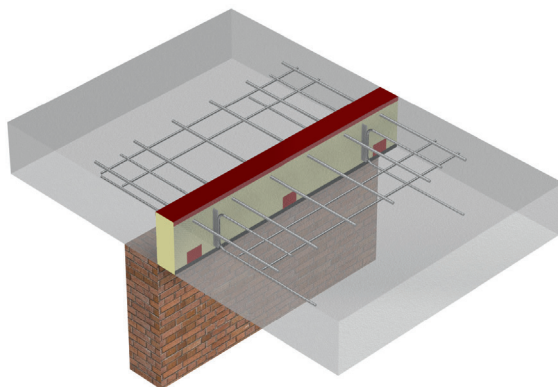


Balcony connectors FB

*Easy and reliable solution which reduces thermal bridges between external reinforced concrete elements (e. g. balcony) and floor slabs or walls.
Big range of types gives opportunity to design optimal solution for every investment.*

National Technical Assessment ITB-KOT-2017/0146

Connector FB-100 for cantilevered slabs

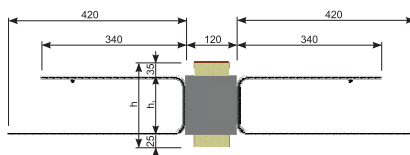
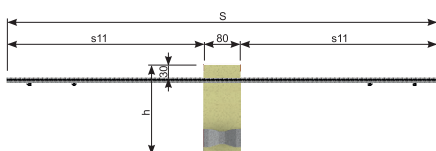


- Standard elements for floor slabs with thickness between 140 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of stainless steel
- Steel plates made of stainless steel
- Steel compression bearing made of stainless steel (for ceilings 14, 16 cm) or concrete bearing (ceilings 18 cm and higher)
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 104 6 × 10 - 2 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of steel plates



Connector FB-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter Ø [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm] s
				Bars	Steel plates	Compress. bearing				
FB-101 2x10-1	140	80	10	2	1	1	6	22	16	960
	160	100	10	2	1	1	8	27	22	960
	180	120	10	2	1	1	10	33	27	960
	200	140	10	2	1	1	11	38	31	960
	220	160	10	2	1	1	13	44	35	960
	240	180	10	2	1	1	15	49	40	960
	260	200	10	2	1	1	17	55	45	960
	280	220	10	2	1	1	18	60	48	960
	300	240	10	2	1	1	20	65	53	960
FB-102 2x14-1	140	80	14	2	1	2	12	22	16	1280
	160	100	14	2	1	2	15	27	22	1280
	180	120	14	2	1	2	19	33	27	1280
	200	140	14	2	1	2	22	38	31	1280
	220	160	14	2	1	2	26	44	35	1280
	240	180	14	2	1	2	29	49	40	1280
	260	200	14	2	1	2	32	55	45	1280
	280	220	14	2	1	2	36	60	48	1280
	300	240	14	2	1	2	39	65	53	1280
FB-102 2x14-2	140	80	14	2	2	2	12	43	32	1280
	160	100	14	2	2	2	15	54	44	1280
	180	120	14	2	2	2	19	65	54	1280
	200	140	14	2	2	2	22	76	62	1280
	220	160	14	2	2	2	26	87	70	1280
	240	180	14	2	2	2	29	98	80	1280
	260	200	14	2	2	2	32	109	90	1280
	280	220	14	2	2	2	36	120	96	1280
	300	240	14	2	2	2	39	130	106	1280
FB-103 4x10-1	140	80	10	4	1	2	13	22	16	960
	160	100	10	4	1	2	16	27	22	960
	180	120	10	4	1	2	20	33	27	960
	200	140	10	4	1	2	23	38	31	960
	220	160	10	4	1	2	26	44	35	960
	240	180	10	4	1	2	30	49	40	960
	260	200	10	4	1	2	33	55	45	960
	280	220	10	4	1	2	37	60	48	960
	300	240	10	4	1	2	40	65	53	960
FB-103 4x10-2	140	80	10	4	2	2	13	43	32	960
	160	100	10	4	2	2	16	54	44	960
	180	120	10	4	2	2	20	65	54	960
	200	140	10	4	2	2	23	76	62	960
	220	160	10	4	2	2	26	87	70	960
	240	180	10	4	2	2	30	98	80	960
	260	200	10	4	2	2	33	109	90	960
	280	220	10	4	2	2	37	120	96	960
	300	240	10	4	2	2	40	130	106	960

Connector FB-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates	Compress. bearing		80 mm	120 mm	
							V _{res} (±) [kN]	V _{res} (±) [kN]	S	
FB-103 4x10-3	140	80	10	4	3	2	13	65	48	960
	160	100	10	4	3	2	16	81	66	960
	180	120	10	4	3	2	20	98	81	960
	200	140	10	4	3	2	23	114	93	960
	220	160	10	4	3	2	26	131	105	960
	240	180	10	4	3	2	30	147	120	960
	260	200	10	4	3	2	33	164	135	960
	280	220	10	4	3	2	37	180	144	960
300	240	10	4	3	2	40	195	159	960	
FB-104 6x10-1	140	80	10	6	1	3	19	22	16	960
	160	100	10	6	1	3	24	27	22	960
	180	120	10	6	1	3	29	33	27	960
	200	140	10	6	1	3	34	38	31	960
	220	160	10	6	1	3	40	44	35	960
	240	180	10	6	1	3	45	49	40	960
	260	200	10	6	1	3	50	55	45	960
	280	220	10	6	1	3	55	60	48	960
300	240	10	6	1	3	60	65	53	960	
FB-104 6x10-2	140	80	10	6	2	3	19	43	32	960
	160	100	10	6	2	3	24	54	44	960
	180	120	10	6	2	3	29	65	54	960
	200	140	10	6	2	3	34	76	62	960
	220	160	10	6	2	3	40	87	70	960
	240	180	10	6	2	3	45	98	80	960
	260	200	10	6	2	3	50	109	90	960
	280	220	10	6	2	3	55	120	96	960
300	240	10	6	2	3	60	130	106	960	
FB-104 6x10-3	140	80	10	6	3	3	19	65	48	960
	160	100	10	6	3	3	24	81	66	960
	180	120	10	6	3	3	29	98	81	960
	200	140	10	6	3	3	34	114	93	960
	220	160	10	6	3	3	40	131	105	960
	240	180	10	6	3	3	45	147	120	960
	260	200	10	6	3	3	50	164	135	960
	280	220	10	6	3	3	55	180	144	960
300	240	10	6	3	3	60	195	159	960	
FB-104 6x10-4	140	80	10	6	4	3	19	86	64	960
	160	100	10	6	4	3	24	108	88	960
	180	120	10	6	4	3	29	130	108	960
	200	140	10	6	4	3	34	152	124	960
	220	160	10	6	4	3	40	174	140	960
	240	180	10	6	4	3	45	196	160	960
	260	200	10	6	4	3	50	218	180	960
	280	220	10	6	4	3	55	240	192	960
300	240	10	6	4	3	60	260	212	960	

Connector FB-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res(-)} [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates	Compress. bearing		80 mm	120 mm	
								V _{res(±)} [kN]	V _{res(±)} [kN]	S
FB-104 6x10-5	140	80	10	6	5	3	19	97	72	960
	160	100	10	6	5	3	24	122	99	960
	180	120	10	6	5	3	29	146	122	960
	200	140	10	6	5	3	34	171	140	960
	220	160	10	6	5	3	40	196	158	960
	240	180	10	6	5	3	45	221	180	960
	260	200	10	6	5	3	50	245	203	960
	280	220	10	6	5	3	55	270	216	960
	300	240	10	6	5	3	60	293	239	960
FB-105 4x14-1	140	80	14	4	1	4	24	22	16	1280
	160	100	14	4	1	4	31	27	22	1280
	180	120	14	4	1	4	38	33	27	1280
	200	140	14	4	1	4	44	38	31	1280
	220	160	14	4	1	4	51	44	35	1280
	240	180	14	4	1	4	58	49	40	1280
	260	200	14	4	1	4	65	55	45	1280
	280	220	14	4	1	4	72	60	48	1280
	300	240	14	4	1	4	78	65	53	1280
FB-105 4x14-2	140	80	14	4	2	4	24	43	32	1280
	160	100	14	4	2	4	31	54	44	1280
	180	120	14	4	2	4	38	65	54	1280
	200	140	14	4	2	4	44	76	62	1280
	220	160	14	4	2	4	51	87	70	1280
	240	180	14	4	2	4	58	98	80	1280
	260	200	14	4	2	4	65	109	90	1280
	280	220	14	4	2	4	72	120	96	1280
	300	240	14	4	2	4	78	130	106	1280
FB-105 4x14-3	140	80	14	4	3	4	24	65	48	1280
	160	100	14	4	3	4	31	81	66	1280
	180	120	14	4	3	4	38	98	81	1280
	200	140	14	4	3	4	44	114	93	1280
	220	160	14	4	3	4	51	131	105	1280
	240	180	14	4	3	4	58	147	120	1280
	260	200	14	4	3	4	65	164	135	1280
	280	220	14	4	3	4	72	180	144	1280
	300	240	14	4	3	4	78	195	159	1280
FB-106 6x14-1	140	80	14	6	1	6	36	22	16	1280
	160	100	14	6	1	6	46	27	22	1280
	180	120	14	6	1	6	56	33	27	1280
	200	140	14	6	1	6	57	38	31	1280
	220	160	14	6	1	6	77	44	35	1280
	240	180	14	6	1	6	87	49	40	1280
	260	200	14	6	1	6	97	55	45	1280
	280	220	14	6	1	6	107	60	48	1280
	300	240	14	6	1	6	118	65	53	1280

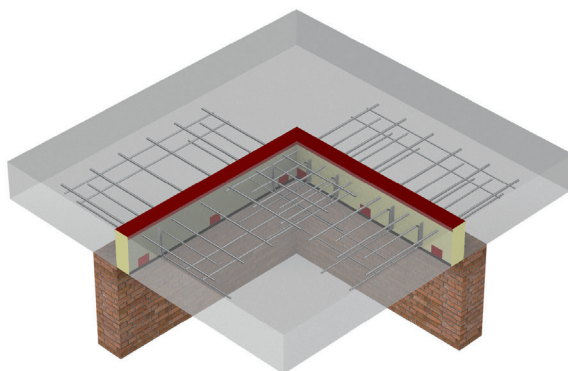
Connector FB-100 / concrete grade \geq C20/25											
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]	
				Bars	Steel plates	Compress. bearing					S
FB-106 6x14-2	140	80	14	6	2	6	36	43	32	1280	
	160	100	14	6	2	6	46	54	44	1280	
	180	120	14	6	2	6	56	65	54	1280	
	200	140	14	6	2	6	67	76	62	1280	
	220	160	14	6	2	6	77	87	70	1280	
	240	180	14	6	2	6	87	98	80	1280	
	260	200	14	6	2	6	97	109	90	1280	
	280	220	14	6	2	6	107	120	96	1280	
	300	240	14	6	2	6	118	130	106	1280	
FB-106 6x14-3	140	80	14	6	3	6	36	65	48	1280	
	160	100	14	6	3	6	46	81	66	1280	
	180	120	14	6	3	6	56	98	81	1280	
	200	140	14	6	3	6	67	114	93	1280	
	220	160	14	6	3	6	77	131	105	1280	
	240	180	14	6	3	6	87	147	120	1280	
	260	200	14	6	3	6	97	164	135	1280	
	280	220	14	6	3	6	107	180	144	1280	
	300	240	14	6	3	6	118	195	159	1280	
FB-106 6x14-4	140	80	14	6	4	6	36	86	64	1280	
	160	100	14	6	4	6	46	108	88	1280	
	180	120	14	6	4	6	56	130	108	1280	
	200	140	14	6	4	6	67	152	124	1280	
	220	160	14	6	4	6	77	174	140	1280	
	240	180	14	6	4	6	87	196	160	1280	
	260	200	14	6	4	6	97	218	180	1280	
	280	220	14	6	4	6	107	240	192	1280	
	300	240	14	6	4	6	118	260	212	1280	
FB-106 6x14-5	140	80	14	6	5	6	36	97	72	1280	
	160	100	14	6	5	6	46	122	99	1280	
	180	120	14	6	5	6	56	146	122	1280	
	200	140	14	6	5	6	67	171	140	1280	
	220	160	14	6	5	6	77	196	158	1280	
	240	180	14	6	5	6	87	221	180	1280	
	260	200	14	6	5	6	97	245	203	1280	
	280	220	14	6	5	6	107	270	216	1280	
	300	240	14	6	5	6	118	293	239	1280	
FB-107 8x14-1	140	80	14	8	1	8	48	22	16	1280	
	160	100	14	8	1	8	62	27	22	1280	
	180	120	14	8	1	8	75	33	27	1280	
	200	140	14	8	1	8	89	38	31	1280	
	220	160	14	8	1	8	102	44	35	1280	
	240	180	14	8	1	8	116	49	40	1280	
	260	200	14	8	1	8	130	55	45	1280	
	280	220	14	8	1	8	143	60	48	1280	
	300	240	14	8	1	8	157	65	53	1280	

Connector FB-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-107 8x14-2	140	80	14	8	2	8	48	43	32	1280
	160	100	14	8	2	8	62	54	44	1280
	180	120	14	8	2	8	75	65	54	1280
	200	140	14	8	2	8	89	76	62	1280
	220	160	14	8	2	8	102	87	70	1280
	240	180	14	8	2	8	116	98	80	1280
	260	200	14	8	2	8	130	109	90	1280
	280	220	14	8	2	8	143	120	96	1280
	300	240	14	8	2	8	157	130	106	1280
FB-107 8x14-3	140	80	14	8	3	8	48	65	48	1280
	160	100	14	8	3	8	62	81	66	1280
	180	120	14	8	3	8	75	98	81	1280
	200	140	14	8	3	8	89	114	93	1280
	220	160	14	8	3	8	102	131	105	1280
	240	180	14	8	3	8	116	147	120	1280
	260	200	14	8	3	8	130	164	135	1280
	280	220	14	8	3	8	143	180	144	1280
	300	240	14	8	3	8	157	195	159	1280
FB-107 8x14-4	140	80	14	8	4	8	48	86	64	1280
	160	100	14	8	4	8	62	108	88	1280
	180	120	14	8	4	8	75	130	108	1280
	200	140	14	8	4	8	89	152	124	1280
	220	160	14	8	4	8	102	174	140	1280
	240	180	14	8	4	8	116	196	160	1280
	260	200	14	8	4	8	130	218	180	1280
	280	220	14	8	4	8	143	240	192	1280
	300	240	14	8	4	8	157	260	212	1280
FB-107 8x14-5	140	80	14	8	5	8	48	97	72	1280
	160	100	14	8	5	8	62	122	99	1280
	180	120	14	8	5	8	75	146	122	1280
	200	140	14	8	5	8	89	171	140	1280
	220	160	14	8	5	8	102	196	158	1280
	240	180	14	8	5	8	116	221	180	1280
	260	200	14	8	5	8	130	245	203	1280
	280	220	14	8	5	8	143	270	216	1280
	300	240	14	8	5	8	157	293	239	1280
FB-107 8x14-6	140	80	14	8	6	8	48	110	80	1280
	160	100	14	8	6	8	62	138	110	1280
	180	120	14	8	6	8	75	166	135	1280
	200	140	14	8	6	8	89	194	155	1280
	220	160	14	8	6	8	102	222	175	1280
	240	180	14	8	6	8	116	250	200	1280
	260	200	14	8	6	8	130	278	225	1280
	280	220	14	8	6	8	143	306	240	1280
	300	240	14	8	6	8	157	334	255	1280

Connector FB-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates	Compress. bearing		80 mm	120 mm	
							V _{res} (±) [kN]	V _{res} (±) [kN]	S	
FB-107 8x14-7	140	80	14	8	7	8	48	123	88	1280
	160	100	14	8	7	8	62	154	121	1280
	180	120	14	8	7	8	75	186	148	1280
	200	140	14	8	7	8	89	217	170	1280
	220	160	14	8	7	8	102	248	192	1280
	240	180	14	8	7	8	116	279	220	1280
	260	200	14	8	7	8	130	311	247	1280
	280	220	14	8	7	8	143	342	264	1280
	300	240	14	8	7	8	157	375	271	1280
FB-108 10x14-1	140	80	14	10	1	10	60	22	16	1280
	160	100	14	10	1	10	77	27	22	1280
	180	120	14	10	1	10	94	33	27	1280
	200	140	14	10	1	10	111	38	31	1280
	220	160	14	10	1	10	128	44	35	1280
	240	180	14	10	1	10	145	49	40	1280
	260	200	14	10	1	10	162	55	45	1280
	280	220	14	10	1	10	179	60	48	1280
	300	240	14	10	1	10	196	65	53	1280
FB-108 10x14-2	140	80	14	10	2	10	60	43	32	1280
	160	100	14	10	2	10	77	54	44	1280
	180	120	14	10	2	10	94	65	54	1280
	200	140	14	10	2	10	111	76	62	1280
	220	160	14	10	2	10	128	87	70	1280
	240	180	14	10	2	10	145	98	80	1280
	260	200	14	10	2	10	162	109	90	1280
	280	220	14	10	2	10	179	120	96	1280
	300	240	14	10	2	10	196	130	106	1280
FB-108 10x14-3	140	80	14	10	3	10	60	65	48	1280
	160	100	14	10	3	10	77	81	66	1280
	180	120	14	10	3	10	94	98	81	1280
	200	140	14	10	3	10	111	114	93	1280
	220	160	14	10	3	10	128	131	105	1280
	240	180	14	10	3	10	145	147	120	1280
	260	200	14	10	3	10	162	164	135	1280
	280	220	14	10	3	10	179	180	144	1280
	300	240	14	10	3	10	196	195	159	1280
FB-108 10x14-4	140	80	14	10	4	10	60	86	64	1280
	160	100	14	10	4	10	77	108	88	1280
	180	120	14	10	4	10	94	130	108	1280
	200	140	14	10	4	10	111	152	124	1280
	220	160	14	10	4	10	128	174	140	1280
	240	180	14	10	4	10	145	196	160	1280
	260	200	14	10	4	10	162	218	180	1280
	280	220	14	10	4	10	179	240	192	1280
	300	240	14	10	4	10	196	260	212	1280

Connector FB-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates	Compress. bearing		80 mm	120 mm	
								V _{res} (±) [kN]	V _{res} (±) [kN]	S
FB-108 10x14-5	140	80	14	10	5	10	60	97	72	1280
	160	100	14	10	5	10	77	122	99	1280
	180	120	14	10	5	10	94	146	122	1280
	200	140	14	10	5	10	111	171	140	1280
	220	160	14	10	5	10	128	196	158	1280
	240	180	14	10	5	10	145	221	180	1280
	260	200	14	10	5	10	162	245	203	1280
	280	220	14	10	5	10	179	270	216	1280
	300	240	14	10	5	10	196	293	239	1280
FB-108 10x14-6	140	80	14	10	6	10	60	110	80	1280
	160	100	14	10	6	10	77	138	110	1280
	180	120	14	10	6	10	94	166	135	1280
	200	140	14	10	6	10	111	194	155	1280
	220	160	14	10	6	10	128	222	175	1280
	240	180	14	10	6	10	145	250	200	1280
	260	200	14	10	6	10	162	278	225	1280
	280	220	14	10	6	10	179	306	240	1280
	300	240	14	10	6	10	196	334	255	1280
FB-108 10x14-7	140	80	14	10	7	10	60	123	88	1280
	160	100	14	10	7	10	77	154	121	1280
	180	120	14	10	7	10	94	186	148	1280
	200	140	14	10	7	10	111	217	170	1280
	220	160	14	10	7	10	128	248	192	1280
	240	180	14	10	7	10	145	279	220	1280
	260	200	14	10	7	10	162	311	247	1280
	280	220	14	10	7	10	179	342	264	1280
300	240	14	10	7	10	196	375	271	1280	

Connector FBE-100 for cantilevered balconies – for coigns

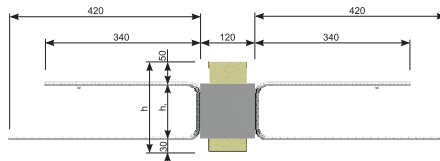
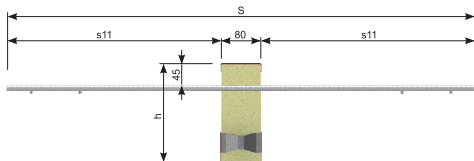


- Standard elements for floor slabs with thickness between 140 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of stainless steel
- Steel plates made of stainless steel
- Steel compression bearing made of stainless steel (for ceilings 14, 16 cm) or concrete bearing (ceilings 18 cm and higher)
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FBE - 109 6 × 10 - 4 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of steel plates



Connector FBE-100 / concrete grade \geq C20/25

Symbol	h [mm]	h ₁ [mm]	Bar diameter Ø [mm]	Quantity			M _{req} (-) [kNm]	Insulation 80 mm V _{req} (±) [kN]	Insulation 120 mm V _{req} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FBE-109 4x10-1	160	80	10	4	1	2	13	22	16	960
	180	100	10	4	1	2	17	27	22	960
	200	120	10	4	1	2	19	33	27	960
	220	140	10	4	1	2	23	38	31	960
	240	160	10	4	1	2	26	44	35	960
	260	180	10	4	1	2	30	49	40	960
	280	200	10	4	1	2	34	55	45	960
	300	220	10	4	1	2	37	60	48	960

Connector FBE-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FBE-109 4x10-2	160	80	10	4	2	2	13	43	32	960
	180	100	10	4	2	2	17	54	44	960
	200	120	10	4	2	2	19	65	54	960
	220	140	10	4	2	2	23	76	62	960
	240	160	10	4	2	2	26	87	70	960
	260	180	10	4	2	2	30	98	80	960
	280	200	10	4	2	2	34	109	90	960
	300	220	10	4	2	2	37	120	96	960
FBE-109 4x10-3	160	80	10	4	3	2	13	65	48	960
	180	100	10	4	3	2	17	81	66	960
	200	120	10	4	3	2	19	98	81	960
	220	140	10	4	3	2	23	114	93	960
	240	160	10	4	3	2	26	131	105	960
	260	180	10	4	3	2	30	147	120	960
	280	200	10	4	3	2	34	164	135	960
	300	220	10	4	3	2	37	180	144	960
FBE-110 6x10-1	160	80	10	6	1	3	20	22	16	960
	180	100	10	6	1	3	25	27	22	960
	200	120	10	6	1	3	31	33	27	960
	220	140	10	6	1	3	36	38	31	960
	240	160	10	6	1	3	41	44	35	960
	260	180	10	6	1	3	46	49	40	960
	280	200	10	6	1	3	51	55	45	960
	300	220	10	6	1	3	57	60	48	960
FBE-110 6x10-2	160	80	10	6	2	3	20	43	32	960
	180	100	10	6	2	3	25	54	44	960
	200	120	10	6	2	3	31	65	54	960
	220	140	10	6	2	3	36	76	62	960
	240	160	10	6	2	3	41	87	70	960
	260	180	10	6	2	3	46	98	80	960
	280	200	10	6	2	3	51	109	90	960
	300	220	10	6	2	3	57	120	96	960
FBE-110 6x10-3	160	80	10	6	3	3	20	65	48	960
	180	100	10	6	3	3	25	81	66	960
	200	120	10	6	3	3	31	98	81	960
	220	140	10	6	3	3	36	114	93	960
	240	160	10	6	3	3	41	131	105	960
	260	180	10	6	3	3	46	147	120	960
	280	200	10	6	3	3	51	164	135	960
	300	220	10	6	3	3	57	180	144	960
FBE-110 6x10-4	160	80	10	6	4	3	20	86	64	960
	180	100	10	6	4	3	25	108	88	960
	200	120	10	6	4	3	31	130	108	960
	220	140	10	6	4	3	36	152	124	960
	240	160	10	6	4	3	41	174	140	960
	260	180	10	6	4	3	46	196	160	960
	280	200	10	6	4	3	51	218	180	960
	300	220	10	6	4	3	57	240	192	960

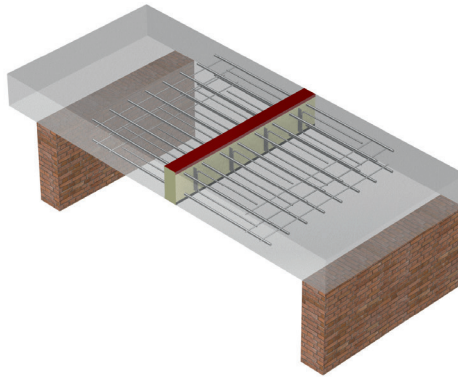
Connector FBE-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{red} (-) [kNm]	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
				Bars	Steel plates	Compress. bearing		V _{red} (±) [kN]	V _{red} (±) [kN]	
									S	
FBE-110 6x10-5	160	80	10	6	5	3	20	97	72	960
	180	100	10	6	5	3	25	122	99	960
	200	120	10	6	5	3	31	146	122	960
	220	140	10	6	5	3	36	171	140	960
	240	160	10	6	5	3	41	196	158	960
	260	180	10	6	5	3	46	221	180	960
	280	200	10	6	5	3	51	245	203	960
	300	220	10	6	5	3	57	270	216	960
FBE-111 4x14-1	160	80	14	4	1	4	25	22	16	1280
	180	100	14	4	1	4	32	27	22	1280
	200	120	14	4	1	4	38	33	27	1280
	220	140	14	4	1	4	45	38	31	1280
	240	160	14	4	1	4	52	44	35	1280
	260	180	14	4	1	4	59	49	40	1280
	280	200	14	4	1	4	66	55	45	1280
	300	220	14	4	1	4	73	60	48	1280
FBE-111 4x14-2	160	80	14	4	2	4	25	43	32	1280
	180	100	14	4	2	4	32	54	44	1280
	200	120	14	4	2	4	38	65	54	1280
	220	140	14	4	2	4	45	76	62	1280
	240	160	14	4	2	4	52	87	70	1280
	260	180	14	4	2	4	59	98	80	1280
	280	200	14	4	2	4	66	109	90	1280
	300	220	14	4	2	4	73	120	96	1280
FBE-111 4x14-3	160	80	14	4	3	4	25	65	48	1280
	180	100	14	4	3	4	32	81	66	1280
	200	120	14	4	3	4	38	98	81	1280
	220	140	14	4	3	4	45	114	93	1280
	240	160	14	4	3	4	52	131	105	1280
	260	180	14	4	3	4	59	147	120	1280
	280	200	14	4	3	4	66	164	135	1280
	300	220	14	4	3	4	73	180	144	1280
FBE-112 6x14-1	160	80	14	6	1	6	38	22	16	1280
	180	100	14	6	1	6	49	27	22	1280
	200	120	14	6	1	6	59	33	27	1280
	220	140	14	6	1	6	69	38	31	1280
	240	160	14	6	1	6	79	44	35	1280
	260	180	14	6	1	6	89	49	40	1280
	280	200	14	6	1	6	100	55	45	1280
	300	220	14	6	1	6	110	60	48	1280
FBE-112 6x14-2	160	80	14	6	2	6	38	43	32	1280
	180	100	14	6	2	6	49	54	44	1280
	200	120	14	6	2	6	59	65	54	1280
	220	140	14	6	2	6	69	76	62	1280
	240	160	14	6	2	6	79	87	70	1280
	260	180	14	6	2	6	89	98	80	1280
	280	200	14	6	2	6	100	109	90	1280
	300	220	14	6	2	6	110	120	96	1280

Connector FBE-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FBE-112 6x14-3	160	80	14	6	3	6	38	65	48	1280
	180	100	14	6	3	6	49	81	66	1280
	200	120	14	6	3	6	59	98	81	1280
	220	140	14	6	3	6	69	114	93	1280
	240	160	14	6	3	6	79	131	105	1280
	260	180	14	6	3	6	89	147	120	1280
	280	200	14	6	3	6	100	164	135	1280
	300	220	14	6	3	6	110	180	144	1280
FBE-112 6x14-4	160	80	14	6	4	6	38	86	64	1280
	180	100	14	6	4	6	49	108	88	1280
	200	120	14	6	4	6	59	130	108	1280
	220	140	14	6	4	6	69	152	124	1280
	240	160	14	6	4	6	79	174	140	1280
	260	180	14	6	4	6	89	196	160	1280
	280	200	14	6	4	6	100	218	180	1280
	300	220	14	6	4	6	110	240	192	1280
FBE-112 6x14-5	160	80	14	6	5	6	38	97	72	1280
	180	100	14	6	5	6	49	122	99	1280
	200	120	14	6	5	6	59	146	122	1280
	220	140	14	6	5	6	69	171	140	1280
	240	160	14	6	5	6	79	196	158	1280
	260	180	14	6	5	6	89	221	180	1280
	280	200	14	6	5	6	100	245	203	1280
	300	220	14	6	5	6	110	270	216	1280
FBE-113 8x14-1	160	80	14	8	1	8	51	22	16	1280
	180	100	14	8	1	8	65	27	22	1280
	200	120	14	8	1	8	79	33	27	1280
	220	140	14	8	1	8	92	38	31	1280
	240	160	14	8	1	8	106	44	35	1280
	260	180	14	8	1	8	119	49	40	1280
	280	200	14	8	1	8	133	55	45	1280
	300	220	14	8	1	8	146	60	48	1280
FBE-113 8x14-2	160	80	14	8	2	8	51	43	32	1280
	180	100	14	8	2	8	65	54	44	1280
	200	120	14	8	2	8	79	65	54	1280
	220	140	14	8	2	8	92	76	62	1280
	240	160	14	8	2	8	106	87	70	1280
	260	180	14	8	2	8	119	98	80	1280
	280	200	14	8	2	8	133	109	90	1280
	300	220	14	8	2	8	146	120	96	1280
FBE-113 8x14-3	160	80	14	8	3	8	51	65	48	1280
	180	100	14	8	3	8	65	81	66	1280
	200	120	14	8	3	8	79	98	81	1280
	220	140	14	8	3	8	92	114	93	1280
	240	160	14	8	3	8	106	131	105	1280
	260	180	14	8	3	8	119	147	120	1280
	280	200	14	8	3	8	133	164	135	1280
	300	220	14	8	3	8	146	180	144	1280

Connector FBE-100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{red} (-) [kNm]	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
				Bars	Steel plates	Compress. bearing		V _{red} (±) [kN]	V _{red} (±) [kN]	S
FBE-113 8x14-4	160	80	14	8	4	8	51	86	64	1280
	180	100	14	8	4	8	65	108	88	1280
	200	120	14	8	4	8	79	130	108	1280
	220	140	14	8	4	8	92	152	124	1280
	240	160	14	8	4	8	106	174	140	1280
	260	180	14	8	4	8	119	196	160	1280
	280	200	14	8	4	8	133	218	180	1280
	300	220	14	8	4	8	146	240	192	1280
FBE-113 8x14-5	160	80	14	8	5	8	51	97	72	1280
	180	100	14	8	5	8	65	122	99	1280
	200	120	14	8	5	8	79	146	122	1280
	220	140	14	8	5	8	92	171	140	1280
	240	160	14	8	5	8	106	196	158	1280
	260	180	14	8	5	8	119	221	180	1280
	280	200	14	8	5	8	133	245	203	1280
	300	220	14	8	5	8	146	270	216	1280
FBE-113 8x14-6	160	80	14	8	6	8	51	110	80	1280
	180	100	14	8	6	8	65	138	110	1280
	200	120	14	8	6	8	79	166	135	1280
	220	140	14	8	6	8	92	194	155	1280
	240	160	14	8	6	8	106	222	175	1280
	260	180	14	8	6	8	119	250	200	1280
	280	200	14	8	6	8	133	278	225	1280
	300	220	14	8	6	8	146	306	240	1280
FBE-113 8x14-7	160	80	14	8	7	8	51	123	88	1280
	180	100	14	8	7	8	65	154	121	1280
	200	120	14	8	7	8	79	186	148	1280
	220	140	14	8	7	8	92	217	170	1280
	240	160	14	8	7	8	106	248	192	1280
	260	180	14	8	7	8	119	279	220	1280
	280	200	14	8	7	8	133	311	247	1280
	300	220	14	8	7	8	146	342	264	1280
FBE-114 10x14-1	160	80	14	10	1	10	64	22	16	1280
	180	100	14	10	1	10	81	27	22	1280
	200	120	14	10	1	10	98	33	27	1280
	220	140	14	10	1	10	115	38	31	1280
	240	160	14	10	1	10	132	44	35	1280
	260	180	14	10	1	10	149	49	40	1280
	280	200	14	10	1	10	166	55	45	1280
	300	220	14	10	1	10	183	60	48	1280
FBE-114 10x14-2	160	80	14	10	2	10	64	43	32	1280
	180	100	14	10	2	10	81	54	44	1280
	200	120	14	10	2	10	98	65	54	1280
	220	140	14	10	2	10	115	76	62	1280
	240	160	14	10	2	10	132	87	70	1280
	260	180	14	10	2	10	149	98	80	1280
	280	200	14	10	2	10	166	109	90	1280
	300	220	14	10	2	10	183	120	96	1280

Connector FBE-100 / concrete grade \geq C20/25											
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation	Insulation	Dim. [mm]	
				Bars	Steel plates	Compress. bearing		80 mm	120 mm		
							V _{res} (±) [kN]	V _{res} (±) [kN]	S		
FBE-114 10x14-3	160	80	14	10	3	10	64	65	48	1280	
	180	100	14	10	3	10	81	81	66	1280	
	200	120	14	10	3	10	98	98	81	1280	
	220	140	14	10	3	10	115	114	93	1280	
	240	160	14	10	3	10	132	131	105	1280	
	260	180	14	10	3	10	149	147	120	1280	
	280	200	14	10	3	10	166	164	135	1280	
	300	220	14	10	3	10	183	180	144	1280	
FBE-114 10x14-4	160	80	14	10	4	10	64	86	64	1280	
	180	100	14	10	4	10	81	108	88	1280	
	200	120	14	10	4	10	98	130	108	1280	
	220	140	14	10	4	10	115	152	124	1280	
	240	160	14	10	4	10	132	174	140	1280	
	260	180	14	10	4	10	149	196	160	1280	
	280	200	14	10	4	10	166	218	180	1280	
	300	220	14	10	4	10	183	240	192	1280	
FBE-114 10x14-5	160	80	14	10	5	10	64	97	72	1280	
	180	100	14	10	5	10	81	122	99	1280	
	200	120	14	10	5	10	98	146	122	1280	
	220	140	14	10	5	10	115	171	140	1280	
	240	160	14	10	5	10	132	196	158	1280	
	260	180	14	10	5	10	149	221	180	1280	
	280	200	14	10	5	10	166	245	203	1280	
	300	220	14	10	5	10	183	270	216	1280	
FBE-114 10x14-6	160	80	14	10	6	10	64	110	80	1280	
	180	100	14	10	6	10	81	138	110	1280	
	200	120	14	10	6	10	98	166	135	1280	
	220	140	14	10	6	10	115	194	155	1280	
	240	160	14	10	6	10	132	222	175	1280	
	260	180	14	10	6	10	149	250	200	1280	
	280	200	14	10	6	10	166	278	225	1280	
	300	220	14	10	6	10	183	306	240	1280	
FBE-114 10x14-7	160	80	14	10	7	10	64	123	88	1280	
	180	100	14	10	7	10	81	154	121	1280	
	200	120	14	10	7	10	98	186	148	1280	
	220	140	14	10	7	10	115	217	170	1280	
	240	160	14	10	7	10	132	248	192	1280	
	260	180	14	10	7	10	149	279	220	1280	
	280	200	14	10	7	10	166	311	247	1280	
	300	220	14	10	7	10	183	342	264	1280	

Connector FB-200 for continuous connection of balcony slab with floor

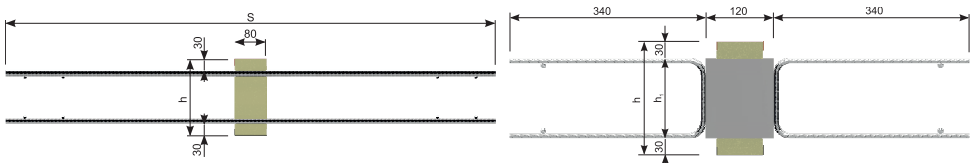


- Standard elements for floor slabs with thickness between 140 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of stainless steel
- Steel plates made of stainless steel
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 204 8 × 14 - 4 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of steel plates



Connector FB-200 / concrete grade \geq C20/25

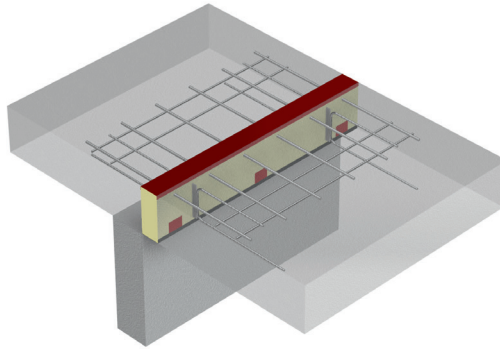
Symbol	h [mm]	h ₁ [mm]	Bar diameter Ø [mm]	Quantity			M _{res} (±) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm] S
				Bars	Steel plates					
FB-201 6x10-1	140	80	10	6	1	15	21	16	960	
	160	100	10	6	1	20	27	22	960	
	180	120	10	6	1	24	32	27	960	
	200	140	10	6	1	29	38	31	960	
	220	160	10	6	1	33	43	35	960	
	240	180	10	6	1	37	49	40	960	
	260	200	10	6	1	42	54	45	960	
	280	220	10	6	1	46	60	48	960	
	300	240	10	6	1	51	65	53	960	

Connector FB-200 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter ∅ [mm]	Quantity		M _{res} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates		80 mm	120 mm	
							V _{res} (±) [kN]	V _{res} (±) [kN]	S
FB-201 6x10-2	140	80	10	6	2	15	43	32	960
	160	100	10	6	2	20	54	44	960
	180	120	10	6	2	24	65	54	960
	200	140	10	6	2	29	76	62	960
	220	160	10	6	2	33	87	70	960
	240	180	10	6	2	37	98	80	960
	260	200	10	6	2	42	109	90	960
	280	220	10	6	2	46	120	96	960
	300	240	10	6	2	51	130	106	960
FB-201 6x10-3	140	80	10	6	3	15	65	48	960
	160	100	10	6	3	20	81	66	960
	180	120	10	6	3	24	98	81	960
	200	140	10	6	3	29	114	93	960
	220	160	10	6	3	33	131	105	960
	240	180	10	6	3	37	147	120	960
	260	200	10	6	3	42	164	135	960
	280	220	10	6	3	46	180	144	960
	300	240	10	6	3	51	195	159	960
FB-202 4x14-1	140	80	14	4	1	21	21	16	1280
	160	100	14	4	1	27	27	22	1280
	180	120	14	4	1	34	32	27	1280
	200	140	14	4	1	40	38	31	1280
	220	160	14	4	1	47	43	35	1280
	240	180	14	4	1	53	49	40	1280
	260	200	14	4	1	59	54	45	1280
	280	220	14	4	1	66	60	48	1280
	300	240	14	4	1	72	65	53	1280
FB-202 4x14-2	140	80	14	4	2	21	43	32	1280
	160	100	14	4	2	27	54	44	1280
	180	120	14	4	2	34	65	54	1280
	200	140	14	4	2	40	76	62	1280
	220	160	14	4	2	47	87	70	1280
	240	180	14	4	2	53	98	80	1280
	260	200	14	4	2	59	109	90	1280
	280	220	14	4	2	66	120	96	1280
	300	240	14	4	2	72	130	106	1280
FB-202 4x14-3	140	80	14	4	3	21	65	48	1280
	160	100	14	4	3	27	81	66	1280
	180	120	14	4	3	34	98	81	1280
	200	140	14	4	3	40	114	93	1280
	220	160	14	4	3	47	131	105	1280
	240	180	14	4	3	53	147	120	1280
	260	200	14	4	3	59	164	135	1280
	280	220	14	4	3	66	180	144	1280
	300	240	14	4	3	72	195	159	1280

Connector FB-200 / concrete grade \geq C20/25									
Symbol	h [mm]	h _i [mm]	Bar diameter \varnothing [mm]	Quantity		M _{req} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates		80 mm	120 mm	
							V _{req} (±) [kN]	V _{req} (±) [kN]	S
FB-203 6x14-2	140	80	14	6	2	32	43	32	1280
	160	100	14	6	2	41	54	44	1280
	180	120	14	6	2	51	65	54	1280
	200	140	14	6	2	60	76	62	1280
	220	160	14	6	2	70	87	70	1280
	240	180	14	6	2	80	98	80	1280
	260	200	14	6	2	89	109	90	1280
	280	220	14	6	2	99	120	96	1280
	300	240	14	6	2	108	130	106	1280
FB-203 6x14-3	140	80	14	6	3	32	65	48	1280
	160	100	14	6	3	41	81	66	1280
	180	120	14	6	3	51	98	81	1280
	200	140	14	6	3	60	114	93	1280
	220	160	14	6	3	70	131	105	1280
	240	180	14	6	3	80	147	120	1280
	260	200	14	6	3	89	164	135	1280
	280	220	14	6	3	99	180	144	1280
	300	240	14	6	3	108	195	159	1280
FB-203 6x14-4	140	80	14	6	4	32	86	64	1280
	160	100	14	6	4	41	108	88	1280
	180	120	14	6	4	51	130	108	1280
	200	140	14	6	4	60	152	124	1280
	220	160	14	6	4	70	174	140	1280
	240	180	14	6	4	80	196	160	1280
	260	200	14	6	4	89	218	180	1280
	280	220	14	6	4	99	240	192	1280
	300	240	14	6	4	108	260	212	1280
FB-204 8x14-2	140	80	14	8	2	42	43	32	1280
	160	100	14	8	2	55	54	44	1280
	180	120	14	8	2	68	65	54	1280
	200	140	14	8	2	81	76	62	1280
	220	160	14	8	2	93	87	70	1280
	240	180	14	8	2	106	98	80	1280
	260	200	14	8	2	119	109	90	1280
	280	220	14	8	2	132	120	96	1280
	300	240	14	8	2	144	130	106	1280
FB-204 8x14-3	140	80	14	8	3	42	65	48	1280
	160	100	14	8	3	55	81	66	1280
	180	120	14	8	3	68	98	81	1280
	200	140	14	8	3	81	114	93	1280
	220	160	14	8	3	93	131	105	1280
	240	180	14	8	3	106	147	120	1280
	260	200	14	8	3	119	164	135	1280
	280	220	14	8	3	132	180	144	1280
	300	240	14	8	3	144	195	159	1280

Connector FB-200 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity		M _{red} (±) [kNm]	Insulation 80 mm V _{red} (±) [kN]	Insulation 120 mm V _{red} (±) [kN]	Dim. [mm] S
				Bars	Steel plates				
FB-204 8x14-4	140	80	14	8	4	42	86	64	1280
	160	100	14	8	4	55	108	88	1280
	180	120	14	8	4	68	130	108	1280
	200	140	14	8	4	81	152	124	1280
	220	160	14	8	4	93	174	140	1280
	240	180	14	8	4	106	196	160	1280
	260	200	14	8	4	119	218	180	1280
	280	220	14	8	4	132	240	192	1280
	300	240	14	8	4	144	260	212	1280

Connector FB-300 for cantilevered balcony slabs

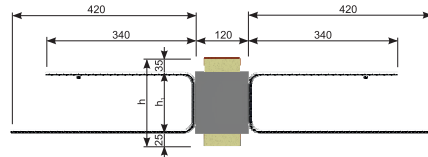
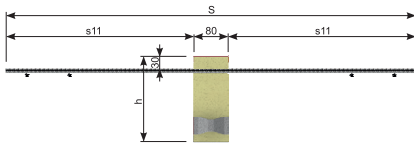


- Standard elements for floor slabs with thickness between 140 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of black steel, hot-dip galvanised carbon steel
- Steel plates made of stainless steel
- Steel compression bearing made of stainless steel (for ceilings 14, 16 cm) or concrete bearing (ceilings 18 cm and higher)
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 304 6 × 10 - 2 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of steel plates



Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Req} (-) [kNm]	Insulation 80 mm V _{Req} (±) [kN]	Insulation 120 mm V _{Req} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-301 2x10-1	140	80	10	2	1	1	5	22	16	820
	160	100	10	2	1	1	6	27	22	820
	180	120	10	2	1	1	8	33	27	820
	200	140	10	2	1	1	9	38	31	820
	220	160	10	2	1	1	10	44	35	820
	240	180	10	2	1	1	12	49	40	820
	260	200	10	2	1	1	13	55	45	820
	280	220	10	2	1	1	15	60	48	820
	300	240	10	2	1	1	16	65	53	820
FB-302 2x14-1	140	80	14	2	1	2	9	22	16	1050
	160	100	14	2	1	2	12	27	22	1050
	180	120	14	2	1	2	15	33	27	1050
	200	140	14	2	1	2	17	38	31	1050
	220	160	14	2	1	2	20	44	35	1050
	240	180	14	2	1	2	23	49	40	1050
	260	200	14	2	1	2	26	55	45	1050
	280	220	14	2	1	2	28	60	48	1050
	300	240	14	2	1	2	31	65	53	1050
FB-302 2x14-2	140	80	14	2	2	2	9	43	32	1050
	160	100	14	2	2	2	12	54	44	1050
	180	120	14	2	2	2	15	65	54	1050
	200	140	14	2	2	2	17	76	62	1050
	220	160	14	2	2	2	20	87	70	1050
	240	180	14	2	2	2	23	98	80	1050
	260	200	14	2	2	2	26	109	90	1050
	280	220	14	2	2	2	28	120	96	1050
	300	240	14	2	2	2	31	130	106	1050
FB-303 4x10-1	140	80	10	4	1	2	10	22	16	820
	160	100	10	4	1	2	13	27	22	820
	180	120	10	4	1	2	15	33	27	820
	200	140	10	4	1	2	18	38	31	820
	220	160	10	4	1	2	21	44	35	820
	240	180	10	4	1	2	24	49	40	820
	260	200	10	4	1	2	26	55	45	820
	280	220	10	4	1	2	29	60	48	820
	300	240	10	4	1	2	32	65	53	820
FB-303 4x10-2	140	80	10	4	2	2	10	43	32	820
	160	100	10	4	2	2	13	54	44	820
	180	120	10	4	2	2	15	65	54	820
	200	140	10	4	2	2	18	76	62	820
	220	160	10	4	2	2	21	87	70	820
	240	180	10	4	2	2	24	98	80	820
	260	200	10	4	2	2	26	109	90	820
	280	220	10	4	2	2	29	120	96	820
	300	240	10	4	2	2	32	130	106	820

Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-303 4x10-3	140	80	10	4	3	2	10	65	48	820
	160	100	10	4	3	2	13	81	66	820
	180	120	10	4	3	2	15	98	81	820
	200	140	10	4	3	2	18	114	93	820
	220	160	10	4	3	2	21	131	105	820
	240	180	10	4	3	2	24	147	120	820
	260	200	10	4	3	2	26	164	135	820
	280	220	10	4	3	2	29	180	144	820
	300	240	10	4	3	2	32	195	159	820
FB-304 6x10-1	140	80	10	6	1	3	15	22	16	820
	160	100	10	6	1	3	19	27	22	820
	180	120	10	6	1	3	23	33	27	820
	200	140	10	6	1	3	27	38	31	820
	220	160	10	6	1	3	31	44	35	820
	240	180	10	6	1	3	35	49	40	820
	260	200	10	6	1	3	39	55	45	820
	280	220	10	6	1	3	44	60	48	820
	300	240	10	6	1	3	48	65	53	820
FB-304 6x10-2	140	80	10	6	2	3	15	43	32	820
	160	100	10	6	2	3	19	54	44	820
	180	120	10	6	2	3	23	65	54	820
	200	140	10	6	2	3	27	76	62	820
	220	160	10	6	2	3	31	87	70	820
	240	180	10	6	2	3	35	98	80	820
	260	200	10	6	2	3	39	109	90	820
	280	220	10	6	2	3	44	120	96	820
	300	240	10	6	2	3	48	130	106	820
FB-304 6x10-3	140	80	10	6	3	3	15	65	48	820
	160	100	10	6	3	3	19	81	66	820
	180	120	10	6	3	3	23	98	81	820
	200	140	10	6	3	3	27	114	93	820
	220	160	10	6	3	3	31	131	105	820
	240	180	10	6	3	3	35	147	120	820
	260	200	10	6	3	3	39	164	135	820
	280	220	10	6	3	3	44	180	144	820
	300	240	10	6	3	3	48	195	159	820
FB-304 6x10-4	140	80	10	6	4	3	15	86	64	820
	160	100	10	6	4	3	19	108	88	820
	180	120	10	6	4	3	23	130	108	820
	200	140	10	6	4	3	27	152	124	820
	220	160	10	6	4	3	31	174	140	820
	240	180	10	6	4	3	35	196	160	820
	260	200	10	6	4	3	39	218	180	820
	280	220	10	6	4	3	44	240	192	820
	300	240	10	6	4	3	48	260	212	820

Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Req} (-) [kNm]	Insulation 80 mm V _{Req} (±) [kN]	Insulation 120 mm V _{Req} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-304 6x10-5	140	80	10	6	5	3	15	97	72	820
	160	100	10	6	5	3	19	122	99	820
	180	120	10	6	5	3	23	146	122	820
	200	140	10	6	5	3	27	171	140	820
	220	160	10	6	5	3	31	196	158	820
	240	180	10	6	5	3	35	221	180	820
	260	200	10	6	5	3	39	245	203	820
	280	220	10	6	5	3	44	270	216	820
	300	240	10	6	5	3	48	293	239	820
FB-305 4x14-1	140	80	14	4	1	4	19	22	16	1050
	160	100	14	4	1	4	24	27	22	1050
	180	120	14	4	1	4	30	33	27	1050
	200	140	14	4	1	4	35	38	31	1050
	220	160	14	4	1	4	40	44	35	1050
	240	180	14	4	1	4	46	49	40	1050
	260	200	14	4	1	4	51	55	45	1050
	280	220	14	4	1	4	56	60	48	1050
	300	240	14	4	1	4	62	65	53	1050
FB-305 4x14-2	140	80	14	4	2	4	19	43	32	1050
	160	100	14	4	2	4	24	54	44	1050
	180	120	14	4	2	4	30	65	54	1050
	200	140	14	4	2	4	35	76	62	1050
	220	160	14	4	2	4	40	87	70	1050
	240	180	14	4	2	4	46	98	80	1050
	260	200	14	4	2	4	51	109	90	1050
	280	220	14	4	2	4	56	120	96	1050
	300	240	14	4	2	4	62	130	106	1050
FB-305 4x14-3	140	80	14	4	3	4	19	65	48	1050
	160	100	14	4	3	4	24	81	66	1050
	180	120	14	4	3	4	30	98	81	1050
	200	140	14	4	3	4	35	114	93	1050
	220	160	14	4	3	4	40	131	105	1050
	240	180	14	4	3	4	46	147	120	1050
	260	200	14	4	3	4	51	164	135	1050
	280	220	14	4	3	4	56	180	144	1050
	300	240	14	4	3	4	62	195	159	1050
FB-306 5x14-2	140	80	14	5	2	5	24	43	32	1050
	160	100	14	5	2	5	30	54	44	1050
	180	120	14	5	2	5	37	65	54	1050
	200	140	14	5	2	5	44	76	62	1050
	220	160	14	5	2	5	50	87	70	1050
	240	180	14	5	2	5	57	98	80	1050
	260	200	14	5	2	5	64	109	90	1050
	280	220	14	5	2	5	70	120	96	1050
	300	240	14	5	2	5	77	130	106	1050

Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-306 5x14-3	140	80	14	5	3	5	24	65	48	1050
	160	100	14	5	3	5	30	81	66	1050
	180	120	14	5	3	5	37	98	81	1050
	200	140	14	5	3	5	44	114	93	1050
	220	160	14	5	3	5	50	131	105	1050
	240	180	14	5	3	5	57	147	120	1050
	260	200	14	5	3	5	64	164	135	1050
	280	220	14	5	3	5	70	180	144	1050
	300	240	14	5	3	5	77	195	159	1050
FB-306 5x14-4	140	80	14	5	4	5	24	86	64	1050
	160	100	14	5	4	5	30	108	88	1050
	180	120	14	5	4	5	37	130	108	1050
	200	140	14	5	4	5	44	152	124	1050
	220	160	14	5	4	5	50	174	140	1050
	240	180	14	5	4	5	57	196	160	1050
	260	200	14	5	4	5	64	218	180	1050
	280	220	14	5	4	5	70	240	192	1050
	300	240	14	5	4	5	77	260	212	1050
FB-307 6x14-1	140	80	14	6	1	6	28	22	16	1050
	160	100	14	6	1	6	36	27	22	1050
	180	120	14	6	1	6	44	33	27	1050
	200	140	14	6	1	6	52	38	31	1050
	220	160	14	6	1	6	60	44	35	1050
	240	180	14	6	1	6	69	49	40	1050
	260	200	14	6	1	6	77	55	45	1050
	280	220	14	6	1	6	85	60	48	1050
	300	240	14	6	1	6	93	65	53	1050
FB-307 6x14-2	140	80	14	6	2	6	28	43	32	1050
	160	100	14	6	2	6	36	54	44	1050
	180	120	14	6	2	6	44	65	54	1050
	200	140	14	6	2	6	52	76	62	1050
	220	160	14	6	2	6	60	87	70	1050
	240	180	14	6	2	6	69	98	80	1050
	260	200	14	6	2	6	77	109	90	1050
	280	220	14	6	2	6	85	120	96	1050
	300	240	14	6	2	6	93	130	106	1050
FB-307 6x14-3	140	80	14	6	3	6	28	65	48	1050
	160	100	14	6	3	6	36	81	66	1050
	180	120	14	6	3	6	44	98	81	1050
	200	140	14	6	3	6	52	114	93	1050
	220	160	14	6	3	6	60	131	105	1050
	240	180	14	6	3	6	69	147	120	1050
	260	200	14	6	3	6	77	164	135	1050
	280	220	14	6	3	6	85	180	144	1050
	300	240	14	6	3	6	93	195	159	1050

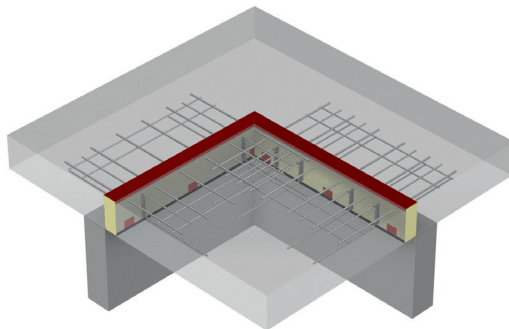
Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (\pm) [kN]	Insulation 120 mm V _{Res} (\pm) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-307 6x14-4	140	80	14	6	4	6	28	86	64	1050
	160	100	14	6	4	6	36	108	88	1050
	180	120	14	6	4	6	44	130	108	1050
	200	140	14	6	4	6	52	152	124	1050
	220	160	14	6	4	6	60	174	140	1050
	240	180	14	6	4	6	69	196	160	1050
	260	200	14	6	4	6	77	218	180	1050
	280	220	14	6	4	6	85	240	192	1050
	300	240	14	6	4	6	93	260	212	1050
FB-307 6x14-5	140	80	14	6	5	6	28	97	72	1050
	160	100	14	6	5	6	36	122	99	1050
	180	120	14	6	5	6	44	146	122	1050
	200	140	14	6	5	6	52	171	140	1050
	220	160	14	6	5	6	60	196	158	1050
	240	180	14	6	5	6	69	221	180	1050
	260	200	14	6	5	6	77	245	203	1050
	280	220	14	6	5	6	85	270	216	1050
	300	240	14	6	5	6	93	293	239	1050
FB-308 8x14-1	140	80	14	8	1	8	38	22	16	1050
	160	100	14	8	1	8	48	27	22	1050
	180	120	14	8	1	8	59	33	27	1050
	200	140	14	8	1	8	70	38	31	1050
	220	160	14	8	1	8	81	44	35	1050
	240	180	14	8	1	8	91	49	40	1050
	260	200	14	8	1	8	102	55	45	1050
	280	220	14	8	1	8	113	60	48	1050
300	240	14	8	1	8	123	65	53	1050	
FB-308 8x14-2	140	80	14	8	2	8	38	43	32	1050
	160	100	14	8	2	8	48	54	44	1050
	180	120	14	8	2	8	59	65	54	1050
	200	140	14	8	2	8	70	76	62	1050
	220	160	14	8	2	8	81	87	70	1050
	240	180	14	8	2	8	91	98	80	1050
	260	200	14	8	2	8	102	109	90	1050
	280	220	14	8	2	8	113	120	96	1050
300	240	14	8	2	8	123	130	106	1050	
FB-308 8x14-3	140	80	14	8	3	8	38	65	48	1050
	160	100	14	8	3	8	48	81	66	1050
	180	120	14	8	3	8	59	98	81	1050
	200	140	14	8	3	8	70	114	93	1050
	220	160	14	8	3	8	81	131	105	1050
	240	180	14	8	3	8	91	147	120	1050
	260	200	14	8	3	8	102	164	135	1050
	280	220	14	8	3	8	113	180	144	1050
	300	240	14	8	3	8	123	195	159	1050

Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-308 8x14-4	140	80	14	8	4	8	38	86	64	1050
	160	100	14	8	4	8	48	108	88	1050
	180	120	14	8	4	8	59	130	108	1050
	200	140	14	8	4	8	70	152	124	1050
	220	160	14	8	4	8	81	174	140	1050
	240	180	14	8	4	8	91	196	160	1050
	260	200	14	8	4	8	102	218	180	1050
	280	220	14	8	4	8	113	240	192	1050
	300	240	14	8	4	8	123	260	212	1050
FB-308 8x14-5	140	80	14	8	5	8	38	97	72	1050
	160	100	14	8	5	8	48	122	99	1050
	180	120	14	8	5	8	59	146	122	1050
	200	140	14	8	5	8	70	171	140	1050
	220	160	14	8	5	8	81	196	158	1050
	240	180	14	8	5	8	91	221	180	1050
	260	200	14	8	5	8	102	245	203	1050
	280	220	14	8	5	8	113	270	216	1050
	300	240	14	8	5	8	123	293	239	1050
FB-308 8x14-6	140	80	14	8	6	8	38	110	80	1050
	160	100	14	8	6	8	48	138	110	1050
	180	120	14	8	6	8	59	166	135	1050
	200	140	14	8	6	8	70	194	155	1050
	220	160	14	8	6	8	81	222	175	1050
	240	180	14	8	6	8	91	250	200	1050
	260	200	14	8	6	8	102	278	225	1050
	280	220	14	8	6	8	113	306	240	1050
	300	240	14	8	6	8	123	334	255	1050
FB-308 8x14-7	140	80	14	8	7	8	38	123	88	1050
	160	100	14	8	7	8	48	154	121	1050
	180	120	14	8	7	8	59	186	148	1050
	200	140	14	8	7	8	70	217	170	1050
	220	160	14	8	7	8	81	248	192	1050
	240	180	14	8	7	8	91	279	220	1050
	260	200	14	8	7	8	102	311	247	1050
	280	220	14	8	7	8	113	342	264	1050
	300	240	14	8	7	8	123	375	271	1050
FB-309 10x14-1	140	80	14	10	1	10	47	22	16	1050
	160	100	14	10	1	10	61	27	22	1050
	180	120	14	10	1	10	74	33	27	1050
	200	140	14	10	1	10	87	38	31	1050
	220	160	14	10	1	10	101	44	35	1050
	240	180	14	10	1	10	114	49	40	1050
	260	200	14	10	1	10	128	55	45	1050
	280	220	14	10	1	10	141	60	48	1050
	300	240	14	10	1	10	154	65	53	1050

Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (±) [kN]	Insulation 120 mm V _{Res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FB-309 10x14-2	140	80	14	10	2	10	47	43	32	1050
	160	100	14	10	2	10	61	54	44	1050
	180	120	14	10	2	10	74	65	54	1050
	200	140	14	10	2	10	87	76	62	1050
	220	160	14	10	2	10	101	87	70	1050
	240	180	14	10	2	10	114	98	80	1050
	260	200	14	10	2	10	128	109	90	1050
	280	220	14	10	2	10	141	120	96	1050
	300	240	14	10	2	10	154	130	106	1050
FB-309 10x14-3	140	80	14	10	3	10	47	65	48	1050
	160	100	14	10	3	10	61	81	66	1050
	180	120	14	10	3	10	74	98	81	1050
	200	140	14	10	3	10	87	114	93	1050
	220	160	14	10	3	10	101	131	105	1050
	240	180	14	10	3	10	114	147	120	1050
	260	200	14	10	3	10	128	164	135	1050
	280	220	14	10	3	10	141	180	144	1050
	300	240	14	10	3	10	154	195	159	1050
FB-309 10x14-4	140	80	14	10	4	10	47	86	64	1050
	160	100	14	10	4	10	61	108	88	1050
	180	120	14	10	4	10	74	130	108	1050
	200	140	14	10	4	10	87	152	124	1050
	220	160	14	10	4	10	101	174	140	1050
	240	180	14	10	4	10	114	196	160	1050
	260	200	14	10	4	10	128	218	180	1050
	280	220	14	10	4	10	141	240	192	1050
	300	240	14	10	4	10	154	260	212	1050
FB-309 10x14-5	140	80	14	10	5	10	47	97	72	1050
	160	100	14	10	5	10	61	122	99	1050
	180	120	14	10	5	10	74	146	122	1050
	200	140	14	10	5	10	87	171	140	1050
	220	160	14	10	5	10	101	196	158	1050
	240	180	14	10	5	10	114	221	180	1050
	260	200	14	10	5	10	128	245	203	1050
	280	220	14	10	5	10	141	270	216	1050
	300	240	14	10	5	10	154	293	239	1050
FB-309 10x14-6	140	80	14	10	6	10	47	110	80	1050
	160	100	14	10	6	10	61	138	110	1050
	180	120	14	10	6	10	74	166	135	1050
	200	140	14	10	6	10	87	194	155	1050
	220	160	14	10	6	10	101	222	175	1050
	240	180	14	10	6	10	114	250	200	1050
	260	200	14	10	6	10	128	278	225	1050
	280	220	14	10	6	10	141	306	240	1050
	300	240	14	10	6	10	154	334	255	1050

Connector FB-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation:	Insulation:	Dim. [mm]
				Bars	Steel plates	Compress. bearing		80 mm	120 mm	
										S
FB-309 10x14-7	140	80	14	10	7	10	47	123	88	1050
	160	100	14	10	7	10	61	154	121	1050
	180	120	14	10	7	10	74	186	148	1050
	200	140	14	10	7	10	87	217	170	1050
	220	160	14	10	7	10	101	248	192	1050
	240	180	14	10	7	10	114	279	220	1050
	260	200	14	10	7	10	128	311	247	1050
	280	220	14	10	7	10	141	342	264	1050
	300	240	14	10	7	10	154	375	271	1050

Connector FBE-300 for cantilevered balcony slabs – for coigns

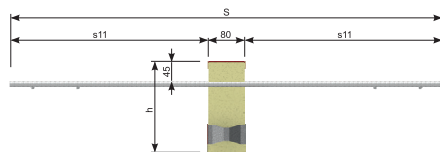
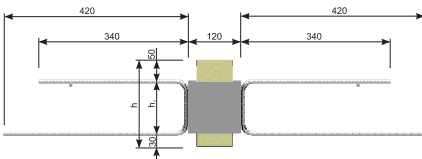


- Standard elements for floor slabs with thickness between 160 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of black steel, hot-dip galvanised carbon steel
- Steel plates made of stainless steel
- Steel compression bearing made of stainless steel (for ceilings 16 cm) or concrete bearing (ceilings 18 cm and higher)
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FBE - 310 6 × 10 - 4 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of steel plates



Connector FBE-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (±) [kN]	Insulation 120 mm V _{Res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FBE-310 4x10-1	160	80	10	4	1	2	10	22	16	820
	180	100	10	4	1	2	12	27	22	820
	200	120	10	4	1	2	15	33	27	820
	220	140	10	4	1	2	18	38	31	820
	240	160	10	4	1	2	21	44	35	820
	260	180	10	4	1	2	23	49	40	820
	280	200	10	4	1	2	26	55	45	820
	300	220	10	4	1	2	29	60	48	820
FBE-310 4x10-2	160	80	10	4	2	2	10	43	32	820
	180	100	10	4	2	2	12	54	44	820
	200	120	10	4	2	2	15	65	54	820
	220	140	10	4	2	2	18	76	62	820
	240	160	10	4	2	2	21	87	70	820
	260	180	10	4	2	2	23	98	80	820
	280	200	10	4	2	2	26	109	90	820
	300	220	10	4	2	2	29	120	96	820
FBE-310 4x10-3	160	80	10	4	3	2	10	65	48	820
	180	100	10	4	3	2	12	81	66	820
	200	120	10	4	3	2	15	98	81	820
	220	140	10	4	3	2	18	114	93	820
	240	160	10	4	3	2	21	131	105	820
	260	180	10	4	3	2	23	147	120	820
	280	200	10	4	3	2	26	164	135	820
	300	220	10	4	3	2	29	180	144	820
FBE-311 6x10-1	160	80	10	6	1	3	16	22	16	820
	180	100	10	6	1	3	20	27	22	820
	200	120	10	6	1	3	24	33	27	820
	220	140	10	6	1	3	28	38	31	820
	240	160	10	6	1	3	32	44	35	820
	260	180	10	6	1	3	36	49	40	820
	280	200	10	6	1	3	40	55	45	820
	300	220	10	6	1	3	45	60	48	820
FBE-311 6x10-2	160	80	10	6	2	3	16	43	32	820
	180	100	10	6	2	3	20	54	44	820
	200	120	10	6	2	3	24	65	54	820
	220	140	10	6	2	3	28	76	62	820
	240	160	10	6	2	3	32	87	70	820
	260	180	10	6	2	3	36	98	80	820
	280	200	10	6	2	3	40	109	90	820
	300	220	10	6	2	3	45	120	96	820
FBE-311 6x10-3	160	80	10	6	3	3	16	65	48	820
	180	100	10	6	3	3	20	81	66	820
	200	120	10	6	3	3	24	98	81	820
	220	140	10	6	3	3	28	114	93	820
	240	160	10	6	3	3	32	131	105	820
	260	180	10	6	3	3	36	147	120	820
	280	200	10	6	3	3	40	164	135	820
	300	220	10	6	3	3	45	180	144	820

