

A New Standard in Transformer Efficiency



In January 2007, the Energy Policy Act of 2005 (EPAct 2005) set the minimum efficiency level (TP1) for transformers. While this standard sets a minimum performance level, transformers rated at TP1 do not provide the greatest efficiency or offer the lowest life cycle cost.

Acme POWERWISE C3 transformers are 30% better performing in efficiency than standard TP1 transformers. Thanks to a more efficient core and higher-grade electrical steel that minimizes losses, these energy-efficient units even exceed the requirements of the US Department of Energy Candidate Standard Level (CSL) 3 performance standard, commonly referred to as "C3."

Depending on the kVA size, this increase in efficiency can save thousands of dollars in energy costs per transformer. Whether you are looking to upgrade your older pre-TP1 transformers or specify the highest-efficiency transformers on your new project, Acme POWERWISE C3 transformers can deliver the power and performance you need.

	15 kVA	30 kVA	45 kVA	75 kVA	112.5 kVA	150 kVA	225 kVA	300 kVA	500 kVA
CSL-3 Efficiency	97.9%	98.3%	98.4%	98.6%	98.7%	98.8%	99.0%	99.0%	99.1%

Within a typical facility, increasing the efficiency of your transformers can provide significant savings in a short period of time. Payback usually occurs within 2.5 to 3.5 years, thanks in large part to our no-load losses. Because no-load losses are present even when the transformers are lightly loaded, they are critical to overall efficiency — and POWERWISE losses are up to 40% less than traditional TP1 designs.

	15 kVA	30 kVA	45 kVA	75 kVA	112.5 kVA	150 kVA	225 kVA	300 kVA
No-Load Loss	70W	90W	130W	160W	240W	280W	370W	550W

EVALUATING TOTAL COST OF OWNERSHIP

Total Cost of Ownership = Initial Cost + Yearly Energy Cost

Cost over the life of the installation should be the most important factor when deciding which technology to use. Since the typical transformer lasts 25 to 30 years, the total life cycle cost far outweighs the initial purchase price of the transformer. The electricity wasted by low initial-cost transformers can amount to millions of wasted kilowatt hours over the operational life of the installation.

TYPICAL APPLICATIONS INCLUDE:

- Educational Facilities (K–12/University)
- Government Buildings
- Manufacturing Facilities
- Office and Commercial Buildings
- Healthcare/Hospital/Medical Office Buildings
- Financial Institutions
- Data Processing Centers
- Wastewater and Sewage Treatment Facilities
- Correctional Facilities
- Industrial Facilities



APPLICATIONS

The Acme POWERWISE C3 transformer is the ideal transformer for commercial environments where energy efficiency is a primary concern. It is a perfect choice for K through 12, college, university, healthcare, governmental and commercial buildings where the total life cycle cost of the facility and its electrical system is a priority.

DESIGN

The Acme POWERWISE C3 sets new standards for efficiency and reliability. Through more efficient core material and higher-grade electrical steel, losses are minimized and performance is maximized. Acme POWERWISE C3 transformers are copper wound, 3-phase common-core, dry type ventilated isolation transformers. Each transformer is meticulously constructed to ANSI/IEEE Standards and is UL and CSA listed.

ENVIRONMENTAL EFFICIENCY

Acme POWERWISE transformers are the most efficient commercially available transformers. Because they generate lower losses, they reduce power drawn from generating stations, resulting in lower greenhouse gas emissions and less smog. The result is a win for the environment and a win in terms of lowest transformer life cycle costs.

WARRANTY

Acme POWERWISE C3 transformers are subjected to rigorous quality electrical and insulation tests in our ISO 9001-certified facility, and they are backed by our 25-year pro-rated warranty.

SPECIFICATIONS

Windings	Copper
Insulation Class.....	220° C
Degree Rise	115° C or 130° C
Noise Levels.....	Per NEMA ST-20 -5dB low noise
Rated for 60 Hertz	
K Rating	K-13
Voltage Taps.....	Voltage Taps: 15 through 500 kVA (2) 2-1/2% ANFC, (4) 2-1/2% BNFC
Neutral Conductor	200% Rated
Electrostatic Shield	Standard
Enclosure	Ventilated NEMA 2 (NEMA 3R available with drip shield)

