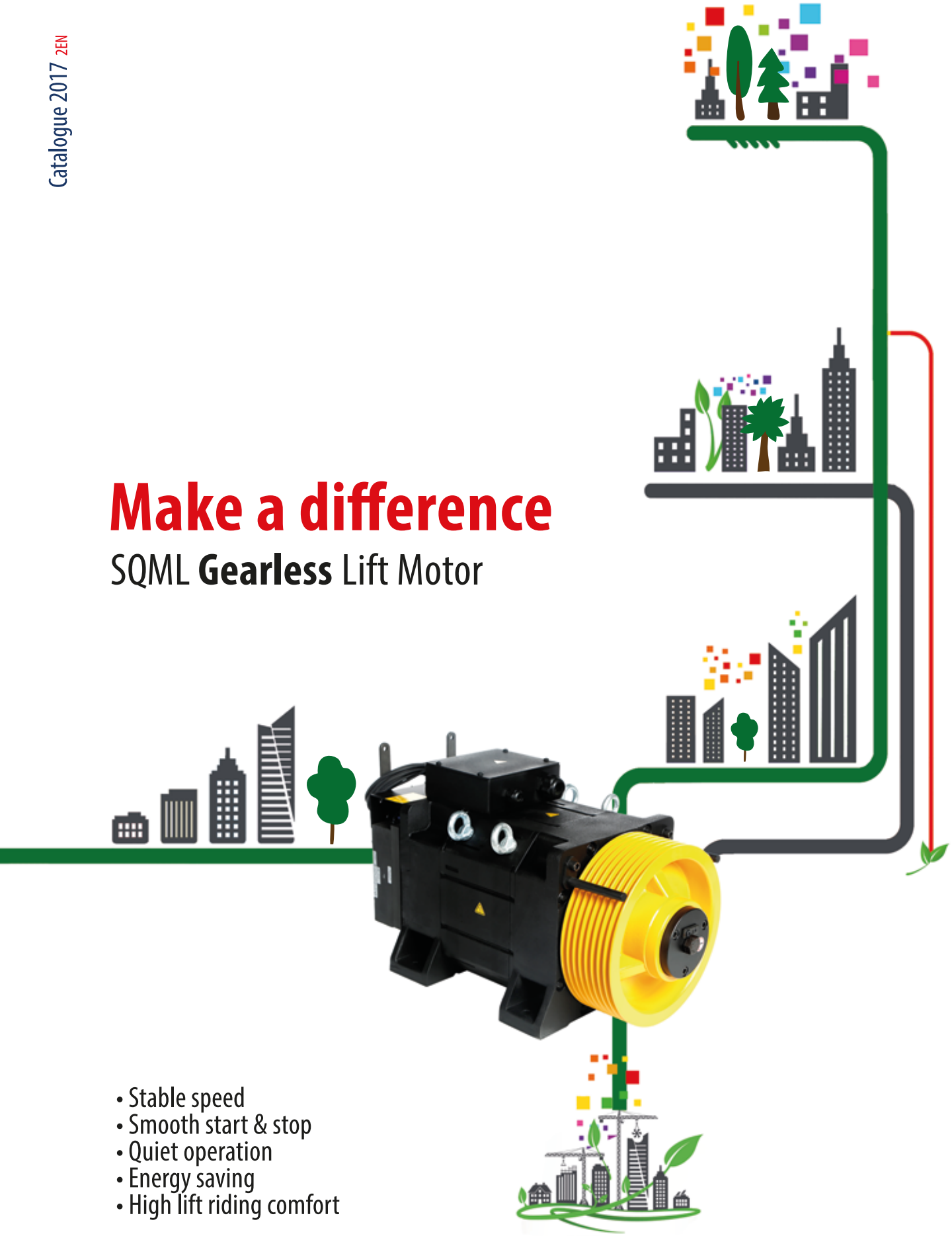
Catalogue 2017 2EN

# Make a difference

## SQML **Gearless** Lift Motor



- Stable speed
- Smooth start & stop
- Quiet operation
- Energy saving
- High lift riding comfort

EMF Motor®

# EMF Motor

## *Only the Best wins ...*

Every solution comes from a real understanding of the challenges facing designers and users.

EMF Motor continues to be a company made of innovative individuals striving to design, create and build products and solutions that help to improve industrial technology. We design our products for durability and we test them rigorously to ensure the highest levels of reliabity.

Our products are the **"next big thing"** in electric motors. Our patented technology provides the ground to attract world's most talented and motivated engineers. EMF Motor products will benefit design engineers to innovate compact products that will respond to the increasing demand from customers.

**"Precise motion"** is our focus. SQM Torquemotor can distinctly differentiate your product, your efficiency and your operations and deliver a market place advantage by improving its performance. This means totally increased efficiency which is the expectation within every company. Perfectly deployed motion can make your product more reliable and efficient and enhance accuracy.

**How is this all possible? What is so different about the SQM Torquemotor?**

SQM Torquemotor works with a patented motor principle that is most suitable for applications with high torque at low speed. SQM Torquemotor is a synchronous machine and the windings have no influence on the pole number. The high pole number is achieved by intelligent magnetic field.

As a result SQM Torquemotor, as a direct drive, offers great advantages in all performance criterias, such as very high energy efficiency, high dynamics, high overload capacity, quiet and practically maintenance free operation.

## SQML Gearless Lift Motor

- SQML Gearless Lift Motor uses the patented LiProKA principle.
- SQML Gearless Lift Motor has the highest efficiency by far.
- With its high number of poles the motor is very dynamic and has excellent controllability.
- A3 compatible safe brake is incorporated.
- The LiProKa principle is characterised by very compact design.
- As a result of the low moment of inertia, the starting current is minimal.
- There is a constant torque over the whole speed range.
- Very low torque ripple enables excellent lift "ride comfort".
- Due to its high efficiency the motor always stays cool, making it especially suited to locations with high ambient temperature.

