



CLOSING THE GAP

on **DEF** Dispensing



What We Know

2010 EPA Mandate

For a Cleaner Environment

Reduce NO_x Emissions

- New On-Road Diesel
Medium & Heavy-Duty Vehicles



SCR Technology

- An Exhaust After-treatment that Controls Emissions
Downstream from the Engine
- Utilizes Diesel Exhaust Fluid (DEF) to Reduce NO_x Levels

What We Know

Protect SCR Technology

DEF PURITY IS REQUIRED

If Not Handled Properly... There Will Be Problems

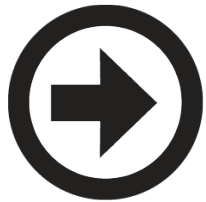
- Detrimentially Affects SCR Performance
- Will Void Vehicle Warranties
- Causes Premature Catalyst Deactivation
- Fouling of Pre-filters & Injector Nozzles



What We Know

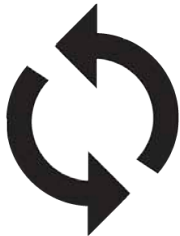
Container System Logistics

Lifecycles



Single Trip / One Way

Fill - Transport - Dispense - Disposal / Recycle



Return / Refill

Fill - Transport - Dispense – Return - Refill



On-Site Filling

Fill - Transport - Dispense – Refill On-Site

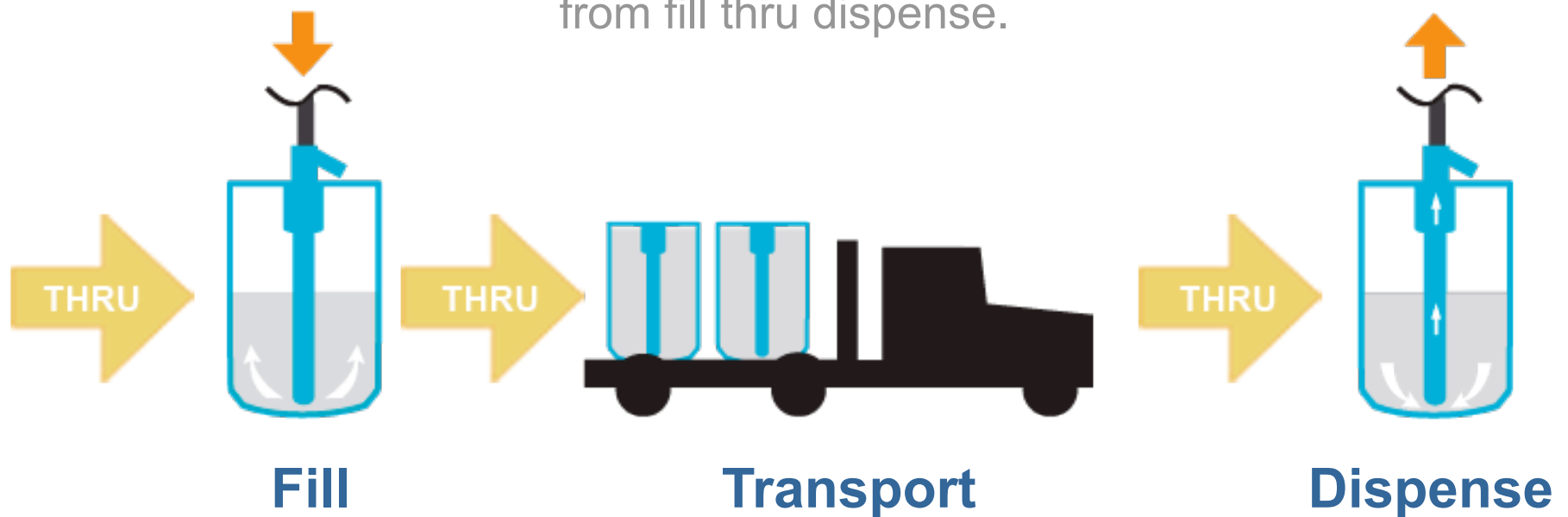
OBJECTIVE

Deliver DEF Purity

→ **FILL** → **TRANSPORT** → **DISPENSE**

CLOSED

Integrated container valve system that is **sealed and secure** throughout the service life of the container; from fill thru dispense.



