SPECIALIZED INDUSTRY SOLUTIONS

70

SE

Company History and Overview

- SIS started in 2006 based on a localized need for specialized and innovative machines in the Upper Cumberland area. With our success, SIS has equipment in production throughout the Southeast and Mexico.
- Project Size Ranges: \$5K to \$800K
- Average Project Size: \$50K to \$75K
- Typical Project Delivery: ranges from 8-10 to 24-26 weeks
- Types of products assembled/tested by SIS machines include:

Automotive:Consumer Products:Fuel rails, injectors, and pumpsIllumination componentsEngine covers, pistons, and blocksWatercomponentsheaterStarters, alternators, ECU modules Pill bottlesFiltration devicesPaper productsWindshieldsBall studs and control arms

Company Profile

<u>Sales</u>

2008 \$2.1M, 2009 \$900K, 2010 \$1.7M, 2011 \$3.1M YTD

- 9500 sq ft (2,000 office space)
- (12) Full-Time Team Members
- (3) Milling Machines
- (1) Lathe



- (2) MIG/TIG Welding & Plasma Cutting Station
- (4) Fabrication and Cutting Machines
- (1) Custom Electrical Cabinet Build Area
- (2) Assembly Bays (allows for information containment)
- (2) Loading and Unloading Truck Docks

Design and Build

- Fully automated assembly/test lines
- Indexing dial machines
- Palletized conveyor systems
- Robotic assembly cells
- Multiple operational assembly/test stations
- Simple operation assembly/test stations
- Simple material handling conveyors
- Fixtures/tooling

Engineering Design Tools

- Solid Works 2010 Mechanical Design
- AutoCad 2004 Electrical Design
- Microsoft Office Suite Excel, PowerPoint, Publisher, Outlook, Word
- Microsoft Project Manager
- RSLogix 5, 500, 5000 Allen-Bradley PLC's
- CX1 Integrator Omron PLC's and Panels
- Various HMI Programming Software
- Various Robot/Vision Programming Software

SolidWorks – Mechanical Design



Back

AutoCad – Electrical Design



Robotic Part Handling and Servo Pressing





Robotic Assembly Station





Plastic Part Assembly Fixture



Servo Driven Tote Palletizer & Piston Unload



Tote loaded with pistons is unloaded utilizing servo driven components and a vision system.



Robotic De-Flashing





Casting is loaded into fixture then the robot moves the brush over the casting to remove excess flashing.

Lubricant Application



Leak Tester





Casting is loaded into fixture and clamped into position. The casting is then pressure tested.

Engine Block Wash Station





After machining the engine block is loaded into position. The block is rotated as coolant is blown away.

Electrical Design

- Power distribution layouts
- I/O schematics
- Panel layouts
- Safety circuits
- PLC programming
- Interface panel programming

Electrical Design

- Electrical Distribution Panel Build/Layout and Design
- Motor Control Panel Build/Layout and Design
- Electrical Cabinet Panel Build/Layout and Design









Name Brand Components



- Omron PLC/HMI/Sensors/Safety
- Allen-Bradley –PLC/HMI/Servo/Safety Components
- Proface HMI Screens
- Keyence Vision/Sensors/Barcode Readers/Safety Products
- Pilz and Allen-Bradley Safety PLCs
- Promess and FEC-Servo Press Technology
- CTS and ATEK- Leak Testers
- Cognex Vision/Bar Code Readers
- Motoman- Robots and Positioners
- IAI-Actuators and SCARA Robots
- Camco-Positioners
- Bosch-Palletized Systems, Screw Drivers, Servo Motors
- Hytrol-Conveyors
- Rivet Forming-Bal-Tec, Orbit Form, and VSI_
- Altas Copco, GSE, and CP Screw Driving
- Yaskawa and Allen-Bradley -Servo Components
- Banner-Safety Products
- Domino-Ink Jet/Label Printers/Laser Printers
- Telesis-Contact Markers
- Kistler-Sensors
- Schmidt and BTM-Pneumatic Presses



