

# H1 series Compact Inverter

Customize the new future



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## ABOUT US

Zhejiang New Folinn Electric Co., Ltd, also called Folinn for short, was founded in 1994. Located at Wenling, the youngest costal city in China, and well-known manufacturing base in Yangtze River Delta.

We are specialized in manufacturing inverter, our market share has been in the forefront of the industry, is well-known inverter manufacture who engaged in the development, manufacturing and marketing of industrial automation control products in China.

We have 270 patented technologies and 21 software copyrights. The total building area of our factory is 35,000 square meters. And we have established three R&D centers in Taizhou, Hangzhou and Germany, sales network and after-sales service agencies have been throughout the main provinces and autonomous regions, exported to Europe and the United States, southeast Asia, the Middle East and other countries.

Folinn always adheres to the service concept of quality and customer first. Depends on the advantages of technology research and marketing channels, Folinn more actively expands its product line, and improves the core competitiveness in the market continuously, and provides high-quality electrical products and personalized solutions for electric power, new energy, machinery manufacturing and other fields.

Driving Follow Heart, Winning The Future!

## CONTENTS

Appearance Introduction	05
Panel Introduction and Technical Specifications	06
Product Features	08
Application	15
Wiring	16
Size and Model	17



# APPEARANCE INTRODUCTION

## Compact & Flexible

### H1 Series Compact Inverter

Based on the industrial application demand of high stability, small size and easy debugging,

Folinn has developed a new generation of compact inverter.

Support industry customization, widely used in woodworking machinery, fans and water pump, food filling, ceramic machinery, textile machinery and other equipment





# PRODUCT APPEARANCE INTRODUCTION

Compact design, Customized interface



**Easy detachable fan design**  
easy to replace, easy to clean, long life

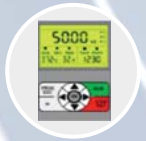


**Function Card**  
Press to remove it easily and can replace it with customized function card

**⚠ Plug and unplug with power is strictly prohibited**



**Abundant display**  
LED keypad, LCD keypad



**External operation panel**  
parameter copy, fault diagnosis, operation optimization, cloud connection



**Independent air duct**  
Reliable heat dissipation high protection level



**Customized terminal**  
Customization cost rationalization according to industry characteristics and customer demands



**European terminal**  
no need special tools, easy connection, save time

# PANEL INTRODUCTION



## TECHNICAL SPECIFICATIONS

	Item	Description
Input	Rated voltage, frequency	three phase: 380V~440V,50Hz/60Hz; single phase: 200V~240V,50Hz/60Hz
	voltage operating range	three phase: 320V~460V; single phase: 180V~260V Voltage unbalance rate:<3%; frequency:±5%
Output	voltage	0-rated input voltage
	frequency	0Hz~1000Hz
	overload capacity	150% rated current 60s, 180% rated current 2s
main control performance	control mode	V/F;Sensorless vector control (SVC)
	modulation mode	Space vector PWM modulation
	motor type	asynchronous motor, synchronous motor, single motor (Please consult the manufacturer when using)
	start torque	0.5Hz/150% rated torque
	speed adjusting range	1:100(speed sensorless)
	frequency accuracy	digital setting: max. frequency ±0.01%; analog setting: max. frequency ±1%
	frequency resolution	digital setting: 0.1Hz; analog setting: max. frequency 1%
	acceleration and deceleration curve	line/S-curve
	current limiting	Automatic current limitation during operation to prevent frequent over current fault tripping
	instant power down	Support instant stop non-stop,automatic frequency reduction
operation function	command source	keypad, terminal, communication
	setting value source	digital, analog, multi-step speed, communication
	PID	support main setting+PID
protection function	over current, over voltage, under voltage, over heat, over load, phase loss, earth leakage, output short circuit protection, etc	
	communication	MODBUS RTU
Operation panel	digital tube display	output frequency, output current, output voltage, bus voltage, displayed value 1, displayed value 2, current alarm, current fault
	external keypad	support
Environment	applicable place	indoor, no direct sunlight, no dust, corrosive gas, combustible gas, oil mist, water vapor, water drop or salt, etc
	altitude	derating use if above 1000m, derating 10% for every 1000m increase.
	environment temperature	-10℃~+40℃ (derating use if environment temperature is 40℃~50℃)
	humidity	5%~95% RH, non-condensation
	store temperature	-40℃~+70℃
vibration	less than 5.9m/s <sup>2</sup> (0.6g)	

