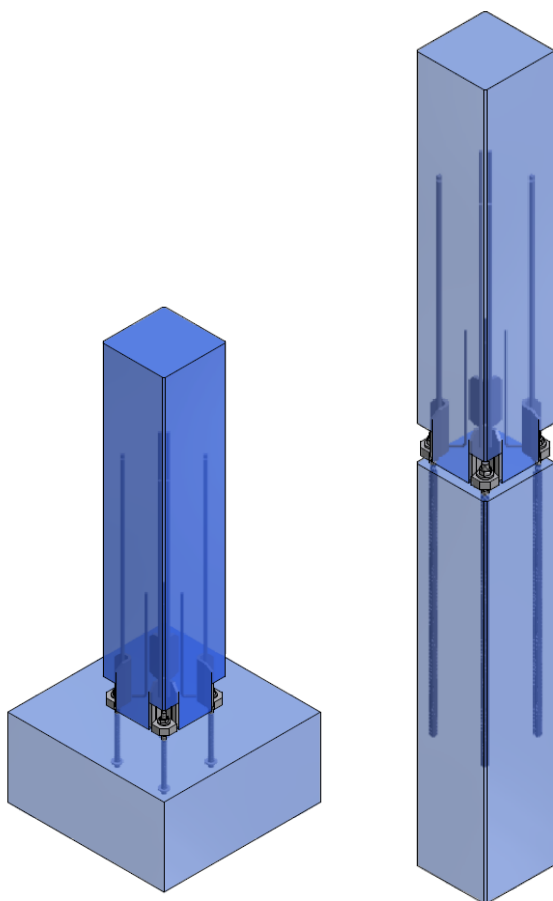


Examples of use Column shoe:



Code	Description	Color
AR-20	Column shoe 20	Yellow
AR-24	Column shoe 24	Green
AR-30	Column shoe 30	Blue
AR-39	Column shoe 39	Red

\* Condition: anchorage and overlap in good condition with HA-30.

For more demanding conditions (concrete HA-25, dynamic loads, etc.), consult technical department NOXIFER.

**Rebars material:** B500S  
**Steel sheet material :** S355 J2+N  
Column shoe capacities on back side.

Column shoe element for bolted connection between the precast concrete column and the foundation or other concrete element (column, wall, main beam, etc.).

## Column shoe AR



[www.noxifer.com](http://www.noxifer.com)

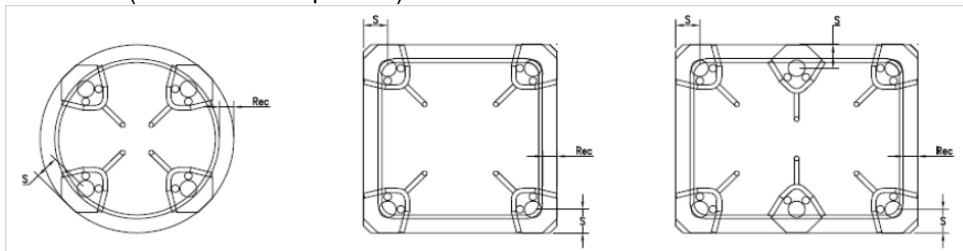


## 1 1.1. Column shoe selection by type of capacity, screw anchor or equivalence with armor :

	AR20	AR24	AR30	AR39
Associated screw anchor	TN 20	TN 24	TN 30	TN 39
Foot corrugated bars	2xØ16 / 401 mm <sup>2</sup>	2xØ16 / 401 mm <sup>2</sup>	2xØ20 / 628 mm <sup>2</sup>	2xØ20 / 628 mm <sup>2</sup>
Maximum axial load (1)	96.3 kN	138.7 kN	220.4 kN	383.40 kN
Maximum axial load (2)	31.26 kN	45.04 kN	71.58 kN	124.54 kN
Equivalence (3)	Ø 16 / 201mm <sup>2</sup>	Ø 20 / 314mm <sup>2</sup>	Ø 25 / 491mm <sup>2</sup>	Ø 32 / 804mm <sup>2</sup>

- 1) Maximum capacity defined by associated threaded anchor. Standard compression and tracción according to EC3 (EN1993-1-8: 2005)
- 2) Maximum cutting capacity governed by threaded anchor (filled joint situation made) according to EC3 (EN-1993-1-8: 2005 3.6.1 Tb 3.4).
- 3) Direct relationship between foot capacity pillar (= screw anchors) and rebar B-500s / sd. Pre-sized.

## 2 2.1. Using Column shoe (corner or center position). Considerations:



AR Column shoe is designed to be placed in corner and central position; Its geometry can be used even in circular column:

	AR20	AR24	AR30	AR39
Minimum value S. (a)	50 mm	50 mm	50 mm	60 mm
Covering Rec. (b)	15 to 30 mm	15 to 30 mm	15 to 30 mm	15 to 30 mm

- a) The minimum distance between Column shoe center hole and outer side of the column. This distance can be increased according to project conditions.
- b) Depending on the project requirements (fire resistance or durability according EHE-08 environment or EC2, the coating stirrup weave column could be higher than 30mm. In these cases, the Column shoes must be moved inwards column and increase the value of S. should also be moved to the same extent threaded anchors TN to be coupled with the Column shoe AR.

## 3 3.1. Application Considerations:

Once you have selected the type and number of Column shoe / anchors according to the project design, the Column shoes should be placed in abutment in the correct position. The Column shoe must be assembled with the column main reinforcement (following the requirements defined in EHE-08 and EC-2), to properly transmit efforts from column to foundation by Column shoes and threaded anchors.

*Armor technical details specific document supplement to this prospectus.*

**For more details about the use of short anchors, consult NOXIFER technical department .**

## 4 4.1. Placing Column shoe in mold (factory):



End tape or template of mold to set Column shoe in the correct position. Column shoe bars are also fixed to the main reinforcement of the column.



Installation boxes Column shoe. With these elements is avoided filling Column shoe areas for later assembly screw anchors TN. These installation boxes must be removed once the column out of the mold and recovering for producing the next column (if boxes are metallic).