

The GEWI® System – Connecting Reinforcement

Basic Concept

GEWI® reinforcing steel is B500B steel in accordance with DIN 488 with rolled-on thread on both sides forming a special left-hand thread along the entire bar length. The GEWI® System serves for coupling and anchoring these threadbars and has proven itself countless times during the last decades as an excellent connecting reinforcement on challenging jobsites.

There is no need for using overlap connections and overlapping joints: GEWI® threaded reinforcing steel bars can be coupled directly and axially using couplers. The couplers are designed for transferring the calculational ultimate bar load with a safety factor of over 1.15 – all connections and design states can be realized as full joints independent of whether tensile, compression or alternating loads prevail.

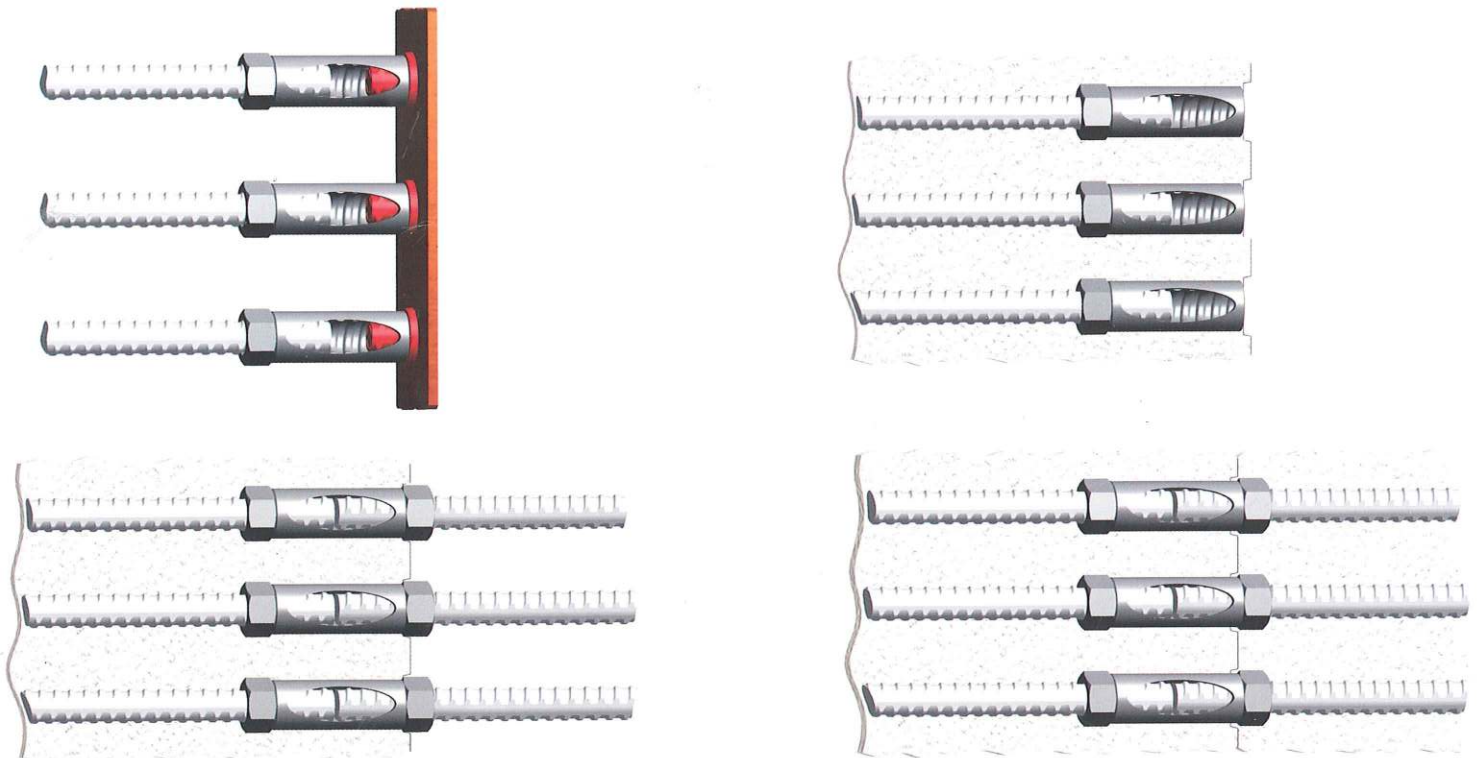
Especially in heavily reinforced structural elements in which distances between individual reinforcing bars can be a problem, the GEWI® System offers major advantages. Areas with double bar levels are no longer necessary and larger passageways for inserting vibrators and pouring the concrete mix are created so that the concrete quality is enhanced.

The GEWI® System also achieves excellent results in the end anchorage area:

The anchor lengths of the reinforcing bars can be reduced to a minimum using anchor pieces and plate anchorages, which significantly decreases the amount of steel and concrete that is needed.

Thanks to the coarse and extremely robust GEWI® Thread, GEWI® Threadbars are perfectly suitable for on-site use and can even be screwed when extremely dirty – the same applies to GEWI® nuts.

