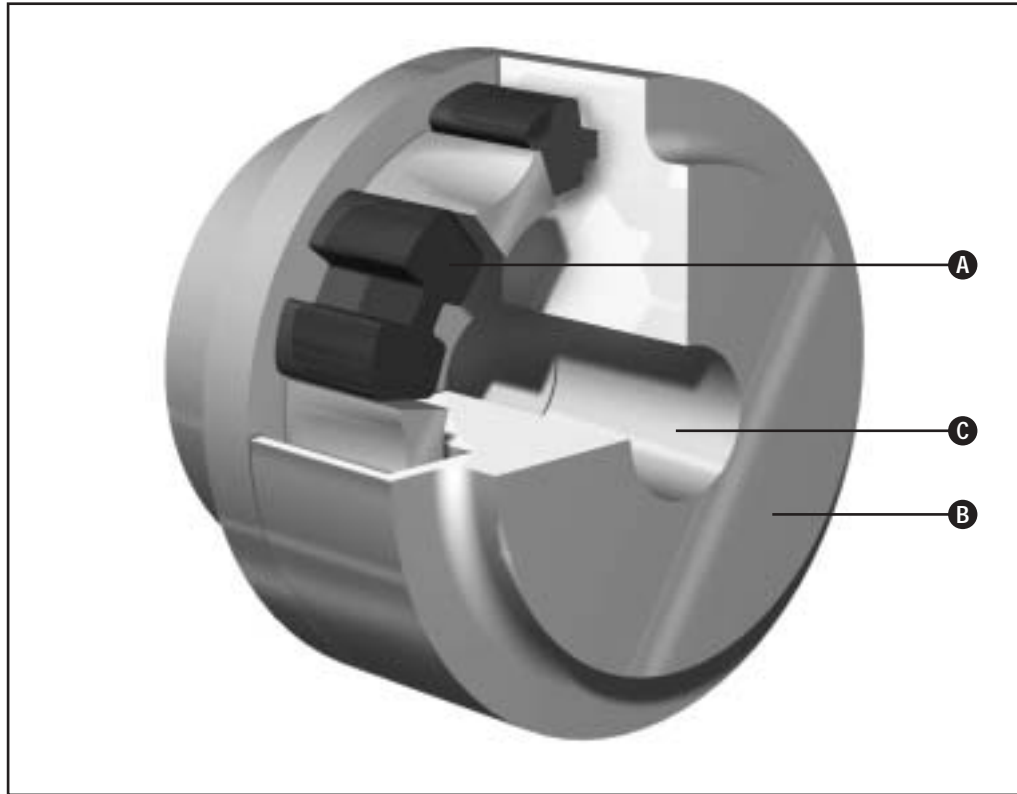


- A – Highly resilient flexible elements
- B – Anti corrosion treatment
- C – Finished machined hubs available from stock



Product Description

The Powerstream™ 'B' Series range of rubber couplings has been specially designed to transmit torque & damp out vibrations even when operating with high misalignment. The overall design is compact & can be supplied as a non spacer or spacer design.

- Easy to install
- Operates in either direction
- Hubs supplied either finished machined or pilot bored
- Ideally suited for a vast range of applications in a wide variety of industries
- A wide range of bore and keyway hubs available from stock
- Particularly suitable for pump applications.

Design Features

- Excellent power to weight ratio
- Supply of finished machined cast iron hubs with nitrile rubber flexing elements available from stock.
- High misalignment capability
- Torsional flexibility & internal damping of rubber elements
 - Can absorb vibration levels so protecting equipment
 - Allow equipment to pass through critical speeds without damage
- Transmits torque in an emergency even when rubber elements fail
- Only maintenance required is checking condition of rubber elements
- If required – rubber elements are easy to replace
- Alternative elastomers can be supplied to suit specific applications.



