

# SIMOVERT MASTERDRIVES Vector Control Compact and Chassis Units



## Water-cooled converters

## Compact and chassis units

### Technical characteristics

These frequency converters bring together the whole experience gained with air-cooled SIMOVERT MASTERDRIVES with a water-cooling system. When built into the appropriate cabinets, high degrees of protection can be achieved, e.g. IP65.

Water-cooled units can only be supplied as compact and chassis units.

The heat loss of the frequency converters can be removed from the control cabinet, the control panel or the factory without any exchange of air.

The use of water-cooling power modules in drive engineering is a highly appropriate method of cooling as cooling water is available in many cases for production purposes.

The modularity and proven functionality with regard to control, communication, technology, operation and visualization of the SIMOVERT MASTERDRIVES is fully retained with this type of converter.

The water-cooled converters which come including the CUVV control module can be used to perform the most varied of tasks, such as those involving:

- injection moulding machines
- wire drawing machines
- glass drawing machines
- main propulsion drives for ships
- cement mills
- recycling industry and the
- textile industry.

### Unit design

These units have the same design as the air-cooled MASTERDRIVES. In the heat sink area an air/water cooler is installed through which water from an external supply flows. The fan used in the air-cooled units is retained in order to ensure internal cooling of the boards, electronics box, capacitors and busbars. The performance data of the comparable air-cooled MASTERDRIVES have been retained. The unit has a supplementary cooling capacity under certain conditions (see technical data), i.e. the cooling circuit, in conjunction with the converter fan, is dimensioned so that it can remove more heat from the surrounding environment than the converter can produce.

#### Compact units 2.2 kW to 37 kW

The degree of protection for the units is IP20.

The cooling water lines may be connected from either above or below. The connections for cooling-water lines are on the side of the compact unit. The clearance required to an adjacent unit is approx. 65 mm.

#### Adapter sets for cooling water connection

The following adapter sets are available for the cooling water connection to the units:

- ½" adapter set for frame sizes A to F
- ¾" adapter kit for frame size G

The adapter set consists of cooling water hoses, hose clamps, jointing connectors (straight) with union nuts and washers.

#### Chassis units 37 kW to 200 kW

The degree of protection for the unit is IP00 (IP20 available as an option).

The cooling water lines can optionally be connected at the top or bottom.

#### Chassis units 250 kW to 400 kW

The degree of protection for the unit is IP00. Higher degrees of protection can be achieved by installing the units in system cabinets.

The cooling water lines can be connected at the bottom only.

These units can only release their own heat losses to the cooling-water circuit. In relation to a comparable air-cooled unit, the fan for the internal cooling of the unit has a lower output and is therefore quieter.