## EXCELLENT PERFORMANCE

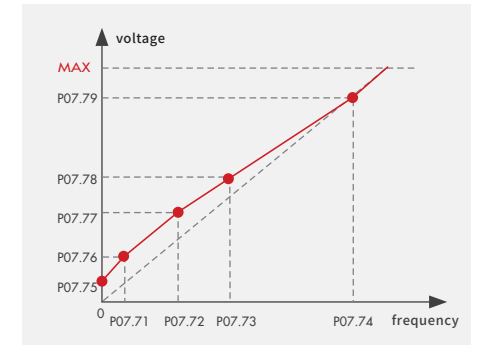
### Compatibility drive:

Applicable to asynchronous motor, synchronous motor and single motor



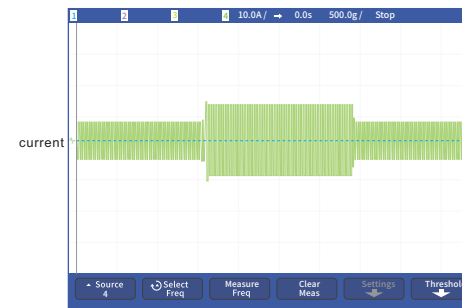
### Adaptive vector control

Vector performance, VF convenience. The motor parameters are not sensitive and do not need self-learning.



### Wide range vector control

Frequency range 0-1000Hz, applicable to more motors, and ensures high performance when running with high speed



### High carrier frequency

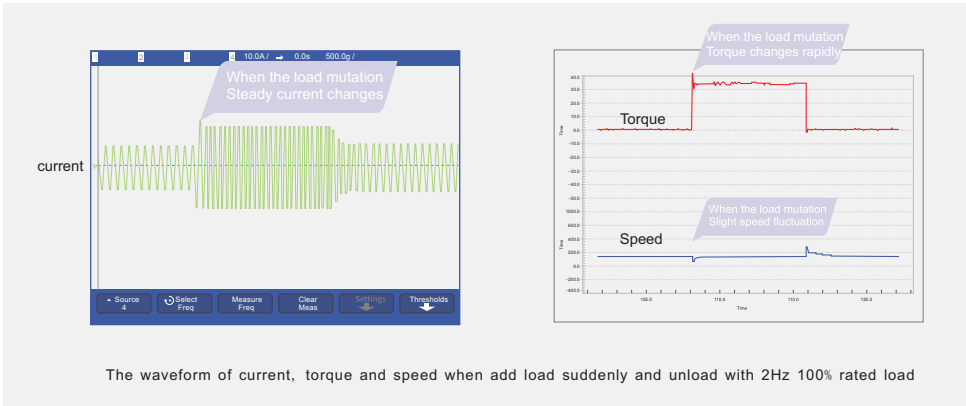
Max. 16 kHz, motor can work more quietly.



# POWERFUL FUNCTION

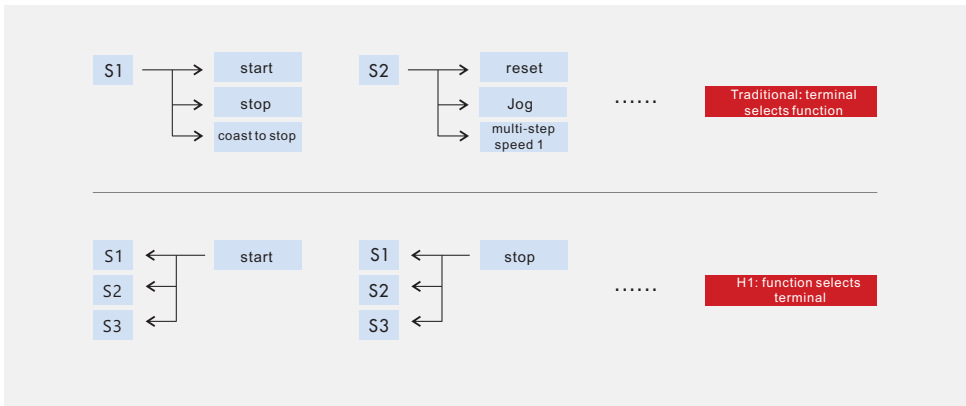
## Fast current control

High dynamic response speed (15ms), fast start-up speed, small speed fluctuation.



