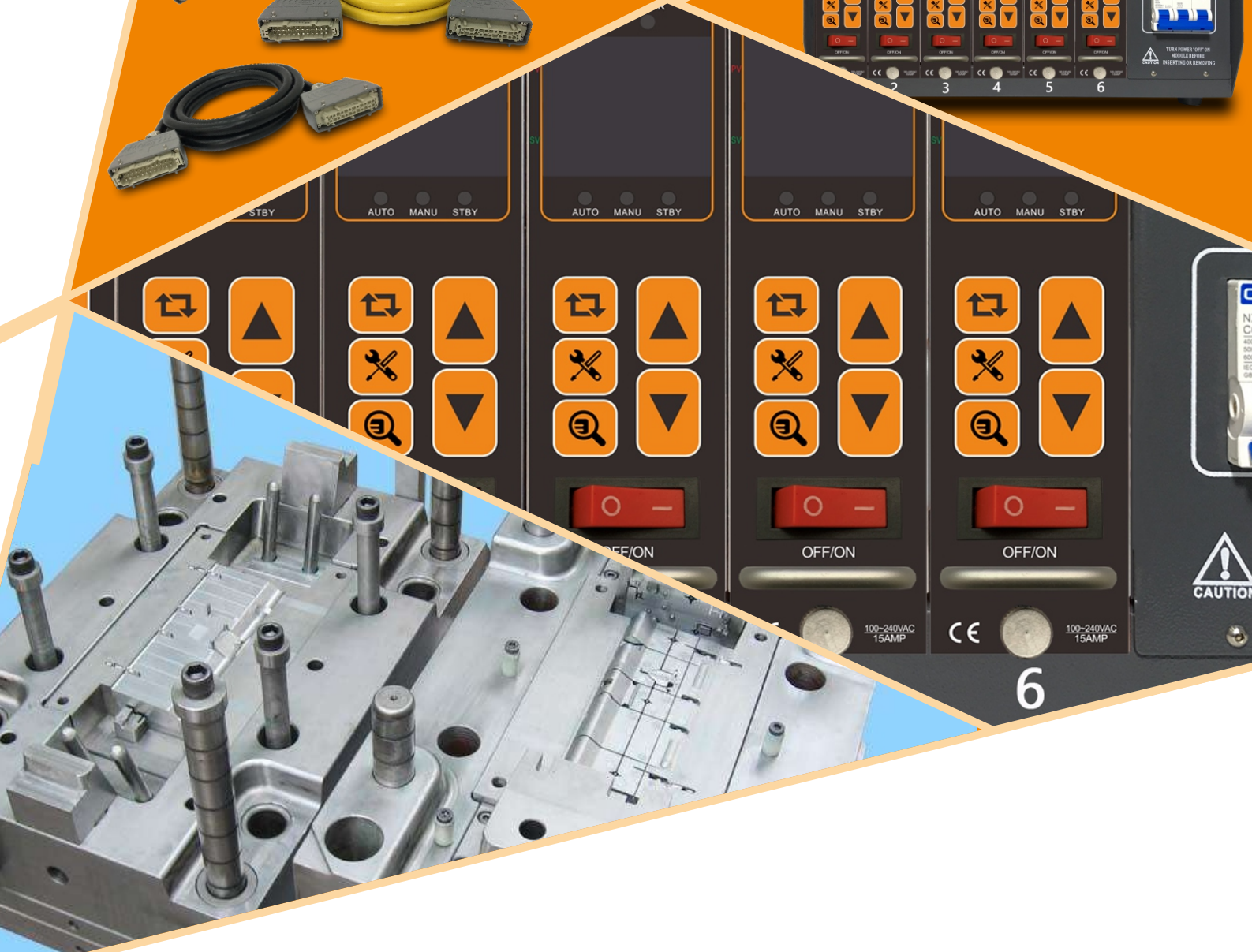




2020 DESIGNED IN DRDER
BEAUTYCHEN INORDER



Multi-Functional, Compatible,

International Standard Hot Runner Temperature Controller



HY01 Model is the intelligent hot runner controller which professional used for international market demand. International standard of TP01&02 makes the model compatible with the DME, YUDO, HUSKY standard hot runner controller. Strong protective function and precision temperature control algorithm realize the challenge of price and quality balance.

