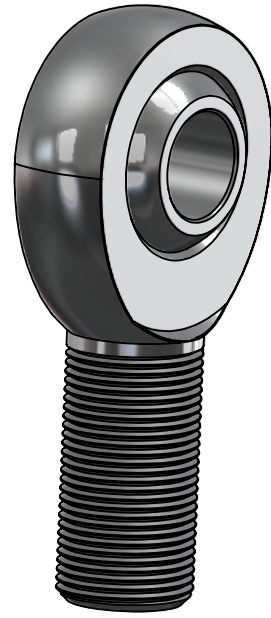
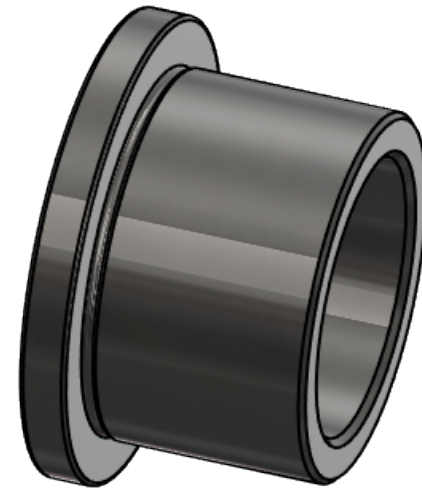


CHOOSING WHICH TYPE OF SPACER IS RIGHT FOR YOUR APPLICATION



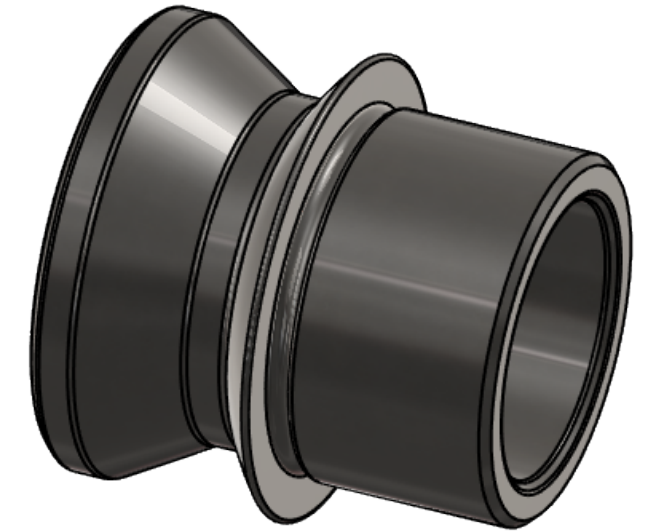
Rod End



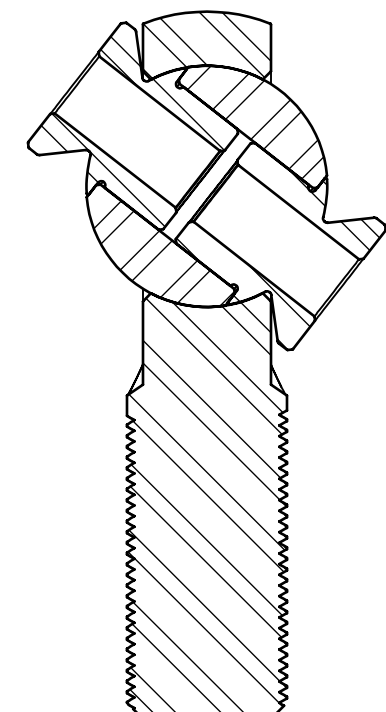
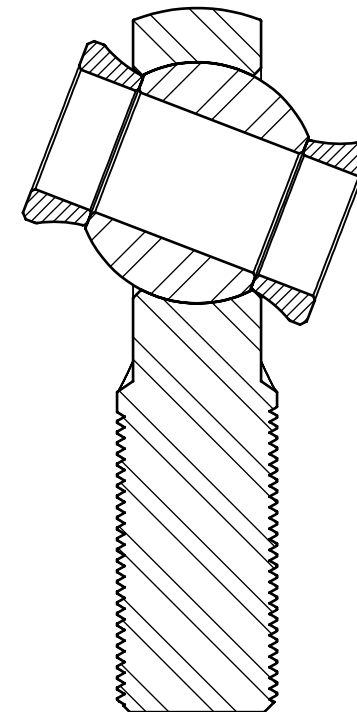
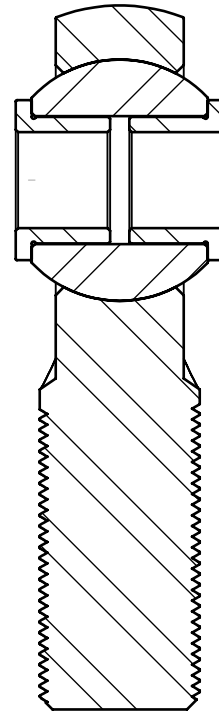
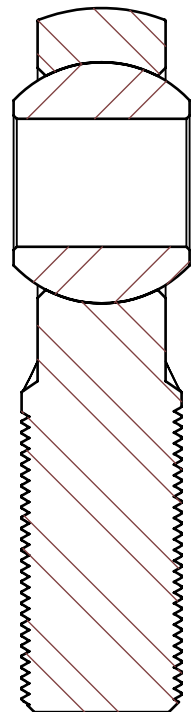
Step Down Spacer



