USER MANUAL



Electronic 250
Turbo 250
Turbo 400
Turbo 500

AC ARC WELDING MACHINES

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Firma / Company

Demiriz Elektrik İnşaat Sanayi ve Ticaret Limited Şirketi Ortaköy Sanayi Bölgesi Tiftik Sokak No:16 Silivri/İstanbul

Fabrika / Factory

Demiriz Elektrik İnşaat Sanayi ve Ticaret Limited Şirketi Ortaköy Sanayi Bölgesi Tiftik Sokak No:16 Silivri/İstanbul

Ürün / Product

Örtülü Elektrod Kaynak Makinası

MMA Welding Machine

Marka - Model / Brand - Model

DEMİRİZ - Electronic 250

Yukarıda tanımlanan beyanın nesnesi, ilgili uyumlaştırılmış AB mevzuatı ile uyumludur. The object of the declaration described above, is in conformity with the relevant union harmonisation legislation.

Direktifler / Directives

2014/35/AB LVD Yönetmeliği LVD Directive 2014/35/EU

Uyumlaştırılmış Standartlar / Harmonised Standards

TS EN 60974-1:2012

İstanbul, **01.06.2017**

Beyan No : CED.005 Declaration No : CED.005 Burhan DEMİRİZ Elektronik Mühendisi Electronics Engineer



Firma / Company

Demiriz Elektrik İnşaat Sanayi ve Ticaret Limited Şirketi Ortaköy Sanayi Bölgesi Tiftik Sokak No:16 Silivri/İstanbul

Fabrika / Factory

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Ürün / Product

Örtülü Elektrod Kaynak Makinası

MMA Welding Machine

Marka - Model / Brand - Model
DEMIRIZ - Turbo 250

Yukarıda tanımlanan beyanın nesnesi, ilgili uyumlaştırılmış AB mevzuatı ile uyumludur. The object of the declaration described above, is in conformity with the relevant union harmonisation legislation.

Direktifler / Directives 2014/35/AB LVD Yönetmeliği LVD Directive 2014/35/EU

Uyumlaştırılmış Standartlar / Harmonised Standards
TS EN 60974-1:2012

Istanbul, **01.06.2017**Beyan No : CED.006
Declaration No : CED.006

Burhan DEMİRİZ Elektronik Mühendisi Electronics Engineer



Firma / Company

Demiriz Elektrik İnşaat Sanayi ve Ticaret Limited Şirketi Ortaköy Sanayi Bölgesi Tiftik Sokak No:16 Silivri/İstanbul

Fabrika / Factory

Demiriz Elektrik İnşaat Sanayi ve Ticaret Limited Şirketi Ortaköy Sanayi Bölgesi Tiftik Sokak No:16 Silivri/İstanbul

Ürün / Product

Örtülü Elektrod Kaynak Makinası

MMA Welding Machine

Marka - Model / Brand - Model
DEMiRiZ - Turbo 400

Yukarıda tanımlanan beyanın nesnesi, ilgili uyumlaştırılmış AB mevzuatı ile uyumludur. The object of the declaration described above, is in conformity with the relevant union harmonisation legislation.

Direktifler / Directives 2014/35/AB LVD Yönetmeliği LVD Directive 2014/35/EU

Uyumlaştırılmış Standartlar / Harmonised Standards
TS EN 60974-1:2012

Istanbul, **01.06.2017**Beyan No : CED.007
Declaration No : CED.007

Burhan DEMİRİZ Elektronik Mühendisi Electronics Engineer



Firma / Company

Demiriz Elektrik İnşaat Sanayi ve Ticaret Limited Şirketi Ortaköy Sanayi Bölgesi Tiftik Sokak No:16 Silivri/İstanbul

Fabrika / Factory

Demiriz Elektrik İnşaat Sanayi ve Ticaret Limited Şirketi Ortaköy Sanayi Bölgesi Tiftik Sokak No:16 Silivri/İstanbul

Ürün / Product

Örtülü Elektrod Kaynak Makinası

MMA Welding Machine

Marka - Model / Brand - Model
DEMIRIZ - Turbo 500

Yukarıda tanımlanan beyanın nesnesi, ilgili uyumlaştırılmış AB mevzuatı ile uyumludur. The object of the declaration described above, is in conformity with the relevant union harmonisation legislation.

