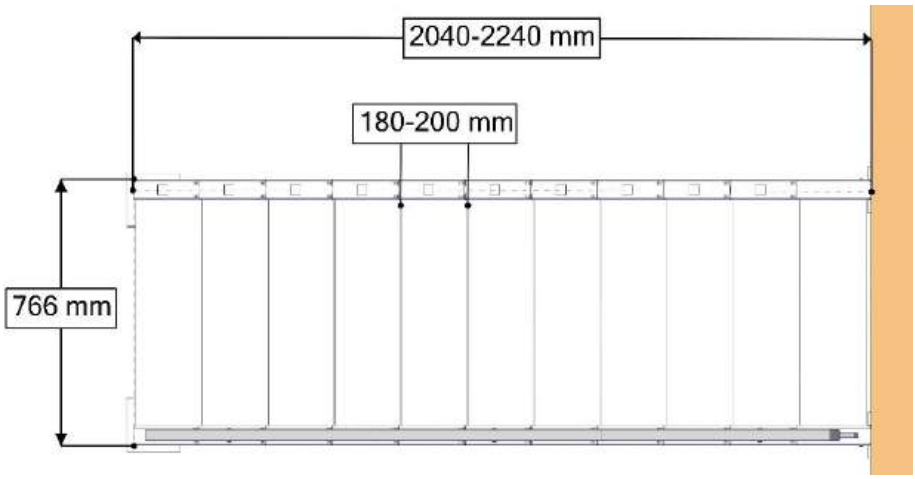
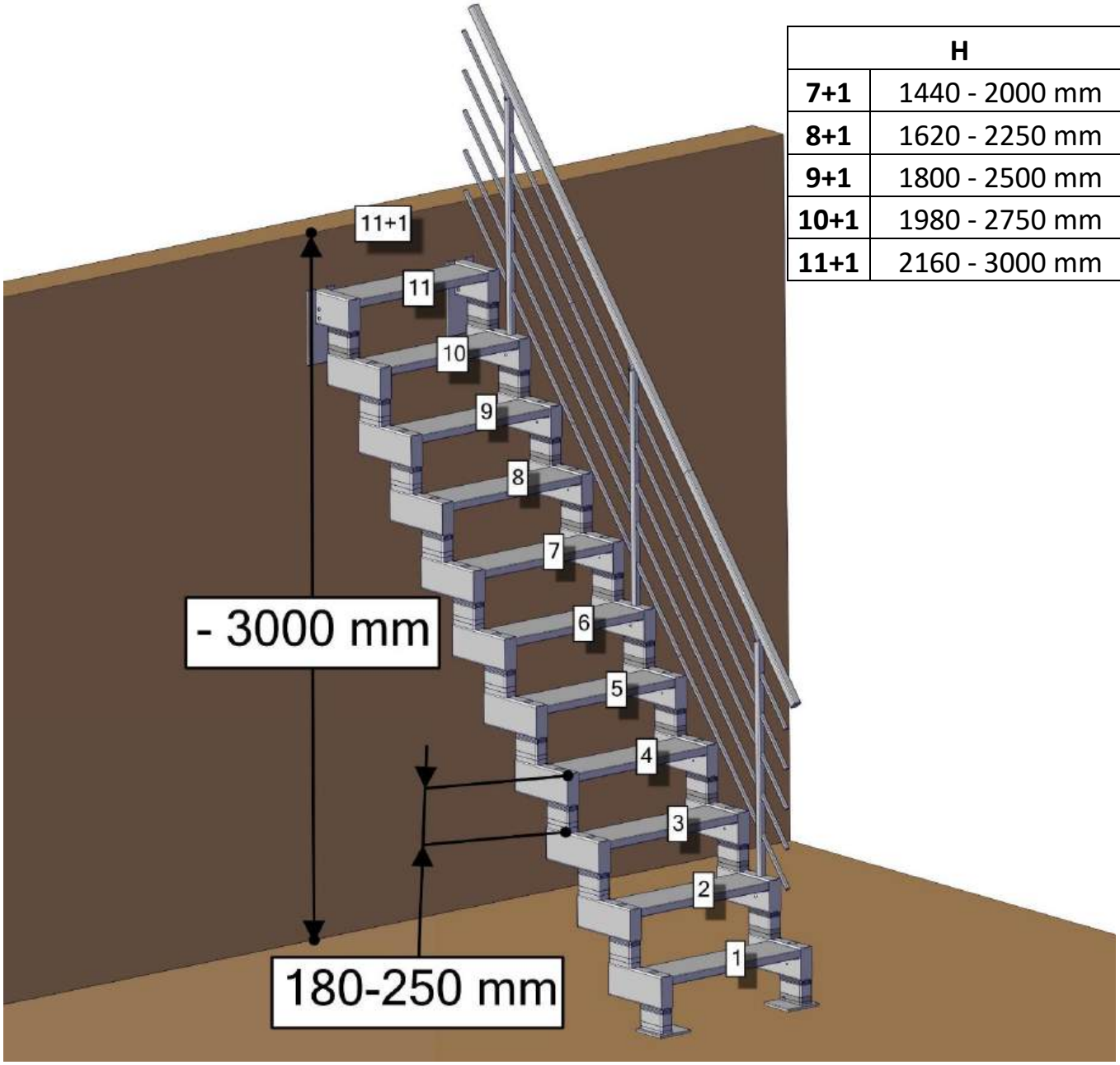
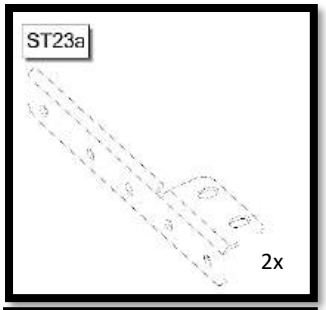
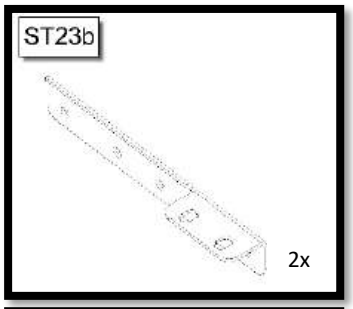
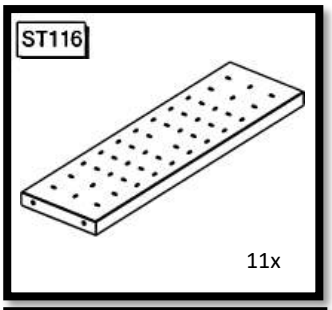


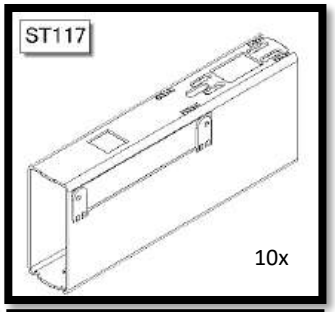


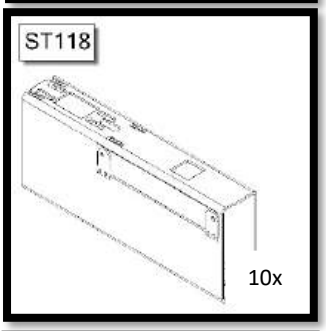
	H
7+1	1440 - 2000 mm
8+1	1620 - 2250 mm
9+1	1800 - 2500 mm
10+1	1980 - 2750 mm
11+1	2160 - 3000 mm

