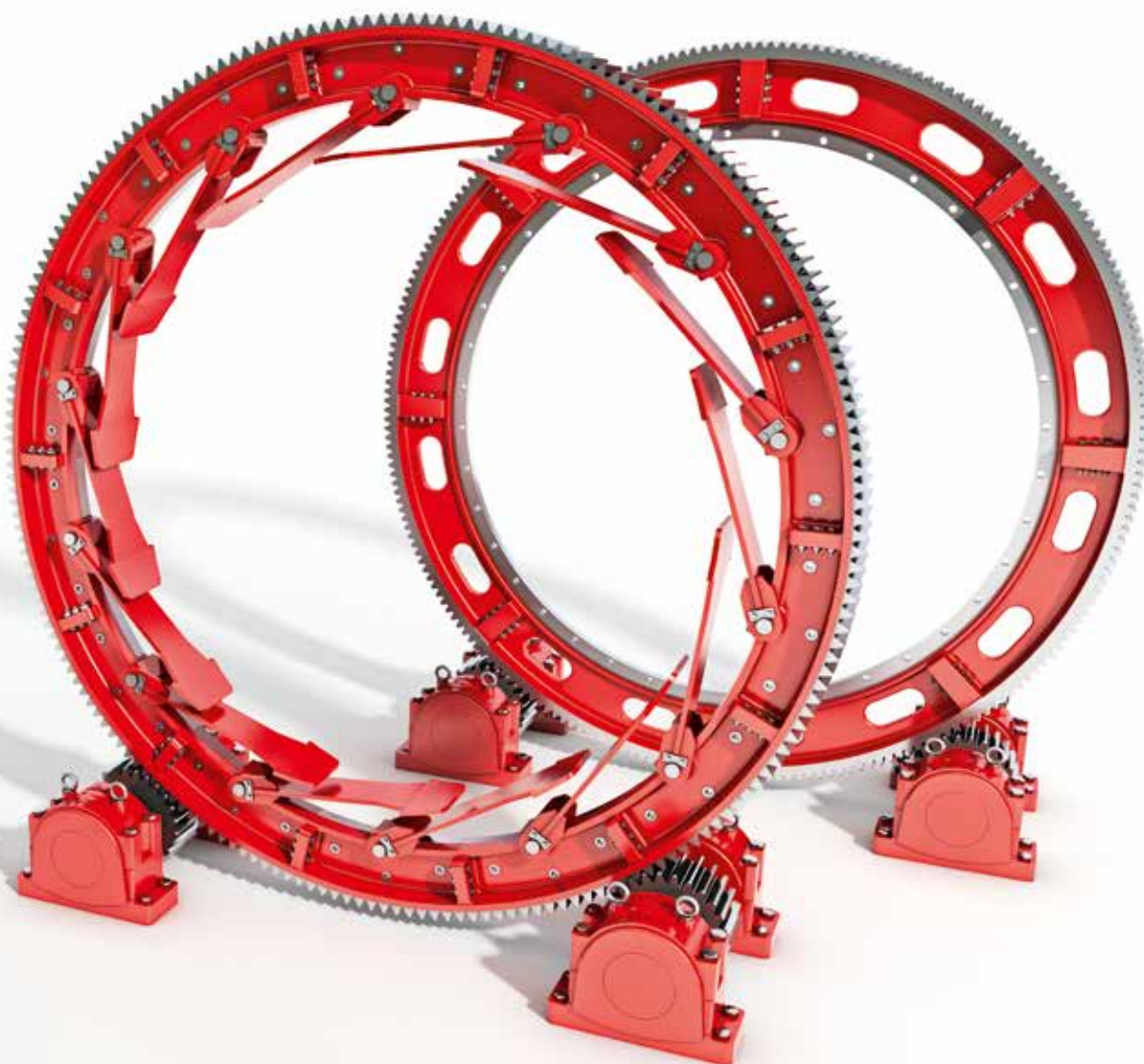


Segmented girth gears -

Flexible concept for diverse combinations



Segmented girth gears: More than the sum of the individual segments

Girth gears are used to drive large, rotating systems such as dryers, rotary kilns or horizontal mills. They are installed around the circumference of these systems and transfer the drive torque from the gearmotor to the rotary cylinder. SEW-EURODRIVE has developed a flexible concept for this which simplifies manufacture, transport and installation.

Traditional girth gears generally consist of two to four segments and are assembled together for processing. This requires extremely large and expensive machines for production,

handling and heat treatment. Besides this, the size of component parts creates disadvantages with regard to casting and heat treatment.

