//ANGEL React

Smart Safety Solutions for Lone Workers

Ha, ha, h

alive, sta

We use technology and our experience to improve the world of workplace safety. People are our focus.

Ah, ha

sta

a, stayin

ayin alive

a, ha, ha,

ayin alive

Gets help when you can't.

Our goal is to ensure maximum safety through the right choice of emergency call systems. In work situations with higher risks or when working alone, having the appropriate emergency solutions can save lives.

We understand that every company has its unique approach to dealing with emergencies. Our emergency call system for saving lone workers is just as individualized. Let's find together the most suitable solutions for you and your company!

Lone Workers and emergency call solutions

Lone working is standard in many companies. Technologies are evolving, thus many processes are being automated and rationalized. Working alone enables greater efficiency and flexibility. But it also harbors potential dangers. [1]

You might now ask yourself: What are examples of lone working?
We've collected some for you. [2]

- Maintenance and servicing in workplaces, buildings, and outdoor
- Work in the vicinity of parts under voltage
- Working with heights

Accidents are a potential danger, especially when working alone. In an emergency, necessary assistance must be provided as fast as possible. [3]

A solution for providing help as fast as possible is an emergency call system, such as ANGEL React. The Genius automatically detects falls and motionlessness, and in combination with the ANGEL React Shirt system, also detects electrical accidents. The Shirt and Clip systems also allow the injured to manually trigger the alarm. In all cases, the alarm will allow for necessary aid to reach the lone worker in a reasonable time.

The following alarm types are available to emergency call systems:
Manual alarm
- SOS button

Automated alarm
- Motionlessness alarm
- Fall alarm
- Electrical accident alarm
- Alarm timer

Summary
Emergency call systems like ANGEL React can provide help quickly when working alone. Using those solutions minimizes the risk of an accident. Check out our emergency solutions on the following pages and find out how they fit your company's needs.

[1][2] Bundesministerium für Arbeit (BMA) (2020): Arbeitsplätze. Alleinarbeitsplätze (AAP) - Sicherheitstechnische Grundlagen. Bundesministerium für Arbeit (BMA). Available at: URL: https://www.arbeitsinspektion.gv.at/Zentrale_Dokumente/Arbeitsstaetten-_-plaetze/Arbeitsplaetze/alleinarbeit_b_ua.pdf (Accessed on: 28 March 2024). p. 5, p. 20-34

[3] Bundesministerium für Arbeit (BMA) (2021): Arbeitsplätze. Alleinarbeitsplätze (AAP) - Beispielsammlung. Bundesministerium für Arbeit (BMA). Available at: URL: https://www.arbeitsinspektion.gv.at/Zentrale_Dokumente/Arbeitsstaetten-_-plaetze/Arbeitsplaetze/alleinarbeit_beispielsammlung_ua.pdf (Accessed on: 28 March 2024). p. 20-34

