

Marine Transmission Center

Powertrain Division of Mack Boring & Parts Company

New Product Bulletin

The Marine Transmission Center, Powertrain Division of Mack Boring & Parts Company has taken on a new line of Flexible Shaft Couplings and Drive Dampeners. Both of these products are manufactured and machined to exacting standards and feature a new type of Polyurethane to ensure less noise and a long life. These products also have fail safes incorporated into their design so that in the unlikely event of an element failing, drive is maintained.



R & D Flexible Shaft Couplings

Alignable—Flexible—Failsafe

The R&D flexible coupling offers an unmatched combination of noise and vibration reduction in a simple reliable easy to install unit. Help protect your drivetrain from overloading in the event of a grounding or a fouled prop. The flexible barrier is made from resilient polyurethane that has been machined to exacting tolerances. Metal straps on each side of the flexible coupling form an “X” which provide for failsafe operation.

R & D Damper Plates

The R&D damper plate is designed to prevent gearbox rattle at low engine speeds, and to help reduce wear and tear on major components. To promote quicker acceleration into higher rpm ranges common to modern diesels, manufacturers have lightened the engine flywheel. Without the inertia of the traditional heavy flywheel, low rpm suffers by causing a backlash or gear rattle in the gearbox. Every R&D marine damper plate employs a machined polyurethane element with three different styles offering from 1 degree to 33 degrees of deflection, helping to eliminate these problems.



R & D MARINE LTD.

Marine Transmission Center

Powertrain Division of Mack Boring & Parts Company

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Calculating the power of the coupling required:

$$\frac{\text{Horse power of engine}}{\text{Engine speed}} \times (\text{Reduction ratio}) \times 100 = \text{HP} / 100\text{rpm}$$

Flexible Shaft Coupling Applications

Transmission model	Part number	List price	Gearbox Flange				Flexible Coupling		
			Diameter	No Bolts	Bolt Circle	Pilot	Diameter	Length	Capacity HP/100 RPM
4" Yanmar	910-002	\$ 150.00	4.00	4	78mm	50mm	4.50	1.28	3
5 3/4" (SAE 3)	910-003	\$ 412.00	5.75	6	4.75	3.00	6.00	1.87	20
4" Velvet Drive / Hurth	910-004	\$ 182.00	4.00	4	3.25	2.50	4.50	1.35	7
Volvo MS & RB	910-007	\$ 160.00	4.00	4	80mm	60mm	4.50	1.72	3
5" Velvet Drive / Hurth	910-009	\$ 284.00	5.00	4	4.25	2.50	5.63	1.77	13
5" Yanmar	910-012	\$ 284.00	5.00	4	100mm	65mm	5.63	1.77	10
5 3/4" (SAE 3)	910-026	\$ 639.00	5.75	6	4.75	3.00	6.00	1.96	28
Yanmar KM5	910-037	\$ 294.00	5.12	4	4.25	2.50	5.63	2.01	13
4" Yanmar	910-043	\$ 150.00	4.00	4	78mm	50mm	4.50	1.28	5
Adapter	202-148	\$ 350.00						2.125	

ZF220A & MG502 use adapter # 202-148 & Flexible coupling # 910-003

4" Velvet Drive / Hurth;	1017-004, ZF5M thru ZF30M
5" Velvet Drive / Hurth	1017 Reduction, 1018 all, 5000 series down angle, ZF45A, ZF63A & H
4" Yanmar	KM2 series, KM3 series, KM35A & P, KBW10
5" Yanmar	KBW20, KBW20-1, KBW21, KM4A, KMH4A KH18
5 3/4" (SAE #3) 910-003	Borg Warner 73 series & 7000 series
5 3/4" (SAE #3) 910-026	ZF80A, ZF280 family, ZF301 family, MG5050, MG5061, MG506, MG507

Calculating Engine Torque

$$\frac{\text{Horse power of engine}}{\text{Engine speed}} \times 5252 = \text{Torque LB-FT}$$

Damper Plate Applications

Transmission model	Part number	List price	# of Splines	Max Torque	Element Type	No Bolts	Bolts Circle	Outside Diameter
Yanmar GM / YM	RD22W118	\$ 225.00	10	100 LB-FT	"Hammerhead"	6	150mm	170mm
Yanmar 3JH3E& 4E	RD2W88	\$ 225.00	26	100 LB-FT	"Hammerhead"	6	170mm	190mm
Yanmar 3JH3E& 4E	RD22W88	\$ 225.00	10	100 LB-FT	"Hammerhead"	6	170mm	190mm
Yanmar 4LH-DTE	RD4U102	\$ 367.00	26	350 LB-FT	"Hammerhead"	2 x 3	310mm	335mm
Yanmar 4LHA	RD48AD102	\$ 430.00	26	400 LB-FT	"High Deflection"	2 x 3	310mm	335mm
SAE 10	RD4R17	\$ 331.00	26	550 LB-FT	"Hammerhead"	8	Multi	12.37"
SAE11.5	RD4R5	\$ 331.00	26	550 LB-FT	"Hammerhead"	8	13.125"	13.87"
SB Chevy	RD3M3	\$ 296.00	26	400 LB-FT	"Linear—Loop"	6	Multi	13.24"
BB Chevy	RD4P3	\$ 331.00	26	550 LB-FT	"Linear—Loop"	6	Multi	13.24"

Note: High deflection dampers must be installed on a CCW flywheel rotation

There are over 100 different options and combinations available, please give us a call with your needs.

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Product Bulletin

Yanmar Flexible Shaft Couplings Applications

<u>ENGINE</u>	<u>TRANSMISSION</u>	<u>ALT. TRANSMISSION</u>	<u>PART NUMBER</u>
1GM10	KM2P		910-002
2GM20	KM2P		910-002
2YM20	KM2P		910-002
3GM30	KM2P		910-002
3YM20 / 30	KM2P		910-002
3JH SERIES	KM3A	KBW10	910-002
4JH SERIES	KBW20 / KBW21	KM4A	910-012
4JH4-TE	ZF30M		910-004
4LH-DTE	KM5A		910-037
4LHA-HTE, HTP, DTE	ZF45A, ZF63A, 5000A		910-009
4LHA- DTP, STE, STP	ZF45A, ZF63A, 5000A		910-009 OR 910-029
6LP SERIES	ZF45A, ZF63A, 5000A		910-009 OR 910-029
6LYA-UTE, STE, STP	ZF80A, ZF85A		910-006 OR 910-026
6LY2-STE, STP	ZF80A, ZF85A		910-026 OR 910-033
6LY3A-ETP	ZF85A		910-033
6CX SERIES			NOT AVAILABLE

** If multiple part numbers are listed check application for proper torque capacity **

Flexible couplings are also available to fit many other applications. Please contact the Marine Transmission Center or Mack Boring and Parts Company for addition sizes.

Calculating the power of the coupling required:

$$\frac{\text{Horse power of engine}}{\text{Engine speed}} \times (\text{Reduction ratio}) \times 100 = \text{HP} / 100\text{rpm}$$

1-800-709-0673

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