

# HARDY

## PROCESS SOLUTIONS

Measurement ■ Automation ■ Productivity

A Roper Technologies Company

Your Weighing Partner for **Process and Packaging**



Easiest to Use | Highest Performance | Lowest Total Cost

# OEM Trends & Challenges



For more than 100 years, Hardy has been helping OEMs and Machine Builders meet their customers' needs. We understand the specific requirements that OEMs have, and the challenges they face. Our OEM customers tell us they require solutions that help support their following three goals:

- **Software Productivity:** to maximize design optimization and code reuse; and to minimize engineering hours and their time to market.
- **Scalability, Information Integration & Multi-Discipline Control:** to drive design flexibility, machine scalability, safety risk avoidance, and machine energy savings.
- **Sustainable Platforms:** to ensure hardware scalability, simplified integration, machine performance, footprint reductions, and regulatory requirements.

Our industrial weighing solutions support the above goals and help OEMs deliver the lowest total cost to design, develop and deliver process & packaging equipment and skids. Our solutions boost your customers' overall equipment effectiveness (OEE), significantly reducing downtime by as much as 51% compared to other industrial weighing solutions. Hardy products are easy to integrate. They consistently, cost-effectively and safely help produce high-quality products.

Let us show you how we can help you meet your goals with weighing solutions that really work for OEMs and Machine Builders!

## Products Designed With OEMs in Mind



**HI 6200 Single Channel Weight Processor**

- Powerful Weight Processor
- Color touch-screen interface
- Ultra-compact design
- Fieldbus communications



**Hardy 6600 Multichannel Weight Processors**

- Up to 28 channels of weight on a single Ethernet Connection
- Low power consumption
- Fieldbus communication



**HI 1734-WS Weight Module for POINT I/O**

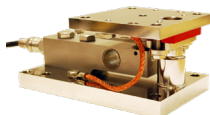
- Plug-in weight module
- Uses just 1 watt power
- Premier Integration with AOP, Faceplate with AOIs
- Ultra-compact



**HI 4050CW Checkweighing Bundle**

- High performance static or dynamic checkweighing
- Hardy C2<sup>®</sup> Load Cell(s)
- Junction box
- Check-Master Application

## Hardy Advantage<sup>®</sup> Load Cells & Scales with C2<sup>®</sup> Electronic Calibration



# Measure | Monitor | Control | Inspect

In almost every industry segment, raw materials and finished product need to be weighed multiple times in the manufacturing process. This is especially true in process manufacturing, which has the need for accurate inventory control, material feed and rate control in batching, filling and dispensing of finished product in packaging, and checkweighing for final product inspection. These are all areas in which Hardy excels and has the expertise and solutions to assist your team in reducing cost and increasing yield, while limiting downtime and achieving Overall Equipment Effectiveness (OEE).

**Our weighing solutions support processing skids and packaging equipment across all stages of manufacturing. Some examples are:**



**Loss in Weight/Gain  
in Weight Batch Control**



**Feeder Control**



**Filling & Dispensing**



**Hardy Casewigher for  
Product Inspection**



SILVER  
**Technology Partner**

A ROCKWELL AUTOMATION PARTNER

## Applications

- Filling/dispensing
- Batching/blending
- Check Weighing
- Bulk bag/IBC
- Draft control
- Loss-in-weight rate control
- Loss-in-rate weight control
- Level control
- Tank farm monitoring
- Force measurement

## Industries

- Food & Beverage
- Industrial Manufacturing
- Consumer Packaged Goods
- Mining & Minerals
- Metals
- Pharmaceutical & Biotech
- Chemical Processing

## Networks

- DeviceNet
- ControlNet
- Ethernet
- EtherNet/IP
- Remote I/O
- Profibus-DP
- Modbus RTU
- Modbus TCP
- Analog
- Serial



## We Provide OEM Solutions that Support Your Business



### Stock



#### Inventory Management Solutions

In stage one of the manufacturing process, your customers' must have reliable visibility to, and an accurate count of, all the raw materials in their manufacturing supply chain. This is the first step to ensure their process runs smoothly. Hardy's inventory weighing solutions deliver both at the least total cost to own, safely operate and maintain.

