## **Clever Watering**

Every drop counts

4.78



## Automatic Watering that works alongside you.

Save water and time as your garden flourishes.

Realise Your Gardening **Preams** 

🌀 GARDENA

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### Water sensibly and efficiently: In all areas of your garden. With automatic watering you have more time to relax and enjoy.

Saving water and money? And still have more time for fun activities you enjoy? That's possible with GARDENA: It doesn't matter if you want to grow your plants in the garden, on the balcony or on the terrace. Get Europes' No. 1 irrigation brand and treat yourself to some rewarding moments with just one click. Switch from vigorous gardening duties to enjoyment mode while your plants are flourishing.

#### Plant areas: Raised beds and vegetable beds

The GARDENA Micro-Drip-System ensures that your plants germinate, grow, blossom and flourish. By watering exactly at the root of the plant. Page 24



#### Plant rows: Hedges & shrubs

Watering for plant growth and well-being. Hedges and shrubs, border plantings or plant borders are irrigated in a sustainable manner. Page 28



#### Potted plants: Balcony & Terrace

Well looked after. Now your plants are watered automatically and efficiently. Every day. Even when you are on vacation. Page 18



#### The heart of automatic watering: The Irrigation Control

Now water is supplied to all areas of your garden. No matter the time, water requirements or which system. It liberates you to have the control for everything to run smoothly. Page 42



#### Underground Water Network

Always be connected to the source. Thanks to this invisible underground Pipeline solution, you have access to water wherever you need it. Page 38

#### Lawn

Achieve a green and lush lawn with a Sprinklersystem. Discover the elegant and efficient lawn care solution that is even water-saving. Underground installed sprinklers get the hard work done and disappear when not in use. Page 32

## Is investing in intelligent and automatic watering worthwhile?

The world needs more green spaces. Not only do they help the planet, but also people. Let's care for them, whether in the countryside, the garden, on the terrace or balcony. Discover your sustainable watering solution from GARDENA.

### Healthy plants and greener lawns ...

are proof of watering your garden correctly. Thanks to automatic irrigation it is a piece of cake to keep your garden areas beautiful and lush.





#### More time to relax ...

while the system takes care of the irrigation in your garden. Thanks to automatic watering you have more time to relax on the terrace, balcony or among beautiful flower borders and vegetable beds.



#### Conserve resources ...

by switching from manual to automatic watering. Automated and precise irrigation is much more efficient. You can save up to 70 % of the water while your garden thrives. Every drop counts.

#### Adaptable & clever ...

from small to large lawns, from flower pots on the balcony to raised beds in your garden: GARDENA offers customised and intelligent solutions, which can be conveniently adapted to all your watering needs.

## Did you know...

### ... that plants absorb water from the soil with the help of its roots?

Plants consist of approx. 80 to 90 % water and would no longer be able to survive without water. Water dissolves nutrients in the soil, which are transported upwards to the plant via the roots to support growth and other metabolic processes, including photosynthesis.

### ... the water requirement varies greatly from plant to plant?

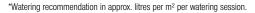
The lettuce in the vegetable patch, the hedges in front of the house and the lavender on the balcony - they all need to be watered at different intervals and with different amounts of water.

### ... that there are four stages of the warning signs of plant thirst?

Dark green, bluish coloured lawns or plants with withered and dropping leaves are typical signs of acute water shortage. Garden experts distinguish between four phases of a plant's drying out: incipient thirst, acute water shortage, wilting and death. You can find the warning signs on page 13.

### ... that drought stress reduces photosynthesis, growth and survival of the plant?

Drought stress mainly occurs when water demand exceeds the available amount of water available or when the transpiration rate rises sharply including water deficit, drought and high salinity in the soil.



Hortensie (Hydrangea macrophylla)

4 to 5 litres\* Prefer it regularly damp to wet. Lavender (Lavandula) Prefer to be dry than too moist. Ensure good water drainage, so that no waterlogging occurs.

### ... that too much water can have a negative impact on plant growth?

There is often a tendency to water more than necessary when a plant shows warning signs of thirst. The already stressed and weakened plant roots would deteriorate even quicker due to access to insufficient oxygen.

#### ... that the best time to water is in the morning?

The soil has cooled down overnight and absorbs the water well. In the blazing sun the water would evaporate immediately.

#### ... that you can reduce up to 70 % water consumption compared to conventional irrigation techniques?

Automatic irrigation conserves this precious and valuable resource and gives the plants exactly the right amount of water they need - not too much or too little. Precise watering enhances your plants growth, making them more beautiful and healthier and providing you a richer harvest.

🕑 Tip

Without water you cannot achieve a healthy garden. Discover our range of Water Controls that transport water just at the right time. No matter if you want to irrigate one particular area or your entire garden. GARDENA offers a range of Water Controls that are directly connected to a water tap.

The multi-channel Irrigation Control will be heart of your garden that waters different areas separately with individual watering schedules, e.g. lawn, flower boxes or vegetable beds. Now each area will get the right amount of water at the right time. **More on page 42** 

Heather

(Calluna vulgaris)

3 litres\* Water regularly on warm days in autumn. Lemon (Citrus limon)

**3 to 4 litres\*** Rarely but thoroughly, avoid waterlogging. In winter keep dry.

## 10 tips for clever watering

How you can save time and money through needs-based watering.



#### Keep consistently moist

Most plants are dependent on a constant soil moisture level. Drip irrigation saves water, because with each drop, you're targeting water to the roots. The result: vigorous growth, a better yield and more beautiful, healthier plants.



#### Watering economically

For a flower bed, one or two waterings a week is usually sufficient. Use as much water as necessary and as little as possible. This can be achieved using an automatic irrigation system with moisture sensor in the bed, on the balcony or in the lawn. The sensor is your reliable guide, as it skips irrigation schedules when the soil is moist. Just insert it in the soil and know for sure whether the plants need water or not. **More on page 45** 

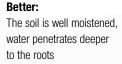


#### Watering the roots

You should water the roots and not other parts of the plant. This is where it matters the most. Too little water often only wets the surface of the soil, e.g. when mulch is applied. With the Micro-Drip-System, you water the plant efficiently and precisely directly at the root. Crops depend on even soil moisture in their ripening phase before harvesting. This is especially important for the formation of roots and tubers of carrots or potatoes, leaves of basil, heads of cauliflower or lettuce, pods of beans or fruits of tomatoes or fruit.

#### Wrong: Only the top layer of soil is soaked, the roots do not get any water









#### Water early in the morning

The soil cools down at night. If you water in the morning, less water evaporates compared to watering on hot soil. Your plants are able to absorb sufficient water before the soil heats up during the day. Let a Water Control take charge of the watering schedule and irrigate your plants at the right time: While you sleep, it takes care of the watering duration and frequency based on a pre-defined schedule.

#### Keep the leaves dry

Plant diseases are always a cause for concern for gardeners. Wet leaves are more susceptible to sickness. If left wet overnight, fungal infections may arise. Therefore, try not to wash off the leaves when watering, but water the root area. The Micro-Drip-System waters the plant precisely and directly at the roots.



#### Avoid waterlogging

Waterlogging prevents the roots from breathing. The roots drown without oxygen. Therefore, a soil moisture sensor is the ideal solution to identify soil that is too wet. If this is the case, simply skip a watering cycle.



#### Use rain water

Harvesting rain water is better for the environment and your plants. They love the fact that rainwater is warmer than tap water and has a lower calcium content. More on page 31



#### Use high-quality clay-rich soil

Earth containing a lot of clay minerals retains water better due to its ability to swell, providing the plants with a more consistent supply of water. A good quality top soil ensures excess water can drain away during wet summers and in winter thus preventing waterlogging. Loam and humus are also good at retaining water.



#### **Group plants together**

Grouping plants according to their needs allows for more efficient watering. Modern water controls take into account the needs of different watering zones and required watering methods.



#### **Regional plants**

Growing indigenous plants requires less effort, fertiliser, pesticide – and water. "Old" varieties adapted to the local conditions are more suitable than over-bred global hybrid cultivars. But there are other locally cultivated plants that have adapted to the domestic climate.

11

# 5 steps to a beautiful lawn



#### A good soil is the basis

The ideal basis for lawns is also a loamy sandy soil. Nutrient-rich humus as a root base ensures good growth. If in doubt, it even pays to remove poor topsoil and replace it with new soil.



#### The lawn type makes the difference

Here it is worth investing a little more in a high-quality mixture - for a healthy, weed-free lawn. Ornamental lawns, play lawns and utility lawns are recommended. The last mentioned is one of the most frequently sold types, because it is resilient and looks good at the same time. Ornamental lawn has finer-leaved grasses that grow close together, which makes it look particularly beautiful carpet-like.



#### Mow and scarify once, please!

Our lawns need to be cared for; that means mowing and verticutting. When mowing, you should make sure not to cut off more than a third of the leaf volume. Experts recommend a cutting height of 35-45 mm. With the GARDENA SILENO, you cut the grass cleanly with precision blades and reliably achieve the desired cutting height. The fine cuttings act as a natural fertiliser on the lawn. This promoted healthy growth and saves precious time, to do the things you love. Do you want the best possible care for your lawn? Then you should verticut it once a year. To do this, mow the lawn as deep as possible to a height of approx. 20 to 30 mm.



#### Fertilising keeps your lawn in shape

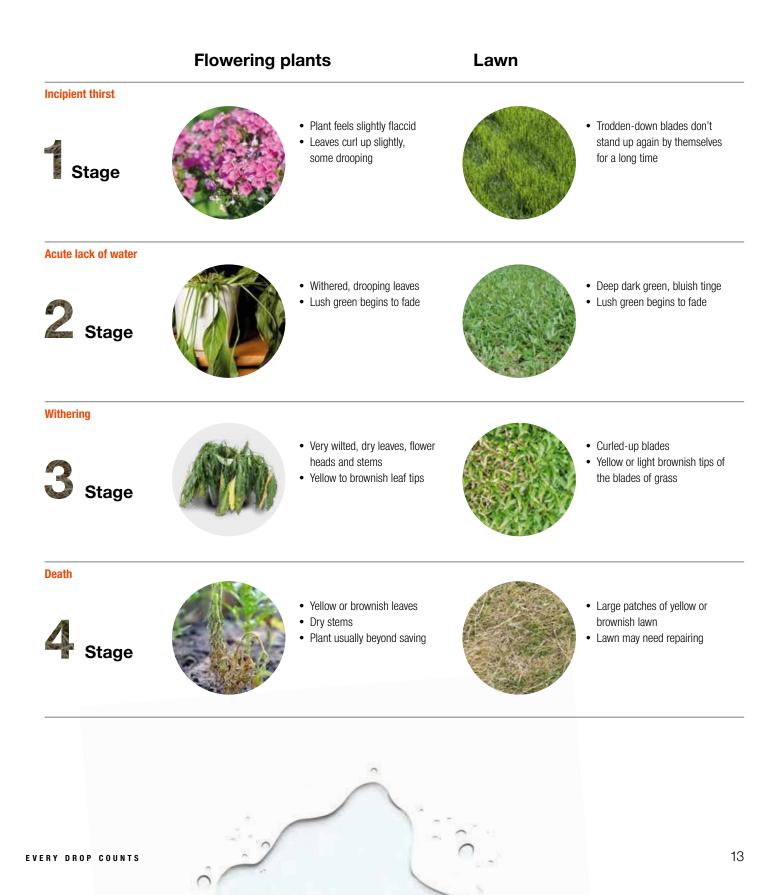
Good nutrients keep you healthy - this also applies to your lawn. Too few nutrients lead to visible deficiency symptoms. And that's exactly the risk when mowing and removing the grass. The lawn loses leaf mass and important nutrients. If the nutrient deficiency becomes too great, it slows down its growth, begins to discolour and becomes more susceptible to disease. To make matters worse, the reduced nutrient content of the soil can also make it easier for undesirable weeds to take root. To avoid this, fertilise the lawn, ideally before it starts to rain. If it does not rain, you should water the lawn so that it does not "burn". You can save about a third of the fertiliser by mulching the lawn if you leave back the clippings on your lawn. Robotic mowers mow so frequently that the clippings are always small. Classic mowers have mulching blades that shred the clippings and then leave them lying around.

#### Water - the recipe to achieve a beautiful lawn



Finally, it is always the right watering that determines how healthy and green your lawn is. Here, too, the rule is: Clever watering! Use the GARDENA Sprinklersystem, a complete system, consisting of Pop-up Sprinklers, Pipes and Connectors as well as the matching Irrigation Control (see p. 32).

## Warning signals of dried out plants



### Micro-Drip-System: Caring for your plants and every precious drop.

Watering precisely e at the root

From now on the Micro-Drip-System irrigates for you! The Micro-Drip-System is an automated watering solution that is growing in popularity. The increase in demand is undoubtedly linked to hotter and drier summers and changing perception to this scarce resource in our society.

There are key sustainable advantages that make this solution unbeatable: You can save up to 70 % of water through targeted watering directly at the root of the plant. The system is installed in no time. So if you want to water more plants with the Micro-Drip-System, this can be done in just a few steps - thanks to the patented Quick & Easy connectors. Your plants will be supplied with exactly the right amount of water at the right spot.

The result is beautiful and healthy plants.





#### Plant areas: Raised beds and vegetable beds

Are you considering watering plant areas? Do you want to water entire beds of lettuce, beans, strawberries or shrubs?

Discover the suitable irrigation solution based on the type of plants and setting of the plants in the bed. Based on the watering needs of your plants you can select from a range of Micro-Drip Drip Heads and Spray Nozzles. In combination with a Water Control and Sensor you can optimise the irrigation process even more. **More see page 24** 

#### Potted plants: Balcony & terrace

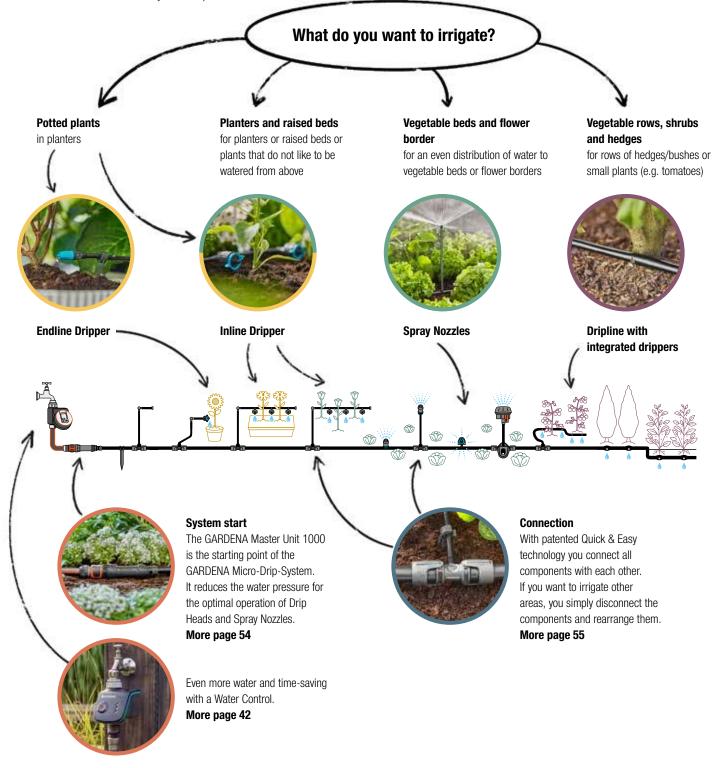
With conventional watering, the plant often receives too much water. Micro-Drip Drip Heads, on the other hand, carefully transport water directly to the root of the plant over a defined period of time. It is the ideal invisible irrigation solution for your potted plants. More see page 18

#### Plant rows: Hedges & shrubs

For hedges and rows of plants, you lay a dripline that supplies the plants with water above or below the ground. The underground installation is particularly ideal for permanent plantings while above ground installation of the dripline are best suited for annual plantings. With the Micro-Drip-System you water directly at the roots. This way you avoid overwatering and the soil does not get too wet. **More see page 28** 

## Easy and convenient ...

Thanks to the Quick & Easy connection technology the Micro-Drip-System is very easy to install. There is no prior knowledge needed. The drip irrigation starts with the Watering Control which is installed directly at the tap. From there, the water flows through the Master Unit to driplines and connectors, transporting it to directly to the plants in the desired sections in your greenspace, such as plant areas, potted plants or plants rows. Drip Heads and Spray Nozzles are individually placed along each plant. Drop by drop the water is directly transported to the root of the plant. Select from a range of options to either manually or automatically irrigate your plants. GARDENA even enables you to control the irrigation schedule from the comfort of your smartphone.

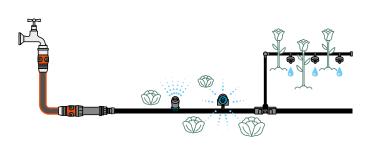


Quickly explained & quickly installed

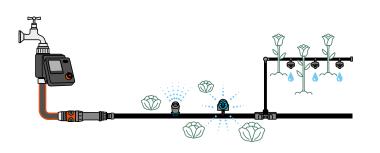
You can easily install the Micro-Drip-System yourself. You can find more information on installation in the DIY section on page 66 or watch the online videos. In no time you will supply your plants comfortably and efficiently with this precise and sustainable plant irrigation solution.

#### How to step up and control your Micro-Drip-System

Only you know what works best for you and what your garden needs. From automated irrigation with Water Control installed at the tap, to intelligent watering with Water Control and Soil Moisture Sensor to smart watering via the GARDENA smart App with the smart Water Control and smart Sensor. Everything is possible. Explore all available options and discover an automatic watering solution with the ideal comfort level for your needs.



\*\*



#### Directly at the tap

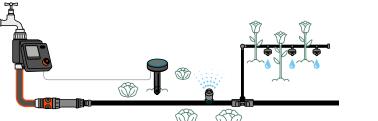
Basic and flexible to install and use. First you need the Master Unit 1000 or Master Unit 2000, which regulates the pressure and filters the water. Connect the Connecting or Supply Pipe directly to the Master Unit. You can easily regulate then constant water supply from the water tap.

#### With Water Control

Water reliably and conveniently by automating the watering schedule with a GARDENA Water Control. You can easily define and set the days, duration of the watering cycle and exact timings on the units itself. The Water Control then takes care of everything without any need of interference. Discover our range of models and select the system that is best suited for the needs of your garden.

More on page 46

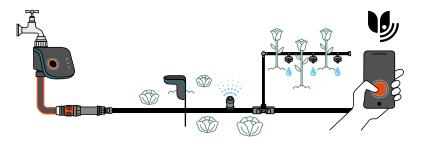
#### $\star\star\star$



#### With Water Control and Soil Moisture Sensor

You can also combine your Water Control with the GARDENA Soil Moisture Sensor. It is directly connected to the Water Control via a cable and reliably measures the soil moisture. Especially after longer periods of rain the soil is very moist. The Sensor would signal this to the Water Control and a pre-defined watering schedule will automatically be skipped. Thus water is saved and the plants receive the best care. **More on page 46** 

 $\star \star \star \star$ 



#### With smart Water Control and smart Sensor

Irrigate the smart way. This is the most water-efficient and intelligent way to care for your garden. Just open the GARDENA smart App and control your garden maintenance from home or on the go. The smart system automatically provides the optimal care. It takes into account soil moisture measured by the smart Sensor and weather forecast. The watering schedule of the smart Water Control is then automatically adjusted when required. You can even use voice control and connect the smart system with Alexa, Apple HomeKit or Google Home. **More on page 50** 

#### EVERY DROP COUNTS

smart

You don't necessarily need a huge garden. An outdoor oasis can also be found on balconies and terraces. Whether oleander, laurel or lavender: planters and potted plants can turn your terrace or city balcony into an oasis of well-being. Blooming flower boxes bending towards the sun. Be surrounded by eye-catching and colourful plants and enjoy time with friends in your outdoor oasis. Now you can easily design the outside as charming as the inside and make it beautiful for yourself. Get the waterefficient and reliable irrigation solution for your balcony or terrace.

