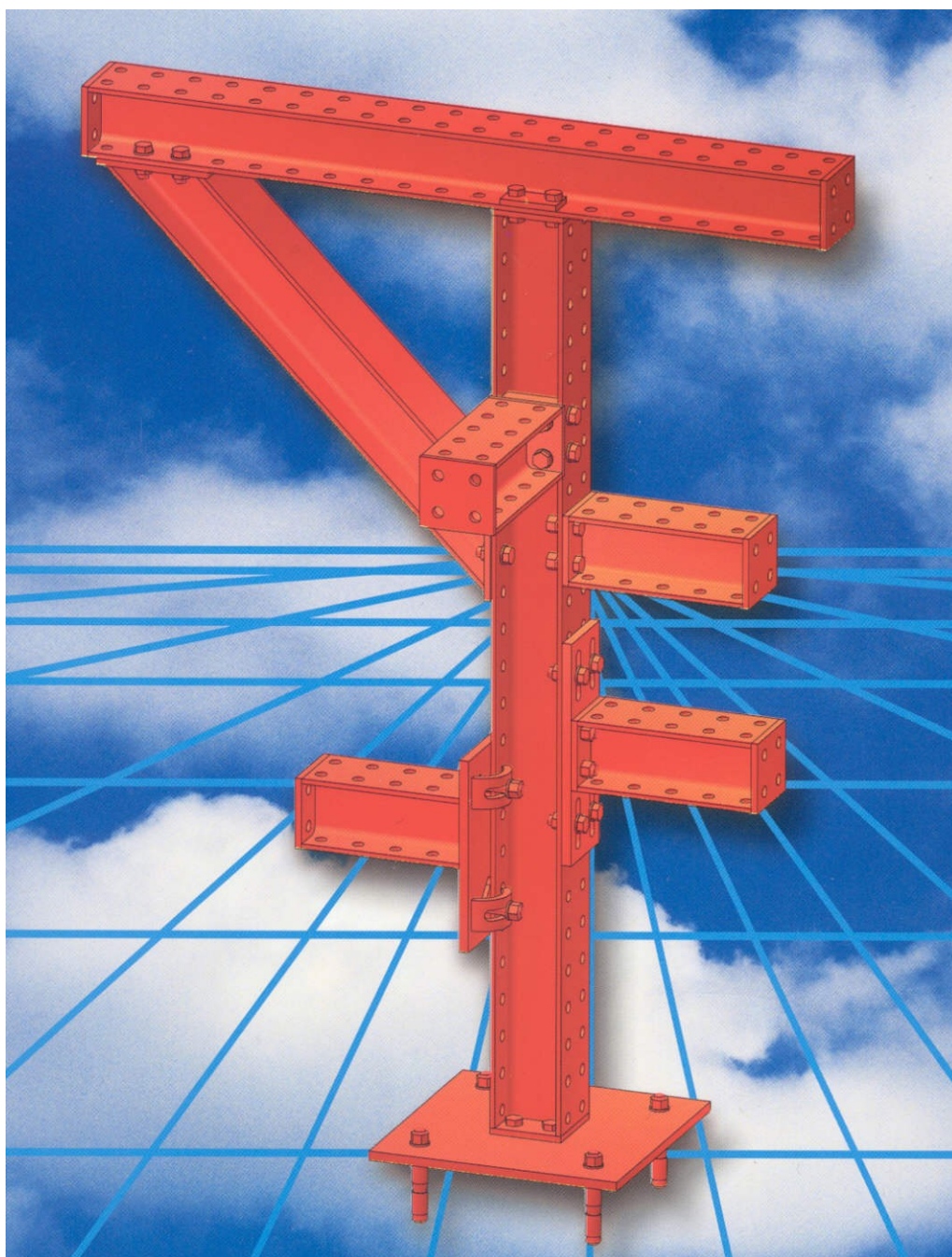


MODULARSTEEL IN H-PROFILE 120



Nyt perspektiv indenfor anlægsarbejde

We know from experience that changes/alterations and expansions “during” the construction period occur to an increased extent. Problems with the construction, procurement and installation, as well as more costs follow.



As a future-oriented supplier, we have taken up the challenge and developed a new concept.

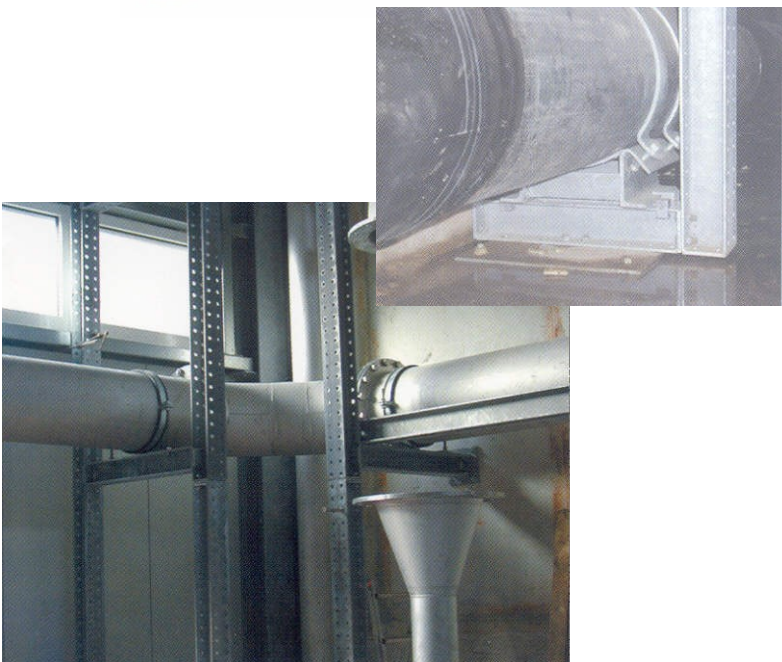


Advantages:

- less resource consumption according to drawings with standardized components
- simplified/easy and quick assembly on the construction site
- no welding during assembly, only screw connections
- no welding (no welding work) during repair and inspection
- flexible reactions to deviations and drawing changes
- high usability with smaller/fewer system modules
- High quality corrosion protection as all parts are hot-dip galvanized (duplex coating on request)
- BERNECKER module brackets and clamping systems are easy to install without any problems.

Solution:

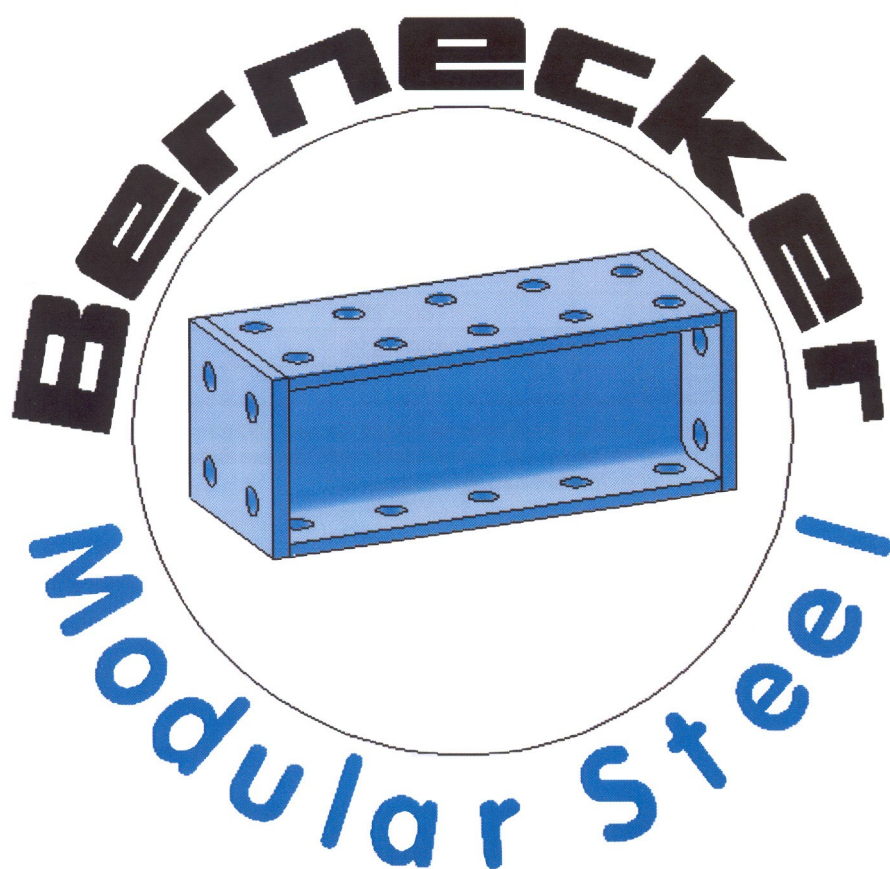
Our newly developed software CD PDS-intergraf can make the changes easier, both time-saving and efficient. For users of AutoCAD and compatible systems, a component library is available. BERNECKER Modular Supports reduce costs and help shorten construction times and guarantee optimal corrosion protection. The development of BERNECKER Modular Supports is a step towards time-efficient work and assembly in the construction and building industry

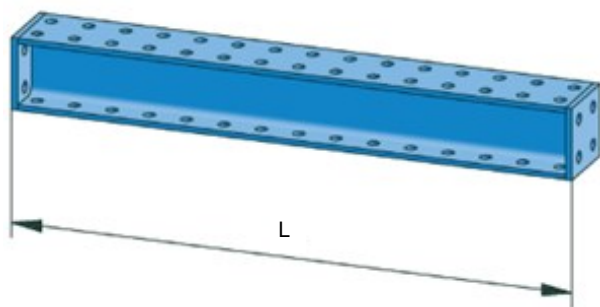


MODULARSTEEL

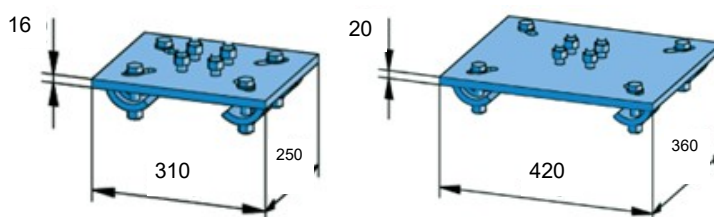
SYSTEM 120

"HEAVY"





