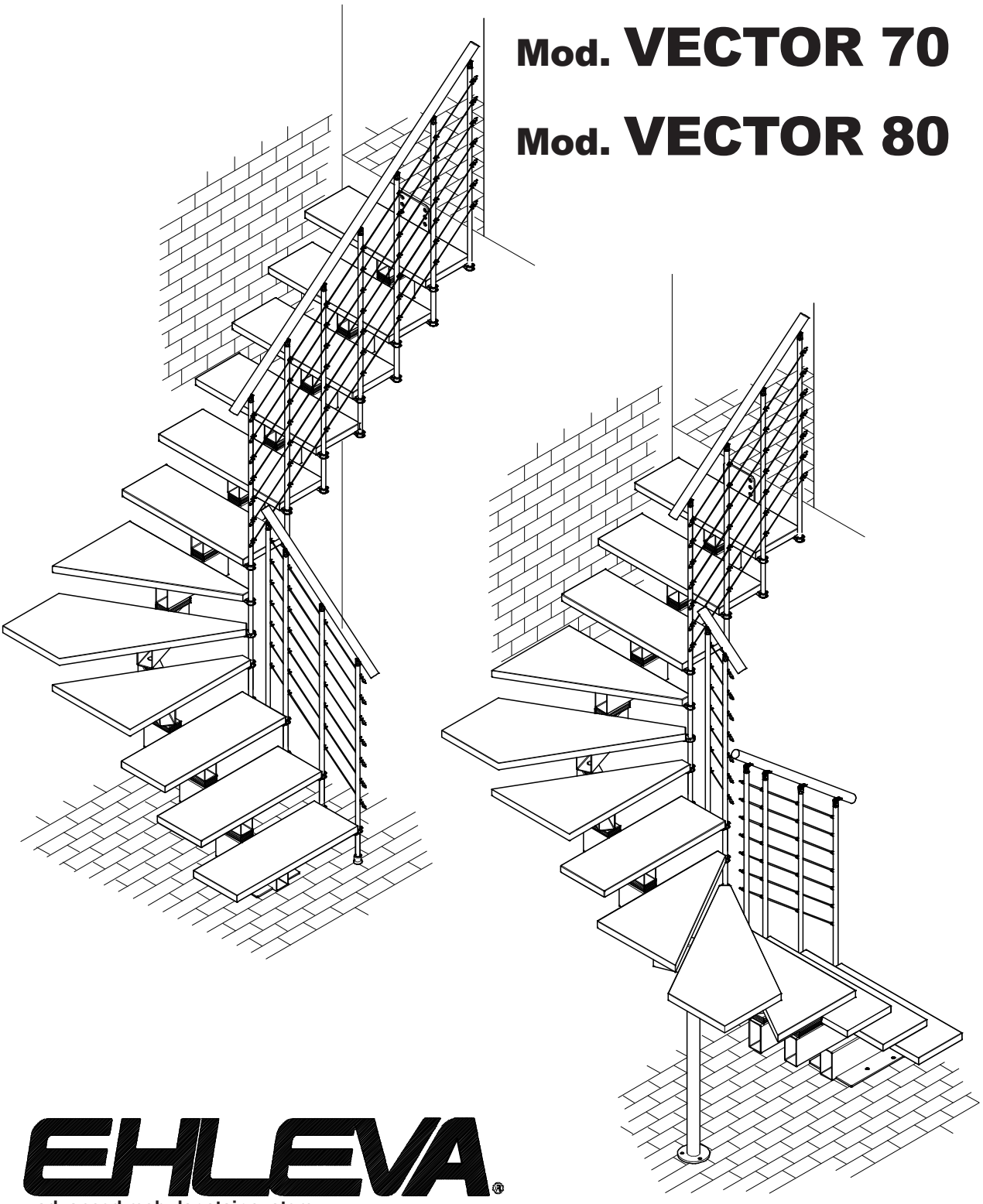
ASSEMBLY ISTRUCTIONS

GB

Mod. VECTOR 70

Mod. VECTOR 80



EHLEVA®

advanced mobular stair system

MC

Code **MD.K.001**	Rev **0**	Edition **10.2006**

CONTENTS

STRUCTURE OF THE MANUAL

- The present assembly instructions are sub-divided into two sections as follows:

Part 1

- All the parts included in the package are listed and illustrated:
wooden components listed in progressive order, the letter "**L**" preceding the number.
The parts composing the **VECTOR 70 - VECTOR 80** models are identified by a number preceded by the letters "**K**" "**B**" "**P**".

Part 2

-the preliminary operations and various stages for a correct procedure are listed.
The assembly stages of steps, banister columns and handrail shared by both models are illustrated.

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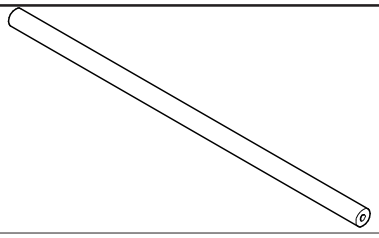
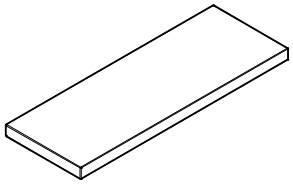
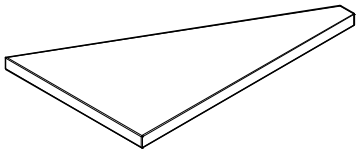
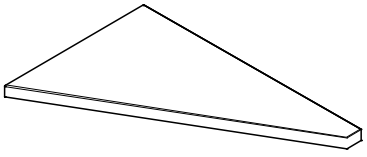
PART 1

WOODEN COMPONENTS Mod. VECTOR 70 - VECTOR 80

- Before proceeding to the various assembly stages, empty the cardboard package and arrange all parts on a flat surface to check that all components included in the list attached are present, that the number of components matches the indications of both the "**L**" and "**U**" configurations of the stairs and that no damaged parts are present.

Ref.	Draw	Stair shape N. pcs. L	Stair shape N. pcs. U
L15		5	5
L20		9	6
L21		1	2
L22		1	2

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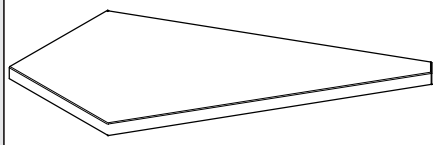
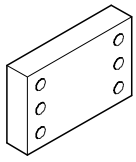
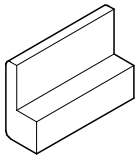
L23		1	2
D03		1	1
D04		1	1

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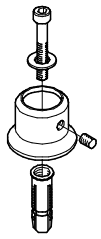
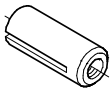
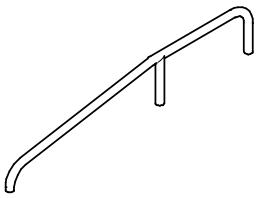
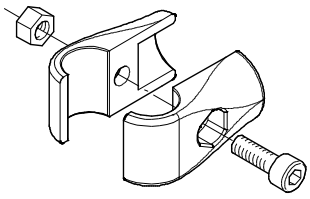
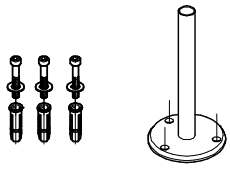
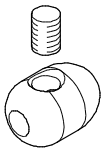
COMPONENTS Mod. VECTOR 70 - VECTOR 80

Ref.	Draw	N. pcs. L	N. pcs. U
K18	 M6x70 M6x6 Ø6x12	1	1
K23		5	5
K33		1	1
K36		6	8
K38		1	1
K60		32	48
K84	 Length.6500 mm	7	7

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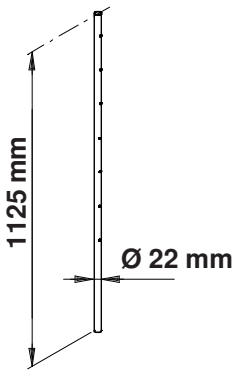
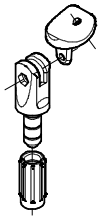
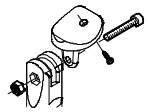
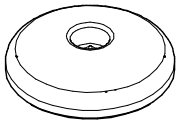
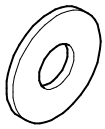
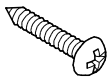
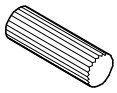
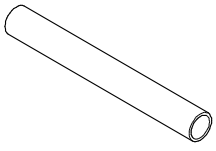
K63		11	9
K65		12	10
K66		30	30
K68		4	6
K71		5	5
K76		4	6
K77		7	9
K80	 4.2x19	30	30
K82		1	2

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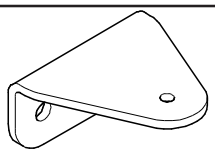
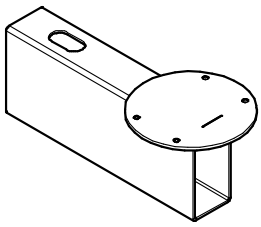
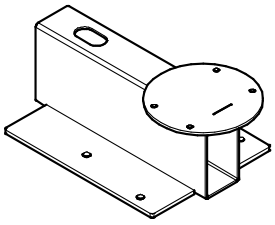
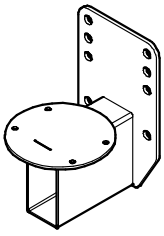
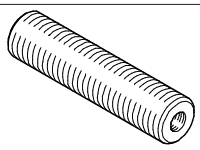
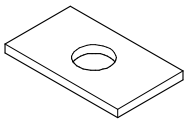
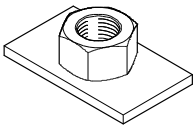
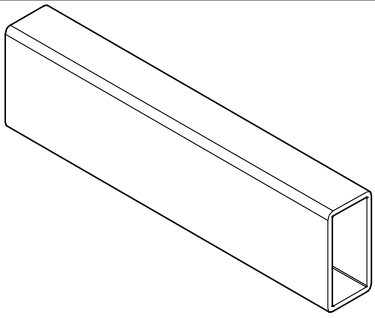
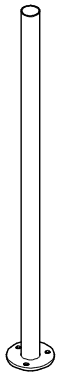
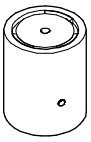
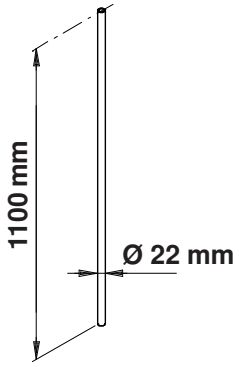
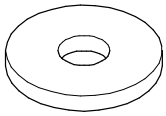
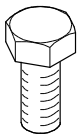
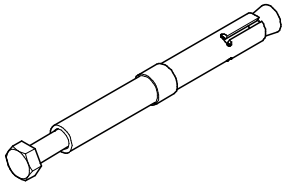
Ref.	Draw	N. pcs. L	N. pcs. U
K100		2	2
K101		10	10
K102		1	1
K103		1	1
K104		11	11
K119		11	11
K120		11	11
K121		1	1

Ref.	Draw	N. pcs. L	N. pcs. U
K122		1	1
K123		1	1
K125		1	2
K126		11	11
K127	M16x30 	11	11
K129		2	2

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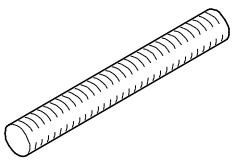
Ref.	Draw	N. pcs. L	N. pcs. U
K130		2	2
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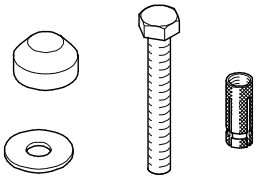
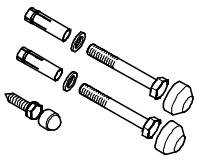
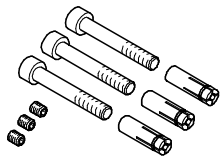
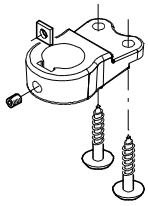
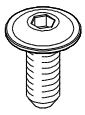
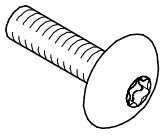
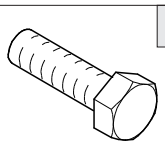
B200		4	4
B201		2	2
B202		1	1
B203		23	23
B204		12	12
B205		48	48
B206	 **M10x40**	1	1

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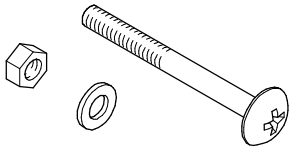
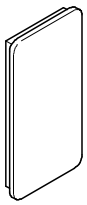
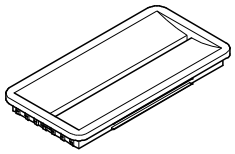
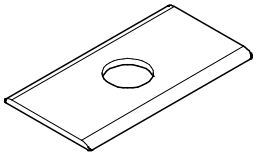
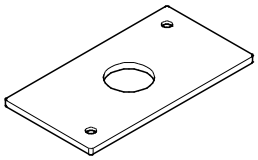
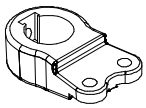
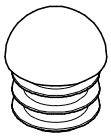
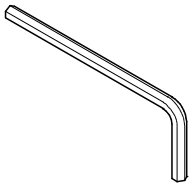
B207		2	2
P90		1	1
P105		23	23
P106a		22	22
P106		143	143
P107		23	23
P110		3	5
B300		1	1
B301		1	1

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PART 2

CONFIGURATION VECTOR 70 - VECTOR 80

- These are called “modular stairs” because the rise “**A**” and tread “**P**” may be adjusted according to the availabe space.
  The “**VECTOR 70**” label identifies the stair model having a 700 mm step width
  The “**VECTOR 80**” label identifies the stair model having a 800 mm step width.
  The type and instructions for a correct assembly are identical.
  Before passing on to the assembly instructions, the correct configuration must be established.
  The staircase may lean on a wall or be placed in an open environment.
  In the first case, the banister will be mounted only on the inner side opposite the wall, and the gangway size may be derived from figure **b**.
  If the banister needs to be mounted on both sides, the gangway is highlighted in fig. **a**.
  Moreover, the location and available space determine the climbing directions, which may be right- or left-oriented, and the actual staircase configuration, according to an “**L-**” or “**U-**”shaped configuration, as illustrated in the following pages.

Mod. **VECTOR 70** Width. **740** mm
Mod. **VECTOR 80** Width. **840** mm

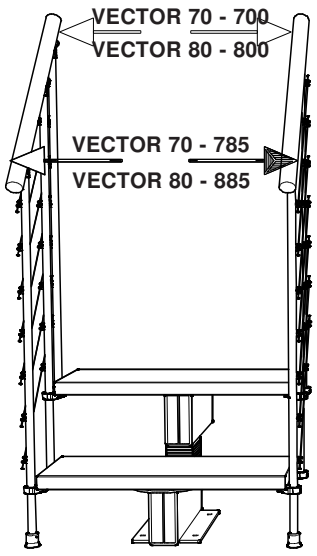

Fig. a

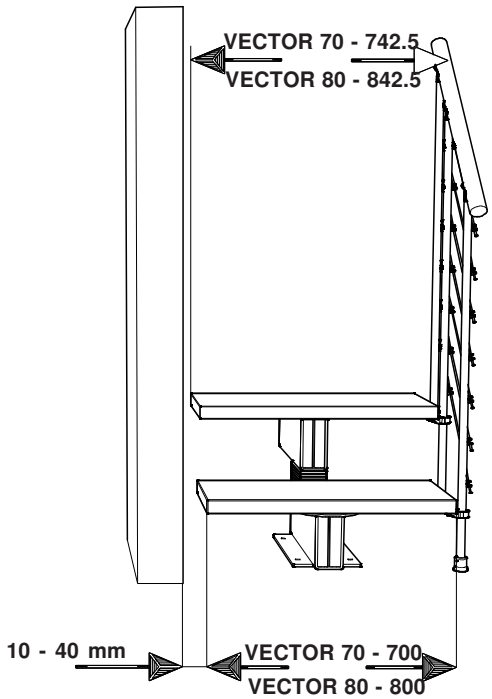

Fig. b

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USEFUL HEIGHT MEASUREMENT

- The measures that need to be assessed are reported in fig. 1.
  - **"A"** Rise size to be defined based on **"Table "A"** on pages 9-10-11
  - **"P"** Tread size, calculated according to the instructions reported on page 8
  - **"H"** Height (fig. 2)

N.B. All measures reported in the manual are in "mm" (millimetres)

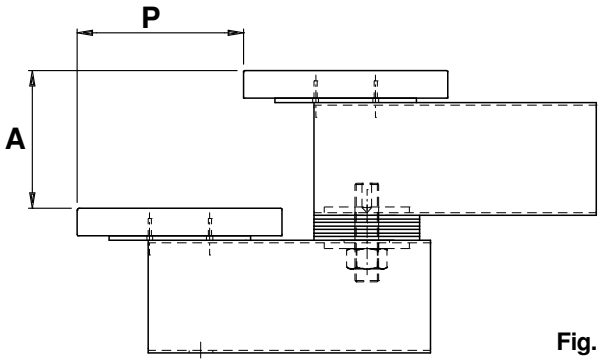

Fig. 1

- Measure the distance between upper and lower floor "**H**".
  The measure assessed thanks to this operation plays an important role since it sets the rise size. The size "**H**" needs to be identified in the dedicated box of **"table A"** on pages 9-10-11. After having identified the "**H**" height, the adjacent boxes report the rise value "**A**" and how many steps are needed to achieve the desired height. (Fig. 2)
  However, follow the detailed explanation on the following pages.

