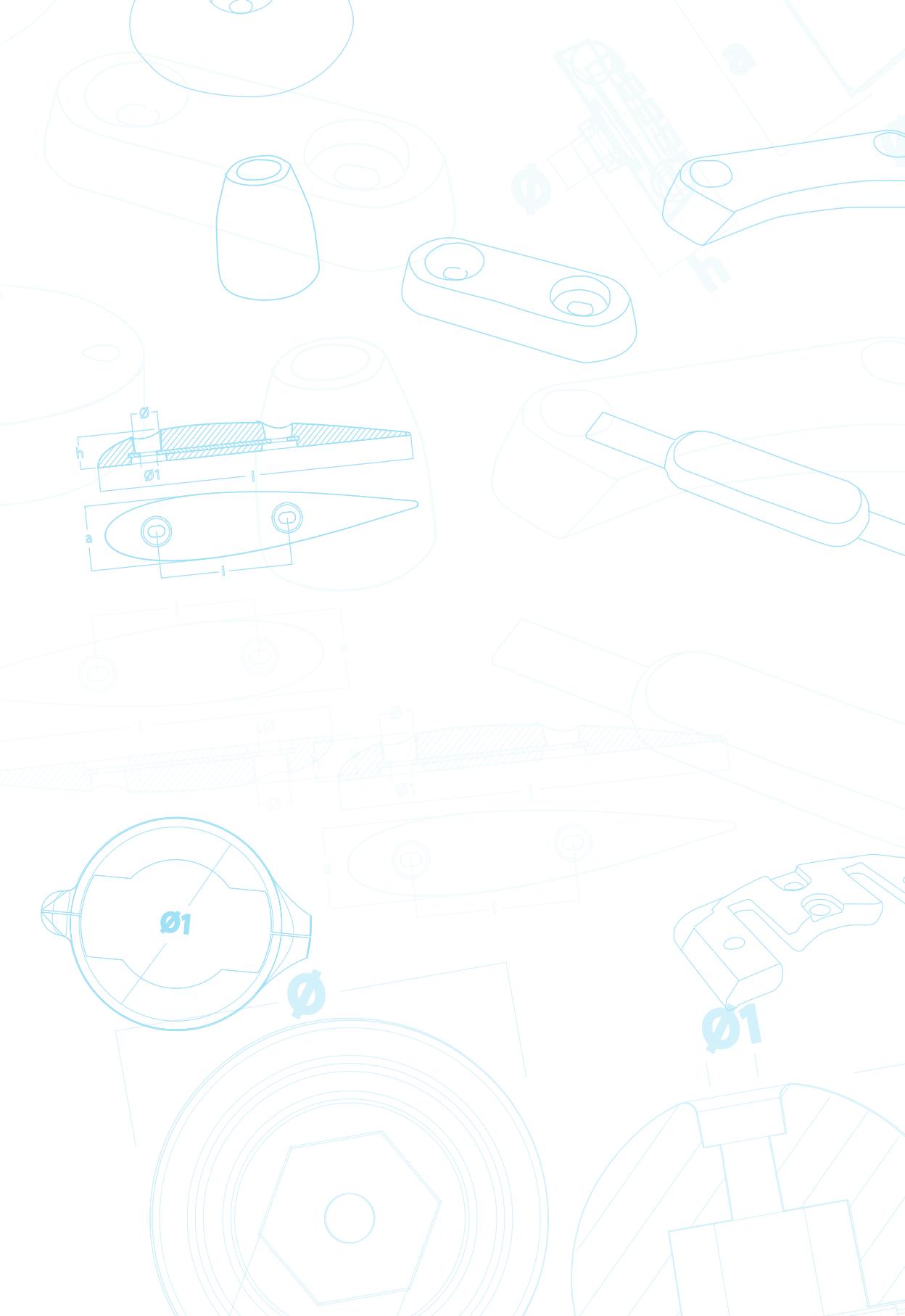




best anode





Sevgili Dostlar,

Öncelikle çalışma arkadaşlarım ve siz değerli müşterilerimize teşekkür etmek istiyorum.

ARGE çalışma aşamasından son kullanıcı olan siz müşterilerimize kadar ilişkilerimizi her zaman karşılıklı güven ve samimiyet üzerine inşa ettik.

Biz de; siz dost ve müşterilerimizin bize olan güvenini Best Tutya markasını ülkemize kazandırarak karşılık verdik.

1994 yılında basit yöntemler ile üretmeye başladığımız Best Tutya'yı, 2006 yılında seri üretime geçirdik ve 2010 yılından itibaren full otomasyona başladık.

Ve bugün istenilen her büyüklükteki siparişi birkaç gün içerisinde sevk edebilecek üretim bandına ulaştık. Buraya siz müşterilerimizle birlikte geldiğimiz bilinci içerisinde, ürün çeşitlerimizi sürekli geliştiriyoruz.



Bu katalog içeriğinde bulunmayan güncel ürünlerimizi
www.bestmuhendislik.com ve **www.bestanode.com**
web adreslerinden inceleyebilirsiniz.

Saygılarımla...

Ali Bostan

Makine Mühendisi
Uzak Yol Başmühendisi

Dear friends,

Firstly, I would like to thank to my dear colleagues and my dear customers.

From the first stage of Research development and till the last users of customers, we have always built up our relations on the basis of mutual trust and sincerity.

We have responded your loyalty towards us by introducing Best Anode brand to the world.

In 1994, we started producing Best Anode with basic methods then in 2006 we started to serial manufacture. Now from 2010, it has been full automation.

And today, we have reached to ship any size of orders in a few days.

We are still growing. You can also visit our website

www.bestmuhendislik.com and **www.bestanode.com**
and look through our products.

Best regards

Ali Bostan

Marine Engineer
Ocean Go Chief Engineer



Tüm ürünlerimizde saf külçeler kullanılarak döküm yapılmaktadır. Bu nedenle en iyi kalite tutyayı elde etmekteyiz.

Pure ingots are used in all of our products. That's why we get the anode with best quality.



Tüm eritme ve döküm işlemleri ile kontrol işlemleri ISO 9001 standartlarına göre yapılmakta, alaşım kullanımı ise US MIL standartlarına göre yapılmaktadır.

All melting and casting operations and quality control operations are carried out according to ISO 9001 standards and alloy use is made according to US MIL standards.



Ürünlerimizin US MIL standartlarında olduğu Türk Loydu tarafından sıkı bir şekilde denetlenmektedir. Üretimden çıkan ürünlerin mutlaka spectrometrik analizi yapıldıktan sonra sevkiyatı yapılmaktadır. Bu analizler aynı zamanda Türk Loydu'na gönderilmektedir.

Our products are subject to US MIL standards strictly controlled by the Turkish loyd. After the spectrometric analysis of the products from the production is absolutely done , the shipment is made.These analyzes are also sent to the TURKISH LOYD.



Biz Avrupa regülasyonuna uygun olan yüksek kaliteli külçelerden üretim yapmaktayız. Üretimini yaptığımız Al alaşımı tutyalarda toksit kirlletici olarak bilinen kadmiyumun (Cd) bulunmadığını ambalaj üzerinde özellikle belirtiyoruz. (Cadmium free = % 0 Cd)

We use only selected and high quality pure materials in compliance with the european REACH regulations. All aluminium anodes display the cadmium free logo to remark the absence of cadmium, recognized as toxic pollutant and banned by many countries.



Ürünlerimizin %90'ı her an için stoklarımızda bulunmaktadır. Stokta bulunmayan ürünü birkaç gün içinde uretibilecek bir otomasyona sahibiz. Acil siparişleriniz stoklarımızda mevcut ise birkaç saat içinde adresinize sevk edilir.

%90 of our products are available in stock at anytime we have an automation that can produce the product within a few days. If your urgent orders are available in our stocks.



Üretim aşamasında emniyet ve çevre faktörlerini ön planda tutmaktadır.

Safety and enviromental factors are our top priorities during production.



Ürünlerimiz sevk edilmeden önce mutlaka iki kez kontrol edilmektedir.

Products are checked twice before being shipped.



Ürünlerimizin paketlemeleri özenle yapılır. Bu nedenle nakliye sırasında kötü bir sürpriz yaşamazsınız.

Our products are **carefully** packed so you will not have a bad surprise during shipping.

KOROZYON NEDİR?

Korozyon; Metallerin içinde bulundukları ortam ile kimyasal ve elektrokimyasal reaksiyonlara girerek metalik özelliklerini kaybederek çürümeleridir.

Metaller doğada saf olarak bulunmazlar, oksit halinde bulunurlar. Oksitleri saf metale dönüştürmek için bir takım işlemelere ihtiyaç duyulur ve bunun sonucunda da kimyasal olarak saf metal elde edilir. Saf metaller dengesizdirler.

İletken bir ortamda; su altında veya atmosferde metal buna tepki verir ve doğal hali olan oksite döner. Örnek olarak; çelik pasa dönüşür. Sadece bakır ve değerli metaller (altın, gümüş, platinyum) sabit kararlılıklarını sebebiyle doğada metal olarak kalırlar.

ELEKTROKİMYASAL KOROZYON

Yüzeydeki metal atomları eriyerek suya yani bir elektrolite (iletken bir sıvı) karışır. Bu atomlar elektronlarını suya verirler ve pozitif yüklü iyonlara dönüşürler. Su moleküllerinin (H_2O) küçük bir yüzdesi H^+ ve OH^- yüklü iyonlarına bölünürler. Metal yüzeyindeki ufak çeşitlilikler farklı koşullar oluşturur ve elektronlar aşınma bölgесinden sudaki iyonlarla birleşikleri başka bölgelere giderler. Bu yoğunlukla hidrojen iyonlarının ve oksijenin su ve bir tür hidrojen gazı haline gelmenin tepkisidir. Pozitif metal iyonları suda dolaşarak metalin hidroksitini oluşturan ters yöne akan negatif iyonlarla birleşir. Bu tepkimeler sonucu oksit oluşumunun ilk aşamasıdır.

Yani, görülmüyor ki elektrik akımının metal yüzeyindeki belirli noktalara etkili olmasıyla anodik bölgelerde metal kaybına (aşınmaya) sebep oluyor.

WHAT IS CORROSION ?

Chemical corrosion is the process of deterioration of metal components when exposed to an aqueous environment (water).

It requires energy to convert oxides into pure metals and as a result they are chemically unstable. In the presence of water, either underwater or in the atmosphere the metal will react and return to its natural state as an oxide. Steel for example will degrade (oxidize) back to rust. Only copper and precious metals (gold,silver,platinum) exist as metals in nature due to their relative stability.

ELECTROCHEMICAL CORROSION

The metal atoms at the surface dissolve into the water, which is an electrolyte (a liquid that can conduct electricity). They give up electrons and turn into positively charged ions. A small percentage of the water molecules H_2O break down into charged ions H^+ and OH^- . Slight variations in the metal surface generate different conditions and the electrons flow through the metal from the corrosion area to other areas, close by, where they combine with the ions in the water. This is mainly a reaction with hydrogen ions and oxygen forming water and some formation of hydrogen gas. The positive metal ions flow through the water and combine with the negative ions flowing in the opposite direction forming the hydroxide of the metal. This is the first stage towards forming the oxide during a series of reactions.

So, you can see that an electric current is set up between localized areas on the surface of metal, resulting in metal loss (corrosion) at the anodic areas. At the cathodic areas, only electrons are given up so no metal is lost in these areas.

*Electrolyzed Shaft
(Elektrolize olmuş şaft örneği)*



NEDEN BAZI METALLER DİĞERLERİNDEN FAZLA AŞINIYOR ?

Tüm metaller suda oksitlenir (altın hariç), bazıları ise diğerlerinden daha kolay oksitlenir. Bu oranlar Galvanik potansiyel Serileri olarak gösterilir. Galvanik potansiyel serileri, metallerin deniz suyuna koyulduğunda tek başlarına ulaştığı gerilimin bir ölçügedir. Metal suya ne kadar atom kaybederse, metalde o kadar fazla elektron kalır ve daha düşük gerilim elde edilir. Diğer bir deyişle metal daha çabuk aşınır. Bu gerilim gümüş ve gümüş klorid (Ag/AgCl) gibi standart bir yarım hücre kullanılarak ölçülebilir. Daha pozitif kalan metalleri aşınmaya daha az eğilimlidir.

WHY DO SOME METALS CORRODE MORE THAN OTHERS ?

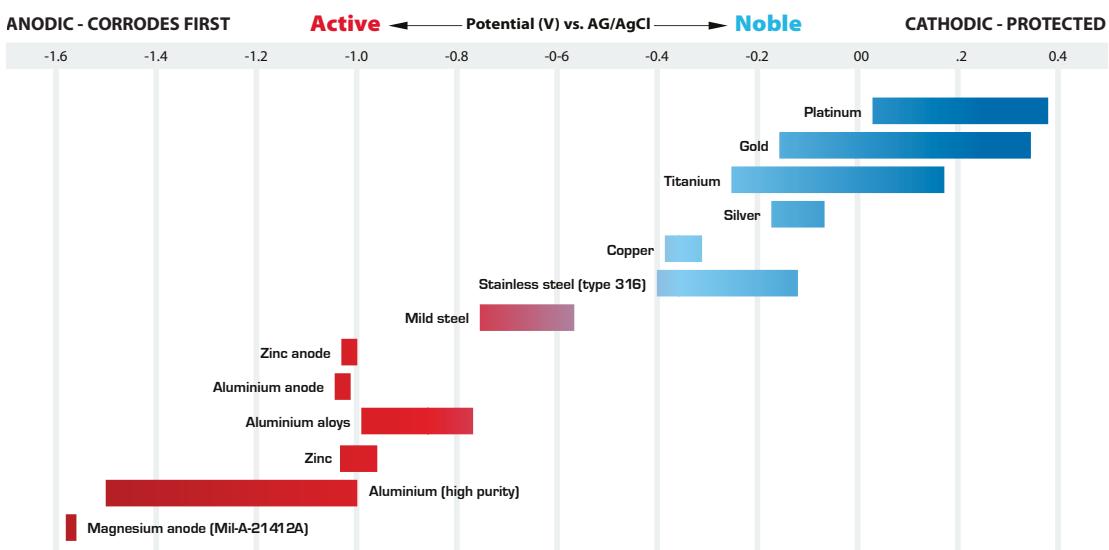
All metals tend to be oxidized (corrode) in water (except gold), some more easily than others. The relative rate can be plotted on the GALVANIC SERIES. This is a measure of the voltage reached by the metal alone when it is immersed in seawater. The more the metal gives up atoms to the water, the more electrons are left in the metal and lower the voltage achieved. In other words the metal is corroding quickly (dissolving easily). This voltage can be measured using a standard half cell such as a silver/silver chloride (Ag/AgCl) cell. Metals that remain more positive are less prone to corrosion.

