

# X

**STÜBBE**

**X-CLASS**

BUILT FOR THE EXTREME



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**EACH ERA HAS  
ITS OWN  
CHALLENGES**

—

**BUT WE ALWAYS  
HAVE THE SOLUTION**

The demands placed on pumps and aggregates for aggressive and corrosive fluids have continued to grow in recent years: materials and technologies now need to handle even higher pressures, temperatures and pumping quantities, and even more complex media. Also, there are now even more application fields and challenges requiring economic solutions.

**The X-CLASS marks the start  
of the next era in the performance  
of heavy duty plastic pumps**

The X-CLASS marks the start of the next era in the performance of heavy duty plastic pumps: extreme durability and much longer service lives redefine what is possible. Thanks to its innovative power and our own thermoplastic processing expertise gained in more than 60 years in this sector, the X-CLASS marks a further milestone as a future-oriented, efficient and reliable pump system with the ability to withstand any conditions.



**DT**

Didier Tounkap,  
head of R&D

**“WE HAVE BEEN WORKING INTENSELY ON THE FUTURE AND HAVE CREATED A PUMP THAT IS SECOND TO NONE.”**

**Mr Tounkap, you are head of R&D at STÜBBE. What makes the new X-CLASS family stand out?**

The X-CLASS pumps are used to pump chemicals that are highly aggressive and also very abrasive. The most important characteristic of this construction series is reliability; a factor that was top of our list in the development phase. Our competence in processing plastics has ensured that the X-CLASS is very durable and has a longer service life.

**“Our competence in processing plastics has ensured that the X-CLASS is very durable.”**

**This is all-encompassing if one looks at the variants isn't it?**

Yes. The 18 model sizes in 7 plastics and various bearing carrier units represent a modular solution which can adapt to the performance specifications as required. The X-CLASS family is a flexible modular system and is therefore able to accommodate our customers' application requirements. This is added value as far as spare parts are concerned.

**Were there any special challenges during the development phase?**

It was a challenge to systematically merge all our know-how. This wasn't just important for the development of the product itself, but also with a view to the subsequent application of the pumps. In addition, we also introduced new production processes to allow us to manufacture the product. At the end of the day, the investment in this series was considerable. And it was a challenge for a medium-sized company like STÜBBE to successfully implement a project that cost in excess of a million euros.

**How does the X-CLASS series address the issue of digitalisation?**

One large interface issue between the X-CLASS and Industrie 4.0 is Predictive Maintenance. As the pumps process abrasive media, the level of wear is incredibly high which will ultimately impact on their performance. The need of the customers to find a way to detect potential machine failure in advance and shutdown or service the system in a scheduled manner is great. This is the reason why we cooperated with a partner to embed sensors into the X-CLASS pumps that are able to measure, e.g. the axial thrust, and allow predictions to be made about the load condition of the pumps. This level of proactivity helps to prevent unscheduled failure of the pump.

# X-CLASS

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# FEASIBILITY REDEFINED



- 18 construction sizes
- 7 plastics
- 3 slide ring seal series
- Min. pumping output 2 m<sup>3</sup>/h
- Max. pumping output 1000 m<sup>3</sup>/h
- Application temperatures from -20 °C to +160 °C
- Pressure levels up to 16 bar

## PERFORMANCE

# PE

### PERFORMANCE LIMITS RE-DEFINED.

Compared to other (plastic) process pumps, the innovative X-CLASS stands out thanks to its broad performance range and therefore sets new standards in the heavy duty plastic pump sector.

It was specifically developed for applications with exacting demands with respect to mechanical wear resistance, chemical resistance, application temperatures, pressures and high efficiency. A higher flow rate and pressure combined with a significantly higher service life redefine what is possible.

The intelligent modular system allows adaptation to the specified performance spectrum. It is designed to be flexible so that changes in the pump configuration can be accommodated at any time by simply replacing a few parts. This opens up a wealth of new possibilities in performance ranges that were previously unattainable.



