BSP BracketSystem® Polska

DECLARATION OF PERFORMANCE
BSP/01/2021

1. Trade name of the building product:

Set of BSP building products

2. Designation of the type of the building product:

Sets of building products for assembly of BSP substructure:

1. **„KW"**
2. **„KWRY"**
3. **„KCS"**
4. **„KWRW" i „KWRZ"**
5. **„KW" fixed with „KWRW" i „KWRZ"**
6. **„KWP2"**
7. **„FtF"**
8. **„FtF" fixed with „KWRW" i „KWRZ"**

3. Intended use:

Set of building products for assembly of interior and exterior ventilated claddings.

4. Name and adress of the manufacturer and place of the manufacturing of the product:

BSP Bracket System Polska Sp. z o.o.
ul. Prochowa 35 lok. 31,
04-388 Warszawa
Tel. +48 22 243 09 70
Email: info@bspsystem.com

5. Name and address of the registered office of the authorised representative: **N/A**

6. Polish domestic system used for the assessment and for the verification of the constancy of performance: **2+**

7. Polish domestic technical specification:

7b. National Technical Assessment:

ITB-KOT-2018/0434 edition 1 „A set of products for making BSP System substructure for fixing facade linings" with Annex No. 1 issued 22.12.2020

Technical Assessment Body/National Technical Assessment Body:

Building Research Institute – accreditation No. AC020

Name of accredited certification body, number of accreditation and number of national certificate or name of accredited laboratory/laboratories and number of accreditation:

Certbud Sp. z o.o. – No. AC158 (Certificate No. UWB-Z1421)

8. Declared performance:

Principal characteristics of the product for intended use	***Declared performance***	***Remarks***
Resistance to horizontal and vertical load	Tables D1-D6	According to ETAG 034 and EAD 090034-00-0404:2016
Resistance to corrosion of unprotected sets of products	Environment category: C1, C2, C3	According to PN-EN ISO 9223:2012
Resistance to corrosion of sets of products protected with oxide anodic coating and hooks made of steel 1.4401 or 1.4407 according to PN-EN 10088-1:2014	Environment category: C1, C2, C3, C4	According to PN-EN ISO 9223:2012
Classification in terms of reaction to fire of elements made of steel and aluminum	Class A1	According to PN-EN 13501-1+A1:2010
Classification in terms of reaction to fire of „KW1 PAS" and „KW3 PAS" brackets	Class B-s3, d0	According to PN-EN 13501-1+A1:2010
Classification in terms of fire propagation through external walls when exposed to fire from the outside	Not spreading fire (NRO)	According to PN-B-02867:2013

Table 1: Description of the sets covered by National Technical Assessment and the products that are parts of them.

Symbol of set	*Products that are parts of the set*				
	Brackets	***Brackets with laminate separators***	***Profiles***	***Hooks***	***Complementary sccessories***
„KW"	BSP KW1	BSP KW1 PAS, BSP KW3 PAS	L-profiles: BSP KWR2, BSP KWR5, BSP KWR7, BSP KWR10, BSP KWR11, BSP KWRG T-profiles: BSP KWR1, BSP KWR8, BSP KWR9, BSP KWR12	-	BSP HDPE pad, BSP KWP1 extension (used only with BSP KW1 bracket)
„KWRY"	BSP KW1	BSP KW1 PAS, BSP KW3 PAS	BSP KWRY50, BSP KWRY80	BSP KWZ	BSP HDPE pad, BSP KWP1 extension (used only with BSP KW1 bracket)
„KCS"	BSP KW1	BSP KW1 PAS, BSP KW3 PAS	BSP KCL BSP KCT	BSP KC1, BSP KC2, BSP KC3, BSP KC4, BSP KC5, BSP C0, BSP C1, BSP Z1	BSP HDPE pad, BSP KWP1 extension (used only with BSP KW1 bracket)
„KWRW i KWRZ"	-	-	BSP KWRW, BSP KWRZ	BSP KWRW, BSP KWRZ	-
„KW fixed with KWRW i KWRZ"	BSP KW1	BSP KW1 PAS, BSP KW3 PAS	L-profiles: BSP KWR2, BSP KWR5, BSP KWR7, BSP KWR10, BSP KWR11, BSP KWRG T-profiles: BSP KWR1, BSP KWR8, BSP KWR9, BSP KWR12	BSP KWRW, BSP KWRZ	BSP HDPE pad, BSP KWP1 extension (used only with BSP KW1 bracket)
„KWP2"	BSP KW1	-	BSP KWR1	-	BSP KWW1 foot, BSP KWP2 extension
„FtF"	BSP K1, BSP K2	-	BSP KWR6	-	BSP HDPE pad, BSP KP1 extension
„FtF fixed with KWRW i KWRZ	BSP K1, BSP K2		BSP KWR6 BSP KWRW, BSP KWRZ	BSP KWRW, BSP KWRZ	BSP HDPE pad, BSP KP1 extension