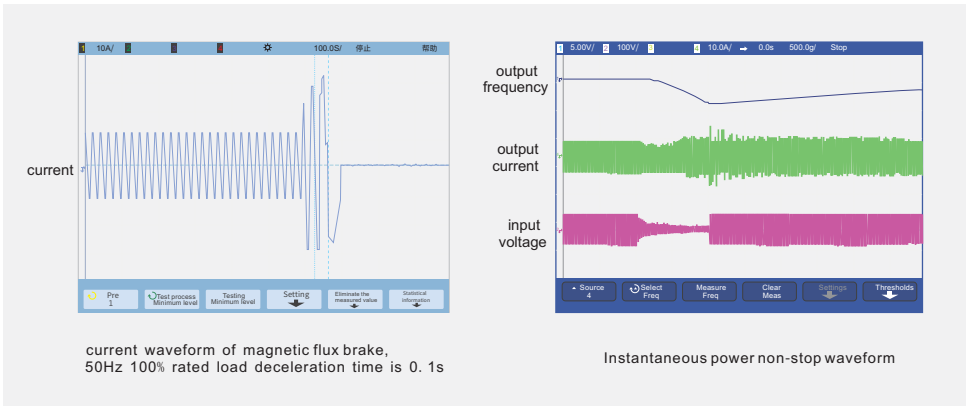
## Easy to operate:

Select terminal source according to the required function, saving the number and type of terminal



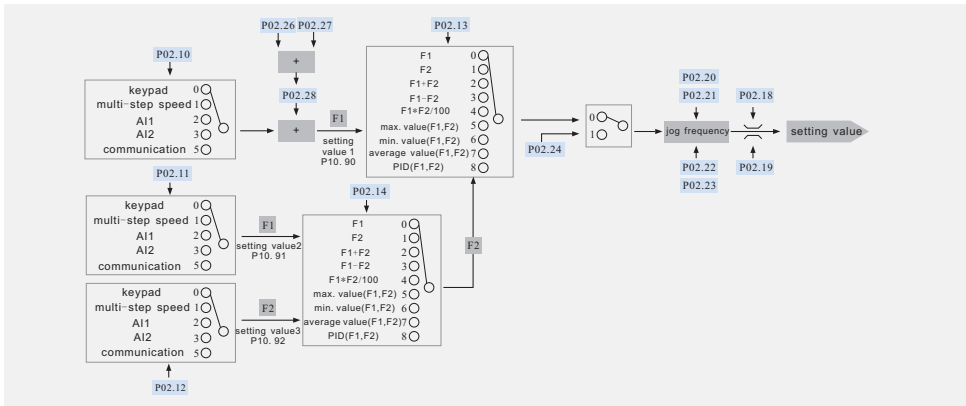
## Bus voltage control:

Over-voltage control ensures deceleration at the fastest speed, magnetic flux braking realizes rapid deceleration when there is no braking resistor, and under-voltage control realizes non-stop function when instantaneous power-off.



## Flexible function:

Flexible combination of setting values and commands, easily adapt to different applications



### Abundant extended functions:

Provide various key-pad, communication, encoder, IO interface and other extension cards.

External operation panel type



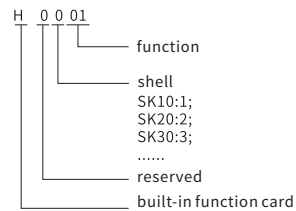
OP-H102



OP-H101

### Selection table

Physical characteristics	Function Card								
	H0100	H0101	H0110	To be continue	H0200	H0201	To be continue	H0300	To be continue
Digital input	2	4	5	.....	10	10	.....	.....	.....
Digital output				.....			.....	.....	.....
Relay output	1	1	2	.....	3	3	.....	.....	.....
Analog input	1	1	1	.....	2	2	.....	.....	.....
Analog output			2	.....	2	2	.....	.....	.....
Pulse input				.....			.....	.....	.....
Pulse output				.....			.....	.....	.....
Encoder input				.....			.....	.....	.....
MODBUS	1	1	1	.....	1	1	.....	.....	.....
STO				.....	1		.....	.....	.....



card name	shell model	appearance
H0100	SK10	
H0101	SK10	
H0110	SK10	
H0200	SK20	
H0201		
H0300	SK30	

#### Remarks:

1. The built-in function card with STO function must be equipped with inverter of STO circuit. For example: H0200 built-in function card is equipped with H100T40040BTO inverter (the second T represents built-in STO circuit).

