SHABBARI

ISO 9001:2000 CERTIFIED

SHABBARI

CONSISTENT

PRICE

AND

QUALITY

2 elements that fasten us together

» Consultants » Engineering Contractors » The Governments

SHABBARI

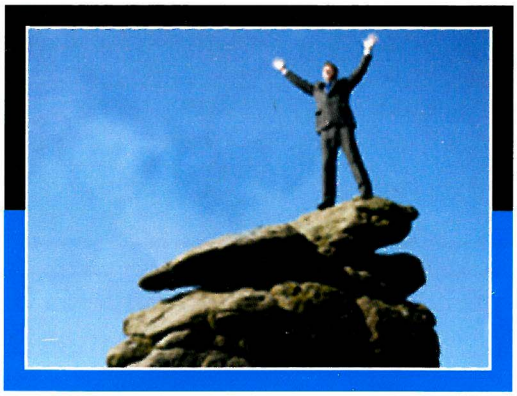
SHABBARI TRADING LLC,

Established on 5th Jan 1995, one of the largest stockings and wholesale distributors of fasteners business in U.A.E. Shabbari's philosophy is to bring its customers the highest quality of parts and service possible. This, with our extensive capabilities, has made SHABBARI TRADING LLC an industry leader. SHABBARI's management capitalizes on its extensive experience of above 45 years in bringing high quality parts and providing excellent service to its valued customers. Today, we have an "in-house" stock of more than 20,000 different fasteners ranging from various sizes, materials and specifications. In addition, we also have the capability of providing any complex fasteners and parts made to the customer's requirement.

From blanket orders with scheduled releases to multiple location bin stocking services, SHABBARI TRADING LLC can offer an inventory management program that will reduce your costs, guarantee availability and streamline your entire purchasing process.

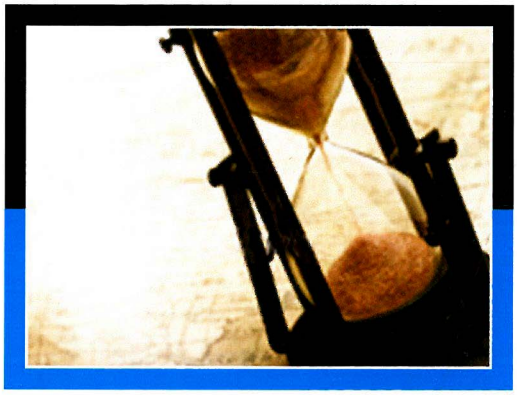
We build a relationship with our customers by tailoring our services to meet their changing needs. And continue to build this relationship by offering our customers highly efficient methods of inventory control and distributing the parts they need, when they need them. SHABBARI always continues to find, evaluate and test new product lines. With our strong manufacturing partners capabilities, we create a "One Stop" solution for our customers. We require "No Minimum Order Quantity" for any stock item. We are most economical, "Competitive Price with the Best Quality" and we are the one source for your "Complete Range of Fasteners".

PROFILE



Our Vision

We want to be the market leader and the most successful Fasteners Solutions Provider in the industry.

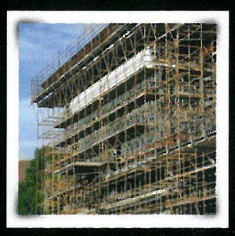


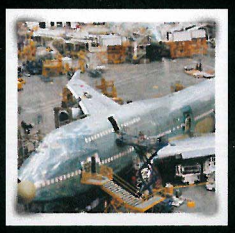
Our Mission

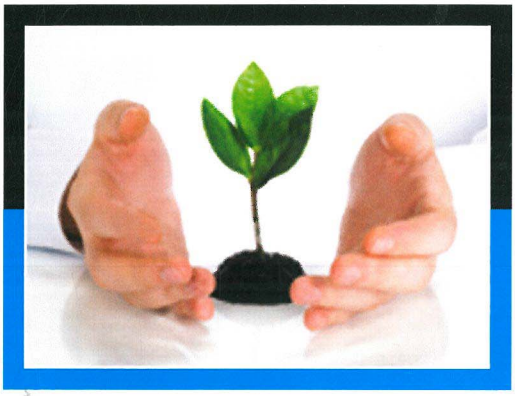
- We strive to increase our market leadership in the Fasteners industry.
- We aim to meet and exceed our customer's needs and expectations.
- We secure a long-term profitable business with our equally committed manufacturers and suppliers.

QUALITY

SHABBARI







Few of Our Valued Customers

- Al NABOODAH Group of Companies
- BELHASA Group of Companies
- MABANI Steel
- Dubai Rapid Link Consortium
- Tiger Steel
- Kelly Steel

SHABBARI

CUSTOMERS

Our Suppliers

TCB

BTS GmbH
Beam Clamps
BTS

FABORY Fasteners

IFASTGROUPE DISTRIBUTION
A Division of Ifastgroupe

ITALBOLT INOX SERVICE
Stainless Steel Fasteners

SHEARSTUD
www.shearstud.com

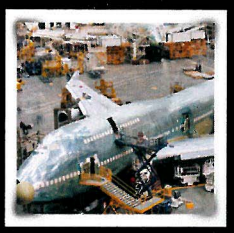
SHEARSTUD

V.AR.VIT.

