



## Assembly and Maintenance



# WELLMAN

### Assembly

Care is necessary in the assembly of couplings, particularly in checking for both parallel and angular alignment and in setting the correct gap as shown in the tables. The coupling grooves must be completely packed with grease before the spring is inserted and a further liberal application of grease after its insertion is essential. After the assembly of the outer cover the maximum possible quantity of grease should be injected through the grease valves.

After the first hour's running at full speed and extra 'topping up' of grease should be given to couplings that cannot be serviced more often than every 12 to 15 months.

### Lubrication

Wellman Couplings should be lubricated with good quality stiff water-free grease. The following are approved :

Duckham - Admax S.3 (Previously H.S.G.) or Admax L.2 (Previously L.B. 10)

Esso - H.M.P. or Beacon 2 or 3

Mobil oil - Mobilux No 2 or Mobilgrease Larital No. 2

Power - B.P. Energ grease - R.B.B. 3 or L.S. 3

Regent/Texaco/Caltex - Marfak 3 or Marfak Multi-purpose 2

Sheel - Nerita 3 or Alvania 3

Castrol - Spheerol - A.P. 2 or A.P. 3

Turbine and other high speed couplings are designed for oil lubrication as individually specified.

### Maintenance

1. Periodically replenish grease through the grease valves.
2. Open up covers occasionally to check shaft alignment and to ensure that springs are lubricated against wear.
3. Clean out and renew grease in accordance with the above instructions as necessary, but at least every 12 to 15 months.



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## Resilient Couplings

### Spacer Type

Wellman Spacer Couplings are used for process Pumps or for applications where movement of connected units are undesirable.

Spacer Couplings facilitates easy servicing of impellers, packing glands, seals, bearings, and other components. To accomodate large shaft gaps, "Full Spacer" is normally used. It can be quickly installed or removed in one piece as illustrated below. The "Half Spacer" is suitable for drives having limited space. It however, requires removal of the Cover and the Grid Elements before removing Space position.

Ratings and selection procedures are same as that of standard Wellman Couplings.



## Coupling Ratings and Working Factors

### Resilient Couplings

To obtain full benefit from the resilient qualities of a Wellman Coupling it must be carefully matched to the particular characteristics of the power transmission system for which it is intended. The characteristics must therefore be carefully studied before the coupling can be specified. Although some systems are found on examination to present special problems, in most cases it is possible to select a Wellman Coupling of a rating precisely right for its purpose by using a simple formula which includes a working factor, the latter taking account of such contingencies as overloads shocks, stalling, accidental misalignment, etc ; thus.

$$\text{Coupling rating} = \frac{\text{Normal h.p.} \times \text{factor}}{\text{r.p.m.}}$$

$$\text{or } \frac{\text{Normal torque in lbs/ins} \times \text{factor}}{63,000}$$

Coupling ratings are given in each of the tables appearing in latter pages. Recommended factors for various duties are listed opposite. The list is not intended to be more than a general guide to such factors because each case must be studied on its merits and account taken of the particular working conditions. Sometimes reduced factors can safely be used (for example with certain low speed applications) with consequent cost savings. Wellman engineers are always ready to give advice on this subject.

After the coupling rating has been selected, it is always necessary to check the maximum bore and safe speed against the requirements of the drive. If the maximum bore is too small, a larger coupling must be selected. If the safe speed is too low, a different type of Wellman Coupling will be required.

