

Ducis TAKEX RIKEN



DUCIS ENTERPRISE CO.,LTD



營業項目 Business Range

衝壓模具微電腦下死點檢出裝置

Stamping die computerized Slug Detector.

日本理研/竹中衝壓護手防護安全裝置

RIKEN/TAKEX (JAPAN) Press machine Hands-Protector Safety.

模具誤送及通過檢出裝置

Stamping Die Error-Carring and Passing Through Inspection Devices.

衝床微調式雙面給油器及噴油裝置

Press machine Micro-Adjust type Double Sides Lubricant Feeder.

機臺自動化控制設計與維修

Design and Maintain of the Automated working unit.

衝床自動化周邊設備與節能電器裝置

Press machine automation and relative devices service.

衝床銷售及維修

Sales and maintenance of punch



Ducis 先進設計・專業制造・專業代理(理研 RIKEN/竹中TAKEX/杉山)



DUCIS ENTERPRIS

FAITH TO THE LETTER, FOLLOW SERVICE FOREMOS

公司簡介

東莞申皓成立於2000年。是一家臺灣企業有限公司在廣東省、福建省及江蘇省等地都設有分公司，從事衝床的自動化、安全化，無人化的研究與開發已有幾十年的歷史，在此領域已積累了相當豐富的經驗。本公司參考先進國家技術。專業設計。製造生產與銷售衝床周邊自動化系列的機械設備。主要生產銷售微電腦下死點檢出器，模具誤送及通過檢出裝置。不銹鋼附自動點磁閥給油桶，雙面給油器，噴油器，各種自動化設備。代理日本杉山檢知器與各種配件；代理之衝床護手防護安全裝置是日本二大光電產品理研。竹中之品牌。日本杉山的各種檢知器及中國機械設備及智能手機APP的運營開發與招商。

日本理研主要產品：衝床護手防護安全裝置、荷重監視器、誤送檢知、下死點檢知、各種檢知器的配件。

日本竹中主要產品：衝床光電護手，光電開關。

日本杉山主要產品：下死點檢知、誤送檢知等其他產品及其配件

申皓之產品行銷於世界各地，以優良的品質。熱忱。高效、優質的售後服務而受到廣大客戶群的支持與愛護。為滿足消費者之需求及方便性。長久以來，我們秉承“品質第一，服務至上”的宗旨，竭誠為廣大新老客戶提供高品質，高效能、人性化、自動化的優良產品及定期為客戶做產品檢修與服務。得到客戶的大力支持與高度信賴。造就申皓在商業界的良好形象。與此同時，產品的品質也獲得了客戶的一致好評。

我公司技術力量雄厚、安裝、售後服務及維修都有非常成熟的技術。長期以來，我們秉承“品質第一，服務至上”的宗旨，竭誠為廣大新老客戶提供高品質，高效能、人性化、自動化的優良產品。我們期望能與貴公司攜手共創未來！

Dongguan Shen Hao was founded in 2000. Is a Taiwan company with offices in Guangdong Province, Fujian province and Jiangsu province and other places, automation and safety in punch, research and development of unmanned has decades of history, this field has accumulated rich experience. The company reference advanced national technology. Professional design. Machinery and equipment for manufacturing, manufacturing and sales of punching machines. The main production and sales of microcomputer under the detector dead, and fault detection device by die. Stainless steel with automatic point magnetic valve to the oil drum, double-sided oil feeder, injector, a variety of automation equipment. Deputy director of the Japanese mountain inspection and a variety of accessories accessories; punch punch safety protection device is Japan's two major optoelectronic products. Brand in bamboo. A variety of detection devices and the development and investment of China's machinery and equipment and smart phone APP. Japanese main products: punch hand safety protection device, load test, fault monitor, die under the inspection of knowledge, a variety of detector parts. Japan's main products in bamboo: punch photoelectric hand protector, photoelectric switch.

The main products: Japan Sugiyama die under inspection knowledge, inspection and other missent products and accessories Shen Haozhi products are sold all over the world with good quality. Hot pillow. High efficiency, high-quality after-sales service by the majority of customer support and care. In order to meet the needs and convenience of consumers. For a long time, we are adhering to the "quality first, service first" purpose, wholeheartedly provides the high quality for the majority of new and old customers excellent products, high efficiency, humanization, automation and regular customers to do product maintenance and service. Strong support and high trust from customers. To create a good image in the business sector. At the same time, the quality of the product has also won the praise of customers.

My company has strong technical strength, installation, after-sales service and maintenance are very mature technology. For a long time, we are adhering to the "quality first, service first" purpose, dedicated to the vast number of old and new customers to provide high-quality, efficient, user-friendly, automated products. We look forward to working with your company to join hands in creating the future!



經營理念： 誠信經營、效益優先、彰顯特色、合作共贏。

服務理念： 至誠至信、全心全意、專業服務、客戶至上。

企業精神： 敢于挑戰，勇于探索的創新精神；刻苦鑽研，自學自強的進取精神；
恪盡職守，腳踏實地的敬業精神；甘當人梯，共同進步的團隊精神。

Ducis 先進設計 · 專業製造 · 專業代理(理研 RIKEN/竹中TAKEX杉山)

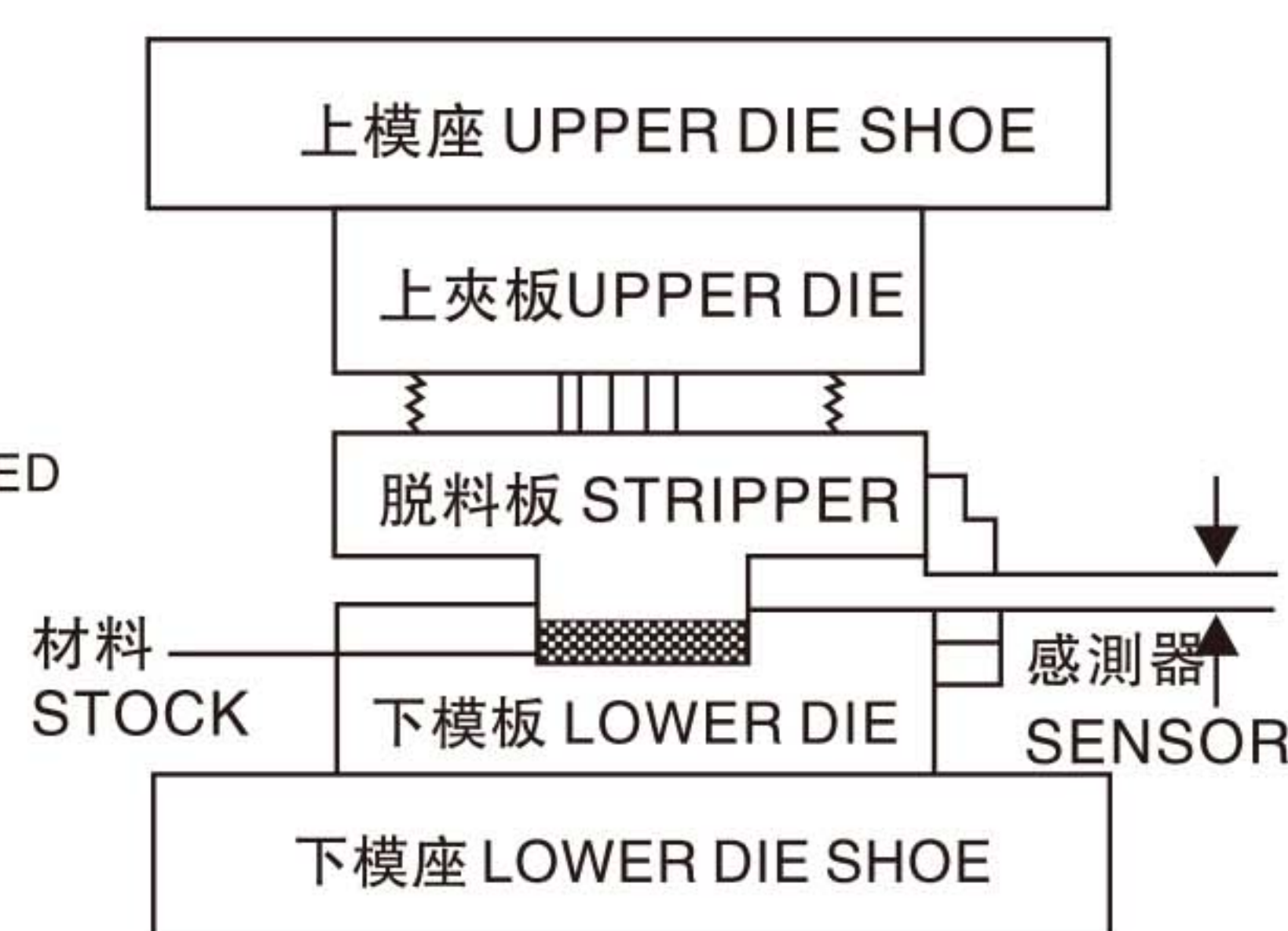
下死點連續衝壓模感測器 (SD-411/412/414) Computerized slug detector (411/412/414)



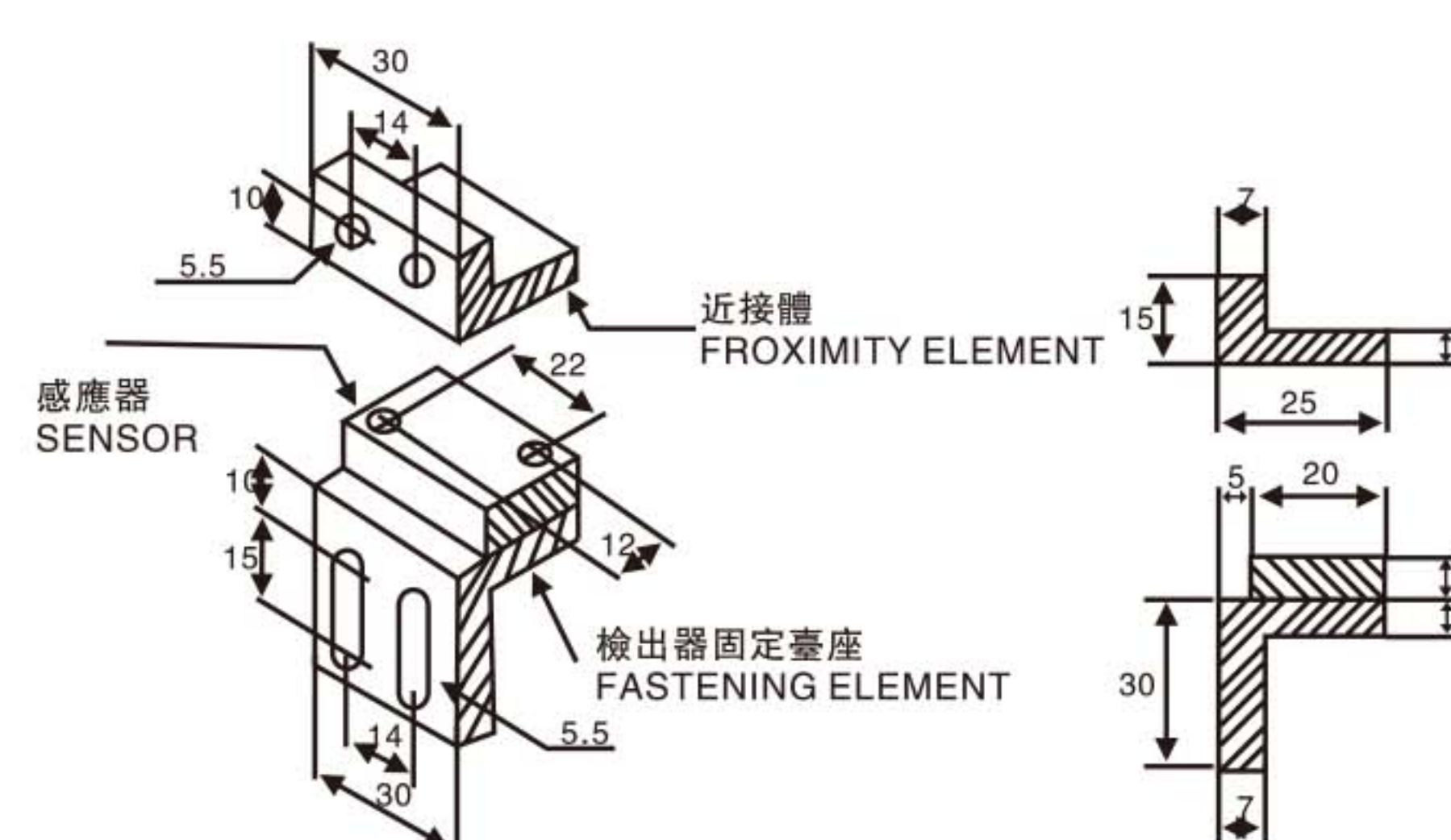
SD-411/412感測器裝配圖:

SD-411/412 Installation locations:

傳感測器操作距離: 0.7mm~1.5mm
(脫料板在下死點位置時)
GAP "A" IS TO BE 0.7mm~1.5mm
WHEN THE STRIPPER IS POSITIONED
AT IT' S BOTTOM DEAD CENTER.



