

65500

BALL AND SOCKET JOINTS

Material

Steel, silver zinc plated, ball stud: minimum tensile strength $R_m=600N/mm^2$.
Housing: minimum tensile strength $R_m=500N/mm^2$.

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 .

Standard thread is right hand, (for left hand thread see 65502).

Important Notes

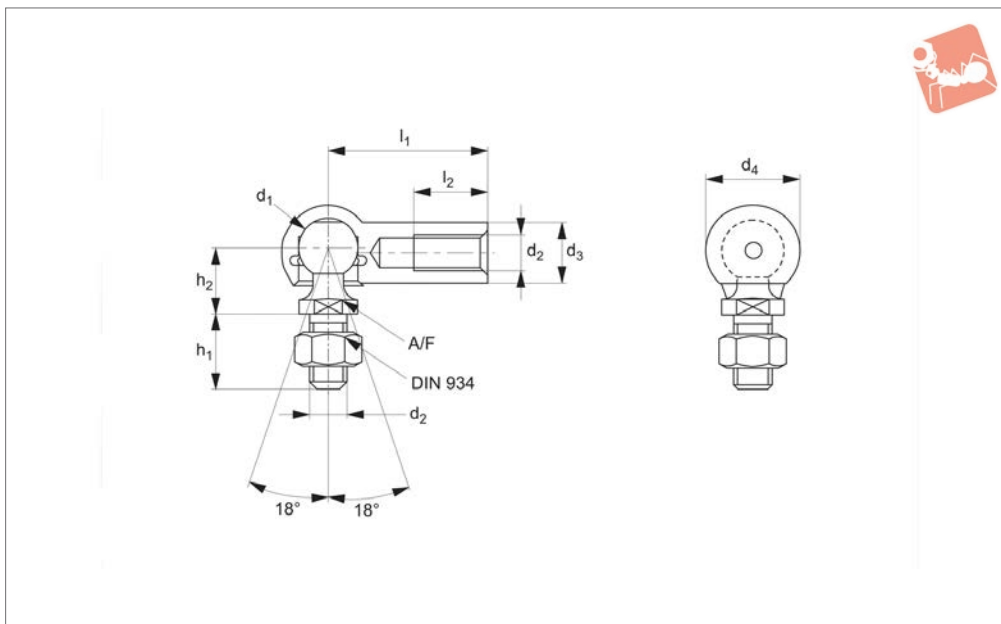
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d ₁	l ₁ ±0.3	d ₂	d ₃	d ₄	h ₁ ±0.3	Weight g
65500.W0105	Right	8	22	M 5	8	12.8	10.2	15.2
65500.W0106	Right	10	25	M 6	10	14.8	12.5	25.2
65500.W0108	Right	13	30	M 8	13	19.3	16.5	53.1
65500.W0110	Right	16	35	M10	16	24.0	20.0	103.8
65500.W0112	Right	16	35	M12	16	24.0	20.0	103.8
65500.W0114	Right	19	45	M14x1,5*	22	30.0	28.0	220.9
65500.W0115	Right	19	45	M14	22	30.0	28.0	220.9
65500.W0116	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.
65500.W0105	9	10.2	7	3	50	20	3
65500.W0106	11	11.5	8	4	100	40	4
65500.W0108	13	14.0	11	6	200	80	6
65500.W0110	16	15.5	13	8	400	160	8
65500.W0112	16	15.5	13	8	400	160	8
65500.W0114	22	21.5	16	10	800	320	10
65500.W0115	22	21.5	16	10	800	320	10
65500.W0116	22	21.5	16	10	800	320	10



65502



Material

Steel, silver zinc plated, ball stud: minimum tensile strength $R_m=600N/mm^2$.
Housing: minimum tensile strength $R_m=500N/mm^2$.

hexagon nut.

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

*M14x1,5 is a fine pitch 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.

Technical Notes

To DIN 71802 form CS, supplied with

Tips

Stud: right hand thread.

Housing: left hand thread.

For sealing cap version, see .

