# MultiWit®
# Bark Beetle Slit Trap

**1 x slit trap body**
Colour: dark brown/black

**Note:** The AntiSmell trap salt is provided inside the trap body.


**1 x funnel**
*(removable)*

**1 x gutter with stainless steel screen**
*(removable)*

**3 x stainless steel screens**

**2 x caps, included in the delivery scope of the trapping tray**
*(these are provided inside the trapping tray)*

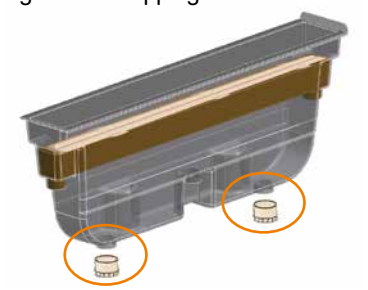
witasek®

## The MultiWit® bark beetle slit trap can be used as:

- **dry trap** – in the area of monitoring
- **wet trap** – in the areas of mass trapping and monitoring
- **single trap or three-trap star**

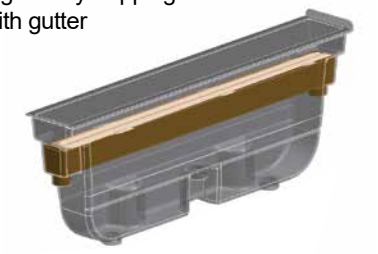
**Difference between the dry trapping method and the wet trapping method:**
The collection container of the MultiWit® bark beetle slit trap has been designed to allow switch-over from the dry trapping to the wet trapping method in a few simple steps.

Fig. 1: Wet trapping method



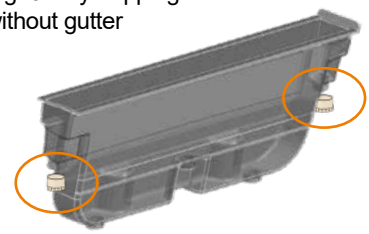
Caps are attached to the two bottom outlets of the trapping tray.

Fig. 2: Dry trapping method with gutter



Caps are not required (Please keep safe!).

Fig. 3: Dry trapping method without gutter



Caps are attached to the two top outlets of the trapping tray.

When using the **dry trapping method** (see Fig. 2 and Fig. 3), the tray should be checked and emptied weekly during the main flight period of the bark beetles. This is especially important in wet weather as the trapped beetles start rotting which will deter newly arriving beetles.

When counting using a measuring jug, 1 ml beetles correspond to approx. 40 European spruce bark beetles or respectively approx. 600 six-toothed spruce bark beetles.

| Item No. | Item designation |
|---|---|
| 315851 | Bark beetle measuring jug - 100 ml |
| 315861 | Bark beetle measuring jug - 250 ml |

When using the **wet trapping method**, the containers need to be checked and emptied only every 4-8 weeks as the trapped beetles are preserved in a water-trap salt solution that prevents the formation of any smell of decay which would deter newly arriving beetles.
For the wet trapping method, two caps are attached to the two bottom outlets (see Fig. 1) and the trap salt-water solution is filled in. This can be mixed either directly in the trapping tray or alternatively in a separate container. **For this, mix 700 ml water with 150 g AntiSmell trap salt (1 pack).**

**Note:** Do not remove the gutter when using the wet trapping method. Any rainwater penetrating from the top will be drained through it preventing dilution and thus a reduced effect of the catch solution.

