Steel housing
Primary voltage 12 and 24 kV
Power rating up to 1000 kVA

Definition
CSS is a type tested assembly comprising of an enclosure containing a medium voltage switchgear, a distribution transformer, a low voltage switchboard, interconnections and auxiliary equipment to transform energy from medium to low voltage systems.

Standard features
CSS layout can be equipped with air or gas insulated ring main unit (RMU) for secondary distribution network.

Low voltage side is equipped with LVS concept switchboard. Mercury 10 layout can accommodate up to 16 NH3 size fuselists. Low voltage switchboard can be equipped with DIN busbars, Z busbars or Kabeldon type busbars.

Transformer
CSS is designed and manufactured for installation of dry or oil type transformers with the transformer compartment designed for natural cooling which will meet temperature rise limits and IEC requirements.

Medium voltage
CSS medium voltage compartment design is flexible to accommodate different types of secondary switchgear: 12/24 kV SafeRing / SafePlus with SF6 or non-SF6 insulation up to 5 bays or 12 kV air insulated NAL switchgear up to 4 bays.

Features
- High level of safety for equipment and personnel
- All equipment inside CSS is type tested
- Engineered footprint meeting required clearance standards
- Oil collection pit underneath the transformer
- Outside operated steel housing
- Can be lifted with transformer installed (consult ABB first)
- Engineered for smooth air flow and natural cooling
- Locking system for all doors to prevent un-authorized entry of personnel
- Stainless steel hinges for corrosion resistance
- No access to live parts
- Steel parts are tested according to ISO 6988

Low voltage
Low voltage switchboard is type tested according to IEC standards and can accommodate various types of switching devices such as MCCB’s, ACB’s or fuse switches.
Measurement and monitoring devices, as well as control and communication devices can be accommodated if needed. Busbar sizes are dimensioned according to transformer ratings. Various number and ratings of outgoing feeders are possible, depending on the transformer size and customer needs.

Interconnections
Transformer medium voltage connection is done with single-core XLPE insulated cables (PVC or PE sheath).
Low voltage cable connections are done with double insulated high flexible cable, to provide earth fault and short-circuit proof design for service personnel safety. Interconnection is dimensioned according to maximum transformer ratings.
Optional Features

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### Mercury 10

**Power rating**: 1000 kVA

**MV Switchgear**

- ABB SafeRing / SafePlus
- NAL Switchgear / SafeLink 2

**Rated voltage**

- Up to 24 kV
- Up to 12 kV

**Short circuit withstand current of internal earthing network**

- Up to 20 kA, 1 s

**Substation dimension (L x W x H)**

- 2730 x 2130 x 2430 mm

**Weight of substation with or w/o LV/MV switchgear excluding transformer**

- 2790 kg / Up to 3750 kg

**Transformer compartment dimension (L x W x H)**

- 1870 x 1190 x 2200 mm

**Maximum allowed transformer load / no load losses**

- Ak - Ao

**Enclosure IP class**

- IP23D

**Enclosure thermal class**

- 20K

**Rated current of LV panel**

- Up to 1600 A

**Rated short circuit withstand capacity of LV busbar system**

- Up to 50 kA, 1 s

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**Contact us**

**ABB AS**

Aruküla tee 83, Jüri, Rae vald
Harjumaa, 75301, Estonia

info.css@ee.abb.com

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