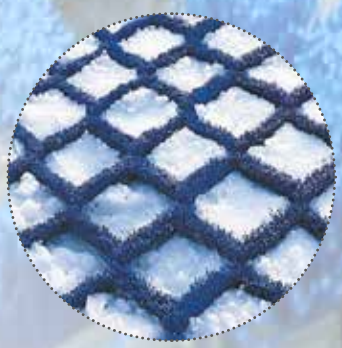
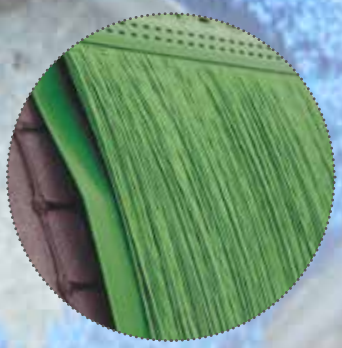
SKI SLOPES FOR
ALPINE SKIING
CROSS COUNTRY SKIING
SKI JUMPING

sit
YOUR BRUSH SOLUTION





SPORT SOLUTIONS

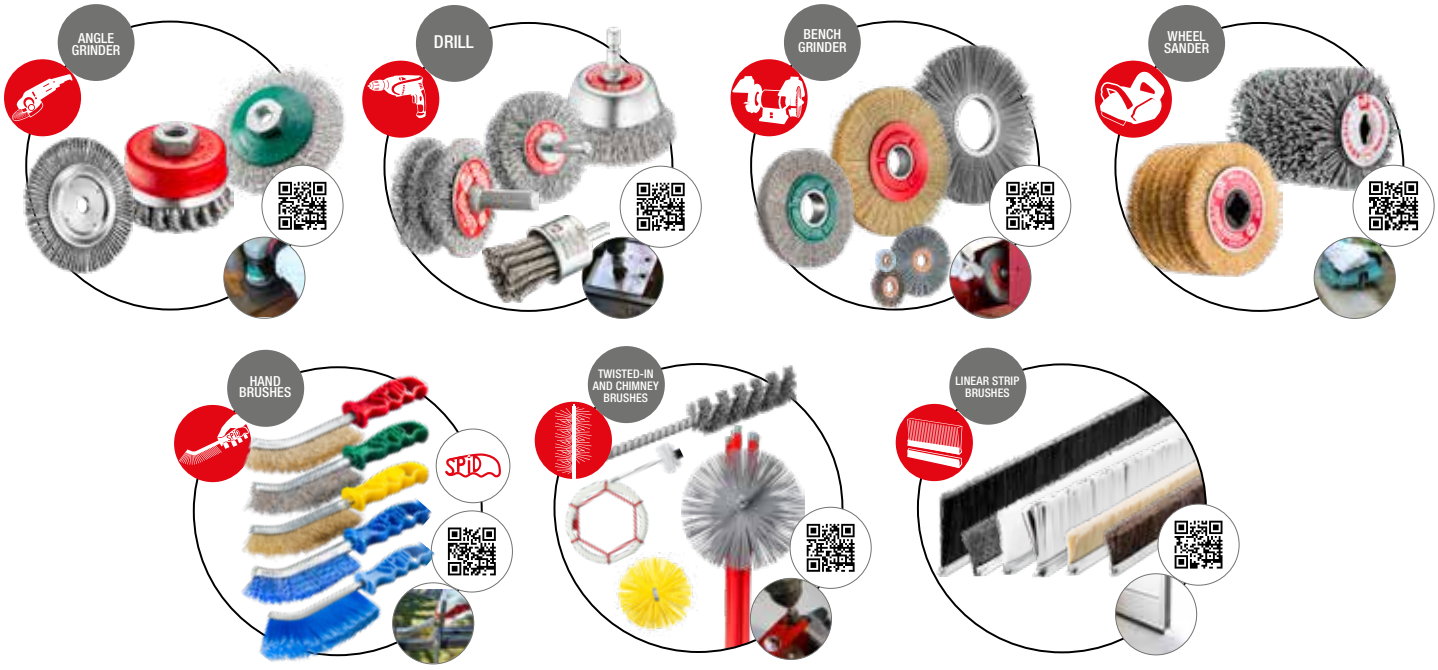
Who we are..

SIT - Società Italiana Tecnospazzole is the italian leader in technical and industrial brushes manufacturing. SIT's origins date back to paintbrushes handicraft production; industrial applications for surface finishing are our present; continuous technical innovation is our future. Always following quality and design of Made in Italy products; always seeking sustainable development.
SIT is certified by TÜV SÜD following the quality standard of ISO 9001 for industrial brushes design, manufacture, sale and trade for industrial and DIY applications.

What we do..

The right brush for each operation

STANDARD SOLUTIONS



INDUSTRIAL SOLUTIONS

SIT & SPORT

History of SIT synthetic structures for winter sports

1958
Ponte di Legno: First ski-jump in Italy with plastic covering.
The plastic covering consisted in panels with plastic filaments, fixed to a metallic support.

