26. Februar 2013

TP-VT product description

GEZE sliding door drive VTM 300NT

LEONARDO Markengebäude (glass cube), Bad Driburg

Sliding door drive VTM 300NT

Agenda

- Description VTM 300NT
- Specifications
- Functional description
- Control and safety sensor
- Planning and technical documents
- Control cabinet VTM 300NT
- Limitations
- Inquiries, proposals
- Order processing
- Range of applications
- Examples of installation
- VTM engine variants
- ID numbers VTM

LEONARDO Markengebäude (glass cube), Bad Driburg

VTM sliding door drive

Description VTM 300NT

- **GEZE VTM 300NT** sliding door drive is developed for the installation on the outer sides of cruisers. **VTM 300NT** is based on the **TSA 360NT** unit with **DCU1** control technology.
- Electric components, such as control unit, battery, transformer, display program switch, are installed in a separate control cabinet. The control cabinet is installed in the dry inside of the cruiser.
- All materials are optimized for the medium seawater. This is ensured by, stainless steel fasteners and bearings such as other seawater resistant materials. The **DCU 1** drive motor is protected by a lens cap. Wiring is ensued with two terminal boxes on the drive unit.
- The engine is processed only by TP-VT. In advance all functions and requirements are necessary. Delivery times and prices on request.
- Increased installation demand by service partner (wiring)

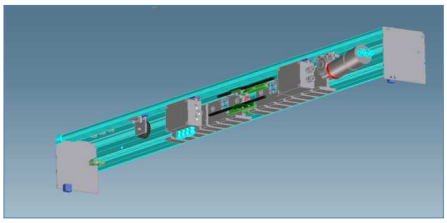

fig.: drive unit VTM 300NT

VTM sliding door drive

Specifications

- **Opening width:**
  800 – 2000mm (single-leaf)
  800 - 2500mm (double-leaf)

- **Max. leaf weight:**
  1 x 100kg (single-leaf)
  2 x 100kg (double-leaf)

- **Electric:**
  voltage: 230V
  frequency: 50/60 Hz
  rated power: 200W

fig.: VTM 300NT 1-leaf

- **Parameter:**

opening speed:	0.2m/s … 0.7m/s
closing speed:	0.2m/s … 0.5m/s
hold-open time:	0 - 60s
opening and closing force adjustable:	standard: 150N

- **Sensors:**
  According to GEZE Standard, DIN 18650, ship classification, wharf specific requirements
  Note: the IP protection of all sensors has to be checked.

VTM sliding door drive

Functional description GEZE VTM 300NT

Operating modes

The door system can be switched at different types of setting modes with the program display switch (DPS). The customer requirements have to be clarified :

- **'permanent open':** The door drives to the open position and remains open. Movement detector or opening switch are deactivated.
- **'automatic':** The door opens as soon as the movement detector or opening switch sends a signal and closes after an individually adjustable time. Safety sensors protect the driving way of the leaves. If there is any person in the opening, the closing process will be stopped.
- **'reduced opening width':** The fixed settings of the learning mode are activated or deactivated.
- **'shop closing' (one-way):** The door opens just in case if a person goes from the inside to the outside. (Not required in shipbuilding)
  Could be adjusted optional.
- **'night':** Movement detectors are switched inactive, the door closes.
  On the control unit all entrances are blocked.
  Not required in shipbuilding
- **'service':** Function for service, maintenance, repair;
  possible with GEZE connects from V3.0

VTM sliding door drive

Control and safety sensor

Actuation sensors:

According to GEZE Standard
Elbow switch
LED sensors
Radar
Costumer potential-free sensors
Note: the IP requirements have to be considered generally.