Connector FBE-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm] S
				Bars	Steel plates	Compress. bearing				
FBE-311 6x10-4	160	80	10	6	4	3	16	86	64	820
	180	100	10	6	4	3	20	108	88	820
	200	120	10	6	4	3	24	130	108	820
	220	140	10	6	4	3	28	152	124	820
	240	160	10	6	4	3	32	174	140	820
	260	180	10	6	4	3	36	196	160	820
	280	200	10	6	4	3	40	218	180	820
	300	220	10	6	4	3	45	240	192	820
FBE-311 6x10-5	160	80	10	6	5	3	16	97	72	820
	180	100	10	6	5	3	20	122	99	820
	200	120	10	6	5	3	24	146	122	820
	220	140	10	6	5	3	28	171	140	820
	240	160	10	6	5	3	32	196	158	820
	260	180	10	6	5	3	36	221	180	820
	280	200	10	6	5	3	40	245	203	820
	300	220	10	6	5	3	45	270	216	820
FBE-312 4x14-1	160	80	14	4	1	4	19	22	16	1050
	180	100	14	4	1	4	25	27	22	1050
	200	120	14	4	1	4	30	33	27	1050
	220	140	14	4	1	4	35	38	31	1050
	240	160	14	4	1	4	41	44	35	1050
	260	180	14	4	1	4	46	49	40	1050
	280	200	14	4	1	4	51	55	45	1050
	300	220	14	4	1	4	57	60	48	1050
FBE-312 4x14-2	160	80	14	4	2	4	19	43	32	1050
	180	100	14	4	2	4	25	54	44	1050
	200	120	14	4	2	4	30	65	54	1050
	220	140	14	4	2	4	35	76	62	1050
	240	160	14	4	2	4	41	87	70	1050
	260	180	14	4	2	4	46	98	80	1050
	280	200	14	4	2	4	51	109	90	1050
	300	220	14	4	2	4	57	120	96	1050
FBE-312 4x14-3	160	80	14	4	3	4	19	65	48	1050
	180	100	14	4	3	4	25	81	66	1050
	200	120	14	4	3	4	30	98	81	1050
	220	140	14	4	3	4	35	114	93	1050
	240	160	14	4	3	4	41	131	105	1050
	260	180	14	4	3	4	46	147	120	1050
	280	200	14	4	3	4	51	164	135	1050
	300	220	14	4	3	4	57	180	144	1050
FBE-313 6x14-1	160	80	14	6	1	6	30	22	16	1050
	180	100	14	6	1	6	38	27	22	1050
	200	120	14	6	1	6	46	33	27	1050
	220	140	14	6	1	6	54	38	31	1050
	240	160	14	6	1	6	62	44	35	1050
	260	180	14	6	1	6	71	49	40	1050
	280	200	14	6	1	6	79	55	45	1050
	300	220	14	6	1	6	87	60	48	1050

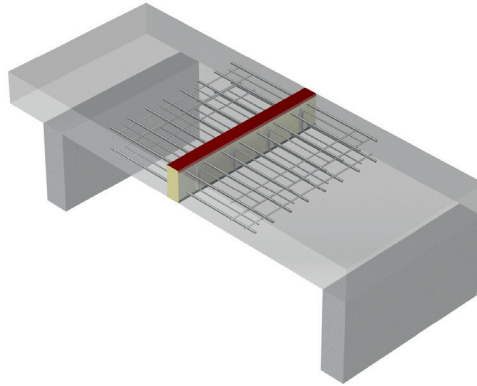
Connector FBE-300 / concrete grade $\geq C20/25$										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (±) [kN]	Insulation 120 mm V _{Res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FBE-313 6x14-2	160	80	14	6	2	6	30	43	32	1050
	180	100	14	6	2	6	38	54	44	1050
	200	120	14	6	2	6	46	65	54	1050
	220	140	14	6	2	6	54	76	62	1050
	240	160	14	6	2	6	62	87	70	1050
	260	180	14	6	2	6	71	98	80	1050
	280	200	14	6	2	6	79	109	90	1050
300	220	14	6	2	6	87	120	96	1050	
FBE-313 6x14-3	160	80	14	6	3	6	30	65	48	1050
	180	100	14	6	3	6	38	81	66	1050
	200	120	14	6	3	6	46	98	81	1050
	220	140	14	6	3	6	54	114	93	1050
	240	160	14	6	3	6	62	131	105	1050
	260	180	14	6	3	6	71	147	120	1050
	280	200	14	6	3	6	79	164	135	1050
300	220	14	6	3	6	87	180	144	1050	
FBE-313 6x14-4	160	80	14	6	4	6	30	86	64	1050
	180	100	14	6	4	6	38	108	88	1050
	200	120	14	6	4	6	46	130	108	1050
	220	140	14	6	4	6	54	152	124	1050
	240	160	14	6	4	6	62	174	140	1050
	260	180	14	6	4	6	71	196	160	1050
	280	200	14	6	4	6	79	218	180	1050
300	220	14	6	4	6	87	240	192	1050	
FBE-313 6x14-5	160	80	14	6	5	6	30	97	72	1050
	180	100	14	6	5	6	38	122	99	1050
	200	120	14	6	5	6	46	146	122	1050
	220	140	14	6	5	6	54	171	140	1050
	240	160	14	6	5	6	62	196	158	1050
	260	180	14	6	5	6	71	221	180	1050
	280	200	14	6	5	6	79	245	203	1050
300	220	14	6	5	6	87	270	216	1050	
FBE-314 8x14-1	160	80	14	8	1	8	40	22	16	1050
	180	100	14	8	1	8	51	27	22	1050
	200	120	14	8	1	8	62	33	27	1050
	220	140	14	8	1	8	73	38	31	1050
	240	160	14	8	1	8	83	44	35	1050
	260	180	14	8	1	8	94	49	40	1050
	280	200	14	8	1	8	105	55	45	1050
300	220	14	8	1	8	115	60	48	1050	
FBE-314 8x14-2	160	80	14	8	2	8	40	43	32	1050
	180	100	14	8	2	8	51	54	44	1050
	200	120	14	8	2	8	62	65	54	1050
	220	140	14	8	2	8	73	76	62	1050
	240	160	14	8	2	8	83	87	70	1050
	260	180	14	8	2	8	94	98	80	1050
	280	200	14	8	2	8	105	109	90	1050
300	220	14	8	2	8	115	120	96	1050	

Connector FBE-300 / concrete grade \geq C20/25

Symbol	h [mm]	h ₁ [mm]	Bar diameter Ø [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Steel plates	Compress. bearing				
FBE-314 8x14-3	160	80	14	8	3	8	40	65	48	1050
	180	100	14	8	3	8	51	81	66	1050
	200	120	14	8	3	8	62	98	81	1050
	220	140	14	8	3	8	73	114	93	1050
	240	160	14	8	3	8	83	131	105	1050
	260	180	14	8	3	8	94	147	120	1050
	280	200	14	8	3	8	105	164	135	1050
300	220	14	8	3	8	115	180	144	1050	
FBE-314 8x14-4	160	80	14	8	4	8	40	86	64	1050
	180	100	14	8	4	8	51	108	88	1050
	200	120	14	8	4	8	62	130	108	1050
	220	140	14	8	4	8	73	152	124	1050
	240	160	14	8	4	8	83	174	140	1050
	260	180	14	8	4	8	94	196	160	1050
	280	200	14	8	4	8	105	218	180	1050
300	220	14	8	4	8	115	240	192	1050	
FBE-314 8x14-5	160	80	14	8	5	8	40	97	72	1050
	180	100	14	8	5	8	51	122	99	1050
	200	120	14	8	5	8	62	146	122	1050
	220	140	14	8	5	8	73	171	140	1050
	240	160	14	8	5	8	83	196	158	1050
	260	180	14	8	5	8	94	221	180	1050
	280	200	14	8	5	8	105	245	203	1050
300	220	14	8	5	8	115	270	216	1050	
FBE-314 8x14-6	160	80	14	8	6	8	40	110	80	1050
	180	100	14	8	6	8	51	138	110	1050
	200	120	14	8	6	8	62	166	135	1050
	220	140	14	8	6	8	73	194	155	1050
	240	160	14	8	6	8	83	222	175	1050
	260	180	14	8	6	8	94	250	200	1050
	280	200	14	8	6	8	105	278	225	1050
300	220	14	8	6	8	115	306	240	1050	
FBE-314 8x14-7	160	80	14	8	7	8	40	123	88	1050
	180	100	14	8	7	8	51	154	121	1050
	200	120	14	8	7	8	62	186	148	1050
	220	140	14	8	7	8	73	217	170	1050
	240	160	14	8	7	8	83	248	192	1050
	260	180	14	8	7	8	94	279	220	1050
	280	200	14	8	7	8	105	311	247	1050
300	220	14	8	7	8	115	342	264	1050	
FBE-315 10x14-1	160	80	14	10	1	10	51	22	16	1050
	180	100	14	10	1	10	64	27	22	1050
	200	120	14	10	1	10	77	33	27	1050
	220	140	14	10	1	10	91	38	31	1050
	240	160	14	10	1	10	104	44	35	1050
	260	180	14	10	1	10	118	49	40	1050
	280	200	14	10	1	10	131	55	45	1050
300	220	14	10	1	10	144	60	48	1050	

Connector FBE-300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
				Bars	Steel plates	Compress. bearing		V _{Res} (±) [kN]	V _{Res} (±) [kN]	
									S	
FBE-315 10x14-2	160	80	14	10	2	10	51	43	32	1050
	180	100	14	10	2	10	64	54	44	1050
	200	120	14	10	2	10	77	65	54	1050
	220	140	14	10	2	10	91	76	62	1050
	240	160	14	10	2	10	104	87	70	1050
	260	180	14	10	2	10	118	98	80	1050
	280	200	14	10	2	10	131	109	90	1050
	300	220	14	10	2	10	144	120	96	1050
FBE-315 10x14-3	160	80	14	10	3	10	51	65	48	1050
	180	100	14	10	3	10	64	81	66	1050
	200	120	14	10	3	10	77	98	81	1050
	220	140	14	10	3	10	91	114	93	1050
	240	160	14	10	3	10	104	131	105	1050
	260	180	14	10	3	10	118	147	120	1050
	280	200	14	10	3	10	131	164	135	1050
	300	220	14	10	3	10	144	180	144	1050
FBE-315 10x14-4	160	80	14	10	4	10	51	86	64	1050
	180	100	14	10	4	10	64	108	88	1050
	200	120	14	10	4	10	77	130	108	1050
	220	140	14	10	4	10	91	152	124	1050
	240	160	14	10	4	10	104	174	140	1050
	260	180	14	10	4	10	118	196	160	1050
	280	200	14	10	4	10	131	218	180	1050
	300	220	14	10	4	10	144	240	192	1050
FBE-315 10x14-5	160	80	14	10	5	10	51	97	72	1050
	180	100	14	10	5	10	64	122	99	1050
	200	120	14	10	5	10	77	146	122	1050
	220	140	14	10	5	10	91	171	140	1050
	240	160	14	10	5	10	104	196	158	1050
	260	180	14	10	5	10	118	221	180	1050
	280	200	14	10	5	10	131	245	203	1050
	300	220	14	10	5	10	144	270	216	1050
FBE-315 10x14-6	160	80	14	10	6	10	51	110	80	1050
	180	100	14	10	6	10	64	138	110	1050
	200	120	14	10	6	10	77	166	135	1050
	220	140	14	10	6	10	91	194	155	1050
	240	160	14	10	6	10	104	222	175	1050
	260	180	14	10	6	10	118	250	200	1050
	280	200	14	10	6	10	131	278	225	1050
	300	220	14	10	6	10	144	306	240	1050
FBE-315 10x14-7	160	80	14	10	7	10	51	123	88	1050
	180	100	14	10	7	10	64	154	121	1050
	200	120	14	10	7	10	77	186	148	1050
	220	140	14	10	7	10	91	217	170	1050
	240	160	14	10	7	10	104	248	192	1050
	260	180	14	10	7	10	118	279	220	1050
	280	200	14	10	7	10	131	311	247	1050
	300	220	14	10	7	10	144	342	264	1050

Connector FB-400 for continuous connection of balcony slab with floor slab

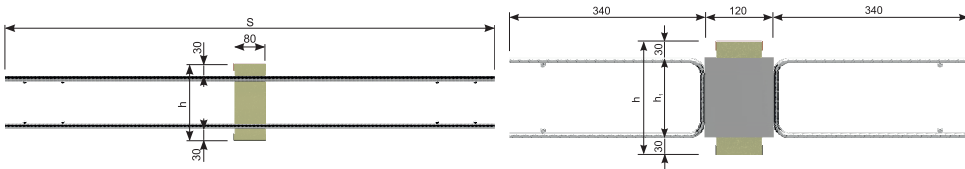


- Standard elements for floor slabs with thickness between 140 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of black steel, hot-dip galvanised carbon steel
- Steel plates made of stainless steel
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 404 8 × 14 - 4 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of steel plates



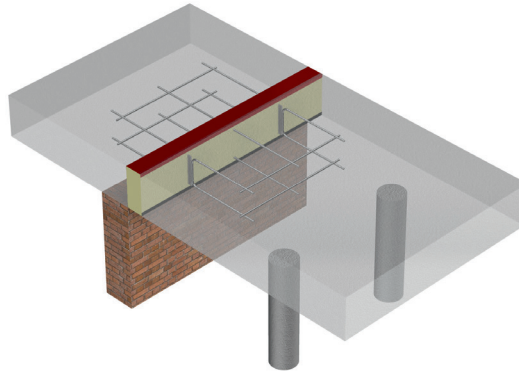
Connector FB-400 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity		M _{res} (±) [kNm]	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
				Bars	Steel plates		V _{res} (±) [kN]	V _{res} (±) [kN]	
FB-401 6x10-1	140	80	10	6	1	13	21	16	820
	160	100	10	6	1	16	27	22	820
	180	120	10	6	1	20	32	27	820
	200	140	10	6	1	23	38	31	820
	220	160	10	6	1	27	43	35	820
	240	180	10	6	1	31	49	40	820
	260	200	10	6	1	34	54	45	820
	280	220	10	6	1	38	60	48	820
	300	240	10	6	1	41	65	53	820

Connector FB-400 / concrete grade \geq C20/25										
Symbol	h [mm]	h _i [mm]	Bar diameter Ø [mm]	Quantity			M _{red} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates			80 mm	120 mm	
							V _{red} (±) [kN]	V _{red} (±) [kN]	S	
FB-401 6x10-2	140	80	10	6	2	13	43	32	820	
	160	100	10	6	2	16	54	44	820	
	180	120	10	6	2	20	65	54	820	
	200	140	10	6	2	23	76	62	820	
	220	160	10	6	2	27	87	70	820	
	240	180	10	6	2	31	98	80	820	
	260	200	10	6	2	34	109	90	820	
	280	220	10	6	2	38	120	96	820	
	300	240	10	6	2	41	130	106	820	
FB-401 6x10-3	140	80	10	6	3	13	65	48	820	
	160	100	10	6	3	16	81	66	820	
	180	120	10	6	3	20	98	81	820	
	200	140	10	6	3	23	114	93	820	
	220	160	10	6	3	27	131	105	820	
	240	180	10	6	3	31	147	120	820	
	260	200	10	6	3	34	164	135	820	
	280	220	10	6	3	38	180	144	820	
	300	240	10	6	3	41	195	159	820	
FB-402 4x14-1	140	80	14	4	1	17	21	16	1050	
	160	100	14	4	1	22	27	22	1050	
	180	120	14	4	1	27	32	27	1050	
	200	140	14	4	1	32	38	31	1050	
	220	160	14	4	1	38	43	35	1050	
	240	180	14	4	1	43	49	40	1050	
	260	200	14	4	1	48	54	45	1050	
	280	220	14	4	1	53	60	48	1050	
	300	240	14	4	1	58	65	53	1050	
FB-402 4x14-2	140	80	14	4	2	17	43	32	1050	
	160	100	14	4	2	22	54	44	1050	
	180	120	14	4	2	27	65	54	1050	
	200	140	14	4	2	32	76	62	1050	
	220	160	14	4	2	38	87	70	1050	
	240	180	14	4	2	43	98	80	1050	
	260	200	14	4	2	48	109	90	1050	
	280	220	14	4	2	53	120	96	1050	
	300	240	14	4	2	58	130	106	1050	
FB-402 4x14-3	140	80	14	4	3	17	65	48	1050	
	160	100	14	4	3	22	81	66	1050	
	180	120	14	4	3	27	98	81	1050	
	200	140	14	4	3	32	114	93	1050	
	220	160	14	4	3	38	131	105	1050	
	240	180	14	4	3	43	147	120	1050	
	260	200	14	4	3	48	164	135	1050	
	280	220	14	4	3	53	180	144	1050	
	300	240	14	4	3	58	195	159	1050	

Connector FB-400 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter ∅ [mm]	Quantity		M _{red} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Steel plates		80 mm	120 mm	
							V _{red} (±) [kN]	V _{red} (±) [kN]	S
FB-403 6x14-2	140	80	14	6	2	25	43	32	1050
	160	100	14	6	2	33	54	44	1050
	180	120	14	6	2	41	65	54	1050
	200	140	14	6	2	49	76	62	1050
	220	160	14	6	2	56	87	70	1050
	240	180	14	6	2	64	98	80	1050
	260	200	14	6	2	72	109	90	1050
	280	220	14	6	2	80	120	96	1050
	300	240	14	6	2	87	130	106	1050
FB-403 6x14-3	140	80	14	6	3	25	65	48	1050
	160	100	14	6	3	33	81	66	1050
	180	120	14	6	3	41	98	81	1050
	200	140	14	6	3	49	114	93	1050
	220	160	14	6	3	56	131	105	1050
	240	180	14	6	3	64	147	120	1050
	260	200	14	6	3	72	164	135	1050
	280	220	14	6	3	80	180	144	1050
	300	240	14	6	3	87	195	159	1050
FB-403 6x14-4	140	80	14	6	4	25	86	64	1050
	160	100	14	6	4	33	108	88	1050
	180	120	14	6	4	41	130	108	1050
	200	140	14	6	4	49	152	124	1050
	220	160	14	6	4	56	174	140	1050
	240	180	14	6	4	64	196	160	1050
	260	200	14	6	4	72	218	180	1050
	280	220	14	6	4	80	240	192	1050
	300	240	14	6	4	87	260	212	1050
FB-404 8x14-2	140	80	14	8	2	34	43	32	1050
	160	100	14	8	2	44	54	44	1050
	180	120	14	8	2	55	65	54	1050
	200	140	14	8	2	65	76	62	1050
	220	160	14	8	2	75	87	70	1050
	240	180	14	8	2	85	98	80	1050
	260	200	14	8	2	96	109	90	1050
	280	220	14	8	2	106	120	96	1050
	300	240	14	8	2	116	130	106	1050
FB-404 8x14-3	140	80	14	8	3	34	65	48	1050
	160	100	14	8	3	44	81	66	1050
	180	120	14	8	3	55	98	81	1050
	200	140	14	8	3	65	114	93	1050
	220	160	14	8	3	75	131	105	1050
	240	180	14	8	3	85	147	120	1050
	260	200	14	8	3	96	164	135	1050
	280	220	14	8	3	106	180	144	1050
	300	240	14	8	3	116	195	159	1050

Connector FB-400 / concrete grade \geq C20/25									
Symbol	h [mm]	h _i [mm]	Bar diameter \varnothing [mm]	Quantity			Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm] S
				Bars	Steel plates	M _{red} (±) [kNm]			
FB-404 8x14-4	140	80	14	8	4	34	86	64	1050
	160	100	14	8	4	44	108	88	1050
	180	120	14	8	4	55	130	108	1050
	200	140	14	8	4	65	152	124	1050
	220	160	14	8	4	75	174	140	1050
	240	180	14	8	4	85	196	160	1050
	260	200	14	8	4	96	218	180	1050
	280	220	14	8	4	106	240	192	1050
	300	240	14	8	4	116	260	212	1050

Connector FB-500 for balcony slabs swivel supported

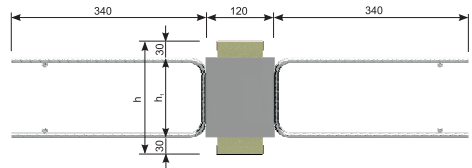
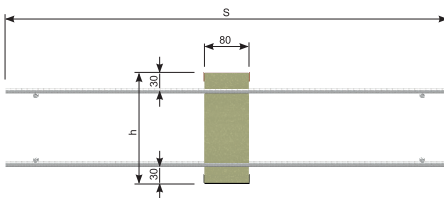


- Standard elements for floor slabs with thickness between 140 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of stainless steel
- Steel plates made of stainless steel
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 504 2 h=200 mm, XPS80, L=1000 mm

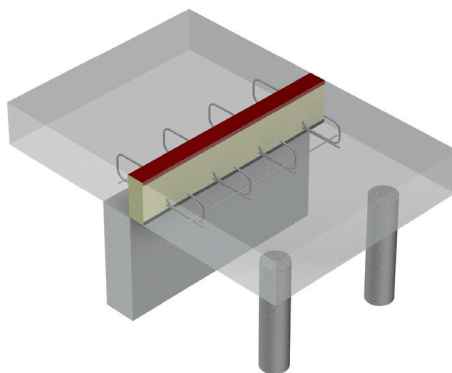
Type of connector Quantity of steel plates



Connector FB-500 / concrete grade \geq C20/25						
Symbol	h [mm]	h ₁ [mm]	Quantity	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
			Steel plates	V _{res} (±) [kN]	V _{res} (±) [kN]	S
FB-501 (1pl)	140	80	1	22	16	800
	160	100	1	27	22	800
	180	120	1	33	27	800
	200	140	1	38	31	800
	220	160	1	44	35	800
	240	180	1	49	40	800
	260	200	1	55	45	800
	280	220	1	60	48	800
300	240	1	65	53	800	
FB-502 (2pl)	140	80	2	43	32	800
	160	100	2	54	44	800
	180	120	2	65	54	800
	200	140	2	76	62	800
	220	160	2	87	70	800
	240	180	2	98	80	800
	260	200	2	109	90	800
	280	220	2	120	96	800
300	240	2	130	106	800	
FB-503 (1pl)	140	80	1	22	16	800
	160	100	1	27	22	800
	180	120	1	33	27	800
	200	140	1	38	31	800
	220	160	1	44	35	800
	240	180	1	49	40	800
	260	200	1	55	45	800
	280	220	1	60	48	800
300	240	1	65	53	800	
FB-504 (2pl)	140	80	2	43	32	800
	160	100	2	54	44	800
	180	120	2	65	54	800
	200	140	2	76	62	800
	220	160	2	87	70	800
	240	180	2	98	80	800
	260	200	2	109	90	800
	280	220	2	120	96	800
300	240	2	130	106	800	
FB-505 (3pl)	140	80	3	65	48	800
	160	100	3	81	66	800
	180	120	3	98	81	800
	200	140	3	114	93	800
	220	160	3	131	105	800
	240	180	3	147	120	800
	260	200	3	164	135	800
	280	220	3	180	144	800
300	240	3	195	159	800	

Connector FB-500 / concrete grade \geq C20/25						
Symbol	h [mm]	h ₁ [mm]	Quantity	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
			Steel plates	V _{res} (±) [kN]	V _{res} (±) [kN]	S
FB-506 (4pl)	140	80	4	86	64	800
	160	100	4	108	88	800
	180	120	4	130	108	800
	200	140	4	152	124	800
	220	160	4	174	140	800
	240	180	4	196	160	800
	260	200	4	218	180	800
	280	220	4	240	192	800
	300	240	4	260	212	800
FB-507 (5pl)	140	80	5	97	72	800
	160	100	5	122	99	800
	180	120	5	146	122	800
	200	140	5	171	140	800
	220	160	5	196	158	800
	240	180	5	221	180	800
	260	200	5	245	203	800
	280	220	5	270	216	800
	300	240	5	293	239	800
FB-508 (6pl)	140	80	6	110	80	800
	160	100	6	138	110	800
	180	120	6	166	135	800
	200	140	6	194	155	800
	220	160	6	222	175	800
	240	180	6	250	200	800
	260	200	6	278	225	800
	280	220	6	306	240	800
	300	240	6	334	255	800

Connector FB-600 for balcony slabs swivel supported



- Standard elements for floor slabs with thickness between 160 and 300 mm
- Standard thickness of insulation: 80 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars(hoop sticks) made of stainless steel
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

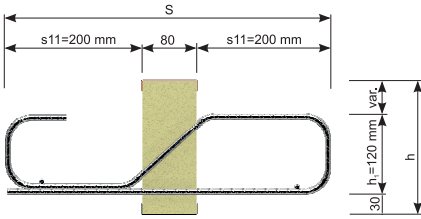
Example of marking:

FB - 604

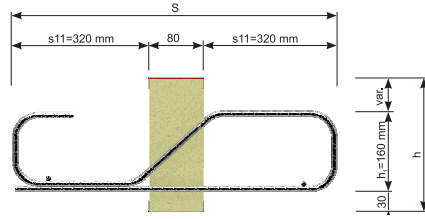
h=200 mm, XPS80, L=1000 mm

Type of connector

Up to h=200 mm



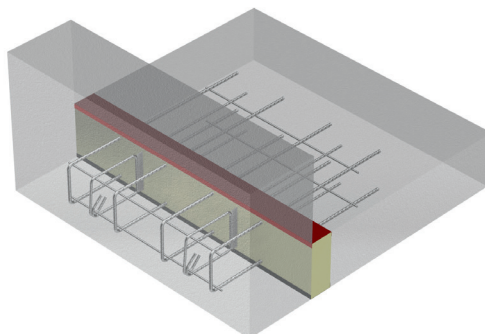
From h=200 mm



Connector FB-600 / concrete grade \geq C20/25							
Symbol	h [mm]	Bar diameter \varnothing [mm]	Quantity		Dimensions [mm]		
			Hoop sticks	$V_{Ed}(+)$ [kN]	S	s11	h
FB-601	160	8	2	38	480	200	120
	180	8	2	38	480	200	120
	200	8	2	38	480	200	120
	220	10	2	61	720	320	160
	240	10	2	61	720	320	160
	260	10	2	61	720	320	160
	280	10	2	61	720	320	160
	300	10	2	61	720	320	160
FB-602	160	8	2	38	480	200	120
	180	8	2	38	480	200	120
	200	8	2	38	480	200	120
	220	10	2	61	720	320	160
	240	10	2	61	720	320	160
	260	10	2	61	720	320	160
	280	10	2	61	720	320	160
	300	10	2	61	720	320	160
FB-603	160	8	3	57	480	200	120
	180	8	3	57	480	200	120
	200	8	3	57	480	200	120
	220	10	3	92	720	320	160
	240	10	3	92	720	320	160
	260	10	3	92	720	320	160
	280	10	3	92	720	320	160
	300	10	3	92	720	320	160
FB-604	160	8	4	76	480	200	120
	180	8	4	76	480	200	120
	200	8	4	76	480	200	120
	220	10	4	122	720	320	160
	240	10	4	122	720	320	160
	260	10	4	122	720	320	160
	280	10	4	122	720	320	160
	300	10	4	122	720	320	160

Connector FB-600 / concrete grade \geq C20/25								
Symbol	h [mm]	Bar diameter \varnothing [mm]	Quantity		$V_{res}^{(+)}$ [kN]	Dimensions [mm]		
			Hoop sticks			S	s11	h
FB-605	160	8	5		95	480	200	120
	180	8	5		95	480	200	120
	200	8	5		95	480	200	120
	220	10	5		153	720	320	160
	240	10	5		153	720	320	160
	260	10	5		153	720	320	160
	280	10	5		153	720	320	160
	300	10	5		153	720	320	160
FB-606	160	8	6		113	480	200	120
	180	8	6		113	480	200	120
	200	8	6		113	480	200	120
	220	10	6		184	720	320	160
	240	10	6		184	720	320	160
	260	10	6		184	720	320	160
	280	10	6		184	720	320	160
	300	10	6		184	720	320	160

Connector FB-700 for attic style, short consoles installation

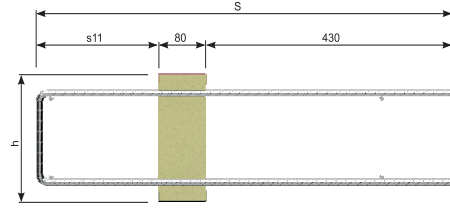
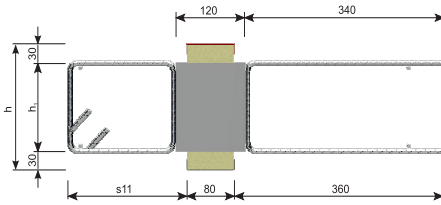


- Standard elements for floor slabs with thickness between 140 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars (steel plates) made of stainless steel
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 704 4 × 10 - 2 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of steel plates



Connector FB-700 / concrete grade $\geq C20/25$

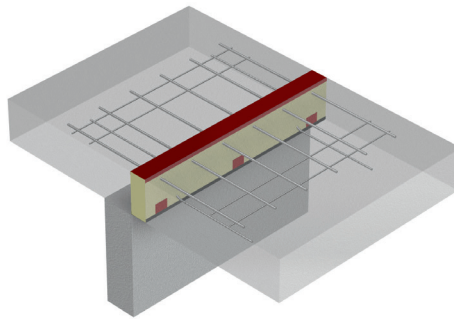
Symbol	h [mm]	Bar diameter Ø [mm]	Quantity		s11 = 120 mm			s11 = 160 mm		s11 = 200 mm		Insulation 80 mm		Insulation 120 mm		M _{Red} = 0	Dimension [mm]					
			Hoop sticks	Steel plates	M _{Red} (±) [kNm]	M _{Red} (±) [kNm]	M _{Red} (±) [kNm]	V _{Red} (±) [kN]	V _{Red} (±) [kN]	N _{Red} [kN]	s11			S								
FB-701 2x10-1	140	10	2	1	4	4,5	5	22	16	124	120	160	200	630	670	710	120	160	200	630	670	710
	160	10	2	1	5	6	7	27	22	124	120	160	200	630	670	710	120	160	200	630	670	710
	180	10	2	1	6	7	8	33	27	124	120	160	200	630	670	710	120	160	200	630	670	710
	200	10	2	1	8	9	10	38	31	124	120	160	200	630	670	710	120	160	200	630	670	710
	220	10	2	1	9	10	11	44	35	124	120	160	200	630	670	710	120	160	200	630	670	710
	240	10	2	1	11	11,5	12	49	40	124	120	160	200	630	670	710	120	160	200	630	670	710
	260	10	2	1	12	13	14	55	45	124	120	160	200	630	670	710	120	160	200	630	670	710
	280	10	2	1	14	14,5	15	60	48	124	120	160	200	630	670	710	120	160	200	630	670	710
300	10	2	1	15	16	17	65	53	124	120	160	200	630	670	710	120	160	200	630	670	710	
FB-702 2x10-1	140	10	2	1	4	4,5	5	22	16	124	120	160	200	630	670	710	120	160	200	630	670	710
	160	10	2	1	5	6	7	27	22	124	120	160	200	630	670	710	120	160	200	630	670	710
	180	10	2	1	6	7	8	33	27	124	120	160	200	630	670	710	120	160	200	630	670	710
	200	10	2	1	8	9	10	38	31	124	120	160	200	630	670	710	120	160	200	630	670	710
	220	10	2	1	9	10	11	44	35	124	120	160	200	630	670	710	120	160	200	630	670	710
	240	10	2	1	11	11,5	12	49	40	124	120	160	200	630	670	710	120	160	200	630	670	710
	260	10	2	1	12	13	14	55	45	124	120	160	200	630	670	710	120	160	200	630	670	710
	280	10	2	1	14	14,5	15	60	48	124	120	160	200	630	670	710	120	160	200	630	670	710
300	10	2	1	15	16	17	65	53	124	120	160	200	630	670	710	120	160	200	630	670	710	
FB-703 3x10-1	140	10	3	1	6	7	8	22	16	186	120	160	200	630	670	710	120	160	200	630	670	710
	160	10	3	1	8	9	10	27	22	186	120	160	200	630	670	710	120	160	200	630	670	710
	180	10	3	1	10	11	12	33	27	186	120	160	200	630	670	710	120	160	200	630	670	710
	200	10	3	1	12	13	15	38	31	186	120	160	200	630	670	710	120	160	200	630	670	710
	220	10	3	1	14	15	17	44	35	186	120	160	200	630	670	710	120	160	200	630	670	710
	240	10	3	1	16	17	19	49	40	186	120	160	200	630	670	710	120	160	200	630	670	710
	260	10	3	1	18	19	21	55	45	186	120	160	200	630	670	710	120	160	200	630	670	710
	280	10	3	1	21	22	23	60	48	186	120	160	200	630	670	710	120	160	200	630	670	710
300	10	3	1	23	24	26	65	53	186	120	160	200	630	670	710	120	160	200	630	670	710	
FB-703 3x10-2	140	10	3	2	6	7	8	43	32	186	120	160	200	630	670	710	120	160	200	630	670	710
	160	10	3	2	8	9	10	54	44	186	120	160	200	630	670	710	120	160	200	630	670	710
	180	10	3	2	10	11	12	65	54	186	120	160	200	630	670	710	120	160	200	630	670	710
	200	10	3	2	12	13	15	76	62	186	120	160	200	630	670	710	120	160	200	630	670	710
	220	10	3	2	14	15	17	87	70	186	120	160	200	630	670	710	120	160	200	630	670	710
	240	10	3	2	16	17	19	98	80	186	120	160	200	630	670	710	120	160	200	630	670	710
	260	10	3	2	18	19	21	109	90	186	120	160	200	630	670	710	120	160	200	630	670	710
	280	10	3	2	21	22	23	120	96	186	120	160	200	630	670	710	120	160	200	630	670	710
300	10	3	2	23	24	26	130	106	186	120	160	200	630	670	710	120	160	200	630	670	710	

Connector FB-700 / concrete grade \geq C20/25																
Symbol	h [mm]	Bar diameter \varnothing [mm]	Quantity		s11 = 120 mm	s11 = 160 mm	s11 = 200 mm	Insulation 80 mm	Insulation 120 mm	$M_{red} = 0$ N_{red} [kN]	Dimension [mm]					
			Hoop sticks	Steel plates	$M_{hoop}(\pm)$ [kNm]	$M_{steel}(\pm)$ [kNm]	$M_{s11}(\pm)$ [kNm]	$V_{hoop}(\pm)$ [kN]	$V_{steel}(\pm)$ [kN]		s11			S		
FB-704 4x10-1	140	10	4	1	8	9	10	22	16	248	120	160	200	630	670	710
	160	10	4	1	10	11	13	27	22	248	120	160	200	630	670	710
	180	10	4	1	13	14	16	33	27	248	120	160	200	630	670	710
	200	10	4	1	15	17	19	38	31	248	120	160	200	630	670	710
	220	10	4	1	18	20	22	44	35	248	120	160	200	630	670	710
	240	10	4	1	21	23	25	49	40	248	120	160	200	630	670	710
	260	10	4	1	24	26	28	55	45	248	120	160	200	630	670	710
	280	10	4	1	27	29	31	60	48	248	120	160	200	630	670	710
300	10	4	1	31	32	34	65	53	248	120	160	200	630	670	710	
FB-704 4x10-2	140	10	4	2	8	9	10	43	32	248	120	160	200	630	670	710
	160	10	4	2	10	11	13	54	44	248	120	160	200	630	670	710
	180	10	4	2	13	14	16	65	54	248	120	160	200	630	670	710
	200	10	4	2	15	17	19	76	62	248	120	160	200	630	670	710
	220	10	4	2	18	20	22	87	70	248	120	160	200	630	670	710
	240	10	4	2	21	23	25	98	80	248	120	160	200	630	670	710
	260	10	4	2	24	26	28	109	90	248	120	160	200	630	670	710
	280	10	4	2	27	29	31	120	96	248	120	160	200	630	670	710
300	10	4	2	31	32	34	130	106	248	120	160	200	630	670	710	
FB-704 4x10-3	140	10	4	3	8	9	10	65	48	248	120	160	200	630	670	710
	160	10	4	3	10	11	13	81	66	248	120	160	200	630	670	710
	180	10	4	3	13	14	16	98	81	248	120	160	200	630	670	710
	200	10	4	3	15	17	19	114	93	248	120	160	200	630	670	710
	220	10	4	3	18	20	22	131	105	248	120	160	200	630	670	710
	240	10	4	3	21	23	25	147	120	248	120	160	200	630	670	710
	260	10	4	3	24	26	28	164	135	248	120	160	200	630	670	710
	280	10	4	3	27	29	31	180	144	248	120	160	200	630	670	710
300	10	4	3	31	32	34	195	159	248	120	160	200	630	670	710	
FB-705 6x10-1	140	10	6	1	11	13	15	22	16	372	120	160	200	630	670	710
	160	10	6	1	15	17	20	27	22	372	120	160	200	630	670	710
	180	10	6	1	19	21	24	33	27	372	120	160	200	630	670	710
	200	10	6	1	23	26	29	38	31	372	120	160	200	630	670	710
	220	10	6	1	27	30	33	44	35	372	120	160	200	630	670	710
	240	10	6	1	32	34	37	49	40	372	120	160	200	630	670	710
	260	10	6	1	36	39	42	55	45	372	120	160	200	630	670	710
	280	10	6	1	41	43	46	60	48	372	120	160	200	630	670	710
300	10	6	1	46	48	51	65	53	372	120	160	200	630	670	710	
FB-705 6x10-2	140	10	6	2	11	13	15	43	32	372	120	160	200	630	670	710
	160	10	6	2	15	17	20	54	44	372	120	160	200	630	670	710
	180	10	6	2	19	21	24	65	54	372	120	160	200	630	670	710
	200	10	6	2	23	26	29	76	62	372	120	160	200	630	670	710
	220	10	6	2	27	30	33	87	70	372	120	160	200	630	670	710
	240	10	6	2	32	34	37	98	80	372	120	160	200	630	670	710
	260	10	6	2	36	39	42	109	90	372	120	160	200	630	670	710
	280	10	6	2	41	43	46	120	96	372	120	160	200	630	670	710
300	10	6	2	46	48	51	130	106	372	120	160	200	630	670	710	

Connector FB-700 / concrete grade \geq C20/25

Symbol	h [mm]	Bar diameter \varnothing [mm]	Quantity		s11 = 120 mm	s11 = 160 mm	s11 = 200 mm	Insulation 80 mm	Insulation 120 mm	$M_{red} = 0$	Dimensions [mm]					
			Hoop sticks	Steel plates	$M_{red}(\pm)$ [kNm]	$M_{red}(\pm)$ [kNm]	$M_{red}(\pm)$ [kNm]	$V_{red}(\pm)$ [kN]	$V_{red}(\pm)$ [kN]		N_{red} [kN]	s11			S	
FB-705 6x10-3	140	10	6	3	11	13	15	65	48	372	120	160	200	630	670	710
	160	10	6	3	15	17	20	81	66	372	120	160	200	630	670	710
	180	10	6	3	19	21	24	98	81	372	120	160	200	630	670	710
	200	10	6	3	23	26	29	114	93	372	120	160	200	630	670	710
	220	10	6	3	27	30	33	131	105	372	120	160	200	630	670	710
	240	10	6	3	32	34	37	147	120	372	120	160	200	630	670	710
	260	10	6	3	36	39	42	164	135	372	120	160	200	630	670	710
	280	10	6	3	41	43	46	180	144	372	120	160	200	630	670	710
	300	10	6	3	46	48	51	195	159	372	120	160	200	630	670	710

Connector FB-1100 for cantilevered balcony slabs

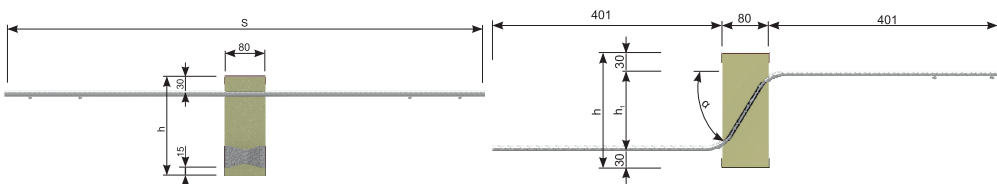


- Standard elements for floor slabs with thickness between 160 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars and hoop sticks made of stainless steel
- Steel compression bearing made of stainless steel (for ceilings 16 cm) or concrete bearing (ceilings 18 cm and higher)
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 1104 6 × 10 - 2 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of hoop sticks



Connector FB-1100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (+) [kN]	Insulation 120 mm V _{Res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1101 2x10-1	160	90	10	2	1	1	8	17	13	960
	180	110	10	2	1	2	10	19	16	960
	200	130	10	2	1	2	11	21	18	960
	220	150	10	2	1	2	13	22	19	960
	240	170	10	2	1	2	15	23	21	960
	260	190	10	2	1	2	17	24	22	960
	280	210	10	2	1	2	18	25	23	960
	300	230	10	2	1	2	20	25	23	960
FB-1102 2x14-2	160	90	14	2	2	2	15	34	27	1280
	180	110	14	2	2	3	19	38	32	1280
	200	130	14	2	2	3	22	42	36	1280
	220	150	14	2	2	3	26	45	39	1280
	240	170	14	2	2	3	29	47	41	1280
	260	190	14	2	2	3	33	48	44	1280
	280	210	14	2	2	3	36	50	45	1280
	300	230	14	2	2	3	40	51	47	1280
FB-1103 4x10-1	160	90	10	4	1	2	15	17	13	960
	180	110	10	4	1	4	19	19	16	960
	200	130	10	4	1	4	23	21	18	960
	220	150	10	4	1	4	26	22	19	960
	240	170	10	4	1	4	30	23	21	960
	260	190	10	4	1	4	33	24	22	960
	280	210	10	4	1	4	37	25	23	960
	300	230	10	4	1	4	40	25	23	960
FB-1103 4x10-2	160	90	10	4	2	2	15	34	27	960
	180	110	10	4	2	4	19	38	32	960
	200	130	10	4	2	4	23	42	36	960
	220	150	10	4	2	4	26	45	39	960
	240	170	10	4	2	4	30	47	41	960
	260	190	10	4	2	4	33	48	44	960
	280	210	10	4	2	4	37	50	45	960
	300	230	10	4	2	4	40	51	47	960
FB-1103 4x10-3	160	90	10	4	3	2	15	50	40	960
	180	110	10	4	3	4	19	57	47	960
	200	130	10	4	3	4	23	63	53	960
	220	150	10	4	3	4	26	67	58	960
	240	170	10	4	3	4	30	70	62	960
	260	190	10	4	3	4	33	73	65	960
	280	210	10	4	3	4	37	75	68	960
	300	230	10	4	3	4	40	76	70	960
FB-1104 6x10-1	160	90	10	6	1	3	23	17	13	960
	180	110	10	6	1	4	28	19	16	960
	200	130	10	6	1	4	34	21	18	960
	220	150	10	6	1	4	39	22	19	960
	240	170	10	6	1	4	44	23	21	960
	260	190	10	6	1	4	50	24	22	960
	280	210	10	6	1	4	55	25	23	960
	300	230	10	6	1	4	60	25	23	960

Connector FB-1100 / concrete grade \geq C20/25

Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (+) [kN]	Insulation 120 mm V _{res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1104 6x10-2	160	90	10	6	2	3	23	34	27	960
	180	110	10	6	2	4	28	38	32	960
	200	130	10	6	2	4	34	42	36	960
	220	150	10	6	2	4	39	45	39	960
	240	170	10	6	2	4	44	47	41	960
	260	190	10	6	2	4	50	48	44	960
	280	210	10	6	2	4	55	50	45	960
300	230	10	6	2	4	60	51	47	960	
FB-1104 6x10-3	160	90	10	6	3	3	23	50	40	960
	180	110	10	6	3	4	28	57	47	960
	200	130	10	6	3	4	34	63	53	960
	220	150	10	6	3	4	39	67	58	960
	240	170	10	6	3	4	44	70	62	960
	260	190	10	6	3	4	50	73	65	960
	280	210	10	6	3	4	55	75	68	960
300	230	10	6	3	4	60	76	70	960	
FB-1104 6x10-4	160	90	10	6	4	3	23	67	54	960
	180	110	10	6	4	4	28	76	63	960
	200	130	10	6	4	4	34	84	71	960
	220	150	10	6	4	4	39	89	78	960
	240	170	10	6	4	4	44	93	83	960
	260	190	10	6	4	4	50	97	87	960
	280	210	10	6	4	4	55	99	91	960
300	230	10	6	4	4	60	101	94	960	
FB-1104 6x10-5	160	90	10	6	5	3	23	84	67	960
	180	110	10	6	5	4	28	96	79	960
	200	130	10	6	5	4	34	105	89	960
	220	150	10	6	5	4	39	111	97	960
	240	170	10	6	5	4	44	117	104	960
	260	190	10	6	5	4	50	121	109	960
	280	210	10	6	5	4	55	124	113	960
300	230	10	6	5	4	60	127	117	960	
FB-1105 4x14-1	160	90	14	4	1	4	30	17	13	1280
	180	110	14	4	1	6	37	19	16	1280
	200	130	14	4	1	6	44	21	18	1280
	220	150	14	4	1	6	51	22	19	1280
	240	170	14	4	1	6	58	23	21	1280
	260	190	14	4	1	6	65	24	22	1280
	280	210	14	4	1	6	72	25	23	1280
300	230	14	4	1	6	79	25	23	1280	
FB-1105 4x14-2	160	90	14	4	2	4	30	34	27	1280
	180	110	14	4	2	6	37	38	32	1280
	200	130	14	4	2	6	44	42	36	1280
	220	150	14	4	2	6	51	45	39	1280
	240	170	14	4	2	6	58	47	41	1280
	260	190	14	4	2	6	65	48	44	1280
	280	210	14	4	2	6	72	50	45	1280
300	230	14	4	2	6	79	51	47	1280	

Connector FB-1100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (+) [kN]	Insulation 120 mm V _{Res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1105 4x14-3	160	90	14	4	3	4	30	50	40	1280
	180	110	14	4	3	6	37	57	47	1280
	200	130	14	4	3	6	44	63	53	1280
	220	150	14	4	3	6	51	67	58	1280
	240	170	14	4	3	6	58	70	62	1280
	260	190	14	4	3	6	65	73	65	1280
	280	210	14	4	3	6	72	75	68	1280
	300	230	14	4	3	6	79	76	70	1280
FB-1106 6x14-1	160	90	14	6	1	6	45	17	13	1280
	180	110	14	6	1	7	56	19	16	1280
	200	130	14	6	1	7	66	21	18	1280
	220	150	14	6	1	7	77	22	19	1280
	240	170	14	6	1	7	87	23	21	1280
	260	190	14	6	1	7	98	24	22	1280
	280	210	14	6	1	7	108	25	23	1280
	300	230	14	6	1	7	119	25	23	1280
FB-1106 6x14-2	160	90	14	6	2	6	45	34	27	1280
	180	110	14	6	2	7	56	38	32	1280
	200	130	14	6	2	7	66	42	36	1280
	220	150	14	6	2	7	77	45	39	1280
	240	170	14	6	2	7	87	47	41	1280
	260	190	14	6	2	7	98	48	44	1280
	280	210	14	6	2	7	108	50	45	1280
	300	230	14	6	2	7	119	51	47	1280
FB-1106 6x14-3	160	90	14	6	3	6	45	50	40	1280
	180	110	14	6	3	7	56	57	47	1280
	200	130	14	6	3	7	66	63	53	1280
	220	150	14	6	3	7	77	67	58	1280
	240	170	14	6	3	7	87	70	62	1280
	260	190	14	6	3	7	98	73	65	1280
	280	210	14	6	3	7	108	75	68	1280
	300	230	14	6	3	7	119	76	70	1280
FB-1106 6x14-4	160	90	14	6	4	6	45	67	54	1280
	180	110	14	6	4	7	56	76	63	1280
	200	130	14	6	4	7	66	84	71	1280
	220	150	14	6	4	7	77	89	78	1280
	240	170	14	6	4	7	87	93	83	1280
	260	190	14	6	4	7	98	97	87	1280
	280	210	14	6	4	7	108	99	91	1280
	300	230	14	6	4	7	119	101	94	1280
FB-1106 6x14-5	160	90	14	6	5	6	45	84	67	1280
	180	110	14	6	5	7	56	96	79	1280
	200	130	14	6	5	7	66	105	89	1280
	220	150	14	6	5	7	77	111	97	1280
	240	170	14	6	5	7	87	117	104	1280
	260	190	14	6	5	7	98	121	109	1280
	280	210	14	6	5	7	108	124	113	1280
	300	230	14	6	5	7	119	127	117	1280

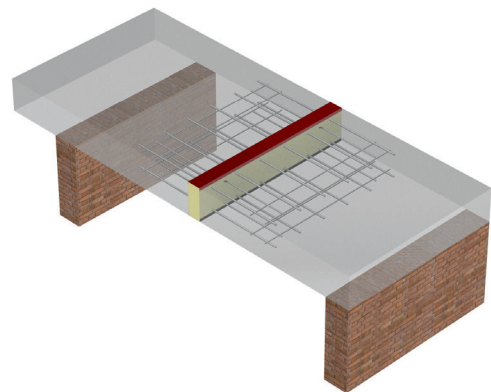
Connector FB-1107 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (+) [kN]	Insulation 120 mm V _{res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1107 8x14-1	160	90	14	8	1	8	61	17	13	1280
	180	110	14	8	1	9	74	19	16	1280
	200	130	14	8	1	9	88	21	18	1280
	220	150	14	8	1	9	102	22	19	1280
	240	170	14	8	1	9	116	23	21	1280
	260	190	14	8	1	9	130	24	22	1280
	280	210	14	8	1	9	144	25	23	1280
300	230	14	8	1	9	158	25	23	1280	
FB-1107 8x14-2	160	90	14	8	2	8	61	34	27	1280
	180	110	14	8	2	9	74	38	32	1280
	200	130	14	8	2	9	88	42	36	1280
	220	150	14	8	2	9	102	45	39	1280
	240	170	14	8	2	9	116	47	41	1280
	260	190	14	8	2	9	130	48	44	1280
	280	210	14	8	2	9	144	50	45	1280
300	230	14	8	2	9	158	51	47	1280	
FB-1107 8x14-3	160	90	14	8	3	8	61	50	40	1280
	180	110	14	8	3	9	74	57	47	1280
	200	130	14	8	3	9	88	63	53	1280
	220	150	14	8	3	9	102	67	58	1280
	240	170	14	8	3	9	116	70	62	1280
	260	190	14	8	3	9	130	73	65	1280
	280	210	14	8	3	9	144	75	68	1280
300	230	14	8	3	9	158	76	70	1280	
FB-1107 8x14-4	160	90	14	8	4	8	61	67	54	1280
	180	110	14	8	4	9	74	76	63	1280
	200	130	14	8	4	9	88	84	71	1280
	220	150	14	8	4	9	102	89	78	1280
	240	170	14	8	4	9	116	93	83	1280
	260	190	14	8	4	9	130	97	87	1280
	280	210	14	8	4	9	144	99	91	1280
300	230	14	8	4	9	158	101	94	1280	
FB-1107 8x14-5	160	90	14	8	5	8	61	84	67	1280
	180	110	14	8	5	9	74	96	79	1280
	200	130	14	8	5	9	88	105	89	1280
	220	150	14	8	5	9	102	111	97	1280
	240	170	14	8	5	9	116	117	104	1280
	260	190	14	8	5	9	130	121	109	1280
	280	210	14	8	5	9	144	124	113	1280
300	230	14	8	5	9	158	127	117	1280	
FB-1107 8x14-6	160	90	14	8	6	8	61	101	80	1280
	180	110	14	8	6	9	74	115	95	1280
	200	130	14	8	6	9	88	126	106	1280
	220	150	14	8	6	9	102	133	116	1280
	240	170	14	8	6	9	116	140	125	1280
	260	190	14	8	6	9	130	145	131	1280
	280	210	14	8	6	9	144	148	135	1280
300	230	14	8	6	9	158	152	140	1280	

Connector FB-1100 / concrete grade \geq C20/25											
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (+) [kN]	Insulation 120 mm V _{Res} (+) [kN]	Dim. [mm]	S
				Bars	Hoop sticks	Compress. bearing					
FB-1107 8x14-7	160	90	14	8	7	8	61	118	93	1280	
	180	110	14	8	7	9	74	134	111	1280	
	200	130	14	8	7	9	88	147	123	1280	
	220	150	14	8	7	9	102	155	135	1280	
	240	170	14	8	7	9	116	163	146	1280	
	260	190	14	8	7	9	130	169	153	1280	
	280	210	14	8	7	9	144	172	157	1280	
	300	230	14	8	7	9	158	177	163	1280	
FB-1108 10x14-1	160	90	14	10	1	10	76	17	13	1280	
	180	110	14	10	1	12	93	19	16	1280	
	200	130	14	10	1	12	111	21	18	1280	
	220	150	14	10	1	12	128	22	19	1280	
	240	170	14	10	1	12	145	23	21	1280	
	260	190	14	10	1	12	163	24	22	1280	
	280	210	14	10	1	12	180	25	23	1280	
	300	230	14	10	1	12	198	25	23	1280	
FB-1108 10x14-2	160	90	14	10	2	10	76	34	27	1280	
	180	110	14	10	2	12	93	38	32	1280	
	200	130	14	10	2	12	111	42	36	1280	
	220	150	14	10	2	12	128	45	39	1280	
	240	170	14	10	2	12	145	47	41	1280	
	260	190	14	10	2	12	163	48	44	1280	
	280	210	14	10	2	12	180	50	45	1280	
	300	230	14	10	2	12	198	51	47	1280	
FB-1108 10x14-3	160	90	14	10	3	10	76	50	40	1280	
	180	110	14	10	3	12	93	57	47	1280	
	200	130	14	10	3	12	111	63	53	1280	
	220	150	14	10	3	12	128	67	58	1280	
	240	170	14	10	3	12	145	70	62	1280	
	260	190	14	10	3	12	163	73	65	1280	
	280	210	14	10	3	12	180	75	68	1280	
	300	230	14	10	3	12	198	76	70	1280	
FB-1108 10x14-4	160	90	14	10	4	10	76	67	54	1280	
	180	110	14	10	4	12	93	76	63	1280	
	200	130	14	10	4	12	111	84	71	1280	
	220	150	14	10	4	12	128	89	78	1280	
	240	170	14	10	4	12	145	93	83	1280	
	260	190	14	10	4	12	163	97	87	1280	
	280	210	14	10	4	12	180	99	91	1280	
	300	230	14	10	4	12	198	101	94	1280	
FB-1108 10x14-5	160	90	14	10	5	10	76	84	67	1280	
	180	110	14	10	5	12	93	96	79	1280	
	200	130	14	10	5	12	111	105	89	1280	
	220	150	14	10	5	12	128	111	97	1280	
	240	170	14	10	5	12	145	117	104	1280	
	260	190	14	10	5	12	163	121	109	1280	
	280	210	14	10	5	12	180	124	113	1280	
	300	230	14	10	5	12	198	127	117	1280	

Connector FB-1100 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Ed} (-) [kNm]	Insulation 80 mm V _{Ed} (+) [kN]	Insulation 120 mm V _{Ed} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1108 10x14-6	160	90	14	10	6	10	76	101	80	1280
	180	110	14	10	6	12	93	115	95	1280
	200	130	14	10	6	12	111	126	106	1280
	220	150	14	10	6	12	128	133	116	1280
	240	170	14	10	6	12	145	140	125	1280
	260	190	14	10	6	12	163	145	131	1280
	280	210	14	10	6	12	180	148	135	1280
300	230	14	10	6	12	198	152	140	1280	
FB-1108 10x14-7	160	90	14	10	7	10	76	118	93	1280
	180	110	14	10	7	12	93	134	111	1280
	200	130	14	10	7	12	111	147	123	1280
	220	150	14	10	7	12	128	155	135	1280
	240	170	14	10	7	12	145	163	146	1280
	260	190	14	10	7	12	163	169	153	1280
	280	210	14	10	7	12	180	172	157	1280
300	230	14	10	7	12	198	177	163	1280	

Technical parameters
Balcony connectors FB

Connector FB-1200 for continuous connection of balcony slab with floor slab

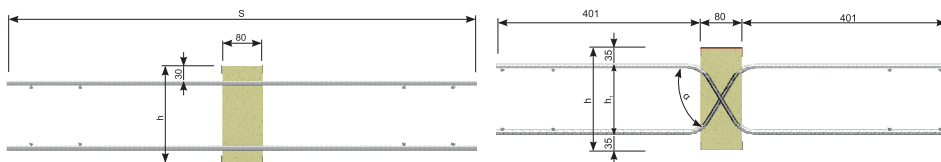


- Standard elements for floor slabs with thickness between 160 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of stainless steel
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 1204 6 × 10 - 2 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of hoop sticks



Connector FB-1200 / concrete grade $\geq C20/25$

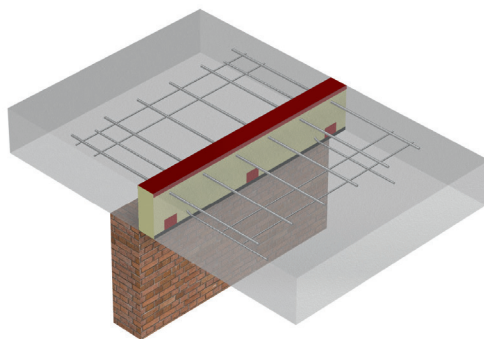
Symbol	h [mm]	h ₁ [mm]	Bar diameter Ø [mm]	Quantity		M _{res} (±) [kNm]	Insulation 80 mm V _{res} (±) [kN]	Insulation 120 mm V _{res} (±) [kN]	Dim. [mm]
				Bars	Hoop sticks				
FB-1201 2x10-1	160	90	10	2	1+1	7	15	12	960
	180	110	10	2	1+1	9	17	14	960
	200	130	10	2	1+1	11	19	16	960
	220	150	10	2	1+1	12	21	18	960
	240	170	10	2	1+1	14	22	19	960
	260	190	10	2	1+1	16	23	21	960
	280	210	10	2	1+1	18	24	22	960
300	230	10	2	1+1	20	24	22	960	
FB-1202 2x14-2	160	90	14	2	2+2	13	30	24	1280
	180	110	14	2	2+2	17	35	29	1280
	200	130	14	2	2+2	20	39	33	1280
	220	150	14	2	2+2	24	42	36	1280
	240	170	14	2	2+2	27	44	39	1280
	260	190	14	2	2+2	31	46	41	1280
	280	210	14	2	2+2	34	48	43	1280
300	230	14	2	2+2	38	49	45	1280	
FB-1203 4x10-1	160	90	10	4	1+1	14	15	12	960
	180	110	10	4	1+1	18	17	14	960
	200	130	10	4	1+1	21	19	16	960
	220	150	10	4	1+1	25	21	18	960
	240	170	10	4	1+1	28	22	19	960
	260	190	10	4	1+1	32	23	21	960
	280	210	10	4	1+1	35	24	22	960
300	230	10	4	1+1	39	24	22	960	
FB-1203 4x10-2	160	90	10	4	2+2	14	30	24	960
	180	110	10	4	2+2	18	35	29	960
	200	130	10	4	2+2	21	39	33	960
	220	150	10	4	2+2	25	42	36	960
	240	170	10	4	2+2	28	44	39	960
	260	190	10	4	2+2	32	46	41	960
	280	210	10	4	2+2	35	48	43	960
300	230	10	4	2+2	39	49	45	960	
FB-1203 4x10-3	160	90	10	4	3+3	14	45	37	960
	180	110	10	4	3+3	18	52	43	960
	200	130	10	4	3+3	21	58	49	960
	220	150	10	4	3+3	25	62	54	960
	240	170	10	4	3+3	28	66	58	960
	260	190	10	4	3+3	32	69	62	960
	280	210	10	4	3+3	35	71	65	960
300	230	10	4	3+3	39	73	67	960	

Connector FB-1200 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity		M _{res} (±) [kNm]	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
				Bars	Hoop sticks		V _{res} (±) [kN]	V _{res} (±) [kN]	
FB-1204 6x10-1	160	90	10	6	1+1	21	15	12	960
	180	110	10	6	1+1	27	17	14	960
	200	130	10	6	1+1	32	19	16	960
	220	150	10	6	1+1	37	21	18	960
	240	170	10	6	1+1	43	22	19	960
	260	190	10	6	1+1	48	23	21	960
	280	210	10	6	1+1	53	24	22	960
300	230	10	6	1+1	59	24	22	960	
FB-1204 6x10-2	160	90	10	6	2+2	21	30	24	960
	180	110	10	6	2+2	27	35	29	960
	200	130	10	6	2+2	32	39	33	960
	220	150	10	6	2+2	37	42	36	960
	240	170	10	6	2+2	43	44	39	960
	260	190	10	6	2+2	48	46	41	960
	280	210	10	6	2+2	53	48	43	960
300	230	10	6	2+2	59	49	45	960	
FB-1204 6x10-3	160	90	10	6	3+3	21	45	37	960
	180	110	10	6	3+3	27	52	43	960
	200	130	10	6	3+3	32	58	49	960
	220	150	10	6	3+3	37	62	54	960
	240	170	10	6	3+3	43	66	58	960
	260	190	10	6	3+3	48	69	62	960
	280	210	10	6	3+3	53	71	65	960
300	230	10	6	3+3	59	73	67	960	
FB-1205 4x14-1	160	90	14	4	1+1	26	15	12	1280
	180	110	14	4	1+1	33	17	14	1280
	200	130	14	4	1+1	40	19	16	1280
	220	150	14	4	1+1	47	21	18	1280
	240	170	14	4	1+1	54	22	19	1280
	260	190	14	4	1+1	61	23	21	1280
	280	210	14	4	1+1	68	24	22	1280
300	230	14	4	1+1	75	24	22	1280	
FB-1205 4x14-2	160	90	14	4	2+2	26	30	24	1280
	180	110	14	4	2+2	33	35	29	1280
	200	130	14	4	2+2	40	39	33	1280
	220	150	14	4	2+2	47	42	36	1280
	240	170	14	4	2+2	54	44	39	1280
	260	190	14	4	2+2	61	46	41	1280
	280	210	14	4	2+2	68	48	43	1280
300	230	14	4	2+2	75	49	45	1280	
FB-1205 4x14-3	160	90	14	4	3+3	26	45	37	1280
	180	110	14	4	3+3	33	52	43	1280
	200	130	14	4	3+3	40	58	49	1280
	220	150	14	4	3+3	47	62	54	1280
	240	170	14	4	3+3	54	66	58	1280
	260	190	14	4	3+3	61	69	62	1280
	280	210	14	4	3+3	68	71	65	1280
300	230	14	4	3+3	75	73	67	1280	

Connector FB-1200 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity		M _{res} (±) [kNm]	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
				Bars	Hoop sticks		V _{res} (±) [kN]	V _{res} (±) [kN]	
FB-1206 6x14-2	160	90	14	6	2+2	40	30	24	1280
	180	110	14	6	2+2	50	35	29	1280
	200	130	14	6	2+2	61	39	33	1280
	220	150	14	6	2+2	71	42	36	1280
	240	170	14	6	2+2	81	44	39	1280
	260	190	14	6	2+2	92	46	41	1280
	280	210	14	6	2+2	102	48	43	1280
300	230	14	6	2+2	113	49	45	1280	
FB-1206 6x14-3	160	90	14	6	3+3	40	45	37	1280
	180	110	14	6	3+3	50	52	43	1280
	200	130	14	6	3+3	61	58	49	1280
	220	150	14	6	3+3	71	62	54	1280
	240	170	14	6	3+3	81	66	58	1280
	260	190	14	6	3+3	92	69	62	1280
	280	210	14	6	3+3	102	71	65	1280
300	230	14	6	3+3	113	73	67	1280	
FB-1206 6x14-4	160	90	14	6	4+4	40	60	49	1280
	180	110	14	6	4+4	50	69	58	1280
	200	130	14	6	4+4	61	77	66	1280
	220	150	14	6	4+4	71	83	72	1280
	240	170	14	6	4+4	81	88	78	1280
	260	190	14	6	4+4	92	92	83	1280
	280	210	14	6	4+4	102	95	86	1280
300	230	14	6	4+4	113	98	90	1280	
FB-1207 8x14-2	160	90	14	8	2+2	53	30	24	1280
	180	110	14	8	2+2	67	35	29	1280
	200	130	14	8	2+2	81	39	33	1280
	220	150	14	8	2+2	95	42	36	1280
	240	170	14	8	2+2	109	44	39	1280
	260	190	14	8	2+2	123	46	41	1280
	280	210	14	8	2+2	136	48	43	1280
300	230	14	8	2+2	150	49	45	1280	
FB-1207 8x14-3	160	90	14	8	3+3	53	45	37	1280
	180	110	14	8	3+3	67	52	43	1280
	200	130	14	8	3+3	81	58	49	1280
	220	150	14	8	3+3	95	62	54	1280
	240	170	14	8	3+3	109	66	58	1280
	260	190	14	8	3+3	123	69	62	1280
	280	210	14	8	3+3	136	71	65	1280
300	230	14	8	3+3	150	73	67	1280	
FB-1207 8x14-4	160	90	14	8	4+4	53	60	49	1280
	180	110	14	8	4+4	67	69	58	1280
	200	130	14	8	4+4	81	77	66	1280
	220	150	14	8	4+4	95	83	72	1280
	240	170	14	8	4+4	109	88	78	1280
	260	190	14	8	4+4	123	92	83	1280
	280	210	14	8	4+4	136	95	86	1280
300	230	14	8	4+4	150	98	90	1280	

Connector FB-1200 / concrete grade \geq C20/25										
Symbol	h [mm]	h _i [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (±) [kNm]	Insulation 80 mm	Insulation 120 mm	Dim. [mm]
				Bars	Hoop sticks	S		V _{res} (±) [kN]	V _{res} (±) [kN]	
FB-1208 10x14-3	160	90	14	10	3+3	66	45	37	1280	
	180	110	14	10	3+3	84	52	43	1280	
	200	130	14	10	3+3	101	58	49	1280	
	220	150	14	10	3+3	118	62	54	1280	
	240	170	14	10	3+3	136	66	58	1280	
	260	190	14	10	3+3	153	69	62	1280	
	280	210	14	10	3+3	171	71	65	1280	
FB-1208 10x14-4	160	90	14	10	4+4	66	60	49	1280	
	180	110	14	10	4+4	84	69	58	1280	
	200	130	14	10	4+4	101	77	66	1280	
	220	150	14	10	4+4	118	83	72	1280	
	240	170	14	10	4+4	136	88	78	1280	
	260	190	14	10	4+4	153	92	83	1280	
	280	210	14	10	4+4	171	95	86	1280	
FB-1208 10x14-5	160	90	14	10	5+5	66	75	61	1280	
	180	110	14	10	5+5	84	87	72	1280	
	200	130	14	10	5+5	101	96	82	1280	
	220	150	14	10	5+5	118	104	90	1280	
	240	170	14	10	5+5	136	110	97	1280	
	260	190	14	10	5+5	153	115	103	1280	
	280	210	14	10	5+5	171	119	108	1280	
300	230	14	10	5+5	188	122	112	1280		

