# Pinflex Couplings

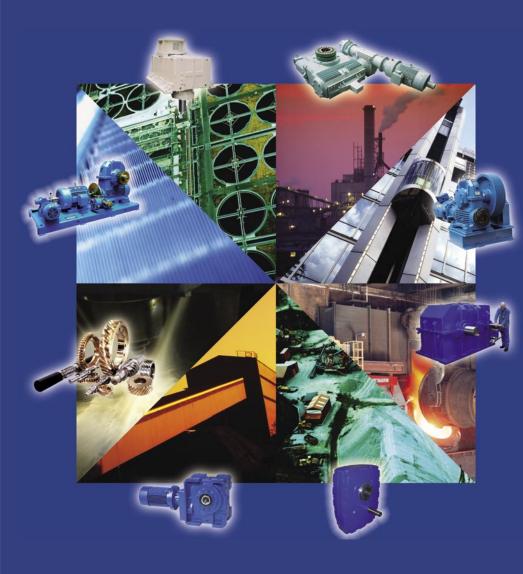




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**Strength through Service** Renold Gears has been manufacturing high quality, high specification gear units for over 100 years and has always been at the leading edge of gear technology with innovative products and power transmission solutions.



## Interchangeability

Many of the products from Renold Gears are dimensionally interchangeable with other manufacturers gear units, allowing a trouble free replacement of gearboxes, in most cases upgrading the capacity through state of the art technology and materials.

## Custom Made

Renold Gears is unique in it's ability to offer custom made products designed to meet customers exacting requirements without compromise on availability and cost. From complete package solutions to individual precision replacement gears, all can be tailor made to meet specific applicational requirements.

## Available

The most popular ranges of gearboxes are available from local distribution stock, backed up by extensive stocks from our manufacturing plant in the UK.

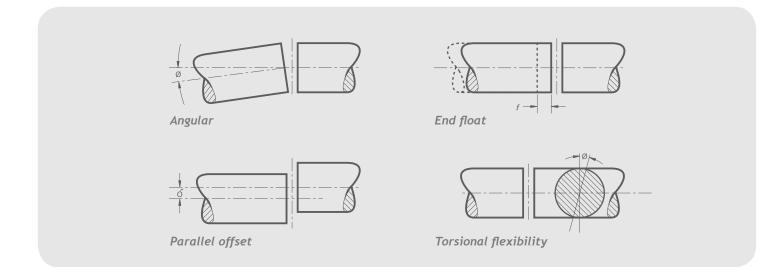


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## **Coupling Selection Guide**



## Flexible Couplings should be used to accommodate any combination of misalignment conditions described below.

## At installation all couplings should be aligned as near to perfect as possible.

#### 1. Angular

Angular misalignment is present when the shaft axes are inclined one to the other. Its magnitude can be measured at the coupling faces.

#### 2. Parallel Offset

Axial misalignment is present when the axes of the driving and driven shafts are parallel but laterally displaced.

#### 3. End float (axial)

End float is the ability to accommodate a relative axial displacement of the connected shafts; achieved by sliding members or flexing of resilient components.

#### 4. Torsional flexibility

Torsional flexibility is a design feature necessary to permit shock and impulsive loadings to be suitably dampened. It is achieved by the provision of a flexible medium such as rubber, springs, etc., between the two halves of the coupling.

#### Selection

In order to select the correct type and size of coupling, the following basic information should be known:

Power to be transmitted

- (a) Normal.
- (b) Maximum.
- (c) Whether continuous or intermittent.

Characteristics of the drive

- (a) Type of prime mover and associated equipment.
- (b) Degree of impulsiveness of driven load.

Speed in revolutions per minute

(a) At which normal power is transmitted.(b) At which maximum power is transmitted.(c) Maximum speed.

Dimensions of shafts to be connected

- (a) Actual diameter.
- (b) Length of shaft extension.
- (c) Full keyway particulars.

