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YASH HIGHVOLTAGE

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

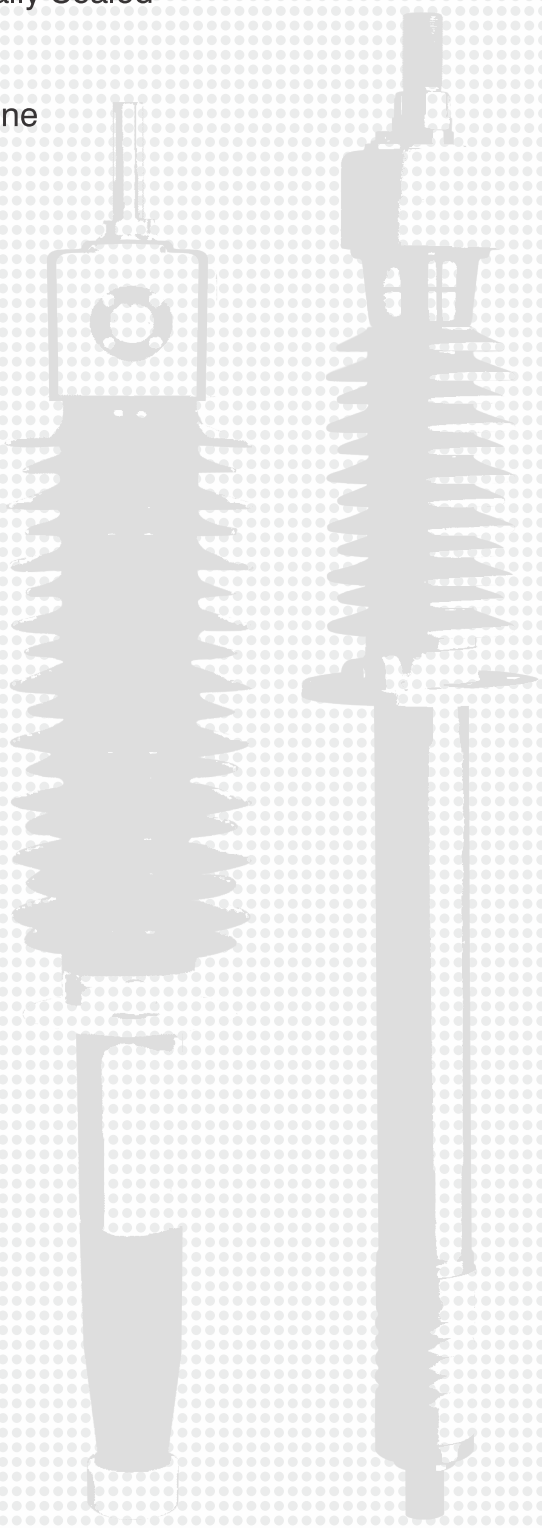
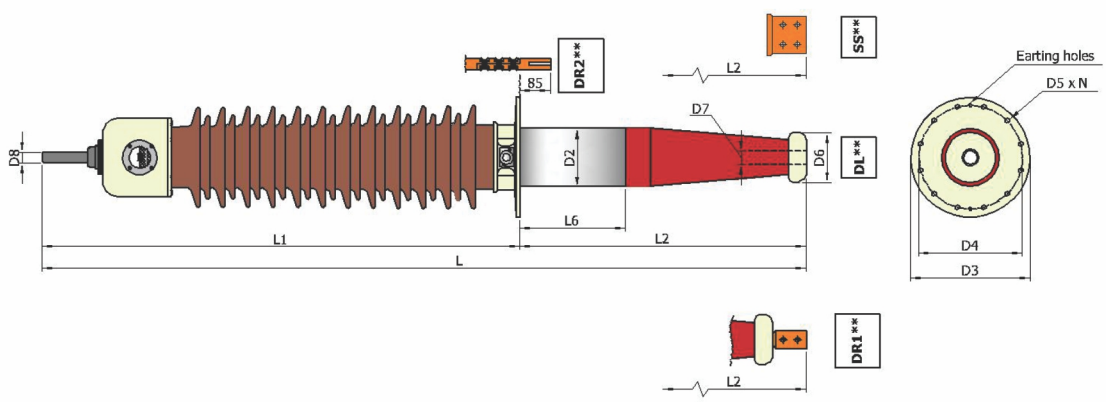


Table - 1 - Standard dimensions of OIP bushings rated 36kV upto 170kV, current 800A upto 3150A
(All dimensions are in mm)

Model	HSV, kV	BIL, kVp	AC test level, kV	Rated current, Amp	Connection tor transformer (**)	Cantilever test load, N	L1- Air end length	L2- Oil end length for 100 mm BCT*	L- Total length	L6 - BCT Space	D2- Oil side max. diameter	D3- Outer diameter of flange	D4- PCD of flange	D 5 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	Standard: 0, 100, 300, 600 Customized BCT lengths available upon request	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



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 - (Ir) 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 500 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.

