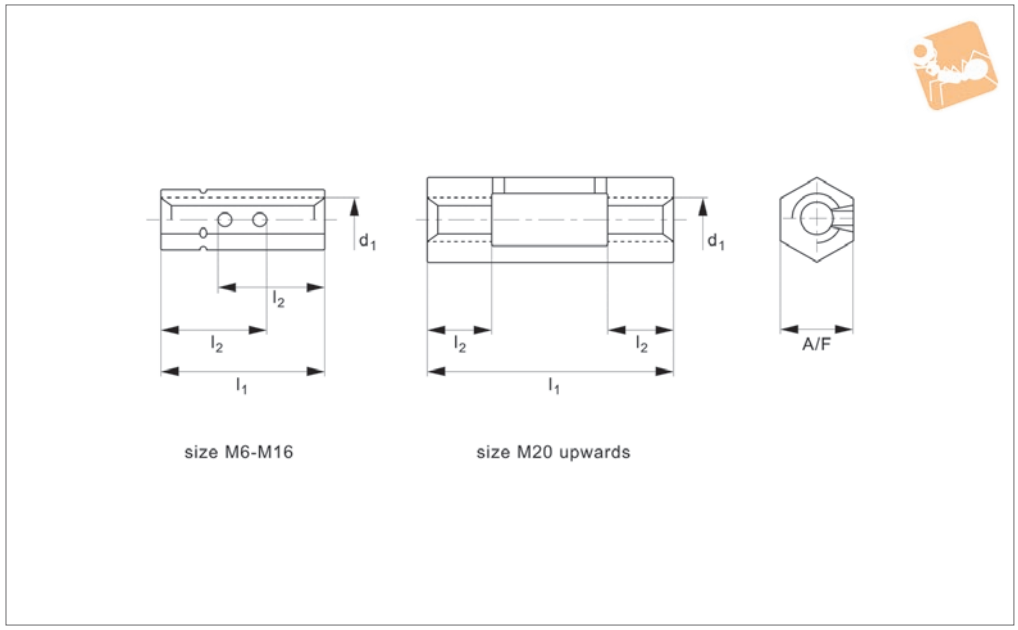
Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	d_1	d_2	l_1	l_2	l_3	l_4	l_5	l_6 min.	w_1	Weight kg
R3852.006-A4	M 6	10	110	74	50	50	77.0	151	8.0	0.09
R3852.008-A4	M 8	11	110	80	52	60	98.0	178	10.0	0.15
R3852.010-A4	M10	15	125	95	59	73	116.5	212	12.5	0.26
R3852.012-A4	M12	17	125	107	66	90	146.0	264	16.0	0.40
R3852.016-A4	M16	22	170	146	85	100	165.0	311	16.0	0.95

Hexagonal Body Turnbuckles
steel



R3825

Material
Steel (1.0037), zinc-plated.
Hot dip galvanized, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3804.006-FZ.

Technical Notes
To DIN 1479.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