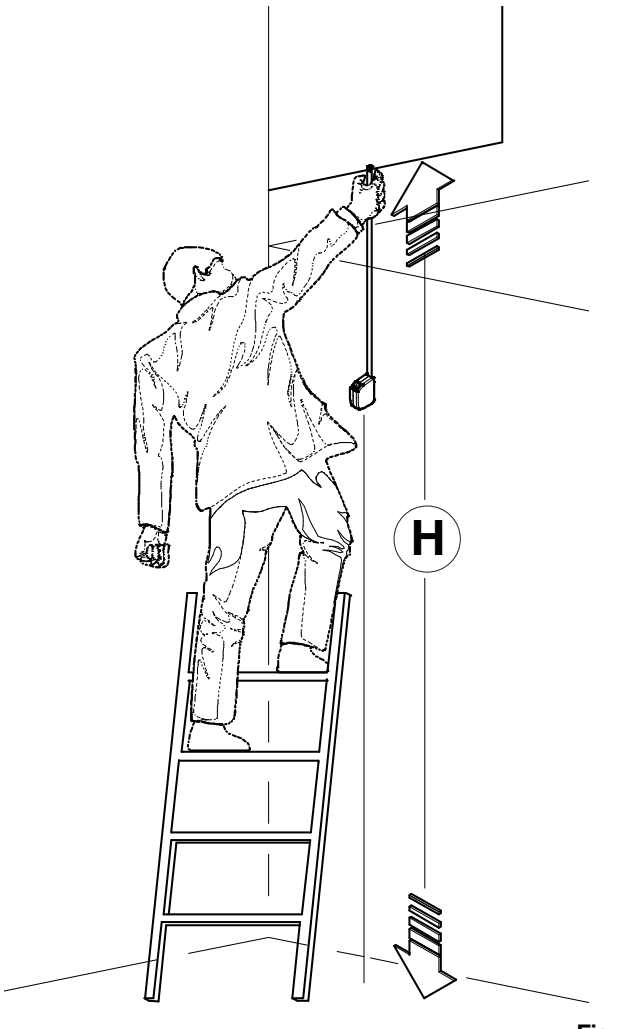

Fig. 2

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CALCULATING THE TREAD

- The tread may be calculated according to the following formulas, referring to both **VECTOR 70 - VECTOR 80** staircase models.
  In case of the "**L**" configuration, only the formula 1 shall be applied and all steps will have the same tread size; in case of the "**U**" configuration, the formula 1 shall be applied for the **W** stretch, whereas the formula 2 shall be implemented for the **J** tread. Consequently, two different tread sizes may emerge, one for the **J** and **Q** stretches and one for the **W** stretch. Please notice that the values of the **VECTOR 70** model must range between 200 mm min and 230 mm max, whereas those of the **VECTOR 80** model must range between 220 mm min and 250 mm max.
  P = Tread
  W = Staircase length with "**L**" configuration
  J = Staircase width with "**U**" configuration

WARNING

The measures to be reported in the documents below must be expressed in millimetres.

Formula 1

VECTOR 70 Config. "**L**" e "**U**" $P = \frac{W - 990}{n° G - 1}$

Formula 1

VECTOR 80 Config. "**L**" e "**U**" $P = \frac{W - 1110}{n° G - 1}$

Formula 2

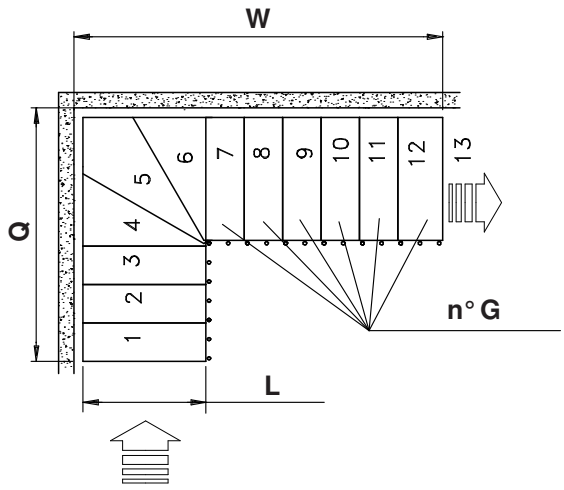
VECTOR 70 Config. "**U**" $P = \frac{J - 1460}{n° G}$

Formula 2

VECTOR 80 Config. "**U**" $P = \frac{J - 1660}{n° G}$

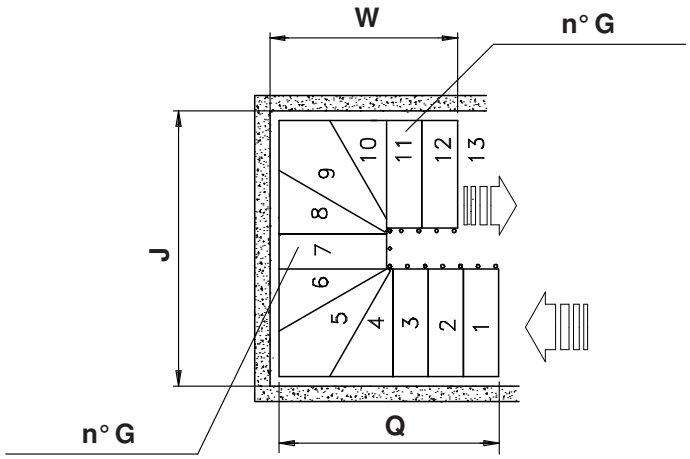
Config. "L"

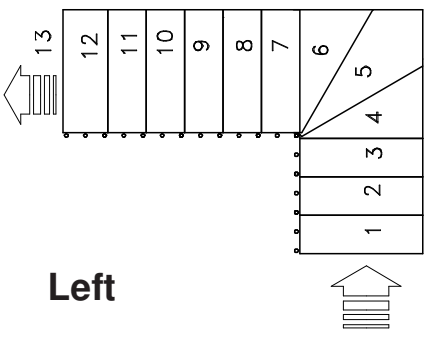
Right



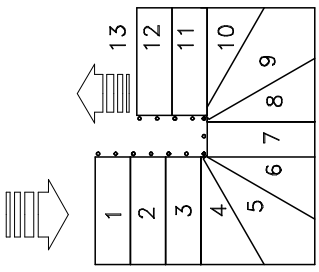
Config. "U"

Right





Left



Left

Fig. c

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CALCULATING THE RISE (table "A")

- The "**table A**" below shows the values for the rise according to the "**H**" height measured previously. Moreover the number of **K106** spacers to be mounted is reported, also with reference to the height.
  How to read and use the table: example. **Measured height: "H" 2390** mm
  The **2390** line shows that the staircase will be composed of **12** steps and that **7 180** mm rises and **5 185** mm rises need to be created (the first rise is always **205** mm).
  To create the rises described above, a spacer package must be installed including:
  four spaces (two **P106a** with rounded corners and two normal **P106)** to achieve the **180** mm rise
  five spacers (two **P106a** with rounded corners and three normal **P106)** to achieve the **185** mm rise

Spacer number		4	5	6	7	8
		Rise "A"				
H.	***G.***	***180***	***185***	***190***	***195***	***200***
2365	12	12				
2370	12	11	1			
2375	12	10	2			
2380	12	9	3			
2385	12	8	4			
2390	**12**	**7**	**5**			
2395	12	6	6			
2400	12	5	7			
2405	12	4	8			
2410	12	3	9			
2415	12	2	10			
2420	12	1	11			
2425	12		12			
2430	12		11	1		
2435	12		10	2		
2440	12		9	3		
2445	12		8	4		
2450	12		7	5		
2455	12		6	6		
2460	12		5	7		
2465	12		4	8		
2470	12		3	9		
2475	12		2	10		
2480	12		1	11		
2485	12			12		
2490	12			11	1	
2495	12			10	2	
2500	12			9	3	
2505	12			8	4	
2510	12			7	5	
2515	12			6	6	
2520	12			5	7	
2525	12			4	8	
2530	12			3	9	
2535	12			2	10	
2540	12			1	11	
2545	12				12	
2550	12				11	1
2555	12				10	2
2560	12				9	3
2565	12				8	4
2570	12				7	5
2575	12				6	6
2580	12				5	7
2585	12				4	8
2590	12				3	9
2595	12				2	10
2600	12				1	11

Spacer number		8	9	10	11	12
		Rise "A"				
H.	***G.***	***200***	***205***	***210***	***215***	***220***
2605	12	12				
2610	12	11	1			
2615	12	10	2			
2620	12	9	3			
2625	12	8	4			
2630	12	7	5			
2635	12	6	6			
2640	12	5	7			
2645	12	4	8			
2650	12	3	9			
2655	12	2	10			
2660	12	1	11			
2665	12		12			
2670	12		11	1		
2675	12		10	2		
2680	12		9	3		
2685	12		8	4		
2690	12		7	5		
2695	12		6	6		
2700	12		5	7		
2705	12		4	8		
2710	12		3	9		
2715	12		2	10		
2720	12		1	11		
2725	12			12		
2730	12			11	1	
2735	12			10	2	
2740	12			9	3	
2745	12			8	4	
2750	12			7	5	
2755	12			6	6	
2760	12			5	7	
2765	12			4	8	
2770	12			3	9	
2775	12			2	10	
2780	12			1	11	
2785	12				12	
2790	12				11	1
2795	12				10	2
2800	12				9	3
2805	12				8	4
2810	12				7	5
2815	12				6	6
2820	12				5	7
2825	12				4	8
2830	12				3	9
2835	12				2	10
2840	12				1	11

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Spacer number		12	13	14	15
		Rise "A"			
H.	G.	220	225	230	235
2845	12	12			
2850	12	11	1		
2855	12	10	2		
2860	12	9	3		
2865	12	8	4		
2870	12	7	5		
2875	12	6	6		
2880	12	5	7		
2885	12	4	8		
2890	12	3	9		
2895	12	2	10		
2900	12	1	11		
2905	12		12		
2910	12		11	1	
2915	12		10	2	
2920	12		9	3	
2925	12		8	4	
2930	12		7	5	
2935	12		6	6	
2940	12		5	7	
2945	12		4	8	
2950	12		3	9	
2955	12		2	10	
2960	12		1	11	
2965	12			12	
2970	12			11	1
2975	12			10	2
2980	12			9	3
2985	12			8	4
2990	12			7	5
2995	12			6	6
3000	12			5	7
3005	12			4	8
3010	12			3	9
3015	12			2	10
3020	12			1	11
3025	12				12

Spacer number		11	12	13	14
		Rise "A"			
H.	G.	215	220	225	230
3030	13	7	6		
3035	13	6	7		
3040	13	5	8		
3045	13	4	9		
3050	13	3	10		
3055	13	2	11		
3060	13	1	12		
3065	13		13		
3070	13		12	1	
3075	13		11	2	
3080	13		10	3	
3085	13		9	4	
3090	13		8	5	
3095	13		7	6	
3100	13		6	7	
3105	13		5	8	
3110	13		4	9	

Spacer number		11	12	13	14	15
		Rise "A"				
H.	G.	215	220	225	230	235
3115	13		3	10		
3120	13		2	11		
3125	13		1	12		
3130	13			13		
3135	13			12	1	
3140	13			11	2	
3145	13			10	3	
3150	13			9	4	
3155	13			8	5	
3160	13			7	6	
3165	13			6	7	
3170	13			5	8	
3175	13			4	9	
3180	13			3	10	
3185	13			2	11	
3190	13			1	12	
3195	13				13	
3200	13				12	1
3205	13				11	2
3210	13				10	3
3215	13				9	4
3220	13				8	5
3225	13				7	6
3230	13				6	7
3235	13				5	8
3240	13				4	9
3245	13				3	10
3250	13				2	11
3255	13				1	12
3260	13					13

Spacer number		11	12	13	14
		Rise "A"			
H.	G.	215	220	225	230
3265	14	4	10		
3270	14	3	11		
3275	14	2	12		
3280	14	1	13		
3285	14		14		
3290	14		13	1	
3295	14		12	2	
3300	14		11	3	
3305	14		10	4	
3310	14		9	5	
3315	14		8	6	
3320	14		7	7	
3325	14		6	8	
3330	14		5	9	
3335	14		4	10	
3340	14		3	11	
3345	14		2	12	
3350	14		1	13	
3355	14			14	
3360	14			13	1
3365	14			12	2
3370	14			11	3
3375	14			10	4

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Spacer number		11	12	13	14	15
		Rise "A"				
H.	G.	215	220	225	230	235
3380	14			9	5	
3385	14			8	6	
3390	14			7	7	
3395	14			6	8	
3400	14			5	9	
3405	14			4	10	
3410	14			3	11	
3415	14			2	12	
3420	14			1	13	
3425	14				14	
3430	14				13	1
3435	14				12	2
3440	14				11	3
3445	14				10	4
3450	14				9	5
3455	14				8	6
3460	14				7	7
3465	14				6	8
3470	14				5	9
3475	14				4	10
3480	14				3	11
3485	14				2	12
3490	14				1	13
3495	14					14

Spacer number		11	12	13	14	
		Rise "A"				
H.	G.	215	220	225	230	
3500	15	1	14			
3505	15		15			
3510	15		14	1		
3515	15		13	2		
3520	15		12	3		
3525	15		11	4		
3530	15		10	5		
3535	15		9	6		
3540	15		8	7		
3545	15		7	8		
3550	15		6	9		
3555	15		5	10		
3560	15		4	11		
3565	15		3	12		
3570	15		2	13		
3575	15		1	14		
3580	15			15		
3585	15			14	1	
3590	15			13	2	
3595	15			12	3	
3600	15			11	4	
3605	15			10	5	
3610	15			9	6	
3615	15			8	7	
3620	15			7	8	
3625	15			6	9	
3630	15			5	10	
3635	15			4	11	
3640	15			3	12	

Spacer number		11	12	13	14	15
		Rise "A"				
H.	G.	215	220	225	230	235
3645	15			2	13	
3650	15			1	14	
3655	15				15	
3660	15				14	1
3665	15				13	2
3670	15				12	3
3675	15				11	4
3680	15				10	5
3685	15				9	6
3690	15				8	7
3695	15				7	8
3700	15				6	9
3705	15				5	10
3710	15				4	11
3715	15				3	12
3720	15				2	13
3725	15				1	14
3730	15					15

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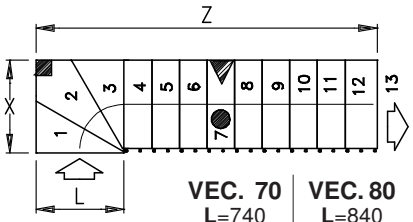
CONFIGURATION

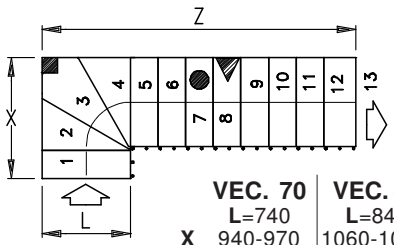
- The available configurations and their relevant sizes are reported below. Please notice that, for brevity's sake, only right-climbing staircases are illustrated. Each of the drawings presented is matched by its left-climbing counterpart. Moreover, the points where the staircase can be anchored or supported during the assembly stages are also shown.

