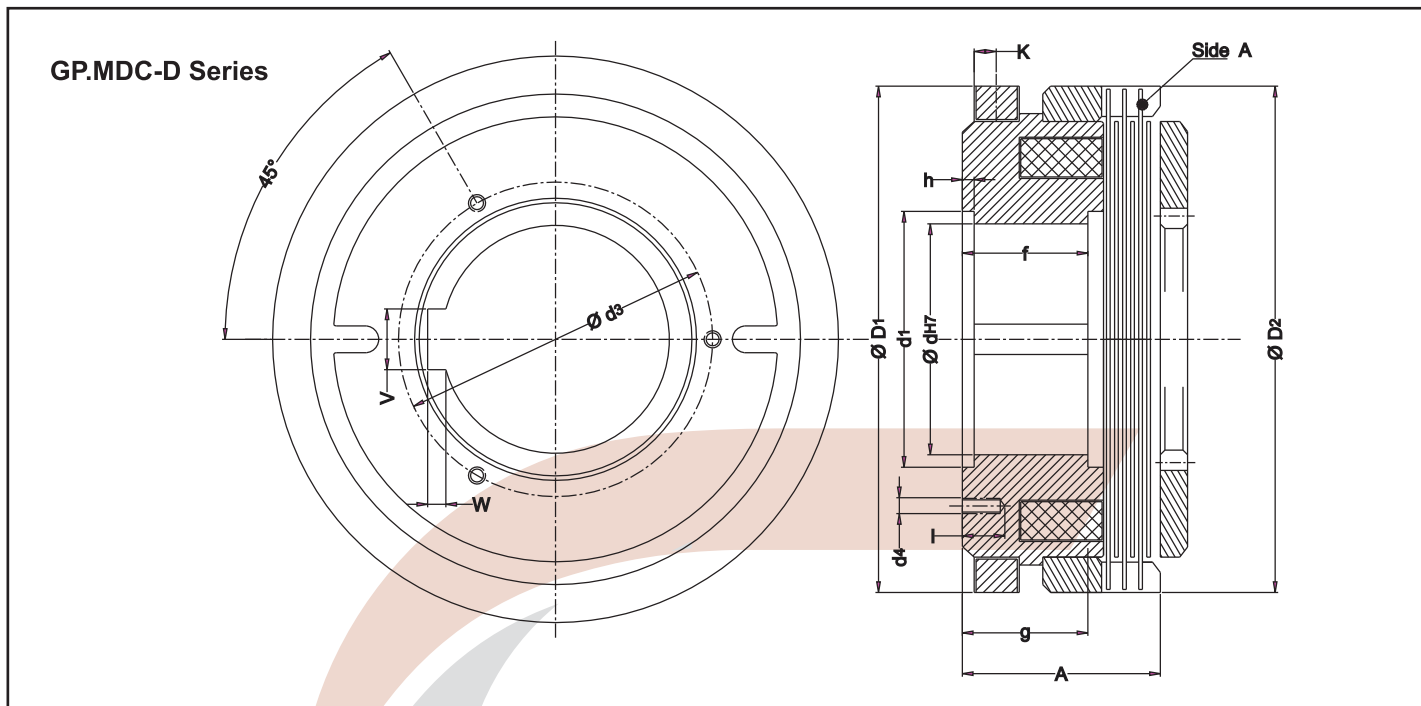


Dimension Data

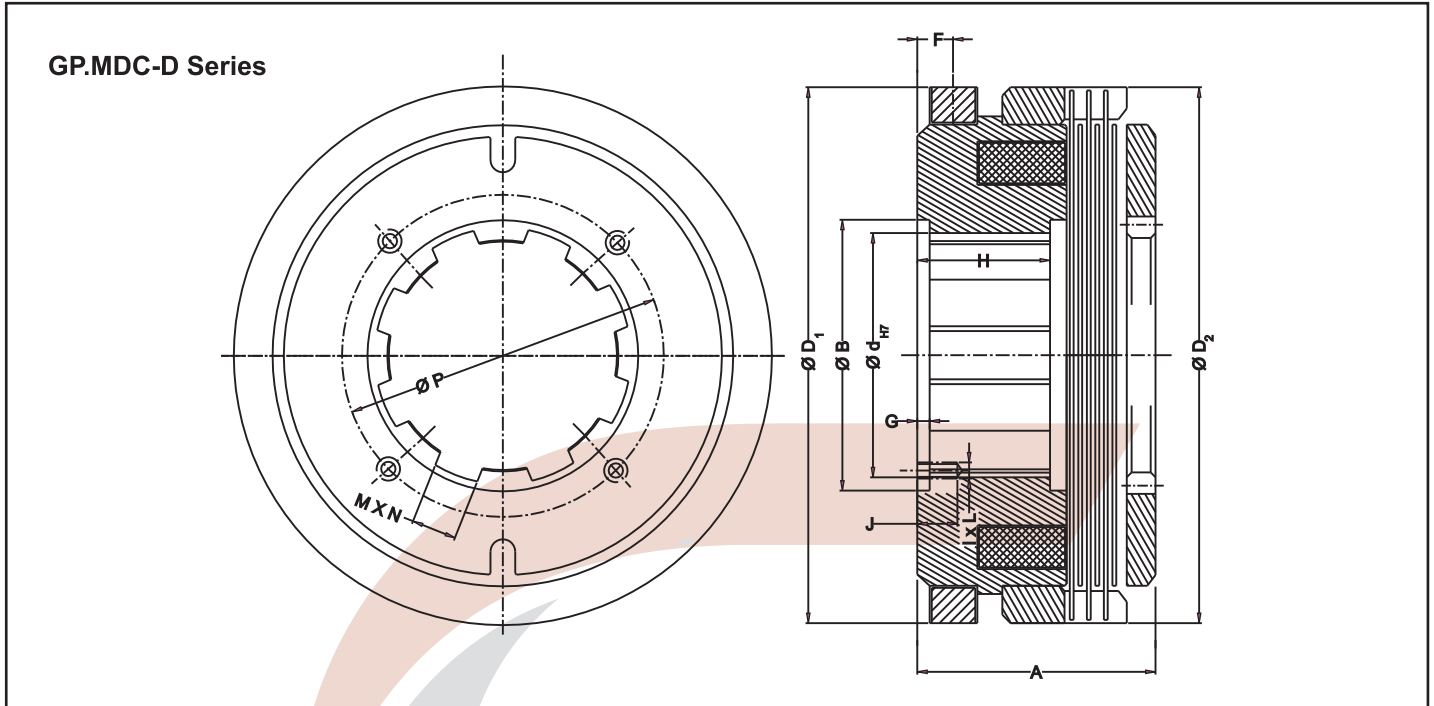
Multi-Disc Electromagnetic Clutches GP.MDC-D Series



