

# RENLE

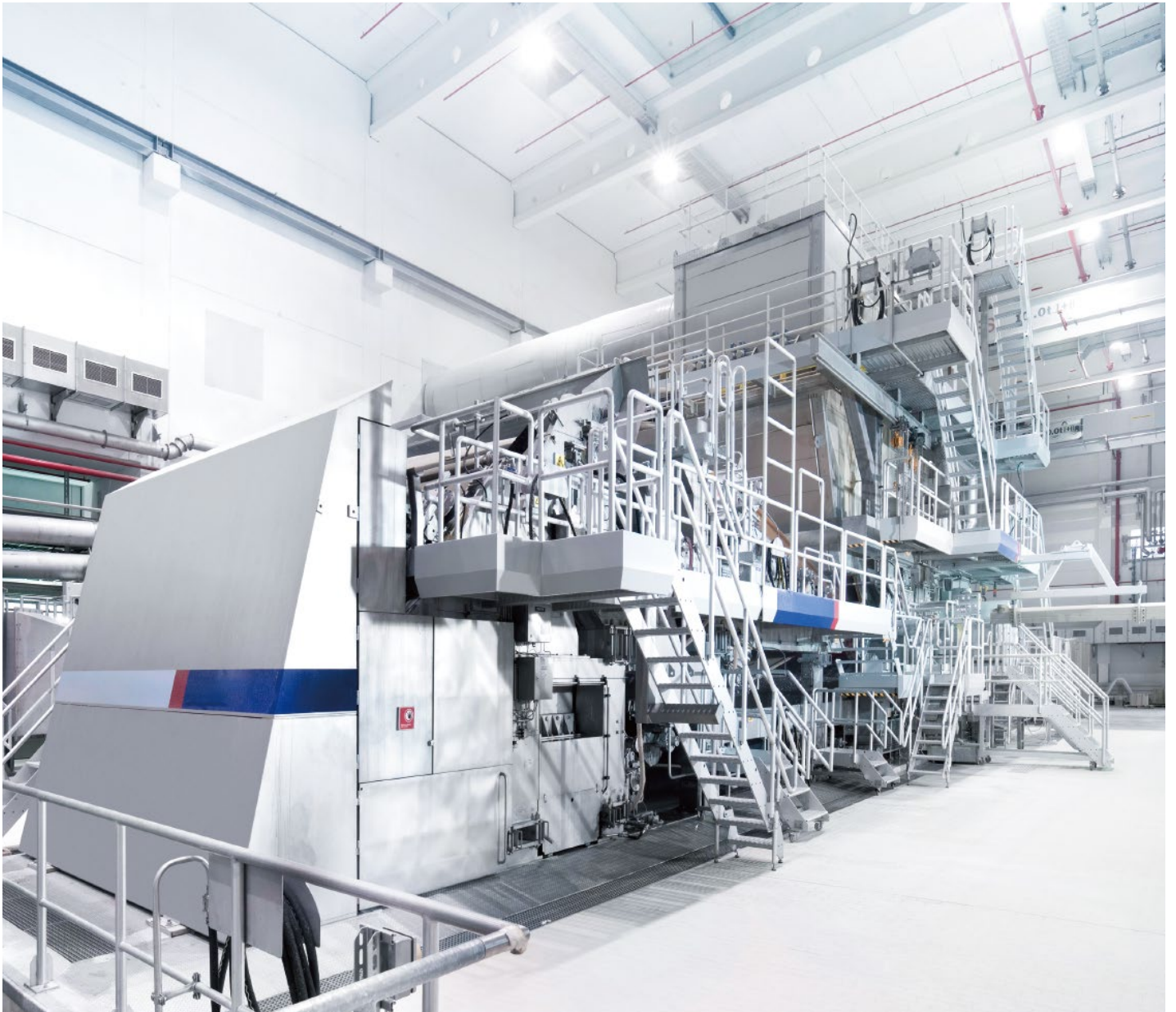


**雷诺尔**  
Shanghai RENLE  
Science&Technology Co., Ltd.

National toll free service hotline:  
**+86 800-8200-785**  
[www.renle.com](http://www.renle.com)

**RNB8 Series**

**MULTI-MACHINE  
DRIVE FREQUENCY INVERTER**



Intelligent power grid - New energy - Electric drive - Professional Manufacturer

# RENLE Science&Technology Co., Ltd.



Shanghai Renle Science & Technology Co., Ltd. is the integrator designs the intelligent electrical energy-saving system, manufactures products and provides solutions to control system. Its products include HV/LV motor soft starter, HV/ LV frequency inverter, intelligent electricals, new-energy electricals, HV/LV complete equipment for electric power transmission distribution and so on. Its products are widely used in electric power, metallurgy, petroleum chemistry, military industry, mining, chemical industry, construction, light industry, pharmaceuticals, municipal construction, textile printing and dyeing, papermaking, rubber and plastic, electrified railway construction and other industries. Its products sell well in many countries and regions of the world.

The company products are used in many projects, such as Expo 2010 Shanghai China, 2008 Beijing Olympic Games, Yangshan Deepwater Port Project of Shanghai International Shipping Center, Shanghai Pudong Airport, Shanghai Hongqiao Airport, the Three Gorges Project, Gansu Satellite Launching Center, South-to-North Water Diversion Project, West-to-East Natural Gas Transmission Project, China National Petroleum Corp., SINOPEC, Double Coin Holdings, Shandong Linglong Tyre and other national key supporting projects. Its premium products and excellent after-sales service are favored by the clients.

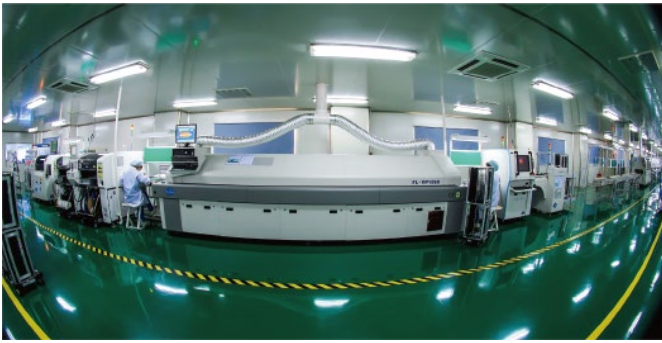






# 雷诺尔

Shanghai RENLE  
Science&Technology Co., Ltd.



The company takes a lead through the ISO9001 Quality Management System Certification, ISO14001 Environmental Management System Certificate, OHSAS18001 Occupational Health and Safety Management System Certificate, CE, China Compulsory Certification (CCC), China Certification Center for Energy Conservation Product (CECP), Technischer überwachungs Verein (TUV), Certificate of Conformity GOST and product inspection and certificate. The company keeps introducing international advanced production and test equipment, sets up labs, and provides D&R experiment base for several domestic colleges and universities. The company is approved to set up the postdoctoral centre by the Human Resources and Social Security Bureau, signaling Renle' s collaboration with the school in establishing the platform for combination of production, teaching and research, improving the enterprise' s capability of independent innovation, research and development.

Adhering to hard-working and enterprising-spirit, the compa-

ny gradually realized production modernization, group management, product specialization and technology leadership, and was credited with honors, such as the National Torch Plan Key High-tech Enterprise, High-tech Enterprise, Enterprises Accredited for Fulfilling Contract and Valuing Credit in China, National Key New Product, Shanghai Innovative Enterprise, Shanghai Certified Enterprise Technology Center, Shanghai Famous Trademark, Shanghai Famous Brand Product, Shanghai Key New Product, Shanghai Brand Name Products, Postdoctoral Centre and intelligent power grid R&D center and so on.

The company shall keep developing products of energy-saving, efficiency, precision and humane. With the specialized and unique control technology, advanced and applicable innovative products, and deep-integrated solutions, the company helps clients in realizing economic transformation, industry upgrading and speedy internalization. With its high-qualified products, the company aims to be the world-renowned specialized manufacture of intelligent electrical equipment.

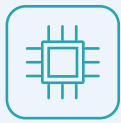


# RNB8 Series

## MULTI-MACHINE DRIVE FREQUENCY INVERTER

RNB8 Series Multi-machine Drive Frequency Inverter is the new-generation low-voltage multi-machine transmission and drive product independently developed by the Renle. It adopts electric transmission dispersed from the centralized power supply by common DC bus after rectification as the technical plan. The products are mainly used in production line equipment and multi-machine drive equipment load, such as the product line for main transmission of paper machine, metallurgical production line, textile printing and dyeing machine, hoisters, chemical fiber plastics, printing and packaging and other complicated systems in needs of high-performance multipoint transmission.

State-of-the-art equipment and technology make premium products.



