

**YOUR BENEFIT:**

- Optimum inlet
- Wide range of variants
- Submersible length up to 15 m

SUBMERSIBLE PUMP MULTI-STAGE **HZV**  
+SPECIAL DESIGN FOR ZONE 0

## SUBMERSIBLE PUMP HZV

### Description / Application

Type HZV is a vertical single or multi-stage submersible centrifugal pump that was specifically developed for pumping hydrocarbons in refueling systems. Common examples of use include the removal of fuels and solvents from underground tanks, the pumping of kerosene in hydrant systems for aircraft refueling and the return of condensate. Due to a wide range of materials, various design variants and shaft seals, HZV pumps are suitable for handling many fluids of not too high viscosity, as long as they are free of solid additives.

The hydraulic pump part is arranged in the vessel or in the pumped medium. The lantern for receiving the drive motor is constructed outside the vessel on a dome cover. The connection is made by a multi-stage shaft and pipe string. The pump and drive shafts are supported in sleeve bearings. The upper drive shaft is fixed by a grease-lubricated, double-sided angular ball bearing. This allows submersible length of up to 15m.

### Applications

- Chemistry & Petrochemistry
- Offshore
- Ship technology & Marine
- Refueling equipment & Aviation
- Tank storages & Tank farms
- Renewable energy & Environmental engineering

Info HZV



## SUBMERSIBLE PUMP HZV

### Technical Data

#### Design

Pump type	Multistage Pump
Stages	Single or multi-stage
Sealing	Mechanical seal
Set-up	Vertical
Self-priming	No
Bearing	Antifriction bearing, sleeve bearing
Lubrication	Grease / Oil

#### Material

Spheroidal graphite iron (EN-GJS) / Cast steel (GP-240 GH), Austenitic cast steel (1.4408/1.4571), Duplex (1.4517), Ni-Based (2.4686)

#### Technical Data

Q max*	600 m <sup>3</sup> /h [2640 gpm]
H max*	500 m [1640 ft]
Operating pressure**	16 bar [232 psi/1.6 MPa]
Temperature**	200°C [390°F]
max. speed	3500 rpm

\* depending on size and speed

\*\* higher temperatures and pressures on request

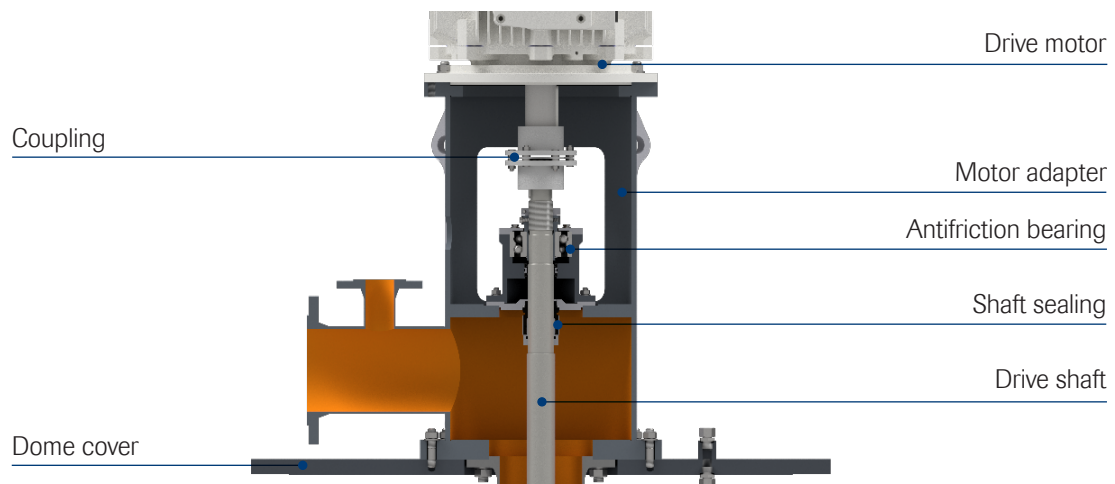
#### Norm

ISO 5199 / API 610 (VS1 or VS6)

