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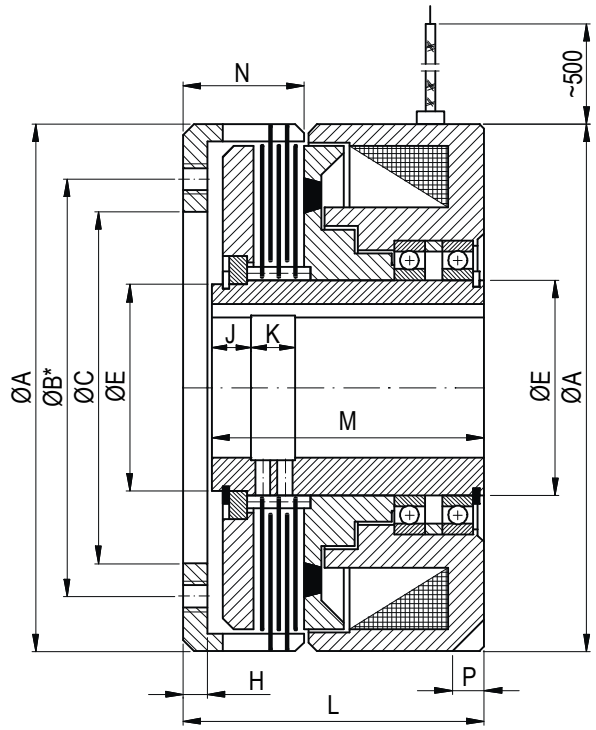
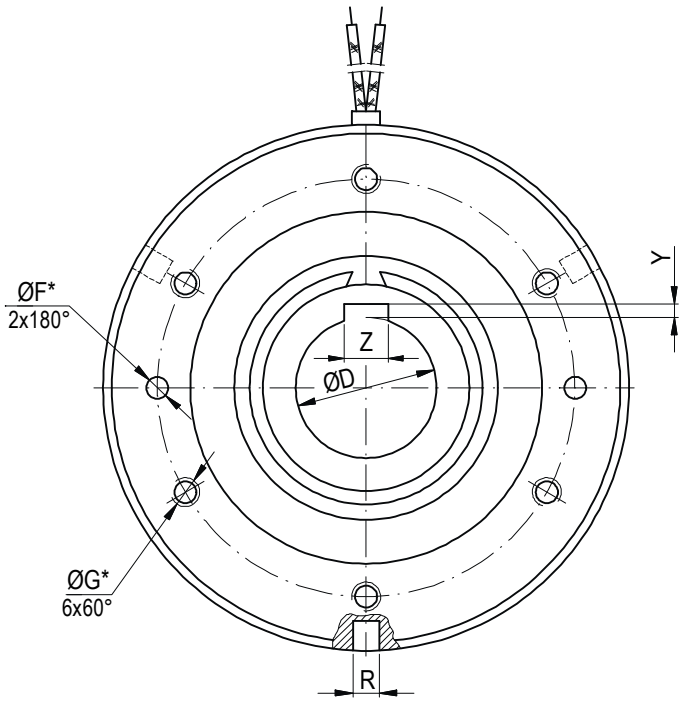
MULTIPLE-DISC CLUTCHES E2M-..4 2015

dMultiple-disc clutches E2M-..4 are designed to work in oil only. They are operated at 24 V DC (12 V or 48 V on special request).





