

The background of the slide is a grayscale photograph of an industrial facility. In the foreground, a large, multi-bladed fan drive is visible, partially obscured by the text. In the background, several large, circular cooling towers are arranged in rows, with steam or smoke rising from them. The overall scene is industrial and technical.

Sumitomo DriveTechnologies

INNOVATIVE SOLUTIONS FOR COOLING TECHNOLOGY
LARGE INDUSTRIAL FAN DRIVES

Cooling or capturing air?

WE HAVE YOUR DEDICATED FAN DRIVE SOLUTION!

Large industrial fan drives are indispensable in a wide range of industries, serving as the backbone for efficient thermal management and air movement. These systems are designed to meet diverse operational needs, whether cooling steam, water, or other fluids for reuse, ensuring compliance with environmental regulations, or facilitating air capture for innovative applications.



Power generation



Chemicals



Steel & metal



Data centers



Climate / clean air

Tailored Fan Drive Solutions for

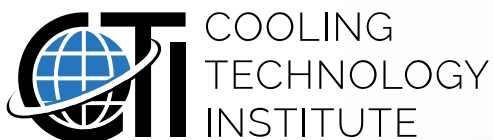
- **Wet Cooling Towers (WCT):**
Engineered for water-abundant areas, our durable and efficient drive trains power fans for effective heat exchange in extreme corrosive and humid atmospheres.
- **Air-Cooled Condensers (ACC):**
Designed for dry regions, our robust drive trains operate large fans for efficient steam condensation, supporting water-saving and sustainable operations.
- **Direct Air Capturing (DAC):**
Our reliable drive trains ensure precise control for fans used in CO₂ extraction, enabling advanced air-capturing systems.

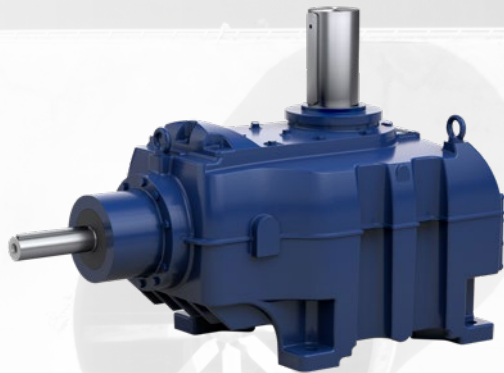
Why Choose Our Solution

Whether you require vertical or horizontal configurations, right-angle or parallel shaft gearboxes, our systems are custom-engineered to meet the demands of large fan drive applications.

Drive your system with confidence. Choose innovation, choose reliability, choose us.

- Designed in accordance with Cooling Technology Institute (CTI) standards.
- Optimized gear geometry in accordance with AGMA specifications.
- Dedicated selection method taking starts and stops into account
- Specifically developed design offers a cost-effective, robust & efficient solution
- Proven reliability with over 30,000 installations worldwide.
- Optional ATEX certification for hazardous environments.
- High resistance in corrosive and extreme humidity environment





Hansen M5CT / P4

Vertical **INDUCED DRAFT**

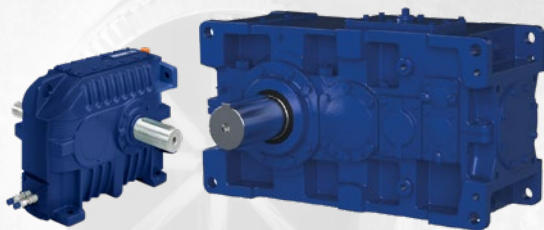
- Right-angle shafts
- 12 sizes
- 2.6-108kNm
- 2-stages, ratios 3.55-22.4



Hansen M4ACC

Vertical **FORCED DRAFT**

- Parallel shafts
- 7 sizes
- 17-70kNm
- 2-stages, ratios 9-25



Hansen P4 / PARAMAX

Horizontal **VARIOUS COOLING APPLICATIONS**

- Parallel & right-angle shafts
- 2.6-1100kNm
- Single and Multistage, various ratios

Vertical fan drives

INDUCED DRAFT - Right-Angle Shaft Gearboxes

Our Hansen M5CT/P4 right-angle 2-stage gearbox series is the ideal solution for vertical large fan drive applications such as wet cooling towers, air-cooled condensers, and direct air capturing systems. Designed for demanding environments, it offers exceptional performance, durability, and ease of maintenance, ensuring reliable operation even under extreme corrosive and humid conditions.

