

MZ

S E R I E S

ELECTROMAGNETIC TOOTH CLUTCH

Torque Range: 18 ~ 2950 ft-lbs.

Torque Range: 25 ~ 4000 N-m



FEATURES

ZERO BACKLASH

The MZ series provides minimal backlash. Backlash can be totally eliminated as an option.

ZERO DRAG TORQUE

There is no drag torque in the disengaged mode because both faces separate completely.

NO SLIP

Driving torque is via teeth, therefore slippage is non-existent when the clutch is engaged.

WET / DRY APPLICATIONS

The MZ series clutches can be used in either wet or dry applications.

HIGH-TORQUE COMPACT DESIGN

The MZ Series tooth engagement clutches provide the highest torque per size of any electromagnetic clutch style.

FLEXIBLE MOUNTING

Clutches are supplied with armature assembly only which should be bolted into customer's gear, pulley or coupling.

LONG LIFE

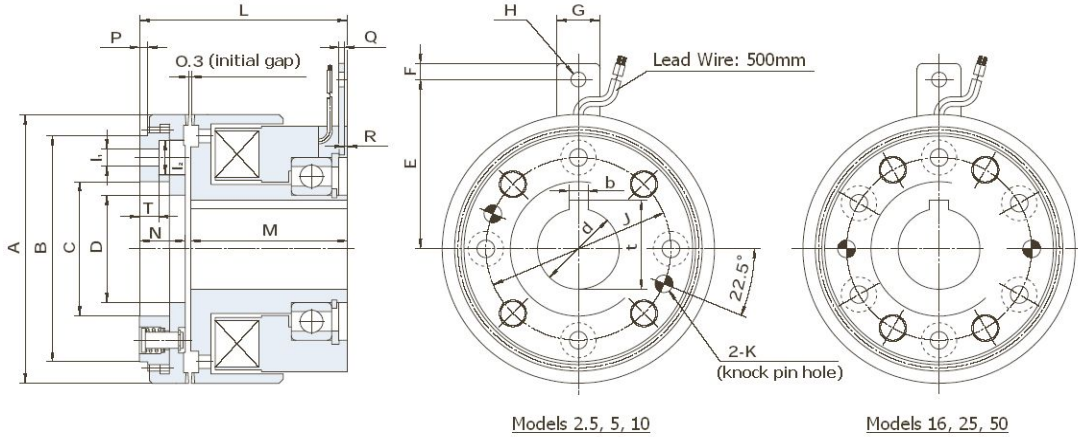
Since tooth wear is minimal, the MZ series has an extremely long operational life.



