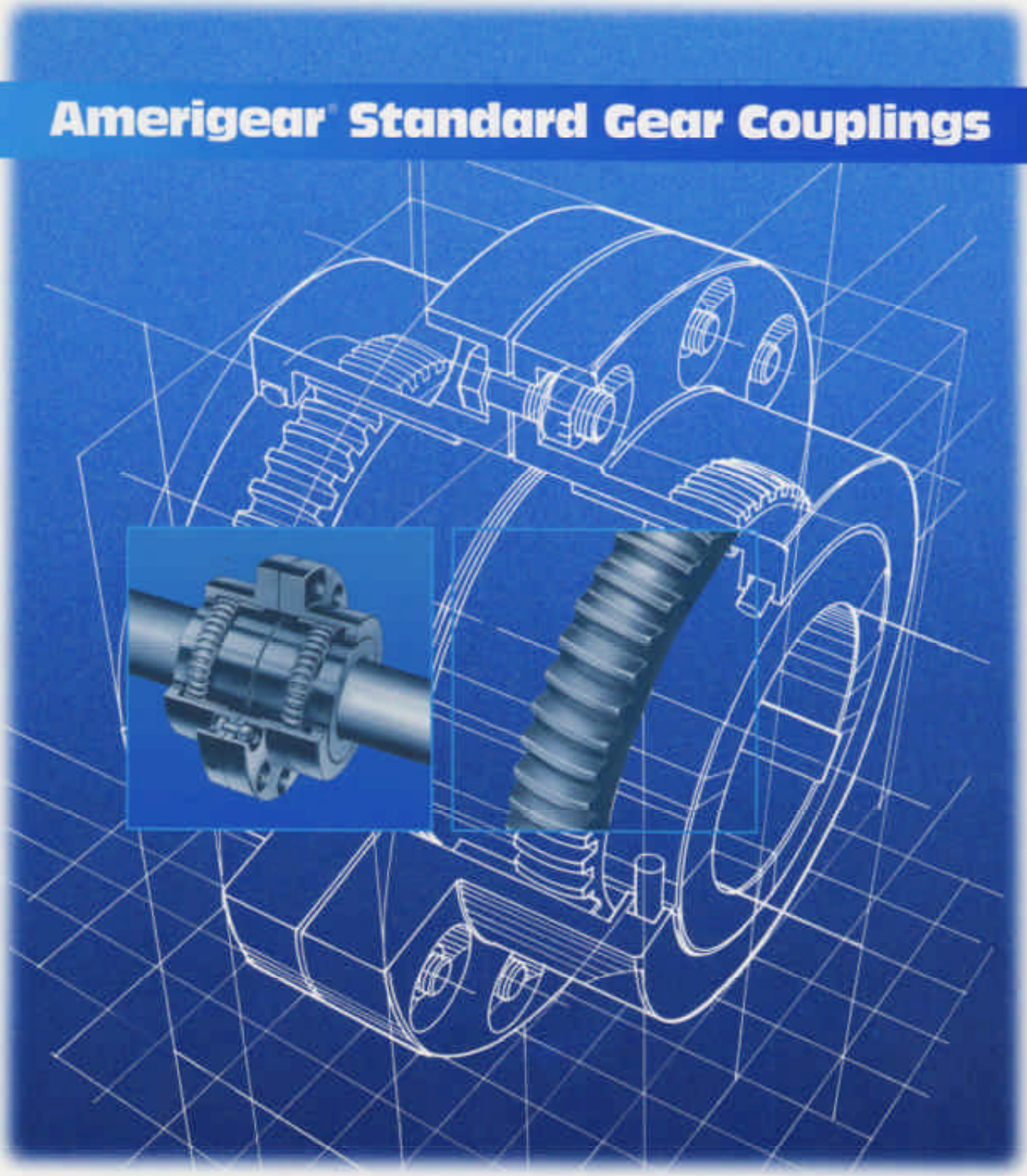
# Amerigear® Standard Gear Couplings



Flanged and Continuous Sleeve Designs

Ameridrives Coupling Products

AN AMERIDRIVES INTERNATIONAL COMPANY

# Amerigear

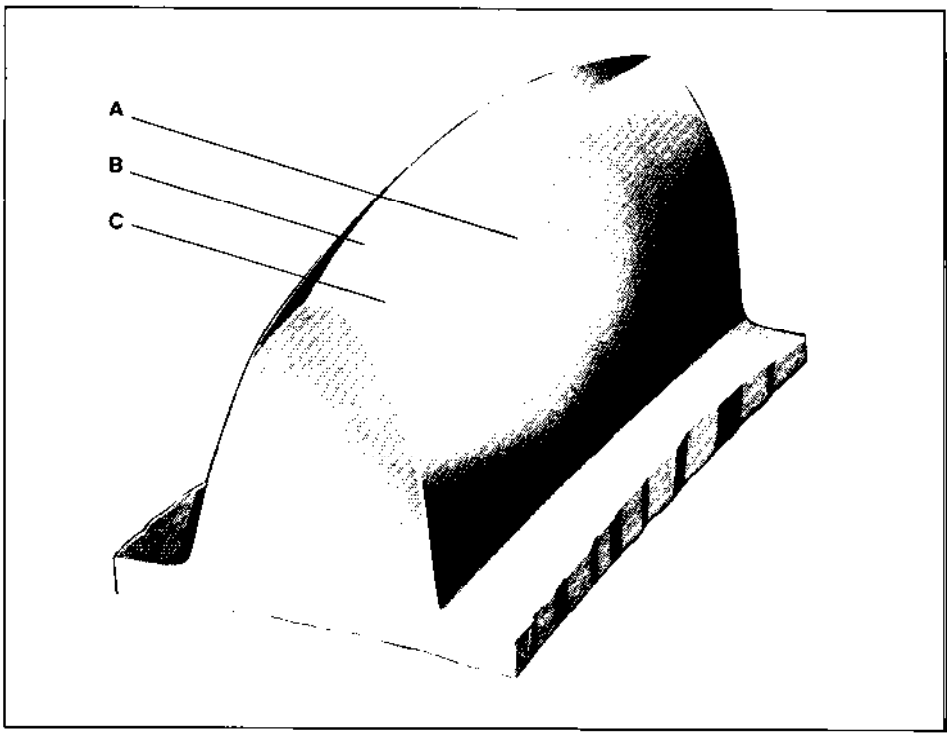
## Flexible Couplings

# Fully-Crowned Teeth
# The Basis For Gear Tooth Design

**Amerigear . . . the first, the finest . . . flexible coupling with Fully-Crowned Gear Teeth.**

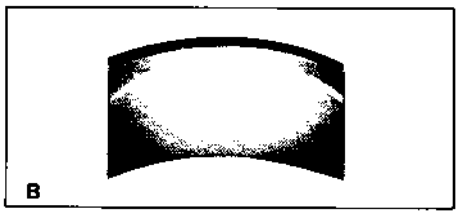
In contrast with ordinary gear tooth forms, the Amerigear Fully-Crowned Tooth represents the ultimate achievement in the art of gear tooth design, wherein all three working portions of the tooth are crowned. As a result, the teeth act much like a rocking chair, capable of sliding freely in the axial direction without digging or gouging the internal mating teeth. Because of this design advantage, Amerigear Flexible Couplings with Fully-Crowned Gear Teeth offer operational benefits of maximum load-carrying capacity with minimum size, maximum reliability and long life.

Amerigear . . . often copied, but never equaled.

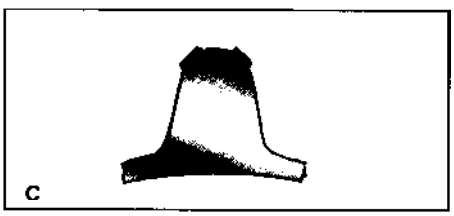




**Crowned Flanks** Flanks of the teeth are crowned so that tooth thickness is greatest at the center of the tooth. This assures larger contact area per tooth for higher torque requirements and puts more teeth in contact for a given angle. Actual tooth loading takes place near the center of the tooth face where tooth thickness is greatest. Crowned flanks also eliminate end-of-tooth loading, provide optimum load distribution, and accommodate all types of misalignment with minimum backlash, while transmitting constant velocity. This design provides good oil film characteristics for efficient lubrication.




**Crowned Tips** Tips of teeth are crowned with a radius equal to the outside of the gear element. The crowned tip contacts the root of internal gear teeth in the external sleeve, accurately piloting the sleeve with true concentric ball-and-socket action. This permits minimum diametral sleeve clearance and centers the sleeve physically to assure good dynamic balance characteristics under various loading and misalignment conditions.




**Crowned Chamfers** Faces of the teeth adjacent to the tips are chamfered to eliminate interference with the sleeve tooth fillets. This allows the true involute flanks of the gear teeth to be in contact with the sleeve teeth and assures freedom to misalign.

In accordance with our established policy to constantly improve our products, the specifications contained herein are subject to change without notice.

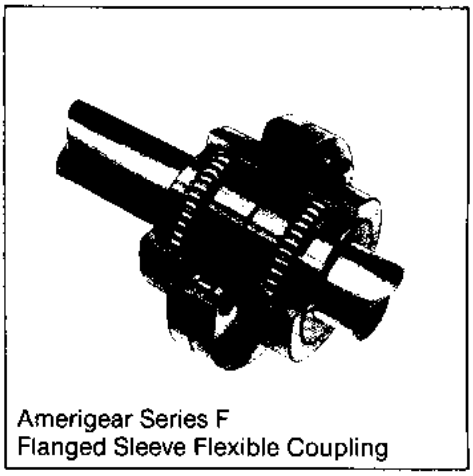
Ameridrives International
Coupling Products

# Table of Contents

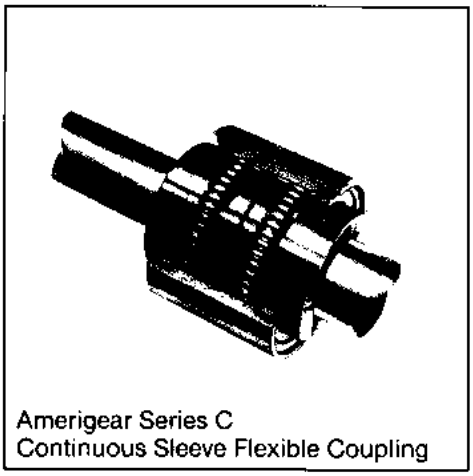


**IDENTIFICATION OF COUPLING TYPES**

F ..... Flanged Sleeve
C ..... Continuous Sleeve
FS and CS ..... Single Engagement
FM and CM ..... Mill Motor (Taper Shaft)
FMS and CMS ..... Mill Motor Single Engagement
FV and CV ..... Vertical
FVS and CVS ..... Vertical Single Engagement
FA and CA ..... Axial Travel
FAS and CAS ..... Axial Travel Single Engagement
FE ..... Extended (Spacer)
FL and CL ..... Continuously Lubricated
FEL ..... Extended, Continuously Lubricated
FR ..... Rigid
FD and FDC ..... Disconnect (Cut-out)
FB and CB ..... Brake Drum
FI ..... Insulated
FPH ..... Shear Pin
FSPH ..... Shear Pin Single Engagement



Amerigear Series F
Flanged Sleeve Flexible Coupling



Amerigear Series C
Continuous Sleeve Flexible Coupling

# Amerigear

## Flexible Couplings

## Design Advantages

**The Flexible Coupling** method of connecting rotating shafts is a vital and necessary technique. Large massive shafting, loosely mounted in sleeve bearings and merely joined together by rigidly bolted flanges, cannot provide efficient mechanical power transmission. Especially today, as machine designers and builders demand higher speeds, higher torques, and higher misalignment capacities, the need for "flexibly connecting" this equipment becomes apparent.

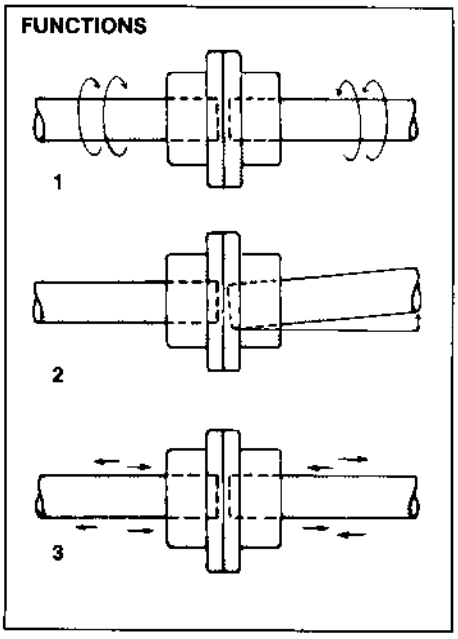
**A flexible coupling is necessary** since it is practically impossible to achieve and maintain perfect alignment of coupled rotating shafts. During initial assembly and installation, precise alignment of the shaft axes is not only difficult to achieve but in many cases it is economically unfeasible. During operation, alignment is even more difficult to maintain. Shaft misalignment — caused by uneven bearing wear, flexure of structural members, settling of foundations, thermal expansion, shaft deflection and other factors — is an operating certainty. Because these factors are extremely difficult to control, a flexible coupling serves as an ideal answer to compensate or minimize the effects of unavoidable misalignment and end movement of coupled shafts.

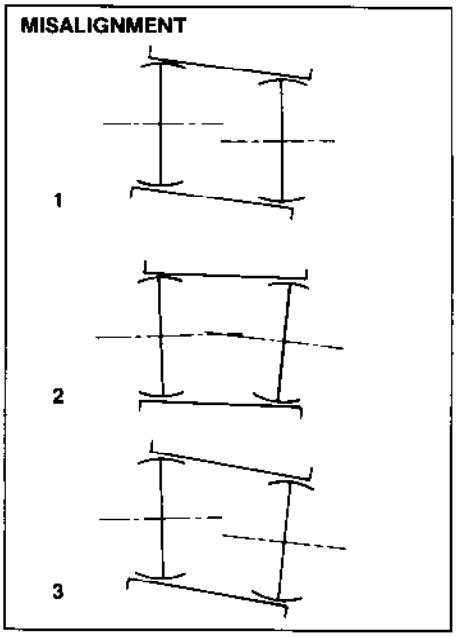
**A flexible coupling** must provide three basic functions:

1. Physically couple together two rotating shafts for efficient transmission of mechanical power, transferring the torque of one shaft to the other, directly and with constant velocity.
2. Compensate for all types of misalignment between rotating, connected shafts without inducing abnormal stresses and loads on connected equipment, and without tangible loss of power.
3. Compensate for end or axial movement of the coupled shafts, preventing either shaft from exerting excessive thrust on the other and allowing each to rotate in its normal position.

**Three types of misalignment** must be effectively accommodated by a flexible coupling.

1. Parallel Offset — axes of connected shafts are parallel, but not in the same straight line.
2. Angular — axes of shafts intersect at center point of coupling, but not in the same straight line.
3. Combined Angular-Offset — axes of shafts do not intersect at point of coupling and are not parallel.




## Amerigear®

**Amerigear Fully-Crowned Teeth (Fig. 1)** Crowned Flanks, Crowned Tips, Crowned Chamfers — recognized as the ultimate in gear tooth design and the secret of superior mechanical power transmission! Increased tooth contact area improves the load-carrying capacity of the teeth regardless of operating conditions and provides "ball-and-socket" piloting action at all misalignments. As a result, connected equipment is able to operate at higher torques, speeds, and misalignments with resultant longer life.

**Rigid, strong, "floating" sleeve (Fig. 2)** A floating sleeve, containing internally-cut gear teeth at opposite ends, is made from medium carbon steel. In effect, it provides a "bridge" between driving and driven gear meshes. It can be furnished as a continuous, one-piece sleeve . . . or made in two halves and bolted together.

**Precision-machined identical hubs (Fig. 3)** Two identical hubs, machined to close tolerances, contain external Fully-Crowned Gear Teeth which totally engage internal teeth of the sleeve. Fully-Crowned Teeth enable coupling to operate longer, with minimum backlash while assuring free axial movement of connected shafts.