	Model	GP 0,5	GP 1
		EK 0,5	EK 1
Static torque	Nm	7	20
Dynamic torque	Nm	5	10
Speed at 10 m per sec. (1)	min-1	2700	2300
Engagement time	ms	120	170
Disengagement time	ms	40	50
Coil power consumption at 25°C	W	10	15
Mass moment of inertia side A	10 ⁻³ kgm ²	0,25	0,58
Mass (weight)	kg	0,46	0,77
A	mm	23	29,5
Ø D1	mm	70	82
Ø D2	mm	70	80
Ø d H7	mm	25	34
Ø d3	mm	32	41
d 4	mm	M4	M4
f	mm	16	18,5
g	mm	14	16.5
h	mm	1,5	1,5
k	mm	3,5	5,5
l	mm	6	10
d1	mm	27	36
Air gap	mm	0.7	1.0

Dimension Data

Multi-Disc Electromagnetic Clutches GP.MDC-D Series

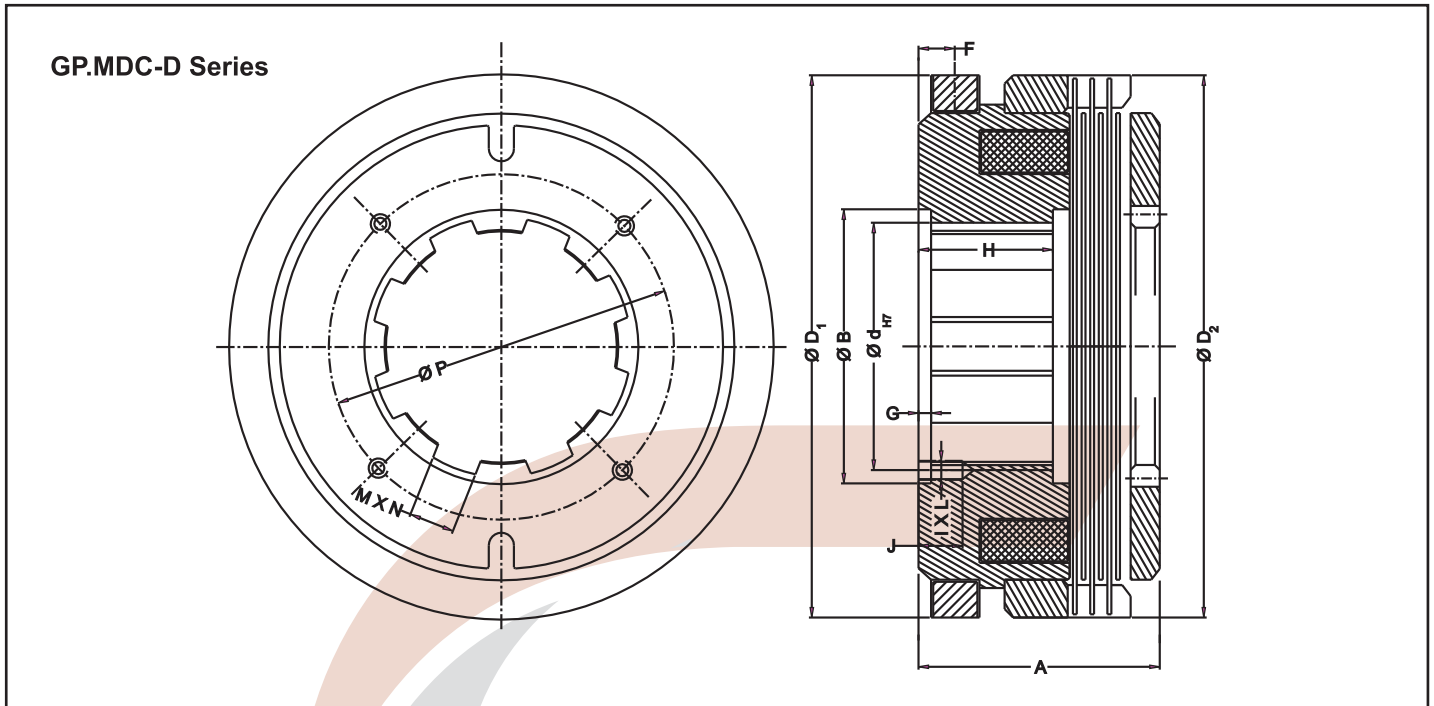


Model		GP 2	GP 2 D	GP 5	GP 5 D	GP 10	GP 10 D	GP 10 E	GP 20
Comparable to ZF Type:		EK 2	EK 2 D	EK 5	EK 5 D	EK 10	EK 10 D	EK 10 E	EK 20
Static torque	Nm	36	50	100	100	200	200	200	410
Dynamic torque	Nm	20	20	55	55	110	100	100	230
Speed at 10 m per sec. (1)	min-1	2050	2200	1750	1650	1500	1400	1350	1250
Engagement time	ms	220	220	280	280	360	360	360	450
Disengagement time	ms	70	70	100	100	110	110	110	200
Coil power consumption at 25°C	W	17	18	20	22	29	29	27	37
Mass moment of inertia side A	10 ⁻³ kgm ²	0,99	1,2	2,4	3,1	6,0	7,3	8,7	13,1
Mass (weight)	kg	1,03	1,21	2,11	2,18	4,34	3,75	3,90	5,80
A	mm	32	36	47.5	45.5	55	52	52	54
D ₁ Ø	mm	92	95	106	114	126	134	140	152
D ₂ Ø	mm	90	93	106	114	126	134	140	152
BØ	mm	37	42	38	52	44	60	70	60
d H7 Ø	mm	32	36	32	46	36	52	62	52
H	mm	18	20	25	23	29	26	26	25
G	mm	1.5	1.5	2	2	2	2	2	2
M X N	mm	6 X 8	7 X 8	6 X 8	9 X 8	7 X 8	10 X 8	11 X 8	10 X 8
I X L	mm	m6 X 4	m6 x 4	m8 X 4	m8 X 4	m8 X 4	m8 X 4	m6 X 4	m10 X 4
J	mm	10	10	12	12	15	15	15	15
F	mm	5.5	5.5	6	6	7	7	7	7
