

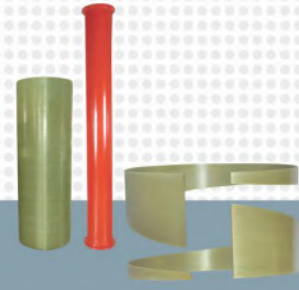




Product Range

 HIGH CURRENT BUSHINGS	 RIP/RIS CONDENSER BUSHINGS	 FIBER GLASS CYLINDERS & END RINGS	 RETROFIT SOLUTIONS
Rated Voltage 24 kV ~ 36 kV Rated Current 4000 ~ 20000 A Standard IEC-60137:2017/IEEE Types Oil filled / Communicating /OIP Condenser	Rated Voltage 24 kV ~ 245 kV Rated Current Upto 3150 A* Standard IEC-60137:2017 Connection Draw lead/Draw Rod/Stem type Housing Composite/Polymeric/ Silicone * 6300 and other special current ratings also available on request	For power transformer winding formers Range ~ 1800mm Diameter ~ 2800mm Height Material Filament wound cylinders in epoxy /polyester resin Application • Power/Dry type transformers • EHV test transformers • Test equipment • Tap changers	Inter-changeable solutions with global reputed makes 

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Represented By



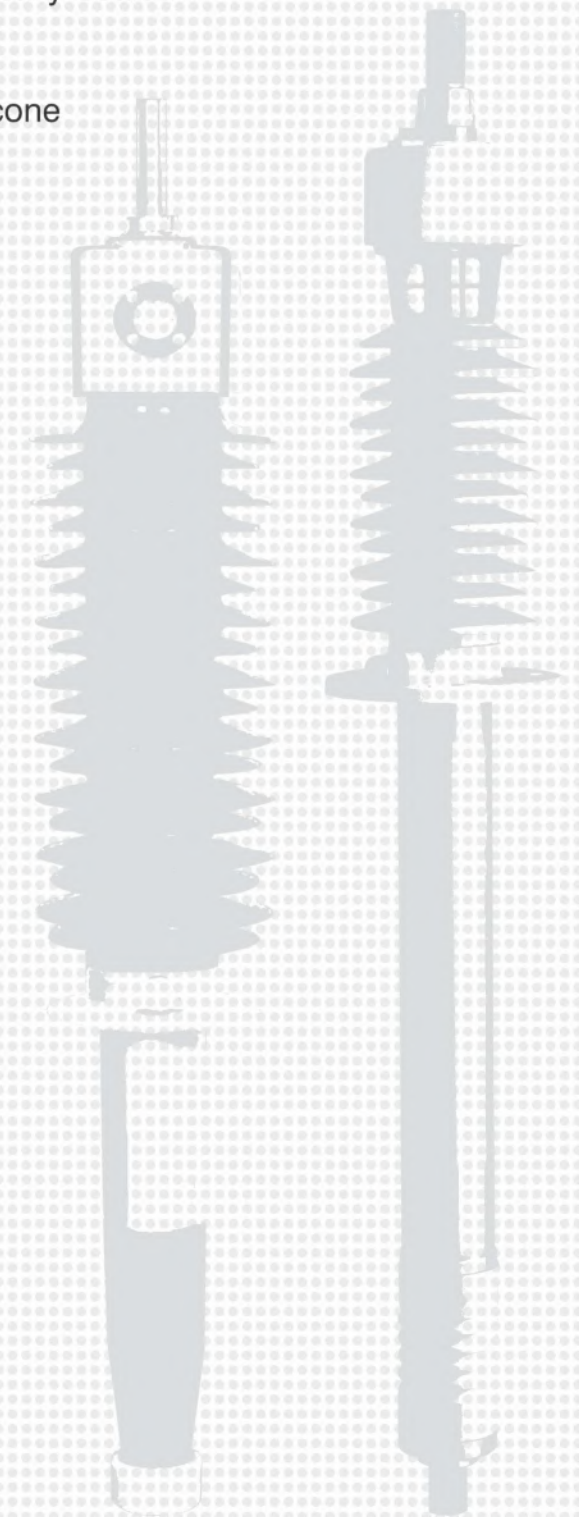
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OIP Condenser Bushings

Insulation : Oil - impregnated paper - Hermetically Sealed
Application : Transformer - Outdoor
Type : Oil to Air / Oil to Oil / Air to Air
Insulator : Porcelain / Hollow composite / Silicone
Rated Voltage : 24 kV ~ 170 kV
Rated Current : 400 A ~ 3150 A
Standard : IEC 60137:2017 / IEEE



