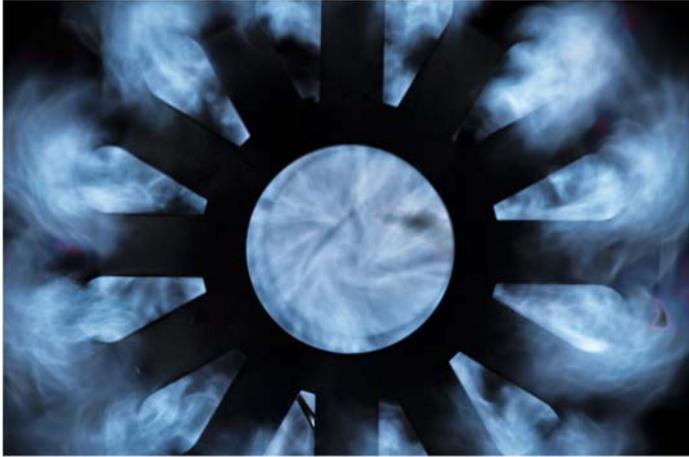


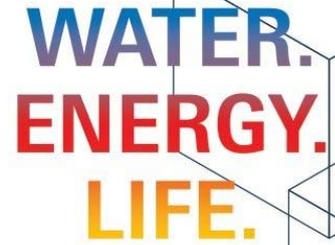
Premium marathon® combustion systems in worldwide operation...



**ISH** Frankfurt am Main  
11.–15. 3. 2019

dreizler® is your innovative partner for reliable, efficient and clean **marathon®** burner technology.

**Come and visit us at our Booth C61 in Hall 12.0. We look forward to you.**



**WATER.**  
**ENERGY.**  
**LIFE.**

Hamburg – Schleswig-Holstein

## Things are hotting up in the North – Burner optimization at 19 plants

We are very happy to be part of an extensive project in Hamburg/Schleswig-Holstein together with our long-standing business partner – eNeG Vertrieb- und Service GmbH in Hamburg!

HanseWerk Natur GmbH will replace 31 burners with a single firing capacity of 600 kW to 16.000 kW and a total firing capacity of 137 MW in a total of 19 plants.

The new **marathon®** burners from dreizler perfectly meet the requirements:

→ Project planning on BAT (best available technology), 20 - 30 % below the current TA Luft regulations. This posed a particular challenge in many plants with sometimes difficult reversible flame boilers, tight space conditions and often very low gas pressures.

→ High control ratios in combustion technology and preferably for local and district heating requirements.

→ In burner design, deviant to EN 676 no averaging is permitted. Each measured value must be assigned below the assured requirement. The measurement uncertainty must not be subtracted from the measured value. A working reserve for subsequent changes in capacity and future emission requirements has also been taken into account.

We have been working successfully for many years with the company eNeG Vertrieb- und Service GmbH and we are proud that our **marathon®** burners are allowed to demonstrate its full capabilities in this important project!

We are sure that we can inspire the end customer HanseWerk Natur GmbH with our products as well as with the services provided by eNeG.

Many thanks to Hamburg! We are looking forward to the joint implementation with all parties involved in HanseWerk Natur GmbH and eNeG Vertrieb- und Service GmbH.

**Well-equipped for the future.**



**HanseWerk**



**eNeG**

Energie | Technik + Automation

### Dates

**ISH 2019, Frankfurt**  
11<sup>th</sup> - 15<sup>th</sup> March 2019

**Technical seminar**  
Spaichingen  
15<sup>th</sup>/16<sup>th</sup> May 2019

**17. GESTRA Symposium**

25<sup>th</sup> - 28<sup>th</sup> February 2019  
01<sup>st</sup> - 04<sup>th</sup> April 2019  
20<sup>th</sup> - 22<sup>nd</sup> May 2019

### Imprint

Walter Dreizler GmbH  
Max-Planck-Straße 1-5  
78549 Spaichingen  
V.i.S.d.P. Daniel Dreizler  
Tel.: +49(0)7424-7009-0  
Fax: +49(0)7424-7009-90  
E-Mail: info@dreizler.com

Installation example in Austria

## Fire and flame for exemplary emissions

In November, the new Werndorf cogeneration plant went into operation in Austria. The power plant with natural gas firing will supply parts of the city of Graz with district heating.

