Baelz-vapordynamic®

www.baelz.de

This Sales Brochure intends to give you a slight insight into the Baelz Technology Brand Baelz-vapordynamic®. For deeper technical information to our products please ask for further documentation. **Your Baelz Team.**

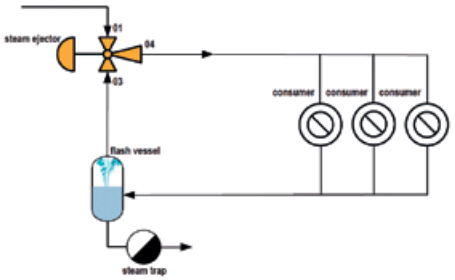
1. Technology and Components

baelz 590

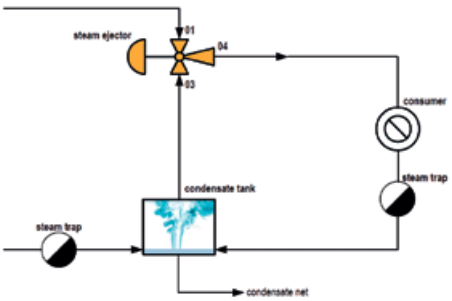
When working with steam, you must be able to rely on systems running smoothly. Production reliability, low energy costs and maintenance requirements are key factors for success in every industry. Steam ejectors from Baelz are the first choice for those employing steam technology, constructing machines and systems for steam applications or investing in projects involving heat transfer media.

Systems using steam ejectors for energy efficiency:

1. Recirculation
This type of system is adopted when there is a need for increased performance and improved production of machines. The performance increase in this type of system can average around 15 %, combined with a steam saving of up to 5 %.



2. Compression
Installations using steam ejectors as thermocompressors are perfect for saving energy, achieving direct steam saving values between 10 and 30 % or more.



Advantages at a glance:

- Increase of useful heating surface to 100 %
- Reduction of steam losses
- Increased machine performance
- System applicable to all types of steam installations.
- Recirculation and recompression systems make maximum use of available energy
- Can be used with other gases compatible with our products

media	pressure	dimension	housing material	temperature
steam, water / hot water	16 – 40	15 – 300	ductile iron (JS1025)	-50 to 240°C (-cooling tube) -50 bis 350°C (+cooling tube)

baelz 591

Internal recirculation enables production of saturated steam without overheating. The Baelz desuperheater is perfectly suited to this purpose.

Advantages at a glance:

- High precision in pressure control
- High precision in temperature control

media	pressure	dimension	housing material	temperature
steam, water/ hot water	16–40	32–300	ductile iron (JS1025)	-50 to 240°C (-cooling tube) -50 to 350°C (+cooling tube)

baelz 585

This ejector is particulary suited to processes where a rapid production of hot water with maximum recirculation through direct mixing of steam and water is required. It is available in sizes from DN 15 to DN 125.

Advantages at a glance:

- Optimal use of the motive energy of steam in conveying the water to be heated
- Optimal mixing by condensation of steam in water
- Quiet operation due to specially designed mixing chamber
- Fully integrated in process control together with the actuator, temperature sensor and controller
- Low investment costs
- Can be used with other liquids compatible with our products

media	pressure	dimension	housing material	temperature
steam, water/ hot water	16/25	15–125	ductile iron (JS1025)	-50 to 240°C (-cooling tube) -50 to 350°C (+cooling tube)

2. Add-Ons

In addition to the individual components baelz 585, 590 and 591, Baelz recommends quoting for / selling the following three product sets (only standard sets shown).

ACTUATOR SET

Electric actuators

baelz 373-E07	baelz 373-E45	baelz 373-E65-11	baelz 373-E65-20
700 N / 2.000 N	4.000 N	2.000 N	1.100 N

Pneumatic actuators

baelz 373-P21	baelz 373-P22	baelz 373-P31	baelz 373-P32
1.020 N – 2.040 N	1.846 N – 3.692 N	2.480 N – 4.960 N	4.402 N

REGULATION SET CONTROLLERS

Universal / industry controllers

Digital / continuous:	baelz 6496
Analogue / 3-step controller:	baelz 6490

Never combine a 3-point-step controller with a pneumatic actuator, as compressed air is not suited to open-stop-close control. The same applies to safety valves. If a safety valves is combined with a 3-point-step controller it will work as a open-close valve (emergency control).

