

COMMERCIAL COLD WATER IMMERSION

# The Ice Bath Buyer's Guide

Specifying commercial cold water immersion: what to ask, what good looks like, and how to read the answer.

An independent specification standard, written to be used against any cold immersion supplier. It sets the standard a supplier must satisfy in writing, and the basis for verifying an installed plunge. The verdict doesn't depend on brand.

# A working tool for the person specifying, procuring or verifying a plunge

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This guide turns twelve diligence questions into a buyer's tool for the health club operator, hospitality buyer, estates or procurement lead, and the responsible person who will run the unit. Questions one to eleven mirror the FWG cold immersion diligence set. Question twelve adds the commercial test: whether the supplier can turn a safe, clean installation into a used, dosed practice.

Work through section four with the supplier in the room or on the page. Record answers on the scorecard, then assign a verdict.

THE CORE PRINCIPLE

*A credible claim names the parameter, the threshold, the unit and the instrument. Where those numbers are absent, the absence is the finding.*

AUTHORSHIP AND INTERESTS

Written by Future Wellness Group. FWG advises operators on specification and verification, holds commercial relationships with suppliers in this category including work on protocol, training and claims governance, and operates a register of supplier specification responses for which it charges an assessment fee that doesn't vary with the outcome. Every threshold here is drawn from PWTAG TN71 or the published literature, so any supplier, including those FWG works with, is judged against the same evidence.

| GREEN                                                                                                  | AMBER                                                                                                                    | RED                                                                                                                                                               |
|--------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Critical parameters answered, verified where relevant, given at the point of use. Specify and proceed. | Answered, but self-reported or with gaps. Proceed only with on-site verification and claims constrained until evidenced. | Cannot or will not provide temperature stability, turnover, disinfection, testing and logging, or independent verification data. Do not buy, regardless of brand. |

# Not a cold box. A shared, chilled body of water on commercial premises.

Cold water immersion has moved from fringe to fixture list, a high-perceived-value amenity that supports acquisition and retention. That is exactly why the specification has to be right: it is a hygiene and safety exposure as much as an amenity. Three commercial failure modes follow from a weak spec, and all three are avoidable at purchase.

|                                                                                                                                                                                             |                                                                                                                                                                                                                |                                                                                                                                                                                          |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Warm drift</b><br><br>The plunge drifts warm under load, so members don't get the dose they were promised, complain, and stop using it. It is a common source of member dissatisfaction. | <b>Hygiene incident</b><br><br>Water quality slips because filtration, disinfection or logging were never specified, and a shared plunge becomes a reputational and legal problem rather than a selling point. | <b>Unmanaged cost</b><br><br>Chiller running cost, consumables, water changes and labour turn out to be the real price. A cheaper box with no monitoring becomes the more expensive one. |
|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

The purchase price is the smallest number in the decision. The specification is what protects the other numbers.

The governing UK guidance is PWTAG Technical Note TN71, Ice Baths (August 2024): turnover and circulation, filtration, disinfection and residual, testing and logging, and the manufacturer and operator duty split. Where this guide names a threshold, it is anchored there.

Cold slows microbial growth; it doesn't remove the need for disinfection, filtration and monitoring. A shared cold plunge sits in the same hygiene world as a spa pool. A supplier who treats cold as a reason to skip the water regime has told you something important.

|                                                                                                                                       |                                                                                                                                                                               |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>MANUFACTURER SETS</b><br><br>Bathing load and equipment: chiller sizing, turnover, filtration, capacity, O&M manuals and training. | <b>OPERATOR RUNS</b><br><br>The water regime: daily testing, dosing, cleaning, record-keeping and bather screening. A good supplier narrows, but doesn't remove, this burden. |
|---------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# The twelve questions

For each question: what to ask, why it matters commercially, how to read the answer against a green, amber or red standard, and what a fully specified answer looks like.