近接體與□出器,固定臺座之外形尺寸圖
Testing matter and sensor Kit installation
Set of configuration Lay-out



產品特點:

SD-411—臺主機，一個輸出裝置(單點)
SD-412—臺主機兩個輸出裝置(雙點)

- 傳感器操作設定距離: 為 (A) 位置0.7mm至1.5mm, 請按設定開關後出現199至0, 再移動感測頭鐵塊就可調整到70~150的操作距離。
- 監視值設定之操作: 精密度設定範圍 $\pm 1 \mu m \sim \pm 99 \mu m$, 監視值依您實際需要的精度而設定。
- 當衝模開始運作此檢知前六次顯示數字為模具高度測試平均值。(當衝床電源開關切掉“OFF”或感應線離開感應器再重新插入感應器等,須按(Monitor or/off) 亮綠燈, 此值才會重新計算)。
- 檢知有效/無效時可選擇的裝置, 安裝在有效、無效旁的指示燈在OFF狀態下為紅燈, 在ON狀態下為綠燈。
- SP: 速度異常及停機時會出現: 另外原因: 衝壓時, 上、下鐵塊突然脫落時會出現。
- OP: 為感測線及感測頭斷線或者感測線拉開時會出現。
- HI: 太高異常紅燈及高的黃色燈會亮。
- LO: 太低異常紅燈及低的紅色燈會亮。
- ES: 為誤送檢知、材料無料檢知、擠料檢知等異常時會出現。
- 此機臺規格設定值為 $1 \mu m$ 單位, 可依模具精度需要而選擇。
- 此檢知可加裝誤送檢知、材料無檢知(電眼檢知)、擠料檢知(感測棒檢知)。

◆規格 Specifications

Product Features:

SD-411—One basic unit, Single output device (Single Port)
SD-412—One basic unit, Dual output device (Dual Ports)

- Sensor operation setup distance: Location (A) form 0.8mm to 1.2mm, please setup switch thereafter 199-0 displayed. Move the block of the sensor head, it can be adijused to 70150 as operation distance. (Meaning 0.7mm to 1.50mm) Press setup switch again after set-up process.
- Operation of monitoring value setup: Accuracy range sets up from $\pm 1 \mu m \sim \pm 99 \mu m$ depends on your exact accuracy requirement.
- While stamping die starts running, the first six times displaying digits meaning the average of the die-height testing. (It will be recalculated while stamping machine power off for the sensor line out of the basic unit and re- plug -l n), please press monitor MONITORON.OFF switch thereafter the green lighe light up.
- This product can be choose set up in effective or ineffective. The lights is red when the setup is off. The lights is green when the set up is on.
- This product provides precision set-up value as $1 \mu m$, it is selectable against different accuratetoolings.
- Options available for Error-Carry-On, Missing material (by Electro-Eyes sensor) and Material Jammed(Bysensoring Bar) .

適用溫度 Applicable Temperature Range	0 ~ 50℃	標準配件 Standard Accessories	感測器, 感測線3M, 感應鐵塊 Sensor, sensor line 3M, iron block
重量kg	2.4kg	有綫感測器長度 Size of Sensor	30W × 8H × 20D
輸出信號 Stop Signal Output	繼電器接點(A.B)250V3A Relay Contacts	感測器長度 Length of Sensor	5cm~10cm
電源電壓 Supply Voltage	AC85V~250V50/60Hz ± 10%	連接綫長度 Length of Joint Cable	3M及5M兩種 3M and 5M 2 Models
外形尺寸 Size of Main Unit	105W × 140H × 185D	感測設定距離 Gap Between and Proximity Element	0.8mm ~ 1.2mm
		最大連轉速度 Max. Operating Speed	1200 S.P.M

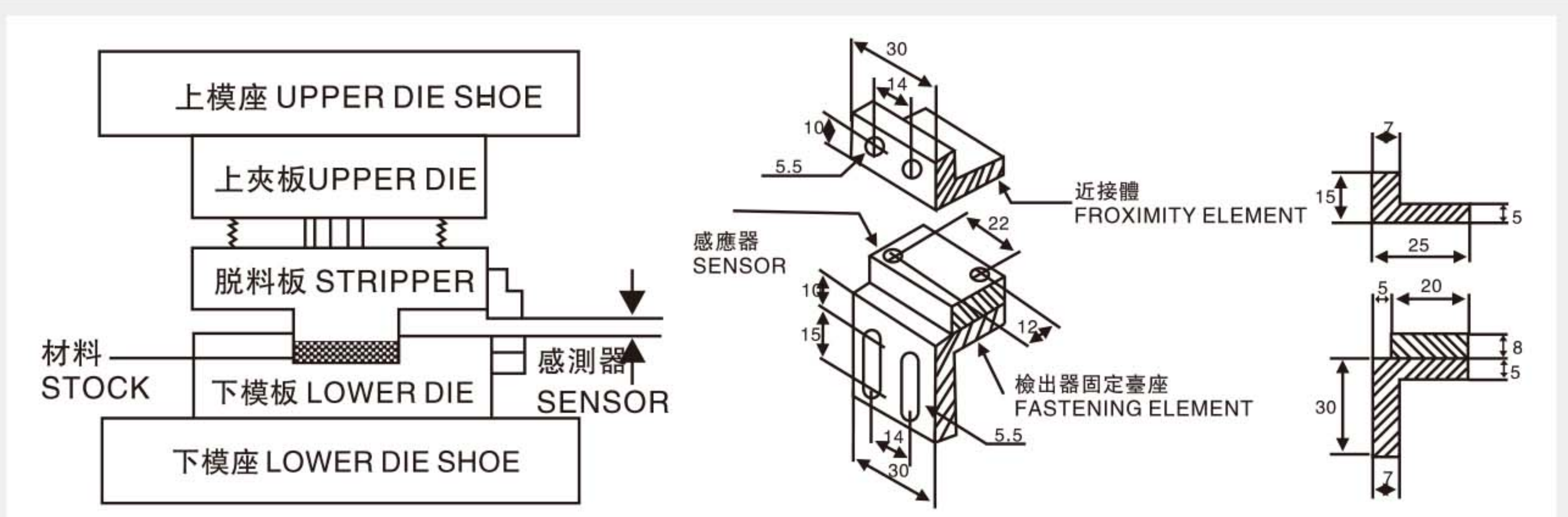
下死點連續衝壓模感測器 (SD-401/402) Computerized slug detector (401/402)



SD-401/402/411/412/414感測器裝配圖:

SD-401/402/411/412/414 Installation locations:

傳感測器操作距離: 0.8mm~1.2mm(脫料板在下死點位置時)
GAP "A" IS TO BE 0.8mm~1.2mm
WHEN THE STRIPPER IS POSITIONED AT IT'S BOTTOM DEAD CENTER.



產品特點

SD-401/411—臺主機，一個輸出裝置(單點)

SD-402/412—臺主機兩個輸出裝置(雙點)

SD-414—臺主機，四個輸出點

- 1、傳感器操作設定距離: 為 (A) 位置0.8mm至1.2mm, 請按設定開關後出現199至0, 再移動感測頭鐵塊就可調整到80~120的操作距離。(也就是0.8mm至1.2mm)。設定完成後需要再按攝第開關復原。
- 2、監視值設定之操作: 精密度設定範圍 $\pm 1 \mu m \sim \pm 99 \mu m$, 監視值依您實際需要的精度而設定。
- 3、當衝模開始運作此檢知前四次顯示數字為模具高度測試平均值。(當衝床電源開關切掉"OFF"或感應線離開感應器再重新插入感應器等, 此值才會重新計算)。
- 4、SP: 速度異常及停機時會出現: 另外原因: 衝壓時, 上、下鐵塊突然脫落時會出現。
- 5、OP: 為感測線及感測頭斷線或者感測線拉開時會出現。
- 6、HI: 太高異常紅燈及高的黃色燈會亮。(距離超過1.2mm以上)
- 7、LO: 太低異常紅燈及低的紅色燈會亮。(距離低於0.8mm以下)
- 8、ES: 為誤送檢知、材料無料檢知、擠料檢知等異常時會出現。
- 9、功差值顯示超過設定值時, 異常燈會亮。
- 10、本機有自我檢知功能。
- 11、此機規格設定值為 $1 \mu m$ 單位, 可依模具精度需要而選擇。
- 12、此檢知可加裝誤送檢知、材料無料檢知(電眼檢知)、擠料檢知(感測棒檢知)。

Product Features:

SD-401/411—One basic unit, Single output device (Single Port)

SD-402/412—One basic unit, Dual output device (Dual Ports)

- 1、Sensor operation setup distance: Location (A) from 0.8mm to 1.2mm, please press setup switch thereafter 199~0 displayed. Move the iron block of the sensor head, it can be adjusted to 80~120 as operation distance. (Meaning 0.8mm to 1.2mm) Press setup switch again after set-up process.
- 2、Operation of monitoring value setup: Accuracy range sets up from $\pm 1 \mu m \sim \pm 99 \mu m$ depends on your exact accuracy requirement.
- 3、While stamping die starts running, the first four times displaying digits meaning the average of the die-height testing. (It will be re-calculated while stamping machine power off or the sensor line out of the basic unit and re-plug-in)
- 4、SP: Displays when abnormal speed and machine stop: other reasons: upper or lower iron blocks drop out suddenly.
- 5、OP: Sensor line and sensor head disconnect or sensor line pull out from the unit.
- 6、HI: Abnormal too high, the red light lights up and abnormal high the yellow light lights up. (Distance higher over than 1.2mm)
- 7、LO: Abnormal too low and low, the red light lights up. (distance lower over than 0.8mm)
- 8、ES: Displays when error carrying, missing material or material jammed.
- 9、Abnormal light lights up when tolerance displayed value over than pre-set.
- 10、Self-Check functions available.
- 11、This product provides precision set-up value as $1 \mu m$, it is selectable against different accurate toolings.
- 12、Options available for Error-Carry-On, Missing material (by Electro-Eyes sensor) and Material Jammed (By sensing Bar).

