

A W O R L D O F S O L U T I O N S



Rail Car Loadout Systems

B E Y O N D W E I G H I N G T E C H N O L O G Y





The World Leader in Rail Car Loadout Systems

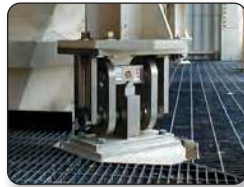
Kanawha Scales & Systems (KSS) is the leading manufacturer of high speed, high precision, batch weigh rail car loadout systems having supplied more than 225 systems throughout the world since the introduction of batch weighing technology in the late 1970s. KSS provides the experience, flexibility and state-of-the-art technology that can only be delivered by a company that has supplied more batch weigh loadout systems than any other supplier in the world. This experience brings peace of mind and

proven performance that no other loadout provider can offer. Clients who establish a relationship with KSS are assured of receiving an intricately planned and proven loadout system that offers confidence that their system, and the support they receive, will consistently exceed their expectations.

Key System Components

LOAD CELL WEIGHING MODULES

Our specially designed, self-aligning mounting arrangement utilizes double ended shear beam load cells in a parallel link suspension configuration with lifting provisions, assuring the highest weighing accuracy, as well as safe and fast serviceability.



CALIBRATION SYSTEM

Built in certified test weights, traceable to NIST and OIML weights and measures standards allow for fast and easy testing from the control panel and assure accurate weighing performance for every train.



CONTROL SYSTEM

Our in-house application experts can provide customized color graphics for the monitoring and control of the entire loadout operation. The integrated programmable logic controller can also monitor and control reclaim, blending and other associated systems from the loadout control room.



AUTOMATIC CAR IDENTIFICATION

Radio Frequency Identification (RFID) readers provide automatic recording of rail car serial numbers minimizing loading time and data entry errors.



CONTROL GATES

KSS has perfected truly dustless, low maintenance and easily serviceable double-bladed slide and clam shell control gates. Slide gates utilize UHMW guides, which do not require lubrication and frequent maintenance. Our multiple gate arrangement ensures the most accurate cut-off target weight possible.



LOADING CHUTE

Our unique traversing/telescoping chute's compact and efficient design minimizes the overall height of the structure, lowering the conveying power needed to transport product to the top of the loadout. This also minimizes the distance that the product free falls into the rail car, reducing initial loading dusting and product breakage. The loading chute is completely independent of the weigh bin, eliminating weighing errors and undesirable stresses on the weighing system.



"We provide customized solutions, along with 24 hour technical support."

Optional System Components

COMMAND CHAIR

An ergonomically designed, full body contoured chair with integrated controls and numerous adjustments for the operator provides exceptional visibility of train loading operations, as well as comfort for the operator during loading operations.

EXTERIOR GATE SERVICEABILITY

This option provides removable sections on the control gates that allow for the replacement of the UHMW guide blocks from the exterior portion of the gate. This eliminates the need for confined space entry into the bins for fast and safe gate serviceability during maintenance.

FULLY AUTOMATIC UNATTENDED AND/OR REMOTE CONTROL OPERATION

KSS can provide fully automatic unattended operations that require no additional human intervention once the loading process has been initiated. The control system monitors and consistently loads each rail car automatically. Remote control operations are also available where control of the entire loadout process is available from a remote control room location.

RECLAIM AND BLENDING CONTROLS

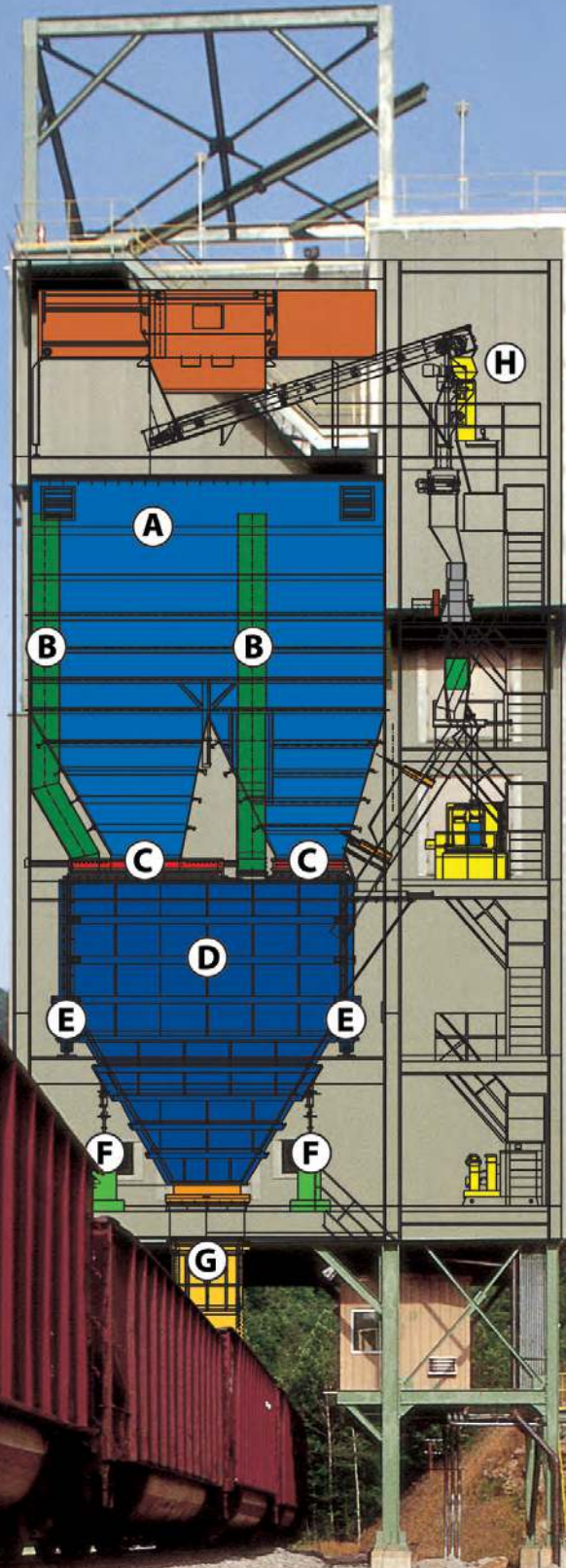
Complete system integration in one efficient control system. KSS can combine the controls for the loadout, reclaim and/or material blending into one common and well-engineered system.



