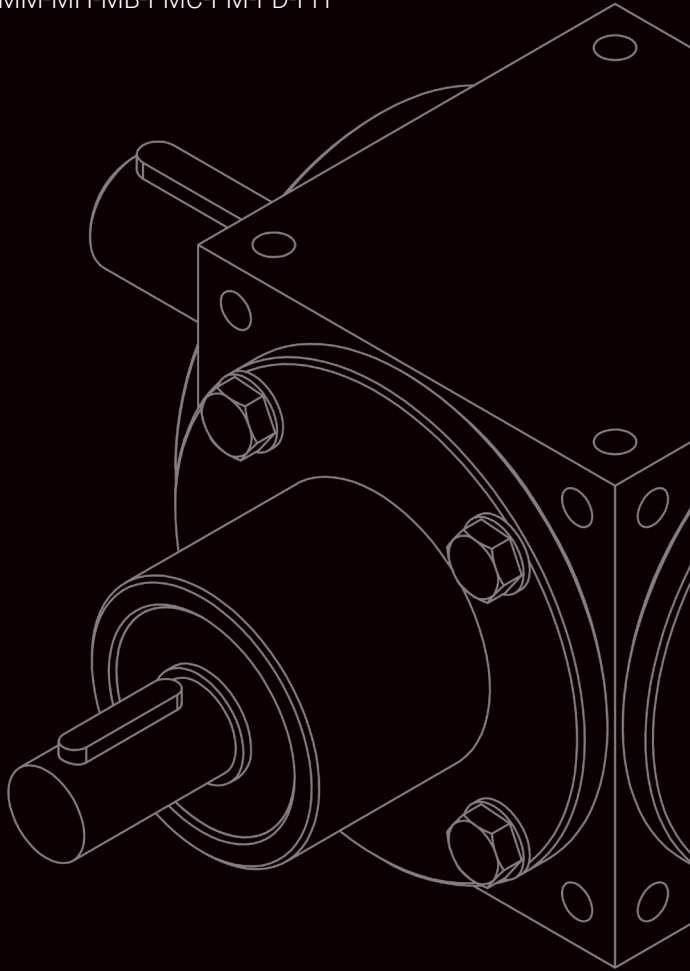


BEVEL GEARBOX

MMC-MM-MH-MB-FMC-FM-FD-FH



Instruction Manual

Installation - Operation - Maintenance

About Us:

Setting out with the principle of providing world-class solutions to its customers using the latest technologies, MecMot has quickly created value in its sector and managed to become one of the leading companies.

MecMot, which started its operations in a 25 m² design office in 2017, provides product supply to many countries in the world today with its 30+ expert staff, high production capacity and wide stock infrastructure.

MecMot, which has proven itself in design and production, also provides special product production to its customers in line with their requests and needs with its high quality standards.

Product:

- Screw Jack
- Bevel Gearbox
- Linear Actuator



MecMot Catalog QR Kode

Contact:

Mecmot Linear Machine Systems Industry and Trade Ltd. Co.

Ankara Rd. Vadi St, Akturk Industrial Estate

No:6/ A24-A25-A26, Kurtkoy, Pendik/ İstanbul, Türkiye

Phone: +90 216 807 20 17

info@mecmot.com | www.mecmot.com



This instruction manual provides essential information for long-term use of the product. Before the installation, operation and maintenance of each product, this manual should be read. Disregard to comply with the installation, use and maintenance instructions in this manual would result in the termination of the warranty conditions of the product. MecMot will not be held responsible for any damage arising from the failure to comply with the instructions.

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1. General Precautions

The instruction document must be kept ready for the company that will install our products. In case of installation (or operation) of our products, please provide this manual as well as clearly explaining to the end users the points to be considered and the points to be paid attention to during operation.

** End User: The user who will operate the products to be installed. This instruction document should be read thoroughly before opening the product and the written recommendations should be taken into consideration.*







CAUTION

The manufacturer disclaims all liability for damage to persons or property resulting from failure to observe the precautions listed herein.

