ago
energie + anlagen

aio 150|200|250|300
all in one – Power. Heat. Cooling.

Everything from one source – your benefit.

ago. One step ahead.

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all in one – Power. Heat. Cooling.

The exact power output and refrigerating capacity
is designed to meet each customer's individual needs.

Profitability

- Use of CHP heat to cover cooling requirements
- Own production of power, heat and cooling
- Reducing energy costs

Efficiency

- Energy savings through triple use of power, heat and cooling
- High savings of CO_2
- High efficiency (up to 90 %)

Safety

- Security of supply due to proven plant engineering
- Plant construction
- Operation and financing

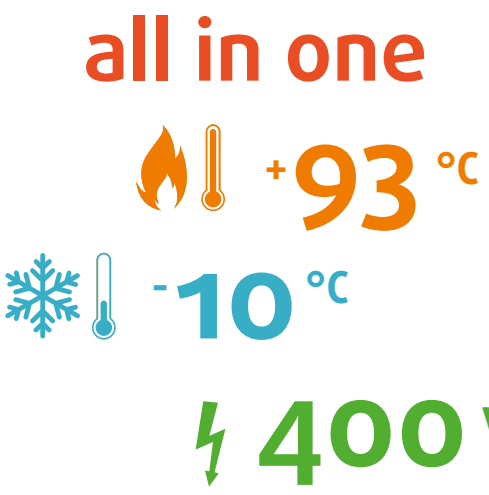
aio 150|200|250|300
all in one

Optimise today your energy costs of tomorrow.

Your benefits

By connecting a combined heat and power plant with an absorption chiller you can reduce operating costs and help reducing the environmental impact.

- Reduction of operating costs through the generation of power, heat and cooling
- Reduction of electric power input and power peaks
- Long durability and high reliability
- Increase of energy efficiency through trigeneration compared to separate cooling generation
- For the absorption chiller only natural refrigerants are used (ammonia and water), no chemicals are added
- Government subsidies

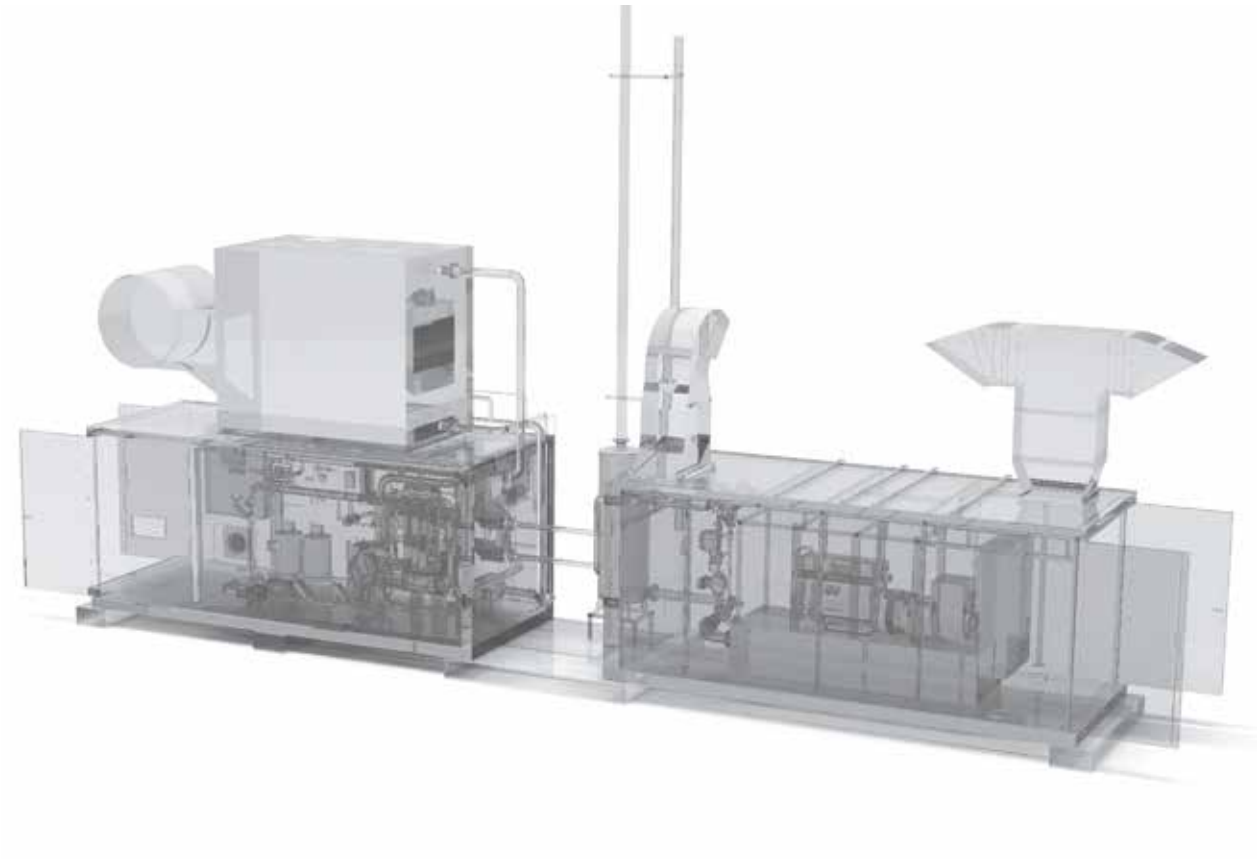


Areas of application

- Butcheries
- Dairies
- Breweries
- Bakeries
- Food and fresh food logistics
- and many more

