



Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592

Specification Data
47-425

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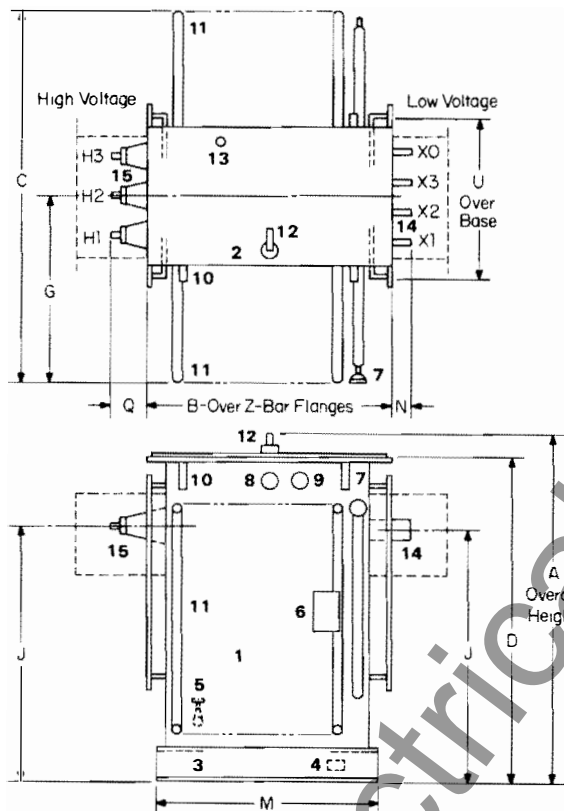
October, 1979
Supersedes TCS 47-430
Pages 1 and 2, Dated November, 1978

Mailed To: E, D/2082/DB

Type RSL Rectangular Coil Core Form
WEMCO "C" Oil
Standardized, 500-2500 Kva
Three Phase, 60 Hertz

Liquid Immersed Secondary Unit Substations (Power Centers)

Liquid Filled Power Center Transformers



Outline as shown is for standard Z-Bar/Z-Bar flanges. When high voltage bus throat is required, add 9 inches to B dimension. When LV bus throat is required, add 8½ inches to B dimension.

Dotted line indicates approximate location of Bus Throats if required.

Description: Numbers correspond to those on the drawing.

1. Tank
2. Cover—welded to tank
3. Base—jacking area at ends
4. Ground pad—1 total
5. Drain valve—1 inch valve for combination lower filter press connection, complete drain and provision for sampling
6. Diagram instruction plate
7. Dial type thermometer with alarm contacts when required
8. Magnetic liquid gauge with alarm contacts when required
9. Pressure vacuum gauge and air test valve
10. Lifting hooks
11. Cooling tubes
12. Tap changer operating mechanism with provision for padlocking
13. 1 inch upper filter & filling plug connection
14. L.V. bushing assembly (Wall mounted)
15. H.V. bushings—3 total (Wall mounted)

General Information

The dimensions and weights in the following tables are for use with T.C.S. 47-435, page 1 for standard ratings as defined by standard electrical, mechanical, tests and accessories in Price List 47-400. For specials, refer to South Boston Plant.

These Power Center Transformers are three phase, 60 Hertz, 65°C or 55°C rise, (see tables) in a 40°C max., 30°C over 24 hours average ambient, indoor or outdoor with aluminum, rectangular strap and sheet windings.

Contact South Boston for specification data on WEMCO FR units.

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G.O. No. _____ Item No. _____

60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2-2\frac{1}{2}\%$, Delta High Voltage Connection. ①

Fixed Dimensions In Inches

A	D	J	N	Q
84.50	79.0	55.0	3.04	8.41

60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2-2\frac{1}{2}\%$, Delta High Voltage Connection. ①

Fixed Dimensions In Inches

A	D	J	N	Q
84.50	79.0	55.0	3.04	8.41

750 KVA 55°C Rise		Transformer Dimensions in Inches ②					Total Wt. -	
HV	LV	B	C	G	M	U	Gal.	Lbs. w/Oil
2400	480Δ	47.40	88.38	43.19	43.15	33.37	174	5489
2400	480Y	46.68	85.26	42.63	42.44	32.25	166	5367
2400	240Δ	47.64	88.26	44.13	43.39	35.25	184	5421
2400	208Y	47.14	90.26	44.13	42.89	35.26	179	5492
4160	480Δ	47.36	86.38	43.19	43.12	33.37	173	5489
4160	480Y	46.56	87.26	42.63	42.32	32.25	163	5274
4160	240Δ	47.52	88.26	44.13	43.27	35.25	197	5646
4160	208Y	47.14	88.26	44.13	42.89	35.26	203	5809
4800	480Δ	47.40	86.38	43.19	43.15	33.37	174	5512
4800	480Y	46.50	89.26	44.63	42.26	32.25	163	5322
4800	240Δ	47.64	84.26	42.13	43.39	35.25	195	5603
4800	208Y	47.14	86.26	42.13	42.89	35.26	200	5767
6900	480Δ	48.70	84.74	41.37	44.46	33.74	185	5668
6900	480Y	47.94	86.10	43.05	43.70	33.09	175	5576
6900	240Δ	48.14	86.26	42.13	43.89	35.25	195	5712
6900	208Y	47.88	90.26	44.13	43.63	35.25	186	5634
7200	480Δ	48.70	80.88	39.44	44.46	33.87	188	5729
7200	480Y	48.26	84.16	41.08	44.02	33.15	174	5546
7200	240Δ	48.84	86.26	42.13	44.59	35.25	192	5619
7200	208Y	47.96	88.26	44.13	43.71	35.26	187	5671
12000	480Δ	49.12	80.88	39.44	44.88	33.87	195	5905
12000	480Y	47.94	85.72	42.86	43.70	32.71	165	5362
12000	240Δ	48.84	82.26	40.13	44.59	35.25	196	5666
12000	208Y	48.08	86.26	42.13	43.83	35.25	186	5642
12470	480Δ	48.76	86.88	43.44	44.52	33.87	192	5836
12470	480Y	47.22	83.66	40.83	42.98	32.66	178	5551
12470	240Δ	48.14	86.26	42.13	43.89	35.25	190	5593
12470	208Y	47.88	88.26	44.13	43.63	35.25	187	5642
13200	480Δ	49.06	82.88	41.44	44.82	33.87	185	5648
13200	480Y	47.52	86.00	43.00	43.27	33.00	170	5473
13200	240Δ	48.34	84.26	42.13	44.09	35.25	193	5679
13200	208Y	47.88	88.26	44.13	43.63	35.25	192	5754
13800	480Δ	49.06	81.00	39.50	44.82	33.99	186	5679
13800	480Y	47.62	84.06	41.03	43.38	33.05	174	5538
13800	240Δ	49.08	82.26	40.13	44.84	35.25	201	5797
13800	208Y	48.08	84.26	42.13	43.83	35.25	208	5928

Dimensions Shown for Indoor or Outdoor Oil Transformers.

① Contact Westinghouse for Final Dimensions for Construction on each Order.

② All Dimensions and Weights are Approximate and Subject to Change Without Notice.

