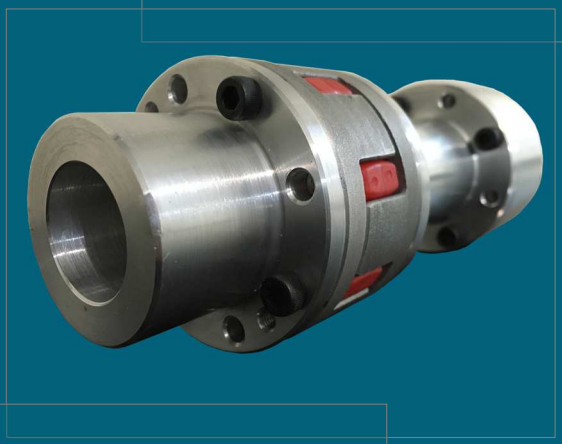
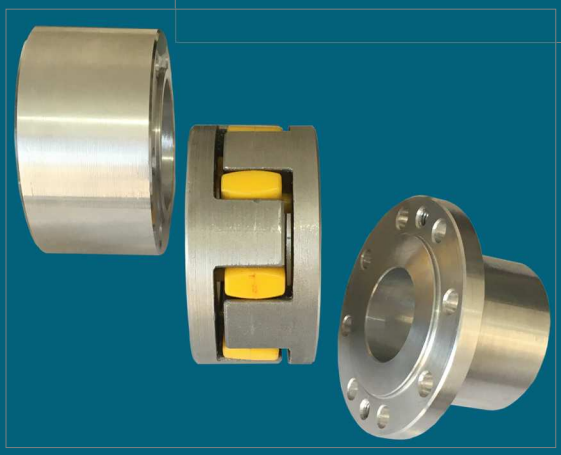
SPIDERFLEX®



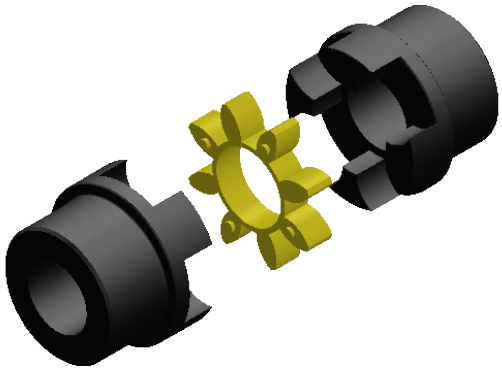


FLEXELEMENT

Power Transmission Solution

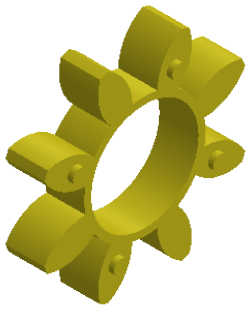
THE CURVED JAW DESIGN

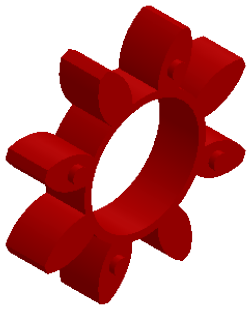
- Three piece design that is easy to assemble.
- The curved jaw design incorporates both radial and axial curvature (crowning) to the elastomer.
- Hubs are offered in steel material.
- Two different urethane elastomers available.
- No metal to metal contact and no lubrication required.
- Fail safe design due to the jaw in compression design (continues to function after the elastomer fails).
- The CF series covers a torque range of 67 to 247,800 in-lbs.



ELASTOMERS

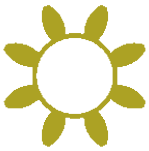
- Two types of spiders are available for the CF Series of couplings.
- Polyurethane elastomer provide high abrasion resistance and elasticity, along with good damping characteristics.
- The elastomer are offered in a variety of shore hardnesses, each providing a different level of torque capacity, damping, and chemical resistance.
- The 92 shore A elastomer (yellow in color) is the standard, offering excellent torque carrying capacity.
- The 95/98 shore A elastomer (red) offers higher torque than the standard 92 shore.
- The 92 and 95/98 shore A elastomer have a temperature capacity of 212° F.
- The curved jaw elastomer's polyurethane material also resists oil, dirt, sand, grease, moisture, many solvents, as well as atmospheric effects of ozone.