METALLERİN GALVANİK POTANSİYEL SERİLERİ

Aşağıdaki tabloda galvanik potansiyel değerleri verilmiştir. Eğer bu listeden bir metal çifti deniz suyu içinde bulunursa, tablonun sol kısmında olan metal anot olur ve korozyona uğrar.

GALVANIC POTENTIAL SERIES OF METALS

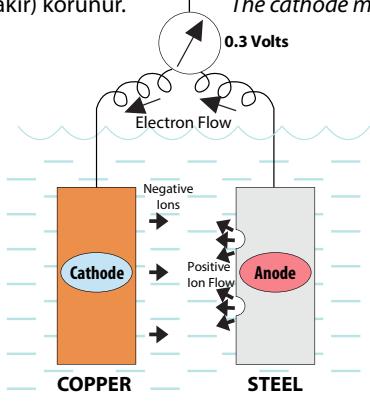
The table below gives the galvanic potential values. If a metal from this list is found in the seawater, the metal on the left of the table becomes an anode and causes corrosion.



GALVANİK KOROZYON

İki farklı çeşit metal bir araya geldiğinde, elektronlar daha fazla negatif yüklü metalden daha fazla pozitif yüklü metale gider. Başka bir deyişle, anottan katoda doğru akar. Bakır ve çelik arasında oluşan gerilim 0.3 voltтур. Devre tütüyadaki pozitif yüklü iyonların elektrolite kaybıyla ve negatif yüklü iyonların eksi uca hareketiyle tamamlanır.

Bu küçük parçacıkların suya bırakıldığı tek bir metalinkinden çok daha çabuktur ve bu örnek çeliğin aşınıp bitmesiyle sınırlıdır. Eksi uçlu madde (Bakır) korunur.

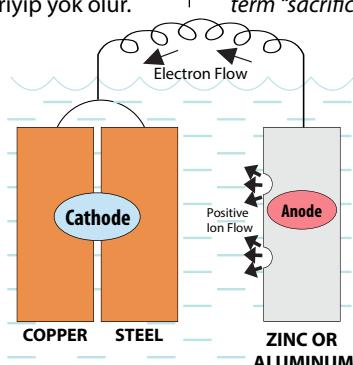


METALİN KORUNMASI VE TUTYA:

Eğer iki farklı metali de korumak istiyorsanız, araya üçüncü bir aktif metal koymalısınız. Genel olarak kullanılan metal çinkodur ancak alüminyum ve magnezyum da kullanılmaktadır. Zn veya Al iki metal için de tutya olur. Çinko veya alüminyum diğer iki metali korumak için kendini feda eder yani; eriyip yok olur.

GALVANIC CORROSION

When two different metals (copper and steel in the example) are in contact, electrons will flow from the more negatively charged metal to the more positively charged metal. The voltage generated between copper and steel would be 0.3 volts. The circuit is completed by the loss of positively charged ions from the anode into the electrolyte and the movement of negatively charged ions to the cathode. This release of small particles into the water is much more rapid than with one metal alone, and in this example is limited to the corrosion of the steel. The cathode material is protected.



SACRIFICIAL ANODE

If you want to protect both types of metal you must add a third more active metal. The traditional metal is zinc although magnesium and aluminum are also used. This active metal becomes the anode for both metals. The zinc or aluminum sacrifices itself to protect the other two metals, hence the term "sacrificial anode".

AŞINMAYI ETKİLEYEN FAKTÖRLER

Not: Bu etkenlerden bazıları metal yüzeyinde mikroskopik olarak çeşitlilik gösterebilir.

Sıvının İletkenliği

Deniz suyu iyi bir iletken, tatlı su ise kötü bir iletkendir yani deniz suyunda aşınma daha fazladır.

Oksijen Miktarı

Genellikle, aşınma oranı sudaki oksijen oranına bağlı olarak artar. Ancak, çatlaklar ve yarıklar ile civata başları da oksijeni çektileri için anodik olurlar ve aşınırlar.

Sudaki kirlilik oranı

aşınmayı artırır.

Sıcaklık

Daha yüksek su sıcaklığı aşınma oranını artırır, yaklaşık her 10 derecede ikiye katlanır

Basınç

Basınç altındaki metal aşınmaya beraber basınç çatlakları sebebiyle ani bir yetmezliğe sebep olabilir.

Mikroorganizmaların Varlığı

Doğada, korozyona etki edebilecek mikroorganizmalar mevcuttur. Bu etki pozitif ya da negatif olabilir.

BEST TUTYANIN ALAŞIM ÖZELLİKLERİ STANDARDI:

ALLOY SPECIFICATION OF BEST ANODE STANDART PRODUCTION

Element		ZINC ALLOY - ÇINKO ALAŞIM according US MIL Spec. A-18001K	ALLUMINIUM ALLOY - ALUMİNYUM ALAŞIM according US MIL Spec. A24779 SH	MAGNESIUM ALLOY - MAGNEZYUM ALAŞIM according US MIL Spec. A21412SH
Aluminum	Al	0.10-0.5	Remaining	5.00-7.00
Cadmium	Cd	0.025-0.07	-	-
Copper	Cu	0.005 max.	0.04 max.	0.01 max
Indium	In	-	0.014-0.02	-
Iron	Fe	0.005 max.	0.08 max.	0.03 max
Nichel	Ni	-	-	0.003 max
Silicon	Si	-	0.08-0.20	0.03 max
Zinc	Zn	Remaining	4.0-6.5	2.00-4.00
Others Total	-	0.10 max.	0.10 max.	0.30 max
Nominal electrical capacity - Nominal elektrik kapasitesi				
780 AmpHr/kg		2700 AmpHr/kg	1105 AmpHr/kg	
Nominal open circuit potential - Nominal açık devre potansiyeli				
-1050 mV Ag/AgCl reference cell		-1100 mV Ag/AgCl reference cell	-1150 mV Ag/AgCl reference cell	
Density - Yoğunluk				
7,14 g/cm3		2,80 g/cm3	1,80 g/cm3	
Current efficiency-Akum verimliliği				
95%		95%	50%	
Alloy consumed to produce 1 A/year kg - Kilogram bazında yıllık tüketilen alaşım miktarı				
11,20		3,2	7,9	

WHAT FACTORS AFFECT CORROSION?

Note: Some of these factors can vary microscopically on the surface of the metal.

Conductivity of electrolyte

Seawater is a good conductor and freshwater is a bad conductor, so corrosion is worse in seawater.

Amount of oxygen

Generally, corrosion rates increase in proportion to the amount of oxygen in the water. However cracks and crevices, which are starved of oxygen, become anodic and corrode also e.g. under barnacles or boltheads.

Presence of pollutants

Increases corrosion.

Temperature

Higher water temperature increases corrosion rates approximately doubling for every 10 C (18 F).

Stress

Metal under tensile stress in combination with corrosion can suffer sudden failure due to stress cracking.

Presence of bioorganisms

There are various types of microorganisms that can contribute to corrosion, either by removing protection or causing a corrosive environment.

METALİN KORUNMASI VE TUTYA:

Tutyaların yüzeyinin alanı; ne kadar koruma sağlayacağını, ağırlığı ise ne kadar süre ile çalışacağını gösterir. Her tutyanın ağırlığına karşı Amper saat ile ölçülebilen farklı kapasiteleri vardır.

TEKNENİN TUTYA İHTİYACI:

Bir teknede kullanılacak tutyanın ağırlığını hesaplamak karmaşıktır. İki adet tutya gereksinimi vardır:

- İyi bir koruma sağlamak için yeterli yüzey alanı
- İhtiyaç duyulan zaman kadar çalışması için yeterli ağırlık

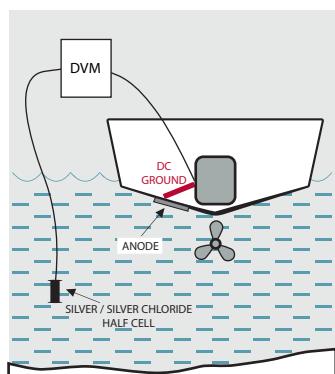
Yüzey Alanı

Tutyaları en iyi şekilde yerleştirmek için, önce "Gövde Potansiyelini" ölçmek gereklidir.

Tutyalar bağlama sistemine eklendiği zaman ölçülen gerilim azalır. Eğer gerilim 200 - 250 mV altına düşüyorsa, bu teknedenin uygun şekilde korunduğu anlamına gelir. Ek olarak çinko veya alüminyum tutya koruma problemi olmadan arttırılabilir. Magnezyum tuyaları eklerken ise daha dikkatli olmak gereklidir.

Ağırlık

Sudaki zaman içinde yeteri kadar süre boyunca koruyucu bir akım sağlamak için yeterli ağırlık gereklidir. Bu ticari gemiler için bir veya daha fazla sene iken kişisel teknelerde bir sezondur.



SACRIFICIAL ANODE

The surface area of the sacrificial anodes determines how much protection you get. The weight determines how long they will last. Different anodes have different capacities measured in Amp Hours per Pound.

ANODES REQUIRED

Calculating the weigh of anodes to use on a boat is fairly complicated. There are two requirements of anodes :

- Enough surface area to provide good protection.
- Enough weight to last the required period of time.

Surface Area

Ideally this can be determined by measuring the "hull potential" before and after installing the anodes. Hull potential is measured using a digital voltmeter between a Ag/AgCl half cell and the boat's negative ground to the bonding system.

When anodes are added to the bonding system the voltage measured reduces. If the voltage is lowered by 200 - 250 mV the boat is considered to be adequately protected. In practice additional zinc or aluminium anodes can be added without any problems of overprotection. More care is needed when adding magnesium anodes.

Weight

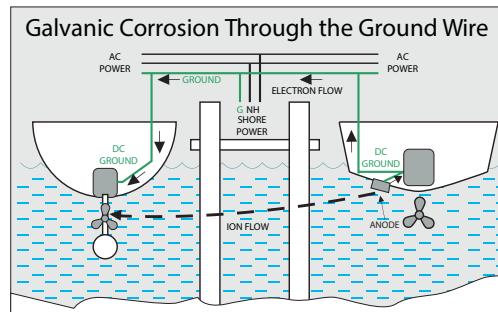
Sufficient weight is needed to supply a protecting current for the required time in the water. This is usually one or more years for commercial vessels and one season for recreational craft.

SAHİL BAĞLANTISININ KOROZYONA ETKİSİ:

Sahile bağlanmak siz komşu teknelere de bağlar. Eğer komşu teknelər uygun tutyalarla korunmuyorsa, onları da siz korumış olursunuz. Bu da; tutularınızın çabuk yıpranmasına sebep olur.

GALVANIC CORROSION VIA THE GROUND WIRE

Connecting into shore power connects your ground to the neighbouring boats. If they are not protected by suitable anodes, you will protect them – causing rapid wearing of your anodes.



BEST TUTYAYI NE ZAMAN DEĞİŞTİRME利YİM?

Best tutayı ağırlığının yarısına düşüğü zaman değiştirmek gerekir.

Havaya temas etmeleri halinde tutyaların üzerinde oluşan oksitlenme, galvanik koruma üzerinde olumsuz etki yapar. Tamamen yeni tutular üzerinde bile oksit tabakası bulunabilir. Bu nedenle tekneyi suya indirmeden önce daima tutyaları zımpara kağıdıyla temizleyin. Galvanik koruma üzerinde olumsuz etki yaratabileceği için, çelik aletler kullanmayın. Yeni tutyaları monte ederken, iyi bir metalik temas yüzeyi sağladığınızdan emin olun. Civata ve somunların dışlerine, civata sabitleyici yapıştırıcı damlatarak sıkınız.

GALVANIC CORROSION VIA THE GROUND WIRE

"Replacing Sacrificial Anodes When the weight decreases by 50%, the anode should be replaced." Dismantle the sacrificial anodes. Fit new sacrificial anodes and tighten them well to ensure good metallic contact. **Oxide forms on the sacrificial anodes when they are in contact with air, which has an adverse effect on the galvanic protection. There can be a layer of oxide even on completely new sacrificial anodes. For this reason always clean the sacrificial anodes before launching the boat. Clean with emery paper. Do not use steel tools, since this can have an adverse effect on the galvanic protection.**

TUTYA METALLERİ / SACRIFICIAL ANODE MATERIALS

	Zinc Anode	Al Anode	Mg Anode
Voltage (in sea water) V	1,03	1,1	1,6
Relative Life (Zinc=100 same size)	100	150	30
Relative Density (Zinc=100)	100	42	27
Mil. Spec.	MIL A-180001 K	MIL A24779 SH	MIL A21412 SH

HANGİ TUTYAYI KULLANMALIYIM? / WHICH ANODE MATERIAL?

Hull	Inboard				Outdrive
	Wood	Fiberglass	Aluminium	Steel	
Freshwater Pure (Temiz su)	Al	Al/Mg	Al	Al/Mg	Al/Mg
Freshwater Polluted (Kirli su)	Al	Al	Al	Al	Al
Freshwater Brackish (Sodalı veya tuzlu su)	Al/Zn	Al/Zn	Al/Zn	Al/Zn	Al
Salt (Tuzlu su)	Al/Zn	Al/Zn	Al/Zn	Al/Zn	Al



TÜRK LOYDU

TYPE APPROVAL CERTIFICATE

Certificate No: T0.DER.12-2426

This Certificate consists of 2 pages.

This is to certify that the

SACRIFICIAL ANODE FOR CORROSION PROTECTION

With type designations

See appendix I

Manufactured by

BEST MÜHENDİSLİK, TURİZM VE TİCARET LTD. ŞTİ.
Marmaris MUĞLA/TURKEYIs found to comply with
Türk Loydu Rules for Classification of ships and TS 9234

Application	: Approval is given for the sacrificial anode material and not for anode design.
Design	: BEST MÜHENDİSLİK, TURİZM VE TİCARET LTD. ŞTİ.
Sizes	: See appendix I

Address of Manufacturer : Sartma Mah. 24. Sokak No: 9 Marmaris-MUĞLA/TURKEY

Place and date : Tufo İSTANBUL 21.09.2013

Subject to the conditions referred to 2nd page, this certificate is valid until 20.09.2018
Etiler KARPUZ
Head of Marine Industry Division
Ahmet HOLOSORLU
SurveyorForm No: CE101-04/ 27th January 2012

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Product description :

Type Designation : See appendix I

Materials used : Zinc based sacrificial anode material.