**Positive dust-tight seals (Fig. 4)** Buna-N O-ring seals keep contamination out . . . vital lubricant in. They are designed to accommodate temperatures up to 250°F. For temperatures of 400°F continuous and 550°F for short periods, Viton O-ring seals are available. These are easily installed without removing coupling hub and sleeve from shafting.

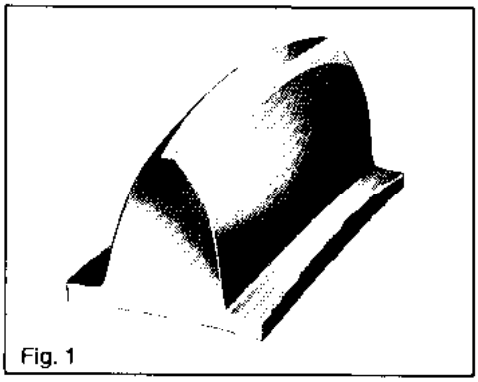


Fig. 1

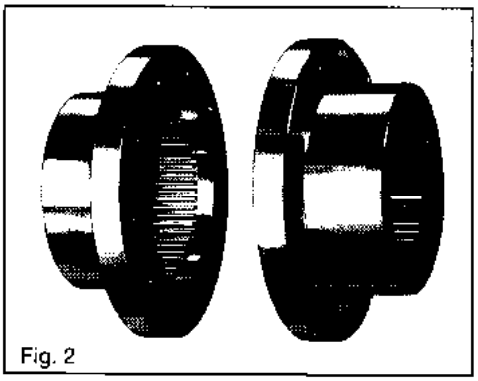


Fig. 2

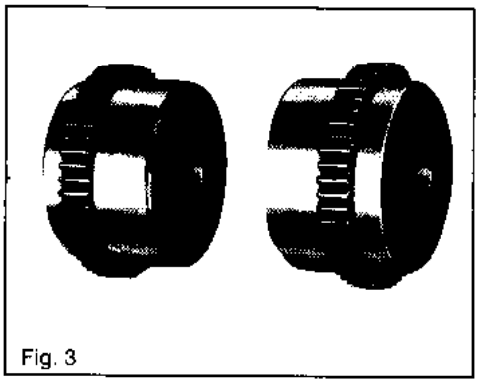


Fig. 3

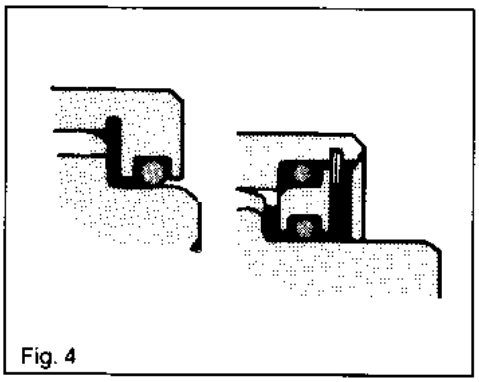
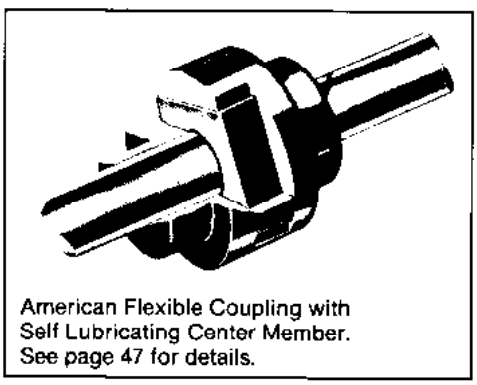


Fig. 4

## American®

**Operating advantages** The American Flexible Coupling is a simplified and efficient unit. It performs all of the required functions of a flexible coupling and compensates for angular misalignment up to ±1° in standard applications. But it will compensate for many times this amount without strain to the connected equipment or loss of power for short periods, should an unforeseen alignment condition arise. It is ideal for blind assembly or vertical applications.

The Coupling functions basically on the well-known "Oldham" principle, modified and improved to accommodate maximum shaft misalignment with greater efficiency, easy installation, inspection and servicing. It transmits torque through an intermediate square floating member, and compensates for all three types of misalignments by the combined sliding actions between the closely fitting center member and the adjacent driving and driven jaw flanges.


American Flexible Coupling with Self Lubricating Center Member.
See page 47 for details.

# Amerigear

## Flexible Couplings

## Ordering Information

1. **Obtain Shaft Sizes** Compare shaft sizes of driving and driven equipment with listed maximum bores of desired Series or Type coupling to determine "tentative" coupling size.

   NOTE: Maximum bores are listed on pages 8 and 9 for F Type couplings and on page 29 for C Type couplings.

2. **Compute effective HP/100 RPM or torque to be transmitted** Select a service factor from adjacent table. Determine HP/100 RPM as follows:

$$\text{HP/100 RPM (effective)} = \frac{\text{HP transmitted} \times 100 \times \text{S.F.}}{\text{RPM}}$$

   or determine Torque (in.-lbs.) as follows:

$$\text{Torque (effective)} = \text{HP/100 (effective)} \times 630$$

   or

$$\text{Torque (effective)} = \frac{\text{HP transmitted} \times 63{,}000 \times \text{S.F.}}{\text{RPM}}$$

   Confirm "Tentative" Coupling size or increase to a size which has a HP/100 RPM or torque rating equal to or greater than value computed above.

3. **Check Maximum Speed of Application** Refer to page 34 for maximum speed ratings. These speeds are given only as a guide, since the maximum speed depends on the system characteristics.

4. **Check Space Limitations** Dimensions of the selected coupling should be compared with space provided in the application to assure proper clearances. Shaft extensions, separation, and clearances to align coupling should be checked.

**Example** A 250-HP electric motor is to drive a centrifugal pump at 1750 RPM. Motor shaft size is 2½". Pump shaft size is 2". Bore size for Series F and Series C, Size 202 will accommodate the 2½" shaft.

$$\text{HP/100 RPM} = \frac{250 \times 100 \times 1.5}{1750} = 21.4$$

Both Series F and Series C, Size 202 have capacities of 50 HP/100 RPM.

Note: Series F and Series C, Size 202 will accommodate a 2¾" shaft with standard square key. In this example, the rating of 50 HP/100 RPM provides a large margin of safety.

**Recommended Service Factors (S.F.)**
In order to provide for the dynamic torque which must be transmitted, it may be necessary to increase the horsepower to be transmitted by a factor which will allow for momentary increases in torque due to the characteristics of the equipment. The service factors shown in the table below provide a basis for estimating this allowance for specific combination of connected equipment.

These factors are derived from lengthy service experience with average applications — and they are to be considered as a general guide. For conditions not covered by the table, good judgment must be exercised and a factor selected by referring to the type of equipment most closely approximating the type of application being considered, or by detailed analysis of the dynamics of the equipment.

| LOAD | DRIVEN EQUIPMENT | TYPE DRIVER | | |
|---|---|---|---|---|
| | | Motor or Turbine | Hydraulic Drive | Reciprocating Engine |
| UNIFORM | Centrifugal Pumps • Conveyors — Even Loaded • Exciters • Fans and Blowers — Light Duty • Generators — Even Loaded • Mixers — Liquid | 1.0 | 1.25 | 1.50 |
| LIGHT SHOCK | Centrifugal Pumps • Generators — Pulsating Load • Grinders • Hydraulic Pumps • Kilns • Line Shafting • Machine Tools • Oscillating Pumps • Textile Machinery • Woodworking Machinery | 1.5 | 1.75 | 2.0 |
| MEDIUM SHOCK | Air Compressors — Multi-Cylinder • Ball and Rod Mills • Cranes • Elevators • Hoists • Punch Presses • Reciprocating Pumps • Shears • Ship Drives • Welding Generators | 2.0 | 2.25 | 2.5 |
| HEAVY SHOCK | Air Compressors — Single Cylinder • Dredges • Drilling Rigs • Mine Machinery • Rolling Mill Drives • Rubber Mixers | 2.5 | 2.75 | 3.0 |
| EXTREME SHOCK | Ore Crushers • Barstock Shears • Vibrating Conveyors | 3.0 | 3.5 | 4.0 |

For operating speeds less than 100 RPM, service factors may be reduced depending upon application. Refer to Ameridrives International for appropriate recommendations.

### When Ordering, Specify Following Information

1. Quantity and delivery requirements.
2. Shaft or bore sizes and keyway dimensions. Give exact dimensions with tolerances.
3. Load — horsepower and/or torque at a specific RPM. State normal and maximum conditions.
4. Speed — minimum, normal and maximum.
5. Application — type of driver and driven equipment.
6. Coupling Series, Type and Size.
7. Space limitations — envelope dimensions, shaft extensions and shaft spacing.
8. Unusual misalignment conditions.
9. Modifications — setscrews, tapered bores, special keys, hub cut-off, counterbores or others.
10. Unusual operating conditions — ambient temperatures and atmospheres.

### Specify Following Information for Specific Couplings

**Series FM and CM — Mill-motor Type:** Motor frame number plus drawing detail of shaft if possible.

**Series FE — Spacer Type:** Shaft separation: Specify shrouded or exposed bolt.

**Series FS and CS — Tandem Type:** State if floating shaft to be supplied. Specify mounting arrangement and shaft spacing.

**Series FA and CA — Axial Travel Type:** Amount of travel. Shaft extension and separation.

**Series FD, FDC — Disconnect Type:** Specify which bore is to be in the disengaging hub. Describe shifting mechanism.

**Series FPH, FSPH — Shear Pin:** State shear torque and quantity of spare shear pins.

**Limited End Float Variation:** Specify allowable end float.

### Recommended Bore Tolerances

- Recommended standard bore tolerances for interference and clearance fits are shown in Tables A and B respectively.
- Bore tolerances conform to AGMA 9002-A86 standards.

**Interference Fits** Unless specified, bores will be furnished with an interference fit.

When **shaft sizes only** are stated on order and they consist of fractional or decimal dimensions without tolerance, the bore will be sized for an interference fit in accordance with Table A. If exact **shaft size** and tolerance do not agree with tables, the largest shaft dimension will be considered "basic" and the standard negative bore tolerance will be applied.

**TABLE A — INTERFERENCE FIT — INCHES**

| Nominal Bore Range | Shaft Tolerance | Bore Tolerance | Interference Range |
|---|---|---|---|
| Thru 1.5000 | +.0000<br>-.0005 | -.0005<br>-.0010 | +.0000<br>-.0010 |
| Over 1.5000 Thru 3.0000 | +.0000<br>-.0010 | -.0010<br>-.0020 | +.0000<br>-.0020 |
| Over 3.0000 Thru 4.0000 | | -.0015<br>-.0030 | -.0005<br>-.0030 |
| Over 4.0000 Thru 5.0000 | | -.0020<br>-.0035 | -.0010<br>-.0035 |
| Over 5.0000 Thru 7.0000 | | -.0025<br>-.0040 | -.0015<br>-.0040 |
| Over 7.0000 Thru 8.0000 | | -.0030<br>-.0050 | -.0020<br>-.0050 |
| Over 8.0000 Thru 9.0000 | | -.0035<br>-.0055 | -.0025<br>-.0055 |

**Clearance Fits** If **shaft sizes** are listed as fractional or decimal dimensions without tolerance, the bore will be sized in accordance with Table B. If **exact shaft** size and tolerance are given, but tolerance does not agree with Table B, the largest shaft dimension will be considered as "basic" and the standard bore tolerance will be applied.

Table B conforms to AGMA 9002-A86 Class I.

**TABLE B — CLEARANCE FIT — INCHES**

| Nominal Bore Range | Shaft Tolerance | Bore Tolerance | Clearance Range |
|---|---|---|---|
| Thru 1.5000 | +.0000<br>-.0005 | +.0010<br>-.0000 | +.0015<br>-.0000 |
| Over 1.5000 Thru 2.0000 | +.0000<br>-.0010 | +.0010<br>-.0000 | +.0020<br>-.0000 |
| Over 2.0000 Thru 6.5000 | | +.0015<br>-.0000 | +.0025<br>-.0000 |

### Example

**Shaft Size** — 2.000 (Basic Size)
1.999 (With Tolerance)

**Interference Fit**
Coupling Bore 1.999
1.998

**Clearance Fit**
Coupling Bore 2.001
2.000

**STANDARD RECOMMENDED KEYWAYS**

| Nominal Bore Range | | Coupling Keyway Inches | | |
|---|---|---|---|---|
| Over | To Include | Width | Depth Sq. Key | Depth Red. Key |
| .438 | .562 | .125 | .062 | .047 |
| .562 | .875 | .188 | .094 | .062 |
| .875 | 1.250 | .250 | .125 | .094 |
| 1.250 | 1.375 | .312 | .156 | .125 |
| 1.375 | 1.750 | .375 | .188 | .125 |
| 1.750 | 2.250 | .500 | .250 | .188 |
| 2.250 | 2.750 | .625 | .312 | .219 |
| 2.750 | 3.250 | .750 | .375 | .250 |
| 3.250 | 3.750 | .875 | .438 | .312 |
| 3.750 | 4.500 | 1.000 | .500 | .375 |
| 4.500 | 5.500 | 1.250 | .625 | .438 |
| 5.500 | 6.500 | 1.500 | .750 | .500 |
| 6.500 | 7.500 | 1.750 | .875 | .750 |
| 7.500 | 9.000 | 2.000 | 1.000 | .750 |

# Amerigear

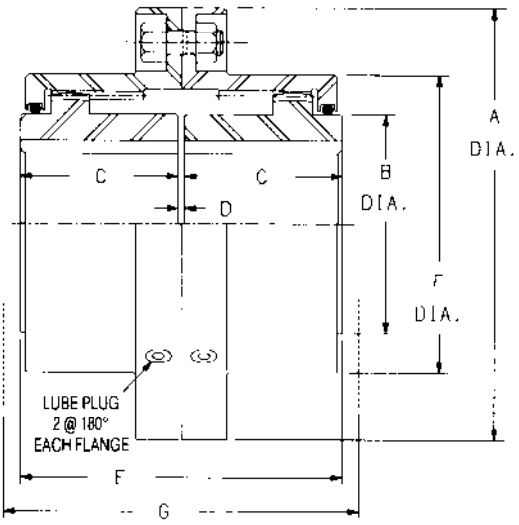
## Flexible Couplings

## Series F
## Sizes 200-207

**Flanged Sleeve — Double-Engagement Type**

**Application:** Meets requirements of all standard applications for shaft sizes up to 10.25 diameter. Compensates for all three types of misalignment.

**Description:** Amerigear 200 Series F Flexible Coupling is designed with bolted center flanges to facilitate installation and alignment. Optimum separation of gear meshes permits high parallel offset capacity. Flanged-sleeve design makes possible minimum distances between bearing housings to facilitate shaft alignment. In addition, 200 Series hubs are designed with a greater bore capacity.




