

A rod end bearing, also known as a heim joint (N. America) or rose joint (U.K. and elsewhere), is a mechanical articulating joint. Such joints are used on the ends of control rods, steering links, tie rods, or anywhere a precision articulating joint is required, and where a clevis end (which requires perfect 90 degree alignment between the attached shaft and the second component) is unsuitable. A ball swivel with an opening through which a bolt or other attaching hardware may pass is pressed into a circular casing with a threaded shaft attached. The threaded portion may be either male or female.

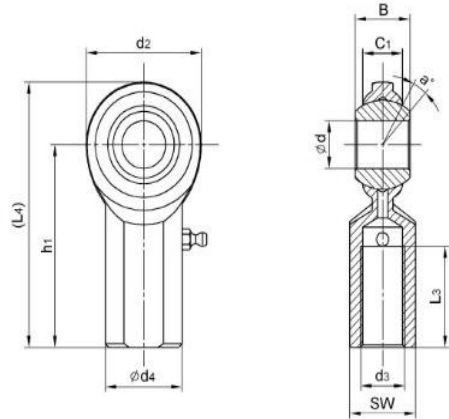
The heim joint's advantage is that the ball insert permits the rod or bolt passing through it to be misaligned to a limited degree (an angle other than 90 degrees).

A link terminated in two heim joints permits misalignment of their attached shafts (viz., other than 180 degrees) when used in tension. When used in compression, the through-rods are forced to the extreme ends of their ball's misalignment range, which cocks the link at an oblique angle.

Rod end bearing:CF Series



**Ball:** Gcr15 Steel, heat treated, HRC56 min;  
Precision ground, polished, hard chromium plated  
**Body:** Carbon steel, Zinc plated, chromate treated  
**Sliding contact surfaces:** Steel/Steel



Motion(shanghai)Industrial Development Co.,Ltd

Part No.	Dimensions(mm/inches)										Ball	a°	Load	weight
	d+0.03	B	C1	d2	d3	h1	L3	(L4)	d4	sw	dia	mis.	ratings	≈ kg
	-0.01				UNF-2B						angle	(KN)		
CF3	4.826	7.92	5.94	15.88	10-32	26.97	11.11	34.91	10.31	7.92	11.11	13	7.6	0.182
CF3	0.19	0.312	0.234	0.625	10-32	1.062	0.437	1.375	0.406	0.312	0.437	13	7.6	0.182
CF4	6.35	9.53	6.35	19.05	1/4-28	33.32	14.28	42.85	11.89	9.52	12.7	18	9.9	0.226
CF4	0.25	0.375	0.25	0.75	1/4-28	1.312	0.562	1.687	0.468	0.375	0.5	18	9.9	0.226
CF5	7.938	11.1	7.92	22.23	5/16-24	34.92	15.88	46.03	12.7	11.1	15.88	14	12.7	0.362
CF5	0.3125	0.437	0.312	0.875	5/16-24	1.375	0.625	1.812	0.5	0.437	0.625	14	12.7	0.362
CF6	9.525	12.7	9.11	25.4	3/8-24	41.28	19.05	53.98	17.45	14.27	18.26	14	17	0.059
CF6	0.375	0.5	0.359	1	3/8-24	1.625	0.75	2.125	0.687	0.562	0.719	14	17	0.059
CF7	11.112	14.27	10.31	28.58	7/16-20	46.02	22.22	60.3	19.05	15.88	20.62	13	21	0.081
CF7	0.4375	0.562	0.406	1.125	7/16-20	1.812	0.875	2.375	0.75	0.625	0.812	13	21	0.081
CF8	12.7	15.88	11.5	33.33	1/2-20	53.98	25.4	70.64	22.22	19.05	23.8	12	27.5	0.131
CF8	0.5	0.625	0.453	1.312	1/2-20	2.125	1	2.781	0.875	0.75	0.937	12	27.5	0.131
CF10	15.875	19.05	12.29	38.1	5/8-18	63.5	31.75	82.55	25.4	22.22	28.58	16	29.9	0.195
CF10	0.625	0.75	0.484	1.5	5/8-18	2.5	1.25	3.25	1	0.875	1.125	16	29.9	0.195
CF12	19.05	22.23	15.06	44.45	3/4-16	73.02	38.1	95.25	28.58	25.4	33.33	14	44.2	0.294
CF12	0.75	0.875	0.593	1.75	3/4-16	2.875	1.5	3.75	1.125	1	1.312	14	44.2	0.294
CF16	25.4	34.93	25.4	69.85	1-1/4-12	104.78	53.98	139.7	41.28	38.1	47.62	14	129.1	0.925
CF16	1	1.375	1	2.75	1-1/4-12	4.125	2.125	5.5	1.625	1.5	1.875	14	129.1	0.925

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