

BALL JOINT ASSEMBLIES

Photos not actual size

Rod End Ball Joints • Male with Stud

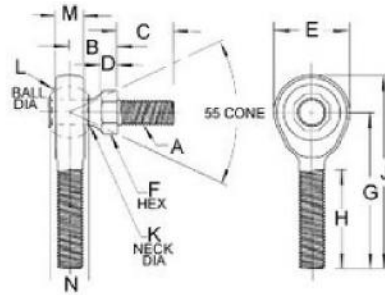
• **Bearing Raceway:**
Locked in by annular groove-trunnion design.
Made of fiber reinforced nylon.

• **Spherical Ball:**
Precision made from selected low carbon steel-case hardened - file hard. Plated plus dichromate treated for corrosion resistance.

• **Outer Member (Housing):**
Low carbon steel, plated plus dichromate treated for corrosion resistance.

• **Left Hand Thread:**
Available with left hand thread in most sizes. Marked for easy user identification.

Only available fully assembled.



Part No.	Thread Size (A)	B	C	D	E	F	G	H	J	K	L	M	N	Unit Pkg.	Thread
12290	10-32	.437	.437	.156	.625	.312	1.250	.750	1.562	.189	.438	.250	.312	1	R
12292	1/4-28	.469	.562	.156	.750	.375	1.562	1.000	1.937	.250	.516	.281	.375	1	R
12293														1	L
12030	5/16-24	.531	.687	.187	.875	.437	1.875	1.250	2.312	.312	.625	.344	.437	1	R
12031	3/8-24	.625	.875	.218	1.000	.500	1.937	1.250	2.437	.375	.719	.406	.500	1	R
12295														1	L
12032	1/2-20	.875	1.125	.312	1.312	.625	2.437	1.500	3.094	.500	.938	.500	.625	1	R

Rod End Ball Joints • Female with Stud

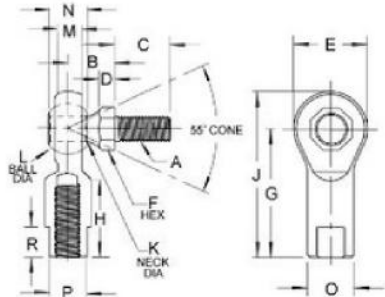
• **Bearing Raceway:**
Locked in by annular groove-trunnion design.
Made of fiber reinforced nylon.

• **Spherical Ball:**
Precision made from selected low carbon steel-case hardened - file hard. Plated plus dichromate treated for corrosion resistance.

• **Outer Member (Housing):**
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• **Left Hand Thread:**
Available with left hand thread in most sizes. Marked for easy user identification.

Only available fully assembled.



Part No.	Thread Size (A)	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	Unit Pkg.	Thread
12034	10-32	.437	.437	.156	.625	.312	1.062	.562	1.375	.189	.438	.250	.312	.406	.312	.406	1	R
12283																	1	L
12035	1/4-28	.469	.562	.156	.750	.375	1.312	.750	1.687	.250	.516	.281	.375	.469	.375	.406	1	R
12284																	1	L
12036	5/16-24	.531	.687	.187	.875	.437	1.375	.750	1.812	.312	.625	.344	.437	.500	.437	.500	1	R
12285																	1	L
12037	3/8-24	.625	.875	.218	1.000	.500	1.625	.937	2.125	.375	.719	.406	.500	.687	.562	.562	1	R
12286																	1	L
12491	7/16-20	.844	1.062	.312	1.125	.625	1.812	1.032	2.375	.437	.812	.437	.562	.750	.625	.625	1	R
12038	1/2-20	.875	1.125	.312	1.312	.625	2.125	1.187	2.781	.500	.938	.500	.625	.875	.750	.687	1	R
12288	5/8-18	1.00	1.125	.375	1.500	.750	2.500	1.500	3.250	.625	1.125	.562	.750	1.00	.875	.875	1	R
12492	3/4-16	1.187	1.812	.375	1.750	1.00	2.875	1.562	3.750	.750	1.312	.687	.875	1.125	1.00	1.00	1	R

