



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.

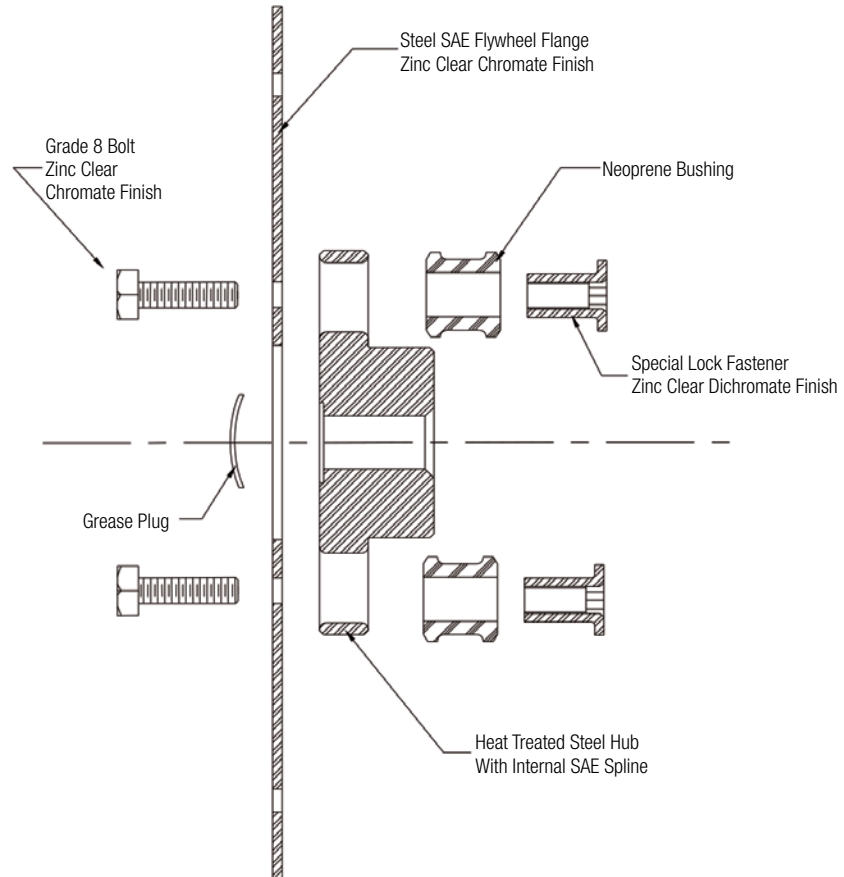
Flywheel flanges are available in SAE sizes 6–1/2 thru 14 from stock, with many metric options available.

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

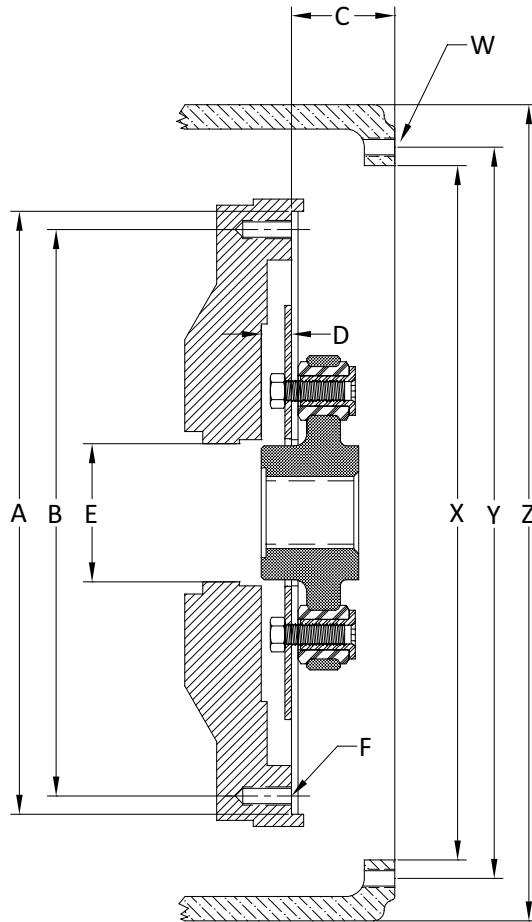
Angular = 1°
Parallel = .015"

