



USA Bearings & Belts
"We get things moving!"

HF SERIES

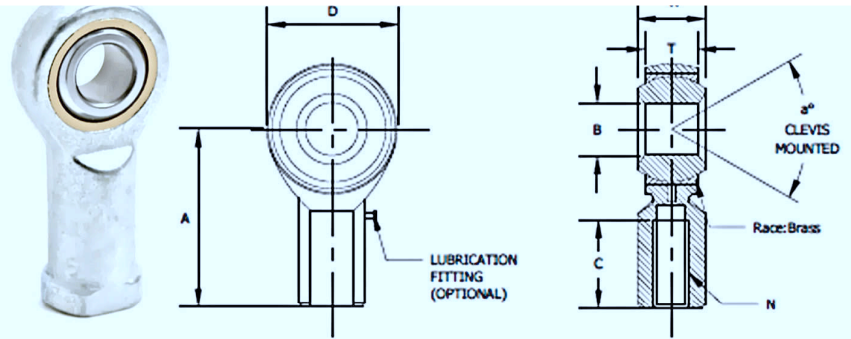
Precision 3 piece construction provides steel on bronze contact for lubricity, smoother operation, and provides long dynamic life.

Material

Ball: 52100/Hard Chrome Plated

Body: Carbon Steel Zinc Plated

Race: Sintered Oil Impregnated Bronze



Applications:

Precision Machinery

Industrial Equipment

Farm Machinery

Truck/Bus/Off Highway Vehicles

Recreational Vehicles



| Female Rod Ends | | B Dia. | D Dia. | W Width | T Width | Ball Dia. | A Length | N Thread | C Length | E Dia. | F Flat | a° Mis. Angle | Ult. Static Radial Load (lbs) | Approx. Weight (lbs) |
|---------------------|--------------------|--------------------|------------------|------------------|------------------|-----------|------------------|-----------|------------------|------------------|------------------|---------------|-------------------------------|----------------------|
| Right Hand Part No. | Left Hand Part No. | +0.0015 -0.0005 | +0.010 -0.010 | +0.005 -0.005 | +0.015 -0.015 | Ref. | +0.015 -0.015 | UNF 2B | +0.062 -0.031 | +0.010 -0.010 | +0.010 -0.010 | Ref. | | |
| HF 3 | HFL 3 | 0.1900 | 0.625 | 0.312 | 0.250 | 0.437 | 1.062 | 10-32 | 0.500 | 0.406 | 0.312 | 13 | 1,624 | 0.04 |
| HF 4 | HFL 4 | 0.2500 | 0.750 | 0.375 | 0.281 | 0.500 | 1.312 | 1/4-28 | 0.687 | 0.468 | 0.375 | 16 | 2,545 | 0.06 |
| HF 5 | HFL 5 | 0.3125 | 0.875 | 0.437 | 0.344 | 0.625 | 1.375 | 5/16-24 | 0.687 | 0.500 | 0.437 | 14 | 3,200 | 0.09 |
| HF 6 | HFL 6 | 0.3750 | 1.000 | 0.500 | 0.406 | 0.719 | 1.625 | 3/8-24 | 0.812 | 0.687 | 0.562 | 12 | 3,950 | 0.15 |
| HF 7 | HFL 7 | 0.4375 | 1.250 | 0.562 | 0.437 | 0.812 | 1.812 | 7/16-20 | 0.937 | 0.750 | 0.625 | 14 | 4,300 | 0.20 |
| HF 8 | HFL 8 | 0.5000 | 1.312 | 0.625 | 0.500 | 0.937 | 2.125 | 1/2-20 | 1.062 | 0.875 | 0.750 | 12 | 6,700 | 0.33 |
| HF 10 | HFL 10 | 0.6250 | 1.500 | 0.750 | 0.562 | 1.125 | 2.500 | 5/8-18 | 1.375 | 1.000 | 0.875 | 16 | 7,400 | 0.48 |
| HF 12 | HFL 12 | 0.7500 | 1.750 | 0.875 | 0.687 | 1.312 | 2.875 | 3/4-16 | 1.562 | 1.1250 | 1.000 | 14 | 11,550 | 0.72 |

