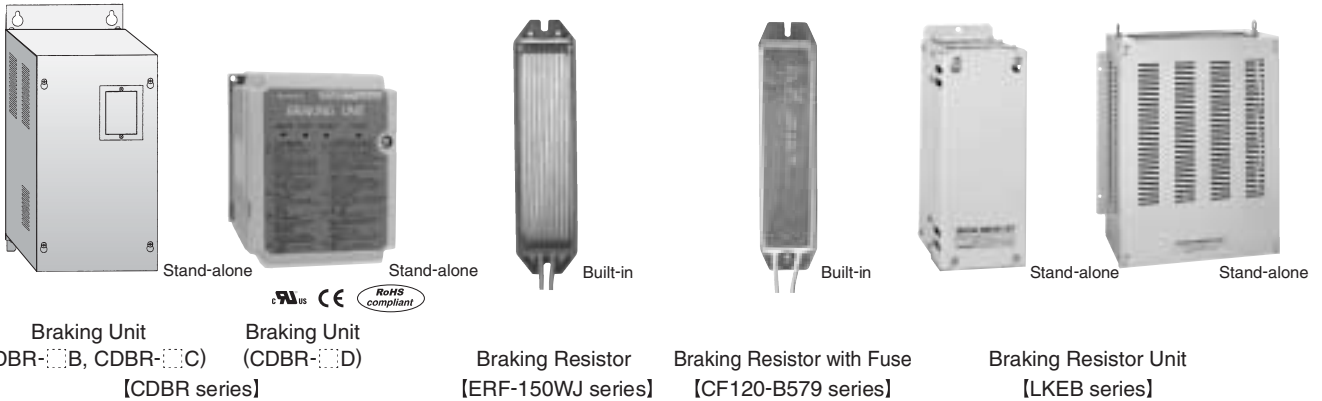


Braking Unit, Braking Resistor, Braking Resistor Unit

Braking units come standard with 200 V and 400 V class drives 0.4 to 30 kW. If the application requires a braking resistor or braking unit, choose from built-in and stand-alone types in accordance with motor capacity.



200 V Class

Footnotes are listed on page 49.

Max. Applicable Motor (kW)	ND/HD	A1000 Model CIMR-A-□2A	Braking Unit		Braking Resistor (Duty Factor: 3% ED, 10 s max.)*1								Braking Resistor Unit (Duty Factor: 10% ED, 10 s max.)*1					Min.*2 Connectable Resistance (Ω)		
			Model CDBR-□□	Qty.	No Fuse				With Fuse				Model LKEB-□□□□	Resistor Specifications (per unit)		Qty.	Diagram		Braking Torque*3 (%)	
					Model ERF-150WJ	Resistance (Ω)	Qty.	Diagram	Braking Torque*3 (%)	Model CF120-B579	Resistance (Ω)	Qty.		Diagram	Braking Torque*3 (%)					Resistance (Ω)
0.4	HD	0004			201	200	1	A	220	B	200	1	A	220	20P7	70 W 200 Ω	1	B	220	48
0.75	ND	0004			201	200	1	A	125	B	200	1	A	125	20P7	70 W 200 Ω	1	B	125	48
	HD	0006																		
1.1	ND	0006			201	200	1	A	85	B	200	1	A	85	20P7	70 W 200 Ω	1	B	85	48
	HD	0008			101	100			150	C	100			1	150	21P5			260 W 100 Ω	
1.5	ND	0008			101	100	1	A	125	C	100	1	A	125	21P5	260 W 100 Ω	1	B	125	48
	HD	0010																		
2.2	ND	0010			700	70	1	A	120	D	70	1	A	120	22P2	260 W 70 Ω	1	B	120	48
	HD	0012																		16
3	ND	0012			620	62	1	A	100	E	62	1	A	100	22P2	390 W 40 Ω	1	B	150	16
	HD	0018																		
3.7	ND	0018			620	62	1	A	80	E	62	1	A	80	23P7	390 W 40 Ω	1	B	125	16
	HD	0021																		
5.5	ND	0021			620	62	2	A	110	E	62	2	A	110	25P5	520 W 30 Ω	1	B	115	16
	HD	0030																		
7.5	ND	0030													27P5	780 W 20 Ω	1	B	125	16
	HD	0040																		9.6
11	ND	0040													2011	2400 W 13.6 Ω	1	B	125	9.6
	HD	0056																		
15	ND	0056													2015	3000 W 10 Ω	1	B	125	9.6
	HD	0069																		
18.5	ND	0069													2015	3000 W 10 Ω	1	B	100	9.6
	HD	0081																		
22	ND	0081													2015	3000 W 10 Ω	1	B	85	9.6
	HD	0110													2022	4800W 6.8 Ω			125	6.4
30	ND	0110													2022	4800 W 6.8 Ω	1	B	90	6.4
	HD	0138																		
37	ND	0138													2022	4800 W 6.8 Ω	1	B	70	6.4
	HD	0169	2037D	1											2015	3000 W 10 Ω	2	E	100	5.0
45	ND	0169	2037D	1											2015	3000 W 10 Ω	2	E	80	5.0
	HD	0211	2022D	2											2022	4800 W 6.8 Ω	2	D	120	6.4
55	ND	0211													2022	4800 W 6.8 Ω	2	D	100	6.4
	HD	0250	2022D	2																
75	ND	0250													2022	4800 W 6.8 Ω	3	E	110	1.6
	HD	0312	2110B	1																
90	ND	0312													2022	4800 W 6.8 Ω	4	E	120	1.6
	HD	0360	2110B	1																
110	ND	0360																		
	HD	0415	2110B	1											2018	4800 W 8 Ω	5	E	100	1.6