◆規格 Specifications

適用溫度 Applicable Temperature Range	0 ~ 50°C	標準配件 Standard Accessories	感測器, 感測線3M, 感應鐵塊 Sensor, sensor line 3M, iron block
重量kg	2.4kg	有綫感測器長度 Size of Sensor	30W × 8H × 20D
輸出信號 Stop Signal Output	繼電器接點(A.B)250V3A Relay Contacts	感測器長度 Length of Sensor	5cm~10cm
電源電壓 Supply Voltage	AC85V~250V50/60Hz ± 10%	連接綫長度 Length of Joint Cable	3M及5M兩種 3M and 5M 2Models
外形尺寸 Size of Main Unit	105W × 140H × 185D	感測設定距離 Gap Between and Proximity Element	0.8mm ~ 1.2mm
		最大連轉速度 Max. Operating Speed	1200 S.P.M

自動衝床下死點監視器SD-822/824

Automatic Press Bottom Dead Point Monitoring Device SD-822/824



SD-824



SD-822



自動衝床下死點監視器SD-822/824規格:

品名	型號	精度	精度範圍	適用溫度	最大運轉速度	外形尺寸
下死點監視器	SD-822/824	0.1 μm	±0.1 μm ~ ±99 μm	0~50℃	4000 S.P.M	120(W)×90(H)×140(D)

自動衝床下死點監視器SD-822/824產品特點

- 衝壓機的衝長對應4毫米。(舊機型對應8毫米)
- 裝載了傳感器補正功能。
- 比較舊機型(MB,MXx2)的外形，小型化了一半。
- 可以進行高精度的檢測。能分解0.1微米。
- 裝載了第一彈回的檢測功能。(第一彈回自動檢測功能)
- 顯示的亮度提高到了舊機型的約4倍。在運處也清晰可見。
- 故障時顯示忽亮忽滅。在遠處也能輕易判別。

自動衝床下死點監視器SD-822/824檢測方法:

下死點監視(B.D.C)

一般的卸料板模具發生廢料上跳時卸料板位置發生變化。

測試出此下死點的位移，檢測出廢料上跳。

第一反彈監視(1st BOUND)

彈簧壓強極高或有間隙調整墊片的模具產生廢料上跳時，廢料會被壓扁在下死點位置難以檢測。

此時在廢料被壓扁之前，即在卸料板與廢料接觸第一次的反彈的下死點進行廢料上跳的檢測。

自動衝床下死點監視SD-822/824用途:

在卸料板下降放測試下死點位置，檢測廢料上跳。

自動衝床下死點監視器SD-822可以追蹤到轉數4000min-1，是最適用於告訴精密衝床的廢料上跳檢測器。

Automatic Press Bottom Dead Point Monitoring Device SD-822/824 Specifications:

Designation	Type	Accuracy	Accuracy range	Arcum temperature	Max. SPM	Dimensions
Automatic Press Bottom Dead Point Monitoring Device	SD-822/824	0.1 μm	±0.1 μm ~ ±99 μm	0~50℃	4000 S.P.M	120(W)×90(H)×140(D)

Automatic Press Bottom Dead Point Monitoring Device SD-822/824 Product Features:

It covers as small as 4mm stroke length of a press machine,(It was 8mm for the conventional unit.)

It has sensor compensation function.

Similar sensor s made by other makers are also applicable.

It is miniaturized in a half size of the conventional unit(MB,MX 2sets).

It enables high accuracy detection. Resolution:0.1 μm

It has first bound detection function.(First bound automatic search function.)

The brightness of display is about 4 times brighter than conventional unit.

It keeps clear view from a distance.

Error lamp will blink when error is detected.

Maximum 4-channel detection is available by installing an additional option unit(SD-822).

Automatic Press Bottom Dead Point Monitoring Device SD-822/824 Function:

It detects slugs coming up by measuring the bottom dead point position of stripper plate.since it will catch up with 4000 rpm as maximum,it is good for high speed precision press machine to detect slug coming up.

自動衝床下死點監視器SD-902/904

Automatic Press Bottom Dead Point Monitoring Device SD-902/904



自動衝床下死點監視器SD-902/904規格:

品名	型號	精度	精度範圍	適用溫度	最大運轉速度	外形尺寸
下死點監視器	SD-902/904	0.1 μm	$\pm 0.1 \mu\text{m}$ $\sim \pm 99 \mu\text{m}$	0~50°C	4000 S.P.M	164(W) x 94(H) x 152(D)

自動衝床下死點監視器SD-902/904產品特點

- 提高精密度:
傳感信號處理電路更精密，準確到最高分辨率1 μ / 0.1 μ ，下死點的微量位移也可檢測。1 μ 模式下感應範圍增加至2.5mm。
- 高度準確的位移量顯示:
位移量可在數字顯示器上顯示，高精密讀數工作狀況容易確定。
- 傳感器電纜數值度自由選擇:
數值補正功能可以當場調整，每個CH電纜長度可自由設置。
- 加強的檢測定時功能:
外部定時以衝床凸輪訊號控制，內部定時以每個CH自動設定，內部角度定時不用外部凸輪及外部定時同樣可檢測。
- 可進行定時檢測:
測試外部凸輪在定時狀態下，測試一個有故障性能的傳感器之狀態。
- 能檢測傳感器的斷路:
傳感器未連接、傳感器不良、電纜數綫等傳感器的斷路發生，輸出停止信號，
- 顯示異常OP。
- 可選擇使用有效及無效裝置。
- 可選擇使用絕對值及平均值。
- ES：增加二組誤送功能，可自行選擇材料無料檢知、擠料檢知。
- SP：速度異常及停機時出現，或衝壓時上下鐵塊突然脫落時出現，可選擇SP或取消SP。增加提前檢知功能：使用在0.5mm以下且軟性材料(銅料)上，提前在料屑被壓平前檢出異常。

Automatic Press Bottom Dead Point Monitoring Device SD-902/904 Specifications:

Designation	Type	Accuracy	Accuracy range	Arcum temperature	Max. SPM	Dimensions
Automatic Press Bottom Dead Point Monitoring Device	SD-902/904	0.1 μm	$\pm 0.1 \mu\text{m}$ $\sim \pm 99 \mu\text{m}$	0~50°C	4000 S.P.M	164(W) x 94(H) x 152(D)

Automatic Press Bottom Dead Point Monitoring Device SD-902/904 Product Features:

1. Higher sensitivity:
The accuracy of the sensor signal processing circuit has been improved. The maximum processing resolution has been developed to be 0.1 μm . Minute displacement at the bottom dead center can be detected.
2. Displacement check with digital display and micron - indicator:
The displacement is displayed simultaneously both with digital display having high reading accuracy and the micron-indicator easy to check the condition. This enables an easy-check of the operation conditions of the detector.
3. Displayed gap for sensor installation:
The distance between the sensor head and a target is displayed at the time of installing the sensor. Without the use of the gap gauge, the sensor can be installed accurately.
4. Flexible adjustment of the sensor cable length.
The cable compensation function enables fine adjustment of the cable length on site. The cable length can be freely set for each channel.
5. Developed detection timing:
The external timing is produced from 2 inputs and the internal timing is from each channel. If the internal angle timing is used, the equivalent detection with the external timing can be achieved without an external cam.
6. Effective timing test:
The timing test can detect out of control conditions such as unusual installation of the sensor and improper operation of the external cam.
7. ES: add 2 channels for detecting error carrying. Could choose to detect missing material or material jammed.
8. Mean value and absolute value can be selected.
9. This product can be chosen to set up in effective or ineffective,
10. SP: Displays when speed is abnormal and machine stops. Other reasons: upper or lower iron blocks drop out suddenly.
11. Option available for detection in advance: using soft material (copper) under 0.5mm. could detect abnormal before slug pressed.

理研自動衝床下死點監視器RM-7201 Bottom New Selber GX B.D.C. Absolute Monitoring Device(Unit)



理研自動衝床下死點監視器RM-7201規格:

品名	型号	精度	精度范围	适用温度	最大运转速度	外形尺寸
下死点检知器	RM-7201	1 μ m	$\pm 1 \mu\text{m} \sim \pm 99 \mu\text{m}$	0~40℃	2000 S.P.M	W220mm x H135mm x D136

理研自動衝床下死點監視器RM-7201產品特點:

視覺明顯監視畫面

使用5.7英寸的液晶顯示。數值形容易觀測。可以監視滑塊的實時變化。
用新一衝成功能可以對至今為止祇能够由數值進行判斷的模具卸料的動作，對長安器
模具等進行跟進。

收集數據用電腦進行簡單處理

可向外部提取存儲下死點值數據。
用市販USB存儲卡記錄數據，記錄後便于攜帶到現場。
大容量128M 可記錄大約500萬衝程
存儲卡記錄數據CSV格式保存，可用Excel進行處理,在辦公室處理數據可用于追溯。

理研自動衝床死點監視器RM-7201用途:

NEW SELBER VII (SEBEN)的後續機種，彩色圓形顯示可以觀測下死點的實時變化。
用USB存儲卡可以連續記錄下死點的數據。有利于可追溯性。

RM-7201 Specifications:

Models	Mode	Accuracy	Accuracy range	Operating Temperature Range	Max SPM	Size of Mian Unit
Absolute Monitoring Device	RM-7201	1 μ m	$\pm 1 \mu\text{m} \sim \pm 99 \mu\text{m}$	0~40℃	2000 S.P.M	W220mm x H135mm x D136

RM-7201 Product Features:

Achived high-speed tracking and high-reliability
High-speed tracking with manitoring function.The maxium speed is 2000 min-1 (spm).
Conventional model is 1300 min-1 (spm).
VISUAL MONITORING
Adopted 5.7 inches color liquid crystal monitor,Achieved better view and more indication of the information for numeric values and waveforms.
It enables clear and wide view of ram II s variation per hour with graph.
Newly adopted one-shor waveform indication function contributes to take necessary actions for a press machine or a stamping die by checking the motion of the stripper plate with waveform though the conventional model allows just to see the numerical values.
DATA COLLECTION WITH PC,EASY DATA PROCESSING
It stores consecutive B.D.C,data and easy to output the date.
The data is stored in the USB flush memory,which is available in the market.It allows easy transportation of the data from production site.
Large capacity type128M stores 5 million shots data approx.
The flush memory data can be prooessed in the Excel files aince it is stored as CSV file format.

RM-7201 Function:

A succeeding model of NEW SELBER VII (SEVEN)
I can watch a change by color graphic indication in per hour of a bottom dead center.
Consecutive records of bottom dead center data are possible with USB flash memory.