2. If you need other types and quantity of terminals, contact our company for mass customization.

### Application customization:

Complex application functions can be realized by programming, and customized function call can be realized by application macro

P01.63=0

P01.66=490

P01.67=5

P01.68=1090

P02.03=1

P02.04=1

P02.11=2

⋮

One-click setting →

P01.20=86

### Maintenance tools :

PC upper computer, mobile app and other tools provide perfect monitoring, configuration, optimization and diagnosis services



# SOLID HARDWARE

## Independent air duct:

No forced wind flows through the components, improving environmental adaptability.



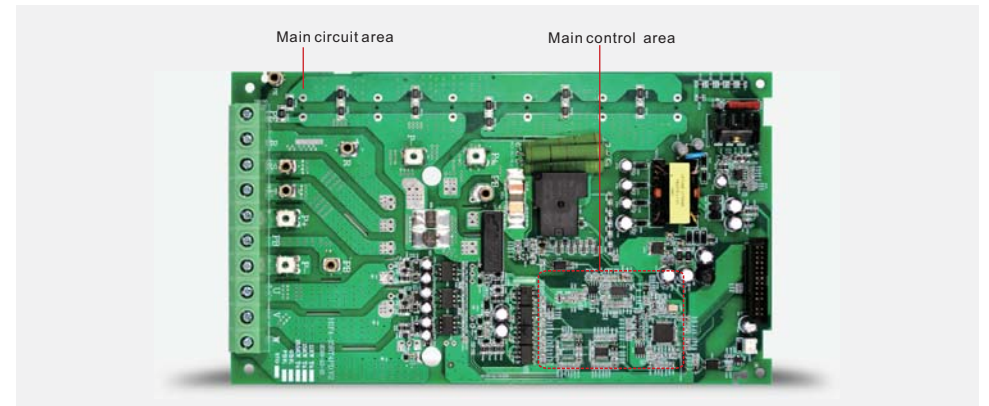
## Fast and tight protection:

Short circuit fault, input / output phase loss, overload, leakage, etc., fully protect the inverter and motor.



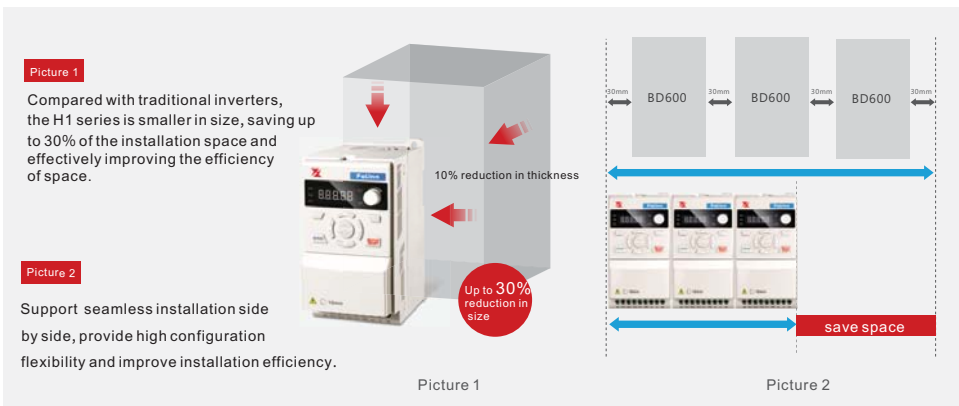
## Integrated design:

Reduce the number of boards and flying wires, eliminate potential fault points with the greatest extent, and maximize performance the electrical and EMC with high-efficient.



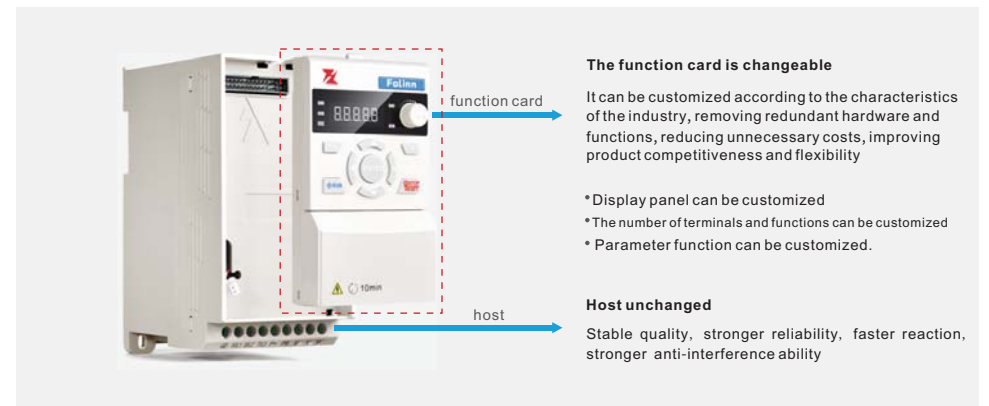
## Delicate heat dissipation design:

Compact size and easy installation.



