

Fenner



Essex
Couplings

Essex Jaw Couplings

04

Essex Jaw couplings are low weight and torque transmission couplings with bore range from 15 to 90mm. Axial plug-in, easy assembly and maintenance free.

Essex Standard Spacer Couplings are available with different spacer lengths to suit different applications without moving the drive or the driven equipment

04-01

Salient Features

- Simple construction; quick easy installation; No special tools required.
- Flexible insert caters for incidental angular, parallel and axial misalignment.
- Absorbs shock loads and damps small amplitude vibration.
- Insert design presets correct distance between hubs, using raised pads on each leg of the insert.
- Available in a range of stock bore sizes. Can also be supplied with finished bore & keyway.
- Unaffected by moisture, grease and oils-including non-aromatic and non-detone solvents and temperatures within the range-40° C to + 100° C.
- Spacer coupling with spacer size depending upon the distance between two shaft ends (DBSE)

Table: 04-01 Service Factors

| Type of Driven Machine | Type of Driving Unit | | |
|---|----------------------------------|-----------------------------|-------------------------|
| | Electric Motors & Steam Turbines | Internal Combustion Engines | |
| | | More than six cylinders | Less than six cylinders |
| Uniform Load - Agitators, Brewing machinery, Centrifugal compressors and pumps, Belt conveyers, Dynamo meters, Line shafts, Fans upto 7.5 kW, Blowers and exausters except positive displacement Generators. | 1.0 | 1.5 | 2.0 |
| Moderate Shock - Clay working machinery, General machine tools, Paper mill beaters and winders, Rotary pumps, Rubber extruders, Rotary screens, Textile machinery, Marine propellers and fans over 7.5 kW. | 1.5 | 2.0 | 2.5 |
| Heavy Shock - Bucket elevators, Cooling tower fans, Piston compressors and pumps, Foundry machinery, Metal presses, Paper mill calendars, Hammer mills, Presses and pulp grinders, Rubber calendars, Pulverisers and positive displacement blowers. | 2.0 | 2.5 | 3.0 |

Selection

Details required for couplings selection

1. Type of driven machine and operating hours per day.
2. Speed and power absorbed by driven machine (if absorbed power is not known, calculate on power rating of prime mover).
3. Diameter of shafts to be connected.
4. Distance between two shaft ends in case of spacer coupling.

Procedure

a) Service Factor

Determine the required service factor from table.

b) Design Power

Multiply the normal running power by the service factor. This gives the Design Power which is used as a basis for selecting the coupling.

c) Coupling Size

Depending upon the type of coupling required, refer to respective power rating tables. Power ratings can be interpolated in relation to speed parameters.

d) Bore Size

Check from the dimension table to see if bore capacity of the couplings is adequate, otherwise select next higher size coupling.

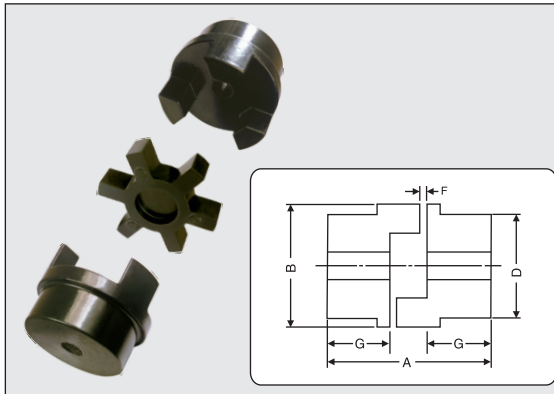
Polyurethane Spider Elements

Spider elements for Spider couplings are available in Polyurethane material which gives added strength and longer life.



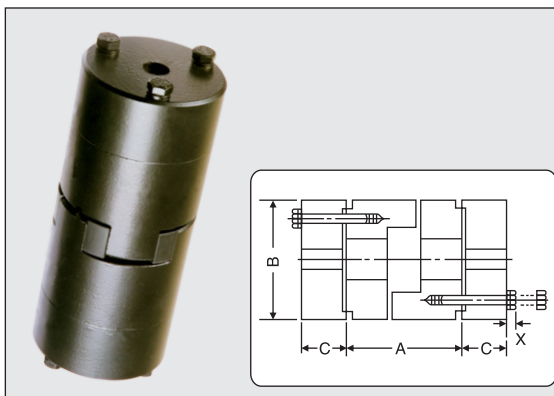
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STANDARD COUPLINGS



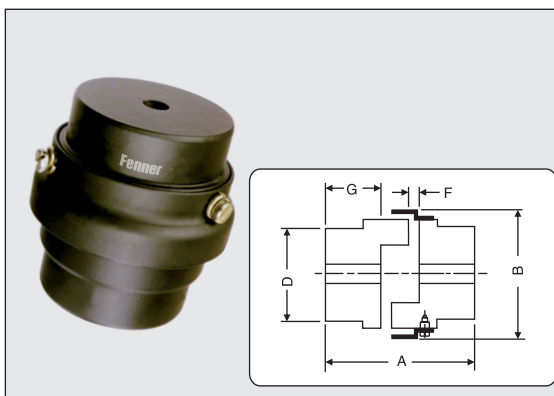
| Size | Power per 100 rev/min kW | Bore in mm | | Dimensions in mm | | | | |
|----------|-----------------------------|------------|------|------------------|-----|-----|---|----|
| | | Min. | Max. | A | B | D | F | G |
| F - 095 | 0.21 | 15 | 28 | 63 | 54 | 49 | 2 | 25 |
| F - 099 | 0.39 | 20 | 30 | 72 | 65 | 51 | 2 | 27 |
| F - 0100 | 0.50 | 20 | 38 | 88 | 65 | 57 | 2 | 35 |
| F - 0110 | 0.92 | 20 | 42 | 108 | 85 | 76 | 3 | 43 |
| F - 0150 | 1.50 | 30 | 48 | 115 | 96 | 80 | 3 | 45 |
| F - 0190 | 2.02 | 36 | 55 | 133 | 115 | 102 | 3 | 54 |
| F - 0225 | 2.75 | 40 | 60 | 153 | 127 | 108 | 3 | 64 |