**Yes,
it is Currently
Closed.**



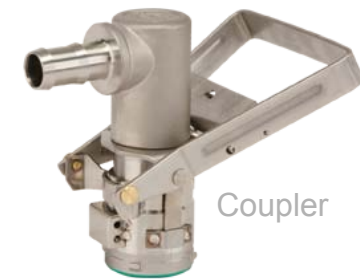
**However,
Can you Control
Who & What Gets In?**

The Micro Matic Difference

CLOSED, SEALED & SECURE

From Fill thru Dispense

- **Closed** to unauthorized users, product adulteration and environmental contaminants.
- **Sealed** spring actuated valve systems ensure automatic closure of coupler and container valve when disconnected.
- **Secure** tamper evidence protects container valve from removal and clearly identifies if container package has been tampered with.



Container Systems

Open vs. Closed

Technical Differences

Stinger / Drum Pump



OPEN

OPEN

Probe / Dip Tube



OPEN

OPEN

Valve

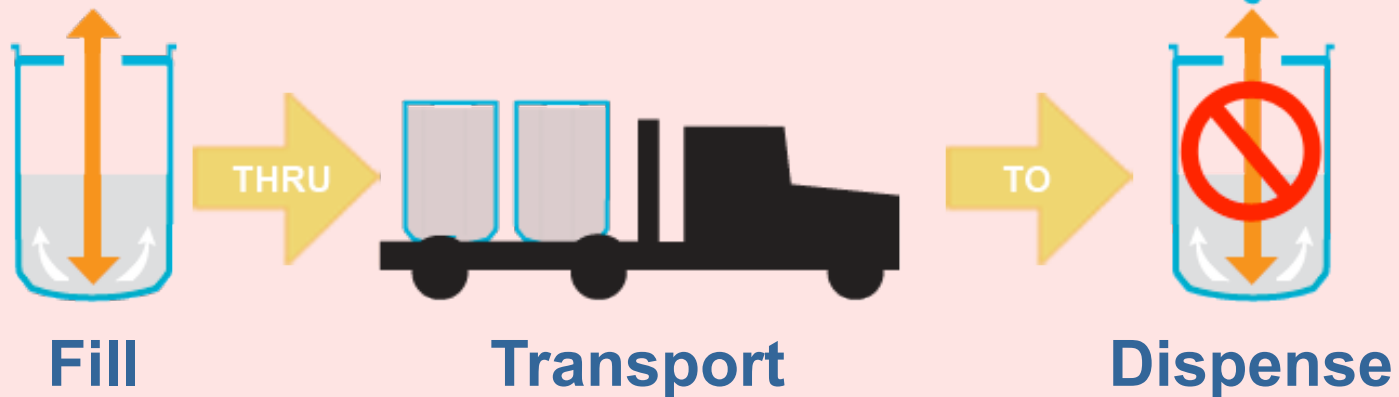


CLOSED

CLOSED

OPEN SYSTEM

Stinger / Drum Pump Container System



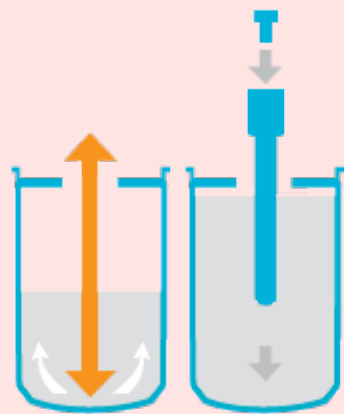
