



Vibration Suppression Control

Yaskawa's drive extends the
life of devices!

Yaskawa's drive suppresses the vibration of compressors. The drive prevents machine failures resulting from vibration, extends the life of the devices, and reduces device reinforcement costs.

Life Extension and Long Service Life

Yaskawa's drive prevents failures caused by vibration and refrigerant leakage from piping. It also **keeps the machines from stopping.**

Save Cost

You can **save the typical costs** for vibration suppressing reinforcements (thick, high-strength pipes and reinforcements for installation sections).

Low Audible Noise

The drive **reduces mechanical noise** caused by vibration.

Decrease Design Time

There is no need to design with consideration of vibration. **You can reduce time to test and consider.**



The compressor generates vibration due to its operational principles. If the piping is damaged by vibration, it causes the machine stoppage due to refrigerant leakage. Vibration control requires thick, high-strength pipes and reinforcements for the installation sections, which result in a cost increase. Yaskawa's drive suppresses the vibration of the machine while controlling the compressor.

Yaskawa's drive provides more effective vibration suppression control than compressor manufacturers' drives.

■ Comparison ratios of vibration values (the value for the dedicated drive is 100%)

| AC Drive | Acceleration (m/s ²) | Amplitude (mm 0-peak) |
|---|----------------------------------|-----------------------|
| Company A's drive (with vibration suppression control) | 100% | 100% |
| GA700 (with vibration suppression control) | 44% | 5% |

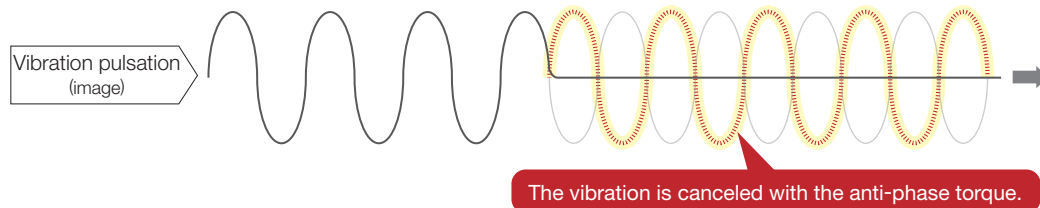
Note: Based on the results of Yaskawa's actual machine evaluation tests.



How vibration suppression control works

The compressor in repetitive expansion and compression operation causes a wide range of torque variations, which causes the vibration.

Yaskawa's drive detects the fluctuation of torque and counteracts the vibration by giving anti-phase torque.



■ Supported models



**High Performance Type
GA700**
Motor Capacity
Three-Phase 200 V Class: 0.4 to 110 kW
Three-Phase 400 V Class: 0.4 to 630 kW*

Applicable motors



* Some models are currently under preparation.
For details, refer to the GA700 catalog (KAEP C710617 00).



**Compact Vector Control Drive
V1000**
Motor Capacity
Three-Phase 200 V Class: 0.1 to 18.5 kW
Single-Phase 200 V Class: 0.1 to 3.7 kW
Three-Phase 400 V Class: 0.2 to 18.5 kW

Applicable motors



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Contact Information

Specifications are subject to change without notice for ongoing product modifications and improvements. For inquiries on the contents of this document, contact a Yaskawa representative or the Yaskawa sales department listed above.

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