

ACCESS POP-UP CRICKET SQUARE PACKAGE

Description (SCS150-5K)

The package includes water storage tank, pressurisation pump, controller, rotary pop-up sprinklers, pipe and fittings.

*For general information see **I09** instructions.*

The system will require the following:

- A dedicated mains water supply capable of delivering a minimum of 900 litres/hour.
- A dedicated 13amp plug socket adjacent to the irrigation controller location.
- A dedicated 240VAC power supply wired into the pump isolator (1.1kW/6.84A FLC).
- Suitable water storage tank base.
- Weatherproof cover for pressure booster pump assembly.

Installation tip:

Recommended order of installation

1. Irrigation controller (wall mount only).
2. Water storage tank (fit components, connect mains water supply and fill).
3. Pressurisation pump (connect to water storage tank and 240VAC supply)
These will provide pressurised water for testing purposes.
4. System supply pipework (leave exposed).
5. Drain point (as section instructions).
6. Signal cable (as section instructions).
7. Sprinkler pop-up assemblies (as section instructions).
8. Wiring (as section instructions).

Irrigation Controller

To operate the system a Hunter X2 controller is supplied. This should be wall mounted using the top mounting lug and the lower 2 exposed holes. The unit is weatherproof and can if necessary be located outside. The cover also has locking rings for a padlock if additional security is required.

Wiring

All connection terminals are accessed by pulling down the front cover.

The mains cable connection point is accessed by removing the screw down cover on the LHS. If using the connection kit supplied, the 20mm cable gland should be fitted first. Push the end of the plug/lead through the gland and connect into the connector block as indicated. Tighten the cable gland and refit the cover and screw.

The controller does not need a connection to the pressurisation pump.

Water Storage Tank

A 5000Litre water storage tank is supplied and this will need placing on a smooth, level reinforced concrete base capable of supporting its filled weight (see manufacturers handling and base guidelines). The following tank ancillaries will require fitting once the tank has been sited (see separate instructions I13).

- **(ETVB3)** ¾" float valve controls the water level inside the tank.
- **(EWTWEIR)** type 'AB' weir overflow for water regs compliance.
- **(ETOF4)** 1" warning overflow assembly gives indication of a float valve fault.
- **(EVG8)** gate valve for bottom outlet.

The tank outlet is threaded 2" BSPM and after first sealing the threads with PTFE tape screw on the 2" brass gate valve (**EVG8**). The 2" x 1" threaded nipple (**FPTN8-4**) is fitted to the outlet of the gate valve, seal the 2" side with PTFE tape. A 1m length of suction hose is supplied pre-assembled for connection from the tank to the pump inlet (ensure the internal leather washers are fitted when assembling).

A permanent mains water connection is required and this should be connected to the tank float valve inlet. If using Blue MDPE pipe, running underground, the water regulations require this to be at a depth of 750mm. For winterisation purposes a stopcock and drain point should be included in the pipework.

Pressurisation Pump

The pressurisation pump is preassembled and should be placed on a firm level base adjacent to the water storage tank. The pump inlet is 1" BSPM to accept the other end of the 1" suction hose assembly.

The pump outlet is fitted with a 50mm compression pipe fitting for connection to the square supply pipework. Cut the supply pipework at the pump outlet position and fit an elbow (**FLE50**). Bring a short length of pipe to the surface and connect onto the pump outlet fitting.

The pump is pre-wired to a Genyo pressurestat and this switches on the pump whenever a sprinkler is operated. It also protects the pump if for any reason the water inside falls below the tank outlet.

Wiring

The pump assembly is prewired to the attached isolator switch. Remove the cover by undoing the 2 phillips headed screws. The 240VAC mains power supply should be wired into the top of the isolator switch (**Live – L1 & Neutral – L2**) the **Earth** should be connected to the LHS earth terminal. Use a 20mm gland to suit the wire used.

The pump and ancillaries will need protecting from the elements in a suitable enclosure.