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G.O. No. _____ Item No. _____



Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592

Specification Data
47-425

Page 5

October, 1979
Supersedes TCS 47-430
Pages 5 and 6, Dated January, 1979

Mailed To: E, D/2082/DB

Type RSL Rectangular Coil Core Form
WEMCO "C" Oil
Standardized, 500-2500 Kva
Three Phase, 60 Hertz

Liquid Immersed Secondary Unit Substations (Power Centers)

60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2\frac{1}{2}\%$, Delta High Voltage Connection. ①

Fixed Dimensions In Inches

A	D	J	N	Q
84.50	79.0	55.0	3.04	8.41

750 KVA 65°C Rise		Transformer Dimensions in Inches ②					Gal.	Total Wt. Lbs. w/Oil	Dimensions Shown for Indoor or Outdoor Oil Transformers.
HV	LV	B	C	G	M	U			
2400	480Δ	47.40	72.38	35.19	43.15	33.37	166	5197	
2400	480Y	46.48	77.26	38.63	42.24	32.25	155	4963	
2400	240Δ	47.38	72.26	36.13	43.14	35.25	164	5043	
2400	208Y	47.14	77.26	38.13	42.89	35.26	160	5074	
4160	480Δ	46.92	78.38	39.19	42.68	33.37	166	5286	
4160	480Y	46.48	81.26	40.63	42.24	32.25	157	5046	
4160	240Δ	47.14	76.26	38.13	42.89	35.25	171	5155	
4160	208Y	47.14	78.26	38.13	42.89	35.26	177	5354	
4800	480Δ	48.02	66.38	33.19	43.78	33.37	166	5212	
4800	480Y	46.48	77.26	38.63	42.24	32.25	148	4892	
4800	240Δ	47.38	70.26	34.13	43.14	35.25	181	5351	
4800	208Y	47.14	90.26	44.13	42.89	35.26	190	5679	
6900	480Δ	48.36	68.74	33.37	44.12	33.74	174	5352	
6900	480Y	47.24	66.08	33.04	43.00	33.08	162	5128	
6900	240Δ	48.34	72.26	36.13	44.09	35.25	168	5188	
6900	208Y	47.81	74.26	36.13	43.63	35.25	166	5239	
7200	480Δ	49.06	69.00	33.50	44.82	33.99	182	5504	
7200	480Y	47.32	70.00	35.00	43.07	33.00	158	5118	
7200	240Δ	48.14	72.26	36.13	43.89	35.25	199	5441	
7200	208Y	48.08	70.26	34.13	43.83	35.25	166	5259	
12000	480Δ	49.00	70.68	35.44	44.76	33.87	164	5284	
12000	480Y	47.22	71.98	34.99	42.98	32.97	148	4998	
12000	240Δ	47.76	70.26	34.13	43.51	35.25	172	5269	
12000	208Y	47.88	74.26	36.13	43.63	35.25	167	5239	
12470	480Δ	47.54	70.74	35.37	43.30	33.74	155	5135	
12470	480Y	47.22	69.88	34.94	42.98	32.87	146	4977	
12470	240Δ	48.34	72.26	36.13	44.09	35.25	170	5231	
12470	208Y	47.88	74.26	36.13	43.63	35.25	168	5287	
13200	480Δ	47.74	66.74	33.37	43.50	33.74	157	5168	
13200	480Y	47.22	70.20	35.10	42.98	33.20	153	5115	
13200	240Δ	48.14	70.26	34.13	43.89	35.25	179	5262	
13200	208Y	47.88	76.26	38.13	43.63	35.25	165	5198	
13800	480Δ	48.12	66.88	33.44	43.87	33.87	161	5251	
13800	480Y	47.22	70.30	35.15	42.98	33.30	148	5040	
13800	240Δ	47.88	70.26	34.13	43.64	35.25	176	5385	
13800	208Y	48.08	70.26	34.13	43.93	35.25	165	5313	

① Contact Westinghouse for Final Dimensions for
Construction on each Order.

② All Dimensions and Weights are Approximate and
Subject to Change Without Notice

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G.O. No. _____ Item No. _____



60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2\frac{1}{2}\%$, Delta High Voltage Connection. ①

Fixed Dimensions In Inches

A	D	J	Q
84.50	79.0	55.0	8.41

Dimensions Shown for Indoor or Outdoor Oil Transformers.

1000 KVA 55° Rise		Transformer Dimensions in Inches ②						Gal	Total Wt. Lbs. w/Oil
HV	LV	B	C	G	M	N	U		
2400	480Δ	49.06	98.74	49.37	44.82	3.04	33.74	200	6487
2400	480Y	48.68	99.26	48.63	44.44	3.04	32.25	181	6188
2400	240Δ	51.04	102.64	51.32	46.79	3.04	37.63	240	6826
2400	208Y	50.20	104.64	51.32	45.96	4.05	37.63	257	7292
4160	480Δ	50.12	97.00	45.50	45.88	3.04	34.00	202	6484
4160	480Y	49.88	95.26	46.63	45.64	3.04	32.25	178	6120
4160	240Δ	50.76	104.62	51.31	46.52	3.04	37.62	236	6735
4160	208Y	50.58	98.62	49.31	46.34	4.05	37.62	251	7136
4800	480Δ	48.68	104.62	51.31	44.44	3.04	33.62	196	6400
4800	480Y	49.06	99.26	48.63	44.82	3.04	32.25	177	6088
4800	240Δ	50.76	102.62	51.31	46.52	3.04	37.62	233	6673
4800	208Y	50.58	98.62	49.31	46.34	4.05	37.62	253	7168
6900	480Δ	50.18	99.00	49.50	45.94	3.04	33.99	202	6525
6900	480Y	49.12	99.64	48.82	44.88	3.04	32.64	179	6107
6900	240Δ	51.32	102.62	51.31	47.08	3.04	37.62	232	6678
6900	208Y	50.70	108.62	53.31	46.46	4.05	37.62	232	7102
7200	480Δ	49.82	105.00	51.50	45.58	3.04	33.99	200	6491
7200	480Y	49.06	99.82	48.91	44.82	3.04	32.81	185	6254
7200	240Δ	51.38	102.62	51.31	47.14	3.04	37.62	237	6732
7200	208Y	50.96	106.62	53.31	46.71	4.05	37.62	225	6930
12000	480Δ	50.94	95.62	47.81	46.70	3.04	34.62	208	6572
12000	480Y	50.26	98.34	49.17	46.02	3.04	33.33	200	6489
12000	240Δ	52.66	92.64	45.32	48.42	3.04	37.63	254	7050
12000	208Y	51.70	98.62	49.31	47.46	4.05	37.62	237	7169
12470	480Δ	51.12	99.38	49.69	46.88	3.04	34.37	216	6704
12470	480Y	51.00	92.14	45.07	46.76	3.04	33.13	213	6640
12470	240Δ	52.04	94.64	47.32	47.80	3.04	37.63	246	6963
12470	208Y	51.70	96.62	47.31	47.46	4.05	37.62	240	7217
13200	480Δ	51.00	98.00	48.00	46.76	3.04	34.99	204	6508
13200	480Y	50.32	102.16	51.08	46.08	3.04	33.16	200	6529
13200	240Δ	52.02	96.64	47.32	47.77	3.04	37.63	250	7052
13200	208Y	51.70	100.62	49.31	47.46	4.05	37.62	237	7170
13800	480Δ	51.06	99.38	49.69	46.82	3.04	34.37	215	6672
13800	480Y	50.26	96.02	47.01	46.02	3.04	33.01	208	6616
13800	240Δ	52.08	94.64	47.32	47.83	3.04	37.63	243	6910
13800	208Y	52.20	92.62	45.31	47.96	4.05	37.62	241	7221

① Contact Westinghouse for Final Dimensions for Construction on each Order.

② All Dimensions and Weights are Approximate and Subject to Change Without Notice.