The motor designed with German and Turkish Cooperation, has excellent torque / speed curves

- has by far the highest efficiency
- allows you to feel the lift "ride comfort"
- works quietly so does not disturb

## Patented LiProKa Motor Principle (Patent No: EP 0910154)

- The stator of the EMF Motor is very similar to a conventional motor.
- Permanent magnets are glued to the rotor.
- When the motor stator winding is supplied with zero voltage and frequency, magnetic flux is formed.
- When the frequency is increased, the magnetic field starts to rotate.
- The two magnetic systems, permanent magnet rotor and magnetization created by the rotating stator field, start to pull and push each other over the whole circumference.
- The direction of rotation of the magnetic rotor is opposite to the rotating stator field and the rotor turns much more slowly than the rotating field. The permanent magnets and motor geometry define the speed reduction ratio.
- With this new motor principle a very high torque is created by a winding with a low number of poles.
- The copper losses and hysteresis losses are very low which allows extremely high efficiency values.
- Due to the high number of magnetic poles, rotation is very slow and a high torque achieved.
- In most cases, no additional blower or water cooling is required for these motors.
- The results show there is no other motor principle or design that even gets close to the level of efficiency achieved by EMF Motor or the level of torque to weight ratio of EMF Motor design.

*** LiproKa** is the given name to motor physics, which was invented by Dr. Jürgen Lindner and Michael Prokopp in Germany and realized with the intense effort, determination and investment of the Kayakıran Family in Turkey. It works in a different way to current known physics and is designed to give high torque at low speeds.

# SQML 100

- From 320 kg up to 630 kg carrying capacity
- 160 mm, 210 mm and 240 mm traction sheave options
- Compact design
- 1:1 and 2:1 suspension options

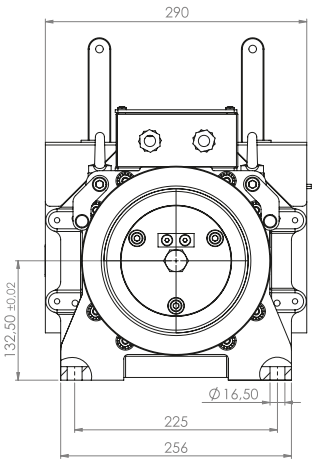
| Suspension | Motor Nr. | Motor Code | Load Capacity kg | Traveling Speed m/s | Traction Sheave mm | Rope Values x mm | Rated Torque Nm | Rated Speed d/d | Rated Current A | Rated Power kW | Static Load kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1:1 | a | 100-160 | 320 | 1,0 | Ø 240 | 7 x 6,5 | 280 | 80 | 11 | 2,3 | 1700 |
| | b | 100-160 | 320 | 1,6 | Ø 240 | 7 x 6,5 | 280 | 127 | 17,2 | 3,7 | 1700 |
| | c | 100-160 | 320 | 1,0 | Ø 210 | 8 x 6,5 | 245 | 91 | 9,8 | 2,3 | 1700 |
| | d | 100-160 | 320 | 1,6 | Ø 210 | 8 x 6,5 | 250 | 146 | 16,1 | 3,8 | 1700 |
| 2:1 | e | 100-140 | 320 | 1,0 | Ø 210 | 4 x 6,5 | 120 | 182 | 6,4 | 2,3 | 1700 |
| | f | 100-140 | 400 | 1,0 | Ø 210 | 6 x 6,5 | 150 | 182 | 10,5 | 2,8 | 1700 |
| | g | 100-140 | 400 | 1,0 | Ø 240 | 5 x 6,5 | 170 | 159 | 11,7 | 2,7 | 1700 |
| | h | 100-140 | 480 | 1,0 | Ø 210 | 6 x 6,5 | 180 | 182 | 12,7 | 3,4 | 1700 |
| | i | 100-140 | 480 | 1,0 | Ø 240 | 5 x 6,5 | 192 | 159 | 13,5 | 3,2 | 1700 |
| | j | 100-160 | 630 | 1,0 | Ø 210 | 7 x 6,5 | 225 | 182 | 16,9 | 4,3 | 1700 |
| | k | 100-160 | 630 | 1,0 | Ø 240 | 6 x 6,5 | 240 | 159 | 17 | 4,0 | 1700 |

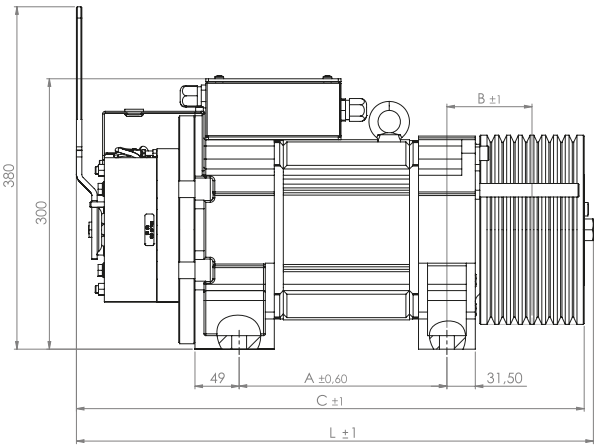
## Caution

- Certificated rope must be used with 210 mm and lesser traction sheaves.
- All calculations have been made due to Drako 250T rope type.
- Feedback device is a Heidenhain ECN1313 EnDat encoder and the brakes are Mayr branded.
- Shaft efficiency is considered as 80% in all calculations.
- Maximum Static loads are given for 1:1 suspension. They need to be multiply by 2 for 2:1 suspension.
- Compensation rope must be used over 24m travel distance.
- Travel distance is considered 35-45m for 2m/s and higher cabin speeds.
- Please contact us for other load capacities.
- Sheave angles for 210 mm and 240 mm are 50°, for 320 mm and 400 mm they are 45°.
- The hardness rate of our sheaves is 50 HRC.
- Brake supply voltage is 207VDC.