Advanced communication technology



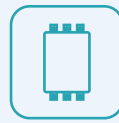
Multi-machine synchronous control



Powerful function



High efficiency and energy saving



Save cabinet space



Little pollution to power grid





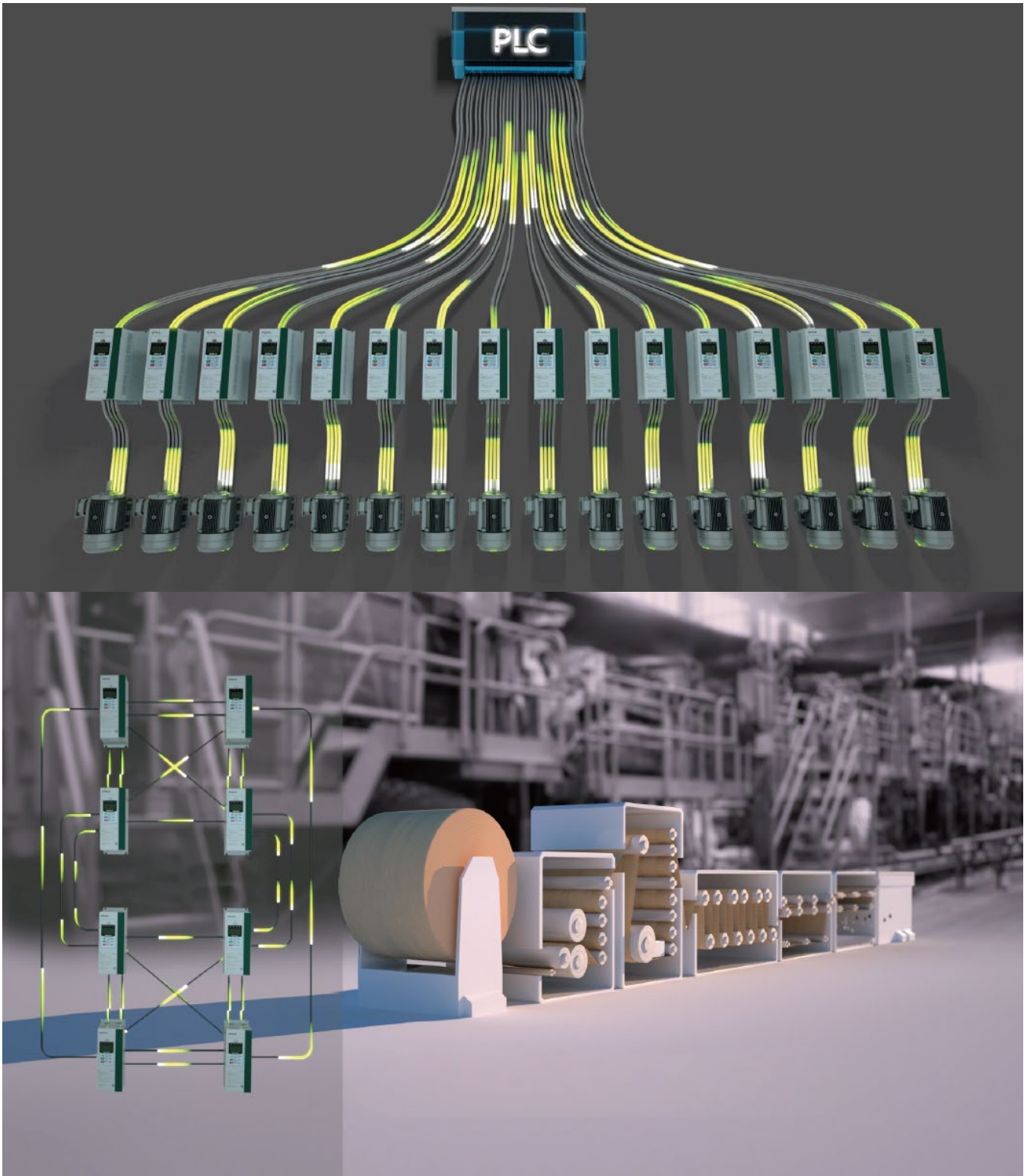


RNB8 Series

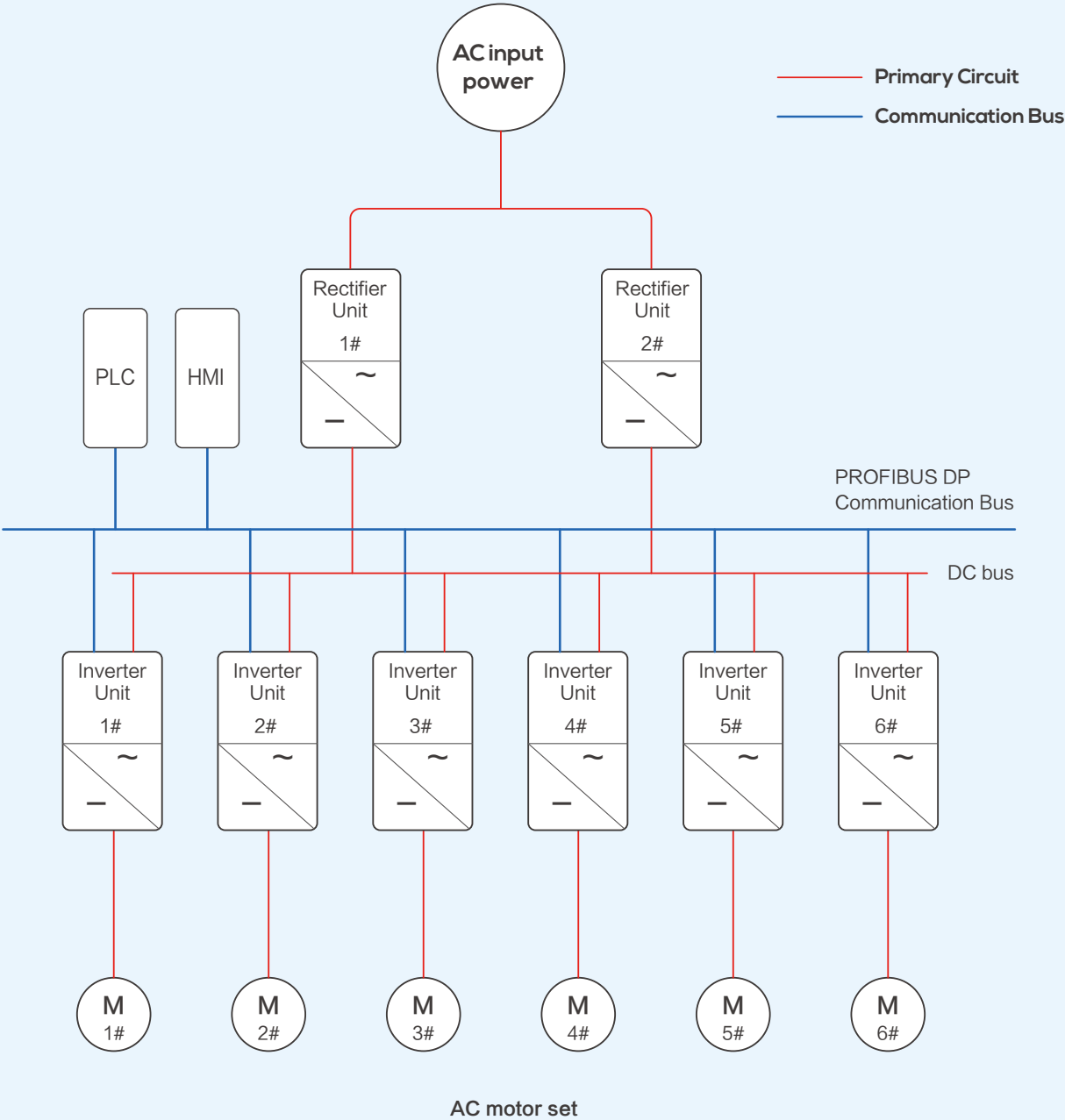
## MULTI-MACHINE DRIVE FREQUENCY INVERTER

### Multi-machine Drive · Excellent Control Performance

It is widely used in the papermaking and steel rolling production lines and other complicated systems with high demand for performance.



## SYSTEM DIAGRAM OF PRODUCT



# PRODUCT FEATURES

## 1. Save cabinet space

Divided as rectifier and inverter units; book modular design; applicable to compact installation side by side for several machines, highly utilized cabinet space, small floor space.

## 2. High efficiency and energy saving

Common DC bus, automatic allocation of power consumption and dynamic braking, save braking energy consumption, high power utility rate;

## 3. Little pollution to power grid

Centralized power supply lessens the harmonic pollution and EMI interferences to the power grid by the inverter input.

## 4. Advanced communication technology

Adopt the advanced industrial field bus, PROFIBUS-DP communication. The maximum communication rate can reach

12Mbps. Multi-station and long-distance high speed communication between inverters and upper computer controller system.

## 5. Excellent multi-machine synchronous control performance

Multi-machine synchronous control is excellent in speedy response, high precision, strong stability, enables the synchronous running of dozens of motor in the whole production line, realizes speedy and even distribution of the load, avoiding mechanical breakdown caused by the asynchronous equipment and uneven load distribution.

## 6. Powerful in function & flexible in use

Rectifier and inverter units have several power module units. Flexible and convenient power extension. The product has abundant I/O and communication interfaces, and is reserved with related extended interfaces.

# PRODUCT NAMEPLATE

<b>RENLE 雷诺尔</b> 变频器-逆变单元 VFD-INVERTER	<b>RENLE 雷诺尔</b> 变频器-整流单元 VFD-RECTIFIER
型号规格: RNB81011-4T Model	适配电机: 11KW Electric Motor Adapter
输入电压: DC 540V Input Voltage	输入电流: DC 32A Input Capacity
输出电压: 3PH 0~380V Output Voltage	输出电流: 3PH 24A Output Current
出厂编号: RGP8180110010 Identification No.	生产日期: 2018/01 Release Date
IP20	IP20
上海雷诺尔科技股份有限公司 Shanghai RENLE Science&Technology Co., Ltd.	上海雷诺尔科技股份有限公司 Shanghai RENLE Science&Technology Co., Ltd.
	



## PRODUCT TYPE

### ● Naming

RN
B
8
I
□
□
□
- 4T -
□
(
□
□
)

①
②
③
④
⑤
⑥
⑦
⑧

### ● Statement

	Character	Meaning	Statement
①	RN	Company Code	Shanghai Renle Science & Technology Co., Ltd.
②	B	Product Line Code	Low-voltage frequency inverter
③	8	Product Series	8: 8 Series
④	N/A	Product Type	Common frequency inverter integrates the rectifier and inverter
	I		Inverter unit of the frequency inverter
	RD		Rectifier unit of the frequency inverter is uncontrolled diode rectifier
	RG		Rectifier unit of the frequency inverter is the semi-controlled thyristor rectifier
	RI		Rectifier unit of the frequency inverter is IGBT-controlled PWM rectifier
⑤	XXX	Product power	003: 3KW; 037: 37KW; 110: 110KW; 1M0: 1MW
⑥	4T	Voltage Level	Three-phase 380V
	6T		Three-phase 690V
⑦	-X	Industry	Special industry by subdivision
			The general industry by default
⑧	(XX)	Board and card selection	Board and card separation
			First: communication card; Second: function extension board
			Standard configuration by default

## TABLE OF PRODUCT SPECIFICATION AND TYPE

Sheet of Rectifier Specification and Type

Rectifier Model	Power (kW)	Rated input AC voltage(V)	Rated input AC current (A)	Rated output DC current (A)	Adaptive inverter power (kW)
RNB8RD030-4T	30	380	61	75	30
RNB8RD055-4T	55		106	130	55
RNB8RD110-4T	110		214	262	110
RNB8RD315-4T	315		600	735	315