System beam		
Material: DIN EN 10025		
Finish: Fully hot-dip galvanized		
Article no.	L (mm)	Weight (kg)
STB-0300-F	300	7,4
STB-0600-F	600	13,1
STB-0900-F	900	18,9
STB-1200-F	1200	24,6
STB-1500-F	1500	30,4
STB-1800-F	1800	36,2
STB-2100-F	2100	41,9



Adapter plate for clamp connection; Connection section 80-200 mm or 190-310 mm

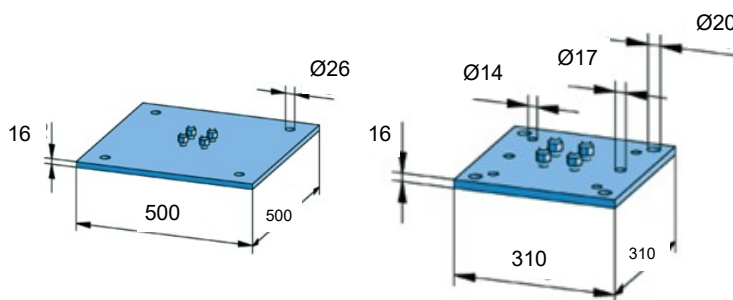
Material: DIN EN 10025, hot-dip galvanized

Finish: Complete with beam clamps* and screw fastening, incl. 4 off studs 50 or 70 mm permanently caulked**

Article no.	Dimensions (mm)	Weight (kg)
STB-APK-1-50-F	250 x 16 x 310	13,5
STB-APK-2-50-F	360 x 20 x 420	27,5

* Beam clamps with standard bolts universally suitable for flange thickness 8-30 mm (broad flanged beam 120-500), please request longer bolts for HEM type beam (up to 40 mm flange thickness)

** Stud 70 mm long when using shims for levelling/aligning



Adapter plate for plug connection to concrete *

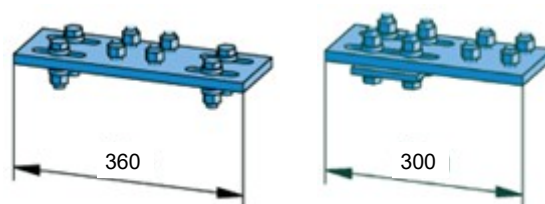
Material: DIN EN 10025, hot-dip galvanized

Finish: incl. 4 off studs 50 or 70 mm permanently caulked, recommended for LIEBIG type 25 plug**

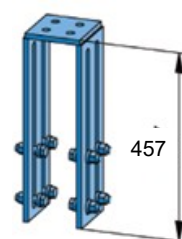
Article no.	Dimensions (mm)	Plug	Weight (kg)
STB-APD-50-F	500 x 16 x 500	Steel galvanized	30,4
STB-APD-B-50-F	310 x 16 x 310	Steel galvanized	12,8

* STB-APD-B - Halften cast-In channels 2 x M16

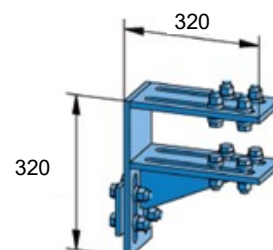
Standard components



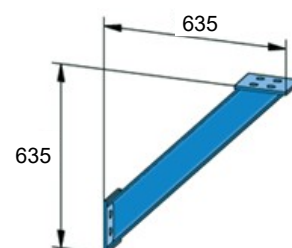
Vertical connection to system beam	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-APV-1-F	6,1
STB-APD-3-F	6,0



Vertical stay, to bridge level differences up to 300 mm	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-VS-F	12,5

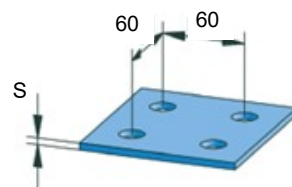


Bridge bearing, to bridge horizontal gaps up to 150 mm	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-HS-F	12,0

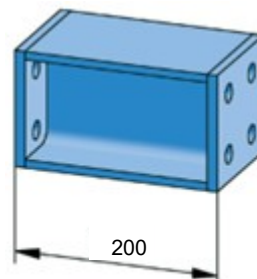
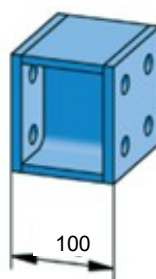


System beam 45° - stay	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-S45-0600-F	21,6

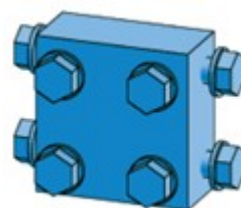
Standard components



Shims for system beam			
Material: DIN EN 10025, hot-dip galvanized			
Article no.	Thickness (mm)	Center of screws	Weight (kg)
STB-D-001-F	1	60 x 60	0,1
STB-D-002-F	2	60 x 60	0,2
STB-D-003-F	3	60 x 60	0,3
STB-D-005-F	5	60 x 60	0,5
STB-D-010-F	10	60 x 60	1,0

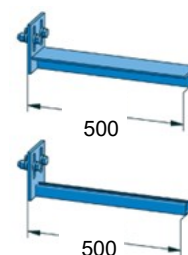


Distance beam	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-0100-F	3,5
STB-0200-F	5,5

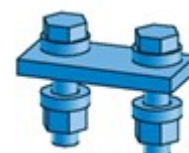


Cross connector for system beam	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-QAS-1-F	4,3

Standard components



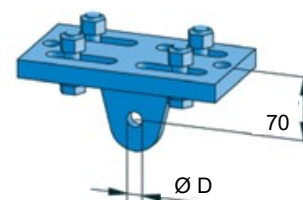
Bracket for system beam	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-TB-500-F	6,7
STB-HM-500-F	2,5



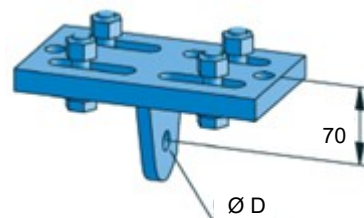
Washer plate and screw fastening	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-U-016-F	0,6



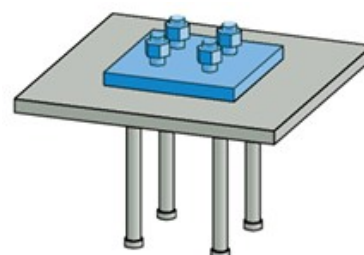
Nuts and Bolts, loose	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-S-016x045-F	0,13
STB-S-016x055-F	0,14
STB-S-016x070-F	0,16
STB-S-016x090-F	0,19



Beam hanger		
Material: DIN EN 10025, hot-dip galvanized		
Article no.	Ø D (mm)	Weight (kg)
STB-HP-M12-F	13	5,6
STB-HP-M16-F	17	5,6
STB-HP-M20-F	21	5,6



Beam hanger, axial		
Material: DIN EN 10025, hot-dip galvanized		
Article no.	Ø D (mm)	Weight (kg)
STB-HP-M12-F	13	5,6
STB-HP-M16-F	17	5,6
STB-HP-M20-F	21	5,6



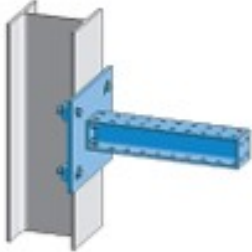
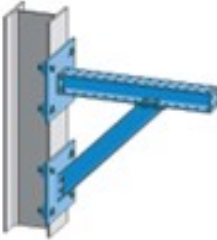
Welding plate for anchor plate for system beam	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-PA-F	3,2



Cap	
Material: PVC	
Article no.	Weight (kg)
STB-KAPPE-PVC	0,08



Connecting kit	
Material: DIN EN 10025, hot-dip galvanized	
Article no.	Weight (kg)
STB-AS-F	3,7

Overview of types			
U61K__ 	U61D_ 	U62K__ 	U62D_ 
U64K__ 	U64D_ 	Other types on request	
U68K__ 	U68D_ 		
U69K__ 	U69D_ 	U67K__ 	U67D_ 
U70K__ 	U70D_ 	U71K__ 	U71D_ 

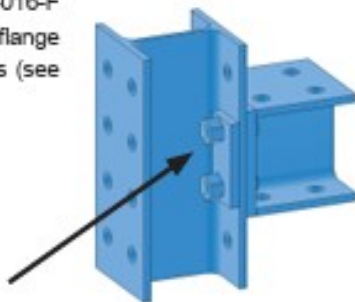
Assembly instructions

BERNECKER ModularSteel is extremely versatile and easy to assemble thanks to its relatively small number of system components. There are a number of important rules that must be followed however:

The system components are completely hot-dip galvanized and all necessary holes are predrilled at our factory. Drilling or welding on the components affects their loadbearing capacity and should be avoided.

ModularSteel 120:

Washer plates* STB-U-016-F must be fitted on the flange side in all 90° connections (see sketch).



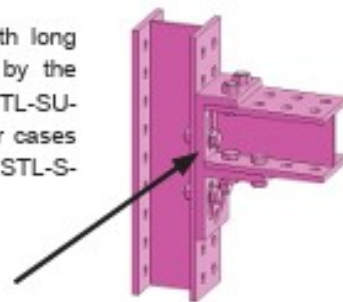
Assembly in general

The screw fastenings* must be used as shown in the sketch and tightened with the prescribed torque (Tab.1).

Tab. 1	ModularSteel 120	ModularSteel 80
Torque	120 Nm	80 Nm
* Screw fastenings always tightened with prescribed tool		

ModularSteel 80:

Screw connections with long holes must be fitted by the screw fastening* STL-SU-012x035-F. In all other cases the screw fastening* STL-S-012x030-F is used.

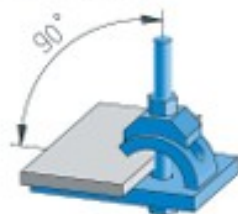


Adapter plate assembly

Position the system beams and screw them with the provided screw fastening* in the adapter plate.

Adapter plate for clamp connection

Slacken the connection kit STL-AS-F / STB-AS-F supplied, align to desired beam and clamp tight.



Caution: The bolt* must be straight and clamps be parallel to each other.

Adapter plate for plug connection

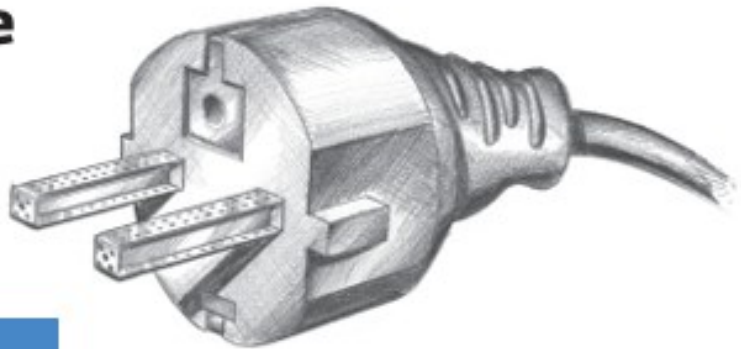
Please refer to table 2 for the types of chosen plugs which our stress calculations are based upon. Other marketable products can be used if their loadbearing capacity is proved and if they apply to the clearance hole. The plugs must be set according to the instructions and building control approvals of the plug manufacturer.

Tab. 2	ModularSteel 120	ModularSteel 80
Adapter plate	STB-APD-50-F	STL-PD-x-F
	STB-APD-B-50-F	
Plug	Liebig plug B M16-25/55/15	Liebig anchor AB M12-20/80/15
	Fischer FAZ 12/30	

Note on the static loadings:

The loadings shown in this document have been calculated based on a static model using certain assumptions and parameters. Despite taking every precaution and applying the accepted rules of engineering practice and the applicable standards, we can only guarantee the loadings for the static cases illustrated in this catalogue. Under no circumstances can we give any guarantee or warranty in the case of deviations from models, constraints and static assumptions.

Stay efficient. Why consume more than necessary?



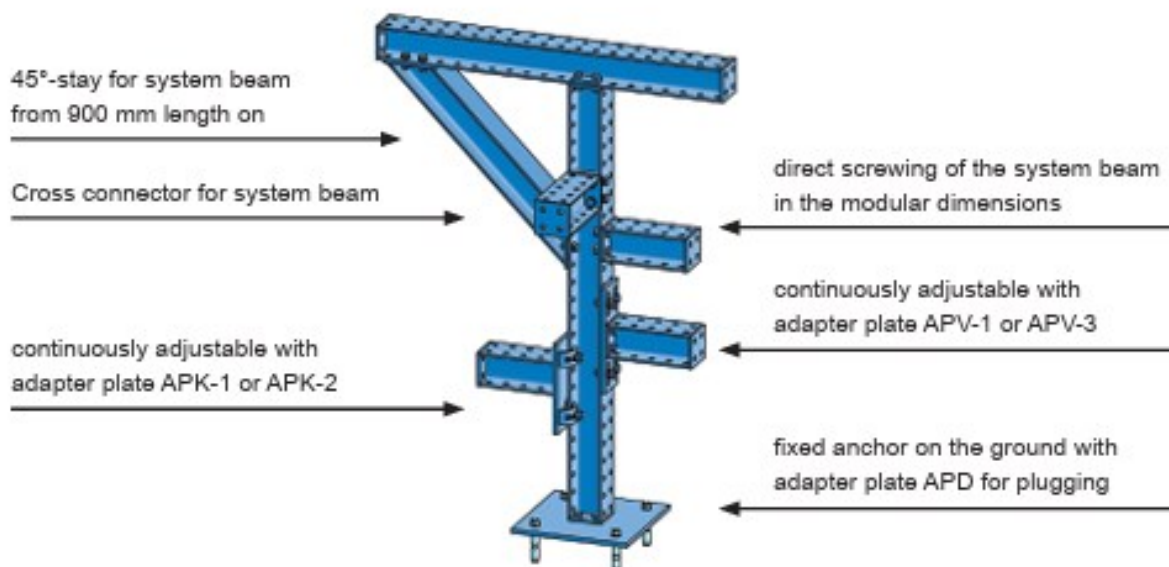
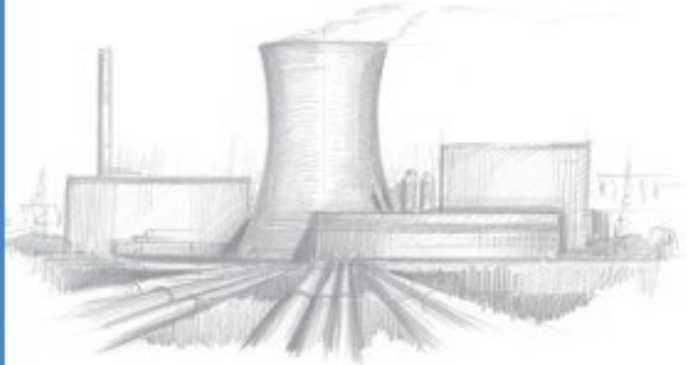
**few system
components,
re-usable**



**high flexibility,
no welding -
only screwing**



**profitability through
cost-effectiveness
and time saving**



Inquiry / Order sheet

Mail: cobalch@cobalch.com

Matchcode	Article no.		weight / piece	order quantity
120101	STB-0300-F		7,4 kg	
120102	STB-0600-F		13,1 kg	
120103	STB-0900-F		18,9 kg	
120104	STB-1200-F		24,6 kg	
120105	STB-1500-F		30,4 kg	
120106	STB-1800-F		36,2 kg	
120107	STB-2100-F		41,9 kg	
120108	STB-S45-0600-F		21,6 kg	
120201	STB-APK-1-50-F		13,5 kg	
120202	STB-APK-2-50-F		27,5 kg	
120203	STB-APD-50-F		30,4 kg	
120204	STB-APD-B-50-F		12,8 kg	
120205	STB-PA-F		3,2 kg	
120301	STB-U-016-F		0,8 kg	
120302	STB-S-016x045-F		0,1 kg	
120303	STB-S-016x055-F		0,1 kg	
120304	STB-S-016x070-F		0,2 kg	
120305	STB-S-016x090-F		0,2 kg	
120401	STB-APV-1-F		6,1 kg	
120402	STB-APV-3-F		6,0 kg	
120403	STB-QAS-1-F		4,3 kg	
120501	STB-VS-F		12,5 kg	
120502	STB-HS-F		12,0 kg	
120503	STB-D-001-F		0,1 kg	
120504	STB-D-002-F		0,2 kg	
120505	STB-D-003-F		0,3 kg	
120506	STB-D-005-F		0,5 kg	
120507	STB-D-010-F		1,0 kg	
120508	STB-0100-F		3,5 kg	
120509	STB-0200-F		5,5 kg	
120601	STB-TB-500-F		6,7 kg	
120602	STB-HM-500-F		2,5 kg	
120701	STB-HP-M12-F		5,6 kg	
120702	STB-HP-M16-F		5,6 kg	
120703	STB-HP-M20-F		5,6 kg	
120711	STB-HPA-M12-F		5,6 kg	
120712	STB-HPA-M16-F		5,6 kg	
120713	STB-HPA-M20-F		5,6 kg	
120704	STB-Kappe-PVC		0,1 kg	
120705	STB-AS-F		3,7 kg	

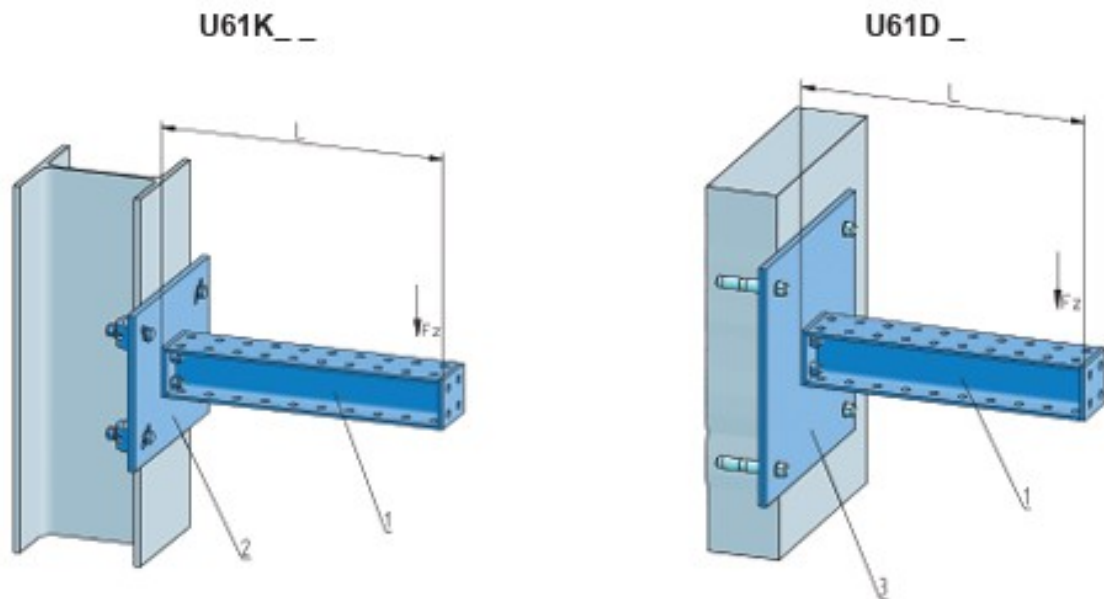
Client no.:

Name:

Projekt:

Date:

Company stamp / Signature:



Cantilever U61K_A (Connection section 80-200)

	L	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
Fz [kN]		11,4	8,4	5,3	3,9	3,0	2,5	2,1
kg		20,4	26,1	31,9	37,6	43,4	49,2	54,9

Cantilever U61K_B (Connection section 190-310)

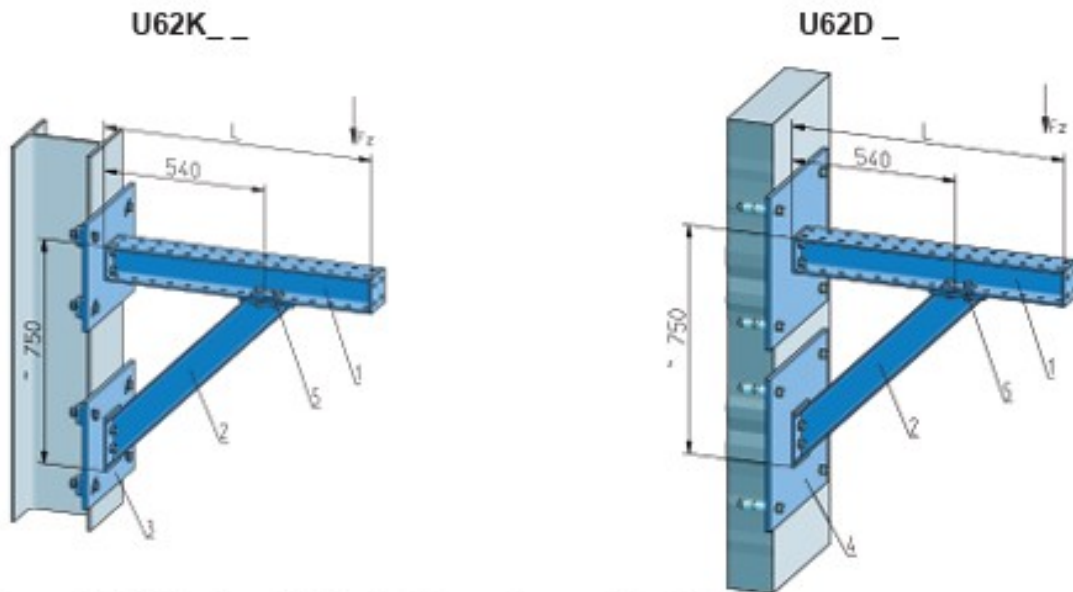
	L	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
Fz [kN]		11,4	8,4	5,3	3,9	3,0	2,5	2,1
kg		37,2	42,9	48,7	54,4	60,2	66,0	71,7

Cantilever U61D_ (Plugplate)

	L	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
Fz [kN]		14,3	6,9	4,4	3,2	2,5	2,1	1,7
kg		37,8	43,5	49,3	55,0	60,8	66,6	72,3

- Pos.1:** STB-0300-F up to STB-2100-F
Pos.2: A = STB-APK-1-50-F (Connection section 80-200) or
 B = STB-APK-2-50-F (Connection section 190-310)
Pos.3: STB-APD-50-F

Example: U61KBA = Cantilever, clamp connection, L=600 mm, STB-APK-1-50-F, Fz=8,4 kN



Cantilever with 45° - stay U62K_A (Connection section 80-200)

	L			C	D	E		
				900	1200	1500		
	Fz [kN]			5,8	4,3	3,5		
	kg			67,7	73,4	79,2		

Cantilever with 45° - stay U62K_B (Connection section 190-310)

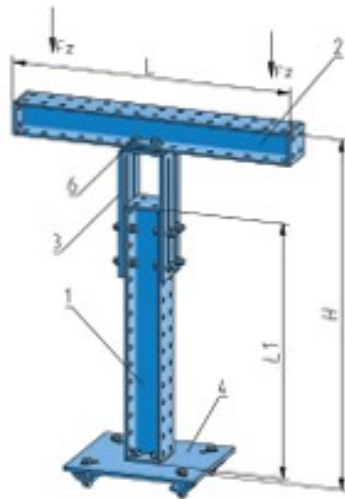
	L			C	D	E		
				900	1200	1500		
	Fz [kN]			5,8	4,3	3,5		
	kg			101,3	107,0	112,8		

Cantilever with 45° - stay U62D_ (Plugplate)

	L			C	D	E		
				900	1200	1500		
	Fz [kN]			5,8	4,3	3,5		
	kg			102,5	108,2	114,0		

- Pos.1:** STB-0900-F up to STB-1500-F
Pos.2: STB-S45-0600-F
Pos.3: A = STB-APK-1-50-F (Connection section 80-200) (2x) or
 B = STB-APK-2-50-F (Connection section 190-310) (2x)
Pos.4: STB-APD-50-F (2x)
Pos.5: STB-U-016-F (2x)
Example: U62DE = Cantilever with 45°- stay, plug connection, L=1500 mm, STB-APD-50-F, Fz=4,4 kN

U64K_ _ _



T-Support U64K_ _A (Connection section 80-200)

	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	591-746	746-1046	1046-1346	1346-1646	1646-1946	1946-2246	2246-2546
_B L=600	Fz[kN]	6,8	6,8	5,8	4,2	3,3	2,8	2,4
	kg	47,2	52,9	58,7	64,4	70,2	76,0	81,7
_C L=900	Fz[kN]	4,5	4,5	4,5	4,2	3,3	2,8	2,4
	kg	53,0	58,7	64,5	70,2	76,0	81,8	87,5
_D L=1200	Fz[kN]	3,3	3,3	3,3	3,3	3,3	2,8	2,4
	kg	58,7	64,4	70,2	75,9	81,7	87,5	93,2

T-Support U64K_ _B (Connection section 190-310)

	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	591-746	746-1046	1046-1346	1346-1646	1646-1946	1946-2246	2246-2546
_B L=600	Fz[kN]	6,8	6,8	5,8	4,2	3,3	2,8	2,4
	kg	64,0	69,7	75,5	81,2	87,0	92,8	98,5
_C L=900	Fz[kN]	4,5	4,5	4,5	4,2	3,3	2,8	2,4
	kg	69,8	75,5	81,3	87,0	92,8	98,6	104,3
_D L=1200	Fz[kN]	3,3	3,3	3,3	3,3	3,3	2,8	2,4
	kg	75,5	81,2	87,0	92,7	98,5	104,3	110,0

Pos.1: STB-0300-F up to STB-2100-F

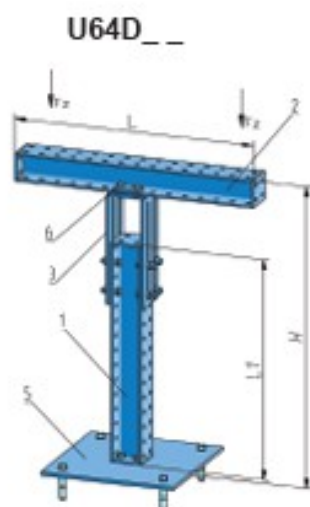
Pos.2: STB-0600-F up to STB-1200-F

Pos.3: STB-VS-F

Pos.4: A = STB-APK-1-50-F (Connection section 80-200) or
B = STB-APK-2-50-F (Connection section 190-310)

Pos.6: STB-U-016-F (2x)

Example: U64KCBB = T-Support, clamp connection, L1=900 mm, L=600 mm, STB-APK-2-50-F, Fz=5,8 kN

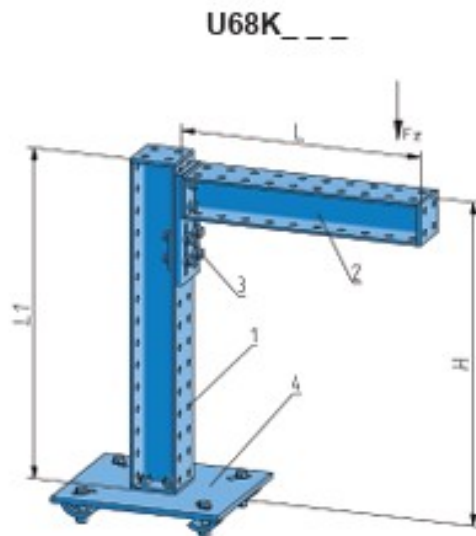


T-Support U64D__ (Plugplate)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	591-746	746-1046	1046-1346	1346-1646	1646-1946	1946-2246	2246-2546
_B L=600	Fz[kN]	16,5	9,4	5,6	4,0	3,1	2,5	2,1
	kg	64,6	70,3	76,1	81,8	87,6	93,4	99,1
_C L=900	Fz[kN]	11,0	7,9	5,6	4,0	3,1	2,5	2,1
	kg	70,4	76,1	81,9	87,6	93,4	99,2	104,9
_D L=1200	Fz[kN]	8,2	6,8	5,1	4,0	3,1	2,5	2,1
	kg	76,1	81,8	87,6	93,3	99,1	104,9	110,6

- Pos.1:** STB-0300-F up to STB-2100-F
Pos.2: STB-0600-F up to STB-1200-F
Pos.3: STB-VS-F
Pos.5: STB-APD-50-F
Pos.6: STB-U-016-F (2x)

