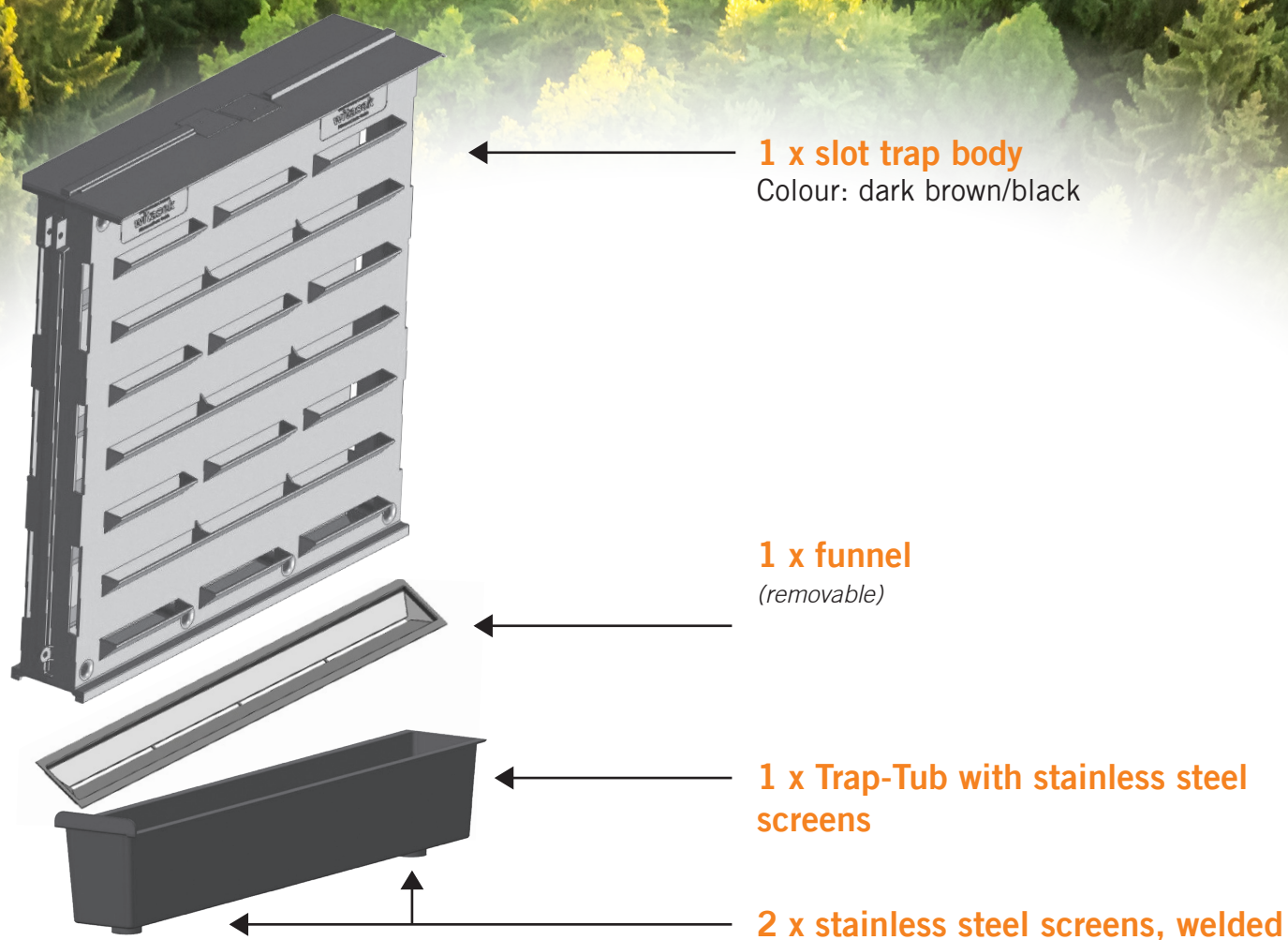


WitaTrap®

Bark Beetle Slot Trap



The WitaTrap® bark beetle slot trap can be used in the dry trapping method:

- **dry trap** – in the area of monitoring
- **single trap or three-trap star**

When using the **dry trapping method**, 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.

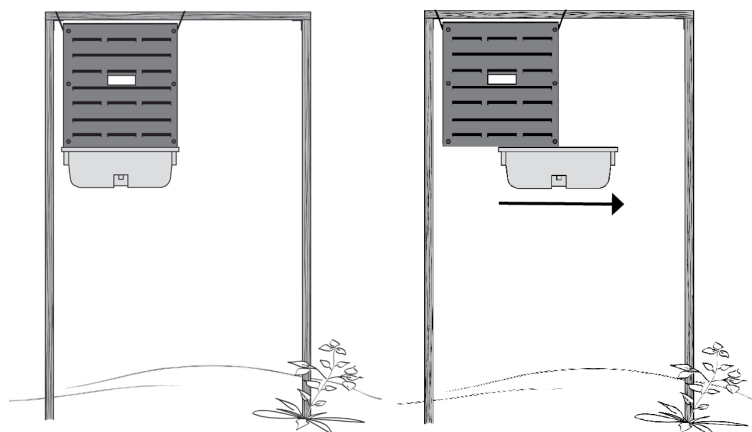
When counting using a measuring jug, 1 ml beetles correspond to approx. 40 European spruce bark beetles or respectively approx. 600 six-toothed spruce bark beetles.

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

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

Single trap

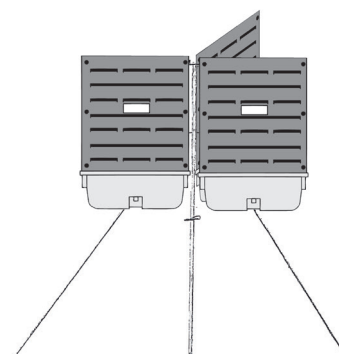
For the assembly of one single trap stand use hardwood (see picture). Fix the trap to the frame with e.g. cable ties. Hang the trap so, that there is enough space to pull out the catching tube. The trap must be fixed so that it is moved as little as possible by the wind. The lower edge of the trap should 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 slots from the top.



Three-trap star

Three units of the WitaTrap® bark beetle slot 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 slot 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 WitaTrap® 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 on the 3 tensioning ropes well and anchor to the ground using the supplied pegs...



...Hook the three slot 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 slot 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 attractant, 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 slot 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 slot 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 (see MultiWit® Trap-Tub, item no. 313111), 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 or 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 slot 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 slot 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 WitaTrap® slot trap can be used to trap almost all types of bark beetles.
- Only correct and consistent use of the MultiWit® bark beetle slot 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
314031	WitaTrap® bark beetle slot trap
313011	WitaTrap® standard collection container without funnel
391511	Funnel for WitaTrap® collection container