#### Selection

When the input drive is not steady (i.e. not from an electric motor), and/or the driven load is impulsive, the actual power is multiplied by a Service Factor from the Table 2 (page 13).

#### **Selection Procedure**

1. Nominal power in kW to be transmitted = K.

2. Select appropriate load classification from Table 1, denoted as either S,  $\ensuremath{\mathsf{M}}$  or H.

3. From Table 2, establish Service Factor(s) to be applied, taking into account hours of operation/day and prime mover = fD.

4. From Table 3 select factor for the required frequency of starts/hr = fS.

- 5. Selection Power Ks = K x fD x fS
- 6. Equivalent power at 100 RPM = Ks x 100

RPM

7. Check that coupling selected will accept the required shaft diameters. Should shaft diameter exceed maximum permissible, then re-select using next larger size of coupling.

## Load Classification by Application

able 1		Dry dock cranes	(2)	Planer feed chains	M	Presses	
Agitators		Main hoist	(2)	Planer floor chains	M	Pulp machine reel	
	S	Auxiliary hoist	(2)	Planer tilting hoist	Μ	Stock chest	
Pure liquids		Boom, luffing	(2)	Re-saw merry-go-round conveyor	Μ	Suction roll	
iquids and solids	M	Rotating, swing or slew	(3)	Roll cases	Н	Washers and thickeners	
iquids - variable density	м	Tracking, drive wheels	(4)	Slab conveyor	Н	Winders	
lowers		Elevators	( )	Small waste conveyor-belt	S	Printing presses	-
entrifugal	S	Bucket - uniform load	S	Small waste conveyor-chain	M		
obe	M			Sorting table	M	Pullers	
ane	S	Bucket - heavy load	M	Tipple hoist conveyor		Barge haul	
	5	Bucket - continuous	S		M	Pumps	
rewing and distilling		Centrifugal discharge	S	Tipple hoist drive	M	Centrifugal	-
ottling machinery	S	Escalators	S	Transfer conveyors	Μ	Proportioning	
rew kettles - continuous duty	S	Freight	Μ	Transfer rolls	Μ	Reciprocating	
ookers - continuous duty	S	Gravity discharge	S	Tray drive	Μ	single acting: 3 or more cylinders	
Ash tubs - continuous duty	S	Man lifts	*	Trimmer feed	Μ	double acting: 2 or more cylinders	
cale hopper - frequent starts	Μ	Passenger	*	Waste conveyor	Μ		
an filling machines	S	Extruders (plastic)		Machine tools		single acting: 1 or 2 cylinders	
				Bending roll	Μ	double acting: single cylinder	
ane knives (1)	М	Film	S			Rotary - gear type	
ar dumpers	н	Sheet	S	Punch press - gear driven	H	Rotary - lobe, vane	
ar pullers	Μ	Coating	S	Notching press - belt drive		Rubber and plastics industries	
•		Rods	S	Plate planners	Н	Crackers (1)	1
larifiers	S	Tubing	S	Tapping machine	Н	Laboratory equipment	
lassifiers	Μ	Blow moulders	M	Other machine tools			
lay working machinery		Pre-plasticiers	M	Main drives	Μ	Mixed mills (1)	
rick press	Н	•	m	Auxiliary drives	S	Refiners (1)	
riquette machine	H	Fans	<i>_</i>	Metal mills	-	Rubber calenders (1)	
		Centrifugal	S			Rubber mill, 2 on line (1)	
lay working machinery	M	Cooling towers		Drawn bench carriage and		Rubber mill, 3 on line (1)	
ug mill	м	Induced draft	*	main drive	Μ	Sheeter (1)	
ompressors		Forced draft	*	Pinch, dryer and scrubber		Tyre building machines	