Application/Limitation(Approval conditions):

Approval is given for the sacrificial anode material and not for anode design, based on 10 days test duration, according to TS 9234

The mean current capacity of the sacrificial anode material after 10 days free running testing is 290 Ah/kg, the potential is about -1.03 V vs. Ag/AgCl seawater. Approval is given for use in seawater below 30°C.

Documentation : Test reports . , 77872523.27/230

Test carried out (and result) : Type Testing carried out according to TS 9234 and Türk Loydu rule's. Found satisfactory.

Place of test carried out

LT ÜKÜMLÜ METALURJ FAKÜLTESİ
Avrasya Kampüsü 34469 Maslak-İSTANBUL/TURKEY
KÖŞGENTMUS San. Sitesi C Blok 308 Sok. No:46 Y.Dokuzlu İSTANBUL/TURKEY
TEKNOLAB-TEKNOLOJİ LARBARATUAR HİZMETLERİ LTD. ŞTİ
Bilgi Organize San. Böl. Dikmenler Sıf. B6 Blok No:23 Bayraklı-İSTANBUL/TURKEY

Marking of product: The product to be marked same as below mentioned.

- Manufacturer name and trade mark.
- Type designation.


Ahmet HOLOSORLU
Surveyor

This certificate is valid if environmental surveys carried out to the satisfaction of TL surveyor and following entries made:

 Surveyor	 Surveyor	 Surveyor	 Surveyor
11.09.2014 Survey Date	11.09.2014 Survey Date/2016 Survey Date/2017 Survey Date

This certificate is subject to terms and conditions described below.
Any significant change in design or construction may render this certificate invalid. True intent of evidence is not valid for representation, the manufacturer should make sure that the equipment is not modified after the date of issue of this certificate. This certificate is not valid for products without TL working sheet mentioned. The manufacturer should notify TÜRK LOYDU of any modification or change in the equipment in order to obtain valid certificate. This certificate states that issued opinions are representative of the product samples of the TÜRK LOYDU code, date, and relevant environmental instruments that apply to it.

Form No: CE101-04/ 27th January 2012

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İSTANBUL TEKNİK ÜNİVERSİTESİ
Kimya Metalurji Fakültesi

İTÜ



Tarih : 08.05.2013
Sayı : 77872523.27/ 230
Konu : Rapor Hk

RAPOR

BEST MÜHENDİSLİK Tur. ve Tic. Ltd. Şti.'nin 16.04.2013 tarihli yazıları ile istemiş oldukları hususlara ait rapordur.

Numune: Başvuru yazısının ekinde gönderilen ve galvanik usul katodik koruma maksadı kullanılacağı belirtilen "Türk Loydu damgali" 1 adet çinko anot numunesi.

İstenenler: Çinko anot numunesinin, Türk Loydu standartlarına uygunluk durumunun değerlendirilmesi açısından; anot verimi, açık ve kapalı devre potansiyeli ve anot akım kapasitesinin tespiti.

Sonuç: Çinko anot numunesinin, sentetik deniz suyu içerisinde açık devre potansiyeli ölçülmüştür. Açık devre potansiyeli Ag/AgCl/deniz suyu referans elektroduna göre -1,03 V olarak tespit edilmiş olup bu değer Türk Loydu Vakfının çinko anotlar için belirlediği (tekne yapım kuralları, bölüm 1 – kısım 22, tablo 22.1) standarda uygundur.

Numunenin anot akım kapasitesi TS9234'de belirlenen yöntemle gör sentetik deniz suyu kullanılarak yapılmıştır. Buna göre:

Anod akım kapasitesi: 790 Ah/kg

Anot Verimi (%) = $(\text{Ölçülen akım kapasitesi} / \text{Teorik akım kapasitesi}) \times 100$

$$= (790/820) \times 100 = \%96$$

Elde edilen anot verimi Tablo 22.1'de verilen minimum %95 anot verimi koşulunu sağlamaktadır.

Bilgilerinize sunulur.

İmza tözük okulu Rapor İşleri'nin
şurumluluğu imza sahiplerine aittir.

Saygılarımızla,

Prof. Dr. Mustafa Orgen



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T.C.
TÜRK PATENT ENSTİTÜSÜ

MARKA TESCİL BELGESİ

Marka No : 2014 31717 - Ticaret



Marka Sahibi : BEST MÜHENDİSLİK TURİZM VE TİCARET LTD.
ŞTİ.
TÜRKİYE CUMHURİYETİ
Sarıvana Mah. 24. Sok. No:9 MARMARİS MUĞLA
Emtiasi : 06
İlişiktedir.



Markaların Korunması Hakkında 556 Sayılı Kanun Hükmünde
Kararnameye göre 17/04/2014 tarihinden itibaren ON YIL müddetle
24/02/2015 tarihinde tescil edilmiştir.

Prof. Dr. Habip ASAN
Enstitü Başkanı

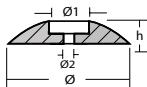


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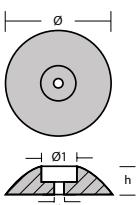
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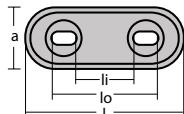
RUDDER ANODES
UFO TUTYALAR


Material	Code	Ø	Ø 1	Ø 2	h	kg	lb
Zn	UFO 50	50mm 2"	20mm 3/4"	6,5mm 1/4"	10mm 3/8"	0,075	0,165
Zn	UFO 70	70mm 2 3/4"	22mm 7/8"	8mm 5/16"	12mm 1/2"	0,175	0,385
Zn	UFO 90	90mm 3 1/2"	35mm 1 3/8"	11mm 7/16"	16mm 5/8"	0,38	0,836
Zn	UFO 110	110mm 4 5/16"	31mm 1 1/4"	10mm 3/8"	18mm 11/16"	0,65	1,43
Zn	UFO 125	125mm 5"	31mm 1 1/4"	11mm 7/16"	22mm 7/8"	1	2,2

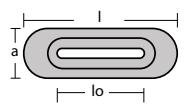
RUDDER ANODES HEAVY SERIES
AĞIR TİP UFO TUTYALAR


Material	Code	Ø	Ø 1	Ø 2	h	kg	lb
Zn	UFH 50Z	50mm 2"	20mm 3/4"	9mm 3/8"	15mm 9/16"	0,13	0,286
Al	UFH 50A	50mm 2"	20mm 3/4"	9mm 3/8"	15mm 9/16"	0,04	0,11
Zn	UFH 70Z	70mm 2 3/4"	22mm 7/8"	9mm 3/8"	16mm 5/8"	0,27	0,528
Al	UFH 70A	70mm 2 3/4"	22mm 7/8"	9mm 3/8"	16mm 5/8"	0,10	0,22
Zn	UFH 90Z	90mm 3 1/2"	26mm 1 1/64"	11mm 7/16"	20mm 3/4"	0,45	1
Al	UFH 90A	90mm 3 1/2"	26mm 1 1/64"	11mm 7/16"	20mm 3/4"	0,18	0,44
Zn	UFH 110Z	110mm 4 5/16"	30mm 13/16"	11mm 7/16"	22mm 13/16"	0,75	1,65
Al	UFH 110A	110mm 4 5/16"	30mm 13/16"	11mm 7/16"	22mm 13/16"	0,30	0,66
Zn	UFH 130Z	125mm 5"	32mm 1 1/4"	13mm 1/2"	30mm 1 3/16"	1,6	3
Al	UFH 130A	125mm 5"	32mm 1 1/4"	13mm 1/2"	26mm 1 1/64"	0,65	1,23
Zn	UFH 140Z	140mm 5 1/2"	47mm 1 7/8"	15mm 9/16"	30mm 1 3/16"	2,2	4,84
Al	UFH 140A	140mm 5 1/2"	47mm 1 7/8"	15mm 9/16"	30mm 1 3/16"	0,785	1,73
Zn	UFH 190Z	190mm 7 1/2"	47mm 1 7/8"	15mm 9/16"	30mm 1 3/16"	5	11
Al	UFH 190A	190mm 7 1/2"	47mm 1 7/8"	15mm 9/16"	30mm 1 3/16"	2	4,4

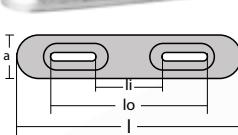
Special dimensions are produced / Özel ölçülere göre üretim yapılır

PLATE ANODES VT SERIES
VETUS TİP TUTYALAR


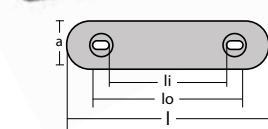
Material	Code	I	a	li	lo	h	kg	lb
Zn	VT 80Z	148cm 5 13/16"	57cm 2 1/4"	66cm 2 5/8"	95cm 3 3/4"	21cm 7/8"	0,750	1,80
Al	VT 80A	148cm 5 13/16"	57cm 2 1/4"	66cm 2 5/8"	95cm 3 3/4"	23cm 7/8"	0,34	0,75



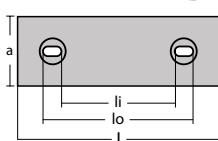
Material	Code	I	a	li	lo	h	kg	lb
Zn	VT 100	200cm 7 7/8"	65cm 2 9/16"	110cm 4 5/16"	38cm 1 1/2"		1,300	2,86
Al	VT 100A	200cm 7 7/8"	65cm 2 9/16"	110cm 4 5/16"	38cm 1 1/2"		0,52	1,144



Material	Code	I	a	li	lo	h	kg	lb
Zn	VT 200	315mm 12 3/8"	65mm 2 3/8"	104mm 4 1/8"	255mm 10"	32mm 1 1/4"	2,2	4,84
Al	VT 200A	315mm 12 3/8"	65mm 2 3/8"	104mm 4 1/8"	255mm 10"	32mm 1 1/4"	0,9	1,94



Material	Code	I	a	li	lo	h	kg	lb
Zn	VT 225	435mm 17 1/8"	90mm 3 1/2"	195mm 7 11/16"	260mm 10"	36mm 1 7/16"	5,25	11,50
Al	VT 225A	435mm 17 1/8"	90mm 3 1/2"	195mm 7 11/16"	260mm 10"	36mm 1 7/16"	2,5	5,50

NEW


Material	Code	a	b	li	lo	h	kg	lb
Zn	VT 115	200mm 7 7/8"	100mm 3 15/16"	80mm 3 1/16"	150mm 6"	21mm 13/16"	2,2	4,90
Al	VT 115A	200mm 7 7/8"	100mm 3 15/16"	80mm 3 1/16"	150mm 6"	21mm 13/16"	1,1	2,4
Zn	VT 140	265mm 10 7/16"	85mm 3 3/8"	120mm 4 3/4"	160mm 6 5/16"	31mm 1 1/4"	3,4	7,48
Al	VT 140A	265mm 10 7/16"	85mm 3 3/8"	120mm 4 3/4"	160mm 6 5/16"	31mm 1 1/4"	1,42	3,12
Zn	VT 185	320mm 12 5/8"	68mm 2 11/16"	160mm 6 5/16"	200mm 7 7/8"	31mm 1 1/4"	3,7	8,14
Al	VT 185A	320mm 12 5/8"	68mm 2 11/16"	160mm 6 5/16"	200mm 7 7/8"	31mm 1 1/4"	1,48	3,3
Zn	VT 300	290mm 11 7/16"	142mm 5 9/16"	150mm 5 15/16"	250mm 9 13/16"	30mm 1 3/16"	7,6	16,72
Al	VT 300A	290mm 11 7/16"	142mm 5 9/16"	150mm 5 15/16"	250mm 9 13/16"	30mm 1 3/16"	3	6,6

Special dimensions are produced / Özel ölçülere göre üretim yapılır

SHAFT ANODES

ŞAFT TUTYALAR



Paslanmaz civatalar paket içindedir.
Included Stainless Steel Bolt



NO NEED HAMMER FOR INSTALLATION

Material	Code	$\varnothing i$	$\varnothing o$	h	kg	lb	Holes
Zn	SH 025	25mm 1"	58mm 2 5/16"	56mm 2 3/16"	0,48	1,06	2
Zn	SH 254	25,4mm 1"	58mm 2 5/16"	56mm 2 3/16"	0,48	1,06	2
Zn	SH 030	30mm 1 3/16"	58mm 2 5/16"	56mm 2 3/16"	0,44	0,97	2
Zn	SH 032	31,75mm 1 1/4"	58mm 2 5/16"	56mm 2 3/16"	0,44	0,97	2
Zn	SH 035	35mm 1 3/8"	65mm 2 9/16"	65mm 2 9/16"	0,575	1,27	4
Zn	SH 038	38,1mm 1 1/2"	80mm 3 1/8"	72mm 2 7/8"	0,94	2,07	4
Zn	SH 040	40mm 1 9/16"	80mm 3 1/8"	72mm 2 7/8"	0,9	1,98	4
Zn	SH 445	44,5mm 1 3/4"	80mm 3 1/8"	75mm 3"	0,87	1,92	4
Zn	SH 045	45mm 1 7/8"	80mm 3 1/8"	75mm 3"	0,87	1,92	4
Zn	SH 050	50mm 2"	93mm 3 5/8"	82mm 3 1/4"	1,05	2,31	4
Zn	SH 051	50,8mm 2"	93mm 3 5/8"	82mm 3 1/4"	1,05	2,31	4
Zn	SH 055	55mm 2 3/16"	109mm 4 5/16"	99mm 3 7/8"	1,85	4,07	4
Zn	SH 057	57,1mm 2 1/4"	109mm 4 5/16"	99mm 3 7/8"	1,80	3,96	4
Zn	SH 060	60mm 2 3/8"	109mm 4 5/16"	99mm 3 7/8"	1,70	3,74	4
Zn	SH 635	63,50mm 2 1/2"	109mm 4 5/16"	99mm 3 7/8"	1,55	3,41	4
Zn	SH 065	65mm 2 9/16"	109mm 4 5/16"	99mm 3 7/8"	1,55	3,41	4
Zn	SH 070	70mm 2 3/4"	127mm 5"	106mm 4 3/16"	2,75	6,05	4
Zn	SH 075	75mm 2 15/16"	127mm 5"	106mm 4 3/16"	2,55	5,61	4
Zn	SH 076	76,2mm 3"	127mm 5"	106mm 4 3/16"	2,50	5,50	4
Zn	SH 080	80mm 3 1/8"	127mm 5"	106mm 4 3/16"	2,33	5,13	4
Zn	SH 085	85mm 3 3/8"	127mm 5"	106mm 4 3/16"	2,20	4,84	4
Zn	SH 090	90mm 3 9/16"	140mm 5 1/2"	119mm 4 11/16"	4,30	9,46	4
Zn	SH 095	95mm 3 3/4"	140mm 5 1/2"	119mm 4 11/16"	4,10	9,02	4
Zn	SH 100	100mm 3 15/16"	140mm 5 1/2"	119mm 4 11/16"	3,85	8,47	4
Zn	SH 102	101,60mm 4"	140mm 5 1/2"	119mm 4 11/16"	3,85	8,47	4
Zn	SH 110	110mm 4 5/16"	177mm 6 15/16"	149mm 5 7/8"	9,90	21,78	4
Al	SH 110A	110mm 4 5/16"	177mm 6 15/16"	149mm 5 7/8"	3,80	8,38	4
Zn	SH 115	115mm 4 1/2"	177mm 6 15/16"	149mm 5 7/8"	9,70	21,34	4
Al	SH 115A	115mm 4 1/2"	177mm 6 15/16"	149mm 5 7/8"	3,70	8,14	4
Zn	SH 120	120mm 4 3/4"	177mm 6 15/16"	149mm 5 7/8"	9,50	20,90	4
Al	SH 120A	120mm 4 3/4"	177mm 6 15/16"	149mm 5 7/8"	3,60	7,92	4
Zn	SH 125	125mm 4 15/16"	177mm 6 15/16"	149mm 5 7/8"	9	19,80	4
Al	SH 125A	125mm 4 15/16"	177mm 6 15/16"	149mm 5 7/8"	3,50	7,70	4
Zn	SH 127	127mm 5"	177mm 6 15/16"	149mm 5 7/8"	8,50	18,70	4
Al	SH 127A	127mm 5"	177mm 6 15/16"	149mm 5 7/8"	3,30	7,26	4
Zn	SH 130	130mm 5 1/8"	177mm 6 15/16"	149mm 5 7/8"	8	17,6	4
Al	SH 130A	130mm 5 1/8"	177mm 6 15/16"	149mm 5 7/8"	3	6,60	4

