MODULO Technical sheet

1. DESCRIPTION

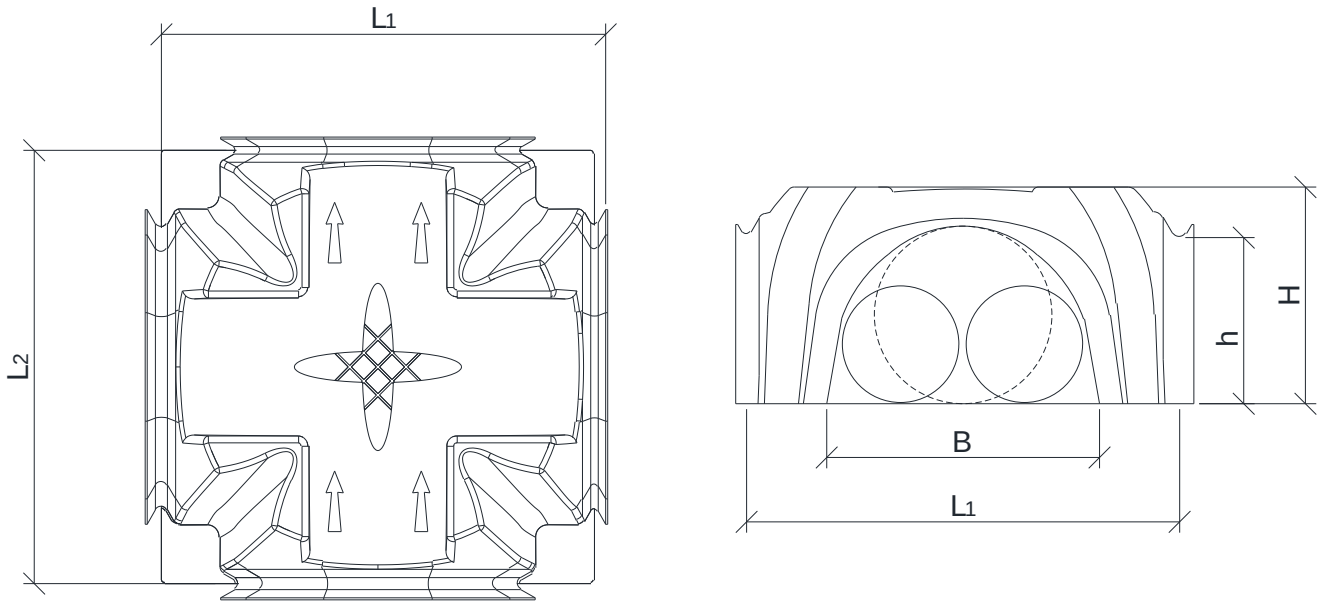
Modular formwork made of recycled PP for ventilated foundations for residential and industrial buildings.