**DURABILITY**

**DU**

**DURABLE. STURDY.  
COMPACT.**

Thanks to its special design, the X-CLASS is much more resistant to corrosive, abrasive and aggressive transfer media. It can withstand even very high temperatures and enormous pressure – and, thanks to its low wear and higher running times, it is by far the most durable in its class. The X-CLASS can be used wherever other pump systems are working at their limits and guarantees excellent operating security.



**CAPABILITY**

**CA**

**EQUIPPED WHATEVER  
THE TASK.**

Thanks to its high durability, the X-CLASS can cope with almost all ambient factors and therefore sets a new reference value in the plastic pump segment. This, in turn, allows processes and pumping tasks outside the previous dimensions to be accommodated: a number of new industries and ambitious environments can now be developed. The limits of what is feasible are expanded – safely, efficiently and in a controlled manner.

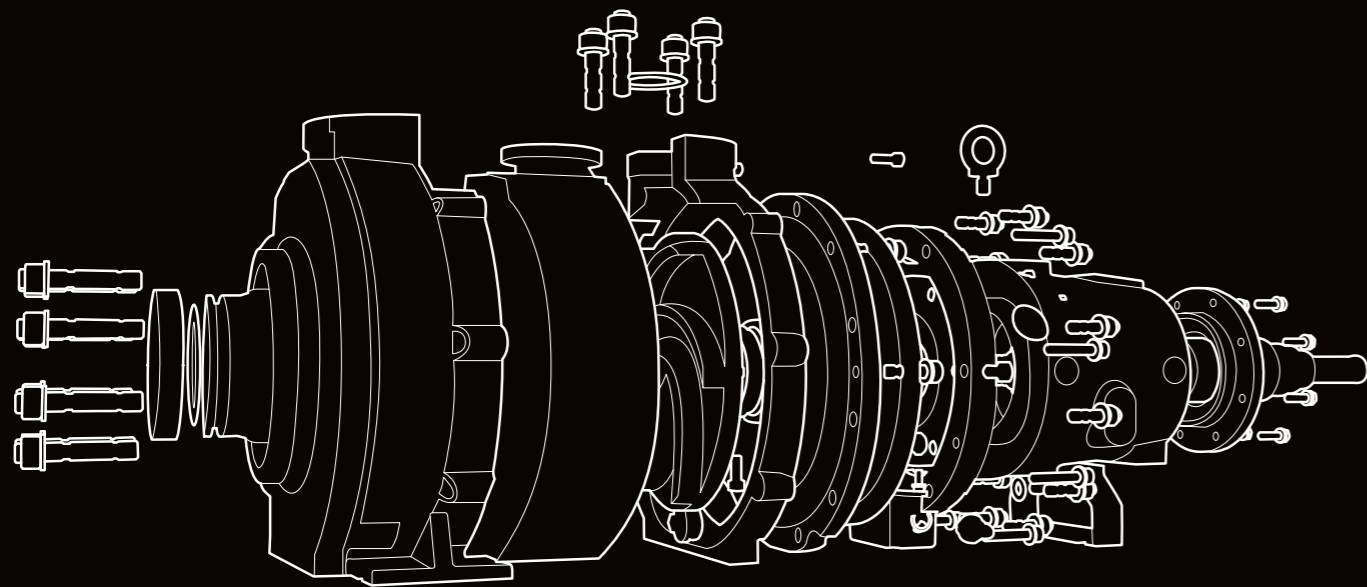
Thanks to its modular design, the X-CLASS can be integrated perfectly into even the most difficult of areas. Maintenance and spare parts sourcing are stable processes and can be reliably guaranteed by experts.





