



EN 342:2017

0,381 (B) 2 X  
When worn with X12T

The protective clothing model X12J and X12T may not be worn at temperatures colder than -50C!

English  
Information/instructions for use of

protective clothing against cold EN 342: 2017

Protective jacket against cold – X12J

Protective trousers against cold – X12T

The following pieces of equipment for protection against cold, X12J and X12T, have been tested in

accordance with EN 342:2017 Protective clothing - Ensembles and Garments for protection against cold, corresponding to the requirement EN ISO 13688:2013 Protective Clothing, and fulfil the PPE Regulation 2016/425.

### 1. Physiological requirements for protective clothing against the cold

According to EN342:2017, protective clothing against cold has to fulfil certain requirements concerning physiological requirements which have to be identified as 'special subject classes' on the label.

-Resultant effective thermal insulation Icler (tested with underwear type B, C or reference clothing R)

-Air permeability class (1-3)

-Water penetration class (optional)(1-2)

Thermal insulation is expressed with the help of the resultant basic insulation of clothing Icler, which is measured by a moveable thermal dummy. It refers to the entire combination of protective clothing against cold, which means the actual protective clothing along with the underwear. The standard specification intends two different standardized implementations:

-Underwear A is a lighter version

-Underwear B increases the insulation through the addition of thermal underwear as well as gloves and headwear

The protective clothing against cold model X12J and X12T is tested with underwear B.

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User Guide / Guide de l'utilisateur

The Chiller Collection USERGUIDE  
X12J WHEN WORN WITH X12T



Size code	XS	S	M	L	XL	XXL	3XL	4XL
To fit chest cm	78-89	86-94	94-102	102-110	110-118	118-129	129-141	141-153

2. Field of appliance

For choosing an adequate kind of protective clothing against cold, the user must make sure of the environment temperatures, the heaviness of labour and the time spent. Therefore, you must analyse the working piece first.

If you choose cold protective clothing or a certain working phase according to the charts in pictures 2 and 3, it must be assumed that protection for hands and feet also have a sufficiently high isolation of warmth, and that the face and head are also protected in an appropriate way.

With the help of pictures 2 and 3 and using the results of model X12J and X12T duly recorded on the labels, the user can determine for which climatic conditions and for which period of wear the clothing is suited for during special work.

The protective clothing model X12J and X12T may not be worn in temperatures below -50°C.

Insulation Icler m2xK/W	Wearer moving activity							
	Light 115 W/m2				Medium 170 W/m2			
	0.4m/s		3 m/s		0.4m/s		3 m/s	
	8HR	1HR	8HR	1HR	8HR	1HR	8HR	1HR
0.265	3°C	-12°C	-9°C	-3°C	-12°C	-28°C	-2°C	-16°C
0.310	-2°C	-18°C	-6°C	-8°C	-18°C	-36°C	-7°C	-22°C
0.390	-9°C	-28°C	-0°C	-16°C	-29°C	-49°C	-16°C	-33°C
0.470	-17°C	-38°C	-6°C	-24°C	-40°C	-60°C	-24°C	-43°C
0.540	-24°C	-45°C	-11°C	-30°C	-49°C	-71°C	-32°C	-52°C
0.620	-31°C	-55°C	-17°C	-38°C	-60°C	-84°C	-40°C	-61°C

Figure 1: Effective thermal insulation of clothing Icler and ambient temperature conditions for heat balance at different durations of exposure.

Figure 2: Resultant effective thermal insulation of clothing Icler and ambient temperature conditions for heat balance at different activity levels of durations of exposure

Minimum of environment temperature at air speed 0.3 – 0.5 m/s for the appliance in protective clothing against cold according to EN 342:2017.

Resultant effective thermal insulation and minimum ambient temperatures for the garment tested.

Icler m²K/W	Wearer working and standing			
	115 W/m²		170 W/m²	
	8HR	1HR	8HR	1HR
0,381	-8°C	-27°C	-28°C	-48°C

Figure 3: Resultant effective thermal insulation and minimum ambient temperatures

Icler m²K/W	Wearer working and moving			
	115 W/m²		170 W/m²	
	0.4m/s	3m/s	0.4m/s	3m/s
	8HR	1HR	8HR	1HR
0,381	-8°C	-27°C	1°C	-15°C
			-28°C	-48°C
			-15°C	-32°C

Warning: the results given in these lists can only be attained by wearing the jacket and trousers in the same combination.

When choosing clothing against cold, do not choose clothing that is too tight since not only will freedom of movement be restricted but the volume of air between top clothes and underwear will be reduced, which could lead to a less effective insulation of warmth of the entire ensemble.

Complete the ensemble with protection to hands, feet and head.

4. Care and storing

To preserve the warmth isolating properties of protective clothing against the cold for a long time, it is necessary to take certain care.

After wearing the clothing, it should be placed on a coat hanger in a drying cupboard or a well ventilated warm room to dry it away from extremes of temperature.

Avoid storing in compressed conditions.

For further care instruction please consult the care label sewn into the garment.

5. Repair

Put your boots on after you have put your trousers on to prevent the trouser lining from being damaged.

If the garment becomes damaged it will not provide the optimum level of protection and should therefore be immediately repaired or replaced. Never use a damaged garment. Always consult the manufacturer before attempting repair.

6. Aging

Protection against cold will be less when the volume of insulation has decreased. The certification on the clothing is valid for 5 years from date of manufacture. Failure to comply with the instructions/regulations in this manual, as well as the individual use in se, may reduce the durability of the PSA.

7. Material

For information about the fabrics of the PPE, consult the label sewn into the garment.

8. Washing

Do not tumble dry.  
Do not wash at a temperature higher than 40°C.  
Do not use any form of bleach or detergent on this garment.  
Do not dry clean.  
Do not iron.  
Ensure that all zips and velcro is done up before washing and drying.  
Please see the following icons to confirm these instructions:

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