MZ 2.5 ~ 50



MZ 100 ~ 400

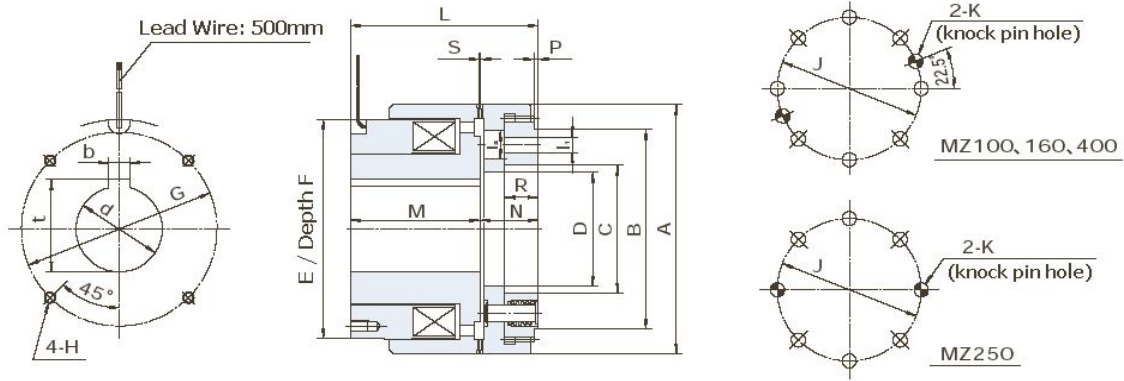


MZ	Dry Type	2.5D	5D	10D	16D	25D	50D
	Wet Type	2.5W	5W	10W	16W	25W	50W
Static Torque [ft-lbs / N-m]		18 / 25	37 / 50	74 / 100	118 / 160	184 / 250	369 / 500
Coil (20°C)	Voltage [DC-V]	24					
	Current [A]	0.63	0.96	1.25	1.46	1.67	2.08
	Resistance [Ω]	38.4	25	19.2	16.5	14.4	11.5
	Wattage [W]	15	23	30	35	40	50
Armature	Pull-In Time [ms]	60	70	90	100	140	170
	Release Time [ms]	60	70	90	100	140	170
Max Allowable Speed [rpm]		5000	4500	3800	3500	3200	2700
Max Engagement Speed [rpm]		38	34	28	26	24	20
Moment of Inertia (J) [kg-cm ²]	Rotor	2.5	5	11	21.3	35	94.5
	Armature	2.5	4.5	8.3	15.3	29	60
Bore [mm]		dH7	20	25	30	35	40
Key Way [mm]	bE9	5	7	7	10	10	12
	t+0.15/-0	22	28	33	38.5	43.5	53.5
Dimensions [mm]	A	75	85	100	110	120	140
	Bh7	62	70	84	90	98	112
	CH7	38	45	50	65	65	70
	D	29	34	40	46	51	62
	E	54	58	63	68	73	88
	F	6	6	6	6	6	10
	G	16	16	16	16	16	24
	H	5.5	5.5	5.5	5.5	5.5	8.5
	I1	4x4.5	4x5.5	4x6.5	6x5.5	6x6.5	6x8.5
	I2	8	10	13	10	13	16
	J	50	58	68	78	82	92
	K	4.8	5.8	5.8	7.8	7.8	9.8
	L	67	72	75	82	92	112
	M	52	55	57	62	70	85
	N	13.7	15.5	16.5	18.5	20.5	25.5
	P	3	3	3	3	3	3
Q	2	2	2	2	2	2.9	
R	-	-	0.5	0.5	1	-	
T	5	6	7	7	8	10	
Weight [lbs / kg]		3.3 / 1.5	4.4 / 2.0	6.6 / 3.0	8.8 / 4.0	11 / 5	19 / 9

[Included parts & accessories : surge protector]

[1" = 25.4mm]

[EM: Electromagnet]