Key Features and Benefits

- **Reliable Lubrication System:**
Engineered for simplicity, the integrated lubrication system eliminates the need for external piping, enhancing reliability and reducing maintenance efforts.
- **Purpose-Built Housing Design:**
The robust housing design ensures smooth and efficient transmission of high axial loads from the cooling fan through the gearbox center bore. These loads are effectively directed toward the mounting feet, which are concentrically positioned with the output shaft for superior stability.
- **Extended Bearing Span:**
Featuring heavy-duty roller bearings, the gearbox provides strong shaft support, making it ideal for high-torque applications.
- **Effective Cooling Ribs:**
Strategically designed cooling ribs ensure optimal thermal power dissipation, allowing the gearbox to operate efficiently even in high-temperature conditions.
- **Cost-Efficient and Robust Design:**
With its low-maintenance design, the Hansen M5CT/P4 offers a cost-effective solution without compromising on durability or performance.

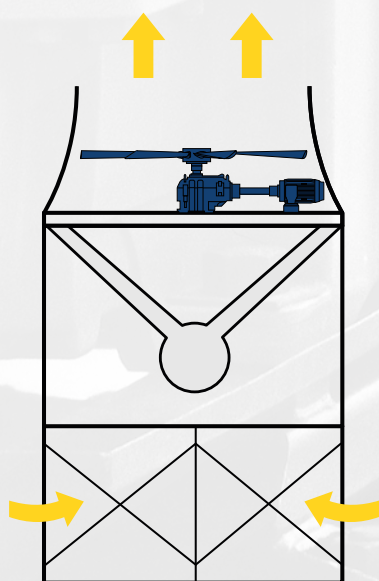
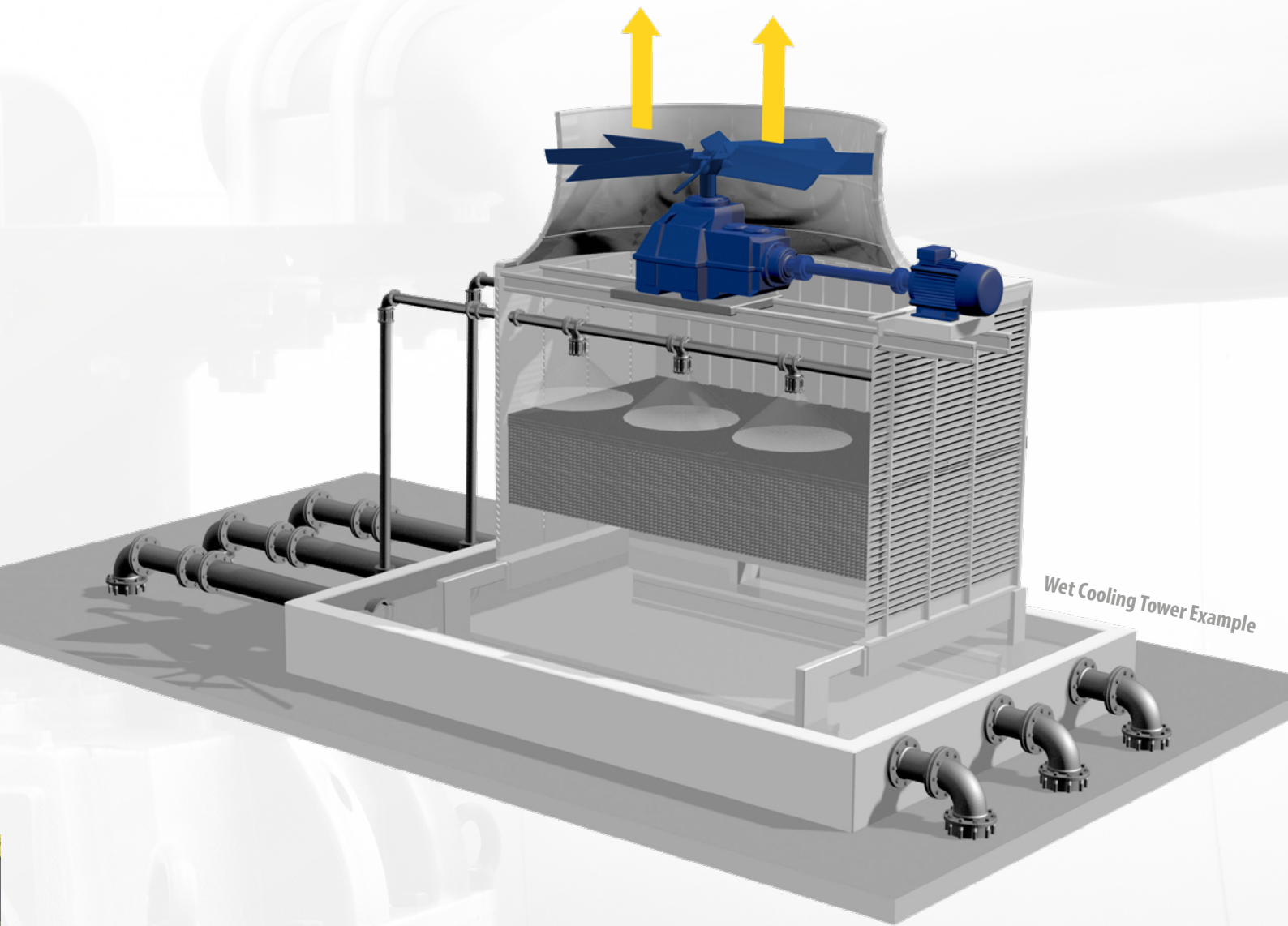
Specifications at a Glance

