

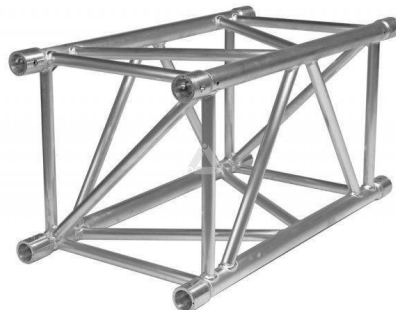
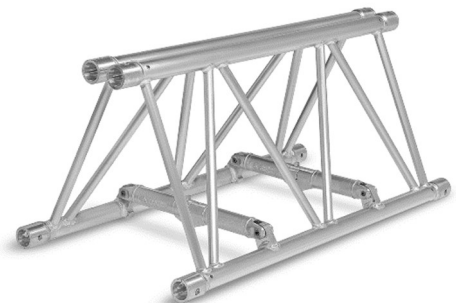
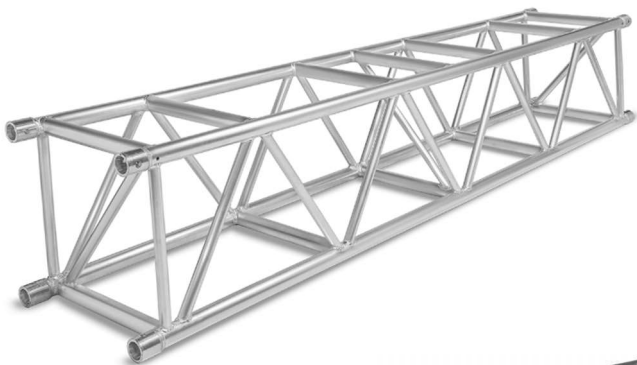


PROLYTE

S52F-V-SV Truss

User manual

Part 2: Product-specific instructions



Original instructions

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If you have comments or improvement ideas for this document, please contact us by using the e-mail address found on the back cover of the document. All comments and ideas will be carefully considered in the future development of the product or this document.

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Change history

Issue	Date	Changes
1	July 2023	First issue.

1 Introduction

This manual is intended for truss owners, providers and skilled riggers and any person who has been trained in working safely with trusses.

This manual is Part 2 of the User Manual. The User Manual consists of the following parts:

- Part 1: General instructions
- Part 2: Product-specific instructions

This manual must be read in conjunction with *Part 1: General instructions* of the User Manual.

If there are discrepancies between *Part 1* and *Part 2*, the information given in *Part 2* is the information that applies to the product and overrides the information given in *Part 1*.

This manual assumes that you have been trained or work under the control of a competent or qualified person who has been trained in safety and assembly.

1.1 About this product

PROLYTE trusses are structural elements designed to be repeatedly assembled and disassembled to carry loads in temporary or permanent installations. Depending on the application, PROLYTE trusses can be referred to as lifting accessories or construction products. For information on the related standards, see Chapter 1.5.

The S52 series can be used for indoor and outdoor structures.

1.2 Related information

For more information on the product, see www.prolyte.com/products/aluminium-truss.

1.3 About this manual

Before working with the product, read this manual carefully and pay attention to the information provided. Use this manual to familiarize yourself with the product, its proper use and safety regulations.

1.3.1 Safety conventions



Indicates a hazardous situation, which, if not avoided, will result in death or serious injury. This signal word is limited to the most extreme situations.



Indicates a hazardous situation, which, if not avoided, could result in death or serious injury.



Indicates a hazardous situation, which, if not avoided, could result in minor or moderate injury.



Indicates information considered important but not hazard-related.

1.4 Terminology

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

Trusses and truss modules are hereinafter referred to by the term “truss”.

1.5 Standards

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

2 Safety

Before working with the product, see the section *Safety* in *PROLYTE Trusses User Manual, Part 1: General instructions*. Read the Safety information carefully and pay attention to the information provided.

In addition to the Safety information provided in Part 1, make sure you read the Safety information provided in this product-specific user manual.

NOTICE

Read these safety texts carefully before working with the product.

NOTICE

Make sure manuals are available at all times for all users and employees.

