



Your Best Connection!

CURVED JAW COUPLINGS

THREE PIECE DESIGN

FAIL SAFE

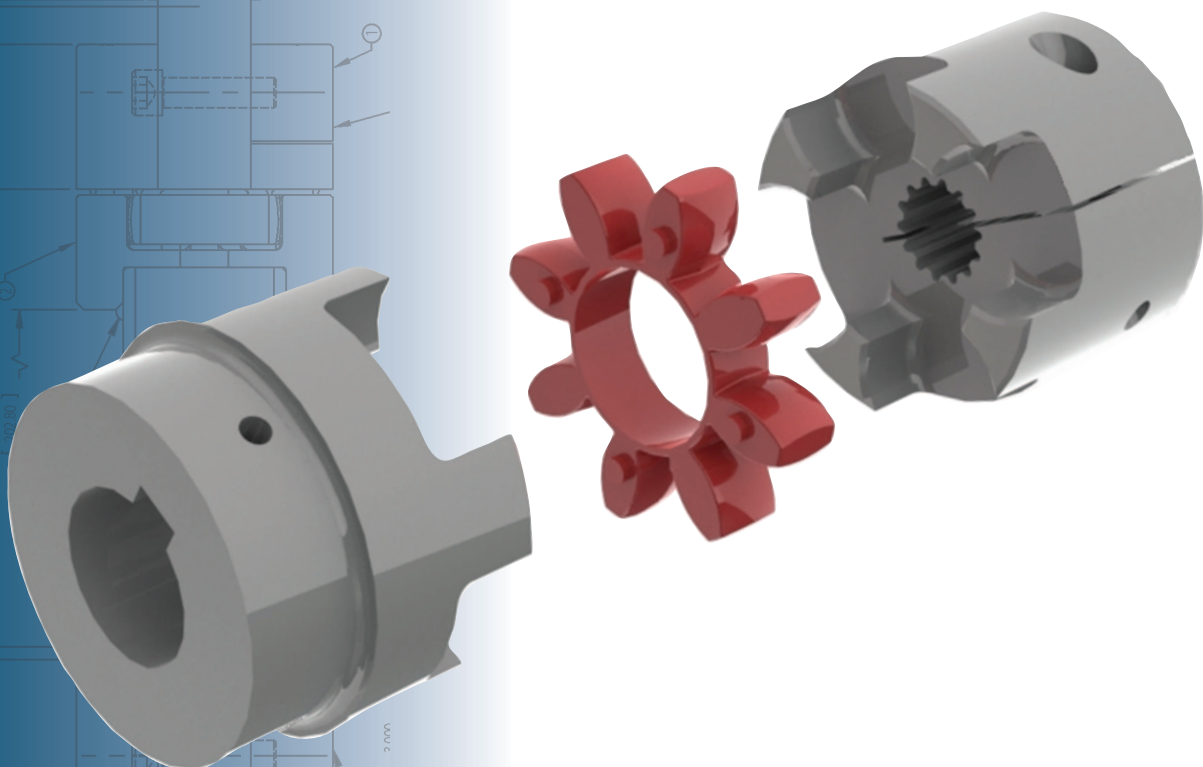
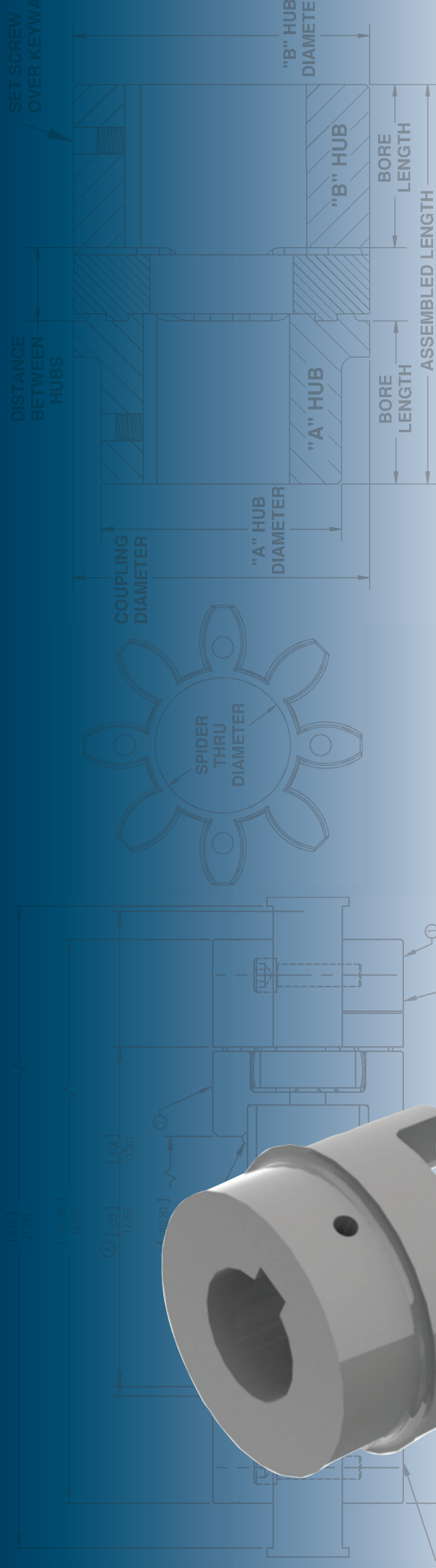
NO LUBRICATION REQUIRED

