

Sec. 24

BALL JOINT ASSEMBLIES

Rod End Ball Joints (Male)

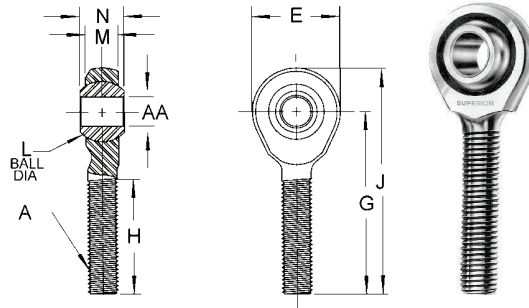
Bearing Raceway - Locked in by annular groove-trunnion design. Made of fiber reinforced nylon.

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

Spherical Ball - Precision make from selected low carbon steel-case hardened - file hard. 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



Dimensions

Auveco Part No.	Thread Size (A)	AA	E	G	H	J	L	M	N	Unit Pkg.	Thread
12268 12269	10-32	.189 .191	.625	1.250	.750	1.562	.438	.250	.312	1 1	R L
12270 12271	1/4-28	.250 .252	.750	1.562	1.000	1.937	.516	.281	.375	1 1	R L
12021 12272	5/16-24	.3125 .3145	.875	1.875	1.250	2.312	.625	.344	.437	1 1	R L
12022 12273	3/8-24	.375 .377	1.000	1.937	1.250	2.437	.719	.406	.500	1 1	R L
12485	7/16-20	.4395 .4375	1.125	2.125	1.312	2.687	.812	.437	.562	1	R
12023 12274	1/2-20	.500 .502	1.312	2.437	1.500	3.094	.938	.500	.625	1 1	R L
12024	5/8-18	.625	1.500	2.625	1.625	3.375	1.125	.562	.750	1	R
12486	3/4-16	.752 .750	1.750	2.875	1.750	3.750	1.312	.687	.875	1	R

Rod End Ball Joints (Female)

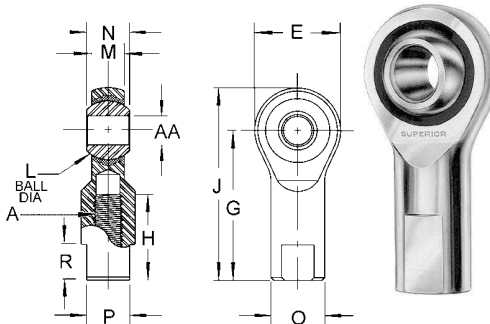
Bearing Raceway - Locked in by annular groove-trunnion design. Made of fiber reinforced nylon.

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

Spherical Ball - Precision make from selected low carbon steel-case hardened - file hard. 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



Dimensions

Auveco Part No.	Thread Size (A)	AA	E	G	H	J	L	M	N	O	P	R	Unit Pkg.	Thread
12025 12276	10-32	.189 .191	.625	1.062	.562	1.375	.438	.250	.312	.406	.312	.406	1 1	R L
12026 12277	1/4-28	.250 .252	.750	1.312	.750	1.687	.516	.281	.375	.469	.375	.406	1 1	R L
12027 12278	5/16-24	.3125 .3145	.875	1.375	.750	1.812	.625	.344	.437	.500	.437	.500	1 1	R L
12028 12279	3/8-24	.375 .377	1.000	1.625	.937	2.125	.719	.406	.500	.687	.562	.562	1 1	R L
12487	7/16-20	.4395 .4375	1.125	1.812	1.032	2.375	.812	.437	.562	.750	.625	.625	1	R
12029 12280	1/2-20	.500 .502	1.312	2.125	1.187	2.781	.938	.500	.625	.875	.750	.687	1 1	R L
12281	5/8-18	.625	1.500	2.500	1.500	3.250	1.125	.562	.750	1.000	.875	.875	1	R
12488	3/4-16	.752 .750	1.750	2.875	1.562	3.750	1.312	.687	.875	1.125	1.000	1.000	1	R

Rod End Ball Joints (Male with Stud)

Bearing Raceway - Locked in by annular groove-trunion design. Made of fiber reinforced nylon.

