

**Simplifying Processes...
Standardizing Excellence.**

Check-list of Functionality For Line-side Labeling & Automating Processes

Do you need to improve line-side processes to ensure parts are accurately identified, counted, packed, labeled and traced? Do you need real-time visibility of operations, and more individual accountability?

SPEDE Automated Solutions standardize and control line-side processes, to ensure consistent accurate results -- every day, on every shift. Our solutions interface to PLCs, vision sensors, weigh scales, touchscreens, USB cameras and other technologies to verify line-side processes in real-time and alert the operator when an error is being made.

Our solutions also capture and display real-time production counts and machine run data, to enable easy monitoring of production at line-side, create traceability records, and automatically update host ERP, EDI and OEE systems.

Line-side Labeling Uses PLCs, Scales, Touch Screens, Vision

A fully automated labeling solution eliminates human touch points in the labeling process and provides the highest level of control and error-proofing.

The SPEDE automated line-side labeling solutions print a container label automatically when a pack count is reached, eliminating the manual tasks of identifying and counting parts, differentiating between good and scrap parts, and making sure the container label matches the container's part number and quantity.

Use the Check-list Below as a Starting Point

This check-list can help you identify and prioritize the functionality you need at each production line. Our solutions can be tailored to fit the procedures, equipment and data requirements of each line. You can expand functionality in the future as your needs require.

Which Solution(s) Could Improve your Labeling Operation?

- Use your production machine's PLC to count good and scrap parts; print a container label when the PLC indicates a pack count of good parts is reached
- Use a Weigh/Count Scale to determine when the container is full; automatically print a container label
- Use a Vision Sensor for part verification and scrap detection; optionally control the conveyor to divert suspect part
- Use a Vision Sensor to count good, scrap and serialized parts; print a container label when a pack count of good parts is reached
- Print a serialized label or use laser etching to serialize each individual Part
- Use vision or 2D reader to read each Part's serial number for accurate counts and serialized parts traceability
- Use a Touchscreen PC at line-side to display real-time counts, enable adjustments for rejects /scrap and print container labels
- Use a power cart and WiFi printer as a mobile print station.
- Export Production Counts, Machine Data and Container Label Data to your existing ERP/EDI /Shipping System



PLC-directed



Weigh Scale Interface



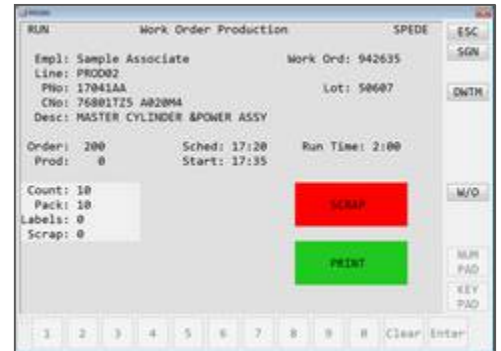
Vision Sensor

Extended Line-side Functionality – Beyond Labeling

Extended Functionality offers additional benefits beyond labeling, such as real-time production visibility, accurate control of packing processes, serialized parts traceability, and compliance with Honda MPRs (Minimal Process Requirements). These options can be added at any time to improve the quality, accuracy and efficiency of your operations.

Real-time Production Data at Line-side

- Validation of Parts and/or Tools at Start-of-Run
- Validation of Parts at Kitting or Packing
- Real-time Machine Counts of pieces produced
- Actual Machine Counts vs. Targets
- Operator productivity (good parts, rejects, scrap)
- Alert/Report if Operator varies from standard processes
- Collect/Store PLC metrics for production machine in SQL DB for Operational Efficiency (OEE) reports
- Retain a detailed Individual Part History including any Rework history



Real-time Control of Partials

- Control of containers of Partials at End-of-Run / End-of-Shift / Break-times
- Control of leftover Partials after combining multiple Partials to make up a full pack
- Read a part serial number that is laser etched or barcoded on each part

Serialized Parts Traceability

- Print serialized barcode label for each part
- Use laser etching or other technology to serialize each individual Part
- Control serialized containers of Partials at End-of-Shift
- Maintain detailed Individual Part History including Re-work history
- Maintain the association of individual serialized parts to serialized container
- Maintain the association of serialized containers to a serialized pallet label
- Maintain the association of a serialized pallet to a unique customer shipper/RAN/ASN
- Maintain Part Traceability from a Customer backwards to the Shipper number / Pallet/ Container/ Machine/ Shift/ Operator
- Maintain Part Traceability backwards from a Production Machine to the Lot Numbers of Raw Materials used
- Maintain Part Traceability backwards from the Lot Numbers of Raw Materials used in production to the Supplier(s) of those Raw Materials
- Collect/Store Production Run Statistics in SQL DB for inquiries/reports

Part Nbr	Description	Run Nbr	Start	Stop	Elapsed	Scrap	Good	Containers
C729-103-0000	ACCORD M/T RADIATOR	000012001	08:03:22	12:01:10	03:57:48	11	200	40
C729-103-0000	ACCORD M/T RADIATOR	000012004	13:01:06	17:38:57	04:37:51	19	240	48
C729-103-0000	ACCORD M/T RADIATOR	000012007	18:20:07	23:30:45	05:10:38	9	260	52
					13:46:17	39	700	140
C729-101-0000	CIVIC M/T RADIATOR	000012012	07:58:26	12:10:00	04:11:34	13	180	36
C729-101-0000	CIVIC M/T RADIATOR	000012016	13:12:35	17:28:20	04:15:45	8	160	32
C729-101-0000	CIVIC M/T RADIATOR	000012017	19:00:05	23:40:10	04:40:05	11	205	41

Real-time Production Reports and Accountability

- Export production reporting data to ERP, inventory control and/or OEE systems.
 - Maintain Operator accountability (who made what, where, when, etc.).
 - Confirm / Report that each Operator is following your processes.
 - Collect/Store PLC metrics for production machine in SQL DB for OEE reports.
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If you would like to discuss your line-side requirements with a business analyst, please call us at **440.808.8888** or email your completed Check-list to: info@spede.com.

Your Name _____

Company _____

Job Function _____

Phone or Email: _____

Project Timeframe _____

Comments:

