

Flexible Shaft Couplings



R & D Marine has developed a wide range of competitively priced Flexible Couplings to fit all major installations.

The R & D Flexible Couplings reduce engine noise, vibration transmission and are designed to accept propeller thrust, a separate thrust bearing and bulk head are not required.

The couplings are made from a polyester elastomer which is not affected by salt water, diesel and lubrication fluids.

If electrical continuity is required an earthing connector can be fitted in the centre of most Flexible Couplings.

Installation is quick and easy as the R & D Coupling requires no machining and comes supplied with bolts to connect between the two existing shaft flanges.

Checking alignment on installation and during service checks is quick and easy using the red cone headed bolt.

Products are available ex-stock and worldwide through our distribution network.

- For engines 5 to 1500 HP
- Reduces engine noise and vibration transmission
- Fail safe design
- Bolts between existing shaft flanges
- Requires no machining
- Simple to install
- Simple to periodically check alignment
- Wide range of stock
- Accepts propeller thrust
- Impervious to salt water, diesel and lubrication oils
- Fast installation time
- Electrical continuity available
- Worldwide availability
- Competitively priced

R & D Marine Flexible Shaft Couplings

How to Select (details required)

1. Engine horse power and Engine Speed
2. Gearbox type and reduction ratio
3. Gearbox flange details. Diameter of flange. Diameter of register. Pitch circle diameter of fixing holes. Size and quantity of holes
(Pitch circle diameter is the distance between the centre of hole at 12 O'clock position to the centre of the hole at 6 o'clock)

Example

1. Ford 150 HP at 2500 RPM
2. Borg Warner Velvet Drive 72C 2:1 Reduction
3. 5" Flange, 2.500 dia Register, 4.250 PCD,
4 off holes 0.437 diameter

To calculate Power of coupling required.

Horse Power of Engine x Reduction Ratio x 100 = HP/100rpm
Engine Speed

$\frac{150 \times 2 \times 100}{2500} = 12$ HP/100 rpm

Coupling Required 910-009 Borg Warner

The R & D 910 Series couplings consist of a contoured flexible disc moulded in tough yet resilient new type Polyester Elastomer. The contoured disc gives clearance for bolt heads, and is able to flex freely to take up any temporary misalignment of the engine and shaft, due to flexing of the boat structure or the engine moving on its rubber vibration isolation mountings. Forward thrust is taken in compression on the disc between the two half couplings and reverse thrust is taken again in compression on the disc between the two fail safe straps. In the unlikely event of a disc failure, the steel straps make the coupling fail safe and ensure drive is maintained in both forward and reverse.

Couplings as standard are non-conducting but we can supply a silver impregnated rubber element to fit in the centre of the coupling between the two fail safe straps to give continuity if required.