Sheet of Inverter Specification and Type

Inverter Model	Power (kW)	Rated input DC voltage (V)	Rated input DC current (A)	Rated output AC current(A)	Adaptive motor power (kW)
RNB8I003-4T	3.0	540	10	7	3.0
RNB8I004-4T	4.0		12	10	4.0
RNB8I005-4T	5.5		16	13	5.5
RNB8I007-4T	7.5		22	16	7.5
RNB8I011-4T	11		32	24	11
RNB8I015-4T	15		42	32	15
RNB8I018-4T	18.5		48	38	18.5
RNB8I022-4T	22		55	44	22
RNB8I030-4T	30		76	61	30
RNB8I037-4T	37		92	73	37
RNB8I045-4T	45		110	90	45
RNB8I055-4T	55		132	106	55
RNB8I075-4T	75		184	147	75
RNB8I090-4T	90		220	177	90
RNB8I110-4T	110		262	212	110

## Table of Product Technical Parameters

Items	Specification	
Input	Rectifier Unit	
	Rated input voltage	4T: 380VAC 50/60Hz; 6T: 690VAC 50/60Hz
	Input voltage range	fluctuation of voltage: -15% ~ +10%; fluctuation of frequency: -5% ~ +5% degree of unbalance: ≤3%
	Inverter Unit	
	Rated input voltage	4T: 515VDC ; 6T: 930VDC
	Input voltage range	fluctuation of voltage: -15% ~ +10%
Output	Rectifier Unit	
	Rated output voltage	4T: 540VDC ; 6T: 975VDC
	Inverter Unit	
	Output voltage range	4T: 0 ~ 380VAC 0 ~ 600Hz; 6T: 0 ~ 690VAC 0 ~ 600Hz
Control Performance	Control mode	V/F Control, Speed sensorless vector control, Speed sensor vector control
	Range of speed regulation	1:100 (peed sensorless vector control); 1:1000 (Speed sensor vector control)
	Steady speed precision	±0.5% (Speed sensorless vector control); ±0.2%(Speed sensor vector control)
	Torque response	≤20mS(Speed sensorless vector control); ≤5mS(Speed sensor vector control)
	Torque control accuracy	±5% (Speed sensorless vector control); ±3% (Speed sensor vector control)
Basic function	Overload capacity	Inverter Unit:150% Rated current 60S;180% Rated current10S;200% Rated current 1S
	Automatic voltage regulation	When the voltage of power gird changes, stable output voltage can be maintained automatically.
	Automatic torque boost	Automatic torque boost can be realized through the VF control.
	Speed search start	Smooth start without impact can be realized in the rotating motor.
	Acceleration and deceleration curves	Line ; S curve
	Operation instruction	Three channels: Local machine / LED/LCD operation panels are externally introduced; control terminals; telecommunication
	Frequency instruction	Five channels: Local machine / LED/LCD operation panels are externally introduced; external terminal analog; external terminal multi-speed; telecommunication; PID

> To be continued

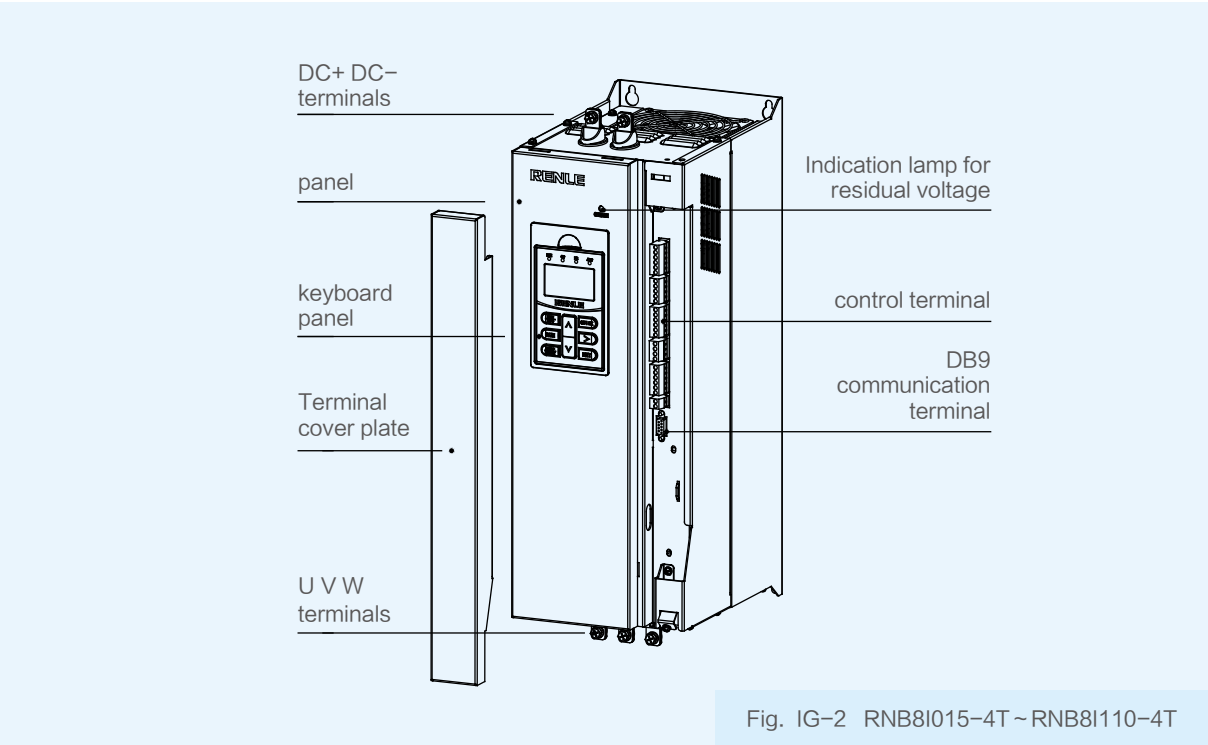
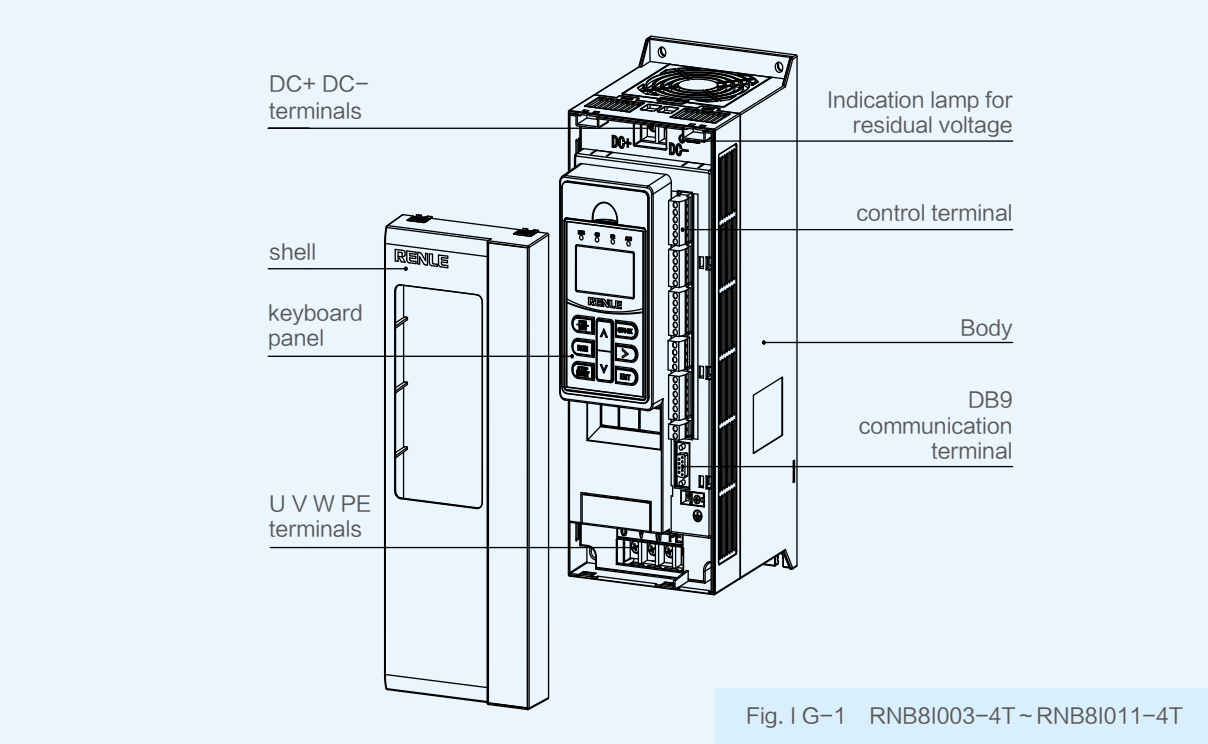


