Reinforcing Bar Couplers for Cryogenic Applications

Tested to -168°C/-270°F according to EN 14620-3 with cryogenic quality rods











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Cryogenic Rebar Couplers

The Ancon CTT tapered thread coupler range is designed for use with cryogenic-grade reinforcement in construction projects such as Liquefied Natural Gas (LNG) and Liquefied Petroleum Gas (LPG) tanks, according to EN 14620-3.

System benefits

- 3 Suitable for use on structures according to EN 14620-3
- 3 Tested with quality reinforcing bars and cryogenic environment at temperatures of (-168°C/-270°F)
- 3 Compact design coupler for use in confined spaces
- 3 The tapered thread simplifies rod placement and alignment.
- 3 Very quick and easy installation, to promote construction speed.

EStructures according to EN 14620-3

Ancon CTT couplers are ideal for use in constructed structures.

In accordance with EN 14620-3:2006. This standard specifies the requirements for materials, design, and construction of all components of in-situ, vertical, cylindrical, and below-ground storage or refrigeration tanks for liquefied gases operating at temperatures between 0°C and –165°C. BS EN 14620-3:2006 superseded BS 7777-3:1993.

CRYOGENIC quality rods

Kryba®r specializes in cryogenic concrete reinforcement bars KRYBAR-165 bars are suitable for storage tanks operating at temperatures below -170°C/-274°F, and these were the cryogenic-grade bars used in the ANCON testing program.

The CTT Range

The Ancon range includes standard, positional, and transition couplers. For rods with diameters ranging from 12 to 32 mm. In all cases, the rod ends are cut before being tapered to tighten onto the threaded coupler. The coupler is simply tightened onto the bar at the threaded end using a torque wrench.

Reference

RLNG Reservoir, Yamal, Russia

O projecto Yamal LNG está situado no estuário do rio Ob River no nordeste Russo que se encontra gelado nove meses por ano.

O tanque tem capacidade para 160,000 m3 e encerra um contentor de aço inoxidável e uma estrutura externa pre-tensionada em betão; esta e composta por mais de 16,000 acopladores criogénicos Ancon para a ligação de varões Krybar de 25 a 32m de diametro.





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Standard Cryogenic Couplers (CTTS)

Ancon Cryogenic Tapered Thread Couplers are used to connect two rods of the same diameter, when one of the rods can be rotated.

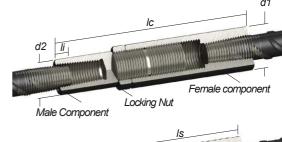
Diametro do varão (mm)		12	14	16	20	25	28	32
Dia. Externo (mm)	d	22	22	25	30	36	42	48
Comprimento acoplador (mm)	1	58	64	70	74	90	100	112
Peso (kg)		0.13	0.12	0.17	0.25	0.43	0.66	0.99
Torque (Nm)		60	85	110	165	265	275	285
Ref.		CTTS12	CTTS14	CTTS16	CTTS20	CTTS25	CTTS28	CTTS32



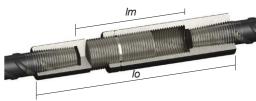
Cryogenic Positional Couplers (CTTP)

Ancon's cryogenic tapered thread positional couplers are used when neither bar can be rotated. They consist of a male section, a female section, and a locking nut. Adjustable, they can be used to bring two rebars together.

Rod diameter (mm)		12	14	16	20	25	28	32
External diameter (mm)	d1	25	25	30	36	48	50	55
External diameter (mm)	d2	22	22	25	30	36	42	48
Female lenght (mm)	ls	84	89	95	112	132	137	153
Nut length (mm)	In	13	13	13	13	13	13	15
Closed length (mm)	lc	138	150	155	180	207	218	243
Max. Open Length (mm)	Ю	178	190	196	231	266	274	305
Rod insertion before tightening (mm)	li	9	12	15	8	16	22	28
Rod insertion after tightening (mm)	le	26	29	32	33	42	47	53
Adjustable length (mm)	la	23	23	24	26	34	34	37
Max distance between rods (mm)	lm	126	124	132	165	182	174	199
Weight (kg)		0.44	0.67	0.67	1.12	2.21	2.30	3.51
Coupler Torque (Nm)		60	85	110	165	265	275	285
Nut torque (Nm)		20	25	30	50	70	80	90
Ref.		CTTP12	CTTP14	CTTP16	CTTP20	CTTP25	CTTP28	CTTP32







Cryogenic Transition Couplers (CTTT)

Ancon cryogenic threaded taper transition couplers are used to join rods of different diameters, when one of the rods can be rotated.

Diam. do varão (mm	n) 12/1	14	12/16	14/16	16/20	20/25	25/28	25/32	28/32
Extern. diameter (mm)	d	22	25	25	30	36	42	48	48
Lenght (mm) /	65		72	71	78	90	99	112	110
Weight (kg)	0.14		0.21	0.19	0.30	0.48	0.72	1.11	1.02
Torque (Nm)	60/85	5	60/110	85/110	110/165	165/265	265/275	265/285	275/285
Ref.	CTTT	12/14	CTTT12/I	6 CTTT14	/I6 CTTTI6	5/20 CTTT2	0/25 CTTT	25/28 CTT	T25/32 CT









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