Example: U64DCB = T-Support, plug connection, L1=900 mm, L=800 mm, STB-APD-50-F, Fz=5,6 kN



Scaffold U68K_ _A (Connection section 80-200)

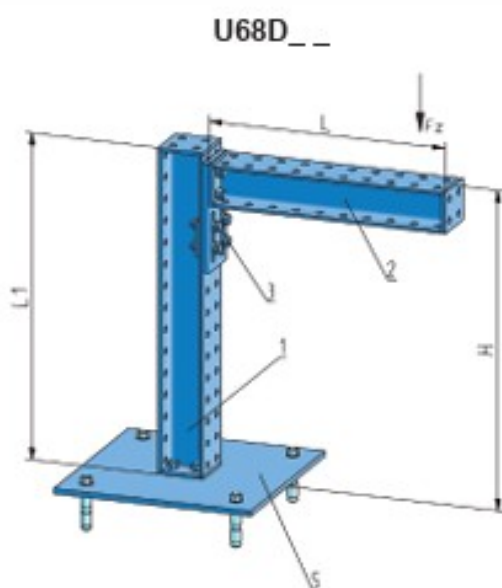
	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_A L=300	Fz[kN]	9,6	9,6	8,3	6,6	5,5	4,7	4,1
	kg	33,9	39,6	45,4	51,1	56,9	62,7	68,4
_B L=600	Fz[kN]	5,5	5,5	5,5	4,9	4,3	3,8	3,4
	kg	39,6	45,3	51,1	56,8	62,6	68,4	74,1
_C L=900	Fz[kN]	3,8	3,8	3,8	3,8	3,5	3,1	2,8
	kg	45,4	51,1	56,9	62,6	68,4	74,2	79,9
_D L=1200	Fz[kN]	o	o	o	2,9	2,9	2,7	2,5
	kg	51,1	56,8	62,6	68,3	74,1	79,9	85,6

Scaffold U68K_ _B (Connection section 190-310)

	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_A L=300	Fz[kN]	9,6	9,6	8,3	6,6	5,5	4,7	4,1
	kg	50,7	56,4	62,2	67,9	73,7	79,5	85,2
_B L=600	Fz[kN]	5,5	5,5	5,5	4,9	4,3	3,8	3,4
	kg	56,4	62,1	67,9	73,6	79,4	85,2	90,9
_C L=900	Fz[kN]	3,8	3,8	3,8	3,8	3,5	3,1	2,8
	kg	62,2	67,9	73,7	79,4	85,2	91,0	96,7
_D L=1200	Fz[kN]	o	o	o	2,9	2,9	2,7	2,5
	kg	67,9	73,6	79,4	85,1	90,9	96,7	102,4

- Pos.1:** STB-0300-F up to STB-2100-F
Pos.2: STB-0300-F up to STB-1200-F
Pos.3: STB-APV-3-F
Pos.4: A = STB-APK-1-50-F (Connection section 80-200) or
 B = STB-APK-2-50-F (Connection section 190-310)

Example: U68KCAB = Scaffold, clamp connection, L1=900 mm, L=300 mm, STB-APK-2-50-F, Fz=8,3 kN

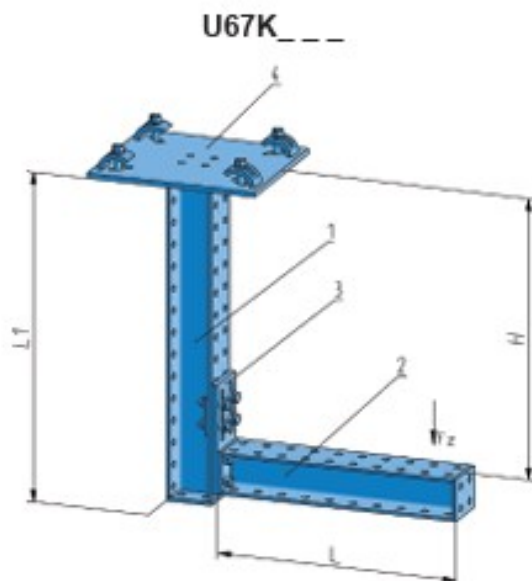


Scaffold U68D_ (Plugplate)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_A L=300	Fz[kN]	16,9	10,8	7,7	6,0	4,9	4,2	3,6
	kg	51,3	57,0	62,8	68,5	74,3	80,1	85,8
_B L=600	Fz[kN]	8,3	6,4	5,2	4,3	3,7	3,3	2,9
	kg	57,0	62,7	68,5	74,2	80,0	85,8	91,5
_C L=900	Fz[kN]	5,4	4,5	3,9	3,4	3,0	2,7	2,5
	kg	62,8	68,5	74,3	80,0	85,8	91,6	97,3
_D L=1200	Fz[kN]	o	o	o	2,8	2,5	2,3	2,1
	kg	68,5	74,2	80,0	85,7	91,5	97,3	103,0

Pos.1: STB-0300-F up to STB-2100-F
Pos.2: STB-0300-F up to STB-1200-F
Pos.3: STB-APV-3-F
Pos.5: STB-APD-50-F

Example: U68DCA = Scaffold, plug connection, L1=900 mm, L=300 mm, STB-APD-50-F, Fz=7,7 kN



Scaffold U67K_ _A (Connection section 80-200)

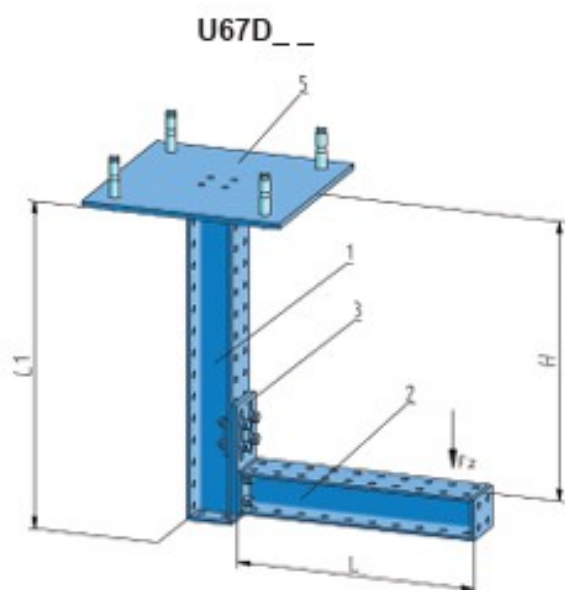
	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	20 / 206	- 506	- 806	- 1106	- 1406	- 1706	- 2006
_A L=300	Fz[kN]	9,6	8,7	6,8	5,6	4,8	4,2	3,7
	kg	33,9	39,6	45,4	51,1	56,9	62,7	68,4
_B L=600	Fz[kN]	5,5	5,5	5,0	4,3	3,8	3,4	3,1
	kg	39,6	45,3	51,1	56,8	62,6	68,4	74,1
_C L=900	Fz[kN]	3,8	3,8	3,8	3,5	3,1	2,9	2,6
	kg	45,4	51,1	56,9	62,6	68,4	74,2	79,9
_D L=1200	Fz[kN]	o	o	o	2,9	2,7	2,5	2,3
	kg	51,1	56,8	62,6	68,3	74,1	79,9	85,6

Scaffold U67K_ _B (Connection section 190-310)

	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	20 / 206	- 506	- 806	- 1106	- 1406	- 1706	- 2006
_A L=300	Fz[kN]	9,6	8,7	6,8	5,6	4,8	4,2	3,7
	kg	50,7	56,4	62,2	67,9	73,7	79,5	85,2
_B L=600	Fz[kN]	5,5	5,5	5,0	4,3	3,8	3,4	3,1
	kg	56,4	62,1	67,9	73,6	79,4	85,2	90,9
_C L=900	Fz[kN]	3,8	3,8	3,8	3,5	3,1	2,9	2,6
	kg	62,2	67,9	73,7	79,4	85,2	91,0	96,7
_D L=1200	Fz[kN]	o	o	o	2,9	2,7	2,5	2,3
	kg	67,9	73,6	79,4	85,1	90,9	96,7	102,4

- Pos.1:** STB-0300-F up to STB-2100-F
Pos.2: STB-0300-F up to STB-1200-F
Pos.3: STB-APV-3-F
Pos.4: A = STB-APK-1-50-F (Connection section 80-200) or
B = STB-APK-2-50-F (Connection section 190-310)

Example: U67KCAB = Scaffold, clamp connection, L1=900 mm, L=300 mm, STB-APK-2-50-F, Fz=6,8kN

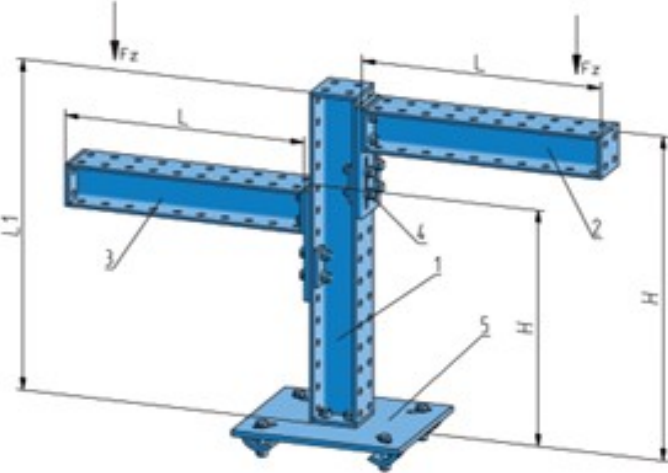


Scaffold U67D__ (Plugplate)