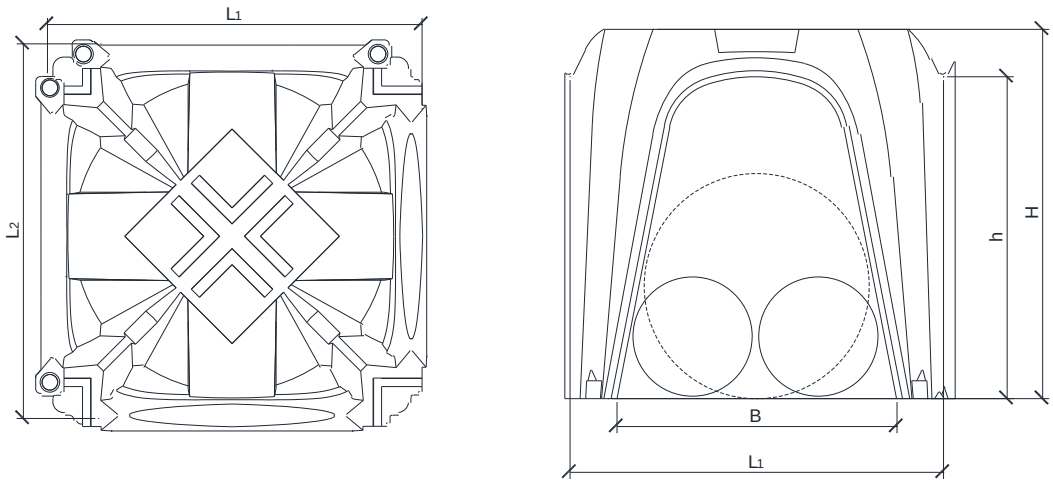




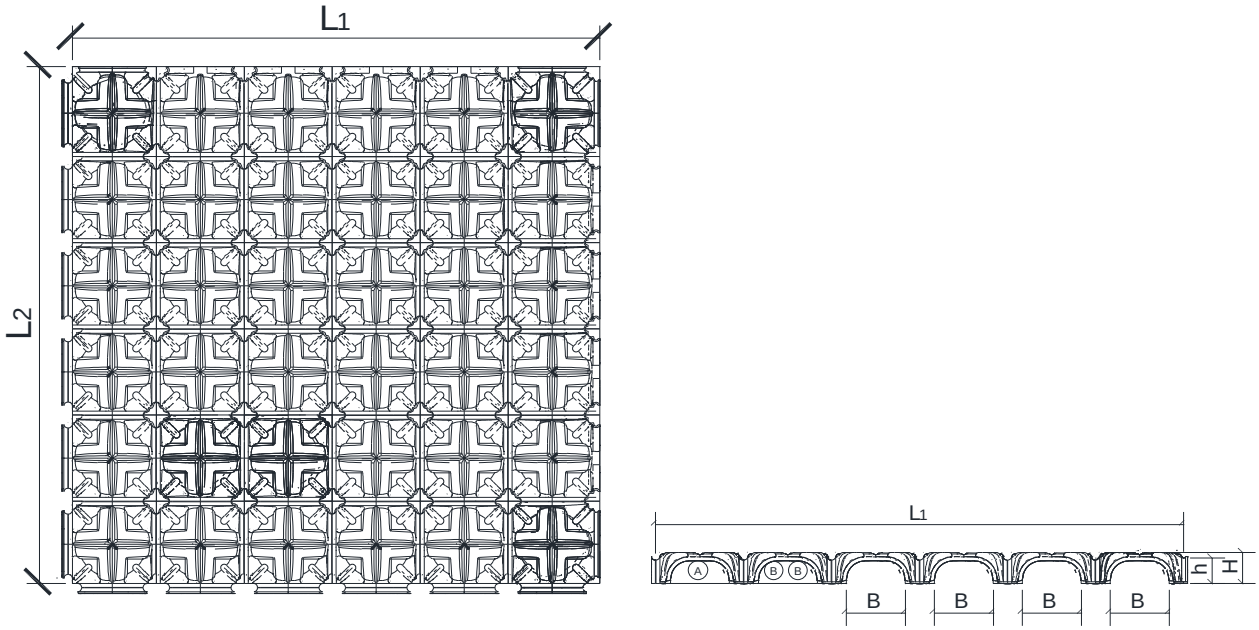
2. TECHNICAL DRAWINGS



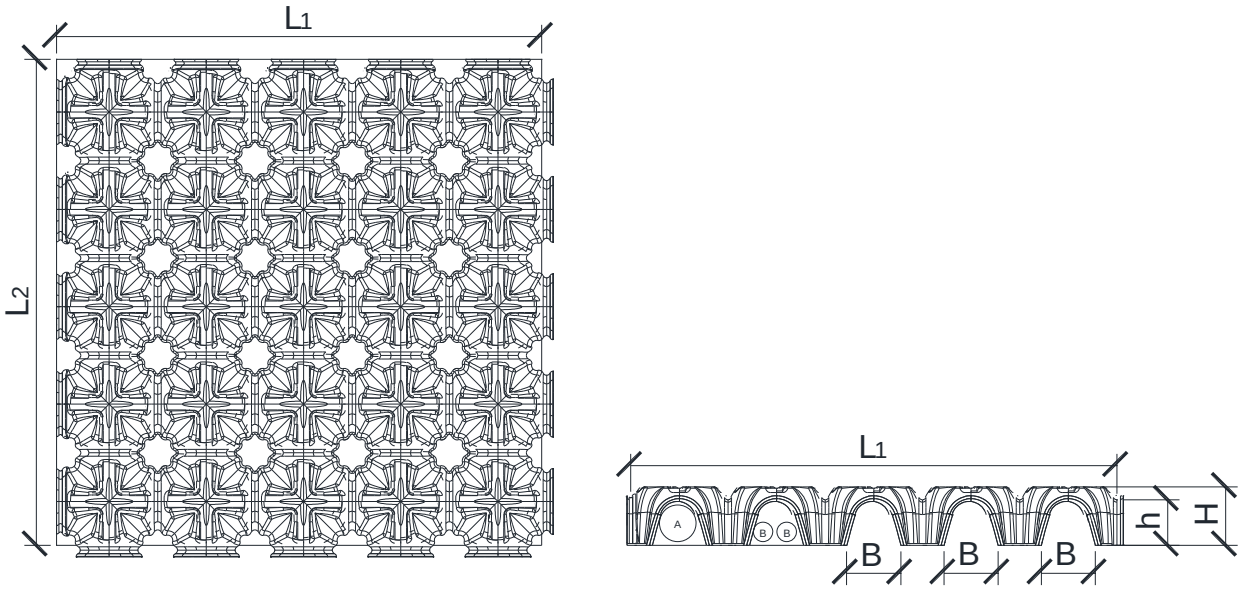
Modulo 50x50



