Base
PROTECTION

Our Technology

Technology AirTech® with tpu-SKIN®

Flexibility and lightness

How much more energy does a worker consume while wearing safety shoes in 8 workings hours?

Consider that:
• A worker does about **5 steps per minute**, **2400 steps in 8 steps**, **4800 movements** (for two feet);

• To support the foot movement doing a one meter long step, the shoes is bowed of **30°on the sole of the foot around the flexion line.**

The effort a worker does or rather the energy that he has to use to lift up the heel of at least 10 cm from the ground is directly proportional to the rigidity of the sole.

Shoes comparison	TRADITIONAL DUAL DENSITY SHOES		Base PROTECTION INNOVATIVE FOOTWEAR AirTech® with tpu-SKIN®
	Dual density	Dual density or PU/TPU or PU/Rubber	
	Steel toe-cap Steel midsole	Composite Toe-cap Metal-free midsole	Steel toe-cap Metal-free FRESHiNFLEX PROTECTOR
1 Total shoe weight	740 gr.	650 gr.	600 gr.
Energy required to make a step of about 1 m	7,4 Joule	6,5 Joule	6 Joule
Energy required to bend the shoe of 30 ° to lift up the heel of 10 cm	3 Joule	1,5 Joule	0,5 Joule
Daily steps	4.800	4.800	4.800
2 Total energy consumed in one day	49.920 J	38.400 J	31.200 J
Energy saving	0%	-23%	-37,5%

1 If you suppose to use a shoe upper weight of 200 gr and a sole with a volume of 500 cm^3 and we add up all efforts of flexions and movements, you have the total additional energy that a worker, wearing a safety shoe, has to do.

2 If we add the efforts of flexion and walking, we obtain the total energy that a worker, daily, need to spend, just for wearing professional working shoes.

With base shoe made with AirTech®sole and tpu-SKIN®, a worker can save more than 18.000 j daily. With the same quantity of energy, a storekeeper could move 1 meter forward **180 boxes of 10 kg: why has it to be wasted?**

Anti-fatigue sole

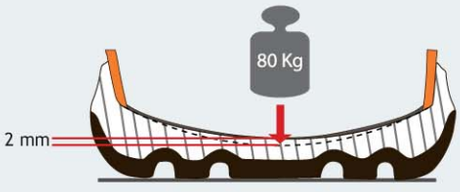
Sole comparison
Transversal section in the bending area with a low thickness

- Normal dual density sole pressing midsole;
- Hard, heavy and compact outsole.

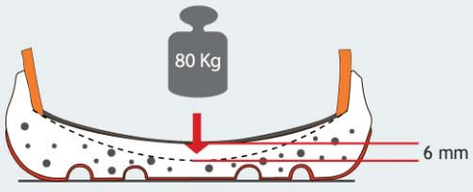
- Outsole, the heaviest part of the sole, is reduced to a thin layer of some tenths millimetres thanks to Technology tpu-skin
- The midsole, the lightest and softest layer, is increased thanks to the AirTech® technology.

High cushioning effect

Worker 80 Kg heavy - Midsole potential compression of 50%



Normal sole with only 2 mm compression



sole AirTech® with tpu-skin with bearing effect: compression: 6 mm

The AirTech® sole with tpu-skin is very soft and for this reason it adapts better itself to the foot morphology, gives a sensation of softness and makes pleasant both the upright position and the walking.

- Anti-fatigue;
- Light;
- Elastic;
- Flexible;
- Resistant to repeated flexions.

Technology sticking

Highest slip resistant outsole

- Flat outsole;
- In pu/rubber;
- Higher grip;
- Extremely flexible;
- Round side profile;
- No dirty;
- No scratches;

SRC

SLIP RESISTANCE TYPE C (EN ISO 20345:AMD1)

SRC = SRA + SRB

	SRA (Ceramics+deterging solution)		SRB (Steel+glycerine)	
	Heel (nclination 7°)	Flat	Heel (nclination 7°)	Flat
standard (EN ISO 20345:AMD1)	≥ 0,28	≥ 0,32	≥ 0,13	≥ 0,18
performance	0,52 +86%	0,50 +56%	0,20 +54%	0,22 +22%

EXTRA GRIP *during the shoe flexion. Thanks to the carvings on the sole and heel, typical of professional Boat shoes.*

Technology dry'n air

Physiology

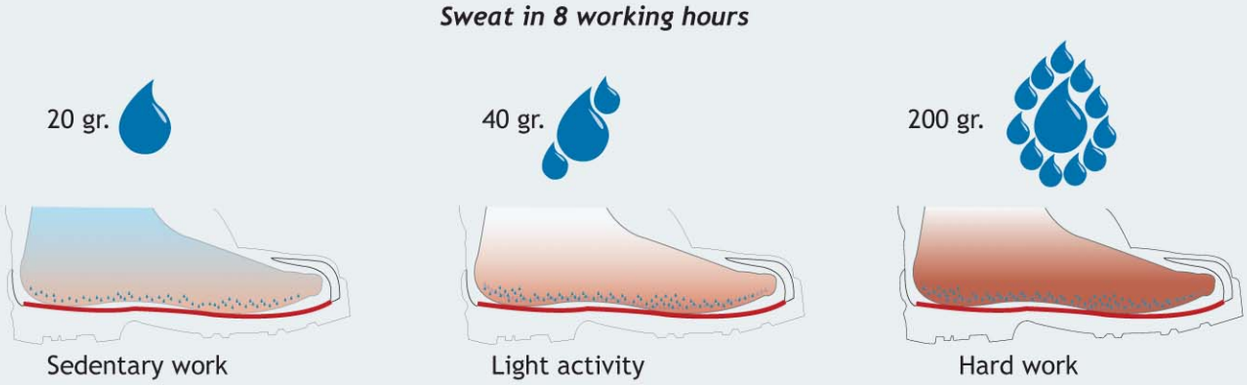
Why do the foot sweat?

Sweating is a physiological process due to the secretion of waste substances through sweat pores which can increase because of:

- Warm production due to physical activity;
- Temperature or humidity increase.

Sweating has an important role: decrease the body temperature through the water vaporization of sweat making it steady if it works correctly.
The physiological foot temperature is about 30-31 °C.

Sweat in 8 working hours



Sweat dispersion through the shoe

The foot sweat, turned into steam, is dispersed from the shoe thanks to the upper breathability.

Some factors may reduce the dispersion, particularly if the shoes are made without considering the foot physiological exigencies, for instance:

- Low quality leathers, linings and supports;
- Excessive glue use (makes the production easier, but decreases the breathability);
- Breatheable upper surface reduction.

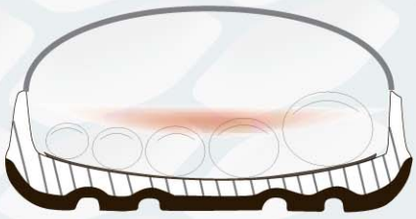
RESULT: for a traditional work shoe the quantity of drained sweat shall result lower than the quantity of sweat produced, the foot will consequently remain always wet, leaving the skin viscid and causing:

- Bad smells;
- Skin steeping;
- Mycosis;
- Social discomfort;
- Shoes fast wear and tear.

Heat dispersion

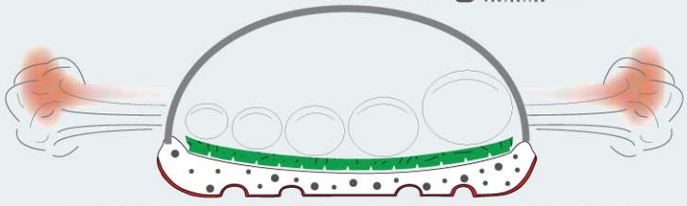
Footwear comparison

Traditional working shoe



Warm feet since embedded in the sole

Shoe Record Base



Cooler foot thanks to the low sole profile combined with the anatomical footbed dry'n air

The low sole profile combined with the anatomical footbed dry'n air keep the foot over the shoe edge. ***The upper surface, useful for the perspiration, increases of at least 60 cm²***. It facilitates a higher evaporation through the upper leather and the side draining of internal heat

The anatomical footbed dry'n air is equipped with a holes and ducts that improve the air circulation between foot and sole.

dry'n air

In the anatomical footbed dry'n air, over 120 holes generate an additional ***surface, of about 25 cm² under the foot, and allowing an instant sweat drain in the area under the foot.***

Furthermore the canal system, combined with the 120 communicating holes, means an effective air-circulation system inside the footwear, that keeps the feet drier by increasing the number and frequency of steps.

Footwear comparison

Safety Class		Upper Material	Upper breathability (mg/cm²*h)	Working hours (h)	Perspiration Surface (Cmq)	Sweat dispersion (gr)	Sweat dispersion (%)	Performance
S2-S3	Traditional footwear	Suedelather or nubuck	2,5	8	300	6	30%	
S2-S3	Base Footwear with dry'n air footbed	Nabutek	6	8	385	18,5	92%	+62%
S1	Traditional footwear	Textile - suedeleather	3,5	8	300	8,5	42%	
S1	Base Footwear with dry'n air footbed	Textile and Nabutek	9	8	385	27,7	139%	+97%

Work Conditions :
- Working in upright position (static upright position);
- Outside temperature 23°C;
- Relative outside humidity 50%.

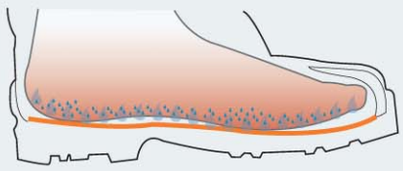
*The comparison shows how a footwear equipped with dry'n air **footbed** has, at least, **85cm² more breathing surface,** if compared to a traditional safety footwear with direct attach sole, and is always more physiologically effective than a traditional safety footwear, since it is **enabled to disperse** completely all **the sweat** produced and leaving **the feet always dry.***

dry'n air PLUS Technology

Dry feet

Footwear comparison

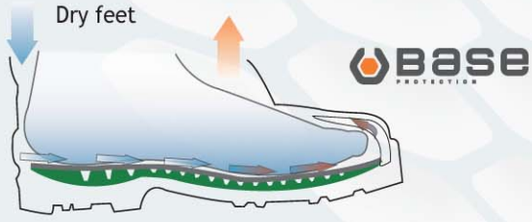
Wet feet



Traditional safety boot

The feet are embedded in the sole, there is no possibility of air exchange.

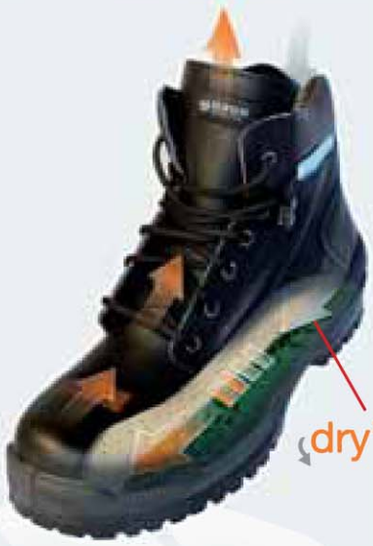
Dry feet



Boot with dry'n air PLUS system

The sole has been conceived with a cavity for a built-in insole made by puncture-resistant textile with a canal system dry'n air PLUS that ***enables the air circulation even under the foot sole.***

the anatomical footbed dry'n air PLUS combined with Puncture-resistant ballistic textile is made of 200 holes helping the sweat to be quickly drained. The outcome is dry foot also in a work shoe with a puncture resistant textile.



dry'n air PLUS

Fresh and dry outside air, can enter, from above the boot, and flows along the canal system dry'n air PLUS, inside the vamp, through the 200 holes of the footbed and it is then expelled from the shoe neck. The air circulation is considerably increased by the walking, since the feet press on the underlying canals, priming a "pumping" action, that, increasing the air speed, pushes the moisture outside the boot, through the spaces between foot, lining and upper.

This forced air-circulation is, proportionally, increased, by a higher number of steps, while walking, thus increasing the heat and steam dispersion, thanks to the effective thermical exchange, by convection, with the external environment.

Footwear comparison

Activity	Sweat quantity (gr)	Number of steps/minute (hypothesis)	SWEAT DISPERSED Weight (gr) Traditional footwear	Weight (gr) base Footwear with dry'n air PLUS footbed	Performance (%) Traditional footwear	Performance (%) base Footwear with dry'n air PLUS footbed	base Differences in performance
Sedentary work	20	Less than 5	7,2 gr	12,6 gr	36%	63%	+ 27%
Light work	44	10 to 15	12 gr	35 gr	27%	80%	+ 52%
Hard work	200	Over 60	30 gr	190 gr	15%	95%	+ 80%

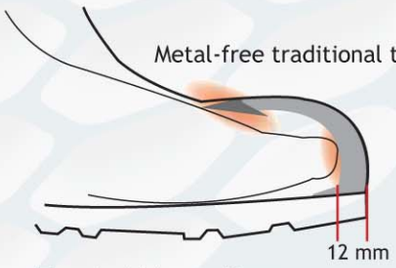
Work Conditions :
- Working in upright position (static upright position);
- Outside temperature 23°C;
- Relative outside humidity 50%.

*If a footwear with the dry'n air PLUS canal system is used under active conditions (walking), **it is possible that all moisture, produced by the feet**. The pumping activity in Platinum shoe is clearly higher than a normal work shoe in extrem working conditions.*

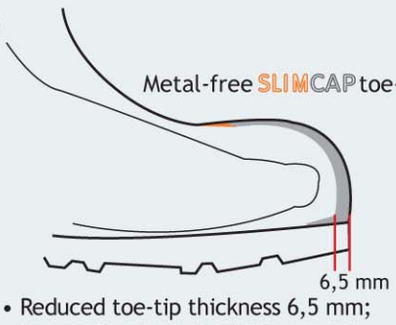
SLIMCAP *Technology*

Anatomical protection that does not reduce the toes space

Toe-caps comparison



- Toe-tip thickness 12mm;
- Reduce the fitting and hurts.



- Reduced toe-tip thickness 6,5 mm;
- Does not reduce the fitting.

Toe-protection band: eliminates pressure on toes

Band comparison

Traditional toe-protection flat band

Pre-shaped toe-protection band for SLIMCAP

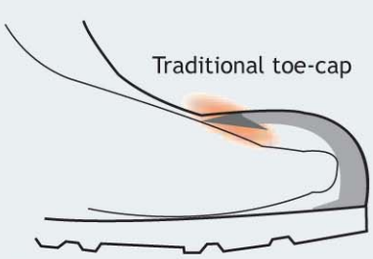
Gluing systems comparison

Traditional toe-protection and toe-cap gluing

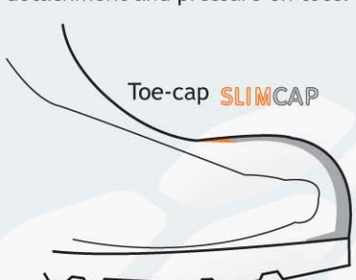
It is a shape-memory material, difficult to glue, and even after the gluing, it tends to detach, pressing the toes and hurting.

SLIMCAP toe-protection and toe-cap gluing

Having the same toe-cap shape it fits perfectly, the toe-cap, this eliminates the risk of accidental detachment and pressure on toes.



The toe-protection band detaches and hurts



The toe-protection band remains fixed to the SLIMCAP

EXCLUSIVE PATENT

SLIMCAP

Base PROTECTION

- Reduced toe-tip thickness 6,5 mm;
- Does not reduce the fitting;
- With pre-shaped toe-protection band;
- 35% lighter than the other toe-caps on the marketplace;
- Granted safety performances from -40°C to +60°C;
- Tested in compliance with European (EN20345), Canadian(CSA) and american (ANSI) safety regulations.

consumer needs
base protection range

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