Driving AIDC Forward

From Power to Motion



TECO

together, we empower the Future

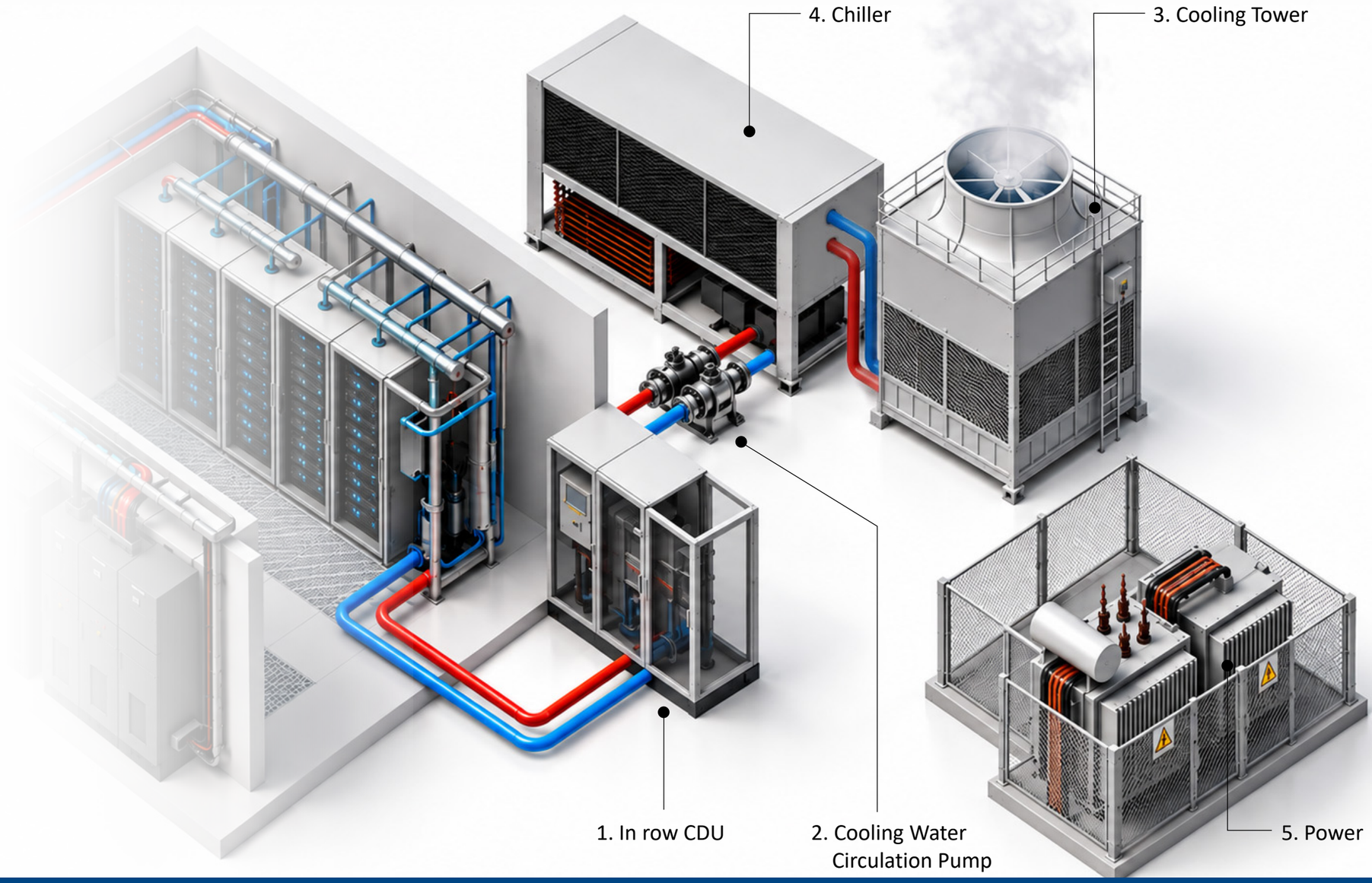


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To The Next Efficiency Class

One class ahead, and future ready





01.

Industrial Flat-wire Motor for CDU pump



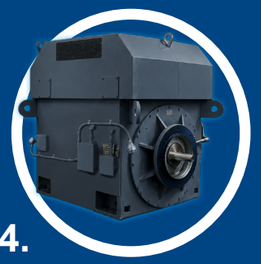
02.

Syn RM Motor for cooling water circulation pump



03.

Direct drive motor for cooling tower





04.

