STARTABOX
Perforated Reinforcement Continuity System

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Startabox
Perforated Reinforcement Continuity System

Specialist supplier of construction solutions

STARTABOX Perforated Reinforcement Continuity System

The STARTABOX system is a quick and safe method of achieving a high quality reinforcement connection in a structural concrete joint, without resorting to complicated shuttering details or costly formwork damage.

It consists of high yield reinforcement steel cut and bent to conform with BS4466:1989 and subsequent amendments BS8666:2000 and BS866:2005 in an ISO 9002 approved environment.

The reinforcement bars are housed in a hot dip galvanized and perforated case with a convenient tear off cover strip for bar diameters up to and including 12mm diameter, with a robust galvanized steel cover available for bars of 16mm and 20mm diameter. For larger diameter bars it is possible to supply a continuity system using couplers. Please ask for details.

The perforated casing ensures that the product remains embedded in the structure upon removal of formwork, as the concrete and case become a composite material providing excellent bonding characteristics for the next concrete pour.

The Advantages of Startabox

Speed

STARTABOX is quickly nailed to the formwork or tied back to the wall reinforcement. There is no need for time consuming drilling and cutting of the formwork. This means that shuttering materials can easily be struck and reused thereby accelerating pour schedules. This is vital in today's fast-track construction processes.

Safety

The steel starter bars are housed within their case until ready for straightening. This ensures a safe environment with no protruding starter bars, an obvious hazard on many sites. STARTABOX also increases the available working area with the bars housed until needed.

The perforated profile reduces the need to scabble the construction joint interface, a time consuming process with obvious health and safety implications.

Cost

The formwork suffers no damage and therefore may be utilised many times over. This is a great improvement over traditional stop ends providing only one use.

Due to the formwork material being totally sealed and intact the contractor will not incur grout loss at areas where starter bars would once have penetrated the shuttering material. This leads to easier management of the workmanship at construction joints.

Quality Control

The STARTABOX system allows free airflow due to its perforated casing. This is an invaluable means of removing entrapped air where high pour heights are being achieved, thus reducing the risks of honeycombing.

37/1 'L' Bar Special Bar Arrangement.

38/1 'U' Bar Double Case Arrangement for wider Sections and waterstop applications.

Material ready for supply to site.

CARES Technical approval report available on request

Technical Data

Case

STARTABOX® cases are manufactured from galvanised mild steel sheet rolled to precise dimensions. The cases are perforated to provide both an excellent bond to the first concrete pour and provide an excellent key for the subsequent pour. The cases are annealed at specific points along the length to ease nailing when fixing to formwork.

Reinforcement Bar

All reinforcement bar in the system is grade 500C, conforming to BS4449:2005. The material is specially selected to conform with the stringent requirements of CARES Technical Approval, which ensures that any reinforcement in the STARTABOX® system is suitable for rebending and retains its minimum yield strength of 500N/mm2. This in turn gives the engineer and designer the confidence to use STARTABOX® in any structure without compromising the design requirements.

Lids

For applications using 8mm to 12mm bar diameters STARTABOX® is supplied with plastic tear off lids, which are both quick and convenient to remove. On applications using 16mm and 20mm rebar, due to the weight of the unit, STARTABOX® may be supplied with purpose made galvanised steel lids which improves product stability.

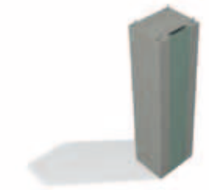
End Caps

STARTABOX® cases are fitted with two easily removable stable plastic end caps. These ensure that concrete does not enter the case where the lap bars are housed. Both lids and end caps are recyclable.

Installation Sequence

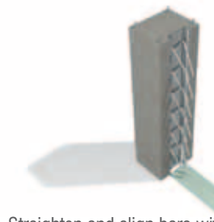
For additional details please refer to CARES Technical Approval document.

