FORK TRUSS

LIBERA FL76



This LIBERA system is designed for large grids and complex installations, allowing the construction of structures up to 22 metres in length.

For indoor applications, it is suitable for theatre grid structures, as well as for TV and cinema studios.

- 47 to 200 cm flat trusses
- Available in two versions: standard and with built-in roofing sheet guides
- Ends with aluminium forks
- Curved parts for grid structure end fittings
- Universal four-way connection

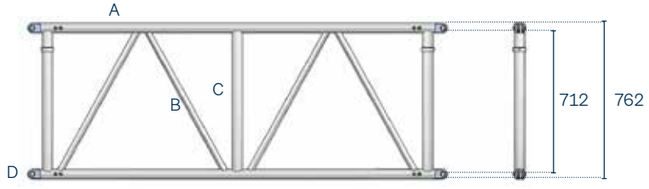
LINEAR ELEMENTS

*V - standard truss
*R - built-in rail for canopy

Code	H (cm)	L (cm)	Code	H (cm)	L (cm)
FL76047V	flat section 76	47	FL76047R	flat section 76	47 with guide
FL76086V	flat section 76	86	FL76086R	flat section 76	86 with guide
FL76100V	flat section 76	100	FL76100R	flat section 76	100 with guide
FL76186V	flat section 76	186	FL76186R	flat section 76	186 with guide
FL76200V	flat section 76	200	FL76200R	flat section 76	200 with guide
			FL76111RHC	flat section 76	105 curved

“R” codes identify trusses featuring a top chord profile with an integrated track for the sliding of roofing sheets.
The connection between trusses is ensured by the **FL76CS04R** Star connector.
For the full **“R” series** range, please contact our sales department.

Chords A	Diagonals B	Braces C	Ends D	Connection systems
Extruded tube Ø 50 × 4 mm EN AW – 6082 T6	Extruded tube Ø 30 × 3 mm EN AW – 6082 T6	Extruded tube Ø 50 × 4 mm EN AW – 6082 T6	Forks connector EN AW – 6082 T6	FL52C504: four-way connection KHLP: cylindrical pin + safety R-clip KHLM+KHL



Load table - Type A

4 WAY STAR CONNECTION

span	Unif. distributed load: Point load	Unif. distributed load: Full load	Unif. distributed load: Central deflection	Centre point load: Point load	Centre point load: Full load	Centre point load: Central deflection
[m]	[kg/m]	[kg]	mm	[kg]	[kg]	mm
3	818	2453	1	2118	2118	1
4	610	2441	2	1579	1579	2
5	486	2430	4	1253	1253	3
6	344	2067	6	1033	1033	5
7	250	1750	8	875	875	6
8	189	1510	10	755	755	8
9	147	1320	13	660	660	11
10	117	1167	16	583	583	13
11	94	1039	19	519	519	16
12	78	930	23	465	465	19
13	64	836	27	418	418	23
14	54	755	32	377	377	27
15	45	682	37	341	341	31
16	39	617	42	309	309	36
17	33	559	47	279	279	41
18	28	505	53	253	253	46
19	24	456	60	228	228	52
20	21	411	66	206	206	58
21	18	369	73	185	185	65
22	15	330	81	165	165	72
23	13	293	89	147	147	80
24	11	259	97	129	129	88

Load table - Type A

MALE / FEMALE FORK CONNECTION

span	Unif. distributed load: Point load	Unif. distributed load: Full load	Unif. distributed load: Central deflection	Centre point load: Point load	Centre point load: Full load	Centre point load: Central deflection
[m]	[kg/m]	[kg]	mm	[kg]	[kg]	mm
3	462	1387	0	1387	1387	1
4	344	1375	1	1375	1375	2
5	273	1364	2	1253	1253	3
6	225	1352	4	1033	1033	5
7	192	1341	6	875	875	6
8	166	1329	9	755	755	8
9	146	1318	13	660	660	11
10	117	1167	16	583	583	13
11	94	1039	19	519	519	16
12	78	930	23	465	465	19
13	64	836	27	418	418	23
14	54	755	32	377	377	27
15	45	682	37	341	341	31
16	39	617	42	309	309	36
17	33	559	47	279	279	41
18	28	505	53	253	253	46
19	24	456	60	228	228	52
20	21	411	66	206	206	58
21	18	369	73	185	185	65
22	15	330	81	165	165	72
23	13	293	89	147	147	80
24	11	259	97	129	129	88

Cantilever load table - Type A

span	Unif. distributed load: Point load	Unif. distributed load: Full load	Unif. distributed load: Central deflection	Centre point load: Point load	Centre point load: Central deflection
[m]	[kg/m]	[kg]	mm	[kg]	mm
1.0	1232	1232	0	1232	0
1.5	818	1226	1	1057	1
2.0	610	1221	1	787	2
2.5	486	1215	2	625	3
3.0	344	1031	3	515	5
3.5	249	873	5	436	6
4.0	188	753	6	377	8

