



Bonfiglioli

Vectron

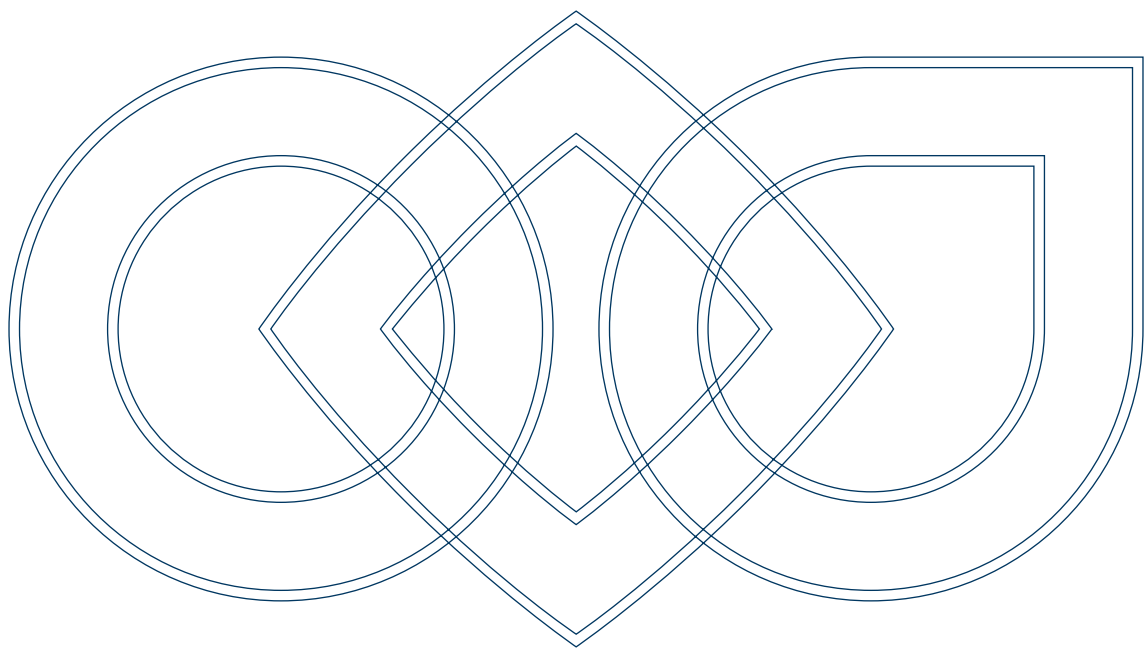
Active Cube 8

The high power solution



PRODUCT

 **Bonfiglioli**
Forever Forward



Active Cube 8

The high power solution.

Bonfiglioli Active Cube 8 Series of inverter drives sets new standards in technology for a broad range of applications. Active Cube 8 drives are particularly suited to heavy duty industries such as mining industry, metal industry, water treatment, pump station and many others.

The Active Cube 8 offers a wide range of built-in functions like PLC functions allowing energy savings, precise diagnostic and more flexible programmability.

Special Feature

- All features of standard ACU
- Complete Cabinet Design possible: "Plug and Play"
- Output Power: 200 ... 400 kW (400V, 525V and 690V)
- High overload capability (1,5 / 1,8)
- STO / SIL2 integrated
- Standard cooling and optional watercooling
- Parallel connection of up to 3 devices (1200 kW)
- Can be connected to Bonfiglioli regenerative units AEC 8