Balcony&

Discover our Starter Sets for Balcony & Terrace on page 66

GARDENA



## Quenching the insatiable thirst

The plants in pots and planters can be divas. Sometimes they complain about waterlogging, they drown in water, they feel dehydrated, or they cry out for water. And other times, the plants bend their neck because they don't receive sufficient water. The Micro-Drip-System is your little helper to ensure accurate and water-efficient watering of your plants. Drop by drop it transports water directly where it is really need: at the root of the plant. Especially due to the scarce amount of soil available, only little water can be stored and regular watering is a must for potted plants. You want to provide just the care right for your plants? Then Micro-Drip-System is the right solution you have been looking for. It cares for your plants with every precious drop. Not only when you are at home but also when you are traveling. Your plants will continue to thrive, even when you are away. Beautiful and healthy plants are the result from precise and accurate watering at the root of the plant. You don't know where to start? With the help of the Starter Sets, the Micro-Drip-System is easy to install. Every step is easy to follow, even if you're not technically minded or struggle with your green thumb. With AquaBloom you don't even need a power supply, because the device is solar powered and can water up to twenty plants. From now on you can relax and your plants are well looked after.

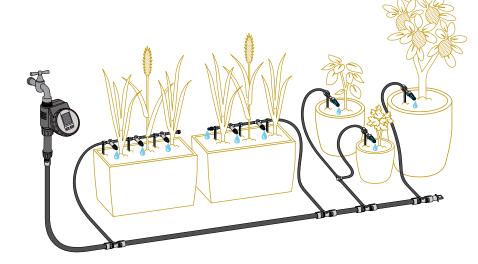


### More time to relax.

The Micro-Drip-System takes care of the irrigation.

Maybe you have to get used to it first: to the free time. The Micro-Drip-System is always there to reliably and conveniently care and water your geraniums, verbenas, petunias, herbs and other plants in your outdoor space. After all, the growing season lasts from spring to autumn and the system will support you throughout that time period. The Micro-Drip-System: your reliable and water-efficient helper for a blossoming outdoor space.

Drip Heads are the best technique to water plotted plants and planters. Endline Drip Heads are ideal for watering stand-alone plants in individual pots. Inline Drippers are best suited for flower boxes and pots with several plants. Easily create your individual solution or check out our range of starter sets for your individual watering needs.





For balconies and terraces, the 4.6 mm Supply Pipe and Connectors are most suitable. You can easily hide the installation behind the pots and planters for it become nearly invisible.

> Installation video balcony



Installation video terrace



#### **Feature of Dripper**



**Ideal amount of water** Either constant or adjustable water output.



Reliable water volumes Consistent water delivery over the entire system. Thanks to pressure compensating Drip Heads. Even with differences in height between the pots, it is guaranteed that all plants are watered evenly.



**No clogging** Labyrinth technology in the Drip Heads prevents deposits. The system cleans itself.



Auto Stop Saves water because the the Drip Heads closes itself when it is switched off and does not drip.



Easily cut the pipe and combine it with other components.

Screw the Endline Dripper onto the end of the pipe.

Inline Dripper are mounted into the ends of two pipes.

**Tip** The Installation tool helps you to easily screw the Endline Dripper onto the end of the pipe.

DIY instructions see page

#### Which type of Dripper is the right one ...?



2l/h

**AUTO** 

**STOP** 

SELF

#### **Endline Dripper**

suitable for watering stand-alone plant pots. They are screwed onto the end of the pipe.

#### For plants with the same need of water

Standard Drip Heads – Consistent flow rate for plants with the same water requirement.







are mounted into the ends of two pipes to water a row of plants,

**Inline Dripper** 

such as in flower boxes or beds.

For plants with the same need of water and height differences Pressure-compensating Drip Heads – For a uniform flow rate over the entire system, even with pots with height differences.







For plants with a different need of water Adjustable Drip Heads – Flexibly adjustable to the water requirement of the plant.







For plants with a different need of water and height differences

Adjustable and pressure-compensating Drip Heads – Flexibly adjustable to the water requirements of the plant, even with pots with height differences.









Product overview

see page 56

SELF

BALCONY AND TERRACE

56

AUTO





21/h

## Irrigation miracle without the need of water tap

With the autonomous irrigation solutions from GARDENA, watering your plants on the balcony or terrace is going to be a breeze. You don't have a water tap on your balcony or terrace? Or you don't want to be connect to the main water supply?



#### You don't have access to a water tap or power? GARDENA AquaBloom





Is there no water tap and power socket on your balcony or terrace? Then the solar-powered AquaBloom is the perfect solution for you. It supplies plants and flowers with water without the need to have access to a socket or water tap. AquaBloom can water up to 20 plants and transform your balcony or terrace a blooming oasis.

- No water connection necessary.
- No electricity connection needed.
- Solar powered.
- 3-in-1 control unit (pump, watering control, solar panel).
- 14 pre-defined watering programmes.
- As set available: 10.5 I sustainable, expandable water reservoir.

#### Further benefits of AquaBloom



Battery and solarpowered control

You don't need a power socket. Simply insert the supplied batteries and you are ready to go.



**Set watering frequency** You can set the desired watering frequency by simply turning the orange control knob. From 10 minutes every 12 hours to 20 minutes every

72 hours. The choice is yours.



**Effortlessly irrigation** AquaBloom transports the water to your plants, even if the water tank is on another floor.



#### Easy to install

Combine AquaBloom with the Micro-Drip-System on balconies and terraces. Simply connect the supply pipe to the AquaBloom, select the desired schedule and the supply of water starts. The water from the water tank is pumped to each Dripper, watering the root of the plant.

#### You have a power connection? GARDENA Balcony Watering





The GARDENA Fully Automatic Flower Box Irrigation automatically irrigates up to 25 plants. No water tap is required. This autonomous irrigation solution can pump water even from sustainable water reservoir, such as rainwater tanks. It is also suitable for watering potted plants. The water flow is controlled by the computer and is automatically switched on and off. This is convenient and gives you more free time to relax. The integrated 14 watering programmes allows you to provide and selection the optimal care for your individual plants. The set requires everything you needs, including a pump. Now you are ready to go in no time.

- The water is pumped out of the container with the pump.
- With the watering control for the pump you can choose from 14 watering programmes.
- Inline Dripper deliver water to the plants in a dosed and water-saving manner.



#### Indoor watering

😂 Tîp

Suitable for outdoor and also indoor plants. You can easily water your plants, even when you are not at home. GARDENA offers a clever, automatic watering solutions for up to 36 indoor plants. You don't require access to a water tap. The pump activates the watering schedule for one minute every day. The distributors supply drop by drop the roots of the plants with water. The full set includes pump, pipes, water reservoir, various irrigation drip distributors and transformer with integrated timer. Everything you need to start watering your plants immediately. The low-voltage transformer ensures safe and flexible use.

Product overview see page 57

57

## Raised beds and vegetable beds

Is the green salad really organic? You can be assured they are if you grow vegetables and fruits in your own garden. You want a lush, colourful bouquet of flowers from your large perennial bed? You like to look out into the greenery and gaze over ornamental trees or ground covers? More and more people have the desire to live in harmony with nature. They discover new hobbies and enjoy planting their flower and vegetable plots but also fruit and vegetable cultivation. Ideal project for a fun family experience. The right irrigation solution ensures that your outdoor oasis becomes a desired place to relax while your vegetable beds are thriving.

Installation video 🔳 vegetable bed



Discover our Starter-Sets for your vegetable and ornamental garden and raised beds on page 67

GARDENA

GARDENA



## Irrigating plant areas

The majority of vegetables mostly consist of up to 90 % water, from broccoli to tomatoes and the top seller, cucumber. To thrive, the plants need plenty of water. Especially in hot summer months, such as July and August. Consistent and precise irrigation is also crucial for newly planted plants. Because of their shallow roots, young crops need care and gentle watering if they are to thrive. A useful and practical alternative to a watering can or garden hose is drip irrigation, which transports water directly where it is needed: at the root of the plant. Micro-Drip-System is the most efficient way to water your plants. Other parts of the plant stay dry which is especially important for the leaves. This means no unnecessary watering, no lost water and a water-efficient irrigation solution. As part of the Micro-Drip-System you can also select from range of Spray Nozzles and Sprinklers that provide the optimal care for your plants and vegetables. Easily create your own individual irrigation solution: From irrigating smaller to large sections. GARDENA offers a range of Spray Nozzle with various spray radius, from 90 to 360 degrees. Finally a system that cares for your plants and supports richer harvest.





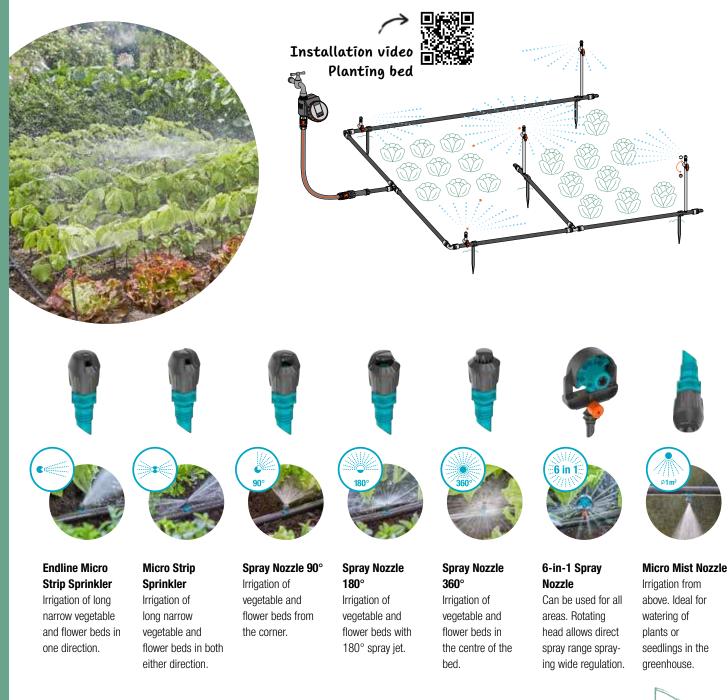
## **Best irrigation for your bed? It's here!**

Micro-Drip-System for plant areas

#### Vegetable beds and flower borders

Summers are getting hotter and drier. Water-efficient irrigation is therefore fundamental. Use Spray Nozzles as a reliable and accurate irrigation solution for your plants. Decide how to use the little irrigation helpers most effectively. There are so many options, simply choose based on the watering requirements of your plants. Thanks to the Quick & Easy connectors, you can reach every corner in the bed and the system grows with you, so to speak.

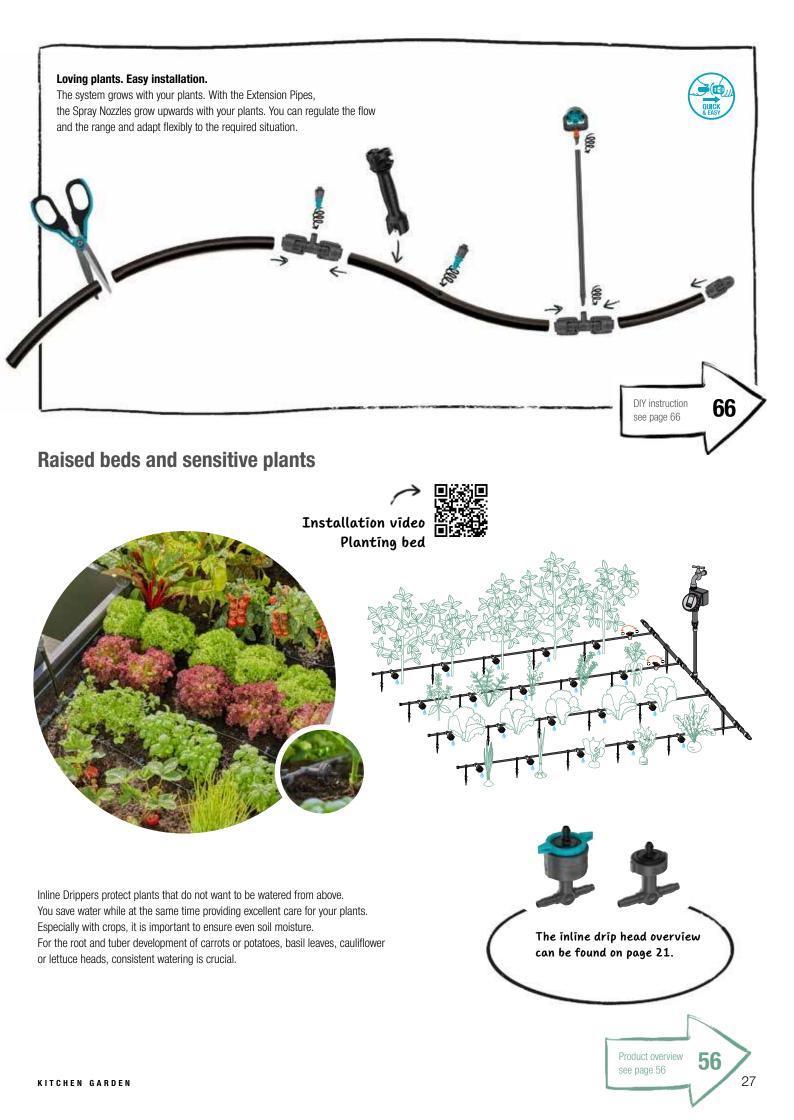
For example, if your vegetables are positioned in a row, you install the Endline Micro Strip Sprinkler or Micro Strip Sprinkler. If you want to water your plants from a corner, select the 90° Spray Nozzle. Alternatively, you can position a 360° Spray Nozzle in the middle of the bed to irrigate all the surrounding plants. There is also the ingenious 6-in-1 Spray Nozzle with six different spray patterns and volume regulation. With the fine Micro Mist Nozzle the water is finely atomised from above. This is perfect for sensitive seedlings.

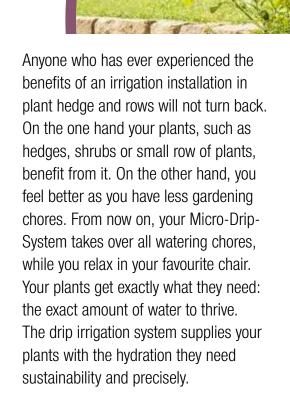


Product overview

see page 58

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Shrubs

Discover our starter-sets for your plant rows on page 67

GARDENA

## Watering plant rows

You don't have to be brave. Just motivate yourself to try this way of of irrigation. You will be amazed! Simply take the drip irrigation line in your hand, run it along your hedges and shrubs and the irrigation of your garden is in safe hands. The Dripline has integrated drippers which are positioned at 30 cm distance. Ideal for efficient and accurate watering of row of plants. Practically no great effort is required - you simply install and start using the system. Your plants are being well taken care of, while you can do what you enjoy doing. By the way, you can choose to use above-ground or below a invisible ground installation.

HEDGES AND SHRUBS

## The direct link to the root

#### Watering intelligently with a dripline.

It is important to keep the root balls moist immediately after planting; but these 'green walls' still need water later on. Decide whether you want to lay the drip line above or below ground; both options work. The Micro-Drip-System provides continuous, regulated and efficient water supply. Plants thrive especially well in rows of plants, such as hedges, bushes and shrubs. The integrated drippers supply water to the plants directly "in line" along the roots.

#### Dripline for vegetable- and small plant rows Above ground installation

- Maximum pipe length: 30 m (Master Unit placed centrally in the pipe run)
- Branches and extensions at any time possible with Easy & Flexible connectors

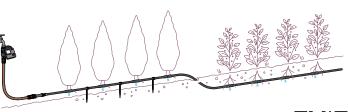


Installationvideo

#### Dripline for hedges and border plantings with even spacing Above and below ground installation

- Maximum pipe length 140 m (Master Unit placed centrally in the pipe run)
- Branches and extensions are possible at any time with Quick & Easy Connectors
- Constant water output even with differences in height
- Invisible underground installation thanks to the root protection





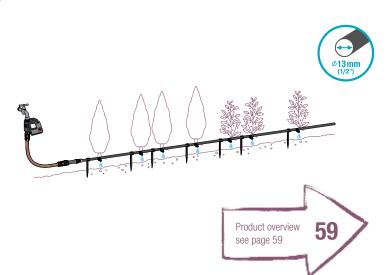


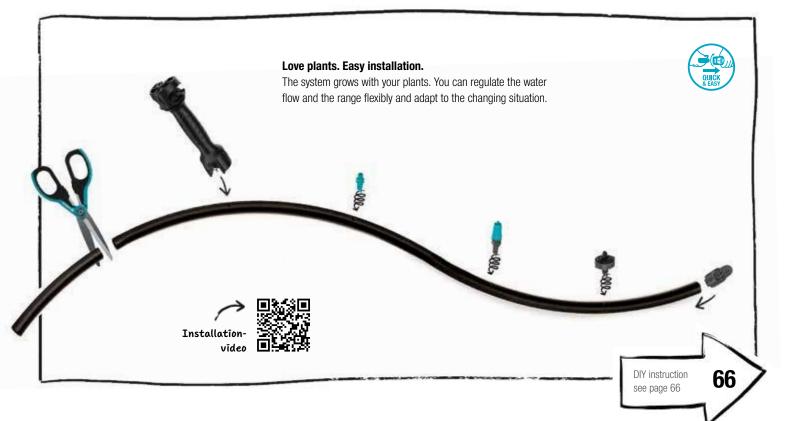


#### Hedges and border plantings with uneven spacing Above ground installation

You can turn the Endline Dripper in irregular intervals directly into the Dripline in order to water directly at the plant. You can find an overview of the Endline Dripper on page 21.







#### Did you know that you can use rainwater sustainably?

We consume around 140 litres of drinking water per capita every day. Are there ecological alternatives? Of course there are! Collect rainwater and use it! It makes sense to save the valuable resource of water and use rainwater for watering the garden, since it falls from the sky for free anyway. If you use rainwater, you make an active contribution to environmental protection and save money. In addition rainwater is naturally free of lime and chlorine and has the right temperature. This is good for your plants. So become a rainmaker, fetch the collected rainwater from a rain barrel, well or cistern, pump the water with the help of your chosen pump and water your garden with a clear conscience.