**SIZES 200 THRU 207**

| F Size | Maximum Bore | | Parallel Offset Capacity | Load Capacity | | DIMENSIONS | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Square Key | Reduced Key | | HP Per 100 R.P.M. | Torque In.-Lbs. x $10^3$ | A | B | C | D | E | F | G** |
| *200 | .81 | .88 | .023 | 3 | 1.9 | 2.94 | 1.25 | 1.06 | .12 | 2.25 | 1.94 | 2.88 |
| *201 | 1.25 | 1.31 | .042 | 5 | 3.2 | 3.56 | 1.75 | 1.38 | .12 | 2.88 | 2.56 | 3.50 |
| *201¼ | 1.63 | 1.75 | .057 | 12 | 7.6 | 4.00 | 2.25 | 1.69 | .12 | 3.50 | 3.00 | 4.12 |
| 201½ | 2.25 | 2.38 | .058 | 27 | 17.0 | 6.00 | 3.12 | 1.94 | .12 | 4.00 | 3.93 | 4.75 |
| 202 | 2.75 | 2.88 | .079 | 50 | 31.5 | 7.00 | 4.00 | 2.44 | .12 | 5.00 | 4.86 | 6.00 |
| 202½ | 3.50 | 3.75 | .102 | 85 | 53.6 | 8.38 | 4.88 | 3.03 | .19 | 6.25 | 5.88 | 7.25 |
| 203 | 4.00 | 4.25 | .119 | 150 | 94.5 | 9.44 | 5.75 | 3.59 | .19 | 7.38 | 6.88 | 8.50 |
| 203½ | 4.50 | 4.75 | .142 | 225 | 142.0 | 11.00 | 6.50 | 4.19 | .25 | 8.62 | 7.90 | 10.00 |
| 204 | 5.50 | 5.88 | .164 | 340 | 214.0 | 12.50 | 7.75 | 4.75 | .25 | 9.75 | 9.24 | 11.00 |
| 204½ | 6.25 | 6.75 | .187 | 515 | 324.0 | 13.62 | 9.00 | 5.31 | .31 | 10.94 | 10.37 | 12.25 |
| 205 | 7.00 | 7.12 | .218 | 660 | 416.0 | 15.31 | 9.50 | 6.03 | .31 | 12.38 | 11.44 | 13.75 |
| 205½ | 7.50 | 7.62 | .245 | 875 | 551.0 | 16.56 | 10.50 | 6.62 | .31 | 13.56 | 12.69 | 15.25 |
| 206 | 8.25 | 8.62 | .275 | 1,190 | 750.0 | 18.00 | 11.75 | 7.41 | .31 | 15.12 | 13.75 | 16.50 |
| 207 | 9.62 | 10.25 | .314 | 1,640 | 1,033.0 | 20.75 | 13.50 | 8.69 | .38 | 17.75 | 16.00 | 19.25 |

*SIZES 200, 201 AND 201¼ FLANGE FASTENERS ARE SELF-LOCKING SOCKET HEAD CAP SCREWS — ONE FLANGE TAPPED.

SIZES 201½-205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS; EXPOSED BOLTS (EB) UPON REQUEST — NO ADDITIONAL COST. **CLEARANCE FOR ALIGNING COUPLING.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS.

MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40. CENTER FLANGE DETAILS, PAGE 41. ADDITIONAL DETAILS, PAGE 42. WEIGHTS AND WR², PAGE 38. MODIFICATIONS AND VARIATIONS, PAGES 23-28. MAXIMUM SPEEDS, PAGE 34.

COMBINED ANGULAR AND PARALLEL OFFSET SHOULD NOT EXCEED ± 1½° PER GEAR MESH.

Amerigear Flexible Couplings - Fully-Crowned Teeth For Higher Torque, Higher Speed, Higher Misalignment Capacity

All Amerigear Series F Couplings incorporate the following engineered features:

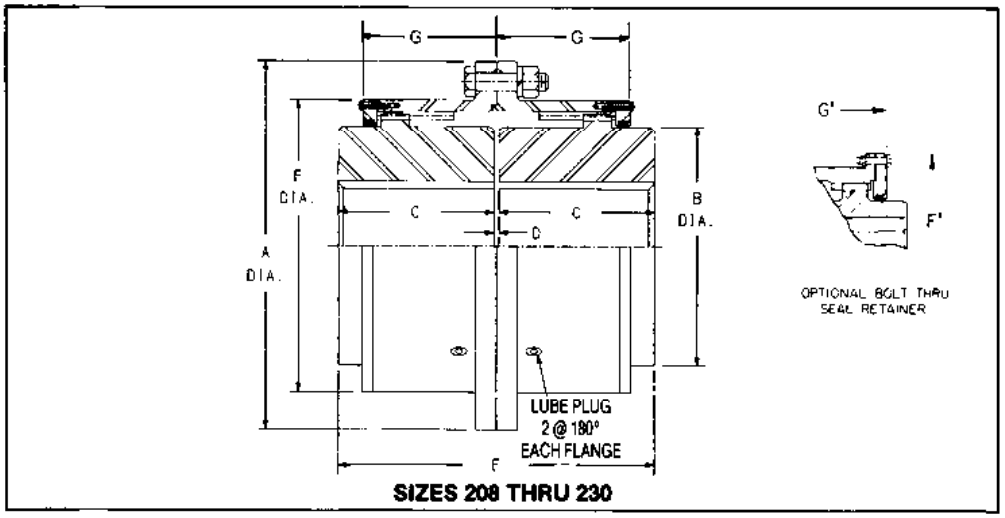
- ± 1½° angular misalignment capacity per gear mesh.
- Torque ratings at full misalignment - in excess of normal requirements for average applications.
- Accurately machined medium carbon steel hubs and sleeves.
- Positive-type O-ring seals keep lubricant in . . . contaminants out. Seals enshrouded to prevent damage.

# Series F
# Sizes 208-230

**Flanged Sleeve —**
**Double-Engagement Type**

**Application:** Meets requirements of severe service conditions and larger shaft sizes up to 46" diameter. Compensates for all three types of misalignment.

**Description:** Heavy-duty Amerigear Series F Flexible Coupling (Sizes 208-230) contains the same basic design features as Series F (Sizes 200-207), described on page 8 . . . however, misalignment capacity is ± ¾°. Major components are fully-machined from medium carbon steel.



SIZES 208 THRU 230

| F Size | LOAD CAPACITY* HP Per 100 RPM | LOAD CAPACITY* Torque In.-Lbs. x $10^6$ | Parallel Offset Capacity In. | DIMENSIONS A | B | C | D | E | F | G | Opt. Bolt Through Seal Retainer Parallel Offset | F' | G' |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 208 | 2,380 | 1.50 | .164 | 23.25 | 15.62 | 9.75 | .38 | 19.88 | 18.38 | 8.38 | .164 | 20.62 | 8.38 |
| 209 | 2,700 | 1.70 | .181 | 26.00 | 17.50 | 10.75 | .50 | 22.00 | 20.50 | 9.19 | .181 | 22.75 | 9.19 |
| 210 | 3,300 | 2.08 | .200 | 28.00 | 19.00 | 12.00 | .50 | 24.50 | 22.38 | 10.00 | .200 | 25.12 | 10.00 |
| 211 | 5,800 | 3.65 | .216 | 30.50 | 21.00 | 13.00 | .50 | 26.50 | 24.75 | 10.91 | .216 | 26.75 | 10.91 |
| 212 | 7,700 | 4.86 | .228 | 33.00 | 23.00 | 14.00 | .50 | 28.50 | 26.75 | 11.59 | .228 | 28.75 | 11.59 |
| 213 | 10,000 | 6.31 | .249 | 35.75 | 25.00 | 15.00 | .75 | 30.75 | 28.75 | 12.47 | .249 | 30.75 | 12.47 |
| 214 | 12,700 | 8.02 | .262 | 38.00 | 27.00 | 16.00 | .75 | 32.75 | 30.75 | 13.09 | .262 | 32.75 | 13.09 |
| 215 | 15,300 | 9.65 | .275 | 40.50 | 29.00 | 17.00 | .75 | 34.75 | 32.75 | 13.72 | .275 | 35.50 | 13.72 |
| 216 | 17,400 | 10.96 | .203 | 44.50 | 30.50 | 18.00 | 1.00 | 37.00 | 35.50 | 11.34 | .294 | 39.50 | 14.84 |
| 218 | 23,200 | 14.62 | .203 | 48.50 | 34.50 | 20.00 | 1.00 | 41.00 | 39.50 | 11.47 | .347 | 43.50 | 16.97 |
| 220 | 30,000 | 18.95 | .203 | 52.50 | 38.50 | 22.00 | 1.00 | 45.00 | 43.50 | 11.59 | .399 | 48.00 | 19.09 |
| 222 | 38,000 | 23.98 | .203 | 58.00 | 42.50 | 24.00 | 1.00 | 49.00 | 48.00 | 11.75 | .451 | 52.00 | 21.50 |
| 224 | 48,800 | 30.72 | .203 | 62.88 | 46.50 | 26.00 | 1.00 | 53.00 | 52.00 | 11.91 | .504 | 56.00 | 23.41 |
| 226 | 63,000 | 39.70 | .203 | 69.00 | 50.00 | 28.00 | 1.00 | 57.00 | 57.00 | 12.22 | .556 | 61.00 | 25.72 |
| 228 | 81,900 | 51.61 | .203 | 73.00 | 54.00 | 30.00 | 1.00 | 61.00 | 61.00 | 12.69 | .609 | 65.00 | 28.13 |
| 230 | 94,800 | 59.70 | .203 | 77.00 | 58.00 | 32.00 | 1.00 | 65.00 | 65.00 | 12.69 | .609 | 69.00 | 28.13 |

*IF HIGHER TORQUE CAPACITY IS REQUIRED AND SIZE IS RESTRICTED, CONSULT AMERIDRIVES INTERNATIONAL.

CENTER FLANGE DETAILS, PAGE 41. ADDITIONAL DETAILS, PAGE 43. WEIGHTS AND WR², PAGE 39. MODIFICATIONS AND VARIATIONS, PAGES 23-28. LARGER SIZES AVAILABLE. MAXIMUM SPEEDS, PAGE 34.

SIZES 208-230 HAVE EXPOSED BOLTS.

**SINGLE AND DOUBLE KEY BORE CAPACITY — FLEXIBLE HUBS**

| F Size | 1 SQUARE KEY Max. Bore Inches | Keyway W. - Inches | Keyway H. - Inches | 1 REDUCED KEY Max. Bore Inches | Keyway W. - Inches | Keyway H. - Inches | K* Inches | 2 SQUARE KEYS Max. Bore Inches | Keyways W. - Inches | Keyways H. - Inches | 2 REDUCED KEYS Max. Bore Inches | Keyways W. - Inches | Keyways H. - Inches | K* Inches |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 208 | 11.250 | 2.500 | 1.250 | 12.250 | 2.500 | .812 | 8.823 | 12.000 | 1.750 | .875 | 12.750 | 1.750 | .625 | 8.953 |
| 209 | 12.250 | 3.000 | 1.500 | 13.375 | 3.000 | 1.000 | 7.531 | 13.500 | 2.000 | 1.000 | 14.500 | 2.000 | .688 | 7.875 |
| 210 | 13.750 | 3.000 | 1.500 | 16.000 | 3.000 | 1.000 | 8.360 | 14.875 | 2.000 | 1.000 | 15.750 | 2.000 | .688 | 8.500 |
| 211 | 14.250 | 3.500 | 1.750 | 15.250 | 3.500 | 1.250 | 8.703 | 15.500 | 2.750 | 1.375 | 16.500 | 2.750 | .875 | 9.000 |
| 212 | 15.250 | 3.750 | 1.875 | 16.250 | 3.750 | 1.375 | 9.281 | 17.000 | 3.000 | 1.500 | 18.000 | 3.000 | 1.000 | 9.937 |
| 213 | 18.250 | 4.000 | 2.000 | 17.250 | 4.000 | 1.500 | 9.875 | 18.500 | 3.250 | 1.625 | 19.500 | 3.250 | 1.125 | 10.750 |
| 214 | | | | | | | | 20.000 | 3.500 | 1.750 | 21.000 | 3.500 | 1.250 | 11.625 |
| 215 | | | | | | | | 21.500 | 3.500 | 1.750 | 22.500 | 3.500 | 1.250 | 12.375 |
| 216 | | | | | | | | 23.000 | 3.750 | 1.875 | 24.000 | 3.750 | 1.375 | 13.250 |
| 218 | | | | | | | | 26.000 | 4.000 | 2.000 | 27.000 | 4.000 | 1.500 | 14.875 |
| 220 | | | | | | | | 29.000 | 4.500 | 2.250 | 30.000 | 4.500 | 1.750 | 16.562 |
| 222 | | | | | | | | 31.750 | 5.000 | 2.500 | 33.000 | 5.000 | 1.875 | 18.187 |
| 224 | | | | | | | | 34.500 | 6.000 | 3.000 | 36.000 | 6.000 | 2.250 | 20.000 |
| 226 | | | | | | | | 37.000 | 6.000 | 3.000 | 39.000 | 6.000 | 2.250 | 21.562 |
| 228 | | | | | | | | 40.000 | 6.000 | 3.000 | 42.000 | 6.000 | 2.250 | 23.062 |
| 230 | | | | | | | | 44.000 | 6.000 | 3.000 | 46.000 | 6.000 | 2.250 | 25.062 |

NOTE: SINGLE KEYS NOT RECOMMENDED FOR SIZES 214 AND LARGER. CONSULT AMERIDRIVES INTERNATIONAL IF DOUBLE KEYS NOT PRACTICAL.

*MAXIMUM DISTANCE FROM BOTTOM OF KEYWAY TO BORE AXIS.

MAXIMUM BORES AND PULLER HOLE DATA, PAGE 40.

# Amerigear

## Flexible Couplings

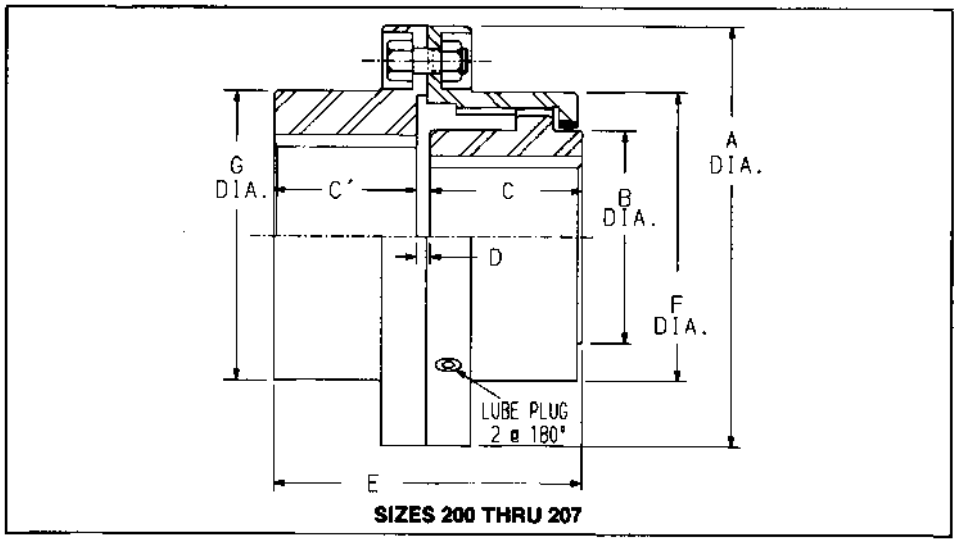
## Series FS
## Sizes 200-207

**Flanged Sleeve —**
**Single-Engagement Type**

**Application:** Used primarily in tandem pairs, connected by intermediate floating shaft . . . or as individual unit in conjunction with a driver or driven shaft having a self-aligning support bearing. When used singly, compensates for angular misalignment only.

**Description:** Amerigear Series FS Flexible Coupling consists of one standard flexible half coupling and one rigid half. The bolted center flanges facilitate installation and alignment.

If used in tandem assemblies, see page 24 for shaft sizes and page 37 for speed limits.