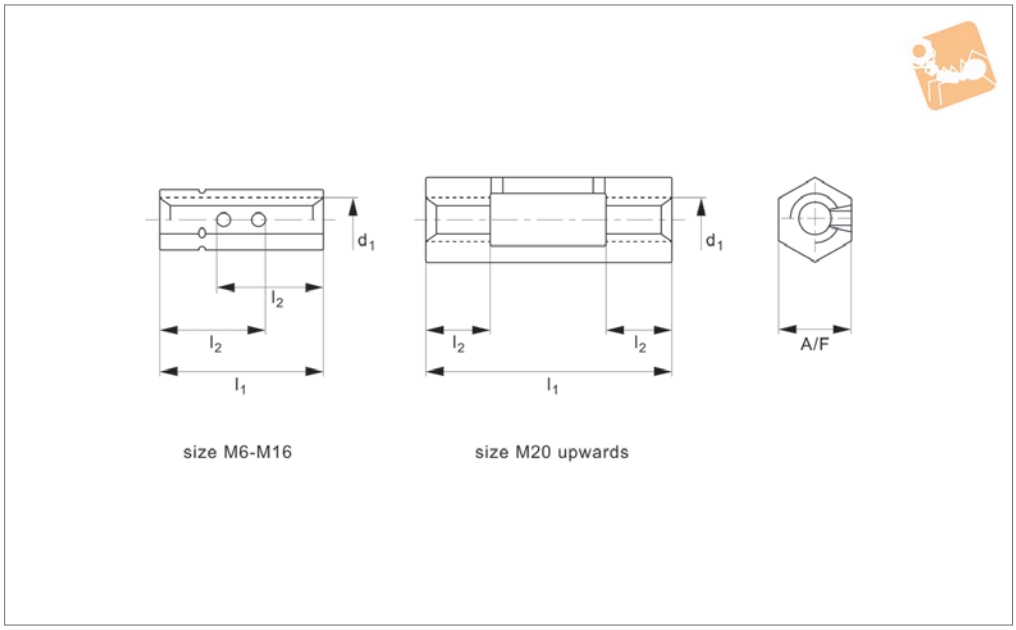
Important Notes
L2 dimension indicates the length of thread from each end that has been overcut.
This means you can screw from one end a total of length l2. Please note if screwing in from both ends the length of thread is half l2.
Sizes M6-M16, have overlapping thread, from M20 middle part is relieved.

Turnbuckles are not to be used for lifting.
Only suitable for use in tension.

Order No.	d_1	l_1	l_2	A/F	Adjustment	Weight kg
R3825.006-ZP	M 6	30	22.5	10	15	0.02
R3825.008-ZP	M 8	35	25.0	13	15	0.03
R3825.010-ZP	M10	45	33.0	16	21	0.06
R3825.012-ZP	M12	55	40.0	18	25	0.09
R3825.016-ZP	M16	75	55.0	24	35	0.18
R3825.020-ZP	M20	95	24.0	30	47	0.32
R3825.024-ZP	M24	115	29.0	36	57	0.53
R3825.030-ZP	M30	125	36.0	46	53	1.08

Hexagonal Body Turnbuckles
stainless steel

R3826



Material
Stainless steel (A4).

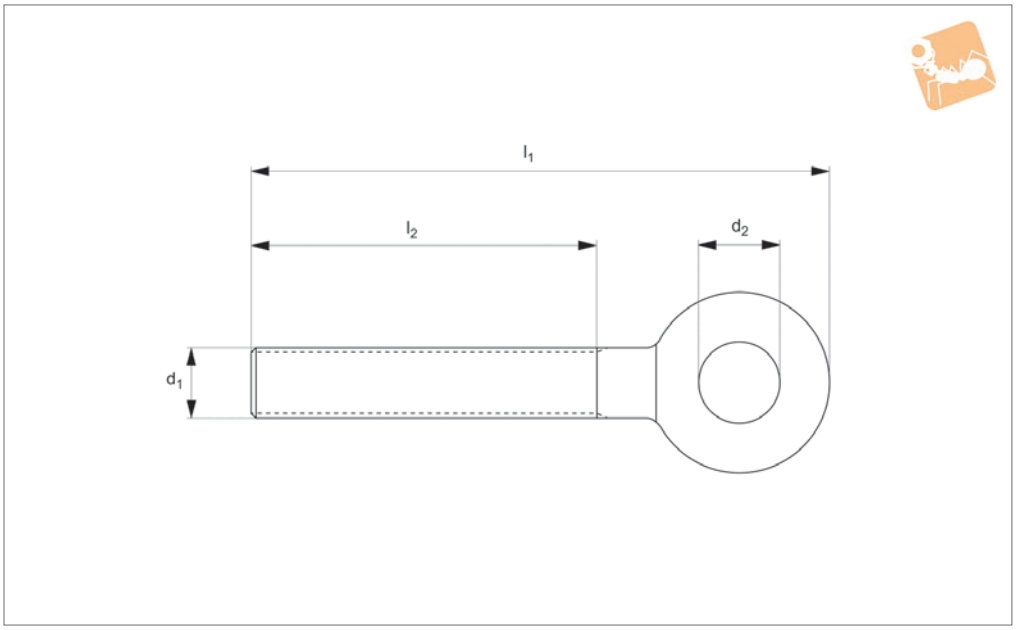
Technical Notes
To DIN 1479.

