

TONWERK 6



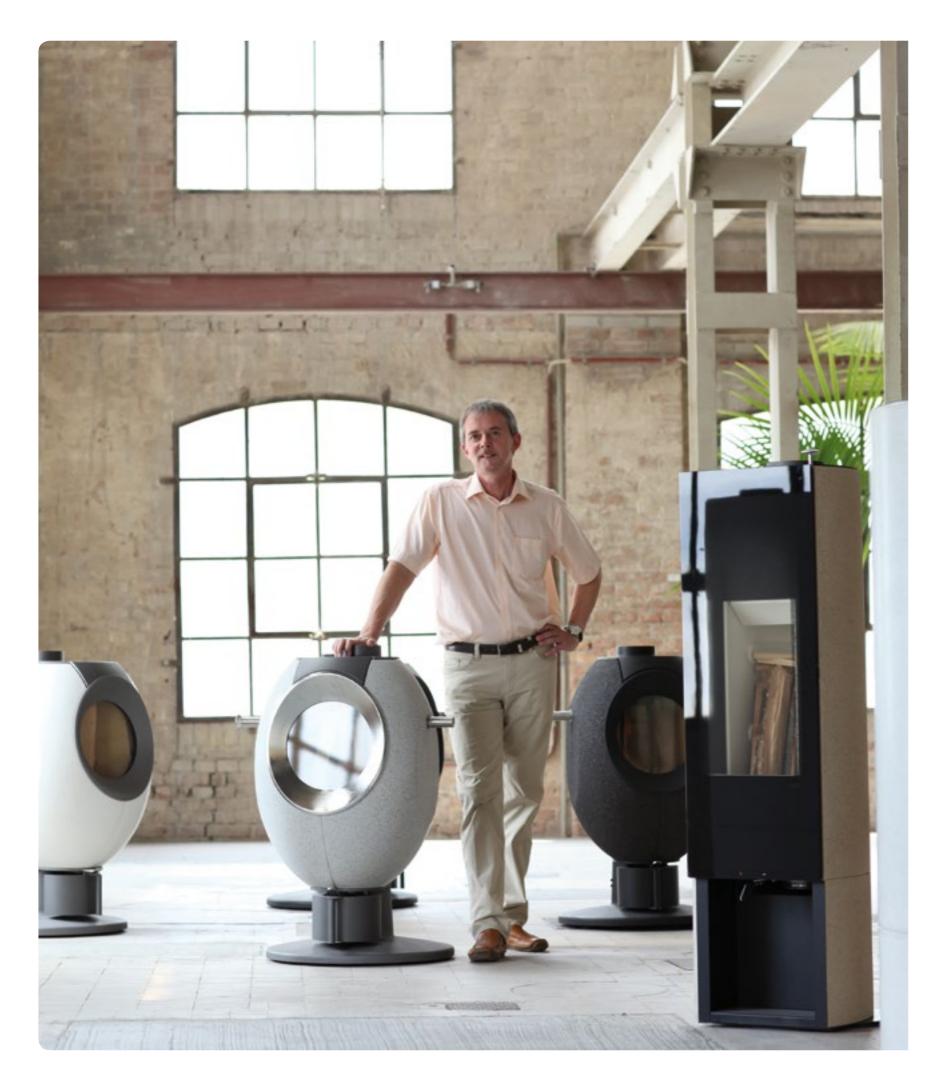
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Further details can be found on the internet at www.tonwerk-ag.com



"A warm heart of stone."

There is nothing better in your own living room than a crackling stove fire that radiates pleasant heat in the cold season and turns your home into a cosy oasis of wellness and relaxation. Especially in the winter months, when we feel only rarely the sun's pleasant heat, a warm and cosy living space becomes particularly important for body and soul. It is then that many people long for the good old days of the open hearth, to enjoy the peace and fascination of this natural source of heat.

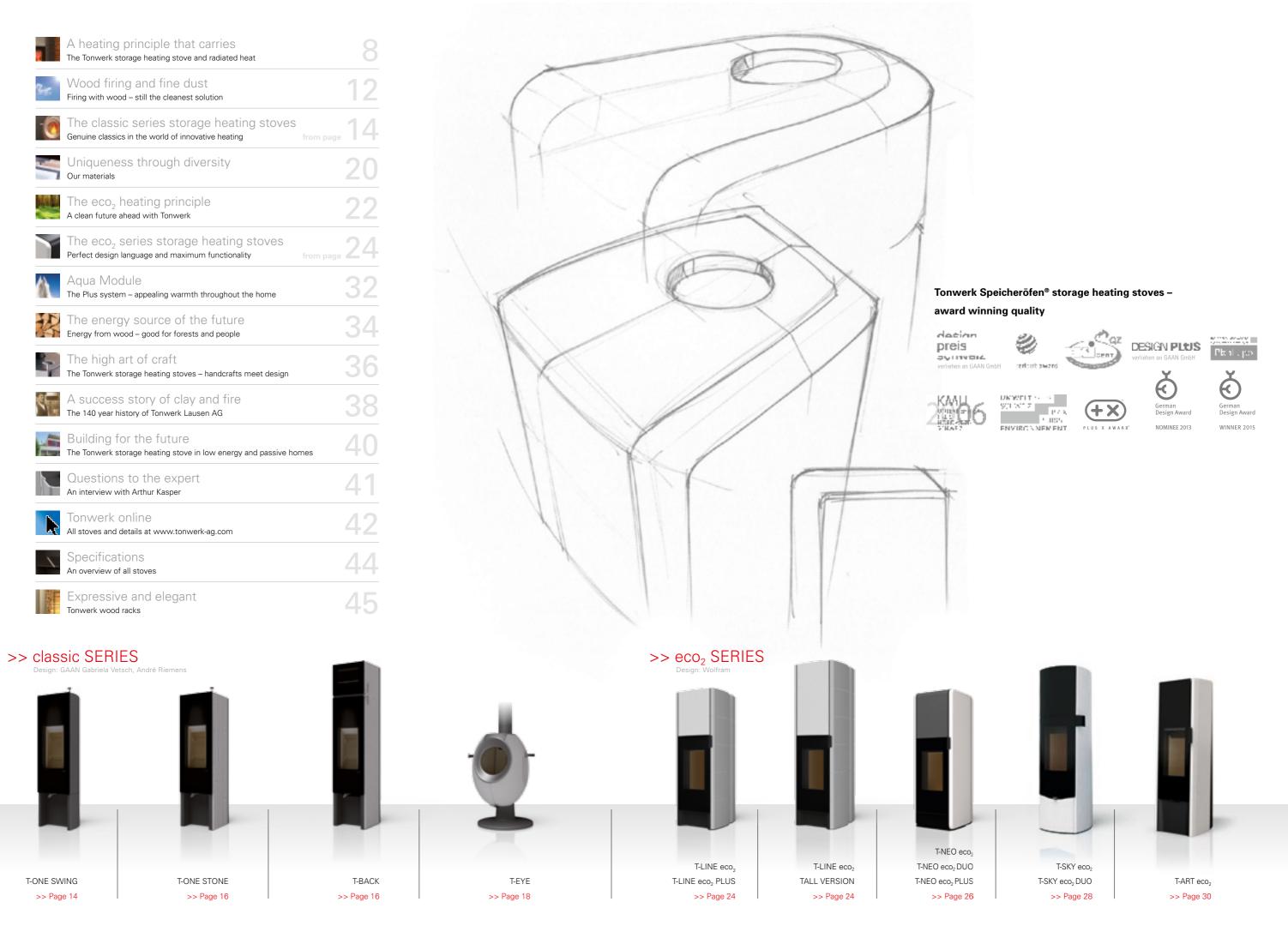
Many years ago now, Tonwerk Lausen AG used these words to present its vision of creating a stove that unites all of the pleasant properties of a chimney, flue, and tiled stove. It should have a space saving and contemporary design, allow a generous view of the flames, and at the same time emit healthy radiant heat for sustained periods. Yet there was more: it should exceed the efficiency and eco friendliness of other stoves, as well as set new standards in design and functionality.

