BARTEC®

PRODUCT DATASHEET

BARTEC® datasheet PDS-001 Rev34-en January 2020

Dextra

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CONTENT

Product Description

The BARTEC® reinforcing bar end preparation system is a patented cold-upsetting and threading process that guarantees a resistant cross-section area larger than that of the parent bar.

The BARTEC® system uses isometric parallel threads, so its mechanical performance in compression equals that in tension.

The BARTEC® system is the easiest way of connecting two bars that cannot be turned, a feature known as “Position splicing”.

The BARTEC®system conveniently uses the same coupler to do standard splices or position splices. The difference between both splices is limited to the length of the thread done on the bar.

The same bar end preparation can also accommodate an anchor plate in order to create a headed bar.

BARTEC® mechanical connections have been designed to far surpass the requirements of all international codes and standards:

The BARTEC® splicing system creates a full strength connection of grade 500 reinforcement bars with a guaranteed tensile strength higher than the nominal ultimate tensile strength of the bar.

The surface condition of BARTEC® couplers and anchor plates conforms to ACI 318 § 7.4.2, ACI 349 § 7.4, ASME Section III Division 2 § CC 4360 and B.S. 5400 Part 7 § 4.5. Weldable couplers furthermore conform to ANSI/AWS D1.1-88 § 3.2.1.

//BARTEC®

The only rebar splice that maintains the full ductility of the reinforcing bar while using the same coupler for standard and position connections.

CAD & BIM

CAD & BIM tools to support design engineers in the drawing and modelling of strutures are available in the download section of www.dextragroup.com

For designer tools support, contact us at: cadbim@dextragroup.com

Tekla

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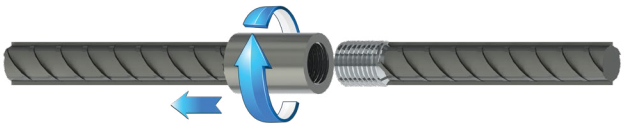
Standard splices (Type A)

The BARTEC® mechanical splice system consists in enlarging the reinforcing bar ends by cold-upsetting prior to threading them. Extra-long threads are used to assist alignment, or when joining bars that cannot be turned. All applications can thus be fulfilled by only one model of coupler, thereby reducing inventory management to a minimum

Standard BARTEC® splices are accomplished by use of a standard female coupler matching the thread size made on the bars. The continuation bar is rotated in order to achieve the connection.

STEP1

STEP2



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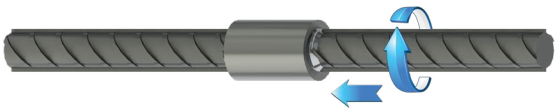
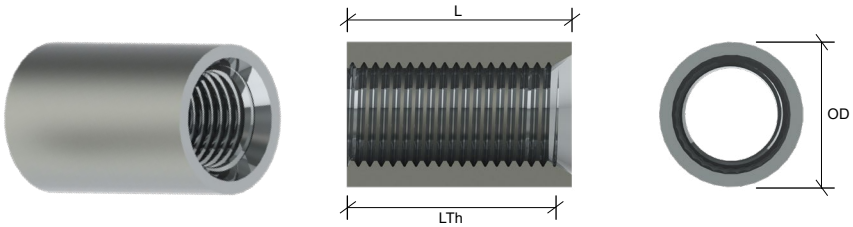




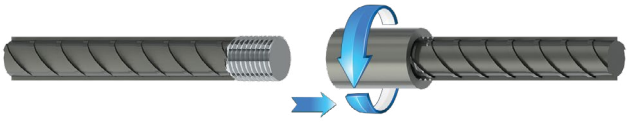
See Assembly instruction n° AI-BT-02E.

Position Splices (Type B)

When both bars would be a burden to rotate, for example because of their size or length, the BARTEC® splice system simply extends the thread onto the ribs of the bar, thereby enabling the coupler to be fully screwed onto it. It is then unscrewed from the first phase bar onto the second phase bar to accomplish the connection.

STEP1

STEP2



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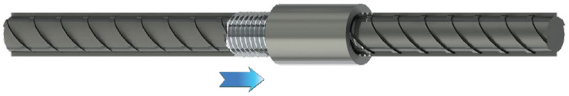

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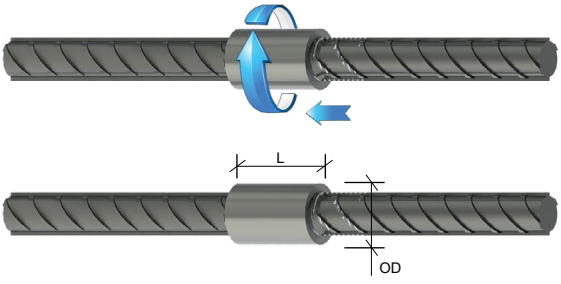


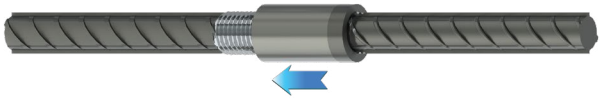
See Assembly instruction n° AI-BT-03E

Position Splices (Type C)

STEP1

STEP2

STEP3



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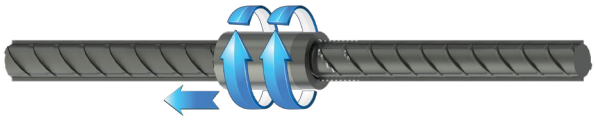
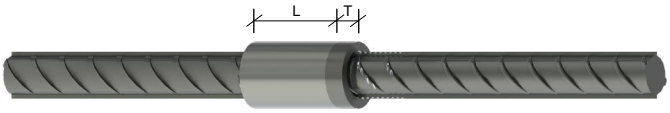
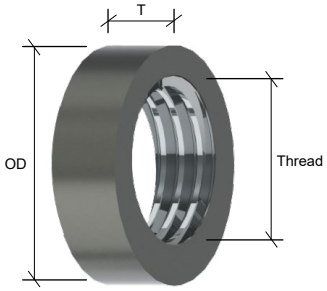




Position splice type C
See Assembly instruction n° AI-BT-04E.

Type C position splices are type B connections where the thread has been further extended to accommodate a lock nut. They are ideal when the second bar is bent and must be locked in a specific direction.



Lock nuts

Bar size	Product code BARTEC® standard coupler	Approximate dimensions (mm)		
		OD	L	LTh
12	FPBF1214201	20	28	26
14	FPBF1416201	24	36	32
16	FPBF1620255	26	44	39
18	FPBF1822251	34	49	44
20	FPBF2024305	31	52	47
22	FPBF2227305	39	66	59
25	FPBF2530355	39	66	59
28,30	FPBF2833355	44	71	64
32	FPBF3236405	48	78	70
36	FPBF3642455	55	90	82
38	FPBF3842455	57	90	82
40	FPBF4045455	60	97	88
50	FPBF5056552	75	120	110

Table 1: Dimensions of BARTEC® Standard couplers as used for A,B,C connections.