Tips
Turnbuckles consist of a metal frame with right hand thread one end and left hand thread the other end. Used for tensioning by rotating turnbuckle body without twisting attached rope or cable.

Important Notes
L2 dimension indicates the length of thread from each end that has been overcut.
This means you can screw from one end a total of length l2. Please note if screwing in from both ends the length of thread is half l2.
Sizes M6-M16, have overlapping thread, from M20 middle part is relieved.

Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	d_1	l_1	l_2	A/F	Adjustment	Weight kg
R3826.006-A4	M 6	30	22.5	10	15	0.02
R3826.008-A4	M 8	35	25.0	13	15	0.03
R3826.010-A4	M10	45	33.0	16	21	0.06
R3826.012-A4	M12	55	40.0	18	25	0.09
R3826.016-A4	M16	75	55.0	24	35	0.18
R3826.020-A4	M20	95	24.0	30	47	0.32
R3826.024-A4	M24	115	29.0	36	57	0.53
R3826.030-A4	M30	125	36.0	46	53	1.08



R3860

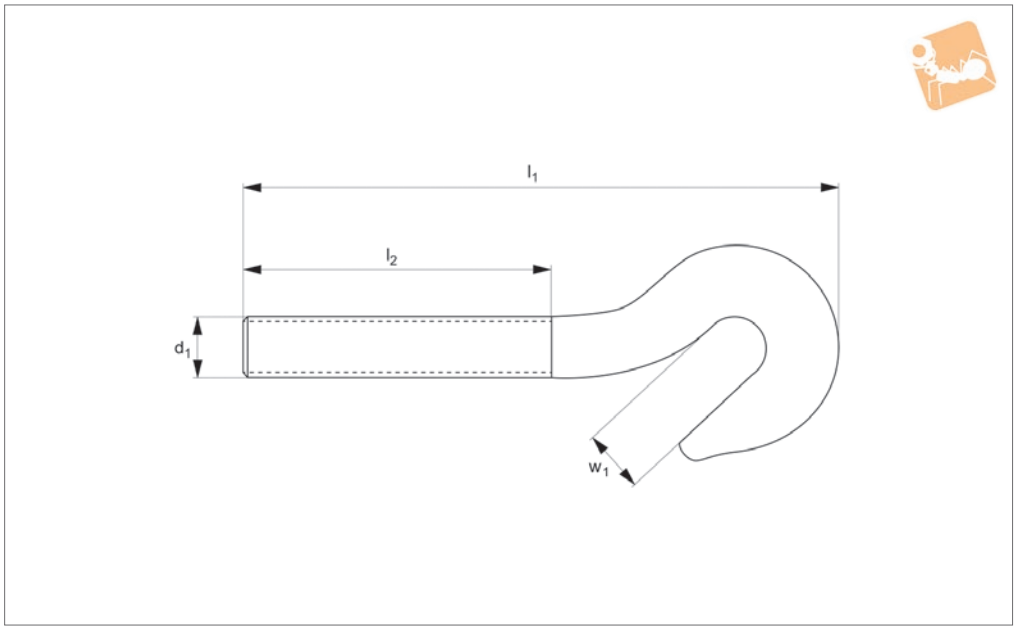
Material
Steel (1.0037), zinc-plated.
Hot dip galvanized version, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3860.R006-FZ.

Important Notes
Turnbuckles are not to be used for lifting.
Only suitable for use in tension.