MV motor & MVD for chiller





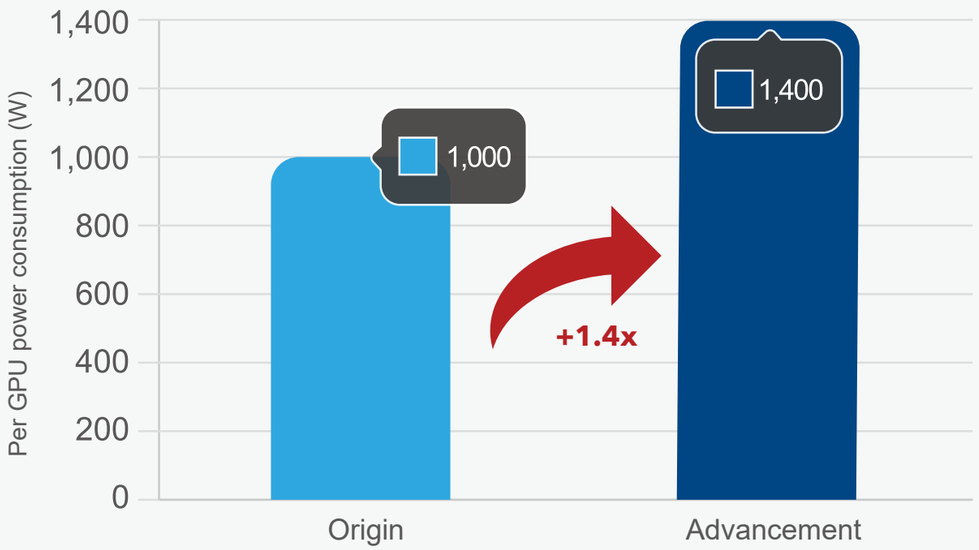
05.

Transformer for AIDC power

The Thermal Challenge Behind Next-Gen AI Chips

Next-generation GPU architectures are pushing per-chip power consumption higher, driving a corresponding surge in rack thermal density that today's cooling infrastructure must be ready to handle.

As per-GPU chip power consumption increases, so does heat.

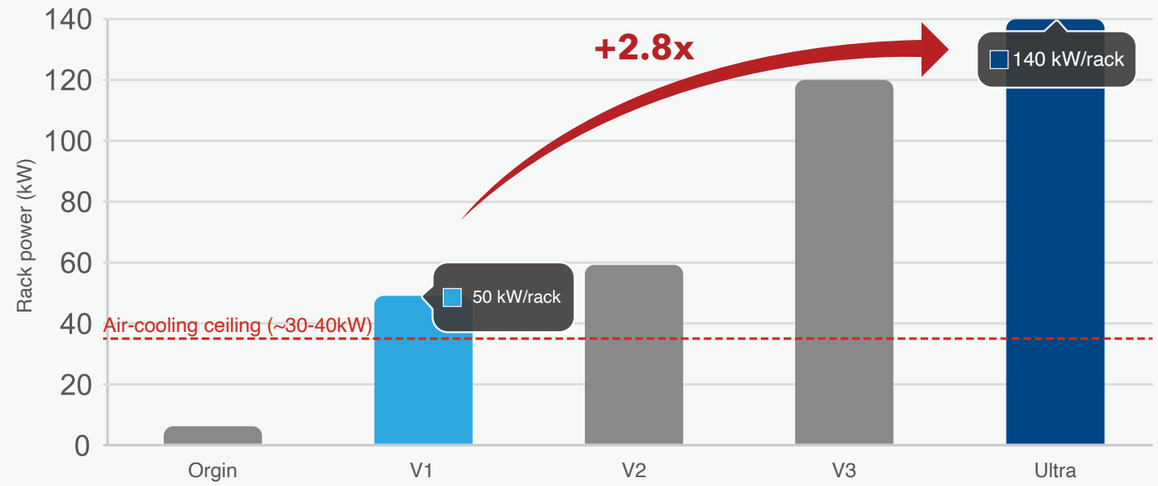


Sources: ModulEdge/Introl technical analysis (2026).

Surge in Rack Power & Thermal Load

Beyond the 30-40kW air-cooling ceiling, liquid cooling and CDUs are no longer optional. However, these vital cooling systems become major energy consumers, introducing massive new power demands to the cooling infrastructure.

Rack power density and heat output have nearly tripled.



Sources: Uptime Insititute (2025 industry average), IntuitionLabs , ModulEdge/HPE.

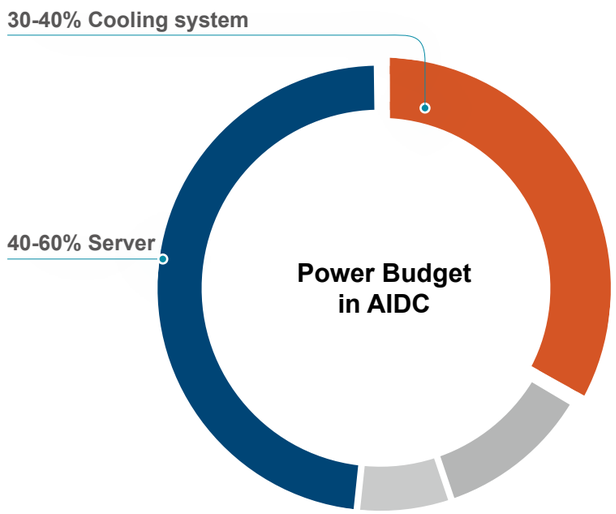
Why the AI Era Demands Fluid Power?

Low Efficiency
Air's low heat capacity and poor conductivity limit cooling efficiency..

Thermal Lag
Air cooling reacts too slowly to sudden GPU workload spikes.

Limited Density
High-power air systems require massive heat sinks and spacious air ducts.

High Vibration
High-RPM fans create constant vibration and noise.



