International Temperature Control, Inc.

Hot Runner Mold Temperature Control System & Accessories

VISIONS 3000 Computerized Systems

INDEX
VISIONS 3000 Rev. 2.52 HOT RUNNER CONTROL SYSTEM CONFIGURATION & ACCESSORIES

- Industry leading Rugged Industrial Design
- Easy to Operate
- Large 12” Touchscreen Safety Glass Protected
- Designed for Ease of Maintenance and Support
- Low Center of Gravity
- Energy Efficient Operation
- Cables & Connectors to Customers Specifications
- Full Diagnostics
- Tool Pre-production Validation
- Supplied in any configuration of high or low current zones
- Mold WaterFlo Option
- 24 month limited warranty

International Temperature Control, Inc.

Hot Runner Mold Temperature Control System & Accessories

VISIONS 3000 Computerized Systems

VISIONS 3000 HOT RUNNER TEMPERATURE CONTROL SYSTEMS

(VCS-16) 1 to 16 Zone Hot Runner Mold Temperature Control System

System Input Voltage:	240v AC, 4-wire (3 AC Power & 1 Ground)
System Input Frequency:	50 - 60 Hz
System Input Power Phase:	3-Phase
Heater Voltage:	240v AC
Heater Power Phase:	Single
Maximum Amps per Zone:	15 amp std. 30 amp optional
System Breaker:	70 Amps w/door interlock std. (higher amperages breakers available)
Total System Amps @ 240v:	121.2 (higher system amperages available)
Total System Watts @ 240v:	29,097 (higher system wattage available)
Number of Zones:	1 to 16 Zones (depending on system requirements)
Construction:	Heavy duty steel construction with low center of gravity for greater stability Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance. Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord. Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch Qty. (4) Swivel Casters
Dimensions:	49" High, 24" Wide, 18" Deep (1244 x 609 x 457mm)
Weight:	180 pounds approx. Depending on number of zones. Cables not included
Standard Features:	Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected Thermocouple – Type "J" or "K" Grounded or Ungrounded Thermocouple over voltage protection on all inputs Thermocouple Isolation – Zero to Zero Ambient Operating Temperature – 32° to 104° F (0° to 40° C) Ambient Humidity – 0 to 95% RH, non-conducting Ambient Storage Humidity – -4° to 140° F (-20° to 60° C) System Power Isolation – Front Door mounted breaker with door interlock System Over Current Protection – Circuit Breaker rated in accordance with system specifications Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion Measurement Accuracy – +/- 1.0° F (0.5° C) for range of control: +/- 0.5% updated every 100ms Calibration – < 0.2% of full scale 32° to 932° degrees F (0° to 500° degrees C) Cold Junction Error – +/- 1° F @ 77° F (typical) Temperature Stability – +/- 1° F from ambient Control Stability – +/- 1 digit – under steady state conditions Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight Display Protection – LCD protected with toughened safety glass Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp
Optional Features:	Remote Touchscreen (Operator Interface) – 30 ft. long cable USB, Ethernet & Wi-Fi Communications 30 amp zones Real Time WaterFlo Monitoring & Alarms - Option Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable:	PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)
Mold Thermocouple Cable:	THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)
Mold Power Connector:	MPC-12 (Male)
Mold T/C Connector:	MTC-12 (Male)
Mold Junction Box:	MJB-12 or MJBW-12
Transformer Package:	TP-15, TP-30 or TP-45 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

International Temperature Control, Inc.

Hot Runner Mold Temperature Control System & Accessories

VISIONS 3000 Computerized Systems

(VCS-32) 17 to 32 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 70 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 121.2 (higher system amperages available)

Total System Watts @ 240v: 29,097 (higher system wattage available)

Number of Zones: 17 to 32 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.

Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 49" High, 24" Wide, 18" Deep (1244 x 609 x 457mm)

Weight: 180 pounds approx. Depending on number of zones. Cables not included

Standard Features:
Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type "J" or "K" Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32° to 104° F (0° to 40° C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4° to 140° F (-20° to 60° C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0° F (0.5° C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32° to 932° degrees F (0° to 500° degrees C)
Cold Junction Error – +/- 1° F @ 77° F (typical)
Temperature Stability – +/- 1° F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features:
Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms - Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-15, TP-30 or TP-45 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

International Temperature Control, Inc.

Hot Runner Mold Temperature Control System & Accessories

VISIONS 3000 Computerized Systems

(VCS-48) 33 to 48 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 100 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 173.2 (higher system amperages available)

Total System Watts @ 240v: 41,568 (higher system wattage available)

Number of Zones: 33 to 48 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.

Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 49" High, 24" Wide, 18" Deep (1244 x 609 x 457mm)

Weight: 200 pounds approx. Depending on number of zones. Cables not included

Standard Features: Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type "J" or "K" Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32^{o} to 104^{o} F (0^{o} to 40^{o} C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4^{o} to 140^{o} F (-20^{o} to 60^{o} C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0^{o} F (0.5^{o} C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32^{o} to 932^{o} degrees F (0^{o} to 500^{o} degrees C)
Cold Junction Error – +/- 1^{o} F @ 77^{o} F (typical)
Temperature Stability – +/- 1^{o} F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features: Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms - Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-15, TP-30 or TP-45 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

(VCS-64) 49 to 64 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 125 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 216.5 (higher system amperages available)

Total System Watts @ 240v: 51,960 (higher system wattage available)

Number of Zones: 49 to 64 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.

Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 49" High, 24" Wide, 18" Deep (1244 x 609 x 457mm)

Weight: 220 pounds approx. Depending on number of zones. Cables not included

Standard Features:
Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type "J" or "K" Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32° to 104° F (0° to 40° C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4° to 140° F (-20° to 60° C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0° F (0.5° C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32° to 932° degrees F (0° to 500° degrees C)
Cold Junction Error – +/- 1° F @ 77° F (typical)
Temperature Stability – +/- 1° F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features:
Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms – Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-30, TP-45 or TP-75 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

(VCS-80) 65 to 80 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 150 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 259.8 (higher system amperages available)

Total System Watts @ 240v: 62,352 (higher system wattage available)

Number of Zones: 65 to 80 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.

Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 55” High, 24” Wide, 18” Deep (1397 x 609 x 457mm)

Weight: 240 pounds approx. Depending on number of zones. Cables not included

Standard Features:
Operator Interface – Large 12” Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type “J” or “K” Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32° to 104° F (0° to 40° C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4° to 140° F (-20° to 60° C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0° F (0.5° C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32° to 932° degrees F (0° to 500° degrees C)
Cold Junction Error – +/- 1° F @ 77° F (typical)
Temperature Stability – +/- 1° F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12” LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features:
Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms – Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-30, TP-45 or TP-75 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

(VCS-96) 81 to 96 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 150 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 259.8 (higher system amperages available)

Total System Watts @ 240v: 62,352 (higher system wattage available)

Number of Zones: 81 to 96 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.

Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 61" High, 24" Wide, 18" Deep (1549 x 609 x 457mm)

Weight: 260 pounds approx. Depending on number of zones. Cables not included

Standard Features:
Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type "J" or "K" Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32^{o} to 104^{o} F (0^{o} to 40^{o} C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4^{o} to 140^{o} F (-20^{o} to 60^{o} C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0^{o} F (0.5^{o} C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32^{o} to 932^{o} degrees F (0^{o} to 500^{o} degrees C)
Cold Junction Error – +/- 1^{o} F @ 77^{o} F (typical)
Temperature Stability – +/- 1^{o} F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features:
Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms – Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-45 or TP-75 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

International Temperature Control, Inc.

Hot Runner Mold Temperature Control System & Accessories

VISIONS 3000 Computerized Systems

(VCS-112) 97 to 112 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 175 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 303.1 (higher system amperages available)

Total System Watts @ 240v: 72,744 (higher system wattage available)

Number of Zones: 97 to 112 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.
Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 67" High, 24" Wide, 24" Deep (1701 x 609 x 609mm)

Weight: 285 pounds approx. Depending on number of zones. Cables not included

Standard Features: Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type "J" or "K" Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32° to 104° F (0° to 40° C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4° to 140° F (-20° to 60° C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0° F (0.5° C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32° to 932° degrees F (0° to 500° degrees C)
Cold Junction Error – +/- 1° F @ 77° F (typical)
Temperature Stability – +/- 1° F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features: Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms – Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-45 or TP-75 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

International Temperature Control, Inc.

Hot Runner Mold Temperature Control System & Accessories

VISIONS 3000 Computerized Systems

(VCS-128) 113 to 128 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 175 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 303.1 (higher system amperages available)

Total System Watts @ 240v: 72,744 (higher system wattage available)

Number of Zones: 113 to 128 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.

Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 73 High, 24" Wide, 24" Deep (1854 x 609 x 609mm)

Weight: 310 pounds approx. Depending on number of zones. Cables not included

Standard Features:
Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type "J" or "K" Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32° to 104° F (0° to 40° C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4° to 140° F (-20° to 60° C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0° F (0.5° C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32° to 932° degrees F (0° to 500° degrees C)
Cold Junction Error – +/- 1° F @ 77° F (typical)
Temperature Stability – +/- 1° F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features:
Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms – Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-45 or TP-75 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

International Temperature Control, Inc.

Hot Runner Mold Temperature Control System & Accessories

VISIONS 3000 Computerized Systems

(VCS-144) 129 to 144 Zone Hot Runner Mold Temperature Control System

System Input Voltage: 240v AC, 4-wire (3 AC Power & 1 Ground)

System Input Frequency: 50 - 60 Hz

System Input Power Phase: 3-Phase

Heater Voltage: 240v AC

Heater Power Phase: Single

Maximum Amps per Zone: 15 amp std. 30 amp optional

System Breaker: 200 Amps w/door interlock std. (higher amperages breakers available)

Total System Amps @ 240v: 346.4 (higher system amperages available)

Total System Watts @ 240v: 83,136 (higher system wattage available)

Number of Zones: 113 to 128 Zones (depending on system requirements)

Construction: Heavy duty steel construction with low center of gravity for greater stability
Bottom Cabinet on casters with filtered cooling fans on back, hinged front door with clear panel for system LED observation, removable back panel for maintenance.
Top LCD Box with filtered cooling fan. Top box can be mounted remotely with optional 30ft. communication cord.