Regular immersion in a green oasis can be healing. Perhaps that is why the lawn is one of the areas that most people consider the most important part of a beautiful garden. Lush and green, soft and dense. The lawn makes you feel good, especially when you look outside into the garden. It makes you even enjoy to spend more time outside while breathing in the scent of the fresh grass. What is the magic formula for a well-kept lawn? The most important fertiliser for the lawn is water. That's why watering is important in every part of your garden. How do you implement this in every day life? It is simple. Just install an irrigation system that enables to you supply water to every corner of your garden. It is the first step into an automated underground irrigation solution. Once installed, you can easily irrigate your lawn with the support of the GARDENA Sprinklersystem. Flexible, convenient and efficient.

### The Sprinklersystem that understands your lawn

Finally a beautiful lawn! GARDENA is at your side when it comes to understanding your lawn. Because when the intelligent Sprinklersystem takes over the irrigation, your lawn reliably gets as much water as it needs. You don't have to think about it, or water your lawn yourself. With an automatic Sprinklersystem, you are investing in sustainable lawn care solution. After just a few simple steps, the lawn irrigation system is installed and even in increasingly dry summers, your lawn is reliably cared for. The invisible and unobtrusive Sprinklers disappear back into the ground once they have completed their irrigation task. Installed with an irrigation control your system works fully automatically. This way your lawn is efficiently watered. Explore our wide range of Pop-up Sprinklers for small and large, round, square or complex lawns. Simply adapt your choice to the shape of your lawn. And if you're considering to install a new lawn, it's best to be smart and consider automatic irrigation when planning your garden.



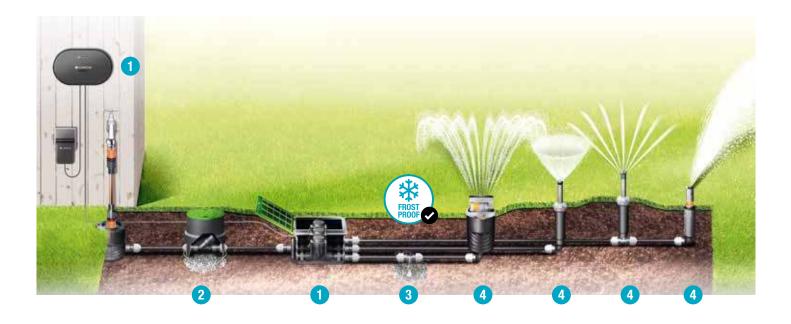


## **Convenient and reliable** lawn irrigation



#### Sprinklersystem

Still watering your garden with a hose? The trend is shifting - also for sustainable reasons - towards automatic underground irrigation. When it's time to water, the water flow pushes the Pop-up Sprinklers out of the ground and they disappear again once pre-defined watering schedule has been completed. The watering schedules are based on the shape of the lawn and its water requirements. Based on your pre-defined watering schedule, the pop up Sprinklers supply you lawn with water exactly at the frequency and duration as it requires. This gives the soil enough time to absorb the water without running off unused on the surface or seeping away.



#### **1** Irrigation Control & valves

For the automation of the Sprinklersystem and for controlling of different watering zones.

#### **2** Pressure Regulator

The Pressure Regulator with integrated filter prevents pressure peaks and protects against dirt water. This improves the quality of the system.

#### **3** Pipes & Connectors Simple, durable and watertight

thanks to the Quick & Easy technology.

#### 4 Pop-up Sprinklers

A wide range for flexible installation for every garden size.



😂 Tîp

The GARDENA myGarden Planner helps you to plan your Sprinklersystem installation based on your requirements of your individual garden. Recreate the layout of your garden by using the automatic planning aids. In a few simple steps you have everything you need to install the ideal Sprinklersystem installation for your garden. Also check the DYI section in this brochure for more detailed information.



DIY instructions

see page 74



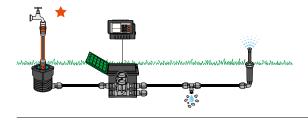
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#### Automatic irrigation - exactly the way you need it. Choose the right Water Control for you and your garden.

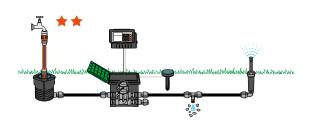
The summers are getting hotter and drier, your garden is getting thirstier. The summers are getting hotter and drier, your garden is getting thirstier and it wants to be watered; even if you don't have time or are on holiday. Choose from range of solution that makes most sense for you and your garden. From manual to fully automatic, everything is possible.

#### With power connection



#### **Classic Irrigation Control**

It's simple and flexible. With a multi-channel control, you can use the display to programme a schedule to water your lawn. By opening and closing the valves, the watering cycles are then executed automatically and reliably.



#### **Classic Irrigation Control with Sensor**

Why not combine a Soil Moisture Sensor with your Sprinkler system? This allows the sensor to continuously monitor the moisture levels of the soil; if the soil is moist, after an extensive rainfall for example, irrigation is automatically skipped. This allows you to water efficiently, even when you are not at home.

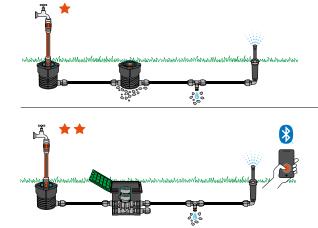
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#### smart multi-channel Irrigation Control with smart Sensor



This control allows for six valves to be individually programmed and irrigate up to six garden areas as needed. You can operate the smart Irrigation Control via the GARDENA smart App and set up a suitable watering schedule for each individual watering zone. Weekdays and duration of the watering cycles can be selected individually. Via the smart GARDENA App you can access the Sprinklersystem at any time and from anywhere. Together with the smart Sensor and weather forecast the watering schedules are automatically adjusted and you save even more water while your garden is thriving.

#### Without power connection



#### **Regulator and Shut-off Valve**

With this you can regulate the water flow of individual Pop-up Sprinklers or groups of Pop-up Sprinklers simply by opening and closing them manually.

#### Irrigation Valves 9 V Bluetooth®

Even without a power connection, you can automate the watering with the help of the Bluetooth<sup>®</sup> control. The control unit is simply mounted on the valves. The valves open and close automatically according to a schedule.

#### Irrigation Valves 9 V Bluetooth® with Sensor

11.15

The system becomes even more professional with the help of Soil Moisture Sensors. These are connected to the Bluetooth<sup>®</sup> control unit via a cable. If the soil is sufficiently moist, planned watering cycles are automatically skipped. This helps to save water.



()

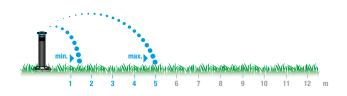
## The Sprinklers at a glance

Our new Pop-up Sprinklers are made of high quality materials and ensure an even more reliable and watering.

#### **Small-sized lawns**

#### Pop-up Sprinklers SD range

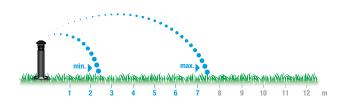
SD Pop-up Sprinklers are designed for small and narrow lawn areas. Thanks to the wide range of the spray sector, you can also use the sprinklers particularly well in corner areas. The Pop-up Sprinkler can be flexibly adjusted without tools from 5-360°, depending on the conditions on site. The spray distance can also be adjusted by a screwdriver to the size of the area. The integrated filter protects the nozzle from dirt.



#### **Medium-sized lawns**

#### Pop-up Sprinklers MD range

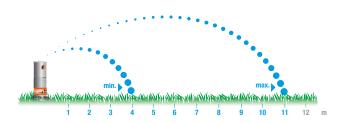
The Pop-up Sprinklers from the MD models are circular sprinklers for medium-sized lawn areas, which feature new, consumer-friendly functions that can be combined with T-sprinklers. A highlight is also the water-efficient Rotary nozzle. With its rotating spray pattern and its low wind sensitivity and dosed precipitation, it is easier for the plants to absorb the water well. The sprinkler distributes the water evenly, regardless of spray distance and sector setting.



#### Large-sized lawns

#### Turbo-driven Pop-up Sprinkler T380

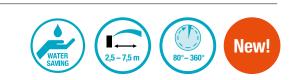
With the GARDENA T-irrigation models you can water large lawns comfortably. Thanks to a similarly low water flow rate, you can combine them with the MD Sprinklers.







New!



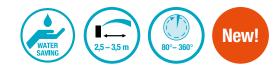




## **High plants**

#### Pop-up Sprinkler MD40/300

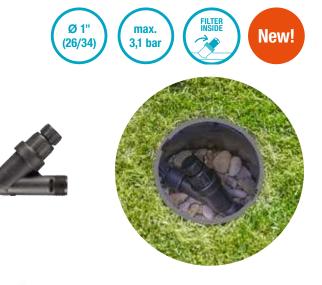
The MD40/300 Pop-up Sprinkler has a 30 cm long sprinkler body which allows watering even over taller plants. It is equipped with a rotating nozzle that distributes the water with gentle, water with gentle rotating jets and, if desired, can water the lawn and plants at the same time.





#### **Pressure Regulator**

Research and development ensure that GARDENA products are constantly being further developed. For example, the combination of pressure regulation and water filtration improves the service life of the Sprinklersystem. The pressure is regulated to a maximum of 3.1 bar. The Pressure Regulator protects the Sprinklersystem from too high water pressure and can be combined with the underground Pipeline and Connectors. This prevents damage and prolongs the life of the system. In addition, the integrated filter protects against dirt.



# Underground water network

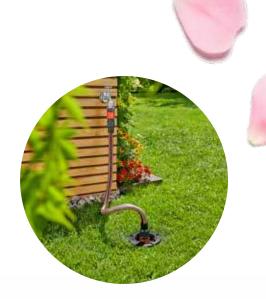
It is a fact that plants need water. No matter where they are located in the garden. Either you use a watering can or the water is automatically transported to every corner in your garden. How does it work? The answer is Pipeline. An underground water network with endless possibilities to provide the right care for you and your plants. This irrigation system is straightforward to install and suitable for gardens of any size.

Pipeline connects even remote areas of your garden with the water supply. With just one click you can tie in a range of devices to this life-changing GARDENA Irrigation System. From Water Tap to Micro-Drip-System, the choice is yours. Unlock the secret of sustainable and versatile watering for you and your garden. Just select the location, install a water socket and watering any area in your garden will become a breeze.



Using a garden hose or watering can are the traditional way of watering your garden. Modern technology has transformed the world of garden irrigation. Thanks to Pipeline, even remote areas of your garden will receive just the right care for them to blossom to their fullest potential. Without tugging or rolling up a hose or dragging water. Pipeline is basically a more sophisticated and versatile concept of a garden hose system. It is installed underground and connects all areas of your garden to an invisible network of pipes and Water Stations that ensure continuous water supply. Hidden and convenient. Just decide on the location, install a Water Station and create a convenient water source anywhere in your garden. They are called Water Stations as you can connect a range of devices to it and withdraw water like electricity from a socket. From garden hose to automatic irrigation solutions, such as Micro-Drip-System. Each Water Station is equipped with an automatic stop valve, so there is no need to go to the water tap and no water is wasted when disconnecting the hose. Thanks to Pipeline underground network system, water supply is guaranteed which will put you in a happy mood.







# Unlimited possibilities with the Pipeline

Get out of old habits. You can keep everything as it is or optimize the irrigation of your garden. In this case optimising means using water sensibly while also giving yourself some relief. Discover the world of Pipeline and the benefits of an underground installed water network that transports water to even remote areas of your garden. We guide you through a Pipeline optimised garden. You will realise that Pipeline is a must-have irrigation helper ideal for any garden.





#### Convenient, reliable and easy to install

Pipeline is straightforward to install and can easily be configured to your individual garden. Just cut the pipes to the required lengths and build your own underground network. Quick & Easy technology allows easy connection of pipes with connectors. Just push the pipes on either end of the connector and twist the grey part to lock the pipes in place. Just as simple as that.



#### Frost protection

Use the Drain Valve at the lowest position in the system to make the complete installation frost-proof.

Installation video Pipeline



DIY instructions on page

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#### Water Station and Hose Box

Wherever the hose box is placed in the garden, with Pipeline you have always the suitable connection to the water supply.

#### Water Station

Water Station with Original GARDENA System. Flexible connecting options for all OGS applications.

Water Station and

Micro-Drip-System With the Pipeline system water can be supplied to the Micro-Drip-System.



Water Station & Pipeline **Garden Water Tap** The Pipeline Garden Water Tap provides for convenient access to water.



#### Water Plug

The GARDENA Water Plug provides for easy tapping without the classic water tap. The Water Plug can be attached to the wall or in loose subsoil with spike.

#### **Connecting Point** The water inlet to the

5

system. Connected to the water tap with GARDENA Profi System for maximum water flow.



#### **Pipeline and** Sprinklersystem Using the valve box or the control- and shut-off valve the Sprinklersystem can be connected to the underground Pipeline.





#### Water Station and Pipeline **Oscillating Sprinkler**

Watering made easy by attaching the Pipeline Oscillating Sprinkler onto the Water Station for watering the desired area.

# Automatic water control

It's quite time-consuming to meet the water requirements of each individual plant in your garden. When it comes to watering, it does not only depend on the right amount of water, but also on providing it to the plants at the right time and at the correct intervals. The automatic Water Control does just that. This makes plant irrigation even more efficient. Your potted plant needs water daily, the vegetables once a week, and the flat-rooted shrubs grow best when they are watered vigorously once every three days in the early morning. As a gardener, you can sometimes get stressed, because your garden needs water even when you are away or simply still asleep. The clever solution is automatic Water Control.

## Why are automatic Water Controls so vital?

How would you like to irrigate?

The best time to water your plants is early in the morning; but you might still be sleeping. By watering early in the morning, the soil has a better chance of absorbing the water. It also gives your plants a better chance at dissolving the nutrients around the roots, resulting in healthier plants and a richer harvest. With a Water Control you will not forget to water again. It allows you to sit back, relax, knowing your plants are being cared for. Water Controls are perfect for when you're on holiday, due to the clearly defined watering schedules you not only save time, but precious water.

4

Below-ground irrigation For watering of several garden areas or for fully automated lawn irrigation.



Everything is straightfoward and flexible: install the Water Control directly at the tap and your plants will be automatically be well taken care off. The GARDENA Water Control can easily be set up to water your plants in the mornings or when you are out and about. Just select the frequency and duration of the watering cycle and the Water Control takes charge of your gardens' well-being. Discover our range of Water Controls and find the right model for your needs. **More on page 44** 



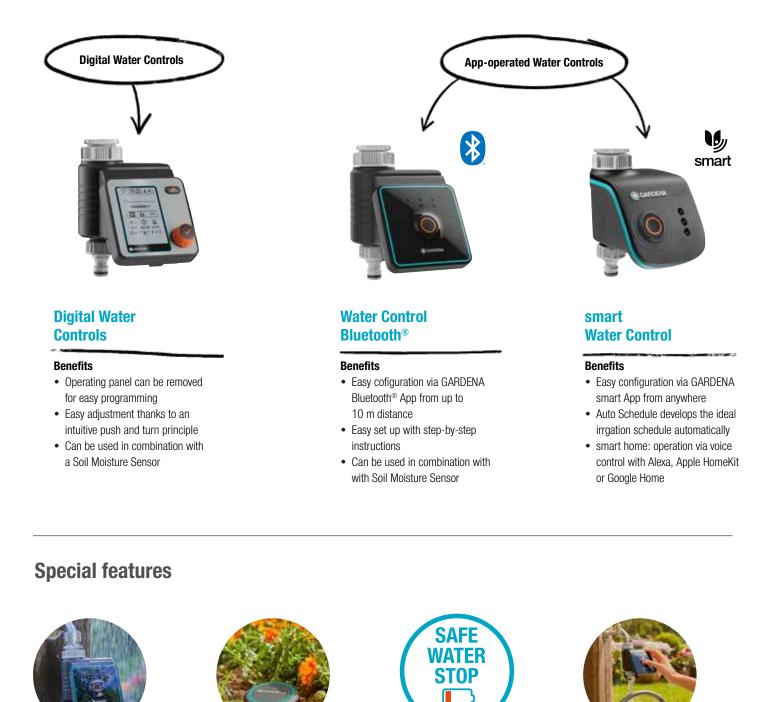
Multi-channel Irrigation Control is ideal when the amount of water from the tap is not sufficient to operate the complete irrigation system at the same time or when different areas in the garden have individual watering needs. Use it to water the lawn, the hedges or the flower beds independently of each other. With the multi-channel Irrigation Control you can set watering schedules and provide just the right care for each individual area. **More on page 48** 

Above-ground irrigation - from the tap For watering of max two garden areas.

# The ideal model for your needs



GARDENA offers a variety of water controls that are easy to use and reliable. From digital devices to App-controlled water controls, find the suitable product for every different application needs.



Safe Stop

The unique technology prevents

watering when the battery is low.

**High quality** Weather-proof electronics and corrosion-resistant valve. Pressureresistant from 0.5 to 12 bar. Water-saving

Usage with Soil Moisture Sensor

automatically skips predefined

watering schedule when soil is

already sufficiently moist.



**Manual Watering** 

function.

The central button allows you to start

manual watering with automatic stop

# At the root of the plant

## Soil Moisture Sensors

Watering your garden has never been so easy and accurate: The innovative Soil Moisture Sensors from GARDENA automatically ensure that your garden is watered as needed and in a water-saving manner by measuring the real-time soil moisture and sending this data to your Water Control. If the soil is sufficiently moist, the pre-defined watering schedule is skipped. As a result, your plants automatically receive reliable and accurate care, while you save water.



#### **Soil Moisture Sensor**

#### Benefits

- Skips the next watering schedule if soil is sufficiently moist
- Flexible set up of the moisture levels limits for Flex, Select, Master & Bluetooth® Water Controls
- Connection with Water Computer can be extended with Extension Cable (art.no. 1868-20)





#### smart Sensor

#### Benefits

- Measures the soil moisture and sends a signal to the smart Water Control to skip the watering schedule when required
- Measures temperature
- Flexible setting of moisture level
- History of measured soil moisture data can be tracked on the app

**Special features** 



#### Extra flat head

The smart Sensor has a modern design with a flat head. It can easily be placed in the lawn. The robotic lawnmower will drive over it and continue mowing.



Versatile

The sensors can be used in combination with a multi-channel Irrigation Control or Bluetooth<sup>®</sup> Irrigation Valve.

More information on the smart system on page 50 or under www.gardena.de/smart

# **GARDENA Irrigation Control**

Above-ground Water Controls

#### Flex

**Select** 



#### Balcony & terrace / micro irrigation

#### Use

- For watering potted plants/balcony plants
- Flexible setting with short cycles and high watering frequencies (up to every 4 hours)
- Ideal in combination with the GARDENA Micro-Drip-System

Watering schedules	1
Start time	flexible
Duration	1 sec 99 min.
Intervals	every 4/6/8/12/24/48/72 hours
Selection of weekdays	predefined cycles
Watering cycles/day	up to 6 (every 4 hours)
Water-saving option	with Soil Moisture Sensor
Manual watering	•
ArtNo.	1890

#### 3 watering schedules / all garden areas

#### Use

- For convenient, flexible watering
- 3 individual watering schedules including start time, duration, week days - ideal e.g. for pre-watering the soil
- Ideal in combination with Sprinklers or Micro-Drip-System

Watering schedules	3
Start time	flexible based on schedule
Duration	1 sec - 7 hrs 59 min per schedule
Intervals	weekdays per schedule
Selection of weekdays	<ul> <li>per schedule</li> </ul>
Watering cycles/day	up to 3
Water-saving option	with Soil Moisture Sensor
Manual watering	•
ArtNo.	1891

#### **MultiControl duo**

#### Up to 2 areas

- UseFor independent watering of 2 areas
- For independent watering of 2 areas
- For instance the lawn behind the house and the flower beds in front of it

Watering schedules	2 x 1
Start time	flexible based on schedule
Duration	1 sec - 3 hrs 59 min per outlet
Intervals	selection of weekly programs or in cycles every 8/12/24 hrs every 2nd/3rd/7th day
Selection of weekdays	for each schedule
Watering cycles/day	up to 3 (every 8 hours)
Water-saving option	with Soil Moisture Sensor
Manual watering	•
ArtNo.	1874

#### Master



## 6 watering schedule / very flexible settings / up to 6 areas

#### Use

- For automatic watering of a large area in the garden with a maximum of flexibility in time
- 6 individual watering schedules including start time, duration, week days
- Watering of up to 6 different areas in combination with the 
   Water Distributor automatic.

