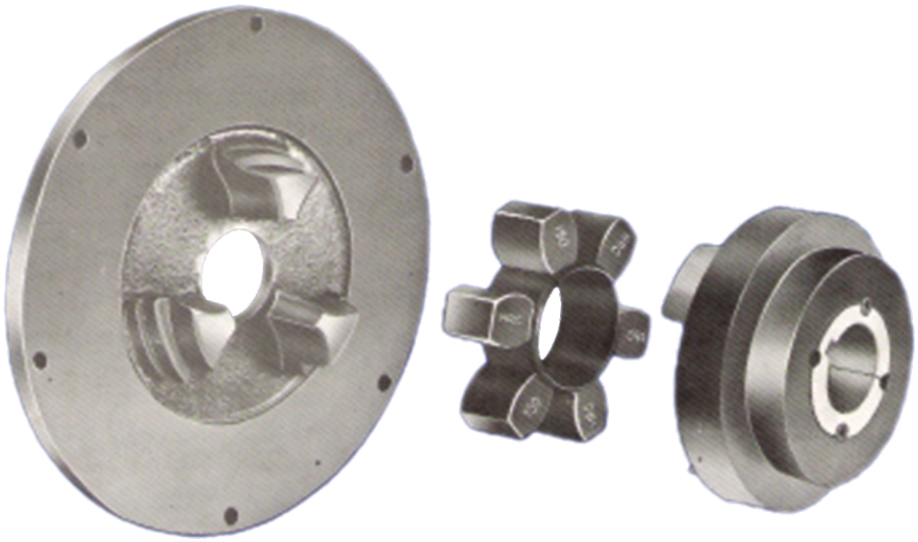


Fenner

HRC Plug-in Flywheel Couplings

06

The plug-in Flywheel Coupling will overcome the usual problems associated with 'blind fitting' of an inaccessible coupling within an assembly.

The driver flange bolts directly onto the engine flywheel and engages via a standard flexible element to the standard driven flange utilising the appropriate Taper Loack® bush.

HRC Plug-in Flywheel Couplings

UNHRC coupling design comprises two accordant coupling halves. with integral concave shaped dogs between which an involute petal element fits snugly. The individual petals of this driving element are designed to avoid edge pressure where the connected shafts are not in true alignment. HRC couplings compensate for incidental radial, axial and angular misalignment of the shafts which they connect.

The plug-in design will overcome the usual problems associated with 'blind fitting' of an inaccessible coupling within an assembly. The driver flange bolts directly onto the engine flywheel and engages via a standard flexible element to the standard driven flange utilising the appropriate Taper Lock® bush.

Fig.1 shows typical response curves comparing an• undamped system with the characteristic of the HRC coupling. The coupling is selected so that normal running falls on that part of the curve where vibrations are attenuated to a lesser value than the disturbances introduced by the machines.

The elastomeric element makes the coupling suitable for use in most conditions within a temperature range of - 30°C to +100°C. which includes resistance to oil based lubricants. It is formulated to have the highest practical damping coefficient represented by the shaded area in Fig. 2, thereby ensuring minimum response to excitation vibrations in systems with reciprocating or un balanced machinery.

The progressive torsional stiffness characteristic of the coupling (Fig. 1) offers versatility in stiffness correctly related to the relative inertia of the driving and driven machines. Almost all combinations of machine inertia can be satisfactorily handled by the standard element.

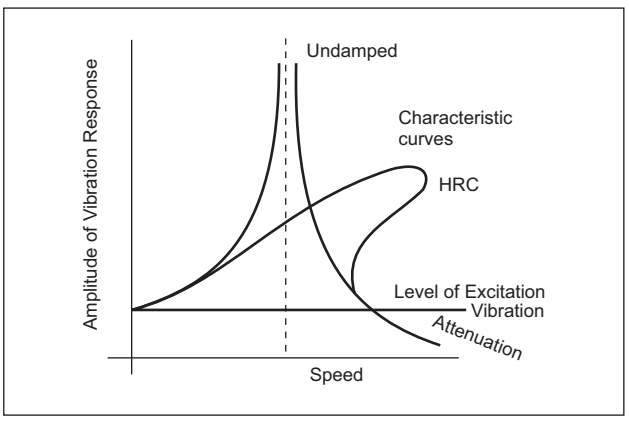


Fig.1

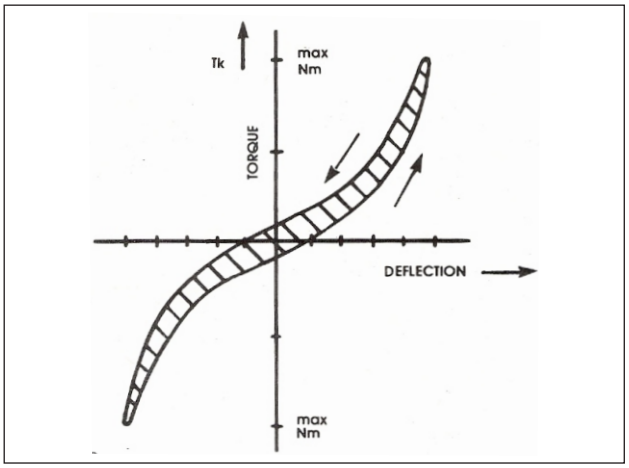


Fig. 2

Features:

- Plug-in design.
- Direct fitting flywheel flange.
- Taper Lock«> bush driven flange.
- Easy installation and removal requires neither special tools nor skilled labour.
- Standard element. High coefficient of damping. Low magnification.
- High coefficient of damping reduces vibration and torsional oscillation.
- Will accommodate incidental misalignment and displacement.
- No lubrication required.
- Positive drive; in the unlikely event of the flexible element being destroyed.