Qty. (as required) FCK-TC (25 pin) – Male – Thermocouple Connector with latch
Qty. (as required) FCK-PR (25 pin) – Female – Power Connector with latch
Qty. (4) Swivel Casters

Dimensions: 73 High, 24" Wide, 24" Deep (1854 x 609 x 609mm)

Weight: 310 pounds approx. Depending on number of zones. Cables not included

Standard Features: Operator Interface – Large 12" Industrial Grade Touchscreen - Safety Glass Protected
Thermocouple – Type "J" or "K" Grounded or Ungrounded
Thermocouple over voltage protection on all inputs
Thermocouple Isolation – Zero to Zero
Ambient Operating Temperature – 32^{o} to 104^{o} F (0^{o} to 40^{o} C)
Ambient Humidity – 0 to 95% RH, non-conducting
Ambient Storage Humidity – -4^{o} to 140^{o} F (-20^{o} to 60^{o} C)
System Power Isolation – Front Door mounted breaker with door interlock
System Over Current Protection – Circuit Breaker rated in accordance with system specifications
Module Protection – All modules fully fused on inputs & outputs where required & keyed for proper insertion
Measurement Accuracy – +/- 1.0^{o} F (0.5^{o} C) for range of control: +/- 0.5% updated every 100ms
Calibration – < 0.2% of full scale 32^{o} to 932^{o} degrees F (0^{o} to 500^{o} degrees C)
Cold Junction Error – +/- 1^{o} F @ 77^{o} F (typical)
Temperature Stability – +/- 1^{o} F from ambient
Control Stability – +/- 1 digit – under steady state conditions
Tuning Method – Full 3-term, PID control with 5 presets for Cavity & Manifold zones and password protection
Display Type – 800 x 600 (SVGA), Full Color, 12" LCD Touchscreen with backlight
Display Protection – LCD protected with toughened safety glass
Display Backlight – Automatic backlight – switch off to increase lamp life – any button to activate lamp

Optional Features: Remote Touchscreen (Operator Interface) – 30 ft. long cable
USB, Ethernet & Wi-Fi Communications
30 amp zones
Real Time WaterFlo Monitoring & Alarms – Option
Customer Specific Mold Cables & Connectors

SANDARD ACCESSORIES

Mold Power Cable: PWC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Male)

Mold Thermocouple Cable: THC12-xx (10 or 20 ft.) (Mold Cable End – Female) (System Cable End – Female)

Mold Power Connector: MPC-12 (Male)

Mold T/C Connector: MTC-12 (Male)

Mold Junction Box: MJB-12 or MJBW-12

Transformer Package: TP-45 or TP-75 (480 to 240vac step down) - Transformer size is an estimate only. Use the following to determine the proper transformer size. (Total System Watts Divided by 1,000, equals Transformer Kva)

NOTE: All VISIONS 3000 systems are easily adaptable to specific individual system requirements.

ADVANCED SOFTWARE

Tool Diagnosis

A suite of functions which will trouble shoot the mold either on start-up or during normal operations, checking for faults such as:

1. Swapped heater or thermocouple wiring analysis (indicates affected zones if a fault is detected).
2. Heater power/watt monitoring to identify leakage.
3. Heater Resistance monitoring to predict heater failure.
4. Thermocouple Fault Analysis
5. Toolguard: Monitors performance of the molds cooling system and alarms if a failure in the cooling system has been detected. If the VISIONS 3000 is interfaced with the molding machine, it can cease the molding operation before costly damage occurs.
6. Surface Graphs: Provides immediate at-a-glance insight into the operation of all the zones on the tool by means of an easy to understand 3-Dimensional depiction of the tool. Peaks & Valleys point out those zones which deviate from baseline. This is a much faster method of determining out-of-tolerance conditions than other methods such as tabulated data.
7. Trend Graphs: A selectable display of historic values showing both the measured temperature and power values. In this way, problematic zones can be identified, something that can not be done using historical analysis only.
8. Visual Diagnostics: LED's are visible through the front door providing immediate indication of the operation condition of all the boards, fuses, and communications & processing activity.

Tool Validation

Pre-Production Validation of New or Refurbished Tools. The VISIONS 3000 offers a complete suite of functions which allow a tool to be completely tested prior to placing in a molding press. The validation process can be done on a test bench or where ever most convenient. The diagnostic function automatically testes each zone in sequence before moving on to the next zone. Testing encompasses all heater and thermocouple functions.

Individual Heater PID, Alarm Settings and Power Consumption Monitoring

Individual Heater Auto P.I.D. Tuning:
The VISIONS 3000 has enhanced the ability to fine tune the most troublesome of molds. Under normal operations, tuning is carried out during the warm up process, individually tuning each zone heater to control within 0.5° F of set point. The Auto Tune is carried out automatically each time the controller is turned on. Incorrect P.I.D. tuning is the main reason for inconsistent temperature control. For troublesome molds, auto tuning can be refined by the operator selecting from a range of 5 different settings to fine tune the P.I.D. to match the tool.

Individual Heater Alarm Tolerance Settings:
Heaters can be allocated individual settings to prevent global alarm settings being triggered by minority, problematic thermocouples. Each heater/thermocouple combination has it's own trigger and values assigned to operate independently. Each alarm trigger, for example thermocouple open, can be assigned a level and each level can be assigned an action, for example; place the controller into standby mode.

Individual Heater Power Consumption Monitoring:
All Cavity heaters power consumption is constantly and individually monitored. Any increase in power demand is the first sign of a developing problem and early detection is vital in preventing avoidable scrap and tool down time in the machine.

Energy Savings

In today's world of ever increasing energy costs, efficiency is a major concern. The Adaptive Thermal Control of the VISIONS 3000 adapts power usage to the precise thermal requirements of the tool, balancing power demand to reduce temperature oscillation in the heater, thus increasing control accuracy whilst also increasing the reliability of the heater and reducing energy usage.