Safety sensors:

Safety light barrier IP65
- in shipbuilding two pairs are installed
- installation height: 200 -1000-1300 1600m above the floor

Ultrasonic sensors
- just for the dry inner zone

Light curtains
- limited – can be applicable in consultation

fig.: VTM 300NT, 2-leaf

Black Out function:

In case of an emergency, the doors are unplugged. The doors open permanently in all operation modes by the battery

Lock:

Toothed belt latch is not possible (no IP protection)
not permitted in shipbuilding

VTM sliding door drive

Planning and technical documents

- Installation drawing 88302-ep69 and further
- Sliding door drive VTM 300NT 88302-ep07
- Control cabinet 500x400x225mm 88320-0-0004
- Cable plan to 80340-9-0959
- Standard DCU1 optional connections
- English documentation

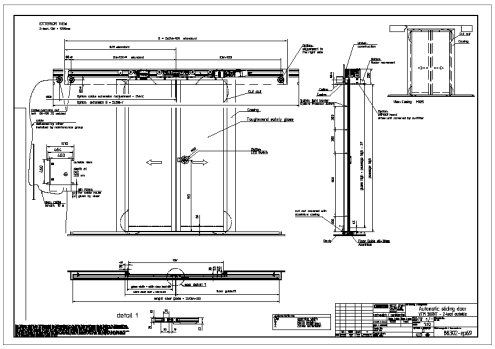

fig.: concept drawing 88302-ep69

Sliding door drive VTM 300NT

Control cabinet VTM 300 NT

VTM 300NT is standardly programmed with the Software **V3_0 VT_v01 CHS0x3ea** (shipbuilding).
The Software can be exchanged with the Standard **DCU 1** software.
Control cabinet is installed at the dry inside.
Cable length from control cabinet to drive unit: max. 15m
Routing of cables on site and according the current electro technical standards

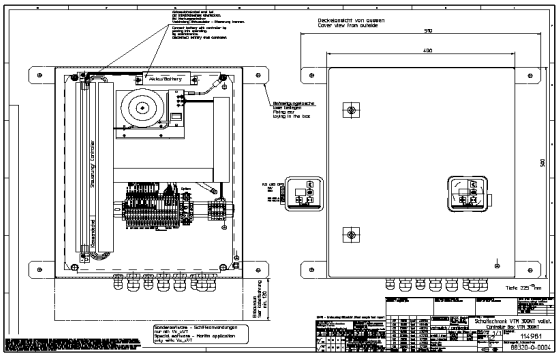

fig.: Control cabinet, 8820-0-0004, ID 114981

VTM sliding door drive

Limitations

Not possible is:

- FR permission
- IP protected toothed belt latch
- protection against burglary
- Door systems, which open and close directly in or above the water level (swimming channels)

Generally all applications have to be tested for function and purpose.

Additional requirements (examples):

- chemical requirements
- material compatibility: examples

Aluminum
Stainless steels
Plastics
Rubber profiles
Cables and electric
Surface coatings
Glass
Sensors ...

VTM sliding door drive

Control cabinet VTM 300NT

Template for announcement: (should be aligned to the application)
Sliding door drive GEZE VTM-300 NT

Leaf weight	1-leaf:	max. to 100kg
	2-leaf:	max. to 2*100kg
Opening width	1-leaf:	800-2000mm
	2-leaf:	900-2400mm

Aluminum girder profile for driving unit with roller carriage.
Self-learning microcontroller
Smooth-running DC drive with encapsulated motor, short circuit protected power supply 230V AC, hardwearing high-power DC motor,
power transmission via toothed belt.
Running rail and girder profile of aluminum, anodised surface 15my, coloring EV1
Running and support bearing are made of plastic with a grooved ball bearing of stainless high-alloyed steel

Control:
Self-learning, with an automatic error detection, automatic adaption of hold-open time on frequency guarantees an optimal convenience, adjustable hold-open time, reduced opening width, adjustable opening and closing speed, safety auto reverse in the closing direction, power limit 150N according to BGR (former ZH 1/494)
Display program switch with membrane keyboard and display: permanently open, automatic mode, shop closing.
Control, power supply, programming switch and wiring are supplied in an external cabinet- prepared for installation on a dry place

One-way movement detector **GEZE GZ 472** to safeguard the sliding plane in 200, 1000, 1300, 1600 mm height

Materials have an increased corrosions resistance for sea air.
Effects associated with chlorine-containing air or chemical interventions can **not** be excluded.
An additional ground wire in the range of wet rooms like bathrooms is necessary.

VTM sliding door drive

Inquiries, proposals

VTM 300 NT sliding door drive has to be adjusted separately for each inquiry and proposal.
Ahead of each inquiry functions and applications have to be checked. Entries have to be compiled by TP-VT. Additional requirements have to be validated by TP.