Available in Re-Lubricable design - Add G Suffix (HF 6G)

Interchanges/Equivalents:

| BL | Heim | Aurora | SealMaster/Spherco | Cablecraft | Alinabal |
|--------|-------|--------|--------------------|------------|------------|
| HF 8 | HF8 | MW-8 | TR8 | DBF8 | VXF-8-G |
| HF 8G | HF8G | MW-8Z | TR8N | DBF8Z | VXF-8-G-8 |
| HFL 8 | HFL8 | MG-8 | TRL8 | DBFL8 | VXFL-8-G |
| HFL 8G | HFL8G | MG-8Z | TRL8N | DBFL8Z | VXFL-8-G-8 |

PRECISION ROD ENDS

HM SERIES

Precision 3 piece construction provides steel on bronze contact for lubricity, smoother operation, and provides long dynamic life.

Material

Ball: 52100/Hard Chrome Plated

Body: Carbon Steel Zinc Plated

Race: Sintered Oil Impregnated Bronze

Applications:

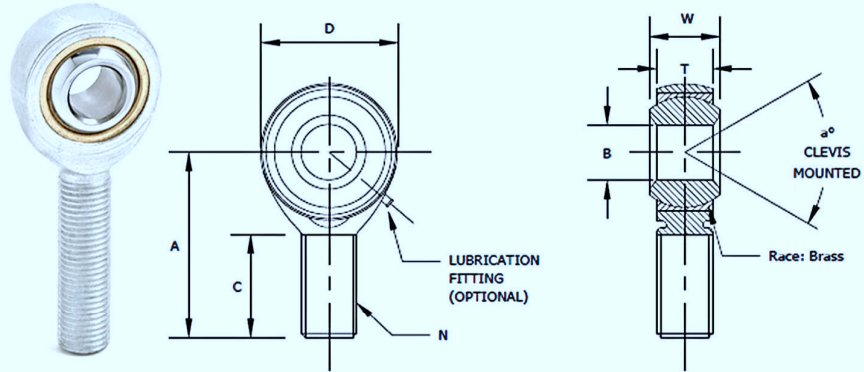
Precision Machinery

Industrial Equipment

Farm Machinery

Truck/Bus/Off Highway Vehicles

Recreational Vehicles



| Male Rod Ends | | B Dia. | D Dia. | W Width | T Width | Ball Dia. | A Length | N Thread | C Length | a° Mis. Angle | Ult. Static Radial Load (lbs) | Approx. Weight (lbs) |
|---------------------|--------------------|--------------------|------------------|------------------|---------|-----------|------------------|-----------|------------------|---------------|-------------------------------|----------------------|
| Right Hand Part No. | Left Hand Part No. | +0.0015 -0.0005 | +0.010 -0.010 | +0.005 -0.005 | Ref. | Ref. | +0.015 -0.015 | UNF 3A | +0.062 -0.031 | Ref. | | |
| HM 3 | HML 3 | 0.1900 | 0.625 | 0.312 | 0.250 | 0.437 | 1.250 | 10-32 | 0.750 | 13 | 1,174 | 0.03 |
| HM 4 | HML 4 | 0.2500 | 0.750 | 0.375 | 0.281 | 0.500 | 1.562 | 1/4-28 | 1.000 | 16 | 2,168 | 0.04 |
| HM 5 | HML 5 | 0.3125 | 0.875 | 0.437 | 0.344 | 0.625 | 1.875 | 5/16-24 | 1.250 | 14 | 2,796 | 0.07 |
| HM 6 | HML 6 | 0.3750 | 1.000 | 0.500 | 0.406 | 0.719 | 1.938 | 3/8-24 | 1.250 | 12 | 4,012 | 0.11 |
| HM 7 | HML 7 | 0.4375 | 1.125 | 0.562 | 0.437 | 0.812 | 2.125 | 7/16-20 | 1.375 | 14 | 4,244 | 0.16 |
| HM 8 | HML 8 | 0.5000 | 1.312 | 0.625 | 0.500 | 0.937 | 2.438 | 1/2-20 | 1.500 | 12 | 6,700 | 0.25 |
| HM 10 | HML 10 | 0.6250 | 1.500 | 0.750 | 0.562 | 1.125 | 2.625 | 5/8-18 | 1.625 | 16 | 7,400 | 0.38 |
| HM 12 | HML 12 | 0.7500 | 1.750 | 0.875 | 0.687 | 1.312 | 2.875 | 3/4-16 | 1.750 | 14 | 11,550 | 0.60 |

