

# Data Collection



## Define and execute data collection plans

### Overview

During manufacturing operations, there is a large amount of data that is generated. This data is very valuable, and it's required for the purposes of quality, traceability, monitoring, control, root-cause analysis, and continuous improvement. As an integral part of the Manufacturing Execution System (MES), all collected data is highly contextualized, thus enabling all sorts of correlations.

Data Collection allows predefined data collections to take place at certain processing points (e.g.: at Track-In or Track-Out) using context resolution. It also supports the capture of data at any time using an ad-hoc data collection. Data can be collected manually or automatically via automation.

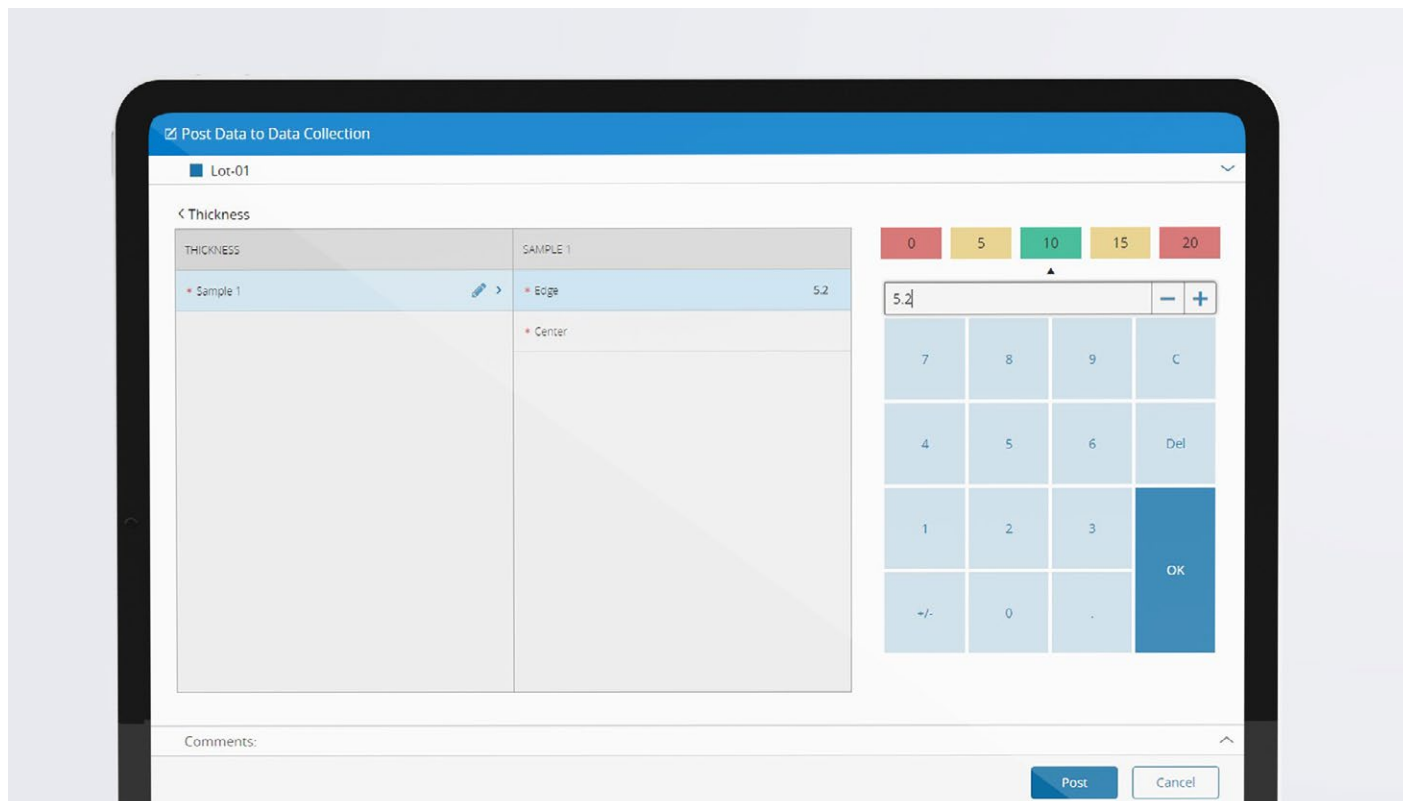


Figure 1 Data Collection screen example



**Critical**  
manufacturing 10.2

**Disclaimer** · The information contained in this document represents the current view of Critical Manufacturing on the issues discussed as of the date of publication. Because Critical Manufacturing must respond to changing market conditions, it should not be interpreted to be a commitment on the part of Critical Manufacturing, and Critical Manufacturing cannot guarantee the accuracy of any information presented after the date of publication. This document is for informational purposes only. Critical Manufacturing makes no warranties, express, implied or statutory, as to the information herein contained.

contact@criticalmanufacturing.com · www.criticalmanufacturing.com

## Key Features

- Support for qualitative and quantitative parameters, with validation tables and ranges for the acceptable data values.
- Support for to capture data over a long period of time (long running) or in one snapshot (immediate).
- Support for optional and mandatory parameters, with flexible number of samples and readings.
- Support for parameter groups and calculated parameters.
- Support for flexible data collection limits with different validation ranges and different parameter limits.
- Support for manual and automatic data collection.
- Integrated with Material Tracking, Resource Tracking, Maintenance Management and SPC.
- Integration with Exception Management, with the capability of opening a Protocol Instance automatically in case that there is a limit violation.

## Benefits

- Increased operational efficiency
- Reduction in the opportunity for errors
- Improved process control
- Faster speed of learning
- Enabler for root-cause analysis, data analysis and continuous improvement

The screenshot displays the 'Data Collection' interface within a software application. The top navigation bar includes 'Dispatch and Track-In Material' and 'RESOURCE' / 'DATA COLLECTION' tabs. The breadcrumb trail shows 'MDLOT-2020001 (Queued) / MOSRM8HP (MOSRM8HQ Product) / Inspection / 100 Units'. The main area is titled 'Data Collection' and contains a table with the following data:

DATA COLLECTION	WIDTH (MM)	SAMPLE 1
* Tensile Strength (Pascals)	* Sample 1	* Reading 1
* Width (mm)		* Reading 2
* Length (mm)		* Reading 3

Values for the readings are: 104 mm (Reading 1), 106 mm (Reading 2), and 105 mm (Reading 3). A numeric keypad overlay is shown on the right, with the value '105' entered in the input field. The keypad includes digits 0-9, '+/-', a decimal point, and 'OK' and 'Del' buttons. A visual gauge above the keypad shows a range from 90 to 105 mm, with the current value of 105 mm highlighted in green.

At the bottom of the interface, there is a 'Comments' field and three buttons: 'Cancel', '< Back', and 'Track-In'.

Figure 2 Data Collection integration with track-in