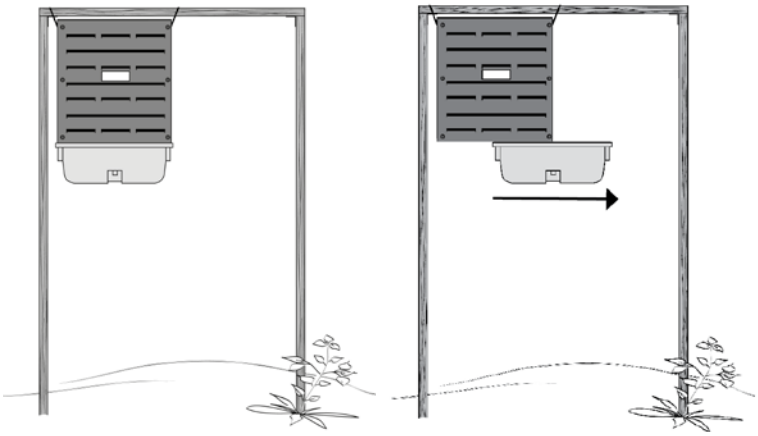
During checks, monitor the fill level of the catch solution. If it has dropped, refill with water and trap salt in the right mixing ratio.

- Using the wet trapping method with AntiSmell trap salt will suppress the smell of decay over a very long period; weekly emptying is therefore not required which will reduce costs.
- An additional major advantage of the wet trapping method with AntiSmell trap salt is that the trapped beetles can no longer release diverting pheromones, which the beetles produce, for example, when there are too many beetles on a tree

# Installation instructions for use as single trap or three-trap star:

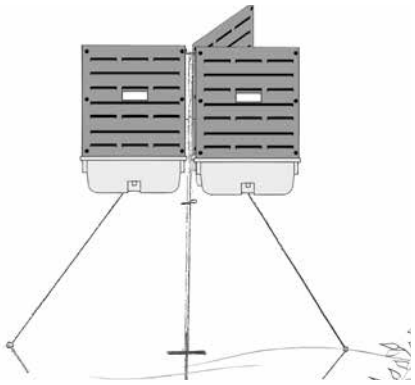
## Single trap

For the assembly of one single trap stand use hardwood (see picture). Fix it to the frame with e.g. cable ties. Hang the trap so, that there is enough space to pull out the catching tube. The trap must be fixed so that it is moved as little as possible by the wind. The lower edge of the trap should be at approx. 1,30 m. Hang the pheromone so low from the top into the inner trap body that it hangs freely in the trap approximately at the level of the fourth row of slits from the top.



## Three-trap star

Three units of the MultiWit® bark beetle slit traps can be combined with the WitaTrap® bark beetle three-trap stand to form a three-trap star (see Fig.). As the catching surfaces are distributed over 360°, three-trap stars delivered better trapping results throughout compared to a single trap in tests.
The trapping output of three-trap stars ranges between 150 % and 250 % of the trapping result achieved with single traps. Another major advantage is the fact that one single pheromone will suffice to attract the beetles



The WitaTrap® bark beetle three-trap stand is designed to allow attachment of the slit traps directly on the stand (if necessary, use a pair of pliers to bend the suspension hooks a little for easier attachment). No fasteners or the like are required. When hanging the unit, note the hook-in side to ensure that the MultiWit® trapping tray can be removed from all three trap bodies at any time for emptying the beetles. The supplied pin is driven into the soil and the three-trap stand with the traps is mounted. Use the pre-assembled tensioning ropes and the ground anchors to stabilize the three-trap stand to withstand weather. The material of the three-trap stand is galvanized to prevent rust.

Drive the ground anchor securely into the ground...

... place the three-trap stand on top. Next tension the 3 tensioning ropes well and anchor to the ground using the supplied pegs...

...Hook the three slit traps to the hooks.
**Tip:** For easier threading, use a pair of pliers to bend the hooks slightly outward.

When using the **three-trap stand**, only one pheromone is required to attract the beetles. It is fastened in the middle between the three traps, at the height of the fourth slit row from the top on the three-trap stand.

## Information for infestation by European spruce bark beetles *(Ips typographus)*

**Pheromones/attractants:**

| Item No. | Pheromone | Dispenser type | Effective period |
|---|---|---|---|
| 323411 | Ipsowit® Standard | standard dispenser | 6-8 weeks |
| 324411 | Pheroprax® Ampoule | ampoule dispenser | 6-8 weeks |
| 323711 | Kombiwit® Tube | ampoule dispenser | up to 20 weeks |

**Purposes of application:**

- **Monitoring:** Monitoring of existing European spruce bark beetle population.
- **Pest control:** Reduction of the population to a size that makes infestation of healthy standing trees unlikely.