Flexible Coupling Information

	Gearbox Flange Dimensions										Flexible Coupling Details						
Flexible Coupling	Manufacturer	Diameter		No Bolts	Nom Dia Of Holes		Bolt Pitch Circle		Register		Diameter		Length		Bolt Dia	Capacity /100 rpm kW <i>HP</i>	Ref
		mm	<i>Inch</i>		mm	<i>Inch</i>	mm	<i>Inch</i>	mm	<i>Inch</i>	mm	<i>Inch</i>	mm	<i>Inch</i>			
910-001	B/W, PRM, ZF-Hurth, Technodrive	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	82.55	<i>3.25</i>	63.5	<i>2.50</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M10	3.73 <i>5</i>	
910-002	Yanmar	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	78.00	<i>3.07</i>	50.0	<i>1.97</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M10	2.24 <i>3</i>	
910-003	B/W, PRM, ZF-Hurth, Twin Disc	146.0	<i>5.75</i>	6	12.7	<i>0.50</i>	120.6	<i>4.75</i>	76.2	<i>3.00</i>	152.4	<i>6.0</i>	47.5	<i>1.87</i>	1/2 UNF	14.92 <i>20</i>	X O
910-004	B/W,PRM, ZF-Hurth	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	82.55	<i>3.25</i>	63.5	<i>2.50</i>	114.3	<i>4.5</i>	35.6	<i>1.40</i>	M10	5.97 <i>8</i>	
910-005	Paragon	101.6	<i>4.00</i>	4	9.7	<i>0.38</i>	82.55	<i>3.25</i>	66.7	<i>2.63</i>	114.3	<i>4.5</i>	34.5	<i>1.35</i>	3/8 UNF	5.22 <i>7</i>	
910-006	Twin Disc, ZF-Hurth	146.0	<i>5.75</i>	6	16.0	<i>0.63</i>	120.6	<i>4.75</i>	76.2	<i>3.00</i>	152.4	<i>6.0</i>	47.5	<i>1.87</i>	1/2 UNF	14.92 <i>20</i>	O X O
910-007	Volvo	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	80.0	<i>3.15</i>	60.0	<i>2.36</i>	114.3	<i>4.5</i>	43.7	<i>1.72</i>	M10	2.24 <i>3</i>	
910-009	B/W, PRM, ZF-Hurth, Volvo	127.0	<i>5.00</i>	4	11.2	<i>0.44</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	143.0	<i>5.63</i>	45.0	<i>1.77</i>	7/16 UNF	9.69 <i>13</i>	X O
910-012	Yanmar	127.0	<i>5.00</i>	4	10.0	<i>0.39</i>	100.0	<i>3.93</i>	65.0	<i>2.56</i>	135.0	<i>5.31</i>	45.0	<i>1.77</i>	M10	7.46 <i>10</i>	
910-013	Bukh	90.0	<i>3.54</i>	4	8.1	<i>0.32</i>	74.5	<i>2.93</i>	47.0	<i>1.85</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M8	2.24 <i>3</i>	
910-014	B/W, PRM, ZF-Hurth, Technodrive	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	82.55	<i>3.25</i>	63.5	<i>2.50</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M10	2.24 <i>3</i>	
910-015	Self Change 350HD	222.2	<i>8.75</i>	6	11.2	<i>0.44</i>	190.5	<i>7.50</i>	152.4	<i>6.00</i>	222.2	<i>8.75</i>	44.5	<i>1.75</i>	7/16 UNF	32.1 <i>43</i>	O
910-016	Self Change 700HD	260.4	<i>10.25</i>	6	16.0	<i>0.63</i>	228.6	<i>9.00</i>	152.4	<i>6.00</i>	276.4	<i>10.88</i>	58.0	<i>2.28</i>	5/8 UNF	48.47 <i>65</i>	X O
910-017	Twin Disc	184.2	<i>7.25</i>	6	19.0	<i>0.75</i>	152.4	<i>6.00</i>	95.25	<i>3.75</i>	190.5	<i>7.5</i>	60.7	<i>2.39</i>	5/8 UNF	29.84 <i>40</i>	O X O
910-018	PRM	184.2	<i>7.25</i>	6	16.0	<i>0.63</i>	152.4	<i>6.00</i>	95.25	<i>3.75</i>	190.5	<i>7.5</i>	60.7	<i>2.39</i>	5/8 UNF	29.84 <i>40</i>	X O
910-019	Volvo	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	80.0	<i>3.15</i>	60.0	<i>2.36</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M10	2.24 <i>3</i>	