TECO solutions target the energy saving from cooling system

- Optimized PUE
- Precision VFD Flow Control
- Compact & High-Power Density
- 24/7 Heavy-Duty Reliability

From Power to Performance

Industrial Flat-Wire Motor

Permanent Magnet



- Motor Type: DVEH
- Efficiency: IE5+
- Output: 7.5 - 315 kW
  (11-37kW available)
- R.P.M: 1600 - 3600
- Voltage: 380V
- Frame Size: F#132 - 160
- Enclosure: IP55
- Cooling: IC 411
- Insulation: Class F

Copper Flat Wire winding with high-energy NdFeB permanent magnet technology increases stator slot fill factor and reduces envelope volume by over 30%, releasing maximum flexibility for system lightweighting.

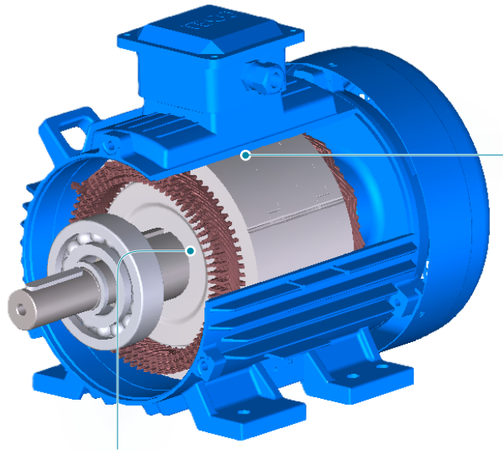
IE5+
Full Load Eff.
94% to 96%

Max. Speed
⬆ 200%

Power Density
⬆ 70%

25%
Energy Saving
in Variable-Speed
Application

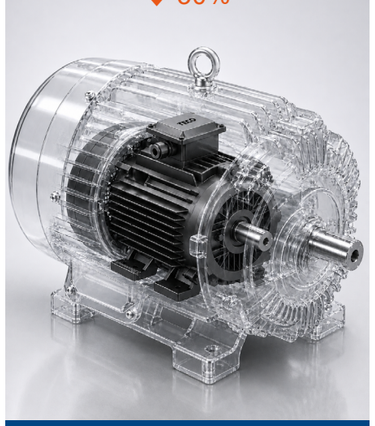
A slot fill factor above 90% enables a frame two sizes smaller and 50–60% less weight at the same output. Lower copper loss raises full-load efficiency by 2.5–3% over IE3 induction motors, reaching IE5+. Superior heat dissipation, a rigid winding structure, and Class H insulation ensure long-term reliability, while rectangular slots keep noise down to 78 dB.



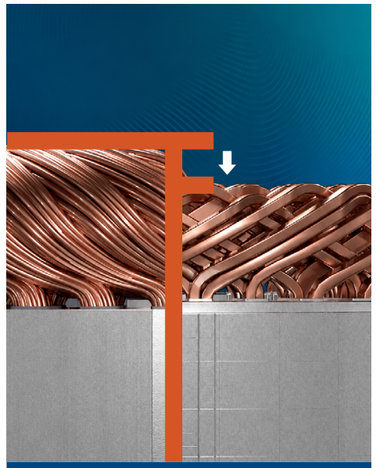
NdFeB Rotor



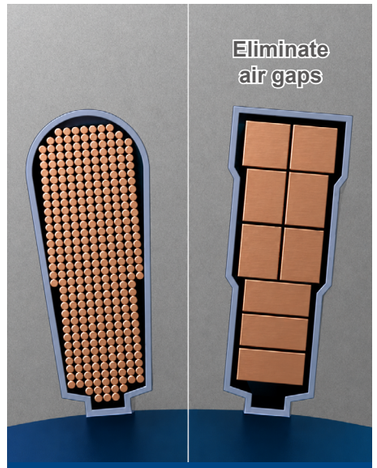
⬇ 30%



Volume Comparison



End-Winding Height
Reduce copper waste and lower thermal resistance



Slot Fill Factor
Maximize power density and heat dissipation

Watch Video

From Power to Performance

Syn Reluctance Motor

Magnet Free



- Motor Type: CEAR(IEC)
  CEAQ(NEMA)
- Efficiency: IE5
- Output Range: 5.5 - 22 kW
- R.P.M: 1800 - 3600
- Voltage: 380 - 480V
- Frequency: 60Hz, 120Hz
- Frame Size: F#132 - 180
- Enclosure: IP55
- Cooling: IC 411
- Insulation: Class F

By eliminating rare-earth magnets, it completely mitigates critical supply chain risks while maintaining an exceptionally cool operation—drastically reducing rotor copper losses to lower bearing operating temperatures by 5°C to 15°C compared to conventional induction motors, with an overall rise capped under 80°C.

