

# ROMFIL

evoflow crossflow filtration



# ROMFIL

## Quality made in Germany

We are pleased that our products have piqued your interest. On the following pages you have the opportunity to find out more about us and our systems.

The founders of the **ROMFIL** Crossflow filtration technology has been dealing with the use of membranes since 1975. Membranes for clarifying wine were tested as early as 1983. The first series filters went into production in 1988. In 1998, the originators of crossflow filtration technology founded the **ROMFIL** GmbH in the middle of the Rheinhessen Tuscany in Wolfsheim.

In collaboration with customers and oenologists from well-known national and international institutions, we are constantly developing and improving our systems and facilities. We are proud that the **ROMFIL** Crossflow filtration technology is one of the most gentle filtration methods available, especially for wine.

**ROMFIL** Crossflow filtration stands for quality and precision in manufacturing and processing. We want our customers to be able to make their everyday work as pleasant as possible with our products. Some customers even call this "feel-good filtration". We are happy about this compliment and thank you.

With us, quality craftsmanship and perfect service are in one hand.

**ROMFIL** Crossflow filtration is "Made in Germany". For us this means: project planning, planning, design, programming and manufacturing of all systems in Germany.

Find out more about Romfil, our technology and products! We cordially invite you to do so.

# DIEROMFILCROSSFLOWFILTRATION

Conventional static filtration processes - such as layer filtration or filtration with diatomaceous earth - work to clarify liquids with filter plates or sediments between the trub and clear sides. All of these variants are discontinuous processes. The filter media is used up after a certain number of filtrations and must be replaced and later disposed of. In addition, final filtration candles are always necessary for fine or clear filtration.

With the **ROMFIL** Crossflow filtration technology avoids the disadvantages of the traditional static filtration method. You work comfortably, cost-efficiently and sustainably. You produce less waste and save energy, working time and manpower.

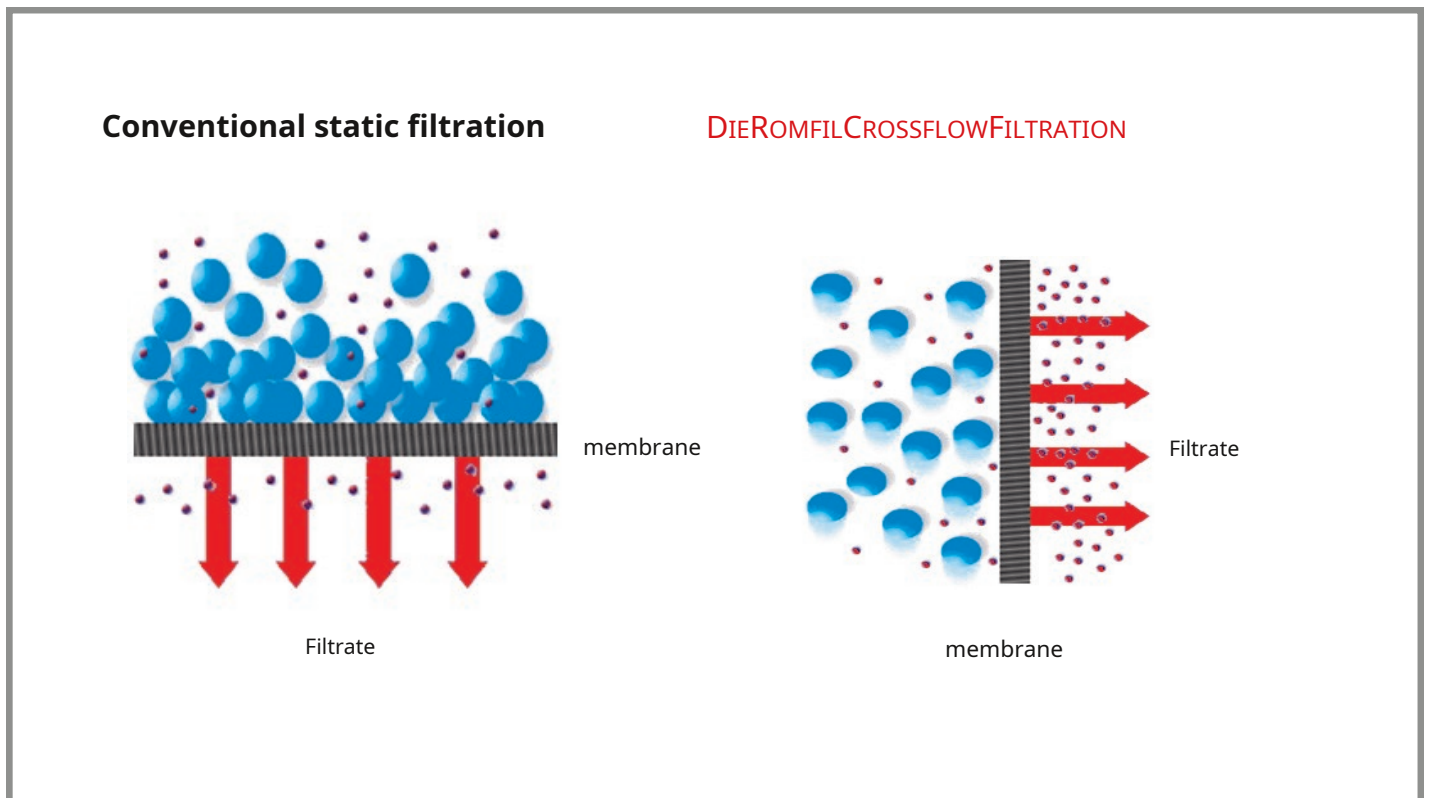
What makes the difference?