杉山下死點檢知器PS-462/464

High resolution Bottom dead center detector PS-464/462



杉山下死點檢知器PS-462/464規格:

品名	型号	精度	精度范围	适用温度	最大运转速度	外形尺寸
下死点检知器	PS-462	0.1 μm	±0.1 μm~ ±99 μm	0~55℃	4000 S.P.M	200 × 98 × 184
下死点检知器	PS-464	0.1 μm	±0.1 μm~ ±99 μm	0~55℃	4000 S.P.M	200 × 98 × 184

杉山下死點檢知器PS-462/464產品特點:

- 1、敏感度高:**
传感信号处理电路更紧密，可精确到0.1 μm能检测微量位移。
- 2、数字显示器精确显示位移量:**
数字显示器精确显示位移量，同时可确认高精密度工作状态。
- 3、可显示传感器间隙**
感应头距离可被显示，甚至可测量间隙测量仪不能测量的数值。
- 4、连线长度自由选择**
线长补正功能可以调节，每个CH电缆长度可自由设置。
- 5、加强的检测定时功能**
外部定时从2条输入，内部定时从每个CH管内部角度定时不用外部凸轮同样可检测。
- 6、可进行定时测试**
测试外部凸轮在定时状态和测试一个正常的有故障性能的传感器之状态。
- 7、能检测传感器的断路**
传感器未连接，传感不良，连线断线等发生时，输出传感器停止信号。

PS-464/462 High resolution Bottom dead center detector Specifications:

Models	Mode	Accuracy	Accuracy range	Operating Temperature Range	Max Operating Speed	Size of Mian Unit
Detector	PS-462	0.1 μm	±0.1 μm~ ±99 μm	0~ 55℃	4000 S.P.M	200 × 98 × 184
Detector	PS-464	0.1 μm	±0.1 μm~ ±99 μm	0~ 55℃	4000 S.P.M	200 × 98 × 184

PS-464/462 High resolution bottom dead center detector Product Features:

- 1.Higher sensitivity**
The accuracy of the sensor signal processing circuit has been improved,The maximum processing resolution has been developde to be 0.1 μm.Minute displacement at the bottom dead center can be detected.
- 2.Displacement check with digital display and micron-indicator**
The displacement is displayed simultaneously both with the digital display having high reading accuracy and the micron-indicator easy to check the condition.This enables an easy-check of the operating conditions of the datector.
- 3.Displayed gap for sensor installation**
The distance between the sensor head and a target is displayed at the time of installing the sersor,Without the use of the gap gauge,the sensor can be installed accurately.
- 4.Flexible adjustment of the sensor cable length**
The cable compensation function enables fine adjustment of the cable length on site.The cable length can be freely set for each channel.
- 5.Developed detection timing**
The external timing is produced from 2 inputs and the intenal timing is from each channel.If the intenal angle timing is used,the equivalent detection with the external timing can be achievdd without an external cam
- 6.Eff active timing test**
The timing test can detect out of control conditions such as unususl installation of the sensor and improper operation of the external cam.
- 7.Detection of sensor wire disconnection**
A stop signal is output when PS-464/462 detects disconnect/defects of the sensor or disconnection of the sensor cable by the sensor disconnection function.

理研自動衝床動態位移數據系統 RM-3000

Bootom New Selber GX B.D.C Absolute Monitoring Device(Unit)



- 1.為導入衝床進行數據調查。(有負荷無負荷的特性區別等)
- 2.根據下死點與位移的組合測試。
- 3.下死點變動與框架。模具溫度以及油溫的比較測試。
- 4.改進現有的衝床的使用方法提高加工零部件的水平。
- 5.根據衝床的溫度變化對下死點變化採取對策。
- 6.用于衝床以及模具的定期點檢。
- 7.根據衝床的數變化測試下死點的動態精度。(判斷最適合轉數)
- 8.對模具設計以及加工的數據進行反饋。(從感覺到數據顯示)
- 9.做到考慮到重心重量的設計數據。(衝床不同，型號不同的波形區別)
- 10.推遲把卸料板作為接近體的更有效的位置。
更加有效利用第一反彈模式。

1. Conduct data survey for the imported punch. (the difference between load and load free features)
2. Based on the combination test of the lower dead point and displacement.
3. Change and frame of the bottom dead center. Comparison test of mold temperature and oil temperature.
4. Improve the current use of punch presses to improve the level of processing parts.
5. According to the change of the temperature of the punching machine, countermeasures are taken to change the dead point.
6. Regular spot check for punch and die.
7. The dynamic accuracy of the dead point under the test of the number of punch. (judgment is best for number of turns)
8. Feedback on mold design and processing data. (from sensing data)
9. Design data that takes into account weight of the center of gravity. (different punch presses, different types of waveforms)
10. Postpone the unloading plate as a more effective position of proximity. More effective use of the first bounce mode.

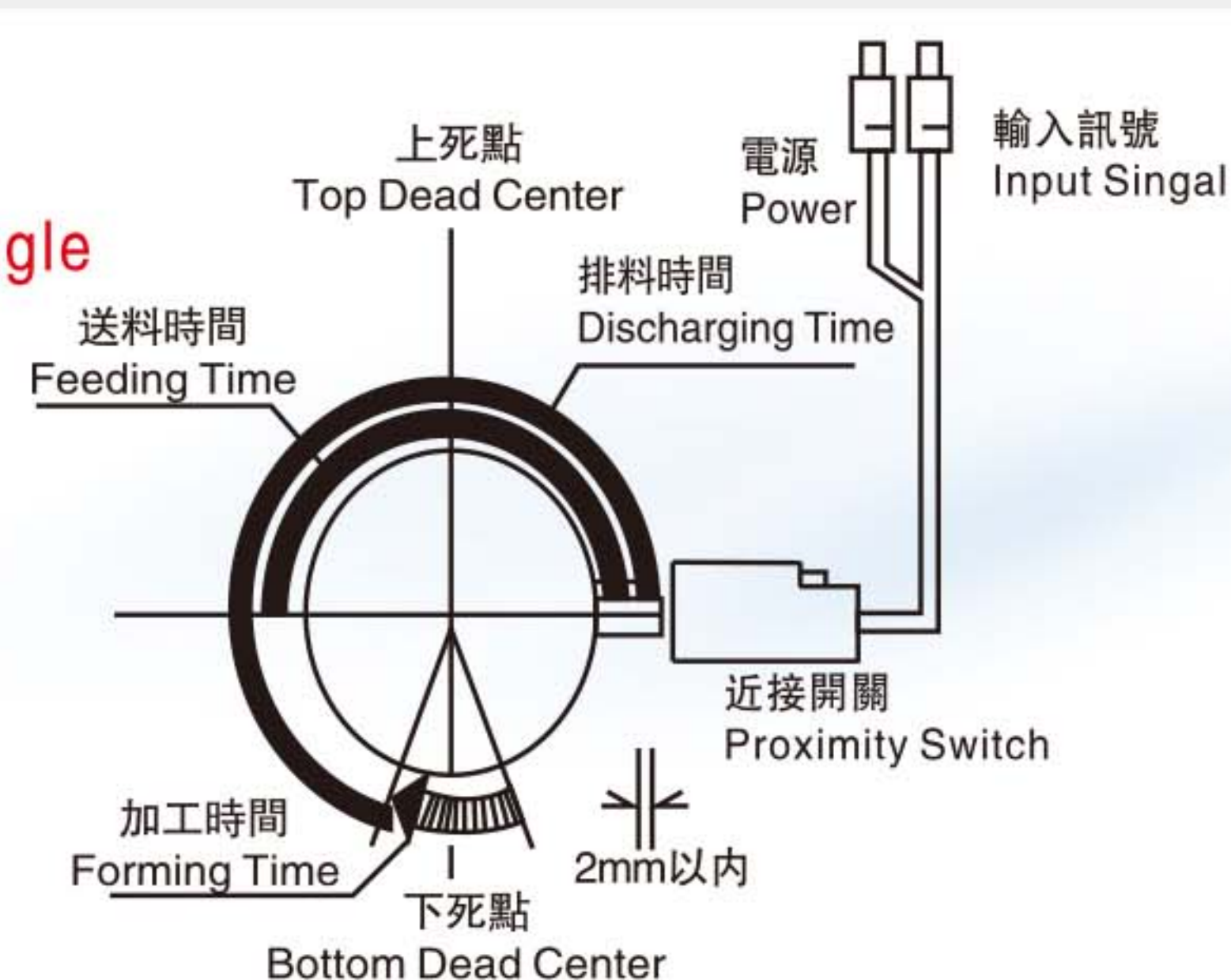
模具誤送檢知 (SD-101/102) Stamping Die Error-Larrying Device (SD-101/102)

通過檢知 (SD-201/202) Passing Through Inspection Device (SD-201/202)

同期訊號和角度圖

The chart of synchronization signal and angle

無接觸式：近接開關作排料和同期檢出，
基準輸入時間和角度關係圖。
NON-CONTACT CHECKING METHODE:
Limit Switch Used to do discharge
and synchronization check.
The chart shows the relation
between the output signal
time and angle.



SD-101/102應用功能 SD-101/102 function

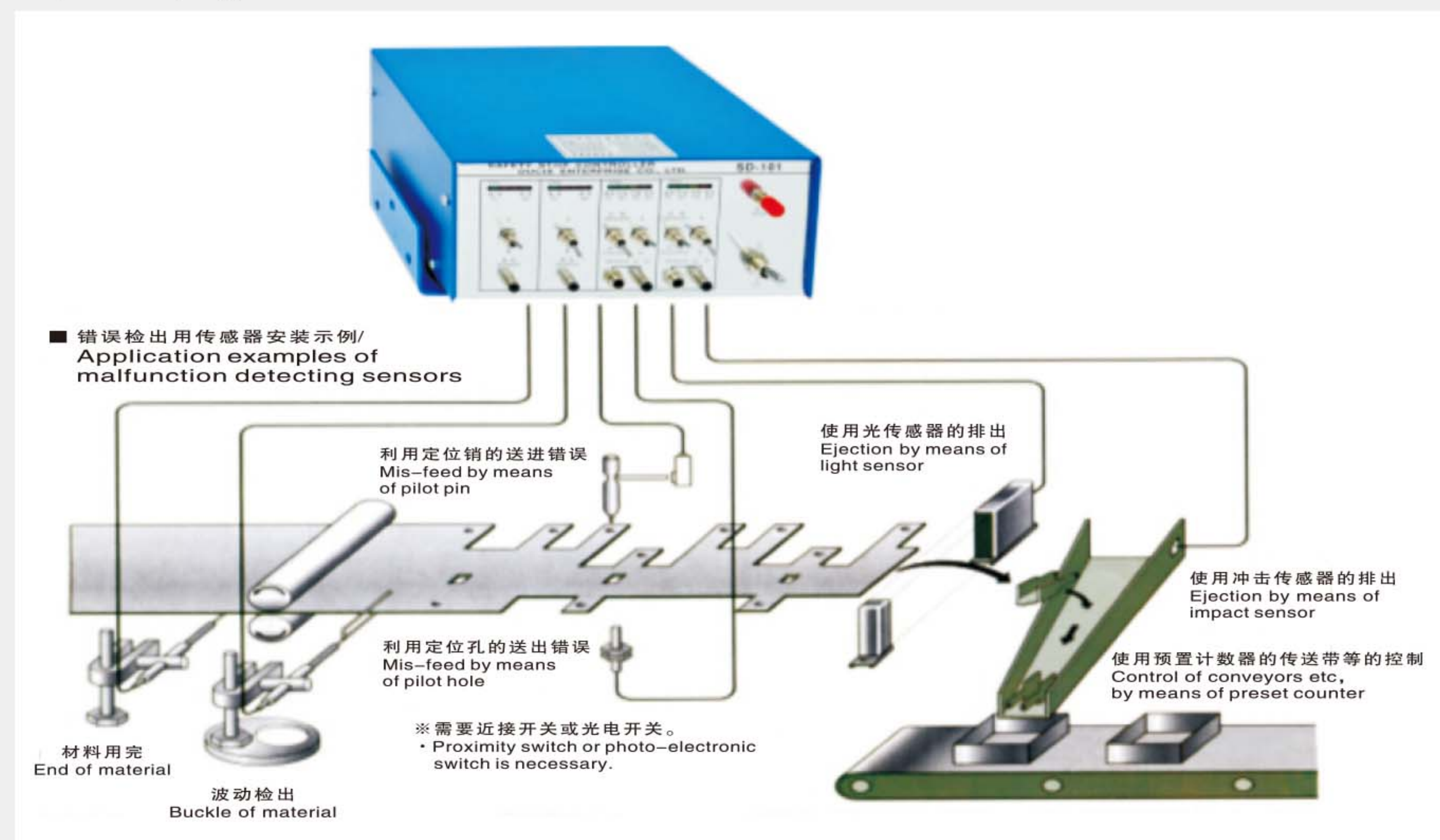
A: 動作檢出：波動 (擠料) “A” Corrugation Extrusion	偵測 (棒) 裝置接觸 (ON) 檢出 Detecting Rod: “ON” Contact Check
A: 動作檢出：材料末端 “B” Feeding Out	偵測 (棒) 裝置切斷 (OFF) 檢出 Detecting Rod: “OFF” NON-Contact Check
同期檢出 應用：送料不足檢測 送料間距檢測	配合衝床送料時間、(角度)，來檢測送料是否正確，同期基準點 (TM黃色燈) 在90度位置也就是在衝床輪軸設凸輪信號。在TM燈未亮之前材料先送定位，否則停機。 Work with the feeding time of the machine to check feeding checking point is fixed at 90°. (TM yellow lamp). The material must be fed at right place before brightening of TM lamp. IF not, the machine stops.
記憶檢出(通過檢出) “Memory” Discharging 應用：衝壓制品排出 workpiece (吹出)檢出	衝床每衝壓一行程必須要有制品通過檢測裝置 (光電、磁性、微動、近接等開關) 輸入檢出訊號作記憶 (MY綠色燈)，同期燈亮清除記憶如無制品通過就停止。 On every pressing stroke, it must have a workpiece to pass the detecting device (photoelectric, magnetic, micro, proximity switches, etc.) which outputs a checking signal to the controller to store (“MY” green lamp). TM lamp brightens and eliminates the memory if NO workpiece passes. The machine stops.
標準配件外 其他光電選擇	Detecting Device 市售近接開關、光電開關、紅外線偵測開關 (附擴大器內裝) 以及偵測棒、微動開關均可配合使用。 Proximity, photoelectric, infrared detection switch (DC 12V, built-in amplifier), and the detecting rod, micro-switches,