- Leave the handling of products to qualified or experienced engineers in the transportation, placement, use, operation, maintenance and inspection of products.
- Do not use the product for purposes and behaviors other than those specified.
- Unauthorized modification of the product will void the manufacturer's liability.
- The personnel assigned for maintenance must be trained and must have read and fully understood this "Use and Maintenance Instruction Manual".

1.1 Symbols and Definition

 Danger	Failure to comply with this warning <u>will</u> lead to serious danger for the personnel such as death or serious injuries.
 Warning	Failure to comply with this warning <u>may</u> lead to serious danger for the personnel such as death or serious injuries.
 Coution	Failure to comply with this warning may lead to minor injuries.
 Note	Notes for understanding or optimizing working processes.

1.2. Recommended Conditions for the Product

In order to ensure that the product operates at maximum efficiency and for a long time, attention must be paid to the specified items.

1.2.1 Product Use Purpose

Gear boxes are only suitable for lifting, lowering, tilting and forwarding movements within the specified lifting capacity ranges. The user is responsible for ensuring correct use.

1.2.3 Ambient Temperature

The most efficient ambient operating temperature of the product is 60 °C.

1.2.4 Ambient Humidity

The product cannot work under water or in extremely humid areas.

1.2.5 Lubrication Process

The oil used in the gearbox is synthetic oil, and the oil used in the trapezoidal shaft is grease.

1.2.6 Weight to be Lifted

The maximum load the product can handle. Products can be used within the scope and limits specified in our catalogs and brochures.

1.3 Duties of Operating Companies

MecMot, ensure that the Reverser is operated and maintained only in accordance with this instruction manual and the rules and regulations applicable in the country of use.

Personnel who will operate,

- Must be authorized to operate the Reverser.
-
- Should be trained and qualified for the relevant job, must read and understand this user manual.
- Should be familiar with applicable safety regulations.
- Should wear personal safety equipment.

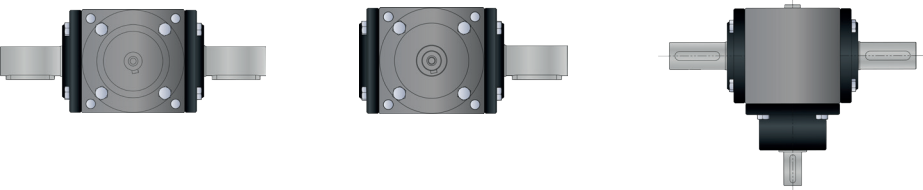
1.4 Content of Supply

MecMot Reverser, packaged products are kept in wooden cases against possible damage during transportation. Foam material is used to prevent contact between products inside the case to prevent shock and impact. The scope of supply of MecMot Reverser is given below.

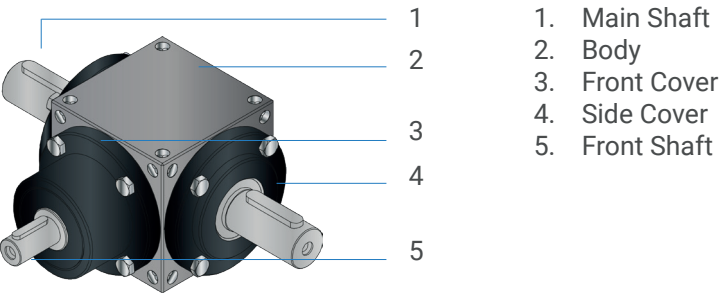
- MecMot Direction Changer
- This Instruction Manual
- Shipping Note

