

YASKAWA

Lift Solutions

Best-in-Class Products and Solutions



Yaskawa Solutions for the Lift Industry

Yaskawa offers solutions for numerous applications in the lift industry, from individual components for modernization and new installations to ready-to-use package solutions.



The One Stop Shop For Lift

Yaskawa offers bundles that perfectly match the chosen motor and lift application. Commissioning is as easy as possible. No matter what you need: Only one supplier, one order, one shipment, one guarantee.



Compatible

The L1000E Lift drive supports all common fieldbuses and standards.

Package for Hydraulic Lifts With the L1000H

An innovative solution for demanding hydraulic lift applications. The combination of an L1000H inverter drive and an EV4 valve from Blain Hydraulics ensures a smooth ride and extraordinary energy efficiency.



PM Machines

The L1000E lift drive matches perfectly with the synchronous permanent magnet motors offered in the Yaskawa lift bundles.



Up To 2,500 kg At 2 m/s

The synchronous motors used in lift bundles are made in Europe and allow a comfortable ride in a wide range of lift installations.

Energy Saving Solutions

Yaskawa lift bundles consist of highly energy efficient components. Power regeneration with solutions like the R1000 and D1000 offer additional energy saving potentials for many lift applications. The U1000 Matrix converter combines energy recovery, a clean grid and minimum space requirements.



Lift Drive Series: Rise to the Top

The Yaskawa Lift Drive Series is the solution for technical requirements of today's elevators. This lift drive controls induction and permanent magnet motors. It is the first choice for new installation, machine room-less lifts, but also for modernization. Experience proven Yaskawa reliability combined with a new level of ride comfort.



V1000 - Compact & Easy To Use

The compact V1000 is a cost-effective solution for modernization and new installation of lifts with gear motors that do not have speed feedback. By reducing its design to the essentials, this inverter drive combines user-friendliness with stable lift performance and a durable, solid design.



L1000H - For Modern Hydraulic Lifts

With the L1000H inverter drive and the EV4 control valve from our partner Blain Hydraulics, Yaskawa is offering an energy-efficient solution for demanding hydraulic lift applications. Upward travel is controlled by the inverter and downward travel is controlled mechanically. Travel comfort in down direction can be optimized by the special down travel control sequence. Other than the connection of the magnetic coils, the controller works without pressure sensors or flow meters.



L1000E - Flexible & Versatile

The L1000E lift drive controls induction and permanent magnet motors, and is a good choice for new installations and lift modernization. State-of-the-art control algorithms ensure a comfortable ride and precise positioning, as well as completely replacing motor contactors. The L1000E reduces audible noise, costs, space requirements and maintenance effort.



Shortest Setup Time

Setting up an elevator drive can be a real hassle, or it can be simple with the L1000E. Motor data is automatically tuned in stand-still condition without the need to remove ropes. Defaults are set to match the needs of most installations, and parameters are shown in multi-language lift terminology and units.



Best Ride Comfort

The L1000E comes with a sophisticated vector control algorithm and lift-dedicated control functions for a bump-free start without a load sensor for smooth speed transition and precise landing.



Brake Monitoring

The L1000E is available with internal brake monitoring. This prevents unintended car movement without the need for additional external devices, reducing cost and maintenance effort.



Rescue Operation

In case of power outage, the L1000E can be supplied by batteries or an uninterruptable power supply (UPS). The drive can automatically evacuate to the light load direction allowing an optimal selection of the components used without any oversizing.



Operation Without Motor Contactors

The L1000E can completely replace motor contactors. Thus, it reduces audible noise, costs, space requirements and maintenance effort.



Low Standby Power Consumption

The L1000E consumes very little energy, especially when not in operation, making it easier to build lift systems which meet the highest energy efficiency requirements.

Lift Motors for Gearless Elevators

Our gearless, synchronous motors are manufactured in Europe and can be used in many different traction elevator designs. With a load capacity of up to 2,500 kg and speed of 2 m/s, they are ideally suited for a broad range of passenger elevators.

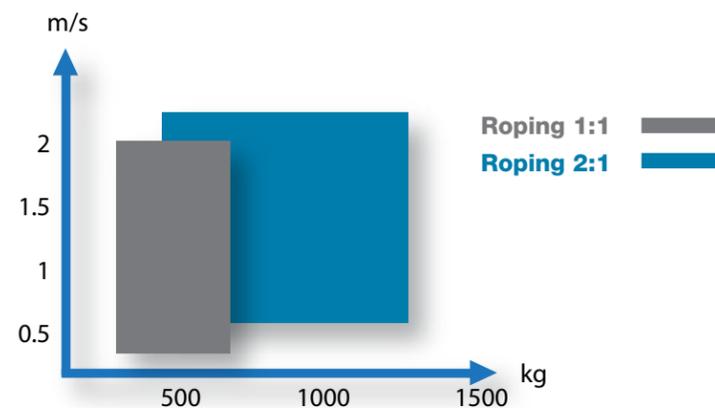
MSYP-160

This gearless, synchronous motor can be used in many different traction elevator designs. With its load capacity of up to 1,250 kg and its speed of 2 m/s it is ideally suited for passenger elevators with medium sized cars.



Low Noise Operation

The MSYP Series lift motors are built for a comfortable ride. This includes a low noise level and minimized vibrations.



Design example



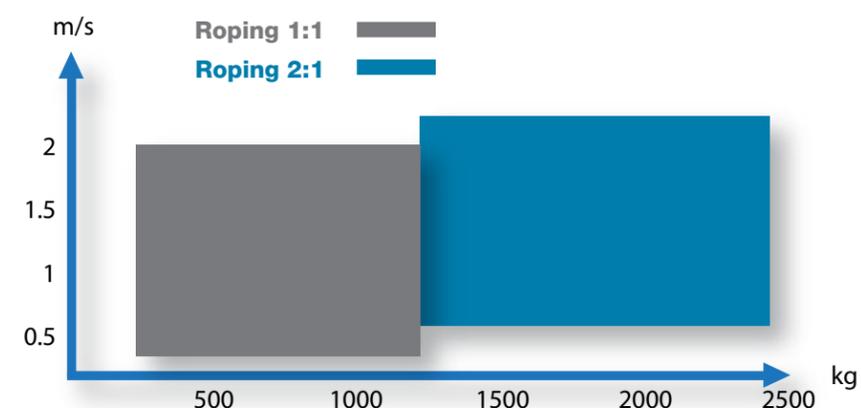
MSYP-225

This gearless, synchronous motor can be used in a diverse range of traction elevator designs. With its high load capacity of up to 2,500 kg and its speed of 2 m/s it is ideally suited for passenger elevators with spacious cars and for transport elevators in hospitals and nursing facilities.



Smooth Ride Characteristics

The perfect match with Yaskawa Lift drives enables a smooth ride and avoids any overshoot, even without a load sensor.



Design example

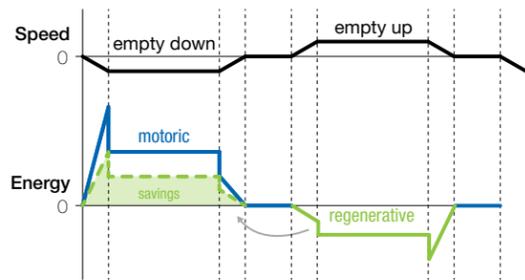


Power Regenerative Units

When it comes to highest demands in energy efficiency, there is no way around energy recovery. With our innovative green performance products we provide solutions for any lift applications, no matter if it's single or group lifts. Time to think green.