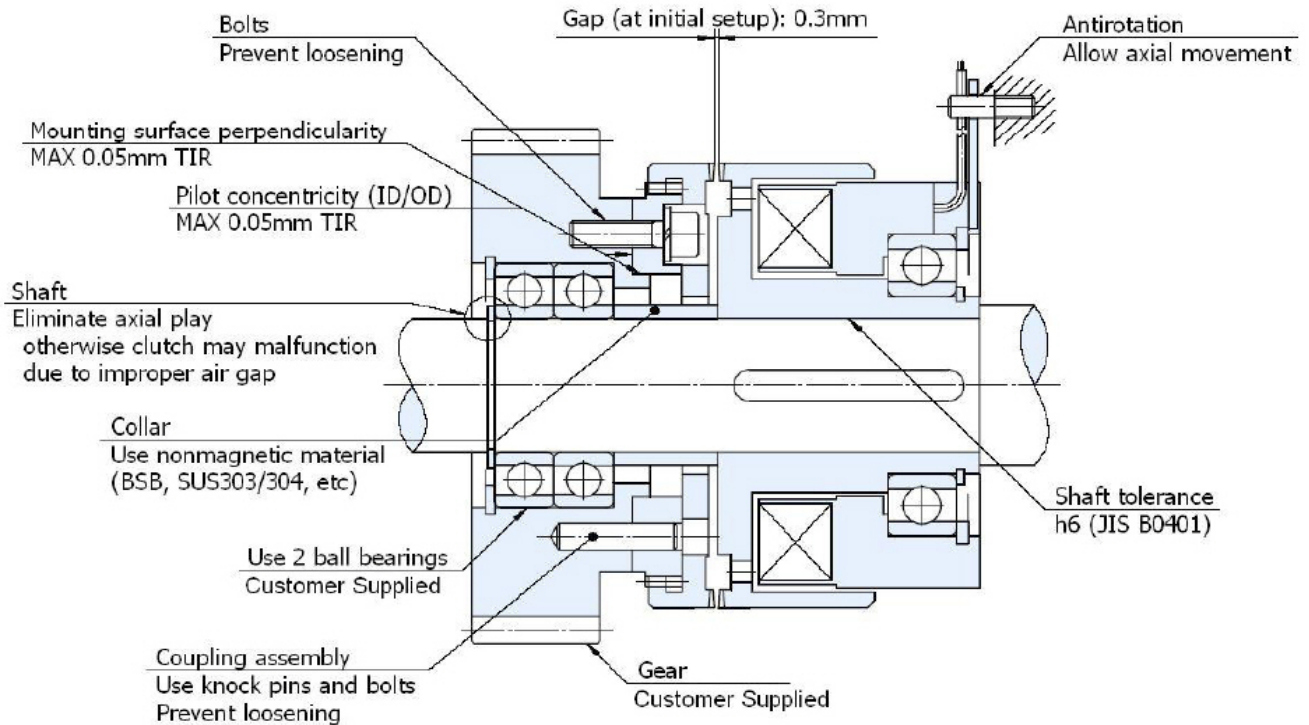
MZ		100	160	250	400
Static Torque [ft-lbs / N-m]		738 / 1000	1180 / 1600	1844 / 2500	2950 / 4000
Coil (20°C)	Voltage [DC-V]	24			
	Current [A]	2.67	3.33	3.75	4.13
	Resistance [Ω]	9	7.2	6.4	5.8
	Wattage [W]	65	80	90	100
Armature	Pull-In Time [ms]	250	300	380	450
	Release Time [ms]	250	300	350	400
Max Allowable Speed [rpm]		2200	2000	1600	1400
Max Engagement Speed [rpm]		0	0	0	0
Moment of Inertia (J) [kg-cm ²]	Rotor	275	480	1210	1670
	Armature	220	490	920	1440
Bore [mm]	dH7	60	70	90	100
Key Way [mm]	bE9	15	18	24	28
	t+0.15/-0	65	76	98	109
Dimensions [mm]	A	175	196	237	258
	Bh7	140	160	185	208
	Ch7	90	100	130	140
	D	80	92	120	126
	Eh8	154	176	209	229
	F	5	5	5	5
	G	136	156	190	210
	H	M8-12	M8-12	M10-20	M10-20
	I1	8-11	8-13	6-18	8-18
	I2	20	24	30	30
	J	118	136	155	175
	K	11.7	15.5	15.5	15.5
	L	130	134	150	160
	M	90	90	100	105
	N	40	44	50	55
P	3	4	4	4	
R	23.5	25	27	30	
S	0.3~0.5	0.4~0.6	0.6~0.8	0.6~0.8	
Weight [lbs / kg]		37 / 17	55 / 25	77 / 35	97 / 44

[Included parts & accessories : surge protector]

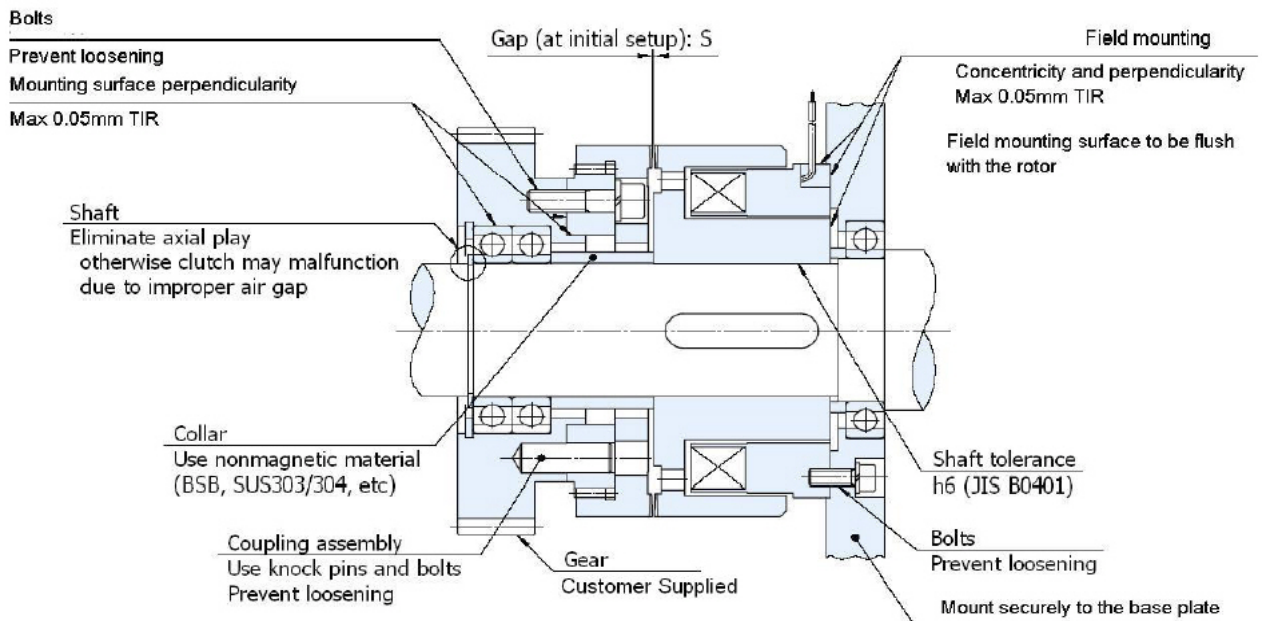
[1" = 25.4mm]