Salient Features

- Manufacturing and field experience of more than 12,000 Bushings
- Computer aided Finely graded Capacitive insulation for optimum electrical field distribution
- Partial discharge free and low dissipation factor attributable to stable long-term performance
- Shatter-proof oil end insulator
- High seismic and SC load withstand capacity
- Available with porcelain or composite insulator housing on air-side.
- Excellent thermal performance
- Large size oil indicator for better visibility from distance and angles
- Viton material O-rings for oil sealing
- Special terminals available upon request
- Potential for customization of BCT, oil end length, mounting flange to a large extent
- Exact interchangeability with global reputed makes
- Shortest lead times industry wide

- VCL/VCD/VCS Bushings are High voltage capacitance graded oil-impregnated paper insulated bushings
- The Bushings comply with IEC 60137 standard's performance requirements for application in power transformers
- The main component of Bushing is the Active part and is manufactured using insulating kraft paper wound around a central tube or solid conductor
- During paper winding, aluminium foils are embedded in paper co-axially at pre-calculated locations to optimise the radial and axial electrical field along the bushing
- After winding, paper core is dried under vacuum at elevated temperatures and subsequently impregnated with high quality vacuum dried and degassed Insulating mineral oil
- Bushing is assembled in a controlled environment and filled under vacuum with vacuum dried and degassed Insulating Mineral oil
- After oil filling, each Bushing is subjected to oil filled over-pressure test for verification of joint sealing
- All bushings are routine tested and type tested in accordance with IEC 60137

Fully type tested product range at accredited Laboratories

Multiple satisfactory performance credentials from customers & end users

Air end terminal is of high electrical conductivity Copper/Brass alloy and Electro-plated.

Conservator is non-magnetic, corrosion-resistant Al-cast with oil level indicator.

Air end porcelain insulator is made of high quality electrical grade porcelain according to IEC 60815.

Alternatively, Hydrophobic and Shatterproof Composite/Silicone insulator according to IEC 61462 and IEC 62217 can also be provided upon request.

Mounting flange is non-magnetic, corrosion-proof Al-cast duly pressure tested, with provision for test tap, air release and earthing.

CT pocket is available below mounting flange from 0 mm upto 600 mm. Non-standard CT pocket length is also available upon request.

Oil end epoxy insulator is made of two-part epoxy resin with Silica filler and is shatter proof.

O-rings and gaskets are of Viton rubber compatible with Oil and having high temperature resistance.

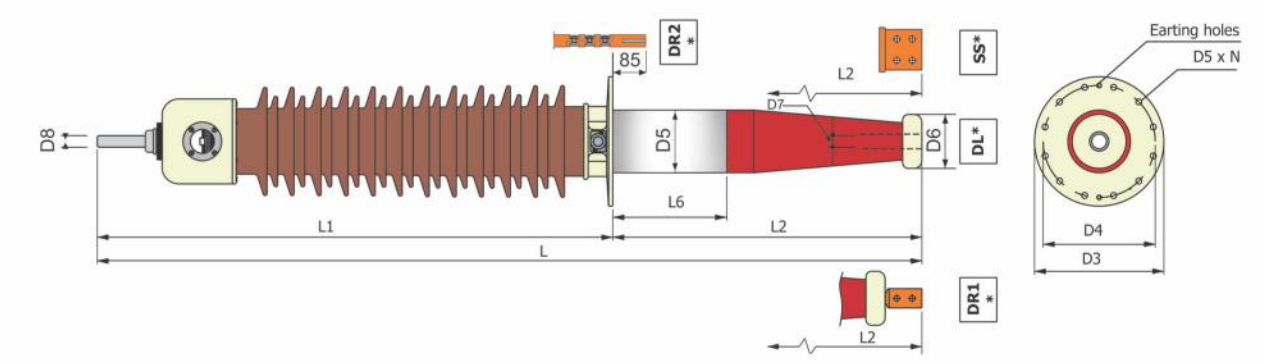
Test Tap: All bushings are provided with test tap for condition monitoring of OIP insulation.



