## Standard Panels

| Description | Configuration Details | Part # | Page # |
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| Base Tier 3 Panel | MVP (Tier 3) with Throttle in 7000 Series Panel | MVP-A7102-01 | 2 |
| Base Tier 4 Panel | MVP (iT4) with Throttle in 7000 Series Panel | MVP-A7202-01 | 3 |
| Base Tier 4 Panel | C Series in 7000 Series Panel | C4-E7000-01 | 4 |
| Base Autostart Panel | C Series in 8000 Series Panel | C4-E8000-AS-01 | 5 |
| Full Feature Autostart Panel | C Series in 8000 Series Panel (Super Pump 2 Specification) | C4-G8300-AS-01 | 6 |

## OEM or Application Specific Panels

| OEM/Application | Configuration Details | Part # | Page # |
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| Chipper Application | MVP (Tier3) with Throttle in 3000 Series Panel | MVP-A3102-01 | 7 |
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| Durand Wayland #1 | C Series in 7000 Series Panel (with Integrated Sprayer Control) | C4-E7111 | 10 |
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| GM Gas Panel | C Series in 2500 Series Panel for GM Gas Engines | C3-E2527 | 12 |
| Marine Panel | Marine Panel with Gauges and Alarm Horn | M3-4600-12V M3-4600-24V | 13-14 |
| Vac-Con | In development | TBD | 15 |

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*BASE Tier 3 Panel – MVP Series*

## MVP-A7102-01 Panel Specification

MVP mounted in 8" x 8" polycarbonate enclosure with clear cover (can be latched and locked)

➢ **Manual Start**
➢ **Engine Display**
➢ **Throttle Control** *(via MVP UP and DOWN buttons)*
➢ **Fault Code Reader**
➢ **Red/Yellow Alarm Lamps**
➢ **Key Switch**
➢ **Polycarbonate Enclosure with Clear Cover**
➢ **21 Pin Connector** *(mounted on bottom of panel)*

➢ **Optional Hare/Turtle Throttle Switch Kit**

**70-0402-1** Throttle Switch Kit
*Plugs directly into panel and MVP module. For customers who want hare/turtle switch instead of using MPV UP and DOWN buttons.*

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## BASE iT4 Panel – MVP Series



## MVP-A7202-01 Panel Specification

MVP mounted in 8" x 8" polycarbonate enclosure with clear cover (can be latched and locked)

- ➢ **Manual Start**
- ➢ **Engine Display**
- ➢ **Throttle Control** *(via MVP UP and DOWN buttons)*
- ➢ **Fault Code Reader**
- ➢ **Red/Yellow Alarm Lamps**
- ➢ **Key Switch**
- ➢ **Polycarbonate Enclosure with Clear Cover**
- ➢ **21 Pin Connector** *(mounted on bottom of panel)*

➢ **Optional Hare/Turtle Throttle Switch Kit**



**70-0402-1** Throttle Switch Kit
*Plugs directly into panel and MVP module. For customers who want hare/turtle switch instead of using MPV UP and DOWN buttons.*

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*BASE iT4 Panel – C Series*



## C4-E7000-01 Panel Specification

C Series display mounted in 8" x 8" polycarbonate enclosure with clear cover (can be latched and locked)

- ➢ **Manual Start**
- ➢ **Engine Display**
- ➢ **Throttle Control** *(via UP and DOWN buttons)*
- ➢ **Fault Code Reader**
- ➢ **Red/Yellow Alarm Lamps**
- ➢ **Key Switch**
- ➢ **Polycarbonate Enclosure with Clear Cover**
- ➢ **21 Pin Connector** *(mounted on bottom of panel)*

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### Auto Start iT4 Panel – C Series

## C4-E8000-AS-01 Panel Specification

C Series display mounted in 8" x 10" polycarbonate enclosure with clear cover (can be latched and locked)

- ➢ **Manual & Auto Start**
- ➢ **Engine Display**
- ➢ **Throttle Control** *(via UP and DOWN buttons)*
- ➢ **Fault Code Reader**
- ➢ **Red/Yellow Alarm Lamps**
- ➢ **Key Switch**
- ➢ **Polycarbonate Enclosure with Clear Cover**
- ➢ **21 Pin Connector** *(mounted on bottom of panel)*

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*Full-Feature iT4 Panel – C Series*
*Super Pump Specification*