3 Limitations of use

Make sure you read the information provided in section *Limitations of use* in *PROLYTE Trusses User Manual, Part 1: General instructions*.

PROLYTE trusses described in this manual are not specifically designed for lifting people. Adequate load reduction and safety precautions, according to local legislation, must be considered when people are lifted.

3.1 Allowable loading

For load capacity information, see Chapter 7.

3.2 Structural data

All our trusses are calculated according to the Eurocode 9 (DIN-EN 1999) standard. Eurocodes are standards based on Load and Resistance Factor Design (LRFD).

WARNING

The structural data provided before January 2016 was based on the German DIN 4113 standard. As this standard had a different safety principle, the structural values cannot be compared.

NOTICE

TÜV certificates issued after February 2015 are all based on Eurocode 9.

Code	Type	Material	Geometry								
			Dimensions centre to centre		Main chord [mm]	diagonals [mm]	Cross-section complete truss				Average dead weight
			Height	Width			A	I _y	I _z	I _T	g
			[mm]	[mm]			[cm ²]	[cm ⁴]	[cm ⁴]	[cm ⁴]	[kg/m]
S52F	Folding	6082 T6	470	520	50x4	25x3	23.12	10906.2	-	-	12
S52V	Square	6082 T6	470	470	50x4	30x3	23.12	10906.19	3650	950	15
S52SV	Square	6082 T6	470	170	50x4	30x3	23.12	10906.19	10906.19	3300	15

Table 1: Geometry

Code	Design values of resistances				
	Main chord	Complete truss			
	N _{rd}	M _{y,rd}	M _{z,rd}	V _{z,rd}	V _{y,rd}
	[kN]	[kNm]	[kNm]	[kN]	[kN]
S52F	68.44	57.13	-	34.53	-
S52V	65.29	61.37	-	42.61	-
S52SV	68.44	64.33	64.33	42.61	42.61

Table 2: Design values of resistances

4 Transport, handling and storage

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

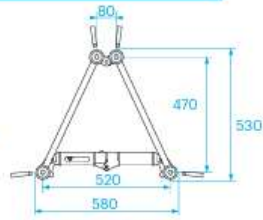
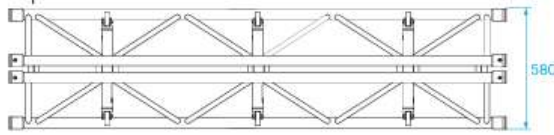
5 Identification

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

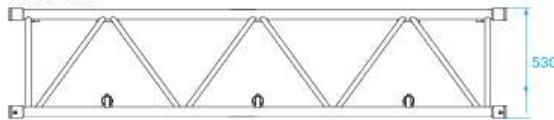
6 Technical specifications

S52F

Top View

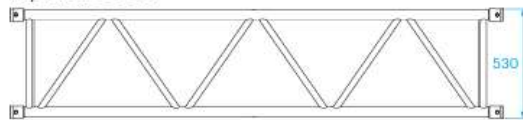


Side View

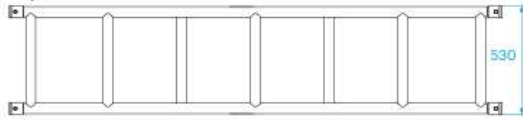


S52SV - S52V

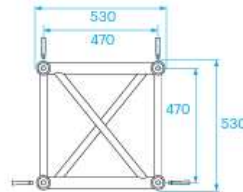
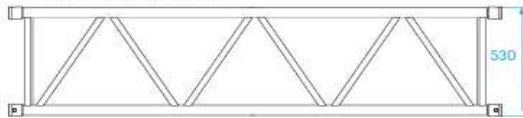
Top View S52SV



Top View S52V



Side View S52SV - S52V



Technical Specifications - S52 Series

Types	Folding (F), Square (V)
Alloy	EN AW 6082 T6
Main Chords	50 x 4 mm
Diagonal Members	S52F - 25 x 3 mm S52V/SV - 30 x 3 mm
Coupling System	CCS7

S52V / S52SV / S52F - Standard available Lengths and Codes

Metres	Feet	Code*
0,60	1.97	S52--L060 S52F-L060
0,80	2.62	S52--L080 S52F-L080
1,00	3.28	S52--L100
1,20	3.94	S52--L120 S52F-L120
1,50	4.92	S52--L150
1,60	5.25	S52--L160 S52F-L160
2,00	6.56	S52--L200
2,40	7.87	S52--L240 S52F-L240
2,50	8.20	S52--L250
3,00	9.84	S52--L300
3,20	10.50	S52--L320
4,00	13.12	S52--L400

*on • indicate V for Square and SV for Square truss with

7 Load capacity

In addition to the information and instructions provided in *PROLYTE Trusses User Manual, Part 1: General instructions*, the truss loads shall never exceed the values stated in the load tables below.

 S52F - Allowable Loading

SPAN		Uniformly Distributed Load		DEFLECTION		MAXIMUM ALLOWABLE POINT LOADS										SPAN
		UDL				CPL		DEFLECTION		TPL		QPL		FPL		
m	ft	kg/m	lbs/ft	mm	inch	kgs	lbs	mm	inch	kgs	lbs	kgs	lbs	kgs	lbs	total weight
2.4	7.9	1049.2	706.0	3	0.1	2060.3	4547.1	2	0.1	1030.2	2273.6	686.8	1515.7	515.1	1136.8	28.8
3.6	11.8	697.5	469.3	7	0.3	1895.7	4183.8	5	0.2	1027.2	2267.1	684.8	1511.4	513.6	1133.6	43.2
4.8	15.7	663.9	446.7	12	0.5	1574.1	3474.0	10	0.4	983.7	2170.9	655.8	1447.3	486.7	1074.1	57.6
6.0	19.7	529.6	356.4	19	0.7	1253.4	2766.3	15	0.6	940.1	2074.8	626.7	1383.2	459.7	1014.6	72
7.2	23.6	432.7	291.2	27	1.1	1038.6	2292.2	22	0.8	778.9	1719.1	519.3	1146.1	432.7	955.1	86.4
8.4	27.6	357.9	240.8	37	1.4	884.2	1951.4	29	1.2	663.2	1463.6	442.1	975.7	368.4	813.1	100.8
9.6	31.5	303.8	204.4	48	1.9	767.6	1694.1	38	1.5	575.7	1270.6	383.8	847.1	319.8	705.9	115.2
10.8	35.4	237.9	160.1	61	2.4	743.8	1641.6	49	1.9	557.9	1231.2	371.9	820.8	309.9	684.0	129.6
12.0	39.4	200.8	135.1	75	2.9	722.9	1595.4	60	2.4	542.2	1196.6	361.5	797.7	301.2	664.8	144
13.2	43.3	164.1	110.4	91	3.6	703.9	1553.5	72	2.9	527.9	1165.1	352.0	776.8	293.3	647.3	158.4
14.4	47.2	136.1	91.6	108	4.2	686.2	1514.4	86	3.4	514.6	1135.8	343.1	757.2	285.9	631.0	172.8
15.6	51.2	114.4	77.0	126	5.0	624.7	1378.7	101	4.0	468.5	1034.0	312.3	689.3	260.3	574.4	187.2
16.8	55.1	97.2	65.4	147	5.8	571.3	1260.9	117	4.6	428.5	945.7	285.7	630.4	238.0	525.4	201.6
18.0	59.0	83.2	56.0	168	6.6	561.9	1240.2	135	5.3	421.4	930.1	281.0	620.1	234.1	516.7	216
19.2	63.0	71.9	48.4	192	7.5	551.9	1218.0	153	6.0	413.9	913.5	275.9	609.0	229.9	507.5	230.4
20.4	66.9	62.4	42.0	216	8.5	509.3	1124.1	173	6.8	382.0	843.1	254.7	562.1	212.2	468.4	244.8
21.6	70.8	54.5	36.7	242	9.5	471.0	1039.4	194	7.6	353.2	779.6	235.5	519.7	196.2	433.1	259.2

