

# HONEYWELL VARIABLE FREQUENCY DRIVES SOLUTIONS

High Torque Performance and Precise Control



**Honeywell**

# DRIVE ENERGY SAVINGS AND HIGH EFFICIENCY WITH HONEYWELL VFD, HAC, WIDE RANGE DRIVES

Honeywell's energy efficient HAC series variable frequency motor drives meet automation requirements across a variety of industrial segments and process applications, ranging from small fans & pumps to large compressors and low-voltage to mid-voltage(690Vac)



# A BETTER FIT FOR YOUR APPLICATION

Honeywell VFD is designed with application support in mind. There are three Honeywell VFD models of differing sizes and frequency ranges – from 0.75 to 1000kw – making the solution suitable for a variety of applications.

- HAC10 helps improve the performance of mechanical devices and equipment with an Asynchronous Motor-open Loop vector control, suitable for any general applications that requiring high-speed control accuracy, high-speed responses,

high torque responsiveness, high torque output at low speed.

- HAC310, low-voltage drive is a high-performance standard drive with the Asynchronous open-loop vector control, and Asynchronous closed-loop control of PID, sensorless vector control and advanced technology that can be used in any environment.
- HAC310 is suitable for any general applications that requiring high-speed control accuracy, high-speed responses, high torque responsiveness, high torque output at low speed.

Also, it's useful for some critical applications, that requiring high-precision speed control even at zero speed.

- HAC310, mid-Voltage(690Vac) drive, high-performance for specific applications with precise control of PID and covering upto 1000kw power that requiring high-speed control accuracy, high-speed responses, high torque responsiveness, high torque output at low speed.



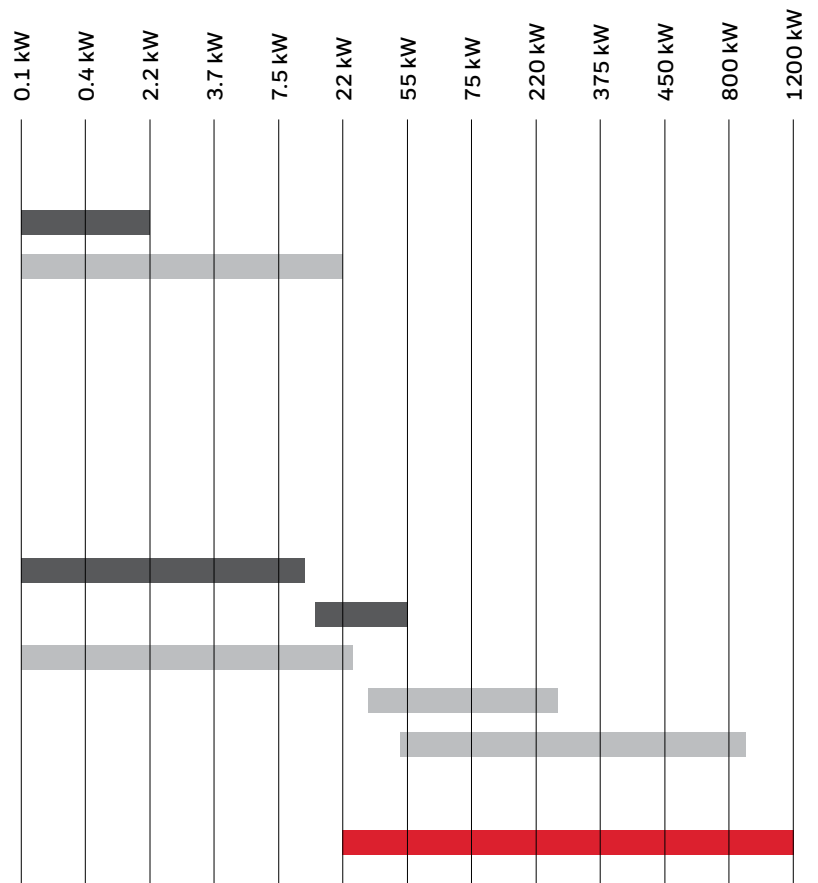
## HAC10 Standard Drive

- 1 Ø 200V 0.75 to 2.2kW
- 3 Ø 400V 0.75 to 22kW



## HAC310 Hi-performance

- 1 Ø 200V 0.75 to 15kW
- 1 Ø 200V 18 to 55kW
- 3 Ø 400V 0.75 to 22kW
- 3 Ø 400V 30 to 110kW
- 3 Ø 400V 55 to 710kW
- 3 Ø 690V 22 to 1120kW