■ Wall anchoring point ▼ Wall anchoring point ● Support point

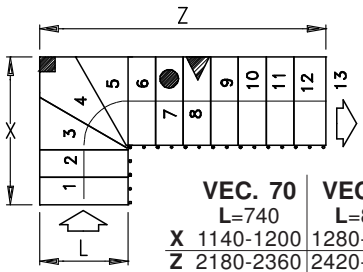
CONFIGURATION "L"



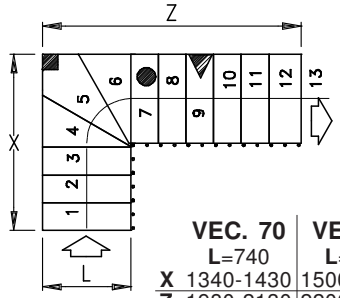
	VEC. 70 L=740	VEC. 80 L=840
X	740	840
Z	2580-2820	2840-3100



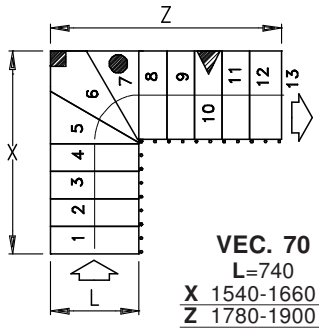
	VEC. 70 L=740	VEC. 80 L=840
X	940-970	1060-1090
Z	2390-2600	2640-2850



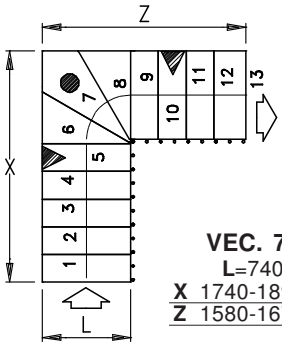
	VEC. 70 L=740	VEC. 80 L=840
X	1140-1200	1280-1340
Z	2180-2360	2420-2600



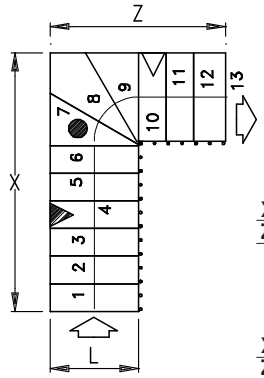
	VEC. 70 L=740	VEC. 80 L=840
X	1340-1430	1500-1590
Z	1980-2130	2200-2350



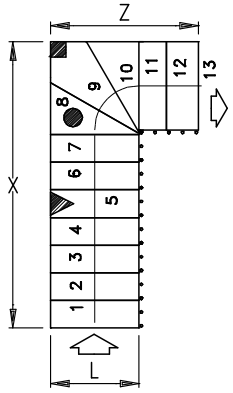
	VEC. 70 L=740	VEC. 80 L=840
X	1540-1660	1720-1840
Z	1780-1900	1980-2100



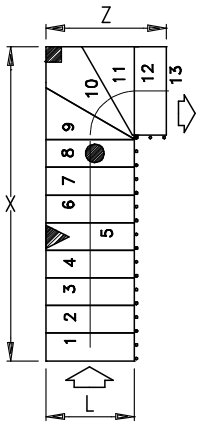
	VEC. 70 L=740	VEC. 80 L=840
X	1740-1890	1940-2090
Z	1580-1670	1760-1850



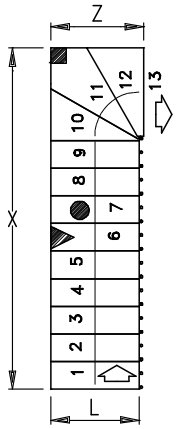
	VEC. 70 L=740	VEC. 80 L=840
X	1940-2120	2160-2340
Z	1380-1440	1540-1600



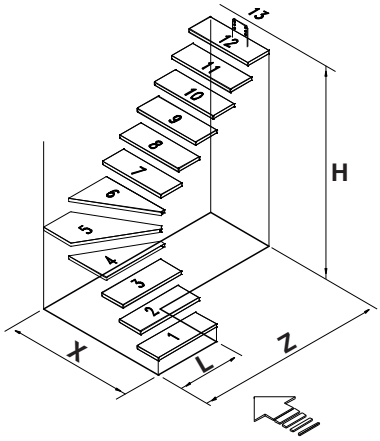
	VEC. 70 L=740	VEC. 80 L=840
X	2140-2350	2380-2590
Z	1180-1210	1320-1350

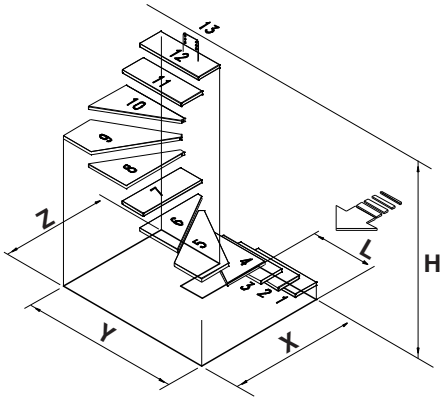


	VEC. 70 L=740	VEC. 80 L=840
X	2340-2580	2060-2840
Z	980	1100



	VEC. 70 L=740	VEC. 80 L=840
X	2540-2810	2820-3090
Z	750	850





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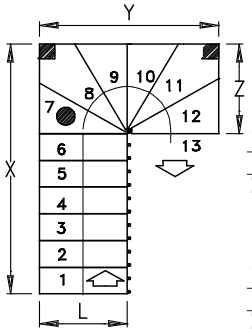
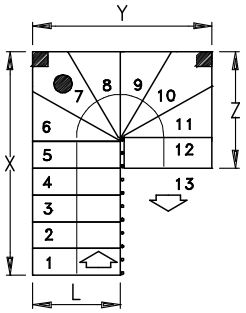
CONFIGURATION "U"



VEC. 70
L=740
X 1940-2120
Y 1440
Z 750

VEC. 80
L=840
X 2160-2340
Y 1640
Z 850



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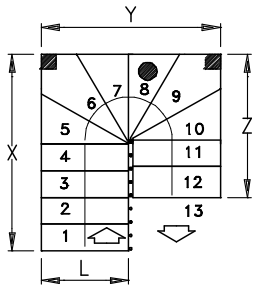
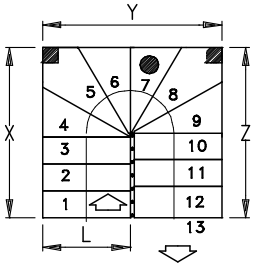
L=740
X 1740-1890
Y 1440
Z 980

VEC. 80
L=840
X 1940-2090
Y 1640
Z 1100



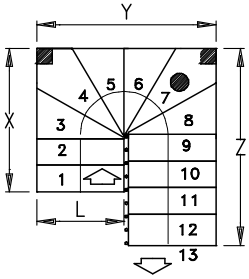
VEC. 70
L=740
X 1540-1660
Y 1440
Z 1180-1210

VEC. 80
L=840
X 1720-1840
Y 1640
Z 1320-1350



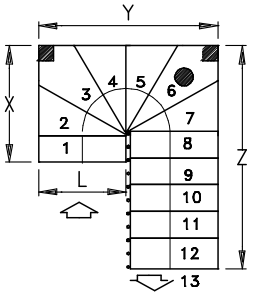
VEC. 70
L=740
X 1340-1430
Y 1440
Z 1380-1440

VEC. 80
L=840
X 1500-1590
Y 1640
Z 1540-1600



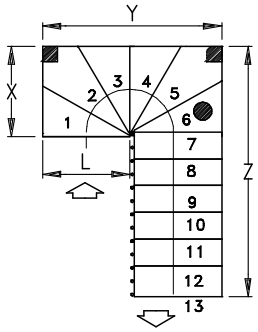
VEC. 70
L=740
X 1140-1200
Y 1440
Z 1580-1670

VEC. 80
L=840
X 1280-1340
Y 1640
Z 1760-1850



VEC. 70
L=740
X 940-970
Y 1440
Z 1760-1880

VEC. 80
L=840
X 1060-1090
Y 1640
Z 1990-2100



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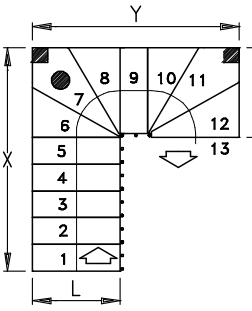
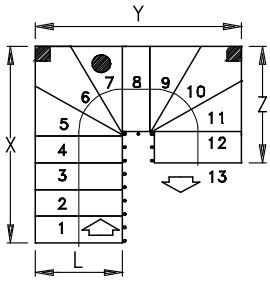
L=740
X 740
Y 1440
Z 1980-2130

VEC. 80
L=840
X 840
Y 1640
Z 2200-2350



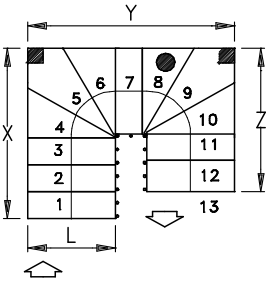
VEC. 70
L=740
X 1740-1890
Y 1640-1670
Z 750

VEC. 80
L=840
X 1940-2090
Y 1860-1890
Z 850



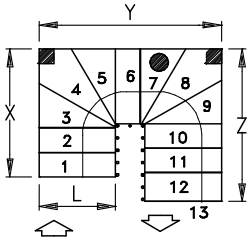
VEC. 70
L=740
X 1540-1660
Y 1640-1670
Z 980

VEC. 80
L=840
X 1720-1840
Y 1860-1890
Z 1100



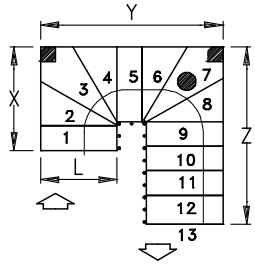
VEC. 70
L=740
X 1340-1430
Y 1640-1670
Z 1180-1210

VEC. 80
L=840
X 1720-1590
Y 1860-1890
Z 1320-1350



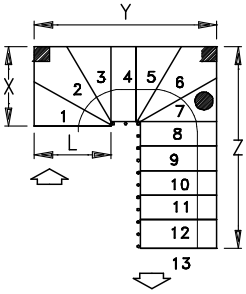
VEC. 70
L=740
X 1140-1200
Y 1640-1670
Z 1380-1440

VEC. 80
L=840
X 1280-1340
Y 1860-1890
Z 1540-1600



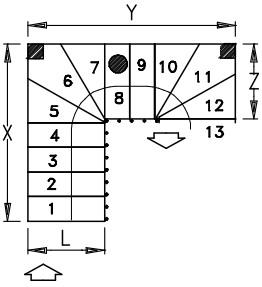
VEC. 70
L=740
X 940-970
Y 1640-1670
Z 1580-1670

VEC. 80
L=840
X 1060-1090
Y 1860-1890
Z 1760-1850



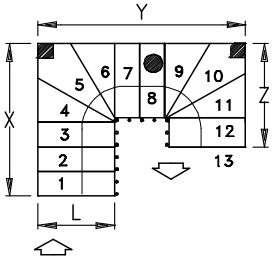
VEC. 70
L=740
X 740
Y 1640-1670
Z 1780-1900

VEC. 80
L=840
X 840
Y 1860-1890
Z 1980-2100



VEC. 70
L=740
X 1540-1660
Y 1840-1900
Z 750

VEC. 80
L=840
X 1720-1840
Y 2080-2140
Z 850



VEC. 70
L=740
X 1340-1430
Y 1840-1900
Z 980

VEC. 80
L=840
X 1500-1590
Y 2080-2140
Z 1100

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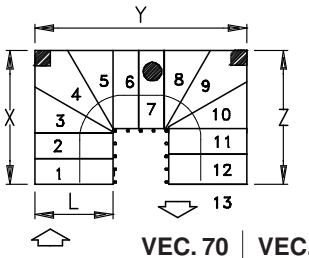
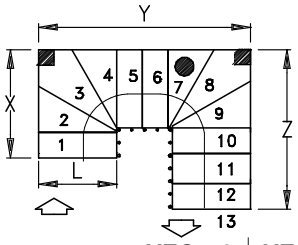
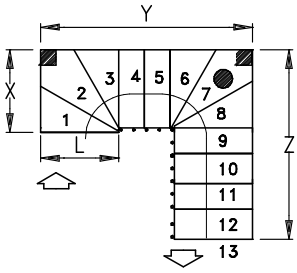


	VEC. 70 L=740	VEC. 80 L=840
X	1140-1200	1280-1340
Y	1840-1900	2080-2140
Z	1180-1210	1320-1350

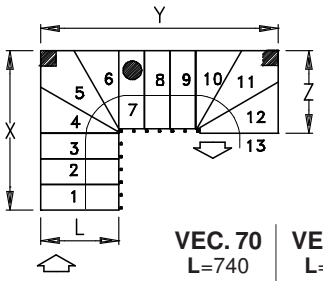


	VEC. 70 L=740	VEC. 80 L=840
X	940-970	1060-1090
Y	1840-1900	2080-2140
Z	1380-1440	1980-2100

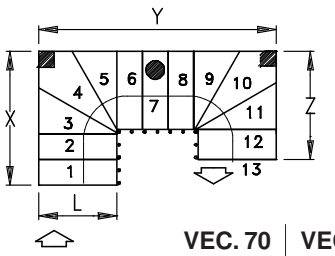


VEC. 70 L=740	
X	740
Y	840-1900
Z	1580-1670

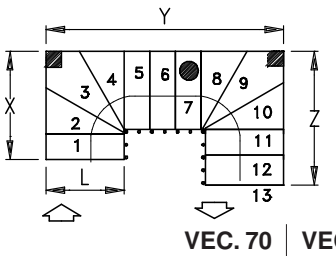
VEC. 80 L=840	
X	840
Y	2080-2140
Z	1760-1850



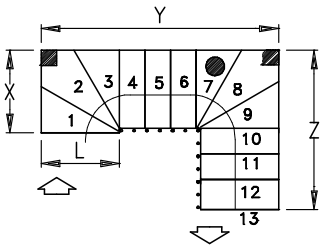
	VEC. 70 L=740	VEC. 80 L=840
X	1340-1430	1500-1590
Y	2040-2130	2300-2390
Z	750	850



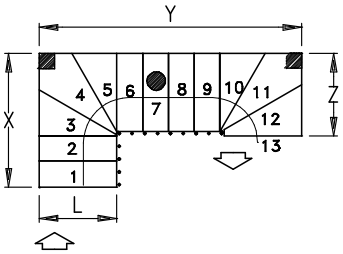
	VEC. 70 L=740	VEC. 80 L=840
X	1140-1200	1280-1340
Y	2040-2130	2300-2390
Z	980	1100



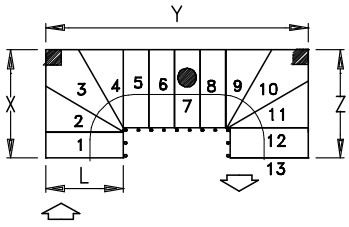
	VEC. 70 L=740	VEC. 80 L=840
X	940-970	1060-1090
Y	2040-2130	2300-2390
Z	1180-1210	1320-1350



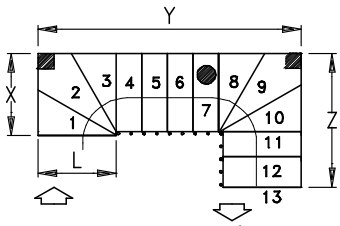
	VEC. 70 L=740	VEC. 80 L=840
X	740	840
Y	2040-2130	2300-2390
Z	1380-1440	1540-1600



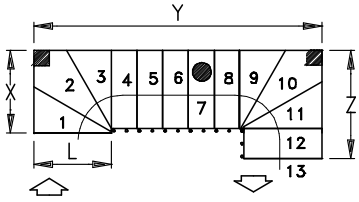
	VEC. 70 L=740	VEC. 80 L=840
X	1140-1200	1280-1340
Y	2240-2360	2520-2640
Z	750	850



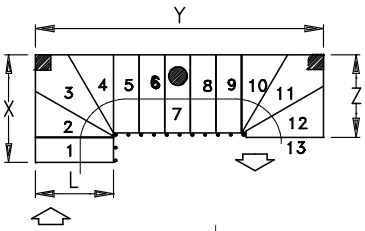
	VEC. 70 L=740	VEC. 80 L=840
X	940-970	1060-1090
Y	2240-2360	2520-2640
Z	980	1100



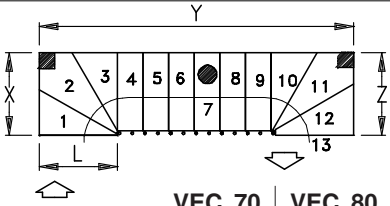
	VEC. 70 L=740	VEC. 80 L=840
X	740	840
Y	2240-2360	2520-2640
Z	1180-1210	1320-1350



	VEC. 70 L=740	VEC. 80 L=840
X	740	840
Y	2440-2590	2740-2890
Z	980	1100



	VEC. 70 L=740	VEC. 80 L=840
X	940-970	1060-1090
Y	2440-2590	2740-2890
Z	750	1100



	VEC. 70 L=740	VEC. 80 L=840
X	740	840
Y	2640-2820	2960-3140
Z	750	850

VECTOR 70 = VEC. 70
VECTOR 80 = VEC. 80

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TRAKING

- After having identified and set the parameters identifying the staircase characteristics (H height,P tread and A rise) assembly operations can actually start.
  Always begin from the arrival position.

  On the arrival floor slab, the correct position must be identified to anchor the step support.

  Position the **D03** template on the floor slab, make sure it is aligned with the floor (use a level) and comply with the following references:
  value V = **260**mm min. for the **VECTOR 70 model** (side without banister)
  310mm min. for the **VECTOR 80 model** (side without banister)
  value **A** = corresponding to the value of the **"A" rise** calculated previously.

  The **D03** template includes six holes. To anchor the module, two holes are enough.
  Identify the holes that need to be reproduced: in general refer to those halfway the floor slab width, not too close to the floor surface. fig. 3.