1 inch = 25.4 mm | 1m = 3.28 ft | 1 lbs = 0.453 kg

 S52V - Allowable Loading

SPAN		Uniformly Distributed Load		DEFLECTION		MAXIMUM ALLOWABLE POINT LOADS										SPAN
		UDL				CPL		DEFLECTION		TPL		QPL		FPL		
m	ft	kg/m	lbs/ft	mm	inch	kgs	lbs	mm	inch	kgs	lbs	kgs	lbs	kgs	lbs	total weight
3	9.8	1880.2	1265.1	5	0.2	2962.7	6538.7	4	0.2	1863.5	4112.8	1410.7	3113.4	1144.2	2525.2	45.0
4	13.1	1406.8	946.6	9	0.4	2526.0	5574.9	7	0.3	1584.5	3496.9	1239.4	2735.3	1028.6	2270.1	60.0
5	16.4	1122.7	755.5	14	0.5	2198.7	4852.4	11	0.4	1394.6	3078.0	1115.6	2462.2	931.1	2055.0	75.0
6	19.7	895.7	602.7	20	0.8	1943.7	4289.6	16	0.6	1254.9	2769.7	1020.4	2252.0	854.2	1885.1	90.0
7	23.0	654.5	440.4	27	1.1	1738.9	3837.8	22	0.9	1139.2	2514.2	938.8	2072.0	759.5	1676.3	105.0
8	26.2	497.9	335.0	36	1.4	1570.6	3466.3	29	1.1	1041.5	2298.6	868.0	1915.6	682.6	1506.5	120.0
9	29.5	390.6	262.8	45	1.8	1429.4	3154.7	36	1.4	957.8	2113.9	805.7	1778.3	618.6	1365.3	135.0
10	32.8	313.8	211.2	56	2.2	1309.1	2889.1	45	1.8	885.2	1953.6	733.5	1618.8	564.6	1246.0	150.0
11	36.1	257.0	172.9	68	2.7	1205.0	2659.5	54	2.1	821.4	1812.9	668.8	1476.0	518.1	1143.5	165.0
12	39.4	213.8	143.9	80	3.2	1114.0	2458.6	64	2.5	764.9	1688.1	613.2	1353.3	477.8	1054.4	180.0
13	42.6	180.2	121.2	94	3.7	1033.5	2281.0	76	3.0	714.3	1576.5	564.8	1246.4	442.2	976.0	195.0
14	45.9	153.5	103.3	109	4.3	961.7	2122.5	88	3.4	668.7	1475.9	522.1	1152.4	410.7	906.4	210.0
15	49.2	132.0	88.8	126	4.9	897.1	1979.9	101	4.0	627.4	1384.6	484.3	1068.8	382.5	844.1	225.0
16	52.5	114.4	76.9	143	5.6	838.5	1850.7	114	4.5	589.6	1301.2	450.3	993.9	357.0	787.8	240.0
17	55.8	99.8	67.1	161	6.4	785.1	1732.8	129	5.1	554.9	1224.6	419.7	926.2	333.8	736.7	255.0
18	59.0	87.5	58.9	181	7.1	736.1	1624.6	145	5.7	522.8	1153.8	391.8	864.6	312.6	689.9	270.0
19	62.3	77.2	51.9	202	7.9	690.9	1524.8	161	6.4	493.0	1088.0	366.2	808.3	293.1	646.9	285.0
20	65.6	68.3	46.0	223	8.8	648.9	1432.2	179	7.0	465.2	1026.7	341.7	754.0	275.1	607.1	300.0

