Turkey’s largest and one of the world’s most renowned producers of gearboxes.
Turkey’s largest and one of the world’s most renowned producers of gearboxes.
Founded in 1958, Yilmaz Reduktor quickly became Turkey’s leading gearbox manufacturer, aided by consistent product quality, well-disciplined work, strong strategic planning, and a consistent vision. Today, Yilmaz Reduktor is known as Turkey’s leading gearbox producer and is rapidly gaining recognition worldwide. Yilmaz Reduktor uses its extensive experience to develop new products, employs the latest available production technology, and continuously invests in engineering. This helps to provide its customers with products that meet the expectations of the world market. Yilmaz Reduktor is trusted by customers in many industries and is regarded as a reliable partner.
Mesut Yılmaz was born in 1932 in Kastamonu Abana as the third child of the Yılmaz family. He had a hard childhood, marred by World War II and industrialization problems around Turkey. During this period he worked at his father’s café in Abana. After leaving primary school, he travelled to Istanbul on a ship to learn a new profession without seeking his family’s permission. During his first years in Turkey’s capital he encountered many challenges. Living in an attic above a café in Karaköy Perşembe Pazarı, he worked as an apprentice to a Greek craftsman. Always planning to open his own workshop he worked hard and strove to learn from masters. In those challenging years he married Sabahat Yılmaz. She was born in 1933 in Kastamonu Abana as the daughter of Hulusi Hacıyüzbaşı. Together with a friend, Mesut Yılmaz opened his first workshop in 1958 at Şişhane İstanbul. Initially they had only three machines: a lathe, a drill, and a sawhorse, all of which they built themselves. Mesut Yılmaz’s life consisted of his family and his work. The few occasions that he did take time off were spent hunting and fishing. He died of heart failure on 17 August 2001 while fishing in his boat. After his death his sons and Sabahat Yılmaz continued his work, striving to accomplish Mesut Yılmaz’s dream of establishing Yılmaz Redüktör on the World market.

From its humble beginnings as a producer of machine components in 1958 Yılmaz Redüktör has become Turkey’s largest gearbox producer and counts among the world’s most renowned manufacturers.
1963 - First Gearboxes A Series
In 1963 First Gearbox orders are received and decided to focus on gearbox production.

1987 - New Gearbox Facility
Turkey's largest gearbox plant opened in İstanbul - Beylikdüzü with a 23,000 m² floor area.

2005 - ATEX Certificate
Yılmaz receives ATEX certification for its products - again a first for gearbox production in Turkey. Today nearly all of Yılmaz Product's are ATEX certificated.

2009 - T Series
Production of T series started, which were optimized for conveyor applications.

2017 January - AC Drives
While adding speed control devices to gear unit and AC motor couples, Yılmaz Redüktör start to offer complete solutions for customers.

1958 - First Workshop
Yılmaz Redüktör's first workshop opened in İstanbul Şişhane.

1970 - First Factory
Yılmaz Redüktör buys building for casting and gearbox production which was our old sales headquarters.

1994 - First Export
First export made to the European market.

2004 High Tech Investment
Second high tech investment made accelerating the transition to automated production.

2002 - MES Foundry
Mes Foundry was established with fully automated production lines. Mes foundry meets all of Yılmaz Redüktör's cast part needs.

2007 - H Series
In 2007 First Industrial gearboxes presented in Turkey. The new units were labeled as "H".

2010 January - New D Series
New D Series Gearboxes are designed and started to produce according to "High Power Density" principle.

2010 June - New CNC Machines
In 2010 Yılmaz Redüktör invests 30 new CNC Machines, loaded by robots these machines boost production speed and quality.

2013 September - Electric Motor Works
In 2013 September Yılmaz Redüktör establishes subsidiary company ELK motor plant in Çerkezköy Tekirdağ with second plant for MES Döküm, which will increase production capacity to 20000 tonnes per year.

1995 - Quality grade 6 gears
With the technology investment in 1995 first quality grade six gears were made.

2000 - ISO 9001 Certificate
Yılmaz Redüktör is Turkey's first gearbox producer to receive ISO 9001 certification, adding management quality to existing product quality.

2011 - P/R Series
In 2011 Yılmaz Redüktör starts production of Turkey's first mass-produced planetary arboxes.

2012 - V Series
Yılmaz Redüktör releases its V series hoist drum drive units, which is offering a lot of advantages for crane manufacturers.

2013 May - New K Series
In 2013 Yılmaz Redüktör releases its K series gearboxes with higher efficiency than the E series worm gearboxes.
In 1963 a movement started in a small workshop in Şişhane...
Established as a subsidiary of Yılmaz Redüktör in 2011, ELK’s electric motor factory, located in the Cerkezköy industrial park, began series production in 2013. The factory produces motors of types IE2 and IE3 ranging from size 71 to 225 (0.25 to 45 kW). All motors have been designed and engineered according to EU standards. They are sold under the ELK or Yılmaz brand.

**ELK Electric Motors San. ve Tic. A.Ş**

Ender Yılmaz  
Chairman of the Board of Management

Mehmet Şinasi Yılmaz  
Member of the Board of Management

Mustafa Yılmaz  
Member of the Board of Management

**Mes Foundry San. ve Tic. Ltd. Şti.**

Subsidiary MES Foundry was founded to meet Yılmaz Redüktör’s needs for cast part. The company has a capacity of 80,000 tonnes per year and can produce standard cast iron, modular cast iron and bronze castings. The majority of MES Foundry’s output – 95 percent – goes to Yılmaz Redüktör. Its facilities consist of induction furnaces, moulding lines, core making machines, and an in-house test lab.

Metin Yılmaz  
General Manager

**Yılmaz Marketing Import Export San. ve Tic. Ltd. Şti.**

Established in 1995 Yılmaz Marketing is responsible for import, export, logistics, personnel transport, catering and construction activities of our group companies. Since 2008 our company has extended its construction activities and completed the building of our Cerkezköy plant. A third plant is currently being built in Vraco, Greece. Our experienced and dedicated staff ensures the continued fulfillment of customer expectations.

