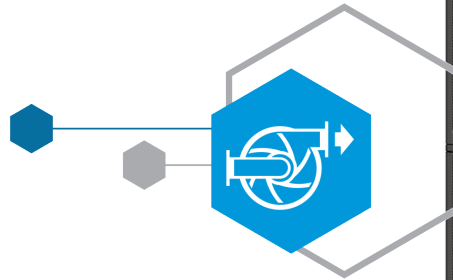


DFS SS BULK TRANSFER AND OFFLOAD SYSTEM



Stainless Steel Bulk Transfer and Offload System



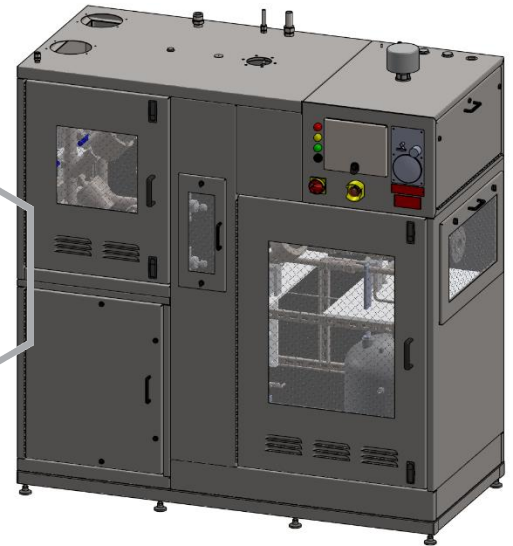
The DFS Titan™ SS Bulk Transfer and Offload System automatically transfers a solvent chemical from the tanker offload cabinet to the main distribution tanks. This system monitors the level of the main bulk tanks and allows tanker offload into storage tank A. Storage tank A refills storage tank B at the defined setpoint, and all chemical transfers for production tools come from storage tank B.

When the distribution system requests chemical, the system transfers chemical until the distribution tank level has been satisfied and the request signal removed. If one of the pumps is down for maintenance, the system can be configured to supply and return from the opposite tank.

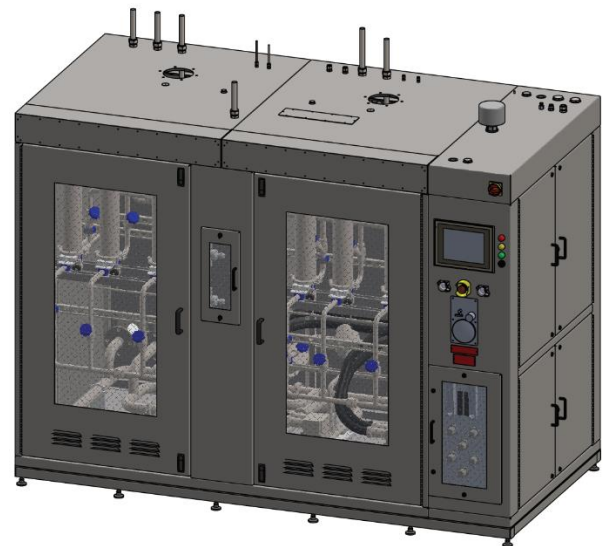
Utilizing a Z-Purge, the controls section is constantly purged and monitored to remove any chemical fumes.

Advantages

- ▶ Low cost of ownership
- ▶ Pressure control to +/- 0.3 psig
- ▶ Flexible and user-friendly HMI
- ▶ Quality control of incoming chemicals
- ▶ Monitors and controls:
 - Tanker offload functionality
 - Tank levels during offloads and normal operation
 - Tank containment box leak detection and door interlocks
- ▶ Continuous transfer of chemical from the main tanks to the production area distribution tanks



SS Offload Cabinet



SS Transfer Cabinet



DFS SS BULK TRANSFER AND OFFLOAD SYSTEM

Features

- ▶ Fully automated systems
- ▶ Flow and pressure monitoring
- ▶ Quality Control verification of incoming chemical
- ▶ Class 1 Division 2 components and intrinsic isolation
- ▶ Grounding throughout each system to eliminate ESD potential
- ▶ UL 508a certified

Transfer Cabinet

- ▶ 2 BPS-2000 SS centrifugal pumps
- ▶ Multiple 20-inch filter housings
- ▶ Waste pump for system draining and maintenance
- ▶ On-board N₂ tank blanketing
- ▶ SEMI S2 compliant (Certified upon request)

Offload Cabinet

- ▶ SS N₂ connection and regulator for supply to tanker
- ▶ Waste tank and pump to remove sample waste
- ▶ Automated inline sampling for offload analytical verifications

Safety

- ▶ Cabinet leak detection and alarming
- ▶ Cabinet door interlocks
- ▶ Cabinets contain 110% of the largest volume
- ▶ EMO to stop unload functionality from offload system
- ▶ Z-Purged control section
- ▶ Local and remote EMO capability

Options

- ▶ Teflon plumbing
- ▶ Pneumatic or centrifugal pumps
- ▶ Tank volumes and materials
- ▶ Inline sample or bottle
- ▶ F47 certification (upon request)

Controls

- ▶ Omron™ or Allen-Bradley® PLC
- ▶ HMI: 7" (Offload); 12" (Transfer)
- ▶ On-screen system P&ID
- ▶ Maintenance and shutdown monitoring
- ▶ Force screens for maintenance and troubleshooting
- ▶ Password protected screens
- ▶ Manual activation of valves/pumps
- ▶ Connectivity to system PLC Ethernet networks
- ▶ Communication with PC via PLC network



Model	Transfer System
Applications	Solvents
Internal Flow Path	2" inlets and 1" outlets
Flow Rate	40-60 LPM
Pressure Control	+/- 0.3 psig
Materials Flow Path	316 EP SS pipe and tubing
Cabinet Materials	304 SS, safety glass
Safety	UL 508a, SEMI S2 compliant
Footprint	51"Dp x 103"W x 81" H

Transfer Fac. Requirement	Utilities
Nitrogen (N ₂)	200 SCFH
Clean Dry Air (CDA)	120 psi / 15 SCFM
Exhaust	400 SCFM
Process Drain	45 LPM
Power	208VAC, 20A
Cabinet Drain	Pressurized

Model	Offload System
Applications	Solvents
Internal Flow Path	2"
Flow Rate	45-75 LPM
Pressure Control	+/- 0.3 psig
Materials Flow Path	SS EP pipe and tubing
Cabinet Materials	304 SS, safety glass
Safety	UL 508a, SEMI S2 compliant
Footprint	33"Dp x 71"W x 77" H

Offload Fac. Requirement	Utilities
Nitrogen (N ₂)	13 SCFH
Clean Dry Air (CDA)	120 psi / 15 SCFM
Exhaust	300 SCFM
Process Drain	45 LPM
Power	208VAC, 20A
Cabinet Drain	Pressurized



DFS Diversified Fluid Solutions
A Critical Process Systems Group Company

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