#### Types of Applications

- Vessel / Tank Weighing
- Inventory Control
- IBC Weighing
- Throughput Weighing

#### Hardy Solutions

Hardy HI 1734-WS Weigh Scale Module for POINT I/O



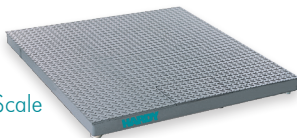
HI 2080-WS for Micro800

Hardy HI 6200 Single Channel Weight Processor



Hardy HI 6600 Modular Sensor System

Hardy Floor Scale



Hardy OneMount™ Advantage® Shear Beam



### Make



#### Batching & Blending

The second stage of the manufacturing process involves sequentially or simultaneously adding one or more ingredients into vessels by weight and/or rate, then discharging the batch (sum of all the ingredients) to a downstream process. Hardy's material feed solutions ensure the accuracy of the mix (batch or blend), delivering highly repeatable results and ensuring that your customers' have good quality control at the least total cost to own, safely operate and maintain.

#### Types of Applications

- Sequential Batching by Gain in Weight
- Blending by Loss in Weight
- Simultaneous Batching by Loss in Weight
- Loss in Weight Feeder Control

#### Hardy Solutions

Hardy HI 1734-WS Weigh Scale Module for POINT I/O

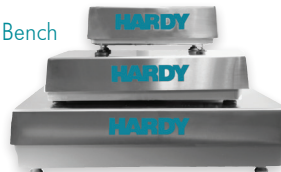


Hardy HI 6200 Single Channel Weight Processor



Hardy HI 4050 Weight Controller

Hardy Bench Scales



HI 6500 Weight Processor



# In Every Stage of Process & Packaging

Quality, Safety, Solutions, Savings



## Filling, Dispensing, Dosing

Your customers' packing lines need precise filling solutions (for gross weight applications), and/or dispensing solutions (for net weight applications) to control the very fast feeds needed to sustain the throughputs required as finished product is packed into containers. Weighing provides the best accuracy for this task, and the most repeatable result. Hardy's filling solutions (gain-in-weight) and dispensing solutions (loss-in-weight) deliver the best material feed results, at the least total cost to own, safely operate and maintain.

### Types of Applications

- Packing by Gain/Loss in Weight
- Piece/Portion Weighing
- IBC Dispensing
- Floor Scale

### Hardy Solutions

Hardy HI 1756-1DF/2DF  
Dispenser Fillers



Hardy HI 6200  
Single Channel  
Weight Processor



Hardy HI 1734-WS  
Weigh Scale for  
POINT I/O



Hardy Lift Deck  
Floor Scale



Hardy One Mount™ Beam  
Type, Low Capacity



## Product Inspection

The last step in the manufacturing process calls for filled containers to be reweighed to check proper filling, meet regulatory requirements, and ensure end user satisfaction. Hardy's static (manual or semi-automated weighments) or dynamic (automated in-motion weighments) Checkweighing solutions can be used for a wide variety of applications including verifying package weight, piece count, grading or sorting. Once again delivering your customers' with fast product inspection solutions, at the least total cost to own, safely operate and maintain.

### Types of Applications

- Static Checkweighing
- Bench Scale
- Dynamic Checkweighing
- Portable Scale

### Hardy Solutions

Hardy HI 6200  
Single Channel  
Weight Processor



HI 4050CW  
Checkweighing  
Bundle

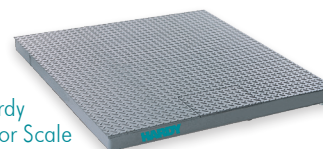


Hardy E-Scale IIoT-Ready  
Bench Scale



Single Point  
Load Cell

Hardy  
Floor Scale





# Solutions for all Types of OEM Customers

## Your Business Need:

Developing, testing and refining your process skids or machines can be a waste of time, money and resources. You realize you can't be an expert at everything. So how do you avoid the trap of spending hours and hours, trying to meet tough customer specifications, when you don't really have deep experience in the area of process weighing?

