

Sales Catalogue for the support of:
Oil circuit breakers
Vacuum circuit breakers
SF6 circuit breakers
3.3kV – 33kV Switchgear
11kV-275kV isolators

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Document History

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This catalogue is published solely for information purposes and should not be considered all inclusive.



 WARNING	 WARNING
<p>Improperly installing or maintaining these products can result in death, serious personal injury, or property damage.</p> <p>Installation or maintenance should be attempted only by qualified personnel after consulting the relevant sections of individual product Operation and Maintenance Manuals</p>	<p>The components illustrated in this manual are designed and tested to operate within their originally certified ratings.</p> <p>Operation outside of these ratings may cause the equipment to fail, resulting in death, bodily injury and property damage.</p> <p>If there is any doubt regarding ratings and fault levels of equipment, consult Switchgear Support Ltd.</p>

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INTRODUCTION

Switchgear Support Ltd specialise in the supply of components and services for MV/HV legacy switchgear, typically originally manufactured between the 1950's and 1990's.

Predominantly, these activities are focused on the Brush Switchgear and South Wales Switchgear ranges of equipment but we offer some support for other Original Equipment Manufacturers (OEM) such as GEC Switchgear, Reyrolle Switchgear, AEI Switchgear, Crompton Parkinson and Switchgear and Cowan .

Each section illustrates the types of components and services we provide but due to the hundreds of product variables it is impractical to demonstrate our complete range of competencies.

The catalogue has been prepared to provide a basic guideline for our customers, to assist in the identification of individual products and to offer our customers the opportunity to contact Switchgear Support Ltd for further details.

As with all pdf documents the search function "CTRL+F" may direct you more quickly to your chosen requirements.

For technical support and all spares/refurbishment enquiries:



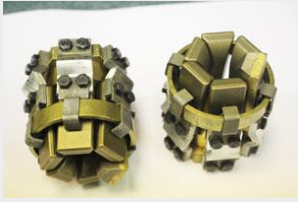

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The listing in each section is illustrative but not exhaustive – please contact Switchgear Support Ltd for your exact requirements if not shown in any section.

Section 1: Oil Circuit Breaker Contacts and internal components

Switchgear Support Ltd offer a full range of fixed/moving contacts and internal components for all Brush Switchgear and South Wales Switchgear oil circuit breakers within the typical 3kV-33kV voltage range.

Manufacturer	Product Type	Description	Image (typical)
Brush Switchgear Ltd	VSI/VTD - type/1: R4/1; R8/1; R12/1; Q16/1; Q20/1	Fixed contact assembly	
Brush Switchgear Ltd	VSI/VTD - type/1: R4/1; R8/1; R12/1; Q16/1; Q20/1	Moving contact assembly	
Brush Switchgear Ltd	VSI/VTD - type/2: R4/2; R8/2; R12/2; Q16/2; Q20/2	Fixed contact assembly	
Brush Switchgear Ltd	VSI/VTD - type/2: R4/2; R8/2; R12/2; Q16/2; Q20/2	Moving contact assembly	
Brush Switchgear Ltd	VSI/VTD - type/3: R8/3; R12/3; Q16/3; Q20/3	Fixed and moving contact assembly	Similar to /2 contacts with copper fingers and differing arcing finger





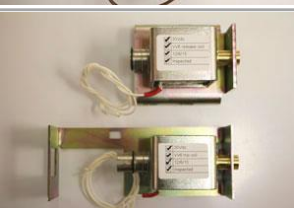
Section 1: Oil Circuit Breaker Contacts and internal components

Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	C4X & D4X ranges and all other C/D derivatives (C6X, C8X etc): 3.3kV-13.8kV	Fixed contact assembly	
South Wales Switchgear	C4X & D4X ranges and all other C/D derivatives (C6X, C8X etc) : 3.3kV-13.8kV	Moving contact assembly	
South Wales Switchgear	33kV including E01, E05, UE1, ET1, EM12, EM20	Fixed contact assembly	
South Wales Switchgear	33kV including E01, E05, UE1, ET1, EM12, EM20	Moving contact assembly	
Brush/South Wales Switchgear	Any ocb	Arc control pots (VSI illustrated)	
Brush/South Wales Switchgear	Any ocb	Complete service kit comprising fixed/moving contacts and gaskets/vent seals (VSI set illustrated)	