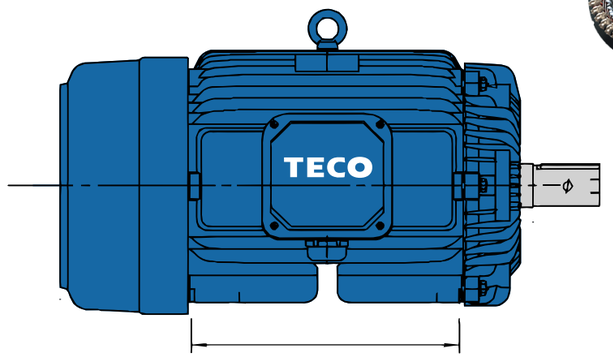
Total Losses
⬇ 20%

Over-Speed
Capacity 150%

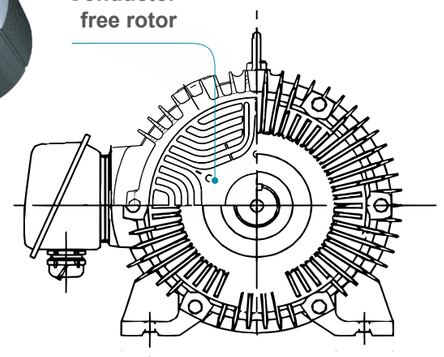
Bearing Temp.
⬇ 8.7° C

Manufacturing
CO2 Reduction

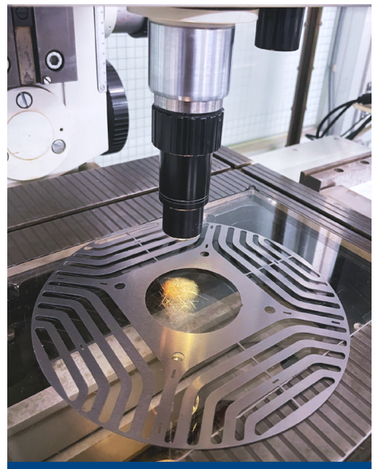
Engineered within the same frame size as standard induction motors, it enables direct drop-in replacement without any modification to existing mounting or installation configurations. Its conductor-free rotor design eliminates rotor copper loss, delivering higher efficiency and lower operating temperatures over the motor's service life.







Same Frame, Seamless IM Upgrade



Optimized Magnetic Circuit Rotor Design



Conductor-Free
Converts thermal losses into efficiency.



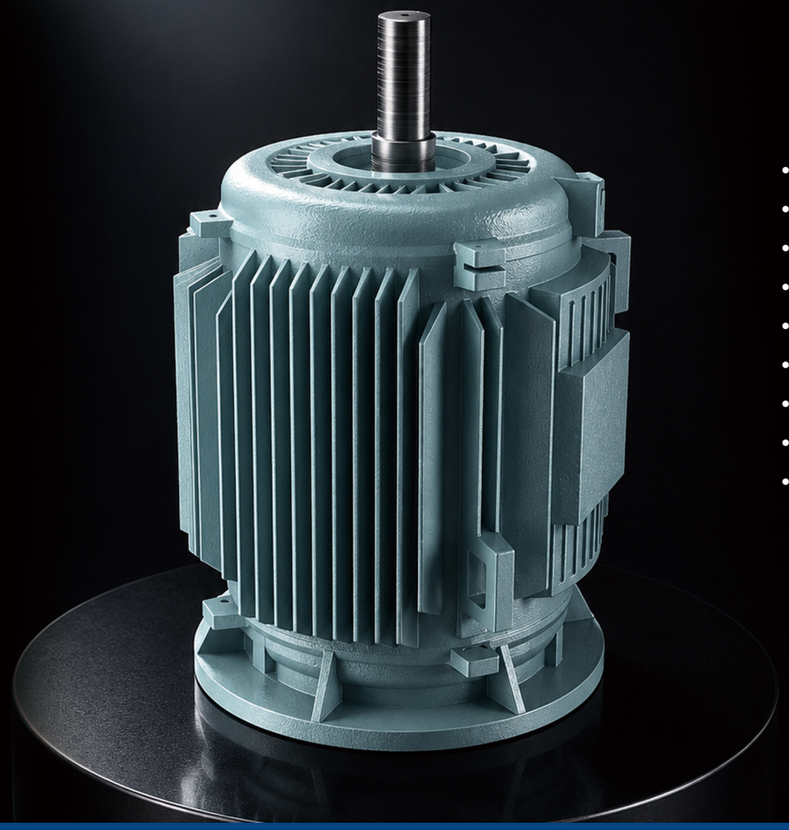
High Torque, Low Consumption
Sustained continuous operation

Catalog

From Power to Performance

Direct Drive Motor

Permanent Magnet



- Motor Type: DVDA
- Efficiency: IE4
- Output Range: 5.5 - 75 kW
- R.P.M: 200 - 500
- Voltage: 380V
- Frame Size: F#180 - 355C
- Enclosure: IP66
- Cooling: IC 418
- Insulation: Class F

Specially engineered for cooling tower applications. By eliminating traditional gearboxes and drive belts, it completely avoids oil leakage and high transmission power loss.

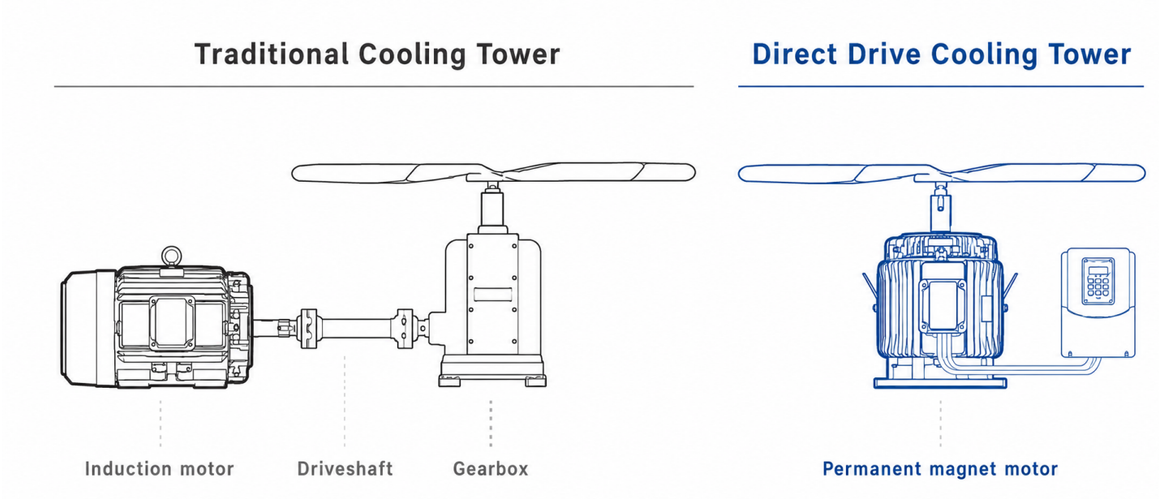
No Drive Shaft Breakage

No Gearbox Maintenance

No Risk of Oil Leakage

No Gearbox Retrofit Costs

This direct-drive configuration replaces conventional shaft-mounted reducers, minimizing energy loss during power transmission while significantly enhancing system reliability. With no gearbox to maintain, users benefit from reduced maintenance requirements and lower long-term operating costs throughout the motor's service life.



TECO Direct-Drive Motor have shown strong growth.



Electricity Cost Savings
18% Over 5 Years



Zero Maintenance and Servicing Costs



Thrust Bearings Guaranteed for 100,000-Hour Rated Life

Watch Video

From Power to Performance

Open Drip Proof Motors (ODP)

Medium & High Voltage



- Motor Type: ASZK/ASCK
- Output Range: 300 - 14900 kW
- Voltage:
  - 50Hz: 3kV, 6kV, 11kV
  - 60Hz: 4kV, 6.6kV, 11kV
- Frame Size: F#355 - 900
- Enclosure: IP23(ODP)
- Cooling: IC 418
- Pole: 2 - 8
- Standard: IEC

Built with a heavy-duty rotor construction and a durable steel-plate box-type frame—complemented by a thick-walled air cabinet—the motor ensures superior mechanical strength and structural integrity under heavy loads. The stator winding features a Class F with VPI solventless epoxy varnish, providing strength and high voltage-surge resistance.

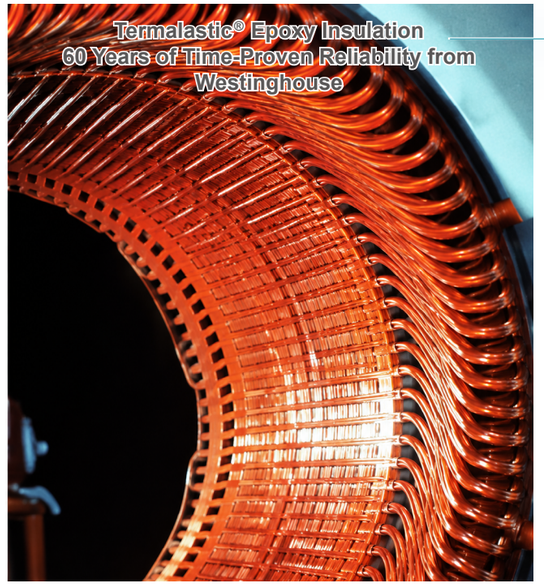
24/7
B10 Bearing Life
⬆ 10 years

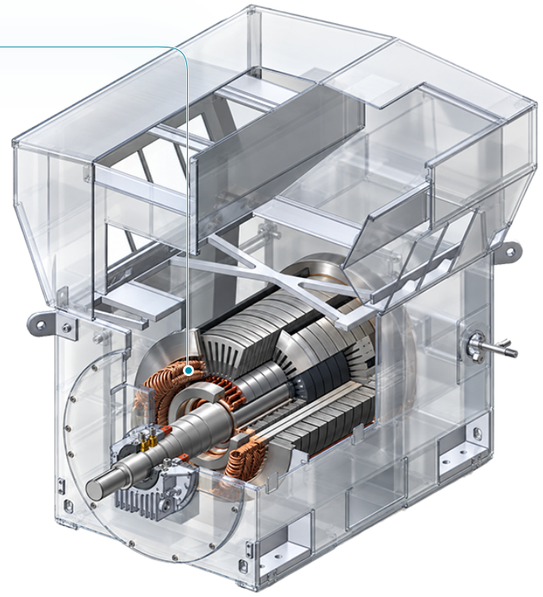
Class F
VPI Insulation

Ultra-Low Noise
<85dBA

Vibration Protection
< 38 μm

Inherited from decades of Westinghouse heavy-industrial motor engineering, Thermalastic® epoxy insulation delivers exceptional dielectric strength and voltage endurance, with proven resistance to moisture, thermal cycling, and chemical contaminants for long-term reliability.