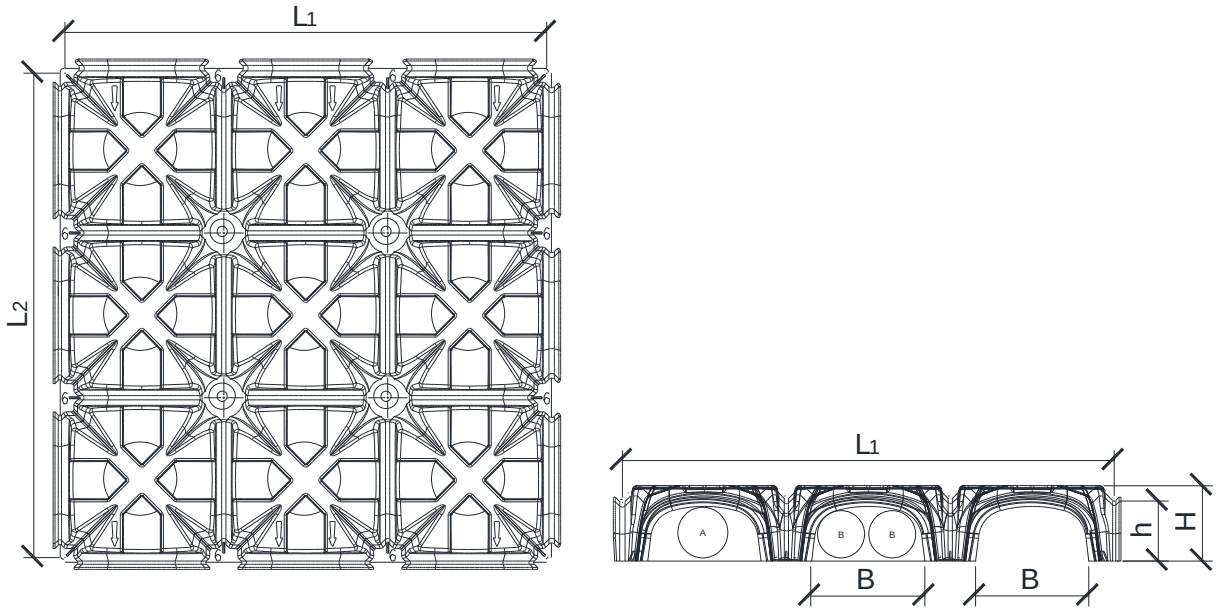
Modulo 71x71



Modulo h3



Modulo h6



Modulo h9

3. GENERAL INFORMATION

Material	Recycled polypropylene 100% GRAPLENE
Colour	Black
Place of production	Italy

