

easyFlow

Closed Transfer System
for Plant Protection Products
Operator manual easyFlow - Quick Guide



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Status 5.10.2016
 Version GB V 1.3

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1. easyFlow - available parts and mounting kits



Tank adapter (incl. drilling jig, seals and screws)
Part no. 15955



Container adapter (fits on containers for Plant Protection Products (PPP) up to 10 l, with 63 mm neck thread) Part no. 15954



Wedge plates, for balancing the tank adapter on inclined or uneven tank surfaces (contains 2 wedge plates and 2 sealing rings)
Part no. 16071

easyFlow

Set 1, contains 1x tank adapter and 3x container adapter
Part no. 16076

easyFlow

Set 2, contains 1x tank adapter and 5x container adapter
Part no. 16077

1.1. Content of the easyFlow kits



1a Tank adapter, to be installed on the sprayer tank or induction bowl

1b Drilling jig also used as counter plate to fix the easyFlow tank adapter from inside

1c Sealing ring between tank adapter (1a) and tank

1d Mounting screws (stainless)

2 3x Container adapter (5x for set 2) to fit on containers for Plant Protection Products (PPP)

1.2. Required tools for mounting

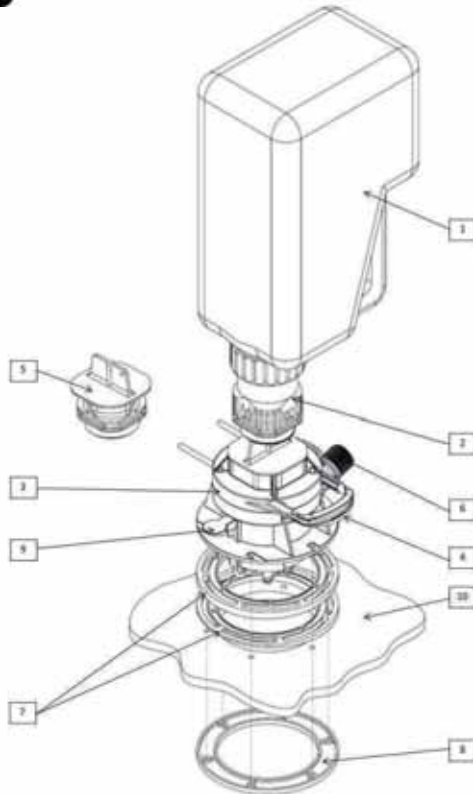
- Power drill
- Lock hole saw # 95-97 mm
- Drill #5.5mm
- Marker
- Socket key #7
- Countersink or scraper

For cleaning

- Bucket or bin for collecting and avoiding debris inside the tank
- Brush

2. The easyFlow system at a glance

easyFlow



1 PPP container

2 easyFlow container adapter

3 easyFlow tank adapter

4 Hand grip

5 Cap for tank adapter

6 Thread for rinsing water connection, 3/4 " BSP

7 Wedge plates (optional)

8 Drilling jig (1b)

9 Rinsing lever

10 Sprayer tank

2.1. Installation of the easyFlow tank adapter

2.1.1. Dimensions of the tank adapter

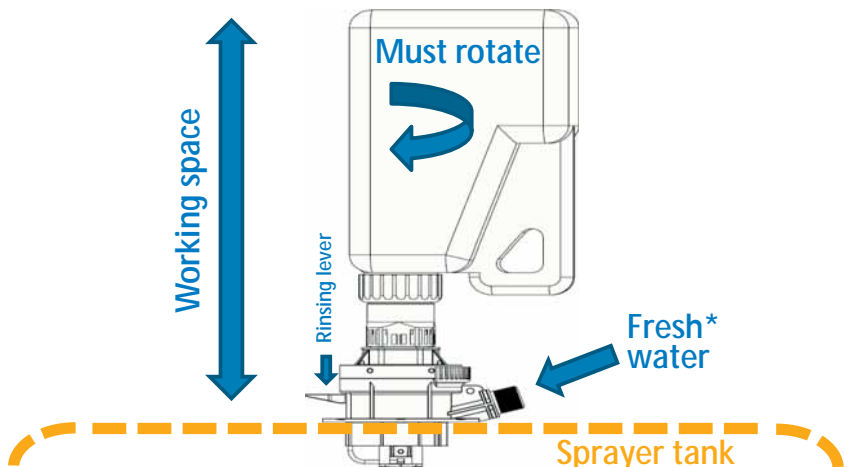


Front view

2.1.2. Where to install the easyFlow tank adapter

Before installing the easyFlow tank adapter onto your sprayer check carefully that:

- there is enough space for operation of the easyFlow at selected place
- there are no pipes, tank rinsing nozzles or other obstacles inside the tank which will interfere with the installation of the easyFlow,
- the drilling jig (1b) must be placed inside the tank (check accessibility)
- there is enough working space to handle a full 5l or 10l PPP container on top of the tank adapter after installation
- there is room to rotate the container at the rinsing process
- there is a fresh water connection with max. 6 bar pressure (best 3-4 bar);
Note: *forward facing, position the fresh water connection right hand for easy operation of the device



2.1.3. Check list for the best installation place



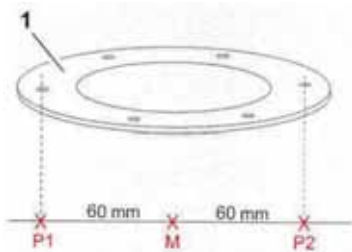
Please consider the following important points

- Installation above max. tank filling level (dosing process requires free flow) at an easy accessible point, considering max. height for safety of operations
- The operator has enough space for handling of the PPP containers, requirements see 2.1.2.
- Plane and horizontal installation area, use the wedge plates (no. 16071) to balance declines up to 5°
- No obstacles inside the tank under the installation area, accessibility for placing the jig from inside the tank
- Easy connection and space for a fresh water connection (quick coupling, trigger or gate valve)
- Rinsing lever is easy to reach and press
- The tank lid should not interfere with the operational space of the easyFlow

2.2. Mounting the easyFlow on the sprayer tank



Mark the centre of the hole to cut-out for the easyFlow installation on the tank or respectively the induction hopper.



Draw a line through the centre and mark the two points P1 and P2 on both sides at 60 mm distance, for the first mounting screws of centre.



Position the drilling jig (1) placing two holes on the marked points and mark the remaining 4 using the punches on the jig.

Make sure that no debris can fall into the tank by placing a collection tray or bucket under the installation area.

Use a drill with diameter 5.5 mm to drill the 6 mounting holes.

Cut out the space for easyFlow tank adapter using a lock hole saw with 95-97 mm diameter



Alternatively use a jig saw



Use a scraper to remove remaining burrs.





Place the sealing ring on the tank and insert the easyFlow tank adapter. If needed use the wedge plates in between (see 2.2.1).

Check the position of the easyFlow and that all drill holes are in line.

Use the tank lid to place the jig plate inside the tank and use the jig plate as a counterpart from inside the tank.



Put the self-cutting screws through and tighten them up carefully starting from two opposite points. Fix the screws stepwise tightening up firmly, but do not over tighten!



If necessary, cut off any screw ends sticking out.



Connect the cap of the tank adapter and lock it by pulling the lever.

For the fresh water connection use a quick coupling with a trigger or a valve, see 2.2.2.

2.2.1. Installation on inclined tank surfaces



If needed, use the wedge plates, part no. 15954, to level tank inclinations up to 5°. The two wedge plates are turned against each other to adapt to any inclination from 1°-5°. Adjust the plates until the easyFlow tank adapter is in a horizontal position.

Use the sealing rings in between the plates to seal. Then continue with the regular assembling procedure.


2.2.2. Installation of the outlet of the rinsing water


The fresh water connection has a 3/4 BSP thread. For easy operation we recommend the installation of a quick connection with a valve facilitating the rinsing process. Max. pressure is 6 bar!

3. General safety instructions

- Label instruction of the Plant Protection Products (PPP) must be followed.
- Observe all general notes for use of PPP.
- Dispose empty containers according to regulations.

3.1. Precautionary statements

 Warning	<p>Warning! Residues of Plant Protection Products can cause the following:</p> <ul style="list-style-type: none"> – Breathing difficulties, poisoning, loss of consciousness or other life-threatening conditions due to inhalation or swallowing! – Allergies and skin irritations due to skin contact!
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 Alert	<p>Alert!</p> <p>When using the easyFlow with Plant Protection Products wear standard personal protective equipment that is recommended during mixing and loading of PPP, such as protective gloves, long sleeved shirts and trousers, shoes and safety glasses!</p>
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3.2. Unauthorized modifications and spare parts manufacturing


Modifications or changes to the machine are only permitted after consultation with, and agreement from, the manufacturer. Original spare parts and accessories authorized by the manufacturer ensure safety. The use of other parts may exempt the manufacturer from liability for the resulting consequences.

3.3. Replacement parts

Equipment parts which are not in perfect condition must be replaced immediately!

Use only Agrotop original spare parts. Should spare parts from other manufacturers be used, there is no guarantee that their design or manufacture complies with the required structural and safety standards.

The agrotop GmbH assumes no liability for damages resulting from the use of non-approved spare parts.

 Note	<p>Note!</p> <p>Any use of the easyFlow, not explicitly indicated by this manual, is considered unintended and strictly prohibited.</p> <p>A non-compliance of this results in a partial or total loss of the product warranty!</p>
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4. Examples of installation of the easyFlow on different sprayers



5. How to use the easyFlow – System

5.1. Step 1 - Connect the easyFlow container adaptor



Unscrew original cap from PPP container.
If container is sealed **do not cut the seal!**



Screw on container adaptor, check before if the container adaptor is stretched out (seal cutter is protected inside the adaptor)

5.2. Step 2 - Open tank adaptor

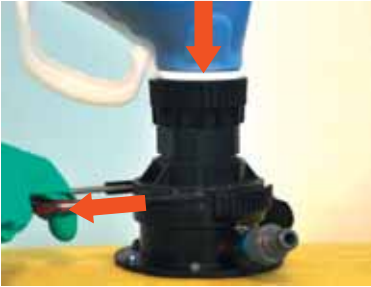


Turn tank adaptor counter clockwise until full lock reached



Press in bow-type handle and take out to closing plug

5.3. Step 3 - Connecting PPP container and Dosing



Attach PPP container and lock it by pulling the handle
Push down container to cut seal

Dosing:



To open turn handle clockwise and
withdraw required volume

To stop dosing:



Turn handle counter clockwise to close,
the flow rate can be controlled by gradually
turning back the handle until full lock

5.4. Step 4 - Cleaning / Rinsing

5.4.1. Intermediate adaptor flushing after partial dosing:

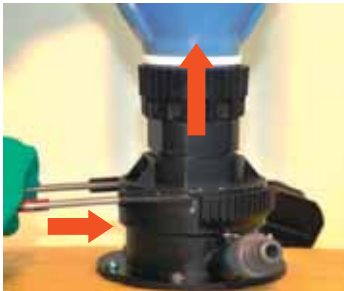


Check if handle is turned counter clockwise to full lock



Connect fresh water hose
Push down red knob and open clean water line approx. 5 seconds

Disconnecting partly empty PPP container:



Check again that handle is turned counter clockwise to full lock, then push handle to unlock container adapter.

Store the PPP container with the easyFlow container adapter connected till completely empty, **do not unscrew!**

Do not forget to disconnect water hose when finished.

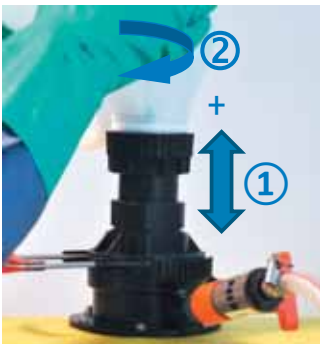
5.4.2. Final cleaning after emptying:



Keep easyFlow tank adaptor opened
 Connect with water and open line
 Turn container and make built-in flat fan nozzle reach every part of container

 Turn handle counter clockwise to full lock and repeat step 5.4.1. (Partial flushing) before disconnecting the clean and empty PPP container

5.5. Step 5 - Disconnecting PPP container after emptying



Stretch out easyFlow container adaptor ① into initial position by pulling up PPP container while turning container clockwise ②. Seal cutter is back into adaptor.



Turn back handle counter clockwise ① to closed position press in handle ② and disconnect PPP container with easyFlow container adapter connected ③. Then unscrew the easyFlow container adaptor for next use.

Closed transfer system at a glance

The easyFlow is the first closed, contamination-avoiding and self-cleaning transfer system for liquid plant protection products from sealed or non-sealed small PPP containers enabling the user to do partial or complete dosing. The easyFlow system is designed to fulfil all standards of environmental protection and operational safety today and in the future.

In comparison to previous systems easyFlow combines following advantages in one compact system:

- Non-spilling connection with highest standards to user and environmental safety
- An automatic relocking system prevents from unintended opening of the PPP container
- Continuously adjustable flow rates, enabling exact transfer of partial container volumes
- Rinsing of accessible parts in contact with Plant Protection Products (PPP) after partial dosing (adapters stays connected onto the PPP container)
- Fast and complete rinsing of empty plant protection product containers
- No more contamination and cleaning of measuring jugs required
- Easy installation on all sprayer tanks and on most chem-hoppers
(Required space see Quick guide page 3)

Characteristics:

easyFlow tank adapter

- Partial dosing possible if needed
- Flow by gravity, no pump needed
- Large diameters for quick flow
- Easy to install and operate
- Wedge plates available to balance declined tanks

easyFlow container adapter

- rinsing nozzles incorporated in container adapter
- cuts and pushes back the aluminium seal of the PPP container automatically, no contaminated tools or knives required
- possibility to use several container adaptors in combination with one tank adapter



easyFlow Tank adapter
Part No. 15955



easyFlow Container adapter
Part no. 15954



easyFlow Wedge plates
Part no. 16071

easyFlow Set 1, Part no. 16076, contains:
1x Tank adapter (15955) und 3x Container adapter (15954)
easyFlow Set 2, Part no. 16077, contains:
1x Tank adapter (15955) und 5x Container adapter (15954)



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