

# Ipsen **RT/T** – the Engineer’s choice for Atmosphere Furnace Technology



# RT/T

Smart solutions from the world market-leader. Ipsen is setting new standards in quality with the new Ipsen atmosphere furnace: tuned components, smart interfaces and controls, easy equipment planning and concepts to increase energy efficiency. Designed in Germany.

Hard work wins



# Is there anything more convincing than quality? The new Ipsen **RT/T**.

To Ipsen, quality means offering you technology that is intelligent, energy efficient, and easy to operate. With innovative technologies such as Recon® Burner, SuperQuench, and the revolutionary HybridCarb process, we are not just refining proven technologies, we have optimized them up to the current available limits of the technical possibilities.

- **The revolutionary HybridCarb**
- is a completely new gassing technique for gas carburizing: Process gas isn't burned off;
- it's recycled back into the heating chamber,
- reducing CO<sub>2</sub> emissions and process gas costs by as much as 90%. It's the engineer's choice because it is good for our climate and for your energy efficiency.



#### ■ **The powerful SuperQuench.**

Most processes can't improve the qualities of every kind of steel. Ipsen SuperQuench can. It's the universal oil bath with outstanding quenching performance. Thanks to larger propellers, stronger drive motors and optimized baffling, it can tackle even the most challenging alloys.



#### ■ **The clever Recon® Burner.**

A stroke of genius: heat recuperation. Recon® Burners fitted with special ceramic inner linings that increase thermal efficiency from 50% to more than 85% – simply by recuperating the heat from the exhaust gasses.



#### ■ **Top quality lining.**

The Ipsen RT/T is lined with extremely durable insulating firebrick and has a silicon-carbide hearth. The surrounding muffle protects the charge from exposure to direct heat and facilitates uniform temperature distribution throughout the load.

## The new Ipsen **RT/T**: cunning innovations, clever interfaces, intelligent configuration.

What do you get when you combine intelligence and quality? An atmosphere furnace that is state-of-the-art in both hardware and software. Cunning innovations like the HybridCarb process that help you save energy and resources. Clever interfaces that give you comprehensive control over all aspects of heat treatment. Intelligent automation software that simplifies your facility planning. The new Ipsen RT/T is a highly intelligent system that reduces your workload and produces results efficiently. It's the engineer's choice because heat treatment doesn't get smarter than this.

# Are you hungry for quality that isn't energy-hungry? Ipsen **ADVANCED EFFICIENCY.**

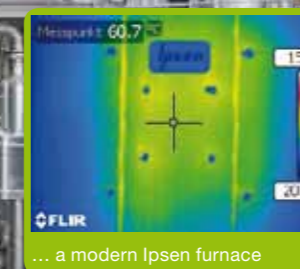
Heat treatment facilities' appetite for energy is not only an environmental challenge. It's a financial challenge, too, with energy prices rising and climate certificates on their way. If you want to perform cost-effective heat treatment you have to be energy efficient and use sensible recycling processes – such as Ipsen's **ADVANCED EFFICIENCY** concept.

**Optimal energy recovery: Recon® Burner.**  
 Recon® Burners re-use heat energy multiple times. They capture valuable heat from exhaust gases and return it to the combustion process. The burners are very easy to adjust and clean, too.

**Splendid Insulation.**  
 The energy efficiency of the Ipsen RT/T is in part thanks to the excellent insulation provided by a combination of high grade insulating materials.



The difference between the insulation of a conventional furnace and ...



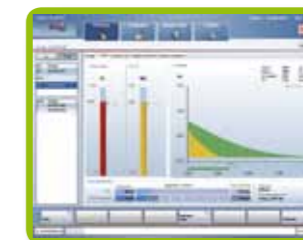
... a modern Ipsen furnace



**Intelligent technology for more energy efficiency: AutoMag® 4.0.**  
 Smart process control software does more than simply monitor batches and control their treatment. It also assures the optimal use of energy and other resources. AutoMag® 4.0 makes your heat treatment easy to control and continuously more energy efficient.



**Less CO<sub>2</sub>, lower costs: HybridCarb.**  
 You shouldn't be wasting gas and energy during gas carburizing. The revolutionary HybridCarb system significantly reduces process gas and energy consumption.

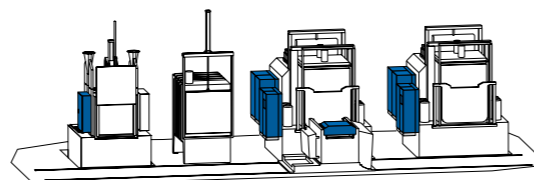


**Everything under control: Carb-o-Prof®.**  
 The Carb-o-Prof® furnace control software assures you maximum efficiency, with easy, comprehensive, and reliable control, as well as analysis and process optimization.