檢出功能

- ◆材料用完檢出(CH1)使用接觸式傳感器和限位開關等，當材料供給斷絕時，輸出停止信號。
- ◆波動檢出(CH2.CH3)在材料供給側，當材料挂在模具等上而發生彎曲時等，使用接觸式傳感器或限位開關等檢出彎曲并輸出停止信號。
- ◆送進錯誤檢出(CH4)對於材料的送進，使用同步信號和接觸傳感器，檢測在1行程中是否以正常的長度送進。當發生送進錯誤時輸出停止信號。
- ◆排出檢出(CH5.CH6)使用光幕傳感器或磁通傳感器等，檢出加工品的排出狀況，如果發生異常，輸出停止信號。

◆Detection Functions

- ◆End-of-Material Detection (CH1) The device detects the end of feeding material, using a touch sensor, a limit switch, etc., and outputs a stop signal.
- ◆Buckling Detection (CH2.CH3) The device detects buckling when material is caught or bended in the die, using a touch sensor, limit switch, etc., on the material feed side, and outputs a stop signal.
- ◆Mis-feed Detection (CH4) The device checks whether material is fed in proper length during one stroke, using a timing signal, touch sensor, etc., and outputs a stop signal upon detection of mis-feed.
- ◆Ejection detection (CH5.CH6) The device detects ejection of the work using a light curtain sensor, magnetic pass-through sensor, etc., determines the presence of a fault and outputs a stop signal.



理研衝壓機錯誤檢出裝置PMC-3
Multi-Channel Press Malfunction Detector PMC-3

可選單元/Optional Unit

計數器單元

PMC-CU作為PMC-3型錯誤檢出裝置可選件而備用的計數器單元,可通過超設本裝置作為6位計數器使用,除此以外可大幅度增加其功能。

檢出功能設定

可對每個通過選擇接觸/分離/送進錯誤/排出的功能。

基準凸輪功能(連續運轉專用功能)

傳感器輸入極性切換

可進行各通道的傳感器輸入(A=ON輸入, b=OFF輸入)的切換。

SPM顯示功能

開動中顯示衝壓機的轉速。

液晶單元(CLT)

CLT作為PMC-3型錯誤檢出裝置的可選件而備用的彩色液晶單元,具備有助於提高生產率的各種功能。可邊看大型監控器邊以對話方式容易地設定PMC-3的各種功能。



帶計數器單元PMC-3
PMC-3 with Counter Unit



帶液晶單元(CLT)PMC-3
PMC-3 with Liquid-Crystal Display Unit (CLT)

Counter Unit

PMC-CU is an optional counter unit for used with PMC3. With the addition of this unit, not only a six-digit counter can be made use of, but also much more function can be added;

●Selection of detection functions For each channel, a detection function can be selected from make, break, mis-feed and ejection detections;

●Reference cam function (special function for continuous operation)

Use of a reference cam makes it possible to generate two types of arbitrary timing signals.

●Switching between sensor inputs can be done for each channel.

●SPM Display

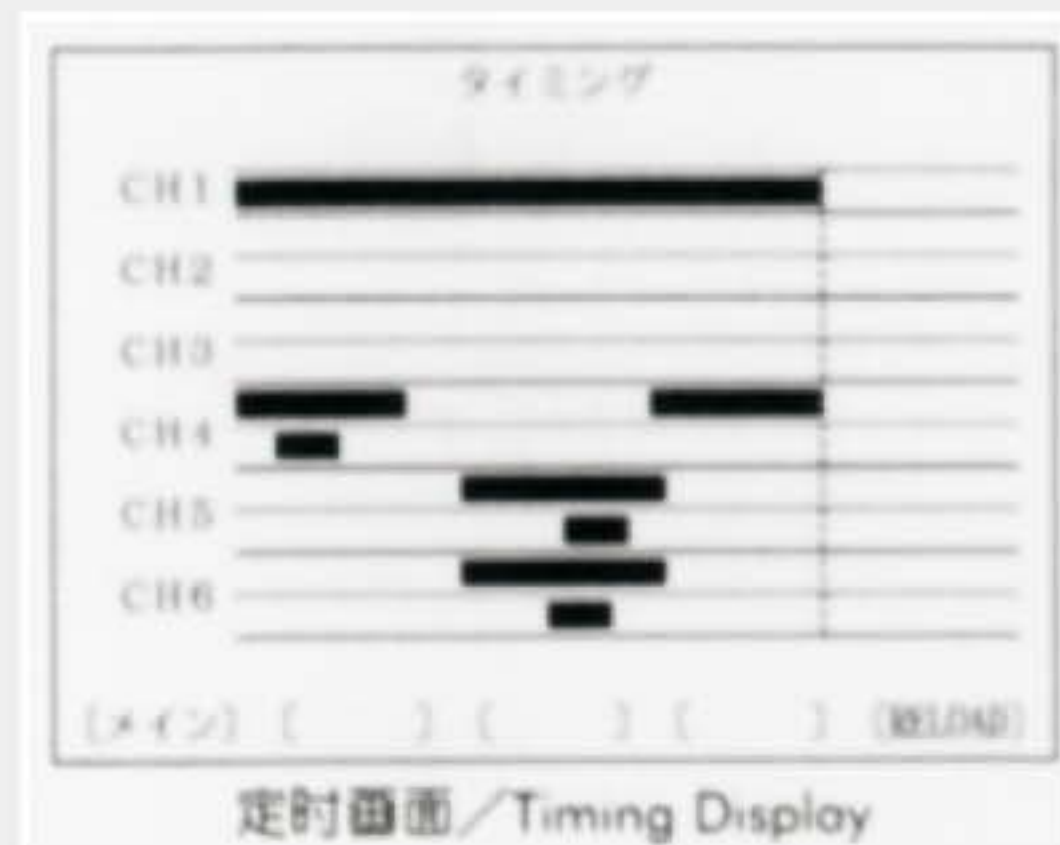
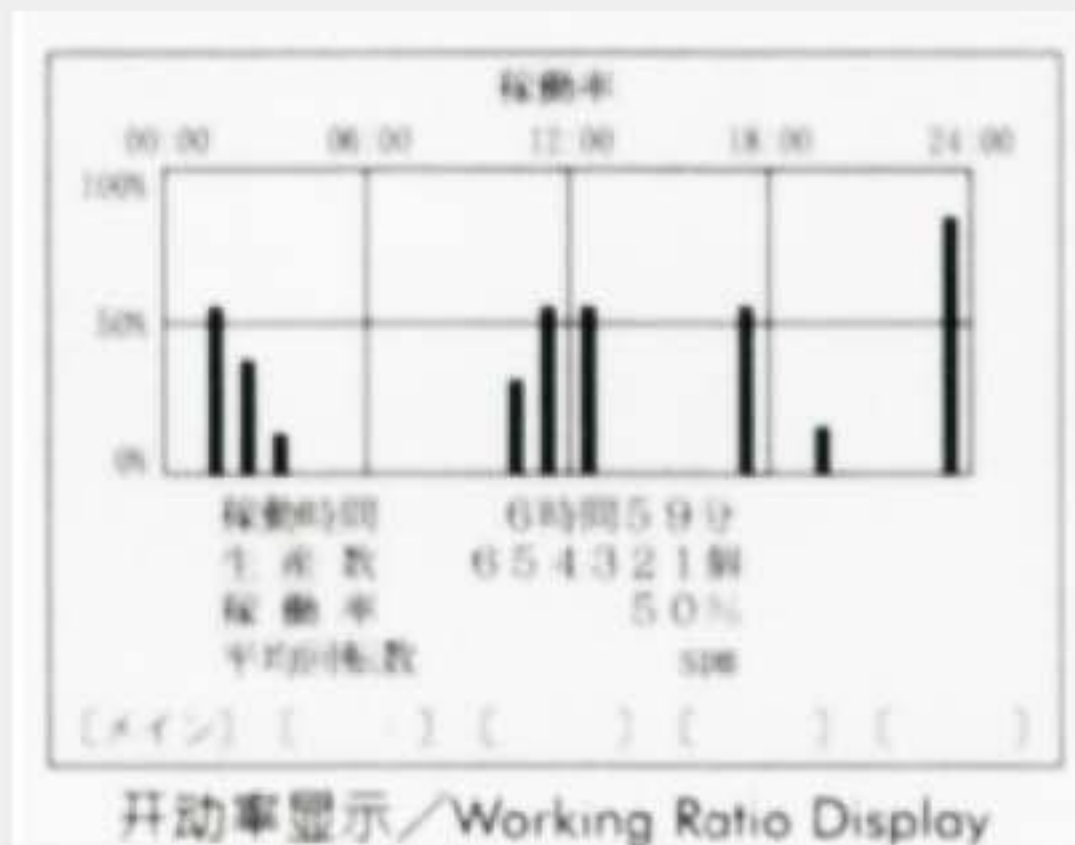
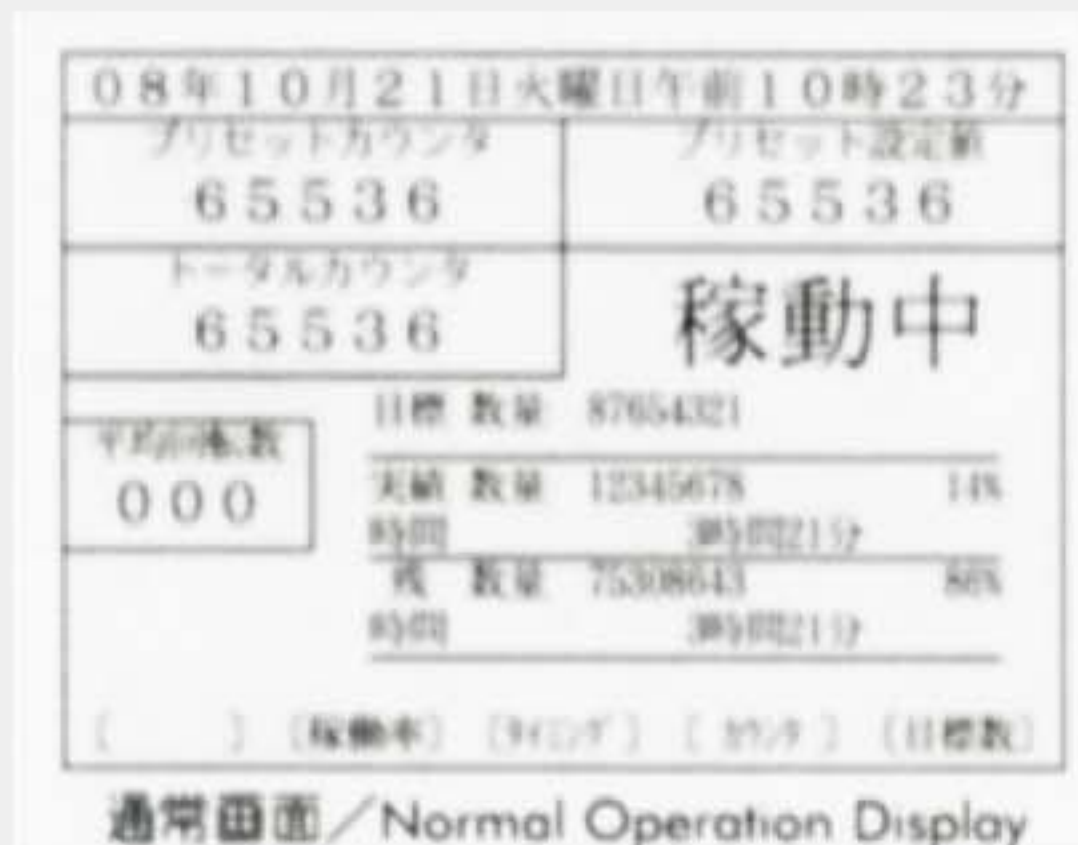
Shows SPM during press operation.