> Continued

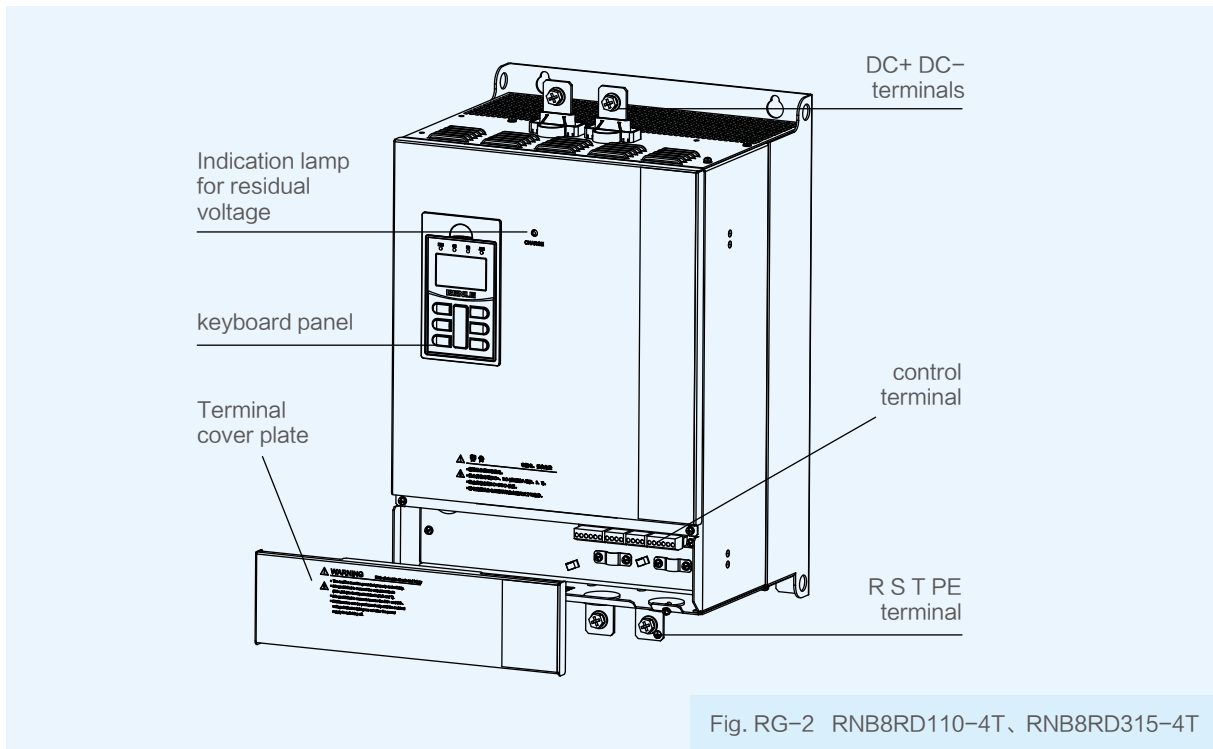
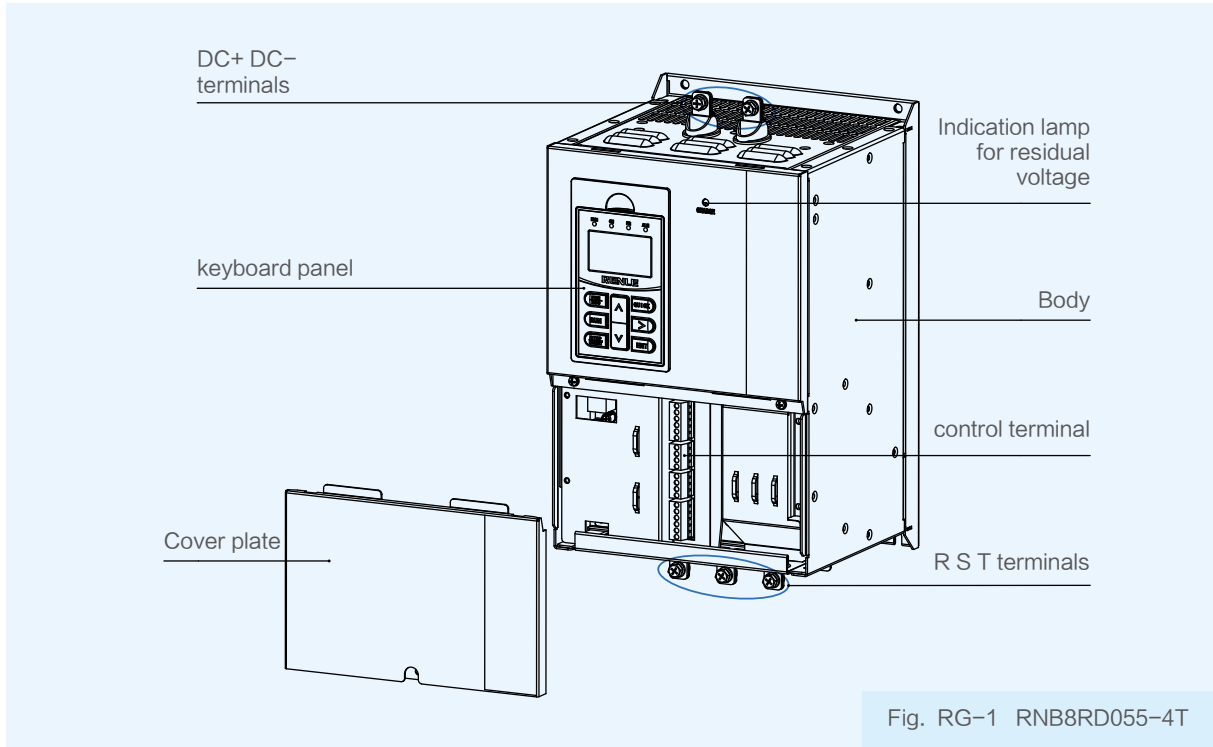
Items		Specification
Man-machine interface	Analog input	2 circuits, 0 ~ 10V or 0/4 ~ 20mA optional, programmable
	Analog output	2 circuits, 0 ~ 10V or 0/4 ~ 20mA optional, programmable
	Digital input	8 circuits, programmable
	Digital output	2 circuits relay output signal, programmable 1 circuit open collector signal, programmable
	Keyboard display	It supports the LCD display and digital display keyboard. Standard configuration: LCD screen display and keyboard, RJ 45 interface
	Communication interface	It supports the Modbus-RTU or Profibus DP communication protocol. Standard configuration: Profibus DP protocol, DB9 interface.
	Encoder Interface	It supports the 24V optical-electricity encoder collector open circuit and differential signals.
	Extended board and card	Extensible communication board and card, which supports the Ethernet and wireless network. Extensible PG board and card, which supports 5V sin-cos encoder, rotary transformer and other different encoder signals. Extensible I/O board and card, which supports digital and analog input and output signals.
Protection function	Inverter Unit: Overcurrent, overvoltage, undervoltage, motor overload, frequency inverter overload, output phase loss, overheated inverter module, drive breakdown and so on.	
	Rectifier unit: Input phase loss, input overvoltage, input undervoltage, overheated rectifier module and so on.	
Environment	Place for use	Indoor, the altitude is lower than 1000 meters, no dust, no leakage, no corrosive gas, away from direct sunlight
	Temperature for storage environment	-45 ~ +65°C
	Operation temperature	-10 ~ +40°C, Degraded use for temperature between 40 ~ 50°C. The rated output current shall be reduced by 1% for each one degree rise in temperature.
	Humidity	5 ~ 95% (no condensation)
	Altitude	0 ~ 2000 meters, Degraded use for height of over 1000 meters. The rated output current shall be reduced by 1% for each 100 meter rise in height.
	Vibration	Less than 0.5g
	Storage temperature	-40 ~ +70°C
	Protection level	IP20

