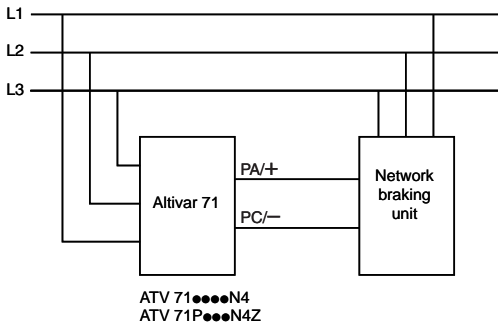


### Presentation



The network braking unit can be used to restore the following to the line supply:

- the energy from the motor
- the energy from the motors controlled by several drives connected on the same DC bus

It is available for **ATV 71●●●●N4** and **ATV 71P●●●●N4Z** drives.

### Applications

Braking on a driving load:

- vertical movements
- escalators
- etc.

### General characteristics

Degree of protection		IP 20
Maximum relative humidity		Class F humidity without condensation 5...85%
Ambient air temperature around the device	Operation	°C 5...+40 without derating Up to 55°C with current derating of 3% per °C above 40°C
	Storage	°C -25...+55
Maximum operating altitude	m	1000 without derating 1000...4000 derating the current by 5% per additional 1000 m

### Electrical characteristics

Type of module		VW3 A7 201...212	VW3 A7 231...241
Supply voltage	V	400 ~	460 ~
Nominal voltage ± 10%	V	380...415 ~	440...480 ~
Operating frequency	Hz	40...60 ± 10%	
Overload capacity	A	1.2 x maximum current (Irms)	
Efficiency		97% (3% of thermal losses)	
Power factor		1	
Fundamental frequency component		0.7...0.95	

### Connection characteristics

Maximum connection capacity	VW3 A7 201	25 mm <sup>2</sup> , connected on a bar, M5
	VW3 A7 202...205, VW3 A7 231, 232	35 mm <sup>2</sup> , connected on a bar, M6
	VW3 A7 206...209, VW3 A7 233...238	95 mm <sup>2</sup> , connected on a bar, M8
	VW3 A7 210...212, VW3 A7 239...241	150 mm <sup>2</sup> , connected on a bar, M10

# Variable speed drives for asynchronous motors

Altivar 71

Option: network braking units

## Line voltage: 400 V ~

Maximum current I <sub>rms</sub>		Continuous braking power	Maximum braking power	Fast-acting semi-conductor fuses		Reference	Weight
~	≡			~	~		
A	A	kW	kW	A	V		kg
11	13	7	7	20	660	VW3 A7 201	20.000
20	24	13	13	30	690	VW3 A7 202	25.000
32	38	11	22	50	690	VW3 A7 203	26.000
48	58	21.5	33	80	690	VW3 A7 204	30.000
65	78	26	45	100	690	VW3 A7 205	32.000
102	123	32	70	160	660	VW3 A7 206	43.000
130	157	38	90	200	660	VW3 A7 207	48.000
195	236	38	135	315	660	VW3 A7 208	52.000
231	279	86	160	350	660	VW3 A7 209	90.000
289	350	120	200	400	1000	VW3 A7 210	100.000
360	433	135	250	500	1000	VW3 A7 211	115.000
500	600	200	345	630	1000	VW3 A7 212	125.000

## Line voltage: 460 V ~

Maximum current I <sub>rms</sub>		Continuous braking power	Maximum braking power	Fast-acting semi-conductor fuses		Reference	Weight
~	≡			~	~		
A	A	kW	kW	A	V		kg
28	33	11	22	50	690	VW3 A7 231	26.000
41	50	21.5	33	80	690	VW3 A7 232	30.000
57	69	26	45	100	690	VW3 A7 233	36.000
88	107	32	70	160	660	VW3 A7 234	43.000
113	137	38	90	200	660	VW3 A7 235	48.000
138	166	38	110	250	660	VW3 A7 236	48.000
157	189	38	125	250	660	VW3 A7 237	50.000
176	212	38	140	315	660	VW3 A7 238	90.000
201	243	86	160	315	660	VW3 A7 239	100.000
289	346	120	230	500	1000	VW3 A7 240	105.000
500	600	240	375	630	1000	VW3 A7 241	125.000