Bar size	Product code BARTEC® lock nut	Approximate external dimensions (mm)	
		OD	T
12	FPBL1214002	20	10
14	FPBL1416002	24	10
16	FPBL1620002	28	10
18	FPBL1822002	30	10
20	FPBL2024002	32	10
22	FPBL2527002	36	13.5
25	FPBL2530002	40	12
28,30	FPBL2833002	45	16.5
32	FPBL3236002	50	15
36	FPBL3642002	58	21
38	FPBL3642002	58	21
40	FPBL4052002	62	18
50	FPBL5056002	75	22.5

Table 2: Dimensions of BARTEC® lock nuts (Type C only)

Caging Splices

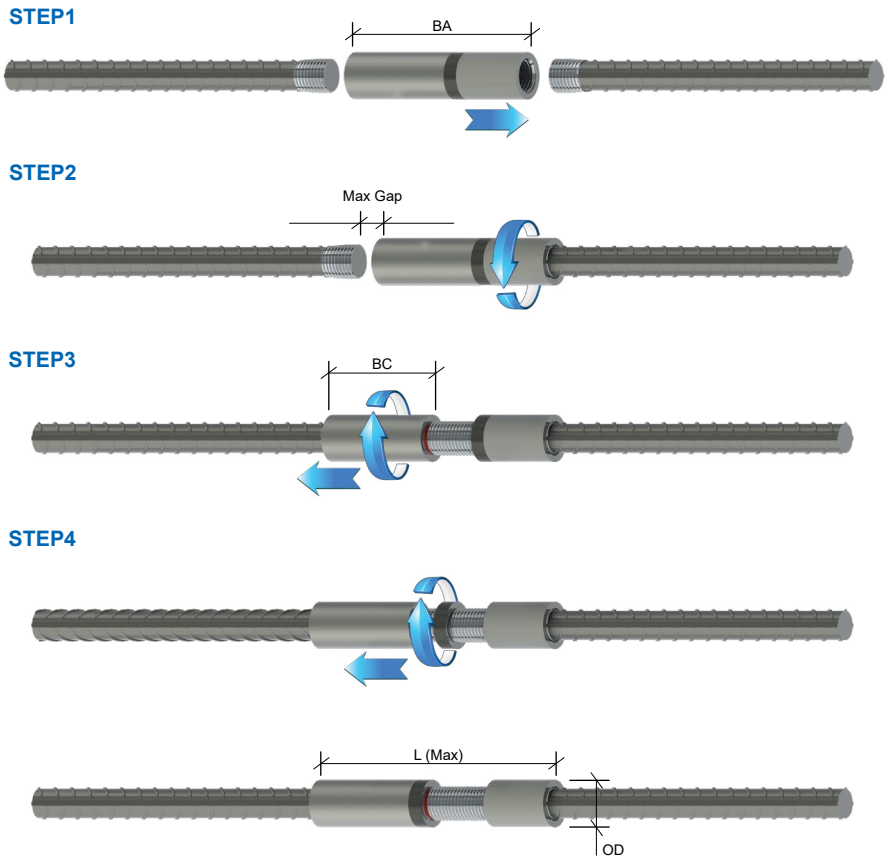
Connection of single bars

When the bars cannot be brought butt to butt (as it happens often in cages manufacturing), BARTEC® Caging splices are the answer. Both bars are threaded with a standard BARTEC® thread, and a “Caging Assembly Set” is used to connect them.

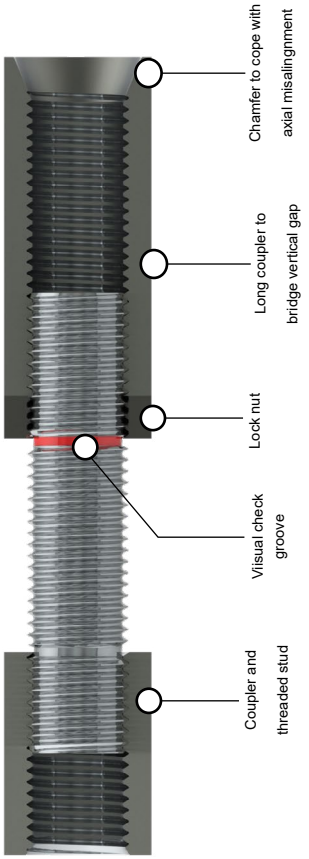
This set is constituted of 3 pieces pre-assembled together: a caging stud, a long bridging coupler and a lock-nut. The end of the caging stud bears a female thread that fits on one bar (Preferably the top bar in case of vertical cages).

To connect the two bars, the bridging coupler is unscrewed from its stud and is screwed onto the second bar. Gaps between the two bar ends can be bridged by this system: The gap should not exceed the values in table 3.

If one of the bars is concreted before assembly of the reinforcement, its thread must be protected by a pocket former (See page 15).



See Assembly instruction n° AI-BT-07E.



BARTEC® Caging assembly set

Bar size	Product code BARTEC® Caging assembly	Approximate external dimensions (mm)			Max gap (mm)	L Max
		D	BA	BC		
16	FPBB1620253	28	120	66	16	166
20	FPBB2024303	32	140	78	20	198
22	FPBB2227303	40	166	86	22	229
25	FPBB2530353	40	175	97	25	242
28, 30	FPBB2833353	45	196	108	28	274
32	FPBB3236003	50	213	120	32	297
36	FPBB3642453	58	250	138	36	345
40	FPBB4045453	62	275	160	50	390
50	FPBB5056553	75	340	197	60	480

Table 3: Dimensions of BARTEC® Caging splices

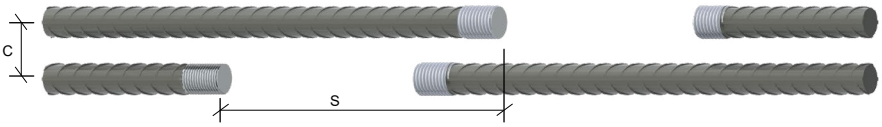
Connection of bundled bars

To connect bundled bars with this system, a minimum spacing should be maintained between the bar ends in order to accommodate the thickness of the coupler, and the bar ends should be staggered so that the movement of the bridging couplers is not obstructed by the neighbouring bar.

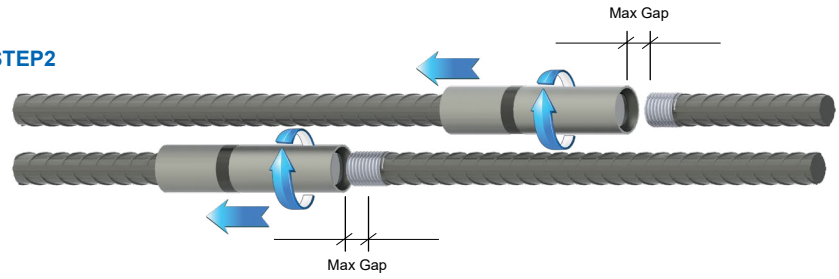
The minimum values for spacing and staggering are given in table 4. The spacing “c” is the centre-to-centre value. The staggering length “s” is from bar end to bar end.

There is no need to stagger the bars if the centre-to-centre spacing is more than both the diameter of the couplers and the dimension of the lock nut.

STEP1



STEP2



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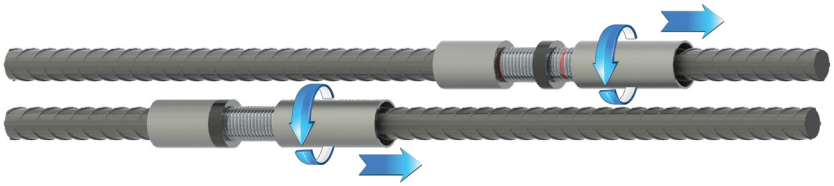
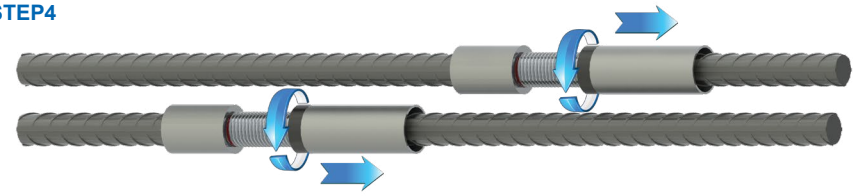