## Customization:

According to industry customization, remove redundant functions, cost is more reasonable, and quality is more stable.

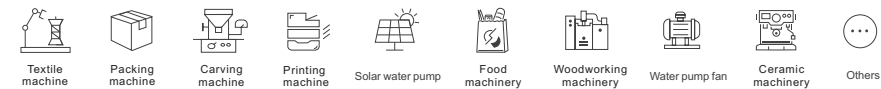




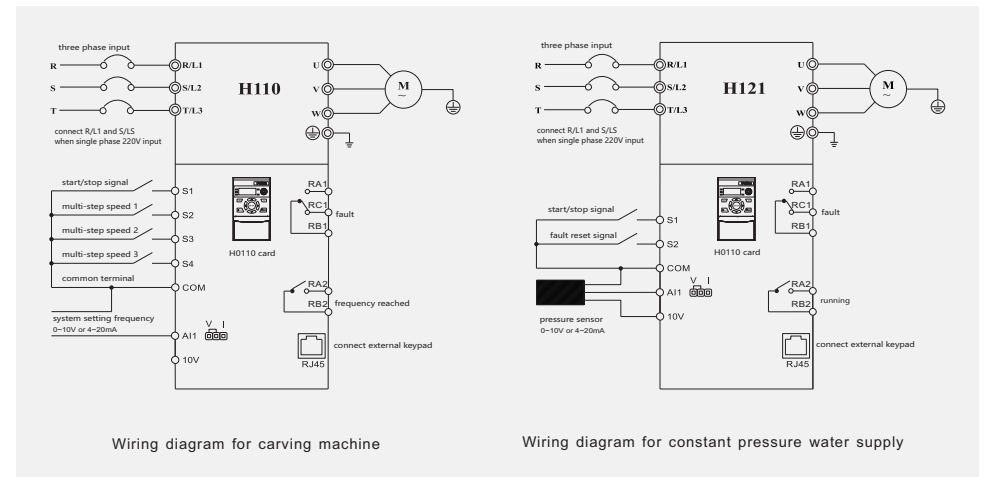
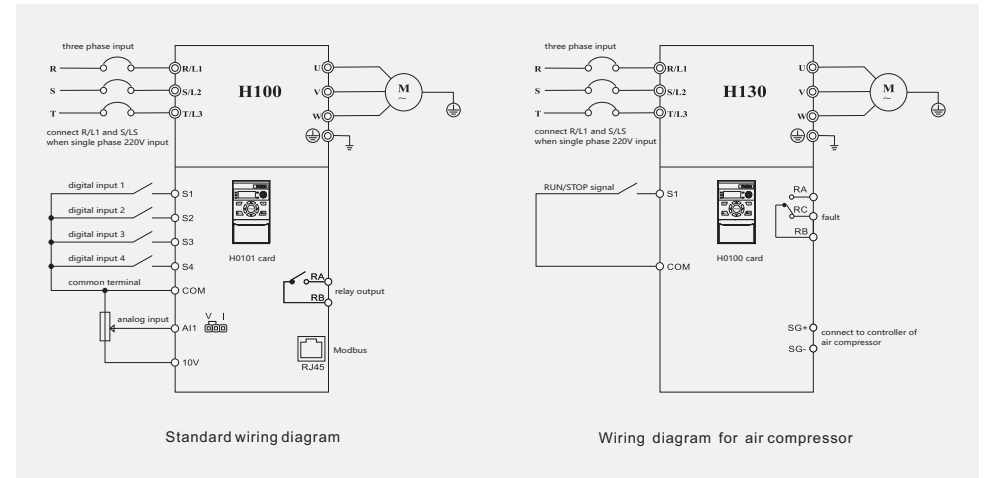


## SOME APPLICATIONS

Folinn H1 series inverter is widely used in textile machine, packing machine, carving machine, printing machine, solar water pump, food machinery, woodworking machinery, water pump fan and ceramic machinery, providing better solutions