Our products: The Shirt and Clip systems save lone workers through the combination of app solution and dead man's switch. It not only detects motionlessness, fall accidents, and electrical accidents but also informs emergency contacts facilitating better help coordination. The Location Beacon provides precise location information for large floor spaces and can also service areas which lack GPS signal (e.g. cellars, tunnels, buildings). The Watchdog can trigger an emergency-off circuit.
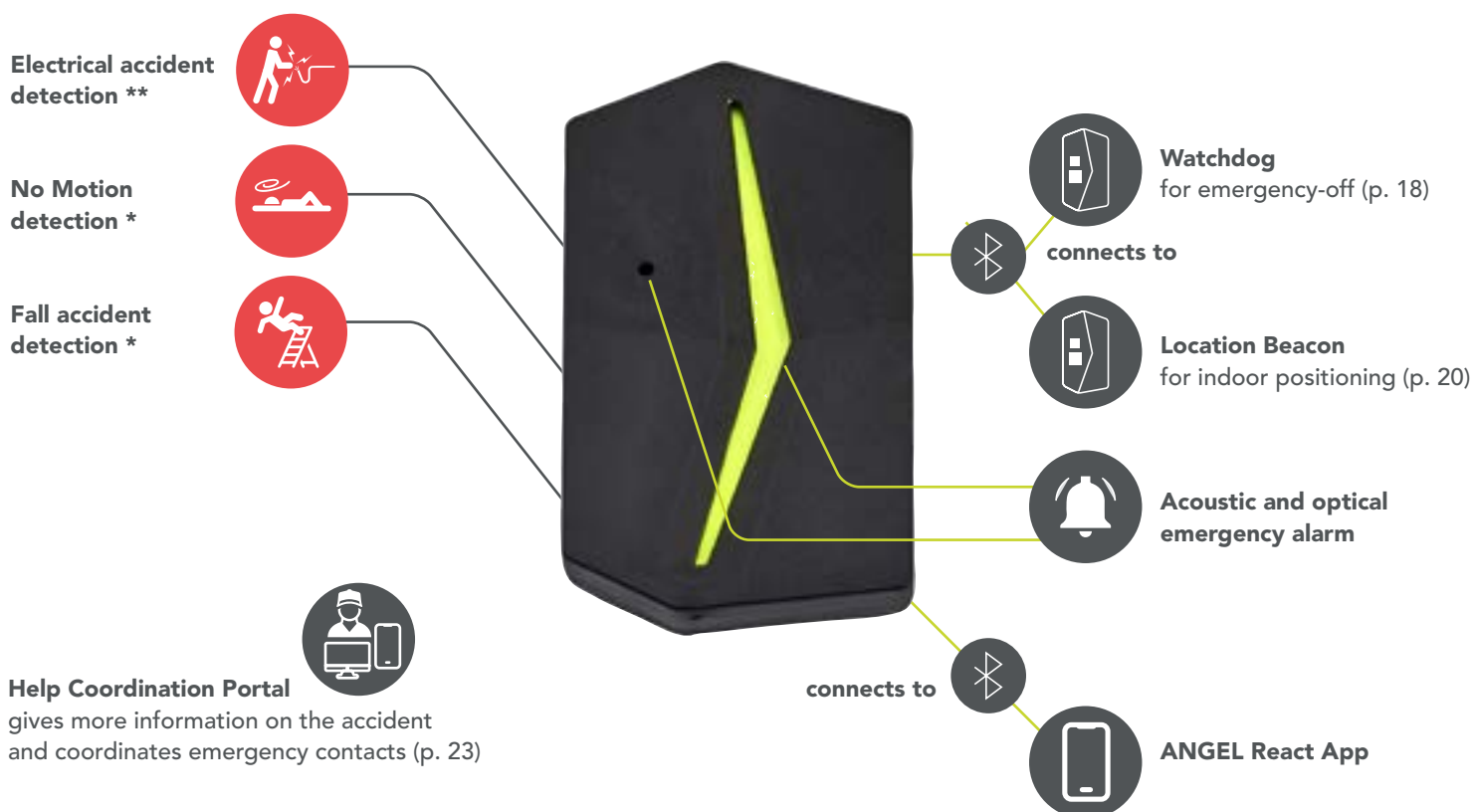
Gets help when you can't.

These are our products that make your day-to-day work safer.

ANGEL React Genius

The Genius is the brain of the ANGEL React systems. It clicks into the Shirt cradle or the clip and communicates with the user over optical and acoustic signals. The Genius detects motionlessness and fall accidents. In combination with an intelligent Shirt, it recognizes electrical accidents.

Electrical accident detection **

No Motion detection *

Fall accident detection *

Help Coordination Portal gives more information on the accident and coordinates emergency contacts (p. 23)

Watchdog for emergency-off (p. 18)

connects to

Location Beacon for indoor positioning (p. 20)

Acoustic and optical emergency alarm

connects to

ANGEL React App

ANGEL React helps you in critical work situations and can save lives. However, the ANGEL React system is not personal safety equipment as defined in DIN VDE V 0825-1 or -11 or BS 8484 and not personal protective equipment as defined in regulation (EU) 2016/425.

To ensure the highest levels of workplace safety, always observe the national safety standards and safety regulations. We cannot guarantee that the product will detect every emergency. You must not, under any circumstances, expose yourself to a higher level of risk by relying on the ANGEL React System. ANGEL React is not designed or intended for diagnosing, preventing, monitoring, or treating diseases, injuries, or other medical purposes. ANGEL React is not a medical device as defined in the Regulation (EU) 2017/745 of 05/25/2017.

