

# CATALOGUE *LiquoSystems*

2022 – 2024



**EVERYTHING YOU NEED FOR TANK  
COOLING AND FERMENTATION CONTROL  
WITH THAT LITTLE BIT EXTRA  
TO ENSURE YOUR SUCCESS**

# #LIFEBLOOD

# #BRAND QUALITY

# #SUCCESS



**Dear readers,** ever since our foundation in 1995 we have been grappling with just a single question on a daily basis: how can we make our products even better for you? We regularly find answers to this, our central question. Our entire lifeblood goes into the development of our products in the area of professional tank cooling and optimal fermentation control. We manufacture our devices exclusively in Germany, which then serve our customers as they seek to build upon their successes in their wine cellars or breweries. Wineries, wine producers, wine and fruit growers, winemaking cooperatives and beer brewers all rely on our quality brand, made right here in Kirchheim. We are the benchmark by which small and medium-sized businesses are measured. Within the industry, our fermentation cooling devices from the AquaZero series have become must-have tools within a cellar environment.

Are you looking for a reliable partner in the field of beer, mash, lager, wine and fermentation tank cooling? Give us a call now. We would be happy to provide a non-binding consultation. You are guaranteed access to the highest level of expertise and the highest standard of quality in cooling and control technology for wine cellars and breweries!

Warm regards,  
Stephan Wieland  
CEO

A handwritten signature in black ink, appearing to read 'S. Wieland', written on a light gray background.



- Expertise since 1995
- All products produced in Germany
- The benchmark in tank cooling & temperature control
- 25,000 systems sold
- Continuous further development
- Wide range of accessories

**More online: [liquosystems.de](https://liquosystems.de)**



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# 1 COOLING DEVICES

AquaZero, AquaSnap



# REASONS TO CHOOSE AN AquaZero COOLING DEVICE

## HOW AN AIR/WATER COOLING DEVICE WORKS

The AquaZero air/water cooling device with integrated buffer tank and circulation pump extracts heat energy from the cooling carrier medium (water) via a refrigerant circuit with a compressor, and thus cools the water in a water circuit, via which this cooling energy is transported to the individual tanks or heat exchangers. For the cooling process, the extracted heat energy is discharged into the surrounding air via a fan.

## FUNCTIONAL CONSTRUCTION

As standard, the AquaZero is fitted with a circulation pump, an integrated buffer tank, floating switches for the water shortage pre-alarm, a bypass, a manometer, a dirt trap, a drainage cock that leads to outside, combined fault lamps, a control display with status and error messages, contact terminals for external release, and a connection cable with a power connector.

Control display,  
water shortage pre-alarm,  
large combined fault lamp,  
external remote release,  
connection cable with  
connector

Fill level tube, dirt trap in the  
inlet, external drainage cock,  
outlet temperature min. -5°C

Buffer tank bypass  
with manometer  
circulation pump



MORE ON  
THIS ONLINE

# A SOLUTION FOR EVERY REQUIREMENT

## The devices save space and assembly time

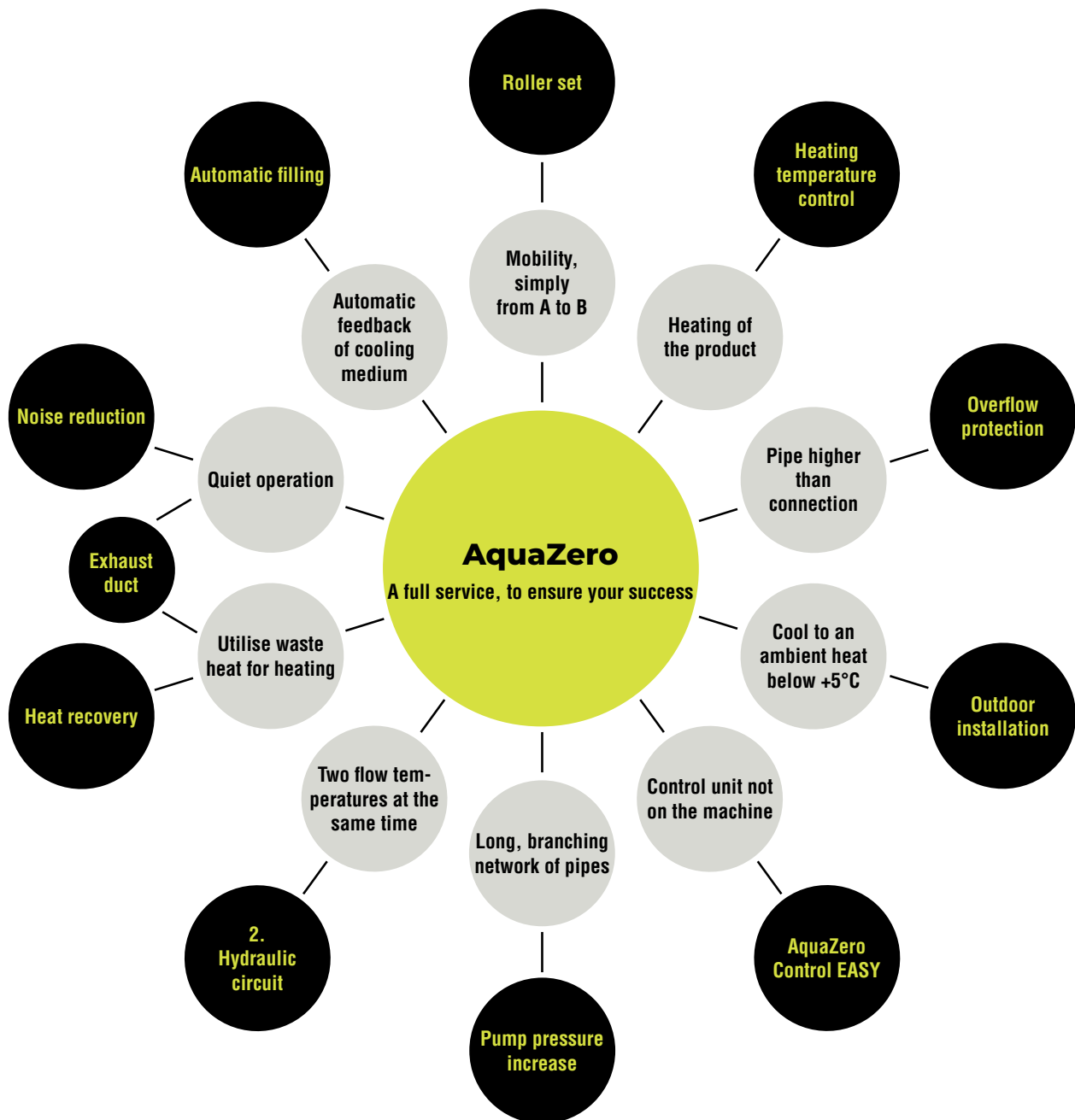
The robust, modular system of the AquaZero offers a wide range of functions in the field of process chilling for industry. Standardisation via the simple configuration of a 0.8 – 500 kW cooling capacity.

## Simple installation and maintenance

The compact and complete refrigerant circuit is installed inside the device. Cooling water line connections for the supply and return flow are easily accessible from the outside.

## Hydraulic components:

- Circulation pump
- Bypass with manometer
- Buffer tank
- Dirt trap at the inlet
- External drain cock







### THE MAJOR BENEFIT

- External remote release
- Water shortage pre-alarm
- Bypass and manometer
- Dirt trap in the inlet
- Large combined fault lamp
- Connection cable with connector
- Min. outlet temperature -5°C

**Convenience included**



# AquaZero

0.8 kW - 70 kW

The AquaZero cooling devices, equipped with a water tank and circulation pump, are designed for an open cooling circuit system. The cooling devices are characterised by exceptional reliability, long product life, and a compact construction.

The carefully designed construction is very easy to maintain. Every cooling device is ready to connect, and has been checked with regard to function and performance.



**UNPACK - CONNECT -  
SWITCH ON**



## FEATURES INCLUDED IN ALL DEVICES AS STANDARD:

- Min. outlet temperature of -5°C
- 4-metre connection cable with connector
- Bypass incl. manometer integrated into the device
- Dirt trap installed at the water inlet
- Floating switch installed for water shortage pre-alarm
- Digital display with fault and operating notifications
- External remote release possible via Nano Terminal
- Evaporator: smooth copper coil
- MicroGroove condenser, dirt-resistant (no filter required)
- Many options configurable and already installed, e.g. overflow protection

| TYPE            | COOLING CAPACITY | DIMENSIONS           | WEIGHT  | CODE      |
|-----------------|------------------|----------------------|---------|-----------|
| AquaZero 00.65  | 00.80 kW         | H345 x L565 x D440   | 50 kg   | KGS_19006 |
| AquaZero 01.00  | 01.20 kW         | H450 x L750 x D450   | 90 kg   | KGS_19010 |
| AquaZero 01.40  | 01.60 kW         | H450 x L750 x D450   | 90 kg   | KGS_19014 |
| AquaZero 01.70  | 02.00 kW         | H450 x L750 x D450   | 90 kg   | KGS_19017 |
| AquaZero 02.70  | 03.00 kW         | H470 x L1000 x D520  | 150 kg  | KGS_19027 |
| AquaZero 03.50  | 04.00 kW         | H470 x L1000 x D520  | 160 kg  | KGS_19035 |
| AquaZero 05.00  | 05.80 kW         | H570 x L1000 x D520  | 160 kg  | KGS_19050 |
| AquaZero 05.80  | 06.50 kW         | H570 x L1000 x D520  | 180 kg  | KGS_19058 |
| AquaZero 06.00  | 06.90 kW         | H1220 x L720 x D670  | 140 kg  | KGS_19060 |
| AquaZero 06,.50 | 07.70 kW         | H1220 x L720 x D670  | 175 kg  | KGS_19065 |
| AquaZero 10.50  | 12.00 kW         | H1600 x L880 x D750  | 250 kg  | KGS_19105 |
| AquaZero 13.50  | 15.00 kW         | H1600 x L880 x D750  | 260 kg  | KGS_19135 |
| AquaZero 16.50  | 21.00 kW         | H1970 x L1450 x D900 | 500 kg  | KGS_19165 |
| AquaZero 19.00  | 25.00 kW         | H1970 x L1650 x D900 | 460 kg  | KGS_19190 |
| AquaZero 22.00  | 30.00 kW         | H1970 x L1650 x D900 | 470 kg  | KGS_19220 |
| AquaZero 27.00  | 35.00 kW         | H1970 x L1650 x D900 | 540 kg  | KGS_19270 |
| AquaZero 32.00  | 42.00 kW         | H1970 x L2600 x D900 | 470 kg  | KGS_19320 |
| AquaZero 38.00  | 50.00 kW         | H1970 x L2600 x D900 | 900 kg  | KGS_19380 |
| AquaZero 50.00  | 64.00 kW         | H1970 x L2600 x D900 | 1000 kg | KGS_19500 |
| AquaZero 54.00  | 70.00 kW         | H1970 x L2600 x D900 | 1150 kg | KGS_19540 |

Cooling capacity at +15°C outlet temperature and +20°C inlet temperature, as well as +32°C ambient temperature





# Wide product range to cover your needs

## Made-to-stock cooling devices

25 pre-fabricated cooling devices, directly available from stock, with fast delivery:

### 2 versions:

- Basic version up to 15 kW + Overflow protection + Roller set
- Basic version from 15 kW + Overflow protection + Outdoor installation
- Wide range of functions integrated as standard



| TYPE           | CODE      |
|----------------|-----------|
| AquaZero 00.65 | KGS_19006 |

## Made-to-order cooling devices

Fully tailored cooling devices for maximum flexibility. Thanks to a wide range of options, the configuration possibilities are almost endless:

### 3 versions:

- Basic version (air-cooled), water-cooled and AquaZero in combination with heat exchanger
- Available from AquaZero 21 kW heat recovery
- From AquaZero 21 kW with two separate hydraulics circuits
- Expanded output range up to 500 kW
- Wide range of functions integrated as standard
- Trouble-free design with cooling performance calculator: [www.liquosystems.de](http://www.liquosystems.de)



| TYPE           | CODE      |
|----------------|-----------|
| AquaZero 02.70 | KGS_19027 |
| AquaZero 03.50 | KGS_19035 |



| TYPE            | CODE      |
|-----------------|-----------|
| AquaZero 06.00  | KGS_19060 |
| AquaZero 06,.50 | KGS_19065 |



| TYPE           | CODE      |
|----------------|-----------|
| AquaZero 10.50 | KGS_19105 |
| AquaZero 13.50 | KGS_19135 |



| TYPE           | CODE      |
|----------------|-----------|
| AquaZero 01.00 | KGS_19010 |
| AquaZero 01.40 | KGS_19014 |
| AquaZero 01.70 | KGS_19017 |



| TYPE           | CODE      |
|----------------|-----------|
| AquaZero 05.00 | KGS_19050 |
| AquaZero 05.80 | KGS_19058 |



| TYPE           | CODE      |
|----------------|-----------|
| AquaZero 16.50 | KGS_19165 |
| AquaZero 19.00 | KGS_19190 |
| AquaZero 22.00 | KGS_19220 |
| AquaZero 27.00 | KGS_19270 |

# AquaZero Accessories



## WALL CONSOLE

For sound-insulated wall mounting of AquaZero series up to type 05.80.

| TYPE         | CODE     |
|--------------|----------|
| Wall console | 4ME00847 |

## TECHNICAL SPECIFICATIONS

|           |                   |
|-----------|-------------------|
| Material  | Steel, galvanised |
| Max. load | 250 kg            |



## GLYCOL MIXTURE 34%

Available in one container size. 25-litre canister. The prepared glycol mixture can be immediately added to the circulation system.

| TYPE              | CODE       |
|-------------------|------------|
| 25-litre canister | HKL_Gly_25 |



**Compact and reliable:  
Technology made in Germany**

| TYPE  | CODE       |
|---|------------|
| AquaZero roller set, up to 05.80 kW                 | KGS_19Z001 |
| AquaZero roller set, from 06.00 kW                  | KGS_19Z002 |
| AquaZero roller set, from 16.50 kW                  | KGS_19Z003 |
| AquaZero roller set, from 22.00 kW                  | KGS_19Z004 |
| AquaZero overflow protection up to 06.50 kW         | KGS_19Z006 |
| AquaZero overflow protection from 10.50 kW          | KGS_19Z007 |
| AquaZero overflow protection from 22.00 kW          | KGS_19Z008 |
| AquaZero heating temperature control up to 05.00 kW | KGS_19Z011 |
| AquaZero heating temperature control from 05.80 kW  | KGS_19Z012 |
| AquaZero heating temperature control from 10.50 kW  | KGS_19Z013 |
| AquaZero heating temperature control from 22.00 kW  | KGS_19Z014 |
| AquaZero outdoor installation up to 02.70 kW        | KGS_19Z021 |
| AquaZero outdoor installation from 03.50 kW         | KGS_19Z022 |
| AquaZero outdoor installation from 06.00 kW         | KGS_19Z023 |
| AquaZero outdoor installation from 10.50 kW         | KGS_19Z024 |
| AquaZero outdoor installation from 32.00 kW         | KGS_19Z025 |
| AquaZero pump pressure up to 5.80 kW                | KGS_19Z031 |
| AquaZero pump pressure from 6.00 kW                 | KGS_19Z032 |
| AquaZero pump pressure from 22.00 kW                | KGS_19Z033 |
| AquaZero automatic filling                          | KGS_19Z042 |
| 2. AquaZero circuit from 16.50 kW                   | KGS_19Z053 |
| 2. AquaZero circuit from 22.00 kW                   | KGS_19Z054 |
| AquaZero Control EASY I External                    | KGS_19Z065 |

# AquaSnap and AquaSnap PLUS

16 kW - 41 kW



This generation of cooling devices offers the latest technical innovations, such as an integrated hydronics module with a pump and expansion tank. As such the required installation and simple tasks such as the connection of the power supply and the water feed and return lines are limited. The device includes one or two two-level axial fans, with a horizontal air outlet for exceptional quiet operation.

## TECHNICAL SPECIFICATIONS

|   |  |
|---|--|
| Power supply<br>V-Ph-Hz                 | 400-3-50   |
| Water inlet/outlet<br>connection        | 1-1/4 inch / 1 inch<br>(16, 21 kW)<br>1-1/4-inch internal thread |
| S1 feed line                            | +7°C   |
| S2 feed line                            | configurable when ordering                                       |
| Permitted external<br>temperature range | -10°C to +45°C   |
| Housing                                 | painted steel plates   |



**MINIMUM FLOW  
TEMPERATURE: -8°C**

| COOLING QUANTITY | COOLING CAPACITY | DIMENSIONS           | WEIGHT | CODE       |
|------------------|------------------|----------------------|--------|------------|
| 544 hl           | 16.5 kW          | H1579 x L1136 x D522 | 189 kg | KGS_0018_C |
| 712 hl           | 21.6 kW          | H1579 x L1136 x D522 | 208 kg | KGS_0022_C |
| 910 hl           | 27.6 kW          | H1790 x L995 x D760  | 255 kg | KGS_0026_C |
| 1,108 hl         | 33.6 kW          | H1790 x L995 x D760  | 280 kg | KGS_0032_C |
| 1,365 hl         | 41.4 kW          | H1790 x L995 x D760  | 291 kg | KGS_0040_C |

Cooling capacity at +7°C flow temperature and +12°C return temperature, and an external air temperature of +35°C

## AquaSnap PLUS - Cooling device with heat pump

| COOLING QUANTITY | COOLING CAPACITY | DIMENSIONS           | WEIGHT | CODE        |
|------------------|------------------|----------------------|--------|-------------|
| 527 hl           | 16.0 / 17.0 kW   | H1579 x L1136 x D559 | 206 kg | KGS_W1017_C |
| 666 hl           | 20.2 / 21.7 kW   | H1579 x L1136 x D559 | 223 kg | KGS_W1021_C |
| 913 hl           | 27.7 / 29.9 kW   | H1790 x L995 x D760  | 280 kg | KGS_W1026_C |
| 1,078 hl         | 32.7 / 33.3 kW   | H1790 x L995 x D760  | 295 kg | KGS_W1033_C |
| 1,312 hl         | 39.8 / 40.9 kW   | H1790 x L995 x D760  | 305 kg | KGS_W1034_C |

Heat output: Water inlet/outlet temperature +40°C/+45°C and +7°C ambient temperature

**MORE ON  
THIS ONLINE**







AquaSnap Control PLUS [control unit], integrated

## AquaSnap

39 kW - 80 kW

The Carrier AquaSnap liquid cooler series is available for immediate delivery with the R-32 refrigerant.

Carrier, a globally leading manufacturer of ultra-modern air-conditioning, cooling and heating solutions, is a company belonging to the Carrier Global Corporation (NYSE: CARR), a provider of innovative heating, ventilation and air conditioning (HVAC) technology, as well as cooling, fire protection, safety and building automation technology.

The series covers an output range from 40 to 940 kW.

AquaSnap, when used with R-32 refrigerant, fulfils the requirements for a wide range of applications. The series now offers a wider range of operating conditions, can be used with external air temperatures of up to 48 degrees Celsius, and features Carrier's

best technologies, for maximum efficiency under all conditions, including:

- multiple scroll compressors for all load requirements.
- brazed, asymmetrical plate heat exchanger with genuine dual-circuit concept, for high performance under both full and partial load conditions.
- smart energy monitoring function with real-time performance information and energy consumption measurement,
- Greenspeed® intelligence in the premium versions. speed-regulated fans and pumps.

AquaSnap devices are available for immediate delivery with R-32 refrigerant.



**NEW:  
REFRIGERANT R-32**

### TECHNICAL SPECIFICATIONS

|                                      |                            |
|--------------------------------------|----------------------------|
| Power supply                         | V-Ph-Hz 400-3-50           |
| Water inlet/outlet connection        | 2-inch external thread     |
| S1 feed line                         | +7°C                       |
| S2 feed line                         | configurable when ordering |
| Permitted external temperature range | -10°C to +45°C             |
| Housing                              | painted steel plates       |

| COOLING QUANTITY | COOLING CAPACITY | DIMENSIONS            | WEIGHT | CODE       |
|------------------|------------------|-----------------------|--------|------------|
| 1,296 hl         | 39.3 kW          | H1330 x L2050 x D1061 | 488 kg | KGS_0041_C |
| 1,471 hl         | 44.6 kW          | H1330 x L2050 x D1061 | 496 kg | KGS_0045_C |
| 1,712 hl         | 51.9 kW          | H1330 x L2050 x D1061 | 519 kg | KGS_0050_C |
| 1,927 hl         | 58.4 kW          | H1330 x L2050 x D1061 | 531 kg | KGS_0060_C |
| 2,201 hl         | 66.7 kW          | H1330 x L2050 x D1061 | 545 kg | KGS_0070_C |
| 2,593 hl         | 78.6 kW          | H1330 x L2050 x D1061 | 562 kg | KGS_0080_C |

Cooling capacity at +7°C flow temperature and +12°C return temperature, and an external air temperature of +35°C

# AquaSnap and AquaSnap PLUS accessories



## GLYCOL MIXTURE 34%

Available in one container size. 25-litre canister. The prepared glycol mixture can be immediately added to the circulation system.

| TYPE              | CODE       |
|-------------------|------------|
| 25-litre canister | HKL_Gly_25 |



## HYDRAULIC SYSTEM SET

This set includes everything for the assembly of a closed hydraulics circuit. Tailored for the AquaSnap series on page 11.

| TYPE                 | CODE           |
|----------------------|----------------|
| Hydraulic system set | HKL_SET_S_G_SE |



## AQUASNAP CONTROL [CONTROL UNIT]

Simple control unit for AquaSnap cooling devices. Ideal when the device is positioned outside, and you wish to control it from inside.

| TYPE                            | CODE        |
|---------------------------------|-------------|
| AquaSnap Control [control unit] | KGS_F_015_C |



## PAIR OF FLOOR CONSOLES

Ideal for cooling devices, for higher floor clearance. e.g. in case of snow or heavy rain

| TYPE                            | CODE     |
|---------------------------------|----------|
| Pair of floor consoles, 600 mm  | 4ME00840 |
| Pair of floor consoles, 1000 mm | 4ME00841 |

## TECHNICAL SPECIFICATIONS

|                                |                             |
|--------------------------------|-----------------------------|
| Length                         | 600/1000 mm                 |
| Width x Height                 | 220 x 95 mm                 |
| Load-bearing capacity per foot | 600: 474 kg<br>1000: 645 kg |
| Material                       | UB-stabilised rubber        |

## THE MAJOR BENEFIT

- compatible accessories
- all from a single source
- Quality products



**MORE ON  
THIS ONLINE**





Photos: GWF Frankenwein

## RELIABLE COOLING OF 300 TANKS GWF PLACES ITS TRUST IN THE SYSTEMS FROM LiquoSystems

More than 2,100 winemakers, more than 1,200 hectares of vineyard: The Winzergemeinschaft Franken eG (GWF) is one of Germany's six major winegrower's cooperatives. GWF is based in the Lower Franconian town of Kitzingen, in the district of the same name. This community is based across the entire Franconian wine growing region: members cultivate their vineyards in locations ranging from Spessart to

Steigerwald, Saaletal and Tauber Franconia. Founded in 1959, since then top wines have been produced in renowned Franconian locations. The catchment area for prime locations is huge: stretching from Großostheim to Zeil am Main, and from Hammelburg to the Tauber valley. The mild environment and the mineral-rich soils in these regions offer the best conditions for exquisite wines. Alongside the Sil-