Energy Saving Potential In Elevators



Less Energy Consumption With Power Regeneration

- Braking energy regeneration replaces braking resistors, saves space and reduces maintenance
- Consumers within the building use regenerative energy instead of line power
- Energy savings of up to 50% are possible, while less heat emission reduces the risk of fire



D1000

The D1000 regenerative converter unit complements the Yaskawa product range with a low harmonics Active Front End solution.

Suitable for both regenerative individual drives and systems of inverter drives, the D1000 feeds excess braking energy back into the power grid instead of dissipating it as heat.



R1000

The R1000 regenerative braking unit is a smart and efficient alternative to dynamic braking for single or multi-axis drive installations with high amounts of regenerative motor operation. Instead of wasting it as heat, the R1000 feeds excessive braking energy back to the grid, reducing the energy consumption of the installation.



Energy Efficient Four-Quadrant

The R1000, D1000 and U1000 save energy by making excessive braking energy available to other consumers in the same grid instead of wasting it as heat. All three products provide high duty cycle braking capability.



Smart System Design

R1000, D1000 and U1000 are purely selected by braking power and can therefore be selected smaller than the drive it is connected to, allowing them to minimize system space, optimize cost and maximize efficiency.



Save Energy Cost

Especially in high duty braking applications such as escalators or lifts, the R1000, D1000 and U1000 provide numerous advantages. The small installation space and low heat generation impact installation cost, while using the regenerated energy reduces the operating cost and payback time.



Cool Operation

Power regenerative units eliminate the need for safely located braking resistors, saving valuable space and reducing the risk of fire. Less heat is generated so that the demand for ventilation is greatly reduced. Maintenance (e.g. for resistor cleaning) is not necessary.



Compatible

R1000 and D1000 regenerative units can be used with any conventional drive that has full access to the DC bus.



Clean Power

U1000 and D1000 minimize losses in grid components like generators and transformers thanks to a sinusoidal input current with a total harmonic distortion of less than 5% and a displacement power factor of ~1. The higher power quality reduces the potential disturbance of other components.



U1000

The U1000 is a highly efficient inverter drive based on Yaskawa's Matrix converter technology. With its full power regeneration capability, it offers great energy saving potential while sinusoidal input currents and a power factor close to one reduce stress on grid components like transformers and power lines. With an ultra-compact shape, the U1000 is the first choice for innovative, energy-efficient drive solutions with or without power regeneration.

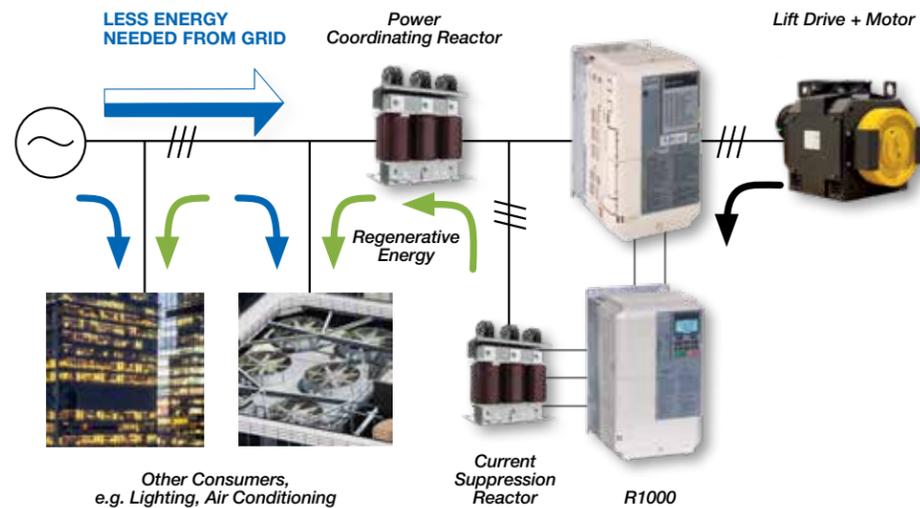
Energy Recovery and Grid Protection

With the R1000 regenerative braking unit, the D1000 regenerative converter unit and the U1000 Matrix converter, Yaskawa provides solutions that help to significantly reduce energy consumption by feeding back braking energy to the power grid. This cuts down costs dramatically and allows a power-grid friendly operation.

Option 1: R1000

Save Energy With Power Regeneration

Unlike dynamic braking, which dissipates all braking energy in the form of heat, the R1000 avoids wasted energy by delivering it back to the power source for use by other loads.



Option 3: U1000

Grid Protection With Built-In Power Regeneration

The U1000 has power regeneration built-in. Braking energy that is typically wasted in resistors can be used by other consumers in the same grid, saving energy and cost.

The all-integrated design of the U1000 reduces the required installation space by more than 50%. The U1000 eliminates external transformers, reactors, and filter circuits often found with traditional regenerative and low harmonic solutions. EMC factory option and current filter components are available and built into the U1000 providing a compact package

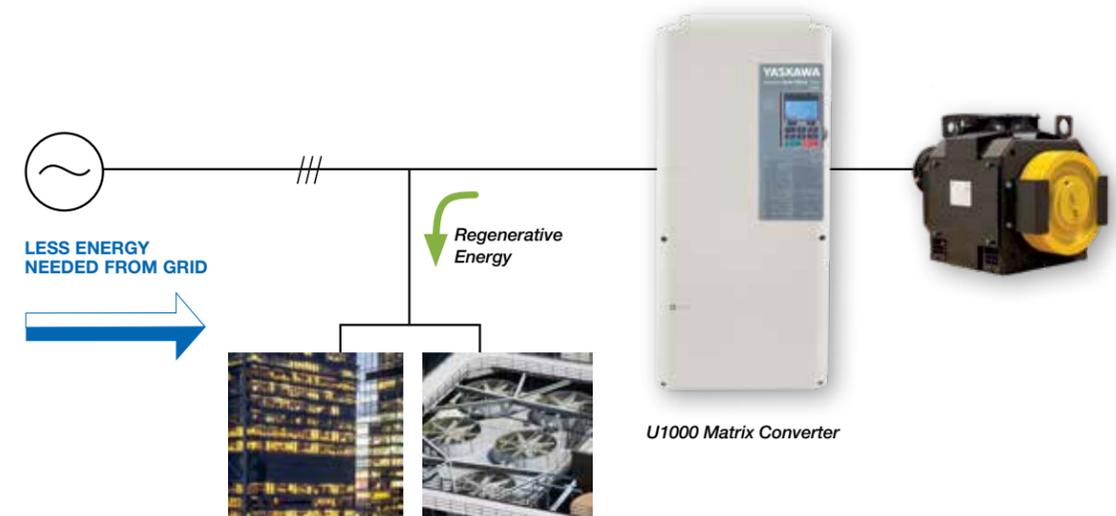
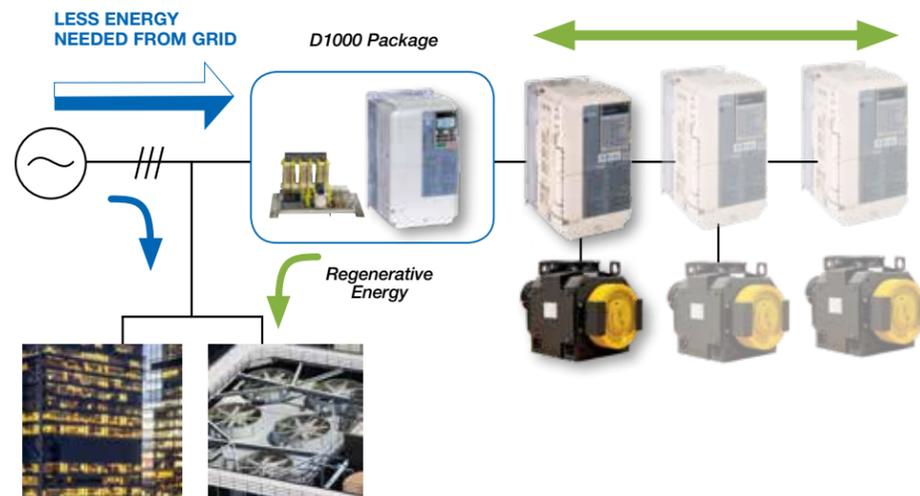
Model	R1000	D1000	U1000
Energy saving by braking power regeneration	●	●	●
Integrated drive (runs a motor)	-	-	●
Improve power factor	-	●	●
Suppress input current harmonics	-	●	●
DC voltage boost	-	●	-
Multiple drives	-	●	-
Simple wiring	○	○	●
Downsize panel	○	○	●