- **Right-Angle Shafts**
- **12 Sizes Available:**
Torque range of 2.6 – 108 kNm
- **2-Stage Gear Design:**
Ratios from 3.55 to 22.4
- **Various Instrument & Accessory Options:**
a.o condition monitoring for temperature, oil flow, and vibrations, enabling proactive maintenance.

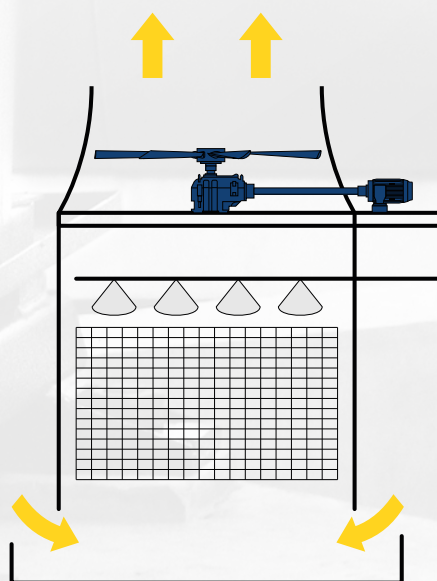


Visit the Hansen M5CT product page for more information.

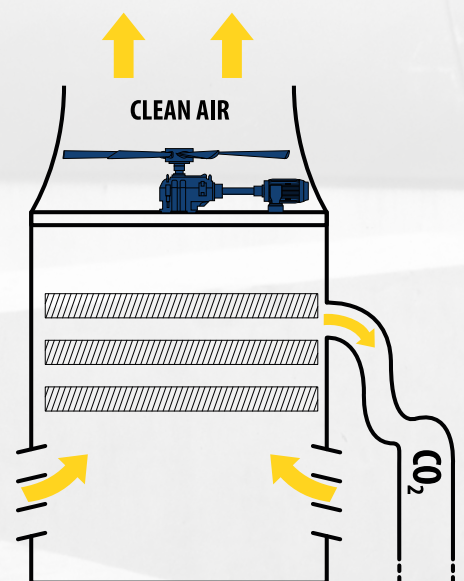




Air-cooled Condenser



Wet Cooling Tower



Direct Air Capturing

Vertical fan drives

FORCED DRAFT - Parallel Shaft Gearboxes

The Hansen M4ACC parallel shaft gearbox is specifically designed to meet the demands of vertical fan drives in forced draft air-cooled condenser systems. With its compact and efficient design, it ensures reliable and cost-effective performance in even the harshest environments.