Multi-channel control and convenient operation

1, 2, 4, 6, 8, 12, 16, 24 and 36 channels (zones) is the standard cabinet of **TP-01**, it could support 1-36 zones hot runner controller for our customer. The biggest advantages is flexible and convenient operation. It could remove, add or replace the module by customer demand. The free-tool design make the operation and maintenance be more faster and convenient.

Comprehensive Error Diagnosis Function

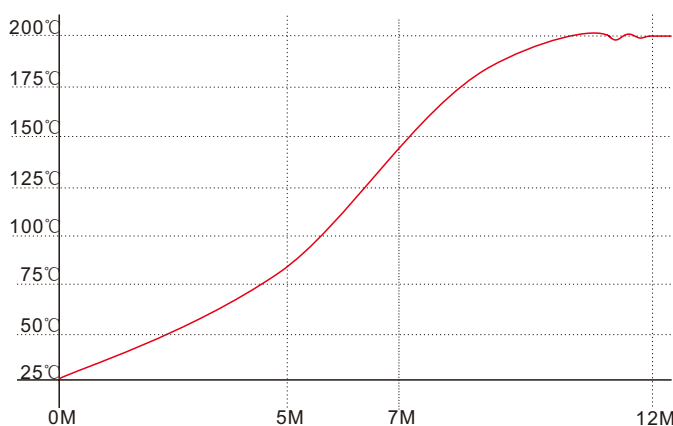
The comprehensive output information display and error alarm code could help clients to found the problem easily and reduce the diagnostic time.

Fault Descriptor	Fault Reasons
T/C OPEN	Not connect T/C or T/C
T/C +/- Revised	Wrong connection of T/C +/-
T/C Short	T/C input wire short or T/C loosen
Wrong connection of T/C and heater	T/C contact to Heater position
Heater Open	Un connected heater or heater damaged
Heater short	Heater short or damaged
Triac short	Heater leakage current or card damaged
FUSE 1 Damaged	Fuse 1 damaged or other
FUSE 2 Damaged	Fuse 2 damaged or other
Test loop break	Card is damaged
Over output current	Over load current
Card over heated	inefficient cooling system

All the hot runner controller of Topower choose **FUZZY PIDD** control technical, it could suit for any heating model automatically without any tuning parameter and improve the work efficiency.

- (1) Sensing--10 times sampling frequency per second, the hot runner controller could test thermocouple precisely.
- (2) Controlling- If the temperature deviation over 0.5°C of setting temperature, FUZZY PIDD algorithm would adjust automatically. The PID2 second derivative could monitor the changing rate of real temperature, it could limit or remove the redundant or insufficient by adjusting the heating output.
- (3) Start-up---Choosing phase start-up output, it could reach final limitation via linear, precise output proportion of each heater.

Heating Curve Diagram



Notice: The heating curve testing parameter is heating power is 300W, setting temperature is 200°C and other default function parameter.

Supply Voltage Display And Supply Power Error Protection

Input power indicator would display the current power once the controller is opened. The user could decide whether switch on the module or not by the display voltage. If the control voltage over rate power range, the temperature controller would self-checking once the user switch on the module and light the alarm indicator to remind the user and avoid the loss caused by supply power error.