Special dimensions are produced / Özel ölçülere göre üretim yapılır

SHAFT ANODES

ŞAFT TUTYALAR



Paslanmaz civatalar paket içindedir.
Included Stainless Steel Bolt



NO NEED HAMMER FOR INSTALLATION

Special dimensions are produced /
Özel ölçülere göre üretim yapılır

Material	Code	$\varnothing i$	$\varnothing o$	h	kg	lb	Holes
Zn	SHX 22	22mm 7/8"	50mm 2"	50mm 2"	0,27	0,6	2
Al	SHX 22A	22mm 7/8"	50mm 2"	50mm 2"	0,1	0,22	2
Zn	SHX 25	25mm 1"	50mm 2"	50mm 2"	0,4	0,9	2
Al	SHX 25A	25mm 1"	50mm 2"	50mm 2"	0,16	0,35	2
Zn	SHX 254	25,4mm 1"	58mm 2 5/16"	58mm 2 5/16"	0,44	0,97	2
Al	SHX 254A	25,4mm 1"	58mm 2 5/16"	58mm 2 5/16"	0,17	0,37	2
Zn	SHX 28	28mm 1 1/8"	58mm 2 5/16"	58mm 2 5/16"	0,44	0,97	2
Al	SHX 28 A	28mm 1 1/8"	58mm 2 5/16"	58mm 2 5/16"	0,17	0,37	2
Zn	SHX 30	30mm 1 3/16"	58mm 2 5/16"	58mm 2 5/16"	0,42	0,95	2
Al	SHX 30A	30mm 1 3/16"	58mm 2 5/16"	58mm 2 5/16"	0,16	0,35	2
Zn	SHX 32	31,75mm 1 1/4"	58mm 2 5/16"	58mm 2 5/16"	0,4	0,88	2
Al	SHX 32A	31,75mm 1 1/4"	58mm 2 5/16"	58mm 2 5/16"	0,16	0,35	2
Zn	SHX 35	35mm 1 3/8"	68mm 2 11/16"	65mm 2 9/16"	0,7	1,54	4
Al	SHX 35A	35mm 1 3/8"	68mm 2 11/16"	65mm 2 9/16"	0,27	0,6	4
Zn	SHX 38	38,1mm 1 1/2"	68mm 2 11/16"	65mm 2 9/16"	0,65	1,43	4
Al	SHX 38A	38,1mm 1 1/2"	68mm 2 11/16"	65mm 2 9/16"	0,25	0,55	4
Zn	SHX 40	40mm 1 9/16"	68mm 2 11/16"	65mm 2 9/16"	0,9	2	4
Al	SHX 40A	40mm 1 9/16"	68mm 2 11/16"	65mm 2 9/16"	0,38	0,8	4
Zn	SHX 445	44,5mm 1 3/4"	80mm 3 1/8"	82mm 3 1/4"	0,87	1,9	4
Al	SHX 445A	44,5mm 1 3/4"	80mm 3 1/8"	82mm 3 1/4"	0,33	0,73	4
Zn	SHX 45	45mm 1 3/4"	80mm 3 1/8"	82mm 3 1/4"	0,87	1,91	4
Al	SHX 45A	45mm 1 3/4"	80mm 3 1/8"	82mm 3 1/4"	0,33	0,72	4
Zn	SHX 50	50mm 2"	80mm 3 1/8"	82mm 3 1/4"	1,05	2,31	4
Al	SHX 50A	50mm 2"	80mm 3 1/8"	82mm 3 1/4"	0,38	0,83	4
Zn	SHX 51	50,8mm 2"	80mm 3 1/8"	82mm 3 1/4"	1,05	2,31	4
Al	SHX 51A	50,8mm 2"	80mm 3 1/8"	82mm 3 1/4"	0,38	0,84	4
Zn	SHX 55	55mm 2 3/16"	100mm 3 15/16"	100mm 3 15/16"	1,85	4,07	4
Al	SHX 55A	55mm 2 3/16"	100mm 3 15/16"	100mm 3 15/16"	0,7	1,54	4
Zn	SHX 57	57,1mm 2 1/4"	100mm 3 15/16"	100mm 3 15/16"	1,8	3,96	4
Al	SHX 57A	57,1mm 2 1/4"	100mm 3 15/16"	100mm 3 15/16"	0,69	1,52	4
Zn	SHX 60	60mm 2 3/8"	100mm 3 15/16"	100mm 3 15/16"	1,7	3,74	4
Al	SHX 60A	60mm 2 3/8"	100mm 3 15/16"	100mm 3 15/16"	0,65	1,43	4
Zn	SHX 635	63,50mm 2 1/2"	100mm 3 15/16"	100mm 3 15/16"	1,55	3,41	4
Al	SHX 635A	63,50mm 2 1/2"	100mm 3 15/16"	100mm 3 15/16"	0,6	1,32	4

SHAFT ANODES

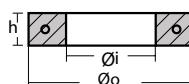
ŞAFT TUTYALAR



Material	Code	$\varnothing i$	$\varnothing o$	h	kg	lb	Holes
Zn	SHX 70	70mm 2 3/4"	127mm 5"	106mm 4 3/16"	2,75	6,05	4
Al	SHX 70A	70mm 2 3/4"	127mm 5"	106mm 4 3/16"	1,15	2,53	4
Zn	SHX 75	75mm 2 15/16"	127mm 5"	106mm 4 3/16"	2,55	5,60	4
Al	SHX 75A	75mm 2 15/16"	127mm 5"	106mm 4 3/16"	1,14	2,50	4
Zn	SHX 76	76,2mm 3"	127mm 5"	106mm 4 3 /16"	2,50	5,50	4
Al	SHX 76A	76,2mm 3"	127mm 5"	106mm 4 3/16"	1,14	2,50	4

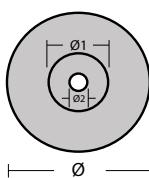
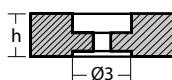
COLLAR SHAFT ANODES

DAR ŞAFT TUTYALARI



Material	Code	$\varnothing i$	$\varnothing o$	h	kg	lb	Holes
Zn	DS 025	25mm 1"	58mm 2 5/16"	25mm 1"	0,22	0,48	2
Zn	DS 254	25,4mm 1"	58mm 2 5/16"	23mm 15/16"	0,22	0,48	2
Zn	DS 030	30mm 1 3/16"	63mm 2 1/2"	23mm 15/16"	0,3	0,66	2
Zn	DS 032	31,75mm 1 1/4"	63mm 2 1/2"	23mm 15/16"	0,3	0,66	2
Zn	DS 035	35mm 1 3/8"	63mm 2 1/2"	23mm 15/16"	0,27	0,6	2
Zn	DS 038	38,1mm 1 1/2"	63mm 2 1/2"	23mm 15/16"	0,25	0,55	2
Zn	DS 040	40mm 1 9/16"	69mm 2 11/16"	23mm 15/16"	0,3	0,66	2
Zn	DS 445	44,5mm 1 3/4"	69mm 2 11/16"	23mm 15/16"	0,26	0,57	2
Zn	DS 045	45mm 1 3/4"	69mm 2 11/16"	23mm 15/16"	0,26	0,57	2
Zn	DS 050	50mm 2"	78mm 3 1/16"	21mm 13/16"	0,3	0,66	2
Zn	DS 51	50,8mm 2"	78mm 3 1/16"	21mm 13/16"	0,3	0,66	2

Special dimensions are produced / Özel ölçülere göre üretim yapılır

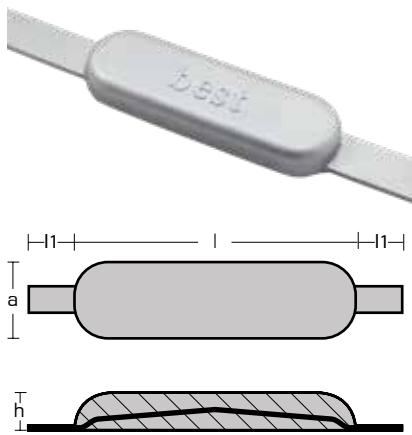
STERN ANODES / KIÇ AYNA TUTYALARI


Material	Code	\varnothing	$\varnothing 1$	$\varnothing 2$	$\varnothing 3$	h	kg	lb
Zn	IT 3000	123mm 4 13/16"	47mm 1 7/8"	14mm 9/16"	50mm 2"	38mm 1 1/2"	2,5	5,5
Zn	IT 4000	140mm 5 1/2"	47mm 1 7/8"	14,5mm 9/16"	47mm 1 7/8"	30mm 1 3/16"	3	6,6
Al	IT 4000A	140mm 5 1/2"	47mm 1 7/8"	14,5mm 9/16"	47mm 1 7/8"	30mm 1 3/16"	1,13	2,49
Zn	IT 5000	140mm 5 1/2"	47mm 1 7/8"	14,5mm 9/16"	40mm 1 9/16"	45mm 1 3/4"	3,6	7,92
Al	IT 5000A	140mm 5 1/2"	47mm 1 7/8"	14,5mm 9/16"	40mm 1 9/16"	45mm 1 3/4"	1,35	2,97



Special dimensions are produced / Özel ölçülere göre üretim yapılır

HULL ANODES / DEMİRLİ TUTYALAR



Steel parts galvanized to cover corrosion

Have been made durable.

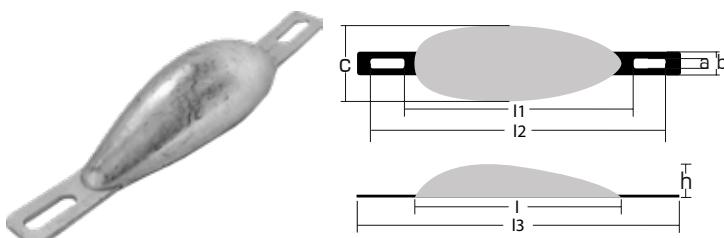
Çelik kısımlar galvaniz kaplanarak korrozyona dayanıklı hale getirilmiştir.

Material	Code	I	I1	a	h	kg	lb
Zn	DM 1000	120mm 4 11/16"	70mm 2 3/4"	50mm 2"	20mm 13/16"	0,86	1,9
Zn	DM 2000	190mm 7 1/2"	80mm 3 1/8"	60mm 2 3/8"	23mm 15/16"	1,7	3,74
Zn	DM 2500	170mm 6 11/16"	70mm 2 3/4"	70mm 2 3/4"	30mm 1 3/16"	2,5	5,5
Al	DM 2500A	170mm 6 11/16"	70mm 2 3/4"	70mm 2 3/4"	30mm 1 3/16"	0,95	2,1
Zn	DM 4000	250mm 9 13/16"	105mm 4 1/8"	85mm 3 3/8"	28mm 1 1/8"	4	8,8
Al	DM 4000A	250mm 9 13/16"	105mm 4 1/8"	85mm 3 3/8"	28mm 1 1/8"	1,55	3,41
Zn	DM 5000	250mm 9 13/16"	105mm 4 1/8"	90mm 3 9/16"	30mm 1 3/16"	5	11
Al	DM 5000A	250mm 9 13/16"	105mm 4 1/8"	90mm 3 9/16"	30mm 1 3/16"	1,9	4,18
Zn	DM 8000	300mm 11 13/16"	100mm 3 15/16"	100mm 3 5/16"	40mm 1 9/16"	8	17,6
Al	DM 8000A	300mm 11 13/16"	100mm 3 15/16"	100mm 3 5/16"	40mm 1 9/16"	3	6,6
Zn	DM 10000	300mm 11 13/16"	100mm 3 15/16"	100mm 3 5/16"	50mm 2"	10	22
Al	DM 10000A	300mm 11 13/16"	100mm 3 15/16"	100mm 3 5/16"	50mm 2"	3,8	8,36

WATER DROP HULL ANODES / DAMLA TUTYA



Material	Code	I	I1	I2	I3	a	b	c	h	kg	lb
Zn	WD 500	120mm 4 11/16"	140mm 5 1/2"	200mm 7 7/8"	210mm 8 3/8"	10 3/8"	25 1"	43 1 11/16"	27 1 1/16"	0,5	1,1
Al	WD 500A	120mm 4 11/16"	140mm 5 1/2"	200mm 7 7/8"	210mm 8 3/8"	10 3/8"	25 1"	43 1 11/16"	27 1 1/16"	0,26	0,6
Zn	WD 1000	150mm 6"	177mm 7"	237mm 9 7/16"	245mm 9 9/16"	10 3/8"	25 1"	56 2 1/2"	35 1 3/8"	1	2,2
Al	WD 1000A	150mm 6"	177mm 7"	237mm 9 7/16"	245mm 9 9/16"	10 3/8"	25 1"	56 2 1/2"	35 1 3/8"	0,46	1
Zn	WD 1500	170mm 6 3/4"	205mm 8"	260mm 10 1/4"	280mm 11"	14 9/16"	30 1 3/16"	60 2 3/8"	38 1 1/2"	1,4	3
Al	WD 1500A	170mm 6 3/4"	205mm 8"	260mm 10 1/4"	280mm 11"	14 9/16"	30 1 3/16"	60 2 3/8"	38 1 1/2"	0,72	1,6
Zn	WD 2000	180mm 7"	205mm 8"	260mm 10 1/4"	280mm 11"	14 9/16"	30 1 3/16"	70 2 3/4"	42 1 5/8"	1,8	4
Al	WD 2000A	180mm 7"	205mm 8"	260mm 10 1/4"	280mm 11"	14 9/16"	30 1 3/16"	70 2 3/4"	42 1 5/8"	0,86	1,9



Steel parts galvanized to cover corrosion

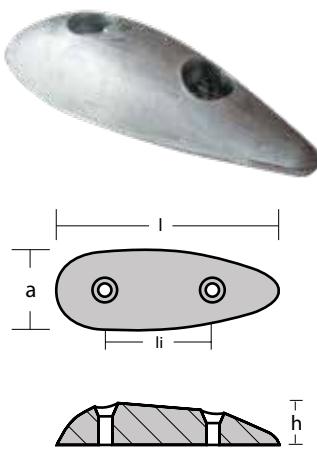
Have been made durable.