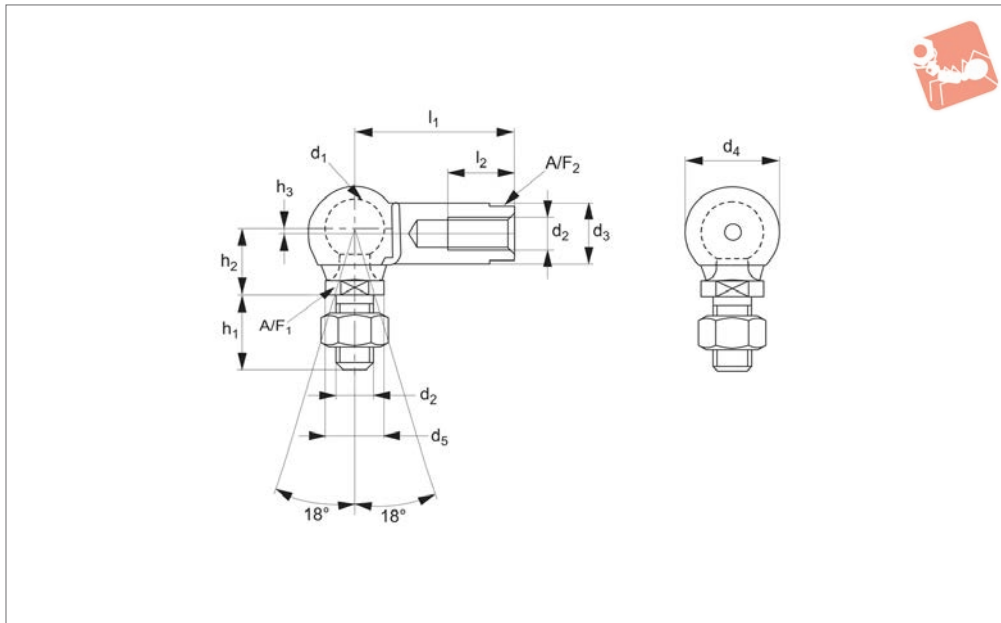
Order No.	Thread hand	d_1	l_1 ± 0.3	d_2	d_3	d_4	h_1 ± 0.3	Weight g
65502.W0005	Left	8	22	M 5	8	12.8	10.2	15.2
65502.W0006	Left	10	25	M 6	10	14.8	12.5	25.2
65502.W0008	Left	13	30	M 8	13	19.3	16.5	53.1
65502.W0010	Left	16	35	M10	16	24.0	20.0	103.8
65502.W0012	Left	16	35	M12	16	24.0	20.0	103.8
65502.W0014	Left	19	45	M14x1,5*	22	30.0	28.0	220.9
65502.W0015	Left	19	45	M14	22	30.0	28.0	220.9
65502.W0016	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.
65502.W0005	9	10.2	7	3	50	20	3
65502.W0006	11	11.5	8	4	100	40	4
65502.W0008	13	14.0	11	6	200	80	6
65502.W0010	16	15.5	13	8	400	160	8
65502.W0012	16	15.5	13	8	400	160	8
65502.W0014	22	21.5	16	10	800	320	10
65502.W0015	22	21.5	16	10	800	320	10
65502.W0016	22	21.5	16	10	800	320	10



Ball and Socket Joint with flats on housing

Ball and Socket Joints



65508

BALL AND SOCKET JOINTS

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 65510).

Important Notes

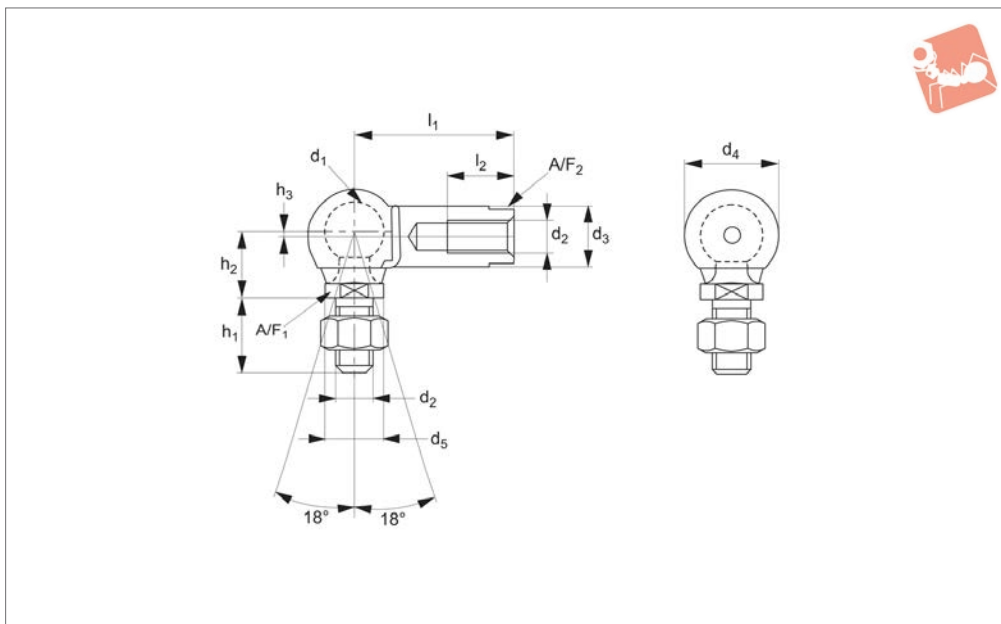
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without a nut, then please consider a counterbore to accommodate the unthreaded shank.

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
65508.W0105	Right	8	22	M 5	8	12.8	8	15.2
65508.W0106	Right	10	25	M 6	10	14.8	10	25.2
65508.W0108	Right	13	30	M 8	13	19.3	13	53.1
65508.W0110	Right	16	35	M10	16	24.0	16	103.8
65508.W0112	Right	16	35	M12	16	24.0	16	103.8
65508.W0114	Right	19	45	M14x1,5*	22	30.0	22	220.9
65508.W0115	Right	19	45	M14	22	30.0	22	220.9
65508.W0116	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.
65508.W0105	10.0	9	0.65	10.2	7	-	3	50	20	3
65508.W0106	12.5	11	0.70	11.5	8	-	4	100	40	4
65508.W0108	16.5	13	1.15	14.0	11	-	6	200	80	6
65508.W0110	20.0	16	1.15	15.5	13	-	8	400	160	8
65508.W0112	20.0	16	1.15	15.5	13	-	8	400	160	8
65508.W0114	28.0	20	0.50	21.5	16	19	10	800	320	10
65508.W0115	28.0	20	0.50	21.5	16	19	10	800	320	10
65508.W0116	28.0	20	0.50	21.5	16	19	10	800	320	10