4. TECHNICAL DATA

Product	Code	L1* (cm)	L2* (cm)	H* (cm)	h* (cm)	B* (cm)	Concrete consumption flush to the formwork** (m^3/m^2)	Sizes allowed for MEP (mm)	Footprint area (cm^2)	Pillars per m^2	Aggregate max. size (mm)***	Installation time (m^2/hour/man)
MODULO H3	EMODULO5003	50	50	3	2,5	5,65	0,004	2x Ø20	4,00	138	10	90
MODULO H6	EMODULO5006	50	50	6	5	5,65	0,009	1x Ø40 / 2x Ø24	7,84	100	15	90
MODULO H9	EMODULO5809	58	58	9	7	13,55	0,010	1x Ø60 / 2x Ø60	9,60	27,6	20	90
MODULO H13	EMODULO5013	50	50	13	7	28	0,028	1x Ø70 / 2x Ø60	187,69	4	30	90
MODULO H15	EMODULO5015	50	50	15	9	26,5	0,030	1x Ø90 / 2x Ø80	231,04	4	30	90
MODULO H17	EMODULO5017	50	50	17	11	30	0,035	1x Ø110 / 2x Ø100	182,25	4	30	90
MODULO H20	EMODULO5020	50	50	20	14	28	0,037	1x Ø140 / 2x Ø120	210,25	4	30	90
MODULO H25	EMODULO5025	50	50	25	19	31,5	0,038	1x Ø200 / 2x Ø140	196,00	4	30	90
MODULO H27	EMODULO5027	50	50	27	21	34	0,040	1x Ø200 / 2x Ø150	144,00	4	30	90
MODULO H30	EMODULO5030	50	50	30	24	31,5	0,044	1x Ø240 / 2x Ø130	156,25	4	30	90
MODULO H35	EMODULO5035	50	50	35	29	35	0,052	1x Ø300 / 2x Ø150	110,25	4	30	90
MODULO H40	EMODULO5040	50	50	40	34	36	0,056	1x Ø300 / 2x Ø160	125,44	4	30	90
MODULO H45	EMODULO7145	71	71	45	36	50	0,064	1x Ø360 / 2x Ø210	272,25	2	30	100
MODULO H50	EMODULO7150	71	71	50	41	47	0,076	1x Ø400 / 2x Ø210	289,00	2	30	80 (fast leg included)
MODULO H55	EMODULO7155	71	71	55	46	52	0,078	1x Ø410 / 2x Ø220	272,25	2	30	80 (fast leg included)
MODULO H60	EMODULO7160	71	71	60	51	52	0,079	1x Ø410 / 2x Ø220	240,25	2	30	80 (fast leg included)
MODULO H65	EMODULO7165	71	71	65	56	53	0,084	1x Ø420 / 2x Ø230	210,25	2	30	80 (fast leg included)
MODULO H70	EMODULO7170	71	71	70	61	53	0,083	1x Ø420 / 2x Ø230	182,25	2	30	80 (fast leg included)

** considering the recycled material, dimensions have to be considered with a tolerance of ± 1,5%*
*** The volume may change depending on the pouring conditions and the material tolerances*
**** to be evaluated according to the dimensions of the reinforcement and the concrete cover foreseen by the project*

5. LOADING CHARTS

	LOAD CLASS	Distributed load (kg/m²)	Upper slab thk. (cm)	Reinforcement (mm)*	Slab on grade thk. (cm)	Subgrade thk. (cm)	Preassure on soil (ULS) (kg/cm²)**
MODULO H3 MODULO H6 MODULO H9	Residential Cat. A	0 – 500	5	Ø6 / 20x20	5	-	0,24
	Crowd places [Cat. B e C]	500 – 1.000	5	Ø6 / 20x20	5	-	0,44
	Commercial [Cat. D]	1.000 – 2.500	6	Ø6 / 20x20	8	-	0,50
	Industrial and storage [Cat. E]	2.500 – 5.000	6	Ø6 / 20x20	10	-	0,66
	> 5.000	To be evaluated contacting Geoplast's technical dept.					