2. Product to be Described in this Instruction

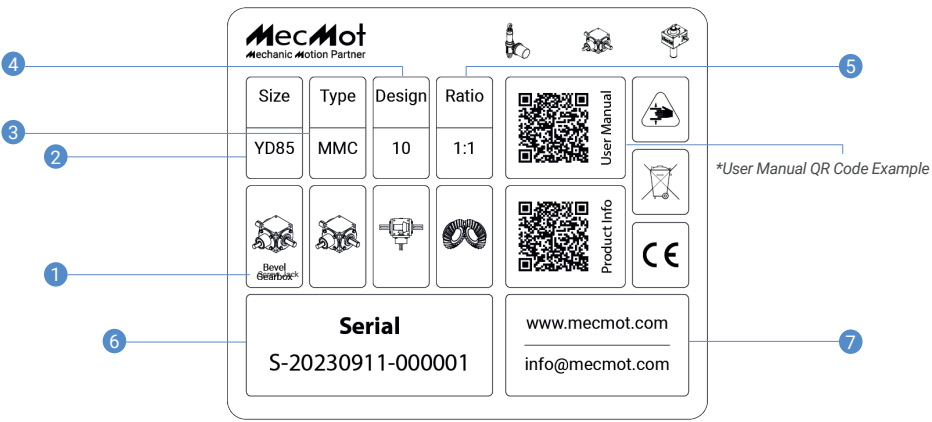
2.1 General Appearance



MMC TYPE



2.2 Product Label



*Mecmot Direction Changer Product Label Example

1. Product Name
2. Model Description
3. Type Description
4. Maximum Static Load Transmission
5. Gear Ratio
6. Serial Number (Production End Date / Warranty Start Date - Order Code)
7. MecMot Contact Information

3. Transport and Storage of the Product

3.1 Transport

Falling loads may cause serious injuries while moving the product, so to avoid possible dangers;



WARNING

- To avoid injury, do not touch the product's shaft key with bare hands.
- Make sure that the lifting slings used are securely attached and do not slip.
- Use personal protective equipment.
- Do not stand under a hanging product. Take good care of the product when carrying it, it may fall or turn over.
- Products should not be subjected to more weight than the maximum lifting load.

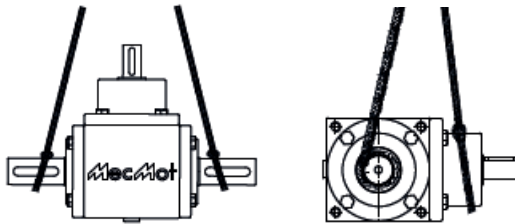


CAUTION

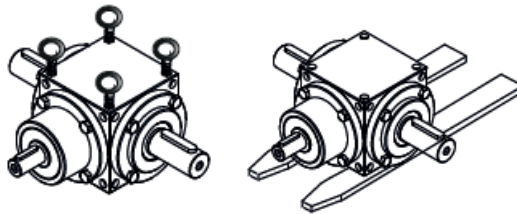
- Check the delivery of the product and check the packaging for damage.
- Use appropriate lifting equipment if necessary.
- The user is responsible for any damage that occurs immediately to the product.
- Be particularly careful when handling long and thin rods to prevent contamination.

TEHLİKE

- To avoid injury and/or damage caused by the Reverser being damaged, the product falling or tipping over, always use lifting bolts or other lifting devices suitable for the product, if available. Transport methods for the MMC version;



**For secure attachment, attach eye bolts or eye nuts to the gear case. Make sure the carrying apparatus is parallel to the surface it touches.*



3.2 Depolanması



WARNING

Incorrect storage environment and incorrect positioning of the product may cause damage to the product. In order to prevent this;

- To prevent the products from being damaged by corrosion, do not store them in humid environments. Store only in closed and dry rooms.
- Do not store for more than a short period in areas that have a roof but allow free air circulation from outside.
- Carry out commissioning no later than 1 year after delivery. (Make sure the product is stored under appropriate conditions during this period.)

**For other storage conditions and periods, please contact MecMot.*

3.3 Installation



WARNING

- Only allow qualified and trained personnel to perform the work.
- Turn off the entire system and secure it against operation.
- Wear personal safety equipment before installation.
- Do not remove covers placed on the product.
- Use protective gloves for sharp edges on the product.

When installing the product, the conditions to be taken into consideration in the installation area are;

3.3.1 Direction to be mounted

Check if the mounting surface of the unit is suitable. Inadequate direction may damage the bearing, gear tooth and shaft of the product.