B SERIES

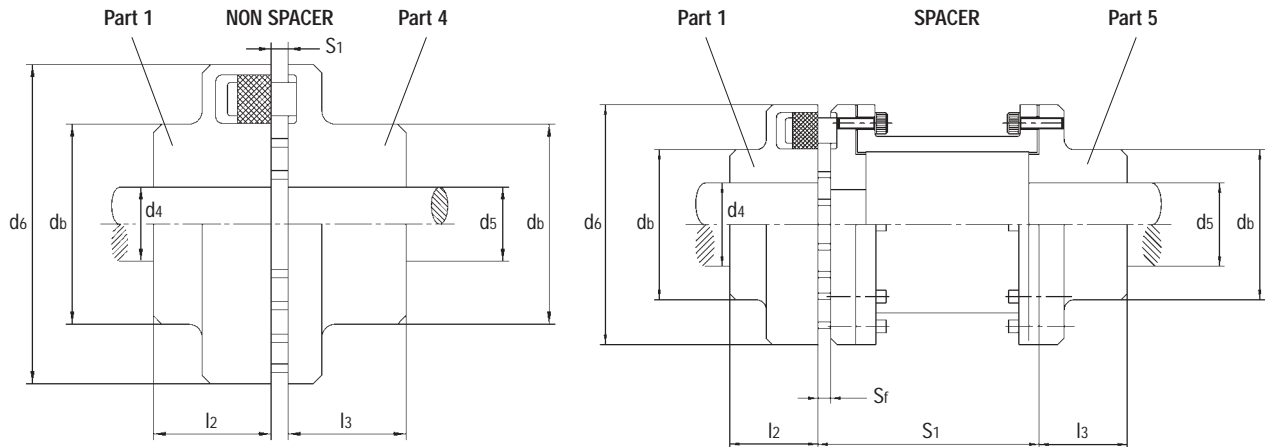
POWERSTREAM™ Elastomeric Insert Couplings

Technical Data

Coupling Size	Rating kW/100 rpm	Torque T_N Nm	Maximum Speed n_{max} rpm	Non Spacer		Spacer		
				Mass kg	Moment of Inertia WR^2 kgm ²	DBSE mm	Total Weight kg	Total Moment of Inertia WR^2 kgm ²
B068	0.36	34	5000	0.6	0.0003	-	-	-
B080	0.63	60	5000	1.5	0.0012	100	2.8	0.0014
						140	2.9	0.0015
B095	1.1	100	5000	2.6	0.0027	100	3.9	0.0028
						140	4.2	0.0031
B110	1.7	160	5000	3.9	0.0055	100	5.8	0.0056
						140	6.2	0.0060
						180	6.6	0.0064
B125	2.5	240	5000	6.2	0.0107	100	8.2	0.0099
						140	8.7	0.0100
						180	9.2	0.0110
B140	3.8	360	4900	6.9	0.014	100	11.3	0.0180
						140	11.8	0.0190
						180	12.3	0.0200
B160	5.9	560	4250	9.4	0.025	100	14.5	0.0300
						140	15.2	0.0320
						180	16.0	0.0340
B180	9.2	880	3800	14.0	0.045	140	21.0	0.0540
						180	21.9	0.0580

NOTE: For other sizes please consult John Crane.

Typical Arrangement



B Series Dimensional Data

NON SPACER

Coupling Size	l2	d6	S1	db		Max Bores	
				Part 1	Part 4	Part 1(d4)	Part 4(d5)
68	20	68	2-4	68	46	24	28
80	30	80	2-4	80	68	30	38
95	35	95	2-4	76	76	42	42
110	40	110	2-4	86	86	48	48
125	50	125	2-4	100	100	55	55
140	55	140	2-4	100	100	60	60
160	60	160	2-6	108	108	65	65
180	70	180	2-6	125	125	75	75

All dimensions are in mm

Parallel bores will be machined to an H7 tolerance with keyways to ISO R773, normal class fit (Js9).

