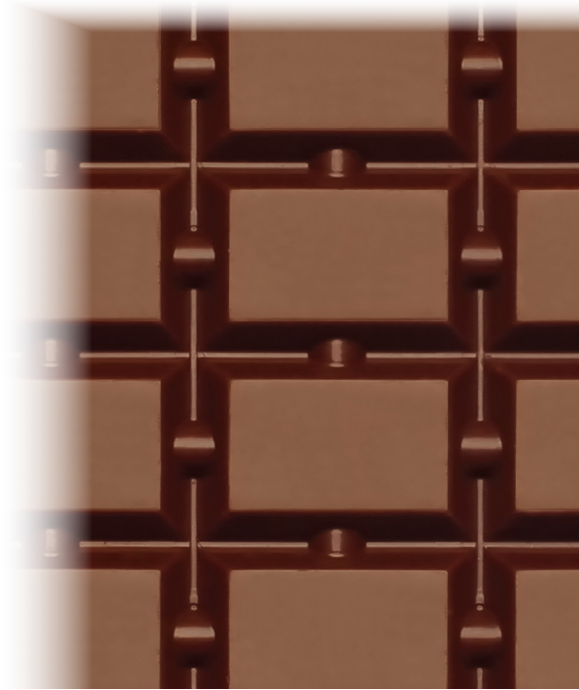


Your Weighing Partner in All Stages of **Chocolate Manufacturing**



Chocolate Processing Trends & Manufacturing Challenges



Food & Beverage Manufacturing

For nearly 100 years, Hardy has helped large Food Industry customers navigate market changes, increasing government regulations, consolidation and changing consumer preferences.

We understand the specific challenges CHOCOLATE manufacturers face, and we know that weighing is a crucial factor throughout the process – from grading and bagging cocoa beans to adding precise amounts of ingredients over a specific time, from pouring and packaging to weighing hulls for sale to secondary markets.

Our customers tell us they need:

- **More Flexibility**
- **Sustainable Quality**
- **Increased Throughput**
- **Easier Line Changeovers**
- **Rapid System Conversions**
- **Compliance of Multiple Regulations**

Hardy's industrial weighing solutions meet all of these challenges and more – at the lowest possible total cost. Our solutions also boost Overall Equipment Effectiveness (OEE) significantly by reducing downtime by as much as 51%*.

Hardy products are easy to integrate. They consistently, cost-effectively, and safely help produce high-quality products. Our weighing solutions can also assist you in complying with the FDA regulations and consumer satisfaction. Let us show you how we can help you meet your goals with weighing solutions that work for chocolate and other candy manufacturers!

* when compared to other industrial weighing solutions.

Companies We're Proud to Have Worked With Include:

- General Mills
- Kraft Heinz
- FritoLay
- Campbell Soup
- Pepsi
- Coca-Cola
- Conagra Foods
- Coors Miller
- Bimbo Bakeries
- Heinz
- JM Smucker
- Starbucks
- Flowers Foods

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 for the chocolate manufacturing process, which has the need for accurate inventory control, material feed and rate control in batch control, 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 chocolate processing in all stages and forms of the manufacturing process. Some examples are:



Bulk



Bars



Bon Bon / Balls



Buttons / Bites

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

Networks

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

We Provide Solutions that Support Your Business —



Stock



Inventory Management Solutions

In stage one of the manufacturing process, you must have reliable visibility to, and an accurate count of, all raw materials in your manufacturing supply chain. This is the first step to ensure your 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

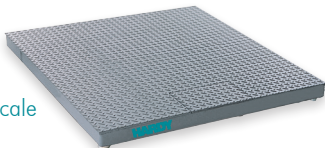
Hardy Solutions

Hardy HI 1769-WS/2WS
Plug In Weigh Modules



Hardy HI 6600 Modular Sensor System

Hardy Floor Scale



Hardy HI LPRC03 High Capacity Load Point



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 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 1756-FC Feeder Controller Module and HI 1756-2WS Weigh Scale Module