CF SERIES ELASTOMER RECOMMENDATION CHART

ELASTOMER TYPE	APPLICATION TYPES REQUIRING
92 shore A (Yellow)	General & hydraulic applications
95/98 shore A (Red)	High torque requirements



CF SERIES ELASTOMER PERFORMANCE DATA

ELASTOMER TYPE	COLOR	MATERIAL	TEMPERATURE RANGE		MISALIGNMENT (INCHES)			TYPICAL APPLICATIONS
			NORMAL	MAXIMUM	AXIAL	PARALLEL	ANGULAR	
92 Shore A	Yellow	Polyurethane	-40° to 212° F	-50° to 248° F	0.39	0.007 - 0.020	0.9 - 1.2 deg	General & hydraulic
95/98 Shore A	Red	Polyurethane	-40° to 212° F	-40° to 248° F	0.39	0.007 - 0.020	0.9 - 1.2 deg	High torque requirements

THE CURVED JAW DESIGN

1.- Determine the nominal torque (Tn) of your application:

Nm = Tn = HPx7160 / RPM **lbs.in= Tn= HPx63025 / RPM**

2.- Calculate your Application Service Factor using the charts below.
The total Service Factor (**F**) will be:

F = F1 x F2 x F3

3.- Calculate the design torque (DTmax) of your application.

Design Torque (DTmax) =
Nominal Torque x service factor

4.- Using the Elastomer Torque Ratings Table on page 3 select the urethane shore hardness which best corresponds to your relative damping needs in the application.

5.- Next find the columns listing Tn and Tmax values listed in Nm or in-lbs and compare them against the DTmax figure for your application. Make sure that the spider/coupling size values are larger than the application values.

6.- Once the size is selected using the torque values, check the table on page 4 to make sure the bore size needed will fit in the coupling using standard or large hub.

7.- Double check the overall dimensions of the coupling to ensure that it will fit in the space allowed for the coupling in the application.

*This selection process is based on application factors only.
A selection process is also available using DIN 740.
Consult with Engineering for details.

APPLICATION SERVICE FACTOR (F1)

APPLICATION SERVICE FACTOR	SERVICE FACTOR (F1)
Uniform operation with small masses to be accelerated. Hydraulic and centrifugal pumps, light generators, blowers, fans, ventilators, belt/screw conveyors.	**1.1**
Uniform operation with medium masses to be accelerated. Sheet metal bending machines, wood working machines, mills, textile machines, mixers.	**1.2**
Irregular operation, with medium masses to be accelerated. Rotating ovens, printing presses, generators, shredders, winders,spinning machines, pumps for viscous fluids.	**1.3**
Irregular operation and shocks, with medium masses to be accelerated concrete mixers, drop hammers, cable cars, paper mills, compression pumps, propeller pumps, rope winders, centrifuges.	**1.4**
Irregular operation and very heavy shocks, with large masses to be accelerated. Excavators, hammer mills, piston pumps, presses,rotary boring machines, shears, forge presses, stone crushers.	**1.6**
Irregular operation and very heavy shocks, with very large masses to be accelerated. Piston type compressors and pumps without speed variations, heavy roll sets, welding machines, brick presses, stone crushers.	**1.8**

Electrical motor start direct on line, use 1.5

APPLICATION SERVICE FACTOR FOR STARTS PER HOUR (F2)

STARTS PER HOUR	100	200	400	800
Service Factor (F2)	1.2	1.4	1.6	1.8

APPLICATION SERVICE FACTOR FOR AMBIENT TEMPERATURE (F3)

AMBIENT TEMPERATURE	-30° TO 30° C	40° C	60° C	80° C
Service Factor (**F3**)	1.0	1.2	1.4	1.6

