instasprink

DESIGN SOFTWARE · BS 9251:2021

INSTASPRINK DESIGN

Residential sprinkler design, from floor plan to finished drawings.

Lay out BS 9251:2021 sprinkler systems in your web browser. Heads placed and checked as you go, pipework laid out for you, the whole system shown in realistic 3D, and drawings and reports ready to issue.

Category 1 and 2 | Realistic 3D view | Preliminary hydraulics | Nothing to install | PC, Mac and tablet



instasprink.com

INSTASPRINK DESIGN

Design faster. Check as you go. Issue with confidence.

InstaSprink Design takes a residential sprinkler system through seven clear steps, from the architect's plans to a full set of drawings and a preliminary hydraulic report. It does the repetitive work for you: placing and dimensioning heads, routing the pipework, finding the operating heads, drawing the system in 3D and filling in the title block. Everything is checked against the head's listed limits as you work, so your time goes on the design decisions.

Start from any plan

Drop in a PDF, PNG or JPG. Set the scale from one dimension and line the floors up.

Heads placed for you

Mark out a room and the heads are placed, spaced and dimensioned to the head's listed coverage.

Live coverage checks

Spacings, wall distances and uncovered areas show in red the moment anything is out.

Pipework laid out

Auto pipe runs a square 25 mm main and 20 mm branches to every head, with another route a click away.

See it in realistic 3D

Every floor, riser, branch and head, with the tank and pump set in place. Turn it, check it, and put it on the drawing.

Preliminary hydraulics

Operating heads found and every combination checked against the supply, ready to confirm in your hydraulic calculation software.

Seven steps, from plans to drawings

1. **Plans** — Upload the drawings for each floor
2. **Scale** — Set the scale and line the floors up
3. **Heads** — Mark the rooms, heads placed
4. **Pipework** — Auto pipe, risers and 3D check
5. **Supply** — Mains, boosted, or tank and pump
6. **Hydraulics** — MHU, densities and supply check
7. **Drawings** — Sheets, 3D view, report and materials

Made for the people who design and fit residential systems

Sprinkler contractors, installers and plumbers designing houses, flats and residential blocks to BS 9251:2021. A guided next step at the top of every screen shows what to do next, so occasional users never get lost.