entrifugal	S	Induced draft	Μ	rolls, reversing	*	Tyre and tube press openers	
obe	Μ	Large, mine etc.	Μ	Slitters	м	Tubers and strainers (1)	
eciprocating - multi-cylinder	Μ	Large, industrial	M	Table conveyors nonreversing		Warming mills (1)	
eciprocating - single cylinder	H	Light, small diameter	S	group drives	Μ	3 ( )	
		<b>U</b>	5	Individual drives	Н	Sand muller	
onveyors - uniformly loaded or fe		Feeders		Reversing	*	Screens	ſ
pron	S	Apron	Μ	Wire drawing and flattening machine	Μ	Air washing	-
ssembly	S	Belt	м			Rotary, stone or gravel	
elt	S	Disc	S	Wire winding machine	Μ	Travelling water intake	
ucket	S	Reciprocating	Н	Mills, rotary type		U	_
hain	S	Screw	Μ	Ball (1)	Μ	Sewage disposal equipment	
light	S	Food industry		Cement kilns (1)	Μ	Bar screens	
lven	S			Dryers and coolers (1)	Μ	Chemical feeders	
crew	Š	Beef slicer	M	Kilns other than cement	Μ	Collectors	
	2	Cereal cooker	S	Pebble (1)	M	Dewatering screws	
Conveyors - heavy duty		Dough mixer	Μ	Rod, plain & wedge bar (1)	M	Scum breakers	
ot uniformly fed		Meat grinder	Μ			Slow or rapid mixers	
pron	Μ	Generators - not welding	S	Tumbling barrels	Н	Thickeners	
ssembly	Μ	Hammer mills	H	Mixers		Vacuum filters	
elt	Μ		п	Concrete mixers continuous	Μ		
ucket	M	Hoists		Concrete mixers intermittent	Μ	Slab pushers	1
hain	M	Heavy duty	Н	Constant density	S	Steering gear	Ĵ
		Medium duty	Μ	Variable density	M	Stokers	6
light	M	Skip hoist	M		M		Ļ
ive roll		Laundry		Oil industry		Sugar industry	ſ
lven	Μ			Chillers	Μ	Cane knives (1)	
eciprocating	Н	Washers - reversing	M	Oil well pumping	*	Crushers (1)	
crew	Μ	Tumblers	м	Paraffin filter press	Μ	Mills (1)	
haker	Н	Line shafts		Rotary kilns	Μ	Textile industry	
rane Drives - not dry dock	_	Driving processing equipment	Μ	Paper mills			ſ
, ,	S	Light	S			Batchers	
Nain hoists	5 *	Other line shafts	S	Agitators (mixers)	M	Calenders	
ridge travel		· · · · · · · · · · · · · · · · · · ·		Barker - auxiliaries hydraulic	M	Cards	
rolley travel	*	Lumber industry		Barker - mechanical	Н	Dry cans	
rushers		Barkers, hydraulic, mechanical	M	Barking drum	Н	Dryers	
Ire	Н	Burner conveyor	м	Beater and pulper	Μ	Dyeing machinery	
tone	H	Chain saw and drag saw	Н	Bleacher	S	Looms	
ugar (1)	M	Chain transfer	Н	Calenders	M	Mangles	
		Craneway transfer	Н	Calenders - super	Н	Nappers	
redges	17	De-barking drum	Н	Converting machine except		Pads	
able reels	Μ	Edger feed	M				
onveyors	Μ			cutters, platers	M	Range drives	
utter head drives	Н	Gang feed	M	Conveyors	S	Slashers	
ig drives	H	Green chain	M	Couch	Μ	Soapers	
Aanoeuvring winches	M	Live rolls	Н	Cutters, platers	Н	Spinners	
umps	M	Log deck	Н	Cylinders	Μ	Tenter frames	
		Log haul - incline	Н	Dryers	M	Washers	
creen drive	н	Log haul - well type	H	Fell stretcher	M	Winders	
tackers	M	Log turning device	н	Fell whipper	H		
				i ett willppei	- 11	Windlass	
Itility winches	M	Main log conveyor	Н	Jordans	Μ		-

#### Key

S = Steady

- M = Medium Impulsive
- H = Highly Impulsive
- \* = Refer to Renold
- (1) = Select on 24 hours per day service factor only.