65510



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

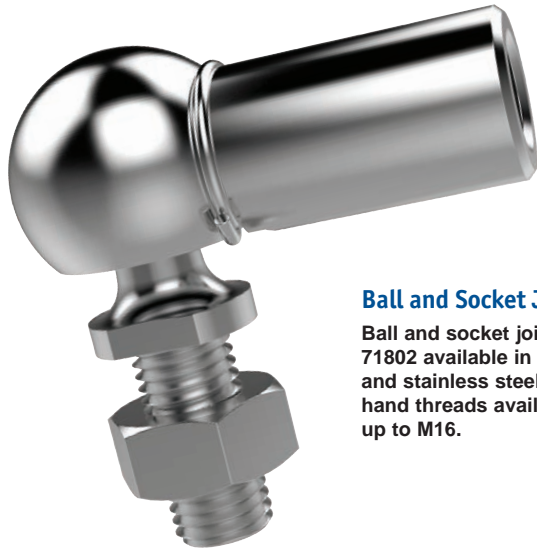
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

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
65510.W0005	Left	8	22	M5	8	12.8	8	15.2
65510.W0006	Left	10	25	M6	10	14.8	10	25.2
65510.W0008	Left	13	30	M8	13	19.3	13	53.1
65510.W0010	Left	16	35	M10	16	24.0	16	103.8
65510.W0012	Left	16	35	M12	16	24.0	16	103.8
65510.W0014	Left	19	45	M14x1,5	22	30.0	22	220.9
65510.W0015	Left	19	45	M14	22	30.0	22	220.9
65510.W0016	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	Static load	Dyn. load C	Force required for movement
							kg min.	kg max.	kg max.	kg max.
65510.W0005	10.0	9	0.65	10.2	7	-	3	50	20	3
65510.W0006	12.5	11	0.70	11.5	8	-	4	100	40	4
65510.W0008	16.5	13	1.15	14.0	11	-	6	200	80	6
65510.W0010	20.0	16	1.15	15.5	13	-	8	400	160	8
65510.W0012	20.0	16	1.15	15.5	13	-	8	400	160	8
65510.W0014	28.0	20	0.50	21.5	16	19	10	800	320	10
65510.W0015	28.0	20	0.50	21.5	16	19	10	800	320	10
65510.W0016	28.0	20	0.50	21.5	16	19	10	800	320	10



Parts overview



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.



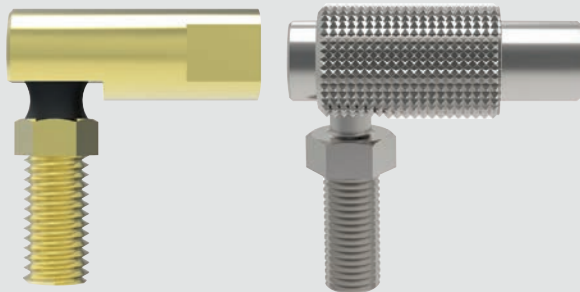
Axial Ball and Socket Joints

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.



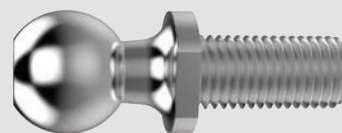
Ball and Socket Joints with sealing caps and spanner flats

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.



Quick Release plus other ball and socket joints

Quick release ball joints allow rapid release and reconnection of ball stud for easy installation. DMG6 and male:male ball joints and lockable also available. Sizes M5 up to M10.



Threaded Ball Studs

Threaded ball studs to DIN71803 form C available in zinc plated steel. Sizes M5 up to M14.

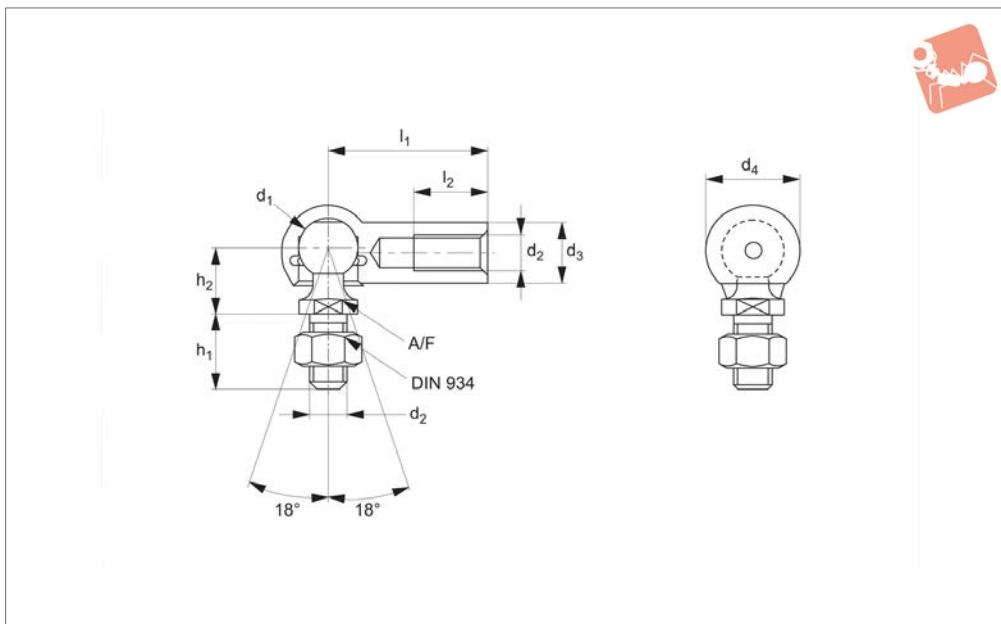
see our website for our full range:
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BALL AND SOCKET JOINTS

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65504



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

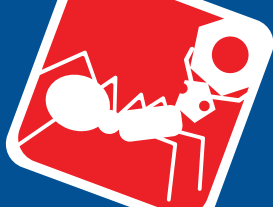
For sealing cap version, see , standard thread is right hand, (for left hand thread see 65506).