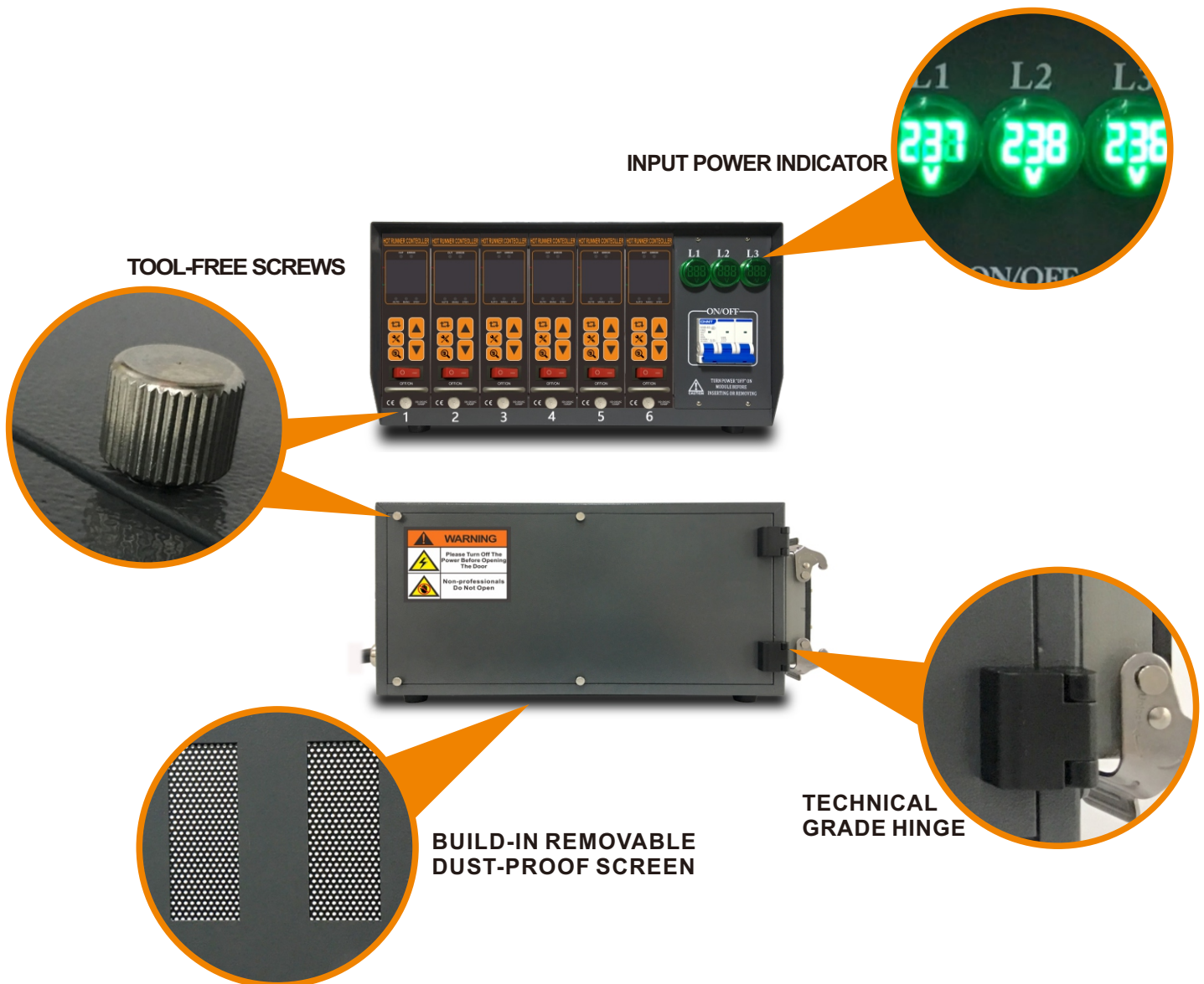
Soft-start Function

The hot runner controller would check the heater short situation and make the power rise steadily to reach the setting temperature. If the heater is wet or short, it would adjust the output to protect the heater, cable and controller.

1 Year Warranty

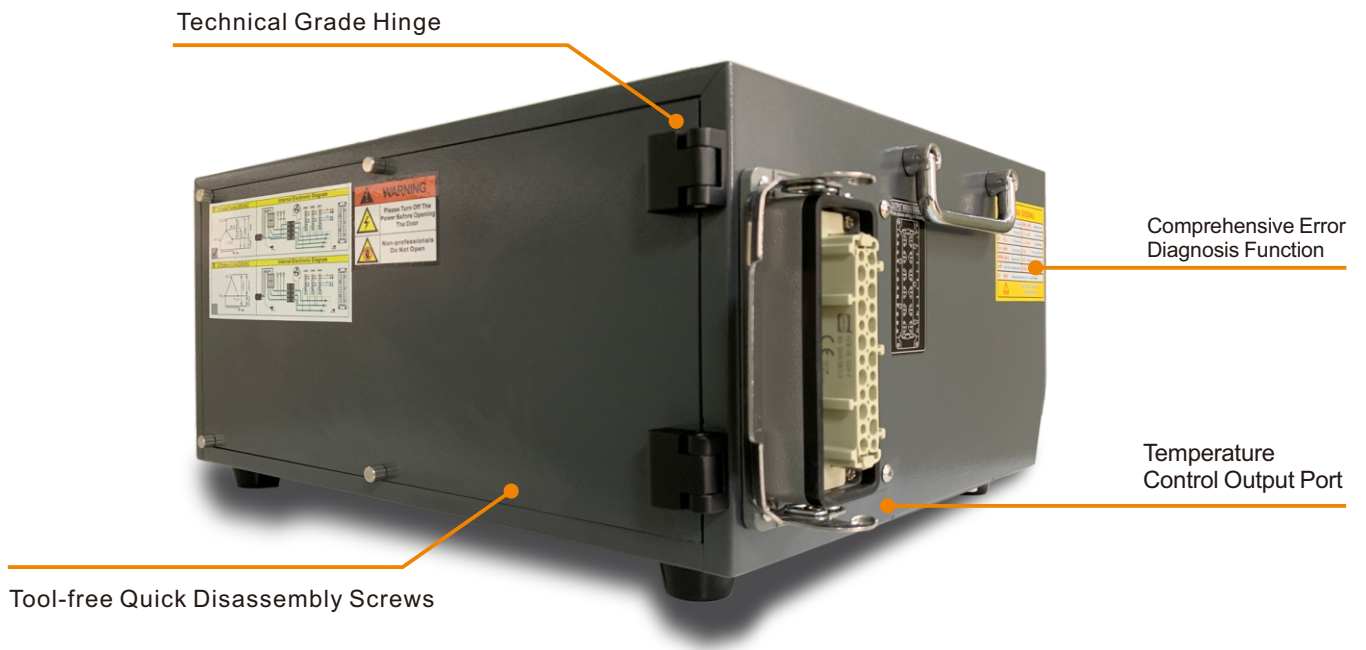
Each Topower temperature controller support 1 year warranty period (without man-made damage), lifetime cost maintenance (over 1 year) and technical support to solve the user's after-sales worries.