Project Documentation

- Proposal and concept drawing
- Project schedule
- 3D mechanical assembly and part models
- Dimensional mechanical drawings
- Electrical drawings
- PLC and HMI programs
- Operational sequence
- Bills of materials
- Spare parts lists
- Purchased component literature
- Preventative maintenance schedule

Project Milestones

- Project kick-off meeting
- Preliminary mechanical design review
- Final mechanical and electrical design review
- Equipment demonstration prior to shipment
- Installation
- Equipment demonstration after install

1 2 1 1 1 2 1 1 2 1 2 1 2 1 2 1 2 1 2 1	JCI #180 SPIN RIVET STATION RECEIVE P.O RECEIVE MODELS, PRINTS & SAMPLE PARTS RECEIVE MODELS, PRINTS & SAMPLE PARTS RECEIVE MODELS, PRINTS & SAMPLE PARTS RECEIVE SAMPLE FOR CORA INTERNAL RECORPT MEETING MECHANICAL DESIGN DESIGN REVIEW CONTROLS DES GN GOREN LONG LEAD ITEMS PURCHASED COMPONENT DELWERY DETAIL MECHANICAL DESIGN METAL FARICATION & METAL TREATMENT CONTROLS PROGRAMMING CONTROL PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WIRING MANUAL PART BUILD / PARTIAL POWER ON	105 daya 1 day 1 day 1 day 1 day 1 day 1 day 1 day 8 days 8 days 5 days 5 days 6 days 6 days 1 day 10 days 9 days 1 days	Man 9/25/08 Man 9/25/08 Man 9/25/08 Man 9/25/08 Man 10/13/08 Tue 9/26/08 Man 10/27/08 Thu 10/27/08 Thu 10/27/08 Thu 10/27/08 Thu 10/25/08 Thu 11/5/08 Thu 11/27/08 Fri 12/5/08 Wed 12/15/08	Fri 2/20/09 Man 8/29/08 Man 8/29/08 Man 10/13/08 Tue 9/20/08 Wed 10/1/08 Fri 10/24/08 Man 10/27/08 Wed 10/29/08 Wed 11/26/08 Wed 11/26/08 Thu 11/26/08 Wed 12/3/08 Thu 12/4/08 Fri 12/12/08	3 5 5 Na;han 7 Na;han/RonKim Na;han Na;han 12 Whit/Raymond/Tracy/1 14 Chardler	20 14	
2	RECEIVE P.O RECEIVE P.O RECEIVE MODELS, PRINTS & SAMPLE PARTS NETERNAL KICK-OFF MEETING CUSTOMER KICK-OFF MEETING MECHANICAL DESIGN MECHANICAL DESIGN DESIGN REVIEW CONTROLS DES GN GREER LONG LEAD ITEMS PURCHASED COMPONENT DELINERY DETAIL MECHANICAL DESIGN METAL FABRICATION & METAL TREATMENT (CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING STATICN ASSEMBLY & WRING MANUAL ARAT BUILD I PARTIAL POWER ON	1 day 1 day 1 day 1 day 1 day 1 day 1 day 8 days 1 day 20 days 5 days 5 days 6 days 6 days 1 day 1 day 20 days 5 days 6 days 7 days	Man 8/25/08 Man 8/25/08 Man 10/13/08 Tue 5/30/08 Wed 10/12/08 Thu 10/2/08 Thu 10/27/08 Tue 10/25/08 Wed 10/25/08 Thu 10/30/08 Thu 10/30/08 Thu 11/5/08 Fri 12/5/08 Wed 12/10/08	Man 8/29/08 Man 10/13/08 Man 10/13/08 Tue 9/20/05 Wed 10/1/08 Man 10/24/08 Man 10/27/08 Thu 11/6/08 Wed 11/26/08 Wed 11/26/08 Thu 12/4/08 Thu 12/4/08 Wed 12/10/08	3 5 Narihan 7 Ron Narihan/Ron/Kim 10 Vendors Narihan 12 Wihi/Raymond/Tracy/ 14 Ron 14 Ron		an a