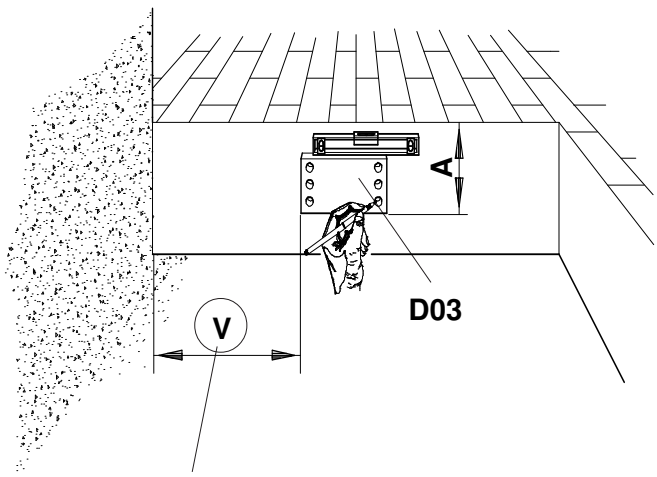

Fig. 3

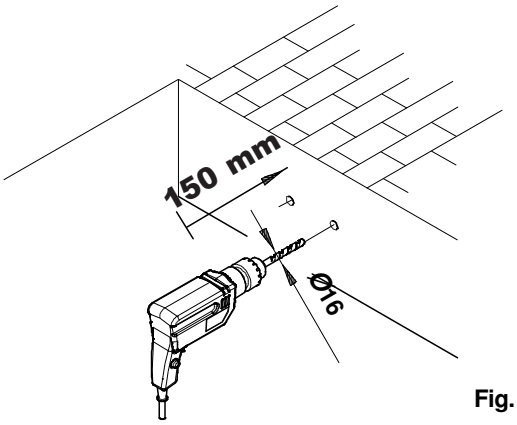

Fig. 4

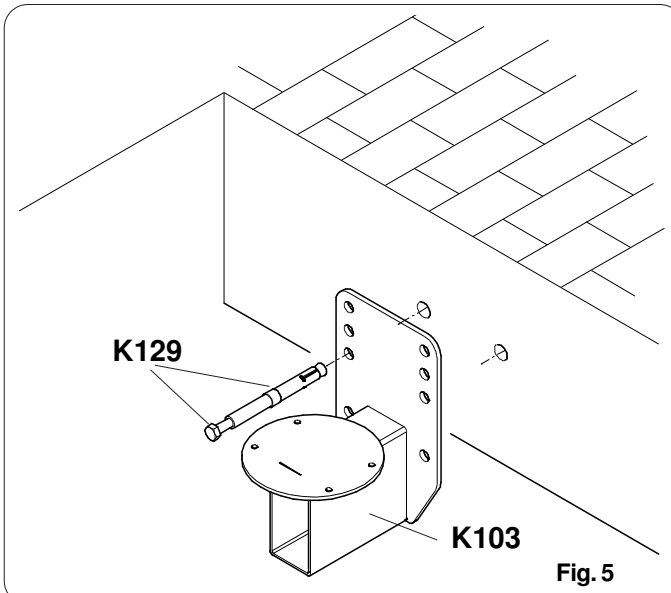

Fig. 5

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PREPARING COLUMNS AND STEPS

- Before proceeding to assemble the steps, mount the **P107** banister column support fig. 7 -8 - 9 - 10.

  Drill a **Ø4** hole by means of a wood drill in the points identified on the step and achieve a **30 mm** depth as shown in fig. 9.

WARNING!!!

Be very careful when operating on the bottom side of the step, where anchoring holes are already present, and on the correct side where the banister will be mounted.

- Mount columns as shown in fig. 6

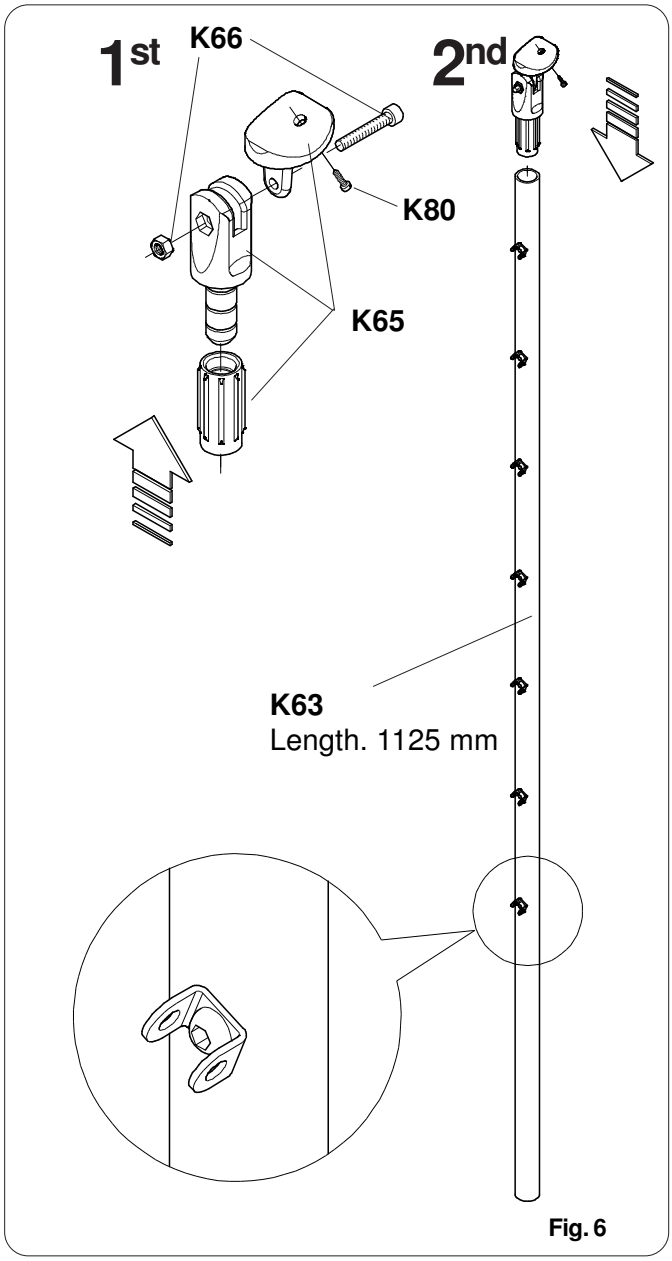

Fig. 6

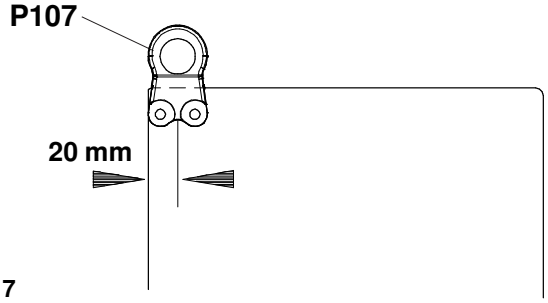

Fig. 7

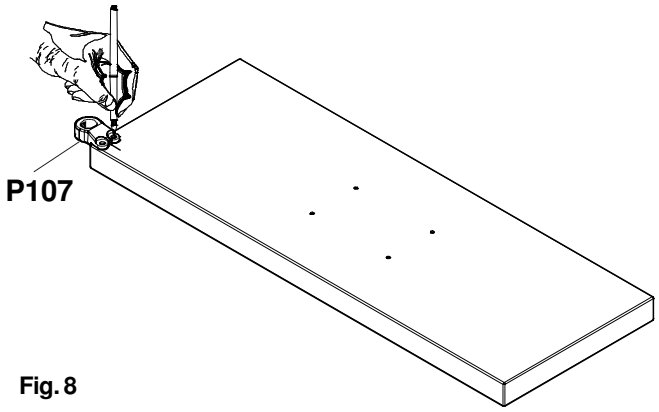

Fig. 8

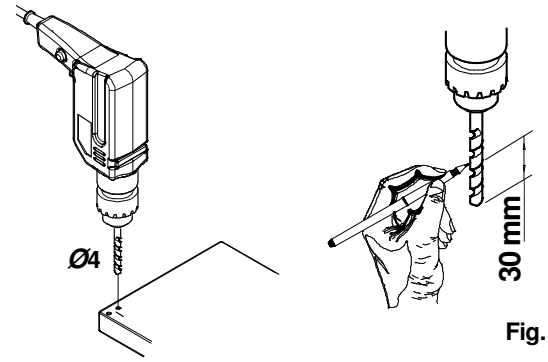

Fig. 9

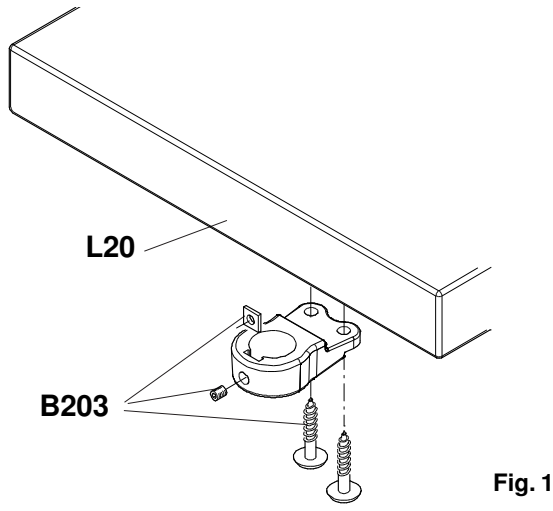

Fig. 10

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ASSEMBLING THE STEP

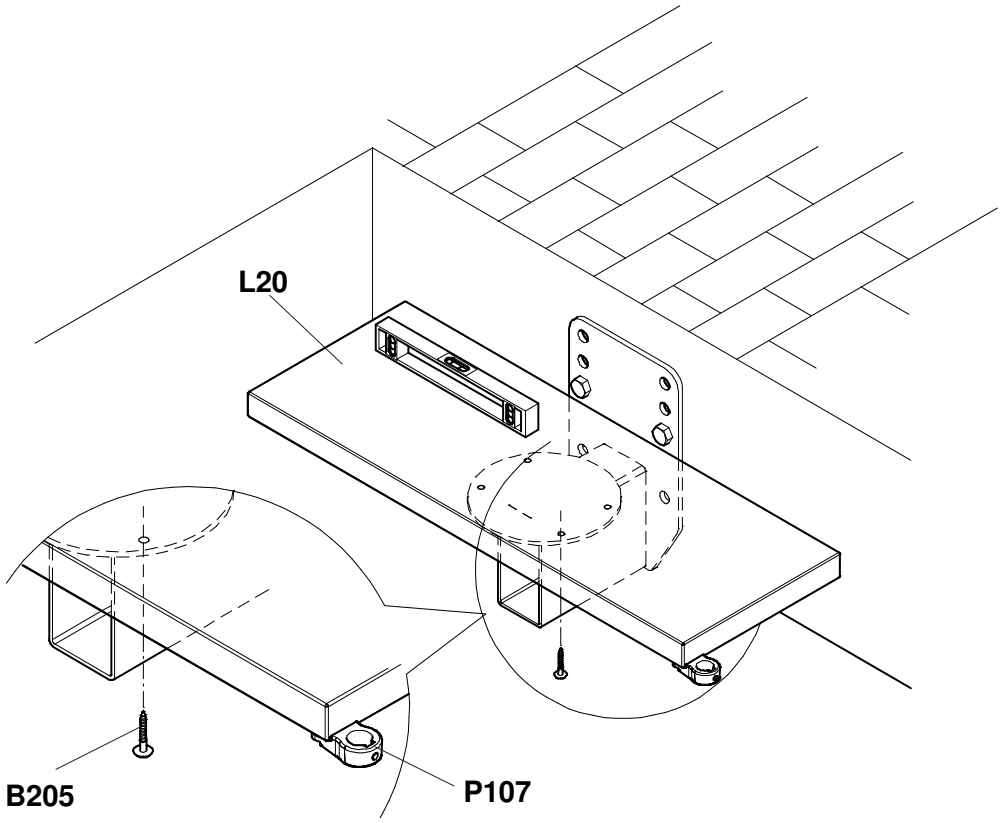

Fig. 11

- At this point form the **P106 - P106a** spacer package which will determine the size of the rise set previously.
  To define the number of spacers to be used, refer to the "**table A**" attached to the pages 9-10-11.
  Form the spacer package by assembling the **P106 - P106a spacers** as shown in fig. 12.

- Insert the **K120** plate into the **K101** support module and maintain its position by means of the **D04** template as shown in fig. 12.
  Screw the **K104** pin into the **K120**plate described above as shown in fig. 12

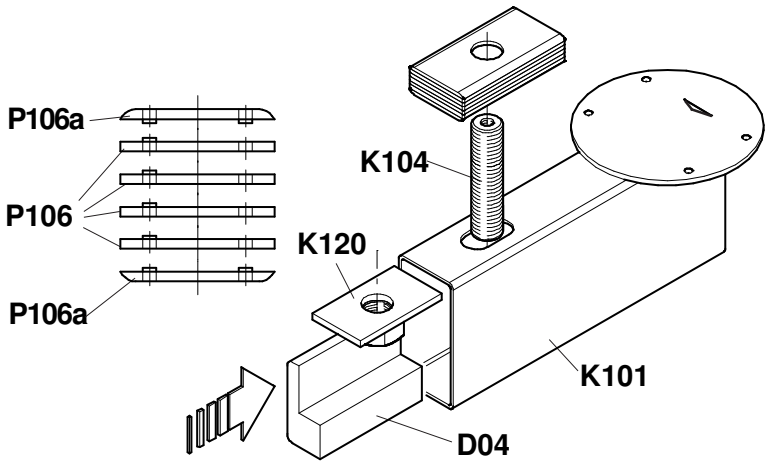

Fig. 12

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- Having formed a unit, insert the projecting part of the pin into the hole placed under the step support module mounted previously. Insert the **K119** plate into the pipe of the unit described above and anchor everything by means of the **K127** screw and the **K126** washer.
  To facilitate screwing operations, we recommend using a jack spanner to screw in the screw until it starts tightening. Since the tread must still be adjusted, the unit must not be tightened fully.
  Moreover, before assembling the module, insert the **P105** plug from behind.
  (fig. 13)

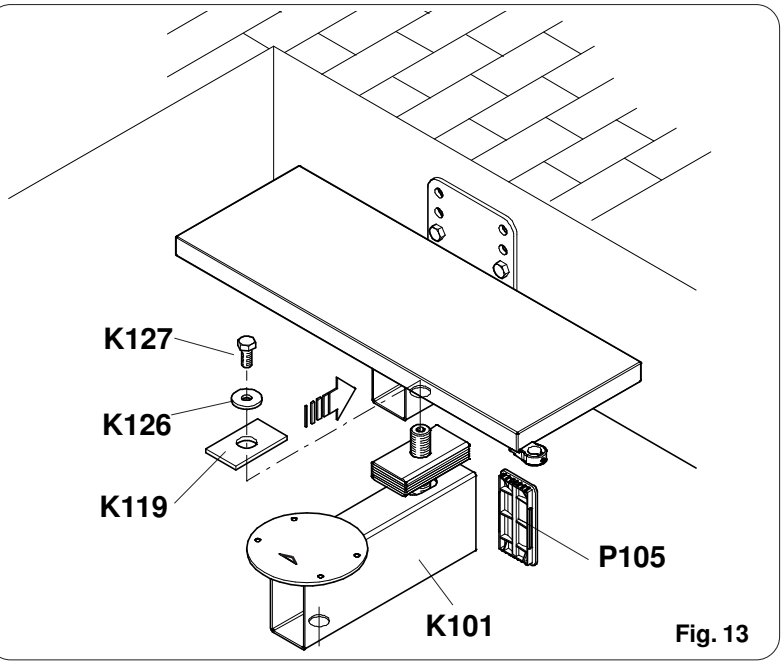

Fig. 13

- Now adjust the module according to the **"P" tread size**.
  This value must be measured starting from the front part of the spacer package until the reference present on the support flange as shown in fig. 14.
  Fully tighten the **K127** screw which was previously left lose, paying particular attention to the position of the spacer package, which needs to remain aligned with the support.
  The use of a rigid reference guide is recommended to be applied to the sides of the pipe with clamps during the operation.

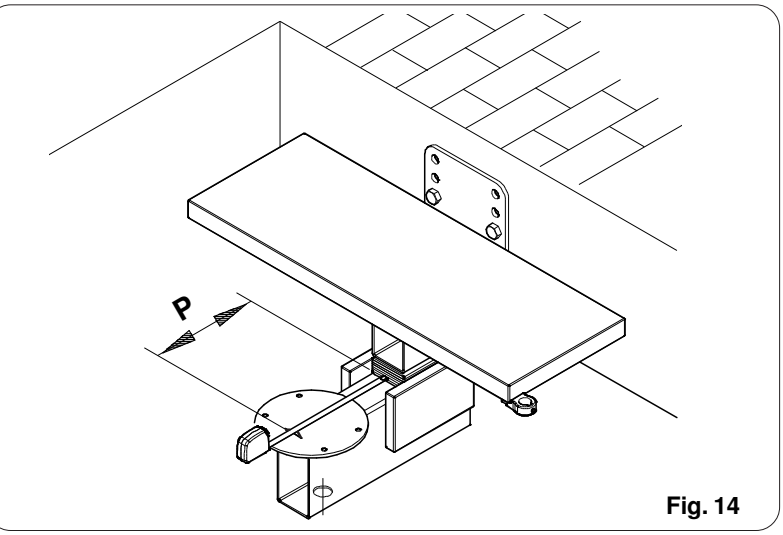

Fig. 14

- Assemble the **L20 step** on the **K101** support by means of the **B205** screws as shown in fig. 15.