○ Good ● Best - Not Applicable

Option 2: D1000

Save Energy And Protect The Grid

The D1000 regenerative converter unit complements the Yaskawa product range with a low harmonics Active Front End solution. Suitable for both regenerative individual drives and systems of inverter drives, the D1000 feeds excess braking energy back into the power grid instead of dissipating it as heat. Typical one-on-one applications like escalators and elevators have one inverter drive connected to a D1000.



Robots for Welding, Painting and Handling

Yaskawa offers special welding robots, high quality positioners and gantry systems up to complete welding systems. In addition, the MOTOMAN robots from Yaskawa are also the optimum solution for handling and material feeding due to their speed, precision and cost-effectiveness.

Turnkey Welding Systems

With more than 30 years of experience and a market share of over 30%*, Yaskawa is number one in automated path welding.

For the development and construction of systems and robot programming, Yaskawa offers an all-round package according to customer requirements.

Yaskawa cooperates closely with almost all major welding technology suppliers for the automation sector.

State-of-the-Art Technology

Devices and software that are perfectly coordinated. Even if there are only vague ideas about how to weld a workpiece, Yaskawa can create a concept for its customers, integrating all of the necessary components to present a solution that inspires.



* (Source: IFR numbers for 2016)

Painting Robots

Although a MOTOMAN robotic system is extremely fast, its high precision and well coordinated movements save a considerable amount of time and reduce waste. The paint coating is applied consistently at maximum speed, with guaranteed perfect results.

The MOTOMAN EPX series offers a range of painting robots that are perfectly tailored to a customer's requirements and provide top quality results.

Material Handling With Robots

The MOTOMAN MH series offers flexible, 6-axis high-speed robots for a variety of applications such as handling, machine loading, processing and distribution applications.



As demonstrated by numerous studies, up to 70% of maintenance costs can be saved by preventive maintenance. With VIPA teleservice modules, you can enable continuous monitoring and maintenance for your systems.

VIPA Teleservice Modules

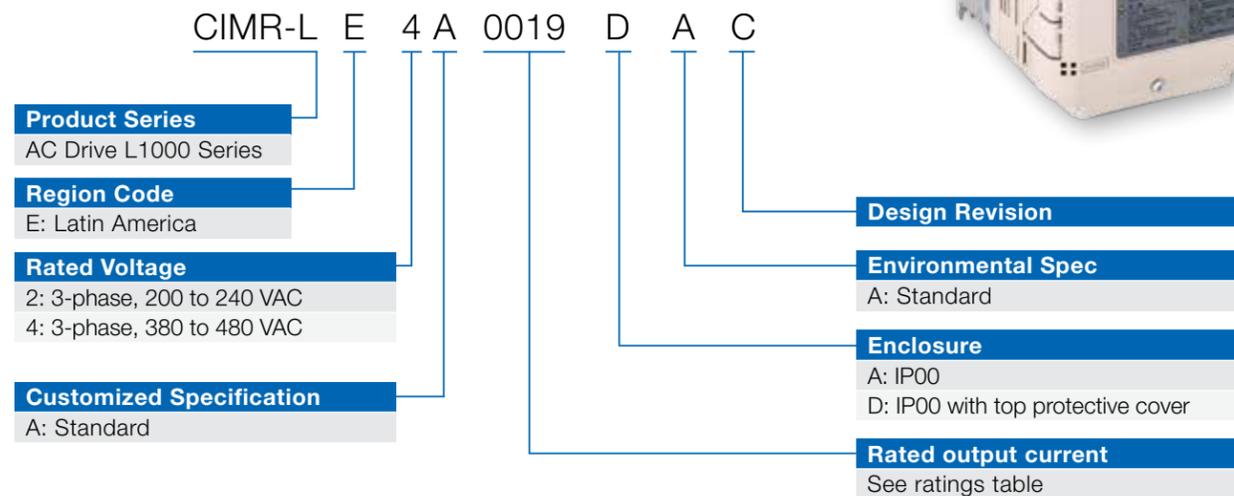
Whether the conventional way via analog, ISDN line, or via broadband connections such as ADSL and HSUPA (mobile communications) VIPA offers a complete product range on teleservice modules. The communication to your automatization modules is established by MPI, PROFIBUS or via the Ethernet interface, each pairs to each of our devices, standard. The configuration of the VIPA teleservice modules is performed via web browser. Additional software is not required.



L1000E Technical Data



Model Designation L1000E



Data and Dimensions L1000E

200 - 240 VAC

CIMR-LE2A □□□□	Maximum Applicable Motor Power (kW)	Rated Output Current * (A)	Dimensions (mm)			Weight (kg)	EMC Filter (L1000E)	Braking Unit		Braking Resistor Unit	
			H	W	D			Model CDBR-	Qty	Specs (Per Unit)	Qty
0018	3.7	17.5	259	140	165	3.5	FS5972-18-07	Built-in		1100 W 38 Ω	1
0022	5.5	21.9	259	140	165	3.5	FS5972-35-07	Built-in		1700 W 26 Ω	1
0031	7.5	31.3	259	140	168	4.0	FS5972-35-07	Built-in		2200 W 19 Ω	1
0041	11.0	41.3	259	140	168	4.0	FS5972-60-07	Built-in		3400 W 12.6 Ω	1
0059	15.0	58.8	300	180	188	5.6	FS5972-60-07	Built-in		4500 W 9.6 Ω	1
0075	18.5	75	351	221	198	8.7	FS5972-100-35	Built-in		5600 W 7.5 Ω	1
0094	22.0	93.8	351	221	198	9.7	FS5972-100-35	Built-in		6700 W 6.3 Ω	1
0106	30.0	106.3	399	249	259	21.0	FS5972-170-40	Built-in		9000 W 4.9 Ω	1
0144	37.0	143.8	450	274	259	25.0	FS5972-170-40	2037D	2	5600 W 7.5 Ω	2
0181	45.0	181.3	551	325	284	37.0	FS5972-250-37	2037D	2	6700 W 6.3 Ω	2
0225	55.0	225	551	325	284	38.0	FS5972-250-37	2110B	1	16800 W 2.7 Ω	2
0269	75.0	268.8	706	450	350	76.0	FS5972-410-99	2110B	1	22400 W 1.9 Ω	2
0354	90.0	353.8	706	450	350	80.0	FS5972-410-99	2110B	2	16800 W 2.7 Ω	3
0432	110.0	432.5	800	500	330	98.0	FS5972-600-99	2110B	2	16800 W 2.7 Ω	4

*The value of output current for models up to 143.8 A assumes a maximum carrier frequency of 8 kHz and a maximum carrier frequency of 5 kHz for 181.3 A and above. Increasing the carrier frequency requires a reduction in current.

