

**GUARDIAN**

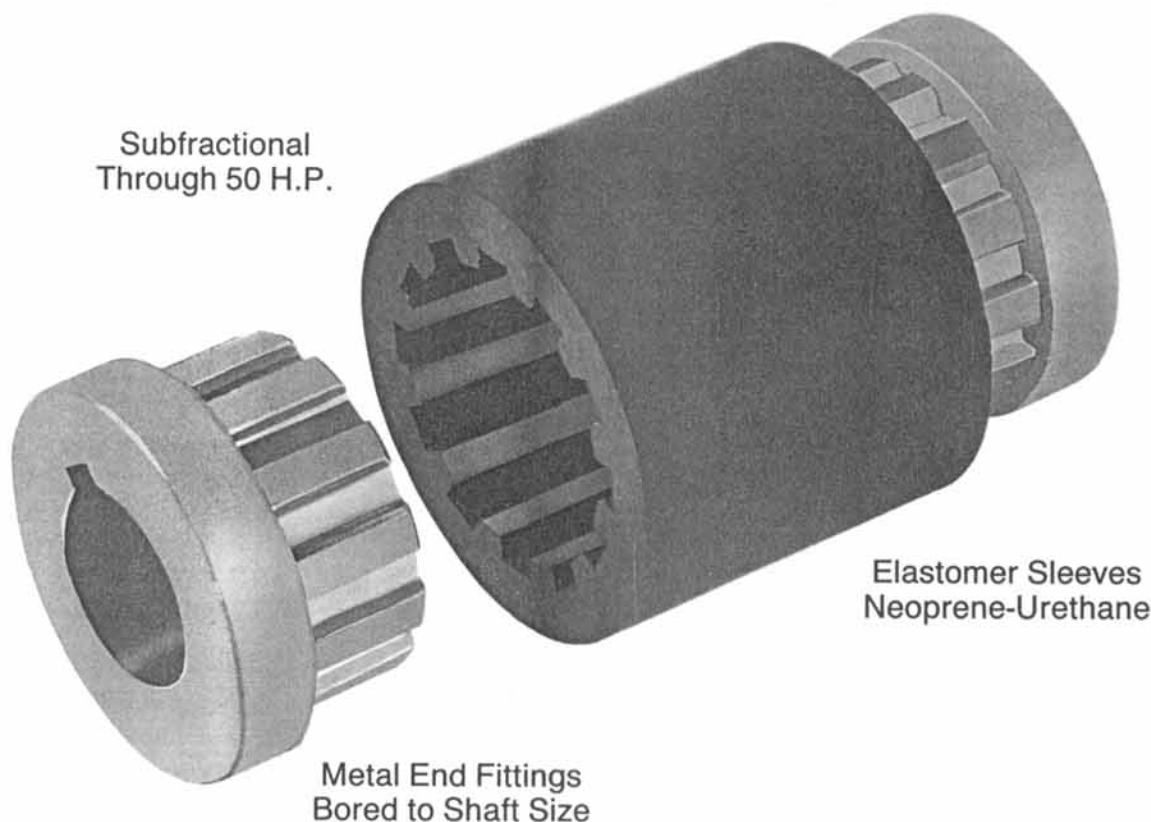
GG97

# **GEAR GRIP<sup>TM</sup>**

## **FLEXIBLE SHAFT COUPLINGS**

**For The Mechanical Power Transmission Industry**

**MADE IN U.S.A.**



### **GUARDIAN Industries**

3201 Ohio Street, P.O. Box 478, Michigan City, IN 46361  
219/874-5248 Fax 219/879-6643

# COUPLING SELECTION

Select coupling on basis of torque or H.P., load and bore size required

Guardian Coupling No.	Sleeve Compound	Nominal Torque Inch Lbs.	Max. Torque Inch Lbs.	HP @ 1750 RPM	Max Speed RPM	Misalignment Parallel/Angular		Stiffness In # (Rad.)
11-PG	SR/SM	4	18	.11	25,000	.016	7.5° Max	28
12-PG	SU	13	55	.36	25,000	.016	7.5° Max	57
18-PG	SR	16	65	.44	16,800	.040	7.5° Max	124
19-PG	SU	40	160	1.10	16,800	.040	7.5° Max	183
21-PG	SR	30	110	.83	16,500	.040	7.5° Max	107
24-PG	SU	50	200	1.30	16,500	.040	7.5° Max	115
31-PG	SR	60	250	1.7	15,500	.040	7.5° Max	270
32-PG	SU	45	175	1.25	15,500	.040	7.5° Max	134
33-PG	SF	72	400	2.0	15,500	.040	7.5° Max	225
41-PG	SR	108	440	3.0	15,000	.040	7.5° Max	630
42-PG	SU	185	738	5.0	15,000	.040	7.5° Max	423
43-PG	SF	140	580	4.0	15,000	.040	7.5° Max	330
54-PG	SU	200	800	5.5	10,000	.040	7.5° Max	1,530
56-PG	SF	270	980	7.5	10,000	.040	7.5° Max	561
64-PG	SU	270	1080	7.5	8,000	.080	7.5° Max	3,095
66-PG	SF	360	1440	10.0	8,000	.080	7.5° Max	3,438
76-PG	SF	1080	4700	30.0	5,600	.090	7.5° Max	3,367
86-PG	SF	1800	7200	50.0	5,600	.090	7.5° Max	10,115