Liquid-Crystal Display Unit (CLT)

CLT is an optional Liquid-Crystal Display Unit for used with PMC-3 and it has various and

rich functions which are useful for productivity improvement and rationalization.

With adding this unit, anyone can operate and set various functions of PMC-3 interactively.



套件構成/Ordering Information

型號/Model	最件構成品/Commodities Component							備注/Remark
	PMC-3-BU	PMC-3-MU	PMC-3-CU	傳感器套件 Sensor Kit	LDS-100	LDR-110	LDS-200	
PMC-3N								
PMC-3A	○	—	—	○	—	—	—	
PMC-3B	○	—	—	○	○	—	—	
PMC-3R	○	—	—	○	—	○	—	
PMC-3L	○	—	—	○	—	—	○	
PMC-3N(帶計數器)PMC-3N with Counter Unit								
PMC-3CA	○	—	○	○	—	—	—	
PMC-3CB	○	—	○	○	○	—	—	
PMC-3CR	○	—	○	○	—	○	—	
PMC-3CL	○	—	○	○	—	—	○	
PMC-3N(帶液晶顯示)PMC-3N with CLT Unit								
PMC-3MA	○	○	—	○	—	—	—	
PMC-3MB	○	○	—	○	○	—	—	
PMC-3MR	○	○	—	○	—	○	—	
PMC-3ML	○	○	—	○	—	—	○	
單元/Unit only								
PMC-3BU	○	—	—	—	—	—	—	檢出裝置主體 PMC-3N Unit
PMC-3MU	—	○	—	—	—	—	—	液晶單元 CLT Unit
PMC-3CU	—	—	○	—	—	—	—	計數器單元 Counter Unit
接觸式傳感器/Touch Sensor								
傳感器套件 Sensor Kit	—	—	—	○	—	—	—	接觸式傳感器 Touch Sensor
光幕傳感器/Part Ejection Light Sensor								
LDS-100	—	—	—	—	○	—	—	直射式,光幕寬度100mm Direct Protection type, 100mm Height
LDS-200	—	—	—	—	—	—	○	直射式,光幕寬度200mm Direct Protection type, 200mm Height
LDR-110	—	—	—	—	—	○	—	直射式,光幕寬度110mm Direct Protection type, 110mm Height

負荷監視裝置 PLA-2N/PLA-4N 2-Channel Load Monitoring System

PLA-2N型負荷監控器使用應變式傳感器(變形測量器)對衝壓機設備的負荷進行監控，在顯示衝壓 加工時正確的負荷值的同時，如果檢出異常狀態立即發出停止信號，使衝壓動作停止。對每個行程進行監控，同時也不會放過偏心負荷。可延長模具的壽命，防衝壓機的損傷和磨損于未然，并且對質量控制也發揮作用。

The PLA-2N has the function of detecting of detecting the press load with a strain gauge. It diaplays the accurate load during press processing, and output stop signals and stops a press machine immediately when abnormality is detected. Monitoring cannot be ignored when there are eccentric loads for each stroke, and furthermore, load monitoring extends the life of dies, prevents friction and wear of presses, also promotes quality control and rationalization.

特點/Features

- 掌握作用于衝壓框架左右的負荷平衡，了解負荷中心，偏心負荷等，有助于衝壓機及模具的維持管理。
- 作為模具的超載保護器，推測2片衝壓，模具破損以及模具的研磨時期，并對送進推力，板壓變化等實施監控。
- 通過了解產品的合理負荷，可容易的選擇衝壓機設備。
- 檢出作業可同時設定使用絕對值比較(上下限的設定)，前一次比較(變差的設定)，為此能實施更擴範圍的管理。
- 顯示器采用易于辨識的數字LED。條形顯示中以百分比常時地顯示作用于左右的負荷。
- Easy to know the balance of loads applied to the left and right sides of the press, and to know improper balance, load center, etc., it facilitates die maintenance and quality control.
- As a overload protector, it prevents from the damage of the dies by detecting double hits, mis-feed, change of material thickness etc., and estimates die regrinding intervals.
- By knowing the suitable load for products, the selection of the press is facilitated.
- The detector can be used to simultaneously set absolute value comparison (set value of upper/lower limits) and comparison with the value of the previous time.
- The digital LED display is easy to read, and the bar display shows the left load and the right load in percentage.

PLA-2N



PLA-4N



客戶案例圖

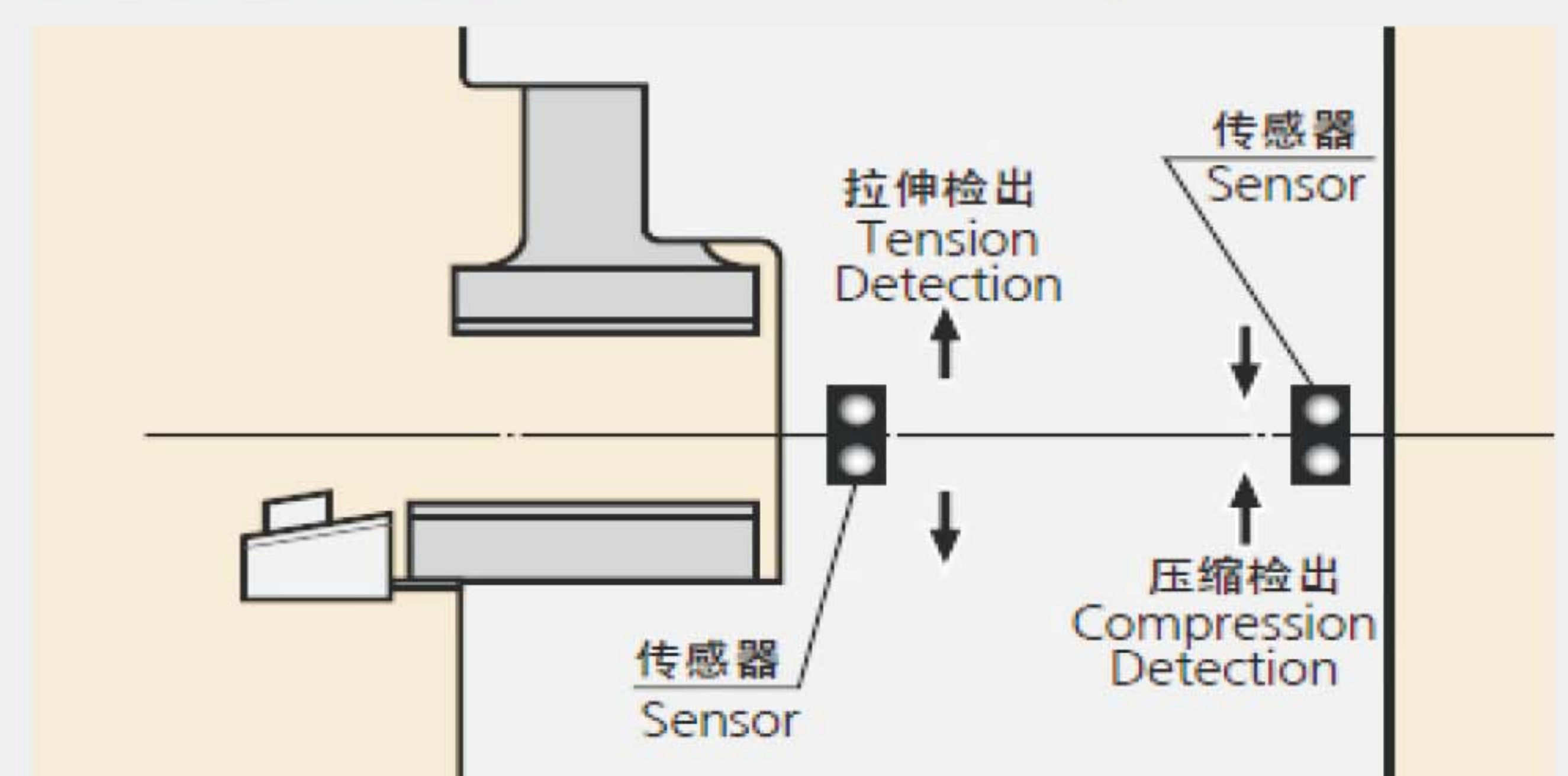


檢出方法/Detecting Method

PLA-2N(負荷監控器)使用高性能成型模應變傳感器，由安裝在衝壓機框架上的傳感器檢測 衝壓機加壓時產生的反作用力，并監控每個行程的負荷變化，超過預先設定的範圍時，立即輸出停止信號，使衝壓動作停止。

The PLA-2N has the function of detecting the pree load with a strain gauge. It displays the accurate load during press processing, and output stop signals and stops a press machine immediately when abnormality is detected. Monitoring cannot be ignored when there are eccentric loads for each stroke, and furthermore, load monitoring extends the life of dies, prevents friction and wear of presses, also promotes quality control and rationalization.

