

1.01123.0001

## Withdrawal system for solvents with manual pressure build-up for 10 l and 30 l stainless steel barrels

### Handling and safety notices

#### Components

- Withdrawal system with 2 exchangeable dip tubes for 10 l and 30 l stainless steel barrels
- Clamp for outlet tube
- Ball valve tap
- Pump ball with rapid-action connector
- Three-way stopcock

#### Additional parts

- 1.07070.0001 Antistatic device
- 1.08803.0001 Key for opening drums and barrels
- 9.67100.9051 Spiral gas feeding tube
- 9.67100.9100 Pressure reducing valve
- 9.67100.9004 Pressure safety device

#### Spare parts

- 9.67100.1079 Hand pump ball with rapid-action connector
- 9.67100.1048 Seal (O-ring 14x2.5 mm)
- 9.67400.1047 Seal (O-ring 56x3.6 mm)

#### Safety notices

General warnings and safety instructions must be observed.

The sampling system, particularly the sealings, should be checked for proper operation before each use. If flammable liquids (e.g. solvents) are to be used, the container must be properly earthed according to valid safety regulations to avoid explosion and fire risks. Appropriate measures must be taken to discharge static electricity. Both the withdrawal system and container must be grounded in accordance with the applicable safety regulations. For this purpose the antistatic device (Cat. No. 1.07070.0001) can be used. Grounding clamps must have metallic contact with both the container and the withdrawal system, and a safe ground connection.

It is important to ensure that both the container and the withdrawal system (e.g. at the outlet tube) are grounded separately. This measure prevents electrostatic separation of charges in case the withdrawal system is removed from the container.

The grounding of the container and the grounding of the withdrawal system must be installed **before opening** the container. The withdrawal system must remain grounded permanently.

After finishing the work steps (emptying and closing the container completely) the grounding clamp of the container can be removed and used to ground the new container directly.

The discharge of electrostatic charges of the user must be ensured. Therefore, the user must always wear conductive personal protective equipment, especially shoes and gloves. The floor has to be conductive as well.

1.01123.0001

## Withdrawal system for solvents with manual pressure build-up for 10 l and 30 l stainless steel barrels

### Handling and safety notices

Safety notices - continued -

Sampling vessels made of insulating material with a volume greater than 1 liter should not be used.

Before using the withdrawal system, the user must ensure that there are no additional ignition hazards caused by process-specific parameters, such as increased ignitability of the substances due to changed environmental conditions or when sampling in combination with highly charge-generating processes.

The choice of the withdrawal system for the different products is the responsibility of the customer. We only give recommendations. The system is not suitable for corrosive acids.

Before removing the sampling system or in the event of prolonged interruption of the pouring process, and in all cases overnight, the container must be vented to zero pressure.

#### Handling notices

The withdrawal system at issue is designed for dispensing solvents from our stainless steel 10 l and 30 l barrels with manual pressure build-up by a pump ball.

The solvents container must be properly grounded before opening. Subsequently, the container lid is opened using a drum key (e.g. Cat. No. 1.08803.0001).

For the first usage or after solvent exchanges the system has to be pre-rinsed (dip tube inside and outside) with a sufficient amount of the solvent to be used. The first milliliters should be discarded to avoid a transfer of possible production-related impurities into the solvent. After long shutdown times a flushing of the whole system is recommended.

Ensure that the container is depressurized before the withdrawal system is removed. (see "Removal and installation of a new, full solvents barrel").

When removing the withdrawal system from the container, ensure that the system is still grounded. Solvent residues inside the withdrawal system can be returned to the container via the dip tube by moving the stopcock. The empty container must be closed immediately after removal of the withdrawal system.