3 2 4 2 5 6 7 8 9 10 10 2 13 14 15 15 16 2 17 2 18 3 20 3	RECEIVE MODELS, PENTER & SAMPLE PARTS HEPDEVE SAMPLE PERGERAN INTERNAL KICK-OFF MEETING CUSTOMER KICK-OFF MEETING MECHANICAL DESIGN DESIGN REVIEW CONTROLS DESIGN ORDER LONG LEAD ITEMS PURCHASED COMPONENT DELINERY DETAIL MECHANICAL DESIGN METAL FABRICATION & METAL TREATMENT CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING STATION ASSEMBLY & WRING STATION ASSEMBLY & WRING STATION ASSEMBLY & WRING	1 day 1 day 1 day 1 day 1 day 1 day 8 days 1 day 20 days 5 days 6 da	Man 9/25/08 Man 10/13/08 Tue 9/30/08 Thu 10/27/08 Thu 10/27/08 Thu 10/27/08 Thu 10/27/08 Thu 10/25/08 Thu 10/30/08 Thu 10/30/08 Thu 11/57/08 Fri 12/5/08 Wed 12/15/08	Man 8/29/08 Man 10/13/08 Tue 9/30/08 / Wed 10/1/08 / Man 10/27/08 Thu 11/8/08 / Wed 10/29/08 Wed 11/5/08 Wed 11/5/08 Wed 12/3/08 Thu 12/4/08 Wed 12/3/08	5 Nathan 7 Nathan/RonKim 10 Verdore Nathan/RonKim Nathan 11 Ron 11 Ron	-	0 - March
4 m 5 6 7 8 9 9 10 m 11 12 13 13 14 15 16 14 17 18 19 19 20 20 21 21 21 21 21 21 21 21 21 21 21 21 21 2	HECHUP SAMPLE FORGRAM INTERNAL KICK-OFF MEETING CUSTOMER KICK-OFF MEETING MECHANICAL DESIGN DESIGN REVIEW CONTROLS DES GN FURCHASED COMPONENT DELIVERY DETAIL MECHANICAL DESIGN METAL FABRICATION & METAL TREATMENT CONTROL PARCATION & METAL TREATMENT CONTROLS PROGRAMMING CONTROL PARE. BUILD DE-BUILD PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WEING MANIAL ARAT EUILD / PARTIAL PCWER ON	1 day 1 day 1 day 17 days 1 day 8 days 1 day 20 days 5 days 5 days 5 days 5 days 5 days 1 day 10 days 5 days 5 days 5 days 5 days	Mon 10/13/08 Tue 9/30/08 Wed 10/1/08 Thu 10/2/08 Mon 10/27/08 Tue 10/26/08 Thu 10/26/08 Thu 10/30/08 Thu 11/9/08 Fin 11/9/08 Fin 12/5/08 Wed 12/10/08 Man 12/15/08	Man 10/13/08 Tue 8/30/05 Wed 10/1/08 Fn 10/24/08 Mon 10/27/08 Thu 11/8/08 Wed 11/26/08 Wed 11/26/08 Wed 12/3/08 Thu 12/4/08 Fn 12/12/08 Wed 12/10/08	8 5 Na:han 7 Ratu Na:han Na:han Na:han 1 Ron 11 Ron 14 Chardisr 20		
5 6 7 8 9 10 11 12 13 14 15 16 16 18 19 18 20 23	INTERAL KICK-OFF MEETING CUSTOMER KICK-OFF MEETING MECHANICAL DESIGN BESIGN REVIEW CONTROLS DESIGN GROEN LONG LEAD ITEMS PURCHASED COMPONENT DELIVERY DETAIL MECHANICAL DESIGN METAL FABRICATION & METAL TREATMENT CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING CONTROLS PROGRAMMING STATICN ASSEMBLY & WRING STATICN ASSEMBLY & WRING	