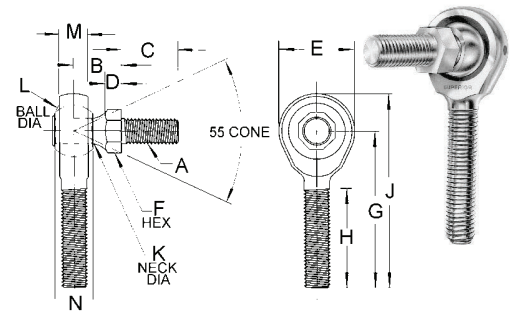
Threaded Stud - Made from medium carbon steel.

Spherical Ball - Precision make 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



Dimensions

Auveco 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 12293	1/4-28	.469	.562	.156	.750	.375	1.562	1.000	1.937	.250	.516	.281	.375	1 1	R L
12030	5/16-24	.531	.687	.187	.875	.437	1.875	1.250	2.312	.312	.625	.344	.437	1 1	R
12031 12295	3/8-24	.625	.875	.218	1.000	.500	1.937	1.250	2.437	.375	.719	.406	.500	1 1	R 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 - trunion design. Made of fiber reinforced nylon.

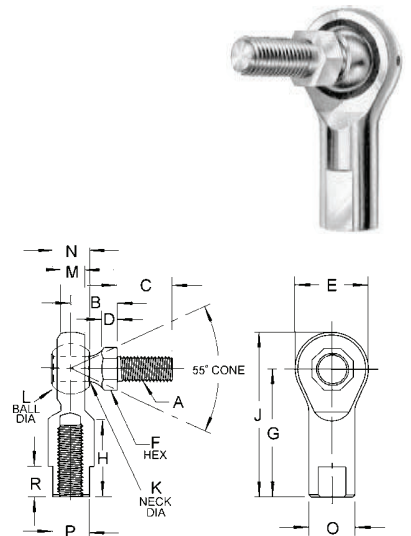
Threaded Stud - Made from medium carbon steel

Spherical Ball - Precision make 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



Dimensions

Auveco Part No.	Thread Size (A)	B	C	D	E	F	G	H	J	K	L	M	N	O	P	R	U. P.	The.
12034 12283	10-32	.437	.437	.156	.625	.312	1.062	.562	1.375	.189	.438	.250	.312	.406	.312	.406	1 1	R L
12035 12284	1/4-28	.469	.562	.156	.750	.375	1.312	.750	1.687	.250	.516	.281	.375	.469	.375	.406	1 1	R L
12036 12285	5/16-24	.531	.687	.187	.875	.437	1.375	.750	1.812	.312	.625	.344	.437	.500	.437	.500	1 1	R L
12037 12286	3/8-24	.625	.875	.218	1.000	.500	1.625	.937	2.125	.375	.719	.406	.500	.687	.562	.562	1 1	R 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

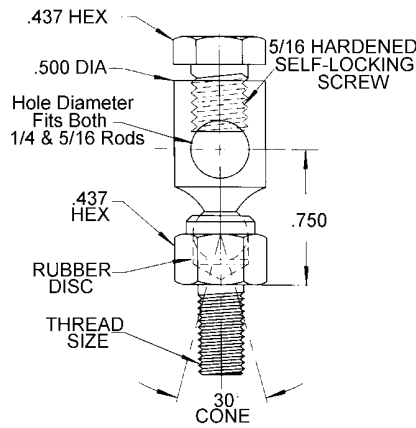
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BALL JOINT ASSEMBLIES

Damper Control Swivels

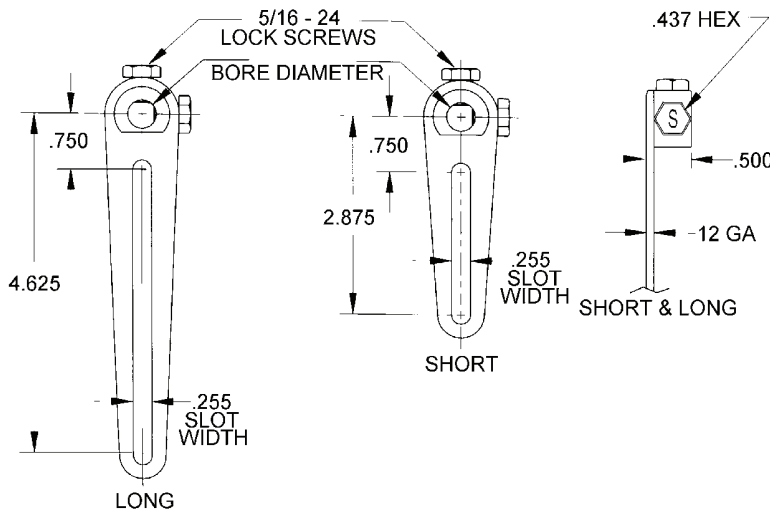
The units are made from low carbon steel and are plated and dichromate treated for corrosion resistance. The set screws are made of low carbon steel, plated and dichromate treated for corrosion resistance. Set screws are case hardened. A rubber disc is used in the assembly.

