Coupler

Coupler
Threaded steel coupler system

The rebar connection system with 100% load transmission – suitable for both static and dynamic load.

The coupler is designed as a threaded reinforcement connection for formed construction joints. Reinforcement work is normally carried out on both sides of the construction joint using lap joints or one side is anchored. The bar lengths are based on the structural analysis requirements of the building component and are calculated from the anchorage and lap lengths specified in DIN 1045.

The main influencing factors are rebar diameter, concrete quality and placement conditions.

In order to keep up with the construction industry's demands for availability at short notice we maintain a large stock of standard lengths. Three standard lengths in any rebar diameter are kept on stock.

Special lengths can be produced at short notice to your requirements.

The Coupler system gives you the opportunity to connect rebars simply, quickly and inexpensively, even when large rebar diameters are used.

This makes the range an useful logical extension to our rebendable Stabox® rebar connection system for rebars over 12 mm Ø.

Corresponding inspection reports and certification are available on request.

Please ask, if required!

FRANK

Schraubanschluß
System Coupler
ZULASSUNG

DEUTSCHES INSTITUT FÜR BAUTECHNIK
Anstalt des öffentlichen Rechts

10829 Berlin, 16. März 1998
Kolonnenstraße 30 L
Telefon: (0 30) 7 87 30 - 342
Telefax: (0 30) 7 87 30 - 320
GeschZ.: I 41-1.1.5-18/97

Allgemeine bauaufsichtliche Zulassung

Zulassungsnummer: Z-1.5-100

Antragsteller: Max Frank GmbH & Co KG
Mitterweg 1
94339 Leibfing

Herstellwerk:
PLAKABETON S.A.
Industrielaan 2
B-1740 Ternat

Zulassungsgegenstand: Mechanische Verbindung von Betonstahl BSt 500 S mittels Schraubmuffe, Ø 12 bis 28 mm
Bewehrungsanschluß "System Couplerbox"

Geltungsdauer bis: 31. März 2003

Der obengenannte Zulassungsgegenstand wird hiermit allgemein bauaufsichtlich zugelassen.
Diese allgemeine bauaufsichtliche Zulassung umfaßt sechs Seiten und vier Anlagen.

Deutsches Institut für Bautechnik

Diese allgemeine bauaufsichtliche Zulassung ersetzt die allgemeine bauaufsichtliche Zulassung vom 9. Juli 1990 mit Nr. Z-1.3-BV 27, geändert/verlängert durch Bescheid vom 9. Juli 1992.
Der Gegenstand ist erstmals am 9. Juli 1990 allgemein bauaufsichtlich/baurechtlich zugelassen worden

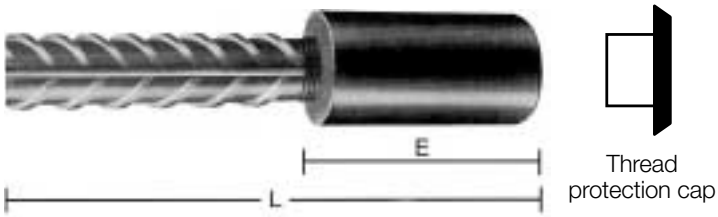
Vertrieb: MAX FRANK GmbH+Co. KG · Mitterweg 1 · D-94339 Leibfing · Tel. 09427/189-0 · Fax 09427/1588

Coupler
Standard versions

The standard version of a complete CAE set consists of:

for the first concrete pour

CA-bar + socket incl. thread protection cap



and for the second concrete pour

CE-additional bar

Article number CA bar + socket	Article number CE additional bar	Article number cpl. set	Type Ø mm	Type L per bar mm	Weight per set kg	Socket Length E mm	Socket External Ø mm	Socket Weight kg	Req'd tightening torque [1] Nm
CCA120570	CCE120570	CCAE120570	12	570	1.07				
CCA120800	CCE120800	CCAE120800	12	800	1.48	40	22	0.079	60
CCA121500	CCE121500	CCAE121500	12	1500	2.72				
CCA140660	CCE140660	CCAE140660	14	660	1.67				
CCA140930	CCE140930	CCAE140930	14	930	2.32	45	22	0.081	100
CCA141500	CCE141500	CCAE141500	14	1500	3.70				
CCA161020	CCE161020	CCAE161020	16	1020	3.43				
CCA161440	CCE161440	CCAE161440	16	1440	4.76	45	32	0.218	100
CCA161800	CCE161800	CCAE161800	16	1800	5.90				
CCA201280	CCE201280	CCAE201280	20	1280	6.52				
CCA201800	CCE201800	CCAE201800	20	1800	9.09	52	32	0.209	200
CCA202100	CCE202100	CCAE202100	20	2100	10.57				
CCA251600	CCE251600	CCAE251600	25	1600	12.69				
CCA252260	CCE252260	CCAE252260	25	2260	17.77	60	40	0.377	250
CCA252600	CCE252600	CCAE252600	25	2600	20.39				
CCA281790	CCE281790	CCAE281790	28	1790	17.80				
CCA282530	CCE282530	CCAE282530	28	2530	24.95	65	45	0.550	280
CCA283000	CCE283000	CCAE283000	28	3000	29.49				