7

guided steps, start to finish

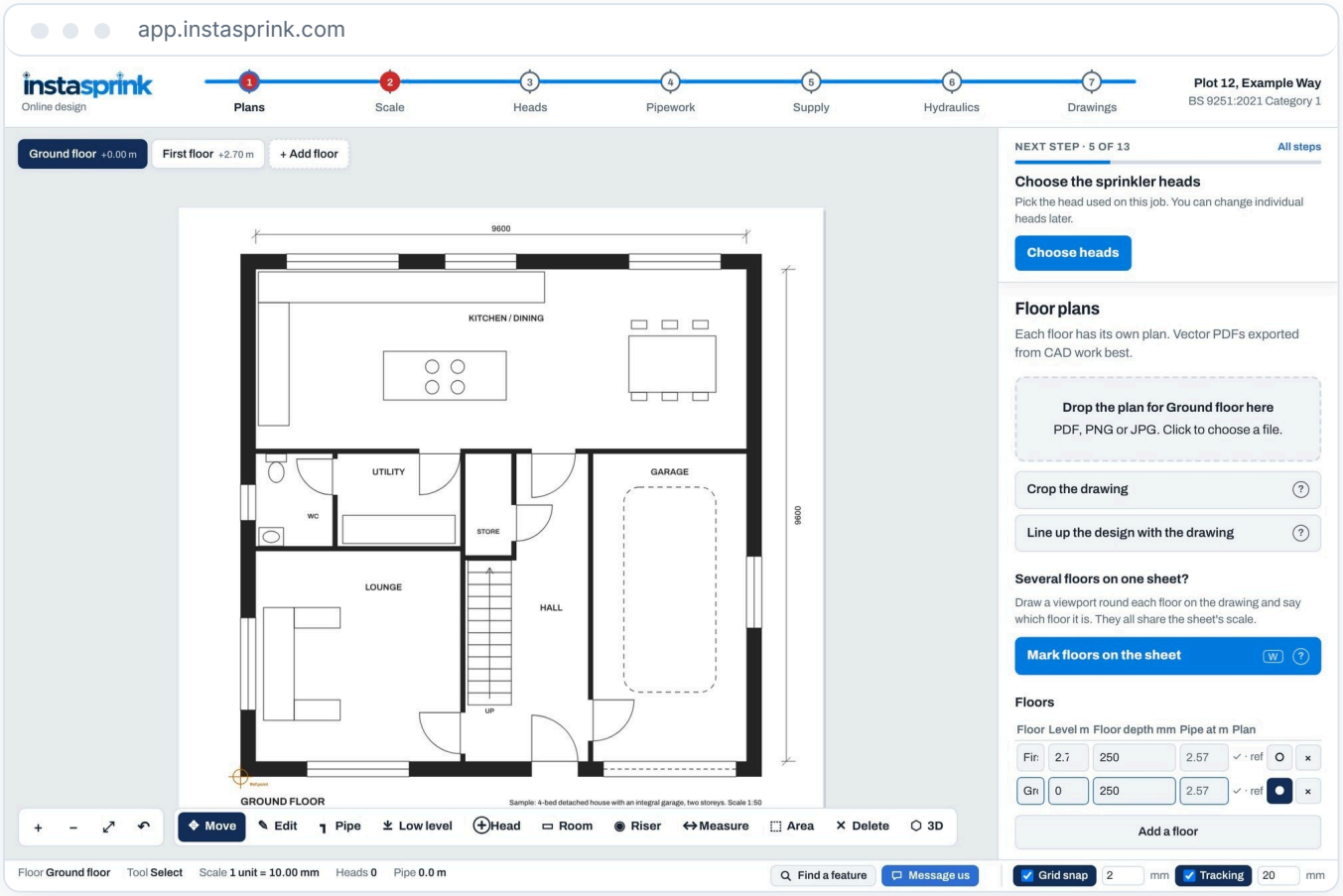
A1 / A3

drawing sheets as one PDF

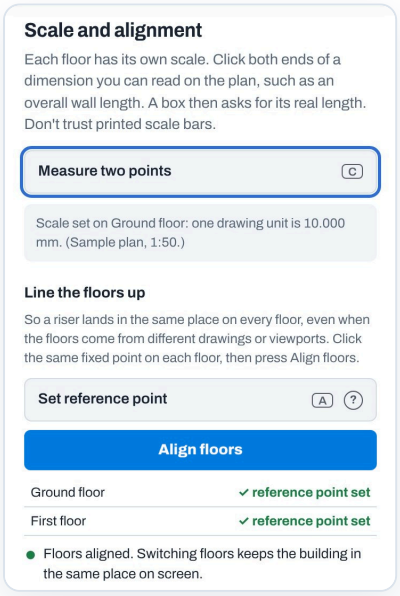
1 2 PLANS AND SCALE

Start from the plans you already have

Drop each floor's plan into the tool. A PDF straight from CAD works best, or use a PNG or JPG. Click both ends of a dimension you can read to set the scale, then click one fixed point on each floor so risers land in the same place on every level.



Plans. Each floor has its own plan. Crop to the part you need, or mark several floors on one sheet.



Scale and alignment. Set from a real dimension, not a printed scale bar.

- **Multi-page PDFs** and drawings with several floors on one sheet.
- **Floors lined up** from one reference point, so a riser drawn on one floor lands in the same place on every other.
- **Revised drawings** drop straight in. Your design and its scale carry over, the old drawing shows in red over the new one, and Line it up fixes any shift.
- **Measure and Area** tools for any distance, area or perimeter on the plan.

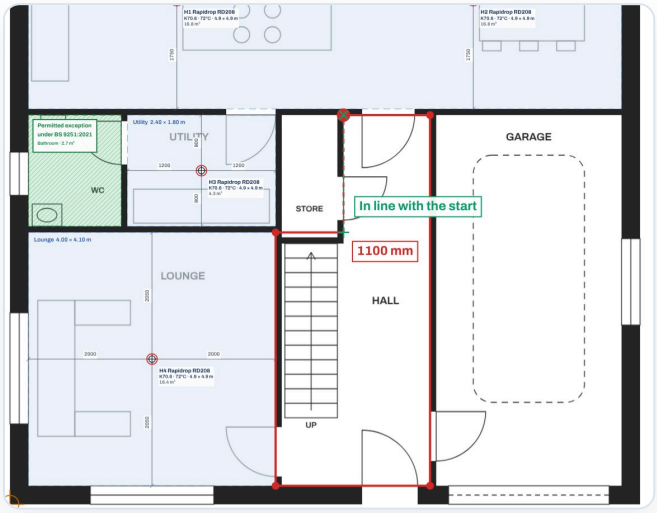


Area. Drag a box or click round the corners: the area in m² and the perimeter show on the plan. Nothing is added to the design.

