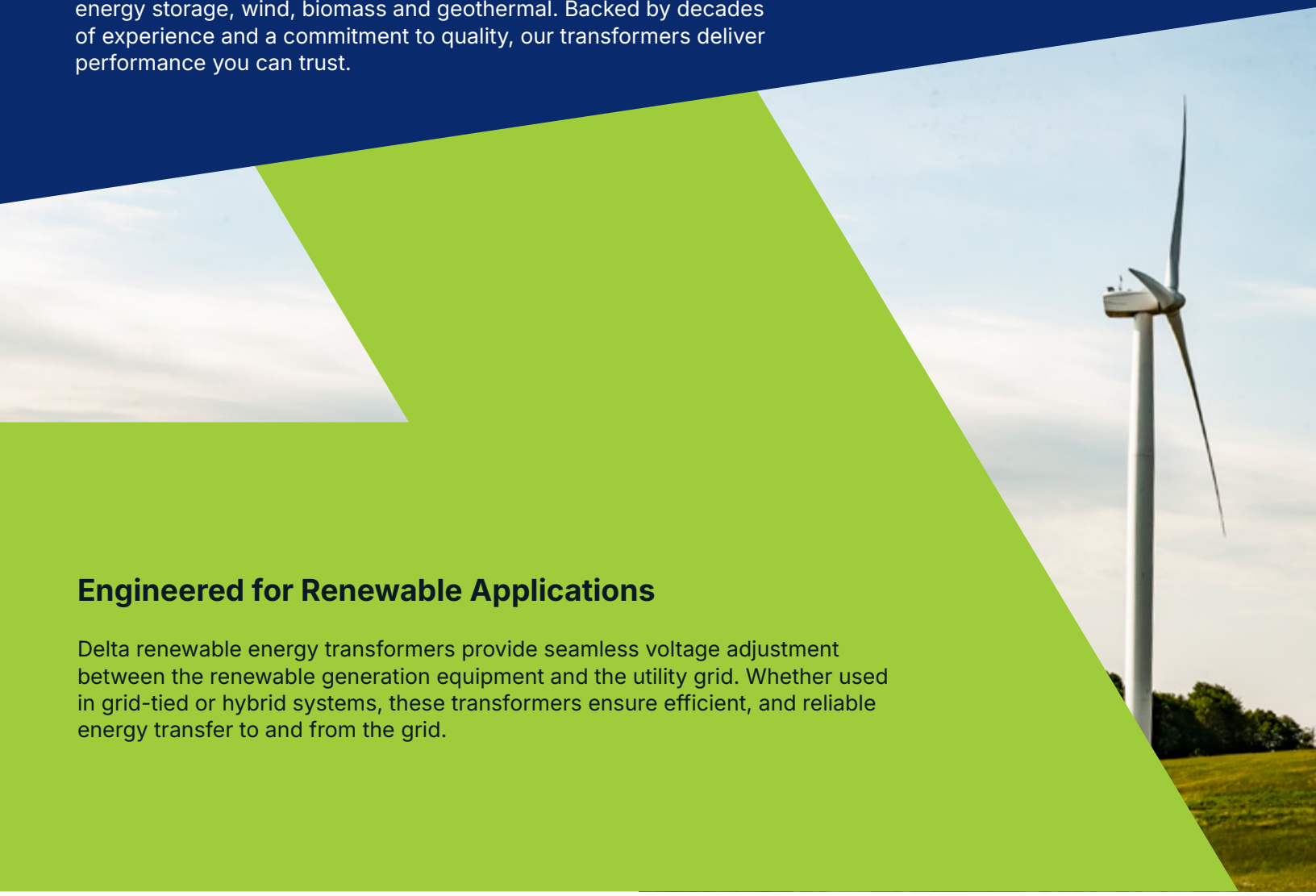
DELTA
TRANSFORMATEURS
TRANSFORMERS

Renewable Energy Transformers

Technical expertise
with a human touch

Reliable Power for a Sustainable Future

As the renewable energy market grows in complexity and demand, dependable power solutions are more critical than ever. Delta Transformers offers a comprehensive line of dry-type renewable energy transformers specifically engineered for renewable energy applications, such as solar, energy storage, wind, biomass and geothermal. Backed by decades of experience and a commitment to quality, our transformers deliver performance you can trust.



Engineered for Renewable Applications

Delta renewable energy transformers provide seamless voltage adjustment between the renewable generation equipment and the utility grid. Whether used in grid-tied or hybrid systems, these transformers ensure efficient, and reliable energy transfer to and from the grid.

Transformer Design

In renewable energy applications, transformer design plays a critical role in ensuring system reliability and compatibility with inverter technologies. Depending on the inverter type, the transformer's winding configuration and core construction must be carefully selected to support stable operation under both normal and fault conditions, such as phase loss. Many inverters require a neutral connection, and since most building electrical distribution systems are three-phase, four-wire configurations, a transformer with a Wye-Wye winding is often necessary to provide a neutral point for both the inverter and the building panel.

For this configuration, inverter manufacturers typically specify a 4 or 5 leg core design to accommodate circulating currents during phase loss.