Mustafa Balıkan  
General Manager Assistant

Mehmet Özkan  
General Manager Assistant

**Yılmaz Redüktör Group Companies**
You can take technical advice from our sales engineers with a phone call. You can easily choose suitable gear units for your applications while exchanging technical know-how with them.
You can find detailed information about our products and services on our website. All of our product catalogues, manuals, certificates, 2D and 3D technical drawings and PDF drawings can be downloaded from our website. With the help of easy-to-use “GST” application on our website you can make engineering calculations for your application and choose suitable gearbox easily. For additional information about our mobile applications, please contact with our sales engineers.

You can find online stock and order tracking system under “GST” on our website, which is available for our dealers and OEM customers. If you are an OEM customer of ours, you can request a user name and password for the system from our sales department.
Contracted Dealer Network

We are as close to you as your next-door neighbour with our contracted dealer network. Our dealers can help you for all of your requests with before and after sales.

Service

Please contact our service head quarters below.

Domestic Service
Arastırma & Lozan Cad. No:1734523/Esenyurt - İstanbul - Türkiye
Tel: 0212 888 60 00
Fax: 0212 888 60 01

Service
Internal: 1223, 1228, 1287
E-Mail: servis@yr.com.tr

Spare Parts
Internal: 1224, 1277
E-Mail: yedekparca@yr.com.tr

International Services
Yılmaz UK Ltd
Unit 4 Oakwell Court, Oakwell Way, Birstall, West Yorkshire, WF17 9LU - England
Tel: +44 (0) 1924 284 320
E-Mail: info@yilmazuk.co.uk
Website: www.yilmazuk.co.uk

Yılmaz Redüktör GmbH
Molsfeld 3 - 40670 Meerbusch - Germany
Tel: +49 (0) 2159 92 84 06
Fax: +49 (0) 2159 92 98 394
E-Mail: info@yilmazreduktor.de
Website: www.yilmazreduktor.de
The new generation of Yilmaz gearboxes is of a monoblock (one-piece housing) design, which has the advantages of lower noise level, reduced oil leakage and higher rigidity and gear strength. All bearings are supported by the housing itself and not by split housings. All axes are machined on the same mounting plate, which gives a high precision on all axes with very tight tolerances. The gear manufacturing processes used allow exceptionally tight gear tolerances. This requires machining of the GG22 material housing to obtain the same tight tolerances, which can be achieved only with a monoblock housing. The one-piece housing also makes higher bearing and gear life as well as greater overhung loads possible. Gear strength, bearing life, shaft strength etc. are calculated with professional software applications according to DIN and Niemann’s calculation principles. The middle bearing support plate is integrally cast and provides optimum support for bearings used in three-stage gearboxes. The middle bearing support plate allows the gears to be supported from both sides and very close to the gear wheel. This minimizes runout and deformations under running load, making it possible to make low noise gearboxes. The new generation of gearboxes feature many additional mounting possibilities. According to customer specifications IEC B14, B5 or standard coupled geared motors are available. All models are two- or three-stage and foot- or flange-mounted. The new gearboxes have lower axle heights than the old models and are more compact at the same power and speed. All gearboxes are of a modular design, allowing double gearboxes to be integrated with minimum change. All gearbox tolerances are actively checked by our quality control system.
GEAR UNITS
Foot-Mounted Helical Gearboxes

Specifications and Advantages
- Monoblock housing design
- Two or three stages can be in the same housing
- Reduction can be increased up to six stages with additional housing
- Bearing solutions for high radial and axial loads

Options and Accessories
- Output shaft options
- Servomotor-specific connection flanges
- Electromagnetic brake motors (24V/220V/380V)
- Backstop applications:
  - 12 or 1024 pulse encoder
  - External fan cooling option for frequency inverter applications

Torque Range [Nm] | 50 - 18,000
Motor Power Range [kW] | 0.12 - 160
Output Speed Range [rpm] | 0.1 - 780

Input Type

Output Type

Please see Options and Accessories chapter for additional information
N Series
Flange Mounted Helical Gearboxes

Flange-mounted, helical gear units with solid output shaft, input and output shafts are parallel to each other.

Specifications and Advantages
- Monoblock housing design
- Two or three stages can be in same housing
- Reduction can be increased up to six stages with additional housing
- Bearing solutions for high radial and axial loads
- Output shaft options

Options and Accessories
- Output shaft and flange options
- Servomotor-specific connection flanges
- Electromagnetic brake motors (24V/220V/380V)
- Backstop applications
- 512 or 1024 pulse encoder
- External fan cooling option for frequency inverter applications

Options and Accessories
- Output shaft and flange options
- Servomotor-specific connection flanges
- Electromagnetic brake motors (24V/220V/380V)
- Backstop applications
- 512 or 1024 pulse encoder
- External fan cooling option for frequency inverter applications

Output Shaft Options

NR Series
- Direct motor coupled

NV Series
- With IEC 85B14 motor mounted

NN Series
- Flange mounted gear unit with IEC 85B14 motor flange

NT Series
- With input shaft without motor

Please see Options and Accessories chapter for additional information.

<table>
<thead>
<tr>
<th>Torque Range [Nm]</th>
<th>50 - 18,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Power Range [kW]</td>
<td>0.12 - 160</td>
</tr>
<tr>
<td>Output Speed Range [rpm]</td>
<td>0.1 - 780</td>
</tr>
</tbody>
</table>

N Series – 23

N Series – 24
D Series

Parallel Shaft Helical Gearboxes

Specifications and Advantages
- Monoblock housing design
- Two or three stages can be in the same housing
- Reduction can be increased up to six stages with additional housing
- Bearing solutions for high radial and axial loads
- Output shaft options (hollow shaft, solid shaft, shrink disk, hollow and solid splines)
- Extruder output option for extruder machines (DRE Type)

Options and Accessories
- Output flange and output shaft options
- Servomotor specific connection flanges
- Electromagnetic brake motors (24V/220V/380V)
- Backstop application
- 512-1024 pulse encoder applications
- External fan cooling option for frequency inverter applications

Helical gear sets, their input and output shafts are parallel and they can be connected to machines from sides of housing, with torque arm or from output flange.