Connector FB-1300 for cantilevered balcony slabs

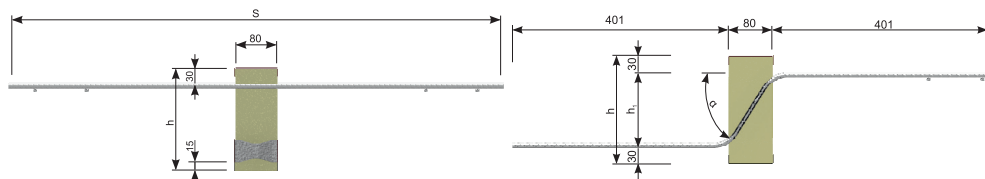


- Standard elements for floor slabs with thickness between 160 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of black steel, hot-dip galvanised carbon steel
- Hoop stick made of stainless steel
- Steel compression bearing made of stainless steel (for ceilings 16 cm) or concrete bearing (ceilings 18 cm and higher)
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 1304 6 × 10 - 2 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of hoop sticks



Connector FB-1300 / concrete grade $\geq C20/25$

Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (+) [kN]	Insulation 120 mm V _{Res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress bearing				
FB-1301 2x10-1	160	90	10	2	1	1	6	17	13	820
	180	110	10	2	1	2	7	19	16	820
	200	130	10	2	1	2	9	21	18	820
	220	150	10	2	1	2	10	22	19	820
	240	170	10	2	1	2	11	23	21	820
	260	190	10	2	1	2	13	24	22	820
	280	210	10	2	1	2	14	25	23	820
	300	230	10	2	1	2	16	25	23	820
FB-1302 2x14-2	160	90	14	2	2	2	12	34	27	1050
	180	110	14	2	2	3	14	38	32	1050
	200	130	14	2	2	3	17	42	36	1050
	220	150	14	2	2	3	20	45	39	1050
	240	170	14	2	2	3	22	47	41	1050
	260	190	14	2	2	3	25	48	44	1050
	280	210	14	2	2	3	28	50	45	1050
	300	230	14	2	2	3	30	51	47	1050
FB-1303 4x10-1	160	90	10	4	1	2	12	17	13	820
	180	110	10	4	1	2	15	19	16	820
	200	130	10	4	1	2	17	21	18	820
	220	150	10	4	1	2	20	22	19	820
	240	170	10	4	1	2	23	23	21	820
	260	190	10	4	1	2	26	24	22	820
	280	210	10	4	1	2	28	25	23	820
	300	230	10	4	1	2	31	25	23	820
FB-1303 4x10-2	160	90	10	4	2	2	12	34	27	820
	180	110	10	4	2	2	15	38	32	820
	200	130	10	4	2	2	17	42	36	820
	220	150	10	4	2	2	20	45	39	820
	240	170	10	4	2	2	23	47	41	820
	260	190	10	4	2	2	26	48	44	820
	280	210	10	4	2	2	28	50	45	820
	300	230	10	4	2	2	31	51	47	820

Connector FB-1300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (+) [kN]	Insulation 120 mm V _{res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1303 4x10-3	160	90	10	4	3	2	12	50	40	820
	180	110	10	4	3	2	15	57	47	820
	200	130	10	4	3	2	17	63	53	820
	220	150	10	4	3	2	20	67	58	820
	240	170	10	4	3	2	23	70	62	820
	260	190	10	4	3	2	26	73	65	820
	280	210	10	4	3	2	28	75	68	820
300	230	10	4	3	2	31	76	70	820	
FB-1304 6x10-1	160	90	10	6	1	3	18	17	13	820
	180	110	10	6	1	3	22	19	16	820
	200	130	10	6	1	3	26	21	18	820
	220	150	10	6	1	3	30	22	19	820
	240	170	10	6	1	3	34	23	21	820
	260	190	10	6	1	3	38	24	22	820
	280	210	10	6	1	3	42	25	23	820
300	230	10	6	1	3	47	25	23	820	
FB-1304 6x10-2	160	90	10	6	2	3	18	34	27	820
	180	110	10	6	2	3	22	38	32	820
	200	130	10	6	2	3	26	42	36	820
	220	150	10	6	2	3	30	45	39	820
	240	170	10	6	2	3	34	47	41	820
	260	190	10	6	2	3	38	48	44	820
	280	210	10	6	2	3	42	50	45	820
300	230	10	6	2	3	47	51	47	820	
FB-1304 6x10-3	160	90	10	6	3	3	18	50	40	820
	180	110	10	6	3	3	22	57	47	820
	200	130	10	6	3	3	26	63	53	820
	220	150	10	6	3	3	30	67	58	820
	240	170	10	6	3	3	34	70	62	820
	260	190	10	6	3	3	38	73	65	820
	280	210	10	6	3	3	42	75	68	820
300	230	10	6	3	3	47	76	70	820	
FB-1304 6x10-4	160	90	10	6	4	3	18	67	54	820
	180	110	10	6	4	3	22	76	63	820
	200	130	10	6	4	3	26	84	71	820
	220	150	10	6	4	3	30	89	78	820
	240	170	10	6	4	3	34	93	83	820
	260	190	10	6	4	3	38	97	87	820
	280	210	10	6	4	3	42	99	91	820
300	230	10	6	4	3	47	101	94	820	
FB-1304 6x10-5	160	90	10	6	5	3	18	84	67	820
	180	110	10	6	5	3	22	96	79	820
	200	130	10	6	5	3	26	105	89	820
	220	150	10	6	5	3	30	111	97	820
	240	170	10	6	5	3	34	117	104	820
	260	190	10	6	5	3	38	121	109	820
	280	210	10	6	5	3	42	124	113	820
300	230	10	6	5	3	47	127	117	820	

Connector FB-1300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{red} (-) [kNm]	Insulation 80 mm V _{red} (+) [kN]	Insulation 120 mm V _{red} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1305 4x14-1	160	90	14	4	1	4	23	17	13	1050
	180	110	14	4	1	4	29	19	16	1050
	200	130	14	4	1	4	34	21	18	1050
	220	150	14	4	1	4	39	22	19	1050
	240	170	14	4	1	4	45	23	21	1050
	260	190	14	4	1	4	50	24	22	1050
	280	210	14	4	1	4	55	25	23	1050
300	230	14	4	1	4	61	25	23	1050	
FB-1305 4x14-2	160	90	14	4	2	4	23	34	27	1050
	180	110	14	4	2	4	29	38	32	1050
	200	130	14	4	2	4	34	42	36	1050
	220	150	14	4	2	4	39	45	39	1050
	240	170	14	4	2	4	45	47	41	1050
	260	190	14	4	2	4	50	48	44	1050
	280	210	14	4	2	4	55	50	45	1050
300	230	14	4	2	4	61	51	47	1050	
FB-1305 4x14-3	160	90	14	4	3	4	23	50	40	1050
	180	110	14	4	3	4	29	57	47	1050
	200	130	14	4	3	4	34	63	53	1050
	220	150	14	4	3	4	39	67	58	1050
	240	170	14	4	3	4	45	70	62	1050
	260	190	14	4	3	4	50	73	65	1050
	280	210	14	4	3	4	55	75	68	1050
300	230	14	4	3	4	61	76	70	1050	
FB-1306 5x14-2	160	90	14	5	2	5	29	34	27	1050
	180	110	14	5	2	5	36	38	32	1050
	200	130	14	5	2	5	43	42	36	1050
	220	150	14	5	2	5	49	45	39	1050
	240	170	14	5	2	5	56	47	41	1050
	260	190	14	5	2	5	63	48	44	1050
	280	210	14	5	2	5	69	50	45	1050
300	230	14	5	2	5	76	51	47	1050	
FB-1306 5x14-3	160	90	14	5	3	5	29	50	40	1050
	180	110	14	5	3	5	36	57	47	1050
	200	130	14	5	3	5	43	63	53	1050
	220	150	14	5	3	5	49	67	58	1050
	240	170	14	5	3	5	56	70	62	1050
	260	190	14	5	3	5	63	73	65	1050
	280	210	14	5	3	5	69	75	68	1050
300	230	14	5	3	5	76	76	70	1050	
FB-1306 5x14-4	160	90	14	5	4	5	29	67	54	1050
	180	110	14	5	4	5	36	76	63	1050
	200	130	14	5	4	5	43	84	71	1050
	220	150	14	5	4	5	49	89	78	1050
	240	170	14	5	4	5	56	93	83	1050
	260	190	14	5	4	5	63	97	87	1050
	280	210	14	5	4	5	69	99	91	1050
300	230	14	5	4	5	76	101	94	1050	

Connector FB-1300 / concrete grade \geq C20/25

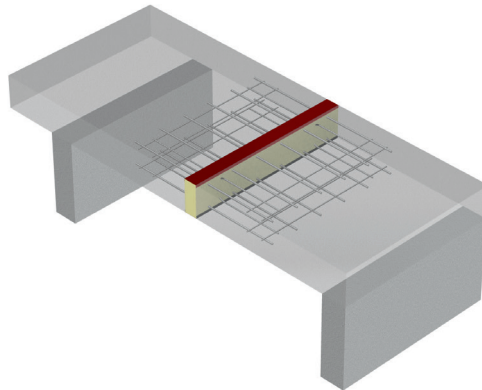
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (+) [kN]	Insulation 120 mm V _{res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1307 6x14-1	160	90	14	6	1	6	35	17	13	1050
	180	110	14	6	1	6	43	19	16	1050
	200	130	14	6	1	6	51	21	18	1050
	220	150	14	6	1	6	59	22	19	1050
	240	170	14	6	1	6	67	23	21	1050
	260	190	14	6	1	6	75	24	22	1050
	280	210	14	6	1	6	83	25	23	1050
300	230	14	6	1	6	91	25	23	1050	
FB-1307 6x14-2	160	90	14	6	2	6	35	34	27	1050
	180	110	14	6	2	6	43	38	32	1050
	200	130	14	6	2	6	51	42	36	1050
	220	150	14	6	2	6	59	45	39	1050
	240	170	14	6	2	6	67	47	41	1050
	260	190	14	6	2	6	75	48	44	1050
	280	210	14	6	2	6	83	50	45	1050
300	230	14	6	2	6	91	51	47	1050	
FB-1307 6x14-3	160	90	14	6	3	6	35	50	40	1050
	180	110	14	6	3	6	43	57	47	1050
	200	130	14	6	3	6	51	63	53	1050
	220	150	14	6	3	6	59	67	58	1050
	240	170	14	6	3	6	67	70	62	1050
	260	190	14	6	3	6	75	73	65	1050
	280	210	14	6	3	6	83	75	68	1050
300	230	14	6	3	6	91	76	70	1050	
FB-1307 6x14-4	160	90	14	6	4	6	35	67	54	1050
	180	110	14	6	4	6	43	76	63	1050
	200	130	14	6	4	6	51	84	71	1050
	220	150	14	6	4	6	59	89	78	1050
	240	170	14	6	4	6	67	93	83	1050
	260	190	14	6	4	6	75	97	87	1050
	280	210	14	6	4	6	83	99	91	1050
300	230	14	6	4	6	91	101	94	1050	
FB-1307 6x14-5	160	90	14	6	5	6	35	84	67	1050
	180	110	14	6	5	6	43	96	79	1050
	200	130	14	6	5	6	51	105	89	1050
	220	150	14	6	5	6	59	111	97	1050
	240	170	14	6	5	6	67	117	104	1050
	260	190	14	6	5	6	75	121	109	1050
	280	210	14	6	5	6	83	124	113	1050
300	230	14	6	5	6	91	127	117	1050	
FB-1308 8x14-1	160	90	14	8	1	8	47	17	13	1050
	180	110	14	8	1	8	57	19	16	1050
	200	130	14	8	1	8	68	21	18	1050
	220	150	14	8	1	8	79	22	19	1050
	240	170	14	8	1	8	89	23	21	1050
	260	190	14	8	1	8	100	24	22	1050
	280	210	14	8	1	8	111	25	23	1050
300	230	14	8	1	8	122	25	23	1050	

Connector FB-1300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{Res} (-) [kNm]	Insulation 80 mm V _{Res} (+) [kN]	Insulation 120 mm V _{Res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1308 8x14-2	160	90	14	8	2	8	47	34	27	1050
	180	110	14	8	2	8	57	38	32	1050
	200	130	14	8	2	8	68	42	36	1050
	220	150	14	8	2	8	79	45	39	1050
	240	170	14	8	2	8	89	47	41	1050
	260	190	14	8	2	8	100	48	44	1050
	280	210	14	8	2	8	111	50	45	1050
	300	230	14	8	2	8	122	51	47	1050
FB-1308 8x14-3	160	90	14	8	3	8	47	50	40	1050
	180	110	14	8	3	8	57	57	47	1050
	200	130	14	8	3	8	68	63	53	1050
	220	150	14	8	3	8	79	67	58	1050
	240	170	14	8	3	8	89	70	62	1050
	260	190	14	8	3	8	100	73	65	1050
	280	210	14	8	3	8	111	75	68	1050
	300	230	14	8	3	8	122	76	70	1050
FB-1308 8x14-4	160	90	14	8	4	8	47	67	54	1050
	180	110	14	8	4	8	57	76	63	1050
	200	130	14	8	4	8	68	84	71	1050
	220	150	14	8	4	8	79	89	78	1050
	240	170	14	8	4	8	89	93	83	1050
	260	190	14	8	4	8	100	97	87	1050
	280	210	14	8	4	8	111	99	91	1050
	300	230	14	8	4	8	122	101	94	1050
FB-1308 8x14-5	160	90	14	8	5	8	47	84	67	1050
	180	110	14	8	5	8	57	96	79	1050
	200	130	14	8	5	8	68	105	89	1050
	220	150	14	8	5	8	79	111	97	1050
	240	170	14	8	5	8	89	117	104	1050
	260	190	14	8	5	8	100	121	109	1050
	280	210	14	8	5	8	111	124	113	1050
	300	230	14	8	5	8	122	127	117	1050
FB-1308 8x14-6	160	90	14	8	6	8	47	101	80	1050
	180	110	14	8	6	8	57	115	95	1050
	200	130	14	8	6	8	68	126	106	1050
	220	150	14	8	6	8	79	133	116	1050
	240	170	14	8	6	8	89	140	125	1050
	260	190	14	8	6	8	100	145	131	1050
	280	210	14	8	6	8	111	148	135	1050
	300	230	14	8	6	8	122	152	140	1050
FB-1308 8x14-7	160	90	14	8	7	8	47	118	93	1050
	180	110	14	8	7	8	57	134	111	1050
	200	130	14	8	7	8	68	147	123	1050
	220	150	14	8	7	8	79	155	135	1050
	240	170	14	8	7	8	89	163	146	1050
	260	190	14	8	7	8	100	169	153	1050
	280	210	14	8	7	8	111	172	157	1050
	300	230	14	8	7	8	122	177	163	1050

Connector FB-1309 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{res} (-) [kNm]	Insulation 80 mm V _{res} (+) [kN]	Insulation 120 mm V _{res} (+) [kN]	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing				
FB-1309 10x14-1	160	90	14	10	1	10	58	17	13	1050
	180	110	14	10	1	10	72	19	16	1050
	200	130	14	10	1	10	85	21	18	1050
	220	150	14	10	1	10	98	22	19	1050
	240	170	14	10	1	10	112	23	21	1050
	260	190	14	10	1	10	125	24	22	1050
	280	210	14	10	1	10	139	25	23	1050
300	230	14	10	1	10	152	25	23	1050	
FB-1309 10x14-2	160	90	14	10	2	10	58	34	27	1050
	180	110	14	10	2	10	72	38	32	1050
	200	130	14	10	2	10	85	42	36	1050
	220	150	14	10	2	10	98	45	39	1050
	240	170	14	10	2	10	112	47	41	1050
	260	190	14	10	2	10	125	48	44	1050
	280	210	14	10	2	10	139	50	45	1050
300	230	14	10	2	10	152	51	47	1050	
FB-1309 10x14-3	160	90	14	10	3	10	58	50	40	1050
	180	110	14	10	3	10	72	57	47	1050
	200	130	14	10	3	10	85	63	53	1050
	220	150	14	10	3	10	98	67	58	1050
	240	170	14	10	3	10	112	70	62	1050
	260	190	14	10	3	10	125	73	65	1050
	280	210	14	10	3	10	139	75	68	1050
300	230	14	10	3	10	152	76	70	1050	
FB-1309 10x14-4	160	90	14	10	4	10	58	67	54	1050
	180	110	14	10	4	10	72	76	63	1050
	200	130	14	10	4	10	85	84	71	1050
	220	150	14	10	4	10	98	89	78	1050
	240	170	14	10	4	10	112	93	83	1050
	260	190	14	10	4	10	125	97	87	1050
	280	210	14	10	4	10	139	99	91	1050
300	230	14	10	4	10	152	101	94	1050	
FB-1309 10x14-5	160	90	14	10	5	10	58	84	67	1050
	180	110	14	10	5	10	72	96	79	1050
	200	130	14	10	5	10	85	105	89	1050
	220	150	14	10	5	10	98	111	97	1050
	240	170	14	10	5	10	112	117	104	1050
	260	190	14	10	5	10	125	121	109	1050
	280	210	14	10	5	10	139	124	113	1050
300	230	14	10	5	10	152	127	117	1050	
FB-1309 10x14-6	160	90	14	10	6	10	58	101	80	1050
	180	110	14	10	6	10	72	115	95	1050
	200	130	14	10	6	10	85	126	106	1050
	220	150	14	10	6	10	98	133	116	1050
	240	170	14	10	6	10	112	140	125	1050
	260	190	14	10	6	10	125	145	131	1050
	280	210	14	10	6	10	139	148	135	1050
300	230	14	10	6	10	152	152	140	1050	

Connector FB-1300 / concrete grade \geq C20/25										
Symbol	h [mm]	h ₁ [mm]	Bar diameter \varnothing [mm]	Quantity			M _{red} (-) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Hoop sticks	Compress. bearing		80 mm	120 mm	
							V _{red} (+) [kN]	V _{red} (+) [kN]	S	
FB-1309 10x14-7	160	90	14	10	7	10	58	118	93	1050
	180	110	14	10	7	10	72	134	111	1050
	200	130	14	10	7	10	85	147	123	1050
	220	150	14	10	7	10	98	155	135	1050
	240	170	14	10	7	10	112	163	146	1050
	260	190	14	10	7	10	125	169	153	1050
	280	210	14	10	7	10	139	172	157	1050
300	230	14	10	7	10	152	177	163	1050	

Connector FB-1400 for continuous connection of balcony slab with floor

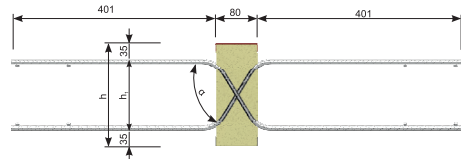
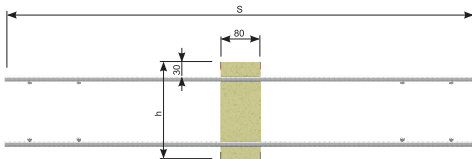


- Standard elements for floor slabs with thickness between 160 and 300 mm
- Standard thickness of insulation: 80 or 120 mm
- Type of insulation: mineral wool (WM) or styrofoam (XPS)
- Rebars made of black steel, hot-dip galvanised carbon steel
- Hoop stick made of stainless steel
- Additional reinforcement of balcony slab and floor slab - pages: 91-92

Example of marking:

FB - 1404 6 × 10 - 2 h=200 mm, XPS80, L=1000 mm

Type of connector Quantity of bars Bar diameter Quantity of hoop sticks



Connector FB-1400 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter ∅ [mm]	Quantity		M _{res} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Hoop sticks		80 mm	120 mm	
							V _{res} (±) [kN]	V _{res} (±) [kN]	s
FB-1401 2x10-1	160	90	10	2	1+1	5	17	13	820
	180	110	10	2	1+1	7	19	16	820
	200	130	10	2	1+1	8	21	18	820
	220	150	10	2	1+1	10	22	19	820
	240	170	10	2	1+1	11	23	21	820
	260	190	10	2	1+1	12	24	22	820
	280	210	10	2	1+1	14	25	23	820
300	230	10	2	1+1	15	25	23	820	
FB-1402 2x14-2	160	90	14	2	2+2	10	34	27	1050
	180	110	14	2	2+2	13	38	32	1050
	200	130	14	2	2+2	16	42	36	1050
	220	150	14	2	2+2	18	45	39	1050
	240	170	14	2	2+2	21	47	41	1050
	260	190	14	2	2+2	24	48	44	1050
	280	210	14	2	2+2	26	50	45	1050
300	230	14	2	2+2	29	51	47	1050	
FB-1403 4x10-1	160	90	10	4	1+1	11	15	12	820
	180	110	10	4	1+1	14	17	14	820
	200	130	10	4	1+1	16	19	16	820
	220	150	10	4	1+1	19	21	18	820
	240	170	10	4	1+1	22	22	19	820
	260	190	10	4	1+1	25	23	21	820
	280	210	10	4	1+1	27	24	22	820
300	230	10	4	1+1	30	24	22	820	
FB-1403 4x10-2	160	90	10	4	2+2	11	30	24	820
	180	110	10	4	2+2	14	35	29	820
	200	130	10	4	2+2	16	39	33	820
	220	150	10	4	2+2	19	42	36	820
	240	170	10	4	2+2	22	44	39	820
	260	190	10	4	2+2	25	46	41	820
	280	210	10	4	2+2	27	48	43	820
300	230	10	4	2+2	30	49	45	820	
FB-1403 4x10-3	160	90	10	4	3+3	11	45	37	820
	180	110	10	4	3+3	14	52	43	820
	200	130	10	4	3+3	16	58	49	820
	220	150	10	4	3+3	19	62	54	820
	240	170	10	4	3+3	22	66	58	820
	260	190	10	4	3+3	25	69	62	820
	280	210	10	4	3+3	27	71	65	820
300	230	10	4	3+3	30	73	67	820	
FB-1404 6x10-1	160	90	10	6	1+1	16	15	12	820
	180	110	10	6	1+1	20	17	14	820
	200	130	10	6	1+1	25	19	16	820
	220	150	10	6	1+1	29	21	18	820
	240	170	10	6	1+1	33	22	19	820
	260	190	10	6	1+1	37	23	21	820
	280	210	10	6	1+1	41	24	22	820
300	230	10	6	1+1	45	24	22	820	

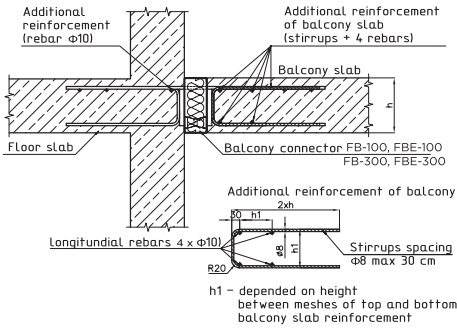
Connector FB-1400 / concrete grade \geq C20/25									
Symbol	h [mm]	h _i [mm]	Bar diameter \varnothing [mm]	Quantity		M _{req} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Hoop sticks		80 mm	120 mm	
							V _{req} (±) [kN]	V _{req} (±) [kN]	S
FB-1404 6x10-2	160	90	10	6	2+2	16	30	24	820
	180	110	10	6	2+2	20	35	29	820
	200	130	10	6	2+2	25	39	33	820
	220	150	10	6	2+2	29	42	36	820
	240	170	10	6	2+2	33	44	39	820
	260	190	10	6	2+2	37	46	41	820
	280	210	10	6	2+2	41	48	43	820
	300	230	10	6	2+2	45	49	45	820
FB-1404 6x10-3	160	90	10	6	3+3	16	45	37	820
	180	110	10	6	3+3	20	52	43	820
	200	130	10	6	3+3	25	58	49	820
	220	150	10	6	3+3	29	62	54	820
	240	170	10	6	3+3	33	66	58	820
	260	190	10	6	3+3	37	69	62	820
	280	210	10	6	3+3	41	71	65	820
	300	230	10	6	3+3	45	73	67	820
FB-1405 4x14-1	160	90	14	4	1+1	20	15	12	1050
	180	110	14	4	1+1	26	17	14	1050
	200	130	14	4	1+1	31	19	16	1050
	220	150	14	4	1+1	36	21	18	1050
	240	170	14	4	1+1	42	22	19	1050
	260	190	14	4	1+1	47	23	21	1050
	280	210	14	4	1+1	53	24	22	1050
	300	230	14	4	1+1	58	24	22	1050
FB-1405 4x14-2	160	90	14	4	2+2	20	30	24	1050
	180	110	14	4	2+2	26	35	29	1050
	200	130	14	4	2+2	31	39	33	1050
	220	150	14	4	2+2	36	42	36	1050
	240	170	14	4	2+2	42	44	39	1050
	260	190	14	4	2+2	47	46	41	1050
	280	210	14	4	2+2	53	48	43	1050
	300	230	14	4	2+2	58	49	45	1050
FB-1405 4x14-3	160	90	14	4	3+3	20	45	37	1050
	180	110	14	4	3+3	26	52	43	1050
	200	130	14	4	3+3	31	58	49	1050
	220	150	14	4	3+3	36	62	54	1050
	240	170	14	4	3+3	42	66	58	1050
	260	190	14	4	3+3	47	69	62	1050
	280	210	14	4	3+3	53	71	65	1050
	300	230	14	4	3+3	58	73	67	1050
FB-1406 5x14-2	160	90	14	5	2+2	25	30	24	1050
	180	110	14	5	2+2	32	35	29	1050
	200	130	14	5	2+2	39	39	33	1050
	220	150	14	5	2+2	46	42	36	1050
	240	170	14	5	2+2	52	44	39	1050
	260	190	14	5	2+2	59	46	41	1050
	280	210	14	5	2+2	66	48	43	1050
	300	230	14	5	2+2	72	49	45	1050

Connector FB-1400 / concrete grade \geq C20/25									
Symbol	h [mm]	h ₁ [mm]	Bar diameter ∅ [mm]	Quantity		M _{res} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Hoop sticks		80 mm	120 mm	
							V _{res} (±) [kN]	V _{res} (±) [kN]	s
FB-1406 5x14-3	160	90	14	5	3+3	25	45	37	1050
	180	110	14	5	3+3	32	52	43	1050
	200	130	14	5	3+3	39	58	49	1050
	220	150	14	5	3+3	46	62	54	1050
	240	170	14	5	3+3	52	66	58	1050
	260	190	14	5	3+3	59	69	62	1050
	280	210	14	5	3+3	66	71	65	1050
300	230	14	5	3+3	72	73	67	1050	
FB-1406 5x14-4	160	90	14	5	4+4	25	60	49	1050
	180	110	14	5	4+4	32	69	58	1050
	200	130	14	5	4+4	39	77	66	1050
	220	150	14	5	4+4	46	83	72	1050
	240	170	14	5	4+4	52	88	78	1050
	260	190	14	5	4+4	59	92	83	1050
	280	210	14	5	4+4	66	95	86	1050
300	230	14	5	4+4	72	98	90	1050	
FB-1407 6x14-2	160	90	14	6	2+2	31	30	24	1050
	180	110	14	6	2+2	39	35	29	1050
	200	130	14	6	2+2	47	39	33	1050
	220	150	14	6	2+2	55	42	36	1050
	240	170	14	6	2+2	63	44	39	1050
	260	190	14	6	2+2	71	46	41	1050
	280	210	14	6	2+2	79	48	43	1050
300	230	14	6	2+2	87	49	45	1050	
FB-1407 6x14-3	160	90	14	6	3+3	31	45	37	1050
	180	110	14	6	3+3	39	52	43	1050
	200	130	14	6	3+3	47	58	49	1050
	220	150	14	6	3+3	55	62	54	1050
	240	170	14	6	3+3	63	66	58	1050
	260	190	14	6	3+3	71	69	62	1050
	280	210	14	6	3+3	79	71	65	1050
300	230	14	6	3+3	87	73	67	1050	
FB-1407 6x14-4	160	90	14	6	4+4	31	60	49	1050
	180	110	14	6	4+4	39	69	58	1050
	200	130	14	6	4+4	47	77	66	1050
	220	150	14	6	4+4	55	83	72	1050
	240	170	14	6	4+4	63	88	78	1050
	260	190	14	6	4+4	71	92	83	1050
	280	210	14	6	4+4	79	95	86	1050
300	230	14	6	4+4	87	98	90	1050	
FB-1408 8x14-2	160	90	14	8	2+2	41	30	24	1050
	180	110	14	8	2+2	51	35	29	1050
	200	130	14	8	2+2	62	39	33	1050
	220	150	14	8	2+2	73	42	36	1050
	240	170	14	8	2+2	84	44	39	1050
	260	190	14	8	2+2	94	46	41	1050
	280	210	14	8	2+2	105	48	43	1050
300	230	14	8	2+2	116	49	45	1050	

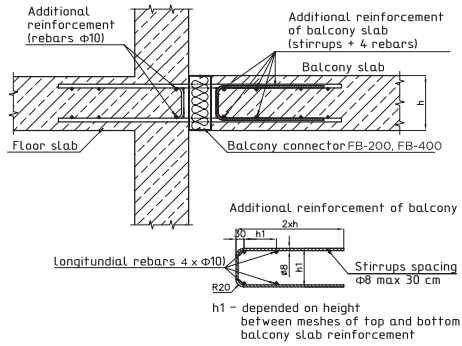
Connector FB-1400 / concrete grade \geq C20/25									
Symbol	h [mm]	h _i [mm]	Bar diameter \varnothing [mm]	Quantity		M _{res} (±) [kNm]	Insulation	Insulation	Dim. [mm]
				Bars	Hoop sticks		80 mm	120 mm	
							V _{res} (±) [kN]	V _{res} (±) [kN]	S
FB-1408 8x14-3	160	90	14	8	3+3	41	45	37	1050
	180	110	14	8	3+3	51	52	43	1050
	200	130	14	8	3+3	62	58	49	1050
	220	150	14	8	3+3	73	62	54	1050
	240	170	14	8	3+3	84	66	58	1050
	260	190	14	8	3+3	94	69	62	1050
	280	210	14	8	3+3	105	71	65	1050
	300	230	14	8	3+3	116	73	67	1050
FB-1408 8x14-4	160	90	14	8	4+4	41	60	49	1050
	180	110	14	8	4+4	51	69	58	1050
	200	130	14	8	4+4	62	77	66	1050
	220	150	14	8	4+4	73	83	72	1050
	240	170	14	8	4+4	84	88	78	1050
	260	190	14	8	4+4	94	92	83	1050
	280	210	14	8	4+4	105	95	86	1050
	300	230	14	8	4+4	116	98	90	1050
FB-1409 10x14-3	160	90	14	10	3+3	51	45	37	1050
	180	110	14	10	3+3	64	52	43	1050
	200	130	14	10	3+3	78	58	49	1050
	220	150	14	10	3+3	91	62	54	1050
	240	170	14	10	3+3	105	66	58	1050
	260	190	14	10	3+3	118	69	62	1050
	280	210	14	10	3+3	131	71	65	1050
	300	230	14	10	3+3	145	73	67	1050
FB-1409 10x14-4	160	90	14	10	4+4	51	60	49	1050
	180	110	14	10	4+4	64	69	58	1050
	200	130	14	10	4+4	78	77	66	1050
	220	150	14	10	4+4	91	83	72	1050
	240	170	14	10	4+4	105	88	78	1050
	260	190	14	10	4+4	118	92	83	1050
	280	210	14	10	4+4	131	95	86	1050
	300	230	14	10	4+4	145	98	90	1050
FB-1409 10x14-5	160	90	14	10	5+5	51	75	61	1050
	180	110	14	10	5+5	64	87	72	1050
	200	130	14	10	5+5	78	96	82	1050
	220	150	14	10	5+5	91	104	90	1050
	240	170	14	10	5+5	105	110	97	1050
	260	190	14	10	5+5	118	115	103	1050
	280	210	14	10	5+5	131	119	108	1050
	300	230	14	10	5+5	145	122	112	1050

Additional reinforcement of balcony slab

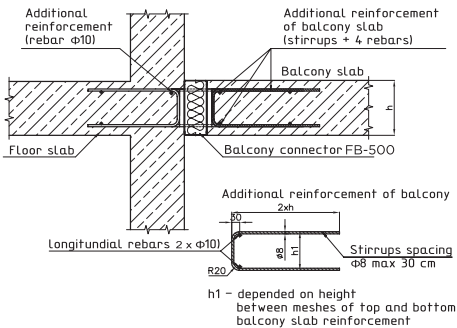
FB-100, FBE-100
FB-300, FBE-300



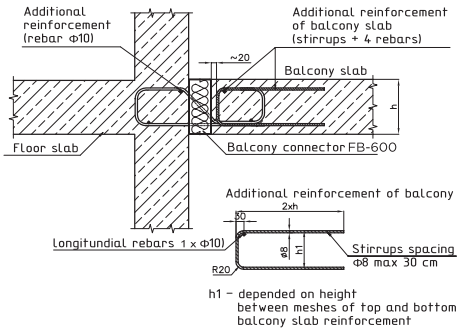
FB-200, FB-400



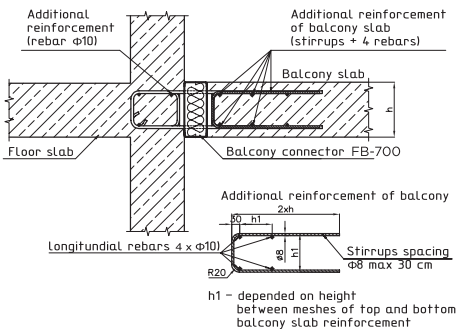
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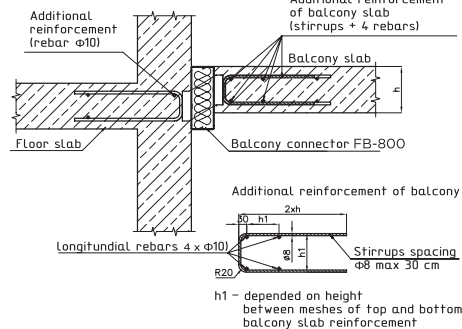
FB-600



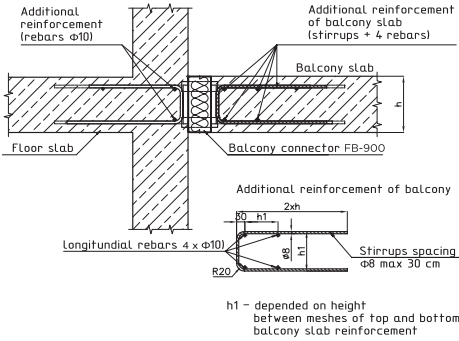
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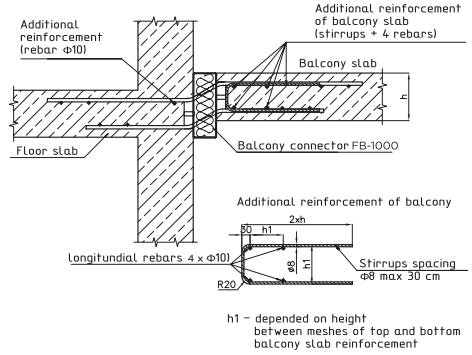
FB-800



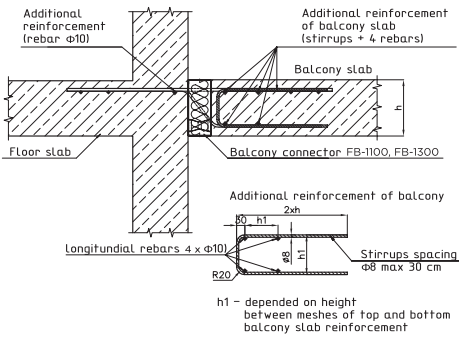
FB-900



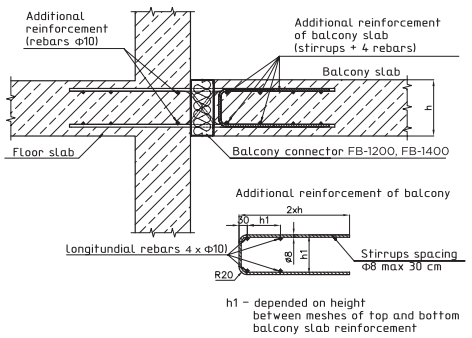
FB-1000

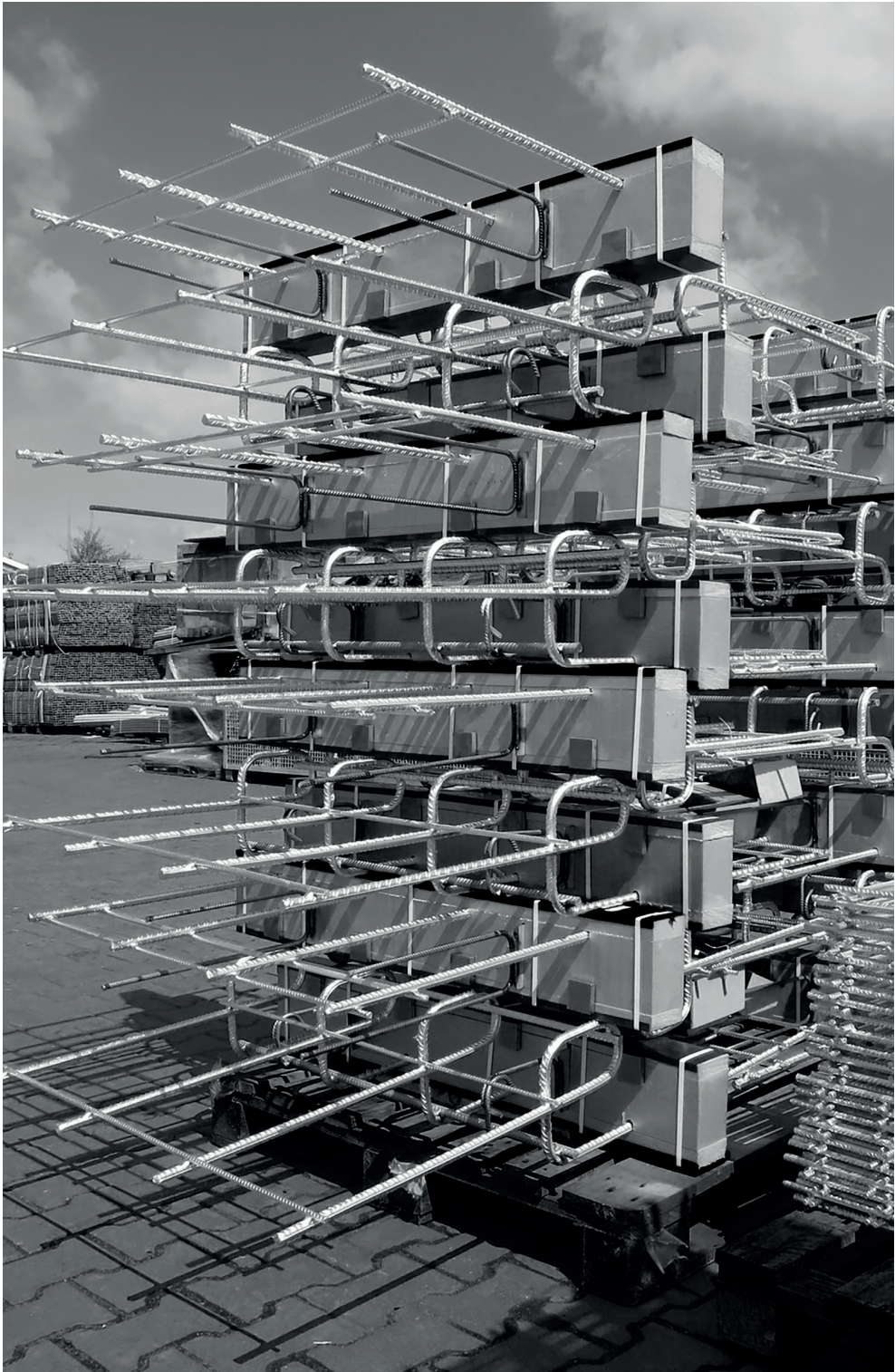


FB-1100, FB-1300



FB-1200, FB-1400

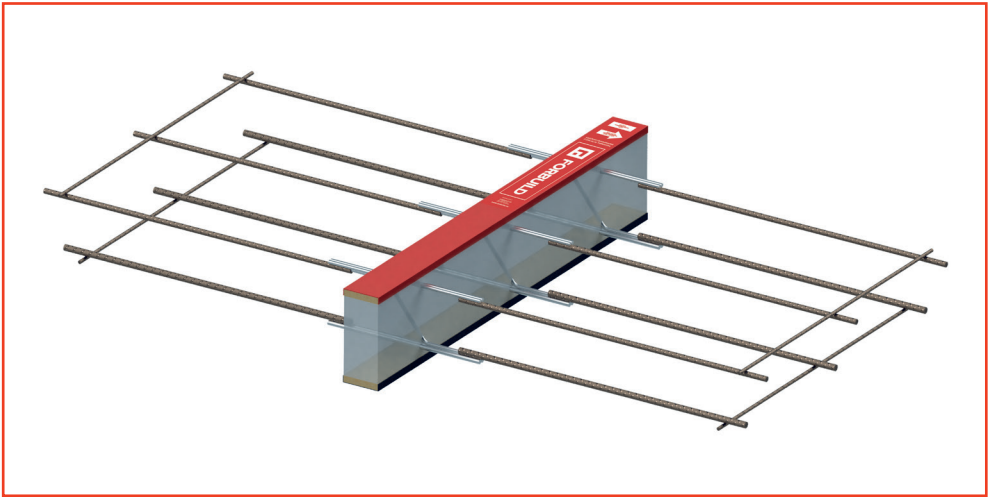




Balcony connectors KB

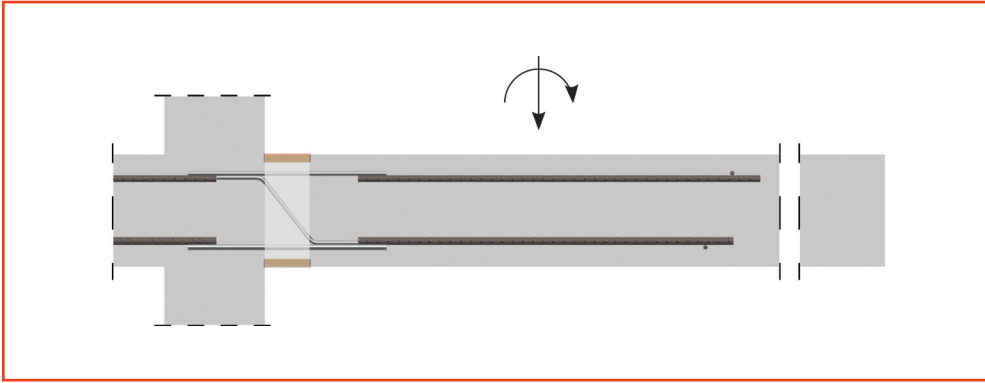
The newest product of Forbuild company. Easy end reliable solution which reduces thermal bridges between external reinforced concrete elements (e. g. balcony) and floor slabs or walls.

General information



Construction of balcony connector KB – general view

- Balcony connector KB consists of reinforcing sets and plastic case which is filled up by insulating material. Main function of insulating material is decreasing phenomenon of thermal bridge.
- Capacity of balcony connectors depends on quantity of reinforcing sets which are inside insulating bricks. One reinforcing set consists of rebars transferring elongating forces, transverse rebars transferring shear forces and bars transferring compression forces.



Cross-section of balcony connector KB

Reinforcing connector KB	European Technical Assessment
Element:	Material:
- reinforcing set (reinforcement transferring elongating, shear, and compression forces)	Welded bars made of stainless steel (type Duplex) and black carbon steel (B500B).
- insulating material	Styrofoam with thermal conductivity coefficient $\lambda \leq 0,036 \text{ W/m}\cdot\text{K}$, or mineral wool with thermal conductivity coefficient $\lambda \leq 0,040 \text{ W/m}\cdot\text{K}$. Standard width of insulation - 80mm, optional - 120mm.
- casing	PVC.

Standard elements for floor slabs with thickness between 140 and 300 mm
 Additional reinforcement at construction site in balcony slab is not necessary.