SIZES 200 THRU 207

| F Size | Max. Bore Flex Half | | Max. Bore Rigid Half | | Load Capacity | | DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Square Key | Reduced Key | Square Key | Reduced Key | HP Per 100 R.P.M. | Torque In.-Lbs. x $10^3$ | A | B | C | C' | D | E | F | G |
| *200 | .81 | .88 | 1.31 | 1.38 | 3 | 1.9 | 2.94 | 1.25 | 1.06 | 1.05 | .08 | 2.19 | 1.94 | 1.94 |
| *201 | 1.25 | 1.31 | 1.75 | 1.88 | 5 | 3.2 | 3.56 | 1.75 | 1.38 | 1.23 | .08 | 2.69 | 2.56 | 2.56 |
| *201¼ | 1.63 | 1.75 | 2.00 | 2.13 | 12 | 7.6 | 4.00 | 2.25 | 1.69 | 1.48 | .08 | 3.25 | 3.00 | 3.00 |
| 201½ | 2.25 | 2.38 | 2.69 | 2.88 | 27 | 17.0 | 6.00 | 3.12 | 1.94 | 1.78 | .16 | 3.88 | 3.93 | 3.93 |
| 202 | 2.75 | 2.88 | 3.25 | 3.50 | 50 | 31.5 | 7.00 | 4.00 | 2.44 | 2.28 | .16 | 4.88 | 4.86 | 4.88 |
| 202½ | 3.50 | 3.75 | 4.00 | 4.25 | 85 | 53.6 | 8.38 | 4.88 | 3.03 | 2.91 | .19 | 6.12 | 5.88 | 5.88 |
| 203 | 4.00 | 4.25 | 4.62 | 5.00 | 150 | 94.5 | 9.44 | 5.75 | 3.59 | 3.41 | .19 | 7.19 | 6.88 | 6.88 |
| 203½ | 4.50 | 4.75 | 5.38 | 5.75 | 225 | 142.0 | 11.00 | 6.50 | 4.19 | 3.97 | .22 | 8.38 | 7.90 | 7.90 |
| 204 | 5.50 | 5.88 | 6.25 | 6.75 | 340 | 214.0 | 12.50 | 7.75 | 4.75 | 4.44 | .31 | 9.50 | 9.24 | 9.24 |
| 204½ | 6.25 | 6.75 | 6.88 | 7.38 | 515 | 324.0 | 13.62 | 9.00 | 5.31 | 5.00 | .34 | 10.66 | 10.37 | 10.18 |
| 205 | 7.00 | 7.12 | 7.88 | 8.38 | 660 | 416.0 | 15.31 | 9.50 | 6.03 | 5.75 | .34 | 12.12 | 11.44 | 11.44 |
| 205½ | 7.50 | 7.62 | 8.75 | 9.25 | 875 | 551.0 | 16.56 | 10.50 | 6.62 | 6.12 | .34 | 13.09 | 12.69 | 12.69 |
| 206 | 8.25 | 8.62 | 9.38 | 9.88 | 1,190 | 750.0 | 18.00 | 11.75 | 7.41 | 7.16 | .41 | 14.97 | 13.75 | 13.75 |
| 207 | 9.62 | 10.25 | 10.75 | 11.50 | 1,640 | 1,033.0 | 20.75 | 13.50 | 8.69 | 8.44 | .50 | 17.62 | 16.00 | 15.75 |

*SIZES 200, 201 AND 201¼ FLANGE FASTENERS ARE SELF-LOCKING SOCKET HEAD CAP SCREWS - RIGID FLANGE TAPPED.

SIZES 201½ - 205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS: EXPOSED BOLTS (EB) AVAILABLE UPON REQUEST — NO ADDITIONAL COST.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS.

MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40. CENTER FLANGE DETAILS, PAGE 41. ADDITIONAL DETAILS, PAGE 42. WEIGHTS AND WR², PAGE 38. MODIFICATIONS AND VARIATIONS, PAGES 23-28. MAXIMUM SPEEDS, PAGE 34.

COMBINED ANGULAR AND PARALLEL OFFSET SHOULD NOT EXCEED ± 1½° PER GEAR MESH.

PILOT RINGS AVAILABLE. SEE PAGE 41 FOR DIMENSIONS OF PILOT RINGS.

Amerigear Flexible Couplings - Fully-Crowned Teeth For Higher Torque, Higher Speed, Higher Misalignment Capacity
All Amerigear Series FS Couplings incorporate the following engineered features:

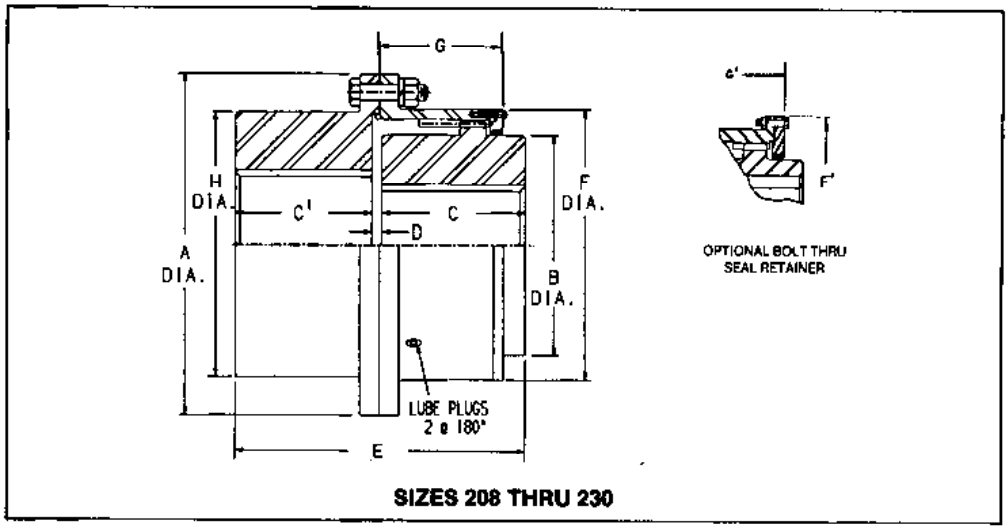
- ± 1½° angular misalignment capacity per gear mesh. Used singly, can only accommodate angular misalignment.
- Torque ratings at full misalignment - in excess of normal requirements for average applications.
- Accurately machined medium carbon steel hubs and sleeves.
- Positive-type O-ring seals keep lubricant in . . . contaminants out. Seals enshrouded to prevent damage.

# Series FS
# Sizes 208-230

**Flanged Sleeve — Single-Engagement Type**

**Application:** Meets requirements of severe service conditions and larger shaft sizes up to 49" diameter. Used primarily in tandem pairs, connected by intermediate floating shaft . . . or as individual unit in conjunction with a driver or driven shaft having a self-aligning bearing. When used singly, compensates for angular misalignment only.

**Description:** Amerigear Series FS Flexible Coupling (Sizes 208-230) contains the same basic design features as Series FS (Sizes 200-207), described on page 10 . . . however, angular misalignment capacity is ± ¾°. Major components are fully-machined from medium carbon steel.




**SIZES 208 THRU 230**

| FS Size | LOAD CAPACITY** | | DIMENSIONS | | | | | | | | | Optional Bolt Through Seal Retainer | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | HP Per 100 RPM | Torque In.-Lbs. x $10^6$ | A | B | C | C' | D | E | F | G | H | F' | G' |
| 208 | 2,380 | 1.50 | 23.25 | 15.62 | 9.75 | 9.62 | .50 | 19.88 | 18.38 | 8.38 | 18.00 | 20.62 | 8.38 |
| 209 | 2,700 | 1.70 | 26.00 | 17.50 | 10.75 | 10.69 | .56 | 22.00 | 20.50 | 9.19 | 20.00 | 22.75 | 9.19 |
| 210 | 3,300 | 2.08 | 28.00 | 19.00 | 12.00 | 11.88 | .62 | 24.50 | 22.38 | 10.00 | 22.00 | 25.12 | 10.00 |
| 211 | 5,800 | 3.65 | 30.50 | 21.00 | 13.00 | 12.88 | .62 | 26.50 | 24.75 | 10.91 | 24.75 | 26.75 | 10.91 |
| 212 | 7,700 | 4.86 | 33.00 | 23.00 | 14.00 | 13.88 | .62 | 28.50 | 26.75 | 11.59 | 26.75 | 28.75 | 11.59 |
| 213 | 10,000 | 6.31 | 35.75 | 25.00 | 15.00 | 15.00 | .75 | 30.75 | 28.75 | 12.47 | 28.75 | 30.75 | 12.47 |
| 214 | 12,700 | 8.02 | 38.00 | 27.00 | 16.00 | 16.00 | .75 | 32.75 | 30.75 | 13.09 | 30.75 | 32.75 | 13.09 |
| 215 | 15,300 | 9.65 | 40.50 | 29.00 | 17.00 | 17.00 | .75 | 34.75 | 32.75 | 13.72 | 32.75 | 35.50 | 13.72 |
| 216 | 17,400 | 10.96 | 44.50 | 30.50 | 18.00 | 18.00 | 1.00 | 37.00 | 35.50 | 11.34 | 35.50 | 39.50 | 14.84 |
| 218 | 23,200 | 14.62 | 48.50 | 34.50 | 20.00 | 20.00 | 1.00 | 41.00 | 39.50 | 11.47 | 39.50 | 43.50 | 16.97 |
| 220 | 30,000 | 18.95 | 52.50 | 38.50 | 22.00 | 22.00 | 1.00 | 45.00 | 43.50 | 11.59 | 43.50 | 48.00 | 19.09 |
| 222 | 38,000 | 23.98 | 58.00 | 42.50 | 24.00 | 23.88 | 1.12 | 49.00 | 48.00 | 11.75 | 48.00 | 52.00 | 21.50 |
| 224 | 48,800 | 30.72 | 62.88 | 46.50 | 26.00 | 25.88 | 1.12 | 53.00 | 52.00 | 11.91 | 52.00 | 56.00 | 23.41 |
| 226 | 63,000 | 39.70 | 69.00 | 50.00 | 28.00 | 27.88 | 1.12 | 57.00 | 57.00 | 12.22 | 57.00 | 61.00 | 25.72 |
| 228 | 81,900 | 51.61 | 73.00 | 54.00 | 30.00 | 29.88 | 1.12 | 61.00 | 61.00 | 12.69 | 61.00 | 65.00 | 28.13 |
| 230 | 94,800 | 59.70 | 77.00 | 58.00 | 32.00 | 31.88 | 1.12 | 65.00 | 65.00 | 12.69 | 65.00 | 69.00 | 28.13 |

*IF HIGHER TORQUE CAPACITY IS REQUIRED AND SIZE IS RESTRICTED, CONSULT AMERIDRIVES. LARGER SIZES AVAILABLE.

SIZES 208-230 HAVE EXPOSED BOLTS (EB). CENTER FLANGE DETAILS, PAGE 41. ADDITIONAL DETAILS, PAGE 43. MAXIMUM SPEEDS, PAGE 34. WEIGHTS AND WR², PAGE 39. MODIFICATIONS AND VARIATIONS, PAGES 23-28.

**MAXIMUM BORES FOR RIGID HALF**

| FS Size | 1 SQUARE KEY | | | 1 REDUCED KEY | | | | 2 SQUARE KEYS | | | 2 REDUCED KEYS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Max. Bore Inches | Keyway W. - Inches | Keyway H. - Inches | Max. Bore Inches | Keyway W. - Inches | Keyway H. - Inches | K* Single Key | Max. Bore Inches | Keyway W. - Inches | Keyway H. - Inches | Max. Bore Inches | Keyway W. - Inches | Keyway H. - Inches | K* 2 Keys |
| 208 | 11.500 | 3.000 | 1.500 | 12.500 | 3.000 | 1.000 | 7.062 | 12.375 | 2.000 | 1.000 | 13.000 | 2.000 | .688 | 7.109 |
| 209 | 12.750 | 3.250 | 1.625 | 13.750 | 3.250 | 1.125 | 7.812 | 14.000 | 2.250 | 1.125 | 14.750 | 2.250 | .750 | 8.031 |
| 210 | 14.500 | 3.500 | 1.750 | 15.250 | 3.500 | 1.250 | 8.796 | 15.500 | 2.750 | 1.375 | 16.250 | 2.750 | .875 | 8.984 |
| 211 | 15.250 | 3.750 | 1.875 | 16.250 | 3.750 | 1.375 | 9.281 | 16.750 | 3.000 | 1.500 | 17.750 | 3.000 | 1.000 | 9.750 |
| 212 | 16.250 | 4.000 | 2.000 | 17.250 | 4.000 | 1.500 | 9.828 | 18.250 | 3.250 | 1.625 | 19.250 | 3.250 | 1.125 | 10.609 |
| 213 | | | | | | | | 19.750 | 3.500 | 1.750 | 20.750 | 3.500 | 1.250 | 11.468 |
| 214 | | | | | | | | 21.500 | 3.750 | 1.875 | 22.500 | 3.750 | 1.375 | 12.468 |
| 215 | | | | | | | | 23.000 | 3.750 | 1.875 | 24.000 | 3.750 | 1.375 | 13.234 |
| 216 | | | | | | | | 24.500 | 4.000 | 2.000 | 25.500 | 4.000 | 1.500 | 14.093 |
| 218 | | | | | | | | 27.750 | 4.500 | 2.250 | 28.750 | 4.500 | 1.750 | 15.863 |
| 220 | | | | | | | | 30.500 | 5.000 | 2.500 | 31.750 | 5.000 | 1.875 | 17.546 |
| 222 | | | | | | | | 34.000 | 5.500 | 2.750 | 35.000 | 5.500 | 2.250 | 19.531 |
| 224 | | | | | | | | 37.000 | 6.000 | 3.000 | 38.000 | 6.000 | 2.500 | 21.265 |
| 226 | | | | | | | | 40.000 | 6.500 | 3.250 | 41.000 | 6.500 | 2.750 | 23.000 |
| 228 | | | | | | | | 44.000 | 6.500 | 3.250 | 45.000 | 6.500 | 2.750 | 25.062 |
| 230 | | | | | | | | 48.000 | 7.000 | 3.500 | 49.000 | 7.000 | 3.000 | 27.250 |

FOR FLEXIBLE HUB BORE CAPACITY (PAGE 9) AND PULLER HOLE DATA (PAGE 40) USE INFORMATION FOR SERIES F.

If used in tandem assemblies, consult Ameridrives for shaft size and speed limits

*MAXIMUM DISTANCE FROM BOTTOM OF KEYWAY TO BORE AXIS. REFERENCE DRAWING ON PAGE 40.

# Amerigear

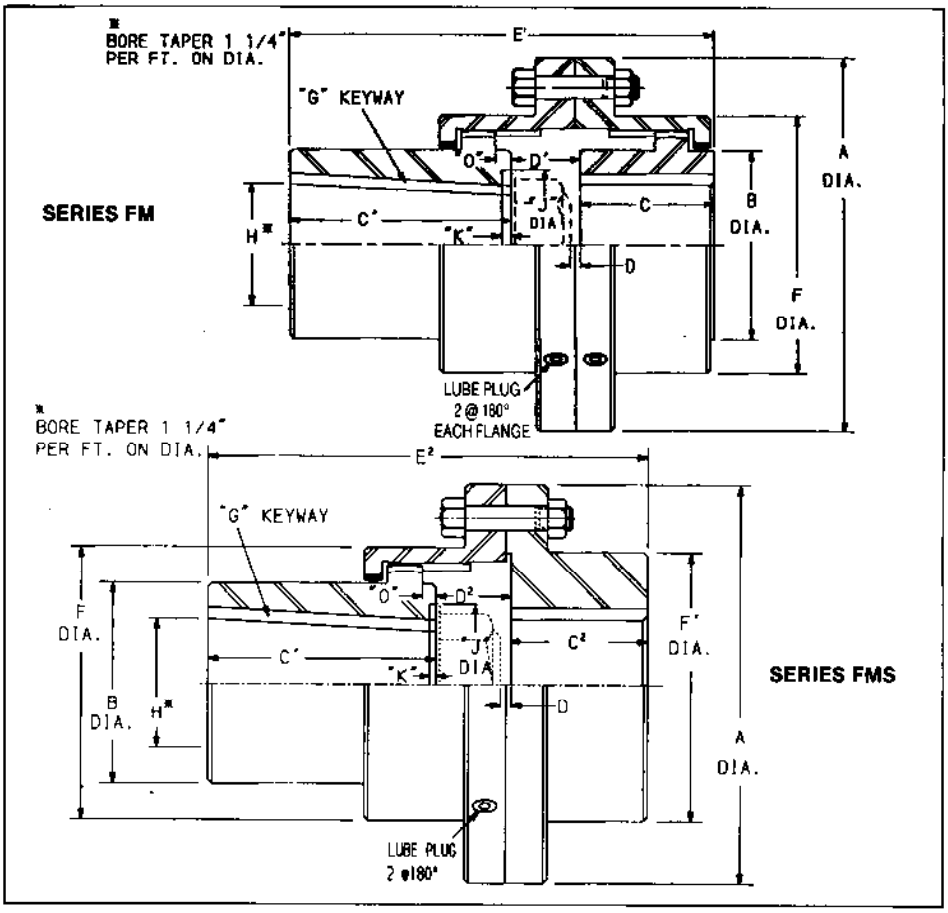
## Flexible Couplings

## Series FM, FMS
## Sizes 201½-206

**Flanged Sleeve —**
**Double- and Single-Engagement Mill Motor Type**

**Application:** Designed for modern mill motor applications and standards demanding quick change-out of equipment for continuous and uninterrupted operation.