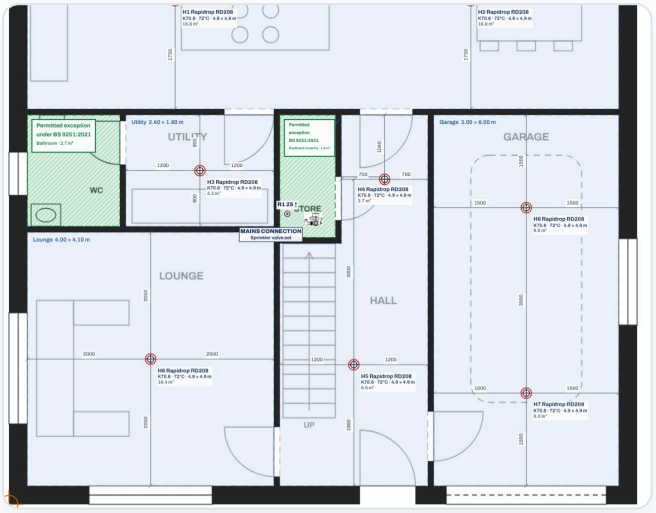
3 SPRINKLER HEADS

Mark a room. The heads place themselves.

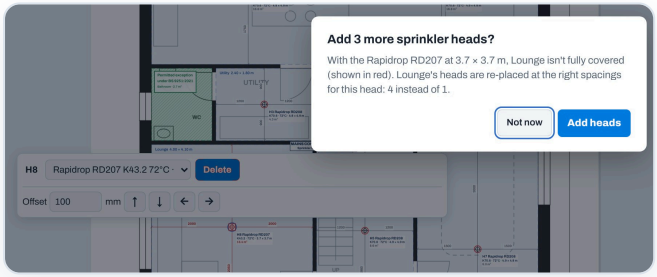
Drag a box for a rectangular room, or click round the corners of any other shape. Live dimensions and alignment guides keep the outline square as you go. Close it and the heads are placed at the right spacings, with every head-to-head and head-to-wall dimension drawn on.



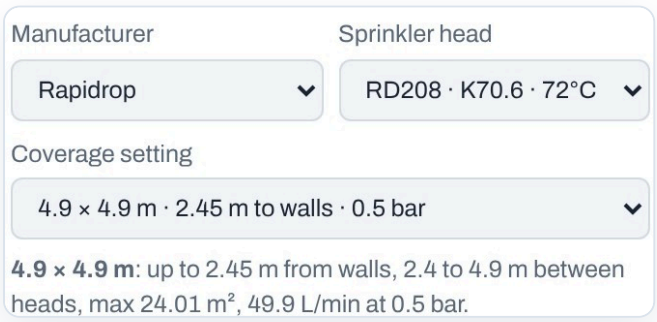
Tracing a room. The live dimension and the "in line with the start" guide keep the outline true.



Heads placed. Every room marked: heads spaced, dimensioned and labelled, the WC and store marked as permitted exceptions.



Change a head and it tells you. Swap to a head that covers less and what's no longer covered shows in red. One click re-places the room's heads at the right spacings, and pipes them in again if they were piped.



- **Head library** of Rapidrop, Viking and Victaulic pendent and sidewall heads, with each coverage setting. Add your own to the company library.
- **Drag a head too far** and another head of the same kind comes in to cover the gap. Drag it back and it goes again.
- **Permitted exceptions** under BS 9251:2021, such as small bathrooms and cupboards, are marked and listed.
- **Rooms open between floors**, such as a hall and landing, are linked as one fire compartment.
- **Sloping ceilings**, one slope or two to a ridge, with heads at their true heights.