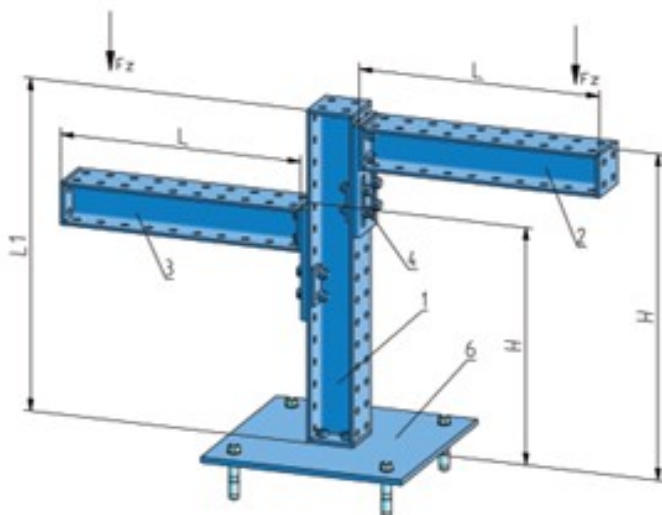
	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	20 / 206	- 506	- 806	- 1106	- 1406	- 1706	- 2006
_A L=300	Fz[kN]	8,9	6,8	5,4	4,6	3,9	3,4	3,1
	kg	51,3	57,0	62,8	68,5	74,3	80,1	85,8
_B L=600	Fz[kN]	5,7	4,8	4,1	3,6	3,2	2,8	2,6
	kg	57,0	62,7	68,5	74,2	80,0	85,8	91,5
_C L=900	Fz[kN]	4,2	3,7	3,2	2,9	2,6	2,4	2,2
	kg	62,8	68,5	74,3	80,0	85,8	91,6	97,3
_D L=1200	Fz[kN]	o	o	o	2,4	2,2	2,1	1,9
	kg	68,5	74,2	80,0	85,7	91,5	97,3	103,0

Pos.1: STB-0300-F up to STB-2100-F
Pos.2: STB-0300-F up to STB-1200-F
Pos.3: STB-APV-3-F
Pos.5: STB-APD-50-F

Example: U67DCA = Scaffold, plug connection, L1=900 mm, L=300 mm, STB-APD-50-F, Fz=5,4 kN

U69K_ _ _ 								
Scaffold U69K_ _ _A (Connection section 80-200)								
	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_AA L=300	Fz[kN]	9,6	9,6	8,3	6,6	5,5	4,7	4,1
	kg	47,3	53,0	58,8	64,5	70,3	76,1	81,8
_BB L=600	Fz[kN]	5,5	5,5	5,5	4,9	4,3	3,8	3,4
	kg	58,7	64,4	70,2	75,9	81,7	87,5	93,2
_CC L=900	Fz[kN]	3,8	3,8	3,8	3,8	3,5	3,1	2,8
	kg	70,3	76,0	81,8	87,5	93,3	99,1	104,8
_DD L=1200	Fz[kN]	o	o	o	2,9	2,9	2,7	2,5
	kg	81,7	87,4	93,2	98,9	104,7	110,5	116,2
Scaffold U69K_ _ _B (Connection section 190-310)								
	L1	A_	B_	C_	D_	E_	F_	G_
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_AA L=300	Fz[kN]	9,6	9,6	8,3	6,6	5,5	4,7	4,1
	kg	64,1	69,8	75,6	81,3	87,1	92,9	98,6
_BB L=600	Fz[kN]	5,5	5,5	5,5	4,9	4,3	3,8	3,4
	kg	75,5	81,2	87,0	92,7	98,5	104,3	110,0
_CC L=900	Fz[kN]	3,8	3,8	3,8	3,8	3,5	3,1	2,8
	kg	87,1	92,8	98,6	104,3	110,1	115,9	121,6
_DD L=1200	Fz[kN]	o	o	o	2,9	2,9	2,7	2,5
	kg	98,5	104,2	110,0	115,7	121,5	127,3	133,0
Pos.1: STB-0300-F up to STB-2100-F Pos.2 + 3: STB-0300-F up to STB-1200-F Pos.4: STB-APV-3-F (2x) Pos.5: A = STB-APK-1-50-F (Connection section 80-200) or B = STB-APK-2-50-F (Connection section 190-310)								
Example: U69KDAAB = Scaffold, clamp connection, L1=1200 mm, L=300 mm, STB-APK-2-50-F, Fz=6,6 kN								

U69D_ _ _

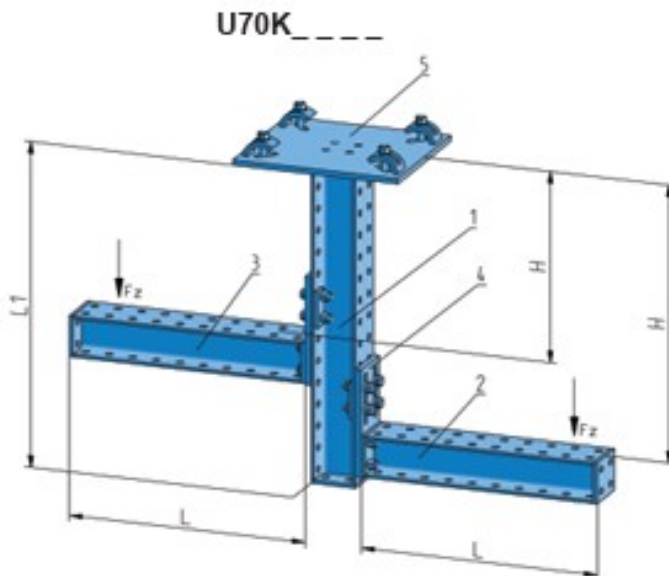


Scaffold U69D_ _ _ (Plugplate)

	L1	A_ _ _	B_ _ _	C_ _ _	D_ _ _	E_ _ _	F_ _ _	G_ _ _
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_AA L=300	Fz[kN]	18,9	10,6	7,7	6,0	4,9	4,2	3,6
	kg	64,7	70,6	76,2	81,9	87,7	93,5	99,2
_BB L=600	Fz[kN]	8,3	6,4	5,2	4,3	3,7	3,3	2,9
	kg	76,1	81,8	87,6	93,3	99,1	104,9	110,6
_CC L=900	Fz[kN]	5,4	4,5	3,9	3,4	3,0	2,7	2,5
	kg	87,7	93,4	99,2	104,9	110,7	116,5	122,2
_DD L=1200	Fz[kN]	0	0	0	2,8	2,5	2,3	2,1
	kg	99,1	104,8	110,6	116,3	122,1	127,9	133,6

Pos.1: STB-0300-F up to STB-2100-F
Pos.2 + 3: STB-0300-F up to STB-1200-F
Pos.4: STB-APV-3-F (2x)
Pos.6: STB-APD-50-F

Example: U69DDAB = Scaffold, plug connection, L1=1200 mm, L=300 mm, STB-APD-50-F, Fz=6,0 kN



Scaffold U70K__A (Connection section 80-200)

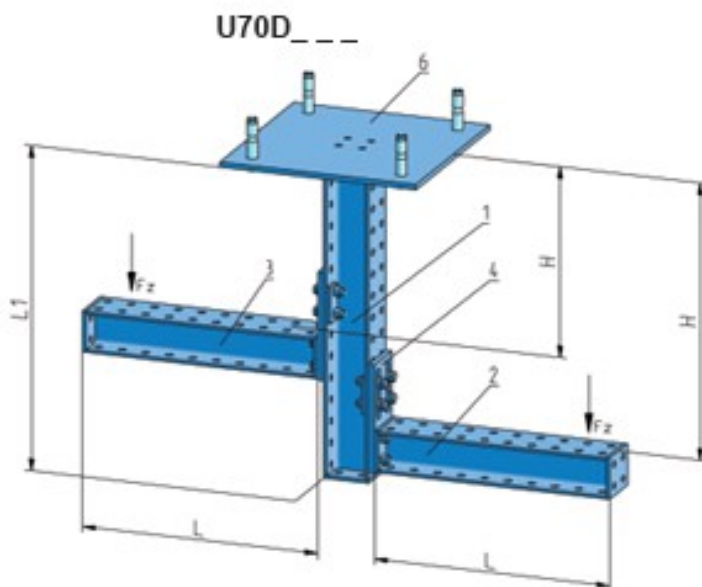
	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	20 / 208	- 508	- 808	- 1108	- 1408	- 1708	- 2008
_AA L=300	Fz[kN]	9,6	8,7	6,8	5,6	4,8	4,2	3,7
	kg	47,3	53,0	58,8	64,5	70,3	76,1	81,8
_BB L=600	Fz[kN]	5,5	5,5	5,0	4,3	3,8	3,4	3,1
	kg	58,7	64,4	70,2	75,9	81,7	87,5	93,2
_CC L=900	Fz[kN]	3,8	3,8	3,8	3,5	3,1	2,9	2,6
	kg	70,3	76,0	81,8	87,5	93,3	99,1	104,8
_DD L=1200	Fz[kN]	o	o	o	2,9	2,7	2,5	2,3
	kg	81,7	87,4	93,2	98,9	104,7	110,5	116,2

Scaffold U70K__B (Connection section 190-310)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	20 / 208	- 508	- 808	- 1108	- 1408	- 1708	- 2008
_AA L=300	Fz[kN]	9,6	8,7	6,8	5,6	4,8	4,2	3,7
	kg	64,1	69,8	75,6	81,3	87,1	92,9	98,6
_BB L=600	Fz[kN]	5,5	5,5	5,0	4,3	3,8	3,4	3,1
	kg	75,5	81,2	87,0	92,7	98,5	104,3	110,0
_CC L=900	Fz[kN]	3,8	3,8	3,8	3,5	3,1	2,9	2,6
	kg	87,1	92,8	98,6	104,3	110,1	115,9	121,6
_DD L=1200	Fz[kN]	o	o	o	2,9	2,7	2,5	2,3
	kg	98,5	104,2	110,0	115,7	121,5	127,3	133,0