**The ground should be removed only after the complete closure of the container!**

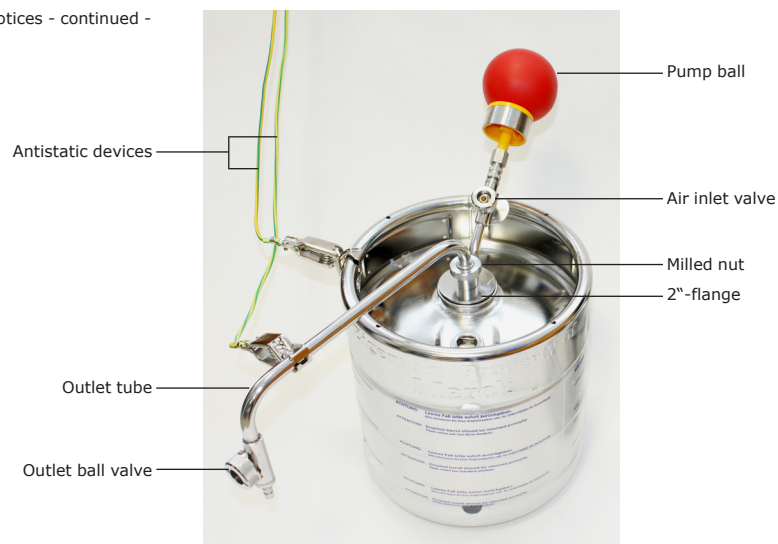
**IMPORTANT:** Ensure that the dip tube is not touched during the container-exchange procedure and that the withdrawal system is installed directly into the new container without putting it down on another surface.

1.01123.0001

## Withdrawal system for solvents with manual pressure build-up for 10 l and 30 l stainless steel barrels

### Handling and safety notices

Handling notices - continued -



#### Installation

1. Ensure that all components (barrel and withdrawal system separately) as well as the user are properly earthed.
2. Screw the appropriately sized dip tube to the threaded connector at the rear side of the withdrawal system.
3. Attach the pump ball to the quick connector at the top side of the withdrawal system.
4. Close off both valves by turning clockwise. (outlet valve: engraved line horizontal position, air inlet valve: position Z)
5. Open the barrel using an appropriate drum key (e.g. Cat. No. 1.08803.0001).
6. Bring the knurled nut and the 2" flange to their topmost, final position.
7. Insert the dip tube and the lower clamping plate into the barrel.
8. Press the flange downwards against the barrel outlet and fix the outlet system in position by turning the knurled nut clockwise.
9. Optimal ergonomic positioning can be achieved by turning the air inlet and outlet valves in opposite directions.
10. Tighten the knurled nut by hand.



1.01123.0001

## Withdrawal system for solvents with manual pressure build-up for 10 l and 30 l stainless steel barrels

### Handling and safety notices

Handling notices - continued -

#### Dispensing (manual pressure operation)

1. Ensure that all components (barrel and withdrawal system separately) as well as the user are properly earthed.
2. Place a bottle or other vessel right under the outlet. The outlet tube should reach approx. 1 cm into the neck of the vessel.
3. Open the air inlet valve (position A = open).
4. Squeeze the pump ball to generate pressure inside the barrel.
5. Open the outlet valve (vertical position of the engraved line) by turning it counter-clockwise and dispense the required amount of solvent.  
If the solvent amount is not enough the pump ball can be squeezed during the active withdrawal.
6. Close off the outlet valve (horizontal position of the engraved line) once dispensing has been completed.



#### Withdrawal completed for the day / for a longer shut off period

1. Adjust the air inlet valve to position E (= venting) until the barrel is completely depressurized.
2. Adjust the air inlet valve to Z-position (= closed).
3. Remove the pump ball at the quick connector.
4. Make sure that both inlet and outlet valves are closed off if the barrel is to be transported to the safety cabinet with the withdrawal system attached. Remove the withdrawal system for a longer shut off period.

Position A:  
OPENPosition E:  
VENTINGPosition Z:  
CLOSED

#### Removal and installation of a new, full solvent barrel

1. Make sure that:
  - a. all valves are closed: the air inlet valve is in position Z and the outlet valve in horizontal position.
  - b. the empty barrel is depressurized before the withdrawal system is removed (Venting the system is done by turning the air inlet valve to position E.)
  - c. all components (barrel and withdrawal system separately) as well as the user are still properly earthed
  - d. the new, full solvents barrel is properly earthed. For this procedure there is a 3rd grounding cable included in the antistatic set (Cat. No. 1.07070.0001)