Only Available Fully Assembled



Thread Size	Damper Control Swivels			
	Auveco Part Number Without Nut And Washer	Unit Pkg	Auveco Part Number With Nut And Washer	Unit Pkg.
1/4-28 x 9/16"	12303	2	12047	3
1/4-20 x 7/16"	12304	2	12048	3
1/4-20 x 9/16"	12305	2	12049	3
5/16-24 x 3/4"	12300	2	12307	2

Crank Arms (12 Gauge Steel)

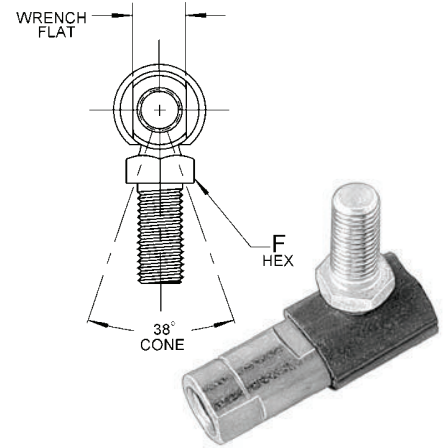
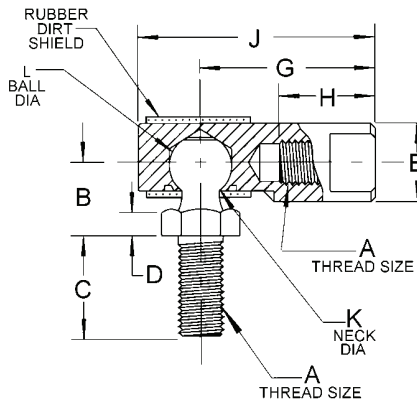


Auveco Part No.	Description	Bore Diameter	Unit Pkg.
12050	Short Series Crank Arm for 3/8" Shaft	.385/.389	1

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

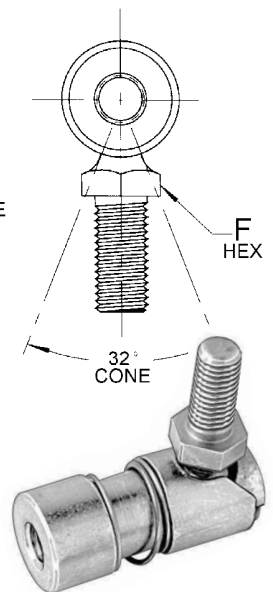
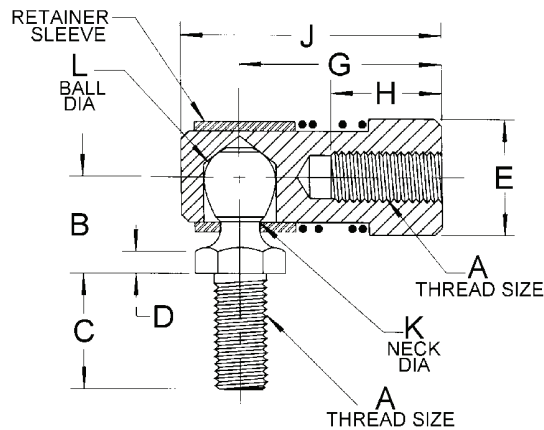
DIMENSIONS

Auveco Part No.	Unit Pkg.	A	B	C	D	E	Wrench Size	F	G	H	J	K	L	Thread
13580	2	10-32	7/16	7/16	1/8	3/8	5/16	5/16	7/8	15/32	1-5/32	.177	.301	R
12039	3	1/4-28	15/32	9/16	1/8	7/16	3/8	3/8	31/32	17/32	1-5/16	.208	.347	R
12040 13590	3 2	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	R L
12041	1	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	R
12042	1	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	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