Watering schedules	6
Start time	flexible based on schedule
Duration	1 sec - 4 hrs per schedule
Intervals	weekdays
Selection of weekdays	for each schedule
Watering cycles/day	up to 6
Water-saving option	with Soil Moisture Sensor
Manual watering	•
ArtNo.	1892

## App based watering controls

#### **Bluetooth®**



#### Via GARDENA Bluetooth® App / all garden areas

Use

- · For convenient, flexible watering per Bluetooth® App
- Up to three individual watering schedules
- · Ideal in combination with Sprinklers or Micro-Drip-System

#### Benefits of the Bluetooth® App:



Watering schedules	3
Start time	flexible per schedule
Duration	1 min - 8 hrs per schedule
Intervals	weekdays per schedule
Selection of weekdays	<ul> <li>for each schedule</li> </ul>
Watering cycles/day	up to 3
Water-saving option	• the Soil Moisture Sensor
Manual watering	•
ArtNo.	1889

5

smart

smart

#### smart Water Control



#### **Control via GARDENA smart app**

#### smart Water Control

With the smart Water Control you can flexibly set the watering schedules in the GARDENA smart App and adjust them as needed at any time.

#### Benefits of the smart App:



More information on the GARDENA smart System on page 50.

Watering schedules	free selectable
Start time	flexible per schedule
Duration	1 sec - 10 hrs
Intervals	weekdays
Selection of weekdays	per schedule
Watering cycles/day	individual
Water-saving option	with smart Sensor
Manual watering	•
ArtNo.	19031 or supplied with smart system sets

## Add-ons for analog or app-based watering controls



#### **Soil Moisture Sensor**

Measures and skips scheduled watering cycles as soon as a pre-set moisture level is reached. For optimized, water-conserving watering in connection with a GARDENA Water Control.

Art.-No. 1867



#### smart Sensor

Measures the soil moisture level and the ground temperature and transfers those data to the GARDENA smart App. Can be used in combination with the smart multi-channel Irrigation Control and the smart Home & Garden Pump.

Art.-No. 19040



#### Water Distributor automatic

Perfect in combination with the Water Control Master. With several irrigation lines, e.g. for GARDENA Sprinklers, Micro-Drip-System or Sprinklersystem. Each line can be triggered up to once per day by the Water Control Master. Ideal for planted areas with different watering needs or if the water pressure is too low to water them all at the same time.

Art.-No. 1197



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## **Underground water control**

Multi-channel control for the versatile gardens

The most common type of automatic watering is lawn irrigation. It is the most straightforward solution, not only for the lawn, but also for other areas of your garden. Dry spells in your garden are going to be a thing of the past. Whether you want to irrigate your lawn, flowerbeds, potted plants, shrubs or hedges, your automatic watering system will take care of it. The multi-channel Control is ideal when the water supply of the tap is not sufficient to cover the entire garden at once. It also let's you irrigate different areas of the garden individually. Define a watering schedule for each zone, incl. time and frequency. Sit back and relax.



## Possible applications of the multi-channel control



#### Lawn/Sprinklersystem

The multi-channel Control is ideal to be used in combination with a Sprinklersystem. The lawn can be divided in different areas with individual watering schedules.



**Watering several garden areas** For watering different areas in the garden the Micro-Drip-System can be connected to the Valve Box using a Water Station.





#### smart watering doesn't only mean more free time, but also reduced water consumption.

If you want to integrate automatic irrigation into your garden, the first step is planning. Ask yourself questions like: What do I want to irrigate? Which components are needed? Where is the water connection? How large is the area I want to irrigate? Is the available amount of water of the connection sufficient to irrigate all areas simultaneously? Or is it necessary to water only one area? You think this is too complex? It only seems so. With our Sprinklersystem Planner Tool you learn more about the topic and it supports you in the planning process. The GARDENA smart multi-channel Irrigiation Control is the "control center". It can be operated manually, automatically with a defined watering schedule or in combination with smart Sensor. In the smart App, the schedule can be activated with sunrise sunset automation. With the smart system your entire garden is irrigated at an optimum level and sustainable manner as it collects, analyses and aligns data from soil moisture data, weather forecast reports and auto schedule settings. **More on page 50.** 

WATER CONTROL

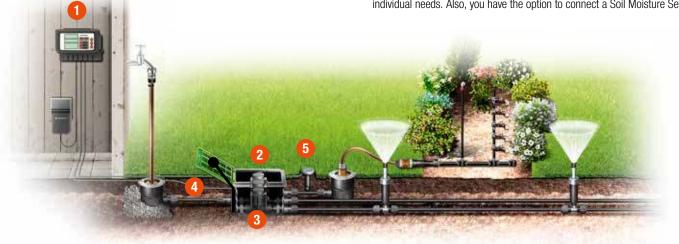
# **Utilise all options**

It can be so simple: You redesign your garden. You start from scratch and install a multi-channel solution right now. In doing so, you set the foundation that will later benefit your garden, relieve you from chores and reduce water consumption. It lets you define the ideal irrigation solution for the entire garden. Whether you start to use them now or later. The Water Control can be used individually and as part of a system if desired.

## With power supply



How to centrally control the irrigation of your entire garden: Via the GARDENA Multi-Channel Control 1, the 24V irrigation valves 2 in the valve box 3 receive through a cable 4 the signal to open or shut-off the water flow. This way, up to 6 irrigation valves and the corresponding number of channels can be activated fully automatically. Your garden can be watered in the different areas according to their individual needs. Also, you have the option to connect a Soil Moisture Sensor. 5



## No power supply exists



How to control any number of watering channels via app, fully automatically and cordless with the GARDENA Bluetooth<sup>®</sup> App **1** Simply program the data and transmit them to the irrigation valve via app. The Irrigation Valve 9 V Bluetooth<sup>®</sup> **2** fits in a GARDENA Valve Box **3**. You have the option to connect a soil moisture sensor **4** to the control unit. Operating the system via battery makes the GARDENA Irrigation Valves independent from power supply. The valve boxes can be installed at any place in the garden.

## **Special features**





**Auto Schedule** 



EasyApp Control

EasyConfig



Bluetooth<sup>®</sup> Connection



# smart system

How to make your garden smart? If you like, quick and simple. Lawn irrigation is often the starting point for automated solutions, after which other areas can follow, e.g. drip irrigation for a flower bed. Smart is that you can water automatically and as needed, from anywhere and any time. Also you are easily able to integrate a smart robotic mower into your smart system. Coordinate watering and mowing times.

You are on the road? No problem. You are always connected to your smart garden and in the picture at all times. You alone decide how and with what you enter into your personal smart system or whether and with which solutions you expand it.



## **Connect. Control. Thrive.**

The GARDENA smart system is the intelligent system that converts your garden into a smart garden. Now you can complete daily gardening chores the smart way via the GARDENA smart App. Adjust and connect individual tasks or even automise recurring chores. As a result you can save time and achieve a well-kept and thriving harvest while saving up to 70 % water. Via the smart App you can water one or several areas in your garden with bespoke setting or operate the robotic lawnmower. You can transform your garden into a relaxing, sustainable and comfortable space of well-being in no time at all. With the lawnmower support of the GARDENA smart system, you have all the features at your fingertips.





#### smart lawn care

Mow the lawn automatically the smart way. With the GARDENA smart App, you can control your **smart SILENO Robotic Lawnmower** to achieve a carpet-like cut for all lawn sizes up to 1,500 m<sup>2</sup>.



**smart lawn irrigation** Effortlessly water multiple areas of your garden with an underground irrigation system. The **smart Irrigation Control** manages up to six irrigation valves – each of which can be independently controlled via the GARDENA smart App.



#### smart and efficient irrigation

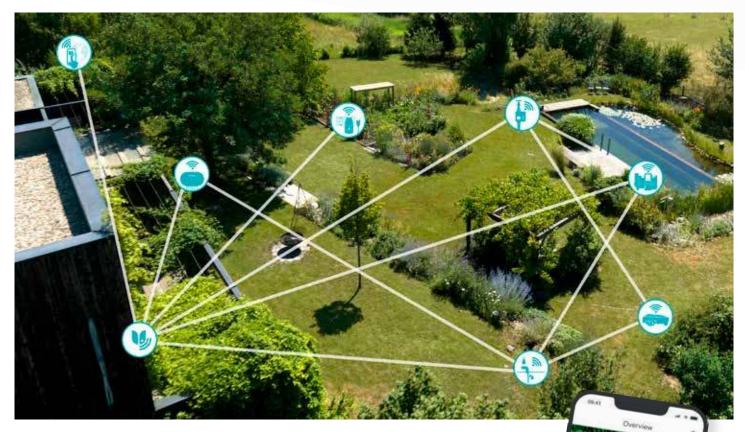
Measure the soil moisture and temperature in your garden or in planters and check it in the GARDENA smart App. Using the **smart Sensor** with a smart Water Control or a smart Irrigation Control, you can save water and ensure the right level of watering.



#### smart plant irrigation

Water a single garden area with tap water. The **smart Water Control** lets you remotely control your garden taps for perfect results – simply controlled via the GARDENA smart App.

# Easy access to your networked garden



You want to keep track of the gardening chores at any time? You want to amend the maintenance setting even when you are out and about? The GARDENA smart system gives you the control you want and your garden the attention it needs.

The GARDENA smart range is an interconnected system with smart gardening devices that communicate with each other and the GARDENA smart App to provide just the right care for your garden. No matter where you are. Just open the app, connect to your smart garden and control each individual smart gardening device for a thriving and blossoming garden.





#### **GARDENA smart App**

Download and connect to the free GARDENA smart App on your smart phone and access your entire garden at the touch of a button. Mowing the lawn and watering your plants has never been so easy and convenient.



#### smart Gateway

The smart gateway communicates with each GARDENA smart gardening device using powerful smart radio technology. The smart Gateway is connected to the router at home via LAN cable or WLAN.



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## smart App Benefits

Discover the variety of functions\*





#### **EasyApp Control** Easy control of your garden from anywhere with the GARDENA smart app.



**Auto Schedule** Develops the optimal plan for the care of the garden.

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#### History

Review of sensor values and watering history of the last 7 days. Including skipped cycles due to sufficient soil moisture or predicted rain.



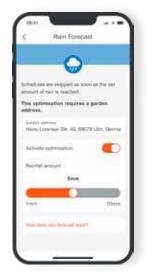
#### LONA™ Intelligence

Learns, maps and adapts the mowing individually to the Garden - thanks to intelligent, Al-based technology with location tracking.



#### Soil moisture

Measures temperature and soil moisture in the garden to optimize irrigation and save water.



#### Weather forecast

Takes into account the local weather forecast. If sufficient precipitation is predicted, the scheduled irrigation automatically be suspended.

Plant Library Attaiwns V	D fy point
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#### **Plant library**

Knows everything you want to know about your plants, from flowering time to optimal climate. Recognises plants by photo upload. Identify unknown plants with one click.



#### **Smart Home**

Control The GARDENA smart system devices and the smart Home by voice control with Alexa, via Google Home or Apple HomeKit.

## **Product overview**

## Micro-Drip-System System Start

	Connection to the tap		Pressure regulator and fill	Installation	
MADE IN Europe	New!	New!	New!	New!	New!
	Tap Fitting 13 mm (1/2") – G 3/4"	Tap Fitting 4.6 mm ( <sup>3</sup> /16") – G 3/4"	Master Unit 1000	Master Unit 2000	Installation Tool
Use	For connecting the Connecting Pipe Flex 13 mm (1/2") to the Master Unit 1000/2000 (Art. No. 13333/13310) or directly to the water connection of a cistern (3/4") with maximum 1.5 bar	For connecting the Supply Pipe 4.6 mm (3/4") to the Master Unit 1000/2000 (Art. No. 13333/13310) or directly to the water connection of a cistern (3/4") with maximum 1.5 bar	Starter component of the Micro-Drip-System for reducing pressure to 1.5 bar and for filtering the water	Starter component of the Micro-Drip-System for reducing pressure to 1.5 bar and for filtering the water	Universal tool for the fitting of various articles and piercing of the connecting pipe
Water flow	-	-	up to 1,000 l/h	up to 2,000 l/h	-
Article No.	13222	13224	13333	13310	13313

## Micro-Drip-System Pipes, Connectors and Accessories

## **Pipes and accessories**

	13 mm (1/2")		4.6mm (3/16'')		13 mm (1/2")	4.6 mm (3/16'')
GERMANY <sup>2</sup> made in Europe	New!				New!	#
	Connecting Pipe Flex <sup>1</sup>	Connecting Pipe Flex <sup>2</sup>	Supply Pipe <sup>2</sup>		Shut-off/Regulation Valves	
Diameter	13 mm (1/2")	13 mm (1/2")	4.6 mm (3/16")	4.6 mm (3/16")	13 mm (1/2")	4.6 mm (3/16")
Use	Central supply pipe in the Micro-Drip-System, can be laid above or below ground, very supple due to unique flexible technology		Supply pipe for drip head can be laid above or belo		Shutting off individual pipelines 13 mm (1/2") (Art. No. 1346/1347)	Shutting off individual pipelines 4,6 mm (3/16") (Art. No. 1348/1350)
Contents	15 m	50 m	15 m	50 m	1 piece	2 pieces
Article No.	1346	1347	1350	1348	13207	13217

## **Pipe Pegs**

13 mm (1/2")		4.6 mm (3/16")		
<sup>1</sup> MADE IN GERMANY	C			
	Pipe Pegs 13 mm (1/2") <sup>1</sup>	Pipe Pegs 4.6mm (3/16")		
Use	Pipe Pegs 13 mm (1/2")           The pipe peg is used for guiding and securing the supply pipe in the ground. Guiding and securing the supply pipe in the ground. Guiding and securing the supply pipe in the ground. Guiding and securing the supply pipe in the ground.	•••		
Use Contents		•••		

## Micro-Drip-System Pipes, Connectors and accessories

## Connectors

	4.6 mm (3/16")					
MADE IN EUROPE	New!	New!	New!	New!	New!	New!
	-	7	1	+	*	J
	Connector	L-Joint	T-Joint	4-Way Coupling	Plug	T-Joint Nozzles/ Endline Drip Heads
Use	Extension of the Supply Pipe	Precise branching of the Supply Pipe 4.6 mm (3/16") (Art. No. 1348/1350)	For branching off the Supply Pipe 4.6 mm (3/16") (Art. No. 1348/1350)	For branching off the Supply Pipe 4.6 mm (3/16") (Art. No. 1348/1350)	For sealing off the Supply Pipe 4.6 mm (3/16"), for sealing a hole in the Connecting Pipe 13 mm (1/2")	For fixing Spray Nozzles and Endline Drip Heads in the Supply Pipe 4.6 mm (3/16") (Art. No. 1348/1350)
Contents	10 pieces	10 pieces	10 pieces	10 pieces	10 pieces	5 T- pieces, 1 Closing cap
Article No.	13213	13212	13211	13214	13215	13216

	13 mm (1/2'')	13 mm (1/2")						
MADE IN EUROPE	New!	New!	New!	New!	New!	New!		
	-		J					
	Connector	L-Joint	T-Joint	Connector 13 mm (1/2") - 4.6 mm (3/16")	Plug	T-Joint Spray Nozzles		
Use	Extension of the Connec- ting Pipe Flex and Supply Pipe 13 mm (1/2") (Art. No. 1346/1347, 13503, 13504)	Precise branching off the Connecting ipe Flex 13 mm (1/2")(Art. No. 1346/1347)	Branching off the Connecting Pipe Flex 13 mm (1/2") (Art. No. 1346 /1347)	Transition from Connec- ting Pipe Flex 13 mm (1/2") to Supply Pipe 4.6 mm (3/16") (Art. No. 1348/1350)	Sealing of Connecting Pipe Flex 13 mm (1/2") (Art. No. 1346/1347)	For fixing Spray Nozzles in the Connecting Pipe Flex 13 mm (1/2") (Art. No. 1346, 1347)		
Contents	3 pieces	2 pieces	2 pieces	5 pieces	5 pieces	5 pieces		
Article No.	13203	13202	13201	13204	13205	13206		

## Micro-Drip-System for Potted Plants

<b>Starter Sets</b>	27	
MADE IN GERMANY	New Set	Nicro-Drip-Irrigation Terrace Set
"-Shrijelavis"	For 15 plants	For 30 plants
Contents	1 Master Unit 1000, 20 m Supply Pipe 4.6 mm (3/16"), 10 Pipe Pegs 4.6 mm (3/16"), 15 Inline Drip Heads pressure-compensating 2 I/h, 5 T-Joints 4.6 mm (3/16"), 2 Regulation and Shut-Off Valvels 4.6 mm (3/16"), 5 Plug 4.6 mm (3/16")	1 Master Unit 1000, 15 m Connecting Pipe Flex 13 mm (1/2"), 10 Connectors 13 mm (1/2") - 4.6 mm (3/16"), 2 Plugs 13 mm (1/2"), 20 m Supply Pipe 4.6 mm (3/16"), 20 Pipe Pegs 4.6 mm (3/16"), 5 Plugs 4.6 mm (3/16"), 5 T-Joints 4.6 mm (3/16"), 3 Regulation and Shut-Off Valves 4.6 mm (3/16"), 10 Adjustable Endline Drip Heads 0-15 l/h, 20 Inline Drip Heads 2 l/h, 1 Cleaning Needle
Artikel No.	13401	13400

## **Endline Dripper**

<sup>1</sup> MADE IN GERMANY <sup>2</sup> MADE IN EUROPE	New!	New!	New!	New!
Every counts, and counts of counts o	Endline Drip Head 2 I/h <sup>1</sup>	Endline Drip Head 2 I/h, pressure-compensating <sup>2</sup>	Adjustable Endline Drip Head 0–15 I/h <sup>1</sup>	Adjustable Endline Drip Head pressure- compensating <sup>2</sup>
Water flow	2  //h	Constant 2 l/h independent of the water pressure	Adjustable from 0-15 l/h	Adjustable from 1-8 l/h, independent of the water pressure
Special features		Self -cleaning with membrane/ labyrinth technology, constant water output, self-sealing when system switched off	Fully adjustabe endline drip head with integrated cleaning needle	Adjustable with volume scale, self-cleaning with membrane/labyrin- th technology, constant water output, self sealing when system switched off
Contents	25 Endline Drip Heads, 1 Cleaning Needle	10 pieces	10 pieces	5 pieces
Article No.	13307	13302	13305	13304