B35 dual-point mounting ensures precise coupling alignment under high loads, minimizing vibration and downtime in mission-critical cooling systems.

Catalog

From Power to Performance

Inverters

Medium & High Voltage



- Power: 150 - 8,880 kW
- Voltage: 2.4 - 11kV
- Frequency: 50Hz, 60Hz
- Control Power: 230VAC ±10%(1.4–2.3 kVA)
- Input Power Factor: ≥0.96
- Drive Efficiency: 96.5%
- Enclosure: IP41

This medium voltage drive uses a proven multi-level power cell design with a phase-shifting transformer to reduce input harmonics and improve power quality—protecting both the grid and nearby equipment, with no extra filters needed. The modular power units are easy to maintain from the front, cutting downtime.

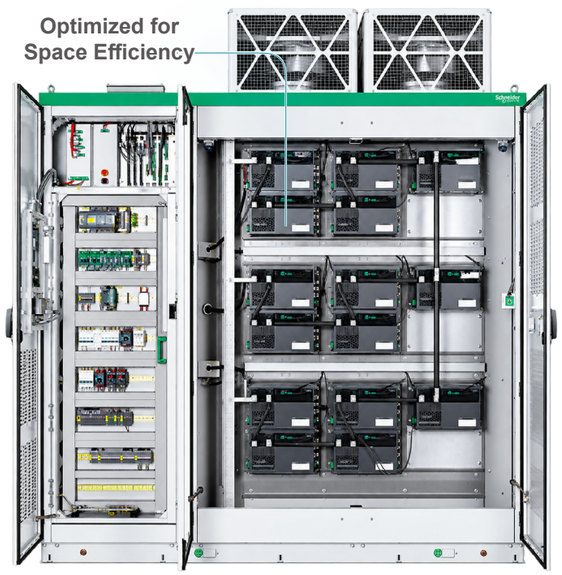
Drive Efficiency
96.5%

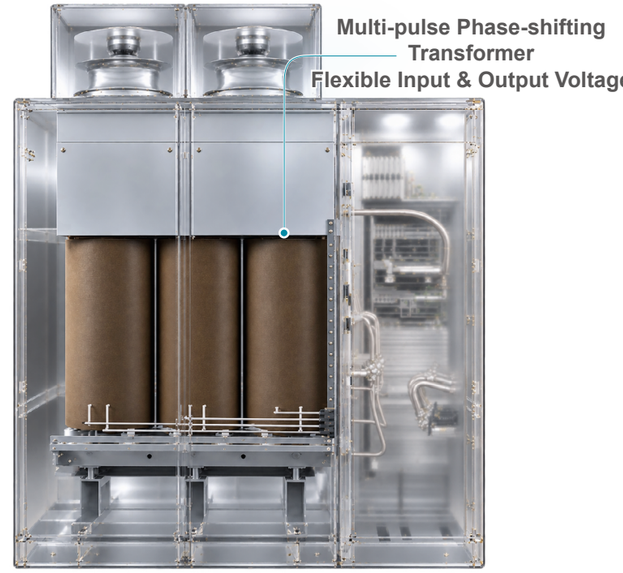
Low Harmonic
<5% THDi

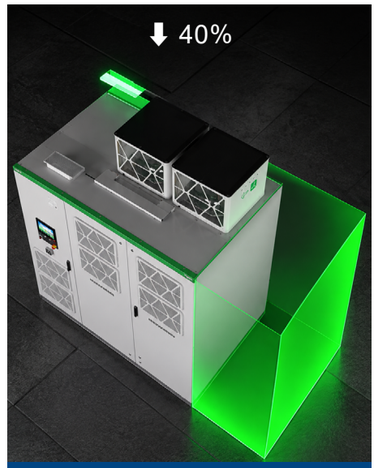
Overload Capability
120% 60sec

Up to 30%
Energy Savings

It supports Modbus communication as standard, with optional fieldbus protocols including Profibus, Profinet, DeviceNet, and EtherNet/IP, making it easy to connect with existing monitoring systems. Reliable and stable, it's built for demanding industries like mining, water treatment, and power generation.



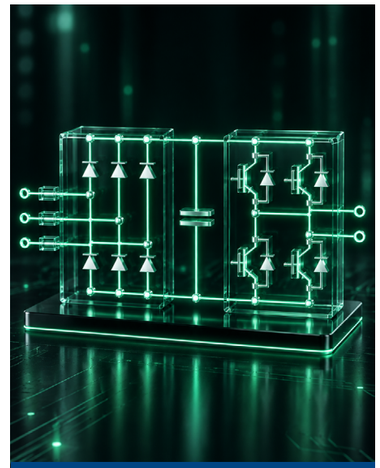




Volume Comparison



VRT — Stays Above Critical Voltage Thresholds for 500ms



Power Cell Bypass for Uninterrupted Performance

Catalog

From Power to Performance

Cast Resin
Distribution Transformer



- Voltage: Up to 34.5 kV
- Frequency: 50Hz, 60Hz
- Rating: 7,500kVA
- Standards: IEC, IEEE, CNS
- Efficiency: Up to 99.4%
- Insulation: H, F

Integrating Wire Disc multi-layer winding technology with high-permeability grain-oriented silicon steel, our transformers break through traditional efficiency limits, delivering a peak efficiency of up to 99.4%.

