High Voltage, General Purpose Transformers

2.4 Thru 15 KV Class
DOE 2010 Efficiency Compliant

FEDERAL PACIFIC

ISO 9001:2008
REGISTERED

Specifications

Three Phase — 150° C Rise — 2.4KV Thru 15KV

Medium voltage dry-type transformers must comply with the new Department of Energy efficiency regulations published in Table 1.2 of the Federal Register/ Vol. 72, No. 197 / Friday, October 12, 2007. This is the DOE 10 CFR 431 Section 196.

Core & Coil
Wire or strip wound coils on high grade silicon electrical steel cores. Complete assembly isolated from enclosure through vibration dampening pads.

Insulation
220° C insulation system.

Enclosure
Indoor ventilated heavy gauge steel enclosure with removable front and rear panels. Arranged for standard floor or platform mounting.

Finish
Electrostatically applied baked light grey polyurethane powder paint.

Terminals
Wiring compartments located behind removable covers with fully sized terminals arranged to accept installer's cable connectors. Flexible grounding strap provided between core and coil assembly and enclosure with stud or ground pad for system ground connection.

Taps
Units provided with full capacity primary taps. (2) @ 2-1/2% FCAN and (2) @ 2-1/2% FCBN.

Nameplate
Diagrammatic nameplate includes all rating data and provides wiring diagram with connection point identification.

Standards
ANSI - C57.12
NEMA ST-20

Sound Levels
Transformers meet the maximum sound level requirements established by IEEE as follows:

10- 50	KVA 45 db
51- 150	KVA 50 db
151- 300	KVA 55 db
301- 500	KVA 60 db
501- 700	KVA 62 db
701-1000	KVA 64 db
1001-1500	KVA 65 db

Style A

Style B

Catalog Number Selection - High Voltage General Purpose (HVGP)

USS Approximate Dimensions and Weights - Indoor Only (DOE 2010 Efficiency Compliant)
(Basic Design without any special features or listings.)

Three Phase — 150° C Rise — 2.4 KV, 5 KV, 7.2 KV, 8.6 KV and 15 KV

Table I (2.4 KV and 5 KV Class)		
KVA	**Catalog Number[1]**	**Enclosure Style**
15	GT ( ) S15H	A
30	GT ( ) S30H	A
45	GT ( ) S45H	A
75	GT ( ) S75H	A
112	GT ( ) S112H	A
150	GT ( ) S150H	A
225	GT ( ) S225H	A
300	GT ( ) S300H	A
500	GT ( ) S500H	A
750	GT ( ) S750H	B
1000*	GT ( ) S1000H	B
1500*	GT ( ) S1500H	B

For dimensions and weights see catalog page 78.

Table I Voltage Codes		
2.4KV Class - 20KV BIL		
Primary	Secondary	Code
2400 Delta	240 Delta	A2
	480 Delta	A3
	208Y/120	A4
	480Y/277	A5
5KV Class - 30KV BIL		
Primary	Secondary	Code
4160 Delta	240 Delta	B2
	480 Delta	B3
	208Y/120	B4
	480Y/277	B5
4800 Delta	240 Delta	C2
	480 Delta	C3
	208Y/120	C4
	480Y/277	C5

Table II (7.2 KV, 8.6 KV and 15 KV Class)		
KVA	**Catalog Number[1]**	**Enclosure Style**
75	GT ( ) S75H	B
112.5	GT ( ) S112H	B
150	GT ( ) S150H	B
225	GT ( ) S225H	B
300	GT ( ) S300H	B
500	GT ( ) S500H	B
750	GT ( ) S750H	B
1000[2]	GT ( ) S1000H	B
1500[2]	GT ( ) S1500H	B

For dimensions and weights see catalog page 79.

Table II Voltage Codes		
7.2KV Class - 45KV BIL		
Primary	Secondary	Code
7200 Delta	240 Delta	D2
	480 Delta	D3
	208Y/120	D4
	480Y/277	D5
8.6KV Class - 45KV BIL		
Primary	Secondary	Code
8320 Delta	240 Delta	G2
	480 Delta	G3
	208Y/120	G4
	480Y/277	G5
15KV Class - 60KV BIL		
Primary	Secondary	Code
12000 Delta	240 Delta	J2
	480 Delta	J3
	208Y/120	J4
	480Y/277	J5
12470 Delta	240 Delta	K2
	480 Delta	K3
	208Y/120	K4
	480Y/277	K5
13200 Delta	240 Delta	L2
	480 Delta	L3
	208Y/120	L4
	480Y/277	L5
13800 Delta	240 Delta	M2
	480 Delta	M3
	208Y/120	M4
	480Y/277	M5