Unique accident detection

Help in emergencies: ANGEL React recognizes motionlessness, fall accidents and electrical accidents and automatically calls for help — a comprehensive companion for lone working. The Genius is the central element of the ANGEL React emergency call systems. It recognizes emergencies and sets the emergency call chain in motion at lightning speed if required.
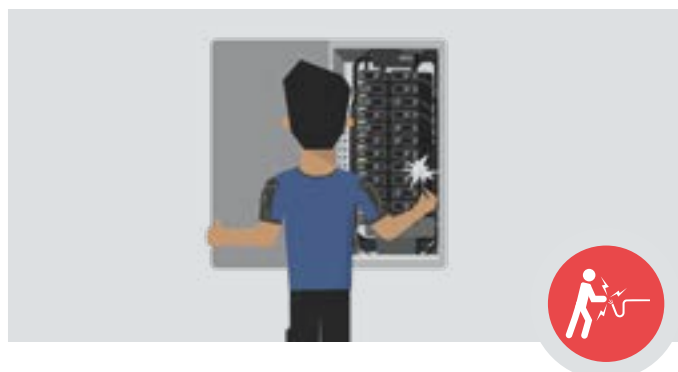

Case 1: No Motion *
If a person is motionless while performing their daily work, this may indicate an emergency. The ANGEL React systems respond to motionlessness with a pre-alarm. The user can abort the pre-alarm with a slight movement. If the person remains motionless, the system assumes an emergency and sets the emergency call chain in motion. The emergency contacts can then assist quickly.

Case 2: Fall accident *
Falls represent a common cause of accidents while at work. If the system detects a fall accident, followed by a short period of motionlessness, it triggers the alarm and calls for help.

* The Shirt and Clip systems detect motionlessness and fall accidents.

** Electrical accidents can only be detected by the Shirt system.

Case 3: Electrical accident **
Working with electrical installations can bear the danger of touching live parts. An electrical accident might be a result. The person on the picture is working on an electrical cabinet. The Person inadvertently touched a conductive part under live voltage with one hand and the other touching the metal front door. As a result, a current flows from one hand to the other, through the body and across the heart, and causes an electrical shock. The ANGEL React Shirt system detects an accident by measuring the voltage drop between the upper arms. It then initiates an automated alarm.

ANGEL React Clip system

The ANGEL React Clip system combines user-friendliness with high safety at work. The Clip Genius is central to the system: it detects an emergency and instantly sets the emergency call chain in motion if needed.

Central control unit: the Clip Genius ①

② **Ideal holder – the clip**

Easy to attach

③

Smartphone App
A smartphone connects to the Clip Genius via Bluetooth, showing the system's status and offering the possibility for configuration (e.g., emergency contacts). If an emergency is detected, the smartphone sends the alarm via our backend to the emergency contacts.

The Clip system at a glance:

- Quick to install and easy to use
- Reliable in emergencies
- Detects motionlessness and fall accidents
- Enables effective and fast help
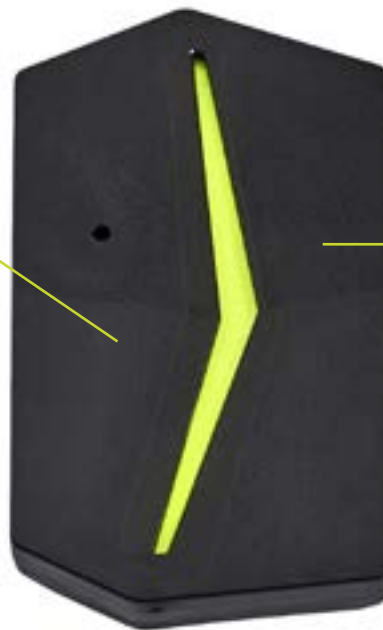- Can reduce the accident severity by using Watchdog

ANGEL React Shirt system

The ANGEL React Shirt system detects electrical accidents, motionlessness and fall accidents, and automatically summons assistance, making it a trusty companion throughout the working day. An unbeatable trio that brings many benefits.

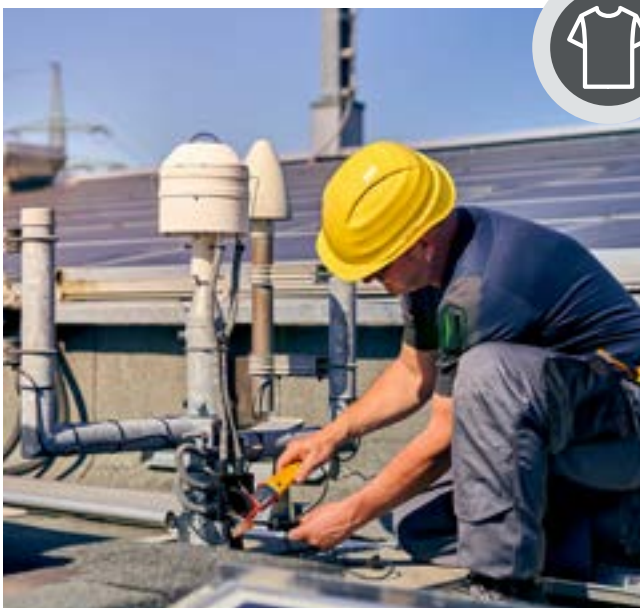**Central control unit:** the Shirt Genius **①**