VESCOVINI GROUP

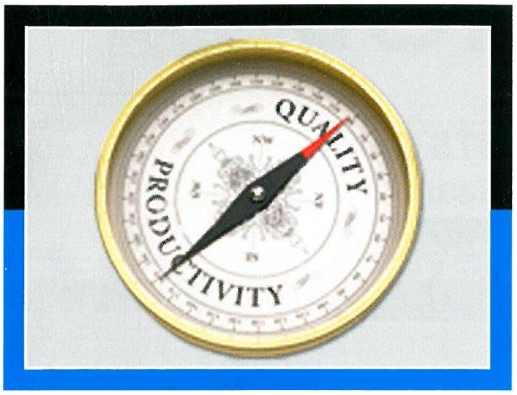
SSF

super duplex titanium
high nickel alloys stainless steel



QUALITY

SHABBARI



Our Quality Policies

- The customer always comes first
- Zero defects are our target
- Always do it right the first time
- Always is quality consistent and correct
- Prevention is better than cure
- Quality is everyone's responsibility
- Quality improvement must become a positive habit
- Continuous improvement is our attitude
- An ISO Certified Company

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Our Quality Cycle

- Material Ordered from Selected ISO certified company
- Received goods as per schedule
- Once Material is received the goods are inspected, sorted and Random Test carried out
- If material received is as per proper specification, than properly labeled and stored in Warehouse
- Material not as per sepcification - Rejected and returned to Supplier

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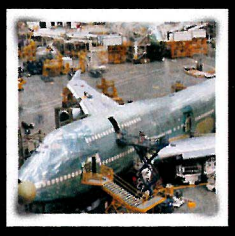

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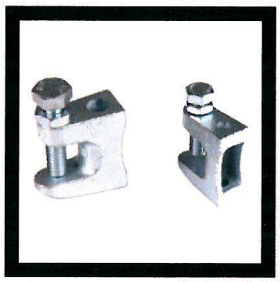
Anchors, Studs & Lifting

L & Twisted
Foundation Bolt

Lifting Eye Bolt, Nut

Shear Studs

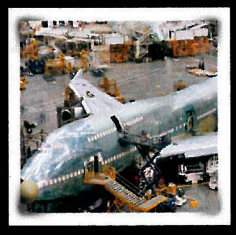


Beam Clamps

Anchors & Shields

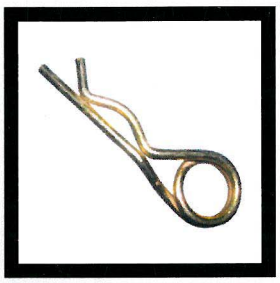
PRODUCTS

SHABBARI



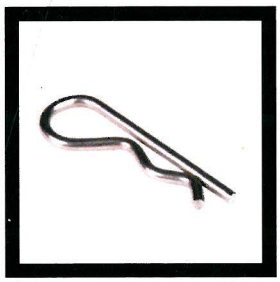
Pins, Keys & Rivets

Taper Pin



Double Spring Lock Clip

Dowel & Split (Cotter) Pin



Hair Pin

Aluminium Blind Rivet

Aluminium Round Head Rivet

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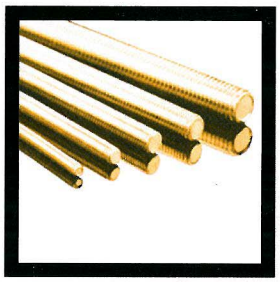
PRODUCTS

Threaded Bars

Zinc & Black Threaded Bar

SS Threaded Bar



Brass Threaded Bar

PRODUCTS

SHABBARI

Screws

Self Taping Screws

Brass Machine Screws

Hex Head Self Tapping Screws

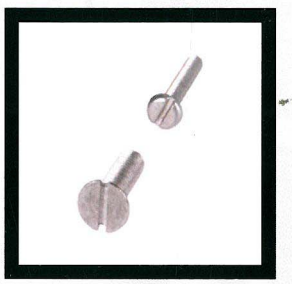
Brass/Wood Screws

Coach Screws

SS Bi-Metal SDS

Dowel Screw

Mushroom Head ST Screws



St. St. Pan, CSK Head Screws

St. St. Machine Screws

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PRODUCTS

Allen (Socket) Products

Low Head

Grub Screw

Allen Bolt

Fine Allen Bolt

CSK Allen Bolt

Button Head
Allen Bolt

SS Allen Bolt

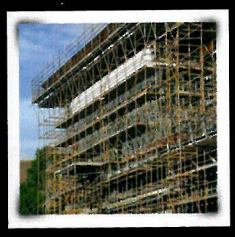
SS CSK Allen Bolt

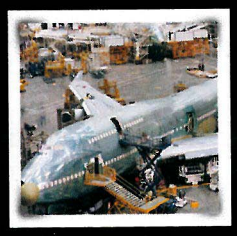
SS Button Head
Allen Screws

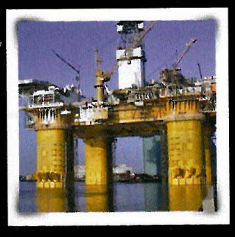
SS Allen Grub Screws

PRODUCTS

SHABBARI







Bolts

Heavy Hex Bolt
A325M, A490M

Brass Eye Bolt
& Wing Nut

Elevator Bolt

10.9 Fine Bolt

St. St. Carriage Bolt

UNF G5, G8 Bolt

Brass Bolts

UNC G8 Bolt

UNC G5 Bolt

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PRODUCTS

Bolts

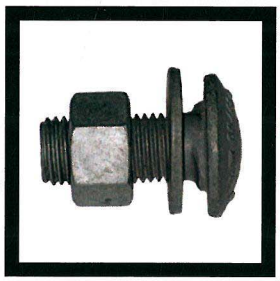
SS Bolts

Spline Bolts

HDG 8.8 Bolt

Wing Bolt

Carriage Bolt



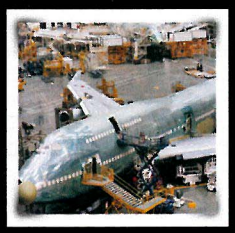
Highway Barrier

Tension Control Bolt

HDG 10.9 Bolt

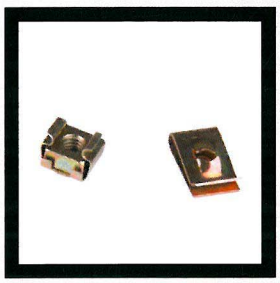
PRODUCTS

SHABBARI



Nuts

Spring Nuts



Cage & Speed Nut

Flange Nuts

ZP Brass & SS Dome Nuts

SS Wing Nut

Steel Wing Nut

BrassWing Nut

Pal Nut

Long Nut

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PRODUCTS

Nuts

2H Nut

Rivet Nut

Castle Nut

Full Steel Lock Nut

Nylock Nut

Check Nut

G. I. Nut

HDG A563M Nut

Square Nut

Stainless Steel Nut

PRODUCTS

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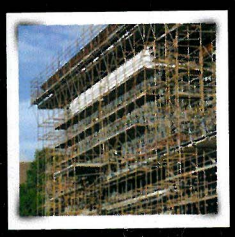
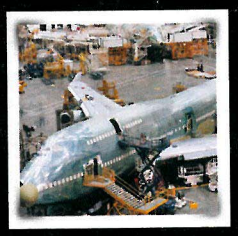