3.3.2 Stand to be mounted

Before installing the product on your machine, check whether the machine's construction and rigidity are suitable for the product. Inadequate construction and rigidity of the machine will produce abnormal vibration and cause an accident resulting in injury and/or damage.

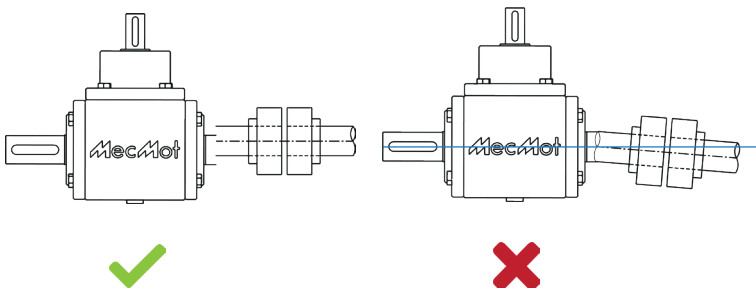
3.3.3 Surface to be mounted

Check the mounting surface of the unit to ensure that the product shaft angles are adequate. Support the surface to be mounted with paint and rust-resistant enamel.

3.3.4 Correct centering

Improper centering will cause mechanical failure of the product or the end of its service life.

Hole, There is a hole part to adjust the appropriate location on the mounting surface. To adjust the center of the screw shaft and the center of the lifting system, process it on the mounted.



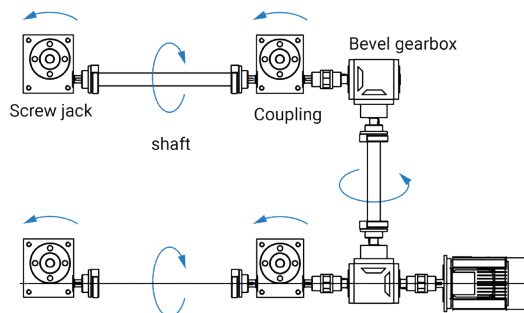
3.4 Connection

When you connect the product shaft to a load or motor, check the following points.



CAUTION

- Close the entire system and secure it against opening.
- Before connecting the product to the machine, pay attention to the direction of rotation. Rotation in the wrong direction may cause an accident or damage.
- Do not touch the rotating parts. Cover them with protective covers to prevent an accident.
- When directly connected to each other, check the allowed connection accuracy. If such connections are broken during operation, it may cause product damage and/or machine damage.
- Adjust according to the connection position when connecting to another machine or part.
- When you install a coupling, sprocket or gear on the shaft of the product, apply grease so that it does not stick to the shaft and do not apply physical force to the bearing of the product to prevent damage.
- When connecting our product to the shaft of the machine with a coupling, center the shaft.
- When connecting our product to the shaft of the machine with a pulley or gear, connect them correctly using the recommended appropriate belt tension or pulley tension. Tightening or loosening of the belts or pulleys may cause stress on the product.
- Position the sprocket or pulley as close to the product body as possible so that the shaft can carry the loads at the root.



3.5 Engine Connection

Bevel Gear Boxes, standard drive is made using AC motors.

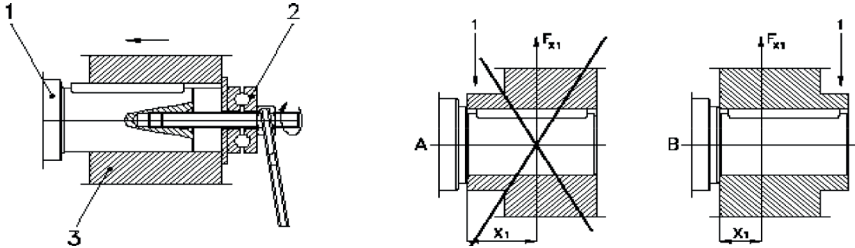


CAUTION

- Close the entire system and secure it against opening.
- Before connecting the product to the machine, pay attention to the direction of rotation. Rotation in the wrong direction may cause an accident or damage.
- Do not touch the rotating parts. Cover them with protective covers to prevent an accident.
- When directly connected to each other, check the allowed connection accuracy. If such connections are broken during operation, it may cause product damage and/or machine damage.
- Adjust according to the connection position when connecting to another machine or part.
- When you install a coupling, sprocket or gear on the shaft of the product, apply grease so that it does not stick to the shaft and do not apply unjustified physical force to the bearing of the product to prevent damage.
- When connecting our product to the shaft of the machine with a coupling, center the shaft.
- When connecting our product to the shaft of the machine with a pulley or gear, connect them correctly using the recommended appropriate belt tension or pulley tension. Tightening or loosening of the belts or pulleys may cause stress on the product.
- Position the sprocket or pulley as close to the product body as possible so that the shaft can carry the loads at the root.

3.6 Parts Connected to the Output Shaft

See the diagram below for output shaft component connection.

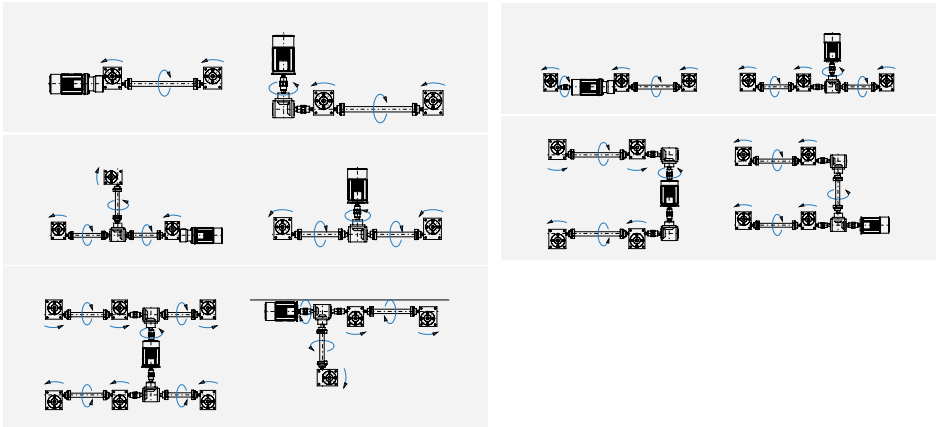


3.7 Correct Position of the Elements Connected to the Output Shaft

The elements connected to the reducer output should be as close to the reducer as possible. The radial load that will occur due to the connection should be provided from the closest distance to the reducer.

- Unscrew the shrink ring bolts. Using a solvent available in your market, wipe off all the oil and dirt on the shrink ring and shaft. Make sure that no solvent remains on the shaft and shrink ring. Insert the shaft into the hole and tighten the bolts as shown below. Make sure that there is a gap between the reducer sleeve shaft.
- When a coupling connection is made, it should be ensured that there is a gap between the two couplings.
- When a coupling connection is made, make sure that there is no axial displacement between the two shafts.
- When a coupling connection is made, make sure that there is no angular displacement between the axes of the two shafts.

Screw Jack and Direction Changer connection types



4. Operating Precautions

- The system must be installed and aligned.
- The shaft must be lubricated.
- Operate the Direction Changer slowly and carefully.
- Operate with no load or low load as much as possible.
- The current value must be in the normal range and constant.



CAUTION

Large fluctuations indicate misalignment and voltage. Stop if you notice anything abnormal.

- Check the temperature value, the working length and if there is too much working in succession, take it under control. Pay attention to the sound.