Microprocessor controllers:	baelz 6200, baelz 6164, baelz 7164

Positioners

Combined with electric actuator:	baelz 1020
Combined with pneumatic actuator:	baelz 87

ATTACHMENT SET

Manual fittings:	shut-off valve baelz 70028, check valve 70081, strainer 70200
Temperature indicators / sensors:	baelz 71140, baelz 61
Pressure indicators / transmitters:	baelz 70802, baelz 828
Safety valves:	baelz 70340, baelz 70625-VA
Safety temperature limit switch:	baelz 231
Safety pressure limit switch:	baelz 834

3. Real Cases

PAPER

Product: baelz 590 DN 125 PN 16
Company / Country: Sappi Fine Papers / Austria
Project Description: In this project the aim was to increase steam pressure at the oven to 5 bars. Thanks to the controlled ejector it is now possible to combine a low steam pressure of 2.5 bars with motive steam at 11 bars resulting in a higher pressure of 4 bars. By renovating the plant, Sappi was able to increase the output of each filling process by approximately 3–5 %, making for considerable savings. As a result of these savings the project paid for itself within a few months.

FOOD AND BEVERAGES

Product: baelz 590 DN 100 PN 40
Company / Country: a leading baby food manufacturer / Spain
Project Description: An ejector was already installed in the facility but the safety valve on the 03 side was causing problems and preventing the system from running correctly. In addition, a considerable amount of energy was being lost. Hence, the whole system needed to be re-designed. The new design calculations required a steam ejector in DN 100 (2 sizes smaller than the original one). Since installing the new ejector, the system runs perfectly. The project paid for itself within six weeks.

POWER PLANT

Product: baelz 590 DN 65 PN 16
Company / Country: a local electricity producer / Germany
Project Description: The electricity producer decided to start using the water supply with steam / hot water solutions using condensate back-up control. So an ejector was used upstream of the new steam / water heating facilities, thus utilizing the flash steam from the condensate collecting vessel, the so-called vapor compression, as well as the high-pressure steam.
The amount of flash steam being let off into the open air via the roof was able to be reduced considerably by use of the steam ejector. This means an annual saving of around 15,000 euros for steam production and water heating.

4. Reference excerpt

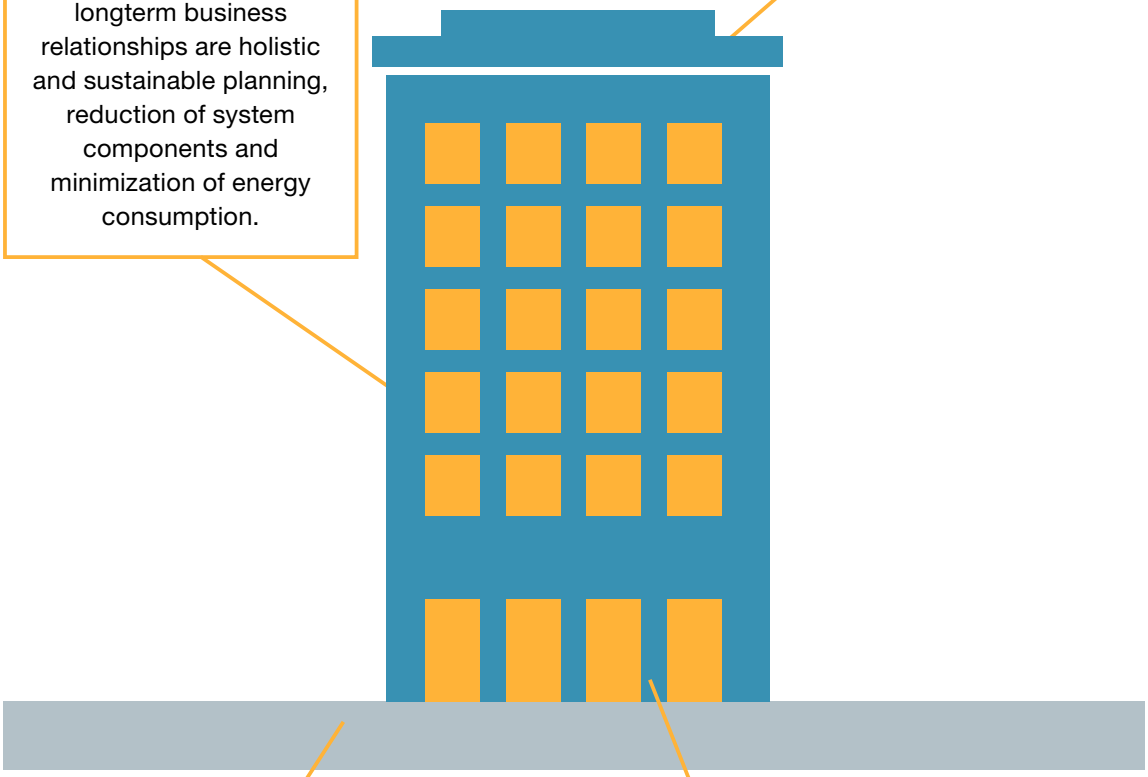
product	company	country	branch
baelz 585	Licher Privatbrauerei	Germany	food
baelz 590	TWE Hangzou	China	textile
baelz 590	Highfame Printing	China	textile
baelz 590	Hingfung Printing	China	textile
baelz 590	Jiangsu Jinlun	China	chemical
baelz 590	BASF-YPC	China	chemical
baelz 590	Condat	Germany	lubricants
baelz 590	Miguel y Costas	Spain	paper
baelz 590	Ence	Spain	paper
baelz 590	Storaenso	Germany	paper
baelz 590	Papelera Munné	Spain	paper
baelz 590	International Paper	Germany	paper
baelz 590	Kelloggs	Germany	food
baelz 590	cascades	Canada	paper
baelz 590	Gascogne Paper	France	paper
baelz 590	Brunnschweiler	Spain	paper
baelz 590	VPK Packaging	Belgium	packaging
baelz 590	Osiris	Germany	textile
baelz 590	Smurfit Kappa	Germany	food
baelz 590	SCA	Sweden	paper
baelz 591	Roche Diagnostics	Germany	pharmaceutical
baelz 591	ABBOTT	Germany	pharmaceutical
baelz 591	Laufenmühle	Germany	textile
baelz 591	WZG	Germany	food
baelz 591	Erbatech	Germany	textile
baelz 591	Boehringer Ingelheim	Germany	pharmaceutical
baelz 591	Clariant	Germany	chemical
baelz 591	Vintron GmbH	Germany	chemical
baelz 591	BASF	Germany	power plant
baelz 591	RWE	Germany	power plant