P	mm	45	50	50	60	60	72	80	75
Air gap	mm	1.8	1.2	1.8	1.8	2.0	2.0	2.0	2.5

* Optional : Bore available with one keyway to DIN 6885

Dimension Data

Multi-Disc Electromagnetic Clutches GP.MDC-D Series

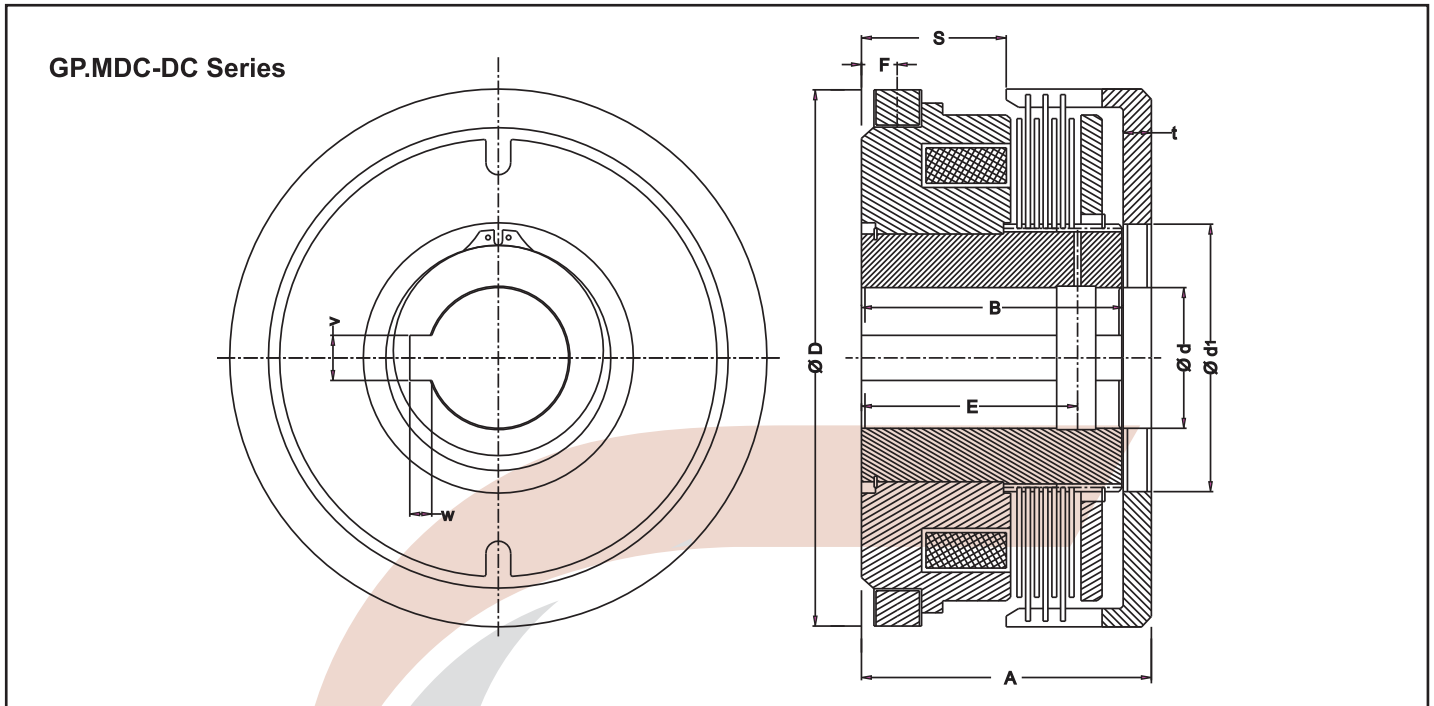


	Model Comparable to ZF Type:	GP 20 D	GP 20 E	GP 40	GP 40 D	GP 40 E	GP 60 D	GP 80	GP 120 E	GP 160	GP 320
		EK 20 D	EK 20 E	EK 40	EK 40 D	EK 40 E	EK 60 D	EK 80	EK 120E	EK 160	EK 320
Static torque	Nm	400	360	900	800	800	1100	1800	2400	3600	5800
Dynamic torque	Nm	200	200	500	400	450	600	1000	1300	2000	3200
Speed at 10 m per sec. (1)	min ⁻¹	1150	1150	950	950	950	900	750	700	600	550
Engagement time	ms	450	450	600	600	600	750	900	1100	1300	1700
Disengagement time	ms	200	200	250	250	250	300	380	400	540	750
Coil power consumption at 25°C	W	41	38	57	59	77	79	88	130	130	170
Mass moment of inertia side A	10 ⁻³ kgm ²	18,7	18,1	40,0	41,8	40,9	62,8	104,4	159,0	337,8	653,5
Mass (weight)	kg	5,8	5,7	10,4	9,9	9,0	12,2	16,3	19,7	37	64
A	mm	58.5	58.5	67	68.5	67.5	73.5	77	80	104	114
D1 Ø	mm	166	166	195	195	195	210	240	258	295	336
D2 Ø	mm	166	166	195	195	195	210	240	258	295	336
BØ	mm	80	81	80	90	111	100	110	123	122	142
dH7 Ø	mm	72	72	72	82	102	92	102	112	112	130
H	mm	33	30	34	36.5	35	38	40	38	51	53
G	mm	2.5	2.5	3	3	3	3	3	3	3	3
F	mm	7	7	7	7	7	8.5	8.5	8.5	8.5	8.5
M X N	mm	12 X 10	12 x 10	12 x 10	12 x 10	16 x 10	14 x 10	16 x 10	18 x 10	18 x 10	18 x 10
J	mm	15	15	18	18	15	20	20	25	25	25
I X L	mm	m10 X 5	m10 X 5	m10 X 5	m10 X 5	m8 X 5	m10 X 5	m12 X 5	m12 X 5	m16 X 5	m16 X 5
P	mm	92	95	105	110	122	120	140	150	160	190
Air gap	mm	2.5	3.0	4.0	3.5	4.5	4.0	5.0	4.0	4.5	5.5