---

<table>
<thead>
<tr>
<th>Torque Range [Nm]</th>
<th>130 – 18,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Power Range [kW]</td>
<td>0.12 – 160</td>
</tr>
<tr>
<td>Output Speed Range [rpm]</td>
<td>0.1 – 580</td>
</tr>
</tbody>
</table>

---

Input Type

<table>
<thead>
<tr>
<th>Type</th>
<th>DR Series</th>
<th>DV Series</th>
<th>DN Series</th>
<th>DT Series</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Direct motor coupled</td>
<td>With IEC 85/B14 motor mounted</td>
<td>Gear unit with IEC 85/B14 motor flange</td>
<td>With input shaft without motor</td>
</tr>
</tbody>
</table>

Output Type

<table>
<thead>
<tr>
<th>Type</th>
<th>D..00</th>
<th>D..01</th>
<th>D..02</th>
<th>D..03</th>
<th>D..05</th>
<th>D..06</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>With hollow shaft</td>
<td>With solid shaft</td>
<td>With solid shaft and flange</td>
<td>With hollow shaft and flange</td>
<td>With hollow shaft and shrink disk</td>
<td>With extruder shaft</td>
</tr>
</tbody>
</table>

---

Please see Options and Accessories chapter for additional information
K Series
Bevel-Helical Gearboxes

Specifications and Advantages
- Monoblock housing design
- Two or three stages can be in same housing
- Reduction can be increased up to six stages with additional housing
- Bearing solutions for high radial and axial loads
- Output shaft options (hollow shaft, solid shaft, shrink disk, hollow and solid splines)
- Extruder output option for extruder machines (KRE Type)

Options and Accessories
- Output flange and output shaft options
- Servomotor specific connection flanges
- Electromagnetic brake motors (24V/220V/380V)
- Backstop application
- 512-1024 pulse encoder applications
- External fan cooling option for frequency inverter applications

Helical bevel gear units, their input and output shafts are perpendicular to each other. They can be mounted to machine from foot, output flange or with torque arm.

Input Type

Output Type

\[\text{Torque Range [Nm]}\]
80 – 15,000

\[\text{Motor Power Range [kW]}\]
0.12 - 90

\[\text{Output Speed Range [rpm]}\]
0.1 - 460

Please see Options and Accessories chapter for additional information.
E Series

Worm Gearboxes

The worm gearboxes of the E series feature input and output shafts that are perpendicular to each other. Their worms are made of steel and gears are made of bronze. They can be mounted to the driven machine by the foot, flange or torque arm on the gearbox.

Specifications and Advantages
- Maximum thermal capacity through optimized design of cooling fins
- Additional helical gear stage for low output speeds
- Bearing solutions for high radial and axial loads
- Special motor flanges

Options and Accessories
- E.C.B and B14 motor flanges
- Output flange options
- Special sealings
- Torque arm
- Electromagnetic brakes
- Optional output shaft dimensions
- Servomotor specific connection flanges

Specifications and Advantages

<table>
<thead>
<tr>
<th>Torque Range [Nm]</th>
<th>0.5 – 1.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Power Range [kW]</td>
<td>0.06 – 7.5</td>
</tr>
<tr>
<td>Output Speed Range [rpm]</td>
<td>0.2 – 250</td>
</tr>
</tbody>
</table>

Input Type

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>ET Series</td>
<td>Gear unit with IEC B5/B14 motor mounted</td>
</tr>
<tr>
<td>EN Series</td>
<td>Worm gearbox with IEC B5/B14 motor flange</td>
</tr>
<tr>
<td>ET Series</td>
<td>With input shaft without motor</td>
</tr>
</tbody>
</table>

Output Type

<table>
<thead>
<tr>
<th>Output Type</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>E..00</td>
<td>With hollow shaft</td>
</tr>
<tr>
<td>E..01</td>
<td>With solid shaft</td>
</tr>
<tr>
<td>E..02</td>
<td>With solid shaft and flange</td>
</tr>
<tr>
<td>E..03</td>
<td>With hollow shaft and flange</td>
</tr>
<tr>
<td>E..04</td>
<td>With double solid output shaft</td>
</tr>
<tr>
<td>E..05</td>
<td>With double solid output shaft and flange</td>
</tr>
<tr>
<td>E..06</td>
<td>With double hollow output shaft</td>
</tr>
<tr>
<td>E..07</td>
<td>Worm gear unit with double input shaft</td>
</tr>
<tr>
<td>E..08</td>
<td>With Double hollow output shaft</td>
</tr>
</tbody>
</table>

Please see Options and Accessories chapter for additional information.
INDUSTRIAL GEARBOXES
Specifications and Advantages
- High torquedensity with the help of compact housing and bearings
- Bearing solutions for high radial and axial loads
- Output shaft options (Solid shaft, shrink disk, hollow shaft with splines, solid shaft with splines)
- AC and hydraulic motor flanges
- Perpendicular input shaft options with bevel gear stage
- Worm and bevel gear unit coupling options to decrease output speed
- Different cooling and lubrication options for different working conditions

Options and Accessories
- Servomotor specific connection flanges
- Electromagnetic brakes
- Electromagnetic and hydraulic brakes
- M2 - O124 pulse encoder application
- External fan cooling option for frequency inverter applications
- Special sealings
- Glass oil level indicator

Options and Accessories
- Servomotor specific connection flanges
- Electromagnetic brakes
- Electromagnetic and hydraulic brakes
- M2 - O124 pulse encoder application
- External fan cooling option for frequency inverter applications
- Special sealings
- Glass oil level indicator

Options and Accessories
- Servomotor specific connection flanges
- Electromagnetic brakes
- Electromagnetic and hydraulic brakes
- M2 - O124 pulse encoder application
- External fan cooling option for frequency inverter applications
- Special sealings
- Glass oil level indicator

Torque Range [Nm] 1.000 – 50.000
Motor Power Range [kW] 0.37 - 75
Output Speed Range [rpm] 0.1 - 410
R Series
Planetary, Foot Mounted Gearboxes

Gearboxes that have a modular design and consist of sun, planet and internal gearing, which can be mounted with mounting holes on housing. They are suitable for mobile applications with their high torque capacity and compact design.