SPACER

Coupling Size	l2	l3	d6	S1 Distance Between Shaft Ends			db		Sr	Max Bores (D1)	
				100	140	180	Part 1	Part 5		Part 1(d4)	Part 5(d5)
80	30	45	80	*	*		80	55	5	30	32
95	35	45	95	*	*		76	70	5	42	42
110	40	+50	110	*	*	*	86	80	5	48	48
125	50	+50	125	*	*	*	100	90	5	55	55
140	55	65	140	*	*	*	100	100	5	60	60
160	60	70	160	*	*	*	108	108	6	65	65
180	70	80	180		*	*	125	125	6	75	75

All dimensions are in mm

Distance Between Shaft Ends (DBSE) marked * are standard spacer lengths

+ For 180 mm DBSE, dimension l2 is 60 mm



B SERIES

POWERSTREAM™ Elastomeric Insert Couplings

Selection Procedure

- Select appropriate load factor from table SF1.
- Select appropriate service factor from table SF2
Note: If the coupling is subject to an excess of 25 starts per hour, add 0.75 to SF2.
- Calculate coupling torque T_N from

$$T_N = \frac{P_N \times 9550 \times SF_2}{n}$$
 Where:
 P_N = rated power for driven equipment (kW)
 n = speed (rpm).
- Select a coupling with the same or higher rating.
- Check the hub bore capacity is suitable, if not select a larger size coupling.
- Check maximum speed capability of the coupling.
- Ensure ambient temperature is between -30°C to +100°C.
- Specify S1 (Distance Between Shaft Ends - DBSE) – if applicable.

Example:

45 kW electric motor connected to a 42 kW agitator at 2950 rpm. (less than 25 starts/hour)

$$T_N = \frac{42 \times 9550 \times 1}{2950}$$

$$T_N = 136 \text{ Nm}$$

Selection: B110

Maximum bore capacity: 48 mm

Coupling is capable of operating up to 5000 rpm.

Load Factor SF1

AGITATORS		Induced Draft without Damper Control	H	Kick-outs	A	Couch Roll	A
Pure Liquids	U			Manipulators	H	Cutter, Platers	H
Liquids & Solids	A	FEEDERS		Merchant Mills	H	Cylinders	A
Liquids - variable density	A	Apron, Belt, Disc, Screw	U	Pusher Rams	A	Disc Refiners	A
BLOWERS		Reciprocating	H	Reel Drives	A	Dryers	A
Centrifugal	U	HAMMER MILLS	A	Reel Drums	A	Felt Stretcher	U
Lobe	A			Reelers	H	Felt Whipper	H
Vane	U	LUMBER INDUSTRY		Rod & Bar Mills	H	Line Shaft	U
CLAY & STONE WORKING MACHINERY	H	Barkers - Drum Type	H	Roughing Mill Delivery Table	H	Log Haul	H
		Edger Feed	H	Runout Tables	A	Pulp Grinder	A
		Live Rolls	H	Saws, Hot & Cold	A	Press Roll	H
		Log Haul - Incline	H	Screwdown Drives	H	Reel	A
COMPRESSORS		Log Haul - Well Type	H	Slitters	H	Stock Chests	A
Centrifugal	U	Off Bearing Rolls	H	Slab Mills	H	Suction Roll	A
Lobe	A	Planer Feed Chains	A	Soaking Pit Cover Drives	H	Washers & Thickeners	A
Reciprocating - Multi-Cylinder	H	Planer Floor Chains	A	Straighteners	A	Winders	A
		Planer Tilting Hoist	A	Tables, Transfer & Runout	A	PUMPS	
		Slab Conveyor	U	Thrust Block	H	Centrifugal	U
		Sorting Table	U	Traction Drive	H	Reciprocating Single Acting	
		Trimmer Feed	A	Tube Conveyor Rolls	A	1 or 2 Cylinders	H
				Wire Drawing	A	Double Acting	H
						Rotary, Gear, Lobe, Vane	A
CONVEYORS		METAL MILLS		MILLS, ROTARY TYPE		RUBBER INDUSTRY	
Light Duty Uniformly Fed		Draw Bench - Carriage	H	Ball	H	Mixed - Banbury	H
Apron, Bucket, Chain, Flight, Screw	U	Draw Bench - Main Drive	H	Dryers & Coolers	H	Rubber Calendar	H
Belt	U	Forming Machines	H	Hammer	H	Rubber Mill (2 or more)	H
Oven	A	Slitters	A	Kilns	H	Sheeter	H
		Table Conveyors		Pebble & Rod	H	Tyre Building Machines	H
		Non- Reversing	H	Pug	H	Tyre & Tube Press Openers	U
		Reversing	H	Tumbling Barrels	H	Tubers & Strainers	H
CRANES AND HOISTS (Note 1)		Wire Drawing & Flattening Machine	A			SEWAGE DISPOSAL EQUIPMENT	
Main Hoists, Reversing	H	Wire Winding Machine	A	MIXERS		Bar Screens	U
Skip Hoists, Trolley & Bridge Drives	A			Concrete	A	Chemical Feeders	U
Slope	A	METAL ROLLING MILLS		Drum Type	A	Dewatering Screens	U
		Coilers, Hot Mill	A	PAPER MILLS		Grit Collectors	U
CRUSHERS		Coilers, Cold Mill	U	Barker, Auxiliaries, Hydraulic	H	Scum Breakers	U
Ore Stone	H	Cold Mills	A	Barker, Mechanical	H	Slow or Rapid Mixers	U
		Cooling Beds	A	Barking Drum Spur Gear Only	H	Sludge Collectors	U
ELEVATORS (Note 1)		Door Openers	A	Beater & Pulper	A	Thickeners	U
Bucket	A	Draw Benches	A	Bleacher	U	Vacuum Filters	U
Centrifugal & Gravity Discharge	U	Edger Drives	A	Calenders	H		
Escalators	U	Feed Rolls, Reversing Mills	H	Chippers	A		
Freight	H	Furnace Pushers	A	Coaters	U		
		Hot Mills	H				
FANS		Ingot Cars	A				
Centrifugal	U						
Cooling Towers	A						
Forced Draft	A						

