



# April 2023 Lunch and Learn Automation and Controls Processes

# What we're reviewing

- Estimating in CRM
- AyrDyne estimating tool
- How we handle Service calls
- New cell modem rollout
- Lead times and purchasing process

# Estimating in CRM

# Estimating in CRM

## -5 Prg (Programming)

- Custom machines/robotics
- Non-standard AyrDyne control panels
- Service calls that require program changes
- Remote service via cell modem

## -5 EI-M (Electro-Mechanical)

- Service (non-programming)
- Electrical troubleshooting/field control panel modification
- Machine building/assembly

# Estimating in CRM

## -5 Dsn (Design)

- Design of electrical schematics
- Time spent to order or source components

## -9 Tst Prg (Test Program)

- Testing and programming of standard AyrDyne panel (includes PLC, HMI, VFD, etc.)
- Point-to-point testing of panels
- UL listing and final quality inspection of control panels

## -9 Build

- Used for building a control panel

# Quote example in Project Estimator

129048 - Saved

Project Estimator

23 AyrDyne Control Panels for the Toyota Project

Related Opportunity

1

Revision

General Notes Related

Commission (%) ---

Commission Paid To ---

Integer Factor ---

Project Total **\$110,467.00**

Edit Filter

Navigation bar with icons for back, forward, refresh, and zoom (100%).

Department	Hours (Qty)	Hours (\$)	Ext Sell (\$)	Total (\$)
5 Dsn	105	\$14,700.00	\$0.00	\$14,700.00
9 Off	238	\$17,850.00	\$0.00	\$17,850.00
9 Tst Prg	35	\$3,850.00	\$0.00	\$3,850.00
D	14	\$980.00	\$0.00	\$980.00

	Departme	Qty	Part Number	Description	Hours(Qt)	Rate(\$)	Unit Hour	Ext Hour:	Unit Cost	Margin(%)	Ext Sell(\$)	Line T
	5 Dsn	7		Design (Design)	2	140.00	280.00	1,960.00	0.00	0	0.00	1,960.00
	5 Dsn	7		Design (Order Material)	1	140.00	140.00	980.00	0.00	0	0.00	980.00
	5 Dsn	7	Extra	Design (Miscellaneous)	12	140.00	1,680.00	11,760.00	0.00	0	0.00	11,760.00
	9 Off	7		Shop (Control Panel Assembly)	20	75.00	1,500.00	10,500.00	0.00	0	0.00	10,500.00
	9 Off	7	Extra	Shop (Control Panel Assembly)	14	75.00	1,050.00	7,350.00	0.00	0	0.00	7,350.00
	9 Tst Prg	7		Shop (Test Control Panel)	2	110.00	220.00	1,540.00	0.00	0	0.00	1,540.00
	9 Tst Prg	7		Shop (Program VFD)	1	110.00	110.00	770.00	0.00	0	0.00	770.00
	9 Tst Prg	7		Shop (Program PLC and HMI)	2	110.00	220.00	1,540.00	0.00	0	0.00	1,540.00
	D	7		Delivery (Crate Control Panel)	2	70.00	140.00	980.00	0.00	0	0.00	980.00
	M	7		Material (Shop Control Panel)	0	0.00	0.00	0.00	7,779.00	20	65,343.60	65,343.60

**AyrDyne estimating tool**

# AyrDyne estimating tool

## Updates on part numbers and prices



### Estimating Tool

Reset Form

Main Blower HP*	<input type="text"/>	Supply Voltage*	<input type="text"/>	Include VFD	<input type="text"/>
Dust Collector Model*	<input type="text"/>			Number of Solenoids	<input type="text"/>
RF & RP Unit	<input type="text"/>				

### OPTIONS

Isolation Valve Circuitry	<input type="text"/>	Double Dump Valve	<input type="text"/>	Additional Motors (5HP or less)	<input type="text"/>
<i>If Yes*</i> , Isolation Valve Type	<input type="text"/>	Level Indicator	<input type="text"/>	Additional Motors (7.5HP to 20HP)	<input type="text"/>
Explosion Bottle System	<input type="text"/>	<i>If Yes</i> , Level Indicator Device	<input type="text"/>	<i>If RF Selected</i> , PD Pump Motor	<input type="text"/>
Fire Suppression Shutdown	<input type="text"/>	Compressed Air Dump Valve	<input type="text"/>	Zero Speed Switch	<input type="text"/>
Explosion Vent Burst Indicator	<input type="text"/>	<i>If Yes</i> , Compressed Air Dump Valve Device	<input type="text"/>	Fludizer Air Pads Circuitry	<input type="text"/>
<i>If Yes</i> , Explosion Vent Type	<input type="text"/>	Compressed Air Monitoring Device	<input type="text"/>	<i>If Yes</i> , Fludizer Air Pads Hardware	<input type="text"/>
XP Drum Sensor	<input type="text"/>	Pressure Transmitter	<input type="text"/>	Control Panel Interface Connector	<input type="text"/>
High Temperature Alarm	<input type="text"/>	HEPA Pressure Drop Monitoring	<input type="text"/>	Donaldson iCue	<input type="text"/>
Broken Bag Detector	<input type="text"/>	Alarm Beacon	<input type="text"/>	Remote Start/Stop Option	<input type="text"/>
<i>If Yes</i> , Broken Bag Detector Device	<input type="text"/>	Alarm Beacon and Horn	<input type="text"/>	<i>If Yes</i> , NEMA 4 Remote Start/Stop Station	<input type="text"/>
<i>If Yes</i> , Broken Bag Probe Length	<input type="text"/>	Larger Siemens HMI Screen 9"	<input type="text"/>	One Remote Transmitter in an Enclosure	<input type="text"/>
Allen-Bradley Hardware	<input type="text"/>	Larger Siemens HMI Screen 15"	<input type="text"/>	Two Remote Transmitter in an Enclosure	<input type="text"/>
		Relay Alarm Contacts	<input type="text"/>	NEMA 4 Outdoor Window Kit	<input type="text"/>
		BACnet Control	<input type="text"/>	NEMA 4 Enclosure with NEMA 4 Fan	<input type="text"/>
		<i>If Yes</i> , BACnet Protocol	<input type="text"/>		