Specifications and Advantages
- High torque density with the help of compact housing and bearings
- Bearing solutions for high radial and axial loads
- Output shaft options (Solid shaft, shrink disk, hollow shaft with splines, solid shaft with splines)
- AC and hydraulic motor flanges
- Perpendicular input shaft options with bevel gear stage
- Worm and bevel gear unit coupling options to decrease output speed
- Different cooling and lubrication options for different working conditions

Options and Accessories
- Servomotor specific connection flanges
- Hydraulic and air brakes
- External air cooling option for frequency inverter applications
- Special sealings
- Glass oil level indicator

Options and Accessories
- Servomotor specific connection flanges
- Electromagnetic brakes
- Electromagnetic and hydraulic brakes
- External fan cooling option for frequency inverter applications
- Special sealings
- Glass oil level indicator

<table>
<thead>
<tr>
<th>Torque Range [Nm]</th>
<th>1.000 – 50.000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Power Range [kW]</td>
<td>0.37 – 75</td>
</tr>
<tr>
<td>Output Speed Range [rpm]</td>
<td>0.1 – 410</td>
</tr>
</tbody>
</table>

Please see Options and Accessories chapter for additional information.
H Series
Industrial Helical-Geared Units

Helical industrial type gear units with parallel input and output shaft. They can be mounted to driven machines with foot, output flange or torque arm.

Specifications and Advantages
- GGG40 spherically compact housing
- Gears with modifications and tapered rolling bearings
- Mounting from all sides
- Motor mounting with IEC B5 flange
- Output flange options
- Output shaft options (solid shaft, shrink disk, hollow shaft with splines, solid shaft with splines)
- Lubrication options
- Cooling options
- Option for coupling with H series gear units to further increase ratio

Options and Accessories
- Mechanical brake option on housing
- Complete solutions including elec brake, hydraulic coupling and electric motor on skid base frame
- Diffuser, oil filter sensor, oil filter, glass oil level indicator and special sealings
- Torque arm

Options and Accessories
- Mechanical brake option on housing
- Complete solutions including elec brake, hydraulic coupling and electric motor on skid base frame
- Diffuser, oil filter sensor, oil filter, glass oil level indicator and special sealings
- Torque arm

| Ratio Range | 5.33 - 420 |
| Torque Range [Nm] | 4,850 – 470,000 |
| Speed Range [rpm] | 0.1 - 263 |

Input Type

H..00
With hollow shaft

H..01
With solid output shaft

H..02
With solid shaft and flange

H..03
With hollow shaft and flange

H..04
With double solid output shaft

H..05
With double solid output shaft and flange

H..08
With double hollow output shaft and flange

H..09
With extruder output shaft

Output Type

H..09
With extruder output shaft

Please see Options and Accessories chapter for additional information.
B Series
Industrial Helical-Bevel Gear Units

Helical and bevel industrial type gear units with perpendicular input and output shaft. They can be mounted to driven machine with foot/output flange or torque arm.

Specifications and Advantages
- GGG40 spherically compact housing
- Gears with modifications and tapered rolling bearings
- Mounting from all sides
- Motor mounting with IEC 95 flange
- Output Flange options
- Output shaft options (solid shaft, shrink disk, hollow shaft with splines, solid shaft with splines)
- Lubrication options
- Cooling options
- Option for coupling with D series gear units to further increase ratio

Options and Accessories
- Mechanical brake option on housing
- Complete solutions including eldro brake, hydraulic coupling and electric motor on steel base frame
- Oil filter, oil flow sensor, oil filter, glass oil level indicator and special sealings
- Torque arm

Ratio Range 9.78 - 430
Torque Range [Nm] 4,850 – 470,000
Speed Range [rpm] 0.1 - 140

Input Type

Output Type

<table>
<thead>
<tr>
<th>Input Type</th>
<th>Output Type</th>
</tr>
</thead>
<tbody>
<tr>
<td>BT Series</td>
<td>B..00, B..01, B..02</td>
</tr>
<tr>
<td>With input shaft</td>
<td>With hollow shaft</td>
</tr>
<tr>
<td>without motor</td>
<td></td>
</tr>
<tr>
<td>BK Series</td>
<td>B..03, B..04, B..05</td>
</tr>
<tr>
<td>With input flange</td>
<td>With solid output</td>
</tr>
<tr>
<td>with motor</td>
<td>shaft</td>
</tr>
<tr>
<td>BT..20 Series</td>
<td>B..08, B..09, B..10</td>
</tr>
<tr>
<td>Gearbox with two</td>
<td>With double hollow</td>
</tr>
<tr>
<td>input shaft</td>
<td>output shaft and flange</td>
</tr>
<tr>
<td>BT+ DR..Series</td>
<td>B..11, B..12</td>
</tr>
<tr>
<td>Gear unit with</td>
<td>With double solid</td>
</tr>
<tr>
<td>additional housing</td>
<td>output shaft and flange</td>
</tr>
</tbody>
</table>

Please see Options and Accessories chapter for additional information
Special Application Gearboxes
V series gear units are three stage, helical-gear hoist drum drive units. Input and output centre distances are as far apart as possible. Input and output shafts are parallel to each other. Output shafts are splined according to standards.