BALL JOINT ASSEMBLIES

Photos not actual size

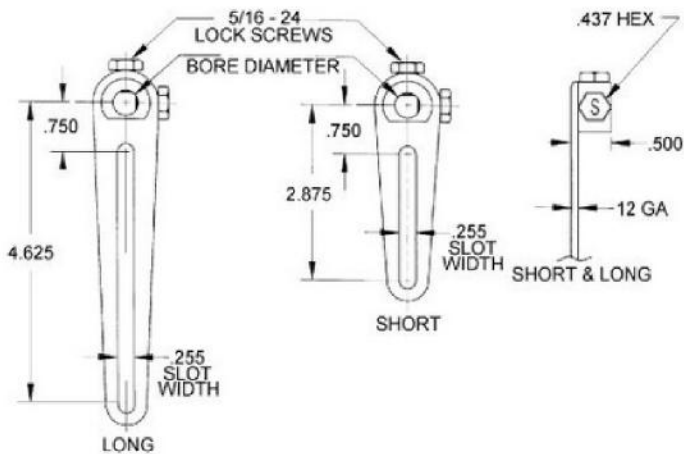
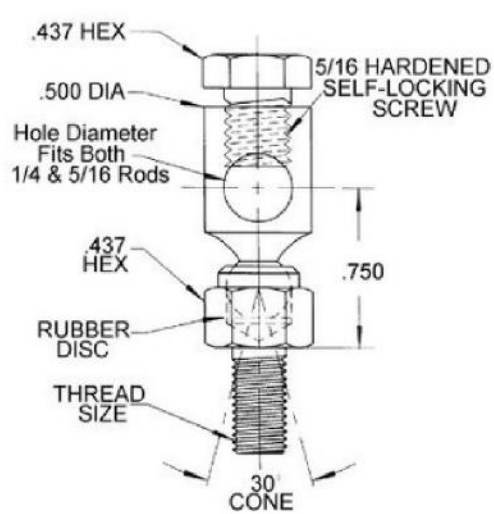
Damper Control Swivels

The units are made from low carbon steel and are plated and dichromate treated for corrosion resistance. The set screws are made of low carbon steel, plated and dichromate treated for corrosion resistance. Set screws are case hardened. A rubber disc is used in the assembly.

Only available fully assembled

Damper Control Swivels

Thread Size	Part No. w/o Nut & Washer	Unit Pkg.	Part No. with Nut & Washer	Unit Pkg.
1/4-28 x 9/16"	12303	2	12047	3
1/4-20 x 9/16"	12305	2	12049	3



Crank Arms

12 Gauge Steel

12050

Short Series Crank Arm
For 3/8" Shaft
Bore Diameter: .385/.389

UNIT PACKAGE: 1

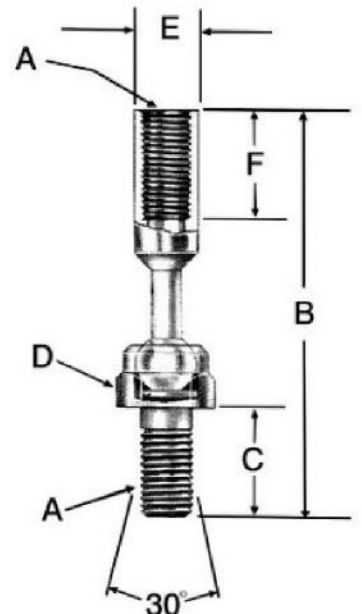


Lightweight Ball Joint Assemblies

Materials of construction: Made of low carbon steel. Units are plated and dichromate treated for corrosion resistance. A rubber disc is used.

Only available fully assembled.

Part No	Unit Pkg.	G.M.C. Part No.	A	B	C	D	E	F
21533	2	443773	1/4-28	2-3/32	9/16	7/16	5/16	9/16



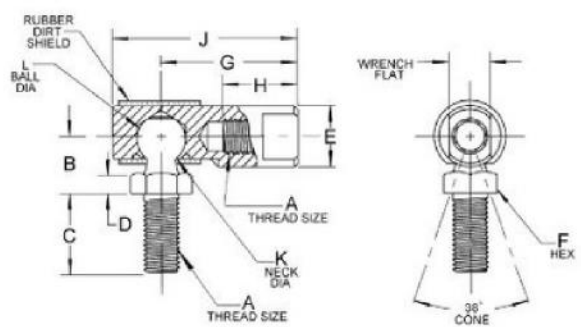
BALL JOINT ASSEMBLIES

“Flat Top” • Shurseal



Materials of construction:
Made of low carbon steel with ball studs case hardened. Plated and dichromate treated for corrosion resistance.

Only available fully assembled.