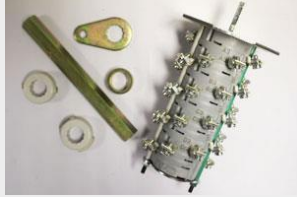

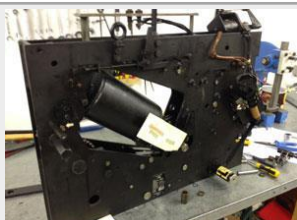
Section 2: Circuit Breaker Mechanism Components

Switchgear Support Ltd offer a full range of oil, SF6 and vacuum circuit breaker mechanism components for all Brush Switchgear and South Wales Switchgear equipment within the typical 3kV-33kV voltage range.

The repairs of older mechanisms can also be undertaken where the original design expertise and knowledge is difficult to resource.

Manufacturer	Product Type	Description	Image (typical)
Brush Switchgear	VSI	Trip coils, release coils and assemblies and all other mechanism parts	
Brush Switchgear	VMV (illustrated) and others	Springs, bearings, props, charging claws, plus many other components	
Brush Switchgear	VMV	Charging motors	
Brush Switchgear	VMV	Trip coils, release coils and assemblies	
Brush Switchgear	FV/FVR/Vactruck	Obsolete coil assemblies (illustrated) and all other mechanism parts	



Section 2: Circuit Breaker Mechanism Components

Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	C4X & D4X range and HG12	Trip coils, release coils and assemblies	
South Wales Switchgear	C4X & D4X range and HG12	Mechanism components and assemblies	
South Wales Switchgear	C4X & D4X range and HG12	Replacement motor or addition of motor charging facilities (older 82XEM mechanism illustrated)	
Brush/South Wales Switchgear	General	Anti pump contactors, mechanism switches	
Brush/South Wales Switchgear	General	Auxiliary switch assemblies	
Brush/South Wales Switchgear	General	Full mechanism repair service (Brush VMV mechanism components illustrated)	
Other manufacturers	General	Full mechanism repair service (Switchgear & Cowan mechanism illustrated)	



Section 3: Switchgear Safety Modification Kits

Over the many years of excellent service, there have been some safety improvements and modifications to a variety of Brush Switchgear and South Wales Switchgear equipment.

Switchgear Support Ltd offer a full range of safety modifications for these switchgear types.






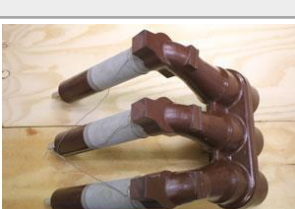
Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	C/D type ocb's	SC7 mechanism trip assist spring	
South Wales Switchgear	IF4X oil switch	Drive bar assembly	
South Wales Switchgear	HG12	Slow close modification kit	
South Wales Switchgear	HG12	VT shroud misalignment issues	
Brush Switchgear	VSI/VTD	Checking procedure – vertical and lateral alignment	

Section 3: Switchgear Safety Modification Kits






Manufacturer	Product Type	Description	Image (typical)
Brush/South Wales Switchgear	3 limb and 5 limb cast resin VT's	Prevention of discharge in VT primary spouts	
Brush/South Wales Switchgear/Any OEM	All switchgear	Remote control operation	

Section 4: Switchgear Bushings and Insulators

Switchgear Support Ltd offer a full range of switchgear panel and circuit breaker bushings and insulators for Brush Switchgear and South Wales Switchgear within the typical 3kV-33kV voltage range. These include cast resin, DMC and SRBP bushings. We also offer reverse engineering facilities for any SRBP bushing for any manufacturer's equipment.






Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	C4X & D4X range and HG12	Feeder bushings	
South Wales Switchgear	C4X & D4X range and HG12	Busbar bushings	
South Wales Switchgear	C4X & D4X range and HG12	CT bushings	
South Wales Switchgear	EM12/EM20	33kV indoor switchgear ocb bushings	
Brush Switchgear	All ranges	Cable box bushings	
Brush Switchgear	All ranges	CT bushings (illustrated), busbar bushings, stand off insulators	

Section 4: Switchgear Bushings and Insulators



Manufacturer	Product Type	Description	Image (typical)
Brush Switchgear	VSI/VTD – all ratings	400A-2000A ocb bushings (800A ocb bushing illustrated)	
GEC Switchgear	OLX/SBV	Ocb bushings/cable box bushings (800A SBV cable box bushing illustrated)	
Reyrolle Switchgear	LMT	CT bushings	
Westinghouse/ Email	J18, J22	Ocb bushings (800A illustrated), CT bushings	
Westinghouse/ Email	J18, J22	Bus section bushings (1200A illustrated)	

Section 5: CT's and VT's

Switchgear Support Ltd offer a full range of current transformers and voltage transformers for all Brush Switchgear and South Wales Switchgear panels within the typical 3kV-33kV voltage range.





Manufacturer	Product Type	Description	Image (typical)
Brush/South Wales Switchgear	All panel types	Ring CT's	
Brush/South Wales Switchgear	All panel types	Wound type cast resin CT's	
Brush/South Wales Switchgear	All panel types	Cast resin moving portion VT's and fixed portion VT's	
Any OEM	Generator VT's	Cast resin power VT	
Any OEM	Freestanding VT's	VT's for application where not possible to mount on switchboard	

Section 5: CT's and VT's




Manufacturer	Product Type	Description	Image (typical)
Brush Switchgear	Hawkvac 6	Control VT's	
GEC Switchgear	BVP/BVRP	Conversion of oil VT to cast resin VT utilising original tank	

Section 6: Cable Boxes, Adaptor Chambers, Busend Cable Boxes and Surge Arrester Chambers

Switchgear Support Ltd offer a wide range of cable boxes, busbar adaptor chambers and bespoke chambers for all Brush Switchgear, South Wales Switchgear and other OEM switchgear within the typical 3kV-33kV voltage range.






Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	All switchgear types	Rear cable box (HG12 illustrated)	
Brush Switchgear	All switchgear types	Rear cable box (VSI illustrated)	
Brush Switchgear/ South Wales Switchgear	All switchgear types	Busend cable boxes (double busbar HG12 illustrated)	
AEI Switchgear	QA/QF	Busend cable box (compound busbars illustrated)	

Section 6: Cable Boxes, Adaptor Chambers, Busend Cable Boxes and Surge Arrester Chambers

Manufacturer	Product Type	Description	Image (typical)
Brush Switchgear	VSI/VMV	Surge arresters fitted to VSI/VMV panel	
Brush Switchgear	VTD/VMVD	Surge arresters (incorporating resistor capacitor networks)	
Reyrolle Switchgear	LMT	Rear cable box	


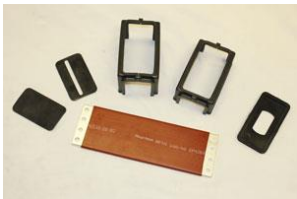

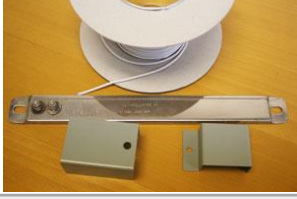


Section 7: Overhead Line Equipment

Switchgear Support Ltd offer a wide range of spares and assemblies for the South Wales Switchgear and Brush Power Equipment overhead line ranges of isolators, disconnectors, ABI's and fuse cut outs.

Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	Overhead line 33kV ABI's	Complete fixed/moving contact assemblies	
South Wales Switchgear	TD range	Fixed (illustrated) and moving contacts	
South Wales Switchgear	RD302 and RD range	Fixed/moving contacts and contact holder	
South Wales Switchgear	RD302 and RD range	Complete phase assemblies	
Other Switchgear	Any product	Isolator drive assemblies	





Section 8: General Panel Components

Switchgear Support Ltd offer a very wide range of component parts for all Brush Switchgear and South Wales Switchgear – from simple linkages to complete certified busbar systems.



Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	All types	Busbars and shrouds	
Brush Switchgear	All types	Busbars and shrouds	
Brush Switchgear/ South Wales Switchgear	All types	Shutter assemblies/selectors	
Brush Switchgear/ South Wales Switchgear	All types	Heaters and shrouds	
Brush Switchgear/ South Wales Switchgear	All types	Operational tools/handles	
Brush Switchgear/ South Wales Switchgear	All types	Any switchgear panel item	

Section 9: Switchgear Retrofit

Switchgear Support Ltd offer a full range of retrofit circuit breakers for all Brush Switchgear and South Wales Switchgear oil/gas/vacuum circuit breakers within the typical 3kV-13.8kV voltage range.






Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	C4X/D4X/HG12	Gas Circuit Breaker (illustrated) or vacuum circuit breaker retrofits – to 1250A, 31.5kA	
Brush Switchgear	VSI/VTD/Vactruck/VMV	Vacuum circuit breaker retrofits (to 2000A, 25kA)	
Brush Switchgear	VSI/VTD	Vacuum circuit breaker retrofits (to 2000A, 31.5kA)	
Brush Switchgear	VTD/VMVD (double busbar)	Vacuum circuit breaker earthing trucks (40kA rated)	

Section 9: Switchgear Retrofit

Manufacturer	Product Type	Description	Image (typical)
Brush Switchgear	VTD/VMVD (double busbar)	Conversion of oil circuit breaker to earthing truck	
Brush Switchgear	VBA/VBAD	Vacuum circuit breaker retrofits (to 1200A, 25kA)	

Section 10: Switchgear Refurbishment and Extension Panels



Switchgear Support Ltd offer a full range of extension panel and switchgear panel refurbishment/upgrades for all Brush Switchgear and South Wales Switchgear equipment within the typical 3kV-13.8kV voltage range.

Manufacturer	Product Type	Description	Image (typical)
Brush Switchgear	FV/FVR extension panels	11kV extension panel for UK DNO	
Brush Switchgear	VMVD	11kV conversion from 400A to 1250A (double busbar) for UK DNO	
Brush Switchgear	HV6 motor starter	3.3kV extension panel for oil refinery	
South Wales Switchgear	HG12	11kV extension panel for UK DNO	
South Wales Switchgear	EM20	33kV indoor switchgear: complete rebuild of ocb for overseas Utility	

Section 10: Switchgear Refurbishment and Extension Panels

Manufacturer	Product Type	Description	Image (typical)
South Wales Switchgear	ET1	CT change for UK DNO	
South Wales Switchgear	D8/12X	Complete redesign/replacement of failed compound filled CT chamber on double busbar unit	
South Wales Switchgear	C8X	Rebuild of failed panel for UK DNO	
South Wales Switchgear	C4X/D4X/HG12	Conversion to COP2 metering for UK power station – 13 x double busbar panels	
South Wales Switchgear	RD302	Refurbishment of failed 132kV isolator for UK DNO	
Reyrolle Switchgear	LMT	Conversion of wound CT's and compound cable box to ring CT's/dry type cable box for UK DNO	



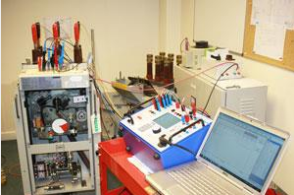


Section 10: Switchgear Refurbishment and Extension Panels

Manufacturer	Product Type	Description	Image (typical)
GEC Switchgear	BVP	Refurbishment of failed ocb for overseas Utility	
BTH	66kV single phase ocb	Design modification to ensure correct mechanical operation for UK DNO	

Section 11: Installation, Commissioning and Testing

Switchgear Support Ltd offer a full range of services with regards to:

- Installation and commissioning of switchgear
- Specialist circuit breaker testing
- Partial Discharge testing
- Short Circuit Testing

Description	Image (typical)
Installation of switchgear – new switchboards or extension panels	
Commissioning and protection testing – new switchgear or legacy switchgear	
Circuit breaker testing – full timing tests in works or on site	
Partial discharge testing in works	
Short Circuit testing – consultation/testing expertise	



Switchgear Support Ltd provides an unparalleled service in terms of HV Switchgear legacy product support.

We are a total solution provider – from basic component obsolescence issues to total solutions on HV Switchgear networks.

“Our objectives are quite simple – we aim to provide our customers with a total solution for all of their HV Switchgear needs; now and in the future.

*We achieve this through our knowledge, experience and total personalised commitment”
- Dave Johnson, CEng, owner of Switchgear Support Ltd*