*) ØB, ØG, ØF (pinholes) are made by the user

Size	Torque		Coil power	Coil resistance	Max. speed	Weight	Dimensions [mm]																
	stat. [Nm]	dyn. [Nm]	[W]	[Ω]	[min-1]	[kg]	A	B	C [H7]	Dmax [H7]	E	F	G	H	J	K	L	M	N	P	R	Y	Z [Js9]
054	25	16	21	27	4500	1,2	80	60	40	18	30	4	M4	4	5	7	48,5	42	18	5	4	2,8	6
064	40	25	22	27	4000	1,8	90	70	45	22	30	5	M5	5	6	7	54,5	48	19,5	7	4	2,8	6
074	63	40	29	20	4000	2,3	100	80	55	25	34	5	M5	5	8	8	58	50	23,5	7	5	3,3	8
084	100	63	40	14	3800	3	110	90	65	30	42	6	M6	5	9	9	62,5	55	24	7	6	3,3	8
094	160	100	44	13,8	3500	4	120	95	70	35	47	6	M6	6	11	11	69	64	27,5	7	6	3,3	10
104	250	160	65	8,8	3200	5,9	135	110	75	40	52	8	M8	6	12	12	78	73	30,5	8	8	3,3	12
114	400	250	72	8	3000	8,1	150	130	95	50	63	8	M8	7	14	13	85	78	33,5	9	8	3,8	14
124	630	400	79	7,3	2700	11,3	170	145	105	55	73	10	M10	8	10	21	97	85	39	9	8	4,3	16
134	1000	630	110	5,3	2500	16	190	160	125	70	92	10	M10	9	11	24	112	98	46	11	10	4,9	20
144	1600	1000	105	5,5	2200	22,4	215	185	135	80	101	12	M12	10	12	23	122	107	51	12	10	5,4	22

Please note that dimensions “D” and “C” are made at the customer’s request (groove dimension according to PN/M-85005)

The following clutch details should be provided in your order (example)

Clutch E2M–134–65–24–125

clutch size
“D” dimension of the mounting hole
supply voltage
dimension “C” in the driver

****The manufacturer reserves the right to modify the products in order to improve their quality****

POWER SUPPLY

E2M-..4 clutches operate at 24 ±1 V DC. In order to protect the clutch coil from a breakdown, a quenching member should be used in the supply system in the form of a resistor connected in parallel with the coil, (the resistance of which should be approx. 10 times higher than the resistance of the coil), semiconductor diode, or a resistor and a diode.

LUBRICATION

Multiple-disc clutches are lubricated in order to reduce wear of components (brake pads in particular) and carry away the heat generated during operation. Multiple-disc clutches should be lubricated with mineral oils with viscosity below 37 cSt. Depending on the linear velocity of the clutch ("V") measured on the outside diameter, the following oils are recommended:

- at linear velocity V<12 m/s – oils with viscosity of 37 cSt maximum
- at linear velocity V>12 m/s – oils with viscosity of ~20 cSt

Note that oil viscosity has been determined for 50°C [1 cSt = 1 mm^2/s]
The manner in which clutches are lubricated (from the inside through the hollow shaft, by pouring or immersion in oil up to 1/6 of diameter "A") mainly depends on conditions of operation. The user should choose the method of lubrication which ensures that oil temperature in the lubrication system does not exceed 60°C, and clutch temperature after stabilization does not exceed 90°C.
The table below shows recommended oil expenditure on clutch lubrication through pouring:

Clutch size	**054**	**064**	**074**	**084**	**094**	**104**	**114**	**124**	**134**	**144**
Expenditure [l/min.]	0,3	0,3	0,4	0,6	0,8	1,2	1,6	2,0	2,5	3,0

If the clutch is lubricated from the inside (through a hollow shaft), oil expenditure can be reduced by approx. 50% compared to the table values.

TECHNICAL CONDITIONS OF ASSEMBLY AND OPERATION

1. Clean the clutch with a maintenance agent before assembly.
2. Mount the clutch sleeve on the shaft coaxially with the element on which the clutch driver is mounted, and prevent the sleeve from axial movement. Whipping of the shaft section where the sleeve is to be mounted should be max 0,02 mm. Whipping of the base surface under the driver should be 0,03-0,05 mm depending on brake size.
3. Fix the clutch driver to a driven element or driving element with screws or pegs prevented from dropping during operation.
4. Clutches do not need to be adjusted during operation. The user should, however, regularly check oil cleanliness (lubricating oil should be free from mechanical and chemical impurities).