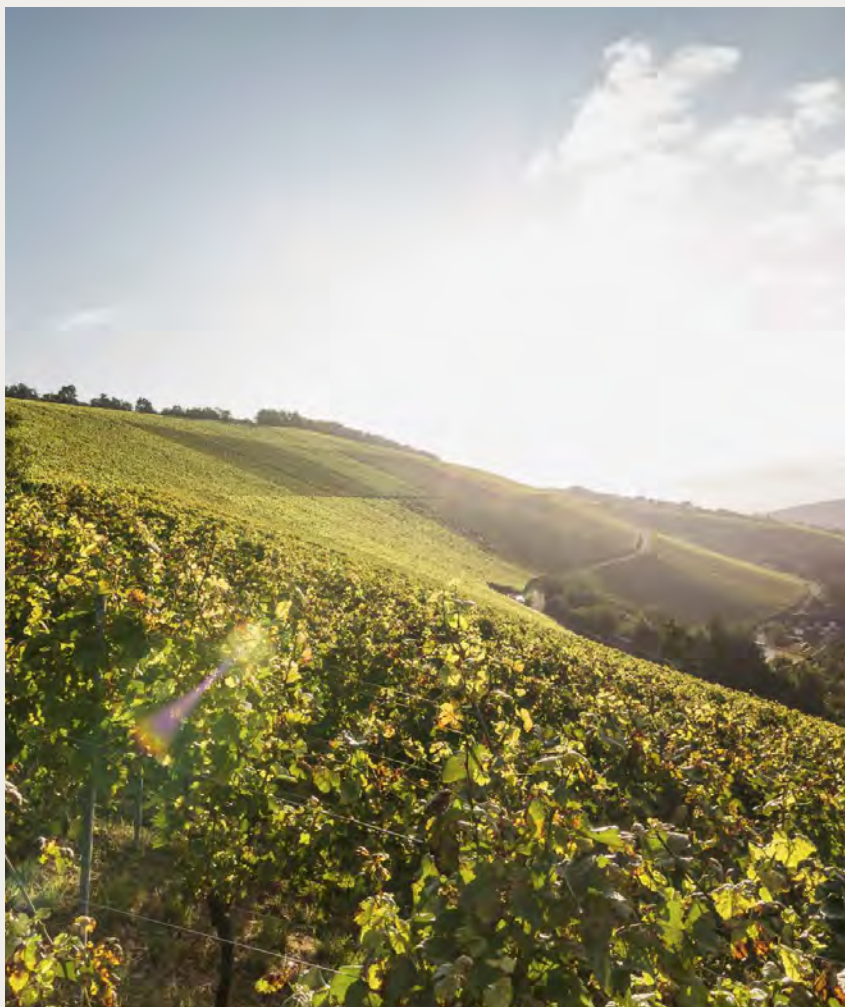
vaner produced in Bocksbeutel, the range of wines includes all common Franconian grape varieties. Each wine region, each individual location, and each winemaker gives the wines their characteristic notes. GWF wines regularly receive awards in numerous national and international wine competitions. Christian Baumann is the first cellar master. He has been on board since 1989, and has been fully entrusted



with family vineyard's wine-growing heritage. Having grown up in a family of wine-growers, even as a child the vineyard was his playground of choice. It is therefore no coincidence that the wine-growing and cellar management technician is still pursuing his great passion as a sideline, and even runs his own vineyard.

"The collaboration with LiquoSystems dates back more than 20 years now," reminisces Christian Baumann. "We put the controlled fermentation cooling of the Nano System from LiquoSystems to very successful use. It is reliable, robust, and well visualised." In terms of both fermentation monitoring and valve control, LiquoSystems is a reliable partner by GWF's side. Cellar master, Christian Baumann, is looking forward to being able to use the most recent version of the cooling control system: "My team can log in at any time using a PC". In the cellar we operate the terminal by means of a touchscreen. We can immediately call up any necessary information with just a few clicks." 300 tanks are equipped with the technology from LiquoSystems. The direct display and adjustment of the fermenting temperature at each individual tank with the Nano Top can also be accessed via the Nano Terminal central control unit and on PC, via the web interface. This provides a complete overview of the fermentation cellar at the click of a mouse.

**The Franconian Wine Country is located at the Main Triangle, and is surrounded by Spessart, the Rhön Mountains, the Steigerwald, and the charming Tauber valley.**



**In the GWF, wine-growers and cellar masters produce really good wines on vineyards spanning around 1,200 hectares - for which they regularly win awards.**



**GWF  
FRANKENWEIN**



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SPACE COOLING

# 2 SPACE COOLING

IdroFan, IdroFlow, IdroStream

## IdroFan



129 m³ - 472 m³

This room air conditioning unit combines attractive design with versatility, and is thus suitable for all application environments, from large rooms or wine cellars, to bottle stores and offices. The device is very slim, and can be mounted anywhere, for instance, on the wall or ceiling, and blends seamlessly into the environment. The room air conditioning unit impresses on account of its simple installation, extremely quiet fans, and low energy consumption. The integrated valve technology saves on laborious installation work, costs, time, and money. Simply connect the flow and returns lines, and you're done.



**SMALL - SPACE - COOLING**

### TECHNICAL SPECIFICATIONS

Power supply  
V-Ph-Hz 230-1-50

Water inlet/outlet  
connection 3/4-inch internal thread

Water inlet  
temperature min. +5°C  
max. +80°C

Application range +5°C to +32°C

Housing Plastic / metal



| SPATIAL VOLUME | COOLING CAPACITY | DIMENSIONS           | WEIGHT | CODE       |
|----------------|------------------|----------------------|--------|------------|
| 115 m³         | 1.3 kW           | H607 x L840 x D252   | 20 kg  | RKT_42N135 |
| 290 m³         | 3.2 kW           | H607 x L1.200 x D252 | 28 kg  | RKT_42N325 |
| 515 m³         | 5.7 kW           | H607 x L1.400 x D252 | 34 kg  | RKT_42N435 |
| 720 m³         | 8.0 kW           | H607 x L1.800 x D252 | 44 kg  | RKT_42N645 |

Cooling capacity: water inlet temperature +7°C and outlet temperature +12°C, as well as +27°C ambient temperature

## IdroStream



500 m³ - 3000 m³

Highly efficient and powerful stock cooling. Ideal for the optimal cooling of stored bottles or tanks. These devices impress with the following application benefits: high heat absorption on a small surface, high air quantity, good efficiency level, high air throwing distance, and effective air distribution. The 7.0 millimetre cooling fins, arranged with a wide spacing, prevent the heat exchange surfaces from getting clogged with dust particles. Suitable for water and glycol mixtures.



**WAREHOUSE COOLING**

### TECHNICAL SPECIFICATIONS

Blade partition 7.0 mm Aluminium

Application range -30°C to +40°C

Housing Powder-coated aluminium/  
magnesium alloy



| SPATIAL VOLUME | COOLING CAPACITY | DIMENSIONS          | THROWING DISTANCE | CODE         | FANS |
|----------------|------------------|---------------------|-------------------|--------------|------|
| 500 m³         | 3.3 kW           | H430 x L1203 x D497 | 21 m              | LKT_0330_2_C | 1    |
| 750 m³         | 5.2 kW           | H1360 x L645 x D685 | 37 m              | LKT_0520_2_C | 1    |
| 1,500 m³       | 10.5 kW          | H2250 x L645 x D685 | 41 m              | LKT_1050_2_C | 2    |
| 2,250 m³       | 15.4 kW          | H3240 x L685 x D645 | 43 m              | LKT_1538_2_C | 2    |
| 3,000 m³       | 20.0 kW          | H4130 x L685 x D645 | 44 m              | LKT_1998_2_C | 3    |

Cooling capacity: water inlet temperature +7°C and outlet temperature +12°C, as well as +15°C ambient temperature

**MORE ON  
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# IdroFan



**750 m³ - 2250 m³**

This room air conditioning unit is designed for all types of small or large surfaces (industrial buildings or workshops, warehouse facilities, large stores, garages etc.).

Exceptional diffusion thanks to patented JET + double-bend technology, fan motor assembly with HEE fan and streamlined rotor, offering the ideal compromise between air performance and acoustic comfort.

Dual deflector diffusor with JET + technology as standard.

Antibacterial condensate run-off pan with integrated quick connection for cooling or reversible applications.

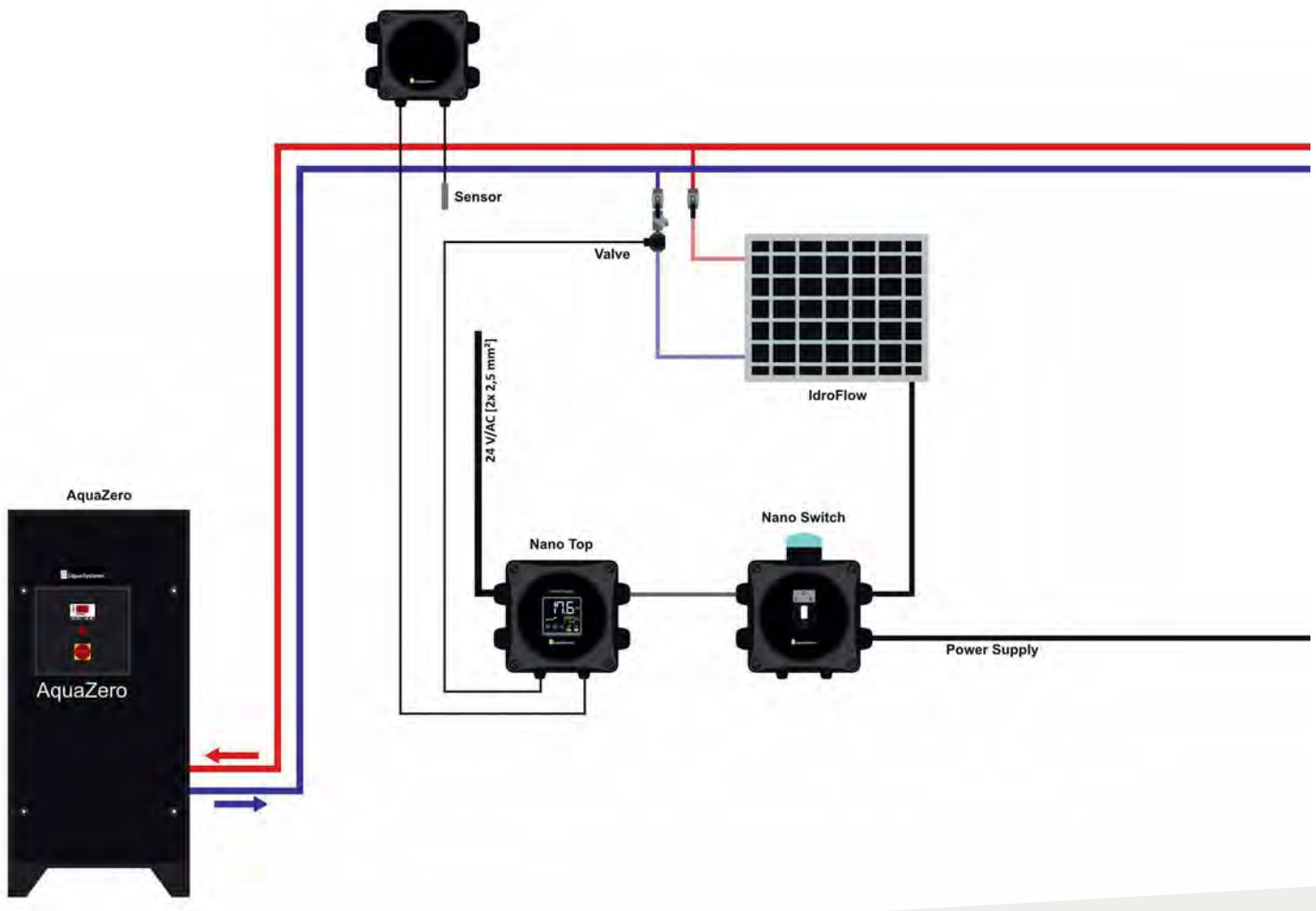


**LARGE - SPACE - COOLING**



| SPATIAL VOLUME | COOLING CAPACITY | DIMENSIONS         | WEIGHT | CODE           |
|----------------|------------------|--------------------|--------|----------------|
| 750 m³         | 5.4 kW           | H460 x L646 x D412 | 26 kg  | RKT_42AM35_2_C |
| 1,000 m³       | 7.4 kW           | H555 x L700 x D429 | 34 kg  | RKT_42AM40_2_C |
| 1,500 m³       | 11.2 kW          | H618 x L813 x D429 | 44 kg  | RKT_42AM45_2_C |
| 2,250 m³       | 15.3 kW          | H714 x L918 x D524 | 56 kg  | RKT_42AM50_2_C |

Cooling capacity: water inlet temperature +7°C and outlet temperature +12°C, as well as +27°C ambient temperature



**MORE ON  
THIS ONLINE**

# IdroFan, IdroFlow, IdroStream accessories



## Nano IdroControl

This Nano IdroControl set includes everything you need to control the IdroFlow or idroStream devices.

| TYPE             | CODE     |
|------------------|----------|
| Nano IdroControl | Nano_200 |



## IdroFlow wall mount

Simple painted steel carrier consoles.

| TYPE       | CODE         |
|------------|--------------|
| Wall mount | RKT_42AM_WHA |



## IdroFan Control

Control unit for the configuration of the room temperature and fan speed of the IdroFan.

| TYPE  | CODE     |
|---|----------|
| IdroFan Control [room temperature controller] | RR_002_C |



## Motorised ball valve

Stainless steel base body with drive unit and ten-metre cable. Position display and automatic reset, as well as simple modernisation of solenoid valves without altering the electrical installation. Advantages of a motorised ball valve over a solenoid valve:

- no dropouts on account of lime or dirt particles
- no pressure shocks on the hydraulic system

| TYPE                                   | CODE     |
|--|----------|
| IdroFlow 3/4" motorised ball valve     | 2ET05420 |
| IdroStream 1-1/4" motorised ball valve | 2ET05440 |

## THE MAJOR BENEFIT

- Simple installation
- Long throwing distance
- Incl. condensate collector
- Ceiling or wall-mounting





# 3 HEAT EXCHANGERS

Cooling plates



## Cooling plates

Cooling plates with screwed sockets for simple self-assembly. Saves time as well as laborious and expensive welding work on the tank. The cooling plates are electropolished to a high shine. This surface treatment facilitates cleaning, as practically no wine scale deposits build up.