Direktifler / Directives

2014/35/AB LVD Yönetmeliği LVD Directive 2014/35/EU

Uyumlaştırılmış Standartlar / Harmonised Standards
TS EN 60974-1:2012

Istanbul, **01.06.2017**Beyan No : CED.008

Declaration No : CED.008

Burhan DEMİRİZ Elektronik Mühendisi Electronics Engineer

SAFETY RULES

- Apply all safety regulations in this manual.
- The manufacturer cannot be held responsible for any injury or damage to the machine as a result of non-compliance with the warnings and modifications to the machine.
- Keep everyone except operators, especially children, away from the work site when operating the machine.
- Do not operate your machine in an open environment, especially in rainy weather. Disconnect the machine from the mains. Failure to do so may result in electric shock.
- Wear dry and insulated gloves and work clothes. Do not use wet or damaged gloves and work clothes. Synthetic materials should be avoided due to their flammable nature.
- Never touch electrical parts.
- Do not wear watch, ring, metal accessories etc. when operating the machine.
- Protect yourself from possible shocks by isolating yourself from the work surface and the floor.
 Use electrically insulating, dry and undamaged insulation material on the floor that is large enough to cut off contact with the work surface.
- Check all cables frequently for possible damage. If a damaged or insulated cable is detected, repair it immediately or replace it with the same diameter and type cable.
- Always connect the mains cord of the machine to a grounded outlet. Make sure that the electrical outlet you are connecting to be properly grounded.
- If the mains cable of the machine has a three-phase plug, firmly connect the grounding line on your machine to the earth screw on the machine.
- Make sure that the power line to which the mains cable is connected is protected by a protective automatic fuse.
- Keep all cover, panel etc. of the machine closed and locked.
- Keep the machine switched off when not in use.
- Wear metal-toed work shoes for the possibility of heavy objects falling.
- Always use the handles when moving the machine. Never attempt to move by pulling the cables.
- Place your machine on a floor with a maximum of 10 degrees of slope so that it does not fall or fall over.
- Always ensure good ventilation in the environment where the machine is operated.
- Always keep fire extinguishers and materials in order to protect against fire. Combustible materials, gasoline, oil, thinner etc. keep materials away from the machine.
- Long-term inhalation of fumes and gas when welding is very dangerous. Create a natural or forced ventilation system in the work area. If necessary, use a suitable smoke extraction system at the welding site.
- If you are working in narrow and enclosed areas, or if you are welding lead, beryllium, cadmium, zinc, zinc coated or painted materials, use masks that provide fresh air in addition to the above precautions.
- Arc welding light will damage your eyes and skin. Processes such as welding, grinding or brushing
 can cause sparks and splash of metal particles. Wear a suitable protective mask (4 to 13
 according to EN 379) and a suitable protective mask to protect your eyes and face. Hot parts can
 cause severe burns. Never touch hot parts with bare hands. When you need to keep hot parts,
 use suitable tools, high thermal insulation and high-flammability gloves.
- Ensure that the working area of the machine complies with electromagnetic compatibility (EMC). Electromagnetic interference during operation may cause unwanted effects on your electronic devices and the network. The effects of these interventions that may occur during use are the responsibility of the user.
- If any electromagnetic interference occurs, to ensure compliance; extra measures such as the use of short mains cable, the use of shielded cables, move the machine to another location, remove

- the cables from the affected device and / or zone, or use filter or protection at the working area for EMC.
- Operate the machine as far away from your sensitive electronic equipment as possible to prevent possible EMC damage.
- Electric current passing through any conductor generates regional electric and magnetic fields (EMF). EMF may disrupt the operation of medical implants (such as pacemakers), such as pacemakers. Keep people with medical implants away from the work environment of the machine.