*The pattern across the set matters more than any single answer.*

|                    |                           |                        |
|--------------------|---------------------------|------------------------|
| 01<br>Temperature  | 02<br>Turnover            | 03<br>Filtration       |
| 04<br>Disinfection | 05<br>Testing and logging | 06<br>Geometry         |
| 07<br>Materials    | 08<br>Readiness           | 09<br>Safety and entry |
| 10<br>Verification | 11<br>Claims              | 12<br>Programming      |

# 01 Temperature set point and stability

ASK

What temperature does the unit hold, how stable across repeated entries and peak load, and what is chiller capacity relative to users per hour?

WHY IT MATTERS

Every body adds heat. A unit sized for a headline figure on an empty tank drifts warm under load. It is a common member complaint, and the easiest to design out at purchase.

| GREEN                                                                                  | AMBER                                         | RED                                                          |
|----------------------------------------------------------------------------------------|-----------------------------------------------|--------------------------------------------------------------|
| Held set point, measured stability under a stated load, chiller matched to throughput. | A set point with no stability or load figure. | A temperature claim with no chiller specification behind it. |

WHAT GOOD LOOKS LIKE

A user-selectable set point with the hold temperature stated per unit, in TN71's vocabulary: chill tub 3–8°C, cold tub below 2°C. Stability modelled to a stated per-bather heat gain in watts, with the immersion duration, water temperature and ambient conditions that figure is derived from, plus surface, pipework and pump gains; chiller sizing gated against hourly throughput; water temperature logged at least once a minute. TN71 is explicit that heavy bathing raises system temperature where the chiller can't hold it, so the benchmark is a supplier who hands you the heat-load model, not a brochure number.

# 02 Water turnover and circulation

ASK

What is the turnover rate, the time to circulate full volume, where does water enter and leave, and are there dead spots?

WHY IT MATTERS

Turnover governs both temperature uniformity and hygiene. Water that doesn't move isn't being filtered, and in a shared plunge stagnation is a hygiene exposure.

| GREEN                                            | AMBER                                          | RED                         |
|--------------------------------------------------|------------------------------------------------|-----------------------------|
| A stated turnover rate and a circulation layout. | Circulation mentioned with no turnover figure. | No turnover concept at all. |

WHAT GOOD LOOKS LIKE

At least three turnovers per hour (full volume every 20 minutes or faster, inside the TN71 30-minute benchmark), continuous 24-hour filtration, and at least two collection points, surface and base, as TN71 requires, with a non-flat, anti-vortex, protruding base outlet against suction entrapment. Ask for the circulation layout drawing and flow rate measured live. Multiple inlets are this guide's own bar, not a TN71 requirement.



# 03 Filtration grade

ASK

What filtration is fitted, at what rate in metres per hour, and to what micron rating or media grade?

WHY IT MATTERS

Shared cold water is a hygiene exposure and filtration is the first line of defence. Filtered without a rating means nothing.

|                                                                        |                           |                       |
|------------------------------------------------------------------------|---------------------------|-----------------------|
| GREEN                                                                  | AMBER                     | RED                   |
| A named filter type with a stated filtration rate and change interval. | Filtered, with no rating. | No filtration detail. |

WHAT GOOD LOOKS LIKE

A named filter type from those TN71 lists: granular media, silica sand 16/30 or glass, or cartridge, with a stated micron rating or media grade. TN71 gives no micron standard for this application, so the specifiable number is the filtration rate: medium rate 10–25 m/h, high rate 25–50 m/h. That rate also governs the response to faecal, vomit and blood release, so ask for the procedure and check it matches the rate quoted (PWTAG TN2). TN71's maintenance cadence is the baseline, and it is stricter than a calendar interval: cartridges changed daily, media backwashed daily to a stated pressure differential, media replaced per manufacturer guidance. Any proposed interval longer than one year must be justified with flow and pressure data; that limit is this guide's own bar, not a TN71 requirement.

# 04 Disinfection method and residual

ASK

How is water disinfected, by ozone, UV or chemical, what residual is maintained, and what is the contact time?