You partner with Hardy and leverage OUR expertise, experience and solutions. We can help you take a shortcut to the best solution and reduce both your development cost and time to market. Getting it wrong has always been easy. Getting it right with Hardy is a far better option.



## Design, Develop & Deliver

### Less TIME to engineer, EASIER to implement, VERY scalable

- Choose from a variety of instruments, PLC plug-in modules and sensors, scalable to the economy of your machines.
- Use an open-architecture that delivers complete freedom of design and optimizable footprint.
- Deploy weight processors or weight controllers with in-built material feeds by weight, rate, or check weighing.
- Take advantage of validated integration tools, easy configuration and FREE phone support from experts in process weighing.

**OEM CUSTOMER VALUE**

"HARDY'S PROCESS WEIGHING SOLUTIONS SUPPORT THE LOWEST TOTAL COST TO ENGINEER - DESIGN, DEVELOP AND DELIVER, PROCESS EQUIPMENT & PROCESS SKIDS"

		<b>HARDY TOOLBOX</b>										<b>OEM VALUE</b>		
		Fast, Accurate calibrations (C2)		Semi-auto operator diagnostics (I1)		Vibration elimination (WAVE/SANER)		Predictive feed management (FEEDMASTER)		Remote product inspection (CHECKMASTER)				Auto save & copy of setup (SMM)
		> Safety	> Accuracy	> Quality	< Waste	> Quality	> Visibility	> Accuracy	< Time [1-2 hrs]	< Time [1-2 days]	< Time	> Easy		
<b>Software Productivity</b>	Reduce Hours to Engineer	•											• •	Reduces time to design/develop/deploy
	Design Optimization	•	•	•	•	•	•	•	•	•	•	•	• •	Reduces time to develop
	Time to Market	•			•	•	•	•	•	•	•			Reduces the time to deploy
	Code Re-Use				•	•			•	•				Reduces the time to develop
<b>Scalability, Integrated Information, Multi-Discipline Control (e.g. PID, Feed Forward, etc.)</b>	Design Flexibility				•	•							•	Expands the number of design possibilities
	Machine Scale								•	•				Multiple scales, weight capacities & resolutions
	Safety Risk Avoidance	•	•				•							Supports safety of people, product & production
	Machine Energy Savings													Micro800 and POINT I/O scale modules draw less than 1 watt of power
<b>Sustainable Platforms</b>	Scale in hardware													1 to many scales possible (plug-in-modules or instruments)
	Simplified integration				•	•	•	•	•	•	•	•	•	Reduces time to develop/deploy
	Machine performance	•	•	•	•	•								Reduces time to deploy/optimize/diagnose
	Footprint reductions													Small footprint instruments & sensors
	Meet Standards													Meets international standards for process weighing
	Secured IP													Reduces risk by supporting multiple levels of secure access
	Non-invasive upgrades								•	•				Supports machine uptime

# Tools to Increase Productivity



The Hardy Process Toolbox is a unique set of productivity tools that support industrial weighing functions. Each tool saves time, increases accuracy, improves efficiency or reduces risk in industrial weighing applications, while saving OEMs considerable development and systems integration time. Another key benefit is the ability to differentiate your product offering.

- ✓ **Accurate**
- ✓ **Stable**
- ✓ **Fast**
- ✓ **Flexible**
- ✓ **Easy**



## C2® - Calibrate Without Weights

The Hardy C2® Process Toolbox function provides quick and easy electronic calibration of a weighing system without the need for heavy test weights.



## WAVERSAVER® - Stabilize Noisy Weight Readings

Hardy's WAVERSAVER core technology eliminates the effects that surrounding vibration has on the scale weight signal, providing only true data for fast, accurate weight reading.



## WAVERSAVER+ - Increase Scale Resolution

Filters both external and internal noise under a static weight condition to go beyond the 1 in 10,000 limitation, providing repeatable weighing results the first time and every time.