System Supply Pipework

Installation tip:

*Use a hacksaw to cut the pipe, but ensure all swarf is removed. Then use the chamfering tool (**FLCHAM**) to aid assembly of fittings. ensure pipe goes fully past inner seal.*

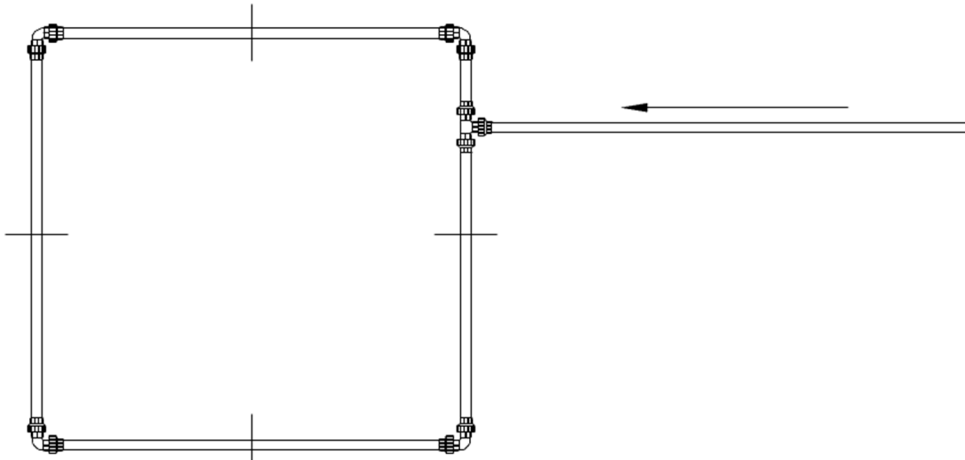
300m x 50mm black MDPE type pipe is provided, this will be delivered in 100m coils. Undo strapping carefully and trap the outside tail, uncoil cartwheel fashion to avoid twisting.

Trenches should be straight sided and wide enough to accommodate the number of pipes, signal cable, fittings and any assemblies. As the pipework will be drained down during frost periods, a depth of 300mm will be sufficient.

The soil should be free of large stones and sharp flints that could potentially damage the pipe and cable. A cushioning layer of 100mm of sand or gravel should be used around the pipe if this is a problem.

Always tape over the ends of the pipe to prevent any dirt ingress. A pipe warning tape will be provided to be placed over the pipe this needs to be ideally 150mm above the pipe.

Run the pipe from the pump location to the edge of the square fit a tee (**FLT50**) and run the pipe around the perimeter making a complete ring. Fit elbows (**FLE50**) on the corners.



Mark the centre of each side to indicate sprinkler location.

Drainpoint

At the furthest point on the supply pipework a drainpoint should be fitted. This consists of a 50mm saddle fitting (**FS50-4**). This should be clamped around the pipe in a suitable location. The saddle exit should then be carefully drilled using a saddle cutter or 15mm drill bit. A 1" manifold nipple is then screwed in with a sealing cap. A 10" underground valve chamber provides access when required.

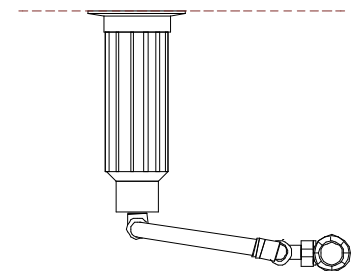
Sprinkler Pop-up Assembly

The sprinklers are pre-assembled and require only supply pipe and signal cable connections. The sprinklers should be positioned in the centre of each side of the square. The sprinklers should be fixed in position, using compacted soil. The sprinklers are preassembled with swing joints which allow adjustment for height whilst maintaining a vertical plane. The sprinkler top should be slightly lower than the surrounding ground (allowing for grass mowing).

Rainbird 752E

- Height of Rainbird 752E sprinkler = 380mm

Ensuring the sprinkler will finish at the correct position/level, cut the 50mm supply pipe and fit the sprinkler assembly tee. Before fixing the sprinkler in the ground check the jet direction is correct (see below). Ensuring the sprinkler solenoid coil, wires and signal cable are left exposed, firmly compact the soil around the remainder of the sprinkler body, ensure it is secure, upright and the top finishes at the correct level.



Sprinkler adjustment

The sprinklers will have the correct jet fitted and the arc pre-set at 180deg however, depending upon their final set position they may need adjusting to ensure they are pointing in the direction of the square. This is best done after installation (see below).