| Pitch | mm |
|---|---|
| 210 Sheave | 13 |
| 240 Sheave | 13 |
| 320 Sheave | 16 |
| 400 Sheave | 20 |

EMF Motor reserves the right to amend dimensions, technical data and design specification without prior notification.




| Motor Nr. | A mm | B mm | L mm | Weight kg |
|---|---|---|---|---|
| a | 250,5 | 89 | 594 | 134 |
| b | 250,5 | 89 | 594 | 134 |
| c | 250,5 | 95 | 594 | 126 |
| d | 250,5 | 95 | 594 | 126 |
| e | 230,5 | 74 | 574 | 118 |
| f | 230,5 | 82 | 574 | 120 |
| g | 230,5 | 76 | 574 | 126 |
| h | 230,5 | 82 | 574 | 120 |
| i | 230,5 | 76 | 574 | 126 |
| j | 250,5 | 88 | 594 | 125 |
| k | 250,5 | 82 | 594 | 132 |

# SQML 100 160 mm traction sheave

- Quieter operation and smooth speed
- Higher comfort

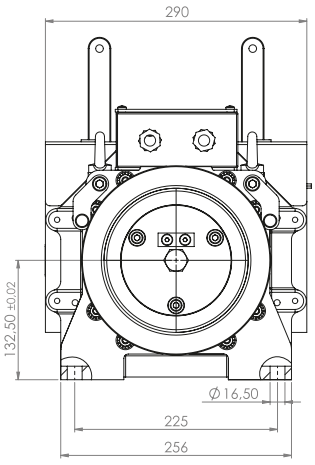
| Suspension | Motor Nr. | Motor Code | Load Capacity kg | Traveling Speed m/s | Traction Sheave mm | Rope Values x mm | Rated Torque Nm | Rated Speed d/d | Rated Current A | Rated Power kW | Static Load kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2:1 | a | 100-140 | 320 | 1 | Ø 160 | 3 x 6,5 | 95 | 239 | 5,9 | 2,3 | 1700 |
| | b | 100-140 | 400 | 1 | Ø 160 | 4 x 6,5 | 115 | 239 | 7,7 | 2,8 | 1700 |
| | c | 100-140 | 480 | 1 | Ø 160 | 4 x 6,5 | 135 | 239 | 10,5 | 3,4 | 1700 |
| | d | 100-140 | 630 | 1 | Ø 160 | 5 x 6,5 | 175 | 239 | 17 | 4,3 | 1700 |
| | e | 100-160 | 800 | 1 | Ø 160 | 6 x 6,5 | 210 | 239 | 18 | 5,3 | 1700 |

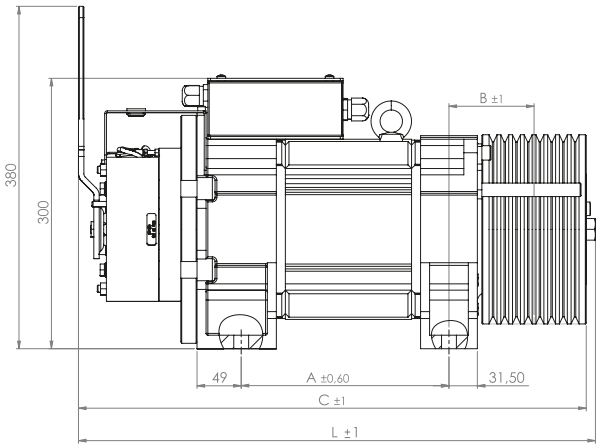
## Caution

- Certificated rope must be used with 160 mm and lesser traction sheaves.
- All calculations have been made due to DRAKO PTX 300 5/6,5 (mue = 0,25/0,5) rope type.
- Feedback device is a Heidenhain ECN1313 EnDat encoder and the brakes are Mayr branded.
- Shaft efficiency is considered as 80% in all calculations.
- Maximum Static loads are given for 1:1 suspension. They need to be multiply by 2 for 2:1 suspension.
- Brake supply voltage is 207VDC.
- Compensation rope must be used over 24m travel distance.
- Please contact us for other load capacities.
- Sheave channel type is U and channel angle is 45°
- Pitch distance on the sheave is 13mm.

EMF Motor reserves the right to amend dimensions, technical data and design specification without prior notification.

| Pitch | mm |
|---|---|
| 160 Sheave | 13 |




| Motor Nr. | A mm | B mm | L mm | Weight kg |
|---|---|---|---|---|
| a | 230,5 | 89 | 574 | 110 |
| b | 230,5 | 89 | 574 | 110 |
| c | 230,5 | 89 | 574 | 110 |
| d | 230,5 | 94 | 574 | 110 |
| e | 250,5 | 100 | 594 | 115 |

# SQML 132

- Up to 1000 kg carrying capacity
- 210 mm, 240 mm and 320 mm traction sheave options
- 2 m/s speed options
- 1:1 and 2:1 suspension options

