Renoldflex Couplings

RENOLD
Superior Coupling Technology

www.renold.com

RENOLD

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

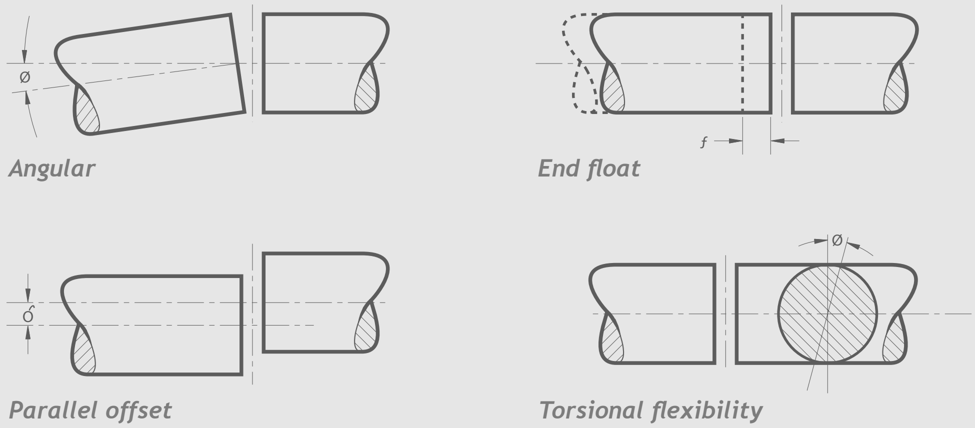
The most popular ranges of gearboxes are available from local distribution stock, backed up by extensive stocks from our manufacturing plant in the UK.

RENOLD

Superior Gear Technology

Contents

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, 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 = $\frac{\text{Ks x 100}}{\text{RPM}}$