It is the designer's responsibility to evaluate that the soil is able to guarantee the pressures indicated and evaluated on Modulo H9. In the presence of concentrated loads or other variables, please contact Geoplast's technical office. The values shown in this table consider complete maturation of the concrete - 28 days.

** Minimum reinforcement calculated in relation to the maximum load value referred to the identified category.*

***The values shown, calculated in accordance with EN 1992-1-1, are purely indicative and are strongly influenced by the mechanical characteristics of the soil. The actual sizing must be evaluated case by case by an engineer.*

	LOAD CLASS	Distributed load (kg/m²)	Upper slab thk. (cm)	Reinforcement (mm)*	Slab on grade thk. (cm)	Subgrade thk. (cm)	Preassure on soil (ULS) (kg/cm²)**
MODULO H13 MODULO H15 MODULO H17 MODULO H20 MODULO H25 MODULO H27 MODULO H30 MODULO H35 MODULO H40	Residential Cat. A	0 – 500	5	Ø6 / 20x20	5	-	0,73
	Crowd places [Cat. B e C]	500 – 1.000	5 – 6	Ø6 / 20x20	5	-	1,20
	Commercial [Cat. D]	1.000 – 2.500	7	Ø6 / 15x15	10	-	1,30
	Industrial and storage [Cat. E]	2.500 – 5.000	8	Ø8 / 15x15	10	15	1,33
	> 5.000	To be evaluated contacting Geoplast's technical dept.					

It is the designer's responsibility to evaluate that the soil is able to guarantee the pressures indicated and evaluated on Modulo H35. In the presence of concentrated loads or other variables, please contact Geoplast's technical office. The values shown in this table consider complete maturation of the concrete - 28 days.

** Minimum reinforcement calculated in relation to the maximum load value referred to the identified category.*

***The values shown, calculated in accordance with EN 1992-1-1, are purely indicative and are strongly influenced by the mechanical characteristics of the soil. The actual sizing must be evaluated case by case by an engineer.*

	LOAD CLASS	Distributed load (kg/m²)	Upper slab thk. (cm)	Reinforcement (mm)*	Slab on grade thk. (cm)	Subgrade thk. (cm)	Preassure on soil (ULS) (kg/cm²)**
MODULO H45 MODULO H50 MODULO H55 MODULO H60 MODULO H65 MODULO H70	Residential Cat. A	0 – 500	5	Ø6 / 20x20	5	-	1,21
	Crowd places [Cat. B e C]	500 – 1.000	6-7	Ø6 / 15x15	5	-	1,97
	Commercial [Cat. D]	1.000 – 2.500	8	Ø8 / 15x15	10	-	2,21
	Industrial and storage [Cat. E]	2.500 – 5.000	9-12	Ø8 / 15x15	10	15	1,86
	> 5.000	To be evaluated contacting Geoplast's technical dept.					

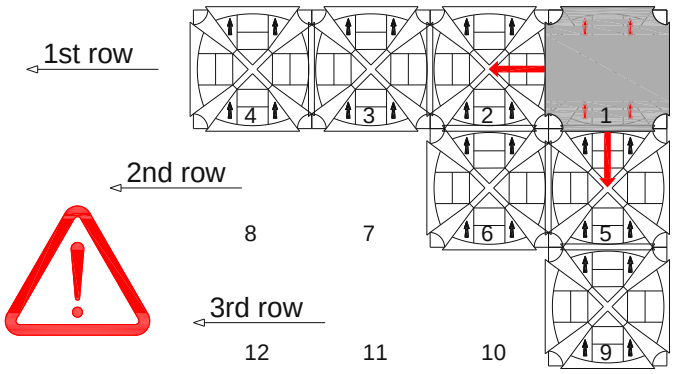
It is the designer's responsibility to evaluate that the soil is able to guarantee the pressures indicated and evaluated on Modulo H70. In the presence of concentrated loads or other variables, please contact Geoplast's technical office. The values shown in this table consider complete maturation of the concrete - 28 days.