910-020	Volvo	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	80.0	<i>3.15</i>	60.0	<i>2.36</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M10	3.73 <i>5</i>	
910-021	Enfield, Sonic	101.6	<i>4.00</i>	2	11.2	<i>0.44</i>	76.0	<i>3.00</i>	---	---	108.0	<i>4.25</i>	41.7	<i>1.64</i>	7/16 UNF	1.87 <i>2.5</i>	
910-022	Twin Disc	228.6	<i>9.00</i>	8	22.6	<i>0.89</i>	190.5	<i>7.50</i>	152.4	<i>6.00</i>	222.2	<i>8.75</i>	44.5	<i>1.75</i>	1/2 UNF	48.47 <i>65</i>	O X O
910-024	Twin Disc	266.7	<i>10.5</i>	8	25.4	<i>1.00</i>	222.2	<i>8.75</i>	127.0	<i>5.00</i>	276.4	<i>10.88</i>	56.7	<i>2.23</i>	5/8 UNF	63.38 <i>85</i>	O X O
910-025	B/W, PRM, ZF-Hurth, Twin Disc	146.0	<i>5.75</i>	6	12.7	<i>0.5</i>	120.6	<i>4.75</i>	76.2	<i>3.00</i>	152.4	<i>6.0</i>	49.8	<i>1.96</i>	1/2 UNF	20.88 <i>28</i>	X O
910-026	Twin Disc	146.0	<i>5.75</i>	6	16.0	<i>0.63</i>	120.6	<i>4.75</i>	76.2	<i>3.00</i>	152.4	<i>6.0</i>	49.8	<i>1.96</i>	1/2 UNF	20.88 <i>28</i>	O X O
910-027	ZF W320 320A	225	<i>8.86</i>	8	17.0	<i>0.67</i>	196	<i>7.72</i>	140	<i>5.51</i>	228.6	<i>9.0</i>	44.5	<i>1.75</i>	1/2 UNF	48.47 <i>65</i>	O
910-028	Bukh	90.0	<i>3.54</i>	4	8.1	<i>0.32</i>	74.5	<i>2.93</i>	47.0	<i>1.85</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M8	3.73 <i>5</i>	
910-029	B/W, ZF-Hurth, Volvo	127.0	<i>5.00</i>	4	11.2	<i>0.44</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	143.0	<i>5.63</i>	52.4	<i>2.06</i>	7/16 UNF	14.92 <i>20</i>	O
910-030		292.1	<i>11.5</i>	8	25.4	<i>1.00</i>	247.6	<i>9.75</i>	152.4	<i>6.00</i>	292.1	<i>11.5</i>	58.4	<i>2.30</i>	5/8 UNF	89.48 <i>120</i>	O X O
910-032	B/W, PRM, ZF-Hurth, Twin Disc	146.0	<i>5.75</i>	6	12.7	<i>0.5</i>	120.6	<i>4.75</i>	76.2	<i>3.00</i>	152.4	<i>6.0</i>	55.4	<i>2.18</i>	1/2 UNF	27.6 <i>37</i>	
910-033	Twin Disc, ZF-Hurth	146.0	<i>5.75</i>	6	16.0	<i>0.63</i>	120.6	<i>4.75</i>	76.2	<i>3.00</i>	152.4	<i>6.0</i>	55.4	<i>2.18</i>	1/2 UNF	27.6 <i>37</i>	O
910-034	Open Centre V Drive 52mm Bore	127.0	<i>5.00</i>	4	11.2	<i>0.44</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	162.0	<i>6.38</i>	45.0	<i>1.77</i>	7/16 UNF	8.95 <i>12</i>	#
910-035		340.0	<i>13.38</i>	8	25.4	<i>1.00</i>	295.3	<i>11.63</i>	152.4	<i>6.00</i>	348.0	<i>13.7</i>	108.0	<i>4.25</i>	5/8 UNF	119.3 <i>160</i>	O
910-036	Twin Disc	127.0	<i>5.00</i>	4	10.0	<i>0.39</i>	104.8	<i>4.13</i>	63.5	<i>2.50</i>	143.0	<i>5.63</i>	45.0	<i>1.77</i>	M10	7.46 <i>10</i>	
910-037	Yanmar	130.0	<i>5.12</i>	4	12.3	<i>0.48</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	143.0	<i>5.63</i>	51.1	<i>2.01</i>	7/16 UNF	9.69 <i>13</i>	
910-038	Taipeungyang TK 250	178.0	<i>7.00</i>	6	14.3	<i>0.56</i>	152.0	<i>5.984</i>	100	<i>3.94</i>	190.5	<i>7.50</i>	63.3	<i>2.49</i>	M14	41.0 <i>55</i>	
910-039	Twin Disc	184.2	<i>7.25</i>	6	19.0	<i>0.75</i>	152.4	<i>6.00</i>	95.25	<i>3.75</i>	190.5	<i>7.50</i>	63.3	<i>2.49</i>	5/8 UNF	41.0 <i>55</i>	O
910-040	PRM	184.2	<i>7.25</i>	6	16.0	<i>0.63</i>	152.4	<i>6.00</i>	95.25	<i>3.75</i>	190.5	<i>7.50</i>	63.3	<i>2.49</i>	5/8 UNF	41.0 <i>55</i>	
910-041		292.1	<i>11.5</i>	8	25.4	<i>1.00</i>	247.6	<i>9.75</i>	152.4	<i>6.00</i>	292.1	<i>11.5</i>	58.4	<i>2.30</i>	5/8 UNF	104.4 <i>140</i>	O