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

Table 1

Application	Load
Agitators	
Pure liquids	S
Liquids and solids	M
Liquids - variable density	M
Blowers	
Centrifugal	S
Lobe	M
Vane	S
Brewing and distilling	
Bottling machinery	S
Brew kettles - continuous duty	S
Cookers - continuous duty	S
Mash tubs - continuous duty	S
Scale hopper - frequent starts	M
Can filling machines	S
Cane knives (1)	M
Car dumpers	H
Car pullers	M
Clarifiers	S
Classifiers	M
Clay working machinery	
Brick press	H
Briquette machine	H
Clay working machinery	M
Pug mill	M
Compressors	
Centrifugal	S
Lobe	M
Reciprocating - multi-cylinder	M
Reciprocating - single cylinder	H
Conveyors - uniformly loaded or fed	
Apron	S
Assembly	S
Belt	S
Bucket	S
Chain	S
Flight	S
Oven	S
Screw	S
Conveyors - heavy duty not uniformly fed	
Apron	M
Assembly	M
Belt	M
Bucket	M
Chain	M
Flight	M
Live roll	*
Oven	M
Reciprocating	H
Screw	M
Shaker	H
Crane Drives - not dry dock	
Main hoists	S
Bridge travel	*
Trolley travel	*
Crushers	
Ore	H
Stone	H
Sugar (1)	M
Dredges	
Cable reels	M
Conveyors	M
Cutter head drives	H
Jig drives	H
Manoeuvring winches	M
Pumps	M
Screen drive	H
Stackers	M
Utility winches	M
Dry dock cranes	
Main hoist	(2)
Auxiliary hoist	(2)
Boom, luffing	(2)
Rotating, swing or slew	(3)
Tracking, drive wheels	(4)
Elevators	
Bucket - uniform load	S
Bucket - heavy load	M
Bucket - continuous	S
Centrifugal discharge	S
Escalators	S
Freight	M
Gravity discharge	S
Man lifts	*
Passenger	*
Extruders (plastic)	
Film	S
Sheet	S
Coating	S
Rods	S
Tubing	S
Blow moulders	M
Pre-plasticiers	M
Fans	
Centrifugal	S
Cooling towers	
Induced draft	*
Forced draft	*
Induced draft	M
Large, mine etc.	M
Large, industrial	M
Light, small diameter	S
Feeders	
Apron	M
Belt	M
Disc	S
Reciprocating	H
Screw	M
Food industry	
Beef slicer	M
Cereal cooker	S
Dough mixer	M
Meat grinder	M
Generators - not welding	S
Hammer mills	H
Hoists	
Heavy duty	H
Medium duty	M
Skip hoist	M
Laundry	
Washers - reversing	M
Tumblers	M
Line shafts	
Driving processing equipment	M
Light	S
Other line shafts	S
Lumber industry	
Barkers, hydraulic, mechanical	M
Burner conveyor	M
Chain saw and drag saw	H
Chain transfer	H
Craneway transfer	H
De-barking drum	H
Edger feed	M
Gang feed	M
Green chain	M
Live rolls	H
Log deck	H
Log haul - incline	H
Log haul - well type	H
Log turning device	H
Main log conveyor	H
Off bearing rolls	M
Planer feed chains	M
Planer floor chains	M
Planer tilting hoist	M
Re-saw merry-go-round conveyor	M
Roll cases	H
Slab conveyor	H
Small waste conveyor-belt	S
Small waste conveyor-chain	M
Sorting table	M
Tipple hoist conveyor	M
Tipple hoist drive	M
Transfer conveyors	M
Transfer rolls	M
Tray drive	M
Trimmer feed	M
Waste conveyor	M
Machine tools	
Bending roll	M
Punch press - gear driven	H
Notching press - belt drive	*
Plate planners	H
Tapping machine	H
Other machine tools	
Main drives	M
Auxiliary drives	S
Metal mills	
Drawn bench carriage and main drive	M
Pinch, dryer and scrubber rolls, reversing	*
Slitters	M
Table conveyors nonreversing group drives	M
Individual drives	H
Reversing	*
Wire drawing and flattening machine	M
Wire winding machine	M
Mills, rotary type	
Ball (1)	M
Cement kilns (1)	M
Dryers and coolers (1)	M
Kilns other than cement	M
Pebble (1)	M
Rod, plain & wedge bar (1)	M
Tumbling barrels	H
Mixers	
Concrete mixers continuous	M
Concrete mixers intermittent	M
Constant density	S
Variable density	M
Oil industry	
Chillers	M
Oil well pumping	*
Paraffin filter press	M
Rotary kilns	M
Paper mills	
Agitators (mixers)	M
Barker - auxiliaries hydraulic	M
Barker - mechanical	H
Barking drum	H
Beater and pulper	M
Bleacher	S
Calenders	M
Calenders - super	H
Converting machine except cutters, platers	M
Conveyors	S
Couch	M
Cutters, platers	H
Cylinders	M
Dryers	M
Fell stretcher	M
Fell whipper	H
Jordans	M
Log haul	H
Presses	M
Pulp machine reel	M
Stock chest	M
Suction roll	M
Washers and thickeners	M
Winders	M
Printing presses	*
Pullers	
Barge haul	H
Pumps	
Centrifugal	S
Proportioning	M
Reciprocating	
single acting: 3 or more cylinders	M
double acting: 2 or more cylinders	M
single acting: 1 or 2 cylinders	*
double acting: single cylinder	*
Rotary - gear type	S
Rotary - lobe, vane	S
Rubber and plastics industries	
Crackers (1)	H
Laboratory equipment	M
Mixed mills (1)	H
Refiners (1)	M
Rubber calenders (1)	M
Rubber mill, 2 on line (1)	M
Rubber mill, 3 on line (1)	S
Sheeter (1)	M
Tyre building machines	*
Tyre and tube press openers	*
Tubers and strainers (1)	M
Warming mills (1)	M
Sand muller	M
Screens	
Air washing	S
Rotary, stone or gravel	M
Travelling water intake	S
Sewage disposal equipment	
Bar screens	S
Chemical feeders	S
Collectors	S
Dewatering screws	M
Scum breakers	M
Slow or rapid mixers	M
Thickeners	M
Vacuum filters	M
Slab pushers	M
Steering gear	*
Stokers	S
Sugar industry	
Cane knives (1)	M
Crushers (1)	M
Mills (1)	M
Textile industry	
Batchers	M
Calenders	M
Cards	M
Dry cans	M
Dryers	M
Dyeing machinery	M
Looms	M
Mangles	M
Nappers	M
Pads	M
Range drives	*
Slashers	M
Soapers	M
Spinners	M
Tenter frames	M
Washers	M
Winders	M
Windlass	*