Hardy HI 4050 Weight Controller and HI 6500 Weight Processor



Hardy Bench Scales



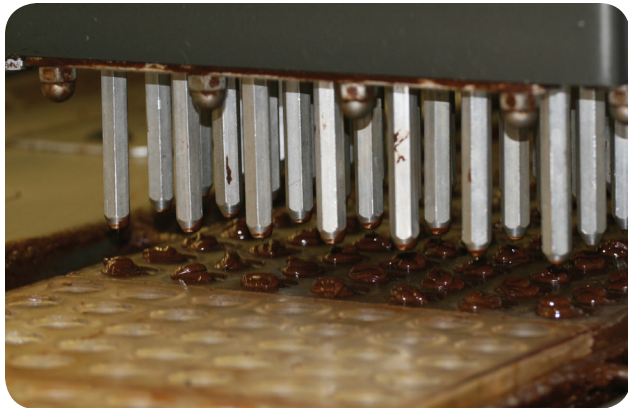
Hardy OneMount™ Advantage® Shear Beam



Food & Beverage
Manufacturing

In Every Stage of the Process

Quality, Safety, Solutions, Savings



Pack



Filling, Dispensing, Dosing

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 Filler and HI 2080-WS
Weigh
Scale

Hardy HI 3010 and
HI 3030 Weight & Rate
Controllers

Hardy Lift Deck
Floor Scale



Hardy HI LPRE05 Load Point



Ship



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 customer satisfaction. Hardy's checkweighing solutions static (manual or semi-automated weighments) or dynamic (automated in-motion weighments) can be used for a wide variety of applications including verifying package, weight, piece count, grading or sorting. Once again delivering 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

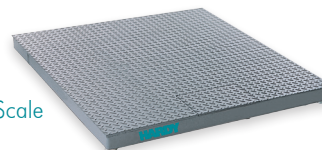
Hardy
HI 1769-WS
Weigh Scale
Module



Hardy Dynamic
Checkweigher Family



Hardy
Floor Scale



Hardy
HI SP6 Single
Point





Solutions for all Types of Customers

Food & Beverage Manufacturing

Your Business Need:

You've been looking to deploy a weighing solution to upgrade your manufacturing system. Perhaps you want to:

- Increase productivity
- Improve product quality
- Reduce costs
- Respond faster to your customer's needs

Hardy lowers the total cost to **OWN, DESIGN and INTEGRATE** almost any weighing application. Here's how!



Manufacturers

Own & Operate

Less **WASTE**, less **RISK**, more **PRODUCTIVITY**

- Simplify use and training with easy to use operator/maintenance interfaces.
- Increase measurement stability/resolution to reduce cycle times and increase throughput.
- Replace expensive, risky, time consuming traditional calibrations with fast, easy, safe, accurate electronic calibrations.
- Decrease scale downtime with operator and internet enabled tools to trouble shoot and diagnose your scales.



OEMs

Design, Develop & Deliver

Less **TIME** to engineering, **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.



System Integrators

Integrate

Less **TIME** to integrate & configure. **EASIER** to connect. **VERY** scalable.

- Choose from a range of scalable, intelligent Allen-Bradley modules and load cells that plug into the PLC backplane.
- Select from a wide range of field instruments, load cells and wired fieldbus communications.
- Use Rockwell validated integration tools- AOPs (Add-On-Profiles), EDS_AOPs or AOs to make setup and configuration easy.
- Deploy our Faceplates, reuse and repurpose your PLC code.

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 process 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 Ethernet network



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 to transfer it to another like controller in a few minutes. You can also use the card to easily back up your 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 check weighing functions and are part of every Hardy Check Weighing solution. A fully automated Check Weighing 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 nearly 100 years Hardy Process Solutions, headquartered in San Diego, California, has been providing innovative process control solutions for the food processing industry. 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 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 our customers realize increased production efficiency.

Instant Information

We offer instant access to videos, white papers, articles, case studies brochures, application notes, and more.



Simply go to:
www.hardysolutions.com/media-center/view



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