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#### Introduction

Rebar Couplers are devices used to connect steel bars in reinforced concrete structures that are more beneficial than the conventional method of lap splicing.

**FUTURE Couplers** are the best cost efficient system that guarantees that the ultimate performance of the reinforcement with avoidance of connection failures.

#### **Benefits**

- Every connection is pull tested during the extrusion cycle.
- No reduction of the cross section area of the bar.
- Solves bar congestion problems.
- Shortens construction cycle time.
- Reduces steel wastage.

#### **FUTURE Coupler features**

- Designed and manufactured in compliance with ACI318, BS8110
- Full-Tension splice, bar break under tensile tests.
- Easy to operate and maintain, High production efficiency and fast installation, no need for skilled technicians.
- Several types of splices, which could be suitable for rebar splicing when the rebar cage or the bending rebar is used.
- The splices could be produced in advance without influencing the construction period.
- Inexpensive to purchase, maintain and repair.
- Manufactured under strict quality assurance plans.

#### **Standard Coupler**

### 3 Step process

- **Cutting:** The end of the rebar is sawn cut by special cutting machine for bar splicing.
- **Rolling:** The sawn cut end of the rebar is directly rolled using a thread rolling machine.
- **Splicing:** Connecting rebars using couplers.







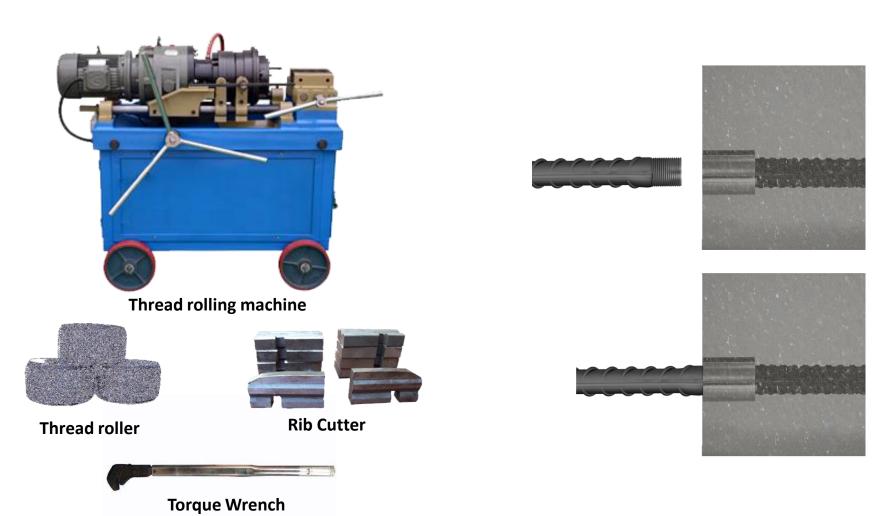
### **Installation**

- For rebars to be connected with standard coupler, the effective threading length of each rebar end should be half of the tube coupler length. (see TABLE-1)
- Tighten the coupler with wrench so that the two threaded rebar ends can push against each other tightly in the middle of the coupler.
- After splicing, the effective screw threads on rebar ends outside the coupler should be no more than two threads on each side

Size	Effective Thread Length (mm)	Wrench Torque Setting (Nm²)
Ø 16	22.5	120
Ø 18	25.0	150
Ø 20	27.5	180
Ø 22	30.0	220
Ø 25	32.5	270
Ø 28	35.0	270
Ø 32	40.0	300
Ø 36	40.0	300
Ø 40	50.0	300

(Table 1)

### **Standard Coupler**



#### **Cold forge Coupler**

### 3 Step process

- **Cutting:** The end of the rebar is sawn cut by special cutting machine.
- **Cold Forging:** The sawn end of the bar is then enlarged by a cold forging process.
- **Threading:** Thread is mechanically formed onto the enlarged end of the bar.







## **Cold Forging coupler calculation**

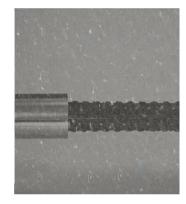
Bar Diameter	Out Diameter	Length of	Thread S	Size (mm)	Weight of
(mm)	of Coupler (mm)	Coupler (mm)	Direct Rolling	Rolling after Stripping	Coupler (kg)
16	23	42	M17 x 2.5	M16.5 x 2.5	0.07
18	28	46	M19 x 2.5	M18.5 x 2.5	0.13
20	30	50	M21 x 2.5	M20.5 x 2.5	0.15
22	33	54	M23 x 2.5	M22.5 x 2.5	0.19
25	38	62	M26 x 2.5	M25.5 x 2.5	0.30
28	43	68	M29 x 2.5	M28.5 x 2.5	0.43
32	48	76	M33 x 2.5	M32.5 x 2.5	0.58
36	53	84	M37 x 2.5	M36.5 x 2.5	0.93
40	60	92	M41 x 2.5	M40.5 x 2.5	1.25

