
 MECHANICAL REINFORCING BAR SPLICING SYSTEM

cryoCOUP Coupler

PROPERTIES

- Improved performance and stability at cryogenic temperatures (-168 °C / -270 °F)
- Installs easily and fast
- Slim design reduces concrete cover
- Available in sizes 12 mm - 32 mm
- Allows simple visual inspection
- Suitable for use with cryogenic reinforcing bars



Regnum Cryocoup Couplers are designed to splice the same diameter bars where at least one bar can be rotated and moved freely in its axial direction. Cryocoup couplers should be specified whenever cryogenic-grade reinforcing bar is used, or during normal operating or emergency conditions where the temperature falls below -20 °C (-4 °F). These couplers are suitable for use in structures built in accordance with EN 14620-3:2006. Typical applications include splicing of the reinforcing bars in LNG and LPG storage tanks.

Cryocoup couplers are designed to meet or exceed major international building codes, including:

Eurocode 2	IBC Type 1 (125% Specified Yield)	ISO 15835	BS 7777
ACI 318 Type 1 (125% Specified Yield)	IBC Type 2 (Specified Ultimate)	GOST 34278	Turkish Seismic Code 2018
ACI 318 Type 2 (Specified Ultimate)	AS3600	BS EN 1992-1-1	EN 14620-3*

*EN 14620-3:2006 specifies the general requirements for materials, design and construction of all concrete components of site-built, vertical, cylindrical, flat-bottomed steel tanks for the storage of refrigerated, liquefied gases with operating temperatures between 0°C and -165°C.

PLANT:

Sanayi Mh. İzmit Sanayi Sitesi 13.Cd
318. Blok No: 132 İzmit-KOCAELİ
info@regnumconstruction.com

OFFICE:

Caferağa Mah. Ressam Şeref Akdik Sok. No:24/8
Kadıköy - İSTANBUL +90 216 405 21 55

SIMPLE INSTALLATION



1. Remove the protecting cap from the rebar.



2. Screw the coupler on the threaded bar.



3. Align the corresponding rebar. Rotate the rebar to the middle of coupler.

Product Code	Metric [mm]	Bar Sizes		Outside Diameter (*)		Length		Unit Weight (*)	
		US	Canada	[mm]	["]	[mm]	["]	[kg]	[lb]
BRCP12	12	#4	10M	19	3/4	38	1-1/2	0.05	0.12
BRCP14	14	-	-	24	15/16	42	1-21/32	0.09	0.2
BRCP16	16	#5	15M	29	1-9/64	47	1-27/32	0.14	0.31
BRCP20	20	#6	20M	34	1-11/32	54	2-1/8	0.22	0.49
BRCP26	26	#8	25M	39	1-17/32	66	2-19/32	0.29	0.64
BRCP28	28	#9	30M	44	1-47/64	68	2-43/64	0.42	0.93
BRCP32	32	#10	-	39	1-17/32	66	2-19/32	0.29	0.64

(*) Bar diameters and weights may vary by country.

NOTES

- Dimensions shown in chart are typical.
- It is recommended to lock the splices using a wrench. No specific torque needed.
- It is recommended to store away the thread protecting caps for reuse.
- Refer to the complete product installation instructions before starting the installation.

PERFORMANCE

Tensile test requirements at cryogenic temperatures indicated in EN 14620-3 Annex A.3.

The tensile strength of the splice should meet or exceed the yield strength of an unnotched bar. This is known as the Notch Sensitivity Ratio (NSR).

$$NSR = \frac{\text{Tensile strength for Regnum Crycoup Splice}}{\text{lower yield strength of unnotched bar}} \geq 1$$

*Note: Regnum offers reinforcing bar test criteria used in EN 14620-3 where there is not any current codes governing the use of splicing systems for cryogenic applications. BS 7777 part 3 and EN 14620-3 construction codes are the most frequently applied standards for the design and construction of flat- bottomed, vertical, cylindrical storage tanks for low- temperature service.

Regnum Construction
 Reinforcing Bar
 Splicing System
<http://tiny.cc/regnum>



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