MZ: TYPICAL INSTALLATION

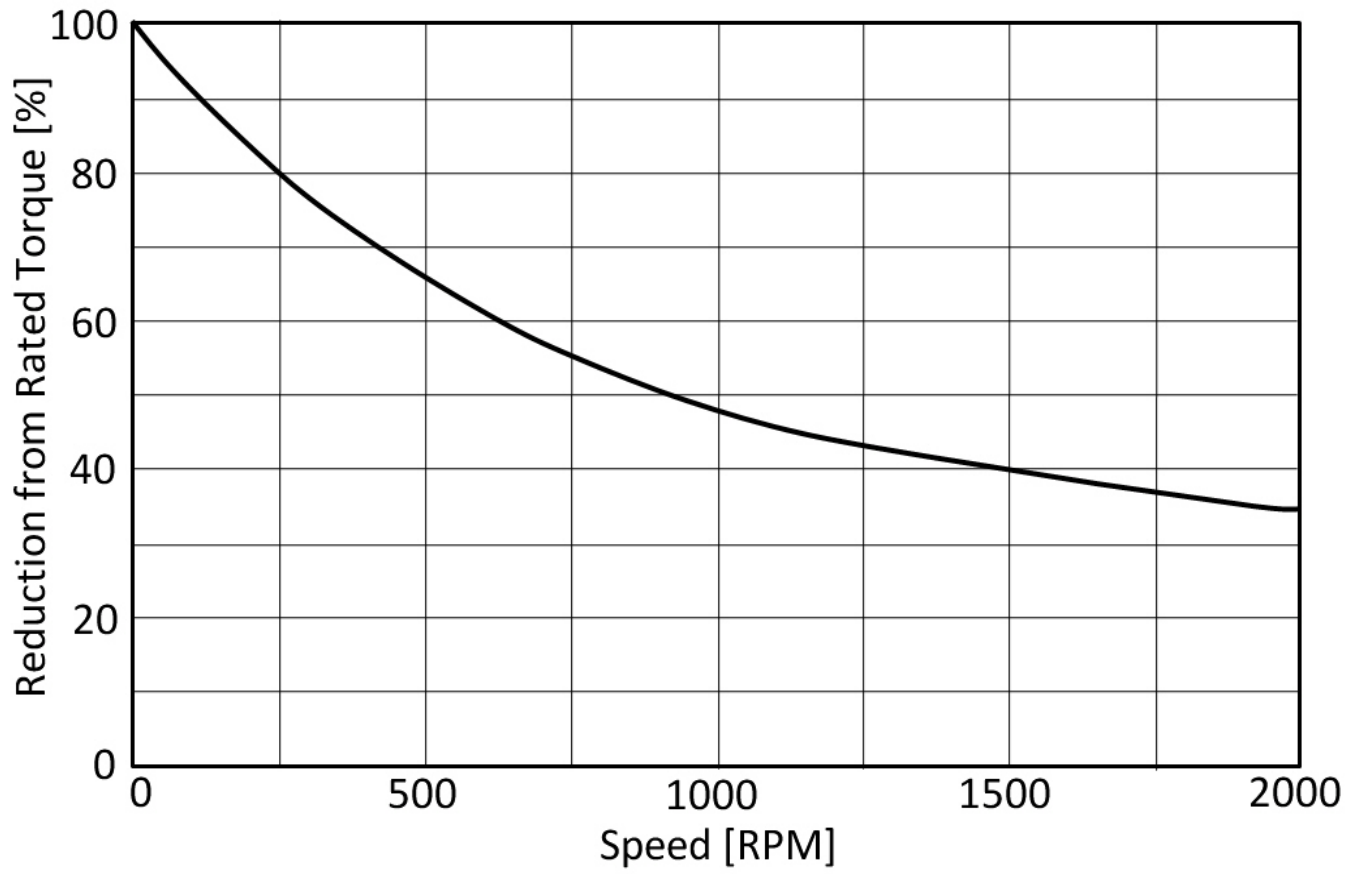
Models 2.5~50

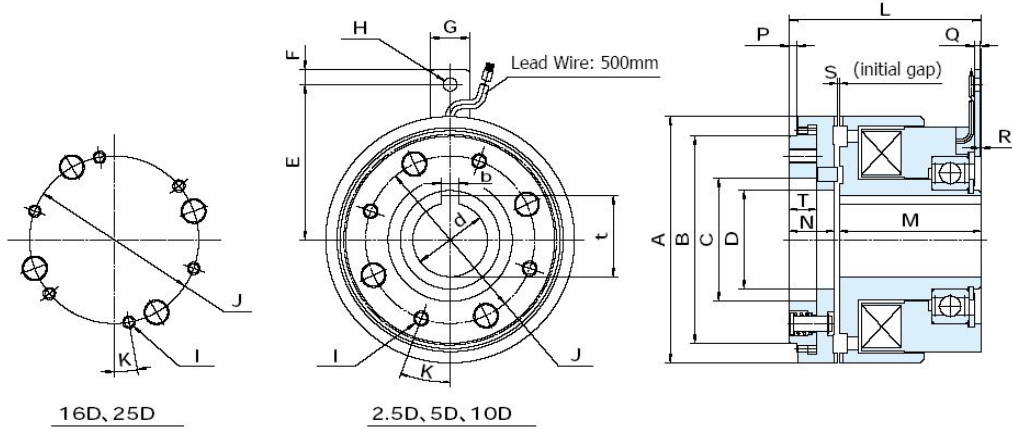


Models 100~400



MZ: TORQUE CHARACTERISTIC





MZS		2.5D	5D	10D	16D	25D
Static Torque [ft-lbs / N-m]		18 / 25	37 / 50	74 / 100	118 / 160	184 / 250
Coil (20°C)	Voltage [DC-V]	24				
	Current [A]	0.63	0.96	1.25	1.46	1.67
	Resistance [Ω]	38.4	25	19.2	16.5	14.4
	Wattage [W]	15	23	30	35	40
Armature	Pull-In Time [ms]	90	90	90	100	140
	Release Time [ms]	60	70	100	110	140
Max Allowable Speed [rpm]		5000	4500	3800	3500	3200
Moment of Inertia (J) [kg-cm ²]	Rotor	2.5	5	11	21.3	35
	Armature	3.5	6	10.5	18.7	29
Bore [mm]	dH7	20	25	30	35	40
Key Way [mm]	bE9	5	7	7	10	10
	t+0.15/-0	22	28	33	38.5	43.5
Dimensions [mm]	A	75	85	100	110	120
	Bh7	62	70	84	90	98
	Ch7	38	45	50	65	65
	D	29	34	40	46	51
	E	54	58	63	68	73
	F	6	6	6	6	6
	G	16	16	16	16	16
	H	5.5	5.5	5.5	5.5	5.5
	I	4xM4	4xM5	4xM6	6xM5	6xM6
	J	50	58	68	78	82
	K	10°	15°	20°	10°	10°
	L	68.5	73.5	76.5	83.5	92
	M	52	55	57	62	70
	N	15.2	17	17.8	19.7	20.2
	P	3	3	3	3	3
	Q	2	2	2	2	2
R	-	-	0.5	0.5	1	
S	0.4~0.5	0.4~0.5	0.5~0.6	0.6~0.7	0.6~0.7	
T	10	10.8	10.8	11.7	12.4	
Weight [lbs / kg]		3.3 / 1.5	4.4 / 2.0	6.6 / 3.0	8.8 / 4.0	11.0 / 5.0

[Included parts & accessories : surge protector]

[1" = 25.4mm]