

Fact Sheet

VLT® OneGearDrive®

VLT® OneGearDrive® comprises a high-efficiency permanent magnet (PM) motor coupled to an optimised bevel gearbox. As part of the Danfoss VLT® FlexConcept® the VLT® OneGearDrive® is an energy-efficient drive system that helps to optimise plant productivity and reduce energy costs.

With only one motor type and three available gear ratios, the motor concept covers all typical versions of conveyor drives commonly used in the food and beverage industry.

Furthermore, the restricted range of physical configurations of the VLT® OneGearDrive® simplifies spares holding and makes it more cost efficient, easing engineering and installation thanks to uniform mechanical dimensions.

Flexible plant design

In combination with the VLT® AutomationDrive FC 302 or the VLT® Decentral Drive FCD 302 the VLT® OneGearDrive® is equally suited to central and decentral installations, giving the plant designer complete flexibility from the outset. As a whole, the system can reach energy savings of up to 40% compared with conventional systems.

Two versions

The VLT® OneGearDrive® comes in two versions, the VLT® OneGearDrive® Standard for use in dry and wet production areas and the VLT® OneGear-

Drive® Hygienic for use in wet areas, areas with high cleaning intensity and aseptic and clean room production areas.



VLT® OneGearDrive® Hygienic



VLT® OneGearDrive® Standard with brake

| Feature | Benefit |
|---|--|
| High system efficiency including frequency converter | – Save money and energy – up to 40% energy savings compared to conventional systems |
| High-efficiency Permanent-magnet three-phase synchronous 10-pole motor with bevel gear drive | – Better than Super Premium Efficiency class IE4 (comparing to induction motor only). Will comply to highest IES2 class with FC 302 |
| Available hollow shaft diameters: 30, 35, 40 mm and 3 imperial shaft sizes | – Flexible adaption to customer standards |
| Completely smooth enclosure leaves no crevices or dirt traps | – Easy to clean – Safe production |
| Motor connection with Danfoss CleanConnect® stainless steel circular connector | – Safe connection in wet areas – Fast installation and replacement – High cleanability |
| Motor and brake connections via terminal box with CageClamp® technology | – Fast, reliable connection – Lower installation cost |
| Aseptic coating | – Resistant to detergents and disinfectants (pH 2..14) |
| Gearbox without breather vents and use of food grade lubricants compliant with FDA and NSF requirements | – Up to 35,000 operating hours in partial load between oil change |
| High degrees of protection: – IP67 and IP69K (OGD- H) – IP67 (OGD-S) | – Unrestricted use in wash down areas – High protection in wash down areas |
| Fan-free operation | – Less noise emission – No airborne germs and dirt particles are drawn into the motor and then expelled back into the surrounding air |
| Only 3 gearbox ratios in one common design | – Up to 70% reduction in variants reduces spare part stock |
| Compatible with all Danfoss frequency converters FC 302 and FCD 302 from 0.75 to 3 kW | – Free choice of central or decentral installation |

Achieve up to

70%

variant reduction with VLT® OneGearDrive® together with VLT® AutomationDrive FC 302 or VLT® Decentral Drive FCD 302.

In both versions, the completely smooth, easy-to-clean surface free of cooling fins, prevents pockets of dirt from forming and allows detergents to drain off freely. The fan-free motor avoids the risk of airborne germs and dirt particles being drawn in and then expelled back into the surrounding air.

Hygienic design

The VLT® OneGearDrive® Hygienic complies with the requirements for best cleaning and hygienic design – with certification according to EHEDG (European Hygienic Engineering & Design Group). It is certified as usable for clean rooms and aseptic filling by IPA (Fraunhofer institute) according to the dedicated “Air Cleanliness Classification” DIN EN ISO 14644-1.