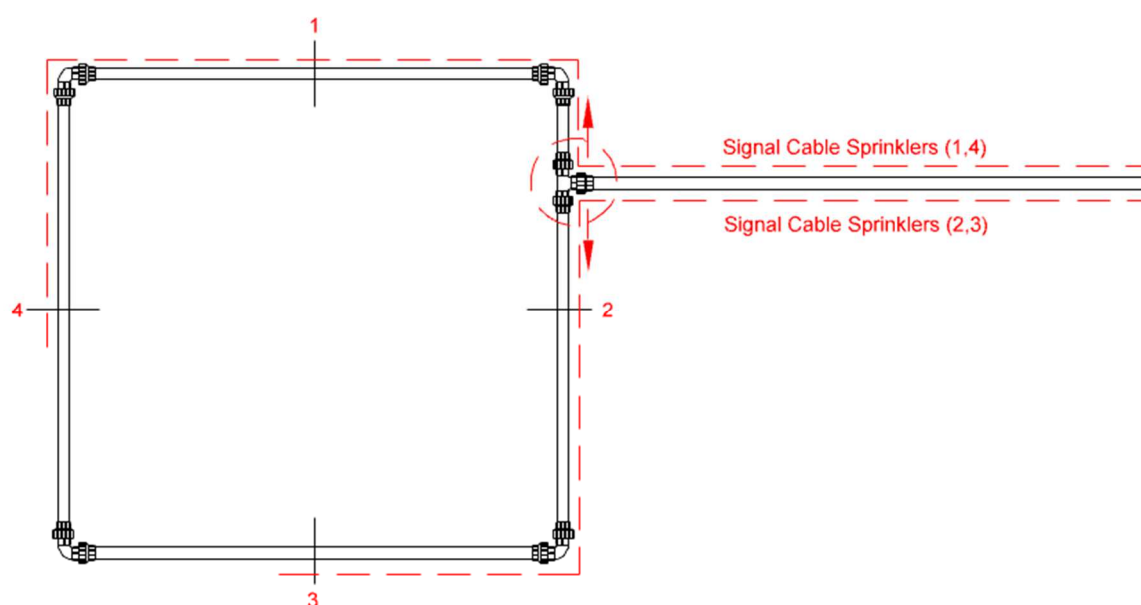
Installation tip: When manually checking the sprinkler jet direction the rotor needs to complete its arc before returning therefore do not force the rotor in one direction if resistance is felt turn in the opposite direction first.

- To check the jet direction, insert a Phillips screwdriver into one of the silver screws on top of the sprinkler and turn the rotor turret fully anticlockwise checking the jet direction arrow moulded into the top is parallel with the LHS edge of the square.
- If the jet direction is out, you will need to insert a flat bladed screwdriver into the slot on the retention ring and carefully prise the ring out.
- Using 2 screwdriver blade on opposite sides carefully lift up/out the sprinkler rotor.
- Replace with the jet direction correct, then ensure the retention ring is replaced securely.

Signal Cable

Each sprinkler is individually controlled via built-in solenoid valve. This is connected electrically to the irrigation controller via multi-core low voltage signal cable. This should be laid with the supply pipework (tape underneath the pipe every 2m). 4 x 100m coils of multicore cable is provided, use 2 coils and run both together from the controller location to the tee location.

- If there is enough cable, continue round in both directions (individual cables supply sprinklers 1 & 4, 2 & 3).



Leave a loop at each middle sprinkler location to aid wiring later.

- If the cables are not long enough to reach the sprinklers, use the 2 spare coils to extend both cables. Join **only** colours red, yellow, green and blue using DBY grease connectors (**ELCGD**). Cover all connections with 10" round chamber supplied.

Installation tip:

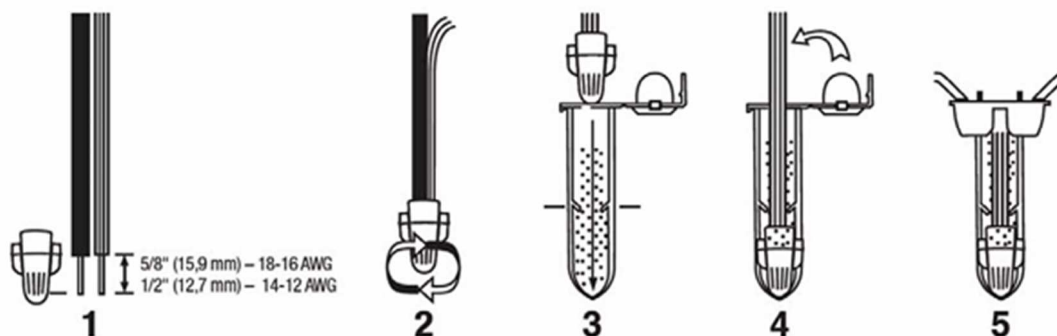
Label the ends of each individual cable with the sprinklers it supplies to aid controller wiring later.

Wiring

If the signal cable is looped, without cutting the cable strip 100mm section of the grey outer sheathing exposing the inner coloured wires. If the cable is terminated cut a 100mm section from the end.