Order No.	Thread hand	d_1	d_2	l_1	l_2	Weight kg
R3860.R006-ZP	Right	M 6	10	74	50	0.015
R3860.R008-ZP	Right	M 8	11	80	52	0.030
R3860.R010-ZP	Right	M10	15	95	59	0.050
R3860.R012-ZP	Right	M12	17	107	66	0.085
R3860.R014-ZP	Right	M14	18	158	85	0.130
R3860.R016-ZP	Right	M16	22	146	85	0.210
R3860.R020-ZP	Right	M20	24	170	100	0.380
R3860.R022-ZP	Right	M22	30	203	123	0.580
R3860.R024-ZP	Right	M24	33	213	134	0.830
R3860.R030-ZP	Right	M30	39	255	150	1.400
R3860.R036-ZP	Right	M36	37	260	150	2.180
R3860.R042-ZP	Right	M42	48	285	165	3.190
R3860.R048-ZP	Right	M48	58	335	185	4.970
R3860.L006-ZP	Left	M 6	10	74	50	0.015
R3860.L008-ZP	Left	M 8	11	80	52	0.030
R3860.L010-ZP	Left	M10	15	95	59	0.050
R3860.L012-ZP	Left	M12	17	107	66	0.085
R3860.L014-ZP	Left	M14	18	158	85	0.130
R3860.L016-ZP	Left	M16	22	146	85	0.210
R3860.L020-ZP	Left	M20	24	170	100	0.380
R3860.L022-ZP	Left	M22	30	203	123	0.580
R3860.L024-ZP	Left	M24	33	213	134	0.830
R3860.L030-ZP	Left	M30	39	255	150	1.400
R3860.L036-ZP	Left	M36	37	260	150	2.180
R3860.L042-ZP	Left	M42	48	285	165	3.190
R3860.L048-ZP	Left	M48	58	335	185	4.970

Hooks for Turnbuckles
steel

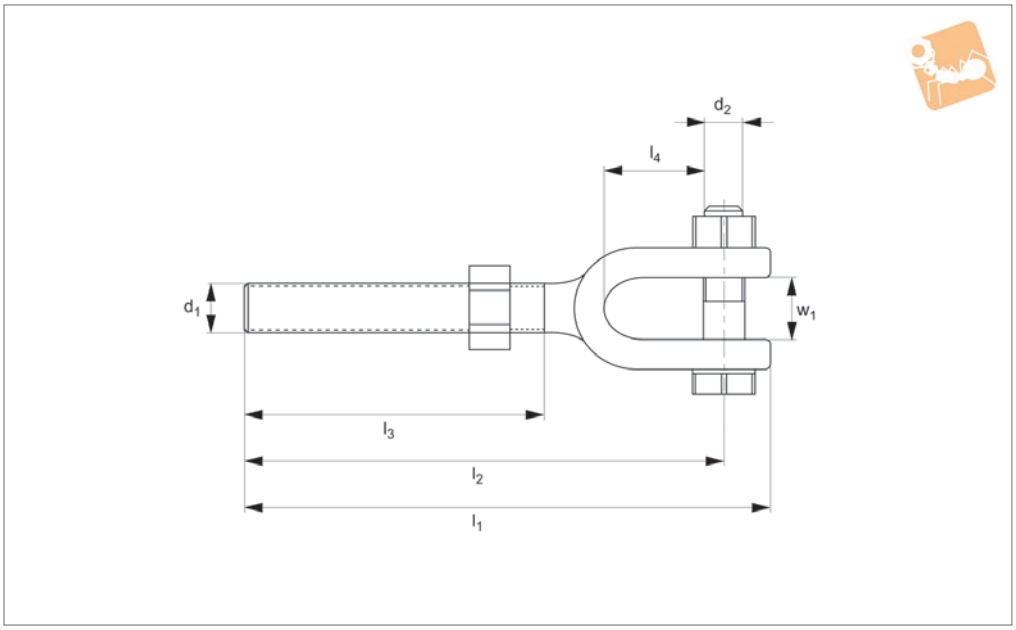
R3862



Material
Steel (1.0037).
Hot dip galvanized version, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3862.R006-FZ.

Important Notes
Turnbuckles are not to be used for lifting.
Only suitable for use in tension.