Table D1. Resistance of console connections with profiles to vertical and horizontal load – average values

Connection type of the profile with console			BSP profile: KCL, KCT, KWRY50, KWRY80, KWR1, KWR2, KWR5, KWR6, KWR7, KWR8, KWR9, KWR10, KWR11, KWR12, KWRG, KWRW, KWRZ																			
			BSP console: KW1 PAS, KW3 PAS, KW1, K1, K2 or BSP console with extension: KW1+ KWP1, K1+ KP1, K2+ KP1																BSP console: KW1, K1, K2			
Geometrical parameters - dimensions of the console		L_x (console reach - A[1], in the case of consoles with extensions - total reach of the console - A[1] and extension), mm	≤ 170				≤220				≤260				≤280				≤310			
		B[1] (console height), mm	≥ 150	≥ 120	≥90	≥60	≥ 150	≥ 120	≥90	≥60	≥ 150	≥ 120	≥90	≥60	≥ 150	≥ 120	≥90	≥60	≥ 150	≥ 120	≥90	≥60
		C[2] (foot thickness), mm	≥3				≥ 4				≥ 4				≥ 4				≥ 4			
		foot width, mm	≥47				≥59				≥59				≥59				≥59			
Average value of force F_m, N	Resistance to vertical force	load value with displacement of 0.2%-L_x	198	198	86	86	165	181	87	49	165	135	60	49	165	135	60	52	144	115	67	49
		F_r - load value with constant displacement 0.2%-L_x	666	666	161	161	949	738	179	89	949	555	130	89	949	555	130	80	780	477	129	103
		F_{1d} - load value with displacement of 1 mm	496	496	177	177	277	377	166	80	277	228	101	80	277	228	101	77	217	178	100	72
		F_{3d} - load value with displacement of 3 mm	1155	1155	304	304	744	885	381	173	744	578	238	173	744	578	238	153	602	470	189	150
		F_s - load value at damage	4509	4509	1458	1458	3956	3963	1934	914	3956	3007	1398	914	3956	3007	1398	801	3246	2461	1202	642
	Resistance to horizontal force	load value with displacement of 1 mm	932	932	724	724	1478	1310	955	800	1478	1310	790	758	1268	1268	790	659	1663	1447	1112	994
		F_m- load value with constant displacement of 1 mm	2831	2831	2093	2093	4458	4262	2613	2330	4458	4262	2798	2367	3797	3797	2798	2003	5027	5031	2932	2601
		F_t - load value at damage	9394	9394	4476	4476	11357	9757	6512	4986	11357	9757	9053	7915	10704	10704	9053	5416	11975	11283	9547	7018

[1] Designations A, B according to fig. B1, B2 and B30
[2] Designation C according to fig. B1, B2 and B30

Table D2. Resistance of console connections with profiles to vertical and horizontal load – characteristic values