### TECHNICAL SPECIFICATIONS

|  |                                     |
|--|-------------------------------------|
| Socket length, up to and including support plate | 180 or 50 millimetres               |
| Operating pressure                               | max. 4 bar                          |
| Material   | Stainless steel V4A electropolished |

Includes mounting kit



| COOLING VOLUME | DIMENSIONS   | COOLING SURFACE     | CONNECTION    | CODE   |
|----------------|--------------|---------------------|---------------|--------|
| 25 hl          | H500 x W370  | 0.37 m <sup>2</sup> | 1/2 inch - AG | BP 054 |
| 30 hl          | H750 x W370  | 0.56 m <sup>2</sup> | 1/2 inch - AG | BP 074 |
| 50 hl          | H1000 x W370 | 0.74 m <sup>2</sup> | 1/2 inch - AG | BP 104 |
| 60 hl          | H1250 x W370 | 0.93 m <sup>2</sup> | 1/2 inch - AG | BP 124 |
| 75 hl          | H1500 x W370 | 1.11 m <sup>2</sup> | 1/2 inch - AG | BP 154 |
| 87 hl          | H1750 x W370 | 1.30 m <sup>2</sup> | 1/2 inch - AG | BP 174 |
| 100 hl         | H2000 x W370 | 1.48 m <sup>2</sup> | 1/2 inch - AG | BP 204 |
| 115 hl         | H2250 x W370 | 1.67 m <sup>2</sup> | 1/2 inch - AG | BP 224 |
| 130 hl         | H2500 x W370 | 1.85 m <sup>2</sup> | 1/2 inch - AG | BP 254 |
| 145 hl         | H2750 x W370 | 2.04 m <sup>2</sup> | 1/2 inch - AG | BP 274 |
| 160 hl         | H3000 x W370 | 2.22 m <sup>2</sup> | 1/2 inch - AG | BP 304 |
| 180 hl         | H3500 x W370 | 2.59 m <sup>2</sup> | 1/2 inch - AG | BP 354 |
| 200 hl         | H4000 x W370 | 2.96 m <sup>2</sup> | 1/2 inch - AG | BP 404 |

Other dimensions, connections, mounting options on request!



| COOLING VOLUME | DIMENSIONS   | COOLING SURFACE     | CONNECTION    | CODE     |
|----------------|--------------|---------------------|---------------|----------|
| 25 hl          | H500 x W370  | 0.37 m <sup>2</sup> | 1/2 inch - AG | BP 054_S |
| 30 hl          | H750 x W370  | 0.56 m <sup>2</sup> | 1/2 inch - AG | BP 074_S |
| 50 hl          | H1000 x W370 | 0.74 m <sup>2</sup> | 1/2 inch - AG | BP 104_S |
| 60 hl          | H1250 x W370 | 0.93 m <sup>2</sup> | 1/2 inch - AG | BP 124_S |
| 75 hl          | H1500 x W370 | 1.11 m <sup>2</sup> | 1/2 inch - AG | BP 154_S |
| 87 hl          | H1750 x W370 | 1.30 m <sup>2</sup> | 1/2 inch - AG | BP 174_S |
| 100 hl         | H2000 x W370 | 1.48 m <sup>2</sup> | 1/2 inch - AG | BP 204_S |
| 115 hl         | H2250 x W370 | 1.67 m <sup>2</sup> | 1/2 inch - AG | BP 224_S |
| 130 hl         | H2500 x W370 | 1.85 m <sup>2</sup> | 1/2 inch - AG | BP 254_S |
| 145 hl         | H2750 x W370 | 2.04 m <sup>2</sup> | 1/2 inch - AG | BP 274_S |
| 160 hl         | H3000 x W370 | 2.22 m <sup>2</sup> | 1/2 inch - AG | BP 304_S |
| 180 hl         | H3500 x W370 | 2.59 m <sup>2</sup> | 1/2 inch - AG | BP 354_S |
| 200 hl         | H4000 x W370 | 2.96 m <sup>2</sup> | 1/2 inch - AG | BP 404_S |

Other dimensions, connections, mounting options on request!



**MORE ON  
THIS ONLINE**



# Mini cooling plate

## ON SHORT SIDE

Mini cooling plate with screwed sockets for simple self-assembly. Suitable for the small fermentation tanks with a 300 mm manhole produced by reputable manufacturers. For example, the following tank sizes: 325, 525, 625 litres, etc. The cooling plates are made of V4A-Edelstahl stainless steel with a high-sheen electropolished finish. This finish ensure efficient cleaning.

### TECHNICAL SPECIFICATIONS

|  |                                     |
|--|-------------------------------------|
| Socket length, up to and including support plate | 182 millimetres                     |
| Operating pressure                               | max. 4 bar                          |
| Material   | Stainless steel V4A electropolished |

| COOLING VOLUME | DIMENSIONS  | COOLING SURFACE      | CONNECTION    | CODE   |
|----------------|-------------|----------------------|---------------|--------|
| 12 hl          | H350 x W270 | 0.189 m <sup>2</sup> | 1/2 inch - AG | BP 035 |
| 17 hl          | H500 x W270 | 0.270 m <sup>2</sup> | 1/2 inch - AG | BP 050 |
| 25 hl          | H700 x W270 | 0.378 m <sup>2</sup> | 1/2 inch - AG | BP 070 |



Includes mounting kit

# Mini cooling plate

## MOUNTED ON THE LONG SIDE

Mini cooling plate with screwed sockets for simple self-assembly. Suitable for the small fermentation tanks with a 300 mm manhole produced by reputable manufacturers. For example, the following tank sizes: 325, 525, 625 litres, etc. The cooling plates are made of V4A-Edelstahl stainless steel with a high-sheen electropolished finish. This finish ensure efficient cleaning.

### TECHNICAL SPECIFICATIONS

|  |                                     |
|--|-------------------------------------|
| Socket length, up to and including support plate | 42 millimetres                      |
| Operating pressure                               | max. 4 bar                          |
| Material   | Stainless steel V4A electropolished |

| COOLING VOLUME | DIMENSIONS  | COOLING SURFACE      | CONNECTION    | CODE     |
|----------------|-------------|----------------------|---------------|----------|
| 12 hl          | H350 x W270 | 0.189 m <sup>2</sup> | 1/2 inch - AG | BP 035_S |
| 17 hl          | H500 x W270 | 0.270 m <sup>2</sup> | 1/2 inch - AG | BP 050_S |
| 25 hl          | H700 x W270 | 0.378 m <sup>2</sup> | 1/2 inch - AG | BP 070_S |



Includes mounting kit

### ACCESSORIES

### CODE

|  |          |
|--|----------|
| <b>1 21 mm drill [1/2 inch]</b><br>Industrial-quality carbide drills, not to be compared with traditional DIY models | Z_W_0002 |
| <b>2 Lubricating cooling pin</b><br>for convenient distribution to the drill. Prolongs the life of the drill.        | Z_W_0005 |
| <b>3 Handheld deburring tool</b><br>Handy, universal deburring tool with replaceable blade.                          | Z_W_0010 |



## THE MAJOR BENEFIT

- High warehouse availability
- High-quality packaging
- Reinforced cooling plate connecting pieces
- Cooling hose and electropolished cooling plates
- GEKA plus couplings on the cooling hose



**MORE ON  
THIS ONLINE**

# Shell-and-tube heat exchanger

Shell-and-tube heat exchanger for the heating or cooling of low viscosity media with a low solid particle content (e.g. must re-cooling, system separator for vegetable cooling baths, pre-cooler for spirit filtration). The exchanger consists of multiple small tubes, through which the product generally flows. These tubes are surrounded and welded to a larger casing pipe, through which the cooling or heating medium flows in the opposite direction.

The shell-and-tube heat exchanger comes with dairy coupling connections and a wall mount as standard.

Custom changes, such as a 2 x 3-metre tube bundle rather than a 6-metre tube bundle, or a mobile base frame are available on request.



| COOLING CAPACITY | COOLANT OUTPUT | PRODUCT OUTPUT | WEIGHT | LENGTH | CODE     |
|------------------|----------------|----------------|--------|--------|----------|
| 9 kWh            | 1.5 m³/h       | 0.5 m³/h       | 50     | 6      | RWT_0009 |
| 12 kWh           | 2.0 m³/h       | 0.7 m³/h       | 70     | 6      | RWT_0012 |
| 25 kWh           | 4.5 m³/h       | 1.5 m³/h       | 90     | 6      | RWT_0025 |
| 65 kWh           | 12.0 m³/h      | 4.0 m³/h       | 100    | 6      | RWT_0065 |
| 115 kWh          | 20.0 m³/h      | 7.0 m³/h       | 150    | 6      | RWT_0115 |

## HEAT EXCHANGER Cooling hose

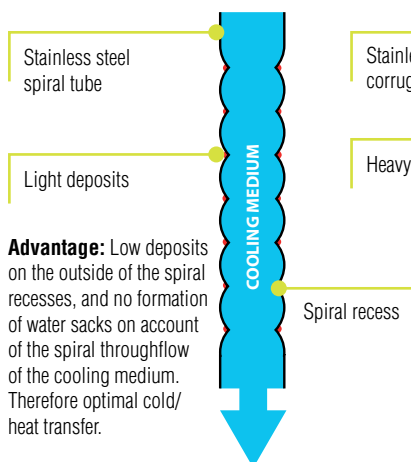
# Simplex cooling hose

Simplex, the cooling hose for fast and flexible cooling. Made from high-quality V4A stainless steel spiral tubing, for effective heat transfer. In contrast to traditional corrugated tubing, the low surface corrugation (spiral-shaped) facilitates heat transfer

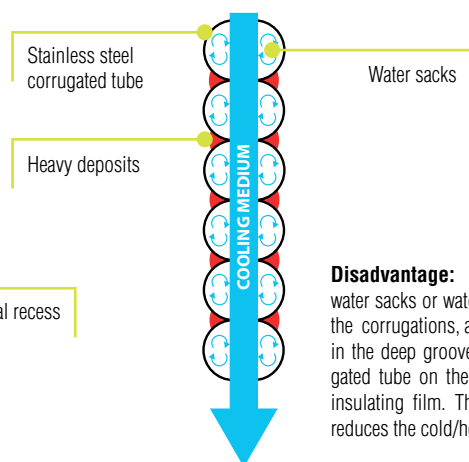
and cleaning. On the one hand, no water sacks form when the cooling water is flowing, and on the other hand, the fermenting material does not build up between the spiral corrugations. Simply insert into the bung and connect to the cooling water. An additional

hole in the silicone bung enables the application of a fermentation lock. Using an adapter, the TopFlow CO2 flow rate sensor can also be integrated. An ideal addition to mobile individual fermentation control units.

