



FBA Flywheel Couplings



 **Guardian[®]**
Couplings

An Altra Industrial Motion Company



FBA Flywheel Coupling

The FBA (Flywheel–Blind Assembly) coupling is a torsionally soft engine drive that has dampening characteristics.

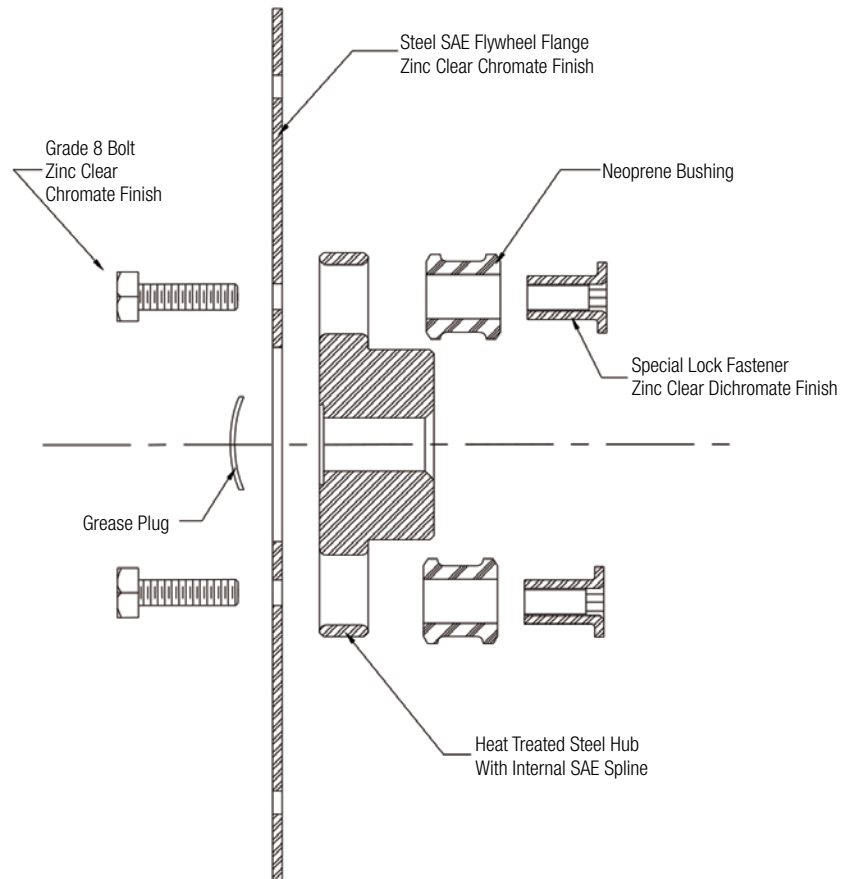
Flywheel flanges are available in SAE sizes 6–1/2 thru 14 from stock, with many metric options available.

The FBA coupling is used worldwide in gas/ diesel engine applications including; aerial lifts, skid steer loaders, excavators, and low mass compressors.

Withstands temperatures up to 212°F.

TECHNICAL DATA

The FBA (flywheel-blind assembly) was designed in response to the demand for a torsionally soft drive system with “plug-in” capability. This flywheel coupling consists of a steel flywheel flange, splined steel hub, rubber vibration damper, and specially designed fasteners.



Coupling Assembly	Nominal Torque Rating*
SAE 6.5	1,950 in-lbs
SAE 7.5	1,950 in-lbs
SAE 8	3,655 in-lbs
SAE 10	4,640 in-lbs
SAE 11.5	7,500 in-lbs
SAE 14	12,190 in-lbs

* All values are based on Guardian standard product offering. Please consult Guardian Industries for non-standard configurations.