Key Features and Benefits

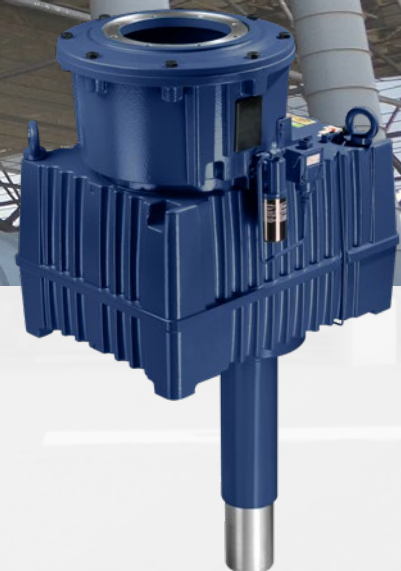
- **Compact and Robust Design:**
Engineered for durability and efficiency, reference to the optimized selection method taking the many start stops into account, the M4ACC delivers consistent performance while withstanding demanding conditions.
- **Alignment-Free Motor Connection:**
Equipped with a standard lantern housing, the gearbox allows an easy and precise motor connection directly on top of the unit, simplifying installation and enhancing system reliability.
- **High Efficiency and Quiet Operation:**
Proven gear geometry, designed for maximum load capacity, minimum losses and silent performance, the M4ACC optimizes energy usage, reducing operational costs while maintaining a quiet work environment.
- **Low Maintenance for Maximum Uptime:**
Example is the Leakage-Free Drywell as standard sealing at the low speed shaft. Built for reliability, the M4ACC requires minimal maintenance, helping you reduce downtime and operational expenses.
- **Tailored for Maintenance Safety:**
Available with an optional hydraulic brake system, the M4ACC ensures safety during maintenance activities, adding an extra layer of operational confidence.