**Installation of traps in the terrain and baiting:**

- Install the traps in the terrain from mid/end of March. Fill with a suitable pheromone before the first flight of the beetles (in average temperatures from 15-16°C in the shade). Depending on the packaging information of the pheromone, another pheromone is added following the end of the effective period to keep the effect of the attractant constant, i.e. two to three standard pheromones are required for two flights per year, three to four pheromones are required for three flights per year.
- On freshly cleared areas (e.g. windbreak) where infestation by the European spruce bark beetle is to be feared, the traps are arranged in a row in front of existing borders and at margins with sun exposure. Installation of one to two traps only might be sufficient for small clearances.
- The **distance** of the traps **to healthy trees** should be **12-15 m**!
- The distance between the traps (both single traps and three-trap stars) should not exceed 50 m for low infestation, 30 m for medium infestation and 20 m for high infestation.
- The use of three-trap stars is recommended in case of very high infestation density.
- When using the single trap, fill the pheromone from the top through the tabs into the interior of the trap so that it is freely suspended at the height of the fourth slit row from the top. When using the three-trap star, only one pheromone is required that is secured between the three traps (at the height of the fourth slit row from the top) on the shade side of the three-trap stand.

**Check:**

When using the dry trapping method, check and empty the tray once weekly during the main flight period, especially in wet weather to prevent formation of smell of decay. When counting using a measuring jug, 1 ml beetles approx. 40 European spruce bark beetles.

When using the wet trapping method, checks are only required every 4-8 weeks. Check the fill level of the water-trap salt solution. If it has dropped, refill with water and trap salt in the right mixing ratio. If necessary, replace the trap salt completely. When using the wet trapping method with AntiSmell trap salt, decay and rot smell is suppressed for an extended period and weekly checks are therefore not required. In addition, the beetles cannot release any undesired messenger substances.

## Information for infestation by six-toothed spruce bark beetle *(Pityogenes chalcographus)*

**Pheromones/attractants:**

| Item No. | Pheromone | Dispenser type | Effective period |
|---|---|---|---|
| 321411 | Chalcowit® | standard dispenser | 6-8 weeks |
| 321211 | Chalcoprax® Ampoule | ampoule dispenser | 6-8 weeks |
| 323711 | Kombiwit® Tube | ampoule dispenser | up to 20 weeks |

**Purposes of application:**

- **Monitoring:** Monitoring of the existing six-toothed spruce bark beetle population.
- **Pest control:** Reduction of the population to a size that makes infestation of healthy standing trees unlikely.

**Installation of traps in the terrain and baiting:** see European spruce bark beetle

- The traps are placed at thickets, pole wood or matured wood of spruces where infestation by six-toothed spruce bark beetles in the lying or standing wood was detected during the current or the previous year. The number of traps will depend on the size of the area.
- The **distance** of the traps **to healthy trees** should be approx. **12-15 m**!

**Check:** see European spruce bark beetle

- When counting using a measuring jug, 1 ml beetles = approx. 600 six-toothed spruce bark beetles.

# Information for infestation by the striped ambrosia beetle *(Trypodendron lineatum)*

**Pheromones/attractants:**

| Item No. | Pheromone | Dispenser type | Effective period |
|---|---|---|---|
| 321211 | Trypowit® | standard dispenser | 6-8 weeks |
| 323821 | Lineatin Kombi | standard dispenser | 6-8 weeks |

**Purposes of application:**

- **Monitoring:** Determination of existing wood at risk to protect the lying wood with insecticides on a preventive basis.
- **Pest control:** Reduction of the population by mass trapping over several years in order to minimize the frequency of infestation on freshly harvested wood.
- **Cleaning of wood storage areas:** Trapping of beetles in wood storage areas where infested wood or wood that might be used for breeding is stored or where the beetles might overwinter in the forest soil.