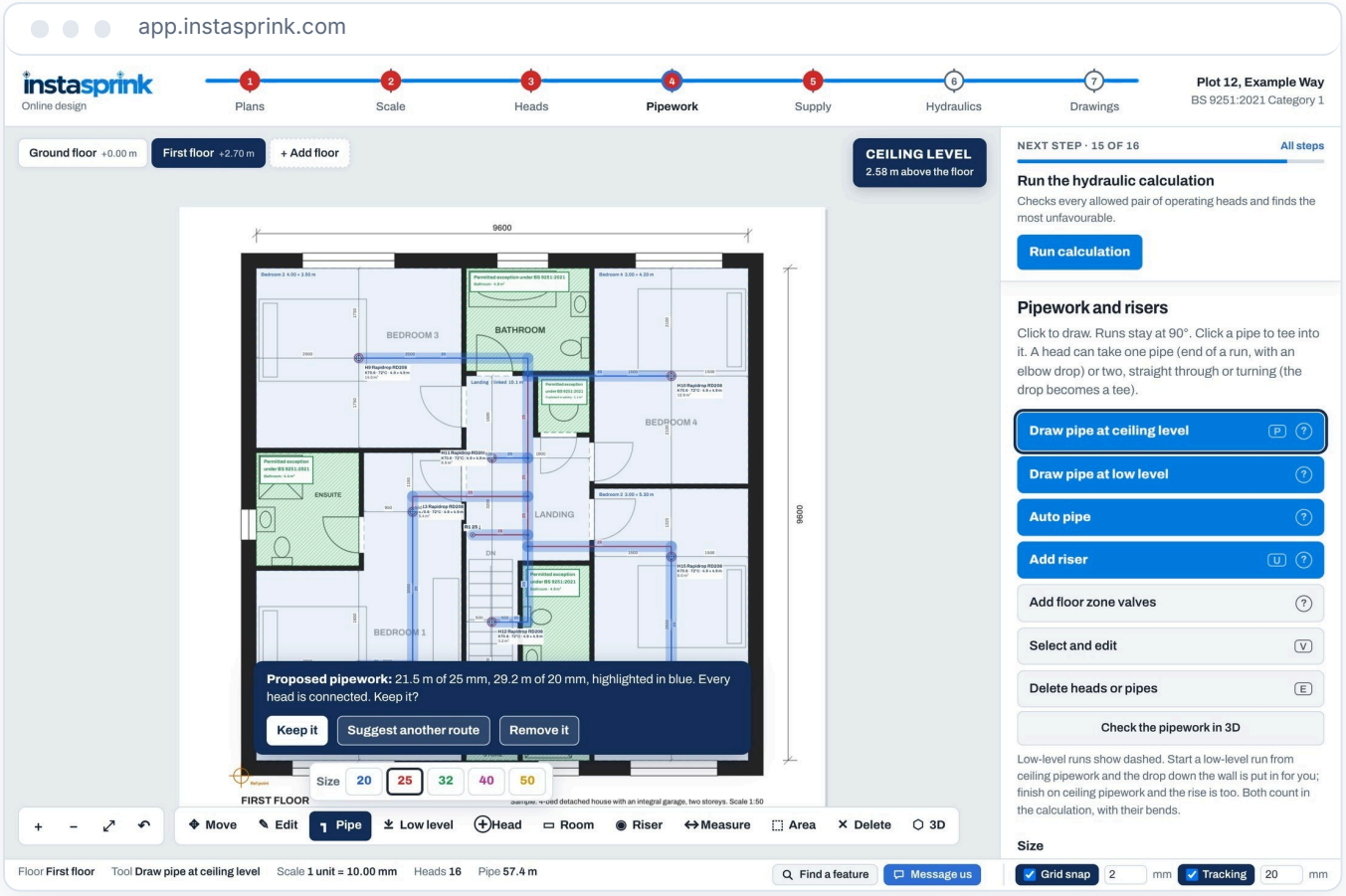
Pick the make, head and coverage setting

Its limits are spelt out in plain terms: how far from the walls, how far apart, the most area one head can cover, and the flow and pressure it needs. Every head on the plan is checked against them as you work.

4 PIPEWORK AND RISERS

Pipework, laid out for you

Auto pipe works out the shortest square network from the riser to every head: a 25 mm main down the hall or landing and 20 mm branches to single heads. Every head is picked up in line on a tee, or at the end of a run. Keep it, ask for another route, or draw your own: runs stay at 90° and every tee and elbow is counted.



Proposed pipework, highlighted in blue with its lengths by size: keep it, suggest another route, or remove it.