- SR-Neoprene (85A Durometer) SM-Molded Rubber (92A Durometer)
- SF-Reinforced Neoprene (70A Durometer) SU-Urethane (95A Durometer)
- Torque and horsepower ratings based on Normal Duty at standard or minimum length.
- Increased length may decrease torque capacity, but will improve misalignment allowance and shock dampening.
- Keyway: metric, shallow or other special keyseats available upon request.
- 1 angular degree of twist = .01745 radians.

**To Order:** Specify coupling number, overall length, size of each bore, and keyway size if desired.

**Example:** 56-PG 2 1/2, 3/4" x 1 1/8".

## COMPLETE COUPLING DIMENSIONS

Coupling No.	Minimum Standard Length (A)
11-PG	1"
12-PG	(1.00")
18-PG	1 1/2"
19-PG	(1.50")
21-PG	2 1/4"
24-PG	(2.25")
31-PG	2 3/8"
32-PG	(2.38")
33-PG	
41-PG	2 3/8"
42-PG	(2.38")
43-PG	
54-PG	2 1/2"
56-PG	(2.50")
64-PG	2 3/4"
66-PG	(2.75")
76-PG	3 1/4"
	(3.25")
86-PG	3 7/16"
	(3.44")

## SLEEVE DIMENSIONS

Sleeve No.	Standard Length (B) <sup>3</sup>	Diameter (D)
11-SR/SM	.56"	.80"
12-SU	.56"	.80"
18-SR	.85"	1.20"
19-SU	.85"	1.14"
21-SR	1 19/32"	1.20"
24-SU	(1.59")	1.14"
31-SR	1 19/32"	1.40"
32-SU	(1.59")	1.40"
33-SF		1.56"
41-SR	1 19/32"	1.84"
42-SU	(1.59")	1.82"
43-SF		1.80"
54-SR	1 19/32"	2.37"
56-SU	(1.59")	2.25"
64-SU	1 19/32"	3.05"
66-SF	(1.59")	2.97"
76-SF	2 1/8"	3.50"
	(2.125")	
86-SF	2 1/8"	4.05"
	(2.125")	

## FOOT NOTES:

- Dimensions include, a minimum clearance between end fittings of 1/8". Customer shafts need not extend to full depth of coupling bore. Depending on bore size, 2/3 of depth is generally adequate.
- For long lengths, a wooden dowel insert may be used to prevent collapse of the coupling sleeve under torque load. The O.D. of the inserts should allow for a slip fit inside the root diameter of the sleeve. The coupling torque rating may be lower at long lengths.
- Sleeve length and diameter dimensions may vary by ±.030".
- Part # EZ-Die cast zinc alloy end fitting Part # ES-Powdered metal alloy end fitting.

**NORMAL DUTY CYCLE**

Normal torque motors and multicylinder engines operating less than 10 hrs/day with infrequent starts and stops. No heavy, pulsating loads or clutches to add shock to the drive train.

**SEVERE DUTY CYCLE**

High torque motors and single cylinder engines operating for more than 10 hrs/day. Frequent starts and stops, heavy pulsating loads or clutches which exceed the normal torque loads.

**METRIC BORES & KEYSEATS**

Bore Size MM	Stand. Keyseat Broaches Avail.
6,7,8	2MM
9,10	3MM
11,12	4MM
13 thru 17	5MM
18 thru 22	6MM
23 thru 30	8MM
31 thru 38	10MM
39 thru 44	12MM

\*For keyseat and bore combinations not listed above, consult factory for quotation.