In addition, the space-efficient, compact design of Honeywell VFD enables plenty of room for other equipment; and its compatibility with industry-standard Modbus protocol, Ethernet/IP and EtherCAT protocols ensures quick and easy integration with virtually any type of controller.

Fully integrating with Honeywell system and suitable for Discrete Control





HONEYWELL		HACC310	HAC10
Output voltage		220V, 380V	220V, 380V
380V rated voltage		380V~480V	380V~480V
Output frequency		0-600Hz (optional 800Hz)	0-600 Hz
Power range	230V	0.75-55kW	0.75-2.2kW
	380V-460V	0.75-1120KW	0.75-22kW
Parallel installation		Yes	Yes
IP grade		IP20/IP54 (customized)	IP20
Overload capacity	150%	89s	60s
	200%	3s	0.5s
Motor type	AM	Yes	Yes
	PMSM	Yes	Yes
	SRM	Yes	No
Multi motor parameters		No	No
Low-speed torque under VC control	0.5 Hz	200%	200%
Built-in Modbus RTU		Yes	Yes
Extension card for CANopen, PROFIBUS DP, Profinet, EtherCAT		Yes	No
Extension card for Modbus TCP		Under development	No
Built-in PLM programming		No	No
STO function		No	No
EMC filter		Optional external or built-in	Optional external
General Functions	Torque control	Yes	Yes
	Position control	Yes	No
	Tension control	Yes	No
	V/F control	Yes	Yes
	V/F split control	Yes	No
	Self-defined V/F control	Yes	Yes
	V/F energy saving running	Yes	Yes
Multi-pump controller	Pump cleaning	Yes	Yes
	Anti-freeze	Yes	Yes
	Under-load (No Flow, Dry Pump)	Yes	Yes
	Multi-pump control	Yes	Yes
	Pipe broken	Yes	Yes
HVAC with fire mode	Fire Mode	Yes	No
Solar pump	Solar pump control	Yes	Yes
Hydraulic VFD		Yes	
Air compressor VFD		Yes	
Lifting VFD		Yes	



## SEAMLESS INTEGRATION

Every Honeywell AC drive model features plug-and-play integration with Honeywell's Experion DCS system and ControlEdge platform. Because of this, hours of manual mapping and integration work can be accomplished in minutes, with reduced chance of error. Honeywell AC drive is scalable,

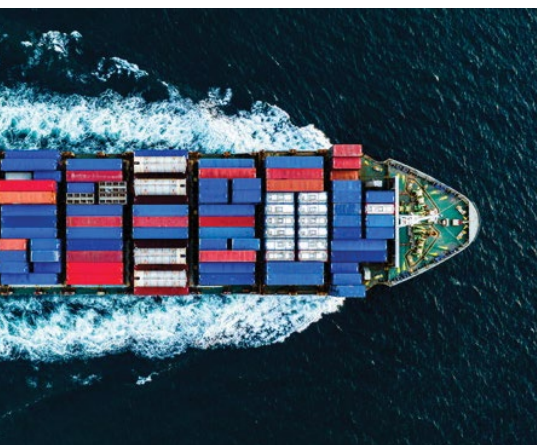
too, offering easy connection to I/O modules and communications interfaces. Furthermore, end users can benefit from optional Honeywell TotalCare remote and on-site support services to facilitate the installation, startup and future expansion of their Honeywell AC drive solution.



## EASY AND RAPID CONFIGURATION

Developed with ease of use in mind, Honeywell AC drive incorporates a template-based multi-copier that can multiply configurations, enabling faster startup time. It also includes

software at no extra cost, minimizing configuration time and providing peace-of-mind; and features a built-in library that can power applications ranging from pumps to ventilators.