- **Risers** carry the pipework between floors, with the rise drawn and counted.
- **Low-level runs** with the drops down the wall put in for you.
- **Floor zone valves** for larger buildings.
- **Sized as you choose:** a 25 mm main with 20 mm to single heads, or all in 25 mm.
- **Every fitting counted:** tees, elbows, reducers and the head adaptors, carried through to the materials list.
- **Hand-drawn runs** snap square and join the network, so a tricky corner is a few clicks.
- **Check it in 3D** at any time: the whole system, floor by floor, with the tank and pump set in place (next page).

Heads are never the corner of a run

Auto pipe comes in on the line of the onward pipe and turns before the head, so every head sits in line on a tee or at the end of a run, the way an installer would fit it.

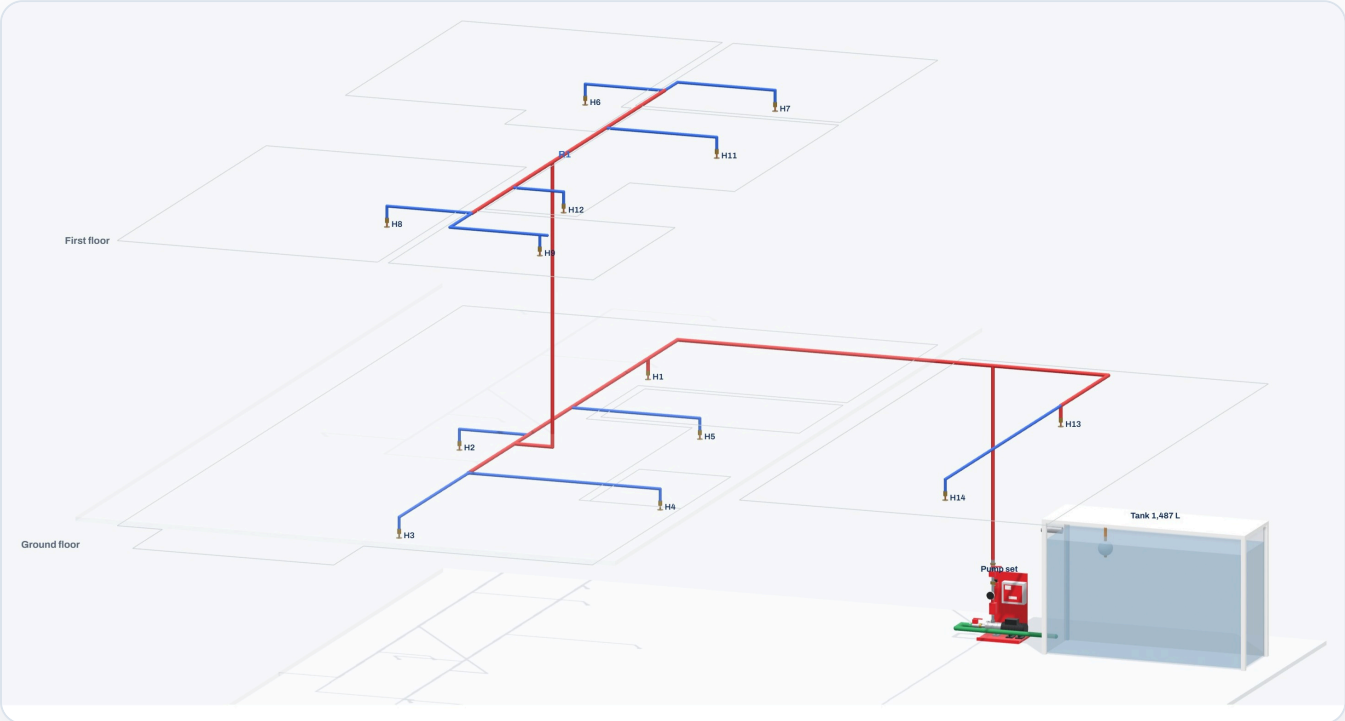
Lengths and fittings as you go

Every proposed route shows its pipe lengths by size before you accept it, and the materials list and the hydraulic calculation both read straight from what's drawn.

REALISTIC 3D VIEW

See the whole system before anyone picks up a pipe cutter

One click turns the plan into a 3D view of the installation: every floor in place, the riser climbing between them, each branch in its true size and colour, every head on its drop, and the tank and pump set standing where they will go. Turn it, tilt it, switch floors on and off, and click anything to find it on the plan. It's the quickest way to spot a run that's been taken the long way round, and the picture that makes sense to a client or a site team.



A two-storey house with a tank and pump. 25 mm main in red, 20 mm branches in blue, each head on its drop, the fire pump set and the 1,487-litre tank beside the building. Exactly this view goes on the drawing sheet and downloads as its own PDF.