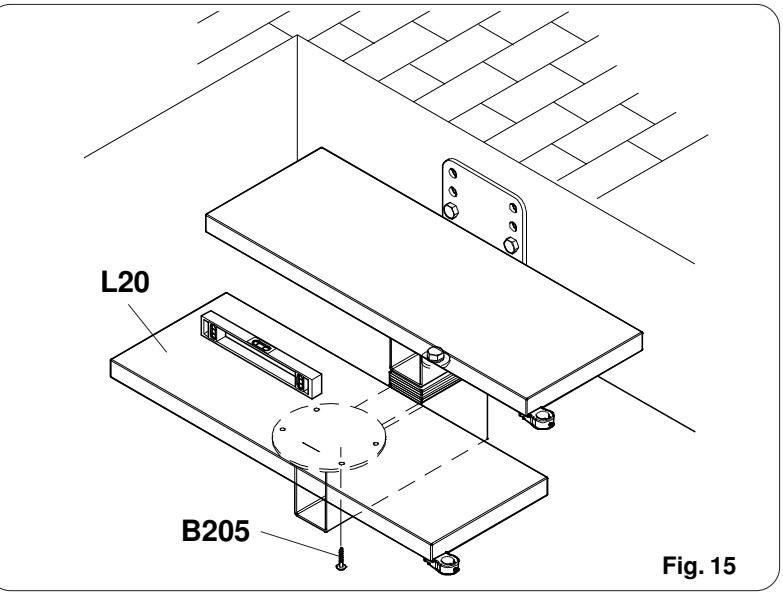

Fig. 15

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- Insert the **K63** column into the **P107** support mounted previously.
  By means of a level check that it is vertical and lock it temporarily in the position illustrated in fig. 16.
  Insert a **P107** support and mark the position of the holes on the bottom part of the step fig. 16 -17

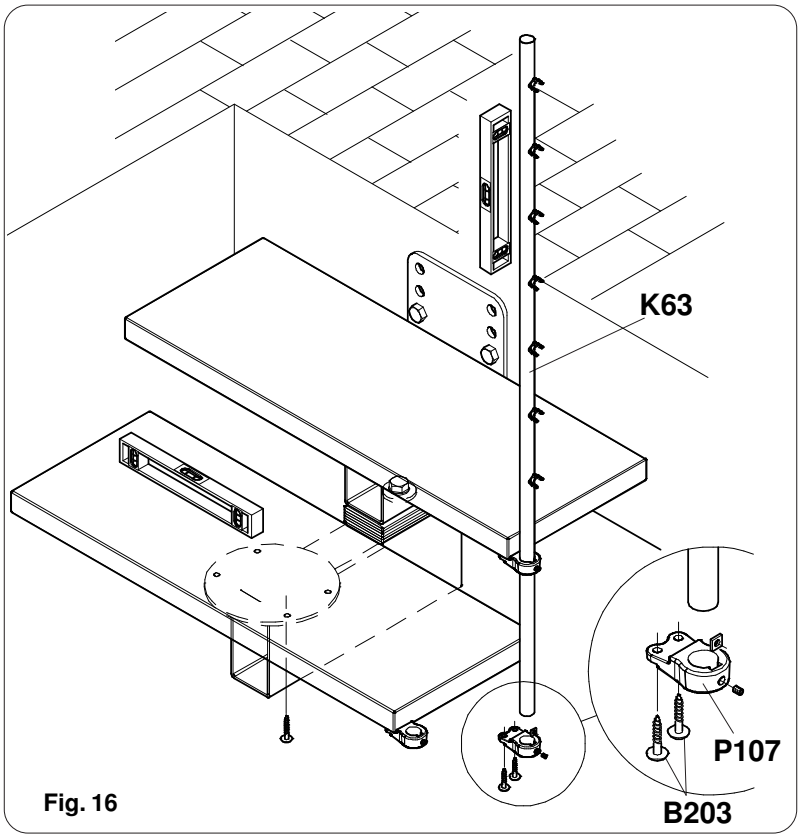

Fig. 16

- Drill in the points marked and mount the **P107** support by following the same procedure illustrated above.
  (fig. 7-8-9-10 page16)

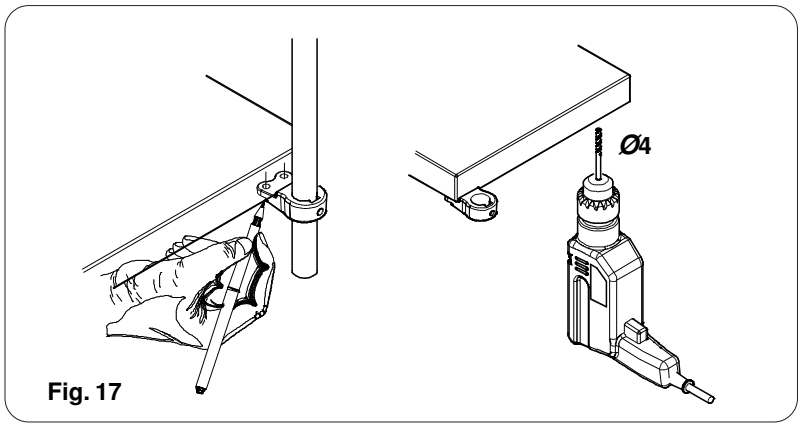

Fig. 17

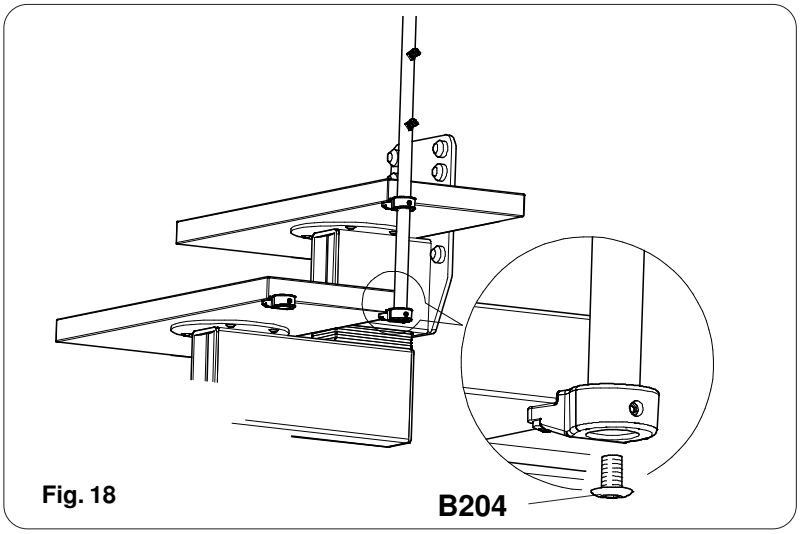

Fig. 18

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- Continue assembling the following steps according to the same procedure until the first **L21** is achieved where the staircase starts turning. Mount the **P107** support on the **L21** step by using the pre-existing holes and make sure to insert the square nut with relevant security dowel as illustrated above. Inset a **K63**banister column into the top step support and lock it temporarily in the position illustrated in fig. 19.
  Check that the module is positioned in the **P Max** tread position, then place the **L21** step as shown in fig.19 and lock it by means of **B205**
  Adjust the step in the maximum tread position, i.e. all the way in the front, until the most advanced position is achieved. (fig. 19)
  Lock the module in the position achieved and make sure that during the operation the spacer package remains aligned with the module, including the vertical direction of the column.

WARNING!!!
While the steps are being assembled, the unit that is being formed should be supported so that it does not press on the support of spacer package (see the "SUPP." example fig. 20). This should be done every three/four steps (see Example in fig. 20) to facilitate assembling the starting module after having reached the ground.

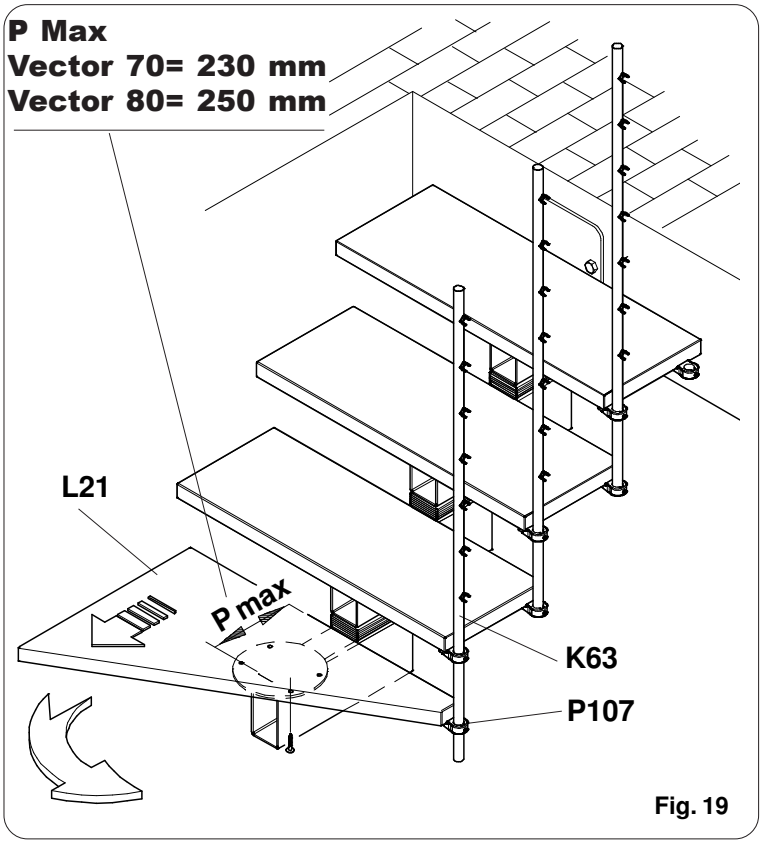

Fig. 19

- Similarly, proceed to assemble the **L23** central step.
  In this case, the **K125** extension should be mounted and connected to the top rod.
  The package contains a **K125** column.
  Cut **K125** to achieve a length amounting to three times the size of the rise **T=3*A**, and proceed as shown in fig. 20, connect both pieces by means of the threaded rod **K130** and **K23** bushing.
  The step supporting module will take the direction set by the anchoring holes present in the step.
  In this case adjust the **"P"** tread until it reaches its minimum value.
  Align the spacer package by means of one of the two supports and keep it still while it is being anchored.

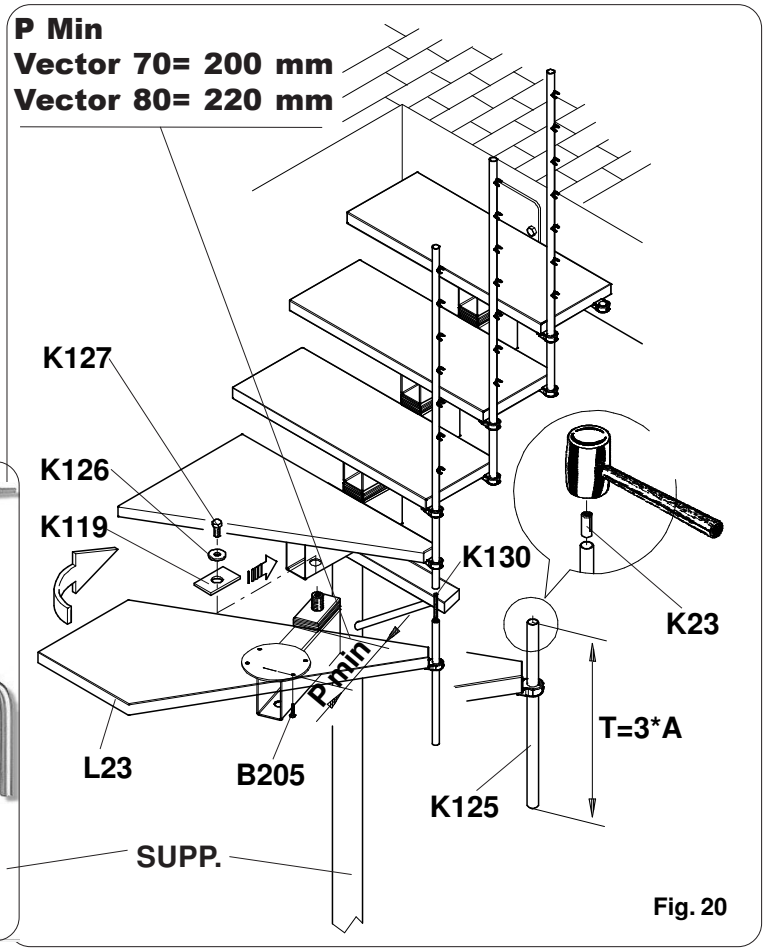

Fig. 20

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- Similarly, proceed to mount the L22 turning step by following the same procedure described above.
  Also in this case, the step must be positioned in the furthest backward possible tread position (P min) (fig. 21)

- Anchor the column and extension definitively to their P107 supports, insert the P110 plug into the column hole as shown in fig. 22.

- After having completed the assembly of the staircase, according to the selected configuration, one further turning step (U configuration) or straight step (L or wide U configurations) must be inserted.
  In either case, the procedure is the same as the procedure described above.
  Remember that if a straight step is mounted, the K101 support module must be adjusted again according to the .P. tread as shown in fig. 22.

- Complete the assembly of the steps until you reach the ground.

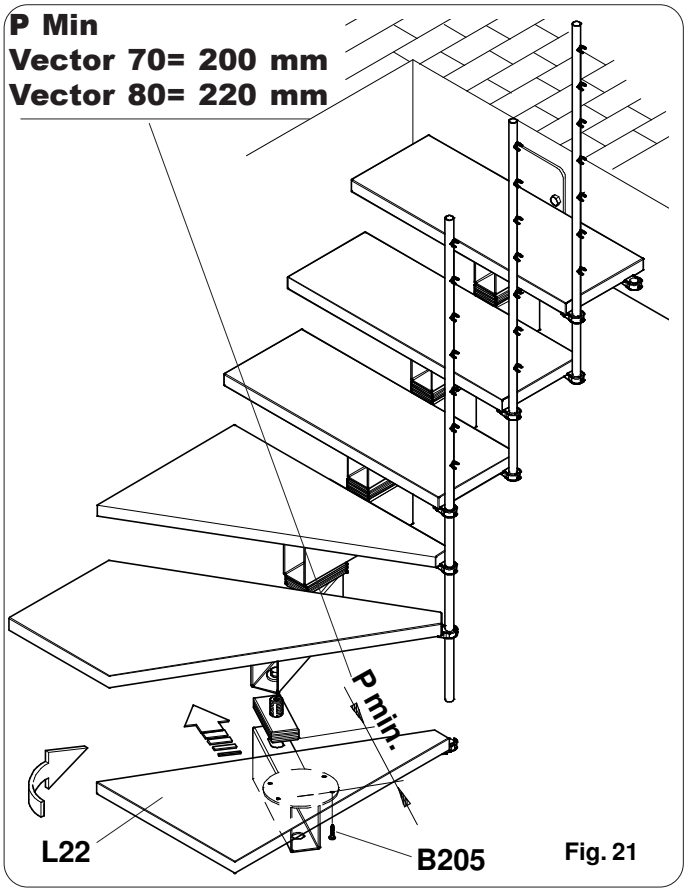

Fig. 21

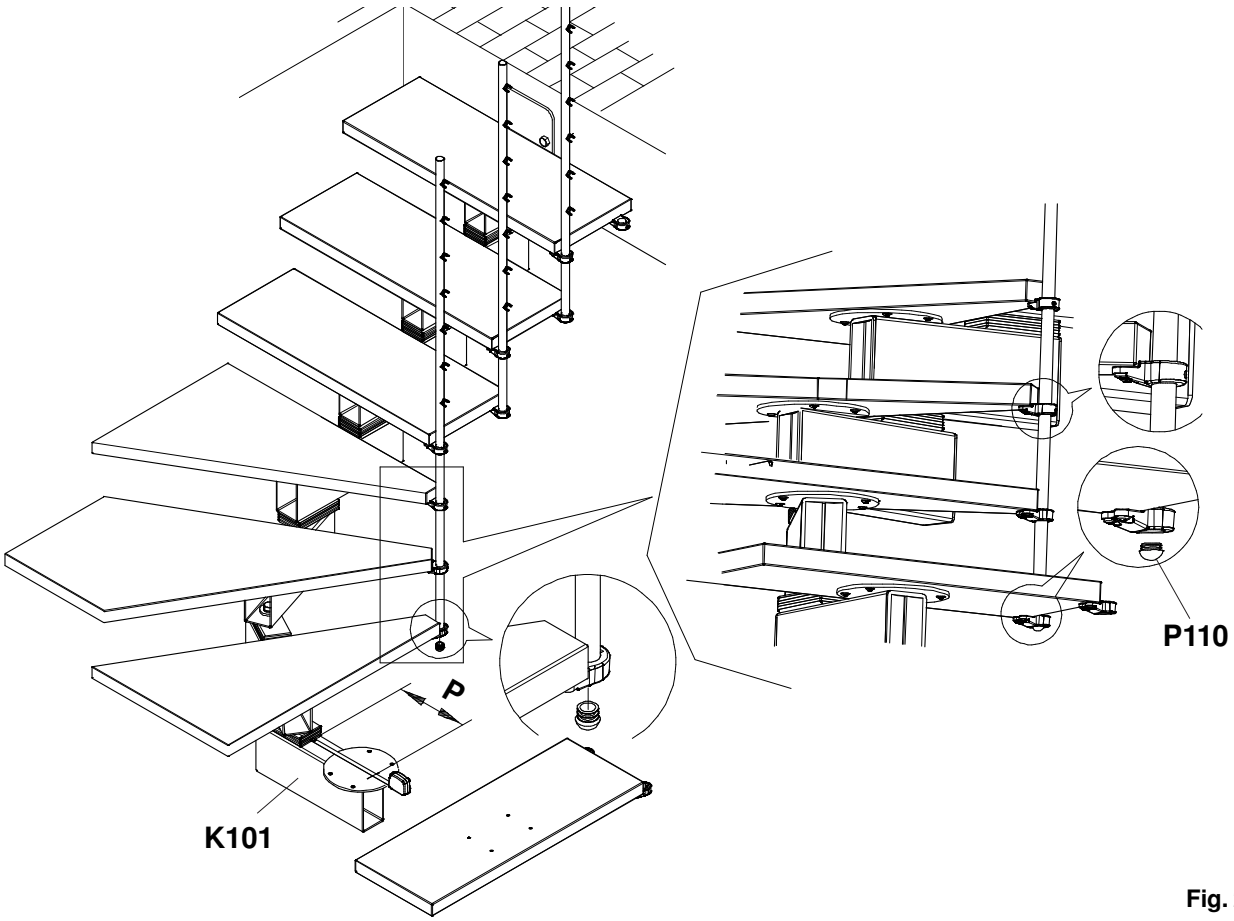

Fig. 22

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- After having reached the ground, the K102 element must be used as the last step.
  Assemble the module as described above without tightening fully and adjust its position according to the tread. (fig. 24)