## EFFICIENT OPERATIONS

Energy-efficient operation is another Honeywell AC drive hallmark. The solution offers energy savings performance of 30-40% compared with direct on line drives; noise-

filtering harmonics of 18-37% THDi; and a DC reactor that improves power supply input and reduces harmonics. It also features low-speed torque control for a soft start.

## DESIGNED FOR COMPLIANCE

Finally, Honeywell AC drive meets Category C3, Class A EMC compliance for noise basically. And, with IP66, NEMA 4X and 3C2

compliance, MasterVert offers the waterproofing, corrosion protection and conformal coating required for application in harsh environments.

## SUITABILITY FOR INDUSTRIAL APPLICATIONS

APPLICATION		TYPE				TORQUE		DRIVE SERIES		
		FrL	GL	FL	IL	CT	VT	HAC10	HAC310(LV)	HAC310(MV)
Water & Wastewater	Fan			✓				✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓	✓		✓	✓
	Mixer			✓		✓			✓	✓
Metals & Materials Management	Fan			✓			✓	✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓			✓	✓
	Conveyor	✓				✓		✓	✓	✓
	Press				✓	✓			✓	✓
	Winder (Drawing Machine)				✓	✓			✓	✓
	Winder (Stranding Machine)				✓	✓			✓	✓
	Hoist (Hoist)		✓			✓			✓	✓
	Hoist (Trolley, Gantry)	✓				✓			✓	✓
	Synchronized Position Control (Grinder)	✓			✓	✓			o	
	Synchronized Position Control (Automatic Lathe)	✓			✓	✓			o	
Energy	Fan			✓			✓	✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓			✓	✓
	Conveyor	✓				✓			✓	✓
	Hoist (Hoist)		✓			✓			✓	✓
	Hoist (Trolley, Gantry)					✓			✓	✓
	High-capacity Fan & Pump (Power Generation Industry)			✓			✓		✓	✓
Food & Beverage	Fan			✓			✓	✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓			✓	✓
	Conveyor	✓				✓		✓	✓	✓
	Mixer	✓		✓		✓			✓	✓
	Extruder	✓				✓			✓	✓
	Packing Machine (Synchronization, Position Control)	✓				✓			o	o
	Cutting Machine (Synchronization, Position Control)	✓				✓			o	o
	Labeling Machine (Synchronization, Position Control)	✓				✓			o	o
	Hoist (Hoist)		✓			✓			✓	✓
	Hoist (Gantry, Trolley)					✓			✓	✓
Mining	Fan			✓			✓	✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓			✓	✓
	Conveyor	✓				✓			✓	✓
	Crusher / Drill Machine	✓				✓			✓	✓
	Crane (Hoist)		✓			✓			✓	✓
	Crane (Gantry/Trolley, Rotating/Turning)	✓				✓			✓	✓
	Hoist (Hoist)		✓			✓			✓	✓
	Hoist (Gantry, Trolley)					✓			✓	✓
HVAC / Refrigerator	Fan			✓			✓	✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓			✓	✓

Optimal Suitable

FrL=Friction Load | GL= Gravity Load | FL = Fluid Load | IL=Inertia Load | CT=Constant Torque | VT=Variable Torque

