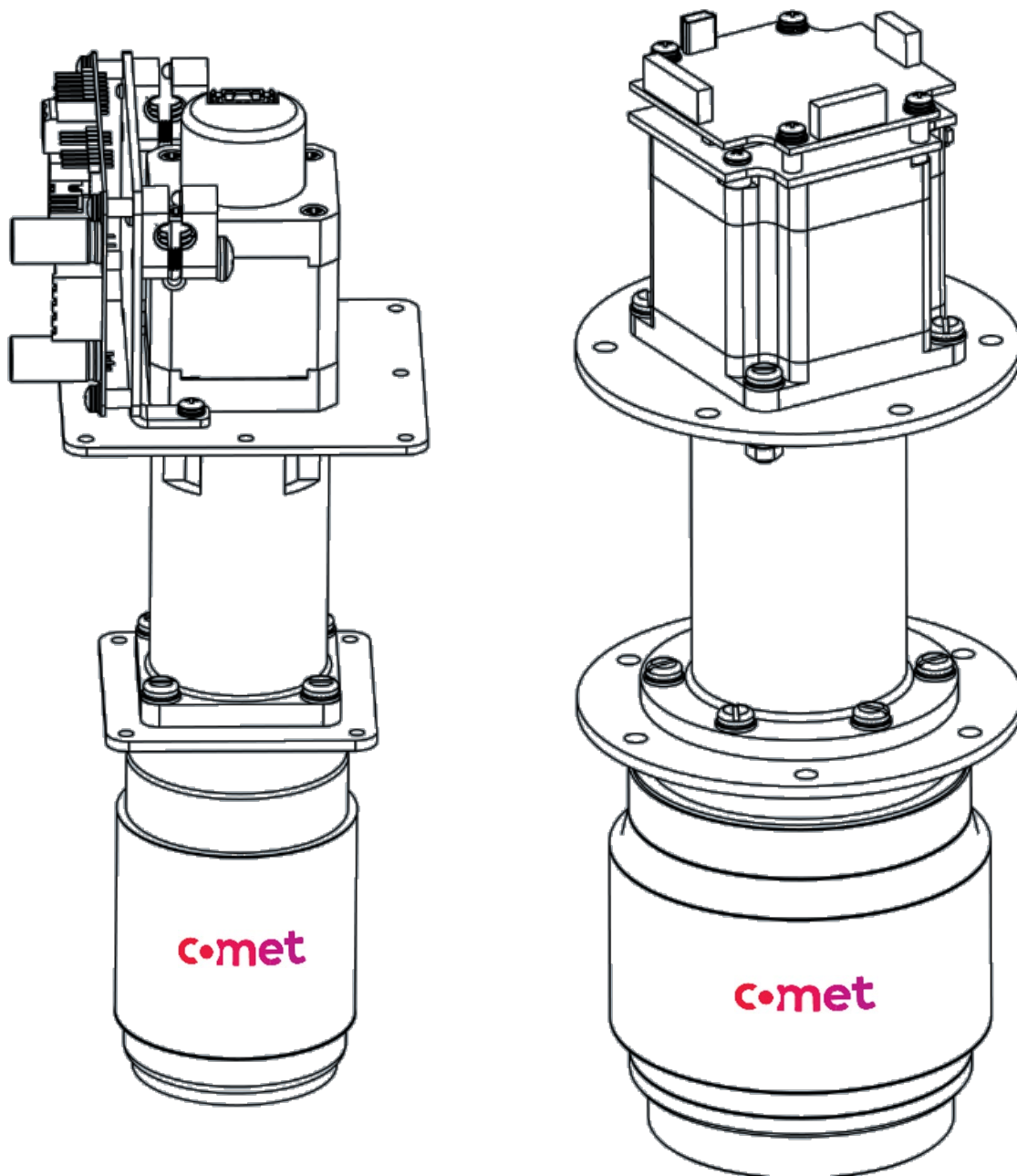


Safety Aspects Integrated Drives



1. Safety aspects

1.1 Capacitor

Be aware that the capacitor can store electrical power.

1.2 Electrical Insulation

The electrical insulation between the bulkhead mounting flange and the capacitor mounting flange is achieved by the IFLEX™ coupler and the mounting tube, using highly insulating PEEK material. The dimensions of the coupler and the mounting tube are chosen such that their insulation voltage is generally in the range of 50% to 70% of the respective capacitor's stand-off voltage (**working voltage**). For some capacitors, though, this insulation voltage will even cover the full stand-off voltage. The former is referred to as "reduced voltage", whereas the latter is referred to as "full voltage". The type designation of the selected product will also reflect the respective specification.

The calculation of the isolation distance is based on the norm EN 50178 (norm for high voltage systems).

The following terms and conditions are based:

- Degree of pollution: 1
- Over voltage class: 1
- Safety factor: 7.7

The isolation distance is calculated on the formula shown in Figure 1.

$d = \frac{U_z - 1.35}{30 * p}$	<p>d distance [cm]</p> <p>U_z ignition voltage [kV]</p>
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Figure 1: Formula to calculate the isolation distance

Led by experience. Driven by curiosity.

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