At the **ROMFIL** With crossflow filtration, the liquid flow is not directed against the membrane, but rather along it. The porous surface of this hollow fiber membrane allows the filtrate to escape gently. In addition, a controlled, gentle and

efficient backwashing with the filtrate during the filtration process. This prevents, among other things, any blocking.

The filtration with the **ROMFIL** Crossflow filtration technology enables a longer service life for your system. In addition, you work with a neutral filter medium.

There is no need to mix the filtrate with filter aids. Time and costs are saved. Another plus point **ROMFIL** Crossflow filtration system is a significantly lower filtration loss compared to traditional filtration methods.



Schematic comparison between conventional and **ROMFIL** Crossflow filtration



# DIEROMFILEVOFLOWFILTRATION SYSTEMSRCF

TheROMFILCrossflow filtration systems RCF have always impressed with their performance, efficiency and protection of the filtrate.

In times of constantly rising energy prices, we are pleased to be able to say to our customers: With the new technologyEvoflow Crossflow Filtration Systems RCFIt is now possible to work even more energy-efficiently, more quietly and in a more environmentally friendly way. Production costs are thus further reduced.

TheROMFILThe typical protection of the filtrate - which is particularly important when filtering wine - has been further improved.

As one of the few manufacturers of crossflow filtration systemsROMFILCrossflow filtration systems compliant with EU Regulation 10/2011 on materials and objects intended to come into contact with food.

Depending on their wishes and needs, our customers choose from different modelsROMFILEvoflow filtration systems. Even from the entry-level model with one or two modules, everyone isROMFILCrossflow filtration systems come standard with an automatic

equipped with a low quantity switch-off. With our RCF Basic systems, we offer a cost-effective entry-level version of crossflow filtration. Basic systems are equipped with Evoflux modules as standard and have everything you need for crossflow filtration.

All other RCF systems have a wider range of technical features (ROMFILEvoflush - automatic backwash). They offer the option of a wide range of equipment variants - depending on customer requirements - up to fully automatic filtration.

Fully automaticROMFILCrossflow filtration systems RCFA (from four modules) automatically start with water rinsing or - optionally - with chemical cleaning after a low quantity shutdown. They then automatically return to filtration mode. They are particularly interesting for large wineries and wineries, as RCF A systems can run unobserved for long periods of time.



