



LOTO

Process Management Board

One-Stop LOTO Solution



Energy Isolation Comprehensive Catalogue

A: Lockout & Tagout B: BEIAN Tags C: Safety Interlocks

<https://www.beian-lock.com/>

About Us



1. Introduction

Guangzhou Beian Lock Technology is a certified High-Tech enterprise (Certificate No.: GR20184400820) which is capable of providing overall services from R&D Design, Production, Training, Sales to System Integration all in one. Founded in the beginning of 2014, Beian always insists on the principle "no small matter to safety production" and commits to promoting intrinsic safety prevention system to reduce production accidents in various industries and protect life safety for workplace personnels. Beian is gradually creating and developing quality products and services to solve the issue of production and advance the era of modern industry 4.0 through absorbing and introducing advanced technology from home and abroad.

2. Products

Beian is a comprehensive technology entity including trading, R&D production, engineering and system integration. The product ranged from industrial safety lockouts, industrial and commercial smart locks, visual LOTO management software & hardware, interlocks integrated control system, SIS, respiratory protection, various gas detector, protective suits, various PPE supplies, visual management solutions, inspection equipment, monitoring equipment, various flow connection softpipe to industrial filters. Our cooperative partner is around the world including Halma, Dräger and Pilz etc.

3. Intrinsic Safety Division

Intrinsic Safety Division absorbed modern safety production theory and advocated prevention in advance and control of hazard dangerous source to help enterprises improve overall safety protective system to reduce loss and add value through emphasizing on economic concept of safety benefits. Now intrinsic safety division has 24 safes locating in Panyu district of Guangzhou dedicating to creating exclusive and professional safety system to various and different industries considering four dimensions of personnel, machine, environment and management through independent R&D to cooperative R&D and optimizing the combination of resource allocation.

4. Customers



5. Cooperative Customers

Brands	
Solutions	 KBAL01

Brands	
Solutions	 KBYS-2G KBAL02

Brands	 广东能源集团 GUANGDONG ENERGY GROUP
Solutions	 KBAL03

Brands	
Solutions	 BAN-ZSGJ03-1 KBAL02

Brands	
Solutions	 KBAL04

Brands	
Solutions	 KBAL05

A: Lockout & Tagout - LOTO

LOTO Management Board - Optional Type 002

I. What is standard and visual LOTO procedure? 003

- 1. China Standard GB/T 33579-2017 to the definition of LOTO Solution..... 003
- 2. China Standard GB/T 33579-2017..... 003
- 3. The Background of advancing LOTO Nowaday..... 003
- 4. Standard and Visual LOTO Solution..... 004

II. The Necessary Tools of Standard Visualization - LOTO Management Board 004

- 1. Performance Pattern and The Principle of Standard and Visualization..... 005
- 2. The Examples of Combination Usage Recommended..... 006
 - ① Moved Style-Combination of LOTO Management Board
 - ② Fixed Style-Combination of LOTO Management Board

III. Build Your LOTO solution 008

- 1. Preparation Before Building Up..... 008
- 2. Based on Training Required - Choose LOTO Simulation Training Program..... 010
 - ① Working Environment - Choose Right LOTO Related Personnels Training Program
 - ② Choose LOTO Simulation Training Board - Equipment LOTO Process Simulator
 - ③ Other LOTO Simulation Training Program
- 3. Based on Isolation Procedure - Choose Information Board Simulation Scheme..... 012
 - ① Visual LOTO Procedure and Management
 - ② Choose Information Board Module (500mm*500mm)
 - ③ Information Board Accessories
- 4. Based on Working Status - Choose Working Status Board Scheme..... 013
 - ① Confirm Working Mode, Qty. of Personnels, LOTO Procedure and Choose Working Status Board
 - ② Choose Working Status Board Module (500mm*500mm)
 - ③ Working Status Accessories
 - ④ Other Working Scheme
- 5. Based on Isolation Points Status - Choose Lockouts and Lockout Management Scheme..... 018
 - ① Confirm Isolation Status Board through Isolation Points Checklist and Working Procedure
 - ② Choose Isolation Status Board Module (500mm*500mm)
 - ③ Isolation Board Accessories
- 6. Based on Isolation Points Type - Choose Lockout and Lockout Management Scheme..... 026
 - ① Complete the identification of Locking Devices at Isolation Points
 - ② Choose Lockout Management Board Module (500mm*500mm)
 - ③ Lockout Management Board Accessories
 - ④ Other Lockouts Storage Management Scheme
- 7. Based on Workplace Space - Choose Small Working Board..... 039
 - ① Customize Small Working Board as required (500mm*500mm)
 - ② Other Small Working Scheme

B: Beian Tags

I. Cardstock Write-on Tags	042
II. Plastic Write-on Tags	043
III. Metal Write-on Tags	044
IV. Rubber Write-on Tags	044
V. Numbered and Lettered Tags	044
VI. Engraving and Stamping Tags	046
VII. Tracking & Inspection Tags	047
VIII. Accident Prevention Tags	050
IX. Critical Tags	055
X. Blank Plates	055
XI. Numbered & Lettered Plates	056
XII. Parking Permit Tags	058
XIII. Made-to-Order Cardstock Tags	058
XIV. TUFFX Tags	058
XV. Legend Plates	059
XVI. Barcode Plates	060

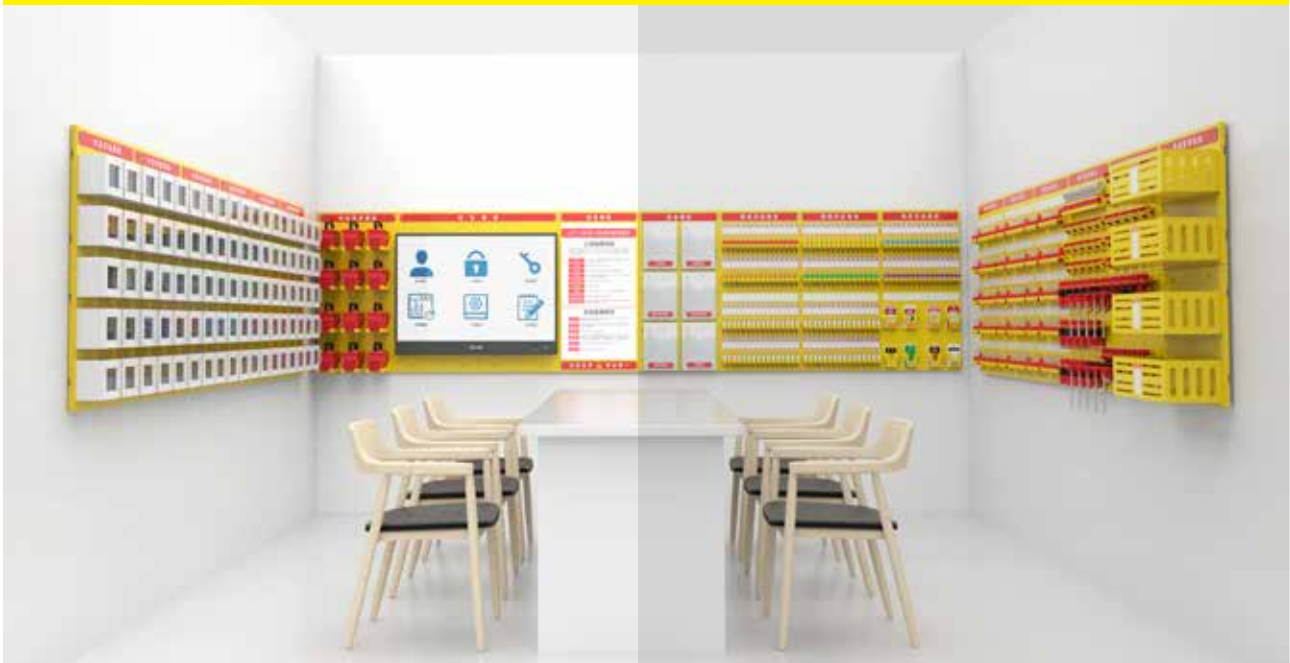
C: Safety Interlocks

I. Overview of Mechanical Protection	062
II. Interlocks Category	064
III. Interlocking Safety Applications	064
IV. AMG Series Trapped Key Safety Door Interlock	065
V. BIL Series Mechanical Program Logic Interlock	068

LOTO

Process Management Board

One-Stop LOTO Solution



A

Lockout & Tagout

- Standard and Visual Solutions

LOTO Management Boards Selections

Simulator Module Selections	 KBYS-1		Information Module Selections	 KBXXA  KBXXB  KBXXC  KBXXD			
Working Status Module Selections	 KBX11  KBX05  KBX81  KBX63  KBX15						
Isolation Module Selections	 KB202-1  KB202-3  KB202-2  KB202-5  KB202-4  KB202-6  KBSK201-1  KBSK201-2  KBSC02-1						
Lockout Management Module Selections	 KBF35  KBD20D  KBDD  KBD55D  KBD12  KBD55  KBGD  KBK11G  KBF35D						
Small Working Module Selections	 KBSA01		Movable Stands Selections	 KBG-2  KBG-4  KBG-6  KBG-8			

I. What is Standard and Visual LOTO Procedure?

1. China National Standard GB/T 33579-2017 define Lockout and Tagout as follows:

Build a set of control system and apply lockout & tagout procedure to prevent machine energy from releasing or transmitting accidentally.



Working Environment

It is applicable to all equipment maintenance working including repair, maintenance, label, check, transform, equipping, test, clean and disassemble etc.



Lockout

Prevent personnel from operating energy sources or equipment until finishing of maintenance.

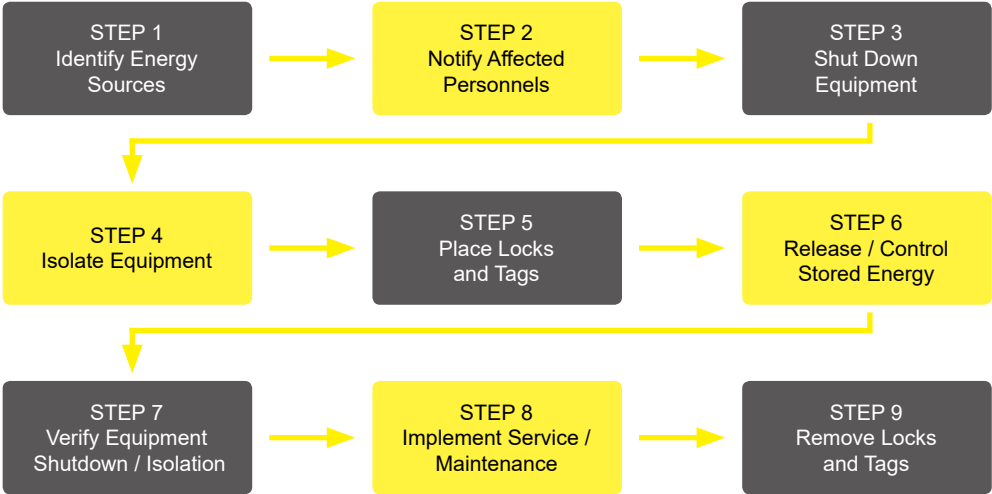


Tagout

Use warning tags to warn other personnels "Do Not Operate" during equipemnt maintenance.

2. China National Standard GB/T 33579-2017

It requires LOTO procedure as follows:



3. The Background of Lockout & Tagout Implementation

In current environment of lockout & tagout, standard problem is still very severe, the procedure is not implemented well. Much working only scratch the surface and personnel do not implement working as regulated. Isolation points is unclear and out of management. The usage of lockouts is lack of records and management. LOTO procedure is untransparent amd low-efficient. It led lockout & tagout procedure have a weak result. As the demand of reforming lockout & tagout procedure is gradually increasing, Beian Lock as pioneer obtained well-reputation in various industries that is always dedicating to improvement and optimization of lockout and tagout procedure and also providing working personnels with safe and effective LOTO services.



4. Standard and Visual LOTO Solution

The Procedure	Current Situation of Conventional LOTO	Standard Implementation Solution	Visual Implementation Solution
1. Identify Energy Sources Apply Risk Assessment to Dangerous Sources, Identify and Sort Out Isolation Points Based on Equipment and Tasks.	No Sorting Out, Working upon Experience	Produce Related Energy Indication Docs Produce Isolation Checklist and Guideline	Use Information Board
2. Notify Affected Personnels Notify All the Personnels Related to Isolation Working.	Mess Procedure, Lack of Management	Use Backend Smart Lock Software Notice Confirm which Equipments should be shut down and Locking Points.	Use Information Board and Smart Lock Backend Software
3. Shut Down Equipment	Unable to Verify	Apply related App to shut off	Use Smart Passive Locks Backend Software
4. Isolate Energy After Shutdown, Operate the Device to Cut Off or Shut Off All Energy Sources	Unable to Verify	Apply related App to shut off	Use Smart Passive Locks Backend Software Records, Lockout Isolation Time and Personnels
5. Place Locks and Tags Place Safety Padlocks, Tags and Safety Lockouts	Mixed Use of Locks, Not Corresponding to Isolation Points	Check Isolation Guideline, Lockout Management Board and Demonstration Board.	Check Isolation Status by Working Status Board and Isolation Status Board
6. Release Stored Energy Control Residue Energy	Lack of Process Management	Isolation Checklist and Guideline	Use Real-Time Monitor Device to check at Backend
7. Verify Equipment Isolation Zero-Energy Verification, Ensure The Effectivity of Lockout and Tagout Before Implementing Service / Maintenance.	Lack of Process Management	/	Use Real-Time Monitor Device to check at Backend
8. Implement Maintenance Complete the Necessary Service / Maintenance Working and Avoid Any Potential Operation that Probably Restore Energy of the Equipment.	Lack of Process Management Personnels are unable to be supervised during working.	/	Use Isolation Status Board and Backend Software Query
9. Remove Locks and Tags Authorize Personnels to Remove Their Own Padlocks, Tags and Lockouts.	Removal Working Disorder Lack of Organized Storing	Procedure Docs., Safety Personnels Backend Software Authorized	Backend Software Query

II. The Necessary Tools of Standard Visualization & LOTO Management Board

It is important part of LOTO Process Management and one of indispensable tools to visual management. Conventional Lockout Station could not replace of LOTO Management Board.



Three Important Messages should be conveyed through Visual LOTO Management:

1. Working Status

2. Isolation Status

3. Guide Information

Three Important Messages should be conveyed through Standard LOTO Management:

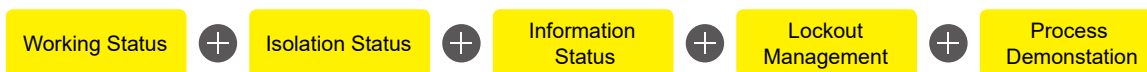
1. Lockouts Management

2. Usage Regulated

3. Don't neglect the little things.

1. The Performance Form and The Principle of Standard and Visualization

Performance Form



The Principle of Standard and Visualization

Board Function Partition		Renderings	Principle of Standard and Visualization
Visual Board Module	Working Status Board		The Principle of Visualization: All the isolation points under single task were locked and then put all the keys into a single group lockout box which should be locked then by each related personnel. It means that each task should be corresponding to each group lockout box and shows working status through usage status of group lockout box. The Boards with Identification
	Isolation Status Board		The Principle of Visualization: Each equipment lock should be corresponding to each isolation points. The usage status of equipment locks can show energy shutoff / isolation status of the equipment. Personnel locks should be held by working personnels which will be locked on group lockout box when working and removed after task completed. The usage status of personnel locks can show the status of task completion. The Boards with Identification
	Information Board		The Principle of Visualization: Various documents of regulations and procedure should be stored here, It includes 《Isolation Checklist》, 《Energy Identified List》, 《LOTO Guideline》 and 《The Record of Lockout Usage and Rental》 etc.
Standard Board Module	LOTO Management Board		The Principle of Standard: Conventional lockout station messed with lockout box storage and caused lack of management due to different positions of equipments in various industries and usage of various lockouts. Belian developed universal electric lockouts and valve lockouts that can solve the problem.
	Small Operating Board		The Principle of Standard: No matter how small working space and equipment it is, it still require a full set of standard usage procedure. Don't neglect the little things, Small Operating Board with full fuction is your best choice in this situation.
	LOTO Simulation Training Board		The Principle of Standard: It's applied to demonstrate how to lock isolation points of equipment and regulate the locking procedure of working personnel to improve working efficiency.

2. Combination Recommended

① Movable Style - LOTO Management Boards Combination



Example

Please choose suitable movable stand upon the actual demands of board module Quantity.



KBG-2

Material:
Euro Standard 4040
Industrial Aluminium
Alloy Material

Size:
500*610*1530mm



KBG-4

Material:
Euro Standard 4040
Industrial Aluminium
Alloy Material

Size:
1000*610*1530mm



KBG-6

Material:
Euro Standard 4040
Industrial Aluminium
Alloy Material

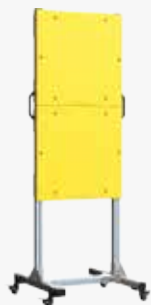
Size:
1500*610*1530mm



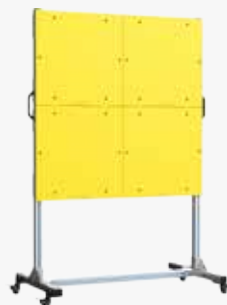
KBG-8

Material:
Euro Standard 4040
Industrial Aluminium
Alloy Material

Size:
2000*610*1530mm



2 Boards Stand



4 Boards Stand



6 Boards Stand



8 Boards Stand

② Fixed Style - LOTO Management Boards Combination



Combo 1: 500mm*2000mm



Combo 2: 500mm*1500mm



Combo 3: 500mm*1000mm



Combo 4: 500mm*2500mm



Combo 5: 1000mm*1500mm



Combo 6: 1000mm*2000mm



Combo 7: 1000mm*1500mm



Combo 8: 1000mm*500mm



Combo 9: 1000mm*1500mm



Combo 10: 1000mm*1000mm



Combo 11: 1000mm*1000mm



Combo 12: 1000mm*1500mm

III. Build Your LOTO solution

1. Preparation Before Building Up

Energy Identification - Produce Isolation Points Checklist.

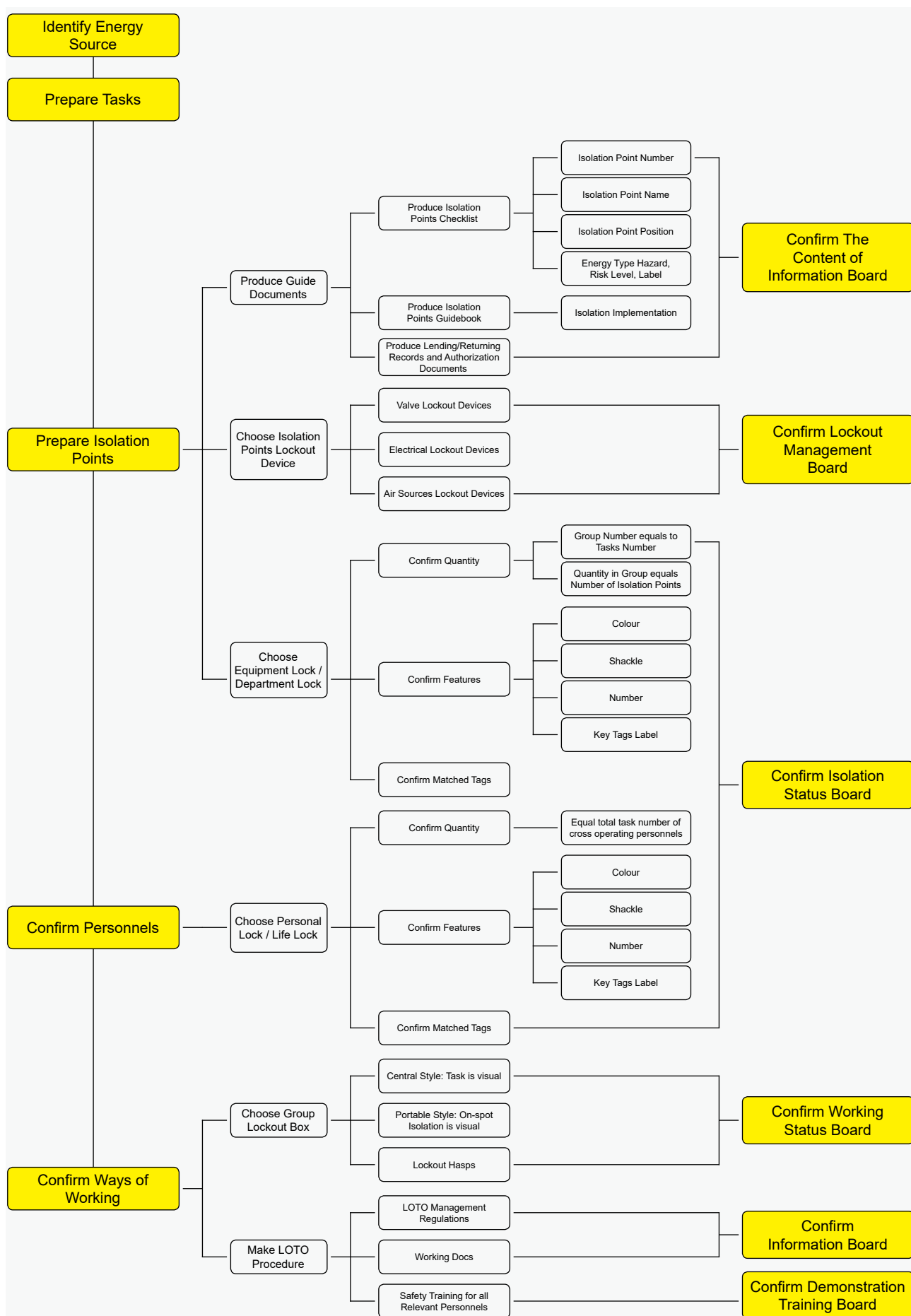
Example: Beijing Shougang Steel

Energy Isolation Module Schedule – Task Risk Identification and Isolation Points Analysis													
S/N	Equipment Isolation Guideline	Specialty Mechanical, Electrical, Instrumental, Manufacturing, Technique	Task Types Repair, Maintenance, Processing, TPM, Manufacturing Operation, Technician Inspection, Equipment Points Inspection	Working Task Preparing step by step upon production line process.	Energy Isolation required or not	Working with energy required or not	Risk Identification To ensure life safety of workshop personnel, it's necessary to include all the risk during working and each task should be listed out.	Isolation Points Analysis					
								Identification According to identification risk, this will help confirm dangerous energy sources in the task and isolation points to shut off dangerous energy source.	Preparation List out all non-repeating Isolation Points		Optimization Combine and optimize isolation points upon energy logic		
									Name	Energy Type	Name	Position	Energy Type
1	Opener Swing Machine Self-Inspection and Isolation Guideline	Mechanical	TPM	Clean oil-dirt and dust of uncoiling machine	YES	NO	Uncoiling machine traverse, mandrel roll, Opener swing press and roll, small trolley lift and traverse, the move of uncoiling machine cause injury.	#5 valve stand-opener swing, #5 valve table-top roller shifting, opener swing CPC#hydraulic pump (MCO01-9-4) power switch	X3 Machine Unit Entrance Hydraulic Station 5# Valve Stand-Opener Swing	Hydraulic	#5 Valve Stand Main Power Switch	Rest Side of Uncoiling Machine	Hydraulic
2		Mechanical	Repair	Inspect and fasten itself bolts of uncoiling machine comprehensively.	YES	NO	Uncoiling machine traverse, mandrel roll, Opener swing press and roll, small trolley lift and traverse, the move of uncoiling machine cause injury.	#5 valve stand-opener swing, #5 valve table-top roller shifting, opener swing CPC#hydraulic pump (MCO01-9-4) power switch	X3 Machine Unit Entrance Hydraulic Station 5# Valve Stand-Peeler	Hydraulic	MCO01-9 Switch	X3 Main Power Room #5J02 Cabinet of Main Power Room on ground	Electricity
3		Mechanical	Repair	Replace traverse hydraulic cylinder of uncoiling machine	YES	NO	Uncoiling machine traverse, mandrel roll, hydraulic pipeline pressure, lubrication pipeline pressure	#5 valve stand-opener swing, #5 valve table-top roller shifting, opener swing CPC#hydraulic pump (MCO01-9-4) power switch	X3 Machine Unit Entrance Hydraulic Station 5# Valve Stand-top roller shifting	Hydraulic	Recycle Water TPR point valve	Machine Unit 25 span below 220 columns	Recycle Water
4		Mechanical	Repair	Fasten Gearbox, Coupling, Traverse Hydraulic Cylinder, Rotary Hydraulic Cylinder Bolt of uncoiling machine	YES	NO	Uncoiling machine traverse, mandrel roll, hydraulic pipeline pressure, lubrication pipeline pressure	#5 valve stand-opener swing, #5 valve table-top roller shifting, opener swing CPC#hydraulic pump (MCO01-9-4) power switch	X3 Machine Unit 1 Uncoiling Machine CPC# Power(MCO# 9-3) Power	Electricity	*****	*****	*****
5		Mechanical	Repair	Inspect tooth surface of Gearbox and measure backlash.	YES	NO	Uncoiling machine traverse, mandrel roll, hydraulic pipeline pressure, lubrication pipeline pressure	#5 valve stand-opener swing, #5 valve table-top roller shifting, opener swing CPC#hydraulic pump (MCO01-9-4) power switch	Uncoiling machine CPC# Hydraulic Pump (MCO01-9-4) Power Supply	Electricity			
6		Mechanical	Repair	Inspect, replace or accurate mandrel of uncoiling machine	YES	NO	Uncoiling machine traverse, mandrel roll, Opener swing press and roll, small trolley lift and traverse, the move of uncoiling machine cause injury.	*****	*****	*****			
7		Mechanical	Repair	Lubricate periodically mandrel of uncoiling machine	YES	NO	Uncoiling machine traverse, mandrel roll, Opener swing press and roll, small trolley lift and traverse, the move of uncoiling machine cause injury.						
8		Mechanical	Repair	Press and roll hydraulic cylinder of uncoiling machine.	YES	NO	Uncoiling machine traverse, mandrel roll, Opener swing press and roll, small trolley lift and traverse, the move of uncoiling machine cause injury.						