Data and Dimensions L1000E

380 - 480 VAC

CIMR-LE4A □□□□	Maximum Applicable Motor Power (kW)	Rated Output Current * (A)	Dimensions (mm)			Weight (kg)	EMC Filter (L1000E)	Braking Unit		Braking Resistor Unit	
			H	W	D			Model CDBR-	Qty	Specs (per unit)	Qty
0009	3.7	9.0	259	140	165	3.5	FS5972-10-07	Built-in		1100 W 150 Ω	1
0012	5.5	11.5	259	140	165	3.5	FS5972-18-07	Built-in		1700 W 100 Ω	1
0019	7.5	18.5	259	140	168	4.0	FS5972-35-07	Built-in		2200 W 75 Ω	1
0023	11.0	22.5	259	140	168	4.0	FS5972-35-07	Built-in		3400 W 50 Ω	1
0030	15.0	30.0	300	180	168	5.4	FS5972-35-07	Built-in		4500 W 38 Ω	1
0039	18.5	38.8	300	180	188	5.4	FS5972-60-07	Built-in		5600 W 30 Ω	1
0049	22.0	48.8	351	221	198	8.0	FS5972-60-07	Built-in		6700 W 25 Ω	1
0056	30.0	56.3	399	249	259	22.0	FS5972-60-07	Built-in		9000 W 19 Ω	1
0075	37.0	75.0	450	274	259	25.0	FS5972-100-35	Built-in		11200 W 15 Ω	1
0094	45.0	93.8	511	325	259	36.0	FS5972-100-35	40450D	2	9000 W 19 Ω	2
0114	55.0	113.8	511	325	259	36.0	FS5972-170-40	40450D	2	9000 W 19 Ω	2
0140	75.0	140.0	551	325	282	41.0	FS5972-170-40	4220B	1	22400 W 7.5 Ω	1
0188	90.0	187.5	551	325	282	42.0	FS5972-170-40	4220B	1	33600 W 5 Ω	1
0225	110.0	225.0	706	450	330	79.0	FS5972-250-37	4220B	1	33600 W 5 Ω	1

*The value of output current for models up to 113.8 A assumes a maximum carrier frequency of 8 kHz and a maximum carrier frequency of 5 kHz for 140 A and above. Increasing the carrier frequency requires a reduction in current.

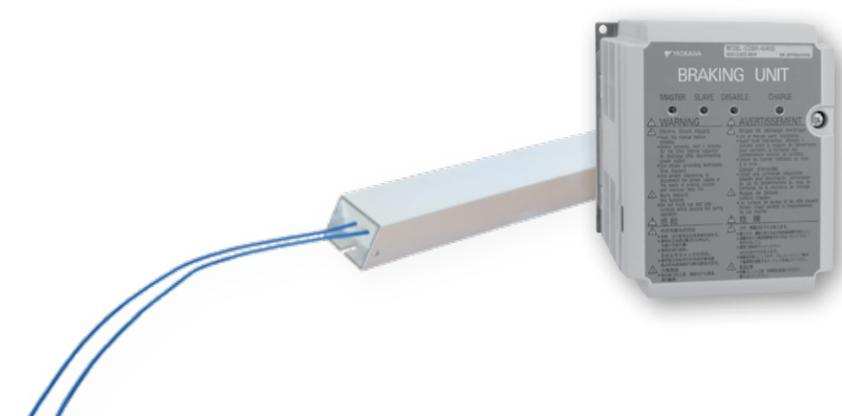
EMC Filter & AC Input Reactor

EMC filters are installed at the input of the drive. They reduce conducted emission in order to maintain compliance with EMC standards such as the EN12015.



Braking Options

Braking options dissipate kinetic energy when moving in regenerative direction. Drives up to 37 kW have built-in braking transistors and must only be equipped with a braking resistor. Larger drives need an additional braking unit.



V1000 Technical Data

Specifications and Options

Data and Dimensions V1000

200 - 240 VAC

CIMR-VU2A □□□□	Maximum Applicable Motor Power (kW)	Rated Output Current * (A)	Dimensions (mm)			Weight (kg)	EMC Filter
			H	W	D		
0020	3.7	17.5	153	140	143	2.6	FS23637-24-07
0030	5.5	25	254	140	140	3.8	FS23637-52-07
0040	7.5	33	254	140	140	3.8	FS23637-52-07
0056	11.0	47	290	180	163	5.5	FS23637-68-07
0069	15.0	60	350	220	187	9.2	FS23637-80-07

Data and Dimensions V1000

380 - 480 VAC

CIMR-VU4A □□□□	Maximum Applicable Motor Power (kW)	Rated Output Current * (A)	Dimensions (mm)			Weight (kg)	EMC Filter
			H	W	D		
0009	2.2	7.2	128	108	154	1.7	FS23639-10-07
0011	3.7	9.2	128	140	143	2.4	FS23639-15-07
0018	5.5	14.8	254	140	140	3.8	FS23639-30-07
0023	7.5	18.0	254	140	140	3.8	FS23639-30-07
0031	11.0	24.0	290	180	143	5.2	FS23639-50-07
0038	15.0	31.0	290	180	163	5.5	FS23639-50-07

* This value assumes a maximum carrier frequency of 8 kHz. Increasing the carrier frequency requires a reduction in current.

Operating Environment	
Ambient Temperature	-10 to +50 °C
Storage Temperature	-20 to +60 °C
Humidity	95% RH or less (non-condensing)
Altitude	Up to 1000 meters (output current derating of 1% per 100 m required above 1000 m, max. 3000 m)
Vibration/Shock	10 Hz to 20 Hz, 9.8 m/s ² max. 20 Hz to 55 Hz, 5.9 m/s ² (200 V: 75 kW or less, 400 V: 90 kW or less) or 2.0 m/s ² max. (200 V: 90 kW or more, 400 V: 110 kW or more)
Protection Design	IP00 with protective top cover, Open Type enclosure