ELECTROMAGNETIC COMPATIBILITY (EMC)

- This machine is designed to comply with all relevant regulations and norms. However, it may still
 produce effects that may affect other systems, such as communication devices (telephone, radio,
 television, etc.) and security devices. These effects can cause safety problems on exposed
 systems. Carefully read and understand this section to reduce or eliminate the amount of effects
 that can be generated by this machine.
- This machine is designed for operation in the industrial zone and according to CISPR11, the 2nd group is a class A device. The use of the grid in residential areas can cause difficulties in terms of noise transmitted or emitted in ensuring electromagnetic compatibility. The user must install and operate this machine as described in the manual. If any electromagnetic interference is detected due to the operation of this machine, the user should take corrective measures to reduce or eliminate these effects.
- Before installing the machine, it should be checked whether there are any devices that may malfunction due to electromagnetic effects in the working area. In this context:
 - Input and output cables, control cables, signal cables, telephone cables in the work area of the machine,
 - radio and / or television transceivers, telecommunication devices, computers or computer control vehicles / machines,
 - Safety and control equipment for industrial operations, calibration and measurement devices,
 - medical devices such as heart rhythm devices and hearing aids,
 - Check the electromagnetic immunity of equipment's operating near the working area.
- The user must ensure that all equipment in the work area is compatible. Otherwise, additional protection measures may be required. These measures will depend on the size of the work area, the shape of the building and other activities in the work area.
- In order to reduce the electromagnetic emissions that may arise from the machine, the items outlined below should be taken into consideration.
 - Connect the machine to the input network according to the operating instructions. If effects occur, it may be necessary to take additional measures, such as filtering the input source.
 - The output cables should be held short and possible side by side. If possible, the workpiece must be grounded to reduce electromagnetic emissions. The user should ensure that grounding the workpiece will not cause problems for personnel and equipment or cause unhealthy working conditions.
 - The shielding of cables in the work area may be a method to reduce electromagnetic emissions. This may be necessary in specific application areas.

CAUTIONS BEFORE TRANSPORTATION

- AC welding machines; the main machine and the cables connected to the main machine are packaged with air bubble packing material.
- Carry the Electronic 250 and Turbo 250 models with the handle.

- Turbo 400 and Turbo 500 models are wheeled. Be very careful about tipping during transport. Move the machine upwards.
- Do not place anything on the machine during transport. Do not stack even if the machine is to be used in a constant place.
- Do not displace the machine by pulling it from its cables or apparatus.
- Do not attempt to move the machine carelessly. Protect the machine from impact.
- Outside the machine; avoid moving and using with wind, rain, snow. Protect the machine from getting wet.
- If there are elements that could damage the machine during transportation, keep it in its packaging.

CAUTIONS DURING DELIVERY

- First remove all packing material on the machine.
- Make sure that all the items you have ordered have arrived. If any material is missing or damaged, contact your place of purchase immediately.
- In case of damaged or incomplete delivery; Keep a record, take a picture of the damage and report to the carrier with a copy of the transport note.
- The standard package for the electronic 250 electrode welding machine includes:
 - Mains cable and its connected plug
 - Electrode holder cable connected to main machine and electrode holder
 - Work cable attached to the main machine
 - User guide
 - Warranty certificate
- The standard package for the turbo 250 electrode welding machine includes:
 - Mains cable and its connected plug
 - Electrode holder cable connected to main machine and electrode holder
 - Work cable attached to the main machine
 - User guide
 - Warranty certificate
- The standard package for the turbo 400 covered electrode welding machine includes:
 - Mains cable and its connected plug
 - Electrode holder cable connected to main machine and electrode holder
 - Work cable attached to the main machine
 - User guide
 - Warranty certificate
- The standard package for the Turbo 500 covered electrode welding machine includes:
 - Mains cable and its connected plug
 - Electrode holder cable connected to main machine and electrode holder
 - Work cable attached to the main machine
 - User guide
 - Warranty certificate

