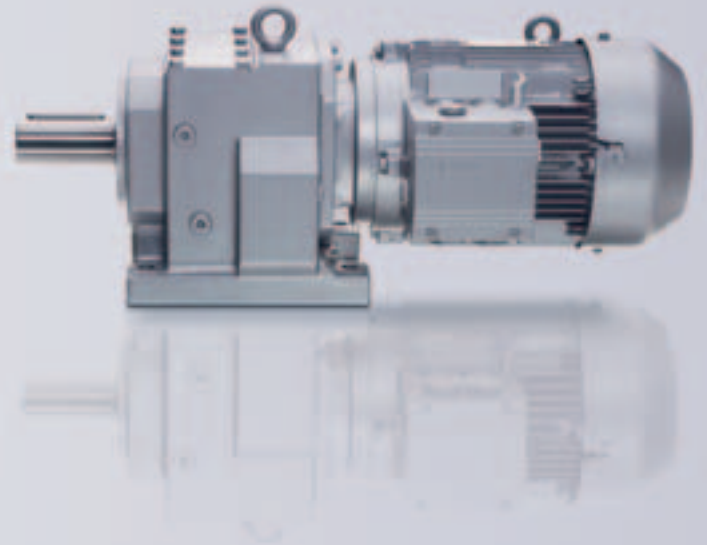


**Best in power per kilo**

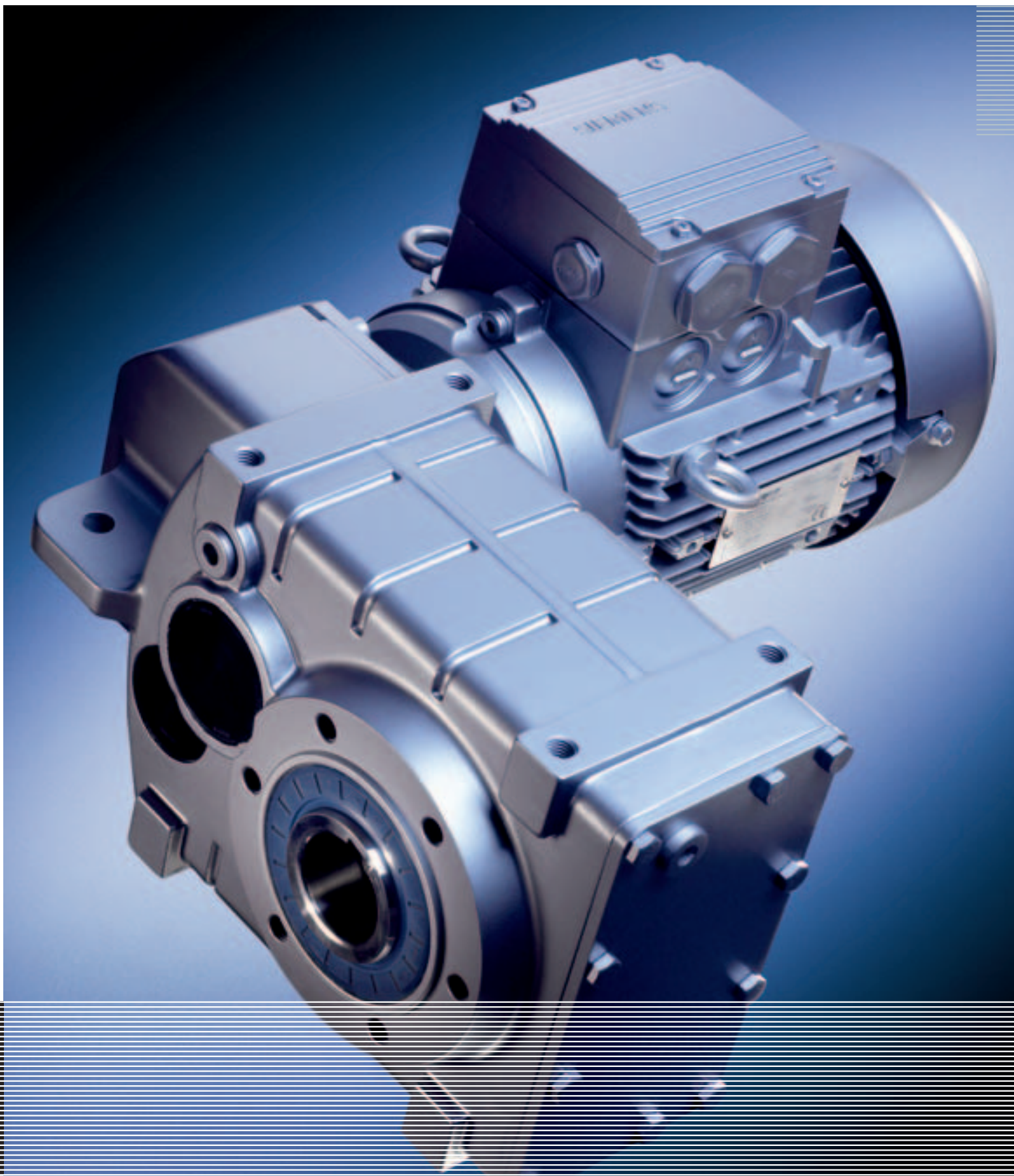
**Best in power per space**



# flender motox

GEARED MOTORS

**SIEMENS**



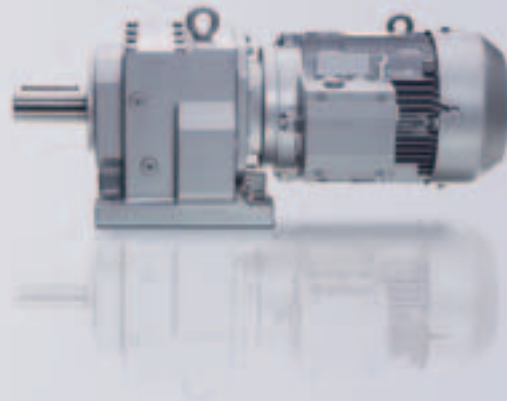
## FLENDER MOTOX – there's more in it for you

Maximum power in minimum space - that's what our new FLENDER MOTOX series of geared motors is all about. Offering you a rated drive torque of up to 20,000 Nm and a higher nominal gear torque as compared to geared motors of the same size. FLENDER MOTOX rounds off our drive portfolio in the power range from 0.09 kW to 200 kW for all gear types. **Convince yourself of its powerful performance.**

**Short-term power boost**



**Long-term power enhancement**



# flender motox

# The Appropriate Power for Your Application

When it comes to your drives, we leave no room for compromise. With FLENDER MOTOX, we offer the complete spectrum of geared motors. Our portfolio includes all conventional geared type motors and covers all drive applications. We have an appropriate solution for any and all of your needs. You also benefit from significantly higher nominal gear torques than are typically found on the market. Take advantage of the comprehensive FLENDER MOTOX benefits.

## Complete spectrum - you have a choice

### When we say complete, we mean complete.