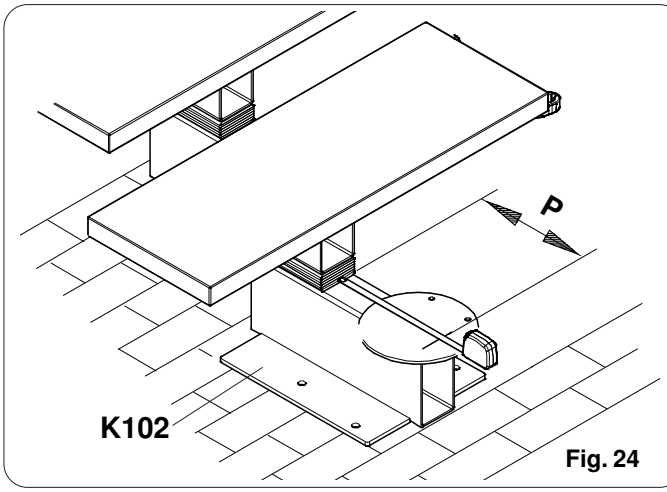

Fig. 24

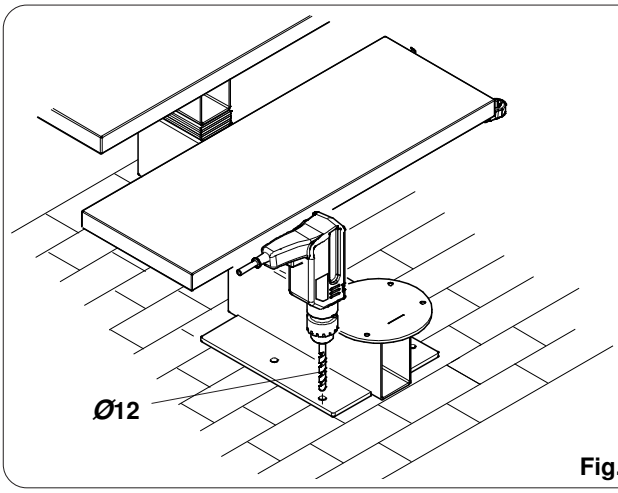

Fig. 25

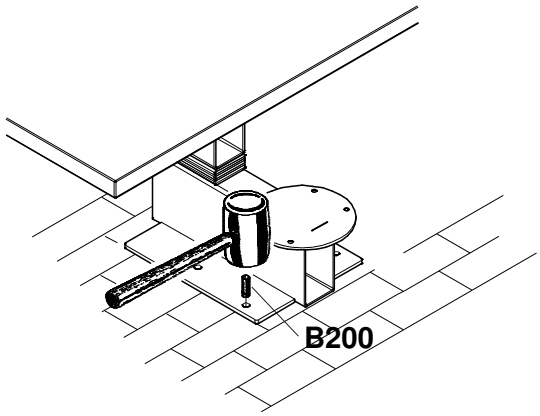

Fig. 26

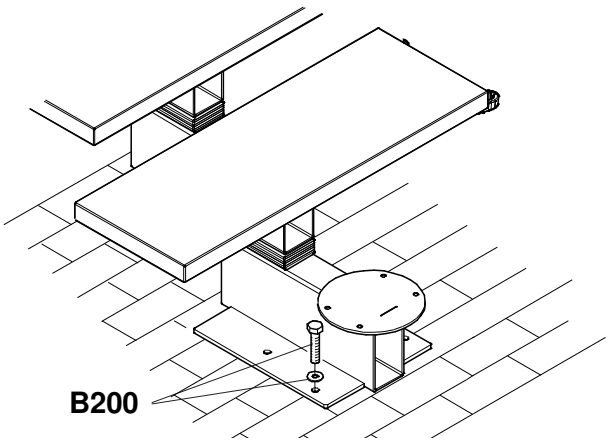

Fig. 27

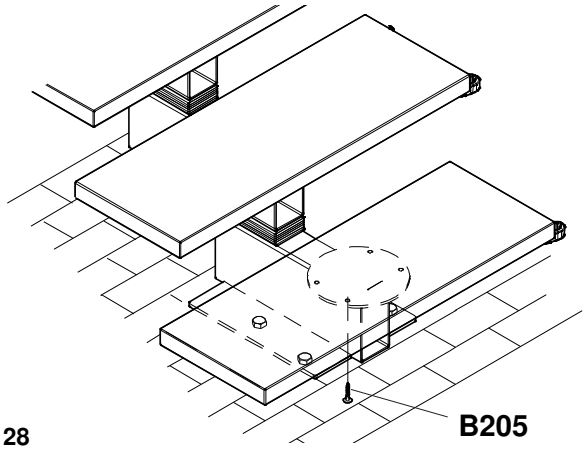

Fig. 28

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- The last column must be cut before being assembled. The cutting length T is calculated according to the formula reported in figure 29.
  Where A is the rise value (fig. 29)

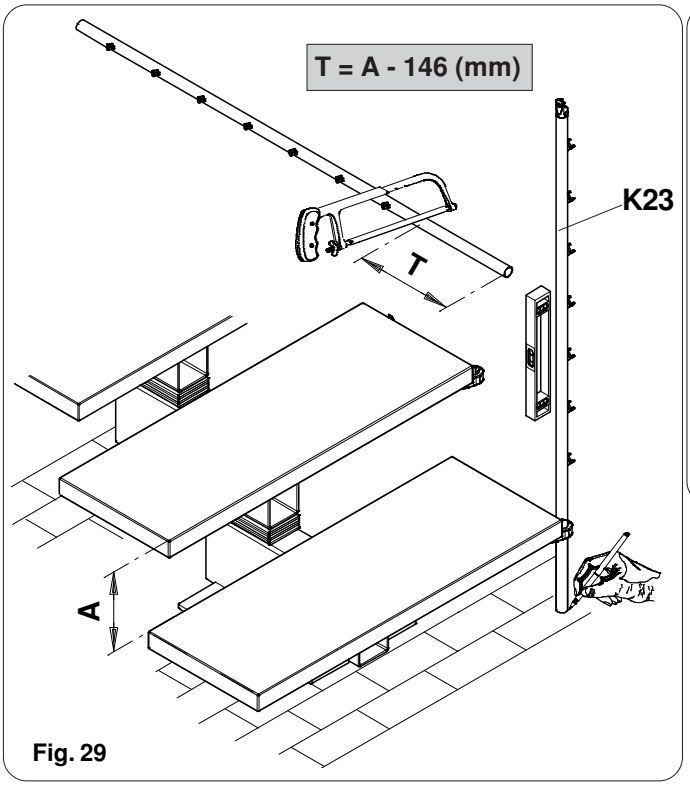

Fig. 29

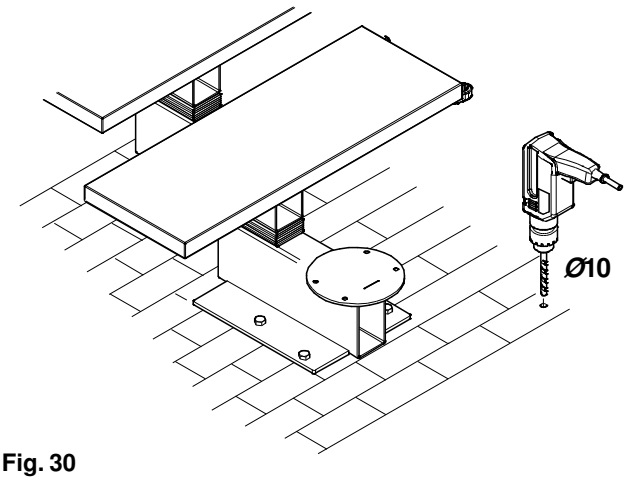

Fig. 30

- Drill the point marked by means of a ***Ø 10*** drill (fig. 30)

- After having assembled the K63 starting column, mount the K33 stiffener as shown in fig. 31A, by means of the K36 clamps and position it with the lower arm under the step

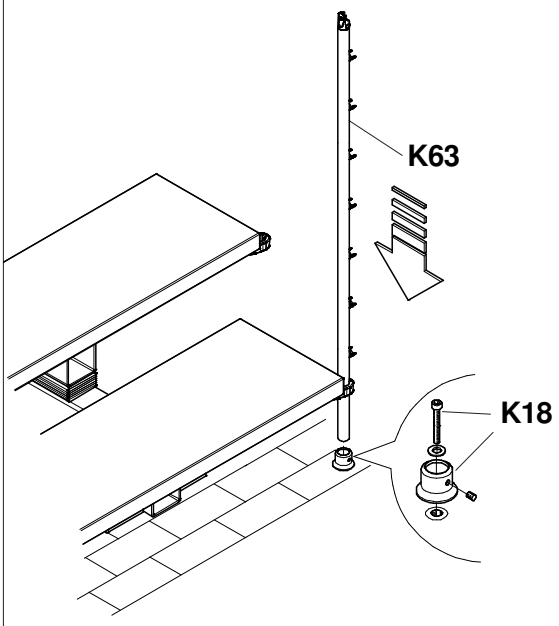

Fig. 31

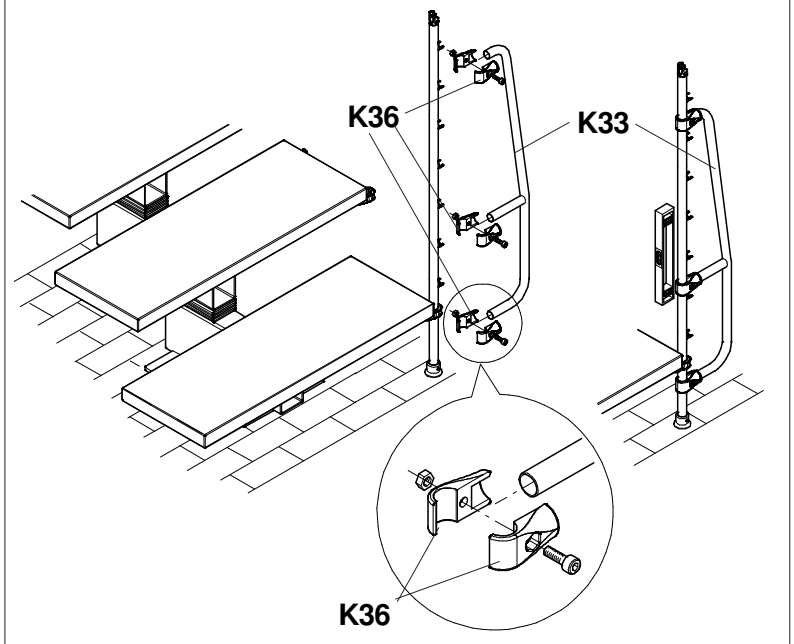

Fig. 31A

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MOUNTING THE COLUMN AND/OR BRACKET

WARNING!!!

It is strictly prohibited to use and climb on the stairs before having carried out the stiffening and support operations.

- Moreover, the point where to insert the k122 support Column must be identified. The drawings on 12-13-14 report the points where the staircase may be adequately supported SEE ● symbol.

- After having identified the position, measure its H1 (mm) height from the floor as shown in fig. 32.
  Drill the support from below and in the centre line by means of a **Ø12** drill.

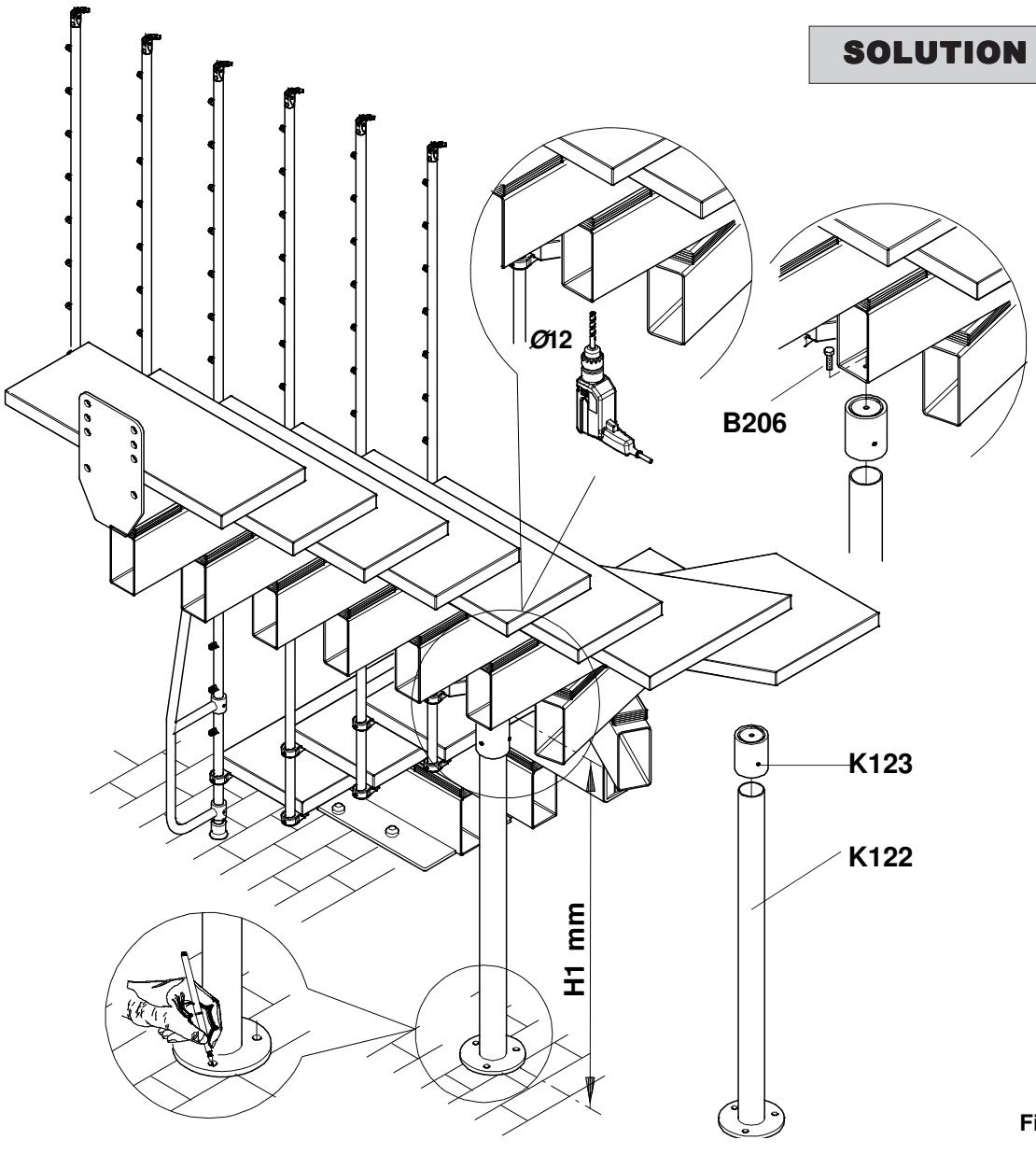

Fig. 32

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- Cut the **K122** Column according to the **H1 - 10 mm** height (**K123** spacer).
  (fig. 33)

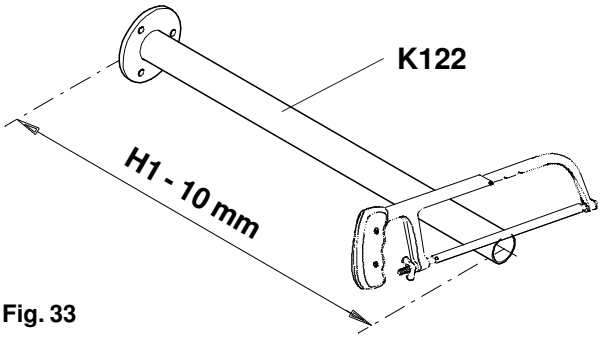

Fig. 33

- Drill in the marked point by means of a **Ø12** drill and insert the B202 kit small block into the hole
  (fig. 34-35)