② Detects **electrical accidents, motionlessness and fall accidents** at work using sensors of the ANGEL React T-Shirt

③ Smartphone App
A smartphone connects to the Shirt Genius via Bluetooth, showing the system's status and offering the possibility for configuration (e.g., emergency contacts). If an emergency is detected, the smartphone sends the alarm via our backend to the emergency contacts.

The Shirt system at a glance:

- Quick to install and easy to use
- Reliable in emergencies
- Detects electrical accidents, motionlessness, and also fall accidents
- Can reduce the severity of an accident in combination with the Watchdog
- Intelligent T-Shirt available in different versions

ANGEL React T-Shirt

The intelligent T-Shirt combines comfortable workwear with emergency call systems. It's available in your corporate colors and can be printed to your specifications with a company logo and slogan.
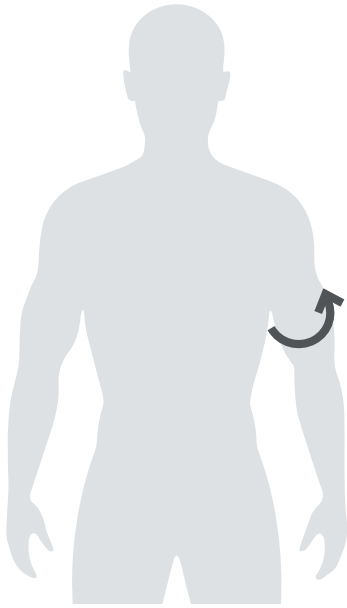
Individual branding and different designs

ANGEL React T-Shirt ②

Central control unit: the Shirt Genius ①

Fitted holder – the cradle

Conductive materials and electrodes

Comfortable against the skin

Smartphone App ③

Conductive materials and electrodes
Electrodes in the cuffs measure the voltage drop between the upper arms, allowing current flow to be detected. Elastane in the cuffs provides close skin contact with the sensors connected to the Shirt Genius by a textile cable.

Individual branding
Choose from the following standard colors:
- Cobalt Blue
- Yellow
- Navy Blue
- Forest Green
- Black
- Fiery Red

Order Assistance

How do you find the right size for you?

It is essential to take accurate measurements to ensure the items fit correctly. The upper arm, in particular, must be measured accurately to enable reliable detection.

Step 1
Take a measuring tape and let your less dominant arm hang by your side. Relax your upper arm and measure its circumference at its widest point (the biceps). Make a note of the size.