**Installation of traps in the terrain and baiting:**

- Install the traps in March after the first frost-free days. Bait the trap with the corresponding pheromone before the beetle flight. Refilling with pheromone is not required as one piece will suffice for the flight period.
- The traps are installed at existing spruce forests and storage areas if infestation was detected in the lying wood during the current or the previous year.
- The distance of the wood storage areas used in the previous year to the new storage areas have to be at least 50 m. Beetle populations in wood storage areas used in the previous year should be reduced as the beetles will overwinter in the forest soil from July. New infestation in the next year can thus be reduced. Always install the traps in last year‘s wood storage area.
- Make sure to use three-trap stars if beetle populations are very large or respectively at places where high trapping numbers have been identified in control traps (1,000 beetles or more).
- The distance to wood storage areas should be approx. 50 m, the distance between the traps should range between 15 m (for three-trap stars and in particular for wood storage areas) and 30 m (for single traps).
- When using the single trap, fill the pheromone from the top through the tabs into the interior of the trap so that it is freely suspended at the height of the fourth slit row. When using the three-trap star, only one pheromone is required that is secured between the three traps (at the height of the fourth slit row from the top) on the three-trap stand.

**Check:** see European spruce bark beetle

- When counting using a measuring jug, 1 ml beetles = approx. 130 striped ambrosia beetles.
- It is not necessary to inspect the standing existing trees as the beetle does not infest standing wood.