Drive Series	L1000E	V1000
Conformity / Standards		
Standards	CE, UL, cUL, RoHS	CE, UL, cUL
Functional Safety	STO (Safe Torque Off), Cat. 3, PL d; SIL2	STO (Safe Torque Off), Cat. 3, PL d; SIL2
Power Ratings		
Maximum Motor Output	3.7 - 110 kW	4.0 - 15.0 kW
Overload Capacity	133% for 30 seconds	
Rated Voltage	200 V Class: 200 to 240 V 50/60 Hz (-15% to +10%) 400 V Class: 380 to 480 V 50/60 Hz (-15% to +10%)	
Rated Input Frequency	50/60 Hz ± 3%	
Maximum Output Frequency	200 Hz	400 Hz
Braking Transistors	Built-in up to 37 kW	Built-in
Control / Programming		
Control Inputs	8 digital (sink / source), 2 analog (voltage)	7 digital (sink / source), 1 pulse
Control Outputs	4 digital relay, 2 photocoupler, 2 analog (voltage)	1 digital relay, 2 photocoupler, 2 analog (1 voltage, 1 current/voltage), 1 pulse
Operator	LED monitor, LCD optional	LED, LCD optional

Options for L1000E		
Communication	Modbus RTU	Standard
Motor Feedback	Incremental Encoder (Line Driver)	PG-X3
	Complimentary Encoder (HTL, Open-Collector)	PG-B3
	Resolver Interface for TS2640N321E64	PG-RT3
	Endat 2.1 / 2.2, HIPERFACE	PG-F3
	Heidenhain ERN1387 / ERN487	PG-E3
Input / Output	Analog Output: 2-channel, -/+10 V (11-bit signed)	AO-A3
	Digital Input: 16 Digital inputs, +24 V, at 8 mA each, sink or source, multi-function or frequency reference (16-bit binary or BCD)	DI-A3
	Digital Output: 6 photocoupler (48 V, 50 mA), 2 relay contacts (250 VAC/30 VDC, 1 A maximum)	DO-A3

MSYP-160 Technical Data



Performance Data (More models available)

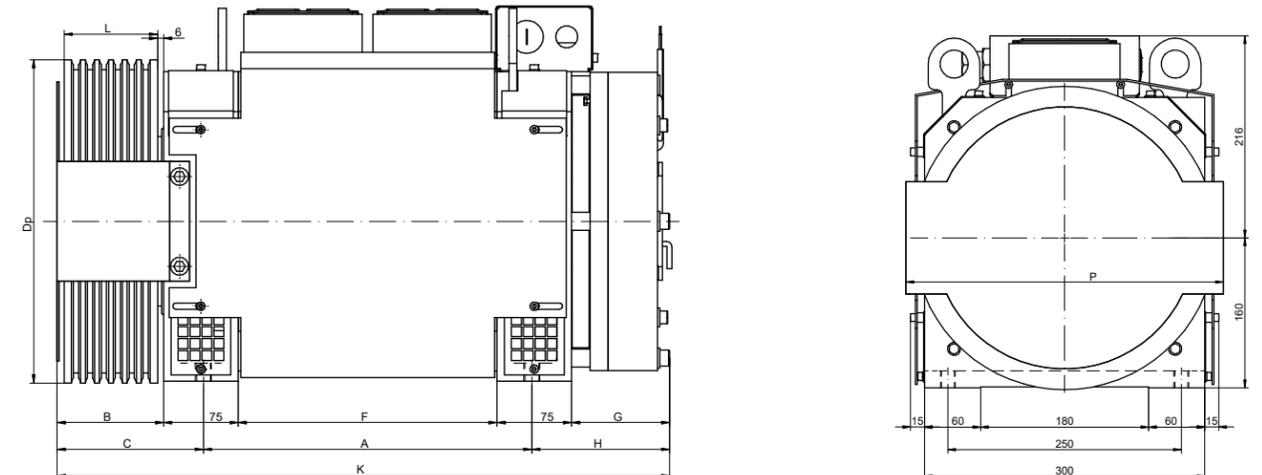
Roping 2:1

Motor Type	ID Number	Rated Output (kW)	Load Q (kg)	Traction Sheave (mm)	Grooves Rope Ø (mm)	R/min at 1 m/s
MSYP-160.20-20	320160	2.0	320	240	5 × 6.5	160
MSYP-160.20-20	320255	3.1	320	240	5 × 6.5	255
MSYP-160.30-20	630160	3.9	630	240	7 × 6.5	160
MSYP-160.40-20	630120	3.9	630	320	6 × 8.0	120
MSYP-160.30-20	630255	6.2	630	240	7 × 6.5	255
MSYP-160.40-20	630191	6.2	630	320	6 × 8.0	191
MSYP-160.50-20	100160	6.1	1000	240	10 × 6.5	160
MSYP-160.60-20	100120	6.1	1000	320	6 × 8.0	120
MSYP-160.50-20	100255	9.8	1000	240	10 × 6.5	255
MSYP-160.60-20	100191	9.8	1000	320	6 × 8.0	191

Roping 1:1

Motor Type	ID Number	Rated Output (kW)	Load Q (kg)	Traction Sheave (mm)	Grooves Rope Ø (mm)	R/min at 1 m/s
MSYP-160.30-20	320080	2.0	320	240	7 × 6.5	80
MSYP-160.40-20	320060	2.0	320	320	6 × 8.0	60
MSYP-160.30-20	320128	3.1	320	240	7 × 6.5	128
MSYP-160.40-20	320096	3.1	320	320	6 × 8.0	96
MSYP-160.50-20	480080	3.0	480	240	10 × 6.5	80
MSYP-160.60-20	480060	3.0	480	320	6 × 8.0	60
MSYP-160.50-20	480128	4.7	480	240	10 × 6.5	128
MSYP-160.60-20	480096	4.7	480	320	6 × 8.0	96
MSYP-160.60-20	630080	3.9	630	240	10 × 6.5	80
MSYP-160.60-20	630128	6.2	630	240	10 × 6.5	128

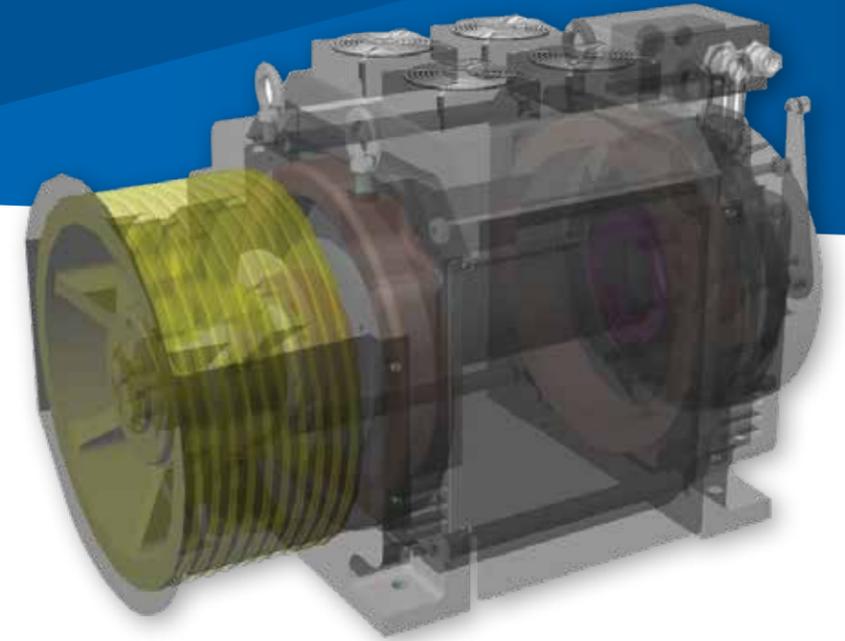
Additional versions upon request. Maximum axle load: 3,100 kg. Weight counter-balance at travel heights > 40 m