WHY IT MATTERS

Cold slows biology, it doesn't stop it. Method and maintained residual keep a shared plunge safe between users; a system with no residual is an assumption, not a control.

|                                                             |                                                |                         |
|-------------------------------------------------------------|------------------------------------------------|-------------------------|
| GREEN                                                       | AMBER                                          | RED                     |
| A named method with a maintained residual and contact time. | A method named with no residual or monitoring. | No disinfection regime. |

WHAT GOOD LOOKS LIKE

A primary chemical residual (typically chlorine with pH correction) dosed automatically by an instrument-grade controller to the recognised band: free chlorine 1.0–5.0 mg/l at pH 7.0–7.6, or for a bromine system free bromine 4.0–6.0 mg/l at pH 7.2–7.6, with UV or ozone as secondary. Automated dosing is the commercial standard; a manual residential unit is not fit for shared load. Secondary UV or ozone is checked daily before bathing starts. Where there is no circulation, filtration and disinfection at all, TN71 is unambiguous: the bath must be emptied, disinfected and cleaned after every single user.



# 05 Water testing and logging

|                                                                                                                   |                                                                                                                                                                                          |
|-------------------------------------------------------------------------------------------------------------------|------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ASK                                                                                                               | WHY IT MATTERS                                                                                                                                                                           |
| What is tested, how often, and where is it logged: free sanitiser, pH, ORP and microbial, against what guideline? | A disinfection system is only as good as its monitoring. Logging is the record you reach for after an incident or inspection. It is commonly missing, and the omission is a serious one. |

|                                                                            |                                        |                    |
|----------------------------------------------------------------------------|----------------------------------------|--------------------|
| GREEN                                                                      | AMBER                                  | RED                |
| A defined testing schedule and logging regime against recognised guidance. | Testing mentioned, no schedule or log. | No testing regime. |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WHAT GOOD LOOKS LIKE | Operator testing of free chlorine and pH by calibrated photometer before bathing starts and every two hours thereafter; monthly microbiology by a UKAS ISO 17025 lab covering aerobic colony count at 37°C, coliforms, <i>E. coli</i> and <i>Pseudomonas aeruginosa</i> ; quarterly Legionella where air is introduced, with TN71 noting that sampling doesn't remove that risk whereas an inline 0.2µm filter can; records kept at least five years. Machine-side plant logging sits alongside the chemical log. |
|----------------------|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|

# 06 Geometry, depth and capacity

|                                                                                                                           |                                                                                                                                                                                      |
|---------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| ASK                                                                                                                       | WHY IT MATTERS                                                                                                                                                                       |
| What are the internal dimensions and depth, the maximum bathers, and how is single versus shared use managed for hygiene? | Geometry sets experience and hygiene load. A vessel sized for one but used by three changes the water-quality maths entirely; a stated capacity lets you match the unit to footfall. |

|                                                                  |                  |                    |
|------------------------------------------------------------------|------------------|--------------------|
| GREEN                                                            | AMBER            | RED                |
| Dimensions, depth and an hourly and daily capacity basis stated. | Dimensions only. | No capacity logic. |

|                      |                                                                                                                                                                                                                                                                                                                                                                                                                     |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| WHAT GOOD LOOKS LIKE | A stated capacity in users per hour and users per day, both determined by the manufacturer as TN71 requires, with per-product dimensions and depth as a table. Both figures trace back to the same heat-load model that sizes the chiller, and the hourly figure is the one that predicts warm drift. Depth is stated relative to a seated bather, so that an incapacitated user's airway stays clear of the water. |
|----------------------|---------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|



# 07 Materials and surface hygiene

ASK

What are the wetted materials, how biofilm-resistant, and what is the cleaning regime between sessions and for deep cleans?

WHY IT MATTERS

Surfaces harbour biofilm. Material choice and cleaning schedule decide whether the vessel stays clean between water changes, and the pipework you can't see matters as much as the shell.

| GREEN                                    | AMBER           | RED                 |
|------------------------------------------|-----------------|---------------------|
| A material spec and a cleaning schedule. | Materials only. | No cleaning regime. |

WHAT GOOD LOOKS LIKE

Non-porous wetted surfaces (stainless steel interior the benchmark) plus corrosion-appropriate pipework. TN71 notes that low temperature slows colonisation but organisms survive without effective disinfection, and that chlorine-resistant organisms such as *Staphylococcus aureus* survive better, with open wounds the specific infection risk, so material and disinfection are specified as a pair. Cleaning to TN71: daily in commercial settings, 100 mg/l chlorinated water, a fat-removing product for the scum line, materials per manufacturer guidance. Water-change frequency set by risk assessment, potentially weekly or after every change of guests, with a periodic chemical shock reaching all pipework before drain and refill.

# 08 Readiness and contraindication

ASK

How is an individual's readiness assessed, which contraindications are screened, and what guidance covers cold shock and afterdrop?

WHY IT MATTERS

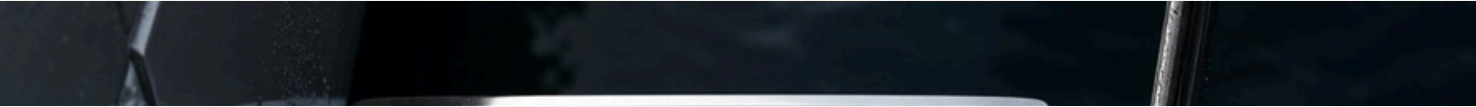
Cold immersion is not for everyone on every day. In a self-service setting readiness screening is a large part of the safety case, and cold-shock risk is highest at the temperatures a commercial plunge runs.

| GREEN                                                                             | AMBER                             | RED                              |
|-----------------------------------------------------------------------------------|-----------------------------------|----------------------------------|
| A readiness and contraindication process, with cold-shock and afterdrop guidance. | General consult a doctor wording. | No screening or safety guidance. |

WHAT GOOD LOOKS LIKE

A daily green, amber, red readiness self-assessment that drives the dose, and a named clinical contraindication set (respiratory, cardiovascular, pregnancy, age extremes) at the point of use alongside TN71's hygiene exclusions: open wounds excluded, 48 hours clear of sickness and diarrhoea, 14 days after cryptosporidiosis, no drugs or alcohol, pre-immersion toilet, hand wash and soap shower, head kept out of the water and no ingestion. Cold-shock guidance should follow the evidence: the response is at or near maximal from around 15°C downwards, so a 3–8°C plunge sits well inside the range in which the response is already at its maximum. Colder water doesn't mean a smaller response, and 12–15°C is not a mild beginner setting (Tipton et al., 2017). The head-out rule is a safety point as well as a hygiene one: face immersion and breath holding on cold entry can drive sympathetic and parasympathetic activation at the same time, the mechanism described as autonomic conflict (Shattock and Tipton, 2012).





# 09 Safety, entry and supervision

ASK

How do users enter and exit safely, what immersion-time limits apply, and what is the supervision and emergency model for self-service?

WHY IT MATTERS

The risk in cold is acute, not chronic. Entry, exit, a stated time limit and a response plan are non-negotiable for an unsupervised model; the absence of a written procedure is a liability the operator carries.

|                                                          |                          |                                           |
|----------------------------------------------------------|--------------------------|-------------------------------------------|
| GREEN                                                    | AMBER                    | RED                                       |
| A defined entry, exit, time limit and supervision model. | Partial safety guidance. | Get in and out, with no safety framework. |

WHAT GOOD LOOKS LIKE

Coached first exposure, with dose set by a written protocol that scales temperature and duration to user experience and reserves the coldest settings for staff-authorised use, plus point-of-use governance (posters, prompts, stop-criteria, escalation charts). Insist in writing on a stated maximum immersion time for unsupervised use and an emergency-response template.

# 10 Verification and standards

ASK

Is water quality independently tested, will the supplier provide results, and does the installation meet recognised recreational water guidance?

WHY IT MATTERS

Self-declared water quality is a claim; independent testing is the proof. It is the hardest bar in the set, and one rarely cleared at manufacturer level.

|                                                                       |                          |                              |
|-----------------------------------------------------------------------|--------------------------|------------------------------|
| GREEN                                                                 | AMBER                    | RED                          |
| Independent water-test results provided, against recognised guidance. | Tested, with no results. | No independent verification. |

WHAT GOOD LOOKS LIKE

Independent UKAS-accredited testing (currently the operator's duty, records with them). The emerging best practice is manufacturer-level verification: pooled UKAS results across the supplier's sites into evidence the buyer can point to. Ask whether the supplier holds a completed specification response with its evidence attached, and whether any independent results have been assessed against a published measurement method rather than self-reported. A supplier who has tested but will not release the results is amber, so verify on site. A supplier who has never commissioned independent testing is red.

# 11

## Claims and basis

ASK

For each claimed benefit, what evidence supports it at the actual temperature and duration the protocol delivers?

WHY IT MATTERS

Cold-water claims are routinely borrowed from studies run at temperatures and durations the plunge never delivers: usually warmer and longer in the recovery literature, or far more extreme in ice-swimming and cryotherapy work. A claim that doesn't match the real dose is one you can't stand behind, and the operator inherits the advertising exposure under the CAP Code.

| GREEN                                                      | AMBER                            | RED                                   |
|------------------------------------------------------------|----------------------------------|---------------------------------------|
| Claims tied to the actual protocol, with matched evidence. | Generic cold-exposure citations. | Outcome claims with no protocol link. |

WHAT GOOD LOOKS LIKE

A claims register in which every benefit is evidence-graded and dose-matched to the temperature and duration it applies to. The strongest suppliers hold a sign-off process and commission research where the literature is thin. Buyer's test: ask for the evidence behind one headline claim and check the study's temperature and duration match.

# 12

## Dosing, protocol and programming support

ASK

Beyond the equipment, can the supplier provide dosing protocols, exposure guidance and staff and member education, matched to temperature and use case?

WHY IT MATTERS

A plunge no one knows how to use is an expensive ornament. The commercial return comes from members using it correctly, repeatedly and safely, and staff being able to guide them.

| GREEN                                                                                                                              | AMBER                                                                                     | RED                                                             |
|------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Structured dosing tied to temperature and user experience, plus staff training and member guidance, with a named competence route. | General usage advice or a single time recommendation, no structured protocol or training. | Equipment only, dosing left entirely to the operator or member. |

WHAT GOOD LOOKS LIKE

A written dosing protocol stating temperature, duration and frequency for each level of user experience, with the coldest and longest exposures reserved for staff-authorised use; a staff training route leading to a recognised third-party qualification, not the supplier's own certificate alone; and member guidance at the point of use. Habituation of the cold-shock response depends on frequent, closely spaced exposures, so a programme built on occasional use isn't delivering the same intervention (Barwood et al., 2024). The outcome to buy is a practice that is used, not just installed.

# A fully specified offer is not a box. It is three layers.

The benchmark supplier delivers all three and can show you the join between them.

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## LAYER 01

### Infrastructure

The equipment and its monitoring: a chiller sized to load, continuous filtration, automated dosing, and connected logging that reports temperature, flow, pressure and uptime, alerting the operator before a problem reaches the member.

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## LAYER 02

### Governance

How the unit is run: operations and maintenance manuals, facility charts, testing and cleaning cadences, bather screening, and a staff escalation model. This is the layer that discharges the operator's duty under TN71.

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## LAYER 03

### Programming

How the cold is used: the dosing protocols, the staff and instructor training, and the member guidance that turns a cold box into a repeatable, coached practice with a defined and evidenced dose.

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Equipment without governance is a liability. Governance without programming is an unused asset. The outcome to buy is trained readiness: safe by design, run to a defensible regime, used to a protocol the operator can prove.