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 (f_D)

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

Table 3 Factor for Starts/Hour(f_S)

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 f_D = 1.5

From Table 3 f_S = 1.2

Therefore selection kW is:-

$Ks = K \times f_D \times f_S$
$= 7.5 \times 1.5 \times 1.2$
$= 13.5$ kW

$$\text{Equivalent power at 100 RPM} = \frac{Ks \times 100}{RPM}$$

$$= \frac{13.5 \times 100}{1440}$$

$= 0.9375$kW @ 100RPM

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

Key Stress

1. Permissible key stress = 70N/mm^2
2. Nominal torque T_{KM} = K x 9550 / RPM Nm
3. Force at key F = T_{KM} /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^2 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 x 9550/1440 = 49.7Nm

   r = 55/2 = 27.5mm ÷ 1000 = 0.0275m

   F = 49.7/0.0275 = 1741N

   A = 16 x 45 = 720mm^2

   fk = 1741/720 = 2.4M/mm^2

   Selection is therefore good.

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

WARNING

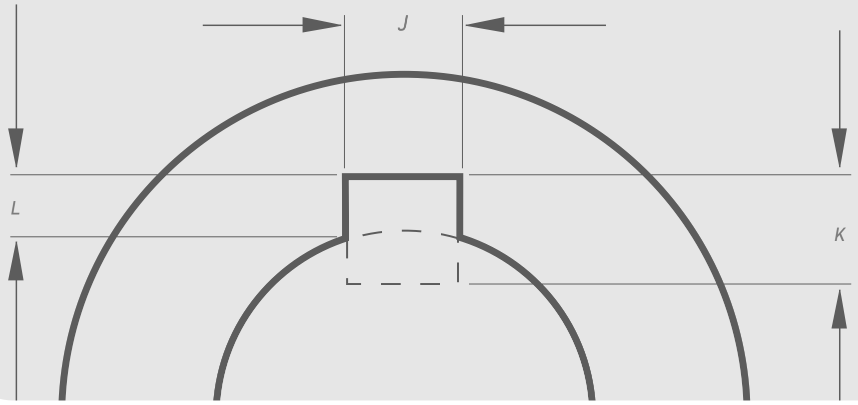
It is the responsibility of the system designer to ensure that the application of the coupling does not endanger the other constituent components in the system. Service factors given are an initial selection guide.

WARNING

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

Key and Keyway Dimensions

[*fig 01*]



Metric (mm)

Keyways comply with BS4235: Part 1: 1972

Shaft dia.		Key & keyway		
Over	Incl.	J	K	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

Shaft dia.		Key & keyway		
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.

Renoldflex

A torsionally stiff, backlash free coupling with misalignment capacity. Designed for use at high speeds and in high temperatures.

Torsionally rigid steel coupling

Renoldflex is a range of couplings that utilizes a stainless spring steel disc pack to provide a positive 'backlash free' drive.

The coupling consists of two carbon steel hubs that are connected to the disc packs with a system of micrometric precision bushings and high tensile steel screws. This construction provides a backlash free and torsionally rigid drive with the additional benefit of a 100% steel construction.

The Renoldflex range of couplings is based upon a modular component assembly; therefore it can be easily adapted to suit a wide variety of applications and design situations:

The Renoldflex type A uses a single disc pack and two hubs. It permits both axial and angular misalignments. This arrangement guarantees the highest torsional stiffness for this range of couplings. A special vertical support can be produced to allow for vertical or inclined mounting of the type A arrangement.

The Renoldflex type B uses two disc packs, two hubs and a spacer. It permits axial, angular and radial misalignments. The spacer component can be supplied in several lengths to allow for different axial dimensions.