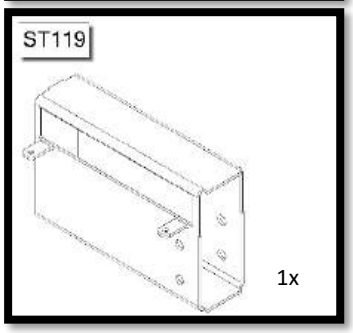

ST23a
2x

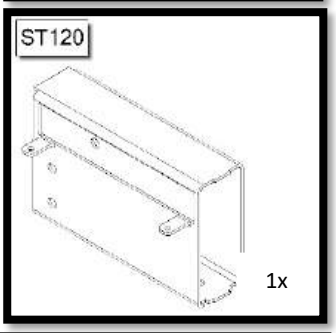

ST23b
2x

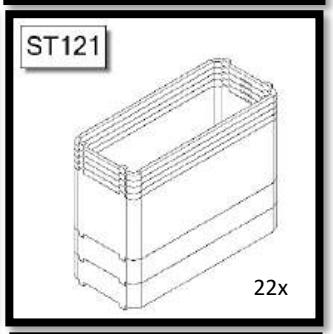

ST116
11x

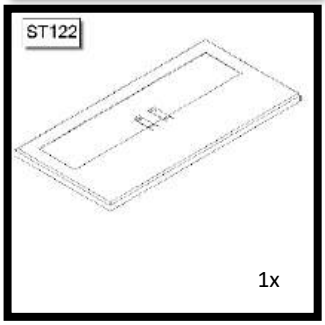

ST117
10x

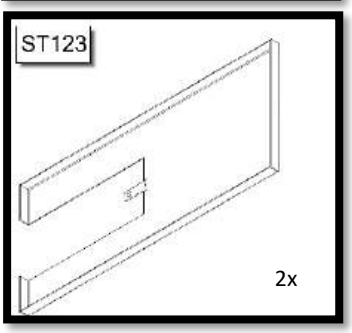

ST118
10x

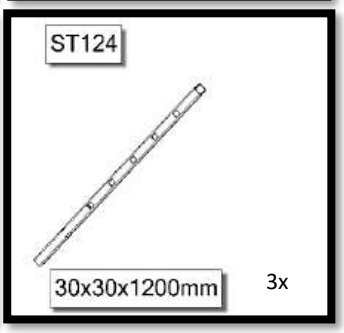

ST119
1x

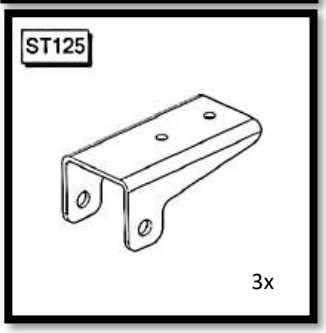

ST120
1x

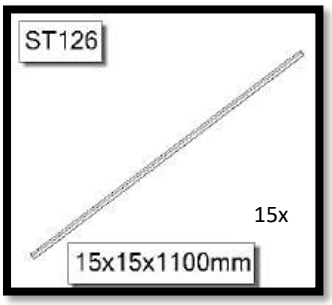

ST121
22x

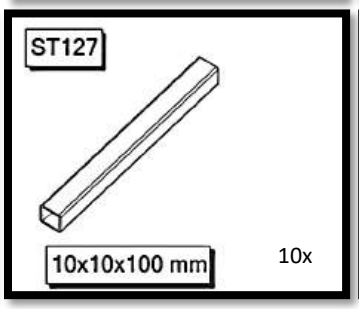

ST122
1x

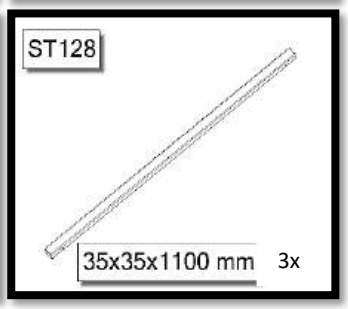

ST123
2x

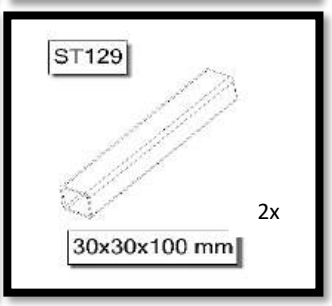

ST124
30x30x1200mm
3x

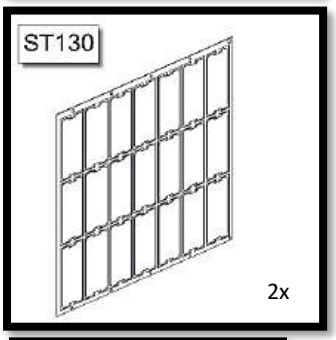

ST125
3x

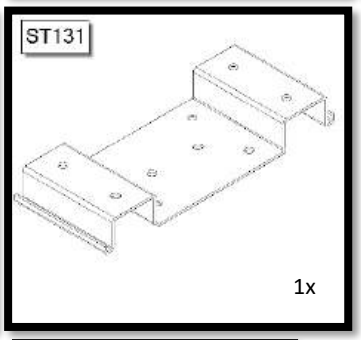

ST126
15x
15x15x1100mm

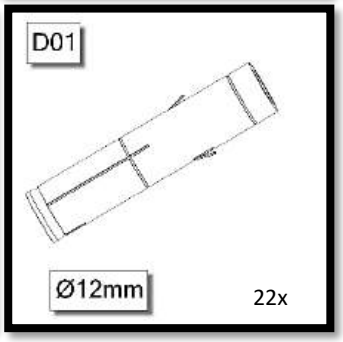

ST127
10x10x100 mm
10x

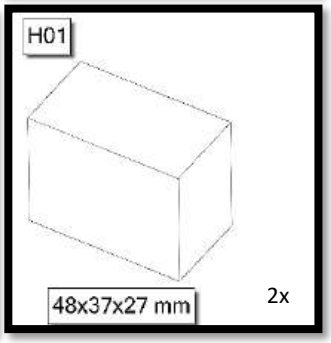

ST128
35x35x1100 mm
3x

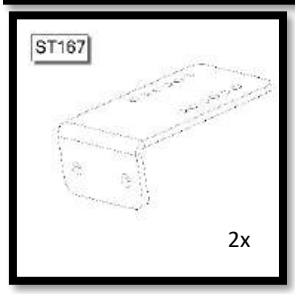

ST129
2x
30x30x100 mm

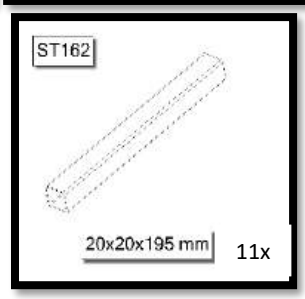

ST130
2x


ST131
1x


D01
Ø12mm
22x


H01
48x37x27 mm
2x

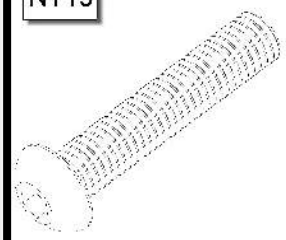

ST167
2x


ST162
20x20x195 mm
11x

NT07

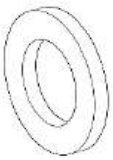
Ø4,2x19mm 125x

NT19



M8x60 mm 22x

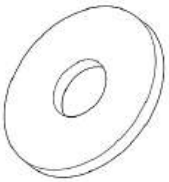
NT26



200x

M8 DIN 125A

NT37

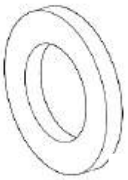


M8 DIN9021 4x

NT45

M6 6x

NT50



6x

M6 DIN 125A

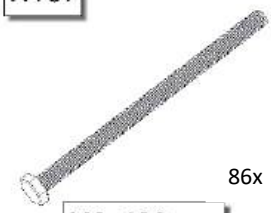
NT65

M8x20 mm 11x

NT66

Ø3,5x9,5mm 60x

NT67



86x

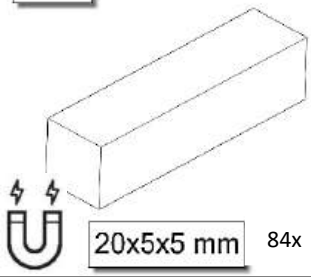
M8x130 mm

NT68

6x

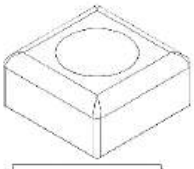
M6x10 mm

NT69



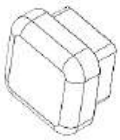
20x5x5 mm 84x

NT70



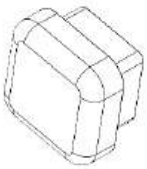
M8 DIN 557 174x

KS08



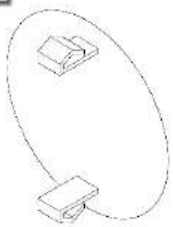
15x15mm 10x

KS14



35x35mm 2x

KS15

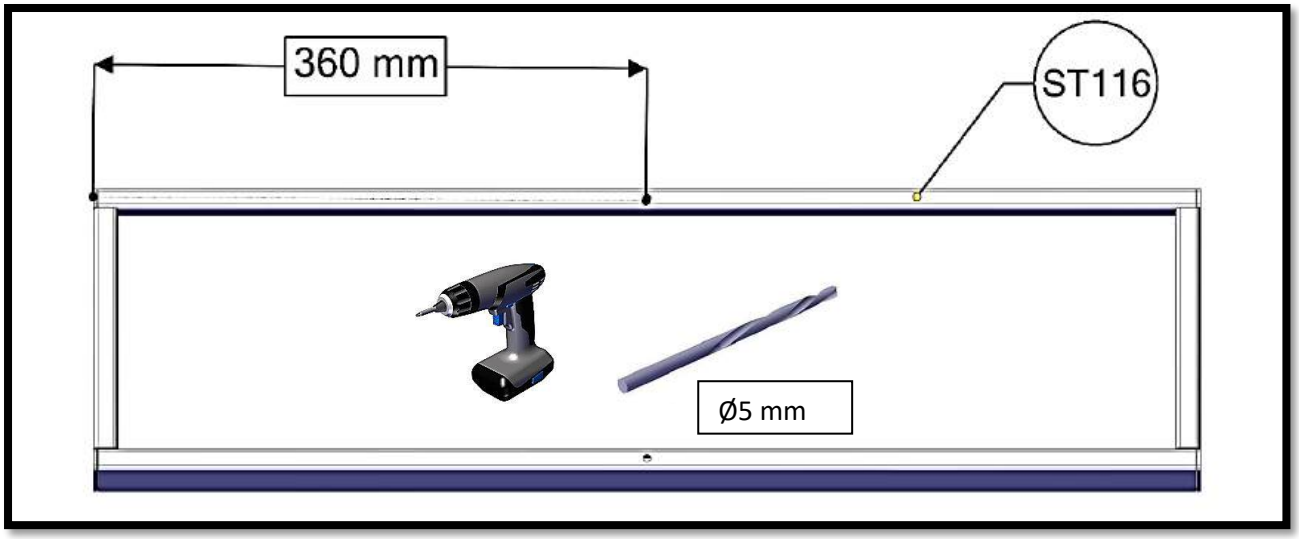


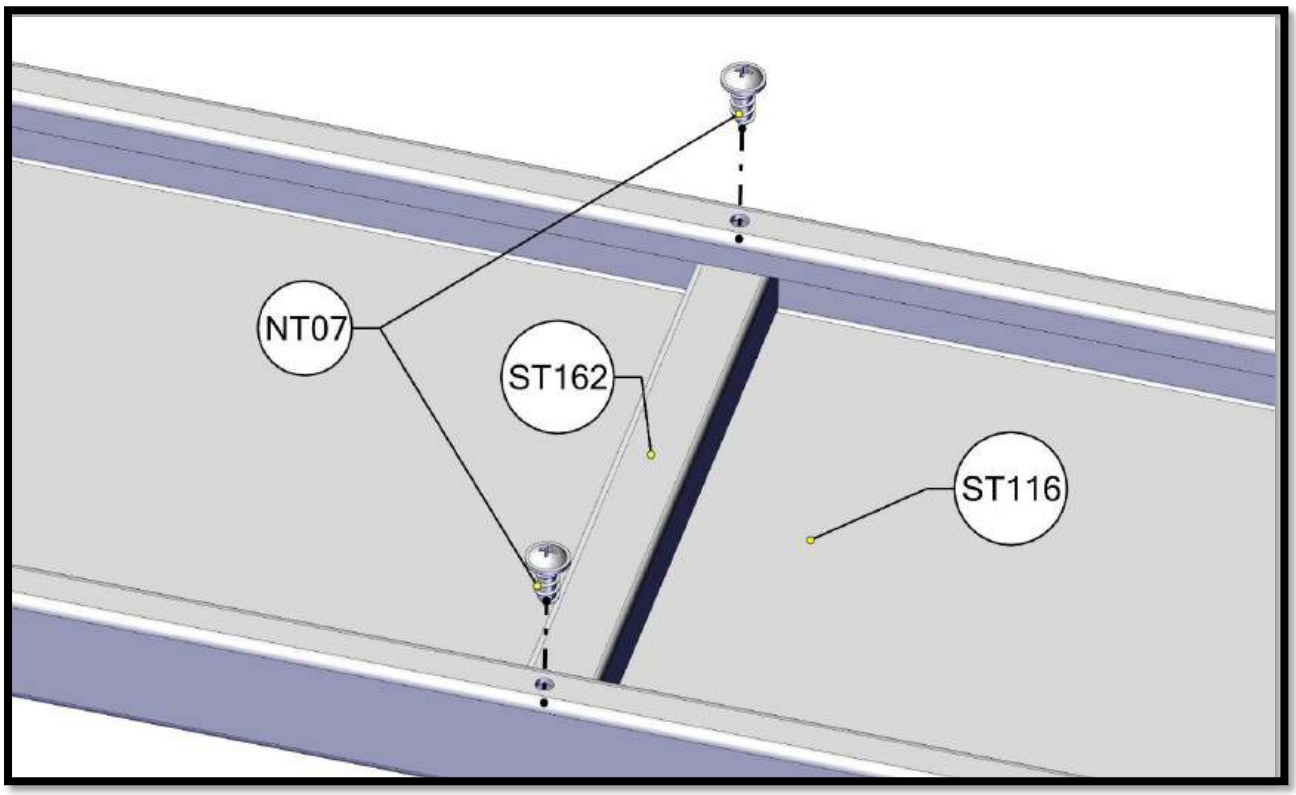
Ø37 mm 40x

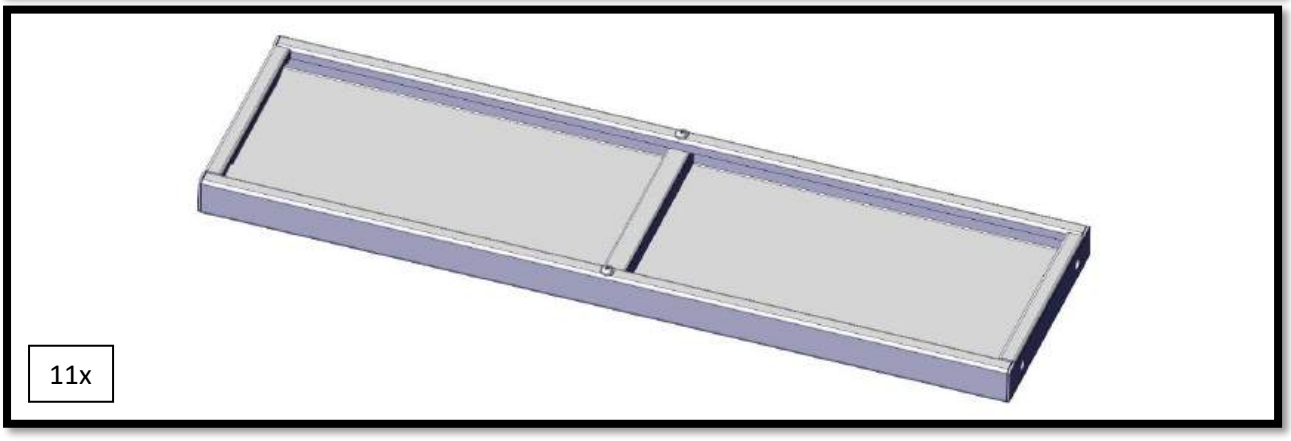
W01

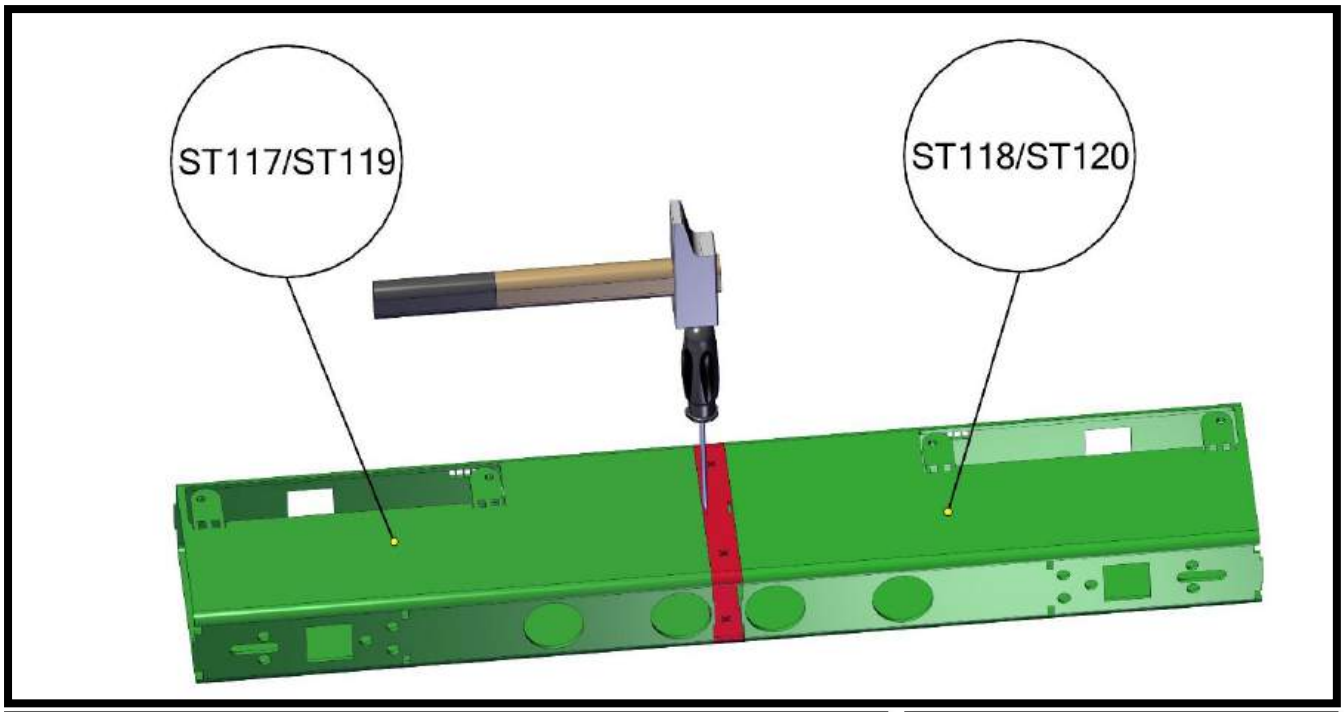
1x

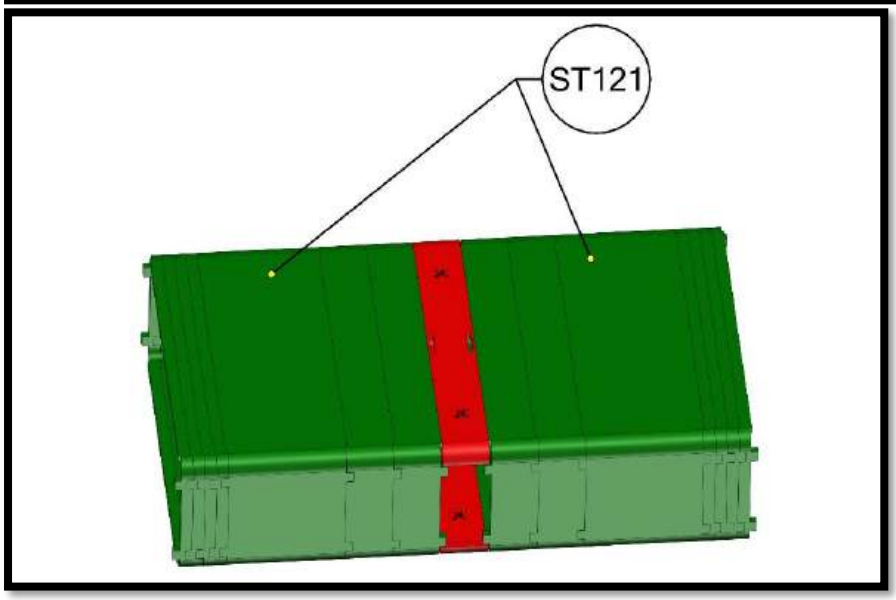
20x20x210 mm

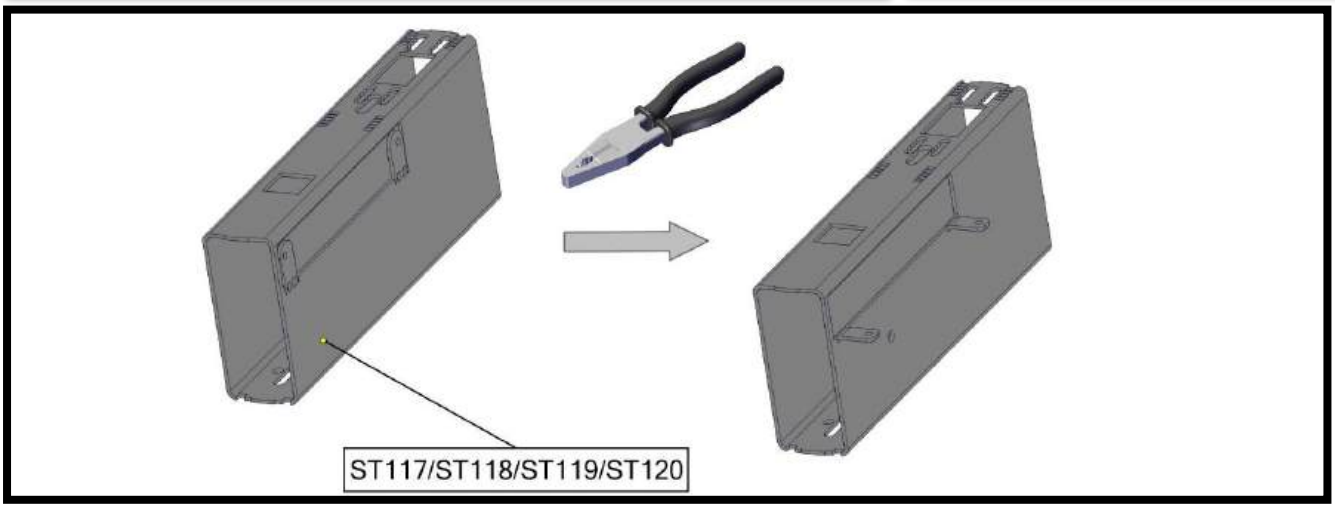

360 mm
ST116
Ø5 mm

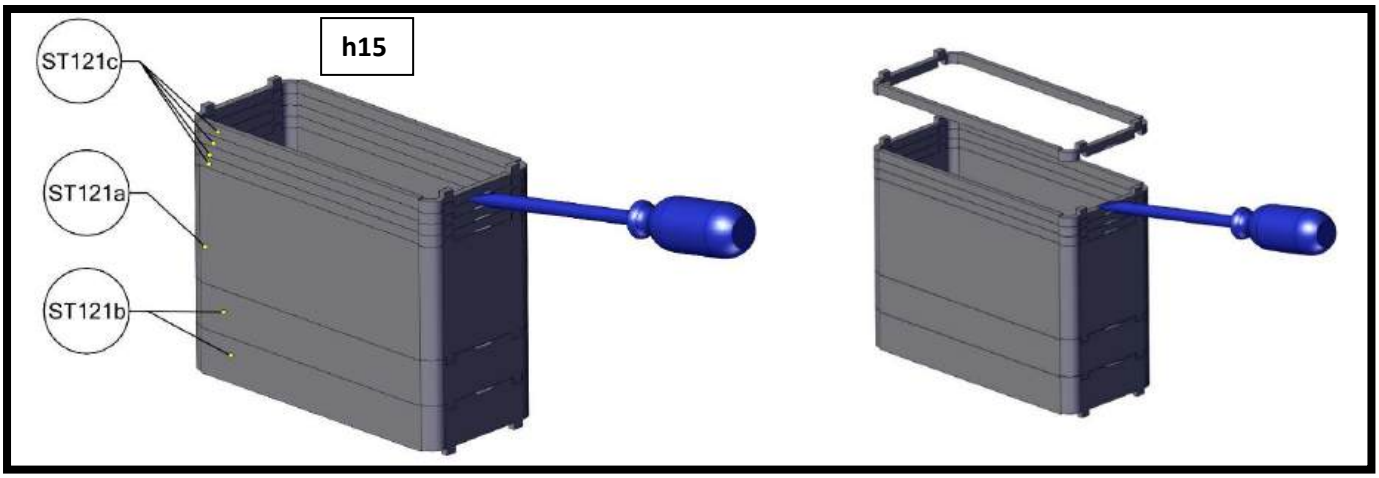

NT07
ST162
ST116


11x

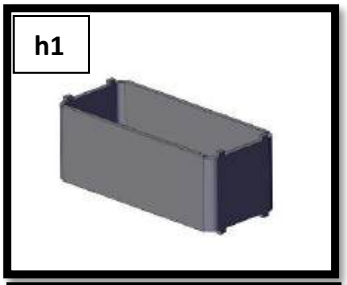

ST117/ST119
ST118/ST120

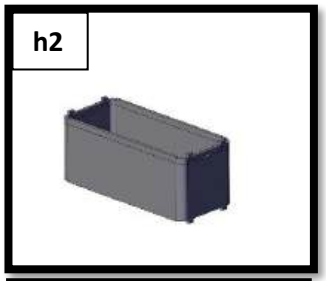

ST121

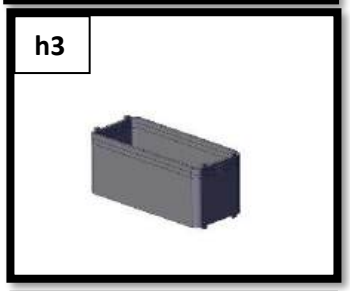

ST117/ST118/ST119/ST120

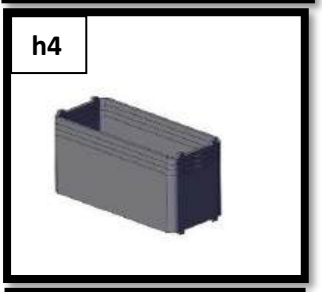


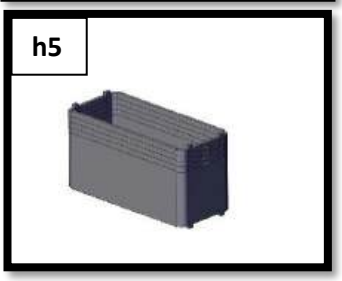
	h[mm]	ST121a	ST121b	ST121c
h1	180	1x	0x	0x
h2	185	1x	0x	1x
h3	190	1x	0x	2x
h4	195	1x	0x	3x
h5	200	1x	0x	4x
h6	205	1x	1x	0x
h7	210	1x	1x	1x
h8	215	1x	1x	2x
h9	220	1x	1x	3x
h10	225	1x	1x	4x
h11	230	1x	2x	0x
h12	235	1x	2x	1x
h13	240	1x	2x	2x
h14	245	1x	2x	3x
h15	250	1x	2x	4x

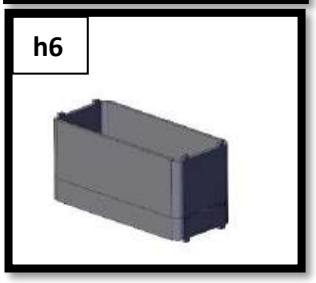


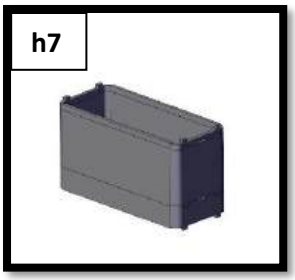


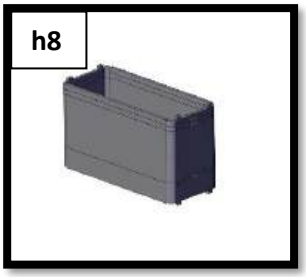


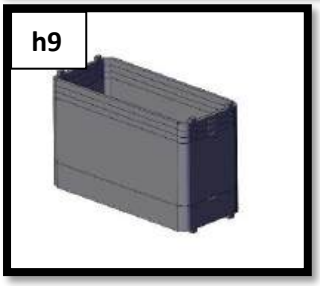


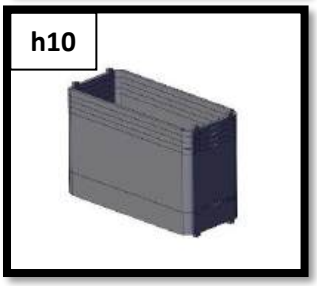


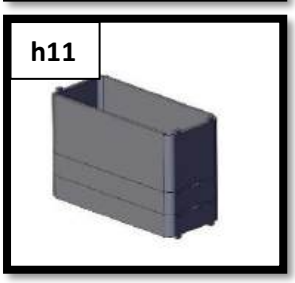


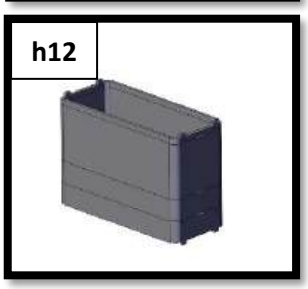


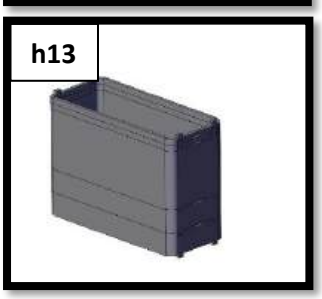


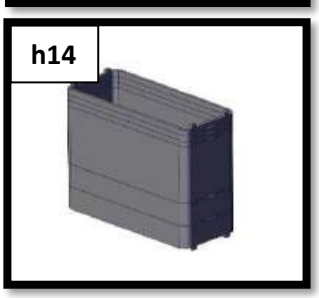












11+1

H [mm]	h1	h2
2160	12x	
2165	11x	1x
2170	10x	2x
2175	9x	3x
2180	8x	4x
2185	7x	5x
2190	6x	6x
2195	5x	7x
2200	4x	8x
2205	3x	9x
2210	2x	10x
2215	1x	11x

H [mm]	h2	h3
2220	12x	
2225	11x	1x
2230	10x	2x
2235	9x	3x
2240	8x	4x
2245	7x	5x
2250	6x	6x
2255	5x	7x
2260	4x	8x
2265	3x	9x
2270	2x	10x
2275	1x	11x

H [mm]	h3	h4
2280	12x	
2285	11x	1x
2290	10x	2x
2295	9x	3x
2300	8x	4x
2305	7x	5x
2310	6x	6x
2315	5x	7x
2320	4x	8x
2325	3x	9x
2330	2x	10x
2335	1x	11x

H [mm]	h4	h5
2340	12x	
2345	11x	1x
2350	10x	2x
2355	9x	3x
2360	8x	4x
2365	7x	5x
2370	6x	6x
2375	5x	7x
2380	4x	8x
2385	3x	9x
2390	2x	10x
2395	1x	11x

H [mm]	h5	h6
2400	12x	
2405	11x	1x
2410	10x	2x
2415	9x	3x
2420	8x	4x
2425	7x	5x
2430	6x	6x
2435	5x	7x
2440	4x	8x
2445	3x	9x
2450	2x	10x
2455	1x	11x

H [mm]	h6	h7
2460	12x	
2465	11x	1x
2470	10x	2x
2475	9x	3x
2480	8x	4x
2485	7x	5x
2490	6x	6x