This vision provided all of the motivation we needed to make it reality, and so we began dedicating ourselves to creating innovative heating installations, researching with unflagging determination and never ceasing in our goal of making what's good even better. Only in this manner could we create a product that was unique for its time – the Tonwerk Speicherofen® storage heating stove made in Switzerland. All of this knowhow can today be found combined in Tonwerk storage heating stoves made with handcrafted precision. The result is a range of products that combine the pleasant with the useful: maximum energy yield with minimum wood consumption, eco friendly combustion with low emissions, hours of gentle radiated heat for natural well being, and an internationally award winning design and technology on the highest level.

Yet our modern storage heating stoves can offer far more than just that. I therefore invite you to accompany me through our world of unique Tonwerk storage heating stoves presented on the following pages.

With best regards, your

Peter Brogli Managing Director

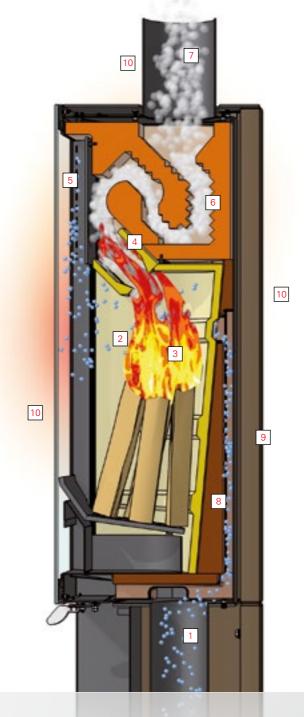


The Tonwerk storage heating stove

A HEATING PRINCIPLE THAT CARRIES

The effective strengths of a Tonwerk storage heating stove are virtually invisible on the outside.

It is therefore all the more worth taking a look inside, for the modern design conceals highest-level innovative technology that fulfils all the requirements of today – and the heating needs of tomorrow.



Crackling flames, flickering firelight, and feel good heat. Who doesn't enjoy sitting before calmly burning fire and watching the cosy play of flickering flames? If you too want to create this relaxing atmosphere and are thinking about purchasing a stove, you should first consider carefully two things: the heating principle of the storage heating stove and the natural effects of radiated heat.

If you have already spent long hours before a campfire, you will know that this still gives off cosy heat even after the flames have died. This heat is radiated not only by the embers, but also by the stones that store heat and release this slowly. Also a growing number of people have come to appreciate the benefits of a wood fire

inside their own four walls. Unfortunately, this feeling of warmth is often only a short lived pleasure. The conventional chimney or flue stove quickly overheats the room, and cools down just as quickly once the fire has burned down. Unless your stove stores the heat inside and releases it in pleasant doses over many hours.

Heating does not always mean the same

Nowadays we spend a large part of our lives in closed rooms that in addition need to be constantly heated in the cold season. In this country, heating systems are indispensable. Yet heating air is not necessarily healthy. The usual radiators heat the air with their hot surfaces, giving rise to convection heat. Heated air is lighter than



- 1 supply of external combustion air
- 2 ceramic combustion chamber
- 3 top down combustion of wood
- 4 afterburner zone
- 5 window cleaned with air
- 6 heat exchanger / ceramic storage core
- 7 flue gas outlet
- 8 thermal insulation
- 9 handcast outer cladding
- 10 radiated heat

"A clean future ahead with Tonwerk."

cold air, so it rises. The result is more or less intense circulation, and consequently unpleasant side effects. On the one hand, the air loses its moisture content, which is felt especially acutely by the mucous membranes and respiratory tract. On the other, house dust and allergens are whirled up, with adverse effects on allergy sufferers.

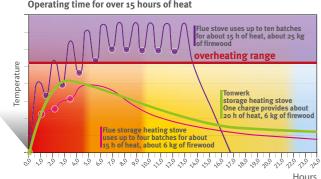
The secret of natural radiated heat

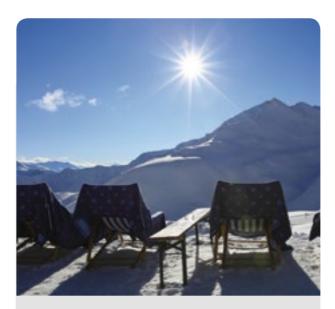
Yet what does the ideal heat source look like? It should warm us and be as economical and eco friendly as possible. In addition, it should generate a healthy indoor climate, i.e. pleasant room temperatures and unmoving air with a low dust content. It is precisely here where the effects of radiated heat are felt most effectively, or the heat that everyone knows from the sun.

The human organism responds to radiated heat with a particularly pleasant feeling. It is physiologically beneficial and soothing. Since prehistoric times humans have utilised and enjoyed radiated heat. It is transmitted by electromagnetic waves in the infrared range. Radiated heat travels through air without loss and without heating this. Not until it encounters solid bodies like walls, objects, and also people does it generate heat. This effect is familiar to everyone from sunny winter days. Even when the air is very cold you can feel the warm rays of the sun on your skin. The temperature felt is higher than the actual temperature of the surrounding air. This explains the great benefits and sustainability of radiated heat.

Heat up and enjoy

Operating time for over 15 hours of heat





A heating principle that carries the Tonwerk storage heating stove

Of the most diverse heating principles developed to date, the heat radiated from the storage heating stove best approximates the effects of the sun's rays. Both are based on the same principle of physics. Rooms with sources of radiated heat present an environment considerably less susceptible to unhealthy germs, mould, and moisture. Medical and building biology experts recommend this heating principle as the healthiest for heating rooms because the air remains fresh and clean - just as it should be. Tonwerk storage heating stoves not only present an impressive play of flickering flames, but also emit exactly this kind of radiated heat that is felt to be particularly pleasant and is actually healthier to boot. They are therefore ideal for greater cosiness and well being.

A warm heart of stone

The heart of a Tonwerk storage heating stove is the integrated storage core of ultra heat-conducting, refractory ceramic. When wood burns, this core absorbs and retains over 60% of the released energy which it later emits slowly back to the environment. The stove's direct emission of heat is therefore reduced to a pleasant rate of radiation, and the room does not overheat as a result. After a time, the heat stored in the core is released in healthy doses of

radiated warmth over the outer cladding, ensuring that the feel good temperature is maintained for many hours.

Outer cladding as a single cast

Also the stove's outer cladding stores some of the heat, which is then diffused over the large surface area. The heat emitted continuously from the core is therefore distributed better through the room, and the temperature is kept to a pleasant level. The stone cladding is manufactured in a casting process, so the range of potential designs is virtually unlimited. This stove cladding also comes with a wide range of natural stone options. Tonwerk storage heating stoves can therefore be adapted perfectly to personal tastes.

Firing and afterburner chamber for even greater benefits

No matter the model you choose, all variants of all Tonwerk storage heating stoves pursue the same objective: the highest possible efficiency. Owing to the vertical firing chamber where the upright firewood burns slowly from top to bottom (top down combustion), this stove exhibits lower emission values and a considerably greater energy efficiency. All of these factors are instrumental in raising stove efficiency, at the same time reducing the consumption of firewood.

Good energy for the whole home

The optimal heat release and low consumption of firewood represent a decisive added value for Tonwerk storage heating stoves. It should therefore come as no surprise that this heating principle has long become established in modern residential buildings as well, whether as a supplementary heating system or as the main heating system in low energy homes.

Emissions

The subject of environmental protection is often accompanied by discussions on fine dust issues and firing with wood. Unfortunately, many stove owners and prospective buyers are confused and unsure as a result. With a Tonwerk storage heating stove, this subject is as good as settled. Our stoves fulfil today the most stringent emission requirements. This is good for the environment, and you have a clear conscience.