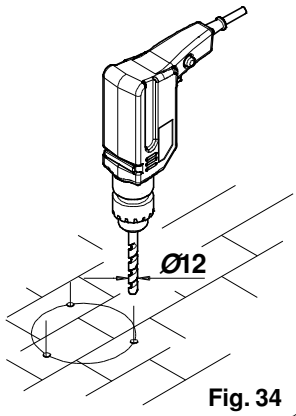

Fig. 34

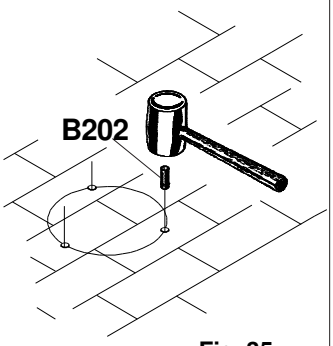

Fig. 35

- Place the Column back and anchor it by means of the **B202** kit screws (fig. 36).
  Adjust the **K123** washer so that it touches the bottom side of the module and join with the B206 screw by means of the hole drilled before.
  (fig. 32 previous page)

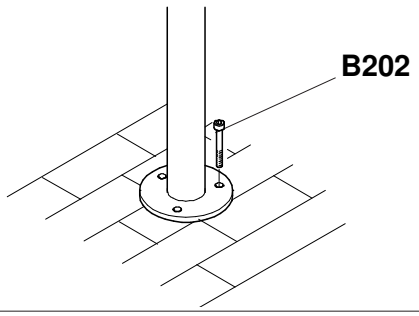

Fig. 36

- To complete the operation, cover all anchoring screws (arrival and departure modules) with their relevant K131 caps. In the arrival module, the heads of the screws must be covered directly, whereas the cap must be glued on the holes left empty, Fig, 37

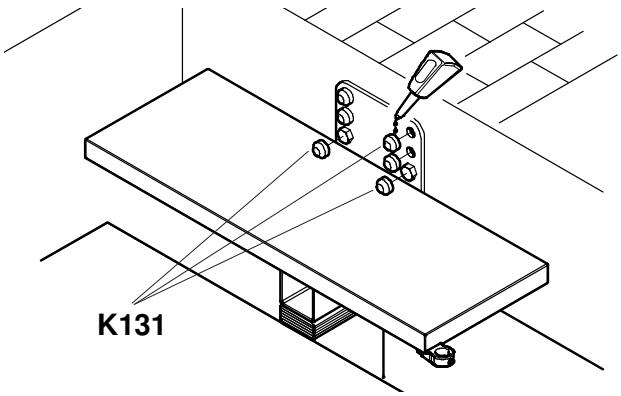

Fig. 37

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- In certain cases, no support column may be added, as shown above; in such cases it is advisable to support the staircase by means of a K121 support bracket to be inserted by drilling a min 150 mm deep hole in the wall closer to the staircase and embed the bracket as described in fig. 38.
  Then mount the P90 closing cap on the pipe head.

SOLUTION 2

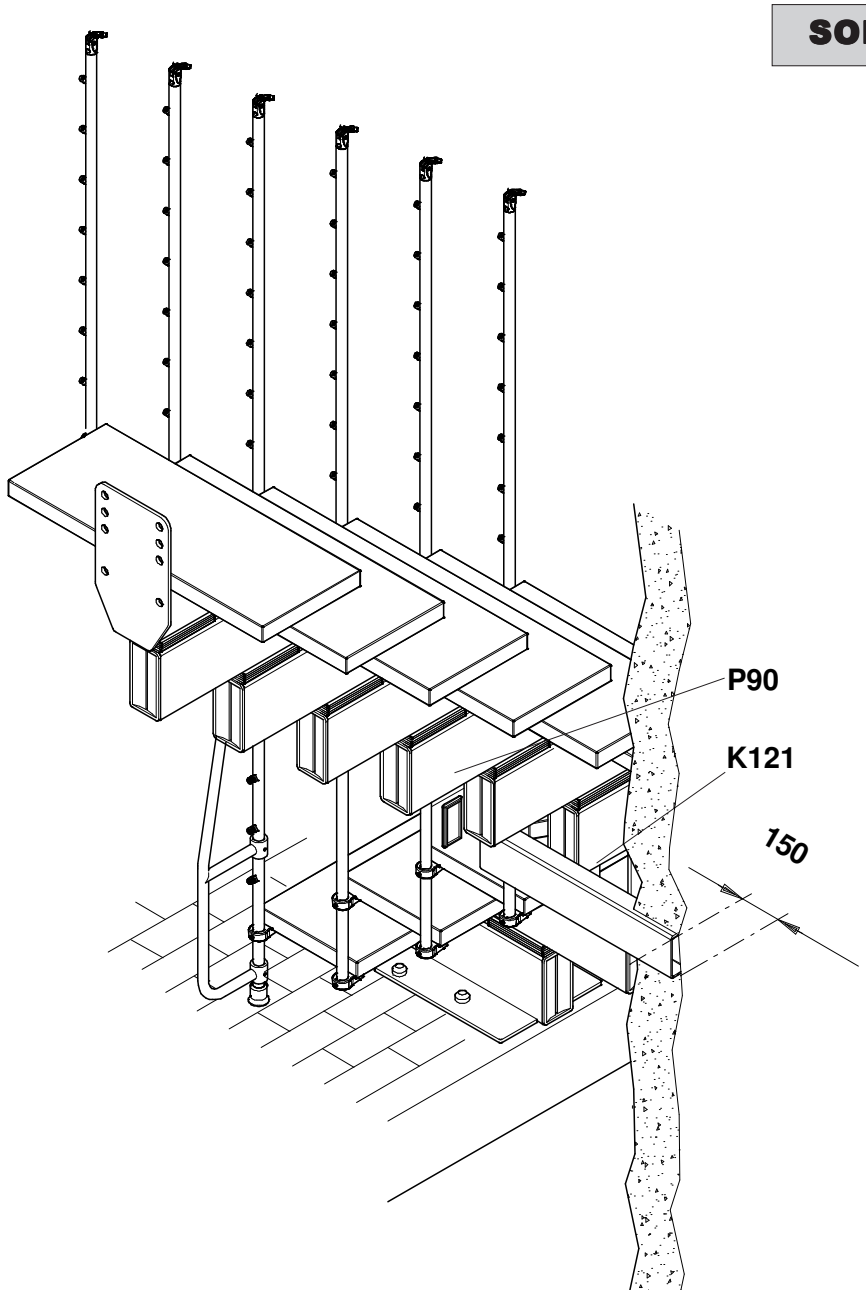

Fig. 38

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CHECKING AND MOUNTING ADDITIONAL COLUMNS

- Now the correct position of the columns assembled needs to be checked. Check that they are vertical and that the cable supports face outside the staircase, as shown in fig. 39

- Near the step preceding the first turning step an additional column must be assembled. It must be cut to achieve a height that is half the rise .A.: **T = A / 2**
  Between the two supports anchored before, trace the position of a third element as shown in fig. 39.
  The assembly procedure is the same as the procedure described above.
  Anchor everything by means of the relevant **B203** kit screws. Then, insert the **P110** cap at the foot of the column.
  Mount an additional column on the last step, at a distance equal to the tread size, as shown in fig. 39. Moreover, it is advisable to assemble an additional support anchored to the top side of the step, so that the column is anchored in a stiffer and safer way.
  Adjust the height so that it matches those mounted before and does not project beyond its support.

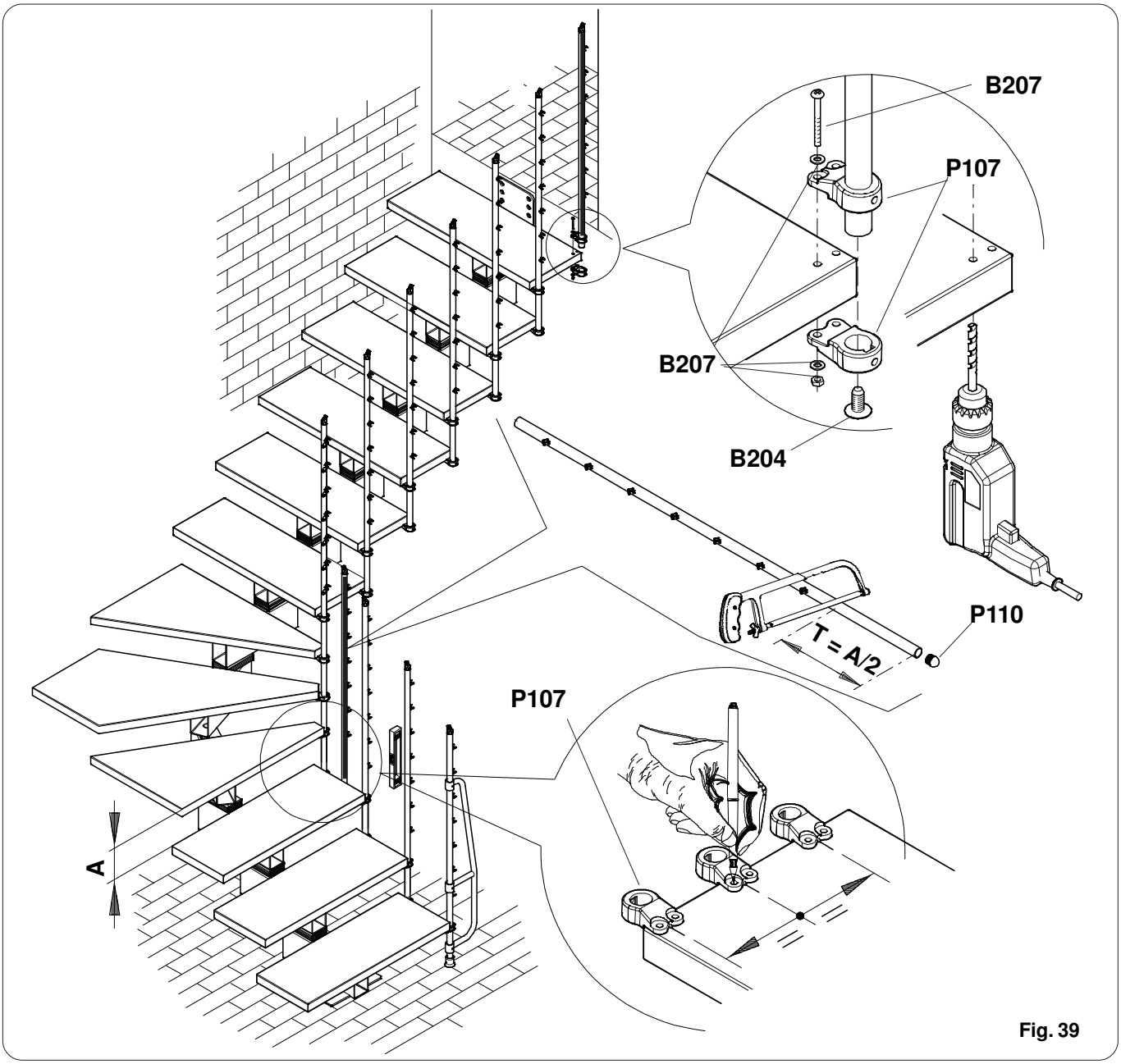

Fig. 39

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ASSEMBLING THE HANDRAIL

- Place the handrail on the first support approx. 40-50 mm far from the first column (fig. 40)
  By referring to the housing, drill a **Ø3** preliminary hole to anchor the handrail in its **K65** housing**.**
  Make sure that it is correctly placed into its housings, no gaps are left between them Anchor the handrail by means of the dedicated **K66** kit screw**.**
  Proceed until the last column before the staircase turns has been reached.

WARNING!!!

When assembling the handrail make sure that the k65 supports shaped like a "saddle" face the inner part of the staircase.

- After having reached the last column before the staircase turns, cut the handrail and leave the exceeding part so that the **K68** plug can be mounted.
  We suggest to mount the plug before the final anchoring of the handrail on the column.

- Resume assembling the handrail after the staircase has turned by proceeding in the same way until reaching the last column mounted on the final step.

- Cut the excessive part of the handrail and leave a 40-50 mm projecting part.

- All configurations envisage that an additional column must be mounted on the last straight step before the staircase turns. Figure 41 shows the example of a "U" staircase.

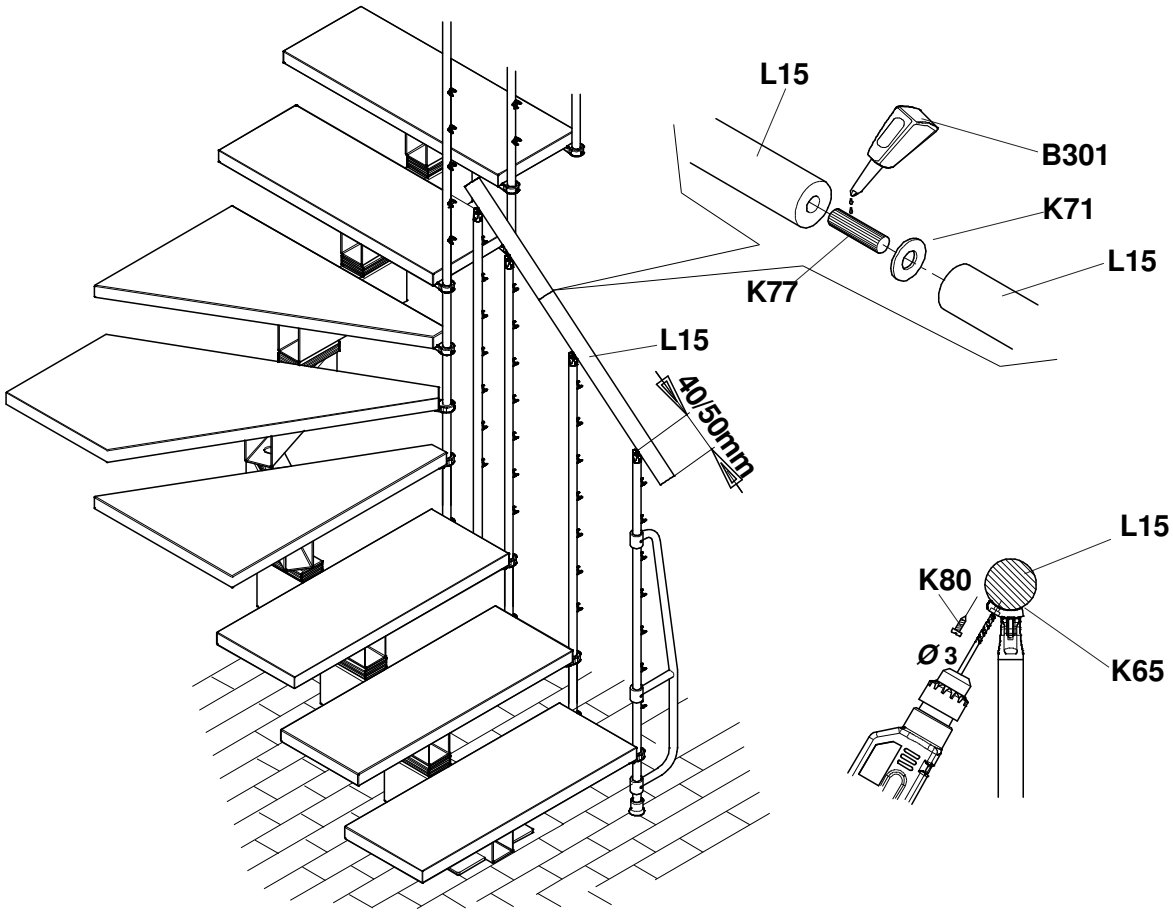

Fig. 40

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- After having assembled the handrail the **K68** plug must be mounted at both ends.
  Place the plug at one hand and trace the position of the anchoring holes.
  Drill with a **Ø 4** wood drill and mount the **K68** plug with the relevant **K76** screw (Fig. 41)
  That operation must be implemented at both ends of the handrail.

