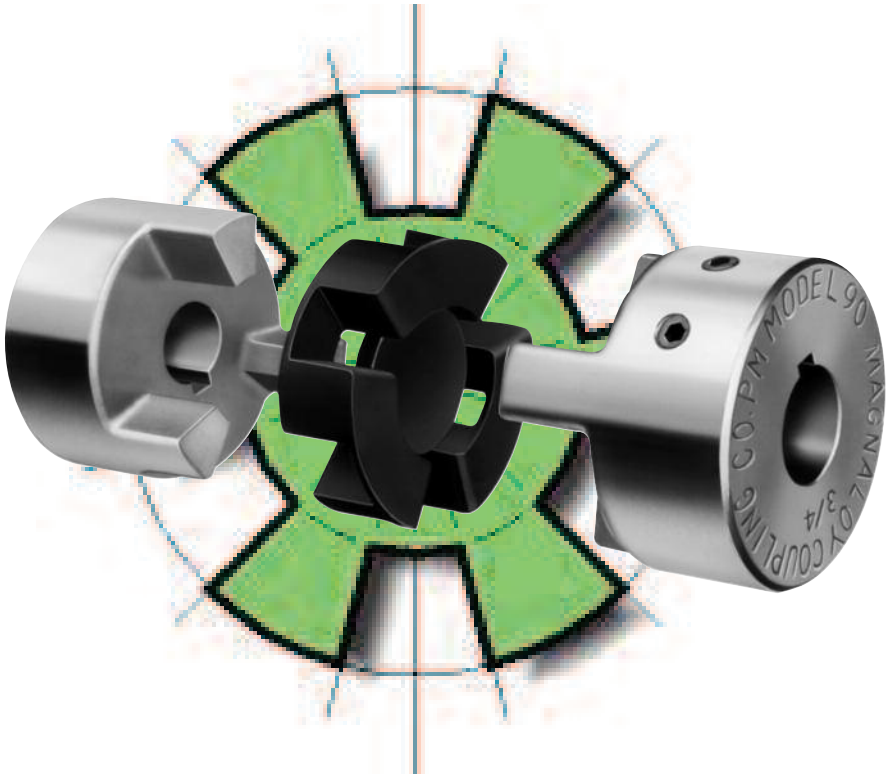
Powdered Metal PM90 Coupling

The Strong, High Quality, Low Cost Powdered Metal Coupling from Magnaloy

When your priorities for a coupling are economy and strength... specify the all-new Magnaloy Type PM90.
The PM90 is made from high-density powdered metal and is available in standard bores up to 1 1/8 inch maximum. Double set screws are standard in all bores 1/2 inch and over. The set screws are placed over the keyway and at a 45^0 angle to the keyway to allow greater hoop-stress generation and maximum shaft gripping. The increased drive lug surface area on the PM90 provides low unit loads on the insert drive segments while insuring more rapid heat dissipation. Magnaloy's exclusive insert design allows easy installation and replacement without hub removal. The drive lug design provides even compressive loading with no radial loading of insert drive elements.



It is a well established fact that the major cause of failure in an elastomeric insert type drive coupling is hysteresis failure which results from overworking the insert by application of cyclic loads and the associated heat generation. These cyclic loads can be internal in origin as a result of coupling design (see page 2) and when coupled with externally applied loads can greatly reduce elastomer life. Specifying Magnaloy's Type PM Coupling with radial designed drive lugs results in true compressive loads and improved insert life.

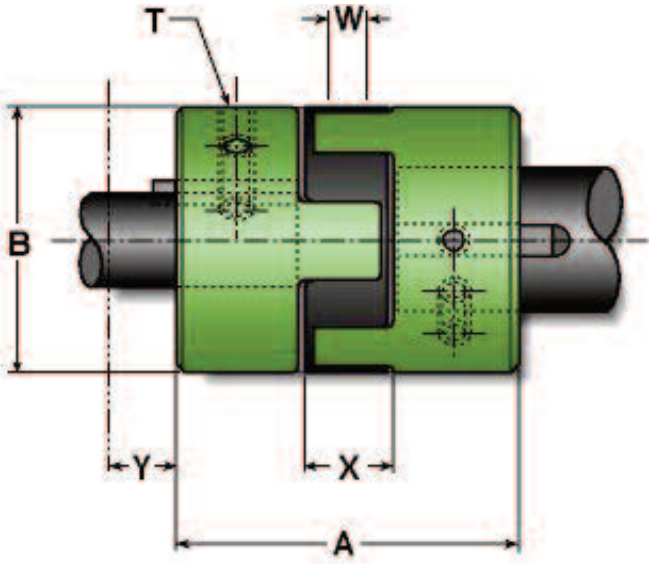
magnaloy coupling company *501 Commerce Drive Alpena, MI 49707* ***989 356-2186***
A Division of Douville Johnston Corporation *Fax: 989 354-4190* *http://www.magnaloy.com*