Dimensions

Motor Type	Dimensions (mm)									
	A	B	C	F	G	H	D φ	L	P	K
MSYP-160.20-20	180	83	123	110	99	139	240	70	251.51	442
MSYP-160.30-20	230	120	160	160	99	139	240	94	254	529
							320		340	
MSYP-160.40-20	280	120	160	210	99	139	240	94	254	579
							320		340	
MSYP-160.50-20	330	150	190	260	108	148	240	130	254	668
		119	159				320	94	340	637
MSYP-160.60-20	380	150	190	310	108	148	240	130	254	718
		119	159				320	94	340	687

MSYP-225 Technical Data



Performance Data (More models available)

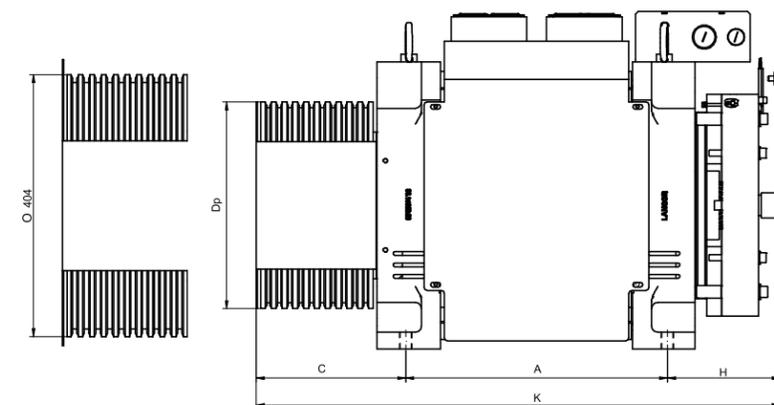
Roping 2:1

Motor Type	ID Number	Rated Output (kW)	Load Q (kg)	Traction Sheave (mm)	Grooves Rope Ø (mm)	R/min at m/s
MSYP-225.44-20	125120	8.8	1250	320	10 × 8	120 / 1.0
MSYP-225.44-20	125191	14.0	1250	320	10 × 8	191 / 1.6
MSYP-225.44-20	160120	11.2	1600	320	10 × 8	120 / 1.0
MSYP-225.52-20	160096	11.2	1600	400	10 × 10	96 / 1.0
MSYP-225.52-20	160191	18.0	1600	320	10 × 8	191 / 1.6
MSYP-225.60-20	160153	17.9	1600	400	10 × 10	153 / 1.6
MSYP-225.52-20	200120	14.0	2000	320	10 × 8	120 / 1.0
MSYP-225.60-20	200191	22.4	2000	320	10 × 8	191 / 1.6
MSYP-225.64-20	200096	14.0	2000	400	10 × 10	96 / 1.0
MSYP-225.72-20	200153	22.4	2000	400	10 × 10	153 / 1.6
MSYP-225.64-20	250120	17.5	2500	320	10 × 8	120 / 1.0
MSYP-225.72-20	250191	28.0	2500	320	10 × 8	191 / 1.6

Roping 1:1

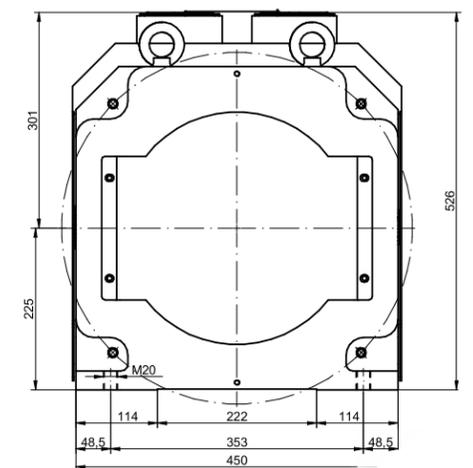
Motor Type	ID Number	Rated Output (kW)	Load Q (kg)	Traction Sheave (mm)	Grooves Rope Ø (mm)	R/min at m/s
MSYP-225.28-20	630060	4.4	630	320	10 × 8	60 / 1.0
MSYP-225.44-20	630095	7.1	630	320	10 × 8	95 / 1.6
MSYP-225.44-20	800060	5.6	800	320	10 × 8	60 / 1.0
MSYP-225.44-20	800095	9.0	800	320	10 × 8	95 / 1.6
MSYP-225.52-20	800048	5.6	800	400	10 × 10	48 / 1.0
MSYP-225.60-20	800076	9.0	800	400	10 × 10	76 / 1.6
MSYP-225.52-20	100060	7.0	1000	320	10 × 8	60 / 1.0
MSYP-225.60-20	100048	7.0	1000	400	10 × 10	48 / 1.0
MSYP-225.60-20	100095	11.3	1000	320	10 × 8	95 / 1.6
MSYP-225.68-20	100076	11.3	1000	400	10 × 10	76 / 1.6
MSYP-225.60-20	125060	9.0	1250	320	10 × 8	60 / 1.0
MSYP-225.72-20	125095	14.1	1250	320	10 × 8	95 / 1.6

Additional versions upon request. Maximum axle load: 10,050 kg. Standard sheave has 10 grooves.
Weight counter-balance at travel heights > 40 m.



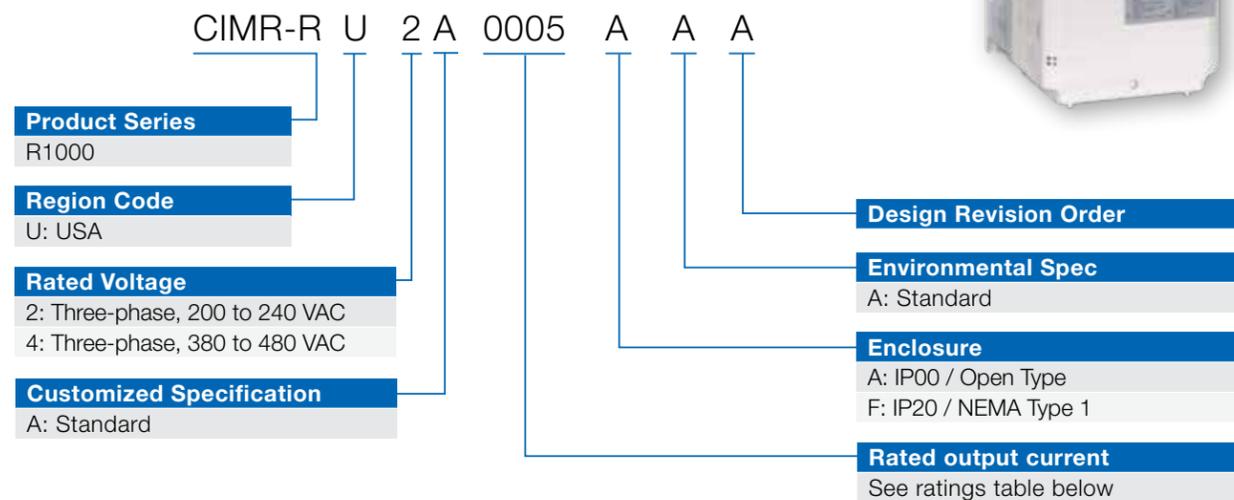
Dimensions

Motor Type	Dimensions (mm)				
	A	C	H	D φ	K
MSYP-225.28-20	251.5	235	177	324	663.5
		244		404	673.0
MSYP-225.44-20	331.5	235	177	324	743.5
		244		404	
MSYP-225.52-20	371.5	235	177	324	783.5
		244		404	
MSYP-225.60-20	411.5	235	177	324	823.5
		244		404	
MSYP-225.72-20	471.5	235	184	324	890.5
		244		404	



