

# **3TEMP Pour over brewing**

To get good filter coffee; clean, clear and well tasting is not an easy task, to do this every time is even more complicated.

To extract the best tasting oils and fragrances you need to mix coffee together with fresh water; this at perfect temperature and at the optimal time. Then by using quality filter papers, optimized to get the best brewing tempo and to catch unwanted oils you are set up in the most secure way to get consistent great coffee.

Getting profiled pour over brews with the 3TEMPS's HIPSTER series is easy, our process is extremely efficient at extracting coffee solubles compared to other traditional techniques; only using fresh water with perfect temperature control, this over the whole brewing process.

The 3TEMP brewers guarantees best possible taste in every brew, using less coffee, also saving energy by not having staled, unoxidized, pre heated water. Our process guarantees freshly heated water, in every brew.

3TEMP HIPSTER series helps you, in an easy way, to brew the best coffee, wherever you are, every time.

That is what we call "Quality in Cup"...

...and in this document we are going to tell you about some of our secrets.

## **ABOUT 3TEMP**

Back in 2014, a designated team started a journey, A journey with a set goal! Arvika, Sweden, would be the home of the best batch brewer ever.

Not only in brewing black coffee but also to have the lowest possible environmental impact, most connected and adaptable, and the most appealing look; this is to **give black coffee the attitude it deserves.** 

To make our goal even harder to reach, the brewer should be the easiest to use, maintain and serve.

There is a lot of competition in our field. But we knew we had a head start; **We are Vikings, coming from Sweden - northern Europe - the center of the world regarding black coffee.** The total sum of experience our team had in making coffee equipment was a lot more than 100 years, and we had a brand-new idea for how to solve the temperature control.

**Quality in Cup** was the set target hymn, and **HIPSTER brewers** were what the name of the product family should be called, running our **3TEMP system.** 

**In 2015** the first profile brewer was born, the **HIPSTER TWO GROUP**; soon after this, we also released the **HIPSTER UC** and **HIPSTER ONE GROUP**.

In 2016 the HIPSTER WALL opened its eyes for the first time.

**In 2018** We travelled around, got user input from users and techs, and concluded. Some models were not as easy to serve as our goal said, but the quality of the coffee was excellent.

**In 2019** We listened to our customer's advice, went back to the drawing table, and kept the vital brewing parts as they were but made the **HIPSTER series - generation two** this new generation had one goal, make the brewers a lot easier to serve. Also, we made some changes to make this generation more robust and even easier to handle.

**also in 2019**, in November, <u>**HIPSTER KOBRA**</u> and <u>**HIPSTER PULS**</u> + a complete redesign of the UC-box + <u>**cold brew**</u> were added to our brewer's functionality. Not only this, but we also released the <u>**Coffee Particle Analyzer - CPA**</u>

#### In 2020 Covid-19 no comments.

In 2021 We introduced **BaaS - Brewer as a Service**; Here you can have, at a set monthly price, the best possible brewer, **everything included: brewer, filters, installation, training, lifetime support and service.** 

In April 2022, <u>Allegra</u>, at the London coffee festival, together with a jury, assigned us a price; **The price was the <u>Best all-round filter</u>** <u>brewer</u>, and our goal was met!

But rest assured, we won't stop. Every day onwards, we are fighting for our planet, our children and every living being. It's time to make every brewer run on our system or others that have started to follow our idea. <u>No boiler tanks!</u>



# Making coffee is an art, the art of concentration, control and repetition

A trained BARISTA prefers to prepare a black filter coffee using something called pour over, meaning that the barista will manually pour hot water over a coffee bed using something like the Kalitta or some V60 device.

Those brews usually are brewed in small batches. The result will be great as long as everything is done correctly.

The pours should be even poured over the whole coffee bed, the temperature of the water should be correct, and the timing needs to be at a specific tempo, not to mention the ratio between the water and the amount of coffee. If the barista does anything else, the result immediately will result in lower quality than wanted.