STEP4



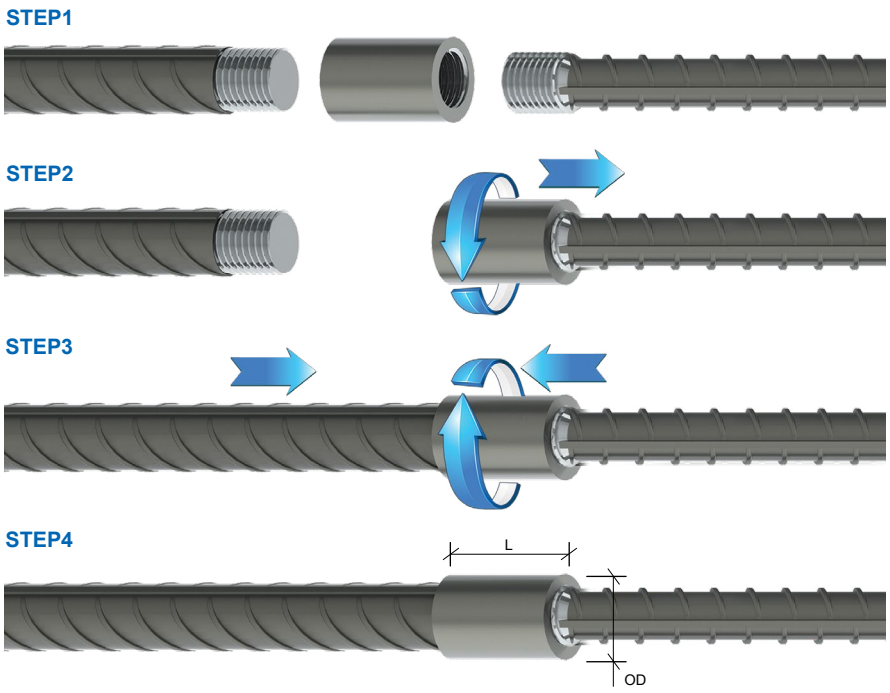
Bar size	Min. bar spacing C (mm)		Min. bar staggering S (mm)
	No Staggering	Staggering	
16	33	27	167
20	37	31	200
22	45	35.75	226
25	45	37.5	243
28, 30	50	41.5	276
32	55	46	299
36	63	52	348
40	67	56	392
50	80	67.5	483

Table 4: Spacing and staggering for connection of bundled bars.

Transition Splices

Transition Splices (via the bar)

When there is a need to splice bars of different diameters, it is allowable in most cases (see table 5 below) to reduce the size of the larger bar and to use a standard coupler.

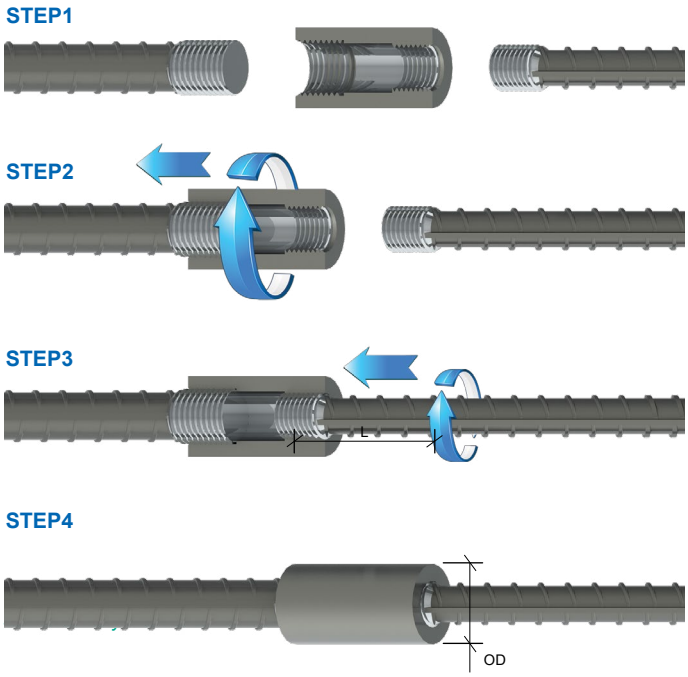


Bar size	Feasibility	Thread
16/12	OK	M14 on Ø 16
20/14		M16 on Ø 20
25/20		M24 on Ø 25
28/22		M27 on Ø 28
32/25		M30 on Ø 32
36/28		M33 on Ø 36
43/36		M42 on Ø 43
50/43		M48 on Ø 50
20/18	OK Both bar ends need to be forged. Die pockets of Bartec R are required.	M20 on Ø 20
20/16		M22 on Ø 20
22/20		M24 on Ø 22
25/22		M27 on Ø 27
28/25		M30 on Ø 28
32/28		M33 on Ø 32
36/32		M36 on Ø 32
40/36		M42 on Ø 40
25/16	OK with Caution The larger bar must be threaded in 2 or 3 times. The threading head must be re-adjusted between the 2 or 3 times. The processing time will be significantly larger and the wear & tear of tools significantly higher. This job should be done by the most skilled operator. The coupler chamfer must be on the side of the smaller bar.	
40/25		
40/28		
40/32		
50/40		

Table 5: BARTEC® Direct Transitions

Transition Splices (via the coupler)

The BARTEC® range includes special transition couplers to connect bars of different diameters.



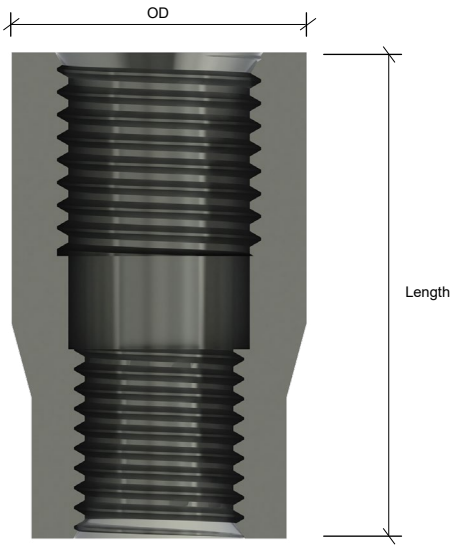
See Assembly instruction n° AI-BT-05E.

Bar size	Product code BARTEC® Transition coupler	Approximate external dimensions (mm)	
		OD	L
14/12	FPBT1412003	24	38
16/14	FPBT1614003	26	46
20/12	FPBT2012003	30	50
20/14	FPBT2014003	30	52
20/16	FPBT2016003	30	56
22/16	FPBT2216003	36	59
22/20	FPBT2220003	38	63
25/16	FPBT2516003	38	64
25/20	FPBT2520003	38	68
25/22	FPBT2522003	45	71
28,30/16	FPBT2816003	40	67
28,30/20	FPBT2820003	40	71
28,30/22	FPBT2822003	45	74
28,30/25	FPBT2825003	45	77
32/16	FPBT3216003	45	72
32/20	FPBT3220003	45	76
32/22	FPBT3222003	45	79
32/25	FPBT3225003	45	82
32/28,30	FPBT3228003	48	85
34/22	FPBT3422003	50	82
34/25	FPBT3425003	52	85
34/28,30	FPBT3428003	52	88
36/25	FPBT3625003	52	90
36/28,30	FPBT3628003	55	93
36/32	FPBT3632003	60	96
40/25	FPBT4025003	55	93
40/28,30	FPBT4028003	55	96
40/32	FPBT4032003	62	99
40/36	FPBT4036003	62	105
50/32	FPBT5032003	75	114
50/40	FPBT5040003	75	123

Table 6: Dimensions of BARTEC® Transition couplers

Forged Transition Couplers

Depending on quantities and lead time requirements, transition couplers may also be delivered with this alternate design. Please consult us for more information.