2495	5x	7x
2500	4x	8x
2505	3x	9x
2510	2x	10x
2515	1x	11x

H [mm]	h7	h8
2520	12x	
2525	11x	1x
2530	10x	2x
2535	9x	3x
2540	8x	4x
2545	7x	5x
2550	6x	6x
2555	5x	7x
2560	4x	8x
2565	3x	9x
2570	2x	10x
2575	1x	11x

H [mm]	h8	h9
2580	12x	
2585	11x	1x
2590	10x	2x
2595	9x	3x
2600	8x	4x
2605	7x	5x
2610	6x	6x
2615	5x	7x
2620	4x	8x
2625	3x	9x
2630	2x	10x
2635	1x	11x

H [mm]	h9	h10
2640	12x	
2645	11x	1x
2650	10x	2x
2655	9x	3x
2660	8x	4x
2665	7x	5x
2670	6x	6x
2675	5x	7x
2680	4x	8x
2685	3x	9x
2690	2x	10x
2695	1x	11x

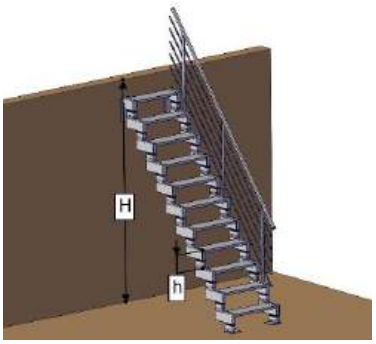
H [mm]	h10	h11
2700	12x	
2705	11x	1x
2710	10x	2x
2715	9x	3x
2720	8x	4x
2725	7x	5x
2730	6x	6x
2735	5x	7x
2740	4x	8x
2745	3x	9x
2750	2x	10x
2755	1x	11x

H [mm]	h11	h12
2760	12x	
2765	11x	1x
2770	10x	2x
2775	9x	3x
2780	8x	4x
2785	7x	5x
2790	6x	6x
2795	5x	7x
2800	4x	8x
2805	3x	9x
2810	2x	10x
2815	1x	11x

H [mm]	h12	h13
2820	12x	
2825	11x	1x
2830	10x	2x
2835	9x	3x
2840	8x	4x
2845	7x	5x
2850	6x	6x
2855	5x	7x
2860	4x	8x
2865	3x	9x
2870	2x	10x
2875	1x	11x

H [mm]	h13	h14
2880	12x	
2885	11x	1x
2890	10x	2x
2895	9x	3x
2900	8x	4x
2905	7x	5x
2910	6x	6x
2915	5x	7x
2920	4x	8x
2925	3x	9x
2930	2x	10x
2935	1x	11x

H [mm]	h14	h15
2940	12x	
2945	11x	1x
2950	10x	2x
2955	9x	3x
2960	8x	4x
2965	7x	5x
2970	6x	6x
2975	5x	7x
2980	4x	8x
2985	3x	9x
2990	2x	10x
2995	1x	11x
3000		12x



10+1

H [mm]	h1	h2
1980	11x	
1985	10x	1x
1990	9x	2x
1995	8x	3x
2000	7x	4x
2005	6x	5x
2010	5x	6x
2015	4x	7x
2020	3x	8x
2025	2x	9x
2030	1x	10x

H [mm]	h2	h3
2035	11x	
2040	10x	1x
2045	9x	2x
2050	8x	3x
2055	7x	4x
2060	6x	5x
2065	5x	6x
2070	4x	7x
2075	3x	8x
2080	2x	9x
2085	1x	10x

H [mm]	h3	h4
2090	11x	
2095	10x	1x
2100	9x	2x
2105	8x	3x
2110	7x	4x
2115	6x	5x
2120	5x	6x
2125	4x	7x
2130	3x	8x
2135	2x	9x
2140	1x	10x

H [mm]	h4	h5
2145	11x	
2150	10x	1x
2155	9x	2x
2160	8x	3x
2165	7x	4x
2170	6x	5x
2175	5x	6x
2180	4x	7x
2185	3x	8x
2190	2x	9x
2195	1x	10x

H [mm]	h5	h6
2200	11x	
2205	10x	1x
2210	9x	2x
2215	8x	3x
2220	7x	4x
2225	6x	5x
2230	5x	6x
2235	4x	7x
2240	3x	8x
2245	2x	9x
2250	1x	10x

H [mm]	h6	h7
2255	11x	
2260	10x	1x
2265	9x	2x
2270	8x	3x
2275	7x	4x
2280	6x	5x
2285	5x	6x
2290	4x	7x
2295	3x	8x
2300	2x	9x
2305	1x	10x

H [mm]	h7	h8
2310	11x	
2315	10x	1x
2320	9x	2x
2325	8x	3x
2330	7x	4x
2335	6x	5x
2340	5x	6x
2345	4x	7x
2350	3x	8x
2355	2x	9x
2360	1x	10x

H [mm]	h8	h9
2365	11x	
2370	10x	1x
2375	9x	2x
2380	8x	3x
2385	7x	4x
2390	6x	5x
2395	5x	6x
2400	4x	7x
2405	3x	8x
2410	2x	9x
2415	1x	10x

H [mm]	h9	h10
2420	11x	
2425	10x	1x
2430	9x	2x
2435	8x	3x
2440	7x	4x
2445	6x	5x
2450	5x	6x
2455	4x	7x
2460	3x	8x
2465	2x	9x
2470	1x	10x

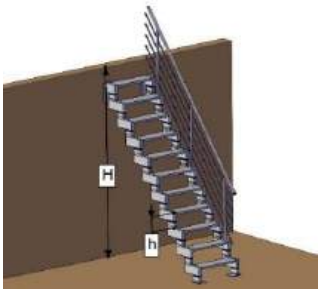
H [mm]	h10	h11
2475	11x	
2480	10x	1x
2485	9x	2x
2490	8x	3x
2495	7x	4x
2500	6x	5x
2505	5x	6x
2510	4x	7x
2515	3x	8x
2520	2x	9x
2525	1x	10x

H [mm]	h11	h12
2530	11x	
2535	10x	1x
2540	9x	2x
2545	8x	3x
2550	7x	4x
2555	6x	5x
2560	5x	6x
2565	4x	7x
2570	3x	8x
2575	2x	9x
2580	1x	10x

H [mm]	h12	h13
2585	11x	
2590	10x	1x
2595	9x	2x
2600	8x	3x
2605	7x	4x
2610	6x	5x
2615	5x	6x
2620	4x	7x
2625	3x	8x
2630	2x	9x
2635	1x	10x

H [mm]	h13	h14
2640	11x	
2645	10x	1x
2650	9x	2x
2655	8x	3x
2660	7x	4x
2665	6x	5x
2670	5x	6x
2675	4x	7x
2680	3x	8x
2685	2x	9x
2690	1x	10x

H [mm]	h14	h15
2695	11x	
2700	10x	1x
2705	9x	2x
2710	8x	3x
2715	7x	4x
2720	6x	5x
2725	5x	6x
2730	4x	7x
2735	3x	8x
2740	2x	9x
2745	1x	10x
2750		11x



9+1

H [mm]	h1	h2
1800	10x	
1805	9x	1x
1810	8x	2x
1815	7x	3x
1820	6x	4x
1825	5x	5x
1830	4x	6x
1835	3x	7x
1840	2x	8x
1845	1x	9x

H [mm]	h2	h3
1850	10x	
1855	9x	1x
1860	8x	2x
1865	7x	3x
1870	6x	4x
1875	5x	5x
1880	4x	6x
1885	3x	7x
1890	2x	8x
1895	1x	9x

H [mm]	h3	h4
1900	10x	
1905	9x	1x
1910	8x	2x
1915	7x	3x
1920	6x	4x
1925	5x	5x
1930	4x	6x
1935	3x	7x
1940	2x	8x
1945	1x	9x

H [mm]	h4	h5
1950	10x	
1955	9x	1x
1960	8x	2x
1965	7x	3x
1970	6x	4x
1975	5x	5x
1980	4x	6x
1985	3x	7x
1990	2x	8x
1995	1x	9x

H [mm]	h5	h6
2000	10x	
2005	9x	1x
2010	8x	2x
2015	7x	3x
2020	6x	4x
2025	5x	5x
2030	4x	6x
2035	3x	7x
2040	2x	8x
2045	1x	9x