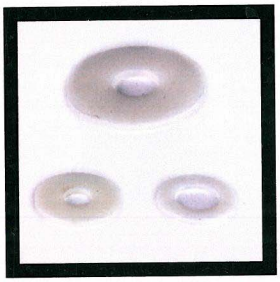


Washers

Taper Washer

Conical Spring Washer

Hillside Washer



Nylon Washer

Internal Star Washer

Star Lock Washer

Copper Washer

Single Tab Washer

Twin Tab Washer

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PRODUCTS

Washers

Contact Washer

Schnorr Washer

SS Internal
Star Washer

SS Flat
Washer Din 125

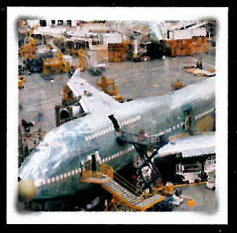
ZP Flat Washer
Din 125

External Star Washer

SS External
Star Washer

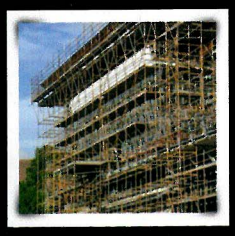
Internal Tooth Washer

External Tooth Washer



PRODUCTS

SHABBARI



Mechanical Properties of Steel, Screws and Studs

Mechanical and Physical Properties of Steel Bolts, Screws & Studs in accordance with ISO898-1:1999 is given below:

Sub-clause number	Mechanical and physical property			Property class										
				3.6	4.6	4.8	5.6	5.8	6.8	8.8[a] d ≤ 16[c] mm	8.8[a] d > 16[c] mm	9.8[b]	10.9	12.9
5.1	Nominal tensile strength, $R_{m,nom}$		N/mm²	300	400		500		600	800	800	900	1000	1200
5.2	Minimum tensile strength, $R_{m,min}$ [d e]		N/mm²	330	400	420	500	520	600	800	830	900	1040	1220
5.3	Vickers hardness, HV		min.	95	120	130	155	160	190	250	255	290	320	385
	F ≥ 98N		max.	220[f]					250	320	335	360	380	435
5.4	Brinell hardness, HB		min.	90	114	124	147	152	181	238	242	276	304	366
	$F = 30\ D^2$		max.	209[f]					238	304	318	342	361	414
5.5	Rockwell hardness, HR	min.	HRB	52	67	71	79	82	89	-	-	-	-	-
			HRC	-	-	-	-	-	-	22	23	28	32	39
		max.	HRB	95.0[f]					99.5	-	-	-	-	-
			HRC	-					-	32	34	37	39	44
5.6	Surface hardness, HV 0.3		max.	-						[g]				
5.7	Lower yield stress,		nom.	180	240	320	300	400	480	-	-	-	-	-
	R_{eL}[h], N/mm²		min.	190	240	340	300	420	480	-	-	-	-	-
5.8	Stress at 0.2% non-proportional		nom.	-					-	640	640	720	900	1080
	elongation $R_{p0.2}$[i], N/mm²		min.	-					-	640	660	720	940	1100
5.9	Stress under proof load, S_p	S_p/R_{eL} or $S_p/R_{p0.2}$		0.94	0.94	0.91	0.93	0.90	0.92	0.91	0.91	0.90	0.88	0.88
			N/mm²	180	225	310	280	380	440	580	600	650	830	970
5.10	Breaking torque, M_B		Nm min.	-						See ISO 898-7				
5.11	Percent elongation after fracture, A		min.	25	22	-	20	-	-	12	12	10	9	8
5.12	Reduction area after fracture, Z		% min.	-						52		48	48	44
5.13	Strength under wedge loading[e]			The values for full size bolts and screws (no studs) shall not be smaller than the minimum values for tensile strength shown in 5.2										
5.14	Impact strength, KU		J min.	-			25	-		30	30	25	20	15
5.15	Head soundness			No fracture										
5.16	Minimum height of non-decarburized thread zone, E			-						$\frac{1}{2}H_1$		$\frac{2}{3}H_1$	$\frac{3}{4}H_1$	
	Maximum depth of complete decarburization, G		mm	-						0.015				
5.17	Hardness after retempering			-						Reduction of hardness 20 HV maximum				
5.18	Surface integrity			In accordance with ISO 6157-1 or ISO 6157-3 as appropriate										

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a For bolts of property class 8.8 in diameters d ≤16 mm, there is an increased risk of nut stripping in the case of inadvertent over-tightening inducing a load in excess of proof load. Reference to ISO 898-2 is recommended.

b Applies only to nominal thread diameters d ≤ 16 mm.

c For structural bolting the limit is 12 mm.

d Minimum tensile properties apply to products of nominal length l ≥ 2.5 d. Minimum hardness applies to products of length l < 2.5 d and other products which cannot be tensile-tested (e.g. due to head configuration).

e When testing full-size bolts, screws and studs, the tensile loads, which are to be applied for the calculation of R_m, shall meet the values given in Table 6 and Table 8.

f A hardness reading taken at the end of bolts, screws and studs shall be 250 HV, 238 HB or 99.5 HRB maximum.

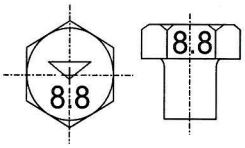
g Surface hardness shall not be more than 30 Vickers points above the measured core hardness on the product when readings of both surface and core are carried out at HV 0.3. For property class 10.9, any increase in hardness at the surface which indicates that the surface hardness exceeds 390 HV is not acceptable.

h In cases where the lower yield stress R_{eL} cannot be determined, it is permissible to measure the stress at 0.2% non-proportional elongation $R_{p0.2}$. For the property classes 4.8, 5.8 and 6.8 the values for R_{eL} are given for calculation purposes only, they are not test values.

i The yield stress ratio according to the designation of the property class and the minimum stress at 0.2% non-proportional elongation $R_{p0.2}$ apply to machined test specimens. These values if received from tests of full size bolts and screws will vary because of processing method and size effects.