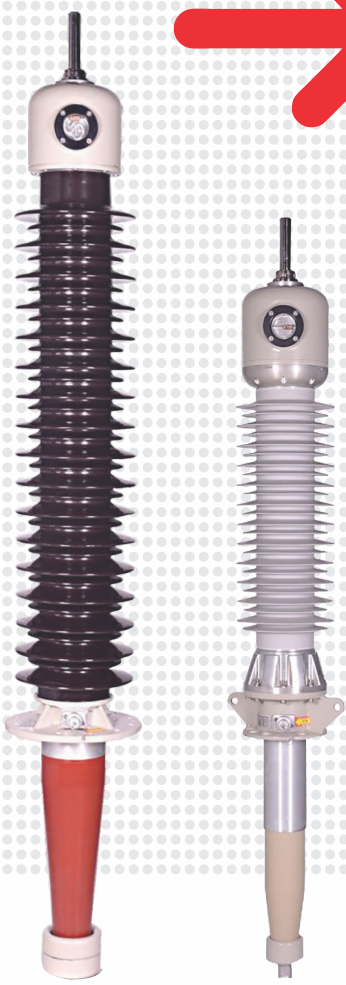
For any non-standard / special dimensions different than above, please feel free to approach us to check for customized solution.

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 on 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

Fully type tested product range at accredited Laboratories

Multiple satisfactory performance credentials from customers & end users



- 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

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.

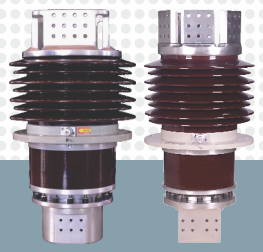
CT length (BCT) is available below mounting flange from 0 mm upto 600 mm. Non-standard CT length (BCT) is also available upon request.

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.

Product Range



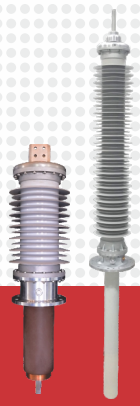
HIGH CURRENT BUSHINGS

Rated Voltage
24 kV ~ 36 kV

Rated Current
4000 ~ 20000 A

Standard
IEC-60137:2017/IEEE

Types
Oil filled / Communicating /OIP Condenser



RIP/RIS CONDENSER BUSHINGS

Rated Voltage
24 kV ~ 245 kV

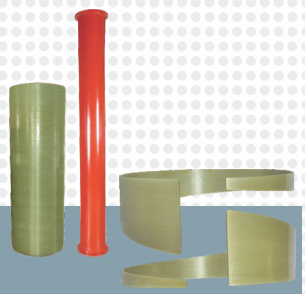
Rated Current
Upto 3150 A*

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



FIBER GLASS CYLINDERS & END RINGS

For power transformer winding formers

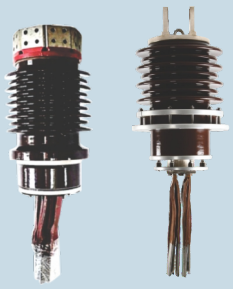
Range
~ 1800mm Diameter
~ 2800mm Height

Material
Filament wound cylinders in epoxy/polyester resin

Application
- **Power/Dry type transformers**
- **EHV test transformers**
- **Test equipment**
- **Tap changers**

RETROFIT SOLUTIONS

Interchangeable solutions with global reputed makes



YASH HIGHVOLTAGE

Factory
84/1-B, P.O. Khakhariya, Halol-Savli Road,
Dist. Vadodara - 391510, Gujarat - 391 510 INDIA

Office
2/3, Param Park, B/h Taksh Bungalows, Vasna Road,
Alkapuri, Vadodara - 390007, Gujarat - INDIA
Email: sales@yashhv.com
Mobile: +91 90990 96577

Represented By

Tiger