



Power-to-X

Pumps, IoT, Engineering and Service Solutions

PROVEN TECHNOLOGY

DESMI

Our Offerings for the Power-to-X Industry



PUMPS

DESMI'S EXPERTISE IN PUMPING SOLUTIONS plays a pivotal role in optimizing Power-to-X processes. From robust pumps designed for efficient energy conversion to tailored systems ensuring seamless fluid transfer, DESMI's pumping precision forms the backbone of reliable and sustainable Power-to-X operations. Our custom-engineered fluid transfer systems cater to the unique needs of Power-to-X setups, providing reliable and precise fluid handling for various stages of the conversion process.



IOT SOLUTIONS/VFD

THROUGH IOT SOLUTIONS FOR MONITORING AND CONTROL, DESMI enable users to monitor and control Power-to-X processes remotely. Real-time data insights enhance decision-making, ensuring optimal performance and resource utilization. By incorporating Variable Frequency Drives (VFD) technology, DESMI enhances the flexibility and efficiency of Power-to-X systems. Precise control over pump speeds and energy consumption allows for dynamic adjustments to match varying operational requirements.



ENGINEERING

TAILORED TO MEET THE SPECIFIC NEEDS OF EACH CLIENT as DESMI engineers custom Power-to-X solutions, considering the unique requirements of each industry. Scalable and adaptable, these systems are crafted to maximize efficiency and reliability. This includes fine-tuning for energy storage, conversion, and overall system performance.



SERVICE

DESERVE, OUR DEDICATED SERVICE BRANCH, caters to your every service need, spanning from installation and commissioning to ongoing service and parts support, available 24/7 across the globe. With our DESMI 48 concept, you can get a selection of replacement pumps within two working days, and we carry out repairs on many different pump brands. Our mission is simple: to make it easier to own a DESMI product.

DISCOVER OUR COMPLETE PUMP RANGE AT
DESMI.COM



Key Benefits of DESMI Power-to-X Pump Solutions



A One-Stop-Shop destination for PtX pump solutions, offering a streamlined approach to sustainable energy conversion



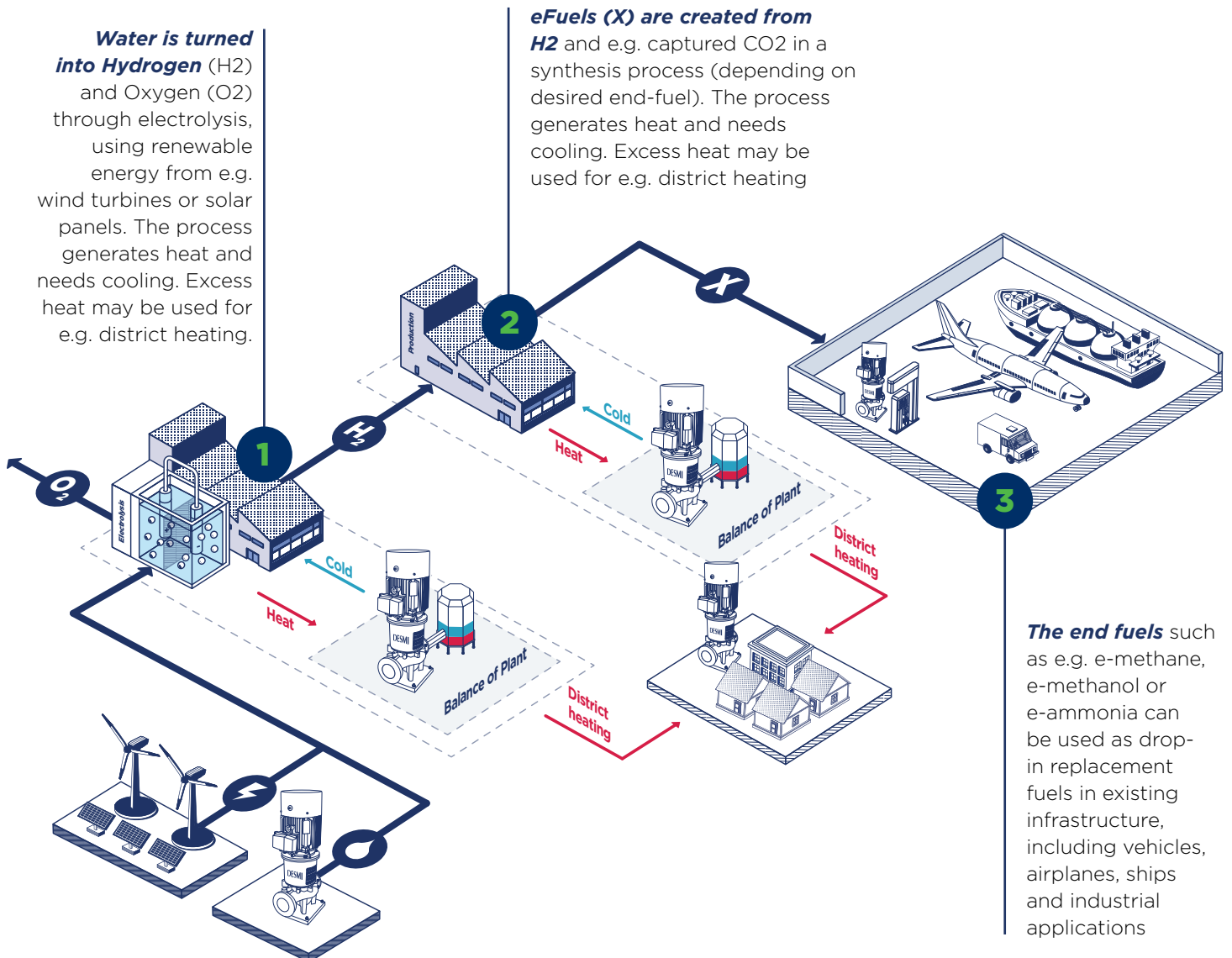
Energy Efficiency with pumps and systems designed for maximum energy transfer, contributing to a greener energy landscape