Example: Xuehua Beer

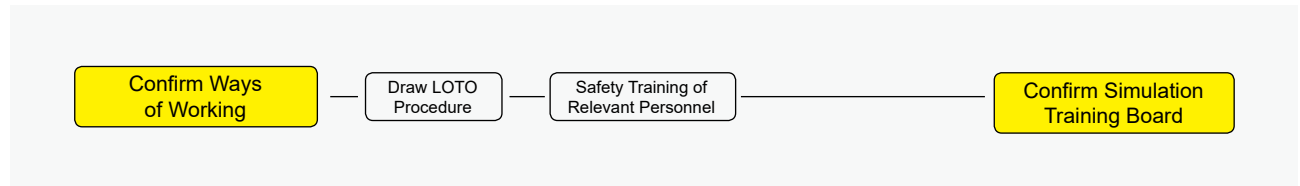
S/N	Application Area	Equipment Name	Relevant Position	Dangerous Energy Type	Ways to Control Energy Sources (Switch / Valve etc)	The Positions of Upper Control Points (Switch / Valve etc)	Lockout Type	Stored Energy Type	Ways to Release Stored Energy	Ways to Verify Zero-Energy	Remark
1	Package	Box Carton Removing Machine	Relevant Asistants	Electric	Power Switch	Box Carton Removing Machine Distribution Cabinet	Electrical Lockout	/	/	Start Box Carton Removing Machine to check equipment working or not	
2	Package	1# Box Carton Removing	Relevant Asistants	Electric	Power Switch	Box Carton Removing Machine Distribution Cabinet	Electrical Lockout	/	/	Start #1 Box Carton Removing to check equipment working or not	
3	Package	2# Box Carton Removing	Relevant Asistants	Electric	Power Switch	Box Carton Removing Machine Distribution Cabinet	Electrical Lockout	/	/	Start #2 Box Carton Removing to check equipment working or not	
4	Package	Box Carton Turning Machine	Relevant Asistants	Electric	Power Switch	Box Carton Removing Machine Distribution Cabinet	Electrical Lockout	/	/	Start Box Carton Turning Machine to check equipment working or not	
5	Package	Bottle Box Separating Machine	Relevant Asistants	Electric	Power Switch	Box Carton Removing Machine Distribution Cabinet	Electrical Lockout	/	/	Start Bottle Box Separating Machine to check equipment working or not	
6	Package	Box Carton Pressing Machine	Relevant Asistants	Electric	Power Switch	Box Carton Pressing Machine Distribution Cabinet	Electrical Lockout	/	/	Start Box Carton Pressing Machine to check equipment working or not	
7	Package	Box Carton Pressing Machine Transmission System	Relevant Asistants	Electric	Power Switch	Box Carton Removing Machine Distribution Cabinet	Electrical Lockout	/	/	Start Carton Transmission System to check equipment working or not	
8	Package	Box Carton Pressing Machine Pressing System	Relevant Asistants	Electric	Power Switch	Box Carton Removing Machine Distribution Cabinet	Electrical Lockout	/	/	Start Pressing System to check equipment working or not	
9	Package	Box Carton Cleaning Machine	Relevant Asistants	Electric	Power Switch	Box Carton Cleaning Machine Distribution Cabinet	Electrical Lockout	/	/	Start Carton Cleaning to check equipment working or not	
10	Package	Bottle Cleaning Machine 30% Concentrated Alkali Tank	Bottle Cleaning Machine Production Technician	Chemical	Butterfly Valve	Pipeline Control Butterfly Valve	Butterfly Valve Lockout	Chemical	Zero-Energy	Check Pressure Meter if indicating Zero or not	
11	Package	Liquidified Alkali Auto-adding Device	Bottle Cleaning Machine Production Technician	Chemical	Butterfly Valve	Pipeline Control Butterfly Valve	Butterfly Valve Lockout	Chemical	Zero-Energy	Check Pressure Meter if indicating Zero or not	
12	Package	Cover Transmission Machine	Bottle Line Repairing Worker	Electric	Power Switch	Beer Filling Machine Distribution Cabinet	Electrical Lockout	/	/	Start Cover Transmission to check equipment working or not	
13	Package	Liquid Level Detector	Beer Filling Machine Production Technician	Electric	Power Switch	Liquid Detecting Machine Distribution Cabinet	Electrical Lockout	/	/	Start Liquid Level Detecting Machine to check equipment working or not	
14	Package	FBI	Beer Filling Machine Production Technician	Electric	Power Switch	FBI Distribution Cabinet	Electrical Lockout	/	/	Start FBI to check equipment working or not	
15	Package	Laser Printer	Paper Packing Machine Production Technician	Electric	Power Switch	Printer Distribution Cabinet	Electrical Lockout	/	/	Start Laser Printer to Check Equipment working or not	
16	Package	Weighing Machine	Palletizing Machine	Electric	Power Switch	Palletizing Machine Distribution Cabinet	Electrical Lockout	/	/	Start Weighing Machine to Check Equipment Working or not	
17	Package	CIP Acid Tank	Beer Filling Machine Production Technician	Chemical	Butterfly Valve	Lower Part of Acid Tank	Butterfly Valve Lockout	Chemical	Zero-Energy	Check Pressure Meter if indicating Zero or not	
18	Package	CIP Hot Water Tank	Beer Filling Machine Production Technician	Heat	Gate Valve	Steam Valve	Gate Valve Lockout	Heat	Zero-Energy	Check Pressure Meter if indicating Zero or not	
19	Package	Transmission Chain	Bottle Line Repairing Worker	Electric	Power Switch	Steam V#Chain Motor Control Cabinet	Electrical Lockout	/	/	Start Chain to check Equipment Working or not	
20	Package	Bottle Transmission Chain	Bottle Line Repairing Worker	Electric	Power Switch	Steam V#Chain Motor Control Cabinet	Electrical Lockout	/	/	Start Chain to check Equipment Working or not	It should implement LOTO procedure for front-end Chain when opening tank chain
21	Package	General Centrifugal Pump	Electrician	Electric	Power Switch	Pump Control Cabinet	Electrical Lockout	/	/	Start General Centrifugal Pump to check Equipment Working or not	
22	Package	Air Pump	Electrician	Pressure (Air)	Pneumatic Valve	Pneumatic Pump Valve	Pulling Pneumatic Pipeline	Pressure (Air)	Zero-Energy	Check Pressure Meter if indicating Zero or not	
23	Package	Electric Pump	Electrician	Electric	Power Switch	Pump Control Cabinet	Electrical Lockout	/	/	Start Electric Pump to check Equipment Working or not	
24	Package	Speed Reducing Machine	Electrician	Electric	Power Switch	Motor Control Cabinet	Electrical Lockout	/	/	Start Speed Reducing Machine to check Equipment Working or not	
25	Package	Air Pressure Pipeline and Manual Valve	Bottle Line Repairing Worker	Pressure (Air)	Valve	Pipeline Valve	Butterfly Valve Lockout	Pressure (Air)	Zero-Energy	Check Pressure Meter if indicating Zero or not	It will require to put on earplugs and safety glasses when cleaning and using compressor air soft pipe
26	Package	Pneumatic Valve (No Dangerour Medium)	Electrician	Pressure (Air)	Manuel Valve or Air Pipeline	Instruments Pneumatic Pipeline and Air Pipe	Pneumatic Pipeline Lockout and Valve Lockout	Pressure (Air)	Zero-Energy	Check Pressure Meter if indicating Zero or not	Must shut off air sources to avoid any potential danger in maintenance when pressure and mechanical energy existing

LOTO Logic as indicated below: Identification of Isolation Points is the start of creating standard and visual LOTO.



2. Based on Training Required - Choose LOTO Simulation Training Board

① Working Environment - Choose suitable LOTO training program for relevant personnels.



② Choose LOTO Simulation Training Board - Equipment LOTO Dynamic Manufacturing Process Simulator



Equipment LOTO Dynamic Manufacturing Process Simulator will replicate a manufacturing unit to indicate residue energy and accumulated energy of pneumatic equipment network based on compressing air energy to explain complete set of LOTO solution in LOTO procedure. It included energy LOTO procedure and isolation points (Air Source and Electric) LOTO solution. It also explain methods of mechanical locking through using fixed rod. By execution of LOTO procedure in reverse order at lower level of cylinder and unlocking in specific order at higher level of cylinder when mechanical locking, it can demonstrate locking procedure.

The Content of Demonstration

1. Energy Type: Electric, Compressing Air, Accumulated Pressure, Residue Energy, Gravity Potential Energy
2. Locking Position: 3 Positions Shut-off Valve, Pressure-Reducing Valve, Flow Valve, Emergency Stop Button, Emergency Start Button, Power Switch, Air Switch, Alternating Current Connector, Hand Valve.
3. Overall System: Emergency Stop System, Pneumatic Jack, Interlocking System, Safety Gate System, Pressure System, Fixed Rod Locking System, Two-Ways Execution System.
4. Isolation Points Locking Solution: Gate Valve Lockout, Ball Valve Lockout, Air Switch Lockout, Circuit Breaker Lockout, Alternating Current Connector Lockout, Fixed Rod Lockout.

LOTO Procedure

Overall Air Sources Power Simulation in Operation.

1. Locking at higher level fixed rod --- Simulating Physical LOTO Solution to Equipments in Operation Area.
2. Open Locking Box (Emergency Stop Button) --Simulating to start Safety Fence
3. Open Pressure-reducing Valve --- Simulating to remove residue energy
4. Close A7,A8,A9 Shut-off Valve --- Simulating to lock Pneumatic Energy Source
5. Close Air Switch and Alternating Current Connector --- Simulating to lock Electrical Energy Source
6. Close Hand Valve --- Simulating to lock Control Switch
7. Start Operation



Size: 500mm*1000mm
Item No.:BAN-ZSGJ03-1
Brand: Beian Lock

LOTO Removal Procedure

Contact backtracking in the order of locking

LOTO Products

F01*1、F03*1、F11*1、D59*1、D55*1、D20*1、D87*1、201*10、K11*1、P04*10、X112*1

③ Other LOTO Simulation Training Program

● Safety Lockout Training Solution - Demonstration Board

Beian Lock produce a large demonstration board to suit general energy isolation program to demonstrate isolation points related to Electric, Valve and Button etc. It will help user to make demonstration and conduct training. (Complete Module Design, Easy to Dissemble and Operate, Visual Training will help personnel understand and execute in operation.)



● LOTO Simulator - Applicable to LOTO Training



LOTO Simulator BAN-ZSGJ04-Industrial Process

- Industrial Process Simulator demonstrate manufacturing process in complex pipeline network. It can demonstrate LOTO by executing locking procedure in reverse order.
- Energy Type: Electric, Movement, Pressure, Residue Energy and Energy Visual Verification
- It can make padlocks, safety equipment (safety protection) linking with entering closed space possible

Overall Features	Group Lockout Box / Emergency Stop System / Light Switch / Pneumatic Jack / Interlocking System / Ball Valve / Compressing Air Tank / Flywheel Valve / Pressure Meter / Tag
Product Size	1800mm x 1650mm x 500mm



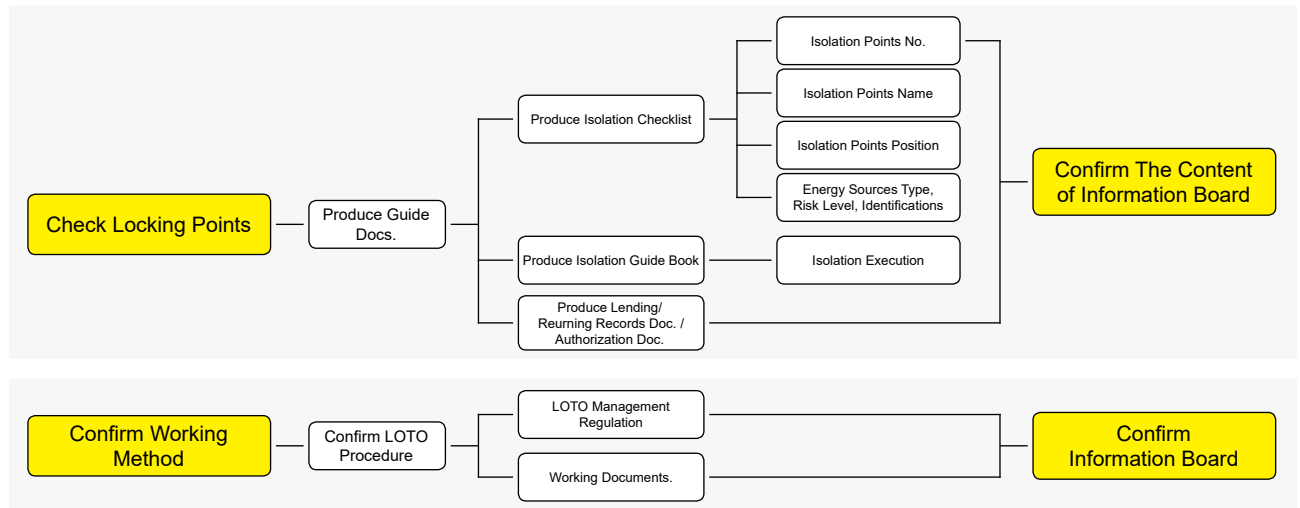
LOTO Simulator BAN-ZSGJ05-Manufacturing Plant

- Manufacturing Process Simulator will replicate a independent manufacturing unit to demonstrate residue energy and accumulated energy in the network of compressing air. It can explain usage method of fixed rod to conduct mechanical locking.
- Energy Type: Electric, Compressing Air, Accumulated Pressure, Residue Energy, Gravity Potential Energy, Mechanical and Visual Energy Verification with Pressure Meter.
- By execution of LOTO procedure in reverse order at lower level of cylinder and unlocking in specific order at higher level of cylinder when mechanical locking, it can demonstrate locking procedure.

Overall Features	Group Lockout Box / Emergency Stop System / Light Switch / Local Isolation Switch / Fan / Padlock Style Ball Valve / Ball Valve / Flywheel Valve / Water Pump / Tags
Product Size	600mm x 650mm x 400mm

3. Based on Isolation Procedure - Choose Information Board Module Solution

① Visual LOTO Procedure and Management



② Choose Informaiton Board Module (500mm*500mm)



KBXXA

Information Status Board

LOTO Procedure, LOTO Regulation, Isolation Points Checklist, Locking Log etc.

Customized Content

Various Docs Available



KBXXB



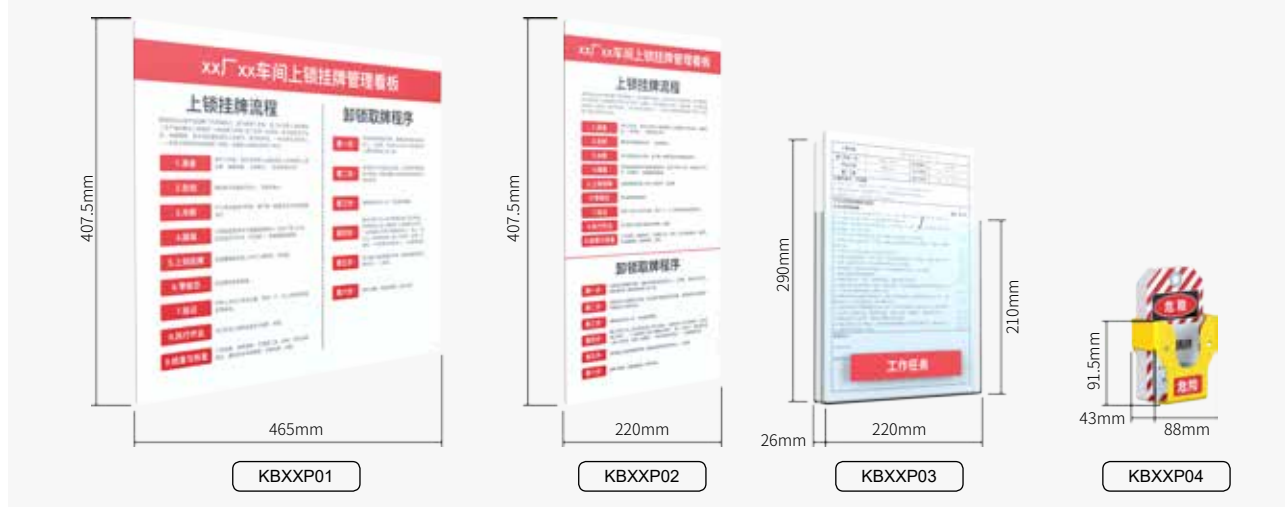
KBXXC



KBXXD

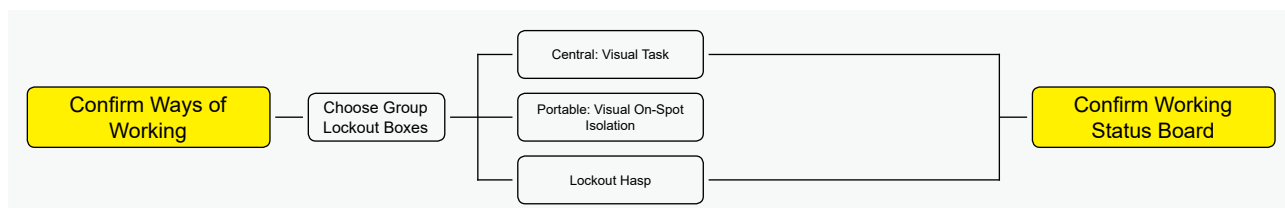
③ Information Board Accessories

A: Accessories Size



4. Based on Working Status - Choose Working Status Board Solution

① Confirm Ways of Working, Personnels Qty., LOTO Procedure and Choose Working Status Board



② Choose Working Status Board Module (500mm*500mm)



Working Status Board

Working Task is corresponding to group lockout box one by one. It will indicate working execution status by usage status of group lockout box.

Customized Content

Various Docs available



③ Working Board Accessories

A: Working Status Board Accessories



BAN-X11G

Name: Portable Group Lockout Box
Size: 206*77*168mm
Material: Low Carbon Steel and Powder Coating + Clear PC Board
Feature: Frontside Working Docs Slot
Max Personnels: 4+1



BAN-X05

Name: Portable Group Lockout Box
Size: 197*110*87mm
Material: Low Carbon Steel and Powder Coating + Clear PC Board
Feature: Universal
Max Personnels: 22



BAN-X81-1

Name: Central Key Group Lockout Box
Size: 155*105*200mm
Material: Low Carbon Steel and Powder Coating + Clear PC Board
Feature: Special to LNG
Max Personnels: 4+1



BAN-X63

Name: Strip and Central Group Lockout Box
Size: 140*140*100mm
Material: Low Carbon Steel and Powder Coating + Clear PC Board
Feature: Special to Power Plant
Max Personnels: 5



BAN-X15

Name: Hole and Central Group Lockout Box
Size: 140*140*100mm
Material: Low Carbon Steel and Powder Coating + Clear PC Board
Feature: Universal
Max Personnels: 12

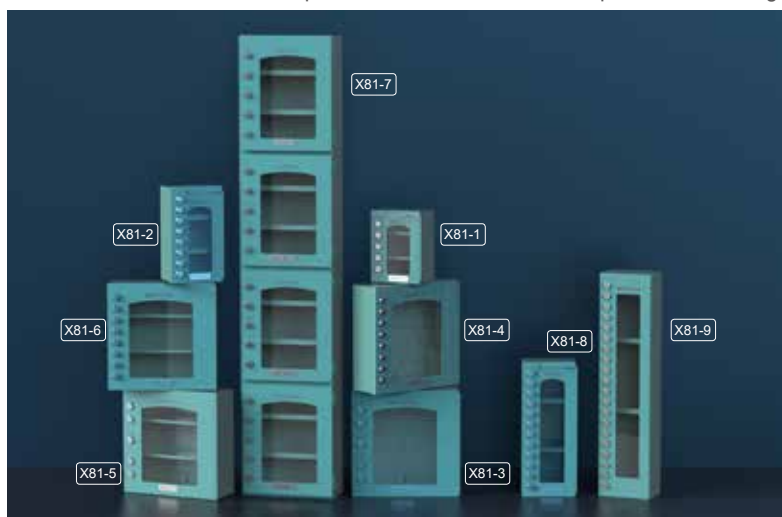
④ Other Working Solution

When there is lack of room to apply LOTO process management board or need build central management lockout station in control room, please use the following non-board solution. With many years service experiences to large enterprises, Beian Lock launched central management LOTO station which is specially applicable to LNG, Steels and Electric etc.

A: Working Station Group Lockout Box

● Solution One: Special to LNG and Steel

Combination - Can customize specification and combine free upon actual working demands



Advantage - Special Management Wafer Cam Lock



A

Control Lock is special customized and developed independently by Beian Lock. When control lock locked, the whole box can not open, other locks also can not open box even if with keys. Control Keys are able to join into box management or not.

B

Each Cylinder is with unique code, at least 5pcs per group / 8pcs per group. It's only require maintenance personnel to take matched keys, no need matched padlock.

C

Inside shelf is designed for storing safety lockout or tags and also management of spinning isolation keys and padlocks.

Product	Item no.	Description
Group Lockout Boxes BAN-X81 Series (More Applied to LNG and Steel industries)	BAN-X81-1	4 second level lock + 1 control lock;155x105x200(mm)
	BAN-X81-2	7 second level lock + 1 control lock;155x105x270(mm)
	BAN-X81-3	4 second level lock + 1 control lock;300x105x300(mm)
	BAN-X81-4	7 second level lock + 1 control lock;300x105x300(mm)
	BAN-X81-5	4 second level lock + 1 control lock;300x105x300(mm)
	BAN-X81-6	7 second level lock + 1 control lock;300x105x300(mm)
	BAN-X81-7	Individual Group Box with 4 second level lock + 1 control lock;270x130x1300(mm)
	BAN-X81-8	11 second level lock + 1 control lock;155x105x385(mm)
	BAN-X81-9	19 second level lock + 1 control lock;155x110x635(mm)



● Solution Two: More applied to Electricity and Cement Industries



BAN-X67



BAN-X63WHT



BAN-X63BLU



BAN-X85

This Lockout Cabinet is mainly used for storing isolation keys and working tags. Usually, the cabinet will be hanging with two kinds of padlocks: Safety Padlock and Control Padlock, so it will be 2 padlocks at least. The padlock Qty can increase based on 2 padlocks if needed more.

Item no.	Material	Size	Other
BAN-X67	Low Carbon Steel and Powder Coated + Clear PC Board	250mm(L)×250mm(W)X200mm(H)	Customized Service
BAN-X63WHT		160mm(L)×160mm(W)X100mm(H)	
BAN-X63BLU		140mm(L)×140mm(W)X100mm(H)	
BAN-X85		153mm(L)×59mm(W)X155mm(H)	

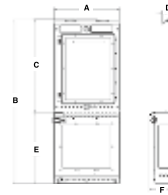
● Solution Three: Universal use to various industries

Custom Service is available, please contact sales for details.