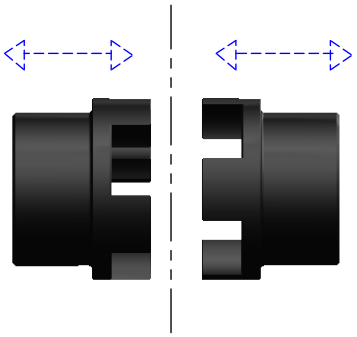
DEFINITION OF TERMS

Tn Rated coupling torque
Tmax Maximum torque of the coupling
P[HP] Power
RPM[1/min] Revolutions per minute
Nm Newton meters
DTmax Maximum torque of the application
HE Hub Extended length hub

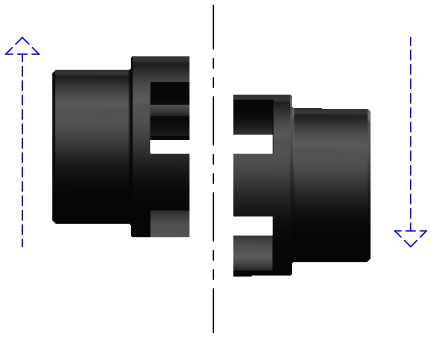
APPLICATION SERVICE FACTOR (F1)

SIZE	MAXIMUM SPEED RPM	TORQUE (YELLOW) 92 Shore A		TORQUE (RED)			WIND-UP ANGLE	
		NOMINAL (Tn) Nm **in-lbs**	**MAXIMUM** (Tmax) Nm in-lbs	**NOMINAL** (Tn) Nm **in-lbs**	**MAXIMUM** (Tmax) Nm in-lbs	**Hardness** Shore A	**NOMINAL** TORQUE	**MAXIMUM** TORQUE
19	14,000	10 **88**	20 **177**	17 **150**	34 **300**	**98**	**3. 0°**	**4.5°**
24	10,600	35 **310**	70 **620**	60 **530**	113 **1,000**			
28	8,500	95 **840**	190 **1,680**	160 **1,415**	320 **2,830**			
38	7,100	190 **1,680**	380 **3,360**	325 **2,875**	650 **5,750**			
42	6,000	265 **2,345**	530 **4,690**	450 **3,980**	899 **7,960**			
48	5,600	310 **2,740**	619 **5,480**	525 **4,645**	1,050 **9,290**			
55	4,750	410 **3,625**	819 **7,250**	685 **6,060**	1,369 **12,120**			
65	4,250	625 **5,530**	1,250 **11,060**	940 **8,320**	1,880 **16,640**	**95**		
75	3,550	1,279 **11,320**	2,559 **22,650**	1,920 **16,990**	3,869 **33,980**			
90	2,800	2,400 **21,240**	4,799 **42,480**	3,600 **31,860**	7,199 **63,720**			

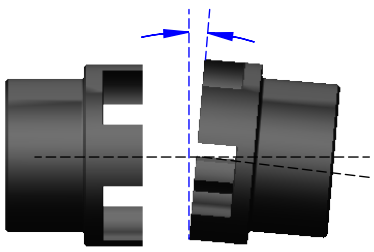
CF Series Displacement Misalignment (inches)