The plant in the newly built boiler house consists of 3 Viessmann Vitomax double flame tube boilers with a heat output of 32,5 MW each. dreizler® supplied 6 x powerful gas burners marathon® M 10003.5 ARZ in DUObloc version. The blower units were mounted above the boilers and supply the required combustion air to the marathon® burners. The burners are equipped with internal exhaust gas recirculation ARZ and exhaust gas recirculation ARF.

The precise matching of the combustion chamber geometry of the three-pass boiler and the brilliant LOW-NO<sub>x</sub> characteristics of the applied marathon® burners ensure CO<sub>2</sub>-efficient and efficiency-optimized heat generation.

In combination with the downstream exhaust gas heat exchangers and an O<sub>2</sub>-optimized combustion, a combustion efficiency of more than 96,5% is achieved. It is possible to operate all three boilers simultaneously with the same district heating capacity, or just one boiler with full power and the other boilers in the partial load range. Depending on the respective load requirement and operating mode, each boiler in modulating burner operation can generate at least 2,5 MW up to max. 31,5 MW heat.

The special strength of the system lies also in the innovative control technology, realized by our experienced partner for high-quality control systems, company ESF with Mr. Friesenbichler and his team. The combination of a type-tested Lamtec combustion manager with a freely programmable controller with 2v3 selection



marathon®

realizes all technical parameters for optimal energy and emission-optimized operation.

The use of state-of-the-art marathon® combustion technology reliably complies with the prescribed emission limits and optimally fulfills BAT (best available technology) requirements.

The plant was taken over in the commercial operation in time on 12<sup>th</sup> November 2018.

Peter Huber, Managing Director of Viessmann Austria, praises the excellent cooperation and good coordination of all involved on the construction site:

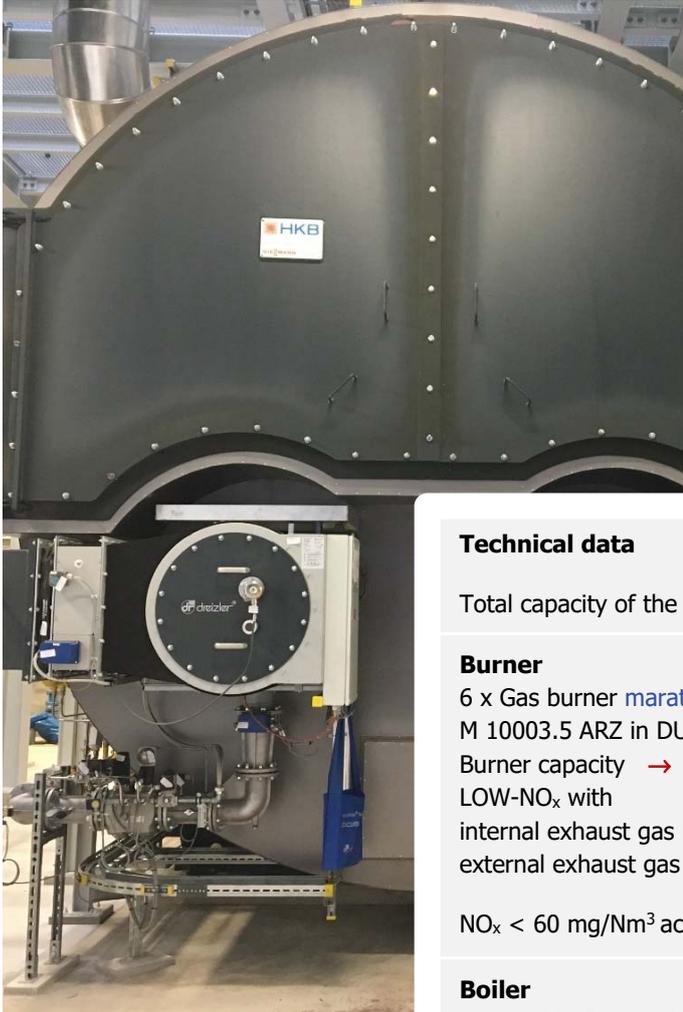
“ We are proud of the new boiler house and the technical equipment components used in it.



The dreizler® team would like to thank all partners for the trust and the fast, successful implementation of this demanding LOW-NO<sub>x</sub> firing plant.