Marking of Bolts, Screws and Studs

- Marking of all property classes is obligatory for hexagon bolts and screws with nominal diameters d ≥ 5mm, preferably on top of the head.



- Studs shall be marked for property classes ≥ 8.8 and with nominal diameter ≥ 5mm. For studs with interference fit, the marking shall be at the nut end.

Mechanical Properties of Steel Nuts in accordance with

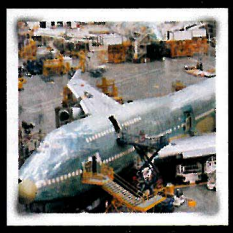
Strength grade designation	4	5	6	8	10	12	
Proof load stress[a] N/mm²	400	500	600	800	1000	1200	c
Brinell hardness (HB) max.	302	302	302	302	353	375	All nuts
Rockwell hardness[b] (HRC) max.	30	30	30	30	36	39	All nuts
Vickers hardness (HV) max.	310	310	310	310	370	395	All nuts

NOTE For Materials and Mechanical Properties of hexagon bolts and screws, refer to BS EN ISO 898-1.

[a] The proof load is calculated by multiplying the proof load stress by the tensile stress area of the bolt.

[b] The conversion from Brinell hardness into Rockwell hardness has been calculated according to BS EN ISO 6506-1,2 and 3 and BS EN 10109-1.

[c] All nuts other than those exempted by agreement between the purchaser and the manufacturer. Nuts with a specified proof load in excess of 500 000 N (see Table 10) may be exempt from proof load testing. Such nuts shall meet the minimum hardness as agreed between the purchaser and the manufacturer.



- The trade (Identification) marking of the manufacturer is mandatory on all products which are marked with property classes.

- For other types of bolts and screws the same marking system shall be used. For special components marking will be as agreed between the interested parties.

Mechanical Properties of Steel Nut

1. The property classes and their mechanical properties mentioned below apply to nuts with metric ISO thread with nominal thread diameters up to and including 39mm, and heights not less than 0.8D (including the normal counter-sunk on the thread), made of carbon steel or low alloy steel and when tested at room temperature.

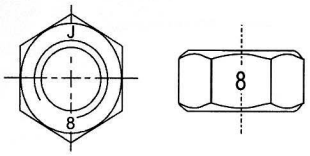
It does not apply to nuts which have to meet special requirements, such as for weldability, corrosion resistance, ability to withstand temperatures above + 300oC or below - 50oC or locking. Nuts made from free-cutting steel shall not be used above +250^{o}C. There is an increased risk of strip¬ping for assemblies with threads having wider tolerances. The use for nuts above 39mm is only permitted, when the nuts meet all the requirements.

2. Designation of Property Classes

The symbol for property classes consists of a figure that indicates 1/100 of the proof load stress in N/mm2.

E.g. class 8 has a proof load stress of 8 x 100 = 800 N/mm2. This proof load stress is equal to the minimum tensile strength of a bolt, which can be loaded up to the minimum yield strength of the bolt when mated with the nut con¬cerned. Nuts of a higher property class can generally be used in the place of nuts of a lower class.

Marking of Nuts



Hexagon nuts ≥ M5 shall be marked with the symbol of the property class, and the trade (identification) marking of the manufacturer on the bearing surface or side.

TECHNICAL

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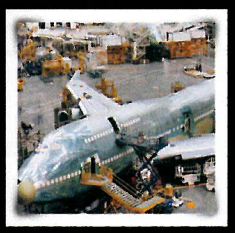

Chemical Composition of Steel Bolts, Screws and Studs

In the table below a specification is given of the steels for the standardized property classes of bolts, screws and studs in accordance with ISO898-1 :1999

Property Class	Material and treatment	Chemical composition limits (check analysis) % *(m/m)*					Tempering temperature
		C		P	S	B[a]	°C
		min.	max.	max.	max.	max.	min.
3.6[b]	Carbon Steel	-	0.20	0.05	0.06	0.003	-
4.6[b]		-	0.55	0.05	0.06	0.003	-
4.8[b]							
5.6		0.13	0.55	0.05	0.06	0.003	-
5.8[b]		-	0.55	0.05	0.06		
6.8[b]							
8.8[c]	Carbon steel with additives (e.g. B, Mn or Cr) quenched and tempered	0.15[d]	0.40	0.035	0.035	0.003	425
	Carbon steel quenched and tempered	0.25	0.55	0.035	0.035		
9.8	Carbon steel with additives (e.g. B, Mn or Cr) quenched and tempered	0.15[d]	0.35	0.035	0.035	0.003	425
	Carbon steel quenched and tempered	0.25	0.55	0.035	0.035		
10.9[e f]	Carbon steel with additives (e.g. B, Mn or Cr) quenched and tempered	0.15[d]	0.35	0.035	0.035	0.003	340
10.9[f]	Carbon steel quenched and tempered	0.25	0.55	0.035	0.035	0.003	425
	Carbon steel with additives (e.g. B, Mn or Cr) quenched and tempered	0.20[d]	0.55	0.035	0.035		
	Alloy steel quenched and tempered[g]	0.20	0.55	0.035	0.035		
12.9[f h i]	Alloy steel quenched and tempered[g]	0.28	0.50	0.035	0.035	0.003	380

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a Boron content can reach 0.005% provided that non-effective boron is controlled by addition of titanium and/or aluminium.
b Free cutting steel is allowed for these property classes with the folllowing maximum sulfur, phosphorus and lead contents: sulfur 0.34%; phosphorus 0.11%, lead 0.35%.
c For nominal diameters above 20 mm the steels specified for property classes 10.9 may be necessary in order to achieve sufficient hardenability.
d In case of plain carbon boron steel with a carbon content below 0.25% (ladle analysis), the minimum manganese content shall be 0.6% for property class 8.8 and 0.7% for 9.8, 10.9 and 10.9.
e Products shall be additionally identified by underlining the symbol of the property class (see clause 9). All properties of 10.9 as specified in Table 3 shall be met by 10.9, however, its lower tempering temperature gives it different stress relaxation characteristics at elevated temperatures (see Annex A).
f For the materials of these property classes, it is intended that there should be a sufficient hardenability to ensure a structure consisting of approximately 90% martensite in the core of the threaded sections for the fasteners in the "as-hardened" condition before tempering.
g This alloy steel shall contain at least one of the following elements in the minimum quantity given: chromium 0.30%, nickel 0.30%, molybdenum 0.20%, vanadium 0.10%. Where elements are specified in combinations of two, three or four and have alloy contents less than those given above, the limit value to be applied for class determination is 70% of the sum of the individual limit values shown above for the two, three or four elements concerned.
h A metallographically detectable white phosphorus enriched layer is not permitted for property class 12.9 on surfaces subjected to tensile stress.
i The chemical composition and tempering temperature are under investigation.