# X-CLASS

# TECHNICAL DATA



### AVAILABLE PLASTICS\*



\*conductive plastics on request

### AUXILIARY SEALS\*

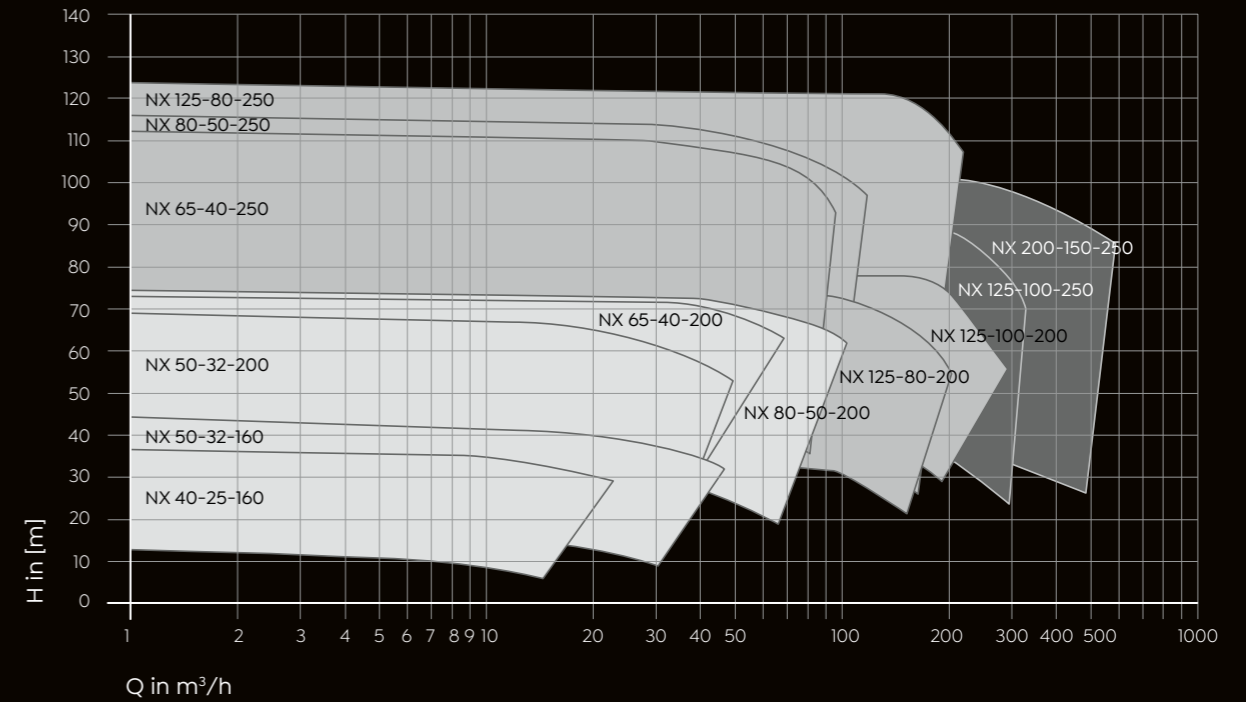


\*other materials on request

### CHARACTERISTIC CURVES

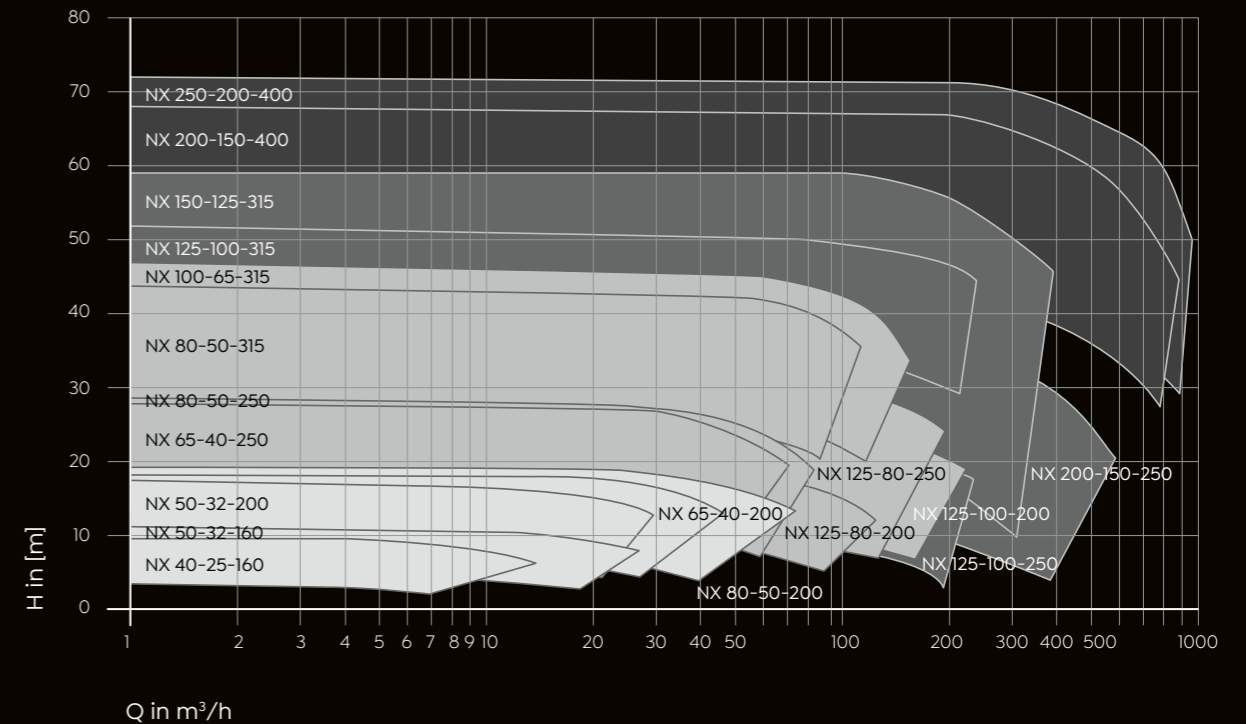
#### 2-POLE

2900 MIN<sup>-1</sup>, 50 HZ



#### 4-POLE

1450 MIN<sup>-1</sup>, 50 HZ



- Bearing carrier size I
- Bearing carrier size III
- Bearing carrier size II
- Bearing carrier size IV

# BUILT TO STAY — X-CLASS ADVANTAGES



## 01

### NEW APPLICATION FIELDS

Development of new application fields and much lower overall costs.

## 02

### IMPROVED EFFICIENCY

Price benefits compared to the purchase of metal pumps and improved efficiency in the long term due to longer application times.

## 03

### LONGER SERVICE LIVES

Fewer failures, fewer inspections and a reduction of costs due to longer service lives.

## 04

### EFFICIENT HYDRAULICS

There are various hydraulic constructions available to ensure a balance between a high level of efficiency and stability, especially in the face of sediment loads.

## 05

### OPTIMISED MATERIAL RESISTANCE

Optimised material resistance: the composition of the pumping media determines the plastic configuration.

