Prefabricated substations
HEKA
The **HEKA** prefabricated substations have been developed for the transformation of 6… 24/0.4 kV medium voltage power for the use of consumers. These units include low and medium voltage switchgear equipment, circuit protection devices, a transformer, as well as all necessary wiring and accessories.

**CONSTRUCTION**

The substation enclosures are manufactured out of 2.0 mm thick, galvanized, sheet metal. They are resistant to ultraviolet light and have a protective surface with powder-coating paint. The design of these substations has the advantage that the enclosure and base can be lifted and transported to its location after prefabrication; however, after the transformer has been installed, consultation with the manufacturer is advised.

Substations enclosures made out of reinforced concrete are available with several types of exterior finishing (plain concrete, crushed granite surfacing, simulated brick finish, painted as well as smooth surfacing). The units that can be accessed from the outside have an integrated base for cabling; those that can be maintained from the inside have separate base modules. The units can be lifted and transported after the electrical equipment has been installed; though, once the transformer has been added, consultation with the manufacturer is advised.

**ELECTRICAL EQUIPMENT**

Medium voltage equipment: available with one to five chambers; air or SF6 insulation switching (for example, ABB SafeRing; Siemens 8DJ20 and 8DH10, Merlin-Gerin RM6 and SM6, Eaton Holec Xiria).

Low voltage equipment: available with up to 2500 A rated current in various configurations and equipped with a choice of fuses and automatic circuit breakers for the outputs. Additional options: areas for metering and billing, sections for providing street lighting, and reactive-power compensation.

Power transformers that are rated up to 1600 kVA are available either submerged in oil or in a dry state. In order to prevent environmental damage, the units have an integrated oil collector in the base. The substations are pre-equipped with the necessary cabling for connections to low and medium voltage switching equipment.

**TRANSPORT AND INSTALLATION**

The substations are equipped with loops for lifting hooks. The base, enclosure and roof should be lifted separately. The base contains the cabling. On-site installation steps include the preparation of the floor base and the external connections. Each unit includes manuals for installation and use.

**TESTS AND STANDARDS**

The prefabricated substations have been manufactured and tested according to the standards IEC 61330 and IEC 62271-202. All components contained in the unit conform to these standards.
Non Walk-in prefabricated metal enclosure substations

**HEKA 1 VM 160**

- Sn max: 160 kVA
- In (MV): -
- In (LV): 400 A
- M: 400 kg

**HEKA 1 VM 250**

- Sn max: 250 kVA
- In (MV): 630 A
- In (LV): 400 A
- M: 650 kg

**HEKA 1 VM 1000-2**

- Sn max: 1000 kVA
- In (MV): 630 A
- In (LV): 1600 A
- M: 1850 kg

**HEKA 1 VM 1000-3**

- Sn max: 1000 kVA
- In (MV): 630 A
- In (LV): 1600 A
- M: 2100 kg
Walk-in prefabricated concrete enclosure substations

**HEKA 1 SB 1000**
- Sn max: 1000 kVA
- In (MV): 630 A
- In (LV): 1600 A
- M: 12500 kg

**HEKA 1 SB 1600**
- Sn max: 1600 kVA
- In (MV): 630 A
- In (LV): 2500 A
- M: 26000 kg

**HEKA 2 SB 1000**
- Sn max: 2x1000 kVA
- In (MV): 630 A
- In (LV): 1600 A
- M: 21000 kg

**HEKA 2 SB 1600**
- Sn max: 2x1600 kVA
- In (MV): 630 A
- In (LV): 2500 A
- M: 30500 kg
Non Walk-in prefabricated concrete enclosure substations

**HEKA 1 VB 630**

**HEKA 2 VB 1000**

As a result of future product development and possible changes in the applied standards, the manufacturer reserves the right to change the product specifications and construction without prior notice. Please contact AS Harju Elekter Elektrotehnika to check the accuracy of the information in this publication.

**Substation Name Code**

**Product family:** HEKA Harju Elekter prefabricated substation

**Number of power transformers:**
- 1 One power transformer
- 2 Two power transformer

**Access for maintenance:**
- S Interior
- V Exterior

**Enclosure material:**
- M Metal
- B Concrete

**Transformer maximum power:**
- 160 kVA
- 250 kVA
- 630 kVA
- 1000 kVA
- 1600 kVA

**Data Code**

<table>
<thead>
<tr>
<th>Sn max</th>
<th>Rated maximum power of the substation</th>
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<tbody>
<tr>
<td>In (MV)</td>
<td>Rated normal current of the middle voltage switchgear</td>
</tr>
<tr>
<td>In (LV)</td>
<td>Rated normal current of the low voltage switchgear</td>
</tr>
<tr>
<td>M</td>
<td>Total mass of the substation (without power transformer)</td>
</tr>
<tr>
<td>630 kVA</td>
<td>630 A</td>
</tr>
<tr>
<td>1000 kVA</td>
<td>1600 A</td>
</tr>
<tr>
<td>7200 kg</td>
<td>10000 kg</td>
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