Order No.	Thread hand	d_1	l_1	l_2	w_1	S.W.L. kg	Weight kg
R3862.R006-ZP	Right	M 6	77.0	50	9.5	75	0.016
R3862.R008-ZP	Right	M 8	98.0	60	11.0	165	0.034
R3862.R010-ZP	Right	M10	116.5	73	14.0	235	0.060
R3862.R012-ZP	Right	M12	146.0	90	18.0	320	0.113
R3862.R014-ZP	Right	M14	140.0	80	16.0	420	0.170
R3862.R016-ZP	Right	M16	165.0	100	19.0	530	0.275
R3862.R020-ZP	Right	M20	180.0	105	21.0	730	0.440
R3862.R022-ZP	Right	M22	215.0	120	26.0	1120	0.685
R3862.R024-ZP	Right	M24	225.0	135	29.0	1550	0.765
R3862.R030-ZP	Right	M30	225.0	140	31.0	2240	1.325
R3862.R036-ZP	Right	M36	300.0	170	35.0	3530	2.285
R3862.L006-ZP	Left	M 6	77.0	50	9.5	75	0.016
R3862.L008-ZP	Left	M 8	98.0	60	11.0	165	0.034
R3862.L010-ZP	Left	M10	116.5	73	14.0	235	0.060
R3862.L012-ZP	Left	M12	146.0	90	18.0	320	0.113
R3862.L014-ZP	Left	M14	140.0	80	16.0	420	0.170
R3862.L016-ZP	Left	M16	165.0	100	19.0	530	0.275
R3862.L020-ZP	Left	M20	180.0	105	21.0	730	0.440
R3862.L022-ZP	Left	M22	215.0	120	26.0	1120	0.685
R3862.L024-ZP	Left	M24	225.0	135	29.0	1550	0.765
R3862.L030-ZP	Left	M30	225.0	140	31.0	2240	1.325
R3862.L036-ZP	Left	M36	300.0	170	35.0	3530	2.285



R3864

Material
Steel (C45, 1.0503), zinc-plated.
Hot dip galvanized version, above M12 available on request providing increased protection against corrosion. Please add - FZ for hot dip galvanized, e.g. R3864. R008-FZ.

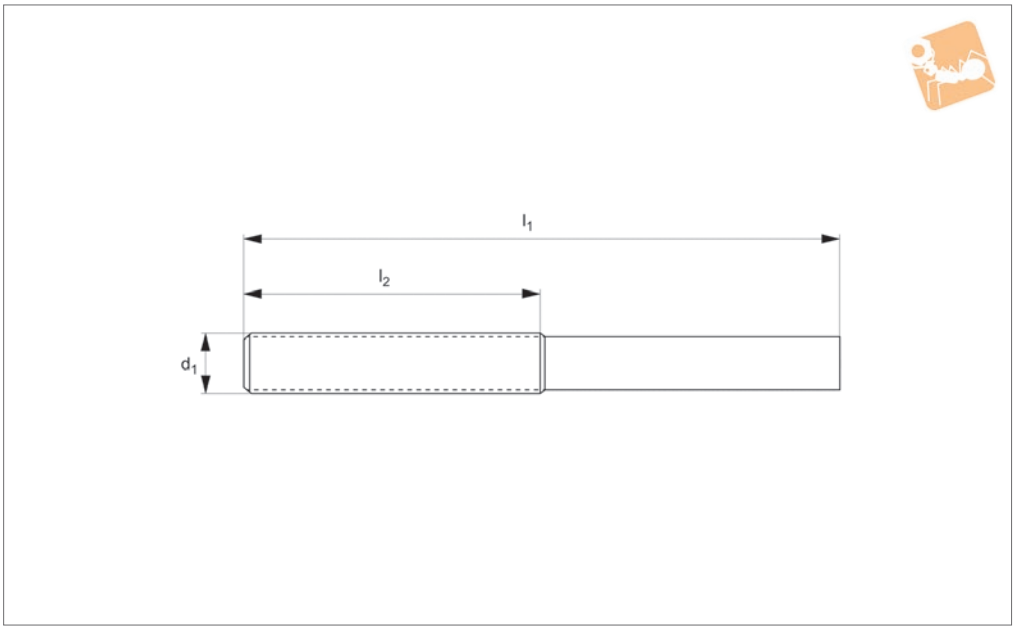
Important Notes
Turnbuckles are not to be used for lifting.

