EAGLESTAR

LOADING ARM SYSTEM

HENAN EAGLESTAR ENERGY TECHNOLOGY CO.,Ltd

PRODUCT FEATURES

Accurate Measurement

Equipped with Emerson or E+H brand mass flow-meters, achieving up to 0.1 accuracy level to ensure precise fuel dispensing.

Safety and Overfill Protection

Interlocked with the overfill protection device to re-alize emergency shut-off control of valves and oil pumps, preventing fire and explosion accidents.

Interlocked Control

Automatically starts and stops the oil pump, enabling pump-valve interlock functions. In emergency stop, alarm, or pause status, the loading pump will stop accordingly; once resumed, the pump restarts automatically.

Explosion-Proof Safety

If the electrostatic clamp detects an abnormal grounding re-sistance (>50Ω), it will interlock with the grounding device to trigger an alarm and shut down valves and pumps, ensuring static discharge safety and preventing fire/explosion hazards.

Operating System

Customizable to meet client-specific functional needs, including customized reporting.

Efficient and Fast

Factory-assembled unit, station installation in 1–3 days. Small footprint suitable for various scenarios. Proprietary control instruments automatically record sales data. PLC automation enables operators to complete operations via one-click or card-swipe, re-placing traditional multi-person, hour-long processes.

SINGLE-BAY FUEL LOADING SKID

STRUCTURE

One fuel loading unit is installed on one side of the skid, including one loading arm (mainly side-mounted), piping system, control system, and safety devices (such as anti-static equipment, emergency stop system, etc.).

FEATURES

- Compact design, small footprint, high integration, flexible installation.
- Efficiency: Can load only one tank truck at a time, lower throughput.
- Space requirement: Compact layout requires only single-side operation space (approx. 3–5 meters width).
- Equipment cost: Single unit, lower cost.

CONFIGURATION LIST

No.	Name	QTY
1	Batch Controller	1
2	Protective Cabinet	1
3	Explosion-Proof Emergency Stop Button	1
4	Top-Loading Overfill & Anti-Static Controller	1
5	Human Body Static Release Alarm	1
6	Mass Flowmeter	1
7	Explosion-Proof Electric Ball Valve	1
8	Top-Loading Arm	1
9	Mobile Ladder	1
10	Explosion-Proof Power Control Box	1
11	Pipeline Centrifugal Pump	1

DOUBLE-BAY FUEL LOADING SKID

STRUCTURE

One independent fuel loading unit is installed on each side of the skid, each with a loading arm, piping, control system, and safety devices. The two units can operate independently or in linked mode.

FEATURES

- Larger overall dimensions than single-bay skid; higher efficiency.
- Can load two tank trucks simultaneously, doubling throughput.
- Requires dual-side operating space (approx. 6–10 meters width) with parking lanes on both sides.
- Double-unit configuration, cost about 1.5–2 times a single-bay skid.

CONFIGURATION LIST

No.	Name	QTY
1	Batch Controller	1
2	Protective Cabinet	1
3	Explosion-Proof Emergency Stop Button	1
4	Top-Loading Overfill & Anti-Static Controller	2
5	Human Body Static Release Alarm	1
6	Mass Flowmeter	2
7	Explosion-Proof Electric Ball Valve	2
8	Top-Loading Arm	2
9	Mobile Ladder	2
10	Explosion-Proof Power Control Box	1
11	Pipeline Centrifugal Pump	2

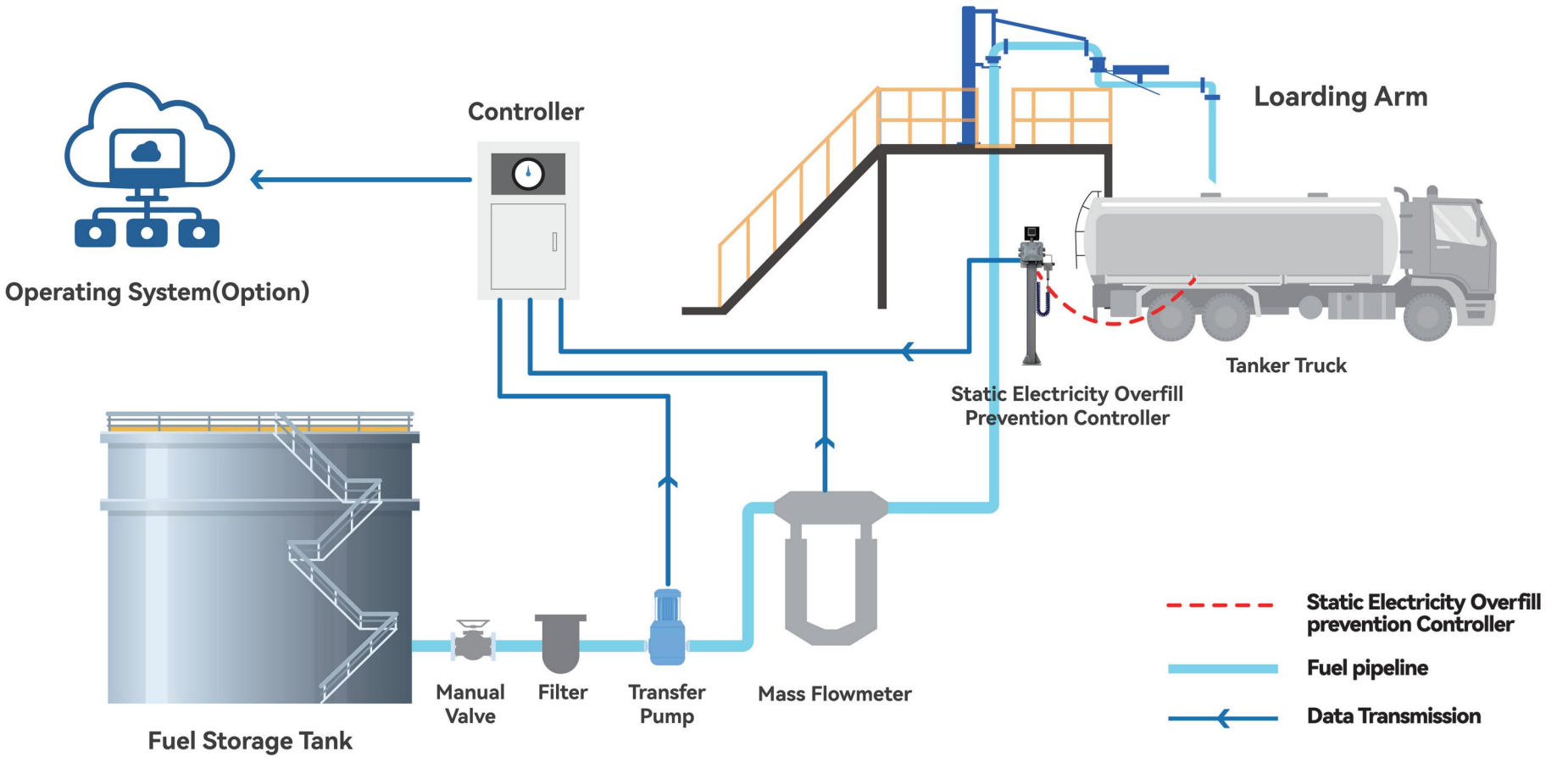
COMBINED LOADING/UNLOADING SKID

The combined fuel loading/unloading skid uses shared piping, loading arms, pump sets, control system, and safety devices to enable both loading from storage tank to truck and unloading from truck to storage tank. Operation mode can be switched with one button for convenience.

Loading

Unloading

OPERATING PRINCIPLE



BASIC PROCESS FLOW

STEP 01

Vehicle parks at designated position.Connect electrostatic overfill controller.

STEP 02

Open manhole cover and position loading arm.

STEP 03

Press start button to load unload(can set batch quantity).

STEP 04

Loading/unloading automatically stops when set value is reached.Remove electrostatic overfill controller.

Cloud Management System

Data uploaded to the system | **Available for inquiry at any time** | **Easy Management with Report Generation**

MAIN COMPONENTS DISPLAY

Batch Controller

Mass Flowmeter

Explosion-Proof Electric Ball Valve

Top-Loading Arm

Explosion-Proof Power Control Box

Protective Cabinet

Pipeline Centrifugal Pump

Top-Loading Overfill & Anti-Static Controller

Human Body Static Release Alarm

Explosion-Proof Emergency Stop Button

TANK FARM SOLUTION

Storage Tank Farm

Tank specifications: 40 HQ container dimensions (L 12.032 m × W 2.352 m × H 2.698 m), easy for transport and installation. Total capacity: 70,000–75,000 liters. Applicable for various environments, such as mining sites, small depots, and engineering projects.