(2) = Use service factor of 1.00 for any duration of service.

- (3) = Use service factor of 1.25 for any duration of service.
- (4) = Use service factor of 1.50 for any duration of service.

#### Note

Machinery characteristics and service factors listed in this catalogue are a guide only. Some applications (e.g. constant power) may require special considerations. Please consult Renold.

## Service Factors and Selection

#### Table 2 Service Factor (fp)

Prime mover		Driven machiner	y characteristics		
(Drive input)	Duration service hours/day	Steady load	Medium impulsive	Highly impulsive	
Electric, air & hydraulic Motors or steam turbine (Steady input)	Intermittent - 3hrs/day max 3 - 10 over 10	0.90 1.00 1.25	1.00 1.25 1.50	1.50 1.75 2.00	
Multi-cylinder I.C. engine (Medium impulsive input)	Intermittent - 3hrs/day max 3 - 10 over 10	1.00 1.25 1.50	1.25 1.50 1.75	1.75 2.00 2.25	
Single-cylinder I.C. engine (Highly impulsive input)	Intermittent - 3hrs/day max 3 - 10 over 10	1.25 1.50 1.75	1.50 1.75 2.00	2.00 2.25 2.50	

#### Table 3 Factor for Starts/Hour(fs)

No of starts per hour	0-1	1-30	30-60	60-
Factor	1,0	1,2	1,3	1,5

#### **Example of Selection**

Coupling is required to transmit 7.5kW at 1440 RPM to connect an electric motor to a gear box driving a chain conveyor running for 18 hours/day and starting 15 times/hour. Shaft diameters /55mm respectively.

#### K = 7.5kW

From Table 1 Load Classification = M (medium impulsive)

From Table 2 Service Factor fD = 1.5

From Table 3 fs = 1.2

Therefore selection kW is:-

 $Ks = K \times f_D \times fS$ 

= 7.5 x 1.5 x 1.2

= 13.5 kW

Equivalent power at 100 RPM =

RPM 13.5 x 100

=

```
1440
```

= 0.9375kW @ 100RPM

Ks x 100

From page **17** selection is RSC110 (644911) (maximum bore 55 mm).



It is the responsibility of the system designer to ensure that the application of the coupling does not endanger the other constituent components in the system. Service factors given are an initial selection guide.

#### **Key Stress**

1. Permissible key stress = 70N/mm<sup>2</sup>

2. Nominal torque TKM = K x 9550 / RPM Nm

- 3. Force at key F = TKM /r
- 4. Shaft Rad r. metres
- 5. Key area A = J x HUB length mm (Obtain from relevant catalogue page).
- 6. Key stress  $fk = F/A N/mm^2$
- 7. If resultant stress is less than 70 N/mm<sup>2</sup> key stress is acceptable.
  If resultant fk is greater than 70, consider either two keyways or extending hub length.
- 8. Example:

 $T_{KM} = 7.5 \times 9550/1440 = 49.7Nm$ r = 55/2 = 27.5mm ÷ 1000 = 0.0275m F = 49.7/0.0275 = 1741N A = 16 x 45 = 720mm<sup>2</sup> fk = 1741/720 = 2.4M/mm<sup>2</sup>

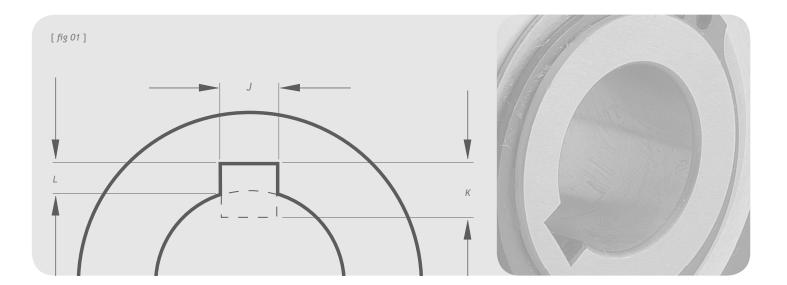
Selection is therefore good.