### LiquoSystems cooling hose



### Traditional cooling hose



| COOLING VOLUME | OVERALL LENGTH | COOLING SURFACE  | CONNECTION | CODE     |
|----------------|----------------|------------------|------------|----------|
| 10 hl          | 1,000 mm       | 0.18 m² / 0.4 kW | GEKA plus  | KSR_5010 |
| 20 hl          | 2,000 mm       | 0.35 m² / 0.8 kW | GEKA plus  | KSR_5020 |
| 25 hl          | 2,500 mm       | 0.44 m² / 1.0 kW | GEKA plus  | KSR_5025 |
| 30 hl          | 3,000 mm       | 0.53 m² / 1.2 kW | GEKA plus  | KSR_5030 |
| 40 hl          | 4,000 mm       | 0.70 m² / 1.6 kW | GEKA plus  | KSR_5040 |
| 50 hl          | 5,000 mm       | 0.88 m² / 2.0 kW | GEKA plus  | KSR_5050 |

### TECHNICAL SPECIFICATIONS

|                            |  |
|----------------------------|--|
| Silicone plugs (food safe) | DN50 bung with additional hole                           |
| Material                   | V4A stainless steel spiral tube, electropolished   Brass |
| Bend radius                | min. 80 millimetres                                      |
| Operating pressure         | max. 6 bar   |



# 4 FERMENTATION CONTROL

Nano Solo, Nano Fix, Nano Pilot  
Nano Tank, Nano Top and Nano Terminal





## Nano Solo

The Nano Solo comes complete with a temperature sensor, motorised ball valve, and GEKA Plus bayonet screw connections. All you have to do is connect the device to the power supply and to the cooling water feed. Clear layout, with a large actual and target temperature display. The stainless steel backing plate enables multiple types of installation with the additional bungee cord hook.

### Mobile individual fermentation control unit:

- 1/2" motorised ball valve with GEKA Plus
- Actual and target display
- 5-metre temperature sensor with weight
- 5-metre connection cable with connector
- Stainless steel retaining plate for flexible mounting
- Protection class IP 65

### Advantages over comparable products:

- GEKA PLUS couplings
- Sensor weight
- FixFlex variable tension band
- Stainless steel backing plate with hook and rounded form in the centre, for mounting onto thermowells, sampling valves, ladder brackets etc.

| TYPE                     | CODE     |
|--------------------------|----------|
| Nano Solo I 230 Volt MKH | Nano_045 |



## Nano Fix

The Nano Fix is a plug & play temperature regulator for a tank.

The motorised ball valve is permanently installed in the cooling water flow line.

The Nano Fix can be simply mounted onto the wall using the included mounting straps, or can be connected to pipes using a pipe clamp, with a mounting plate, which is available separately.

The power adapter, the temperature sensor, and the motorised ball valve, each with 5-metre cables, are already connected to the housing.

You therefore require no electrical installation.

| TYPE     | CODE     |
|----------|----------|
| Nano Fix | Nano_300 |



## Nano Pilot

Nano Pilot elevates the temperature control of your product to a new level: convenient and smart.

### Plug&Play temperature control for a maximum of five fermenters

- Simple and uncomplicated plug & play application.
- Control and monitoring of five tanks with individual set point temperature.
- Operating modes: monitoring, cooling, or heating
- Displays: valve status, alarm, operating mode, recipe application, actual temperature, target temperature, name

### Comprehensive range of accessories included:

- Curve display (actual/target temperature, density, scaling)
- Tank grouping (tank front view, group access)
- Web interface (remote access via RJ45 socket (LAN))
- Recipe management with eight profiles (temperature or time-controlled)
- 5 x motorised ball valves with ~ 10 m (stainless steel base unit, IP65)
- 5 x Temperature sensors with ~ 15 m (PT100, 1/3DIN, VA thermowell)

| TYPE       | CODE     |
|------------|----------|
| Nano Pilot | Nano_350 |



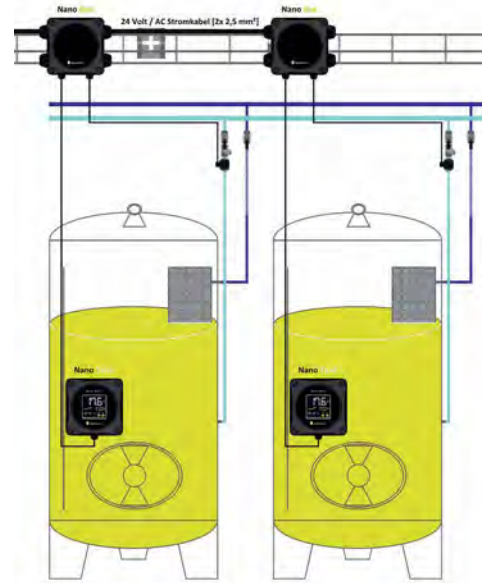
PLUG & PLAY



## Nano Tank

The modern individual fermentation control for a tank, with a large actual and target temperature display. The stainless steel bushing on the rear enables simple mounting to a thermowell on the tank. Nano Tank can be controlled centrally using the Nano Terminal operating unit, and this extends its functionality significantly. For simple and professional wiring, we recommend the Nano Box.

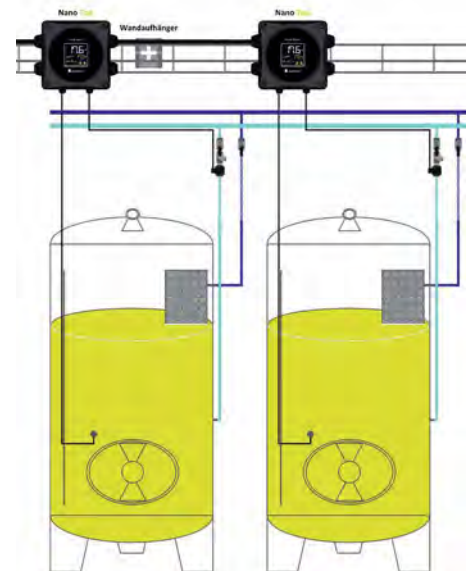
| TYPE   | CODE                             |
|--|----------------------------------|
| Nano Tank  | Nano_030                         |
| TECHNICAL SPECIFICATIONS                         |                                  |
| Type   | Fermentation control at the tank |
| Controller types                                 | PID                              |
| Display  | Actual and target value          |
| Power supply                                     | 24 V                             |
| Connection cable length                          | 6 m with braid                   |
| Housing  | Polycarbonate with GFS           |
| Thermowell length                                | 240 mm                           |
| Dimensions                                       | W x H x D:<br>100 x 120 x 330 mm |
| <div>+</div> <b>FAST AND SIMPLE INSTALLATION</b> |                                  |



## Nano Top

The universal control unit of the Nano System, for a tank, with a large actual and target temperature display. The device can be simply installed wherever you want. We can also supply the compatible mounting panels. Nano Top can be controlled centrally using the Nano Terminal operating unit, and this extends its functionality significantly. For simple and universal installation, we recommend our mounting kit or our VariAll mounting plate, for quick mounting to the cable tray.

| TYPE     | CODE     |
|----------|----------|
| Nano Top | Nano_060 |



**UNIVERSAL CONTROL UNIT**

### THE MAJOR BENEFIT

- Modular system
- Simple installation and operation
- Additional comfort and functionality thanks to the Nano Terminal\*

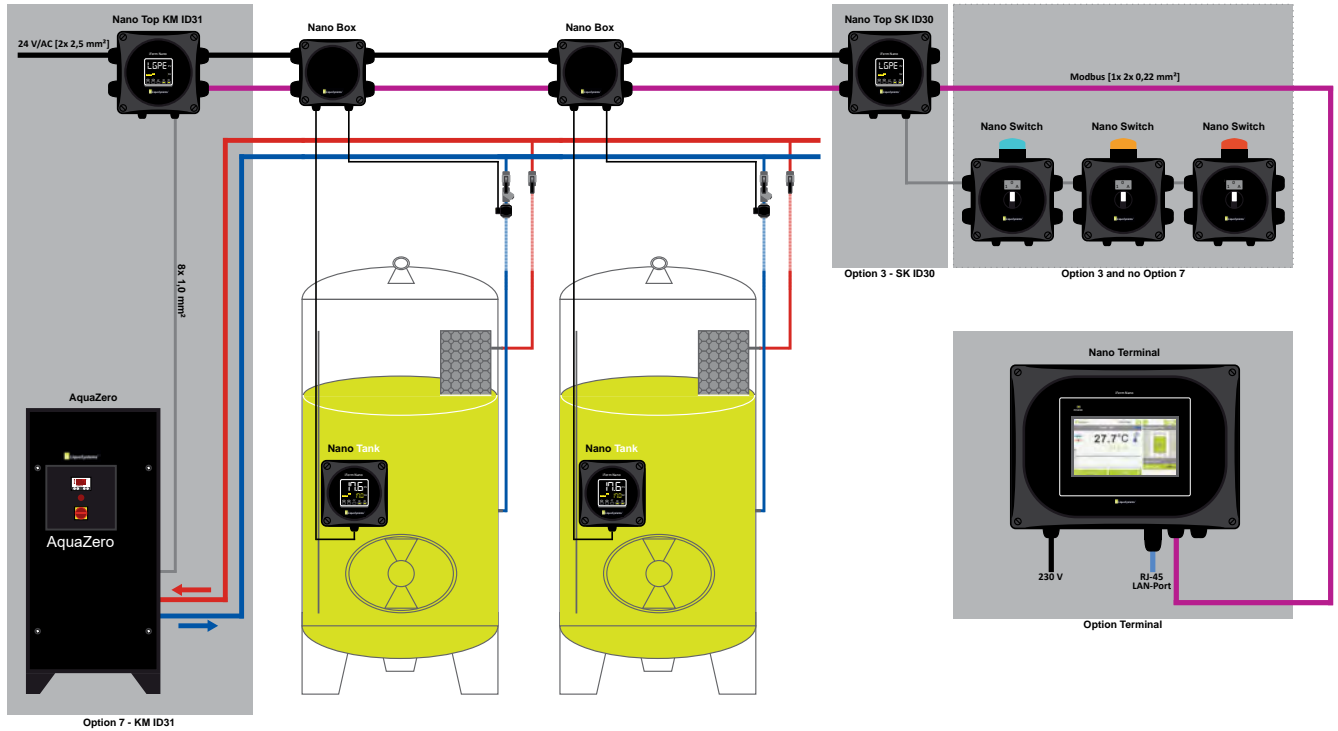


**MORE ON THIS  
IN OUR VIDEO!**

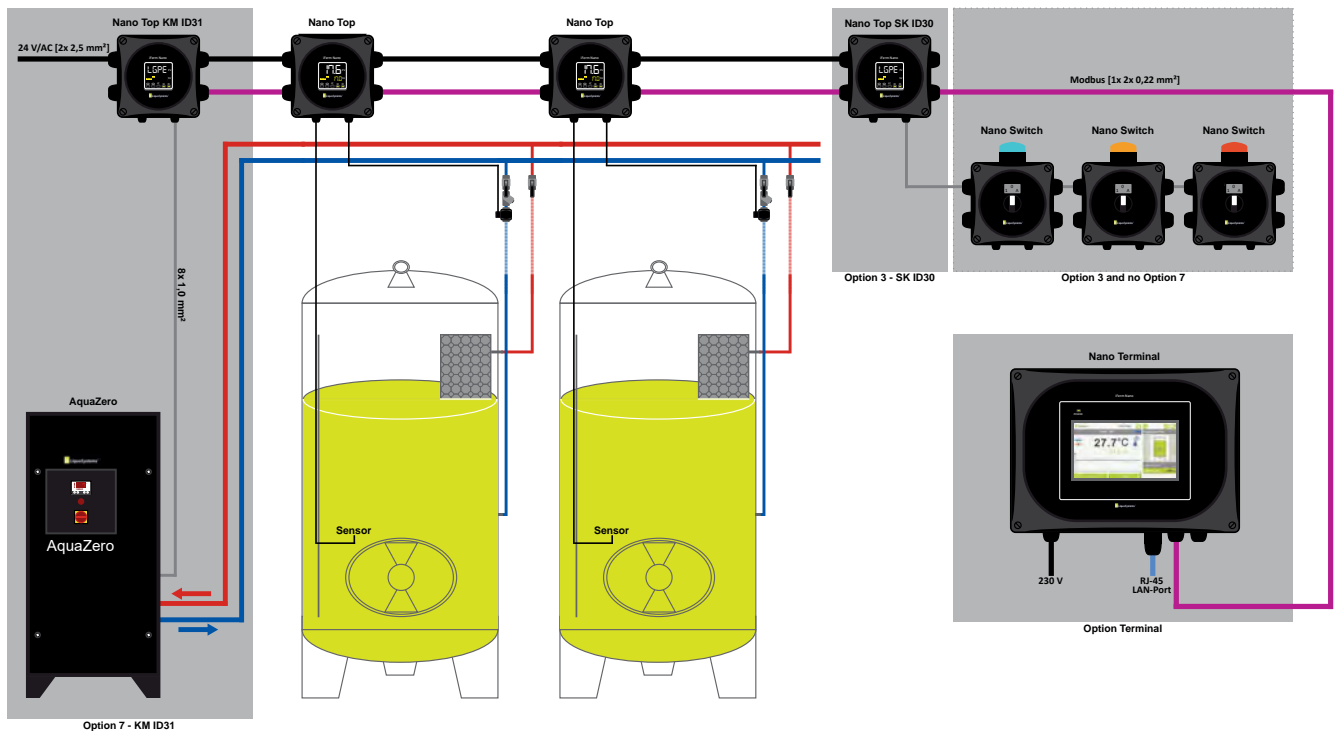
\*Via the web interface, access via smartphone, tablet, PC



