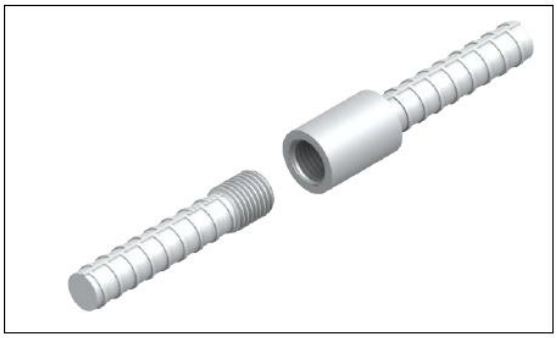
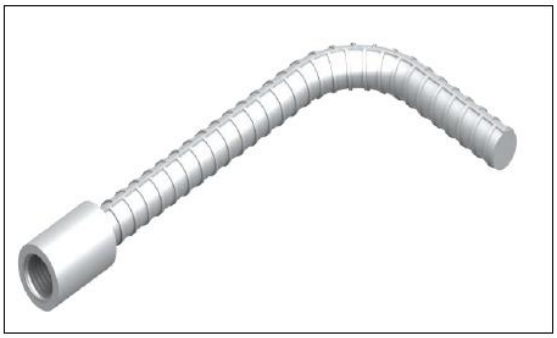
TECHNICAL DATA SHEET
FORTEC SCREWED REINFORCEMENT





PRODUCT DESCRIPTION
The Fortec screwed reinforcement is a system of mechanical connections of reinforcing bars and reinforcement anchors in ferroconcrete structures. The connection guarantees transfer of full loads and ensures 100% load capacity of the connected bars. The entire system consists of threaded bars, connecting bushings, additional elements and installation accessories. A wide range of diameters is available, from 12 to 40mm, used in making connections and anchoring the reinforcement in ferroconcrete structures.

APPLICATIONS
The screwed reinforcement is used as elements providing continuous reinforcement and is used i.e. as a reinforcing connector in ceiling panels, ceiling-wall connections or walls covered by sections of concrete. It is successfully used in working spaces provided in concrete.

REFERENCE DOCUMENTS
- catalogue: *Concrete reinforcement system*
- Technical Approval ITB No AT-15-9647/2016 - Technical approval IBDiM No AT/2016-02-3208/1

INSTALLATION METHOD
In order to avoid uncontrollable bar shifting during structural concrete casting, threaded bars are installed in the boarding using installation fixtures, a steel batten or a trapezoid PVC batten. Once the boards are removed, all plastic caps and pads protecting the connected bar against contamination during concrete casting should be removed and the connecting bars should be tightened.

STORAGE / TRANSPORT
Store in premises protected against moisture and rainfall. Transport takes place in bundles or on pallets in the case of smaller elements.

NOTES
Individual types, dimensions and their identification numbers are included in the catalogue. Protective gloves should be used during reinforcement installation.

TECHNICAL AND COMMERCIAL DATA

Parameter	Value
Bar length [m]	up to 12
Bar diameter [mm]	12 to 40
Steel type	BSt500S, B500SP
Sales unit	piece

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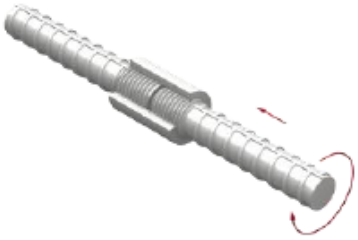
FORTEC SCREWED REINFORCEMENT SYSTEM CONNECTION TYPES

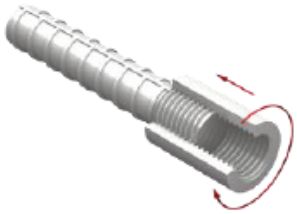
STANDARD CONNECTION – TYPE A

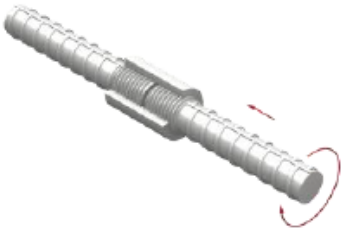
The thread provided on the bundled part of the reinforcing bar guarantees the ability to thread the bars together with a muff.



STANDARD CONNECTION – TYPE M

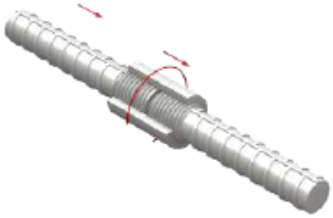
It is used, when it is possible to rotate the connected bar and translate it along its axis.

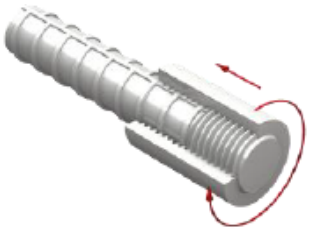




POSITIONAL CONNECTION – TYPE MB

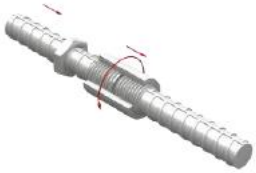
It is used, when it is impossible to rotate the connected bar but it is possible to translate it along its axis.





POSITIONAL CONNECTION WITH STABILISATION – TYPE MC

It is used when it is impossible to rotate the connected bar, but it is possible to translate it along its axis and the connected bar should be positioned precisely related to the base bar once the connection is made.



DISTANCE CONNECTION – TYPE MD

Used when there may be a distance present between the front faces of the connected bars, however, it may not be greater than the diameter of the connected bars.