There are a lot of baristas that can make magic-tasting coffee using this technique, but there are only a few of them that will do this every time. In the real world, it's easy to get distracted, someone can be rude and talk to the barista in the middle of the brew, or the mind of the barista can be elsewhere for just any reason. Sometimes the highly trained barista might be out of the coffee shop/cafe/restaurant, and you have just an ordinary person to serve the customers coffee, maybe a family member helping or a student doing extra work. That by the way might be good for the business, because having only highly trained baristas will cost a lot more than having some youngster helping out from time to time.

In the procedure of making pour-over coffee, usually, the barista or the extra employee will heat fresh water from the tap, do the first pour and then make a pause, prewetting the coffee, called the pre-wet-phase, giving the water and coffee time to emerge together; every ground of the coffee shall be slightly soaked with hot water. By this, the coffee will be slightly softened and release more good stuff during the rest of the brew. The pause is there to let the coffee "bloom"; this pause is often called the blooming phase. The bloom makes the coffee rounder in taste and helps extract more of the good tastes from the coffee.

There are a lot of other situations where prevetting is performed to soak something, then take a pause, and then pour over more fluids. An example is when you are washing some dirt or dried wine from a table; then it also helps if the dirt or wine can be pre-wetted for a while before being washed off. What happens when you have a kettle of hot water in your hand? Your hand will be slightly tired, and the water will get colder.

In the next phase, the extraction phase, the barista pours some more water over the coffee bed and takes a new pause letting the water flow evenly through the coffee into the kettle beneath. This procedure is then performed until the exact amount of water is poured, using several iterations of pours and pauses.

The temperature of the water, if the kettle is not reheated, will during this procedure always decrease. This is the physics of heated fluids; they get colder when stored at room temperature.

When making coffee, this phenomenon doesn't need to be wrong because, at the end of the brew, the end-phase, most of the good tastes are already extracted, and the more bitter, heartburn-giving chemicals start to dissolve. At lower temperatures, this reaction is slowed down, and not as many of those chemicals will be transferred into the vessel of brewed coffee. But if the water gets too cold, the dissolving of the good tastes also will decrease to mush, and an under-extraction will occur.

As mentioned earlier in this article, the result often tastes excellent, but at the same time, the brews are usually pretty small in volume. They must be repeated to almost every customer.

A pour-over also takes a long time, and this occupies the person brewing pour-overs, preventing them from doing other things, like talking to customers. It's also quite exhausting and will over many years, repeating the maneuvers, day in and day out, cause acing shoulders etc.



The HIPSTER brewers and the 3TEMP system is the perfect solution to this. Let the skilled barista program the brewer and set the prebrew amount of water, the temperature of the pre-brew, the wanted ratio of coffee/water, the blooming delay, and the number of pours to be in the extraction and end phase. Even to precisely set the water temperature in those phases separately, as well. The HIPSTER brewer doesn't have any pre-heated water. It always brews on freshly heated water, making all the wanted minerals and all the free oxygen in the water reach the coffee.

When this is done, the HIPSTER brewer will perform every step in a pour-over precisely the same way every time.

The 3TEMP system will take care of the boring repeating choirs doing pours and pauses, controlling the temperature in every part of the brew. Amounts, ratios, and timings are no longer an issue, and no worries, a HIPSTER brewer never has its mindset elsewhere.

It might, if you want, be the end of small pour-overs, as the brewer can brew from one cup (V60) up to one gallon (ca 3.8 liters) of perfectly brewed pour-over coffee in every batch. And it doesn't end here. The HIPSTER brewer can also brew cold brew (or cold drip) coffee up to one gallon in 20-25 minutes.

Probably the best thing is that anyone can brew the perfect batch, the barista or the family member; it's just to measure up the coffee, pour it into the paper filter, load up, select the

desired brew profile and press start. The HIPSTER will then do exactly what the barista has programmed, every time, every day.

But what if there is no barista that can set the profile?

No worries here, either. The HIPSTER brewers are connected to our 3TEMP.ONLINE online support platform, our experts gladly help out setting your profiles remotely, exactly as you want the coffee at your place, wherever you are. Here you also can follow the brews, read out statistics or let the brewer inform the world about what and when you are brewing.



Actually, the brewer is in your control, 100%, wherever you are.

The 3TEMP system has full control of the temperatures via the patented heating control and doesn't waste any energy when not brewing as it is tankless.

We could go on talking about design and space-saving, but that's another story...

### That's "quality in cup"

## **3TEMP - Temperature control - we are realists.**

Question 1

# Does your owen or stove have one temperature, or can you process your food at different temperatures?

When you make one single meal, you probably start on one power setting, usually a high temperature, and during the cooking, either increase or, in most cases, decrease the temperatures after a while.

Coffee is food that is being processed, so in the 3TEMP system, you can set the brewing temperatures at the beginning of the brew, in the middle of the brew and finally in the last stage of the brew. Up or down doesn't matter; it's your choice.

#### Question 2

### When you measure temperatures indoors, outdoors, your body temperature or your fridge, can you read out the exact temperature instantly or do you have to wait a minute or two?

Our answer is always NO; stable or slow-moving temperatures can be read. However, as soon as the temperature probe is moved from one spot to another or the temperature rapidly changes, a delay is needed to trust the temperature measuring device.

#### Question 3

# Would you trust a driver that drives just by looking at images a co-driver snaps and handles to the driver?

We won't! There is a delay from the snap of a photo until the driver's brain can see the image taken and take proper action. When you take a photo of drying paint or, in the car-codriver case, at a parking lot where every car around is parked, you, in many situations, could trust the image to predict the future; the driver could be trusted to move the car just some meters slowly.

But as the speed increase and the traffic around gets heavier, the delay would make it impossible to trust that the driver is given enough just-in-time data and are smart enough to predict everything to neither feel nor be safe, even self-driving cars with many photo sensors connected directly to the brain (CPU) aren't yet to trust having people onboard.

Slow-moving, small devices without people onboard can be seen today in public; the reason here is the size and speed.

# The patented 3TEMP system trust only the slowest moving temperatures, the incoming water temperature.

The 3TEMP system will work on any incoming water pressure stable or, as in the real world, fluctuating; We know that the water pressure constantly will fluctuate. Other devices also need water, such as a dishwater machine, a tap, or your neighbor; every device in the system is constantly changing the water pressure.

The 3TEMP system always sees that the pump works at precisely the same pressure, that is, zero pressure.

The 3TEMP CPU has enough power to do real-time physics calculations. A sensor system feeds the CPU in real-time all needed data, doing it math, and controlling the pump, capable of instantly reacting. This is to have a perfectly constant flow just to hit the exact temperature wanted.

### **3TEMP - Water physics and facts**

Some facts, later we make this into human language WATT = effect

WATT per TIME = energy

Water has a specific heat capacity of 4.186 J/g°C, meaning that it requires 4.186 J of energy (1 calorie) to heat a gram by one degree

1J = Usage of 1 WATT in 1 second = The energy it takes to lift 100g one meter up.





From the link under the image, we get:

When water temperatures increase, it causes the gas and water molecules to gain more energy which in turn breaks the weak molecular interactions between water and oxygen molecules, causing the oxygen to escape.

https://atlas-scientific.com/blog/how-does-temperature-affect-dissolved-oxygen/

#### and from

https://homewaterplant.com/wp-content/uploads/2019/02/Home-Water-Plant-Limescale-Reactions-revc.pdf we find more interesting things:

Calcium and magnesium are the most common soluble ions in hard water, and the amounts of these two ions are measured to determine water hardness. Iron and manganese ions are also found in some water supplies. The three carbonates that form from the most common soluble metal ions are calcium carbonate, magnesium carbonate, and manganese carbonate. These three carbonates are very insoluble in water, tend to fall out of solution, and deposit as white to off-white crystals in pipes and on heating elements in hot water heaters, dishwashers, instant hot water heaters, and coffee makers.

#### Does this have anything to do with the choice of brewer?

At 3TEMP, we are stating that it has nothing to do with the choice of brewer until you start to be concerned about the taste and consistency of the taste, the energy cost price, CO2 emissions or the lifetime of the brewer itself.



#### How do we dare stating this?

The facts above actually tell us that it takes energy to heat water; in fact, it tells exactly how much energy it takes to heat water.

It also tells us how long it will take to heat a set volume from one temperature to another.

Let us explain. (And yes, we are using 1g/ml as the density of the water here)

4.186 J heats 1g of water 1 degree Celsius per second



4186 J geat 1000g of water 1 degree Celsius per second

So, for example, we have a 2.5-litre (ca 2500 g) kettle of 20C water and want to get that heated to 96C;

This means we need to heat the water 76C. If we are using an effect at 2,2 KW (2200-WATT 100% efficiency), it will take:

4186/2200 x 2500/1000 x 76 = 361.5 seconds = 6 minutes and 1,5 seconds. Or we can run the water through a heating device with the same effect at exactly 2500/361.5 ml/s = 6.92 ml/s, the temperature at the output would then be our target temperature, it's also, not by a coincident, the 3TEMP patented way to solve this. No boiler needed and perfect temperature control. We can select to go up or down temperature just by increasing or decreasing the flow, smart, isn't it?

5 liters will take 12 minutes and 3 seconds, and if we double the effect, we will do 2.5 liters in 3 minutes.

2200 watts in 6 minutes (1/10 of an hour), meaning 0.220 KWH

4400 watts in 3 minutes (1/20 of an hour), meaning 0.220 KWH

3 minutes is too short of reaching the correct extraction of coffee; everyone knows this. But still, it will use precisely the same amount of energy. Every way we heat 2.5 liters of water, it will need 0.22 KWH

10 x 2.5 liters brews per day will then consume 2.2 KWH. And the time needed to heat water with 2200W is 1 hour and 15 seconds.

But what about the 23 hours left that day? If you keep the water heated in a boiler over time, the details in the first section state that the free oxygen will evaporate; Both magnesium - which is good for the taste of the coffee, and limescale (Limestone) - tend to fall out of solution, causing damage to the brewer. So, the longer the boiler are standing idle, the chance of getting a good extraction of coffee will decrease and the limescale amount will start to build up in the boiler.

In a 5-litres boiler equipped system someone choose to brew 3 x 2.5 liters quick brews in the morning, the first brew will start at stale water, no magnesium or oxygen as the water has

been standing hot during the previous hours. The next brew will be of better quality as some fresh water have been replacing some of the old water, and the third brew will be made on more or less fresh water. But now you have new water with more limescale that will fall out instead. Inconsistent tase is what you have and one brew that's probably near wanted quality.

Also, during this 23 hours you need to keep the brewer to continue holding the water warm, causing energy loss. In our tests 5-liter thermos leeks around 27 watts, in our real word tests on brewers a more normal number tends to be at least 100w keeping the water warm. 100w x 23 hours is 2,3 KWH, so the brewer will need more energy destroying the water quality than brewing 10 brews of 2.5 liters batches; That not even close to perfect in any world, especially our world who is in desperate need of saving on energy to have a chance to give our children some chance of a decent tomorrow. Tank equipped brewers will just increase the co2 tons emitted, this just to destroy water or as we say, decrease the quality in cup; And don't forget, it's the owner of the brewer who is paying electrical bills doing this!



In the 3TEMP system, everything goes idle the same time the target volume is reached. No more waste of energy or destroying the quality of the water as it's don't get heated when no water is needed.

That's "quality in cup"

### **3TEMP – Coldbrew**



Although the market for cold-brew coffee can sometimes be a little more complex to navigate than the market for roasted coffee, it is still an area which has huge potential. As a category that is currently expected to grow at an annual growth rate of 32.5% until 2026, evidently it is an area where a bit of innovation and ingenuity could have a sizable impact on its future.

Although the process to make it can involve more steps when compared with hot coffee, a cold brew can act as a strong foundational and accessible option on any speciality coffee menu—ideal for those hot summer days which are becoming a little more common in our current era. As well as providing some welcome temperature-based benefits for those customers who aren't sure about the more nuanced and often more expensive premium filter options, a good cold brew coffee can help to introduce many 'newbie' coffee customers to the wide array of flavors that speciality coffee offers whilst remaining simple to brew and serve.

With the expected increased demand for cold brew coffee on its way, it is perhaps fitting that there is now a far more effective and efficient way to brew it. Introducing the **3TEMP HIPSTER GENERATION TWO**.



Since 2019, all of the Hipster machines available from 3TEMP have included a unique cold brewing feature through a firmware upgrade, offering enhanced functionality to the user whilst retaining all the same benefits relevant to brew control and sustainability. To help minimize water and coffee wastage, if a user wishes, they can choose to brew a single cup (200ml) or a full multi-liter batch (3.8l) in a time far shorter than a traditional cold brew. While the latter can take 12 or even up to 24 hours (and this is before the filtering and storage requirements), just 20 minutes is needed to brew 3.8 liters on a 3TEMP or one hour for 18 liters. This has huge potential time-saving benefits for a busy speciality coffee shop, where an effective system is a critical aspect for success. It is efficient processes like these which can help provide the flexibility that is useful when there is varying level of demand or when multiple barista hands aren't so readily available.

From a design perspective, it is key to note that the 3TEMP has no large boiler or reservoir for heating the water built into the machine. Featuring a tankless design, the machine uses the exact amount of water needed with fresh water being introduced into the system for every brew. A nice side benefit of this is that no excess water needs to be dumped out at the end of every day. Notably, limescale is also reduced resulting in a longer-lasting machine—good for the environment and great for taste. Contrastingly, if water is kept in a tank, over time it can lose its mineral and oxygen content which can completely change a coffee's flavour profile, and not for the better. To achieve this much more economical process, the brewer uses a flash heating system with a thermocoil. This design allows for cool, fresh water to be sent straight to the coffee without any heating, thus creating a simple but effective system for brewing cold brew when needed.



Since its inception, the engineering team behind the 3TEMP have focused on the fine details of how and why things work to find the best ways to do things and yield the best quality results. An example of this concerns the components chosen for use in production, with durability being a key consideration. For example, the incorporation of a brushless pump offers a longer

lifespan, increased efficiency, and higher reliability. With fewer moving parts being used and replacements available if needed directly from the supplier, users can spend less time fixing problems and more time serving delicious coffee to their customers. Unlike some concentrated cold brew options (often served from a box), which can come with excessive packaging and quality issues, the 3TEMP saves on the raw materials and resources needed to produce them and is a lighter and more compact machine meaning fewer emissions are involved in its transportation.

While being able to offer scale simply is one important aspect for a batch filter brewer, achieving the right level of quality and consistency in the cup in the first place is another matter. Coffee is complex and if it isn't brewed with this in mind then many of the potential flavors and experiences could be lost. Notably, it is important to have a simplified way to control the brewing process but with all the detail and nuance needed to get to the best results flavor-wise. To achieve this, included with the 3TEMP's system is a profiling system that provides a user full control using custom profiling controls. A pre-brew or blooming phase, main extraction phase and end draw-down phase can all be customized alongside the

pressure and temperature, helping to offer the brewer peace of mind that they are getting the best out of their beans that day. With innovations like these, perhaps it is time to move on from automated filter brewing and induction heating plates and move into the age of profile brewing like with espresso. Aside from the precise control, durability, and multi-functionality that the 3TEMP offers, it is interesting to mention that it is also IoT



(Internet of Things) enabled which users can make use of through a BaaS (Brewer as a Service) subscription. Aside from maintenance and servicing benefits, here users have the option to access a curated library of recipes and receive further support if required. It is by incorporating technology in this way which can help to reduce complexity and increase accessibility in an industry that can sometimes be overly confusing and convoluted.

## In the end, it will be through connecting the dots between stakeholders in the coffee value chain that will help to demystify complexity and create value more effectively in the future.

How can the process of speciality coffee brewing be simplified but enhanced?

How can reduced costs on materials, energy and time be put to better use?

With more brewers like the 3TEMP becoming available in the speciality coffee market, we may soon have better answers for the previous questions to help benefit the global industry and introduce more people into what speciality coffee can truly offer.

That's "quality in cup"



#### HIPSTER KOBRA + UCBOX



## HIPSTER KOBRA

Nothing moves like the KOBRA. Built to take a minimal space on the desc, still it adapts and will fit whatever thermos you have.

Everything you expect from the HIPSTER serieies is available, but here we also added the feature to easy adapt the height of the brewer

Either you adjust the KOBRA itself or you add the optional driptray and you can set the height of every brew above the desc.





## HIPSTER WALL

Together with the same UCBox as in the KOBRA you can fit the brewer right up on the wall, mount the unit on a set height that fits your servers.



## HIPSTER PULS – Tabletop

## **3TEMP - Coffee Particle Analyser - CPA**

As the speciality coffee industry continues to grow and reach new audiences, technology and innovation continue to provide professionals with interesting solutions for achieving quality. The Coffee Particle Analyser from 3TEMP is the latest tool that may be able to redefine and elevate standards that are currently accepted amongst professionals when it comes to grinding. By enabling its users a greater level of insight and accuracy when analysing coffee particle size distribution, with the CPA, understanding particle analysis and its role in coffee could become as omnipresent as other tried and true measurements such as TDS (total dissolved solids) and extraction.



# But what is the CPA, what is particle analysis and how does it work? Read on to learn more.

When it comes to quality in coffee, it may come as no surprise to learn that little things can make a big difference. At every step of the value chain, there are opportunities to preserve and increase it. From processing to washing, to drying, to storing, to and brewing, it is by being aware of the details and how

roasting, grinding and brewing, it is by being aware of the details and different approaches can affect the end result which can ultimately lead to more understanding and progress in the industry.

The grinding step is a critical part of the process when it comes to preparing a quality brew and as such investing in and maintaining a decent grinder is an important consideration whether you are operating a coffee business or are a passionate home brewer. The reason for this is because, with a more consistent or even grind, there is an increased possibility for unlocking the chemical compounds created during the roasting process. This is why a burr grinder can lead to a much better coffee experience than a blade grinder as the former truly grinds the coffee while the latter chops beans into noticeably unevenly sized pieces resulting in uneven extraction and less balance of flavour.

In the end, a better grind leads to a better cup of coffee. Unless you want to invest in bulky and expensive equipment normally found in a science laboratory, knowing what is happening at the grind level has largely been a guessing game until now. Due to the increasingly wide variety of grinders available and the wide array of results concerning their grind size distribution, there is a lot of variation to be explored and evaluated. Other variables in the coffee-making process such as dose,



yield, brew time and extraction have all received a great deal of time in the spotlight. It might now be time for an undoubtedly pivotal aspect of coffee brewing to take center stage.

#### So how does the Coffee Particle Analyzer work?

Well, after the user has some ground coffee, a sample can be placed inside the spreader for photo analysis using the supplied dosing tool. Particles can then be spread across a white surface, captured in a single picture from different angles. Based on a surface area reading from the software, data is translated into a graph that tells the user the exact size of the particles and their overall distribution (the spread over the range of all sizes). Whether wanting to assess the performance of a grinder or the final brew, it is by correlating the returned data with sensory aspects that will help to guide and inform the user. To do this, samples can be cupped and blind tasted just as with a production-based cupping that would take place at a roastery. Over time, one would also be able to determine whether their grinder's burrs (the cutting discs that crush the coffee) need replacing or if a new grinder should be considered.

Due to varying levels of grinder performance—further affected by the volume of coffee that is being put through them—there will be a range of time periods in which burrs will perform their best. To achieve optimum results, it is of paramount importance that they are kept sharp. Coffee ground with dull burrs can lead to an increase in clogging and a higher likelihood of channelling. On the other hand, with 3TEMPs Coffee Particle Analyzer, an engineer can keep appropriate tabs on grinders in a simple manner when it comes to establishing if there is a problem in the quality of the grind.

#### So who can benefit from the CPA?



Well, depending on who is using it, there are many possible applications for the tool. Whether you're a coffee equipment manufacturer looking to build the right product, a quality-focused roaster, a chain that wants to maintain quality and consistency across multiple stores, or a barista who wants to further their coffee education and elevate their art, the small but sophisticated CPA is up to the job. Unlike other tools and technologies already out there, the CPA from 3TEMP is the first affordable and ultra-portable coffee grind measurement device available. It incorporates a patent pending

optical sensor to measure the size of each coffee grind and provides users with a greater understanding whilst remaining simple to operate.

For any coffee professional striving to deliver the best quality grind, being more aware of particle size is going to greatly improve the chances of delivering the right results. In addition, the CPA could help users to understand how different particle size distributions contribute to different results in the cup based on the actual brew style. From this image (Blittersdorf and Klatt, 2016) we can see the median particle size (measured in  $\mu$ m) for a range of different brew styles. With the CPA, a user has the option to go much deeper into particle size analysis for each brew method. This could prove invaluable when learning more about the various interplays between the two. For example, when it comes to espresso brewing a certain percentage of fines are said to be 'necessary to achieve a pressure build-up, body and a delicate crema despite the short extraction time.'

Interestingly, some baristas have already started to explore how varying grind size distributions can affect layers in the cup by sifting out specific distributions from the same

coffee. In this way, they have been able to learn more about how these fines (tiny coffee particles) and boulders (larger coffee particles) can impact the final flavour. From an educational standpoint, this is another useful application for the CPA and unlike other complicated optical-based methods, is straightforward to carry out as part of a focused test.

The CPA is more than just a measuring tool to assess quality. It is a device that can empower us as coffee lovers to take pride in our work. Although other key brewing variables such as temperature, water, and TDS already have lots of solutions for exploring and analysing, until now, grind size distribution has been an area normally left for well-paid coffee scientists to explore. With the CPA, a very high level of accuracy can be achieved without the need for bulky and expensive laboratory-style particle measurement devices.

If you want to brew a coffee with a more intense aroma, more clarity of flavour, sweetness, cleanliness or more brightness then grind size should undoubtedly not be an afterthought in your coffee quality control. Of course, as taste is largely subjective, and not always easy to measure, a tool like the CPA can provide the perfect opportunity for brewers to use to create and set their own parameters and standards for what is acceptable when it comes to particle size distribution and a burr's lifespan.

The meeting of technology, innovation and craftsmanship within the coffee industry may just be the ideal combination to effectively create sustainable change. When the three are combined we can make more informed choices and deliver quality with fewer headaches. While this is something that is continually evolving, it could well be the key to introducing more people to what great coffee can be.

### **3TEMP.ONLINE**



At last, of course are the HIPSTER series fully connected devices, making everything easy to handle from your shop, your home or when you are out travelling. But this is a separate document.

THANK YOU FOR YOUR INTERESST!

// THE 3TEMP-TEAM