Note 1 : Consult Local Safety Codes

Service Factor SF2

PRIME MOVER	LOAD FACTOR FOR DRIVEN MACHINE		
	U	A	H
Electric, Hydraulic Motors & Turbines	1.00	1.25	1.75
Piston Engines: 4 cylinders & above	1.25	1.50	2.00
Piston Engines: 1 - 3 cylinders	1.50	2.00	2.50



B SERIES

POWERSTREAM™ Elastomeric Insert Couplings

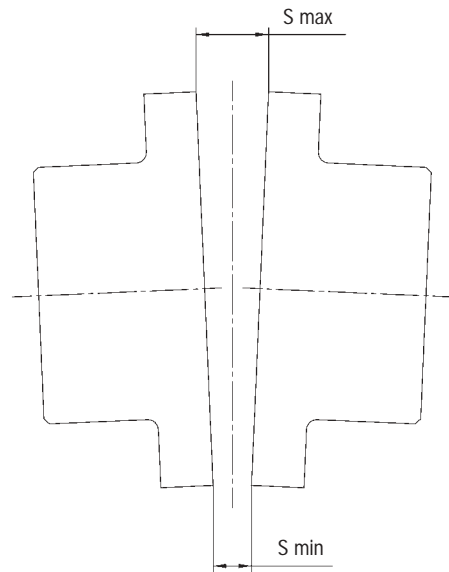
Available Options

The B-Series range of Powerstream couplings can be supplied in a variety of configurations such as connected to plain & V-belt pulleys, flywheels, brake drums & SAE flanges.

Coupling Alignment

Coupling Size	Maximum Permissible Misalignment		
	Radial ΔK_r mm	Axial ΔK_a mm	Angular $\Delta K_w = 1^\circ$ $S_{max} - S_{min}$ mm
B068	0.11	2	0.11
B080	0.13	2	0.13
B095	0.15	2	0.15
B110	0.18	2	0.18
B125	0.21	2	0.21
B140	0.24	2	0.24
B160	0.27	4	0.27
B180	0.30	4	0.30

Angular Misalignment ΔK_w



Correct installation & alignment of couplings is essential for reliable machinery performance.

These values are maximums for each type of misalignment for a coupling operating at 3000 rpm. The coupling must not be subjected to these levels of misalignment at the same time.

At time of installation, initial alignment should be within 10% of permissible max. misalignment values.



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