Beian Service

1. Working Station include rewritable tags.
2. Documents Box make document visual and available in working process.
3. Lockout Hasps using with padlocks can secure working documents and make management easier.
4. Lockout Hasps can help distinguish management padlock and personal padlock.
5. The rack with hook help display the keys placed in lockout box.
6. The builtin visual key box can indicate working status
7. Colourful padlocks can prevent meaningless keys from replication



Code	A	B	C	D	E	F
Size	308	787	441	57	348	119

● Solution Four: More use to Electricity Industry



BAN-X64



BAN-X68



BAN-X15



BAN-X102

Item no.	Material	Size	Other
BAN-X64	Low Carbon Steel and Powder Coated + Clear PC Board	100mm(L)×72.5mm(W)X174.5mm(H)	Customized Service
BAN-X68		100mm(L)×116mm(W)X173mm(H)	
BAN-X15		156mm(L)×61mm(W)X154mm(H)	
BAN-X102		431.5mm(L)×60mm(W)X236.5mm(H)	

B: Portable Group Lockout Box

● Solution One: Universal Use to Various Industries



1. Two Groups + Sole Points Group Lockhole: Two Groups utmost are available, each group include 6 persons, total is 12 persons for group locking points and we provide sole unlocking hole of management lock.

2. Working Document Visual Window: Front Door of Locking Box is designed with stored slot made of clear Acrylic board for working documents. It can show the details of current working task to check easier.

3. 13pcs adjustable shelf boards: cabinet have 13pcs fixed position for adjustable shelf board. It can adjust and control internal space of cabinet.

4. 10pcs hooks: cabinet have 10 hooks make multi equipment padlocks lock easier when working. It can store 30pcs personal padlocks utmost after working completion and use internal space efficiently.



Item no.	Material	Size (Excl. Handle)	Other
BAN-X11	Low Carbon Steel and Powder Coated + Clear PC Board	246mm(L)×109mm(W)X236mm(H)	Customized Service
BAN-X12		312mm(L)×111mm(W)X381mm(H)	
BAN-X13		399mm(L)×192mm(W)X762mm(H)	
BAN-X14		270mm(L)×109mm(W)X240mm(H)	
BAN-X22		190mm(L)×75mm(W)X120mm(H)	
BAN-X22L		240mm(L)×58mm(W)X145mm(H)	

● Solution Two: More Use to Cement Industry



Item No.	Item Name	Material	Size (Excl. Handle)
BAN-X20	Group Lockout Box Management Station	Cold Rolled Sheet / PC	710mm(L)×420mm(W)X138mm(H)
BAN-X03	Pulling Rod Type Key Box	Stainless Steel / Nylon	163mm(L)×95mm(W)X260mm(H)

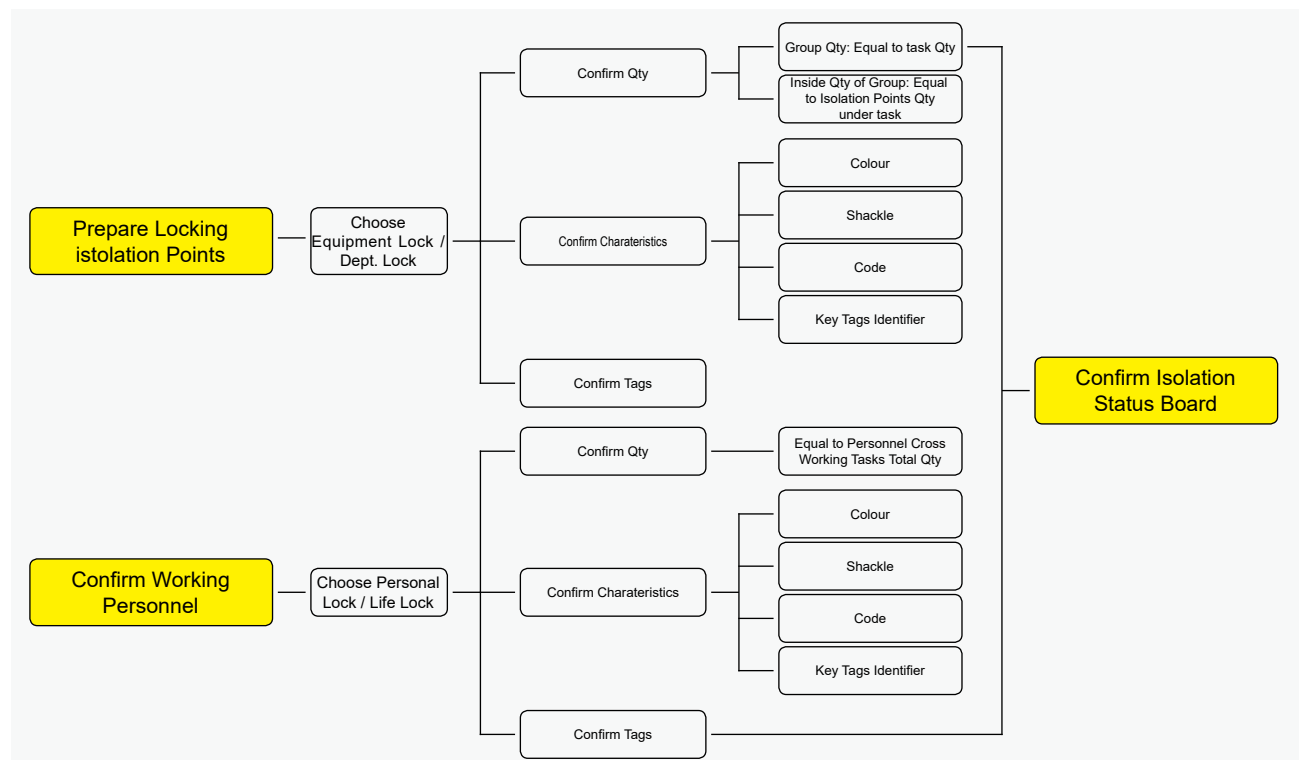
● Solution Three: Universal Use to Various Industries



Item no.	Material	Size (Excl. Handle)	Max. Peoples
BAN-X112	Low Carbon Steel and Powder Coated / Clear PC Board	215mm(L)×101mm(W)X179mm(L)	8
BAN-X04	Low Carbon Steel and Powder Coated	197mm(L)×87mm(W)X118mm(L)	20
BAN-X05	Low Carbon Steel and Powder Coated / Clear PC Board	197mm(L)×87mm(W)X118mm(L)	20
BAN-X06	Low Carbon Steel and Powder Coated / Clear PC Board	267mm(L)×127mm(W)X187mm(L)	26
BAN-X18	PC Plastic	192mm(L)×85mm(W)X92mm(L)	16
BAN-X104	Low Carbon Steel and Powder Coated	230mm(L)×86mm(W)X151mm(L)	12
BAN-X106	Low Carbon Steel and Powder Coated / Clear PC Board	235mm(L)×140mm(W)X108mm(L)	26
BAN-X107	Low Carbon Steel and Powder Coated / Clear PC Board	381mm(L)×76mm(W)X150mm(L)	10
BAN-X108	Low Carbon Steel and Powder Coated	120mm(L)×108mm(W)X187mm(L)	6

5. Based on Isolation Points - Choose Isolation Status Board Solution

① Combined with Isolation Point Checklist and Working Procedure to confirm Isolation Status Board.



② Choose Isolation Status Board Module (500mm*500mm)



KB201-4

Isolation Status Board

Equipment Lock and Isolation Points are corresponding mutually one by one. The using status of equipment can indicate the status of Isolation Points.

Customized Content

Various Document Format Available



KB201-1



KB201-3



KB201-2



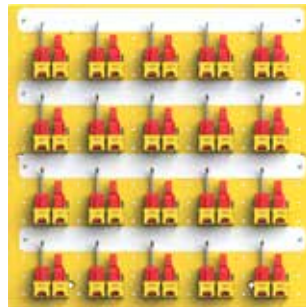
KB201-5



KB201-6



KBSK201-1



KBSK201-2



KBSC02-1

③ The Accessories of Isolation Board

A: Size



KBSP01

Name: Personnel Padlock Sticker
Size: 484*3*74mm
Sign: Customized Content of Sticker

XXXXXX

XXXXXX

XXXXXX

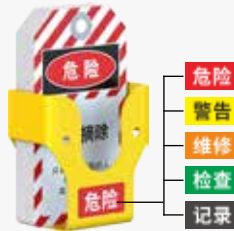
KBSP02

Name: Rewritable Board
Size: 470*3*40mm



KBSP03

Name: Padlock Stored Slot
Size: 50*28*40mm
Sign: Customized Content of Sticker



KBXP04

Name: Tags Stored Pocket
Size: 88*43*91.5mm
Sign: Customized Content of Sticker



XBSP04

Name: IC Card Stored Slot
Size: 91.5*15*40mm



KBSP06

Name: On-site Photos Pocket
Size: 65.5*5*105mm

C: Introduction to Safety Padlocks

● Safety Padlocks



Insulated Safety Padlocks 202/202L
In compliance with OSHA standard, it could be used with various lockouts and able to lock dynamic sources effectively to make personnel and equipment safe. Non-conductive, Spark-proof and Anti-UV. Avoid accidents and injuries further.



Safety Padlocks 201/201L
In compliance with OSHA standard, it's used to replace of metal lockouts when implementing LOTO procedure. The special design to LOTO is suitable to confined space, eg.: Chemical, Military, Oil Exploration and Power etc..



Small Lockbody Safety Padlocks S01/S02
Lock Body is corrosion resistant and light thermal plastic. It's light and small to wide application.



Slim Shackle Safety Padlocks 701
Lock Body is made of engineering plastic reinforced nylon PA that is durable to use, light and insulated, 4mm diameter steel shackle is anti-corrosive and widely applicable.

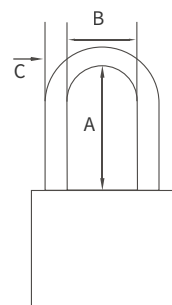


Steel Cable Safety Padlocks 206/S03
Lock Body is optional including regular type and small type. Shackle is stainless steel cable with PVC coated. Integrated the features of both regular safety padlocks and cable locks to wide application.

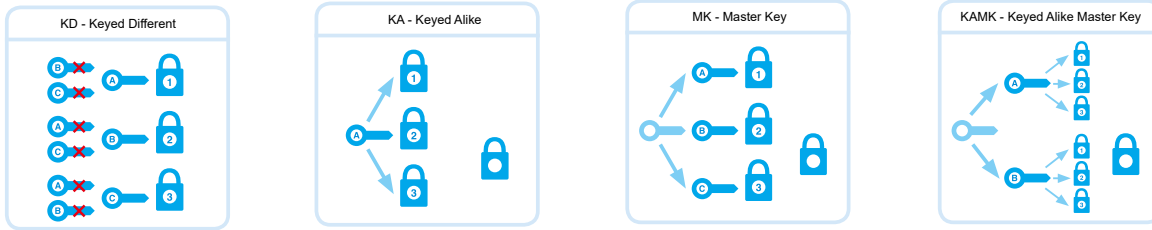
Anti-Static Explosion Proof Safety Padlocks 6538
It quite suits to nuclear power station, Petroleum and Petrochem industries. The advantage is explosion-proof, anti-corrosion, rust-proof and impact resistant. It's good to use in harsh environment.

● Choose Safety Padlocks

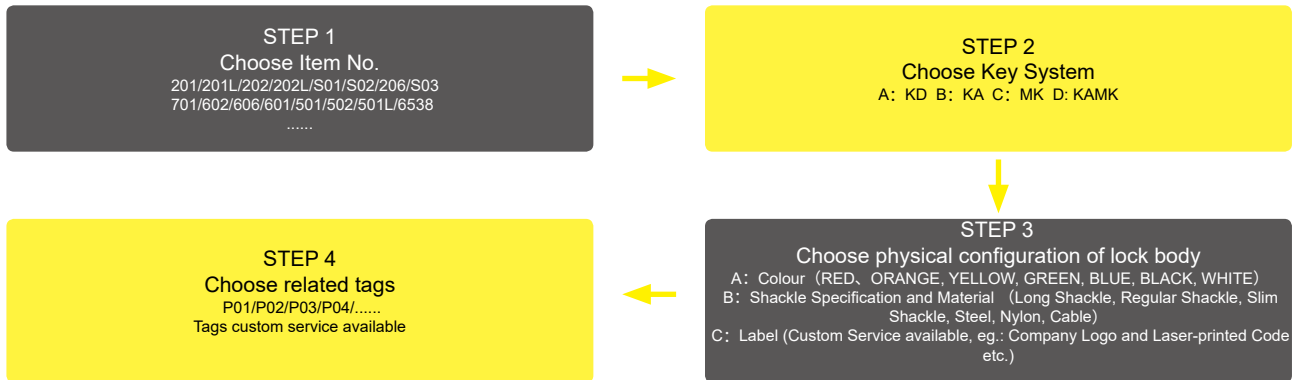
Item Name	Item No.	Width (mm)	Height (mm)	A (mm)	B (mm)	C (mm)	Shackle Material	Item Name	Item No.	Width (mm)	Height (mm)	A (mm)	B (mm)	C (mm)	Shackle Material
Safety Padlock	201	42	45	38	20	6.3	Steel	All Brass Safety Padlock	6538	38	27	64	20	6.3	Steel Cable
	201L			76	20	6.3									
Insulated Safety Padlock	202			38	20	6.3	Insulated Nylon	Slim Shackle Safety Padlock	701	42	45	40	22.5	4	Steel
	202L			76	20	6.3									
Small Lockbody Safety Padlock	S01	30	33	28	15.5	4.5	Steel								
	S02			28	15.5	4.5	Nylon								
Cable Safety Padlock	206	42	45	77	20	3	Steel								
	S03	30	33	77	15.5	3									



● Key System



● The Procedure to Choose Safety Padlock



D. Introduction to Safety Tags

● Professional Manufacturing

Beian produce the custom tags that is applicable to any procedure and regulation. We have provided customers around the world with millions of Tough Tags, Very Tough Tags and Ultra Duty Tags. Advanced production facilities and wide range of tag designs make us understand correctly and satisfy the demand of customer with providing custom Tough tags.



Plain Tags or Printed Tags

BEIAN can produce tough plain tags, printed tags and personalised tags to virtually any specification.



Large Range of Colours

We offer a large range of standard colours, as well as 4 Fluorescent Day-Glo options. Different tag colours are often used to indicate inspection Status of Plant or Equipment.



Plastic Tags in Several Thicknesses

Indoors, Outdoors, Onshore, Offshore, Worldwide. BEIAN Tags are designed to suit the specific climate they are to work in.



Die-Cut Shapes

BEIAN tags can be die-cut to any shape you require. Our clients will often choose a shaped tag in a vivid colour.



Strong Fixed Hole

Manufactured from tough Prism Polypropylene designed to stay attached. Reliable, durable and safe solutions.



Perforation For Tear-off Section

Track various stages of Shutdowns, Flange Inspections, Leak Testing and Repairs. Coloured Tear-Off Sections can be filed in special Tag-Section Holders.



Sequential Numbers for Track and Trace

Sequential numbering is critical for monitoring the progress of manufacturing, stock-control, repair and inspection processes.



Security Holograms

Special holograms can be printed to avoid manufacturing illegal version, ideal for applications requiring extra security use.



Worldwide Languages

Different countries or regions use different languages. Make sure your tags are understood by everyone involved.



Branding

Customize your brand-specific tags - that appeals to people attention and remember.



Barcode Tags and Labels

Barcode Tag can be made, these are often used with sequential numbers to make tracking and tracing become faster.



Incorporate QR codes

Typically used to take customers to a specific webpage for instructions, it can serve various functions upon your needs.

● Choose Safety Tags



BAN-P01



BAN-P02



BAN-P05



BAN-P1002



BAN-P100



BAN-P101



BAN-P03



BAN-P04



BAN-P96



BAN-P98



BAN-P99



BAN-P103



BAN-P136



BAN-P137



BAN-P139



BAN-P97



BAN-P104



BAN-P138



BA18P200



BA18P201



BA18P202



BA18P203



BAN-P145



BAN-P146



BAN-P147



BAN-P143



BAN-P148



BAN-P149



BAN-P07



BAN-P21



BAN-P23



BAN-P41



BA18P301



BA18P302



BA18P303



BA18P304



BA18P305



BA18P306



BA18P307



BA18P308



BA18P309



BA18P310



BA18P311



BA18P312



BA18P313



BA18P314



BA18P315



BA18P316



BA18P317



BA18P318



BA18P319



BA18P320



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BA18P346



BA18P347



BA18P348



BAN-P157-1



BAN-P157-2



BAN-P157-3



BAN-P157-4

● Custom Safety Tags



Plain Tag Templates



Tear-off Tag Templates



Multi-Holes Tag Templates



Die-Cut Tag Templates

We offer a selection of standard label templates to suit almost any application. Choosing one of these will also save you on tooling costs. Beian's extensive design library and state-of-the-art production facilities allow us to manufacture labels of virtually any specification at very competitive prices, using them exactly as needed.

● DESIGN YOUR OWN TAG

1.REQUEST YOUR FREE SAMPLE PACK

Request your free sample pack to experience the strength and durability.



2.SELECT A TEMPLATE

Select a template from our extensive library of tag shapes, or specify the approximate dimensions you require. If you choose an existing template, it will save a tooling cost.



3.CHOOSE YOUR COLOURS

State the tag colour you wish to use, your text colour and the quantity of tags.



6.NOW LEAVE IT TO US

Our dedicated design team will create a full-colour proof, which will be emailed for you to amend or approve.



5.WE'LL SEND YOU A QUOTATION

Our estimating team will send you a quotation for your customised tagging solution.



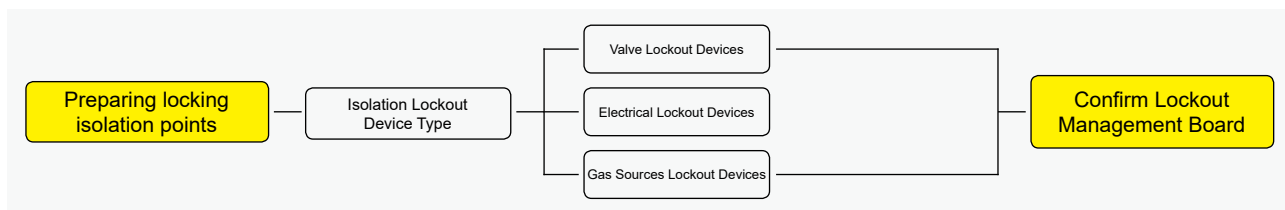
4.SEND US A SKETCH

Create a word document, spread sheet or even just a sketch, showing the printing you would like on your tags. If your logo is to be included we will require a high quality electronic copy of this.

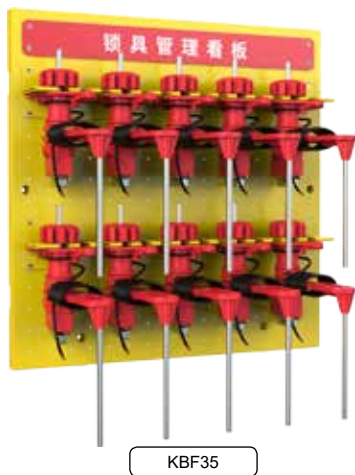


6.Based On Isolation Points - Choose Lockout and Management Solution

① Complete to identify devices of locking points



② Choose Lockout Management Board Module (500mm*500m)



KBF35

Lockout Management Board

Regulate and store all kinds of lockout devices, Beian can provide all kinds of universal valve lockout, MCB lockouts and Power Button Lockouts.

Custom Content

Various Documents Type Available



KBD55



KBGD



KBK11G



KBF35D



KBD12D



KBDD



KBD55D



KBD12

③ Lockout Management Board Accessories

A. The Introduction to Board Accessories



KBZP01

Name: Universal
Lockout Pocket
Size: 470*200*150mm



KBZP02

Name: Power Button
Lockout Pocket
Size: 78*48*22mm



KBZP03

Name: Valve Lockout
Rack
Size: 490*61*70mm



KBZP04

Name: Padlock Rack
Size: 480*42*30mm



KBZP05

Name: Electrical
Lockout Pocket
Size: 70*47*48mm

B: Electrical Lockout

● Circuit Breaker Lockout Solution



BAN-D04

BAN-D01

BAN-D02

BAN-D03

MCB Lockout BAN-D01/D02/D03/D04

BAN-D01 POS(Pin Out Standard),hole spacings≤12mm, Pin-out range: 14mm-18mm

BAN-D02 PIS(Pin In Standard),hole spacings≤12mm, Pin-in Range: 14mm-18mm

BAN-D03 TBLO(Tie Bar Lockout)

BAN-D04 POW(Pin Out Wide),hole spacings≥20mm, Widened Pin-out range: 22mm-28mm



Universal Miniature Circuit Breaker Lockout BAN-D20

- Made of insulative nylon,eco-friendly material,corrosion resistance,high temperature resistance from -50°C to +160°C.
- Hole 1: Can lock with padlock shackle diameter ≤7mm
Hole 2: Can lock with padlock shackle diameter ≤4.5mm
- The clamp mouth can lock popular level 1-4 MCB handle including ABB, Schneider, Chint and Siemens
- Lock Screw:Made of all brass material,tighten the screw to achieve a locking effect.



Multi-Function Breaker Lockout BAN-D95

- Handle size increased,easy to operate keyhole diameters7mm,accepts up to 10 padlocks.
- Adjustable sliding block, can freely adjust according to the size of the circuit breaker handle.
- The strip takes effects to chunk according to the smooth space of the circuit breaker card slot.



Clamp-On Breaker Lockout BAN-D11/D12/D13

- Made of rugged polypropylene PP and impact modified PA.
- Use thumbscrew to clamp lockout securely onto switch tongue, then pull cover and lock in place to avoid loosening
- D11 can lock handle widths≤18mm, D12 can lock handle widths≤42mm, D13 can lock handle widths≤72mm.



Miniture Circuit Breaker Lockout BAN-D88

- a. Using for MCBs,RCBOs,RCCBS circuit breakers
- b. ON or OFF position all available



MCB Lockout BAN-D86

- a. Made of aluminum alloy,suitable for small size circuit breaker
- b. Dimension: 24.5mm x 17.5mm x 7mm



Easily Circuit Breaker Lockout BAN-D87

- a. Made of reinforce nylon and chrome plated brass screw
- b. Accomodate padlock shackle diameters≤7mm



Grip Tight Circuit Breaker Lockout BAN-D93 (493B)

- a. Fits standard height and tie-bar toggles typically found on 120/240V breakers.
- b. Durable construction with reinforced polymer for operation in harsh environments.



Easily Circuit Breaker Lockout BAN-D18

- a. Made of reinforce nylon and chrome plated brass screw
- b. Accomodate padlock shackle diameters≤7mm
- c. Widely used for a large variety of MCCB(handle thickness≤20mm)



Multi-function Breaker Lockout BAN-D17

- a. Made of reinforce nylon and chrome plated brass screw
- b. Accomodate padlock shackle diameters≤7mm



Miniature Breaker Lockout BAN-D96(S2391)& BAN-D99(S2390)

- a. Black handle and Pin out, suitable for breakers with toggle openings ≤11mm
- b. Red handle and Pin out, suitable for breakers with toggle openings between 11mm - 13mm



Universal 415V Breaker Lockout BAN-D91/D92

- a. Made of modified nylon PA and brass screw
- b. Can lock breaker handle width≤75mm,height≤23mm



Grip Tight Circuit Breaker Lockout BAN-D94 (491B)

- a. Fits wide or tall breaker toggles typically found on hi-voltage breaker
- b. Durable construction with reinforced polymer for operation in harsh environments.