Nail to inside of formwork or tie back to wall reinforcement steel

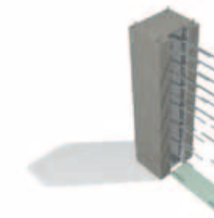


Plastic tear-off strip will show when formwork is struck

Remove tear-off strip to expose starter bars



Straighten and align bars with counter bending tool



Starter bars are now ready for lapping onto main reinforcement

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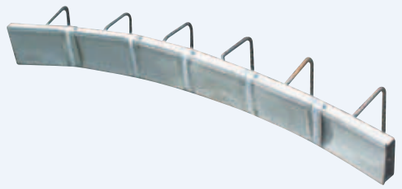
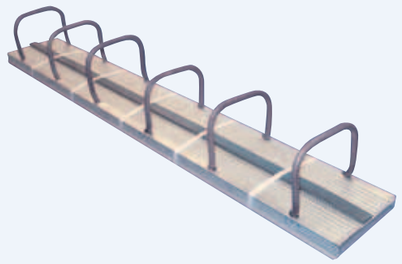
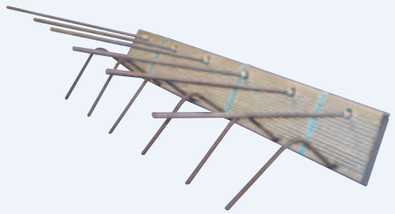
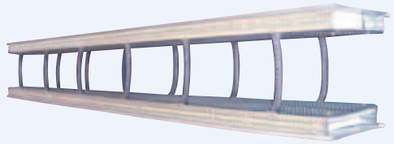








Product Enhancement

Curved Startabox

STARTABOX can be manufactured to a customers desired internal or external radius.

STARTASTOP

STARTABOX can be manufactured incorporating a hydrophilic waterstop strip on both the internal and external face of the casing. This is especially useful for construction joints in below ground situations or within water retaining structures. The hydrophilic strip used is passed for use in potable water situations.

STARTABOX Coupler Combinations

Where reinforcement bar diameters or congestion of reinforcement bar restricts the use of STARTABOX, a coupler solution can be introduced. This can be detailed in conjunction with STARTABOX and can even include them in the same joint detail.

STARTABOX Cross Wall Connection

Where two walls bisect each other STARTABOX can be manufactured to accommodate the pull out bars for both faces of a wall in one single strip. This ensures the reinforcement runs continuously through the bisecting wall.

Additional Products

Counterbending Tool

Bars should be straightened using the correct equipment. These specially manufactured tools have a tapered end to ensure the rebar is straightened correctly.

Grout Check Tape

Used to prevent grout covering the tear off face of the STARTABOX sections, when tied back to the reinforcement steel. A strip of grout check tape is simply fixed to each edge of the STARTABOX by means of a self adhesive backing.

Rebar Safety Caps

Used to provide protection of exposed bar ends until lapping bars have been fixed.

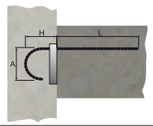
Fixing Clamps

BRC supply a range of fixing clamps to mechanically fix the STARTABOX to the reinforcement steel. Especially useful with STARTABOX cases containing heavier bar diameters, to ensure correct levels are maintained throughout the concrete pour.

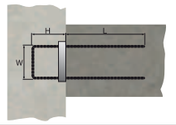
Standard Range

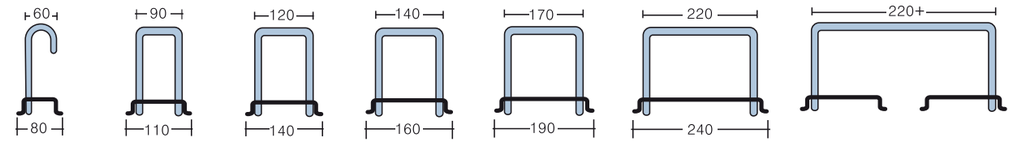
Standard Code	Pattern No	Case Width	Length M	Bar Type	Bar Centres	H	W	L	A
S801215	32/1	80	1.20	12	150	170		500	100
S801220	32/1	80	1.20	12	200	170		500	100
S111215	38/1	110	1.20	12	150	170	90	500	
S111220	38/1	110	1.20	12	200	170	90	500	
S141215	38/1	140	1.20	12	150	170	120	500	
S141220	38/1	140	1.20	12	200	170	120	500	
S161215	38/1	160	1.20	12	150	170	140	500	
S161220	38/1	160	1.20	12	200	170	140	500	
S191215	38/1	190	1.20	12	150	170	170	500	
S191220	38/1	190	1.20	12	200	170	170	500	
S241215	38/1	240	1.20	12	150	170	220	500	
S241220	38/1	240	1.20	12	200	170	220	500	
S161620	38/1	160	1.20	16	200	170	140	650	
S191615	38/1	190	1.20	16	150	170	170	650	
S191620	38/1	190	1.20	16	200	170	170	650	
S241615	38/1	240	1.20	16	150	170	220	650	
S241620	38/1	240	1.20	16	200	170	220	650	