Only suitable for use in tension.

Order No.	Thread hand	d_1	d_2	l_1	l_2	l_3	l_4	w_1	Weight kg
R3864.R008-ZP	Right	M 8	8.5	125	116	68	28.75	9.0	0.095
R3864.R010-ZP	Right	M10	8.5	139	130	82	29.25	10.7	0.132
R3864.R012-ZP	Right	M12	10.5	160	150	90	44.75	15.5	0.215
R3864.R016-ZP	Right	M16	12.5	186	172	102	45.25	20.0	0.405
R3864.R020-ZP	Right	M20	17.0	205	185	115	59.50	23.5	0.812
R3864.R024-ZP	Right	M24	20.5	240	215	125	62.75	29.0	1.395
R3864.R030-ZP	Right	M30	25.0	290	255	150	89.50	34.0	2.690
R3864.L008-ZP	Left	M 8	8.5	125	116	68	28.75	9.0	0.095
R3864.L010-ZP	Left	M10	8.5	139	130	82	29.25	10.7	0.132
R3864.L012-ZP	Left	M12	10.5	160	150	90	44.75	15.5	0.215
R3864.L016-ZP	Left	M16	12.5	186	172	102	45.25	20.0	0.405
R3864.L020-ZP	Left	M20	17.0	205	185	115	59.50	23.5	0.812
R3864.L024-ZP	Left	M24	20.5	240	215	125	62.75	29.0	1.395
R3864.L030-ZP	Left	M30	25.0	290	255	150	89.5	34.0	2.690

Welding Studs
steel

R3866

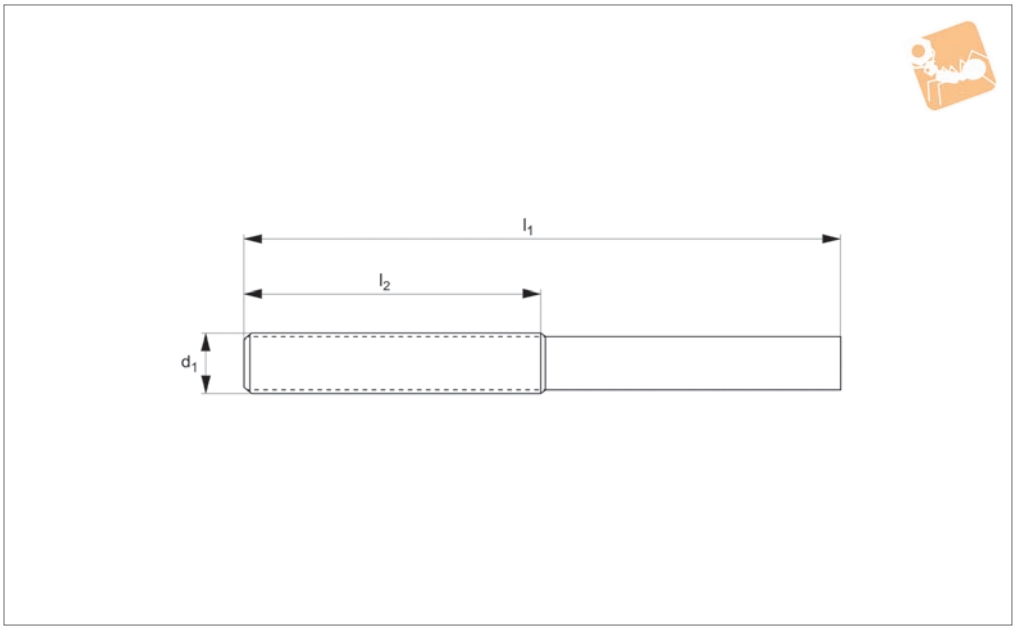


Material
Steel (1.0037 up to M36, above M36 1.0052).
Hot dip galvanized version, available on request providing increased protection against corrosion. Please add -FZ for hot dip galvanized, e.g. R3866.R006-FZ.