910-042	Dong-I DMT 170HL	287.2	<i>11.3</i>	6	25.1	<i>0.98</i>	240.0	<i>9.45</i>	160.0	<i>6.30</i>	292.1	<i>11.5</i>	58.4	<i>2.30</i>	5/8 UNF	67.0 <i>90</i>	O
910-043	Yanmar	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	78.0	<i>3.07</i>	50.0	<i>1.97</i>	114.3	<i>4.5</i>	32.5	<i>1.28</i>	M10	3.73 <i>5</i>	
910-044	B/W, PRM, ZF-Hurth, Volvo	127.0	<i>5.00</i>	4	11.2	<i>0.44</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	143.0	<i>5.6</i>	45.0	<i>1.77</i>	7/16 UNF	5.97 <i>8</i>	
910-045		340.0	<i>13.38</i>	8	25.4	<i>1.00</i>	295.3	<i>11.63</i>	152.4	<i>6.00</i>	348.0	<i>13.7</i>	108.0	<i>4.25</i>	3/4 UNF	171.5 <i>230</i>	O
910-046	Allison M25	228.6	<i>9.00</i>	8	19.0	<i>0.75</i>	190.5	<i>7.50</i>	152.4	<i>6.00</i>	222.2	<i>8.75</i>	44.5	<i>1.75</i>	1/2 UNF	48.47 <i>65</i>	O
910-047	Dong-I DMT 260H	292.1	<i>11.5</i>	6	21.0	<i>0.826</i>	240.0	<i>9.45</i>	150.0	<i>5.90</i>	292.1	<i>11.5</i>	58.4	<i>2.30</i>	5/8 UNF	67.0 <i>90</i>	O
910-048	Twin Disc MG 5111 SC	228.6	<i>9.00</i>	6 (8)	22.6	<i>0.89</i>	190.5	<i>7.50</i>	152.4	<i>6.00</i>	222.2	<i>8.75</i>	62.7	<i>2.47</i>	1/2 UNF	48.47 <i>65</i>	O X O
910-049	ZF 325-1A Volvo Flange	205.0	<i>8.07</i>	10	18.0	<i>0.71</i>	170.0	<i>6.69</i>	140.0	<i>5.51</i>	223.0	<i>8.78</i>	124.0	<i>4.88</i>	M18	56 <i>75</i>	
910-050	Twin Disc 510A/5114A	230.0	<i>9.00</i>	8	22.6	<i>0.89</i>	190.5	<i>7.50</i>	152.4	<i>6.00</i>	230.0	<i>9.00</i>	101.6	<i>4.0</i>	1/2 UNF	63.38 <i>85</i>	O
910-051	Twin Disc MG 521	279.4	<i>11.00</i>	8	19.0	<i>0.75</i>	241.3	<i>9.50</i>	152.4	<i>6.00</i>	260.4	<i>11.25</i>	58.4	<i>2.30</i>	5/8 UNF	89.48 <i>120</i>	O
910-052	Lister	120.7	<i>4.75</i>	6	11.2	<i>0.44</i>	98.5	<i>3.88</i>	63.5	<i>2.50</i>	150.9	<i>5.94</i>	69.9	<i>2.75</i>	7/16 UNF	7.46 <i>10</i>	
910-053	Dong-I DMT 150H	218	<i>8.58</i>	6	20.0	<i>0.79</i>	180.0	<i>7.09</i>	140.0	<i>5.51</i>	222.2	<i>8.75</i>	45.0	<i>1.77</i>	1/2 UNF	35.8 <i>48</i>	O
910-054	Open Centre V Drive 58mm Bore	146.0	<i>5.75</i>	6	12.7	<i>0.50</i>	120.6	<i>4.75</i>	76.2	<i>3.00</i>	172.0	<i>6.77</i>	47.5	<i>1.87</i>	1/2 UNF	17.9 <i>24</i>	
910-055	Open Centre V Drive 52mm Bore	127.0	<i>5.00</i>	4	11.2	<i>0.44</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	162.0	<i>6.38</i>	45.0	<i>1.77</i>	7/16 UNF	5.2 <i>7</i>	#
910-057	B/W, Hurth, Volvo	127.0	<i>5.00</i>	4	11.2	<i>0.44</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	143.0	<i>5.63</i>	52.4	<i>2.06</i>	7/16 UNF	18.64 <i>25</i>	
910-058	Dong-I DMT 70T, 90T, 100T	178.0	<i>7.00</i>	6	16.0	<i>0.63</i>	152.0	<i>5.984</i>	100.0	<i>3.94</i>	190.5	<i>7.50</i>	63.3	<i>2.49</i>	5/8 UNF	41.0 <i>55</i>	
910-059	Volvo	101.6	<i>4.00</i>	4	10.0	<i>0.39</i>	80.0	<i>3.15</i>	60.0	<i>2.36</i>	114.3	<i>4.5</i>	35.6	<i>1.40</i>	M10	5.96 <i>8</i>	
910-060	TMP	112.8	<i>4.44</i>	2	11.2	<i>0.44</i>	81.0	<i>3.19</i>	---	---	112.8	<i>4.44</i>	38.1	<i>1.50</i>	7/16 UNF	2.42 <i>3.25</i>	
910-061	Open Cntre V Drive 52mm Bore	127.0	<i>5.00</i>	4	11.2	<i>0.44</i>	107.9	<i>4.25</i>	63.5	<i>2.50</i>	162.0	<i>6.38</i>	52.6				