For operation above 80% of the declared maximum coupling speed it is recommended that the coupling is dynamically balanced.



Rotating equipment must be provided with a suitable guard before operating or injury may result.

## Key and Keyway Dimensions



Metric (mm)

#### Keyways comply with BS4235: Part 1: 1972

Sha	aft dia.		Key & keywa	у
Over	Incl.	J	К	L
6	8	2	2	1.0
8	10	3	3	1.4
10	12	4	4	1.8
12	17	5	5	2.3
17	22	6	6	2.8
22	30	8	7	3.3
30	38	10	8	3.3
38	44	12	8	3.3
44	50	14	9	3.8
50	58	16	10	4.3
58	65	18	11	4.4
65	75	20	12	4.9
75	85	22	14	5.4
85	95	25	14	5.4
95	110	28	16	6.4
110	130	32	18	7.4
130	150	36	20	8.4
150	170	40	22	9.4
170	200	45	25	10.4
200	230	50	28	11.4

Imperial (inches)

Keyways comply with BS46: Part 1: 1958

Sha	aft dia.		Key & keywa	у
Over	Incl.	J	K	L
0.25	0.05	0.125	0.125	0.060
0.50	0.75	0.187	0.187	0.088
0.75	1.00	0.250	0.250	0.115
1.00	1.25	0.312	0.250	0.090
1.25	1.50	0.375	0.250	0.085
1.50	1.75	0.437	0.312	0.112
1.75	2.00	0.500	0.312	0.108
2.00	2.50	0.625	0.437	0.162
2.50	3.00	0.750	0.500	0.185
3.00	3.50	0.875	0.625	0.245
3.50	4.00	1.000	0.750	0.293
4.00	5.00	1.250	0.875	0.340
5.00	6.00	1.500	1.000	0.384

Keyway dimensions [ fig 01 ] Parallel keyways are supplied unless customer states otherwise.

## Pinflex



## A robust, general purpose pin/buffer coupling providing reliable fail safe transmission of torque and misalignment capability.

#### Coupling capacity

- Maximum power @ 100RPM: 340kW
- Maximum torque: 32500Nm

#### Features and benefits

- Steel half bodies, strong yet compact.
- Heavy duty pin and buffer coupling - for heavy shock load conditions.
- Torsionally flexible shock absorbing, extending machine life.
- Maintenance free minimum number of wearing parts.
- Misalignment capabilities allowing flexibility in installation.

- Common half bodies minimalise stock holding.
- Polyurethane buffers, reliable/ flexible and temperature resistant.
- Modular construction available as coupling, brakedrum and shear pin designs.
- Taper bores available for ease of maintenance.
- Potential energy saving when used to replace older cast iron pin and bush couplings.

Standard range comprises

- Shaft to Shaft
- Shear Pin
- Brake Drum/Disc

#### Applications

- Conveyors
- Escalators
- Mixers
- Pumps
- General Industrial Applications

#### **Construction details**

Steel Half Bodies

Urethane Buffer: Temp Range -40°C to +80°C

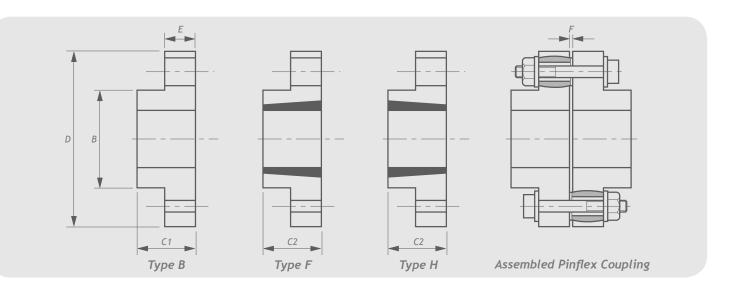


Can be certified for use in potentially explosive atmospheres containing gas or dust, according to ATEX directive 94/9/EC.