[1] Caution: torque wrench required!

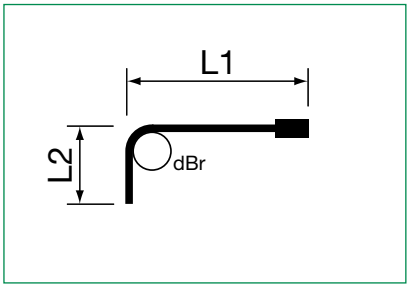
Ø 32 and 40 can be supplied as same type but without Building Authority Certification.

Standard versions can be supplied at short notice due to our optimised stock quantities.

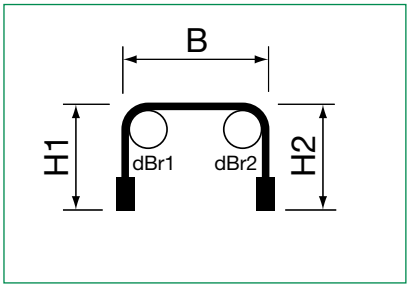
Coupler
Special versions

Special versions can be produced to your requirements. Please contact our technical advisory service.

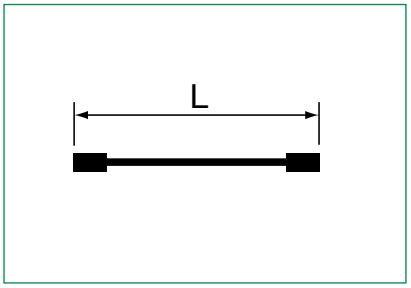
Type WCA



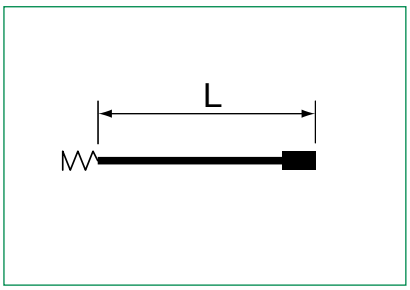
Type DWCA



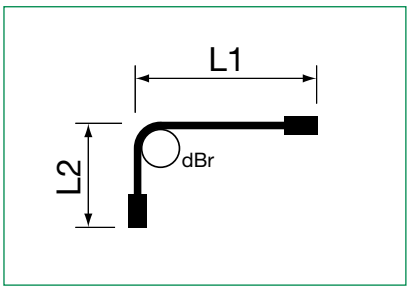
Type DCA



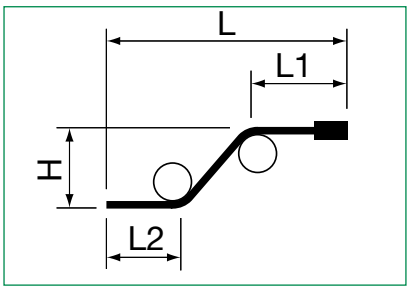
Type ECA



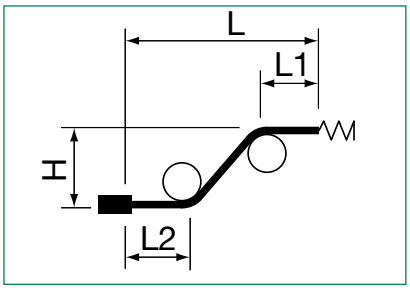
Type DCAW



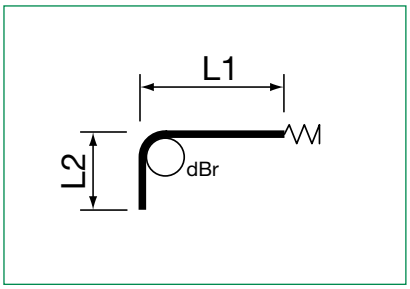
Type WWCA



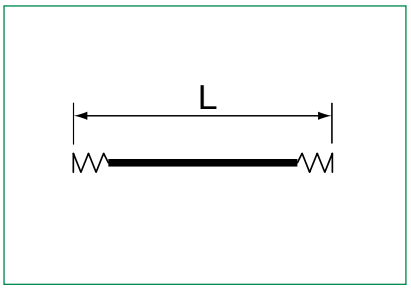
Type WWECA



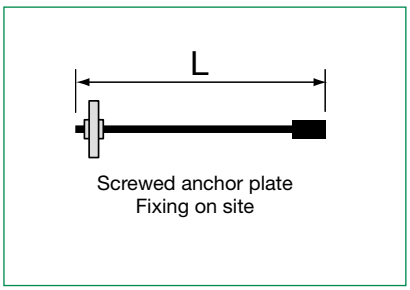
Type WCE



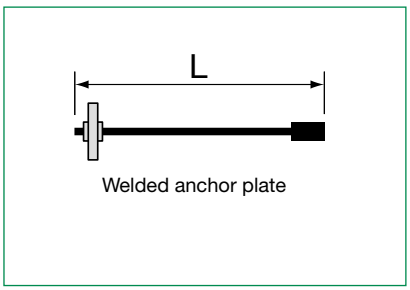
Type DCE



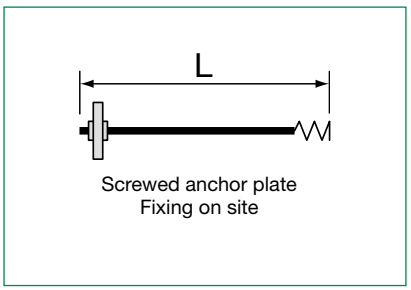
Type CA-APG



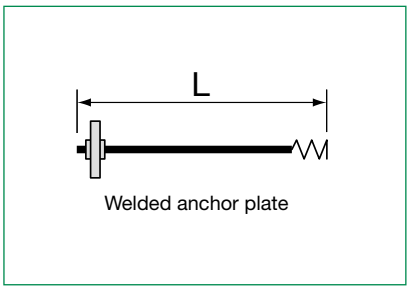
Type CA-APS



Type CE-APG



Type CE-APS



Special lengths

a) Shortened standard lengths

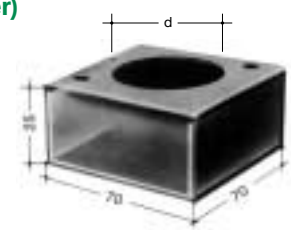
b) Extension of standard lengths using flash-butt welding
→ Delivery within approx. 3 days

c) Special manufacture
→ Delivery within approx. 14 days

Coupler
Fixing aids

Coupler Single box (with cover)

Can easily be fixed to the formwork with two nails; insert CA.



Type	Article number	d mm	Weight kg/item
Single box 12	CEBOX12	22	0.12
Single box 14	CEBOX14	22	0.12
Single box 16	CEBOX16	33	0.12
Single box 20	CEBOX20	33	0.12
Single box 25	CEBOX25	40	0.12
Single box 28	CEBOX28	45	0.12

Coupler box (with cover)

Extended Single box for fixing large series easily.

Bar spacing “s“ can be supplied to any dimension.

Type	Article No. s = 10 cm	Article No. s = 15 cm	Article No. s = 20 cm
Coupler box 12	CCB1210120	CCB1215120	CCB1220120
Coupler box 14	CCB1410120	CCB1415120	CCB1420120
Coupler box 16	CCB1610120	CCB1615120	CCB1620120
Coupler box 20	CCB2010120	CCB2015120	CCB2020120
Coupler box 25	CCB2510120	CCB2515120	CCB2520120
Coupler box 28	CCB2810120	CCB2815120	CCB2520120

▲ Single box fixed in series

▲ Coupler “Rail“ box

▲ The Coupler box guarantees precise location of the reinforcement bar and additional thrust interlocking.