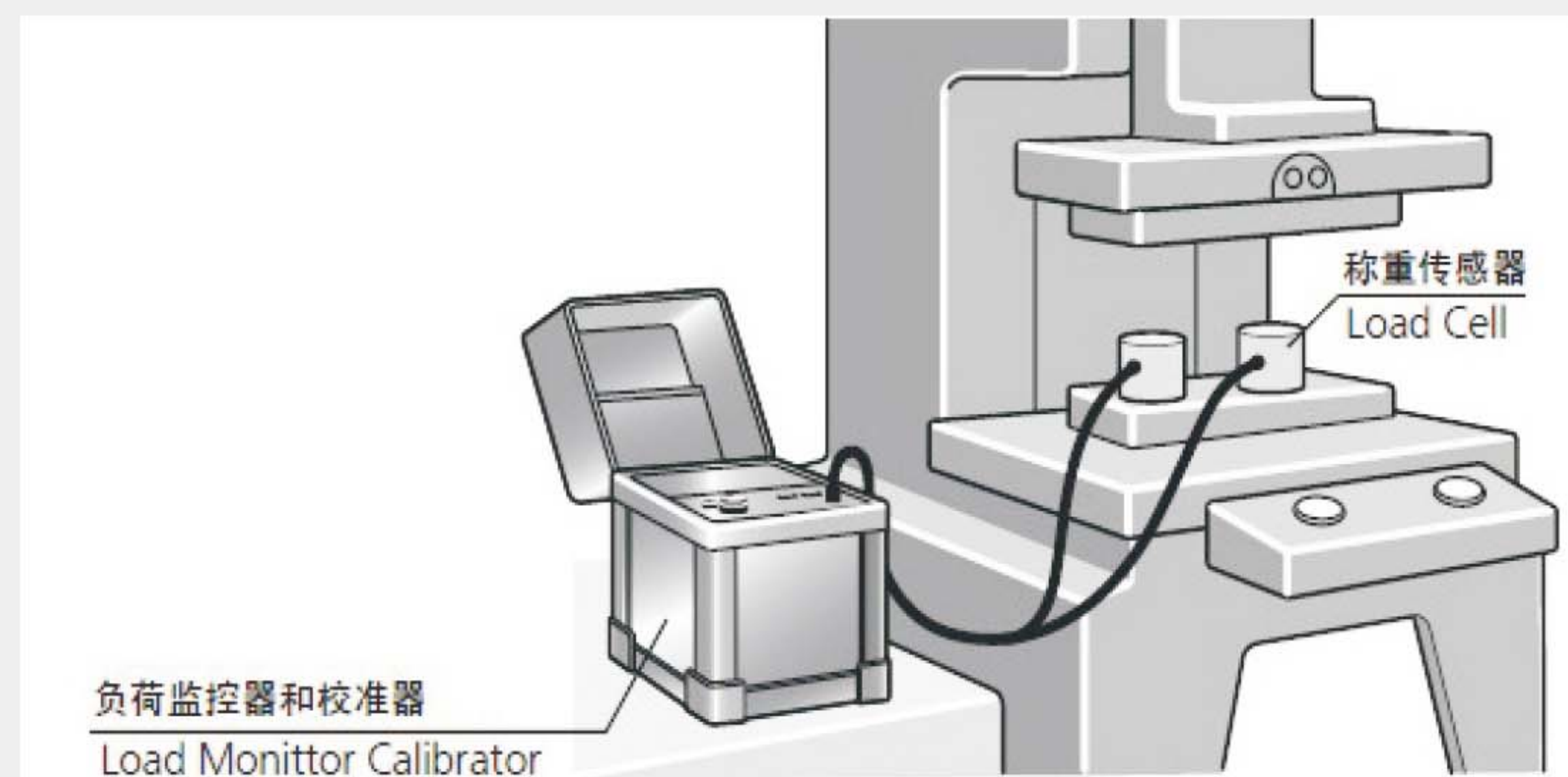
傳感器安裝位置/Sensor Mounting Position



校準/Calibration

將傳感器安裝在衝壓機上，在僅是接線的情況下，所顯示的數值并不是正確的噸數，要想顯示正確的噸數，須使用校正器與稱重傳感器進行校正。

When the sensors are left as installed on and wires to the press, the tonnage indication is random and has no significance. Therefore, it is necessary to calibrate the amplification factor of the unit so as to indicate the accurate tonnage.



日本理研衝床機械安全裝置

RIKEN/JAPAN Safety Light Curtains for Press Machine

RIKEN/JAPAN SEII系列 反射型 SEII: Reflection Type Safety Light System



種類 Kinds

型式 Models	光軸距離 Optical axis pitch	光軸數 No.of optical axis	防護高度 Protection height
SEII-24	40mm	6	200mm
SEII-32	40mm	8	280mm
SEII-40	40mm	10	360mm
SEII-48	40mm	12	440mm

產品特點

- 1.在內部追加安裝了自我檢測回路，能自動檢測電子回路，監視操作安全。
- 2.透過合力設計，與舊型號相比重量減少1/2。
- 3.與以前的SE型號相比，更不易收到外部散亂光影響。
- 4.通過採用節省功能的電路，將耗電量減少一半。
- 5.光敏傳感器小型化，使作業面更寬廣。
- 6.採用特殊的過濾器，提高了抗污和抗潮能力。

Product Features

- 1.Additional built-in self-check circuit checks electronic circuit automatically to monitor operation safety.
- 2.Efficient design reduces weight by 50%compared to conventional systems.
- 3.Negative effects of ambient light are reduced compared to the previous SE model.
- 4.Energy-saving circuitry reduces power consumption by50%.
- 5.Down-sized light sensor allows for an expanded working area.
- 6.Special filter improves strength against stainst and tarnishing.

RIKEN/JAPAN RPH4系列 透過型 RPH4 Series: Direct Projection Type Safety Light System



種類 Kinds

輸出距離 Detective distance	光軸距離 Optical axis pitch	防護高度 Protection height	光軸數 No.of optical axis	品名Models	品名Models
0.2-10m	15mm	180mm	13	RPH425-180	RPH425-180W
		240mm	17	RPH425-240	RPH425-240W
		300mm	21	RPH425-300	RPH425-300W
		360mm	25	RPH425-360	RPH425-360W
		420mm	29	RPH425-420	RPH425-420W
		480mm	33	RPH425-480	RPH425-480W
		540mm	37	RPH425-540	RPH425-540W
		600mm	41	RPH425-600	RPH425-600W
		660mm	45	RPH420-660	RPH420-660W
		720mm	49	RPH425-720	RPH425-720W
		780mm	53	RPH425-780	RPH425-780W
		840mm	57	RPH425-840	RPH425-840W
		900mm	61	RPH425-900	RPH425-900W
		960mm	65	RPH425-980	RPH425-980W
		1020mm	69	RPH425-1020	RPH425-1020W
		1080mm	73	RPH425-1080	RPH425-1080W

產品特點

- 1.搭載LED條，追求操作的方便性。
- 2.傳感器本體內置多種多樣的安全功能。
- 3.符合IEC規格，EN規格的型號4的傳感器。
- 4.異常時可以瞬間中斷操作，實現高度的安全性。
- 5.透過自我故障診斷功能開關輸出，徹底追求避免失敗的設計。
- 6.透過具有最高水準的安全設計和FMEA分析，徹底追求安全性。

Product Features

- 1.LED indicator bar for easy operation.
- 2.Variety of built-in safety functions the sensor unit.
- 3.Type 4 safety light curtain conforming to IEC and EN.
- 4.Immediate emergency stop Achieved the highest degree of safety.
- 5.Complete failsafe design-the self-diagnosis function turns off the output of emission in case of malfunction.
- 6.Achieved the highest degree of safety.Safety design backed by advanced technology.The highest-level safety design engineering and FMEA.

RIKEN/JAPAN RSL200系列 透過型 RSL230 Series: Direct Projection Type Safety Light System



種類 Kinds

輸出距離 Detective distance	光軸距離 Optical axis pitch	防護高度 Protection height	光軸數 No.of optical axis	品名Models	品名Models
0.2-6m	20mm	140mm	8	RSL230-140(S)	RSL230-140(W)
		220mm	12	RSL230-220(S)	RSL230-220(W)
		300mm	16	RSL230-300(S)	RSL230-300(W)
		380mm	20	RSL230-380(S)	RSL230-380(W)
		460mm	24	RSL230-460(S)	RSL230-460(W)
		540mm	28	RSL230-540(S)	RSL230-540(W)
		620mm	32	RSL230-620(S)	RSL230-620(W)
		700mm	36	RSL230-700(S)	RSL230-700(W)
		780mm	40	RSL230-780(S)	RSL230-780(W)
		850mm	44	RSL230-860(S)	RSL230-860(W)
		940mm	48	RSL230-940(S)	RSL230-940(W)
		1020mm	52	RSL230-1020(S)	RSL230-1020(W)
		1100mm	56	RSL230-1100(S)	RSL230-1100(W)
		1180mm	60	RSL230-1180(S)	RSL230-1180(W)
		1260mm	64	RSL230-1260(S)	RSL230-1260(W)

產品特點

- 1.間隔為20mm的光軸準確覆蓋防護區域，不會發生失效。
- 2.在每個4光軸單位中，供選的光軸數範圍8-100，可選的保護高度範圍為140-1980mm
- 3.設計輕巧細長，所需安裝空間小，可以留出更大的工作空間
- 4.故障發生時，LED閃光模板將會指出該故障的起因。
- 5.具有預先連線的特點。可進行簡單的電纜連接及安裝。
- 6.配有直射式安全系統，可以簡單地調節光軸。
- 7.可選擇單面式和雙面式的控制箱，雙面式的控制箱可以同步控制2組投光器及受光器。

Product Features

- 1.20mm pitch optical axes accurately cover the protection area.without tall.
- 2.8-100 optical axes types in the unit of every 4-optical-axes are available, and selectable from 140-1,980mm length variation.
- 3.Light and slim design requires minimum installation space and thus allows large workspace.
- 4.When an error arlises,its cause is indicated with led flashing patterns.
- 5.Employes pre-wired reature realizes simple cable connection and easy installation.
- 6.Employed direct projection type safety sustem makes it possible to adjust optical axes easily.
- 7.Control box is selectable from one-sides and both-sides types.The both-sides type enables to control 2 pairs of emitters and receivers simultaneously.



微調式衝壓材料雙面給油機及自動給油機(SD-701/702) Double-side material lubricating oil feeder(SD-701/702)

產品特點 Product Features

- 1.材料給油機適用於材料雙面能均勻塗布，可大幅提升衝壓模具壽命。
- 2.機體結構採用鋁金合金，經陽極表面處理可達以美觀耐用，搭配簡易固定座，適合各種機體安裝。
- 3.特殊微調式油量設計，油量大小可依工作所需調整，達到節省油料浪費。
- 4.本機體採用高密羊毛氈。耐磨性強，含油性佳，採用片式組合設計，維修簡便。
- 5.油桶內裝有過濾網，潤滑油可重複使用。
- 6.可選擇裝有電磁閥的油桶，于衝床連接座自動化、無人化作業。

- 1.The material lubricator is suitably used for material with double faced oiling at same time to prolong greatly the service life of pressing mold.
- 2.Aluminum alloy body structure and it's surface isprocessed with anodic treatment and that to be beautiful and durable. Amounting bracket is included which suitable to install all machines body.
- 3.Special micro-adjusting oiling design.the oil volume can be controlled freey that depending on the working condition.it could be save oil.
- 4.This lubricator adopts high-density wool cotton material with excellent anti-wearing and powerful oil absorbing whichcombination designed by piece model, easily to maintence.
- 5.Filtering mesh is devised inside the oil barrel then the lubricant can be used again.
- 6.The lubricant tank equipped with electromagnet valve may be selected, It could be automation when connected with the press.



