

# Why hesitant to use drive?



✓ Problem **1**

The motor is directly connected to the power supply, so what's the point of using a drive?

✓ Problem **2**

Saving energy will have no effect because the motor operates at a constant speed.

✓ Problem **3**

Wiring and setup are troublesome.

✓ Problem **4**

Solutions for harmonics and noise are necessary for drives.

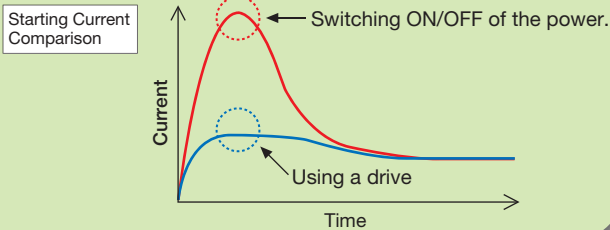
## There is no need to worry!

Yaskawa can solve your problems.

✓ Problem **1**

When you turn on the power supply to start a motor, five to six times the rated current flows to the motor. Using a drive achieves the following:

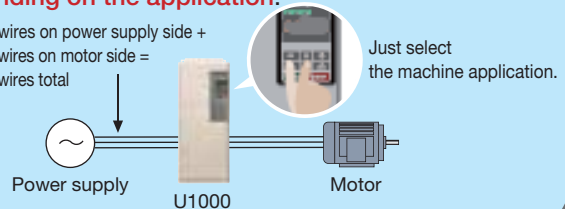
- ◆ The starting current is reduced, so you can **reduce your contract electric fee**.
- ◆ You can **use a breaker with a smaller capacity**.
- ◆ **Contactor maintenance is not necessary**.



✓ Problem **3**

- ◆ **Wiring is as easy as connecting a contactor**.
- ◆ **The drive can be set easily and automatically depending on the application**.

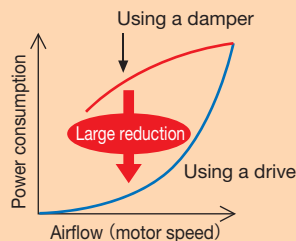
3 wires on power supply side + 3 wires on motor side = 6 wires total



✓ Problem **2**

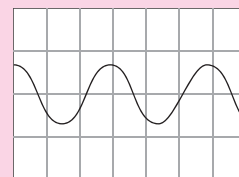
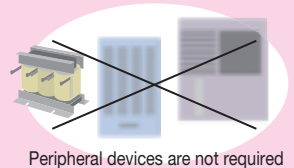
Do you use a machine for controlling airflow or water pressure? If you use a drive to control the motor speed,

- ◆ **Power consumption is drastically reduced!**



✓ Problem **4**

- ◆ **Harmonic current solutions are not necessary**.
- ◆ If you drive the motor at the power supply frequency, **noise solutions are not necessary** (commercial power switching function).
- ◆ **A braking resistor is not required** with the U1000.



Input power supply current waveform

**The U1000 can solve your problems!**

## Standard Specifications

200 V Class

ND: Normal Duty, HD: Heavy Duty

Model CIMR-U-2A			0028	0042	0054	0068	0081	0104	0130	0154	0192	0248	
Rated Input/Output	Rated Input	ND	25	38	49	62	74	95	118	140	175	226	
	Current	A	HD	20	25	38	49	62	74	95	118	140	175
	Rated Input	ND	12	17	22	28	34	43	54	64	80	103	
	Capacity	kVA	HD	9	12	17	22	28	34	43	54	64	80
	Rated Output	ND	28	42	54	68	81	104	130	154	192	248	
Power	Current	A	HD	22	28	42	54	68	81	104	130	154	192
	Overload Tolerance	HD Rating: 150% of rated output current for 60 s, ND Rating: 120% of rated output current for 60 s (Derating may be required for repetitive loads)											
	Carrier Frequency	4 kHz (User adjustable up to 10 kHz. Derating may be required.)											
	Max. Output Voltage	Depends on input voltage											
	Max. Output Frequency	400 Hz											
Power	Rated Voltage/Rated Frequency	Three-phase AC power supply: 200 to 240 Vac 50/60 Hz											
	Allowable Voltage Fluctuation	-15% to +10%											
	Allowable Frequency Fluctuation	± 3% (Frequency fluctuation rate: 1 Hz/100 ms or less)											
	Allowable Power Voltage Imbalance between Phases	less than 2%											
Harmonic Current Distortion Rate	5% or less (IEEE 519)												
Input Power Factor	0.98 or more (for rated load)												


400 V Class

Model CIMR-U-4A			0011	0014	0021	0027	0034	0040	0052	0065	0077	0096	0124	0156	0180	0216	0240	0302	0361	0414	0477	0590	0720	0900	0930		
Rated Input/Output	Rated Input	ND	10	13	19	25	31	36	47	59	70	87	113	142	164	197	218	275	329	377	Available soon.						
	Current	A	HD	8.7	10	13	19	25	31	36	47	59	70	87	113	142	164	197	218	275							329
	Rated Input	ND	9	12	17	22	28	33	43	54	64	80	103	130	150	180	200	251	300	344							
	Capacity	kVA	HD	8	9	12	17	22	28	33	43	54	64	80	103	130	150	180	200	251							300
	Rated Output	ND	11	14	21	27	34	40	52	65	77	96	124	156	180	216	240	302	361	414							
Power	Current	A	HD	9.6	11	14	21	27	34	40	52	65	77	96	124	156	180	216	240	302	361						
	Overload Tolerance	HD Rating: 150% of rated output current for 60 s, ND Rating: 120% of rated output current for 60 s (Derating may be required for repetitive loads)																									
	Carrier Frequency	4 kHz (User adjustable up to 10 kHz. Derating may be required.)																									
	Max. Output Voltage	Depends on input voltage																									
	Max. Output Frequency	400 Hz																									
Power	Rated Voltage/Rated Frequency	Three-phase AC power supply: 380 to 480 Vac 50/60 Hz																									
	Allowable Voltage Fluctuation	-15% to +10%																									
	Allowable Frequency Fluctuation	± 3% (Frequency fluctuation rate: 1 Hz/100 ms or less)																									
	Allowable Power Voltage Imbalance between Phases	less than 2%																									
Harmonic Current Distortion Rate	5% or less (IEEE 519)																										
Input Power Factor	0.98 or more (for rated load)																										


Note: For details, refer to the U1000 catalogs (No. KAEP C710636 02).

## Many other products are also available


**AC Drives**




**Compact V/f control J1000**  
200 V CLASS, THREE-PHASE  
INPUT: 0.1 to 5.5 kW  
200 V CLASS, SINGLE-PHASE  
INPUT: 0.1 to 2.2 kW  
400 V CLASS, THREE-PHASE  
INPUT: 0.2 to 5.5 kW



**Compact vector control V1000**  
200 V CLASS, THREE-PHASE  
INPUT: 0.1 to 18.5 kW  
200 V CLASS, SINGLE-PHASE  
INPUT: 0.1 to 3.7 kW  
400 V CLASS, THREE-PHASE  
INPUT: 0.2 to 18.5 kW




**High performance vector control A1000**  
200 V CLASS,  
0.4 to 110 kW  
400 V CLASS,  
0.4 to 630 kW




**High-function fully vector control Varispeed G7**  
200 V CLASS,  
0.4 to 110 kW  
400 V CLASS,  
0.4 to 300 kW

**Regenerative Energy-saving Units**



**Power Regenerative Converter D1000**



**Power Regenerative Unit R1000**

Using with drives lead to furthermore energy saving



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