Baelz Blueprint

Our Vision Statement

ROOF
A high level of customer satisfaction is what we are working for day by day. That is why, here at Baelz, we always put our customers' needs and requirements first.

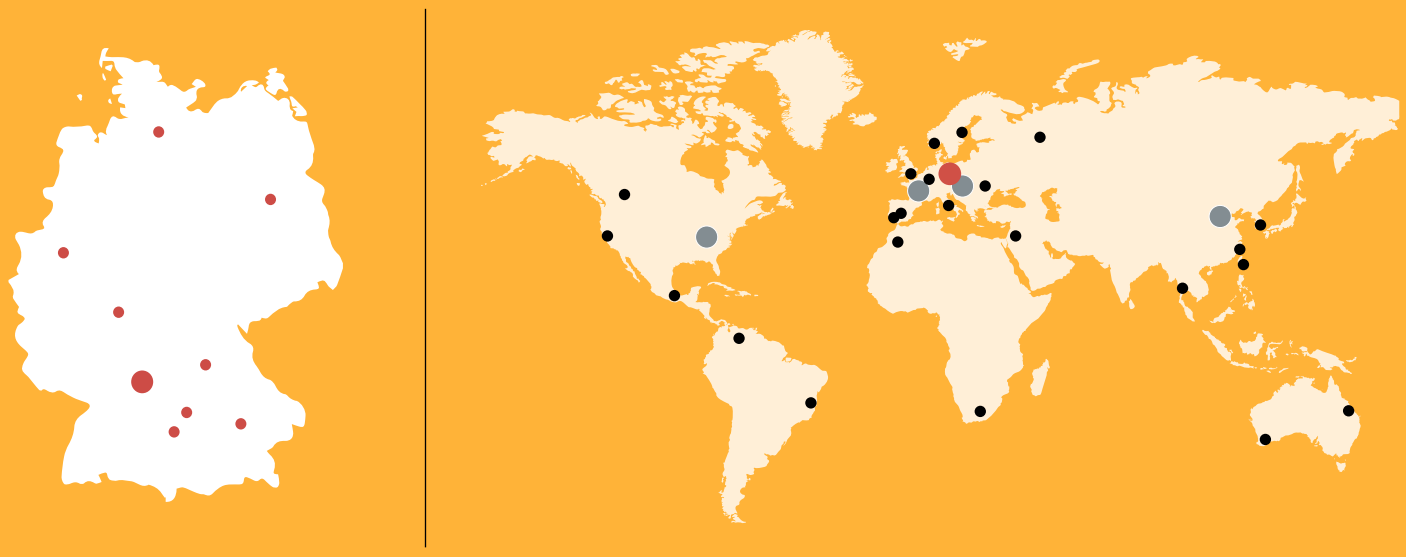
WALLS
The essential points of creating prosperous, longterm business relationships are holistic and sustainable planning, reduction of system components and minimization of energy consumption.



PILLARS
Consistently high product quality, variability and flexibility in planning and construction are the basis of every one of our successful concepts.

FOUNDATION
In order to guarantee a worldwide presence we work closely with our partners. Thanks to our transparent network we are able to identify and master challenges immediately and solve customers' problems quickly and effectively.

HOT COOL **BAELZ**



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Baelz-hydrodynamic®
Baelz-electrodyn®
Baelz-thermodynamic®

Save Energy?
Baelz offers solutions worldwide.

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