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G.O. No. _____ Item No. _____

Sheet _____ of _____ Sheets



Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592

Specification Data
47-425

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October, 1979
Supersedes TCS 47-430
Pages 7 and 8, Dated January, 1979

Mailed To: E, D/2082/DB

Type RSL Rectangular Coil Core Form
WEMCO "C" Oil
Standardized 500-2500 Kva
Three Phase, 60 Hertz

Liquid Immersed Secondary Unit Substations (Power Centers)

60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2\frac{1}{2}\%$, Delta High Connection. ①

Fixed Dimensions In Inches

A	D	J	Q
84.50	79.0	55.0	8.41

1000 KVA 65°C Rise		Transformer Dimensions in Inches ②						Gal	Total Wt
HV	LV	B	C	G	M	N	U		
2400	480Δ	49.06	80.74	39.37	44.82	3.04	33.74	187	6045
2400	480Y	48.00	83.26	40.63	43.76	3.04	32.25	165	5682
2400	240Δ	48.80	86.26	42.13	44.56	3.04	35.25	177	5829
2400	208Y	49.70	90.64	45.32	45.56	4.05	37.63	216	6539
4160	480Δ	48.72	82.88	41.44	44.47	3.04	33.87	169	5807
4160	480Y	47.94	85.26	40.63	43.70	3.04	32.25	153	5602
4160	240Δ	49.19	86.26	42.13	44.90	3.04	35.26	177	5876
4160	208Y	50.08	92.62	45.31	45.84	4.05	37.62	217	6612
4800	480Δ	48.76	84.62	41.31	44.52	3.04	33.62	174	5922
4800	480Y	48.00	83.26	40.63	43.76	3.04	32.25	150	5532
4800	240Δ	48.84	86.26	42.13	44.59	3.04	35.26	175	5800
4800	208Y	50.34	86.62	43.31	46.09	4.05	37.62	218	6522
6900	480Δ	49.44	81.00	39.50	45.20	3.04	33.99	176	6034
6900	480Y	48.32	83.70	40.85	44.08	3.04	32.69	156	5679
6900	240Δ	49.12	84.26	42.13	44.87	3.04	35.26	178	5897
6900	208Y	50.70	86.62	43.31	46.46	4.05	37.62	196	6336
7200	480Δ	48.44	87.00	43.50	44.20	3.04	33.99	168	5890
7200	480Y	48.32	81.64	40.82	44.08	3.04	32.63	160	5745
7200	240Δ	48.84	86.26	42.13	44.59	3.04	35.26	181	5933
7200	208Y	50.46	84.62	41.31	46.21	4.05	37.62	195	6310
12000	480Δ	50.68	81.38	39.69	46.44	3.04	34.37	188	6176
12000	480Y	49.18	80.32	39.16	44.94	3.04	33.31	174	5933
12000	240Δ	50.12	82.26	40.13	45.87	3.04	35.25	193	6176
12000	208Y	51.46	86.62	43.31	47.21	4.05	37.62	201	6400
12470	480Δ	50.32	83.24	41.62	46.08	3.04	34.24	183	6071
12470	480Y	49.62	77.82	38.91	45.38	3.04	32.81	182	6104
12470	240Δ	50.12	82.26	40.13	45.87	3.04	35.25	184	5992
12470	208Y	51.46	82.62	41.31	47.21	4.05	37.62	213	6625
13200	480Δ	50.62	81.24	39.62	46.38	3.04	34.24	184	6111
13200	480Y	49.56	82.18	41.09	45.32	3.04	33.17	174	5967
13200	240Δ	49.84	84.26	42.13	45.59	3.04	35.25	191	6183
13200	208Y	51.20	86.62	43.31	46.96	4.05	37.62	206	6504
13800	480Δ	51.00	79.24	39.69	46.76	3.04	34.24	181	6019
13800	480Y	49.26	79.96	38.98	45.02	3.04	32.95	181	6084
13800	240Δ	50.12	84.26	42.13	45.87	3.04	35.25	184	6002
13800	208Y	51.20	84.62	41.31	46.96	4.05	37.62	199	6413

Dimensions Shown for Indoor or Outdoor Oil Transformers.

① Contact Westinghouse for Final Dimensions for Construction on each Order.

② All Dimensions and Weights are Approximate and Subject to Change Without Notice.

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G.O. No. _____ Item No. _____



60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2\frac{1}{2}\%$, Delta High Voltage Connection. ①

Fixed Dimensions In Inches

A	D	J	N	●
54.50	79.0	55.0	3.04	8.41

Dimensions Shown for Indoor or Outdoor Oil Transformers

1500 KVA		Transformer Dimensions in Inches ●						Total Wt -
HV	LV	B	C	G	M	U	Gal	lbs w/Oil
55°C Rise								
2400	480Δ	52.26	114.62	56.31	48.02	35.62	229	8112
2400	480Y	52.44	110.26	54.13	48.20	35.25	225	8021
4160	480Δ	53.62	108.76	54.38	49.38	35.75	231	8057
4160	480Y	52.82	112.26	56.13	48.58	35.25	224	8035
4800	480Δ	53.88	106.76	52.38	49.64	35.75	233	8101
4800	480Y	52.76	110.26	54.13	48.52	35.26	225	8048
6900	480Δ	53.14	112.88	56.44	48.89	35.87	236	8117
6900	480Y	52.88	110.26	54.13	48.64	35.25	239	8111
7200	480Δ	53.50	110.88	54.44	49.26	35.87	250	8208
7200	480Y	53.18	114.26	56.13	48.94	35.25	223	8011
12000	480Δ	53.68	115.12	56.56	49.44	36.12	240	8194
12000	480Y	53.68	116.40	58.20	49.44	35.40	229	8144
12470	480Δ	53.38	113.12	56.56	49.14	36.12	237	8198
12470	480Y	52.88	112.26	56.13	48.64	35.25	247	8279
13200	480Δ	54.06	113.62	56.18	49.82	36.62	250	8493
13200	480Y	54.82	114.26	56.13	50.58	35.25	225	8180
13800	480Δ	53.38	113.12	56.56	49.14	36.12	238	8133
13800	480Y	54.06	110.50	54.25	49.82	35.50	229	8212
65°C Rise								
2400	480Δ	51.54	96.62	48.31	47.30	35.62	199	7412
2400	480Y	51.88	94.26	46.13	47.64	35.26	202	7394
4160	480Δ	51.96	96.76	48.38	47.71	35.75	197	7406
4160	480Y	52.06	100.26	48.13	47.82	35.25	192	7381
4800	480Δ	51.62	98.76	48.38	47.37	35.75	194	7327
4800	480Y	51.38	98.26	48.13	47.14	35.25	194	7401
6900	480Δ	52.24	98.88	48.44	47.99	35.87	197	7402
6900	480Y	52.00	96.26	48.13	47.76	35.25	202	7440
7200	480Δ	52.58	94.88	46.44	48.33	35.87	201	7442
7200	480Y	51.38	104.26	52.13	47.14	35.25	199	7422
12000	480Δ	52.64	97.12	48.56	48.39	36.12	205	7559
12000	480Y	52.18	98.26	48.13	47.94	35.25	196	7501
12470	480Δ	52.34	99.12	48.56	48.09	36.12	211	7635
12470	480Y	52.94	92.32	46.16	48.70	35.31	203	7448
13200	480Δ	52.60	99.12	48.56	48.36	36.12	205	7499
13200	480Y	52.50	96.26	48.13	48.26	35.25	195	7468
13800	480Δ	52.90	94.74	46.37	48.65	35.74	226	7810
13800	480Y	53.32	86.56	42.28	49.08	35.56	198	7530

① Contact Westinghouse for Final Dimensions for Construction on each Order.

② All Dimensions and Weights are Approximate and Subject to Change Without Notice

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G. O. No. _____ Item No. _____

Sheet _____ of _____ Sheets

Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592



Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592

Specification Data
47-425

Page 9

October, 1979
Supersedes TCS 47-430
Pages 9 and 10, Dated November, 1978

Type RSL Rectangular Coil Core Form
WEMCO "C" Oil
Standardized 500-2500 Kva
Three Phase, 60 Hertz

Mailed To: E, D/2082/DB

Liquid Immersed Secondary Unit Substations (Power Centers)

60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2\frac{1}{2}\%$, Delta High Voltage Connection. ①

Fixed Dimensions In Inches

A	D	J	N	Q
84.50	79.0	55.0	3.04	8.41

2000 KVA HV LV Transformer Dimensions in Inches ② B C G M U Gal. Total Wt. Lbs. w/Oil Dimensions Shown for Indoor or Outdoor Oil Transformers.