Rod End Spacer



High Misalignment Spacer



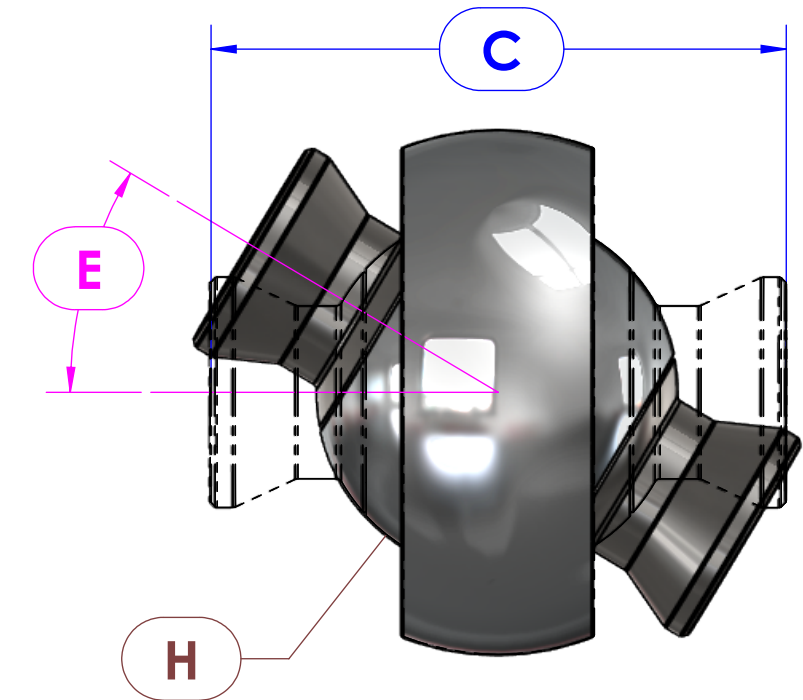
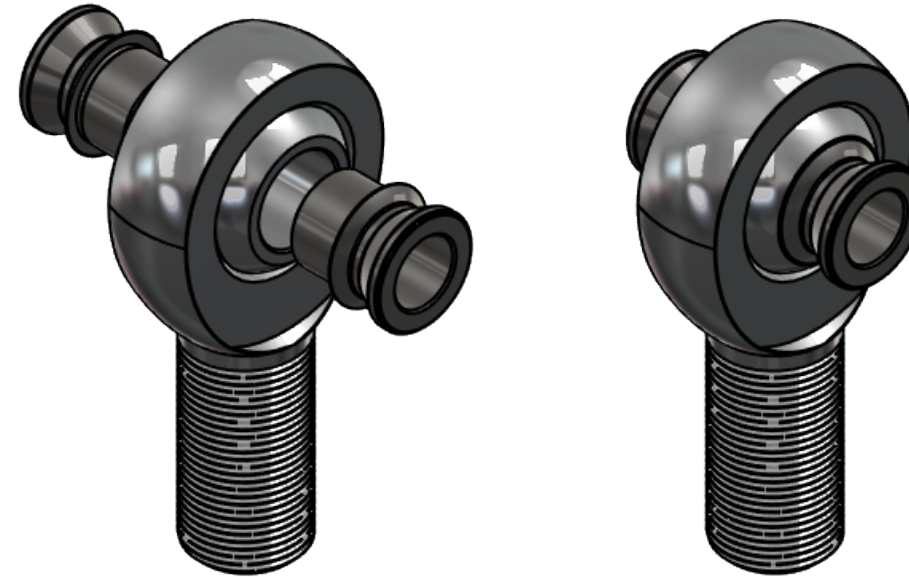
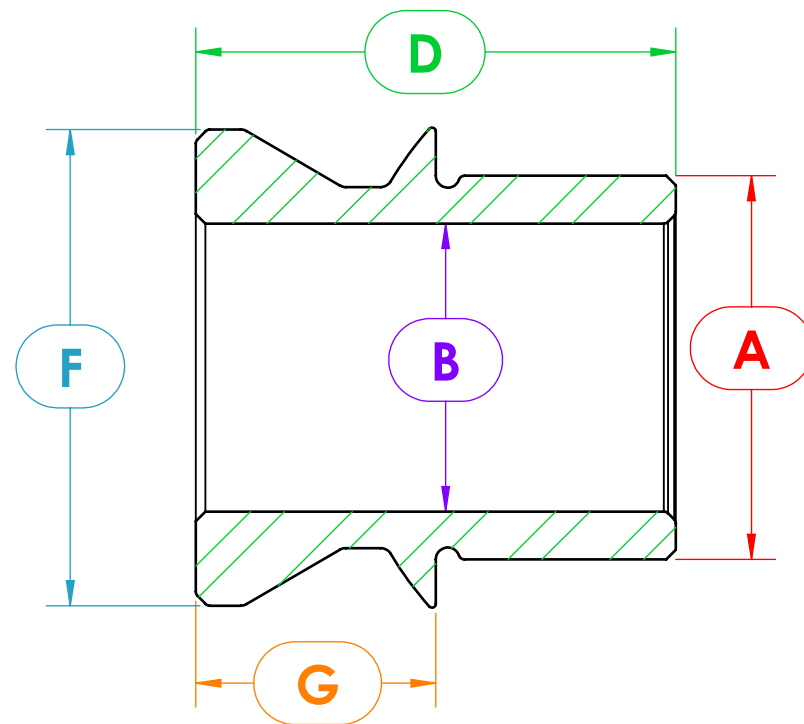
Rod end (or commonly referred to as Heim Joint) offers a cost effective and strong option when choosing a joint, but is very limited in its maximum range of motion when installed into a bracket or steering system.