Class of Machine			Max. Factor
Agitator	...		2
Calendar	...		3
Cement Mill and Kiln	...		3
Conveyor	: Horizontal	...	1.0
	: Inclined	...	1.5
Couches	:		2.5
Crane motions :—			
a) (Classes 3 & 4)	Hoist	...	4
	Long travel	...	3
	Cross traverse	...	3
b) (Classes 1 & 2)	Hoist	...	3
	Long travel	...	2.5
	Cross traverse	...	2.5
Electric Generator	(Steady load)	...	1.75
Fan	: Cooling tower	...	2.5
	Industrial	...	2.0
	Mine	...	2.5
Haulage	:		3
Line shafting	:		2
Machine Tool	: Reversing	...	3.0
	Other	...	1.5
Paper Mill	:		2 to 4 +
	Pumps : Centrifugal	...	1.25
	Rotary	...	2
	Reciprocating	...	3
Rock Crushers	:		4
Rubber Mill	: Rubber Mixer	...	3
Steel Work drives	:		2 to 5 +
Turbine Driven Generators	:		1.25
Roll'g Mills, Motor driven without Flywheel	...		4

+ The factors given above for Paper Mill and Steel Works drives are only a general guide. These drives are so varied in their characteristics and methods of specifying power transmitted are so diverse that each must be considered individually. Full details should be sent to Wellman Wacoma Limited.

Drives from prime movers other than electric or turbine, e.g. steam, diesel, petrol engines, etc. call for individual consideration. Here also full details should be sent to Wellman Wacoma Limited.

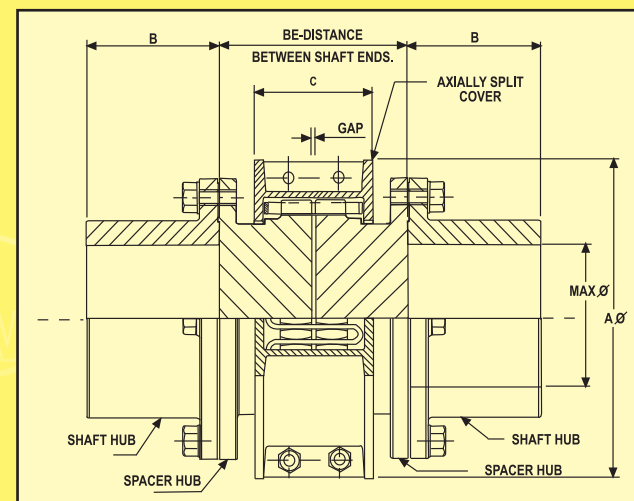


Table-1

Coupling No	Rating	Clearance dia	Shaft Hub length	Space between Shaft Ends (BE)		Cover length	Gap	Max Ø	Standard rough bore
	h.p. per r.p.m.	A	B	Min.	Max.	C			
102	0.006	105	35	76.20	95.25	58	3	29	10
110	0.008	127	35	76.20	203.20	64.29	3	40	12.7
120	0.015	127	41	88.90	215.90	64.5	3	42	16
124	0.025	159	54	101.60	215.90	66	3	58	16
130	0.04	178	62	112.00	215.90	84.5	3	54	16
136	0.06	190.5	73	114.30	330.20	85	3	63.50	16
152	0.09	222	80	127.00	330.20	86.5	3	78	25.4
158	0.12	244.5	83	139.70	330.20	86.5	3	92	25.4
168	0.18	267	90	177.80	406.40	86.5	3	108	25.4
212	0.35	276	102	203.20	406.40	138	5	102	38
236	0.45	324	120	203.20	406.40	157	5	122	50
266	0.65	336.5	140	203.20	406.40	157	5	126	50
290	0.90	381	159	228.60	406.40	158.75	5	146	50
318	1.25	425	181	254.00	406.40	160	5	167	50

- All couplings are fitted with grease valves. BS. 1486, part I 1959 type II B in covers.
- All dimensions are subject to confirmation.
- Any enquiry should be accompanied by the following service information.  
(a) h.p.m. and r.p.m. to be transmitted. (b) classes of driving and driven machines. (c) starting loads or overloads.

(d) nominal diameters and lengths of shafts extensions (e) overall length and diameter of the Spacer Type shaft. (f) any other relevant details of working conditions.

When ordering the following additional information should be supplied.  
(g) bore diameter and limit required for each half coupling (or each shaft diameter and manufacturing limits) (h) full keyway dimensions and whether parallel or taper.