Reliability and Smooth Operation for uninterrupted performance



Knowledge and experience within pump solutions rooted in decades of expertise



DESMI Power-to-X cooling Pumps



DESMI ESL



DESMI ESLH



DESMI DSL



DESMI DSL Horizontal

Single-stage, End-suction

ESL/ESLH In-line and end-suction single-stage centrifugal pump	
Nominal diameter (DN)	25 to 100
Flow rate - 50Hz	Up to 200 m ³ /h (880 US gpm)
Flow rate - 60 Hz	Up to 250 m ³ /h (1100 US gpm)
Head	Up to 65 m (210 ft)
Pressure	Up to 30 bar (435 psi)
Temperature	Up to 140°C (284°F)
Motor	Standard and EX motors
VFD	Direct or wall-mounted
Applications: Water, water with additives, seawater and oils up to 500 cSt.	

Double Suction, In-line

DSL Vertical and horizontal inline double suction centrifugal pump	
Nominal diameter (DN)	150 to 600
Flow rate - 50 Hz	Up to 6200 m ³ /h (27300 US gpm)
Flow rate - 60 Hz	Up to 7400 m ³ /h (32580 US gpm)
Head	Up to 140 m (459 ft.)
Pressure	Up to 25 bar (363 psi)
Temperature	Up to 140°C (284°F)
Motor	Standard and EX motors
VFD	Wall-mounted
ATEX approved.	
Applications: Water with additives and seawater.	



DESMI NSL Horizontal



DESMI NSL



DESMI NSLH



DESMI NSLV

In-line, Vertical & Horizontal

NSL Vertical and horizontal in-line centrifugal pump	
Norminal Diameter (DN)	80 to 350
Flow rate - 50 Hz	Up to 2000 m ³ /h (8800 US gpm)
Flow rate - 60 Hz	Up to 2400 m ³ /h (10600 US gpm)
Head	Up to 195 m (640 ft)
Pressure	Up to 25 bar (360 psi)
Temperature	Up to 140°C (284 °F)
Motor	Standard and Ex motor
VFD	Direct or Bulkead/Wall-mounted
ATEX approved	
Applications: Water, water with additives, seawater and oils up to 500 cSt.	