Connection type of the profile with console			BSP profile: KCL, KCT, KWRY50, KWRY80, KWR1, KWR2, KWR5, KWR6, KWR7, KWR8, KWR9, KWR10, KWR11, KWR12, KWRG, KWRW, KWRZ																			
			BSP console: KW1 PAS, KW3 PAS, KW1, K1, K2 or BSP console with extension: KW1+ KWP1, K1+ KP1, K2+ KP1																BSP console: KW1, K1, K2			
Geometrical parameters -		L_x (console reach - A[1], in the case of consoles with extensions - total reach of the console - A[1] and extension), mm	≤ 170				≤ 220				≤260				≤280				≤ 310			
		B[1] (console height, mm	≥ 150	≥ 120	≥90	≥60	≥ 150	≥ 120	≥ 90	≥60	≥ 150	≥ 120	≥ 90	≥60	≥150	≥ 120	≥90	≥60	≥ 150	≥ 120	≥ 90	≥60
		C[2] (console foot thickness), mm	≥3				≥4				≥ 4				≥4				≥ 4			
		foot width, mm	≥47				≥ 59				≥ 59				≥ 59				≥ 59			
Characteristic value of force $F_{U,5,N}$ [3]	Resistance to vertical force	load value with a displacement of 0.2%-L_x	165	165	76	76	133	163	76	40	133	94	53	40	133	94	53	32	135	110	56	40
		R_{cr} - load value with a constant displacement of 0.2%-L_x	626	626	81	81	857	542	115	54	857	515	110	54	857	515	110	7	719	359	106	95
		R_{cd1} - wa load value with a displacement of 1 mm	443	443	138	138	217	343	147	67	217	152	94	67	217	152	94	46	192	162	83	63
		R_{cd2}- load value with a displacement of 3 mm	1035	1035	236	236	606	772	319	137	606	460	212	137	606	460	212	86	540	412	144	135
		R_s - load value at damage	4362	4362	1377	1377	3672	3535	1819	848	3672	2794	1164	848	3672	2794	1164	730	3034	2374	1043	603
	Resistance to horizontal force	load value with a displacement of 1 mm	786	786	545	545	1149	1110	864	734	1149	1110	586	674	832	832	586	432	1471	1327	985	953
		R_c- load value with constant displacement of 1 mm	2241	2241	1902	1902	4153	3806	2403	2185	4153	3806	2212	2155	3552	3552	2212	1713	4554	3835	2627	2527
		R_f- load value at damage	7243	7243	3726	3726	10692	8936	6028	4901	10692	8936	8275	7014	9749	9749	8275	4790	11916	9975	9301	5833

1) Designations A, B according to fig. B1, B2 and B30
2) Designation C according to fig. B1, B2 and B30
3) Characteristic value of force F_m giving 75% certainty that 95% of the test results will be greater than this value

Table D3. Resistance of hook connections with profiles to horizontal load – average values

F_m - resistance to horizontal force, N - average value		
Connection type	**F_I - load value with constant displacement of 1 mm**	**F_{IU} - load value at damage**
KWZ hook of length ≥ 20 mm with KWRY 50 or KWRY 80 profile	1209	2181
KC1 hook of length ≥ 34 mm with KCL or KCT profile	2862	3767
KC2 hook of length ≥ 34 mm with KCL or KCT profile	1370	1612
KC3 hook of length ≥ 34 mm with KCL or KCT profile	1685	1911
KC4 hook of length ≥ 34 mm with KCL or KCT profile	2306	2710
KC5 hook of length ≥ 25 mm with KCL or KCT profile	2319	2572
C1 hook used with Z1 hook of width ≥ 27 mm with KCL or KCT profile	815	844
C0 hook of width ≥ 34 mm with KCL or KCT profile	815	844
KWRW hook of length ≥ 60 mm with KWRW or KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	957	3025
KWRZ hook of length ≥ 60 mm with KWRW profile: case of maximum profile extension by means of an M6 screw[1)]	957	3025
KWRW hook of length ≥ 60 mm: with KWRW or KWRZ profile: case of minimal profile extension[1)]	755	3919
KWRZ hook of length ≥ 60 mm with KWRW profile: case of minimal profile extension[1)]	755	3919
KWRZ hook of length ≥ 60 mm, with KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	3681	10966
KWRZ hook of length ≥ 60 mm with KWRZ profile: case of minimal profile extension[1)]	3054	14576
[1)] according to fig. D8		

Table D4. Resistance of hook connections with profiles to vertical load – average values