Step 2
Measure your chest circumference and consult the table on the right side to find the correct shirt size. For in-between sizes, we recommend the smaller size.
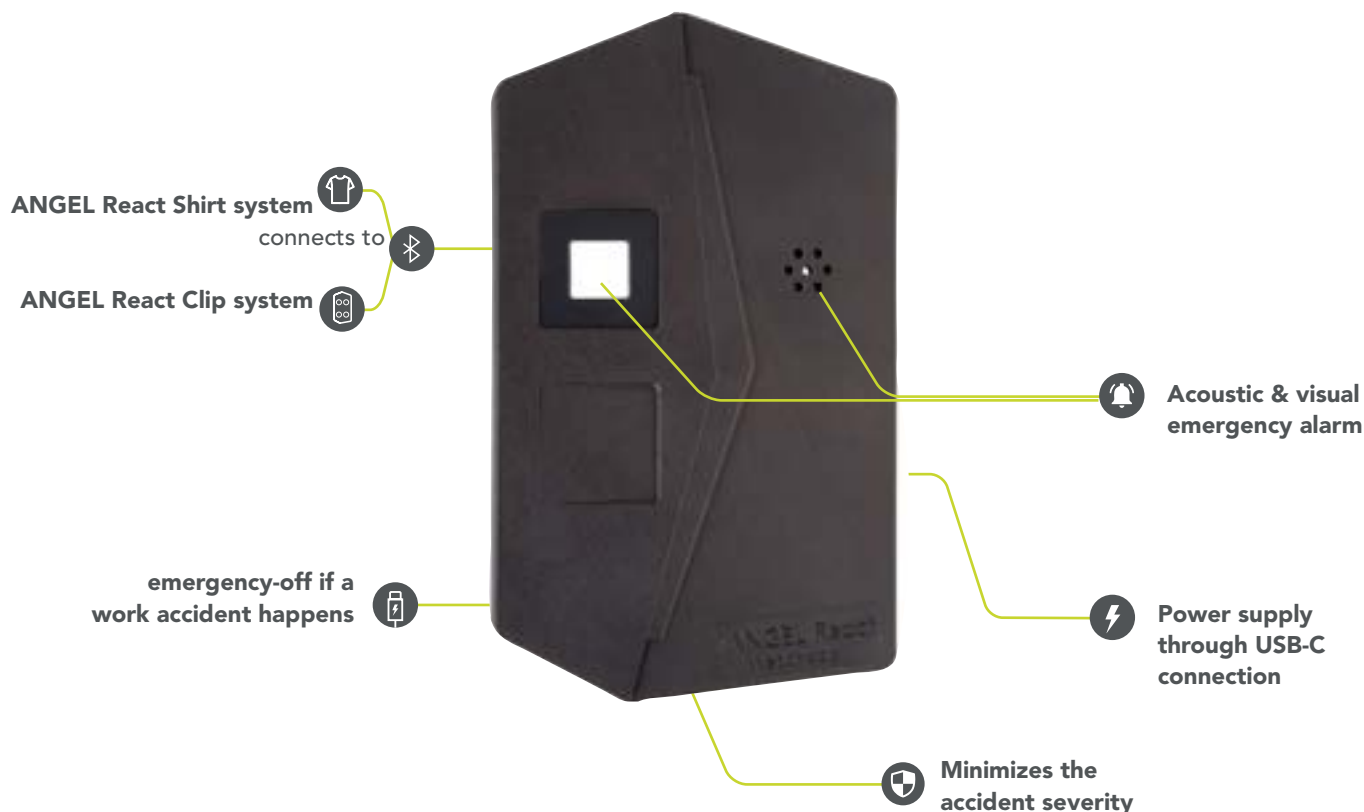
Step 3
When ordering, combine your clothing size with the bicep circumference, e.g., L 27 cm.

Size	Chest measurement	Size
XS	84–90 cm	165–170 cm
S	90–96 cm	170–175 cm
M	96–102 cm	175–180 cm
L	102–108 cm	180–185 cm
XL	108–114 cm	185–188 cm
XXL	114–120 cm	188–191 cm
3XL	120–126 cm	191–194 cm
4XL	126–132 cm	194–197 cm
5XL	132–138 cm	197–200 cm
6XL	138–144 cm	200–203 cm

ANGEL React Watchdog

The Watchdog is an add-on for the ANGEL React Shirt and Clip systems that responds to workplace accidents within milliseconds. In the event of an electrical accident, motionlessness or fall accident, it trips the integrated potential free contact and can trigger an emergency-off circuit.