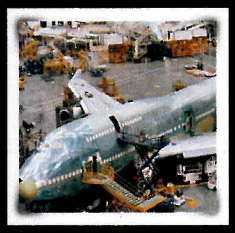
Chemical Composition of Steel Nut

In the table below a specification of steel nuts is given in accordance with BS3692:2001

Strength grade designation	Chemical composition limits (check analysis)			
	Carbon max. %	Manganese min. %	Phosphorus max. %	Sulfur max. %
4, 5 and 6 (See notes)	0.50	-	0.110	0.150
8	0.58	0.30	0.060	0.150
10 and 12 (See notes)	0.58	0.45	0.048	0.058

NOTE 1 Free cutting steel may be used only by special agreement between the purchaser and the supplier. In such cases, the following maximum phosphorus, sulfur and lead contents are permissible:
Phosphorus, 0.12 %; Sulfur, 0.34 %; Lead, 0.35 %

NOTE 2 Alloying elements may be added if necessary to develop the mechanical properties of the nuts stipulatd in clause 15.



Tension Control Bolt

"The lowest cost method of properly installing High Strength Friction Grip Bolts"

Tension Control Bolts or TCBs, *ASTM F 1852,* as they are commonly known throughout the world, are replacing conventional high strength friction grip bolts and swaged collar rivets simply because they are very quick and easy to install using Lightweight Electric Shear Wrenches. Guaranteed tension together with visual inspection removes the likelihood of operator error and ensures engineers that connections are tightened in accordance with specifications.

High strength TCBs are used in a wide range of applications from bridge splice plates to beam to column connections, from stadia roof trusses to rail switches and crossings.

The combination of superior tensile strength together with phenomenal ductility result in a universal bolt that can be employed in almost all steelwork connections.

TCB has its own metal coating plant producing an environmentally friendly process called Greenkote® which is comparable to galvanising, although it is harder wearing and readily accepts all paint systems.

Advantage of Tension Control Bolts

PRE-ASSEMBLED FASTENERS
Provides matched sets for consistent, reliable tension, and saves assembly time

BOLTS, NUT & WASHER (from one source)
Relieves traceability problems

GUARANTEED TENSION
With proper installation, greater than minimum tension is guaranteed

LIGHTWEIGHT ELECTRIC INSTALLATION TOOLS
Facilitate easy movement and reduce worker fatigue

DEPENDABLE, REPEATABLE RESULTS
Consistent tension is not dependent on tools or labor skills

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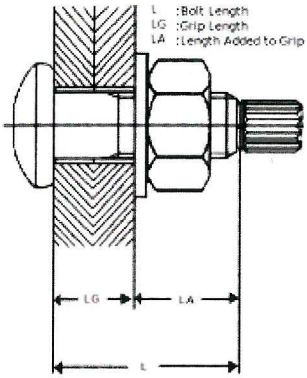
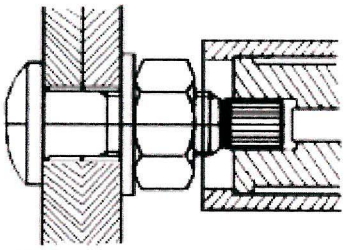
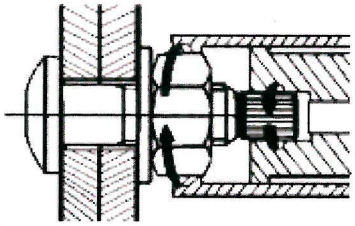


Determining Bolt Length

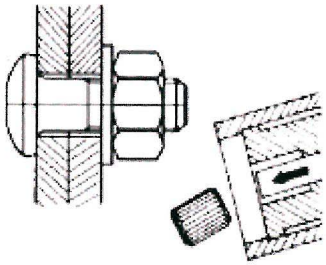
To determine the proper length of the fastener that is needed, refer to the chart below for the proper length to add to the grip.



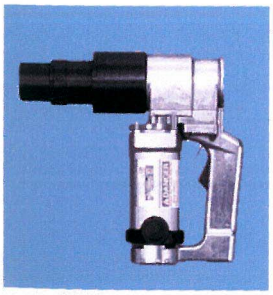
Fit the inner socket of the shear wrench over the spline on the bolt and push forward until the outer socket engages completely with the nut.



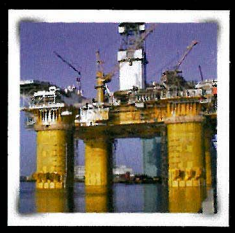
Pull the larger trigger on the wrench. The inner socket will hold the bolt in place while the outer socket tightens the nut. The spline will shear off when proper tension is reached.



Remove the wrench from the nut and pull the ejection trigger. This will eject the spline from the inner socket of the wrench. The installation is now complete and may be verified visually.



Electric
Shear Wrenches



TECHNICAL

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SS Bi-metal
Self Drilling Screws

Corrosion of Fastener

From the past experience about the failure of the metal building, "Corrosion" is one major failure of the metal construction industries.

Inside the interface-connection component o the Metal Building construction system. Corrosion of the screw always play a major reason for te failure. Therefore, choosing a right material for screw has been a very important issue to the designer. According to the America Uniform Buildiong Code, the proposed product time limit of the public safety is required for at least 30-50 years. The material in which can reach it requirement is the Austenitic Stainless Steel Fastener of the SUS 300 Series. It can prevent the corrosion process happened inside the panel & cladding. Not only to ensure the safety of the building and also to avoid the huge amount of the repair cost.