Why many customers decide in favour of a TONWERK Speicherofen® storage heating stove

- storage heating stove technology from a leading manufacturer
- innovative and patented technology
- each stove a handcrafted original
- international award winning, exclusive design
- exclusive range of materials, surfaces, and colours
- heavy duty ceramic core for the maximum heat storage
- maximum energy yield minimum wood consumption
- top down combustion for a unique play of flickering flames
- patented eco, technology for safety, comfort, and high efficiency
- 360° rotation for a view into the flames from all sides
- integrated window cleaning for an unimpeded view into the flames
- radiated heat for a healthy indoor climate
- gentle air circulation and gentle on allergy sufferers
- optional Agua Module for heat distribution throughout the home
- low emissions for a clean environment and a good conscience
- wood firing in low energy and passive homes
- five year warranty, long life, low maintenance
- SWISS MADE

TONWERK-Speicheröfen® storage heating stoves represent progress, efficiency, ecology, and well being a worthwhile investment for the future.

Before your Tonwerk storage heating stove can deliver all of the advantages its outstanding properties are capable of, you will need expert advice and planning. Contact our trained Tonwerk dealers, and you couldn't be in better hands.



WOOD FIRING AND FINE DUST

Heating with firewood has again become the fashion, and has been experiencing a powerful revival for several years. Unfortunately, when the energy source wood is burned, it emits not only light and heat, but also combustion byproducts like the much discussed fine dust.

tive when operated properly, they can be a risk to the environment when they are not.

What falls under the category of fine dust?

Dust is a natural constituent of air and is therefore all around us. It is divided into coarse dust, visible to the human eye, and fine dust, consisting of particles too small to see unaided. Fine dust, also known as particulate matter (PM), is the name given to tiny, part solid, part liquid or gaseous particles in the air that do not fall to the ground immediately, but remain in the atmosphere for a certain time.

These particles, smaller than ten thousandths of a millimetre or ten times smaller than the thickness of a human hair, are therefore designated "thoracic fraction" (PM10) that can prove harmful to the whole respiratory system.

How does fine dust arise, and can it be prevented?

Fine dust is primarily generated by unfiltered industrial and combustion processes and by road traffic where it takes the form of exhaust fumes, tyre debris, and street particles. Other sources of dust include soil, especially in agriculture and during droughts. There are also natural sources like the Sahara or pollen.

Air currents can transport this fine dust even over great distances. Burning wood gives rise to fine dust to varying degrees, depending on the quality of combustion, the fuel, and how the stove is operated. When natural, dry firewood burns down in a stove fitted with innovative combustion control, the emissions are so low that they are harmless

Although modern stoves are an ecological heating alternation beauth. When, however, the wood has not dried adequately or the stove is not operated properly, combustion is only partial and gives rise to higher levels of fine dust and soot. And the situation becomes particularly critical when the home stove is abused as a private waste incinerator or charged with wood containing varnish, resin, solvents, or adhesives. So contribute to a cleaner future by making sure your stove provides cosy heat without damaging your health or the environment.

Firing with wood – despite fine dust still the cleanest solution.

Wood is a renewable energy source that is still being used in too few homes. Unlike fossil fuels, wood does not emit any additional carbon dioxide (CO₂) when it is burned properly. And unlike crude oil, the price of firewood is not affected by international markets. So by burning the right wood in a modern storage heating stove like the Tonwerk, you can sit back untroubled and with a clear conscience. Fine dust emissions are kept to a minimum, and so heating with firewood becomes both an eco friendly and economical alternative.

A clean future ahead with Tonwerk.

The innovative heating principle underlying our Tonwerk storage heating stoves reduces emissions to well below the thresholds stipulated in Europe and worldwide. A Tonwerk storage heating stove exhibits a very high efficiency and so utilises the energy completely. This low-emission combustion affords an essential contribution to the conservation of clean air levels.

SERIES Classic +

- T-ONE SWING
- T-ONE STONE T-BACK
- T-FYF

Their good reputation precedes them

As its name suggests, the "classic" series of handcrafted Tonwerk storage heating stoves has already become established as a line of genuine classics in the world of innovative heating systems. Featuring an international award winning design and ultra modern technology, the "classic" series presents exclusive stoves of the highest Swiss quality.

ONE SWING

DESIGN PLUS

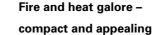
decian preis SCHWEIL



"A marriage of simple aesthetics and timeless elegance. The T-ONE SWING presents the beauty of fire in its purest form."

Vincent von Groenhoff, Freiburg





The perfect effect has nothing to do with size. This is proved by the multiple award winning T-ONE SWING, and that on two fronts. Its elegantly backswept side panels of cast stone not only present an unusually aesthetic and space saving design, but also draw all eyes in the room. In addition, its frameless glass door allows a particularly generous view of the gracefully flickering flames.

Even the small variant of the T-ONE SWING therefore radiates elegance and warmth and lends every room a completely new feeling of cosiness and a unique quality of living.

Unlike most conventional stove systems, the firewood is placed upright in the vertical firing chamber where it burns from the top. Combustion therefore takes place slowly from top to bottom. This innovation not only reduces emissions, but also raises energy efficiency and preserves the environment - and your purse. Six hours of healthy radiated heat with only a single charge of firewood - just right for a cosy evening in your own four walls.

The unique play of flickering flames will enthral you for years to come. And all this thanks to its large glass face and perfected TONWERK technology.



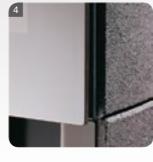
- 2 The upright firewood burns slowly from top to bottom for a captivating view of flickering flames.
- 3 The door opener on the T-ONE SWING and T-ONE STONE is at the top, out of the reach of children.
- 4 The patented frameless glass door not only presents a particularly aesthetic design, but is also very easy to clean.











DESIGN PLUS

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reddot design award

"Individuality and timelessness coupled with ultra modern technology. That is what I see in the T-ONE STONE."

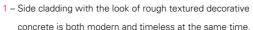
Philippe Regnier, Luxembourg

For lovers of timeless aesthetics

Straight, unembellished, and honest probably the best description of the T-ONE STONE. Its simple elegance is shown to full advantage no matter the outfit. In addition to cast stone cladding, you can also choose a look from Nero Assoluto, smooth soapstone, Himalayan sandstone, or decorative concrete. Its cubic design is underscored by the continuous glass face presenting a perfect view into the flames. Like the T-ONE SWING, this too features a vertical firing chamber for optimised top down combustion and high efficiency.

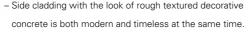
Notwithstanding its unembellished, multiple award winning design, the T-ONE STONE also presents a completely different side that appeals to all of the senses: the optional baking attachment transforms it into the genuine gourmet stove T-BACK, and your home into a bakery filled with the aroma of fresh bread. What other modern stove can offer you the option of baking bread, cake, or fresh pizza in addition to hours of healthy radiated heat?

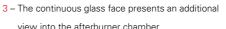
A unique experience for the whole family, without additional consumption of energy. In the T-ONE STONE, Tonwerk has created a stove for aesthetes and gourmets.



- 2 The T-ONE STONE baking attachment transforms your living room into a cosy bakery.
- view into the afterburner chamber.
- combustion of firewood.







4 - The air regulator is easy to use for the optimal



A perfect piece of design no matter how you twist or turn it

Life should be seen from more than just the one angle. And the same holds true for a storage heating stove, we thought, and we went on to develop the T-EYE.

You love watching the calming play of flickering flames? When you're sitting cosily on the sofa, with friends at the dining table, with a good book in your armchair? The T-EYE can be easily rotated through 360° on its designer base and so follow the eyes that it draws to itself. Yet this is not the only innovation by far that this unusual designer stove can present. For instance, the T-EYE features an automatic combustion air flap that does not need any manual intervention. Once heated, the T-EYE does everything by itself. It couldn't be easier. Also, it is charged from above, ensuring clean use because no ashes can fall on the floor. Its round form has such a small height that the T-EYE has no problems operating even under a roof pitch - and presents the perfect picture there too!

A strong piece of design whose heating capacity can compete with the larger models. On a single charge of firewood, the T-EYE emits over six hours of healthy radiated heat, and even outside of the heating season its unmistakable design presents a special highlight in every living space, becoming the expression of your own personality.



^{1 –} The twist grip also incorporates the lever for opening the feed flap.

^{2 -} Simply insert this,

^{3 –} and the flap opens up.

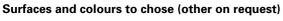
^{4 –} The wood can then be introduced conveniently from above.

UNIQUENESS THROUGH DIVERSITY

Our materials

So that our stoves can offer you their full visual appeal in addition to their optimal storage capacity, you can compile your own colours and textures from our wide range of stone cladding variants. You will then receive a genuine Tonwerk original just as you want it. You can choose from our unique Tonwerk cast stones, a decorative concrete look, the patinated Nero Assoluto or ground soapstone. In the finishing stages, all materials are given the final touch, a process that can be felt as well as seen on our high quality surfaces.

You can configure a selection of colours and materials for your stove model on our website at www.tonwerk-ag.com.





polished



rough



polished

grey nature



grey textured



polished



rubyred











SERIES **eco**2

■ T-LINE eco₂ T-LINE eco₂ TALL VERSION T-LINE eco, PLUS

■ T-NEO eco₂ T-NEO eco, DUO T-NEO eco₂ PLUS

■ T-SKY eco₂ T-SKY eco₂ DUO

■ T-ART eco₂

Perfection in design and technology

Perfect design language and maximum functionality are the characteristic features of the unique storage heating stoves from the "eco," series. Top technical performance is ensured by patented technology for maximum safety, minimum consumption of wood, minimised emissions, and extremely long life all packaged in an extraordinary design. The eco, series is therefore symbolic of progress, efficiency, ecology, and well being.



The e.c.o₂®

HEATING PRINCIPLE









Heat up only once, and enjoy for hours

- intelligent automatic air supply no power source needed
- sustained radiated heat for greater efficiency
- two hours of flickering flames on only the one charge of wood



Comfort auto door closer

- DIBt approval for applications independent of indoor air in low energy houses
- rigorously defined leakage rates for high air tightness



Top down combustion for clean air

- minimised emissions (LRV and BlmschV Stufe 2)
- clean burning few ashes
- firewood burns upright for a unique visual experience

"Ecology for the senses."

Tonwerk Lausen AG had a good reason to register the additional designation "e.c.o₂"® as a tradename. "eco" on a Tonwerk model means that "eco" is in it. eco₂ represents greater autonomy and maximum efficiency, automation, and comfort without additional external power!

The "e" in eco₂ stands for "enjoy" in "heat up and enjoy".

Thanks to the thermomechanical air flap you don't have to worry about anything. Simply ignite your storage heating stove, and the patented air flap does the rest. Once the wood has burned down, it closes automatically, cutting off the supply of air. This means that the stored heat is retained considerably longer, maximising efficiency and saving a huge amount of firewood. You therefore don't need to worry when you leave the house or lie down to sleep: your stove regulates everything for you and welcomes you back from the office or the next morning with a room full of cosy warmth. eco₂ therefore represents greater autonomy and fits perfectly in our time.

The "c" stands for "comfort auto door closer":

In compliance with the applicable standards (DIBt, Germany), this patented system ensures a defined gas tightness and reliable door locking. You therefore do not need any additional monitoring electronics when running a ventilation system. The mechanical system is low maintenance and user friendly and makes sure the door closes gently and reliably.

Finally, o₂ represents "oxygen" in the figurative sense of "clean air".

That is to say, Tonwerk has refined the process of top down combustion. The result of this top down combustion is more than just an impressive experience of flickering flames, this principle effectively reduces your firewood consumption and its perfected technology minimises emissions. These values today are even lower than the emission limits set for 2015. Heating your home cannot be more efficient, more convenient, or more healthy. eco₂ technology fits perfectly in our time and fulfils all of the requirements for modern fuel fired systems for homes.

The eco₂ series and the the standard DIN EN 15250 for slow heat release appliances

Tested in accordance with the standard DIN EN 15250 for slow heat release appliances introduced in 2007, the eco₂ series presents an essential, decisive quality feature that you should heed when buying a storage heating stove. This certificates the quality of heat as it should be – clean, gentle, and sustained. The Tonwerk storage heating stove keeps its promises.

The convection module of the T-NEO eco₂® puo | T-SKY eco₂® puo



The optional convection module gives you, at the flick of a wrist, the additional benefits of greater direct heat emission in the heating up and burning down phases. Extra, faster heat – and self regulating to boot. Choose whenever you wish between assisted convection or pure radiated heat.









"I can only say: pure, unadulterated feel good heat. The T-LINE is a true allrounder that rightly deserves the name of heating miracle." Jörg Heitger, Solothurn

Heating in top form simply fire the stove, and enjoy the heat.

Flexibility is always a good property. In this respect, the T-LINE eco2, available in a range of cast stones, harmonises with every environment and presents an impressive look of self assuredness. With its large glass face and the intriguing contours, this storage champion with the optional rotating function presents a highly impressive picture in any position.

With the patented automatic air supply and top down combustion, the eco, heating principle ensures uniform combustion and an impressive play of flickering flames without any intervention in the supply of air. You need only fire it up - the rest is regulated by the T-LINE eco, itself. The results are just as impressive as the T-NEO eco2, with over sixteen hours of long lasting, gentle radiated heat. Just light the fire in the morning - and still enjoy the warmth the following evening. The combination of healthy warmth and efficient heating couldn't be easier. For even greater heating needs, the T-LINE eco, is also available as a tall version. In conjunction with the water carrying Aqua Module, the optional system PLUS for the T-LINE eco, PLUS combines the special atmosphere created by flickering flames with the additional benefit of heat distributed throughout the home. Up to 50% of the available energy can then be supplied to the heating circuit. Tested in accordance with the standard EN 15250 for slow heat release appliances, it provides modern, sustained heating and maintains the quality of healthy radiated heat. A genuine storage heating stove.

Details on the Aqua Module can be found on page 32 or at www.tonwerk-ag.com

- 1 With its design of elegant lines, the T-LINE presents the beauty of radiated heat in its purest form
- 2 The flue gas pipe can be attached to the T-LINE eco, either on the top
- 4 On the T-LINE eco, PLUS, an AQUA MODULE is installed between the core and outer cladding.



the flexible aesthete **Design Award NOMINEE 2013**

Perfection in form and function.

"For my part, the T-NEO

is the perfect unity of

energy home."

Christian Fossen, Königswinter

technology and design.

The optional Aqua Module

heats the whole of our low

This description probably does the most justice to the T-NEO eco₂. Its inimitable design presents a pleasant contrast to what has been achieved to date. The large, continuous stone cladding with its characteristic curves is available, as usual at Tonwerk, in a great many colour combinations. In every respect, your T-NEO eco₂ becomes your representative, lending your living space that certain visual touch.

Also the T-NEO embodies all of the outstanding properties of the Tonwerk storage heating stove: 360° rotation and frameless glass door for a generous view of the flames, the variable flue gas outlet, and the patented eco, technology.

And as the T-NEO eco₂ PLUS with the Aqua Module, it also presents the option of distributing heat throughout the home. A special addition to the Tonwerk range takes the form of the optional convection module "DUO" for additional flexibility in the emission of heat. Users can therefore choose between pure radiated heat and the faster, regulated convection heat, in other words an even faster emission of direct heat. A harmonious union of aesthetics and technical finesse, the T-NEO eco₂ is a trendsetter of impressive proportions down to the last detail.

Details on the Aqua Module can be found on page 32 or at www.tonwerk-ag.com

- 1 With its exclusive, continuous stone cladding, the T-NEO eco, is a genuine storage champion.
- 2 With eco₂ technology you need only open the door, charge and fire the stove, and enjoy the heat.
- 3 The optional convection module lets you choose between assisted convection or pure radiated heat on your T-NEO eco₂ DUO.
- 4 The rounded and intricately ground edges present an elegance that is both timeless and modern at the same time.



and enjoy the heat.

T-SKY eco_2 the upcoming eco-champior







WINNER 2015









"As an architect, I believe T-SKY represents more than the experience of a real fire. It is part of a lifestyle."

Charlotte Hirschberg, Salzgitter

The magic of fire, in a class of its own – modern, functional and astounding.

Like the other models in the range, T-SKY eco₂ impresses with a perfect combination of ecology, innovation and design. With its soft fluid shapes and elegant side walls that curve slightly to the rear, the T-SKY is neither angular nor round. It achieves something even better: its unique form manages to blend in with shapes of all types. The lavish front made entirely from curved glass completes its specific elegance, providing a fascinating fireside experience from any angle. Thanks to cutting-edge technology, all T-SKY eco₂ components seem to float in unison.

In addition to the patented highlights of the eco_2 series, the T-SKY eco_2 DUO series offers the tried and tested convection module for greater direct heating power. Another special feature is the heat-up valve installed in all T-SKY eco_2 models, which supports the heating-up process even in challenging draught or weather conditions. Like all other Tonwerk storage heaters, this model can be customised with numerous hand-made stone claddings, the variable flue gas outlet and a 360° rotary disk that allows the furnace to rotate around its own axis. As a basis model, the T-SKY can also be delivered with a manual combustion air valve in place of the intelligent automatic air supply.

All in all the T-SKY eco₂ sets a benchmark when it comes to style and unbeatable functionality.

Impressive, extravagant and economical – a heater that meets all requirements.

- 1 The special shape of the T-SKY eco₂ impressively unites the large stone-element surfaces and the curved glass front.
- 2 Optional feature of the T-SKY eco₂ is the convection module while the manual heat-up valve comes with all T-SKY models.
- 3 The ergonomic handle makes opening and closing the combustion chamber door safely a piece of cake.
- 4 The individual hand-made stone cladding makes every T-SKY eco, unique.



Design: Wolfram

Design Award **NOMINEE 2015**

The elegant combination of architectural spirit and tradition.

"The T-ART impresses

both with its internal and

external features. In short

- a stove with character."

Marc Bertona, Neuchâtel

The T-ART eco₂ is another storage heating stove creation which confidentially demonstrates the virtues of TONWERK technology to the outside world. It skilfully combines retro and modern design elements and excites with its neat glass front as well as the tapered fibres which resemble sanded facets. The T-ART eco, catches the viewer's attention as an elegant piece of furniture or as a stove with gracefully flickering flames and the romance of a crackling fire. With its effortless integration into any space it distinguishes itself in the repertoire of interior designers.

Functionality and energy efficiency are of highest priority for the T-ART; it impresses with the technical features of the eco2 series, a heating module for difficult draft conditions and a large range of hand-crafted cast stone surfaces. If you would like to take things into your own hands, order the T-ART eco, as a base model with manual air control . Otherwise: Simply fill with wood and ignite - the automatic door lock, patented automatic air supply and top-down combustion technology will take care of the rest. Decisive for purchasing the T-ART eco, is its sustained, natural radiated heat of more than 12 hours with only one load of wood. Thanks to its design and performance, the T-ART also meets the requirements for low energy construction.

- 1 All the cast-stone corners and edges are hand-crafted providing an elegant finish.
- 2 The frameless, generously sized glass front gives the T-ART its modern and tidy appearance.
- scores points with its continuous stone cover.
- 4 The striking angled surfaces of the T-ART eco, highlight its



3 - If the flue tube is attached at the back, the T-ART eco,

unique dynamics.



AQUA MODULE

The Plus system – the attractive source of heat throughout the home

Depending on the heating concept and needs, all Tonwerk storage heating stoves with the additional designation PLUS can be used with their water carrying Aqua Module to heat a whole home. The home, though, must have been built or renovated to the low energy standards. In all other buildings, a storage heating stove with the Plus system provides a cost cutting supplement to the central heating system.



You don't need to be a clairvoyant to know that domestic heat supply will have to be made up of several constituents in future. Also years ago, when the energy prices suddenly exploded, the demand for alternative energy sources rocketed. In the meantime, this renaissance of economically and ecologically reasoning homeowners has made this option mandatory, and multiple benefits are enjoying a demand greater than ever before. For instance, our storage heating stoves with the Aqua Module not only provide a visually appealing, warm fire with the greatest possible release of healthy, gentle, radiated heat, they also supply the central heating system. You therefore have to pay less for the annual operating costs, you can even do away with supplementary central heating, and you can make yourself independent of the constantly rising prices of the fossil fuels gas and oil.

The Plus system - the clever heating alternative

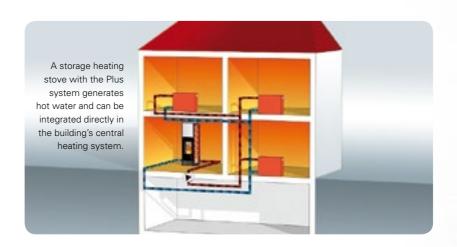
The Tonwerk storage heating stove with Aqua Module fits perfectly in the energy saving concept of low energy buildings. On these stoves, the Aqua Module (absorber principle) is installed between the core and the outer cladding. There it circulates water that can absorb up to 50% of the stove's heat and distribute it through a central heating system. This reduces the direct release of heat to the room, an effect that is important above all in passive houses and homes with low heating requirements. With only little installation work, the Aqua Module can be used to heat adjoining rooms without the need for additional heaters. Thermostatic valves and the specially modified control unit regulate the optimal distribution of heat to the connected rooms. Unlike water carrying flue stoves, the Aqua Module is not in direct contact with the fire. Its efficiency therefore remains constant, it is subjected to far less stress, and it has a long life.

Comfort and heating needs - an individual decision

On only one 6 kg charge of firewood, the various stove models release from 50% of the energy they generate as pleasant doses of heat radiated over their surfaces into the room (see table below). At the same time, the Aqua Module can supply up to 50% of the useful energy to the heating circuit. The optimal transfer of heat and the constant efficiency generate a heat transfer of about eight to nine hours per firewood charge. So by firing your Tonwerk storage heating stove once in the morning and once in the evening, you can enjoy the healthy effects of your stove's radiated heat 24 hours a day – as well as the additional benefits of energy distributed in the heating system.

Depending on the heating needs the Aqua Module can be used:

- together with the central heating system or a solar installation
- as a direct heater in its own heating circuit, without buffer storage
- as the sole heat source in a low energy house



The Aqua Module is available for these models:



Heat distribution per 6 kg charge of firewood

Total:	20 kWh	(100%)
Aqua Module:	10 kWh	(50%)
Storage heating stove:	10 kWh	(50%)

when heat is emitted

Heating with wood

feusuisse

THE ENERGY SOURCE WITH A FUTURE

Tonwerk Lausen AG has long been specialising in the building of efficient stoves with eco friendly heating installations. The designer storage heating stoves from the Swiss handcraft factory utilise the renewable raw material wood that has been a source of heat for millenia. They are so efficient and sustainable that they need be fired only once or twice a day with a single charge of firewood for many hours of healthy radiated heat.

Heating couldn't be friendlier to the environment.

Forests are complex eco systems. When they are utilised optimally as a resource, they are the most productive terrestrial ecosystem. Stoves fired with wood are fundamentally a joy to the environment. You see, wood is a regenerable resource. Not only that, it releases the same quantity of carbon dioxide (CO₂) when it decomposes and when it burns. Heating with wood is therefore CO₂ neutral.

Wood, the renewable raw material from the forest

Despite the more widespread use of firewood, the wood stocks in European forests present a positive balance. According to analyses, the growth of new

Hours of feel good warmth on only one charge of wood.

Tonwerk-Speicheröfen® storage heating stoves – a pleasure for the environment

wood stocks exceeds felling by about 40%. Measured against their surface areas, Germany and Switzerland have the largest wood stocks in Europe, even larger than France and Sweden, although they cover more square kilometres. This also means a huge potential for carbon (CO₂) sequestration. According to conservative estimates, just under 40 billion tonnes of CO₂ are captured in the forests of Central Europe. For a good reason, wood as a regenerable fuel takes its place among the sources of renewable energy sponsored by the government

Firewood protects the climate

The assumption that burning wood damages the forest or the climate is wrong. Rather, the exact opposite is the case. Every kilogram of burned firewood permanently prevents the emission of additional carbon dioxide.

The carbon dioxide released from burning wood is part of a natural cycle that also takes place when a tree decomposes in the forest. Hence, heating with wood not only serves the healthy thinning of forests, it also provides a long term contribution to a balanced climate.

Energy from wood - good for forests and people

The explanation is simple. Burning wood is CO₂ neutral. The carbon dioxide released into the atmosphere is equal to the amount absorbed by the tree – and the amount the tree would have released when decomposing in the forest. Accordingly, a sustainably managed forest provides a far greater contribution to a clean atmosphere than an unexploited forest. Harvested wood stores carbon dioxide for a long time. Burning wood does not cause any additional emissions.

Drying and storing firewood

Ideally, firewood should contain no more than 15% moisture. The dryer the wood, the better its calorific value. When the wood is too moist, the energy escapes as steam through the chimney and is no longer available for heating the room. Moist flue gases damage not only the environment, but also the chimney (risk of sooting). Clean and complete combustion is assured only on properly stored firewood with a low residual moisture content.

Only dry firewood is good firewood!

The calorific values for wood also depend on the wood's moisture content. The more moisture the wood contains, the lower its calorific value. In other words: the drier the firewood, the less is needed to generate more heat in the room.

1 stacked cubic metre (1 stcm = 1 m³) of beechwood is equivalent to about 200 litres of oil or 200 m³ of natural gas



Environmental protection

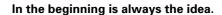
When firewood burns it releases only as much CO_2 as the tree absorbed from the atmosphere while it was growing. When the firewood was collected in the vicinity there are no additional CO_2 emissions otherwise caused by the transport. Wood decomposing in the forest generates the same quantity of CO_2 as the same wood burning.



35

THE HIGH ART OF CRAFT

What began in the nineties with an impassioned vision and a team of highly motivated specialists has long evolved into an exclusive brand of world renown: TONWERK-Speicheröfen® storage heating stoves made in Switzerland. From the very outset, it was our objective to go new ways with an innovative firing technology and to adopt a leading role in the international field of storage heating stoves. Today, the efficiency, eco friendliness, functionality, and design of our stoves are setting new standards in the world of fired stoves.



All of our products reflect the inventiveness and handcrafting skills invested in them. Purist design, aesthetic play of lines, and practicability have now become the hallmark of our designers and engineers. Also, the production site Switzerland has drawn many very attentive eyes from abroad to its outstanding design and top engineering achievements. And, not least of all, the traditional label "Made in Switzerland" still enjoys an excellent image.

Handcrafts meet design made in Switzerland

At Tonwerk in Lausen, every product is a genuine handcrafted original. The stoves are made to specification with the care of craftsmen. The high art of stove building consists of many complex steps that gradually give rise to the unmistakable Tonwerk storage heating stove.

Each stove model is developed in collaboration with renowned designers and specialists for firing technology. CAD is used to create variants and simulate the interaction of individual components in advance. Efficiency and emissions are optimised in our own laboratory. Here, the properties and material qualities of a Tonwerk storage heating stove are subjected to thorough tests under extreme conditions and research conducted regularly into new technologies.

An external type test under the applicable EN standards is performed by independent bodies, e.g. the renowned Fraunhofer Institute. During this test, they also investigate and certificate the high efficiency and low emission combustion.

Stone and design – a good combination

A wide range of natural raw materials lends our Tonwerk storage heating stoves their unmistakable look. After being mixed according to a special, unique recipe, the raw materials are moulded into an outer shell with great visual appeal and the optimal storage properties. In this manner, every cast stone element is formed individually on both the outside and inside and so modified exactly to the technical requirements applying to their storage heating stove. From the core to the combustion chamber, everything is produced on our own facilities. Only so can we obtain the maximum of storage capacity. Even the smallest parts play a key role in the complex interaction of the various materials. Constant quality control is therefore indispensable. The function and properties of the stove constituents are subjected to consistent tests in a fixed sequence of operations. In special processes, the outer cladding of cast stone is treated for so long until the rough texture of its stone surface presents its high quality appeal. Only this can bring out the full beauty of the natural materials. In the grinding shop, the Tonwerk storage heating stoves are brought to completion by meticulous craftsmen and customised to individual wishes.

The countless constituents making up the stove are put together by a team of experienced craftsmen trained specifically for their stove model. Only so can we uphold our ambitious claim of high quality.

At home in Switzerland, Tonwerk has nevertheless found a home all over the world. These heating miracles from Switzerland can even be found in the most remote countries of our Earth, for instance in Japan, New Zealand, South Korea and Australia. The network of professional specialised Tonwerk dealers trained on our premises makes sure that every Tonwerk storage heating stove is installed according to the instructions. This traditional Swiss company always gives top priority to customer satisfaction and quality management.

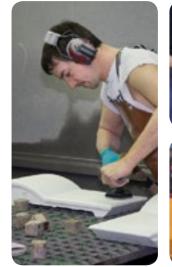


















TONWERK LAUSEN

A SUCCESS STORY OF CLAY AND FIRE

The more than 140 year history of Tonwerk Lausen AG has been moulded by entrepreneurial visions, innovative ideas, unconventional solutions, and the unfailing courage to change. Since the very outset, all processes at this traditional company have started with the raw material clay and the element fire.



A group photo of the hand moulding division (1917)

1942

>>> 1872

Tonwerk Lausen founded Production of refractory and ceramic goods

1907

The joint stock company Tonwerk Lausen AG founded Production of refractories for

crafts and industry

1913

New factory building erected at the present location

Floor tile factory built Manufacture of clinker tiles. By the end of the 1960s Tonwerk had up to 200 employees on its

1993

started developing its line of storage heating stoves that was soon to become its key 1999

From 1999 to 2009 Development of the 2000

First export

activities

2007

Nearly 100 years later, Managing Director Peter Brogli and the Tonwerk Team today

Tonwerk delivering to ten European countries and Japan Tonwerk the leading provider of 2009

2009 saw the development of the Serie eco

2012

The Tonwerk Lausen AG celebrates its 140th annivers: Extension of the Serie eco2 to the Model T-ART eco-

2014

models T-LINE eco₂ and T-NEO eco-

>>>

39

2015

It was a long, arduous road until the international award winning storage heating stoves made by the Swiss handcraft factory had earned it its outstanding reputation that today precedes it. The name "Tonwerk", literally "clay works", refers to the origins of the company as a maker of ceramic products. About 140 years ago, Tonwerk produced tiles, oven to table ware, and firebricks of "Huppererde", a clay rich in pisolitic ore.

Change on the European market

The sixties and seventies were boom years for the production of stoneware floor tiles and firebricks. Then evolving technologies, global shifts in the market, and the relocation of energy and cost intensive production to low wage countries made the production of these mass goods an increasingly unprofitable undertaking in Swit-

zerland. Despite diversification, also refractory production came under increasing pressure as a consequence. At the latest when the borders were opened to Eastern Europe, in the mid nineties, Tonwerk Lausen AG again took up innovative approaches and entrepreneurial visions. These soon started to take shape. After all, there was no other company in Switzerland that had such a vast wealth of experience in the field of ceramic material engineering.

Knowhow, vision, and passion

Since its very beginnings Tonwerk Lausen AG has been concentrating on the art of utilising the energy of flames as efficiently as possible. This knowhow was now to adopt a central role in the company's much needed realignment. And this was found very quickly - together

with a Swiss designer team and a refractory specialist, we wanted to set new standards in stove building and develop a new type of stove that was to store heat in a core of stone and release this in a pleasant radiated form. And on top, its efficiency and eco friendliness was to surpass that of other stoves and set new standards. In less than a year, the team then developed an outstanding product that was unique for its time, and the Tonwerk storage heating stove was born.