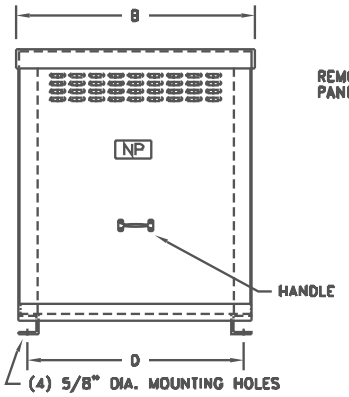
*[1]**NOTE:** Insert correct code from Table 1 or Table 2 for required HV and LV voltage combination in the parenthesis to complete catalog number.*

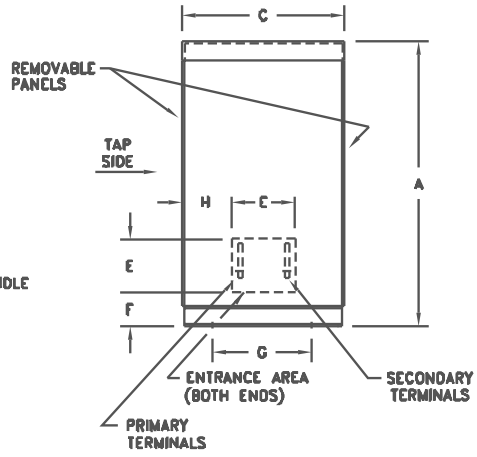
[2] Dimensions on catalog pages 78 and 79 are for secondary voltage of 480 volts only. Consult factory for other voltages.

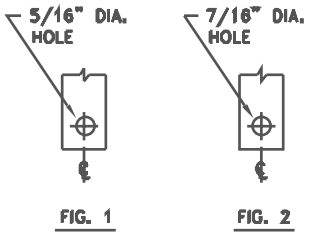
Dimensional Data

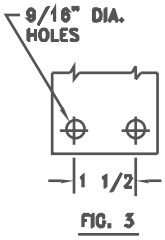
USS Approximate Dimensions and Weights - Indoor Only (DOE 2010 Efficiency Compliant)

Three Phase — 150° C Rise — 2.4 KV and 5 KV



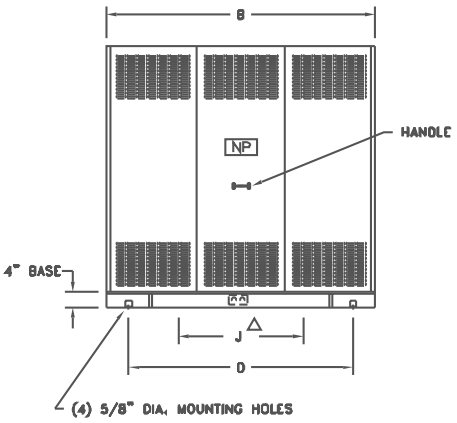


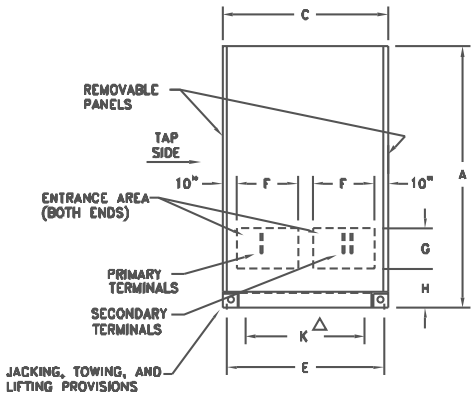




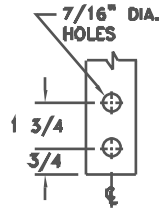
Style A

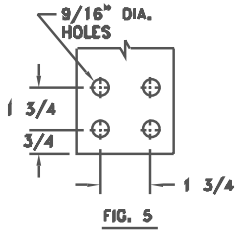
										Terminal Spade	
KVA	Net Wt. in Lbs.	A	B	C	D	E	F	G	H	Primary	Secondary
15	680	48	36	20	34.125	6	5.75	16.75	7	Fig. 1	Fig. 1
30	715	48	36	20	34.125	6	5.75	16.75	7	Fig. 1	Fig. 1
45	750	48	36	20	34.125	6	5.75	16.75	7	Fig. 1	Fig. 2
75	1050	49	39	23	37.125	8	5.75	19.75	7.5	Fig. 1	Fig. 2
112.5	1540	57	45	26	43.125	10	6.75	22.75	8	Fig. 2	Fig. 2
150	1640	57	45	26	43.125	10	6.75	22.75	8	Fig. 2	Fig. 2
225	2050	59	46.5	30.875	43.25	10	6.75	25	10.437	Fig. 2	Fig. 3
300	2680	65	50	30.875	46.75	10	6.75	25	10.437	Fig. 2	Fig. 3
500	3760	72.75	53.375	36.875	49.625	12	7.5	32	12.437	Fig. 2	Fig. 3





△ BOTTOM ENTRANCE AREA
(CENTERED FRONT TO BACK, SIDE TO SIDE)