Wire Disc Winding
High Mechanical Strength

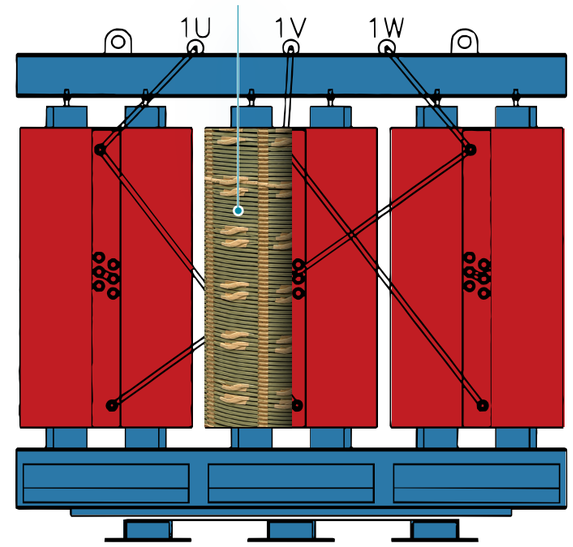
Ultra-Low Noise

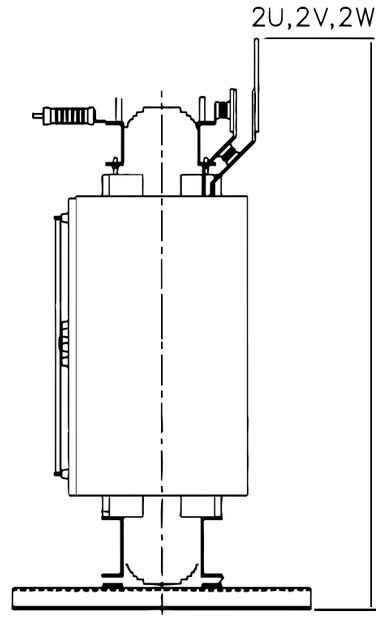
Glass Fiber Mat for Long-Term Insulation

High-Efficiency Core with Low No-Load Loss

The HV coils are wound horizontally directly within the mold, reinforced with glass fiber mat insulation and internal 3D air ducts. This design offers superior thermal dissipation and mechanical short-circuit strength, effectively preventing resin micro-cracking and partial discharge over long-term operation.

