



## *Company Presentation*

**WITT & SOHN**

**IGW Ventilatoren**

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## Who we are...

- Founded 1945
- In third generation of Witt family with Mr. Karsten Witt & Dr. Henrik Witt
- Since November 2018 Dr. Clemens Lorf supports the management team as further Executive Director
- Leading in manufacturing of ventilators for ships, tunnels, industry and power plants
- It is our aim to deliver high quality ventilators to competitive price



Willi Witt



Prof. Dr. Hans Witt



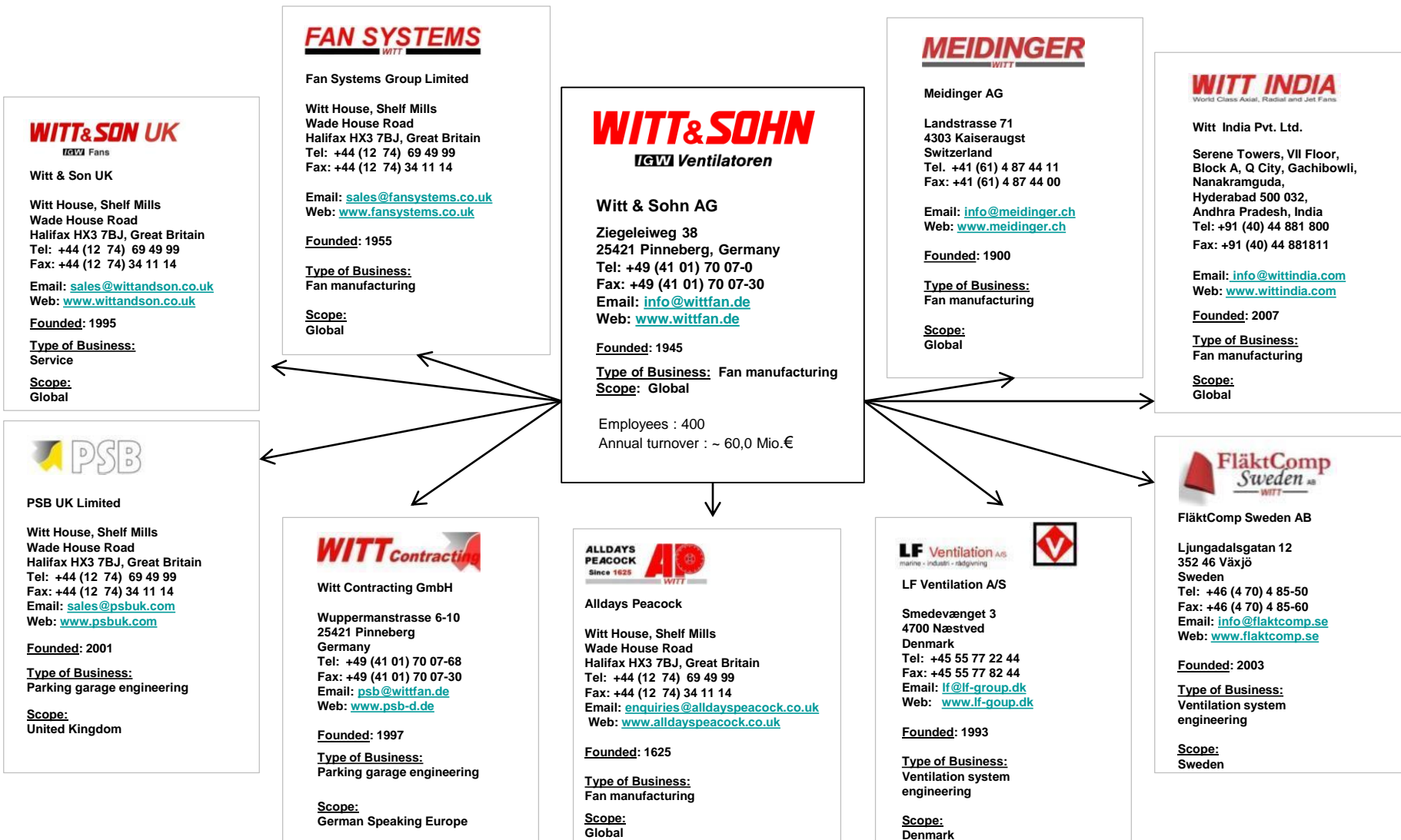
Dr. Henrik Witt



Karsten Witt



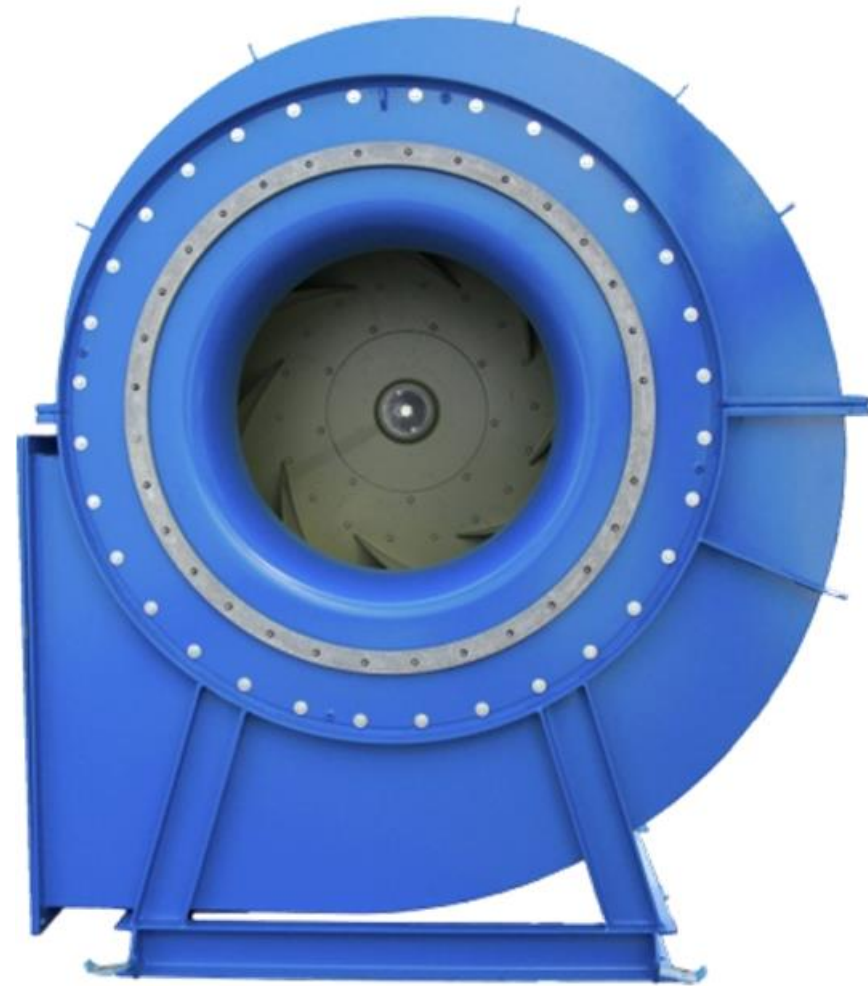