VARIABLE DUROMETER
URETHANE ELEMENTS

NO METAL TO METAL CONTACT

HIGH TORQUE CAPACITIES

VARIABLE HUB MATERIALS



COUPLING TORQUE RATINGS AND SPIDERS

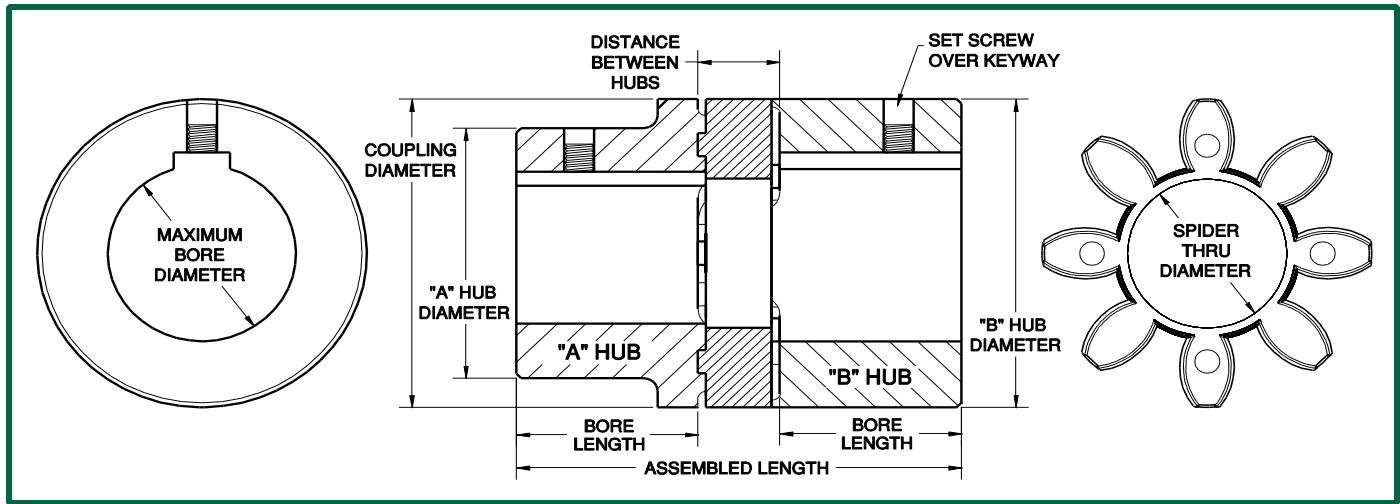
The curved jaw coupling includes two metal hubs and an elastomeric "spider" element.

The spiders are available in different hardness durometers, each easily identified by its color.

