

BBS characteristics

cross sectional

layers	thickness ¹⁾	construction								A_{net}	I_{net}	W_{net}	i_{net}	A_q	
	[mm]	[mm]								[cm ²]	[cm ⁴]	[cm ³]	[cm]	[cm ²]	
3	65 / 19	19	27	19						380	2.125	654	2,36	650	
	74 / 19	19	36	19						380	2.988	808	2,80	740	
	81 / 19	19	43	19						380	3.766	930	3,15	810	
5	102 / 19	19	22	20	22	19				580	6.726	1.319	3,41	1.020	
	112 / 19	19	27	20	27	19				580	8.398	1.500	3,81	1.120	
	122 / 19	19	22	40	22	19				780	10.726	1.758	3,71	1.220	
	130 / 19	19	36	20	36	19				580	11.886	1.829	4,53	1.300	
	143 / 39	39	22	21	22	39				990	22.157	3.099	4,73	1.430	
	153 / 39	39	27	21	27	39				990	26.408	3.452	5,16	1.530	
	163 / 39	39	22	41	22	39				1.190	31.546	3.871	5,15	1.630	
	171 / 39	39	36	21	36	39				990	35.043	4.099	5,95	1.710	
185 / 39	39	43	21	43	39				990	42.632	4.609	6,56	1.850		
7	199 / 39	39	27	20	27	20	27	39		1.180	53.251	5.352	6,72	1.990	
	226 / 39	39	36	20	36	20	36	39		1.180	72.448	6.411	7,84	2.260	
	247 / 39	39	43	20	43	20	43	39		1.180	89.456	7.243	8,71	2.470	
9	282 / 39	39	36	20	36	20	36	20	36	39	1.380	128.878	9.140	9,66	2.820

total / top layer  ... longitudinal layer
 ... cross layer

A_{netto} ... cross sectional area net [only longitudinal layers]
 I_{netto} ... torque of inertia net [only longitudinal layers]
 W_{netto} ... section modulus net [only longitudinal layers]
 i_{netto} ... gyration radius net [only longitudinal layers]
 A_q ... total cross section area [for thrust calculation]
 crosssectional data relating to BBS with a width of 1 m

¹⁾ double-sided visible quality | 2 mm thinner

material

kind of loading	DIN 1052-1 DIN 4074-1		relating to
	[N/mm ²]		
E-module inflexion	E_B	11.000	net cross section
inflexion right angled to plane	permitted σ_B	7,50	net cross section
G-module from lateral force	G_q	60	total cross section
thrust from lateral force	permitted τ_q	0,30	total cross section
pressure in palne	permitted σ_D	8,50	net cross section
normal pressure to plane	permitted $\sigma_{D, normal}$	2,50	surface
pull on plane	permitted σ_Z	4,90	net cross section
kind of loading	EN 1995-1-1 EN 338		relating to
	[N/mm ²]		
E-module inflexion	$E_{o, mean}$	11.000	net cross section
inflexion right angled to plane	$f_{m, k}$	18	net cross section
G-module from lateral force	G_{mean}	60	total cross section
thrust from lateral force	$f_{R, k}$	0,70	total cross section
pressure in palne	$f_{c, o, k}$	21	net cross section
normal pressure to plane	$f_{c, 90, k}$	2,5	surface
pull on plane	$f_{t, o, k}$	9,80	net cross section