The couplings are classified for equipment group II, categories 2 and 3. Contact Renold for further details.

Pinflex Couplings

## Pinflex



Catalogue	Product	Power/	Torque	Speed	Тур	e B	Туре	F&H	l			Dimer	nsions	5		Ту	/pe B	Туре	e F & H
number	number		nominal		Во	re	Bush	Bo	re	В	C1	C2	D	Е	F	Mass*	WR <sup>2</sup> *	Mass*	WR <sup>2</sup> *
		kŴ	Nm	rpm	Max	Min	size	Max	Min	mm	mm	mm	mm	mm	mm	kg	kg m²	kg	kg m²
PF1# #3	8001042/3	2.03	194		man			тах											
PF1# #6	8001042/6	4.05	387																
PF1BB9	8001042/9	6.08	581	6800	50	0	TB1215	32	11	70	44	40	125	20	4	5.2	0.00828	5.0	0.00813
PF1BB12	8001042/12	8.1	774																
PF2# #3	8002050/3	3.59	343																
PF2# #6	8002050/6	7.18	685												_				
PF2BB9	8002050/9	10.76	1028	5900	55	0	TB1615	42	14	80	50	40	145	25	5	8.3	0.01843	7.6	0.01780
PF2BB12	8002050/12	14.35	1370																
PF3# #3	8003060/3	4.24	405																
PF3# #6	8003060/6	8.48	810	5200	70	0	TD2047	50	40	100	(0)	47	475	25	-	42.0	0 02225	42.4	0.024.42
PF3BB9	8003060/9	12.71	1214	5200	72	0	TB2017	50	18	100	60	47	165	25	5	13.8	0.03335	12.1	0.03143
PF3BB12	8003060/12	16.96	1620																
PF4# #3	8004075/3	8.32	795																
PF4# #6	8004075/6	16.65	1590	4400	00	0	TDOFOF	(0	10	442	75		405	25	,	22.0	0.00470	20.2	0.00405
PF4BB9	8004075/9	24.97	2384	4400	80	0	TB2525	60	19	113	75	65	195	35	6	22.0	0.08470	20.3	0.08195
PF4BB12	8004075/12	33.29	3179																
PF5# #4	8005090/4	13.94	1331																
PF5# #8	8005090/8	27.88	2662	3600	110	0	TB3030	75	35	150	89	80	235	35	6	27.0	0.19972	25.2	0 10274
PF5# #12	8005090/12	41.82	3994	3000	110	0	102020	75	20	100	09	00	235	20	0	37.0	0.19972	30.5	0.192/4
PF5BB16	8005090/16	55.76	5325																
PF6# #3	8006110/3	24.70	2359																
PF6# #6	8006110/6	49.40	4717	2900	130	55	TB3535	90	35	180	110	91	290	50	7	73.2	0.61140	65.2	0 58086
PF6# #9	8006110/9	74.10	7076	2900	130	55	100000	90	22	100	110	71	290	50	'	73.2	0.01140	05.2	0.30000
PF6BB12	8006110/12	98.80	9435																
PF7# #4	8007130/4	37.18	3550																
PF7# #8	8007130/8	74.35	7100	2600	150	65	TB4040	100	40	210	130	105	320	50	7	103.0	0.99756	88 5	0 92310
PF7# #12	8007130/12	111.53	10650	2000	150	05	10-0-0	100	-10	210	150	105	520	50	'	105.0	0.77750	00.5	0.72510
PF7BB16	8007130/16	148.70	14200																
PF8# #4	8008150/4	64.70	6179																
PF8# #8	8008150/8	129.40	12357	2200	175	75	TB5050	125	70	245	150	130	380	60	7	168.8	2.33646	154 1	2 22610
PF8# #12		194.10	18536	2200	175	75	103030	123	/0	215	150	150	500	00	'	100.0	2.33010	131.1	2.22010
PF8BB16	8008150/16		24714																
PF9BB4	8009240/4	85.00	8130																
PF9BB8	8009240/8	170.00	16255	1700	260	75	N/A	N/A	N/A	355	220	-	490	60	7	423.0	9.19000	N/A	N/A
PF9BB12	8009240/12	255.00	24385												·				
PF9BB16	8009240/16	340.00	32500																