SPIDER CHARACTERISTICS					
Hardness	Color	Material	Temperature Range		Applications
			Standard	Maximum	
80 Shore A	Blue	Polyurethane	-40° to 212° F	250° F	Excellent damping
92 Shore A	White	Polyurethane	-40° to 212° F	250° F	Moderate damping, general applications
98 Shore A	Red	Polyurethane	-40° to 212° F	250° F	High torque applications
64 Shore D	Green	Hytrell	-30° to 230° F	266° F	Higher torque, high temperature

Coupling Size	Spider Color	Torque (inch-pounds)			Maximum Speed (RPM)	HP @ 1800 RPM
		Nominal	Maximum	Reversing		
19/24	Blue	43	86	11	14,000	1.25
19/24	White	88	177	23	14,000	2.5
19/24	Red	150	300	39	14,000	4
19/24	Green	185	370	46	14,000	5
24/32	Blue	151	301	39	10,600	4.5
24/32	White	310	620	80	10,600	8.7
24/32	Red	530	1,060	142	10,600	15
24/32	Green	660	1,320	165	10,600	18
28/38	Blue	407	814	106	8,500	12.25
28/38	White	840	1,680	221	8,500	23.6
28/38	Red	1,415	2,830	381	8,500	40
28/38	Green	1,770	3,540	442	8,500	50
38/45	Blue	823	1,637	212	7,100	25
38/45	White	1,680	3,360	434	7,100	47
38/45	Red	2,875	5,750	770	7,100	81
38/45	Green	3,585	7,170	896	7,100	100
38/45-L	Blue	823	1,637	212	7,100	25
38/45-L	White	1,680	3,360	434	7,100	47
38/45-L	Red	2,875	5,750	770	7,100	81
38/45-L	Green	3,585	7,170	896	7,100	100
42/55	Blue	1,151	2,301	301	6,000	35
42/55	White	2,345	4,690	611	6,000	66
42/55	Red	3,980	7,965	1,062	6,000	111
42/55	Green	4,955	9,910	1,238	6,000	140
42/55-L	Blue	1,151	2,301	301	6,000	35
42/55-L	White	2,345	4,690	611	6,000	66
42/55-L	Red	3,980	7,965	1,062	6,000	111
42/55-L	Green	4,955	9,910	1,238	6,000	140
48/60	Blue	1,328	2,655	345	5,600	40
48/60	White	2,740	5,485	540	5,600	77
48/60	Red	4,645	9,290	1,212	5,600	130
48/60	Green	5,795	11,590	1,448	5,600	165
55/70	White	3,625	7,255	823	4,750	94
55/70	Red	6,060	12,125	1,443	4,750	155
55/70	Green	7,300	14,600	1,825	4,750	200
65/75	White	5,530	11,060	982	4,250	106
65/75	Red	8,320	16,635	1,469	4,250	159
75/90	White	11,325	22,655	2,248	3,550	240
75/90	Red	16,990	33,980	3,372	3,550	363
90/100	White	21,240	42,480	5,522	3,550	600
90/100	Red	31,860	63,720	8,284	3,550	893
100/110	White	29,205	58,410	7,593	3,550	835
100/110	Red	43,805	87,615	11,390	3,550	1,230
110/125	White	42,480	84,960	9,204	3,550	1,010
110/125	Red	63,720	127,440	13,806	3,550	1,485
125/145	White	58,850	117,705	11,505	3,550	1,265
125/145	Red	88,500	177,000	17,258	3,550	1,857

COUPLING DIMENSIONS



Aluminum Hubs

Size	"A" Hub Min/Max Bore	"B" Hub Min/Max Bore	"A" Hub Diameter	"B" Hub Diameter	Coupling Diameter	Assembled Length	Bore Length (Both A & B)	Between Hubs	Spider Thru Diameter
19/24	.25"/.75"	0.25"/0.95"	1.26"	1.57"	1.57"	2.55"	0.98"	0.56"	0.70"
24/32	Unbored/.94"	N/A	1.86"	N/A	2.16"	2.97"	1.16"	0.63"	1.04"
28/38	.37"/1.10"	0.37"/1.50"	1.89"	2.55"	2.55"	3.53"	1.40"	0.73"	1.17"
38/45	Unbored/1.50"	Unbored/1.77"	2.60"	3.11"	3.11"	4.50"	1.77"	0.95"	1.57"
42/55	.60"/1.65"	0.60"/2.17"	2.95"	3.74"	3.74"	5.00"	2.00"	1.02"	1.86"
48/60	.50"/1.89"	0.50"/2.36"	3.35"	4.13"	4.13"	5.51"	2.27"	1.10"	1.91"