Specifications and Advantages
- GGG40 sphero cast iron housings
- With the help of taper rolling bearings they have the capability of withstanding high radial loads
- Input and output centre distances are as far apart as possible to allow the use of larger drums
- Electromagnetic brakes, encoder and fan cooling applications
- Optional drum connection flange
- Nitrated and splined output shafts
- Bolted connections are made directly on the housing through connection holes
- Wide speed range
- Designed for double- and single-speed brake motors

Specifications and Advantages
- Longer output shaft with agitator housing with reinforced spherical roller bearings
- Wide speed and power range
- Special sealings

<table>
<thead>
<tr>
<th>Ratio Range</th>
<th>2.54 – 203.77</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tonnage Range (Tonne)</td>
<td>0.1 – 50</td>
</tr>
<tr>
<td>Motor Power Range [kW]</td>
<td>0.07 – 45</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Torque Range [Nm]</th>
<th>280 – 18,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Power Range [kW]</td>
<td>0.12 – 160</td>
</tr>
<tr>
<td>Speed Range [rpm]</td>
<td>0.1 – 414</td>
</tr>
</tbody>
</table>
**Mixer Gearboxes - Drywell**

**KR**

K series mixer gearboxes with forced output shaft bearings, special sealings and extra oil leakage pool to prevent oil leakage out of gear unit. They are specifically designed for food and wastewater treatment industries where oil leakage can be a problem. Oil leakage can also be detected with optional oil sensor.

**Output Flange Properties**

1. Oil slinger ring
2. Transparent oil plug or sensor
3. Spherical roller bearing
4. Oil leakage room
5. Greaser for bearing
6. Special sealing for excessive dust

**Torque Range [Nm]** 450 – 15,000

**Motor Power Range [kW]** 0.37 – 160

**Speed Range [rpm]** 0.1 – 580


**DR**

D series mixer gearboxes with forced output shaft bearings, special sealings and extra oil leakage pool to prevent oil leakage out of gear unit. They are specifically designed for food and wastewater treatment industries where oil leakage can be a problem. Oil leakage can also be detected with optional oil sensor.

**Output Flange Properties**

1. Oil slinger ring
2. Transparent oil plug or sensor
3. Spherical roller bearing
4. Oil leakage room
5. Greaser for bearing
6. Special sealing for excessive dust

**Torque Range [Nm]** 450 – 18,000

**Motor Power Range [kW]** 0.37 – 90

**Speed Range [rpm]** 0.1 – 460
H series gearboxes specifically designed for extruder machines with 29400 series bearings and output shaft housing to withstand high axial loads. They have different cooling options to increase thermal powers at heavy working conditions.

Specifications and Advantages
- Housing and output shaft housing made from GGG40 material
- 29400 series output bearings
- Different 29400 bearings sizes according to axial load
- Gears with modification and tapered roller bearings
- Input flange option with IECB5
- Output shaft options (With key or splines)
- Lubrication options according to mounting position
- Cooling options (Heat exchangers or coils)

<table>
<thead>
<tr>
<th>Ratio Range</th>
<th>5.33 - 420</th>
</tr>
</thead>
<tbody>
<tr>
<td>Torque Range [Nm]</td>
<td>4,850 – 90,000</td>
</tr>
<tr>
<td>Speed Range [rpm]</td>
<td>0.1 - 263</td>
</tr>
</tbody>
</table>

K series gearboxes specifically designed for bandsaw machines with special output shaft housing to withstand high radial loads, with forced output shaft bearings and special sealings.

Specifications and Advantages
- Output flange with two row bearings
- Special sealing system to prevent cutting oil to enter gearbox interior
- Nitreated output shafts
- Grounded bevel gear stage to reduce noise
- Optional flange and shaft dimensions

<table>
<thead>
<tr>
<th>Torque Range [Nm]</th>
<th>280 – 15,000</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor Power Range [kW]</td>
<td>0.37 - 90</td>
</tr>
<tr>
<td>Speed Range [rpm]</td>
<td>10 - 227</td>
</tr>
</tbody>
</table>
DRE Extruder Machines

D series parallel shaft gearboxes specifically designed for extruder machines with smaller capacity.

Specifications and Advantages
- Compact design with direct coupled AC motor
- 29400 series output bearings
- Four different mounting positions
- Output shaft options (With key or splines)

| Torque Range [Nm] | 120 – 18,000 |
| Motor Power Range [kW] | 0,12 - 90 |
| Speed Range [rpm] | 0,1 - 580 |

KRE Extruder Machines

K series gearboxes specifically designed for extruder machines with smaller capacity.

Specifications and Advantages
- Direct coupled AC motor with perpendicular input and output shafts
- 29400 series output bearings
- Four different mounting positions
- Output shaft options (With key or splines)

| Torque Range [Nm] | 90 – 15,000 |
| Motor Power Range [kW] | 0,12 - 160 |
| Speed Range [rpm] | 0,1 - 480 |
Two stage compact helical gear units without motor designed for conveyor applications.

Specifications and Advantages
- Two stage compact design
- Forced input shaft bearings designed for belt and pulley applications
- 6 different mounting positions
- Optional shaft dimensions
- Output shafts with key or shrink disk
- Mechanical backstop application for one way conveyors

Specifications and Advantages
- Auxiliary drive for low speed working during maintenance
- Two different auxiliary drive options for empty and full bucket conveyors
- Backstop application
- Special backstop application between main drive and auxiliary drive
- IEC B5 input flange option for motor connection
- Cooling options according to working conditions

<table>
<thead>
<tr>
<th>Ratio Range</th>
<th>Torque Range [Nm]</th>
<th>Speed Range [rpm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>5.0 - 30</td>
<td>250 – 18,000</td>
<td>30 – 650</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Ratio range</th>
<th>Torque Range [Nm]</th>
<th>Speed Range [rpm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>21 - 98</td>
<td>4,050 – 70,000</td>
<td>20 – 70</td>
</tr>
</tbody>
</table>
Planetary gearboxes with bevel stage input designed for twin shaft concrete mixer applications with special flange for pulley connection.

Specifications and Advantages
- Compact design with planet and bevel gear stages
- Input flange suitable for pulley connection
- Tapered input shaft bearings
- GGG40 material input flange and housing
- Splined interior connections
- Standard output seal cover
- Optional oil expansion tank

BT series industrial helical gearboxes with bevel stage input designed for twin shaft concrete mixer applications.