Coupling Selection Guide

ALLISON		
M25	9" Flange	910-046
BORG WARNER		
4" Flange	910-001, 910-004, 910-014	
70C		
71C		
500		
1000		
1500		
5" Flange	910-009(BW) 910-029, 910-044(BW), 910-057	
71C		
72C		
5000		
6" Flange	910-003, 910-025, 910-032	
73C		
7000		

BUKH		
4" Flange	910-013, 910-028	

DONG I		
DMT 70T 178 mm Flange	910-058	
DMT 90T		
DMT 100T		
DMT 140H 198 mm Flange	910-062	
DMT 150H 218 mm Flange	910-053	
DMT 170HL 287 mm Flange	910-042	
DMT 260H 292 mm Flange	910-047	

ENFIELD and SONIC DRIVES		
2 Bolt	910-021	

LISTER		
4 ½" Flange	910-052	

NEWAGE PRM		
S= Shallow Case, D= Deep Case		
4" Flange	910-001, 910-004, 910-014	
Delta		
80		
120		
150		
5" Flange	910-009(PR) 910-044(PR)	
101	910-029	
140		
160		
260		
6" Flange	910-003, 910-025, 910-032	
175		
265		
301		
302		
310		
401		
402		
500		
750		
601 3:1		
1000 3:1		
7 ¼" Flange	910-018, 910-040	
601 4:1		
1000 4:1		
1200S		
1500S		
1750S		
10 ½" Flange	910-024	
1200D		
1500D		
1750D		

PARAGON		
4" Flange	910-005	

SELF CHANGE GEARS		
8 ¾" Flange	910-015	
350HD		
10 ¾" Flange	910-016	
700		

TAIPEOUNGYANG		
178 mm Flange	910-038	
TK250		

TECHNODRIVE		
4" Flange	910-001, 910-004, 910-014	
TMC30		
TMC40		
TMC50		
TMC60		
TM260		
5" Flange	910-009(PR) 910-029	
TM93 - needs spacer 202-560	910-044(PR)	
TM93A		
TM170		
TM170A		
TM345		
TM345A		
TM485A		
TM545A		
TM880A		
6" Flange	910-006, 910-026, 910-033	
TM130B		
TM200B up to 1.28: 1		
TM265		
TM265A		
7 ¼" Flange	910-018	
TMC200B up to 4.48: 1		
TM1200A		