DIMENSIONS

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

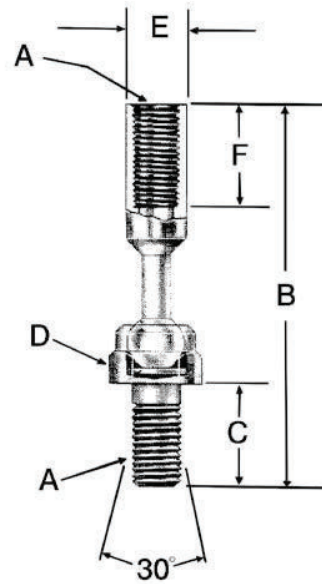
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BALL JOINT ASSEMBLIES (Lightweight)



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.

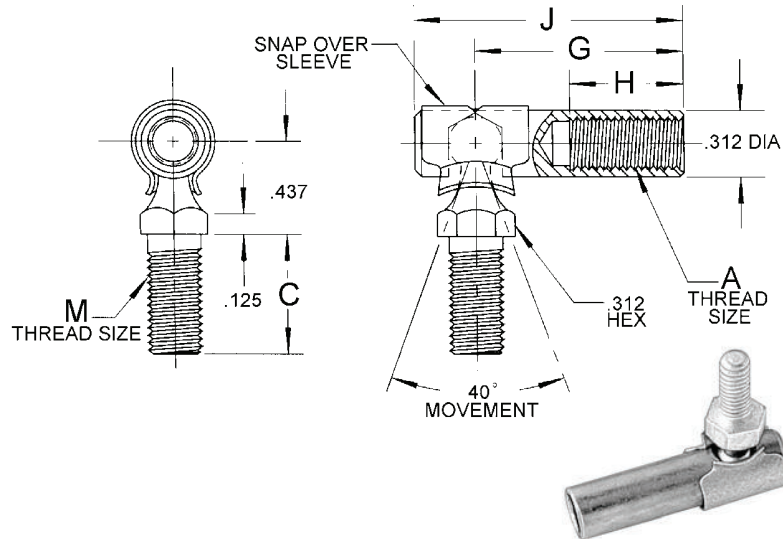


DIMENSIONS

Auveco 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

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

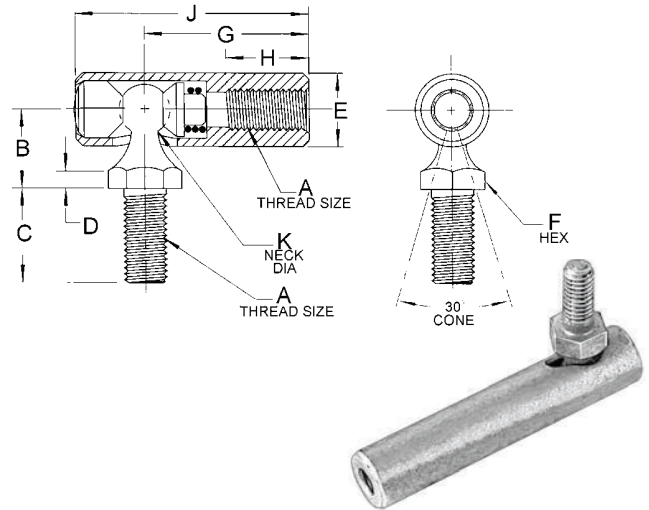
DIMENSIONS

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

BALL JOINT ASSEMBLIES

Spring Loaded

Materials of construction - Made of low carbon steel. Seat members are made of C1008 steel. Both ball stud and seats are case hardened. Assemblies are plated and dichromate treated for corrosion resistance.