APPLICATION		TYPE				TORQUE		DRIVE SERIES		
		FrL	GL	FL	IL	CT	VT	HAC10	HAC310(LV)	HAC310(MV)
Oil & Gas / Chemical	Fan (Blower)			✓			✓	✓	✓	✓
	Oil & Rod Pump			✓			✓		✓	✓
	Compressor			✓		✓			✓	✓
	Conveyor	✓				✓			✓	✓
	Mixer			✓		✓			✓	✓
	Extruder		✓			✓			✓	✓
Plastic & Rubber	Fan / Blower			✓			✓	✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓			✓	✓
	Conveyor	✓				✓			✓	✓
	Mixer			✓		✓			✓	✓
	Extruder	✓			✓	✓			✓	✓
	Screw & Vibration Feeder					✓			✓	✓
	Injection Molding	✓			✓	✓			✓	✓
	Winder		✓			✓			✓	✓
	Hoist (Hoist)					✓			✓	✓
	Hoist (Trolley, Gantry)					✓			✓	✓
Textiles	Fan			✓			✓	✓	✓	✓
	Pump			✓			✓	✓	✓	✓
	Compressor			✓		✓			✓	✓
	Spinning Machine (Threading & Spinning)				✓	✓			✓	✓
	Winder (Weaving)				✓	✓			✓	✓
	Winder (Knitting)				✓	✓			✓	✓
	Washing & Drying (Washer & Dryer)			✓	✓	✓			✓	✓
	Printing								✓	✓
	Extruder	✓				✓			✓	✓
	Hoist (Hoist)		✓			✓			✓	✓
	Hoist (Trolley, Gantry)	✓				✓			✓	✓
	Pulp & Paper	Fan			✓			✓	✓	✓
Agitator Pump				✓			✓		✓	✓
Compressor				✓		✓			✓	✓
Winder (Fixed Contact Control)					✓	✓			✓	✓
Roller Drum					✓	✓			✓	✓
Drying Machine		✓					✓		✓	✓
Coating Machine		✓				✓			✓	✓
Slitter		✓				✓			✓	✓
Hoist (Hoist)			✓			✓			✓	✓
Hoist (Gantry, Trolley)						✓			✓	✓
Crane & Hoist	Crane (Hoist)		✓			✓			✓	✓
	Crane (Gantry/Trolley, Rotating/Turning)	✓				✓			✓	✓
	Hoist (Hoist)		✓			✓			✓	✓
	Hoist (Gantry, Trolley)					✓			✓	✓
	Automatic Warehouse (Lift)		✓			✓			✓	✓
	Automatic Garage (Gantry)	✓				✓			✓	✓



## WHY HONEYWELL?

Honeywell is one of the world's most recognized and respected brands, with a track record of delivery and decades of experience across industries and a culture of innovation in software, systems and connected devices. Honeywell's solution portfolio spans industrial measurement, control and safety systems, thermal solutions, terminal automation, analytics, cybersecurity, industrial software and connectivity.

With customers in more than 125 countries, Honeywell has broader and deeper international presence than any other industrial company.

Speak with us today about how we can help fulfil your objectives.





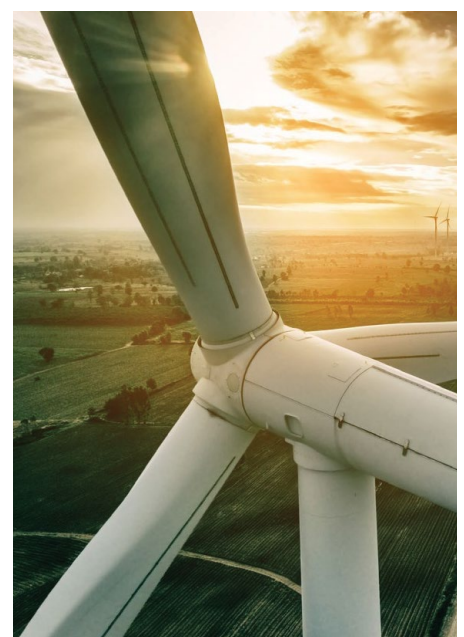


## Service and support

From installation and start up to system maturity and future expansion, Honeywell TotalCare remote and on-site support services ensure you get maximum return from your automation system investment. The TotalCare Service program features specially designed service package options in addition to Honeywell's standard support commitment under the Scalable Control Solutions portfolio.

Available on an annual subscription basis, TotalCare Lite and Enhanced

service packages encompass system updates, upgrades, corrective and preventive maintenance, support requests and more. Factory-trained remote service engineers provide technical support and rapid responses to queries regarding procedures, documentation, operation, service, training, and system enhancements. In addition, TotalCare remote services include a review of operational procedures, software analysis and diagnostic evaluations when required.



**For More Information**

To learn more about Honeywell  
MasterVert drive solutions,  
please visit [www.HoneywellProcess.com/XYZ](http://www.HoneywellProcess.com/XYZ)

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