Coupling capacity

- Maximum power @ 100rpm: 482kW
- Maximum torque: 46000Nm (Using HTT flexible elements)

Features and benefits

- Torsionally stiff – ideal for use on precision machines
- 100% maintenance free – long life with little wear
- Misalignment capabilities allowing flexibility in installation
- Zero backlash guarantees operational accuracy
- High operating temperatures, suitable for harsh operating environments and temperatures up to 240°C
- Taper bored and cone clamp hubs also available
- High transmissible torque (HTT) flexible elements available from size 70 up
- High operating speeds

Standard range comprises

- Shaft to Shaft
- Spacer type

Applications

- Pumps
- Fans
- Blowers
- Material handling
- Servo motor drives
- Machine tools
- Presses
- Cranes
- Wind turbines
- General industrial applications

General details

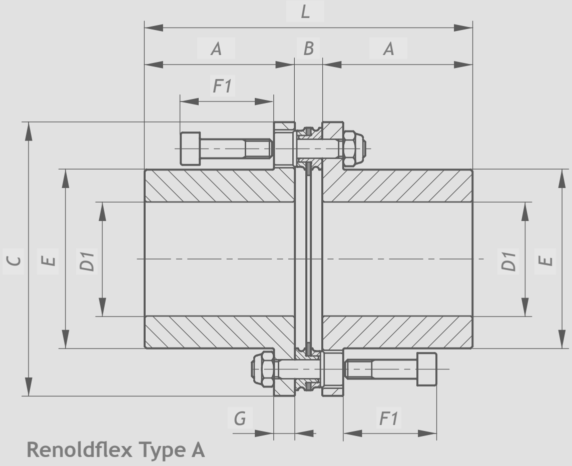
- 100% steel construction
- Steel hubs
- Stainless steel laminated flexible elements

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.

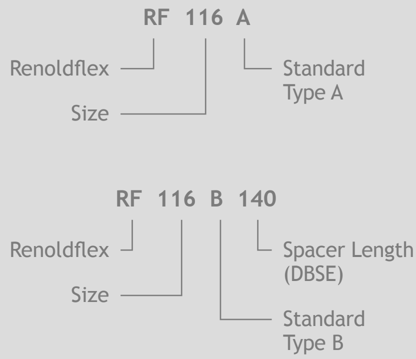
Contact Renold for further details.