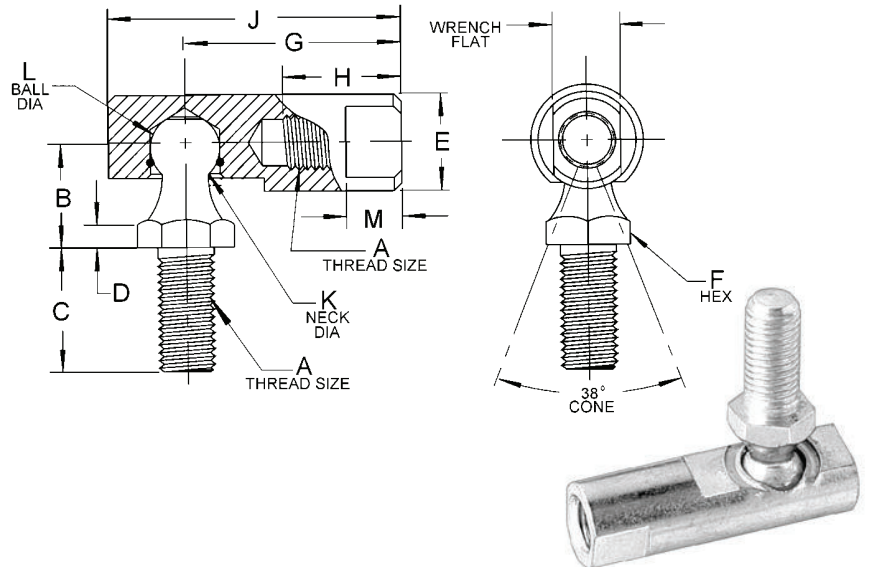
Only Available Fully Assembled.

DIMENSIONS

Auveco Part No.	Unit Pkg.	G.M.C. Part No.	G.M.C. Part No.	A	B	C	D	E	F	G	H	J	K
Spring Loaded													
9866	5	109398	91727	10-32	7/16	7/16	1/8	3/8	5/16	7/8	7/16	1-1/4	.125

("FLAT TOP")

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



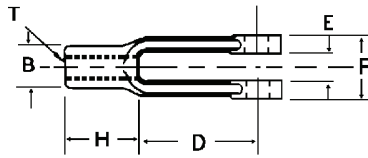
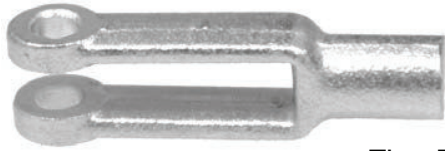
Only Available Fully Assembled.

DIMENSIONS

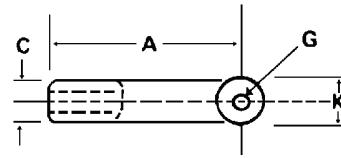
Auveco Part No.	Unit Pkg.	A	B	C	D	E	Wrench Size	F	G	H	J	K	L	Thread
13581	2	10-32	7/16	7/16	1/8	3/8	5/16	5/16	7/8	15/32	1-5/32	.177	.301	R
13582	2	1/4-28	15/32	9/16	1/8	7/16	3/8	3/8	31/32	17/32	1-5/16	.208	.347	R
13584	2	5/16-24	17/32	11/16	5/32	1/2	7/16	7/16	1-1/8	19/32	1-9/16	.250	.405	R
9869	5	3/8-24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

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YOKE ENDS & HOSE CLAMPS



Zinc Finished Drop Forged Yoke Ends
Adjustable



For Clevis Pins
Refer To Page 127

Auveco 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

SINGLE BOND HOSE CLAMPS



Black Nylon

Auveco Part No.	Size	Clamping Range		Unit Pkg.
		Min.	Max.	
19558	1/4"	.246	.290	25
19559	5/16"	.300	.350	25
19560	11/32"	.360	.406	25
19561	13/32"	.410	.468	25
19562	15/32"	.475	.536	25
19564	19/32"	.597	.665	25
19565	43/64"	.670	.780	25
19566	3/4"	.730	.830	25
19568	61/64"	.953	1.093	25
19569	1-1/32"	1.031	1.187	25
19570	1-1/4"	1.250	1.425	10
19571	1-13/32"	1.406	1.610	10
19572	1-19/32"	1.593	1.812	10
19575	2-1/8"	2.120	2.390	10



Spring Action Hose Clamps
Spring Steel, Heat Treated • Phosphate and Paint

Auveco Part No.	Hose O.D.	Color	Max. Dia. Clamp in Free Position	Width	Unit Pkg.
12682	3/8"	Black	.321	5/16"	100
12683	7/16"	Green	.405	5/16"	100
12684	1/2"	Red	.460	5/16"	100
12685	9/16"	Black	.520	5/16"	100
12686	5/8"	Olive	.583	5/16"	100
12688	11/16"	Red	.655	5/16"	100
12689	3/4"	Black	.645	3/8"	100