# AyrDyne material



Microsoft Excel  
Template

VFD / Automatic speed control w/ NEMA 12			208 volt / 3HP		240 volt / 3HP		480 volt / 3
Qty.	Description	Manufacturer	Part number	Price	Part number	Price	Part number
1	Enclosure	Hoffman	CSD363610	\$381.10	CSD363610	\$381.10	CSD363610
1	Back panel	Hoffman	CP3636	\$113.84	CP3636	\$113.84	CP3636
1	Feet kit	Hoffman	CMFK	\$22.67	CMFK	\$22.67	CMFK
1	Disconnect switch	ABB	OS30FAJ12	\$88.79	OS30FAJ12	\$88.79	OS30FAJ12
1	Disconnect shaft	ABB	OXPEX430	\$9.18	OXPEX430	\$9.18	OXPEX430
1	Disconnect handle	ABB	OHY65L6	\$27.17	OHY65L6	\$27.17	OHY65L6
1	Disconnect Lug Kit	ABB	N/A	N/A	N/A	N/A	N/A
3	Main fuses	Mersen	AJT20	\$31.08	AJT20	\$31.08	AJT10
1	Power Distribution Block	Mersen	MPDB63133	\$32.00	MPDB63133	\$32.00	MPDB63133
1	Transformer	Sola	E250JL	\$104.13	E250W	\$64.15	E250W
2	Transformer fuses (PRIMARY)	Mersen	ATOR4	\$18.06	ATOR3.2	\$21.94	ATOR1.5
1	Transformer fuse (SECONDARY)	Mersen	ATOR3.5	\$10.40	ATOR3.5	\$10.40	ATOR3.5
1	VFD	Invertek	ODP-2-22030-3HF42-MN	\$694.77	ODP-2-22030-3HF42-MN	\$694.77	ODP-2-24030-3HF42-MN
1	TP700 Comfort Panel HMI	Siemens	6AV 2124-0GC01-0AX0	\$1,145.50	6AV 2124-0GC01-0AX0	\$1,145.50	6AV 2124-0GC01-0AX0
1	CPU 1215C	Siemens	6ES7 215-1HG40-0XB0	\$523.55	6ES7 215-1HG40-0XB0	\$523.55	6ES7 215-1HG40-0XB0
1	Communication Module RS485	Siemens	6ES7 241-1CH30-1XB0	\$86.95	6ES7 241-1CH30-1XB0	\$86.95	6ES7 241-1CH30-1XB0
1	Relay Output Module 16 Point	Siemens	6ES7 222-1HH32-0XB0	\$156.00	6ES7 222-1HH32-0XB0	\$156.00	6ES7 222-1HH32-0XB0
2	Transmitter	Dwyer	616KD-06-V	\$140.00	616KD-06-V	\$140.00	616KD-06-V
1	DC power supply	IDEC	PSSR-VF24	\$53.05	PSSR-VF24	\$53.05	PSSR-VF24
1	Ventilation kit / AC Unit	Hoffman / Pfannenberg	HF0516414	\$126.54	HF0516414	\$126.54	HF0516414
1	Exhaust kit	Hoffman	HG0500404	\$35.59	HG0500404	\$35.59	HG0500404
1 Lot	Misc. supplies, wireway	Misc.	Misc.	\$150.00	Misc.	\$150.00	Misc.
1 Lot	Wire, power wiring	Misc.	Misc.	\$100.00	Misc.	\$100.00	Misc.
1 Lot	Barb fitting w/ o-ring and cap	Misc.	Misc.	\$20.00	Misc.	\$20.00	Misc.
1 Lot	Temporary Shortage adder	Misc.	Misc.	\$400.00		\$400.00	
Parts total, our cost				\$4,470.37		\$4,434.27	

  

VFD / Automatic speed control w/ NEMA 4			208 volt / 3HP		240 volt / 3HP		480 volt / 3
Qty.	Description	Manufacturer	Part number	Price	Part number	Price	Part number
1	Enclosure	Hoffman	CSD363610	\$381.10	CSD363610	\$381.10	CSD363610
1	Back panel	Hoffman	CP3636	\$113.84	CP3636	\$113.84	CP3636
1	Feet kit	Hoffman	CMFK	\$22.67	CMFK	\$22.67	CMFK
1	Disconnect switch	ABB	OS30FAJ12	\$88.79	OS30FAJ12	\$88.79	OS30FAJ12
1	Disconnect shaft	ABB	OXPEX430	\$9.18	OXPEX430	\$9.18	OXPEX430
1	Disconnect handle	ABB	OHY65L6	\$27.17	OHY65L6	\$27.17	OHY65L6
1	Disconnect Lug Kit	ABB	N/A	N/A	N/A	N/A	N/A
3	Main fuses	Mersen	AJT20	\$31.08	AJT20	\$31.08	AJT10
1	Power Distribution Block	Mersen	MPDB63133	\$32.00	MPDB63133	\$32.00	MPDB63133
1	Transformer	Sola	E250JL	\$104.13	E250W	\$64.15	E250W
2	Transformer fuses (PRIMARY)	Mersen	ATOR4	\$18.06	ATOR3.2	\$21.94	ATOR1.5
1	Transformer fuse (SECONDARY)	Mersen	ATOR3.5	\$10.40	ATOR3.5	\$10.40	ATOR3.5
1	VFD	Invertek	ODP-2-22030-3HF42-MN	\$694.77	ODP-2-22030-3HF42-MN	\$694.77	ODP-2-24030-3HF42-MN
1	TP700 Comfort Panel HMI	Siemens	6AV 2124-0GC01-0AX0	\$1,145.50	6AV 2124-0GC01-0AX0	\$1,145.50	6AV 2124-0GC01-0AX0
1	CPU 1215C	Siemens	6ES7 215-1HG40-0XB0	\$523.55	6ES7 215-1HG40-0XB0	\$523.55	6ES7 215-1HG40-0XB0
1	Communication Module RS485	Siemens	6ES7 241-1CH30-1XB0	\$86.95	6ES7 241-1CH30-1XB0	\$86.95	6ES7 241-1CH30-1XB0
1	Relay Output Module 16 Point	Siemens	6ES7 222-1HH32-0XB0	\$156.00	6ES7 222-1HH32-0XB0	\$156.00	6ES7 222-1HH32-0XB0
2	Transmitter	Dwyer	616KD-06-V	\$140.00	616KD-06-V	\$140.00	616KD-06-V
1	DC power supply	IDEC	PSSR-VF24	\$53.05	PSSR-VF24	\$53.05	PSSR-VF24
1	Ventilation kit / AC Unit	Hoffman / Pfannenberg	HF0516414	\$126.54	HF0516414	\$126.54	HF0516414
1	Exhaust kit	Hoffman	HG0500404	\$35.59	HG0500404	\$35.59	HG0500404
2	NEMA 4 Fan/Grille Shroud	Hoffman	HH05MS61004	\$417.18	HH05MS61004	\$417.18	HH05MS61004
1	NEMA 4 HMI Cover	TBD	TBD	\$150.00	TBD	\$150.00	TBD
1 Lot	Misc. supplies, wireway	Misc.	Misc.	\$150.00	Misc.	\$150.00	Misc.

**Service calls**

# Service calls

- Service line phone number: (717) 335-4899
- Customer Support business cards. **Hand them out!!**
- Service line email: [service@dentechindustrial.com](mailto:service@dentechindustrial.com)
- New ticketing system in development
- Required info for service ticket and why it matters.

# Service calls

- What is an emergency?
  - System is down
  - Customer can expect a return call within 1 hour.
- What is not an emergency?
  - Planned work
  - Start-up support
  - Customer can expect a return call within 4 hours.

**New cell modems**

# New cell modems

- Cell modem jobs will run through Service Dept.
- New policy/contract (rolling out early May)

# New cell modems

- Research and development
  - Reviewed 25+ options
  - Powerful router
  - Custom enclosure/build
- New hardware
  - Better signal & faster connection
  - Simple set up - Battery powered
  - Rugged

# New cell modems

- **Benefits of VPN Technology**
  - Can connect to any hardware
  - Secure
  - Easier/faster connection for our team
- **Benefits to Our Customers**
  - Increased troubleshooting capabilities
    - Feedback speed
    - Faster downloads of changes/updates
  - Easier Set-Up
  - Better Coverage



# Lead times and purchasing process

# Lead times and purchasing process

- Part lead times
- Purchasing process
- Challenges with automation – non-standard components
  - Example: Using Allen-Bradley in control panels >> more time to program >> more expensive
- Cost of expediting parts or materials

Questions?