**Description:** Amerigear Series FM and FMS Flexible Couplings are designed with bolted center flanges to facilitate installation and alignment. Optimum separation of gear meshes permits relatively high parallel offset capacity. Flanged-sleeve design makes possible minimum distances between bearing housings to facilitate shaft alignment.




| FM, FMS Size | Load Capacity | | Parallel Offset Capacity In. | DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | HP Per 100 RPM | Torque In.-Lbs. x $10^3$ | | A | B | F | F' | FM C | FM D | FMS $C^2$ | FMS D |
| 201½ | 27 | 17.0 | .058 | 6.00 | 3.12 | 3.94 | 3.88 | 1.94 | .12 | 1.78 | .16 |
| 202 | 50 | 31.5 | .079 | 7.00 | 4.00 | 4.86 | 4.88 | 2.44 | .12 | 2.28 | .16 |
| 202½ | 85 | 53.6 | .102 | 8.38 | 4.88 | 5.88 | 5.75 | 3.03 | .19 | 2.91 | .19 |
| 203 | 150 | 94.5 | .119 | 9.44 | 5.75 | 6.88 | 6.81 | 3.59 | .19 | 3.41 | .19 |
| 203½ | 225 | 142.0 | .142 | 11.00 | 6.50 | 7.91 | 7.75 | 4.19 | .25 | 3.97 | .22 |
| 204 | 340 | 214.0 | .164 | 12.50 | 7.75 | 9.25 | 9.06 | 4.75 | .25 | 4.44 | .31 |
| 204½ | 515 | 324.0 | .187 | 13.62 | 9.00 | 10.41 | 10.19 | 5.31 | .31 | 5.00 | .34 |
| 205 | 660 | 416.0 | .218 | 15.31 | 9.50 | 11.44 | 11.38 | 6.03 | .31 | 5.75 | .34 |
| 205½ | 875 | 551.0 | .245 | 16.56 | 10.50 | 12.69 | 12.50 | 6.62 | .31 | 6.12 | .34 |
| 206 | 1,190 | 750.0 | .275 | 18.00 | 11.75 | 13.75 | 13.50 | 7.41 | .31 | 7.16 | .41 |

Amerigear Flexible Couplings - Fully-Crowned Teeth For Higher Torque, Higher Speed, Higher Misalignment Capacity

All Amerigear Series FM-FMS Couplings incorporate the following engineered features:

- Series FM compensates for all three types of misalignment. Series FMS compensates for angular misalignment.
- ± 1½° angular misalignment capacity per gear mesh.
- Torque ratings at full 1½° misalignment.
- Accurately machined medium carbon steel hubs and sleeves.
- Positive-type O-ring seals keep lubricant in . . . contaminants out. Seals enshrouded to prevent damage.

| FM, FMS Size | AISE Frame No. | | DIMENSIONS | | | | | | VARIABLE DIMENSIONS | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | | | G | H Bore | FM | | FMS | |
| | | | C' | O | K | J | Keyway | @ Large End | D' | E' | $D^2$ | $E^2$ |
| 201½ | 602 | 802 | 3.16 | — | .16 | 2.81 | .500 × .250 | 1.7485/1.7495 | .91 | 6.00 | .94 | 5.88 |
| | 603, 604 | 803, 804 | 3.72 | — | .22 | 2.81 | .500 × .250 | 1.998/1.999 | .91 | 6.56 | .94 | 6.44 |
| 202 | 602 | 802 | 3.00 | .19 | | | .500 × .250 | 1.7485/1.7495 | 1.06 | 6.50 | 1.09 | 6.38 |
| | 603, 604 | 803, 804 | 3.50 | .12 | | | .500 × .250 | 1.998/1.999 | 1.12 | 7.06 | 1.16 | 6.94 |
| | 606 | 806 | 4.00 | — | | | .500 × .250 | 2.498/2.499 | 1.25 | 7.69 | 1.28 | 7.56 |
| 202½ | 602 | 802 | 3.00 | .55 | | | .500 × .250 | 1.7485/1.7495 | 1.12 | 7.16 | 1.12 | 7.03 |
| | 603, 604 | 803, 804 | 3.50 | .48 | | | .500 × .250 | 1.998/1.999 | 1.19 | 7.72 | 1.19 | 7.59 |
| | 606 | 806 | 4.00 | .36 | | | .500 × .250 | 2.498/2.499 | 1.31 | 8.34 | 1.31 | 8.22 |
| | 608 | 808 | 4.50 | .23 | | | .750 × .250 | 2.998/2.999 | 1.44 | 8.97 | 1.44 | 8.84 |
| | 610 | 810 | 4.50 | .11 | | | .750 × .250 | 3.248/3.249 | 1.56 | 9.09 | 1.56 | 8.97 |
| | 612 | 812 | 5.02 | — | .015 | 4.25 | .750 × .250 | 3.623/3.624 | 1.67 | 9.72 | 1.67 | 9.59 |
| 203 | 604 | 804 | 3.50 | .75 | | | .500 × .250 | 1.998/1.999 | 1.19 | 8.28 | 1.19 | 8.09 |
| | 606 | 806 | 4.00 | .62 | | | .500 × .250 | 2.498/2.499 | 1.31 | 8.91 | 1.31 | 8.72 |
| | 608 | 808 | 4.50 | .50 | | | .750 × .250 | 2.998/2.999 | 1.44 | 9.53 | 1.44 | 9.34 |
| | 610 | 810 | 4.50 | .38 | | | .750 × .250 | 3.248/3.249 | 1.56 | 9.66 | 1.56 | 9.47 |
| | 612 | 812 | 5.00 | .25 | | | .750 × .250 | 3.623/3.624 | 1.69 | 10.28 | 1.69 | 10.09 |
| | 614 | 814 | 5.00 | .12 | | | 1.000 × .375 | 4.2470/4.2485 | 1.81 | 10.41 | 1.81 | 10.22 |
| 203½ | 606 | 806 | 4.00 | .97 | | | .500 × .250 | 2.498/2.499 | 1.38 | 9.50 | 1.34 | 9.31 |
| | 608 | 808 | 4.50 | .84 | | | .750 × .250 | 2.998/2.999 | 1.50 | 10.19 | 1.47 | 9.94 |
| | 610 | 810 | 4.50 | .72 | | | .750 × .250 | 3.248/3.249 | 1.62 | 10.31 | 1.59 | 10.06 |
| | 612 | 812 | 5.00 | .59 | | | .750 × .250 | 3.623/3.624 | 1.75 | 10.94 | 1.72 | 10.69 |
| | 614 | 814 | 5.00 | .47 | | | 1.000 × .375 | 4.2470/4.2485 | 1.88 | 11.06 | 1.84 | 10.81 |
| | 616 | 816 | 5.50 | .34 | | | 1.250 × .375 | 4.6220/4.6235 | 2.00 | 11.69 | 1.97 | 11.44 |
| 204 | 610 | 810 | 4.50 | 1.06 | | | .750 × .250 | 3.248/3.249 | 1.62 | 10.88 | 1.69 | 10.62 |
| | 612 | 812 | 5.00 | .94 | | | .750 × .250 | 3.623/3.624 | 1.75 | 11.50 | 1.81 | 11.25 |
| | 614 | 814 | 5.00 | .81 | | | 1.000 × .375 | 4.2470/4.2485 | 1.88 | 11.62 | 1.94 | 11.38 |
| | 616 | 816 | 5.50 | .69 | | | 1.250 × .375 | 4.6220/4.6235 | 2.00 | 12.25 | 2.06 | 12.00 |
| | 618 | 818 | 6.00 | 1.12 | | | 1.250 × .500 | 4.9970/4.9985 | 1.56 | 12.31 | 1.62 | 12.06 |
| 204½ | 612 | 812 | 5.00 | 1.30 | | | .750 × .250 | 3.623/3.624 | 1.81 | 12.12 | 1.84 | 11.84 |
| | 614 | 814 | 5.00 | 1.17 | | | 1.000 × .375 | 4.2470/4.2485 | 1.94 | 12.25 | 1.97 | 11.97 |
| | 616 | 816 | 5.50 | 1.05 | | | 1.250 × .375 | 4.6220/4.6235 | 2.06 | 12.88 | 2.09 | 12.59 |
| | 618 | 818 | 6.00 | 1.48 | | | 1.250 × .500 | 4.9970/4.9985 | 1.62 | 12.94 | 1.66 | 12.66 |
| | 620 | — | 6.75 | 1.05 | | | 1.500 × .750 | 5.8720/5.8735 | 2.06 | 14.12 | 2.09 | 13.84 |
| 205 | 614 | 814 | 5.00 | 1.70 | | | 1.000 × .375 | 4.2470/4.2485 | 1.94 | 12.97 | 1.97 | 12.72 |
| | 616 | 816 | 5.50 | 1.58 | | | 1.250 × .375 | 4.6220/4.6235 | 2.06 | 13.59 | 2.09 | 13.34 |
| | 618 | 818 | 6.00 | 2.02 | | | 1.250 × .500 | 4.9970/4.9985 | 1.62 | 13.66 | 1.66 | 13.41 |
| | 620 | — | 6.75 | 1.58 | | | 1.500 × .750 | 5.8720/5.8735 | 2.06 | 14.84 | 2.09 | 14.59 |
| | 622 | — | 7.25 | .95 | | | 1.500 × .750 | 6.2470/6.2485 | 2.69 | 15.97 | 2.72 | 15.72 |
| 205½ | 616 | 816 | 5.50 | 2.03 | | | 1.250 × .375 | 4.6220/4.6235 | 2.06 | 14.19 | 2.09 | 13.72 |
| | 618 | 818 | 6.00 | 2.47 | | | 1.250 × .500 | 4.9970/4.9985 | 1.62 | 14.25 | 1.66 | 13.78 |
| | 620 | — | 6.75 | 2.03 | | | 1.500 × .750 | 5.8720/5.8735 | 2.06 | 15.44 | 2.09 | 14.97 |
| | 622 | — | 7.25 | 1.41 | | | 1.500 × .750 | 6.2470/6.2485 | 2.69 | 16.56 | 2.72 | 16.09 |
| | 624 | — | 9.25 | 1.41 | | | 1.500 × .750 | 6.9970/6.9985 | 2.69 | 18.56 | 2.72 | 18.09 |
| 206 | 616 | 816 | 5.50 | 2.53 | | | 1.250 × .375 | 4.6220/4.6235 | 2.06 | 14.97 | 2.16 | 14.81 |
| | 618 | 818 | 6.00 | 2.97 | | | 1.250 × .500 | 4.9970/4.9985 | 1.62 | 15.03 | 1.72 | 14.88 |
| | 620 | — | 6.75 | 2.53 | | | 1.500 × .750 | 5.8720/5.8735 | 2.06 | 16.22 | 2.16 | 16.06 |
| | 622 | — | 7.25 | 1.91 | | | 1.500 × .750 | 6.2470/6.2485 | 2.69 | 17.34 | 2.78 | 17.19 |
| | 624 | — | 9.25 | 1.91 | | | 1.500 × .750 | 6.9970/6.9985 | 2.69 | 19.34 | 2.78 | 19.19 |

ALL MILL MOTOR FLANGES HAVE EXPOSED BOLTS (EB). MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40.

FOR FRAME SIZES NOT SHOWN IN AISE COLUMN AND FOR OTHER TAPER BORE APPLICATIONS, SIZE COUPLING USING LOAD CAPACITIES ON PAGE 12 AND SERVICE FACTORS ON PAGE 6.

MODIFICATIONS AND VARIATIONS, PAGES 23-28.

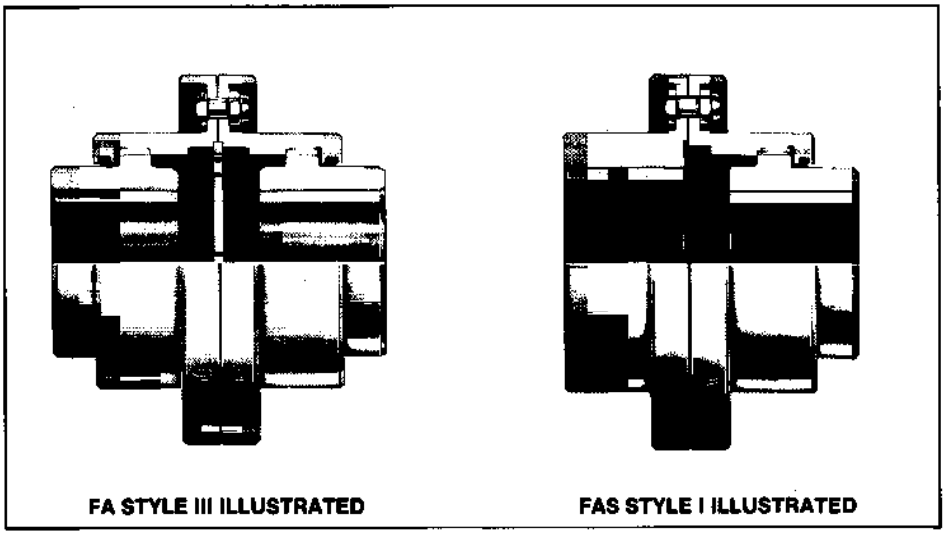
MAXIMUM SPEEDS, PAGE 34.

# Amerigear

## Flexible Couplings

## Series FA, FAS

A multitude of applications exist for axial travel or "slide" couplings. All gear-type couplings permit a minimal amount of travel to accommodate for bearing wear, shaft or rotor float, or thermal expansions. But many drive systems require a greater amount of travel. To fill these requirements Ameridrives has developed a series of axial travel couplings to accommodate most travel requirements. The FA Series includes three coupling styles. The FAS Series includes two styles. The chart below shows the make up of each. If further assistance is required in selecting or designing a coupling with axial travel capacity other than what is shown, consult Ameridrives or your local sales office.



FA STYLE III ILLUSTRATED

FAS STYLE I ILLUSTRATED

| Axial Coupling Type | Style No. | END A | | END B | |
|---|---|---|---|---|---|
| | | Hub Type | Sleeve Type | Hub Type | Sleeve Type |
| FA | I | Standard Hub Modified | Standard | Universal Hub Modified | Standard |
| FA | III | Universal Hub Modified | Standard | Universal Hub Modified | Standard |
| FA | X | Standard | Standard | Special | Long - w/Lip Seal |
| FAS | I | Rigid | — | Universal Hub Modified | Standard |
| FAS | V | Rigid | — | Special | Long - w/Lip Seal |

Amerigear Flexible Couplings - Fully-Crowned Teeth For Higher Torque, Higher Speed, Higher Misalignment Capacity
All Amerigear Series FA and FAS Couplings incorporate the following engineered features:

- Fully-Crowned Gear Teeth—assures smooth action when adjusting for axial displacement with minimum resistance to slide.
- ± ½° angular misalignment capacity per gear mesh. If greater capacity is required, consult Ameridrives.
- Accurately machined medium carbon steel hubs and sleeves.
- Positive-type O-ring seals keep lubricant in... contaminants out. Seals enshrouded to prevent damage.
- Many Series FA hubs are modified standard stock components.
- Many designs available to accommodate most travel requirements.