● Electrical Plug Lockouts Solution



Electrical / Pneumatic Plug Lockout BAN-D31

- a. Made from ABS material. Double open and square lockout design, suitable for all kinds of industrial plugs. The hole can be used to lock cable or downward bent pneumatic male fittings.
- b. Dimension: 9.7cmx9.5cmx17cm, Can lock 5 kinds of pneumatic plug lockout with diameter:9.5、10.4、11.4、12、18.2(mm)



Electrial Plug Lockout BAN-D41/D42

- a. Made from ABS material. Double open and hexagon lockout design, suitable for all kinds of industrial plugs. The hole can be used to lock cable or downward bent pneumatic male fittings.
- b. BAN-D41 is Small Plug Lockout (110V), dimension: 51mm(H) ×51mm(T)×89mm(W), for cable diameter 13mm; BAN-D42 is Large Plug Lockout (220/500V), dimension: 83mm(H)×83mm(T)×178mm(W), for cable diameter 25mm



Electrial/Pneumatic Plug Lockout BAN-Q31-1

- a. Made from ABS material, Cylindrical rotary bottom design, can lock all kinds of electrical plugs and air valve. The holes can be used for locking cable and down-bent pneumatic male thread fittings;
- b. Dimension: 130mm(W) x 165mm(H) x 85mm(D)



Industrial Waterproof Plug Lockout BAN-D46

- a. Made from PC material, this product is designed exclusively for locking plug adapter. It can fix round shape plug and prevent plug from connecting electricity.
- b. Suitable for 16-125A industrial waterproof plug.



Industrial Waterproof Plug Lockout BAN-D43

- a. Made of Engineering plastic PC. Just need to insert the lockout device in the socket and fasten the socket in the right position and then use the padlock or hasp to lock out the socket in place.
- b. Suitable for 400W 32A industrial waterproof plug socket



BAN-D47S



BAN-D47M



BAN-D47L

Industrial Waterproof Plug Lockout BAN-D47S/M/L

- BAN-D47S Suitable for mini size industrial socket(16A, 110/240V)
- BAN-D47M Suitable for middle size industrial socket(32A,415V)
- BAN-D47L Suitable for large size industrial socket(415V 3-Phase)

● Non-regular Power Source Lockout Solution



Up-Down Controller Straining Bag BAN-T71

- a. Made from durable and tear-proof nylon material
- b. Dimension: diameter 178mm × height 432mm
- c. With PVC liner to prevent others to contact the button of the elevator controller
- d. Accepts up to 6 padlocks

● Wall Type Switch Lockout Solution



BAN-D06

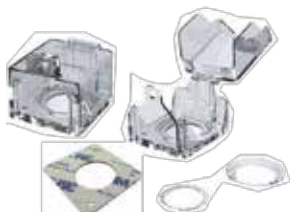


BAN-D07

Socket/Switch Protective Cover BAN-D06/D07

- a. Made of 1.8mm thick durable, abrasion-resistant transparent PVC material; Suitable for single 45A double-pole switches, pull wires and all 25A single double-pole switches currently in the market, it is effective to prevent unauthorized operation and misuse.
- b. BAN-D06 With a hole at bottom; 96mm×96mm×62mm, BAN-D07 Without hole, with hinged door; 96mm×96mm×62mm

● Common Button/Rotary Switch Solution



Multi-Function Button Lockout BAN-D59

- a. Main lock body (Inner diameter 30mm) + Base diam. 24mm + Base diam. 22mm with 3M double-sided adhesive for free combination.
- b. Suitable for the switch with diameter of 30.5mm and 22.5/24.5mm, and for the button maximum diameter 40mm and height 25mm.



Multi-Function Button Lockout BAN-D50

- a. Main part dimension: 49.3mm(H) × 60mm(D), D50S Base: Inner diameter 22mm, D50M Base: Inner diameter 30mm, D50L Base: Inner diameter 34mm.
- b. Suitable for the switch with diameter of 30.5mm and 22.5mm, and for the button maximum diameter 54mm and height 45mm.



Superlarge Press-Key Lockout BAN-D56

- a. Made of high-strength transparent glass PC material. Suitable for both switch with 30.5mm diam. and power button of max 68mm diam. and height 83mm.
- b. Dimension: 70mm × 85mm, hole's diameter 30mm



Mushroom Press-Key Switch Lockout BAN-D55

- a. Made of high quality transparent PVC material, and suitable for the switch with diameter of 30.5mm, and for the button or rotary switch with maximum diameter of 70mm, height 33mm.
b. Dimension: 110mm×75mm, hole's diameter 30mm



Multi-Function Magnetic Lockouts BAN-D68-1/D68-2

- a. Made of high quality transparent acrylic material, with 4 magnets embedded in the bottom, easy to use. Attach to the control panel for warning "Do Not Operate"
b. D68-1 Dimension : 120mm×120mm×55mm (Small)
D68-2 Dimension : 140mm×140mm×55mm (Large)



Self-adhesive Electrical Long-Handle Lockout BAN-D57

- a. Can be fixed around the handle on an electrical panel and be locked out in position with a clamp and padlock to prevent the switch lever from movement.
b. Made up of a 13-hole tape and two clips



Control Panel Lockout (Can be customized) BAN-D65

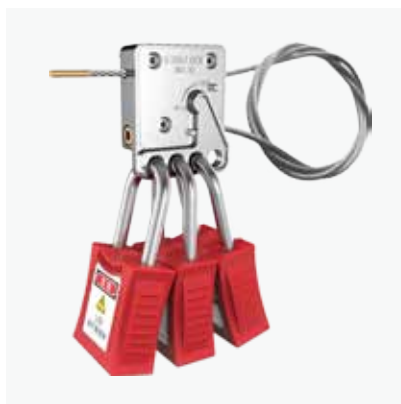
- a. This product is made of plexiglas or acrylic panel; With support frame designed, convenient for operating the panel; Fixed by self-tapping screws or 3M double-sided adhesive.
b. Can be customized as per your requirements



Multi-Purpose Industrial Electric Lockout (Recommended)

- a. Metal Part: Made of Stainless steel with painted black on surface;
b. Adjustable accessories: Mainly used for fixing base and main part;
c. Base Seat: Can be adjusted to three different heights according to different switches;
d. Main Part: Made of durable, lightweight and insulated Nylon, eco-friendly, chemical resistant, high temperature resistant from -50 °C to +160 °C .

C. Cable Lockout



Adjustable Metal Cable Lockout BAN-L20

Made of zinc alloy with matt silver finishing, wear-resistant and anti-corrosion suitable to harsh environment. Adjustable steel cable is diameter 3mm, Length is 1.5m / 2m, or custom service available.



Adjustable Cable Lockout BAN-L10

Made of durable and reinforce nylon PA, wear-resistant and anti-corrosion suitable for harsh environments; Adjustable cable is 4mm diam steel with vinyl coating. Cable Length is 1.5m / 1.8m or custom service available



Wheel Type Cable Lockout BAN-L18

Made of durable and reinforce nylon PA, there are RED / GREEN available. Internal parts are brass material, wear-resistant, anti-spark and anti-corrosion suitable for harsh environments; The cable device can accommodate up to 8 padlocks. Adjustable cable is 4mm diam. made of steel with red vinyl coating. Cable Length is 0.5m/1.5m/2m or custom service available



**Fish-Shaped Cable Lockout
BAN-L21**

Made of durable and reinforce nylon PA, wear-resistant and anti-corrosion suitable for harsh environments; unique cable device can accommodate up to 6 padlocks with a diameter 7mm. Adjustable cable is 4mm diam. made of steel with red vinyl coating. Cable Length is 0.5m/1.2m/2m or custom service available



**Five-Hole Cable Lockout
BAN-L13**

Made of durable and reinforce nylon PA, wear-resistant and anti-corrosion suitable for harsh environments; unique cable device can accommodate up to 5 padlocks with a diameter 7mm. Adjustable cable is 4mm diam. made of steel with red vinyl coating. Cable Length is 1.5m or custom service available



**Hasp Cable Combination
Lockout BAN-L02**

Made of durable and reinforce nylon PA, wear-resistant and anti-corrosion suitable for harsh environments; lock clamp is made of 304 steel stainless. Unique cable device can accommodate up to 5 padlocks with a diameter 7mm. Adjustable cable is 4mm diam. made of steel with red vinyl coating. Cable Length is 1.5m or custom service available



**Wheel Type Cable Lockout
BAN-L31**

Made of durable and reinforce nylon PA, There are Red / Green available, internal parts are brass material, wear-resistant, anti-spark and anti-corrosion suitable for harsh environments; The cable device can accommodate up to 8 padlocks. Adjustable cable is 4mm diam. made of steel with red vinyl coating. Cable Length is 0.5m/1.5m/2m or custom service available

D: Valve Lockouts

● Valve Lockouts Solution

Photos	Item no.	Material	Description
	BAN-F11	PP Plastic	Stem Diameter 25mm-71.5mm
	BAN-F12		Stem Diameter 71.5mm-134mm
	BAN-F13		Stem Diameter 134mm-173mm
	BAN-F14		Stem Diameter 173mm-273mm
	BAN-F15		Stem Diameter 273mm-355mm
	BAN-15PLUS		Stem Diameter 355mm-470mm
	BAN-F11CR	Transparent PC Material	Stem Diameter 25mm-71.5mm
	BAN-F12CR		Stem Diameter 71.5mm-134mm
	BAN-F13CR		Stem Diameter 134mm-173mm
	BAN-F14CR		Stem Diameter 173mm-273mm
	BAN-F15CR		Stem Diameter 273mm-355mm
	BAN-15PLUSCR		Stem Diameter 355mm-470mm



Adjustable Gate Valve Lockout

Made of sturdy and durable polypropylene material; usable in an environment from -25 °C to 90°C .

Item no.	Description
BAN-F16	Suitable for valve stem diameter of 25mm to 165mm



Valve Lockout Bag

Material: It is PP base, PC caps and PP fixing band. Lockout cover dimension: 32.4mmx29.2mm and Lockout Hole diameter: 8mm. It can accommodate 3 padlocks.

Item no.	Description
BAN-F10	Suitable for valve head diameter < 30mm



● Ball Valve Lockout/ Plug Valve Lockout Solution



Adjustable Valve Lockout BAN-F01/F02

a. Made of engineering plastic reinforced nylon PA, which is wear-resistant and drop-resistant; the main body of the ball valve and the pipeline are used to clamp the handle in the form of four-points fixation so that it cannot be rotated;
b. F01 is suitable for DN8-DN50 ball valve, suitable for pipeline 1.3cm-6.4cm in closed state; and 1.3cm-6.4cm in open state. F02 is suitable for DN50-DN200 ball valve, suitable for pipeline 5cm-20cm in closed state.



Standard Ball Valve Lockout BAN-F03/F04

a. Made of standard A3 steel plate with high temperature spraying treatment on its surface to avoid rusting; it is specially used to lock the right-angle turning ball valve in the closed state; it acts as a triangular wedge for the valve rod and pipeline, so that the valve rod cannot be rotated;
b. F03 is suitable for valve size/pipe diameter 6.4mm-25.4mm; suitable for DN8-DN50 ball valve, F04 is suitable for valve size/pipe diameter 31.8mm-76.2mm; suitable for DN50-DN200 ball valve.



Plug Valve Lockout BAN-F41/F42/F43/F44

a. Four sizes available, suitable for valve diameter from 1"-8"
b. F41 suitable for valve stem diameter under 22mm
F42 suitable for valve stem diameter from 23mm to 34.9mm. F43 suitable for valve stem diameter from 44mm to 53.9mm. F44 suitable for valve stem diameter from 55mm to 63.5mm.

● Butterfly Valve Lockout Solution



Adjustable Butterfly Valve Lockout BAN-F64

a. Made of engineering reinforce nylon PA, suitable for butterfly valve. It has 4 holes with 4mm diameter.
b. Hole diameter 4mm; Suitable for locking 8mm-45mm butterfly valve.



Adjustable Butterfly Valve Lockout (Large) BAN-F21

a. Made of polypropylene PP material, chemical-resistance, suitable for harsh environment.
b. Suitable for 8mm-45mm butterfly valve

● Flange Valve Lockout Solution



Adjustable Flange Ball Valve Lockout

Made of polypropylene PP material. a warning sign with a "dangerous" ban on operation.

Item No.	Description
BAN-F08	Suitable for DN8-DN125 flange ball valve



● Pipeline Valve Lockout Solution



Blind Flange Lockout & Tagout Pipeline Maintenance Lockouts BAN-F68 series

a. Main Part: Made of engineering reinforce nylon PA, wear resistant and corrosion resistant. Fixed base can be freely combined with accessories.
b. Metal Slider: made of stainless steel, the whole is stainless steel plate, slider with tooth and fixed screw
c. Control handle: Press down to move the metal slider forward and backward
d. Fixed screw: Mainly used for fixed fittings, and tighten the screw.

Item No.	Recommended Nut Diameter	Pipe Diameter Range	Pipe Flange Width Range
BAN-F68-M	19mm-28.7mm	12.7mm-76.2mm	38.1mm-143.3mm
BAN-F68-L	32mm-47.8mm	88.9mm-304.8mm	95.3mm-274.6mm
BAN-F68-XL	51.2mm-69.9mm	355.6mm-609.6mm	196.9mm-447.8mm

● Universal Valve Lockout Solution

Picture	Item No.	Material	Max. Clamp Range	Description	Application
	BAN-F31 Single Arm	Lock Body: Engineering Reinforced Nylon PA. Metal Part: Chrome Plated Brass & Stainless Steel.	Round Shape Handle: Diameter ≤33mm Square Shape Handle: Height ≤33mm	Lock with right angle turn ball valve for single arm	
	BAN-F32 Two Arms			Two arms to lock out 3, 4 or 5-ways valve	
	BAN-F33 Incl. Cables			Using cable attach for gate valve	
	BAN-F34			For butterfly valves	
	BAN-F35 Single Arm + Cables			Universal valve lockouts for most of valves	

E: Gas Source/Cylinder Lockout

● Storage Tank Lockout Solution



Gas Cylinder Lockout BAN-Q31-2/-3

- a. Made of engineering plastic ABS material, Cylindrical rotary bottom design, can lock various air valves, The holes can be used for locking down-bent pneumatic male thread fittings;
b. Q31-2 is suitable for regular gas cylinder with maximum diameter ≤ 8cm, Q31-3 is suitable for large gas cylinder with maximum diameter ≤ 8cm.



Storage Tank Lockout BAN-Q21

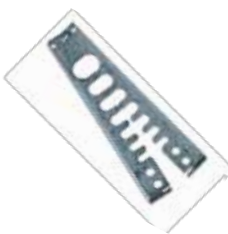
- a. Made of sturdy polystyrene plastic, the center hole of the lockout can be used to permanently store the air hose, the ring on the side can be used to hang the hose and the lock, directly connected to male thread joint, Isolate air source and no need to install direct lock valve, easy to operate.
b. Valve stem hole diameter of 2.8cm is suitable for valves ≤ 7.6cm.

● Gas Source Lockout Solution



Pneumatic Quick-Disconnect Lockout BAN-Q01

- a. Made of sturdy polystyrene plastic, the center hole of the lockout can be used to permanently store the air hose, the ring on the side can be used to hang the hose and the lock, directly connected to male threaded joint, Isolate air source and no need to install direct lock valve, easy to operate.
b. Suitable for most 6.4mm, 9.5mm and 12.7mm male thread joint



Universal Gas Source Lockout BAN-Q11

- a. Made of stainless steel punching, anti-rust and anti-corrosion, it is suitable for almost all air source male connectors in factories, preventing the air source connector from reconnecting with the high-pressure source, and can be matched with a hasp for multiple people to lock at the same time.
b. Dimension: 35mm(W) × 196mm(L) × 3mm(T)

F: Lockout Hasps

● Metal Lockout Hasps



Product Name	Item No.	Description
Aluminium Lockout Hasp	BAN-K11	Hasp Diameter: 1" (2.5cm)
	BAN-K12	Hasp Diameter: 1.5" (3.8cm)
Steel Lockout Hasp	BAN-K01	Hasp Diameter: 1" (2.5cm)
	BAN-K02	Hasp Diameter: 1.5" (3.8cm)
Butterfly Tamper-proof Lockout Hasp	BAN-K31	Accepts up to 6 padlocks
	BAN-K32	Accepts up to 10 padlocks
Ten Holes Aluminium Lockout Hasp	BAN-K65	Accepts up to 10 padlocks, Dimension:163mm×65mm
12/24 Holes Aluminium Lockout Hasp	BAN-K25	For multi-person management,up to 12 persons
	BAN-K26	For multi-person management,up to 24 persons
Steel Hasp with Red Plastic Handle	BAN-K430	Shackle Diameter: 4mm, Height: 25/57/76(mm) or Custom available Jaw Clearance: 25mm, can accept 2 padlocks with shackle diameter less than 7mm.

● Non-Conductive Nylon Hasp



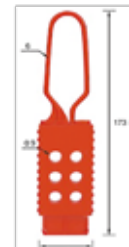
K44



K45



K48



K42

Product	Item No.	Description
Non-Conductive Nylon Hasp	BAN-K44	Lock shackle diameter 3mm, accepts up to 4 padlocks
	BAN-K45	Lock shackle diameter 6mm, accepts up to 4 padlocks
	BAN-K48	Nylon Shackle diameter 3mm, accepts up to 3 padlocks
	BAN-K42	Lock shackle diameter 6mm, accepts up to 6 padlocks

④ Other Lockout Storage Management Solution

When the space of lockout and tagout is not enough to use Process Management Board or you need to establish a central management LOTO station in the central control room, you can use the following solutions;

After years of large-scale enterprise service experience, BeiAn has launched a central management LOTO station suitable for LNG, steel industry, power industry and other industries.

A: Lockout Management Solution

● Advanced Lockout Station



B101



B101-1



B102



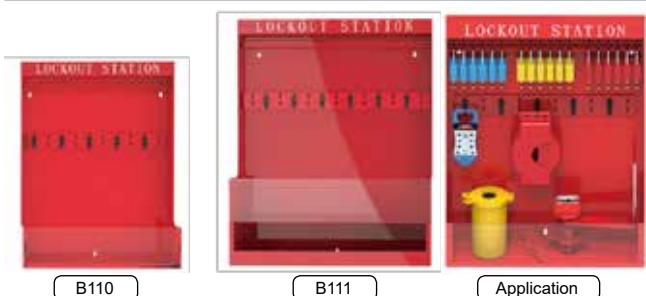
B102-1

Item No.	Material	Dimension	Items List
BAN-B101	Engineering Plastic PC	406(L)×65(W)X315(H)	B101*1
BAN-B101-1	Engineering Plastic PC	406(L)×65(W)X315(H)	B101+Padlock*10+Tag*10+Hasp*2
BAN-B102	Engineering Plastic PC	558(L)×65(W)X393(H)	B102*1
BAN-B102-1	Engineering Plastic PC	558(L)×65(W)X393(H)	B102+Padlock*20+Tag*20+Hasp*8



Item No.	Material	Dimension (mm)	Items List
BAN-X09	Steel Plate + Transparent PC Window	580(L)×90(W)X430(H)	X09*1
BAN-X09-1		580(L)×90(W)X430(H)	X09+Padlocks*20+Tags*50+Hasps*10
BAN-X10		420(L)×70(W)X300(H)	X10*1
BAN-X10-1		420(L)×70(W)X300(H)	X10+Padlocks*10+Tags*25+Hasps*2
BAN-X78		350(L)×95(W)X415(H)	X78*1
BAN-X78-1		350(L)×95(W)X415(H)	X78+Padlocks*12+Tags*50+Hasps*10

● Lock Management Hanging Board



- a. Made from low-carbon steel as well as powder coating and transparent PC panel, plate is 1.0mm thick and PC is 3mm thick.
b. The upper layer with internal keyhole can hang up to 18 padlocks. The lower layer can directly use Beian-Lock's padlock up to 10, which can be used to manage padlocks and other locks.

Item No.	Dimension (mm)
BAN-B110	495(L)×130(W)X660(H)
BAN-B111	620(L)×135(W)X760(H)

● Lockout Station Hanging Board (Made from High Density PPC Plastic Board with Aluminium bar edging)



BAN-B08-1-1(Items List Below)



Safety Padlocks 201RED * 4pcs
Safety Tags BAN-P04 * 5pcs
280mm x 400mm

BAN-B08-4-1(Items List Below)



Safety Padlocks 201RED * 10pcs
Safety Tags BAN-P04 * 20cs
Small Anti-spark Lockout Hasps BAN-K11 * 2pcs
660mm x 520mm

BAN-B08-2-1(Items List Below)



Safety Padlocks 201RED * 4pcs
Safety Tags BAN-P04 * 5cs
Small Anti-spark Lockout Hasps BAN-K11 * 1pc
280mm x 400mm

BAN-B08-5-1(Items List Below)



Safety Padlocks 201RED * 50pcs
Safety Tags BAN-P04 * 20cs
Small Anti-spark Lockout Hasps BAN-K11 * 3pcs
Large Anti-spark Lockout Hasps BAN-K12 * 2pcs
Pocket (For the storage of small lockouts) * 1pc
800mm x 650mm

BAN-B08-3-1(Items List Below)



Safety Padlocks 201RED * 5pcs
Safety Tags BAN-P04 * 10pcs
Small Anti-Spark Lockout Hasps BAN-K11 * 1pc
360mmx540mm

BAN-B08-6-1(Items List Below)



Safety Padlocks 201RED * 100pcs
Safety Tags BAN-P04 * 40pcs
Small Anti-Spark Lockout Hasps BAN-K11 * 4pcs
Large Anti-Spark Lockout Hasps BAN-K12 * 4pcs
Pocket (For the storage of small lockouts) * 1pc
1220mmx800mm

BAN-B08-7-1(Items List Below)



Safety Padlocks 201RED * 100pcs
Safety Tags BAN-P04 * 40pcs
Small Anti-Spark Lockout Hasps BAN-K11 * 4pcs
Large Anti-Spark Lockout Hasps BAN-K12 * 4pcs
Pocket (For the storage of small lockouts) * 1pc
Gate Valve Lockouts BAN-F11/F12/F13/F14/F15 * 1pc
Universal MCB Lockouts BAN-D20 * 10pcs

Multi-Purpose Breaker Lockouts
BAN-D95 * 2pcs
Breaker Lockouts BAN-D92 * 2pcs
Plug Lockouts BAN-D41/42 * 1pc
Cable Lockouts BAN-L10 * 1pc
Adjustable Ball Valve Lockouts BAN-F01
* 1pc
Standard Ball Valve Lockouts BAN-F03
* 1pc
1220mmx800mm

● Lockout Equipment Management Box



X65-1



X65-2



X34-1



X34



Application

Item No.	Dimension (mm)	Description
BAN-X65-1	360(L)×155(D)X450(H)	Boxes are made of Steel plate with high temperature spray treatment and Transparent PC panel(3mm thickness). The plates are thickened, the thickness of front plate is 1.2mm thickness and back plate is 1.0mm. It's more harden and more durable to use. The inner space of box is big that have hangers and two movable shelves to change the space freely. There are fixed screws to prevent shelves from dropping off when using.
BAN-X65-2	480(L)×180(D)X600(H)	
BAN-X34-1	600(L)×450(D)X1360(H)	Boxes are made of welded steel bar with high temperature spray treatment on its surface. Each compartment dimension 305mm×305mm×457mm. The compartment has its own hinged door and keyhole to ensure that only authorized key holders can use to storage safety lockout.
BAN-34	900(L)×450(D)X1360(H)	

● OEM Lockout Management Box Project (Beian can customize the exclusive management system according to the actual needs of customers on site)



Custom Design



Real Scene



Other Custom

Warm Reminder: To select the suitable lockout management device will help to manage better safety lockout. For more details, welcome to contact us!

B: TAGS MANAGEMENT SOLUTION

Picture	Item No.	Description	Application
	BAN-B37	Made of PPC Plastic board with four edges aluminum strip wrap. This tag station have 10 transparent acrylic containers. It accepts tags maximum size of 200mm×10mm. Dimension:500mm(L)×600mm(H)	

C: Padlock Storage Solution

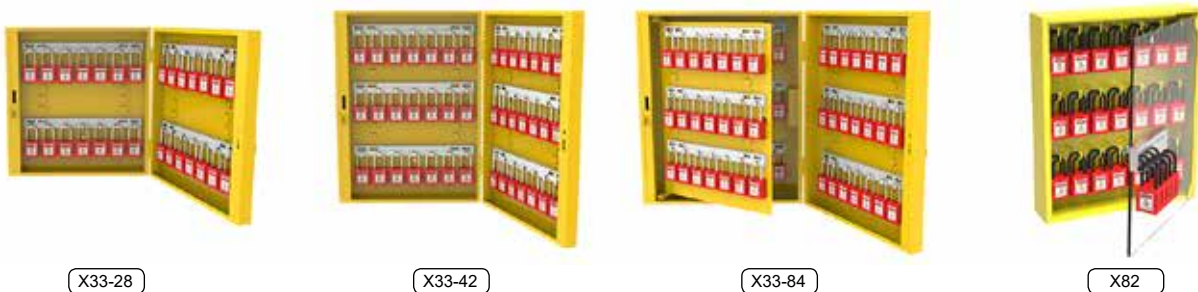
- Mostly used for centralized storage



Product Name	Item No.	Material	Dimension
Padlock Station	BAN-B31	Carbon Steel	140mm(L)×40mm(W)X80mm(H)
	BAN-B32		270mm(L)×40mm(W)X80mm(H)
	BAN-B33		400mm(L)×40mm(W)X80mm(H)
	BAN-B34		530mm(L)×40mm(W)X80mm(H)

- Mostly used for separate storage

Be made from powder coated steel, the space inside can be adjusted freely, so that it can be suitable for the padlocks in different specification.