## Nano Tank Advanced Application



## Nano Top Advanced Application



# Nano Fix, Nano Tank, Nano Top accessories



## BACK PLATE AND MOUNTING FITTINGS

Backing plate and mounting parts for the mounting of the Nano Top, Nano Box and Nano Switch, for various applications such as: wall mounting use plugs, mounting onto wood, mounting onto metal plates

### Available with additional accessories:

- Mounting onto pipes using pipe clamps
- Mounting to cable trays using suspension profiles
- Mounting on C-profiles by means of T-head mounting

### All items made of stainless steel, set consisting of:

- 1 x mounting plate 94 x 94 x 3 mm
- 4 x round head screw
- 3 x M8 nuts
- 3 x M8 bursting discs
- 3 x M8 washers
- 1 x M8 x 10 hexagon screw
- 1 x M8 washer
- 1 x M8 x 45mm threaded pin
- 1 x 50/20 mm hanger bolt

| TYPE                        | CODE     |
|-----------------------------|----------|
| 1 Universal mounting plate  | Nano_110 |
| 2 Cable tray mounting plate | Nano_115 |



## SAFETY TRANSFORMER

Safety transformer for up to twelve valves  
Primary: connector with 1.4 m cable  
Secondary: braid, 2 x 2.5 m<sup>2</sup> with 2.5 m cable.

| TYPE               | CODE     |
|--------------------|----------|
| Safety transformer | 2ET01007 |



## MODBUS DATA CABLE

Special cable for data transfer within a professional setting. 2 x 0.22 mm<sup>2</sup>

| TYPE       | CODE     |
|------------|----------|
| 25 m Ring  | 1KA01262 |
| 50 m Ring  | 1KA01263 |
| 100 m Ring | 1KA01264 |



## THERMOWELLS

Stainless steel thermowells to hold the temperature sensor on the tank, to be welded or screwed on. With internal thread M 12 x 1.5 for secure mounting. Immersion length: 215 mm

| TYPE       | CODE     |
|------------|----------|
| 1 Screw-in | 4ME40126 |
| 2 Welded   | 4ME40122 |
| 3 NW10     | 4ME40129 |



## NANOBOX

- Power connection and/or extension
- Data feed and/or extension
- Nano Tank connection
- Valve cable connection

| TYPE     | CODE     |
|----------|----------|
| Nano Box | Nano_150 |



## 24 V POWER CABLE

High-quality, flexible rubber cable from reputable manufacturers. 2 x 2.5 mm<sup>2</sup>

| TYPE       | CODE     |
|------------|----------|
| 25 m Ring  | 1KA01282 |
| 50 m Ring  | 1KA01283 |
| 100 m Ring | 1KA01284 |



## DRILLS

Industrial-quality carbide drills, not to be compared with traditional DIY models

| TYPE                   | CODE     |
|------------------------|----------|
| 16 mm drill [TSH]      | Z_W_0001 |
| 21 mm drill [1/2 inch] | Z_W_0002 |
| 28 mm drill [3/4 inch] | Z_W_0003 |



## LUBRICATING COOLING PIN

Lubricating cooling pin for convenient distribution to the drill. Prolongs the life of the drill.

| TYPE                    | CODE     |
|-------------------------|----------|
| Lubricating cooling pin | Z_W_0005 |

# Nano Terminal

The Nano Terminal expands the possibilities of the Nano Tank, Nano Top, and Nano Kit Nano fermentation controls, and significantly increases ease of use. The solution if there is no PC nearby, or if software is not an option for the user. For the convenient wiring and operation of the common contacts, we recommend the Nano Switch.

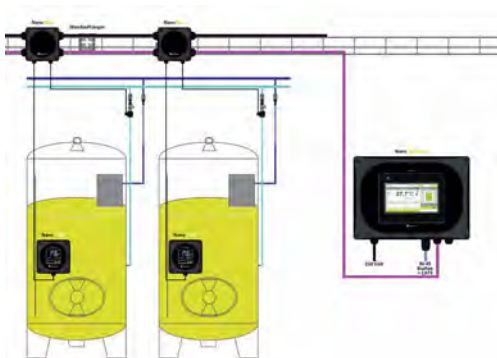
| TYPE          | CODE     |
|---------------|----------|
| Nano Terminal | Nano_010 |

## Advanced possibilities thanks to the Nano Terminal:

- Control panel overview via 30 Nano modules
- Global access function (e.g. valve etc.) to all assigned devices
- Operating mode expansion: Automatic
- Common contacts: to meet the requirements for cooling, heating, alarm (e.g. pump)
- Curve display: temperature progression - trend and scaled for 5 to 50 days, manual density data input
- Valve maintenance for increased process reliability in your hydraulic circuit
- Web interface function for individual access
- Groups: three tank groups (each with ten tanks)\*
- Group-based access function (e.g. valve etc.) to all assigned group devices
- Circuit management
- Image assignment to the individual devices, for simple and fast operation
- Multilingual, with German and English as default languages

## Control unit for Nano:

- Includes brackets for wall mounting
- 7-inch touch display control
- 230 V power supply
- Polycarbonate housing



\*with common contact activated (2 x 10 tanks; 1 x 9 tanks)

\*with circuit management activated (2 x 10 tanks)



Tank display  
Valve status  
Alarm notification  
Target temperature display  
Actual temperature display

Key lock  
Image library  
Manual valve control

Operating mode selection  
Name input  
Temperature trend  
Tank change buttons

Network connection (RJ45 socket)  
Pressure equalisation element  
Screwed cable glands for power and modbus

## Control panel overview - a central overview of up to 30 tanks!

| LiquoSystems |        | iFerm Nano |        |          |        |
|--------------|--------|------------|--------|----------|--------|
| Tank 001     | 20.6°C | Tank 011   | 23.3°C | Tank 021 | 26.8°C |
| Tank 002     | 23.8°C | Tank 012   | 24.9°C | Tank 022 | 27.4°C |
| Tank 003     | -0.4°C | Tank 013   | 25.7°C | Tank 023 | 28.2°C |
| Tank 004     | 88.0°C | Tank 014   | 23.3°C | SyRL 024 | 28.4°C |
| Tank 005     | 22.9°C | Tank 015   | 25.3°C | Tank 025 | 29.0°C |
| Tank 006     | 20.0°C | Tank 016   | 24.7°C | Tank 026 | 28.9°C |
| Tank 007     | 24.2°C | Tank 017   | 26.0°C | PuTa 027 | 29.3°C |
| Tank 008     | 22.7°C | Tank 018   | 25.1°C | Tank 028 | 29.5°C |
| Tank 009     | 23.6°C | Tank 019   | 26.6°C | Vorl 029 | 30.1°C |
| Tank 010     | 21.7°C | Tank 020   | 26.5°C | Tank 030 | 22.5°C |

Tank name

Actual temperature display

Red: Alarm  
Blue: Cooling  
Orange: Heating  
Blue/Orange: Automatic

MORE ON  
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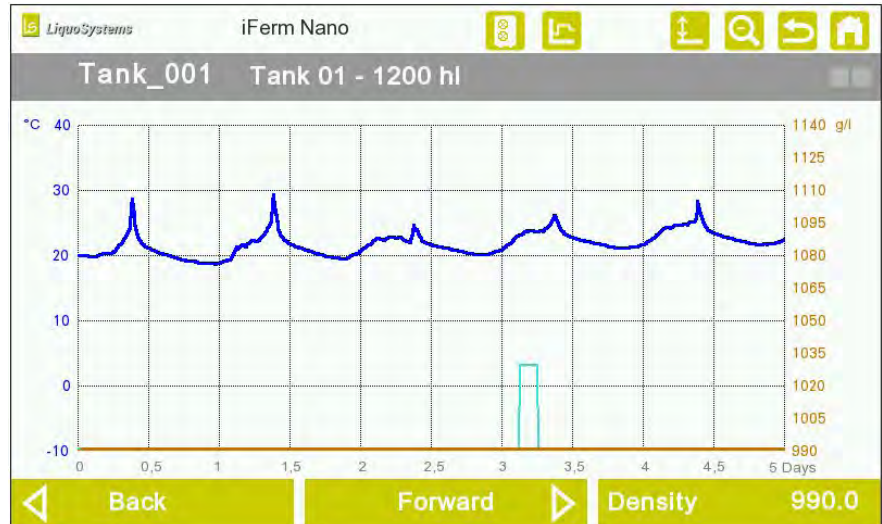




### OPTION 1 | CURVE DISPLAY

- Actual temperature curve
- Target temperature curve
- Density curve
- Scaling - 5 or 50 days

| TYPE     | CODE     |
|----------|----------|
| Option 1 | Nano_014 |
|          |          |
|          |          |



### OPTION 2 | GROUPING

- Tank groups
- Tank front view
- Group-based access functions
- Circuit management

| TYPE     | CODE     |
|----------|----------|
| Option 2 | Nano_015 |
|          |          |
|          |          |



### OPTION 3 | BUS BARS

- Bus bars
- To meet requirements for: cooling, heating, alarm
- Adjustable stopping times

| TYPE             | CODE     |
|------------------|----------|
| Option 3         | Nano_016 |
| Nano Top SK ID30 | Nano_065 |



#### NANO SWITCH | COOLING

Output of a potential-free cooling contact  
Signalling via integrated signal lights.

| TYPE               | CODE     |
|--------------------|----------|
| Nano Switch   Blue | Nano_025 |

#### NANO SWITCH | HEATING

Output of a potential-free heating contact  
Signalling via integrated signal lights.

| TYPE                 | CODE     |
|----------------------|----------|
| Nano Switch   Orange | Nano_026 |

#### NANO SWITCH | ALARM

Output of a potential-free alarm contact.  
Signalling via integrated signal lights.

| TYPE              | CODE     |
|-------------------|----------|
| Nano Switch   Red | Nano_027 |

**OPTION 4 | VALVE MAINTENANCE**

- Valve maintenance
- Individual time definition

| TYPE     | CODE     |
|----------|----------|
| Option 4 | Nano_017 |
|          |          |
|          |          |

**OPTION 5 | ADDITIONAL LANGUAGE**

- Additional language extension
- ES, IT, FR, PL, CZ, HU
- Default languages are German and English
- Other languages on request

| TYPE     | CODE     |
|----------|----------|
| Option 5 | Nano_018 |
|          |          |
|          |          |

**OPTION 6 | WEB INTERFACE**

- Remote access to your container

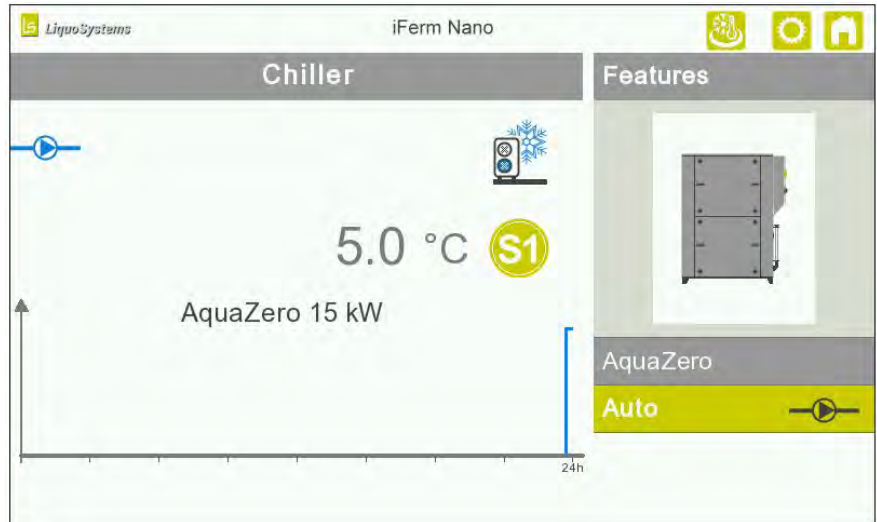
| TYPE     | CODE     |
|----------|----------|
| Option 6 | Nano_019 |
|          |          |
|          |          |