Model PM90 Performance Specifications

Maximum Bore	Minimum Bore	Insert Number	Torque Rating (in lb)	HP Rating per 100 RPM	Torsional Rigidity (in lb/deg)	Complete Coupling Approx Weight (lb)		Wr^2 (lb ft^2) (solid)
						Solid	Max Bore	
1 1/8	7/16	P097N7	224	0.36	38.3	1.8	1.3	0.946
		P097U9	336	0.54	69.9			
		P097H5	672	1.08	158.7			

1

Model PM90 Dimensional Specifications



A -	Over all length (Assembled) - 2.78
B -	Outside Diameter - 2.125
T -	Set Screw Size - 1/4-20 UNC, 2 places
W -	Distance between shaft ends - 3/16 min
X -	Distance between shaft ends - 3/4 max
Y -	Hub movement required for insert removal - 1.20 total

Notes

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Model PM90 - Standard Bore / Keyway Sizes (per AGMA Class 1, Clearance Fit)

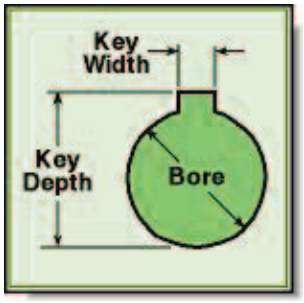
Part Number	Bore & Keyway Combinations	Bore Size**	Key Width	Key Depth	Set Screw	
					Size	Quantity
P090014N	7/16 x No Key	0.4375 / 0.4385	0.0938 / 0.0958	-	1/4-20 UNC	1
P09001403	7/16 x 3/32	0.4375 / 0.4385	0.125 / 0.127	0.484 / 0.495	1/4-20 UNC	1
P09001404	7/16 x 1/8	0.4375 / 0.4385	0.125 / 0.127	0.496 / 0.507	1/4-20 UNC	2
P09001604	1/2 x 1/8	0.500 / 0.501	0.125 / 0.127	0.560 / 0.571	1/4-20 UNC	2
P09001804	9/16 x 1/8	0.5625 / 0.5635	0.125 / 0.127	0.623 / 0.634	1/4-20 UNC	2
P09002005	5/8 x 5/32	0.625 / 0.626	0.1562 / 0.1582	0.698 / 0.709	1/4-20 UNC	2
P09002006	5/8 x 3/16	0.625 / 0.626	0.1875 / 0.1895	0.709 / 0.720	1/4-20 UNC	2
P09002206	11/16 x 3/16	0.6875 / 0.6885	0.1875 / 0.1895	0.773 / 0.784	1/4-20 UNC	2
P09002404	3/4 x 1/8	0.750 / 0.751	0.125 / 0.127	0.812 / 0.823	1/4-20 UNC	2
P09002406	3/4 x 3/16	0.750 / 0.751	0.1875 / 0.1895	0.837 / 0.848	1/4-20 UNC	2
P09002806	7/8 x 3/16	0.875 / 0.876	0.1875 / 0.1895	0.964 / 0.975	1/4-20 UNC	2
P09002808	7/8 x 1/4	0.875 / 0.876	0.250 / 0.252	0.982 / 0.993	1/4-20 UNC	2
P09010006	1 x 3/16	1.000 / 1.001	0.1875 / 0.1895	1.090 / 1.101	1/4-20 UNC	2
P09010008	1 x 1/4	1.000 / 1.001	0.250 / 0.252	1.114 / 1.125	1/4-20 UNC	2
P09010408	1 1/8 x 1/4	1.125 / 1.126	0.205 / 0.252	1.241 / 1.252	1/4-20 UNC	2

** Shaded combinations are Semi-special - see price sheet*

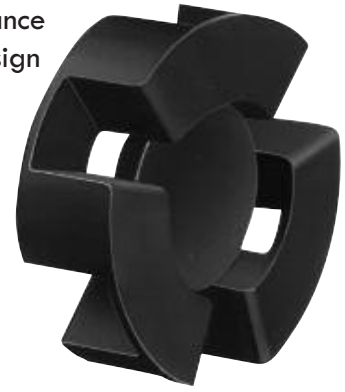
*** Other Bore/Keyway combinations are available. Consult factory for quotation.*

Model PM90 Bore Tolerances

Feature	Tolerance
Bore	-.000 / +.001
Key Width	-.000 / +.002
Key Depth	+.005 / +.016



As with Magnaloy's standard line of couplings, insert elastomer selection allows variable performance characteristics. Insert design eliminates metal-to-metal contact and assures electrical isolation of shafts.



Nitrile, 70A Durometer.....
Standard elastomer material offering excellent resistance to petroleum products and superior compression set characteristics.

Urethane, 90A Durometer.....
Excellent mechanical and physical properties. *Note:* Urethane material tends to soften when exposed to elevated temperatures or humid conditions.

Hytrel, 50D Durometer....
Superior mechanical and physical properties and offers excellent fluid compatibility and high temperature characteristics.

Additional insert materials available upon request from factory.
See page 7 for additional information on insert selection.