In contrast, SEW-EURODRIVE girth gears are split into several identical segments in order to keep the component parts short and easy to handle. By combining the latest materials engineering and state-of-the-art manufacturing methods, the disadvantages of the traditional

manufacturing process are avoided and new benefits created. SEW-EURODRIVE uses only Austempered Ductile Iron (ADI) for girth gears, the tensile strength of which achieves a level unmatched by traditional materials.

Applications/sectors

- Chemicals
- Environment
- Mining
- Energy sector
- Pulp and paper industry
- Steel
- Cement



ADI is described in detail in the following international standards:

- ISO 17804 “Ausferritic spheroidal graphite cast irons”
- AGMA 939-A07 “Austempered Ductile Irons For Gears”

Overview of benefits

Easy casting

The design of the feeders and the use of heat sinks combined with the relatively short segments guarantee a seamless casting quality.

Practical handling

The handling of the individual segments and component groups is simplified both in the factory and at the construction site. There is no need for special transportation arrangements. Segmented girth gears can be transported in standard containers.

Optimized quality assurance

The minimized size brings also cost advantages when it comes to the scrapping of blanks. Flawless blanks can be used without additional welding or oversizing.

Exact pitch accuracy

The segmented girth gears of SEW-EURODRIVE guarantee an initial pitch accuracy of ISO 8 (AGMA 9). The vibrations of the girth gears are kept to a minimum due to the high pitch accuracy.

Simple exchange

If a segment is damaged, it can be exchanged without dismantling the whole ring.

Low weight

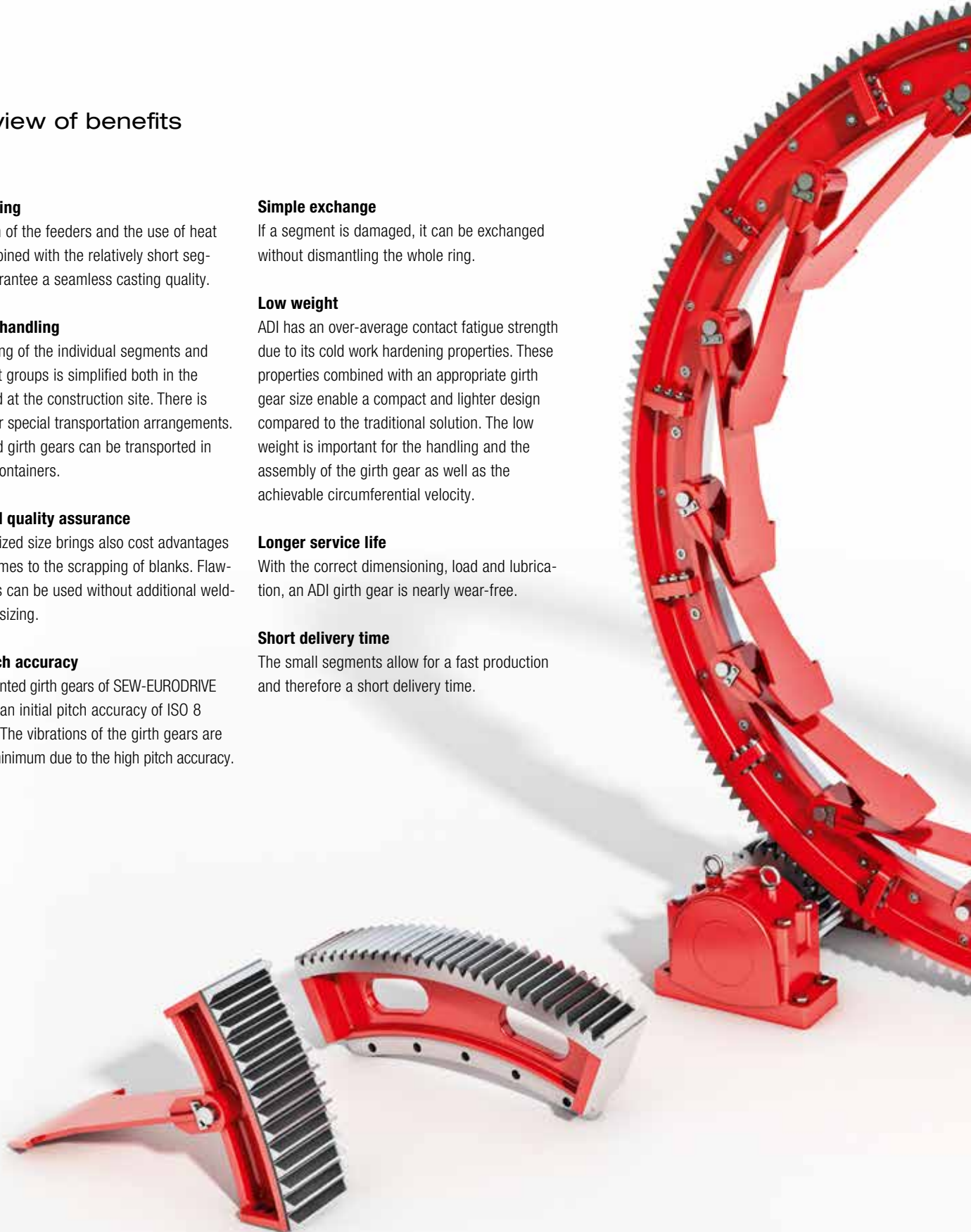
ADI has an over-average contact fatigue strength due to its cold work hardening properties. These properties combined with an appropriate girth gear size enable a compact and lighter design compared to the traditional solution. The low weight is important for the handling and the assembly of the girth gear as well as the achievable circumferential velocity.