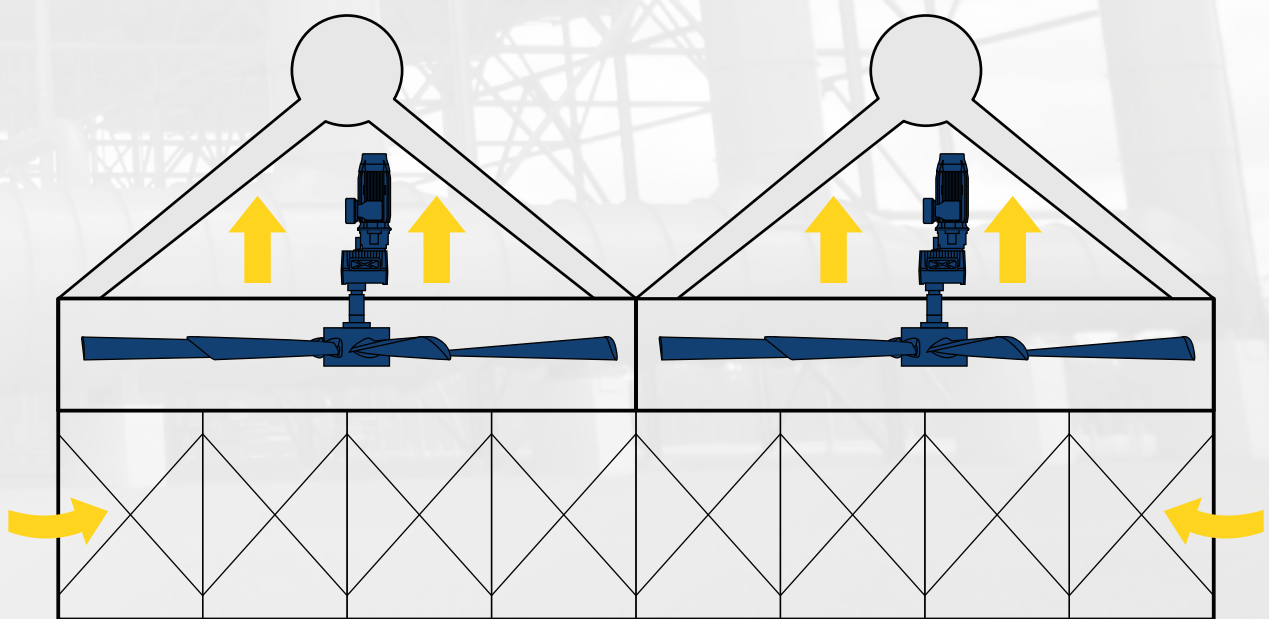
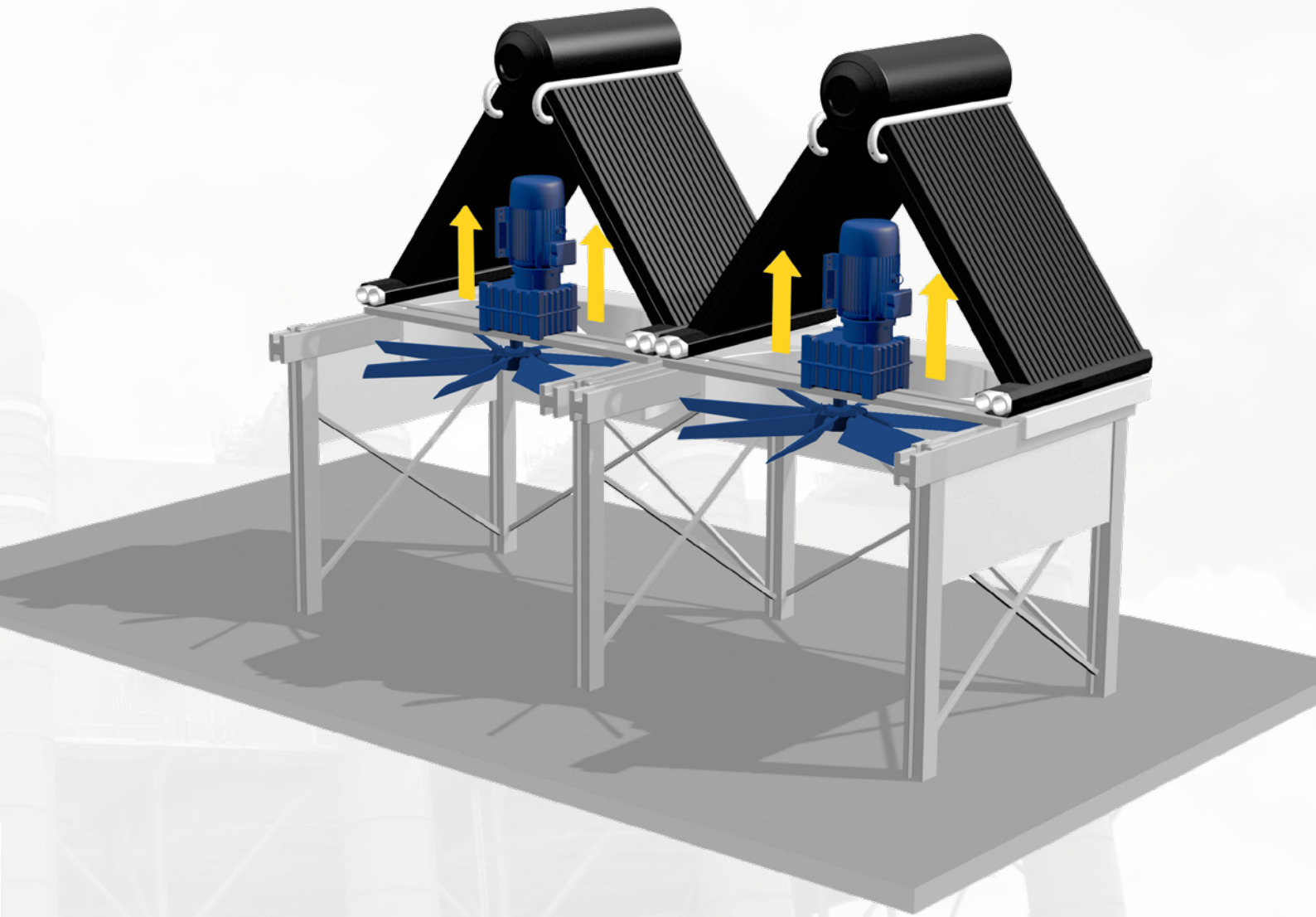
Specifications at a Glance