1. TECHNICAL INFORMATIONS

1.1. STANDARD FEATURES

- Electronic 250, Turbo 250, Turbo 400 and Turbo 500; They are welding machines designed for welding work to burn rod welding electrodes with rutile character. It cannot be used for any other purpose.
- Electronic 250 and Turbo 250 models, 1 phase 220 V (AC) 50 Hz. manufactured according to the grid.
- Turbo 400 and Turbo 500 models, 2 phase 380 V (AC) 50 Hz. manufactured according to the network.
- These machines are not suitable for use with long extension cables or long output cables. Under these conditions low performance will occur.
 - Electronic 250 is fan-cooled and thermally protected against overheating.
- Turbo 250, Turbo 400 and Turbo 500 models are fan cooled.
- Welding can be done by connecting only one electrode to the electrode pin of the machine at the same time.
- The lifetime of these products has been determined by the manufacturer and is 10 years.

1.2. MACHINE'S LABEL

Electronic 250 product label

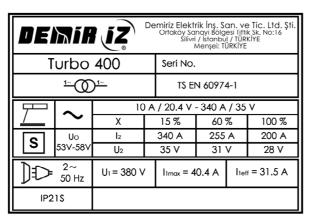
Turbo 250 product label:

DENTIFICA Demiriz Elektrik İnş. San, ve Tic, Ltd. Şti. Ortaköy Sanqvi Bölgesi İffik Sk. No:16 Silivi / İstanbul / TüRKİYE Menşel: TÜRKİYE								
Electron	ic 250		Seri No.					
<u>1~</u> (X)	<u>1~</u>				T\$ EN 60974-1			
尸一	10 A / 20.4 V - 160 A / 24.4 V					4 V		
	Х		20 %	60 9	%	100 %		
S 187/447	l 2		160 A	100	Α	80 A		
18V-44V	U ₂		24.4 V	22.4	V	21.8 V		
]	U1 = 220 V		I _{1max} = 22.3 A I _{1eff} = 9.1 A					
IP21\$								

DENTIFUS Demiriz Elektrik İnş. San. ve Tic, Ltd. Şti. Ortakoy Sanayı Bölgesi İtfik Sk. No:16 Silivi / İstanbul / TÜRKİYE Menşei: TÜRKİYE								
T	urbo	250		Seri No.				
	1			TS EN 60974-1				
7		10 A / 20.4 V - 160 A / 24.4 V					4 V	
		Χ		20 %	60 9	%	100 %	
s	Uo	l ₂		160 A	100 A		80 A	
2	39V-54V	U ₂		24.4 V	22.4	٧	21.8 V	
€	1 ~ 50 Hz	U1 = 220 V		I _{1max} = 33.6 A I _{1eff} = 15.8 A				
IP2	1\$							

Turbo 400 product label:

Turbo 500 product label:



DENTIFUS Demiriz Elektrik İnş. San, ve Tic, Ltd. Şti. Orlakoy Sangyı Bölgesi Littik Sk. No:16 Silivi / İstanbul / TÜRKİYE Menşei: TÜRKİYE								
Т	urbo	500		Seri No.				
	<u>1</u>			T\$ EN 60974-1				
		10 A / 20.4 V - 420 A / 36.5 V					5 V	
	\	Χ		15 %	60	%	100 %	
s	Uo	l ₂		420 A	305	Α	235 A	
<u> </u>	54V-59V	U ₂		36.5 V	32	٧	29 V	
€	2~ 50 Hz	U1 = 380 V		_{1max} = .	43 A	lιε	_{eff} = 34 A	
IP2	1\$							

