

PEAK™ single-phase pad-mounted distribution transformers



General

Eaton's Cooper Power™ series PEAK™ transformers are a class of transformer technologies that are designed to improve performance in terms of kVA rating, compact dimensions, lighter weight, safety, and sustainability. Conventional transformers operate at 65 °C for the Average Winding Rise (AWR) at full load. PEAK transformers are currently available with ratings up to 75 °C AWR.

PEAK transformers are ANSI® compliant, available with all current conventional transformer options and are backed by Eaton's quality control assurances. They are offered in either 65/75 °C slash rated or 75 °C rise rated configurations. A 65/75 °C rated PEAK transformer is comparable in size to a conventional transformer but has nameplated overload capability. A 75 °C rise rated PEAK transformer is smaller in size but delivers the same kVA as its conventional counterpart.

All PEAK transformers use Envirotemp™ FR3™ dielectric fluid as their cooling fluid. Envirotemp™ FR3™ has a higher flash point than conventional transformer fluids which increases PEAK transformer's fire protection. Envirotemp™ FR3™ fluid increases the life span of the core and fluid insulation to a point where the overall life expectancy of PEAK transformers is significantly increased. Envirotemp™ FR3™ fluid is also a green product that has nearly neutral carbon footprint.

PEAK transformers are available in Shrubline™, MaxiShrub™, and Ranch Runner™ styles. All of these distribution transformers are filled with Envirotemp™ FR3™ fluid, self-cooled, available in loop or radial feed, and are dead-front. They are available in standard ratings and configurations or can be customized to meet specific needs.

Transformers shown above (left to right) include the PEAK shrubline, PEAK MaxiShrub and PEAK Ranch Runner style transformers.

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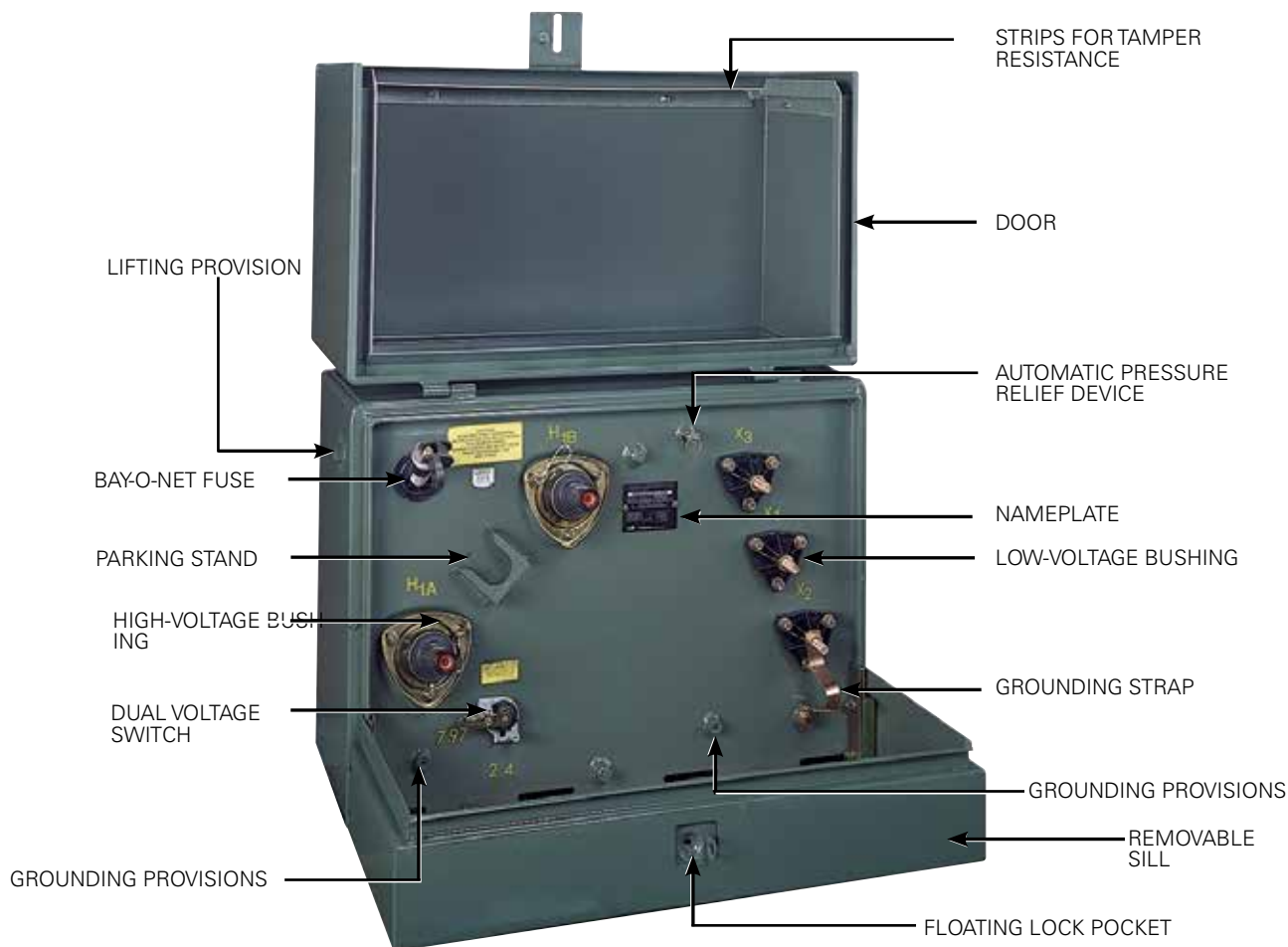