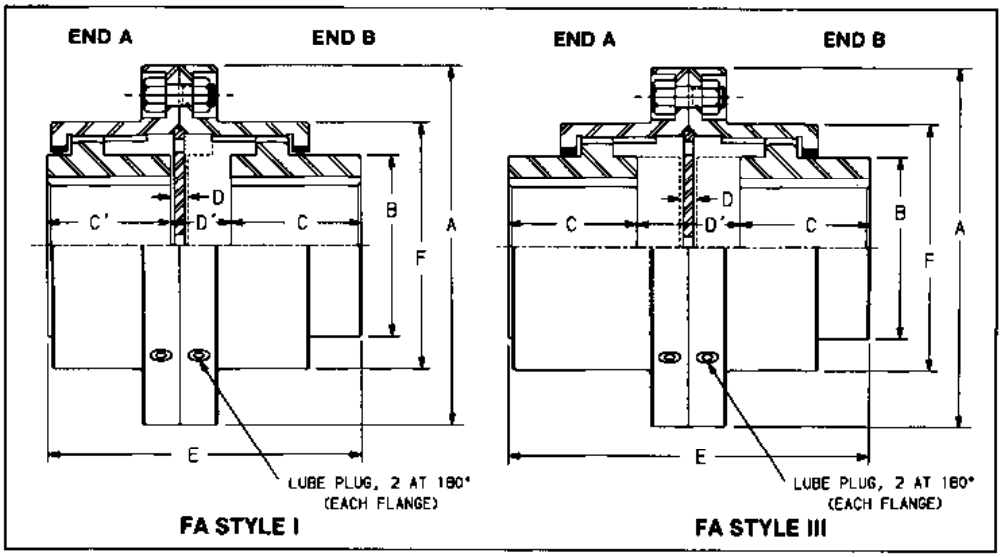
# Series FA, Style I, III
# Sizes 201½-207

**Style I**
**End A**
Standard Hub Modified
Standard Sleeve

**End B**
Universal Hub Modified
Standard Sleeve

**Style III**
**End A**
Universal Hub Modified
Standard Sleeve

**End B**
Universal Hub Modified
Standard Sleeve




| FA Style I Size | *** Parallel Offset Capacity | DIMENSIONS A | B | C | C' | D | D' | E | F | Max. Travel |
|---|---|---|---|---|---|---|---|---|---|---|
| 201½ | .016 | 6.00 | 3.12 | 1.94 | 1.84 | .31 | .64 | 4.42 | 3.94 | .33 |
| 202 | .020 | 7.00 | 4.00 | 2.44 | 2.34 | .31 | .98 | 5.76 | 4.86 | .67 |
| 202½ | .026 | 8.38 | 4.88 | 3.03 | 2.94 | .38 | 1.30 | 7.26 | 5.88 | .92 |
| 203 | .029 | 9.44 | 5.75 | 3.59 | 3.50 | .38 | 1.61 | 8.70 | 6.88 | 1.23 |
| 203½ | .035 | 11.00 | 6.50 | 4.19 | 4.09 | .44 | 1.91 | 10.19 | 7.91 | 1.47 |
| 204 | .039 | 12.50 | 7.75 | 4.75 | 4.56 | .62 | 2.42 | 11.73 | 9.25 | 1.80 |
| 204½ | .046 | 13.62 | 9.00 | 5.31 | 5.12 | .69 | 2.52 | 12.95 | 10.41 | 1.83 |
| 205 | .053 | 15.31 | 9.50 | 6.03 | 5.84 | .69 | 2.98 | 14.86 | 11.44 | 2.30 |
| 205½ | .058 | 16.56 | 10.50 | 6.62 | 6.44 | .69 | 3.47 | 16.53 | 12.69 | 2.78 |
| 206 | .069 | 18.00 | 11.75 | 7.41 | 7.16 | .81 | 3.34 | 17.91 | 13.75 | 2.53 |
| 207 | .084 | 20.75 | 13.50 | 8.69 | 8.38 | 1.00 | 3.62 | 20.69 | 16.00 | 2.62 |

| FA Style III Size | *** Parallel Offset Capacity | DIMENSIONS A | B | C | D | D' | E | F | Max. Travel |
|---|---|---|---|---|---|---|---|---|---|
| 201½ | .013 | 6.00 | 3.12 | 1.94 | .31 | .97 | 4.84 | 3.94 | .66 |
| 202 | .014 | 7.00 | 4.00 | 2.44 | .31 | 1.66 | 6.53 | 4.86 | 1.34 |
| 202½ | .018 | 8.38 | 4.88 | 3.03 | .38 | 2.22 | 8.28 | 5.88 | 1.84 |
| 203 | .018 | 9.44 | 5.75 | 3.59 | .38 | 2.84 | 10.03 | 6.88 | 2.46 |
| 203½ | .022 | 11.00 | 6.50 | 4.19 | .44 | 3.38 | 11.75 | 7.91 | 2.94 |
| 204 | .023 | 12.50 | 7.75 | 4.75 | .62 | 4.22 | 13.72 | 9.25 | 3.60 |
| 204½ | .030 | 13.62 | 9.00 | 5.31 | .69 | 4.34 | 14.97 | 10.41 | 3.66 |
| 205 | .032 | 15.31 | 9.50 | 6.03 | .69 | 5.28 | 17.34 | 11.44 | 4.80 |
| 205½ | .033 | 16.56 | 10.50 | 6.62 | .69 | 6.25 | 19.50 | 12.69 | 5.56 |
| 206 | .047 | 18.00 | 11.75 | 7.41 | .81 | 5.88 | 20.69 | 13.75 | 5.06 |
| 207 | .061 | 20.75 | 13.50 | 8.69 | 1.00 | 6.25 | 23.62 | 16.00 | 5.25 |

***COMBINED ANGULAR AND PARALLEL OFFSET SHOULD NOT EXCEED ± ½° PER GEAR MESH.

SIZES 201½ - 205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS; EXPOSED BOLTS (EB) AVAILABLE UPON REQUEST — NO ADD'L. COST.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS; SHROUDED BOLTS (SB) UPON REQUEST — NO ADD'L. COST.

FOR MAXIMUM BORES AND LOAD CAPACITY, USE SERIES F INFORMATION, PAGE 8.
MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40. CENTER FLANGE DETAILS, PAGE 41.

TRAVEL AND DIMENSION "E" MAY BE DECREASED BY VARYING D AND D' (CONSULT AMERIDRIVES). MAX. SPEEDS, PAGE 34.

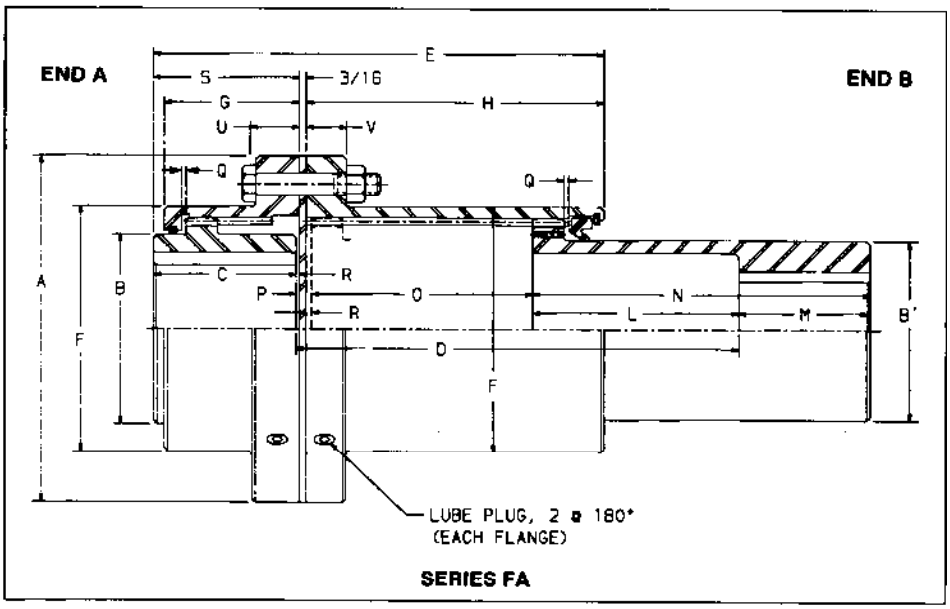
# Amerigear

## Flexible Couplings

## Series FA, Style X
## Sizes 204-207

**Style X**
**End A**
Standard Hub
Standard Sleeve

**End B**
Special Hub
Long Sleeve with Lip Seal



SERIES FA

| FA Coupling Size Style X | Max. Bore Flex Half End "B" Square Key | A | E | G | F | S | B | B' | C, M | H | L |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 204 | 4.50 | 12.50 | 17.89 | 4.46 | 9.25 | 4.87 | 7.75 | 7.00 | 4.75 | 12.83 | 8.75 |
| 204½ | 5.50 | 13.62 | 19.28 | 4.98 | 10.41 | 5.47 | 9.00 | 8.38 | 5.31 | 13.62 | 8.44 |
| 205 | 6.31 | 15.31 | 20.41 | 5.67 | 11.44 | 6.19 | 9.50 | 9.00 | 6.03 | 14.03 | 8.22 |
| 205½ | 6.88 | 16.56 | 21.06 | 6.25 | 12.69 | 6.78 | 10.50 | 10.00 | 6.62 | 14.09 | 7.69 |
| 206 | 7.50 | 18.00 | 21.62 | 6.89 | 13.75 | 7.56 | 11.75 | 11.00 | 7.41 | 14.01 | 6.91 |
| 207 | 9.00 | 20.75 | 23.37 | 7.81 | 16.00 | 8.87 | 13.50 | 13.00 | 8.69 | 14.31 | 6.06 |

| FA Coupling Size Style X | N | U | V | O Maximum Travel | P Hub-To-Hub | | Q | R | D Shaft-To-Shaft | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | | | Min. | Max. | | | Min. | Max. |
| 204 | 13.50 | 1.06 | .87 | 10.62 | .44 | 11.06 | .14 | .12 | 8.81 | 19.44 |
| 204½ | 13.75 | 1.06 | .87 | 11.00 | .50 | 11.50 | .16 | .16 | 8.94 | 19.94 |
| 205 | 14.25 | 1.50 | 1.31 | 11.00 | .50 | 11.50 | .19 | .16 | 8.72 | 19.72 |
| 205½ | 14.31 | 1.50 | 1.31 | 11.00 | .50 | 11.50 | .19 | .16 | 8.19 | 19.19 |
| 206 | 14.31 | 1.00 | .81 | 10.50 | .50 | 11.00 | .22 | .16 | 7.41 | 17.91 |
| 207 | 14.75 | 1.12 | .94 | 10.50 | .56 | 11.06 | .31 | .19 | 6.56 | 17.12 |

FOR DIMENSIONS "B" AND "C", SEE PAGE 8.

FURNISHED WITH EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS; SHROUDED BOLTS (SB) UPON REQUEST — AT ADDITIONAL COST.

FOR LOAD CAPACITY, USE SERIES F INFORMATION, PAGE 8.

PARALLEL OFFSET CAPACITY SHOULD BE CALCULATED WITH HUB SPACING AT "P" (MIN.), SEE PAGE 39. COMBINED ANGULAR AND PARALLEL OFFSET SHOULD NOT EXCEED ± ½° PER GEAR MESH.

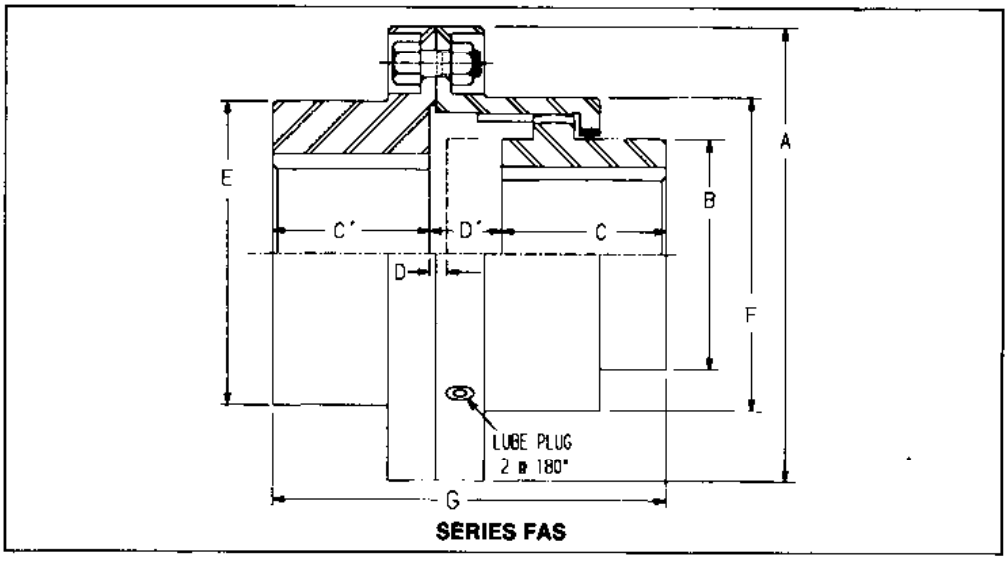
FOR "A" END HUB, MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40.

TRAVEL (DIMENSION "O") MAY BE DECREASED BY VARYING "P" (CONSULT AMERIDRIVES).

MAXIMUM SPEEDS, PAGE 34.

# Series FAS, Style I
# Sizes 201½-207

**Flanged Sleeve —**
**Single-Engagement Axial Type**
**Style I**
**End A**
Rigid Half
**End B**
Universal Hub Modified
Standard Sleeve



SERIES FAS

| FAS STYLE I Size | DIMENSIONS | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|
| | A | B | C | C' | D | D' | E | F | G | Axial Travel |
| 201½ | 6.00 | 3.12 | 1.94 | 1.78 | .16 | .48 | 3.88 | 3.94 | 4.20 | .33 |
| 202 | 7.00 | 4.00 | 2.44 | 2.28 | .16 | .83 | 4.88 | 4.86 | 5.55 | .67 |
| 202½ | 8.38 | 4.88 | 3.03 | 2.91 | .19 | 1.11 | 5.75 | 5.88 | 7.05 | .92 |
| 203 | 9.44 | 5.75 | 3.59 | 3.41 | .19 | 1.42 | 6.81 | 6.88 | 8.42 | 1.23 |
| 203½ | 11.00 | 6.50 | 4.19 | 3.97 | .22 | 1.69 | 7.75 | 7.91 | 9.84 | 1.47 |
| 204 | 12.50 | 7.75 | 4.75 | 4.44 | .31 | 2.11 | 9.06 | 9.25 | 11.30 | 1.80 |
| 204½ | 13.62 | 9.00 | 5.31 | 5.00 | .34 | 2.17 | 10.19 | 10.41 | 12.48 | 1.83 |
| 205 | 15.31 | 9.50 | 6.03 | 5.75 | .34 | 2.64 | 11.38 | 11.44 | 14.42 | 2.30 |
| 205½ | 16.56 | 10.50 | 6.62 | 6.12 | .34 | 3.12 | 12.50 | 12.69 | 15.88 | 2.78 |
| 206 | 18.00 | 11.75 | 7.41 | 7.16 | .41 | 3.19 | 13.50 | 13.75 | 17.75 | 2.78 |
| 207 | 20.75 | 13.50 | 8.69 | 8.44 | .50 | 3.44 | 15.75 | 16.00 | 20.56 | 2.94 |

SIZES 201½ - 205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS; EXPOSED BOLTS (EB) UPON REQUEST — NO ADDITIONAL COST.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS.

ANGULARITY SHOULD NOT EXCEED ± ½° PER GEAR MESH AT SHAFT SPACING OF "D".

MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40. CENTER FLANGE DETAILS, PAGE 41.

FOR MAXIMUM BORES AND LOAD CAPACITY, USE SERIES FS INFORMATION, PAGE 10. MAXIMUM SPEEDS, PAGE 34.