Table:06-01 - Physical Characteristics

Characteristic	Coupling Size			
	150	180	230	280
Normal Torque Nm.	450	800	1600	3150
Max Torque Nm.	1020	1800	3600	7200
Maximum Parallel Mjsalignment mm	0.4	0.4	0.5	0.5
Maximum axial Misalignment mm	0.9	1 1	1.3	1.7
Rated Power (kw) at 100 rpm	4.71	8.38	16.8	33.0

HRC Plug-in Flywheel Couplings

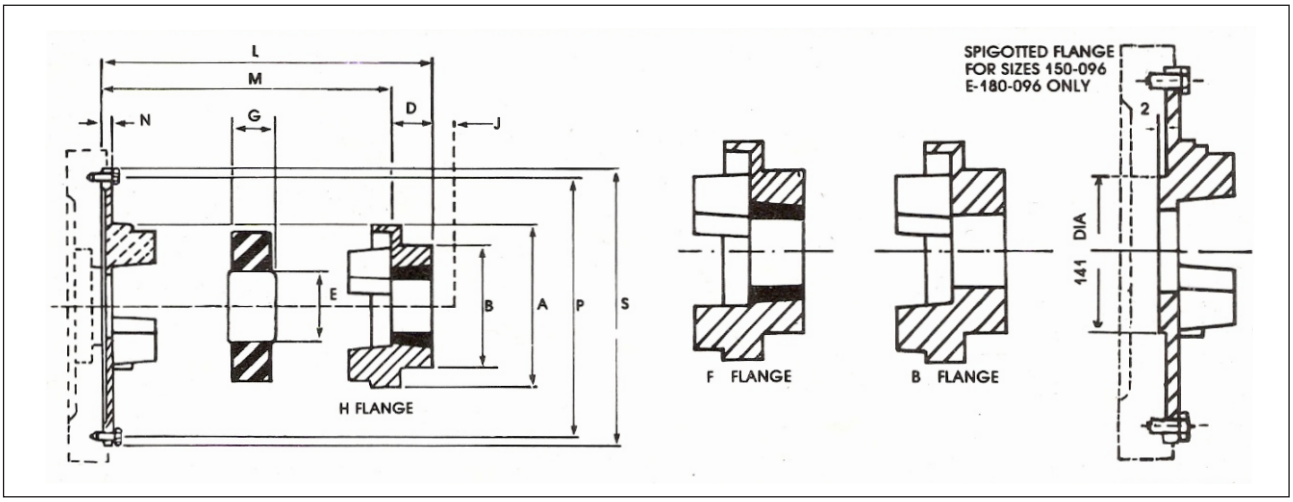


Table :06-02

Driving Range													Driven Range										
Code No	Size	Bolts P.C.D mm	Bolts P.C.D Inch	Bolts No	Bolts Size	S	L Type 'F' 'H'	L Type 'B'	M	N	Total Mass Kg	Total inertia Kgm^2	Size	Type 'F' 'H' Bush no	Type 'F' 'H' Max Bore	Type 'F' 'H' D	A	B	E	G	J	Type 'B' Max Bore	Type 'B' D
045R6102	150-096	246	-	6	M10	265	85.5	112	51.5	14	9.629	0.055	150	2012	50	34	150	115	62	40	44	70	60.5
045R6106	150-126	320	$12\frac{5}{8}$ "	8	$\frac{3}{8}$"BSF	352	85.5	112	51.5	14	13.607	0.157	150	2012	50	34	150	115	62	40	44	70	60.5
045R6105	150-131	333	$13\frac{1}{8}$ "	8	$\frac{3}{8}$"UNF	352	85.5	112	51.5	14	13.607	0.157	150	2012	50	34	150	115	62	40	44	70	60.5
045S6102	180-096	246	-	6	M10	265	108	131.5	61	14	13.128	0.078	180	2517	60	47	180	125	77	49	48	80	70.5
045S6105	180-131	333	$13\frac{1}{8}$ "	8	$\frac{3}{8}$"UNF	352	108	131.5	61	14	17.788	0.191	180	2517	60	47	180	125	77	49	48	80	70.5
045S6107	180-150	381	15 "	12	$\frac{5}{16}$"BSF	400	108	131.5	61	14	19.448	0.249	180	2517	60	47	180	125	77	49	48	80	70.5
045T6107	230-172	438	$17\frac{1}{4}$	8	$\frac{1}{2}$"UNC	466	127.5	165	74.5	14	30.622	0.500	230	3020	75	53	225	155	99	59.5	55	100	90.5

Dimensions in millimetres unless stated

Important

'M' dimension must be maintained for correct assembly. When assembled, there must be clearance between the metal halves of the coupling. A nominal 1·5mm between the face of the dog and the inner face of the opposing coupling half is recommended to prevent any pre-load of driver and driven bearings.