Installation example in Austria



**Technical data**

Total capacity of the plant → 97,5 MW

**Burner**

6 x Gas burner marathon®  
M 10003.5 ARZ in DUObloc version  
Burner capacity → 6 x ca. 16,75 MW  
LOW-NO<sub>x</sub> with  
internal exhaust gas recirculation ARZ and  
external exhaust gas recirculation ARF

NO<sub>x</sub> < 60 mg/Nm<sup>3</sup> according to BAT

**Boiler**

3 x Double flame tube boiler  
Viessmann Vitomax D HW  
Three-pass boiler



Installation example Netherlands

## Optimization and plant retrofitting by LOW-NO<sub>x</sub> burner technology



### Technical data

#### Burner

2 x Gas burner  
**marathon®** M 10003.2 ARZ  
 in DUObloc version  
 Burner capacity → 2 x ca. 8,37 MW

12 x Gas burner  
**marathon®** M 10003.4 ARZ  
 in DUObloc version  
 Burner capacity → 12 x ca. 12 MW

LOW-NO<sub>x</sub> with  
 internal exhaust gas recirculation **ARZ**  
 and external exhaust gas  
 recirculation **ARF**

high-tech version with  
 oxygen control **oxygen**

NO<sub>x</sub> < 60 mg/Nm<sup>3</sup>

#### Boiler

2 x three-pass boiler  
 Boiler capacity 2 x 7,8 MW  
 Bronswerk FHVT 7.8,  
 120°C x 16 bar

6 x Double flame tube boiler  
 Boiler capacity 6 x 22 MW  
 Babcock Euronox, 120° x 16 bar

For many decades, the utility company UNIPER has supplied electricity and heat to customers in Belgium and the Netherlands. In order to ensure a secure and climate-friendly district heating supply in the future, two plants of the operator were modernized at the sites Den Haag and Leiden last year.

A total of 14 modern LOW-NO<sub>x</sub> **marathon®** gas burners M 10003 ARZ in DUObloc version with a burner output of 8,3 MW to 12 MW each were retrofitted to 8 existing boilers.

All burners are equipped with internal exhaust gas recirculation **ARZ** and external exhaust gas recirculation **ARF**. This combination allows remarkably low NO<sub>x</sub> emissions to be realized. In addition, all burners were supplied in high-tech version with oxygen control **oxygen**.

The two plants now ensure reliable, efficient and with a NO<sub>x</sub> value of < 60 mg/Nm<sup>3</sup> very cleanly for heat in the district heating network of Den Haag.

The plant conversion was successfully carried out by our sales and service partner **dreizler® benelux**.



One focus in both projects was the safe undercut below the emission limit values. Equally important was the precise coordination of the step-by-step conversions with the ongoing operation in order to avoid restrictions on the availability of the existing boilers.

We thank our partner **dreizler® benelux** and all involved for the excellent cooperation.



Installation example Netherlands

Project steps

The professional commissioning of the 14 marathon® DUObloc gas burners by experienced specialists was completed in November 2018.

Retrofitting

14

LOW-NO<sub>x</sub>  
marathon®  
GAS BURNER



1

Boiler house in Den Haag



2

Delivery of the marathon® burner



3

DUObloc burner with fan and motor



4

Installation of combustion air fan



8

Assembly of burner 1 on double flame tube boiler



7

Existing boiler Babcock Euronox



6

Transport of the burner with the crane



5

Positioning of the fan above the boiler



9

Control cabinet with frequency converter



10

2 x marathon® M 10003.4 ARZ



11

Boiler/burner plant in Leiden



We thank the competent serviceteam of K.K. Brandertechniek.



Installation example

## More efficiency through successful system conversion



The organic brewery Lammsbräu in Neumarkt can look back on 200 years of tradition and they always have the future in mind. True to the motto of the family-owned company "Talking less, doing more – and doing the right thing", many years ago, the course was set for a sustainable corporate concept.

The new system in the boiler house also is based on this principle. Two hot water boilers from Bosch Industriekessel GmbH in combination with two gas burners [marathon® M 3001 ARZ](#) continuously and sustainably supply the heat required for beer production.