- Note: 1. Braking resistor (ERF-150WJ and CF120-B579) requires a separate attachment for installation. See attachment for braking resistor unit on page 51.
 2. Use the retrofit attachment when replacing an older model CDBR braking unit (CDBR-□B, CDBR-□C). Refer to TOBP C720600 01 1000-Series Option CDBR, LKEB Installation Manual for more details.
 3. Use the External Heatsink Attachment for installation with the heatsink outside the enclosure. Refer to page 52 for details.
 4. If the built-in fuse on a braking resistor blows, then the entire braking resistor should be replaced.
 5. See the connection diagram on page 50.

400 V Class

Max. Applicable Motor (kW)	ND/HD	A1000 Model CIMR-A-4A	Braking Unit		Braking Resistor (Duty Factor: 3% ED, 10 s max.)*1									Braking Resistor Unit (Duty Factor: 10% ED, 10 s max.)*1					Min.*2 Connectable Resistance (Ω)	
			Model CDBR-	Qty.	No Fuse				With Fuse					Model LKEB-	Resistor Specifications (per unit)		Qty.	Diagram		Braking Torque*3 (%)
					Model ERF-150WJ	Resistance (Ω)	Qty.	Diagram	Braking Torque*3 (%)	Model CF120-B579	Resistance (Ω)	Qty.	Diagram		Braking Torque*3 (%)	Resistance (Ω)				
0.4	HD	0002			751	750	1	A	230	F	750	1	A	230	40P7	70 W 750 Ω	1	B	230	96
0.75	ND	0002			751	750	1	A	130	F	750	1	A	130	40P7	70 W 750 Ω	1	B	130	96
	HD	0004																		
1.5	ND	0004			401	400	1	A	125	G	400	1	A	125	41P5	260 W 400 Ω	1	B	125	96
	HD	0005																		64
2.2	ND	0005			301	300	1	A	115	H	300	1	A	115	42P2	260 W 250 Ω	1	B	135	64
	HD	0007																		
3	ND	0007			201	200	1	A	125	J	250	1	A	100	42P2	260 W 250 Ω	1	B	100	64
	HD	0009												43P7	390 W 150 Ω	150			32	
3.7	ND	0009			201	200	1	A	105	J	250	1	A	83	43P7	390W 150 Ω	1	B	135	32
	HD	0011																		
5.5	ND	0011			201	200	2	A	135	J	250	2	A	105	45P5	520 W 100 Ω	1	B	135	32
	HD	0018																		
7.5	ND	0018												47P5	780 W 75 Ω	1	B	130	32	
	HD	0023																		
11	ND	0023												4011	1040 W 50 Ω	1	B	135	32	
	HD	0031																		20
15	ND	0031												4015	1560 W 40 Ω	1	B	125	20	
	HD	0038																		
18.5	ND	0038												4018	4800 W 32 Ω	1	B	125	20	
	HD	0044																		19.2
22	ND	0044												4022	4800 W 27.2 Ω	1	B	125	19.2	
	HD	0058																		
30	ND	0058												4030	6000 W 20 Ω	1	B	125	19.2	
	HD	0072																		
37	ND	0072												4030	6000 W 20 Ω	1	B	100	19.2	
	HD	0088	4045D	1										4037	9600 W 16 Ω			C	125	12.8
45	ND	0088												4045	9600 W 13.6 Ω	1	C	125	12.8	