Longer service life

With the correct dimensioning, load and lubrication, an ADI girth gear is nearly wear-free.

Short delivery time

The small segments allow for a fast production and therefore a short delivery time.





Technical data

- Girth gear pitch diameter of approx. 16 m (larger diameters are possible after further discussion)
- Maximum width 600 mm
- Maximum power 4000 kW per pinion
- Maximum pitch line velocity 6 m/s
- Girth gear module 20, 25, 30, and 40 mm
- Calculation according to standard ISO 6336 (AGMA on request)

The rotation of the kiln can be induced by several drives. This way, the performance is distributed. High torques can be achieved with smaller, more efficient drive units as a result.

Efficient drive solutions from SEW-EURODRIVE

SEW-EURODRIVE delivers not only girth gears but the entire drive package. Basic gear units with drive pinions, a base, casing and many other options are supplied on request. The pinion can therefore be mounted directly on the

input shaft or separately (pedestal bearing). In general drive solutions with girth gears require a great deal of consulting – machine designers and users are therefore supported in all applications in order to identify the best

solution from a technical and economic perspective. SEW-EURODRIVE specialists support the process from consulting through to professional assembly and startup.

Common application sizes:

Application	Mill	Rotary kiln
Power	Up to approx. 15 MW	Up to approx. 1 MW
Diameter	Up to approx. 16 m	Up to 9 m
Installation	Flange	Leaf spring
Speed of rotation	High (10 ... 20 rpm)	Low (1 ... 2 rpm)

Possible scope of delivery

- Segmented girth gears
- Drive pinion and, if required, pedestal bearing
- Fastening parts for the girth gear: Mounting springs or mounting flange
- Main gear unit
- Motors
- Auxiliary drives
- Lubrication system
- Foundation and base frame
- Couplings and covers
- Condition monitoring
- Installation as well as startup of the whole drive system



SEW-EURODRIVE is right there for you:

Argentina

Tel. +54 3327 4572-84
Fax +54 3327 4572-21
sewar@sew-eurodrive.com.ar

Australia

Tel. +61 3 9933-1000
Fax +61 3 9933-1003
enquires@sew-eurodrive.com.au

Austria

Tel. +43 1 617 55 00-0
Fax +43 1 617 55 00-30
sew@sew-eurodrive.at

Belarus

Tel. +375 17 298 47 56
Fax +375 17 298 47 54
sales@sew.by

Belgium

Tel. +32 16 386-311
Fax +32 16 386-336
info@sew-eurodrive.be

Brazil

Tel. +55 19 3835-8000
sew@sew.com.br

Canada

Tel. +1 905 791-1553
Fax +1 905 791-2999
marketing@sew-eurodrive.ca

Chile

Tel. +56 2 2757 7000
Fax +56 2 2757 7001
ventas@sew-eurodrive.cl

China

Tel. +86 22 25322612
Fax +86 22 25323273
info@sew-eurodrive.cn

Colombia

Tel. +57 1 54750-50
Fax +57 1 54750-44
sew@sew-eurodrive.com.co

Czech Republic

Tel. +420 255 709 601
Fax +420 235 350 613
sew@sew-eurodrive.cz

Denmark

Tel. +45 43 9585-00
Fax +45 43 9585-09
sew@sew-eurodrive.dk

Finland

Tel. +358 201 589-300
Fax +358 3 7806-211
sew@sew.fi

France

Tel. +33 3 88 73 67 00
Fax +33 3 88 73 66 00
sew@usocome.com

Great Britain

Tel. +44 1924 893-855
Fax +44 1924 893-702
info@sew-eurodrive.co.uk

Hungary

Tel. +36 1 437 06-58
Fax +36 1 437 06-50
office@sew-eurodrive.hu

India

Tel. +91 265 3045200
Fax +91 265 3045300
marketing@seweurodriveindia.com

Italy

Tel. +39 02 96 9801
Fax +39 02 96 980 999
sewit@sew-eurodrive.it

Ivory Coast

Tel. +225 21 21 81 05
Fax +225 21 25 30 47
info@sew-eurodrive.ci

Japan

Tel. +81 538 373811
Fax +81 538 373814
sewjapan@sew-eurodrive.co.jp

Kazakhstan

Tel. +7 727 238 1404
Fax +7 727 243 2696
sew@sew-eurodrive.kz

Malaysia

Tel. +60 7 3549409
Fax +60 7 3541404
sales@sew-eurodrive.com.my

Mexico

Tel. +52 442 1030-300
Fax +52 442 1030-301
scmexico@seweurodrive.com.mx

Mongolia

Tel. +976 77109997
Fax +976 77109997
sew@sew-eurodrive.mn

Morocco

Tel. +212 523 32 27 80/81
Fax +212 523 32 27 89
sew@sew-eurodrive.ma

Netherlands

Tel. +31 10 4463-700
Fax +31 10 4155-552
info@sew-eurodrive.nl

New Zealand

Tel. +64 9 2745627
Fax +64 9 2740165
sales@sew-eurodrive.co.nz

Norway

Tel. +47 69 241-020
Fax +47 69 241-040
sew@sew-eurodrive.no

Paraguay

Tel. +595 991 519695
Fax +595 21 3285539
sewpy@sew-eurodrive.com.py

Peru

Tel. +51 1 3495280
Fax +51 1 3493002
sewperu@sew-eurodrive.com.pe

Poland

Tel. +48 42 676 53 00
Fax +48 42 676 53 49
sew@sew-eurodrive.pl

Portugal

Tel. +351 231 20 9670
Fax +351 231 20 3685
infosew@sew-eurodrive.pt

Russia

Tel. +7 812 3332522
Fax +7 812 3332523
sew@sew-eurodrive.ru

Singapore

Tel. +65 68621701
Fax +65 68612827
sewsingapore@sew-eurodrive.com

Slovakia

Tel. +421 2 33595 202
Fax +421 2 33595 200
sew@sew-eurodrive.sk

South Africa

Tel. +27 11 248 7000
Fax +27 11 248 7289
info@sew.co.za

South Korea

Tel. +82 31 492-8051
Fax +82 31 492-8056
master.korea@sew-eurodrive.com

Spain

Tel. +34 94 4318470
Fax +34 94 4318471
sew.spain@sew-eurodrive.es

Sweden

Tel. +46 36 3442 00
Fax +46 36 3442 80
info@sew-eurodrive.se

Switzerland

Tel. +41 61 41717-17
Fax +41 61 41717-00
info@imhof-sew.ch

Tanzania

Tel. +255 22 277 5780
Fax +255 22 277 5788
uroos@sew.co.tz

Thailand

Tel. +66 38 454281
Fax +66 38 454288
sewthailand@sew-eurodrive.com

Turkey

Tel. +90 262 999 1000-04
Fax +90 262 999 1009
sew@sew-eurodrive.com.tr

Ukraine

Tel. +380 56 370 3211
Fax +380 56 372 2078
sew@sew-eurodrive.ua

Uruguay

Tel. +598 2 2118189
Fax +598 2 2118190
sewuy@sew-eurodrive.com.uy

USA

Tel. +1 864 439-7537
Fax +1 864 439-7830
csllyman@seweurodrive.com

Venezuela

Tel. +58 241 832-9804
Fax +58 241 838-6275
ventas@sew-eurodrive.com.ve

How we're driving the world



SEW-EURODRIVE
Driving the world

SEW
EURODRIVE

SEW-EURODRIVE GmbH & Co KG
P.O.Box 30 23
76642 Bruchsal/Germany
Tel. +49 7251 75-0
Fax +49 7251 75-1970
sew@sew-eurodrive.com

→ www.sew-eurodrive.com