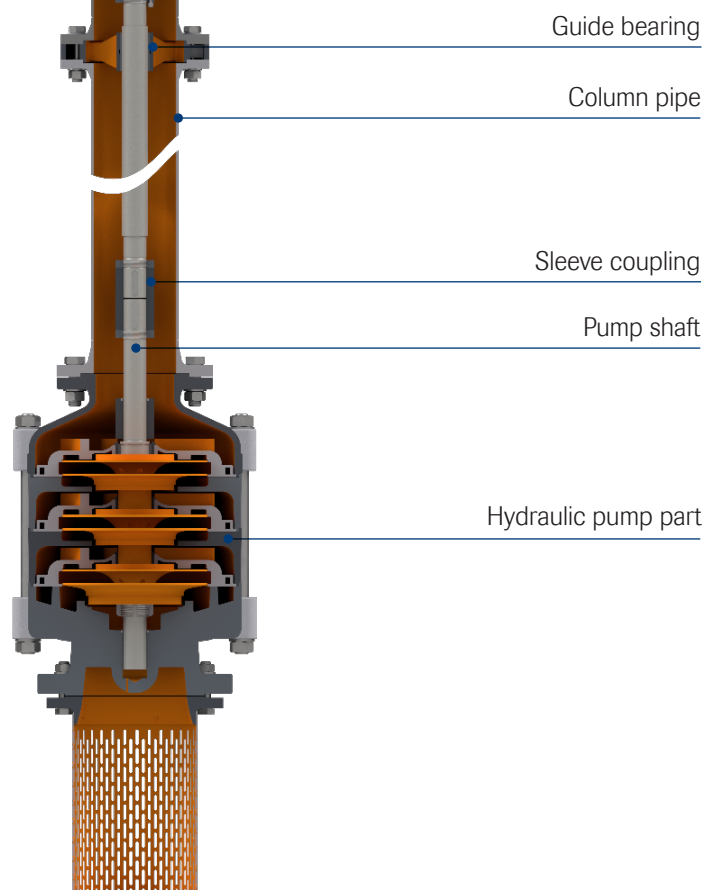
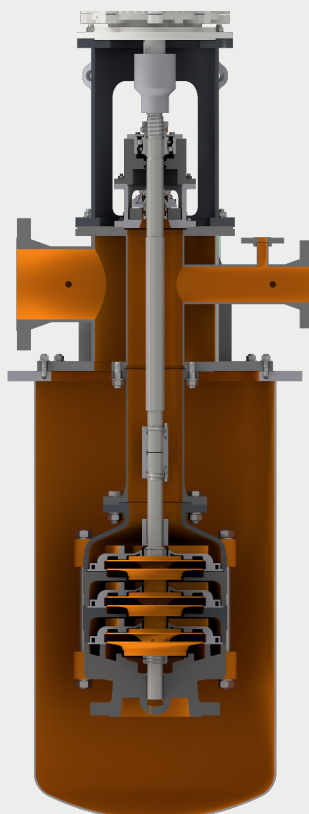
Explosion protection: Category 1 / Zone 0