Style B

											Terminal Spade	
KVA	Net Wt. in Lbs.	A	B	C	D	E	F	G	H	J	K	Primary	Secondary
750	5475	90	64	48	54	44.75	12.5	12	4.25	30	39	Fig. 4	Fig. 5
1000*	5725	90	64	48	54	44.75	12.5	12	4.25	30	39	Fig. 4	Fig. 5
1500*	7825	90	72	48	62	44.75	12.5	12	4.25	30	39	Fig. 4	Fig. 5

* *Dimensions for secondary voltage of 480 volts only. Consult factory for other voltages.*

Dimensional Data

USS Approximate Dimensions and Weights - Indoor Only (DOE 2010 Efficiency Compliant)

Three Phase — 150° C Rise — 7.2 KV, 8.6 KV & 15 KV

Notes:

1. Covers and all panels are removable
2. Grounding block (welded to base)
   (2) 1/2 - 13 tapped holes
3. Lift eyes are a welded integral
   part of the base

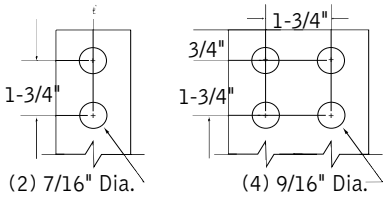
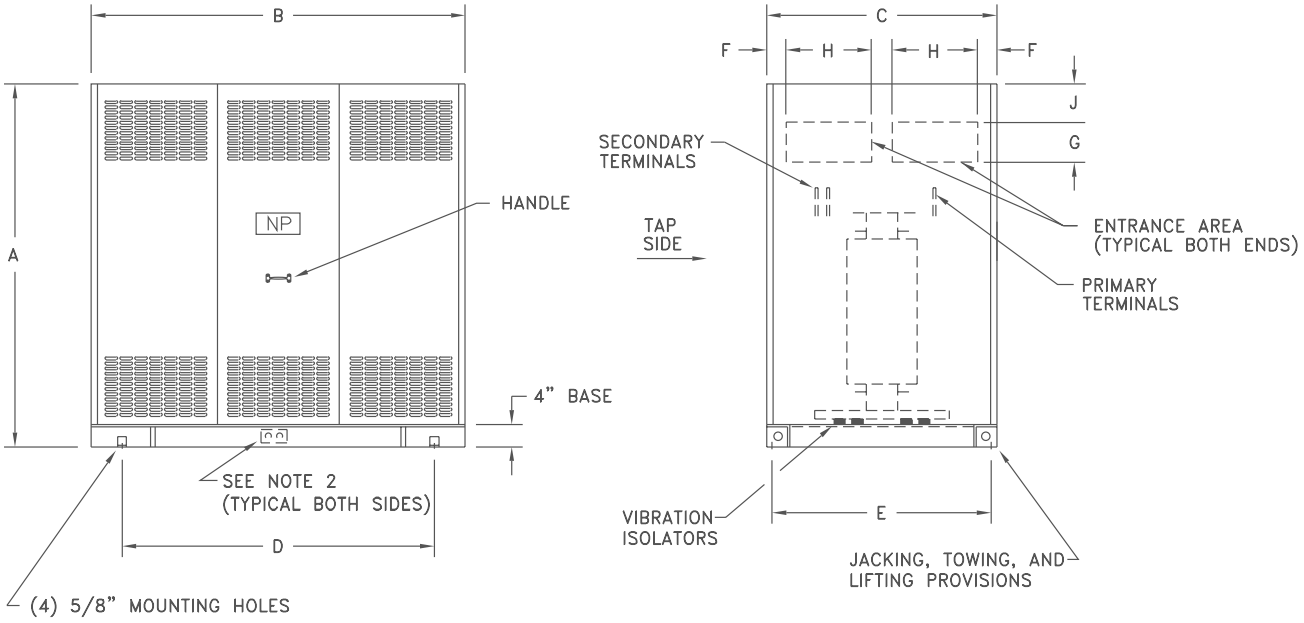


FIG. 1 FIG. 2

Terminal Material: Tin Plated Aluminum

Terminal Spade Figure

KVA	208V	480V	7.2KV, 8.6KV, 15KV
75	1	1	1
112.5	1	1	1
150	1	1	1
225	2	1	1
300	2	1	1
500	2	1	1
750	2	2	1
1000	—	2	1
1500	—	2	1



Style B

KVA	Net Wt. in Lbs.	A	B	C	D	E	F	G	H	J
75	2525	80	53	48	43	44.75	6	8	16.5	4
112.5	2600	80	53	48	43	44.75	6	8	16.5	4
150	3130	80	64	48	54	44.75	6	8	16.5	4
225	3430	80	64	48	54	44.75	6	8	16.5	4
300	4230	80	72	48	62	44.75	6	8	16.5	4
500	5400	90	72	48	62	44.75	6	8	16.5	4
750	6600	90	72	48	62	44.75	6	8	16.5	4
1000*	7600	90	78	48	68	44.75	6	8	16.5	4
1500*	9900	106.5	86	54	76	50.75	6	8	19.5	4

* *Dimensions for secondary voltage of 480 volts only. Consult factory for other voltages.*

Notes