1.3. TECHNICAL PROPERTIES

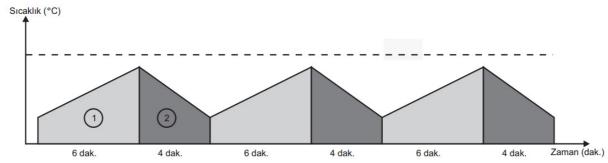
TECHNICAL SPECIFICATION		Electronic 250	Turbo 250	Turbo 400	Turbo 500
Mains Voltage	U_1	220 V (AC)	220 V (AC)	380 V (AC)	380 V (AC)
Operating Frequency	Hz	50	50	50	50
Open Circuit Voltage	U _o	18 V – 44 V	39 V – 54 V	53 V – 58 V	54 V – 59 V
Maximum Output Current	I _{omax}	160 A	160 A	340 A	420 A
Recommended Fuse	C Type	40 A	40 A	63 A	63 A
Power Factor	cosφ	0.7	0.7	0.7	0.7
Cooling		Fan	Fan	Fan	Fan
Voltage Range		1	5	-	ı
Electrode Type		Rutile	Rutile	Rutile	Rutile
Electrode Diameter		1.6-2.5-3.25	2.5-3.25	2.5-3.25-4.0	3.25-4.0-5.0
Protection Class		IP 21S	IP 21S	IP 21S	IP 21S
Insulation Class		Н	Н	Н	Н
Dimensions (w/d/h)	cm	17 x 32 x 27	25 x 36 x 29	52 x 61 x 71	52 x 61 x 71
Weight		15 kg	22 kg	96 kg	105 kg

2. INSTALLATION

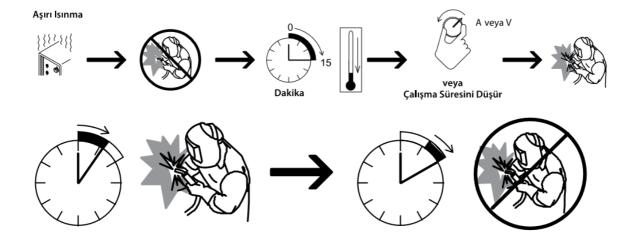
2.1. INSTALLATION AND WORKING TIPS

- Place the machine on a hard, flat surface where it will not fall or fall over. The maximum permissible slope for transport and installation is 10 °.
- For better performance, place the machine at least 30 cm away from objects around it. Pay attention to the overheating, dust and moisture around the machine. Do not operate the machine in direct sunlight. If the ambient temperature exceeds 40 ° C, operate the machine at lower capacities.
- Avoid running the machine with windy and rainy outdoor conditions. If it is necessary to operate the machine in such cases, protect the working environment and the machine with a cover.
- Ensure that the operator can easily access the control and connections of the machine.
- Do not use an input fuse with a value greater than that specified on the product label.

2.2. DUTY CYCLE AND OVER-USAGE



• The operating cycle rate as defined in EN 60974-1 includes a time period of 10 minutes. For example, if the machine is to be operated at 250 A in 60% of 250 A, the machine can weld without stopping in the first 6 minutes of the 10 minute time period (zone 1). However, for the next 4 minutes, the machine must be kept idle for cooling (zone 2).



In the Electronic 250, overheating is carried out by welding 3-4 3.25 mm rutile electrodes continuously. In this case, the overheat indicator on the front panel of the machine will be lit. After 5-6 minutes the machine will cool down and the indicator will go off. Then it will return to working condition.

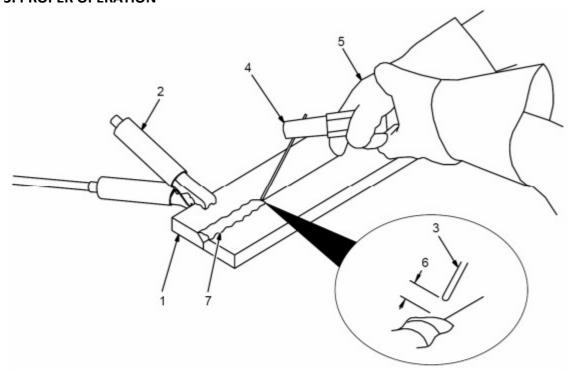
Other models do not have a similar thermal protection system. When the machine is used within the operating cycle specified above and indicated on the sign plate, cooling with the fan will prevent the machine from overheat.

