



# ESM SERIES ELASTOMER COUPLING



## Major Features

- High speed capability.
- Backlash free shaft couplings for small and medium torque values.
- Star-shaped elastomer element with involute tooth profile and high shore hardness ensures zero backlash over life of product.
- Elastomer spider compensates for small shaft misalignments.

## Material

- Steel hubs and polyurethane 72 Shore D and 98 Shore A spider
- Aluminum versions available (ESM-A)

## Technical data/Dimensions

Size ESM	Nominal Torque	Elastomer Hardness Shore	Moment of Inertia	Moment of Inertia Aluminum Version	Torsion Resistance	Max. Lateral Misalignment	Mass	Mass Aluminum Version	Screw Size	Torque to Tighten Screws	Outer Diameter	Length	Bore Range	
	Nm (lb-in)		10 <sup>-3</sup> kgm <sup>2</sup> (lb-in <sup>2</sup> )	10 <sup>-3</sup> kgm <sup>2</sup> (lb-in <sup>2</sup> )		Nm/arcmin (lb-ft/Deg)		mm (inch)		kg (lbs)			kg (lbs)	Nm (lb-in)
ESM-10	10	98 Sh-A	0.02	0.015	0.04	0.1	0.15	0.11	4xM3	1.8	32	50	6	14
	(89)		(0.07)	(0.05)		(1.8)		(0.004)		(0.3)			(0.2)	(16)
ESM-17	17	98 Sh-A	.08	.05	0.24	0.1	0.35	0.28	6xM4	4	40	66	9	19
	(151)		(0.27)	(0.2)		(10.6)		(0.004)		(0.8)			(0.6)	(35)
ESM-25	25	72 Sh-D	0.1	0.06	0.35	0.07	0.35	0.28	6xM4	4	40	66	10	19
	(221)		(0.34)	(0.2)		(15.4)		(0.003)		(0.8)			(0.6)	(35)
ESM-43	43	98 Sh-A	0.29	0.19	0.4	0.1	0.65	0.4	4xM5	8	50	78	12	24
	(381)		(0.99)	(0.65)		(18)		(0.004)		(1.4)			(0.9)	(71)
ESM-50	50	72 Sh-D	0.29	0.19	0.58	0.07	0.65	0.4	4xM5	8	50	78	15	24
	(443)		(0.99)	(0.65)		(25.7)		(0.003)		(1.4)			(0.9)	(71)
ESM-60	60	98 Sh-A	0.43	0.28	0.6	0.1	0.9	0.6	4xM5	8	55	78	12	25
	(531)		(1.47)	(0.95)		(27)		(0.004)		(2)			(1.3)	(71)
ESM-90	90	72 Sh-D	0.43	0.28	0.9	0.07	0.9	0.6	4xM5	8	55	78	16	25
	(797)		(1.47)	(0.95)		(39.9)		(0.003)		(2)			(1.3)	(71)
ESM-150	150	98 Sh-A	0.92	0.65	1.05	0.1	1.2	0.9	8xM5	8	65	90	17	35
	(1329)		(3.14)	(2.22)		(46.3)		(0.004)		(2.6)			(2)	(71)
ESM-200	200	72 Sh-D	0.92	0.65	1.52	0.07	1.2	0.9	8xM5	8	65	90	19	35
	(1772)		(3.14)	(2.22)		(67.2)		(0.003)		(2.6)			(2)	(71)
ESM-320	320	98 Sh-A	2.7	2	2	0.12	2.6	1.9	4xM8	35	80	114	20	40
	(2834)		(9.15)	(6.82)		(88.5)		(0.005)		(5.7)			(4.2)	(310)
ESM-400	400	72 Sh-D	2.7	2	2.85	0.1	2.6	1.9	4xM8	35	80	114	25	40
	(3543)		(9.15)	(6.82)		(126.1)		(0.004)		(5.7)			(4.2)	(310)
ESM-500	500	98 Sh-A	8.8	5.6	5.8	0.15	6	4.5	4xM10	67	100	138	22	48
	(4429)		(29.80)	(19.1)		(256.8)		(0.006)		(13.2)			(9.9)	(593)
ESM-700	700	98 Sh-A	20.5	13	8	0.15	9.5	7	4xM12	115	120	155	25	60
	(6200)		(69.50)	(44.33)		(354)		(0.006)		(20.9)			(15.4)	(1019)
ESM-1000	1000	72 Sh-D	20.5	13	12	0.1	9.5	7	4xM12	115	120	155	25	60
	(8851)		(69.50)	(44.33)		(531)		(0.004)		(20.9)			(15.4)	(1019)

Coupling must be selected so nominal torque is higher than highest operational torque of the application (i.e., during acceleration).  
Bore diameters smaller than the minimum are possible but reliable transmission of nominal torque cannot be guaranteed.