- **Pipe sizes in colour,** with a legend, so a 25 mm main and a 20 mm branch are told apart at a glance.
- **Floors on or off,** and views from any side, so a riser or a congested corner can be looked at on its own.
- **Tank and pump set drawn to size** from the ones you chose, with the tank's capacity shown.
- **Hover to name** any head or pipe; click it and the plan jumps to it.
- **On the drawing sheet** as the 3D pipework view, and as a separate PDF for the client or the installer's pack.
- **Nothing to model.** It's built from the design you've already drawn, so it's always up to date.

1 click

from the plan to the 3D view

Every floor

riser, branches, heads, tank and pump

PDF

on the drawing sheet and on its own

5 6 SUPPLY AND PRELIMINARY HYDRAULICS

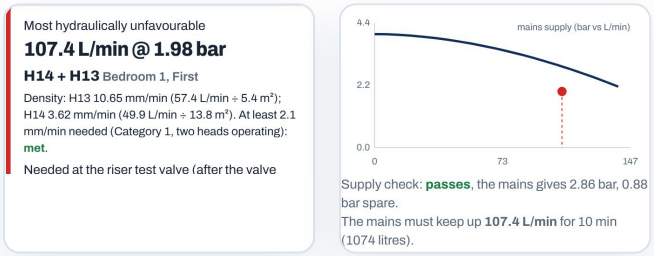
Preliminary hydraulics, as you design

Choose how the system is fed: straight from the mains, boosted mains, or a dedicated tank and pump. Then run the preliminary calculation. The operating heads are worked out for you, every combination is checked against the supply, and the result shows what the system needs and how much is to spare, while there's still time to move a head or change a pipe size.

For assistance with the design, not the final word. InstaSprink's built-in hydraulics are preliminary: they help you arrive at a layout that works. The design must be checked and the calculation confirmed in your preferred hydraulic calculation software before it's issued, and the tool exports the system ready for that.

Water supply

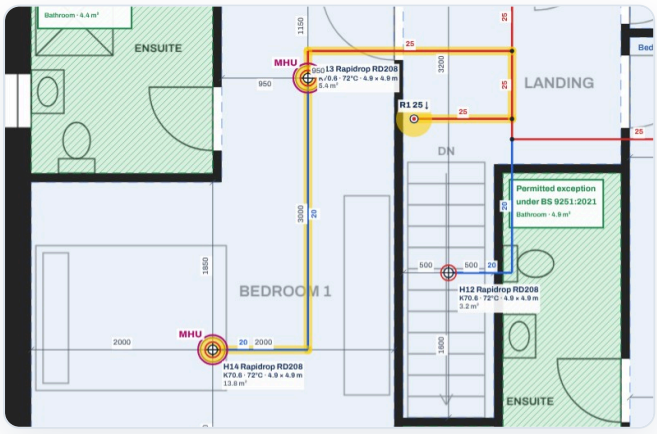
- **Mains:** enter the flow test and the valve set; the supply curve is drawn for you.
- **Tank and pump:** fire pump sets and their curves built in, picked automatically or chosen by you, with the tank sized and checked, including proven infill.
- **Your library:** add your own heads, pumps, tanks and valve sets, shared across the company.



The result: the MHU, its flow and pressure, the densities met, and the demand against the mains curve.

Preliminary hydraulic calculation

- **Operating heads found for you:** each head with the heads next to it in the same room, and a head on its own with the closest head in a room linked to it between floors.
- **MHU and MHF:** the combination with the least spare pressure is the most unfavourable; the most favourable sets the water needed for the duration.
- **Every head checked** for flow, pressure and design density, Category 1 or 2.
- **Fitting losses** to BS 9251:2021 Table B.6, with each pipe's calculation shown.
- **Balance heads:** swap to lower-flow heads where coverage allows, without making the MHU harder.
- **Export for your hydraulic calculation software,** with the pipe data file to match, so the final calculation starts from the same network.



Flow path on the plan. Click any combination and the plan jumps to its floor, with the flow path to the operating heads in yellow, including up the riser.