2.3. MAINS POWER CONNECTION



- For your safety, never use the machine without a plug on the end of the mains cable.
- For the Electronic 250 and Turbo 250 models, check that the mains voltage is 220 V before connecting the machine to the mains. If the input cable is connected to 2 phases, the machine will be subjected to 380 V voltage. This type of user error causes the warranty of the machine to be avoided.
- Make sure that the mains supply to the machine is grounded.
- At the end of the factory, there is a CEE 7/4 plug with 1 Phase + 1 Neutral + Earth Line at the end of the machine's power cord.
- If the plug of the machine is damaged and becomes unusable, it may need to be replaced. Disconnect the machine from the mains before replacing the plug. Replace the plug with a new plug of the same type (CEE 7/4). When doing this change, do not leave the yellow earth ground blank and connect the ground line to the new plug ground point.
- Turbo 400 and Turbo 500 models are produced with three phase plug. Since these models operate with 2 phase 380 V mains voltage, only 2 phase connections are connected to the plug. Do not modify the plug.
- You will see the ground screw on the rear panel of the Turbo 400 and Turbo 500 models. Ground the ground by using a diameter and length of cable that conforms to the grounding regulations.

3. PROPER OPERATION



Çalışılacak olan parça

Çalışmaya başlamadan önce parçanın yüzeyinin temiz olduğundan emin olun.

Toprak Pensesi

Mümkün olduğunca kaynak noktasına yakın bir yere bağlayınız.

Elektrod

Küçük çaplı elektrodlar büyük çaplı olanlara göre daha az akıma ihtiyaç duyarlar. Kaynak akımını ayarlarken elektrod üreticisinin akım önerilerini dikkate alınız.

4. Elektrod Pensesi

5. Elektrod Pensesinin pozisyonu

Ark mesafesi

Bu mesafe elektrodla parça arasındaki mesafedir. Doğru akım ayarındaki kısa bir ark bize keskin ve çıtırtılı bir ses verir.

Kaynak akımı elektrodun kaynak metaline dokunmasıyla başlar.

Cüruf

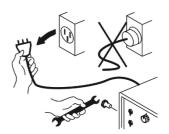
Kırma çekici ve tel fırça yardımıyla kaynak yüzeyindeki cürufu temizleyin. Yeni bir kaynağa başlamadan önce yapmış olduğunuz kaynak dikişini kontrol edin.

4. MAINTENANCE AND FAULT INFORMATIONS

Always apply safety rules during maintenance and repair. The machine must be disconnected from the mains before any maintenance or repair work.

4.1. PERIODIC MAINTENANCE

- Periodic maintenance ensures the machine is safe, convenient and long-lasting.
- Clean all labels on the machine once every 3 months.
- Review all ports and cables every 3 months. Repair or replace any broken, worn out or completely lost cables.
- Check every 3 months if all the moving mechanical components are fulfilled. Clean these parts and make sure they are tight.
- Open the top cover of the machine once every 6 months and clean it with dry air. Clean the windings of the transformer inside the machine with a soft, dry cloth if necessary. When cleaning



- windings, never sanders and so on. Do not use, this situation causes permanent damage such as short circuit conditions.
- The above times are the maximum periods that should be applied if there are no problems with your machine. Depending on the density and pollution of your work environment, you can repeat the above-mentioned operations more frequently.
- Never connect the machine to the mains when the cover is open and do not use it.

4.2. NONPERIODIC MAINTENANCE

• The welding machine's electrode holder and earth connection must be kept clean at all times. If these parts are dirty, rusty or oily, it is difficult for the electrode to stick to the workpiece. If this part is damaged due to intensive use, replace it with a new one.

4.3. BASIC FAULTS AND FIXES

Problem	Possible Cause	Action	
Cannot set output current	Potentiometer Malfunction / (Electronic 250) Malfunction Switch / (Turbo250) Moving Core Fault / (Turbo400)	Disconnect the machine from the network, then call for service.	
Output current is not good even when lamp is on	Low mains voltage	Check if your network is rated at the input voltage on the rating plate.	
	Output cables are too long or worn	Reduce the cables to a reasonable level and replace with a new one if worn.	
Arc starting problem, electrode sticks to material	Dirty, oiled or painted workpiece	Clean the workpiece and allow the chassis to be transported.	
	The tip of the welding gun is dirty	Clean the welding pin and ensure good conduction to the electrode.	