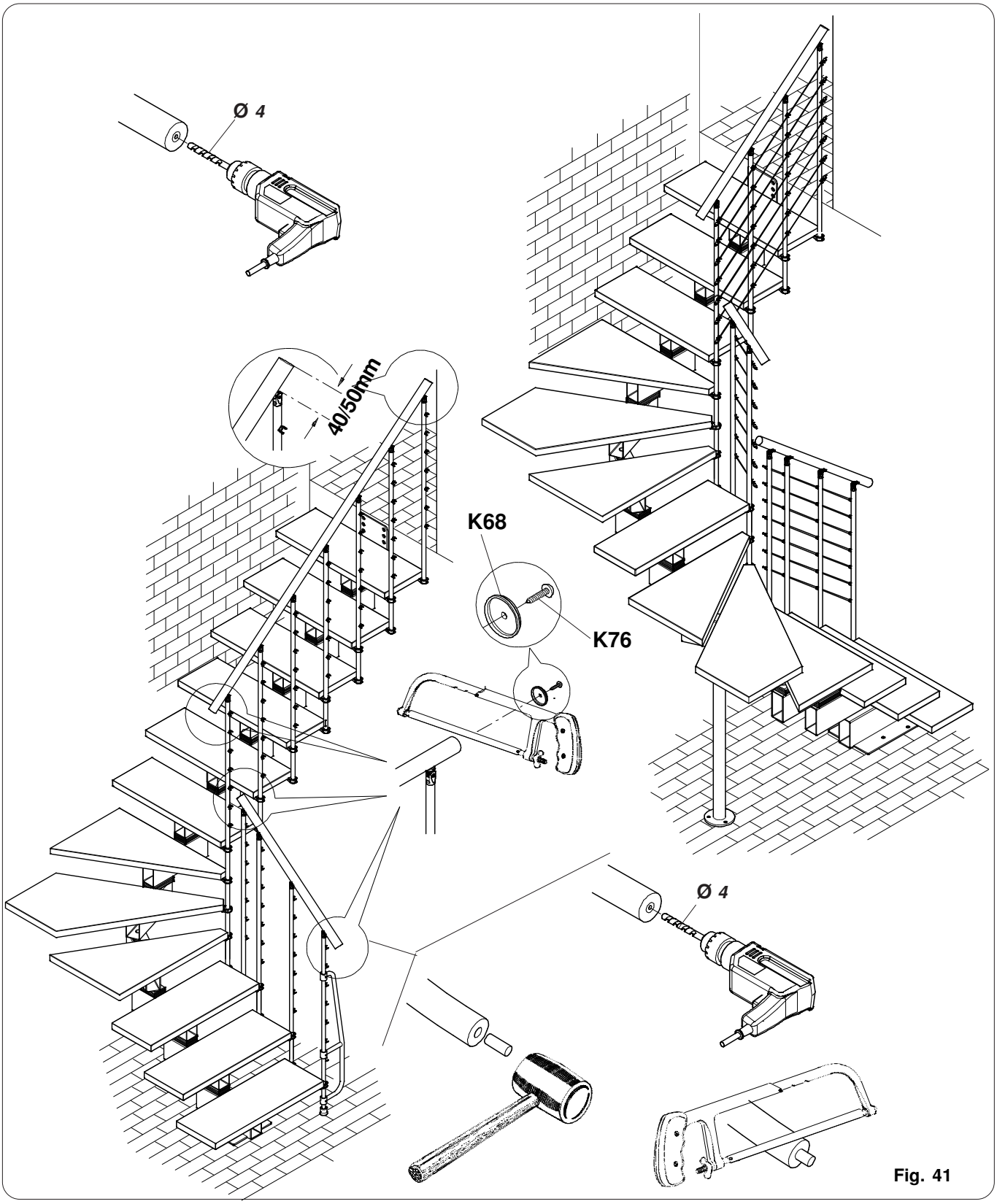

Fig. 41

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ASSEMBLING THE BANISTER CABLES

- Finally, mount the flexible cables.
  Proceed as follows:
  starting from above, insert one end of the **K84** cable into the forks mounted on the columns and anchor it by means of the relevant **K60** clamp.
  Continue inserting the cables into the relevant supports until reaching the last column, thus completing the banister.
  NB. Make sure that the cables are correctly inserted in the relevant supports.
  After completing the operation, make sure that the cables are sufficiently tight between columns.
  Insert the **K60** clamp and anchor it on the cable end; cut the excessive part. Eliminate any scrap or sharp edges resulting from cutting.
  Repeat the same steps with the other stretches of banister.

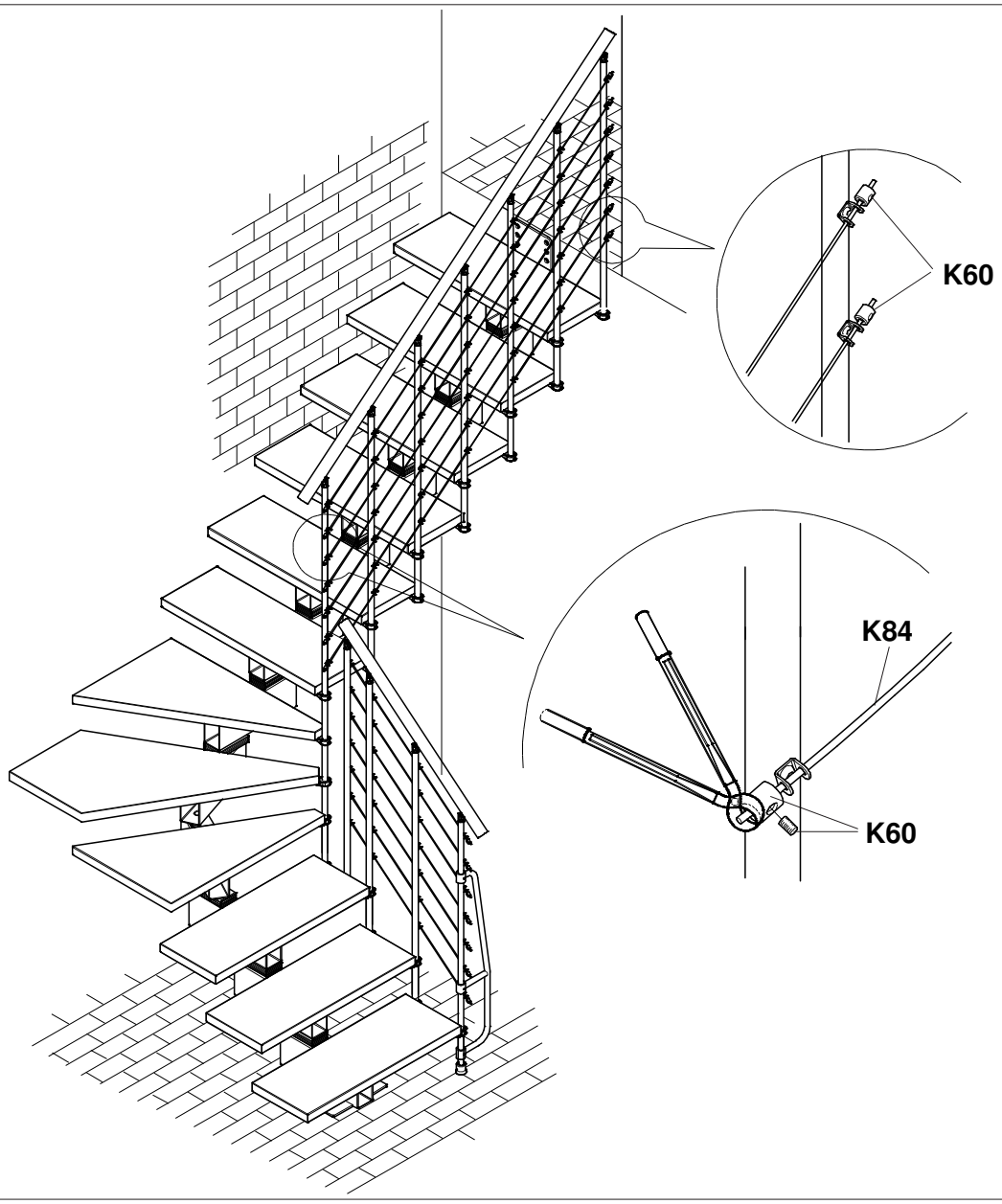

Fig. 42

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COMPLETION AND CHECKS

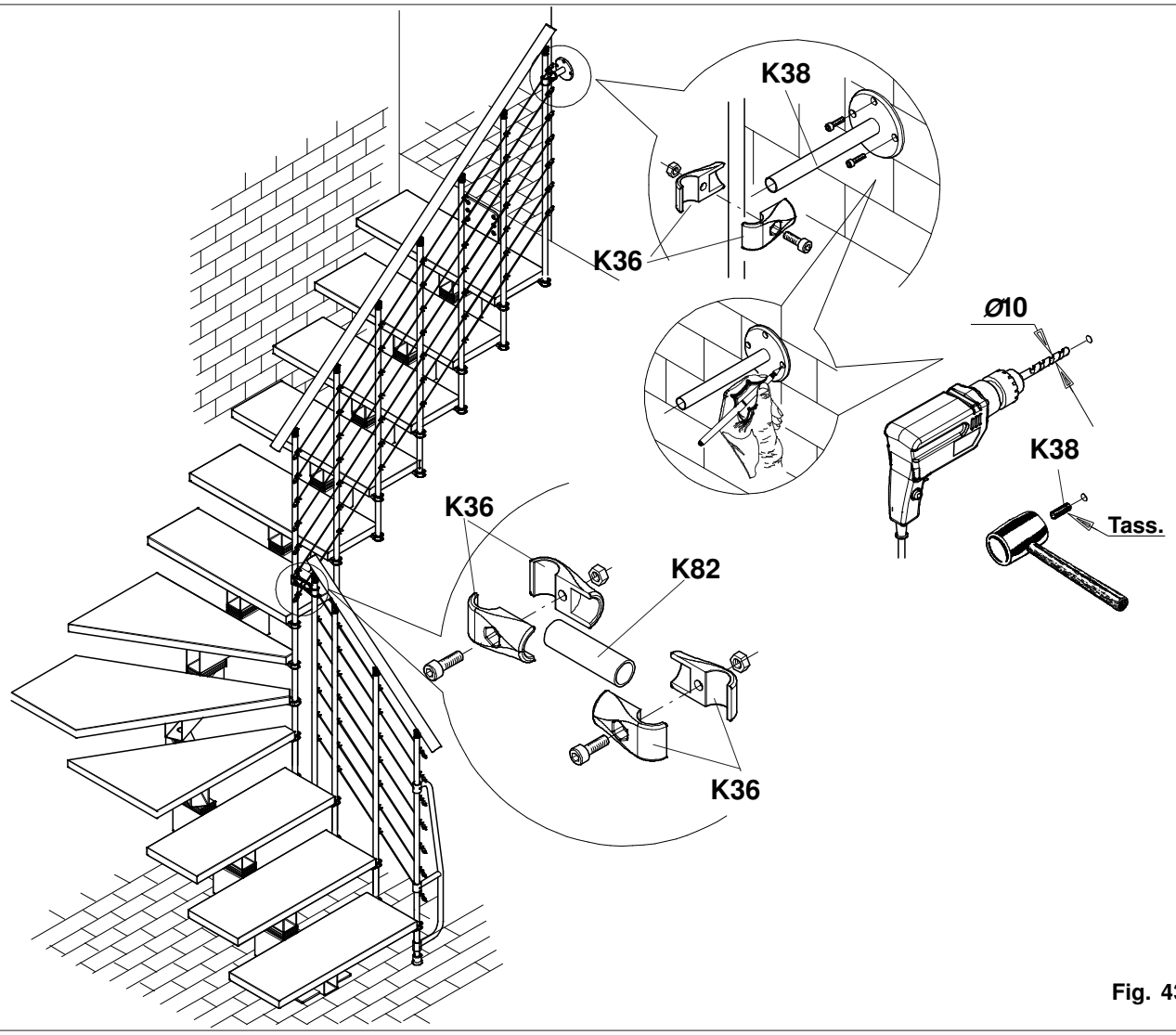

Fig. 43

- Mount the **P105** plugs both in the front and back side of the step support modules (fig. 44)

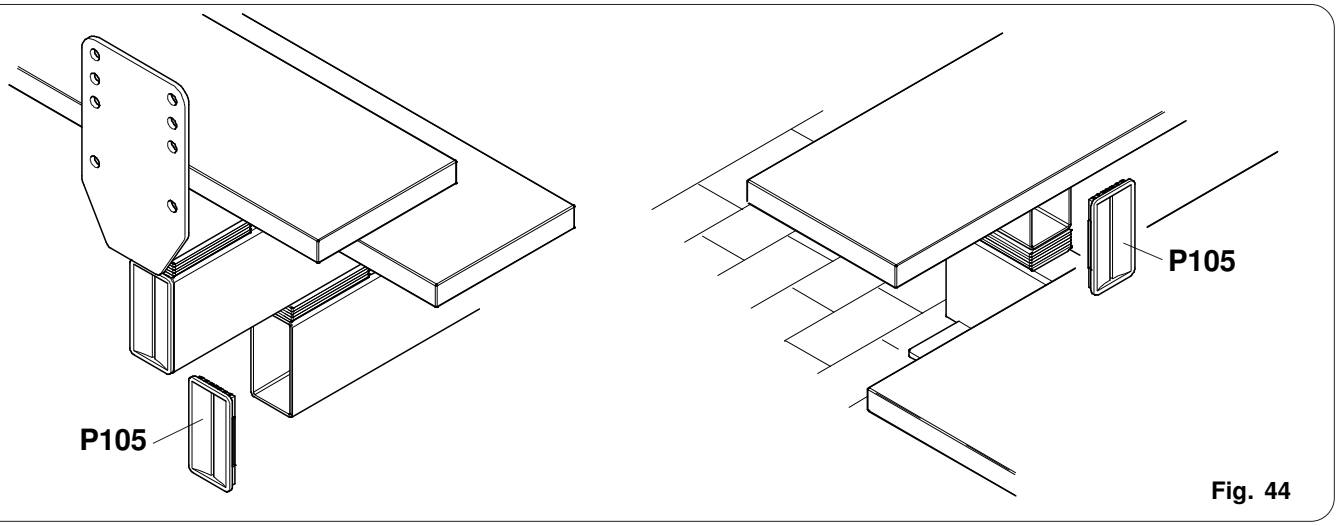

Fig. 44

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- After the assembly operations have been completed, check and test that the staircase is stable and all components are firmly anchored.
  As regards the wall anchoring points, refer to the drawings reported on page 12-13-14.

Example of staircase anchoring and support points

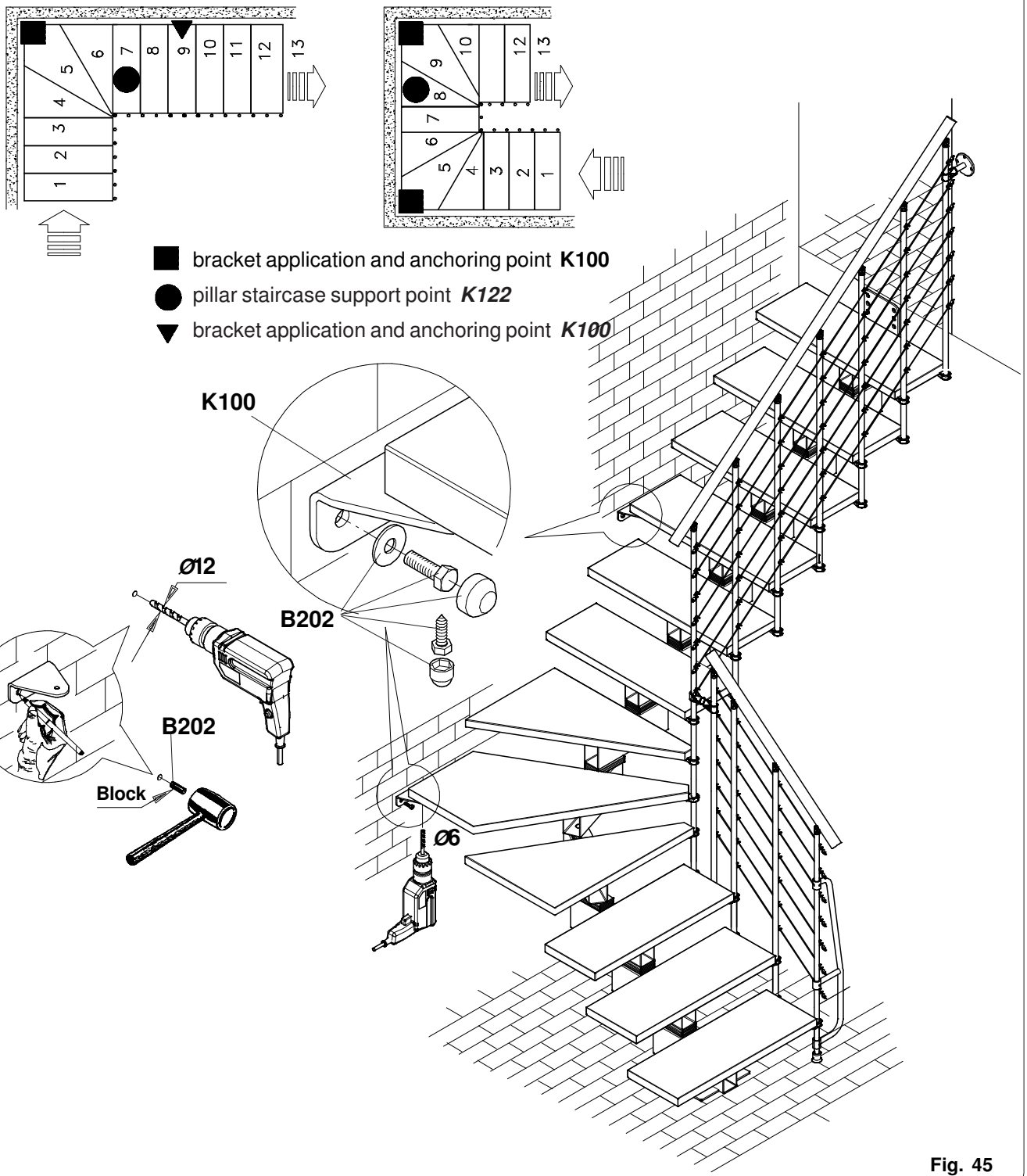

Fig. 45

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