## Product Appearance

- Inverter Unit



● Rectifier Unit

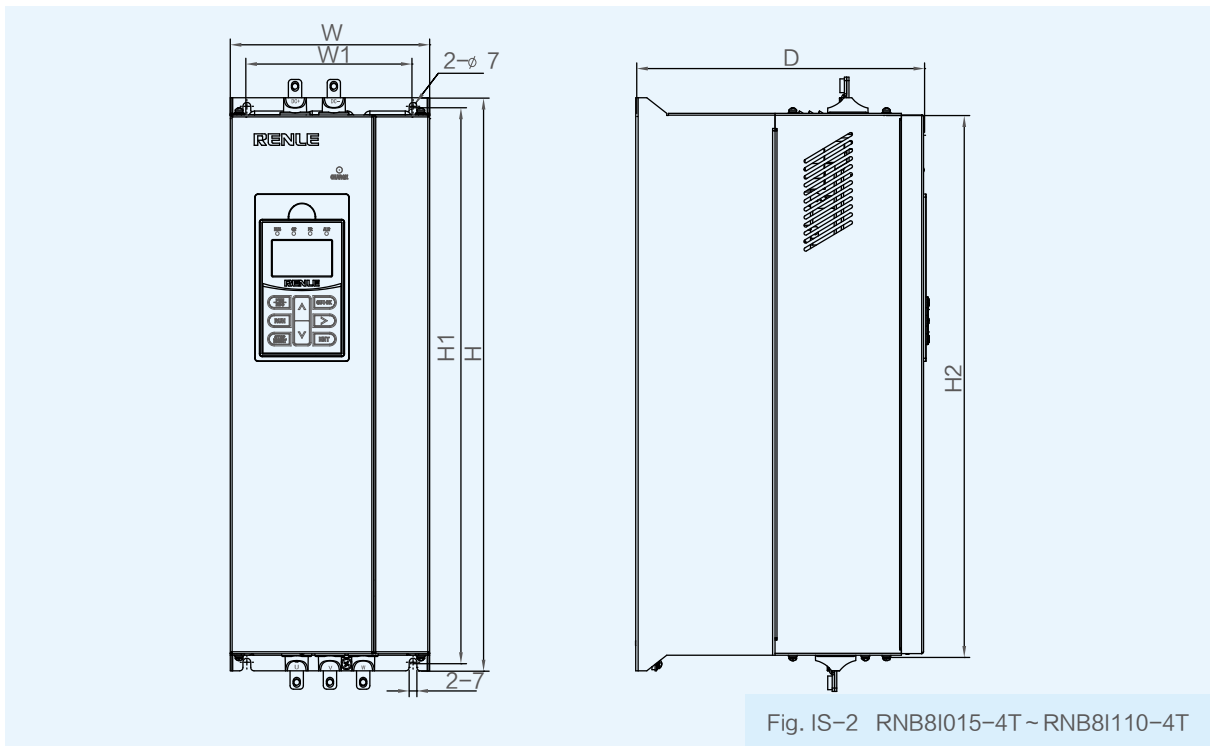
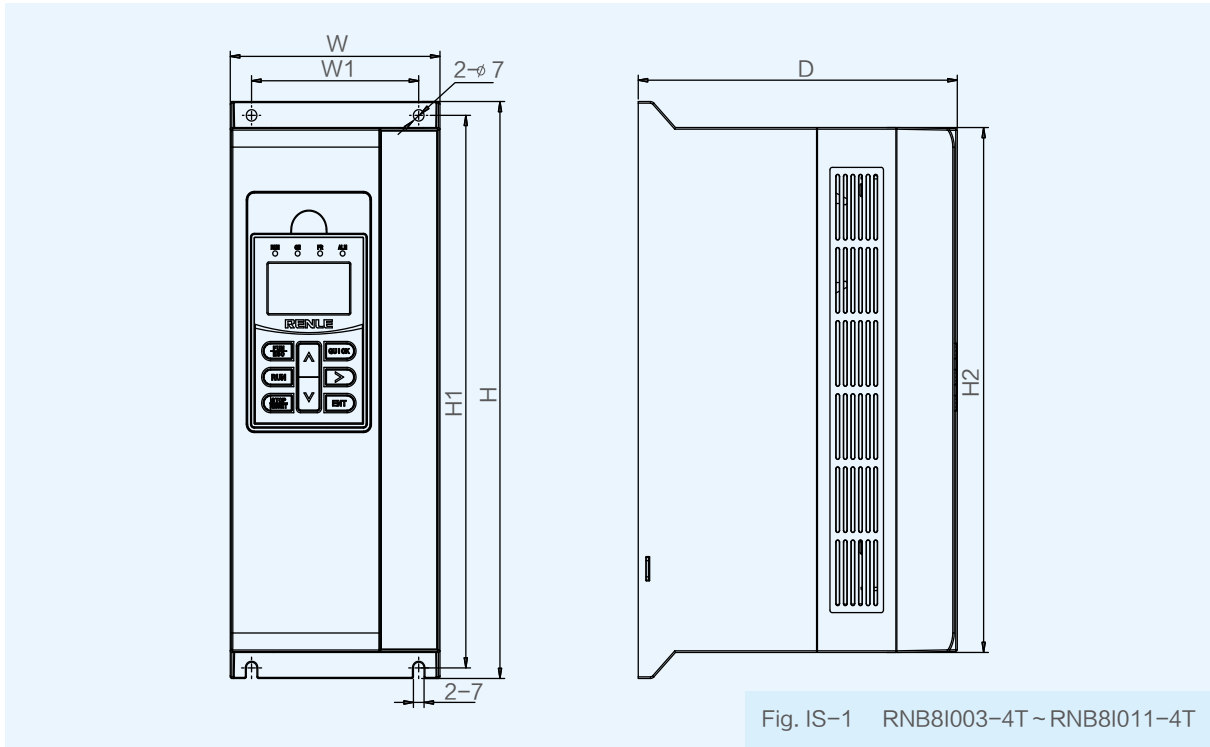