* Optional : Bore available with one keyway to DIN 6885

Dimension Data

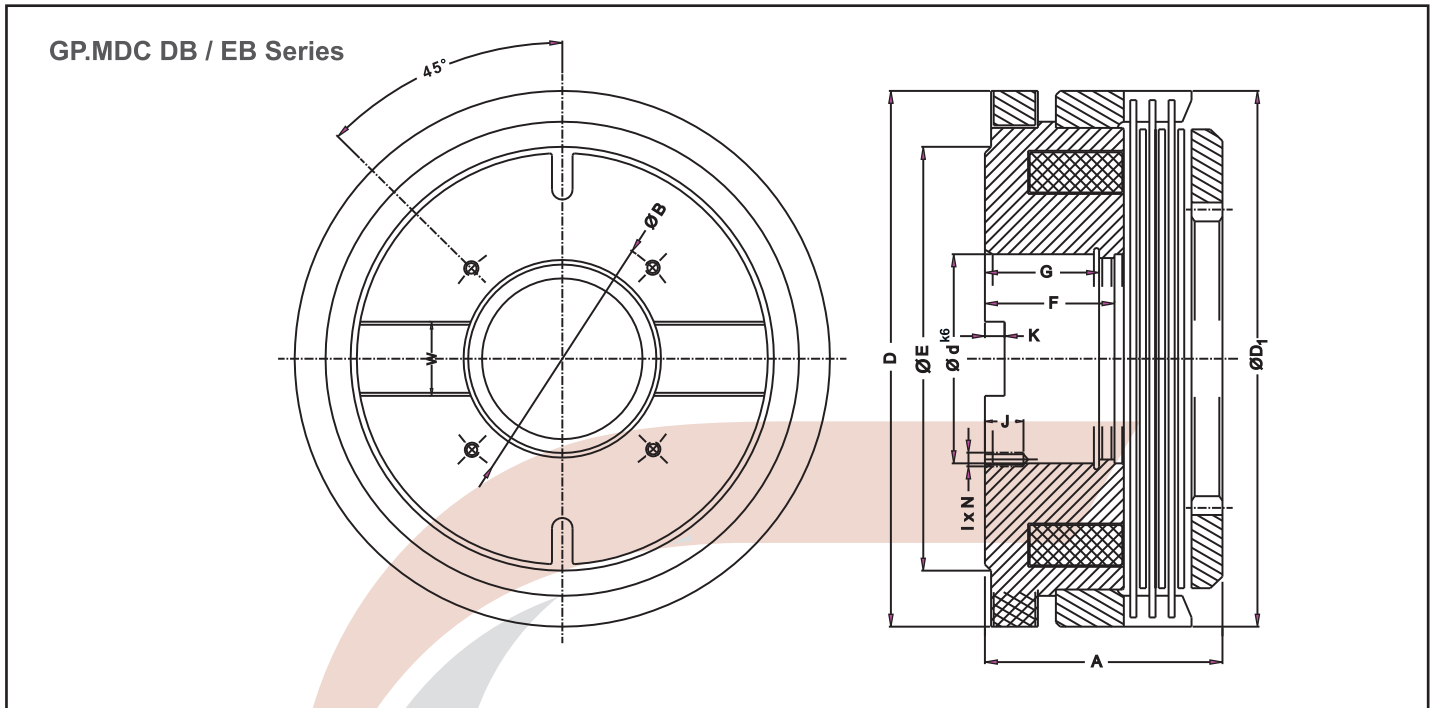
Multi-Disc Electromagnetic Clutches GP.MDC-DC Series



Model		GP 1C	GP 2DC	GP 5DC	GP 10DC	GP 20DC	GP 40DC	GP 60DC
		EK 1C	EK 2DC	EK 5DC	EK 10DC	EK 20DC	EK 40DC	EK 60DC
Comparable to ZF Type:								
Static torque	Nm	20	50	100	200	400	800	1100
Dynamic torque	Nm	10	20	55	100	200	400	600
Speed at 10 m1 sec.	min ⁻¹	2300	2200	1750	1400	1150	950	900
Engagement time	ms	170	220	280	360	450	600	750
Disengagement time	ms	50	70	100	110	200	250	300
Coil power consumption at 25°C	W	18	18	28	36	51	63	90
Mass moment of inertia side A	kg cm ²	6	12	32	74	210	470	655
Mass (weight)	kg	0.98	1.45	2.60	4.50	8.00	13.5	18.2
A	mm	38	46	55	61.5	71	85	90
D Ø	mm	82	95	114	134	166	195	210
dH7 Ø	mm	16	26	36	42	52	62	68
d1Ø	mm	34	45	51	61	75	90	96
S	mm	16	23.5	26	29	33	36	35
V	mm	6	8	10	12	16	18	20
W	mm	1.7	1.7	2.1	2.1	2.6	3.1	4.1
B	mm	33	41	49	56	64	76	80
t	mm	5	5	6	6	8	10	12
F	mm	6	6	6	7	7	7	8.5
Clearance	mm	1	1.2	1.8	2.0	2.5	3.5	4.0
E	mm	23	31	34	37	42	48	50