NOTE: Maximum power and torques for taper bore options are limited by the taper bush capacity.\* Values are for couplings with no bore and a full set of pin assemblies.Max angular isDisc Brake Drum version also available - consult Renold for details.Max offset means

Max angular misalignment 0.25° Max offset misalignment 0.13mm

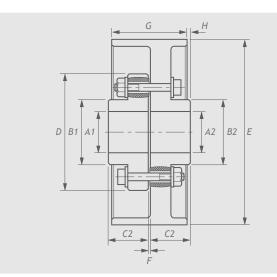
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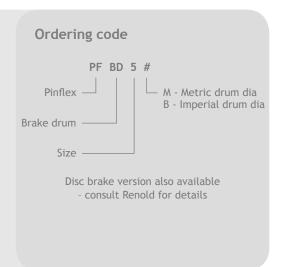


#### **Component Spares**

Coupling	Half body p	pilot bored	Half boc	ly F type	Half bod	ly H type	Pin and b	ouffer set	Coupling
size	Catalogue number	Product number	Catalogue number	Product number	Catalogue number	Product number	Product number	Number per set	Size
PF1	PF1 B	8001042	PF1 F	8001042/77	PF1 H	8001042/88	800 0008	3	PF1
PF2	PF2 B	8002050	PF2 F	8002050/77	PF2 H	8002050/88	800 0010	3	PF2
PF3	PF3 B	8003060	PF3 F	8003060/77	PF3 H	8003060/88	800 0010	3	PF3
PF4	PF4 B	8004075	PF4 F	8004075/77	PF4 H	8004075/88	800 0012	1	PF4
PF5	PF5 B	8005090	PF5 F	8005090/77	PF5 H	8005090/88	800 0012	1	PF5
PF6	PF6 B	8006110	PF6 F	8006110/77	PF6 H	8006110/88	800 0016	1	PF6
PF7	PF7 B	8007130	PF7 F	8007130/77	PF7 H	8007130/88	800 0016	1	PF7
PF8	PF8 B	8008150	PF8 F	8008150/77	PF8 H	8008150/88	800 0020	1	PF8
PF9	PF9 B	8009240	N/A	N/A	N/A	N/A	800 0020	1	PF9

## Pinflex Brakedrum Coupling

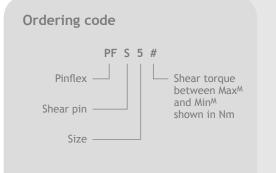




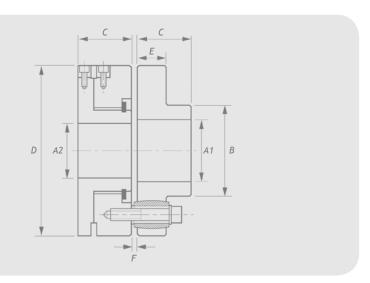
Coupling	Product	Power	Torque	Speed	Во	ore	D	rum dimensio	าร
size	number	/100rpm kW	nominal Nm	max rpm	A1 max mm	A2 max mm	Dia E mm	Width G mm	Dia E inch
PFBD1 #	8101042	8.1	774	3600	50	45	160	92	6
PFBD2 #	8102050	14.35	1370	2850	55	50	200	105	8
PFBD3 #	8103060	16.96	1620	2300	72	60	250	124	10
PFBD4 #	8104075	33.29	3179	1900	80	75	315	140	12
PFBD5 #	8105090	55.76	5325	1400	110	90	400	184	16
PFBD6 #	8106110	98.8	9435	1400	130	110	400	184	16
PFBD7 #	8107130	148.7	14200	1100	150	130	500	241	20
PFBD8 #	8108150	258.8	24714	900	175	150	630	267	24