## 06

### SECURE AND DURABLE SEAL

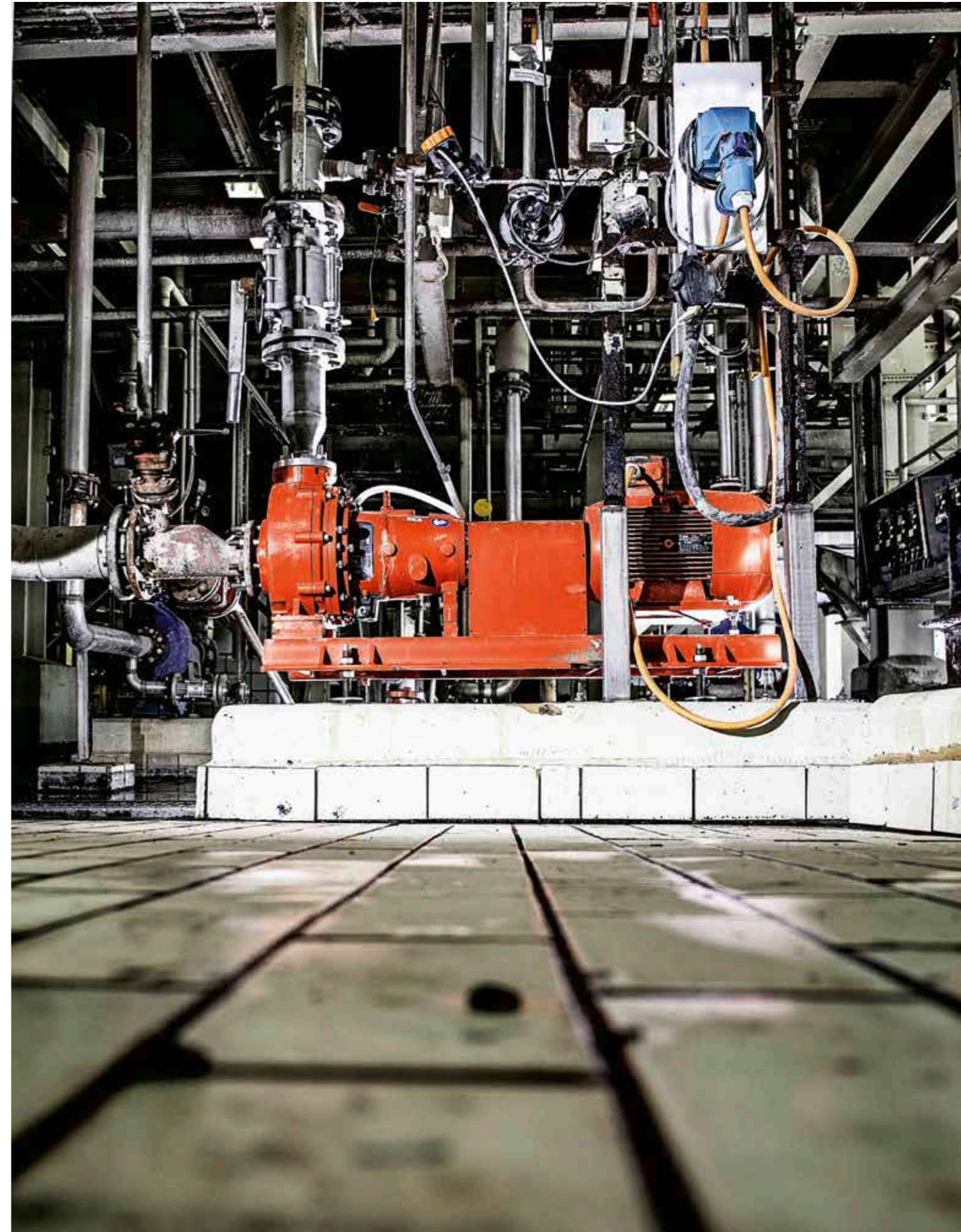
The specially developed slide ring modular kit allows secure and durable sealing thanks to the metal-free design.

# TESTED AND FOUND TO BE EXCELLENT

The issue of liability has not just been important since the launch of Industrie 4.0 / Chemie 5.0, which is why all our pumps undergo extensive testing. We work with select partners who carry out field tests under the most difficult of conditions.

One of our partners specialises in recycling salts and aluminium residues from the aluminium secondary industry. Under extreme conditions, the X-CLASS pump can pump a suspension with a solids content of 400g/l, operating 24/7.

After more than 18 months of uninterrupted operation, the X-CLASS test pump was examined and it was established that there was very little wear on the pump casing, impeller or the slide ring seal despite the extreme conditions. In particular, there was almost no wear at all on the impeller.



# ON CALL FOR YOU

QUESTIONS?  
WE'LL BE HAPPY TO HELP.