Renoldflex



Renoldflex Type A

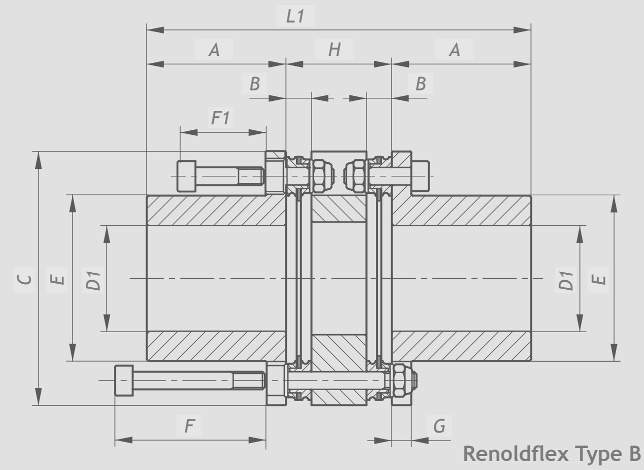
Ordering code



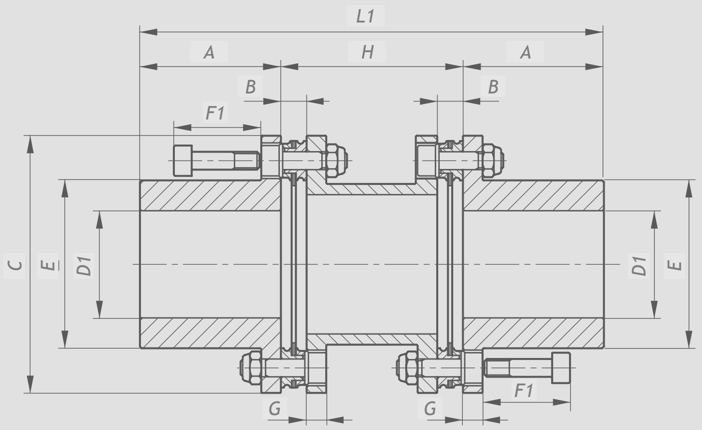
Coupling size	A mm	B mm	C mm	Pilot bore D mm	Max bore D_1* mm	E mm	F_1 mm	G mm	Spacer length H mm	Spacer length	L mm	L_1 mm	Coupling weights Hub (pilot bore) kg	Coupling weights Disc packs kg	Coupling weights Spacer kg
40	17	2.9	40	6	15	26	15	4	16 26		36.9	50	Please consult Renold		
53	24.5	6.9	53	6	22	32.5	25	5	30 39		55.9	79 88	0.2 0.2	0.6 0.7	0.2 0.2
70	39.5	7.5	70.5	10	35	47	25	5	31.2 60 100 140		86.5	110.2 139 179 219	0.6 0.6 0.6 0.6	0.1 0.1 0.1 0.1	0.3 0.3 0.5 0.6
88	45	8.8	88.3	14	45	62.5	32	8	37.6 70 80 100 140	Available up to 3000mm upon request	98.8	127.6 160 170 190 230	1.2 1.2 1.2 1.2 1.2	0.1 0.2 0.2 0.2 0.2	0.6 0.7 0.7 0.8 1.1
116	55	10.4	116.5	15	60	82	40	10	46.3 100 140 180		120.4	156.3 210 250 290	2.4 2.5 2.5 2.5	0.3 0.2 0.2 0.2	1.3 1.4 1.7 2.0
140	60	12	140.5	19	75	98	47	11	55 100 140 180		132	175 220 260 300	3.7 3.9 3.9 3.9	0.4 0.4 0.4 0.4	2.3 2.1 2.6 3.0
166	75	13	166.5	25	90	118	56	12	62.6 100 140 180		163	216.6 250 290 330	7.0 7.0 7.0	0.9 0.9 0.9	3.2 3.8 4.5
198	90	15	198.5	30	100	141	64	14	71.8 140 180		195	251.8 320 360	11.8 11.8	1.4 1.4	5.2 6.0
238	125	20.8	238	39	120	169	81	16	140 180		270.8	392.4 432.4	23.3 23.23	2.2 2.2	10.0 11.8
295	160	28	295	59	150	205	112	22	200 250		348	520	Please consult Renold		
345	200	32	345	79	180	254	133	26	224 250		432.2	624 650	Please consult Renold		

*Use maximum bore D_1 only for uniform load. For heavy duty class, maximum bore: $D_1 = \frac{E}{1.45}$

Renoldflex



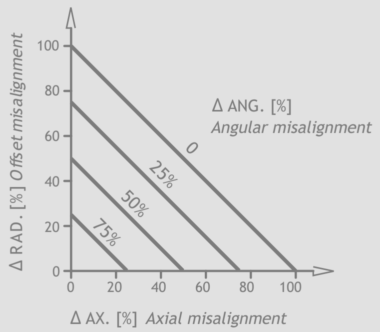
Renoldflex Type B H-MIN



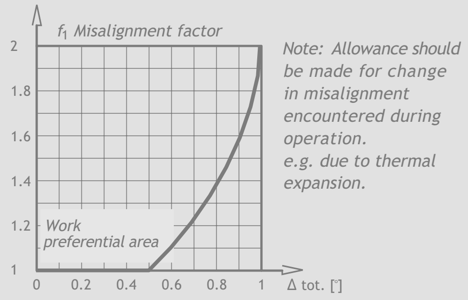
Renoldflex Type B

			RENOLDFLEX TYPE A Single disc pack				RENOLDFLEX TYPE B Double disc pack						TORSIONAL STIFFNESS***		
Size	Nominal Torque T* Nm	Max Speed V** rpm	Misalignment Δ radial offset mm	Misalignment Δ axial ±mm	Misalignment Δ angular [°]	Inertia J kg m²	Spacer length H mm		Misalignment Δ radial offset mm	Misalignment Δ axial ±mm	Misalignment Δ angular [°]	Inertia J kg m²	Disc pack C_K Nm/rad	Spacer C_H 10^6 Nm mm/rad	C_{TOT} Nm/rad
40	18	12000	0	0.4	0.75	0.00002	16 26	Available up to 3000mm upon request	0.2 0.3	0.8	1.75	0.00005 0.00004	Please consult Renold		
53	75	10000	0	0.4	0.75	0.00011	30 39		0.3 0.4	0.8	1.5	0.00016 0.00019	113406	4.1	56703 41988.45
70	170	8400	0	0.5	0.75	0.00049	31.2 60 100 140		0.3 0.7 1.2 1.4	1.1	1.5	0.00071 0.00076 0.00081 0.00087	142464	11.8	71232 56065.02 47142.56 40670.11
88	320	6800	0	0.6	0.75	0.00164	37.6 70 80 100 140		0.4 0.8 0.9 1.2 1.7	1.2	1.5	0.00218 0.00252 0.00256 0.00265 0.00282	200260	51.6	100130 90889.35 89316.32 86328.13 80913.99
116	750	5400	0	0.8	0.75	0.00991	46.3 100 140 180		0.5 1.2 1.7 2.2	1.6	1.5	0.00795 0.00928 0.00986 0.01047	341665	130.4	170832.5 154769.46 147752.84 141344.84
140	1350	4600	0	1	0.75	0.01359	55 100 140 180		0.7 1.1 1.7 2.2	2.1	1.5	0.01824 0.02093 0.02179 0.02264	503858	236	233020.5 224165.39 215958.66
166	2400	3800	0	1.2	0.75	0.0345	62.6 100 140 180		0.7 1.1 1.7 2.2	2.5	1.5	0.05175 0.05379 0.05584	938363	576.1	442511.2 429319.64 416891.81
198	4000	3400	0	1.4	0.75	0.08368	71.8 140 180		0.7 1.6 2.2	2.8	1.5	0.12413 0.12736	1258733	959.8	587023.07 573004.37
238	6500	3000	0	1.7	0.75	0.22773	140 180		1.6 2.1	3.4	1.5	0.33419 0.34564	2268097	1807	1068089.47 1043419.61
295	21000	2500	0	1.1	0.5	0.7	200 250		1.4 1.8	2.2	1	1.07 1.1	Please consult Renold		
345	36000	2100	0	1.3	0.5	1.75	224 250 300		1.6 1.8 2.2	2.6	1	2.62 2.64 2.68	Please consult Renold		

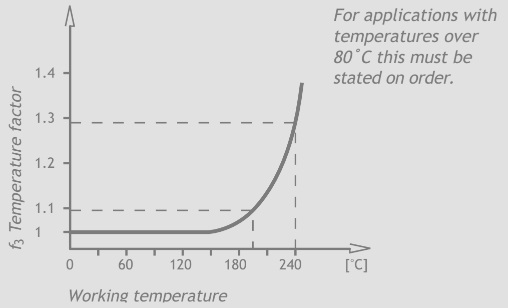
Renoldflex



[*fig 02*] **Misalignment diagram**



[*fig 03*] **Misalignment factor f_1**



[*fig 04*] **Temperature factor f_2**

Renoldflex coupling size selection

In order to select the most suitable sized coupling, a number of service factors must be taken into consideration. These service factors make adjustments to the design torque (T) of an application to take into account factors such as misalignment, load classification, driver classification as well as high ambient temperatures to produce a selection torque (T_S, where $T_S = T \times f_S$). The most suitable coupling is then selected by comparing the selection torque (T_S) and the couplings nominal torque (T_N). Please note - it is important to ensure that the coupling selected will accept the required shaft diameters. Should shaft diameter exceed the maximum permissible then a larger coupling should be selected.