**COUPLING SIZE**

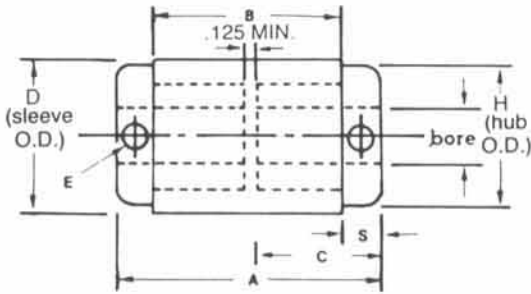
H.P.	3500 RPM	1750 RPM	1160 RPM	860 RPM
1/12	11	11	11	12
1/8	11	11	12	12
1/6	11	12	12	12
1/4	11	12	12	18
1/3	12	12	18	19
1/2	18	19	19	19
3/4	18	19	19	24
1	19	19	24	31
1-1/2	21	24	33	41
2	24	33	41	54
3	31	41	54	54
5	41	54	56	64
7-1/2	54	56	66	66
10	54	66	66	76
15	56	66	76	76
20	66	76	86	86
25	66	76	86	86
30	66	76	86	86
35	76	76	86	86
40	76	86	86	86
50	76	86	86	86

**COUPLING SIZE**

H.P.	3500 RPM	1750 RPM	1160 RPM	870 RPM
1/12	11	11	11	12
1/8	12	12	12	18
1/6	12	12	18	19
1/4	18	19	24	24
1/3	18	21	24	24
1/2	19	24	24	31
3/4	24	24	31	33
1	24	31	33	43
1-1/2	31	33	43	54
2	31	43	54	54
3	33	54	54	56
5	54	56	64	66
7-1/2	64	64	76	76
10	64	66	76	76
15	66	76	76	86
20	76	86	86	86
25	86	86	86	86
30	86	86	86	86
35	86	86	86	86
40	86	86	86	86

**STANDARD KEYWAYS**

Bore Range, in.	Keyseat, in.
3/8 to 1/2	1/8 x 1/16
5/8 to 7/8	3/16 x 3/32
1 5/16 to 1 1/4	1/4 x 1/8
1 5/16 to 1 3/8	5/16 x 5/32
1 7/16 to 1 13/16	3/8 x 3/16
1 7/8	1/2 x 1/4



**SELECTION DATA CHECK LIST**

DRIVER: AC Motor  DC Motor  Gas  Diesel Engine   
 LOAD: H.P.  Speed Torque: Starting  Running   
 Braking   
 DUTY CYCLE: Continuous hrs/day  Start/Stop  How often  Clutches   
 SERVICE CONDITIONS: Vibration  Shock   
 Temperature  Dirt/Moisture  Chemicals   
 PHYSICAL LIMITATIONS: Length desired  Maximum diameter  Shaft gap  Shaft diameter  Keyways   
 Assembly limitations

**END FITTING DIMENSIONS**

Part No. <sup>4</sup>	Hub Diameter (H)	Hub Extension (S)	Hub Length (C)	Standard Bores <sup>5,7</sup>	# of Teeth	Set Screw Size (E)
10-EZ 10-EZ	.70"	.22"	.50"	1/8 3/16 1/4 5/16 3/8 (1/4, 5/16 "D" also available)	8	8-32
18-EZ 18-EZ	1.15"	.33"	.72"	1/4 5/16 3/8 7/16 1/2* (3/8, 5/16 "D")	8	1/4-20
20-EZ 20-EZ	1.15"	.33"	1.09"	5/16 3/8 7/16 1/2* (5/16 "D")	8	1/4-20
30-EZ 30-EZ 30-EZ	1.45"	.38"	1.14"	3/8 7/16 1/2 5/8*	10	1/4-20
40-EZ 40-EZ <sup>8</sup> 40-EZ <sup>8</sup>	1.63"	.38"	1.14"	3/8 7/16 1/2 5/8 3/4 7/8*	12	1/4-20
50-EZ 50-EZ	2.06"	.43"	1.19"	1/2 3/4 7/8 1 1 1/8 1 1/8 1 3/16 1 1/8 1 3/16*	12	5/16-18
60-ES 60-ES	2.76"	.56"	1.30"	1/2 3/4 7/8 1 1 1/8 1 3/16 1 1/4 1 3/8*	12	5/16-18
70-EZ	3.25"	.56"	1.54"	3/4 7/8 1 1 1/8 1 3/16 1 1/4 1 3/8 1 7/16 1 1/2 1 5/8*	12	3/8-16
80-ES	3.75"	.66"	1.66"	7/8 1 5/16 1 1 1/8 1 3/16 1 1/4 1 3/8 1 7/16 1 1/2 1 5/8 1 1 1/16 1 3/4 1 7/8*	12	3/8-16

- Sizes marked with an "\*" indicate largest bore available with standard square style keyway. See table for standard sizes. **SHALLOW** or **FLAT** keyways are available for some sizes.
- KEYWAYS: Special order for series #11, 18, 20. Optional and stock at no additional cost for size #30. Standard for series #40, 50, 60, 70 and 80.
- End fittings can be provided with special bores, metric sizes, taper bore, bushings, splines, clamp type. Prices available upon request.
- 40-G end fitting also available as ES (Powdered metal type) at extra cost.
- End fittings reamed to size for slip fit.