## **Inline Dripper**

	For Potted Plants			
	For Plant Areas			
<sup>1</sup> MADE IN GERMANY <sup>2</sup> MADE IN EUROPE	New!	New!	New!	
Every drop counts.	Inline Drip Head 2 l/h <sup>1</sup>	Inline Drip Head 2 l/h pressure-compensating <sup>2</sup>	Adjustable Inline Drip Head 0-15 l/h <sup>1</sup>	Adjustable Inline Drip Head <sup>1</sup> pressure-compensating
Water flow	2 l/h	2 l/h	0–15 l/h	1–8 l/h
Special features	Can also be used as Endline Drip Head	Self-cleaning with membrane/ labyrinth technology, constant water flow, self-sealing when system switched off	Fully adjustable spray head with integrated cleaning needle	Adjustable, with volume scale. Self-cleaning with membrane/ labyrinth technology, constant water output, self-sealing when system switched off
Contents	10 Inline Drip Heads, 1 Plug, 1 Cleaning Needle	10 Inline Drip Heads, 1 Plug	10 Inline Drip Heads, 1 Plug	5 Inline Drip Heads, 1 Plug
Article No.	13317	13312	13315	13314

## Solar-powered Watering

1 MADE IN GERMANY			<b>9</b>
Every drop counts.	Solar-powered Irrigation AquaBloom Set <sup>2</sup>	Solar-powered AquaBloom Water Reservoir Set	Water Reservoir <sup>1,2</sup>
Use indoor/outdoor	Outdoor, up to 20 plants	Outdoor, up to 20 plants	Outdoor
Water connection required	-	-	-
Power supply required	-	-	-
Contents	1 x Main-Unit with integrated pump and solar panel, 20 x 0.5 ¼h pressure-compensating Inline Drip Heads, 15 x (3/16") Pipe Pegs, 3 x rechargeable AA batteries 1.2 V, 2,400 mAh, 8 x (3/16") Plugs, 1 x Filter, 20 m (3/16") Distribution Pipe	1 x 10.5 I Water Reservoir extendable with Plug, 1 x Main-Unit with integrated pump and solar panel, 20 x 0.5 I/h Inline Drip Heads pressure- compensating, 15 x (3/16") Pipe Peg, 3 x rechargeable AA batteries 1.2 V 2,400 mAh, 8 x (3/16") T-Joints, 8 x (3/16") Plugs, 1 x filter, 20 m (3/16") Distribution Pipe	1 x 10.5 I Water Reservoir 1 x Plug (3/16")
Article No.	13300	13301	13367



## Micro-Drip-System for Plant Areas

	New! Set	New! Set
By the complete of the	Micro-Drip-Irrigation Vegetable Bed/Flower Border Set For up to 60 m <sup>2</sup> vegetable bed/flower border	Micro-Drip Irrigation Raised Bed/Bed Set For a bed/raised bed with up to 35 plants
Contents	1 Master Unit 1000, 1 Installation Tool, 25 m Connecting Pipe Flex 13 mm (1/2"), 15 Pipe Pegs 13 mm (1/2"), 2 T-Joints 13 mm (1/2"), 2 L-Joints 13 mm (1/2"), 3 Plugs 13 mm (1/2"), 5 Control Valves 4.6 mm (3/16"), 4 Spray Nozzles 90°, 1 Spray Nozzle 360°, 5 Extension Pipes for Spray Nozzles	1 Master Unit 1000, 1 Installation Tool, 15 m Connecting Pipe Flex 13 mm (1/2"), 5 Pipe Pegs 13 mm (1/2"), 1 T-Joint 13 mm (1/2"), 2 L-Joints 13 mm (1/2"), 5 Connectors 13 mm (1/2") - 4.6 mm (3/16"), 2 Plugs 13 mm (1/2"), 15 m Distribution Pipe 4.6 mm (3/16"), 20 Pipe Pegs 4.6 m m(3/16"), 35 Inline Drip Heads 2 I/h pressure-compensating, 2 Regulation and Shut-off Valves 4.6 mm (3/16"), 5 Plugs 4.6 mm (3/16")
Article No.	13450	13455

## **Spray Nozzles**

MADE IN GERMANY	New!	New!	New!	New!	New!	New!
Superson of the second	Endline Micro Strip Sprinkler	Micro Strip Sprinkler	Spray Nozzle 90°	Spray Nozzle 180°	Spray Nozzle 360°	6 in 1 Spray Nozzle
Use	For covering long, narrow beds with fine spray	For covering long, narrow beds with fine spray	For covering beds with fine spray from the corner	For covering beds with 180° fine spray	For covering beds with 360° fine spray	Flexible use for different garden areas
Irrigation diameter	-	-	-	-	6 m	-
Range	approx. 2.75 m	approx. 5.5 m	approx. 2.5 m	approx. 2.5 m	approx. 3 m	adjustable
Sprinkling width	approx. 0.6 m	approx. 0.6 m	-	-	-	-
Contents	5 pieces	5 pieces	5 pieces	5 pieces	5 pieces	2 pieces
Article No.	13318	13319	13320	13321	13322	13324

## **Nozzles, Sprinklers & Accessories**

	Nozzles			Sprinklers	Accessories		
MADE IN GERMANY	New!	New!	New!	New!	New!	New!	New!
But Elicitary Colling Charge Colling C	1	ļ				•	
	Micro Mist Nozzle	Small Area Spray Nozzle	Inline Small Area Spray Nozzle	Oscillating Sprinkler OS 90	Extension Pipe for Spray Nozzles	Regulation valve sprayers	Extension Pipe OS 90
Use	For covering newly planted beds with fine spray from above	Accurate watering of small areas such as shrubs and flower bushes	Accurate watering of small areas such as shrubs and flower bushes	Watering of square and rectangular areas	For Spray Nozzles for watering over tall plants	For adjusting the flow rate and range of Spray Nozzles	For Oscillating Sprinkler OS 90
Area coverage	Ø1m	Ø 10–40 cm	Ø 10–40 cm	1–90 m <sup>2</sup>	-	_	-
Range	-	-	-	Adjustable from 0.5–7 m	-	-	-
Sprinkling width	-	-	-	Adjustable from 1.5–13 m	-	-	-
Contents	5 pieces	10 pieces	10 Small Area Nozzles, 1 Plug	1 Oscillating Sprink- ler, 1 Plug	5 pieces	5 pieces	2 pieces
Article No.	13323	13306	13316	13325	13326	13231	13334



For an overview of Inline Drip Heads for plant areas, please to go page 56.



## Micro-Drip-System for Plant Rows

## **Starter Sets**

	4.6 mm (3/16")	13 mm (1/2")			
MADE IN EUROPE	New! Set	Set	Set		
	Micro-Drip-Irrigation Vegetable/Plant Row Set (15 m) For 15 m planting row or sensitive kitchen garden and ornamental plants	Micro-Drip-Irrigation Hedge/Bush Set 25 m For 25 m planting row (e.g. hedges or planted borders)	Micro-Drip-Irrigation Hedge/Bush Set 50 m For 50 m planting row (e.g. hedges or planted borders)		
Internal pipe diameter	4.6 mm (3/16")	13 mm (1/2")	13 mm (1/2")		
Water output	1.6 l/h per section of 30 cm	1.6 l/h per section of 30 cm	1.6 l/h per section of 30 cm		
Installation	only above ground	above and below ground	above and below ground		
Contents	1 Master Unit 1000, 15 m Drip Irrigation Line 4.6 mm (3/16"), 15 Pipe Pegs 4.6 mm (3/16"), 1 Plug 4.6 mm (3/16")	1 Master Unit 1000, 25 m Drip Irrigation Line 13 mm (1/2"), 15 Pipe Pegs 13 mm (1/2"), 1 Plug 13 mm (1/2")	1 Master Unit 1000, 50 m Drip Irrigation Line 13 mm (1/2"), 1 Plug 13 mm (1/2")		
Article No.	13010	13500	13501		

## **Drip Lines**

4.6 mm (3/16")		13 mm (1/2")			
MADE IN EUROPE	New!	New!	New!		
	Dripline 4.6 mm (3/16") 15 m	Dripline 13 mm (1/2") 25 m	Dripline 13 mm (1/2") 50 m		
Internal pipe diameter	4.6 mm (3/16")	13 mm (1/2")	13 mm (1/2")		
Water output	1.6 l/h per section of 30 cm	1.6 l/h per section of 30 cm	1.6 l/h per section of 30 cm		
Use	15 m planting row for sensitive kitchen garden and ornamental plants	For extending the above and below ground Drip Irrigation Lines for planted borders or lawns	For extending the above and below ground Drip Irrigation Lines for planted borders or lawns		
Installation	only above ground	above or below ground	above or below ground		
Contents	15 m Drip Irrigation Line without fittings	25 m Drip Irrigation Line without fittings	50 m Drip Irrigation Line 13 mm (1/2") without fittings		
Article No.	1362	13503	13504		

## **Pop-up Sprinklers**

	SD Models	SD Models		MD Models			
		₩ I C€					
	Pop-up Sprinkler SD30	Pop-up Sprinkler SD80	Pop-up Sprinkler MD40	Pop-up Sprinkler MD80	Pop-up Sprinkler MD180	Pop-up Sprinkler MD40/300	
Watering area	Up to 30 m <sup>2</sup>	Up to 80 m <sup>2</sup>	Up to 40 m <sup>2</sup>	Up to 80 m <sup>2</sup>	Up to 180 m <sup>2</sup>	Up to 40 m <sup>2</sup>	
Watering sector	Fully adjustable without tool from 5–360°	Fully adjustable without tool from 5–360°	Fully adjustable without tool from 80–360°	Fully adjustable without tool from 80–360°	Fully adjustable without tool from 80–360°	Fully adjustable without tool from 80–360°	
Range	adjustable from 1.5–3 m	adjustable from 3–5 m	adjustable from 2.5–3.5 m	adjustable from 3.5–5 m	adjustable from 5–7.5 m	adjustable from 2.5–3.5 m	
Nozzle type	Spray nozzle	Spray nozzle	Rotary nozzle	Rotary nozzle	Rotary nozzle	Rotary nozzle	
Dirt resistance	Integrated filter	Integrated filter		Integrated filter + d	ouble pop-up system	·	
Special features			The Water Smart technology of the rotary nozzle improves water absorption by the plant (up to 30 % water saving compared to spray nozzles)en)				
Connecting thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	1/2" female thread	3/4" male thread	
Article No.	8241	8243	8231	8232	8233	8239	

	T Models				
<sup>2</sup> MADE IN EUROPE	Ţ C€	CE			
	Turbo-driven Pop-up Sprinkler T 200 <sup>1</sup>	Turbo-driven Pop-up Sprinkler T 3801			
Watering area	Up to 200 m <sup>2</sup>	Up to 380 m <sup>2</sup>			
Watering sector	Fully adjustable from 25–360°	Fully adjustable from 25–360°			
Range	Adjustable from 5–8 m	Adjustable from 6–11 m			
Dirt resistance	Integrated filter	Integrated filter			
Special features	Anti-vandal protection by memory function: Sprinkler automatically returns to the pre-set sector				
Connecting thread	1/2" female thread	3/4" female thread			
Article No.	8203	8205			

## **Connection for Pop-up Sprinklers**

1/2" male thread		3/4" male thread			3/4" male thread		
MADE IN GERMANY	10	ø	<b>1</b> 0	•••	A		
	L-Piece 25 mm	Angle Piece 25 mm	T-Piece 25 mm	L-Piece 25 mm	Angle Piece 25 mm	T-Piece 25 mm	T-Piece 25 mm
Connections for	MD40, I	⊥ or Pop-up Sprinkle MD80, MD180, Tu Sprinklers T100	irbo-driven	Connection for Turbo-driven Pop-up Sprinkler T		up Sprinkler T380	In combination with the flexible connectors (Art. No. 2739 and 2740) for Pop-up Sprinkler SD30, SD80, MD40, MD80, MD180, T100, T200, T380 and OS 140. For installing the Drain Valve (Art. No. 2760) within the run of the pipes
Article No.	2780	2782	2786	2781	2783	2787	2790

## **Below Ground Water Networks**

## **Connections and Pipe Connectors**

MADE IN 💻	Connections	Connections		Pipe Connectors			
			0			•	
	Connector 25 mm x 3/4" female thread	Connector 25 mm x 1" female thread	T-Piece 25 mm	L-Piece 25 mm	Connector 25 mm	End-Piece 25 mm	
Use	For pipe connection to the Connecting Point, Water Station, the Regulator and Shut-off Valve, MD40/300 and for directly connecting the Sprinklersystem to the domestic water supply	For pipe connection to the Valve Boxes V1 and V3, to the Pressure Regulator and for directly connecting the Sprinklersystem to the domestic water supply	Pipe branching for Connecting Pipe	Direction change of the Connecting Pipe	For connecting two 25 mm pipes	Terminating the Connecting Pipe	
System	Pipeline, Sprinklersystem	Sprinklersystem	Pipeline, Sprinklersystem	Pipeline, Sprinklersystem	Pipeline, Sprinklersystem	Pipeline, Sprinklersystem	
Article No.	2761	2762	2771	2773	2775	2778	

## **Pipes and System Start**

1 MADE IN EUROPE			
FROST UV	Connecting Pipe <sup>1</sup>	Connecting Pipe <sup>1</sup>	Pipe Cutter 25 mm
Use	System pipes	System pipes	For easy cutting and chamfering of Connecting Pipes 25 mm
Length	50 m	10 m	-
System	Pipeline, Sprinklersystem	Pipeline, Sprinklersystem	Pipeline, Sprinklersystem
Article No.	2701	2718	2727

## **Sprinklersystem Accessories**

<sup>1</sup> MADE IN GERMANY <sup>2</sup> MADE IN EUROPE			New!
	Connecting Point <sup>2</sup>	Regulator and Shut-off Valve $^{\rm 2}$	Sprinklersystem Pressure Regulator
Use	With "Profi" Maxi-Flow Tap Connector, transports water into Pipeline and Sprinklersystem	For stepless regulation and shut-off of individual sprinklers or groups of sprinklers	Pressure reduction to max. 3.1 bar
System	Pipeline, Sprinklersystem	Sprinklersystem	Sprinklersystem
Connection	3/4" male thread	3/4" male thread	1" male thread
Article No.	8262	8264	8200

#### <sup>2</sup> MADE IN **EUROPE** CE CE CE Starter Set Connecting Water Water Plug **Starter Set Complete Set** Pipeline **Pipeline** Pipeline with Pipeline with Pipeline<sup>2</sup> Point<sup>2</sup> Station<sup>2</sup> **Oscillating** Garden Oscillating Oscillating Sprinkler<sup>2</sup> Water Tap Sprinkler<sup>2</sup> Sprinkler<sup>2</sup> Taking water from the Pipeline Use With "Profi" Taking water Starter Set with 2 Starter Set with Complete set For watering Convenient water 2 Water Stations Maxi-Flow Tap from the Pipeline Water Stations with 2 Water square and rectapping at the Connector, tangular areas, Water Station system system and Pipeline Os-Stations and transports water cillating Sprinkler Pipeline Oscillaideal for flower/ into Pipeline and ting Sprinkler vegetable beds Sprinklersystem and lawn Article No. 8262 8266 8254 8270 8272 8274 8251 8252

## **Pipeline**

## Accessories for Pipeline and Sprinklersystem

MADE IN GERMANY	"Profi" Maxi-Flow System Connector Set	"Profi" Maxi-Flow System Connection Set	Adapter Piece	Drain Valve	Drain Valve Set
Use	For connecting the Pipeline and Sprinklersystem to the water tap	Complete set for connecting the Pipeline and Sprinklersys- tem to the water supply	For creating a permanent hose connection	For draining water automati- cally when shutting down the system (connection Art. No. 2790, 2761)	For draining GARDENA products manually before the frost period
Article No.	1505	2713	1513	2760	2770

## Water Controls

## **Above ground Water Controls**

MADE IN GERMANY	ę	CE	ГС С є	* • • • •	ΓE	<b>Γ</b>	smart
winner	Manual Tap	Water Control	Water Control	Water Control	Water Control	MultiControl	smart Water
	Timer <sup>1</sup>	Flex 1	Select <sup>1</sup>	Bluetooth®	Master 1	duo 1	Control 1,2
	Useful: Switches off automatically after the pre-set watering duration	Short cycles for watering pot plants - ideal for use with the GARDENA Micro-Drip-System. Intuitive turn and push feature	Individual setting options of 3 indi- vidual schedules, intuitive operation with just one button	Watering via the GARDENA Bluetooth <sup>®</sup> App from up to 10 m distance	6 independent schedules, intuitive operation with just one button	Flexible thanks to 2 individually pro- grammable outlets. Fully automatic operation with Soil Moisture Sensor possible	Watering times can be set flexibly and adjusted at any time via the GARDENA smart App
Schedules	-	1	3	3	6	1 schedule	individual setting
Energy supply	mechanisch	1 x 9 V alkaline battery (not included)	1 x 9 V alkaline battery (not included)	1 x 9 V alkaline battery (not included)	1 x 9 V alkaline battery (not included)	1 x 9 V alkaline battery (not included)	3 x AA 1.5 V alkaline battery (not included)
Watering duration	5-120 min	1 sec - 99 min	7 hrs 59 min per schedule	1 min - 8 hrs per schedule	1 min - 4 hrs per schedule	1 min - 3 hrs 59 min (per outlet))	1 min - 10 hrs
Watering frequency	-	every 4/6/8/12/24/48/72 hours up to six times per day	weekdays, up to 3 times per day	weekdays can be chosen for each schedule	weekdays, up to 6 times per day	selection of the weekdays or every 2nd/3rd/7th day	weekdays
Can be used with	_	Soil Moisture Sensor (Art. No. 1867)	Soil Moisture Sensor (Art. No. 1867)	Soil Moisture Sensor (Art. No. 1867)	Water Distributor automatic (Art. No. 1197), Soil Moisture Sensor (Art. No. 1867)	Soil Moisture Sensor (Art. No. 1867)	All smart system Sets, Water Distri- butor automatic (Art. No. 1197), smart Sensor (Art. No. 19040)
Article No.	1169	1890	1891	1889	1892	1874	19031

For smart Irrigation Control Starter Sets please see page 65 or www.gardena.de/smart

## Accessories

	Тр се	<b>جمب</b> ( є	smart C E	CE
	Soil Moisture Sensor	Extension Cable	smart Sensor	Water Distributor automatic
Use	For optimized water-saving irrigation. Connection to a GARDENA Water Control. Measures soil moisture and prevents scheduled watering when a preset moisture level is reached	Extension of the sensor's power cable up to 105 m, Soil Moisture Sensor (Art. No. 1867)	Measurement of the soil moisture and ground temperature, inclusion of the soil moisture into the water control via smart App	Fully automatic control of up to 6 accessories, one after the other
Can be used with	GARDENA Water Control Flex (Art. No. 1890), Select (Art. No. 1891), Bluetooth® (Art. No. 1889), Master (Art. No. 1892), MultiControl duo (Art. No. 1874), Irrigation Control 4030 (Art. No. 1283) and 6030 (Art. No. 1284), Irrigation Valve 9V Bluetooth® (Art. No. 1285)	Soil Moisture Sensor (Art. No. 1867)	all smart system Sets	GARDENA Water Control Master (Art. No. 1892)
Article No.	1867	1868	19040	1197