Typical **Loadout** Configuration

Kanawha Scales & Systems has the right loadout configuration for your application. KSS designs your entire loadout from the ground up, engineered to meet your specific needs. Whether your product is coal, iron ore, manganese, salt, phosphate, petroleum coke, aggregate, or other bulk commodities, the components of the loadout are configured to the requirements of your application. KSS application specialists choose the correct type of control gates and shapes of bins to size the loadout system for the desired loading throughput. The loadout and associated control systems are supported remotely throughout the life of the loadout.

- Surge Bin **(A)**
- Air Exchange Ducts **(B)**
- Charging Gates **(C)**
- Weigh Bin **(D)**
- Load Cells **(E)**
- Certified Test Weights **(F)**
- Traversing Telescoping Chute **(G)**
- Optional Sample System Bay **(H)**



Custom Configuration

All components are configured to meet your specific needs.

CONFORMANCE

In addition to meeting all USA NIST and International OIML requirements and specifications, the KSS loadout system and loadout software has received Certificates of Conformance from the National Type Evaluation Program (NTEP) and pattern approval in Australia, Canada, China and Mongolia with other country approvals pending.

The Industry Innovator

Kanawha Scales & Systems has been responsible for many of the industry's innovations since the advent of loadout technology. A continuous pursuit of excellence in product development and testing, coupled with bold vision, has created:

- Application specific design for dustless loadout chutes
- Multiple batch loadout configurations for applications that do not require single batch per car requirements
- System design adaptable to many bulk products
- BatchMaster, the most powerful Windows based train loading/reporting package in the industry
- Built-in rail car database
- Integration of radio frequency tag technology
- Histograms for monitoring both operator and system performance
- Electronic file and EDI transfer of loadout manifest
- Email notifications of train events (arrival, completion, manifests)
- Sophisticated reporting capability with email and web based distribution
- Multiple gates with individual blade control for precision target weight cut-off and reduced structure height
- Hydraulic best practices, maximizing hydraulic system life
- UHMW guide design for gate support reducing maintenance and extending life by the elimination of cam followers
- System design to accommodate diesel or electric locomotives
- Train speed measurement systems for enabling improved automation capabilities
- Foreign object inspection systems for detection of anomalies within empty railcars
- Loading rates up to 12000 TPH for coal applications
- Loading rates up to 24000 TPH for iron ore applications

Sophisticated Reporting Capabilities



BatchMaster offers sophisticated manifest detail and reporting of information that is unmatched in the industry. Manifest data can be configured to report a variety of information. BatchMaster also features a histogram profile that offers a real-time analysis of loading performance. This KSS innovation is an invaluable tool in effectively evaluating overall system performance.

"...get timely and accurate information on bulk products critical to your operations..."

Car ID	Gross Allowable	Tare	Target	Load Time	Bin Gross	Bin Tare	Difference	Loaded Net	Comment
84 CCKC	30000	4000	26000	18:02:28 AM	26000	0	0	26000	
85 CCKC	30000	4000	26000	18:15:26 AM	26000	0	0	26000	
86 CCKC	30000	4000	26000	18:15:52 AM	26000	0	0	26000	
87 CCKC	30000	4000	26000	18:16:48 AM	26000	0	0	26000	
88 CCKC	30000	4000	26000	18:17:58 AM	26000	0	0	26000	
89 CCKC	30000	4000	26000	18:18:18 AM	26000	0	0	26000	
90 CCKC	30000	4000	26000	18:20:30 AM	26000	0	0	26000	
91 CCKC	30000	4000	26000	18:21:46 AM	26000	0	0	26000	
92 CCKC	30000	4000	26000	18:22:57 AM	26000	0	0	26000	
93 CCKC	30000	4000	26000	18:25:07 AM	26000	0	0	26000	
94 CCKC	30000	4000	26000	18:27:20 AM	26000	0	0	26000	
95 CCKC	30000	4000	26000	18:28:08 AM	26000	0	0	26000	

Building Relationships.

Kanawha
Scales & Systems

Creating Solutions.

CORPORATE HEADQUARTERS