Multi-layer wire disc winding with optimal cooling channels



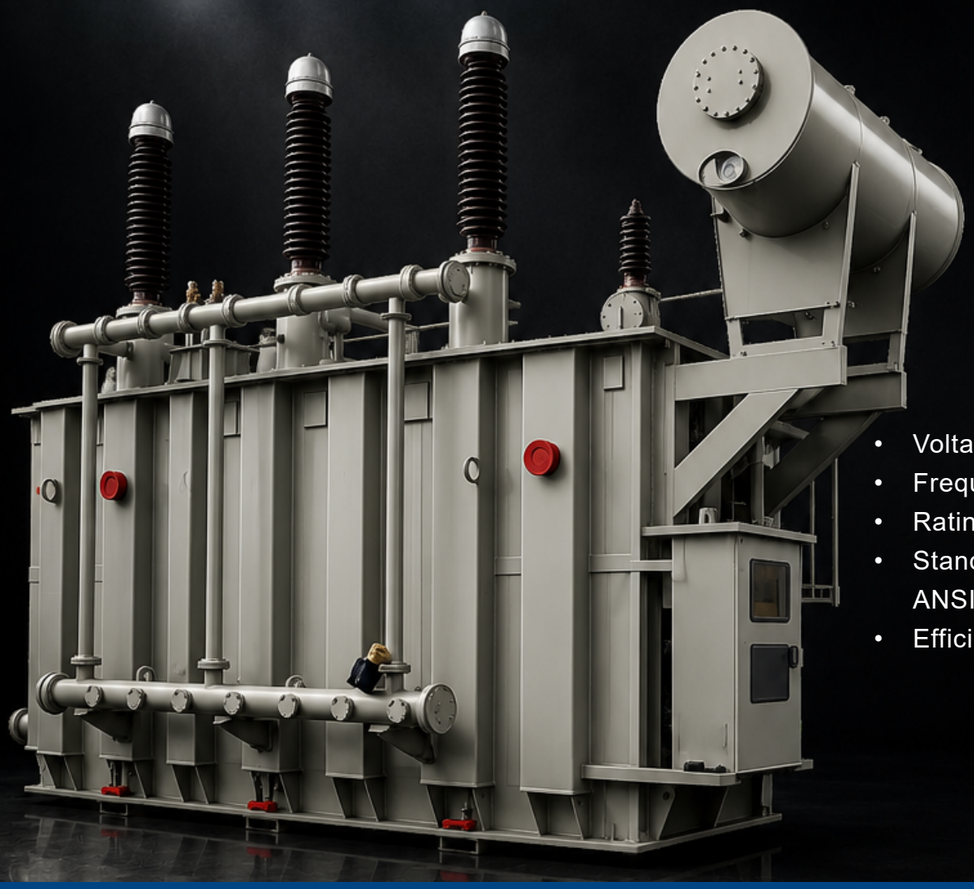


Capacity (kVA)	Pri. Voltage (kV)	Sec. Voltage (V)	Excitation Current (%)	No-Load Loss (W)	75° Load Loss (W)	Total Loss (W)	Eff. (%)	Voltage Regulation (%)	Impedance (%)	Noise Level (dB)	Dimensions (mm)			Weight (kg)
											(L)	(W)	(H)	
500	22.8	380	0.8	920	4950	5870	98.83	0.43	6	53	1450	830	1668	1950
600	22.8	380	0.7	1050	5300	6350	98.94	0.42	6	55	1450	830	1748	2150
750	22.8	380	0.7	1300	6150	7450	99.01	0.42	6	55	1550	830	1748	2450
1000	22.8	380	0.6	1400	7500	8900	99.11	0.42	6	55	1550	1080	1828	2900
1250	22.8	380	0.6	1850	8800	10650	99.15	0.42	6	55	1650	1080	1878	3300
1500	22.8	380	0.5	1900	9900	11800	99.21	0.42	6	56	1750	1080	2108	4250
2000	22.8	380	0.5	2600	13000	15600	99.22	0.43	6	56	1950	1250	2138	5450
2500	22.8	380	0.4	3700	16500	18400	99.26	0.46	6	57	2100	1250	2158	6800
3500	22.8	380	0.3	5100	20800	25900	99.26	0.52	7	58	2300	1250	2180	7200
4000	22.8	380	0.25	5600	24000	29600	99.26	0.58	8	64	2400	1250	2500	10200

Catalog

From Power to Performance

Oil Immersed
Power Transformer



- Voltage: Up to 161 kV
- Frequency: 50Hz, 60Hz
- Rating: Up to 150 MVA
- Standards: IEC, IEEE, ANSI, SPLN
- Efficiency: Up to 99.6%

Designed for extremely demanding extra-high voltage transmission environments. Featuring a top-tier low-loss core design and optimized oil duct cooling structure, it achieves an industry-leading efficiency of 99.6%, significantly cutting millions of kWh in power consumption annually.

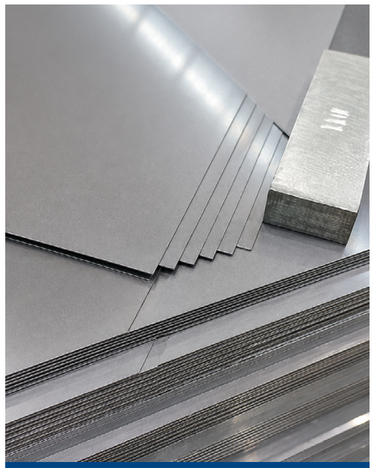
Ultra-High Efficiency 99.6%

Long Life, Low Maintenance

High-Surge Protection

Seamless Grid Coupling

As a qualified PLN supplier, our transformers are engineered with advanced insulation systems and high-strength windings, field-proven in demanding environments including North American oilfields and mining sites. Every unit undergoes rigorous testing at Taiwan TAF-accredited laboratories and independent third-party agencies, meeting the qualification requirements for direct connection to the Taipower grid.



Grain-Oriented Core Design
No-load losses



Multi-Layer Precision Winding



TAF-Accredited Laboratory Testing

Capacity (kVA)	Pri. Voltage (kV)	Sec. Voltage (V)	No Load Current (%)	No-Load Loss (kW)	Load Loss (kW)	Total Loss (kW)	Eff. (%)	Voltage Regulation (%)	Impe-dance (%)	Noise Level (dB)	Dimensions (mm)			Weight (kg)
											(L)	(W)	(H)	
100000	150	66/10	0.2	40	210	250	99.75	0.43	12.5	≦ 67dB(0.3m) ≦ 71dB(2.0m)	8000	6000	6500	100000
60000	150	66/10	0.2	30	130	150	99.73	0.42	12.5	≦ 67dB(0.3m) ≦ 71dB(2.0m)	5800	5000	5200	65000
60000	150	22/10	0.2	28	115	143	99.76	0.39	12.5	≦ 67dB(0.3m) ≦ 71dB(2.0m)	5800	5000	5200	65000
60000 GIS	150	22/10	0.2	28	115	143	99.76	0.39	12.5	≦ 67dB(0.3m) ≦ 71dB(2.0m)	5500	4910	5000	62700
30000	150	22/10	0.2	18	67	85	99.72	0.40	12.5	≦ 67dB(0.3m) ≦ 71dB(2.0m)	4800	4000	4500	40000
30000	66	22	0.2	18	67	85	99.72	0.40	12.5	≦ 67dB(0.3m) ≦ 71dB(2.0m)	4800	4000	4500	40000

Catalog

TECO

together, we empower the Future

For more information,
please visit TECO website.

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