Dr. Clemens Lorf



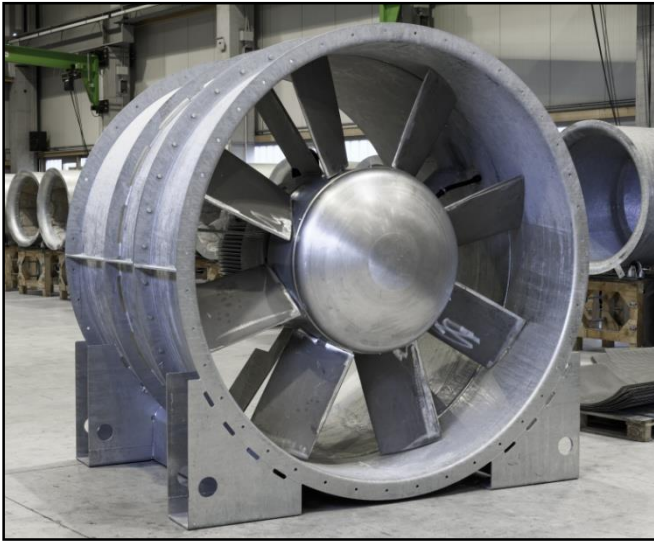
## *The basis for our success...*

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- One of the largest product ranges of any ventilator manufacturer world wide
- Scientifically derived fan curves (4<sup>th</sup> generation impellers)
- Highest efficiencies in all operating points
- 5% of turnover is continuously invested in research and development
- Certified quality since 1976 (KTA1401) and ISO 9001 since 1992
- Highly sophisticated computer system for design, construction and project management
- Very experienced, skilled workforce
- Global presence