Çelik kısımlar galvaniz kaplanarak korrozyona dayanıklı hale getirilmiştir.

Special dimensions are produced / Özel ölçülere göre üretim yapılır

NEW

OVAL SERIES ANODES / OVAL TUTYALAR

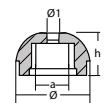
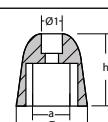
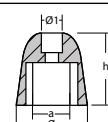
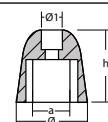


Material	Code	l	a	li	h	kg	lb
Zn	OVL 40	125mm 4 15/16"	50mm 2"	40mm 1 9/16"	23mm 7/8"	0,48	1,05
Al	OVL 40A	125mm 4 15/16"	50mm 2"	40mm 1 9/16"	23mm 7/8"	0,18	0,4
Zn	OVL 45	125mm 4 15/16"	50mm 2"	45mm 1 7/8"	23mm 7/8"	0,48	1,05
Al	OVL 45A	125mm 4 15/16"	50mm 2"	45mm 1 7/8"	23mm 7/8"	0,18	0,4
Zn	OVL 50	125mm 4 15/16"	50mm 2"	50mm 2"	23mm 7/8"	0,5	1,1
Al	OVL 50A	125mm 4 15/16"	50mm 2"	50mm 2"	23mm 7/8"	0,19	0,42
Zn	OVL 55	125mm 4 15/16"	50mm 2"	55mm 2 1/16"	23mm 7/8"	0,5	1,1
Al	OVL 55A	125mm 4 15/16"	50mm 2"	55mm 2 1/16"	23mm 7/8"	0,19	0,42
Zn	OVL 63	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	0,75	1,65
Al	OVL 63A	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	0,30	0,67
Zn	OVL 75	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	0,75	1,65
Al	OVL 75A	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	0,30	0,67
Zn	OVL 95	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	1	2,2
Al	OVL 95A	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	0,40	0,9
Zn	OVL 110	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	1	2,2
Al	OVL 110A	152mm 6"	57mm 2 1/4"	63mm 2 1/16"	31mm 7/8"	0,40	0,9

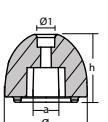
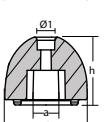
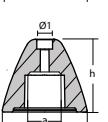
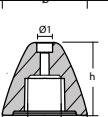


Special dimensions are produced / Özel ölçülere göre üretim yapılır

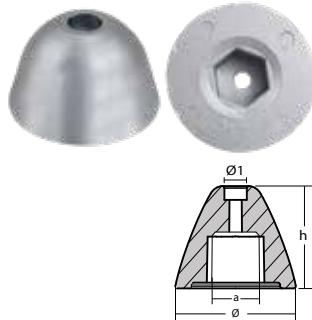
SIDE POWER ANODES
SIDE POWER TUTYALAR

	Code	Description	Ø	Ø 1	h	a	kg	lb
 	Zn	SP 075 FOR SIDE POWER 55/60/65/75/80/95/100	45mm 1 3/4"	11mm 7/16"	20mm 13/16"	20mm 13/16"	0,15	0,33
	Al		45mm 1 3/4"	11mm 7/16"	20mm 13/16"	20mm 13/16"	0,057	0,13
 	Zn	SP 125 FOR SIDE POWER 250/300	41mm 1 5/8"	11mm 7/16"	34mm 1 3/8"	24mm 15/16"	0,16	0,35
	Al		41mm 1 5/8"	11mm 7/16"	34mm 1 3/8"	24mm 15/16"	0,063	0,14
 	Zn	SP 185 FOR SIDE POWER 125/155/240/285	48mm 1 7/8"	11mm 7/16"	42mm 1 5/8"	24mm 15/16"	0,34	0,75
	Al		48mm 1 7/8"	11mm 7/16"	42mm 1 5/8"	24mm 15/16"	0,13	0,28
 	Zn	SP 250 FOR SIDE POWER 420/550 OEM PART NO: 501180A	67mm 2 5/8"	15mm 9/16"	48mm 1 7/8"	30mm 1 3/16"	0,72	1,58
	Al		67mm 2 5/8"	15mm 9/16"	48mm 1 7/8"	30mm 1 3/16"	0,27	0,6
 	Zn	SP 550 FOR SIDE POWER SH 1000/1400 OEM PART NO: 701180A	131mm 5 1/4"		52,5mm 2 1/16"		3,12	6,86
	Al		131mm 5 1/4"		52,5mm 2 1/16"		1,3	2,86

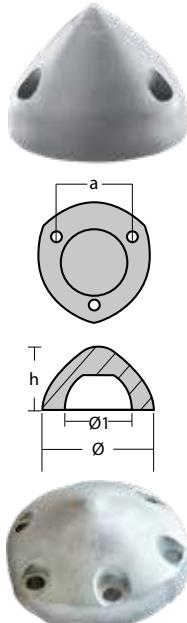
NEW
QUICK BOW THRUST ANODES
QUICK TUTYALAR

	Code	Desc.	Ø	Ø 1	h	a	kg	lb
 	Zn	QK 1400 TQ14000	48mm 1 7/8"	9mm 3/8"	32mm 1 1/4"	17,3mm 11/16"	0,23	0,51
	Al		48mm 1 7/8"	9mm 3/8"	32mm 1 1/4"	17,3mm 11/16"	0,088	0,19
 	Zn	QK 1850 TQ18500	50mm 2"	11mm 7/16"	32mm 1 1/4"	20,2mm 13/16"	0,25	0,56
	Al		50mm 2"	11mm 7/16"	32mm 1 1/4"	20,2mm 13/16"	0,096	0,21
 	Zn	QK 2500 TQ25000	59mm 2 5/16"	6mm 1/4"	44,5mm 1 3/4"	24,2mm 15/16"	0,35	0,78
	Al		59mm 2 5/16"	6mm 1/4"	44,5mm 1 3/4"	24,2mm 15/16"	0,13	0,29
 	Zn	QK 3000 TQ30000	70mm 2 3/4"	10,5mm 7/16"	50mm 2"	27,5mm 1 1/16"	0,54	1,19
	Al		70mm 2 3/4"	10,5mm 7/16"	50mm 2"	27,5mm 1 1/16"	0,207	0,46

Special dimensions are produced / Özel ölçülere göre üretim yapılır

CRAFTSMAN PROPELLER ANODES
CRAFTSMAN TUTYALAR


	Code	Ø	Ø 1	h	a	kg	lb
Zn	CM 35	36mm 1 7/16"	10,5mm 7/16"	20mm 13/16"	17mm 11/16"	0,083	0,18
Al	CM 35A	36mm 1 7/16"	10,5mm 7/16"	20mm 13/16"	17mm 11/16"	0,032	0,07
Zn	CM 55	47mm 1 7/8"	10,5mm 7/16"	30mm 1 3/16"	17mm 11/16"	0,23	0,5
Al	CM 55A	47mm 1 7/8"	10,5mm 7/16"	30mm 1 3/16"	17mm 11/16"	0,09	0,2
Zn	CM 80	51mm 2"	10,5mm 7/16"	32mm 1 1/4"	17mm 11/16"	0,31	0,68
Al	CM 80A	51mm 2"	10,5mm 7/16"	32mm 1 1/4"	17mm 11/16"	0,12	0,26

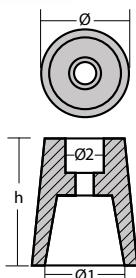
MAX PROP PROPELLER ANODES
MAX PROP TUTYALAR


Mat.	Code	Ø	Ø 1	h	(a)	kg	lb
Zn	MP 038	66mm 2 5/8"	38mm 1 1/2"	40mm 1 9/16"	44mm 1 3/4"	0,28	0,6
Zn	MP 042	74mm 2 7/8"	42mm 1 5/8"	44mm 1 3/4"	48,50mm 1 7/8"	0,35	0,77
Zn	MP 046	82mm 3 3/16"	46mm 1 13/16"	58mm 2 5/16"	57,5mm 2 1/4"	0,73	1,6
Zn	MP 053	100mm 3 15/16"	52mm 2 1/16"	61mm 2 3/8"	71mm 2 13/16"	1,08	2,38
Zn	MP 638	61mm 2 3/8"	39mm 1 1/2"	40mm 137/64"		0,25	0,55
Al	MP 638A	61mm 2 3/8"	39mm 1 1/2"	40mm 1 9/16"		0,10	0,23
Zn	MP 642	68mm 2 11/16"	43mm 1 11/16"	44mm 1 3/4"		0,45	1
Al	MP 642A	68mm 2 11/16"	43mm 1 11/16"	44mm 1 3/4"		0,19	0,41
Zn	MP 646	79mm 3 1/8"	47mm 1 27/32"	57mm 2 1/4"		0,8	1,76
Al	MP 646A	79mm 3 1/8"	47mm 1 27/32"	57mm 2 1/4"		0,27	0,59

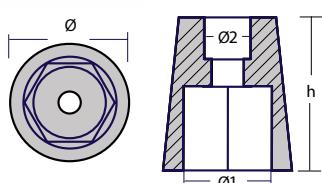
GORI PROPELLER ANODES
GORI TUTYALAR


	Code	Ø i	Ø o	h	kg	lb
Zn	GR 53	53mm- 2 1/16"	83mm- 3 1/4"	40mm- 1 9/16"	0,73	1,6
Al	GR 53A	53mm- 2 1/16"	83mm- 3 1/4"	40mm- 1 9/16"	0,28	0,61
Zn	GR 545	54,5mm- 2 1/8"	79mm- 3 1/8"	23mm- 7/8"	0,36	0,79
Al	GR 545A	54,5mm- 2 1/8"	79mm- 3 1/8"	23mm- 7/8"	0,14	0,3
Zn	GR 80	80mm- 3 1/8"	97mm- 3 3/16"	40mm- 1 9/16"	0,59	1,3
Al	GR 80A	80mm- 3 1/8"	97mm- 3 3/16"	40mm- 1 9/16"	0,22	0,5

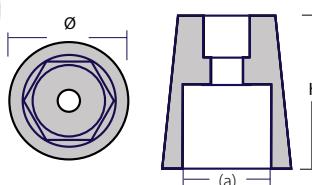
Special dimensions are produced / Özel ölçülere göre üretim yapılır

PROPELLER ANODES (Inside Conical)
PERVANE TUTYA (İç Konik)


Material	Code	\varnothing	$\varnothing 1$	$\varnothing 2$	h	kg	lb
Zn	P 025	33mm 1 5/16"	25mm 1"	11mm 7/16"	40mm 1 9/16"	0,134	0,29
Zn	P 030	40mm 1 9/16"	30mm 1 3/16"	13mm 1/2"	46mm 1 13/16"	0,195	0,43
Zn	P 035	45mm 1 3/4"	35mm 1 3/8"	16mm 5/8"	58mm 2 5/16"	0,33	0,73
Zn	P 040	51mm 2"	41mm 1 5/8"	16mm 5/8"	62mm 2 7/16"	0,465	1,02
Zn	P 045	56mm 3/16"	46mm 1 13/16"	17mm 11/16"	66mm 2 5/8"	0,6	1,32
Zn	P 050	72mm 2 13/16"	57mm 2 1/4"	22mm 7/8"	79mm 3 1/8"	1,1	2,42
Zn	P 055	74mm 2 15/16"	65mm 2 9/16"	21mm 13/16"	78mm 3 1/16"	0,9	1,98
Zn	P 060	83mm 3 1/4"	70mm 2 3/4"	22mm 7/8"	87mm 3 7/16"	1,5	3,3
Zn	P 100	100mm 3 15/16"	84mm 3 5/16"	24mm 15/16"	92mm 3 5/8"	2	4,4

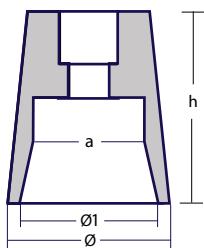
PROPELLER ANODES (Inside Hexagonal)
PERVANE TUTYA (İç Altı Köşe)


Mat.	Code	\varnothing	$\varnothing 1$	$\varnothing 2$	h	kg	lb
Zn	6P 025	33mm 1 5/16"	26mm 1"	11mm 7/16"	39mm 1 1/2"	0,12	0,26
Zn	6P 030	41mm 1 5/8"	31mm 1 1/4"	14mm 9/16"	53mm 2 1/8"	0,25	0,55
Zn	6P 035	46mm 1 13/16"	38mm 1 1/2"	14mm 9/16"	62mm 2 7/16"	0,35	0,77
Zn	6P 040	50mm 2"	41,5mm 1 5/8"	14mm 9/16"	67mm 2 5/8"	0,4	0,88
Zn	6P 045	60mm 2 3/8"	47mm 1 7/8"	22mm 7/8"	75mm 2 15/16"	0,7	1,54
Zn	6P 050	72mm 2 13/16"	60mm 2 3/8"	22mm 7/8"	80mm 3 1/8"	0,86	1,89
Zn	6P 055	75mm 2 15/16"	65mm 2 9/16"	22mm 7/8"	82mm 3 1/4"	1	2,2
Zn	6P 060	82mm 3 1/4"	70mm 2 3/4"	22mm 7/8"	87mm 3 7/16"	1,16	2,55