Product **HY01** Instruction



- **Input Power Indicator:**
Display the current input power to avoid the error input damage;
- **Tool-free Quick Disassembly Screws:**
SUS304 material screws , not need tool to assemble it.
- **Technical Grade Hinge Design:**
Humanize design to convenient service.
- **Build-in Removable Dust-proof Screen:**
Good radiating to prolong the service life.
- **Senior Protective Device:**
It could add the senior protective device in output part and avoid the loss of load error.(Optional)

HY01 Hot Runner Controller Operation Panel Introduction



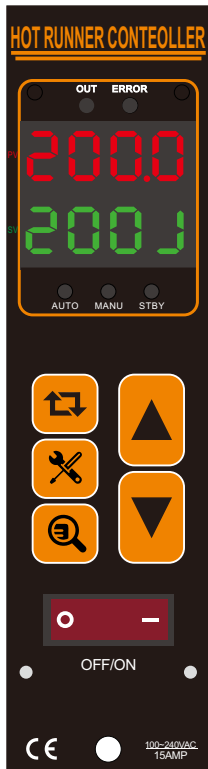
HY01 SERIES DETAIL DESCRIPTION
















Product Features Introduction:

- **Adapter FUZZY PID Control Technical**
- **Automatic Ambient Temp Linear Compensation**
- **Electric Current And Output Ratio Display**
- **Auto/Manual Work Mode**
- **Standby Insulation Function**
- **Overload Protect Function**
- **Thermocouple Fault Detection**
- **Heater Fault Detection**
- **SCR Temp Detection**
- **SCR Fault Detection**
- **Max Current Limitation**
- **Overload Protect Function**
- **Softstart Time&Output Percentage Adjust**
- **Supply Power Frequency Monitor**
- **Industrial Grade Electronic Components**
- **Inner Temperature Detection**
- **Input Power Indicator To Detect Present Power Situation**
- **Tool-free Quick Disassembly Design To Maintain**
- **Build-in Removable Dust-proof Screen To Keep Good Radiating**
- **Custom-made Service For Zones Quantity , Connection Way etc.**

HY01 HOT RUNNER CONTROL MODULE OPERATION PANEL



-  PV Display Testing Value
-  SV Display Setting Value
-  Up Key
-  Down Key
-  Normal Mode Indicator
-  Standby Indicator
-  Manual Mode Indicator
-  Mode Selection Key
-  Heating Indicator
-  Alarm Indicator
-  Display Key to Check Parameters
-  Setup Key For Select Function
-  Power ON/OFF

