HMC-2 operating mechanism
Designed for reliable switching

Introduction
HMC-2 is the latest member of the new HMC family of operating mechanisms. The HMC-2 uses the same well-proven operating principle as its predecessor HMB, but is based, like the HMC-4, on the latest technology for highest reliability. It is an ideal replacement for existing HMB-1 and HMB-2 mechanisms.

Applications
Operating mechanisms are a key component of high voltage circuit-breakers. They find their application in live tank breakers, dead tank breakers, generator circuit-breakers and gas-insulated switchgear.

Innovation and reliability
Our experience is based on:
– 30 years of design and manufacturing
– more than 105,000 operating mechanisms produced
– more than 100 different product applications

The development of the HMC-2 is based on ABB’s long history of operating mechanisms and past history with the HMB. This experience has been used for many innovative solutions and resulted in patented new technologies.

As a result end users and manufacturers of high voltage equipment can expect the highest switching reliability available.

Life cycle cost
The HMC-2 is a compact and reliable operating mechanism, designed with easily accessible modules. Due to its advanced design the HMC-2 is free of scheduled maintenance for 10,000 CO-operations – resulting in the lowest life cycle cost possible.

Adaptation and time to market
The general design of HMC allows for superior adaptability compared to other types of operating mechanism principles. Leading to the shortest time-to-market; guaranteed also by compatibility with all HMB-1 and HMB-2 applications.
The features of HMC-2
- Highest switching reliability by using new design principle like
  - cylinder made from gray cast iron
  - new robust valve technology
  - wiper protected sealing systems
  - gearless pump unit
  - integrated close-interlocking
- Lowest life-cycle cost due to
  - being maintenance-free for 10,000 CO operations
  - easily accessible and exchangeable modules
- Shortest time-to-market due to
  - simple and easy adaptation to all circuit-breaker types
  - nearly identical travel curve as HMB, allowing alternative operating mechanisms test according to IEC62271-100
- Highest power density on market for most compact design of equipment
- Suitable for circuit-breaker applications up to 245 kV

One-fits-all concept
The HMC-2 one-fits-all concept is covering all installation orientations with one design. This means that all applications, either vertical or horizontal, can be served. To adapt to different energy demands only the number of springs is varied. The diversity of mechanisms at the customer is kept to the lowest and allows an efficient inventory management.

Technical data

<table>
<thead>
<tr>
<th></th>
<th>HMC-2/16-90</th>
<th>HMC-2/16-135</th>
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<tbody>
<tr>
<td>number of springs</td>
<td>4</td>
<td>7</td>
</tr>
<tr>
<td>piston rod diameter</td>
<td>16 mm</td>
<td>16 mm</td>
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<tr>
<td>stroke</td>
<td>90 mm</td>
<td>90 mm</td>
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<tr>
<td>stroke</td>
<td>135 mm</td>
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<tr>
<td>stored energy open</td>
<td>0.9 kJ</td>
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<td>stored energy close</td>
<td>0.4 kJ</td>
<td>0.7 kJ</td>
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<td>stored operating</td>
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<tr>
<td>sequence</td>
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<td>mechanical endurance</td>
<td>M2 acc. to IEC 62271-100</td>
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<tr>
<td>expansion stages</td>
<td>power pack (PP) / extended power pack (EP)</td>
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<tr>
<td>dimensions (EP)</td>
<td>340 mm x 580 mm x 770 mm</td>
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<tr>
<td>weight (EP)</td>
<td>approx. 190 kg</td>
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For more information please contact:

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