## Our product range



- Up to **1.000.000 m<sup>3</sup>/h**
- Up to **50.000 Pa**
- Up to **89%** efficiency
- Very low noise levels
- 500 impeller types for centrifugal fans
- 650 impeller types for axial fans

- Axial
- Centrifugal
- Jet Fans
- Mixed Flow Fans
- Direct/ Coupled/ Belt Driven
- Double Inlet
- Accessories



*Our axial fan range:*



- Diameter 250 mm to 3550 mm.
- Up to 3500 Pa pressure developed for each stage.
- High fan efficiency up to 89 %.
- Aluminium wheels, adjustable when stationary.
- Low noise loading.
- Fully reversible.
- Anti-stall facilities.
- Fans designed to be explosion-proof.
- 14 different standard designs.
- Individual adaptation and optimization of the characteristic curves.

## Axial fans for every need

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**Explosion proof**



**Swing out type**



**Bulkhead mounting**



**Free inlet casing**



**Short casing**



**V-belt drive**



## *Extensive range of seawater resisant axial impellers*

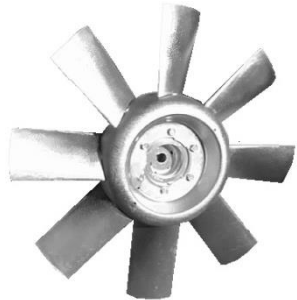
### Examples of standard impellers



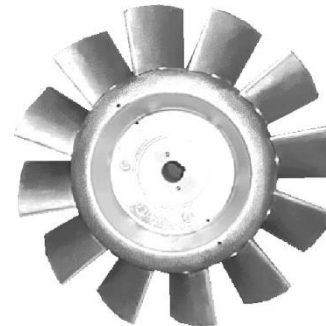
Low pressure  
Axial-Typ N6  
100 - 700 Pa



High pressure  
Axial-Type X8  
500 - 2500 Pa



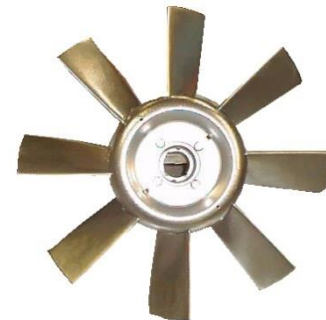
Low pressure  
Axial-Typ N8  
100 - 1700 Pa



