

HONEYWELL RETURNABLE CONTAINER PROGRAM

North America

EFFICIENT AND SAFE PACKAGING

Honeywell has been committed to innovation in solvents as well as organic and inorganic chemicals for analytical applications for more than 200 years. This pioneering spirit is still guiding us as we continue to evolve and strive to offer high-quality products that increase laboratory efficiency, while enhancing safety.

For Burdick & Jackson™ and Chromasolv™ high-purity solvents as well as BioSyn™ DNA/RNA reagents Honeywell offers both common bottles, cans and drums as well as innovative returnable containers that maintain purity and reduce packaging waste. These customer-dedicated containers provide an environmentally responsible way to enhance lab safety and convenience. Dispensing from a fully sealed, break-resistant system reduces employee exposure and increases shelf life by maintaining purity.



FEATURES AND BENEFITS



Increase instrument and production run times



Reduce analysis and process contamination

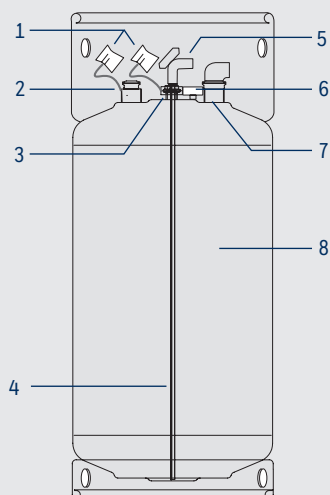


Eliminate packaging waste



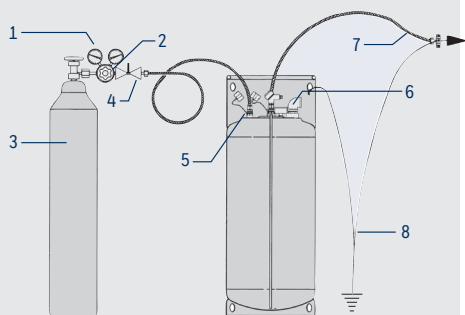
Environmentally sustainable

SSPDS Container Diagram



1. Quick-connect coupling protective caps
2. Male inert gas quick-connect coupling
3. Male solvent quick-connect coupling
4. Solvent dip tube
5. Optional level sensor
6. Pressure gauge
7. Pressure relief valve
8. 304 or 316 stainless steel container body

Typical SSPDS Container Installation



1. Regulator (0–15 psig)
2. Valve
3. Inert gas (He)
4. Gas quick-connect coupling
5. Solvent quick-connect coupling
6. Pressure relief valve
7. Solvent hose
8. Ground cables

STAINLESS STEEL PRESSURE DISPENSE SYSTEM (SSPDS) CONTAINER

The Stainless Steel Pressure Dispense System (SSPDS) container is engineered for shipping, storing and dispensing high-purity solvents. Each SSPDS container maintains solvent purity and meets UN, US DOT and OSHA standards for flammable and combustible liquids.

- SSPDS containers are made from stainless steel, specially cleaned to eliminate contamination prior to solvent filling.
- Tamper-evident seals help to verify the delivery of high-quality, uncontaminated solvent.
- SSPDS container and fittings are designed for a pressure-tight seal. Double-ended inert gas shut-off and solvent quick-connect couplings ensure minimal air inclusion and solvent loss when connecting and disconnecting the container at typical operating pressure.
- All solvent flow path surfaces are inert stainless steel, polytetrafluoroethylene (PTFE) or fluoroelastomer to ensure solvent stability.
- Hoses and solvent dispensers deliver solvent directly to instruments and dispensing stations.
- In addition to system installation recommendations, Honeywell offers regulatory assistance, training on safe container usage and a convenient round-trip shipping program.
- Solvent dispensed from SSPDS container meets or exceeds the already demanding glass bottle specifications. The sealed system protects solvents from contaminations and atmospheric moisture.

INTERMEDIATE BULK CONTAINER (IBC)

Depending on the required solvent purity or to handle corrosive liquids Honeywell offers returnable Intermediate Bulk Containers (IBC) as an alternative to the SSPDS container.

STAINLESS STEEL 800 L IBC

The 800 L stainless steel IBC is lined with polytetrafluoroethylene (PTFE) allowing storage as well as pressure-dispense ultra-high purity and corrosive liquids for your most demanding biosynthetic applications such as DNA/RNA synthesis.

NON-PRESSURIZED STAINLESS STEEL IBC

The 304-stainless steel 1250 L IBC (Hoover) is non-pressurized and offers a safe and cost-effective package solution to meet your high-volume chemical delivery needs. The solvent is dispensed with a pump.