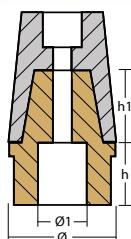
LONG SIZE PROPELLER ANODES (Inside Hexagonal)
PERVANE TUTYA


Mat.	Code	\varnothing	h	(a)	kg	lb
Zn	6K 27	47mm 1 7/8"	57mm 2 1/4"	27mm 1 1/16"	0,35	0,77
Zn	6K 32	52mm 2 1/16"	67mm 2 5/8"	32mm 1 1/4"	0,54	1,19

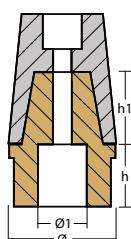
Special dimensions are produced / Özel ölçülere göre üretim yapılır

CRANCHI PROPELLER ANODES (Inside Square) / CRANCHI TUTYA (İçi Kare)


Mat.	Code	\varnothing	$\varnothing 1$	h	(a)	kg	lb
Zn	4P 047	82mm 3 1/4"	70mm 2 3/4"	87mm 3 7/16"	47mm 1 7/8"	1,09	2,4

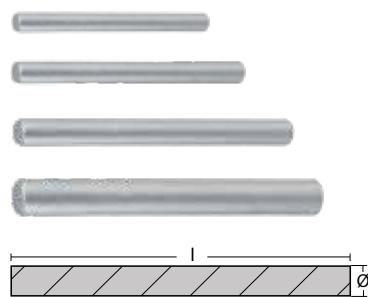
COMPLETE PROPELLER ANODES (Inside Conical)
KOMPLE PERVANE TUTYA (İçi Konik)
NEW


Material	Code	\varnothing shaft	\varnothing	$\varnothing 1$	h	h1
Zn+Brass	CP 025	25mm 1"	37mm 1 7/16"	16*1,5	20	18
Zn+Brass	CP 030	30mm 1 3/16"	45mm 1 3/4"	20*1,5	22	21
Zn+Brass	CP 035	35mm 1 3/8"	50mm 2"	24*2	24	24
Zn+Brass	CP 040	40mm 1 9/16"	55mm 2 3/16"	24*2	27	27
Zn+Brass	CP 045	45mm 1 3/4"	65mm 2 9/16"	33*2	30	30
Zn+Brass	CP 050	50mm 2"	75mm 2 15/16"	36*3	29	33
Zn+Brass	CP 055	55mm 2 3/16"	80mm 3 3/16"	40*3	40	40
Zn+Brass	CP 060	60mm 2 3/8"	90mm 3 9/16"	45*3	41	44

COMPLETE PROPELLER ANODES (Inside Hexagonal)
KOMPLE PERVANE TUTYA (İçi Altıgen)
NEW


Material	Code	\varnothing shaft	\varnothing	$\varnothing 1$	h	h1
Zn+Brass	6CP 025	25mm 1"	37mm 1 7/16"	16*1,5	18	18
Zn+Brass	6CP 030	30mm 1 3/16"	45mm 1 3/4"	20*1,5	22	21
Zn+Brass	6CP 035	35mm 1 3/8"	50mm 2"	24*2	24	24
Zn+Brass	6CP 040	40mm 1 9/16"	55mm 2 3/16"	24*2	27	26
Zn+Brass	6CP 045	45mm 1 3/4"	65mm 2 9/16"	33*2	29	29
Zn+Brass	6CP 050	50mm 2"	75mm 2 15/16"	36*3	35	40
Zn+Brass	6CP 055	55mm 2 3/16"	80mm 3 3/16"	40*3	35	40
Zn+Brass	6CP 060	60mm 2 3/8"	90mm 3 9/16"	45*3	41	44

Special dimensions are produced / Özel ölçülere göre üretim yapılır

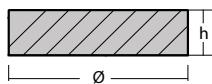
ROD ANODES
ÇUBUK TUTYALAR


Material	Code	\emptyset	l	kg	lb
Zn	CT 10	10mm 3/8"	150mm 5 7/8"	0,08	0,18
Zn	CT 13	13mm 1/2"	200mm 7 7/8"	0,18	0,4
Zn	CT 16	16mm 5/8"	200mm 7 7/8"	0,28	0,62
Zn	CT 20	20mm 13/16"	150mm 5 7/8"	0,31	0,68
Al	CT 20A	20mm 13/16"	150mm 5 7/8"	0,12	0,26
Zn	CT 22	22mm 7/8"	230mm 9"	0,6	1,32
Al	CT 22A	22mm 7/8"	230mm 9"	0,24	0,53
Zn	CT 30	30mm 1 3/16"	400mm 15 11/16"	2	4,4
Al	CT 30A	30mm 1 3/16"	400mm 15 11/16"	0,77	1,69
Zn	CT 40	40mm 1 9/16"	400mm 15 11/16"	3,6	7,92
Al	CT 40A	40mm 1 9/16"	400mm 15 11/16"	1,38	3,04
Zn	CT 50	50mm 2"	400mm 15 11/16"	5,6	12,32
Al	CT 50A	50mm 2"	400mm 15 11/16"	2,15	4,73
Zn	CT 60	60mm 2 3/8"	400mm 15 11/16"	8	17,6
Al	CT 60A	60mm 2 3/8"	400mm 15 11/16"	3,07	6,75
Zn	CT 80	80mm 3 3/16"	200mm 7 7/8"	7	15,4
Al	CT 80A	80mm 3 3/16"	200mm 7 7/8"	2,69	5,92
Zn	CT 100	100mm 3 15/16"	200mm 7 7/8"	11	24,2
Al	CT 100A	100mm 3 15/16"	200mm 7 7/8"	4,23	9,31
Zn	CT 120	120mm 4 11/16"	200mm 7 7/8"	16	35,2
Al	CT 120A	120mm 4 11/16"	200mm 7 7/8"	6,15	13,53
Zn	CT 140	140mm 5 1/2"	200mm 7 7/8"	22	48,4
Al	CT 140A	140mm 5 1/2"	200mm 7 7/8"	8,46	18,61
Zn	CT 150	150mm 5 7/8"	200mm 7 7/8"	25	55
Al	CT 150A	150mm 5 7/8"	200mm 7 7/8"	9,6	21,12
Zn	CT 165	165mm 6 11/16"	200mm 7 7/8"	31	68,2
Al	CT 165A	165mm 6 11/16"	200mm 7 7/8"	11,9	26,18
Zn	CT 190	190mm 7 1/2"	200mm 7 7/8"	40	88
Al	CT 190A	190mm 7 1/2"	200mm 7 7/8"	15,3	33,66
Zn	CT 230	230mm 9"	200mm 7 7/8"	58	127,6
Al	CT 230A	230mm 9"	200mm 7 7/8"	22,3	49

Special dimensions are produced / Özel ölçülere göre üretim yapılır

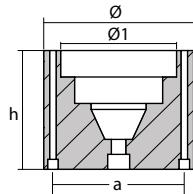
DISC ANODES

DİSK TUTYALAR

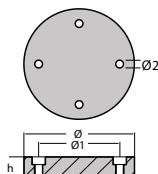


Mat.	Code	\varnothing	h	kg	lb
Zn	DSC 50	50mm 2"	10,5mm 3/8"	0,18	0,4
Al	DSC 50A	50mm 2"	10,5mm 3/8"	0,07	0,15
Zn	DSC 60	60mm 2 3/8"	20mm 13/16"	0,4	0,88
Al	DSC 60A	60mm 2 3/8"	20mm 13/16"	0,15	0,33
Zn	DSC 80	80mm 3 3/16"	20mm 13/16"	0,7	1,54
Al	DSC 80A	80mm 3 3/16"	20mm 13/16"	0,27	0,59
Zn	DSC 100	100mm 3 15/16"	20mm 13/16"	1,1	2,42
Al	DSC 100A	100mm 3 15/16"	20mm 13/16"	0,42	0,92
Zn	DSC 120	120mm 4 11/16"	25mm 1"	2	4,4
Al	DSC 120A	120mm 4 11/16"	25mm 1"	0,77	1,69
Zn	DSC 140	140mm 5 1/2"	30mm 1 3/16"	3,2	7
Al	DSC 140A	140mm 5 1/2"	30mm 1 3/16"	1,23	2,71
Zn	DSC 150	150mm 5 7/8"	30mm 1 3/16"	3,7	8,14
Al	DSC 150A	150mm 5 7/8"	30mm 1 3/16"	1,42	3,12
Zn	DSC 165	170mm 6 11/16"	30mm 1 3/16"	4,8	10,56
Al	DSC 165A	170mm 6 11/16"	30mm 1 3/16"	1,85	4,07
Zn	DSC 190	190mm 7 1/2"	30mm 1 3/16"	6	13,2
Al	DSC 190A	190mm 7 1/2"	30mm 1 3/16"	2,3	5,06
Zn	DSC 230	230mm 9"	30mm 1 3/16"	8,8	19,36
Al	DSC 230A	230mm 9"	30mm 1 3/16"	3,38	7,44
Zn	DSC 250	250mm 9 13/16"	30mm 1 3/16"	10,5	23,1
Al	DSC 250A	250mm 9 13/16"	30mm 1 3/16"	4	8,8
Zn	DSC 300	300mm 11 13/16"	30mm 1 3/16"	14,8	32,56
Al	DSC 300A	300mm 11 13/16"	30mm 1 3/16"	5,7	12,54

Special dimensions are produced / Özel ölçülere göre üretim yapılır

FERRETTI PROPELLER ANODES
FERRETTI TUTYA


Material	Code	Ø	Ø1	h	(a)	kg	lb
Zn	FRT 1000	155mm 6 1/8"	88mm 3 7/16"	100mm 3 15/16"	132mm 5 3/16"	10	22
Al	FRT 1000A	155mm 6 1/8"	88mm 3 7/16"	100mm 3 15/16"	132mm 5 3/16"	3,76	8,29
Zn	FRT 1250	155mm 6 1/8"	116mm 4 9/16"	125mm 4 15/16"	132mm 5 3/16"	12,5	27,5
Al	FRT 1250A	155mm 6 1/8"	116mm 4 9/16"	125mm 4 15/16"	132mm 5 3/16"	4,7	10,36
Zn	FRT 2000	208mm 8 3/16"	169mm 6 5/8"	172mm 6 3/4"	182mm 7 3/16"	22	48,4
Al	FRT 2000A	208mm 8 3/16"	169mm 6 5/8"	172mm 6 3/4"	182mm 7 3/16"	8,46	18,6

AZIMUTH PROPELLER ANODES
AZIMUTH TUTYA


Material	Code	Ø	Ø1	Ø2	h	kg	lb
Zn	AZM 046	139,6mm 5 1/2"	109mm 4 5/16"	15mm 9/16"	30mm 1 3/16"	2,6	5,7
Al	AZM 046A	139,6mm 5 1/2"	109mm 4 5/16"	15mm 9/16"	30mm 1 3/16"	1	2,2
Zn	AZM 072	164mm 6 7/16"	140mm 5 1/2"	18mm 11/16"	28mm 1 1/8"	4,5	9,9
Al	AZM 072A	164mm 6 7/16"	140mm 5 1/2"	18mm 11/16"	28mm 1 1/8"	1,7	3,8

VOLVO PENTA SAIL & STERN DRIVE ANODE
VOLVO PENTA TUTYA

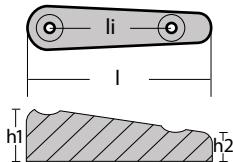
Code	Mat.	Volvo Penta Anodes			Description	kg	lb		
VP 0076	Zn	VOLVO PENTA STERN ANODE	23172849			3,95	8,69		
VP 0076A	Al					1,52	3,34		
VP 0081	Zn	VOLVO PENTA IPS ANODES	3593981			0,8	1,76		
VP 0081A	Al					0,3	0,67		
VP 0086	Zn	VOLVO PENTA SAIL DRIVE 120S			876286	0,52	1,14		
VP 0005	Zn	VOLVO PENTA SAIL DRIVE 130S			3888305 22651246	1,45	3,19		
VP 0099	Zn	VOLVO PENTA FLEX. 3 BLADE ANODE			3858399	0,27	0,59		
VP 0045	Zn	VOLVO PENTA DPH DPR ANODES			3588745	0,5	1,1		
VP 0046	Zn	VOLVO PENTA DPH DPR ANODES			3588746	0,8	1,76		
VP 0014	Zn	VOLVO PENTA SX DPS ANODES			3888814	1,15	2,6		
VP 0017	Zn	VOLVO PENTA SX DPS ANODES			3888817	1,08	2,37		

Special dimensions are produced / Özel ölçülere göre üretim yapılır

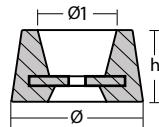
YANMAR SAIL DRIVE ANODES

YANMAR SAIL DRIVE TUTYA

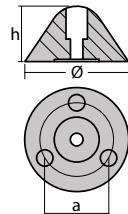
Material	Code	Part No	kg	lb
Zn	YM 2652	196440 02652	0,85	1,87
Zn	SD 2490		0,72	1,58
Al	SD 2490A	196450 02490	0,3	0,65

ARNESON DRIVE ANODES

ARNESON TUTYA

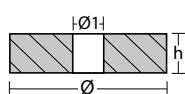
Mat.	Code	l	l1	h	kg	lb
Zn	ARN 025	150mm 5 7/8"	88mm 3 7/16"	28mm 1 1/8"	0,54	1,19
Al	ARN 025 A	150mm 5 7/8"	88mm 3 7/16"	28mm 1 1/8"	0,21	0,46
Zn	ARN 040	185mm 7 5/16"	127mm 5"	51mm 2"	1,85	4
Al	ARN 040A	185mm 7 5/16"	127mm 5"	51mm 2"	0,71	1,55

BENETEAU BOAT ANODE

BENETEAU TUTYA

Mat.	Code	Ø	Ø 1	h	kg	lb
Zn	BNT 050	79mm 3 1/8"	70mm 2 3/4"	45mm 1 3/4"	1,1	2,42
Al	BNT 050A	79mm 3 1/8"	70mm 2 3/4"	45mm 1 3/4"	0,42	0,93