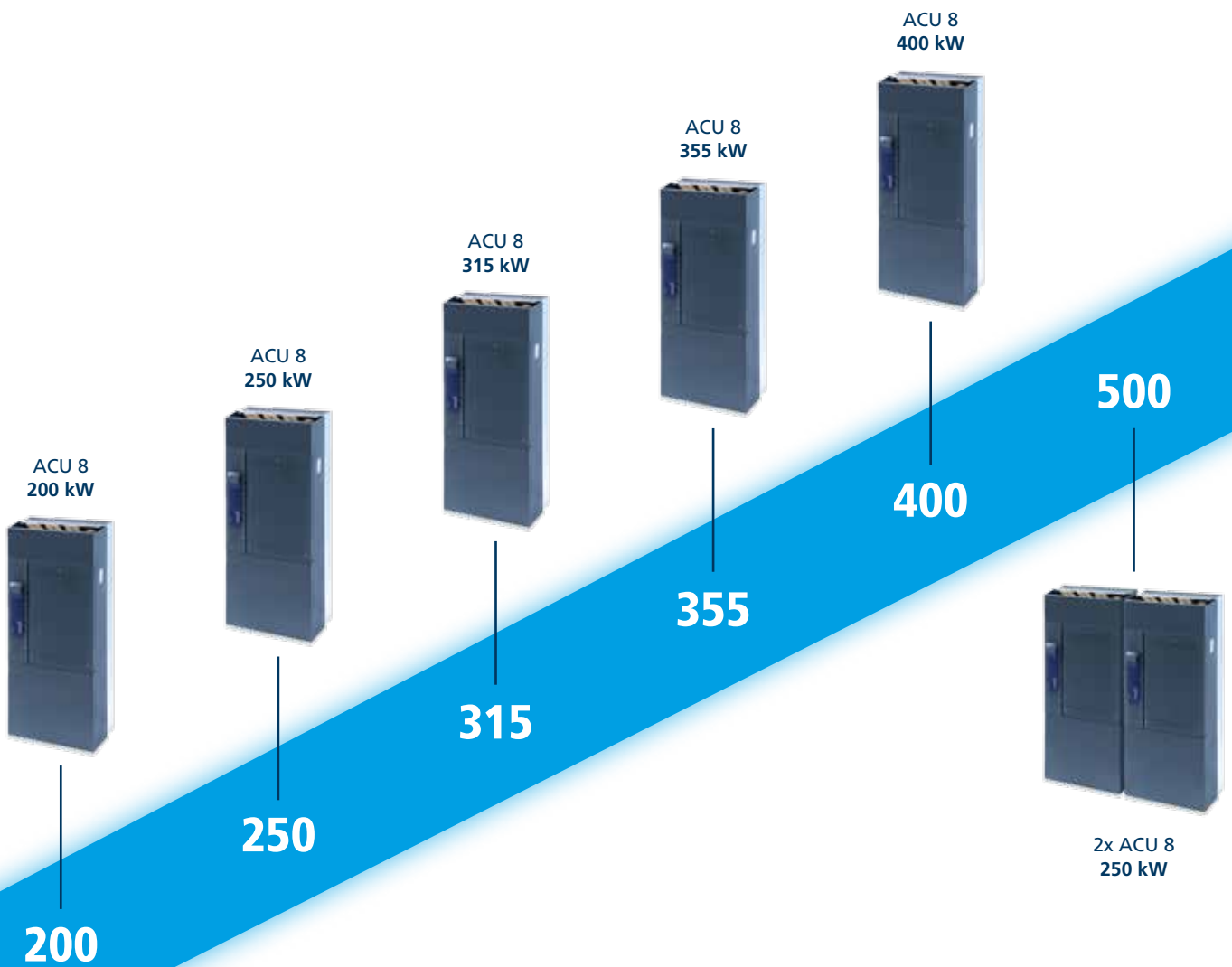


The Active Cube 8 series: a flexible offer

Adapted for a wide range of applications.

VPlus engineering and configuration software includes advanced and effective tools for diagnostics and troubleshooting: real time oscilloscope analyzer, variable monitoring window.

Active Cube 8 extends Active Cube power range up to 1200 kW.





1

Robust Design - Active Cube 8 the perfect solution for harsh environments.

The Active Cube 8 is designed to maximize the opportunities in machine automation. Extensive motor controls and functionality allow this solution to be used in a wide variety of industrial machinery and plants.

Key Features

- High creeping distances
- Coated boards
- Monitoring of cabling
- Monitoring of brake resistor
- Variable fan speed



Pump station

Pumps are typically speedy applications that demand drives with a high power range. Pumps are used in a wide variety of industrial contexts such as a humid atmosphere.



Mining industry

Drives for the mining industry need to guarantee lasting efficiency in the movement and processing of heavy and bulky loads, along with maximum reliability.



Metal industry

The mining industry has special demands for drives. The drives need to be small, compact and energy-efficient with a high degree of performance efficiency.



2

Compact size - Active Cube 8 requires minimum space.

High power density 1200 kW in 1200mm cabinet, best power density in market. The power range of the new drives is 200 - 400 kW for single inverters. With easy and cost effective parallel connection of up to 3 drives applications in power range of up to 1200kW can be realized on minimal panel space. The minimum panel width for a 1200 kW drive is only 1200 mm!