## C4-G8300-AS-01 Panel Specification

C Series display mounted in 8" x 10" polycarbonate enclosure with clear cover (can be latched and locked)

- ➢ **Manual & Auto Start**
- ➢ **Full Set of Inputs & Outputs**
- ➢ **Engine Display**
- ➢ **Throttle Control** *(via UP and DOWN buttons)*
- ➢ **Fault Code Reader**
- ➢ **Red/Yellow Alarm Lamps**
- ➢ **Key Switch**
- ➢ **Polycarbonate Enclosure with Clear Cover**
- ➢ **21 Pin Connector** *(mounted on bottom of panel)*

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*OEM/Application Specific*

## MVP-A3102-01 Panel Specification

➢ **Manual Start**
➢ **Engine Display**
➢ **Throttle Control**
   *(Up/Down Buttons on MVP Unit OR Optional Hare/Turtle Switch)*
➢ **Fault Code Reader**
➢ **Red/Yellow Alarm Lamps**
➢ **Key Switch**
➢ **Power Coated Steel Panel**
➢ **21 Pin Connector** *(to Deere Engine Harness)*

## MVP Series Display

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## C3-F8135 Panel
*(with receiver and antennae installed)*



### Radio Receiver
*Installed and wired into panel by Controls, Inc.*



### OEM Specific

| Part # | Description |
|--------|-------------|
| TR-100 | Handheld Transmitter |
| C3-F8135 | Panel with Receiver & Antenna Installed |
| 44-0000 | Optional Emergency Stop Button *(installed on panel)* |

### Handheld Transmitters
- Two transmitters shipped with each panel
- 9V Battery
- Increase/Decrease Engine Speed
- Start/Stop Engine
- On/Off to Start/Stop Hydraulics Solenoid Switch (like a float switch)

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*OEM Specific*

## C3-F4026 Panel Specification

### Customer Specific Inputs *(Normally Open - Close to Ground to Activate)*
#1 - Remote Stop with display message *(loose wire, customer to wire to remote unit engine stop circuit)*
#2 - Low Idle Speed  *(loose wire, customer to wire to throttle relay per drawing)*
#3 - High Idle speed  *(loose wire, customer to wire to throttle relay per drawing)*
#4 - Low Hydraulic Tank Level Shutdown with display message  *(loose wire, customer to wire to switch)*
#5 – High Hydraulic Tank Temperature Shutdown with display message *(loose wire, customer to wire to switch gauge mounted in panel)*

### Customer Specific Output
#1 - 10A fused auxiliary power circuit energized when control is powered  *(customer to wire for power auxiliaries)*

### Notes
➢ This specification utilizes the C3-200 level unit.
➢ Access to the five inputs and one output is provided via 12 inch leads
➢ This is a manual start panel (panel started at key switch)
➢ 2" hole for field installation of Murphy Switch gauge (provided in 4000 series panel)
➢ High idle speed limited to 2400 rpm
➢ Low idle speed limited to 800 rpm
➢ Ramp rate = 100 rpm/second
➢ Unique panel part numbers are assigned to account for pre configured input settings

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## C4-E7111 Panel Specification

*OEM Specific*

**Customer Specific Outputs**
*Mil Spec Switches and Labeling for the following:*
#1 – Left ON/OFF Toggle Switch
#2 – By-Pass ON/OFF Toggle Switch
#3 – Right ON/OFF Toggle Switch

**Customer Specific Connector**
#1 – 21 Pin Connector with Wires for Both Engine Harness & Sprayer Control Switches
#2 – Connector Location – Middle of Back Side (to fit inside mounting bracket)

| 21 Pin Connector | |
|---|---|
| **Pin** | **Function** |
| B | Battery Positive |
| E | Battery Negative |
| G | Key On Power |
| D | Crank Signal |
| V | J1939 High |
| U | J1939 Low |
| J | Alternator Excite |
| L | Sprayer – Left ON/OFF |
| M | Sprayer – By-Pass ON/OFF |
| C | Sprayer – Right ON/OFF |
| T | Sprayer – Common Battery Plus |
| coiled inside | Fuel Level Sender |
| coiled inside | Digital Input 1 |

### Notes

➢ This specification utilizes the C4-100 level unit.
➢ This is a manual start panel (panel started at key switch)
➢ Operating speed = 2400 rpm
➢ Idle speed = 800 rpm
➢ Ramp rate = 100 rpm/second

