

The aim is to convey to workers and business buyers that this is not just a heating device, but also a professional safety device capable of handling harsh working environments .

Employing bandgap heating technology: redefining wearable cold protection gear

Shenzhen Runxintian Technology Co., Ltd.

In harsh working environments, traditional heating products often break down due to frequent activity or deter users from using them due to battery safety concerns. Runxin Tian uses a **globally exclusive "bandgap heating system"** designed specifically for high-intensity work environments, providing superior safety, comfort, and extreme durability.

— new after millions of flexes.



Traditional electrically heated insoles typically use thin, weak heating wires that break and fail after only a few thousand bends from walking. Runxintian heated insoles completely solve this problem.

Extreme durability : Utilizing innovative band heating materials, it has passed over **1 million bending tests** , far exceeding the 5,000-10,000-cycle limit of competitors in the market. The heating point is located at the arch of the foot, perfectly avoiding the point of sharp bending, ensuring stable operation even under high-intensity labor.

Extremely energy-efficient, lightweight and long-lasting : Output power is only **1W- 5W** . With its extremely low energy efficiency, a lightweight **2000mAh** battery provides more than twice the usage time of competing 5000mAh batteries.

Semi-solid battery safety protection : Equipped with a high-safety **semi-solid battery** , it has extremely strong impact resistance. It will not ignite or spontaneously combust when subjected to squeezing or impact, providing the most reliable foot safety protection for grassroots workers.

II. Heated Gloves: Flexible operation, resistant to tensile stress



For work scenarios that require frequent donning and doffing and delicate operations, we have redefined the structure of heated gloves.

Stress-resistant design : The new design abandons the fragile traditional heating wire and can withstand the strong tensile stress generated by frequent wearing and unwearing. Even under long-term repeated pulling, the heating performance remains stable and will not lose power due to physical damage.

Half-finger design and flexibility : Balancing warmth and hand dexterity, suitable for precision repair or storage operations.

Worker safety priority : Utilizing **semi-solid-state battery** technology, it is impact-resistant and does not burn. In industrial work environments where collisions are possible, this is not just a warm glove, but also a safety device with an extremely high level of protection.

III. Heating Vest: Heat Separation, Highly Efficient Far-Infrared Radiation



This is a high-tech heating device that can be perfectly integrated with work clothes.

Extremely low energy efficiency and ultra-long battery life : With only a **2000mAh** battery, its battery life surpasses that of traditional batteries with 5000mAh batteries on the market. This eliminates the need for workers to carry bulky, high-capacity batteries, reducing the burden of physical labor.

High-intensity far-infrared temperature sensing : The heating material has a powerful **far-infrared function** . Only a small heating area is needed (one piece each for the abdomen and back) to quickly generate heat and penetrate deeply through infrared rays, allowing the whole body to maintain a comfortable temperature in the cold winter.

Separate and convenient design : The heating module and clothing are designed **separately** . The heat source and electronic components can be easily removed, making it convenient for workers to frequently wash the outer clothing, ensuring the hygiene and durability of the work clothes.

Industrial-grade battery safety : It also uses **semi-solid-state batteries** , which are resistant to breakdown and do not spontaneously combust, ensuring absolute safety under various extreme working postures or accidental impacts.

四、Heated sleeping bag



Traditional electric sleeping bags typically use thin, weak heating wires that are extremely prone to breakage and failure when bent . Runxintian heated sleeping bags completely solve this problem.

Extreme durability : Utilizing innovative band heating materials, the heating points are located at only 2 points , perfectly avoiding bending points, so that the heating points will not be damaged even after thousands of folds .

Extremely energy-efficient, lightweight and long-lasting : Output power is only **1W- 5W** . With its extremely low energy efficiency, a lightweight **2000mAh** battery provides more than twice the usage time of competing 5000mAh batteries.

Semi-solid battery safety protection : Equipped with a high-safety **semi-solid battery** , it has extremely strong impact resistance. It will not ignite or spontaneously combust when subjected to squeezing or impact, providing the most reliable foot safety protection for grassroots workers.

Imported cotton filling: The sleeping bag is filled with Bio-Degradable insulation cotton made from imported cotton materials , making the sleeping bag lighter. Combined with the Runxintian heating system, a sleeping bag made with only 70 grams of cotton can withstand temperatures as low as -10° C.

V. Outdoor Seating Cushions



This is a high-tech heating medium that also works perfectly with outdoor cushions .

Extremely low energy efficiency and ultra-long battery life : With only a **2000mAh** battery, its battery life surpasses that of traditional outdoor mats on the market equipped with 5000mAh batteries . This eliminates the need for outdoor users to carry bulky, high-capacity batteries, reducing their burden.

High-intensity far-infrared temperature sensing : The heating material has a powerful **far-infrared function** . Only a small heating area is needed (one piece each for the groin and back) to quickly generate heat and penetrate deeply through infrared rays, keeping the whole body at a comfortable temperature in the cold winter.

Separate and convenient design : The heating module and seat cushion are **designed separately** . The heat source and electronic components can be easily removed, facilitating frequent cleaning of the outer layer and ensuring the hygiene and durability of the seat cushion .

Industrial-grade battery safety : It also uses **semi-solid-state batteries** , which are resistant to breakdown and do not spontaneously combust, ensuring absolute safety under various extreme working postures or accidental impacts.

Imported cotton filling: The cushion is filled with Bio-Degradable insulation cotton made from imported cotton materials , combined with the Runxintian heating system, making the seat lighter.

Our core technological advantages

performance indicators	Runxin Tian Energy Belt Products	Traditional electric heating products
------------------------	----------------------------------	---------------------------------------

performance indicators	Runxin Tian Energy Belt Products	Traditional electric heating products
Startup speed	5-second rapid heat conduction	Slow startup
Durable lifespan	1 million bends	Breakdown after 5,000 cycles
Energy consumption	1W - 5W	4W - 10W
Security Level	Semi-solid state battery (shock resistant, no open flame)	Traditional lithium batteries (risk of combustion and explosion upon impact)
Warranty Commitment	1-year warranty	1-year warranty

For worker safety, comfort, and long-term use, please choose Runxintian Energy's belt heating series.

Attachment: Technical Specification Comparison Table

Tender Requirements	Runxin Tian Energy Belt Series (Tender Specifications)	Traditional heating products on the market (competitor reference)	Explanation of competitive advantages
Core technology for heat generation	Globally exclusive bandgap heating system	Traditional metal heating wires or carbon fibers	It conducts heat extremely quickly (5 seconds) and does not cause a drying sensation.
Bend resistance extends lifespan (insoles/gloves)	1,000,000 bends without damage.	5,000 - 10,000 times	Durability increased by 100 times , significantly

Tender Requirements	Runxin Tian Energy Belt Series (Tender Specifications)	Traditional heating products on the market (competitor reference)	Explanation of competitive advantages
			reducing business replacement costs.
Battery safety technology	Semi-solid state batteries : shock and compression resistant, do not produce open flames or spontaneous combustion.	Traditional liquid lithium batteries	To address workplace safety scenarios, eliminate the risk of battery explosions and protect employee safety.
Energy consumption	1W - 5W	4W - 10W	10% of competitors , and battery efficiency is more advanced.
Battery configuration scheme	2000mAh capacity (for ultra-long battery life)	A battery capacity of 5000mAh or higher is needed to maintain battery life.	Reduce the weight of workers' clothing, and improve operational flexibility and efficiency.
Stress-resistant design (gloves)	Designed without heating wire, resistant to frequent pull-out stress.	Heating wires are prone to breakage and failure due to pulling.	Designed specifically for heavy-duty worker use, maintaining

Tender Requirements	Runxin Tian Energy Belt Series (Tender Specifications)	Traditional heating products on the market (competitor reference)	Explanation of competitive advantages
			stable heating performance over a long period.
Maintaining convenience (pseudonym)	Separate module design: The heat source and clothing can be completely detached.	Integrated design, easy to clean and prevent damage.	It facilitates frequent washing of industrial clothing, extending product lifespan.
Health/Comfort Features	High-intensity far-infrared function	Heating by simple thermistor	It has good permeability, is more comfortable to wear, and has a therapeutic warming effect.
Temperature control	Three-stage intelligent temperature control	Single temperature or unstable temperature control	Provides the most precise environmental adaptability
Warranty and Certification	1-year warranty , with CCC and domestic and international safety certifications.	Unknown warranty period, incomplete certification	Meets the stringent quality compliance requirements of enterprise procurement.

Technical Highlights Summary:

Intrinsic safety : By using a semi-solid-state battery and a low-power design, the heated wearable is upgraded from an "electrical product" to a "safety protective device".

Long-lasting and durable : Million-bend resistance technology ensures that the product will not become a "disposable" consumable under harsh working environments, creating a higher return on investment (ROI) for the purchaser.

Lightweight and efficient : It solves the technical obstacle of "having to carry a large battery to keep warm", allowing frontline workers to maintain maximum productivity while keeping warm.