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
65504.W0005	Right	8	22	M 5	8	12.8	10.2	15.2
65504.W0006	Right	10	25	M 6	10	14.8	12.5	25.2
65504.W0008	Right	13	30	M 8	13	19.3	16.5	53.1
65504.W0010	Right	16	35	M10	16	24.0	20.0	103.8
65504.W0012	Right	16	35	M12	16	24.0	20.0	103.8
65504.W0014	Right	19	45	M14x1,5*	22	30.0	28.0	220.9
65504.W0015	Right	19	45	M14	22	30.0	28.0	220.9
65504.W0016	Right	19	45	M16	22	30.0	28.0	220.9

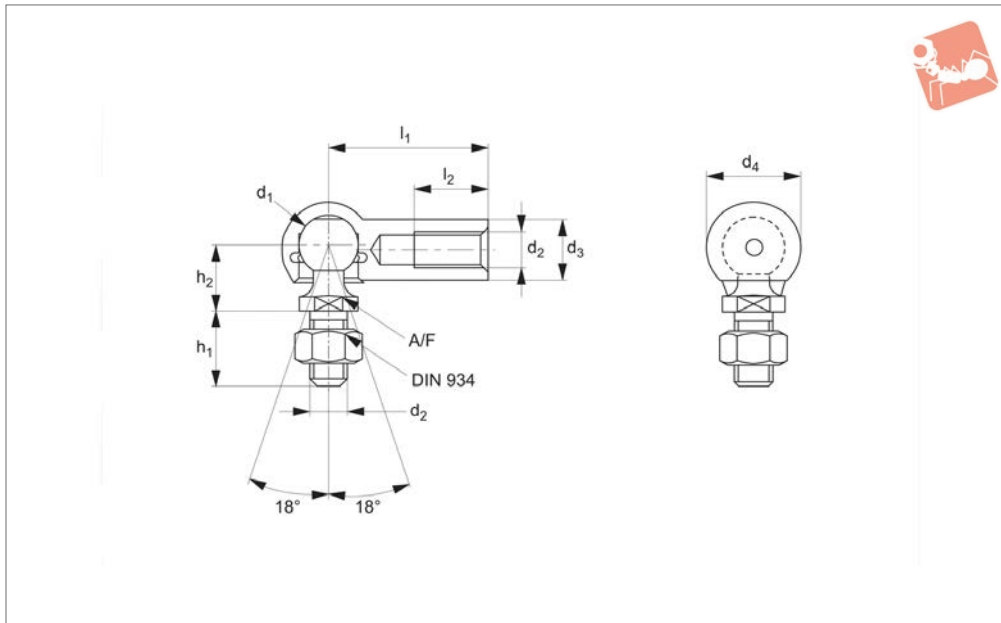
Order No.	h ₂ ±0.3	l ₂ min.	A/F tol. h14	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
65504.W0005	9	10.2	7	3	50	20	3
65504.W0006	11	11.5	8	4	100	40	4
65504.W0008	13	14.0	11	6	200	80	6
65504.W0010	16	15.5	13	8	400	160	8
65504.W0012	16	15.5	13	8	400	160	8
65504.W0014	22	21.5	16	10	800	320	10
65504.W0015	22	21.5	16	10	800	320	10
65504.W0016	22	21.5	16	10	800	320	10



Stainless Ball and Socket Joints

left hand thread

Ball and Socket Joints



65506

BALL AND SOCKET JOINTS

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 .

Important Notes

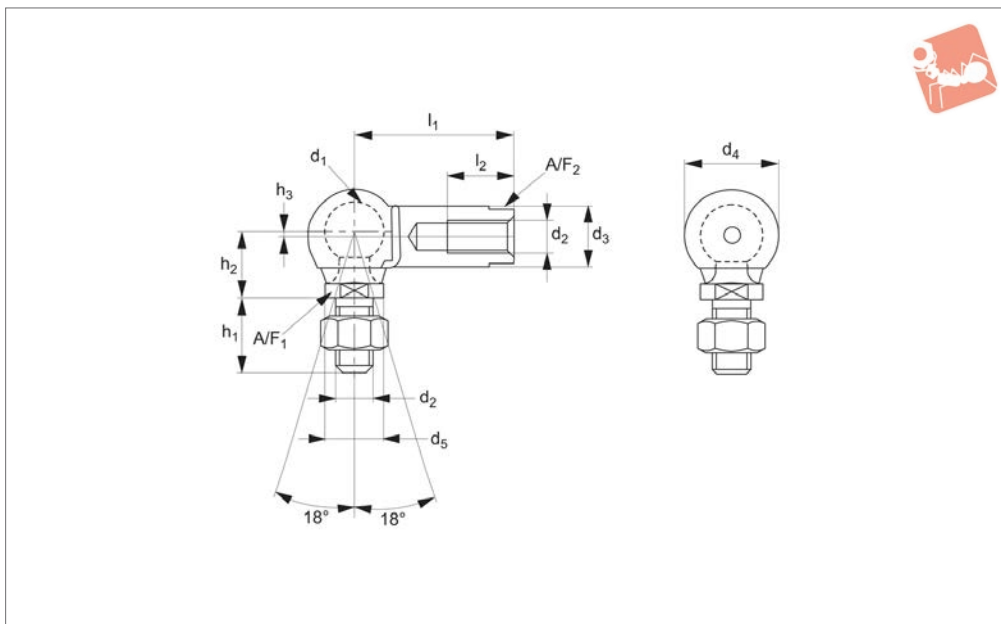
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