ADDITIONAL FEATURES & BENEFITS

- Exceeds US DOE CSL-3 efficiency to help you reduce electrical waste and provide sustainability in your electrical design
- Significantly exceeds TP1 efficiency for low operating cost over the life of the transformer
- Optimized design provides maximum reliability and proven performance
- Produced in an ISO 9001 facility to ensure high quality and rigorous testing standards



SELECTION CHARTS

GROUP D6

POWERWISE C3 - 115 C RISE - COPPER WINDINGS

CSL 3 Efficiency (exceeds TP1)

480 DELTA PRIMARY VOLTS - 208Y120 SECONDARY VOLTS - MAY BE USED ON A 4 WIRE 480Y/277 VOLT SUPPLY - 3Ø, 60 Hz

KVA	CATALOG NO.	APPROX. DIMENSIONS ② Inches (Cm.)			APPROX. SHIP WEIGHT Lbs. (Kg.)	TYPE MTG. W – Wall F – Floor	WEATHER SHIELD P/N	Wiring Diagrams & Design Figures Begin on Page 154
		HEIGHT	WIDTH	DEPTH				
15	TPC3533111S	29.41 (74.7)	28.15 (71.5)	22.37 (56.8)	350 (158.8)	F	WSA1	22-E
30	TPC3533121S	29.41 (74.7)	28.15 (71.5)	22.37 (56.8)	385 (174.6)	F	WSA2	22-E
45	TPC3533131S	29.41 (74.7)	28.15 (71.5)	22.37 (56.8)	455 (206.4)	F	WSA2	22-E
75	TPC3533141S	35.38 (89.9)	31.90 (81.0)	26.88 (68.3)	585 (265.4)	F	WSA3	22-E
112.5	TPC3533151S	41.52 (105.5)	33.06 (84.0)	29.87 (75.9)	1020 (462.7)	F	WSA4	22-E
150	TPC3533161S	41.52 (105.5)	33.06 (84.0)	29.87 (75.9)	1260 (571.5)	F	WSA4	22-E
225	TPC3533171S	41.52 (105.5)	33.06 (84.0)	29.87 (75.9)	1410 (639.6)	F	WSA4	22-E
300	TPC3533181S	45.70 (116.1)	39.50 (100.3)	35.50 (90.2)	1860 (843.7)	F	WSA5	22-E
500	TPC3533191S	62.95 (159.9)	54.00 (137.2)	41.88 (106.4)	3350 (1519.5)	F	WSA7	22-G

GROUP D7

POWERWISE C3 - 130 C RISE - COPPER WINDINGS

CSL 3 Efficiency (exceeds TP1)

480 DELTA PRIMARY VOLTS - 208Y120 SECONDARY VOLTS - MAY BE USED ON A 4 WIRE 480Y/277 VOLT SUPPLY - 3Ø, 60 Hz

KVA	CATALOG NO.	APPROX. DIMENSIONS ② Inches (Cm.)			APPROX. SHIP WEIGHT Lbs. (Kg.)	TYPE MTG. W – Wall F – Floor	WEATHER SHIELD P/N	Wiring Diagrams & Design Figures Begin on Page 154
		HEIGHT	WIDTH	DEPTH				
15.0	TPC3533113S	29.41 (74.7)	28.15 (71.5)	22.37 (56.8)	350 (158.8)	F	WSA1	22-E
30.0	TPC3533123S	29.41 (74.7)	28.15 (71.5)	22.37 (56.8)	380 (172.4)	F	WSA2	22-E
45.0	TPC3533133S	29.41 (74.7)	28.15 (71.5)	22.37 (56.8)	440 (199.6)	F	WSA2	22-E
75.0	TPC3533143S	35.38 (89.9)	31.90 (81.0)	26.88 (68.3)	560 (254.0)	F	WSA3	22-E
112.5	TPC3533153S	41.52 (105.5)	33.06 (84.0)	29.87 (75.9)	1000 (453.6)	F	WSA4	22-E
150.0	TPC3533163S	41.52 (105.5)	33.06 (84.0)	29.87 (75.9)	1220 (553.4)	F	WSA4	22-E
225.0	TPC3533173S	41.52 (105.5)	33.06 (84.0)	29.87 (75.9)	1385 (628.2)	F	WSA4	22-E
300.0	TPC3533183S	45.70 (116.1)	39.50 (100.3)	35.50 (90.2)	1820 (825.5)	F	WSA5	22-E
500.0	TPC3533193S	62.95 (159.9)	54.00 (137.2)	41.88 (106.4)	3250 (1474.2)	F	WSA7	22-G