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safe-t PRODUCTS

Targeting Safety

Making Mining a Safer Place Through

Design & Manufacturing.

FEATURED ITEMS CATALOGUE

AUSTRALIAN Designed & Manufactured

CONTENTS

1 SAFETY INTEGRITY LEVEL (SIL) RATING

6 EMERGENCY STOP DEVICES

6 SAFE-T-PULL
9 SAFE-T-TRIP-WEIGHT
11 SAFE-T-PULL SYSTEM VS BALANCED SYSTEM
12 SAFE-T-TILT
16 PULL-SAFE
17 EMERGENCY-STOP BUTTON, 22MM BUTTON
19 EMERGENCY-STOP BUTTON, IDENTIFACTION, SHROUD & DUST BOOT 22MM BUTTON
21 MINI-EMERGENCY-STOP BOX
23 EMERGENCY-STOP BUTTON, 30MM BUTTON

24 PROTECTIVE STOP DEVICES

24 SAFE-T-RIP
26 SAFE-T-DRIFT
28 SAFE-T-LIMIT
29 SAFE-T-LIMIT ARMS & ROLLERS

31 PUSH-BUTTON-STATION

31 PUSH-BUTON-STATION, 22MM BUTTON
33 MINI-PUSH-BUTON-STATION, 22MM BUTTON

35 ALTERNATIVES/OTHER PRODUCTS

35 SAFE-T-REPLACE, MULTI REPLACE PLATE
37 SAFE-T-STOP-PAUSE-START
38 ROPE GUIDE TRIBOLOGY
39 SAFE-T-ALARM
40 SAFE-T-CONDUIT
41 JUNCTION-BOX
42 SAFE-T-SIGNS
44 SAFE-T-LANYARD

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WHAT WE ARE DOING

SAFETY INTEGRITY LEVEL (SIL) RATING

UNDERGOING COMPREHENSIVE TESTING AND ENSURING COMPLIANCE

Our devices are undergoing testing to meet the required standards for safety systems that demand a high level of reliability. These systems require a SIL rating, and the devices used in these systems must meet specific failure rate criteria as part of the overall SIL calculation.

exida

CERTIFIED SIL 3 CAPABLE

To determine the failure rate, the device must undergo comprehensive testing to ensure compliance through a full Failure Modes and Effects Analysis (FMEA). Most devices on the market have not undergone actual testing but have been reviewed to state their compliance should they be subjected to testing. Safe-T-Products made the deliberate choice to follow a comprehensive independent testing regime to attain full compliance. While it may be a lengthy process, the benefits will far surpass the time and effort invested.

Obtained a **SIL 3 Capable** certification through real-life testing conducted by an independent certification authority will offer certainty and confidence in Safe-T-Products' devices among safety-driven industries.



High Impact PC/PBT UV Stable Flame Retardant Plastic



2mm 316 Electro Polished Stainless Steel



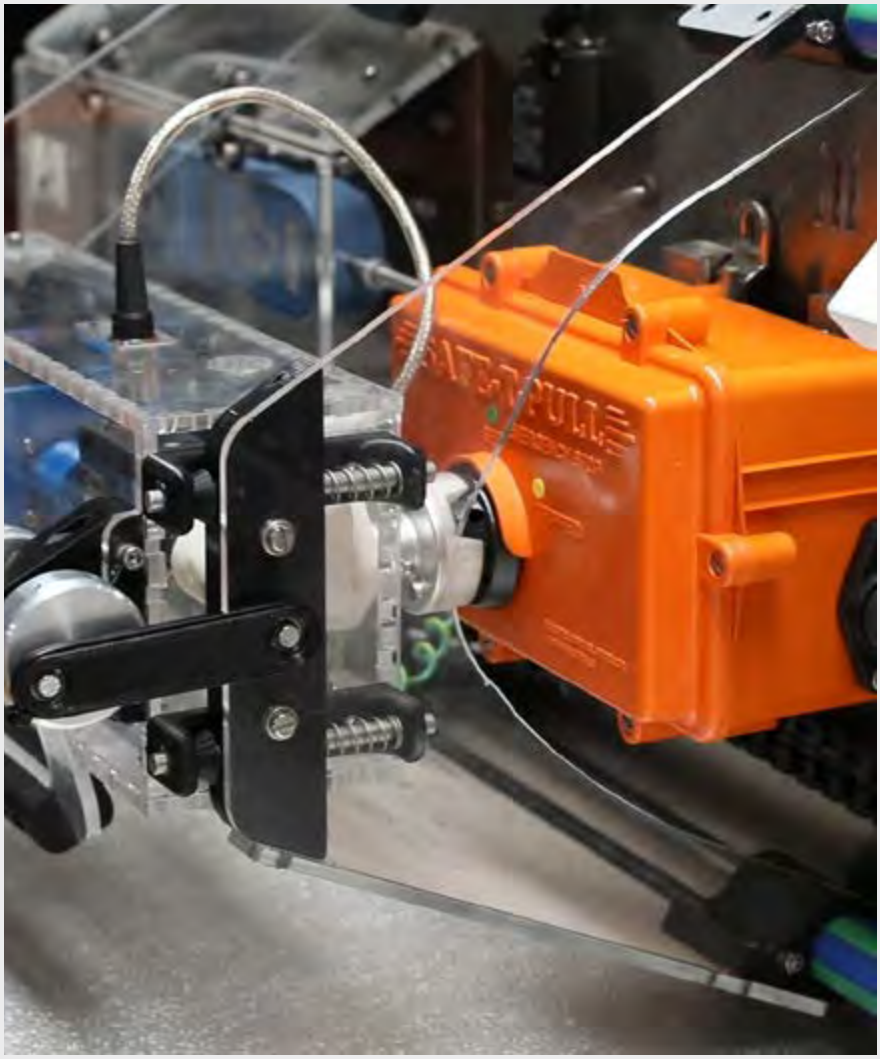
3mm Powder Coated Aluminum

BENEFIT OF FULLY INDEPENDENT TESTING

1. **Independent Verification:** Engaging third-party testing facilities for device durability assessments and partnering with functional safety auditing companies to conduct a comprehensive device FMEA offers an impartial and unbiased evaluation of the device's safety and performance.
2. **Certification Authority:** Securing a well-documented durability safety test certification that can be relied upon and will be recognised by relevant certification authorities and regulatory bodies is crucial for trust in the testing process.
3. **Safety Integrity Level (SIL):** SIL serves as a measure for assessing the performance of safety systems employed across diverse industries. Having a fully endorsed performance level applicable to any SIL calculation ensures that Safe-T-Products' devices are well-suited for a broad range of safety-critical applications.
4. **Real-Life Certification:** The certification is not merely an assumption but a concrete, real-life documented safety test certification, offering tangible evidence of the devices' safety and reliability.
5. **Industry Recognition:** With the successful completion of rigorous independent testing, industries with stringent safety requirements, such as manufacturing, process control, and others, can have certainty and confidence in Safe-T-Products' pull cord devices meeting their specific requirements.



ROADMAP TO ATTAIN SIL RATING



Safe-T-Products initiated its journey towards achieving SIL certification in mid-2015. While the process may have had earlier origins, a pivotal moment occurred in July 2015 when Cris Schulze, representing TUVRheinland Japan, presented an Advanced Seminar on the Functional Safety Standard ISO 13849 in our manufacturing facility in Malaga, Western Australia.

The strategic approach was structured as follows:

1. Clarify the definition of a single "operation."
2. Develop an Automation Tester, known as STP-AMDT, capable of conducting the mechanical cycle durability test on three samples of our Safe-T-Pull pull cord devices. This test would subject each device to 6050 operations, record the applied Newton-meters (Nm) of force and assess the device's functionality post-endurance testing.

This plan was a significant step toward ensuring the certification of our products for SIL, with a particular emphasis on thorough testing and compliance with operational requirements and safety standards.

MILESTONE - TESTING OF ELECTRICAL COMPONENT (COMPLETED)

SIL compliance requires electrical components with direct opening action to meet the standards set by IEC 60947-5-1. Safe-T-Products collaborated with its microswitch supplier to design a custom direct opening microswitch capable of meeting these stringent requirements. These requirements include rigorous testing, such as current tests under operation and fault current tests under operation, among others. The Safe-T-Products direct opening microswitch successfully passed all required tests, ensuring compliance and reliability.





MILESTONE - MECHANICAL CYCLE DURABILITY TEST - (COMPLETED)

Safety in Mines Testing and Research Station (SIMTARS) in Queensland, Australia was willing to work with Safe-T-Products on the mechanical durability of the pull cord device. The Automation Tester was shipped to the facility, accompanied by technical staff and samples of the pull cord device.

- 3 Sample of the STP in a PC/PBT Plastic enclosure
- 3 Sample of the STP in an Aluminium enclosure
- 3 Sample of the STP in a Stainless Steel enclosure

Testing Procedure:

6050 full-cycle tests on 1 sample of each version sent, with each cycle consisting of five specific operations that must be executed in a particular sequence, while measuring the Nm of force and recording this data in a spreadsheet.

Operations:

1. Left Pull Rod in
2. Right Pull Rod in
3. Left Pull Rod out
4. Right Pull Rod out
5. Reset

With a full-cycle time of 23 seconds, or roughly 156 per hour, it took three weeks to complete the testing of all three samples.

MILESTONE - SAFE-T-PULL AUTOMATION MECHANICAL DURABILITY TESTER (STP-AMDT) - (COMPLETED)

Develop bespoke SAFE-T-PULL Automation Mechanical Durability Tester (STP-AMDT)

Several of the durability tests specified in the standard were relatively straightforward to perform; However, finding an effective method for performing the 6050 full-cycle tests proved to be persistently challenging. From the outset, it became clear that the only way to successfully conduct the test was by creating a bespoke in-house automation tester specifically designed to suit our pull cord devices. This equipment was to mimic real-life field operations, accurately record the Nm force, and be strong enough to withhold prolonged testing.

After undergoing multiple changes to the initial design and programming over the past eight years, the Automation Tester was completed in mid-2023.



MILESTONE - ENVIRONMENTAL DURABILITY TEST - (COMPLETED)

Following the operation test, the next phase involves subjecting the same tested devices to extreme temperatures and humidity conditions as well as exposure to a saltwater solution. These conditions are intended to replicate a wide range of environmental situations.

Testing Procedure:

- **Testing at high temperature:** 96 hours at +70 degrees C
- **Testing for variations in humidity and temperature:** 96 hours in environment, changing between moist and warm atmosphere, at +25 degrees C
- **Testing at low temperature:** 96 hours at -40 degrees C
- **Testing in a corrosive and salty environment:** 96 hours at +35 degrees C in a solution of 5% NaCl







MILESTONE - VIBRATION DURABILITY TESTING - (COMPLETED)

After successful completion of the environmental durability test, the same devices proceed through additional tests designed to assess their continued mechanical durability.

Testing Procedure:

- **Shock Test:** Evaluate the devices' ability to withstand mechanical shocks
- **Vibration Test:** Assess the devices' resistance to vibration
- **Electrical Impulse Voltage Test at 2,500 V:** Ensure electrical integrity under high voltage conditions
- **Resetting Test:** Confirm that the devices can return to their proper state after activation or disruption
- **Cord Disengagement and Pull Cord Device Operation test:** Verify that the devices continue to operate as intended after environmental and electrical durability testing

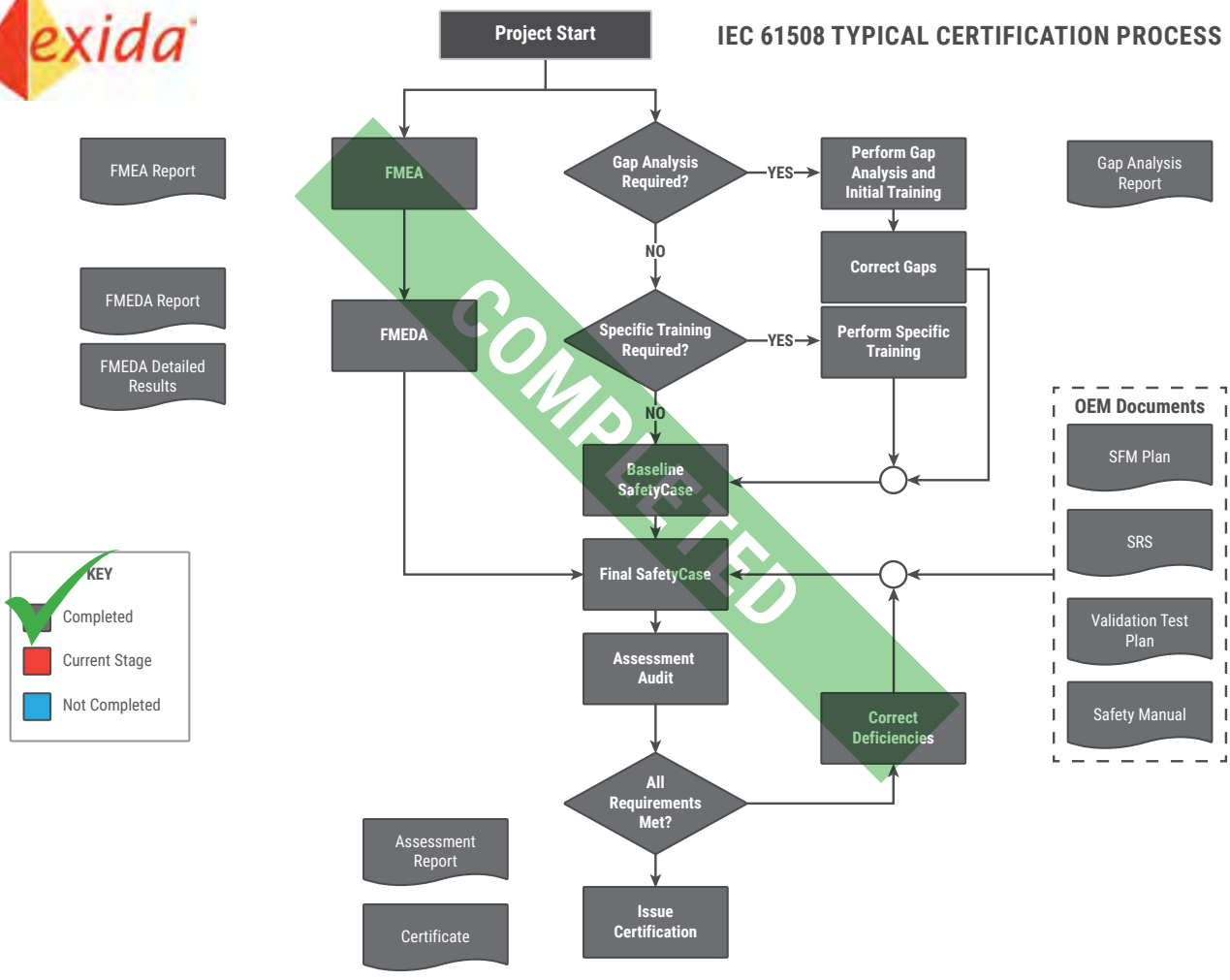
MILESTONES - FAILURE MODE & EFFECTS ANALYSIS (FMEA)



Safe-T-Products have engaged Exida's certification services to certify certain Safe-T-Pull devices to IEC 61508 and then issue IEC 61508 compliance certificates.

The assessment report and the IEC 61508 compliance certificates will be made publicly available through the Exida safety automation equipment list. The road map with key milestones is listed below for the final device testing to receive a SIL capable device. The proposed certification time frame is three to six months if Safe-T-Products has all the correct documentation and the device is found to be valid for SIL certification. The IEC 61508 certification is valid for 3 years. At the end of the certification validity period, Safe-T-Products must renew the certification and Safe-T-Products must successfully pass a surveillance audit to maintain certification. Once Safe-T-Products has a greater understanding of the process and documentation needed to complete the certification process, we will embark on testing other devices that are in our range that need certification.

IEC 61508 TYPICAL CERTIFICATION PROCESS



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Type A (IEC 61508) SIL 3 Capable System.
All Enclosures



IP RATED 66/69K

EMERGENCY STOP
PULL CORD DEVICE

ENSURING SAFETY AND COMPLIANCE

Conveyor systems are integral to many industrial operations, and ensuring their safe operation is crucial to protect workers and prevent accidents. An essential component of this safety system is the emergency stop pull cord device, such as the Safe-T-Pull. Understanding its mechanisms, compliance requirements, proper installation, and enclosure options can significantly enhance workplace safety.

Tested to IP66/69K
CE Conformity

DIVERSE ENCLOSURE OPTIONS FOR DIFFERENT ENVIRONMENTS

The Safe-T-Pull lanyard device is available in four enclosure types to suit various environmental conditions and requirements:

- **UV Stable, Impact Modified, Flame Retardant V0 PC/PBT Enclosure:** This plastic enclosure provides strong impact resistance and is suitable for outdoor use due to its UV stability.
- **2mm 316 Electro Polished Stainless Steel:** Known for its superior resistance to corrosion and its polished finish, this enclosure is ideal for harsh environments.
- **3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure:** This robust enclosure type offers excellent corrosion resistance and durability.



2mm 316 Electro Polished Stainless Steel



High Impact PC/PBT UV Stable Flame Retardant Plastic



3mm Powder Coated Aluminum

FEATURE: TYPE A ELEMENT FOR FUNCTIONAL SAFETY (IEC 61508)

The Safe-T-Pull system is classified as a Type A element, characterised by:

- Well-defined failure modes
- Predictable and proven operational behaviour
- No embedded microprocessors, firmware, or complex software

These traits allow the systems safety performance to be reliably validated using historical field data and empirical testing.

COMPLIANCE NOTE: SIL CAPABILITY

The maximum Safety Integrity Level (SIL) a Type A element may support under IEC 61508-2 Table 2 (with HFT = 0) depends on its Safe Failure Fraction (SFF):

SIMPLIFIED SUMMARY OF TABLE 2 (TYPE A)				
Target SIL	SFF < 60%	60% ≤ SFF < 90%	90% ≤ SFF < 99%	SFF ≥ 99%
SIL 1	HFT 0	HFT 0	HFT 0	HFT 0
SIL 2	Not allowed	HFT 0	HFT 0	HFT 0
SIL 3	Not allowed	Not allowed	HFT 0	HFT 0
SIL 4	Not allowed	Not allowed	Not allowed	Only allowed*
* Typically, SIL 4 requires HFT ≥ 1 even at SFF ≥ 99%.				Safe-T-Pull system

Example:

A pull cord system with an SFF of 92% and no redundancy (HFT = 0) is eligible for use in SIL 3 safety system.

APPLICATION IN CONVEYOR SYSTEMS

SIL 2 compliance is typically required in industries such as mining, bulk material handling, and manufacturing, where:

- Operators are present near hazardous equipment
- Conveyor systems are high-speed or mass-critical
- Uptime and safety system availability are essential

Suitable Type A Devices:

- Pull cord emergency stop switches
- Mechanical limit switches
- Hardwired interlocks

These devices are robust and simple, making them well-suited to functional safety roles.

SIL 3 CONSIDERATIONS

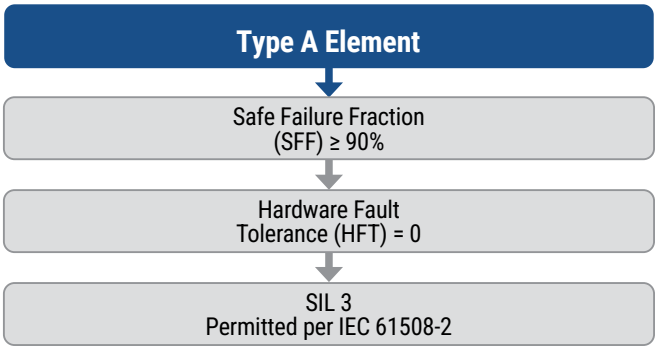
SIL 3 may be required in automated or high-risk environments, such as:

- Crushing/pinching points
- Robotic material handling cells
- Autonomous conveyor zones

In these areas, safety must go beyond pull cord systems, with use of:

- Engineered physical guarding
- Presence-sensing systems (e.g., light curtains, scanners)
- Redundant control architectures

Incorporating a SIL 3 system into a SIL 2 category allows the system to comply with SIL 2.



SAFE-T-PULL SYSTEM COMPATIBILITY

Safe-T-Pull system is designed to be capable for a SIL 3 system. Features include:

- IP67-rated direct opening contacts
- Mechanically linked switching for deterministic feedback
- Available in:
  - Dual microswitch configuration
  - Quad microswitch configuration

All switches are activated simultaneously by any pull cord operation, ensuring redundant safety signal feedback.

CERTIFICATION & ENDURANCE TESTING – IEC 60947-5-5

The Safe-T-Pull system is electrically and mechanically certified to IEC 60947-5-5.

Tested and validated for:

- 6050 mechanical operations under load
- Post-fault current activation of direct opening contacts

ENVIRONMENTAL CONDITIONING:

- 96 h at +70°C (dry heat)
- 96 h at 25–55°C, 95% RH (humidity cycling)
- 96 h at -40°C (cold exposure)
- 96 h at +35°C in 5% NaCl (corrosion resistance)
- Shock and vibration resistance

Full compliance certificates are available at:

www.safe-t-products.com.au

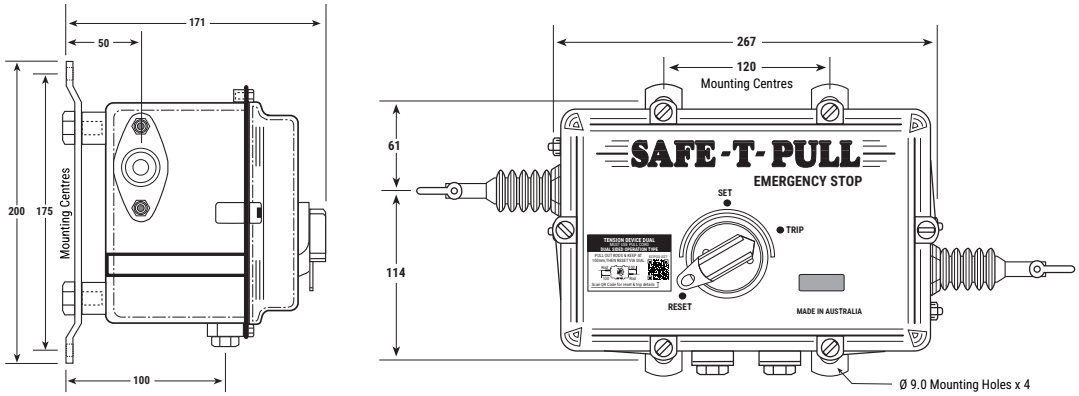
COMMON CONVEYOR SAFETY FUNCTIONS & TYPICAL SIL LEVELS

SAFETY FUNCTION	TYPICAL SIL LEVEL	STANDARD REFERENCE
Pull cord emergency stop	SIL 1 – SIL 2	AS 4024 / IEC 62061 / ISO 13849 / IEC 61508
Overspeed/underspeed detection	SIL 1 – SIL 2	IEC 62061 (per risk assessment)
Belt misalignment/tracking detection	SIL 1	
Blockage / chute plug detection	SIL 1	
Personnel detection (light curtains, etc.)	SIL 2 – SIL 3	ISO 13855 / IEC 61496
Start-up alarms (audible/visual only)	Not safety-rated	Operator alert only
Interlocked guarding	SIL 1 – SIL 2	ISO 13849 (PL c/d)

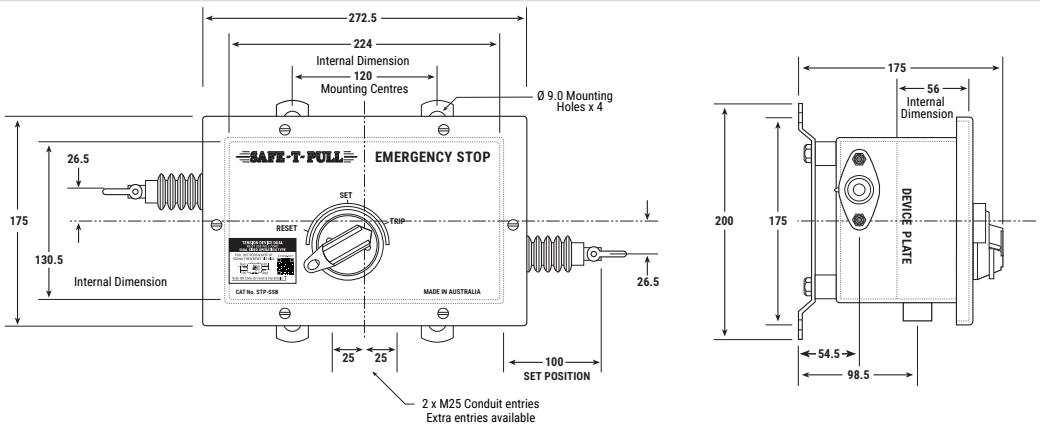
FEATURES

- Tamper proof switch plate mechanism.
- Manual and automated inspections of each device, both electrically and mechanically, ensure compliance and proper functionality.
- Absolute simplicity in initial setup and adjustment. All Set Point adjustments are done from the outside of the enclosure.
- Device design simplicity ensures safety and low maintenance.
- Stainless steel internal compression type springs.
- Electro polished 316 stainless steel pull rods and mounting feet for long lasting environment exposure.
- Pull rods have spring loaded external dust protecting boots so the pull rod is always covered for extra seal protection and pull rods are not exposed to contaminates.
- Double lip oil seals on pull rods and lid dial for secure dust and water protection to IP 66/69 K.
- Non-metallic pull rod bushings eliminating electrolysis issues between the safety mechanism (pull rod) and bushing. Increasing functional safety.
- Independent positive drive slider cams, dual over centering spring switch plate mechanism and lid drive cam for three fail safe trip mechanisms to ensure the device will trip and fail to safe.
- Internal switch connections are fully shrouded for added safety during inspection.
- IP 66/67K S.P.D.T Change-over Safety Micro Switches with Direct Opening Action (IEC 60947-5-1 Annex K) in contact element form C tested and passed to IEC 60947-5-1.
- Cam design compensates for pull cord vibration, expansion and contraction up to 20mm either side of the set point eliminating false tripping.
- Pull forces to actuate trip @ 60N (6Kg) 90° to pull cord axis and 90N (9Kg) along pull cord axis.
- Slider cam position sensing for reducing false trips.

PC/PBT PLASTIC/PLASTIC DIMENSIONS



ALUMINIUM/STAINLESS STEEL DIMENSIONS



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SAFE -T-TRIP WEIGHT





SAFE-T-TRIP WEIGHT
PRECISION TESTING OF PULL CORD TENSION

CONSISTENTLY APPLY A PREDETERMINED FORCE AND ANGLE, ENSURING ACCURATE TESTING OF SAFETY DEVICE ACTIVATION.

SAFE-T-TRIP-WEIGHT: ENSURING SAFETY AND COMPLIANCE

The Safe-T-Trip-Weight is an innovative tool specifically designed to test the safety function and proper tensioning of pull cords on safety devices on conveyor systems. By applying a consistent, predetermined force and angle, it ensures the reliable activation of emergency stop and protective stop mechanisms, helping maintain compliance with safety standards, reduce the risk of system failures, and enhance workplace safety.

Crafted from durable, thick polypropylene, the Safe-T-Trip-Weight is built to withstand repeated use in demanding industrial environments. Engineered for precision, it is pre-configured for testing applications requiring 70N force and comes equipped with a leveling foot for stability and an adjustable drop distance pin for versatile testing. This comprehensive kit includes the 6.8 kg Safe-T-Trip-Weight and its components, providing a complete solution for accurate and consistent safety device testing. Replacement parts are readily available to ensure long-term performance and reliability.

For step-by-step instructions on installation and operation, visit the Product Video Library on the Safe-T-Products website to access the instructional video. For additional information, inquiries, or replacement parts, contact your nearest distributor or connect with us through the Safe-T-Products Contact Page.



Easy to Operate Online Instructional Video

BACK TO INDEX

FOR MORE INFORMATION
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NEWTON'S LAW

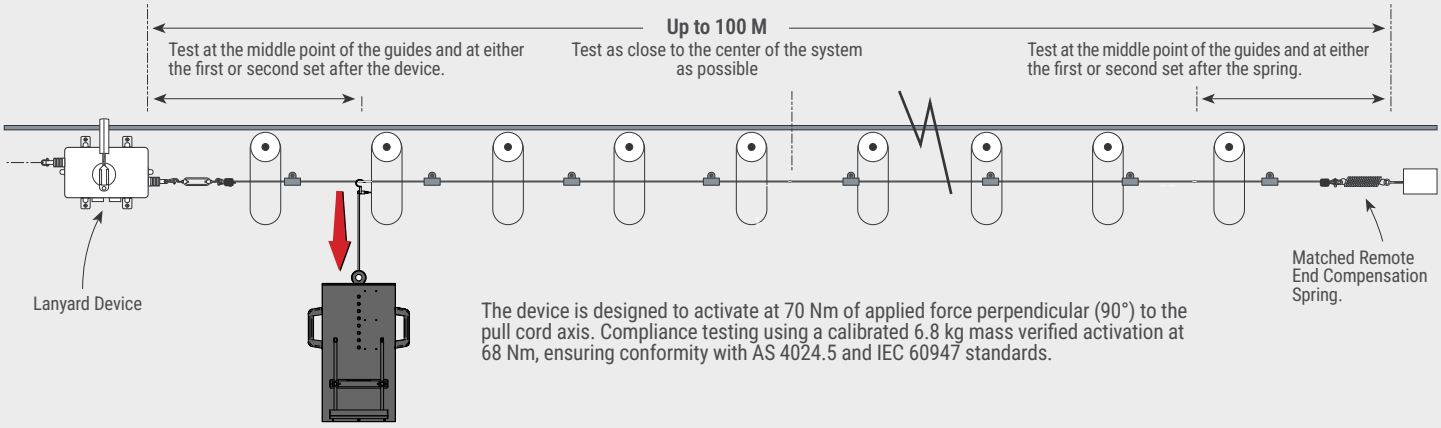


NEWTON'S LAW – REIMAGINED BY SAFE-T-PRODUCTS

Newton may have discovered the laws of motion with a falling apple, but we've taken that concept a step further.

At Safe-T-Products, we've refined the principle by applying a controlled 7kg weight over a set distance, using gravity to deliver consistent force. This forms the basis of our Safe-T-Law – a straightforward and reliable method for testing pull cord systems.

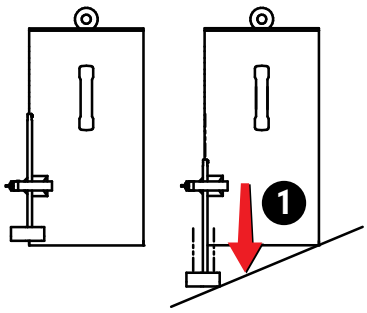
Whether you're commissioning a new pull cord system or conducting periodic testing on an existing setup, the Safe-T-Trip Weight offers the ideal solution. Simple, effective, and built for precision.



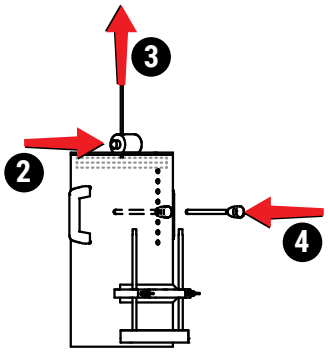
The device is designed to activate at 70 Nm of applied force perpendicular (90°) to the pull cord axis. Compliance testing using a calibrated 6.8 kg mass verified activation at 68 Nm, ensuring conformity with AS 4024.5 and IEC 60947 standards.

EASY TRIP WEIGHT INSTRUCTIONS

1 Visual level the trip weight via the leveling foot.

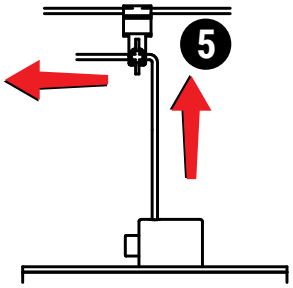


2 3 Press and hold button and lift 6.8 kg weight up to the top of the tube then release the weight lock button.

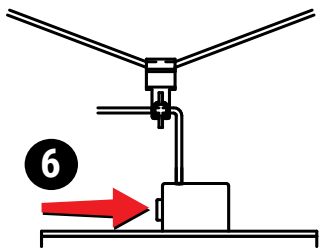


4 Place pin into the desired drop distance and lower the weight onto pin by pressing the button. (3)

5 Place the hook onto the pull cord and adjust until the rope is taught.



6 Remove the pin and press and hold the button to release the weight. (4) (2) (6)



The device is now compliant, requiring less than 70 Nm of force to activate.

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IP RATED 66/69K

SAFE-T-PULL SIL 3 CAPABLE SYSTEM
Vs BALANCED SYSTEM



Tested to IP66/69K
CE Conformity

Why Choose Our Emergency Stop Pull Cord Device?

Our "Safe-T-Pull" emergency stop pull cord system provides "enhanced safety and reliability" compared to standard balance systems, as illustrated in the graphics below. Designed to meet strict compliance standards, it ensures the safe operation of conveyor systems, protecting workers and preventing accidents.

With robust performance, easy installation, and durable construction, Safe-T-Pull is the smart choice for enhancing workplace safety.

BALANCED PULL CORD SYSTEM

Up to 100m (328 Feet) Pull Cord

Can operate in all directions

Can operate in all directions

Failure Point
If the cord becomes caught then the system may not be able to be activated.

Failure Point
Remove both cords, the device can be reset without cords attached.

Failure Point
Both cords may be loose while the device remains set. The pull distance required to trip the device can be excessively long, making activation unsafe.



The use of pigtails or eyebolts can cause major operational issues.

Failure Point
Remove both cords, the device can be reset without cords attached.

Failure Point
If the arm is seized, the entire system will fail to operate.

Can operate in all directions

Can operate in all directions

Failure Point
If the cord becomes caught then the system may not be able to be activated.

Failure Point
Both cords may be loose while the device remains set. The pull distance required to trip the device can be excessively long, making activation unsafe.

Up to 60m (200 Feet) Pull Cord

THE SAFE-T-PULL "TAUT CORD SYSTEM"

The cord must be attached and the device tensioned so the pull rod is set at 100mm

Up to 200m (656 Feet) Pull Cord

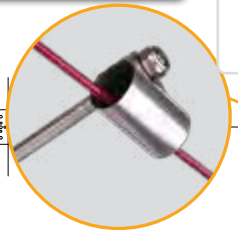
Each side of the Safe-T-Pull functions independently while being mechanically connected to a shared set of switches.

Compensation Spring is fitted with tether cord so the spring can not be over stretched in a activation.

For more information see Tribology document.

Can operate in all directions

Can operate in all directions



SIL ACHIEVABLE

If the cord is removed the system will trip.

The device switch top may become seized or stuck and the device will still trip as normal.

Safe-T-Pull has a long movement before trip so cord expansion and contraction doesn't trip the device.

If the cord is removed the system will trip.

FOR MORE INFORMATION

BACK TO INDEX

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DON'T FORGET TO RECYCLE ME

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IP RATED 66/69K

PROTECTIVE STOP CONTROL TILT DEVICE

ACTIVATES A PROTECTIVE STOP WHEN EXCESSIVE TILT IS DETECTED IN HARSH INDUSTRIAL APPLICATIONS

This all-in-one solution offers exceptional mechanical resilience, compliance with international safety standards, and field-proven reliability-making it the ideal choice for industrial environments that demand precise tilt detection and instantaneous protective shutdown in critical applications.

Tested to IP66/69K
CE Conformity

Unlike conventional tilt devices that rely on a single switching device, the Safe-T-Tilt integrates Dual IP67 Direct Opening Contacts with linked mechanical function using Safe-T-Products' proprietary technology. This design ensures full compliance as a certified protective stop control device, and offers flexibility with dual contacts in series or separate NO/NC signal outputs, depending on system requirements.

The switching action is activated at approximately 20–30 degrees of tilt. Extensive computer simulations have shown that, in typical chute applications, the device experiences tilt in the range of 70–90 degrees, meaning the direct opening action is engaged well before full tilt occurs—ensuring reliable and timely response.

BUILT FOR HARSH ENVIRONMENTS

The Safe-T-Tilt is specifically designed to withstand the harsh rigours of chute environments, where physical impact and environmental exposure are constant challenges. It is enclosed in a super heavy-duty, electropolished 316 stainless steel tube, featuring a custom-designed protective cap that shields the Ex-rated cable gland. This ensures maximum protection against rogue rock impacts, environmental ingress, and mechanical wear-preserving the functionality and integrity of the device in the field.

PROVEN PERFORMANCE IN REAL-WORLD CONDITIONS

To validate its performance, the Safe-T-Tilt has undergone extensive simulation testing under conditions involving lump iron ore, fines iron ore, and sugar pulp. These simulations have confirmed both the operational effectiveness and optimal mounting positions for the device in real-world material flow scenarios, ensuring consistent and dependable operation.

WHY SAFE-T-TILT STANDS APART

Most traditional tilt switches rely on outdated or non-compliant mechanisms, such as:

- Mercury-style switches, which operate by shifting a pool of liquid mercury to close contacts. These are not direct opening and present a toxic hazard on-site.
- Conventional mechanical tilt switches, which keep a micro switch engaged until tilted, allowing the actuator to move away and break contact. This approach is the opposite of direct opening with linked mechanical function and does not meet protective stop standards.

TRUE DIRECT OPENING SAFETY WITH LINKED MECHANICAL IP97 DIRECT OPENING MICRO SWITCH FUNCTION

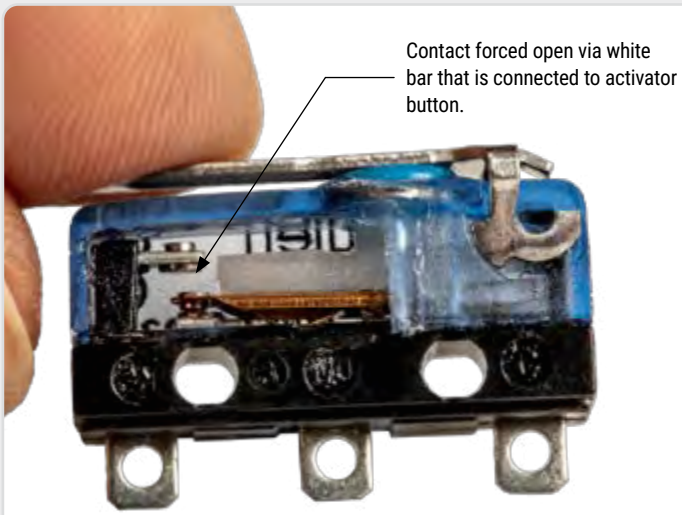
The Safe-T-Tilt features a precision-engineered plunger system that actively forces open the contacts of its direct opening micro switches when tilted. This creates a mechanically linked, fail-safe disconnection, guaranteeing that a true protective stop control function is triggered in the event of hazardous tilt or machine displacement.

COMPLETE KIT FOR EASY INTEGRATION

Each Safe-T-Tilt unit is delivered fully assembled and ready for immediate installation, including:

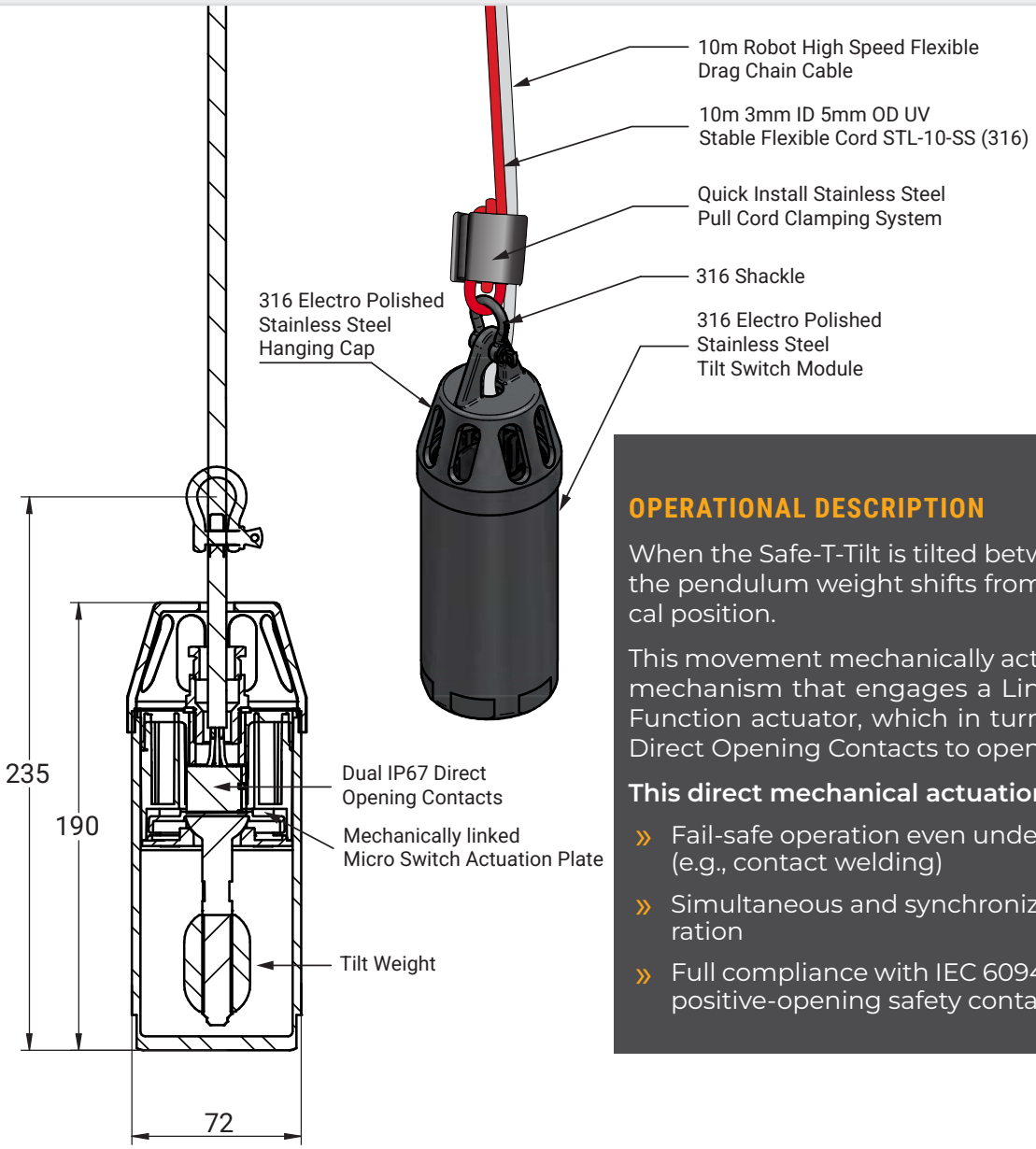
- 1 x Safe-T-Tilt device
- 10 metres of Stainless Steel attachment cable with clamping system
- 10 metres of robot high speed flexible drag chain cable.

DIRECT OPENING MICRO SWITCH



All Safe-T-Products switches use TUV-tested contacts (IEC 60947-5-1) with direct opening action, optimised for low-current control circuits. Shown here is our Mini Micro Switch.

PRODUCT DETAILS



OPERATIONAL DESCRIPTION

When the Safe-T-Tilt is tilted between 20° and 30°, the pendulum weight shifts from its neutral vertical position.

This movement mechanically actuates an internal mechanism that engages a Linked Mechanical Function actuator, which in turn forces the Dual Direct Opening Contacts to open.

This direct mechanical actuation ensures:

- Fail-safe operation even under fault conditions (e.g., contact welding)
- Simultaneous and synchronized contact separation
- Full compliance with IEC 60947-5-1 Annex K for positive-opening safety contacts.

FEATURE: IP 67 DUAL DIRECT OPENING CONTACT WITH LINKED MECHANICAL FUNCTION

Description:

The device is equipped with dual direct opening contacts, ensuring reliable ad fail-safe operation in safety-critical applications. Each contact is mechanically driven to open under actuator force, in full compliance with IEC 60947-5-1 Annex K, ensuring positive mechanical separation-even in the event of contact welding or spring failure.

Key Characteristics:

PARAMETER	SPECIFICATION
Contact Type	Dual NC (Normally Closed) Direct Opening
Standard Compliance	IEC 60947-5-1 Annex K, GS-ET-15, ISO 13850
Mechanical Linkage	Mechanically linked contacts for synchronised operation
Safety Function Category	Suitable for use in Category 1-4 systems (ISO 13849-1)
Performance Level (PL)	PL d/PL e capable depending on system integration
Function	Ensures consistent and complete contact opening on actuation
Redundancy	Dual- channel contact paths for fault tolerance
Application	Emergency stop switches, pull -cord devices, guard interlocks and Protective Stop Controls

Operational Benefits:

- Mechanically enforced contact separation, even under harsh conditions or component failure
- Enhances redundancy and diagnostic capability in safety circuits
- Prevents partial activation due to contact failure
- Fully compliant with international safety standards for machine safety protective stop controls and emergency stops.

Mounting Note:

These contact are pre-fitted within the safety switch mechanism and require no additional configuration during installation.

ELECTRICAL SPECIFICATIONS

IP 67 Safety Micro Switch with Direct Opening Action Specifications

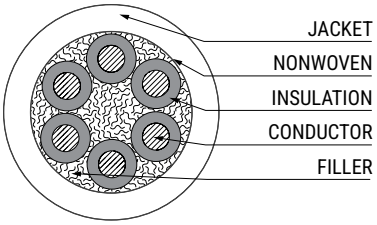
IEC 60947-5-1 Annex K classification	☐ Type 1	☒ Type 2 Direct Opening
Change-over contact element	☒ C	☐ Za ☐ Zb
Contact material	Ag-Ni	
Utilization category	AC-15	DC-13
Operational voltage	250 V	60 V
Operational current	1,5 A	0.5 A
Frequency	50/60 Hz	---------
Number of electrical cycles	6050 (6 min-1)	
Number of mechanical cycles	6050 (6 min-1)	
Conventional free air thermal current	10 A	
Conventional enclosed thermal current	---------	
Operating Temperature	-35° C No Icing	+80° C

Specifications (short-circuit with standability)

Rated conditional short-circuit current	1 000 A
Short circuit protective device	Fuse 6 A gG (IEC 60269-2)

WIRE SPECIFICATION

ROBOT HIGH SPEED FLEXIBLE DRAG CHAIN CABLE TESTED FOR 10 MILLION BENDS

TYPE	6 X 0.75mm2			
TEMP	-40°C~105°C	ENVIRONMENT	ROHS	
RATE	VOLTAGE	300/500V CURRENT 4.5A		
CONDUCTOR	MATERIAL	BARE COPPER		
INSULATION	MATERIAL	NITRILE POLYVINYL CHLORIDE		
	AVERAGE THICKNESS	0.40mm		
	DIAMETER	2.2±0.2mm		
	COLOUR	RED, BLUE, BLACK, GREY, BROWN, ORANGE		
JACKET	MATERIAL	BLACK NITRILE POLYVINYL CHLORIDE		
	AVERAGE THICKNESS	1.2mm		
	DIAMETER	9.3±0.5mm		
SECTION VIEW				
TEST	VOLTAGE	1500V/5MIN	CONDUCTOR RESISTANCE	≤26Ω/Km at 20° C

VISUALISING RELIABLE ACTIVATION IN ACTION

This computer simulation demonstrates the Safe-T-Tilt in operation, clearly showing how the device activates during the early stages of a chute blockage when mounted low within the chute and out of the main ore flow.

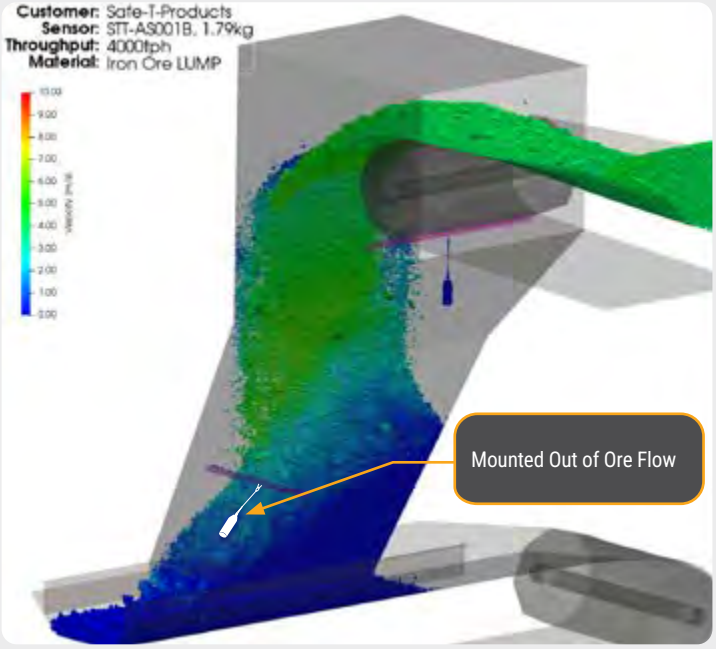
As the simulation illustrates, the Safe-T-Tilt is triggered at a tilt angle of approximately 20–30 degrees—well before the blockage becomes critical. This pre-emptive activation is enabled by Safe-T-Products' proprietary dual direct-opening contact system, which is mechanically linked to deliver a positive, fail-safe response.

In real-world chute conditions, tilt angles can exceed 70–90 degrees during a blockage event. The Safe-T-Tilt responds early, issuing a timely stop signal to help prevent chute overflow and system damage.

This visual confirmation reinforces the Safe-T-Tilt's role as a certified protective stop control device, delivering reliable, early-warning performance exactly when it's needed most.

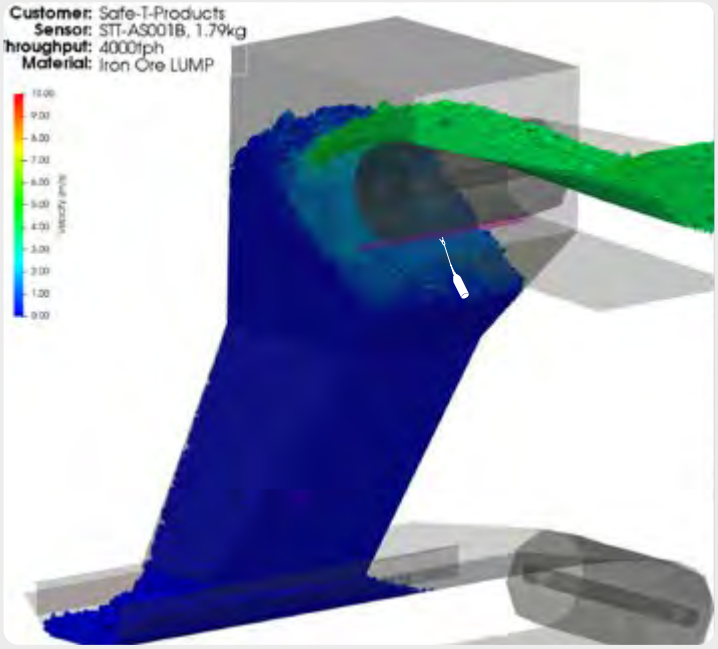
OPTIMAL MOUNTING POSITION-EARLY DETECTION

IRON ORE LUMP

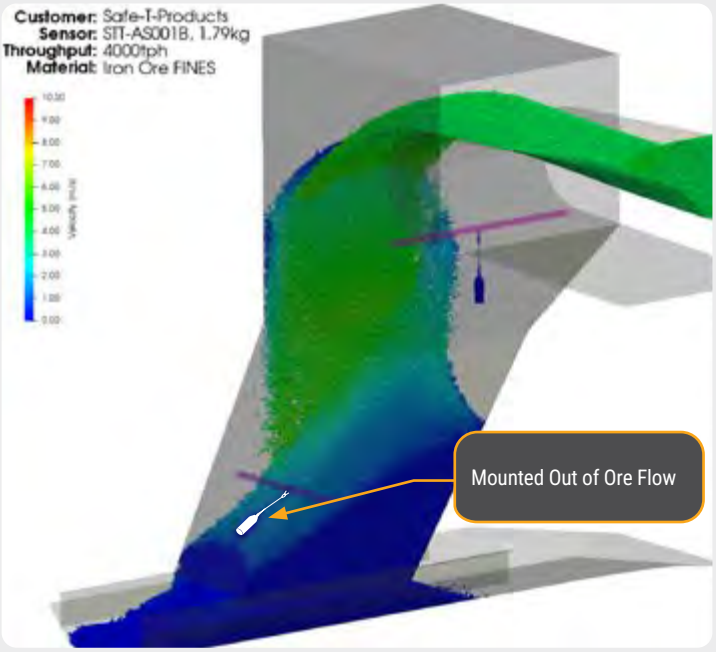


LATE DETECTION POSITION-OVERFLOW MAY OCCUR

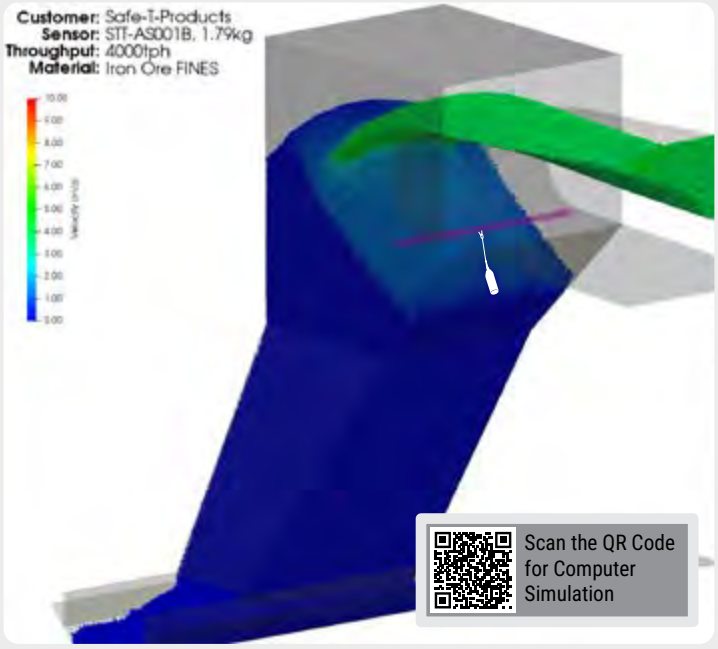
IRON ORE LUMP



IRON ORE FINES



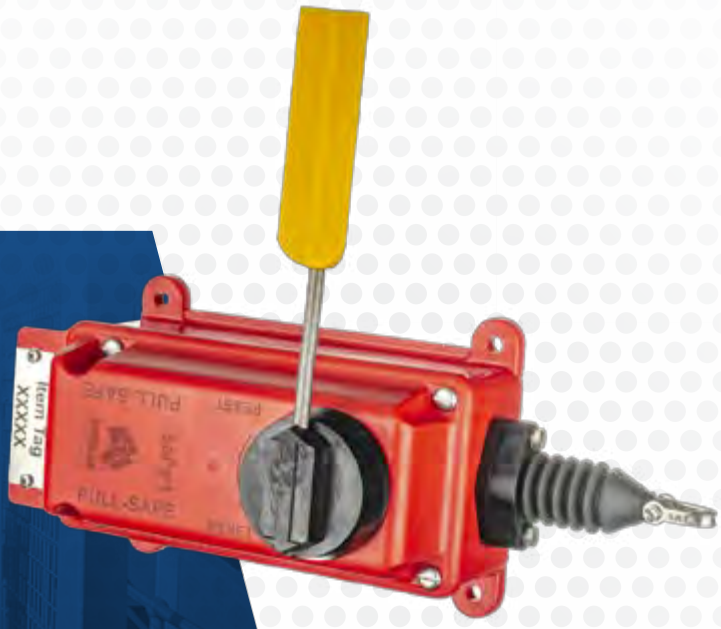
IRON ORE FINES



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Targeting Safety

PULL-SAFE®

IP RATED 66/69K



EMERGENCY STOP
PULL CORD DEVICE

Introducing our state-of-the-art Emergency Stop Pull Cord Device, engineered for robust safety and reliability in industrial environments. This device features a UV stable, impact-modified, flame retardant PC/PBT enclosure, ensuring it can withstand harsh conditions while providing maximum safety performance.

Tested to IP66/69K
CE Conformity

SAFETY MECHANISMS AND COMPLIANCE

The device includes three independent positive drive mechanisms and S.P.D.T. change-over safety micro switches, meeting IEC 60947-5-5 and AS4024 standards. Tripping occurs when the trip cord is removed, over-tensioned, activated, or manually tripped via the reset dial. Resetting requires proper tension on the trip cord.

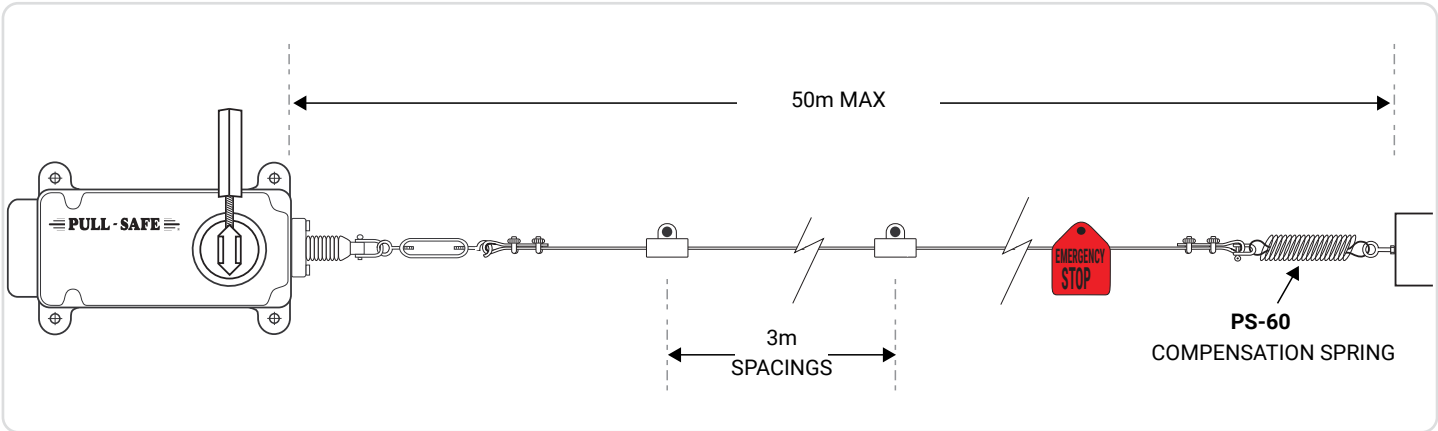
INSTALLATION AND ADJUSTMENT

Quick setup and adjustment are facilitated externally. One device is needed per 50 meters of pull cord, with a matched compensation spring (P/N PS-60) for bidirectional tripping, complying with safety standards.

ENCLOSURE SPECIFICATIONS AND DESIGN ELEMENTS

Made of high-impact, non-corrosive PC/PBT material, the enclosure is UV stabilised and flame retardant. Advanced design includes stainless steel springs and pull rods, double lip oil seals, and non-metallic pull rod bushings for enhanced safety.

Our Emergency Stop Pull Cord device is designed for ease of installation and maintenance, providing reliable performance in the most demanding environments. Ensure your safety protocols are up to standard with this durable and highly efficient safety device.



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Targeting Safety



IP RATED 66/69K

22MM BUTTON VERSION

EMERGENCY STOP DEVICE
SUITABLE FOR INDUSTRIAL, FOOD, TRANSPORT & MINING APPLICATIONS

Our Emergency Stop button is placed within a protective shroud and enclosure designed for Safe-T-Products. The whole setup has a rating of IP66/69K, indicating strong resistance against water and dust ingress.

Tested to IP66/69K
CE Conformity

DIVERSE ENCLOSURE OPTIONS FOR DIFFERENT ENVIRONMENTS

Available in 3 enclosure types to suit various environmental conditions and requirements:

- **UV Stable, Impact Modified, Flame Retardant V0 PC/PBT Enclosure:** This plastic enclosure provides strong impact resistance and is suitable for outdoor use due to its UV stability.
- **3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure:** This robust enclosure type offers excellent corrosion resistance and durability.
- **2mm 316 Electro Polished Stainless Steel:** Known for its superior resistance to corrosion and its polished finish, this enclosure is ideal for harsh environments.

When the Emergency Stop button is integrated into the Safe-T-Products designed shroud and enclosure, the entire device is rated at IP66/69K.

The enclosure's IP rating is protected with a one-piece lid seal pressed into a groove with an external solid protection lip that is higher than the sealing face and protrudes down over the enclosure's sealing edge once the lid is installed. Both conduit entries are equipped with specially designed conduit plugs that feature a unique sealing system, including an O-rings for optimal sealing. To increase the IP rating of the button's seal, the



High Impact PC/PBT UV Stable Flame Retardant Plastic



3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure



2mm 316 Electro Polished Stainless Steel

Emergency Stop lid is fitted with a specially designed button protection and labeling shroud attached via two screws into blind mounting holes. The blind fixing holes are external to the button mounting hole, allowing for the buttons to be sealed directly onto the lid. This shroud protects the seal's integrity from direct sunlight, dust, foreign materials and reduces the power of impact of jets of water by slowing the flow via a torturous path preventing penetration through the seal.

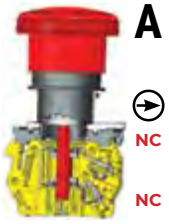
The Emergency Stop button may be fitted with up to 3 direct opening fail safe contact blocks which still fail to safe even if any of the contact blocks are removed. This not only raises the overall safety of the Emergency Stop but completes the safety integrity of the overall system.

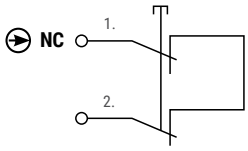
SELF MONITORED CONTACT INCLUDED IN STANDARD RANGE

MTTFd VALUE CALCULATION FOR THE EMERGENCY PUSH BUTTONS ACCORDING WITH EN ISO 13849-1

NOT ACTIVATED

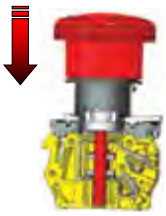
MUSHROOM BUTTON NOT ACTIVATED, CONTACT BLOCK ATTACHED

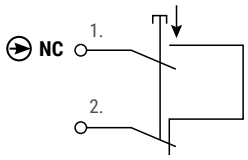




ACTIVATED

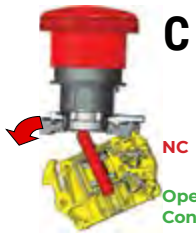
MUSHROOM BUTTON ACTIVATED, CONTACT BLOCK ATTACHED

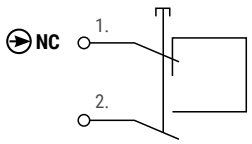




NOT ACTIVATED

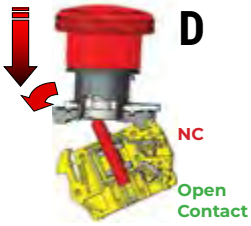
MUSHROOM BUTTON NOT ACTIVATED, CONTACT BLOCK DISCONNECTED

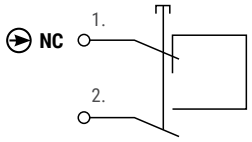




ACTIVATED

MUSHROOM BUTTON ACTIVATED, CONTACT BLOCK DISCONNECTED





SHROUD

Shroud Fitted to Increase Buttons Resistance to Foreign Material Buildup and Operational Failures.



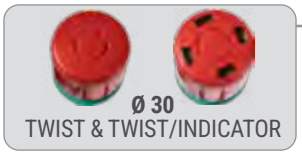
SHROUD WITH BOOT FITTED OPTION

All Emergency Stop Devices come fitted with a Fail Safe Contact Block.



ADDITIONAL CONTACT BLOCKS AVAILABLE

BUTTONS AVAILABLE

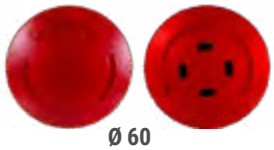


Ø 30
TWIST & TWIST/INDICATOR

NO BOOT FITTED ON THE **Ø 30**



Ø 40
TWIST & TWIST/INDICATOR

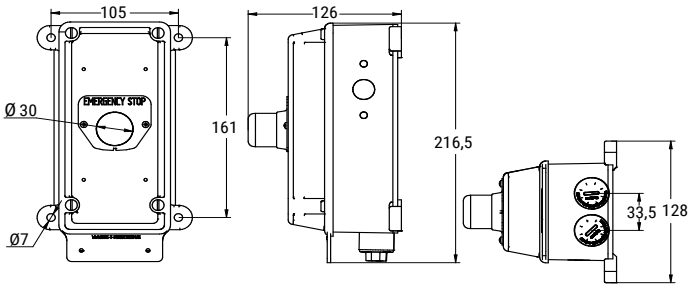


Ø 60
TWIST & TWIST/INDICATOR

Select from our range of 6 button options, including Mushroom-style with twist function, or twist with built-in indicator. You can also pick the size that suits your needs, with diameters available in 30mm, 40mm, and 60mm.

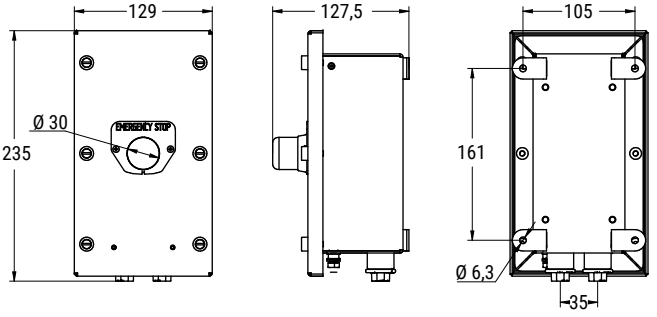
PC/PBT PLASTIC EMERGENCY STOP

30mm DIAMETER BUTTON SHOWN AS EXAMPLE



ALUMINIUM/STAINLESS STEEL EMERGENCY STOP

30mm DIAMETER BUTTON SHOWN AS EXAMPLE



TECHNICAL NOTES

All operators comply with the relevant European standards:

- EN ISO 13850 Machine safety Emergency stop operators, functional characteristics - Design guidelines
- IEC/EN60947-5-1
- Comply with the standard IEC/EN60204-1: Machine safety Machine electrical circuit General guidelines

- The push buttons are designed with a load charge mechanism to ensure a reliable operation in the activated position. The combination with positive switching NC ⊖ contacts and the presence of the indicator on some models, guarantee a high degree of reliability and effectiveness.

safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K

22MM BUTTON VERSION

EMERGENCY STOP DEVICE
FITTED WITH DEVICE IDENTIFICATION, SHROUD AND DUST BOOT

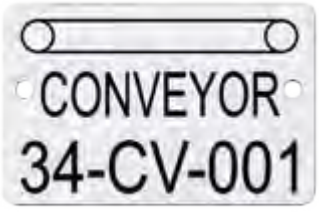
Tested to IP66/69K
CE Conformity

Our Emergency Stop device, as shown in the image, features a heat-foiled labelled shroud with the wording "Emergency Stop" to meet identification compliance standards. The shroud is also equipped with a specially designed safety function boot for the emergency stop button. This boot not only protects the button from water ingress due to high-pressure blasts and dust accumulation, but it also ensures the safety function remains unaffected by preventing foreign materials from becoming lodged under the button head. Additionally, the boot shields the moving parts of the button from environmental exposure, preserving the integrity of the safety functionality.

The boot further enhances the IP rating beyond IP69K, allowing the button to be used in environments where there is a higher risk of foreign materials obstructing its operation, such as abattoirs, cement plants, and fertilizer plants etc.

This attention to detail in the design of bespoke button boots, shrouds, and labelling surpasses industry standards and best practices for safety and functionality in manufacturing and industrial environments. Safe-T-Products' commitment to creating advanced safety devices and innovative solutions is exemplified by the industry-leading boot design and emergency stop function labelling. This dedication ensures our products deliver superior protection and performance.

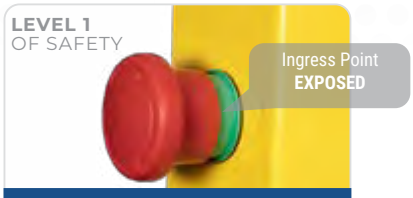
ADDED FUNCTIONAL SAFETY



STT-IDTAG-P
Laser Engraved Identification Tag



Shroud and Dust Boot
(Not for separate sale)



Standard Button Installation
(Sold by Others Not Safe-T-Products)



Without a Dust Boot Obstructions Can occur



With a Dust Boot Installed, Reduces This Risk

EMERGENCY STOP IDENTIFICATION – STANDARDS COMPLIANCE

Each emergency stop device must be clearly and unambiguously identified with the specific equipment or machine it is intended to control.

This requirement aligns with:

- AS 4024.1604:2014 (Safety of Machinery – Design of Controls, Interlocks and Guards)
  - Clause 5.2.2 – Emergency stop devices shall be clearly identifiable and associated with the equipment they control.
  - Clause 5.3.4 – Where multiple emergency stop devices are located in the same area, the function of each shall be clear.
- IEC 60204-1:2016 (Safety of Machinery – Electrical Equipment of Machines)
  - Clause 10.7.2 – The location and function of emergency stop devices shall be clearly marked. The actuator shall be identifiable and associated with the controlled machine.

WHY THIS MATTERS:

In multi-machine environments, clear identification of emergency stop buttons helps ensure:

- Rapid, appropriate action during emergencies
- Avoidance of unintended shutdowns
- Compliance with legal and safety requirements

For best practice, include:

- Durable labels or signs above or beside the E-stop button
- Reference to the machine name, number, or function
- Color coding or zone tagging if applicable

COMPLIANT EMERGENCY STOP LABELLING



- Compliant with AS 4024 and IEC 60204 requirements
- Emergency-stop location and function must be marked
- Machine-specific shutdown control should be clearly indicated
- Prevents confusion in multi-machine areas
- Supports rapid response during emergencies
- Ensures operators and personnel activate the correct E-stop
- Reduces risk of unintended equipment shutdown
- Include the machine name or function on the label
- Use durable, visible signage (above or beside the E-stop)
- Perform routine checks to ensure labels remain legible and in place

safe-t PRODUCTS
Targeting Safety



IP RATED IP66/69K

22MM BUTTON VERSION

MINI EMERGENCY STOP BOX

SUITABLE FOR INDUSTRIAL, FOOD & MINING APPLICATIONS

The Mini Emergency Stop Box is a smaller, highly efficient version of our standard Emergency Stop Device, designed to meet rigorous safety demands in diverse environments. Suitable for industrial, food processing, and mining applications, this compact device ensures robust performance without compromising safety.

Tested to IP66/69K
CE Conformity


High Impact PC/PBT UV Stable Flame Retardant Plastic


3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure


2mm 316 Electro Polished Stainless Steel

KEY FEATURES:

- **Compact Design:** Ideal for limited spaces without sacrificing safety functionality.
- **IP66/69K Rated:** Superior resistance to water and dust ingress, ensuring reliable operation even in harsh conditions.

PROTECTIVE SHROUD AND ENCLOSURE DESIGN:

The Emergency Stop button is securely placed within a specially designed protective shroud and enclosure by Safe-T-Products, enhancing durability and safety. The enclosure features a one-piece lid seal pressed into a groove with an external solid protection lip, providing added protection against environmental factors.

DIVERSE ENCLOSURE OPTIONS:

Available in three enclosure types to suit different environments:

1. **UV Stable, Impact-Modified, Flame Retardant V0 PC/PBT Enclosure:** Strong impact resistance with UV stability, ideal for outdoor applications.
2. **3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entry (Powder-Coated):** Excellent corrosion resistance and durability.
3. **2mm 316 Electro Polished Stainless Steel:** Superior corrosion resistance with a polished finish, perfect for harsh environments.

ENHANCED SEALING SYSTEM:

- Fitted into a groove in the plastic version and adhered to the aluminium and stainless steel, the lid incorporates an external solid lip extending over the sealing edge, providing enhanced protection against water ingress and ensuring long-term durability in harsh environments.
- **25mm Conduit Entry:** Equipped with specially designed conduit plugs featuring unique sealing systems with O-rings for optimal protection.
- **Button Seal:** The Emergency Stop lid includes a specially designed button protection shroud with labeling, secured via two screws into blind mounting holes. This protects the seal from sunlight, dust, and high-pressure water jets.

ADVANCED SAFETY MECHANISMS:

The Emergency Stop button can be fitted with up to three direct-opening fail-safe contact blocks, maintaining fail-safe operation even if one block is removed. This design enhances the overall safety and integrity of the system.

WHY CHOOSE THE EMERGENCY STOP MINI BOX?

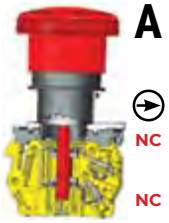
Compact, durable, and engineered for extreme environments, the Emergency Stop Mini Box offers the same high level of safety as larger devices, with the added benefit of space-saving efficiency.

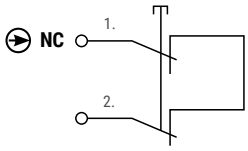
SELF MONITORED CONTACT INCLUDED IN STANDARD RANGE

MTTFd VALUE CALCULATION FOR THE EMERGENCY PUSH BUTTONS ACCORDING WITH EN ISO 13849-1

NOT ACTIVATED

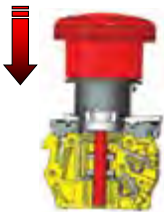
MUSHROOM BUTTON NOT ACTIVATED, CONTACT BLOCK ATTACHED

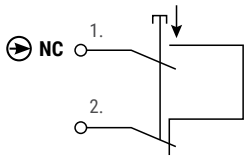




ACTIVATED

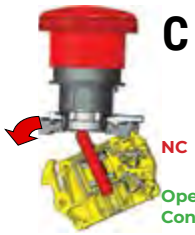
MUSHROOM BUTTON ACTIVATED, CONTACT BLOCK ATTACHED

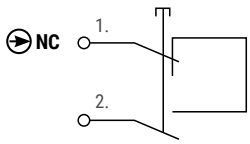




NOT ACTIVATED

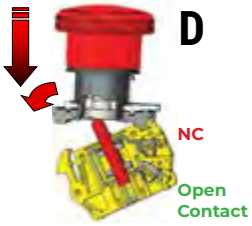
MUSHROOM BUTTON NOT ACTIVATED, CONTACT BLOCK DISCONNECTED

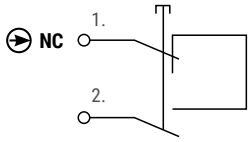




ACTIVATED

MUSHROOM BUTTON ACTIVATED, CONTACT BLOCK DISCONNECTED





SHROUD

All Emergency Stop Devices come fitted with a Fail Safe Contact Block.



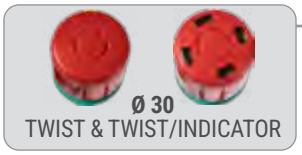
ADDITIONAL CONTACT BLOCKS AVAILABLE

Shroud Fitted to Increase Buttons Resistance to Foreign Material Buildup and Operational Failures.



SHROUD WITH BOOT FITTED OPTION

BUTTONS AVAILABLE

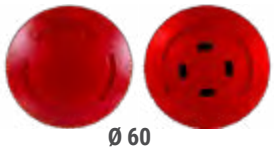


NO BOOT FITTED ON THE **Ø 30**

Ø 30
TWIST & TWIST/INDICATOR



Ø 40
TWIST & TWIST/INDICATOR

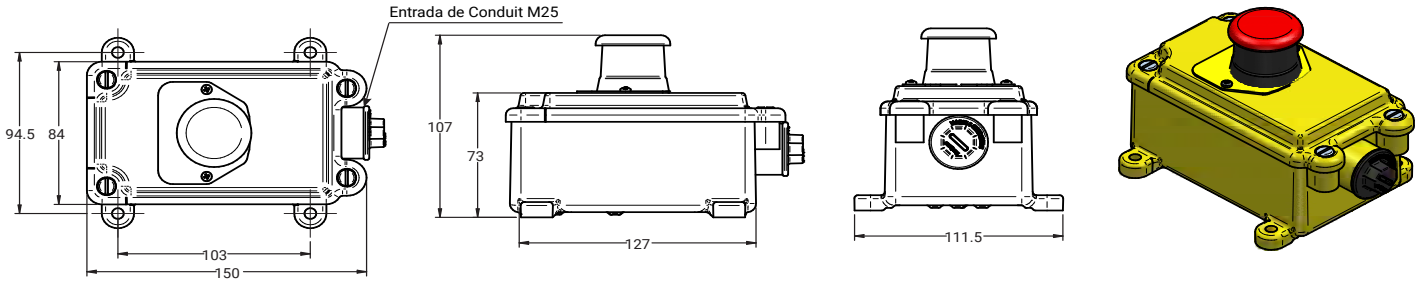


Ø 60
TWIST & TWIST/INDICATOR

Select from our range of 6 button options, including Mushroom-style with twist function, or twist with built-in indicator. You can also pick the size that suits your needs, with diameters available in 30mm, 40mm, and 60mm.

PC/PBT PLASTIC EMERGENCY STOP

30MM DIAMETER BUTTON SHOWN AS EXAMPLE



TECHNICAL NOTES

All operators comply with the relevant European standards:

- EN ISO 13850 Machine safety Emergency stop operators, functional characteristics - Design guidelines
- IEC/EN60947-5-1
- Comply with the standard IEC/EN60204-1: Machine safety Machine electrical circuit General guidelines

- The push buttons are designed with a load charge mechanism to ensure a reliable operation in the activated position. The combination with positive switching NC ⊖ contacts and the presence of the indicator on some models, guarantee a high degree of reliability and effectiveness.

safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K

30MM BUTTON VERSION

EMERGENCY STOP DEVICE
SUITABLE FOR INDUSTRIAL, FOOD, TRANSPORT & MINING APPLICATIONS

Engineered for demanding environments, our 30mm Emergency Stop Device delivers enhanced safety, durability, and versatility. Enclosed within a purpose-built Safe-T-Products protective shroud and housing, this device is certified to IP66/69K, offering industry-leading protection against dust, water, and high-pressure cleaning.

Tested to IP66/69K
CE Conformity

HIGH-PERFORMANCE ENCLOSURE OPTIONS

Choose between two premium enclosure types, both specifically developed to endure rugged industrial conditions:

- **3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure:** This robust enclosure type offers excellent corrosion resistance and durability.
- **2mm 316 Electro Polished Stainless Steel:** Known for its superior resistance to corrosion and its polished finish, this enclosure is ideal for harsh environments.



3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure



2mm 316 Electro Polished Stainless Steel

ENHANCED SEALING WITH SHROUD, DUST BOOT & LID DESIGN

The lid incorporates a one-piece seal adhered to its inner surface, ensuring the seal remains in place after removal. This design also provides sealing around the lid screws, preventing water ingress. Additionally, the lid includes an overlapping lip that covers both the seal and the box edge, further enhancing the enclosure's IP rating.

- Conduit entries are fitted with custom-designed plugs, each with integrated O-rings for maximum ingress protection.
- Button sealing is further enhanced with a durable dust boot, providing a secondary layer of protection against fine particulate ingress and environmental exposure.
- The protective shroud, secured via blind mounting holes outside the button seal area, shields the button from direct sunlight, dust, and high-pressure water. It slows down water flow via a torturous path, safeguarding the button's seal integrity.

THREE BRANDED PUSH BUTTON OPTIONS

This device is available with your choice of trusted 30mm push button brands to meet technical and operational preferences with optional dust boot for specific brands.

EXAMPLES

- Eaton 30mm Push Button
- Schneider 30mm Push Button
- Telemecanique 30mm Push Button

For more information, please visit our website or contact your nearest distributor.

safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K

HEAVY DUTY
BELT RIP DETECTOR

PEACE OF MIND IN CONVEYOR BELT SAFETY

The Safe-T-Rip Heavy Duty Belt Rip Detector offers unparalleled reliability and simplicity in detecting rips in conveyor belts. Its features include simple socket detachment trip operation, a range of robust enclosures, fast rip wire length adjustment, adjustable trip socket tensions, precise belt rip detection, simple and safe reset, and an adjustable tether point cord for added convenience.

Tested to IP66/69K
CE Conformity

DIVERSE ENCLOSURE OPTIONS FOR DIFFERENT ENVIRONMENTS

The Safe-T-Rip device provides flexibility with two enclosure types tailored to various environmental conditions:

- **UV Stable, Impact Modified, Flame Retardant V0 PC/PBT Enclosure:** Offering strong impact resistance and UV stability, suitable for outdoor use.
- **2mm 316 Electro Polished Stainless Steel:** Renowned for its corrosion resistance and polished finish, ideal for harsh environments.



High Impact PC/PBT UV Stable Flame Retardant Plastic



2mm 316 Electro Polished Stainless Steel

The electrical switching circuit of the Safe-T-Rip heavy-duty belt rip detector operates using magnetic or mechanical principals, employing reliable reed or micro switches. The micro switches feature IP67 sealing and silver contacts to ensure dependable circuit performance, while the reed switches are housed in a durable enclosure for added protection.

Adjusting trip tension is straight forward with external spring clip adjustments, allowing for flexibility in settings as needed. Additionally, an external Santoprene rubber boot helps prevent dust and dirt from entering the plug and socket assembly, maintaining operational integrity and compliance with standards.

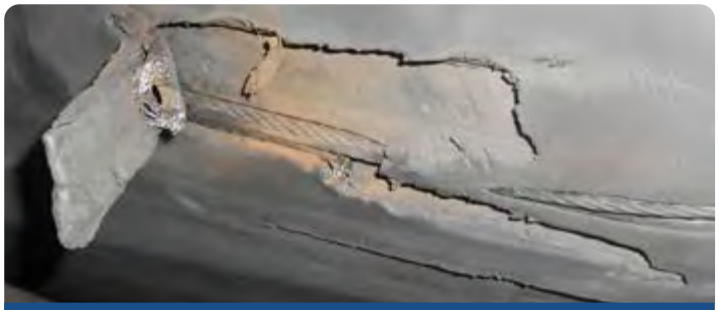
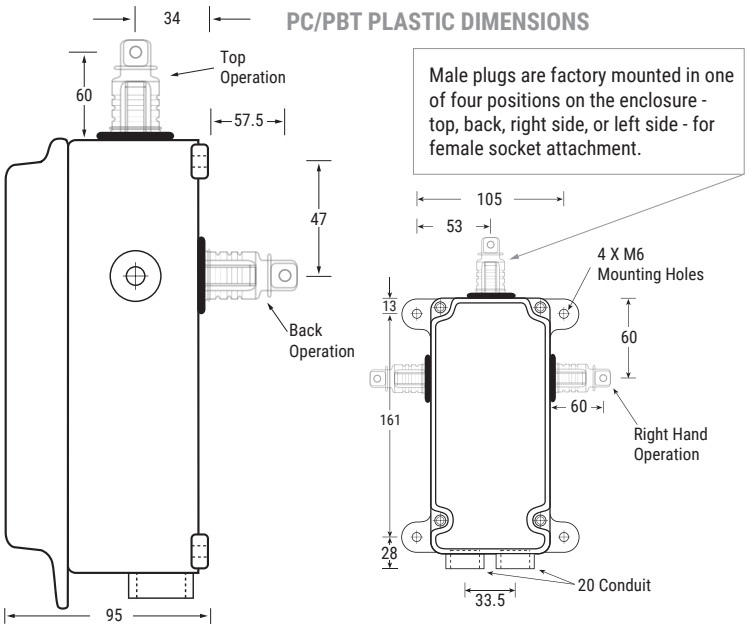


Image depicting a rip in a conveyor belt. Our Safe-T-Rip would detect and activate. Definitions flip side

PC/PBT PLASTIC/STAINLESS STEEL DIMENSIONS

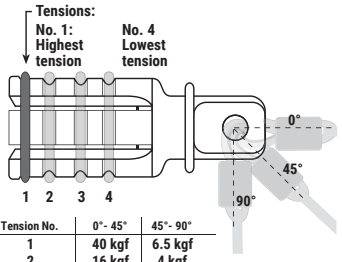
PC/PBT PLASTIC DIMENSIONS



Male plugs are factory mounted in one of four positions on the enclosure - top, back, right side, or left side - for female socket attachment.

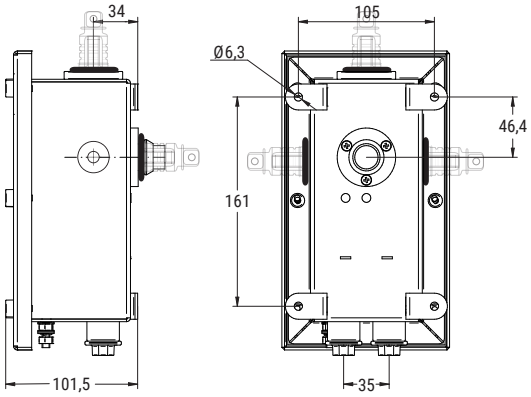
SOCKET

Move stainless steel spring clip for Socket detachment tensions.

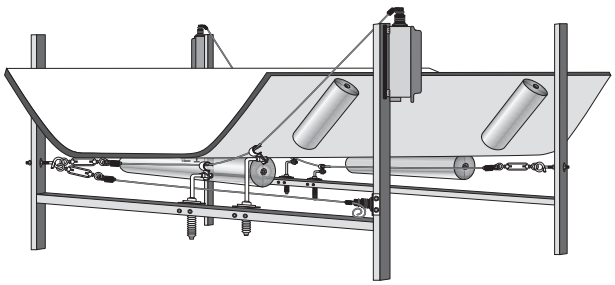


Tension No.	0°- 45°	45°- 90°
1	40 kgf	6.5 kgf
2	16 kgf	4 kgf
3	16 kgf	3 kgf
4	8 kgf	2.5 kgf

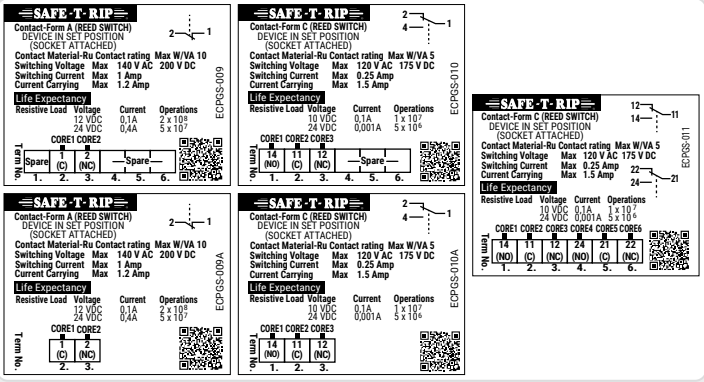
STAINLESS STEEL DIMENSIONS



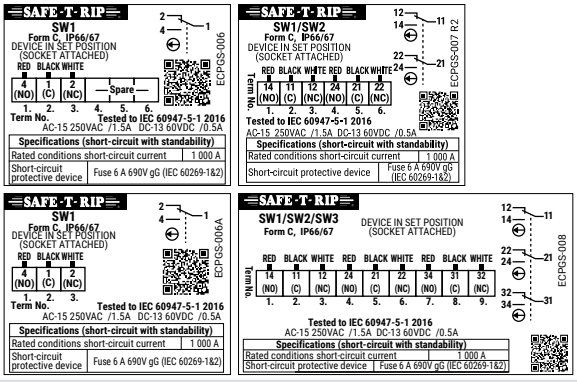
CONVEYOR BELT SYSTEM INSTALLATION



REED SWITCH STICKERS



MICRO SWITCH STICKERS



CONVEYOR BELT DAMAGE DEFINITIONS

According to Safe-T-Products, a **“split belt”** is defined as a split that occurs down the length of the conveyor belt, typically along its longitudinal axis. This type of damage is often caused by material becoming lodged in the chute at the tail end of the conveyor and subsequently penetrating the belt or becoming trapped at the head end of the conveyor system under a cover or similar obstruction. As a result, the continuous operation of the conveyor belt is compromised, leading to the need for repair or replacement to restore functionality and safety within the conveyor system.

According to Safe-T-Products, a **“belt rip”** is defined as a torn or ripped part or hole in a conveyor belt resulting from an object penetrating the belt and either punching through it or ripping the top layer into a flap. This type of damage typically occurs when foreign objects or sharp materials encounter the conveyor belt, causing a rupture or separation in the belt material. As a result, the integrity of the conveyor belt is compromised, leading to potential disruptions in material handling operations and the need for repair or replacement of the damaged section.

safe-t PRODUCTS
Targeting Safety

IP RATED 66/69K

CONVEYOR BELT MISALIGNMENT DEVICE

ENSURING SAFETY AND COMPLIANCE

The Safe-T-Drift heavy-duty belt misalignment device offers a dependable solution for monitoring and controlling belt alignment in high-speed applications. Designed with robustness in mind and compliant with international standards, including Ex zones, this device ensures safety and compliance across diverse industrial environments. With its dual operational capability, precise adjustability, and durable construction, the Safe-T-Drift guarantees long-lasting and trouble-free performance, elevating safety and efficiency in conveyor belt operations.



Tested to IP66/69K
CE Conformity

DIVERSE ENCLOSURE OPTIONS FOR DIFFERENT ENVIRONMENTS

The Safe-T-Drift device provides flexibility with two enclosure types tailored to various environmental conditions:

- **UV Stable, Impact Modified, Flame Retardant V0 PC/PBT Enclosure:** Offering strong impact resistance and UV stability, suitable for outdoor use.
- **2mm 316 Electro Polished Stainless Steel:** Renowned for its corrosion resistance and polished finish, ideal for harsh environments.



High Impact PC/PBT UV Stable Flame Retardant Plastic



2mm 316 Electro Polished Stainless Steel



HORIZONTAL ARMS



VERTICAL ARMS

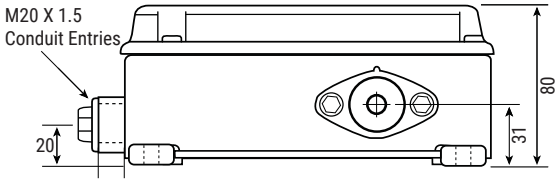
FEATURES

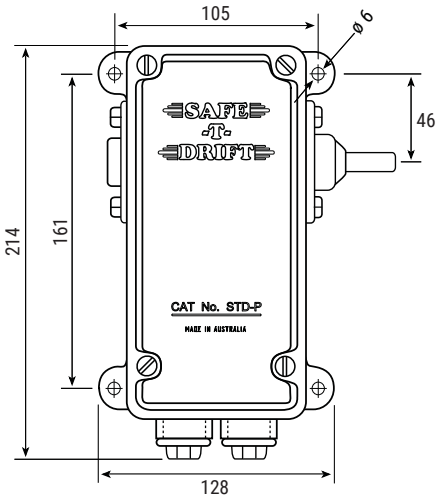
- All external fixings are 316 Stainless Steel.
- Operating shaft bushings are UV stable, flame retardant 15% GF nylon, for maintenance free operation.
- Operating shaft sealing via a double lip oil seal, with external dust protecting boot.
- Operating arm has 90° range of motion with easily adjustable switching points from 5° to 75°.
- Standard unit has both **Alarm & Trip** S.P.D.T Change-over Safety Micro Switches with Direct Opening Action (IEC 60947-5- 1 Annex K) in contact element form C tested and passed to IEC 60947-5-1.
- Micro switches pre-wired to tunnel or rail mounted terminals.
- Devices available to operate in either vertical or horizontal planes.
- Large variety of roller arms fit the device.
- Dual 20mm conduit entries for wiring ease.
- External mounting feet for simple and fast installation.

ROLLER ARMS

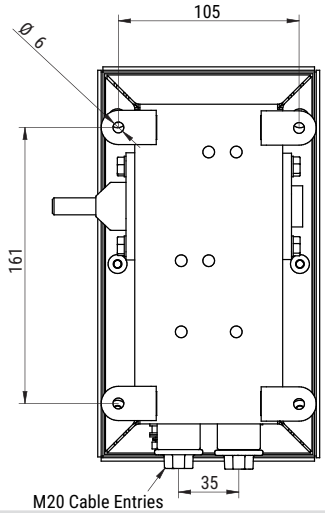
- Solid or sprung shaft roller mounting arms, available either vertical or horizontal orientation.
- Rollers are IP66/69k 316 Polished Stainless Steel and available in either 50mm diameter or 25mm diameter with high speed sealed bearings.
- Arms are fully adjustable through 360°.

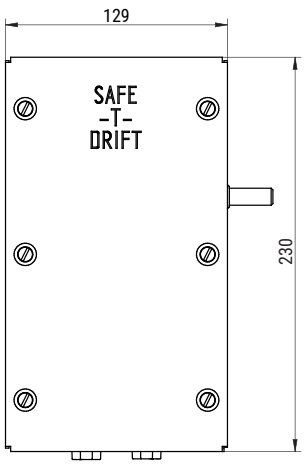
PC/PBT PLASTIC/STATIC DISSIPATIVE PLASTIC DIMENSIONS

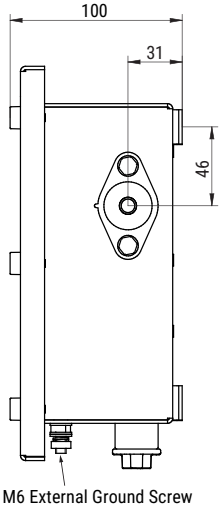




STAINLESS STEEL DIMENSIONS







safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K

HEAVY DUTY LIMIT DEVICE
SUITABLE FOR INDUSTRIAL, FOOD, TRANSPORT & MINING APPLICATIONS

The Safe-T-Limit Heavy Duty Limit Device, is made for applications requiring a device which caters for heavy duty applications, having a pre-warn direct opening trip contact and a final direct opening trip contact.
Dual direction operation (ie. right hand /left hand is also available). It's unique spring /cam operator ensures long, trouble free operation, in the most severe environmental situations.

Tested to IP66/69K
CE Conformity

DIVERSE ENCLOSURE OPTIONS FOR DIFFERENT ENVIRONMENTS

The Safe-T-Limit device provides flexibility with two enclosure types tailored to various environmental conditions:

- **UV Stable, Impact Modified, Flame Retardant V0 PC/PBT Enclosure:** Offering strong impact resistance and UV stability, suitable for outdoor use.
- **2mm 316 Electro Polished Stainless Steel:** Renowned for its corrosion resistance and polished finish, ideal for harsh environments.

PRECISION OPERATION & FLEXIBILITY

The Safe-T-Limit supports dual-direction operation for both left-hand and right-hand configurations. It features 90° full movement of the operating arm, with adjustable switching points from 5° to 75°, allowing for precise control and customisation.

LONG-LASTING & MAINTENANCE-FREE

A robust spring and cam mechanism ensures long-term, trouble-free performance. The operating shaft is sealed with a double-lip oil seal and an external dust-protecting boot, providing extra protection against contaminants and extending the device's lifespan.



High Impact PC/PBT UV Stable Flame Retardant Plastic Shown with Flow Arm Kit

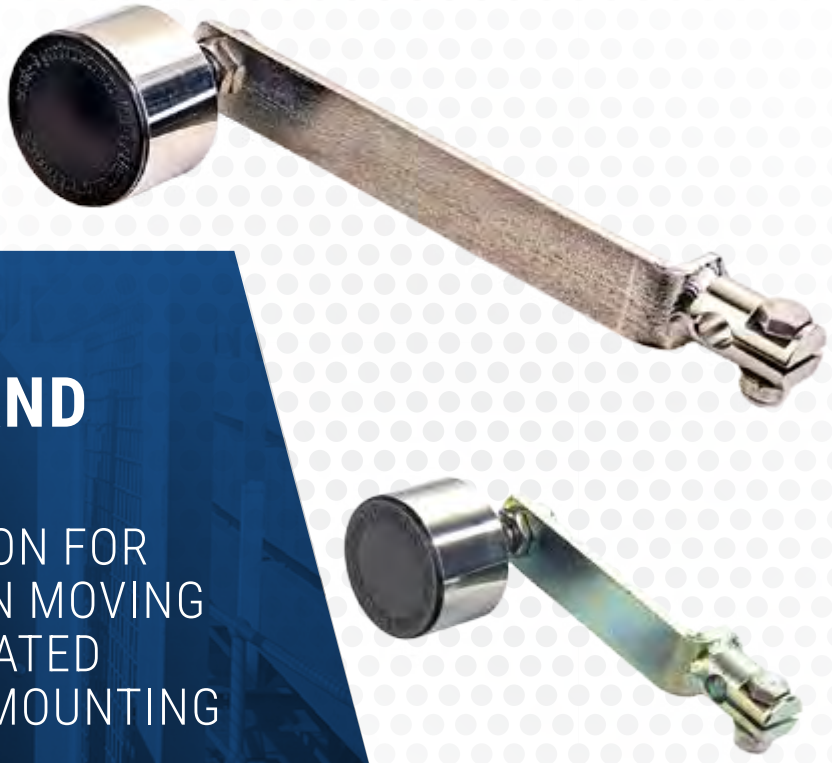


High Impact PC/PBT UV Stable Flame Retardant Plastic Shown with a LA Roller Arm

CERTIFIED SAFETY COMPLIANCE

Equipped with ALARM & TRIP S.P.D.T Change-over Safety Micro Switches, the Safe-T-Limit meets Direct Opening Action requirements (IEC 60947-5-1 Annex K). Micro switches are pre-wired to tunnel or rail-type terminals, ensuring easy installation and secure electrical connections.

safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K

SAFE-T-LIMIT ARMS AND ROLLERS

DURABLE, ADAPTABLE SOLUTION FOR CONTROLLING STOP LIMITS ON MOVING MACHINERY WITH IP 66/69K RATED COMPONENTS AND FLEXIBLE MOUNTING OPTIONS

ARM AND ROLLER FEATURES

The Safe-T-Limit range of arms and rollers provides a straightforward solution for applying protective stop control to moving machinery parts that require this type of control. By easily adapting the Safe-T-Limit protective stop control device, machinery can achieve a controlled limit stop. The rollers are IP 66/69K rated, equipped with sealed bearings and a dust boot to ensure smooth movement when the moving machinery contacts the arm. The dust boot design also allows the arm to be mounted upside down if necessary.

The material flow paddle arm can be supplied in either electro-polished 316 stainless steel or with a U.H.M.W.P.E cover, offering versatility for various applications such as conveyor material flow, train chute retraction indication, over-height detection, and more. The arm features a simple clamping system that attaches to an M10 shaft, allowing the arm to be mounted at any rotational angle for flexible installation.



High Impact PC/PBT UV Stable Flame Retardant Plastic Shown with Flow Arm Kit



High Impact PC/PBT UV Stable Flame Retardant Plastic Shown with a LA Roller Arm

ARM AND ROLLER TYPES

ROLLER LIMIT ARM



STLS-LA

STLS-LA-SS

ROLLER LIMIT ARM



STLS-LS

STLS-LS-SS

ROLLER LIMIT ARM



STLS-HA

STLS-HA-SS

CHAIN LIMIT ARM



STLS-VASB-2



STLS-VASB

CHAIN LIMIT ARM



STLS-VALB-2



STLS-VALB

LIMIT ARM



STLS-VA



STLS-VASR

MATERIAL/MACHINERY FLOW ARM



STLS-PA

FLOW ARM SLEEVE



STLS-SLEEVE454

STLS-SLEEVE700

MATERIAL/MACHINERY FLOW ARM KIT



STLS-PAC454

STLS-PAC700

safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K

22MM BUTTON VERSION

PUSH BUTTON STATION
AUXILIARY CONTROL STATIONS

Our Push Button Stations (PBS) are engineered to withstand the toughest environments while providing customisable control options for industrial, food, and mining applications. With enclosures available in high-impact plastic, aluminum, and stainless steel, and a design that ensures superior protection against water and dust ingress, our PBS range offers unparalleled durability and performance.

Tested to IP66/69K
CE Conformity

DIVERSE ENCLOSURE OPTIONS FOR DIFFERENT ENVIRONMENTS

Available in three enclosure types to suit various environmental conditions and requirements:

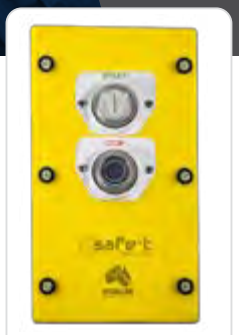
- **UV Stable, Impact Modified, Flame Retardant V0 PC/PBT Enclosure:** This plastic enclosure provides strong impact resistance and is suitable for outdoor use due to its UV stability.
- **3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure:** This robust enclosure type offers excellent corrosion resistance and durability.
- **2mm 316 Electro Polished Stainless Steel:** Known for its superior resistance to corrosion and its polished finish, this enclosure is ideal for harsh environments.

Ideal for Tough Environments: Designed to excel in industrial, food, and mining applications, our PBS enclosures thrive in the harshest environments.

Customisable Control Options: Each enclosure lid can feature up to three 22mm diameter panel mount auxiliary control holes.
These can be fitted with our standard selection of buttons, selector switches, indicator lights, and potentiometers, some supporting up to five contact blocks.



High Impact PC/PBT UV Stable Flame Retardant Plastic



3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure



2mm 316 Electro Polished Stainless Steel

Superior Ingress Protection: Our PBS range maintains its Ingress Protection (IP) rating even when fitted with controls that typically have lower ratings. When equipped with controls from our standard range and installed in specially designed shrouds, the devices achieve an impressive IP66/69K rating.

Enhanced Seal Integrity: A common failure point in most control stations is the seal's inability to withstand water ingress during wash-downs or heavy rains. Our innovative design addresses this with a one-piece lid seal fitted into a groove and protected by an external solid lip that extends over the sealing edge when the lid is closed. Conduit entries are sealed with specially designed O-ring grooved plugs.

CONTROL PROTECTION SHROUDS

To further enhance the IP rating, PBS lids are equipped with control protection and labeling shrouds. These shrouds, secured by two screws into blind mounting holes, safeguard the controls with seals from direct sunlight, dust, and impact from water jets. This design ensures a longer lifespan for controls and prevents water, dust, and foreign material ingress, thereby maintaining the station's safety and integrity.

Our Push Button Stations are engineered for reliability and longevity, providing exceptional protection and performance in any challenging environment.

CONTACT BLOCK

Each Device Is Fitted with 1 NO Contact Block and 1 NC Contact Block.



NO



NC

CONTACT BLOCKS AVAILABLE

SHROUD

Shroud Fitted to Increase Buttons IP Rating to 69k. Other Wording Available.





BUTTONS AVAILABLE



MORE BUTTONS AVAILABLE



Choose from our range of button options, including flush push, extended push, key operation, and more, all available in various colors.



STRUT MOUNTING SYSTEM

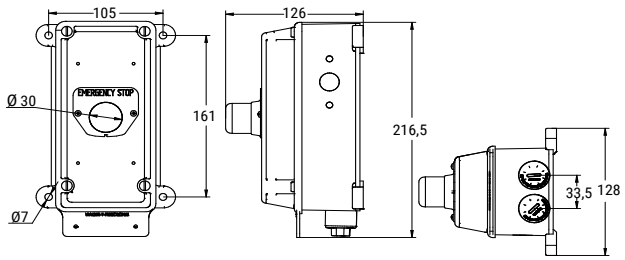
Our struts provide a simple solution to mounting of the safety products either to new or existing structures.

Our custom designed sliders that fit into the 41 x 41mm strut allow for easy repositioning of products, this is achieved by one or two spring loaded fixing bolts that only require minimal adjustment, creating a simple and easy mounting solution.

Our struts come in 316 stainless steel strut and electro polished CF8M strut mounting parts.

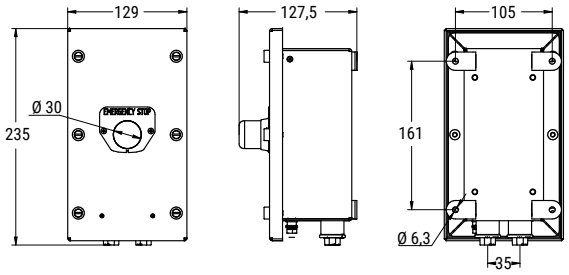
PC/PBT PLASTIC EMERGENCY STOP

30mm DIAMETER BUTTON SHOWN AS EXAMPLE



ALUMINIUM/STAINLESS STEEL EMERGENCY STOP

30mm DIAMETER BUTTON SHOWN AS EXAMPLE



safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K

22MM BUTTON VERSION

MINI PUSH BUTTON STATION BOX

AUXILIARY CONTROL STATION

The Mini Push Button Station (PBS) Box is a space-saving version of our standard PBS, engineered to deliver the same high performance and durability in a more compact design. Ideal for industrial, food, and mining environments, it offers customisable control options with robust protection against harsh conditions.

Tested to IP66/69K
CE Conformity

KEY FEATURES:

- **Compact Design:** Perfect for limited-space installations without compromising functionality.
- **IP66/69K Rated:** Superior water and dust resistance, ensuring reliable operation in extreme environments.

DIVERSE ENCLOSURE OPTIONS:

Available in three enclosure types to meet various environmental demands:

1. **UV Stable, Impact-Modified, Flame Retardant V0 PC/PBT Enclosure:** Offers strong impact resistance and UV stability, ideal for outdoor use.
2. **3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entry (Powder-Coated):** Provides excellent corrosion resistance and durability.
3. **2mm 316 Electro Polished Stainless Steel:** Exceptional corrosion resistance and a polished finish, perfect for harsh environments.

CUSTOMISABLE CONTROL OPTIONS:

The PBS Mini Box lid supports **two 22mm diameter panel mount auxiliary control holes**, compatible with buttons, selector switches, indicator lights, and potentiometers. Some configurations support up to five contact blocks, offering flexible control solutions.



High Impact PC/PBT UV Stable Flame Retardant Plastic	3mm 5052 Aluminium with 6061 Aluminium Cable Gland Entries and Powder Coated Enclosure	2mm 316 Electro Polished Stainless Steel

ENHANCED SEALING SYSTEM:

- Fitted into a groove in the plastic version and adhered to the aluminium and stainless steel, the lid incorporates an external solid lip extending over the sealing edge, providing enhanced protection against water ingress and ensuring long-term durability in harsh environments.
- **25mm Conduit Entry:** Equipped with a specially designed O-ring grooved plugs for optimal sealing.
- **Button Seal:** The Emergency Stop lid includes a specially designed button protection shroud with labeling, secured via two screws into blind mounting holes. This protects the seal from sunlight, dust, and high-pressure water jets.

CONTROL PROTECTION SHROUDS

To improve the IP rating, the PBS Mini Box includes protective shrouds with labeling, secured by two screws into blind mounting holes. These shrouds protect the controls from direct sunlight, dust, and water jets, extending the lifespan of the controls and maintaining system integrity.

SUPERIOR INGRESS PROTECTION

Even when fitted with our sourced controls, which have a lower IP rating due to seal ingress, the PBS Mini Box maintains its IP66/69K rating when used with our specially designed protective shrouds.

WHY CHOOSE THE PUSH BUTTON STATION MINI BOX?

Compact, durable, and customisable, the PBS Mini Box delivers exceptional control performance in space-constrained environments while ensuring maximum protection and reliability.

CONTACT BLOCK

Each Start - Stop Device Is Fitted with 1 NO Contact Block and 1 NC Contact Block.



NO



NC

CONTACT BLOCKS AVAILABLE

SHROUD

Shroud Fitted to Increase Buttons IP Rating to 69k. Other Wording Available.





BUTTONS AVAILABLE



MORE BUTTONS AVAILABLE

Choose from our range of button options, including flush push, extended push, key operation, and more, all available in various colors.



STRUT MOUNTING SYSTEM

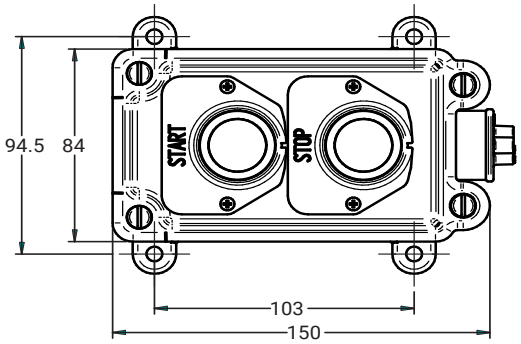
Our struts provide a simple solution to mounting of the safety products either to new or existing structures.

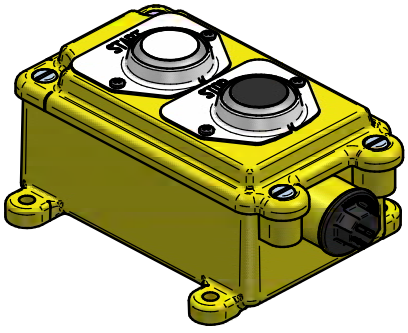
Our custom designed sliders that fit into the 41 x 41mm strut allow for easy repositioning of products, this is achieved by one or two spring loaded fixing bolts that only require minimal adjustment, creating a simple and easy mounting solution.

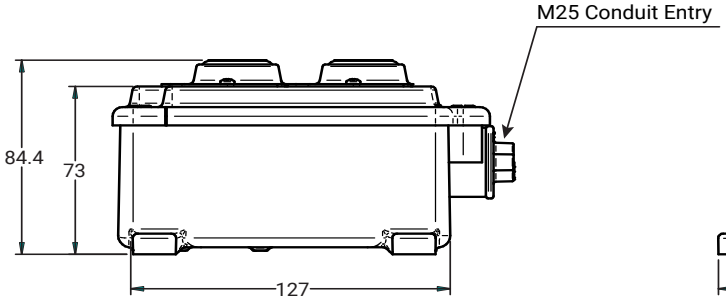
Our struts come in 316 stainless steel strut and electro polished CF8M strut mounting parts.

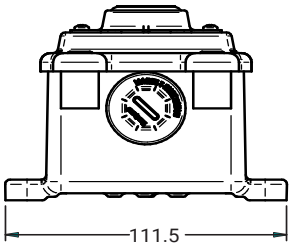
PC/PBT PLASTIC EMERGENCY STOP

30MM DIAMETER BUTTON SHOWN AS EXAMPLE









safe-t PRODUCTS
Targeting Safety



MULTI-DEVICE REPLACEMENT

SEAMLESS SAFETY UPGRADES

HASSLE-FREE DEVICE REPLACEMENT

SAFE-T-PRODUCTS OFFERS A HASSLE-FREE SOLUTION FOR UPGRADING EXISTING SAFETY DEVICES, EMPHASISING FLEXIBILITY AND EASE OF INSTALLATION.

CE Conformity



MULTI-REPLACEMENT DEVICE PLATE

Our multi-replacement device plate integrates seamlessly into diverse applications, ensuring a secure and efficient installation without the usual complications. This versatile solution allows users to transition smoothly to our reliable alternatives.

SPECIFICALLY DESIGNED MOUNTING FEET BRACKETS

To enhance adaptability, our specifically designed mounting feet brackets support the installation process, providing additional security and stability for various setups.

EATON TRIP WIRE SWITCH REPLACEMENT

We offer a simple replacement solution for the E2020 Eaton trip wire switch. Our solution utilises the stainless steel Safe-T-Pull, designed with 25mm conduit entries mounted on the sides of the device. This configuration allows you to reuse the existing cabling, as the original Eaton E2020 model also has side-mounted entries.

This approach minimises downtime and provides a seamless transition to a more robust and reliable safety switch solution.

SAFE-T-PULL DEVICE

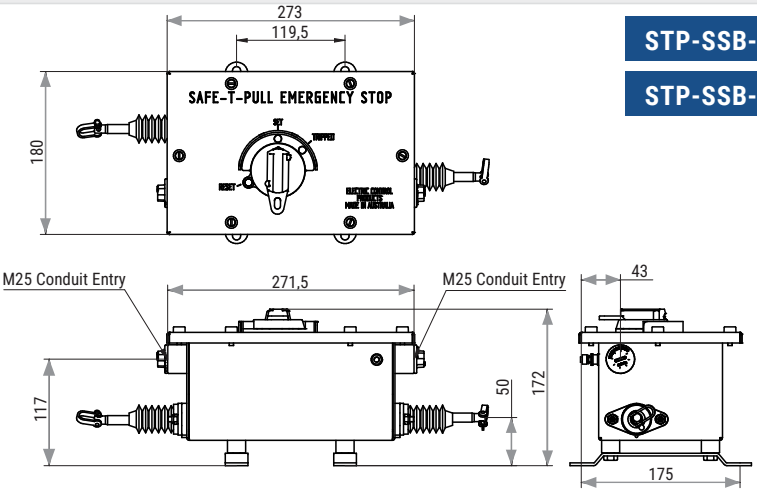
The Safe-T-Pull device exemplifies our innovative solutions. When used in conjunction with our multi-replacement device plate, mounting feet brackets, and stainless steel glands, it effortlessly attaches to existing anchors. This device acts as a vital safety mechanism, stopping machinery or conveyor systems when conditions such as wire removal, slackening, over-tensioning, activation, or manual dial use are met. With integrated direct-opening safety micro switches and a reset dial, users benefit from both automated and manual control for emergency stops, enhancing overall safety.

COMPREHENSIVE RANGE OF PRODUCTS

Safe-T-Products takes pride in offering a comprehensive range of products designed to replace existing devices seamlessly. From the multi-replacement device plate to the Safe-T-Pull device, our solutions ensure robust safety, performance, and ease of installation, making the upgrade process hassle-free.

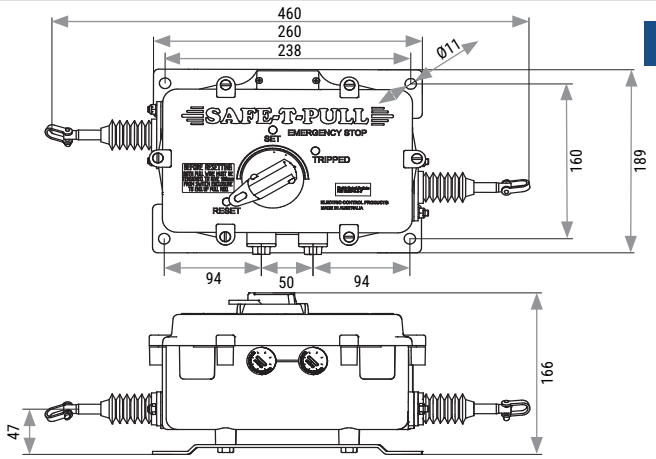
Dedicated to improving conveyor safety, the Safe-T-Products design team continuously addresses industry needs, developing rigorously tested devices that prioritise personnel safety while ensuring a straightforward replacement process.

DIMENSIONS

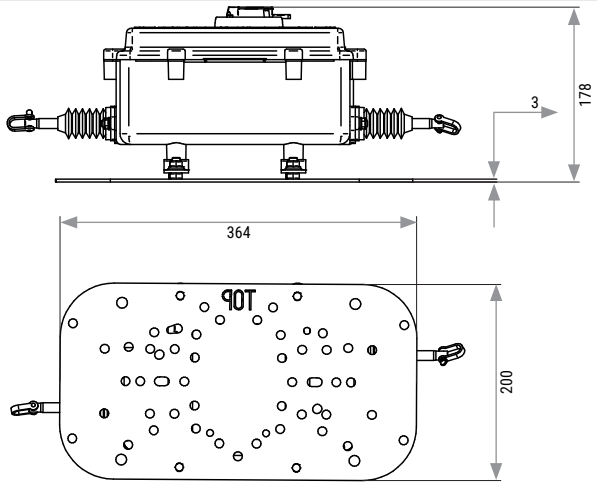


STP-SSB-2-DOW

STP-SSB-4-DOW



NHP-FEET

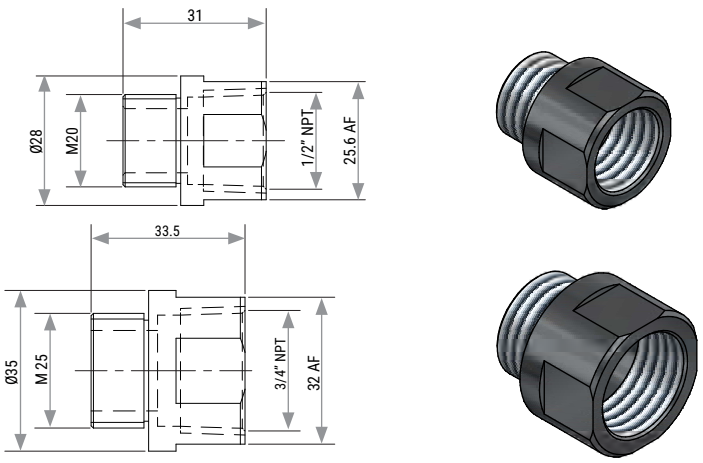


STP-MULTI

Zinc Plated Mild Steel Plate

STP-MULTI-SS

316 Electro Polished Stainless Steel Plate



G-1/2NPT

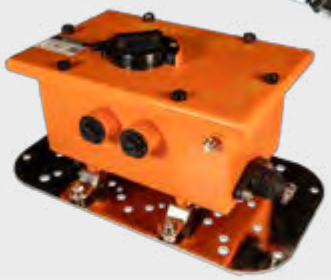
G-3/4NPT

REPLACEMENT LIST



BRAND	TYPE
EATON	E2020





BRAND	TYPE
NHP	NTW 55-4

BRAND	TYPE
BULK PRO	SS-2
BULK PRO	SS-3
KIEPE	HEN
KBT	TPR22-PR
KBT	NSR22-PR
KBT	NSR66-PR
KBT	NSR66-PR3
KBT	NSR11-PR
KBT	NSR12-PR
MATSUSHIMA	ERTD-50
STEUTE	ZS 92 S
CONVEYOR COMPONENTS COMPANY RS	
CONVEYOR COMPONENTS COMPANY PC	
ABB	LINE STRONG 2 ALL TYPES
ABB	LINE STRONG 3 ALL TYPES
BRAMCO	BK400
AUSTDAC	ESS3
AMPCONTROL	PK
DUK	LH SERIES
DAE SUNG	DBSS-10
DAE SUNG	DBSS-10-U
AEG	NSR
OMRON	ER SERIES
IDEM	GLH SERIES
SNTOOM	KLT2
HONEYWELL	2CPSC1A1
NHP	NTW 55-4
ALLEN BRADLEY	LIFELINE 4

BRAND	TYPE
METRIC TO NATIONAL PIPE THREAD	
RAMSEY PROLINE	SPS



safe-t PRODUCTS
Targeting Safety



IP RATED 66/69K OPERATIONS CONTROL DEVICE

PULL CORD OPERATED

Introducing our state-of-the-art Safe-T-Stop-Pause-Start device, engineered for intuitive human operation to either stop a process, pause it temporarily, or resume it upon releasing the cord. This self-resetting device enhances safety by allowing operators to control operations from a distance, keeping them away from hazardous areas while maintaining seamless workflow efficiency.

Tested to IP66/69K
CE Conformity

SAFETY MECHANISMS AND COMPLIANCE

Equipped with **three independent positive drive activation mechanisms** and the option of up to **three S.P.D.T. direct-opening safety micro switches**, our Safe-T-Stop-Pause-Start device meets the highest safety standards. These micro switches have been rigorously tested and comply with the stringent requirements of **IEC 60947.5.1**, ensuring reliability and performance during activation.

Device activation occurs when the cord is pulled and held in any direction. Additionally, if the cord becomes loose or is cut, the device will automatically activate and remain in this position until the cord is properly reinstated, ensuring a **fail-safe response** in these situations.

The incorporation of the **PS-60 compensation spring** enables **bidirectional operation**, while the **T-Bar grip and rope ball** provide enhanced usability in **over-height applications**, offering greater flexibility and ease of operation.

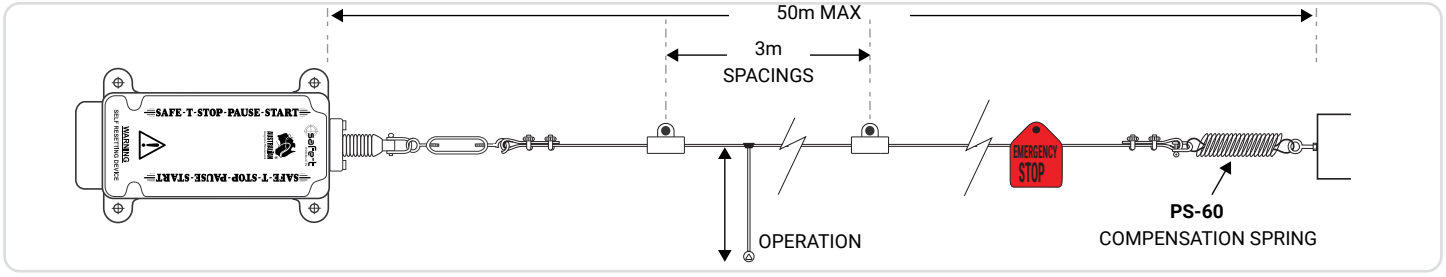
INSTALLATION AND ADJUSTMENT

Installation is designed for **fast and simple setup**, with all **pull cord and device adjustments done externally** for ease of use. The device also allows for **multiple operator control points**, enhancing flexibility and ensuring seamless integration into various operational environments.

Whether used as a **process stop/pause control on a production line** or as a **trigger line for over-height machines**, the system is highly adaptable and can be configured for various applications.

ENCLOSURE SPECIFICATIONS AND DESIGN ELEMENTS

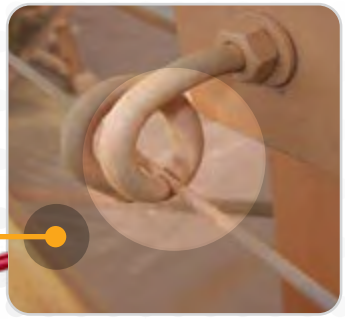
The **IP-rated, UV-stable, high-impact, flame-retardant enclosure** is specifically engineered for **installation in extreme environments**, ensuring long-term durability and reliable operation in demanding conditions.



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The use of pigtails or eyebolts can cause these major functional issues.

ROPE GUIDE TRIBOLOGY

FRICTION AND WEAR OF ENGINEERING MATERIALS

Safe-T-Products has designed the Safe-T-Guide with the enhanced knowledge of UV stabilisation and the use of tribology studies.

The Safe-T-Guides are made from modified polypropylene with added carbon black. With about 3% of carbon black material added, this material acts as an effective UV stabiliser by absorbing the UV light energy and turning it into heat, thus not allowing the UV energy to excite the molecular structure of the polypropylene and cause free radicals to break the structure down. This is one of the reasons the guides are not coloured as they will need to withstand UV for long periods. The adding of carbon black also increases the performance of the polypropylene by enhancing the abrasion resistance, modulus, tear, and tensile strength, which is needed for a pull cord guide to reduce cord wear.

The polypropylene guide also has a slipping agent added into the material at the moulding stage to reduce as much surface friction as possible, so the pull cord runs smoothly through the guide. Pig tails and eyebolts have a very small surface area of pull cord support because they are usually made from 10mm diameter rough surfaced round bar, and the rope sits on this small radius point of the bar. This small rough radius point causes three faults that arise over a short amount of time. One is the vibration of the pull cord moving at 90 degrees to the pigtail/eyebolt axis. The small rough radius wears the coating of the pull cord, and the cord can become stuck to the support via the convex made in the pull cord coating or the coating may cold weld to the support. Two, the pull cord expands, and contracts and the tribology studies show the friction motion cuts into the steel pigtail/eyebolt and becomes jammed into the diameter of the bar. Three, all these then cause extreme friction and safety system failure. These are the reason the Safe-T-Guide has a long friction free surface to support the pull cord and allow for a free-flowing pull cord system.

Also, in the design the guides are loose and are allowed to follow the pull cords axis as the cord moves or is deflected allowing better pull cord movement without causing pull cord or emergency stop safety function failure.

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IP RATED 66/69K

ADVANCED PRE-START WARNING FOR CONVEYOR BELT SYSTEMS

SAFETY FIRST WITH VISUAL AND AUDIBLE ALERTS

30-SECOND PRE-START WARNING

Tested to IP66/69K
CE Conformity

VISUAL AND AUDIBLE ALERTS

The Safe-T-Alarm provides a reliable 30-second pre-start warning with both visual and audible signals, ensuring maximum safety for personnel working around conveyor belt systems. Designed to thrive in the toughest industrial environments, it's a must-have for safety-conscious operations in mining, food, and other industries.

KEY FEATURES OF THE SAFE-T-ALARM:

1. **Engineered for Harsh Environments**
   - » Durable Enclosure: High-impact plastic (UV Stable, Impact Modified, Flame Retardant V0 PC/PBT) offers strong resistance to impact and environmental conditions, making it suitable for outdoor and industrial use.
   - » Built for Tough Applications: Ideal for mining, food, and industrial sectors, the Safe-T-Alarm performs exceptionally in the harshest settings.
2. **Audible Warning with ESM Panel Mount Buzzer**
   - » High Sound Pressure: Up to 100 dB(A), adjustable to suit your environment.
   - » Tone Options: Choose between 2 tones, steady or pulsing, which can be externally switched.
   - » IP 65 Protection: Withstands challenging conditions while ensuring long-lasting reliability.
   - » Compact Design: Fits Ø 22.5 mm/M22 panel sizes with an optional adapter for M30.5 mm.
3. **Visual Warning with IBM Panel Mount LED Beacon**
   - » Modern LED Technology: 9 LEDs provide a clear signalling effect with steady or flashing light options.
   - » Strobe/Flash Frequency: 2 Hz with a 100% duty cycle, ensuring continuous operation.
   - » Extended Service Life: LED light source rated for 100,000 hours of operation.
   - » IP 65 Protection: Reliable performance even in rugged environments. Prewired models with IP 67 available on request.
4. **Laser Engraved Identification Tag**
   - » Each Safe-T-Alarm device includes a customisable laser-engraved identification tag for easy equipment tracking and management.

safe-t PRODUCTS
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IP RATED 67/69K

20 MM



ECP-CP20

25 MM



ECP-CP25

Use 17MM Spanner/Socket or Flat
Blade Screwdriver
Max Torque 1NM

CUSTOM DESIGN CONDUIT PLUGS

TAILOR-MADE CONDUIT PLUGS

Safe-T-Products presents specially crafted conduit plugs, offered in both 20mm and 25mm sizes to guarantee a seamless fit to our device. Driven by a lack of options in the market meeting our rigorous standards, we took the initiative to design and manufacture these plugs, displaying an impressive IP rating of 67/69k, emphasising their unmatched reliability and durability. The accompanying image showcases plug fitted with a rubber seal to enhance their protective features.

Fashioned from modified polypropylene infused with carbon black, our conduit plugs are engineered to withstand prolonged exposure to UV light. Approximately 3% carbon black serves as a potent UV stabiliser, absorbing UV light energy and converting it into heat. This critical process prevents UV energy from disrupting the molecular structure of the polypropylene, ensuring protection against the formation of free radicals that could compromise structural integrity. Notably, the deliberate lack of color in the plugs ensures resilience against extended UV exposure. The integration of carbon black not only bolsters UV resistance but also elevates overall performance, enhancing abrasion resistance, flexibility, mechanical strength, and anti-static properties.



Plug and Seal to IP 67/69K Rated

For your ease, our conduit plugs are ready for individual purchase or in convenient packs of 50—just reference the product identification number. To place an order, simply reach out to your nearest distributor.

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IP RATED 66/69K

ELECTRICAL JUNCTION BOX MULTI-THREADED ENTRY JUNCTION BOX

INSURING CIRCUIT CONNECTION PROTECTION

Tested to IP66/69K
CE Conformity

JUNCTION BOX FEATURES

The junction box is a crucial component in any electrical installation that needs to terminate cables that dissect and run in different directions. Featuring multiple 25mm conduit entries that are sealed to IP66/69K when not in use and designed with bottom entry, this junction box minimises the risk of water ingress, ensuring optimal protection and reliability in demanding environments. The boxes can be fitted with 35mm DIN rail terminals on the pre-fitted base plate, which can be easily removed to add terminals and rail as needed, or they can be pre-fitted for purchase.



8, 25mm Conduit Entries Sealed to IP66/69K When Not in Use.



4, 25mm Conduit Entries Sealed to IP66/69K When Not in Use.

safe-t PRODUCTS
Targeting Safety



REFLECTIVE EMERGENCY STOP LOCATION INDICATORS

The Safe-T-Sign is a highly reflective emergency stop location indicator designed for conveyor lanyard devices, pull cords, and push button stations. Made with premium 3M reflective material and backed by a 10-year guarantee, it ensures maximum visibility in all lighting conditions.

OPTIMISED FOR MAXIMUM VISIBILITY & COMPLIANCE

Mounted on a specially engineered bracket, the sign is angled strategically to provide clear visibility from all directions. It complies with OHS Act, Division 3, 4.29 (k) and (m) and is clearly marked and displayed to enhance workplace safety.

The bracket is made from 1.2mm 304 stainless steel and features two 6mm mounting holes, making it easy to install on both existing and new setups. The angled design aligns with Australian Standards AS4024.3610, ensuring the sign remains visible at 15-metre intervals. According to AS4024.3610 Clause 2.10.6.1, Safe-T-Sign placement follows strict safety guidelines—installed at head, tail, and transfer points, with maximum 30-metre intervals where a pull cord is present along the conveyor.

VERSATILE INSTALLATION OPTIONS

The Safe-T-Sign is available with a backing in 304 stainless steel or polypropylene plastic. It features a single 13mm mounting hole or an optional pull cord mounting clip, allowing for easy installation on new or existing rope supports.

ENHANCING SAFETY IN ANY ENVIRONMENT

Designed to increase visibility and durability, the Safe-T-Sign is made from high-grade reflective material and UV-stable ink, making it a reliable safety solution even in low-light conditions.



The tent-style, stainless steel backed Safe-T-Sign emergency stop reflective indicator installed on top of the Safe-T-Products Emergency-Stop device, ensuring high visibility and compliance in all conditions.

SIGN TYPES



Reflective Sign on Stainless Steel Backing



Reflective Sign on Polypropylene Backing



Reflective Sign on Polypropylene Backing with STL Cord Attachment Clip



Reflective Emergency Stop Sign on Tent Style Stainless Steel Backing to Suit Pull Cord



Reflective Emergency Stop Sign on Tent Style Stainless Steel Backing to Suit Push Button



Reflective Sign on Polypropylene Backing with Magnet Attachment

SAFE-T-SIGN

Our range includes the tent-style stainless steel backing suitable for both pull cord and push-button devices, as well as a reflective sign on polypropylene backing with a magnet attachment, a reflective sign on polypropylene backing with an STL cord attachment clip, and non-tension rope attachment clip types. According to Australian Standard AS4024.3610 Clause 2.10.6.1, these signs should be strategically placed at the head, tail, transfer points, and no more than 30-metre intervals along a conveyor where a pull cord is present.



Reflective Sign on Polypropylene Backing with Non Tension Cord Attachment Clip

HARDWARE AVAILABLE



Vectran Cord and Stainless Steel Cord 1000M Roll



Pull Cord Guides Available



Sign Backing for Strut Mount

safe-t PRODUCTS
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LANYARD PULL CORD

DURABLE & COMPLIANT EMERGENCY STOP PULL CORD

The Safe-T-Lanyard is specifically designed for lanyard emergency stop pull cord systems, ensuring reliable safety compliance. Coated with UV-stable red polyurethane, it withstands harsh environments, providing long-lasting durability.



SAFE-T-LANYARD VECTRAN™



SAFE-T-LANYARD 316 STAINLESS STEEL

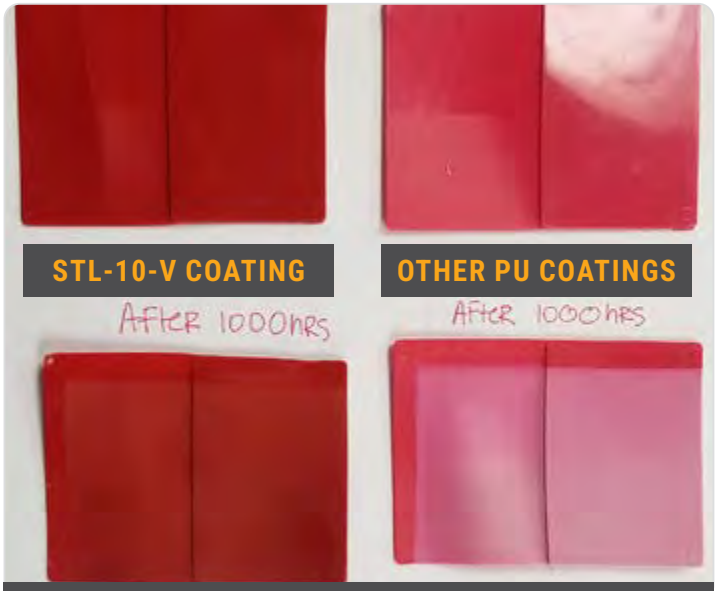
SAFE-T-LANYARD VECTRAN™

Design for Lanyard Emergency Stop Pull Cord systems, Safe-T-Lanyard Vectran features a UV- stable red polyurethane coated (LCP) liquid crystal polymer multifilament yarn cord. This 3mm ID X 5mm OD cord complies with machinery standards, ensuring the use of red coloured pull cords that make for quick identifiable emergency stops and materials of adequate strength for the use of. Consideration for additional reflective signs at intervals not exceeding 30 metres is advised.

SAFE-T-LANYARD STAINLESS STEEL

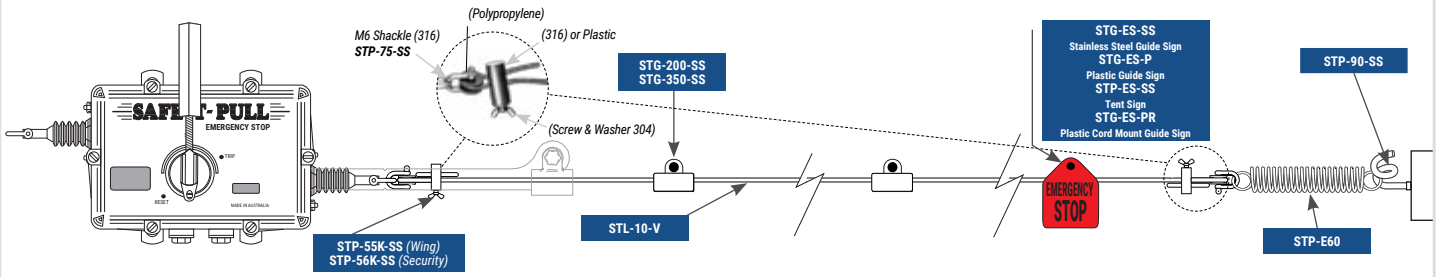
Crafted for Lanyard Emergency Stop Pull Cord systems, Safe-T-Lanyard stainless steel features a UV-stable red polyurethane-coated 316 stainless steel cord with a 3mm ID x 5mm OD. The 7 x 19 construction independent cord core (IWRC) complies with machinery standards, emphasising the use of red-coloured pull cords and suitable materials. The pull cord, is made from UV-stable polyurethane.

When installed correctly using Safe-T-Lanyard (STL-10-SS or STL-10-V) and following installation guidelines, your emergency stop system will comply with all relevant Australian and International Standards.

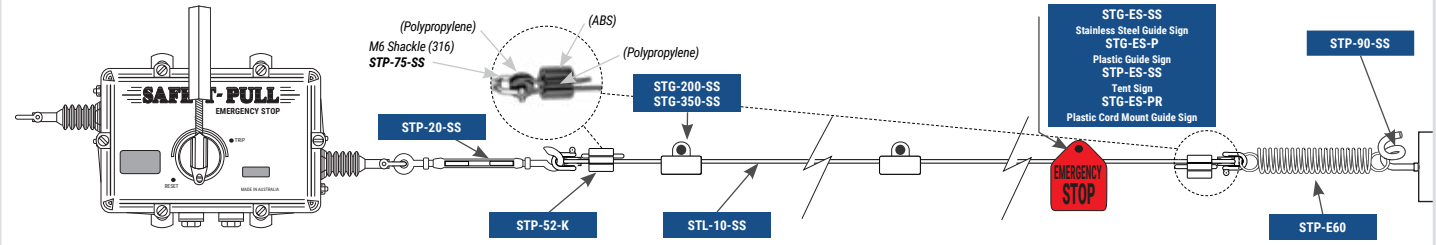


UV Stability: Unlike non-UV-stable coatings that fade or degrade over time, our red polyurethane coating has demonstrated excellent stability under accelerated weathering tests, showing no significant deterioration after 1,000 hours of simulated sunlight exposure. This ensures long-lasting colour visibility and durability in demanding outdoor environments.

VECTRAN CORD RAPID INSTALLATION



STAINLESS STEEL CORD QUICK INSTALLATION



SAFE-T-LANYARD VECTRAN™

Vectran™ is a high performance multifilament yarn spun from liquid crystal polymer (LCP). Vectran™ is the only commercially available melt spun LCP fiber in the world. Vectran™ fiber exhibits exceptional strength and rigidity. Pound for pound Vectran™ fiber is five times stronger than steel and ten times stronger than aluminium weighing in @ 0.022 kg per m.

These unique properties characterise Vectran™:

- High strength and modulus
- Excellent creep resistance
- High abrasion resistance
- Excellent flex/fold characteristics
- Minimal moisture absorption
- Excellent chemical resistance
- Low coefficient of thermal expansion (CTE)
- High dielectric strength
- Outstanding cut resistance
- Excellent property retention at high/low temperatures
- Outstanding vibration damping characteristics
- High impact resistance

(Scan QR Code to Safe-T-Guide Tribology Whitepaper)

(Scan QR Code to Safe-T-Lanyard Test Reports)

SAFE-T-LANYARD STAINLESS STEEL

Safe-T-Products offers the Safe-T-Lanyard (part no STL-10-SS), a 3mm ID x 5mm OD 7 x 19 construction red UV stable polyurethane coated 316 stainless steel (IWRC) cord, weighing 0.06 kg per m.

Considering a 100m lanyard run, the weights vary:

- STL-10-SS: 6 kg (Per 100m)
- STL-10-V: 2.2 kg (Per 100m)

During lanyard cord operation, the weight and friction play a crucial role. When using larger diameter cords of different coatings compared to the recommended Safe-T-Lanyard cord size and coating. This additional weight in coating, along with increased friction, may lead to non-compliance with AS/NZS 4024 standards during testing or emergency stop functioning.

Safe-T-Products has extensively tested their devices with the recommended 3mm ID x 5mm OD cord, confirming compliance with AS/NZS 4024 standards over a 100m lanyard run, after following Safe-T-Products installation instructions.

Friction reduction is vital for an effective and safe functioning emergency stop pull cord system. When using galvanised or zinc plated pigtails or eye bolts, these cause premature cord coating wear which become small grooves locked onto the pigtail or eyebolt that cause extra pull cord system friction or failure. Safe-T-Guide is designed to minimise friction and wear of the pull cord, enhancing the devices effectiveness and improving the Nm pull force required to activate the device. The use of Safe-T-Guide's makes sure the safety system is effective and functioning correctly.

safe-t PRODUCTS

COLTERLEC™

For more information
Call 1300 36 26 26 | sales@colterlec.com.au | www.colterlec.com.au