Dimension Data

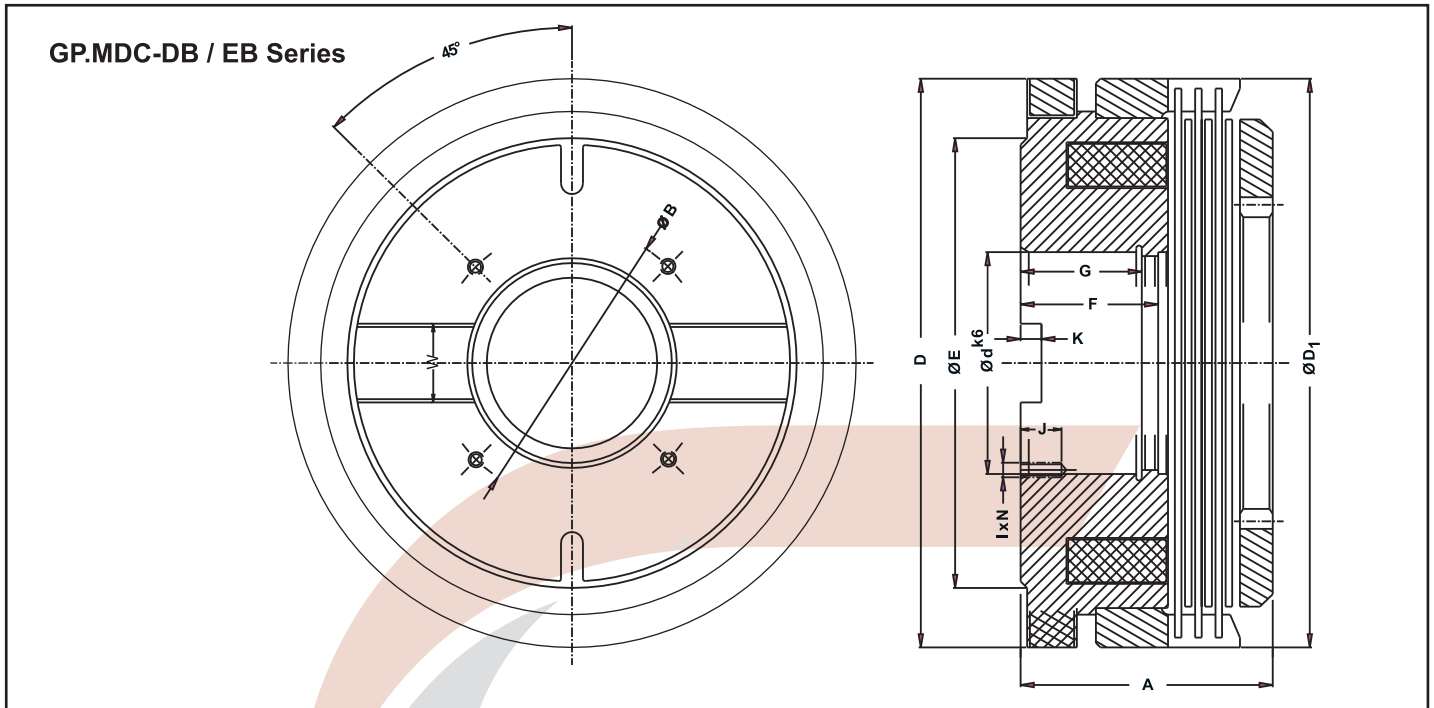
Multi-Disc Electromagnetic Clutches GP.MDC DB / EB Series



Model		GP 1B	GP 2DB	GP 5DB	GP 10EB	GP 20DB	GP 20EB	GP 40DB	GP 40EB
Comparable to ZF Type:		EK 1B	EK 2DB	EK 5DB	EK 10EB	EK 20DB	EK 20EB	EK 40DB	EK 40EB
Static torque	Nm	20	50	100	200	400	360	800	800
Dynamic torque	Nm	10	20	55	100	200	200	400	450
Speed at 10 m1 sec.	min ⁻¹	2300	2200	1650	1350	1150	1150	950	950
Engagement time	ms	170	220	280	300	450	450	600	600
Disengagement time	ms	50	70	100	110	200	200	250	250
Coil power consumption at 25°C	W	18	17	28	34	51	46	83	68
Mass moment of inertia side A	10 ⁻³ kgm ²	7	11	32	81	174	196	355	390
Mass (weight)	kg	0.70	1.20	1.98	3.7	6.3	6.2	9.7	9.3
A	mm	31	38	49.5	55	58.5	64.5	69	68
D Ø	mm	82	95	114	140	166	166	195	195
D1 Ø	mm	80	93	114	140	166	166	195	195
EØ	mm	67	78	95	120	142	142	170	170
dØ K6	mm	35	42	55	68	75	90	90	110
BØ	mm	50	56	75	90	100	110	110	125
F	mm	19	22	27	29	30	33	34	34
G	mm	17	20	22	22	25	28	28	28
J	mm	5	5	7	8	10	9	12	14
K	mm	2.5	2.5	5	5	6	6	6	6
I X N	mm	m5 x 4	m6 x 4	m8 x 4	m8 x 4	m10 x 4	m10 x 4	m10 x 4	m10 x 4
W H7	mm	12	12	14	16	20	20	20	20
Air Gap	mm	1.0	1.2	1.8	2.0	2.5	3.0	3.5	4.5
H	mm	7.5	7.5	11	11	13	13	13	13

Dimension Data

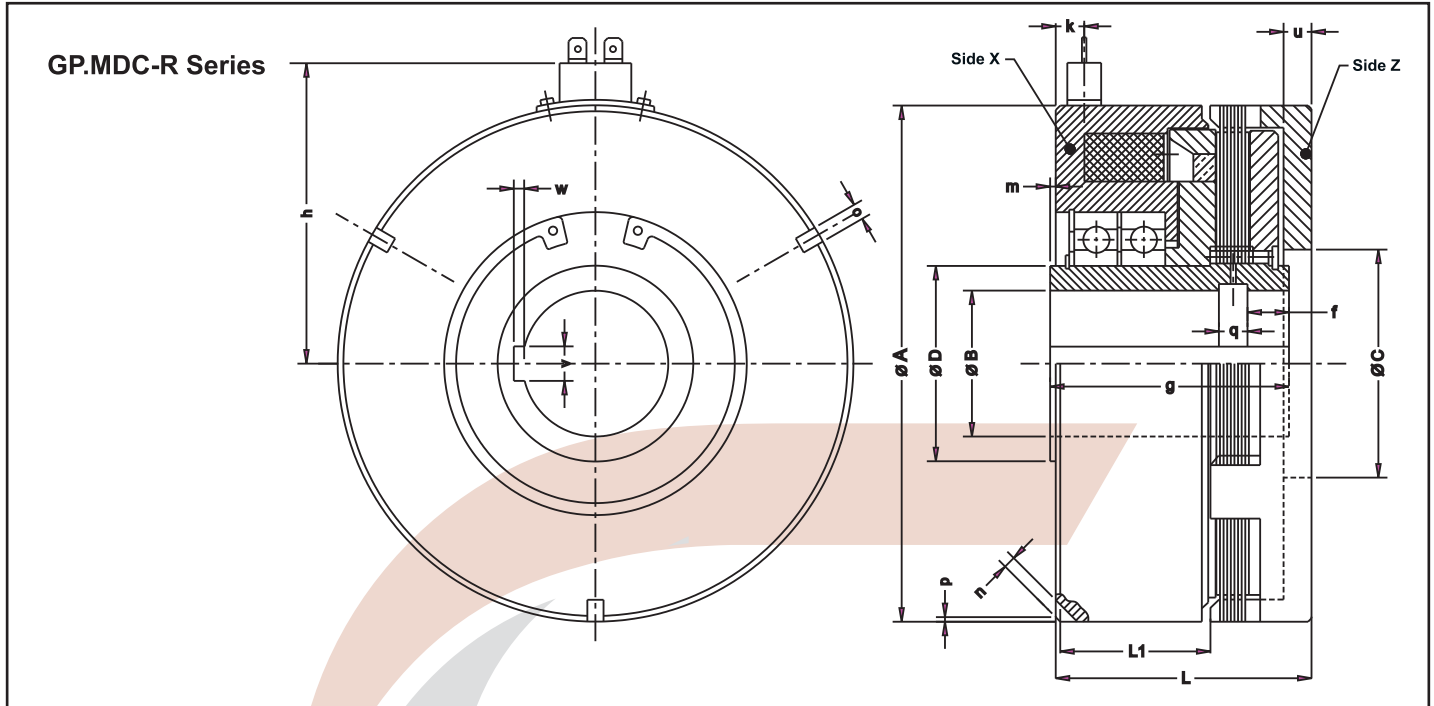
Multi-Disc Electromagnetic Clutches GP.MDC-DB / EB Series



Model		GP 60 DB	GP 80 B	GP 120 EB	GP 160 B	GP 320 B	
Comparable to ZF Type:		EK 60 DB	EK 80 B	EK 120 EB	EK 160 B	EK 320 B	
Static torque	Nm	1100	1800	2400	3600	5800	
Dynamic torque	Nm	600	1000	1300	2000	3200	
Speed at 10 m1 sec.	min ⁻¹	900	750	700	600	550	
Engagement time	ms	750	900	1100	1300	1700	
Disengagement time	W	300	380	400	540	750	
Coil power consumption at 25°C	ms	91	89	140	155	170	
Mass moment of inertia side A	10 ⁻³ kgm ²	585	900	1360	3000	5800	
Mass (weight)	kg	12.9	17.1	21.1	38.4	66.2	
D I M E N S I O N S	A	mm	77.5	80	86	108	118
	D Ø	mm	210	240	258	295	336
	D1 Ø	mm	210	240	258	295	336
	EØ	mm	184	216	234	200	304
	dØ K6	mm	100	110	140	125	140
	BØ	mm	130	145	170	200	275
	F	mm	39	40	41	52	53
	G	mm	31	32	33	42	43
	J	mm	16	18	13	20	20
	K	mm	6	6	8	8	8
	I X N	mm	m12x4	m12x4	m12x4	m16x4	m16x4
	W H7	mm	20	25	25	25	25
	Air Gap	mm	4.0	5.0	4.0	4.5	5.5
H	mm	14.5	14.5	14.5	16.5	16.5	

Dimension Data

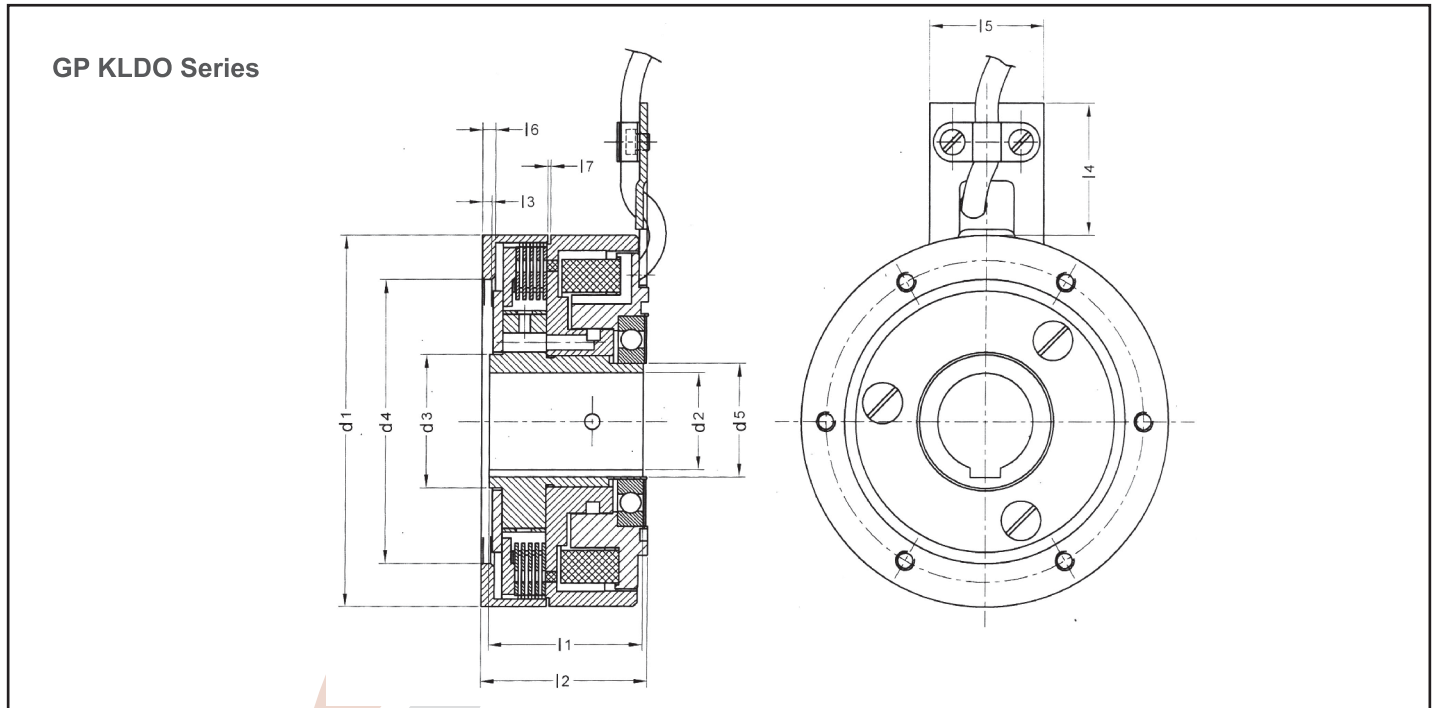
Multi-Disc Electromagnetic Clutches GP.MDC-R Series



Model		GP													
		0.5R	1R	2R	5R	10R	20R	30RA	40RA	60RA	80RA	120A	160R	250R	
Dimensions Data															
Static torque	Nm	10	20	40	100	200	400	600	800	1100	1800	2400	3000	4500	
Dynamic torque	Nm	5	10	20	50	100	200	300	400	600	1000	1300	1600	2500	
Speed (max.)	min ⁻¹	4500	4500	4000	3800	3800	3500	3500	3500	3000	3000	2500	2000	2000	
Engagement time	ms	120	170	220	280	360	450	530	600	750	900	1100	1300	1700	
Disengagement time	ms	40	50	70	100	110	200	220	250	300	380	400	540	750	
Coil power consumption at 20°C	W	17	25	31	37	56	82	110	82	110	130	160	230	270	
Mass moment of inertia side X	10 ³ kgm ²	0.15	0.33	0.73	1.75	4.5	12.3	11.0	19.0	34.5	71.0	98.0	188	280	
Mass moment of inertia side Z	10 ³ kgm ²	0.13	0.25	0.51	1.6	3.0	7.4	8.2	14.5	27.5	50.0	66.0	148	235	
Mass (weight)	kg	1.1	1.5	2.0	3.4	5.4	9.7	9.2	14.8	19.0	27.1	29.7	48.7	60.6	
D I M E N S I O N S	L	mm	38.5	51	56	63	73	82.5	91	94.5	103	110.5	112	131	149
	L1	mm	26	34.5	35.5	37.5	44	49	52.5	52.5	57.5	61	61	65.5	74
	ØA	mm	70	82	95	114	134	166	166	195	210	240	258	295	310
	ØB (H7)	mm	14	18	30	34	42	52	55	65	70	80	100	98	98
	ØC (H7)	mm	24	30	45	50	60	70	60	70	75	90	120	140	140
	ØD	mm	20	25	40	45	55	65	70	80	90	90	100	110.5	123
	f	mm	-	-	7	10	12	13	12	10.5	11.5	13.5	12.5	14	18.5
	q	mm	-	-	8	9	10	12	19	18	18	19.5	21	30	33
	g	mm	34.5	46.5	52	58.5	68	76	84	83.5	91	98	99.5	117	131.5
	h	mm	-	57	63.5	73	83	99	99	114	121	136	145	164	171
	k	mm	-	9	7	7	7	9	10	10	10	10	10	10	10
	m	mm	0.5	1	1.5	1.5	1.5	1.5	0.5	1	2	2	2	3	3
	n	mm	3.5	4	4	4	5	6	6	8	8	10	10	12	12
	o +0.2	mm	6	6	6	8	8	8	8	12	12	12	12	14	14
	p	mm	1.5	2	2	2	2	2	3	3	3	3	3	3	3
	v	mm	5	5	8	10	12	16	16	18	20	22	28	28	28
	w	mm	1.3	1.3	1.7	2.1	2.1	2.6	2.6	3.1	4.1	4.1	5.1	5.1	5.1
	Clearance	mm	1.0	1.0	1.0	1.7	1.7	2.0	3.5	3.5	3.5	4.0	3.0	3.5	4.5

Dimension Data

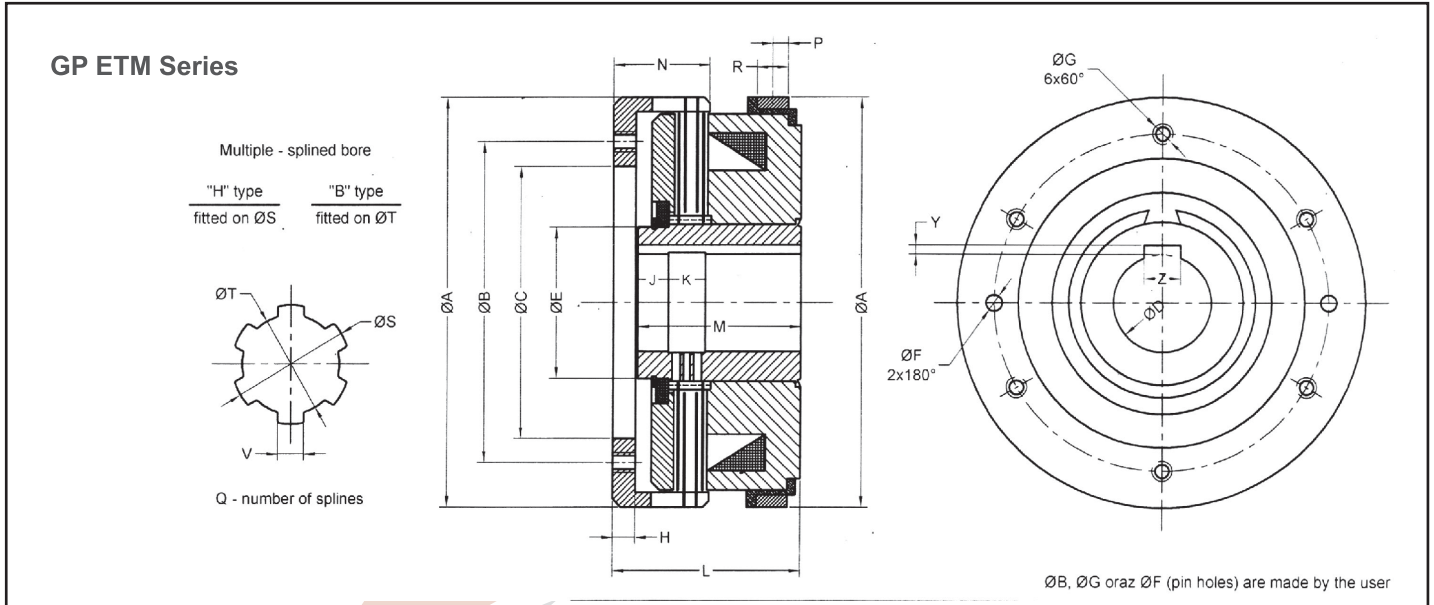
Multi-Disc Electromagnetic Clutches GP.KLDO Series



Size	0.63	1.25	2.5	5	10	20	40	80	160
Power 24 VDC [W]	21	24	35	45	60	77	90	107	147
Current [A]	0.85	1.0	1.4	1.9	2.5	3.2	3.7	4.4	6.1
Weight [kg]	0.8	1.3	1.8	2.6	4.2	7.2	13	22.2	37.8
d1	75	88	97	112	133	158	198	230	270
d2 [H7]	12	15	20	25	30	40	50	60	80
15	20	25	30	40	50	60	70	90	90
d3	22	28	35	40	50	60	76	84	105
d4 [H7]	55	65	74	84	102	124	152	180	210
d5	20	25	30	40	50	65	75	90	110
l1 [-0.2]	33.4	37.6	42.1	44.8	52	61.6	72.6	87.6	108
l2	37	41.5	45	50	58	70	82	100	123
l3	2.7	3	3	3.5	3.5	5	5	7	9
l4 [+1.5]	36	34.5	35	35	39.5	37	40	40	37
l5 [+0.2]	30	30	30	30	30	30	35	35	40
l6	3.7	4	4	5	5	7	7	9	10
l7	0.6	0.7	0.7	0.6	1.0	0.7	1.0	1.8	1.8

Dimension Data

Multi-Disc Electromagnetic Clutches GP.ETM Series



Size	Torque		Coil power [W]	Coil resistance [Ω]	Max. speed [mn-1]	Weight [kg]	Dimensions [mm]													
	stat. [Nm]	dyn. [Nm]					A	B	C [H7]	E	F	G	H	J	K	L	M	N	P	R
052	20	10	13	43	4000	0.9	80	60	40	30	4	M4	4	5	7	37.5	32	18	7	10
062	25	16	15	39	3500	1.2	90	70	45	30	5	M5	5	6	7	41	35	19.5	7	10
072	40	25	16	35	3000	1.7	100	80	55	34	5	M5	5	7	8	46	38	23.5	7	10
082	63	40	23	25	3000	2.2	110	90	65	42	6	M6	5	8	8	48	41	24	7	10
092	100	63	26	22	3000	2.8	120	95	70	48	6	M6	6	8	12	52.5	45	27.5	7	10
102	160	100	31	18.3	2800	4.1	135	110	75	52	8	M8	6	9	13	60	52	30.5	7	10
112	250	160	39	14.7	2500	5.8	150	130	95	64	8	M8	7	11	13	69	60	33.5	7	10
122	400	250	59	9.8	2300	8.4	170	145	105	72	10	M10	8	11	17	79	68	39	8	12
132	1000	630	75	7.6	2100	13.5	190	160	125	90	10	M10	9	13	19	90	78	46	11	18
142	1600	1000	86	6.7	1800	18	215	185	135	100	12	M12	10	15	23	102.5	90	51	11	18

Size	Bore with single key way									Multiple – splined bore											
										Type of bore											
	1A			2A			3A			1B lub 1H				2B lub 2H				3B lub 3H			
	D	Z	Y	D	Z	Y	D	Z	Y	S	T	V	Q	S	T	V	Q	S	T	V	Q
052	22	5	1.9	20	6	2.3	18	5	1.9	25	21	5	6	22	18	5	6	20	16	4	6
062	22	5	1.9	20	6	2.3	18	5	1.9	25	21	5	6	22	18	5	6	20	16	4	6
072	25	6	2.3	22	6	2.3	20	6	2.3	30	26	6	6	25	21	5	6	22	18	5	6
082	30	8	2.6	25	8	2.6	22	6	2.3	34	28	7	6	30	26	6	6	25	21	5	6
092	35	10	2.9	30	8	2.6	25	8	2.6	40	36	7	8	34	28	7	6	30	26	6	6
102	40	10	2.9	35	10	2.9	30	8	2.6	46	42	8	8	40	36	7	8	34	28	7	6
112	50	14	3.3	40	12	2.9	35	10	2.9	54	46	9	8	46	42	8	8	40	36	7	8
122	60	14	3.3	50	16	3.6	40	12	2.9	65	56	10	8	54	46	9	8	46	42	8	8
132	80	16	2.9	70	16	4.3	60	14	4.0	82	72	12	10	72	62	12	8	65	56	10	8
142	90	18	2.9	80	18	4.4	70	16	4.3	92	82	12	10	82	72	12	10	72	62	12	8