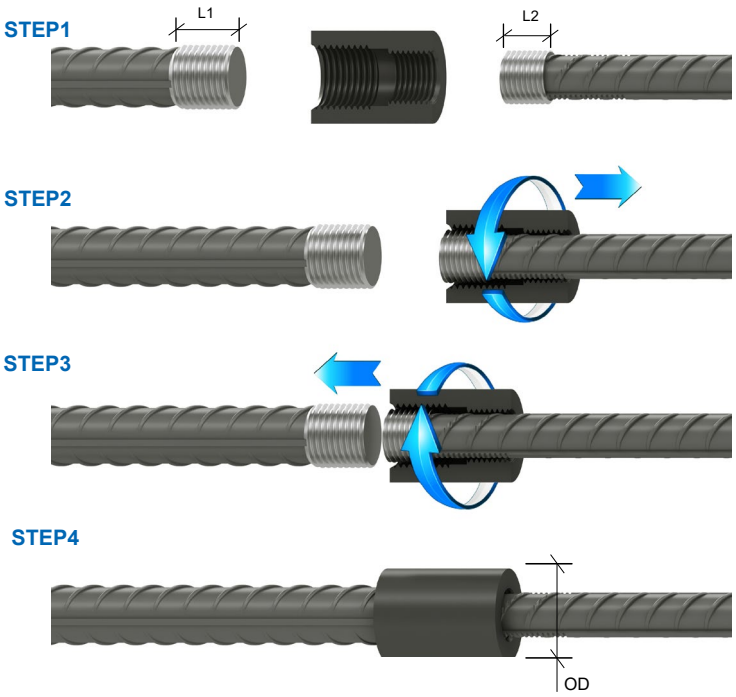


Bar size	Product code Bartec® Transition coupler	Approximate external dimensions (mm)	
		OD	L
20/12	FPDT2012002	32	59
20/14	FPDT2014002	32	59
20/16	FPDT2016002	32	59
20/18	FPDT2018002	32	59
25/16	FPDT2516002	40	72
25/20	FPDT2520002	40	72
25/22	FPDT2522002	40	72
28/16	FPDT2816002	42	78
28/20	FPDT2820002	42	78
28/22	FPDT2822002	42	78
28/25	FPDT2825002	42	78
32/20	FPDT3220002	50	86
32/22	FPDT3222002	50	86
32/25	FPDT3225002	50	86
32/28	FPDT3228002	50	86
40/20	FPDT4020002	62	100
40/25	FPDT4025002	62	100
40/28	FPDT4028002	62	100
40/32	FPDT4032002	62	100

Table 7: Dimensions of Bartec® Forged Transition couplers

Position-Transition Splices

For most bar size combinations, BARTEC Transition couplers can be used to connect bars of different diameter without having to turn either bar, simply by making an extended thread on the smaller bar.



See Assembly instruction n° AI-BT-15E.

Bar size	Product code BARTEC® Transition coupler	Approximate external dimensions (mm)		
		OD	L1	L2
16/14	FPBT1614003	26	22	32
20/12	FPBT2012003	30	32	27
20/14	FPBT2014003	30	32	32
20/16	FPBT2016003	30	32	44
22/16	FPBT2216003	36	32	44
25/16	FPBT2516003	38	34	44
25/20	FPBT2520003	38	34	51
28,30/16	FPBT2816003	40	37	44
28,30/20	FPBT2820003	40	37	51
28,30/22	FPBT2822003	45	37	65
32/16	FPBT3216003	45	37	44
32/20	FPBT3220003	45	37	51
32/22	FPBT3222003	45	37	65
32/25	FPBT3225003	45	37	64
34/22	FPBT3422003	50	40	65
34/25	FPBT3425003	52	40	64
34/28,30	FPBT3428003	52	40	69
36/25	FPBT3625003	52	43	64
36/28,30	FPBT3628003	55	43	69
36/32	FPBT3632003	60	43	75
40/25	FPBT4025003	55	46	64
40/28,30	FPBT4028003	55	46	69
40/32	FPBT4032003	62	46	75
50/32	FPBT5032003	75	56	75
50/40	FPBT5040003	75	56	93

Table 8: Dimensions of BARTEC® Position-Transition splices

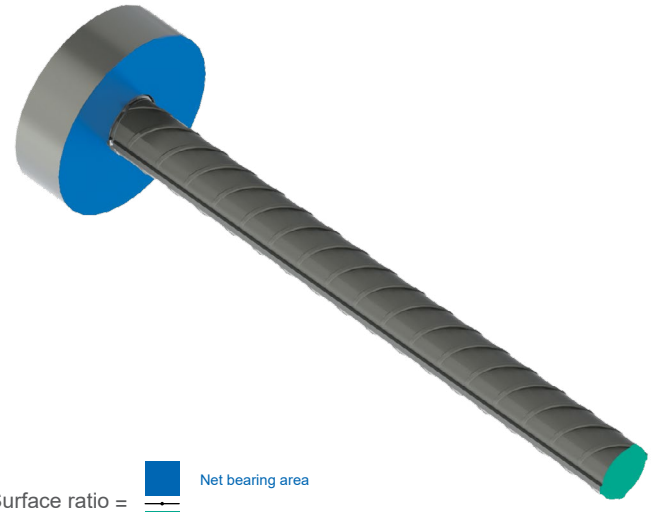
Headed Bars

Development or anchorage of reinforcement is the main use of headed bars. They conveniently replace hooked bars as end anchorages in congested areas. They can also be used to reduce lapping length, or as confinement or shear reinforcement where placing of stirrups is difficult.

Typical applications include exterior beam-column connections, roof corners, pile feet, pile caps, cantilevered members, corbels, etc.

Headed bars can provide full design anchorage by either the head bearing alone or a combination of the head bearing together and rebar bond. The selection of approach will primarily depend on the design standard adopted, the size of the head and the strength of concrete.

Standard BARTEC® mechanical anchorages are circular in shape and are fixed to the end of the rebar by screwing them onto the threaded bar. Two sizes of heads are available:



Surface ratio = Net bearing area / Nominal bar cross section area

- Small heads, with a net bearing area greater than or equal to four times the cross-section area of the reinforcing bar (4A).
- Large heads, with a net bearing area greater than or equal to nine times the cross section area of the reinforcing bar (9A).

When loaded in tension and due to the round shape of the head, a cone of overstressed concrete will develop immediately under the head. If the head is large enough and the concrete is strong enough, the full anchorage design strength can be developed via the head alone. If this is not the case, then a contribution of rebar bond is required, immediately beyond the region of overstressed concrete.

Different codes of practice take different design approaches. Some, for example ACI 318, explicitly allow for a 4A head with a provision for a load contribution to be taken via rebar bond. Others, for example, fib Model Code 2010, give a set of simplified prescriptive rules for a minimum head size of 8A only. EN1992-1-1 (Eurocode 2), does not explicitly cover designing with headed bars.

However, rules can be derived from the provisions for partially loaded areas. For further information on how to design in accordance with Eurocode 2, please see the Arup/Dextra Design Guide.

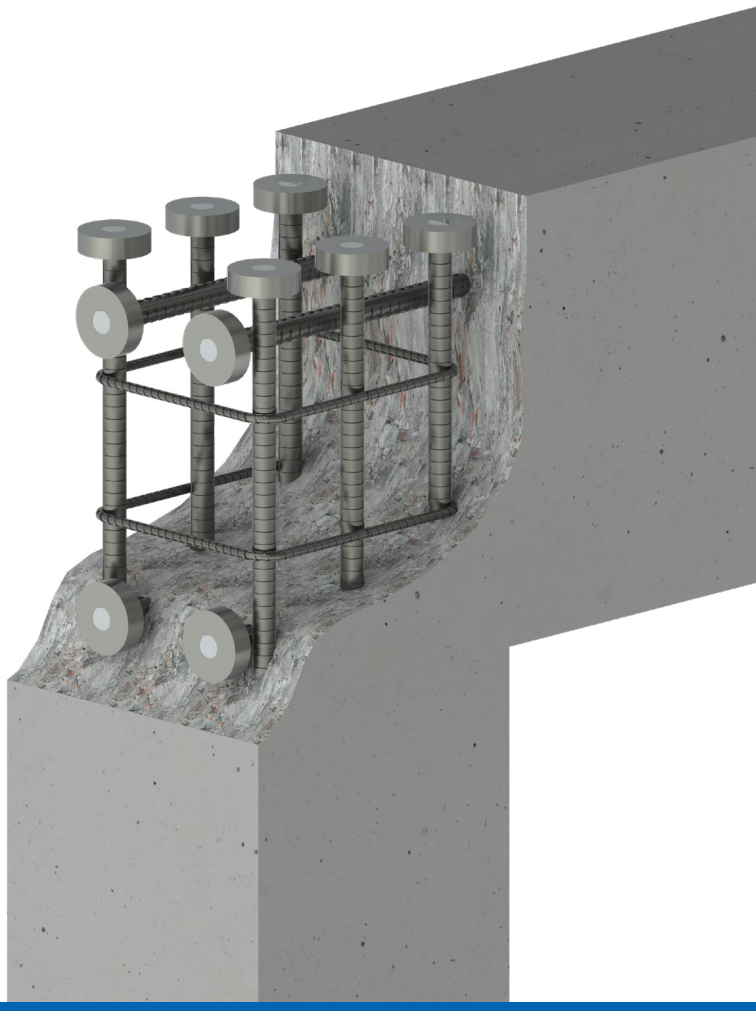
In beam-column connections, headed bars in beam reinforcement should extend to the far side of the column core. In roof corners, the column heads should be located above the beam bars. In both cases this detailing arrangement will provide space for an additional layer of transverse reinforcement, which will further improve the capacity of the anchorage.

Headed bars can be arranged close to one another: Tests have shown that the overlapping of compression cones does not reduce the effectiveness of the anchorage. However, the relevant code of practice should be followed with regards spacing.

For applications in seismic design, or whenever stress reversal can be expected, the anchorage length in compression should be checked too. (Just like hooks, headed bars do not contribute to anchorage in compression, which must therefore be provided by a straight portion of bar as per the code requirement).

Full-scale cyclic tests of beam-column connections reinforced with headed bars have shown that push-out of the concrete behind the head does not occur until a drift ratio of 6%.

See Assembly instruction n° AI-BT12E.



Small Headed bars

Bar size	Product code BARTEC® small anchor plate	Approximate external dimensions Small round head			
		OD (mm)	Thickness (mm)	Net bearing area (mm2)	Surface ratio
12	FPEC1214013	30	12	553	4.89
14	FPEC1416203	34	14	707	4.59
16	FPEC1620013	38	18	820	4.08
20	FPEC2024003	48	20	1,357	4.32
22	FPEC2227013	52	24	1,551	4.08
25	FPEC2530003	60	26	2,121	4.32
28,30	FPEC2833003	70	28	2,993	4.86
32	FPEC3236003	75	31	3,400	4.23
34	FPEC1139003	85	35	4,480	4.93
36	FPEC3642453	85	36	4,289	4.20
40	FPEC4045003	95	38	5,498	4.37
50	FPEC5056553	115	48	7,924	4.04

Table 9: Dimensions of BARTEC® Small Mechanical Anchorages
(Net bearing area at least 4 times the nominal cross-section area of the bar)

Large Headed bars

Bar size	Product code BARTEC® large anchor plate	Approximate external dimensions Large round head			
		OD (mm)	Thickness (mm)	Net bearing area (mm2)	Surface ratio
12	FPEC1214001	42	12	1,232	10.90
14	FPEC1416201	45	14	1,389	9.02
16	FPEC1620001	52	18	1,810	9.00
20	FPEC2024001	65	20	2,866	9.13
22	FPEC2227301	75	24	3,845	10.12
25	FPEC2530351	85	25	4,968	10.12
28	FPEC0933001	95	29	6,233	10.12
30	FPEC3033351	100	28	6,999	9.90
32	FPEC3236001	105	32	7,641	9.50
34	FPEC1139001	115	35	9,192	10.12
36	FPEC3642451	120	36	9,924	9.73
40	FPEC4045001	130	38	11,683	9.29
50	FPEC5056551	165	48	18,919	9.64

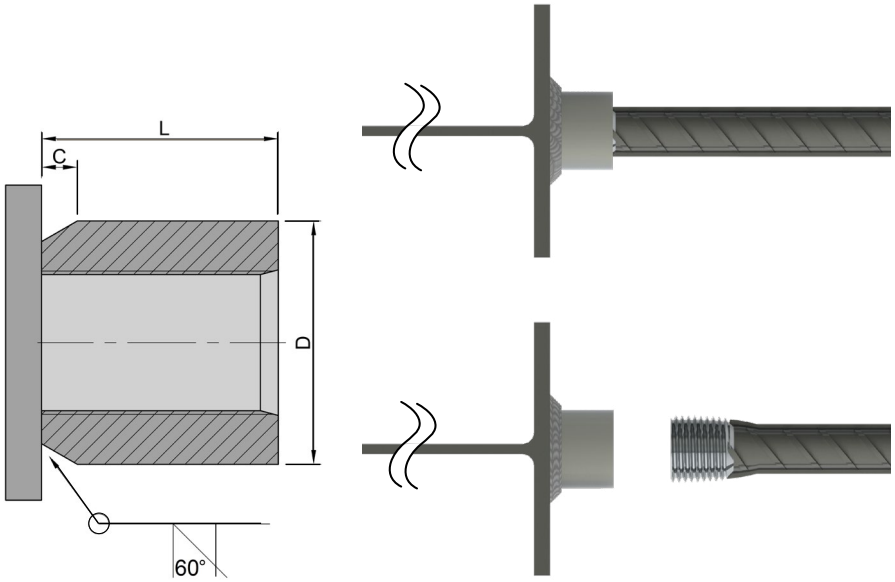
Table 10: Dimensions of BARTEC® Large Mechanical Anchorages
(Net bearing area at least 9 times the nominal cross-section area of the bar)

Weldable Couplers

For composite construction where concrete reinforcement bars must be welded to a steel structure, BARTEC® weldable couplers must be used.

This is a nut made of a weldable-grade steel that bears a large chamfer suitable for single bevel butt welding.

See Assembly instruction n° AI-CW-01E.



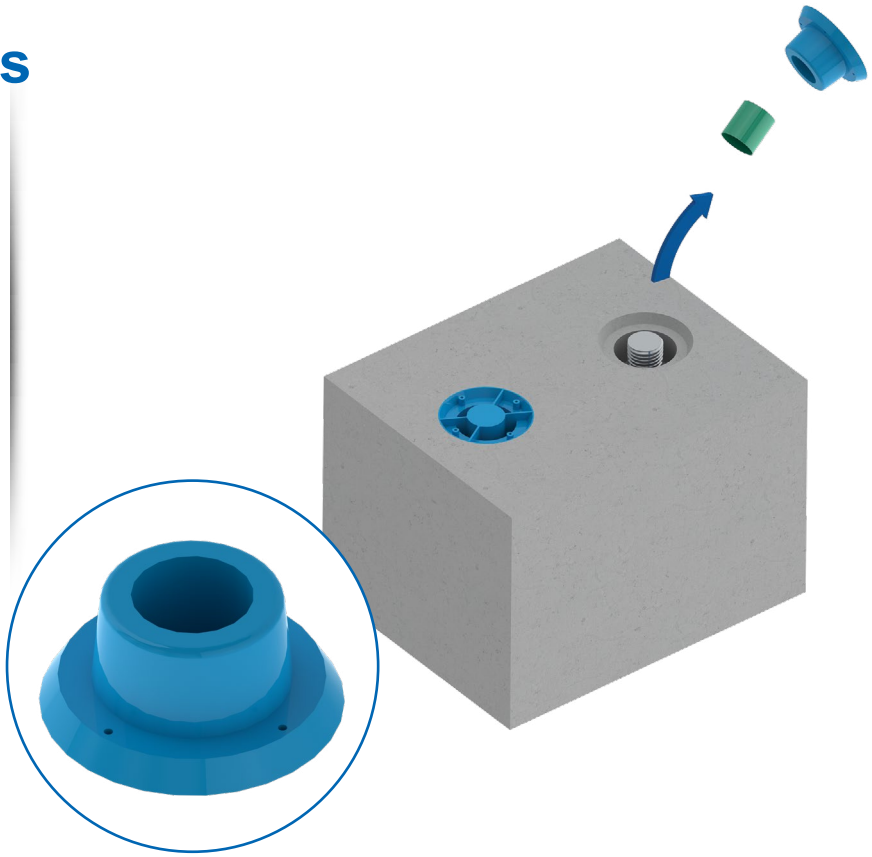
Bar size	Product code BARTEC® Weldable coupler	Approximate external dimensions (mm)		
		D	L	C
12	FPWC1214001	22	18	4
14	FPWC1416001	28	27	4
16	FPWC1620001	34	33	5
18	FPWC1822001	38	35	5
20	FPWC2224001	38	36	6
22	FPWC2627001	45	39	6
25	FPWC2530001	45	37	7
28,30	FPWC2833001	55	40	7
32	FPWC3236001	55	44	8
36	FPWC3642001	72	51	9
40	FPWC4045001	72	54	9
50	FPWC5056001	90	67	11

