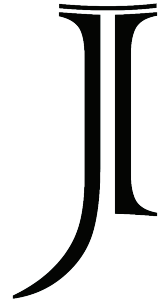


Technical Data Sheet

Kepi 2.0

Air-conditioned Safety Headgear



Jarsh Innovations

CONCEPT

Jarsh Kepi is the world's first air-conditioned headgear for industrial use, built on proprietary cooling technology. The helmet is ultra light and can provide both cooling and heating capabilities (20 °C to 30 °C). It is run on a rechargeable battery.

Our helmet is designed to improve the lives of workers using them, particularly during harsh summer and winter when extreme weather conditions coupled with extreme working environment plays havoc with both psychological and physical condition of the worker, effecting productivity.

The head, being the neural center, is very perceptive to heat. Helmets are known to raise scalp temperature by up to 6 °C leading to thermal exhaustion, higher blood pressure and higher stress. Studies indicate that even a difference of 3 °C to 5 °C can lead to relief from heat exhaustion and prevent diseases arising from high stress.

Jarsh headgears are a remarkable tool of comfort while providing an additional factor of safety.

MODELS OF JARSH KEPI SAFETY HELMETS

The scope of ISO 3873:1977 standard specifies requirement for occupational protective helmets to protect employees' heads from falling objects in building and construction, quarrying, shipbuilding, forestry, and other occupations with similar hazards. These requirements specify the construction and materials of the helmet shell and head harness, mechanical strength of the shell and finish of the helmet.

In compliance with the standards objectives to specify protective helmets that are worn in a variety of occupations, Jarsh Kepi safety helmets are classified into two models:

MODEL	PURPOSE
Kepi 2.0 E	Helmets intended for Senior Level Officers and Executives
Kepi 2.0 S	Helmets intended for Heavy Duty Workers and Skilled Technicians

DESCRIPTION

Kepi 2.0 is light weight and compact giving the users safety, comfort and excellent adaptive cooling experience.

The helmet is divided in to four parts: Shell, Visor, Cooling system and Power system.

The **Shell and the Suspension System** of the helmet are together called a harness. The shell provides the impact protection by deflecting, whilst the harness absorbs the shock and load. The transmission of force is dissipated through the shell, harness by stretching and directs it down through the body to the ground. The four point harness provides the cushioning, spreading the load evenly over the protected area. The polyethylene harness maximizes the surface area contact with the wearer's head and enhances stability/ security of the safety helmet. This economical harness system is readily washable, easily dried and reinserted back into the helmet. The area between the shell and harness is the shock absorption zone and should not be treated as a storage location.

The **Visor** provides eye safety and is suitable for metal cutting operation, spray painting, carpentry, petroleum industry, chemical industry, grinding, electric welding, iron and steel industry, etc. It is made of Poly Urethane material making it flexible and unbreakable.

The **Cooling System** is mainly comprised of heat sink, cold sink, cooling component, fan and several other components. The components interact to keep the temperature of the helmet controlled in order not to exceed the limits imposed by quality, safety, performance and/or efficiency and simultaneously giving the best cooling experience to the user. The state of the art air-distribution channel ensures uniform feel over the head. It has several advantages including greater power/frame size ratio, lower noise level and higher efficiency. Hence, our helmets can be used in totally enclosed environment as well.

Different parts of the body react differently to temperatures. We don't sweat equally over the surface of the body. Eyes and lips are known to react faster to heat exposure. The system is designed to focus on areas like scalp, eyes and ears to better cooling experience.

The **Power System** is comprised of circuitry boards, switches and wires and the battery pack. The battery is rechargeable and mounted on-board the helmet. Once charged, it has a life of 2 hours. The switches help the user to navigate between heating mode and cooling mode as per the requirement.

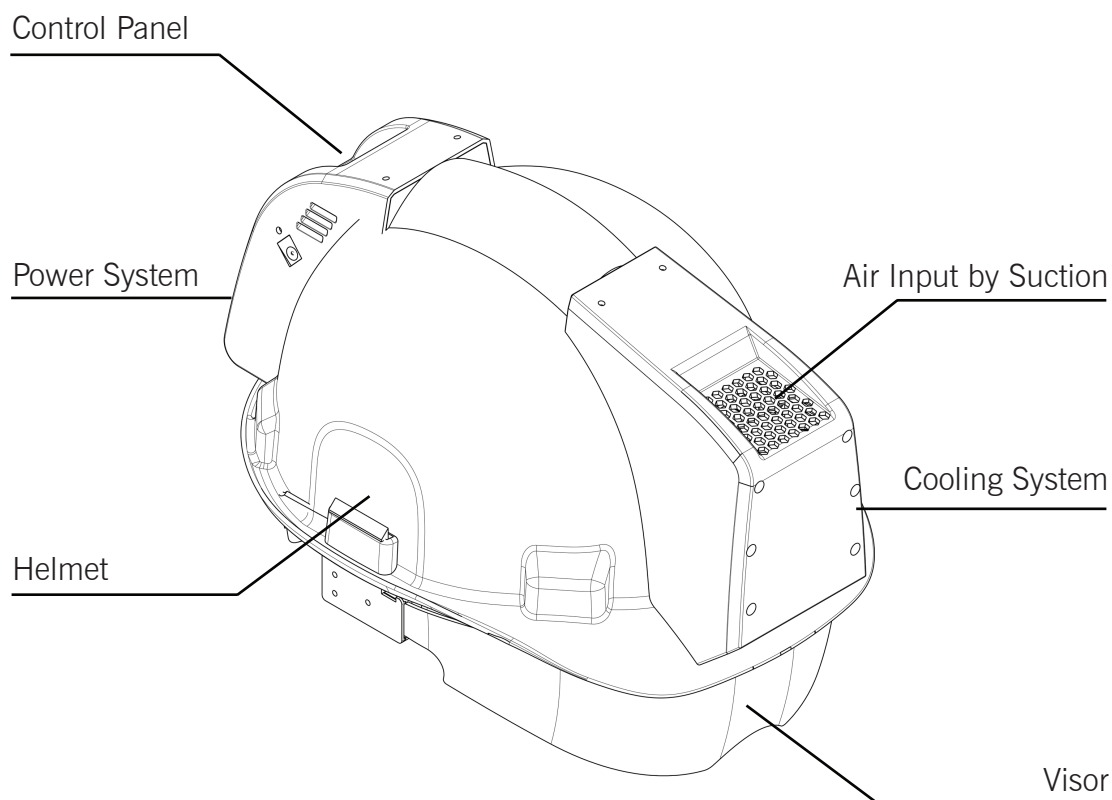


Fig. A - General Design - Kepi 2.0

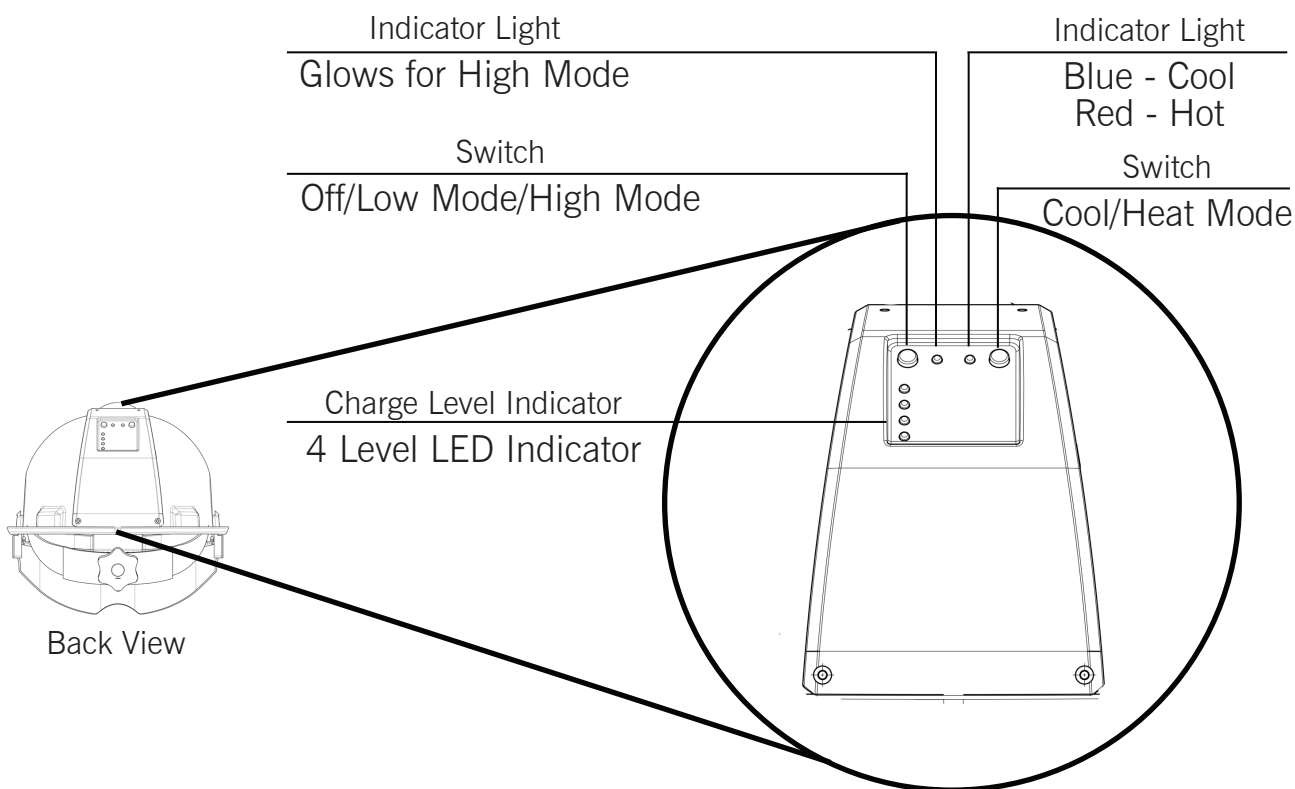


Fig. B - Control Panel - Kepi 2.0

A **Gang Charger** can be used to charge multiple Kepi S 2.0 models in parallel. The Gang Charger has a single input with 220 V AC 15 A socket requirement. Up to 30 pieces can be charged with a single Gang Charger.

TECHNICAL SPECIFICATIONS

SHELL	Shell Material	Injection moulded ABS (plastic)
	Venting	Unvented
	Harness Cradle	25 mm nylon webbing 4 point
	Weight	420 g
	Harness Segments	Injection moulded HDPE (High Density Polyethylene)
	Adjustment Range	50 - 66 cm
	Harness Headband	Injection moulded LDPE (Low Density polyethylene)
	Harness Sweatband	Foam backed Terry Towelling
	Shell Colour	White
	Size	Medium (520 mm to 580 mm adjustable)

VISOR	Size	8" x 15.5"
	Thickness	1.5 mm
	UV Protection	0.9999
	Colour	Transparent/Tinted
	Material	Poly Urethane (PU)
	Weight	45 g

COOLING SYSTEM	Size	2 kg or 0.002 ton cooling capacity
	Fan	25 CFM air flow
	Weight	150 g

POWER SYSTEM		Kept 2.0 E	Kept 2.0 S
	Type	On-board	Body Mounted
	Bag Dimension	NA	28 inches to 40 inches adjustable
	Bag Colour	NA	Black
	Bag Material	NA	Anti-Allergy Cloth
	Battery	3 cells	15 cells
	Cell Description	Samsung 11.1 V 2600 mAh	Samsung 11.1 V 13000 mAh
	Charging Time	1 hour	4 hours
	Battery Charger/ Charging System	Individual Charger	Gang Charger
	No. of Pcs Charged at a Time in the Charger	1 pc	Up to 10 pcs
	Power Consumption per Single Full Charge	0.03 kWh/pc	0.16 kWh/pc
	Operating Voltage	9 to 12.6 V	9 to 12.6 V
	Avg. Operating Current	2 A	2 A
	Peak Current	3.5 A	3.5 A
	Wire Length	NA	90 cm
Weight	160 g	800 g	

Operating Temperature: -10 °C to 50 °C

APPLICATIONS - KEPI 2.0 E

- Kepi 2.0 E is the premium model suitable for senior level officials.
- It is designed keeping in mind the dynamic personalities and style of Executives.
- Suitable for general use in all type of industries

APPLICATIONS - KEPI 2.0 S

- Kepi 2.0 S is the heavy duty model suitable for skilled workers and technicians.
- It is designed for the people who spend long hours on the shop floor or outdoors.
- Suitable for general use in all type of industries

APPROVAL INFORMATION

Jarsh Kepi 2.0 is built on ISI certified helmet and is BIS compliant for general industrial use.

CORPORATE BADGING

Customer Logo Provision: 1.5" x 2.3"

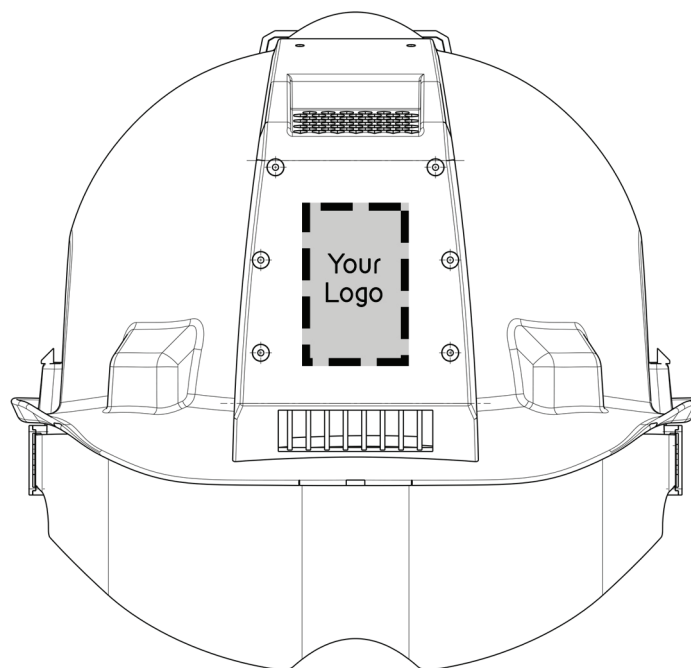


Fig. C - Front View - Kepi 2.0

PACKAGING

Kepi 2.0 E: 1.1 kg/helmet

Kepi 2.0 S: 2 kg/helmet

Carton Size: 30 cm x 23.5 cm x 22 cm - Same size for both models

Master Carton Size: L X B X H = 63 cm x 50 cm x 46 cm = 8 units

MAINTENANCE/CLEANING

The safety helmet should be kept in good condition and cleaned regularly using warm water only. No detergent or soap should be used. A brush can be used to remove stubborn marks from the shell. Prior to washing, the harness should be removed from the shell to facilitate cleaning. The use of solvents, very hot water or harsh abrasives is not recommended.

Worn or damaged headgear parts should be replaced immediately and damaged shells (splits, cracks, dents or excessive abrasion, discolouration or weathering of the shell surface) should be discarded.

LIFETIME

The Jarsh Kepi 2.0 headgear has an average in-use life of up to 3 years. Excessive wear and tear can considerably reduce the lifespan of the product.

Based upon industrial field tests, in general terms, an industrial safety helmet should be replaced every three years from date of issue, and the harness should be replaced every 2 years. Harsh conditions and/or rough usage dictate that a helmet may be replaced sooner.

STORAGE

Storage is part of ongoing care and maintenance but is so often overlooked. Care should be taken to ensure that your safety helmet, when not in use, is stored appropriately and not exposed to possible damage.

It can be stored and transported in their original cartons at ambient temperature (0 °C to +30 °C) in dry conditions. Any direct or indirect spillage of corrosive chemicals should be avoided. Do not store in direct/high heat or sunlight as this

may distort the shell.

Storage near inflammable substances should be avoided.

The Gang charger has to be installed in a dry and neat place and should not be exposed to chemicals or water directly or indirectly for safe operation. Operation near inflammable substances should be avoided. Any direct or indirect spillage of corrosive chemicals or water should be avoided while the charger is in use.

DISPOSAL

Most components of this assemble can be recycled. Recycle symbols are present on both the shell and harness assemblies. If the product is to be disposed of, it should be disassembled and disposed of as solid waste. Please see local authority regulations for disposal advice and locations.

Kepi E 2.0 contains a Li-ion battery and should NOT be thrown into fire or disposed of by incineration. E-Waste disposal rules are to be followed as per local laws and regulations for safe disposal of the product.