Product Name	Item No.	Description	Dimension
Padlock Storage Cabinet	BAN-X33-28	Can storage 28 padlocks	390mm(H)×375mm(W)X62mm(D)
	BAN-X33-42	Can storage 42 padlocks	500mm(H)×375mm(W)X62mm(D)
	BAN-X33-56	Can storage 56 padlocks	500mm(H)×375mm(W)X62mm(D)
	BAN-X33-84	Can storage 84 padlocks	500mm(H)×420mm(W)X110mm(D)
	BAN-X33-112	Can storage 112 padlocks	500mm(H)×420mm(W)X110mm(D)
Management Padlock Storage Cabinet	BAN-X82	Can storage 82 padlocks	500mm(H)×375mm(W)X62mm(D)

● Large-scale customization example

Due to the different scales of factories, conventional safety padlock storage boxes cannot meet the needs, Beian Lock provides customized large storage cabinet. Here is the 720 padlocks storage boxes we customized for customers for reference only, if you need customization, please contact us for details.



Large Padlocks Storage Cabinet (BAN-X33-720)

- Made of powder-coated hardened steel, the internal room of the cabinet can be custom-made according to the number of padlocks that the customer needs to manage, and the height can be adjusted to fit padlocks with different shackle.
- The sliding door design is used, and the sliding rail sliding structure (various styles) is used to push and pull smoothly. The key and padlock can be hung at the same time which is convenient for management.
- It is fixed and moved by means of rollers and brackets which could be changed upon on-site demand.

D: Key Management Solution

● Visible Key Cabinet (50 Keys)



Item No.	BAN-X31-50
Material	Mild Steel + Transparent PC Window
Dimension	380mm(W)×80mm(D)×550mm(H)
Specification	Can hold 50 keys(Color:Grey)

● Keys Management Box

During the use of safety lockout, some keys will be assigned to personnel to carry with them, and some of them are shared or used for backup purposes. There is a problem of needing to manage keys, so Beian Lock launched key management cabinets with different specifications for your choice.

Product Details V



- ▲ Open the cap to write the name and contact information



- ▲ Slot for inserting colored cardboard, with a number corresponding to the above number



Can be used as a notice board



BAN-X72-5

- a. Can accommodate 5 keys



BAN-X72-10

- a. Can accommodate 10 keys



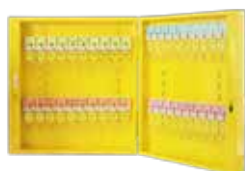
BAN-X72-20

- a. Can accommodate 20 keys
b. 330mm(H)×220mm(W)×62mm(D)
c. 0.6mm Rust-Proof Steel With Computer Electrostatic Paint



BAN-X72-30

- a. Can accommodate 30 keys
b. 500mm(H)×220mm(W)×62mm(D)
c. 0.6mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-40**

- a. Can accommodate 40 keys
- b. 390mm(H)x375mm(W)x62mm(D)
- c. 0.6mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-60**

- a. Can accommodate 60 keys
- b. 500mm(H)x375mm(W)x62mm(D)
- c. 0.6mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-80**

- a. Can accommodate 80 keys
- b. 500mm(H)x375mm(W)x62mm(D)
- c. 0.6mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-120**

- a. Can accommodate 120 keys
- b. 500mm(H)x420mm(W)x110mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-160**

- a. Can accommodate 160 keys
- b. 500mm(H)x420mm(W)x110mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-180**

- a. Can accommodate 180 keys
- b. 500mm(H)x470mm(W)x162mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-240**

- a. Can accommodate 240 keys
- b. 500mm(H)x470mm(W)x162mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-360**

- a. Can accommodate 360 keys
- b. 1008mm(H)x470mm(W)x162mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-480**

- a. Can accommodate 480 keys
- b. 500mm(H)x420mm(W)x110mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-540**

- a. Can accommodate 540 keys
- b. 500mm(H)x470mm(W)x162mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**BAN-X72-720**

- a. Can accommodate 720 keys
- b. 500mm(H)x470mm(W)x162mm(D)
- c. 1.0mm Rust-Proof Steel With Computer Electrostatic Paint

**Free Combination**

- a. More than 360 key box can increase the clapboard and feet
- b. Different Key Management Cabinet meet various needs to have management regulated more.

7. Based On Working Room - Choose Small Working Board

① Customized Small Working Board (500mm*500mm) As Required

**KBSA01**

Small Working Board

In the circumstance of small equipment and high risk of dangerous energy sources, please ensure to implement LOTO process.



Customized Content



Various Document Format Available

② Other Small Working Solution

A: Lockout Tagout Bag + Lockout Tagout Kit

● Lockout Tagout Bag

There are many types of locks required in the operation process, and it is inconvenient to carry multiple pieces. At this time, suitable tools are needed. Bear Locks offers the following tool bags.



3-Pocket Lockout Bag

BAN-T21
400mmx50mmx150mm

Lockout Tagout Bag In Blue Plus Black

BAN-T28-1(15inches)	BAN-T28-2(17inches)	BAN-T28-3(19inches)
360mmx180mmx250mm	400mmx190mmx270mm	430mmx190mmx285mm

● Lockout Tagout Kit

Beian Lock recommends the following packages for you according to the existing products, or choose a combination freely according to your needs.



Personal Maintenance Lockout Kit TC01



Personal Electrical Lockout Kit TC02



Personal Valve Lockout Kit TC03



Electrical Maintenance
Lockout Tagout Kit TC04



Valve Lockout Kit TC05



Electrical Circuit Breaker &
Valve Lockout Kit TC06



Group Maintenance Lockout Kit TC07



Group Electrical Maintenance
Lockout Kit TC08



Group Valve Maintenance
Lockout Kit TC09



Electrical & Valve Lockout Maintenance Kit TC10



B

BEIAN TAGS

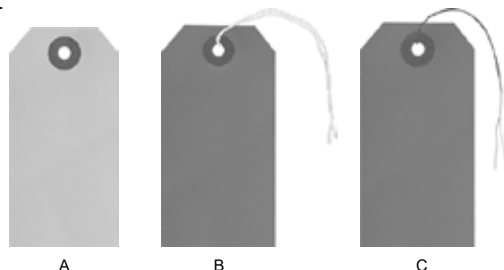
- BEIAN is manufacturing customized tags for almost any application, to virtually any specification.

B. BEIAN-TAGS

I. Cardstock Write-On Tags

1. Cardstock Write-On Tags

A fiber grommet provides tear resistance when hanging these tags.



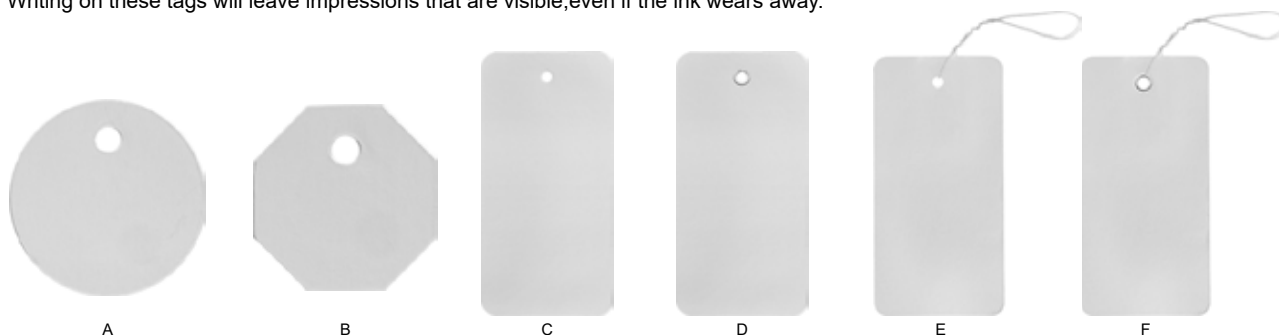
2. Light Duty Cardstock Write-On Tags

Use these light duty tags when durability and tear resistance isn't a concern. They're about half size of our other cardstock tags.



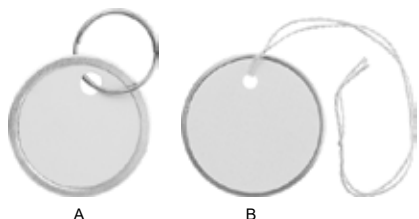
3. Weather-Resistant Cardstock Write-On Tags

Writing on these tags will leave impressions that are visible, even if the ink wears away.



4. Reinforced Cardstock Write-On Tags

A metal rim around the tag prevents warping.



5. Reinforced Cardstock Write-On Tag Assortments

A metal rim around these tags prevents warping. Write on them with a pencil, pen, or permanent marker.



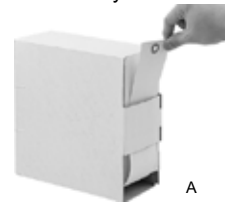
6. Smudge-Resistant Cardstock Write-On Tags

These tags have a matte surface so writing won't smudge or rub off accidentally.



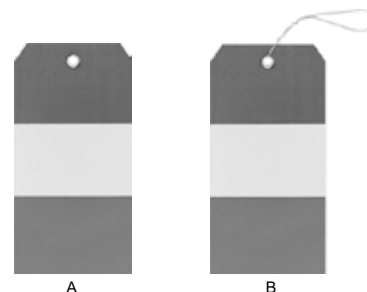
7. Cardstock Write-On Tags with Dispenser

Keep tags clean and organized in a dispenser box. Tear them off the perforated roll when ready to use.



8. Color-Coding Tear-Off Cardstock Write-On Tags.

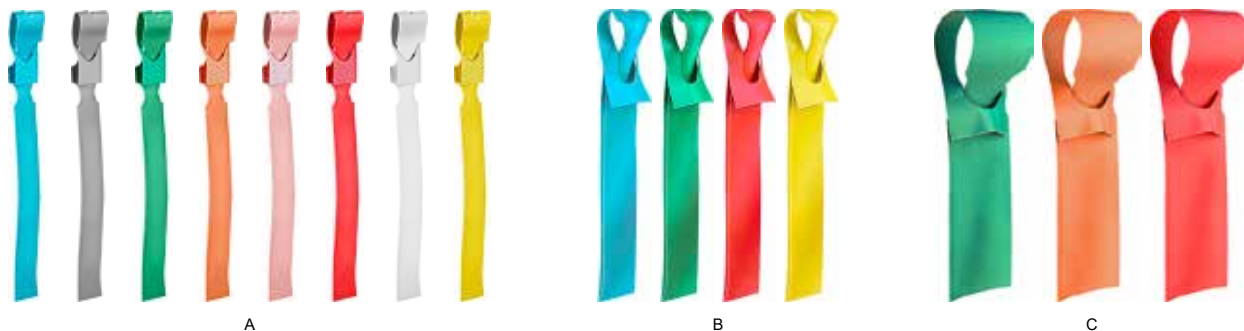
These tags have perforated green, yellow, and red sections that can be torn off to visually indicate when the status of an item or project changes.



9. Metal-Detectable Cardstock Write-On Tags

Label totes, ingredient bags, racks, and other items to keep your food processing plant organized. These tags are laminated with aluminum, so they'll set off metal detectors if they fall into your line. They help you comply with Hazard Analysis and Critical Control Point (HACCP) programs to make sure contaminated food doesn't leave your plant. They're also FDA compliant for direct contact with food. You can leave them attached to batches of food as they cook, unless the oven temperature exceeds 400° F. To help you follow Good Manufacturing Practices (GMP), they come in several colors—use one color for each line or area of your plant to reduce the chance of cross contamination.

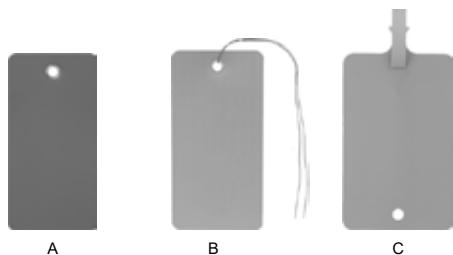
Each tag has a top layer of cardstock that you can write on with a food-grade permanent marker or pen. The cardstock is durable; it resists water and chemicals. On the back, these tags have a glossy film that makes them hard to tear.



II. Plastic Write-On Tags

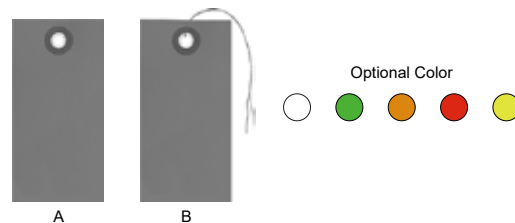
1. Plastic Write-On Tags

Tags are viny. Write on them with a permanent marker.



2. Chemical-Resistant Plastic Write-On Tags

Make of Tyvek, these tags withstand mild acids and alkalis. Write on them with a permanent marker.



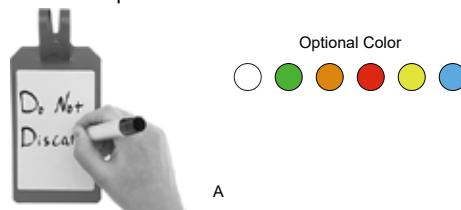
3. Smudge-Resistant Plastic Write-On Tags

These tags have a matte surface so writing won't smudge or rub off accidentally. Write on them with a permanent marker.



4. Dry-Erase Plastic Write-On Tags

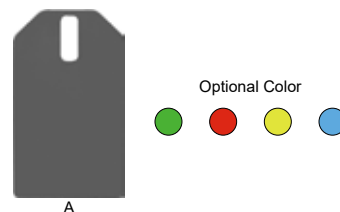
Write on these tags using a dry erase marker, then wipe away writing with a dry cloth when you need a new message. Hang them using the adjustable notched loop. Made of vinyl, these tags are almost impossible to tear.



5. Metal- and X-Ray Detectable Plastic Write-On Tags

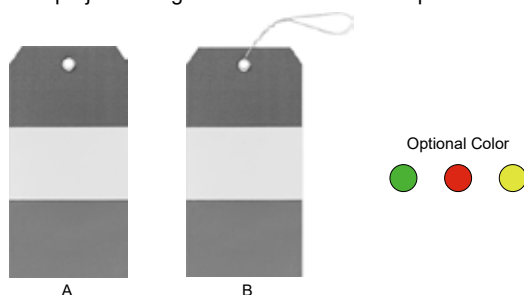
Label devices, machines, and other equipment around your food processing plant while reducing the risk of contaminating the food. These tags contain metal and chemical additives that will set off metal detectors and show up on X-ray machines if they—or any piece of them—fall into your line. They help you comply with Hazard Analysis and Critical Control Point (HACCP) programs for food safety. Available in a variety of colors, they also help you follow Good Manufacturing Practices (GMP)—use one color for each line or area of your plant to reduce the chance of cross contamination. All of these tags are FDA compliant for direct contact with food.

Made of polypropylene, these tags withstand high-temperature washdowns and chemicals used for cleaning. Write on them with markers that are for use in the food industry or laser engrave them. A large hole makes these tags easy to hang.



6.Color-Coding Tear-Off Plastic Write-On Tags

Made of polypropylene, these water- and chemical-resistant tags have perforated green, yellow, and red sections that can be quickly torn off to show when the status of an item or project changes. Write on them with a permanent marker.



III.Metal Write-On Tags

These corrosion-resistant stainless steel tags hold up in harsh environments. Write on them using a permanent marker.



IV.Write-On Tags

These tags are flexible and have a large hole for easy hanging. Write on them using a permanent marker.



V.Sequentially Numbered Metal Tags

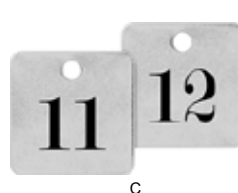
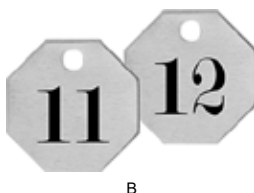
1.Sequentially Numbered Metal Tags

Assign numbers in sequence to machinery, storage areas, and completed work. Numbers are imprinted on one side. Aluminum tags are lightweight and resist corrosion better than brass tags. The tags with an anodized finish have added wear and corrosion resistance. Brass tags withstand abrasion and wear better than aluminum tags. 304 stainless steel tags resist corrosion better than aluminum and brass tags.



2.Made-to-Order Sequentially Numbered Metal Tags

Specify a starting number to label machinery, storage areas, and completed work in sequence (up to 10 digits). Specify a color where applicable. The largest character size will be used, up to 1/2" high. Numbers are imprinted on one side. Aluminum tags are lightweight and resist corrosion better than brass tags. The tags with an anodized finish have added wear and corrosion resistance and are good for color coding. Brass tags withstand abrasion and wear better than aluminum tags. 304 stainless steel tags resist corrosion better than aluminum and brass tags. 316 stainless steel tags have excellent corrosion resistance.



3.Sequentially Numbered Plastic Tags

Assign numbers in sequence to machinery, storage areas, and completed work. Numbers are imprinted on one side. Permanently fasten tags with a security tab using the included rivet tool.



4. Easy-Hang Sequentially Numbered Plastic Tags

These tags have a large hole for easy hanging. Assign numbers in sequence to machinery, storage areas, and completed work. Numbers are stamped on both sides.



5. Made-to-Order Identically Numbered and Lettered Metal Tags

Specify numbers and letters to label equipment or parts in your facility (three lines maximum, 10 characters per line, including spaces). The largest character size will be used, up to 1/2" high. Characters are imprinted on one side. Aluminum tags are lightweight and resist corrosion better than brass tags. The tags with an anodized finish have added wear and corrosion resistance and are good for color coding. Brass tags withstand abrasion and wear better than aluminum tags. 304 stainless steel tags resist corrosion better than aluminum and brass tags. 316 stainless steel tags have excellent corrosion resistance.



6. Made-to-Order Easy-Hang Identically Numbered Plastic Tags

These tags have a large hole for easy hanging. Specify a number to label equipment or parts of your facility (up to four digits). Numbers are stamped on both sides.



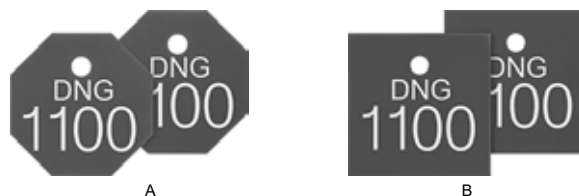
7. Made-to-Order Easy-Hang Identically Numbered and Lettered Plastic Tags

These tags have a large hole for easy hanging. Specify up to four characters—letters or letters and numbers—to label equipment or parts of your facility. Characters are stamped on both sides.



8. Made-to-Order Identically Numbered Plastic Tags with Message

Specify a message (up to four characters, including spaces) and the number you need to label equipment or parts in a facility (up to four digits). Characters are imprinted on one side. Minimum order is 100.



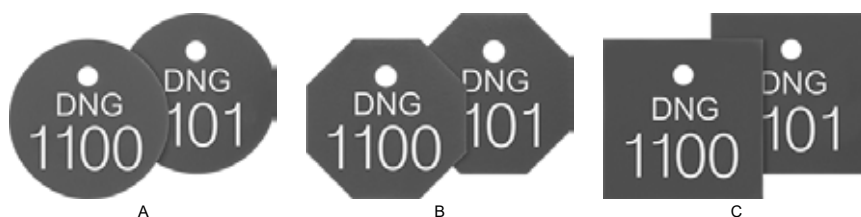
9. Made-to-Order Sequentially Numbered Metal Tags with Message

Specify a message (up to two lines, 10 characters per line, including spaces) and a starting number (up to 10 digits) to label equipment or parts of your facility in sequence. Specify a color where applicable. The largest character size will be used, up to 1/2" high. Characters are imprinted on one side.



10. Made-to-Order Sequentially Numbered Plastic Tags with Message

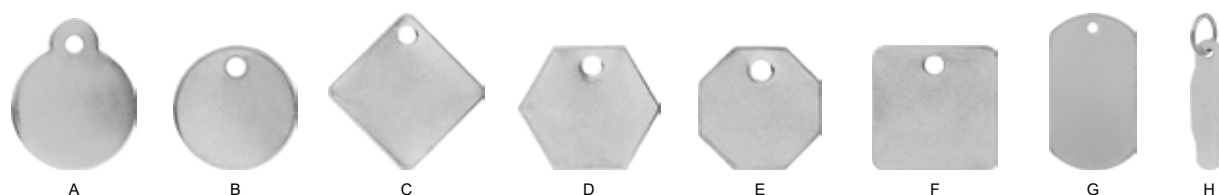
Specify a message (up to four characters, including spaces) and a starting number (up to four digits) to label equipment or parts of your facility in sequence. Characters are imprinted on one side. Minimum order is 100.



VI. Metal Engraving and Stamping Tags

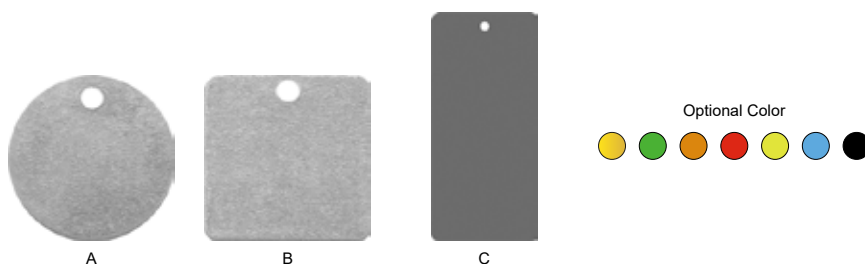
1. Metal Engraving and Stamping Tags

Aluminum tags are lightweight and resist corrosion better than brass tags. Brass tags withstand abrasion and wear better than aluminum tags. 304 stainless steel tags resist corrosion better than aluminum and brass tags. 316 stainless steel tags have excellent corrosion resistance.



2. Choose-a-Color Metal Engraving and Stamping Tags

Color code equipment and inventory. Anodized aluminum plates are lightweight, nonconductive, and more corrosion resistant than steel tags. Steel tags are stronger than aluminum tags.



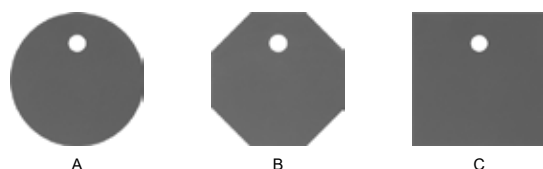
3. Easy-Hang Metal Engraving and Stamping Tags

These tags have a large hole for easy hanging. Also known as miners' checks. Aluminum tags are lightweight and resist corrosion better than brass tags. Brass tags withstand abrasion and wear better than aluminum tags. 304 stainless steel tags resist corrosion better than aluminum and brass tags.



4. Plastic Engraving Tags

Plastic tags withstand mild acids and are more corrosion resistant than metal tags.



5. Easy-Hang Plastic Engraving Tags

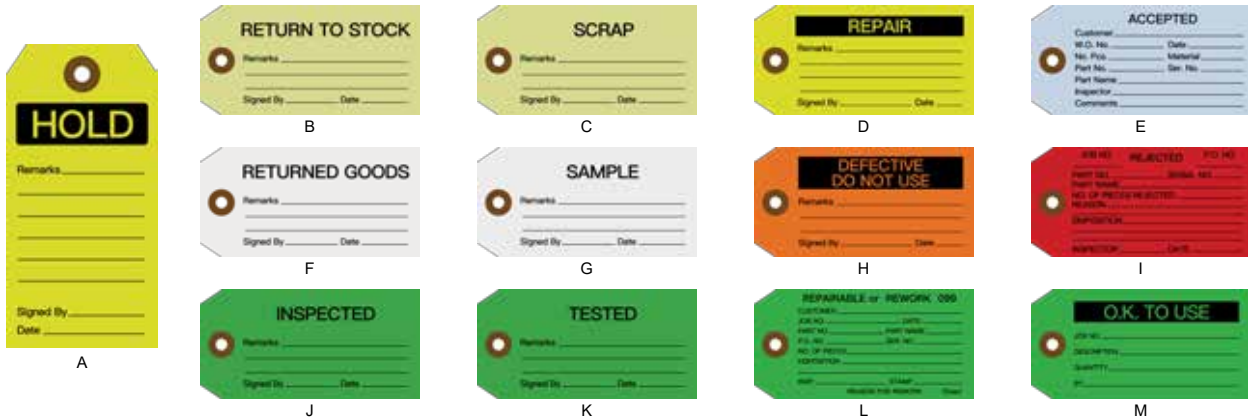
These tags have a large hole for easy hanging.



VII.Tracking and Inspection Tag

1.Material Tracking Tags

The messages on these tags display the status of your materials. Use them to mark equipment and track work in progress.



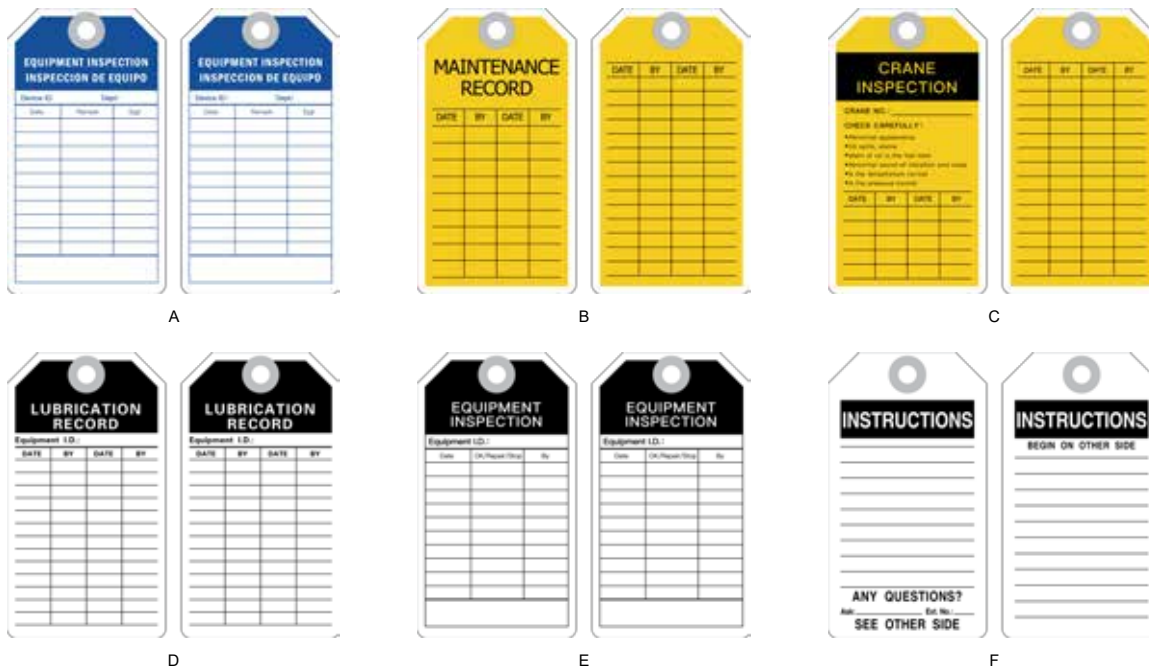
2.Weather-Resistant Material Tracking Tags

Tags are laminated in plastic so they hold up outdoors. Hang them on equipment in need of repairs using an included cable tie. Write on them using a pencil or permanent marker.



3.Weather-Resistant Inspection Record Tags

Tags are laminated in plastic or aluminum so they hold up outdoors. Plastic-laminated tags resist moisture and are almost impossible to tear. Write on them using a pencil, pen, or permanent marker. Attach them using the included cable tie. Write on aluminum-laminated tags with a pen, pencil, or sharp object to create impressions that are visible, even if the ink wears away. Tags with a notched-loop tag holder attach to items by looping around them—no string, chain, or cable tie required. Their long handle also serves as a clasp.



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H1JKLM

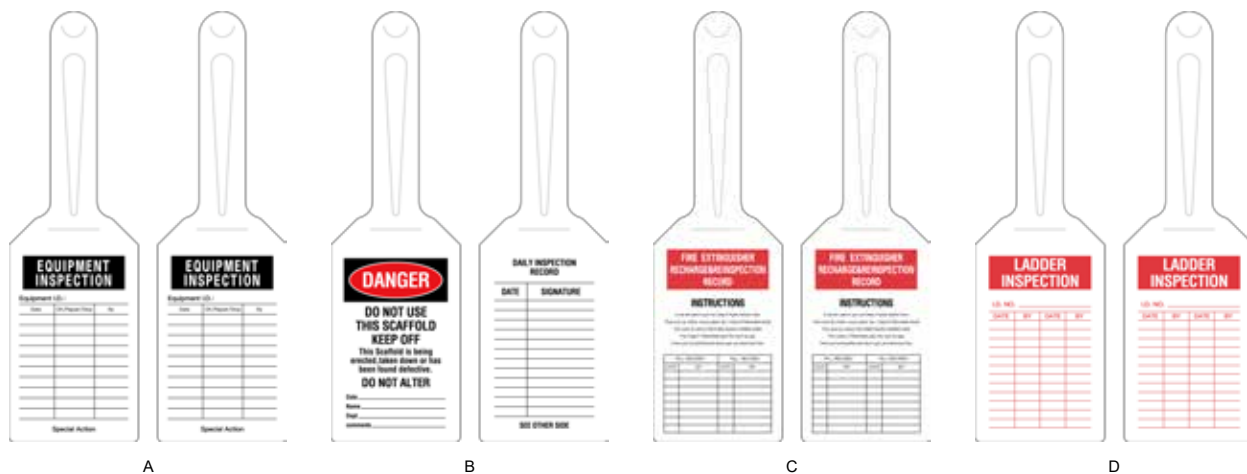
N

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ABCDEF

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4. Inspection Record Tags

Log details about routine equipment inspections. Hang these tags using the included tag holder.



5.5S Red Discard Tags

Sort and flag items for removal or disposal with these highly visible red tags. Write on these tags using a pen.



6. Tear-Off Inventory Tags

The perforated lower stub has the same number as the top portion so it can be matched. Tear off the lower stub and keep it in your files. Use these tags for marking the amount, description, and location of material when taking inventory.



7. Create-a-Copy Inventory Tags

Write on the top sheet and the information transfers to the cardstock tag on the back. Tear the top sheet off and keep it in your files. Use these tags for marking the amount, description, and location of your materials when taking inventory.



8. Create-a-Copy Matching Cardstock Tags

Write on the top sheet and the information transfers to the middle sheet and cardstock tag. All sheets are numbered so the copies can be matched to the original.



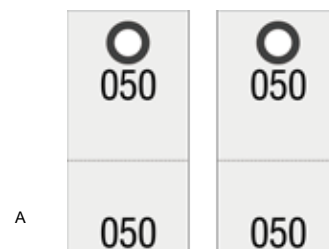
9. Tear-Off Matching Cardstock Tags

The perforated lower stub has the same number as the top portion so they can be matched.



10. Tear-Off Matching Plastic Tags

These tags are water resistant and almost impossible to tear. The perforated lower stub has the same number as the top portion so they can be matched. Write on these tags using a permanent marker.



11. Cylinder Tags



Indicate whether cylinders are full or empty. The plastic laminate protects these tags from moisture and wear. They have the same message printed on both sides. Attach them using an included cable tie.



12. Bluetooth Tracking Tags

Track the location of equipment, tools, and other material around your facility. These tags use bluetooth to communicate with an app on your smartphone—up to 100 ft. away. Update tag inventory and record information such as service reminders for each tag using the app or website. Made of polycarbonate, these tags withstand impact and weathering. Tie, screw, or glue onto material.



13. Valve Numbering Tags with Laminating Flap

Write the valve number on the tag using a permanent marker and then seal the laminating flap to protect the text from smudging and wear. Tags have the same message printed on both sides. Attach using an included cable tie.

VIII. Accident Prevention Tags

1. Lockout/Tagout Tags



Remind workers to use lockout devices and procedures to prevent unexpected machine startups during maintenance and repair work. These tags have danger headers that are typically used in extreme situations to indicate an imminently dangerous situation that, if not avoided, will result in death or serious injury. Write on them using a permanent marker. These tags help meet OSHA standards for lockout/tagout applications. Attach them with an included cable tie.





2.Lockout/Tagout Tags with Laminating Flap



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Sign and date these tags using a permanent marker and then seal the laminating flap to protect the text from smudging and wear. Use these tags to remind workers to use lockout devices and procedures to prevent unexpected machine startups during maintenance and repair work. They have danger headers that are typically used in extreme situations to indicate an imminently dangerous situation that, if not avoided, will result in death or serious injury. These tags help meet OSHA standards for lockout/tagout applications. Attach them with an included string tie.

3.Photo-Insert Lockout/Tagout Tags with Laminating Flap

Add a photo in the self-laminating square to identify the employee working a job. Write on these tags using a permanent marker and then seal the laminating flap to protect the text from smudging and wear. Use these tags to remind workers to use lockout devices and procedures to prevent unexpected machine startups during maintenance and repair work. They have danger headers that are typically used in extreme situations to indicate an imminently dangerous situation that, if not avoided, will result in death or serious injury. These tags help meet OSHA standards for lockout/tagout applications. Attach them with an included cable tie.



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4.Lockout/Tagout Checklist Sheets

Keep detailed records for lockout/tagout procedures and list employees authorized to perform maintenance for a machine or group of machines.

A detailed checklist sheet titled 'LOCKOUT/TAGOUT SYSTEM' and 'LOCKOUT/TAGOUT CHECK LIST'. It includes sections for 'Equipment Description', 'Authorized Personnel', and a table for recording 'Date', 'Time', 'Initials', and 'Remarks'. There are also sections for 'Additional Safety Measures' and 'Exemptions'.

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5.Lockout/Tagout Management Tags

Use these tags to describe equipment and lockout/tagout procedures. Write on them using a pencil, pen, or permanent marker.

Two blue lockout/tagout management tags. The left tag is titled 'LOCKOUT TAGOUT SYSTEM' and 'ENERGY ISOLATION DEVICE NO.' and includes fields for 'ENERGY TYPE & MAGNITUDE', 'SERVICING EQUIPMENT No.', 'EQUIPMENT DESCRIPTION', and 'EQUIPMENT LOCATION'. The right tag is titled 'LOCKOUT TAGOUT SYSTEM' and 'FOLLOW STANDARD LOCKOUT PRACTICE PLUS THESE SPECIAL INSTRUCTIONS'. Both tags have a 'SEE OTHER SIDE' instruction and a 'Prepared By' field.

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6.Metal- and X-Ray-Detectable Lockout/Tagout Tags

Designed for use in the food industry, these tags remind workers to use lockout devices and procedures to prevent unexpected machine startups during maintenance and repair work while reducing the risk of contaminating the food. They contain metal and chemical additives that will set off metal detectors and show up on X-ray machines if they fall into your food processing lines. They're also blue with a lockout label on each side, so they're easy to spot. The labels, however, are not detectable if they peel or scrape off. Use these tags to help you comply with Hazard Analysis and Critical Control Point (HACCP) programs for food safety. They're FDA compliant for direct contact with food.

Made of polypropylene, these tags are durable to withstand repeated use. Write on them with markers that are for use in the food industry. A large hole makes these tags easy to hang.

Two blue lockout/tagout tags with red and white striped borders. The left tag has a 'DANGER' header and 'LOCKED OUT DO NOT OPERATE' text, followed by 'MY LIFE IS ON THE LINE' and a 'NAME' field. The right tag has a 'DANGER' header and 'EQUIPMENT LOCKED OUT' text, followed by 'This tag / lock to be removed only by the individual named on the front'.

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7.Weather-Resistant Machine and Equipment Operation Tags

Tags are laminated in plastic so they hold up outdoors. Use them to communicate dangers to workers near equipment that could cause injury. Write on them using a permanent marker. All tags meet OSHA safety color standards for indicating hazards. Attach them with an included cable tie.

Danger headers are typically used in extreme conditions to indicate an imminently hazardous situation that, if not avoided, will result in death or serious injury. Caution headers indicate a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.

A row of six yellow weather-resistant tags. The first two are 'CAUTION' tags with 'DO NOT REMOVE THIS TAG' and 'SEE OTHER SIDE'. The next two are 'CAUTION' tags with 'DO NOT OPERATE' and 'DO NOT REMOVE THIS TAG'. The last two are 'CAUTION' tags with 'DEFECTIVE DO NOT USE' and 'DO NOT REMOVE THIS TAG'. Each tag has a 'REMARKS' section and a 'Signed By' field.

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A row of six white weather-resistant tags. The first two are 'DANGER' tags with 'DO NOT USE THIS SCAFFOLD KEEP OFF' and 'DO NOT ALTER'. The next two are 'DANGER' tags with 'OUT OF SERVICE' and 'DO NOT REMOVE THIS TAG'. The last two are 'DANGER' tags with 'HOT' and 'DO NOT REMOVE THIS TAG'. Each tag has a 'Signed By' field and a 'SEE OTHER SIDE' instruction.

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8. Machine and Equipment Operation Tags

Communicate dangers to workers near equipment that could cause injury. Tags have printing on one side. Write on them using a permanent marker. All tags meet OSHA safety color standards for indicating hazards. Danger headers are typically used in extreme conditions to indicate an imminently hazardous situation that, if not avoided, will result in death or serious injury. Caution headers indicate a potentially hazardous situation that, if not avoided, may result in minor or moderate injury.





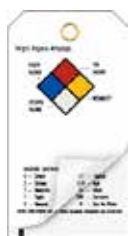
9. Machine and Equipment Operation Tags with Laminating Flap



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Write your message using a permanent marker and then seal the laminating flap to protect the text from smudging and wear. Use these tags to communicate an imminently dangerous situation near machinery and equipment that, if not avoided, will result in death or serious injury. All tags meet OSHA safety color standards for indicating hazards. Attach them with an included string tie.

10. NFPA Diamond Tags



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Provide appropriate code numbers for hazards with these NFPA (National Fire Protection Association) tags. Write on these tags using a permanent marker and then seal the laminating flap to protect the text from smudging and wear. Attach them with an included cable tie.

11. Color Stripe Tags



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The color stripes on these tags identify the type of hazard. Write in the appropriate code numbers with a permanent marker to indicate the severity. Seal the laminating flap to protect the text from smudging and wear. Attach tags with an included cable tie.

12. Made-to-Order Accident Prevention Tags

Specify the printed message you'd like to appear under the header, up to five lines. The first two lines will appear in large text (nine characters per line, including spaces); the last three lines will appear in smaller text (18 characters per line, including spaces). For English/Spanish tags, please specify the message in both languages. These tags indicate an imminently dangerous situation that, if not avoided, will result in death or serious injury. Write on them using a permanent marker. A plastic laminate protects these tags from moisture and wear. All tags meet OSHA safety color standards for indicating hazards. Attach with an included cable tie.



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13.Hot Work Permit Tags

Guide workers through a safety checklist before welding, grinding, cutting, or other work involving fire or sparks. Write on these tags with a permanent marker. Attach them with an included cable tie.



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IX.Key Tags

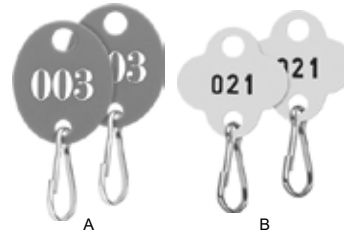
1.Sequentially Numbered Key Tags

Number keys in sequence. These tags have a spring snap that holds up to three standard-sized keys. Numbers are imprinted on one side.



2.Identically Numbered Key Tags

Choose only the numbers you need to identify and organize keys. These tags have a spring snap that holds up to three standard-sized keys. Numbers are imprinted on one side.



3.Key Tags

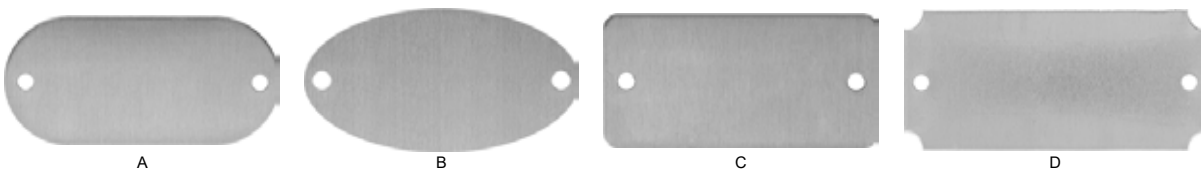
up to three standard-sized keys.



X.Blank Plates

1.Metal Engraving and Stamping Plates

Aluminum plates are lightweight and resist corrosion better than brass plates.Brass plates withstand abrasion and wear better than aluminum plates.304 stainless steel plates resist corrosion better than aluminum and brass plates.316 stainless steel plates have excellent corrosion resistance.



2.Choose-a-Color Metal Engraving and Stamping Plates

Color code equipment and storage areas.Anodized aluminum plates are lightweight, nonconductive, and more corrosion resistant than steel plates.Steel plates are stronger than aluminum plates.



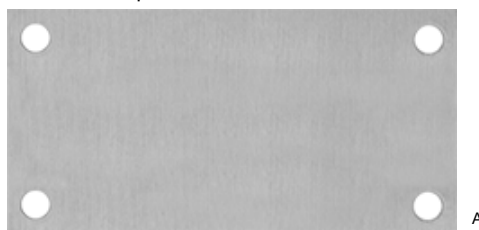
3.Color-Contrasting Metal Engraving Plates

Remove the surface layer of these plates to create an engraved message in a contrasting color. Made of anodized aluminum, these plates are lightweight, nonconductive, and corrosion resistant. They work with rotary and laser engravers.



4. Tie-On Metal Engraving and Stamping Plates

Use the holes in all four corners for bundling or to tie these plates to equipment when bolting isn't an option. Aluminum plates are lightweight and corrosion resistant. 304 stainless steel plates resist corrosion better than aluminum plates.



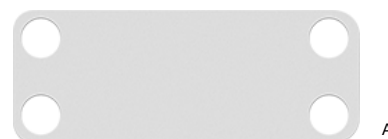
5. Engraving Plates

Remove the surface layer of these plates to create an engraved message in a contrasting color. ABS plates work with rotary engravers. Acrylic plates work with rotary and laser engravers. They are UV resistant so they won't fade in the sun.



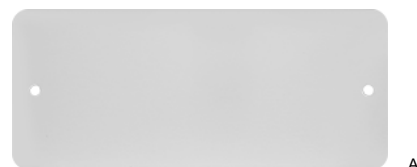
6. Write-On Plates

These plates have a smudgeproof surface that you can write on with permanent marker. They are flexible and have holes at all four corners, so you can use them for bundling or tie them to your equipment when bolting isn't an option.



7. Embossing Plates

These plates are thin enough for embossing, which produces raised characters similar to a license plate. This is useful in washdown applications where engraved or stamped impressions may fill with water or wear away. Aluminum plates are lightweight and resist corrosion better than galvanized steel plates. Galvanized steel plates are stronger than aluminum plates.



XI. Numbered and Lettered Plates

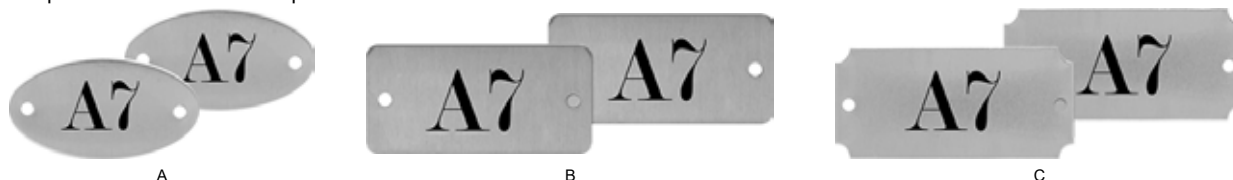
1. Made-to-Order Embossed Plates with Message

Embossing produces raised characters similar to a license plate. This is useful in washdown applications where engraved or stamped impressions may fill with water or wear away. Specify a message to label equipment or parts in a facility. The largest character size will be used, up to 1/2" high. For oval plates, please specify up to three lines of text (six characters per line, including spaces). For rectangular plates, please specify up to six lines of text (18 characters per line, including spaces). Aluminum plates are lightweight and resist corrosion better than brass plates. Brass plates withstand abrasion and wear better than aluminum plates. 304 stainless steel plates resist corrosion better than aluminum and brass plates.



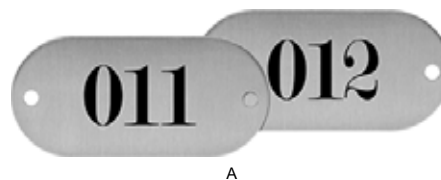
2. Made-to-Order Identically Numbered and Lettered Plates

Specify a message to label equipment or parts in a facility (up to three lines, 10 characters per line, including spaces). Provide a color where applicable. The largest character size will be used, up to 1/2" high. Aluminum plates are lightweight and resist corrosion better than brass plates. The plates with an anodized finish have added wear and corrosion resistance and are good for color coding. Brass plates withstand abrasion and wear better than aluminum plates. 304 stainless steel plates resist corrosion better than aluminum and brass plates. 316 stainless steel plates have excellent corrosion resistance.



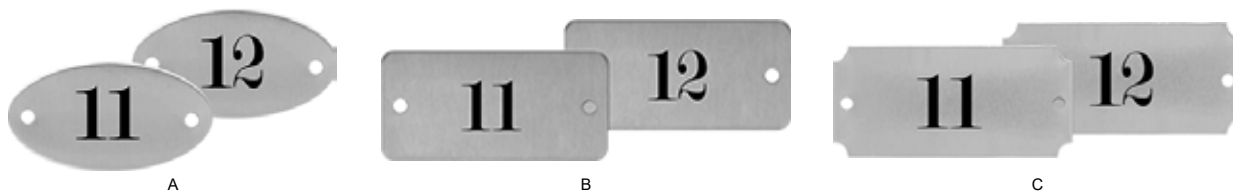
3. Sequentially Numbered Plates

Assign numbers in sequence to machinery, storage areas, and completed work. Aluminum plates are lightweight and resist corrosion better than brass plates. The plates with an anodized finish have added wear and corrosion resistance. Brass plates withstand abrasion and wear better than aluminum plates. 304 stainless steel plates resist corrosion better than aluminum and brass plates.



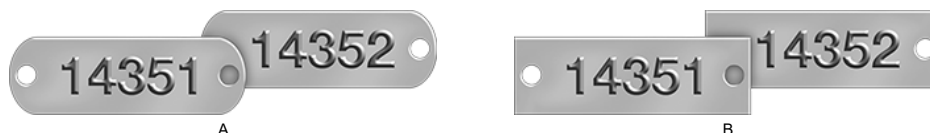
4. Made-to-Order Sequentially Numbered Plates

Specify the number series you need to label machinery, storage areas, and completed work in sequence. The largest character size will be used, up to 1/2" high. For styles A and B, please specify a starting number up to 15 digits. For style C, please specify a starting number up to seven digits. Aluminum plates are lightweight and resist corrosion better than brass plates. The plates with an anodized finish have added wear and corrosion resistance and are good for color coding. Brass plates withstand abrasion and wear better than aluminum plates. 304 stainless steel plates resist corrosion better than aluminum and brass plates. 316 stainless steel plates have excellent corrosion resistance.



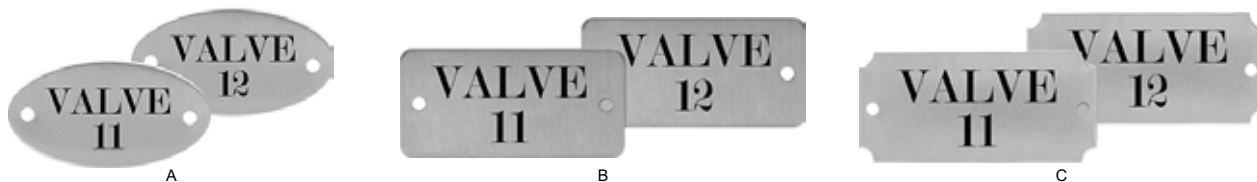
5. Made-to-Order Embossed Sequentially Numbered Plates

Embossing produces raised characters similar to a license plate. This is useful in washdown applications where engraved or stamped impressions may fill with water or wear away. Specify the number series you need to label machinery, storage areas, and completed work in sequence. The largest character size will be used, up to 1/2" high. For oval plates, specify a starting number up to six digits.



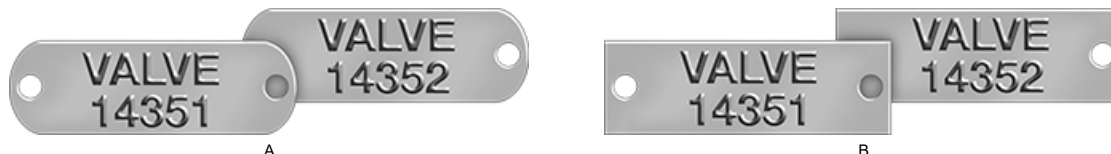
6. Made-to-Order Sequentially Numbered Plates with Message

Specify a message (up to two lines, 10 characters per line, including spaces) and starting number (up to 10 digits) to label equipment or parts in a facility. Provide a color where applicable. The largest character size will be used, up to 1/2" high. Aluminum plates are lightweight and resist corrosion better than brass plates. The plates with an anodized finish have added wear and corrosion resistance and are good for color coding. Brass plates withstand abrasion and wear better than aluminum plates. 304 stainless steel plates resist corrosion better than aluminum and brass plates. 316 stainless steel plates have excellent corrosion resistance.



7. Made-to-Order Embossed Sequentially Numbered Plates with Message

Embossing produces raised characters similar to a license plate. This is useful in washdown applications where engraved or stamped impressions may fill with water or wear away. Specify a message and number series to label machinery, storage areas, and completed work in sequence. The largest character size will be used, up to 1/2" high. For oval plates, specify up to two lines of text (six characters per line, including spaces), a starting number (up to six digits), and a color where applicable. For rectangular plates, please specify up to three lines of text (18 characters per line, including spaces), a starting number (up to 18 digits), and a color where applicable. Aluminum plates are lightweight and resist corrosion better than brass plates. Brass plates withstand abrasion and wear better than aluminum plates. 304 stainless steel plates resist corrosion better than aluminum and brass plates.



XII. Parking Permit Tags

Hang these tags from your vehicle's rearview mirror. They have printing on one side. Write on them using a permanent marker.

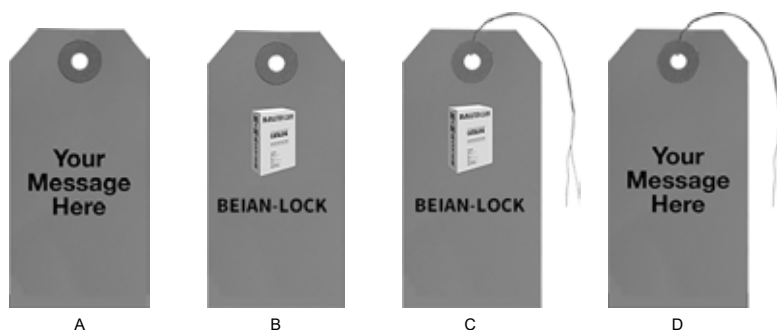


B6922

XIII. Made-to-Order Cardstock Tags

1. Made-to-Order Cardstock Tags

Specify a message (up to 17 lines, 25 characters per line, including spaces) or email an image, PDF, or AI file to sales@beian-lock.com and we'll print a design on your tags.



XIV. Tuffx Tag

TUFFX Tags are unbelievably strong Tags. They are in use all round the world, excelling in extremely harsh environments.

TUFFX Tags are often used as colour coding Tags, or as Inspection Tags for Lifting Gear. Strong, durable, Weatherproof Tags and Waterproof Tags are critical to many safety procedures.

Available plain or customised with your details, these Tough Tags are stocked in 12 eye-catching colours.



AVAILABLE IN 12 EYE CATCHING COLOURS



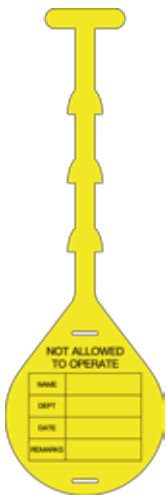
PLAIN OR PRINTED WITH ANY DETAILS



SELF FASTENING, STRONG, FLEXIB



2 NEW COLOURS - GREY AND TURQUOISE



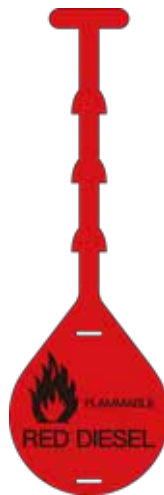
Item No.: B6963
size: 245*80mm



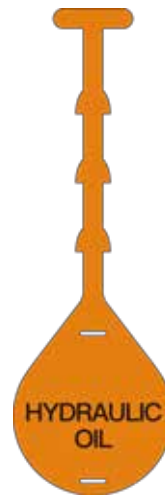
Item No.: B6964
size: 245*80mm



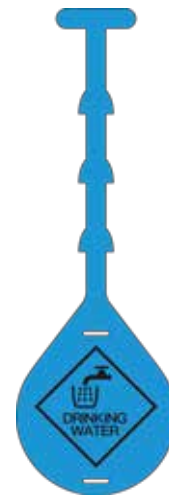
Item No.: B6965
size: 245*80mm



Item No.: B6966
size: 245*80mm



Item No.: B6967
size: 245*80mm



Item No.: B6968
size: 245*80mm



Item No.: BAN-B6969
size: 245*80mm



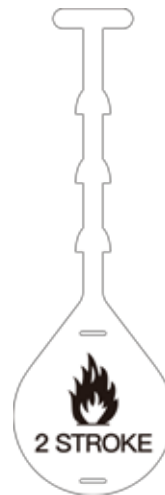
Item No.: B6970
size: 245*80mm



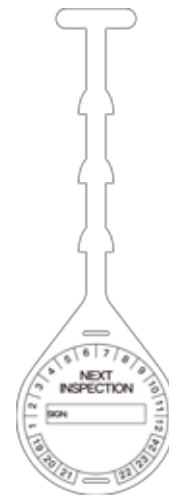
Item No.: B6971
size: 245*80mm



Item No.: B6972
size: 245*80mm



Item No.: B6973
size: 245*80mm



Item No.: B6974
size: 245*80mm

XV.Legend Plates(Conventional opening16mm/22mm/25mm/30mm)

1.Plastic Legend Plates for Emergency Stop Switches



B7240



B7241



B7242



B7243



B7244

Use these plates to indicate the location for turning switches off in emergency situations. Customized Products, Material: ABS, PP.

2.Plastic Legend Plates with Message



B7245



B7246



B7247

Made of plastic, these plates come engraved with your choice of message. Slip them over control board buttons and panel lights to identify their function and mark system components. Customized Products, Material: PP.

3. Metal Legend Plates with Message



B7248

These metal plates come engraved with your choice of message. Slip them over control board buttons and panel lights to identify their function and mark system components. Customized Products, Material: Aluminum.

4. Metal Legend Plates for Emergency Stop Switches



B7249

These metal plates indicate the location for turning switches off in emergency situations. Customized Products, Material: Aluminum.

5. Made-to-Order Plastic Legend Plates



B7250

Plastic legend plates withstand mild acids and are more corrosion resistant than metal plates. Customized Products, Material: PP.

6. Made-to-Order Metal Legend Plates



B7251

Metal plates are more durable than plastic plates. Customized Products, Material: Aluminum.

7. Metal Engraving Legend Plates



B7252

Metal plates are more durable than plastic plates. Customized Products, Material: Aluminum.

8. Plastic Write-On Legend Plates



B7253

Write a message on a piece of paper and display it behind the clear plastic insert. Customized Products, Material: PP.

9. Plastic Engraving Legend Plates



B7254



B7255

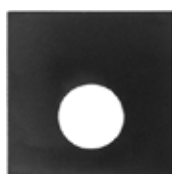


B7256

Engrave your message on these plates and slip them over control board buttons and panel lights to clearly identify their function and mark system components. They are for indoor use only. Customized Products, Material: PP.

10. Color-Contrasting Plastic Engraving Legend Plates

Remove the surface layer of these plates to create an engraved message in a contrasting color. Customized Products, Material: Acrylic, ABS.



B7257



B7258



B7259



B7260



B7261



B7262



B7263

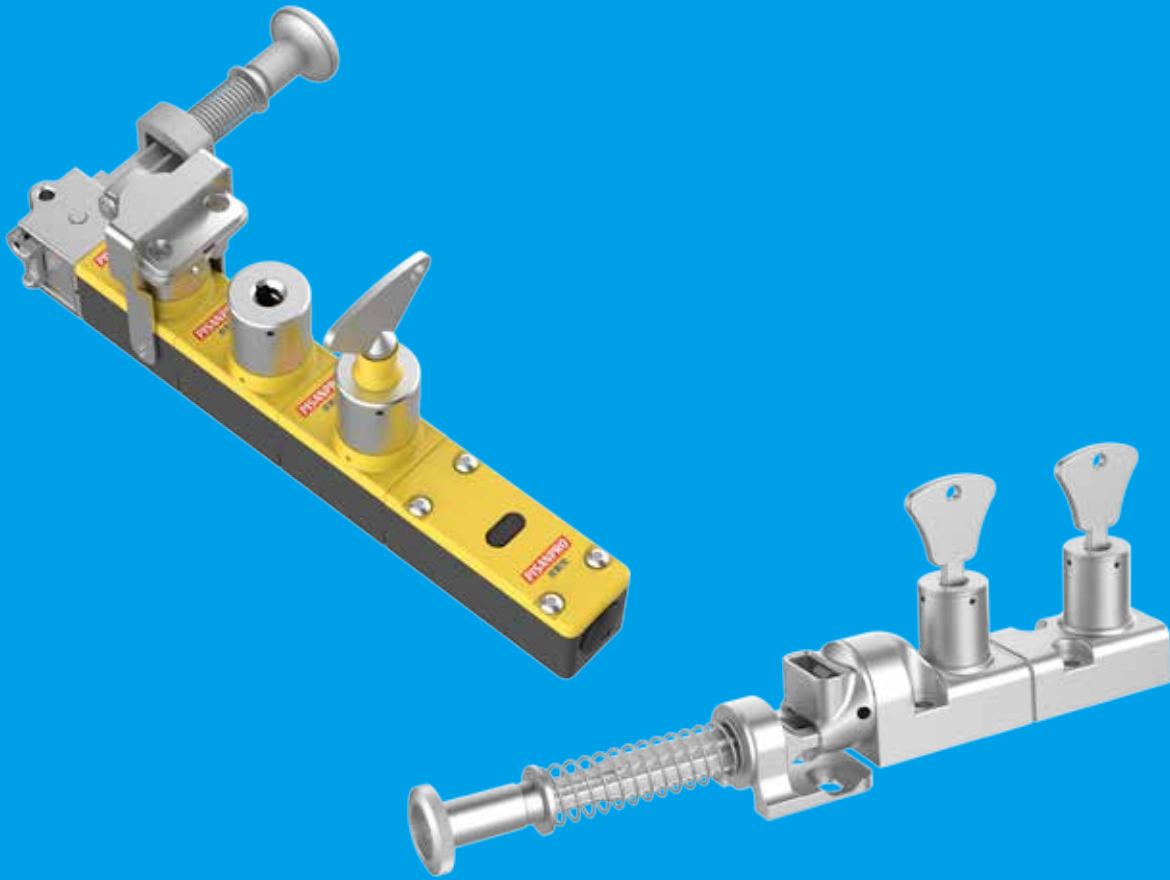
XVI. Bar Code Plates

1. Bar Code Plates



B7264

Track assets with these printed, sequentially numbered bar code plates. Customized Products, Material: Anodized Aluminum.



C

Safety Interlock

- Energy and Electricity
- Industrial Manufacturing
- Logistics Loading and Unloading
- Rail Transit

C. Safety Interlock

I. Overview of Mechanical Protection



Safety machinery provides legal protection for manufacturers and users. Machinery users expect safe machines or equipment. This expectation is global. Likewise, there are regulations around the world to protect operators from mechanical injuries. These regulations vary from region to region. However, there is a broad consensus on the procedures for machinery manufacturing and upgrading: In machinery manufacturing, machinery manufacturers must identify and evaluate all possible hazards and operational danger points through risk assessment (formerly also called hazard analysis).

Based on this risk assessment, the machinery manufacturer should eliminate or reduce the risk through appropriate design measures. If the risk cannot be eliminated in this way or the remaining risk is intolerable, the machine manufacturer must select and apply appropriate protective equipment and, if necessary, inform of the remaining risk.

To ensure that the planned measures work properly, overall confirmation is required. In the overall validation, the design and technical measures must be evaluated in conjunction with organizational measures.



✳️ We'll guide you through six steps to achieve machinery safety.

The working steps are as follows:

● Laws, directives, standards, responsibilities

- 01. EU directives
- 02. Obligations of machine manufacturers
- 03. Standard
- 04. Testing agencies, insurance and competent authorities
- 05. Basics of product liability

Step One: Risk Assessment

- 01. Risk assessment process
- 02. Machine functions
- 03. Hazard identification
- 04. Risk estimation and risk evaluation
- 05. Documentation

1

Step Two: Security Design

- 01. Mechanical design
- 02. Operation and maintenance concepts
- 03. Electrical equipment
- 04. Shutdown
- 05. Electromagnetic compatibility (EMC)
- 06. Fluid technology
- 07. Use in explosive environments

2

Step Three: Technical Protection Measures

- 01. Determine safety functions
- 02. Determine required/security level
- 03. Design security features
 - Develop a safety concept
 - Select protective equipment
 - Determine the location or size of protective equipment
 - Protective equipment integrated into the control system
 - Security technology product overview
- 04. Verify security functions
- 05. Confirm all safety features

3

Step 4: User Information Regarding Residual Risk

4

Step 5: Overall machine verification

5

Step 6: Put the machine on the market

6

● User Responsibilities

As automation technology continues to develop, the requirements for mechanical protection are changing with each passing day. In the past, guards in the workflow were in some sense a distraction and were often abandoned entirely.

Innovative technology allows protective equipment to be integrated into workflows. As a result, they no longer hinder operators and often contribute to increased productivity. For this reason, reliable protective equipment integrated into the workflow is now indispensable.

✂ Introduction: Workflow Protection

• Safety is a basic need

Security is a basic human need. Research shows that people who are constantly exposed to stressful situations are more likely to develop psychosomatic disorders. Although humans can adapt to harsh environments over long periods of time, this will place a huge burden on individuals.

This leads to the following objective: Operators and maintenance personnel should rely on the safety of their machines! But people often assume that increased “safety” will lead to decreased productivity—the opposite is true.

Greater safety means greater motivation, satisfaction, and ultimately greater productivity.

• Security is a management task

Decision makers in industry are responsible for their employees and smooth and cost-effective production. Only when managers implement safety concepts in their daily routines will employees pay equal attention to the issue.

Therefore, to improve sustainability, experts advocate the establishment of a broad “safety culture” within companies. And there's a reason for this: After all, nine out of ten accidents are caused by human error.

• Employee engagement promotes acceptance

It is crucial to incorporate the needs of operations and maintenance personnel into conceptual-level planning. Only a smart security concept that is coordinated with work processes and people can achieve the required acceptance.

• Requires expert knowledge

Machinery safety depends largely on the correct application of directives and standards. In Europe, national regulations are harmonized through EU directives such as the Machinery Directive.

Such directives describe general requirements and specify them through standards. European standards are often also accepted by countries outside Europe.

Practical implementation of all these requirements requires extensive expertise, application knowledge and many years of experience.

• Standard sources:

The content of this Agreement refers to the terms in the following documents.

For undated referenced documents, the latest edition applies to this standard.

"General Principles for Machinery Safety Design Risk Assessment and Risk Reduction" GB/T 15706

"Machinery Safety - Relevant Safety Components of Control Systems Part 1: General Principles of Design" GB/T 16855.1

"Machinery Safety - Relevant Safety Components of Control Systems Part 2: Confirmation" GB/T 16855.2

"Safety of machinery - Design and selection principles for interlocking devices with protective devices" GB/T 18831

"Mechanical and Electrical Safety - Mechanical and Electrical Equipment Part 1: General Technical Conditions" GB/T 5226.1 Corresponding European Standard EN 60204-1

"Machinery Safety - Safe Distance to Prevent Upper and Lower Limbs from Touching Danger Zones" GB 23821

"Machinery Safety Minimum Spacing to Prevent Extrusion of Human Body Parts" GB/T 12265

"Machinery safety: Positioning of safety protection devices related to the approaching speed of human body parts" GB/T 19876 Corresponding ISO standard ISO 13855

"General Specifications for Construction and Acceptance of Mechanical Equipment Installation Projects" GB 50231

"Hygienic Standards for Design of Industrial Enterprises" GBZ1-2010

"Mechanical Safety - Implementation Guidelines for Safety Protection" GB/T 30574

"Steel Structure Design Standard" GB 50017

"Machinery Safety - Fixed Facilities for Access to Machinery" GB 17888

"Safety Requirements for Fixed Steel Ladders and Platforms" GB 4053

"Machine Safety - Functional Status and Setting Principles of Two-Handed Operation Devices" GB/T 19671

"Safety Signs and Guidelines for their Use" GB 2894

"General Specifications for Construction and Acceptance of Mechanical Equipment Installation Projects" GB 50231

"Safety of machinery. Safety-related parts of control systems" ISO 13849-1

"Functional safety of electrical/electronic/programmable electronic safety-related systems" IEC 61508

II. Interlocks Category

Safety interlocking devices are effective measures to prevent misoperation. Conventional safety interlocking devices include electrical operation safety interlocking devices, hydraulic operation safety interlocking devices, and combined operation safety interlocking devices etc. According to the power source that causes the safety interlocking device to operate, it can be divided into three types: direct-acting safety interlocking devices, indirect-acting safety interlocking devices, and combined safety interlocking devices.

Name	Brake		Actuator	
	Principle	Samples	Principle	Samples
Type 1 Structure	Mechanical	Contact, Using Force, Press Down	Uncoded	Switching Cam
				Switching Lever
				Hinge
Type 2 Structure			Encoded	Molded actuator (Converter Rod) wrench
Type 3 Structure	Inductive	Inductive	Uncoded	Suitable Ferromagnetic Materials
		Magnetic		Magnets, Electromagnets
		Capacitive		All suitable materials
		Ultrasonic		All suitable materials
		Optical		All suitable materials
Type 4		Magnetic	Encoded	Encoded Magnets
		RFID		Encoded RFID Transponders
		Optical		Encoded Optical

Safety Switches, Position Switches and Interlocking Devices

The widely used concept of "safety switch" does not appear in the standard because there are so many sensor designs and technologies suitable for interlocking devices that it is impossible to define universal requirements.

Regardless of the technology used (mechanical, electrical, pneumatic, hydraulic), the following definitions apply:

- The interlocking device consists of an actuator and a position switch.
 - The position switch consists of an actuator and an output signal component.
- Depending on the technical and functional safety requirements of the position switches used, the physical guards require one or more interlocking devices.

III. Interlocking Safety Applications

Safety interlocking devices are widely used in the field of industrial safety. There are a lot of danger sources in factories: rotating wheels, moving levers, etc. If there is no additional protection, workers directly contact danger sources, which may cause industrial accidents. In order to avoid such accidents, it will require to add additional protective devices, such as: using protective covers to isolate the moving and rotating parts from the workers. This measure can effectively reduce the occurrence of accidents, but it cannot be avoided because there is still a possibility that the protective device may be removed or opened. In order to prevent such a situation, a device connected to the switch of the equipment is added to the protective cover. This device has the following two functions: 1. The equipment cannot be started when the protective cover is opened or removed; 2. When the protective cover is opened during the operation of the equipment, the equipment will stop directly.

The development of safety interlocking devices is not limited to protective devices such as protective covers, but is developing towards a broader concept. However, no matter how it develops, it contains at least two concepts: one, for safety; two, it must be linked with control devices such as equipment and machinery. Fundamentally speaking: safety interlocking devices are just a technical measure to control dangerous sources in the field of industrial safety.

Can also be used on equipment that is stained with oil or water



Processing Machine Tools

Because of its water-resistant and oil-resistant structure, it can be used safely in water- or oil-stained environments.

Locking Type



Washing Machine

As it is IP65/67/69K-compliant, it can be used in humid and wet environments.

Contactless

Equipment that cannot be stopped immediately uses a locking type



Robot

Due to the inertia of rotation, the safety fence must be locked to prevent it from opening before the robot stops.

Locking Type



Roller

Especially for large-sized rotating bodies, it takes a long time to stop, so the locking type is recommended.

Locking Type

Flexible installation, Wide Application.



Multiple Doors

Even if there are many doors, the safety outputs can be unified through cascade connection.

Locking Type



Lifting baffle

If it is a contactless type, since it can be installed in an L shape, it can also be used in places such as rolling shutters.

Contactless



Robot origin location monitoring

The matching unit is small and does not require wiring, so it can be installed on a robot.

Contactless



Press machine lifting and lowering monitoring

It can also be used as a sensor for operators to pick up workpieces.

Contactless

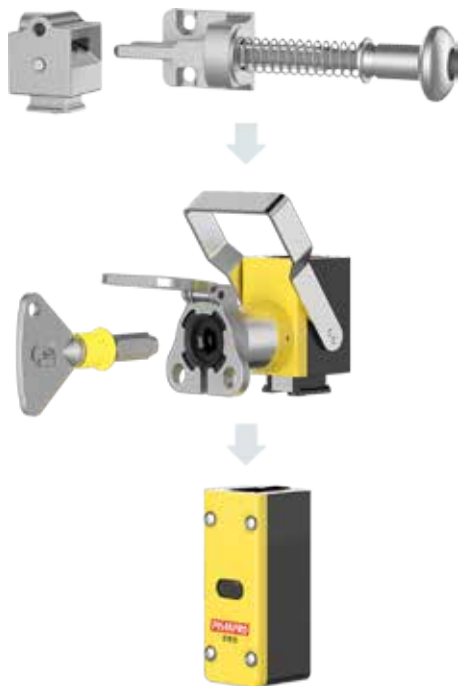
IV.AMG Series Trapped Key Safety Door Interlock (Parameters / Applications / Model List)

The AMG series products are perfect solutions in the field of industrial safety. At the same time, based on the modular design principle, Beian Safety Interlock can construct interlock system solutions more flexibly and easily, and tailor some required application solutions for customers. Internal release/authorization key/safety key and emergency stop button functions can be integrated into traditional safety door switches and electromagnetic safety door locks.

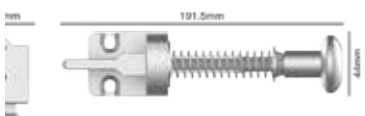
The AMG series products have excellent ruggedness and reliability, which can ensure the reliability of applications in any harsh and dangerous operating environment, while still meeting the safety level of SIL3 (EN/IEC62061) and PLe (ISO13849-1) applications.

AMG series products have passed TUV safety certification and are widely used in metallurgy, automobile, food and other industries.

● Parameter

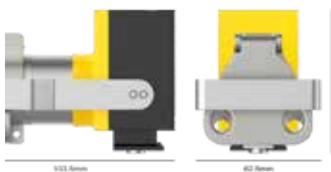


Accessory 1: Lock head and lock handle



- Can be used for hinged doors or sliding doors
- Stainless steel castings
- Bearing capacity: 2500N

Accessory 2: Safety key adapter



- This device can ensure that the machine/equipment cannot be accidentally restarted if the safety key is not returned. It can prevent operators from being accidentally locked in the protection area.
- Can be stacked or used in combination with other safety key adapters (multi-person operation);
 - Can be integrated with an interlocking system with the Beian interlocking series products;
 - Up to 5 safety key adapters can be selected on a safety door;

Accessory 3: Safety Door Trapped Key

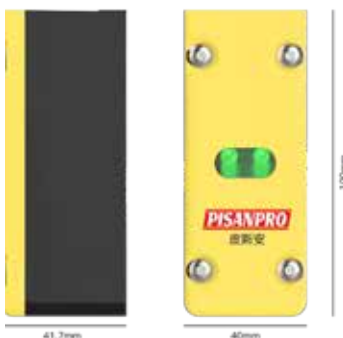


- Coding capacity: 200,000 different combinations
Can be equipped with a universal lock cylinder
Engraving service available

Parameter

Material: Zinc alloy BSEN 12844 standard / Stainless steel BS3146 standard
Finishing: Glossy polyester powder coated
Colour: Red, Black, Stainless Steel
Waterproof: IP67
Operating force: 0.5N
Locking force: 2500N
Mechanical Worklife: > 1000000 times
Applicable Temperature: -5°C to +40°C
Main Switch: Positive Disconnect
Control Current: 3A
Switch Voltage: 48V
Switch Contact Point:
4NC/2NO,2NC/1NO,2NO/2NC
Contact Point Material: 90% Silver, 10% Nickel

Accessory 4: Safety door switch lock body



- The dual safety circuit is used to realize the interlocking of machine operation and safety door.
- Suitable for machines that require frequent entry and exit and do not require stop time;
 - Non-electromagnetic coil control;
 - Indicator light can identify the status of the safety door;

Provide internal wiring terminals, quick cables, and safety bus line interfaces.

Control voltage
24V AC/DC
48V AC/DC

The AMG series is a modular control interlock product designed to provide safety protection for harsh working environments. The AMG series includes a dual-channel safety circuit that can achieve cross-monitoring. A variety of lock head styles and adaptable installation methods give it a long service life. At the same time, a variety of personal safety padlock installation accessories can be selected, so as to meet all-round safety protection while reducing the factory's trouble-free downtime maintenance time. The AMG series is suitable for application cases including safety integrity level SIL3 (EN/IEC62061), Category 4 and PLe (EN/ISO 13849-1) and other safety standards. It is very suitable for harsh working environments and has a service life of more than 1 million operations.

Technical Description:

The product is equipped with the following functions:

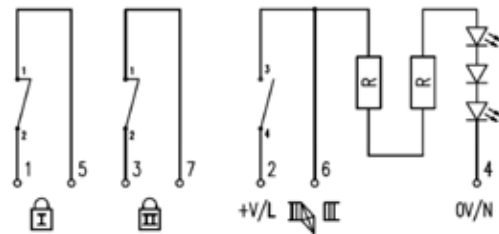
- Handle-type latch + lock head: integrated operating handle, no need to install additional door handle, allowing the protective door to be offset or deformed, and the lock head direction can be adjusted in four 90° directions;
- Safety door switch lock body: provides dual safety circuits and LED status indication;
- Compulsory safety key: The lock latch can only be unlocked by pulling out the safety key. Carry the safety key into the dangerous area to ensure that the equipment cannot be accidentally started by others.

Status Indicator Light Description:

- When the safety door is closed during normal production, the indicator light is off;
- After the safety door is opened, the red indicator light is on.

Electrical Circuit Diagram:

The following diagram shows the circuit diagram when the lock latch is inserted:



Terminal Definition:

- Terminals 1 and 5: Safety circuit 1. When the safety door is opened, this circuit changes from normal close to normal open;
- Terminal 2: 24V;
- Terminals 3 and 7: Safety circuit 2. When the safety door is opened, this circuit changes from normal close to normal open;
- Terminal 4: 0V;
- Terminal 6: When the safety door is opened, the contact voltage is 24V.

Application

AMG Series Application Example A

In this case, AMG products provide mechanical and electronic solutions for the field of robot safety protection.

1. Press the entry command button and the machine equipment stops. The lock controlled by the electromagnetic coil limits the key to be released only when staying in the protection area or the machine is in a safe state (the yellow LED indicator shows the status). The two safety keys A can be pulled out and the red LED indicator shows the status.
2. Key A is used to lock the door, and the safety key B is released at this time. Key B is brought into the protection area as a safety key to prevent people from being locked in or the machine from accidentally restarting.

The reverse operation can safely restart the machine.



AMG Series Application Example B

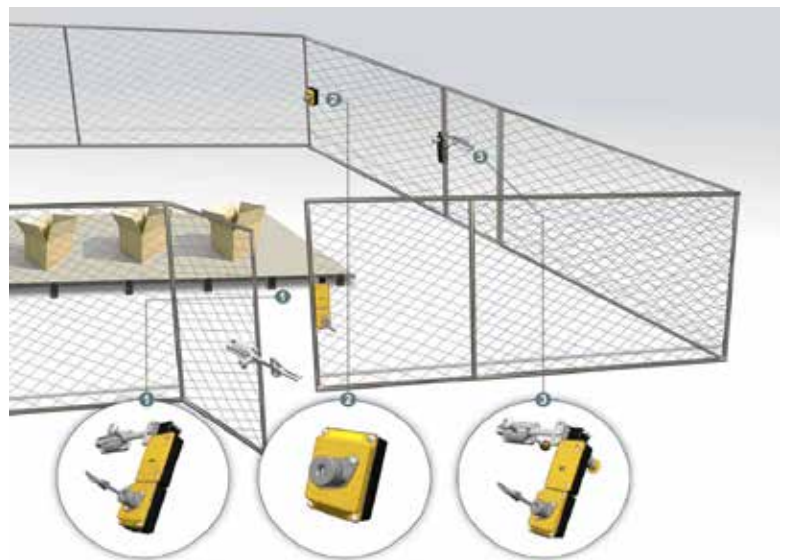
In this case, the potentially dangerous safety protection area has a debugging switch.

1. Turn and pull out the key on any POK key switch, the machine stops after completing the working cycle, and the electromagnetic coil is connected to permit enter the protection area.

The operator can enter the protection area with a safety key to prevent the machine from restarting.

2. Insert the key into the POD key switch in the protection area to start the safety debugging mode.

3. The LOK internal release device can open the protection area from the inside to prevent people from being accidentally locked into the protection area. By hitting the internal release button on the lock body, the latch is released from the lock head and the door can be opened from the inside.



● Model List

Product Category	Product Series	Product No.	Picture
Safety interlock Safety door switch / safety door sensor is a safety device installed on the safety fence to detect operator intrusion. The product lineup includes: mechanical locking method with trapped key, code electromagnetic locking method, and contactless method. It widely supports applications that meet the types of hazardous sources or installation conditions, and can reach Cat.3 Pld SIL2.	 ANG Series	C01K01D01	
		C01K01S01D01	
		C01K01S01D02	
		C01D01	
		C02K01S02D01	
		C02D01	
		C02K01S02D02	
		C02D02	
		C01D02	
		C01K03D01	
		Accessories: Safety Door Switch Main Body C01	
		Accessories: Safety door electromagnetic switch Main body C02	
		Accessories: Long handle door lock Latch D01	
		Accessories: Hinge door lock Latch D02	
		Accessories: Safety Key Adapter K01-K03	
		Accessories: Adapter S01	
		Accessories: Adapter with internal release S02	

V.BIL Series Mechanical Program Logic Interlock



The robust modular inserted key interlock is the preferred range applied for heavy industry. Inserted key interlocks are a reliable and tested method for mechanical guarding of hazardous machines and processes, suitable for a wide range of PLe (Cat.4) applications. They are called "inserted keys" because they release and insert keys in a pre-set sequence to achieve safety control. When the control power or supply power is isolated, a key can be removed to open one or more doors. The inserted key technology principle is used in all applications where power must be isolated before entering or approaching the machine.

● Application



Power / Control Switch

Make sure the power supply is isolated, including any hazards that cannot be immediately isolated such as: heat, pressure, radiation or machine running that are isolated.

- Power Source isolation
- Mechanical Power lock
 - Power lock with limit switch
 - Power lock with switch
 - Circuit Breaker lockout

Control isolation

- Key switch
- Solenoid-operated key switch
- ATEX key switch
- ATEX solenoid-operated key switch
- Solenoid-operated key switch unit
- Power supply time delay unit
- Voltage sensing unit
- Rotary switch control unit

Key Exchange

Determine the model and number of entries

- Key exchange unit
- Key exchange unit with switch

Due to the modular arrangement, when adding doors to the safety Protection area or machine, simply add the FDS-FJ expansion module to the key exchange box and door lock.

The inserted key system is suitable for the safety protection of potentially hazardous areas and does not require electrical wiring.

It is a mechanical structure and is suitable for areas with flammable and explosive gases or dust.

Door locks and Actuators

Determine the type of entrance, such as half-body or full-body entry to the premises, and whether carry safety key or not (to prevent accidental locking).

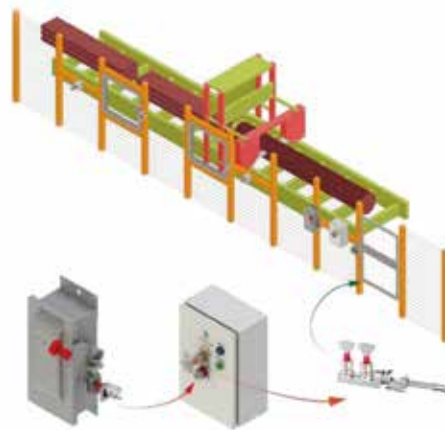
- Single-Head door locks
- Multiple-Head door locks
- Fixed actuators
- Handle actuators
- Spring-driven handle actuators
- Calibrated actuators
- Compressible actuators

Application Example (adding safety interlock to guard cover)

The line production generally has exposed danger sources such as rotating wheels, moving levers, etc. In order to avoid accidents, additional protective devices are generally chosen, such as: using guard covers to isolate moving and rotating parts from workers.

This measure can effectively reduce the occurrence of accidents, but it still cannot be avoided because the protective device may still be removed or opened.

Interlocking can prevent such situations. Add a device connected to the switch of the equipment on the protective cover. This device has the following two functions: 01. The equipment cannot be started when the protective cover is opened or removed; 02. When the equipment is running, once the protective cover is opened, the equipment will stop directly.

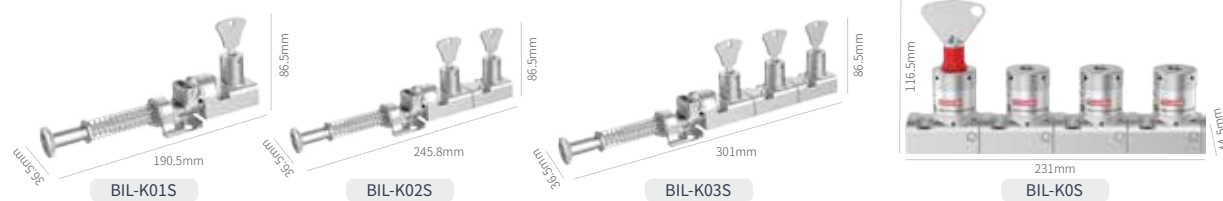


Mechanical Structure Interlocking Logic:

Disconnect the machine switch → Pull out the red key to lock the switch in the disconnected state → Insert the red key into time delay control box → Pull out the yellow key after time delay ends to lock the hydraulic energy in the isolated state → Unlock the passage door and pull out the green key to entry inside.

Parameters

Key Exchange Box Unit



Modular Key Exchange Box

The FDS-KC unit is used to exchange one or more keys for multiple other keys. The device is the connecting part between the isolation device and the entrance lock.

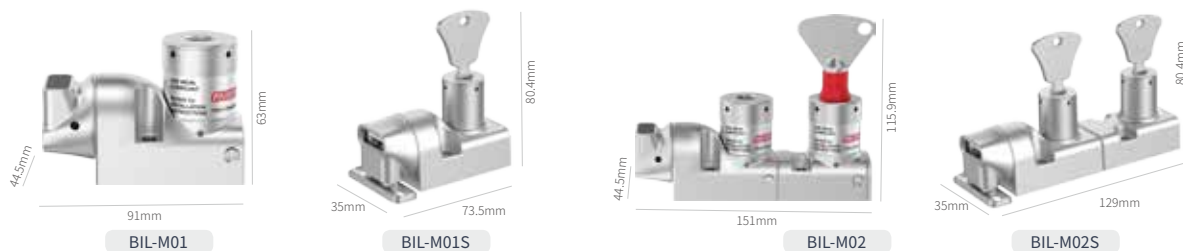
- The product has no installation direction issues
- Any combination of switch/authorization keys
- Sequential or non-sequential key operation
- Simple addition of modules to existing combinations

Basic Parameters

Number of lock cylinders: 1 » 10 K01 » K10

Number of lock cylinders (all stainless steel): 1 » 5 K01S » K05S

Door Lock



Single Head Door Lock

- The product has no installation direction. The lock head can be installed from four angles 360° with 90° increments and +/-5° adjustment. Actuators for two entry methods.
- All DM locks are equipped with stainless steel lock heads
- Durable and robust mechanical lock heads
- Choice of actuators

Basic Parameters

Number of lock cylinders: 1 M01

Number of lock cylinders (all stainless steel): 1 M01S

Multiple Head door locks

- The product has no installation direction issues, the lock head can be installed from four angles 360° with 90° increments and +/-5° adjustment. Actuators for two entry methods.
- Any combination of switch/authorization keys
- Ordered or unordered key operation
- Simple addition of modules to form required combinations
- All DM locks are equipped with stainless steel lock heads
- Durable and robust mechanical lock heads
- Choice of actuators

Basic Parameters

Number of lock cylinders: 2 » 10 M02-M10

Number of lock cylinders (all stainless steel): 2 » 5 M02S-M05S

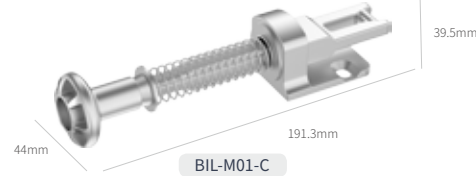


Lock Head fixing direction selection

The M01 and M01S modules benefit from an innovative and patented locking design. With 5 actuators to choose from, the locking head features 360° rotation and adjustment in 90° increments through 4 rotational directions and 2 entry methods, and can be fine-tuned within a range of $\pm 5^\circ$.



Actuator

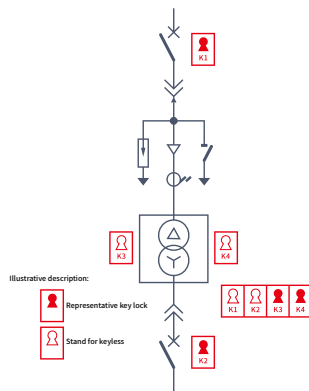


Spring Actuator

- Applicable to all M0 type door locks
- Suitable for occasions where the door needs to be opened and closed twice to prevent the lock from being damaged by slamming the door
- The latch holds the actuator when the door is open
- Vertical adjustment ± 6 mm
- The rotating bracket can be adjusted appropriately

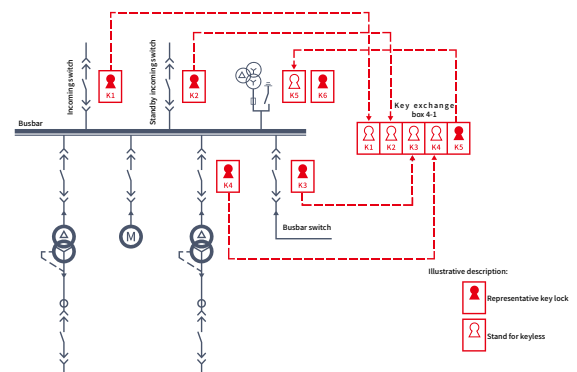
Case

The development of safety interlocking devices is not limited to protective devices such as protective covers, but is developing towards a broader concept. However, no matter how it develops, it at least includes two concepts: 01. For safety; 02. It must be linked with control devices such as equipment and machinery.



Various Industries - Transformer Maintenance Application

- Disconnect the transformer outgoing line switch, pull out the key K2, and lock it in the maintenance position.
- Disconnect the transformer incoming line switch, pull out the key K1, and lock it in the maintenance position.
- Insert the keys K1 and K2 into the key exchange box 2/2, and replace the keys K3 and K4.
- Use keys K3 and K4 to open the front and rear doors of the transformer respectively. The key cannot be pulled out when the door is opened. The key can only be pulled out when the door is closed again.
- Put it into operation and perform the above operations in reverse.



Steel Plant Application - Busbar Maintenance

- Disconnect the incoming switch, spare incoming switch, bus tie switch, and transformer feeder switch respectively, pull out keys K1, K2, K3, and K4, and lock them in the maintenance or test position.
- Insert all the keys pulled out in the previous step into the key exchange box 4/1, and exchange key K5.
- Use key K5 to unlock the busbar grounding knife or busbar grounding trolley. After unlocking, pull out key K6 from its grounding well as the master lock key and hand it over to the maintenance person in charge.
- Put it into operation and perform the above operations in reverse.

● BIL-S Series Parameters

Power lock unit



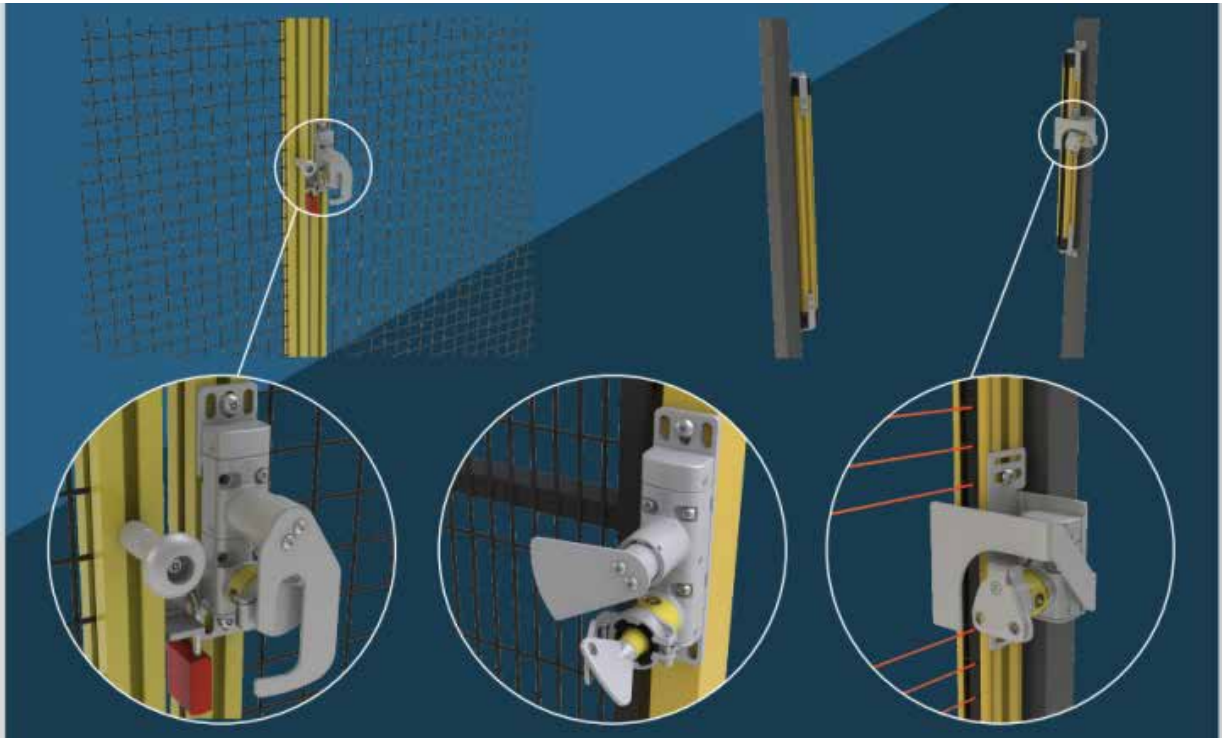
Exchange unit



Door lock unit



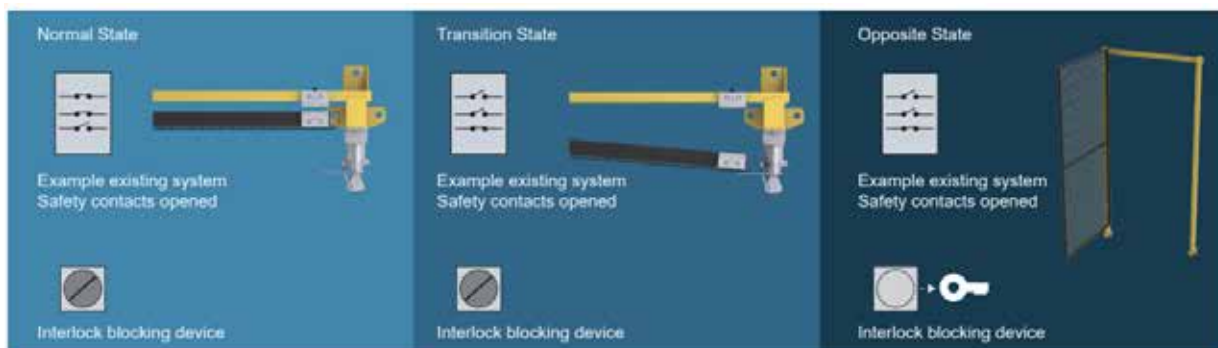
● Case



● BIL-K Series Parameters

Interlock Blocking Device

Interlock Blocking Devices (BIL-K Series) are available in two varieties; sliding door and hinged door applications. The "Existing System Example" uses two NC safety contacts, and one NO monitoring contact. As diagram shown below, it works completely independent of the existing safety system while the operator stay the protected space.



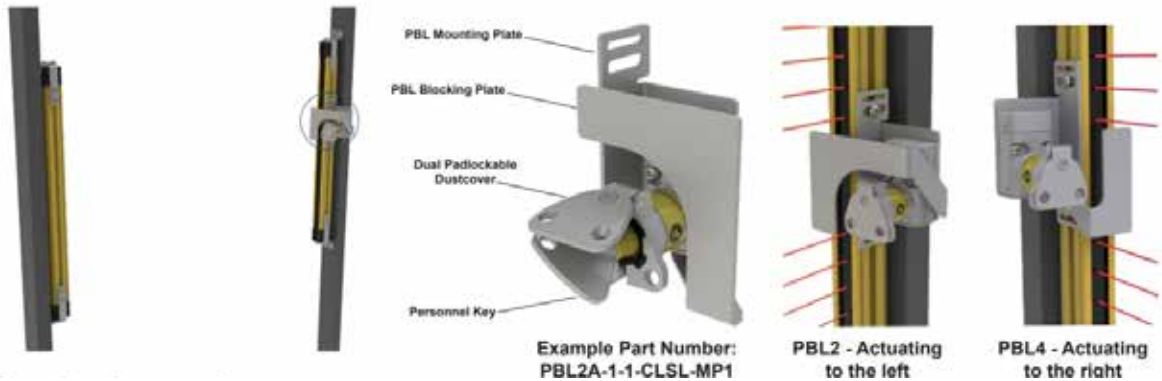
Trapped key

Our locks come in over 200,000 different combinations, effectively preventing duplicate combinations and increasing security performance according to ISO/TS 19837:2018. Unique key labeling is available, up to three lines, each line with 10 characters.



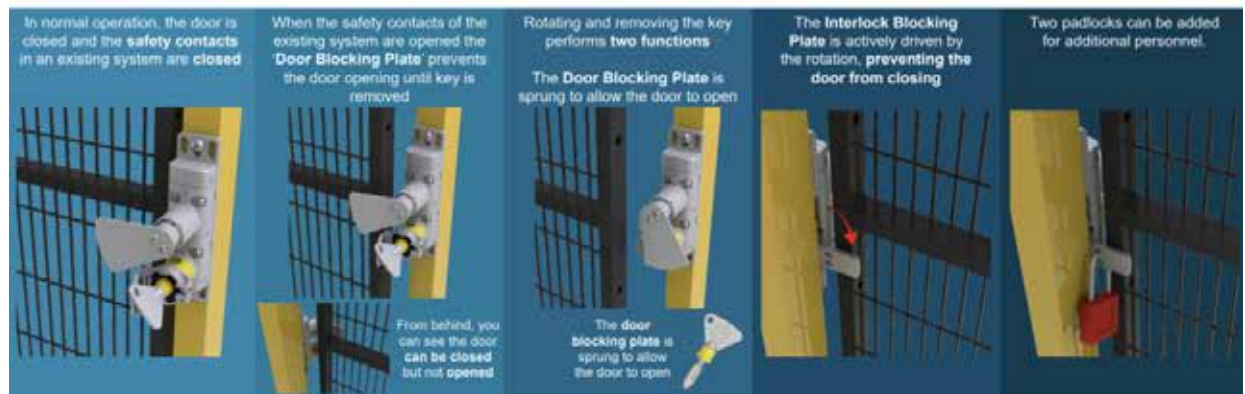
Optoelectronic barrier solution (if safe entry is required through grating)

There are multiple models of photoelectric blocking devices (PBL) that can be installed on different brands of light curtains.



Hinged safety door scheme (maintaining the original interlocking system while adding trapped keys)

1. In normal operation, the door is closed and the safety contact (blade) is in the closed state in the existing system.
2. When unlocking, lower the safety contact (blade), open the door, and release the back blade to prevent the safety door from being closed, keeping the original interlocking system (pin type, electromagnetic type, etc.) isolated and preventing the equipment inside the safety door from being started.
3. Safety padlocks can be installed as needed to enable lockout and tagout when operated by multiple people



Sliding protective door scheme

The interaction between the moving part of the door and the fixed column may vary depending on the protective device. Although sliding to a level door pillar is common, other pillars sliding in front or behind fixed pillars are present in many protective applications.



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