TMP		
2 Bolt	910-060	
5" Flange	910-009(PR) 910-044(PR)	
12000		

TWIN DISC		
SC= Shallow Case, DC= Deep Case		
4" Flange	910-001, 910-004, 910-014	
MG 340		
MG 360		
MG5010SC		
MG5011SC		
MG5010V		
4 ¾" Flange	Adaptor 202-148 with 910-003, 910-025, 910-032	
MG502-I		
MG502-V		
5" Flange 4 ¼ PCD	910-036	
MG5010A		
MG5011A		
5" Flange 4 ¼ PCD	910-009(PR) 910-044(PR)	
MG5005A	910-029, 910-057	
MG5012SC		
MG5015A		
MG5020SC		
MG5055A		
6" Flange	910-006, 910-026, 910-033	
MG5010DC		
MG5050		
MG5050-V		
MG5050-A		
MG5061SC		
MG5061-A		
MG5061V		
MG5062V		
MG506-1		
MG506A-1		
MG507-1		
MG507A-1		
MG50751V		
MG5075-A		
MG5075SC		
7 ¼" Flange	910-017, 910-039	
MG506DC		
MG5065A		
MG507-1		
MG507-1SC		
MG507-2SC		
MG507A-2		
MG5075A needs adaptor 202-356		
MG5075SC		
MG50751V		
MG5081SC		
MG5081A needs adaptor 202-356		
MG5082A		
MG5082SC		
MG5085SC needs adaptor 202-356		
MG5085A needs adaptor 202-356		
MG5090A		
MG509SC		
MG509U		
MG5091SC		
MG5095A		
MGX5095A		

TWIN DISC cont`d		
9" Scalloped Flange	910-048	
MG5111SC		
MG5114SC		
9" Flange	910-022, 910-050	
MG510SC		
MG510A		
MG5111A		
MG5114A		
MG5111V,		
MG5114V		
MG514CU		
MG514U		
MG5135A		
10 ½" Flange	910-024	
MG5091DC		
MG509DC		
MG510DC		
MG5111DC		
MG5114DC		
MG5113		
MG514		

VOLVO		
4" Flange	910-007	
MS		
RB		
4" Flange	910-019, 910-020, 910-059	
MS 2		
MS 10		
MS 15		
MS25		
5" Flange	910-009(VO), 910-029	
MS 3	910-044(VO), 910-057	
MS4		
MS5		
HS25A		
HS45A		
HS63A		
6" Flange	910-006, 910-026	
HS80A	910-033	

YANMAR (KANZAKI)		
4" Flange 78mm PCD	910-002	
KBW10	910-043	
KM2		
KM3		
KM35		
5" Flange 100mm PCD	910-012	
KBW20		
KBW21		
KM4		
KM4A		
KMH4A		
5 ½" Flange 4 ¼ PCD	910-009, 910-029, 910-037	
KM40	910-057	
KM5		
KMH50		
6" Flange	910-006, 910-026, 910-033	
KMH6		
KMH60		
KMH61A		
KMH61V	910-063	

ZF-HURTH		
4" Flange	910-001, 910-004, 910-014	
	ZF	
	35	
35 HBW	4M	
40 HBW	5M	
50 HBW	10M	
100 HBW	12	
125H HSW	12M	
125 HBW	15M	
150 HBW	15MA	
150A HBW	25M	
250 HBW	25	
250H HSW	25A	
250A HSW	25MA	
	30M	
	45A 1.25:1	
450D HSW	45C	
4 ¾ "	Adaptor 202-384 with 910-003 910-025, 910-032	
	ZF	
220A-1 IRM	220A	
	225A	

ZF HURTH cont`d		
5" Flange	910-009(PR), 910-029	
	910-044(PR), 910-057	
HBW	HSW	ZF
360		
	450H2	
	450A2	45A
	450D	45C
	630H1	63
	630A1	63A
	630D	63C
		88C
		90TS
		90ATS
		110TS
6" Flange	13.2 mm bolt holes	910-003, 910-025, 910-032
ZF		
45-1		
6" Flange	16.3mm bolt holes	910-006, 910-026, 910-033
HSW	IRM	ZF
800A2		80A
800A3		80-1A
		85A
		220 needs adaptor 202-329
		280A
		280-1
		280-1A
	280V-LD	280IV
	280PL	280
		285A
		285IV
		286
		286A
		286IV
		300TS
		300-1TS
		300ATS
		300-1ATS
	301PL-2	301C
	301A-2	301A
	300VTS	300IVTS
		110ATS
		110IVTS

7 ¼" Flange	910-017
IRM	
311	
8" Flange	910-049
IRM	ZF
311PL	311
	325-1A Volvo
	335A
350PL-2	350
350A-2	350A
350PL-1	
350A-1	
	350 TS
	350 ATS
350V	350V
350V-LD	350 IV
	360A
	500A
	500-1A