規格 Mode	最大材料寬度 Material width	適合安 裝模型	重量(kg) Weight
CT-65	65mm	AF-2C	0.90
CT-80	80mm	AF-3C	0.95
CT-100	100mm	AF-4C	1.00
CT-150	150mm	AF-5C	1.15
CT-200	200mm	AF-6C	1.40
CT-250	250mm	AF-7C	1.50
CT-300	300mm	AF-8C	1.65
CT-350	350mm	AF-9C	1.80
CT-400	400mm	AF-10C	2.00
CT-450	450mm	AF-11C	2.05
CT-500	500mm	AF-12C	3.50
CT-550	550mm	AF-13C	3.75
CT-600	600mm	AF-14C	3.90

客戶案例圖



規格 Specifications

- SD-701單管（一個出油嘴一祇電磁閥）
SD-702雙管（二個出油嘴二祇電磁閥）
SD-701 Single Port (one lubricant output nozzle, one electromag netic value)
SD-702 Dual Ports (two lubricant output nozzle, two electromag netic values)

CJ-201 spray type automatic material feeder

Instructions for each part

Abnormal oil volume lamp :

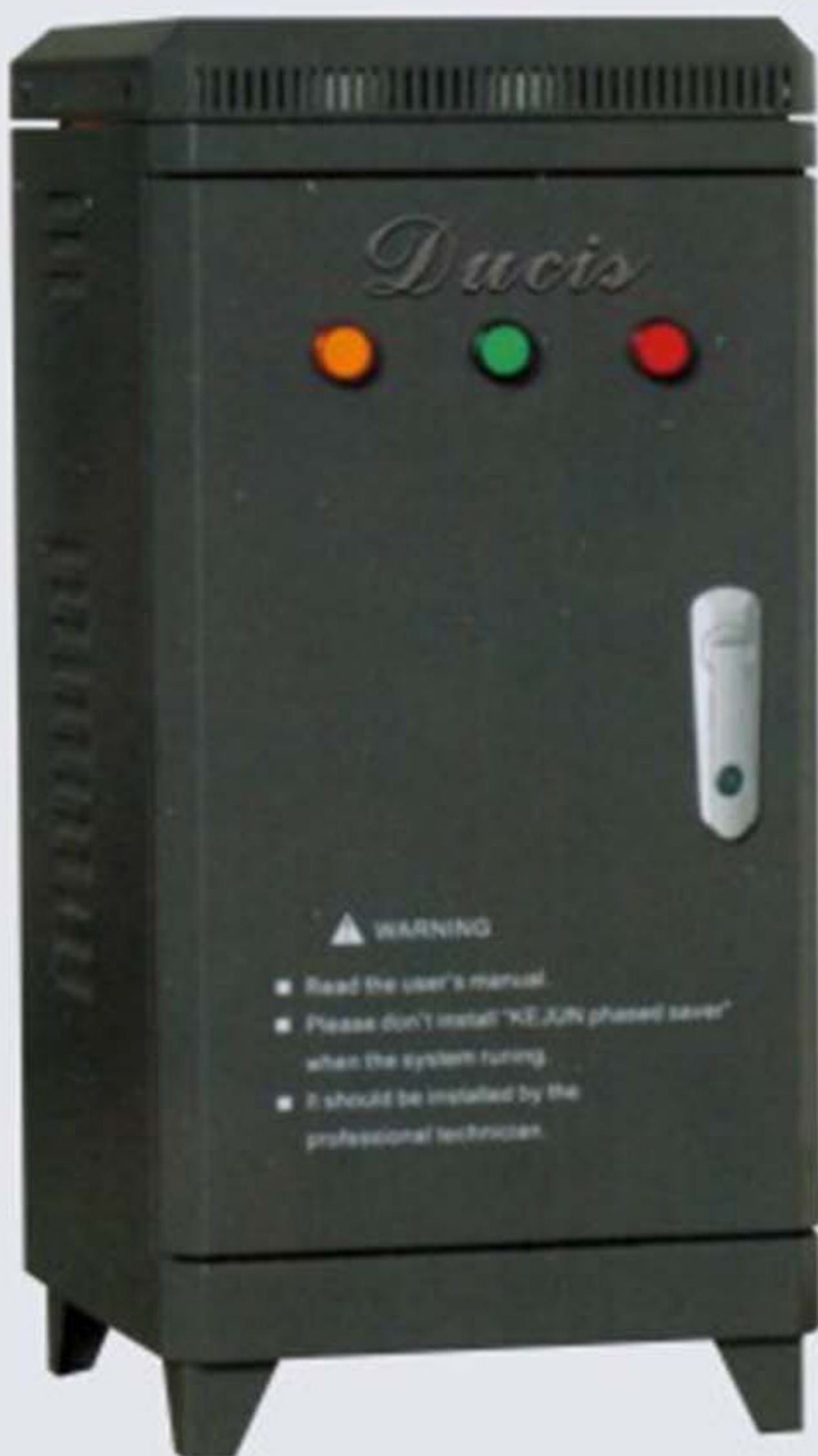
When the material oil is insufficient, adjust the red oil injection time: the ON light above is on, and lubricating oil must be added; If the NO adjustment button is set to the spray actuation time, the cylinder oil will stop the press from being able to start the quantity output (approximately 0.5 to 1 second). If the OFF adjustment button is set to the lower position, the spray actuation stop time will be intermittent (approximately 1.5 to 3 seconds); The shorter the time adjustment, the faster the spray; The longer the time is adjusted, the slower the spray is. Please adjust the power indicator light appropriately according to the pressing speed of the street bed. Power switch

Fuel injection indicator :

When the press opens the oil injection hole for dynamic stamping, the lubricating oil will spray according to the time oil quantity meter, and the indicator light will light up the pressure adjustment button: Generally, it is about 3Kg. The greater the pressure is adjusted, the stronger the spray, the greater the oil flow diffusion area; The smaller the pressure, the weaker the spray and the smaller the diffusion area. Please adjust the adjusting screw appropriately according to the width of the silicon steel sheet material

L-shaped nozzle fixing seat :

The material injection and area can be adjusted up and down, and the L-shaped seat can be adjusted to widen the upper spray; The more the adjustment, the narrower the lower spray. Please determine the silicon steel sheet (chip) based on the width of the silicon copper sheet material.



Energy-saving electronic control device

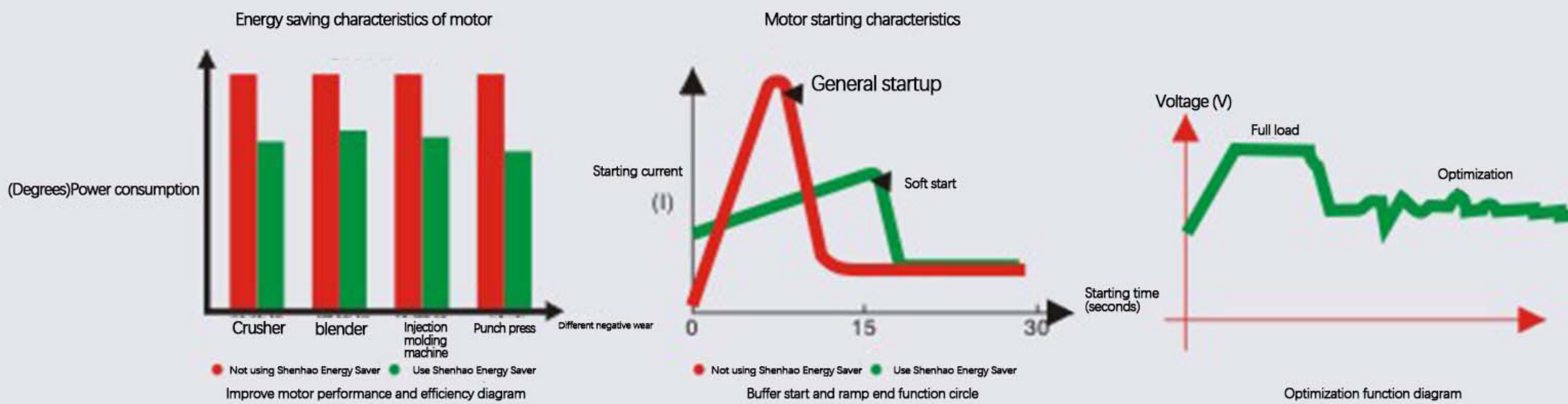
"DUCIS energy-saving electronic control device" is completely different from the traditional frequency conversion speed regulation energy-saving products, it adopts the unique control technology of current and voltage vector sensing dynamic monitoring and pulse width modulation (PWM) organic combination, does not change the original speed and operating characteristics of the motor, thereby avoiding the drawbacks of the motor due to the change of speed surface caused by the decline in production efficiency, filling the gap that the inverter cannot reach, is the crystallization of today's latest scientific and technological achievements, favored by the majority of all kinds of AC motor users.

"DUCIS energy-saving electronic control device" has a wide range of use, suitable for AC asynchronous motors with motor power between 7.5KW-630KW, especially for punching machines, mixers, injection molding machines, brick presses, ball mills, air compressors, hydraulic presses, forming machines and other types of working conditions with large load fluctuations and large impact.

According to the motor power and actual operating conditions of a pair - installation (that is, one power saving corresponds to one motor), the normal power saving rate is between 10%-50%, and the power saving investment cost is recovered for 6-12 months under normal use, and the power saving rate is subject to the specific working conditions.

Product specification table of energy-saving electric control device:

specifications	KE-A		KE-B		KE-C		KE-D	
Height, width, depth (mm)	700 × 340 × 320		900 × 400 × 320		1145 × 550 × 400		450 × 280 × 230	
model	KE7.5	KE11	KE45	KE 55	KE132	KE150	KE7.5	KE11
	KE15	KE18.5	KE75	KE90	KE186	KE225	KE15	KE18.5
Rated current (A)	KE22	KE30	KE110		KE260	KE315	KE22	KE30
	KE37							
Power (kw)	15	23	84	97	255	290	15	23
	30	35	145	170	340	410	30	35
	42	53	205		475	580	42	53
	65							
	1.5	11	45	55	132	150	7.5	11
	15	18.5	75	90	186	225	15	18.5
	22	30	110		260	315	22	30
		37						



"DUCIS energy-saving electronic control device" has significant advantages, mainly manifested in :

1. 90% of the core components of the "DUCIS energy-saving electronic control device" are genuine imported components.

2. Fully automatic operation, no debugging required, easy installation: "DUCIS energy-saving electronic control device" is a fully intelligent energy-saving product for electric motors, with closed-loop feedback control and simple installation and debugging. It only needs to be connected between the power supply of the control cabinet and the motor (only three incoming and three outgoing lines are required). It is suitable for any AC motor working condition, and has full self-adaptability. Once put into use, there is no need for adjustment.

3. Soft start function: It enables the motor to start smoothly and steplessly under any working condition, protects the traction system, reduces the impact of starting current on the power grid, and ensures reliable starting of the motor. Smoothly decelerate and stop the vehicle, eliminating the feedback mechanical impact of the drive system, and effectively reducing the starting current of the motor.

4. With power saving/utility conversion function, with automatic bypass and manual bypass: "DUCIS energy-saving electronic control device" has a power saving/utility conversion function, which is controlled by a three-position switch. When either power saving or utility system fails, just turn the switch to another state to ensure the normal operation of the device and provide dual safety for the device. It will not affect the normal production of the equipment.

5. Does not affect the existing production and quality of the equipment. "DUCIS energy-saving electronic control device" does not change the output frequency of the motor. Its mechanism is to dynamically adjust the motor power according to the weight of the load, that is, not change the rotational speed, so it does not affect the existing output and quality of the equipment.

6. Effectively reduce motor noise and motor temperature rise: "DUCIS energy-saving electronic control device" has no harmonic interference, dynamically adjusts the output power of the motor, maintains the torque and rotational speed of the motor, and has soft start and soft stop functions.

7. Extending the service life of the motor: "DUCIS energy-saving electronic control device" is an energy-saving technology that realizes voltage reduction and current reduction through the conduction angle of silicon controlled rectifier. Its output terminal voltage and current average values are reduced, improving the power factor and efficiency of the motor, thereby effectively reducing the temperature rise of the motor, extending the maintenance cycle and service life of the motor.

8. Simple operation and maintenance: "DUCIS energy-saving electronic control device", also known as motor intelligent controller, is fully automatically controlled by the built-in CPU in its working state, and only needs to adjust the motor startup time manually. Basic settings such as starting torque do not need to be reset after a one-time setting. "DUCIS energy-saving electronic control device" is maintenance-free, and its core components are treated with "three prevention" technology. It only needs to clean the dust on the heat sink once a year and tighten the wiring screws again, with a normal service life of up to 15 years.



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