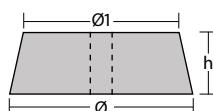
FLEX O FOLD PROPELLER ANODE

FLEX O FOLD TUTYA

Mat.	Code	Ø	h	a	kg	lb
Zn	FOF 1040	68mm 2 11/16"	37mm 1 7/16"	49,5mm 1 15/16"	0,475	1,045
Zn	FOF 2040	mm	82	43	58	1,1
Al	FOF 2040A	82mm 3 1/4"	43mm 11/16"	58mm 5/16"	0,42	0,93

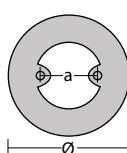
JET SKI ANODE FOR SEA DOO

JET SKI TUTYA

Material	Code	Ø	Ø 1	h	kg	lb
Zn	SD 080	mm	25	6,5	12	0,035
Al	SD 80A	inch	1"	0,25"	1/2	0,013

Special dimensions are produced / Özel ölçülere göre üretim yapılır

LEWMAR BOW THRUST ANODE
LEWMAR TUTYA


Mat.	Code	\varnothing	$\varnothing 1$	h	kg	lb
Zn	LM 050	60mm 2 3/8"	47mm 1 7/8"	19mm 3/4"	0,235	0,51
Al	LM 050A	60mm 2 3/8"	47mm 1 7/8"	19mm 3/4"	0,09	0,2

BOILER ANODE
ISOTERM TUTYA


Mat.	Code	\varnothing	a	h	kg	lb
Zn	ISO101	101mm 4"	42mm 1 5/8"	10mm 3/8"	0,265	0,58

HAMILTON ANODE
HAMILTON TUTYA
NEW

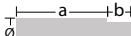
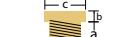
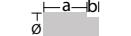
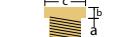

Mat.	Code	\varnothing	$\varnothing 1$	h	kg	lb
Zn	HMT 35	36mm 1 27/64"	25mm 1"	57mm 2 1/4"	0,31	0,68
Zn	HMT 58	-	-	23mm 15/16"	0,3	0,66
Zn	HMT 95	99mm 3 7/8"	73mm 2 7/8"	28mm 1 1/8"	1,2	2,64

Special dimensions are produced / Özel ölçülere göre üretim yapılır

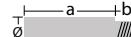
PENCIL ANODES

KALEM TUTYALAR

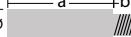
AIFO FPT

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	IFA 1077	IVECO FIAT ANODE	mm	14	26	9		
	Brass	IFT 1077	IVECO ANODE TAP	mm		10	8	24	M18X1,50
	Zn	IFA 1072	IVECO FIAT ANODE	mm	20	20	7		
	Brass	IFT 1072	IVECO ANODE TAP	mm	17	10,5	8,5	32	M28X1,50

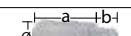
CATERPILLAR

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	CTA 1880	6L2280G	mm	12,5	38	8		7/16"20 UNC
	Zn	CTA 1080	6L2280	mm	11,5	40	10		3/8-16"UNC
	Brass	CTT 1079	6L2279	mm		13,5	10	11	Conical Gas 3/8"-3/8-16"UNC
	Zn	CTA 1083	6L2283	mm	10	55	10		1/4"20 UNC
	Brass	CTT 1082	6L2282	mm		12,5	7,5	9,5	1/4"NPT-1/4"UNC
	Zn	CTA 1088	6L2288	mm	16	63	12		3/8 UNC
	Brass	CTT 1069	SB9169	mm		14	10	14	Conical GAS 1/2 NPT-3/8 UNC

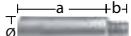
CUMMINS

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	CMA 8241	CUMMINS ANODE	mm	16	41	9		7/16" UNC
	Brass	CMT 8241	CUMMIN TAP	mm		13	8+2	22	1/2"NPT-7/16"UNC
	Brass	CMT 1013	CUMMIN TAP	mm		16	8	12,7	1/2"NPT-7/16"UNC

VOLVO PENTA

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	VP 838929	VOLVO PENTA ANODE	mm	16,5	30	12		Inside M8-Outside 7/16"
	Brass	VP 838928	VOLVO PENTA TAP	mm		32	8+2	12,7	1/2"NPT-M8
	Zn	VP 823661	VOLVO PENTA ANODE	mm	27	44	9		3/8 UNC
	Brass	VP 823662	VOLVO PENTA TAP	mm		14	8+2	19	1R-3/8"UNC

ONAN

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	ON 4434	ONAN ANODE	mm	13	32	9		3/8" UNC
	Brass	ON 4435	ONAN TAP	mm		11	7+2	18	3/8"NPT-3/8"UNC

Special dimensions are produced / Özel ölçülere göre üretim yapılır

PENCIL ANODES

KALEM TUTYALAR

YANMAR

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	YM 44150	YANMAR ANODE	mm	13	38	12		3/8" UNC
	Brass	YM 44151	YANMAR TAP	mm		11	7+2	18	3/8"NPT-3/8"UNC
	Zn	YM 18790	YANMAR ANODE	mm	16	50	12		7/16" UNC
	Brass	YM 18791	YANMAR TAP	mm		13	7+2	22	1/2"NPT-7/16"UNC

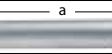
WESTERBEKE

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	WST 11885	WESTERBEKE ANODE	mm	10	45	10		3/8" UNC
	Brass	WST 11886	WESTERBEKE TAP	mm		12	8	14	1/4"NPT-3/8"UNC

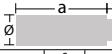
KOHLER

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	KH 2141	KOHLER ANODE	mm	13	32	9		3/8" UNC
	Brass	KH 2142	KOHLER TAP	mm		11	6	22	M18-3/8"UNC

WEBER

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	WBA 1202	WEBER ANODE	mm	16	63	9		M6x1.0

LOMBARDINI

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	LBA 1050	LOMBARDINI ANODE	mm	14	26	10		
	Brass	LBT 1050	LOMBARDINI TAP	mm		10	8+2	22	1/2 Gas

SCANIA

	Mat.	Code	DESCRIPTION		Ø	a	b	c	Thread
	Zn	SNA 1002	SCANIA ANODE	mm	20	45	12		M8x1,25
	Zn	SNA 1201	SCANIA ANODE	mm	17	45	9		M6X1.00

Special dimensions are produced / Özel ölçülere göre üretim yapılır

ENGINE ANODES COMPLETE
MAKİNA TUTYALARI

	Mat.	Code	DESCRIPTION		Ø	c	Thread
	Zn+B	IFC 300	AIFO FIAT ANODE+TAP	mm	13	22	M 18 x 1.50
	Zn+B	IFC 1077	AIFO FIAT ANODE+TAP	mm	14	24	M18 x 1,50
	Zn+B	IFC 1072	AIFO FIAT ANODE+TAP	mm	20	32	M28 x 1,50
	Zn+B	CAT 7980	CATERPILLAR ANODE+TAP	mm	11,5	11	Conical Gas 3/8"
	Zn+B	CAT 8283	CATERPILLAR ANODE+TAP		10	9,5	1/4"NPT
	Zn+B	CAT 6988	CATERPILLAR ANODE+TAP		16	14	Conical GAS 1/2"
	Zn+B	CUM 8241	CUMMINS ANODE+TAP		16	22	7/16" UNC
	Zn+B	VP 2829	VOLVO PENTA ANODE+TAP		16,5	12,7	1/2" NPT
	Zn+B	VP 6162	VOLVO PENTA ANODE+TAP		27	19	1R
	Zn+B	ON 3435	ONAN ANODE+TAP		13	18	3/8" NPT
	Zn+B	YM 5051	YANMAR ANODE+TAP		13	18	3/8" NPT
	Zn+B	YM 9091	YANMAR ANODE+TAP		16	22	1/2" NPT
	Zn+B	WST 8586	WESTERBEKE ANODE+TAP		10	14	1/4" NPT
	Zn+B	KH 4142	KOHLER ANODE+TAP		13	22	M 18
	Zn+B	LBC 1050	LOMBARDINI ANODE+TAP		13	22	1/2" Gas
	Zn+B	IVC 300	IVECO ENGINE ANODE COMPLETTE		13	22	1/2" Gas

Special dimensions are produced / Özel ölçülere göre üretim yapılır

YAMAHA ANODES
YAMAHA TUTYA

	Mat.	Code		Part no	gr	lb
	Al	YMH 26A	Yamaha Bracked Anode	65W 45251 00A	37	0,08
	Zn	YMH 26Z			96,2	0,21
	Al	YMH 28A	Yamaha Internal Cyl. Block Anode	68V 11325	28	0,06
	Zn	YMH 28Z			72,8	0,16
	Al	YMH 30A	Lower Unit Anode	6L5 45251	30	0,07
	Zn	YMH 30Z			78	0,17
	Al	YMH 45A	Yamaha Lower Gear Unit Anode	67C 45251	45	0,1
	Zn	YMH 45Z			117	0,26
	Al	YMH 180A	Yamaha Transom Anode	6G5 45251 01A	455	1
	Zn	YMH 180Z			1183	2,6
	Al	YMH 95A	Yamaha Trim Tab Anode	664-45371	100	0,22
	Zn	YMH 95Z			240	0,5

J/EVINRUDE ANODES
J/EVINRUDE TUTYA

	Mat.	Code		Part no	gr	lb
	Al	SD 40A	Sea Doo Jet ski Anode	271001920	8	0,017
	Zn	SD 40Z			20,8	0,045
	Al	EVR 25A	J/Evinrude Transom Bracked Anode	173029	32	0,07
	Zn	EVR 25Z			83,2	0,18
	Al	EVR 40A	J/Evinrude Transom Bracked Anode	393023	86	0,19
	Zn	EVR 40Z			224	0,49
	Al	EVR 165A	J/Evinrude Transom Bracked Anode	433580	280	0,62
	Zn	EVR 165Z			728	1,6

Special dimensions are produced / Özel ölçülere göre üretim yapılır

MERCRAUISER ANODES
MERCRAUISER TUTYA

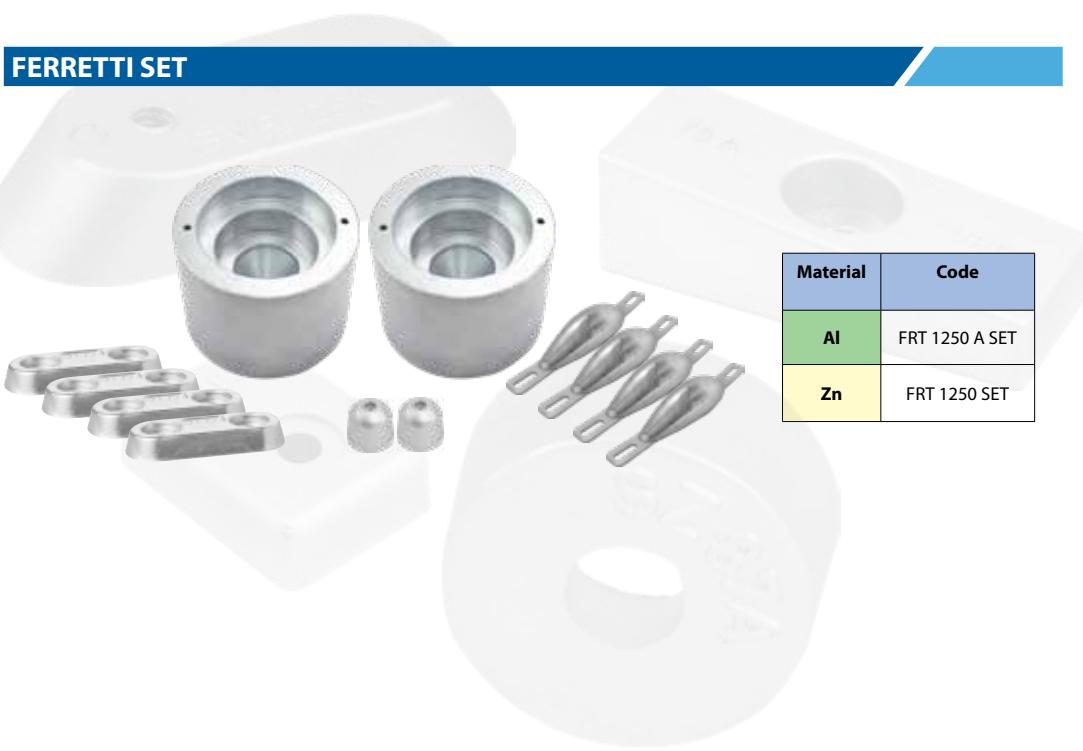
Mat.	Code		Part No	gr	lb
	Al MRC 50A	Mercruiser Trim Cylinder Anode	806190T 1	130	0,28
	Zn MRC 50Z			338	0,75
	Al MRC 90A	Mercruiser Trim Tab Anode Flat	762145T 5	120	0,26
	Zn MRC 90Z			312	0,68
	Al MRC 91A	Mercruiser Trim Tab Anode Flat	76214 4	118	0,26
	Zn MRC 91Z			307	0,67
	Al MRC 34A	Mercruiser Bravo Cavitation Plate Anode	821630T 1	370	0,81
	Zn MRC 34Z			962	2,11
	Al MRC 38A	Mercruiser Bearing Carrier Anode	865182A 1	205	0,45
	Zn MRC 38Z			533	1,17
	Al MRC 48A	Verado 6 Manifold Anode	806188 1	75	0,16
	Zn MRC 48Z			195	0,43
	Al VRD 35A	Verado 6 Trim Cylinder Anode	880653	195	0,43
	Zn VRD 35Z			507	1,1
	Al VRD 73A	Verado 4 6 Side Pocket Anode	893404	45	0,1
	Zn VRD 73Z			117	0,26
	Al VRD 75A	Verado 4 Power Trim Anode	826134T	95	0,21
	Zn VRD 75Z			247	0,54
	Al VRD 165A	Mercruiser Alpha one Gen 2 Trim Cylinder Anode	818298T 1	270	0,59
	Zn VRD 165Z			700	1,54
	Al MRC 74A	Mercruiser Alpha 1 Gen 2 Cavitation plate Anode	806105Q	90	0,2
	Zn MRC 74Z			230	0,51
	Al MRC 21A	Mercruiser Gimbal Housing Block Anode	806189Q	50	0,11
	Zn MRC 21Z			120	0,27
	Al MRC 188A	Mercruiser Gimbal Housing Block Anode	821629Q	270	0,59
	Zn MRC 188Z			700	1,54
	Al MRC 95A	Mercruiser Gimbal Housing Block Anode	43994	350	0,77
	Zn MRC 95Z			900	1,98