Step Down Spacers offer little added mounting width to the joint and reduce the size of the bolt required. These are most often utilized with Trac Bars, Panhard bars and Tie Rod links that require little-to-no misalignment. The bolt hole diameter is reduced for convenience or weight savings if the hardware is oversized for the application

Standard Rod End Spacers are useful for when bolt size should not be reduced. They also offer more clearance from mounting surfaces (brackets, steering arm etc)

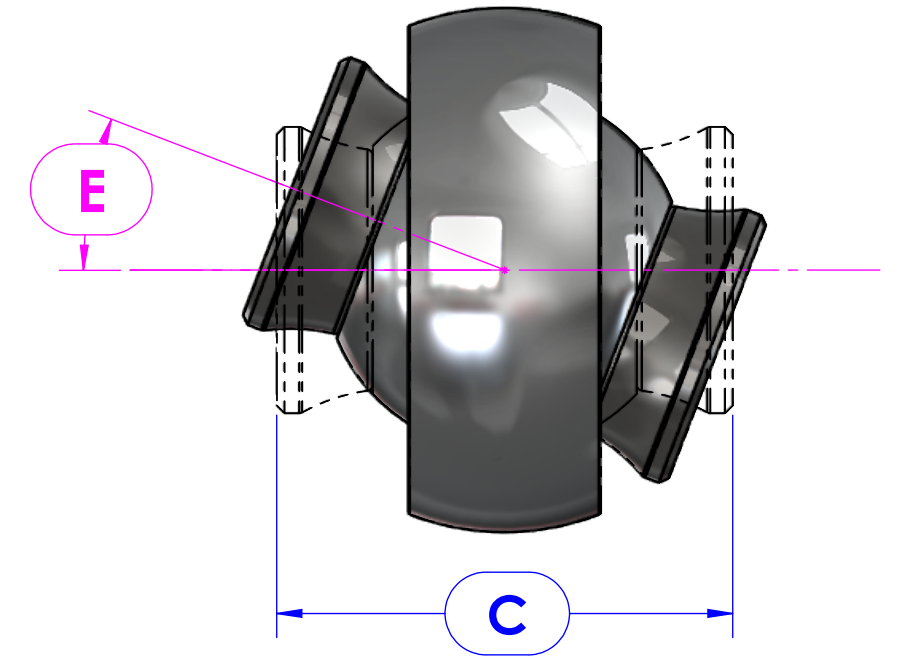
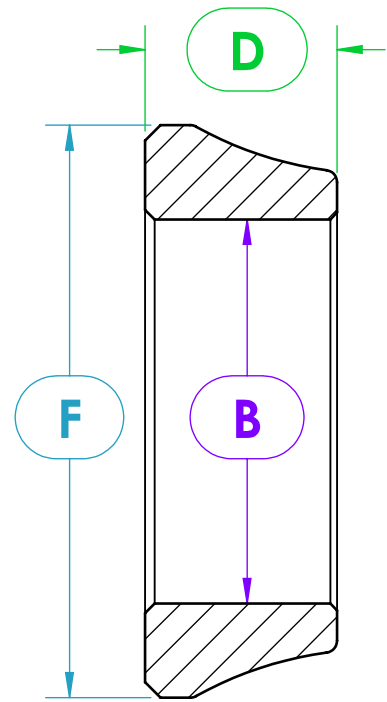
High Misalignment Spacers offer the highest amount misalignment by reducing the bolt hole size and extending radius of ball. These are most commonly used for linkages that require lots of axial and radial movement, like those found in drag links, control arms, 3-links and 4-links.