55°C Rise

4160	480Δ	58.16	116.62	57.31	53.92	37.62	266	9779
4160	480Y	57.66	116.62	57.31	53.42	37.62	261	9899
4800	480Δ	58.14	118.62	59.31	53.89	37.62	265	9744
4800	480Y	57.98	118.62	59.31	53.74	37.62	260	9886
6900	480Δ	58.50	118.62	59.31	54.26	37.62	288	10089
6900	480Y	58.36	118.62	59.31	54.11	37.62	260	9966
7200	480Δ	58.54	114.62	57.31	54.29	37.62	267	9892
7200	480Y	58.36	116.62	57.31	54.11	37.62	261	10038
12000	480Δ	59.26	110.64	55.32	55.01	37.63	270	9931
12000	480Y	58.42	114.80	57.40	54.17	37.79	265	10010
12470	480Δ	58.32	114.64	57.32	54.08	37.63	280	10124
12470	480Y	59.08	113.40	55.70	54.83	38.40	252	9989
13200	480Δ	58.64	114.64	57.32	54.39	37.63	285	10039
13200	480Y	58.10	115.38	57.69	53.86	38.38	267	10025
13800	480Δ	58.96	116.64	57.32	54.71	37.63	260	9917
13800	480Y	59.68	107.56	53.78	55.44	38.56	258	10180

65°C Rise

4160	480Δ	57.12	97.56	48.78	52.88	36.56	242	8966
4160	480Y	56.68	100.86	50.43	52.44	35.85	231	9069
4800	480Δ	56.62	101.56	50.78	52.38	36.56	248	9150
4800	480Y	56.32	104.78	52.39	52.08	35.78	231	9105
6900	480Δ	56.62	99.68	48.84	52.38	36.68	246	9172
6900	480Y	56.26	107.28	52.64	52.02	36.28	229	9001
7200	480Δ	57.26	97.68	48.84	53.02	36.68	249	9209
7200	480Y	55.82	105.20	52.60	51.58	36.19	231	9067
12000	480Δ	57.50	99.54	48.97	53.26	36.93	256	9319
12000	480Y	57.44	98.68	49.34	53.20	37.68	239	9299
12470	480Δ	57.50	100.58	49.29	53.26	37.57	243	9080
12470	480Y	57.44	100.98	49.49	53.20	37.97	235	9213
13200	480Δ	57.88	95.94	46.97	53.64	36.93	253	9248
13200	480Y	57.38	99.82	48.91	53.14	36.82	246	9349
13800	480Δ	58.26	98.58	49.29	54.02	37.57	245	9261
13800	480Y	57.50	101.00	49.50	53.26	37.99	237	9381

① Contact Westinghouse for Final Dimensions for Construction on each Order.

② All Dimensions and Weights are Approximate and Subject to Change Without Notice.

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G.O. No. _____ Item No. _____



60 Hertz, Standard BIL, Standard Sound Level, Standard Impedance,
Standard Losses, Standard Bushing Height, Aluminum Coils,
Standard Taps $\pm 2-2\frac{1}{2}\%$, Delta High Voltage Connection. ①

Fixed Dimensions In Inches

A	D	J	N	Q
84.50	79.0	55.0	4.06	8.41

Dimensions Shown for Indoor or Outdoor Oil Transformers.

2500 KVA		Transformer Dimensions in Inches ①						Gal.	Total Wt. Lbs. w/Oil
HV	LV	B	C	G	M	U			

55°C Rise

4160	480Δ	60.88	118.62	59.31	56.64	37.62	323	11539
4160	480Y	63.76	119.56	59.78	59.52	38.56	295	11910
4800	480Δ	61.46	118.62	59.31	57.21	37.62	318	11355
4800	480Y	64.38	117.92	57.96	60.14	38.91	304	12052
6900	480Δ	60.88	116.68	57.34	56.64	37.68	340	11468
6900	480Y	64.06	120.22	60.11	59.82	39.21	303	12063
7200	480Δ	60.58	116.68	57.34	56.33	37.68	347	11707
7200	480Y	64.00	120.06	60.03	59.76	39.05	306	12120
12000	480Δ	62.20	115.70	57.85	57.95	38.69	322	11540
12000	480Y	64.50	118.62	58.31	60.26	39.62	321	12372
12470	480Δ	61.92	115.70	57.85	57.67	38.69	324	11618
12470	480Y	64.62	120.46	60.23	60.38	39.45	313	12110
13200	480Δ	61.58	117.70	57.85	57.33	38.69	329	11706
13200	480Y	64.12	120.28	60.14	59.88	39.28	312	12127
13800	480Δ	62.20	115.70	57.85	57.95	38.69	324	11602
13800	480Y	64.62	116.64	58.32	60.38	39.64	324	12300

65°C Rise

4160	480Δ	60.54	106.62	53.31	56.29	37.62	281	10603
4160	480Y	60.38	108.62	53.31	56.14	37.62	265	10885
4800	480Δ	60.54	110.62	55.31	56.29	37.62	275	10542
4800	480Y	60.82	106.74	53.37	56.58	37.74	266	10929
6900	480Δ	60.26	110.68	55.34	56.02	37.68	279	10654
6900	480Y	60.12	109.26	53.63	55.88	38.26	268	10857
7200	480Δ	60.86	104.68	51.34	56.61	37.68	288	10828
7200	480Y	60.12	108.96	53.48	55.88	37.96	272	11018
12000	480Δ	61.32	109.70	53.85	57.08	38.69	280	10783
12000	480Y	60.88	109.68	53.84	56.64	38.68	279	10964
12470	480Δ	61.32	107.70	53.85	57.08	38.69	283	10846
12470	480Y	60.88	109.70	53.85	56.64	38.69	280	11051
13200	480Δ	62.20	99.70	49.85	57.95	38.69	281	10721
13200	480Y	64.18	102.22	50.11	59.94	39.22	281	11156
13800	480Δ	61.32	107.70	53.85	57.08	38.69	280	10789
13800	480Y	60.50	105.50	51.75	56.26	38.49	290	11331

① Contact Westinghouse for Final Dimensions for Construction on each Order.

② All Dimensions and Weights are Approximate and Subject to Change Without Notice.

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G.O. No. _____ Item No. _____

Sheet _____ of _____ Sheets

Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592



Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592

Specification Data
47-425

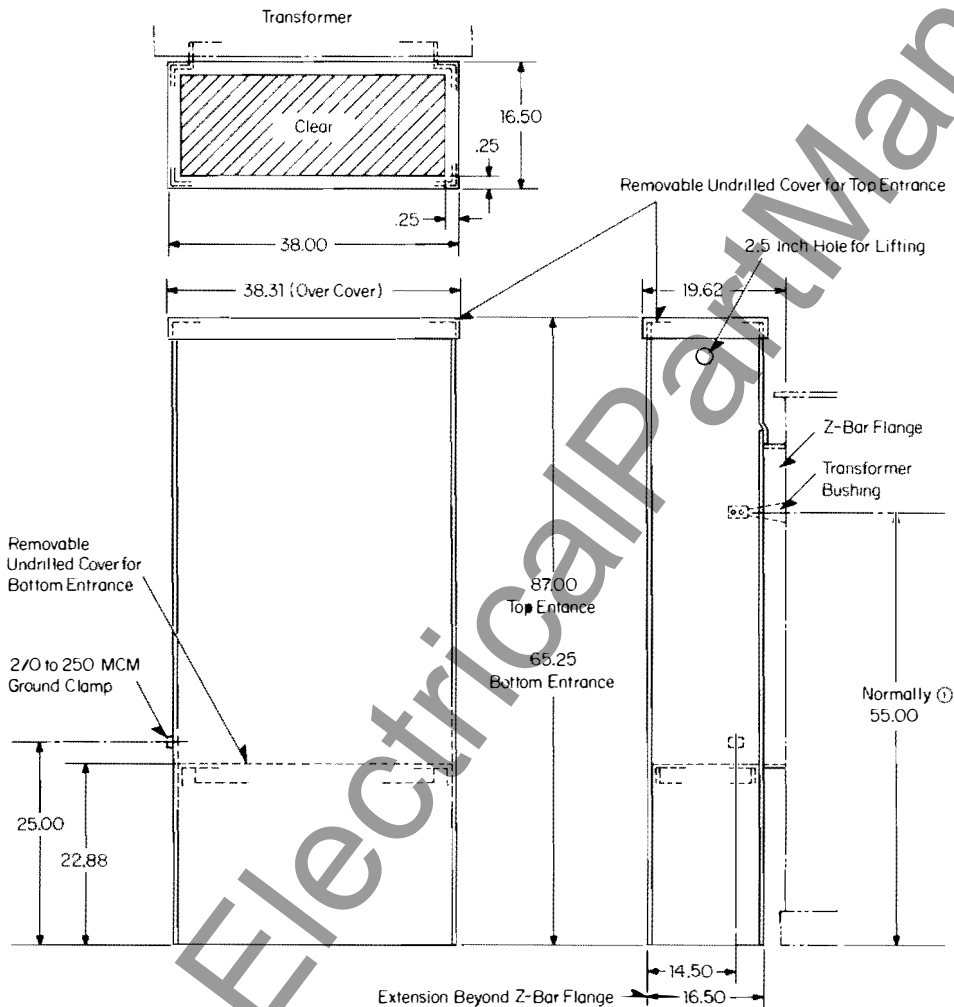
Page 11

October, 1979
Supersedes TCS 47-430
Pages 11 and 12, Dated November, 1978
Mailed To: E, D/2082/DB