H [mm]	h6	h7
2050	10x	
2055	9x	1x
2060	8x	2x
2065	7x	3x
2070	6x	4x
2075	5x	5x
2080	4x	6x
2085	3x	7x
2090	2x	8x
2095	1x	9x

H [mm]	h7	h8
2100	10x	
2105	9x	1x
2110	8x	2x
2115	7x	3x
2120	6x	4x
2125	5x	5x
2130	4x	6x
2135	3x	7x
2140	2x	8x
2145	1x	9x

H [mm]	h8	h9
2150	10x	
2155	9x	1x
2160	8x	2x
2165	7x	3x
2170	6x	4x
2175	5x	5x
2180	4x	6x
2185	3x	7x
2190	2x	8x
2195	1x	9x

H [mm]	h9	h10
2200	10x	
2205	9x	1x
2210	8x	2x
2215	7x	3x
2220	6x	4x
2225	5x	5x
2230	4x	6x
2235	3x	7x
2240	2x	8x
2245	1x	9x

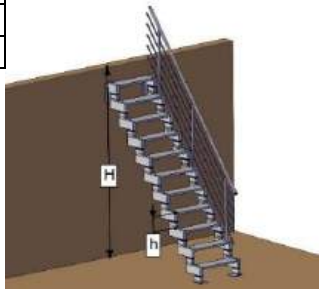
H [mm]	h10	h11
2250	10x	
2255	9x	1x
2260	8x	2x
2265	7x	3x
2270	6x	4x
2275	5x	5x
2280	4x	6x
2285	3x	7x
2290	2x	8x
2295	1x	9x

H [mm]	h11	h12
2300	10x	
2305	9x	1x
2310	8x	2x
2315	7x	3x
2320	6x	4x
2325	5x	5x
2330	4x	6x
2335	3x	7x
2340	2x	8x
2345	1x	9x

H [mm]	h12	h13
2350	10x	
2355	9x	1x
2360	8x	2x
2365	7x	3x
2370	6x	4x
2375	5x	5x
2380	4x	6x
2385	3x	7x
2390	2x	8x
2395	1x	9x

H [mm]	h13	h14
2400	10x	
2405	9x	1x
2410	8x	2x
2415	7x	3x
2420	6x	4x
2425	5x	5x
2430	4x	6x
2435	3x	7x
2440	2x	8x
2445	1x	9x

H [mm]	h14	h15
2450	10x	
2455	9x	1x
2460	8x	2x
2465	7x	3x
2470	6x	4x
2475	5x	5x
2480	4x	6x
2485	3x	7x
2490	2x	8x
2495	1x	9x
2500		10x



8+1

H [mm]	h1	h2
1620	9x	
1625	8x	1x
1630	7x	2x
1635	6x	3x
1640	5x	4x
1645	4x	5x
1650	3x	6x
1655	2x	7x
1660	1x	8x

H [mm]	h2	h3
1665	9x	
1670	8x	1x
1675	7x	2x
1680	6x	3x
1685	5x	4x
1690	4x	5x
1695	3x	6x
1700	2x	7x
1705	1x	8x

H [mm]	h3	h4
1710	9x	
1715	8x	1x
1720	7x	2x
1725	6x	3x
1730	5x	4x
1735	4x	5x
1740	3x	6x
1745	2x	7x
1750	1x	8x

H [mm]	h4	h5
1755	9x	
1760	8x	1x
1765	7x	2x
1770	6x	3x
1775	5x	4x
1780	4x	5x
1785	3x	6x
1790	2x	7x
1795	1x	8x

H [mm]	h5	h6
1800	9x	
1805	8x	1x
1810	7x	2x
1815	6x	3x
1820	5x	4x
1825	4x	5x
1830	3x	6x
1835	2x	7x
1840	1x	8x

H [mm]	h6	h7
1845	9x	
1850	8x	1x
1855	7x	2x
1860	6x	3x
1865	5x	4x
1870	4x	5x
1875	3x	6x
1880	2x	7x
1885	1x	8x

H [mm]	h7	h8
1890	9x	
1895	8x	1x
1900	7x	2x
1905	6x	3x
1910	5x	4x
1915	4x	5x
1920	3x	6x
1925	2x	7x
1930	1x	8x

H [mm]	h8	h9
1935	9x	
1940	8x	1x
1945	7x	2x
1950	6x	3x
1955	5x	4x
1960	4x	5x
1965	3x	6x
1970	2x	7x
1975	1x	8x

H [mm]	h9	h10
1980	9x	
1985	8x	1x
1990	7x	2x
1995	6x	3x
2000	5x	4x
2005	4x	5x
2010	3x	6x
2015	2x	7x
2020	1x	8x

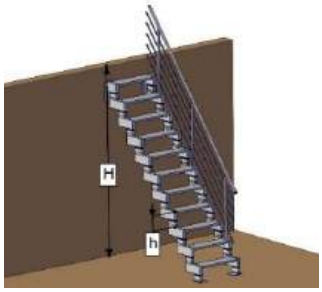
H [mm]	h10	h11
2025	9x	
2030	8x	1x
2035	7x	2x
2040	6x	3x
2045	5x	4x
2050	4x	5x
2055	3x	6x
2060	2x	7x
2065	1x	8x

H [mm]	h11	h12
2070	9x	
2075	8x	1x
2080	7x	2x
2085	6x	3x
2090	5x	4x
2095	4x	5x
2100	3x	6x
2105	2x	7x
2110	1x	8x

H [mm]	h12	h13
2115	9x	
2120	8x	1x
2125	7x	2x
2130	6x	3x
2135	5x	4x
2140	4x	5x
2145	3x	6x
2150	2x	7x
2155	1x	8x

H [mm]	h13	h14
2160	9x	
2165	8x	1x
2170	7x	2x
2175	6x	3x
2180	5x	4x
2185	4x	5x
2190	3x	6x
2195	2x	7x
2200	1x	8x

H [mm]	h14	h15
2205	9x	
2210	8x	1x
2215	7x	2x
2220	6x	3x
2225	5x	4x
2230	4x	5x
2235	3x	6x
2240	2x	7x
2245	1x	8x
2250		9x



7+1

H [mm]	h1	h2
1440	8x	
1445	7x	1x
1450	6x	2x
1455	5x	3x
1460	4x	4x
1465	3x	5x
1470	2x	6x
1475	1x	7x

H [mm]	h2	h3
1480	8x	
1485	7x	1x
1490	6x	2x
1495	5x	3x
1500	4x	4x
1505	3x	5x
1510	2x	6x
1515	1x	7x

H [mm]	h3	h4
1520	8x	
1525	7x	1x
1530	6x	2x
1535	5x	3x
1540	4x	4x
1545	3x	5x
1550	2x	6x
1555	1x	7x

H [mm]	h4	h5
1560	8x	
1565	7x	1x
1570	6x	2x
1575	5x	3x
1580	4x	4x
1585	3x	5x
1590	2x	6x
1595	1x	7x

H [mm]	h5	h6
1600	8x	
1605	7x	1x
1610	6x	2x
1615	5x	3x
1620	4x	4x
1625	3x	5x
1630	2x	6x
1635	1x	7x

H [mm]	h6	h7
1640	8x	
1645	7x	1x
1650	6x	2x
1655	5x	3x
1660	4x	4x
1665	3x	5x
1670	2x	6x
1675	1x	7x

H [mm]	h7	h8
1680	8x	
1685	7x	1x
1690	6x	2x
1695	5x	3x
1700	4x	4x
1705	3x	5x
1710	2x	6x
1715	1x	7x

H [mm]	h8	h9
1720	8x	
1725	7x	1x
1730	6x	2x
1735	5x	3x
1740	4x	4x
1745	3x	5x
1750	2x	6x
1755	1x	7x

H [mm]	h9	h10
1760	8x	
1765	7x	1x
1770	6x	2x
1775	5x	3x
1780	4x	4x
1785	3x	5x
1790	2x	6x
1795	1x	7x

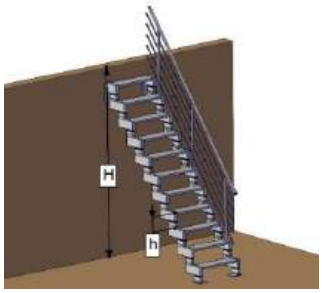
H [mm]	h10	h11
1800	8x	
1805	7x	1x
1810	6x	2x
1815	5x	3x
1820	4x	4x
1825	3x	5x
1830	2x	6x
1835	1x	7x

H [mm]	h11	h12
1840	8x	
1845	7x	1x
1850	6x	2x
1855	5x	3x
1860	4x	4x
1865	3x	5x
1870	2x	6x
1875	1x	7x

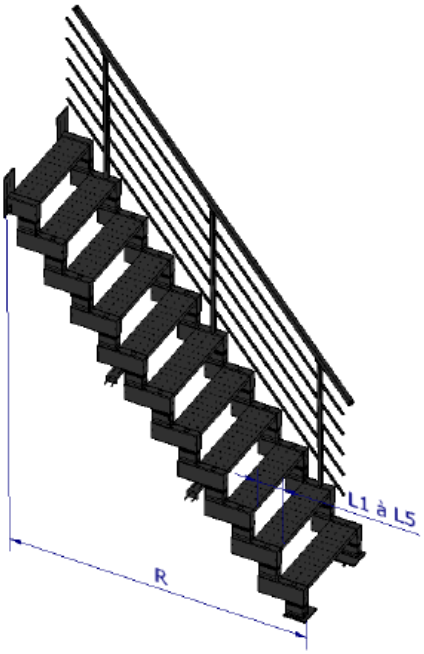
H [mm]	h12	h13
1880	8x	
1885	7x	1x
1890	6x	2x
1895	5x	3x
1900	4x	4x
1905	3x	5x
1910	2x	6x
1915	1x	7x

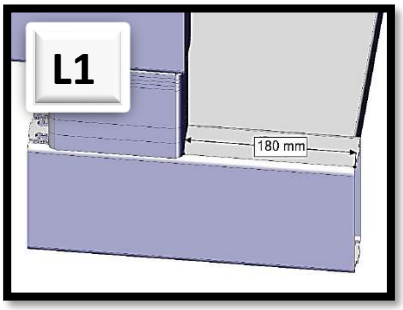
H [mm]	h13	h14
1920	8x	
1925	7x	1x
1930	6x	2x
1935	5x	3x
1940	4x	4x
1945	3x	5x
1950	2x	6x
1955	1x	7x

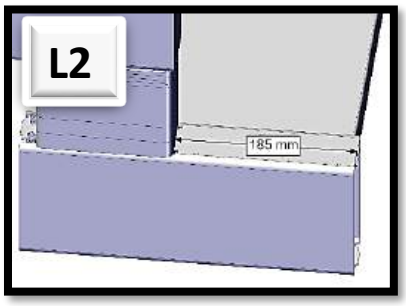
H [mm]	h14	h15
1960	8x	
1965	7x	1x
1970	6x	2x
1975	5x	3x
1980	4x	4x
1985	3x	5x
1990	2x	6x
1995	1x	7x
2000		8x

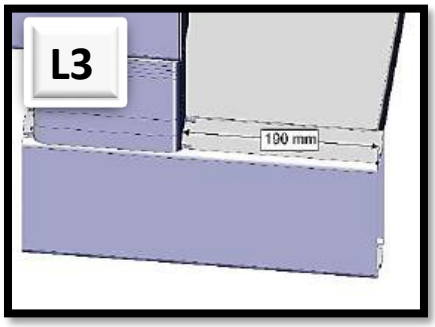


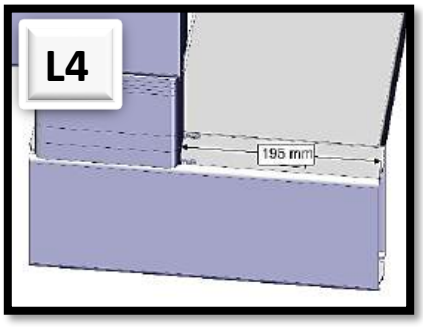
			Length R in mm				
	Height		Tread Depth				
#Steps	**H Mini**	**H Maxi**	**L1 = 180**	**L2 = 185**	**L3 = 190**	**L4 = 195**	**L5 = 200**
7+1	1440	2000	1304	1339	1374	1409	1444
8+1	1620	2250	1484	1524	1564	1604	1644
9+1	1800	2500	1664	1709	1754	1799	1844
10+1	1980	2750	1844	1894	1944	1994	2044
11+1	2160	3000	2024	2079	2134	2189	2244