Specifications and Advantages
- Perpendicular input and output shafts suitable for twin shaft applications
- Input flange suitable for pulley connection
- Tapered bearings
- GGG40 material housing
- Gears with modifications
- Output shaft options (hollow, solid, shrink disk, hollow splined shaft, solid splined shaft)
- Lubrication options (forced lubrication, oil expansion tank)
Options and Accessories
Solid Output Shaft
All gearbox types have output shaft with key according to DIN6685. Materials for output shaft are C45 or 42CrMo4 according to size of gear unit.

Hollow Output Shaft
Lots of our gearboxes can be manufactured with hollow shaft according to DIN6685.

Input Flanges according to IEC BS-B14 and NEMA
Our input flanges and input shafts can be produced according to IEC BS-B14 and NEMA standards.

Servo-Motor connection
We have different input flange options and dimensions according to common servo-motors in the market.

Output Shaft with Spline
Output shafts can be manufactured according to DIN5480 recommended for high frequent start stop applications with high inertia.

Hollow Output Shaft with Spline
Hollow output shafts can be manufactured according to DIN5480 recommended for high frequent start stop applications with high inertia.

HydroMotor Connection
P and R series gearboxes input flange can be produced for hydro-motor connections.

Input flanges with coupling and shrink disk
Especially for servo-motors without key, input shaft with shrink disk is suitable. It is recommended for high frequent start stop applications to prevent faults about keys.

Output Shaft with Shrink Disk
Shrink Disk applications are recommended for high frequent start stop working conditions, key is not sufficient. Output shafts with coupling without key and with the help of screws on disk output torque on driven machine can be adjusted. Also it is useful in humid working conditions for easy demontage.

Output Flange Options
Our gearboxes have lots of different output flange options with square, circle types. They can be with solid or hollow shafts according to customer needs.
**E series Torque Arm**

E series torque arms can be used in three different 90 degree positions which is mounted on housing.

**K series Torque Arm**

K series have two different torque arm options; standard and optional.

**C2 Corrosion Category**

Our standard painting class. It is suitable for indoor and outdoor with protection where humidity and contamination is low.

**D series Torque Arm**

Rubber torque arms are standard with D series which have to be used when mounting through holes in housing.

**Hand Braced Torque Arms**

H and B series torque arms designed to mount on foot mounting holes.

**C4 Corrosion Category**

It is suitable for indoor installation and outdoor installation subject to weathering where humidity and chemical contamination is usually high.

**P series Torque Arm**

P series have two different torque arm options; one and two sided.

**C3 Corrosion Category**

It is suitable for indoor installation and outdoor installation subject to weathering where humidity and chemical contamination is mean.

**C5 Corrosion Category**

It is suitable for indoor installation and outdoor installation subject to weathering where humidity and chemical contamination is permanently high.

**H and B series Torque Arms**

H and B series torque arms designed to mount on foot mounting holes.

**P series Torque Arm**

P series have two different torque arm options; one and two sided.

**C4 Corrosion Category**

It is suitable for indoor installation and outdoor installation subject to weathering where humidity and chemical contamination is usually high.

**C5 Corrosion Category**

It is suitable for indoor installation and outdoor installation subject to weathering where humidity and chemical contamination is permanently high.
**Oil Types**

**Mineral Oils**
ISO VG 220, 320 and 460 viscosity oils are used in our units. They are usually recommended for temperatures higher than zero and up to 40 degrees. The mineral lubricant should be changed after every 10,000 hours.

**Synthetic Oils**
They are recommended for higher and lower ambient temperatures compared to mineral oils, because their viscosity change is low with the temperature. 25,000 hours change interval is recommended between -25°C / 40°C ambient temperatures.

**Nitrile Sealing (NBR)**
Nitrile sealings are suitable for low speed shafts. Their working temperatures are between -40 °C +100 °C. We are using nitrile sealings with dust lip on output shafts of our gear units.

**Viton Sealing (FKM)**
These sealings are produced from fluorocarbon material and used on high-speed shafts. We use viton sealing on our input shafts.

**Oil Types**

**Special ISO VG 150 and 220 viscosity synthetic oils are recommended for gear units working under -25 °C ambient temperature conditions.**

**40˚ Ambient Oils**
Special ISO VG 150 and 220 viscosity synthetic oils are recommended for gear units working under -25 °C ambient temperature conditions.

**Food Grade Oils**
Recommended oils for gear units working in food production lines, where oil can be mix in products accidentally. They are suitable for NSF H1 category.

**PTFE Sealing**
Sealings made from polytetrafluoroethylene material which has low friction coefficient and are very resistant to chemical environments. They can work between -80°C and +200°C temperatures. They are useful for chemical working conditions.

**Cassette Sealing (FKM, NBR)**
They are specially designed sealings made from FKM and NBR materials. They are mostly used in corrosive environments to prevent these corrosive materials to enter inside gear unit. We use these sealings on low speed shafts.

**Biodegradable**
They are not harmful to the environment as low as possible with their high soluble properties. They are compatible in CEC-L-33-A-93 test standard which defines maximum 21 days of biological solubility.

**Nitrile Sealing (NBR)**
Nitrile sealings are suitable for low speed shafts. Their working temperatures are between -40 °C / +120 °C. We are using nitrile sealings with dust lip on output shafts of our gear units.

**Viton Sealing (FKM)**
These sealings are produced from fluorocarbon material and used on high-speed shafts. We use viton sealing on our input shafts.

**Gasket Options and Accessories - 62**

**Sealing Options**

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**Biodegradable**
They are not harmful to the environment as low as possible with their high soluble properties. They are compatible in CEC-L-33-A-93 test standard which defines maximum 21 days of biological solubility.

**Labyrinth Seal Application**
Different protective techniques applied on sealings working on very dusty environments.

**Taconite Sealing Application**
Labyrinth sealing application suited for very dusty and corrosive working environments. They are usually mounted with extra graser system.
**Lubrication Options**

**Oil Bath Lubrication**
Lubrication system without any additional equipment. All interior parts (gears, bearings and seals) get lubricated by splash or directly.