The new FLENDER MOTOX geared motor series rounds off our drive portfolio for the power range between 0.09 kW and 200 kW with a variety of gear types, including helical, parallel shaft, bevel helical, helical worm as well as worm geared motors. Our comprehensive drive solutions allow you to perform every conceivable application in virtually all industries around the globe. Moreover, our geared motors meet all relevant international standards.

- = The standard motors meet all relevant IEC/EN standards.
- = For export to NAFTA markets (USA, Canada, Mexico), our motors are available with the following specifications electrical NEMA, UL, CSA.
- = CCC-certified motors for export to China.
- = Economical energy balance is provided by our highly efficient geared motors (EFF1 motors) that meet EU regulations according to CEMEP as well as North American market standards according to US EPACT law.
- = For operation in explosion risk environments we offer geared motors for Zones 1 and 2 (gas) as well as 21 and 22 (dust) according to EU directive 94/9/EC.



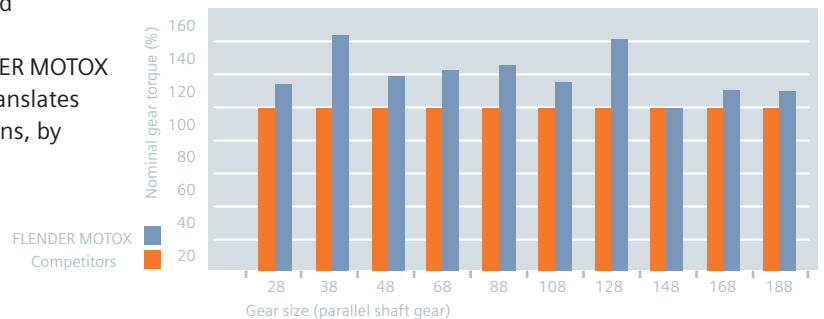
# Maximum Power in Minimum Space

## Higher torque – you benefit from the power

**We drive development forward, enabling you to operate even more profitably.** Our new FLENDER MOTOX series of geared motors offer outstanding technical performance, particularly for conveyor, crane and lifting technology. Offering you a rated drive torque of up to 20,000 Nm and higher nominal gear torques when compared to geared motors of the same size. In addition, you improve your operating factor, thereby also providing a higher level of system availability and operational reliability.