Amerigear Flexible Couplings - Fully-Crowned Teeth For Higher Torque, Higher Speed, Higher Misalignment Capacity

All Amerigear Series FAS Couplings incorporate the following engineered features:

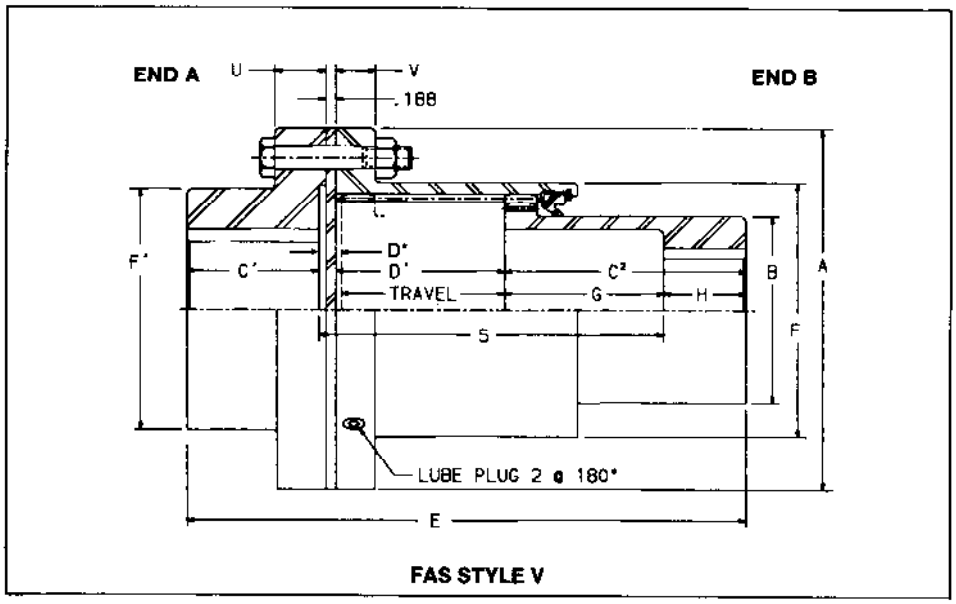
- Fully-Crowned Gear Teeth — assures smooth action when adjusting for axial displacement with minimum resistance to slide.
- ± ½° angular misalignment capacity per gear mesh at minimum separation of hub and rigid half. When used in tandem pairs and connected by an intermediate floating shaft, amount of offset misalignment capacity is determined by the distance between gear meshes. By mounting flexible halves on floating shaft, advantage may be taken of larger bore capacity of rigid half. By mounting rigid halves on floating shaft, more parallel offset is available. See page 39 for calculations.
- Accurately machined medium carbon steel hubs and sleeves.
- Positive-type O-ring seals keep lubricant in . . . contaminants out. Seals enshrouded to prevent damage.
- Many designs available to accommodate most travel requirements.

# Amerigear

## Flexible Couplings

## Series FAS, Style V
## Sizes 204-207

**Style V**
**End A**
Rigid Half
**End B**
Special Hub
Long Sleeve with Lip Seal




FAS STYLE V

*SEE PAGE 10 FOR "D" DIMENSION AND ADD .188 FOR PLATE THICKNESS.

| FAS Style V Size | FLEX HALF Max. Bore Square Key | RIGID HALF Max. Bore Square Key | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|
| | | | A | B | C' | C² | D' | E |
| 204 | 4.50 | 6.25 | 12.50 | 7.00 | 4.44 | 13.50 | 10.75 | 29.06 |
| 204½ | 5.50 | 6.88 | 13.62 | 8.38 | 5.00 | 13.75 | 11.16 | 30.28 |
| 205 | 6.31 | 6.88 | 15.31 | 9.00 | 5.75 | 14.25 | 11.16 | 31.53 |
| 205½ | 6.88 | 6.75 | 16.56 | 10.00 | 6.12 | 14.31 | 11.16 | 31.97 |
| 206 | 7.50 | 9.38 | 18.00 | 11.00 | 7.18 | 14.31 | 10.66 | 32.56 |
| 207 | 9.00 | 10.75 | 20.75 | 13.00 | 8.44 | 14.75 | 10.69 | 34.38 |

| FAS Style V Size | F | F' | G | H | S | U | V | Axial Travel |
|---|---|---|---|---|---|---|---|---|
| 204 | 9.25 | 9.06 | 8.75 | 4.75 | 19.88 | 1.06 | .88 | 10.62 |
| 204½ | 10.41 | 10.19 | 8.44 | 5.31 | 19.97 | 1.06 | .88 | 11.00 |
| 205 | 11.44 | 11.38 | 8.22 | 6.03 | 19.75 | 1.50 | 1.31 | 11.00 |
| 205½ | 12.69 | 12.50 | 7.69 | 6.62 | 19.22 | 1.50 | 1.31 | 11.00 |
| 206 | 13.75 | 13.50 | 6.91 | 7.41 | 18.00 | 1.00 | .81 | 10.50 |
| 207 | 16.00 | 15.75 | 6.06 | 8.69 | 17.25 | 1.12 | .94 | 10.50 |

SIZES 204 - 205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS; EXPOSED BOLTS (EB) UPON REQUEST — NO ADDITIONAL COST.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS.

ANGULARITY SHOULD NOT EXCEED ± ½° PER GEAR MESH AT SHAFT SPACING OF "D".

FOR LOAD CAPACITY, USE SERIES FS INFORMATION, PAGE 10.

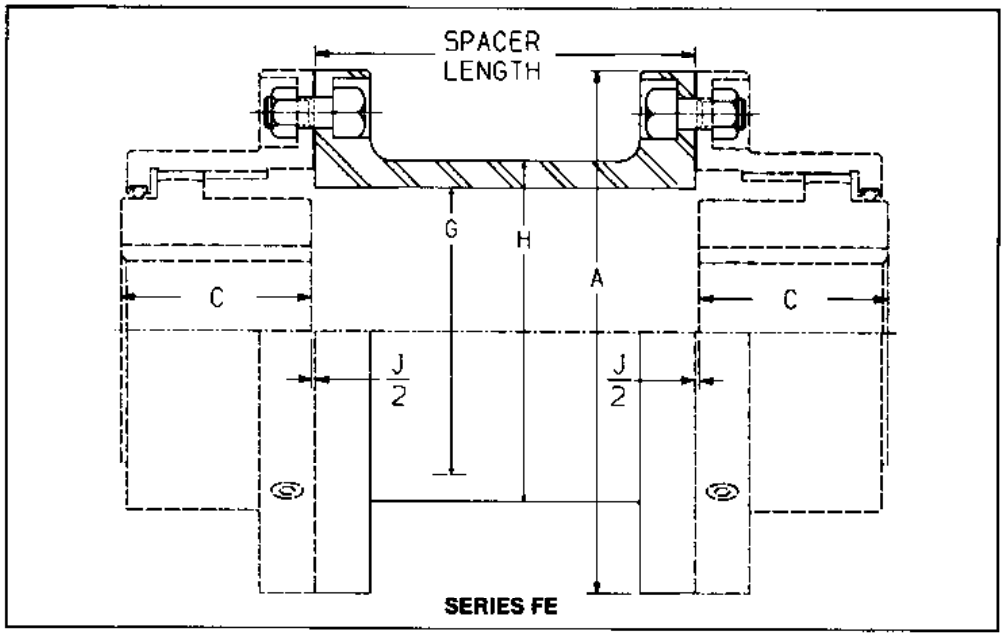
MAXIMUM SPEEDS, PAGE 34.

# Series FE
# Sizes 200-207

**Flanged Sleeve — Spacer Type**

**Application:** Commonly used on pump and compressor drives where maintenance or replacement of shaft seals or bearings is accomplished without moving connected equipment. This arrangement is normally used in place of Series FS in tandem arrangements where shaft spacing is minimum and where low weight and WR² are important.

**Description:** Amerigear Series FE Flexible Coupling consists of two standard halves assembled to the spacer element. The accurately machined steel spacer may be furnished to desired length. For coupling dimensions, refer to Series F, page 8. See engineering section for speed and torque ratings. Step-down spacers are available for connecting half coupling of different sizes.



SERIES FE

| FE Size | DIMENSIONS* A | C | G | H | Minimum** Spacer Length SB | EB | Spacer Removal Clearance "J" |
|---|---|---|---|---|---|---|---|
| 200 | 2.94 | 1.06 | 1.50 | 1.75 | 1.00 | — | .125 |
| 201 | 3.56 | 1.38 | 2.12 | 2.38 | 1.00 | — | .125 |
| 201¼ | 4.00 | 1.69 | 2.38 | 2.75 | 1.00 | — | .125 |
| 201½ | 6.00 | 1.94 | 3.23 | 3.75 | 2.75 | 2.75 | .125 |
| 202 | 7.00 | 2.44 | 4.19 | 4.81 | 2.75 | 3.25 | .125 |
| 202½ | 8.38 | 3.03 | 5.06 | 5.66 | 3.25 | 4.00 | .188 |
| 203 | 9.44 | 3.59 | 5.97 | 6.64 | 3.25 | 4.00 | .188 |
| 203½ | 11.00 | 4.19 | 6.78 | 7.38 | 4.12 | 4.66 | .250 |
| 204 | 12.50 | 4.75 | 8.06 | 8.62 | 4.12 | 4.66 | .250 |
| 204½ | 13.62 | 5.31 | 9.36 | 9.94 | 4.12 | 4.66 | .313 |
| 205 | 15.31 | 6.03 | 9.92 | 10.75 | 5.62 | 5.25 | .313 |
| 205½ | 16.56 | 6.62 | 10.98 | 11.75 | 5.62 | 5.25 | .313 |
| 206 | 18.00 | 7.41 | 11.31 | 12.19 | — | 4.88 | .313 |
| 207 | 20.75 | 8.69 | 13.00 | 13.88 | — | 5.12 | .375 |

*REFER TO SERIES F COUPLING FOR ADDITIONAL DIMENSIONS, PAGE 8.

**MINIMUM FLANGED SPACER LENGTHS DETERMINED BY REQUIRED BOLT REMOVAL CLEARANCE.

SIZES 200, 201, AND 201¼ FLANGE FASTENERS ARE SELF-LOCKING SOCKET HEAD CAP SCREWS — SPACER FLANGE TAPPED.

SIZES 201½ - 205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS; EXPOSED BOLTS (EB) UPON REQUEST — NO ADDITIONAL COST.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS. SEE PRICE GUIDE FOR STOCK SPACERS.

SEE MODIFICATIONS SECTION FOR VARIATIONS INCLUDING LIMITED END FLOAT, PAGES 23-28.

MAXIMUM SPEEDS, PAGE 36.

PILOT RINGS AVAILABLE AT EXTRA COST. SEE PAGE 41 FOR PILOT RING DIMENSIONS.

# Amerigear

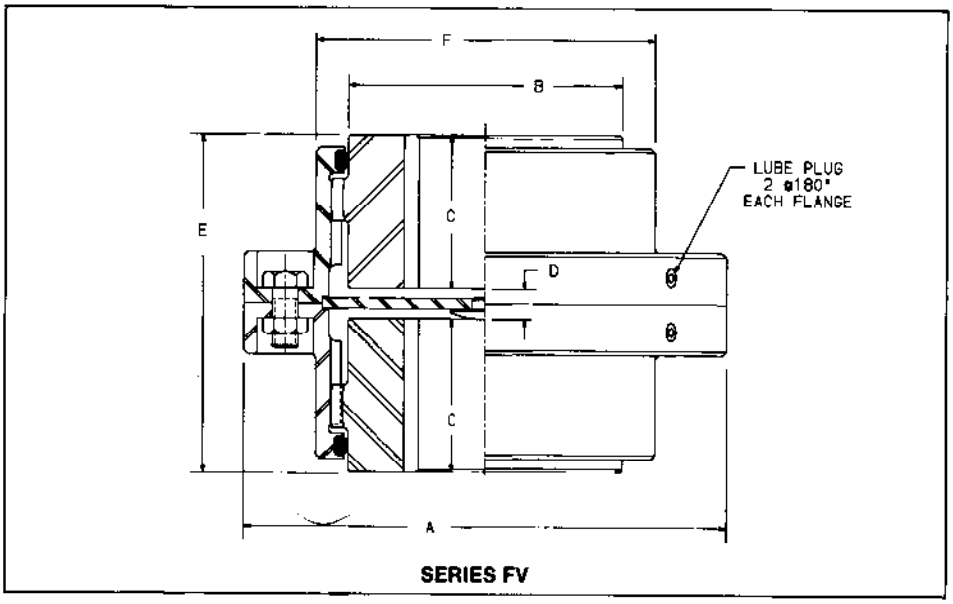
## Flexible Couplings

## Series FV
## Sizes 200-207

**Flanged Sleeve —**
**Double-Engagement Vertical Type**

**Application:** Meets requirements of vertical shaft applications for shaft sizes up to 10.25" diameter. Compensates for all three types of misalignment.

**Description:** Amerigear Series FV Flexible Coupling is designed with bolted center flanges to facilitate installation and alignment. The floating sleeve assembly is supported by a plate and thrust button inserted between the coupling sleeves. Optimum separation of gear meshes permits relatively high parallel offset capacity. Flanged sleeve design makes possible minimum distances between bearing housings to facilitate shaft alignment.




**SERIES FV**

| FV Size | Maximum Bore - Inches Flexible Shaft | | Load Capacity | | Parallel Offset Capacity | DIMENSIONS | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Square Key | Reduced Key | HP Per 100 R.P.M. | Torque In.-Lbs. x $10^3$ | | A | B | C | D | E | F |
| *200 | .81 | .88 | 3 | 1.9 | .023 | 2.94 | 1.25 | 1.06 | .31 | 2.44 | 1.94 |
| *201 | 1.25 | 1.31 | 5 | 3.2 | .042 | 3.56 | 1.75 | 1.38 | .31 | 3.06 | 2.56 |
| *201¼ | 1.63 | 1.75 | 12 | 7.6 | .057 | 4.00 | 2.25 | 1.69 | .31 | 3.69 | 3.00 |
| 201½ | 2.25 | 2.38 | 27 | 17.0 | .058 | 6.00 | 3.12 | 1.94 | .44 | 4.31 | 3.93 |
| 202 | 2.75 | 2.88 | 50 | 31.5 | .079 | 7.00 | 4.00 | 2.28 | .44 | 5.00 | 4.86 |
| 202½ | 3.50 | 3.75 | 85 | 53.6 | .102 | 8.38 | 4.88 | 2.84 | .56 | 6.25 | 5.88 |
| 203 | 4.00 | 4.25 | 150 | 94.5 | .119 | 9.44 | 5.75 | 3.41 | .56 | 7.38 | 6.88 |
| 203½ | 4.50 | 4.75 | 225 | 142.0 | .142 | 11.00 | 6.50 | 3.97 | .69 | 8.62 | 7.90 |
| 204 | 5.50 | 5.88 | 340 | 214.0 | .164 | 12.50 | 7.75 | 4.44 | .88 | 9.75 | 9.24 |
| 204½ | 6.25 | 6.75 | 515 | 324.0 | .187 | 13.62 | 9.00 | 4.97 | 1.00 | 10.94 | 10.37 |
| 205 | 7.00 | 7.12 | 660 | 416.0 | .218 | 15.31 | 9.50 | 5.69 | 1.00 | 12.38 | 11.44 |
| 205½ | 7.50 | 7.62 | 875 | 551.0 | .245 | 16.56 | 10.50 | 6.28 | 1.00 | 13.56 | 12.69 |
| 206 | 8.25 | 8.62 | 1,190 | 750.0 | .275 | 18.00 | 11.75 | 7.00 | 1.12 | 15.12 | 13.75 |
| 207 | 9.62 | 10.25 | 1,640 | 1,033.0 | .314 | 20.75 | 13.50 | 8.12 | 1.50 | 17.75 | 16.00 |

*SIZES 200, 201 AND 201¼ FLANGE FASTENERS ARE SELF-LOCKING SOCKET HEAD CAP SCREWS - ONE FLANGE TAPPED.