Assembly instructions:

Both the Single box and Coupler box make it extremely simple to fit the reinforcement bar:

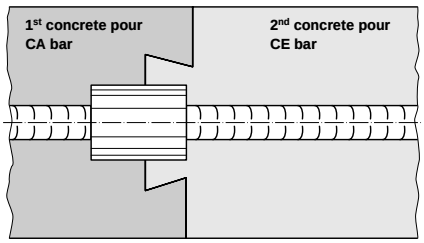
The fixing box is nailed to the formwork before reinforcement fixing commences.

This guarantees that the connections are as per drawing.

After reinforcement fixing is complete, the CA connection bars are simply fitted into the box using the exact-fit apertures and then fixed to the general reinforcement.

The CE bar is then tightened to the specified torque using a torque wrench.

Coupler
Fixing aids



The decisive advantage is the additional recess with dovetail shape. This acts against cracking and guarantees optimum interlocking between both concrete pours.

The joint between socket and bar is therefore not positioned in the construction joint plane where cracks are likely to occur, but embedded in the concrete. This ensures that it is protected against corrosion to the best possible extent.

▲ The Coupler box is nailed to the formwork before reinforcement fixing commences.

▲ Connections are easy to find after pouring.

Sample specification

Tender text: “Fixing aids for threaded steel couplers“

Item	Qty. (no.)	Specification	Price per unit	Total price
		Deliver and fix “FRANK fixing aids with additional thrust interlocking“ for aforementioned FRANK threaded steel couplers. Unit price must include any removal of rear covers necessary after stripping. Single box for Ø _____ mm		
		Coupler box for Ø _____ mm, s = _____ cm		

Coupler
Special accessories

The production of special accessories is carried out using the same quality criteria as for the standard ranges.
The special accessories are not covered by our certification. Structural analysis verification must be carried out based on the individual project.

Adapter connection

The adapter is for the use where connection bars with bent legs are required or are unable to be screwed in.

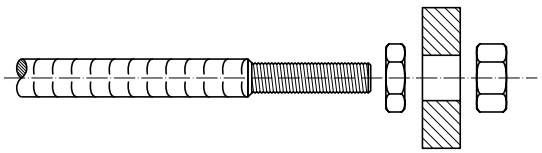
Article number	Ø mm
CAGRELI12	12
CAGRELI14	14
CAGRELI16	16
CAGRELI20	20
CAGRELI25	25
CAGRELI28	28

Socket with right-hand / left-hand thread

Adapter for connecting left-hand threaded socket to standard right-hand threaded socket

Standard – right-hand threaded socket

Anchor plate in ST 37 steel
with 2 hexagon nuts for threaded steel bars



Article number	Ø mm	Dimensions a x b mm	Material thickness mm
CAPLGSCHR12	12	40 x 40	10
CAPLGSCHR14	14	50 x 50	10
CAPLGSCHR16	16	60 x 60	12
CAPLGSCHR20	20	70 x 70	16
CAPLGSCHR25	25	90 x 90	18
CAPLGSCHR28	28	100 x 100	20

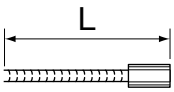
Torque wrench

The required tightening torque must be achieved using a torque wrench.

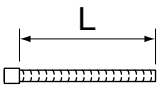
	Article number	Article description	Weight kg/item
	CLDREH	Torque wrench for 12 – 28 mm	5

Coupler
Sample specification

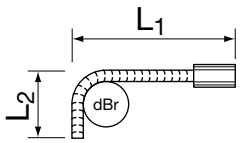
CA



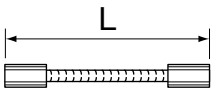
CE



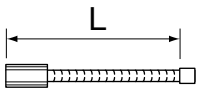
WCA



DCA



ECA



Tender text: “Threaded steel coupler“

Item	Qty. (no.)	Specification	Price per unit	Total price
		Deliver above-mentioned FRANK “threaded steel couplers“ with approval no. Z-1.5-100 in various lengths and types for connections between walls, slabs, platforms, cantilevers, staircases, etc. and install and fix them to the formwork together with the conventional reinforcement observing the DIN standard 1045 and the manufacturer's application instructions.		
		Ø (mm) L (mm) **Type CA** _____ _____ **Type CE** _____ _____		
		Ø (mm) L_1 (mm) L_2 (mm) **Type WCA** _____ _____ _____ **Type CE** _____ _____ _____		
		Ø (mm) L (mm) **Type DCA** _____ _____ _____ **Type CE** _____ _____ _____		
		Ø (mm) L (mm) **Type ECA** _____ _____		

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