Thanks to their special construction design the FLENDER MOTOX geared motors achieve a very high gear ratio. This translates into cost-efficient solutions for a variety of applications, by enabling you to eliminate one gear stage altogether.

The high gear ratio also allows you to benefit from cost savings through the selection of 4-pole standard motors in place of 6- or 8-pole motors. What is more, FLENDER MOTOX features a low-noise design thanks to the low circumferential velocity after the first gear stage, during which we managed to drastically reduce noise development.

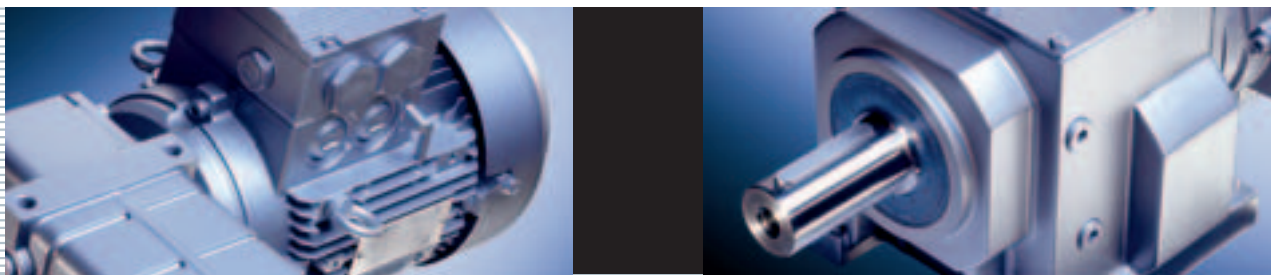


## Practical modular system – you stay flexible

**We work at developing ideas designed to keep you flexible.** Whatever your specifications, our end-to-end portfolio can be individually combined as needed, thanks to our modular building block system for geared motors. You enjoy complete freedom in assembling every conceivable conventional geared motor design and installation variation. The geared motors can be combined many different ways, and thus adapted to a large variety of drive situations.

On the motor side, FLENDER MOTOX features a modular and logistically optimized design. Functional additions such as brake, external fan and sensor can be mounted onto a skeleton motor with the help of an add-onshaft system.

As a result, FLENDER MOTOX offer you tremendous flexibility, allowing you to not only upgrade the motor prior to delivery with additional function units, but also at a later point in time.



# Safeguarding the Future with Systems and Services

## Part of Totally Integrated Automation – you improve your competitiveness

**FLENDER MOTOX geared motors form an integral part of Totally Integrated Automation (TIA), the comprehensive Siemens product and system portfolio for company-wide automation solutions in all industries.**

Thanks to its unique level of integration, Totally Integrated Automation helps to greatly reduce total cost of ownership, shortens time to market while also increasing the return on investment - in the process, also improving your competitiveness over the long term.

This level of integration also offers you advantages for your drive solutions – no matter what your specific needs may be: Totally Integrated Automation forms the basis of a solution that allows you to implement your plans with perfectly integrated components from a single source.

FLENDER MOTOX geared motors are, among other things, also compatible with our comprehensive MICROMASTER and SINAMICS converter product portfolio.

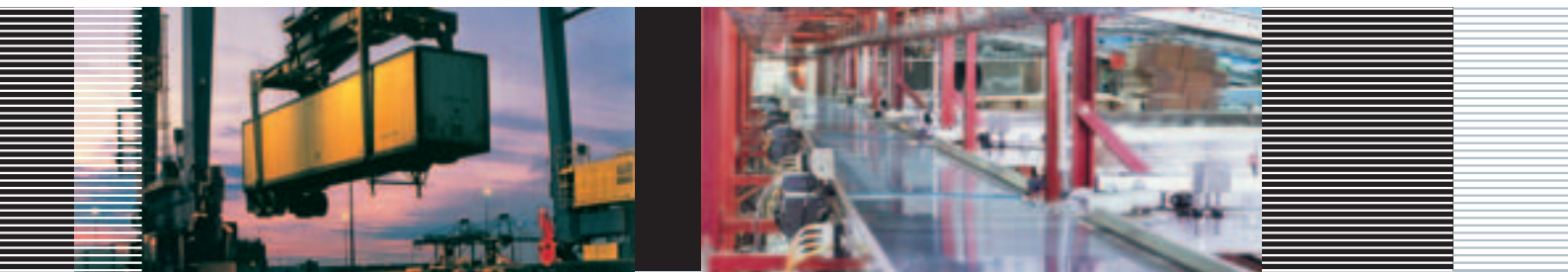
This enables you to take full advantage of integrated system solutions designed to improve your level of productivity – solutions characterized by minimal upgrade expenditures, cost efficiency and sustainability.