- Adaptive Thermal Control technology provides an advanced algorithm tailored to meet the requirements of different molding environments by delivering smooth, exact and balanced power to each heater in increments which provide the total temperature deviation, thereby reducing energy usage.
- Each zone can be set for a maximum amount of power/current which can be applied reducing spiked energy usage. The controller displays the actual current draw for each zone as well as the current draw for the complete tool.
- Even heating of the tool. Manifold & Cavity zones have there own unique PID algorithm which promotes an even and energy efficient warm up of the tool.

Tool Database

The VISIONS 3000 system is capable of storing all operational tool settings for more than 100 different unique tools, each with its own unique identifier.

Operator Interface

INDUSTRY LEADNG OPERATOR INTERFACE:

1. Standard - Large 12" Color Touchscreen Display – Industrial grade with safety glass protection for durability

Data Logging (HISTORY)

All production data is automatically stored for a period of 12 months. Data includes; individual heater power usage and temperature during the production cycle, on a second by second basis. All initial set-up settings, user and set-point changes made during production, Alarm activations and errors. WaterFlo (Gallons/Liters per minute) and water temperature (F° or C°). Tool Diagnostic reports and set-up files. All data is date and time stamped and viewable from the VISIONS 3000 controller or downloadable to a PC or Laptop. Set up data is transferable between VISIONS 3000 controllers. Data cannot be deleted by the user and is password protected.

Boost & Stand-by Modes

Boost: A temporary rise in temperature normally used to clear a cold slug on stat up. Boost operates on Cavity zones only. The increase in temperature (or power if the zone is in manual mode) and the time that Boost is applied are both operator selectable. This function can be saved in the Database.

Stand-by: Stand-by lower the temperature of Manifold and Nozzles to a safe range when the molding system is at idle. This process can be manual or automatic. If connected to sensors on the molding press and feedback indicates the molding operation has ceased for a period of time, VISIONS 3000 can place itself into stand-by mode, lower the temperature to a safe range thereby preventing the degrading of plastic and saving energy. Stand-by operates until cancelled. This process can be saved in the database.

Manifold & Cavity Zone Control

Because of the differences in mass and operation of Manifolds & Cavities the VISIONS 3000 provides a unique PID algorithm tailored to meet there specific requirements. By controlling Manifolds & Cavities independently, smooth, efficient and even control of the mold results. In those rare cases where the normal heating parameters just do not do the job; the

PID characteristics within the VISIONS 3000 can be manually adjusted to fine tune the heating operation of the system to the particular application.

Using a combination of a fast efficient algorithm and balanced power output to the heater, almost any heater is capable of being controlled to within 1^{o} degree F.

Programmable Manifold Pre-heat Start Up Groups:
The user has the ability to define the start-up sequence of manifold heaters. This is useful for tools with a large number of heaters that exceed the maximum current available, if ramped together and provides the means to program the specific start-up recommendations of the hot runner manufacturer, automatically balancing the hot runner during the critical warm up phase.

Graphs

Two different forms of graphs are available:

1. Surface: This is a 3-Dimensional presentation of a range of zones which can be edited to represent the layout of the mold and provide an at-a-glance diagnostic tool, showing any heating or cooling imbalance in the mold.
2. Trend: Permitting the display of up to 8 zones, the trend graph shows both the measured temperature and output power values of the selected zones, enabling in-depth analysis of power demand for similar zones and poor temperature control.

Soft Start

The advanced software within the VISIONS 3000 provides different tool strategies to satisfy the most demanding production requirements. These include:

1. Manual Soft Start - Sometimes referred to as Bake Out, this manually triggered, 30 minute, Low-power function removes moisture in the mold.
2. Automatic Soft Start - When the RUN function is selected, the power of all the zones are ramped from zero. Due to their increases thermal mass, the ramp rate of the Manifold zones is greater than the Cavity zones. Ramping power has significant advantages over ramping temperature – most noticeable, any thermocouple fault condition

   that prevents temperature increase is a zone does not prevent the complete tool from reaching production temperature.
3. Manifold Pre-Heat - It is widely recognized that heating the manifold zones before the cavity zones allows the bushings to bed into the mold preventing leakage. The Manifold Pre-Heat option enables the operator to select this function, if required and by permitting the operator to select the trigger temperature at which the cavity zones start ramping, warm up time is kept to a minimum compared to systems that require the manifolds to reach temperature before activating the cavity zones.

Security

The VISIONS 3000 has three (3) levels of password protection. Only the functions allowed by each level are accessible and the system automatically resets back to the locked mode after a preset time interval.

Machine Interface (optional)

1. Discrete: The VISIONS 3000 has the capability of communicating with the molding press or production equipment using conventional volt-free contacts. These signals include:
   a. External triggering of: Run, Stop, Boost & Standby
   b. External triggering of Production Halt, referred to as Motion Standby, this feature automatically puts the VISIONS 3000 into standby mode when an “In Production” signal fails. This prevents degradation of material and reduces unnecessary power consumption.

c. Internal "Tool at Temperature" signal. This feature can be used to prevent production from commencing before the tool is at temperature. Thus preventing short shots and tool damage, etc.