** Minimum reinforcement calculated in relation to the maximum load value referred to the identified category.*

***The values shown, calculated in accordance with EN 1992-1-1, are purely indicative and are strongly influenced by the mechanical characteristics of the soil. The actual sizing must be evaluated case by case by an engineer.*

6. INSTALLATION

The Modulo installation is carried out by placing the formwork from right to left and from top to bottom, always keeping the printed arrow upwards. It is essential to check the correct fitting of the feet.



Before beginning the installation, it is recommended to consult the Geoplast's layout, in order to lay the elements properly. For correct installation, in compliance with safety regulations, please refer to the installation manual.

7. PACKAGING AND TRANSPORT

Product	Code	Size L1 (cm)	Size L2 (cm)	Size H (cm)	Pcs per pallet (pc)	Surface per pallet (m2)	Gross weight* (kg)
MODULO H3	EMODULO5003	120	102	220	720	180	486
MODULO H6	EMODULO5006	120	102	220	720	180	615
MODULO H9	EMODULO5809	120	120	240	720	240	752
MODULO H13	EMODULO5013	102	102	235	360	90	374
MODULO H15	EMODULO5015	102	102	240	360	90	360
MODULO H17	EMODULO5017	102	102	235	360	90	381
MODULO H20	EMODULO5020	102	102	240	360	90	392
MODULO H25	EMODULO5025	102	102	235	360	90	421
MODULO H27	EMODULO5027	102	102	235	300	75	394
MODULO H30	EMODULO5030	102	102	240	300	75	397
MODULO H35	EMODULO5035	107	107	230	300	75	406
MODULO H40	EMODULO5040	107	107	230	300	75	451
MODULO H45	EMODULO7145	151	151	230	300	150	859
MODULO H50	EMODULO7150	151	151	230	300	150	985
MODULO H55	EMODULO7155	151	151	225	240	120	812
MODULO H60	EMODULO7160	153	153	230	240	120	858
MODULO H65	EMODULO7165	153	153	230	240	120	862
MODULO H70	EMODULO7170	153	153	240	240	120	925

**considering the recycled material, weights have to be considered with a tolerance of ± 10%*

GEOBLOCK Technical sheet

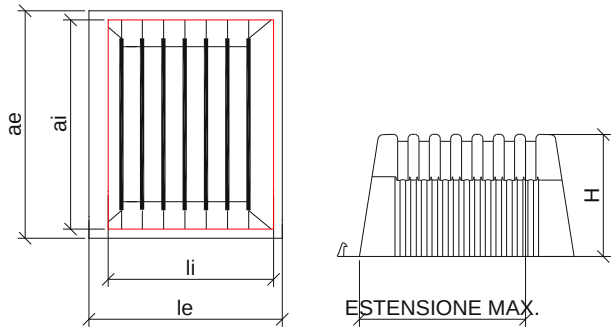
1. DESCRIPTION

Adjustable extension made of regenerated polypropylene for MODULO H13-70, which allows the side closing of the formwork allowing the pouring in one shot



2. DIMENSION

GEOBLOCK	Height	Width (ae)	Lenght (le)	Net width (ai)	Net length (li)	Span	Max. extension
	cm	cm	cm	cm	cm	cm	cm
H13	8,1	36,6	34,5	30,2	30,3	3,5	25
H15	10,4	35,7	35,1	28,6	30,8	3,5	25
H17	12,0	39,1	35,3	32,0	31,0	3,5	25
H20	15,5	37,3	35,8	30,3	31,5	3,5	25
H25	20,3	39,2	36,6	32,4	32,5	3,5	25
H27	22,0	42,8	37,0	35,5	32,8	3,5	25
H30	25,4	40,9	37,5	33,6	33,3	3,5	25
H35	30,1	45,5	38,4	38,2	34,2	3,5	26
H40	35,4	44,5	39,2	37,4	35,1	3,5	26
H45	37,4	58,4	49,5	51,0	45,4	3,5	36
H50	43,0	55,4	51,0	50,8	45,6	3,5	37
H55	47,5	60,8	51,6	53,1	47,1	3,5	39
H60	53,0	57,4	51,9	52,5	47,5	3,5	38
H65	57,0	62,9	53,3	55,5	49,3	3,5	39
H70	63,5	59,8	53,7	55,0	49,3	3,5	39