| Suspension | Motor Nr. | Motor Code | Load Capacity kg | Traveling Speed m/s | Traction Sheave mm | Rope Values x mm | Rated Torque Nm | Rated Speed d/d | Rated Current A | Rated Power kW | Static Load kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1:1 | a | 132-140 | 400 | 1,0 | Ø 240 | 8 x 6,5 | 380 | 80 | 8,7 | 3,2 | 2200 |
| | b | 132-140 | 400 | 1,6 | Ø 240 | 8 x 6,5 | 345 | 127 | 13,5 | 4,6 | 2200 |
| | c | 132-140 | 400 | 1,0 | Ø 210 | 9 x 6,5 | 305 | 91 | 8,1 | 2,9 | 2200 |
| | d | 132-140 | 400 | 1,6 | Ø 210 | 9 x 6,5 | 305 | 146 | 13 | 4,7 | 2200 |
| | e | 132-140 | 480 | 1,0 | Ø 240 | 9 x 6,5 | 380 | 80 | 11,5 | 3,2 | 2200 |
| | f | 132-140 | 480 | 1,6 | Ø 240 | 9 x 6,5 | 410 | 127 | 18 | 5,5 | 2200 |
| 2:1 | g | 132-140 | 630 | 1,6 | Ø 240 | 6 x 6,5 | 265 | 255 | 15,2 | 6,8 | 2200 |
| | h | 132-160 | 630 | 1,6 | Ø 320 | 4 x 8 | 343 | 191 | 18 | 6,9 | 2200 |
| | i | 132-100 | 800 | 1,0 | Ø 210 | 8 x 6,5 | 280 | 182 | 17 | 5,2 | 2200 |
| | j | 132-140 | 800 | 1,0 | Ø 240 | 7 x 6,5 | 325 | 159 | 16,7 | 5,4 | 2200 |
| | k | 132-140 | 800 | 1,6 | Ø 240 | 7 x 6,5 | 322 | 255 | 23,1 | 8,6 | 2200 |
| | l | 132-160 | 800 | 1,0 | Ø 320 | 5 x 8 | 420 | 119 | 17,5 | 5,2 | 2200 |
| | m | 132-160 | 800 | 1,6 | Ø 320 | 5 x 8 | 420 | 191 | 24,3 | 8,4 | 2200 |
| | n | 132-180 | 800 | 2,0 | Ø 320 | 6 x 8 | 420 | 239 | 32 | 10,5 | 2200 |
| | o | 132-160 | 1000 | 1,0 | Ø 240 | 9 x 6,5 | 398 | 159 | 18,2 | 6,6 | 2200 |
| | p | 132-160 | 1000 | 1,6 | Ø 240 | 9 x 6,5 | 398 | 255 | 31,1 | 10,6 | 2200 |

## Caution

- Certificated rope must be used with 210 mm and lesser traction sheaves.
- All calculations have been made due to Drako 250T rope type.
- Feedback device is a Heidenhain ECN1313 EnDat encoder and the brakes are Mayr branded.
- Shaft efficiency is considered as 80% in all calculations.
- Maximum Static loads are given for 1:1 suspension. They need to be multiply by 2 for 2:1 suspension.
- Compensation rope must be used over 24m travel distance.
- Travel distance is considered 35-45m for 2m/s and higher cabin speeds.
- Please contact us for other load capacities.
- Sheave angles for 210 mm and 240 mm are 50°, for 320 mm and 400 mm they are 45°.
- The hardness rate of our sheaves is 50 HRC.
- Brake supply voltage is 207VDC.

| Pitch | mm |
|---|---|
| 210 Sheave | 13 |
| 240 Sheave | 13 |
| 320 Sheave | 16 |
| 400 Sheave | 20 |

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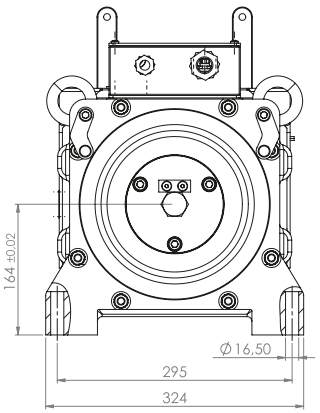
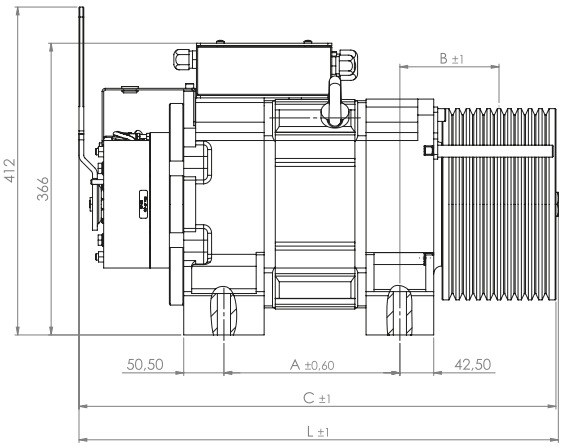



| Motor Nr. | A mm | B mm | L mm | Weight kg |
|---|---|---|---|---|
| a | 261 | 117 | 672 | 201 |
| b | 261 | 117 | 672 | 201 |
| c | 261 | 118 | 672 | 193 |
| d | 261 | 118 | 672 | 193 |
| e | 261 | 119 | 672 | 202 |
| f | 261 | 119 | 672 | 202 |
| g | 261 | 105 | 642 | 198 |
| h | 281 | 86 | 692 | 207 |
| i | 221 | 115 | 602 | 175 |
| j | 261 | 105 | 672 | 198 |
| k | 261 | 105 | 672 | 198 |
| l | 281 | 86 | 692 | 215 |
| m | 281 | 86 | 692 | 215 |
| n | 301 | 102 | 712 | 230 |
| o | 281 | 119 | 692 | 210 |
| p | 281 | 119 | 692 | 210 |

# SQML 160

- Up to 1250 kg carrying capacity
- 240 mm and 320 mm traction sheave options
- 1:1 and 2:1 suspension options