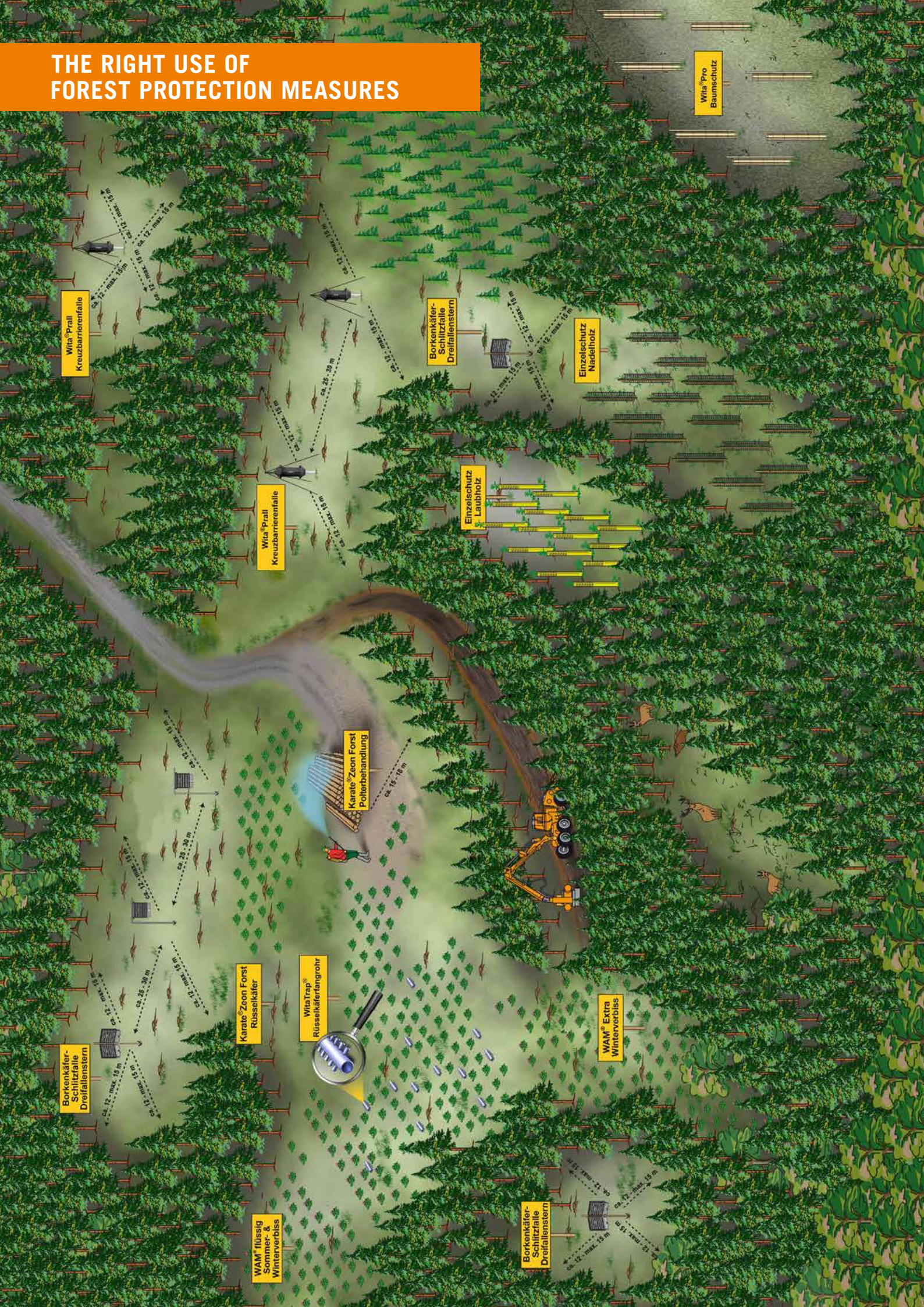
**Other important information**

- The MultiWit® slit trap can be used to trap almost all types of bark beetles.
- Only correct and consistent use of the MultiWit® bark beetle slit trap will deliver the desired results.
- The main flight period of the different beetles will vary depending on the climatic conditions. To determine the local main flight periods, install a few traps and check them frequently. Always check neighbouring trees for possible infestation!
- Pour the trapped beetles in a container and kill them outside the forest. They can also be used as fish food.
- If the traps remain on the site over winter, remove the trapping containers, clean them and preferably store them in a place protected from frost.

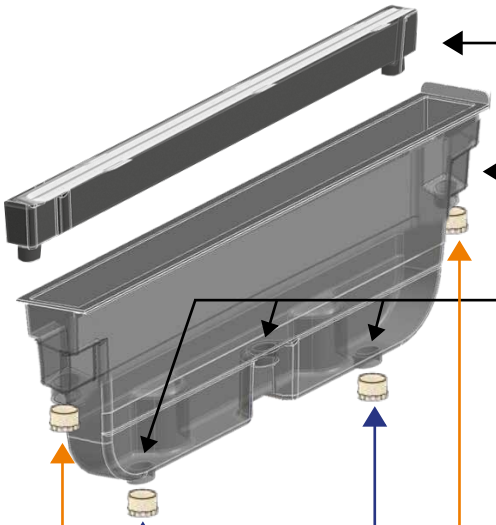
**For reorders:**

| Item No. | Item designation |
|---|---|
| 314051 | MultiWit® Bark Beetle Slit Trap (incl. 1 pack of AntiSmell trap salt) |
| 313111 | MultiWit® trapping tray, complete excluding funnel |
| 391521 | Gutter for MultiWit® trapping tray |
| 391541 | Cap for MultiWit® trapping tray |
| 391411 | AntiSmell trap salt (2 x 150 g per pack) |

# THE RIGHT USE OF FOREST PROTECTION MEASURES



# MultiWit® trapping tray for wet and dry trapping



1 x gutter with stainless steel screen

1 x MultiWit® Trap-Tub

3 x stainless steel screens

2 x caps, included in the delivery scope of the trapping tray

Assembly of the caps for dry trapping without gutter

Assembly of the caps for wet trapping (always with gutter)

*NOTE! The MultiWit® trapping tray is delivered without the funnel. If you still have a funnel from a previous trap, you can naturally continue using it. If a funnel is additionally required, please order it separately. Please always submit a funnel order separately!*

