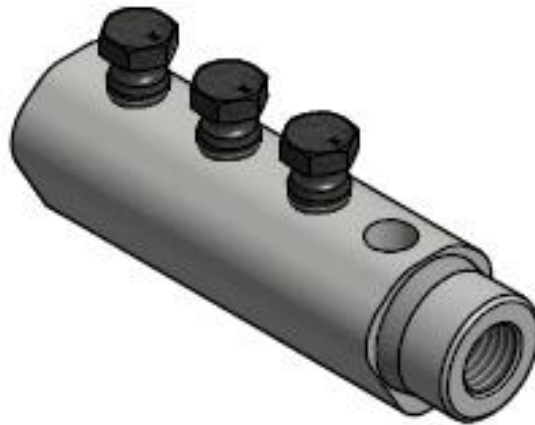


## MOUNTING INSTRUCTIONS

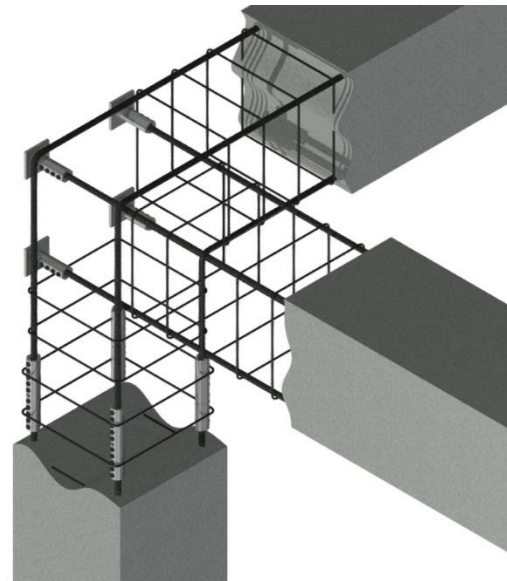
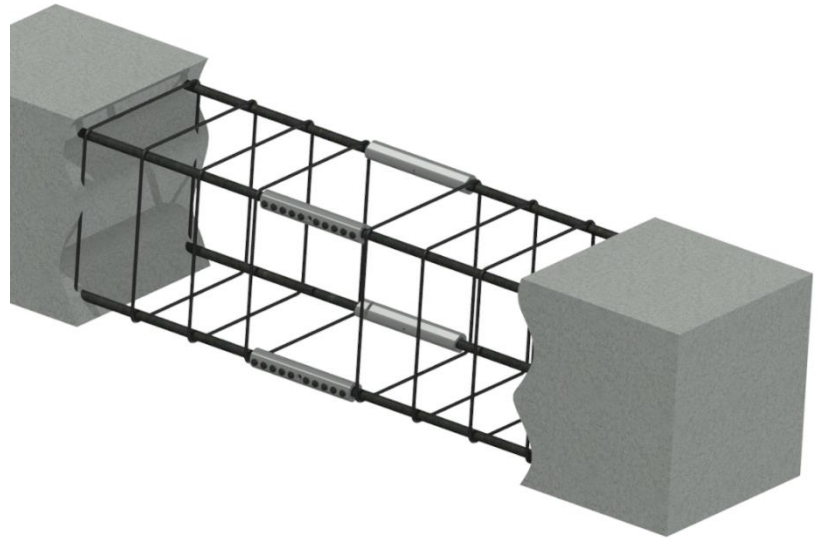
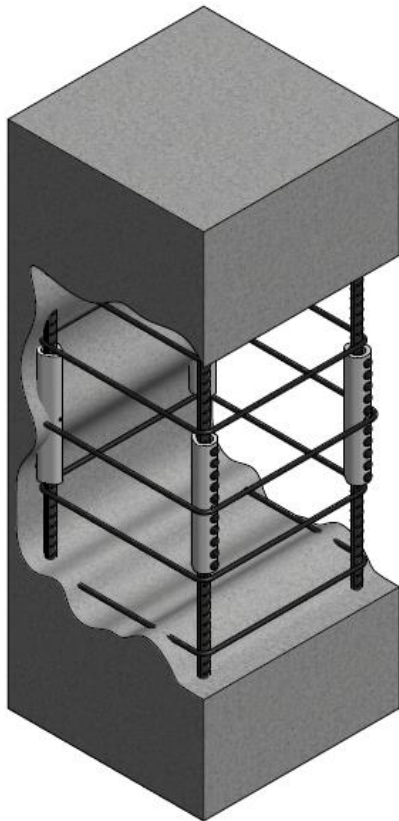