- Pos.1:** STB-0300-F up to STB-2100-F
Pos.2 + 3: STB-0300-F up to STB-1200-F
Pos.4: STB-APV-3-F (2x)
Pos.5: A = STB-APK-1-50-F (Connection section 80-200) or
B = STB-APK-2-50-F (Connection section 190-310)

Example: U70KDAAB = Scaffold, clamp connection, L1=1200 mm, L=300 mm, STB-APK-2-50-F, Fz=5,6 kN

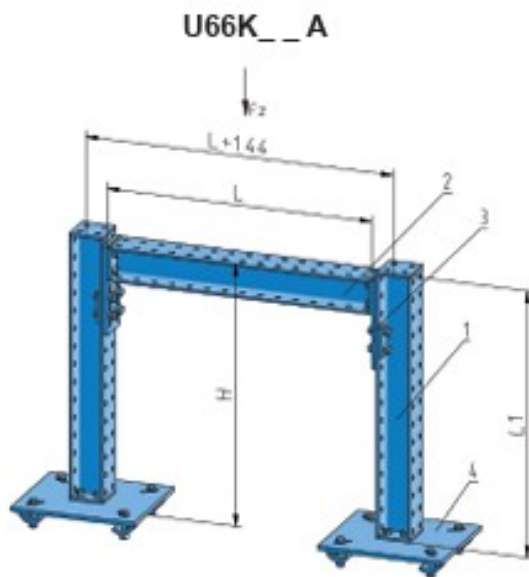


Scaffold U70D_ _ _ (Plugplate)

	L1	A_ _ _	B_ _ _	C_ _ _	D_ _ _	E_ _ _	F_ _ _	G_ _ _
		300	600	900	1200	1500	1800	2100
	H	20 / 206	- 506	- 806	- 1106	- 1406	- 1706	- 2006
_AA L=300	Fz[kN]	8,9	6,8	5,4	4,6	3,9	3,4	3,1
	kg	64,7	70,6	76,2	81,9	87,7	93,5	99,2
_BB L=600	Fz[kN]	5,7	4,8	4,1	3,6	3,2	2,8	2,6
	kg	76,1	81,8	87,6	93,3	99,1	104,9	110,6
_CC L=900	Fz[kN]	4,2	3,7	3,2	2,9	2,6	2,4	2,2
	kg	87,7	93,4	99,2	104,9	110,7	116,5	122,2
_DD L=1200	Fz[kN]	o	o	o	2,4	2,2	2,1	1,9
	kg	99,1	104,8	110,6	116,3	122,1	127,9	133,6

Pos.1: STB-0300-F up to STB-2100-F
Pos.2 + 3: STB-0300-F up to STB-1200-F
Pos.4: STB-APV-3-F (2x)
Pos.6: STB-APD-50-F

Example: U70DDAA = Scaffold, plug connection, L1=1200 mm, L=300 mm, STB-APD-50-F, Fz=4,6 kN

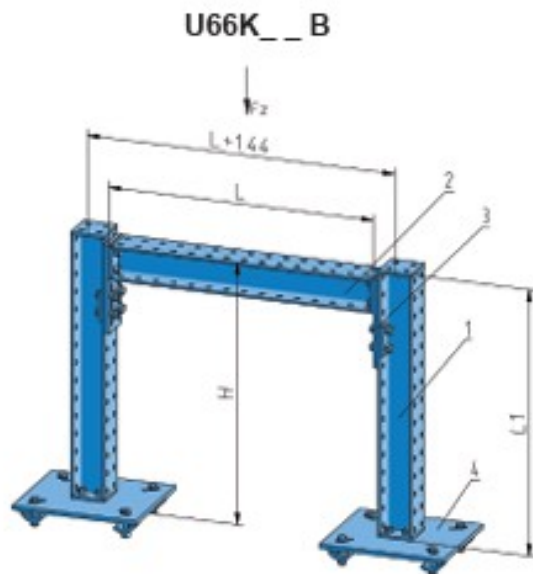


Bridge U66K_A (Connection section 80-200)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_B L=600	Fz[kN]	33,0	43,0	33,0	25,0	20,0	17,0	15,0
	kg	65,9	77,3	88,9	100,3	111,9	123,5	134,9
_C L=900	Fz[kN]	24,0	35,0	32,0	25,0	20,0	17,0	15,0
	kg	71,7	83,1	94,7	106,1	117,7	129,3	140,7
_D L=1200	Fz[kN]	18,0	29,0	31,0	24,0	20,0	17,0	15,0
	kg	77,4	88,8	100,4	111,8	123,4	135,0	146,4
_E L=1500	Fz[kN]	15,0	24,0	29,0	23,0	19,0	16,0	14,0
	kg	83,2	94,6	106,2	117,6	129,2	140,8	152,2
_F L=1800	Fz[kN]	12,0	21,0	27,0	22,0	19,0	16,0	14,0
	kg	89,0	100,4	112,0	123,4	135,0	146,6	158,0
_G L=2100	Fz[kN]	11,0	18,0	25,0	21,0	18,0	15,0	13,0
	kg	94,7	106,1	117,7	129,1	140,7	152,3	163,7

- Pos.1:** STB-0300-F up to STB-2100-F (2x)
Pos.2: STB-0600-F up to STB-2100-F
Pos.3: STB-APV-3-F (2x)
Pos.4: STB-APK-1-50-F (Connection section 80-200) (2x)

Example: U66KCEA = Bridge, clamp connection, L1=900 mm, L=1500 mm, STB-APK-1-50-F, Fz=29,0 kN

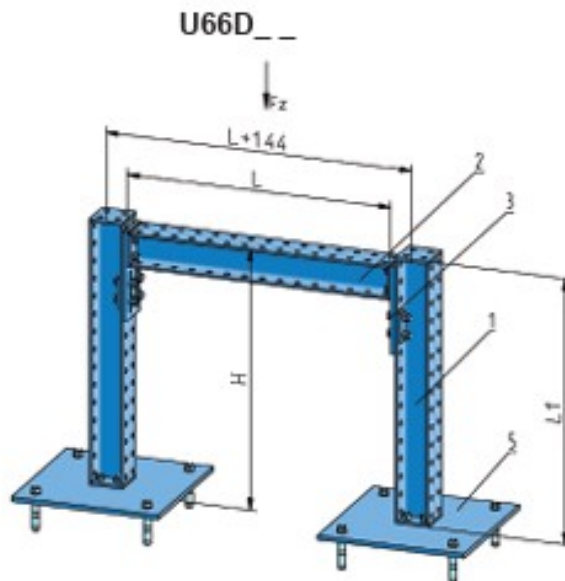


Bridge U66K__B (Connection section 190-310)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_B L=600	Fz[kN]	33,0	43,0	33,0	25,0	20,0	17,0	15,0
	kg	99,5	110,9	122,5	133,9	145,5	157,1	168,5
_C L=900	Fz[kN]	24,0	35,0	32,0	25,0	20,0	17,0	15,0
	kg	105,3	116,7	128,3	139,7	151,3	162,9	174,3
_D L=1200	Fz[kN]	18,0	29,0	31,0	24,0	20,0	17,0	15,0
	kg	111,0	122,4	134,0	145,4	157,0	168,6	180,0
_E L=1500	Fz[kN]	15,0	24,0	29,0	23,0	19,0	16,0	14,0
	kg	116,8	128,2	139,8	151,2	162,8	174,4	185,8
_F L=1800	Fz[kN]	12,0	21,0	27,0	22,0	19,0	16,0	14,0
	kg	122,6	134,0	145,6	157,0	168,6	180,2	191,6
_G L=2100	Fz[kN]	11,0	18,0	25,0	21,0	18,0	15,0	13,0
	kg	128,3	139,7	151,3	162,7	174,3	185,9	197,3

- Pos.1:** STB-0300-F up to STB-2100-F (2x)
Pos.2: STB-0600-F up to STB-2100-F
Pos.3: STB-APV-3-F (2x)
Pos.4: STB-APK-2-50-F (Connection section 190-310) (2x)

Example: U66KCEB = Bridge, clamp connection, L1=900 mm, L=1500 mm, STB-APK-2-50-F, Fz=29,0 kN

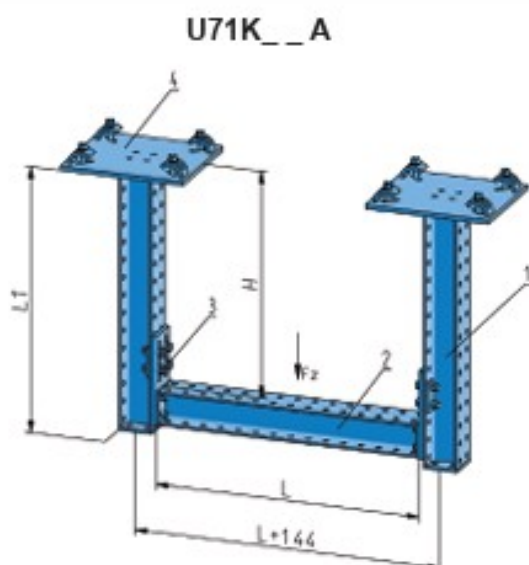


Bridge U66D_ _ (Plugplate)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	134 / 320	- 620	- 920	- 1220	- 1520	- 1820	- 2120
_B L=600	Fz[kN]	60,0	49,0	33,0	25,0	20,0	17,0	14,0
	kg	100,7	112,1	123,7	135,1	146,7	158,3	169,7
_C L=900	Fz[kN]	60,0	45,0	32,0	25,0	20,0	17,0	15,0
	kg	106,5	117,9	129,5	140,9	152,5	164,1	175,5
_D L=1200	Fz[kN]	47,0	42,0	31,0	24,0	20,0	17,0	15,0
	kg	112,2	123,6	135,2	146,6	158,2	169,8	181,2
_E L=1500	Fz[kN]	38,0	35,0	29,0	23,0	19,0	16,0	14,0
	kg	118,0	129,4	141,0	152,4	164,0	175,6	187,0
_F L=1800	Fz[kN]	31,0	31,0	27,0	22,0	18,0	16,0	14,0
	kg	123,8	135,2	146,8	158,2	169,8	181,4	192,8
_G L=2100	Fz[kN]	27,0	27,0	25,0	21,0	18,0	15,0	13,0
	kg	129,5	140,9	152,5	163,9	175,5	187,1	198,5