# Variable speed drives for asynchronous motors

## Altivar 71

### Characteristics curves

#### Example of using characteristics curves

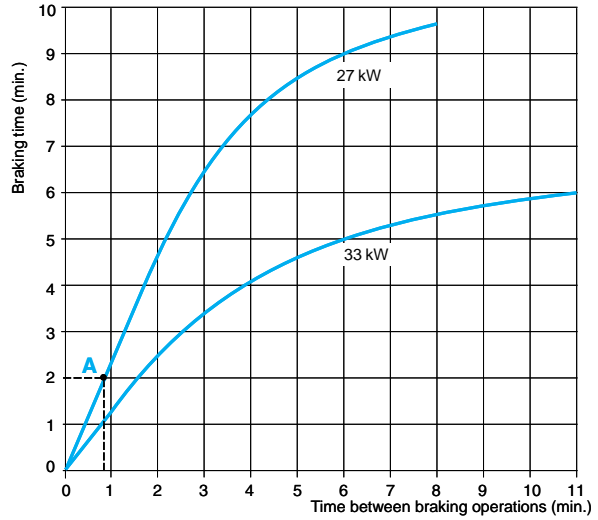
VW3 A7 204, A7 232 (Continuous braking power = 21.5 kW) (1)

**Example of how to use the curves:**

Required braking power of 27 kW.

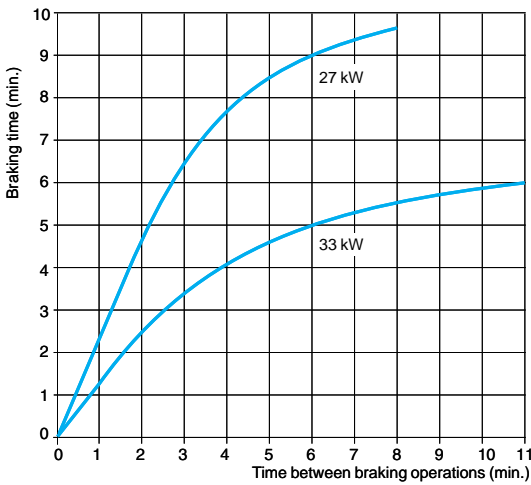
The intersection point between the braking time and the time between 2 braking operations must be on or below the relevant curve.

**Point A** For a braking time of 2 minutes, there must be at least 50 seconds between 2 braking operations.

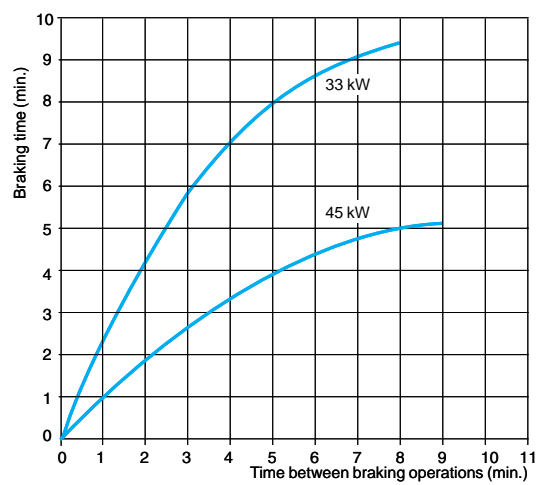


#### Network braking units

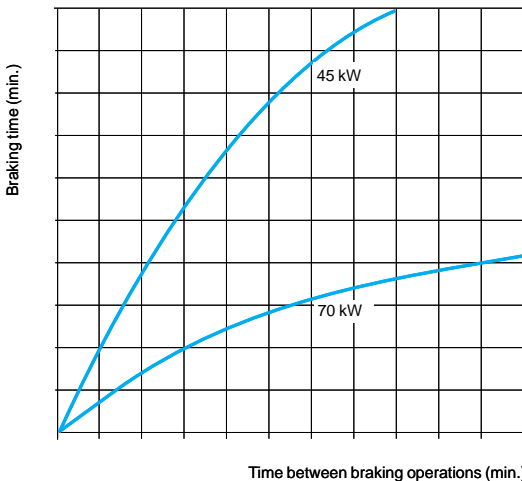
VW3 A7 204, A7 232 (Continuous braking power = 21.5 kW) (1)