Sintered Steel Hubs

Size	"A" Hub Min/Max Bore	"B" Hub Min/Max Bore	"A" Hub Diameter	"B" Hub Diameter	Coupling Diameter	Assembled Length	Bore Length (Both A & B)	Between Hubs	Spider Thru Diameter
19/24	NA	Unbored/0.95"	NA	1.57"	1.57"	2.55"	0.98"	0.56"	0.70"
24/32	NA	Unbored/1.26"	NA	2.18"	2.18"	3.03"	1.18"	0.63"	1.04"
28/38	NA	Unbored/1.50"	NA	2.56"	2.56"	3.45"	1.37"	0.73"	1.17"

Stainless Steel Hubs

Size	"A" Hub Min/Max Bore	"B" Hub Min/Max Bore	"A" Hub Diameter	"B" Hub Diameter	Coupling Diameter	Assembled Length	Bore Length (Both A & B)	Between Hubs	Spider Thru Diameter
24/32	N/A	Unbored/1.26"	N/A	2.18"	2.18"	3.03"	1.18"	0.63"	0.70"
28/38	N/A	.50"/1.50"	N/A	2.56"	2.56"	3.45"	1.37"	0.73"	1.17"
38/45	N/A	.50"/1.77"	N/A	3.15"	3.15"	4.50"	1.77"	0.95"	1.57"
48/60	N/A	.50"/2.36"	N/A	4.13"	4.13"	5.51"	2.27"	1.10"	1.91"

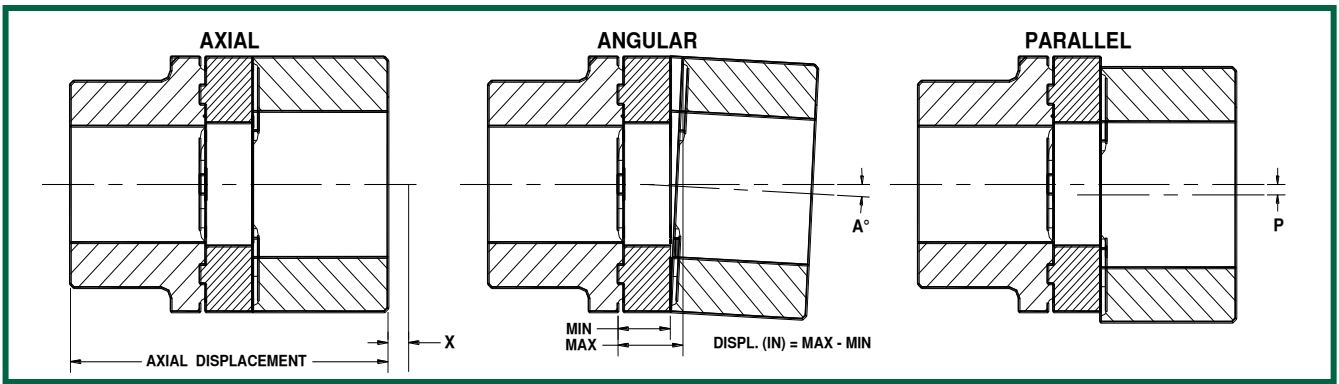
Steel Hubs

Size	"A" Hub Min/Max Bore	"B" Hub Min/Max Bore	"A" Hub Diameter	"B" Hub Diameter	Coupling Diameter	Assembled Length	Bore Length (Both A & B)	Between Hubs	Spider Thru Diameter
38/45	.50"/1.50"	.50"/1.77"	2.60"	3.16"	3.16"	4.50"	1.77"	0.95"	1.57"
38/45-L	N/A	.50"/1.77"	N/A	3.16"	3.16"	6.50"	2.77"	0.95"	1.57"
42/55	.60"/1.65"	.60"/2.17"	2.95"	3.74"	3.74"	5.00"	2.00"	1.02"	1.86"
42/55-L	N/A	.60"/2.17"	N/A	3.74"	3.74"	6.86"	2.95"	1.02"	1.86"
48/60	.50"/1.89"	.50"/2.36"	3.35"	4.13"	4.13"	5.51"	2.27"	1.10"	1.91"
55/70	.62"/2.17"	.62"/2.76"	3.86"	4.73"	4.73"	6.30"	2.56"	1.18"	2.38"
65/75	.87"/2.56"	.87"/2.95"	4.53"	5.31"	5.31"	7.28"	2.95"	1.38"	2.67"
75/90	1.00"/2.95"	1.00"/3.54"	5.32"	6.30"	6.30"	8.27"	3.37"	1.58"	3.61"
90/100	1.50"/3.54"	1.50"/3.94"	6.30"	7.08"	7.88"	9.65"	3.94"	1.77"	3.96"