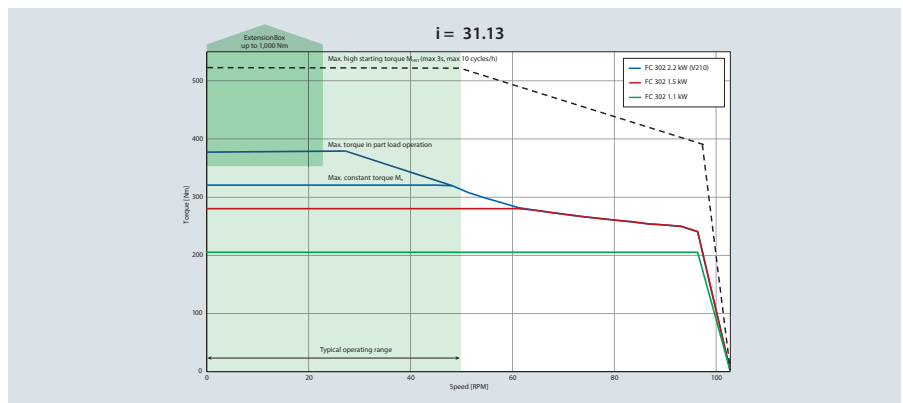
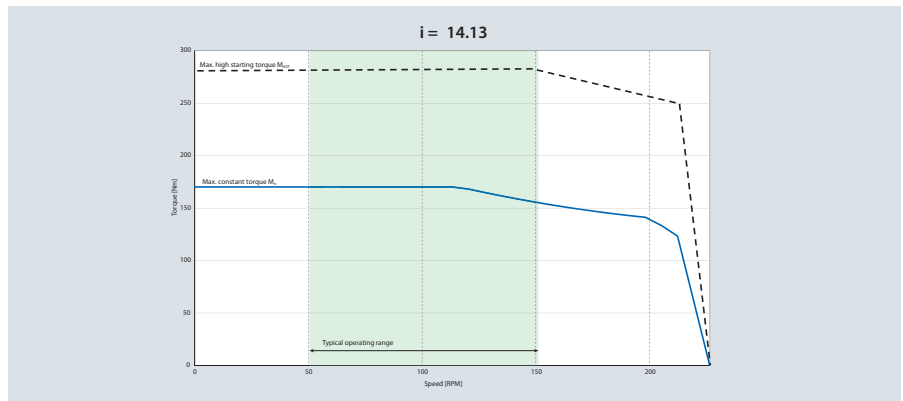
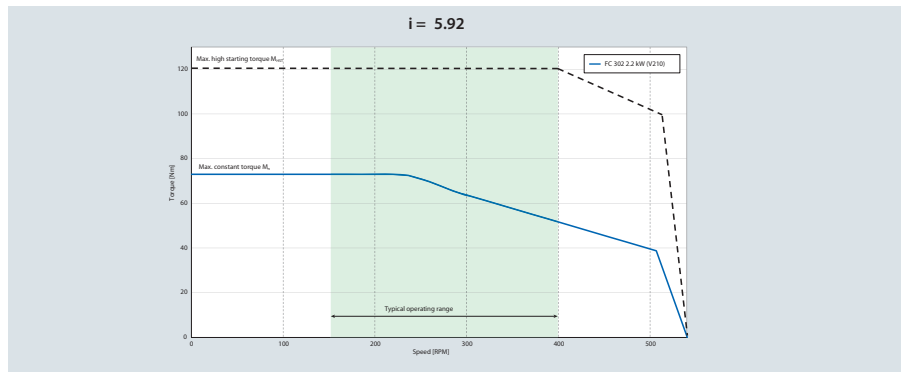


Specifications

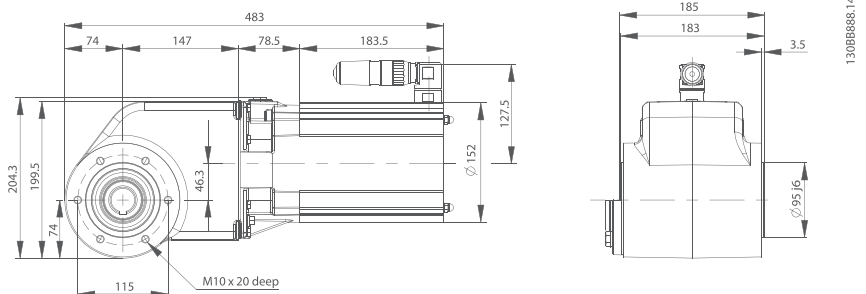
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|----------------------|----------------|
| Power rating | 0.75-2.2 kW |
| Speed max..... | 3000 rpm |
| Frequency max..... | 250 Hz |
| Nominal current..... | 5.5 A |
| Torque..... | 2.35 Nm/A |
| Voltage..... | 155 V/1000 rpm |
| Weight..... | Approx. 22 kg |

Speed/ torque characteristics

Gear ratios 5.92; $i = 14.13$ and $i = 31.13$



Dimensions



Dimensions of Danfoss VLT® OneGearDrive® Hygienic in mm

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