Cantilever load table - Type B

span	Unif. distributed load: Point load	Unif. distributed load: Full load	Unif. distributed load: Central deflection	Centre point load: Point load	Centre point load: Central deflection
[m]	[kg/m]	[kg]	mm	[kg]	mm
1.0	699	699	0	699	0
1.5	462	693	0	693	1
2.0	344	688	1	688	2
2.5	273	682	1	625	3
3.0	225	676	2	515	5
3.5	192	670	4	436	6
4.0	166	665	5	377	8

Load table has been prepared in accordance with EN 1999-1-1. When calculating the allowable loads it is assumed that the load is suspended from the bottom chord and the truss is supported from the top chord at each end.

The values shown in the table are the allowable static loads that can be applied the the truss. This is the live load or the payload.

The self weight of the truss has been taken into account when calculating the values in the table. It should be noted that this are idealised loading conditions and the User shall re-analyze the truss for the loading conditions which prevail for the application being considered.

Connections

LIBERA **FL76**

LIBERA is an open structural system. The distinguishing feature of the system is that it uses standard modular elements connected together in ways that allow varied design and geometry of the finished structure. These two pages show connections and accessories that are helpful in the assembly or set up of your LIBERA FL76 system. The wide range of accessories for LIBERA System include bar hooks, spacers for the construction of arched geometries, complimentary elements for sleeve-blocks and transport trolley systems for flat trusses.



KHLP

20 mm Cylindrical pin
+ 3 mm safety R-clip



KHLB

M20 screw bolt
+ spring washer



KHLD

M20 screw nut
+ spring washer



KHLF

Threaded female fork
connector + spring washer



KHLG

M20 Lifting Eye



KHLM

Male fork
connector complete



KHL180A

180° double fork aluminum
connector



KHL180S

180° double fork
steel connector



KHL90LA

90° double fork
alum. connector, left



KHL90LS

90° double fork steel
connector, left



KHL90RA

90° double fork alum.
connector, right



KHL90RS

90° double fork steel
connector, right



KHL180AL149R

Alusfera spacer connector

Connection Stars

FL76CS02

2-way fork
connection
system



FL76CS03

3-way fork
connection
system



FL76CS04

4-way fork
connection
system



FL76CS04C

4-way fork
connection
system rounded
end



FL76CS04L

4-way fork
connection system
w/foot



FL76CS04Z1

4-way cross
special
connection



FL76CS04Z2

4-way cross
special
connection



FL76CS04R

4-way fork
connection
system w/foot
and vertical fork



Accessories



C052D

Bar hook for 52 cm truss



C066

Bar hook for 61 cm. truss



FL76059HS

HL 76 cm. gate cm 59 truss -
hoist support



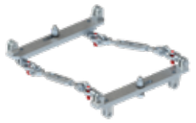
FL76047HSV

HL 76 cm. gate cm 47 truss -
hoist support



FL76FP

Stage floor plate



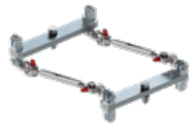
FLRS52E-L

Inclination system for MT52
tower/Libera 76 - Left



FLRS52E-R

Inclination system for MT52 tower/
Libera 76 - Right



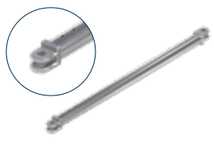
FLRS40E-L

Inclination system for MT40
tower/ Libera 76 - Left



FLRS40E-R

Inclination system for MT40
tower/ Libera 76 - Right



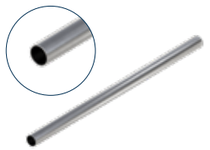
RAF / Reinforced tube w/forks

FL52 Transport trolley system
for 20 pieces



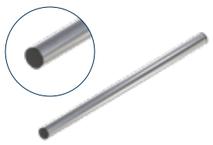
RAH / Diagonal brace w/hooks

RAH014M2P – working length 14.2 cm
RAH049P – working length 49 cm
RAH141M4 – working length 141 cm
RAH158M8 – working length 158 cm
RAH205M9S – working length 205 cm
RAH213M5 – working length 213 cm
RAH223M6 – working length 223 cm
RAH250M6 – working length 250 cm
RAH282M8 – working length 282 cm



RAL / Aluminium pipe

RAL047 – length 47 cm
RAL086 – length 86 cm
RAL100 – length 100 cm
RAL186 – length 186 cm
RAL200 – length 200 cm



RAT / Aluminium pipe w/caps

RAT050 – working length 50 cm
RAT100 – working length 100 cm
RAT150 – working length 150 cm
RAT200 – working length 200 cm
RAT250 – working length 250 cm
RAT300 – working length 300 cm