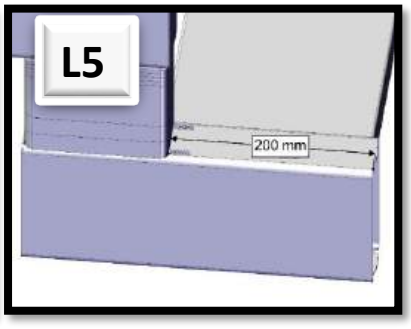


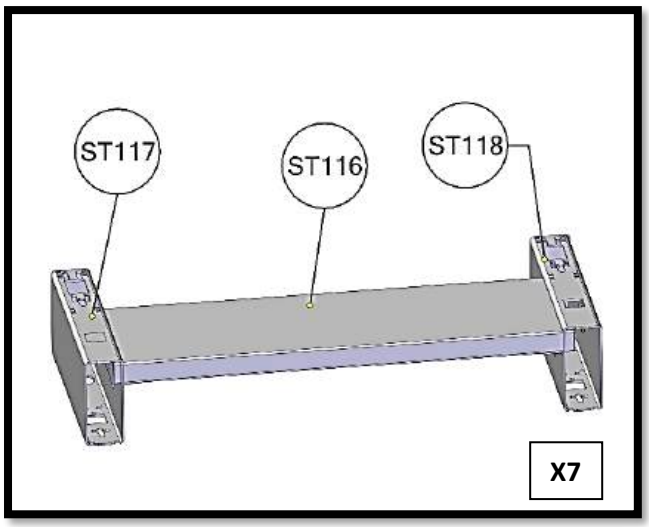


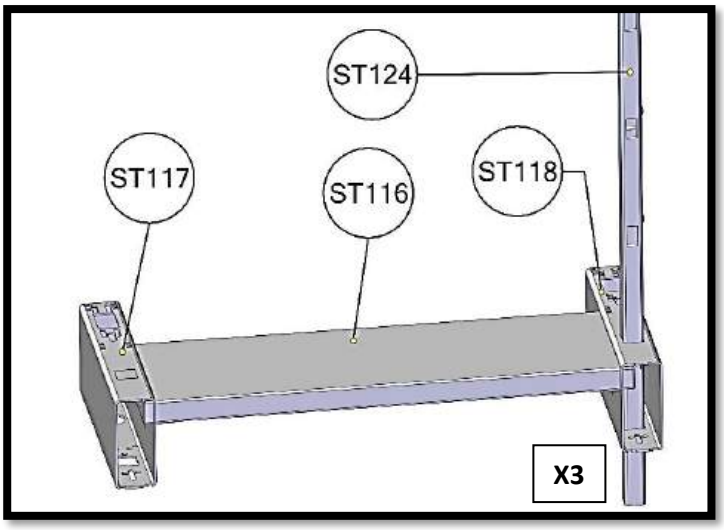


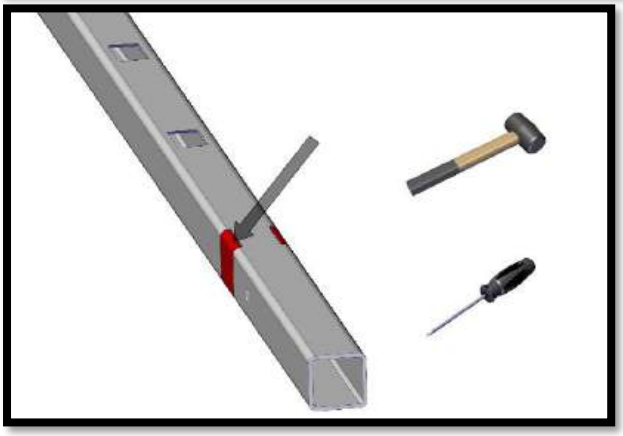


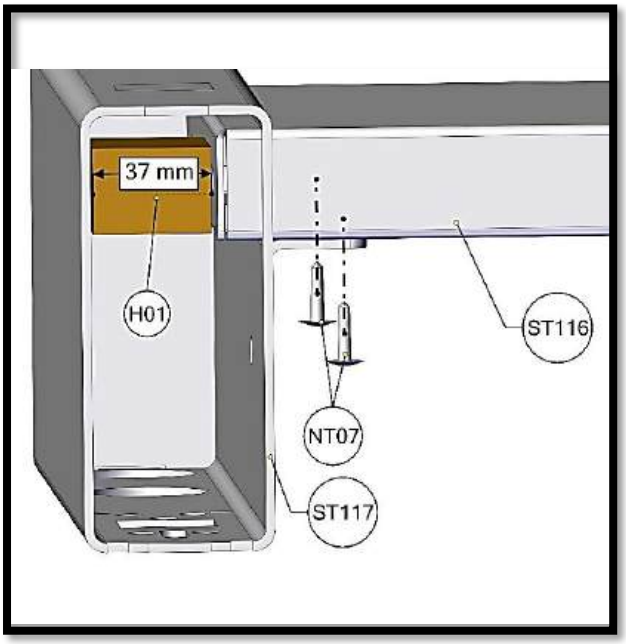


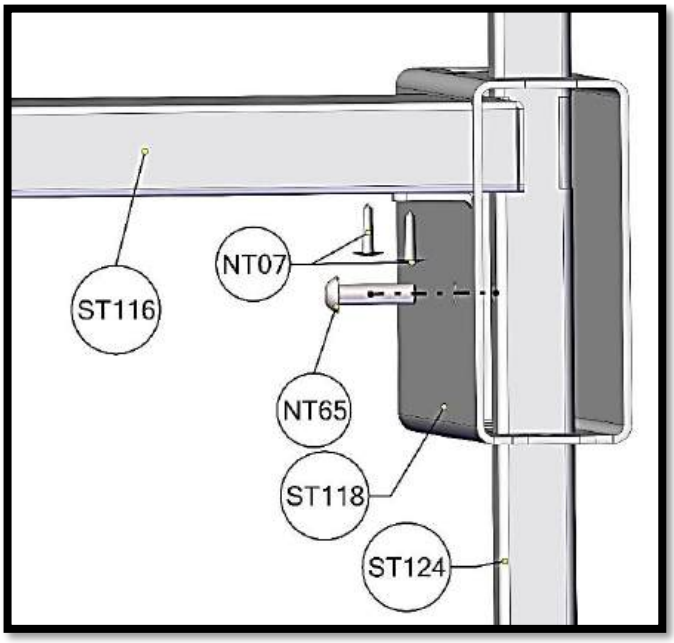


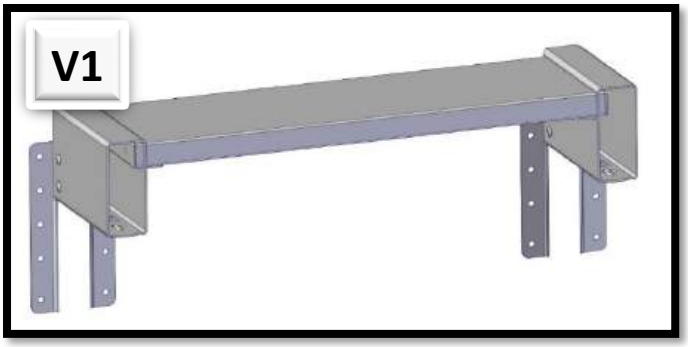

ST117
ST116
ST118
X7

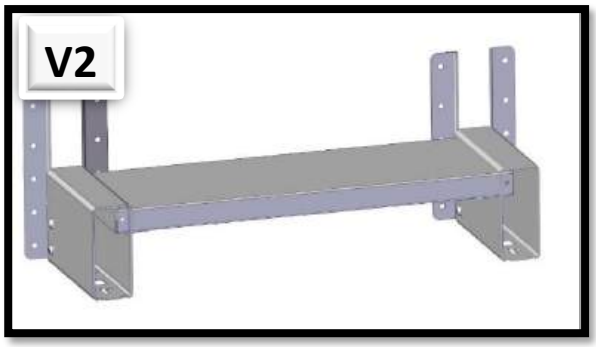

ST124
ST117
ST116
ST118
X3

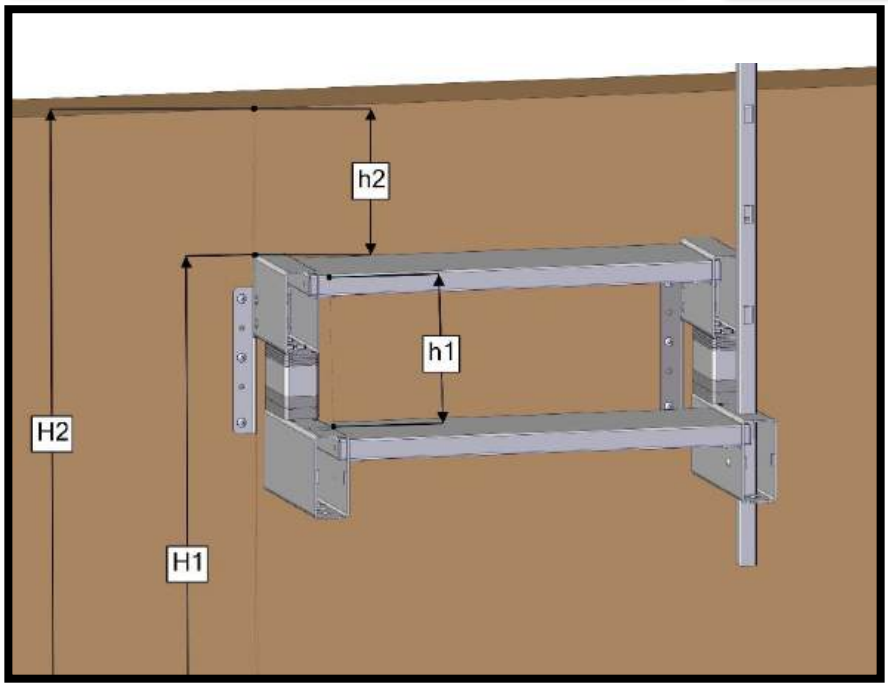



37 mm
H01
ST116
NT07
ST117


ST116
NT07
NT65
ST118
ST124







Example:

H2 = 2940mm

11+1 steps

h1=h2=h

h=H2/(11+1)