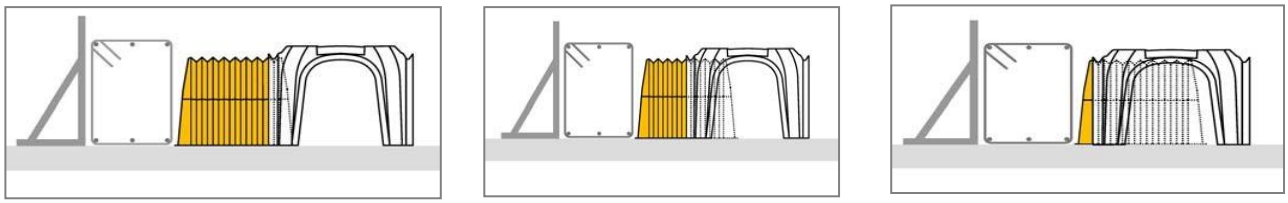


3. INSTALLATION

3.1 Used for lateral closings, Geoblock is positioned by coupling it with Modulo, facing the foundation beam to fill the distance and avoid cutting the formwork.

3.2 With the use of Geoblock, a single pouring is made obtaining a monolithic foundation.

3.3 Geoblock can also be drilled for crawl space ventilation piping.



FERMAGETTO Technical sheet

1. DESCRIPTION

Accessory for closing the lateral side of Modulo 13-40.



2. DIMENSIONS

MODULO'S height	13	15	17	20	25	27	30	35	40
FERMAGETTO'S height	7	9.5	11,5	14,5	20,5	21,0	24,5	30,0	34,0
FERMAGETTO's lenght	28	26.4	30,0	28,0	31,5	34,0	31,7	35,0	36,0

NB: The measures of the Fermagetto are about 1cm bigger along the entire perimeter of the arch.

3. INSTALLATION

- The accessory is placed in front of the arch of the Modulo that faces the foundation beam.
- Fermagetto is installed from the top to the bottom by interlocking the flaps on the arch
- Fermagetto can be cutted with standard tools as drills or grinder to install the pipes for the ventilation.



Lateral flaps



Central flaps



Internal side

CARTONPLASTICO Technical data

1. DESCRIPTION

Accessory for closing the lateral side of Modulo 45-70.



2. DIMENSIONS

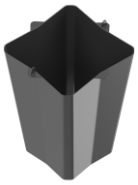
MODULO'S height	**45**	**50**	**55**	**60**	**65**	**70**
CARTONPLASTICO'S height	45+7	50+7	55+7	60+7	65+7	70+7
CARTONPLASTICO'S lenght	200	200	200	200	200	200

CARTONPLASTICO thk. 4mm

FAST LEG for MODULO H50-70 Technical sheet

1. DESCRIPTION

Fast Leg is a trunk pyramid shaped element, made of regenerated polypropylene, for MODULO H50, H55, H60, H65 and H70 that allows concrete to be poured into the leg in a single step.



2. DIMENSIONS

	MODULO'S height (cm)				
	50	55	60	65	70
FAST LEG - height (cm)	19,5	24,5	29,5	24,5	29,5
FAST LEG - width (cm)	22x22	22x22	22x22	20x20	20x20
FAST LEG - weight (kg)	0,215	0,27	0,31	0,245	0,28

3. INSTALLATION

1. The Fast Leg is manually placed in the space created between the legs of the Modules already laid.
2. A maximum of 2 Fast Legs are needed for each m2 of Module laid.
3. Once all Fast Legs are installed, it is possible to proceed with the single casting of the leg.



FASE 1: Fast Leg installation



FASE 2: visual check



Fase 3: final result

Geoplast reserves the right to change the data contained in this document without prior notice.