### OPTION 7 | Aqua Control

- Control unit for cooling devices
- Switch functions: On/Off/Automatic
- Operating mode functions: Cooling/Heating
- Setpoint setting L S1/S2

| TYPE             | CODE     |
|------------------|----------|
| Option 7         | Nano_020 |
| Nano Top KM ID31 | Nano_066 |
|                  |          |
|                  |          |



### OPTION 8 | UNIVERSAL SENSORS

- Universal sensors on three channels
- Pressure sensor for circuit monitoring
- Air humidity sensor for rooms
- Air quality sensor, and much more

| TYPE                             | CODE       |
|----------------------------------|------------|
| Option 8                         | Nano_021   |
| Pressure and air humidity sensor | on request |
|                                  |            |
|                                  |            |



### OPTION 9 | RECIPE MANAGEMENT

- Eight profiles, each with five phases
- Can be simply called up at the respective tank
- temperature or time-controlled

| TYPE     | CODE     |
|----------|----------|
| Option 9 | Nano_022 |
|          |          |
|          |          |

| Recipe management |   |         |       |         |       |         |       |         |       |         |       |
|-------------------|---|---------|-------|---------|-------|---------|-------|---------|-------|---------|-------|
| Recipe            |   | Phase 1 |       | Phase 2 |       | Phase 3 |       | Phase 4 |       | Phase 5 |       |
|                   |   | Temp    | Time  | Temp    | Time  | Temp    | Time  | Temp    | Time  | Temp    | Time  |
| 01                | ▶ | 21.1    | 01:01 | 1.2     | 01:02 | 21.3    | 01:03 | 1.4     | 01:04 | 21.5    | 01:05 |
| 02                | ▶ | 22.1    | 02:01 | 2.2     | 02:02 | 22.3    | 02:03 | 2.4     | 02:04 | 22.5    | 02:05 |
| 03                | ▶ | 23.1    | 03:01 | 3.2     | 03:02 | 23.3    | 03:03 | 3.4     | 03:04 | 23.5    | 03:05 |
| 04                | ▶ | 24.1    | 04:01 | 4.2     | 04:02 | 24.3    | 04:03 | 4.4     | 04:04 | 24.5    | 04:05 |
| 05                | ▶ | 25.1    | 05:01 | 5.2     | 05:02 | 25.3    | 05:03 | 5.4     | 05:04 | 25.5    | 05:05 |
| 06                | ▶ | 26.1    | 06:01 | 6.2     | 06:02 | 26.3    | 06:03 | 6.4     | 06:04 | 26.5    | 06:05 |
| 07                | ▶ | 27.1    | 07:01 | 7.2     | 07:02 | 27.3    | 07:03 | 7.4     | 07:04 | 27.5    | 07:05 |
| 08                | ▶ | 28.1    | 08:01 | 8.2     | 08:02 | 28.3    | 08:03 | 8.4     | 08:04 | 28.5    | 08:05 |



# Nano Kit

The Nano Kit with large actual and target temperature display modernises your old fermentation control unit and brings you right up to date! The ready-mounted Nano Kit for ten tanks. Unplug the old units or modules, plug in the Nano Kit and screw the mounting plate tight - done! Everything else is retained, except in the case of GTR, EFC-1 and EFC-2. Here the temperature sensors must be replaced. The Nano Kit can be controlled centrally using the Nano Terminal operating unit, and this extends its functionality significantly.

| TECHNICAL SPECIFICATIONS                    |                  |
|---|------------------|
| Actual and target display                   |                  |
| Ready to plug in                            |                  |
| !0-piece Nano Control units                 |                  |
| Measuring range                             | -9.9°C – +99.9°C |
| Controller types                            | PID              |
| Operating modes                             | Cooling, Heating |
| Ambient temperature range                   | 10°C – +40°C     |
| Switch outputs                              | 24 V AC, 2A      |
| Networking capability                       | Nano Terminal    |
| Not suitable in conjunction with Assist!    |                  |
| GTR, EFC-1+2: the sensors must be replaced! |                  |



| TYPE    | CODE     |
|---------|----------|
| AFCIGTX | Nano_080 |
| EFC-1   | Nano_085 |
| EFC-3   | Nano_086 |
| GTR     | Nano_087 |



## THE MAJOR BENEFIT

- Modernisation: creating new from old
- Nano Kit for ten tanks
- Unplug the old modules, plug in the Nano Kit and screw the mounting plate tight - done
- Large actual and target display
- Valve status display
- Can be connected to Nano Terminal in order to be controlled by PC, laptop or smartphone



MORE ON THIS ONLINE





## "THE GROUNDWORK FOR A GOOD WINE IS LAID IN THE VINEYARD"

### THE GOLDSCHMIDT FAMILY BELIEVES IN ORGANIC AGRICULTURE



The Goldschmidts of Pfeddersheim are a family business, like something out of a picture book: father, mother and child, working together to manufacture high-quality products within their own company. While senior director Uli and his son Jonas take care of the viticulture, mother Elke manages the office and sales. Daughters Isabell and Jeanette have flown the nest, but still enjoy every minute that they can spend helping out in their parents' wine growing business. Pfeddersheim is a district of Worms, in Rhineland-Palatinate, and is surrounded by picturesque wine country. It is mainly Riesling that is grown here, with a major emphasis on tradition. However, innovation is also of great importance to the Goldschmidts. Thus, following a meeting of the family council more than 20 years ago, it was decided to focus exclusively on organic farming. The vineyard has been certified organic for quite some time now. "Good wine can only be produced when working with nature rather than against it" is the Goldschmidt's motto. "A healthy vineyard ecosystem requires a loose and hummus-rich soil. This can store precipitation well, and supplies the grapes with important





**An idyllic family: the Goldschmidts love their job. The vineyards are their home. Here in Rhinehessen, they lay the foundations for top wines all year round, which they also sell online to great success.**

nutrients. The roots of the wide range of different species of vegetation in the rows of vines loosen the soil," explains Jonas, who has been managing the family business with his father ever since he completed his training as a vineyard technician in 2019. The fruity character is typical of Goldschmidt wines. This is achieved by means of intermittent cooling during fermentation. "The fermentation process is slowed by means of cooling," explains Jonas Goldschmidt. The trick: the new cooling system is mounted just a short distance from the tank in the tank farm – and doesn't affect the temperature development in the room whatsoever. Background: because the company is based in the middle of a residential area, it is important that the neighbours are protected against noise emissions. To this end, LiquoSystems

developed and produced a coherent concept: all tanks were fitted with the Nano Tank individual fermentation control, and thus now have their own direct control unit. The actual and target value display provides an optimal overview of the temperature. The AquaZero 19 wine cooling system accurately produces the cold temperatures that the Goldschmidts require. The warm exhaust air is directed outside via a duct – but can also be released for internal room temperature control in the winter, using a valve control. "Liquo-Systems was able to fulfil our requirements, without exception," enthuses Jonas Goldschmidt. "Noise reduction, optimal use of space, and heat recovery were realised exactly how we wanted."



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Photos: Weingut Goldschmidt

**It all comes down to the right temperature – both in the manufacturing and in the enjoyment of the wines.**



# 5 VALVE TECHNOLOGY

Motorised ball valve, solenoid valve,  
dirt trap, ball valve



## MOTORISED BALL VALVE WITH IP 65 RATING

Valve drive unit with mechanical position display and automatic reset. Stainless steel main body With ten-metre connection cable.

| TYPE             | CODE     |
|------------------|----------|
| 1/2-inch, DN15   | 2ET05410 |
| 3/4-inch, DN20   | 2ET05420 |
| 1-inch, DN25     | 2ET05430 |
| 1-1/4-inch, DN32 | 2ET05440 |
| 1-1/2-inch, DN40 | 2ET05450 |



## BALL VALVE

Nickel-plated with internal/external thread. For the regulation of the flow rate

| TYPE       | CODE     |
|------------|----------|
| 1/2 inch   | 4ME41111 |
| 3/4 inch   | 4ME41112 |
| 1 inch     | 4ME41113 |
| 1-1/4 inch | 4ME41109 |



## 24 VC SOLENOID VALVE CARTRIDGE

Note: delivery includes a shielded solenoid valve socket with an internal LED display, a gasket, and a screw for fixing.

| TYPE                   | CODE     |
|------------------------|----------|
| Socket                 | 2ET05292 |
| Socket with 3 m cable  | 2ET05022 |
| Socket with 10 m cable | 2ET05024 |



## SOLENOID VALVE 24 VAC, 14 VA

Nickel-plated. Internal parts made of stainless steel For water and glycol. Normally closed.

| TYPE           | CODE     |
|----------------|----------|
| 1/2-inch, DN13 | 2ET05052 |
| 3/4-inch, DN20 | 2ET05056 |



## CHECK VALVES

Nickel-plated, for horizontal and vertical installation. Minimum differential pressure 0.5 bar

| TYPE       | CODE     |
|------------|----------|
| 1/2 inch   | 4ME41170 |
| 3/4 inch   | 4ME41171 |
| 1 inch     | 4ME41172 |
| 1-1/4 inch | 4ME41173 |



## DIRT TRAP

Nickel-plated with internal/external thread Strainer made of stainless steel, with 0.5 mm mesh width

| TYPE             | CODE     |
|------------------|----------|
| 1/2-inch, DN15   | 4ME41000 |
| 3/4-inch, DN20   | 4ME41002 |
| 1-inch, DN25     | 4ME41004 |
| 1-1/4-inch, DN32 | 4ME41006 |



## REINFORCED HOSE PACK WITH 2 PIECES

Flexible, impermeable hoses coated with a stainless steel braid. Suitable for cooling and heating circuits with water or a glycol mixture. Connection: external thread/union nut

| TYPE            | CODE     |
|-----------------|----------|
| 1/2 inch, 1 m   | HKL02010 |
| 1/2 inch, 1.5 m | HKL02012 |
| 1/2 inch, 2.0 m | HKL02013 |
| 1/2 inch, 2.5 m | HKL02014 |
| 3/4 inch, 1 m   | HKL02020 |
| 3/4 inch, 1.5 m | HKL02022 |
| 3/4 inch, 2.0 m | HKL02023 |
| 1 inch, 1 m     | HKL02030 |

MORE ON  
THIS ONLINE





## THE ROTE FLITZER (RED RACER) FROM NECKARSULM - IN THE BREWERY ITS ALL ABOUT ALCOHOL CONTENT RATHER THAN HORSEPOWER

Something that is really important to the Neckarsulm natives is the correct pronunciation of their city name. For those unfamiliar with the area tend to speak of Neckars-Ulm. Oops. Incorrect! For this is where the Sulm flows into the Neckar, and therefore the Neckarsulm locals prefer that you please pronounce both syllables together. Now that this is all cleared up, we can move on to what we are actually here to talk about - the "Roter Flitzer" Those who instantly think

of the sleek race car with the four rings on the radiator grille, which have traditionally been built here, are wrong again. It's actually the name of a beer. Or more precisely, the delicious beer from the micro-brewery in the Neckarsulmer Brauhaus. Master brewer Karl Gruhler, who has worked in the industry since 1985, brews beers such as the "Roter Flitzer" here, together with his apprentice. This is a naturally cloudy, bottom-fermented lager - mild and not so hoppy. A true

delight for beer fans. "The light, dark reddish beer appeals mostly to the women who visit the brewery," reveals Brewmaster Gruhler. He has been pursuing his trade in the brewery since 2001 – and has already won multiple awards. The beer merchant produces Kellerpils (cellar beer), Hefeweizen (white beer) and, time and again, seasonal beers. Alongside the guest hour, the business also runs a hotel. The team includes a total of almost 40 employees. To ensure that



Photo: fedorovacz/stock.adobe.com





Photo: Neckarsulmer Brauhaus



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the quality of the beer remains consistently high, the perfect fermentation process is naturally the be-all-and-end-all. Cooling is a big part of this. For it is the precious yeast that ensures the high temperature in the fermenting tank. During fermentation, Gruhler and his apprentice keep the temperature at around ten degrees – depending on which variety they are brewing. The storage temperature is between two and four degrees. When its original cooling control system became outdated and inefficient, the Neckarsulmer Brauhaus called in the expertise of LiqueoSystems. "The new central control unit with touchscreen

is very convenient. I am continually controlling it via my smartphone," enthuses Master Brewer Gruhler. The solenoid valves were replaced with motorised ball valves. As a result, the flow of refrigerant is more constant and resistance-free. "There are no longer any problems whatsoever," says Karl Gruhler, who also welcomes the fact that the valve now displays whether it is open. The recipe management and continuous documentation of the cooling circuit while brewing and when in the cold store are also new. And in case anyone in the car-mad city of Neckarsulm might forget: Don't drink and drive!