# SUBMERSIBLE PUMP HZV

Sectional view / Standard design

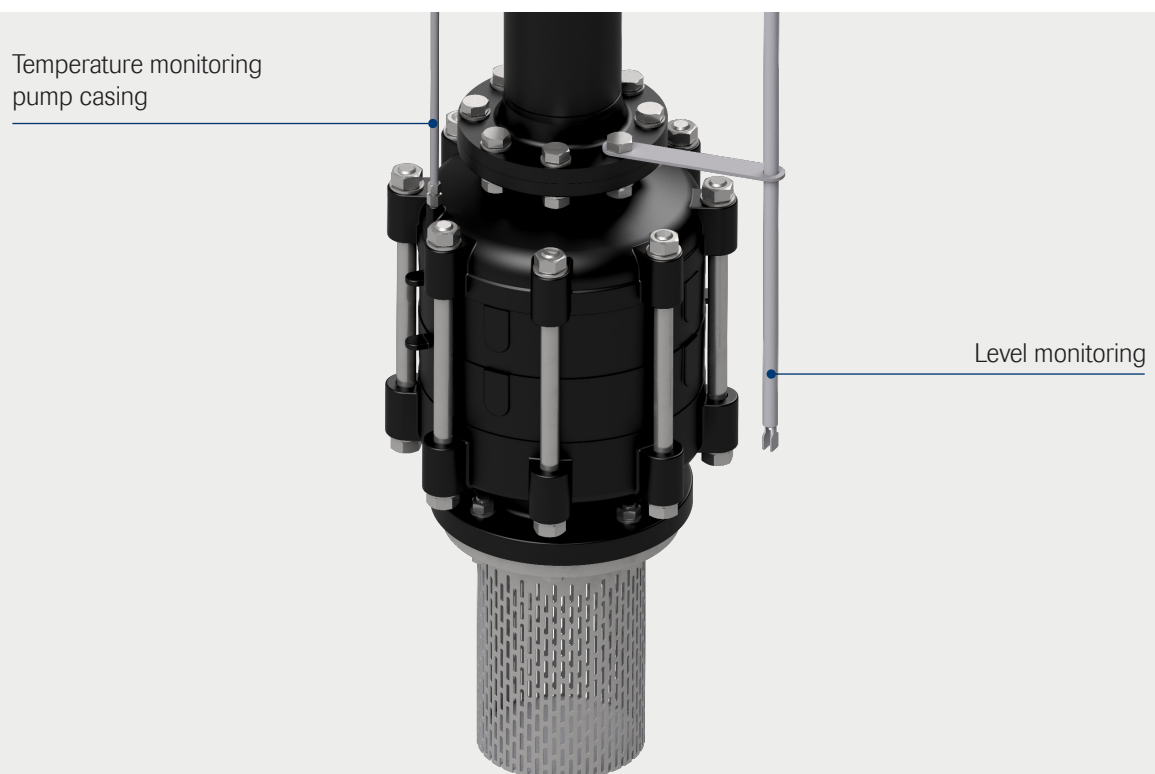


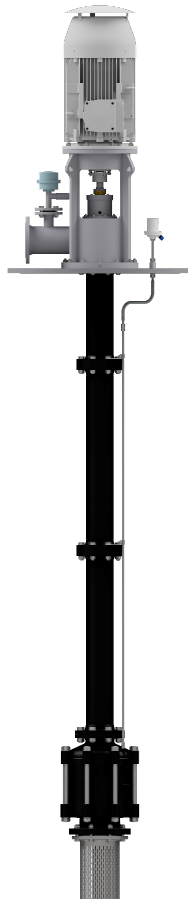
## Barrel-casing design



# SUBMERSIBLE PUMP **HZV CAT.1/V**

**Type-tested  
ATEX-design**





## SUBMERSIBLE PUMP **HZV CAT.1/V**

**Type-tested  
ATEX-design**

Category 1 - Submersible pumps are used to pump flammable, light flammable and highly flammable liquids from zone 0. The liquids must belong to temperature classes T1 to T4.

An EU type-examination certificate issued by the notified body confirms compliance with the essential health and safety requirements of the Explosion Directive for the design of these submersible pumps.

### **Diverse security concept**

A level monitor in the tank ensures that there is sufficient liquid coverage during operation of the pump. A flow switch ensures a defined minimum flow rate. Temperature monitoring on the pump body prevents the pump casing from heating up excessively. The entire safety chain must be checked regularly as part of maintenance measures. With this concept, the failure of a monitoring device is to be viewed as a rare malfunction. The simultaneous failure of several monitoring devices is sufficiently unlikely.

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