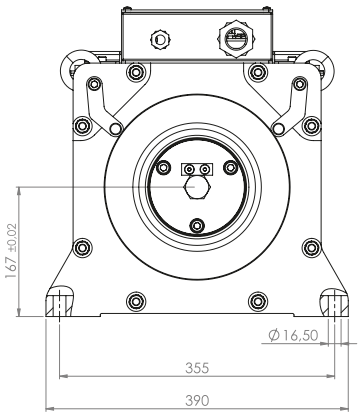
| Suspension | Motor Nr. | Motor Code | Load Capacity kg | Traveling Speed m/s | Traction Sheave mm | Rope Values x mm | Rated Torque Nm | Rated Speed d/d | Rated Current A | Rated Power kW | Static Load kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 1:1 | a | 160-200 | 630 | 1,0 | Ø 240 | 12 x 6,5 | 515 | 80 | 13,5 | 4,3 | 2800 |
| | b | 160-200 | 630 | 1,6 | Ø 240 | 12 x 6,5 | 520 | 127 | 23,3 | 7,1 | 2800 |
| 2:1 | c | 160-200 | 800 | 2,5 | Ø 400 | 4 x 10 | 490 | 239 | 40 | 12,3 | 2800 |
| | d | 160-160 | 1000 | 1,0 | Ø 320 | 6 x 8 | 533 | 119 | 24,5 | 6,6 | 2800 |
| | e | 160-200 | 1000 | 1,6 | Ø 320 | 6 x 8 | 533 | 191 | 35 | 10,7 | 2800 |
| | f | 160-200 | 1250 | 1,0 | Ø 240 | 12 x 6,5 | 500 | 159 | 26 | 8,3 | 2800 |
| | g | 160-200 | 1250 | 1,6 | Ø 240 | 12 x 6,5 | 500 | 255 | 40,4 | 13,4 | 2800 |

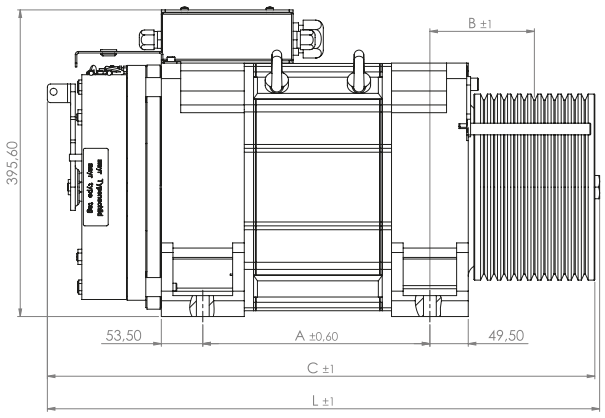
## Caution

- Certificated rope must be used with 210 mm and lesser traction sheaves.
- All calculations have been made due to Drako 250T rope type.
- Feedback device is a Heidenhain ECN1313 EnDat encoder and the brakes are Mayr branded.
- Shaft efficiency is considered as 80% in all calculations.
- Maximum Static loads are given for 1:1 suspension. They need to be multiply by 2 for 2:1 suspension.
- Compensation rope must be used over 24m travel distance.
- Travel distance is considered 35-45m for 2m/s and higher cabin speeds.
- Please contact us for other load capacities.
- Sheave angles for 210 mm and 240 mm are 50°, for 320 mm and 400 mm they are 45°.
- The hardness rate of our sheaves is 50 HRC.
- Brake supply voltage is 207 VDC.

EMF Motor reserves the right to amend dimensions, technical data and design specification without prior notification.

| Pitch | mm |
|---|---|
| 210 Sheave | 13 |
| 240 Sheave | 13 |
| 320 Sheave | 16 |
| 400 Sheave | 20 |




| Motor Nr. | A mm | B mm | L mm | Weight kg |
|---|---|---|---|---|
| a | 333 | 139,5 | 755 | 343 |
| b | 333 | 139,5 | 755 | 343 |
| c | 333 | 124,5 | 752 | 375 |
| d | 293 | 121,5 | 712 | 301 |
| e | 333 | 121,5 | 752 | 344 |
| f | 333 | 139,5 | 755 | 343 |
| g | 333 | 139,5 | 755 | 343 |

# SQML 200

- Up to 3000 kg carrying capacity
- 320 mm and 400 mm traction sheave options
- 2,5 m/s speed options
- 1:1 and 2:1 suspension options

| Suspension | Motor Nr. | Motor Code | Load Capacity kg | Traveling Speed m/s | Traction Sheave mm | Rope Values x mm | Rated Torque Nm | Rated Speed d/d | Rated Current A | Rated Power kW | Static Load kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2:1 | a | 200-240 | 1000 | 2,00 | Ø 320 | 7 x 8 | 533 | 239 | 32 | 13,3 | 5700 |
| | b | 200-240 | 1000 | 2,50 | Ø 400 | 5 x 10 | 610 | 239 | 48 | 15,3 | 5700 |
| | c | 200-200 | 1250 | 1,00 | Ø 320 | 8 x 8 | 671 | 119 | 24 | 8,4 | 5700 |
| | d | 200-200 | 1250 | 1,60 | Ø 320 | 8 x 8 | 671 | 191 | 38,6 | 13,4 | 5700 |
| | e | 200-240 | 1250 | 2,00 | Ø 320 | 9 x 8 | 671 | 239 | 42 | 16,8 | 5700 |
| | f | 200-300 | 1250 | 2,50 | Ø 400 | 6 x 10 | 841 | 239 | 52,5 | 21,1 | 5700 |
| | g | 200-200 | 1600 | 1,00 | Ø 320 | 9 x 8 | 840 | 119 | 32 | 10,6 | 5700 |
| | h | 200-300 | 1600 | 1,60 | Ø 320 | 9 x 8 | 852 | 191 | 42,5 | 17,0 | 5700 |
| | i | 200-300 | 1600 | 2,00 | Ø 320 | 10 x 8 | 852 | 239 | 53 | 21,3 | 5700 |
| | j | 200-300 | 1600 | 2,50 | Ø 400 | 7 x 10 | 1068 | 239 | 75 | 26,7 | 5700 |
| | k | 200-300 | 2000 | 1,00 | Ø 320 | 11 x 8 | 1052 | 119 | 37,6 | 13,1 | 5700 |
| | l | 200-300 | 2000 | 1,60 | Ø 320 | 11 x 8 | 1052 | 191 | 60 | 21,0 | 5700 |
| | m | 200-300 | 2000 | 2,00 | Ø 320 | 12 x 8 | 1052 | 239 | 75 | 26,5 | 5700 |
| | n | 200-300 | 2000 | 2,50 | Ø 400 | 8 x 10 | 1325 | 239 | 110 | 33,2 | 5700 |
| | o | 200-300 | 2500 | 1,00 | Ø 400 | 9 x 10 | 1638 | 95 | 62,9 | 16,3 | 5700 |
| | p | 200-300 | 2500 | 1,60 | Ø 400 | 9 x 10 | 1638 | 153 | 102 | 26,2 | 5700 |
| | r | 200-300 | 2500 | 2,00 | Ø 400 | 9 x 10 | 1657 | 191 | 138 | 33,1 | 5700 |
| | s | 200-300 | 3000 | 0,50 | Ø 400 | 12 x 10 | 1988 | 48 | 47,3 | 10,0 | 5700 |
| | t | 200-300 | 3000 | 1,00 | Ø 400 | 12 x 10 | 1988 | 96 | 90,5 | 19,8 | 5700 |