Misalignment Capability

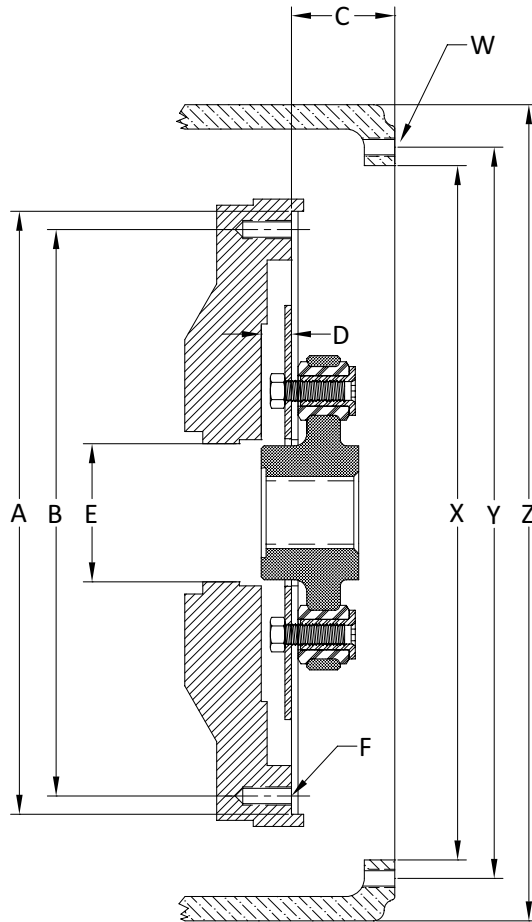
Angular = 1°
Parallel = .015"

Note

The end user is required to use a lithium-based grease on the pump spline and coupling at installation such as Shell Alvania CG or equivalent.



SAE FLYWHEEL & HOUSING DATA



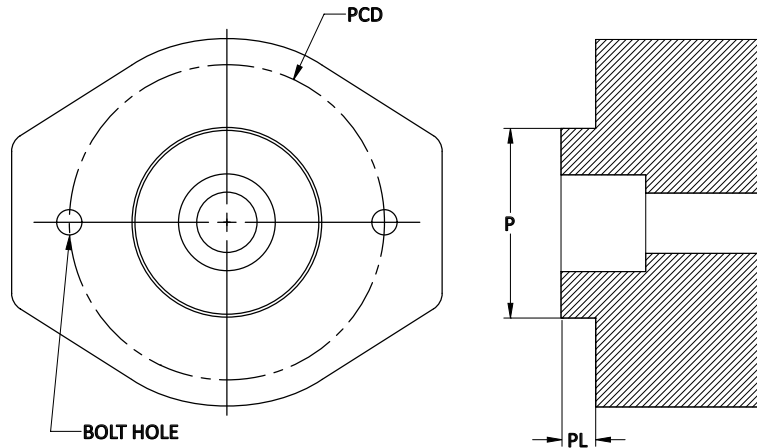
SAE Flywheel Standard Dimensions

Flywheel SAE No.	A inch	B inch	C inch	D inch	E inch	F	
						No.	Size
6 1/2	8.500	7.875	1.190	0.500	2.047	6	5/16" - 8
7 1/2	9.500	8.750	1.190	0.500	2.047	8	5/16" - 18
8	10.375	9.625	2.440	0.500	2.441	6	3/8" - 16
10	12.375	11.625	2.120	0.620	2.834	8	3/8" - 16
11 1/2	13.875	13.125	1.560	1.120	2.834	8	3/8" - 16
14	18.375	17.250	1.000	1.120	3.149	8	1/2" - 13