Fastener Coating

Bi-metal Screw Applied with Ruspert Coating:

AS-3566 Class 3 AS 2331.3.1 for 1000h standard

Ruspert metal finish is a high-grade metal surface processing technology that prevents corrosion. It is the tight joining of the baked ceramic surface coating and the chemical conversion film. These layers are bonded together through chemical reactions, and this unique method of combining layers results in a rigid combination of the coating films. Ruspert(r) treatment does not attribute its anti-corrosion properties to merely a single material, but the synergy of these three layers, which combined have superb rustproof qualities. Corrosion resistance against scratches, gas, weathering and other kinds of corrosive factors including salt water. Low processing temperature, as the drying temperature below 220°C protects the products from metallographic changes. It strengthen the product by prevent embrittment & hole corrosion after the heating treatment. Electrolytic corrosion resistance since it is less contact corrosion with other metals.

Ruspert Coating Consists of 3 Layers:

1. 1st layer is metallic zinc protecting the metal
2. 2nd layer is a chemical conversion film
3. 3rd layer is the baked ceramic coating

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Advantages of Using Bi-Metal Self-Drilling Screw

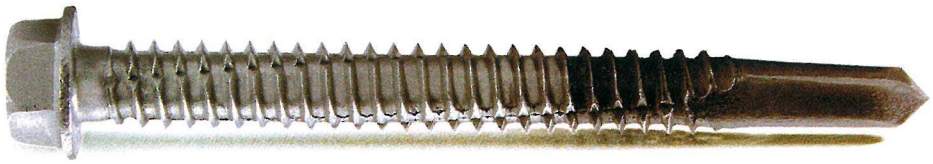
Longer Life Cycles for Building

300 series Austenitic Staianless Steel

(Cold Forging, Not Magnetic, Corrosion Resistance)

Alloy Steel Partial Heat Treatment

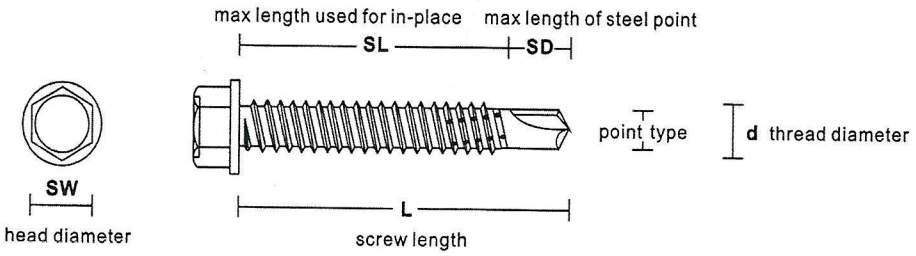
(Partial Heat Treatment Superior Drilling Performance)



3 *Fastening* 2 *Threading* 1 *Drilling*

At One Working Process

Choose The Right Screw From Dimensional Viewpoint



Ø5.5 x 25 Drilling Point

- (thickness of application)
  - drilling point No.1 (8D< 1+1mm)
  - drilling point No.2 (8D< 3mm)
  - drilling point No.3 (8D< 6mm)
  - drilling point No.5 (8D< 12mm)
- L screw length (mm)
- d body diameter (mm)

TECHNICAL

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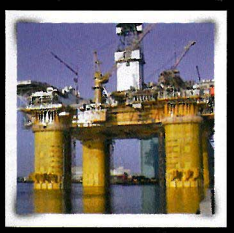
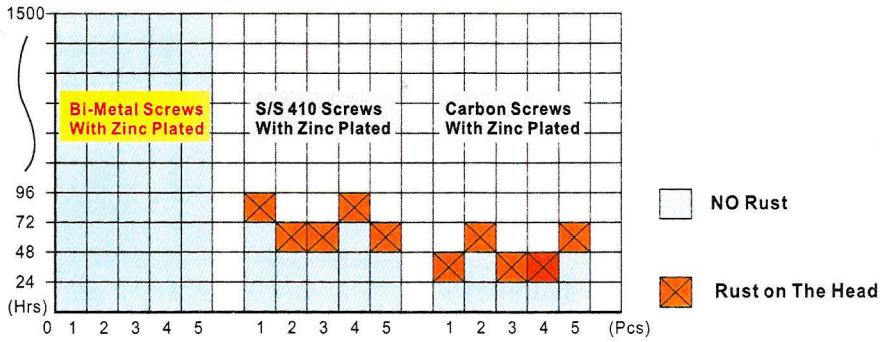
SS Bi-metal
Self Drilling Screws



Coating of Fastener

	Zinc		Ruspert		Tufcote (Ruspert)	
Salt Spray Test	24 hrs (2μ)	72 hrs (2μ)	240 hrs	1000 hrs	1500 hrs	2000 hrs
Kesternich Test	NO	NO	5 cycle	15 cycle	25 cycle	25 cycle
Australian Standard	NO	Class 1	Class 2	Class 3	Class 4	Class 5
Basic Characteristic	**Zinc Coating Consists of 1 Layer :** 1. 1st layer is metallic zinc protecting the metal		**Ruspert Coating Consists of 3 Layer :** 1. 1st layer is metallic zinc protecting the metal 2. 2nd layer is a chemical conversion film 3. 3rd layer is the baked ceramic coating		**Tufcote Coating Consists of 3 Layer :** 1. 1st layer is metallic zinc protecting the metal 2. 2nd layer is a Ceramic Surface Coating 3. 3rd layer is a PU modified Epoxy	
Recommend	General use in internal application		External use in mild moderate industrial or marine enviroments		External use in severe marine environment	

Salt Spray Test According to ASTM B117



Self-Drilling Screws for the building and construction industries
Corrosion Resistance Requirements (Australian Standard AS 3566.2-2002)

Corrosion Resistance Class	Atmosphere of Intended Use
Class 1	General use in internal application AS 2331.3.1 (Salt Spary Test) for 72 h.
Class 2	General use in other than external applications but where significant levels of condensation occurs, AS 2331.3.1 (Salt Spary Test) for 240h, DIN50018 (Kesternich Test) for 5 Cycles.
Class 3	External use in mild moderate industrial or marine environments. Corrosivity categories C2 and C3 classified accordance with ISO 9223 AS 2331.3.1 (Salt Spary Test) for 1000h, DIN50018 (Kesternich Test) for 15 Cycles.
Class 4	External use in severe marine environment, Corrosivity C4 classified in accordance with ISO 9223 AS 2331.3.1 (Salt Spary Test) for 1500h, DIN50018 (Kesternich Test) for 25 Cycles.