1959
First synthetic downhill ski-run – European Patent

1972
First synthetic long-distance ski-run

1958 - 2001
S.I.T. S.p.A. continue the production and the sales of synthetic ski slopes all around the world, with satisfaction of the customers for quality and duration of the products.

2002
Forniture of the first prototypes of synthetic panels (with plastic filaments fixed by plastic support) in Predazzo-Italy.

2003
Complete covering of ski-jump K 20-K31 in Packstall - Gallio – Italy
Test and check of the atmospheric agents to get the FIS certificate

2004
FIS certificate SIT for “Complete plastic covering ski-jump“

2008
LIBEREC K90 and K120 for 2009 FIS Nordic World Ski Championships

2019
Complete covering of ski-jump K60 in Predazzo

SIT & SPORT

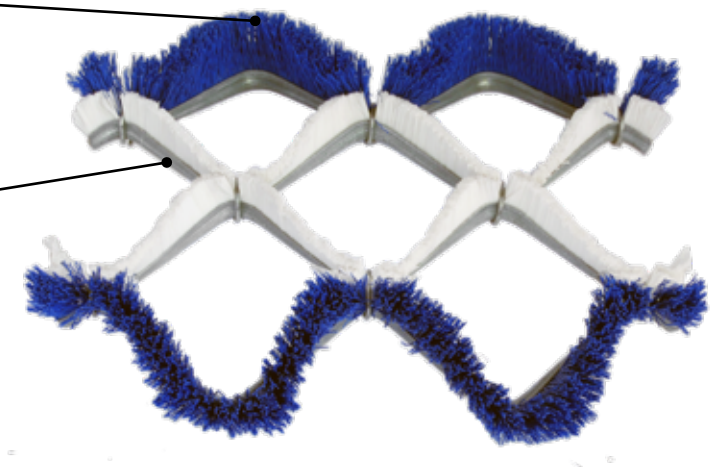
Passion for brushes and outdoor activity

Thanks to its innovative nature and its passion, SIT has patented technologies and products in sports industry (ski but also golf and tennis). In 1962 Pietro Acquaderni, starting from his passion for winter sports, created and patented artificial ski slopes “QUATTROSTAGIONI”, that reproduce the attributes of snow, for downhill, ski jumping and cross-country skiing. Experience and intuitions lead to many patents and soon SIT became first inventor and manufacturer worldwide for brush ski slopes.

“QUATTROSTAGIONI” SYSTEM

WIRE
Crimped wire in PVC (polyvinyl chloride) extruded with an appropriate process which increases its resistance to cutting and to the highly erosive action of the ski blades. The wire tips are rounded and the filament is pre-treat with silicone that guarantee good slipperiness.

SUPPORT
In alveolar shaped galvanized steel section which on the filaments are fixed. It’s suitable to withstand all stresses and forms a no-rigid, resistant and homogeneous surface that can adapts to the roughness of the ground.



PANELS:
with standard measurement of 2.60 x 0.97m. On request they can be supplied in widths of 0.84 - 0.70 - 0.56 - 0.42m.

ASSEMBLY: Simple assembly which is carried out quickly by placing the panels side by side, tying them and anchoring them to the ground with appropriate pegs. The panels adapt to the sinuosity of the ground adhering perfectly and forming a continuous surface. No maintenance will be required over time.

LAND AND ROUTE: The average slope of the land must be around 30%. Experience has shown that this slope allows for a suitable slope for beginners and schools as well as for special slalom racing competitions. It is preferable to choose a grassy substrate to prevent violent rains from biting the filaments. The track can however also be mounted on pebbly or rocky terrain with appropriate anchors.

DURATION AND PERFORMANCE: The duration of the track is many years and obviously it depends on its size and the number of skiers who use it.
The track can remain mounted summer and winter without fear of damage. On the track, skis and normal poles are used, the technique is the same and the edge grip is excellent.

Why “QUATTROSTAGIONI”

- Simplify ski schools, off-season training and pre-seasonal courses
- Extreme adaptability of the panels to any type of surface
- Easy assembly, disassembly and adaptability of the panels
- Support action and intervention in the departure and arrival areas of the chair lifts and where there are poor snow conditions
- Ideal for competitions at sports centers and for events in parks and cities
- it’s the snow that doesn’t melt!!!

DOWNHILL SKI

WATCH THE VIDEO

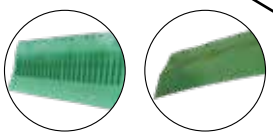
sitbrush.tv/ski1

CROSS COUNTRY SKI

“SANDWICH” system

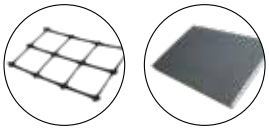
Patented SIT “sandwich” system certified to FIS (International Ski Federation) made of:

Safety Plate

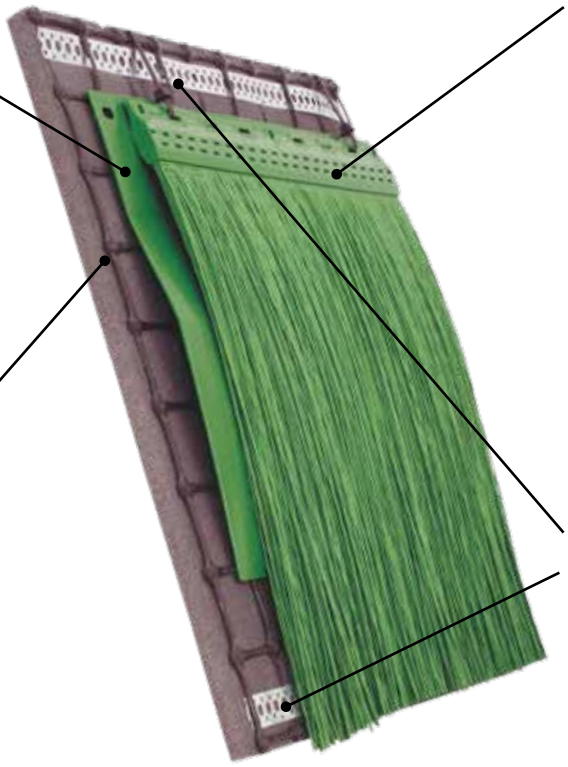


- Superior mechanical resistance
- Perfect horizontal continuity of the panel surface
- Special design for fast and easy assembly
- Cushioning and jumpers’s safety

Net and Mat



- High density polyethylene
- High stress resistance



Brush Panel

- Very high mechanical resistance thanks to the double welding of filament
- Ottimo scivolamento
- UV rays and temperature variations resistant filaments for a “4 seasons” use
- Non erasable traceability
- Recyclable and made of recycled materials
- Custom colors

Zinc plated belt and nylon strip

- Special additives for UV rays, wet and temperature variations resistance

SKI-JUMP

Plastic Ski Jump sit sitbrush.com

FÉDÉRATION INTERNATIONALE DE SKI
INTERNATIONAL SKI FEDERATION
INTERNATIONALER SKI-VERBAND

WOLFGANG HAPPLE
CHAIRMAN SUB-COMMITTEE FOR JUMPING HILLS
ACKERRAINWEG 10
D - 64625 BENSHEIM

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Societa Italiana Tecnospazzole (SIT spa)
z.Hd.Herrn Andrea Aquaderni General Manager
Via Porettana 453
I-40033 CASALECCHIO di Reno-Bologna

GENEHMIGUNG VON SKISPRUNGMATTEN DER OBEN GENANNTEN FIRMA „SIT".

Das FIS Sub – Komitee Sprungschanzen hat den Mattenbelag, hergestellt aus Polypropylen-material, von der Firma „SIT" geprüft und für die Belegung von Sommer- Sprungschanzen freigegeben.

Unter dem Mattenbelag muss eine Sicherheitsplatte, die den Mattenbund abdeckt verlegt werden. Auch diese Sicherheitsplatte wird von der Firma „SIT" gefertigt und ist vom Sub-Komitee genehmigt.

Als Unterkonstruktion liefert die Firma „SIT" eine mind. 20mm dicke Schaumstoffmatte; darüber wird ein stabiles Kunststoffnetz befestigt, an dem die Sicherheitsplatten mit den Matten mit reisfesten Kunststoffbändern angebunden werden. Diese Unterkonstruktion wird ebenfalls vom Sub-Komitee genehmigt.

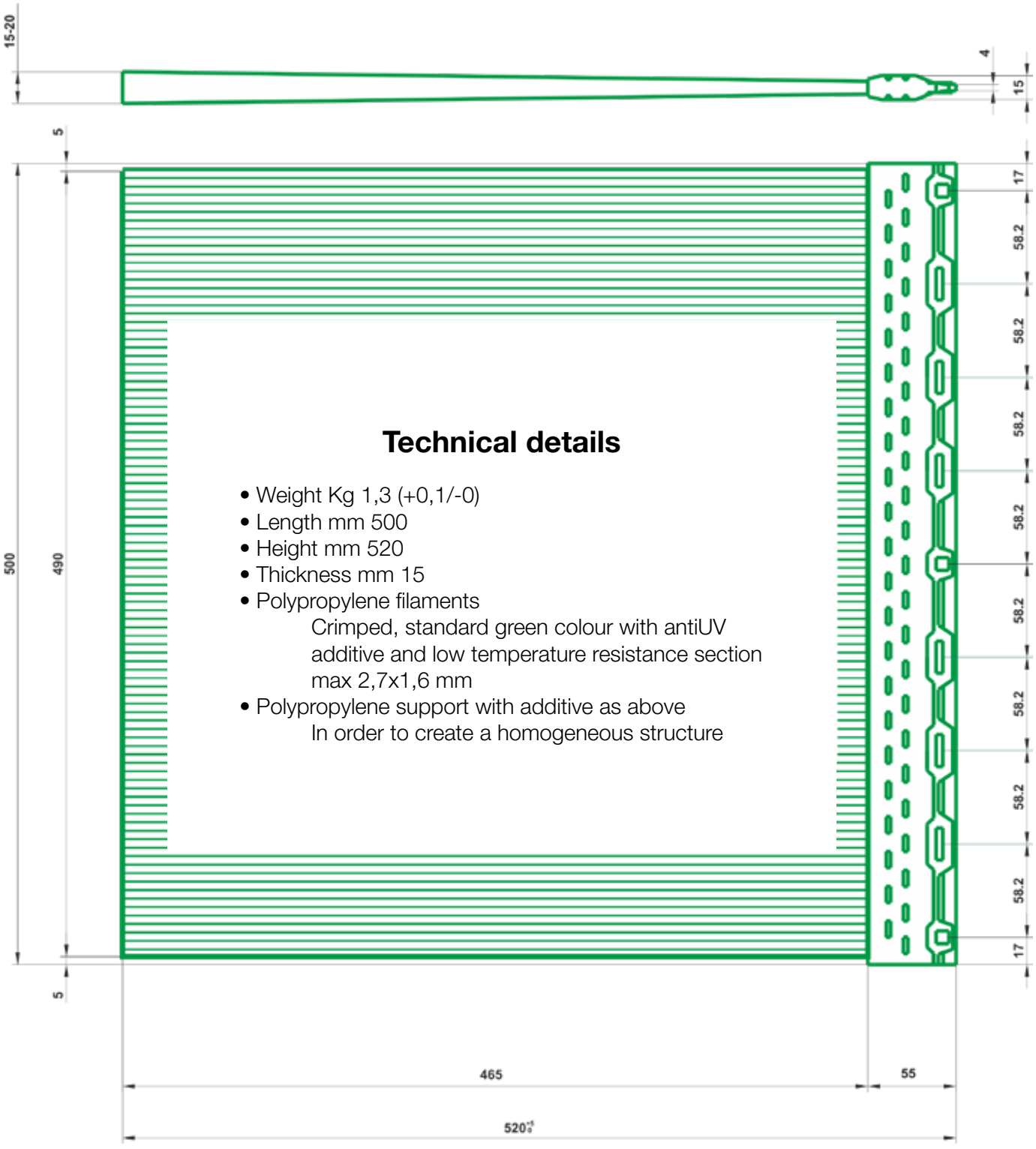
Alle FIS-Vorschriften für den Bau von Mattenschanzen Stand 2004 müssen eingehalten werden.

Bensheim, 10.10.2004

W.Happle, Chairman

Anlage: Vorschriften

Panels



Technical details

- Weight Kg 1,3 (+0,1/-0)
- Length mm 500
- Height mm 520
- Thickness mm 15
- Polypropylene filaments
  Crimped, standard green colour with antiUV additive and low temperature resistance section max 2,7x1,6 mm
- Polypropylene support with additive as above
  In order to create a homogeneous structure

Panels Technical details

POLYPROPYLENE (PP) product, with special additives for reaching a high resistance to temperature variations and high resistance to the action of UV rays.

- FILAMENTS: with dimensions lower than 1,6 x2,7 mm, manufactured with a particular process for granting a perfect uniformity in the filaments, both in ondulation and in the wire section.

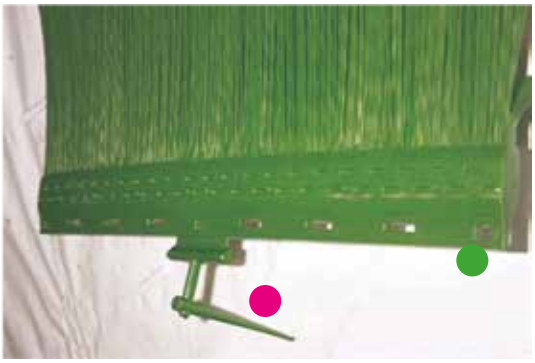
- PANELS made with an innovative technique for achieving:
  • high mechanical resistance for the holding of filaments
  • high sliding
  • Perfect repeatability of structural form of all the elements, that can grant an easy mounting and uniformity in performances.

- TRACEABILITY of each manufactured element, not erasable, for having a total warranty for our customers.

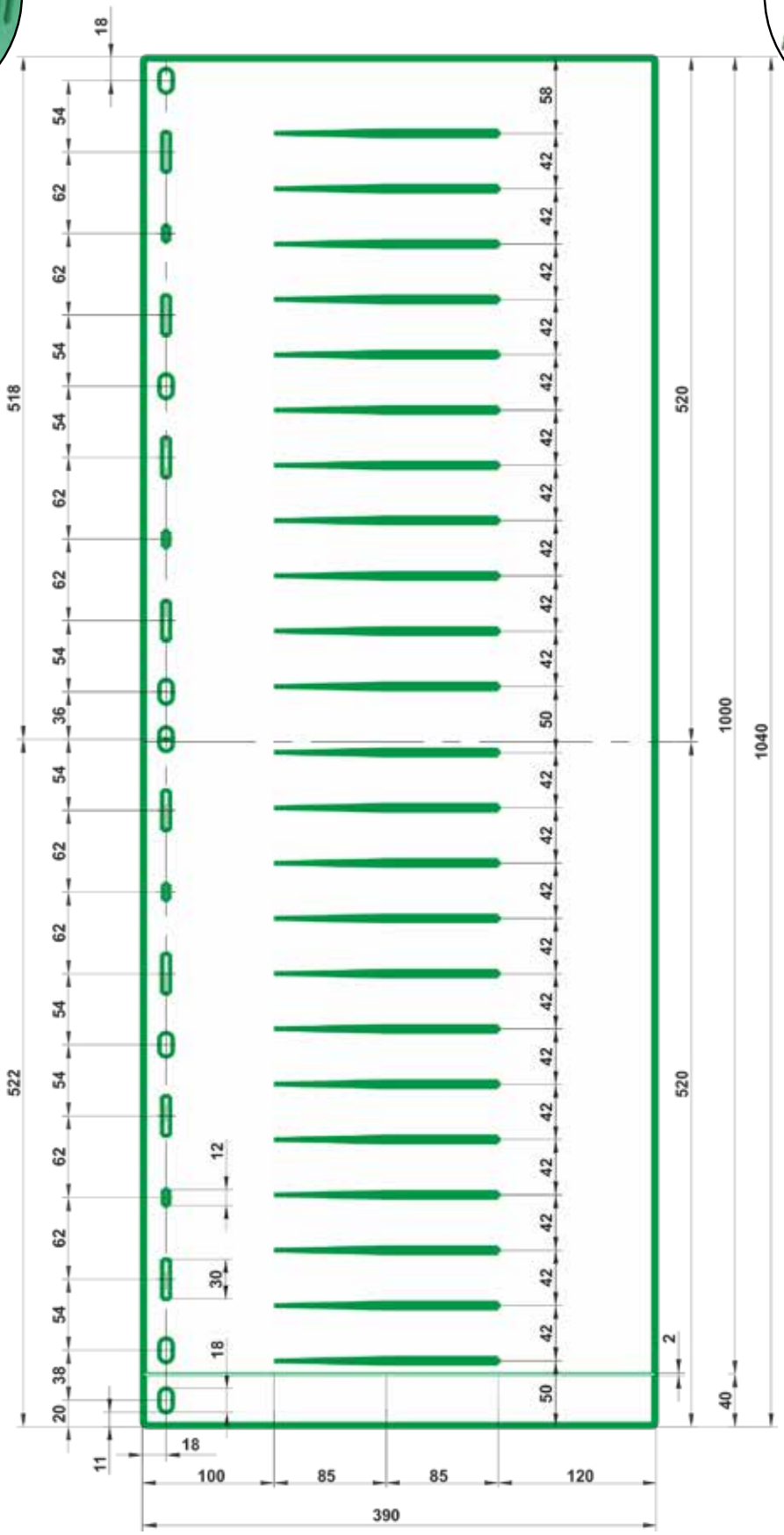
- DOUBLE HOLDING OF FILAMENTS, due to a double working:
  welding of crimped filaments togetherinjection moulding of the support

- SUPPORT manufactured with the same material of the filaments. This can assure an homogeneous behaviour of both elements (expansion, ageing)

- STRUCTURAL FORM OF THE SUPPORT, for having a perfect holding of filaments, both frontal and lateral .
  MANUFACTURING SHAPE. It can be used for the partial repair of already existing ski jumps made with different constructive materials.



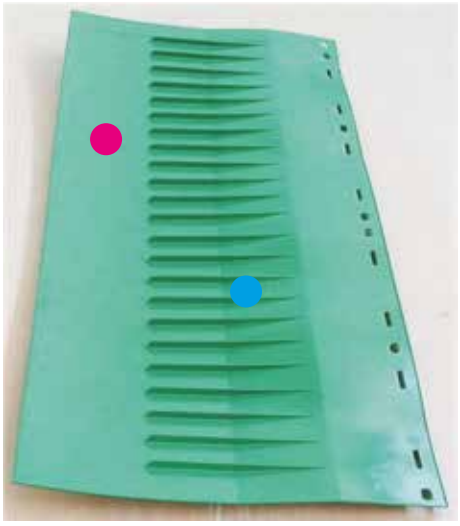
Safety Plates



Safety Plates details

HDPE (polyetilene)
material with special additives
for a better resistance to external agents

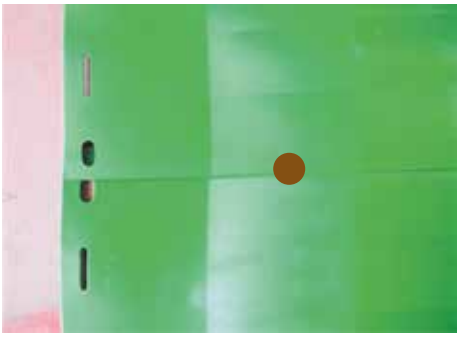
- EXTERNAL EDGES MADE WITH A LITTLE RISE for avoiding cutting or dangerous edges.



- PANEL'S TRACEABILITY data, not erasable, for having details about manufacturing date and granting a total warranty for our customers.
- BONDS WITH TRIANGULAR SHAPE for a better mechanical resistance, in order to avoid breakings for a long time.
- PARTICULAR SHAPE'S LENGTH, to allow their use with different density/overlap of panels with filaments.

- PINS FOR THE FIXING OF PANEL AND SAFETY PLATE for an easy mounting and a higher safety towards mechanical efforts that panels have to bear during athlet's landing.

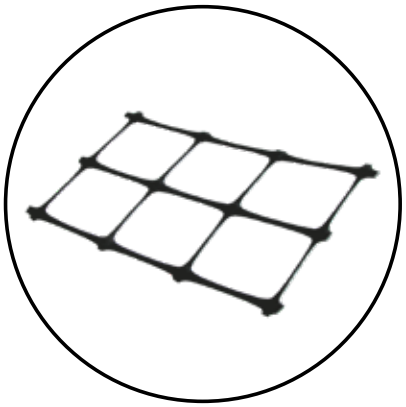
- INCREASED PANEL DIMENSIONS
  Width mm 1050-Lenght mm 390
  On each safety plate, two panels with filaments are mounted for granting a better continuity of the plastic cover of ski jump, they can match perfectly one to the other, for granting a better homogeneity, safety and protection from the back of the panels with filaments.



SPECIAL BUILDING SHAPE (SEMI-BENDED) for a better resistance to mechanical stresses and a perfect horizontal continuity between a line of panels and the one below.

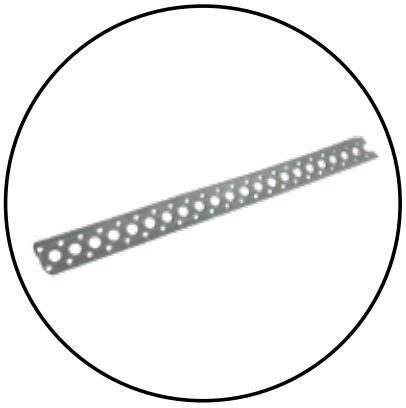
Accessories

SIT NET
Polypropylene texture mm 65x65

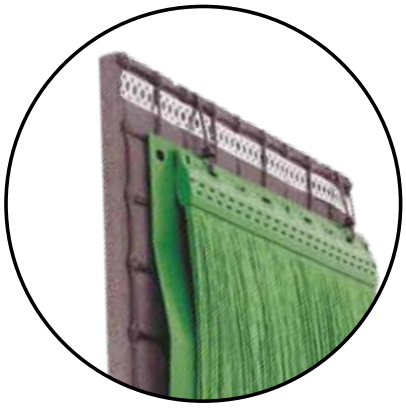


SIT MAT
Polyethylene foam
Thickness mm 20, density 30 Kg/Mc

SIT METALLIC STRIP
Hot Zinc Plated - mm 25x0,7
For SIT NET and SIT MAT blocking to wooden, concrete or other kind of foundation



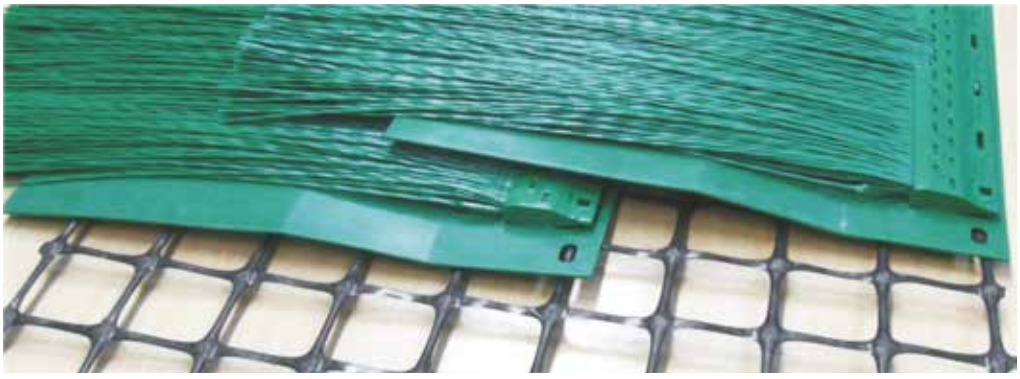
SIT NYLON STRIP
with special additives, N° 2 each panel