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*OEM Specific*

## MVP-A6121-01 Panel Specification

MVP mounted in 8 x 6" polycarbonate enclosure with clear cover (can be latched and locked)

➢ **Engine Display**
➢ **Throttle Control** *(Hare/Turtle Switch)*
➢ **Fault Code Reader**
➢ **Red/Yellow Alarm Lamps**
➢ **Key Switch**
➢ **Polycarbonate Enclosure with Clear Cover**
➢ **21 Pin Connector** *(mounted in center back of panel)*

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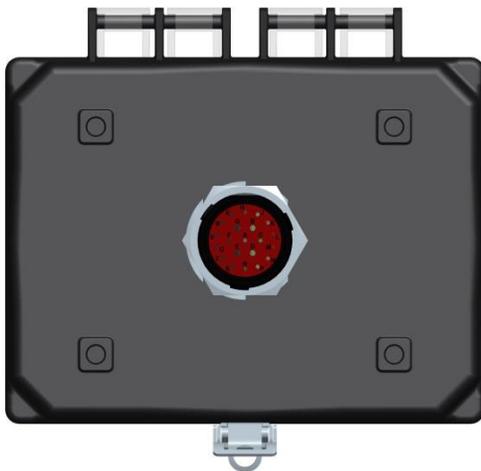
*Application Specific*



## C3-E2527 Panel Specification

- ➢ **GM Gas Engine Panel**
- ➢ **E-Controls GCP ECU**
- ➢ **TSC1 Address 234**
- ➢ **CI Display Module C3-1015**
- ➢ **Manual Start**
- ➢ **Throttle Control**
- ➢ **Fault Code Reader**
- ➢ **Red/Yellow Alarm Lamps**

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## M3-4600-12V
## M3-4600-24V
### Marine Panel



Optional transmission pressure and temperature gauges

**GEM028**
Transmission Pressure

**GEM027**
Transmission Temperature

### Application Specific

## Panel Overview
- OLED Digital Display
- Engine Gauges
- Fault Codes *(Active & Stored)*
- Alarm Log
- Alarm Horn *(with Silence)*
- High Intensity LED Alarm Lamps
- Multiplexing Technology *(for multiple panel installations)*
- Optional Transmission Pressure & Temperature Gauges
- Optional Transmission Pressure & Temperature Alarms

## Physical Elements
- All components water tight
- Robust metal photo panel
- All connectors water tight/plug and play
- Same footprint as RE521033 panel

## Gauges
- Engine Temperature
- Engine Oil Pressure
- Engine Tachometer
- Battery Volts

## Keep It Simple
Controls, Inc. provides all panel components and wiring harnesses for a complete installation. Wiring harnesses provided in custom lengths.

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**ENGINE**

**70-0515-25**
Optional Throttle Harness
25 ft.

Plug into
Throttle
Lever

Plug into
Panel

**800-1000-25**
Harness  25 ft.

**M3-4600-12V**
Panel

RPM

195°F  1800    54
13.8   5.0  10000

START    STOP
MENU  ↑  ↓  ENTER

OFF  RUN CRANK
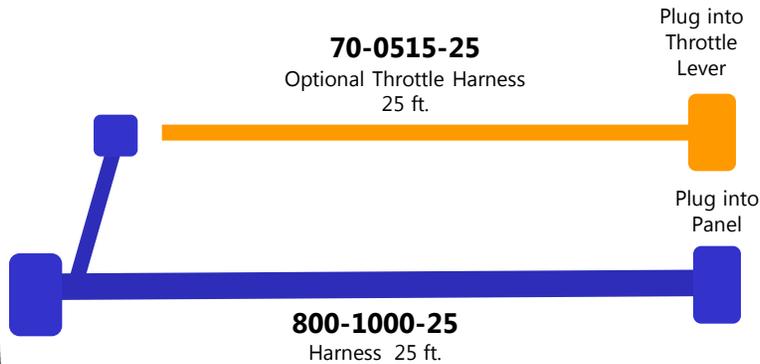
**70-0702-CAP**
Cap

| Part # | Description |
|---|---|
| M4-4600-12V | Main Panel *(with Engine Gauges & Alarm Horn)* |
| 800-1000-25 | Harness 25 Ft. – Engine to Main Panel |
| 70-0515-25 | Throttle Harness 25 Ft. |
| 70-0702-CAP | Terminating Cap |

Panel in development

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