Technical Notes
To DIN 34828.

Important Notes
Turnbuckles are not to be used for lifting. Only suitable for use in tension.

Order No.	Thread hand	d	l_1	l_2	S.W.L. kg	Weight kg
R3866.R006-ZP	Right	M 6	120	60	0.02	0.02
R3866.R008-ZP	Right	M 8	120	65	0.04	0.04
R3866.R010-ZP	Right	M10	150	75	0.07	0.07
R3866.R012-ZP	Right	M12	150	75	0.11	0.11
R3866.R014-ZP	Right	M14	165	80	0.15	0.15
R3866.R016-ZP	Right	M16	200	100	0.26	0.26
R3866.R020-ZP	Right	M20	200	120	0.44	0.44
R3866.R024-ZP	Right	M24	260	150	0.76	0.76
R3866.R030-ZP	Right	M30	260	160	1.20	1.20
R3866.R036-ZP	Right	M36	300	180	2.10	2.10
R3866.R042-ZP	Right	M42	350	200	3.15	3.15
R3866.R048-ZP	Right	M48	380	220	4.60	4.60
R3866.R056-ZP	Right	M56	380	230	6.28	6.28
R3866.R064-ZP	Right	M64	425	300	9.16	9.16
R3866.R072-ZP	Right	M72	400	270	4.60	4.60
R3866.L006-ZP	Left	M 6	120	60	0.02	0.02
R3866.L008-ZP	Left	M 8	120	65	0.04	0.04
R3866.L010-ZP	Left	M10	150	75	0.07	0.07
R3866.L012-ZP	Left	M12	150	75	0.11	0.11
R3866.L014-ZP	Left	M14	165	80	0.15	0.15
R3866.L016-ZP	Left	M16	200	100	0.26	0.26
R3866.L020-ZP	Left	M20	200	120	0.44	0.44
R3866.L024-ZP	Left	M24	260	150	0.76	0.76
R3866.L030-ZP	Left	M30	260	160	1.20	1.20
R3866.L036-ZP	Left	M36	300	180	2.10	2.10
R3866.L042-ZP	Left	M42	350	200	3.15	3.15
R3866.L048-ZP	Left	M48	380	220	4.60	4.60
R3866.L056-ZP	Left	M56	380	230	6.28	6.28
R3866.L064-ZP	Left	M64	425	300	9.16	9.16
R3866.L072-ZP	Left	M72	400	270	4.60	4.60



R3868

Material
Stainless steel (A4).

Technical Notes
To DIN 34828.

Important Notes
Turnbuckles are not to be used for lifting.
Only suitable for use in tension.

Order No.	Thread hand	d_1	l_1	l_2	Weight kg
R3868.R006-A4	Right	M 6	120	60	0.02
R3868.R008-A4	Right	M 8	120	65	0.04
R3868.R010-A4	Right	M10	150	75	0.07
R3868.R012-A4	Right	M12	150	75	0.11
R3868.R014-A4	Right	M14	165	80	0.15
R3868.R016-A4	Right	M16	200	100	0.26
R3868.R020-A4	Right	M20	220	120	0.44
R3868.R024-A4	Right	M24	260	150	0.76
R3868.R030-A4	Right	M30	260	160	1.20
R3868.R036-A4	Right	M36	300	180	2.10
R3868.L006-A4	Left	M 6	120	60	0.02
R3868.L008-A4	Left	M 8	120	65	0.04
R3868.L010-A4	Left	M10	150	75	0.07
R3868.L012-A4	Left	M12	150	75	0.11
R3868.L014-A4	Left	M14	165	80	0.15
R3868.L016-A4	Left	M16	200	100	0.26
R3868.L020-A4	Left	M20	220	120	0.44
R3868.L024-A4	Left	M24	260	150	0.76
R3868.L030-A4	Left	M30	260	160	1.20
R3868.L036-A4	Left	M36	300	180	2.10