Type RSL Rectangular Coil Core Form
WEMCO "C" Oil
Standardized 500-2500 Kva
Three Phase, 60 Hertz

Liquid Immersed Secondary Unit Substations (Power Centers)

Free Standing Air Terminal Chamber High or Low Voltage—Indoor or Outdoor



Ⓢ Dimensions Fixed for Secondary Unit Substation but Variable for Primary Unit Substation.

Westinghouse Electric Corporation

Liquid-Immersed Secondary Unit Substation Transformers

Customer _____ G. O. No. _____ Item No. _____



Westinghouse Electric Corporation		
Liquid-Immersed Secondary Unit Substation Transformers		
Customer _____	G.O. No. _____	Item No. _____

Sheet _____ of _____ Sheets

Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA 24592



Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA 24592

Specification Data
47-620

Page 1

May, 1980
Supersedes SD 47-620, pages 1-2,
dated October, 1979

Mailed to: E, D, C/2108, 2123, 2088,
2124, 2087/DB

112.5 kVA thru 1500 kVA
3 Phase, 60 Hertz

Ventilated Dry Type Transformers 150° C Rise

Notes: This outline may be used for erection purposes. It is not to be regarded as indicating the exact details of construction

For limiting or special dimension problems refer to Westinghouse

Transformer vibration dampener shims, temporary lead braces, tie plates and other shipping supports which are to be removed before operating the transformer are painted yellow and tagged for removal

Item Fitting and Descriptions

1. Case
2. Removable panels
3. Ventilation grille
4. Bar base
5. Provision for fork truck lift on units with B = 60"
6. Removable cover for access to lifting holes
7. Lifting holes
8. H.V. taps
9. L.V. flexible connectors - See figure 3
10. Tie plates-2 total-remove after installation
11. Ground pad
12. Vibration dampeners-remove shipping shims and bolts after installation
13. Diagram instruction plate
14. Lightning arresters when specified
15. Flange end drilling - See figure 4
16. H.V. terminals
17. Hot spot indicator-when specified
18. Air blast fans-when specified
19. H.V. and/or L.V. terminal chambers-full height and width, "B" dimensions includes H.V. and/or L.V. terminal chambers

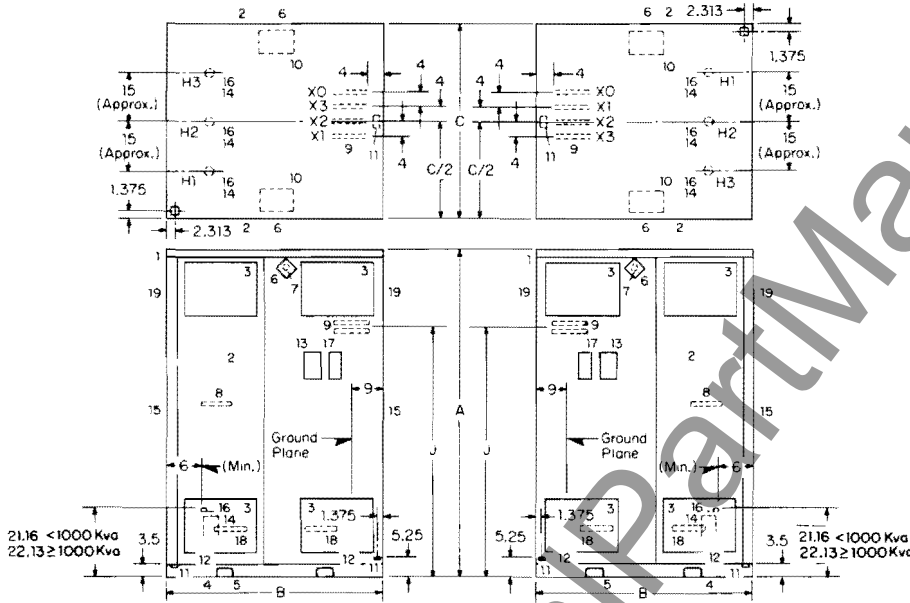


Figure 1: Low Voltage to Right (Std.)

Figure 2: Low Voltage to Left

Table 1
150° C Rise

Line	kVA	HV = 5 kV - 25 kV BIL				
		A	B	C	J	Wt Lb
1	112.5	90 38	60	54	70	1650
2	150	90 38	60	54	70	2000
3	200	90 38	60	54	70	2250
4	225	90 38	60	54	70	2250
5	250	90 38	60	54	70	2300
6	300	90 38	60	54	70	2500
7	400	90 38	60	54	70	2750
8	500	90 38	60	54	70	3150
9	600	90 38	60	54	70	3400
10	750	90 38	60	54	70	4050
11	1000	90 38	70	60	84	5200
12	1500	90 38	70	60	84	5400

Table 2
150° C Rise

Line	kVA	HV = 15 kV - 50 kV BIL				
		A	B	C	J	Wt Lb
1	112.5	90 38	60	54	70	2050
2	150	90 38	60	54	70	2150
3	200	90 38	60	54	70	3000
4	225	90 38	60	54	70	3100
5	250	90 38	60	54	70	3200
6	300	90 38	60	54	70	3350
7	400	90 38	60	54	70	3550
8	500	90 38	60	54	70	4100
9	600	90 38	60	54	70	4200
10	750	90 38	60	54	70	4700
11	1000	90 38	70	60	84	5100
12	1500	90 38	70	60	84	5650

1 Table No _____

2 Line No _____

3 ☐ Fig. 1, L.V. to Right
☐ Fig. 2, L.V. to Left

4 Cooling Class
☐ AA
☐ AA - Future FA
☐ AA - FA

5 H.V. _____ Delta _____ BIL

6 Taps - ANSI (Approx. $\pm 2\frac{1}{2}\%$)

7 L.V. _____ ☐ Delta ☒ Wye

Customer _____

Certified by _____

B NEMA and ANSI Stds. Covering

Insulation Levels Table A
Impedances Table B
Audible Sound Level Table C
Std Tests Table D
Std Mech Features Table E