Cast Iron Hubs

Size	"A" Hub Min/Max Bore	"B" Hub Min/Max Bore	"A" Hub Diameter	"B" Hub Diameter	Coupling Diameter	Assembled Length	Bore Length (Both A & B)	Between Hubs	Spider Thru Diameter
90/100	1.50"/3.54"	1.50"/3.94"	6.30"	7.08"	7.88"	9.65"	3.94"	1.77"	3.96"
100/110	N/A	2.00"/4.33"	N/A	8.86"	8.86"	10.63"	4.33"	1.97"	4.35"
110/125	N/A	2.27"/4.92"	N/A	9.06"	10.04"	11.61"	4.72"	2.17"	4.90"
125/145	N/A	2.27"/5.71"	N/A	10.43"	11.42"	13.39"	5.51"	2.36"	5.75"

MISALIGNMENT



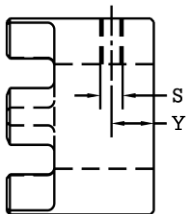
Size	Axial Displacement "X" (Inches)	Angular Displacement A° (Degrees/Inches)	Parallel Displacement P (Inches)
19/24	0.05	1.2 / 0.03	0.008
24/32	0.06	0.9 / 0.03	0.009
28/38	0.06	0.9 / 0.04	0.010
38/45	0.07	1.0 / 0.05	0.011
42/55	0.08	1.0 / 0.07	0.012
48/60	0.08	1.1 / 0.08	0.014
55/70	0.09	1.1 / 0.09	0.015
65/75	0.10	1.2 / 0.11	0.016
75/90	0.12	1.2 / 0.13	0.018
90/100	0.13	1.2 / 0.17	0.019
100/110	0.15	1.2 / 0.19	0.020
110/125	0.17	1.3 / 0.22	0.021
125/145	0.18	1.3 / 0.25	0.024

SET SCREW / CLAMPING INFO

Coupling Size	19/24	24/32	28/38	38/45	42/55	48/60	55/70	65/75	75/90	90/100	100/110	110/125
Location (Y)	0.39	0.39	0.59	0.59	0.79	0.79	0.79	0.79	0.98	1.18	1.18	1.38
Set Screw (S)	1/4-20	5/16-18	5/16-18	5/16-18	3/8-16	3/8-16	1/2-13	1/2-13	1/2-13	3/4-10	3/4-10	3/4-10
Torque (FT-LBS)	7	14	14	14	23	23	50	50	50	167	167	167

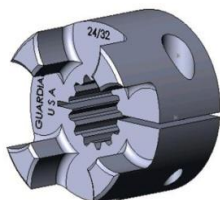
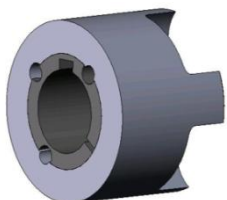
HUB OPTIONS