# Product Appearance and Dimension



## ● Inverter Unit



● Data sheet of Inverter Appearance and Installation Dimension

Inverter model	Outline and installation dimension (mm)						Diameter of mounting recess	Appearance drawing	Outline dimension	Weight (kg)
	W	H	D	W1	H1	H2				
RNB8I003-4T	138	355	210	110	340	323	Φ7	IG-1	IS-1	4.0
RNB8I004-4T										
RNB8I005-4T										
RNB8I007-4T										
RNB8I011-4T										
RNB8I015-4T	180	500	260	150	485	473	Φ7	IS-2	14	
RNB8I018-4T										
RNB8I022-4T										
RNB8I030-4T										
RNB8I037-4T										
RNB8I045-4T	190	600	320	150	581	550	Φ9	IG-2	IS-3	23
RNB8I055-4T										
RNB8I075-4T	244	695	464	190	673	629	Φ10	IS-4	34	
RNB8I090-4T										
RNB8I110-4T										

● Rectifier Unit

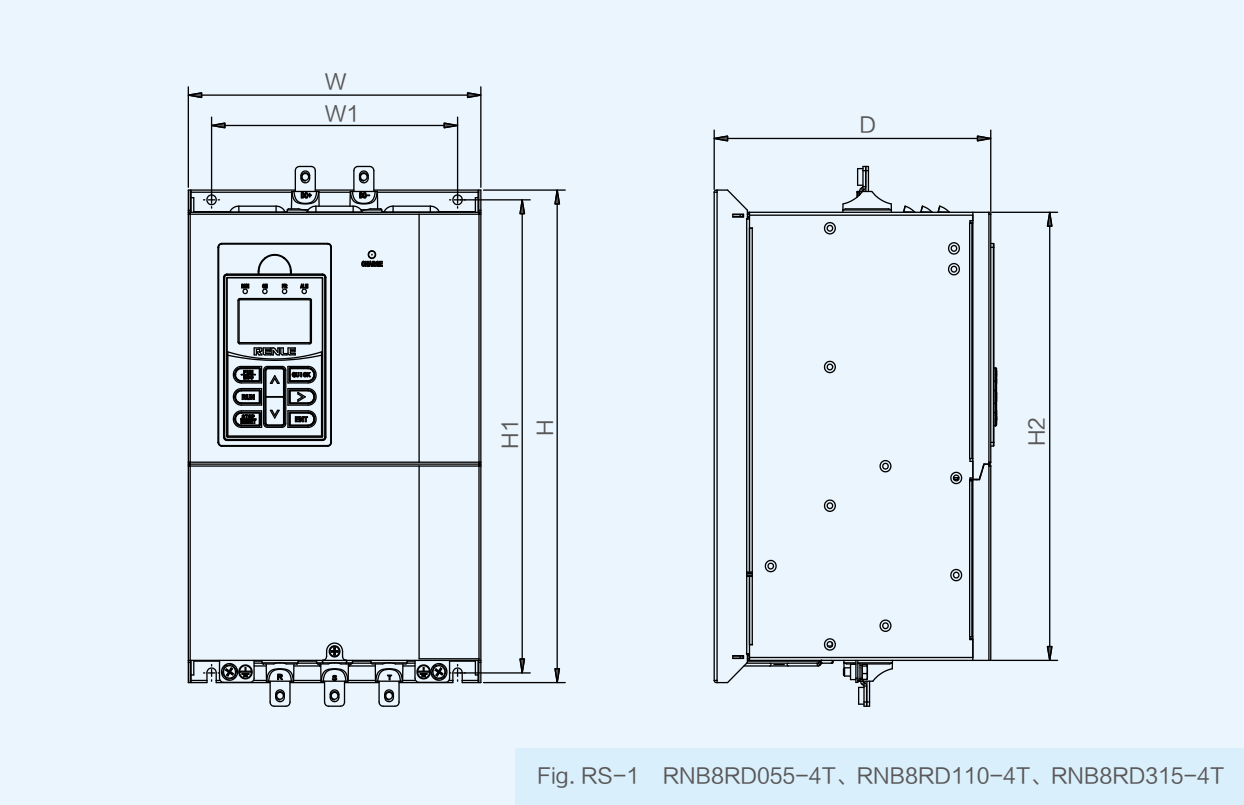
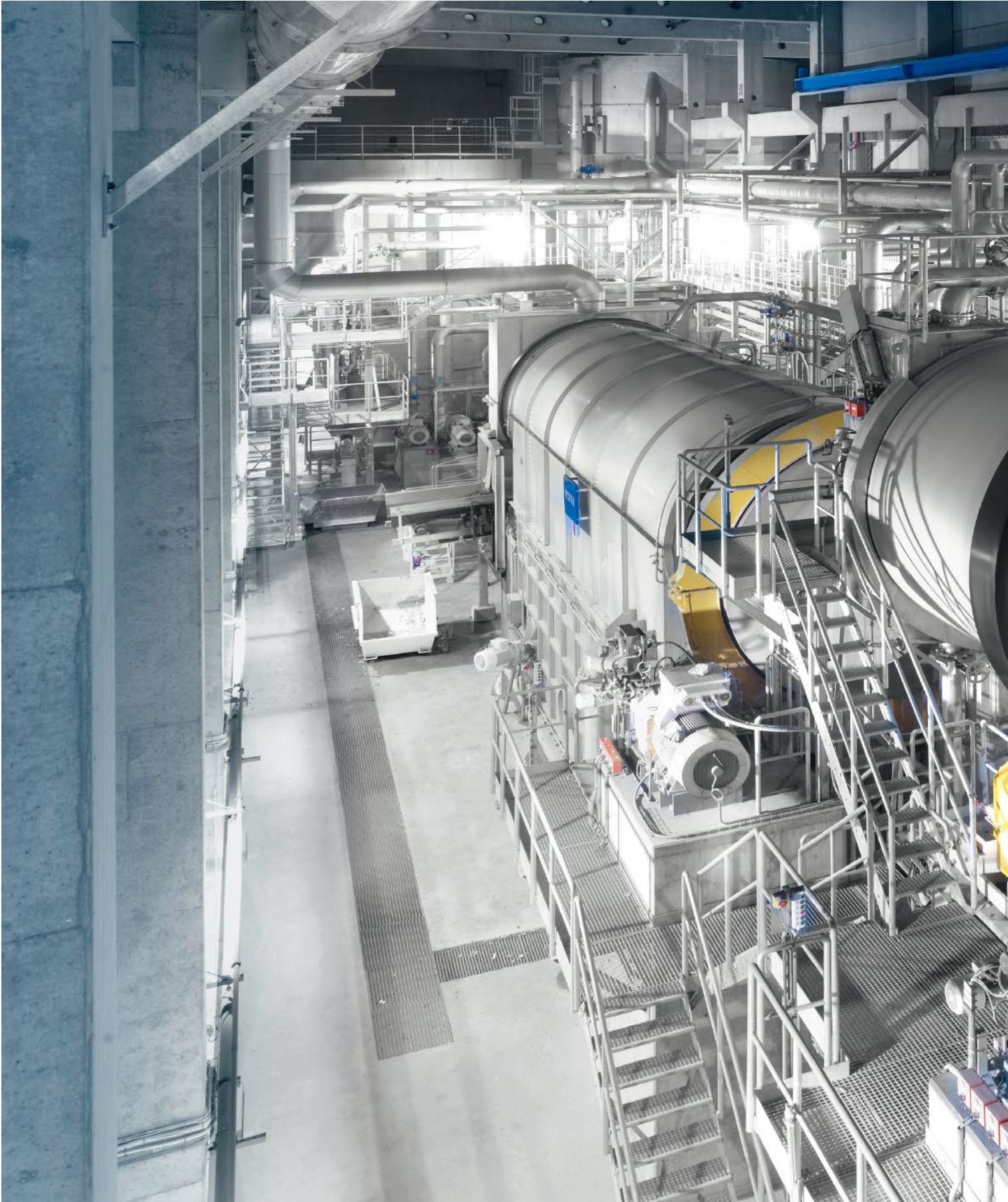