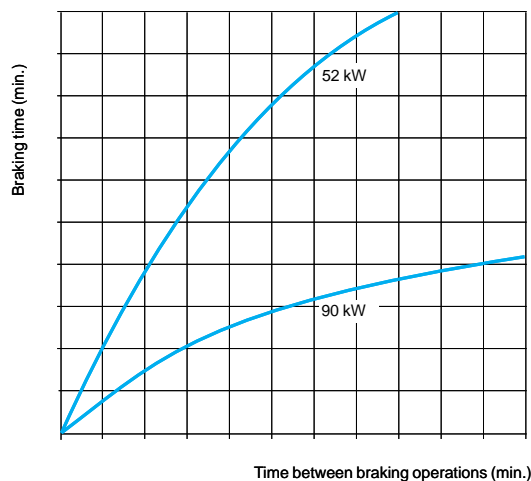
VW3 A7 205, A7 233 (Continuous braking power = 26 kW) (1)



VW3 A7 206, A7 234 (Continuous braking power = 32 kW) (1)



VW3 A7 207, A7 235 (Continuous braking power = 38 kW) (1)



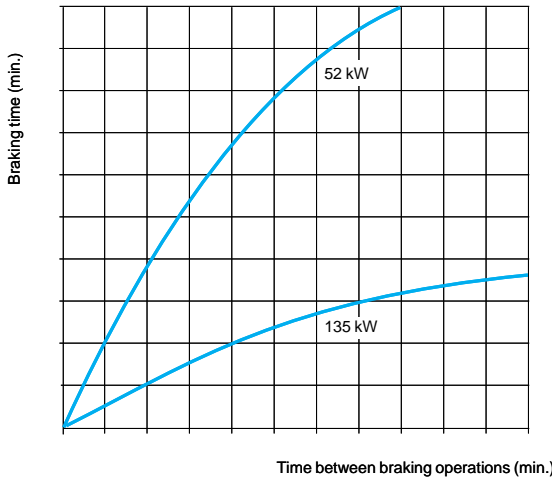
(1) Power indicated for a temperature of 35°C.