2. Ethernet: Ethernet connectivity allows for communications with any number of external devices.

Real Time WaterFlo Monitoring & Alarm

Real Time Mold Water Flow & Temperature Monitoring with warning alarms can now be automated via the VISIONS 3000 controller. The ITC Smart Manifold with its precisely installed flow sensors communicate to the VISIONS 3000 on a second by second basis all flow rate and temperature activity in the molds cooling system. Any critical change in flow rate or temperature can trigger a safety response from the VISIONS 3000. If so set-up, power can be cut to the tools heaters, a machine "alarm" can be activated and a machine "stop" triggered. No Water, No Power! Data collected will also show trend changes and gradual flow reduction which is particularly useful for maintenance to monitor the condition of water filters. Multi-Channel water mapping of the tool will provide significant benefits here-to unavailable. All water data and alarm activations are recorded in the VISIONS 3000 history log and downloadable in data or graphic format.

Saved & Downloadable Diagnostic Reports

The Tool diagnostic function is a very important facility. Not only for diagnosing tool problems, but as a means of tracking the performance and reliability of the heaters & thermocouples over time. Downloadable diagnostic reports allow the tool room to run comparison checks against previous service and repair data to maintain a contemporaneous record of the tools history. The diagnostic reports provide useful evidence and can be submitted to the tool maker of hot runner manufacturer during quality disputes and tool trials prior to delivery.

Calibration

The ease of use and maintenance philosophy of the VISIONS 3000 is carried over to calibration of the system. The input circuitry of the VISIONS 3000 has no potentiometers, removing any drift in the measurement of the thermocouple input. Parameters within the system enable an offset to be applied to easily calibrate the unit.

Multi-Lingual

For world wide applications the VISIONS 3000 has multi-lingual capabilities. The following languages are built into the system: English, Spanish, Mexican, German, French & Italian. Other languages can be easily incorporated.

Viewing Modes

For user convenience the VISIONS 3000 comes with three (3) viewing modes:

1. Medium Density - Displays up to 36 zones per screen
2. High Density - Displays up to 84 zones per screen
3. Low Density - Displays up to 18 zones per screen - includes a time line graph of measured power and temperature

Slaving

Zones with out thermocouple feedback can be linked to a zone with similar operating characteristics which has a thermocouple feedback. This function can be stored in the database.

Communications

USB, Ethernet & Wi-Fi for Download, Upload & Real Time Off Site Monitoring:
All data can be downloaded via USB to a PC or Laptop for back up and viewing. The data can be viewed as a text file, spread sheet or in graph format, allowing for easy distribution of information.

MOLD CABLES – POWER – Standard 15 Amp

12-Zone Power Cable 10 Ft. Long (PWC12-10)

Use:	To connect the bottom control box to the power input connector on the mold
Zones:	12 Zones
Cable Length:	10 Feet
Mold Cable End Connector Kit:	MEK-12PR (Female)
Frame Cable End Connector Kit:	FEK-PR (Male)
Design:	ITC Power Cables are designed to easily and securely latch with the mold and control cabinet connectors. Cables and connectors are engineered to ensure proper insertion of cables.
Connects to:	
Mold Power Connector:	MPC-12 (Male)
Frame Power Connector:	FCK-PR (Female)
Current:	15 Amps
Weight:	6 Pounds Approx.

12-Zone Power Cable 20 Ft. Long (PWC12-20)

Use:	To connect the bottom control box to the power input connector on the mold
Zones:	12 Zones
Cable Length:	20 Feet
Mold Cable End Connector Kit:	MEK-12PR (Female)
Frame Cable End Connector Kit:	FEK-PR (Male)
Design:	ITC Power Cables are designed to easily and securely latch with the mold and control cabinet connectors. Cables and connectors are engineered to ensure proper insertion of cables.
Connects to:	
Mold Power Connector:	MPC-12 (Male)
Frame Power Connector:	FCK-PR (Female)
Current:	15 Amps
Weight:	7 Pounds Approx.

MOLD CABLES – POWER – Standard – 30 Amp (High Power)

1 Zone 30 Amp Power Cable 10 Ft. (PTCHP1-10)

Use:	To connect bottom control cabinet to the input power connector on the mold.
Zones:	1 Zone
Cable Length:	10 Feet
Mold End Connector Kit:	1ZHP-ME (Female)
Frame End Connector Kit:	1ZHP-FE (Male**)**
Design:	Metal construction with pins to accept latch for secure attachment to the connectors on mold and control system cabinet.
Weight:	2 Pound Approx.

1 Zone 30 Amp Power Cable 20 Ft. (PTCHP1-20)

Use:	To connect bottom control cabinet to the input power connector on the mold.
Zones:	1 Zone
Cable Length:	**2**0 Feet
Mold End Connector Kit:	1ZHP-ME (Female)
Frame End Connector Kit:	1ZHP-FE (Male**)**
Design:	Metal construction with pins to accept latch for secure attachment to the connectors on mold and control system cabinet.
Weight:	4 Pound Approx.

3 Zone 30 Amp Power Cable 10 Ft. (PTCHP3-10)

Use:	To connect bottom control cabinet to the input power connector on the mold.
Zones:	3 Zones
Cable Length:	10 Feet
Mold End Connector Kit:	MEKHP-3PR (Female)
Frame End Connector Kit:	FEKHP-3PR (Male**)**
Design:	Metal construction with pins to accept latch for secure attachment to the connectors on mold and control system cabinet.
Weight:	3 Pound Approx.

3 Zone 30 Amp Power Cable 20 Ft. (PTCHP3-20)

Use:	To connect bottom control cabinet to the input power connector on the mold.
Zones:	3 Zones
Cable Length:	20 Feet
Mold End Connector Kit:	MEKHP-3PR (Female)
Frame End Connector Kit:	FEKHP-3PR (Male)
Design:	Metal construction with pins to accept latch for secure attachment to the connectors on mold and control system cabinet.
Weight:	5 Pound Approx.