# The same weaknesses recur. Each has a tell.



|                        |                                                                                                                                           |
|------------------------|-------------------------------------------------------------------------------------------------------------------------------------------|
| <b>Q1 Temperature</b>  | A headline temperature with no chiller spec. Warm drift under load follows, and members feel it within weeks.                             |
| <b>Q2 Turnover</b>     | Circulation described, with no turnover figure. Water that doesn't move isn't being filtered, and the number was never calculated.        |
| <b>Q3 Filtration</b>   | Filtered, with no rate and no rating. It sounds managed and means nothing without a filtration rate, a rating and a change interval.      |
| <b>Q4 Disinfection</b> | A disinfection method with no residual. Cold is treated as if it sterilises. It doesn't, and a shared plunge needs a maintained residual. |
| <b>Q5 Testing</b>      | No testing log. A common gap, and a serious one. Nothing to produce at an inspection or after an incident.                                |
| <b>Q6 Capacity</b>     | Capacity stated as a marketing figure. A number with no heat-load basis, which unravels the moment real footfall arrives.                 |
| <b>Q9 Safety</b>       | No written safety framework. A liability the operator carries, with no stated time limit or emergency procedure for self-service use.     |
| <b>Q11 Claims</b>      | Borrowed evidence. Claims lifted from studies the plunge never matches: warmer, longer recovery trials, or far colder cryotherapy work.   |

The tell is the same across all of these: hesitation, a pivot to lifestyle language, or the phrase commercially sensitive. Treat that as the answer. A supplier with a real product produces these figures without friction, because they had to know them to build the thing.

# Seven points decide whether a good spec performs in a busy site.

## Throughput and capacity

Match the stated users-per-day to your peak footfall, not your average. An undersized chiller drifts warm at the worst moment; an undersized vessel overloads the water chemistry.

## The ongoing duty

Under TN71 the operator, not the manufacturer, runs the water regime: testing, dosing, cleaning, logging, screening. Budget for that labour and the training that makes it defensible. It doesn't disappear because the equipment is good.

## Insurance and liability

The written safety framework and the testing log are what your duty of care and your insurer rest on. Specify them as contract deliverables, with dates and formats, not afterthoughts to be emailed over later. Specify the commissioning measurements the same way: measured circulation flow rate, electrical verification against BS 7671:2018+A4:2026, filled weight against floor capacity, and energy draw over 24 hours. These are ordinary commissioning tests, they cost little at handover, and they are close to impossible to obtain a year later.

## Total cost of ownership

Purchase price is the smallest number. Chiller running cost, consumables, water changes, testing and staff time are the real figure. A cheaper unit with no monitoring is usually the more expensive one over three years.

## Monitoring

A connected unit that auto-alerts on a falling flow rate cuts both the labour and the risk of the daily duty. Ask what the dashboard shows and what triggers an alert, and treat it as part of the spec, not a bonus.

## Staff competency

Insist on a certified operator training course and named responsible persons for the water regime, distinct from the dosing coaching in question twelve. This is your competence evidence if anything goes wrong, and cheap relative to its value.

## Siting, electrical and floor loading

TN71 carries the installation envelope: IET Wiring Regulations zones, socket type and position, RCD protection and floor loading. Confirm the electrical design against BS 7671:2018+A4:2026 and the filled weight against the floor's capacity before the unit is ordered, not on delivery day.

# The buyer's scorecard

Record the supplier's answer to each question, then rate it against the reading standard in section four. A single red on a critical parameter (temperature stability, turnover, disinfection, testing, or verification) is enough to hold the purchase.

| #  | QUESTION                                 | ANSWER / NOTES | R / A / G |
|----|------------------------------------------|----------------|-----------|
| 01 | Temperature set point and stability      |                |           |
| 02 | Water turnover and circulation           |                |           |
| 03 | Filtration grade                         |                |           |
| 04 | Disinfection method and residual         |                |           |
| 05 | Water testing and logging                |                |           |
| 06 | Geometry, depth and capacity             |                |           |
| 07 | Materials and surface hygiene            |                |           |
| 08 | Readiness and contraindication           |                |           |
| 09 | Safety, entry and supervision            |                |           |
| 10 | Verification and standards               |                |           |
| 11 | Claims and basis                         |                |           |
| 12 | Dosing, protocol and programming support |                |           |

# Assigning the verdict

## GREEN

### Specify and proceed

Critical parameters answered, independently verified and given at the point of use where relevant, with claims matched to the real protocol.

## AMBER

### Verify before you commit

Answered, but self-reported or with gaps in the critical parameters. Proceed only with on-site verification and with claims constrained until evidenced. Most of that verification is already within reach: your pool plant contractor tests chemistry and filter differential as routine, your laboratory samples monthly, and flow rate, electrical verification and energy draw are ordinary commissioning tests. Specify them as deliverables and the measurement is largely already paid for.