Part No.	A	B	C	D	E	Wrench Size	F	G	H	J	K	L	Unit Pkg.	Thread
13580	10-32	7/16	7/16	1/8	3/8	5/16	5/16	7/8	15/32	1-5/32	.177	.301	2	R
12039	1/4-28	15/32	9/16	1/8	7/16	3/8	3/8	31/32	17/32	1-5/16	.208	.347	3	R
12040	5/16-24	17/32	11/16	5/32	1/2	7/16	7/16	1-1/8	19/32	1-9/16	.250	.405	3	R
13590													2	L
12041	3/8-24	11/16	7/8	3/16	5/8	1/2	1/2	1-3/8	13/16	1-13/16	.289	.493	1	R
12042	7/16-20	7/8	1-1/8	1/4	3/4	5/8	5/8	1-15/16	1-1/8	2-1/2	.375	.618	1	R

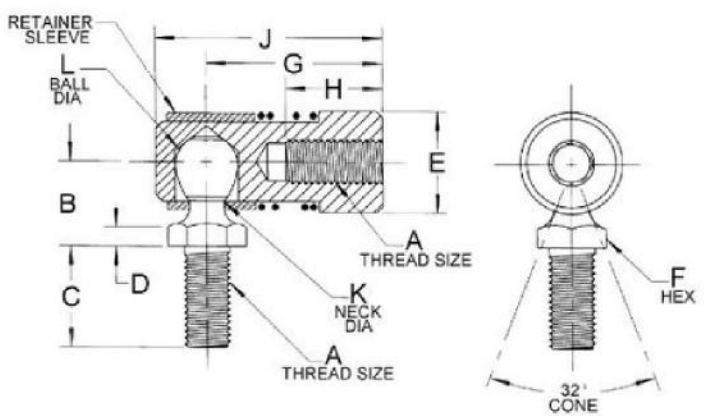
Quick Disconnect

“Key Hole” design on retaining sleeve insures positive alignment of sleeve with ball cavity.



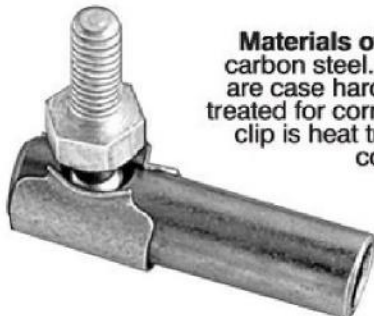
Materials of construction:
Body and ball are of low carbon steel, with ball studs case hardened. All components except stainless steel spring are plated and yellow dichromate treated for greater corrosion resistance.

Only available fully assembled.



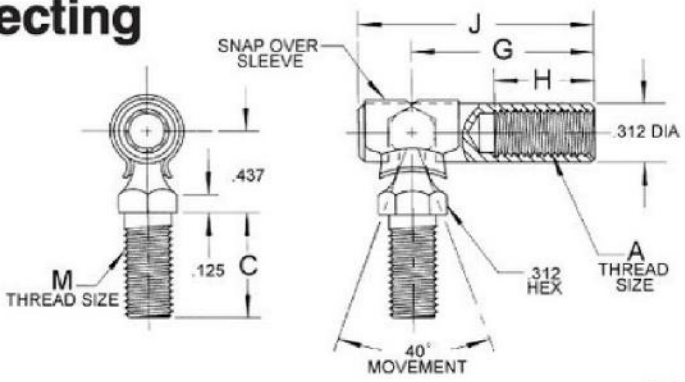
Part No.	A	B	C	D	E	F	G	H	J	K	L	Unit Pkg.
12044	1/4-28	15/32	9/16	1/8	9/16	3/8	31/32	17/32	1-1/4	.192	.347	2
12045	5/16-24	17/32	11/16	5/32	5/8	7/16	1-1/8	19/32	1-29/64	.224	.405	2
13610	3/8-24	11/16	7/8	3/16	3/4	1/2	1-3/8	13/16	1-3/4	.273	.493	1

Disconnecting



Materials of construction: Made of low carbon steel. Both ball stud and ball cavity are case hardened. Plated and dichromate treated for corrosion resistance. The retaining clip is heat treated spring steel, plated for corrosion resistance.

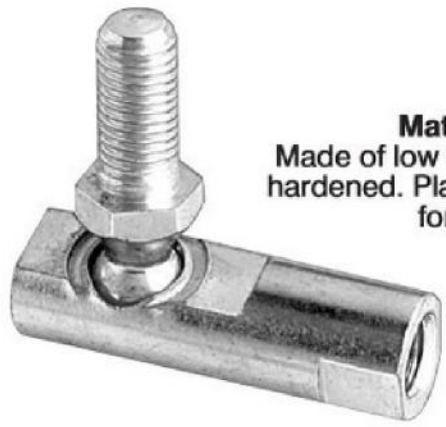
Only available fully assembled.