6 Zone 30 Amp Power Cable 10 Ft. (PTCHP6-10)

Use:	To connect bottom control cabinet to the input power connector on the mold.
Zones:	6 Zones
Cable Length:	10 Feet
Mold End Connector Kit:	MEKHP-6PR (Female)
Frame End Connector Kit:	FEKHP-6PR (Male)
Design:	Metal construction with pins to accept latch for secure attachment to the connectors on mold and control system cabinet.
Weight:	5 Pound Approx.

6 Zone 30 Amp Power Cable 20 Ft. (PTCHP6-20)

Use:	To connect bottom control cabinet to the input power connector on the mold.
Zones:	6 Zones
Cable Length:	20 Feet
Mold End Connector Kit:	MEKHP-6PR (Female)
Frame End Connector Kit:	FEKHP-6PR (Male)
Design:	Metal construction with pins to accept latch for secure attachment to the connectors on mold and control system cabinet.
Weight:	7 Pound Approx.

2000 MAIN FRAMES – standard 15 amp max. zone

12-Zone Thermocouple Cable 10 Ft. Long (THC12-10)

Use:	To connect the control cabinet to the Thermocouple input connector on the mold
Zones:	12 Zones
Cable Length:	10 Feet
Mold Cable End Connector Kit:	MEK-12TC (Female)
Frame Cable End Connector Kit:	FEK-TC (Female)
Design:	ITC Thermocouple Cables are designed to easily and securely latch with the connectors on the mold and on the controller. Cables and connectors are engineered to ensure proper insertion of cables.
Connects to:	
Mold T/C Connector:	MTC-12 (Male)
Frame T/C Connector:	FCK-T/C (Male)
Current:	Designed to be used with ITC's 15 & 30 amp systems
Weight:	6.5 Pounds Approx.

12-Zone Thermocouple Cable 20 Ft. Long (THC12-20)

Use:	To connect the control cabinet to the Thermocouple input connector on the mold
Zones:	12 Zones
Cable Length:	20 Feet
Mold Cable End Connector Kit:	MEK-12TC (Female)
Frame Cable End Connector Kit:	FEK-TC (Female)
Design:	ITC Thermocouple Cables are designed to easily and securely latch with the connectors on the mold and on the controller. Cables and connectors are engineered to ensure proper insertion of cables.
Connects to:	
Mold T/C Connector:	MTC-12 (Male)
Frame T/C Connector:	FCK-TC (Male)
Current:	Designed to be used with ITC's 15 & 30 amp main frames
Weight:	7.5 Pounds Approx.

TRANSFORMER OPTIOINS FOR VISIONS 3000 SYSTEMS

6 KVA Transformer Option (TP-6)

Rating:	Step down 480 vac to 240 vac, 3-Phase, 6 KVA
Transformer:	Encapsulated
Disconnect:	30 Amp
Fuse Size:	8 Amp
Output Capacity:	6,000 Watts, 25 Amps
Input Power Cord:	10 feet long input cord is wired to disconnect box, opposite end has no connector
System:	For systems with few zones and low amperage heater draw (NOTE: only if unit falls within system capacity)
Construction:	Shipped completely assembled and wired and attach to control system. Wires between transformer disconnect and main frame are enclosed in flexible conduit.
Weight:	250 Pounds Approx. (less controller)

9 KVA Transformer Option (TP-9)

Rating:	Step down 480 vac to 240 vac, 3-Phase, 9 KVA
Transformer:	Encapsulated
Disconnect:	30 Amp
Fuse Size:	12 Amp
Output Capacity:	9,000 Watts, 37.5 Amps
Input Power Cord:	10 feet long input cord is wired to disconnect box, opposite end has no connector
Main Frame:	8 Zone Main Frame (NOTE: only if unit falls within system capacity)
Stand:	PFS-812
Construction:	Shipped completely assembled and wired ready to attach main frame. If ordered with main frame, main frame is attached & wired. Wires between transformer disconnect and controller are enclosed in flexible conduit.
Weight:	295 Pounds Approx. (less controller)

15 KVA Transformer Option (TP-15)

Rating:	Step down 480 vac to 240 vac, 3-Phase, 15 KVA
Transformer:	Cabinet Style
Disconnect:	30 Amp
Fuse Size:	17.5 Amp
Output Capacity:	15,000 Watts, 62.5 Amps
Input Power Cord:	10 feet long input cord is wired to disconnect box, opposite end has no connector
System:	For those systems which have a heater draw less than 15,000 watts (NOTE: only if unit falls within system capacity)
Stand:	Heavy Duty, Welded Transformer Stand w/Casters
Construction:	Shipped completely assembled and wired to controller. Wires between transformer disconnect and controller are enclosed in flexible conduit.
Weight:	325 Pounds Approx. (less controller)

30 KVA Transformer Option (TP-30)

Rating:	Step down 480 vac to 240 vac, 3-Phase, 30 KVA
Transformer:	Cabinet Style
Disconnect:	60 Amp
Fuse Size:	35 Amp
Output Capacity:	30,000 Watts, 125 Amps
Input Power Cord:	10 feet long input cord is wired to disconnect box, opposite end has no connector
System:	For VISIONS systems which have a heater draw of less than 30,000 watts
Stand:	Heavy Duty, Welded Transformer Stand w/Casters
Construction:	Shipped completely assembled and wired to the controller. Wires between transformer, disconnect and controller are enclosed in flexible conduit.
Weight:	350 Pounds Approx. (less controller)

