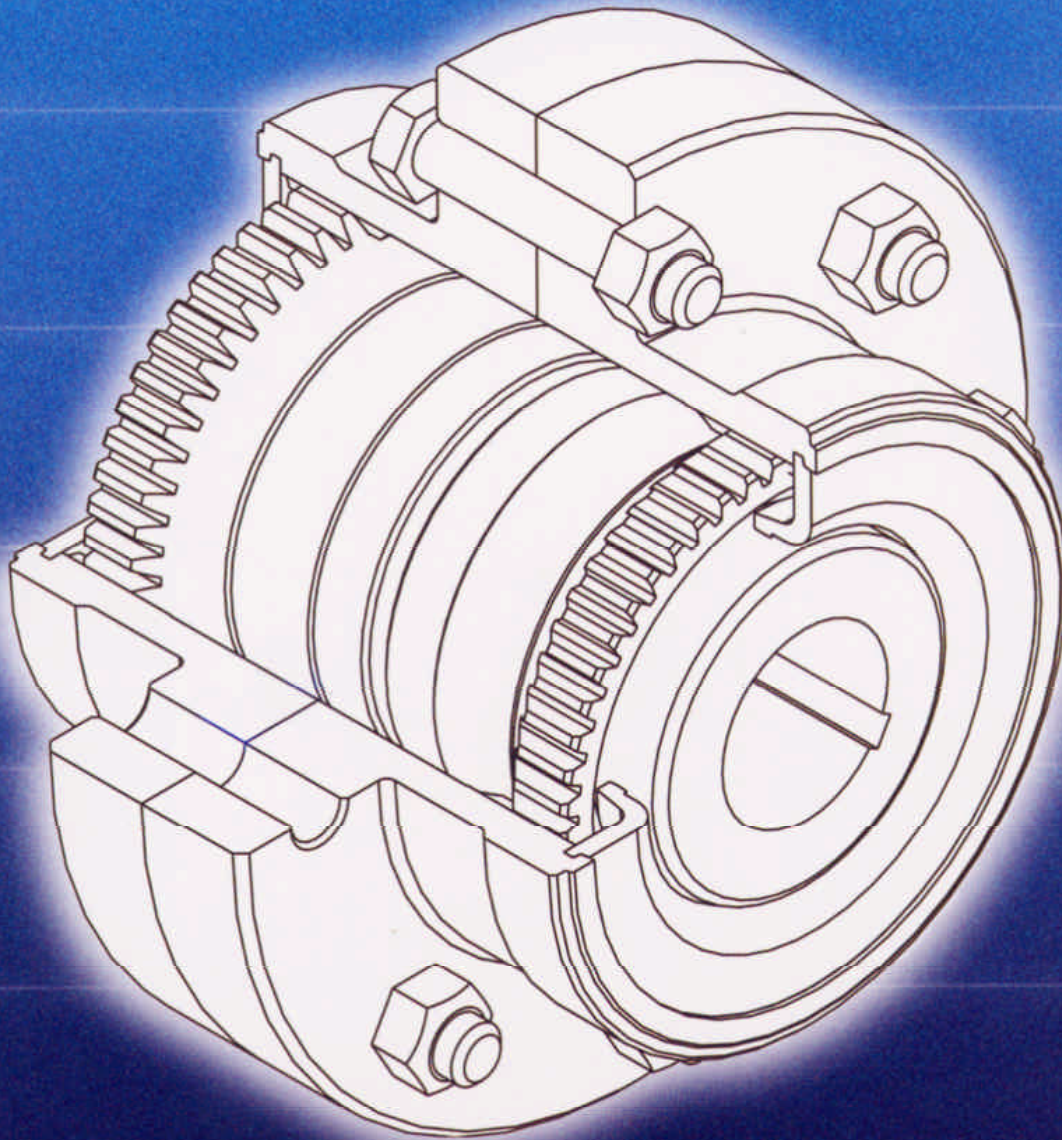


## Amerigear® Metal Labyrinth Seal Couplings



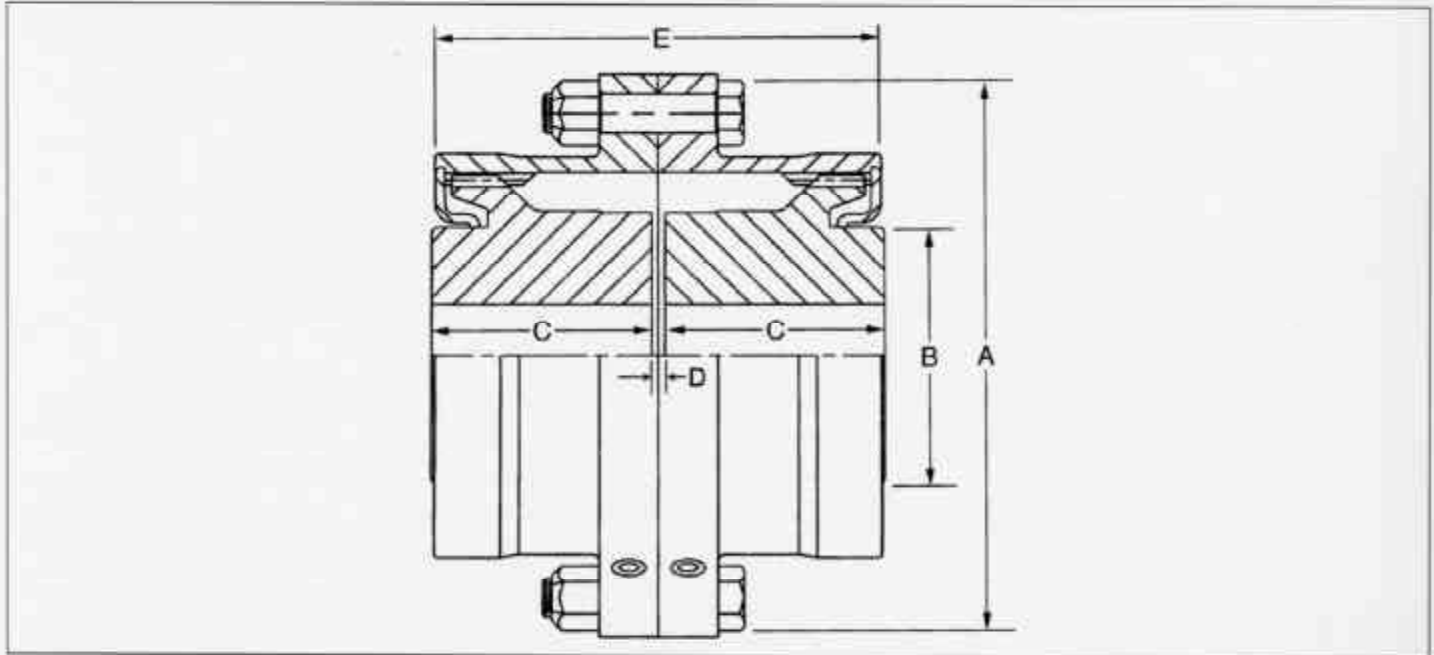
Component part-for-part "drop-in" replacement for FAST® Coupling

**Ameridrives**®  
Couplings

# Full-Flex Couplings

## Series F Size 1 1/2 - 7

Series F Full Flex gear coupling with Steel Labyrinth Seal is applicable for harsh environments.



F Size	Max Bore ① with Standard Key	Load Capacity		Maximum Speed ③ RPM	Weight with Solid Hubs ④ lbs.	Dimensions				
		HP/100 RPM	Torque In-Lbs. ② x 10 <sup>3</sup>			A	B	C	D	E
1 1/2	1.63	27	17.0	12,000	16.5	6.00	2.19	1.94	.13	4.00
2	2.13	50	31.5	9,300	27.4	7.00	2.88	2.44	.13	4.94
2 1/2	2.75	90	56.7	7,900	48.0	8.38	3.63	3.03	.19	6.19
3	3.13	160	101.0	6,800	70.8	9.44	4.25	3.59	.19	7.31
3 1/2	3.75	235	148.0	6,000	113.0	11.00	5.00	4.19	.25	8.50
4	4.25	375	236.0	5,260	177.0	12.50	5.75	4.75	.25	9.75
4 1/2	4.75	505	318.0	4,770	231.0	13.63	6.50	5.31	.31	10.94
5	5.50	700	441.0	4,300	351.0	15.31	7.31	6.03	.31	12.06
5 1/2	5.88	920	580.0	3,880	435.0	16.75	8.00	6.91	.31	13.81
6	6.50	1205	759.0	3,600	538.0	18.00	8.81	7.41	.31	14.81
7	8.00	1840	1,160.0	3,000	860.0	20.75	10.31	8.69	.38	17.31

① BORE SIZES ABOVE MAXIMUM CONTACT AMERIDRIVES.

② OCCASIONAL PEAK TORQUES SHOULD NOT EXCEED 2X THE TORQUE CAPACITY SHOWN.

③ MAXIMUM SPEED WITHOUT BALANCING 60% OF VALUES SHOWN. CONSULT AMERIDRIVES FOR HIGHER SPEEDS.

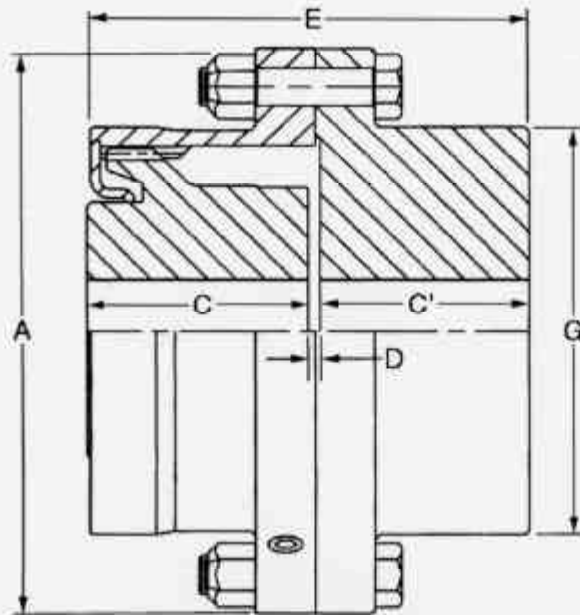
④ WEIGHTS ARE APPROXIMATE.

- OUTER END OF HUB EXTENDS BEYOND SLEEVE IN SIZES 5 1/2, 6 AND 7
- ALL DIMENSIONS IN INCHES
- ± 1/2° STATIC MISALIGNMENT PER COUPLING HALF

# Flex-Rigid Couplings

## Series FS Size 1 1/2 - 7

Series FS Flex-Rigid coupling with Steel Labyrinth Seal is applicable for harsh environments.



FS Size	Max Bore with Standard Keyway		Load Capacity		Maximum Speed ③ RPM	Weight with Solid Hubs ④ lbs.	Dimensions					
	① Flex Half	① Rigid Half	HP/100 RPM	Torque In-Lbs. ② x 10 <sup>3</sup>			A	C	C'	D ⑤	E	G
1 1/2	1.63	2.69	27	17.0	12,000	17.7	6.00	1.94	1.84	.16	3.94	3.81
2	2.13	3.38	50	31.5	9,300	30.0	7.00	2.44	2.28	.16	4.84	4.81
2 1/2	2.75	4.00	90	56.7	7,900	52.6	8.38	3.03	2.91	.19	6.28	5.75
3	3.13	4.75	160	101.0	6,800	78.8	9.44	3.59	3.46	.19	7.22	6.75
3 1/2	3.75	5.50	235	148.0	6,000	124.0	11.00	4.19	4.03	.22	8.38	7.75
4	4.25	6.38	375	236.0	5,260	187.0	12.50	4.75	4.44	.31	9.50	9.00
4 1/2	4.75	7.25	505	318.0	4,770	250.0	13.63	5.31	5.06	.34	10.72	10.12
5	5.50	8.50	700	441.0	4,300	377.0	15.31	6.03	5.69	.34	11.91	11.38
5 1/2	5.88	8.00	920	580.0	3,800	470.0	16.75	6.91	6.97	.34	14.06	10.75
6	6.50	8.75	1205	759.0	3,600	606.0	18.00	7.41	7.46	.34	15.06	11.50
7	8.00	10.00	1840	1,160.0	3,000	957.0	20.75	8.69	8.75	.44	17.66	13.38

① BORE SIZES ABOVE MAXIMUM CONTACT AMERIDRIVES.

② OCCASIONAL PEAK TORQUES SHOULD NOT EXCEED 2X THE TORQUE CAPACITY SHOWN.

③ MAXIMUM SPEED WITHOUT BALANCING 60% OF VALUES SHOWN. CONSULT AMERIDRIVES FOR MAXIMUM SPEEDS OF FLOATING SHAFT COUPLINGS AND LATERAL CRITICAL SPEED CONSIDERATIONS. USERS MUST VERIFY THAT THE DESIGN OF THE SHAFT TO COUPLING HUB CONNECTION IS ACCEPTABLE FOR THE DUTY INTENDED.

④ WEIGHTS ARE APPROXIMATE.

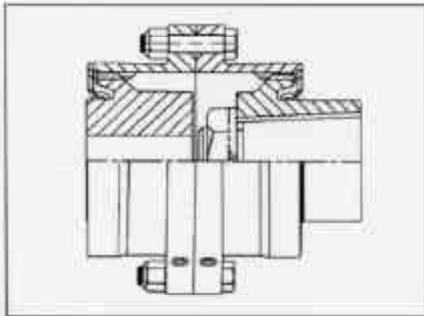
⑤ FLOATING SHAFT LENGTH IS EQUAL TO THE SHAFT SEPERATION MINUS 2 TIMES THE "D" DIMENSION.

• OUTER END OF HUB EXTENDS BEYOND SLEEVE IN SIZES 5 1/2, 6 AND 7

• ALL DIMENSIONS IN INCHES

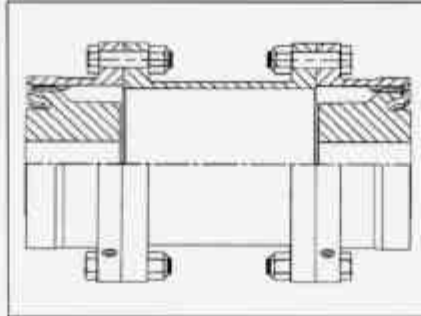
• ± 1/2° STATIC MISALIGNMENT PER COUPLING HALF

# Modifications & Variations



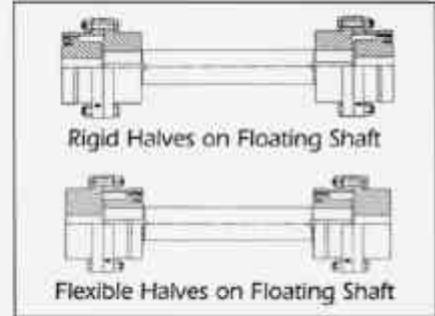
## Mill Motor Couplings

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



## Spacer Couplings

Commonly used on pump and compressor drives where maintenance or replacement of shaft seals or bearings is accomplished without moving connected equipment.



## Tandem Couplings

Two flex rigid couplings connected by an intermediate floating shaft comprise a tandem assembly. Changing the mounting arrangement can vary the bore capacity or the parallel offset.

## Selection Information

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

$$\text{Torque (effective)} = \frac{\text{HP (effective)} \times 630}{\text{RPM}}$$

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** The listed 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 provide in the application to assure proper clearances. Shaft extensions, separations, and clearances to align coupling should be checked.