1 inch = 25.4 mm | 1m = 3.28 ft | 1 lbs = 0.453 kg

SPAN		Uniformly Distributed Load		DEFLECTION		MAXIMUM ALLOWABLE POINT LOADS																SPAN
						Centre Point Load		DEFLECTION		Single Load Third Points Load per Point		Single Load Fourth Points Load per Point		Single Load Fifth Points Load per Point								
m	ft	kg/m	lbs/ft	mm	inch	CPL		DEFLECTION		TPL		QPL		FPL		total weight						
						kgs	lbs	mm	inch	kgs	lbs	kgs	lbs	kgs	lbs							
3	9,8	1880,2	1265,1	5	0,2	2946,1	6501,9	4	0,2	1863,5	4112,8	1410,7	3113,4	1144,2	2525,2	45,0						
4	13,1	1406,8	946,6	9	0,4	2505,6	5529,8	7	0,3	1584,5	3496,9	1239,4	2735,3	1028,6	2270,1	60,0						
5	16,4	1122,7	755,5	15	0,6	2179,5	4810,2	12	0,5	1384,5	3055,5	1109,0	2447,6	927,3	2046,5	75,0						
6	19,7	933,4	628,0	21	0,8	1925,9	4250,5	17	0,7	1245,2	2748,1	1013,9	2237,7	846,0	1867,2	90,0						
7	23,0	686,7	462,1	29	1,1	1722,6	3801,8	23	0,9	1129,9	2493,8	932,5	2058,1	752,1	1660,0	105,0						
8	26,2	522,6	351,7	37	1,5	1555,6	3433,2	30	1,2	1032,8	2279,4	862,0	1902,4	675,9	1491,6	120,0						
9	29,5	410,1	275,9	47	1,9	1415,7	3124,5	38	1,5	949,7	2096,1	800,1	1765,8	612,6	1351,9	135,0						
10	32,8	329,6	221,8	59	2,3	1296,6	2861,6	47	1,8	877,7	1937,1	725,7	1601,6	559,1	1233,9	150,0						
11	36,1	270,1	181,7	71	2,8	1193,7	2634,6	57	2,2	814,5	1797,6	661,8	1460,7	513,2	1132,6	165,0						
12	39,4	224,8	151,2	84	3,3	1103,8	2436,1	67	2,7	758,6	1674,1	607,0	1339,7	473,3	1044,6	180,0						
13	42,6	189,5	127,5	99	3,9	1024,4	2260,8	79	3,1	708,6	1563,8	559,3	1234,4	438,3	967,3	195,0						
14	45,9	161,6	108,7	115	4,5	953,6	2104,5	92	3,6	663,6	1464,5	517,3	1141,8	407,2	898,7	210,0						
15	49,2	139,0	93,5	132	5,2	889,9	1964,0	105	4,1	622,7	1374,4	480,1	1059,5	379,4	837,3	225,0						
16	52,5	120,5	81,1	150	5,9	832,3	1836,8	120	4,7	585,5	1292,1	446,7	985,9	354,3	781,9	240,0						
17	55,8	105,2	70,8	169	6,7	779,7	1720,8	135	5,3	551,3	1216,7	416,6	919,4	331,5	731,6	255,0						
18	59,0	92,4	62,2	190	7,5	731,5	1614,5	152	6,0	519,7	1147,0	389,2	858,9	310,7	685,6	270,0						
19	62,3	81,5	54,9	211	8,3	687,1	1516,5	169	6,7	490,4	1082,4	364,1	803,7	291,5	643,4	285,0						
20	65,6	72,3	48,6	234	9,2	646,0	1425,7	187	7,4	463,2	1022,2	341,1	752,9	273,8	604,4	300,0						

1 inch = 25,4 mm | 1m = 3.28 ft | 1 lbs = 0,453 kg

- TÜV certification only valid for loading table above.
- Loading figures are only valid for static loads.
- Loading figures are only valid for single spans with supports at both ends.
- All static systems, other than single spans, need an individual structural calculation. Please contact a structural engineer or Prolyte for assistance.
- Loading figures are calculated according to and in full compliance with European standards (Eurocode).
- The self-weight of the trusses is already taken into account.
- Loading figures are only valid for the cross sectional orientation of the truss as shown by the icon in the loading table.
- The interaction between bending moment and shear force at the connection point is already taken into account.
- Truss spans can be assembled from different truss lengths.
- Read the manual before assembling, using and loading the truss.

8 Approved accessories

For a complete overview of approved accessories, see our brochures or www.prolyte.com.

WARNING

By using excessive force when tightening accessories such as lamp hooks or cell clamps, you may cause damage to the truss chords.

CAUTION

Pay special attention when using lamp hooks or cell clamps. Their inside radius may not meet the tube they need to be attached to. This can lead to severe damage.

NOTICE

You should never allow accessories to damage other products.

9 Coatings and surface treatments

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

10 Slinging methods

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

11 Assembly and disassembly

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

12 Maintenance

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

13 Inspection

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

14 Discard criteria

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

15 Warranty

See *PROLYTE Trusses User Manual, Part 1: General instructions*.

16 Certificates

The TÜV certificates for this product are available at:

<https://www.prolyte.com/support/certificates/certificates-download>

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