Order No.	Thread hand	d ₁	l ₁ ±0.3	d ₂	d ₃	d ₄	h ₁ ±0.3	Weight g
65506.W0005	Left	8	22	M 5	8	12.8	10.2	15.2
65506.W0006	Left	10	25	M 6	10	14.8	12.5	25.2
65506.W0008	Left	13	30	M 8	13	19.3	16.5	53.1
65506.W0010	Left	16	35	M10	16	24.0	20.0	103.8
65506.W0012	Left	16	35	M12	16	24.0	20.0	103.8
65506.W0014	Left	19	45	M14x1,5*	22	30.0	28.0	220.9
65506.W0015	Left	19	45	M14	22	30.0	28.0	220.9
65506.W0016	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.
65506.W0005	9	10.2	7	3	50	20	3
65506.W0006	11	11.5	8	4	100	40	4
65506.W0008	13	14.0	11	6	200	80	6
65506.W0010	16	15.5	13	8	400	160	8
65506.W0012	16	15.5	13	8	400	160	8
65506.W0014	22	21.5	16	10	800	320	10
65506.W0015	22	21.5	16	10	800	320	10
65506.W0016	22	21.5	16	10	800	320	10



65512



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 65514).

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
65512.W0105	Right	8	22	M5	8	12.8	8	10.0	9	0.65	15.2
65512.W0106	Right	10	25	M6	10	14.8	10	12.5	11	0.70	25.2
65512.W0108	Right	13	30	M8	13	19.3	13	16.5	13	1.15	53.1
65512.W0110	Right	16	35	M10	16	24.0	16	20.0	16	1.15	103.8
65512.W0112	Right	16	35	M12	16	24.0	16	20.0	16	1.15	103.8
65512.W0114	Right	19	45	M14x1,5*	22	30.0	22	28.0	20	0.50	220.9
65512.W0115	Right	19	45	M14	22	30.0	22	28.0	20	0.50	220.9
65512.W0116	Right	19	45	M16	22	30.0	22	28.0	20	0.50	220.9

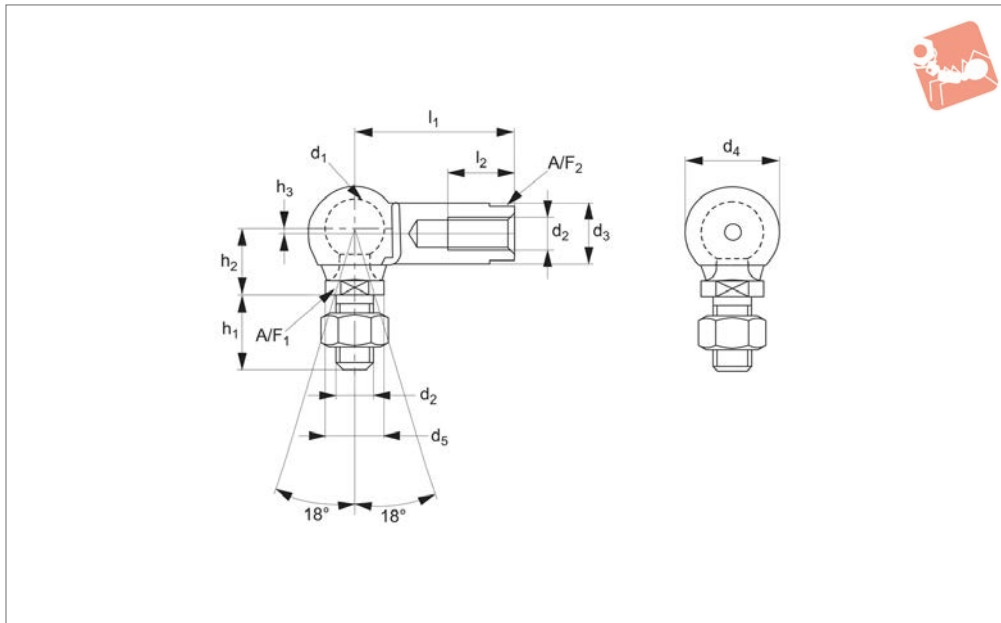
Order No.	l ₂ min.	A/F ₁	A/F ₂	Extraction force kg min.	Static load kg max.	Dyn. load C kg max.	Force required for movement kg max.
65512.W0105	10.2	7	-	3	50	20	3
65512.W0106	11.5	8	-	4	100	40	4
65512.W0108	14.0	11	-	6	200	80	6
65512.W0110	15.5	13	-	8	400	160	8
65512.W0112	15.5	13	-	8	400	160	8
65512.W0114	21.5	16	19	10	800	320	10
65512.W0115	21.5	16	19	10	800	320	10
65512.W0116	21.5	16	19	10	800	320	10