SAE Housing Standard Dimensions

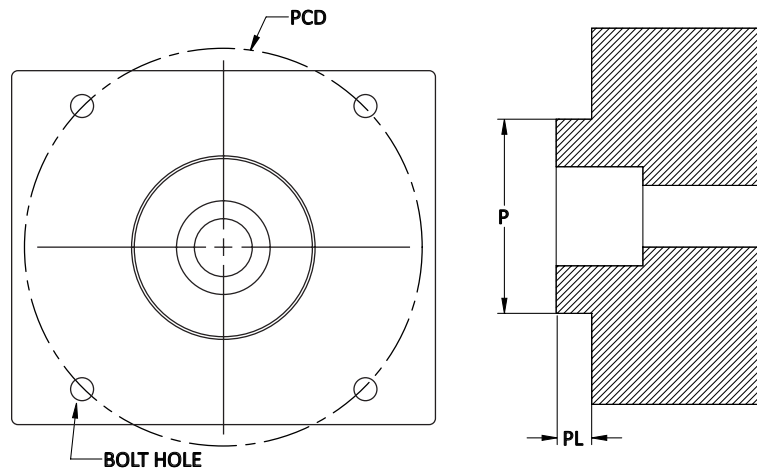
Flywheel SAE No.	X inch	Y inch	Z inch	F	
				No.	Size
6	10.500	11.250	12.120	8	3/8" - 16
5	12.375	13.125	14.000	8	3/8" - 16
4	14.250	15.000	15.880	12	3/8" - 16
3	16.125	16.875	17.750	12	3/8" - 16
2	17.625	18.375	19.250	12	3/8" - 16
1	20.125	20.875	21.750	12	7/16" - 14

SAE PUMP DATA



SAE 2-Bolt Mounting Flange

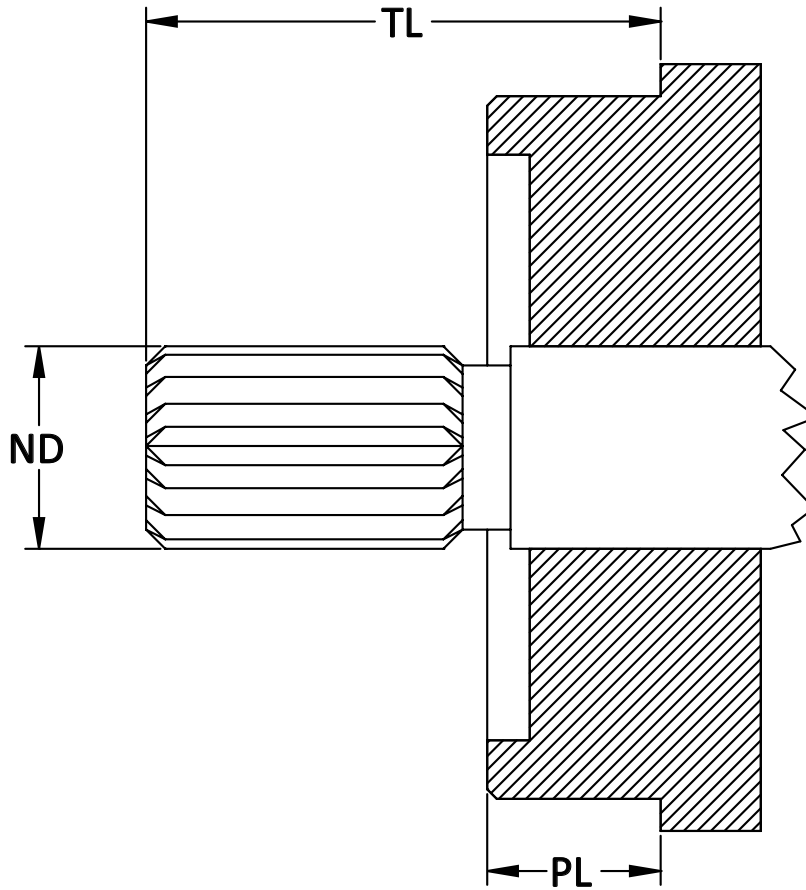
Mounting Flange SAE	Pilot Dimensions P	Flange Dimensions		Pilot Length PL	Bolts
		PCD	Bolt Hole		
AA	2.000	3.250	0.406	0.250	5/16-18
A	3.250	4.187	0.438	0.250	3/8-16
B	4.000	5.750	0.562	0.375	1/2-3
C	5.000	7.125	0.687	0.500	5/8-11
D	6.000	9.000	0.812	0.500	3/4-10
E	6.500	12.500	1.062	0.625	1-8
F	7.000	13.781	1.062	0.625	1-8