*The wires are joined using a two-part grease filled connector (**ELCGD**) a clear sleeve and red/yellow twist nut (see above illustration).*

If having difficulty pushing the connector to the bottom of the tube, use a rigid, thin piece of non-conductive material to help push the connector down. Once the connector is on the bottom, remove the material and fill in any voids left in the grease.



Sprinklers 1&2 (looped cable)

- Expose and cut the **RED** wire, strip 13mm of the coloured sheath from both cut ends and join together with one of the bared sprinkler wires.
- Expose and cut the **YELLOW** wire, strip 13mm of the coloured sheath from both cut ends and join together with the remaining sprinkler wire.

Sprinklers 3&4 (end cable)

- Expose and cut the **GREEN** wire, strip 13mm of the coloured sheath from both cut ends and join together with one of the bared sprinkler wires.
- Expose and cut the **BLUE** wire, strip 13mm of the coloured sheath from both cut ends and join together with the remaining sprinkler wire.

Tidy all wires/connectors and secure with tape, controller wiring will be done later.

Controller (signal cable ends)

Feed the end of the signal cable supplying sprinklers **1&4** through the RHS controller entry hole. Cut down to length if necessary and then remove 40mm of the grey outer sheathing to expose the inner coloured wires. Strip 10mm of the coloured sheath exposing the metal core, from the **RED, YELLOW, GREEN** and **BLUE** wires and connect to controller terminals as follows:

- **1 - RED**
- **2**
- **3**
- **4 - BLUE**
- **C - YELLOW & GREEN**

Feed the end of the signal cable supplying sprinklers **2&3** through the RHS controller entry hole. Cut down to length if necessary and then remove 40mm of the grey outer sheathing to expose the inner coloured wires. Strip 10mm of the coloured sheath exposing the metal core, from the **RED, YELLOW, GREEN and BLUE** wires and connect to controller terminals as follows:

- **1**
- **2 - YELLOW**
- **3 - GREEN**
- **4**
- **C - RED & BLUE**

Controller terminal check:

1 = RED

2 = YELLOW

3 = GREEN

4 = BLUE

C = RED, YELLOW, GREEN, BLUE

Tape both signal cables together inside the controller to keep them secure.

Rain Sensor

A MiniClik rain sensor is supplied, this should be fixed in a level plane in a position where it will receive the similar rainfall as the square. An 8m length of cable is prewired to the sensor for connection to the controller. The end should be pushed through the RHS entry hole.

It is important that the metal bridge is first removed from the **SEN** terminals of the controller. Connect the sensor individual wires to these terminals.

When wiring fully completed, refit the access plate by pushing upwards until it 'clicks' into place.

Testing the System

After the system has been fully installed check each component as follows:

Water storage tank

- Check mains water pipework and fittings for leaks.
- Check outlet fittings and suction hose for leaks.
- Check internal float valve is secure and switching off the water at the correct level.

Pressurisation pump

- Check pump fittings in/out for leaks.
- Check controller operates pump relay and turns pump on/off correctly.

Pipework and fittings

- Check pipe and fittings for leaks.
- Check sprinkler assemblies for leaks.
- Check sprinklers are set correctly

Sprinklers

- Check sprinkler pop-up operation.
- Check sprinkler radius and arc.
- Check sprinkler combined coverage.

Irrigation controller

- Check controller operates each sprinkler manually.
- Check rain sensor operation stops watering.

Operating the System

Recommended watering times

- Individual sprinkler run time 12mins

It is best to water the area early morning if practicable. The above times are for guidance only and may need to be altered according to season, aspect etc. The daily operating time can be

split if required. If watering every other day or weekly multiply daily rate accordingly (if mains water supply sufficient).

Maintenance

It is recommended the system is serviced twice annually to ensure its continued efficient running. The system is not designed to run through the winter months and components should be protected from potential frost damage. Contact Access Service Department for service details or advice (service@access-irrigation.co.uk).

General Details

Location of Equipment

Due to the nature of the equipment, some drainage of water onto the floor is to be expected, during routine maintenance or should a fault develop. It is the responsibility of the client to check the suitability of the proposed equipment and its proposed location before installation.

Connection to Water Supply

The Water Supply (Water Fittings) Regulations 1999 allow this type of system to be operated from the mains water supply, provided the supply is protected by a Cat 5 break tank. It is assumed the supply for the system is fitted with a double check valve. It is also a requirement that the Local Water Authority is informed of the intention to install this system.

Terms and Conditions

Warranty information, payment terms and delivery information is contained in the 'Terms and Conditions of Sale for Access Irrigation Limited', available by request or downloadable from our website.

Irrigation systems should only be installed by a competent person

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