## Caution

- Certificated rope must be used with 210 mm and lesser traction sheaves.
- All calculations have been made due to Drako 250T rope type.
- Feedback device is a Heidenhain ECN1313 EnDat encoder and the brakes are Mayr branded.
- Shaft efficiency is considered as 80% in all calculations.
- Maximum Static loads are given for 1:1 suspension. They need to be multiply by 2 for 2:1 suspension.
- Compensation rope must be used over 24m travel distance.
- Travel distance is considered 35-45m for 2m/s and higher cabin speeds.
- Please contact us for other load capacities.
- Sheave angles for 320 mm and 400 mm they are 45°.
- The hardness rate of our sheaves is 50 HRC.
- Brake supply voltage is 207VDC.

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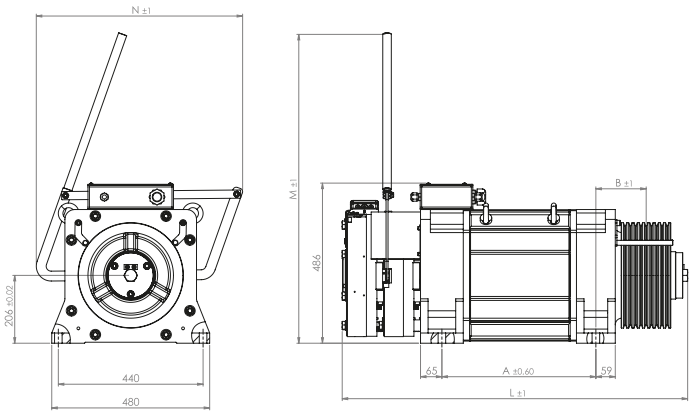
technical data and design specification without prior notification.

| Pitch | mm |
|---|---|
| 210 Sheave | 13 |
| 240 Sheave | 13 |
| 320 Sheave | 16 |
| 400 Sheave | 20 |




| Motor Nr. | A mm | B mm | L mm | M mm | N mm | Weight kg |
|---|---|---|---|---|---|---|
| a | 408 | 146 | 913 | 562 | 562 | 562 |
| b | 408 | 139,5 | 913 | 581 | 581 | 581 |
| c | 368 | 154 | 873 | 521 | 521 | 521 |
| d | 368 | 154 | 873 | 521 | 521 | 521 |
| e | 408 | 162 | 913 | 520 | 520 | 520 |
| f | 468 | 154,5 | 973 | 648 | 648 | 648 |
| g | 368 | 162 | 873 | 520 | 520 | 520 |
| h | 468 | 162 | 973 | 618 | 618 | 618 |
| i | 468 | 170 | 983 | 632 | 632 | 632 |
| j | 468 | 154,5 | 1047 | 713 | 713 | 713 |
| k | 468 | 178 | 1060 | 697 | 697 | 697 |
| l | 468 | 178 | 1060 | 697 | 697 | 697 |
| m | 468 | 186 | 1060 | 697 | 697 | 697 |
| n | 468 | 174,5 | 1038 | 730 | 730 | 730 |
| o | 468 | 174,5 | 1038 | 729 | 729 | 729 |
| p | 468 | 174,5 | 1038 | 729 | 729 | 729 |
| r | 468 | 174,5 | 1038 | 729 | 729 | 729 |
| s | 468 | 204,5 | 1098 | 771 | 771 | 771 |
| t | 468 | 204,5 | 1098 | 771 | 771 | 771 |

# Green Motion 220 V

- From 320 kg up to 800 kg carrying capacity
- 210 mm, 240 mm traction sheave options
- 1:1 and 2:1 suspension options
- Working feature with 3 x 220V (*)

| Suspension | Motor Nr. | Motor Code | Load Capacity kg | Traveling Speed m/s | Traction Sheave mm | Rope Values x mm | Rated Torque Nm | Rated Speed d/d | Rated Current A | Rated Power kW | Static Load kg |
|---|---|---|---|---|---|---|---|---|---|---|---|
| 2:1 | a | 100-140 | 400 | 1 | Ø 240 | 5 x 6,5 | 170 | 159 | 16,9 | 2,8 | 1700 |
| | b | 100-140 | 480 | 1 | Ø 240 | 5 x 6,5 | 192 | 159 | 21,8 | 3,2 | 1700 |
| | c | 132-100 | 630 | 1 | Ø 240 | 6 x 6,5 | 250 | 159 | 22 | 4,2 | 2200 |
| | d | 132-140 | 630 | 1,6 | Ø 240 | 6 x 6,5 | 255 | 255 | 29,7 | 6,8 | 2200 |
| | e | 132-180 | 800 | 1 | Ø 240 | 7 x 6,5 | 325 | 159 | 23 | 5,4 | 2200 |
| | f | 132-180 | 800 | 1,6 | Ø 240 | 7 x 6,5 | 325 | 255 | 37 | 8,7 | 2200 |
| 1:1 | g | 100-160 | 320 | 1,0 | Ø 240 | 7 x 6,5 | 280 | 80 | 18,0 | 2,3 | 1700 |
| | h | 100-160 | 320 | 1,0 | Ø 210 | 8 x 6,5 | 245 | 91 | 16,0 | 2,3 | 1700 |
| | i | 132-100 | 320 | 1,6 | Ø 240 | 7 x 6,5 | 280 | 127 | 23,0 | 3,7 | 2200 |
| | j | 132-100 | 320 | 1,6 | Ø 210 | 8 x 6,5 | 250 | 146 | 20,5 | 3,8 | 2200 |
| | k | 132-140 | 400 | 1,0 | Ø 240 | 8 x 6,5 | 345 | 80 | 15,0 | 3,2 | 2200 |
| | l | 132-140 | 400 | 1,0 | Ø 210 | 8 x 6,5 | 305 | 91 | 14,0 | 2,9 | 2200 |
| | m | 132-140 | 400 | 1,6 | Ø 240 | 8 x 6,5 | 345 | 127 | 24,0 | 4,6 | 2200 |
| | n | 132-140 | 400 | 1,6 | Ø 210 | 9 x 6,5 | 305 | 146 | 21,5 | 4,7 | 2200 |
| | o | 132-160 | 480 | 1,0 | Ø 240 | 9 x 6,5 | 410 | 80 | 17,0 | 3,2 | 2200 |
| | p | 132-160 | 480 | 1,6 | Ø 240 | 9 x 6,5 | 410 | 127 | 18,0 | 5,5 | 2200 |