## Multi-Channel Irrigation Control

## **Multi-Channel Irrigation Controls 24V**

	24 V / power supply		
	smart CE		
	smart Irrigation Control		
Use	Water several areas via smart App, control of 6 Irrigation Valves 24V per device		
Can be used with	Irrigation Valve 24V (Art. No. 1278), smart Sensor (Art. No. 19040)		
Number of irrigation val- ves that can be controlled	6 (24 V)		
Individual schedules per valve	individually adjustable via app		
Watering duration per schedule	individually adjustable via app		
Control via smart App	•		
Article No.	19035		

## **Valves**

	24 V   Power Connectors		Controls 9 V	
GERMANY	CE		د ا	۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲ ۲
	Irrigation Valve 24 V 1	Connection Cable 24 V	Cable Clip 24 V	Irrigation Valve 9 V Bluetooth®
Use	Connection to a GARDENA Irrigation Control via cable	Connection of up to 6 Irrigation Valves 24 V to a GARDENA Irrigation Control	Water-tight connection of the Connection Cable to an Irrigation Valve 24 V when using a Valve Box V1	Battery-operated valve control of irrigation systems without 230 V mains connection. Simple configuration of the programming with the GARDENA Bluetooth® App
Can be used with	Irrigation Control Syster	n 4030 (Art. No. 1283), n 6030 (Art. No. 1284), (Art. No. 19035, 19210)	Connection Cable 24 V (Art. No. 1280)	Soil Moisture Sensor (Art. No. 1867)
Article No.	1278	1280	1282	1285

## **Valve Boxes**

GERMANY		CE
	Valve Box V1 1	Valve Box V3 <sup>1</sup>
Use	For 1 Irrigation Valve 9 V or 24 V	For up to 3 Irrigation Valves 9 V or 24 V
Can be used with	Irrigation Valve 9 V Bluetooth® (Art. No. 1	285), Irrigation Valve 24 V (Art. No. 1278)
Connection	2 x 1" male thread	4 x 1" male thread
Article No.	1254	1255

## smart system Irrigation Control Start Sets

You find all GARDENA smart system products under www.gardena.de/smart

smart	Set	Set	New! Set
	CE	CE	CE
	smart Sensor Control Set	smart Water Control Set	smart Irrigation Control Sensor Set
Use		Watering of plants via smart App	<u> </u>
Contents	smart Water Control, smart Sensor, smart Gateway	smart Water Control, smart Gateway	smart Irrigation Control, smart Sensor, smart Gateway
Article No.	19202	19103	19210

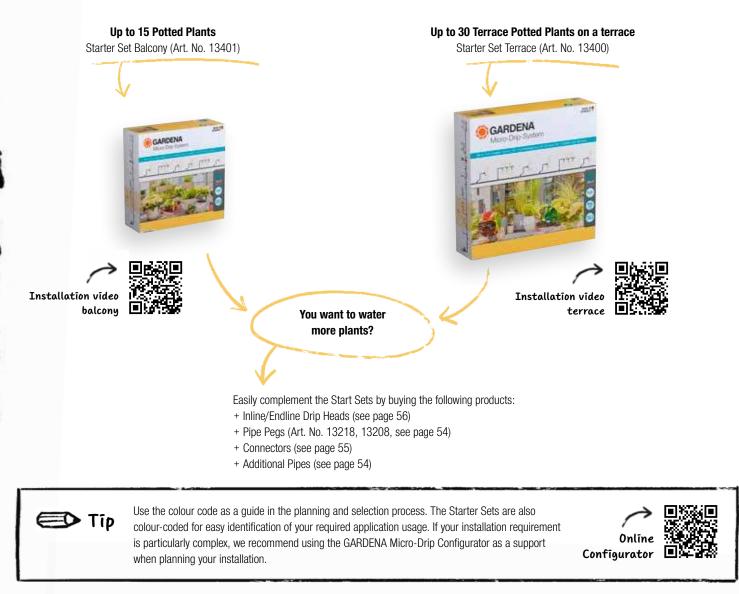
# DOM/OURSCLF Micro-Drip-System

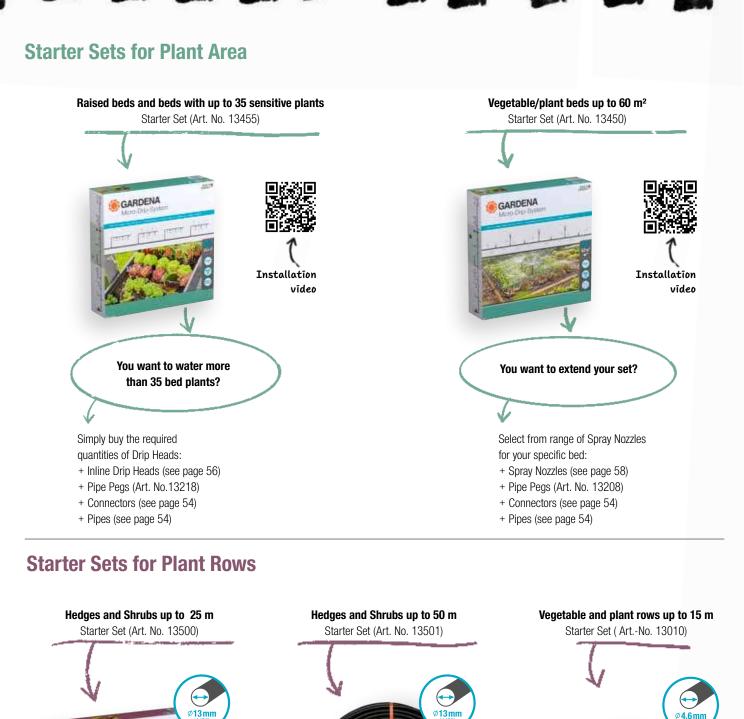
Put an end to the traditional watering solution, such as hose or water cans! You want to be supported with a compact and convenient irrigation solution? Then our Starter Sets are the perfect first step into drip irrigation. Select the set for your specific application area. The package contains a Master Unit with a Connecting Pipe, Connectors and the appropriate Nozzles or Drip Heads. Easily assemble the components together with just a click. Everything is securely connected. Rearrangment of the installation is possible is at any time. A Water Control, extension sets or individual components can easily be added.

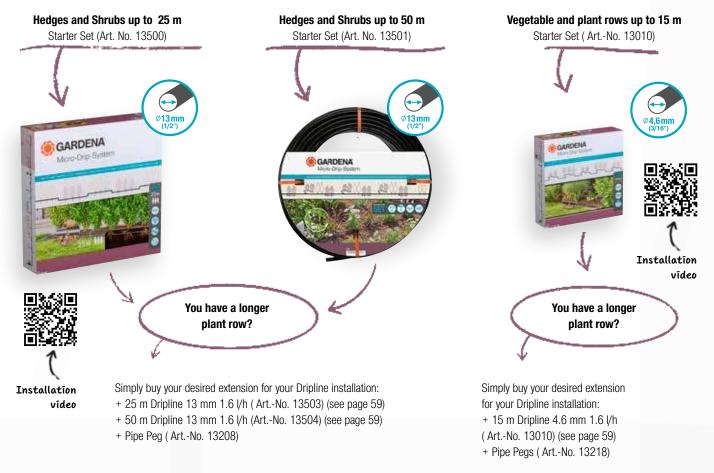
😂 Tîp

For even more convenient and time-saving irrigation, we recommend the Water Control Flex (art. no. 1890) or Select (art. no. 1891). Would you like even more comfort - or control the watering via app? Compare our Water Controls on page 46.

## **Starter Sets for Potted Plants**



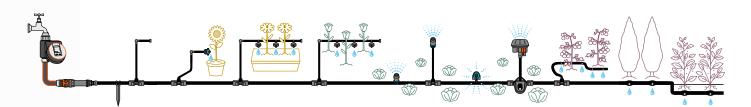




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### Let's get started. How to build your own Micro-Drip-System

You'll be amazed: assembling your own MDS solution is easier than you think. Just follow a few simple steps and you will quickly have your individual and convenient watering solution.



#### **System Start**

Connection

At the beginning you set the Water Control and then the so-called Master Unit. The Master Unit regulates the pressure and filters the water. There are 2 different connection sizes. 13 mm Pipes and Connectors for larger areas and 4.6 mm Pipes and Connectors for smaller surfaces, such as balconies.

#### Potted Plants

#### For pots or flower boxes choose Drip Heads or Starter Sets marked in yellow.

Plant Areas For beds you select Drip Heads, Spray Nozzles or Starter Sets marked in green.

#### **Plant Rows**

Pipeline for above and below ground irrigation of plant rows. Select the practical-Starter Sets marked in purple and extend them with Extension Pipes if desired.

#### The planning process

Do you want to extend your existing system or would like to cover an area in your garden that goes beyond the components included in the Starter Sets? Would you like to create your bespoke Micro-Drip solution and cover different areas in your garden? We are going to show you how many plants you can water with just one connection attached to the water tap.

- 1. Select number of water outlets available to cover the designated areas.
- Then identify the load capacity of your irrigation system - the connection value. This is defined by considering following factors:
  - a.) Mode of installation of the Connection and Supply Pipes
  - b.) Positioning of the Master Unit You can then compare the connection value of your system with the consumption values of all your planned application devices.



## 1. Assemble the irrigation equipment

Map out the number of pots or size of areas you want to cover. Define the suitable components based on the type of usage application, such as Drip Heads, Dripline or Spray Nozzles. Check out pages 56-59 and discover the range of components available by usage application.

#### For example:



4 x Adjustable Endline Drip Head 1-8 l/h for 4 plant pots

 $5\ x$  Inline Drip Head pressure-compensating for plant pot with 5 plants in row

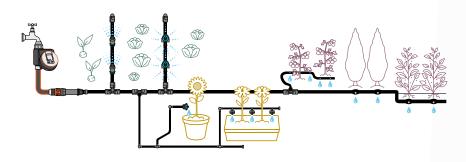
Narrow flower bed at the edge of the terrace 2 x Endline Micro Strip Sprinkler 1 x Micro Strip Sprinkler

DO IT YOURSELF | MICRO-DRIP-SYSTEM

## 2a. Select the ideal installation method of Connection and Supply Pipes

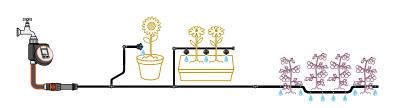
### **Installation type 1** 4.6 mm and 13 mm pipes

To be able to cover more plants, the Supply Pipe 4.6 mm is used in combination with the Connection Pipe 13 mm. The main line is the connection pipe, the small supply pipe transports the water to the plants. Maximum combination is approx. 60 m Connection pipe and approx. 15 m supply pipe.



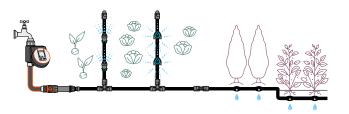
## **Installation type 2** 4.6 mm pipes

In this installation method only the supply pipe and drip line 4,6 mm is used. It is ideal for small garden beds or balconies. Maximum length is approx. 30 m.\*



## **Installation type 3** 13 mm pipes

Only the pipe and drip line 13 mm is used e.g. 13 mm drip line or connection pipe in combination with spray nozzles or endline drip heads. Maximum length is approx. 60 m



\* The maximum pipe length is given as a guide only. The value can vary based on the number of connected components

## 2b. Positioning of the Master Unit

The Master Unit is an important component of the Micro-Drip-System. With this ready-to-connect Master Unit the water pressure is regulated and the water is filtered. If you place the Master Unit centrally in the pipe run, you can easily double the length of the pipe system (see 3. Connection values). If the system starts further away from the tap, then you can bridge the distance with an underground GARDENA pipeline or a garden hose; this prevents loss of water pressure.

#### Master Unit is placed at the System Start

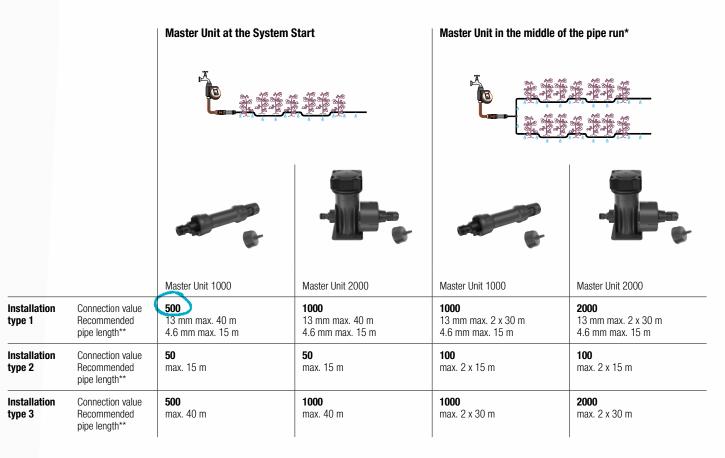
## 3. Comparison of consumption value and connection value

#### Three things you need to know:

- The Master Unit is the starting point and defines the connection value, depending on the model and installation type.
- The connection value defines the capacity available for the maximum installation of Drip Heads, Spray Nozzles and Driplines.
- The connection value of the system must be higher than the consumption value of the installation.

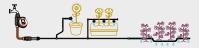
The connection value depends on your selection of pipe combination and positioning of the master unit. You might notice in the below table that the connection value with a 13 mm pipe is higher than with a 4.6 mm pipe. Now enter how many Drip Heads and Spray Nozzles you are planning to install in your system. If the consumption value is below the connection value, you will have a reliable irrigation system.

### **Connection values**



**Installation type 1** 4.6 mm and 13 mm pipes

**Installation type 2** 4.6 mm pipes





**Installation type 3** 

13 mm pipes

\* If the base unit is positioned centrally in the pipe run, then the connected value of each pipe is halved.

\*\* The maximum pipe length is given as a guide only. The value can vary based on the number of connected components.

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### This is how you proceed ...

To get the most out of your Micro-Drip-System, we recommend **installation type 1**. This way you can make the most of your system and maximise its capacity to cover even larger plant areas and support an extension of the system. Depending on your individual needs, the other two types of installation are also a good option.

Your to-do list:

- 1. Determine required quantities of the suitable components based on the type of usage application (Drip Heads, Dripline or Spray Nozzles).
- 2. Determine consumption values of the system (number of application devices x consumption value in the table).
- 3. Add up the total consumption values. If the consumption value of the system is less than the connection value, the system will operate smoothly.

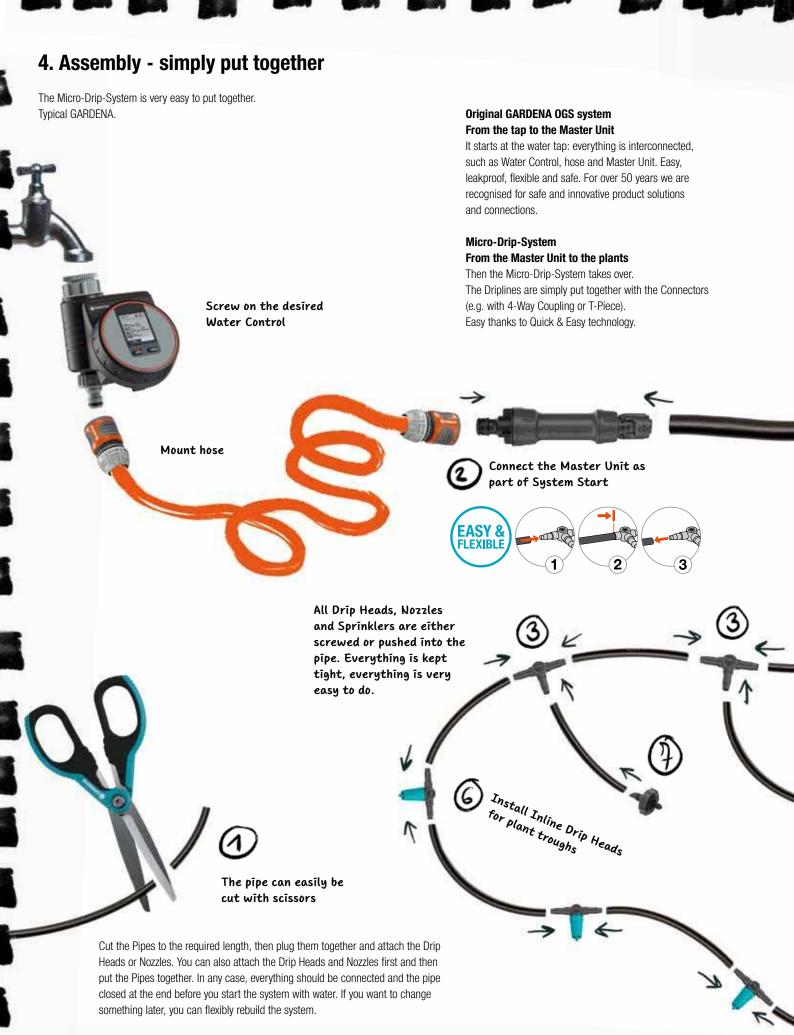
## **Consumption values**

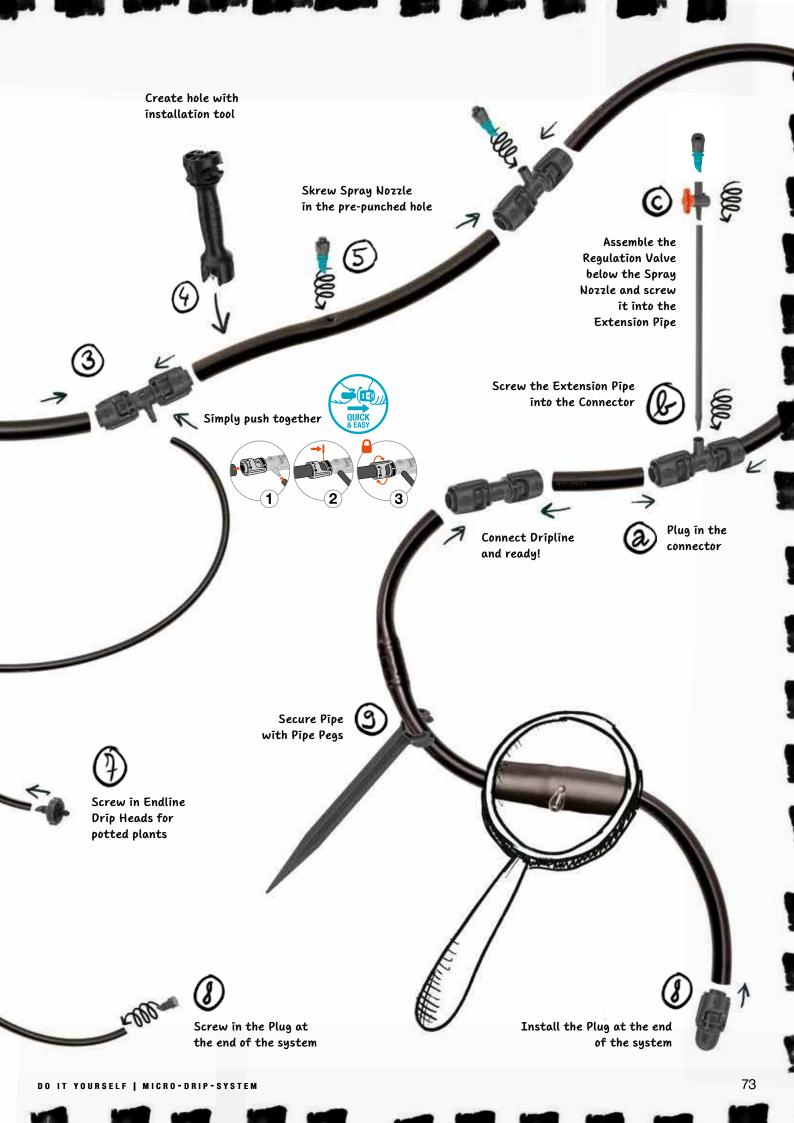
Art. No. Name		Consumption application c		he
Installation type		M1	M2	М3
13302	Endline Drip Head 2 I/h, pressure-compensating	2	2	5
13304	Adjustable Endline Drip Head 1-8 l/h, pressure-compensating	8	8	20
13305	Adjustable Endline Drip 1-15 l/h*	15	15	38
13306	Small Area Spray Nozzle*	_	_	80
13307	Endline Drip 2 I/h	2	2	2
13312	Inline Drip Head 2 I/h, pressure-compensating	4	4	_
13314	Adjustable Inline Drip Head 1-8 l/h, pressure-compensating	16	16	_
13315	Adjustable Inline Drip Head1-15 I/h*	30	30	_
13316	Inline Small Area Spray Nozzle*	80	40	-
13317	Inline Drip Head 2I/h	4	4	-
13318	Endline Micro Strip Sprinkler	70	50	70
13319	Micro Strip Sprinkler	70	50	70
13320	Spray Nozzle 90°	90	50	70
13321	Spray Nozzle 180°	120	100	80
13322	Spray Nozzle 360°	140	100	120
13323	Micro Mist Nozzle	40	25	40
13324	6 in 1 Spray Nozzle*	125	50	60
13325	Oscillating Sprinkler OS 90	-	_	1000
13010/1362	Dripline 4.6 mm (3/16")**	_	4	-
13503 / 13504	Dripline 13 mm (1/2")**	-	_	7
Total value				

## Calculation example

Quantity in plan	Consumption value total
4 pcs.	32
5 pcs.	20
2 pcs.	140
1 pcs.	70
	-
	_
	2/2.5
	262 < 50

\* Flexible adjustable Drip Heads/Nozzles are average values. In individual cases, the value may be higher or lower than stated here, depending on your setting.
\*\* Data per metre of Dripline. If you carry out the installation yourself, we ask for your understanding that we accept no liability and no guarantee for costs and damage that may arise during the implementation of the planning.