## CONNECTION MODE



## NOMENCLATURE AND DIMENSIONS



**H1 00 S2 0007 B T 0**

Customised product model  
 00: general  
 10: carving machine  
 21: pump & fan  
 25: solar pump  
 30: air compressor

S/T: 1PH/3PH  
 2/4: 220/380V

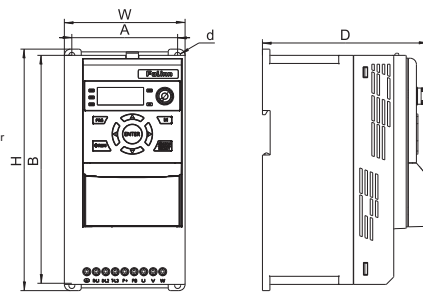
Power: kW  
 Top three: before decimal point  
 One decimal place: after decimal point  
 For example: 0007: 0.75kW

0: no built-in reactor  
 1: built-in DC reactor  
 2: built-in AC reactor  
 3: built-in AC&DC reactor

T: Built-in STO circuit  
 X: Without STO circuit

B: Built-in brake unit  
 X: Without brake unit

Product model (H1 Series)



## INSTALLATION DIMENSIONS

Frame No.	Dimensions(mm)					
	W(Width)	H(Height)	D(Depth)	A	B	d
F1	85	170	124	67.3	158	5
F2	97	194	133	85	184	5
F3	126	237	147	112	223	5
F4	168	298	160	154	283	6
F5	198	355	177	183	338	6
F6	250	400	208	230	380	6

## Models and specifications

Frame No.	Models	Input voltage	Input current(A)	Power(kW)	Output current(A)	Adaptive motor(kW)
F1	<b>H100S20007BX0</b>	1PH 220V	<b>8.2</b>	<b>0.75</b>	<b>5.0</b>	<b>0.75</b>
	<b>H100S20015BX0</b>	1PH 220V	<b>14.0</b>	<b>1.5</b>	<b>7.0</b>	<b>1.5</b>
F2	<b>H100T20022BX0</b>	1PH 220V	<b>23.0</b>	<b>2.2</b>	<b>12.5</b>	<b>2.2</b>
		3PH 220V	<b>13.5</b>			
F3	<b>H100T20037BX0</b>	1PH 220V	<b>38.6</b>	<b>3.7</b>	<b>15.2</b>	<b>3.7</b>
		3PH 220V	<b>16.5</b>			
F4	<b>H100T20055BX0</b>	3PH 380V	<b>24</b>	<b>5.5</b>	<b>23</b>	<b>5.5</b>
		3PH 380V	<b>37</b>			
F1	<b>H100T20110BX0</b>	3PH 380V	<b>52</b>	<b>11</b>	<b>45</b>	<b>11</b>
		3PH 380V	<b>4.0</b>			
F2	<b>H100T40007BX0</b>	3PH 380V	<b>5.8</b>	<b>1.5</b>	<b>4.5</b>	<b>1.5</b>
		3PH 380V	<b>6.5</b>			
F3	<b>H100T40022BX0</b>	3PH 380V	<b>12.6</b>	<b>4.0</b>	<b>10.5</b>	<b>4.0</b>
		3PH 380V	<b>16</b>			
F4	<b>H100T40055BX0</b>	3PH 380V	<b>21</b>	<b>7.5</b>	<b>19</b>	<b>7.5</b>
		3PH 380V	<b>28</b>			
F5	<b>H100T40110BX0</b>	3PH 380V	<b>28</b>	<b>11</b>	<b>26</b>	<b>11</b>
		3PH 380V	<b>36</b>			
F6	<b>H100T40150BX0</b>	3PH 380V	<b>36</b>	<b>15</b>	<b>33</b>	<b>15</b>
		3PH 380V	<b>42</b>			
F1	<b>H100T40185BX0</b>	3PH 380V	<b>42</b>	<b>18.5</b>	<b>40</b>	<b>18.5</b>
		3PH 380V	<b>48</b>			
F2	<b>H100T40220BX0</b>	3PH 380V	<b>48</b>	<b>22</b>	<b>46</b>	<b>22</b>
		3PH 380V	<b>62</b>			
F3	<b>H100T40300BX0</b>	3PH 380V	<b>62</b>	<b>30</b>	<b>58</b>	<b>30</b>
		3PH 380V	<b>76</b>			
F4	<b>H100T40370BX0</b>	3PH 380V	<b>76</b>	<b>37</b>	<b>75</b>	<b>37</b>
		3PH 380V	<b>76</b>			