# THE STRENGTHENING OF RCF ON ONE CLICK



## Ease of use

A new generation of touch-sensitive monitors (touch panels) enables simple and intuitive operation. Individual design options and the clarity of the user interface make the work easier. ROMFIL Filtration systems uncomplicated.



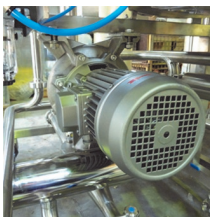
## High workmanship quality

All materials we use are subject to the highest standards. The same applies to our own workmanship quality. Our goal is to provide our customers with an almost perfect product. We hope our joy in quality and precision is transferred to our customers and their work.



## Economics

The well-thought-out design of our filtration systems and advanced pumps enable particularly low power consumption. Energy costs are reduced.



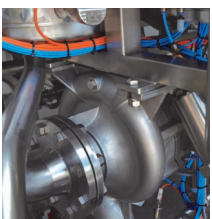
## Ease of maintenance

Our systems are designed and built in such a way that their components are uncomplicated and easy to change and maintain. Wear parts such as mechanical seals and pump bearings can be quickly replaced. This saves our customers time and money.



## service

We offer our customers the option of a free service check-up once a year. One of our employees or cooperation partners checks the filtration system at the customer's site. The associated journey is also free of charge. Only if repair services are necessary will these be invoiced.



## Compact design

Thanks to the well-thought-out compact design, our filters are space-saving and easy to move. ROMFIL Systems can be accommodated even in the smallest basement. They are mounted on very robust stainless steel wheels with plastic plain bearings. The weight of the systems is kept as low as possible. In this way, we guarantee our customers a high level of flexibility and full use of their work space.



## ergonomics

To ensure an orderly hose route, our systems are built so that all connections are on one side. This minimizes the risk of accidents. Hoses are connected in a short time. The filter is ready for use quickly and easily.

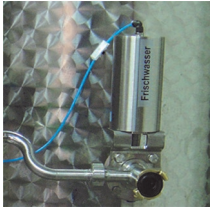
# DIESTRENGTHENING OFRCFON ONEBLICK



## Smart cleaning

Our filters clean themselves with the product during filtration. If necessary, the system can also be rinsed with water. The filtrate does not come into contact with the rinse water.

Due to the intelligent self-cleaning of the filter during filtration operation, the need for cleaning agents is extremely low. Chemical cleaning agents are only used in cases of heavy contamination or long-term preservation. These are tailored to the respective system. This enables the greatest possible cleaning effect while at the same time protecting the filtration system. If chemical cleaning is necessary, our customers can be guided through the entire cleaning process via touch panel (guided cleaning). The ease of use and operating safety are thus increased. The fully automatic ones **ROMFIL** Crossflow filtration systems carry out all the necessary cleaning steps independently. Personnel costs are saved.



## temperature

Advanced pump technology ensures optimal utilization of energy without releasing it into the filtrate. There is practically no product heating.



## volume

Noise protection is not necessary to operate our systems. During filtration operation, the noise level is below 60 db(A). This makes it possible for our customers to have their systems working during actual rest times.



## Respiratory protection

The modern **ROMFIL** Crossflow filtration technology makes respiratory protection unnecessary - in contrast to dusty filter media (kieselguhr).



## flow

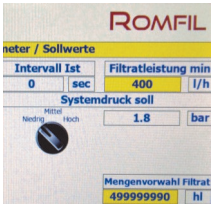
Our particularly optimized routing of the pipes protects the filtrate as best as possible. This is particularly important when filtering wine. Turbulence, which negatively affects the CO<sub>2</sub> concentration, is kept extremely low. The filtration process remains largely stress-free for the wine.



## Visual inspection

Transparent sheets and module housings ensure constant control of the filtrate during the filtration process. Additionally, membrane integrity can be monitored. In the event of damage to an individual membrane fiber, it can be precisely located. The transparent filtrate side of the modules also makes it possible to observe the cleaning reaction.