Basic Parameter Specification

- 01、Temp Control Precision: +/- 1%
- 02、Repeat Temp Control Precision: +/- 0.1%
- 03、Temp Control Stable Precision: +/- 1%
- 04、System Grounding Insulation Voltage:1200VDC
- 05、T/C Cold Junction Compensation: $\leq +1^{\circ}\text{C}$ Temp Coefficient
- 06、Sampling Frequency: 10HZ(100ms)
- 07、Temp Control Range: K Type 0-450 $^{\circ}\text{C}$, J Type 0-450 $^{\circ}\text{C}$
- 08、1 Point Load:3600W/15A
- 09、Alarm Range: 0-100 $^{\circ}\text{C}$ Free Setting
- 10、Thermocouple Type : J type or K type
- 11、Temp Unit: $^{\circ}\text{C}/^{\circ}\text{F}$
- 12、Temp Control Card Work Power: 100-240 VAC
- 13、Work Power And Max Input Power : 380V(Three Phase Five Wires)
& 220VAC (Three Phase Four Wires)
- 14、Control Mode: PID /PIDD Digital Control
- 15、Ambient Temp : -10 $^{\circ}\text{C}$ -60 $^{\circ}\text{C}$,Relative Humidity 35%-85%RH,
Non-corrosive, No Strong Electromagnetic Radiation
Occasion

BASIC SPECIFICATION



Property

- Temp Control Precision : +/- 1%
- Repeat Temp Control Precision: +/- 0.1%
- Temp Control Stable Precision : +/- 1%
- T/C Cold Junction Compensation: $\leq +1^{\circ}\text{C}$ Temp Coefficient
- K Type 45-450°C, J Type 45-450°C
- Thermocouple Type : J type or K type
- Temp Unit: °C/°F
- Control Mode: PID /PIDD Digital Control
- Sampling Frequency: 10HZ(100ms)
- Thermocouple End Compensation: Dynamic Tracking
- Work Mode: Auto/ Manual/Standby

Electric

- Input Power: Three Phases Five Wires(380VAC)/ Three Phases Four Wires(220VAC)
- Temperature Control Module Work Power: 100-240VAC
- Frequency: 50-60HZ
- Single Zone Output Power: 3600Max(240VAC)
- Single Zone Output Current: 15A MAX(240VAC)

Application Ambient

- Relative Humidity: 10%-90%RH, Non-corrosive, No Strong Electromagnetic Radiation Occasion
- Ambient Temperature: 0-55°C
- Transport And Save Ambient Temperature Range: -40-70°C

Connection

- Cable Standard Plug: Metal PG Or M Metric
- Connector Type: HE-006\HE-010\HE-016\HE-024\H-048\DME Standard
- Cable Type: Standard Cable/ J Type Temp Compensation Cable/Outer Covering Cable
- Connection Cable Length: 4mt
- Custom-made Service

Standard

- Certification: CE

Specification, Dimension And Weight



Zones/Channels	Height (mm)	Width (mm)	Depth (mm)	Weight (kg)
1 ZONE	220	52	330	5
2 ZONE	220	170	330	7
4 ZONE	220	320	330	14.5
6 ZONE	220	420	330	18
8 ZONE	220	520	330	21
12 ZONE	220	720	330	23.5

* Weight include the max output module, without cable. These parameters only for reference.

STANDARD CONFIGURATION

Accessories: Hoot Runner Control Main Frame, HY01 Module, Input&Output Cable(The length and type could be custom-made.)