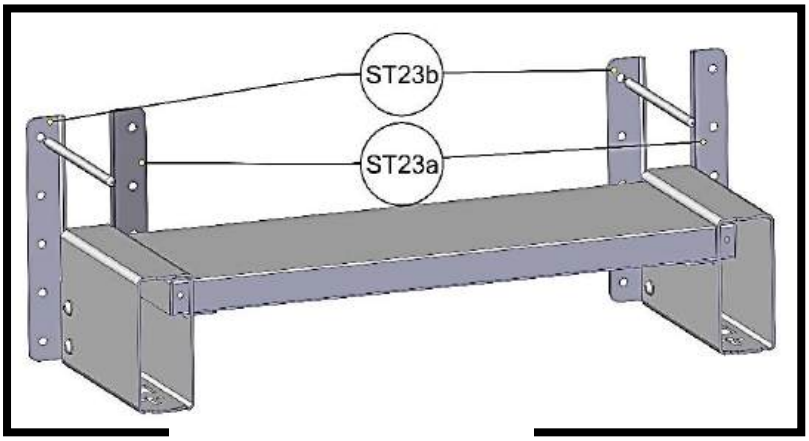
h=2940mm/12

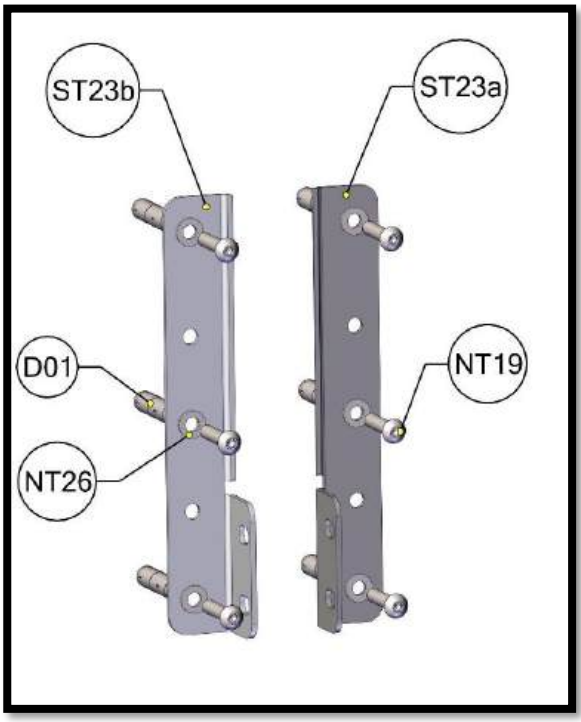
<u>h=245mm</u>

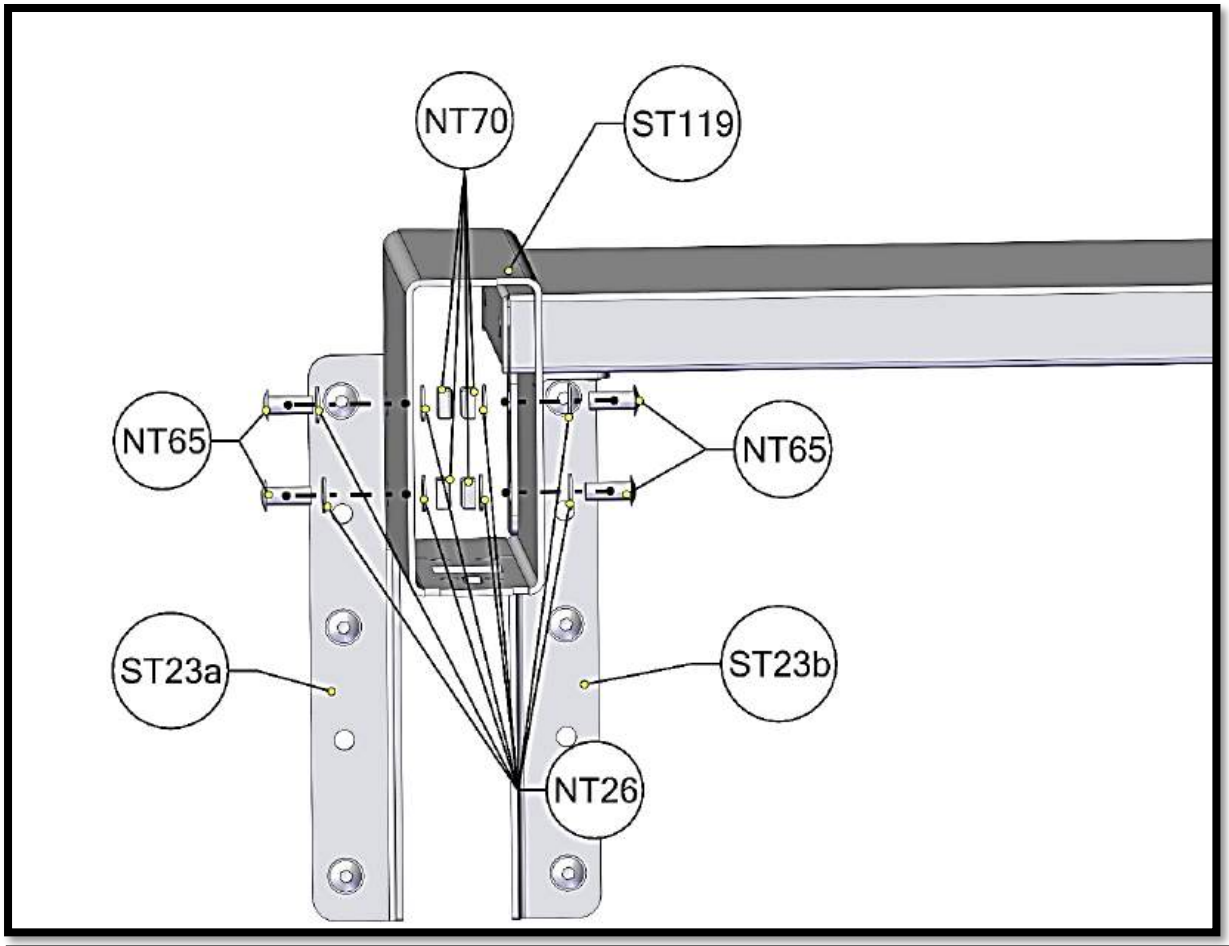
H1=H2-h

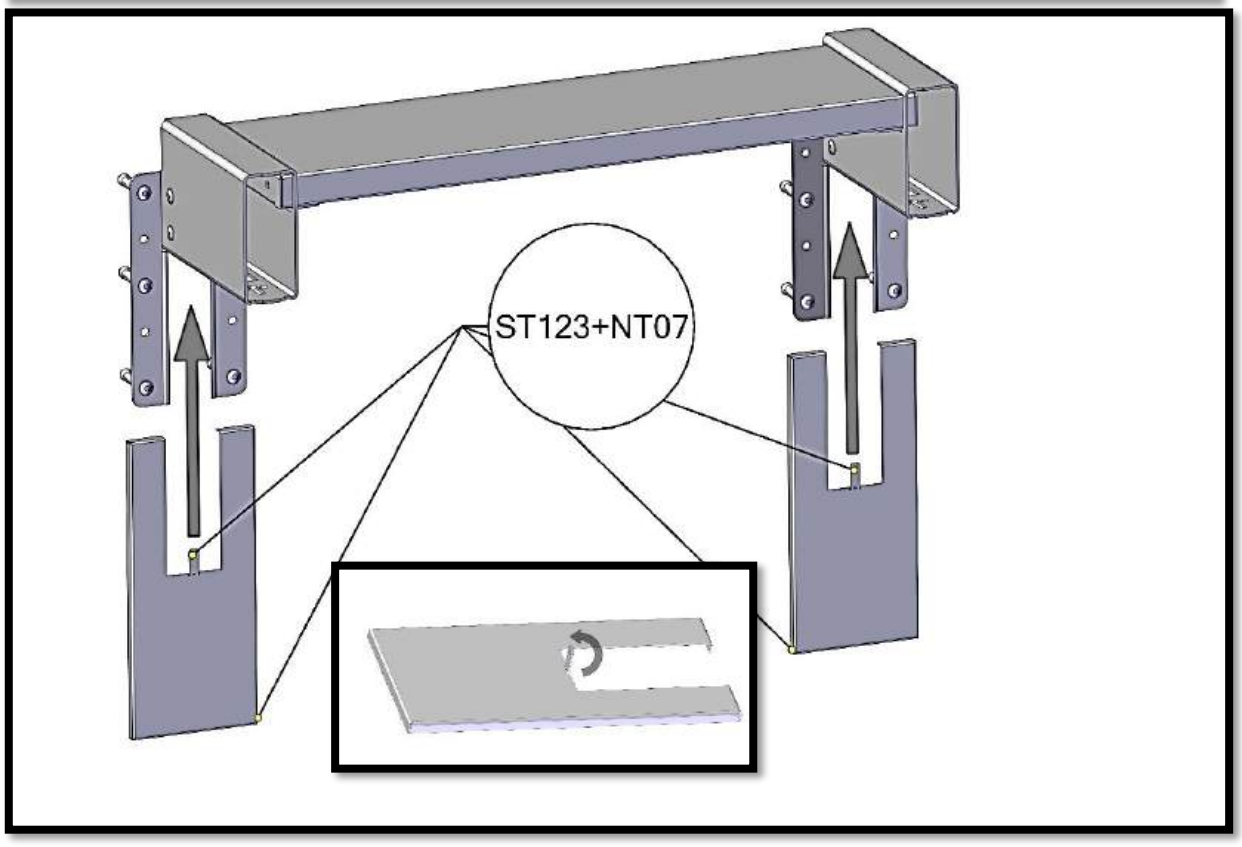
H1=2940mm-245mm

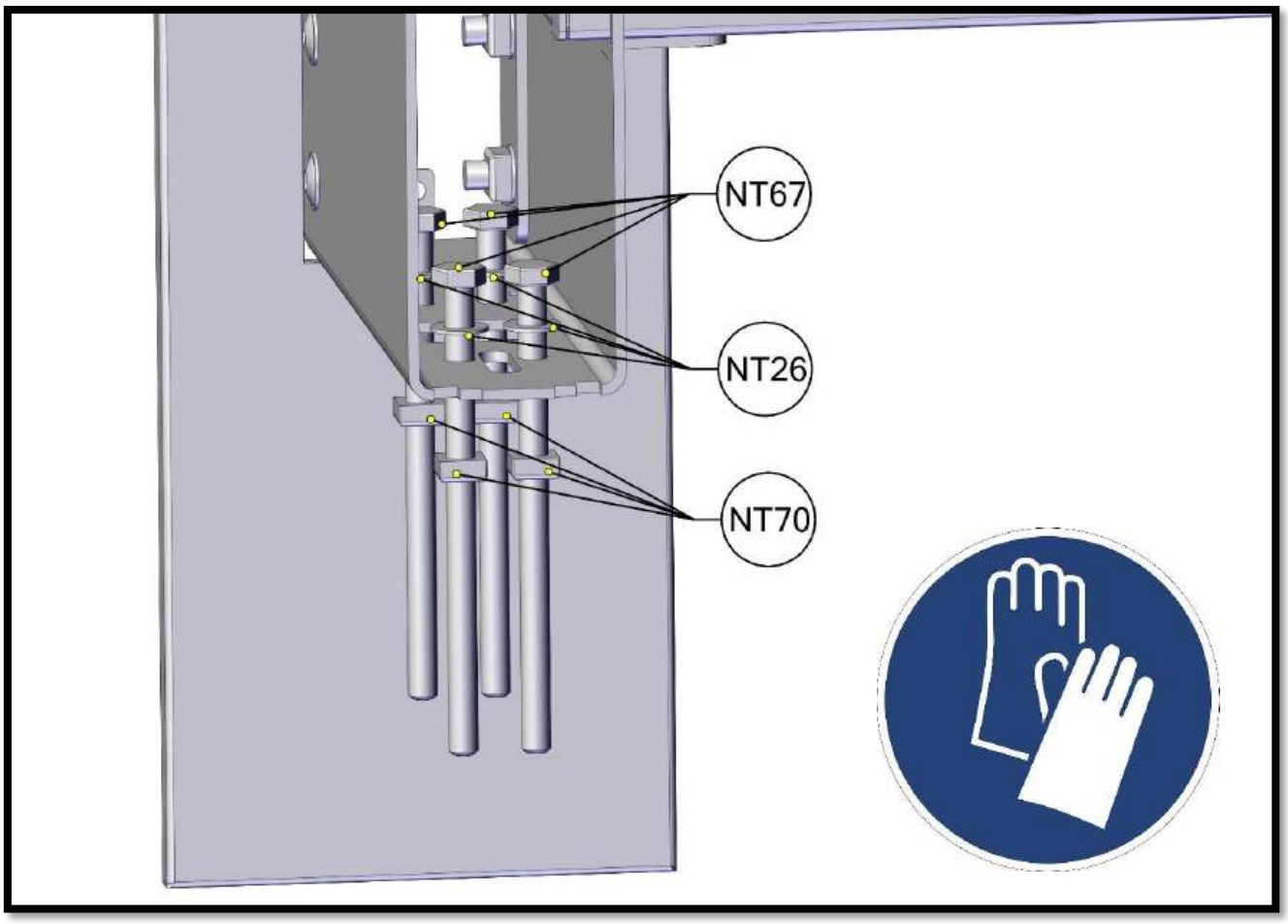
<u>H1=2695mm</u>

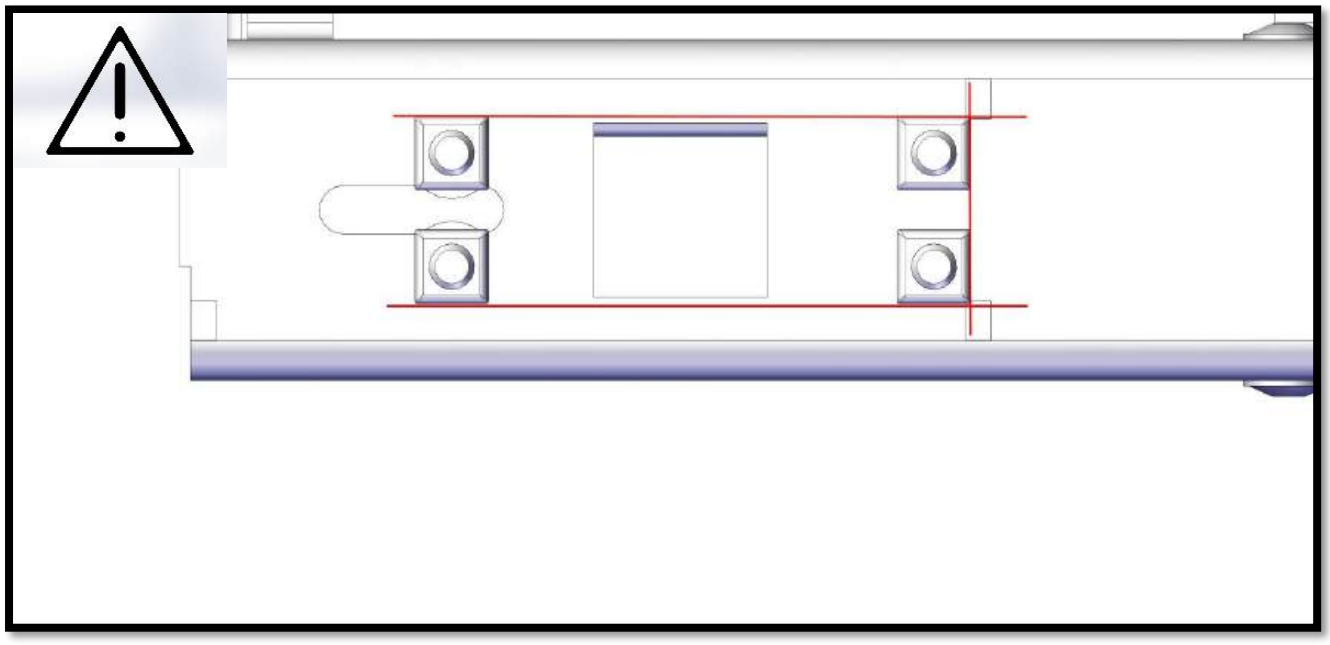


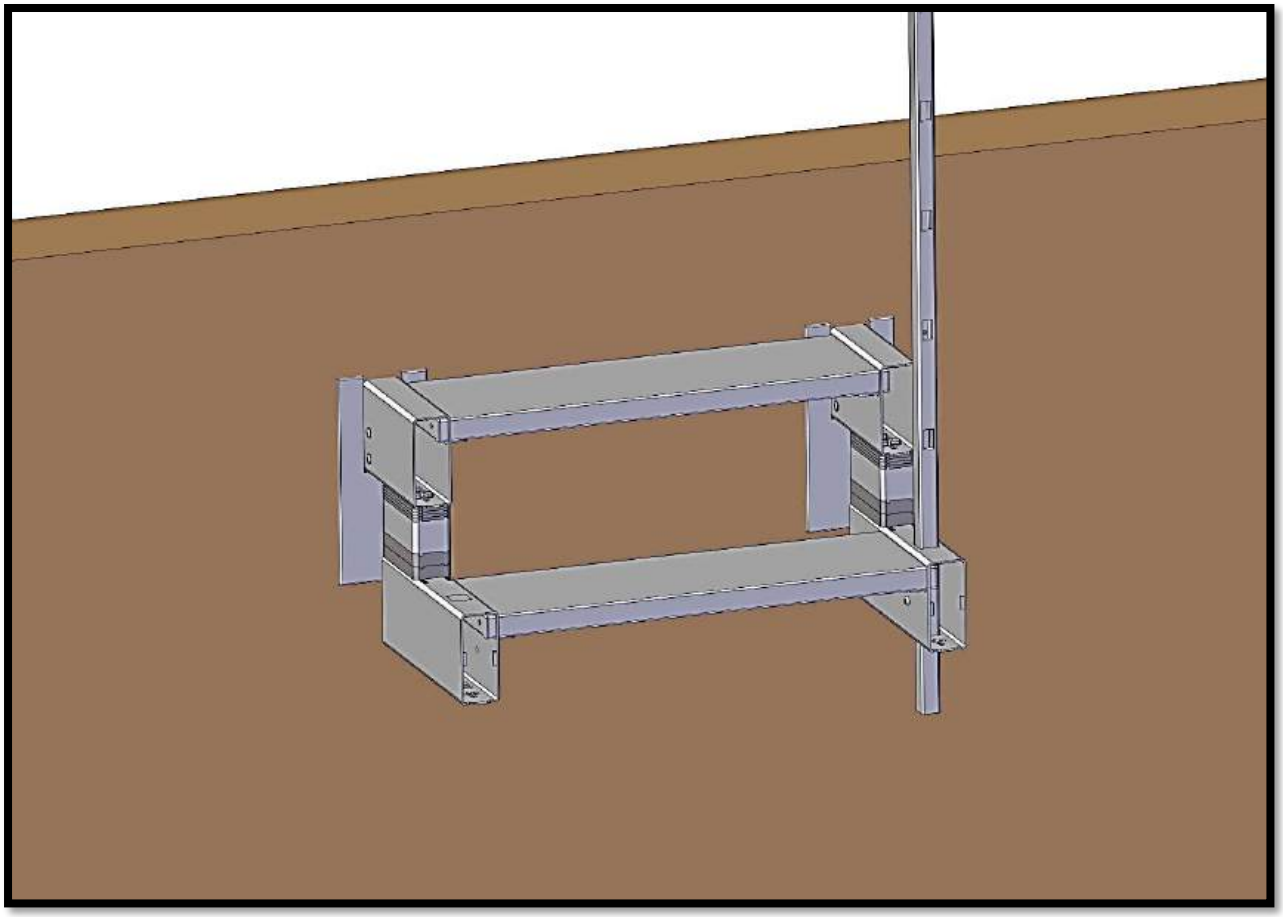


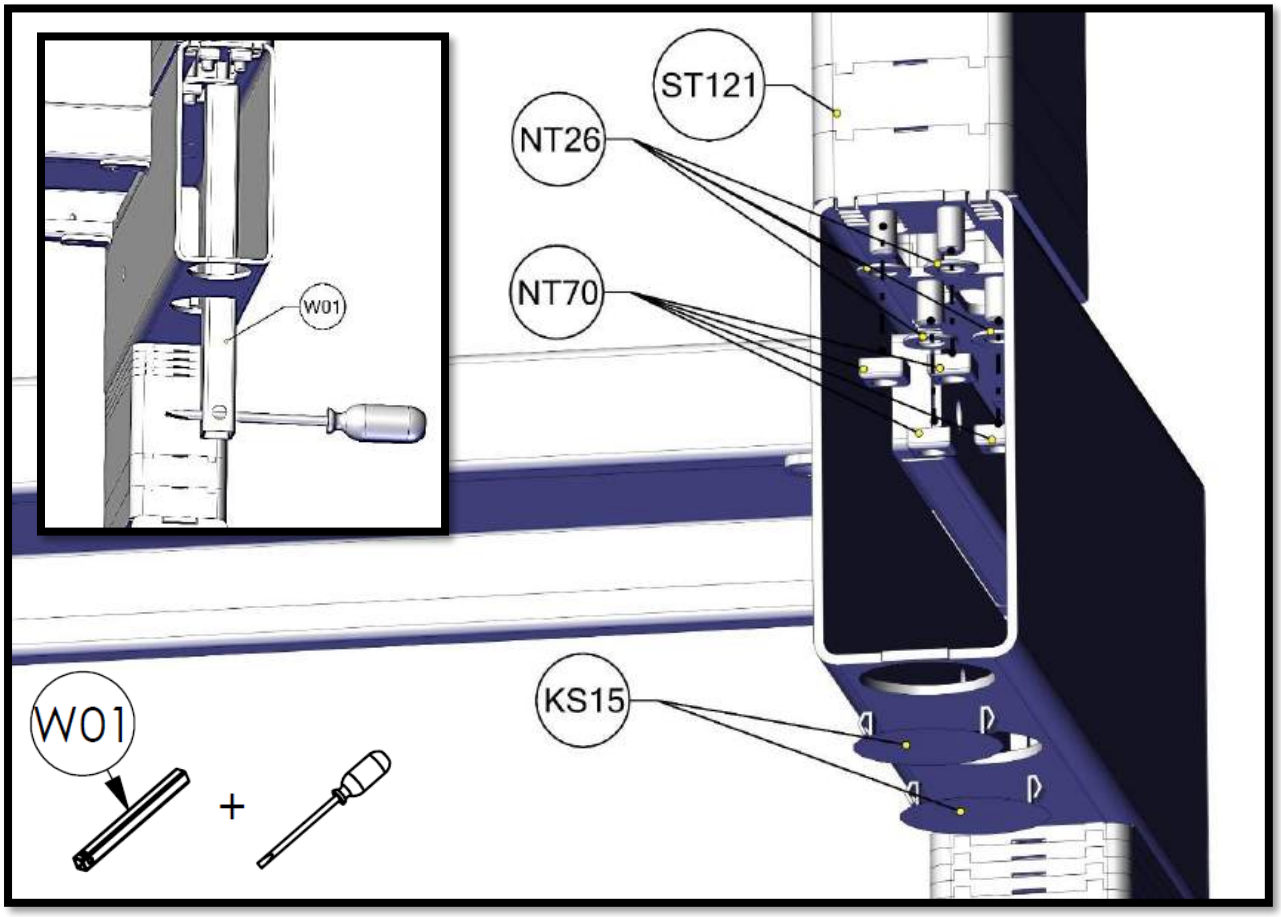

NT70
ST119
NT65
NT65
ST23a
ST23b
NT26

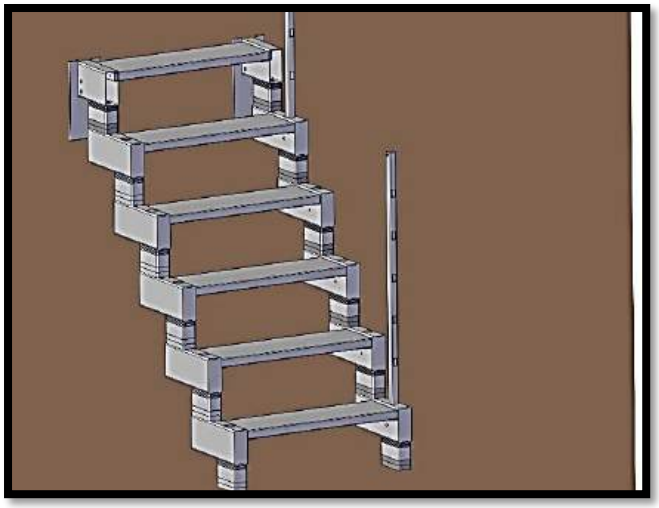

ST123+NT07

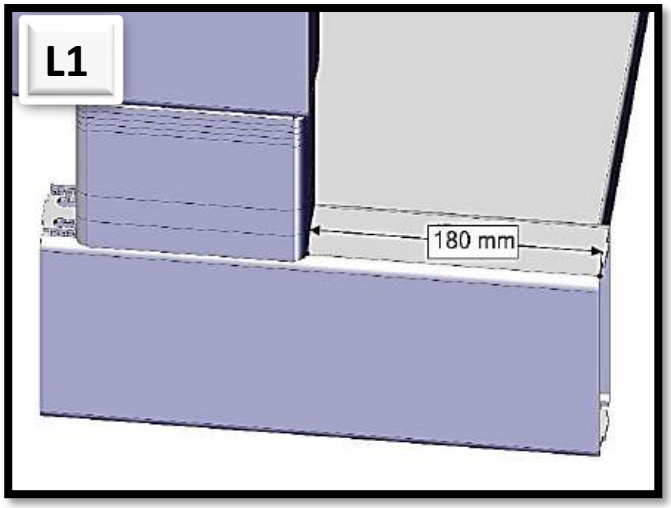

NT67
NT26
NT70

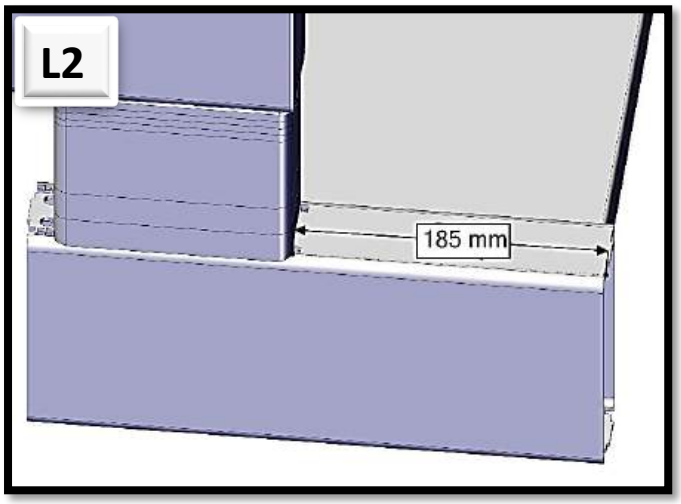