Coupling	Product				D	imensio	าร				Number	Pin & buffer set	
size	number	B1 mm	B2 mm	C1 mm	C2 mm	D mm	F mm	H mm	WR <sup>3</sup> kg m <sup>2</sup>	Mass kg	of pins per coupling	Part number	Number per set
PFBD1 #	8201042	70	70	44	44	125	4	-	0.0277	8.7	12	PFA	3
PFBD2 #	8202050	80	80	50	50	145	5	-	0.0696	14.3	12	PFB	3
PFBD3 #	8203060	100	100	60	60	165	5	-	0.1801	24.2	12	PFB	3
PFBD4 #	8204075	113	113	75	75	195	6	-	0.5487	49.0	12	PFC	1
PFBD5 #	8205090	150	150	90	90	235	6	-	1.6548	82.2	16	PFC	1
PFBD6 #	8206110	180	180	110	110	290	7	22	2.0706	114.1	12	PFD	1
PFBD7 #	8207130	210	210	130	130	320	7	13	5.2192	199.7	16	PFD	1
PFBD8 #	8208150	245	245	150	150	380	7	20	13.566	303.4	16	PFE	1

## Pinflex Shearpin Coupling



Select coupling based on nominal torque using service factors from page 13. Then select required shear torque from table below.



Coupling	Nominal	Shear	torque	Speed	Bor	e A1	Bore	e A2			Dime	nsions			No. of
size	torque	Min Nm	Max Nm	max rpm	Max mm	Min mm	Max mm	Min mm	B mm	C kg	D mm	E mm	F mm	Mass kg	pins
PFS1 #	387	194	774	6800	50	-	40	-	70	44	125	20	4	6.3	6
PFS2 #	685	220	1370	5900	55	-	47	-	80	50	145	25	5	10.1	6
PFS3 #	810	350	1620	5200	72	-	57	-	100	60	165	25	5	15.3	6
PFS4 #	1590	425	3180	4400	80	-	63	-	113	75	195	35	6	27.3	6
PFS5 #	2662	520	5324	3600	110	-	93	-	150	89	235	35	6	47.3	8
PFS6 #	4717	1100	9434	2900	130	55	107	55	180	110	290	50	7	89.8	6
PFS7 #	7100	2750	14200	2600	150	65	120	65	210	130	320	50	7	129	8
PFS8 #	12357	5900	24714	2200	175	75	147	75	245	150	380	60	7	212	8
PFS9 #	16255	8130	32510	1700	260	75	200	75	355	220	490	60	7	513	8

Pinflex Couplings

## The best range of solution chain products available anywhere



## Synergy

- High performance
- Superior wear life
- Outstanding fatigue resistance





- Maintenance free
- Self-lubricating chain
- Food industry-approved lubricant



## RENOLD

- Best premium chain
- Leading performance
- Solid bush / solid roller / end softened pin



## Hydro-Service<sup>™</sup>

- Superior corrosion resistant coating
- Alternative choice to stainless steel chain
- Will not chip or peel
- Hexavalent chrome-free



### Steel Pin Bush Roller Chain

- Manufactured to international stds
- Full range of pitch alternatives
- Breaking loads 13 to 900 kN as std
- Attachments to suit varied applications



## Leaf Chain

- Comprehensive ranges used worldwide for safety critical lifting applications
- 100 years experience in developing and maintaining lifting chain



### **Steel Knuckle Chain**

- Heavy duty, detachable elevator chains
- Integral K type attachments
- Breaking loads from 642kN
   to 1724kN
- Sealed joint to extend chain life



## Roll-Ring<sup>™</sup>

- Revolutionary chain tensioner
- Installed in seconds and self adjusting
- Maintenance free
- Also acts as noise damper



### Customised Engineering Chain

- Wide range to suit specialised applications using high specification materials and treatment processes
- Designed in close collaboration with customer



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- Load monitoring technology
- Technical reports & data logging



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