

1.67500.0001 / 1.67501.0001

Manual withdrawal system for acids and bases

Handling and safety notices

Withdrawal system assembly

- 1 x **Dispense head** (PE or PVDF)
- 1 x **Dip tube** suitable for the appropriate product and pack size/material
- 1 x **Pump ball** - Hand or foot pump ball
- 1 x **Drum key** for tightening dip tubes and/or opening/closing containers properly and safely

Product / order numbers

- 1.67500.0001 Dispense head (PE) for acids and bases, manual pressure build-up
- 1.67501.0001 Dispense head (PVDF) for nitric acid and sulfuric acid, manual pressure build-up
- 9.67114.0000 Hand pump ball
- 1.67502.0001 Foot pump ball for dispense heads 167500 and 167501
- 1.67525.0001 Dip tube (PE) for acids and bases in 25l canisters
- 1.67526.0001 Dip tube (PE) for acids and bases in 25l Fassett®
- 1.67527.0001 Dip tube (PVDF) for nitric acid in 25l combi containers
- 1.67585.0001 Dip tube (PVDF) for nitric acid in 180l combi containers
- 1.67520.0001 Dip tube (PE) for acids and bases in 200l PE-drums
- 1.67521.0001 Dip tube (PVDF) for sulfuric acid in 200l PE-drums
- 1.67528.0001 Dip tube (PVDF) for sulfuric acid in 25l canisters
- 1.67529.0001 Dip tube (PVDF) for sulfuric acid in 25l Fassett®

Complementary products

- 1.67503.0001 Drum key (PE) for opening/closing containers with 2" or 3/4" screw caps made of plastic materials
- 1.08804.0001 Container key for opening containers with KS 60x6 screw cap

Safety notices

Please read all following information properly and completely, keep it for further reference.

This withdrawal system and all components are suitable for acids and bases. For Nitric Acid and Sulfuric Acid only use the withdrawal system and its components made of PVDF.

This system and all components are **NOT suitable** for flammable solvents. This system and all components are **NOT suitable** for inert gas pressurizing or pressurized air.

General warnings and safety instructions must be observed.

Always work according to the information given on the **Material Safety Data Sheet**, which can be downloaded at www.SigmaAldrich.com/msds.

All parts of the withdrawal system, particularly the product contact parts and sealings, should be checked for proper operation before each use.

Before using the withdrawal system, the user must ensure that there are no additional hazards caused by process-specific parameters.

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- Safety notices - continued -

When withdrawing sulfuric acid, the user must ensure that no water is remaining in the system. (Sulfuric acid reacts exothermically with water!)

The maximum duration of use of the dispense heads should not exceed 3 years.

The maximum duration of use of the dip tubes should not exceed 2 years.

When used with hydrogen peroxide, do not exceed 1 year duration time.

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.

The choice of the withdrawal system for the different products and packaging materials is the responsibility of the customer. Merck KGaA, Darmstadt, Germany only gives recommendations.

This system and all components are NOT suitable for flammable solvents.

For safe solvent-withdrawal please use the specially designed and conductive withdrawal systems for solvents. Product information can be found at

www.SigmaAldrich.com/safe-handling or www.SigmaAldrich.com/lab-safety.

Handling notices

The withdrawal system at issue is designed for dispensing acids and bases from containers of Merck KGaA, Darmstadt, Germany: barrels, drums, Fassett® and canisters with 25 l, 180 l and 200 l volume. Withdrawal takes place with manual pressure build-up by a pump ball.

Ensure proper personal protective equipment when working with acids and bases. Appropriate information can be found in the Material Safety Data Sheets of the chemicals which are accessible via our website.

At a suitable place, the container lid is opened by using an appropriate key.

For the first usage or after product exchanges the system must be pre-rinsed (dip tube inside and outside) with a sufficient amount of the product to be used. The first millilitres should be discarded to avoid a transfer of possible production-related impurities into the product. A product-specific usage is recommended.

After long shutdown times, a flushing of the whole system is recommended.

Ensure that the container is depressurized before the withdrawal system is removed.

When removing the withdrawal system from the container, ensure that the remaining amount of product (acid or base) is completely dripped out of the tube into the container.