# DIE STRENGTHENING OF RCF ON ONE CLICK



## Filtration dynamics

The adjustable filtration dynamics offer the possibility ROMFIL Crossflow filtration systems can be individually adjusted to the respective filtrate. This makes it possible to achieve a balance between protection and performance, even with wine that is difficult to filter.



## Inductive flow meter

With the standard inductive flow meter, it is possible to filter exactly the amount that is desired or required. This is particularly important when our customers produce cuveés, need to decant filtrates or the ROMFIL would like to use a crossflow filtration system for contract filtration.



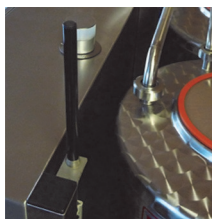
## Complete emptying

ROMFIL Crossflow filtration systems are designed so that they empty completely on a flat surface. The remaining amount remains particularly small. For our smallest filter this is 2.5 liters. Filtration residue can be completely collected and reused. The separate emptying of the trub and clear sides also enables optimal batch separation.

## OPTIONS

ROMFIL Crossflow filtration systems offer numerous equipment options. In this way, our customers have the opportunity to highly individualize their system and adapt it to their requirements.

Here is a small selection:



## SMS option

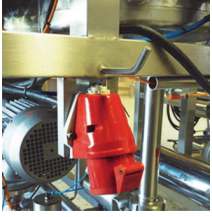
With this option, the filtration system sends a notification (SMS) with filter status messages to a previously set mobile phone.



## VPN option

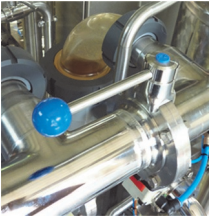
With this option, our customers have the opportunity to carry out the work processes via smartphone, tablet or PC ROMFIL Track and monitor crossflow filtration systems.





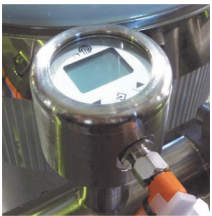
## Vario option

This option makes it possible to use an external feed pump via the **ROMFIL** Control the filtration system. The filter can either be operated directly from the tank or via a feed pump.



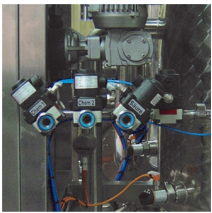
## Module shutdown option

By manually or automatically (depending on your wishes) reducing the modules, the remaining amount can be kept as low as possible or even smaller amounts can be filtered.



## Turbidity monitor option

The turbidity monitor is an additional safety option. It constantly measures the turbidity of the filtered product. If a preselected limit value is exceeded, it switches **ROMFIL** Crossflow filtration system switches off automatically.



## Automatic detergent dosage option

With fully automatic **ROMFIL** In crossflow filtration systems, the dosage of the cleaning agent can be completely controlled by the system. In conjunction with automatic tank cleaning (CIP), the system cleans itself completely independently. This equipment variant is standard from the RCF8 A.



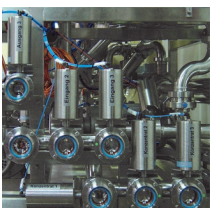
## Forklift pockets option

Below the **ROMFIL** Two guide pockets are attached to the crossflow filtration system. The system can be easily and safely transported with a forklift.



## Compressor option

This option comes into play when at the location of the **ROMFIL** Filtration system no air pressure connection is available. A compressor is integrated into the system. An additional advantage of this option is the higher mobile usage of the filter.



## Tank management option

The fully automatic ones **ROMFIL** Crossflow filtration systems offer the possibility of connecting several tanks to one filtration system. The filter works independently tank by tank. This means the system can run independently - even during the night. In addition, there is no need for unpleasant and time-consuming repositioning and connecting of the hoses.

## DAS EVOFLUX MODUL



The ROMFIL RCF filtration systems are equipped with our Evoflux modules as standard.

ROMFIL Evoflux modules are temperature resistant up to 70° Celsius. We use proven polypropylene for the membrane fibers. The Evoflux module makes it possible to carry out the cleaning process at significantly higher temperatures. Costs can be reduced in this way.