Pattern 32/1 or 13/1



Pattern 38/1 or 21/1





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Startabox®Pattern References

Codes shown in blue are to BS4466:1989
Codes shown in red are to BS8666:2005
Either may be used for specification.

Our technical department offer a detailing service where required.

Case Sizes

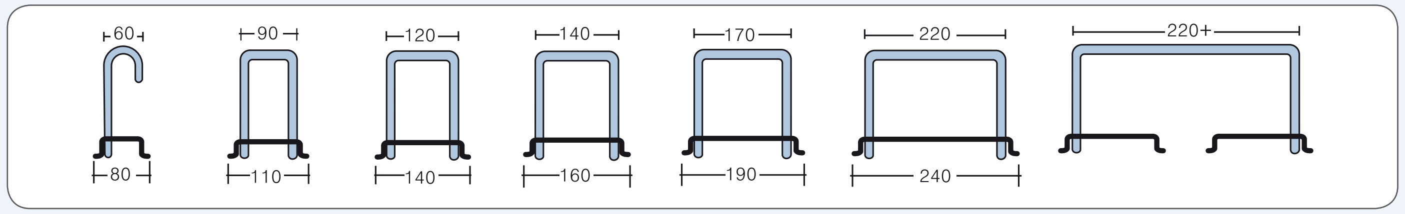
N.B. The Type 11 case with 16mm bars is produced with single bars only. Cases containing 8,10 and 12mm bars supplied 30mm deep. Cases containing 16mm bars may be supplied with 50mm deep steel lids for greater rigidity.

Re-bending tools available from stock. 8-10mm bar, order re-bending tool 1. For 12 to 16mm bar, order re-bending tool 2.

Limiting Dimensions

Bar Dia	H min	W min	A min
H8	90mm	50mm	115mm
H10	100mm	60mm	120mm
H12	120mm	70mm	125mm
H16	170mm	100mm	130mm

The limiting dimensions are based on practical considerations and the requirements of BS8666:2005



STARTABOX Perforated Reinforcement Continuity System

Detailing Schedule

Contractor: Tel: Date: Schedule:

Site: Fax: Detailed by: Drawing:

- Please complete schedule by inserting relevant dimensions with corresponding reference on previous page.
- Please check all stirrup heights "H", as this is always a critical dimension.
- Also available - Couplers for larger bar diameters
- Phone our Technical Department for Scheduling and Advice on 01226 764425
- Note: All cases containing 16mm bars will be supplied 50mm deep.

Schedule Details					Case Details		Reinforcement Details (mm)						Label
Member	Pattern no.	Bar mark	No.of Units	Bars Per Unit	Width mm	Length M	Bar. T	Centres	H	W	L	A	

STARTABOX® PULL OUT BAR CONTINUITY SYSTEM CHECKLIST - (USE AS A SIMPLE ALTERNATIVE TO THE ABOVE SCHEDULE)

At least one line to be completed in each section to allow for correct detailing.

Section A Wall thickness that STARTABOX® will be cast into? mm OR Stirrup height? mm
Section B Slab depth/wall thickness to be formed on second pour? mm OR Stirrup width? mm
Section C Reinforcement bar diameter? mm
Section D Reinforcement bar intervals or centres? mm
Section E Concrete cover to reinforcement required? mm
Section F Total metreage required? metres

DELIVERY ADDRESS: