

What makes **wrought iron** cookware better than cast iron?

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We're real mechanical engineers (who cook), and we've been developing equipment for chefs for decades. So, we know a lot about cast iron and wrought iron, from modern tech to old history.

We are the world's only manufacturer with a patented new method for making production seamless one-piece machine-wrought iron (and stainless) cookware. We manufacture our AUS-ION™ cookware in Sydney, Australia, from pure, clean Australian iron. We are the only real production manufacturer of cookware in Australia, holding stock for kitchenware retailers, exporting around the world. We've made and shipped many hundreds of thousands of pans, and employed a lot of Aussies throughout the journey.

Yes - cast iron is also one piece, and has been in production for centuries. Wrought iron has been around for much longer: for 3,000+ years, since the dawn of the iron age. It was the cookware that dominated for thousands of years, until casting iron became efficient enough to make *cheaper* iron cookware, not *better* cookware. Cast iron then became more popular, despite its heavier weight and inferior conduction, and a tendency to crack under thermal shock or impact on hard floors. This is why not much really old cast iron still survives in museums, and most is cracked.



Broken cast iron pans

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Times change. Our patented wrought iron pans cook and season the same as cast iron, yet they are around half the weight of traditional cast iron pans.

Not only does our highly conductive, solid 3mm thick wrought iron heat faster and more evenly than cast iron - our pans also hold that heat very well and can handle searing a big steak without cooling instantly like thinner carbon steel pans. The extra thickness in cast iron pans (for flow during sand casting) is wasted weight, and it consumes a lot more energy to preheat to temperature.

So, why switch from cast to wrought? To put it simply, while one does have nostalgic merit, the other performs better, in every way...

Many people ask why we are 'trying to fix cast iron if it ain't broke, and has worked just fine for hundreds of years'. Well, the truth is, if your cast iron pans haven't already cracked in one way or another, it is likely only a thermal shock or drop away from becoming 'broke'. This fragility is what we are aiming to overcome with our wrought iron pans.

[*Check out this drop test video, comparing our US-ION wrought iron pan and a generic cast iron pan!*](#)

We also LOVE cast iron, in a nostalgic old way, and respect its important place in history. Cast iron is, however, becoming obsolete, because wrought iron does everything better:

1. Real pure iron: Wrought iron cooks and seasons just like cast iron. Our wrought iron is more iron than cast iron, and is 99.7% pure iron, versus the 96% in cast iron! The difference is largely carbon content - a big barrier to good conductivity. More seriously, many cast iron skillets are made from recycled steel, and unless you believe you can trust the foundry, that recycled steel can contain heavy metals, leading to contamination and leaching. Ask if their pans have been verified through metallurgical testing to contain effectively zero heavy metals...
2. Weight and arm-saving: Wrought iron pans are around half the weight of cast iron pans. The low weight of wrought iron really suits very young and older cooks, as well as cooks with strength challenges, and chefs!
3. Chefs know: Pro chefs have never used cast iron as their workhorse, everyday skillets. They've used riveted French steel pans (or their copies) for hundreds of years. Now, chefs all around the world are switching to our wrought iron pans, including most of the top chefs of Australia, using them all day long as their working skillets. They simply cannot use cast iron all day due to its weight.

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4. Cool handles: Our long, comfortable, vented handle stays much cooler than fat little cast handles... Have you ever wondered why all cast iron pans have the same handles, even 'modern' ones, if they're so hot and horrible to hold? Castability and profitability! It's only short, fat handles that can survive the automated post-casting 'shake down' processes to remove all the sand mold residue, which causes longer cast handles to crack!
5. Superior conductivity: Wrought iron conducts heat much better (faster and more evenly) than cast iron.
6. Tougher: Engineers know cast iron is fragile, because it's in a crystalline metal state where cracks can easily propagate. Wrought iron is cast iron that has been mechanically 'worked' into a much tougher, flattened/overlapping crystal matrix. This impedes crack growth, and makes iron 'malleable', or workable. Wrought iron will never crack like cast iron often does if dropped on a hard floor or thermally shocked. If that's hard to believe, try searching 'cracked', 'broke' or 'tragic' in the big cast iron groups online - it's heartbreaking to see all the sad stories. "I'm devastated. Today I dropped my great grandmother's cast iron skillet...". Most people have no idea they don't last forever, because they eventually crack. That is why we are so confident of our multi-century warranty. It's not a marketing gimmick. It's solid engineering.

It's quite a shock, we know, for the old-timers to see that list. After reading it, we know many people will still say, "Nope, cast iron is still the best." Not exactly good logic against all of the science and evidence - but if they're happy, they should keep cooking on their cast iron. At least it isn't toxic/disposable synthetic non-stick!

All we ask, as mechanical engineers with three decades of experience in this industry, is to think about that list when you're investing in any new iron pans. If they're locally made, that helps employ locals, and you can probably trust that they're not toxic. But, it can't overcome all the performance, weight, conductivity, energy consumption, and durability limitations of cast iron.

Shop once, for life, and hand down for many generations your wrought iron cookware, to be valued for *centuries* as a treasured family heirloom. You can be confident it won't crack and break the heart of one of your descendants.