Figure 1. PEAK single-phase pad-mounted transformer, Shrubline style.

Both the PEAK transformer, Shrubline and MaxiShrub styles are manufactured with ratings from 10-167 kVA. All of these transformers meet or exceed ANSI®, IEEE® and NEMA® standards.

The PEAK transformer in the Shrubline style is a Type-2 single-phase dead-front pad-mounted transformer. The low profile design blends visually with surroundings-shrubs, low hedges, and home air conditioners-making it ideal for residential applications.

The PEAK transformer in the MaxiShrub style is an ANSI® and IEEE® Type-1 single-phase dead-front pad-mounted transformer. The ANSI® and IEEE® Type-1 frontplate arrangement allows vertical feed to the primary and secondary bushings. It is ideal for single-phase industrial and residential applications where a wide range of kVAs or heavy cabling is required.

The PEAK transformer in the Ranch Runner style is manufactured with ratings from 10-50 kVA. It is Rural Utilities Services (RUS) approved, and meets all ANSI® and IEEE® requirements except frontplate arrangements. The PEAK transformer, Ranch Runner style, is a very compact pad-mounted transformer. Its compact design makes it ideal for irrigation, oil field and residential applications. It offers an economical design which provides standard transformer capabilities in a very compact space. This unit is shipped complete with its own poly-pad suitable for shipping and installation.

Eaton offers Cooper Power series poly-pads that are usable with most transformers conforming to ANSI C57.12.25™ -1990 standard (Type-1 or Type-2). This polymer pad serves as a shipping pallet as well as an installation pad.

Standard features

- Meet or exceeds ANSI®, IEEE® and NEMA® standards
- Meets DOE Energy Efficiency Standard 10 CFR Part 431 for distribution transformers
- Envirotemp™ FR3™ fluid
- Tank coating exceeds IEEE Std C57.12.28™-2005 and IEEE Std C57.12.29™-2005 standards (stainless steel units only)
- Full compliance with IEEE Std C57.12.28™-2005 standard enclosure integrity requirements
- Laser engraved nameplate
- Recessed stainless steel lifting provisions
- Tank grounding provisions
- Automatic pressure relief device
- Hinged door with stainless steel hinge pins and barrels
- Floating lock pocket for easy alignment
- Captive stainless steel pentahead door locking bolt
- Fluid fill and drain provisions
- Removable sill
- Welded domed tank cover
- High-voltage bushing wells - 200 A
- Ground strap from X2 to tank ground
- Tamper strips of noncorrosive material
- Decal bushing designations
- Quality System ISO 9001 certified

Optional features

- Various multiple voltages or taps
- Externally-operable multiple voltage or tap-changer switches for safe operation
- Stainless steel tank, tank bottom, sill, door, and/or hardware
- Service entrance in sill
- Various spades and terminals available for secondary bushings
- High efficiency transformers at 0.05% above U.S. Department of Energy (DOE) efficiency or higher
- Stencilled bushing designations
- Various other designations available, e.g., kVA, voltages, fuse number
- High-voltage bushing inserts
- Ground connectors
- Captive stainless steel hexhead door locking bolt
- Rural Utilities Service (RUS) design

- One piece high-voltage bushings
- High-voltage bushing wells with removable studs
- Canadian Standards Association (CSA) and Consumer Electronics Association (CEA) designs
- Special designs to meet international specifications are also available
- Loadbreak switches¹
- Drain/sampling valve¹
- Pressure vacuum gauge¹
- Liquid level gauge¹
- Temperature gauge¹
- Combination shipping and installation poly-pad³

¹ Not available with the PEAK transformer, Ranch Runner style .
² Only available with ANSI® and IEEE® Type -2 front plate configurations.
³ Standard with the PEAK transformer, Ranch Runner style.

PEAK transformer dimensions and weights

Shrubline-style

Product Scope:

kVA: 10-167
 Primary Voltage: 2400-19,920 V
 Secondary Voltage: 120-600 V

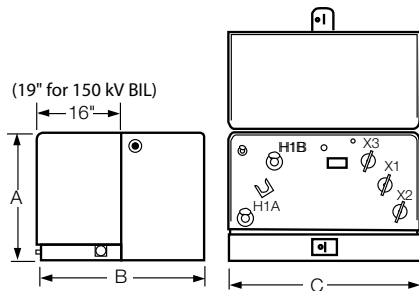


Figure 2. PEAK single-phase pad-mounted transformer, Shrubline style.

Table 1. Typical Dimensions and Weights³

kVA	Dimensions (in.)			Approx. Weight (lbs.)
	"A"	"B"	"C"	
10	24	28 ¹	33	580
15	24	28 ¹	33	610
25	24	28 ¹	33	630
37.5	24	29 ¹	33	680
50	24	31 ¹	33	730
75	24	33 ¹	33	970
100	30	36 ¹	36	1120
167	30	46 ^{1,2}	36	1600

¹ Add 3" for 150 kV BiL
² Includes corrugate
³ Weights, gallons of fluid and dimensions are for reference only, and not for construction. Please contact your Eaton representative for exact dimensions.

MaxiShrub-style

Product Scope:

kVA: 10-167
 Primary Voltage: 2400-19,920 V
 Secondary Voltage: 120-600 V

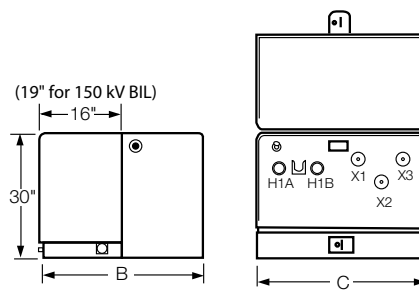


Figure 3. PEAK single-phase pad-mounted transformer, MaxiShrub style.

Table 2. Typical Dimensions and Weights³

kVA	Dimensions (in.)		Approx. Weight (lbs.)
	"B"	"C"	
10	27 ¹	33-36	680
15	27 ¹	33-36	680
25	27 ¹	33-36	680
37.5	27 ¹	33-36	730
50	29 ¹	33-36	780
75	31 ¹	33-36	970
100	33 ¹	36	1120
167	45 ^{1,2}	36	1600

¹ Add 3" for 150 kV BiL
² Includes corrugate
³ Weights, gallons of fluid and dimensions are for reference only, and not for construction. Please contact your Eaton representative for exact dimensions.