## Your benefits when using the MultiWit® trapping tray:

- **suitable for all commercially available slit trap types** (e.g. WitaTrap® slit trap, Theysohn, Ridex, …)
- improved trapping output for **mass trapping and monitoring**
- less controls thanks to wet trapping method resulting in significant work and cost savings – dry trapping is also possible
- **several flexible applications** (wet trapping/dry trapping, as single trap or three-trap star)
- stable, durable material
- **UV stable**
- Eeasy to use and handle
- high functional reliability
- transparent collection container and therefore easier and more accurate determination of the amount of trapped beetles
- reduction of the bark beetle population – if slit trap is correctly used and combined with the corresponding professional forest hygiene, infestation can be reduced significantly in a short time

## The MultiWit® trapping tray can be used in the:

- **dry trapping method** – in the area of monitoring
- **wet trapping method** – in the areas of mass trapping and monitoring

## Installation instructions for various applications:

### Wet trapping method

Installation of the caps at the two bottom outlets (see Figure 1):

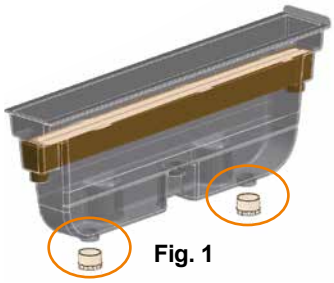


**Fig. 1**

Caps are attached to the two bottom outlets of the trapping tray.

For the use in the wet trapping method, you will additionally require:

- a slit trap body (e.g. MultiWit® slit trap),
- a slit trap funnel,
- the AntiSmell trap salt

The catch solution (150 g AntiSmell trap salt + 700 ml water) is prepared and filled in the MultiWit® trapping tray. The funnel is placed on the MultiWit® trapping tray and is inserted together with the MultiWit® trapping tray in the slit trap body.

**Checks for the wet trapping method:**
When using the wet trapping method, checks are only required every 4-8 weeks. During this, check the fill level of the water-trap salt solution and replace the trap salt if required (e.g. normally every 6-8 weeks when using the AntiSmell trap salt). If the water level has dropped but the trap salt is still effective, it is only required to fill up water. When using the wet trapping method with AntiSmell trap salt, decay and rot smell is suppressed for an extended period and weekly checks are therefore not required. In addition, the beetles cannot release any undesired diverting pheromones.

**Note:** Do not remove the gutter when using the wet trapping method. Any rainwater penetrating from the top will be drained through it preventing dilution and thus a reduced effect of the catch solution.

### Dry trapping method

With or without gutter (see Figure 2 and 3).

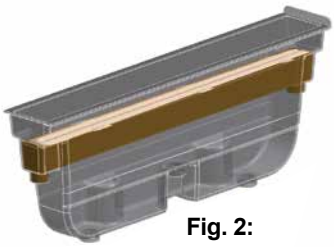


**Fig. 2:**

Caps are not required (Please keep safe!).

For the use in the dry trapping method, you will additionally require:

- a slit trap body (e.g. MultiWit® slit trap)
- a slit trap funnel

**Dry trapping with gutter:** The caps are not required as the gutter is sealed „beetle-tight“ to the outside. (see Figure 2)
Please keep the caps safe. They can be re-ordered at any time if lost.

**Dry trapping without gutter:** The caps are attached to the two top outlets to prevent the beetles from escaping. (see Figure 3)
Next, place the funnel on the trapping tray and insert both into the slit trap body (e.g. MultiWit® slit trap).

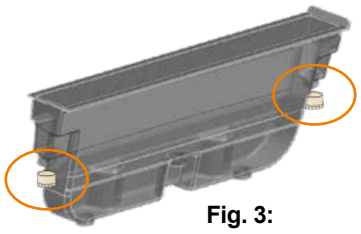


**Fig. 3:**

Caps are attached to the two top outlets of the trapping tray.

**Checks for the dry trapping method:**
When using the dry trapping method, check and empty the container once weekly during the main flight period, especially in wet weather to prevent formation of smell of decay.

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