With regard to the central location of the brewery in the city center of Neumarkt, Lammsbräu placed great emphasis on the equipment of the burners with CO regulation in terms of increasing efficiency and clean air. The application of the patented internal exhaust gas recirculation [ARZ](#) leads to particularly low emissions, e.g.  $NO_x < 75$  mg. The compact design of boiler and burner with integrated Eco is also extremely advantageous in terms of sound emissions.

Last but not least, the Brewery benefits from an optimal price-performance ratio through the combination of high-quality and efficient series products with system-specific fine tuning.

The experienced and competent project team ensured a fast and smooth project process with guaranteed savings in energy consumption and costs.

We would like to thank the brewery Lammsbräu, Bosch Industriekessel GmbH and all involved for the successful implementation of the project and their decision for the [marathon®](#) burner technology.



### Technical data

#### Burner

2 x gas burners [marathon® M 3001 ARZ](#)  
Internal exhaust gas recirculation [ARZ](#)  
capacity approx. 2,6 MW each

oxygen and CO regulation  
[oxygen](#) and [oxygen plus](#)

#### Boiler

Hot water boiler Bosch UT-M 24x10



## Useful information: dreizler® oxygen – Combustion optimization

With the oxygen control [oxygen](#), the  $O_2$  content in the exhaust gas is permanently and precisely determined and readjusted via particularly high-quality lambda sensors. As a result, the amount of exhaust gas and the resulting loss of exhaust gas are constantly monitored and minimized.

When using gaseous fuels, the dreizler® technology [oxygen plus](#) also offers the possibility of measuring unburned exhaust gas components via an additional exhaust gas probe and thus operating the burner with stoichiometric combustion approximately ( $\lambda \sim 1$ ).



Spaichingen

## Successful renewal of certification according to DIN EN ISO 9001:2015

The standard DIN EN ISO 9001 is a globally recognized standard that defines the requirements for effective quality management in a company. The main objective of a QM system is to safeguard and improve product and process quality.

A major advantage resulting from the consistent implementation of a QM system is e.g. a continuous supply of quality products and services that meet the needs of customers and thereby ensure customer satisfaction.

The 4<sup>th</sup> edition of the standard (DIN EN ISO 9001:2008) has been revised and replaced by the 5<sup>th</sup> edition DIN EN ISO 9001:2015. The new version was adopted in November 2015. Companies have to take over the audit within a transitional period of three years.

Following a successful audit in March 2017, dreizler® is recertified and thus meticulously fulfills all the requirements of the current ISO 9001:2015 standard. In an extensive certification process, process descriptions and instructions have been reviewed, restructured and documented. The QM system is subject to a constant improvement process, which is why monitoring audits are carried out at annual intervals.



The certificate for a quality management system according to ISO 9001:2015 was issued by the certification body DVGW. It is important for dreizler® not only to have certified QM system, but the QM system should be brought to life by every member of the dreizler®. This is one of the reasons why, when introducing this new version, we checked all the processes in the team, restructured and documented them from the point of view of our customers and partners.



Advanced solutions and high-quality standards are indispensable for dreizler®. Your satisfaction is our goal.

Certificate on a quality management system according to DIN EN ISO 9001:2015 (November 2015) for „Development, production, sales and maintenance of gas appliances, gas and oil burners according to EN 676/267, ISO 22967/22968 as well as the gas and oil fittings sections, electric wiring and switchgear with electronics.“

Dates

## Gestra Symposium 2019

On the 25<sup>th</sup> February, the Gestra launch again their successful series of lectures in 2019. For the 17<sup>th</sup> time the Gestra invites interested parties to their event.

First-class speakers will give insightful and interesting lectures on the subject „Fittings and devices in steam systems – Innovations and Optimizations 2019“. In the accompanying exhibition there will be an opportunity for expert discussions. dreizler® is also happy to be a partner again this time with the presentation „Reliable compliance with current and future emission requirements“.

The events start at 8:00 a.m. and last until around 15:00 p.m. Participation is free.