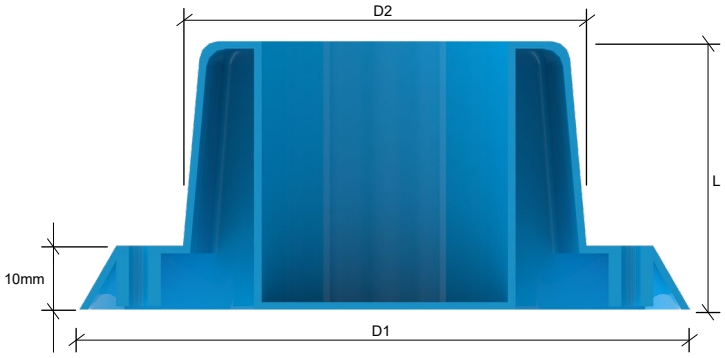
Table 11: Dimensions of BARTEC® weldable couplers

Pocket Formers

Pocket Formers are plastic accessories that fit the threads of BARTEC® bars in order to form a reservation in the concrete. They can be nailed to a wooden formwork through the holes in their flange.

It is advisable to apply a mould-release agent to the pocket formers prior to concreting. Simply use the same agent as for the formworks.





Bar size	Product code BARTEC® Pocket Former	Approximate external dimensions (mm)		
		D1	D2	L
12	FPPF1214002	61.5	28	18
14	FPPF1416002	61.5	32	20
16	FPPF1620002	71.5	40	25
18	FPPF1822002	71.5	40	24
20	FPPF2024002	77.5	45	29
22	FPPF2227002	85.5	50	26
25	FPPF2530002	85.5	50	34
28,30	FPPF2833002	85.5	60	41.2
32	FPPF3236002	95.5	60	42
40	FPPF4045002	115	75	50
50	FPPF5056002	125	85	60

Table 12: Dimensions of BARTEC® Pocket Formers

Epoxy-Coated Range

Epoxy-coated BARTEC® couplers and anchor plates are available for use with epoxy-coated bars. The thickness and continuity of the epoxy coating complies with ASTM A775:2007 and BS ISO14654:1999.

The marking on Dextra BARTEC® Epoxy-Coated range is the same as the one on the BARTEC® Standard “black steel” range.

See Assembly instruction n° AI-BT22E and AI-BT23E.

Standard splice - Epoxy Coated

Bar size	Product code BARTEC® Standard coupler with epoxy coating	Approximate external dimensions (mm)	
		OD	L
16	FPBF1620256	25.6	44
20	FPBF2024306	31	52
25	FPBF2530356	39	66
32	FPBF3236406	48	78
40	FPBF4045456	60	97

Table 13: Dimensions of BARTEC® Standard couplers with epoxy coating

Small Headed bars - Epoxy Coated

Bar size	Product code BARTEC® small anchor plate with epoxy coating	Approximate external dimensions Small round head			
		OD (mm)	Thickness (mm)	Net bearing area (mm2)	Surface ratio
16	FPEC1620011	38	18	820	4.08
20	FPEC2024011	48	20	1,357	4.32
25	FPEC2530011	60	26	2,121	4.32
32	FPEC3236011	75	31	3,400	4.23
40	FPEC4045011	95	38	5,498	4.37

Table 14: Dimensions of BARTEC® Small Mechanical Anchorages with epoxy coating
(Net bearing area at least 4 times the nominal cross-section area of the bar)

Large Headed bars - Epoxy-Coated

Bar size	Product code BARTEC® large anchor plate with epoxy coating	Approximate external dimensions Large round head			
		OD (mm)	Thickness (mm)	Net bearing area (mm2)	Surface ratio
16	FPEC1620010	52	18	1,810	9.00
20	FPEC2024010	65	20	2,866	9.13
25	FPEC2530010	85	25	4,968	10.12
32	FPEC3236010	105	32	7,641	9.50
40	FPEC4045010	130	38	11,683	9.29

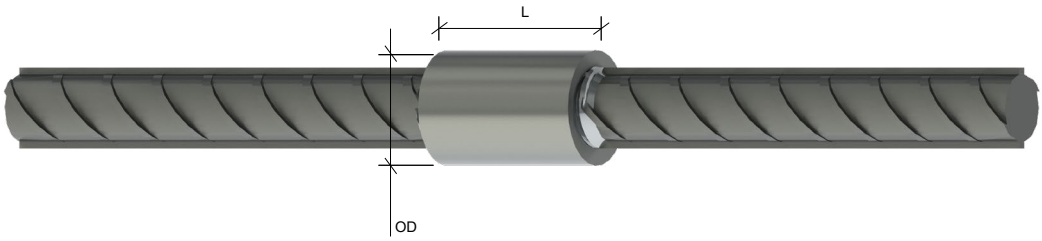
Table 15: Dimensions of BARTEC® Large Mechanical Anchorages with epoxy coating
(Net bearing area at least 9 times the nominal cross-section area of the bar)

Stainless Steel Range

BARTEC® stainless steel couplers are designed to splice BS6744 grade 500 or ASTM A955 grade 60 stainless steel reinforcing bars. They are available in two grades in order to fit with the grade of the bar:

- Bartec austenitic stainless steel couplers are made of grade AISI 316 as per ASTM A276 or X3CrNiMo17-13-3 as per EN 10088-3 (Material number 1.4436).
- Bartec duplex stainless steel couplers are made of grade S31803 or, S32205 as per ASTM A276 or X2CrNiMoN22-5-3 as per EN 10088-3 (Material number 1.4462).

For the splicing of cryogenic reinforcing bars, Bartec austenitic stainless steel couplers are recommended.



Standard splice - Austenitic Stainless Steel

Bar size	Product code Bartec austenitic stainless steel coupler	Approximate external dimensions (mm)	
		OD	L
12	FPSB1214003	24	28
14	FPSB1416003	26	32
16	FPSB1620003	30	40
18	FPSB1822003	32	44
20	FPSB2024003	35	48
22	FPSB2227003	40	54
24,25,26	FPSB2530003	45	60
28,30	FPSB2833003	50	66
32	FPSB3236003	55	72
34	FPBS3439003	60	78
36	FPSB3642003	65	84
40	FPSB4045003	70	90
50	FPSB5056003	85	112

Table 16: Dimensions of BARTEC® austenitic stainless steel couplers

Standard splice - Duplex Stainless Steel

Bar size	Product code Bartec duplex stainless steel coupler	Approximate external dimensions (mm)	
		OD	L
12	FPSB1214002	20	28
14	FPSB1416002	24	32
16	FPSB1620002	28	40
18	FPSB1822002	30	44
20	FPSB2024002	34	48
22	FPSB2227002	38	54
24,25,26	FPSB2530002	40	60
28,30	FPSB2833002	45	66
32	FPSB3236002	50	72
34	FPBS3439002	55	78
36	FPSB3642002	57	84
40	FPSB4045002	65	90
50	FPSB5056002	80	112

Table 17: Dimensions of BARTEC® duplex stainless steel couplers

Colour Identification

The plastic caps that protect the threads of BARTEC® couplers are coloured to enable a quick identification of the bar size and prevent miss-matching of threads.