In the course of time, the GEWI® System has been continuously developed and optimized – a large range of products is available for almost any kind of application.



Fields of Application

- Connecting reinforcement
- Challenging coupling solutions
- Civil engineering
- Construction of power plants

Key Features

- Threadbars with proven coarse GEWI® Thread that is suitable for on-site use – screwable even under extreme conditions
- Thread along the entire length; lengths can be flexibly adjusted on site
- Easy application – thread does not have to be cut on site
- Sufficient coverage can be easily achieved
- Only little space is required during installation
- There is no increase in reinforcement ratio in the connection and anchorage zones
- Approved by the building authorities

Additional Information

German Approvals DIBt Z-1.5-76 (Ø 12-32) and Z-1.5-149 (Ø 40-50)

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Technical Data

GEWI® B500B Reinforcing Steel Threadbar

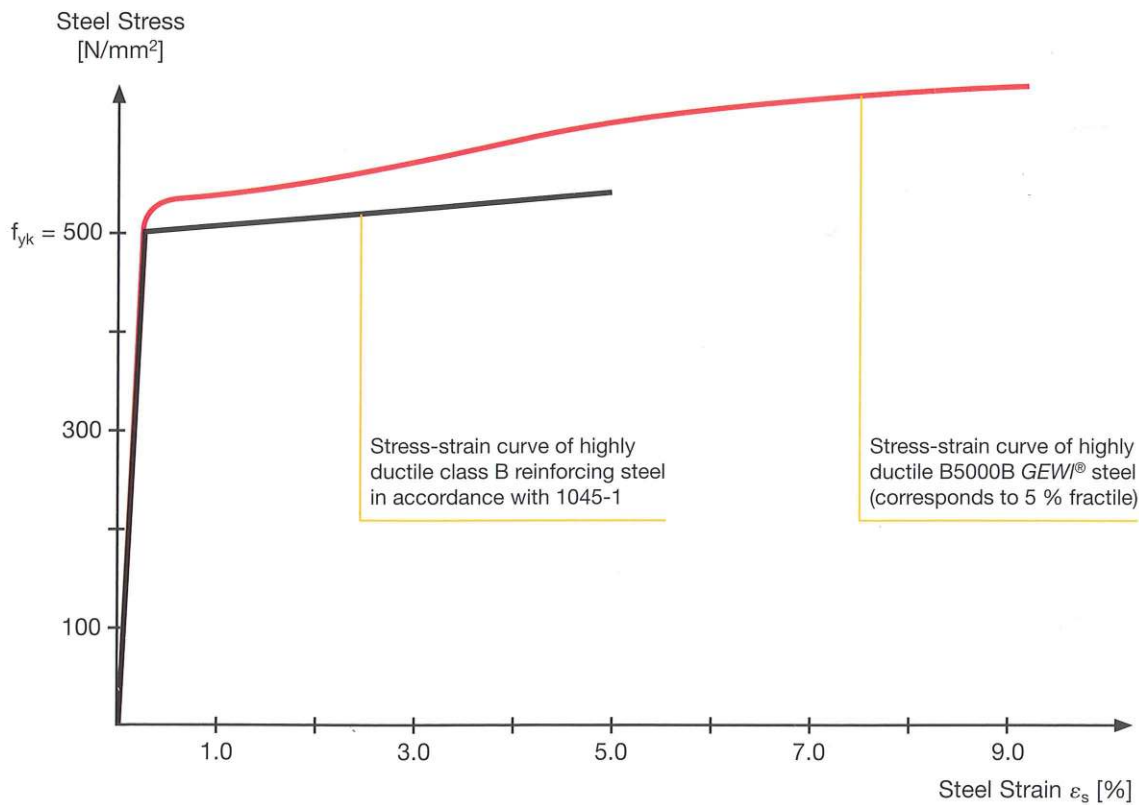
Nominal diameter \varnothing [mm]	Yield strength / tensile strength $f_{0,2k}/f_{tk}$ [N/mm ²]	Cross- sectional area A [mm ²]	Load at yield F_{yk} [kN]	Ultimate load F_{tk} [kN]	Weight [kg/m]	Approval
12	500/550	113	57	62	0.89	○
16	500/550	201	101	111	1.58	○
20	500/550	314	157	173	2.47	○
25	500/550	491	245	270	3.85	○
28	500/550	616	308	339	4.83	○
32	500/550	804	402	442	6.31	○
40	500/550	1,257	628	691	9.86	×
50	500/550	1,963	982	1,080	15.41	×

- Germany: DIBt Z-1.5-76
 × Germany: DIBt Z-1.5-149

Thanks to excellent characteristics, the GEWI® Threadbar can be classified as a highly ductile bar (class B) in accordance with DIN 1045. It also fulfills all DIN EN 1992 (EC2) requirements.

The diagram shows that GEWI® Threadbars clearly exceed the requirements for standard reinforcing steel.

GEWI® accessories cover all common solid construction connections and anchorage systems. The required equipment such as equipment for countering coupler connections and end anchorages is detailed in the equipment section (see page 55).



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