HONEYWELL RETURNABLE CONTAINERS SPECIFICATION OVERVIEW



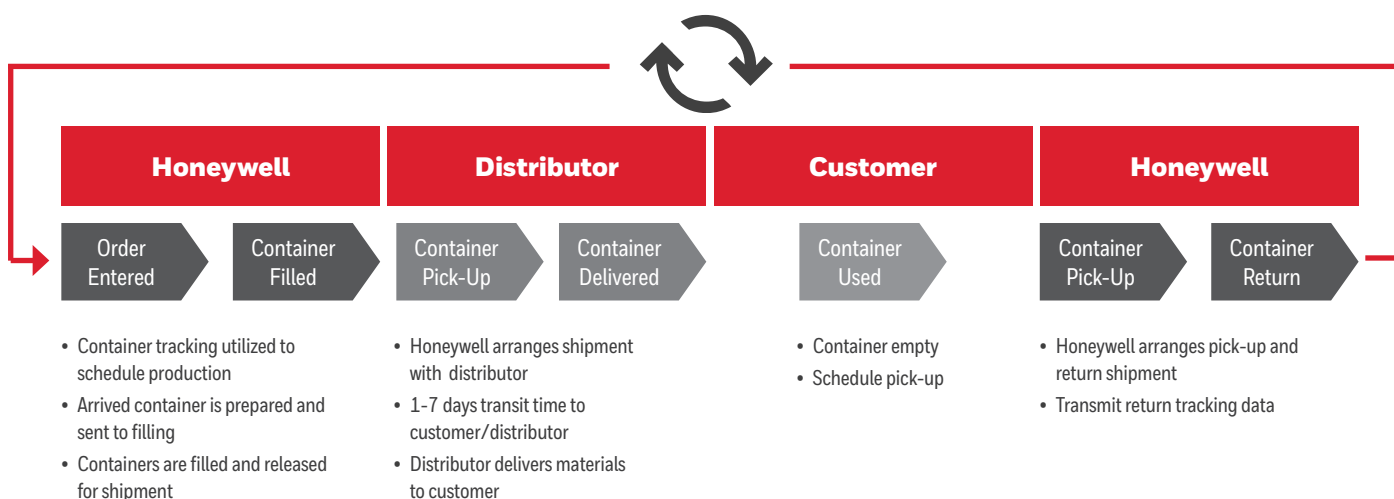
| | 56 L SSPDS | 200 L SSPDS | 1250 L SSPDS | 800 L PTFE LINED IBC | 1250 L HOOVER IBC |
|---------------------------------------|----------------------|----------------------|-----------------------|-----------------------|-----------------------|
| Footprint | 15.5 in (diameter) | 21.8 in (diameter) | 44.9 in x 44.9 in | 45 in x 45 in | 42 in x 48 in |
| | 39.4 cm (diameter) | 55.3 cm (diameter) | 114.1 cm x 114.1 cm | 114 cm x 114 cm | 107 cm x 122 cm |
| Height | 26.5 in | 51.8 in | 73.5 in | 64 in | 51 in |
| | 724 cm | 132 cm | 186.7 cm | 162 cm | 130 cm |
| Volume | 56 L | 200 L | 1250 L | 800 L | 1250 L |
| | 14.8 gal | 52.8 gal | 330.3 gal | 211.3 gal | 330.3 gal |
| Approximate weight when empty | 50 lbs | 107 lbs | 760 lbs | 926 lbs | 475 lbs |
| | 22.7 kg | 48.5 kg | 345 kg | 420 kg | 215 kg |
| Approximate weight when full | 147 lbs ¹ | 455 lbs ¹ | 2710 lbs ¹ | 2487 lbs ² | 2656 lbs ¹ |
| | 67 kg ¹ | 206 kg ¹ | 1229 kg ¹ | 1128 kg ² | 1204 kg ¹ |
| DOT/UN packaging specification | UN1A1/X2.8/900 | UN1A1/X2.0/900 | UN31A/Y | UN31A/Y | UN31A/Y |

1- Filled with methanol

2- Filled with 3% dichloroacetic acid/97% toluene

RETURNABLE CONTAINER FLEET MANAGEMENT

The Honeywell returnable containers are not only safe and easy to use, but also convenient to return for refilling. Honeywell has established a round-trip shipping program that simplifies container return by partnering with a carrier that has been preselected based on their ability to handle and ship the returnable containers at the best available rate to you. Honeywell provides return instructions and attaches it to the returnable container. When the container is empty, call the Honeywell Return Desk at the phone number provided on the return instructions for a bill of lading. Round-trip shipping costs are added to your invoice. Every container is tracked by serial number, with Honeywell keeping complete records of handling and filling. This program expedites empty container return and helps ensure an uninterrupted solvent/reagents supply.



CUSTOM DISPENSING AND CONNECTIONS

Honeywell offers custom dispensing options to support multiple applications, including:

- Custom configured connections and fittings to each of our returnable containers
- Direct connection from a Honeywell container to a custom fitted line which feeds into a production line, vessel or instrument

Working closely with end-users has allowed Honeywell to develop a wide range of dispensing capabilities. The flexibility to retrofit connections onto hoses creates an opportunity to expand your range while maintaining purity to your dispensing point.



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FUTURE
IS
WHAT
WE
MAKE IT**

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