Bar size	Colour
12	Yellow
14	Blue
16	Lavender
18	Grey
20	Orange
22	Red
25	Clear
28,30	Brown
32	Light blue
34	Yellow
36, 38	Green
40	Blue
50	Brown

Table 18 : Colour of plastic caps

Identification & Traceability

Each connection is marked with the following symbols that enable to trace it back to each raw material and production batch data.

Marking on coupler circumference :

Prefix	D	XXXXXX	XXXXXX	Suffix
Model & Bar size	DEXTRA	Production batch	Material Lot	T2DCL for some size of standard & position couplers . TH for end anchors No suffix for other models
		Traceability No.		

Type of splice	Prefix marking number begin with
Standard splice	BFC40D or BF12D
Caging splice	BB32D
Transition	DT40-32
Transition (forged model)	DTF28-20
Stainless (duplex)	BDS12#4D
Stainless (austenitic)	BAS12#4D
Weldable	WC33D
Small end anchor	BFEAS16D
Large end anchor	BFEAL12D

Table 19 : Marking on coupler circumference
Characters in blue vary upon bar/thread diameter.

Full traceability of the production batches and raw materials is guaranteed for all load-bearing components. The retention period of our quality records is 12 years.

Approvals

BARTEC® mechanical splices and anchorages have been approved by the most demanding international regulators:

Country	Agency	Certificate N°	Details
	UK Cares	TA1B-5011	For standard, position splices in dia 12 through 40.
	ICC-ES	ESR-1705	For standard, position, and form fixer splices in dia #4 through #18
		ESR-2166	For small end anchor plates in dia #4 through #11
	Ministry of Transportation of Québec	N° 1586	For standard splices in dia 15M through 55M
	Concrete Institute of Russia	POCC TH. АЯ12. H01289	For standard, position, weldable splices, and small & large end anchors bars in dia 12 through 40. For transition, splices in dia 20 through 40. For caging splices in dia 16 through 40.
	Мосстрой сертификация	RU.MCC.181.358.33603	
	ROMANIA	Nr 003-01/131-2018	For standard, position, transition, weldable splices and small & large end anchors bars in dia 12 through 40. For caging splices in dia 16 through 40. For pocket former in dia 14 through 40.
	Dubai Municipality	N° CL 17020493	For standard splices in dia 12 through 40. For bridging splices in dia 16 through 40
	CNERIB	DTEM /63/2018	For standard & position splices in dia 20 through 32.

Table 20: Product certifications

Quality Assurance

BARTEC® couplers and anchor plates are manufactured according to strict technical specifications and under a production process that has been certified to satisfy to the ISO9001 and ASME NCA-3800 quality assurance standard.

This quality assurance system complies with the requirements ASME NQA-1 and 10CFR50 Appendix B.

Agency		Certificate N°
ASME SETTING THE STANDARD	The American Society of Mechanical Engineers	QSC-706
BUREAU VERITAS Certification	Bureau Veritas	TH010882
CARES UKAS	UK CARES	1086

Table 21: Quality assurance certifications

BARTEC® mechanical splices compliance with section CC-4333 of ACI 359/ASME Boiler & Pressure Vessel Code Section III Division 2 has been confirmed by ASME Code Case Nº 796.

Products described in this document are warranted to be free from manufacturing defects and to perform in accordance with the manufacturer's specifications providing that they are installed in accordance with our written instructions.

Bar End Preparation

Reinforcing bars are individually prepared by having a BARTEC® thread made on one or both of their ends by a Dextra machine. The machine is preferably installed at a fabricator's workshop. Bar end preparation instructions provided by Dextra must be followed.

Installation

The mechanical connection is achieved by screwing the coupler onto one bar, and then unscrewing onto the second bar. Contrary to taper threads, no torque wrench is necessary, and mis-assembly by crossing threads is impossible. Connections on site must be done as per the correct Assembly Instruction, as referenced in this document for each type of splice. They are available upon request or at www.dextragroup.com/downloads-bim.

Disclaimer

As a result of our continuous thrive for technological improvement, Dextra reserves its right to modify the contents of this specification sheet at any time without prior notice. In particular, various sources of raw materials may lead to variations in outside diameters. The information provided on this document, and any outside information linked to, is for guidance only.

Dextra products shall be installed and used only as indicated in Dextra's documentation and training materials. Aforementioned documents are available at www.dextragroup.com and from your Dextra customer service representative. Improper installation, misuse, misapplication or other failure to completely follow Dextra's instructions and warnings may cause product malfunction, property damage, serious bodily injury and death. Dextra cannot accept any liability in respect thereof.

PACKING DETAILS

Packing details

Pocket formers are packed in carton boxes. Other products are packed in wooden crates that can be lifted by a forklift.

All products must be stored under a roof and protected from the elements.

Please ensure that order quantities are a multiple of the packaging quantities stated in the following tables.

Wooden box type	Inside	Outside	Weight (kg)
	W x L x H (cm)	W x L x H (cm)	
1	36.6x56.6x25.0	43.4x63.4x43.7	17
2	56.6x76.6x29.0	63.4x83.4x47.7	25
3	76.6x116.6x29.0	83.4x123.4x47.7	39
4	76.6x116.6x45.0	83.4x123.4x63.7	48
5	76.6x116.6x65.0	83.4x123.4x83.7	60

Table 22: Wooden crates dimensions

Note : The weight of the crates varies depending on ambient humidity.

Carton box	Carton box size (mm)	Weight (kg)
Pocket former	400x400x400	1

Table 23: Carton boxes dimensions

Note : The weight of the crates varies depending on ambient humidity.

BARTEC® Standard couplers >> Page 4

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
12	FPBF1214201	1,000	1	40	57
14	FPBF1416201	1,000	1	80	97
16	FPBF1620255	1,000	1	90	107
18	FPBF1822251	1,000	2	220	245
20	FPBF2024305	1,000	2	160	185
22	FPBF2227305	1,000	3	370	409
25	FPBF2530355	1,000	3	310	349
28,30	FPBF2833355	1,000	3	420	459
32	FPBF3236405	1,000	4	600	648
36	FPBF3642455	500	4	440	488
38	FPBF3842455	500	4	620	668
40	FPBF4045455	1,000	5	1,160	1,220
50	FPBF5056552	250	3	518	557

BARTEC® Lock Nuts >> Page 5

Bar size	Finished code	Qty (pcs)	Box type	Net weight (kg)	Gross weight (kg)
12	FPBL1214002	5000	1	70	87
14	FPBL1416002	2500	1	55	72
16	FPBL1620002	2000	1	54	71
18	FPBL1822002	2000	1	58	75
20	FPBL2024002	2000	1	64	81
22	FPBL2527002	1000	1	54	71
25	FPBL2530002	500	1	30	47
28, 30	FPBL2833002	500	1	54	71
32	FPBL3236002	500	1	63	80
36	FPBL3642002	250	1	58	75
38	FPBL3642002	250	1	58	75
40	FPBL4052002	250	1	56	73
50	FPBL5056002	100	1	39	56

BARTEC® Caging couplers >> Page 6

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
16	FPBB1620253	500	2	255	280
20	FPBB2024303	500	2	410	435
22	FPBB2227303	500	3	725	764
25	FPBB2530353	500	3	785	824
28,30	FPBB2833353	400	3	892	931
32	FPBB3236003	400	4	1,192	1,240
36	FPBB3642453	200	3	932	971
40	FPBB4045453	200	4	1,196	1,244
50	FPBB5056553	100	4	1,058	1,106

