D1000

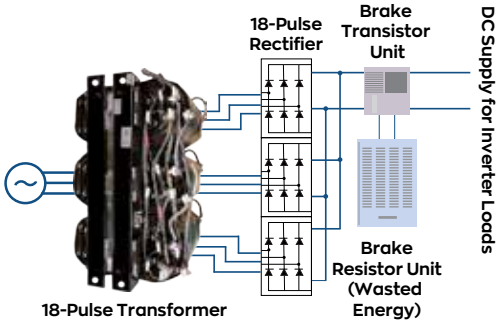
REGENERATIVE CONVERTER UNIT

Looking for a fully regenerative or a clean power solution for your multi-drive or single-drive system? D1000 is your answer.

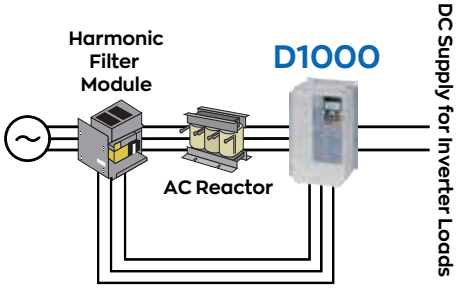
Unlike passive rectifiers which can only supply power from source to load, the D1000 is capable of delivering power in both directions, and is most beneficial to supply single or multi-drive common bus systems that experience significant regeneration.

Additionally, the D1000 system operates with low input current harmonics and improved power factor, which further reduces energy costs and stress on power systems. This clean power solution is achieved without the use of expensive multi-pulse components.

CONVENTIONAL SYSTEM



ACTIVE RECTIFIER SYSTEM



HIGHLIGHTS

- Facilitates IEEE 519 Compliance
- < 5% iTHD at Input Terminals
- Supports Single-Drive or Multi-Drive Common Bus Configurations
- Compatible with All Conventional Drives Having Full Power Access to DC Bus
- Overload Capability of 150% for 30 Seconds, 200% for 3 Seconds
- Near Unity True Power Factor at Full Load
- Ability to Compensate for Low Voltage (Boost Function)
- Overcurrent and Overheat Protection

TYPICAL APPLICATIONS

- Centrifuges
- Paper Winders
- Film Winders
- Sawmill Systems
- Downhill Conveyors
- Engine Test Stands
- Balancing Equipment
- Tire Load Testers
- Transmission Test Stands
- Elevators

200 V CLASS

- 5 - 150 HP

400 V CLASS

- 5 - 750 HP

AMBIENT OPERATING TEMPERATURE

- -10°C to 50°C (Open Type IP00)

CERTIFICATION

- UL, cUL, RoHS, CSA B44.1

STANDARD I/O

- (8) Digital Inputs
- (3) Analog Inputs
- (4) Relay Outputs
- (2) Analog Outputs

COMMUNICATION OPTIONS

- Modbus RTU (Standard)
- Single/Dual Port EtherNet/IP
- Single/Dual Port Modbus TCP/IP
- DeviceNet
- EtherCAT
- MECHATROLINK-II
- CC-LINK
- PROFINET

MECHANICAL OPTIONS

- External Heatsink Kit

YASKAWA

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CAPACITIES AND DIMENSIONS

Each active rectifier system requires a D1000 power module, filter module, and reactor(s). These systems are only sold together as a single kit number as follows:

	System Kit Number	System Capacity				D1000 Module Dimensions*2		
		Recommended Total Motor Load HP (kW) *1	Maximum Continuous *1			Height (inches)	Width (inches)	Depth (inches)
			Output Power (HP)	Output DC Current (DC Amps)	Input AC Current (AC Amps)			
240VAC Input (325V DC Output)	D1000-240-5HP	5 (3.7)	6.7	15	15	11.81	7.09	7.36
	D1000-240-10HP	10 (7.5)	13.4	30	29	11.81	7.09	7.36
	D1000-240-20HP	20 (15)	26.8	61	57	14.37	8.66	7.76
	D1000-240-30HP	30 (22)	40	91	83	17.72	10.83	10.16
	D1000-240-50HP	50 (37)	67	152	140	21.65	12.8	11.14
	D1000-240-75HP	75 (55)	87	197	200	27.76	17.72	12.99
	D1000-240-100HP	100 (75)	120	273	270	27.76	17.72	12.99
	D1000-240-150HP	150 (110)	174	394	400	31.5	19.69	13.78
480VAC Input (650V DC Output)	D1000-480-5HP	5 (3.7)	6.7	8	8	11.81	7.09	7.36
	D1000-480-10HP	10 (7.5)	13.4	15	16	11.81	7.09	7.36
	D1000-480-20HP	20 (15)	26.8	30	30	14.37	8.66	7.76
	D1000-480-30HP	30 (22)	40	45	43	17.72	10.83	10.16
	D1000-480-40HP	40 (30)	54	61	58	17.72	10.83	10.16
	D1000-480-60HP	60 (45)	80	91	86	21.65	12.8	11.14
	D1000-480-100HP	100 (75)	134	152	145	21.65	12.8	11.14
	D1000-480-150HP	150 (110)	174	197	210	31.5	19.69	13.78
	D1000-480-200HP	200 (160)	250	280	300	31.5	19.69	13.78
	D1000-480-300HP	300 (220)	360	409	410	44.88	26.38	14.57
	D1000-480-400HP	400 (315)	500	561	560	44.88	26.38	14.57
	D1000-480-750HP	750 (560)	850	955	1040	54.33	49.21	14.57

*1 Recommended load is stated to account for typical efficiencies of connected loads (e.g. drives and motors). Maximum continuous values can be used if specific load device efficiencies are considered.

*2 Dimensions shown only for D1000 power modules. Contact Yaskawa for dimensions of other components included in kit number.