## Caution

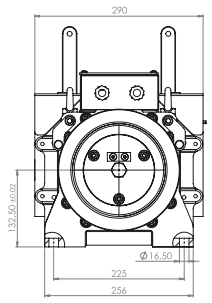
- Certificated rope must be used with 210 mm and lesser traction sheaves.
- All calculations have been made due to Drako 250T rope type.
- Sheave angles for 210 mm and 240 mm are 50°, for 320 mm and 400 mm they are 45°.
- Feedback device is a Heidenhain ECN1313 EnDat encoder and the brakes are Mayr branded.
- Shaft efficiency is considered as 80% in all calculations.
- Maximum Static loads are given for 1:1 suspension. They need to be multiply by 2 for 2:1 suspension. (*) The driver must be compatible with single phase operation.
- Compensation rope must be used over 24m travel distance.
- Travel distance is considered 35-45m for 2m/s and higher cabin speeds.
- Please contact us for other load capacities.
- The hardness rate of our sheaves is 50 HRC.
- Brake supply voltage is 207VDC.

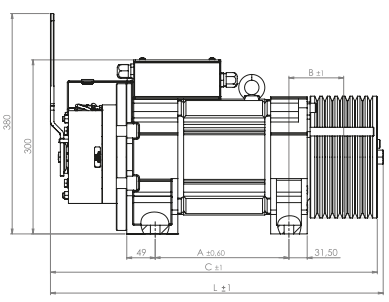
| Pitch | mm |
|---|---|
| 210 Sheave | 13 |
| 240 Sheave | 13 |

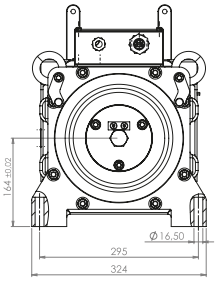
EMF Motor reserves the right to amend dimensions,
technical data and design specification without prior notification.

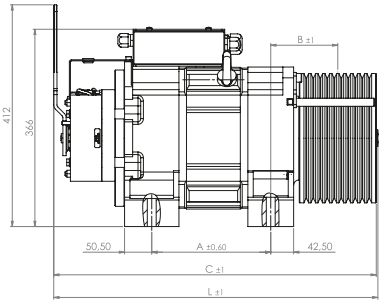
| Motor Nr. | A mm | B mm | L mm | Weight kg |
|---|---|---|---|---|
| a | 230,5 | 76 | 574 | 126 |
| b | 230,5 | 76 | 574 | 126 |
| g | 250,5 | 89 | 594 | 134 |
| h | 250,5 | 95 | 594 | 126 |

| Motor Nr. | A mm | B mm | L mm | Weight kg |
|---|---|---|---|---|
| c | 261 | 105 | 605 | 181 |
| d | 261 | 105 | 642 | 198 |
| e | 261 | 105 | 712 | 225 |
| f | 261 | 105 | 712 | 225 |
| i | 261 | 105 | 632 | 180 |
| j | 221 | 115 | 602 | 175 |
| k | 261 | 117 | 672 | 201 |
| l | 221 | 115 | 642 | 193 |
| m | 261 | 117 | 672 | 201 |
| n | 261 | 118 | 672 | 193 |
| o | 281 | 119 | 692 | 210 |
| p | 281 | 119 | 692 | 210 |



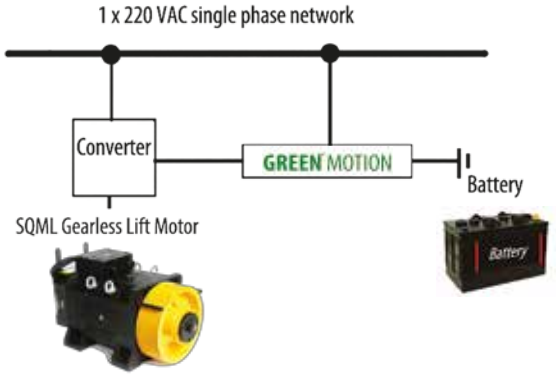



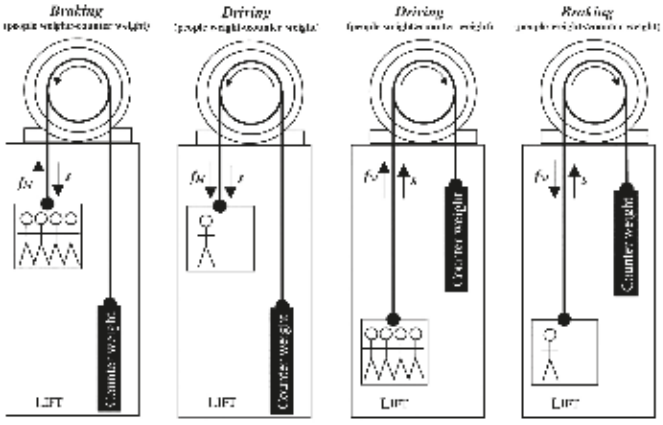
# GREEN MOTION® Smart Lift Energy Management System

