



Specifications:

Why use HAPAM disconnectors?

- * More than 75 years of experience
- * Durable and reliable design
- * Over 30 000 disconnectors and earthing switches are in service in more than 80 countries throughout the world
- * Virtually maintenance free

General

The vertical break disconnector consists of three poles. Each pole consists of a frame, one rotating insulator and two support insulators on which the main blade is mounted.

Frame

The frame is made of a square tube on which the insulators are mounted. The bearing housing for the rotating insulator is also mounted in this frame. 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 is made of an aluminium tube, which has silver-plated copper contacts at both the hinge end and the jaw end. During closing of the disconnector, the main blade makes a double movement: First, the blade is lowered so that it reaches full horizontal position and then the main blade rotates so that contact pressure is applied to both the hinge end and the jaw end of the disconnector.

The main contacts are of the "reverse-loop" design, which makes them suitable for very high short circuit currents.

All contact fingers are made of silver-plated copper and are equipped with stainless steel springs to ensure reliable contact pressure.

The main terminals are made of flat aluminium and can be drilled as per request.

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 aluminium 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 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.

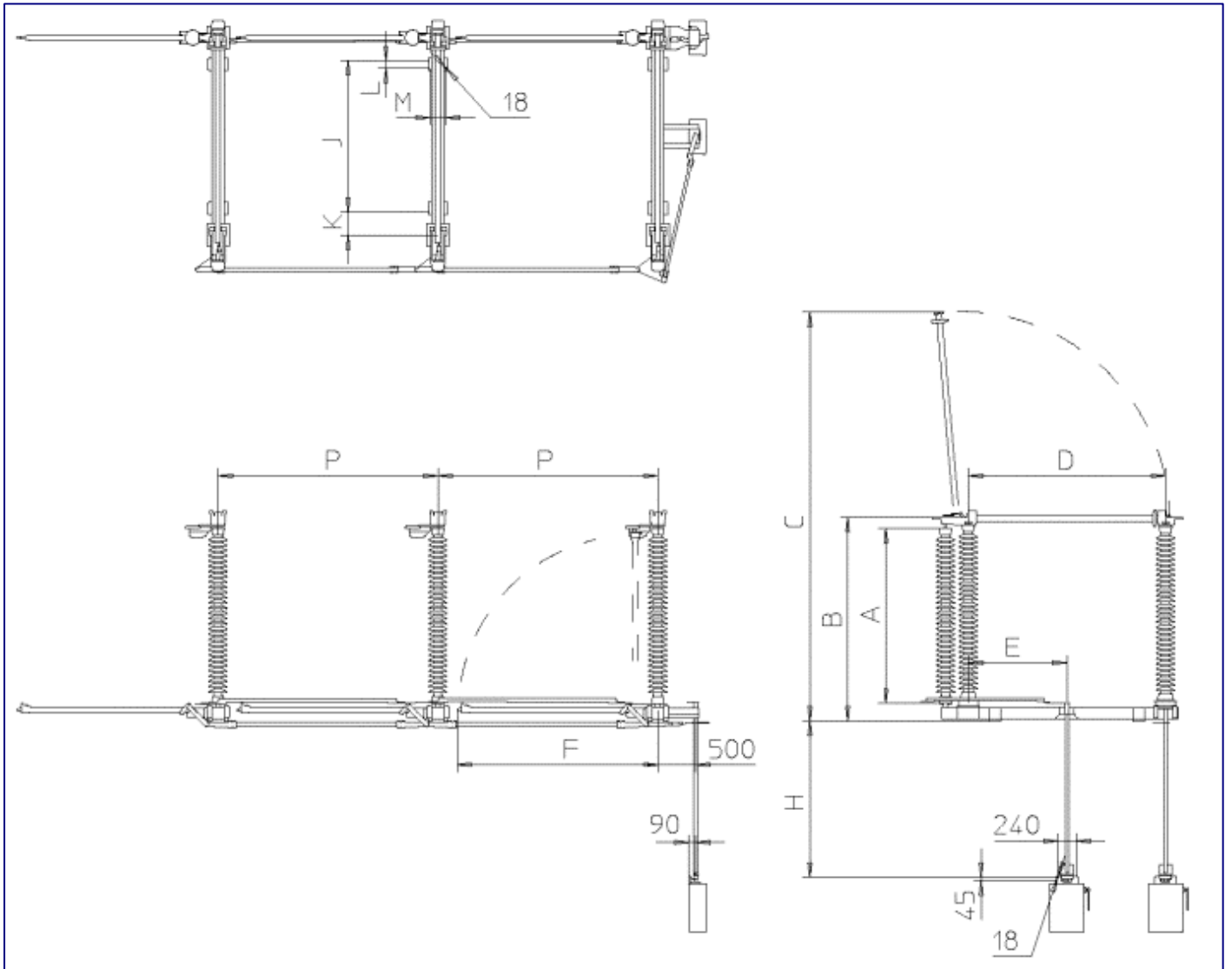
Technical Data:

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

Dimensions (mm)

Voltage (kV)	72.5	123	145	170	245	300	362	420	550
A	770	1220	1500	1700	2300	2650	3150	3650	4400
B	1100	1550	1830	2030	2685	3035	3345	3845	4595
C	2270	3115	3650	4045	5395	6145	6690	7650	9140
D	950	1450	1700	1900	2600	3000	3500	4000	4800
E	475	725	850	875	1300	1500	-	-	-
F	1135	1585	1865	2065	2645	2995	3790	4640	5040
G	285	285	285	285	500	500	-	-	-
J	550	1050	1300	1500	2000	2400	3500	4000	4800
K	200	200	200	200	300	300	-	-	-
L	-	-	-	-	100	100	-	-	-
M	175	175	175	175	210	210	-	-	-
P & H	defined by substation layout								

Drawing:



HAPAM BV

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

Tel. +31 (0)33 2983004

Fax. +31 (0)33 2983204

E-mail: hapam@hapam.nl

www.hapam.nl