	HD	0103	4045D	1																
55	ND	0103	4045D	1										4045	9600 W 13.6 Ω	1	C	100	12.8	
	HD	0139	4030D	2										4030	6000 W 20 Ω	2	D	135	19.2	
75	ND	0139	4030D	2										4030	6000 W 20 Ω	2	D	100	19.2	
	HD	0165	4045D		4045	9600W 13.6 Ω	145	12.8												
90	ND	0165	4045D	2										4045	9600W 13.6 Ω	2	D	100	12.8	
	HD	0208																		
110	ND	0208												4030	6000 W 20 Ω	3	E	100	3.2	
	HD	0250	4220B	1																
132	ND	0250	4220B	1										4045	9600W 13.6 Ω	4	E	140	3.2	
	HD	0296																		
160	ND	0296	4220B	1										4045	9600W 13.6 Ω	4	E	140	3.2	
	HD	0362																		
185	ND	0362	4220B	1										4045	9600W 13.6 Ω	4	E	120	3.2	
	HD	0414																		
220	ND	0414	4220B	1										4037	9600 W 16 Ω	5	E	110	3.2	
	HD	0515																		
250	ND	0515	4220B	1										4037	9600 W 16 Ω	5	E	90	3.2	
315	HD	0675	4220B	2										4045	9600 W 13.6 Ω	6	E	100	3.2	
355	ND	0675	4220B	2										4045	9600 W 13.6 Ω	8	E	120	3.2	
450	HD	0930	4220B	2										4037	9600 W 16 Ω	10	E	100	3.2	
500	ND	0930	4220B	2										4037	9600 W 16 Ω	10	E	90	3.2	
560	HD	1200	4220B	3										4037	9600 W 16 Ω	15	E	120	3.2	
630	ND	1200	4220B	3										4037	9600 W 16 Ω	15	E	100	3.2	

*1 : Refers to a motor coasting to stop with a constant torque load. Constant output and regenerative braking will reduce the duty factor.
 *2 : Assumes the use of a single braking unit. The braking unit should have a resistance higher than the minimum connectable resistance value and be able to generate enough braking torque to stop the motor.
 *3 : Applications with a relatively large amount of regenerative power (elevators, hoists, etc.) may require more braking power than is possible with only the standard braking unit and braking resistor. If the braking torque exceeds the value shown in the table, the capacity of the braking resistor must be increased.
 Note: 1. Braking resistor (ERF-150WJ and CF120-B579) requires a separate attachment for installation. See attachment for braking resistor unit on page 51.
 2. Use the retrofit attachment when replacing an older model CDBR braking unit (CDBR-□B, CDBR-□C). Refer to TOBP C720600 01 1000-Series Option CDBR, LKEB Installation Manual for more details.
 3. Use the External Heatsink Attachment for installation with the heatsink outside the enclosure. Refer to page 52 for details.
 4. If the built-in fuse on a braking resistor blows, then the entire braking resistor should be replaced.
 5. See the connection diagram on page 50.