**The system offers to elevator manufacturers and consumers featured reliability, safety, sustainability and 75 % energy saving.**



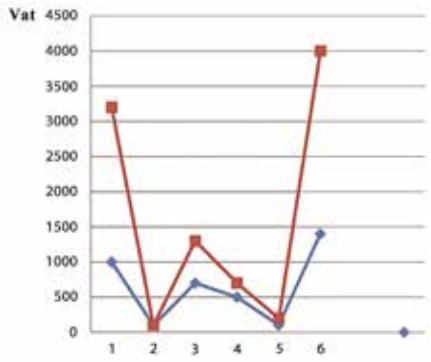

GREEN MOTION® Green Motion Smart Lift Energy Management comprises 1 x SQML lift motor, 1 x driver, 1 x Green Motion card, 1 x DC / AC Green Motion converter and 22 x 9 Amp 12 V batteries.

- GREEN MOTION® Green Motion Smart Lift Energy Management works with a SQML lift motor, one driver, one Green Motion card, one DC / AC Green Motion converter and 22 pieces of 9 Ampere 12 V.
- You do not need a generator and recovery UPS for the elevator.
- The system operates as an uninterruptible power supply. The most important feature is that when the mains electricity is cut off, there are 200 to 300 stop-and-go movements according to the load condition of the elevator without any stopping and loss of speed.
- Even when there is external power connected, 65% of the power required for normal lift operation comes from the external power and 35 % comes from the battery system.
- Compatible with renewable energy systems. Solar panels can be added.




This picture was taken from ELA E4 Energy Elevator and Escalator March 2010.

Comparision between Energy Consumption with "Green Motion" and with the driver



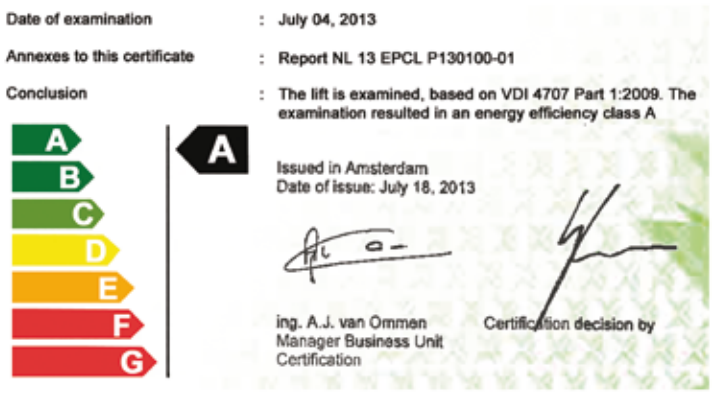

**Energy consumption at different loads**

**with Green Motion**

**only with the network**

| with Green Motion | | | only with the network |
|---|---|---|---|
| 1 | Downward Movement | (No-Load) | 1 |
| 2 | Unloaded Up Movement | (No-Load) | 2 |
| 3 | Downward Movement | (Half-Load) | 3 |
| 4 | Upward Movement | (Half-Load) | 4 |
| 5 | Downward Movement | (Full-Load) | 5 |
| 6 | Upward Movement | (Full-Load) | 6 |

The "Green Motion" Smart Card reduces the electricity costs by charging the battery system overnight.




It is possible to produce a lift in the "A" energy consumption class using our SQML gearless lift motor. An EMF Motor distributor has been able to certify an "A" level energy consumption class lift working with the Lift Institute using our SQML motor working with the LiProKa Motor Principle.
We encourage all lift manufacturers in Turkey to produce elevator in the "A" Energy Consumption class and give full support.

# Our References

Bayraktar Warship

Presidential Mosque

Presidential Tarabya Mansion

Boğaziçi University ve Yıldız Teknik University

Defense Ministry Warship

Ataşehir Mimar Sinan Mosque

Kordsa Sabancı Factory

Sancaktepe State Hospital

Gebze KBS Mold


Gaziosmanpaşa State Hospital

Kiptaş Hadımköy Project

Silvan State Hospital

Dore Life

Tuzla Estate Housing

Ataşehir Real Estate Housing Administration Building

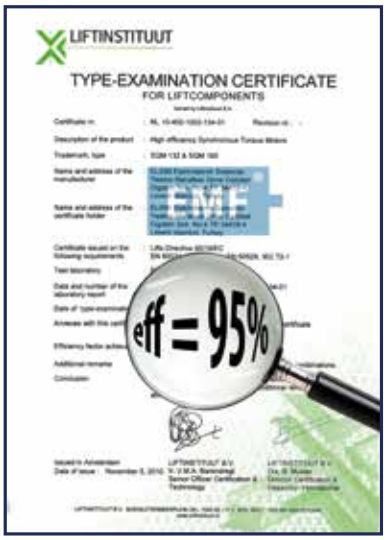

Tekirdağ State Hospital

# Technical Support

At EMF Motor we appreciate that technical support is very important.
With our expert service team, we can determine the cause of your problem and resolve any issues without delay, regardless of your location.
Technical Support tel: +90 216 595 19 00

# Our Certificates





# EMF Motor®

1st Machine and Accessories Manufacturing Technologies R&D Project Market Industrialist Category 2012
**Grand Prize**

Istanbul Chamber of Industry Energy Efficient Product
**Jury Honourable Mention 2011**

Global Success Club Turkish - German
**Innovation Award 2017**

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Industry 4.0

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