F_m - resistance to vertical force, N - average value		
Connection type	**F_I - load value with constant displacement of 1 mm**	**F_{IU} - load value at destruction**
KWZ hook of length ≥ 20 mm with KWRY 50 or KWRY 80 profile	1440	1864
KC1 hook of length ≥ 34 mm with KCL or KCT profile	2052	2400
KC2 hook of length ≥ 34 mm with KCL or KCT profile	1882	3425
KC3 hook of length ≥ 34 mm with KCL or KCT profile	1662	1962
KC4 hook of length ≥ 34 mm with KCL or KCT profile	1731	1924
KC5 hook of length ≥ 25 mm with KCL or KCT profile	1460	1599
C1+Z1 hook of width ≥ 27 mm with KCL or KCT profile,	1536	2340
C0 hook of width ≥ 34 mm with KCL or KCT profile	1536	2340
2 KWRW hooks of length ≥ 60 mm with KWRW or KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	2443	6545
2 KWRZ hooks of length ≥ 60 mm with KWRW profile: case of maximum profile extension by means of an M6 screw[1)]	2443	6545
2 KWRZ hooks of length ≥ 60 mm with KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	6574	14998
[1)] according to fig. D8		

Table D5. Resistance of hook connections with profiles to horizontal load – characteristic values

F_C - resistance to horizontal force, N - characteristic value		
Connection type	**F_I - load value with constant displacement of 1 mm**	**F_{IU} - load value at damage**
KWZ hook of length ≥ 20 mm with KWRY 50 or KWRY 80 profile	1106	2045
KC1 hook of length ≥ 34 mm with KCL or KCT profile	1521	2822
KC2 hook of length ≥ 34 mm with KCL or KCT profile	1039	1017
KC3 hook of length ≥ 34 mm with KCL or KCT profile	1508	1741
KC4 hook of length ≥ 34 mm with KCL or KCT profile	2161	2436
KC5 hook of length ≥ 25 mm with KCL or KCT profile	1820	1986
C1 hook used with Z1 hook of width ≥ 27 mm with KCL or KCT profile	779	801
C0 hook of width ≥ 34 mm with KCL or KCT profile	779	801
KWRW hook of length ≥ 60 mm with KWRW or KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	823	2824
KWRZ hook of length ≥ 60 mm with KWRW profile: case of maximum profile extension by means of an M6 screw[1)]	823	2824
KWRW hook of length ≥ 60 mm: with KWRW or KWRZ profile: case of minimal profile extension[1)]	720	3165
KWRZ hook of length ≥ 60 mm with KWRW profile: case of minimal profile extension[1)]	720	3165
KWRZ hook of length ≥ 60 mm, with KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	3525	9625
KWRZ hook of length ≥ 60 mm with KWRZ profile: case of minimal profile extension[1)]	2879	13992
[1)] according to fig. D8		

Table D6. Resistance of hook connections with profiles to vertical load – characteristic values

F_C - resistance to vertical force, N - characteristic value		
Connection type	**F_I - load value with constant displacement of 1 mm**	**F_{IU} - load value at damage**
KWZ hook of length ≥ 20 mm with KWRY 50 or KWRY 80 profile	1328	1625
KC1 hook of length ≥ 34 mm with KCL or KCT profile	1914	2353
KC2 hook of length ≥ 34 mm with KCL or KCT profile	1758	2905
KC3 hook of length ≥ 34 mm with KCL or KCT profile	1468	1903
KC4 hook of length ≥ 34 mm with KCL or KCT profile	1598	1789
KC5 hook of length ≥ 25 mm with KCL or KCT profile	1382	1502
C1+Z1 hook of width ≥ 27 mm with KCL or KCT profile	1498	2281
C0 hook of width ≥ 34 mm with KCL or KCT profile	1498	2281
2 KWRW hooks of length ≥ 60 mm with KWRW or KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	2288	6180
2 KWRZ hooks of length ≥ 60 mm with KWRW profile: case of maximum profile extension by means of an M6 screw[1)]	2288	6180
2 KWRZ hooks of length ≥ 60 mm with KWRZ profile: case of maximum profile extension by means of an M6 screw[1)]	5199	14996
[1)] according to fig. D8		

9. The performance of the products defined above are compliant with all the performance declared in point 8. The present Polish domestic declaration of performance is issued in accordance with the Act of Parliament dated 16th April 2004 on building products under the exclusive responsibility of the manufacturer.

On behalf of the manufacturer:

Marcin Kwieciński – Chairman of the Board
Mateusz Nowak – Member of the Board

(first and last name)

BracketSystem Polska Sp. z o.o.
Mateusz Nowak
Członek Zarządu

BracketSystem Polska Sp. z o.o.
Marcin Kwieciński
Prezes Zarządu

Warsaw, 10.02.2021

(place and date)

(signs)