



VicRuns

POWER ELECTRONICS · HUNAN, CHINA

SOLE AGENT IN INDONESIA — CV. CITRA JAYA

VD30A Series

Cabinet-Built Low & Medium Voltage Frequency Converter

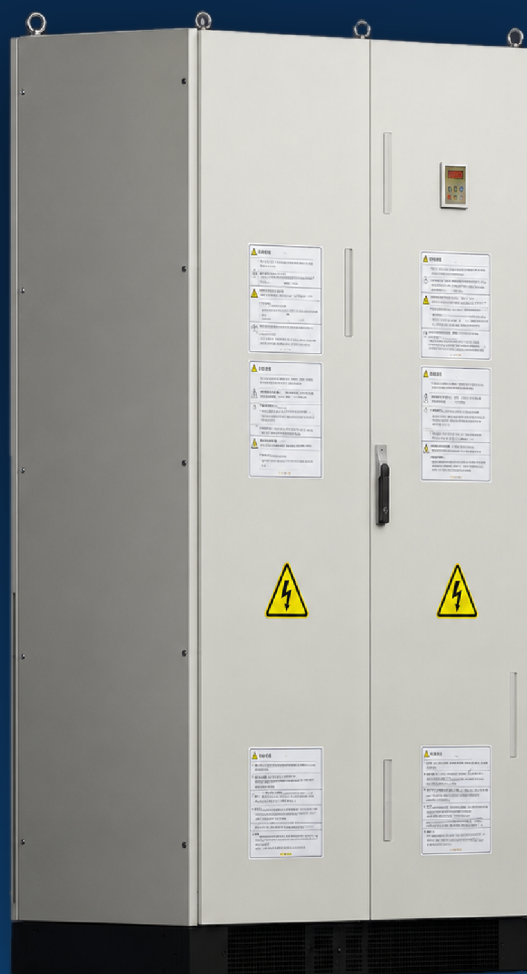
Direct drive of large industrial motors from 380 V to 3.3 kV, with fully customized cabinet builds engineered to match your installation and process requirements.

380 V – 3.3 kV

Fully Customizable

6-Pulse Rectification

Vector Control



Company Profile

Manufacturer of the VD30A Series — Hunan VicRuns Electric Technology Co., Ltd.

Founded in 2006, Hunan VicRuns Electric Technology Co., Ltd. was established by a national "Thousand Talents Program" leading expert, with investment from the Tsinghua University Shenzhen Research Institute and the Hunan High-Tech Venture Capital Group. VicRuns integrates R&D, manufacturing, sales and service under one roof.

The company holds close to **100 patents and software copyrights**, and its core product lines cover frequency converters, low-speed high-torque permanent-magnet motor drives, magnetic-levitation high-speed permanent-magnet synchronous drives, servo drives, and power-generation / energy-storage converters.

Over 18 years, VicRuns has shipped more than **1,000,000 units**, earning long-standing market trust across high-end equipment and new-energy industries. Products are exported to the USA, Russia, Vietnam, Indonesia, Thailand, India and other markets, supported by more than 20 regional offices, 100+ sales & service outlets in China, and 3 overseas offices.

SERVICE COMMITMENT

- Free repair or replacement of quality-related parts within the 1-year warranty period
- Free repair service extended up to 3 years
- Lifetime free technical consultation
- Satisfactory response to customer requests within 24 hours
- On-site service dispatched within 24 hours (in-province) / 48 hours (nationwide, China)



QUALIFICATIONS & HONORS

- National High-Tech Enterprise
- Certified Software Enterprise
- National "Thousand Talents Program" Leading Enterprise
- Specialized, Refined & Innovative ("Little Giant") SME
- TÜV Rheinland ISO 9001 Quality Management System
- TÜV Rheinland IATF 16949 Automotive Quality System
- Hunan Province Enterprise Technology Center
- Xiangtan Mayor's Quality Award

FOOTPRINT

Headquarters: No.36 Innovation Road, National High-Tech Zone, Xiangtan, Hunan

R&D Center: Luguyu International Industrial Park, Yuelu District, Changsha

Shenzhen Office: VicRuns Electric (Shenzhen) Co., Ltd., Nanshan District, Shenzhen

Product Overview

Cabinet-built frequency converter for direct drive of large industrial motors.

The VicRuns VD30A Series is a cabinet-built, low- and medium-voltage frequency converter designed for direct drive of large three-phase asynchronous motors, covering standard voltage classes from 380 V up to 3.3 kV. Built around a 6-pulse uncontrolled rectifier front end and an IGBT inverter, the VD30A delivers smooth, efficient speed control for pumps, fans, compressors, belt conveyors and other demanding industrial loads.

Sole Agent — VicRuns

Cabinet-Built Drive

380 V – 3.3 kV

Fully Customizable

6-Pulse Rectification



VD30A cabinet

VOLTAGE & CAPACITY RANGE

380 V

Standard low-voltage class
VD30A-004T

690 V

Standard low-voltage class
VD30A-007T — up to 1400 kW

3.3 kV

Medium-voltage class
VD30A-033T

Every VD30A cabinet is engineered to order — need a voltage, power or footprint outside the standard classes above? Please contact us with your requirements.

KEY FEATURES

6-Pulse Rectifier Front End

Three-phase uncontrolled rectifier bridge with a DC choke to improve input power factor and suppress bus ripple.

IGBT Inverter, Soft Charge

Machine-side IGBT inverter with a DC soft-start circuit limiting inrush current at power-up.

Modular Power & Rectifier Units

Bolt-in, modular assemblies positioned for easy access — fast installation and field maintenance.

Optional du/dt Filter & Braking

Protects motor winding insulation; optional braking unit dissipates regenerative energy.

Sensorless & PG Vector Control

Supports V/F, sensorless vector control (SVC), and closed-loop vector control with encoder (FVC).

Wide Output Frequency

0–300 Hz output, suiting standard-speed and high-speed direct-drive applications.

System Composition & Specifications

SYSTEM COMPOSITION

Distribution Section	Isolating switch, fuses, rectifier module, cooling fans, mains busbar, control box, auxiliary transformer
Power Section	IGBT power modules, capacitor bank, cooling fans, DC choke, optional du/dt inductor
Control Box	DRI, PWR, INT and CUVC boards, contactor and phase-sequence protection, 24 V / 15 V supplies
Rectifier Module	Rectifier bridge, DC buffer contactor, buffer resistor, terminal board — bolt-in for fast service
Optional Braking Unit	Suppresses DC bus over-voltage; dissipates motor regenerative energy on deceleration
Optional Handheld Keypad	Remote keypad operation of the drive

MAIN CIRCUIT PRINCIPLE

Incoming three-phase AC is rectified by a 6-diode uncontrolled rectifier bridge to a regulated DC bus. A DC choke improves input power factor and smooths the bus voltage. The machine-side IGBT inverter then converts the DC bus back into variable-voltage, variable-frequency AC to drive the motor. An optional du/dt inductor and braking unit can be added per application.

TECHNICAL SPECIFICATIONS

Control Modes	V/F · Sensorless vector (SVC) · Vector control with PG (FVC)
Applicable Motor	Three-phase standard & variable-frequency asynchronous motors
Rated Voltage Classes	380 V · 690 V · 3.3 kV (custom classes available)
Output Frequency Range	0 ~ 300 Hz
Overload Capacity	130% / 60 s · 150% / 3 s (40°C, ≤1000 m, 300 s cycle)
System Efficiency	> 98%
Input Power Factor	0.93 ~ 0.96 at rated conditions
Input Voltage Tolerance	-20% / +10% of rated input
Rated Input Frequency	47.5 Hz ~ 63 Hz
Speed Range / Accuracy	1:1000, ±0.1% (PG vector control)
Starting Torque	150% rated torque at 0.1 Hz (PG VC)
Carrier Frequency	2 kHz
Accel. / Decel. Time	0 ~ 65000 s, individually adjustable
Cooling Method	Forced air cooling, redundant centrifugal fans
MTBF	40,000 hours (25°C, ≤1000 m, rated operation)
Acoustic Noise	≤ 80 dB (per DL/T994-2006)

PRODUCT GALLERY



Front View — Installed Unit



Cabinets Ready for Shipment

Model Naming & Protection Functions

MODEL NAMING CONVENTION

VD30A-033 T / 250G

Series	VD30A — cabinet-built frequency converter series
Voltage Class	004 = 380 V · 007 = 690 V · 033 = 3.3 kV
Power Supply	T = three-phase AC
Adaptable Motor Power	e.g. 250G = 250 kW rating

Custom voltage classes, capacities and cabinet configurations outside this naming scheme can be engineered on request.