High pressure  
Axial-Type Y12  
600 - 3500 Pa



Low pressure  
Axial-Type M8  
300 - 2000 Pa



100 % reversible  
Axial-Type NR  
100 - 1700 Pa



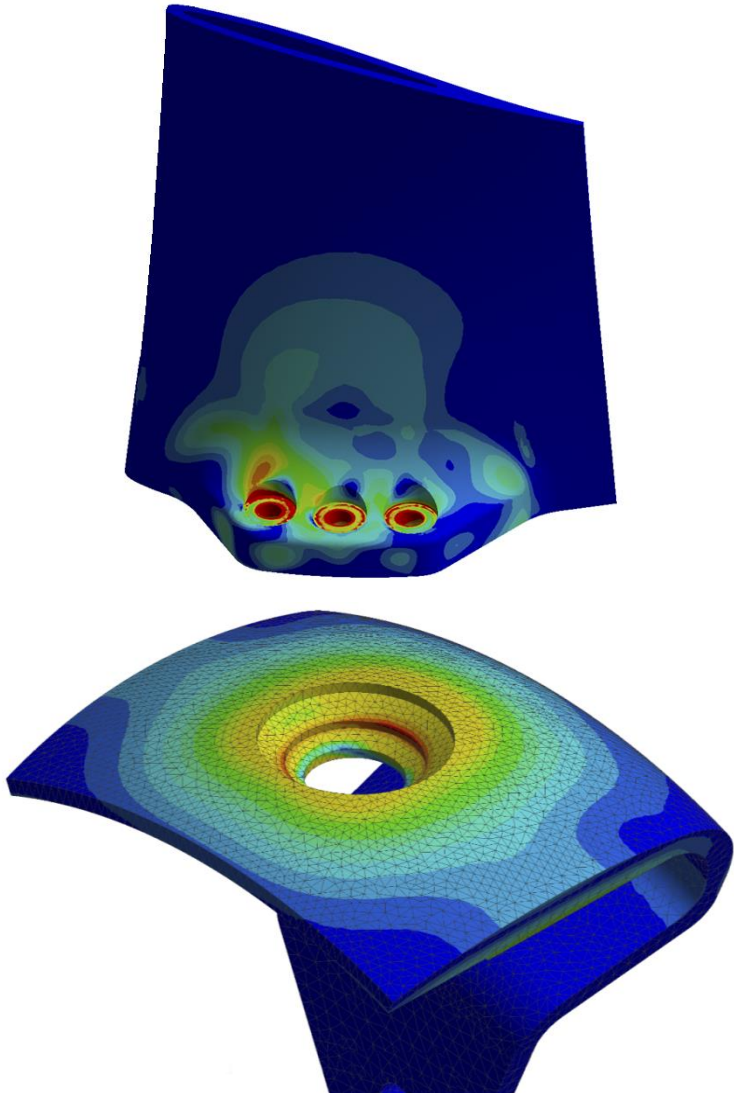
*Focus on ships*



- GL, BV, ABoS, DNV, LRoS, USSR a.o.
- Surface: Hit dip galvanized
- High fan efficiency up to 89 %
- Low noise and vibration levels
- Very small dimensions
- Reversible fans
- Certified explosion proof fans
- Swing out type for special installations
- Wide range of accessoires
- Quick and efficient order processing
- Well experienced team and many references in South Asia



*Computer aided development*



- Fans modelled using infinite elements
- Reinforced impeller blades developed through stress analyses
- Impellers with 90 % higher operating speed
- Guaranteed reliability
- Compact designs
- Competitively priced

*Certified to highest Quality Standards...*

**Qualitätssicherung**      **Quality Assurance**

**KTA 1401**



**DIN EN ISO 9001**  
**DIN EN ISO 3834-2**

**DIN 2303**



DIN EN ISO 9001 zertifiziert



**WITT&SOHN**  
**IGW Ventilatoren**

- **DIN EN ISO 9001** since 1992
- **DIN EN ISO 3834-2** since 1996
- **KTA1401 Nuclear** since 1976
- **DIN 2303** since 2002
- **DIN EN ISO 14001** since 2017
- Each fan with functional test run
- Quality test reports for each fan
- Huge documentation package available if needed
- Special computer system to minimise communication problems

Documented Quality since 1976



DIN EN ISO 9001-Certificate



DIN EN ISO 14001-Certificate



ISO 45001-Certificate

## State of the Art Manufacturing...

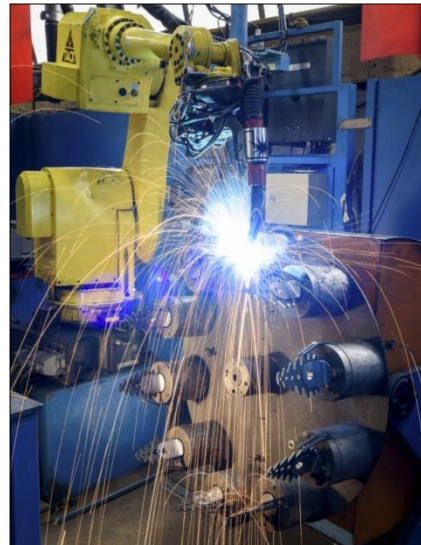
### Balancing Machines



### Automatic Impeller Cutting Machine



### Robot Welding Machine



### CNC Machines



### Sound reduction



*Leading in Research & Development*



*One of the largest worldwide*

*Measuring of Self Exciting Vibrations*



*Huge Reference List...*



- More than **20.000** ships
- More than **1.000** Navy Vessels
- More than **100** Submarines
- More than **80.000** Industry Projects
- More than **1.300** Tunnels worldwide
- More than **120** metro projects
- More than **90** Nuclear Power Plants

*Our Witt – Factory with 25,000m<sup>2</sup>*

**WITT&SOHN**

**IGW Ventilatoren**



*Thank you for your attention!*