AXIAL MISALIGNMENT



RADIAL MISALIGNMENT

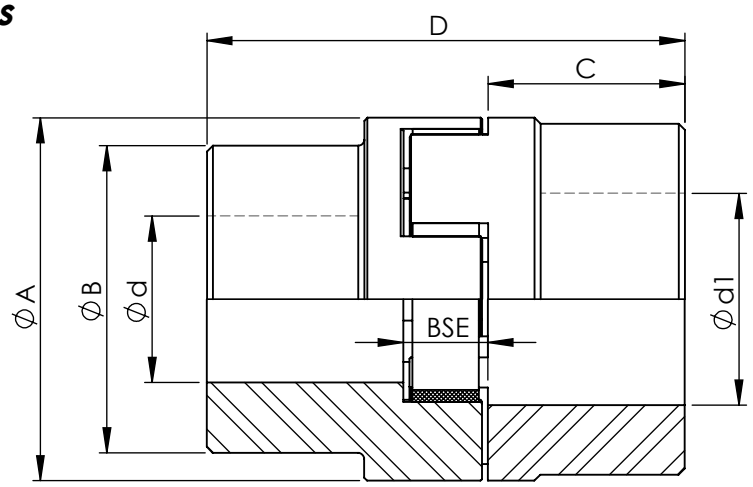


ANGULAR MISALIGNMENT

SIZE	19	24	28	38	42	48	55	65	75	90
Axial Misalignment	0.047	0.055	0.06	0.07	0.079	0.082	0.87	0.102	0.12	0.133
Radial Misalignment	0.004	0.005	0.006	0.007	0.007	0.009	0.009	0.016	0.018	0.019
Angular Misalignment	0.03	0.04	0.05	0.07	0.07	0.08	0.09	0.11	0.13	0.17

The values regarding displacement are provided assuming normal operating conditions (i.e. temperature, torque with nominal rating of the coupling, speed/ RPM rating of the coupling, and misalignment). Careful installation (i.e. alignment) and periodic inspection should be provided to provide the optimum life of the coupling. Special consideration should be given as to the position of the shafts and the amount of axial movement the coupling will be exposed to. The more accurate the alignment of the coupling, will result in greater life of the elastomer. A coupling guard and rotating equipment safety procedures should always be followed.

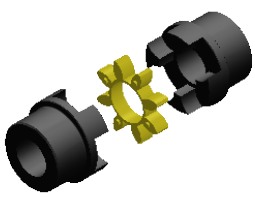
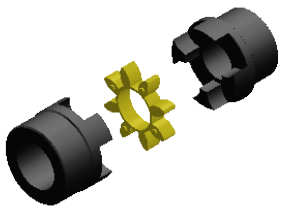
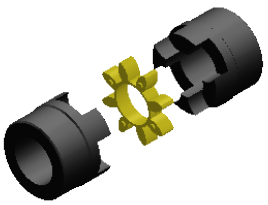
CF1 Series



