BUILDING COMMON GROUND

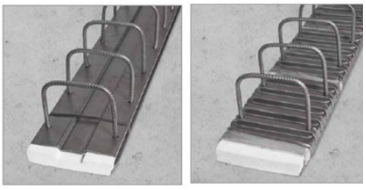
MAX FRANK®

Technical Data Sheet

Stabox® - rebar connection system - international

Stabox® rebar connections boxes

The **Stabox**® rebar connections boxes are used to simplify formwork at construction joints in reinforced concrete construction.



Product

Description	Where reinforcement bars with Ø ≤ 14mm cross a construction joint then rather than have them protrude though the formwork they can be integrated as bent bars in the **Stabox**® case. The **Stabox**® can be installed in the first concrete pour and after stripping the reinforcement bars can be rebent out of the case to provide a lap length for the continuing reinforcement in the correct position.
Uses	Production and application of rebending reinforcement steel are regulated by Eurocode 2, DIN EN 1992-1-1 with NA(D), NCI to 8.3 bending and rebending. The DBV data sheet „Rebending of reinforcement steel and requirements for steel cases“ according to Eurocode 2 contains more detailed information on the technical requirements and the calculation basis. All the latest regulations and additional recommendations are taken into account and implemented in the **Stabox**® production.
Characteristics / advantages	Steel reinforcement complies with country-specific requirements. ▪ Germany and standard: concrete steel reinforcement B500B (WR), guaranteed rebendability according to DIN 488 ▪ Special request on very high ductility reinforcing steel B500C, WPZ 3.1 (DIN EN 10204) ▪ Austria: B550B acc. to ÖNORM B 4707 ▪ Netherlands: B500B (WR), KOMO certificated ▪ Italy: B450C, D.M. 17. January 2018 (NTC 2018); WPZ 3.1 (DIN EN 10204) ▪ Sweden: K500B-KR according to EN 10080:2005 + SS 212540:2011, GlobeCert AB certificated ▪ Steel case: cold-rolled steel strip according to DIN EN 10130, DC 01 ▪ Steel cover: cold-rolled steel strip according to DIN EN 10130, DC 01 ▪ Galvanised, depending on the requirements of steel case/steel: hot-dipped galvanised steel strip according to DIN EN 10326/10327 ▪ Sealing stoppers: PS polystyrene caps (to be removed after opening the reinforcement case) Steel cases may only remain in the construction when consisting of a material with at least the same stiffness as the concrete (Stabox®). Plastic made cases must be removed completely.

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Test reports **(available upon request)**	The calculation basis and the tabular values for the **Stabox**® load calculation charts are constantly adjusted to current standards. Current status according to test report, type statics and type test report from the LBV, August 2013, January 2018 as per DIN EN 1992-1-1:2011-01 with NA(D). ▪ **Standard types** Stabox® S loading case a/b „smooth“ Stabox® S loading case c „interlocked“ Stabox® S loading case e „interlocked“ ▪ **Special types** Stabox® T loading case a/b „interlocked“ Stabox® S loading case e, corbel „interlocked” In addition to load calculation charts, we can provide the calculation basis for all **Stabox**® special types after having received information on the requirements for building elements and loading values.
Approvals / Standards	Processing and quality control inspections conform to the standards listed below unless compliance with other country-specific regulations is required. ▪ DIN EN 1992-1-1 with NA(D), Eurocode 2 ▪ DBV data sheet „Rebending…“ ,version January 2011 ▪ **Stabox**® dimensioning tables according to test report, type statics and type test report from the LBV, August 2013, January 2018 ▪ External quality control and certificate of compliance for further processing of concrete steel B500B (WR) (semi-annual quality control, ÜZ Reg.-Nr. BAY05-BRL488-) ▪ Internal quality control B500B (WR) (constant quality control/inspection certificates)

Product Data

Appearance	/
Packaging	Palletization, order related
Storage	No special requirements

Material Properties

Surface quality

The classification of the reinforcement cases with respect to the surface quality „rough“, „smooth“ and „extremely smooth“ is carried out in compliance with test results of the DBV datasheet „rebending…“, enclosure A. The requirements for the category ‘interlocked’ are defined in DIN EN 1992-1-1:2011, section 6.2.5, picture 6.9, indented joint design. Unclassified reinforcement cases are to be classified as „extremely smooth“.

- **Stabox® S:** joint surface according to DIN EN 1992-1-1:2011-01 „interlocked“

  Calculation of load bearing capacity:

  In the case of transverse stresses V_{Ed} to the steel case (examples c, d, e) according to DBV data sheet „Rebending…“, the **Stabox® S** rebar connection fulfils the requirements of the highest category interlocked to DIN EN 1992-1-1:2011-01.

  It is not possible to assume higher values for c_j and μ for the calculation of the maximum possible transverse force absorption V_{Rd} to DIN EN 1992-1-1:2011-01.

- **Stabox® T:** joint surface according to DIN EN 1992-1-1:2011-01 „interlocked“

  Calculation of longitudinal transmission:

  In the case of longitudinal stresses V_{Ed} to the steel case (examples a, b) according to DBV data sheet „Rebending…“, the **Stabox® T** rebar connection fulfils the requirements of the highest category interlocked to DIN EN 1992-1-1:2011-01.

  It is not possible to assume higher values for c_j and μ for the calculation of the maximum possible thrust force absorption V_{Rd} to DIN EN 1992-1-1:2011-01.

Disclaimer / Notes:

All technical data stated in this TDS are based on laboratory tests. Actual measured data may vary due to circumstances beyond our control.
Recommendations with regard to product application given in the present technical data sheet for practical assistance of product users are based on our experience and our present scientific and practical body of knowledge. These recommendations, however, are given without engagement and do not establish a contractual relationship or subsidiary duties. These recommendations do not relieve users of their liability and of their own responsibility to test, whether our product is adequate for the intended purpose of application. Please refer to the latest edition of this Technical Data Sheet on our web presence www.maxfrank.com