Table - 1 - Standard dimensions of OIP bushings rated 36kV upto 170kV, current 800A upto 3150A (All dimensions are in mm)

Model	HSV, kV	BIL, kVp	AC test level, kV	Rated current, I _r Amp	Connection for transformer (**)	Cantilever test load, N	L1- Air end length	L2- Oil end length for 100 mm BCT*	L- Total length	L6- CT Space	D2- Oil side max. diameter	D3- Outer diameter of flange	D4- PCD of flange	D5 X N- Mounting holes	D6- Oil end shield diameter	D7- Pipe inside diameter	D8- Contact diameter
VCL.3680	36	170	77	800	DL	1000	735	315*	1050		115	225	185	15 x 6	100	35	30
VCD.3601	36	170	77	1250	DR2	1250	735	315*	1050		115	225	185	15 x 6	100	35	60
VCS.3602	36	170	77	2000	SS	2000	905	380*	1285		115	335	290	15 x 12	115	-	60
VCS.3603	36	170	77	3150	SS	3150	905	380*	1285		115	335	290	15 x 12	115	-	60
VCL.5280	52	250	105	800	DL	1000	845	350*	1195		115	225	185	15 x 6	100	35	30
VCD.5201	52	250	105	1250	DR1	1250	845	445*	1290		115	225	185	15 x 6	100	35	60
VCS.5202	52	250	105	2000	SS	2000	950	475*	1425		115	335	290	15 x 12	115	-	60
VCS.5203	52	250	105	3150	SS	3150	950	475*	1425		115	335	290	15 x 12	115	-	60
VCL.7380	72.5	325	155	800	DL	1000	1045	400*	1445		115	225	185	15 x 6	100	35	30
VCD.7301	72.5	325	155	1250	DR1	1250	1045	495*	1540		115	225	185	15 x 6	100	35	60
VCS.7302	72.5	325	155	2000	SS	2000	1165	495*	1660		115	335	290	15 x 12	115	-	60
VCS.7303	72.5	325	155	3150	SS	4000	1165	495*	1660		115	335	290	15 x 12	115	-	60
VCL.12380	123	550	255	800	DL	1250	1595	550*	2145		165	335	290	15 x 12	140	38	30
VCD.12301	123	550	255	1250	DR2	1600	1595	550*	2145		165	335	290	15 x 12	140	38	60
VCS.12302	123	550	255	2000	SS	2500	1590	670*	2260		165	335	290	15 x 12	165	-	60
VCS.12303	123	550	255	3150	SS	4000	1590	670*	2260		165	335	290	15 x 12	165	-	60
VCL.14580	145	650	305	800	DL	1250	1805	600*	2405		165	335	290	15 x 12	140	38	30
VCD.14501	145	650	305	1250	DR2	1600	1805	600*	2405		165	335	290	15 x 12	140	38	60
VCS.14502	145	650	305	2000	SS	2500	1820	720*	2540		165	335	290	15 x 12	165	-	60
VCS.14503	145	650	305	3150	SS	4000	1820	720*	2540		165	335	290	15 x 12	165	-	60
VCL.17080	170	750	355	800	DL	1250	1995	605*	2600		165	335	290	15 x 12	140	38	30
VCD.17001	170	750	355	1250	DR2	1600	1995	605*	2600		165	335	290	15 x 12	140	38	60
VCS.17002	170	750	355	2000	SS	2500	1990	800*	2790		165	335	290	15 x 12	165	-	60
VCS.17003	170	750	355	3150	SS	4000	1990	800*	2790		165	335	290	15 x 12	165	-	60

Standard: 0, 100, 300, 600
Customized BCT lengths available upon request



Model selection:

To inquire about a particular model from the above table, please select Model number from column 1- and mention as "Model No./BCT/Creepage" with your inquiry
For example, to select a bushing with :
Highest System Voltage (HSV) = 72.5kV,
Rated Current – 1250A,
L6 (BCT) = 100 mm
Creepage - 31 mm/kV
the appropriate model would be "VCD.7301/100/31"
The same model, if selected for L6 (BCT) = 300 mm with all other parameters constant, model number would be "VCD.7301/300/31"
If same model is required with BCT, i.e. L6 = 0 mm, it would be "VCD.7301/0/31"

Additional information:

*Oil end length (L2) shown in Table -1 is considering 100 mm BCT for a particular bushing
For L6 (BCT) = 300 mm the L2 will be plus 200 mm over

the L2 dimension of table-1
For L6 (BCT) = 600 mm the L2 will be plus 400 mm over the L2 dimension of table-1
For 0 mm BCT extension – Please check with Yash for the bushing drawing to receive accurate L2 dimension
**DL- Draw lead, DR1- Draw rod bottom connected (split type), DR2- Draw rod upto flange level (split type), SS - Solid Stem.
Creepage distance shown in the table are for 25 mm/kV - standard creepage distance.
31 mm/kV and other special creepage distance are available upon request.
100 kV/other non-standard voltage rating bushing can be offered upon request, subject to feasibility.
Please request for bushing drawing for draw lead / draw rod and oil end termination details.
For any non-standard / special dimensions different than above, please feel free to approach us to check for customized solution.