Ranch Runner-style

Product Scope:

kVA: 10-50
 Primary Voltage: 2400-14,400 V
 Secondary Voltage: 120-600 V

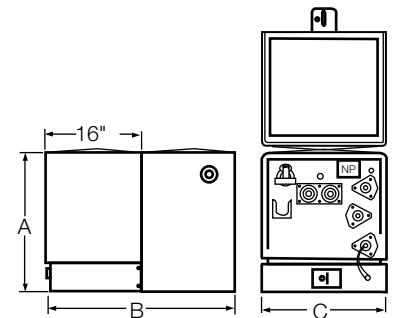


Figure 4. PEAK single-phase pad-mounted transformer, Ranch Runner style.

Table 3. Typical Dimensions and Weights¹

kVA	Dimensions (in.)			Approx. Weight (lbs.)
	"A"	"B"	"C"	
10	24	27.5	21	390
15	24	27.5	21	485
25	24	31.5	21	580
37.5	24	34.5	21	630
50	24	34.5	21	700

¹ Weights, gallons of fluid and dimensions are for reference only, and not for construction. Please contact your Eaton representative for exact dimensions.

Protection options

- Bay-O-Net expulsion fuse with Flapper™ valve
- Bay-O-Net and partial range current-limiting fuses
- Weak link fuse
- Weak link and partial range current-limiting fuses
- Secondary breaker with weak link¹
- MagneX® interrupter with isolation link¹
- MagneX interrupter with partial range current-limiting fuse¹
- Internal, under-oil VariSTAR® surge arrester
- Storm Trapper® H.E. (High Energy), low-voltage distribution-class surge arrester, internally or externally mounted¹

¹ Not available with the PEAK transformer, Ranch Runner-style.

Poly-pad

Eaton offers a Cooper Power series poly-pad that is usable with most transformers conforming to ANSI C57.12.25™-1990 standard (Type-1 or Type-2). This polymer pad enables transformers to be shipped and installed on the same pad. Use of the poly-pad can eliminate the purchasing, inventory, and administrative costs associated with conventional concrete, polymer or fiberglass pads. Installation costs can also be significantly reduced since the transformer is pre-mounted to its pad. These forkliftable units can be transported damage free during shipping and handling.

Quality control

PEAK single-phase pad-mounted distribution transformers provide outstanding performance, passing routine tests as prescribed per ANSI® and IEEE® prior to shipment.

PEAK transformers offered in the MaxiShrub style ANSI® and IEEE® Type-1, Shrubline style ANSI® and IEEE® Type-2 and Ranch Runner style designs are in full compliance with IEEE Std C57.12.28™-2005 standard security requirements.

Corrosion resistance is optimized with the utilization of a superior coating system, combined with the strategic use of stainless steel material, and a tank designed to reduce the retention of water. Our coating systems exceed IEEE Std C57.12.28™-2005 and IEEE Std C57.12.29™-2005 standards stainless steel components include door hinge pins and barrels, parking stands, mounting studs, and recessed lifting provisions.

Door and tank covers are permanently domed to eliminate retention of water. All external parts are full-welded to eliminate corrosion caused by moisture entrapment. Bumper pads on doors reduce shipping damage. Lifting provisions are recessed to reduce damage during handling.

The Quality System at Eaton's Cooper Power Systems Division Transformer Products is ISO 9001 certified.

Additional information

PA201001EN	Stretch your Distribution System Investment with PEAK Transformers
PA132008EN	Defend the Backbone of your Distribution System
S201-20-1	Instructions for Mineral Oil-Filled, single-Phase Pad-mounted Distribution Transformers
CA201003EN	PEAK Single-Phase Overhead Distribution Transformers
CA132016EN	MagneX Single-Phase Interrupter
CA235016EN	VariSTAR Type AZU Heavy Duty Distribution-Class Under-Oil MOV Arrester
CA235015EN	Storm Trapper H.E. (High Energy) Low-Voltage Distribution-Class MOV Surge Arrester
CA132015EN	Sidewall-Mounted and Cover-Mounted Bay-O-Net Fuse Assembly
CA132009EN	Current Sensing Bay-O-Net Fuse Link
CA132010EN	Dual Sensing Bay-O-Net Fuse Link
CA132011EN	Dual Element Bay-O-Net Fuse Link
240-31	Oil Immersed Current Sensing Weak Link Cartridge
240-32	Oil Immersed Dual Sensing Weak Link Cartridge

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