speed is higher than the corresponding speed of the reference frequency. As a result, the inertial energy of the motor and load return to the inverter to charge the capacitors in the main DC circuit. When the voltage increases to the limit, damage may occur to the inverter. It is necessary to apply brake unit/resistor to avoid this accident happens.

	✧ Only qualified electricians are allowed to design, install, commission and operate on the inverter. ✧ Follow the instructions in "warning" during working. Physical injury or death or serious property may occur. ✧ Only qualified electricians are allowed to wire. Damage to the inverter or braking options and part may occur. Read carefully the instructions of brake resistors or units before connecting them to the inverter. ✧ Do not connect the brake resistor to other terminals except for PB and (-). Do not connect the brake unit to other terminals except for (+) and (-).Damage to the inverter or braking circuit or fire may occur.
	✧ Connect the brake resistor or brake unit to the inverter according to the diagram. Incorrect wiring may cause damage to the inverter or other devices.

Goodrive20-EU series inverters have internal brake units.

Model	Type of brake unit	Brake resistor at 100% of braking torque (Ω)	Consumed power of the brake resistor			Min. brake resistor (Ω)
			10% braking	50% braking	80% braking	
GD20-0R4G-S2-EU	Internal brake unit	361	0.06	0.30	0.48	42
GD20-0R7G-S2-EU		192	0.11	0.56	0.90	42
GD20-1R5G-S2-EU		96	0.23	1.10	1.80	30
GD20-2R2G-S2-EU		65	0.33	1.70	2.64	21
GD20-0R4G-2-EU		361	0.06	0.3	0.48	131
GD20-0R7G-2-EU		192	0.11	0.56	0.9	93
GD20-1R5G-2-EU		96	0.23	1.1	1.8	44
GD20-2R2G-2-EU		65	0.33	1.7	2.64	44
GD20-004G-2-EU		36	0.6	3	4.8	33
GD20-5R5G-2-EU		26	0.75	4.13	6.6	25
GD20-7R5G-2-EU		19	1.13	5.63	9	13
GD20-0R7G-4-EU		653	0.11	0.56	0.90	240
GD20-1R5G-4-EU		326	0.23	1.13	1.80	170
GD20-2R2G-4-EU		222	0.33	1.65	2.64	130
GD20-004G-4-EU		122	0.6	3	4.8	80
GD20-5R5G-4-EU		89.1	0.75	4.13	6.6	60

Model	Type of brake unit	Brake resistor at 100% of braking torque (Ω)	Consumed power of the brake resistor			Min. brake resistor (Ω)
			10% braking	50% braking	80% braking	
GD20-7R5G-4-EU		65.3	1.13	5.63	9	47
GD20-011G-4-EU		44.5	1.65	8.25	13.2	31
GD20-015G-4-EU		32.0	2.25	11.3	18	23
GD20-018G-4-EU		27	3	14	22	19
GD20-022G-4-EU		22	3	17	26	17
GD20-030G-4-EU		17	5	23	36	17
GD20-037G-4-EU		13	6	28	44	11.7
GD20-045G-4-B-EU		10	7	34	54	8
GD20-055G-4-B-EU		8	8	41	66	8
GD20-075G-4-B-EU		6.5	11	56	90	6.4
GD20-090G-4-B-EU		5.4	14	68	108	4.4
GD20-110G-4-B-EU		4.5	17	83	132	4.4

Note:

Select the resistor and power of the brake unit according to the data our company provided.

The brake resistor may increase the braking torque of the inverter. The resistor power in the above table is designed on 100% braking torque and 10% braking usage ratio. If the users need more braking torque, the brake resistor can decrease properly and the power needs to be magnified.

	✧ Never use a brake resistor with a resistance below the minimum value specified for the particular drive. The drive and the internal chopper are not able to handle the overcurrent caused by the low resistance.
	✧ Increase the power of the brake resistor properly in the frequent braking situation (the frequency usage ratio is more than 10%).

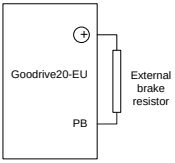
C.7.2 Placing the brake resistor

Use shielded cables for brake resistor cables.

Install all resistors in a place where they will cool.

	✧ The materials near the brake resistor must be non-flammable. The surface temperature of the resistor is high. Air flowing from the resistor is of hundreds of degrees Celsius. Protect the resistor against contact.

Only external brake resistor is needed in Goodrive20-EU.


Goodrive20-EU
PB
External
brake
resistor