HONDA ANODES
HONDA TUTYALAR

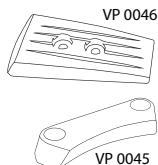
Material	Code	Part No	gr	lb
Al	EVR 25A	45251 01A	34	0,075
Zn	EVR 25Z		88,4	0,2
Al	VRD 75A	826134T	100	0,22
Zn	VRD 75Z		260	0,57

SUZUKI ANODES
SUZUKI TUTYALAR

Material	Code	Part No	gr	lb
Al	SZ 93A	55321 93j01	32	0,07
Zn	SZ 93Z		83,2	0,18
Al	SZ 87A	55321 87j00	9	0,02
Zn	SZ 87Z		23,4	0,05

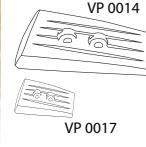
FERRETTI SET


Special dimensions are produced / Özel ölçülere göre üretim yapılır

KITS
SETLER


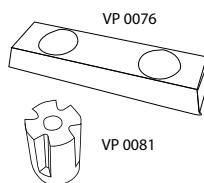
VP 0045

Mat.	Code		kg	lb
Al	DPH KIT Z	Volvo Penta Kit DPH DPR	1,3	2,86
Zn				



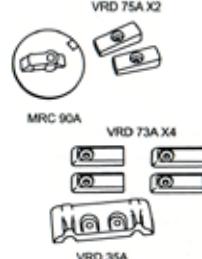
VP 0017

Mat.	Code		kg	lb
Al	DPS KIT Z	Volvo Penta Kit SX DPS	2,23	4,9
Zn				



VP 0081

Mat.	Code		kg	lb
Al	IPS KIT A	Volvo Penta Kit IPS	1,82	4
Zn	IPS KIT Z		4,75	10,45



VRD 75A X2

MRC 90A

VRD 73A X4



VRD 35A

Mat.	Code		kg	lb	
Al	VRD 6A	Verado 6 Comple Kit	0,7	1,54	
Zn	VRD 6Z		1,82	4	
		VRD 6 Screw Set			



MRC 90A



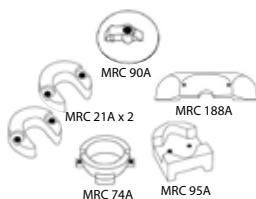
VRD 75A X2



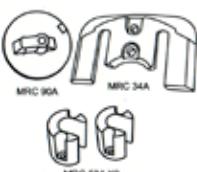
VRD 165 A

Mat.	Code		kg	lb	
Al	VRD 4A	Verado 4 Comple Kit	0,6	1,3	
Zn	VRD 4Z		1,56	3,43	
		VRD 4 Screw Set			

Special dimensions are produced / Özel ölçülere göre üretim yapılır

KITS
SETLER


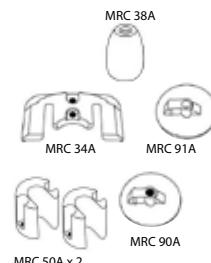
Mat.	Code		kg	lb
Al	ALFA 1A	ALFA 1 GEN 2	0,8	1,76
Zn	ALFA 1Z		2,08	4,58
ALFA 1 Screw Set				



Mat.	Code		kg	lb
Al	MRC 2/3A	Bravo 2/3 Kit	0,78	1,72
Zn	MRC 2/3Z		2	4,4
MRC 2/3 Screw Set				



Mat.	Code		kg	lb
Al	MRC 1A	Bravo 1 Kit	1	2,2
Zn	MRC 1Z		2,6	5,72
MRC 1 Screw Set				

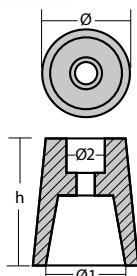


Mat.	Code		kg	lb
Al	MRC 3A	Bravo 3 Kit 2004+	1,1	2,42
Zn	MRC 3Z		2,86	6,29
MRC 3 Screw Set				

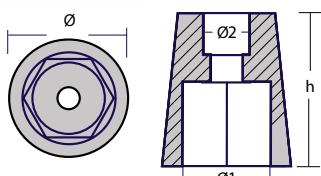
Special dimensions are produced / Özel ölçülere göre üretim yapılır

MARMARİS YACHT CHANDLERY

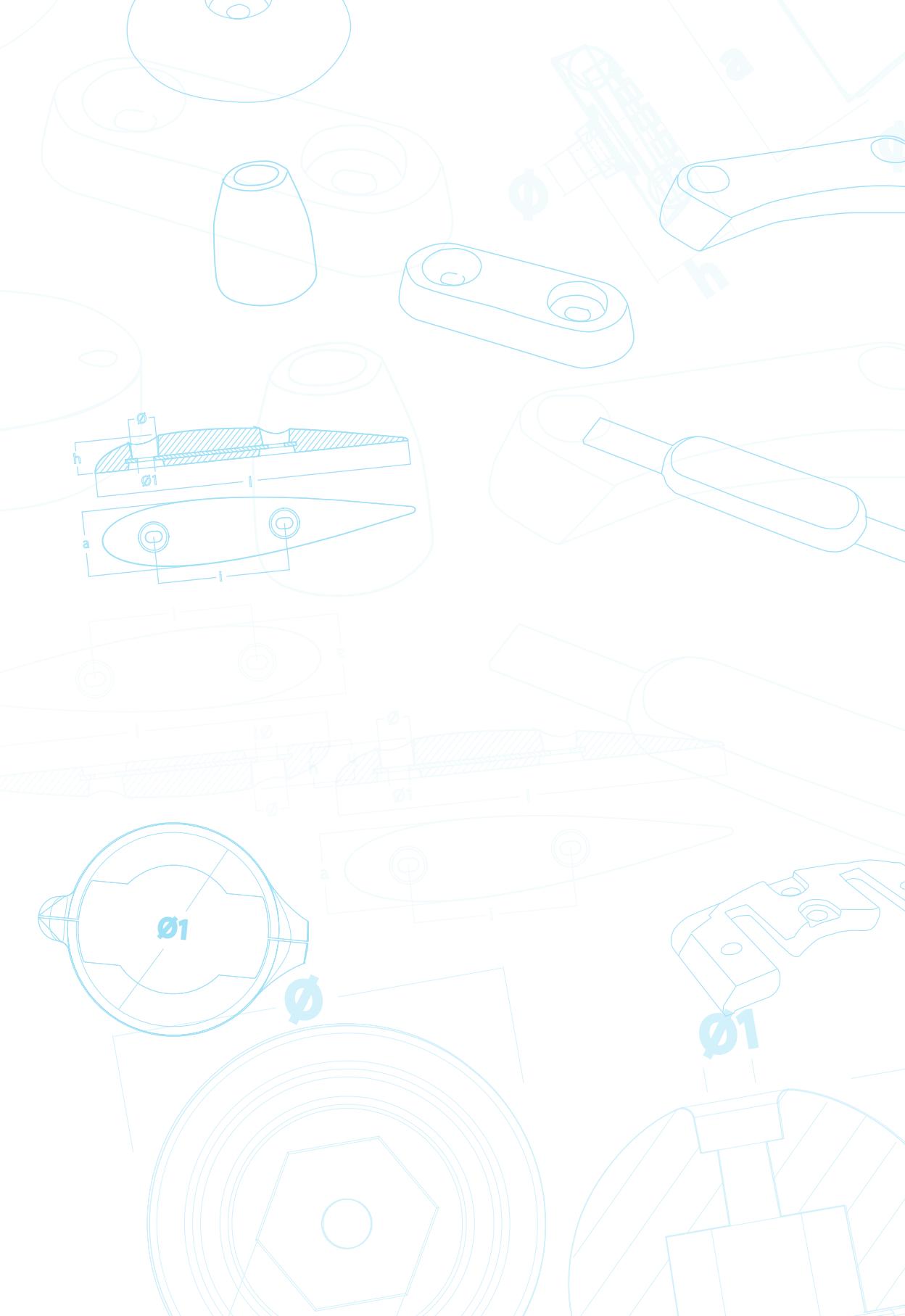


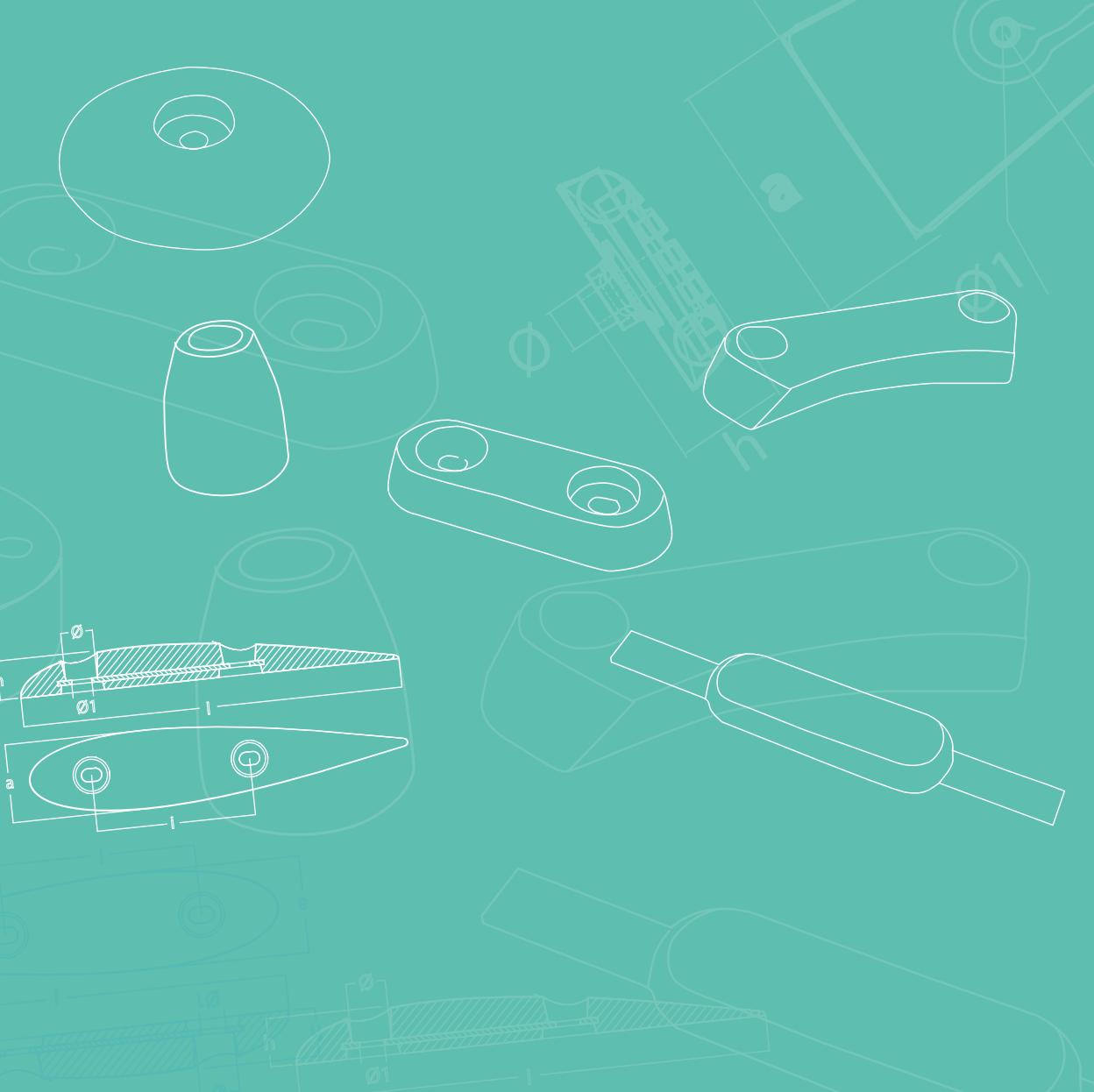
PROPELLER ANODES (Inside Conical)
PERVANE TUTYA (İç Konik)
NEW


Material	Code	\varnothing	$\varnothing 1$	$\varnothing 2$	h	kg	lb
AI	P 025	33mm 1 5/16"	25mm 1"	11mm 7/16"	40mm 1 9/16"	0,134	0,29
AI	P 030	40mm 1 9/16"	30mm 1 3/16"	13mm 1/2"	46mm 1 13/16"	0,195	0,43
AI	P 035	45mm 1 3/4"	35mm 1 3/8"	16mm 5/8"	58mm 2 5/16"	0,33	0,73
AI	P 040	51mm 2"	41mm 1 5/8"	16mm 5/8"	62mm 2 7/16"	0,465	1,02
AI	P 045	56mm 3/16"	46mm 1 13/16"	17mm 11/16"	66mm 2 5/8"	0,6	1,32
AI	P 050	72mm 2 13/16"	57mm 2 1/4"	22mm 7/8"	79mm 3 1/8"	1,1	2,42
AI	P 055	74mm 2 15/16"	65mm 2 9/16"	21mm 13/16"	78mm 3 1/16"	0,9	1,98
AI	P 060	83mm 3 1/4"	70mm 2 3/4"	22mm 7/8"	87mm 3 7/16"	1,5	3,3
AI	P 100	100mm 3 15/16"	84mm 3 5/16"	24mm 15/16"	92mm 3 5/8"	2	4,4

PROPELLER ANODES (Inside Hexagonal)
PERVANE TUTYA (İç Altı Köşe)
NEW


Mat.	Code	\varnothing	$\varnothing 1$	$\varnothing 2$	h	kg	lb
AI	6P 025	33mm 1 5/16"	26mm 1"	11mm 7/16"	39mm 1 1/2"	0,12	0,26
AI	6P 030	41mm 1 5/8"	31mm 1 1/4"	14mm 9/16"	53mm 2 1/8"	0,25	0,55
AI	6P 035	46mm 1 13/16"	38mm 1 1/2"	14mm 9/16"	62mm 2 7/16"	0,35	0,77
AI	6P 040	50mm 2"	41,5mm 1 5/8"	14mm 9/16"	67mm 2 5/8"	0,4	0,88
AI	6P 045	60mm 2 3/8"	47mm 1 7/8"	22mm 7/8"	75mm 2 15/16"	0,7	1,54
AI	6P 050	72mm 2 13/16"	60mm 2 3/8"	22mm 7/8"	80mm 3 1/8"	0,86	1,89
AI	6P 055	75mm 2 15/16"	65mm 2 9/16"	22mm 7/8"	82mm 3 1/4"	1	2,2
AI	6P 060	82mm 3 1/4"	70mm 2 3/4"	22mm 7/8"	87mm 3 7/16"	1,16	2,55





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