Fig. RS-1 RNB8RD055-4T、RNB8RD110-4T、RNB8RD315-4T

● Data sheet of Rectifier Appearance and Installation Dimension

Rectifier model	Outline and installation dimension (mm)						Diameter of mounting recess	Appearance drawing	Outline dimension	Weight (kg)
	W	H	D	W1	H1	H2				
RNB8RD030-4T	138	355	210	110	340	323	Φ7	IG-1	IS-1	3.0
RNB8RD055-4T	220	355	208	185	341	323	Φ7	RG-1	RS-1	20
RNB8RD110-4T	330	500	262	250	479	448	Φ8	RG-2		30.5
RNB8RD315-4T	280	695	465	225	670	625	Φ11			76.5









# RENLE

## A GLIMPSE OF PERFORMANCE IN PAPER INDUSTRY

---

Dezhou Huabei Paper Industry (Group) Co.,Ltd.  
Heilongjiang Yinquan Paper Industry Co., Ltd.  
Huisheng Group Pingyuan Paper Industry Co., Ltd.  
Jiangmen Xinghui Paper Industry Co., Ltd.  
Jintan Xinghui Paper Industry Co., Ltd.  
Longkou Yulong Papermaking Co., Ltd.  
Shandong Guanghua Industry Co.,Ltd.  
Shandong Guihe Xianxing Paper Industry Co., Ltd. Machine 1#  
Shandong Tianhe Paper Industry Co., Ltd. Machine 8# Reform  
Liaoning Xingdong Paper Industry Co., Ltd.  
Weifang Youyi Paper Industry Co., Ltd.  
Henan Hengfeng Paper Industry Co., Ltd.  
Henan Xinxiang Hongda Paper Industry Co., Ltd.  
Jiangxi Yufeng Paper Industry Co., Ltd. PICS system  
Hebei Zhangshi Paper Industry Co., Ltd.  
Shandong Jincailun Paper Industry Co., Ltd.  
Quanlin Environmental Protection Paper Industry Co., Ltd.  
Shouguang City Hongfa Paper Industry Co., Ltd. (Transmission)  
Shandong Tianhe Paper Industry Co., Ltd. (Transmission)  
Shandong Zibo Oumu Special Type Paper Industry Co., Ltd.  
Yunnan Lincang Nanhua Paper Industry Co., Ltd.  
Anhui Xiaoxian Linping Paper Industry Co., Ltd.  
Hunan Yuanjiang Jintaiyang Paper Industry Co., Ltd.

All photographs in this catalog are taken on actual location. No organization or person is allowed to reprint or modify them without prior permission. The products and their description in this catalog are subject to upgrade with the renovation of the products. Please refer constantly to RENLE' s official website: [www.renle.com](http://www.renle.com). Shanghai RENLE Science & Technology Co, Ltd reserves the right of final interpretation.



**雷诺尔**

Shanghai RENLE  
Science&Technology Co., Ltd.

Shanghai RENLE Science & Technology Co., Ltd  
No.3988 Chengbei Road, Jiading District, Shanghai,201807, P. R. China  
Tel: +86-21-3953 8058, 5996 6666  
Fax: +86-21-3953 8129  
E-mail: [info@renle.eu](mailto:info@renle.eu)

RENLE Europe GmbH  
Maxstrasse 23  
22081 Hamburg, Germany  
Fon: 0049-40 - 25 08 41 5  
Fax: 0049-40 - 50 09 70 43

<http://www.renle.com>    <http://www.renle.eu>  
National toll free service hotline: +86 800-8200-785  
Edition A, 2019



WeChat Public Service Account