Filtration becomes more environmentally friendly and cost-effective because fewer cleaning agents are used. In addition, our customers have the opportunity to choose from different module variants.

## DIE POSSIBLE APPLICATIONS & THE MATERIAL

ROMFIL Crossflow filtration systems were originally designed for the gentle filtration of wine. Liquids are now filtered in this way in many other areas. Some examples of this are:

- Domestic water
- Distillates
- Iced tea
- Vinegar
- river water
- fruit juice
- fruit wines
- Met
- Mineral water
- Must
- Pharmaceutical products
- Spirits
- Sweetener solutions
- Drinking water

Our customers have high demands on their product. Us too.

For this reason, our systems are subject to the strictest regulations and quality requirements. We only use high-quality stainless steel as a raw material to manufacture our systems. We have also thought about little things that will make everyday working life pleasant in the long term. For example, the systems are mounted on stainless steel wheels with plastic plain bearings. This means they can be moved easily for many years.

Our modules are specifically for that ROMFIL GmbH developed and manufactured. The quality of our systems guarantees you safety and reliable and efficient work.

# AUTOMATIZATION AND CUSTOMIZATION

Each of our **ROMFIL** Crossflow filtration systems are unique. Our systems are built on a basic device according to individual customer requirements. This ensures that you get exactly the device you really need. You choose how strong yours **ROMFIL** Crossflow filtration system is automated and individualized.

Do you have requirements that are not covered in our options? Then contact us! If your wishes can be realized, we will be happy to implement them for you.



# SERVICE

Reliable and professional service as well as perfect service are extremely important to us.

It is important to us that you always reach the right contact person. We are happy to do without call centers and voice computers.

We always strive to be able to react quickly and easily. For this reason, we have all the necessary wear and spare parts in stock.

Our customers receive one when they purchase **ROMFIL** Crossflow filtration system includes personal instruction on your device, including detailed documentation for the system, an operating manual and a service booklet. The annual service check-ups are documented in the service booklet.

We would be happy to offer you the opportunity to test our devices. We would be happy to provide you with one **ROMFIL** Crossflow filtration system available.

You can convince yourself of the performance and advantages of our systems in the peace and quiet of your working environment.



## Profit for your product

Thanks to consistent development work on crossflow filtration technology, we have managed to create our most gentle filters to date **ROMFIL**. Bringing crossflow filtration systems onto the market. We are constantly working to further develop our systems so that your product is handled as carefully as possible.

## Almost no CO<sub>2</sub> Loss

The optimal flow to the pipes and modules as well as the special design of the connection adapters result in negligible CO<sub>2</sub> Loss in the filtration of wine. His natural concentration remains practically constant.

## Almost no increase in temperature

By combining frequency-controlled feed pumps and low-speed recirculation pumps, we avoid the input of unneeded energy.

## Minimum remaining quantity

**ROMFIL** Thanks to their well-thought-out design, crossflow filtration systems enable almost waste-free work and an extremely small amount of residue.

## No loss of color or aroma

A membrane fiber specially developed for wine in our **ROMFIL** Modulen ensures that the natural colors and flavors in the wine are not damaged or removed.

## Stability and fermentation

The **ROMFIL** Crossflow filtration ensures early microbiological stabilization. Once filtered, there is no secondary fermentation if stored properly.

## Profit for you

We value close cooperation with our customers. This means we can access a very large and diverse range of experience. We are happy to incorporate this knowledge, coupled with the latest findings from science and technology, into the development of our products.

## Not a second time

With the **ROMFIL** Crossflow filtration technology allows you to filter only once for a perfect result. You do not need any prior clarification. Additional filter aids are not necessary. You filter in one operation.

## No additional staff

The largely automated process saves you personnel costs.

## Hardly any surveillance

Thanks to our sophisticated safety features **ROMFIL** Crossflow filtration systems require only minimal personnel supervision.