## 100% service support - we're always on hand for you

**We want you to feel that you have made the right choice with FLENDER MOTOX.** Therefore, we are on hand to support you right from the very start. Thanks to our convenient electronic catalog, selecting and configuring your application is already extremely easy. It enables you to quickly and reliably select the appropriate geared motor, access 2-D and 3-D CAD data in the form of various data file formats, and directly apply them to your construction design. You can access the tool over the Internet at [www.siemens.com/gearedmotors](http://www.siemens.com/gearedmotors)


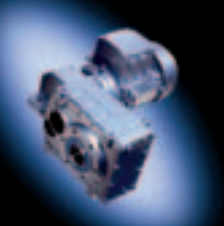



Naturally, if you should require a specific drive solution not covered by our standard portfolio, we will be happy to also develop a tailored solution.

In addition, we also offer comprehensive on-site service support, including everything from commissioning and maintenance to fault repair as well as service contracts. Our regional contact partners around the world are on hand to secure the availability of your machines and systems, providing individualized on-site service and spare parts support.



# Geared Motor Overview

## Product description

|   | Helical geared motors   | Parallel shaft geared motors  | Bevel helical geared motors   | Helical worm geared motors  | Worm geared motors  |
|---|---|---|---|---|---|
|   |  |  |   |  |  |
| <b>Typical application areas</b>                    | Agitator technology<br>Conveyor technology<br>Cooling tower drives                | Conveyor technology<br>Mixers<br>Extruders  | Crane technology<br>Airport technology<br>Storage technology                        | Theater and stage technology, waste water technology                                | Conveyor technology   |
| <b>Nominal gear torque</b>                          | Up to 20,000 Nm   | Up to 20,000 Nm   | Up to 20,000 Nm   | Up to 1,590 Nm  | Up to 166 Nm  |
| <b>Maximum motor power</b>                          | 200 kW  | 200 kW  | 200 kW  | 11 kW   | 1.5 kW  |
| <b>Number of gear sizes</b>                         | 11  | 10  | 10  | 5   | 3   |
| <b>Number of gear ratios</b>                        | 1-/2-/3-stage   | 2-/3-stage  | 2-/3-stage  | 2-stage   | 1-stage   |
| <b>Number of gear ratios for double gear units:</b> | 4-/5-/6-stage   | 4-/5-/6-stage   | 5-/6-stage  | 4-/5-stage  | --  |
| <b>Gear ratio single-stage</b>                      | 1,360 ... 14,455  | --  | --  | --  | 7 ... 100   |
| <b>Gear ratio 2/3-stage</b>                         | 3.07 ... 359.30   | 3.80 ... 449.21   | 3.57 ... 307.24   | 9.67 ... 440.70   | --  |
| <b>Gear ratio double gear</b>                       | 207 .. 71,317   | 299 .. 71,388   | 181 .. 60,115   | 324 .. 33,491   | --  |
| <b>Industry specific solutions*</b>                 | Agitator design<br>Cooling tower design   | Mixer design<br>Extruder design   | Mixer design<br>Extruder design<br>Variant for electric monorail overhead conveyors | Variant for electric monorail overhead conveyors                                    |   |

\* not available in all gear sizes

# Yes, I want to enhance the performance of my drive!

## Learn more about our portfolio for comprehensive and efficient drive solutions!

|                               |  |
|-------------------------------|--|
| Geared motors                 | <a href="http://www.siemens.com/gearedmotors">www.siemens.com/gearedmotors</a>               |
| Totally Integrated Automation | <a href="http://www.siemens.com/tia">www.siemens.com/tia</a>                                 |
| Conveyor technology           | <a href="http://www.siemens.com/conveyor-technology">www.siemens.com/conveyor-technology</a> |
| Energy saving                 | <a href="http://www.siemens.com/energy-saving">www.siemens.com/energy-saving</a>             |

### Siemens AG

Automation and Drives

Standard Drives

Geared Motors

[www.siemens.com/drives](http://www.siemens.com/drives)

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