Program and registration under [www.gestra.de/akademie/anmeldung-fachtagung.html](http://www.gestra.de/akademie/anmeldung-fachtagung.html)

### Dates 2019

- February 25<sup>th</sup> 2019      Magdeburg
- February 26<sup>th</sup> 2019      Walsrode
- February 27<sup>th</sup> 2019      Lübeck
- February 28<sup>th</sup> 2019      Melle/Osnabrück
- April 1<sup>st</sup> 2019              Schweinfurt
- April 2<sup>nd</sup> 2019              Bad Wörishofen
- April 3<sup>rd</sup> 2019              Neckarsulm
- April 4<sup>th</sup> 2019              Michelfeld
- May 20<sup>th</sup> 2019              Bad Nauheim
- May 21<sup>st</sup> 2019              Gladbeck
- May 22<sup>nd</sup> 2019              Morschen



Vienna / Nîmes / Vojens

## At our neighbours: dreizler® Austria, France and Scandinavia introduce themselves

### dr dreizler® austria



dreizler gmbh

**Helmut Frint**  
Geschäftsführer  
Baslergasse 53-61/2/5  
A-1230 Wien

Tel. +43 660 1138219  
h.frint@dreizler.com

In February 2018 dreizler austria gmbh was established in Vienna. We are very happy that with Mr. Frint we were able to gain an expert with excellent knowledge. Helmut Frint has over 20 years of successful industry experience. In particular, his advanced market knowledge and excellent contacts are intended to position dreizler® sustainably and successfully on the Austrian market.

Together with the dreizler® service bases in Graz and Ried, the Vienna office forms the basis for continuous growth in Austria.

By expanding our sales activities, we are creating more customer proximity and can handle the execution of our projects even more efficiently. The focus will continue to be on the design and expansion of successful cooperation with our partners, the expansion of plant modernization (retrofitting) and further strengthening of competence in the field of special equipment.

We are sure that we have created a long-term and ambitious basis that will be beneficial and profitable for our customers and partners.

### dr dreizler® france



**Antonio Rodrigues**  
Direction générale

Tel. +33 4 66 67 52 95  
GSM +33 7 87 81 70 13  
a.rodrigues@dreizler.com

32 rue  
Robert Mallet Stevens  
Bât D, Etage 1  
30900 Nîmes

dreizler® will further expand their position as manufacturer of marathon® gas and combi burners in the power range up to 44 MW in Europe. The choice of a new branch in France is obvious to us: There are already a large number of French customers and successful partnerships with the companies LTS, VIF; ENGIE, PSA and others. The head office of dreizler® france is located in Nîmes in Languedoc-Roussillon. The management and sales will be handled by Mr. Antonio Rodrigues, who, as a sales engineer, has excellent knowledge

and experience in the field of industrial heating equipment.

dreizler® france is responsible for the distribution of burners and spare parts, provides technical support for our French customers and will be able to offer turnkey solutions.

The trading area covers France, Portugal and French-speaking Africa.

With the new office in France we would like to expand our offer for you and provide technical and commercial solutions according to your requirements.

### dr dreizler® in Scandinavia



**Tom Branick Juhl**  
Regional Sales  
and Technical Manager

DK-6500 Vojens

T.Juhl@dreizler.com  
Mobile + 45 4046 4593

Together with our experienced partner Tom Juhl, we have decided to be closer to our customers in Denmark and the Nordic region in future. Team members are our competent partners in Denmark: Michael Hansen carries out turnkey assemblies and services ([www.energy-solutions.dk](http://www.energy-solutions.dk)); Lars Schmidt is responsible for control cabinet construction, control and commissioning(<http://ls-energiteknik.dk>).

The versatile performance spectrum of dreizler® in Scandinavia includes consulting, sales and service for district heating and industry, modernization of burners and controls, sales and design for OEM customers, supply of spare parts and technical support. In cooperation with qualified dreizler® service partners, we also offer service and maintenance of gas and oil burners, assembly and project work.

Spaichingen / Rottweil

## High up with strong partners

A successful premiere took place on June 2018 in the test tower thyssenkrupp in Rottweil. For the first time, the dreizler® technical seminar took place in Germany's highest conference rooms.

More than 30 invited experts from the industry took the opportunity not only to further education and lively technical discussions, but also enjoyed the breathtaking views at 232 m altitude with views of Black Forest, Lake Constance and the Swabian Alb.

Nevertheless, our speakers and guest speakers succeeded in inspiring the

listeners for current topics of the energy transition, LOW NO<sub>x</sub> combustion and best-practice examples with marathon® burners.

Due to the consistently positive response, our seminar with new topics will take place again in Thyssen tower in 2019.