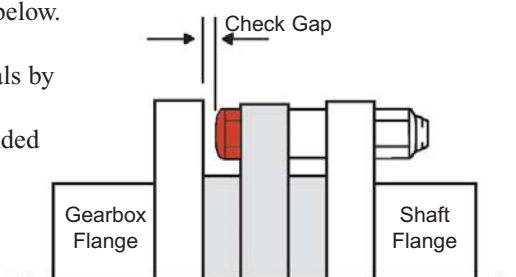
8¾" Flange	910-027
IRM	ZF
320-2	W320
	320A

ZF-HURTH V DRIVE		
4" Flange	Adaptor 202-351 with	
HSW	ZF	910-034, 910-055, 910-061
150V	15M IV	
5" Flange	910-034, 910-055, 910-061	
HSW	ZF	
	90 IVTS	
630V	63 IV	
6" Flange	910- 054, 910-063	
HSW	ZF	
	110 IVTS	
220V-2	220 IV	
800V	80 IV	
800V2	80-11V	
7¼" Flange	Adaptor 202-552 with	
	ZF	910-064
	302 IV	
8" Flange	910-049	
	ZF	
	325 IV	
	350-IV	
	370V	
	500-1 IV	

Couplings 910-030, 910-035, 910-041 and 910-045 will require suitable adaptors for the gearbox flange

INSTALLATION PROCEDURE FOR R & D MARINE COUPLINGS

1. Roughly align engine and stern gear without flexible coupling i.e. only two rigid half couplings pushed together.
2. Bolt "R & D Marine" coupling between the two rigid couplings. Tightening details as below.
3. Check alignment of engine by placing feeler gauges between the **RED CONE HEADED BOLT** and the rigid half coupling. Repeat for the **SAME** bolt at 90° intervals by rotating the shaft.
4. If the gap is the same in all four positions, the engine is accurately aligned. Recommended minimum to maximum gap difference: 0.25 mm / **0.010 inch**.
5. Run installation to bring engine compartment to working temperature.
Re-check torque settings.



Recommended tightening torque:

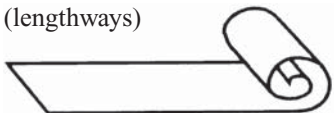
M8 - 27 Nm **20 lbsft** 3/8 UNF - 40 Nm **30 lbsft** M10 - 61 Nm **45 lbsft** 7/16 UNF - 81 Nm **60 lbsft** M12 - 108 Nm **80 lbsft**
1/2 UNF - 100 Nm **75 lbsft** 5/8 UNF - 210 Nm **155 lbsft** M18 - 338 Nm **250 lbsft** 3/4 UNF - 366 Nm **270 lbsft**

EARTHING CONNECTORS

'R & D Marine' Earthing Connector consists of a silver impregnated rubber strip, which when fitted through the axis of the coupling between the two fail safe straps gives electrical continuity. R & D have sizes to fit most 910 series couplings.

INSTALLATION PROCEDURE FOR R&D EARTHING CONNECTORS

1. While carrying out the following procedure, ensure that the connector is not contaminated by grease or dirt.
2. Before fitting the coupling into the drive train, remove 2 off bolts holding one of the fail safe straps.
3. Remove the fail safe strap to uncover the hole in the centre of the coupling.
4. Roll up the earthing connector (lengthways)
as tight as possible.



5. Push into the hole previously uncovered by removing the strap as far as possible.
6. Replace the fail safe strap ensuring that the connector is not damaged, replace 2 off bolts.
7. Fit the coupling as per the installation instructions.
8. Check electrical continuity on installation and thereafter at three to six month intervals.

R & D Marine Earthing Connector Application Guide

Part No	Size (mm)	To Suit Coupling
103-036	9 x 57	910-021
103-037	11 x 57	910-001, 002, 007, 013, 014, 019, 020, 028, 043
103-038	15 x 57	910-004, 005
103-039	17 x 57	910-003, 006, 009, 012, 036, 037, 044, 052
103-040	19 x 57	910-017, 018, 025, 026
103-041	23 x 57	910-029, 038, 039, 040
103-042	25 x 57	910-032, 033
103-043	15 x 75	910-015, 016, 022, 024, 046, 048, 053
103-044	17 x 75	910-030, 041, 042, 047, 051
103-047	9 x 30	910-035, 045, 049, 050
103-053	19 x 75	910-062



Designs are subject to constant review and improvement therefore we reserve the right to amend any dimension or detail specified or illustrated in this publication without notice and without incurring any obligation to provide such modification to products previously delivered.

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