There are no deposited gross- and transfer prices.
Prices have to be calculated by the appropriate agencies (Controlling, Sales).
Surcharge for TP have to be discounted always.
Request of proposal is handled by responsible sales employee.

Responsibility ensued upon consultation.

- Traffic engineering VSH7, skvl
- Domestic construction VS-departments, if no VT-object
- Abroad construction VSE, if no VT-object

VTM sliding door drive

Order processing

- **VTM 300NT** sliding door drive can be illustrated by existing configurations.
- TP is required on all orders.
- Special sizes have to be considered at entry.
- Special solutions have to be supplemented by TP. For the handling technical knowledge is required.
- The job creation is made by VS in consultation with TPM/TPE.
  - Head order data by VS
  - Technology and configuration in consultation with VS – TPM
  - Control and production by FS
  - Field installation only under consultation with, montage partner - VS -TP
  - project-related documentation TP

example: SAP input mask VTM 300NT – configuration

VTM sliding door drive

Order processing

- Development of the drive technology on the basic of concept drawings
- Installation drive and floor guide
- Measurement of veneer plates
- Measurement of ISO fittings VTM
- Order of glass panels
- Installation of veneer plates
- Preinstallation and glazing of door and side parts
- Installation of door leaf and side parts
- Installation and wiring
- Implementing
- Joint approval with wharf and carrier

Note:
Increased process effort for the installation team:
- repeated journeys
- site consultation meetings
- information about adjustments

VTM sliding door drive

Range of applications

- Shipbuilding cruisers
- Riverboats
- Passenger ferries
- RORO ferries
- Sliding doors for the industrial sector (restricted by function and requirements)
- Swimming pools (restricted usable/ individual examination required)
- Kitchen doors
- Wet rooms

fig.: VTM 300NT with ISO fitting VTM-NT

VTM sliding door drive

Examples of installation

VTM 300NT
Examples

VTM sliding door drive

Examples of installation VTM 300NT with ISO fitting VTM-NT

Examples of installation
shell construction-finishing

VTM sliding door drive

VTM drive variants

VTM 310 NT

- Technology is based on the sliding door system **VTM 300NT**. All electric components are installed on the track. Drive unit only permitted for dry inner zone.
- **Advantages:** equivalent structure to **VTM 300** – same components, low replacement management, same Service and attendance instruction (from V3.0 via GEZE connects possible)

VTM – SL

- Limited alternative in minor space conditions
- Installation only with reconciliation of the wharf
- Electronic compontens in control cabinet ID **114981**
- IP 54 protected engine
- advices: mechanical components have no increased corrosion protection, SL- cap only to a limited extent mountable
- Drive unit is projected to 100% by TP.

VTM sliding door drive

Further option TP-VT Solutions

- Flush-mount wood leaf with integrated GEZE ISO fitting
- Elbow-switch with customer favoured imagery
- Elbow-switch installed on the moving leaf
- Cable access points / energy chains
- Queries for air conditioning systems / reduction of energy costs
- Multicolored designs
- Special glass with corroded motives
- Component reduced sliding drive for yacht building with very constricted installation space
- SL-upright
- Definitions of service and attendance (consulting of wharf and carrier to reduce costs)
- Cushioned braked sliding power in electroless condition

VTM sliding door drive

ID numbers VTM

→ Control cabinet **VTM 300NT**		**114981**	
→ Drive unit **VTM 300NT**		**I14981**	configurable
→ Floor guide continuous		**088335**	configurable
→ ISO fitting VTM		**118514**	configurable
→ Drive unit **VTM 310NT**		**114405**	configurable
→ Door suspension plate in reconciliation with door suppliers / interiors			
→ Examples for door suspension plate:			
– Suspension plate		**012658**	
– Suspension bolt	M12x 60 - A2	**101161**	
– Nut	M12 – A2	**101162**	
– Crown gear	A13 – A2	**101163**	
– U-disk	A13 - A2	**101165**	
– Floor guide 16mm		**021874**	
– Relay for single-leaf doors		**103352**	

compiled by TPM2, 19/11/2012

26. Februar 2013

Thank you for your attention

GEZE GmbH

| LEONARDO Markengebäude (glass cube), Bad Driburg