

# 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

***Kanawha***  
***Scales & Systems***

A Division of American Equipment Holdings



[kanawhascales.com](http://kanawhascales.com)

# 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 250 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.



### 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.



### CONTROL GATES

KSS has perfected truly dustless, low maintenance and easily serviceable double-bladed slide and clam shell control gates. Slide gates utilize guide rails, which do not require lubrication and frequent maintenance. Slide gate frame has removable sections that allows for the replacement of the guides 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. Our multiple gate arrangement ensures the most accurate cut-off target weight possible.



### 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.



### AUTOMATIC CAR IDENTIFICATION

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



### 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.



### 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.



*"...We could put a pull quote in this section to take up some of this extra space and it could pertain to one of the Key System Components..."*

**"WE PROVIDE CUSTOMIZED SOLUTIONS, ALONG WITH 24/7 TECHNICAL SUPPORT."**

## Optional System Components

### 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

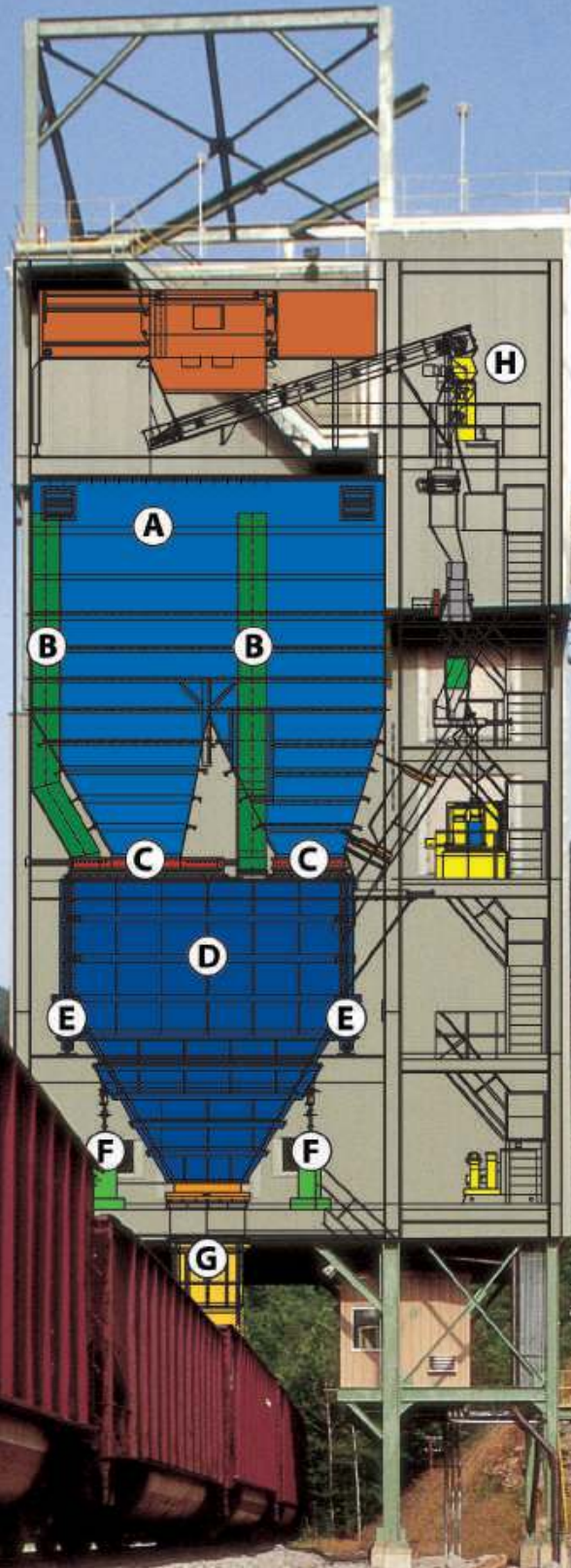
Complete system integration in one efficient control system. KSS can combine the controls for the loadout, reclaim and/or material blending into one common and well-engineered system.



# 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, India, 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
- Integration of radio frequency tag technology
- **BatchMaster®**, the most powerful Windows based train loading/reporting package in the industry
- Built-in rail car database for tare weight lookup
- SQL Server® database technology
- Web services for integration with third-party systems
- 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
- Dustless slide gate design utilizing guides that do not require lubrication. Removable sections in the gate frame allow the guides to be easily replaced during maintenance outages along with eliminating the need to enter the bins and confined space permits
- 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
- Ergonomically designed, full body contoured command chair with integrated controls and numerous adjustments

## 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..."*

Train #	Profile	Ship #	Weight	Tare	Target	Load Time	No. Bins	Bin Tot	Shipping	Total Net	Comments
01	00001	00001	00000	00000	00000	00:00:00	0	0	0	0	
02	00002	00002	00000	00000	00000	00:00:00	0	0	0	0	
03	00003	00003	00000	00000	00000	00:00:00	0	0	0	0	
04	00004	00004	00000	00000	00000	00:00:00	0	0	0	0	
05	00005	00005	00000	00000	00000	00:00:00	0	0	0	0	
06	00006	00006	00000	00000	00000	00:00:00	0	0	0	0	
07	00007	00007	00000	00000	00000	00:00:00	0	0	0	0	
08	00008	00008	00000	00000	00000	00:00:00	0	0	0	0	
09	00009	00009	00000	00000	00000	00:00:00	0	0	0	0	
10	00010	00010	00000	00000	00000	00:00:00	0	0	0	0	
11	00011	00011	00000	00000	00000	00:00:00	0	0	0	0	
12	00012	00012	00000	00000	00000	00:00:00	0	0	0	0	
13	00013	00013	00000	00000	00000	00:00:00	0	0	0	0	
14	00014	00014	00000	00000	00000	00:00:00	0	0	0	0	
15	00015	00015	00000	00000	00000	00:00:00	0	0	0	0	
16	00016	00016	00000	00000	00000	00:00:00	0	0	0	0	
17	00017	00017	00000	00000	00000	00:00:00	0	0	0	0	
18	00018	00018	00000	00000	00000	00:00:00	0	0	0	0	
19	00019	00019	00000	00000	00000	00:00:00	0	0	0	0	
20	00020	00020	00000	00000	00000	00:00:00	0	0	0	0	
21	00021	00021	00000	00000	00000	00:00:00	0	0	0	0	
22	00022	00022	00000	00000	00000	00:00:00	0	0	0	0	
23	00023	00023	00000	00000	00000	00:00:00	0	0	0	0	
24	00024	00024	00000	00000	00000	00:00:00	0	0	0	0	
25	00025	00025	00000	00000	00000	00:00:00	0	0	0	0	
26	00026	00026	00000	00000	00000	00:00:00	0	0	0	0	
27	00027	00027	00000	00000	00000	00:00:00	0	0	0	0	
28	00028	00028	00000	00000	00000	00:00:00	0	0	0	0	
29	00029	00029	00000	00000	00000	00:00:00	0	0	0	0	
30	00030	00030	00000	00000	00000	00:00:00	0	0	0	0	

**Total Train Summary**

Current Tare	Target Tare
Tare to Target	Comments
Bin Cars To Target	