Swiss quality and worldwide success

The launch of the first Tonwerk storage heating stove was so successful that this was very soon followed by other exclusive storage heating stove models that were then and continue to be innovative pioneers for the entire sector. Their combination of extraordinary design and

top technology received countless awards from international panels of experts.

The fact is that the stoves have gained an excellent reputation among architects not only in the neighbouring countries, but throughout Europe and even overseas, including Japan. Today they have taken the leading position on the German speaking markets for high quality storage heating stoves. Today, over 65% of our storage heating stoves are exported.

In line with growing internationalisation, Tonwerk Lausen AG decided in 2008 to gain a foothold in the EU by founding the subsidiary DTLeurope in Luxembourg.



BUILDING FOR THE FUTURE

The Tonwerk storage heating stove in low energy and passive homes

The best building practices are the key – not only in the interests of the environment and our resources, but also for economical reasons. In this respect, the greatest possible reduction of energy requirements takes centre stage.

Anybody building today a new home or modernising a building to low energy standards will be increasingly confronted with energy conservation regulations specific to their country.

By building to these guidelines, you will not only have an ultra modern home with an outstanding energy balance over decades to come, but you will also profit in addition from considerably more comfort and an essentially higher quality of living. Modern storage heating stoves can therefore meet a wide range of heating needs in sustainable buildings renovated under energy saving aspects.

The Tonwerk storage heating stove – the right choice

Especially in these environments, the Tonwerk storage heating stove can unfold its true strength in the form of pleasantly dosed and sustained radiated heat. By meeting these low heating requirements, the stove must also provide a correspondingly low direct heat output if it is not to overheat the living space and therefore prevent a feeling of well being.

Connections for external combustion air, approved tightness (DIBt, Germany), Minergie Module (Switzerland), the patented eco₂ module for the highest possible efficiency and safety – all of these are pioneering elements making a Tonwerk storage heating stove the first choice for low energy homes. Also when a controlled ventilation system is installed.

Minimum energy needs, maximum comfort

True to the motto "heat up and enjoy", the Tonwerk heating principle in conjunction with the patented automatic combustion air supply simplifies handling to the minimum level.

The optional Aqua Module, combined e.g. with a solar installation, fulfils the highest demands for ecology and autonomy, in line with the growing complexity of requirements for heating, ventilation, and air conditioning installations. And above all these is home comfort.

Tonwerk combines healthy living and pioneering ecological and economical solutions with the desire for a relaxing atmosphere generated by the flickering flames of a cosy fire – appealingly packaged at the focus of modern cultivated living.





PASSIVEHOUSEJAPAN

With our commitment to the Swiss Minergie Module for wood fired stoves, our membership of IG Passivhaus, and our seats on various technical committees, we ensure that our products always embody the state of the art.

QUESTIONS TO THE EXPERT

An interview with Arthur Kasper, master stove builder (university degree) and Head of Swiss Sales at Tonwerk Lausen AG

Mr Kasper, how can I decide which Tonwerk storage heating stove is the best one for me?

There are various models you can choose from that meet your available space and heating needs. Do you want to connect your stove to the central heating, or do you simply want to enjoy a wood fire in your living room every now and then? How well is your living space insulated against heat? You should first decide your answers to all of these questions before consulting one of our competent specialised Tonwerk dealers.

How much power (kW) should my stove generate as the minimum?

Prospective buyers are often of the opinion that a high power output is a key quality feature. This, though, is not true. On the contrary: A high kilowatt output often leads to a room overheating and an excessive consumption of wood in the stove. A Tonwerk storage heating stove, on the other hand, needs only to burn down a single charge of firewood to release pleasant doses of healthy radiated heat for hours. This creates a cosy warm climate and reduces the consumption of wood as well. At all events, the power delivered by a stove should correspond to the heating requirements for the room. A well insulated room with integrated central heating definitely needs less heating than, for instance, the attic of an old building.

What do I have to bear in mind when I want to connect a Tonwerk storage heating stove to my chimney?

When a chimney already exists, its condition and suitability should be examined by a chimney sweep. He should also examine everything else connected to the flue system because special regulations apply to multiple ducts. On older chimneys, we recommend clarifying whether its length, cross section, and form fulfil the requirements for modern wood firing. When there is no suitable chimney, it should be modified or a new one built. Building and modifying chimneys, however, must be reported to

the competent authorities, and the work approved by a qualified chimney sweep.

What must I particularly watch out for when renovating or building a chimney?

Well, a new or modernised chimney is generally very tight. Extractor hoods and bathroom ventilators can generate a negative pressure that can throttle the supply of air to a wood fire. It is therefore recommended to install a connection for the supply of external combustion air so that the storage heating stove can operate independently of indoor air. This external supply of combustion air is indispensable when your building is fitted with controlled ventilation.

How do I recognise a really serious offer offering good value for money?

If you just have eyes for stove prices, discounts, and output power, you run the risk of paying even more in the end. A serious offer includes extensive advice and the professional installation of the stove. So before you can decide on a Tonwerk storage heating stove, you must always first consult one of our trained specialised Tonwerk dealers.

TONWERK ONLINE

- All stoves, all details
- Complete documentation
- Interactive explanations

C et Finder Ablage Bearbeiten Darstellung Gebe zu feinter Wille

- Online configurator
- and much more

www.tonwerk-ag.com



Our website provides all of the details you can learn about Tonwerk Lausen AG – neatly categorised for ease and clarity.

From the simplest of operations to the most complex of certifications, you will find here everything you need to know about storage heating stoves and radiated heat. The configurator presents the stove models

in all of the available combinations of materials and colours, giving

BI LE COMP DONNE

TONWERK

you an initial impression of what your new Tonwerk storage heating stove could look like. The panorama function also lets you rotate every model through 360° and scrutinise every detail from all sides.

In addition, the Tonwerk blog www.mytonwerk.com presents a large number of photographs documenting how our storage heating stoves are used all over the world.

These online services are rounded off with our constantly growing Tonwerk media library containing informative advertising trailers and videos for our products and company. Yet all of this, of course, cannot serve in place of an advisory talk with one of our certified specialised Tonwerk dealers who will assist you with professional advice and detailed answers to all of your questions.

Have fun! We look forward to your visit!

This is what you can expect in our



MEDIA LIBRARY



A brief look behind the scenes of this traditional Swiss company, introducing each step of production and the detailed work of



The Tonwerk heating principle

Clear and detailed explanations on the patented, innovative Tonwerk heating principle, and the benefits of gentle radiated heat.



How the Aqua Module works

All details on the optional PLUS system. That "extra" for your storage heating stove and the additional benefits simply explained.



The heating miracles from Switzerland

What distinguishes a genuine storage heating stove from conventional stoves? The essential advantages of Tonwerk technology: here, the T-LINE eco.



Info trailers for all stove models

Informative videos present the special properties of each storage heating stove model.



Interview with Tonwerk

Managing Director Peter Brogli talks about the success, the future, and the new objectives of Tonwerk Lausen AG.



EXPRESSIVE AND ELEGANT

Tonwerk wood racks

Not only our handcrafted stoves create that special atmosphere in your home. Also the clear, sculpture like design of our wood racks accentuates every living space with a discreet, yet fascinating charm. If you are to ignite your wood stove comfortably at any time, you should always have a certain stock of firewood on hand. With this elegant accessory from Tonwerk Lausen AG, your firewood not only finds a worthy home, but is presented in an appealing setting for your living room. Reduced to the essential, our high quality wood racks are the perfect complement to any Tonwerk storage heating stove. Even the bases are made of the same material cladding the outside stone walls of the stove.

The simple form of the **wood rack's steel sections** can easily take even large quantities of wood, and telescopic members provide a range of height adjustments. This means that any quantity of firewood can be stacked with elegant, visually appealing compactness. **The glass variant** presents a captivating design of clear and elegant lines without any frills. Both wood rack models feature an integrated drawer (second drawer optional) providing enough space for everything you need for firing.