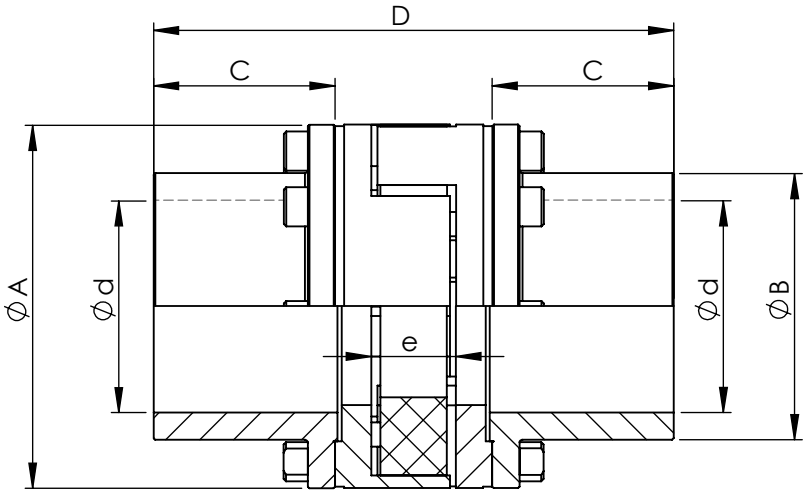
Technical Dimensions Table

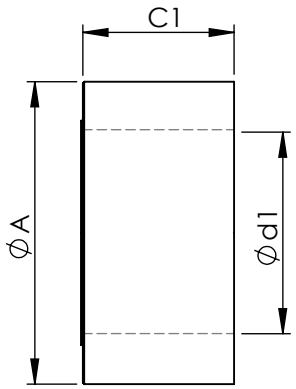
SIZE	STANDARD HUB MAX. BORE (Ø**d**)	LARGE HUB MAX. BORE (Ø**d1**)	**A**	**B**	**C**	**D**	**BSE**
	in mm	**in** mm	**in** mm	**in** mm	**in** mm	**in** mm	**in** mm
19	**0.75** 19	**0.94** 24	**1.57** 40	**1.26** 32	**0.98** 25	**2.60** 66	**0.63** 16
24	**0.94** 24	**1.25** 32	**2.20** 56	**1.57** 40	**1.18** 30	**3.07** 78	**0.70** 18
28	**1.10** 28	**1.50** 38	**2.56** 65	**1.89** 48	**1.38** 35	**3.54** 90	**0.79** 20
38	**1.50** 38	**1.75** 45	**3.15** 80	**2.60** 66	**1.77** 45	**4.49** 114	**0.94** 24
42	**1.65** 42	**2.13** 55	**3.74** 95	**2.95** 75	**1.97** 50	**4.96** 126	**1.02** 26
48	**1.88** 48	**2.31** 60	**4.13** 105	**3.35** 85	**2.20** 56	**5.51** 140	**1.10** 28
55	**2.13** 55	**2.75** 70	**4.72** 120	**3.86** 98	**2.56** 65	**6.30** 160	**1.18** 30
65	**2.50** 65	**2.94** 75	**5.31** 135	**4.53** 115	**2.95** 75	**7.28** 185	**1.38** 35
75	**2.94** 75	**3.50** 90	**6.30** 160	**5.31** 135	**3.35** 85	**8.27** 210	**1.57** 40
90	**3.50** 90	**3.94** 100	**7.87** 200	**6.30** 160	**3.94** 100	**9.65** 245	**1.77** 45

(1). Max. Bore listed is for standard square key.
BSE= Distance Between Shaft End.