Pos.1: STB-0300-F up to STB-2100-F (2x)
Pos.2: STB-0600-F up to STB-2100-F
Pos.3: STB-APV-3-F (2x)
Pos.5: STB-APD-50-F (2x)

Example: U66DCE = Bridge, plug connection, L1=900 mm, L=1500 mm, STB-APD-50-F, Fz=29,0 kN

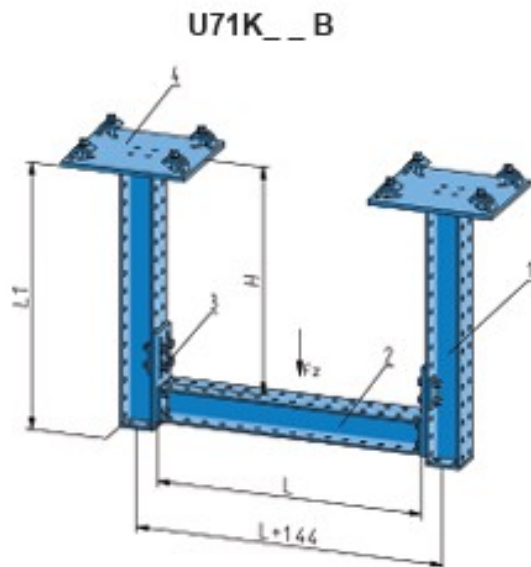


Bridge U71K_ _A (Connection section 80-200)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	20 / 208	- 508	- 808	- 1108	- 1408	- 1708	- 2008
_B L=600	Fz[kN]	32,0	35,0	27,0	21,0	18,0	15,0	13,0
	kg	65,9	77,3	88,9	100,3	111,9	123,5	134,9
_C L=900	Fz[kN]	23,0	33,0	26,0	21,0	17,0	15,0	13,0
	kg	71,7	83,1	94,7	106,1	117,7	129,3	140,7
_D L=1200	Fz[kN]	18,0	29,0	24,0	20,0	17,0	14,0	12,0
	kg	77,4	88,8	100,4	111,8	123,4	135,0	146,4
_E L=1500	Fz[kN]	15,0	24,0	23,0	19,0	16,0	14,0	12,0
	kg	83,2	94,6	106,2	117,6	129,2	140,8	152,2
_F L=1800	Fz[kN]	12,0	21,0	21,0	18,0	16,0	14,0	12,0
	kg	89,0	100,4	112,0	123,4	135,0	146,6	158,0
_G L=2100	Fz[kN]	10,0	18,0	20,0	17,0	15,0	13,0	11,0
	kg	94,7	106,1	117,7	129,1	140,7	152,3	163,7

- Pos.1:** STB-0300-F up to STB-2100-F (2x)
Pos.2: STB-0600-F up to STB-2100-F
Pos.3: STB-APV-3-F (2x)
Pos.4: STB-APK-1-50-F (Connection section 80-200) (2x)

Example: U71KCEA = Bridge, clamp connection, L1=900 mm, L=1500 mm, STB-APK-1-50-F, Fz=23,0 kN

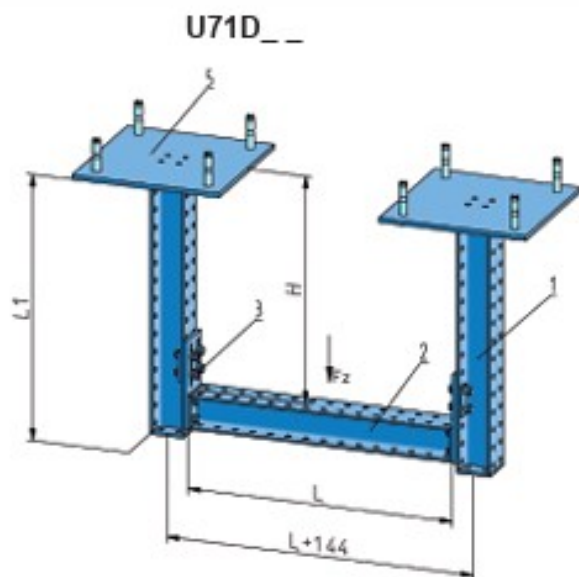


Bridge U71K_ _B (Connection section 190-310)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	20 / 206	- 506	- 806	- 1106	- 1406	- 1706	- 2006
_B L=600	Fz[kN]	32,0	35,0	27,0	21,0	18,0	15,0	13,0
	kg	99,5	110,9	122,5	133,9	145,5	157,1	168,5
_C L=900	Fz[kN]	23,0	33,0	26,0	21,0	17,0	15,0	13,0
	kg	105,3	116,7	128,3	139,7	151,3	162,9	174,3
_D L=1200	Fz[kN]	18,0	29,0	24,0	20,0	17,0	14,0	12,0
	kg	111,0	122,4	134,0	145,4	157,0	168,6	180,0
_E L=1500	Fz[kN]	15,0	24,0	23,0	19,0	16,0	14,0	12,0
	kg	116,8	128,2	139,8	151,2	162,8	174,4	185,8
_F L=1800	Fz[kN]	12,0	21,0	21,0	18,0	16,0	14,0	12,0
	kg	122,6	134,0	145,6	157,0	168,6	180,2	191,6
_G L=2100	Fz[kN]	10,0	18,0	20,0	17,0	15,0	13,0	11,0
	kg	128,3	139,7	151,3	162,7	174,3	185,9	197,3

- Pos.1:** STB-0300-F up to STB-2100-F (2x)
Pos.2: STB-0600-F up to STB-2100-F
Pos.3: STB-APV-3-F (2x)
Pos.4: STB-APK-2-50-F (Connection section 190-310) (2x)

Example: U71KCEB = Bridge, clamp connection, L1=900 mm, L=1500 mm, STB-APK-2-50-F, Fz=23,0 kN



Bridge U71D_ _ (Plugplate)

	L1	A	B	C	D	E	F	G
		300	600	900	1200	1500	1800	2100
	H	20 / 206	- 506	- 806	- 1106	- 1406	- 1706	- 2006
_B L=600	Fz[kN]	31,0	23,0	18,0	15,0	13,0	11,0	10,0
	kg	100,7	112,1	123,7	135,1	146,7	158,3	169,7
_C L=900	Fz[kN]	29,0	23,0	18,0	15,0	13,0	11,0	10,0
	kg	106,5	117,9	129,5	140,9	152,5	164,1	175,5
_D L=1200	Fz[kN]	25,0	21,0	18,0	15,0	13,0	11,0	10,0
	kg	112,2	123,6	135,2	146,6	158,2	169,8	181,2
_E L=1500	Fz[kN]	22,0	20,0	17,0	14,0	12,0	11,0	10,0
	kg	118,0	129,4	141,0	152,4	164,0	175,6	187,0
_F L=1800	Fz[kN]	19,0	18,0	16,0	14,0	12,0	11,0	9,0
	kg	123,8	135,2	146,8	158,2	169,8	181,4	192,8
_G L=2100	Fz[kN]	17,0	17,0	15,0	13,0	12,0	10,0	9,0
	kg	129,5	140,9	152,5	163,9	175,5	187,1	198,5

- Pos.1: STB-0300-F up to STB-2100-F (2x)
 Pos.2: STB-0600-F up to STB-2100-F
 Pos.3: STB-APV-3-F (2x)
 Pos.5: STB-APD-50-F (2x)

Example: U71DCE = Bridge, plug connection, L1=900 mm, L=1500 mm, STB-APD-50-F, Fz=17,0 kN

The BERNECKER-steelwork system is extremely versatile and easy to assemble thanks to its relatively small number of system components.

There are a number of important rules that must be followed however:

- The components are hot-dip galvanized and all necessary holes are predilled at our factory. Drilling or welding on the components affects their loadbearing capacity and *should be avoided*.

- Adapter plate assembly

Position the system beam and insert the 4 bolts supplied through the head plate and screw them into the tapped holes in the adapter plate. Tighten the bolts down with a torque wrench - torque setting 210 Nm.

- Adapter plate for clamp connection

Slacken the clamping plates supplied, align to desired beam and clamp tight. Tighten down to torque setting 210 Nm.

Caution: The bolt must be straight

- Adapter plate for plug connections

Our stress calculations are based on the use of the LIEBIG Type 25 plugs which are supplied - these plugs are an integral part of the loadbearing capacity of the overall system.

The plug must be set according to the instructions and building control approvals of the plug manufacturer. The specification sheet for the LIEBIG plugs which we supply is enclosed.

Please contact COBALCH if using plugs supplied by other manufacturers (phone +45 4582 0533)

- Assembly in general

The system beams can be connected to each other in a wide variety of ways. Loadings for a number of typical applications as illustrated on pages 13 - 30 are listed in the tables on these pages.

The screw fastenings supplied must be used as shown in the sketch and tightened with a torque wrench (setting 210 Nm)

Washer plates type STB-U-016-F must be fitted on the flange side in all 90° connections (see sketch).