1 Zones (15A)ModelHY-2P-15A



Main Frame*1(Include 4.0M Power Input Cable)
Control Module*1



4.0Mt 5PIN Connection Cable

2 Zones (15A)ModelHY-2P-15A



Main Frame*1(Include 4.0M Power Input Cable)
Control Module*2



4.0Mt 10/16/24PIN Connection Cable

4 Zones (15A)Model TP-01-2P-15A&TP02-2P-15A



Main Frame*1(Include 4.0M Power Input Cable)
Control Module*4



4.0Mt 10/16/24PIN Connection Cable

6 Zones (15A)Model TP-01-2P-15A&TP02-2P-15A



Main Frame*1(Include 4.0M Power Input Cable)
Control Module*6



4.0Mt 16/24PIN Connection Cable

8 Zones (15A)Model TP-01-2P-15A&TP02-2P-15A



Main Frame*1(Include 4.0M Power Input Cable)
Control Module*8



4.0Mt 16/24PIN Connection Cable

12 Zones (15A)Model TP-01-2P-15A&TP02-2P-15A



Main Frame*1(Include 4.0M Power Input Cable)
Control Module*12

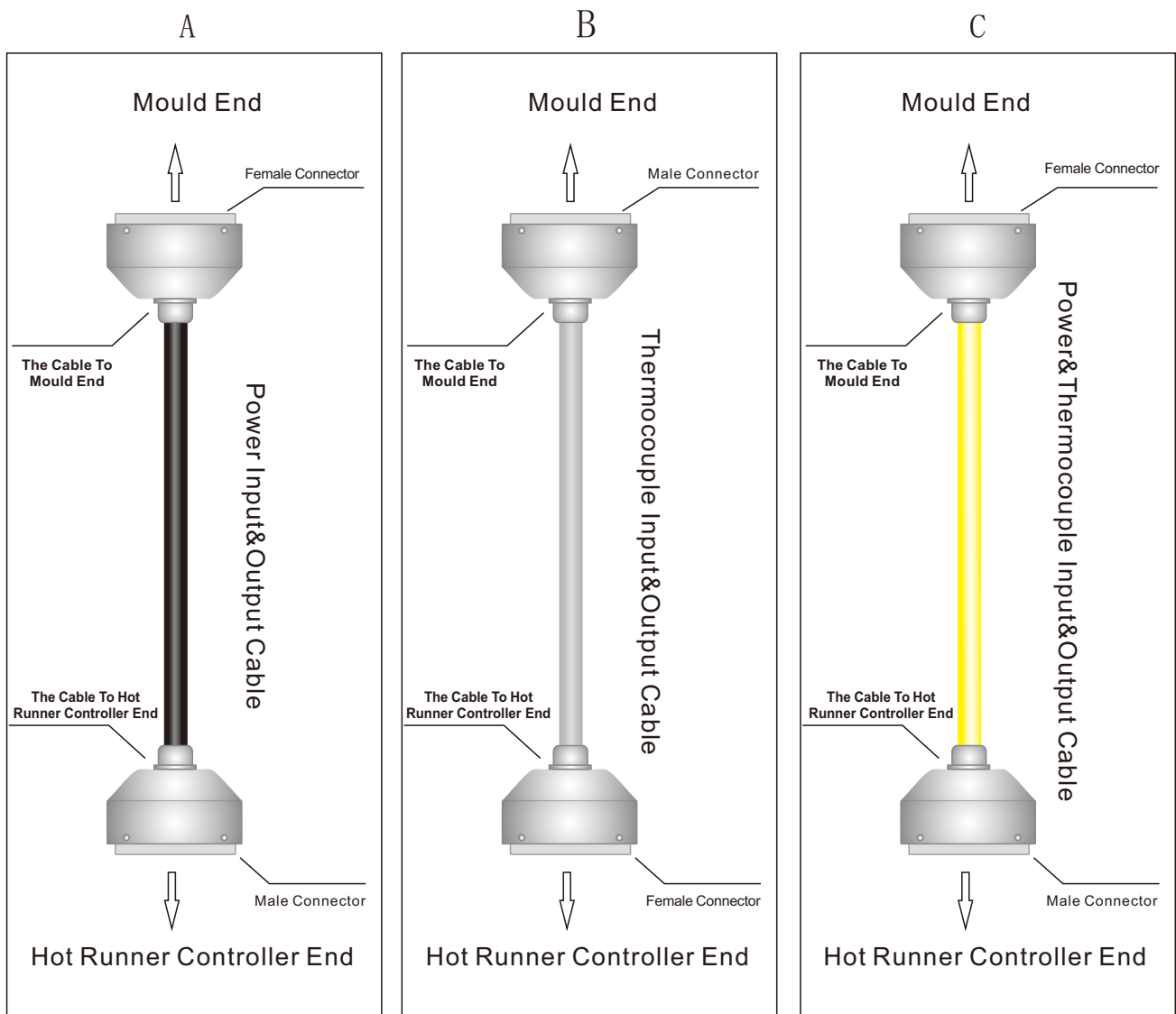


4.0Mt 24PIN Connection Cable

A. The cable is standard power cable which could be used individually. There is no thermocouple wire inner the cable, the temperature sign would be reduced during the transmission process if the cable is used as thermocouple cable.

B. The cable is thermocouple cable(J Type) which could not be used individually, it should be used with A Type cable, this cable only could be used for transporting temperature sign.

C. The cable is power&thermocouple compensation cable, it has both A&B type cable's advantage which could be used individually.



Notice: Please confirm the cable type, connection way before installing to avoid the damage for the connection error.