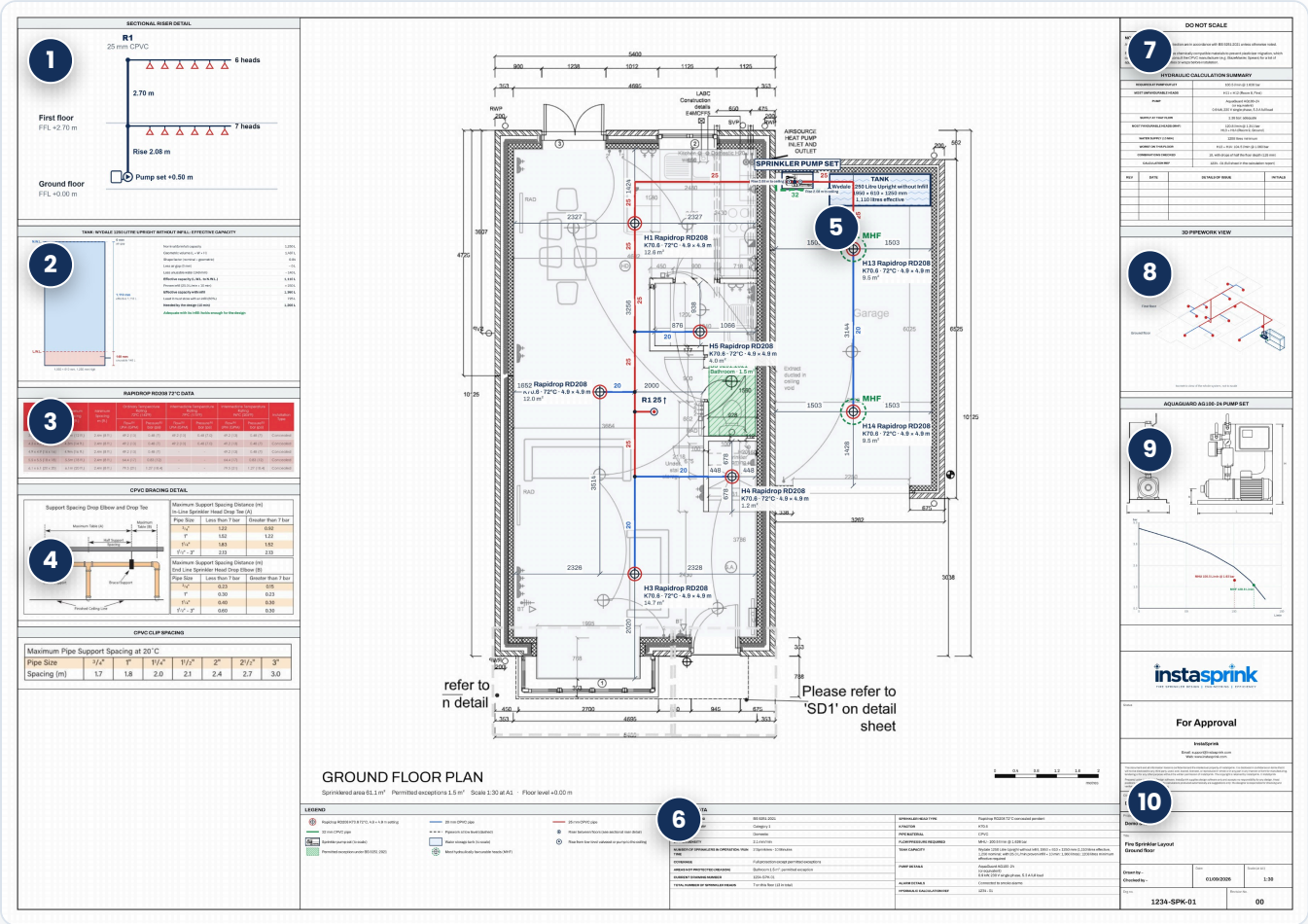
All operating combinations (10)

Heads	Room	Flow L/min	Pressure bar (after valve set)	Lowest head density mm/min	Least allowed	Spare bar
H14 + H13 (MHU)	Bedroom 1, First	107.4	1.98	3.62 (H14)	2.1	0.88
H15 + H16	Bedroom 2, First	104.0	1.85	6.28 (H16)	2.1	1.07
H11 + H12	Landing, First	102.1	1.65	7.57 (H11)	2.1	1.31
H6 + H7	Garage, Ground	104.4	1.20	5.55 (H7)	2.1	1.72
H1 + H2	Kitchen / dining, Ground	100.7	1.09	2.97 (H1)	2.1	1.90
H5 + H4 (MHF)	Hall, Ground	100.0	0.86	5.80 (H5)	2.1	2.15
H9	Bedroom 3, First	49.9	1.31	3.57 (H9)	2.8	2.41
H10	Bedroom 4, First	49.9	1.26	3.96 (H10)	2.8	2.47
H8	Lounge, Ground	49.9	0.98	3.04 (H8)	2.8	2.74
H3	Utility, Ground	49.9	0.84	11.56 (H3)	2.8	2.88

Every combination, side by side, as it appears in the report: flow, pressure, the lowest head density against the least allowed, and the spare pressure.