# Planning Sprinklersystem

The intelligent irrigation system that understands your lawn.

Watering your garden can be a breeze. Install an automatic Sprinklersystem, a reliable system that takes care of your lawn while you enjoy your free time. We'll show you how it's done. From planning by yourself to getting it done for you: Just see what suits you best. The MyGarden Online tool and our customer service team are trusted and helpful partners at your side.



# A Plan yourself

Create an irrigation plan for your individual garden. You will find the instructions on the next pages. Everything is explained step by step. You will find a tear-out shopping list on page 89.



# **B** Plan online

Create your watering schedule with the help of the GARDENA Sprinklersystem planner "myGarden" at www.gardena.com/uk/garden-life/ garden-planner/



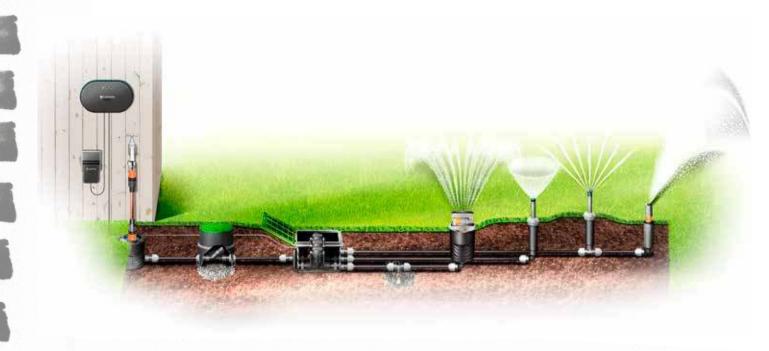


# **C** Use the GARDENA Customer Service

No time or mood to plan it by yourself? Our GARDENA customer service will support you. Inquire also about the costs for your individual planning.

### Contact service

Telephone +44 (0) 344 844 4558 www.gardena.com/uk/support/advice/contact/



We ask for your understanding that we accept no liability for installations created by ourselves and no guarantee for costs and damages, that may arise during the implementation of the planning.

DO IT YOURSELF | SPRINKLERSYSTEM



# Plan it yourself - automatic watering in 8 steps

- 1. Plan system
- 2. Select Sprinklers
- 3. Determine Pipes
- 4. Determine Connections
- 5. Select control unit
- 6. Connect the system
- 7. Installing the system
- 8. Tips & hints for maintenance

# And off you go!

On the following pages you will find out everything you need to know to irrigate your garden automatically. GARDENA provides the best solution due to our expertise, development of GARDENA technology and united passion for gardens. So that you can enjoy your automated lawn irrigation solution with GARDENA Sprinklersystem soon.

# 1. Plan the installation - Draw a blueprint of your garden

# 🗇 Blueprint

1. Draw a blueprint of your property on a scale of 1:100 (1 cm = 1 m) or on a scale of 1:200 (1 cm = 2 m).

2. Mark the water connection (e.g. tap, well, cistern)

3. Mark all areas that need to be irrigated



## 2. Select Sprinklers

With our innovative Sprinkler range you will make the right choice for your project.



### **SD Sprinklers**

With the SD Sprinkler models you can automatically water smaller lawns. Thanks to the easy adjustable spray sector from 5-360°, the Sprinklers are also suitable for installation in narrow corner and small lawn areas. Please note: The SD models cannot be combined with other Sprinkler models on the same pipe.



### **MD Sprinklers**

The models of the MD Sprinklers with spray distance of 2.5-7.5 m are suitable for irrigation of medium-sized areas. Its innovative rotary nozzle improves the water absorbtion into the soil, making it an water-efficient lawn irrigation solution for your garden. Since the water flow is similar to the T-Sprinklers, you can combine them on one pipe.

For watering smaller plants at the edges of the lawn, a model with a longer riser is also available.



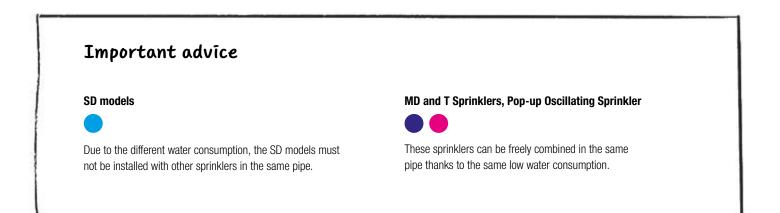
### **T** Sprinkler

For the irrigation of larger areas, you can use the T-line models. They maximum spray distance is 11 m. Convenient installation with MD Sprinklers in one pipe makes planning even easier for you.

### **Overview Sprinklers**

SD models			MD models		T Sprinkler			
	Pop-up Sprinkler	Pop-up Sprinkler	Pop-up Sprinkler	Pop-up Sprinkler	Pop-up Sprinkler	Pop-up Sprinkler	Turbo- driven Pop-up	Turbo- driven Pop-up
	SD30	SD80	MD40	MD80	MD180	MD40/300	Sprinkler T 200	Sprinkler T 380
Watering areas	Up to 30 m <sup>2</sup>	Up to 80 m <sup>2</sup>	Up to 40 m <sup>2</sup>	Up to 80 m <sup>2</sup>	Up to 180 m <sup>2</sup>	Up to 40 m <sup>2</sup>	Up to 200 m <sup>2</sup>	Up to 380 m <sup>2</sup>
Watering sector	5–360°	5–360°	80–360°	80–360°	80–360°	80–360°	25–360°	25–360°
Distance between Sprinklers	1.5–3 m	3–5 m	2.5–3.5 m	3.5–5 m	5–7.5 m	2.5–3.5 m	5–8 m	6–11 m
Sprinkler distance	1.5–3 m	3–5 m	5–3.5 m	3.5–5 m	5–7.5 m	2.5–3.5 m	5-8 m	6–11 m





### What to pay attention to when planning

When positioning the Sprinklers, the goal is to achieve the most even water distribution possible in your garden. Each area should be watered twice and i.e. the spraying areas of two Sprinklers should overlap. This is called a 100% overlap. This way you achieve an accurate irrigation that is wind resistant.

- 100% overlap ensures that your lawn is watered as evenly as possible. Furthermore, more water is distributed in a shorter time period to achieve the most efficient and time-saving irrigation process. This also helps you to choose the optimal time for watering.
- If an even overlapping is not possible, you can also adjust the watering schedule by dividing the area into zones. More on this on page 80 Installation of pipes.
- First you position the Sprinklers in all the corners of your garden. Set them to the maximum possible spraying distance. Then position the Sprinklers at even intervals along the edge. For larger gardens you must also place Sprinklers in the centre to ensure a 100% overlap.
- We recommend installing MD and T-line Sprinklers where possible. These models can be combined with each other in the same pipe run. Here you can choose flexibly spray distances from 2.5 up to 11 m due to the matching pricipitation rate of MD and T-Line sprinkler.
- We recommend SD Sprinklers for corners, where smaller spraying areas or spraying distances are necessary.

# 🗈 Blueprint

Take the blueprint of your garden and complete the following steps:

- 1. Select the appropriate Sprinklers for your garden areas.
- 2. Draw the Sprinklers into the blueprint. Keep in mind the hints provided for the sprinkler positioning.
- 3. Add the selected Sprinklers with the correct description and quantity in your shopping list.



# **Overview**

-

-

Туре	Name		Spray distance	Sector
Irrigation of smaller lawns. Especially suitable for narrow, corner and edge areas	SD models Pop-up Sprinkler	Pop-up Sprinkler SD30Pop-up height 100 mm1/2" female threadArticle No. 8241Pop-up Sprinkler SD80Pop-up height 100 mm1/2" female threadArticle No. 8243	Radius 1.5–3 m CO Radius 3–5 m CO CO CO CO CO CO CO CO CO CO	5–360° Sprinkler distance 1.5–3m 5–360° Sprinkler distance 3–5m ()
Irrigation of medium-sized lawns	į	<b>Pop-up Sprinkler MD40</b> Pop-up height 100 mm 1/2" female thread Article No. 8231	Radius 2.5–3.5 m	80–360° Sprinkler distance 2.5–3.5 m
	p-up Sprinkler	<b>Pop-up Sprinkler MD80</b> Pop-up height 100 mm 1/2" female thread Article No. 8232	Radius 3.5–5 m	80–360° Sprinkler distance 3.5–5 m
	MD models Pop-up Sprinkler	<b>Pop-up Sprinkler MD180</b> Pop-up height 100 mm 1/2" female thread Article No. 8233	Radius 5–7.5 m	80–360° Sprinkler distance 5–7.5 m
For irrigation of plants		<b>Pop-up Sprinkler MD40/300</b> Pop-up height 300 mm 3/4" male thread Article No. 8239	Radius 2.5-3.5m	80–360° Sprinkler distance 2.5–3.5 m
	an Pop-up Sprinkler	<b>Turbo-driven Pop-up Sprinkler T 200</b> 1/2" female thread Article No. 8203	Radius 5–8 m	25–360° Sprinkler distance 5–8 m
	T-Models Turbo-driven Pop-up Sprinkler	<b>Turbo-driven Pop-up Sprinkler T 380</b> 3/4" female thread Article No. 8205	Radius 6–11 m	25–360° Sprinkler distance 6–11 m

M

Consumption v	alues			Connection thread
5–90° = 6	91–180° = 10	181–270° = 13	271–360° = 17	1/2" female thread
		J	•	
5–90° = 10	91–180° = 16	181–270° = 22	271–360° = 27	1/2" female thread
		J	0	
80–90° = 2	91–180° = 4	181–270° = 6	271–360° = 8	1/2" female thread
			0	
80–90° = 4	91–180° = 6	181–270° = 9	271–360° = 13	1/2" female thread
		J	$\mathbf{O}$	
80–90° = 6	91–180° = 12	181–270° = 17	271–360° = 22	1/2" female thread
		J	0	
80–90° = 2	91–180° = 4	181–270° = 6	271–360° = 8	3/4" male thread
		J	0	
25–90° = 9	91–180° = 13	181–270° = 17	271–360° = 20	1/2" female thread
		J	$\mathbf{O}$	
25–90° = 15	91–180° = 20	181–270° = 25	271–360° = 30	3/4" female thread
		J	$\mathbf{O}$	

Connections for 1/2" female thread

**Flexible connection** 



T-Piece Article No. 2790



T-Piece

**Fixed Connection** 

Angle Piece L-Piece Article No. 2786 Article No. 2782 Article No. 2780

**Connections for 3/4" male thread** 

Connector Article No. 2761\*

### Connections for 3/4" female thread

### **Flexible connection**



T-Piece Article No. 2790\*

#### **Fixed Connection**





T-Piece

Angle Piece

L-Piece Article No. 2787 Article No. 2783 Article No. 2781

\* Connection also fits the Drain Valve

# 3. Installation of pipes

### A Determine connection capacity

Depending on the type and setting of the spray area, the Pop-up Sprinklers have different water consumption values. Our irrigation planner helps you to determine the water consumption for your individual Sprinklersystem. If the demand is higher than the amount of water supplied by your main water line, split up your system into several pipes. This is also referred to as irrigation channels. Your garden can be divided into several irrigation zones, and each zone is supplied with a separate pipe. The zones are irrigated independent from each other. To understand which connection value your main line can deliver, you need to determine the so called connection value. To do this, you have to calculate the amount of time needed to fill a 10-litre bucket with water.

### Follow the below instructions:

- Remove all connection parts, such as tap connectors or distributors from the water tap. For pumps, use at least a 3/4" hose.
- Turn the tap on full blast or switch on your pump to fill a 10 litre bucket with water.
- 3. Track the time needed to fill the bucket (10 litres).

**Please note:** If the filling time exceeds 30 seconds, the installation of an irrigation system is not possible.

### **B** Determine distance allowance

The bigger your garden, the longer the pipes can be. Since the water in the pipes has minimal frictional losses, this must be taken into account in the calculation:

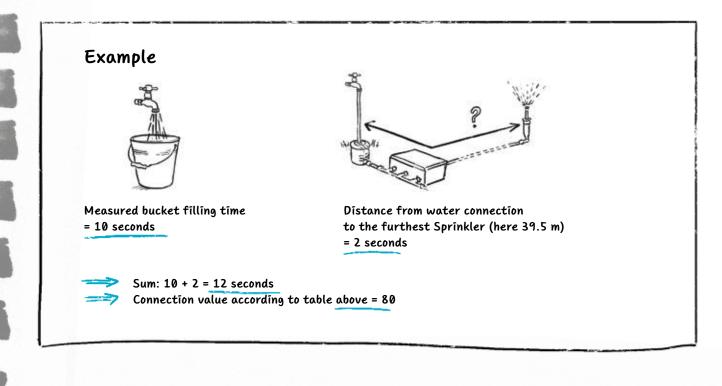
- 1. How many metres in distance are between the tap or pump and the furthest located sprinkler? Make a note of this number.
- For every 25 m of pipe length, you should now add 1 second to the previously determined bucket filling time. See example at point C.

**Please note:** Add 3 second to previously determined bucket filling time when the filling time is less than 14 seconds and want to use a Water Control, an Automatic Water Distributor or 2- or 4-way Distributor.

### **C** Connection value

Now add up the values for the bucket filling time and the distance allowance previously determined.

Seconds	bis 9	10–13	14–19	20–24	25–30
Connection value	100	80	60	40	20



### **D** Determine the number of Pipelines (irrigation channels)

By determining the connection value in point C, you know the maximum amount of water your source can deliver. Each Sprinkler needs a minimum amount of water for optimal water distribution. We have already established the corresponding consumption values with a simple calculation (see overview on pages 78 & 79). However, if you have want to install more Sprinklers than the water source can handle, then you should divide your garden into so-called irrigation zones. Each zone will have a separate pipe and the irrigation schedule for each zone takes place consecutively one after the other. To plan the irrigation zones, proceed as follows.

1. Enter the consumption values for each Sprinkler in your blueprint (cf. page 79 or 82).

- 2. Divide your garden into zones and draw pipes starting from the water supply.
  - Try to group as many Sprinklers as possible in one area of the garden. Note here:
  - The combinability of Sprinklers in one Pipe (see page 77 above "Important notes").
  - The connection value: Only plan as many Sprinklers per Pipeline that the connection value is not exceeded (see sample example on page 82).
- 3. Measure how many metres of pipe you need for your underground network. See sample and garden sketch on page 82.



### **Consumption values of the Sprinklers**

	SD models	SD models		MD models				T Sprinkler	
	Pop-up Sprinkler SD30	Pop-up Sprinkler SD80	Pop-up Sprinkler MD40	Pop-up Sprinkler MD80	Pop-up Sprinkler MD180	Pop-up Sprinkler MD40/300	Turbo- driven Pop-up Sprinkler T 200	Turbo- driven Pop-up Sprinkler T 380	
Waterin areas m <sup>2</sup>	30	80	40	80	180	40	200	380	
<b>0</b> –90°	6	10	2	4	6	2	9	15	
91–180°	10	16	4	6	12	4	13	20	
<b>1</b> 81–270°	13	22	6	9	17	6	17	25	
• 271–360°	17	27	8	13	22	8	20	30	

### Example

**Determine supply Pipes on the basis of the Sprinkler consumption values** The connection value (here e.g. 80) must not be higher than the sum of the Sprinkler consumption values!

	_	+ 10 + 16 + 16	-	- = 5	50 n
Pipe 1 Pipe 2 Pipe 3 4	22 • + 4	+ 4 • + 6 • + 6 •	+ 6 + 6 + 2	= 56	
Pine 3 4	+4 + 15 + 2 +15			= 4	19 r

# Expand the blueprint of your garden

1. Make a note of the connection value you have determined.

2. Now draw in the required Pipes. Take into account that the connection value must not be higher than the sum of the sprinkler consumption values.

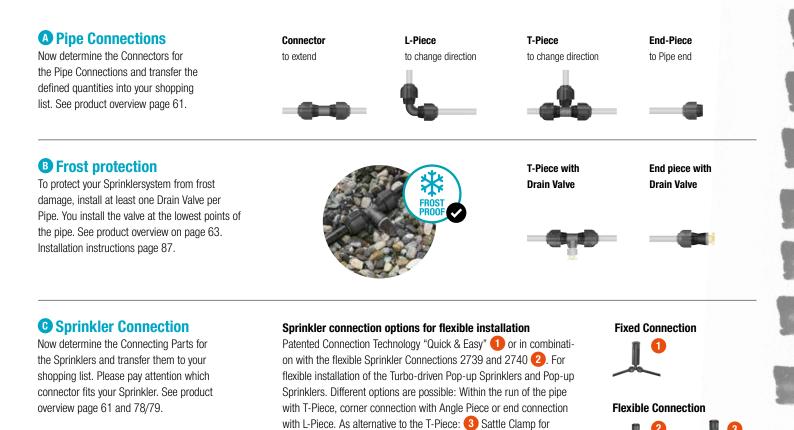
3. Enter the Pipe lengths and add them up. There are Connection Pipes in 10 m, 25 m and 50 m units.



