



Unidrive HS70 and HS30: 0-3,000 Hz

Regulations control the export of high frequency drives

New laws in the EU and USA now restrict the export of variable speed drives with an output of frequency greater than 600 Hz from these territories to other global regions. This brings a challenge to OEMs demanding high speed drives. At the same time, OEMs which do not require 600 Hz-plus capability will be subject to additional controls in the procurement and export of variable speed drives which have unrestricted frequencies.

Unidrive HS30 and HS70 – drives designed for high frequency operation

Emerson solves these challenges with the Unidrive HS70 and Unidrive HS30 variable speed drives by Control Techniques. Unidrive HS70 and HS30 are capable of output frequencies of 3,000 Hz and are perfectly suited to high-speed applications such as automotive and aeronautical engine and transmission line test equipment, machine tool manufacture and centrifuges for food and beverage and oil and gas industries. Unidrive HS70 and Unidrive HS30 are designed with the same specifications as the standard Unidrive M700 and Unidrive M300 variable speed drives, which are restricted to a frequency of 550 Hz and therefore free from export controls.

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Control Techniques™


EMERSON™
Industrial Automation



Unidrive HS70

0 –3,000 Hz Open Loop
 0 - 1,250 Hz Closed Loop
 0.75 kW – 2.8 MW (1.0 hp – 4,200 hp)
 200 V / 400 V / 575 V / 690 V



Unidrive HS30

0 –3,000 Hz Open Loop
 0.25 kW – 7.5 kW (0.33 hp – 10 hp)
 200 V / 400 V

Class leading induction, permanent magnet and servo motor performance, with onboard real-time Ethernet

Unidrive HS70 provides maximum control of high speed motors and incorporates an onboard Advanced Motion Controller and onboard PLC. Unidrive HS70 variants include:

- Unidrive HS70 – Ethernet onboard
- Unidrive HS71 – RS485 onboard
- Unidrive HS72 – Ethernet onboard and dual Safe Torque Off

Flexible integration with safety and communications

Unidrive HS30 is designed for applications that require cost effective integration into safety systems and incorporates dual Safe Torque Off and advanced Rotor Flux Control (RFC-A) of open loop induction motors.

Unidrive HS70 and HS30 are optimized for applications demanding high speed, including:

Automotive & Aeronautical Engine and Transmission Line Test Equipment

Unidrive HS70 is highly suited to the demands of automotive and aeronautical engine and transmission testing equipment. Operation up to 3,000 Hz frequency Open Loop/1,250 Hz Closed Loop is combined with highly dynamic motor control to replicate combustion engine torque ripples to maximum precision. Unidrive HS70 capability extends to 2.8 MW for high power applications.



Machine Tools

Unidrive HS70 and HS30 achieve the very high speed motor control precision required by machine tools, demanded especially by spindle applications. Safe Torque Off functionality optimizes productivity and HS70's onboard programming combined with advanced motion control enable automatic tool changing to be implemented onboard the drive.



Centrifuges

A frequent requirement in food and beverage and oil and gas centrifuge applications, high speed motor control with output frequencies of up to 3,000 Hz Open Loop/1,250 Hz Closed Loop is achievable with Unidrive HS70 and HS30 - HS30 providing up to 7.5 kW output and HS70 up to 2.8 MW.