1 day 1 day 1 day 1 days 1 day 8 days 5 days 5 days 6 days 6 days 1 day 1 day	Tue 9/30/08 Wed 10/1/08 Thu 10/27/08 Mon 10/27/08 Thu 10/27/08 Thu 10/29/08 Thu 10/30/08 Thu 11/27/08 Thu 11/27/08 Fhi 11/27/08 Wed 12/10/08 Wed 12/10/08	Tue 5/30/05 (Wed 107/705 P Fri 10/24/05 P Mon 10/27/05 T Thu 11/8/06 P Wed 10/29/05 Wed 11/26/06 Wed 11/26/06 Wed 11/26/06 Thu 12/4/06 Thu 12/4/06 Thu 12/4/06 Wed 12/10/05 Wed 12/10/05 Pri 12/12/06 Pri 12/12/12/06 Pri 12/12/12/12/12/12/12/12/12/12/12/12/12/1	3 5 5 8 Nathan 9 Ron Nathan 10 Vendors Nathan 12 Wh/Raymond/Tracy/ 11 Ron 14 Chandlor		******
6 7 7 8 9 10 11 12 13 14 15 16 17 18 19 19 20 31	CUSTOMER KICK-OFF MEETING MECHANICAL DESIGN DESIGN REVEW CONTROLS DES GN ORDER LONG LEAD ITEMS PURCHASED COMPONENT DELIVERY DETAIL MECHANICAL DESIGN METAL FARICATION & METAL TREATMENT (CONTROL PARICATION & METAL TREATMENT CONTROL PARICATION & METAL TREATMENT DE-BUG PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WIRING MANUAL PART EUILD / PARTIAL POWER ON	1 day 1 day 1 day 8 days 1 day 20 days 5 days 5 days 6 days 6 days 1 day 10 days 1 day 10 days 5 days 7	Viad 101/26 Thu 1012/26 Mion 10127/26 Tile 10/29/26 Wed 10129/26 Thu 10129/26 Thu 10129/26 Thu 10129/26 Thu 11127/26 Fri 1219/26 Wed 121/10/26 Wed 121/10/26	Wed 10/1/08 / Fri 10/24/08 / Mon 10/27/08 / Thu 11/8/08 / Wed 10/29/08 / Wed 11/26/08 / Wed 12/8/08 / Thu 12/4/09 / Fri 12/12/08 / Wed 12/10/08	5 Nathan 7 8 Ron Nathan/Ron/Kim 10 Vendors Nathan 12 Whit/Raymond/Tracy/ 11 Ron 14 Chandkar	-	-*
7 8 9 10 11 12 13 14 15 16 14 15 18 19 20	NECHANICAL DESIGN DESIGN REVIEW CONTROLS DESIGN GROEN LONG LEAD ITEMS PURCHASED COMPONENT DELIVERY DECALE DECIMPONENT DESIGN METAL FABRICATION & METAL TREATMENT (CONTROL PARE. BUILD DESIGN PARE. BUILD DESIGN PARE. BUILD STATION ASSEMBLY & WRING MANUAL PART BUILD (PARTAL POWER ON	17 days 1 day 8 days 1 day 20 days 5 days 5 days 5 days 1 day 10 days 5 days 1 day	Thu 10/27/28 Mon 10/27/28 Tiue 10/28/28 Wed 10/29/28 Thu 10/30/28 Thu 10/30/28 Thu 11/8/28 Thu 11/27/28 Fri 12/5/28 Wed 12/10/28 Mon 12/15/28	Fri 10/24/08 6 Mon 10/27/08 7 Thu 11/8/08 6 Wed 10/29/08 Wed 11/26/08 Wed 11/26/08 Wed 12/3/08 1 Thu 12/4/08 Fn 12/12/08 Wed 12/10/08	 Na:han Ron Na:han/Ron/Kim Vendors Na:han Wih/Raymond/Tracy/* Wih/Raymond/Tracy/* I Ron Koholker 	-	2
8 9 10 11 12 13 14 15 16 17 18 19 20 23	DESIGN REVIEW CONTROLS DES GN GRERE LONG LEAD ITEMS PURCINASED COMPONENT DELIVERY DETALL MECHANICAL DESIGN METAL FABRICATION & METAL TREATMENT CONTROLS PROGRAMMING CONTROL PANE. BUILD DE-BUIG PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WIRING MANUAL PART BUILD / PARTIAL POWER ON	1 day 8 days 1 day 20 days 5 days 6 days 6 days 1 day 10 days	Mon 10/27/08 Tue 10/28/08 Wed 10/29/08 Thu 10/30/08 Thu 10/30/08 Thu 11/8/08 Thu 11/27/08 Fri 12/6/08 Wed 12/10/08 Mon 12/15/08	Mon 10/27/08 / Thu 11/8/08 / Wed 10/29/08 Wed 11/26/08 / Wed 11/26/08 Wed 12/3/08 / Thu 12/4/08 En 12/12/08 Wed 12/10/08	7 Nathan/Ron/Kim Nathan/Ron/Kim Nathan Nathan 12 Whit/Raymond/Tracy/ 11 Ron 14 Chandler	-	
9 10 11 12 13 14 15 16 17 18 19 19 20 21 21 21 21 21 21 21 21 21 21	CONTOOLS DES GN GREER LONG LEAD ITEMS FURCHASED COMPONENT DELINE RY DETAIL MECHANICAL DESIGN METAL FABRICATION & METAL TREATMENT (CONTROL PANEL SULL) DEBUG PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WRING MANUAL PART BUILD I PARTIAL POWER ON	8 days 1 day 20 days 5 days 6 days 6 days 1 day 10 days 5 days	Tue 10/28/08 Wed 10/29/08 Thu 10/30/08 Thu 10/30/08 Thu 11/8/08 Thu 11/27/08 Fri 12/5/08 Wed 12/10/08 Man 12/15/08	Thu 11/8/08/5 Wed 10/29/08 Wed 11/26/08 Wed 11/26/08 Wed 12/3/08 Thu 12/4/08 Fn 12/12/08 Wed 12/10/08	8 Ron Nathan/Ron/Kim Vendors Narhan 12 Whit/Faymond/Tracy/ 11 Ron 14 Chandler	-	
10 m 11 12 m 13 14 15 16 m 16 m 17 m 18 m 19 m 20 m 20 m	ORDER LONG LEAD ITEMS PURCINGED COMPONENT DELIVERY EDTAL, MICHANICAL DESIGN METAL, FABRICATION & MIETAL, TREATMENT CONTROLS PROGRAMMING CONTROL PANE, BUILD DE-BUG PARE, BUILD DE-BUG PARES TO ARRIVE AT SIS STATION ASSEMBLY & WRING MANUAL PART BUILD / PARTIAL POWER ON	1 day 20 days 5 days 20 days 6 days 6 days 1 day 10 days	Wed 10/25/08 Thu 10/30/08 Thu 10/30/08 Thu 11/6/08 Thu 11/27/08 Fri 12/5/08 Wed 12/10/08 Man 12/15/08	Wed 10/29/08 Wed 11/26/08 Wed 11/26/08 Wed 12/3/08 Thu 12/4/08 Fn 12/12/08 Wed 12/10/08	Na:han/Ron/Kim Vendors Nachan 2 Whit/Raymond/Tracy/ 1 Ron 4 Chandlar		
11 12 13 14 15 16 17 18 19 20 21 21 21 21 21 21 21 21 21 21	PURCHASED COMPONENT DELIVERY DETAIL MICCHARICA DESIGN METAL FABRICATION & MIETAL TREATMENT CONTROLS PROGRAMMING CONTROL PARE. BUILD DE-BUILD PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WIRING MANUAL FART BUILD / PARTIAL POWER ON	20 days 5 days 20 days 6 days 6 days 1 day 10 days	Thu 10/30/08 Thu 10/30/08 Thu 11/8/08 Thu 11/27/08 Fri 12/6/08 Wed 12/10/08 Mag 12/15/08	Wed 11/26/08 1 Wed 11/5/08 Wed 12/3/08 1 Thu 12/4/08 1 Fn 12/12/08 1 Wed 12/10/08	10 Vendors Nathan 12 Whit/Raymond/Tracy/ 11 Ron 14 Chandler		
12 m 13 14 15 16 m 17 m 18 m 19 m 20 21	DETAIL MECHANICAL DESIGN METAL FABRICATION & METAL TREATMENT (CONTROLS PROGRAMMING CONTROL PARE. BUILD DE-BUE TATAT TO ARRIVE AT SIS STATION ASSEMBLY & WRING MANUAL PART BUILD / PARTAL POWER ON	5 days 20 days 6 days 5 days 1 day 10 days	Thu 10/30/08 Thu 11/8/08 Thu 11/27/08 Fri 12/6/08 Wed 12/10/08 Man 12/15/08	Wed 11/5/08 Wed 12/3/08 Thu 12/4/08 Fn 12/12/08 Wed 12/10/08	Nathan 12 Whit/Raymond/Tracy/ 11 Ron 14 Chandler		
13 14 15 16 17 18 19 20 21	METAL FABRICATION & METAL TREATMENT CONTROLS PROGRAMMING CONTROL PANE. BUILD DE-BUG PARTS TO ARRIVE AT SIS STATICH ASSEMBLY & WIRING MANUAL PART BUILD / PARTIAL POWER ON	20 days 6 days 6 days 1 day 10 days	Thu 11/8/08 Thu 11/27/08 Fri 12/5/08 Wed 12/10/08 Man 12/15/08	Wed 12/3/D8 1 Thu 12/4/08 1 Fn 12/12/08 1 Wed 12/10/08	12 Whit/Raymond/Tracy/ 11 Ron 14 Chandler		
14 15 16 17 18 19 20 20	CONTROLS PROGRAMMING CONTROL PANE, BUILD DE-BUG PARTS TO ARRIVE AT SIS STATICN ASSEMBLY & WRING MANUAL PART BUILD / PARTIAL POWER ON	6 days 6 days 1 day 10 days	Thu 11/27/08 Fri 12/5/08 Wed 12/10/08 Man 12/15/08	Thu 12/4/08 1 Fri 12/12/08 1 Wed 12/10/08	11 Ron 14 Chandler		
15 16 17 18 19 20 20	CONTROL PANE_ BUILD DE-BUG PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WRING MANUAL FART BUILD / PARTAL POWER ON	6 days 1 day 10 days	Fri 12/5/08 Wed 12/10/08 Mon 12/15/08	Fn 12/12/08 1 Wed 12/10/08	14 Chandier		
16 17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	DE-BUG PARTS TO ARRIVE AT SIS STATION ASSEMBLY & WRING MANUAL PART BUILD / PARTIAL POWER ON	1 day 10 days	Wed 12/10/08 Man 12/15/08	Wed 12/10/08	10	1	
17 18 19 19 19 19 19 19 19 19 19 19 19 19 19	STATION ASSEMBLY & WIRING MANUAL PART BUILD / PARTIAL POWER ON	10 days	Mon 12/15/08	- 175 CONTRACTOR	all a		
18 18 19 19 20	MANUAL PART BUILD / PARTIAL POWER ON	1 /10/		Fri 12/26/08	Raymond'Jake/Lynr	1	
19 19 20			Wed 117/09	Wed 1/7/09	JCI / SIS		
20	IFOWER ON	1 day	Tue 1/20/09	Tue 1/20/09			
95	COMPLETE ASSEMBLY & WIRING	4 days	Wed 1/21/09	Mon 1/26/09 1	19 Raymond'Lynn	1	
	CUSTOMER RUN-OFF	1 day	Tue 1/27/09	Tue 1/27/09 2	20 JC / 5IS	1	
22	CHANGES / WODIFICATIONS AFTER RUN-OFF	8 dars	Wed 1/28/09	Fri 2/6/09 2	21 813		
23	SHIP TO JCI	Zdaws	Mon 2/9/09	Tuo 2/10/09 2	72		
24	INSTALL TION AT JCL	7 days	Wed 2/11/09	Thu 2/12/09	E Bon		
Project: JCI-1 Date: Mon 12/2	2:08 Spir,		Milastone Summary	¢	External Tasi	ks stone 4	

Contact Information



SPECIALIZED INDUSTRY SOLUTIONS, LLC

621 East 15th Street, Suite A Cookeville, TN 38501 www.specializedindustry.com

Phone: 931-520-1405 Fax: 931-525-1451