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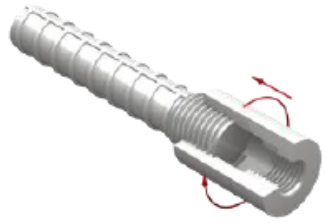
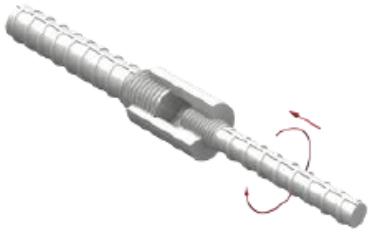
REDUCED CONNECTION – TYPE MR

It is used, when it is possible to rotate the connected bar and translate it along its axis, and the connected bar and the base bar have different diameters.

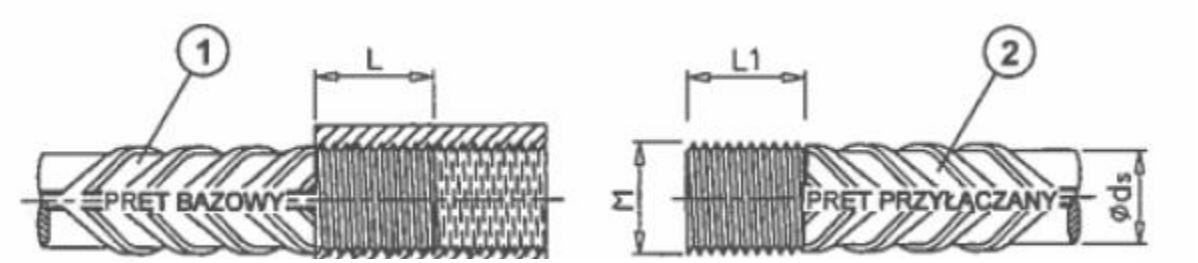




WELDED CONNECTION – TYPE W

It is used when it is necessary to connect the reinforcement bar with the welded structure. It is possible to rotate the connected bar and translate it along its axis.

REINFORCEMENT BARS CONNECTED USING A STANDARD BUSHING



BASE BAR ATTACHED BAR

No	ds [mm]	M[1)]	L[2)] [mm]	L1 [mm]		
				standard distance welded	positional	positional with stabilisation
1	**2**	**3**	**4**	**5**	**6**	**7**
1	12	M14×2,0	16(+1/-2)	16(+1/-2)	32(+0/-3)	42(+0/-3)
2	14	M16×2,0	18(+1/-2)	18(+1/-2)	36(+0/-3)	46(+0/-3)
3	16	M20×2,5	23(+1/-2.5)	23(+1/-2.5)	45(+0/-3.5)	56(+0/-3.5)
4	18	M22×2,5	24(+1/-2.5)	24(+1/-2.5)	48(+0/-3.5)	58(+0/-3.5)
5	20	M24×3,0	27(+1/-3)	27(+1/-3)	54(+0/-4)	64(+0/-4)
6	22	M27×3,0	30(+1/-3)	30(+1/-3)	60(+0/-4)	73.5(+0/-4)
7	25	M30×3,5	33.5(+1/-3)	33.5(+1/-3)	67(+0/-4.5)	79(+0/-4.5)
8	28	M33×3,5	36(+1/-3.5)	36(+1/-3.5)	73(+0/-4.5)	88.5(+0/-4.5)
9	32	M36×4,0	40(+1/-4)	40(+1/-4)	80(+0/-5)	95(+0/-5)
10	26	M42×4,5	46.5(+1/-4)	46.5(+1/-4)	92(+0/-5)	113(+0/-5)
11	40	M45×4,5	50(+1/-4.5)	50(+1/-4.5)	100(+0/-5.5)	118(+0/-5.5)

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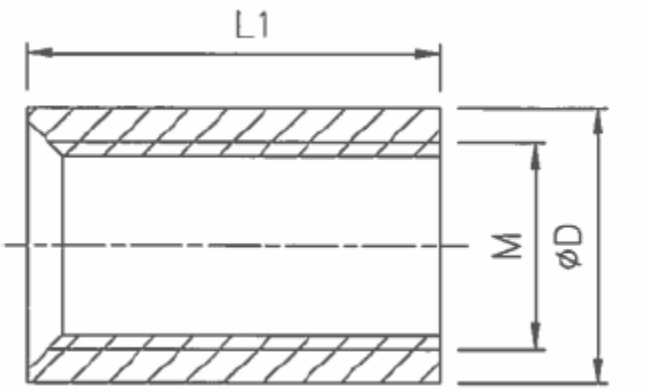
1) thread tolerance (6g) acc PN-ISO 965-2:2001
2) thread lengths for bars used in screwed connections and bar anchoring according to column 4 of this table

STANDARD FS BUSHING



No	Element designation	D_1 [mm]	L1 [mm]	M 1)
1	2	3	4	5
1	FS12	20(±2)	32	M14×2,0
2	FS14	23(±2)	36	M16×2,0
3	FS16	27(±2)	45	M20×2,5
4	FS18	31(±3)	48	M22×2,5
5	FS20	32(±3)	54	M24×3,0
6	FS22	35(±3)	60	M27×3,0
7	FS25	40(±3)	67	M30×3,5
8	FS28	45(±3.5)	73	M33×3,5
9	FS32	50(±3.5)	80	M36×4,0
10	FS35	57(±3.5)	86	M42×4,5
11	FS40	62(±4)	100	M45×4,5
Tolerances		-	±2	6H

1) thread tolerance (6H) acc PN-ISO 962:2001

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