

# **GUARDEX™**

## **Flexible Shaft Drive Couplings**

For The Mechanical Power Transmission Industry

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



1/2 HP-294HP

1/4" to 3-3/4" Bores

Double Crowned Tooth Gear Coupling

Nylon Sleeves, Steel Hubs

Blind Assembly

Free Axial Travel

Splined Bores, Metric Bores

# FEATURES OF THE GUARDEX™ COUPLING

- Double crowned tooth design provides free axial movement, low friction and minimum stress during misalignment. Designs are available with up to  $\frac{3}{8}$ " axial travel.
- Molded nylon sleeve with high torsional stiffness, free from any internal frictional losses or heat build-up. A torsionally stiff coupling with minimum backlash.
- Nylon and steel components allow high ambient temperature operation without lubrication or maintenance. Continuous operating ambients in the ranges between (-) 13°F and (+) 180°F. Heat stabilized polyamide available for temperatures up to (+) 250°F.
- Nylon sleeves resistant to dirt, moisture, most chemicals and petroleum products. No lubrication, seals or retainers to maintain. Easy clean-up and visual inspection.
- Compact and lightweight design with high torque and low inertia. Minimum shaft gap for close-coupled applications.
- Precision molded concentric sleeve and hubs for high speed applications. No bolts, pins, flanges or protrusions to affect balance or safety. Smooth exterior surface.
- Blind assembly with slip-together components for easy inspection and adjustment without disassembly.
- Metric, Standard, Splined bores available.

**DIRECTLY INTERCHANGEABLE WITH BOWEX\* COUPLINGS**

## DOUBLE CROWNED TOOTH

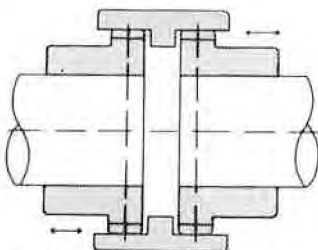


- Large contact area to provide low contact pressure and to reduce stress of shaft misalignment.
- Load distributed near the center of the tooth for maximum strength.
- Low friction for a smooth flow of power without the need for lubrication—maintenance free.
- Free axial movement of the coupling parts to compensate for shaft thermal changes and future alignment problems.

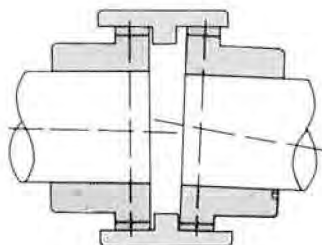
### ALIGNMENT TOLERANCES

Type	Axial Displacement	Parallel Offset	Angular Misalignment	Recommended Hub Spacer Gap
M-Style (three-piece)	$\pm .040$ "	.016"/hub	1°/hub	.0625"/hub

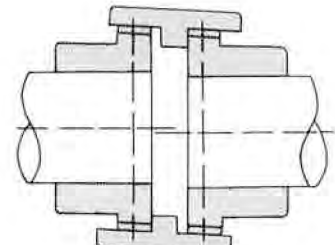
#### AXIAL DISPLACEMENT



#### PARALLEL OFFSET



#### ANGULAR MISALIGNMENT



# GUARDEX™ M-STYLE

## COUPLING SELECTION

Guardex Coupling Number	Nominal Torque Inch Lbs.	Maximum Torque Inch Lbs.	Nominal H.P. @ 1750 RPM	Nominal H.P. @ 1140 RPM	Max. RPM
M-14	86	173	2.5	1.5	14,000
M-19	138	277	3.7	2.5	11,800
M-24	173	347	4.5	3.2	10,600
M-28	390	781	10.5	7.0	8,500
M-32	520	1,041	14.5	9.5	7,500
M-38	694	1,388	22.0	12.5	6,700
M-42	868	1,736	24.0	16.0	6,000
M-48	1,215	2,430	30.0	22.0	5,600
M-65	3,298	6,596	90.0	60.0	4,000
M-80	6,000	12,000	165.0	110.0	3,150
M-100	10,600	21,000	294.0	191.0	3,000

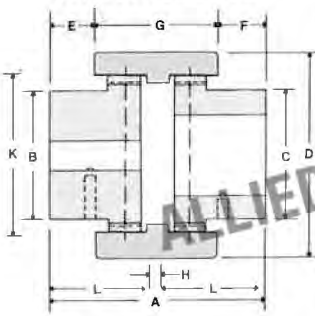


1. Nominal torque ratings allow for 180°F ambient, full misalignment and/or maximum RPM.
2. Starting torque and braking loads should not exceed listed maximum torque.
3. Intermittent, transient peak loads should not exceed three times nominal torque.
4. Applications with uniform loading, well-aligned shafts, and low speeds will allow for operation at maximum torque levels.