## INTEGRATED TECHNICIAN® - Diagnostic Tools for Operators

Hardy's INTEGRATED TECHNICIAN (IT) core feature helps you troubleshoot your weighing system and diagnose problems from the front of the instrument or via the PLC.



## Embedded Web Server - Connect from Anywhere

Access your instrument from any computer browser. Use the embedded web server to set up all parameters from anywhere on the customers' Ethernet networks.



## Secure Memory Module - Safe Configuration Backups

Hardy's Secure Memory Module (SMM) uses a standard SD card or USB stick to automatically back up critical weighing system data, and allowing you or your customer to transfer it to another like controller in a few minutes. You can also use the card to easily back up weight controller data onto a PC.



## FEED-MASTER - Mitigate Feed Disturbances

Hardy's proprietary FEED-MASTER predictive/adaptive algorithm adapts for the flow variation in real time during every feed.



## CHECK-MASTER - Weigh Stationary or In-Motion Items or Finished Product

Hardy's CHECK MASTER is a set of software tools that support checkweighing functions and are part of every Hardy Checkweighing solution. A fully automated Checkweighing system is designed to weigh static items or automatically weigh in-motion items. The check weight controller then directs downstream diverter gates to route product based on weight.



# Proven Solutions

For more than 100 years, Hardy Process Solutions, headquartered in San Diego, California, has been providing weighing solutions for process control and packaging. With that, we have saved our customers thousands of production hours and millions of dollars. Our goal is to provide superior weighing equipment as an industrial scale company that stays on the pulse of innovations in the field. At Hardy, we pride ourselves on the ability to continuously provide superior product quality and excellent customer support, which enables our customers to achieve their process or packaging goals.

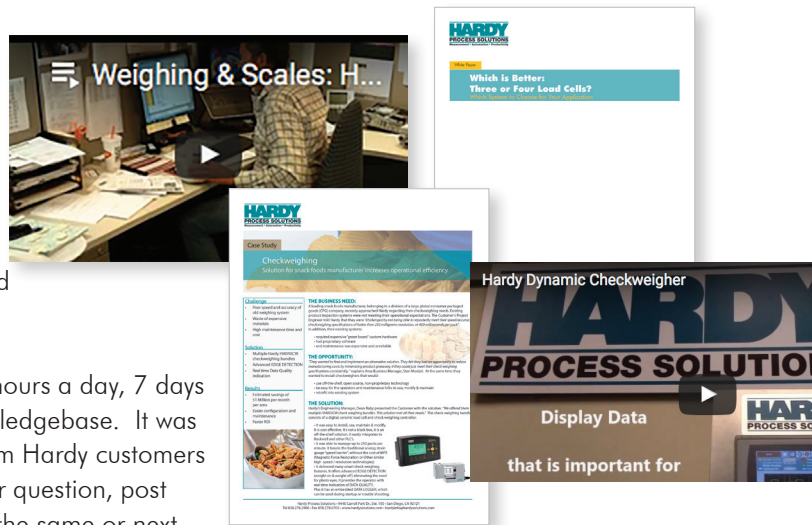


Hardy delivers high performance weighing solutions with the **LOWEST TOTAL COST** to own. We include Industry Leading Technology in all of our scales and instruments to make it **EASY** for you to install, integrate, and maintain. Powerful solutions that are easy to use is why your customers' can realize increased production efficiency.

## Instant Information

Our technical support team will not only help you to establish which type of weight measurement and control best suits your customer's application, but also will guide you on integration. The resulting solution is tailored to meet the business needs of your customer.

Your technical questions can be answered 24 hours a day, 7 days a week, 365 days a year from the online Knowledgebase. It was developed with real questions and answers from Hardy customers just like you. If you can't find the answer to your question, post your question and it typically will be answered the same or next business day.



Simply go to:

[www.hardysolutions.com/support-center/view](http://www.hardysolutions.com/support-center/view)



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