## Final filter

Through **ROMFIL** Crossflow filtration systems allow you to significantly extend the final filter service life.

## No disposal effort

There is no need to dispose of filter materials and filter aids.



## ROMFIL Flotation systems RFS

ROMFIL Flotation systems are used to clarify liquids such as water or must. RFS flotation systems are also ideal for problem musts (rotten grapes, botrytis, ice wine, etc.).

Our ROMFIL RFS flotation systems work as standard with an output of 3,000 to 60,000 liters per hour. But higher outputs of several hundred thousand liters per hour can also be achieved. Depending on customer requirements, different levels of automation are available.

Even with our ROMFIL flotation systems, we have thought about user-friendliness. They are mounted on a mobile, robust stainless steel frame and are particularly low-maintenance. Thanks to their surface quality and well-thought-out design, they can be cleaned quickly and easily.



## ROMFIL Gas management systems RGT

The ROMFIL Gas Contactor RGT makes it possible to dose various gases into liquids and to remove them again. For example, the carbon dioxide content can be enriched to give a white wine more freshness. On the other hand, unwanted carbon dioxide can be removed from a red wine. The CO<sub>2</sub> Absorption is possible up to the saturation limit. This process can also be used to evaporate unwanted aromas (e.g. Böckser). In addition, an RGT system offers the possibility of removing oxygen to prevent premature oxidation of the medium.

The ROMFIL Gas Contactor does not produce large gas bubbles when dosing gases, but instead diffuses the gases into the medium without pressure at a microscopic level. This makes precise dosage in the end product possible.

The heart of our system is the RGT module made of thousands of highly porous, interwoven polypropylene fibers. This resulting membrane ensures the exchange of gases and other substances. The RGT module is held by a robust stainless steel frame. Romfil Gas Contactors can be easily transported thanks to acid- and alkali-resistant wheels.

ROMFIL Gas contactors are available in different levels of automation.



## ROMFIL Ozone generator BOZ

The ROMFIL Ozone generator BOZ ensures efficient, fast, safe and cost-effective sterilization. Ozone ( $O_3$ ) is one of the most suitable sterilizing agents available. It is obtained from the existing oxygen in the air and is therefore available everywhere.

After a short production phase, the generator enriches the available drinking water with ozone. This is then fed to the sterilizer/rinser. This means that bottles are sterilized in just one pass before filling. No further follow-up treatment is necessary, which saves time and money.

In addition, the ROMFIL Ozone generator has the ability to remove unwanted manganese or iron from water. These elements oxidize through ozonation. They can then be extracted using appropriate filters.

Of course, the safety of the operator is always guaranteed. Excess ozone is destroyed immediately and becomes completely harmless oxygen ( $O_2$ ) decomposes. No problematic wastewater is created that would have to be disposed of.

ROMFIL Ozone generators are maintenance-free and compact.