The total service factor $f_S = f_1 x\ f_2 \text{ x } f_3$; where f1 is the misalignment factor, f_2 is the load classification factor and f_3 is the temperature factor. Note; the load classification factor is weighted depending upon the prime mover classification. These service factors are defined below:

Misalignment factor f_1

The maximum misalignments quoted within the technical data for the Renoldflex coupling range cannot be present at the same time. Therefore, the presence of any axial misalignment Δax reduces the possibility for offset misalignment Δrad and angular misalignment Δang, which can be seen in [*fig 02*]. The combined total angular misalignment ΔTOT is a function of the angular misalignment Δang and offset misalignment Δrad of the shafts, according to the following formula:

$$\Delta TOT\ [^\circ] = \frac{\Delta ang}{2} + \arctan \frac{\Delta rad}{(H\text{-}B)}$$

The values H and B [mm] are given in the overall dimensions table. The misalignment factor f_1 is a function of ΔTOT as shown in [*fig 03*].

Load factor f_2

The following load factors apply for machines operated by electric or hydraulic motors as well as steam or gas turbines.

OPERATING MACHINE	load factor f_2
Blowers: low inertia	1.1
Blowers: high inertia, cooling towers	2.0
Centrifugal pumps: low inertia and light liquids	1.1
Centrifugal pumps: high inertia or semi-liquid materials	1.75
Conveyors	1.5
Elevators and cranes	2.0
Gear pumps	1.5
Machine tools: auxiliary drives	1.1
Machine tools: main drives	1.75
Mills	2.5
Paper machines and textile machines	2.0
Presses	3.0
Reciprocating pumps	2.5
Woodworking machines	1.5

For machines operated by alternative prime movers the load factor f_2 must be adjusted as follows:

- f_2+1 for machines operated by IC engines with 4 or 5 pistons.
- f_2+0.5 for machines operated by IC engines with 6 pistons, hydraulic turbines or with a start torque >2.
- The following must be taken into account with regard to repetitive high peak torque applications:
  - For non reversing duty: T> Peak torque
  - For reversing duty: T> 1.5 Peak torque.

Temperature factor f_3

Renoldflex couplings are unaffected by temperatures up to 160°C. For applications with higher temperatures, the temperature factor f_3 seen in [*fig 04*] must be taken into consideration.

Renoldflex

* Renoldflex allows 1.75 times the nominal torque for short periods of time.

** See [*fig 05*] & [*fig 06*].

*** The torsional stiffness of a single pack complete coupling can be approximated to the torsional stiffness of 1 disc pack C_k

The torsional angle of a single pack coupling

$$[^\circ] = \frac{180}{\pi} \frac{T}{C_k}$$

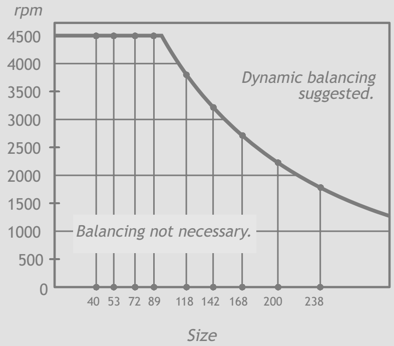
The torsional stiffness of a complete double pack coupling can be approximated to:

$$C_{TOT} = \frac{1}{\frac{2}{C_k} + \frac{H-2B}{C_h}}$$ H,B – see catalogue overall dims

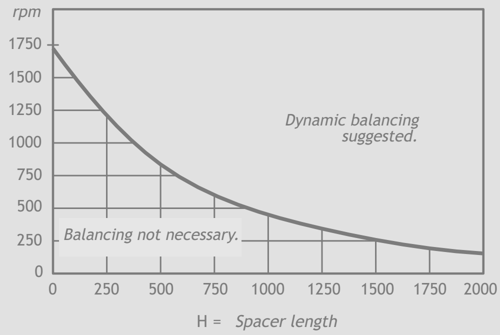
The torsional angle of a double pack coupling

