C-BEC – Crest Breaker Endurance Controller – performs multicycle mechanical endurance on all types of switchgear. This test is necessary to stabilize the mechanism and to identify “Early Infant Mortality” failures in the switchgear assembly.

C-BEC is available in a standalone version and with PC-control. Built-in AC and DC power supplies for energizing coils and motors can be provided as an option. Facility for connecting multiple breakers/drives at a time can also be provided.

Our New range of smart endurance controllers are PLC-based and have an HMI.

C-BEC can be designed for testing the following Switchgear devices
- Low voltage (LV) to ultra high voltage (UHV) circuit breakers up to 1200 kV
- Vacuum circuit breakers (VCB)
- Loco-head circuit breakers
- Gas insulated switchgear (GIS)
- Isolators/disconnectors
- Load break switches (LBS)
- On-load tap changers (OLTC)

Tests Performed
- Checks reliable working of Auto Recloser duty
- Checks reliable functional performance after multiple continuous operations
- Checks closure of contacts at each operation and stops test if all contacts do not close on command, indicating mechanical fault
- Checks continuity of tripping and closing circuits, indicating electrical circuit fault
Features

- Easy to setup and use, with safety features, permitting un-attended Endurance Testing
- Built-in AC and DC power supplies resulting in stable and reproducible testing conditions
- Long-life solid state relays and contactor multiplexer to issue Close and Trip commands to all connected devices
- Selection of test sequences as per relevant standards
- Ability to perform a pre-programmed test sequence on all connected devices at a time
- Automatic control and display of balance operations
- Individual electrical counters to count operations performed on each device
- Monitoring of Endurance Test status over smart phone / PC via internet
- Stops test with an alarm in case a mechanical or electrical fault occurs. SMS alerts available as an option
- Option to continue the balance operations after rectifying fault or isolating the connected device
- Auto-recovery of test after power failure. Keeps last known status in memory and resumes smoothly without any data loss
- Mounted in a specially fabricated rack on wheels for easy movement on shop-floors

**New PLC-controlled smart C-BEC is a self-contained endurance system with an ability to program tests through a 7-inch HMI. It has a facility for continuously monitoring Auxiliary Contacts. Test status and results are also displayed on the HMI.**

Software Features

- Windows-based software for programming and controlling test using a PC
- Test software simplifies test parameters selection, test setups storage, reports viewing, and analysis of graphical test data
- Test certificates can be stored and printed as per the manufacturer’s format
- All test data is stored in a database for analysis

Configurations

- Standalone chassis without Power Supplies
- Trolley mounted with accompanying Power Supplies
- Standalone PLC-based chassis with HMI, without Power Supplies
- PC-based with HD LED display offered as an option

Specifications

<table>
<thead>
<tr>
<th>Parameter</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>Close Command Duration</td>
<td>1 msec to 999 msec</td>
</tr>
<tr>
<td>Trip Command Duration</td>
<td>1 msec to 999 msec</td>
</tr>
<tr>
<td>Spring Delay</td>
<td>1 sec to 999 min</td>
</tr>
<tr>
<td>No. of Cycles</td>
<td>1 to 99999</td>
</tr>
<tr>
<td>Rest Delay Cycles</td>
<td>1 to 99999</td>
</tr>
<tr>
<td>Rest Delay</td>
<td>1 sec to 999 min</td>
</tr>
<tr>
<td>Delay Close-Open</td>
<td>1 msec to 999 min</td>
</tr>
<tr>
<td>Delay Open-Close</td>
<td>1 msec to 999 min</td>
</tr>
<tr>
<td>Special Mid Delay</td>
<td>1 msec to 999 min</td>
</tr>
</tbody>
</table>

Product specifications subject to change
Crest Test Systems is a pioneering company in the field of Test & Measurement. The Crest core team has an experience of 30 years in the field of Switchgear Testing. Our test systems are used everyday to test switchgear on the shop-floors of all leading switchgear manufacturers and also in government test and certification labs. Apart from the Power Sector, Crest also designs and manufactures customized test systems for Metros & Railways, Motor Manufacturing, Battery Industry, and Test & Certification Labs.