Key Features

- Minimized Space
- Tropicalization
- Master-Slave Connection
- 6 Phase Inputs



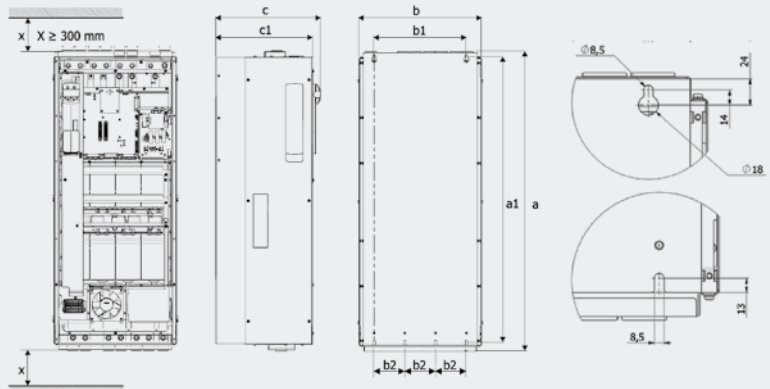
Standard mounting

Two ACU8 in one cabinet
2x 439 mm = 878 mm
Standard cabinet width: 1200 mm



Compact mounting

Three ACU8 in one cabinet
3x 375 mm = 1125 mm
Standard cabinet width: 1200 mm



ACU 401/501/601

Assembly dimensions in mm

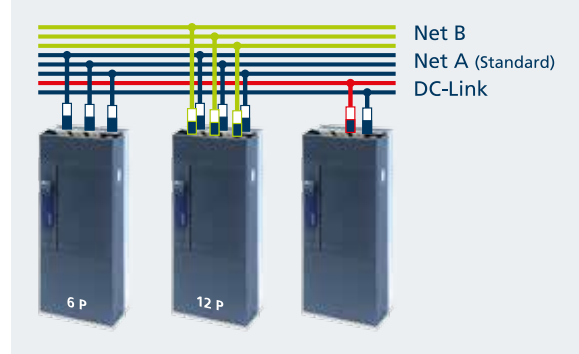
A	A1	B	B1	B2	C	C1
1063	997	439	330	110	375	345

3

Flexible supply - Active Cube 8 can be used in any environment type.

Key Features

- 3 Phase / 6 Pulse - standard
- 6 Phase / 12 Pulse - if available chokes can be minimized
- DC Bus coupling

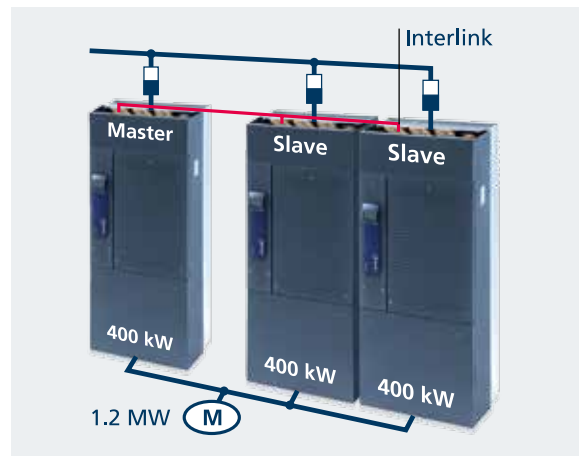


4

Parallel connection - Active Cube 8 in parallel connection is mini solution for maxi power.

Key Features

- Minimized space
- 1200 kW in 1200 mm cabinet
- Modular up to 1200 kW
- 3 Drives react as 1
- 1 configuration in VPlus
- Minimized Jitter 5ns
- Motor chokes not necessary
- Master + Slave current output is balanced
- AC output current is synchronized
- Optional DC bus bar coupling



Energy saving - Active Cube 8 and AEC 8.

AEC regenerating inverters are based on Active technology and deliver the same excellent reliability and versatility as the latest generation of Bonfiglioli inverters.

Key Features

- Power range 200 ... 400 kW at 690 VAC
- Power range 5.5 ... 400 kW at 400 VAC
- 6 Frame sizes
- Multiple communication options
- Sinusoidal or block feed back current configurable
- Optional water cooling



Designation
Active Cube 8

Type	[V]	KEY	[KW]	Brake chopper
ACU	410	53	200	A = Integrated
	510	55	250	
	610	57	315	NA = none
	610	59	355	
	610	61	400	

Technical Data

ACU 8			410 / 400 V					
			-53	-55	-57	-59	-61	
Output, motor side								
Recommended motor shaft power	P	kW	200	250	315	355	400	
Output current	I	A _{eff.}	380	475	595	645	735	
Long-term overload current (60 s) ¹⁾	I	A _{eff.}	570	715	895	970	1100	
Short-term overload current (1 s) ²⁾	I	A _{eff.}	685	855	1070	1160	1330	
Output voltage	U	V _{eff.}	Maximum input voltage, three-phase					
Protection	-	-	Short circuit / earth fault proof ³⁾					
Rotary field frequency	f	Hz	±500 Hz ³⁾					
Switching Frequency	f	kHz	2, 4, 8 ⁴⁾					