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



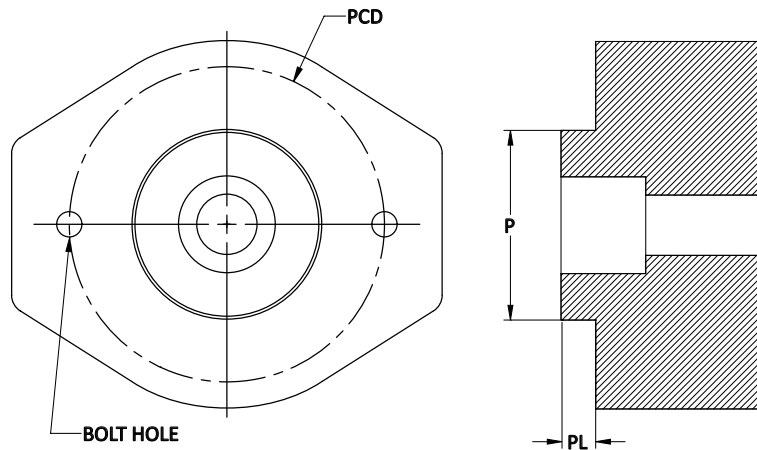
SAE Flywheel Standard Dimensions

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

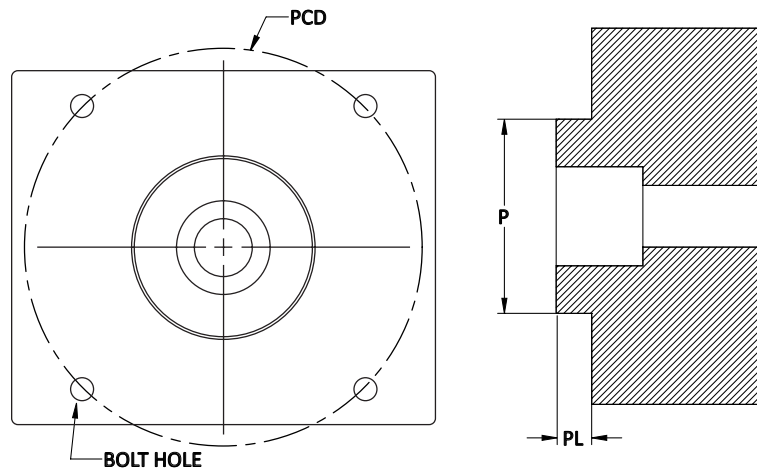
Flywheel SAE No.	X inch	Y inch	Z inch	F	
				No.	Size
6	10.500	11.250	12.120	8	3/8" - 16
5	12.375	13.125	14.000	8	3/8" - 16
4	14.250	15.000	15.880	12	3/8" - 16
3	16.125	16.875	17.750	12	3/8" - 16
2	17.625	18.375	19.250	12	3/8" - 16
1	20.125	20.875	21.750	12	7/16" - 14

SAE PUMP DATA



SAE 2-Bolt Mounting Flange

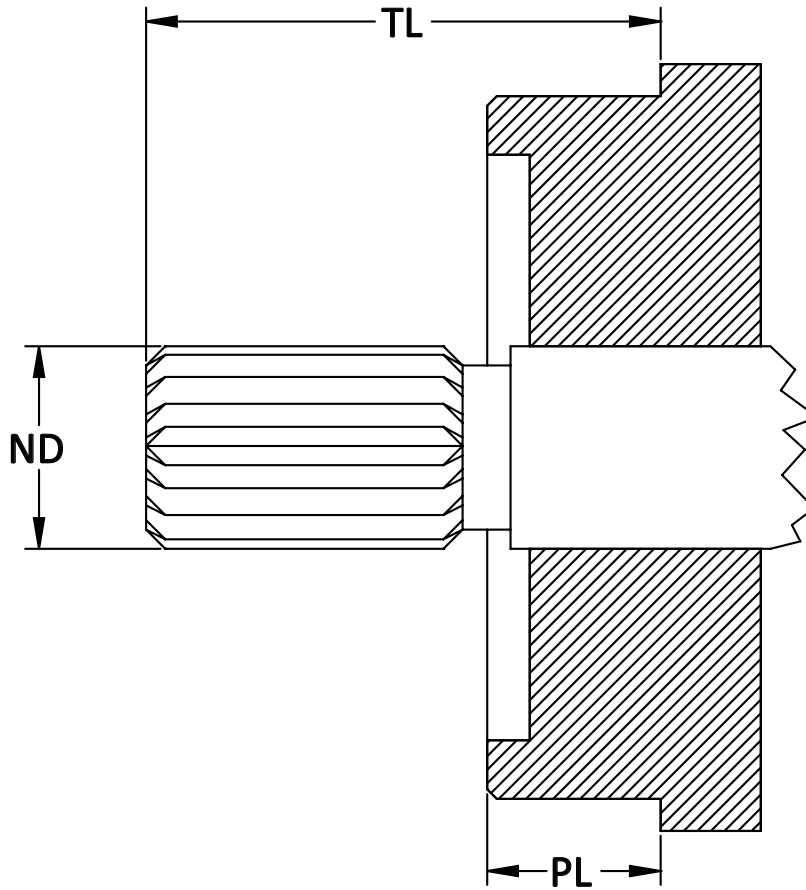
Mounting Flange SAE	Pilot Dimensions P	Flange Dimensions		Pilot Length PL	Bolts
		PCD	Bolt Hole		
AA	2.000	3.250	0.406	0.250	5/16-18
A	3.250	4.187	0.438	0.250	3/8-16
B	4.000	5.750	0.562	0.375	1/2-3
C	5.000	7.125	0.687	0.500	5/8-11
D	6.000	9.000	0.812	0.500	3/4-10
E	6.500	12.500	1.062	0.625	1-8
F	7.000	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
São Paulo, SP - Brasil
+55 (11) 5679-6533

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
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



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