Stainless Ball and Socket Joint

left hand thread - with flats on housing

Ball and Socket Joints



65514

BALL AND SOCKET JOINTS

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

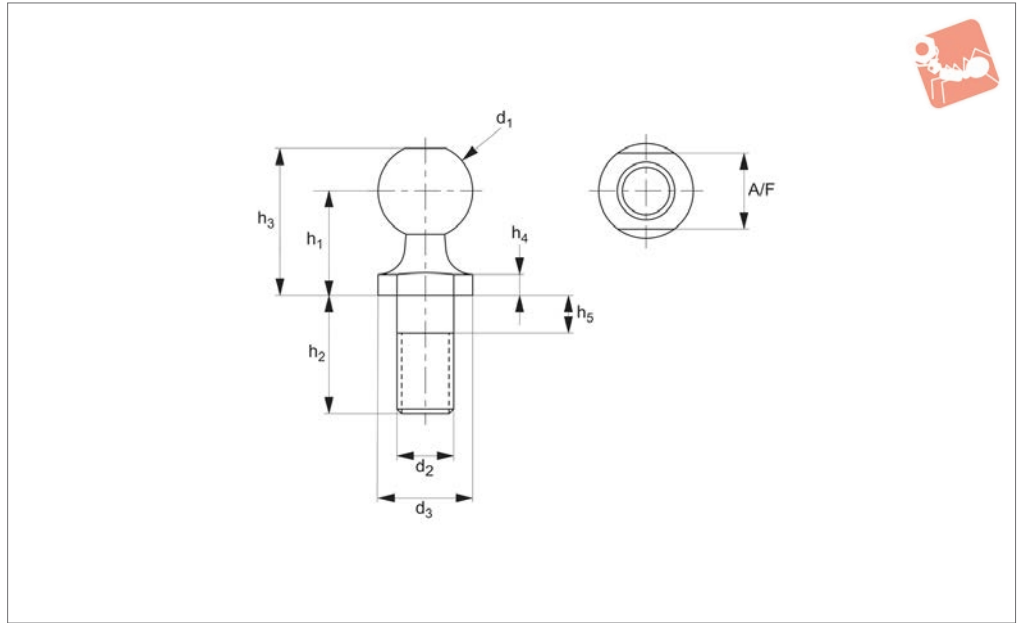
Thread is not full length. There is a min 1.5mm unthreaded shank. If using part without the supplied nut, then please consider a counterbore to accommodate the unthreaded shank.

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
65514.W0005	Left	8	22	M5	8	12.8	8	10.0	9	0.65	15.2
65514.W0006	Left	10	25	M6	10	14.8	10	12.5	11	0.70	25.2
65514.W0008	Left	13	30	M8	13	19.3	13	16.5	13	1.15	53.1
65514.W0010	Left	16	35	M10	16	24.0	16	20.0	16	1.15	103.8
65514.W0012	Left	16	35	M12	16	24.0	16	20.0	16	1.15	103.8
65514.W0014	Left	19	45	M14x1,5*	22	30.0	22	28.0	20	0.50	220.9
65514.W0015	Left	19	45	M14	22	30.0	22	28.0	20	0.50	220.9
65514.W0016	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.
65514.W0005	10.2	7	-	3	50	20	3
65514.W0006	11.5	8	-	4	100	40	4
65514.W0008	14.0	11	-	6	200	80	6
65514.W0010	15.5	13	-	8	400	160	8
65514.W0012	15.5	13	-	8	400	160	8
65514.W0014	21.5	16	19	10	800	320	10
65514.W0015	21.5	16	19	10	800	320	10
65514.W0016	21.5	16	19	10	800	320	10



65550



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
65550.W0005	8.0	M5	8.0	9.0	10.2	12.5	2.0	4.0	7.0	4.5
65550.W0006	10.0	M6	10.0	11.0	12.5	15.5	2.2	4.0	8.0	8.5
65550.W0008	13.0	M8	13.0	13.0	16.5	18.5	2.4	5.3	11.0	17.7
65550.W0010	16.0	M10	16.0	16.0	20.0	23.0	2.7	7.3	13.0	35.0
65550.W0012	16.0	M12	16.0	16.0	20.0	23.0	2.7	7.3	13.0	35.0
65550.W0014	19.0	M14 x 1.5*	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2
65550.W0015	19.0	M14	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2
65550.W0016	19.0	M16	19.0	20.0	28.0	28.5	3.0	10.8	16.0	71.2



Parts overview

Clevis Joints

Stocked to DIN 71752 in steel and stainless steel. Plain clevis joints available in right and left hand threads zinc plated steel and stainless steel. Steel sizes from M4 up to M48. Stainless sizes from M4 up to M27.



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.



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 that we offer.



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. Size available for clevis joints from 4mm up to 20mm.



