



VFD Can Be Mounted  
Directly to Motor

## Variable Frequency Drives (VFD)

Variable frequency drives (VFDs), also known as an AC drives, inverters, and adjustable frequency drives (AFDs), are adjustable speed drives that can be used to control AC induction motors. A VFD is used to adjust motor speed and horsepower by varying frequency and voltage. This adjustability allows the motor speed to match the output requirements of the application. VFDs are ideal for applications where process flowrate precision is critical.

KWS recommends the use of a VFD with all screw feeder and thermal processor applications. Screw feeders are volumetric metering devices. The screw feeder discharge rate of a specific bulk material from a hopper, bin, or silo must be fine-tuned using a VFD. In screw feeder applications, the VFD must be sized for at least two (2) times the full-load amps of the motor to allow for the high inrush current during start-up. Thermal processors cool, heat, or maintain bulk material temperature in a continuous conveying process. A VFD is used to alter processor speed and residence time of the bulk material in the thermal processor to allow for efficient heat transfer.

VFDs can be mounted directly to the AC motor terminal box, wall mounted or mounted in a control panel. A parameter input controller and/or integrated LED display mounted on the front of the VFD makes programming and adjustability easy and user-friendly. VFD parameters can be saved to internal memory or exported to a PC for recall later. VFDs have the flexibility to communicate with other VFDs or control systems that communicate on a custom protocol network of your choice.

### Features

**Use with Different Motors** – VFDs are available for single phase 110V and 240V and three phase 380-480V & 575V AC motors. KWS supplies VFDs for motors ranging from 0.25 to 300 HP.

**Variety of Options** – Wide variety of VFDs with different solutions to your process requirements are available.

### Benefits

**Cost Effective** – VFDs are a very cost-effective solution for process control. Energy consumption is reduced by improving energy efficiency using a VFD.

**Multifunctional** – VFDs are used to provide non-emergency start and stop control, acceleration and deceleration control, and overload protection. VFDs are available with additional I/O connections to extend capabilities.



**Design  
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## Variable Frequency Drives (VFD)



Integral Gear Motor with VFD Mounted  
Directly to Motor



VFDs Can Be Mounted on a Wall  
Near Equipment



VFDs Can Be Mounted in a Control Panel  
to Interface with Other Control Systems



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