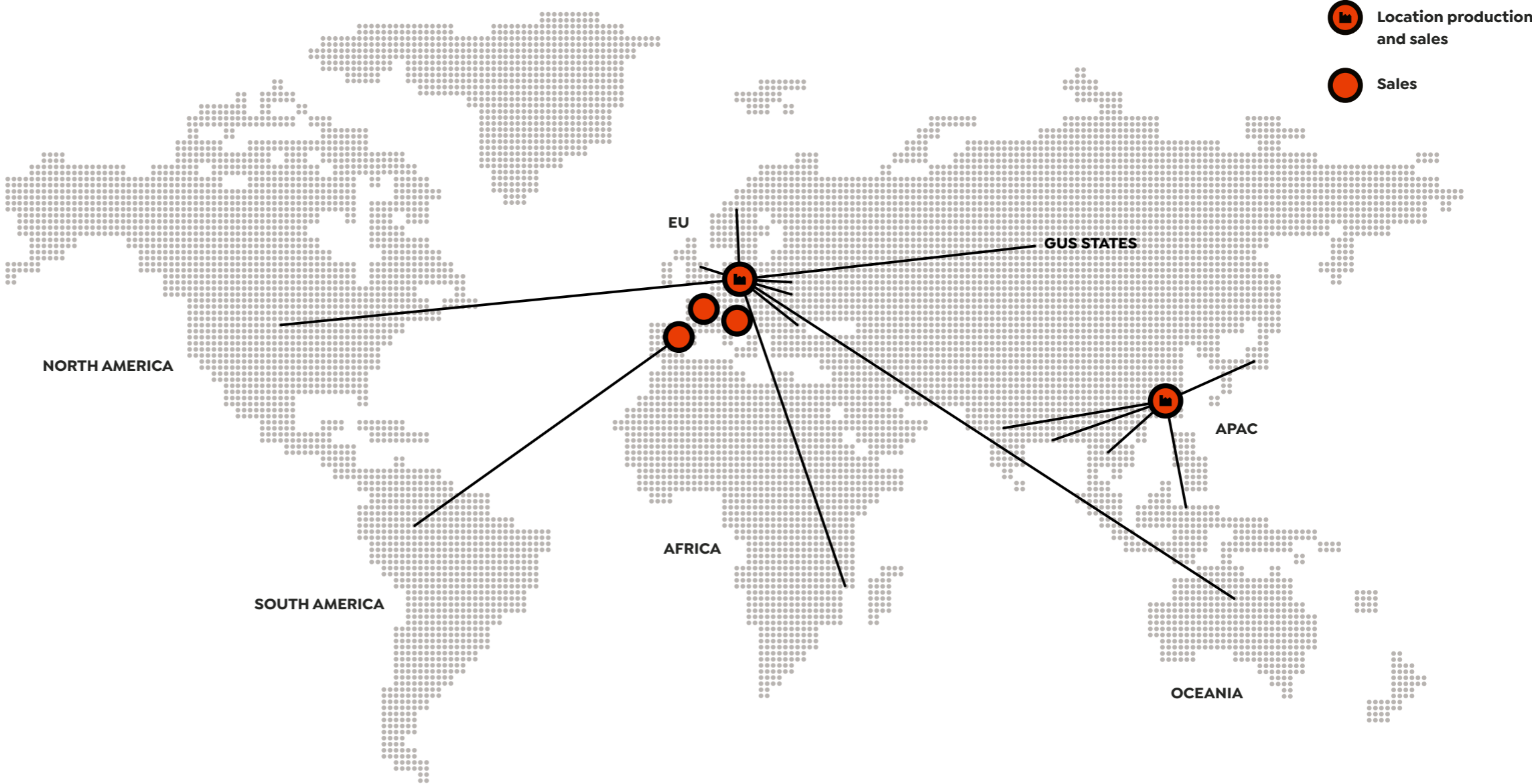
**Thomas Wiesener**  
Sales pumps

sales@stuebbe.com  
T +49 5733 7 99 – 208  
F +49 5733 7 99 – 50 00



**Steffen Jürgens**  
Product manager pumps

sales@stuebbe.com  
T +49 5733 7 99 – 215  
F +49 5733 7 99 – 50 00



## SALES EUROPE

- |                        |               |            |                 |
|------------------------|---------------|------------|-----------------|
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- Australia

## SALES GUS STATES

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- Russia
- Ukraine
- Uzbekistan
- White Russia

## SALES NORTH AMERICA

- Canada
- USA

## PRODUCTION SITES

- Vlotho, Germany
- Suzhou, China

**STÜBBE GmbH & Co. KG**

Hollwieser Straße 5  
32602 Vlotho, Germany

**ST**

T +49 (0) 5733 7 99 - 0  
F +49 (0) 5733 7 99 - 50 00  
contact@stuebbe.com  
www.stuebbe.com