**Forced Lubrication**
Especially for industrial gearboxes, upper bearings can be lubricated with bath lubrication while working on some mounting positions. To lubricate these bearings from lower levels pump up directly to the bearing. Efficiency is much higher with the help of lower churning losses.

**Cooling with Fan**
A cooling fan is mounted on output shaft to create air flow through gear unit. It is the most practical cooling option without any need for cooling water. It is suitable for working conditions below 40 degrees and it is not suitable for dusty environments.

**Cooling with Coil**
Cooling is done with cold water passing through copper pipes inside gear unit oil. It needs cold water maximum 30 °C temperature. It is suitable for M1 and H series gear units for M2 mounting position.

**Nilos Ring Application**
Upper bearings that can not be lubricated by splash are made closed bearing by sheet metals named nilos ring. Closed bearings are lubricated by greasers.

**Oil Expansion Tank**
While gear unit is working on some mounting positions oil level needs to be very high to lubricate higher working parts and this can cause oil leakage when working speed is high. To prevent leakage an expansion tank is mounted on gear unit, creating extra space for increasing volume of inside oil while working.

**Cooling with Oil/Water Heat Exchanger**
An oil/water heat exchanger with pump is mounted on gear unit. Cooling is done through heat exchanger with cold water. Additional equipment is available if needed like pressure switch, flow switch and manometer. It is suitable for every mounting position.

**Cooling with Oil/Air Heat Exchanger**
Cooling system consists oil-air heat exchanger, motor pump and a frame. Gear unit and cooling system mounts on a steel base frame. It is recommended for ambient temperatures below 40°C and not very dusty environments. Another advantage is that it does not need cooling water.

**Cooling with Oil/Water Heat Exchanger**
An oil/air heat exchanger with pump is mounted on gear unit. Cooling is done through heat exchanger with cold water. Additional equipment is available if needed like pressure switch, flow switch and manometer. It is suitable for every mounting position.
Electromagnetic Brakes on Housing
Electromagnetic brakes are mounted on opposite side of input shaft in H series gear units. Usually preferred for crane applications because they enable easy maintenance of AC motor.

Backstop on AC Motor Shaft
Backstop applications that are mounted on back side cover of AC Motor. They are usually preferred because they are economic and compact.

B5/B14 Input Flange with Backstop
Backstop can be supplied inside new B5/B14 input flange which includes two bearings and elastic coupling.

Centrifugal Brake
Centrifugal brakes are mounted between AC motor and gear unit for extra safety purposes with main brake. It stops the AC motor while running with inertia of main load that occurs if main brake has any failure.

Backstop on Housing
Backstop application that are mounted opposite side of input shafts in H series gear units and on secondary stage shafts on K and B series gear units.

Torque Limiter
Torque limiters are mounted between AC motor and gear unit with B5 flange. They limit the passing torque to the set value between motor and gearbox. When the limit torque reached proximity sensor sends signal to stop motor to prevent damage to limiter.

Eldro Brake Application
Eldro brakes are usually preferred for high tonnage crane applications. They are mounted between gear unit and AC motor. We use Eldro brakes on H series gear units if our customer wants.

Eldro Brake Application
Eldro brakes are usually preferred for high tonnage crane applications. They are mounted between gear unit and AC motor. We use Eldro brakes on H series gear units if our customer wants.

85 - Gearbox Options and Accessories
Gearbox Options and Accessories - 86
**Gear Units with Base Frame**

**BT Series Base Frame Application**
BT series gear unit, coupling, and AC motor with foot are all mounted on steel base frame. Couplings can be geared, rubberflex, or hydraulic.

**HT Series Base Frame Application**
HT series gear unit, coupling, and AC motor with foot are all mounted on steel base frame. Couplings can be geared, rubberflex, or hydraulic.

**Rubberflex Coupling**
It is used on input or output shafts of gear units. It compensates misalignment of shaft connection. Material of coupling housing is GS52 steel.

**Hydraulic Coupling**
They are mounted between AC motor and gear unit. It is preferred for applications with high inertia to soft start the motor and lengthen the gearbox life.
ELK Electric Motors San. ve Tic. A.Ş

ELK Electric Motors has been founded by major shareholders of Yılmaz Redüktör A.Ş. with the intention of specializing in the production of electric motors. The company manufactures electric motors in a 40,000m² closed area on a 100,000m² open area.

The company focuses on the production of electric motors designed and manufactured completely in accordance with European standards. The full product range is available in IE2 and IE3 efficiency classes. Motor shafts and end shields are manufactured using fully automatic CNC machines under continuous quality control. The rotor and stator cores are manufactured in our fully automatic punching and interlocking lines.
The main design and technology of ELK Motor is completely suitable to the IE3 efficiency class. Since the outside dimensions of the IE3 and IE2 design are completely same the replacement of the IE2 motor with IE3 motors will be done easily.

In addition to the motors according to the European standards, ELK Motor also manufactures special motors for its customers to decrease the cost and increase the productivity.

Specifications and Advantages
- IE2 and IE3 efficiency class motors with VDE certificate from 0.25 kW motor power
- High starting and brake down torques
- Single winding and double winding single speed motors
- Detachable feet between 71 and 132 frames that make getting left or right terminal box very easy for the customer
- IE2 efficiency class compact engines
- Specially designed engines for 87 Hz applications
- Motors available for S3 intermittent periodic duty type

<table>
<thead>
<tr>
<th>Power Range [kW]</th>
<th>0.25 - 45</th>
</tr>
</thead>
<tbody>
<tr>
<td>Frame Size</td>
<td>71 - 225</td>
</tr>
<tr>
<td>Speed Range [rpm]</td>
<td>1000, 1500, 3000</td>
</tr>
<tr>
<td>Efficiency Class</td>
<td>IE2, IE3</td>
</tr>
<tr>
<td>Voltage [V]</td>
<td>400</td>
</tr>
<tr>
<td>Insulation Class</td>
<td>F, H</td>
</tr>
<tr>
<td>Protection Class</td>
<td>IP55, IP56, IP50, IP66</td>
</tr>
</tbody>
</table>
double winding double speed motors in its standard production lines. ELK motor recommends single winding dahlender type motors for double the difference between speeds and double winding motors for higher speed differences. Also 12/2 poles double speed motors are available for crane industry.