### ALLIGATOR COUPLERS | **ALC-SK CONTINUITY COUPLER**



## THE MAIN APPLICATIONS FOR ALLIGATOR COUPLERS

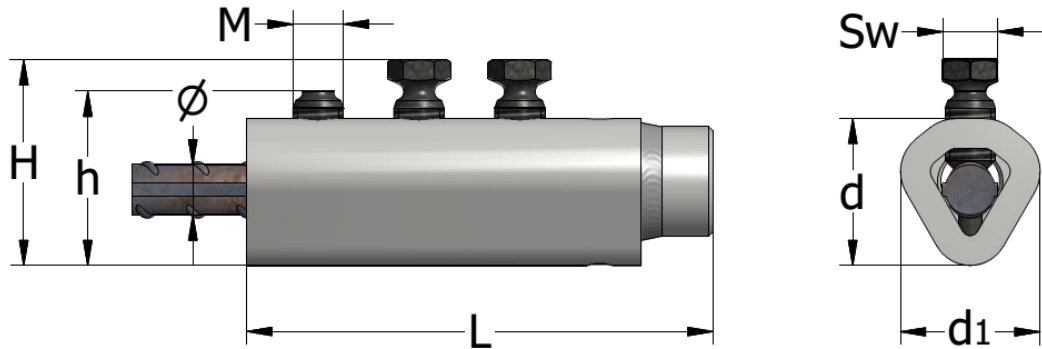
- for column construction
- to extend or repair existing structures
- to connect precast element to precast element
- to close access openings
- for the pre-fabrication of the reinforcing bar cage
- for fatigue applications



## CONTINUITY COUPLER – ALC-SK

The ALLIGATOR CONTINUITY COUPLER allows reinforcement to be extended at construction joint locations without the need to drill the formwork at the construction joint locations. The female part of the coupler is attached to the formwork with the aid of a threaded nailing plate. After removal of the formwork and the nailing plate, the male part of the coupler can be screwed into the installed part of the coupler. The ALC-SK coupler male component has one threaded bolt and two additional locknuts mounted on it, which are used to secure the connection. The male part of the ALC-SK coupler can be replaced by a TSE coupler with a metric thread of the same size. These couplers are also suitable for precast concrete element connections.

Tighten the bolts using a torque wrench, an impact, electric or pneumatic wrench. Please see page 7-8.



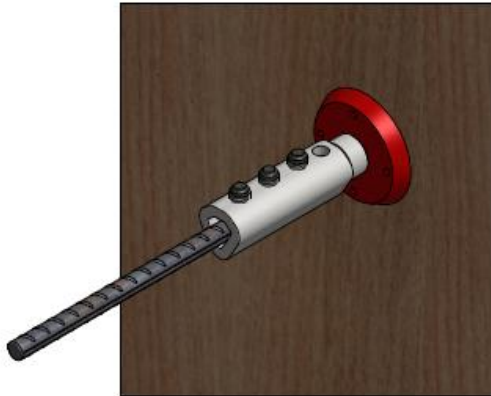
Type ALC-SK	Product no.	Rebar Ø [mm]	Breaking bolt number n	Breaking bolt thread M	L [mm]	d [mm]	d1 [mm]	H Unruptured Bolt [mm]	h [mm]	Bush thread	SW [mm]	Torque moment [Nm]
12	45745	12	3	M12	112	33	34	Max. 49	39	M16	13	95-115
16	45746	16	4	M12	156	37	38	Max. 57	47	M20	13	95-115
20	43578	20	5	M16	188	50	50	Max. 63	51	M24	17	190-215
25	45747	25	6	M16	255	55	54	Max. 72	60	M30	17	190-215
32	45748	32	7	M20	324	70	69	Max. 92	77	M42	22	355-415
40	45749	40	9	M20	386	76	74	Max. 101	86	M48	22	355-415