BARTEC® Transition couplers >> Page 9

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
14/12	FPBT1412003	250	1	23	40
16/14	FPBT1614003	250	1	28	45
20/12	FPBT2012003	250	1	38	55
20/14	FPBT2014003	250	1	40	57
20/16	FPBT2016003	250	1	40	57
22/16	FPBT2216003	250	1	70	87
22/20	FPBT2220003	250	1	83	100
25/16	FPBT2516003	250	1	80	97
25/20	FPBT2520003	250	1	80	97
25/22	FPBT2522003	250	1	143	160
28,30/16	FPBT2816003	250	1	85	102
28,30/20	FPBT2820003	250	1	88	105
28,30/22	FPBT2822003	250	2	135	160
28,30/25	FPBT2825003	250	2	135	160
32/16	FPBT3216003	250	2	125	150
32/20	FPBT3220003	250	2	128	153
32/22	FPBT3222003	250	2	130	155
32/25	FPBT3225003	250	2	128	153
32/28,30	FPBT3228003	250	2	160	185
34/22	FPBT3422003	250	2	175	200
34/25	FPBT3425003	250	2	205	230
34/28,30	FPBT3428003	250	2	203	228
36/25	FPBT3625003	250	2	195	220
36/28,30	FPBT3628003	250	2	240	265
36/32	FPBT3632003	250	2	325	350
40/25	FPBT4025003	250	2	223	248
40/28,30	FPBT4028003	250	2	225	250
40/32	FPBT4032003	250	3	348	387
40/36	FPBT4036003	250	3	345	384
50/32	FPBT5032003	250	3	590	629
50/40	FPBT5040003	250	3	605	644

BARTEC® Forged Transition couplers >> Page 10

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
20/12	FPDT2012002	500	1	105	122
20/14	FPDT2014002	500	1	100	117
20/16	FPDT2016002	500	1	95	112
20/18	FPDT2018002	1000	2	180	205
25/16	FPDT2516002	1000	3	390	429
25/20	FPDT2520002	1000	3	370	409
25/22	FPDT2522002	1000	3	350	389
28/16	FPDT2816002	1000	3	470	509
28/20	FPDT2820002	1000	3	450	489
28/22	FPDT2822002	1000	3	420	459
28/25	FPDT2825002	1000	3	400	439
32/20	FPDT3220002	500	3	360	399
32/22	FPDT3222002	500	3	345	384
32/25	FPDT3225002	500	3	330	369
32/28	FPDT3228002	500	3	315	354
40/20	FPDT4020002	250	3	330	369
40/25	FPDT4025002	250	3	315	354
40/28	FPDT4028002	250	3	305	344
40/32	FPDT4032002	250	3	298	337

BARTEC® Weldable couplers >> Page 14

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
12	FPWC1214001	250	1	10	27
14	FPWC1416001	250	1	25	42
16	FPWC1620001	250	1	43	60
18	FPWC1822001	250	1	58	75
20	FPWC2224001	250	1	55	72
22	FPWC2627001	250	1	85	102
25	FPWC2530001	250	1	73	90
28,30	FPWC2833001	250	2	130	155
32	FPWC3236001	250	2	130	155
36	FPWC3642001	250	2	288	313
40	FPWC4045001	250	2	283	308
50	FPWC5056001	250	3	548	587

BARTEC® Pocket Formers >> Page 15

Bar size	Finished code	Qty (pcs)	Carton box size	Net weight (kg)	Gross weight (kg)
12	FPPF1214002	500	400x400x400	5	6
14	FPPF1416002	500	400x400x400	5	6
16	FPPF1620002	250	400x400x400	4	5
18	FPPF1822002	250	400x400x400	4	5
20	FPPF2024002	250	400x400x400	4	5
22	FPPF2227002	100	400x400x400	2	3
25	FPPF2530002	100	400x400x400	2	3
28,30	FPPF2833002	100	400x400x400	3	4
32	FPPF3236002	100	400x400x400	3	4
40	FPPF4045002	50	400x400x400	2	3
50	FPPF5056002	50	400x400x400	3	4

Note : FCL shipments may be palletised, whereas LCL shipments must be boxed.

BARTEC® Small Headed bars >> Page 13

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
12	FPEC1214013	500	1	30	47
14	FPEC1416203	500	1	40	57
16	FPEC1620013	500	1	65	82
20	FPEC2024003	500	1	115	132
22	FPEC2227013	500	1	155	172
25	FPEC2530003	500	2	230	255
28,30	FPEC2833003	500	2	345	370
32	FPEC3236003	250	2	218	243
34	FPEC1139003	250	2	335	360
36	FPEC3642453	250	2	333	358
40	FPEC4045003	250	2	448	473
50	FPEC5056553	200	3	644	683

BARTEC® Large Headed bars >> Page 13

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
12	FPEC1214001	500	1	60	77
14	FPEC1416201	500	1	80	97
16	FPEC1620001	500	1	135	152
20	FPEC2024001	500	2	235	260
22	FPEC2227301	500	2	380	405
25	FPEC2530351	500	3	540	579
28	FPEC0933001	500	3	775	814
30	FPEC3033351	500	3	840	879
32	FPEC3236001	250	2	520	545
34	FPEC1139001	250	3	680	719
36	FPEC3642451	250	3	755	794
40	FPEC4045001	200	3	748	787
50	FPEC5056551	100	3	757	796

BARTEC® Epoxy-Coated Standard couplers >> Page 16

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
16	FPBF1620256	1,000	1	90	107
20	FPBF2024306	1,000	2	160	185
25	FPBF2530356	1,000	3	310	349
32	FPBF3236406	1,000	4	600	648
40	FPBF4045456	1,000	5	1,160	1,220

BARTEC® Epoxy-Coated Small size Headed bars >> Page 16

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
16	FPEC1620011	500	1	65	82
20	FPEC2024011	500	1	115	132
25	FPEC2530011	500	2	230	255
32	FPEC3236011	250	2	218	243
40	FPEC4045011	250	3	448	487

BARTEC® Epoxy-Coated Large size Headed bars >> Page 16

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
16	FPEC1620010	500	1	135	152
20	FPEC2024010	500	2	235	260
25	FPEC2530010	500	3	540	579
32	FPEC3236010	250	2	520	545
40	FPEC4045010	200	3	748	787

BARTEC® Austenitic Stainless steel couplers >> Page 17

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
12	FPSB1214003	250	1	18	35
14	FPSB1416003	250	1	23	40
16	FPSB1620003	250	1	33	50
18	FPSB1822003	250	1	40	57
20	FPSB2024003	250	1	53	70
22	FPSB2227003	250	1	78	95
24,25,26	FPSB2530003	250	2	113	138
28,30	FPSB2833003	250	2	155	180
32	FPSB3236003	250	2	208	233
34	FPBS3439003	250	2	268	293
36	FPSB3642003	250	3	343	382
40	FPSB4045003	250	3	425	464
50	FPSB5056003	250	4	758	806

BARTEC® Duplex Stainless steel couplers >> Page 17

Bar size	Finished code	QTY (pcs)	Box type	Net weight (kg)	Gross weight (kg)
12	FPSB1214002	250	1	10	27
14	FPSB1416002	250	1	18	35
16	FPSB1620002	250	1	28	45
18	FPSB1822002	250	1	33	50
20	FPSB2024002	250	1	48	65
22	FPSB2227002	250	1	65	82
24,25,26	FPSB2530002	250	1	75	92
28,30	FPSB2833002	250	1	105	122
32	FPSB3236002	250	2	148	173
34	FPBS3439002	250	2	198	223
36	FPSB3642002	250	2	215	240
40	FPSB4045002	250	3	333	372
50	FPSB5056002	250	4	615	663

Commercial presence in more than 55 countries.

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