<table>
<thead>
<tr>
<th>Power[kW]</th>
<th>FrameSize</th>
</tr>
</thead>
<tbody>
<tr>
<td>0,37 / 2,5</td>
<td>100</td>
</tr>
<tr>
<td>0,8 / 4,9</td>
<td>112</td>
</tr>
<tr>
<td>1,6 / 9,5</td>
<td>132</td>
</tr>
<tr>
<td>4,7 / 15,9</td>
<td>160</td>
</tr>
</tbody>
</table>

ElectricMotors-74
Electromagnetic Brakes
Available for all motor sizes. We are using from 5 ft up to the 1000 ft with 24 Volt, 230 Volt and 450 Volt DC voltage electromagnetic brakes according to customer needs.

Hand Release Brake
When electricity is cut or manually releasing of brakes is needed hand release brakes can be used.

Shaft Canopy for electric motors that are using from 5 Nm up to the 1600 Nm with 24 Volt, 230 Volt and 400 Volt DC voltage electromagnetic brakes according to customer needs. When motor movement needed on backside or motor needs to be turned manually an extension shaft at the back of the motor can be protocled.

Forced Cooling
Especially for encoder applications where motor speed is not enough for cooling an extra self powered fan is needed.

Forced Cooling with Encoder
If needed encoder and self powered fan can be mounted on back of motor inside cover where synchronous working is essential.

Forced Cooling with Brake and Encoder
Brake, encoder and self powered fan can be mounted on back of motor inside cover.

Backstop
Applications that are working one way and reverse movement needs to be stopped, backstops are necessary. They can be mounted inside motor cover.

Electric Motor Extension Shaft
When motor movement needed on backside or motor needs to be turned manually an extension shaft at the back of the motor can be protocled.

Canopy
Canopy for electric motors that are working outside is available to prevent rain to enter inside motor.

Forced Cooling with Brake and Encoder
If needed; brake, encoder and self powered fan can be mounted on back of motor, inside cover.

Protection Class

IP55 (Standard)
The ingress of dust is not totally prevented, but dust does not enter in sufficient quantity to interfere with satisfactory operation of the motor. Water projected by a nozzle against the motor from any direction will have no harmful effect.

IP65
The ingress of dust is totally prevented, water projected by a nozzle against the motor from any direction will have no harmful effect.

IP66
The ingress of dust is totally prevented, water from heavy seas or water projected in powerful jets will not enter the motor in harmful quantities.
ELK motors standard isolation class is F. Permissible winding temperature is 155°C at 40°C ambient temperature.

PTC Thermistor

When the temperature of windings rises too high, the thermistor mounted inside motor windings cuts the circuit and protects the motor from any harm.

Heaters and Drain Holes

There can be condensation of water when the motor is working in very humid environments. To prevent this, heaters are mounted inside the motor to keep the temperatures of windings stable. Additionally, drain holes are opened to prevent the accumulation of water inside the motor.
Permissible winding temperature rises to 180 °C at 40 °C ambient temperature.

Thermostat

When the temperature of windings rises too high, thermostat mounted inside motor windings cuts the circuit and protects motor from any harm.
Yılmaz Redüktör has been offering the gearbox and AC motor portfolio of its own manufacturing plants to industry sector for 60 years by now. Recently Yılmaz Redüktör has established Automation Division to include AC drives to the portfolio to provide complete drive train solutions to worldwide distributors, OEMs and end users under same roof. By this horizontal growth move, Yılmaz Redüktör targets to more efficiently serve the powerful engineering experience and skills to all users within same brand name.

A quick glance at Yılmaz Redüktör drive family products reveals that drive products are categorized within four sub groups. These are:

- YI – Yılmaz Integrated
- YB – Yılmaz Basic
- YA – Yılmaz Advanced
- YE – Yılmaz Expert
YB 1000  
Basic Series

Specifications
- Power Rate: Up to 22kW
- Supply: 1 Phase 230V / 380V
- Auto identification
- Especially simplicity
- Built-in PID Control
- V/F Control and Torque Boost
- Coated PCBs
- Usable under Heavy Duties (%150 for 60s with Constant Torque)
- Multi-functional I/O
- Jogging
- RS485 (MODBUS) Communication
- PC Software

YA 10  
Advanced Series

Specifications
- Power Rate: Up to 180kW
- Supply: 1 Phase 230V +/- %15
- Supply: 3 Phase 400V +/- %15
- Auto identification
- Especially simplicity
- RS485 (MODBUS) Communication
- Multi-functional I/O
- PID Process Control
- Jogging
- SLVC - Sensorless Vector Control
- Coated PCBs (3C3)
- Usable under Heavy Duties (%200 for 3s, %150 for 60s)
- Parameter Setting and Cloning with PC Software
- Parameter Cloning Module
YE 30

Specifications
- Power Rate: Up to 250kW
- Supply: 1 Phase 380V +/- 15%
- Supply: 3 Phase 400V +/-15/%10/-/+15
- Auto identification
- Communication Modules (Modbus TCP, Profinet, EtherCAT etc.)
- Through Panel Installation
- Closed-loop Vector Control
- Coated PCBs (3C3, 3C4)
- Usable under Heavy Duties (%180 for 3s, %150 for 60s)
- Regeneration
- Process Control with PLC Functions (IEC61131)
- Parameter Setting, Analyzing and Cloning with SD Card and PC

Y1

Specifications
- Motor-integrated building
- High protection class (IP65)
- Power Rate: Up to 7.5kW
- Auto identification
- Supply: 1 Phase 230V / 3 Phase 400V
- Communication Modules
- Vector Control
- Usable under Heavy Duties (%150 for 60s)
You can find our dealer addresses at our website www.yr.com.tr