



### Specifications:

#### Why use HAPAM disconnectors?

- More than 75 years of experience
- Durable and reliable design
- Over 120.000 disconnectors and earthing switches are in service in more than 100 countries throughout the world
- Virtually maintenance free

#### General

The horizontal double-break disconnector consists of three poles. Each pole consists of a frame, two supporting insulators at each end and one rotating insulator in the center, on which the main blade is mounted.

#### Frame

The frame is made of a square tube in which in the center the bearing housing and the turntable are installed. The turntable is supported by two roller bearings. The bearing housing is sealed and filled up with grease, to ensure a long lifetime. All steel parts of the disconnector are hot-dip galvanized.

#### Insulators

The disconnectors can be equipped with insulators in accordance with IEC, ANSI or DIN specifications.

#### Main blade

The main blade consists of two fixed contacts, mounted on the supporting insulators, and a moving blade mounted on the rotating insulator. The main contacts are installed inside the main blade. They are made of copper, with a silver-plated surface. Each contact finger is provided with stainless steel springs to ensure reliable contact pressure. The contacts are self-cleansing, which makes the disconnector suitable for installation in areas with severe climatic conditions. Depending on the voltage rating, anti-corona shields will be provided.

#### Earthing switch

Hapam disconnectors may be equipped with earthing switches, which can be built-on to the right hand side and/or to the left hand side. The earthing switch consists of an Aluminum tube, provided with silver-plated contacts at both ends.

#### Drive mechanism

The disconnectors and/or earthing switches can be single-pole or three-pole operated by means of a motor-operated drive mechanism or a manual-operated drive mechanism.

In case only one drive mechanism is used for three-pole operation, the poles are interconnected by means of adjustable coupling rods. The drive mechanism also houses the auxiliary contacts for position indication.

### Testing

The disconnectors and earthing switches are designed and tested in accordance with latest IEC specifications. Hapam maintains a quality assurance system according to ISO 9001, certified by DNV GL (previously known as KEMA).

### Installation

The disconnectors and earthing switches are pre-assembled and adjusted in our works as complete as possible. The construction is designed so that all disconnectors can be installed and adjusted at site very easily, without the need of any special tools. Hapam provides clear installation instructions and assembly drawings.

### Maintenance

The disconnectors and earthing switches supplied by Hapam are designed so as to ensure that they are virtually maintenance free. However, to warrant a long and trouble-free service period, we advise that a visual inspection of the contacts and bearing points be carried out at regular intervals.

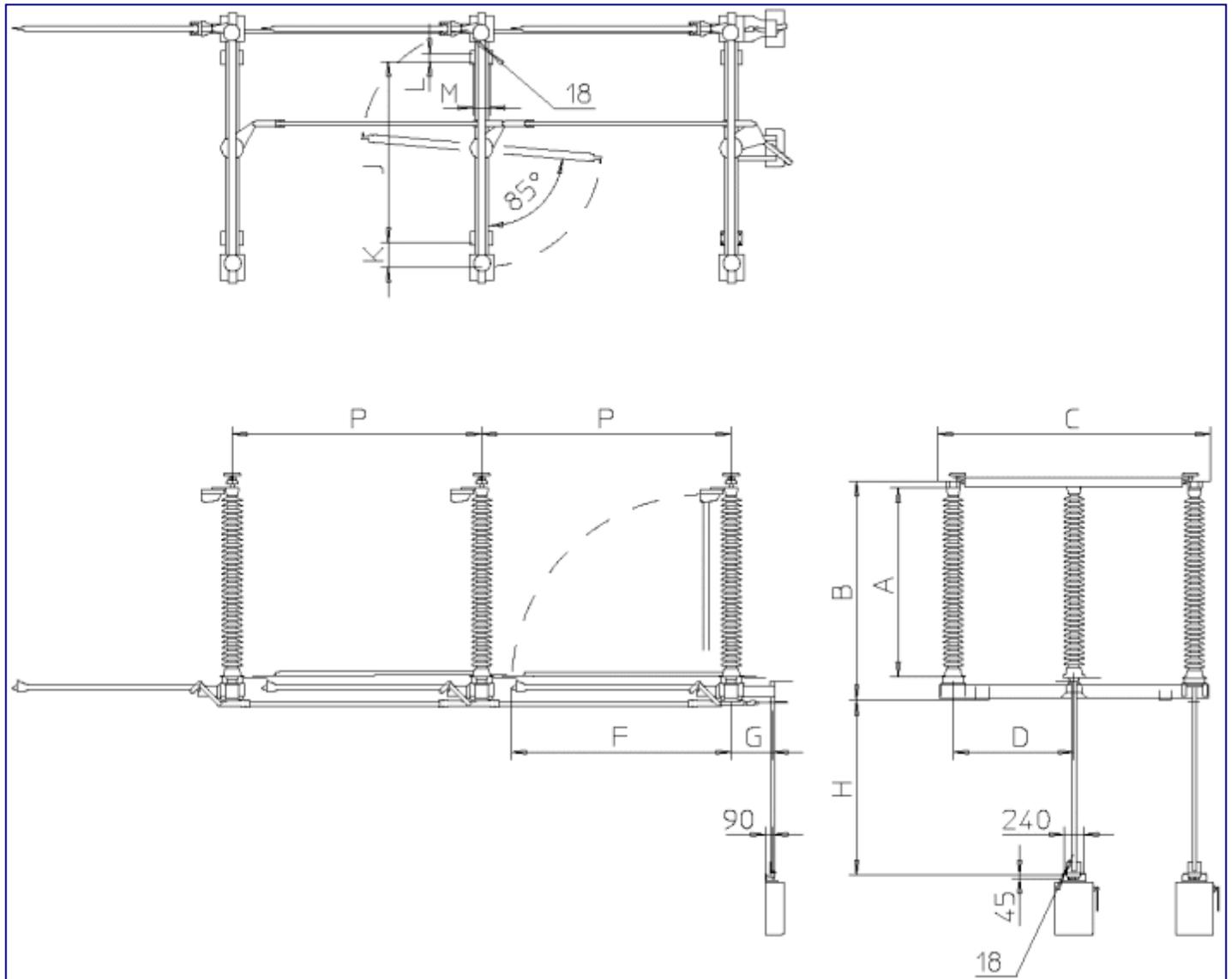
### Technical Data:

Rated Voltage		72.5	123	145	170	245	300	362	420	550	800
<b>Lightning Impulse Withstand Voltage</b>											
- to earth	kV	325	550	650	750	1050	1050	1175	1425	1550	2100
- across the isolating distance	kV	375	630	750	860	1200	1050	1175	1425	1550	2100
							+170	+205	+240	+315	+455
<b>Power frequency withstand Voltage</b>											
- to earth	kV	140	230	275	325	460	460	460	520	620	830
- across the isolating distance	kV	160	265	315	375	530	530	530	610	800	1150
<b>Switching Impulse Withstand Voltage</b>											
- to earth	kV	-	-	-	-	-	850	950	1050	1175	1425
- across the isolating distance	kV	-	-	-	-	-	700	800	900	900	1100
							+245	+295	+345	+450	+650
<b>Current and Short circuit ratings</b>		<ul style="list-style-type: none"> <li>• 1600 A - 80 kA peak - 32 kA/3 sec.</li> <li>• 2000 A - 100 kA peak - 40 kA/3sec.</li> <li>• 3150 A - 125 kA peak - 50 kA/3sec.</li> <li>• 4000 A - 160 kA peak - 63 kA/3sec.</li> <li>• 200 kA peak - 80 kA/1sec.</li> </ul>									

### Dimensions (mm)

Voltage (kV)	72.5	123	145	170	245	300	362	420	550	800	
<b>A</b>	770	1220	1500	1700	2300	2650	3150	3650	4400	On request	
<b>B</b>	1020	1470	1750	1950	2655	3005	3505	4185	4935		
<b>C</b>	1340	2090	2340	2580	3280	3720	4900	5700	6400		
<b>D</b>	500	875	1000	1100	1450	1575	2000	2400	2750		
<b>F</b>	1135	1585	1865	2065	2640	3050	3590	4090	4965		
<b>G</b>	285	285	285	285	500	500	285	285	285		
<b>J</b>	600	1350	1600	1800	2300	2550	3000	3800	4500		
<b>K</b>	200	200	200	200	300	300	500	500	500		
<b>L</b>	-	-	-	-	100	100	100	200	200		
<b>M</b>	175	175	175	175	210	210	210	280	280		
<b>P &amp; H</b>	defined by substation layout										

Drawing:



**HAPAM B.V.**

Voltaweg 30, 3752 LP Bunschoten-Spakenburg  
Postbus 133, 3750 GC Bunschoten-Spakenburg  
The Netherlands

Tel. 0031 33 2983004

Fax. 0031 33 2983204

E-mail: [hapam@hapam.nl](mailto:hapam@hapam.nl)

[www.hapam.nl](http://www.hapam.nl)