Output, braking resistor (extern)⁴⁾

Min. Brake resistance	R	Ω	1.20	1.20	0.80	0.80	0.80	
Recommended Brake resistance (U _{dbc} = 770 V)	R	Ω	1.50	1.50	1.00	1.00	1.00	

Input, mains side

Mains current ⁵⁾	I	A	350	440	550	620	690	
Mains voltage	U	V	400					
Mains frequency	f	Hz	50 (60)					
Fuses ⁶⁾	I	A	500	630	700	800	900	
Fuses as per UL ⁶⁾	Type	-						

Mechanical

Dimensions	HxWxD	mm	1067 x 439 x 375					
Weight approx.	m	kg	120	140	140	140	140	
Ingress protection rating	-	-	IP20 (EN60529)					
Connection terminal	A	mm ²	up to 2 x 240					
Form of assembly	-	-	Vertical					

Ambient conditions

Energy dissipation (2 kHz Switching Frequency)	P	W	4500	5600	6300	6850	7900	
Coolant temperature	T _n	°C	-25 ... 45 (3K3 DIN IEC 60721-3-3)					
Storage temperature	T _L	°C	-25 ... 50					
Transport temperature	T _T	°C	-25 ... 70					
Relative humidity	-	%	15 ... 85, not condensing					

If required by the customer, the switching frequency may be increased if the output current is reduced at the same time. Comply with the applicable standards and regulations for this operating point.

Output current⁷⁾

Frequency inverter nominal power	Switching Frequency		
	2 kHz	4 kHz	8 kHz
160 kW	305	305	305
200 kW	380	380	380
250 kW	475	475	475
315 kW	595	595	595
355 kW	645	645	645
400 kW	735	735	735

¹⁾ Power reduction with torsional frequencies below 10 Hz
²⁾ Only with torsional frequencies above 10 Hz

³⁾ Depending on switching frequency

⁴⁾ Reduction of switching frequency possible on certain conditions

	510 / 525 V					610 / 690 V				
	-53	-55	-57	-59	-61	-53	-55	-57	-59	-61
	200	250	315	355	400	200	250	315	355	400
	290	360	450	490	560	230	280	350	400	450
	435	540	675	735	840	350	420	530	600	675
	520	650	810	880	1000	420	510	630	720	810
	Maximum input voltage, three-phase					Maximum input voltage, three-phase				
	Short circuit / earth fault proof ³⁾					Short circuit / earth fault proof ³⁾				
	± 500 Hz ³⁾					± 500 Hz ³⁾				
	2, 4, 8 ⁴⁾					2, 4, 8 ⁴⁾				

	1.20	1.20	0.80	0.80	0.80	3.00	3.00	1.80	1.80	1.80
	2.70	2.70	1.50	1.50	1.50	5.00	5.00	3.00	3.00	3.00

	270	335	420	470	525	200	250	320	360	410
	400					690 (reduced for UL: 600)				
	50 (60)					50 (60)				
	350	450	550	630	700	315	350	450	500	550

	1067 x 439 x 375					1067 x 439 x 375				
	120	140	140	140	140	120	140	140	140	140
	IP20 (EN60529)					IP20 (EN60529)				
	up to 2 x 240					up to 2 x 240				
	Vertical					Vertical				

	4500	5600	6300	6850	7900	3950	4500	5500	6250	6900
	-25 ... 45 (3K3 DIN IEC 60721-3-3)					-25 ... 45 (3K3 DIN IEC 60721-3-3)				
	-25 ... 50					-25 ... 50				
	-25 ... 70					-25 ... 70				
	15 ... 85, not condensing					15 ... 85, not condensing				

	Switching Frequency			Switching Frequency		
	2 kHz	4 kHz	8 kHz	2 kHz	4 kHz	8 kHz
	230	230	230	180	180	180
	290	290	290	230	230	230
	360	360	360	280	280	280
	450	450	450	350	350	350
	490	490	490	400	400	400
	560	560	560	450	450	450

⁵⁾ Related value with recommended motor power, 400V mains voltage and mains inductance $U_L=4\%$

⁶⁾ For UL-compliant fusing, the specified fuses must be used (in preparation)

⁷⁾ Maximum current in continuous operation

⁸⁾ Semiconductor fuses recommended (in example Bussmann Type 170M)

Bonfiglioli worldwide presence

Bonfiglioli is located in regions and countries around the world that enable us to provide faster sales and service to customers.
We are around the world, and around the corner.



LOCAL SUPPORT



SALES, CUSTOMER SERVICE, WARRANTY, TECH SUPPORT, SPARE PARTS

21 BRANCH OFFICES IN 15 COUNTRIES



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We have a relentless commitment to excellence, innovation and sustainability. Our team creates, distributes and services world-class power transmission and drive solutions to keep the world in motion.



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