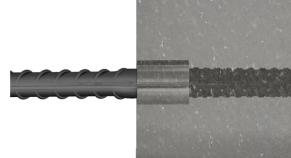
## **Cold forge Coupler**



**Upset Rolling Machine** 







# Product quality certificate



#### Future Scaffolding And Aluminum Industries LLC.

Product quality certificate

Date: 01/04/2019

No: 20190104

				Chei	mical c	ompos	ition			Mechanical Be	ehavior	Process pe	rformance
Product	Specification	С	Si	s	Mn	Р	Cr	Ni	Cu	Tensile strength Kn	Yield point Kn	Squash	NDT
Rebar Coupler	Ø 28 x 5.5	0.2	0.27	0.02	1.66	0.02	0.4	0.07	0.06	192	130	Qualified	Qualified

Signature:



## Certification





Quality Registrar Systems is accredited by Dubai Accreditation Department (DAC) for the Scope mention on Quality Registrar Systems (QRS) Accreditation Certificate No. CB-037-MS

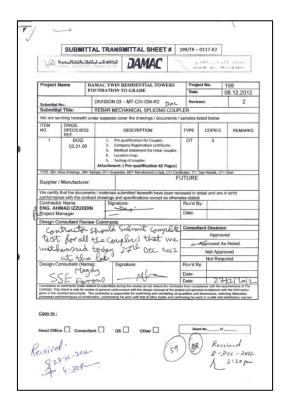
# Municipality Approval

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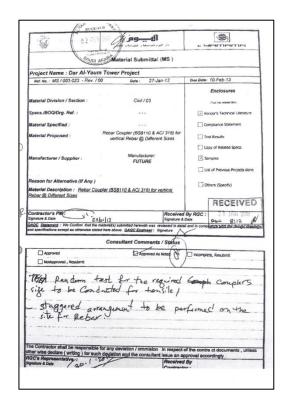
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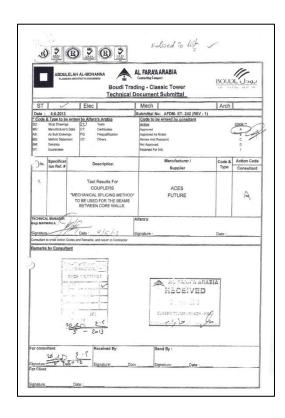


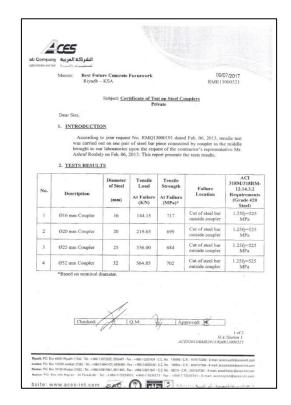




# **Key Consultant Approval**







## Lab test results

Project name : Quality Assurance Sampled by : Client   Chiest   Ch	rials Consultants		TEST	REPORT	J	
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Countier   No given   Date Unes sample received   200-2480   180	rreject incation :	Dist Section				
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Nominal size   No gives   No gives   Tot method   ISK'S 1000		Couplers			rtificate	
Nominal size 19 mm Tested by ARK  Test results:    Specimen III		Not given				
Test results:    Specimen ID   Peak Load (kN)   Mode of Failure     DNS 340443   187.56   The rebar was broken						
Remarks: None Ten Method Variatice. None This report what is only to the ample tested analogal only be reproduced in full and with the written approval of AHS Laboratory  Joseph Regu Head of Construction Materials Section  For All Inly Stanger Laboratories  For All Inly Stanger Laboratories		20 mm				
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## **Company Information**

#### **FUTURE Form systems**

Plot 34023, Dubai industrial city PO Box 52360, Dubai - UAE

Tel: 04 454 21 62 Fax 04 454 21 70

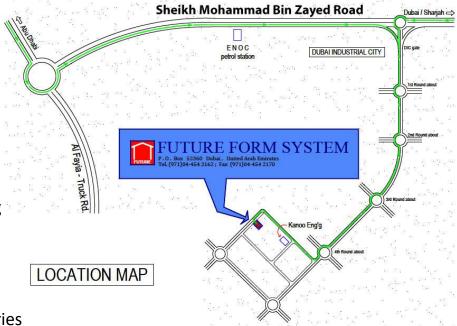
Website: www.Futureformwork.com

Trade Name: Future scaffolding and Aluminium trading

License no. 563713 Register no. 71113 DCCI no. 92879

**Trade Name:** Future scaffolding and Aluminium Industries

License no. 570634 Register no. 74756 DCCI no. 98668



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