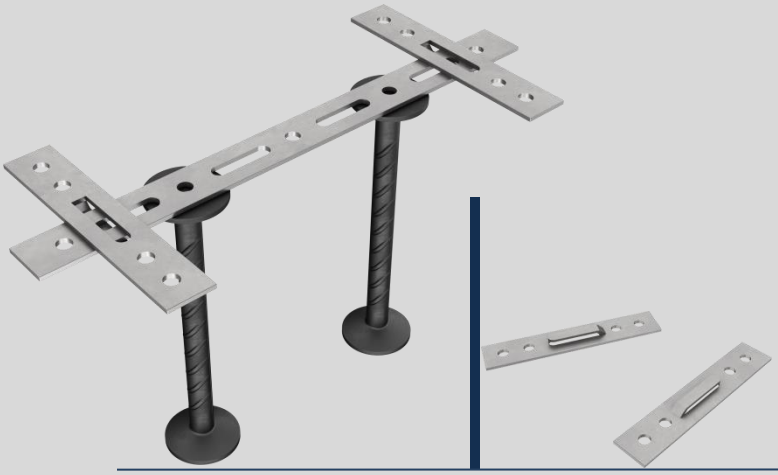
SR

Shear Reinforcement

barus
rebar splice solutions



The Shear Reinforcement elements with double headed ribbed studs, welded to a mounting rail, are used as shear and punching reinforcement.

System Description

Bar-us double headed studs with ribbed shafts are made of weldable ribbed reinforcement bars with a nominal characteristic yield strength of 500 MPa.The mechanical properties of the steel for fill the requirement according to EN 1992-1 -1, Annex C.

They have a head at both ends with a diameter of three times the shaft diameter. The diameters of the shafts are 10,12,14,16,20 and 25 mm for studs with ribbed bars.

The studs are assembled to form reinforcement elements comprising at least two studs. The studs are tack welded or clamped at one end to a non-structural steel rail or reinforcing bars for securing the position of the double headed studs when pouring the concrete. All studs of one of those reinforcement element shall have the same diameter.

To secure the position of the stud's during casting, bars of weldable reinforcing steel d_s = 6 mm to d_s = 10 mm or rails made of structural steel with a nominal characteristic yield strength of 235 MPa (S235JR acc. to EN 10025-2) or non-corrosive steel (No. 1.4401, 1.4404, 1.4571 acc. to EN 10088-5) are used.

Advantages

- Higher load bearing capacity than conventional link reinforcements.
- For panel from 18 cm thick.
- Can also be installed in pre-fab concrete slabs.
- Time saving installation from above
- Standardized product range with short delivery times, standard items are available from stock.
- Includes engineering design service

Traceability

Under the Bar-us Quality Assurance Program, codes are stamped on product. These codes allow the products to be traced back to the original heat of steel.

Previous Applications

Load concentration around the column head generally leads to increased stresses which cannot be absorbed solely in thin slab thicknesses. Previously, to prevent punching shear failure, uneconomical solutions were used. However these methods reduce the usable height between floors and therefore limit building space.

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Stud Dimensions

Stud ϕ [mm]	Head ϕ [mm]	Stud Section [mm²]	Characteristic Yield Strength [MPa]	Anchor Height
10	30	79	500	(Slab Thickness – Upper and Lower Concrete Cover) h ≤ 300 mm
12	36	113		
14	42	154		
16	48	201		
20	60	314		
25	75	491		

Tecnical Calculations

Gaps between studs and placement of the system will be advised by Bar-us technical department according to your project.