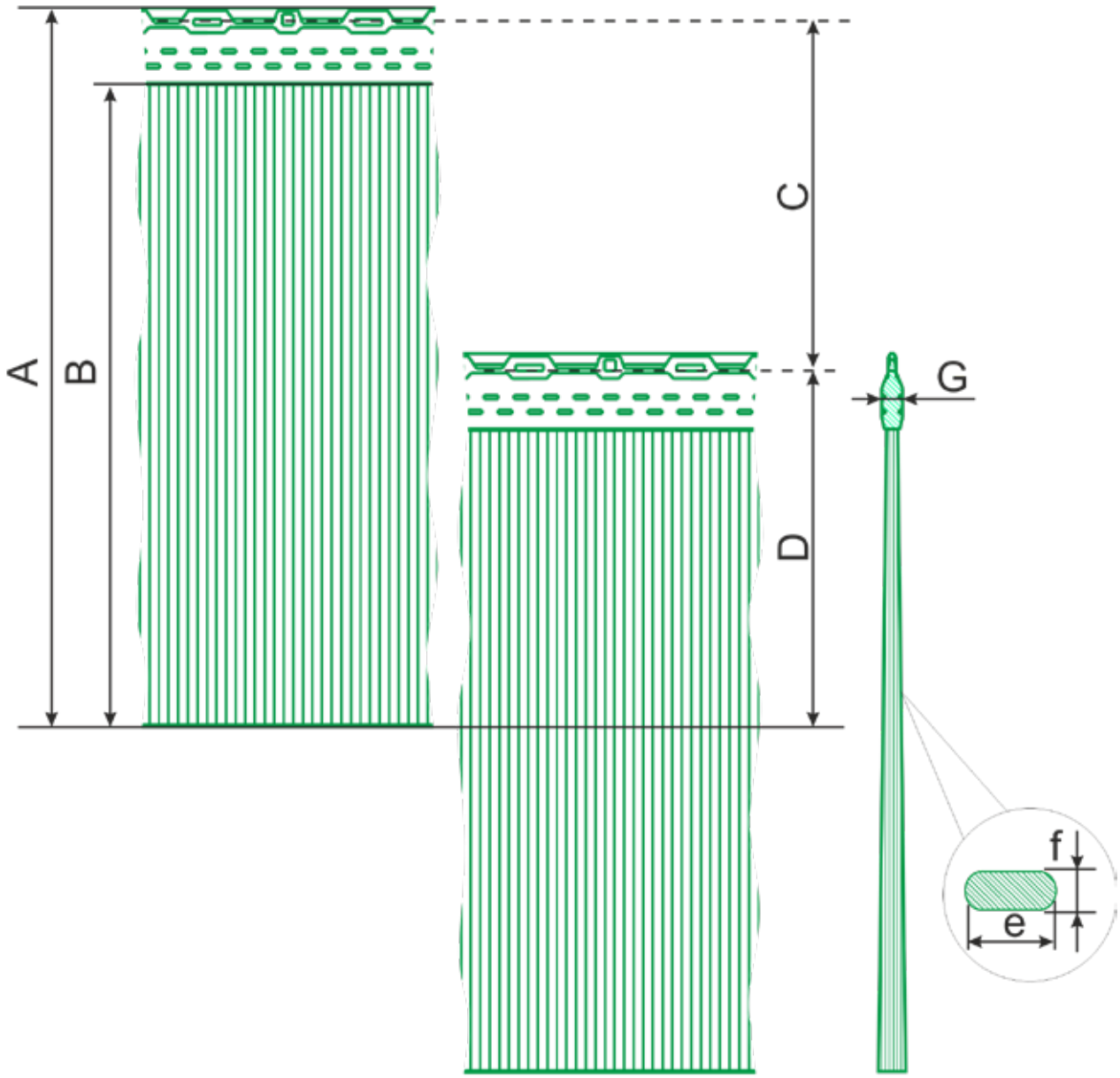
Overlapping

Standard 5 net holes

High density 4 net holes



FIS/SIT Comparaison



	FIS	SIT	
A	-	520	mm
B	480 Max	460	mm
C	-	325	mm
D	170 Min	190÷200	mm
e	2,7 Max	2,5÷2,6	mm
f	1,6 Max	1,3÷1,4	mm
G	10 Min	15	mm
Crimp.	Light	Light	-

Products Comparison

Visual comparison of plastic materials used for the construction of the components of the plastic covers for ski-jumps

- Comparison of the safety plate (1)
- Comparison of tightness of panel filaments (2)
- Comparison of the support for the plastic filaments panels (3)

The material used by SIT Spa are the followings :

HDPE for the safety plates
PP for the filaments
PP for the panels support

Conclusions

In used materials, depending on the component built, special additives are added, even in high percentages (over 30%) to provide our customers with a high quality
plastic cover, which during time has avoided the following disadvantages compared to the elements normally proveded by our competitors:

- Aging of plastic materials (1 and 3)
- Solidity and steady shape over time of the safety plate (1)
- Steady mechanical features over time (4)

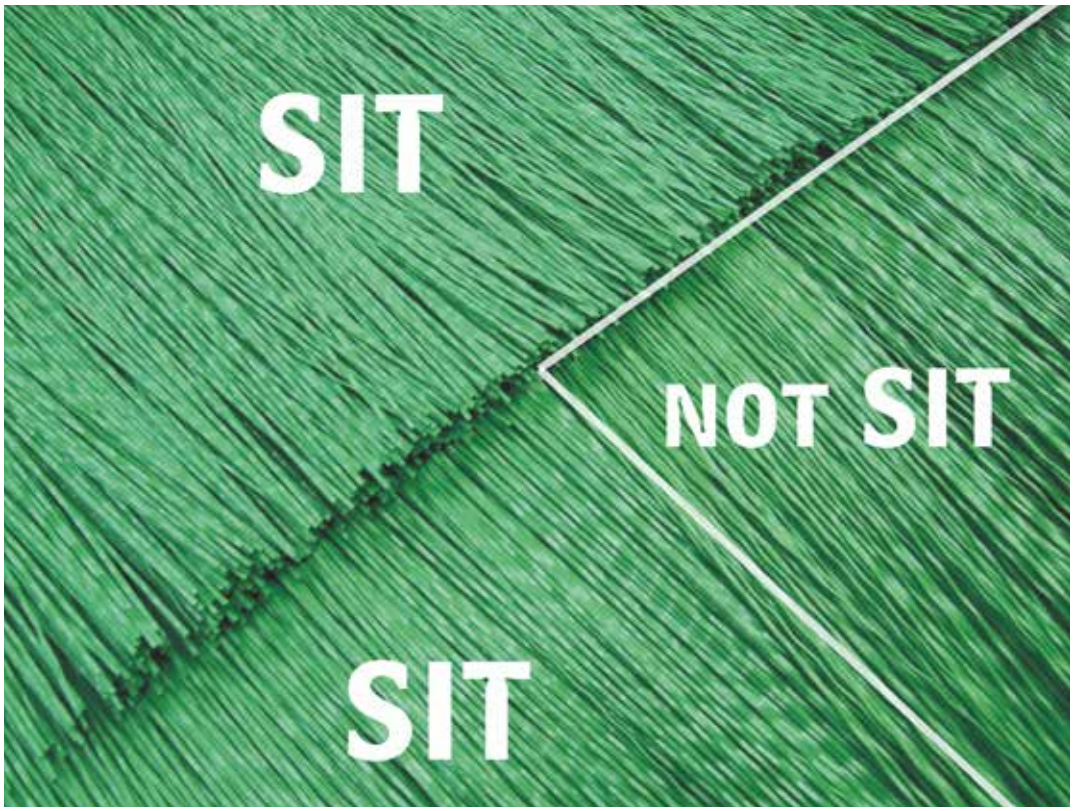
RESULT OF THE USE

- Negligibile loss of panels filaments
- Steady security over time; particular of the safety plates
- Uniform assembly of the structure; this avoiding dangers during assembly that may cause residual tensions due to thermal variations

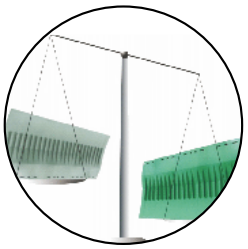
Interchangeability of SIT plastic covering

The structure of SIT safety plates and panels with filaments allows their installation also on old ski jumps plastic coverings.

In order to improve the quality and safety of already existing plastic coverings,
SIT panels with filaments or also safety plates, can be mounted on partial areas of the landing slope and in particular in the area of athletes landing, which is the most important.



Advantage



NEW SUPPLIER

but with experience and tradition

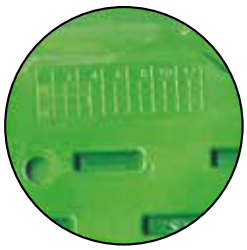
HIGHER QUALITY

SAFETY

TRACEABILITY

LOGISTICS

TRANSPORT
Lower costs thanks to optimizazion and overlapping of packaging
STORAGE
Less space is needed thanks to packaging overlapping and to the possibility of stocking goods
HANDLING
Special boxes SIT Ski Jump, containing about 36 panels, make the movement of the panels inside the yard easier, and prevent filament deformation from the moment of production to their final use



RECYCLING OF SKI JUMP PLASTIC PANELS

All types of plastic panels for our Ski Jump can be recycled. This is possible because SIT uses this material for the manufacturing of brushes where the same quality of filaments, that must be used for ski jumps, is not required. Economic benefits for SIT customers can be defined after a checking of the material that must be recycled.

SIT Quality Certified ISO 9001 by TÜV SÜD

Design, manufacture, sale and trade of industrial brushes,artificial ski slope for downhill, cross-country and ski-jump

FULL ASSISTANCE

Names & Logos

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