## ROMFIL Steam generator RDZ 50

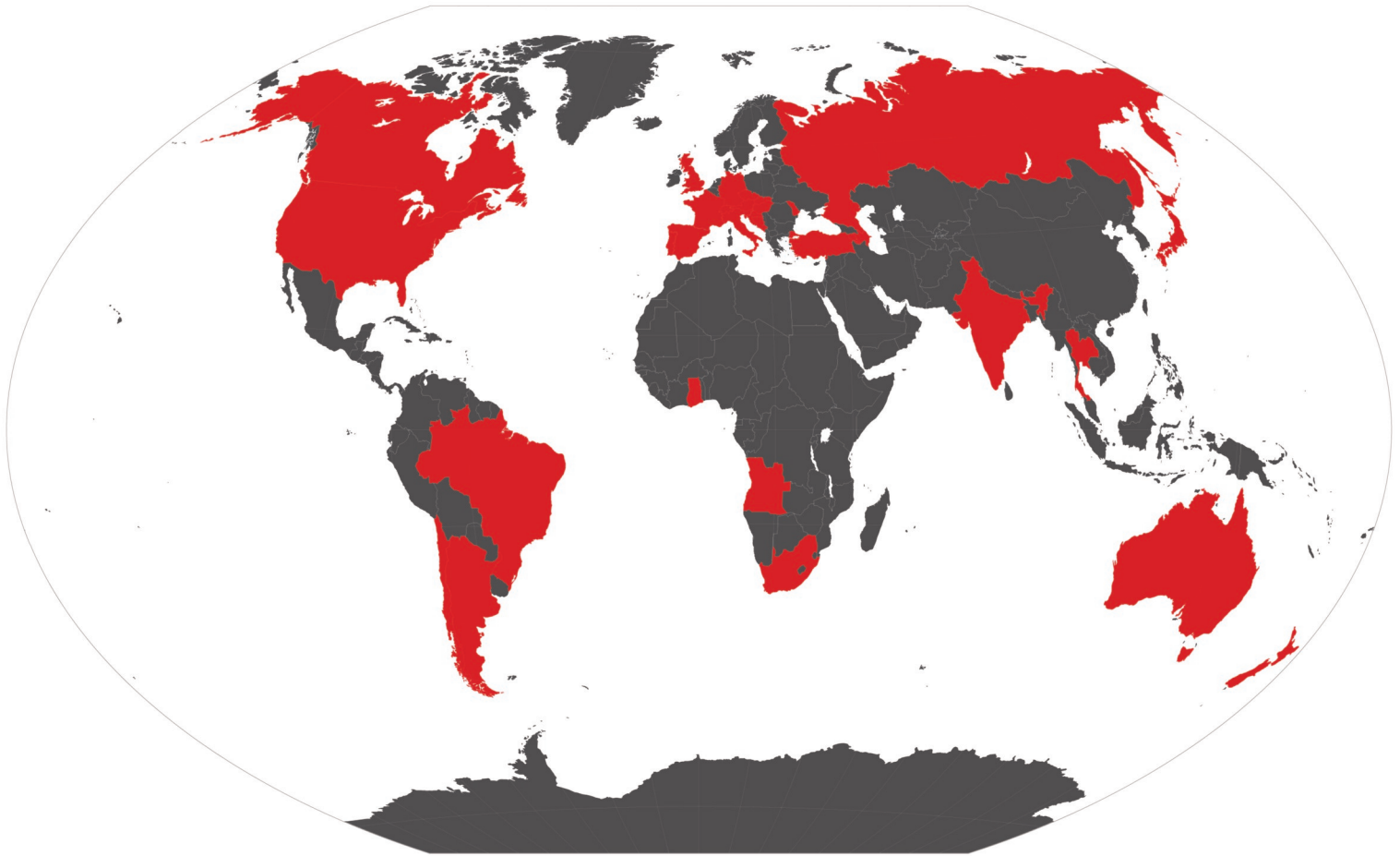
The ROMFIL Steam generator RDZ 50 is used for steaming and cleaning systems and tanks.

In addition, it can also be optionally upgraded with our pump system and thus serve as a hot water source. This also makes it possible to connect the RDZ 50 to a heating coil, a cooling plate or a tank double jacket in order to gently heat liquids or cause mash to ferment. Initiating a second fermentation of wine is of course also possible.

Our damper is mounted on rollers and is of course built to be compact and space-saving. Its function and design give more flexibility in use.



# A USWOLFSHEIM TO THE WHOLEWELT



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Chile  
Germany  
England  
France

Ghana  
India  
Israel  
Italy  
Japan  
Canada  
Kosovo  
Croatia  
Macedonia

Moldova  
Montenegro  
New Zealand  
Austria  
Portugal  
Russia  
Switzerland  
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Slovenia  
Spain  
South Africa  
Thailand  
Czech Republic  
Türkiye  
Ukraine  
Hungary  
USA

**WIR HOPE, WE HAVE YOU'RE CURIOUS ABOUT OURS PRODUCTS MADE.  
SPREACHS CONTACT US! W We're happy about it I HEAR A NUMBER  
OR I HRE E.MAIL.**

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