

Disconnectors

Type RC / RD / RP



Introduction

Acrastyle Limited has been a major supplier to the world wide market for the design and manufacture of high voltage protection and control systems for more than fifty years.

Since the acquisition by S&S Power Switchgear Limited (S&S) in 1997, Acrastyle has been involved in the design, installation and commissioning of medium voltage switchgear and medium/high voltage disconnectors manufactured at the S&S facilities in Chennai and Pondicherry in India.

The original designs for the disconnectors were acquired from Hawker Siddeley with whom S&S had an initial joint venture, following which a number of innovative and cost effective improvements were made. Today more than 25,000 disconnectors have been successfully commissioned world-wide.

Acrastyle and S&S are ISO 9001 certified and the disconnectors are approved to exacting demands of the relevant international standards.

Types of Disconnectors:

- 1
- Centre Break – RC**
- 2
- Double Break – RD**
- 3
- Pantograph – RP**

1 Centre Break Type Disconnector – RC Range

- **Rated Voltage up to 420kV**
- **Short time current up to 50kA**
- **Current rating up to 3150A**

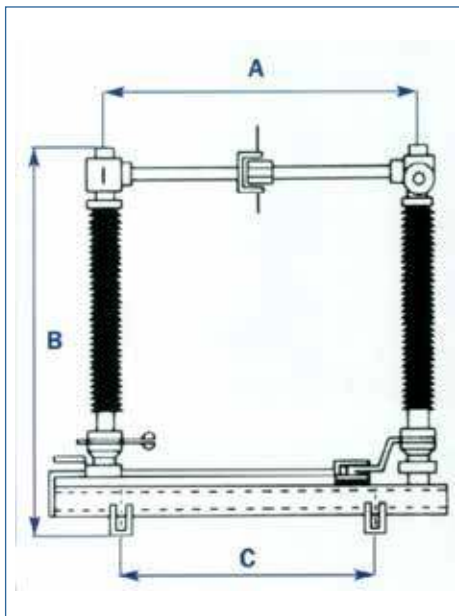
The RC range of open terminal disconnectors employ horizontal isolating design, which is space saving in substations.

The RC range of disconnectors is available for parallel and series arrangement.

Main contacts are multi-finger type and are of reverse loop pattern.

Key Features:

- Low operating torque
- Direct entry contacts
- Self wiping contacts
- Simultaneous operation of 3 poles by single operating mechanism up to 420kV
- Individual pole operation for 420kV



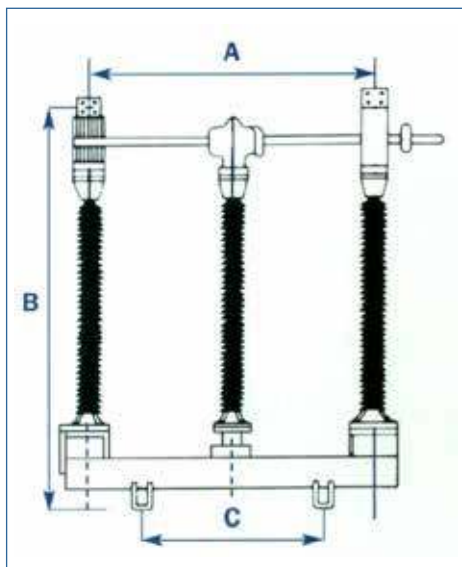
Main dimensions			Rated voltage	Rated current	Rated short time current	Rated impulse withstand voltage	
						To earth	Across isolating distance
A	B	C	kV	A	kA	kVp	kVp
700	1000	450	36	1600	25	170	195
1000	1400	750	72.5	3150	40	325	375
1500	1813	1250	123	3150	40	550	630
1700	2093	1450	145	3150	40	650	750
2000	2261	1700	170	2000	40	750	860
2600	3131	2300	245	3150	40	1050	1200
2600	3281	2300	300	4000	50	1050	1200
4100	4580	3223	420	3150	63	1425	1425 (+170)
							1425 (+240)

2 Double Break Type Disconnecter – RD Range

- **Rated Voltage up to 420kV**
- **Short time current up to 63kA**
- **Current rating up to 4000A**

The RD range open terminal disconnector is a three column disconnector with rotating centre post drive.

The RD range of disconnectors is available for horizontal, upright and parallel arrangements.



The RD range employs a special turn and twist arrangement for opening and closing of contacts.

This rotation ensures adequate contact pressure is built to hold the contacts in closed position even under severe terminal loads or short circuit conditions. The turn and twist arrangement also enhances the self cleaning ability of the contacts.