Fuel Loading Skid

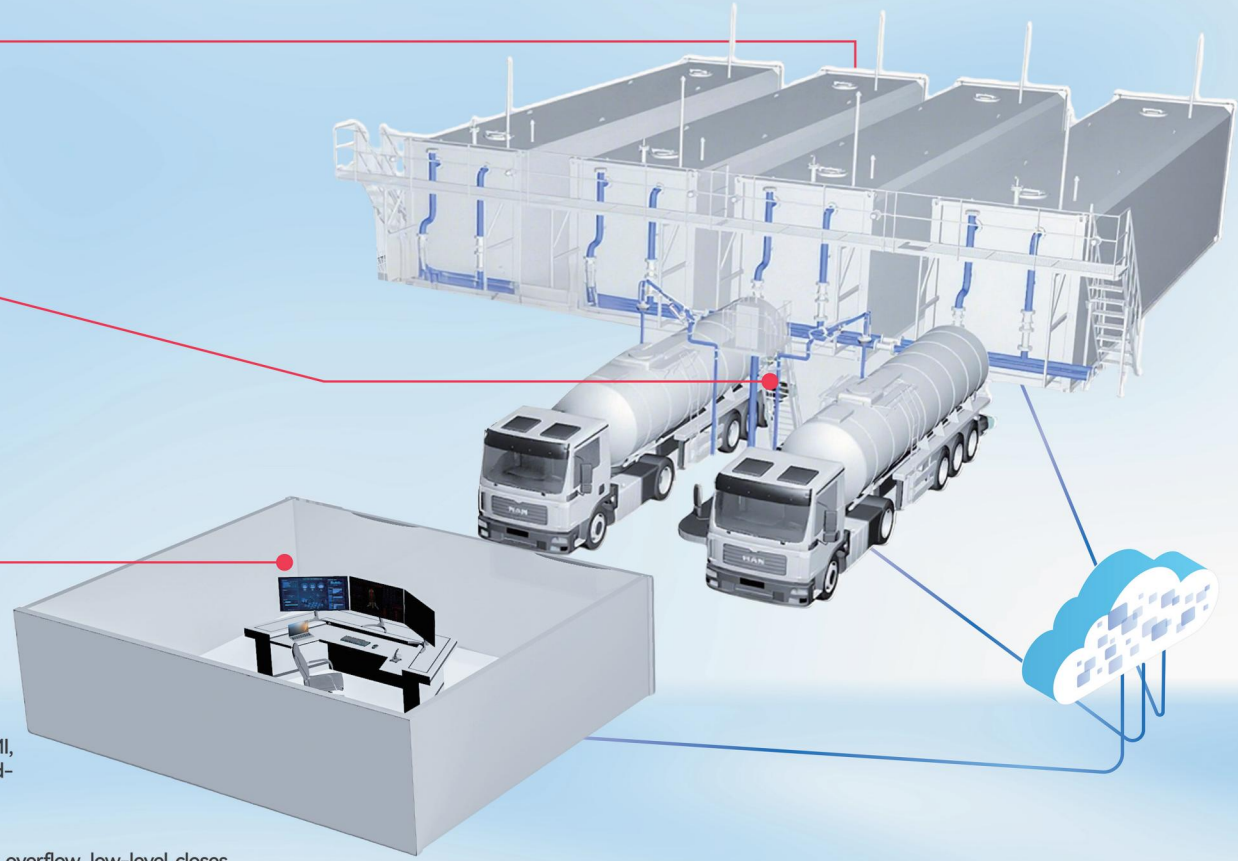
Loading Pump: Selected according to site conditions to ensure stable supply.
Piping: Storage tank outlet connected in parallel to pump inlet, designed and installed per standards to ensure safe, smooth delivery.
Flowmeter: Mass flowmeter with 0.1 accuracy level ensures precise dispensing.

Automatic Control System

Components:
Batch controller, pump, flowmeter, control valve, anti-static and overfill protection, other interlock devices, and related monitoring software.

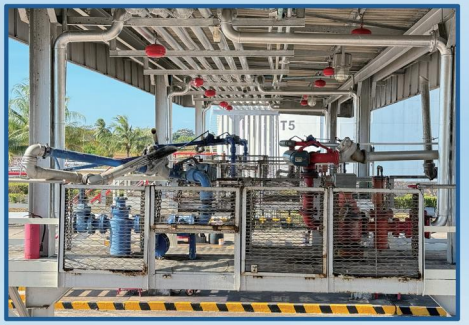
PLC Automation:
PLC for signal acquisition and automatic device control; upper computer for HMI, status display, record query, and parameter setting; enables fully automated loading/unloading, reducing human error.

Automatic Level Control:
Real-time level monitoring with sensors; high-level closes inlet valve to prevent overflow, low-level closes outlet valve for system safety; audio-visual alarms in tank area for abnormal events.



CASE SHOW





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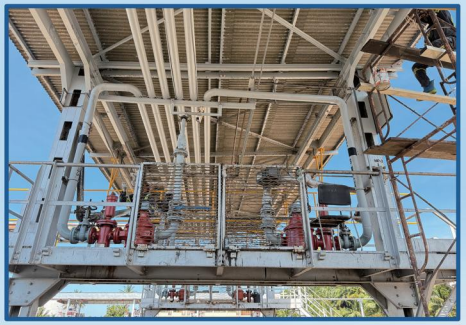




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