SAE 4-Bolt Mounting Flange

Mounting Flange SAE	Pilot Dimensions P	Flange Dimensions		Pilot Length PL	Bolts
		PCD	Bolt Hole		
AA (4F17)	1.781	2.838	0.325	0.250	5/16-18
A	3.250	4.125	0.438	0.250	3/8-16
B	4.000	5.000	0.562	0.375	1/2-13
C	5.000	6.375	0.562	0.500	1/2-13
D	6.000	9.000	0.812	0.500	3/4-10
E	6.500	12.500	0.812	0.625	3/4-10
F	7.000	13.781	1.062	0.625	1-8

SAE PUMP DATA



SAE Involute Splined Pump Shafts

SAE	# of Teeth	Pitch Dia.	Pressure Angle	Major Dia. ND	Minor Dia.	Nominal Dia.	TL
AA	9	20/40	30°	0.625	0.509	1/2	1.062
A	9	16/32	30°	0.625	0.509	5/8	1.250
AH	11	16/32	30°	0.750	0.631	3/4	1.250
B	13	16/32	30°	0.875	0.754	7/8	1.625
BB	15	16/32	30°	1.000	0.877	1	1.812
C	14	16/32	30°	1.250	1.087	1 1/4	2.187
CS	21	12/24	30°	1.380	1.250	1 3/8	2.187
CC	17	16/32	30°	1.500	1.334	1 1/2	2.437
D & E	13	8/16	30°	1.750	1.506	1 3/4	2.937
F	15	8/16	30°	2.000	1.753	2	3.437



COMPLIMENTARY GUARDIAN PRODUCTS: FOR MOUNTING DRIVEN COMPONENTS



Pump Plates

- Manufactured from steel
- SAE Sizes 1 thru 6 from stock
- Plain and zinc finish from stock
- E-Coat, black oxide & powder coat available upon request



Engine Housings

- Manufactured from aluminum & cast iron
- Fits a variety of non-standard SAE option engines
- E-Coat & powder coat available for cast iron designs

See Engine Housing and Pump Mounting Plate literature for complete listings.



OTHER GUARDIAN PRODUCTS:



FL Flywheel Couplings

- Torsionally stiff
- Reinforced nylon flange
- Steel Hub
- No lubrication
- Accepts splines & straight bores/keyways shafts



FH Flywheel Couplings

- Fail-safe couplings
- Torsionally soft for vibration dampening
- Cast iron hubs/flanges
- Variable durometer elements
- Accepts splines & straight bores/keyways shafts



Delta Flywheel Couplings

- Torsionally soft for vibration dampening
- Reinforced nylon flange
- Accepts splines & straight bores/keyways shafts
- No clamping required
- Lubrication required



NV Flywheel Couplings

- Torsionally soft for vibration dampening
- Rubber "fuse" link
- Accepts spline shafts
- No lubrication required
- No clamping required

Belted Drives and Sheaves

TB Wood's

Belted Drives
Chambersburg, PA - USA
1-888-829-6637 – Press #5
For application assistance:
1-888-829-6637 – Press #7

Couplings

Ameridrives Couplings

Mill Spindles, Ameriflex, Ameridisc
Erie, PA - USA
1-814-480-5000
Gear Couplings
San Marcos, TX - USA
1-800-458-0887

Ameridrives Power Transmission

Universal Joints, Drive Shafts, Mill Gear Couplings
Green Bay, WI - USA
1-920-593-2444

Bibby Turboflex

Disc, Gear, Grid Couplings, Overload Clutches
Dewsbury, England
+44 (0) 1924 460801
Boksburg, South Africa
+27(0) 11 918 4270

Guardian Couplings

Engineered Flywheel Couplings, Engine Housings and Pump Mounts, Flexible Shaft Couplings
Michigan City, IN - USA
1-219-874-5248

Huco Dynatork

Precision Couplings and Air Motors
Hertford, England
+44 (0) 1992 501900
Chambersburg, PA - USA
1-888-829-6637

Couplings Cont.