Part No.	A	C	G	H	J	M	Unit Pkg.
13599	10-32NF	7/16	7/8	31/64	1-5/32	10-32NF	2
13601	10-32NF	9/16	7/8	31/64	1-5/32	1/4-28UNF	2
13600	1/4-28UNF	9/16	31/32	17/32	1-1/4	1/4-28UNF	2

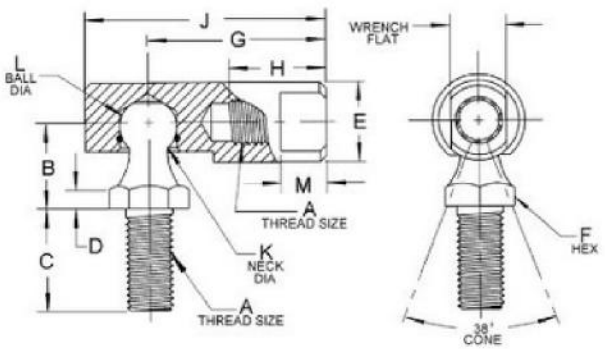
BALL JOINT ASSEMBLIES

“Flat Top”



Materials of construction:
 Made of low carbon steel with ball studs case hardened. Plated and clear dichromate treated for corrosion resistance.

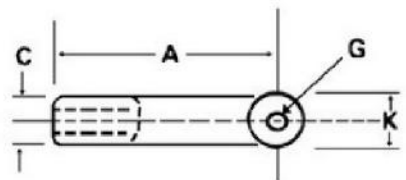
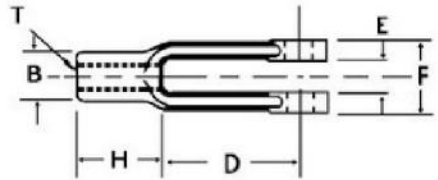
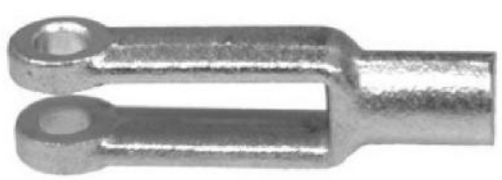
Only available fully assembled.



Part No.	A	B	C	D	E	Wrench Size	F	G	H	J	K	L	Unit Pkg.	Thread
13581	10-32	7/16	7/16	1/8	3/8	5/16	5/16	7/8	15/32	1-5/32	.177	.301	2	R
13582	1/4-28	15/32	9/16	1/8	7/16	3/8	3/8	31/32	17/32	1-5/16	.208	.347	2	R
13584	5/16-24	17/32	11/16	5/32	1/2	7/16	7/16	1-1/8	19/32	1-9/16	.250	.405	2	R
9869	3/8-24	11/16	7/8	3/16	5/8	1/2	1/2	1-3/8	13/16	1-13/16	.289	.493	5	R
13587	1/2-20	7/8	1-1/8	1/4	3/4	5/8	5/8	1-15/16	1-1/8	2-1/2	.375	.618	1	R

YOKE ENDS

Zinc finished Drop Forged Yoke Ends • Adjustable



Part No.	“T” Tap Size	Dimensions in Inches									Unit Pkg.
		A	B	C	D	E	F	G	H	K	
10737	1/4-28	2	7/16	7/16	1-1/4	9/32	5/8	1/4	3/4	1/2	10
10788	1/4-28	2	7/16	7/16	1-1/4	9/32	5/8	1/4	3/4	1/2	2
10738	5/16-24	2-1/4	1/2	1/2	1-7/16	11/32	3/4	5/16	13/16	19/32	10
10789	5/16-24	2-1/4	1/2	1/2	1-7/16	11/32	3/4	5/16	13/16	19/32	2
10739	3/8-24	2-1/2	5/8	5/8	1-5/8	7/16	7/8	3/8	7/8	11/16	10
10790	3/8-24	2-1/2	5/8	5/8	1-5/8	7/16	7/8	3/8	7/8	11/16	2
10740	7/16-20	2-7/8	23/32	23/32	1-7/8	1/2	1	7/16	1	13/16	10
10791	7/16-20	2-7/8	23/32	23/32	1-7/8	1/2	1	7/16	1	13/16	2
10741	1/2-20	3	13/16	13/16	1-7/8	9/16	1-1/8	1/2	1-1/8	15/16	10
10792	1/2-20	3	13/16	13/16	1-7/8	9/16	1-1/8	1/2	1-1/8	15/16	2
10742	5/8-18	4-15/16	1-1/16	1-1/16	3-11/16	11/16	1-3/8	5/8	1-1/4	1-3/16	10
10793	5/8-18	4-15/16	1-1/16	1-1/16	3-11/16	11/16	1-3/8	5/8	1-1/4	1-3/16	2