Available in Re-Lubricable design - Add G Suffix (HM 6G)

Interchanges/Equivalents:

| BL | Heim | Aurora | SealMaster/Spherco | Cablecraft | Alinabal |
|--------|-------|--------|--------------------|------------|------------|
| HM 8 | HM8 | MM-8 | TRE8 | DBM8 | VXM-8-G |
| HM 8G | HM8G | MM-8Z | TRE8N | DBM8Z | VXM-8-G-8 |
| HML 8 | HML8 | MB-8 | TREL8 | DBML8 | VXML-8-G |
| HML 8G | HML8G | MB-8Z | TREL8N | DBML8Z | VXML-8-G-8 |

COMMERCIAL ROD ENDS

CF SERIES

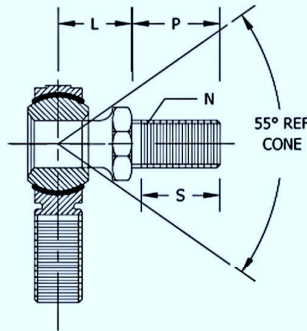
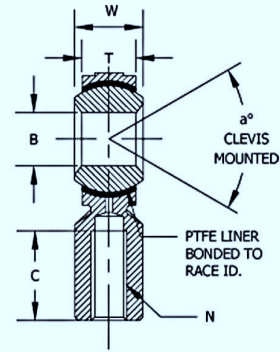
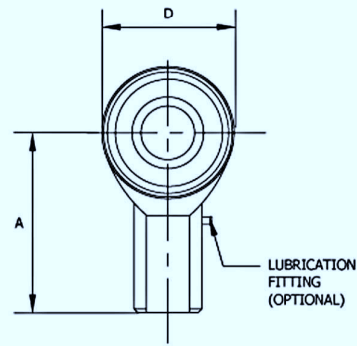
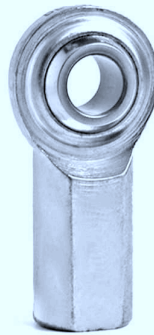
2 piece metal on metal construction offers the most economical design for a wide range of light to heavy duty motion transfer applications.

Material

Ball: 52100/Hard Chrome Plated
Body: Carbon Steel Zinc Plated

Applications:

Construction Machinery
Industrial Equipment
Lawn & Garden Applications
Truck/Bus/Off Highway Vehicles
Recreational Vehicles



| Studded Dimensions | | | | |
|--------------------|-------|------------|----------------------|----------------------|
| Rod End Bore Size | L REF | P +/- .030 | S Min. Thread Length | N Thread Size UNF-2A |
| 1/4" | 0.469 | 0.563 | 0.500 | 1/4-28 |
| 5/16" | 0.531 | 0.688 | 0.594 | 5/16-24 |
| 3/8" | 0.625 | 0.875 | 0.781 | 3/8-24 |
| 1/2" | 0.875 | 1.125 | 1.000 | 1/2-20 |
| 5/8" | 1.000 | 1.125 | 1.000 | 5/8-18 |