Lamiflex Couplings

Flexible Couplings, Bearing Isolators, and Coupling Guards
Cotia, SP - Brasil
+55 (11) 4615-6300

TB Wood's

Elastomeric Couplings
Chambersburg, PA - USA
1-888-829-6637 – Press #5
For application assistance:
1-888-829-6637 – Press #7
General Purpose Disc Couplings
San Marcos, TX - USA
1-888-449-9439

Electromagnetic Clutches and Brakes

Inertia Dynamics

Spring Set Brakes; Power On and Wrap Spring Clutch/Brakes
New Hartford, CT - USA
1-800-800-6445

Matrix International

Electromagnetic Clutches and Brakes, Pressure Operated Clutches and Brakes
Brechtin, Scotland
+44 (0) 1356 602000
New Hartford, CT - USA
1-800-825-6544

Warner Electric

Electromagnetic Clutches and Brakes
New Hartford, CT - USA
1-800-825-6544
For application assistance:
1-800-825-9050

Saint Barthélemy d'Anjou, France
+33 (0)2 41 21 24 24

Precision Electric Coils and Electromagnetic Clutches and Brakes

Columbia City, IN - USA
1-260-244-6183

Engineered Bearing Assemblies

Kilian Manufacturing

Engineered Bearing Assemblies
Syracuse, NY - USA
1-315-432-0700

Gearing

Bauer Gear Motor

Geared Motors
Esslingen, Germany
+49 (711) 3518-0
Somerset, NJ - USA
1-732-469-8770

Boston Gear

Enclosed and Open Gearing, Electrical and Mechanical P.T. Components
Charlotte, NC - USA
1-800-825-6544
For application assistance:
1-800-816-5608

Nuttall Gear and Delroyd Worm Gear

Worm Gear and Helical Speed Reducers
Niagara Falls, NY - USA
1-716-298-4100

Heavy Duty Clutches and Brakes

Industrial Clutch

Pneumatic and Oil Immersed Clutches and Brakes
Waukesha, WI - USA
1-262-547-3357

Svendborg Brakes

Industrial Brakes and Brake Systems
Vejstrup, Denmark
+45 63 255 255

Twiflex Limited

Caliper Brakes and Thrusters
Wichita Falls, TX - USA
1-844-723-3483
Twickenham, England
+44 (0) 20 8894 1161

Heavy Duty Clutches and Brakes Cont.

Wichita Clutch

Pneumatic Clutches and Brakes
Wichita Falls, TX - USA
1-800-964-3262
Bedford, England
+44 (0) 1234 350311

Linear Products

Warner Linear

Linear Actuators
Belvidere, IL - USA
1-800-825-6544
For application assistance:
1-800-825-9050
Saint Barthélemy d'Anjou, France
+33 (0)2 41 21 24 24

Overrunning Clutches

Formsprag Clutch

Overrunning Clutches and Holdbacks
Warren, MI - USA
1-800-348-0881 – Press #1
For application assistance:
1-800-348-0881 – Press #2

Marland Clutch

Roller Ramp and Sprag Type Overrunning Clutches and Backstops
South Beloit, IL - USA
1-800-216-3515

Stieber Clutch

Overrunning Clutches and Holdbacks
Heidelberg, Germany
+49 (0) 6221-30470

For information concerning our sales offices in Asia Pacific check our website www.altramotion.com.cn

While Guardian Industries makes every effort to ensure the accuracy of the information provided, we make no warranty as to the accuracy or completeness of said information.



www.guardiancouplings.com

300 Indiana Highway 212
Michigan City, IN 46360 – USA
219-874-5248
Fax: 219-879-6643

Merchant Drive, Hertford
Hertfordshire SG13 7BL - England
+44(0)1992 501900
Fax: +44 (0)1992 509890