Pipe length per line

# 4. Determine Connections and Fittings

Now it's time for the Pipe Connections, Sprinkler Connections and Drain Valves.

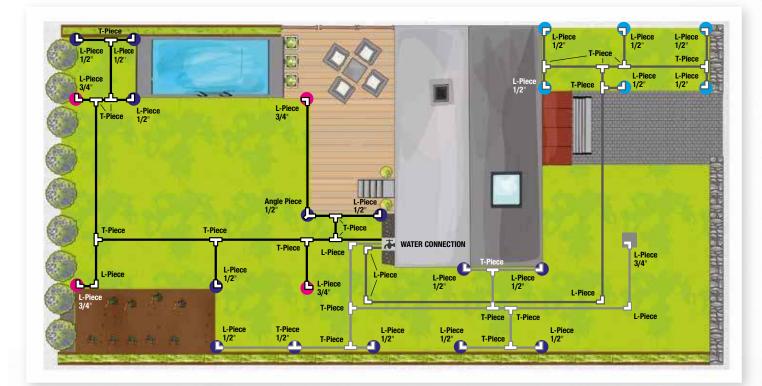


# 😂 Expand the blueprint of your garden

1. Select suitable Pipe Connections and draw them on the plan and transfer them to the shopping list with the required quantities.

mounting without pipe disconnection.

2. Select suitable Sprinkler Connections and draw them into the plan and transfer them to the shopping list with the required quantities.



# 5. Select control unit

Now it's time to choose the right controller for your irrigation - the heart of the Sprinklersystem.

The Sprinklersystems can be equipped with single or multi-channel controls. Multi-channel controls are always necessary if you want to water two or more Pipes / zones in your garden independent of each other. This is necessary for larger gardens or watering areas with different water requirements. (see the information on page 81, point D).



### With Power supply

### Up to 6 irrigation channels

Up to 6 irrigation channels A 24 V Irrigation Valve is connected in front of each irrigation Pipe. (art. no. 1278) Via the GARDENA Irrigation Control, the Irrigation Valves are receiving the impulse to open or close up to 6 irrigation lines - depending on the type.

# The following watering controls are available:

- Classic Irrigation Control System 4030 for up to 4 channels
- Classic Irrigation Control System 6030 for up to 6 channels
- smart Irrigation Control for up to 6 channels, programmable via the GARDENA smart App

Further information on the multi-channel control can be found on pages 48 and 64.





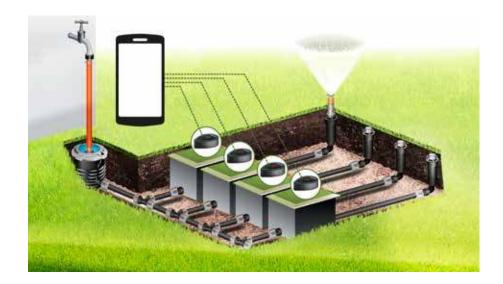
### No power supply

### Any number of irrigation channels

The entire configuration is done via the GARDENA Bluetooth<sup>®</sup> App. The corresponding signals are to the Irrigation Valves 9 V Bluetooth<sup>®</sup> (Art. No. 1285). The control unit is installed directly on the Valve. These open and and close based on the settings made via the App.

You can place the Valves anywhere in the garden. A new 9 V battery is enough for a whole season.

Further information on the multi-channel control can be found on pages 48 and 64.



# 6. Connect the system

The assembly is very easy thanks to the Quick & Easy technology. You will find a detailed product overview on pages 61 and 62. Transfer all required products to your shopping list.

We recommend the following products for easier installation of the system:



### **Profi System Connection Set**

Complete set for connecting Pipeline and Sprinklersystem to the water supply. The set includes all components for the connection between the water tap and the Connecting Point.



### **Connecting Point**

The Connecting Point is the ideal product for the transfer from the water supply (above ground) to the underground Pipes for Pipeline or Sprinklersystem.



### **Pressure Regulator**

For better protection of your Sprinklersystem, we recommend installation of the Pressure Regulator. The best is to install the Pressure Regulator underground in the small valve box (article no. 1290) in front of the electric Valves. The Pressure Regulator fulfils two tasks:

#### 1. High water pressure

If the water pressure from your connection is higher than 4 bar, the installation of the Pressure Regulator is required. This reduces the water pressure to max. 3.1 bar. If you have any questions about the pressure or about the correct connection to the domestic water supply ask your sanitary company if necessary.

### 2. Water filter

The integrated filter holds back dirt particles and the Sprinklersystem is protected from foreign objects. Especially if you use a Pump to supply water, impurities can occur which can impair its function. Due to the installation in the Valve Box, the Pressure Regulator is easily accessible for manual cleaning of its filter.



### Valve Box V3

Up to 3 Irrigation Valves 9 V or 24 V can be installed in the Valve Box V3. This makes them easily accessible as well as protected.

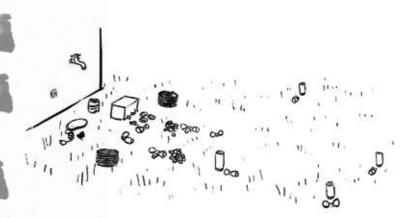


### Various Connection Fittings

For connection to the Connection Point, Water Station, Valves and Valve Boxes, or for direct connection to the house installation.

# 7. Installing the system

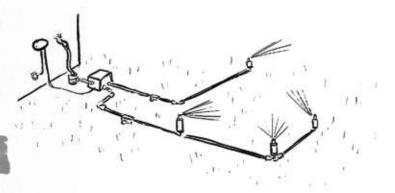
Just a few more steps to fully automated watering. This is how easy it is to install your Sprinklersystem professionally.\*



A Lay out all the parts in your garden according to the plan. Start at the beginning of your irrigation system. Tip: If you unroll the Pipes 1 to 2 hours before and lay them out in the sun, they can be easily straightened.



<sup>B</sup> Cut the Pipes to the right length according to the plan. Make sure that no soil gets into the pipe. If necessary, chamfer the pipe, i.e. remove unclean cut edges. For straight Pipe cuts in just one turn, use the GARDENA Pipe Cutter for cutting the Connecting Pipes (Art. No. 2727).



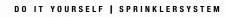
**E** Important! Now check whether your Sprinklersystem is tight. To do this, do a test run before you install the system underground. If the Sprinklersystem is tight, go on to step F. If the Sprinklersystem is not tight, check that the Pipes are really inserted into the connectors as far as they will go.

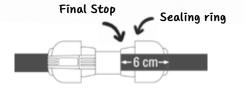


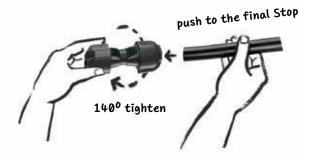
Now pour the soil back in, put the turf on top and tread it down. If you water the soil and the turf first, everything will grow faster. And in 2 to 3 weeks you won't see any more of the installation.



Use a spade to dig v-shaped trenches approx. 20-25 cm deep. To do this, carefully remove the trenched and dig out the trench. Remove the stones from the trench. Tip: Mow the lawn and water it beforehand. Then it's easier.



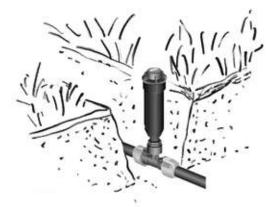




**C** Now connect the elements. Push the Pipes approx. 6 cm into the connector over the O-ring. This creates a watertight connection. Caution: After approx. 4 cm there is a sealing ring. Please insert the tube further into the opening at this point.



Now adjust the spray direction, the spray range and the spray width on the sprinkler. The settings are different, depending on the model. You can find more information on the labels on the Sprinklers themselves.



**G** Now place the Pipes with connectors and Sprinklers in the trench. All Sprinklers and Nozzles must be installed flush with the ground surface. The Nozzle head including recessed grip should be above the ground surface for regular cleaning.



(i) Install the Drain Valves at the lowest points of the system. The difference in height between the Drain Valves must not exceed 2m on slopes. If necessary, install several drainage valves on the slope. In order to improve drainage and protect the Drain Valve, install it in a seepage pack of washed coarse gravel (about coarse gravel (approx. 20 x 20 x 20 cm). Before installing the Drain Valves, rinse the system to remove any dirt that may have got into the system during installation. The Drain Valves opens automatically after irrigation, as soon as the water pressure is below 0.2 bar and drains the pipe.

\* If you carry out the installation yourself, we ask for your understanding that we assume no liability and no guarantee for costs and damages that may arise during the implementation of the planning.

## 8. Tips & hints for maintenance

Here are some tips to help you enjoy your system for a long time.



### **Pressure Regulator**

If the water pressure from your connection is higher than 4 bar, it is recommended to install the Pressure Regulator (Art. No. 8200). The integrated filter retains dirt particles.



### **Frost protection**

Before the frost arrives, disconnect the system from the supply Pipe. Simply observe the additional frost notes for the products.



### Transition from 19 mm or 32 mm to 25 mm Pipe Connections

You have already installed your GARDENA Sprinklersystem before 2005? You want to replace or extend it now?

• Use the Adapter piece (Art No. 1513) for the transition from 19mm to 25m pipes.



#### Permanent pressure resistant connection

For a connection that is resistant to permanent pressure, the connection between the tap and the Connecting Point (Art.-No. 8262) should be made via a 3/4" hose and 2 Adapter Pieces (Art.-No. 1513).



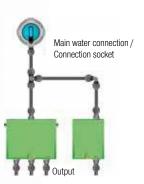
### Most used tools

secateurs or GARDENA Cutting Tool to cut Pipes, screwdriver (slotted or cross, not available from us) to adjust the Sprinklers, spade to bury Pipes.



### **Combination of V3 with V3 Valve Box**

V3 Valve Boxes can be easily combined with each other, assembled and disassembled. This is ensured by the telescopic screw connection.



### Combination V3- with V1 Valve Box

The V3 Valve Box is connected to the water connection. You can also combine it with a V1 Valve Box. To do this, branch of the Pipe and connect it to the V1 Valve Box.

Tip: If you install several Valve Boxes next to each other, we recommend to screw the Valve Boxes together on a wooden board.

# Shopping list GARDENA Sprinklersystem

Art. No.	Name	Piece
Pop-up S	Sprinklers	
8241	Pop-up Sprinkler SD30 1/2" female thread	
8243	Pop-up Sprinkler SD80 1/2" female thread	
8231	Pop-up Sprinkler MD40 1/2" female threade	
8232	Pop-up Sprinkler MD80 1/2" female thread	
8233	Pop-up Sprinkler MD180 1/2" female thread	
8203	Turbo-driven Pop-up Sprinkler T 200 1/2" female thread	
8205	Turbo-driven Pop-up Sprinkler T 380 3/4" female thread	
8239	Pop-up Sprinkler MD40/300 3/4" male thread	
Connecti	on for Pop-up Sprinklers	
2780	L-Piece 25 mm x 1/2" male thread	
2782	Angle Piece 25 mm x 1/2" male thread	
2786	T-Piece 25 mm x 1/2" male thread	
2781	L-Piece 25 mm x 3/4" male thread	
2783	Angle Piece 25 mm x 3/4" male thread	
2787	T-Piece 25 mm x 3/4" male thread	
2790	T-Piece 25 mm x 3/4" female thread	
2761	Connector 25 mm x 3/4" female thread	
Pipes and	d Accessories	
2718	10 m Connecting Pipe 25 mm	
2700	25 m Connecting Pipe 25 mm	
2701	50 m Connecting Pipe 25 mm	
2727	Pipe Cutter 25 mm	
Pipes Co	nnections	
2771	T-Piece 25 mm	
2773	L-Piece 25 mm	
2775	Connector 25 mm	
2778	End-Piece 25 mm	
Frost pro	tection	
2760	Drain Valve (Connection 3/4" male thread)	
2770	Drain Valve Set	

Art. No.	Name	Piece
Irrigation	Control with power supply	
1283	Classic Irrigation Control System 4030	
19035	smart Irrigation Control	
19210	smart Irrigation Control Sensor Set	
1278	Irrigation Valve 24 V	
1280	Connection Cable 24 V	
1282	Cable Clip 24 V	
Irrigation	Control without power supply	
1285	Irrigation Valve 9 V Bluetooth®	
Irrigation	Control Valve Boxes	
1254	Valve Box V1	
1255	Valve Box V3	
Connectio	on of the system	
8262	Connecting Point ( 3/4"- male thread )	
8200	Pressure Regulator	
1505	"Profi" Maxi-Flow System Connector Set	
2713	"Profi" Maxi-Flow System Connector Set	
1513	Adapter Piece 26.5 mm (G 3/4") / 33.3 mm (G 1")	
8264	Regulator and Shut-Off Valve	
2762	Connector 25 mm × 1" female thread	
Sensor ex	rtensions	
1867	Soil Moisture Sensor	
19040	smart Sensor	
Pipeline e	extensions	
8266	Water Station (3/4"-male thread )	
8254	Water Plug (3/4"- male thread )	
8252	Pipeline Garden Water Tap	
8251	Pipeline Oscillating Sprinkler	

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# Shopping list GARDENA Micro-Drip-System

Systemstart and Accessories13333Master Unit (flow rate up to 1000 l/h)113310Master Unit (flow rate up to 2000 l/h)1	
13310Master Unit (flow rate up to 2000 l/h)1	
13222 Tap Fitting 13 mm (1/2") - G 3/4" 1	
13224 Tap Fitting 4.6 mm (3/16") - G 3/4" 1	
13313 Installation Tool 1	
Pipes and Accessories	
1346 Connecting Pipe Flex 13 mm (1/2"), 15 m 1	
1347Connecting Pipe Flex 13 mm (1/2"), 50 m1	
1350 Supply Pipe 4.6 mm (3/16"), 15 m 1	
1348         Supply Pipe 4.6 mm (3/16"), 50 m         1	
13207         Shut-Off/Regulation Valve 13 mm (1/2")         1	
13217 Shut-Off/Regulation Valve 4.6 mm (3/16") 2	
13208 Pipe Pegs 13 mm (1/2") 10	
13218 Pipe Pegs 4.6 mm (3/16") 15	
Connection	
13213 Connector 4.6 mm (3/16") 10	
13212 L-Joint 4.6 mm (3/16") 10	
13211 T-Pieces 4.6 mm (3/16") 10	
13214         4-Way Coupling 4.6 mm (3/16")         10	
13215 Plug 4.6 mm (3/16") 10	
13216 T-Joint Nozzles/Endline Drip Heads 4.6 mm 5 (3/16")	
13203 Connector 13 mm (1/2") 3	
13202 L-Joint 13 mm (1/2") 2	
13201 T-Joint 13 mm (1/2") 2	
13204         Connector 13 mm (1/2") - 4.6 mm (3/16")         5	
13205 Plug 13 mm (1/2") 5	
13206 T-Joint Spray Nozzles 13 mm (1/2") 5	
Micro-Drip-System for Potted Plants	
Starter Sets	
13401 Micro-Drip-Irrigation Balcony Set 1	
13400 Micro-Drip-Irrigation Terrace Set 1	
Endline Drip heads	
13307 Endline Drip 2 I/h 25	
13302 Endline Drip Head 2 I/h, pressure-compensating 10	
13305 Adjustable Endline Drip 0-15 I /h 10	
13304 Adjustable Endline Drip Head 1-8 l/h, 5 pressure-compensating	
Inline Drip Heads	
13317 Inline Drip Head 2 l/h 10	
13312 Inline Drip Head 2 I/h, pressure-compensating 10	
13315 Adjustable Inline Drip Head 0-15 I/h 10	
13314 Adjustable Inline Drip Head 1-8 l/h, 5 pressure-compensating	

	Name	Content	Piece
Holiday and	Balcony Watering		
13300	Solar-powered Irrigation AquaBloom Set	1	
13301	Solar-powered Irrigation AquaBloom Water Reservoir Set	1	
13367	Water Reservoir	1	
Micro-Drip-	System for Plant Areas		
Starter Sets			
13450	Micro-Drip-Irrigation Vegetable Bed/Flower Border Set (60 m <sup>2</sup> )	1	
13455	Micro-Drip-Irrigation Raised Bed/Bed Set	1	
Spray Nozzle	es and Sprinklers		
13318	Endline Micro Strip Sprinkler	5	
13319	Micro Strip Sprinkler	5	
13320	Spray Nozzle 90°	5	
13321	Spray Nozzle 180°	5	
13322	Spray Nozzle 360°	5	
13324	6 in 1 Spray Nozzle	2	
13323	Micro Mist Nozzle	5	
13306	Small Area Spray Nozzle	10	
13316	Inline Small Area Spray Nozzle	10	
13325	Oscillating Sprinkler OS 90	1	
Accessories	for Spray Nozzles and Sprinklers		
13326	Extension Pipe for Spray Nozzles	5	
13231	Regulation Valve Sprayers	5	
13334	Extension Pipe OS 90	2	
Inline Drip H	eads		
13317	Inline Drip Head 2 I/h	10	
13312	Inline Drip Head 2 l/h, pressure-compensating	10	
13315	Adjustable Inline Drip Head 0-15 l/h	10	
13314	Adjustable Inline Drip Head 1-8 I/h, pressure-compensating	5	
Micro-Drip-	System for Plant Rows		
Starter Sets			
13010	Micro-Drip-Irrigation Vegetable/Plant Row Set (15 m)	1	
13500	Micro-Drip-Irrigation Hedge/Bush Set (25 m)	1	
13501	Micro-Drip-Irrigation Hedge/Bush Set (50 m)	1	
Driplines			
1362	Dripline 4.6 mm, 3/16" (15 m)	1	
13503	Dripline 1.6 l/h for Above and Below Ground Irrigation (25 m)	1	
13504	Dripline 1.6 l/h for Above and Below Ground Irrigation (50 m) $\!\!\!$	1	

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# GARDENA My Garden



This is where you can design and plan your dream garden. The free online tool also offers automatic planning for sprinkler systems. www.gardena.com/mygarden

GARDENA

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Take a look: here you will find helpful tips and step-by-step instructions. GardenaUK





# The simple way to your own watering system

### Would you like a convenient watering system in your garden?

- Information that will help you decide on the best solution
- Help with planning, from the sketch to the finished plan do-it-yourself planning instructions. Step-by-step.

### Who and what else can help you

- GARDENA My Garden the free online tool also offers automatic planning for sprinkler systems. www.gardena.com/mygarden
- The GARDENA customer service team will answer your questions.
- Videos on YouTube with informative films about our irrigation solutions

### **More about GARDENA**

Would you like to know more about gardening and GARDENA? Just take a look in our other brochures, visit our website at www.gardena.com/uk or subscribe to our monthly newsletter.







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