End-suction

NSLH/V Vertical and horizontal end-suction centrifugal pump	
Nominal diameter (DN)	80 to 400
Flow rate	Up to 1800 m ³ /h (7900 US gpm)
Head	Up to 220 m (720 ft)
Pressure	Up to 25 bar (363 psi)
Temperature	Up to 150°C (302°F)
Motor	Standard and EX motors
VFD	Direct or wall-mounted
ATEX approved.	
Applications: Water, water with additives, seawater and oils up to 500 cSt.	

DESMI Power-to-X Pumps



HOMA Submersible wastewater pumps



End-fuel pump

Submersible wastewater pump

Submersible wastewater pump	
Nominal diameter (DN)	150 to 600
Flow rate - 50 Hz	Up to 6200 m ³ /h (27300 US gpm)
Flow rate - 60 Hz	Up to 7400 m ³ /h (32580 US gpm)
Head	Up to 140 m (459 ft.)
Pressure	Up to 25 bar (363 psi)
Temperature	Up to 95°C (203°F)
Motor	Standard and EX motors
VFD	Wall-mounted
ATEX approved.	
Applications: Water with additives and seawater.	

Magdrive In-line & End suction Fuel Pump

End-fuel pumps	
Normal Diameter	25 to 100
Flow rate - 50 Hz	Up to 150 m ³ /h (660 US gpm)
Flow rate - 60 Hz	Up to 180 m ³ /h (800 US gpm)
Head	Up to 130 m (430 ft)
Pressure	Up to 16 bar
Temperature	Min. -40°C / Max. 120°C
Motor	Standard and Ex motor
VFD	Direct and Bulkhead/Wall-mounted
Viscosity Range	Min. 0.3 / Max. 300 cSt
ATEX approved	
Common Applications: Where no pumping medium leakage is allowed.	
Pumping of: Methanol, Ethanol, Ammonia, Hydrocarbons (fuels) & Amine/Water Mixtures.	
Note: The pumps are designed for pumping liquids without solid/clogging particles. These could cause premature failure of the pump bearings and/or mag-drive.	

DESMI Vertical Centrifugal Multi-stage Pumps

Multi-stage

Vertical DPV	
2-pole	2, 4, 6, 10, 15, 25, 40, 60, 85, 125
4-pole	15, 25, 40, 60, 85, 125
Capacity range (m ³ /h)/(gpm)	0.5-193/2-849
Maximum pump pressure (m)/(ft)	5/16 to 400/1312
Temperature range medium	-20 - +140° C / -4 - 284° F
Applications: Water, sprinkler, industry, cleaning systems and boiler feeds.	

DESMI DPV Pumps





"DESMI has been a trusted partner through the building of the plant in Kassø. We are satisfied with their work. The pumps were chosen based on their balance of cost-effectiveness and quality. They lived up to the expectations."

- Maintenance Lead at European Energy, Ricki Refstrup



ENSURING THE POWER OF TOMORROW FOR EUROPEAN ENERGY

European Energy is constructing the largest E-methanol plant in the world. With an array of DESMI Centrifugal pumps, they are able to provide ships around the world with about 32,000 tons of E-methanol every year, while also forwarding the excess heat for over 3.300 local households. All with renewable energy!

At the heart of European Energy's Power-to-X plant in Kassø, Denmark, are eleven Balance-of-Plant pumps. By leveraging power from the region's largest solar park to split water into hydrogen and oxygen, these pumps have been specifically engineered to maintain the correct temperature for the electrolysis needed in the processing. The effort not only optimizes performance, but also safeguards the longevity and efficiency of the entire plant.

As CO₂ is added to hydrogen, the plant produces e-methanol, which is a versatile fuel that holds promise for a myriad of applications, from powering methanol-fueled ships to supporting production processes for industry giants.

DESMI's involvement in the project extends beyond pump installation; we have been there through the project's journey, from the design of the pilot plant to the commercialized facility. During the design phase, we collaborated closely with the engineering company, engaging in extensive dialogue to optimize the cooling system.

The integration of DESMI's pumping solutions ensures seamless fluid handling throughout the Power-to-X conversion process. From precise temperature control to efficient energy conversion, the pumps enable European Energy to achieve optimal performance in their flow processes.



LOCATION

Kassø Solar Park,
Denmark



APPLICATION

Power-To-X Plant
making E-methanol
with Solar Panels

DESMI DESMI PRODUCTS

11 Balance-of-Plant
pumps, regulating the
systems temperature

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