And if you prefer more discreet storage for your firewood, the practical, multifunctional **wood box** is just the right thing for you. This aesthetic cube of various high quality materials finds space in every niche, and yet is surprisingly roomy. You can therefore place your firewood and lighting aids in separate compartments, and still have a decorative stool presenting a surface of wood or felt in the colour of your choice. The metal parts of the wood rack and wood box are available in silver grey or black.







H 48 cm B 40 cm T 40 cm





	IJ ├ └ └	
0	luantity of fuel (firewoo	d)
В	Burning time ¹ ca.	
Н	leating time	
	fficiency Flue connection height	1800 mm)
Н	leat storage capacity	
٧	Veight	
Ν	lominal thermal output	
Н	leating capacity	
F	lue connection top	
E	xternal air connection	bottom
F	lue draught	
T	est standard	

conventional design

low energy design

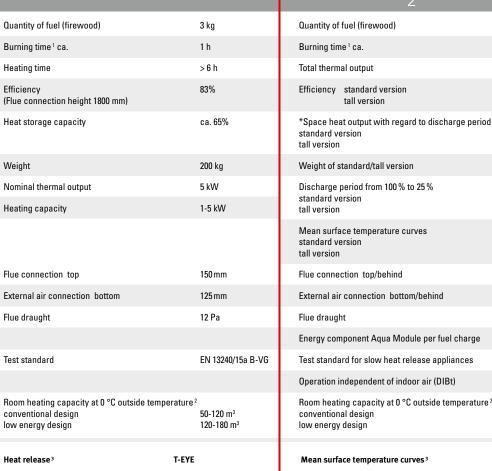
Heat release

kW output capacity

3.5 kg

1–1.5 h

> 6 h



 eco_2

T-LINE

tall version



2 h

> 20 kWh

80 %

84 %

2.4 kW

2.2 kW

8.6 h

10.0 h

100/50/25%

3.6/8.8/12.2 h

4.1/9.8/14.1 h

125 mm

13 Pa

50% (optional)

Z-43.12-258

80-200 m³

200-300 m³

T-LINE eco2

EN 15250/15a B-VG

430/520 kg



Quantity of fuel (firewood)

*Space heat output with regard to discharge period

Burning time 1 ca.

standard version

with DUO Module

standard version

with DUO Module

standard version with DUO Module

Flue draught

conventional design

Mean surface temperature curves

low energy design

Weight with rear steel/stone wall

Mean surface temperature curves

External air connection bottom/behind

Energy component Aqua Module per fuel charge

Room heating capacity at 0 °C outside temperature 2

Test standard for slow heat release appliances

Operation independent of indoor air (DIBt)

Flue connection top/behind

Discharge period from 100 % to 25 %

Efficiency

Total thermal output



6 kg

2 h

80 %

2.4 kW

2.6 kW

8.6 h

6.5 h

420 kg/ 450 kg

100/50/25%

3.6/8.8/12.2 h

3.2/7.8/10.0 h

150 mm

125 mm

13 Pa

50 % (optional)

Z-43.12-258

80-200 m³

200-300 m³

T-NEO eco2

T-NEO eco2 DUO
T-NEO eco2

EN 15250/15a B-VG

> 20 kWh



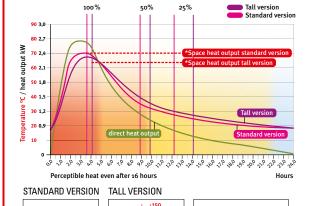


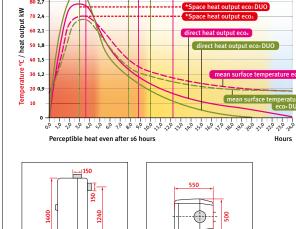


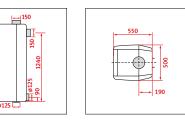


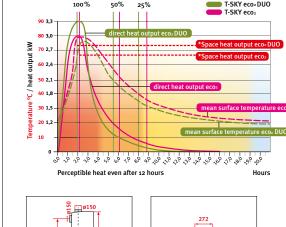


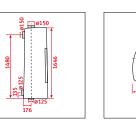
Quantity of fuel (firewood)	6 kg	Quantity of fuel (firewood)	5.5 kg
Burning time ¹ ca.	2 h	Burning time ¹ ca.	2 h
Total thermal output	> 20 kWh	Total thermal output	> 19 kWh
Efficiency	84 %	Efficiency	81 %
*Space heat output with regard to discharge period standard version with DUO Module	2.6 kW 2.8 kW	*Space heat output with regard to discharge period	2.6 kW
Weight	380 kg	Weight	310 kg
Discharge period from 100 % to 25 % standard version with DUO Module	6.7 h 6.1 h	Discharge period from 100 % to 25 %	7.3 h
Mean surface temperature curves standard version with DUO Module	100/50/25 % 2.1/6.1/8.8 h 1.9/5.5/8.0 h	Mean surface temperature curves	100/50/25 % 2.7/7.0/10.0 h
Flue connection top/behind	150 mm	Flue connection top/behind	150 mm
External air connection bottom/behind	125 mm	External air connection bottom/behind	125 mm
Flue draught	12 Pa	Flue draught	11 Pa
Test standard for slow heat release appliances	EN 15250/15a B-VG	Test standard for slow heat release appliances	EN 15250/15a B-V
Operation independent of indoor air (DIBt)	Z-43.12-383	Operation independent of indoor air (DIBt)	Z-43.12-383
Room heating capacity at 0 °C outside temperature ² conventional design low energy design	80-200 m ³ 200-300 m ³	Room heating capacity at 0 °C outside temperature ² conventional design low energy design	80-200 m ³ 200-300 m ³
,	Y eco ₂ T-SKY eco ₂ DUO	Mean surface temperature curves ³ 100% 50% 25%	T-ART eco₂

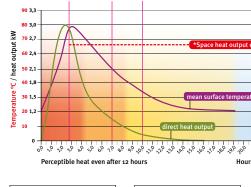


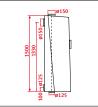


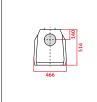


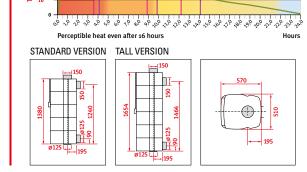


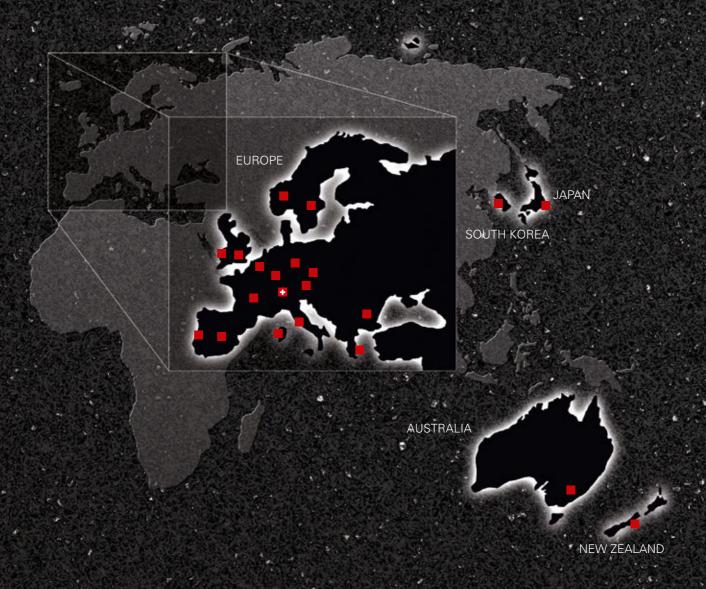


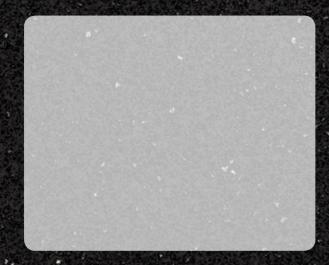














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Tiba AG

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