Delta's Renewable Transformers are engineered with these requirements in mind, offering tailored core constructions that ensure safe, efficient, and flexible integration with modern inverter systems.

Key Benefits

Flexible System Design
Built for bi-directional power flow, ensuring compliance with electrical codes and supporting flexible power between the grid and the sustainable energy source.

Tailored for Renewable Energy
Integration is simplified with windings clearly labeled for inverter and grid side, and adjustment taps placed for renewable configurations.

Easier Installation
With pre-installed lugs (up to 300 kVA), bottom cable entry, and standard Type 3R outdoor enclosures, installation is faster and easier, saving valuable labor time on site.

Reliable Performance in Outdoor Conditions
Available with low-temperature rise and thermal sensing options, they are designed to perform under high load factors and outdoor conditions enhancing system reliability and longevity.

Upstream and Downstream Equipment Protection
With optimized inrush currents, they help prevent nuisance tripping and protect sensitive components upstream and downstream, minimizing downtime and maintenance costs.

Energy Savings
Meets or exceeds SOR/2018-201 (NRCan 2019) & ON Reg. 201/19 efficiency standards, with high-efficiency options available for energy-conscious projects.

Bi-Directional Power Flow

Whether energy is flowing from solar inverters to the grid, or from the grid back to a battery storage system, our transformers are built to handle power in either direction.

**data subject to change without notice*

Standard specifications

kVA	15-1500 - custom and larger kV available upon request
Frequency	60 Hz
Phase	3
Winding Material	Copper or aluminum
Insulation System	220°C insulation class
BIL Rating	10 kV - Higher ratings available upon request
Enclosure Type	Ventilated, Type 3R enclosure
Impregnation Process	The impregnation process for the core and coil assembly include a period under vacuum, followed by pressure impregnation using epoxy resin (EVI process)
Enclosure Finish	Grey finish ANSI-61
Neutral and Ground Terminals	Included
Conduit Entry	Knock-outs on each side (some exceptions may apply)
Impedance	Standard impedance
Mounting	Wall & floor mount: up to 45kVA. Floor mount only: 75kVA and above
Sound Level	Max. 50dB up to 150 kVA, 55dB from 225 kVA to 300 kVA, 60dB at 450 kVA and 62dB at 600 kVA. Anti-vibration pads used between the core and enclosure
Efficiency	Complies with Canadian standards - SOR/2018-201 (NRcan 2019), Ontario Regulation 201/19 and Quebec: O.C./DECRET/1394-2018
Certification	CSA certified
Warranty	10 year warranty with standard limited liability clause

PART NUMBER SYSTEM

Example : CD6A0500 S8RH0DD, isolation transformer, 500kVA, renewable duty, 480 Wye Delta to 208V wye 4 legged core, 150 rise, no k-factor, no static shield, Type 3R enclosure

I	II	III	IV	V	VI	VII	VIII	IX	X
Common Designation	Type of Transformer	Number of Phases	Winding Material	kVA Rating	Product Line	Grid side and inverter side voltages	Temperature Rise, Electrostatic Shield and K-Factor	Winding Configuration	Enclosure Type
C	A = Auto	T = 3 ph Non C802	A = Aluminum	from 0 to 1500	S8 = Renewable duty	G = 120	0 = 150°C Rise, no K-Factor, no Shield	A = 3 Ø, Delta - Delta (0°C)	D = Type 3R
	E = Epoxy	6 = 3 ph C802	C = Copper			H = 208	1 = 150°C Rise, K4, no Shield	B = 3 Ø, Delta - Star (-30°C)	E = Type 4, Not-C802.2
	D = Isolation					K = 240	2 = 150°C, K9, no Shield	C = 3 Ø, Star - Star (3 legged core) (0°C)	H = Type 4X (Stainless), Not-C802.2
	Z = interconnected Star (HMT)					L = 277	4 = 150°C Rise, no K-Factor, 1x Shield	D = 3 Ø, Star - Star (4 legged core) (0°C)	K = Type 3RX (Stainless)
						M = 347	5 = 150°C Rise, K4, 1x Shield	E = 3 Ø, Star - Star (5 legged core) (0°C)	P = Type 3R Epoxy Potted, Not-C802.2
						O = 416	6 = 150°C Rise, K9, 1x Shield	F = 3 Ø, Star - Delta (+30°C)	Q = Type 3RX Epoxy Potted (stainless), Not-C802.2
						R = 480	I = 115°C Rise, K4, no Shield	G = 3 Ø, Delta - Interconnected Star (Z) (0°C)	Y = Type 3R Enhanced
						V = 600	J = 115°C Rise, K4 no Shield	H = 3 Ø, Delta - Interconnected Star (V)(-30°C)	Z = Type 3RX Enhanced (Stainless)
						*	K = 115°C Rise, K9, no Shield	***	****
							M = 115°C Rise, No K-Factor, 1x Shield		
							N = 115°C Rise, K4, 1x Shield		
							O = 115°C Rise, K9, 1x Shield		
							**		

* Other voltages available upon request
** K13 , 130°C & 80°C temperature rise available upon request
*** Other winding configurations available upon request
**** Type 3R is standard.
3R enhanced & 3RX Enhanced: Enclosures equipped with air filters and thermal sensor for outdoor use

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