## 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 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.

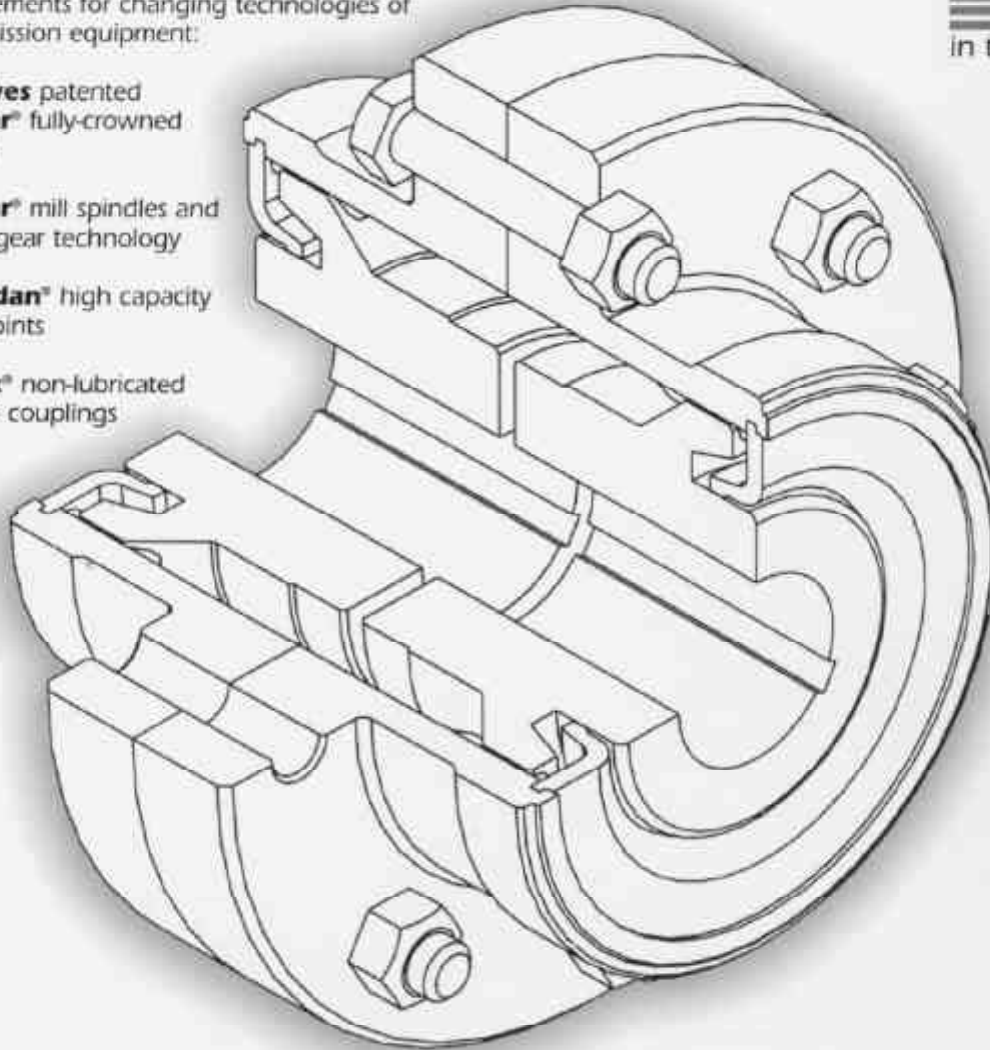
LOAD	DRIVEN EQUIPMENT	TYPE DRIVER		
		Motor or Turbine	Hydraulic Drive	Reciprocating Engine
UNIFORM	Centrifugal Pumps • Conveyors - Even Loaded • Exciters • Fans and Blowers - Light Duty • Generators- Even Loaded • Mixers - Liquid	1.0	1.25	1.5
LIGHT SHOCK	Centrifugal Pumps • Generators - Pulsating Load • 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

# Ameridrives® Couplings

Ameridrives International began manufacturing in 1928 as the Mechanical Drives Division of Zurn Industries. Through the years Ameridrives Couplings has pioneered many improvements for changing technologies of power transmission equipment:



- **Ameridrives** patented **Amerigear**® fully-crowned gear tooth
- **Amerigear**® mill spindles and advanced gear technology
- **Americardan**® high capacity universal joints
- **Ameriflex**® non-lubricated diaphragm couplings



As a leader in power transmission equipment for over 70 years, Ameridrives Couplings are the single source for all drive applications. Let us solve your Driveline Connections. A flexible coupling must provide three basic functions:

1. Physically couple together two rotating shafts.
2. Compensate for all types of misalignment.
3. Compensate for end or axial movement.

The FAST® Coupling was the standard in the metals industry for decades. Ameridrives now offers the labyrinth/steel ring seal option for your coupling needs.

"Drop-In" Replacement for FAST® Coupling			
FAST®	Amerigear®	FAST®	Amerigear®
1 1/2	1 1/2	4 1/2	4 1/2
2	2	5	5
2 1/2	2 1/2	5 1/2	5 1/2
3	3	6	6
3 1/2	3 1/2	7	7
4	4		

## Ameridrives® Couplings

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Type SJ & Type SD High Speed Gear Drives  
Type RV Right Angle Vertical Speed Reducers  
Veri-Dri Vertical Concentric and Parallel Shaft Drives  
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Custom Engineered Drives

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