

Thirty years lasting success in marine propulsion & energy solutions

by Mr. Stephan Backes















Agenda:

1. Fischer Panda 33 years successful power

2. New energy concepts Innovation & communication with inverter technology

3. Whisperprop propulsion The future of hybrid propulsion systems just begins

4. Summary





33 years successful power & energy worldwide



1977 Established in Paderborn, Germany



Manufacturer of compact and quiet generators, energy and aircondition systems & hybrid propulsion



Trade – company name: Fischer Panda



Worldwide distributors and partners in more than 70 countries



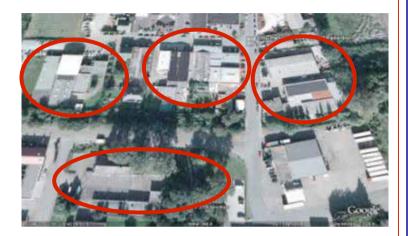
Over 200 generators in product range



Performance range from 2,5 to 200 kW



Total Quality System ISO 9001:2008







The complete energy solution for everyone!

Basic generators

Panda s-series

Premium generators

Panda Asynchron generators

Panda inverter generators

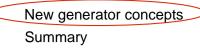
Fischer Panda Germany

Whisperprop electric drives

Hybrid 48V – 240V DC

Battery based

Energy solutions
Hybrid systems
Switch-over boxes





Innovative & Extrem compact & Silent Solutions

Panda 5000i / 8000i / 15000i / 45i









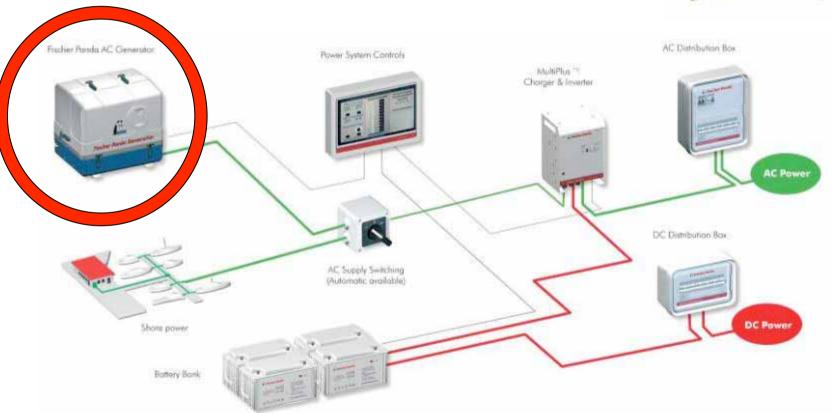
- 5 KVA / 8KVA / 15KVA variable speed generator 45KVA on the METS!
- Self-regulating engine speed system to suit load
- Extreme stable voltage and frequency
- High starting capabilities for handling inductive loads
- Super silent sound cover
- Low weight (-30%) / less space (-25%)
- variable maintenance interval
- Controller CAN capable communication with other interfaces



Intelligent System Concepts

The classic Hybrid-powersystem with Fischer Panda generator!



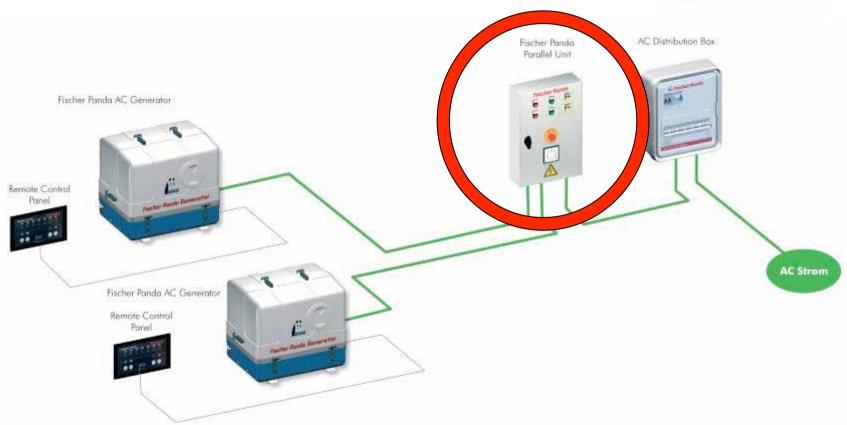




Intelligent System Concepts

The professional powersystem with two parallel Fischer Panda generators!







The challenges for the future hybrid propulsion

Challenge Design

- Innovative
- Modular
- Multifunctional
- Redundant
- Connection to other communication
 systems (CAN,GPRS)
- Economical

Challenge Components

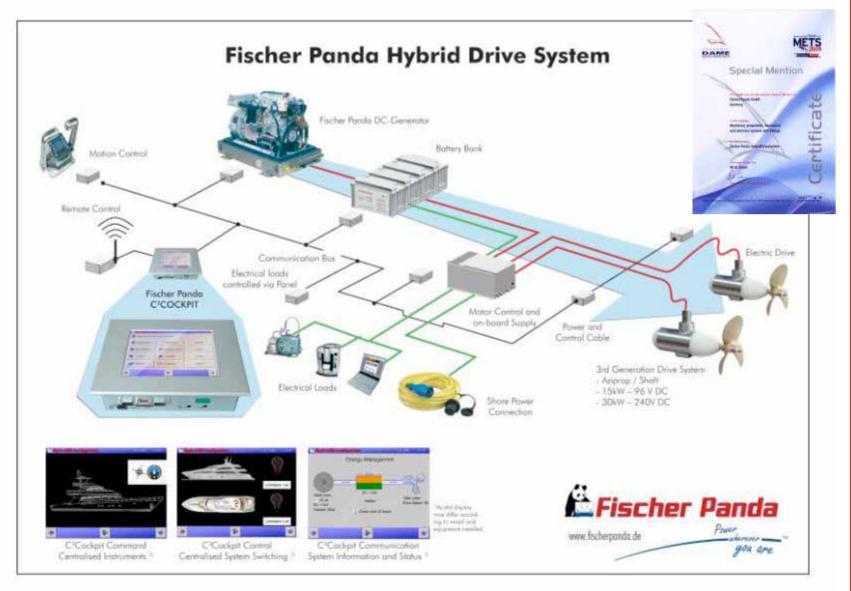
- Save & reliable
- Intelligent
- High efficient drive motors
- Durable
- Ecological

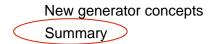


Challenge Power

- Integrated On-board power (230V and 24V)
- Power by batteries,
 generator or shore
- For monohull,Catamaran &Trimaran
- Battery based system









SUMMARY

- The new energy demand requires innovative and efficient solutions
- 2. More and more energy is needed on future boats
- 3. Hybrid battery based systems are the new "green" alternative for on-board power supply & propulsion
- 4. Innovative and load-dependend generators will substitute the old fixed-speed technology
- 5. New design concepts will be based on modular & intelligent electrical power & propulsion systems



Thank you for your attention!



Power – wherever you are ™