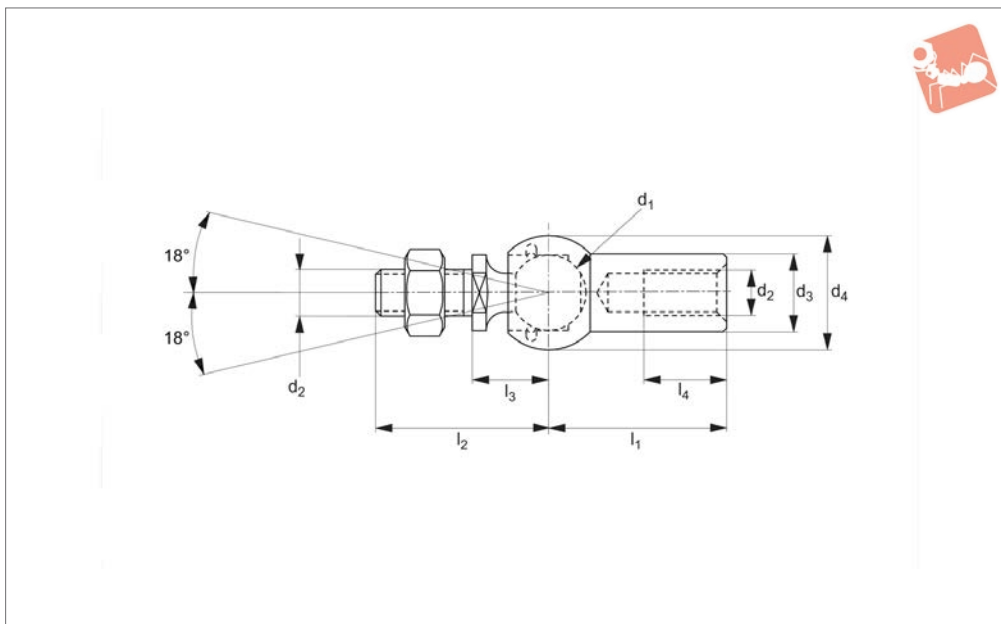
Male Clevis Joints

Stocked in zinc plated steel and stainless steel, right and left hand threads. Sizes M6 up to M20.





65520



Material

Steel, silver zinc plated, ball stud: minimum tensile strength $R_m=600N/mm^2$.
Housing: minimum tensile strength $R_m=500N/mm^2$.

Technical Notes

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

Tips

Standard thread is right hand, (for left hand thread see 65522).
For stainless steel version see 65524.

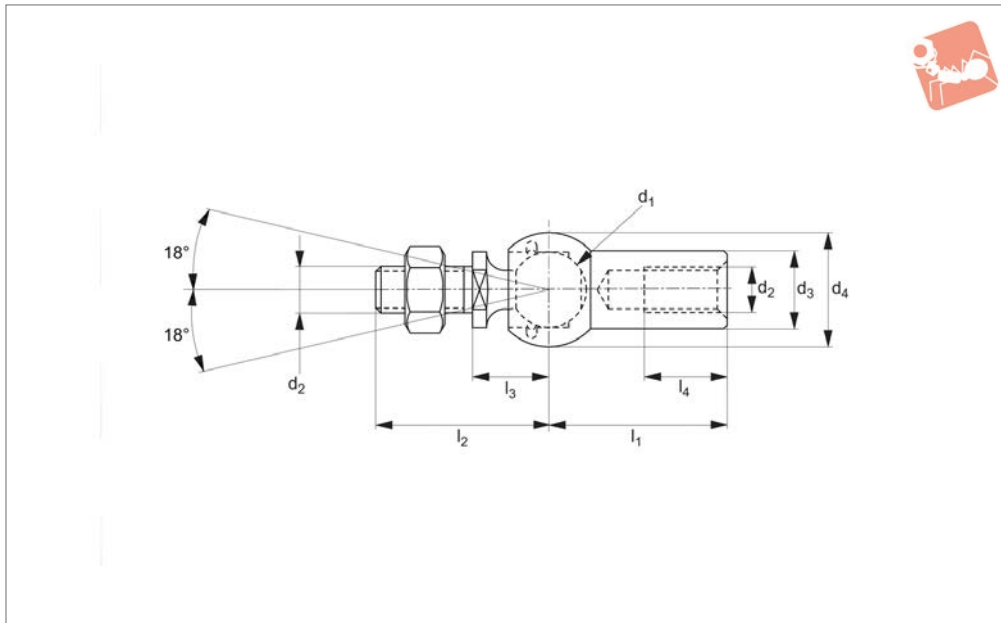
Order No.	Thread hand	d_1 tol. h9	d_2	l_1	d_3 ± 0.5	d_4 ± 0.5	l_2	l_3	l_4	Extraction force N	Weight g
65520.W0005	Right	8	M 5	22	8	12.8	19.2	9	10.2	30	15.2
65520.W0006	Right	10	M 6	25	10	14.8	23.5	11	11.5	40	25.2
65520.W0008	Right	13	M 8	30	13	19.3	29.5	13	14.0	60	53.1
65520.W0010	Right	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
65520.W0014	Right	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9



Axial Ball and Socket Joints

left hand thread

Ball and Socket Joints



65522

BALL AND SOCKET JOINTS

Material

Steel, silver zinc plated, ball stud:
minimum tensile strength $R_m=600N/mm^2$.
Housing: minimum tensile strength

$R_m=500N/mm^2$.

Technical Notes

Similar to DIN 71802, *M14x1,5 is a fine

pitch thread.