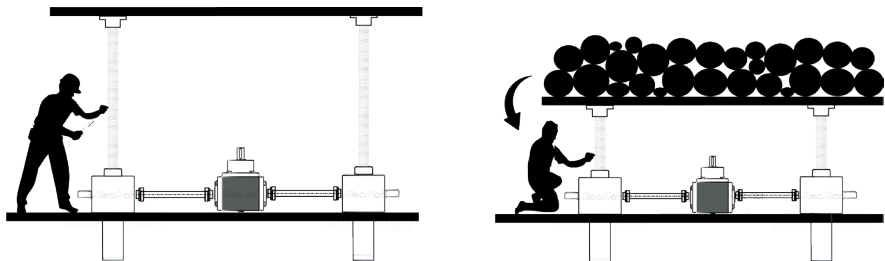
5. Commissioning

- MecMot Direction Changer systems must be installed and connected with their attachments.
- The test run must be completed successfully.
- If there is more force than desired;
 - Make sure the bearings are closed.
 - Make sure that no other elements are colliding with each other.
 - Double check all the reversing connections.
 - Make a test run with the working load and be careful.
- Torque should be constant
- Current consumption should be constant
- Operating temperature should be within normal range
- Re-lubricate the spindle after the first 2 hours of operation at medium temperature.



CAUTION

- Keep away from the products and their rising parts during operation. When you need to approach them, turn off the power switch and then support the lifting part and operate after confirming complete safety.



To prevent an accident that may result in injury and/or death due to the operation of the product or the sudden fall of its rising parts, keep away from the products and their rising parts during operation.

6. Maintenance

6.1 Care

For trouble-free operation, the MecMot Reverser must be checked regularly:

- For trouble-free operation of the products, the first inspection must be done after 1 month at the latest.
- A detailed inspection must be done within 1 year. Inspections must be recorded in a template.

6.2 Visual Control

- A safe area must first be established for observation. Switch off the machine and secure it against being switched on again.
- Check the screws of the attachments and couplings/connecting shafts and retighten if necessary.

6.3 Inspection

The grease must be replaced periodically to extend the service life of the product.

- Visually inspect the coupling stars.
- Allow the machine to operate, checking the following:
 - Smooth and vibration-free operation
 - No excessive noise
 - Constant current consumption
 - Temperature rise within the permissible range

6.4 Lubrication

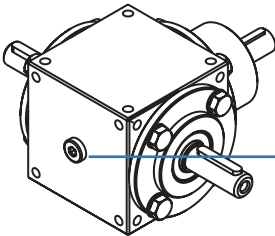
The synthetic oil filling is done by removing the oil plug on the body of the MecMot Direction Changer and contacting the gear box. When you do not operate the unit for a long time, you should move the unit back and forth two or three times a month to protect the interior from rust.

- Provide an oil pan or other adequate measures against possible oil spillage due to mechanical failure or end of life of the product.
- The ball screw uses a grease lubrication system, it is recommended to replace it with new grease in about a week for the first operation. When replacing the grease, wipe off the old grease and then provide new one. When the unit is not operated for a long time (more than 6 months), we recommend to replace the grease with new one before using it again.
- For lubrication, first turn off the entire system and secure it against opening.



NOTE

Gearbox lubrication is 8000 hours. Lubrication interval depends on the application. Monitor the grease condition and determine the interval accordingly.



Oil Plug
(Inner area - gear lubrication)



NOT

- Unsuitable oil will cause damage to the shaft. To prevent this, ensure the correctness of the oil used and do not mix oils.

7. Troubleshooting

- When you notice any abnormal situation such as the following, stop the operation immediately to avoid an accident.

Problem		Possible Causes	Things to Do
Oil Leak		Packaging damage	Replace with new packaging.
		Oil seal damage	Replace with new gasket.
		Not tightening the drain	Tighten the drain plug with sealing tape.
If the Input and Trapezoidal Shafts Do Not Turn		Worm gear broken	Contact MecMot.
		Screw shaft is broken	Contact MecMot.
		Excessive locking state stroke position	Disassemble the unit and replace the part if necessary.
		Bent screw shaft	Replace the screw shaft
		Bearing damaged	Replace with new bearing
		Foreign matter in the unit	Contact MecMot.
Overheating Experienced		Overload	Check the loading and adjust it to a sufficient level.
		Excessive or insufficient grease	Add or remove oil as needed.
		Unsuitable grease or oil	Replace with recommended oil.
		Improper adjustment of bearing	Contact MecMot.
Abnormal Buzz	Regular Noisy Sound	Incorrect gear contact	Contact MecMot.
		Bearing damaged	Replace with new bearing.
		Incorrect adjustment of the coupling	Adjust to proper alignment.
	Loud Metallic Noisy Sound	Wrong bearing preloaded	Contact MecMot.
		Insufficient gear oil	Add appropriate amount of grease.
		Grease problem on input output shaft	Clean off old grease and add new one.
	Irregular Noisy Sound	Foreign matter in the unit	Clean off old grease and add new one.
		Lateral load on input output shaft	Adjust to proper installation.
		Constantly unstable operation	Adjust to proper installation.