ANGEL React Shirt system

connects to

ANGEL React Clip system

Acoustic & visual emergency alarm

emergency-off if a work accident happens

Power supply through USB-C connection
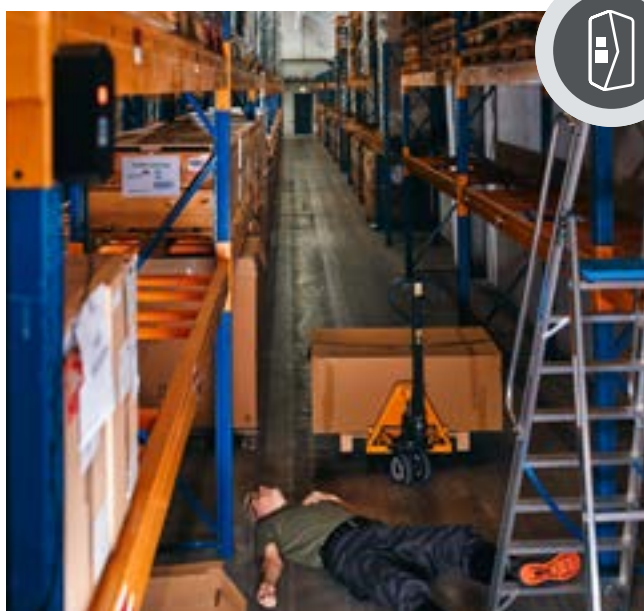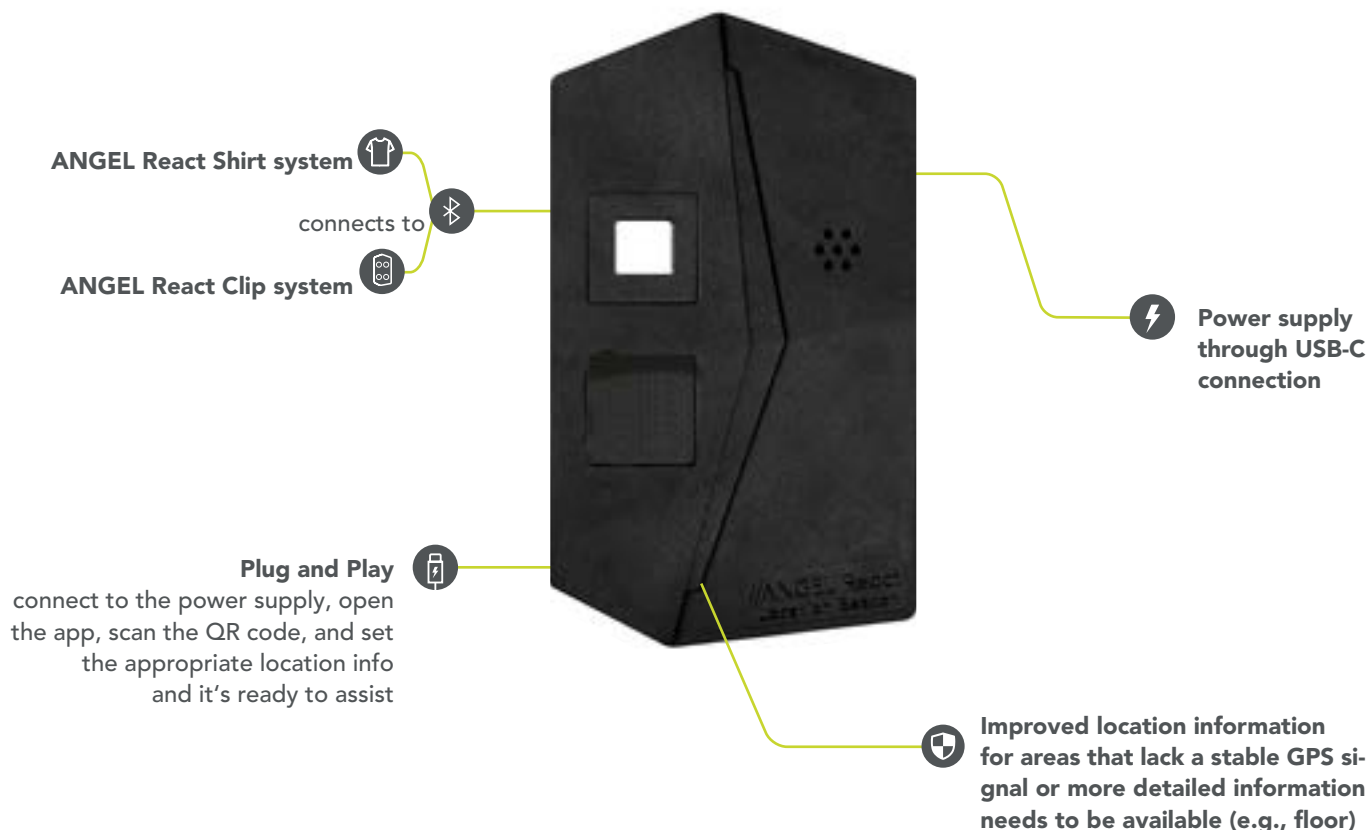
Minimizes the accident severity

The Watchdog is essential to reduce accident severity, where milliseconds count. It's an accessory for the ANGEL React Shirt and Clip systems that respond to workplace accidents immediately. In an emergency, the Genius sends a signal to the Watchdog, which can trigger an emergency-off circuit. The potential free contact could also be integrated into an automation system or start a sirene.

ANGEL React Location Beacon

The Location Beacon gives location information for areas that lack a stable GPS signal. It connects seamlessly with the Shirt and Clip Genius, allowing you to find the injured in cellars, tunnels, or buildings faster.

ANGEL React Shirt system

connects to

ANGEL React Clip system

Power supply through USB-C connection

Plug and Play
connect to the power supply, open the app, scan the QR code, and set the appropriate location info and it's ready to assist

Improved location information for areas that lack a stable GPS signal or more detailed information needs to be available (e.g., floor)

Location information is crucial in case of an accident. ANGEL React systems for accident detection can be combined with an Indoor Positioning System to provide this. Using the Location Beacon or Watchdog, the system gives location information for areas that lack a stable GPS signal (e.g., cellars, tunnels, buildings). To locate injured better and faster it can provide additional location information. Our team of experts is happy to consult you on the location planning of the Indoor Positioning System.
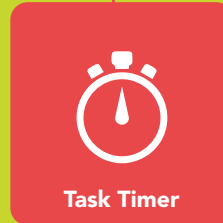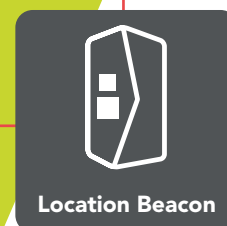
Automated accident detection

Injured are often unable to respond appropriately or even cannot respond at all in an emergency. Thanks to the sophisticated, automated emergency chain, the ANGEL React Shirt and Clip systems ensure that help is on hand quickly.

Electrical accident

No Motion

Fall accident

SOS
Manual alarm

Task Timer

A Task Timer can provide backup support for high-risk work. If the timer is not acknowledged after the set period has elapsed, the rescue chain will be initiated automatically.

Location Beacon

The Location Beacon improves positioning information for areas that lack a stable GPS signal or if more detailed information needs to be available (e.g., floor)
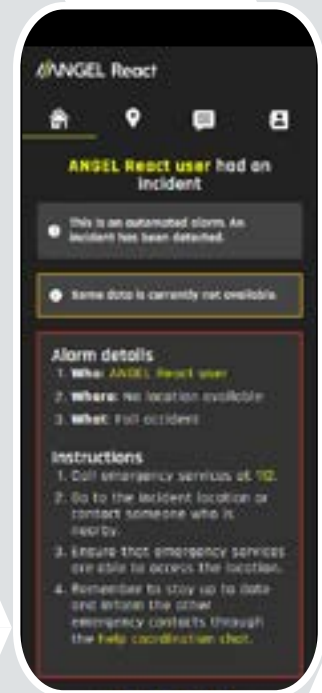
The emergency contacts organize help.

Emergency Contact(s)

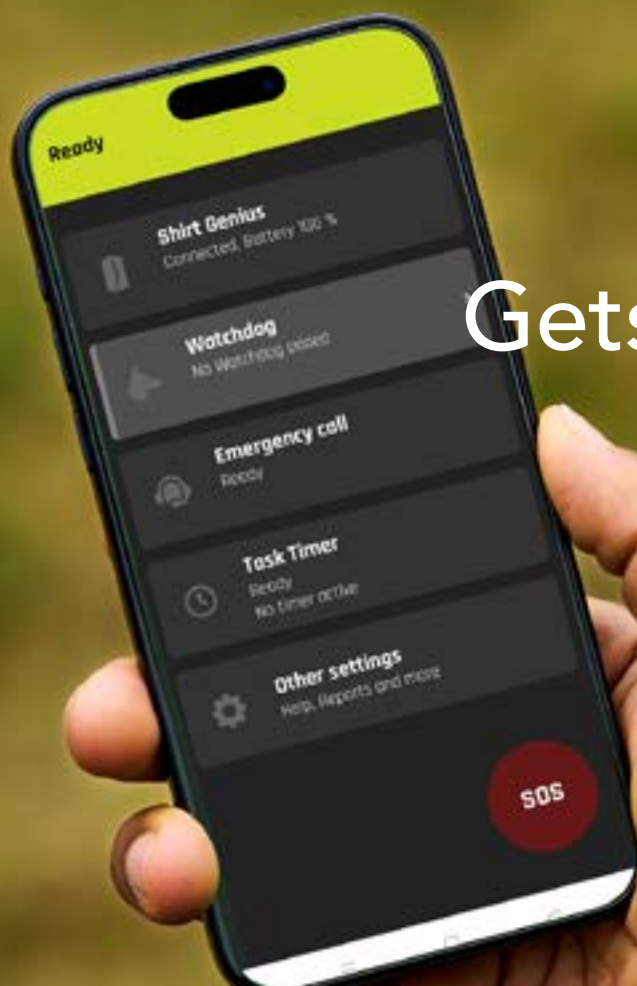Text message, e-mail, and automated voice calls are sent to the saved emergency contacts.