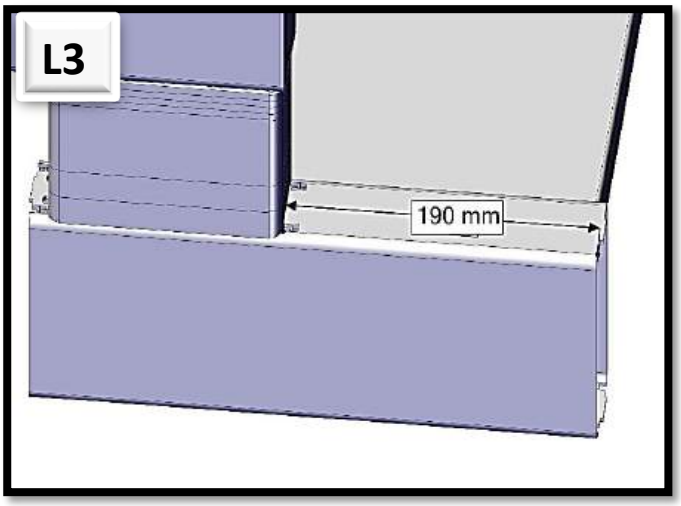


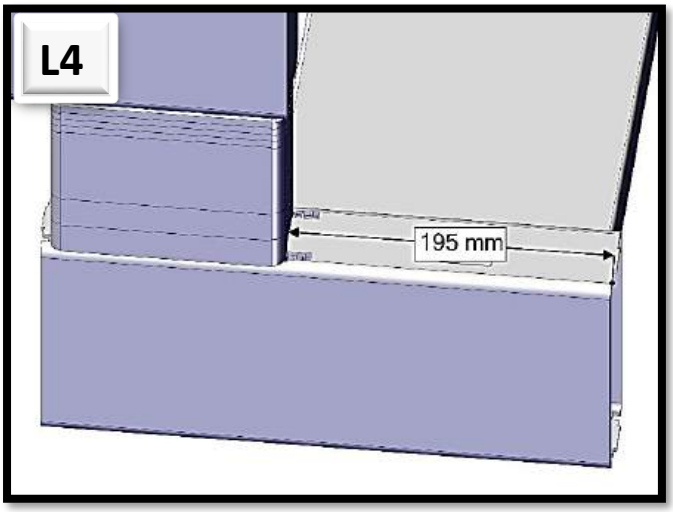

W01
ST121
NT26
NT70
KS15
W01
+

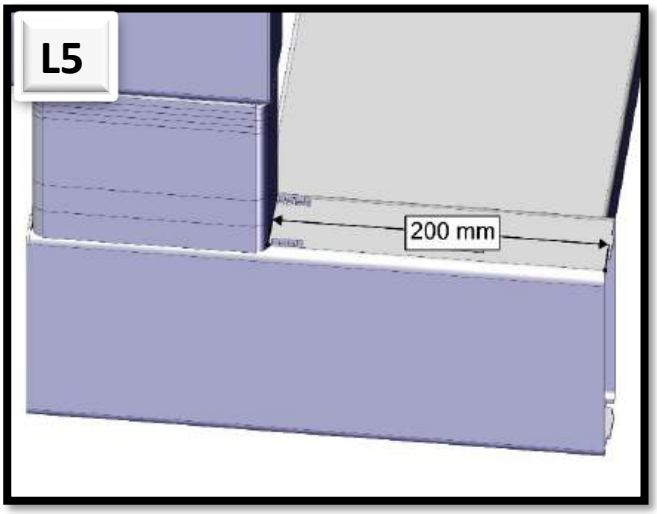


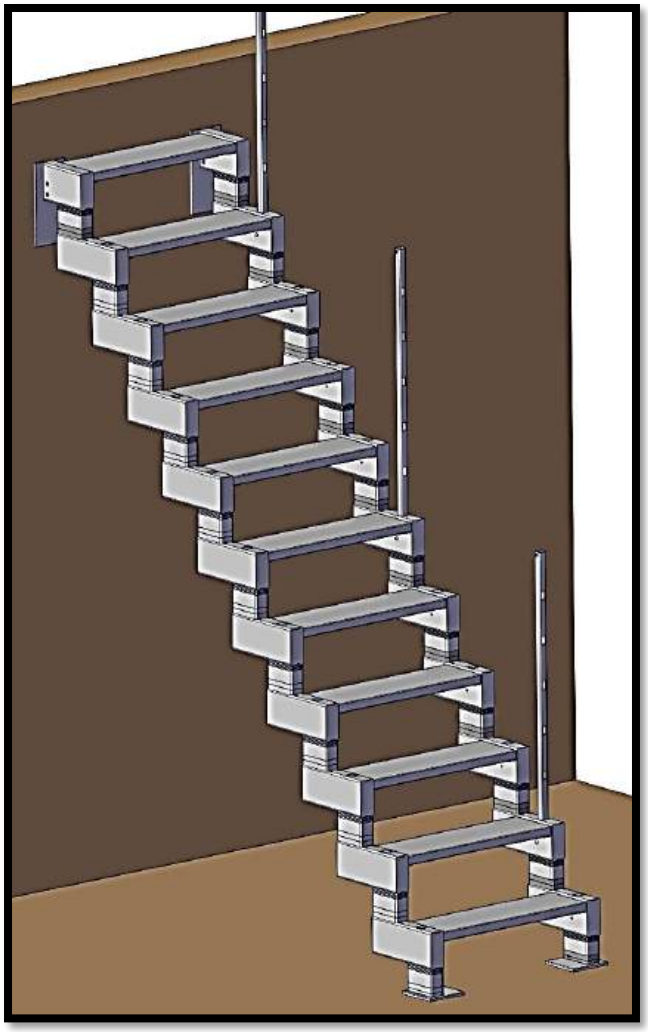

L1
180 mm

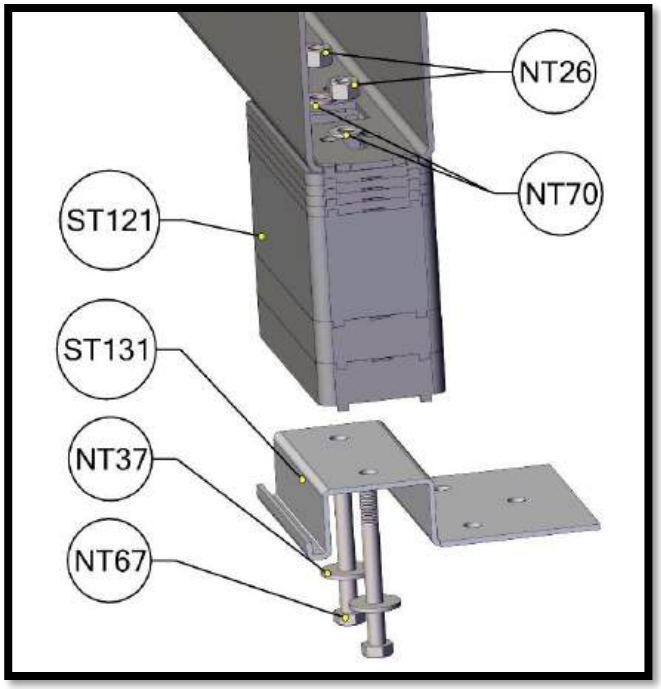

L2
185 mm


L3
190 mm

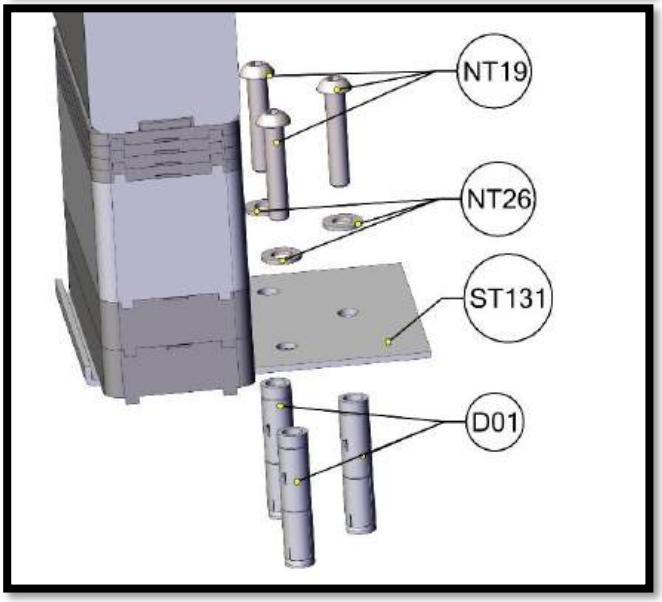

L4
195 mm

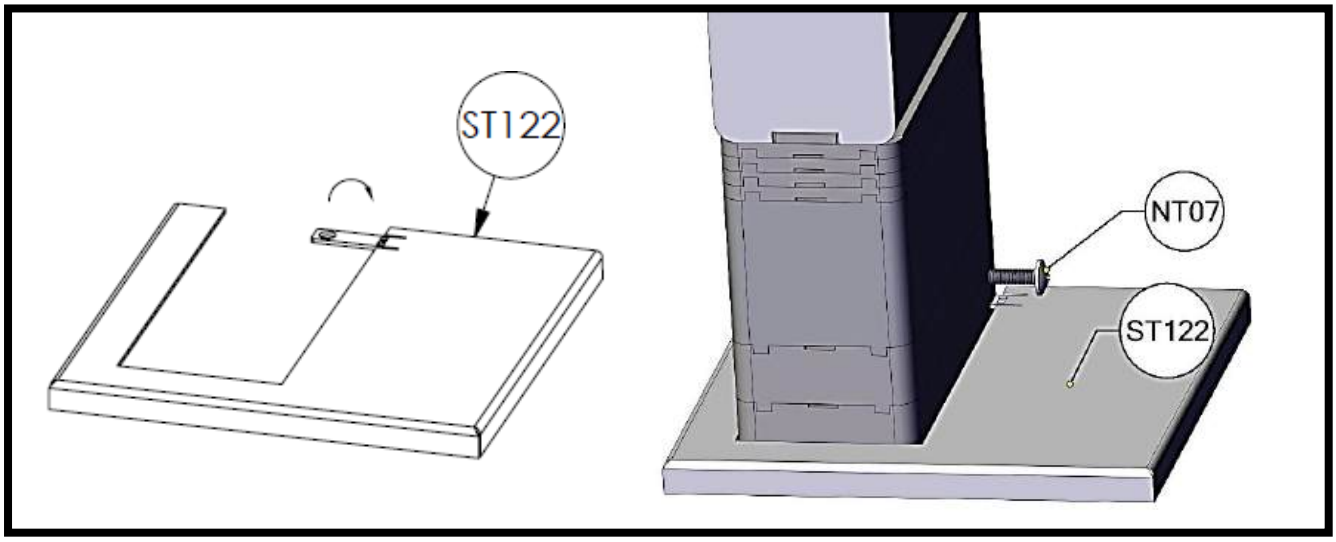

L5
200 mm

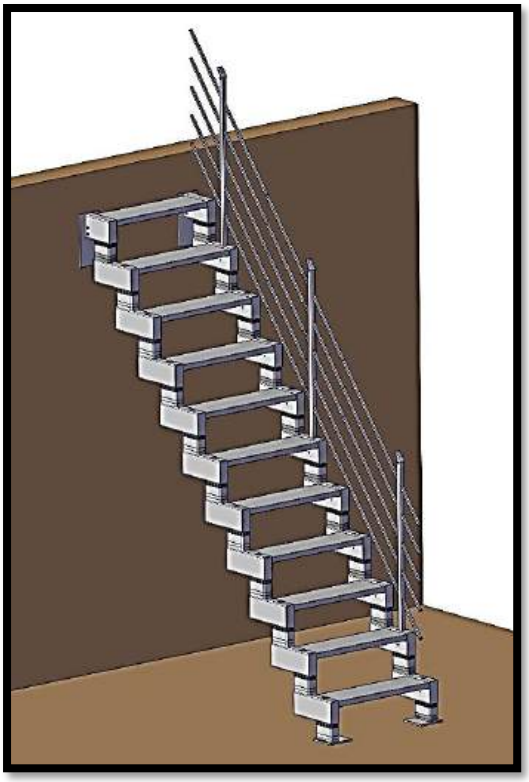


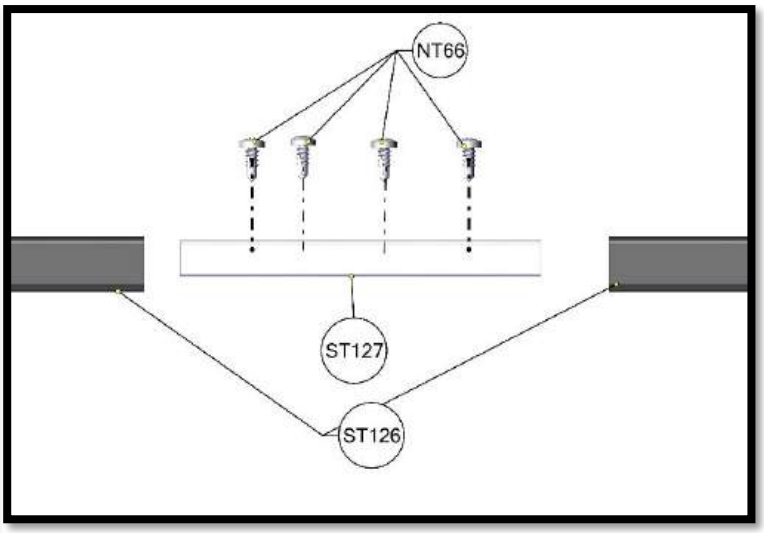

NT26
NT70
ST121
ST131
NT37
NT67

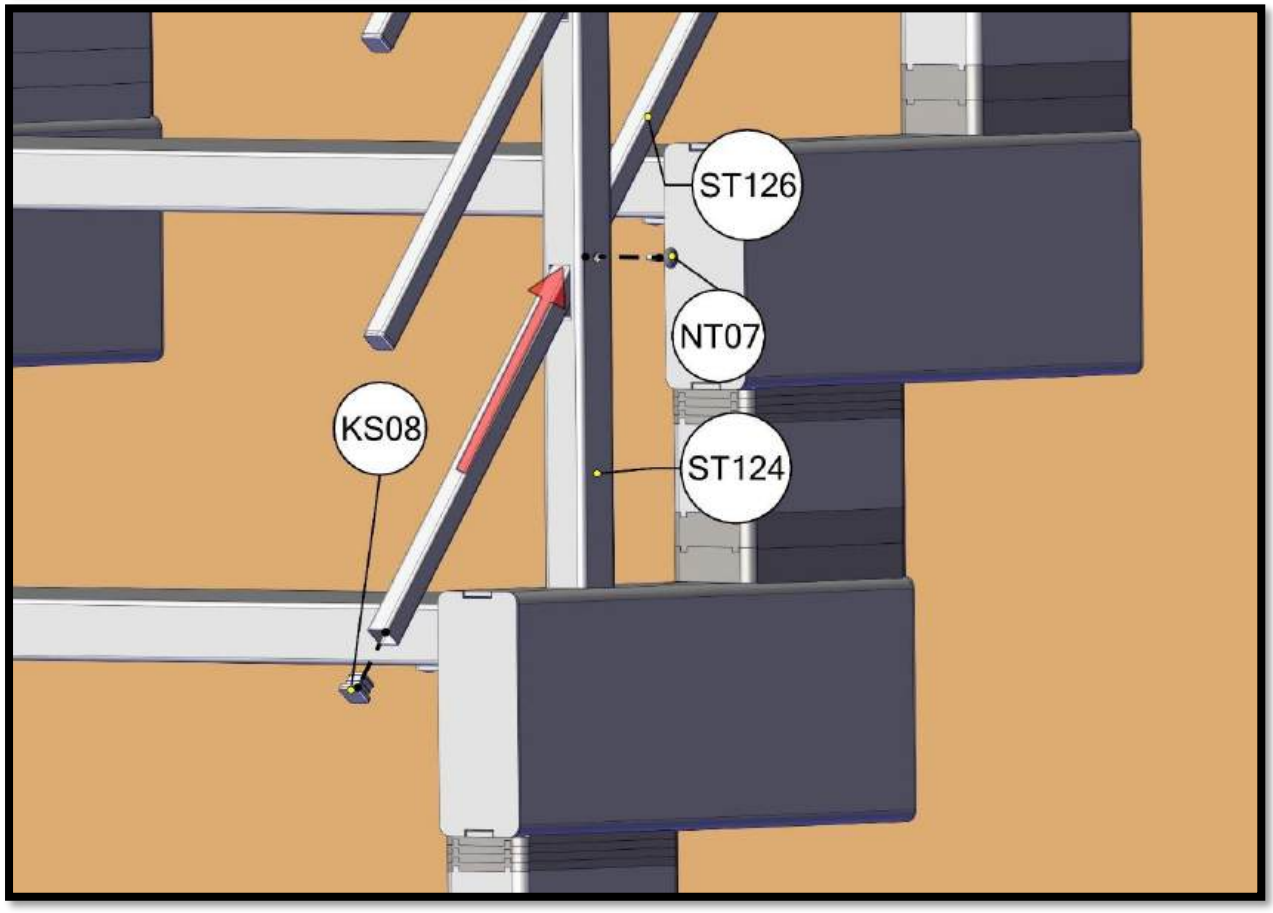
Ø12 mm