PROTECTION FUNCTIONS

Over-Current / Over-Voltage / Under-Voltage

Acceleration, deceleration & constant-speed protection with hardware and software stages.

Input / Output Phase Loss Detection

Protects against unbalanced or missing supply and motor phases.

Motor & Drive Overload Protection

Adjustable overload gain and early-warning threshold.

Module Over-Temperature Protection

Monitors IGBT module temperature and shuts down before damage occurs.

Load-Loss (De-Loading) Detection

Detects belt breakage, pump dry-run and similar loss-of-load conditions.

Speed Deviation & Over-Speed Protection

Available with encoder (PG) feedback for closed-loop applications.

CONTROL & MAINTENANCE HIGHLIGHTS

- Front-access maintenance: pull-out power and rectifier modules for fast field service
- Compatible with mainstream communication protocols (Modbus, Profibus, DeviceNet, InterBus)
- Optional remote handheld keypad for local commissioning and monitoring
- Optional du/dt inductor extends motor winding insulation life on long cable runs
- Encoder (PG) feedback option enables closed-loop vector control for precision applications

Braking Unit, Environmental & Ordering Information

BRAKING UNIT REFERENCE (EXAMPLE RATINGS)

Adaptable Motor	Working Voltage	Working Current	Braking Resistor Power
1000 kW → 900 kW	1100 V	909 A	50 kW
1200 kW → 1100 kW	1100 V	1090 A	60 kW
1400 kW → 1200 kW	1100 V	1386 A	70 kW

Braking resistor selection depends on braking duty cycle, deceleration time and system inertia — final values are engineered per project.

ENVIRONMENTAL CONDITIONS

Operating Temperature	−25°C ~ +50°C (derate 2%/°C above 40°C)
Storage Temperature	−40°C ~ +70°C, rate <1°C/min
Relative Humidity	10% ~ 95%, no condensation
Altitude	No derating ≤1000 m · derate 1%/100 m above
Installation	Vertical mounting on flame-retardant base, level ≤10 mm/3 m
Clearance Required	≥500 mm left/right · ≥800 mm front/rear

PLEASE PROVIDE WHEN ORDERING

- Voltage class and rated capacity
- Driven motor parameters
- Load type and characteristics
- Cabinet layout / clearance requirements
- Any project-specific customization

Need a voltage class, power rating, or cabinet configuration outside our standard VD30A lineup? Every VD30A build can be customized to your project — contact us and our team will get back to you shortly.

Application Scenarios

VicRuns low- and medium-voltage converters are proven across heavy industry.



Mining

Main ventilation fans, belt conveyors, mine hoists, gas drainage pumps



Power Generation

Induced/forced draft fans, primary air fans, boiler feed & circulating pumps



Metallurgy & Cement

Blast furnace & dust-removal fans, slurry pumps, kiln circulating fans



Oil, Gas & Water

Pipeline & injection pumps, submersible pumps, water treatment

WHY VD30A

Direct High-Power Drive

Cabinet-built architecture drives large industrial motors directly, without step-up transformers.

Engineered to Order

Voltage class, capacity and cabinet layout tailored to the motor, load and installation site.

Field-Serviceable Design

Modular, bolt-in power and rectifier units minimize downtime during maintenance.

RIGOROUS QUALITY ASSURANCE

Every VD30A cabinet is validated through a multi-stage factory test flow before shipment:

Safety Test

Insulation & withstand-voltage checks

EMC Test

Lightning, power noise, fast transients, static discharge, voltage sag

Environmental Test

Damp heat, high/low-temperature shock, salt fog

Performance Test

Full-load run, rated parameters, protection & basic functions



VicRuns

Let's Talk About Your Project

Whether you need a standard VD30A cabinet or a fully customized medium-voltage drive solution, our team is ready to help — from voltage & capacity selection through to commissioning support.

CV. CITRA JAYA

Sole Agent — VicRuns Frequency Converters

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