Originated as As 3565-1988. Revised and redesignated in part as AS3565.2-2002

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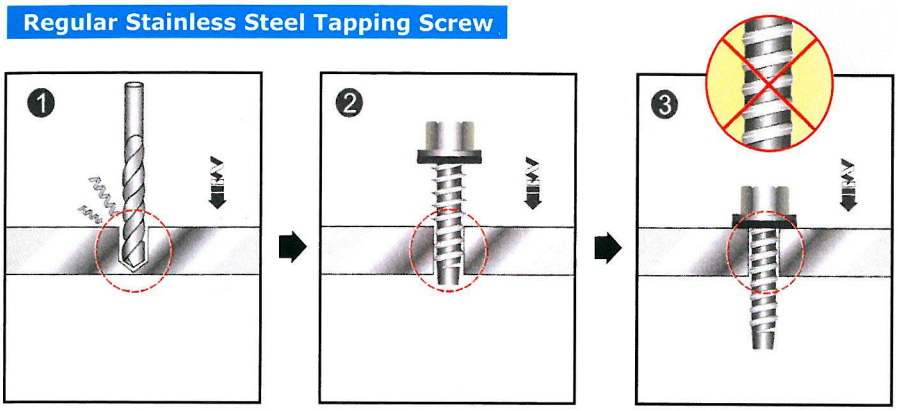
Application Benefits :

Bi-Metal Stainless Steel Self-Drilling Screws

Regular Stainless Steel Tapping Screw

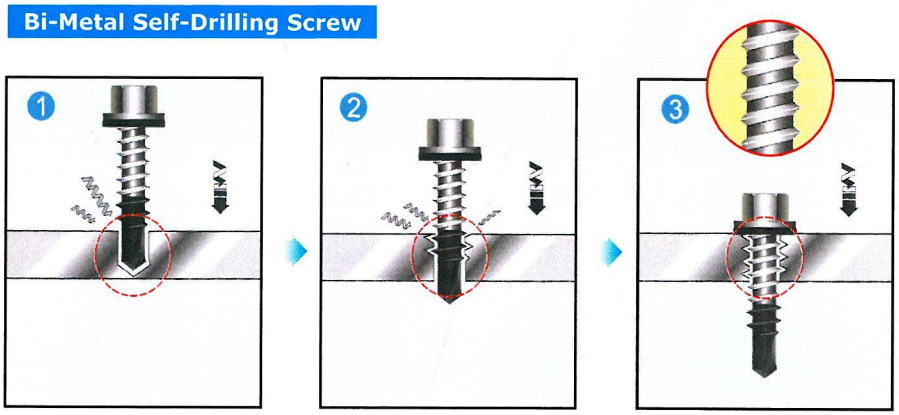


1. Drilling
Pre-drill hole required using drill machine

2. Thread Tapping
Unable to form thread completely on the inner side of the steel plate

3. Fastening
The deformation of thread during tightening and fixing

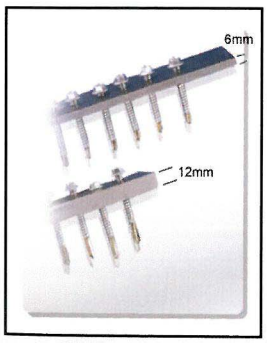
Bi-Metal Self-Drilling Screw



1. Drilling
Drill directly to 0-12mm steel plate, Different kinds of drill point can be selected according to the application requirement

2. Thread Tapping
Heat Treated Portion on Alloy Steel can be easy drilled on the metal plate and form a thread around the hole providing great in-place result

3. Fastening
A2&A4 Stainless body shank & head can maintain guaranteed corrosion resistance performance. Thread without deformation helps to maximize the performance of the pulling out and prevent failurre of structure from wind pressure



TECHNICAL

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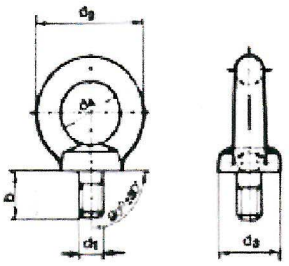
DIN 580
Lifting Eye Bolt

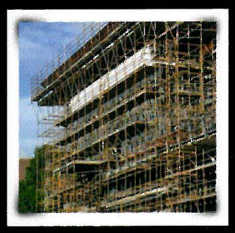


Lifting Eye Bolt CE
C15 Material
B010 - Bare SteelDIN 580

S = Normally Stocked Item * = Contact For Availability

d_1	b	d_2	d_3	d_4	Safe Working Load (kgs.) 1 Bolt	*2 Bolts
M6	13	36	17	16	70	50
M8	13	36	20	20	140	95
M10	17	45	25	25	230	170
M12	20.5	54	30	30	340	240
M14	27	63	35	35	490	340
M16	27	63	35	35	700	500
M18	-	-	-	-	-	-
M20	30	72	40	40	1200	830
M22	35	81	45	45	1500	1050
M24	36	90	50	50	1800	1270
M27	36	90	50	50	2500	1650
M30	45	108	65	60	3600	2600
M33	45	108	65	60	4300	3200
M36	54	126	75	70	5100	3700
M39	54	126	75	70	-	-
M42	63	144	85	80	7000	5000
M45	63	144	85	80	8000	5500
M48	68	166	100	90	8600	6100
M52	68	166	100	90	9900	7300
M56	78	184	110	100	11500	8300
M64	90	206	120	110	16000	11000
M72	100	260	150	140	21000	15000
M80	112	296	170	160	28000	20000
M100	130	330	190	180	38000	27000

*Pulling at a 45° Angle



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TECHNICAL

Heavy Hex Structural Bolts
ASTM A 325M

Metric Series – Dimensions

Notes:

1. The bolts will generally conform to ANSI B18.2.3.7M – Metric Heavy Hex Structural Bolts
2. Thread will conform to Class 6g of ANSI B1.13M.
3. Material: High grade carbon/alloy steel.
4. Heat treatment: As per ASTM A325M and ASTM F 568 Class 8.8
5. Thread Length LT:
   LT1 for L ≤ 100
   LT2 for L > 100

All dimensions are in millimeters

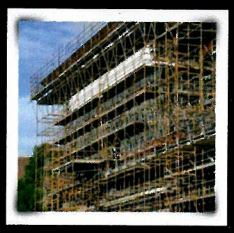
Nominal Thread Size	W Max.	Pitch	C Min.	B Max.	H Nom.	R Min.	Length of Thread		Length Range L
							LT1	LT2	
M12	1.75	21.00	23.35	12.00	7.60	0.6	24	30	25 - 100
M16	2.00	27.00	29.56	16.70	10.0	0.6	31	38	40 – 200
M20	2.5	34.00	37.29	20.84	12.5	0.8	36	43	50 – 200
M22	2.5	36.00	39.55	22.84	14.0	0.8	38	45	50 – 200
M24	3.00	41.00	45.20	24.84	15.0	1.0	41	48	60 – 200
M27	3.00	46.00	50.85	27.84	17.0	1.2	44	51	70 – 200
M30	3.50	50.00	55.37	30.84	18.7	1.2	49	56	80 – 200

Metric Series - Physical Properties & Tightening Torque

Physical Properties	Type 1
Nominal Thread Size	M16 to M36
Tensile Strength (min). (N/mm^2)	830
Proof Load Stress (min.) (N/mm^2)	660
On GL = 2" Elongation % (min.)	14
Reduction of Area	35
Hardness HR (M12~M24) Hardness HR (M27~M36)	C25 – C34 C19 – C30

Recommended Tightening Torque and Induced Loads

Thread Size & Pitch	Stress Area mm^2	Torque Nm	Induced Load N
M16 - 2.00	157	233.0	72,800
M20 – 2.50	245	453.6	113,400
M22 – 2.50	303	616.0	140,000
M24 – 3.00	353	782.9	163,100
M27 – 3.00	459	1,145.3	212,100
M30 – 3.50	561	1,554.0	259,000



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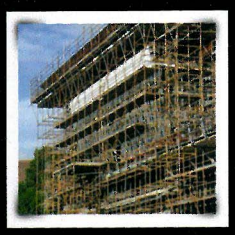

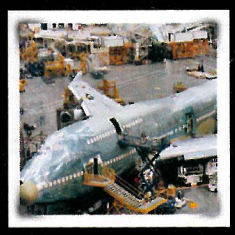

Heavy Hexagon Nuts - ASTM A 563M

Notes:

1. The nuts will generally conform to ANSI B18.2.4.1M – Metric Heavy Hexagonal Nuts
2. Thread will conform to class 6H of ANSI B1.13M for Coarse Series
3. Material & Heat Treatment: To achieve mechanical properties of Properties Class 8S or 10S of ASTM A563M.
4. Nuts of Property Class 8S are used with bolts of ASTM A325M – Type 1 (uncoated). Nuts of Property Class 10S are used with bolts of ASTM A325M – Type 1(Zinc–coated) (in general nuts of a higher property class can replace nuts of a lower property class in a joint).
5. In Bolt/Nut assembly, tightening should be done by rotation of nut.
6. Sizes in brackets are non preferred standards.
7. All dimensions are in millimeters.

Dimensions

Nominal Thread Size	W Max.	Pitch	C Max	H Nom.
M12	1.75	21.00	24.25	12.10
(M14)	2.00	24.00	27.71	13.95
M16	2.00	27.00	31.18	16.75
M20	2.50	34.00	39.26	20.05
(M22)	2.50	36.00	41.57	22.95
M24	3.00	41.00	47.34	23.55
(M27)	3.00	46.00	53.12	26.95
M30	3.50	50.00	57.74	29.90

Physical Properties

Property Class	For use with Bolts of type and finish	Proof Load Stress N/mm2	Rockwell Hardness HR
8S	ASTM A 325M	1,075	B89 – C38
10S	TYPE 1 (non-coated)	1.245 (Normal Tapping)	C26 – C38
	ASTM A 325M	1.165 (Oversize	
	Type 1 (zinc-coated)	Tapping)	

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TECHNICAL

ISO 9001:2000 CERTIFICATION

CERTIFICATE
AWARDED TO

SHABBARI TRADING LLC

at

P.O.BOX 24695, SHOP NO: 20, AL FAHD BUILDING, MALIHA ROAD, SHARJAH, UAE

Quality Registrar Systems certify that the management system of the above organization has been audited and found to be in compliance with the QRS requirements for registration of the management system standard detailed below:

ISO 9001:2015

Quality Management Systems

Scope of work

TRADING, IMPORT AND EXPORT OF FASTENERS (STANDARD & NON STANDARD), BUILDING MATERIAL (INCLUDING ADHESIVES, SEALANTS & COATINGS), HARDWARE & PERSONAL PROTECTIVE ITEMS

EA 29
Certificate No: DQU-13516
Originally Registered: 15 FEB 2021
Latest Issue: 15 FEB 2021
Valid up-to: 14 FEB 2024

Quality Registrar Systems

CB-QMS-037

MANAGING OFFICE ADDRESS:
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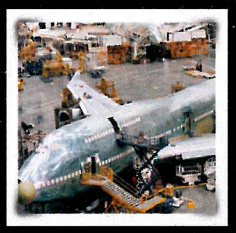
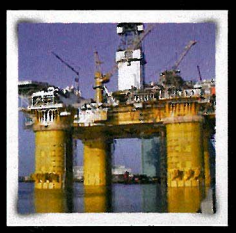
Tel: +971-2-6714302
Fax: +971-2-6741449
www.qrsyst.com

WORLD WIDE CERTIFICATION





CERTIFICATION

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SHABBARI TRADING LLC

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E-mail: info@shabbari.com Website : www.shabbari.com