$$[^\circ] = \frac{180}{\pi} \frac{T}{C_k}$$

T (Nm) – Transmitted torque



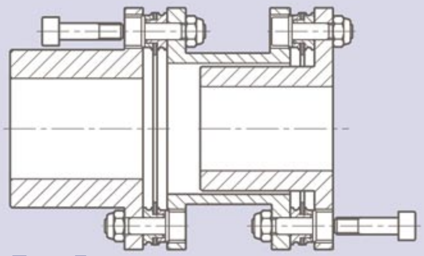
[*fig 05*] **Balancing**



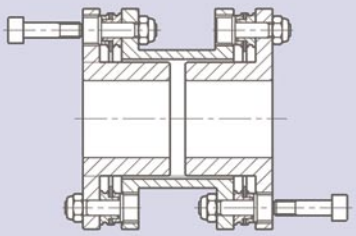
[*fig 06*] **Balancing**

Balancing; Renoldflex standard elements are balanced to grade G6.3 - BS ISO 1940-1:2003. Additional balancing is recommended for applications over the speed curves in [fig 05] and [fig 06].

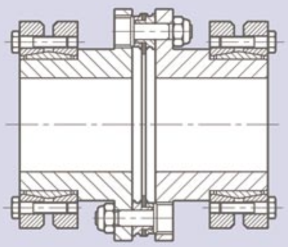
Other Renoldflex Types available (Please consult Renold)



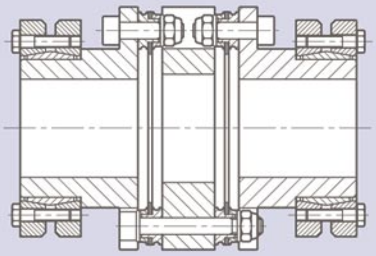
Type E



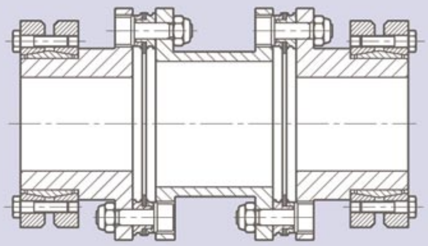
Type F



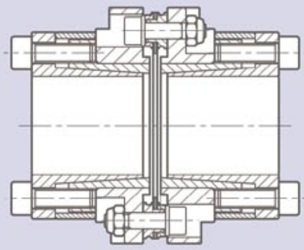
Type G



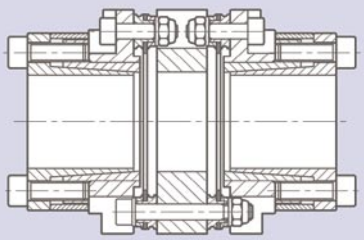
Type HH min



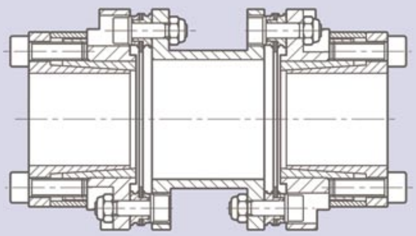
Type H



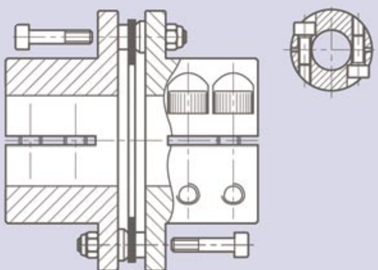
Type L



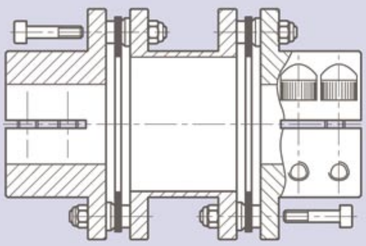
Type MM min



Type M



Type N



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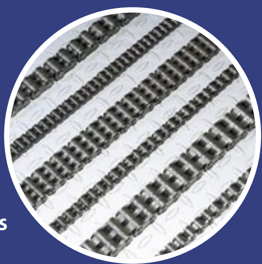

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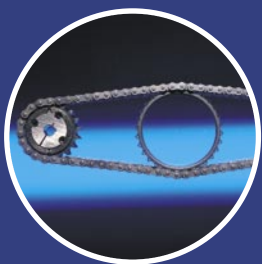

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