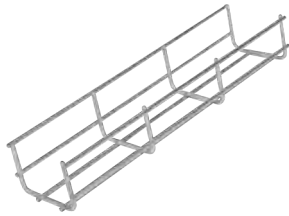


Photo: Neckarsulmer Brauhaus



# 6 ASSEMBLY SYSTEMS

VariAll



### VariAll cable duct 45 x 60

Mounting system for the hygienic routing of cables in the wine cellar.

| TYPE    | CODE     |
|---------|----------|
| 45 x 60 | 4ME00803 |

| TECHNICAL SPECIFICATIONS |                       |
|--------------------------|-----------------------|
| Height                   | 45 mm                 |
| Width                    | 60 mm                 |
| Length                   | 3000 mm               |
| Wire diameter            | 5 mm                  |
| Span                     | 1500 mm               |
| Material                 | Stainless steel [V2A] |



### VariAll connection kit

Contents:

- 2 x connecting brackets
- 2 x clamping plates
- 2 x screws
- 2 x nuts

| TYPE           | CODE     |
|----------------|----------|
| Connection kit | 4ME00810 |

| TECHNICAL SPECIFICATIONS |                       |
|--------------------------|-----------------------|
| Material                 | Stainless steel [V4A] |



### VariAll wall mount

The cable feed is simply hung on the bracket.

Bending the brackets prevents this from falling.

| TYPE | CODE     |
|------|----------|
| Mini | 4ME00814 |

| TECHNICAL SPECIFICATIONS |                       |
|--------------------------|-----------------------|
| Dimensions               | H 55 x W 55 x D 22 mm |
| Material                 | Stainless steel [V4A] |



### Universal mounting plate

Backing plate and mounting parts for the mounting of the Nano Top, Nano Box and Nano Switch, for various applications such as: wall mounting use plugs, mounting onto wood, mounting onto metal plates

All items made of stainless steel, set consisting of:

- 1 x mounting plate 94 x 94 x 3 mm
- 4 x round head screw
- 3 x M8 nuts
- 3 x M8 bursting discs
- 3 x M8 washers
- 1 x M8 x 10 hexagon screw
- 1 x M8 washer
- 1 x M8 x 45 mm threaded pin
- 1 x 50/20 mm hanger bolt

| TYPE                     | CODE     |
|--------------------------|----------|
| Universal mounting plate | Nano_110 |

| TECHNICAL SPECIFICATIONS |                       |
|--------------------------|-----------------------|
| Material                 | Stainless steel [V4A] |



### VariAll Maxi mounting plate

Mounting points for the following options:

- 200 VA safety transformer and junction box
- 200 VA safety transformer and 230 V surface-mounted socket
- 2 x junction boxes

| TYPE | CODE     |
|------|----------|
| Maxi | 4ME00830 |

| TECHNICAL SPECIFICATIONS |                       |
|--------------------------|-----------------------|
| Material                 | Stainless steel [V2A] |



### VariAll Mini mounting plate

Backing plate and mounting parts for the mounting of the Nano Top, Nano Box, and Nano Switch units to the 5 mm cable tray.

All items made of stainless steel, set consisting of:

- 1 x mounting plate 1.5 mm 95 x 100 x 22 mm
- 4 x round head screw for plastic

| TYPE                      | CODE     |
|---------------------------|----------|
| Cable tray mounting plate | Nano_115 |

| TECHNICAL SPECIFICATIONS |                       |
|--------------------------|-----------------------|
| Material                 | Stainless steel [V4A] |



## VariAll

VariAll is a stainless steel cable routing and installation system for the hygienic routing of cables in the wine cellar. The cable routing system is a product developed for optimal function: simple and easily accessible for cleaning. This cable routing system is a high-quality product with a long service life. All cable routing elements are made from 5 mm round material – produced with an aesthetic finish. This protects the cables and hoses. The cable routing elements are supplied in 3-metre lengths. Thanks to a wide range of mounting accessories, installation on a wall or ceiling is very simple. The elements are attached with screw connections.

What is innovative about this mounting system is the full suspension technology. This means that the electrician can work conveniently at the mounting table when installing the fermentation control unit, such as the Nano. Top or Nano Box, for example. Once the electrician has wired the Nano Top fermentation control or the Nano Box terminal box at his leisure, the device is mounted by means of simple suspension on the cable routing elements, which are in turn merely hung onto the wall or ceiling brackets.

### Areas of application:

- Food industry
- Chemicals industry
- Office and IT installations

### Advantages:

- Stainless steel material
- Hygienic
- Fast, simple and safe mounting
- Environmentally friendly and recyclable

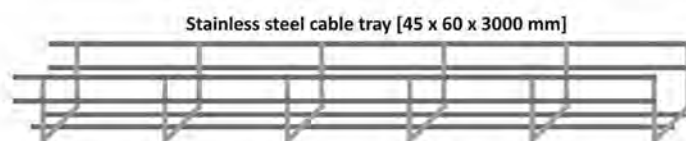
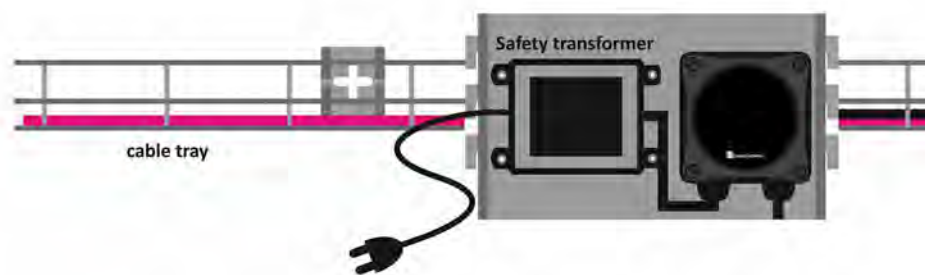
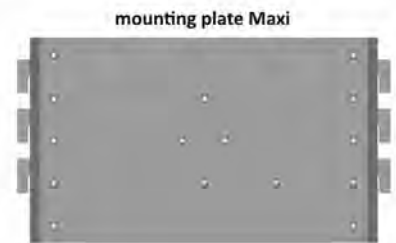
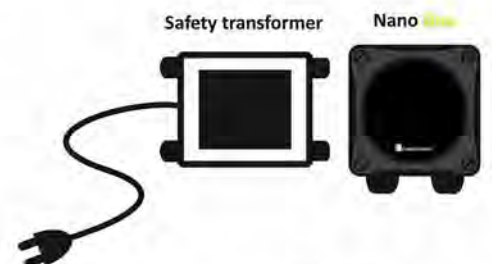
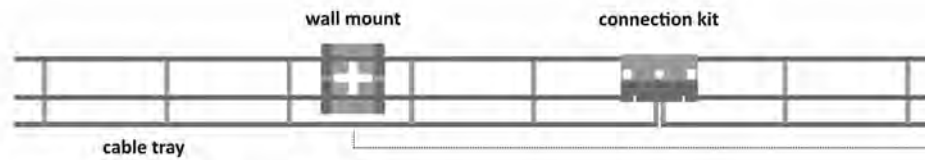
### Materials

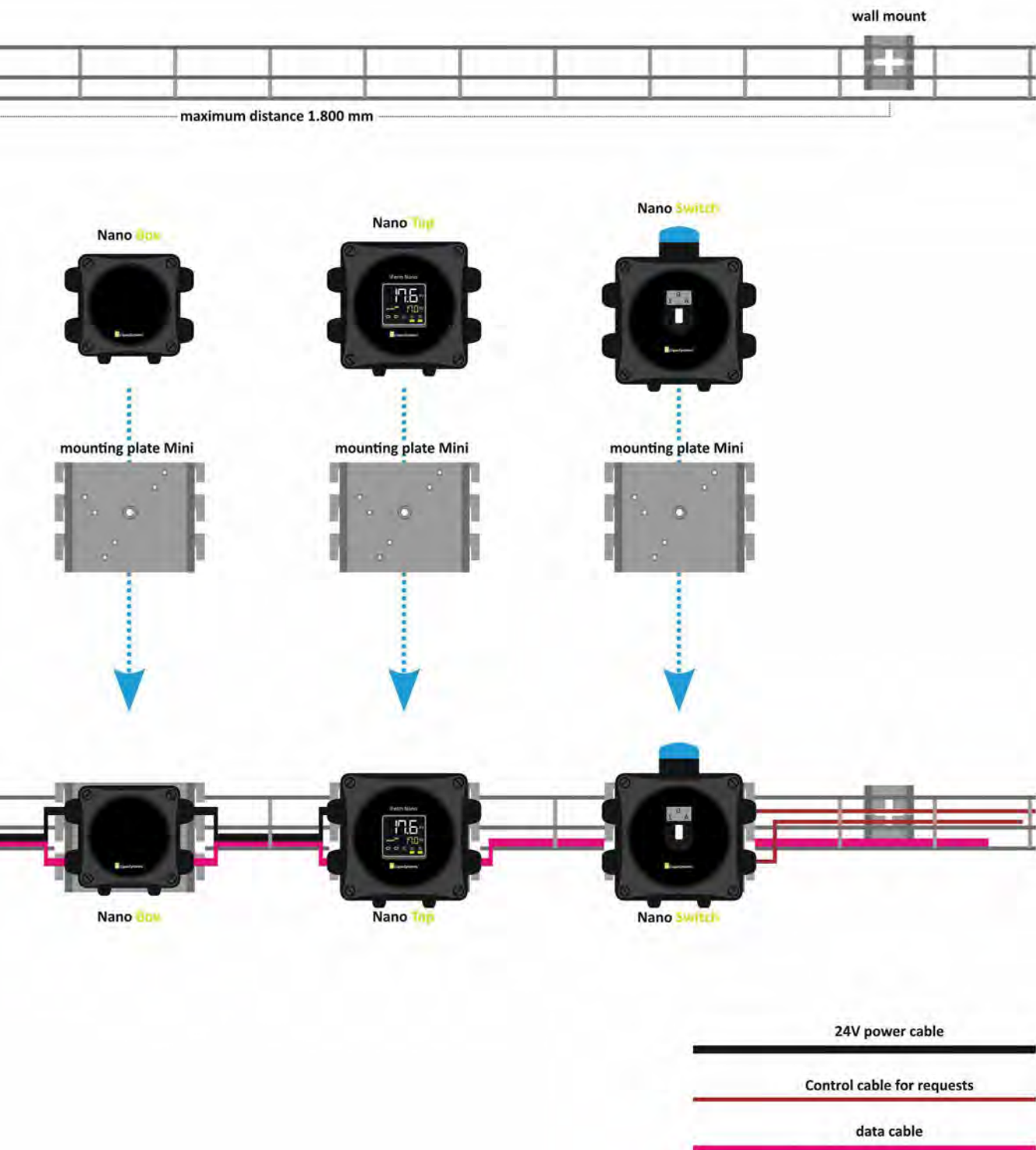
- Removable and remountable connection
- Sturdy, bend-resistant
- High corrosion resistance
- Ingenious mounting technology



### THE MAJOR BENEFIT

- Fast, simple, and safe!
- Suspension fixing
- Hygienic
- Stainless steel material





# #RELIABLE

# #PARTNERSHIP-BASED

# #HONEST



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