H.V. Equipment

9 Air Terminal Chamber
☐ Cable Entrance at Bottom, Clamp Type Term.,
Single Feed
Cable Size _____

10 Close Coupled to
☐ H.V. Switchgear ☐ WLI Sw., Cable Conn
☐ Buffalo Starter ☐ WLI Sw., Bus Conn
☐ Other-specify _____

L.V. Equipment

11 Air Terminal Chamber
☐ Cable Entrance at Bottom without Clamp
Terminals

12 Close Coupled to
☐ L.V. Switchgear
☐ Switchboard
☐ Chicago MCC
☐ Other-specify _____

Coordination Point
☐ E Pittsburgh ☐ Chicago
☐ St. Louis ☐ Visalia

Differences _____

G.O. _____ Item No. _____

Date _____



**Figure 3:
Low Voltage
Flexible Connectors**

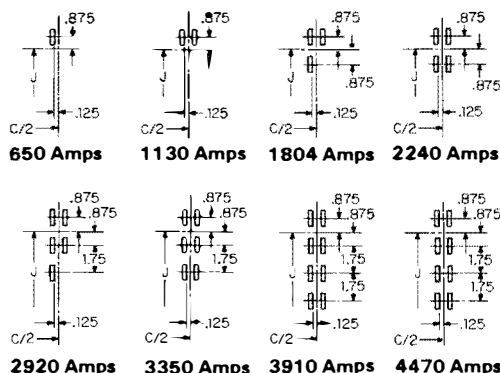
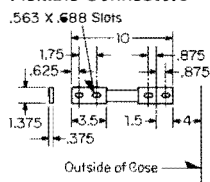
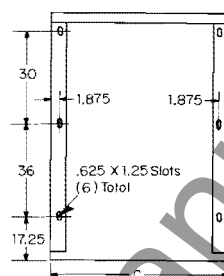


Figure 4: End Drilling



kV Class	Ventilated Dry Type BIL
12	10 kV
25	20 kV
50	25 kV
86.6	35 kV
150	50 kV

kVA	Ventilated Dry Type	
	5 kV Class and Below	8.6 and 15 kV Class 50 BIL
112½	4.6%	3.5%
150	3.8%	4.0%
225	6.0%	4.5%
300	6.3%	5.0%
500	5.75%	5.75%
750	5.75%	5.75%
1000	5.75%	5.75%
1500	5.75%	5.75%

Equivalent Two Winding kVA Self-Cooled	Ventilated Dry Type NEMA Average	Equivalent Two Winding kVA Forced Air Cooled	Ventilated Dry Type NEMA Average
101 to 300	58 db	1000 to 1167	67 db
301 to 500	60 db	1168 to 1667	68 db
501 to 700	62 db	1668 to 2000	69 db
701 to 1000	64 db		
1001 to 1500	65 db		

The following tests will be made on all transformers except as specifically stated. The numbers shown do not necessarily indicate the sequence in which the tests will be made. All tests will be made in accordance with the latest revision of ANSI Standard Test Code for Transformers.

1. Resistance measurements of all windings on the rated voltage connection of each unit and at the tap extremes on one unit only of a given rating on an order.
2. Ratio tests on the rated voltage connection and on all tap connections.
3. Polarity and phase relation tests on the rated voltage connection.
4. No-load loss at rated voltage on the rated voltage connection
5. Exciting current at rated voltage on the rated voltage connection.
6. Impedance* and load loss* at rated current on the rated voltage connection of each unit and on the tap extremes of one unit only of a given rating on an order.
7. Temperature test:
 - A. Temperature test or tests will be made on one unit only of an order covering one or more units of a given rating. Tests will be made only when there is not available a record of a temperature test, on a duplicate or essentially duplicate unit.
 - B. Subject to limitations of the preceding paragraph (A), when a transformer is supplied with auxiliary cooling equipment to provide more than one kVA rating, temperature tests will be made on all nameplate kVA ratings.

8. Applied potential tests.
9. Induced potential tests.

The standard dry type unit substitution transformer is provided with a H.V. flange on one end of the transformer and a L.V. flange on the opposite end, included as part of the transformer. No transition is required when close coupled with H.V. or L.V. Westinghouse equipment listed on the preceding page.

The units are completely open on the end except for the flange around the outside edge.

The units are designed for a maximum altitude of 3300 feet.

Listed below are the standard mechanical features included in the base price of the transformer. There is no deduction for omission of any of these features.

- H.V. and L.V. flange
- Stub taps, internally connected behind removable panel
- Provision for lifting
- Provision for jacking
- Drip proof cover
- Two ground pads
- Instruction Nameplate
- Vibration dampening pads under core and coil assembly
- Base suitable for rolling or skidding in any direction
- Transition space for H.V. and L.V. close coupling
- Continuous ground between ground pads



Westinghouse Electric Corporation
Small Power Transformer Division
South Boston, VA. 24592

Specification Data
47-620

Page 3

May, 1980
Supersedes SD 47-620, pages 3-4
dated October, 1979

Mailed to: E, D, C/2108, 2123, 2088,
2124, 2087/DB

112.5 kVA thru 1500 kVA
3 Phase, 60 Hertz

Ventilated Dry Type Transformers

115° C Rise

Notes: This outline may be used for erection purposes. It is not to be regarded as indicating the exact details of construction

For limiting or special dimension problems refer to Westinghouse.

Transformer vibration dampener shims, temporary lead braces, tie plates and other shipping supports which are to be removed before operating the transformer are painted yellow and tagged for removal.

Item Fitting and Descriptions

1. Case
2. Removable panels
3. Ventilation grille
4. Bar base
5. Provision for fork truck lift on units with B = 60"
6. Removable cover for access to lifting holes
7. Lifting holes
8. H.V. taps
9. L.V. flexible connectors - See figure 3
10. Tie plates-2 total-remove after installation
11. Ground pad
12. Vibration dampeners-remove shipping shims and bolts after installation
13. Diagram instruction plate
14. Lightning arresters when specified
15. Flange end drilling - See figure 4
16. H.V. terminals
17. Hot spot indicator-when specified
18. Air blast fans-when specified
19. H.V. and/or L.V. terminal chambers-full height and width, "B" dimensions includes H.V. and/or L.V. terminal chambers

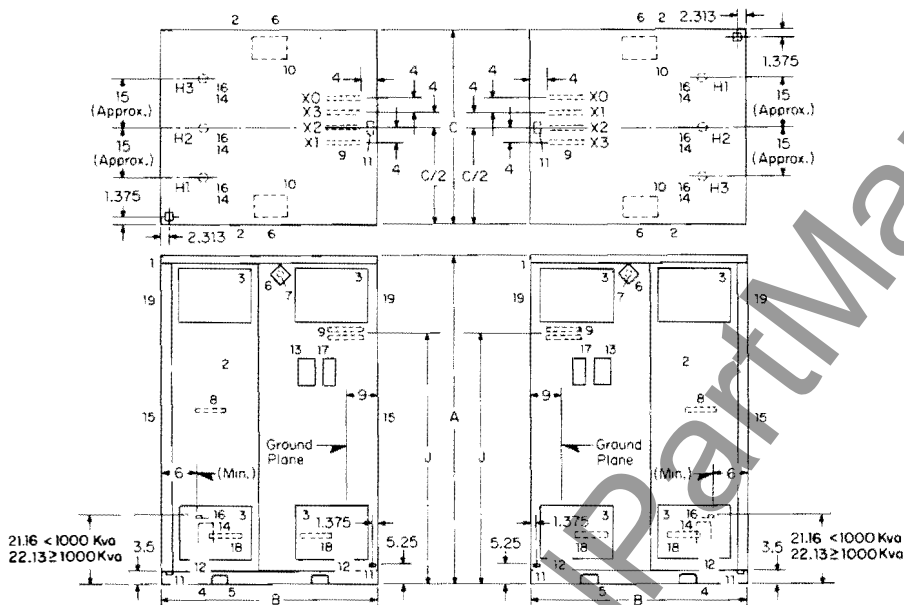


Figure 1: Low Voltage to Right (Std.)