## RED

### Do not buy on the current answers

Cannot or will not provide temperature-stability, turnover, disinfection, testing and logging, or independent water-test data. Do not buy, or do not make claims, regardless of price or brand.

The pattern matters more than any single answer. Where this set escalates to on-site verification, the questions become the measurement plan, and a supplier who has answered well on paper should welcome that step.

Two companion documents sit behind this guide. The Supplier Data Request (CWI-SDR-2026.1) turns these twelve questions into a written response a supplier signs, with an evidence schedule attached. The Verification Method (CWI-VM-2026.1) specifies how each figure is measured on site: the parameter, the tolerance, the calibration requirement, and what the report must contain, so that any competent contractor can execute it and any buyer can read the result.

Future Wellness Group maintains them and assesses completed responses, at a fee that doesn't vary with the outcome.

# References

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## PRIMARY STANDARDS AND GUIDANCE

Pool Water Treatment Advisory Group (2024) *Technical Note 71: Ice Baths*. Tamworth: PWTAG.

Pool Water Treatment Advisory Group (2014) *Technical Note 2: Faecal Contamination*. Tamworth: PWTAG.

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International Organization for Standardization and International Electrotechnical Commission (2017) *ISO/IEC 17025:2017 General requirements for the competence of testing and calibration laboratories*. Geneva: ISO.

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## PHYSIOLOGY

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Barwood, M.J., Eglin, C., Hills, S.P. et al. (2024) 'Habituation of the cold shock response: a systematic review and meta-analysis', *Journal of Thermal Biology*, 119, 103775. doi: 10.1016/j.jtherbio.2023.103775.

Shattock, M.J. and Tipton, M.J. (2012) 'Autonomic conflict: a different way to die during cold water immersion?', *The Journal of Physiology*, 590(14), pp. 3219–3230. doi: 10.1113/jphysiol.2012.229864.

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## ADVERTISING

Committees of Advertising Practice The UK Code of Non-broadcast Advertising and Direct & Promotional Marketing (CAP Code). 12th edn. London: CAP. Maintained online; cite the version in force at the date of specification.

# Glossary

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## TERMS USED IN THIS GUIDE

|                            |                                                                                                              |
|----------------------------|--------------------------------------------------------------------------------------------------------------|
| <b>Turnover</b>            | Time taken to circulate the full water volume through filtration and treatment once.                         |
| <b>Residual</b>            | The concentration of active disinfectant maintained in the water between treatments.                         |
| <b>Free chlorine</b>       | The fraction of chlorine available to disinfect, measured in mg/l.                                           |
| <b>ORP</b>                 | Oxidation-reduction potential, an electrical proxy for disinfection strength used to drive automated dosing. |
| <b>ACC</b>                 | Aerobic colony count at 37°C, a general microbiological measure of water cleanliness.                        |
| <b>Photometer</b>          | A calibrated instrument for measuring chlorine and pH.                                                       |
| <b>Heat load</b>           | The continuous heat a bather adds to the water, used to size the chiller and set capacity.                   |
| <b>UKAS ISO 17025</b>      | The accreditation standard for competent testing laboratories.                                               |
| <b>Cold shock</b>          | The involuntary gasp and hyperventilation response on cold entry, maximal from about 15°C downwards.         |
| <b>Afterdrop</b>           | The continued fall in core temperature after leaving the water.                                              |
| <b>Chill tub, cold tub</b> | TN71's typology: a chill tub runs 3–8°C, a cold tub below 2°C.                                               |
| <b>Scum line</b>           | The fat and soil deposit at the waterline, cleaned daily with a fat-removing product under TN71.             |

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TN71 marks two of its own items as still to be verified, the pre-immersion eating interval and the post-backwash ripening hour. Neither is quoted in this guide as a settled threshold.

# The missing number is where the risk sits.

This guide is built to surface it. A supplier with a real product answers these questions quickly; hesitation, redirection to marketing language, or commercially sensitive is itself the verdict. Specify to the parameter, verify on site, and buy trained readiness, not a cold box.