Unusual Vibration	Wear of gears	Yeni dişlilerle değiştirin.
	Foreign matter in the unit	Üniteyi temizleyin ve yeni yağ koyun.
	Bearing damaged	Yeni rulman ile değiştirin.
	Looseness of mounting bolts	Onaylanan ayardan sonra cıvataları sıkın giriş ve vida mili
	Incorrect mounting setting	Uygun montaja ayarlayın

Our end-of-life products meet current standards and regulations regarding disposal.

- Since it does not contain any toxic substance, no special precautions are required. It should be entrusted to an authorized person for correct disposal and recycling.

Parts that need to be destroyed,

- Bronze and copper materials (gears, nuts, etc.)
- Steel parts (coated with environmentally friendly paints or coatings)
- Lubricants
- Anodized aluminum (parts)
- Plastic parts



NOTE

- Warranty is void if MecMot Reverser is disassembled.
- Allow MecMot Reverser to be disassembled only by personnel authorized by MecMot.

8. In Case of Fire

The reducer is not an explosive material, but it contains synthetic or mineral oil. If the reducer is located in an environment where fire may occur, please pay attention to the following;

Suitable Extinguishing Materials and Protective Equipment,

- Keep an extinguisher made of a suitable material such as carbon dioxide, powder, foam, fog, etc. at an accessible distance around the reducer.



CAUTION

High temperature creates vapor that ignites quickly. Use protective vent plugs.

Unsuitable Extinguishing Materials;
Do not try to extinguish with water.

9. Quality Documents

9.1 CE Certificate

S.N. 55173



UYGUNLUK SERTİFİKASI

Nu.: 29082202242

TESTPLUS

Sertifika sahibi adı ve adresi:

MECMOT LİNEER MAKİNA SİST. TİC. LTD. ŞTİ.
ŞEYHLİ MAH. ANKARA CAD. AKTÜRK SAN. DÜNYASI NO.A25-26
KURTÖY, PENDİK, İSTANBUL, TÜRKİYE

Üretici adı ve adresi:

MECMOT LİNEER MAKİNA SİST. TİC. LTD. ŞTİ.
ŞEYHLİ MAH. ANKARA CAD. AKTÜRK SAN. DÜNYASI NO.A25-26
KURTÖY, PENDİK, İSTANBUL, TÜRKİYE

Ürün adı:

YÖN DEĞİŞTİRİCİ SİSTEMLERİ

Ticari marka:



Ürün tipi:

YD85

Alternatif modeller:

YD110, YD135, YD165, YD200, YD250.

Uygulanan yönetmelikler:

2006/42/AT Makina Emniyeti Yönetmeliği,

Uygulanan standartlar:

EN ISO 12100:2010, EN 60204-1:2018, EN ISO 13857:2019,
EN ISO 14120:2015, EN ISO 13854:2019.

TESTPLUS yukarıda uygunluk değerlendirmesi için sunulan tipin 2006/42/AT Makina Emniyeti Yönetmeliği (EK-II) Temel Sağlık Güvenlik Gerekliliklerine uygun olduğunu referans inceleme raporu ile onaylar. Bu uygunluk sertifikası imalatçının uygunluk beyanı düzenleme ve diğer ilgili yönetmeliklere uyma zorunluluğunu ortadan kaldırmaz. Bu uygunluk sertifikası imalatçının isteğine bağlı düzenlenmiştir.