STANDARD SPACER COUPLINGS



| Size | Power per 100 rev/min kW | Bore in mm | | Distance between shaft ends (DBSE) A | Dimensions in mm | | |
|----------|-----------------------------|------------|------|--------------------------------------|------------------|----|----|
| | | Min. | Max. | | B | C | X |
| F-095 S | 0.21 | 15 | 28 | 90/100 | 54 | 25 | 6 |
| F-0100 S | 0.50 | 20 | 38 | 90/100/140 | 65 | 30 | 6 |
| F-0110 S | 0.92 | 20 | 42 | 90/100/140 | 85 | 35 | 8 |
| F-0150 S | 1.50 | 30 | 48 | 90/100/140 | 96 | 45 | 10 |
| F-0190 S | 2.02 | 36 | 55 | 90/100/140 | 115 | 51 | 10 |
| F-0225 S | 2.75 | 40 | 60 | 90/100/140 | 127 | 57 | 12 |

EXTERNAL SPIDER COUPLINGS



| Size | Power per 100 rev/min kW | Bore in mm | | Dimensions in mm | | | | |
|------------|-----------------------------|------------|------|------------------|-----|-----|---|----|
| | | Min. | Max. | A | B | D | F | G |
| F - 095 E | 0.23 | 15 | 23 | 63 | 64 | 49 | 2 | 25 |
| F - 099 E | 0.38 | 20 | 30 | 72 | 77 | 51 | 2 | 27 |
| F - 0100 E | 0.50 | 20 | 38 | 88 | 77 | 57 | 2 | 35 |
| F - 0110 E | 0.91 | 20 | 42 | 108 | 95 | 76 | 3 | 43 |
| F - 0150 E | 1.47 | 30 | 48 | 115 | 110 | 80 | 3 | 45 |
| F - 0190 E | 2.03 | 36 | 55 | 135 | 128 | 102 | 3 | 54 |
| F - 0225 E | 2.80 | 40 | 60 | 153 | 141 | 108 | 3 | 64 |

F Essex Jaw Couplings

EXTERNAL SPIDER ALUMINIUM SPACER COUPLINGS

| Size | Power per 100 rev/min kW | Bore in mm | | Distance between shaft ends (DBSE) A | Dimensions in mm | | | |
|-----------|--------------------------|------------|------|--------------------------------------|------------------|----|-----|---|
| | | Min. | Max. | | B | C | D | F |
| F-095 ES | 0.23 | 15 | 28 | 90/100/140 | 64 | 25 | 49 | 2 |
| F-100 ES | 0.50 | 20 | 38 | 90/100/140 | 77 | 35 | 57 | 2 |
| F-0110 ES | 0.91 | 20 | 42 | 90/100/140 | 95 | 43 | 76 | 3 |
| F-0150 ES | 1.47 | 30 | 48 | 90/100/140 | 110 | 45 | 80 | 3 |
| F-0190 ES | 2.03 | 36 | 55 | 90/100/140 | 128 | 54 | 102 | 3 |
| F-0225 ES | 2.80 | 40 | 60 | 90/100/140 | 141 | 64 | 108 | 3 |

CUSHION COUPLINGS

| Size | Power per 100 rev/min kW | Bore in mm | | Dimensions in mm | | | | |
|-----------|--------------------------|------------|------|------------------|-----|-----|---|-----|
| | | Min. | Max. | A | B | D | F | G |
| F-0226 P | 3.45 | 25 | 65 | 178 | 143 | 115 | 3 | 70 |
| F-0276 P | 5.60 | 25 | 75 | 200 | 163 | 127 | 3 | 80 |
| F-0280 P | 8.20 | 30 | 75 | 200 | 200 | 140 | 3 | 80 |
| F-0295 P | 13.40 | 40 | 90 | 238 | 245 | 160 | 3 | 95 |
| F-02955 P | 22.40 | 50 | 100 | 264 | 245 | 180 | 3 | 108 |

CUSHION SPACER COUPLINGS

| Size | Power per 100 rev/min kW | Bore in mm | | Distance between shaft ends (DBSE) A | Dimensions in mm | | | |
|------------|--------------------------|------------|------|--------------------------------------|------------------|----|-----|----|
| | | Min. | Max. | | B | C | D | X |
| F-0226 PS | 3.45 | 25 | 65 | 135/140/180 | 145 | 50 | 134 | 12 |
| F-0276 PS | 5.60 | 25 | 75 | 135/140/180 | 165 | 60 | 130 | 12 |
| F-0280 PS | 8.20 | 30 | 75 | 135/140/180 | 200 | 60 | 130 | 14 |
| F-0295 PS | 13.40 | 40 | 90 | 135/140/180 | 249 | 65 | 160 | 16 |
| F-02955 PS | 22.40 | 50 | 90 | 135/140/180 | 249 | 80 | 160 | 16 |



TYPICAL APPLICATIONS

Pumps including back-pull-out type, Conveyors, Elevators, Packaging Machinery, Food Processing Plants, Compressors, General Machine Tools, Blowers, Paper Mill Beaters and Calenders etc.