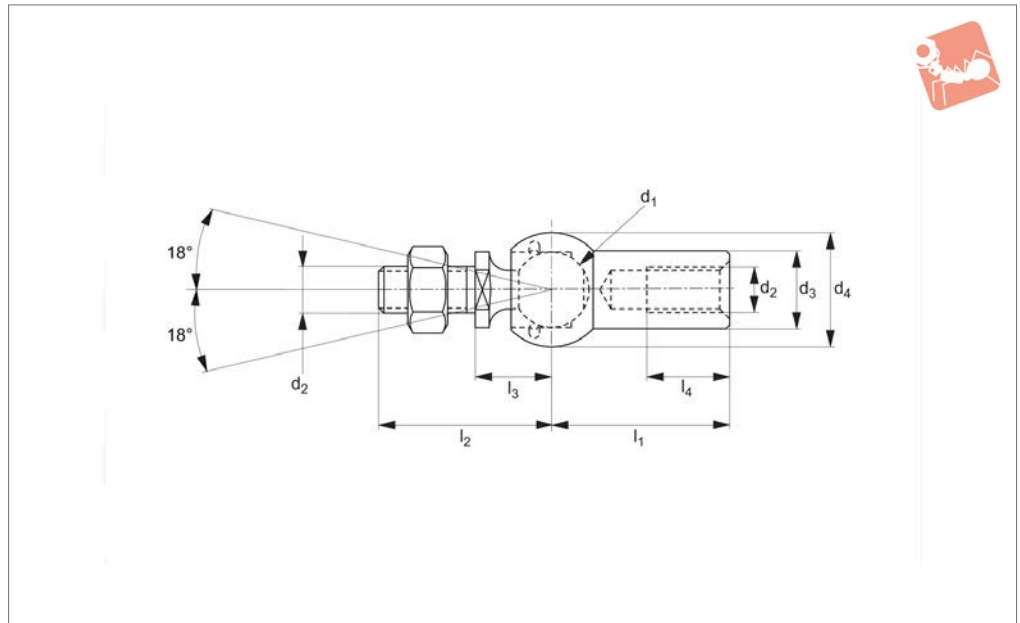
Tips

For stainless steel version see 65526.

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
65522.W0005	Left	8	M5	22	8	12.8	19.2	9	10.2	30	15.2
65522.W0006	Left	10	M6	25	10	14.8	23.5	11	11.5	40	25.2
65522.W0008	Left	13	M8	30	13	19.3	29.5	13	14.0	60	53.1
65522.W0010	Left	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
65522.W0014	Left	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9



65524



Material

Stainless steel (AISI 303).

pitch thread.

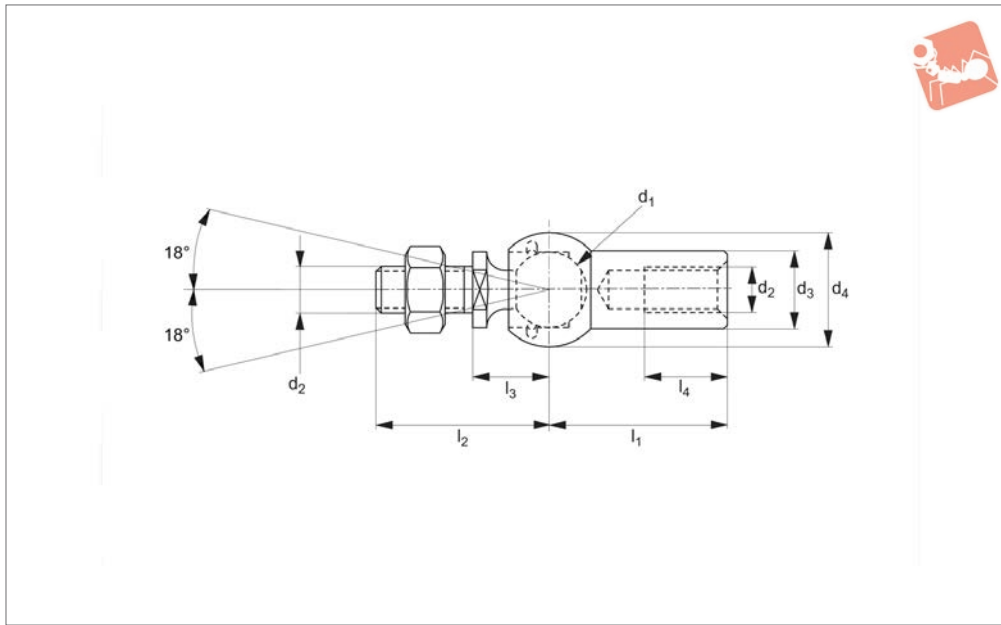
Technical Notes

Similar to DIN 71802, *M14x1,5 is a fine

Tips

Standard thread is right hand, (for left hand thread see 65526).

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
65524.W0005	Right	8	M5	22	8	12.8	19.2	9	10.2	30	15.2
65524.W0006	Right	10	M6	25	10	14.8	23.5	11	11.5	40	25.2
65524.W0008	Right	13	M8	30	13	19.3	29.5	13	14.0	60	53.1
65524.W0010	Right	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
65524.W0014	Right	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9



65526

BALL AND SOCKET JOINTS

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
65526.W0005	Left	8	M5	22	8	12.8	19.2	9	10.2	30	15.2
65526.W0006	Left	10	M6	25	10	14.8	23.5	11	11.5	40	25.2
65526.W0008	Left	13	M8	30	13	19.3	29.5	13	14.0	60	53.1
65526.W0010	Left	16	M10	35	16	24.0	36.0	16	15.5	80	103.8
65526.W0014	Left	19	M14x1,5*	45	22	30.0	48.0	20	21.5	100	220.9