- **Parallel Shafts**
- **7 Sizes Available:**
Torque range of 17 – 70 kNm
- **2-Stage Gear Design:**
Ratios from 9 to 25
- **Various Instrument & Accessory Options:**
a.o. features like a hydraulic brake system for added safety and convenience.



Visit the Hansen M4ACC product page for more information.





Air Cooled Condenser systems (ACC)

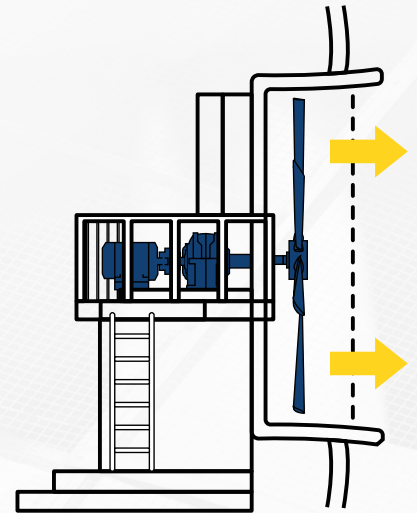
Horizontal fan drives

VARIOUS COOLING APPLICATIONS

When it comes to horizontal fan drive systems in diverse cooling or airflow applications, the PARAMAX and Hansen P4 gearboxes deliver unmatched efficiency, durability, and versatility. Designed for challenging environments, these gearboxes are the perfect fit for cooling technologies like natural draft fan assistance, horizontal direct air capturing, and other industrial fan drive applications.

Key Features and Benefits

- **Versatile Configurations:**
Available in parallel and right-angle shaft designs, these gearboxes are adaptable to a wide range of applications, ensuring seamless integration into your system.
- **Unmatched Efficiency:**
Engineered for superior performance, PARAMAX and Hansen P4 gearboxes optimize energy use, delivering reliable and efficient operation in high-demand scenarios.
- **Durability in Harsh Environments:**
With robust construction and high-quality materials, these gearboxes excel under the most demanding conditions, providing long-lasting reliability.
- **Wide Torque and Ratio Range:**
Offering torque capabilities from 2.6 to 1100 kNm and a variety of single- and multi-stage ratio options, these gearboxes meet the requirements of both standard and specialized industrial applications.

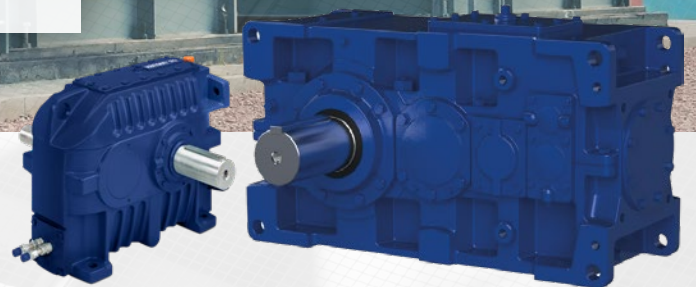


Specifications at a Glance

- **Parallel and Right-Angle Shafts**
- **Wide Torque Range:**
2.6 – 1100 kNm
- **Flexible Design:**
Single- and multi-stage configurations with various ratios
- **Various options available:**
Condition monitoring temperatures, vibrations, backstops, ...



Visit the product overview page for more information.



SERVICE

No matter where you are

Sumitomo Drive Technologies understands the unique requirements of fan drive applications and develops optimal solutions tailored to meet the needs of your system.

