

Main characteristics and features of CoBk serie

Three-phase conservator type oil-immersed distribution transformers

Design and installation characteristics:

- indoor and outdoor use
- continual operation at full load with ONAN cooling
- frequency 50Hz
- up to 1000m altitude
- maximal ambient temperature of 40°C
- thermal insulation class A

Applied standards and norms:

- IEC 60076 Power transformers
- EN 50464 Power transformers
- IEC 60296 Transformer oil

Electrical characteristics of CoBk series									
rated power (kVA)		50	100	160	250	400	630	1000	
rated voltage (kV)	primary	10							
	secondary	0.42							
rated insulation level (kV)		12/1.1 (LI75 AC28/LI0 AC3)							
HV tapping range (off-load)		±2x2.5%							
vector group		Yzn5 or Yzn 11			Dyn5 or Dyn 11				
losses (W)	no-load	125	210	300	425	610	860	1100	
	load (1)	875	1475	2000	2750	3850	5400	9500	
rated impedance voltage (%) (1)		4							
no load current (%) (2)		1.5	1.1	1	0.9	0.8	0.7	0.5	
voltage drop at full load (%)	cosφ=1	1.75	1.47	1.25	1.10	0.96	0.86	0.95	
	cosφ=0.8	3.56	3.41	3.28	3.85	3.10	3.03	4.31	
efficiency (%)	load 100%	cosφ=1	98.00	98.32	98.56	98.73	98.89	99.01	98.94
		cosφ=0.8	97.50	97.89	98.20	98.41	98.61	98.76	98.67
	load 75%	cosφ=1	98.35	98.61	98.81	98.95	99.07	99.18	99.14
		cosφ=0.8	97.94	98.27	98.52	98.69	98.84	98.97	98.93
noise level Lwa	dB(A)	47	49	52	55	58	60	63	



description:

- type - with conservator
- tank - with corrugated walls
- conductor material - copper
- magnetic circuit - Step-Lap tehnology
- transf. oil - Mineral oil acc. IEC 60296
- terminals - acc. IEC 529 - IP00
 - HV porcelain bushing - DIN 42531
 - LV porcelain bushing - DIN 42530
- anti-corrosive protection - hot dip galvanizing

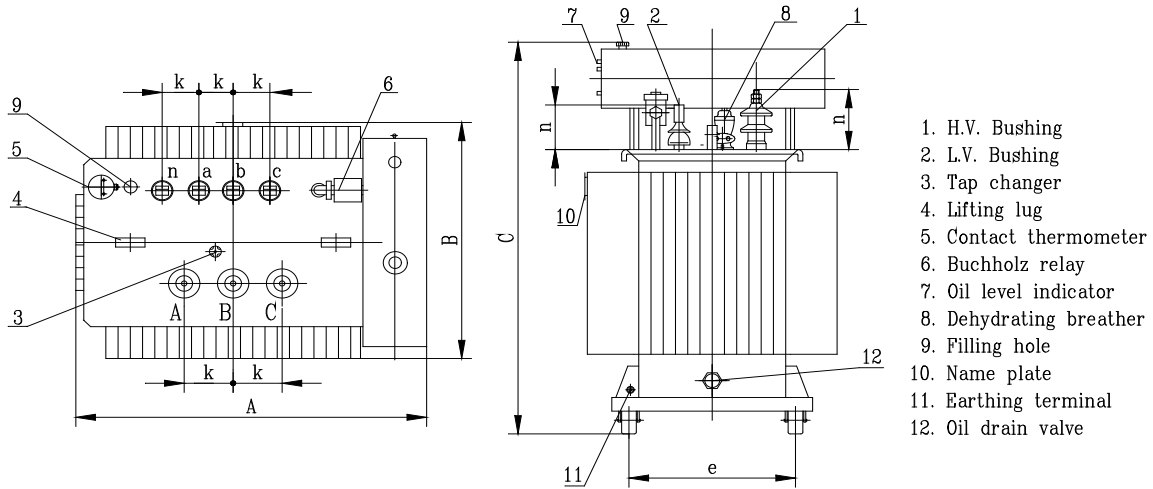
basic accessories:

- magnetic oil level indicator - standard
- contact thermometer - standard ≥ 250kVA
- rollers - standard
- buchholz relay - standard ≥ 250kVA
- dehydrating breather - standard
- thermometer pocket - standard
- oil drain valve - standard
- earthing terminal (2pcs) - standard
- filling hole - standard
- two lifting lugs - standard

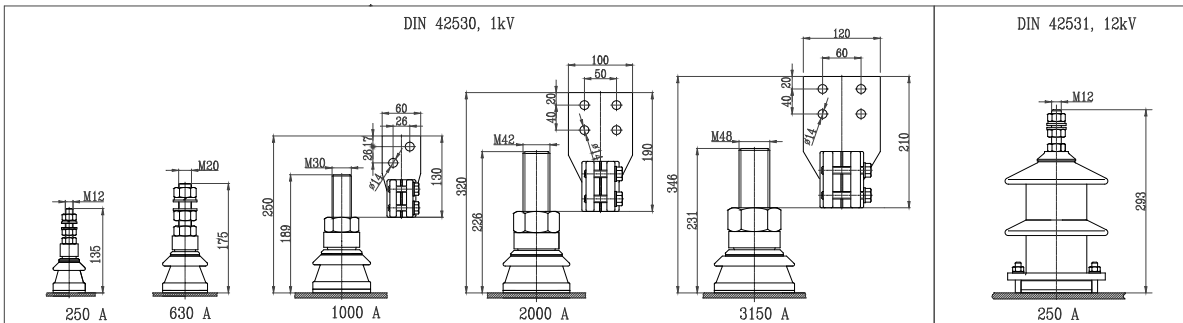
In case of special requirements for distribution transformers in accordance with IEC 60076 and EN 50464 beside this catalogue related to rated powers, design, electrical characteristics and accessories please contact us

Some data from this catalogue could be changed toward to evolution of standards, development of used materials and production proces

**Three-phase conservator type oil-immersed distribution transformers - CoBk Serie
from 50 up to 1000kVA for rated voltages 10kV/0.42kV, 50Hz**



Dimensions									
rated power	kVA	50	100	160	250	400	630	1000	
A	mm	830	900	1000	1250	1370	1470	1770	
B	mm	500	580	580	650	880	800	980	
C	mm	1250	1300	1400	1470	1560	1740	1830	
e	mm	520				620		800	
k	HV	mm	265	275					
	LV	mm	100	100		140		160	
n	HV	mm	293						
	LV	mm	135		175		250	320	
Weights									
oil	kg	95	120	165	190	290	380	530	
total	kg	410	580	790	1020	1520	1960	2650	



Tests:

Routine tests:

- Measurement of winding resistance
- Measurement of voltage ratio and phase displacement
- Measurement of short-circuit impedance and load loss
- Measurement of no-load loss and no-load current
- Dielectric routine tests

Type tests:

- Temperature-rise test
- Dielectric type tests

Remark: It is possible to perform other customer requested testings in accordance with relevant standards and norms.