Figure 2: Low Voltage to Left

Table 4

115° C Rise

Line	kVA	HV - 5 kV - 25 kV BIL					
		A	B	C	J	Wt Lb	
1	112.5	90 38	60	54	70	1700	
2	150	90 38	60	54	70	2000	
3	200	90 38	60	54	70	2300	
4	225	90 38	60	54	70	2300	
5	250	90 38	60	54	70	2600	
6	300	90 38	60	54	70	2600	
7	400	90 38	60	54	70	2850	
8	500	90 38	60	54	70	3400	
9	600	90 38	60	54	70	4250	
10	750	90 38	60	54	70	4250	
11	1000	90 38	70	60	84	5450	

Table 5

115° C Rise

Line	kVA	HV - 15 kV - 50 kV BIL					
		A	B	C	J	Wt Lb	
1	112.5	90 38	60	54	70	2050	
2	150	90 38	60	54	70	2150	
3	200	90 38	60	54	70	3000	
4	225	90 38	60	54	70	3100	
5	250	90 38	60	54	70	3150	
6	300	90 38	60	54	70	3300	
7	400	90 38	60	54	70	3700	
8	500	90 38	60	54	70	4250	
9	600	90 38	60	54	70	4450	
10	750	90 38	60	54	70	4750	
11	1000	90 38	70	60	84	5200	

- 1 Table No _____
- 2 Line No _____
- 3 ☐ Fig. 1, L.V. to Right
☐ Fig. 2, L.V. to Left
- 4 Cooling Class
☐ AA
☐ AA/Future FA
☐ AA/FA
- 5 H.V. _____ Delta _____ BIL
- 6 Taps - ANSI (Approx ±2—2½%)
- 7 L.V. _____ ☐ Delta ☐ Wye

- 8 NEMA and ANSI Stds. Covering
Insulation Levels Table A
Impedances Table B
Audible Sound Level Table C
Std. Tests Table D
Std. Mech. Features Table E
- H.V. Equipment
- 9 Air Terminal Chamber
☐ Cable Entrance at Bottom, Clamp Type Term., Single Feed
Cable Size _____
- 10 Close Coupled to
☐ H.V. Switchgear ☐ WLI Sw., Cable Conn
☐ Buffalo Starter ☐ WLI Sw., Bus Conn.
☐ Other-specify _____

L.V. Equipment

- 11 Air Terminal Chamber
☐ Cable Entrance at Bottom without Clamp Terminals
- 12 Close Coupled to
☐ L.V. Switchgear
☐ Switchboard
☐ Chicago MCC
☐ Other-specify _____

Coordination Point

- ☐ E. Pittsburgh ☐ Chicago
☐ St. Louis ☐ Visalia

Differences _____

G.O. _____ Item No. _____
Date _____

On the bottom of the preceding page, specific information is required for 1, 2, 3, 4, 5 and 7. Under H.V. EQUIPMENT, either 9 or 10 must be checked and under L.V. EQUIPMENT, either 11 or 12 must be checked. Any differences in the customer requirements and the standards in Tables A thru E should be listed under differences. Use a separate sheet of paper if necessary

Figure 3:
Low Voltage
Flexible Connectors

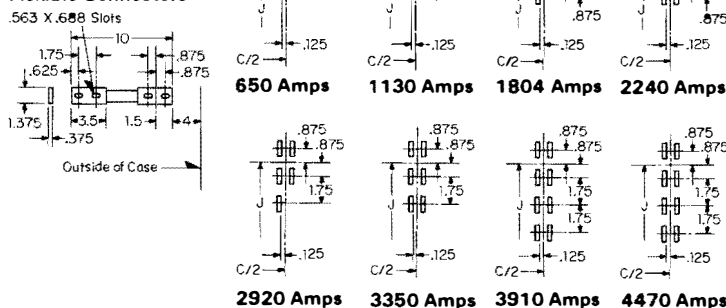


Figure 4: End Drilling

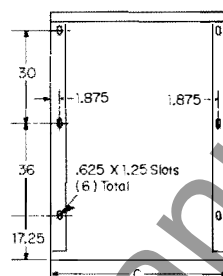


Table A
Insulation Level

kV Class	Ventilated Dry Type BIL
1 2	10 kV
2 5	20 kV
5 0	25 kV
8.66	35 kV
15 0	50 kV

Table B
Impedances

kVA	Ventilated Dry Type	
	5 kV Class and Below	8.6 and 15 kV Class 50 BIL
112½	4.6%	3.5%
150	3.8%	4.0%
225	6.0%	4.5%
300	6.3%	5.0%
500	5.75%	5.75%
750	5.75%	5.75%
1000	5.75%	5.75%

Table C
Audible Sound Levels
Self-Cooled (AA)

Equivalent Two Winding kVA Self-Cooled	Ventilated Dry Type NEMA Average
101 to 300	58 db
301 to 500	60 db
501 to 700	62 db
701 to 1000	64 db

Forced Air Cooled (FA)

Equivalent Two Winding kVA Forced Air Cooled	Ventilated Dry Type NEMA Average
1000 to 1167	67 db
1168 to 1667	68 db
1668 to 2000	69 db

Table D — Standard Tests

The following tests will be made on all transformers except as specifically stated. The numbers shown do not necessarily indicate the sequence in which the tests will be made. All tests will be made in accordance with the latest revision of ANSI Standard Test Code for Transformers.

- Resistance measurements of all windings on the rated voltage connection of each unit and at the tap extremes on one unit only of a given rating on an order.
- Ratio tests on the rated voltage connection and on all tap connections.
- Polarity and phase relation tests on the rated voltage connection.
- No-load loss at rated voltage on the rated voltage connection.
- Exciting current at rated voltage on the rated voltage connection.
- Impedance* and load loss* at rated current on the rated voltage connection of each unit and on the tap extremes of one unit only of a given rating on an order.
- Temperature test:
 - Temperature test or tests will be made on one unit only of an order covering one or more units of a given rating. Tests will be made only when there is not available a record of a temperature test, on a duplicate or essentially duplicate unit.
 - Subject to limitations of the preceding paragraph (A), when a transformer is supplied with auxiliary cooling equipment to provide more than one kVA rating, temperature tests will be made on all nameplate kVA ratings.
- Applied potential tests.
- Induced potential tests.

*On repetitive manufactured units, these tests may be omitted.

Table E — Standard Mechanical Features

The standard dry type unit substation transformer is provided with a H.V. flange on one end of the transformer and a L.V. flange on the opposite end, included as part of the transformer. No transition is required when close coupled with H.V. or L.V. Westinghouse equipment listed on the preceding page.

The units are completely open on the end except for the flange around the outside edge.

The units are designed for a maximum altitude of 3300 feet.

Listed below are the standard mechanical features included in the base price of the transformer. There is no deduction for omission of any of these features.

- H.V. and L.V. flange
- Stub taps, internally connected behind removable panel
- Provision for lifting
- Provision for jacking
- Drip proof cover
- Two ground pads
- Instruction Nameplate
- Vibration dampening pads under core and coil assembly
- Base suitable for rolling or skidding in any direction
- Transition space for H.V. and L.V. close coupling
- Continuous ground between ground pads



May, 1980
Supersedes SD 47-620, pages 5-6,
dated October, 1979

112.5 kVA thru 1500 kVA
3 Phase, 60 Hertz

Mailed to: E, D, C/2108, 2123, 2088,
2124, 2087/DB

Ventilated Dry Type Transformers

80°C Rise

Notes: This outline may be used for erection purposes. It is not to be regarded as indicating the exact details of construction.

For limiting or special dimension problems refer to Westinghouse.

Transformer vibration dampener shims, temporary lead braces, tie plates and other shipping supports which are to be removed before operating the transformer are painted yellow and tagged for removal.