***'J'** is the wrench clearance to allow for tightening and loosening the bush on the shaft. The use of of shortend key will allow this dimension to be reduced. Mass and inertia are for a complete coupling i.e flywheel flange F or H flange fitted with a mid range bush and the element.*

Ordering Instructions

Flywheel to Shaft Coupling

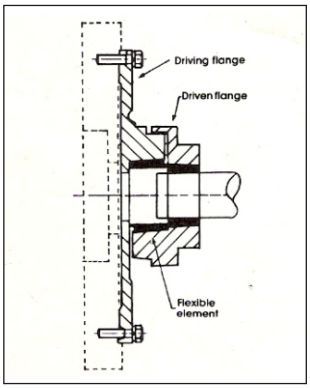
Comprises:	**Example Order:**
1 - Flywheel Flange	1 - 180-131 Flange
1 - Flexible element	1 - 180 Standard Element
1 - HRC Driven Flange	1 - HRC 180F or H Flange
1 - Taper-Lock® Bush.	1 - 2517 T/L Bush Bore 38 mm

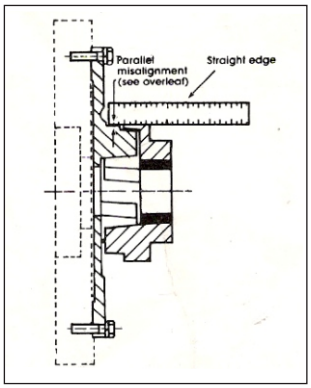
Note:
Screw packs are not included with Driver or Driven Flange.

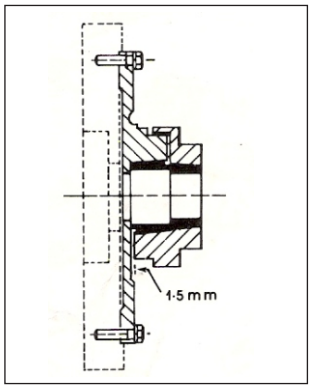
Table :06-03 Application Chart for HRC Plug-in Flywheel Couplings.

Coupling Size	Engine	
	Make	Model
150 -096	**Kirloskar**	RA2, RA3, RA4. RA6, RB22. RB33, RB44, RBV2, RBV3, RBV4, RDA2. RDA3, RDA4.
150 - 126	**Perkins**	P4 (1), P6 (1).
150 - 131	**Ruston**	2YDA , 3YDA.
180 - 096	**Kirloskar**	RB66, RBV6, RDA6.
180 - 131	**Ruston**	4YDA ,6YDA.
180 - 150	**Leyland**	ALU370, ALU400, ALU411.
	Leyland	ALU 680
230 - 172	**Kirloskar** **Cummins**	N-743-G. NTC-495-G NT-180-G, NH-220, NHC-4-G.

Installation Instructions







Note :
When assembled there must be clearance between the metal halves of the coupling. A nominal 1.5 mm between the face of the dog and the inner face of the opposing coupling half is recommended to prevent any pre-load of driver and driven bearings.

Satisfactory performance depends on correct installation and maintenance. All instructions must therefore be followed carefully.

Flywheel Coupling Assembly

1 Thoroughly clean all components. paying particular attention to the removal of the protective coating in the bore of the driven flange.

2. Fit driven flange (with driving dogs facing flywheel) onto driven shaft. Where a Taper- Lock® Flange is used. see separate fitting instructions supplied with the Taper Lock® Bush) Locate flange on shaft so that dimension 'M' will be achieved on assembly (see point 3).

3. Bring driven shaft into line with flywheel until dimension 'M' is correct (see table 06-02). If shaft end float is to occur. locate driven shaft at mid position of end float when checking dimension 'M'. Note that driven shaft may project beyond the face of the flange if required in this event. shaft diameter + key must be within the bore diameter 'E' of the element (see table 06-02). Allow sufficient space between shaft end and flywheel for end float and misalignment.

4. Fit driving flange to flywheel using appropriate screws. Initially screws should be finger tight. Check location surface i.e. outside diameter or spigot in back face of flange are seating square with flywheel.

5. Working alternatively and evenly round the flange. tighten each screw until the required screw torques are achieved - (see table 06-04)

6. With open assembly type drives check both parallel and angular alignment by placing straight edge across the coupling using setting diameter on flywheel flange and shroud on driven flange (as shown). Re-check with straight edge after rotating the flywheel through 360°

Table: 06-04

Fly wheel size	096	126	131	150	172
Screw Torque(Nm)	32	32	32	24	35