## MOUNTING INSTRUCTIONS FOR ALC-SK COUPLER WITH TSE COUPLER

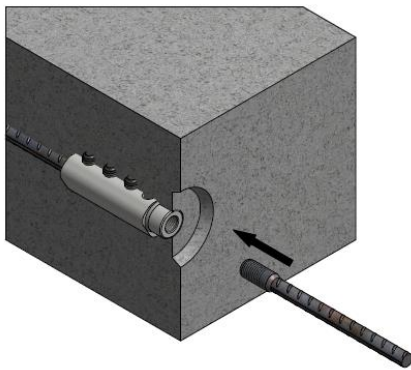


Tighten the breaking bolts completely using an electric or pneumatic wrench as described on page 7-8. The bolts must be tightened from the centre outwards (1 to 3) until the heads of all the breaking bolts shear off.

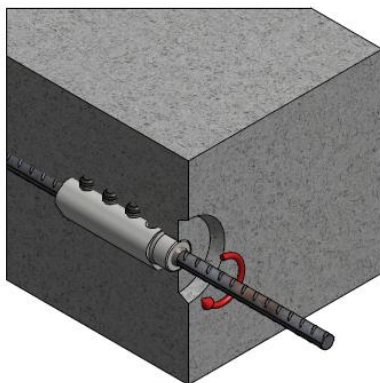
Not removing/shearing of a bolt head during installation is acceptable provided the appropriate bolt torque is attained as detailed in the table on page 3. However, the installation is only considered satisfactory if the height H as in the table on page 3 is not exceeded. This must be measured to ensure satisfactory penetration and grip of the reinforcing bar.



Attach the nail plate to the formwork and screw the ALC-SK onto the plate.



-Remove the formwork and unscrew the nailing plate.  
-Screw the TSE coupler completely into the already fixed component.

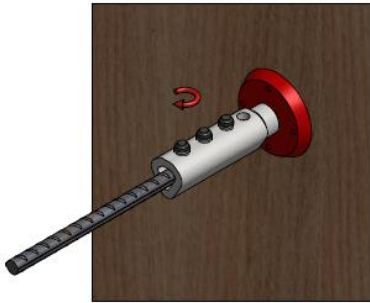


-Tighten the TSE coupler completely using a Terwa torque wrench.  
The torque values are specified in the table on page 6.

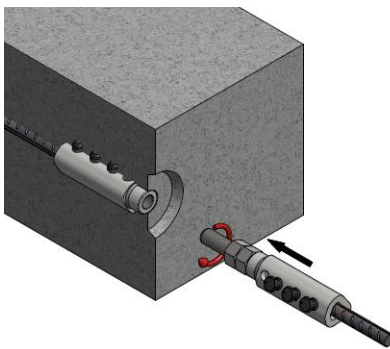
## MOUNTING INSTRUCTIONS FOR ALC-SK COUPLER



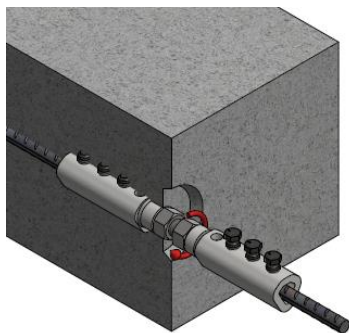
Tighten the breaking bolts completely using an electric or pneumatic wrench as described on page 7-8. The bolts must be tightened from the centre outwards (1 to 3) until the heads of all the breaking bolts shear off.



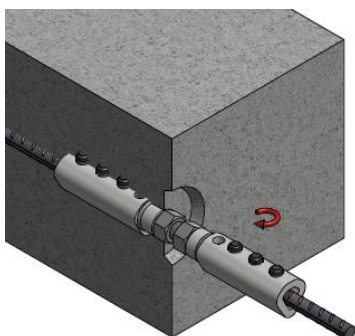
Attach the nail plate to the formwork and fully screw the ALC-SK onto the plate.



- Remove the formwork and unscrew the nailing plate.
- Screw the ALC-SK male component completely into the component that is already attached.
- Rotate the male component until the breaking bolts reach a position accessible for tightening.



- Run the first locknut along the threaded bolt until the attached ALC-SK component is reached.
- Tighten the locknut completely using a wrench.



Tighten the breaking bolts completely using an electric or pneumatic wrench as described on page 7-8.