SIZES 201½ - 205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS; EXPOSED BOLTS (EB) UPON REQUEST — NO ADD'L. COST.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS.

Amerigear Flexible Couplings - Fully-Crowned Teeth For Higher Torque, Higher Speed, Higher Misalignment Capacity

All Amerigear Series FV and FVS Couplings incorporate the following engineered features:

- ± 1½° angular misalignment capacity per gear mesh.
- Torque ratings at full 1½° misalignment.
- Accurately machined medium carbon steel hubs and sleeves.
- Positive-type O-ring seals keep lubricant in . . . contaminants out. Seals enshrouded to prevent damage.
- Advanced seal design (Series FV) configuration affords large bore capacity . . . permits use of relatively small coupling.

MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40. CENTER FLANGE DETAILS, PAGE 41. WEIGHTS AND WR², PAGE 38. ADDITIONAL DETAILS, PAGE 42. MODIFICATIONS AND VARIATIONS, PAGES 23-28. MAXIMUM SPEEDS, PAGE 34.

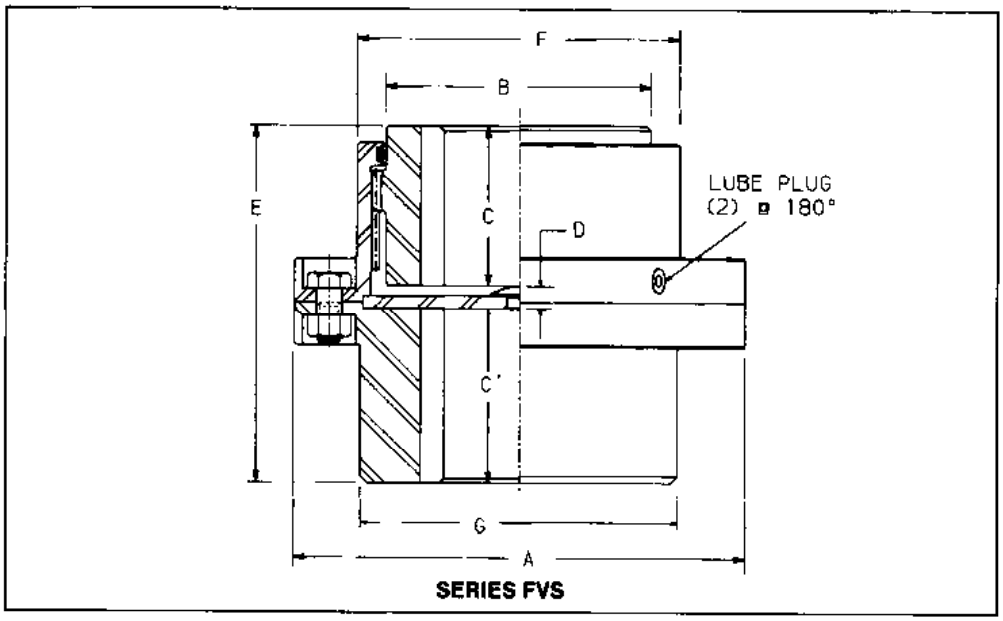
THRUST BUTTON BEARING PLATE NOT NORMALLY REQUIRED IN LOWER HUB. FOR SHAFT WITH LARGE LATHE CENTERS, SPECIFY BEARING PLATE WHEN ORDERING.

# Series FVS
# Sizes 200-207

**Flanged Sleeve —**
**Single-Engagement Vertical Type**

**Application:** Used primarily in tandem pairs for vertical installation, connected by intermediate floating shaft . . . or as individual unit in conjunction with a driver or driven shaft having a self-aligning support bearing. When used singly, compensates for angular misalignment only.

**Description:** Amerigear Series FVS Flexible Coupling consists of one standard rigid half and one standard flexible half coupling modified to accept the thrust button plate. The bolted center flanges facilitate installation and alignment.



**SERIES FVS**

| FVS Size | Maximum Bore Bore - Inches Flexible Half | | Maximum Bore Bore - Inches Rigid Half | | Load Capacity | | DIMENSIONS | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Square Key | Reduced Key | Square Key | Reduced Key | HP Per 100 R.P.M. | Torque In.-Lbs. x $10^3$ | A | B | C | C' | D | E | F | G |
| 200 | .81 | .88 | 1.31 | 1.38 | 3 | 1.9 | 2.94 | 1.25 | 1.06 | 1.05 | .25 | 2.36 | 1.94 | 1.94 |
| *201 | 1.25 | 1.31 | 1.75 | 1.88 | 5 | 3.2 | 3.56 | 1.75 | 1.38 | 1.23 | .25 | 2.86 | 2.56 | 2.56 |
| 201¼ | 1.63 | 1.75 | 2.00 | 2.13 | 12 | 7.6 | 4.00 | 2.25 | 1.69 | 1.48 | .25 | 3.42 | 3.00 | 3.00 |
| 201½ | 2.25 | 2.38 | 2.69 | 2.88 | 27 | 17.0 | 6.00 | 3.12 | 1.94 | 1.78 | .31 | 4.03 | 3.93 | 3.93 |
| 202 | 2.75 | 2.88 | 3.25 | 3.50 | 50 | 31.5 | 7.00 | 4.00 | 2.28 | 2.28 | .31 | 4.88 | 4.86 | 4.88 |
| 202½ | 3.50 | 3.75 | 4.00 | 4.25 | 85 | 53.6 | 8.38 | 4.88 | 2.84 | 2.91 | .38 | 6.12 | 5.88 | 5.88 |
| 203 | 4.00 | 4.25 | 4.62 | 5.00 | 150 | 94.5 | 9.44 | 5.75 | 3.41 | 3.41 | .38 | 7.19 | 6.88 | 6.88 |
| 203½ | 4.50 | 4.75 | 5.38 | 5.75 | 225 | 142.0 | 11.00 | 6.50 | 3.97 | 3.97 | .44 | 8.38 | 7.90 | 7.90 |
| 204 | 5.50 | 5.88 | 6.25 | 6.75 | 340 | 214.0 | 12.50 | 7.75 | 4.44 | 4.44 | .62 | 9.50 | 9.24 | 9.24 |
| 204½ | 6.25 | 6.75 | 6.88 | 7.38 | 515 | 324.0 | 13.62 | 9.00 | 4.97 | 5.00 | .68 | 10.66 | 10.37 | 10.18 |
| 205 | 7.00 | 7.12 | 7.88 | 8.38 | 660 | 416.0 | 15.31 | 9.50 | 5.69 | 5.75 | .68 | 12.12 | 11.44 | 11.44 |
| 205½ | 7.50 | 7.62 | 8.75 | 9.25 | 875 | 551.0 | 16.56 | 10.50 | 6.28 | 6.12 | .68 | 13.09 | 12.69 | 12.69 |
| 206 | 8.25 | 8.62 | 9.38 | 9.88 | 1,190 | 750.0 | 18.00 | 11.75 | 7.00 | 7.18 | .84 | 15.00 | 13.75 | 13.75 |
| 207 | 9.62 | 10.25 | 10.75 | 11.50 | 1,640 | 1,033.0 | 20.75 | 13.50 | 8.12 | 8.44 | 1.06 | 17.62 | 16.00 | 15.75 |

*SIZES 200, 201 AND 201¼ FLANGE FASTENERS ARE SELF-LOCKING SOCKET HEAD CAP SCREWS - RIGID FLANGE TAPPED.

SIZES 201⅛ - 205½ HAVE SHROUDED BOLTS (SB) WITH SELF-LOCKING NUTS, EXPOSED BOLTS (EB) UPON REQUEST — NO ADD'L. COST.

SIZES 206 AND 207 HAVE EXPOSED BOLTS (EB) WITH SELF-LOCKING NUTS.

MAXIMUM BORE, KEYWAY AND PULLER DATA, PAGE 40. CENTER FLANGE DETAILS, PAGE 41. WEIGHTS AND $WR^2$, PAGE 38.

THRUST BUTTON BEARING PLATE NOT NORMALLY REQUIRED IN FLEXIBLE HUB. FOR SHAFT WITH LARGE LATHE CENTERS, SPECIFY BEARING PLATE WHEN ORDERING.

ADDITIONAL DETAILS, PAGE 42. MODIFICATIONS AND VARIATIONS, PAGES 23-28.

MAXIMUM SPEEDS, PAGE 34.

# Amerigear

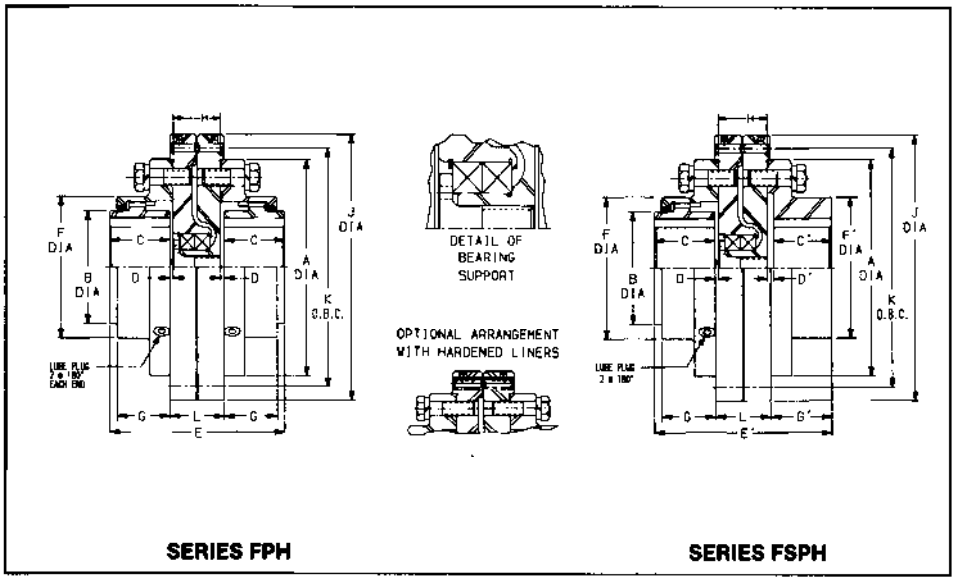
## Flexible Couplings

## Series FPH, FSPH
## Sizes 201½-207

**Flanged Sleeve — Double- and Single-Engagement Shear Pin Type**

**Application:** Used for applications where peak torque or high shock load conditions exist and are greater than normal maximum starting torques. Coupling halves are assembled to both or either side of a shear element assembly to accommodate all types of angular misalignment and axial float. Shear pins are designed to fail at a pre-determined value to protect connected equipment from damage.

**Description:** Amerigear Series FPH and FSPH Shear Pin Couplings have a shear element bolted between the flanges. The shear element consists of two fully machined plates, two lubricated sealed radial thrust ball bearings, retaining ring, retaining bolt and pin, shear pins and setscrews.




| FPH, FSPH Size | Maximum Bore Square Key | Maximum Bore Reduced Key | Maximum Bore Square Key | Maximum Bore Reduced Key | Parallel Offset Capacity | Load Capacity HP Per 100RPM | Load Capacity Torque In.Lbs. x $10^3$ | Shear section Weight Lbs. | Shear section $WR^2$ Lb.-In.$^2$ |
|---|---|---|---|---|---|---|---|---|---|
| 201½ | 2.25 | 2.38 | 2.69 | 2.88 | .097 | 27 | 17.0 | 18 | 119 |
| 202 | 2.75 | 2.88 | 3.25 | 3.50 | .118 | 50 | 31.5 | 20 | 192 |
| 202½ | 3.50 | 3.75 | 4.00 | 4.25 | .142 | 85 | 53.6 | 27 | 354 |
| 203 | 4.00 | 4.25 | 4.62 | 5.00 | .182 | 150 | 94.5 | 68 | 1,302 |
| 203½ | 4.50 | 4.75 | 5.38 | 5.75 | .205 | 225 | 142.0 | 88 | 2,113 |
| 204 | 5.50 | 5.88 | 6.25 | 6.75 | .226 | 340 | 214.0 | 109 | 3,220 |
| 204½ | 6.25 | 6.75 | 6.88 | 7.38 | .250 | 515 | 324.0 | 116 | 3,904 |
| 205 | 7.00 | 7.12 | 7.88 | 8.38 | .298 | 660 | 416.0 | 205 | 9,402 |
| 205½ | 7.50 | 7.62 | 8.75 | 9.25 | .326 | 875 | 551.0 | 232 | 12,190 |
| 206 | 8.25 | 8.62 | 9.38 | 9.88 | .355 | 1,190 | 750.0 | 271 | 16,126 |
| 207 | 9.62 | 10.25 | 10.75 | 11.50 | .394 | 1,640 | 1,033.0 | — | — |

| FPH, FSPH Size | DIMENSIONS A | B | C | C′ | D | D′ | E | E′ | F | F′ | G | G′ | H | J | K | L |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| 201½ | 6.00 | 3.12 | 1.94 | 1.78 | .06 | .09 | 5.50 | 5.38 | 3.93 | 3.93 | 1.77 | 1.88 | 1.50 | 7.38 | 6.625 | 1.59 |
| 202 | 7.00 | 4.00 | 2.44 | 2.28 | .06 | .09 | 6.50 | 6.38 | 4.86 | 4.88 | 2.27 | 2.38 | 1.50 | 8.38 | 7.625 | 1.59 |
| 202½ | 8.38 | 4.88 | 3.03 | 2.91 | .09 | .09 | 7.75 | 7.62 | 5.88 | 5.88 | 2.81 | 3.00 | 1.50 | 9.75 | 9.000 | 1.59 |
| 203 | 9.44 | 5.75 | 3.59 | 3.41 | .09 | .09 | 9.75 | 9.56 | 6.88 | 6.88 | 3.39 | 3.50 | 2.38 | 11.94 | 10.438 | 2.50 |
| 203½ | 11.00 | 6.50 | 4.19 | 3.97 | .12 | .09 | 11.00 | 10.75 | 7.90 | 7.90 | 3.91 | 4.06 | 2.38 | 13.50 | 12.000 | 2.50 |
| 204 | 12.50 | 7.75 | 4.75 | 4.44 | .12 | .19 | 12.12 | 11.88 | 9.24 | 9.24 | 4.46 | 4.62 | 2.38 | 15.00 | 13.500 | 2.50 |
| 204½ | 13.62 | 9.00 | 5.31 | 5.00 | .16 | .19 | 13.31 | 13.03 | 10.37 | 10.18 | 4.98 | 5.19 | 2.38 | 16.12 | 14.625 | 2.50 |
| 205 | 15.31 | 9.50 | 6.03 | 5.75 | .16 | .19 | 15.44 | 15.19 | 11.44 | 11.44 | 5.67 | 5.94 | 3.06 | 18.31 | 16.562 | 3.31 |
| 205½ | 16.56 | 10.50 | 6.62 | 6.12 | .16 | .19 | 16.62 | 16.16 | 12.69 | 12.69 | 6.25 | 6.31 | 3.06 | 19.56 | 17.812 | 3.31 |
| 206 | 18.00 | 11.75 | 7.41 | 7.16 | .16 | .25 | 18.19 | 18.03 | 13.75 | 13.75 | 6.89 | 7.41 | 3.06 | 21.00 | 19.250 | 3.31 |
| 207 | 20.75 | 13.50 | 8.69 | 8.44 | .19 | .31 | 20.81 | 20.69 | 16.00 | 15.75 | 7.81 | 8.75 | 3.06 | 23.75 | 22.000 | 3.66 |

EXPOSED BOLTS ARE FURNISHED AS STANDARD.

MAXIMUM BORE, KEYWAY AND PULLER HOLE DATA, PAGE 40. CENTER FLANGE DETAILS, PAGE 41. MAXIMUM SPEEDS, PAGE 34.