Key Features:

- Low operating torque
- Self wiping, Turn and Twist contacts
- Simultaneous operation of three poles by single operating mechanism up to 420kV.
- Individual pole operation available for 420kV

Main dimensions			Rated voltage kV	Rated current A	Rated short time current kA	Rated impulse withstand voltage	
A	B	C				To earth kVp	Across isolating distance kVp
950	795	500	36	1250	25	170	195
1500	1326	1000	72.5	2000	31.5	325	375
1800	1744	1150	123	1600	40	550	630
2130	1917	1430	145	3150	40	650	750
2450	2417	1800	170	2000*	40	750	860
3200	2980	2500	245	2000	40	1050	1200
3200	2980	2500	300	2000	40	1050	1200
5280	4595	3500	420	4000	63	1425	1425
							(+170)
							(+240)

* NGC EA approved

Operating Mechanism

Disconnectors can be supplied with either manual or motor operated mechanisms.

Operating mechanisms, either manual or motor operated have provision for auxiliary switches, interlock and padlock.

Motor operated mechanism have additional features e-g overload protection, control switches and limit switches.

Contacts

The main contacts are made of copper and are silver plated. Contact fingers utilise springs to ensure adequate contact pressure is maintained throughout the life of the equipment.

Disconnecter Base

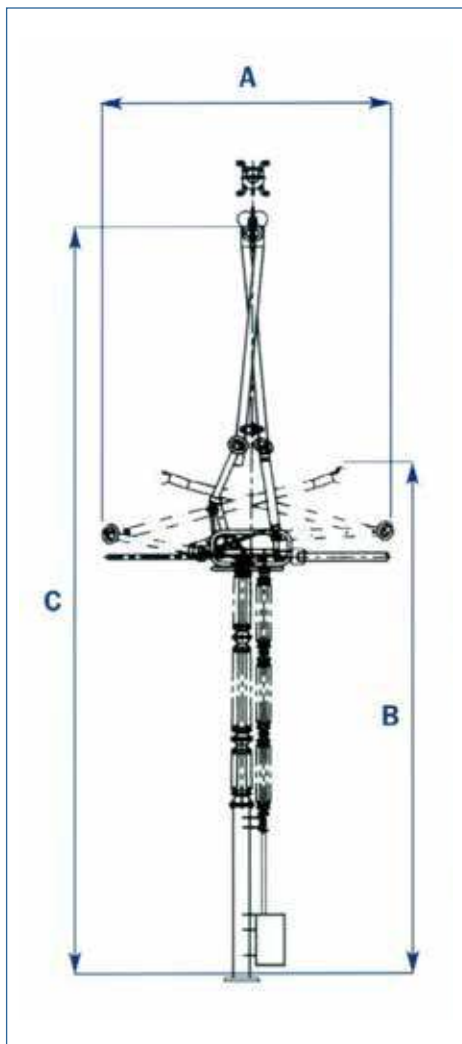
The base is made of welded channel section or welded square tubular assembly and hot dip galvanised. Low friction, sealed for life bearings are built into the base for smooth rotating operation. The base is supplied with suitable mounting pads for installation on to a steel or reinforced concrete structure.

Earthing Switches

Fully rated Earthing Switches can be mounted on either or both ends of the disconnectors.

Earthing switches are available for mounting as an integral part of the disconnector, or for mounting as an independent unit. They can be provided with manual or motor operating mechanism.

3 Pantograph Type Disconnecter – RP Range



- **Rated Voltage from 145kV to 420kV**
- **Short time current up to 63kA**
- **Current rating up to 4000A**

The RP range of Pantograph type Disconnecters employ trapeze contact fixings to suit upper bus arrangements.

RP range pantograph requires very little space in substations.

Current transfer columns are manufactured of aluminium

which ensures high mechanical rigidity and safe current transfer in short circuit.

Key Features:

- Very low civil engineering profile
- Four point contact
- Available for flexible and rigid busbar layouts
- Current transfer through totally enclosed multi-finger hinge contacts
- Individual pole operation

Main dimensions			Rated voltage kV	Rated current A	Rated short time current kA	Rated impulse withstand voltage	
A	B	C				To earth kVp	Across isolating distance kVp
2000	4200	6500	145	2000	40	650	750
2692	6000	8755	245	2500	40	1050	1200
4412	9200	12600	420	4000	63	1425	1425 (+240)

Standard

The RC, RD, and RP range of disconnectors conform to the international standard IEC 60129.

Installation

The disconnector is delivered in identifiable parts and assemblies for ease of erection. Acrastyle

have an experienced and purpose trained team to carry out installation and commissioning services if required. For additional information regarding this service, and the Company's maintenance and after sales service, please contact the Company at the address below.

Further details of the full range of the Company's protection, control, switchgear and disconnectors with their technical specifications and customer reference list can be obtained from the web site at: www.acrastyle.co.uk

Efforts are always being made to review our design and manufacturing methods, therefore small variations may occur between the details given and the equipment supplied.



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