Item Fitting and Descriptions

1. Case
2. Removable panels
3. Ventilation grille
4. Bar base
5. Provision for fork truck lift on units with B = 60"
6. Removable cover for access to lifting holes
7. Lifting holes
8. H.V. taps
9. L.V. flexible connectors - See figure 3
10. Tie plates-2 total-remove after installation
11. Ground pad
12. Vibration dampeners-remove shipping shims and bolts after installation
13. Diagram instruction plate
14. Lightning arresters when specified
15. Flange end drilling - See figure 4
16. H.V. terminals
17. Hot spot indicator-when specified
18. Air blast fans-when specified
19. H.V. and/or L.V. terminal chambers-full height and width, "B" dimensions includes H.V. and/or L.V. terminal chambers except when noted by * in tables

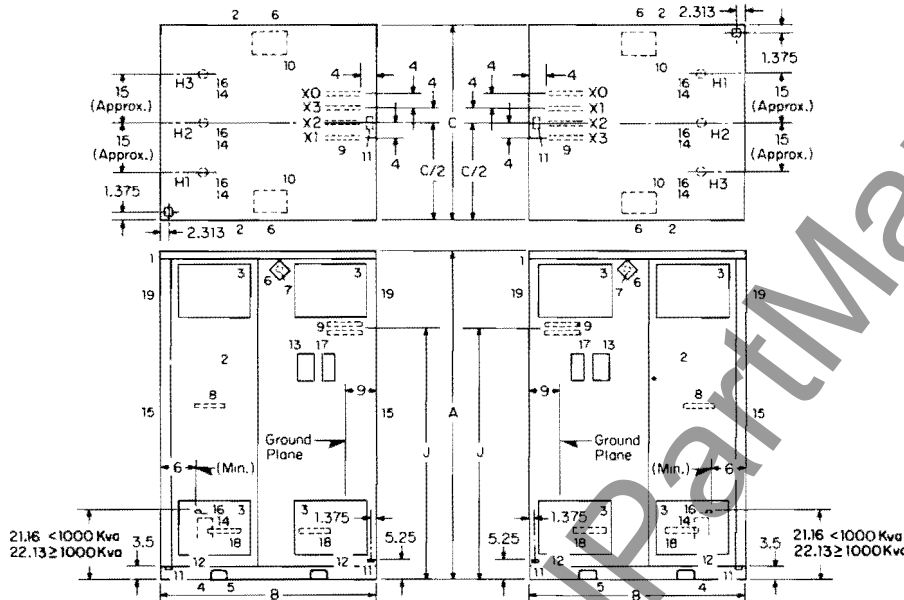


Figure 1: Low Voltage to Right (Std.)

Figure 2: Low Voltage to Left

Table 7
80°C Rise

Line	kVA	A	HV = 5 kV - 25 kV BIL				Wt Lb
			B	C	J	Lb	
1	112.5	90.38	60	54	70	2100	
2	150	90.38	60	54	70	2100	
3	200	90.38	60	54	70	2500	
4	225	90.38	60	54	70	2600	
5	250	90.38	60	54	70	2750	
6	300	90.38	60	54	70	3150	
7	400	90.38	60	54	70	3500	
8	500	90.38	60	54	70	4025	
9	600	90.38	60	54	70	5100	
10	750	90.38	60	54	70	5300	
11	1000	90.38	70*	60	84	7400	

*Add 12 in. for H.V. Terminal Chamber

Table 8
80°C Rise

Line	kVA	A	HV = 15 kV - 50 kV BIL				Wt Lb
			B	C	J	Lb	
1	112.5	90.38	60	54	70	2150	
2	150	90.38	60	54	70	2250	
3	200	90.38	60	54	70	3100	
4	225	90.38	60	54	70	3400	
5	250	90.38	60	54	70	3500	
6	300	90.38	60	54	70	3800	
7	400	90.38	60	54	70	4200	
8	500	90.38	60	54	70	5100	
9	600	90.38	60	54	70	5250	
10	750	90.38	60*	54	70	6000	
11	1000	90.38	70	60	84	6450	

*Add 12 in. for H.V. Terminal Chamber

1 Table No. _____

2 Line No. _____

3 ☐ Fig. 1, L.V. to Right
☐ Fig. 2, L.V. to Left

4 Cooling Class

- ☐ AA
☐ AA/Future FA
☐ AA/FA

5 H.V. _____ Delta _____ BIL

6 Taps - ANSI (Approx $\pm 2-2\frac{1}{2}\%$)

7 L.V. _____ ☐ Delta ☐ Wye

Customer _____

Certified by _____

8 NEMA and ANSI Stds. Covering:

- Insulation Levels Table A
Impedances Table B
Audible Sound Level Table C
Std Tests Table D
Std Mech Features Table E

H.V. Equipment

- 9 Air Terminal Chamber
☐ Cable Entrance at Bottom, Clamp Type Term.,
Single Feed
Cable Size _____

10 Close Coupled to

- ☐ H.V. Switchgear ☐ WLI Sw., Cable Conn
☐ Buffalo Starter ☐ WLI Sw., Bus Conn
☐ Other-specify _____

L.V. Equipment

- 11 Air Terminal Chamber
☐ Cable Entrance at Bottom without Clamp
Terminals

12 Close Coupled to

- ☐ L.V. Switchgear
☐ Switchboard
☐ Chicago MCC
☐ Other-specify _____

Coordination Point

- ☐ E. Pittsburgh ☐ Chicago
☐ St. Louis ☐ Visalia

Differences _____

G.O. _____ Item No. _____

Date _____

On the bottom of the preceding page, specific information is required for 1, 2, 3, 4, 5 and 7. Under H.V. EQUIPMENT, either 9 or 10 must be checked and under L.V. EQUIPMENT, either 11 or 12 must be checked. Any differences in the customer requirements and the standards in Tables A thru E should be listed under differences. Use a separate sheet of paper if necessary.

Figure 3:
Low Voltage
Flexible Connectors

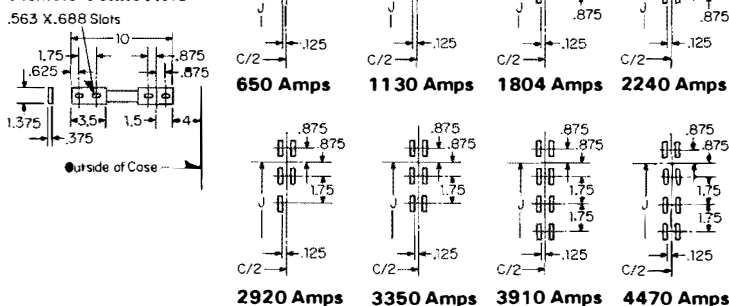


Figure 4: End Drilling

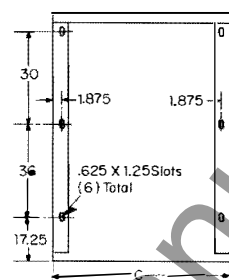


Table A
Insulation Level

kV Class	Ventilated Dry Type BIL
1.2	10 kV
2.5	20 kV
5.0	25 kV
8.66	35 kV
15.0	50 kV

Table B
Impedances

kVA	Ventilated Dry Type	
	5 kV Class and Below	8.6 and 15 kV Class 50 BIL
112½	4.6%	3.5%
150	3.8%	4.0%
225	6.0%	4.5%
300	6.3%	5.0%
500	5.75%	5.75%
750	5.75%	5.75%
1000	5.75%	5.75%

Table C
Audible Sound Levels
Self-Cooled (AA)

Equivalent Two Winding kVA Self-Cooled	Ventilated Dry Type NEMA Average	Forced Air Cooled (FA)	
		Equivalent Two Winding kVA Forced Air Cooled	Ventilated Dry Type NEMA Average
101 to 300	58 db	1000 to 1167	67 db
301 to 500	60 db	1168 to 1667	68 db
501 to 700	62 db	1668 to 2000	69 db
701 to 1000	64 db		

Table D — Standard Tests

The following tests will be made on all transformers except as specifically stated. The numbers shown do not necessarily indicate the sequence in which the tests will be made. All tests will be made in accordance with the latest revision of ANSI Standard Test Code for Transformers.

- Resistance measurements of all windings on the rated voltage connection of each unit and at the tap extremes on one unit only of a given rating on an order.
- Ratio tests on the rated voltage connection and on all tap connections.
- Polarity and phase relation tests on the rated voltage connection.
- No-load loss at rated voltage on the rated voltage connection.
- Exciting current at rated voltage on the rated voltage connection.
- Impedance* and load loss* at rated current on the rated voltage connection of each unit and on the tap extremes of one unit only of a given rating on an order.
- Temperature test:
 - Temperature test or tests will be made on one unit only of an order covering one or more units of a given rating. Tests will be made only when there is not available a record of a temperature test, on a duplicate or essentially duplicate unit.
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- Applied potential tests.
- Induced potential tests.

*On repetitive manufactured units, these tests may be omitted.

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