Drawings and reports, ready to issue

Each floor goes on its own A1 or A3 sheet at a true scale, with your company's title block and logo filled in from the project, and the details an approving body expects alongside the plan. Download the set as one PDF, with the preliminary hydraulic report and an estimated materials list to go with it.



1 Sectional riser detail

2 Tank effective capacity

3 Head data table

4 CPVC bracing and clips

5 MHU and MHF heads

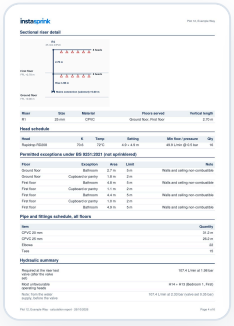
6 Legend and design data

7 Notes and calculation summary

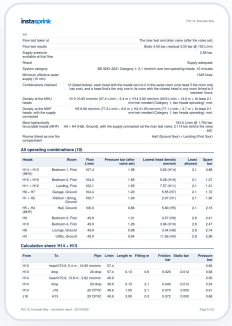
8 3D pipework view

9 Pump set and curve

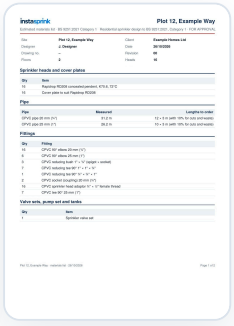
10 Title block and revisions



Preliminary report: layouts, riser detail and schedules



Every combination and the MHU calculation sheet



Materials list: heads, pipe to order and fittings

Issue status on every sheet

Preliminary	**For Approval**
For Construction	As Installed

For Construction and As Installed open once InstaSprink has verified your company's design competency.

BUILT FOR THE WAY YOU WORK

Nothing to install. Your whole team on one login.

Runs in your browser

On a PC, Mac or tablet, or installed as an app. Projects save to your company account, ready to pick up anywhere.

Seats for your designers

Named seats for the people who design, and free view-only users who can open, check and download.

Help where you need it

Find a feature (Ctrl+K) answers "how do I...?" and takes you to the button. Message us from inside the tool.

Design competency

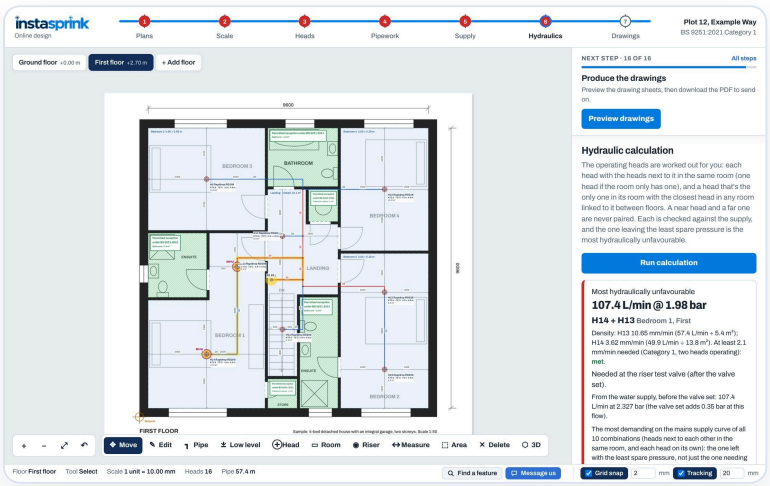
Verified companies issue drawings For Construction and As Installed.

Straightforward pricing

Monthly or annual seats per designer, with an introductory offer for early customers. InstaSprink Estimate is included with every Design seat.

Your branding

Your logo, address and confidentiality text on every drawing, filled in once for the whole company.



On site or in the office

Made for touch as well as a mouse, so the same project opens on a tablet on site or a big screen in the office, with every change saved to the company account. Light or dark mode at the touch of a button.

TRY IT ON YOUR NEXT PROJECT

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