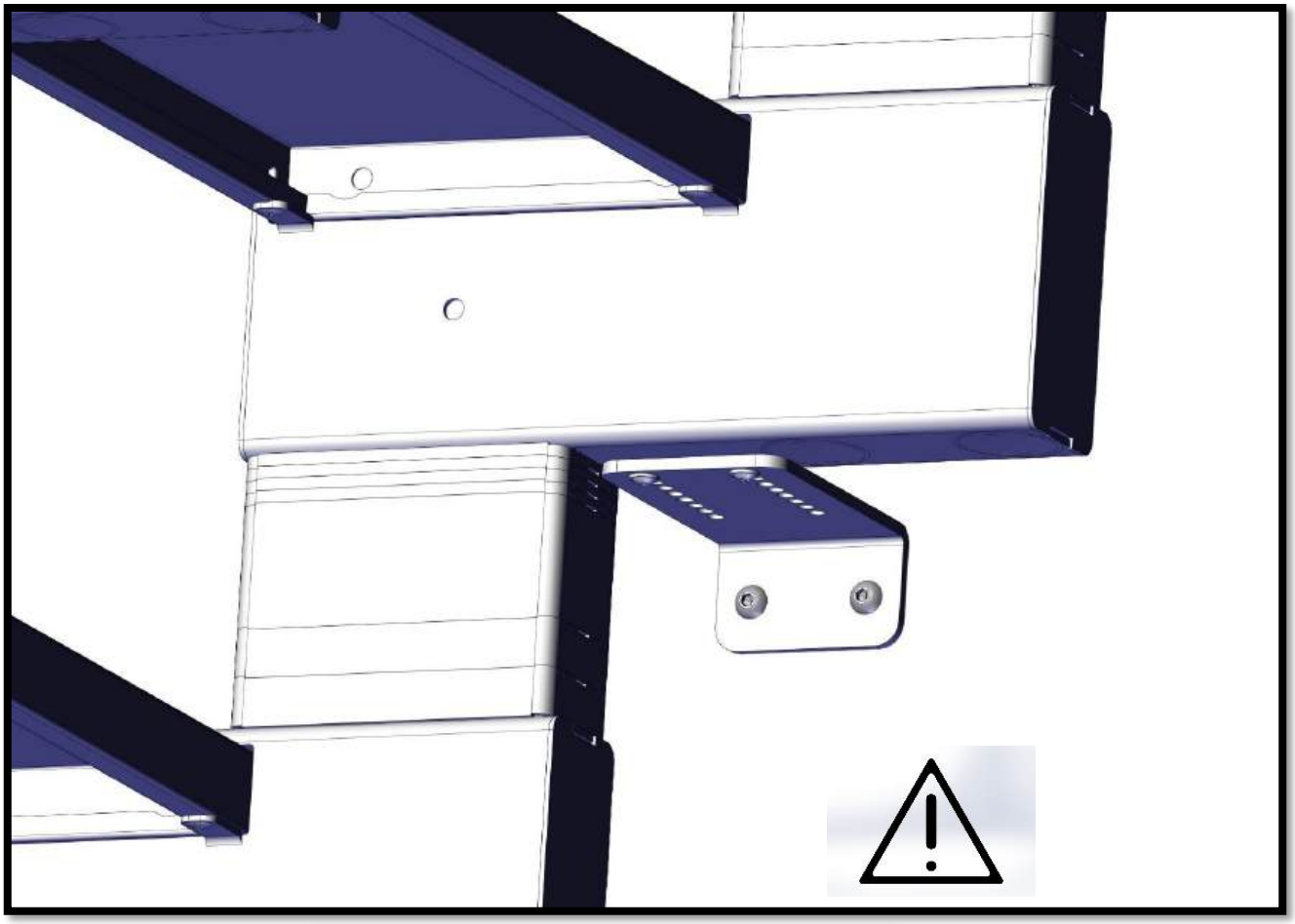

NT19
NT26
ST131
D01

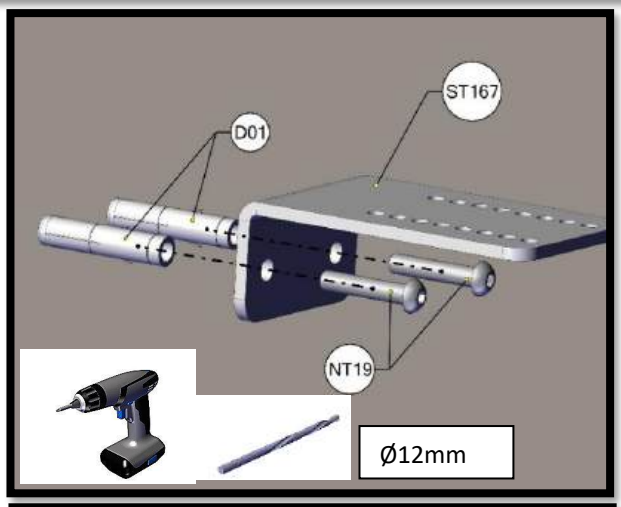

ST122
NT07
ST122

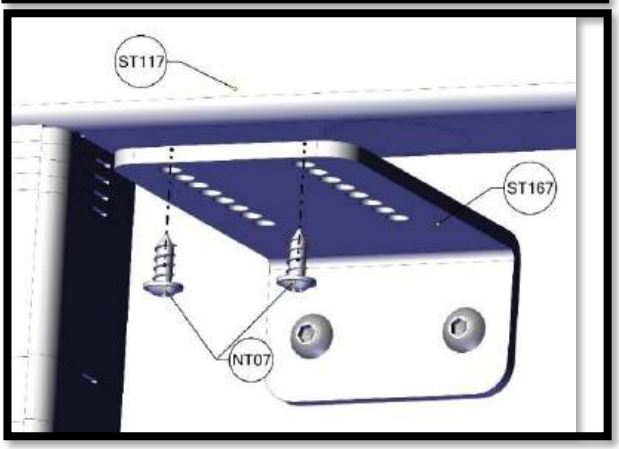


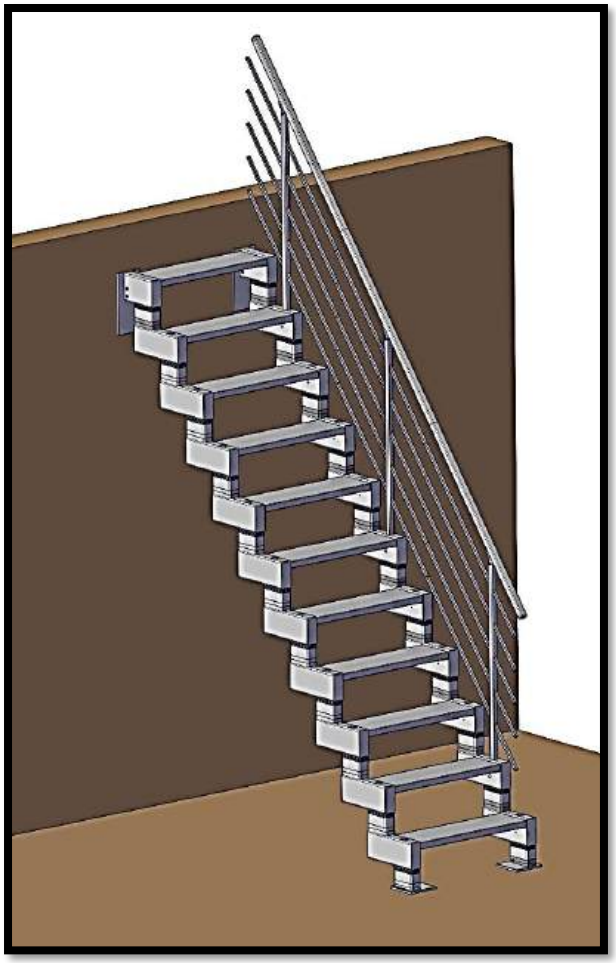

NT66
ST127
ST126

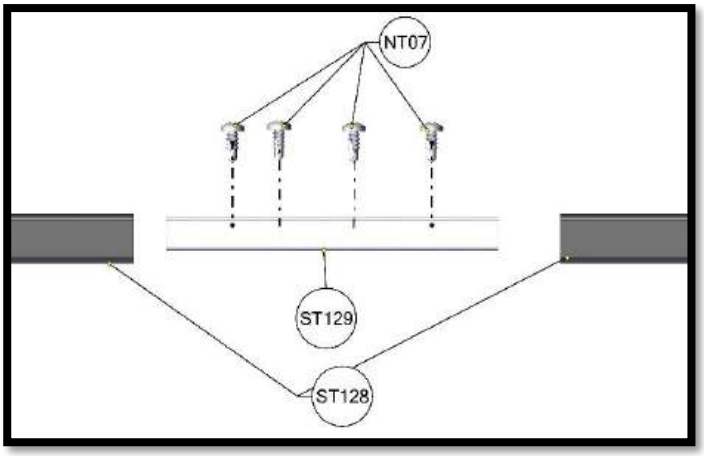

ST126
NT07
KS08
ST124

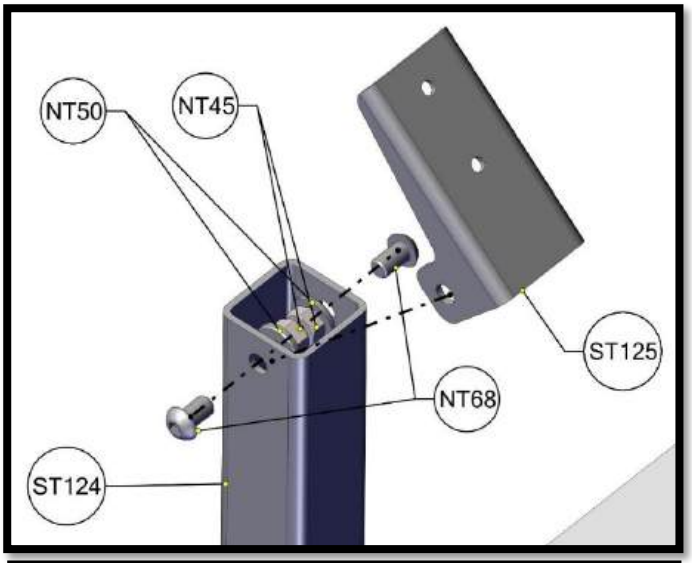


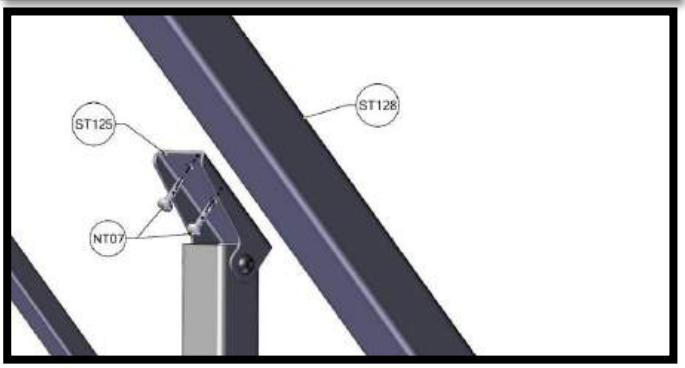

ST167
D01
NT19
Ø12mm

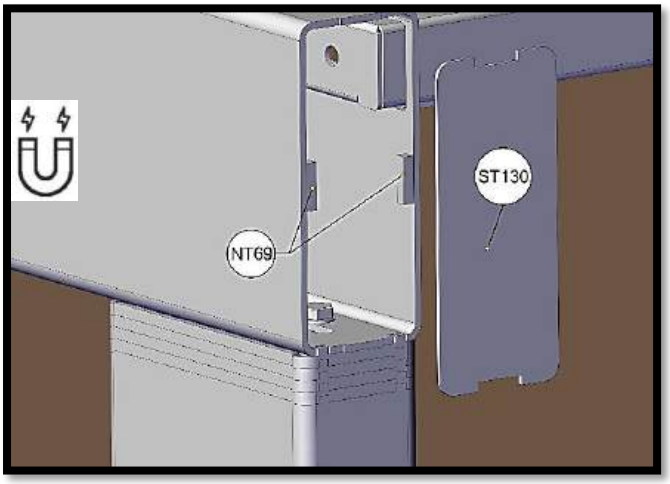

ST117
ST167
NT07

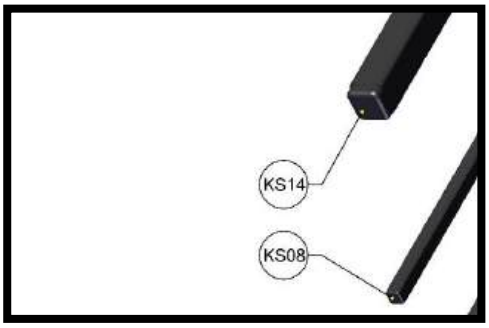



NT07
ST129
ST128


NT50
NT45
ST125
NT68
ST124


ST125
ST128
NT07


ST130
NT69


KS14
KS08