**PLC systematic control and savings.**  
 PLC provides intelligent, individual control of each Recon® Burner, producing the best results while consuming the least energy possible.

## The new Ipsen **RT/T**: do more with less.

Going green makes more sense now than ever, but Ipsen has been working for years on how to use less energy and reduce costs while producing ever-better results. The latest contender in this field is the Ipsen RT/T. It is the engineer's choice because it has exemplary insulation, cutting edge recycling technologies, and it is pre-programmed for energy efficiency.



# Isn't it especially smart when everything is made easier for you?

Ipsen has worked hard to make planning and configuring your facility with the Ipsen RT/T as simple as possible. All our components are intelligently configured for maximum compatibility. This means it is simple to expand or modify your equipment at any time.

## Time-optimised job-planning



**Rapid individual-batch view**  
If you need to get a batch out in a hurry, you can control it with this view. Other jobs are hidden, allowing you to see exactly where the prioritised job is in your facility and what treatment stage it is undergoing.

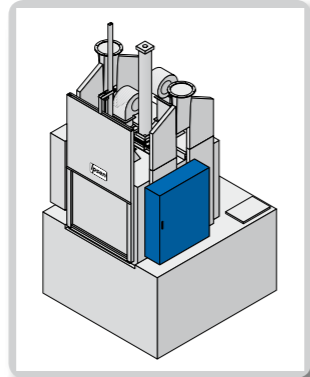
## Energy optimised, cost-saving job-planning



**Efficiency planning view**  
This shows the planned process. The time-axis clearly displays what will happen during the heat treatment process. Processes are optimised for cost-savings and energy efficiency using this view.

## AutoMag® 4.0.

**Everything under control.**  
AutoMag® 4.0 can control all the components of your Ipsen RT/T facility automatically. The software calculates optimal capacity utilization, too. It's the engineer's choice because it gives you even more efficient use of energy and resources.

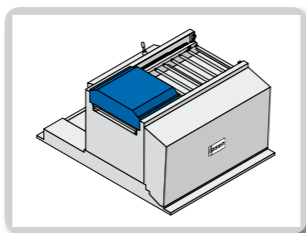
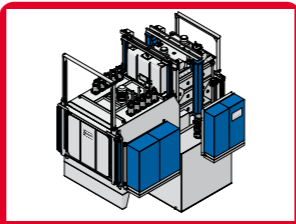


## The washer.

The Ipsen two-stage oil skimming system is extremely compact, provides optimal washing compound usage, and high throughput. The cleaning effect is increased by the up and down motion of the basket – especially helpful for tightly-packed loads.

## Two models.

The Ipsen RT/T comes in two versions: the RT with a single door and the T with double doors.