## TERWA TORQUE WRENCH

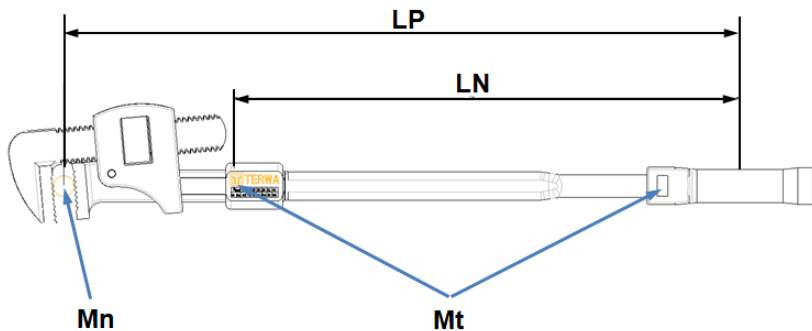
The Terwa torque wrench is specially designed for correctly mounting the Terwa coupler on site and at the factories. All Terwa wrenches are delivered with a calibration report and work instructions.

The torque values for all rebar diameters are marked on the wrench. The torque values for all Terwa couplers are listed below.

Reinforcement diameter [mm]	Necessary torque for each type of rebar [Nm]	Setting torque using wrench Mt [Nm]
10	50	60
12	60	60
14	70	60
16	80	60
18	90	70
20	100	75
22	110	82
25	125	93
28	140	104
32	160	119
40	200	148



TERWA torque wrench



*Mn* – required torque  
*Mt* – setting torque using wrench  
*LP* – length to middle of each reinforcement steel  
*LN* – standard length wrench

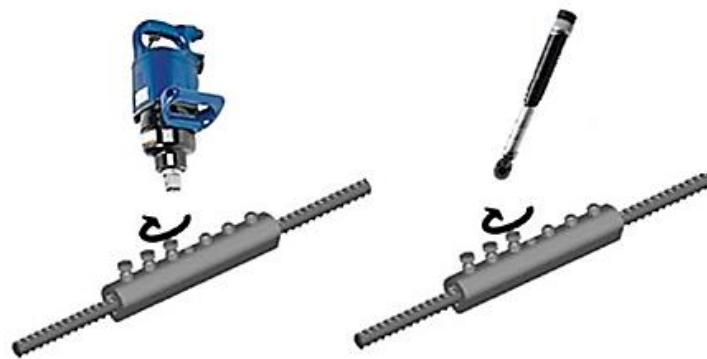
$$Mt = Mn \times LN/LP$$

TERWA wrench dimensions

## TOOLS FOR ALLIGATOR COUPLERS

- Use a high-speed, high-impact electric torque wrench or pneumatic wrench – we recommend a minimum of 1000 Nm.
- Try to prevent additional momentum when mounting/shearing off the bolts.
- When using an air impact wrench, check the air pressure, torque rating and air flow requirements before starting the installation process.
- Removing/shearing off bolt heads is not required if appropriate bolt torque is attained. In this case, please consult the table on page 3; the minimum height “H” has to be reached.
- When there is not enough space in the element to use a pneumatic or electric wrench, a handheld torque wrench can be used to shear the bolt or to attain the torque momentum according to the table on page 3. The wrench momentum has to be a minimum of 2x the breaking bolt torque.
- Using hardened, heavy-duty sockets with a maximum external diameter is recommended; see the table below.

Type ALC	Breaking bolt Thread M	SW / [mm]	Maximum socket wrench diameter /[mm]		
10	M12	13	Ø 26		
12, 14-16, 18	M12	13	Ø 36		
20	M16	17	Ø 27		
22, 25	M16	17	Ø 39		
28, 32, 36, 40	M20	22	Ø 33		



The above-mentioned wrenches with the tooling necessary for shearing off bolts M12, M16 and M20 are available in boxes.



60627

ALC Electric Mounting Kit



60626

ALC Pneumatic Mounting Kit

Aluminium box	Product no.	Type wrench	Torque moment (NM)
1	60627	Electric	1000
2	60626	Pneumatic	1000-1898





## CONTACT



TERWA is the global supplier for precast and construction solutions with multiple offices around the world. With all our staff, partners and agents, we are happy to provide all construction and precast companies who work in the building industry with full service and 100% support.

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