OPEN

CLOSED

OPEN

OPEN SYSTEM

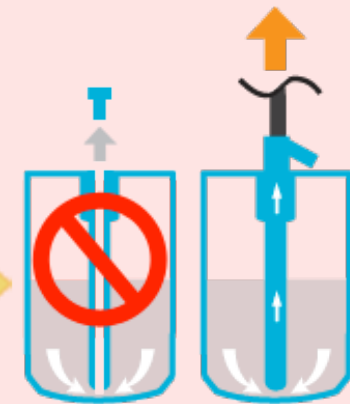
Probe / Dip Tube Container System



Fill



Transport



Dispense

OPEN

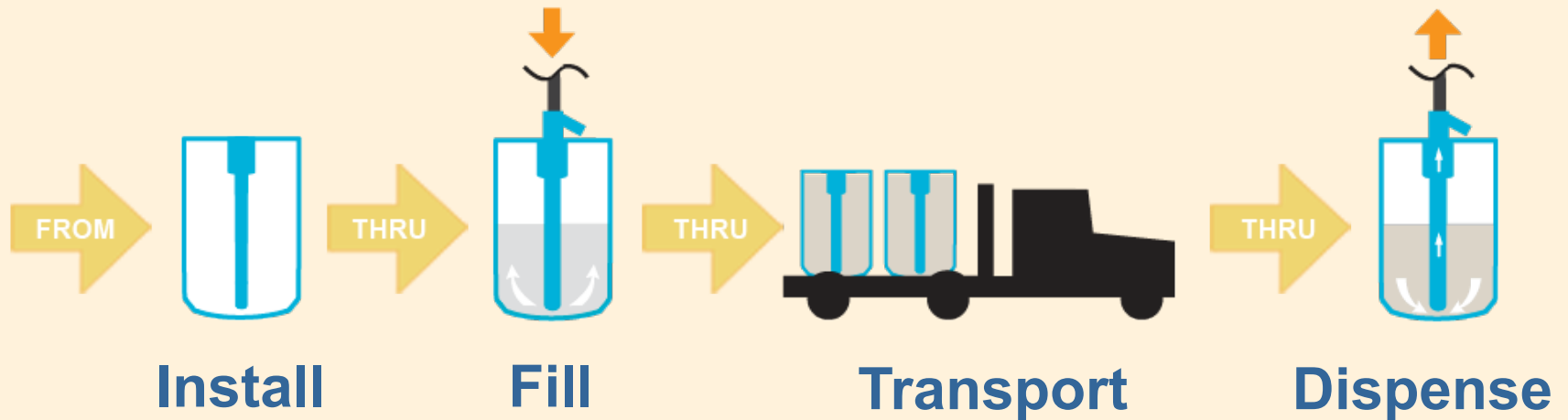
CLOSED

OPEN

CLOSED SYSTEM

Valve

Container System



CLOSED

CLOSED

CLOSED

CLOSED

CLOSED SYSTEM



RETURNABLE / REFILLABLE

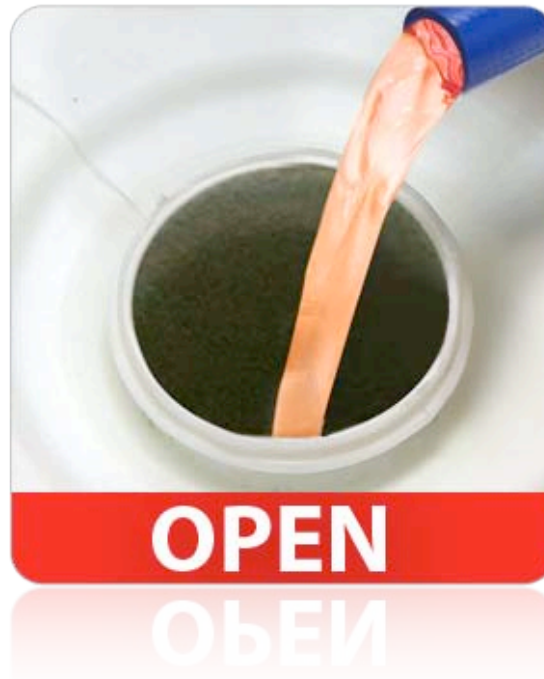
On-Site Filling

Open vs. Closed

Quality Control - Maintaining DEF Purity

Throughout the Supply Chain

- Manufacturing
- Distribution
- Point of Use

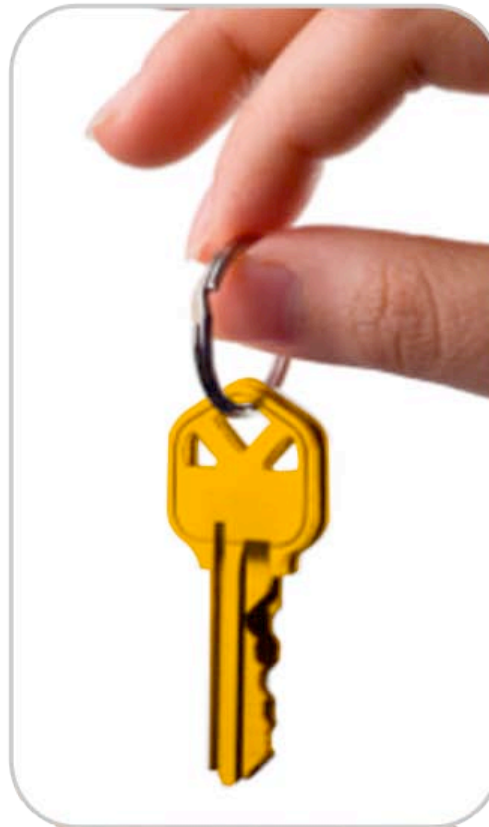


**Make Sure
Your Container
System is...**



**CLOSED,
SEALED
& SECURE.**

Get In **CONTROL**



Get It **CLOSED**

Deliver DEF Purity

Closed, Sealed & Secured.

FILL → TRANSPORT → DISPENSE



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