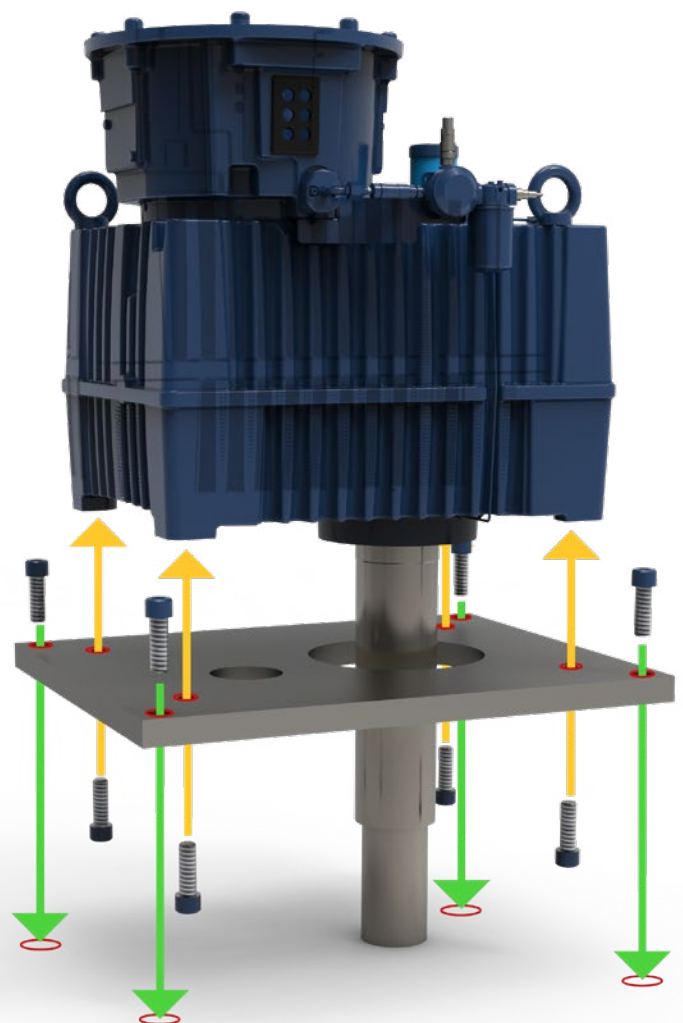
Our service capabilities

Our experts provide practical know-how and leverage cutting edge technology for efficient solutions, wherever you are. We can be your high performance service partner by assisting with:

- Inspections
- Repairs
- Replacement service and drop-in retrofit
- Customizing
- Training

Replacing obsolete equipment can lead to costly downtime and dimensional issues.

We will easily retrofit your units via custom made transition base to match your existing footprint for easy drop-in.



Want to avoid breakdowns?
Have a breakdown and need help immediately?

Sumitomo Drive Technologies

COMPLETE DRIVE PACKAGE SOLUTIONS

Motor + Frequency Drive + Gearbox + Couplings & Brake Systems

Sumitomo Drive Technologies provides comprehensive drive package solutions for fan drive applications. Our integrated systems include high-performance **motors, frequency drives (VFD), gearboxes, couplings and brake systems**, all engineered to work seamlessly together for optimal efficiency and reliability.

- **End-to-End Solutions:**
Everything you need for your fan drive system in one package.
- **Optimized Performance:**
Each component is designed for peak efficiency and long-lasting reliability.
- **Flexibility:**
Customizable solutions tailored to your specific application needs.
- **Proven Quality:**
Trusted by industries worldwide for superior performance.

Choose Sumitomo Drive Technologies for a fully integrated, reliable fan drive system that ensures smooth, efficient operation.



 **Invertertek**
Drives.com
Member of Sumitomo Drive Technologies



 **LAFERTGROUP**
Member of Sumitomo Drive Technologies



OPTIONAL HYDRAULIC BRAKE SYSTEM (PATENTED)

The unique brake design for Hansen M4ACC gear units allows the user to safely slow down the gear unit and condenser fan, and keep them at standstill during maintenance activities in dry cooling towers.

Avoid the risk of personnel injury due to windmilling.





Find your closest Sumitomo Drive Technologies facility here.

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