45 KVA Transformer Option (TP-45)

Rating:	Step down 480 vac to 240 vac, 3-Phase, 45 KVA
Transformer:	Cabinet Style
Disconnect:	60 Amp
Fuse Size:	50 Amp
Output Capacity:	45,000 Watts, 187.5 Amps
Input Power Cord:	10 feet long input cord is wired to disconnect box, opposite end has no connector
System:	For VISIONS systems which have a heater draw less than 45,000 watts.
Stand:	Heavy Duty, Welded Transformer Stand w/Casters
Construction:	Shipped completely assembled and wired to controller. Wires between transformer, disconnect and controller are enclosed in flexible conduit.
Weight:	795 Pounds Approx. (less controller)

75 KVA Transformer Package (TP-75-12)

Rating:	Step down 480 vac to 240 vac, 3-Phase, 75 KVA
Transformer:	Cabinet Style
Disconnect:	100 Amp
Fuse Size:	80 Amp
Output Capacity:	75,000 Watts, 312.5 Amps
Input Power Cord:	10 feet long input cord is wired to disconnect box, opposite end has no connector
System:	For VISIONS 3000 systems which have a heater draw less than 75,000 watts
Stand:	Heavy Duty, Welded Transformer Stand w/Casters
Construction:	Shipped completely assembled and wired to the controller. Wires between transformer, disconnect and controller are enclosed in flexible conduit.
Weight:	975 Pounds Approx. (less controller)

NOTE: Larger Capacity Transformers are available on request

CONNECTORS – MOLD POWER – Standard 15 Amp

12 Zone Mold Power Connector (MPC-12)

Use:	Designed to mount on the mold or mold junction box and accept mold power cable from the controller. All power connectors are physically interchangeable as they will fit any standard ITC mold power cable. The difference is the number of pin pairs installed in the connector, which determines the number of zones a connector will operate.
Zones:	12 Zones
Construction:	(24) power pins plus (1) ground pin (24) 6" power leads plus (1) ground lead with insulated crimp connectors Latch for securing power cable Male
Weight:	Less than 1 pound
Compatibility:	Compatible with other major manufacturers

CONNECTORS – MOLD POWER – HIGH POWER 30 AMP

1 Zone 30 Amp Mold Power Connector (MPTCHP-1)

Use:	Designed to mount on the mold or high power mold junction box and accept high power cable from controller.
Zones:	1 Zone
Construction:	Metal construction with latch for secure attachment
Weight:	1 Pound Approx.

3 Zone 30 Amp Mold Power Connector (MPCHP-3)

Use:	Designed to mount on the mold or high power mold junction box and accept power cable from controller.
Zones:	3 Zones
Construction:	Metal construction with latch for secure attachment
Weight:	1 Pound Approx.

6 Zone 30 Amp Mold Power Connector (MPCHP-6)

Use:	Designed to mount on the mold or high power mold junction box and accept power cable from controller.
Zones:	6 Zones
Construction:	Metal construction with latch for secure attachment
Weight:	1 Pound Approx.

CONNECTORS – MOLD THERMOCOUPLE – Standard 15 Amp

12 Zone Mold Thermocouple Connector (MTC-12)

Use:	Designed to mount on the mold or mold junction box and accept mold Thermocouple cable from the control system.
Zones:	12 Zones
Construction:	(24) pins plus (1) ground pin Thermocouple pins are numbered on each connector for ease of installation Latch for securing thermocouple cable Male
Weight:	Less than 1 pound
Compatibility:	Compatible with other major manufacturers

CONNECTORS – CONTROLLER – POWER & T/C – Standard 15 Amp

Controller Power Connector – Female – For 5, 8 & 12 Zone Power Cables (FCK-PR)

Use:	Mounts on the side of the controller and latches to the Cable Frame End Kit – power (FEK-PR)
Zones:	5, 8, or 12 Zones
Construction:	Steel with latch for easy and secure attachment
Weight:	1 Pound Approx.

Controller Thermocouple Connector – Male – For 5, 8 & 12 Zone Thermocouple Cables (FCK-TC)

Use:	Mounts on the side of the control system and latches to the Cable Frame End Kit – thermocouple (FEK-TC)
Zones:	5, 8, or 12 Zones
Construction:	Steel with latch for easy and secure attachment
Weight:	1 Pound Approx.

CONNECTORS – CONTROLLER – POWER – High Power 30 Amp

3 Zone 30 Amp Main Frame Power Connector (FCKHP-3PR)

Use:	Mounts on the side of the controller for high power applications and latched to the high power frame cable end kit (FEKHP-3).
Zones:	3 Zones
Construction:	Metal construction with latch for secure attachment
Weight:	1 Pound Approx.

6 Zone 30 Amp Main Frame Power Connector (FCKHP-6PR)

Use: Mounts on the side of the controller for high power applications high power and latched to the high power frame cable end kit (FEKHP-6).
Zones: 6 Zones
Construction: Metal construction with latch for secure attachment
Weight: 1 Pound Approx.

CONNECTOR - CABLE END KITS – MOLD - POWER & T/C – Standard 15 Amp

Mold Cable End Kit for 12 Zone Thermocouple Cable (MEK-12TC)

Use: Attaches to the end of Thermocouple Cable and connects to the mold thermocouple connector (MTC-12)
Zones: 12 Zones
Construction: Metal construction with pins to accept latch for secure attachment
Weight: 1 Pound Approx.