Our Help Coordination Portal assists help in case of emergency and enables coordination between emergency contacts. The emergency contacts receive an alert via e-mail, automated call, and text message. A link guides the helpers directly to the Help Coordination Portal. It's accessible via smartphone, notebook, or any PC. The chat function allows participants to exchange the status and needed actions. It also shows related system events and information that can help in this context (e.g., location information). The contact page shows the contact details of all active emergency contacts and enables them to interact directly with each other.

Watchdog

The Watchdog responds to workplace accidents immediately. In an emergency, the Genius sends a signal to the Watchdog, which can trigger an emergency-off circuit.

Gets help when you can't.

Our Services: We are as flexible as our systems. It would be best if you had support in implementing the new emergency call solutions? Or want the system to match your corporate fashion? We offer a compact selection of valuable services to simplify your daily work. Your wish is not on the list? Don't hesitate to let us know. We will be happy to advise you on project options. Our DNA is innovation.

tailor-made solutions

Consultation for Indoor Positioning
Do you need support on where to locate your ANGEL React Location Beacons within your facilities for the best coverage? No worries, we've got you covered! Our team can give on-site or virtual guidance for best positioning.

Pre-Registration service for easy start-up
You don't want to do the registration by yourself? Let us know, and we'll pre-register all devices for you.

Motivation Packages for a better safety culture
With our motivation packages, you can increase the usage rate drastically over time.

Statistics for a better understanding
We provide anonymized usage statistics and number of reported accidents for teams with more than five systems.

Support for offline scenarios
In some areas or facilities, sending an alarm directly is impossible because they lack good mobile radio coverage and internet connectivity. We can provide different solutions for such offline scenarios.

Customized App and Help Coordination Portal solutions
If your enterprise has unique needs, such as an interface to an internalt alarm system or user management portal, get in touch with us. Let's see what we can do.

Customized Workwear and Systems for company needs
Your company has rules and limitations for corporate workwear and devices? We're the right partner to support your needs. Our team of experts will support to develop your own solutions.

Gets help when you can't.

Try&Buy: Test our systems

Don't buy a pig in a poke. We want to convince you of our products. Try the ANGEL React systems, the Watchdog, or Location Beacon for six weeks. And if, in the end, our product passes the everyday test, the test fee will be credited to you from the purchase price. Don't miss this chance to get to know our systems!
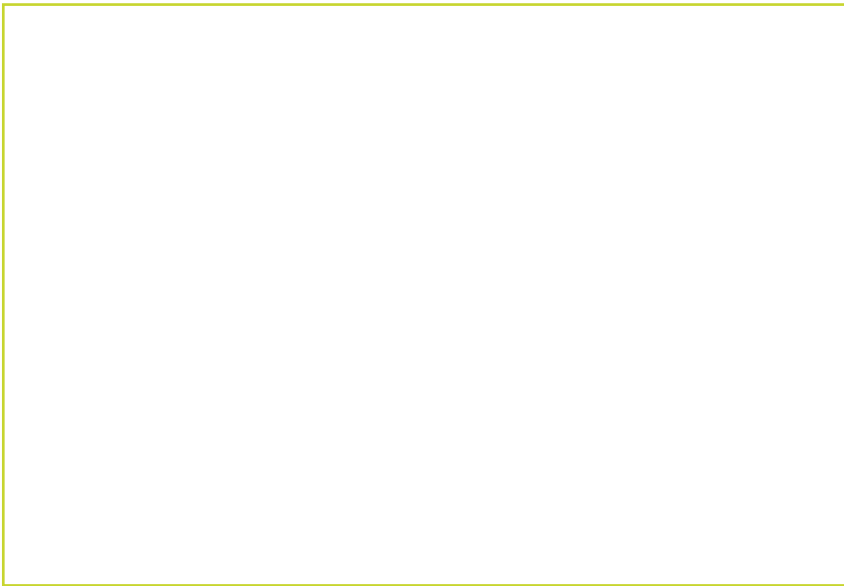
Systems in comparison

Feature	ANGEL React Shirt system	ANGEL React Clip system
Lone working	√	√
Electrical accident	√	X
No Motion	√	√
Fall accident	√	√
Location Beacon connectivity	√	√
Watchdog connectivity	√	√

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