SET SCREW & KEYWAY*



TAPER LOCK BUSHING

CROSS CLAMP**



REFERENCE DATA

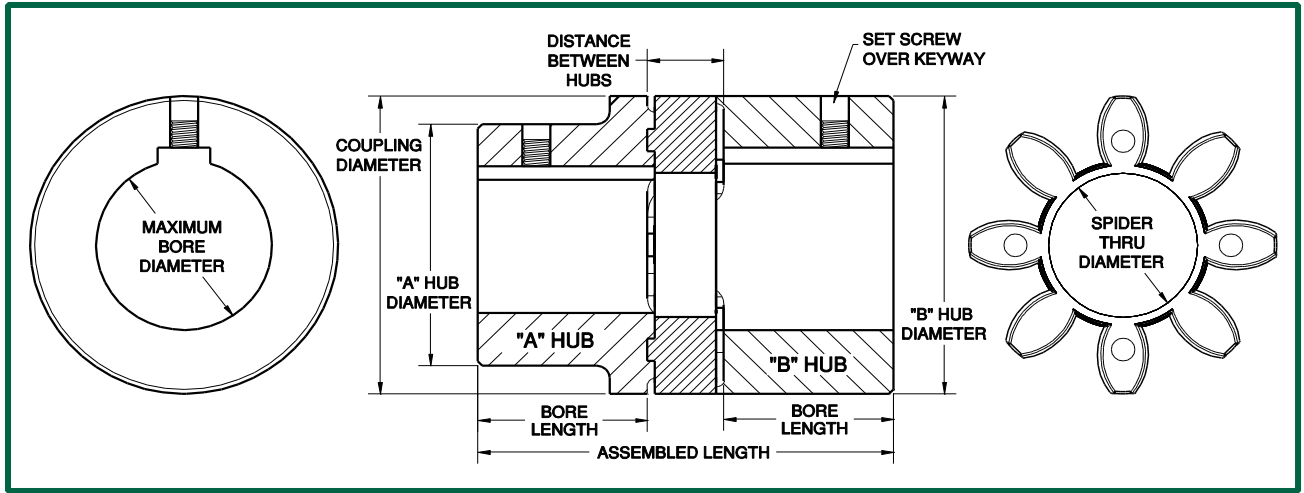
STANDARD BORES & KEYSEATS (in.)		METRIC BORES & KEYSEATS (mm)	
BORE RANGE	KEYSEAT	BORE RANGE	KEYSEAT
0.375 / 0.500	0.125 X 0.063	6-7-8	2
0.625 / 0.875	0.188 X 0.094	9-10	3
0.938 / 1.250	0.250 X 0.125	11-12	4
1.313 / 1.375	0.313 X 0.156	13 THRU 17	5
1.438 / 1.750	0.375 X 0.188	18 THRU 22	6
1.813 / 2.250	0.500 X 0.250	23 THRU 30	8
2.313 / 2.750	0.625 X 0.313	31 THRU 38	10
2.813 / 3.250	0.750 X 0.375	39 THRU 44	12
3.313 / 3.750	0.875 X 0.438	45 THRU 50	14
3.813 / 4.500	1.000 X 0.500	51 THRU 58	16
		59 THRU 65	18
		66 THRU 75	20
		76 THRU 85	22

*Standard set screw furnished unless otherwise requested. Metric set screws also available.

**SAE Spline with cross clamp feature available from stock.

GUARDIAN MINIATURE JAW COUPLINGS

Guardian miniature jaw couplings are general purpose 3 piece couplings with a variable durometer spider elements. These couplings are assembled under a preload, and provide zero backlash to the limit of the element. They are commonly used for applications such as stepper drives, positioning slides, encoders, resolvers, and tachometers.



COUPLING DIMENSIONS

Aluminum Hubs

Size	"A" Hub Min/Max Bore	"B" Hub Min/Max Bore	"A" Hub Diameter	"B" Hub Diameter	Assembled Length	Bore Length	Between Hubs	Spider Thru Diameter	Misalignment		
									Axial	Parallel	Angular
7	NA	Unbored / .276"	NA	.55"	.86"	.28"	.30"	Solid	.030"	.002"	1 Degree
9	NA	Unbored / .354"	NA	.78"	1.20"	.39"	.42"	Solid	.030"	.002"	1 Degree
14	NA	Unbored / .630"	NA	1.18"	1.35"	.43"	.49"	Solid	.030"	.002"	1 Degree

COUPLING TORQUE RATINGS AND SPIDERS

Coupling Size	Spider Color	Torque (inch-pounds)			Torsional Stiffness Inch-pounds/rad	Maximum Speed (RPM)*	HP @ 1800 RPM
		Nominal	Maximum	Backlash Free			
7-80	Blue	6	12	2 IN#	76	34,100	0.17
7-92	White	11	21		127	34,100	0.31
7-98	Red	18	35		203	34,100	0.51
7-64	Green	21	43		304	34,100	0.60
9-80	Blue	16	32	4 IN#	152	23,800	0.46
9-92	White	27	53		279	23,800	0.77
9-98	Red	44	89		456	23,800	1.26
9-64	Green	53	106		658	23,800	1.51
14-80	Blue	35	71	9 IN#	538	15,900	1.00
14-92	White	66	133		1010	15,900	1.88
14-98	Red	111	221		1518	15,900	3.17
14-64	Green	142	283		2070	15,900	4.06

*MAXIMUM SPEED RATINGS BASED UPON SET SCREW CLAMPING. ALL OTHER CLAMPING METHODS PLEASE INQUIRE TO GUARDIAN ENGINEERING.