Rapor nu.:

29082202242

Sertifika basım tarihi:

01.03.2022

Sertifika geçerlilik tarihi:

28.02.2027

İmalatçı uygunluk sertifikası, AT uygunluk beyanı ve eklerini, teknik dokümantasyon ile birlikte, yasal otoriler tarafından talep edildiğinde sunulmak üzere, ürünü pazara sunduktan itibaren on yıl boyunca saklamalıdır. İmalatçı; ilgili yönetmeliğin gerekliliklerine göre üretim ve yönetmeliğin temel sağlık ve güvenlik gereklilikleri karşılayan yukarıda bahsi geçen tipin uygunluğunda olan her bir ürüne CE işaretini ilgilirebilir.

Geçerlilik için
QRCode



ŞÜKRÜ AYBAR

Teknik Düzenleme Sorumlusu
İstanbul, 01.03.2022



TESTPLUS TEKNİK KONTROL VE BELGELENDİRME TİC. LTD. ŞTİ.
Abdurrahmangazi Mah. Ebubekir Cad. No.34/15
Sancaktepe, İstanbul, Türkiye
info@testplus.com.tr

1/1

9.2 EAC Document



AVRASYA EKONOMİK BİRLİĞİ UYGUNLUK BEYANI



Başvuru sahibi "MOSKOVA SERTİFİKA ŞİRKETLER BİRLİĞİ" LIMITED ŞİRKETİ

Yer (tüzel kişiliğin adresi) ve iş yeri: 127474, Rusya, Moskova, Dmitrovskoye Shosse, 60, oda. V, ofis: 15
Ana devlet tescil numarası 1177746341244.
Telefon: 89660172980 E-mail: info@msk-cert.ru
Genel Müdür Anton Sergeyevich Gusarov tarafından temsil edilmektedir

Konik Yön Değiştirici modeller: YD85, YD110, YD135, YD165, YD200, YD250 olduğunu beyan eder.

Ticari marka: MecMot.

Üretici firma : MECMOT LINEER MAKİNA SIST. SAN. TIC. LTD. STI.

Yeri (tüzel kişiliğin adresi) ve üretim faaliyetlerinin yürütüldüğü yerin adresi: Türkiye, AKTÜRK SANAYİ
DUNYASI SEYİHLİ MAH. ANKARA CAD. VADİ SOK. NO: 6/A İC KAPI NO: A25-A26 KURTKOY,
PENDİK, İSTANBUL

Avrasya Ekonomik Birliği'nin TN VED kod(lar)ı: 8483402308

Seri üretim

gerekliliklere uygundur

Gümrük Birliği'nin "Makine ve Ekipmanların Emniyeti Hakkında" Teknik Düzenlemeleri (TR TS 010/2011)

Uygunluk beyanı aşağıdaki hususlar temelinde kabul edilmiştir

OOO GEFEET LIMITED LIABILITY COMPANY (akreditasyon sertifikası kayıt numarası ROSS
RU.32623.IL.11) tarafından düzenlenen 18.09.2024 tarihli AG1757 numaralı Test Raporu.

Uygunluk beyanı için şema: ID

Ek Bilgiler

"Uygunluk beyanı, örnek ürünlerin seçildiği tarihten itibaren üretilen ve araştırma (test) ve ölçümlere tabi tutulan ürünler için geçerlidir, bu durum, örnek seçim rapor(lar)ında belirtilmiştir."

Uygunluk Beyanı kayıt tarihinden itibaren 17.09.2029 tarihine kadar geçerlidir.

Anton Sergeyevich Gusarov
(İmza)
(Adı Soyadı)

Uygunluk beyanının kayıt numarası: EAEU N RU D-TR.RA08.V.48882/24
Uygunluk beyanının tescil tarihi: 18.09.2024

Kaşe: "MOSKOVA SERTİFİKA ŞİRKETLER BİRLİĞİ" LIMITED ŞİRKETİ