Mold Cable End Kit – Power – Female – For 5, 8 & 12 Zone Power Cables (MEK-PR)

Use: Attaches to the end of Power Cable and connects to the mold power connector (MPC-5, 8, or 12)
Zones: 5, 8, or 12 Zones
Construction: Metal construction with pins to accept latch for secure attachment
Weight: 1 Pound Approx.

CONNECTOR - CABLE END KITS – CONTROLLER - POWER & T/C – Standard 15 Amp

Controller Cable End Kit – Power – Male – For 5, 8 & 12 Zone Power Cables (FEK-PR)

Use: Attaches to the end of Power Cable and connects to the controller power connector (FCK-PR)
Zones: 5, 8, or 12 Zones
Construction: Metal construction with pins to accept latch for secure attachment
Weight: 1 Pound Approx.

Controller Cable End Kit – Thermocouple – Female – For 5, 8 & 12 Zone Thermocouple Cables (FEK-TC)

Use: Attaches to the end of Thermocouple Cable and connects to the controller thermocouple connector (FCK-TC)
Zones: 5, 8, or 12 Zones
Construction: Metal construction with pins to accept latch for secure attachment
Weight: 1 Pound Approx.

CONNECTORS - CABLE END KIT – CONTROLLER - POWER – High Power 30 Amp

3 Zone 30 Amp Frame Cable End Kit – Power - (FEKHP-3PR)

Use:	Mounts on the end of the high power cable and attached to the high power connector on the controller (FCKHP-3PR)
Zones:	3 Zones
Construction:	Metal construction with pins to accept latch for secure attachment
Weight:	1 Pound Approx.

6 Zone 30 Amp Frame Cable End Kit – Power - (FEKHP-6PR)

Use:	Mounts on the end of the high power cable and attached to the high power connector on the controller (FCKHP-6PR)
Zones:	3 Zones
Construction:	Metal construction with pins to accept latch for secure attachment
Weight:	1 Pound Approx.

CONNECTORS - CABLE END KIT – MOLD - Power – High Power 30 Amp

3 Zone 30 Amp Mold Cable End Kit – Power - (MEKHP-3PR)

Use:	Mounts on the end of the high power cable and attached to the high power mold power connector on the mold (MPCHP-3PR)
Zones:	3 Zones
Construction:	Metal construction with pins to accept latch for secure attachment
Weight:	1 Pound Approx.

6 Zone 30 Amp Mold Cable End Kit – Power - (FEKHP-6PR)

Use:	Mounts on the end of the high power cable and attached to the high power mold power connector on the mold (MPCHP-6PR)
Zones:	6 Zones
Construction:	Metal construction with pins to accept latch for secure attachment
Weight:	1 Pound Approx.

JUNCTION BOX – MOLD WIRING – Standard 15 Amp – Combination Power & T/C

12 Zone Mold Wiring Junction Box (MJB-12)

Use:	Mold Wiring Junction Boxes are the most convent and economical method of mounting power and thermocouple connectors on the mold.
Zones:	12 Zones
Construction:	Heavy gage steel, anodized for corrosion protection, pre-cut and drilled for hassle free mounting on the mold and installing connectors in the box. Bolted construction for convenient access. *(Connectors { MTC & MPC } must be ordered separately)*
Weight:	3.5 pounds Approx.

JUNCTION BOXES – PRE-WIRED – Std. 15 Amp – Combination Power & T/C

12 Zone Pre-wired Mold Junction Box (MJBW-12)

Use:	Pre-wired Mold Junction Boxes are provided complete with connectors pre-wired to numbered & color coded terminal strips, providing the most convenient and trouble free method of mounting power and thermocouple connectors on the mold.
Zones:	8 Zones
Construction:	Heavy gage steel, powder coated for corrosion protection, pre-drilled for hassle free mounting on the mold. Screw access plate for convent access. MPC-12 Mold Power Connector MTC-12 Mold Thermocouple Connector Terminal Strips – Numbered and Color Coded Connectors wired to terminal strips
Weight:	2.5 pounds Approx.

JUNCTION BOXES – MOLD WIRING – High Power 30 Amp

3 Zone 30 Amp Mold Wiring Junction Box (MJBHP-3)

Use:	Mold Wiring Junction Boxes are the most economical method of mounting the Power & Thermocouple connectors on the mold.
Zones:	3 Zones
Connectors:	MPCHP-3 (Mold Power Connector – High Power*)* – *Purchased separately* MTC-5 (Mold Thermocouple Connector – Std.) – *Purchased separately*
Construction:	Heavy gage steel, anodized for corrosion protection, pre-cut and drilled for hassle free mounting on the mold and installing connectors in the box. Screw type construction for convent access. *(Connectors must be ordered separately)*
Weight:	2.5 Pound Approx.

6 Zone 30 Amp Mold Wiring Junction Box (MJBHP-6)

Use:	Mold Wiring Junction Boxes are the most economical method of mounting the Power & Thermocouple connectors on the mold.
Zones:	6 Zones
Connectors:	MPCHP-6 (Mold Power Connector – High Power) – *Purchased separately* MTC-8 (Mold Thermocouple Connector – Std.) – *Purchased separately*
Construction:	Heavy gage steel, anodized for corrosion protection, pre-cut and drilled for hassle free mounting on the mold and installing connectors in the box. Screw type construction for convent access. *(Connectors must be ordered separately)*
Weight:	5 Pound Approx.