R1000 Technical Data

Model Designation



Three-Phase 200 V Class

Model	Rated Output Capacity (kW)
03P5	3.5
0005	5
0007	5
0010	10
0014	14
0017	17
0020	20
0035	35
0053	53
0073	73
0105	105

Three-Phase 400 V Class

Model	Rated Output Capacity (kW)
03P5	3.5
0005	5
0007	5
0010	10
0014	14
0017	17
0020	20
0035	35
0053	53
0073	73
0105	105
0150	150
0210	210
0300	300

Features

- Compatible with all conventional drives having full power access to DC bus
- Rated for 100% power, 25% duty cycle (60 second maximum on time), or 80% continuous
- Overload capability of 150% for 30 seconds
- 0.9 power factor at full load
- Overcurrent and overheat protection

Regenerative System Components

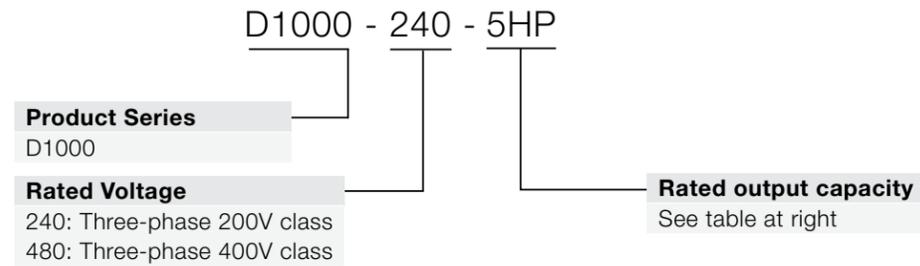
Each regenerative unit system requires an R1000 module, suppression reactor, coordination reactor, and fusing as follows

	Capacity	R1000 Regenerative Unit			Suppression Reactor	Coordination Reactor	Fuses (Qty 3 Req'd)	Fuse Holder		
		kW	Model CIMR-RU	Dimensions (mm)				Model No.	Model No.	Qty Req'd
			H	W	D					
240V Class	3.5	2A03P5FAA	300	140	167	05P00620-0134	05P00620-0136	FU-002031	1	FU-002055
	5	2A0005FAA				URX000083	05P00620-0138			
	7	2A0007FAA				05P00620-0044	FU-002032			
	10	2A0010FAA	340	180	187	05P00620-0044	05P00620-0140	UFU000153	3	FU-002082
	14	2A0014FAA				05P00620-0141	05P00620-0141	UFU000479		
	17	2A0017FAA	400	220	197	05P00620-0143	05P00620-0143	UFU000154		
	20	2A0020FAA				URX000085	UFU000155	3	FU-002083	
	28	2A0028FAA				05P00620-0013	UFU000156			
	35	2A0035AAA	450	275	258	05P00620-0064	05P00620-0070	UFU000156	3	FU-002083
	53	2A0053AAA	550	325	283	URX000086	05P00620-0146	UFU000494	3	FU-002083
73	2A0073AAA	705	450	330	URX000175	URX000175	UFU000375	3	UFU000378	
105	2A0105AAA	800	500	350	URX000178	URX000181	UFU000376	3	UFU000122	
480V Class	3.5	4A03P5FAA	300	140	167	05P00620-0025	05P00620-0133	FU-002030	1	FU-002055
	5	4A0005FAA				05P00620-0133	05P00620-0135			
	7	4A0007FAA				05P00620-0135	05P00620-0137			
	10	4A0010FAA	340	180	187	05P00620-0137	05P00620-0138	FU-002032	1	FU-002055
	14	4A0014FAA				URX000083	05P00620-0139			
	17	4A0017FAA	400	220	197	05P00620-0044	05P00620-0139	FU-000783	3	FU-002082
	20	4A0020FAA				05P00620-0049	05P00620-0049			
	28	4A0028FAA				05P00620-0142	05P00620-0142	UFU000480		
	35	4A0035AAA	450	275	258	05P00620-0144	05P00620-0144	FU-000806	3	FU-002084
	43	4A0043AAA				05P00620-0143		FU-000807		
	53	4A0053AAA	550	325	283	URX000085	05P00620-0145	FU-000809	3	FU-002084
	73	4A0073AAA				05P00620-0064	05P00620-0070			
	105	4A0105AAA	705	450	330	05P00620-0075	05P00620-0146	UFU000374	3	UFU000378
	150	4A0150AAA				URX000175	URX000176	UFU000375		
	210	4A0210AAA				URX000181	URX000182	UFU000376		
300	4A0300AAA	800	500	350	URX000088	05P00620-0094	UFU000377	3	UFU000122	

Dimensions shown are for R1000 only. For dimensions of reactors and fuse holders, contact Yaskawa Technical Support.

D1000 Technical Data

Model Designation



Features

- Facilitates IEEE 519 Compliance
- Less than 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

D1000 Package Kit Includes:

- D1000 Regenerative Converter Unit
- Input Reactor(s)
- Harmonic Filter Module or Harmonic Filter Kit



Filter Kit

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:

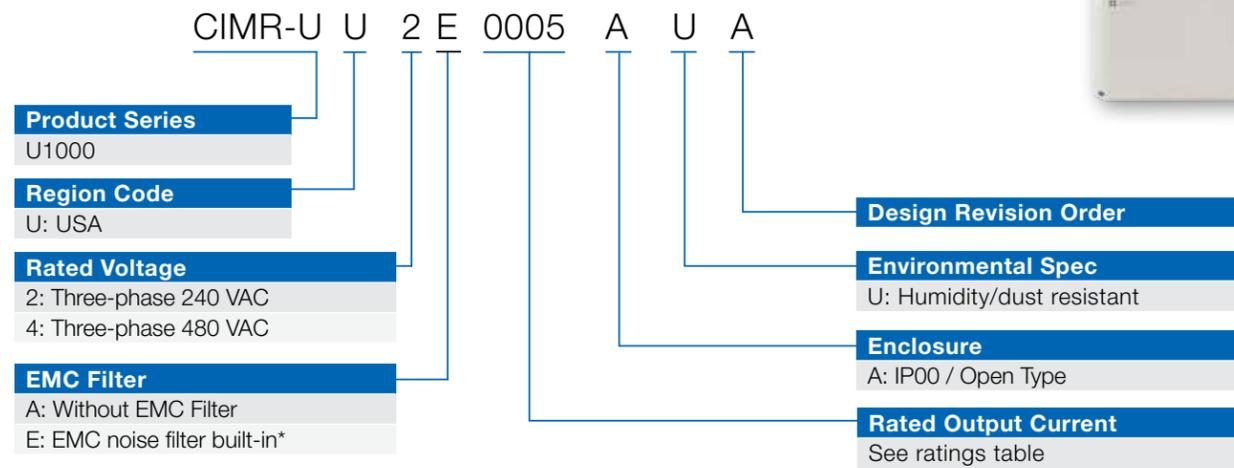
	System Kit Number	D1000 Model Number CIMR-DU	System Capacity ^{*1}				D1000 Module Dimensions ^{*2}		
			Recommended Total Motor Load (kW)	Maximum Continuous			Height (mm)	Width (mm)	Depth (mm)
				Output Power (kW)	Output DC Current (DC Amps)	Input AC Current (AC Amps)			
240VAC Input (325V DC Output)	D1000-240-5HP	2A0005BAA	3.7	5	15	15	300	180	187
	D1000-240-10HP	2A0010BAA	7.5	10	30	29	300	180	187
	D1000-240-20HP	2A0020BAA	15	20	61	57	365	220	197
	D1000-240-30HP	2A0030AAA	22	30	91	83	450	275	258
	D1000-240-50HP	2A0050AAA	37	50	152	140	550	325	283
	D1000-240-75HP	2A0065AAA	55	65	197	200	705	450	330
	D1000-240-100HP	2A0090AAA	75	90	273	270	705	450	330
	D1000-240-150HP	2A0130AAA	110	130	394	400	800	500	350
480VAC Input (650V DC Output)	D1000-480-5HP	4A0005BAA	3.7	5	8	8	300	180	187
	D1000-480-10HP	4A0010BAA	7.5	10	15	16	300	180	187
	D1000-480-20HP	4A0020BAA	15	20	30	30	365	220	197
	D1000-480-30HP	4A0030AAA	22	30	45	43	450	275	258
	D1000-480-40HP	4A0040AAA	30	40	61	58	450	275	258
	D1000-480-60HP	4A0060AAA	45	60	91	86	705	325	283
	D1000-480-100HP	4A0100AAA	75	100	152	145	705	325	283
	D1000-480-150HP	4A0130AAA	110	130	197	210	800	500	350
	D1000-480-200HP	4A0185AAA	160	185	280	300	800	500	350
	D1000-480-300HP	4A0270AAA	220	270	409	410	1140	670	370
D1000-480-400HP	4A0370AAA	315	370	561	560	1140	670	370	
D1000-480-750HP	4A0630AAA	560	630	955	1040	1380	1250	370	

*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.

U1000 Technical Data

Model Designation



* Up to 414 A, bigger models need external EMC filters

Features

- Full regeneration
- Low input current harmonics at all speeds/loads
- Facilitates IEEE 519 Compliance
- Eliminate harmonics with embedded across-the-line operation
- Near unity true power factor at full load
- Higher efficiency than common low harmonic solutions
- Compact design
- Integrated input fusing provides 100kA SCCR
- High reliability with MTBF in excess of 28 years
- Induction and permanent magnet motor control
- Safe torque off (SIL3 and PLe)



Dimensions & Specifications

Open Chassis (IP00)

240 V Class			Dimensions (inches)			Weight (lb) ¹	
Model: CIMR-UU2□	Amps ND / HD	kW ND / HD	Fig. No.	H	W		D
0028AUA	28 / 22	7.5 / 5.5	1	18.89	9.84	14.17	44
0042AUA	42 / 28	11 / 7.5		71			
0054AUA	54 / 42	15 / 11		77			
0068AUA	68 / 54	18.5 / 15					
0081AUA	81 / 68	22 / 18.5	2	32.12	10.39	17.71	132
0104AUA	104 / 81	30 / 22					
0130AUA	130 / 104	37 / 30					
0154AUA	154 / 130	45 / 37	3	38.97	16.33	15.86	245
0192AUA	192 / 154	55 / 45					
0248AUA	248 / 192	75 / 55					
				44.56	19.29	17.71	388

480 V Class			Dimensions (inches)			Weight (kg) ¹	
Model: CIMR-UU4□	Amps ND / HD	kW ND / HD	Fig. No.	H	W		D
0011AUA	11 / 9.6	5.5 / 3.7	1	480	250	360	20
0014AUA	14 / 11	7.5 / 5.5					
0021AUA	21 / 14	11 / 7.5					
0027AUA	27 / 21	15 / 11					
0034AUA	34 / 27	18.5 / 15					
0040AUA	40 / 34	22 / 18.5		32			
0052AUA	52 / 40	30 / 22					
0065AUA	65 / 52	37 / 30					
0077AUA	77 / 65	45 / 37					
0096AUA	96 / 77	55 / 45					
0124AUA	124 / 96	75 / 55	2	816	264	450	60
0156AUA	156 / 124	90 / 75	3	900	415	403	115
0180AUA	180 / 156	132 / 110					
0216AUA	216 / 180	150 / 132					
0240AUA	240 / 216	185 / 150					
0302AUA	302 / 240	220 / 185					
0361AUA	361 / 302	260 / 220					
0414AUA	414 / 361	350 / 300					
0477AUB	477 / 434	300 / 260	Contact Yaskawa	1595	1070	445	561
0590AUB	590 / 477	370 / 300					
0720AUB ²	720 / 590	450 / 370		1835	1210	631	
0930AUB ³	930 / 900	600 / 550					

PWM Filter Model No.	Applicable Drive Models	Dimensions (mm)			Weight (kg) ¹
		H	W	D	
EUJ711800M ²	CIMR-UU4A0720AUB	1351	701	439	346
EUJ711820M ³	CIMR-UU4A0930AUB				

1. This data represents the drive weight only, not shipping weight.
2. Input PWM filter EUJ711800M is required when using CIMR-UU4A0720AUB.
3. Input PWM filter EUJ711820M is required when using CIMR-UU4A0930AUB.

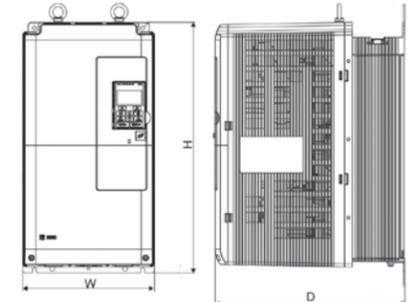


Figure 1

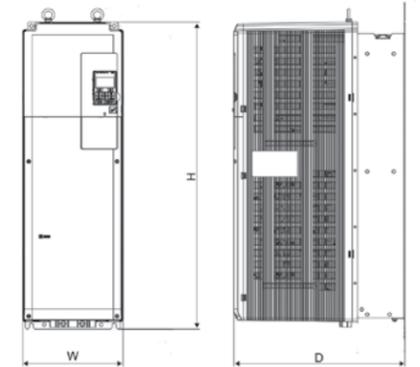


Figure 2

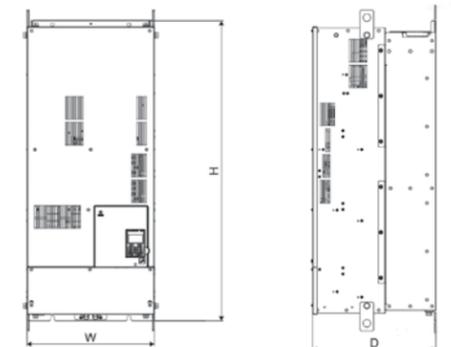


Figure 3



Yaskawa is the leading global manufacturer of low and medium voltage variable frequency drives, servo systems, machine controllers and industrial robots. Our standard products, as well as tailor-made solutions, are well known and have a high reputation for outstanding quality and reliability.