*„The first facility exceeded our expectations!
This is why we have equipped our second site
with a combination of CHP and absorption chiller“*

Reinhold Heimann
Willms Fleisch GmbH



Modular construction of CHP and absorption chiller containers

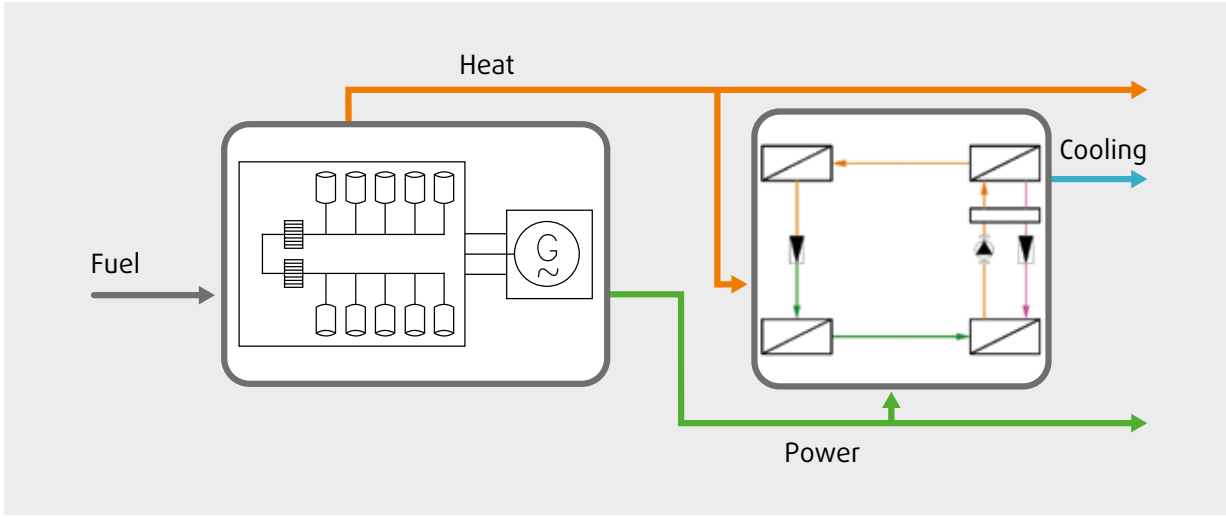
Plant description

A natural gas engine is used to generate power via a generator. The resulting engine heat is used as the primary drive for the absorption chiller. Thanks to this system combination, you can cover your own electricity requirements and at the same time also parts of your refrigeration and heating requirements.
The hydraulic integration into your heating and cooling system takes place via plate heat exchangers and thus ensures complete system separation. The „all in one“ has its own control, which can be integrated into your existing plant control system as required. Furthermore remote access via the Internet enables fast response times and good customer support.

Our team will be happy to answer any questions you may have

Your contact person is
Dr. Klaus Ramming
T. +49 9221 602-122

Mode of operation



Technical Data

Type	CHP				Absorption chiller				Total
	Electrical power output (kW)	Thermal power output (kW)	Fuel input (kW)	Overall efficiency (%)	Lowest temperature (°C)	Cooling capacity A/B (kW)	Re-cooling capacity (kW)	Heat ratio	CO_2-savings (t/a) *
aio 150	143	215	392	91.3	-2	147/113	363	0.68/0.53	241
aio 200	240	365	669	90.4	-10	161/109	526	0.44/0.3	271
aio 250	404	520	1045	88.4	-10	228/155	748	0.44/0,3	534
aio 300	532	665	1341	89.3	-10	292/198	957	0.44/0.3	749

A – Maximum cooling capacity at a cooling water temperature of 15 °C
B – Minimum cooling capacity at a cooling water temperature of 25 °C
* Compared to conventional and separate generation of electricity and refrigeration

Note: Above figures require certain basic conditions which must be checked for each individual cases.

The figures shown in the table reflect an operating point of the combined system. When conditions change the operating parameters also change according to the following principles:

- Higher cooling temperatures improve the heat ratio and lead to an increased cooling performance.
- The lower the re-cooling temperatures, the better the heat ratio and the higher the cooling performance.
- The capacity of the CHP depends on the gas quality and the installation altitude above sea level.

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ago AG Energie + Anlagen
Am Goldenen Feld 23
D-95326 Kulmbach
T. +49 9221 602-0
F. +49 9221 602-149

www.ago.ag