1.01123.0001

## Withdrawal system for solvents with manual pressure build-up for 10 l and 30 l stainless steel barrels

### Handling and safety notices

Handling notices - continued -

- Open the new, full solvents barrel, e.g. by using the drum key (Cat. No. 1.08803.0001).
- Loosen the knurled nut of the withdrawal system by turning it counter-clockwise.
- Bring the knurled nut and the 2" flange to their topmost, final positions.
- Remove the withdrawal system from the empty barrel and keep the end of the dip tube inside the barrel until the remaining amount of solvent is completely rinsed out the withdrawal system.
- Insert the dip tube and the lower clamping plate directly into the new, full solvents barrel.
- Press the flange downwards against the barrel outlet and fix the outlet system in position by turning the knurled nut clockwise.
- Optimal ergonomic positioning can be achieved by turning the air inlet and outlet valves in opposite directions.
- Tighten the knurled nut by hand.
- Close the empty barrel tight, e.g. by using the drum key (Cat. No. 1.08803.0001).
- Disconnect the empty barrel from the grounding line and store the grounding cable inside the antistatic set box till the next barrel exchange.



#### Removal of the withdrawal system without connection to a new barrel

- Make sure that:
  - all valves are closed: the air inlet valve is in position Z and the outlet valve in horizontal position
  - the empty barrel is depressurized before the withdrawal system is removed (Venting the system is done by turning the air inlet valve to position E.)
  - all components (barrel and withdrawal system separately) as well as the user are still properly earthed
- Loosen the knurled nut of the withdrawal system by turning it counter-clockwise.
- Bring the knurled nut and the 2" flange to their topmost, final positions.
- Remove the withdrawal system from the empty barrel and keep the end of the dip tube inside the barrel until the remaining amount of solvent is completely rinsed out the withdrawal system.
- Disconnect the pump ball and remove the grounding line from the withdrawal system.
- Close the empty barrel tight, e.g. by using the drum key (Cat. No. 1.08803.0001).
- Disconnect the empty barrel from the grounding line and store the grounding cable inside the antistatic set box till the next usage.
- Store withdrawal system, antistatic-set and all other components in a safe, dry and dust-free environment.



1.01123.0001

## Withdrawal system for solvents with manual pressure build-up for 10 l and 30 l stainless steel barrels

### Handling and safety notices

Handling notices - continued -

#### Sampling

For solvents sampling **in temporary usage** the withdrawal system can be connected to inert gas. This withdrawal system **must not be used for the permanent gas pressurizing.**

- Ensure that all components (barrel and withdrawal system separately) as well as the user are properly earthed.
- Remove the pump ball at the quick connector.
- Make sure that the inert gas line pressure cannot exceed 0.2 bar, e.g. use the pressure reducer (Cat. No. 9.67100.9100) with included overpressure relief or the pressure safety device (Cat. No. 9.67100.9004) for gas bottles.
- Connect the inert gas feeding tube (Cat. No. 9.67100.9051) to the quick connector on top of the withdrawal system (position of the pump ball).
- Open the gas.
- Place a bottle or other vessel right under the outlet. The outlet tube should reach approx. 1 cm into the neck of the vessel.
- Open the air inlet valve (position A = open).
- Open the outlet valve (vertical position of the engraved line) by turning it counter-clockwise and dispense the required amount of solvent.
- Close off the outlet valve (horizontal position of the engraved line) once dispensing has been completed.



Please keep this information for future reference.

#### DISCLAIMER

Our withdrawal systems and safety accessories have been developed and optimized for the use with containers and chemicals from Merck KGaA, Darmstadt, Germany. Merck KGaA, Darmstadt, Germany therefore disclaims any warranty or liability for the operability of its withdrawal systems and safety accessories in connection with containers or chemicals from other manufacturers.

Merck KGaA, Darmstadt, Germany reserves the right to refrain from the delivery of withdrawal systems and safety accessories if the respective order does not indicate that each withdrawal system and safety accessory will be used in combination with appropriate chemicals and containers from Merck KGaA, Darmstadt, Germany.

We inform and advise our customers to the best of our knowledge and ability but without any engagement or liability on our part. Our customers must obey all existing laws and regulations. This also applies in respect of any protected rights of third parties. Our information and advice does not eliminate the need for our customers to check, on their own responsibility, that our products are suitable and safe for the purpose envisaged.

Version February 2019

Merck KGaA, 64271 Darmstadt, Germany,  
Tel. +49(0)6151 72-2440

EMD Millipore Corporation, 400 Summit Drive  
Burlington MA 01803, USA, Tel. +1-978-715-4321