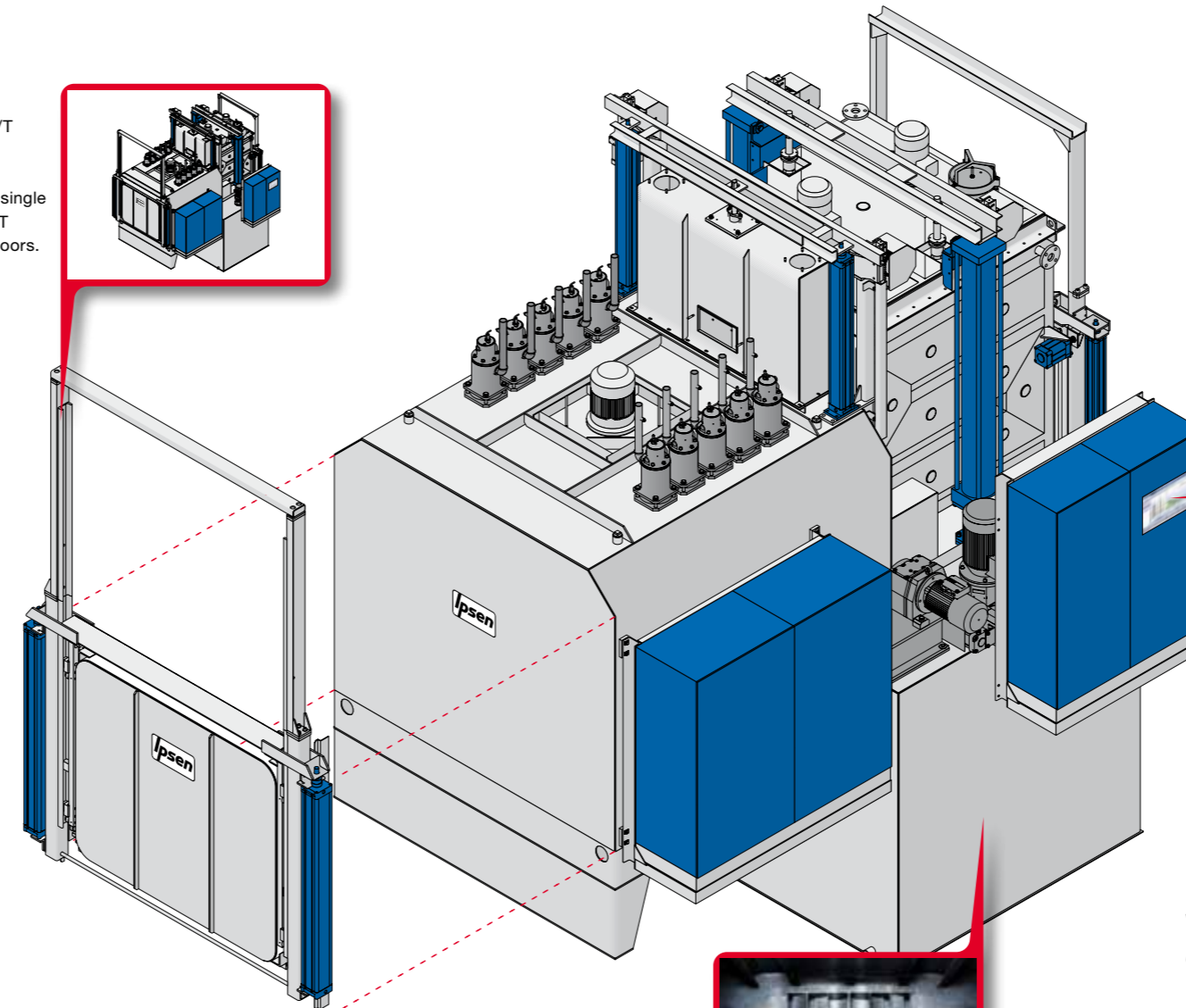
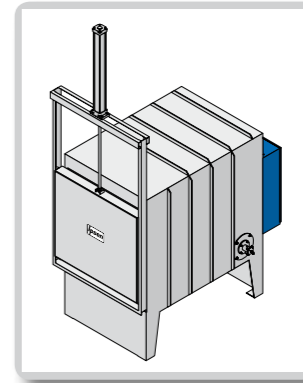


## The reliable loader.

Ipsen's compact and reliable loader is only slightly larger than the charge baskets themselves. And it prevents charges from getting jammed during transport, and minimizes wear and tear on your equipment, baskets, and operators.

## Core design: the tempering furnace.

The welded construction of Ipsen's tempering furnace is light and gas-tight. This gives it advantages including low stored heat levels, fast adjustment to changing treatment temperatures, and excellent temperature uniformity. The construction is also low-maintenance and all its working parts are easily accessible and replaceable.



## Keep it simple: Carb-o-Prof®.

Ipsen's furnace software also enables untrained operators to reliably perform any heat treatment process necessary. What-you-see-is-what-you-get ... if only everything was this easy!



## Making the hard part easy with SuperQuench.

Precise quenching is one of the biggest challenges in heat treatment. Now you can easily take on this challenge with the high-performance Ipsen SuperQuench oil bath.



## Retrofit any time: HybridCarb.

Your investment in this revolutionary recycling technology will pay for itself in record time. But even if it doesn't warm your heart today, every Ipsen RT/T can be quickly and easily retrofitted with a HybridCarb recycling kit at any time.

## EasyProject lets you plan faster.

Why make it complicated? We have developed a smart configuration tool for easier facility planning: EasyProject. It lets us plan and design, together with you, a facility that meets your exact needs. At the push of a button, your specifications are ready and you receive a solid cost estimate. EasyProject guarantees you quick and easy planning and very fast delivery. We look forward to your inquiries.



# About us.

Ipsen – we deliver performance.

Ipsen stands for cutting edge heat treatment technology and systems. Few other enterprises in the world have had such a decisive impact on the development of heat treatment.

For more than 60 years Ipsen has been providing innovative technologies and methods with which to give new properties to steel. Ipsen's products combine the highest performance with outstanding reliability, which perhaps explains why our furnaces and heat treatment equipment enjoy an excellent reputation all over the world.

The company has production sites in Europe, America and Asia. This, together with representatives in 34 countries, ensures excellent customer care all around the world.

Despite the company's many important innovations, Ipsen's focus is not solely on technology: in all we do, we aim to surpass our customers' expectations.

We are not only committed to building and developing great technology. We are also passionate about providing swift, seamless, attentive service.

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Hard work wins