# HIGH MISALIGNMENT SPACERS



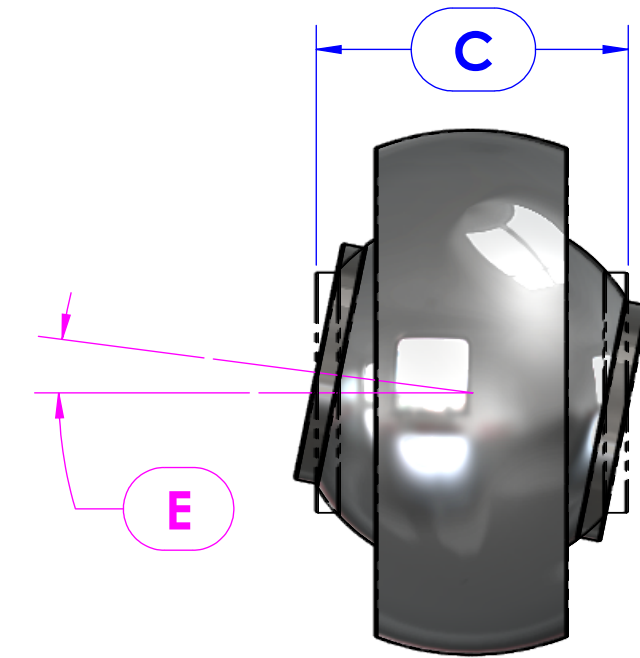
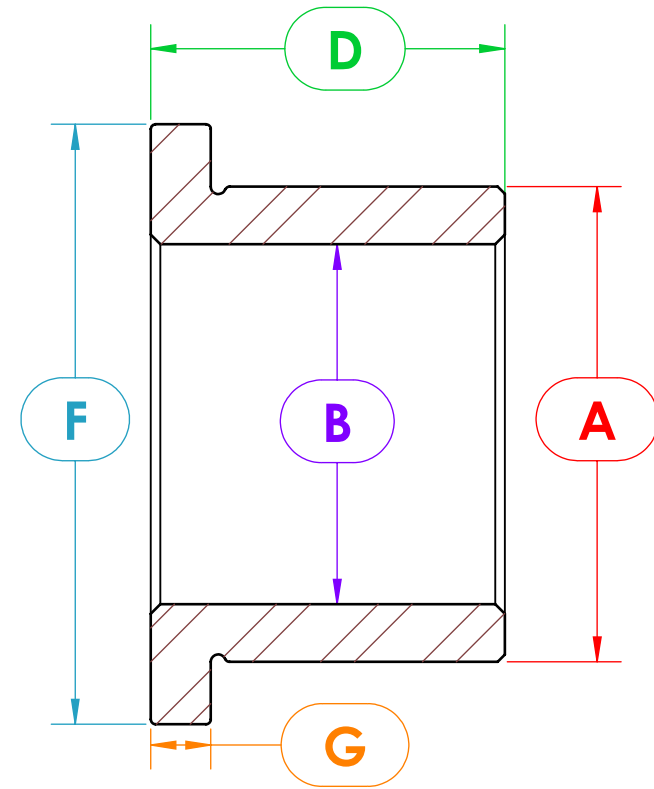
BALLISTIC FABRICATION SKU	(A) Rod End Ball Bore Diameter	(B) Bolt Diameter in Spacer	(C) Assembled Mounting Width	(D) Spacer Width	(E) Max Misalignment Angle	(F) Major Outside Diameter	(G) Shoulder Width	(H) Ball Diameter
HMS-502-1	1.00"	.750" (7/8)	3.00"	1.440"	32°	1.240"	.625" (5/8)	1.875" (1 7/8)
HMS-502	1.00"	.750" (7/8)	2.625" (2 5/8)	1.250"	32°	1.240"	.625" (5/8)	1.875" (1 7/8)
HMS-501	1.00"	.625" (5/8)	2.625" (2 5/8)	1.250"	36°	1.240"	.625" (5/8)	1.875" (1 7/8)
HMS-503	1.00"	.5625" (9/16)	2.625" (2 5/8)	1.250"	39°	1.240"	.625" (5/8)	1.875" (1 7/8)
HMS-511-1	.875" (7/8)	.750" (3/4)	2.00"	.938"	18.5°	1.240"	.5625" (9/16)	1.750" (1 3/4)
HMS-701	.875" (7/8)	.625" (5/8)	1.73"	.850"	25°	1.490"	.490"	1.750" (1 3/4)
HMS-512	.875" (7/8)	.625" (5/8)	2.00"	.938"	20°	1.240"	.5625" (9/16)	1.750" (1 3/4)
HMS-513	.875" (7/8)	.5625" (9/16)	2.00"	.938"	26°	1.240"	.5625" (9/16)	1.750" (1 3/4)
HMS-510	.750" (3/4)	.625" (5/8)	1.75"	.815"	33°	.990"	.440"	1.280"
HMS-515	.750" (3/4)	.5625" (9/16)	1.75"	.815"	35°	.990"	.440"	1.280"
HMS-509	.750" (3/4)	.500" (1/2)	1.75"	.815"	37°	.990"	.440"	1.280"
HMS-1805	.750" (3/4)	.500" (1/2)	2.00"	.975"	35°	.990"	.625" (5/8)	1.188" (1 3/16)
HMS-508	.625" (5/8)	.500" (1/2)	1.50"	.725"	30°	.865"	.375" (3/8)	1.136"

# Standard Rod End Spacer



BALLISTIC FABRICATION SKU	(B) Bolt Diameter in Spacer	(C) Assembled Mountng Width	(D) Spacer Width	(E) Max Misalignment Angle	(F) Major Outside Diameter
SPA-551	1.00"	2.625" (2 5/8")		21°	1.50"
SPA-552	.875" (7/8)	2.00"		19°	1.25"
SPA-553	.750" (3/4)	1.75"	.440"	17°	
SPA-554	.625" (5/8)			13°	1.00"
SPA-555	.500" (1/2)			11°	

## STEP DOWN SPACER



BALLISTIC FABRICATION SKU	(A) Rod End Ball Bore Diameter	(B) Bolt Diameter in Spacer	(C) Assembled Mountng Width	(D) Spacer Width	(E) Max Misalignment Angle	(F) Major Outside Diameter	(G) Shoulder Width
SPA-561	.625" (5/8)	.500" (1/2)		.475"	11°	.850"	.062" (1/16)
SPA-562	.625" (5/8)	.500" (1/2)		.475"	14°	.850"	.120" (1/8)
SPA-564	.750" (3/4)	.625" (5/8)	.980"	.438"	10°	.990"	.062" (1/16)
SPA-565	.875" (7/8)	.750" (3/4)	1.00"	.438"	7.5°	1.05"	.062" (1/16)
SPA-566	.875" (7/8)	.625" (5/8)	1.00"	.438"	7.5°	1.05"	.062" (1/16)