# Variable speed drives for asynchronous motors

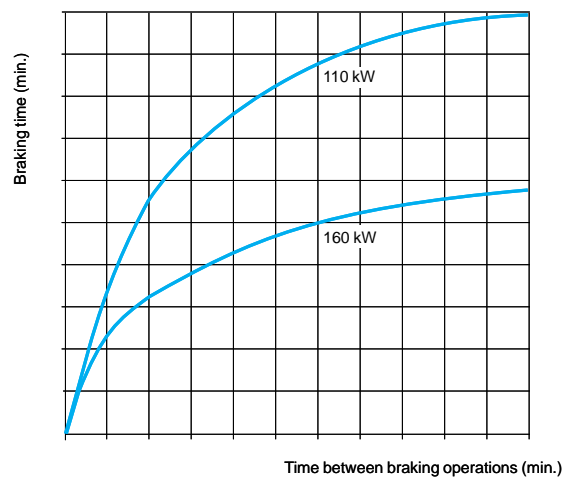
Altivar 71

Characteristics curves

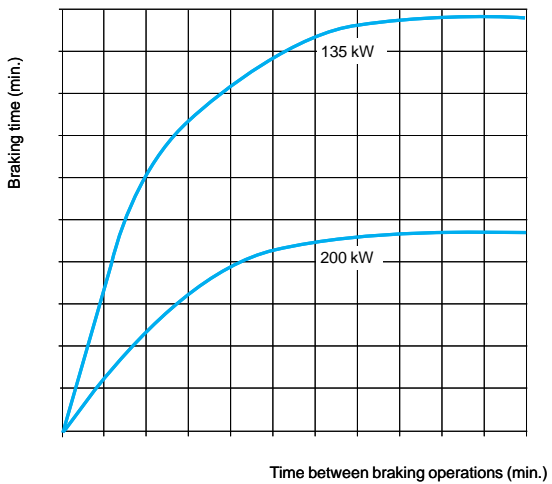
VW3 A7 208 (Continuous braking power = 38 kW) (1)



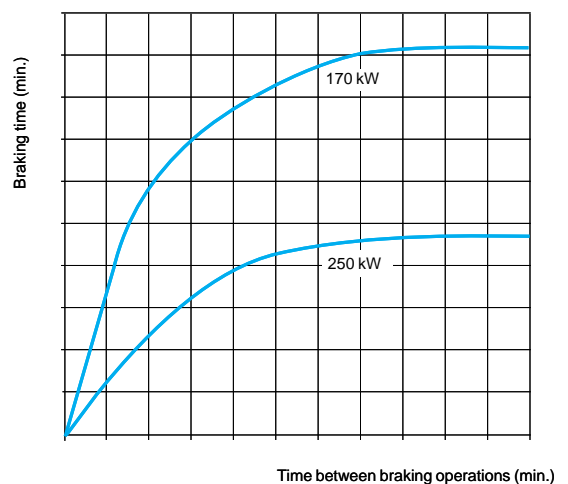
VW3 A7 209, A7 239 (Continuous braking power = 86 kW) (1)



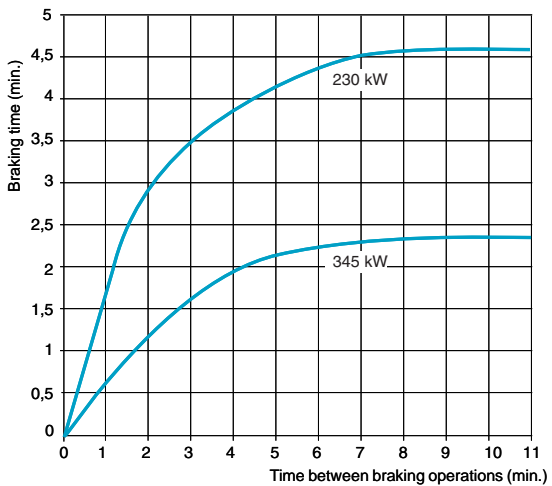
VW3 A7 210, A7 240 (Continuous braking power = 120 kW) (1)



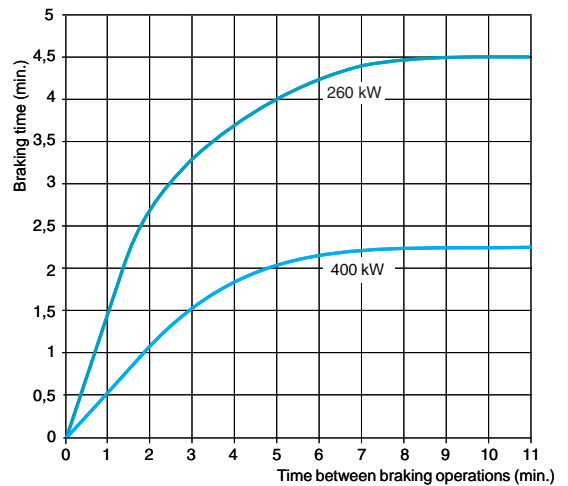
VW3 A7 211 (Continuous braking power = 135 kW) (1)



VW3 A7 212 (Continuous braking power = 200 kW) (1)



VW3 A7 241 (Continuous braking power = 240 kW) (1)



(1) Power indicated for a temperature of 35°C.