CF2 Series



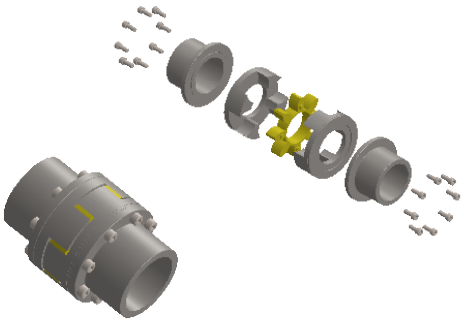


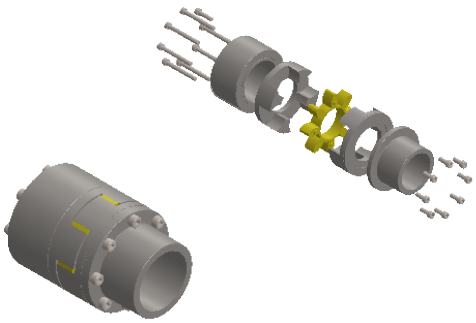
LARGE HUB

Technical Dimensions Table

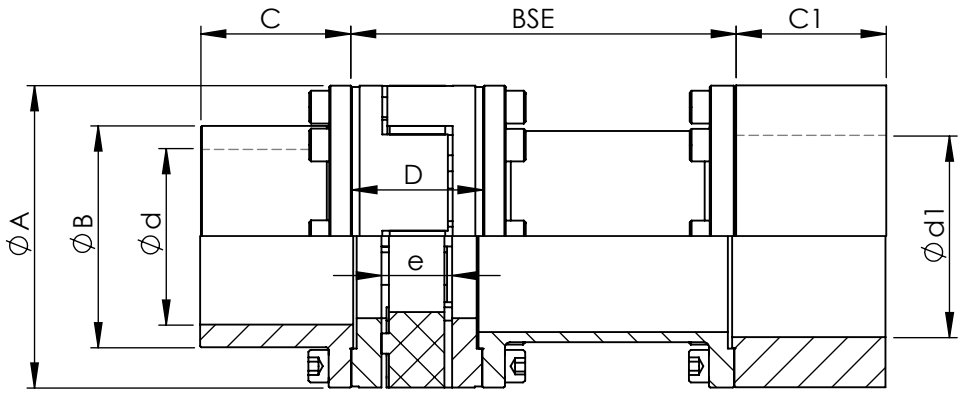
SIZE	STANDARD HUB MAX. BORE (Ø**d**)	LARGE HUB MAX. BORE (Ø**d1**)	A	B	C	C1	D	e
	in mm	**in** mm	**in** mm	**in** mm	**in** mm	**in** mm	**in** mm	**in** mm
24	**0.88** 22	**1.38** 35	**2.17** 55	**1.38** 35	**0.98** 25	**1.14** 29	**3.70** 94	**0.70** 18
28	**1.10** 28	**1.63** 42	**2.56** 65	**1.65** 42	**1.18** 30	**1.34** 34	**4.33** 110	**0.79** 20
38	**1.38** 35	**2.00** 51	**3.15** 80	**2.09** 53	**1.38** 35	**1.65** 42	**5.28** 134	**0.94** 24
42	**1.75** 45	**2.37** 61	**3.74** 95	**2.68** 68	**1.57** 40	**2.05** 52	**5.91** 150	**1.02** 26
48	**1.88** 48	**2.75** 70	**4.13** 105	**2.87** 73	**1.75** 45	**2.36** 60	**6.46** 164	**1.10** 28
55	**2.25** 58	**3.13** 80	**4.72** 120	**3.46** 88	**2.36** 60	**2.76** 70	**7.56** 192	**1.18** 30
65	**2.63** 67	**3.50** 89	**5.31** 135	**4.06** 103	**2.36** 60	**2.87** 73	**8.54** 217	**1.38** 35
75	**3.13** 80	**4.13** 105	**6.30** 160	**4.76** 121	**2.76** 70	**3.35** 85	**9.76** 248	**1.57** 40
90	**4.00** 102	**5.13** 131	**7.87** 200	**6.18** 157	**3.54** 90	**4.02** 102	**15.16** 385	**1.77** 45

* Center Drop-out design provides easy elastic element replacement.
* Opcional with large hubs for greater shaft diameter capacity.





CF3 Series



Technical Dimensions Table

SIZE	STANDARD HUB MAX. BORE (Ød)	LARGE HUB MAX. BORE (Ød1)	A	B	C	C1	D	e	BSE STANDARD
	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm	in mm
24	**0.88** 22	**1.38** 35	**2.17** 55	**1.38** 35	**0.98** 25	**1.14** 29	**1.14** 29	**0.70** 18	**3.50** 89
28	**1.10** 28	**1.63** 42	**2.56** 65	**1.65** 42	**1.18** 30	**1.34** 34	**1.30** 33	**0.79** 20	**3.50** 89
38	**1.38** 35	**2.00** 51	**3.15** 80	**2.09** 53	**1.38** 35	**1.65** 42	**1.50** 38	**0.94** 24	**3.50** 89
42	**1.77** 45	**2.37** 61	**3.74** 95	**2.68** 68	**1.57** 40	**2.05** 52	**1.69** 43	**1.02** 26	**3.50** 89
48	**1.88** 48	**2.75** 70	**4.13** 105	**2.87** 73	**1.75** 45	**2.36** 60	**1.88** 48	**1.10** 28	**5.00** 127
55	**2.25** 58	**3.13** 80	**4.72** 120	**3.46** 88	**2.36** 60	**2.76** 70	**2.13** 54	**1.18** 30	**5.00** 127
65	**2.63** 67	**3.50** 89	**5.31** 135	**4.06** 103	**2.36** 60	**2.87** 73	**2.32** 59	**1.38** 35	**5.00** 127
75	**3.13** 80	**4.13** 105	**6.30** 160	**4.76** 121	**2.76** 70	**3.35** 85	**2.76** 70	**1.57** 40	**7.00** 178
90	**4.00** 102	**5.13** 131	**7.87** 200	**6.18** 157	**3.54** 90	**4.02** 102	**3.19** 81	**1.77** 45	**7.00** 178

*Designed to accommodate a larger shaft separation.