## GUARDEX™

**M-STYLE COUPLING**  
Nylon Sleeve, Steel Hubs  
Three-Piece Construction

### NYLON SLEEVE



### STEEL HUBS

Standard Bores & Keyseats	
Bore Range	Keyseat
3/8 to 1/2	1/8 × 1/16
5/8 to 7/8	3/16 × 3/32
15/16 to 1 1/4	1/4 × 1/8
1 1/16 to 1 3/8	5/16 × 5/32
1 7/16 to 1 3/4	3/8 × 3/16
1 13/16 to 2 1/4	1/2 × 1/4
2 5/16 to 2 3/4	5/8 × 5/16
2 13/16 to 3 1/4	3/4 × 3/8
3 5/16 to 3 3/4	7/8 × 7/16
3 13/16 to 4 1/2	1 × 1/2

Woodruff and special keyways available.

Metric Bores & Keyseats	
Bore Range	Keyseat
6-7-8	2 MM
9-10	3 MM
11-12	4 MM
13 thru 17	5 MM
18 thru 22	6 MM
23 thru 30	8 MM
31 thru 38	10 MM
39 thru 44	12 MM
45 thru 50	14 MM
51 thru 58	16 MM
59 thru 65	18 MM
66 thru 75	20 MM
76 thru 85	22 MM
86 thru 95	25 MM

## DIMENSIONS

Type	Complete Coupling Length A	Max. Dia. D	Hub Dia. B & C	Hub Extension E & F	Gear Ring Dia. K	Bore Length L	Sleeve Length G	Spacer Gap H	No. of Teeth	Setscrews	Coupling Weight #	Min./Max. Bore	Stock Bores W/Keyway	Stock Bores WO/Keyway
M-14	1.77"	1.57"	1.00"	.14"	1.30"	.78"	1.45"	.19"	20	10-24	.4	.187"/.625"	7/16, 1/2, 5/8	1/4, 3/8, 7/16, 1/2, 5/8
M-19	1.96"	1.90"	1.25"	.25"	1.53"	.86"	1.45"	.28"	24	1/4-20	.6	.375"/.750"	1/2, 5/8, 3/4	7/16, 1/2, 5/8, 3/4
M-24	2.07"	2.05"	1.42"	.25"	1.76"	.84"	1.60"	.39"	28	1/4-20	.8	.375"/.945"	1/2, 5/8, 3/4, 7/8	7/16, 1/2
M-28	3.17"	2.58"	1.97"	.69"	2.12"	1.40"	1.80"	.37"	34	1/4-20	1.8	.250"/1.125"	1/2, 5/8, 3/4, 7/8, 1 1/8	7/16, 1/2
M-32	3.15"	3.00"	1.97"	.63"	2.47"	1.40"	1.92"	.35"	40	5/16-18	3.2	.437"/1.26"	1/2, 5/8, 3/4, 7/8, 1 1/8, 1 1/4	
M-38	3.15"	3.25"	2.30"	.65"	2.70"	1.40"	1.90"	.35"	44	5/16-18	4.0	.437"/1.50"	1/2, 5/8, 3/4, 7/8, 1 1/8, 1 3/8, 1 1/2	
M-42	3.36"	3.63"	2.55"	.73"	3.06"	1.50"	1.97"	.36"	50	5/16-8	4.4	.437"/1.65"	5/8, 3/4, 7/8, 1 1/8, 1 3/8, 1 1/2, 1 5/8	
M-48	3.91"	3.88"	2.67"	1.20"	3.06"	1.80"	1.93"	.31"	50	3/8-16	5.4	.437"/1.89"	5/8, 3/4, 7/8, 1 1/8, 1 3/8, 1 1/2, 1 5/8, 1 3/4	
M-65	5.51"	5.58"	3.80"	1.38"	4.33"	2.76"	2.83"	.48"	42	3/8-16	15	.500"/2.56"	1, 1 1/8, 1 3/8, 1 5/8, 1 7/8, 2 1/8, 2 3/8	
M-80	7.32"	6.89"	4.88"	1.83"	5.70"	3.54"	3.66"	N/A	46	3/8-16	25	.98"/3.15"	1 7/8, 2 1/8, 2 3/8, 2 7/8, 3 1/8	
M-100	8.98"	8.26"	5.98"	2.48"	6.93"	4.33"	4.02"	N/A	48	1/2-13	45	1.38"/3.94"	As Requested	

- Notes: 1. Dimension "A" is "fully compressed". For best misalignment characteristics, 1/16" gap per hub is recommended.  
2. M-80/M-100 sleeves have internal snap ring provisions.