5. MANUFACTURER AND AUTHORIZED SERVICES

MANUFACTURER : Demiriz Elektrik İnşaat San. ve Tic. Ltd. Şti.

Address : Ortaköy Sanayi Bölgesi Tiftik Sk. No:16 Silivri/İstanbul

Tel : 0212 734 39 24 – 25 Fax : 0212 734 39 28

web : www.demirizelektrik.com.tr
e-mail : info@demirizelektrik.com.tr

AUTHORIZED SERVICES

	Demiriz Elektrik İnş. San. ve Tic. Ltd. Şti.			Mirioğlu Elektrik Bobinaj	
MERKEZ	Ortaköy Sanayi Bölgesi Tiftik Sk. No:16		НАТАУ	Sanayi Sitesi 6. İniş 8. Cadde No:15	
SERVİS	RVIS Silivri/Istanbul		IIAIAI	Antakya/Hatay	
	0212 734 39 24 – 25			0326 221 41 12	
	Öz Teknik Kaynak Mak.İnş.Malz.San.Tic.Ltd.Şti.			Froser Kaynak Ekp.Paz.San.ve Dış Tic.Ltd.Şti.	
ADANA	Yeşiloba Mah. Yeni Metal Sanayi Sitesi 46023 Sk.		İSTANBUL	i.O.S.B. Demirciler San. Sit. C1 Blok No:198	
ADAMA	No:35/A – 35/1-A Seyhan/Adana	1	İkitelli/İstanbul		
	0322 429 39 85			0212 549 50 70	
	Tezcan Elek. Bob. İç ve Dış Tic. Ltd. Şti. 1230/1.			Serkaynak Kaynak Mlz. ve Hırdavat	
ANKARA	Sokak No:38 Ostim Yenimahalle/Ankara		ISTANBUL	İ.O.S.B. Tormak San. Cami Pasajı No:8	
ANNANA	0312 354 80 21		2	Başakşehir/İstanbul	
	0312 334 80 21			0212 485 71 20	
	Faz Makina Bobinaj San. Tic. İnş. Ltd. Şti.			Önder Kaynak Mak. Ve Mlz.San.Tic.Ltd.Şti.	
ANTALYA	Cumhuriyet Mah. Sanayi Sitesi 663. Sk. No:18		izmir	Kazım Dirik Mah. 340. Sk. No:15	
	Antalya		IZIVIIK	2. Sanayi Sit. Bornava/İzmir	
	0242 346 58 76			0232 435 43 07	
	Özduran Ticaret			Merkez Kaynak San. Tic. Ltd. Şti.	
BURSA	Küçük Sanayi Sitesi 48. Sokak No:23		KAYSERİ	Yeni Sanayi Bölgesi Zuhal Caddesi 20. Sokak No:3	
BUNSA	Nilüfer/Bursa		KATJENI	Kayseri	
	0224 441 46 08			0352 331 82 80	
	Doğangüç Teknik	ik		Çalışkan Bobinaj	
DÜZCE	Kültür Mahallesi 791. Sokak No:17		SAMSUN	Eski Sanayi Sitesi Yeni Mahalle Yurtsever Cad.	
DOZCE	Merkez/Düzce		SAIVISUN	No:52 Canik/Samsun	
	0380 524 94 92			0362 228 12 14	
	Tütüncüler Teknik Makine			Özen Elektrik & Bobinaj	
GAZÍANTEP	Sanayi Mah. 60014 Nolu Cadde No:115		VAN	Koçibey Cad. No:3	
GAZIANTEP	Şehitkamil/Gaziantep		VAN	Van	
	0553 941 76 90	L		0432 214 22 27	

Please visit our website www.demirizelektrik.com.tr for our current service list.