| Female Rod Ends | | B Dia. | D Dia. | W Width | T Width | Ball Dia. | A Length | N Thread | C Length | E Dia. | F Flat | a° Mis. Angle | Ult. Static Radial Load (lbs) | Approx. Weight (lbs) |
|---------------------|--------------------|--------------------|------------------|------------------|---------|-----------|------------------|-----------|------------------|------------------|------------------|---------------|-------------------------------|----------------------|
| Right Hand Part No. | Left Hand Part No. | +0.0025 -0.0005 | +0.010 -0.010 | +0.005 -0.005 | Ref. | Ref. | +0.015 -0.015 | UNF 2B | +0.062 -0.031 | +0.010 -0.010 | +0.010 -0.010 | Ref. | | |
| CF 3 | CFL 3 | 0.1900 | 0.625 | 0.312 | 0.234 | 0.437 | 1.062 | 10-32 | 0.500 | 0.406 | 0.312 | 20 | 2,000 | 0.04 |
| CF 4 | CFL 4 | 0.2500 | 0.750 | 0.375 | 0.250 | 0.500 | 1.312 | 1/4-28 | 0.687 | 0.468 | 0.375 | 27 | 3,250 | 0.05 |
| CF 5 | CFL 5 | 0.3125 | 0.875 | 0.437 | 0.312 | 0.625 | 1.375 | 5/16-24 | 0.687 | 0.500 | 0.437 | 22 | 3,934 | 0.08 |
| CF 6 | CFL 6 | 0.3750 | 1.000 | 0.500 | 0.359 | 0.719 | 1.625 | 3/8-24 | 0.812 | 0.687 | 0.562 | 22 | 5,100 | 0.13 |
| CF 7 | CFL 7 | 0.4375 | 1.125 | 0.562 | 0.406 | 0.812 | 1.812 | 7/16-20 | 0.937 | 0.750 | 0.625 | 21 | 6,420 | 0.18 |
| CF 8 | CFL 8 | 0.5000 | 1.312 | 0.625 | 0.453 | 0.937 | 2.125 | 1/2-20 | 1.062 | 0.875 | 0.750 | 20 | 9,100 | 0.29 |
| CF 10 | CFL 10 | 0.6250 | 1.500 | 0.750 | 0.484 | 1.125 | 2.500 | 5/8-18 | 1.375 | 1.000 | 0.875 | 26 | 9,800 | 0.43 |
| CF 12 | CFL 12 | 0.7500 | 1.750 | 0.875 | 0.593 | 1.312 | 2.875 | 3/4-16 | 1.562 | 1.125 | 1.000 | 24 | 14,250 | 0.65 |

Available with Stud - Add Suffix 'S' (CF 8S), or Maintenance Free/PTFE lined - Add suffix 'T' (CF 8T).

Interchanges/Equivalent:

| BL | Heim | SealMaster/Spherco | Alinabal | Aurora | FK | Cablecraft |
|--------|---------|--------------------|----------|--------|----------|------------|
| CF 8 | F8CR | CFF8 | AF-8-GP | CW-8 | CF8/ECF8 | EF 8 |
| CF 8T | CFHD 8 | CFF8T | PF-8-G | VCW-8 | CF8T | CF8T |
| CF 8S | F8CRY | CFF8Y | AFS-8-GP | CW-8S | CF8Y | EF 8S |
| CF 8TS | CFHDY 8 | CFF8TY | PFS-8-G | VCW-8S | CF8TY | CF8TS |

COMMERCIAL ROD ENDS

CM SERIES

2 piece metal on metal construction offers the most economical design for a wide range of light to heavy duty motion transfer applications.

Material

Ball: 52100/Hard Chrome Plated

Body: Carbon Steel Zinc Plated

Applications:

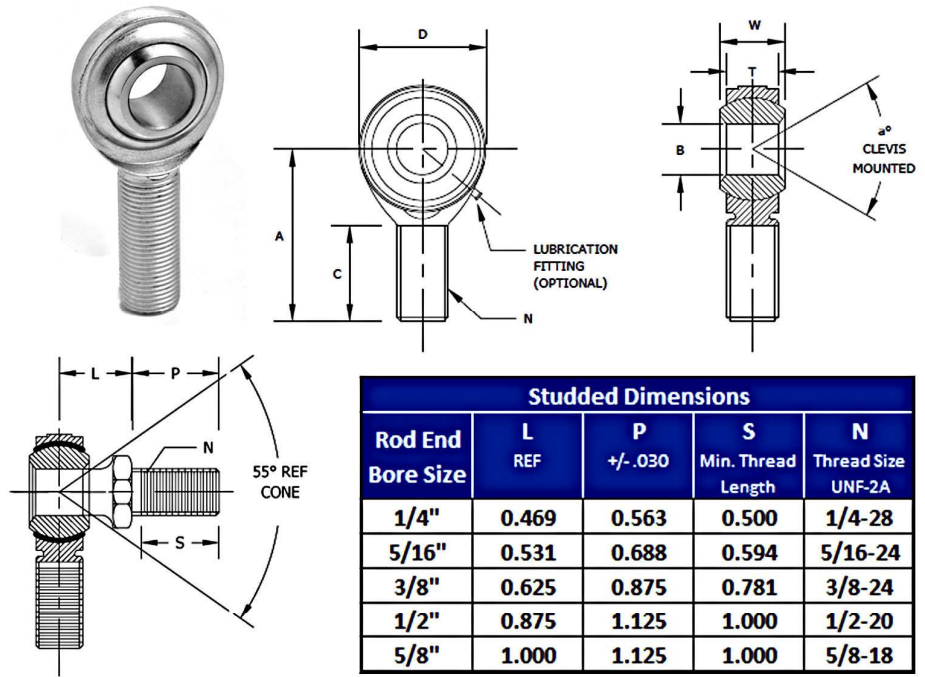
Construction Machinery

Industrial Equipment

Lawn & Garden Applications

Truck/Bus/Off Highway Vehicles

Recreational Vehicles



| Male Rod Ends | | B Dia. | D Dia. | W Width | T Width | Ball Dia. | A Length | N Thread | C Length | a° Mis. Angle | Ult. Static Radial Load (lbs) | Approx. Weight (lbs) |
|---------------------|--------------------|--------------------|------------------|------------------|---------|-----------|------------------|-----------|------------------|---------------|-------------------------------|----------------------|
| Right Hand Part No. | Left Hand Part No. | +0.0025 -0.0005 | +0.010 -0.010 | +0.005 -0.005 | Ref. | Ref. | +0.015 -0.015 | UNF 3A | +0.062 -0.031 | Ref. | | |
| CM 3 | CML 3 | 0.1900 | 0.625 | 0.312 | 0.234 | 0.437 | 1.250 | 10-32 | 0.750 | 20 | 1,210 | 0.03 |
| CM 4 | CML 4 | 0.2500 | 0.750 | 0.375 | 0.250 | 0.500 | 1.562 | 1/4-28 | 1.000 | 27 | 2,225 | 0.04 |
| CM 5 | CML 5 | 0.3125 | 0.875 | 0.437 | 0.312 | 0.625 | 1.875 | 5/16-24 | 1.250 | 22 | 3,600 | 0.07 |
| CM 6 | CML 6 | 0.3750 | 1.000 | 0.500 | 0.359 | 0.719 | 1.938 | 3/8-24 | 1.250 | 22 | 5,100 | 0.11 |
| CM 7 | CML 7 | 0.4375 | 1.125 | 0.562 | 0.406 | 0.812 | 2.125 | 7/16-20 | 1.375 | 21 | 6,402 | 0.15 |
| CM 8 | CML 8 | 0.5000 | 1.312 | 0.625 | 0.453 | 0.937 | 2.438 | 1/2-20 | 1.500 | 20 | 8,386 | 0.24 |
| CM 10 | CML 10 | 0.6250 | 1.500 | 0.750 | 0.484 | 1.125 | 2.625 | 5/8-18 | 1.625 | 26 | 9,813 | 0.36 |
| CM 12 | CML 12 | 0.7500 | 1.750 | 0.875 | 0.593 | 1.312 | 2.875 | 3/4-16 | 1.750 | 24 | 14,290 | 0.57 |

Available with Stud - Add Suffix 'S' (CM 8S), or Maintenance Free/PTFE lined - Add suffix 'T' (CM 8T).

Interchanges/Equivalents:

| BL | Heim | SealMaster/Spherco | Alinabal | Aurora | FK | Cablecraft |
|--------|--------|--------------------|----------|--------|------------|------------|
| CM 8 | M8CR | CFM8 | AM-8-GP | CM-8 | CM8/ECM8 | EM8 |
| CM 8T | CMHD8 | CFM8T | PM-8-G | VCM-4 | CM8T | CM8T |
| CM 8S | M8CRY | CFM8Y | AMS-4-GP | CM-8S | CM8Y/ECM8Y | EM8S |
| CM 8TS | CMHD8Y | CFM8TY | PMS-4G | VCM-8S | CM8TY | CM8TS |