The empty container must be closed immediately after removal of the withdrawal system.

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.

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System overview



Dip tubes



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Installation

Wear personal protective equipment (PPE) according to safety data sheet.

Check proper operation of all parts and components.

Make sure the check valve is installed between the dispense head and pump ball (see system overview).

Connect the pump ball to the inner thread of the check valve by screwing in hand tight.

Remove the originality protection cap from the container.



Open the container with an appropriate key (e.g. with the drum key 1.67503.0001) and remove the closure.



Insert dip tube and tighten firmly by hand (approx. 15 Nm).

For dip tubes without outer knurling use the drum key 1.67503.0001 and tighten the dip tube with approx. 15 Nm.



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- Installation - continued -

Remove the inner closure of the dip tube by using the drum key (e.g. 1.67503.0001).



Check outlet valve of the dispense head is closed – turn it into a horizontal position.



Screw the dispense head into the dip tube and tighten it firmly by hand.



Place receptacle under the outlet and open the valve. The outlet tube should reach approx. 1 cm into the neck of the receptacle.



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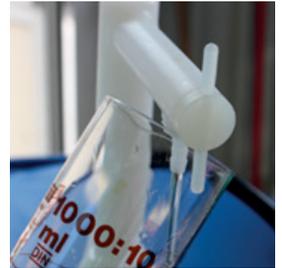
Handling and safety notices

- Installation - continued -

Pressurize by squeezing red pump ball.



Fill your receptacle to the desired volume.



Close outlet valve after filling the receptacle by turning it into its horizontal position.



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Container change

Check outlet valve of the dispense head is closed – turn it into a horizontal position.

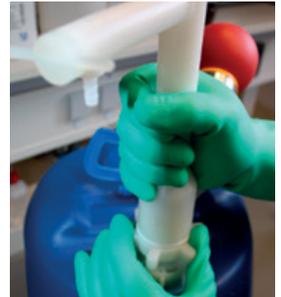


Open the new container of identical properties and identical chemical with the appropriate key by removing the originality protection cap and the closure.



Unscrew the dispense head slowly and carefully.

Caution!
The container will be vented by this step, remaining overpressure will be emitted.



Unscrew the dispense head.

Keep the end of the dispense head inside the drum until the remaining amount of liquid (acid/base) is completely rinsed out.

Remove the dispense head.



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Handling and safety notices

- Container change - continued -

Remove the dip tube by using the appropriate drum key and install it directly to the new container (see installation notices).

Tighten the dip tube firmly by hand (approx. 15 Nm).

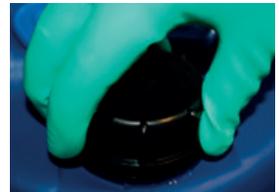
For dip tubes without outer knurling use the drum key 1.67503.0001 and tighten the dip tube with approx. 15 Nm.



Screw the dispense head into the dip tube and tighten it firmly by hand (see installation notices).



Close the empty container tightly with an appropriate key.



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Deinstallation

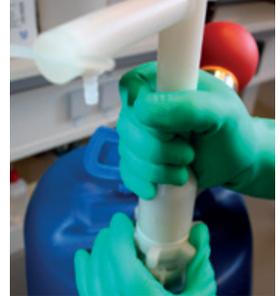
Check outlet valve of the dispense head is closed – turn it into a horizontal position.



Unscrew the dispense head slowly and carefully.

Caution!

The container will be vented by this step, remaining overpressure will be emitted.



Lift the dispense head slightly.

Keep the end of the dispense head inside the drum until the remaining amount of liquid (acid/base) is completely rinsed out.

Remove the dispense head.

Rinse, clean and dry all components properly.



Remove the dip tube.

Rinse, clean and dry all components properly according valid regulations and instructions.



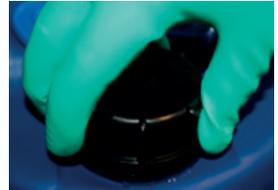
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- Deinstallation - continued -

Close the empty container tightly with an appropriate key.



Store withdrawal system and all other components in a safe, dry and dust-free environment.

Please keep this information for further reference.

For more information and documentation please contact your local sales partner.

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.

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