

服務團隊 SERVICE TEAM

本公司是專業的鍋爐製造廠，如有任何需求歡迎與我們聯絡。
ZU HOW INDUSTRY IS A PROFESSIONAL BOILER MANUFACTURER.
PLEASE DO NOT HESITATE TO CONTACT US WITH ANY INQUIRY.

前瞻、創新、人性化
ADVANCED INNOVATION USERS FRIENDLY

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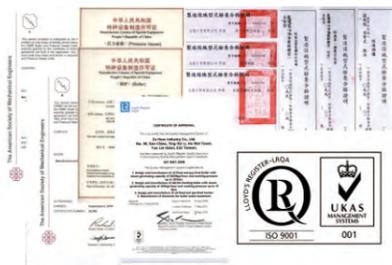
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- ISO 9001(2015)國際品質認證
ISO 9001(2015) International Quality Certified
- 中華民國鍋爐及壓力容器製造設施檢查合格認證
Boiler and Pressure Vessel Manufacturing Facility
Qualified Certificate by Republic of China
- 中國特種設備鍋爐及壓力容器製造許可證
Manufacture License of Special Equipment
People's Republic of China (Boiler/Pressure Vessel)
- 美國機械工程師學會ASME「S」及「U」認證標
Awarded American Society of Mechanical Engineers (ASME)
"S" Stamp and "U" Stamp

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貫流式
蒸汽鍋爐
STEAM BOILER
ONCE-THROUGH TYPE



瓦斯 GAS

志豪工業有限公司
ZU HOW INDUSTRY CO., LTD.



產品特點 PRODUCT FEATURE

- 

4~5分鐘發生蒸汽
點火後4~5分鐘後即可獲得足壓之蒸汽。
PROMPT STEAM 4-5 MINUTES AFTER IGNITION
With sufficient steam obtained 4-5 minutes after ignition.



效率達 88%~96%
爐體構造吸熱效果佳，燃燒效率達 88%~96%
EFFICIENCY 88% - 96%
Boiler structure with excellent heat-absorption provides combustion efficiency up to 88% - 96%.
- 

穩定的蒸氣品質
鍋爐自動偵測爐水濃縮電導度排放爐水，提高蒸氣品質，延長鍋爐使用壽命。
STABLE STEAM QUALITY
Boiler automatically detects concentration conductivity of the boiler water and discharge the boiler water. Steam quality and boiler use-life are controlled and improved.



運轉安靜
送風機及燃燒機聲音皆較舊式同型產品低 5~6 db，即使在鍋爐邊作業亦不受影響。
SILENT
The sound of draft fan & burner is 5-6db lower than old types. Working around the boiler does not get affected by the noise.
- 

傳熱性佳
燃燒氣體高速流動水管群間，熱對流佳，熱吸引快，傳熱效果佳。
GOOD HEAT TRANSFER
The heat flows fast through the tubes; well heat exchange, fast heat absorption and good heat transfer.



安全裝置及控制
燃燒、蒸汽壓力及水位均全自動控制，運轉既安全又經濟。
SAFETY EQUIPMENT & CONTROLLING
Combustion, steam pressure and water level are fully auto-controlled, which ensures both safety & economic operation.
- 

免執照、免檢查
符合「工礦安全檢查所」所定之壓力容器檢查規則的免檢規定。
LICENCE-FREE & INSPECTION-FREE
In compliance with pressure vessel inspection-free rules specified by "Industrial/Mining Security Inspecting Administration" of R.O.C.

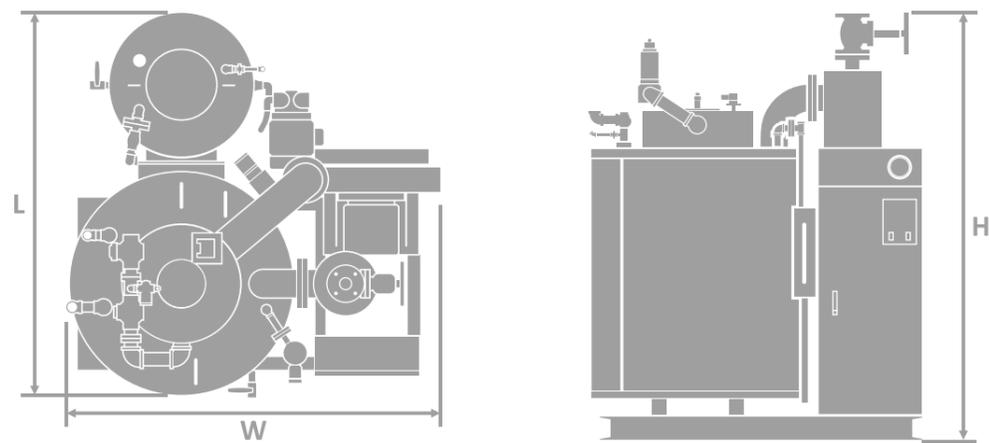


高技術·高品質
全自動 CO₂ 焊接，一貫化的生產部品規格統一，品質有保障。
HIGH TECHNOLOGY, HIGH QUALITY
Fully automatic Co₂ welding with consistent production. The unified boiler parts ensure high quality products.

MEMO



給水預熱器 FEED WATER PREHEATER



| 形式 Model | 長 L (mm) | 寬 W (mm) | 高 H (mm) |
|-----------|----------|----------|----------|
| ZH-100G | 1020 | 711 | 1550 |
| ZH-200G | 1154 | 788 | 1615 |
| ZH-300G | 1279 | 915 | 1804 |
| ZH-300GE | 1477 | 915 | 1804 |
| ZH-400G | 1279 | 915 | 1904 |
| ZH-400GE | 1477 | 915 | 1904 |
| ZH-500G | 1481 | 1098 | 2115 |
| ZH-500GE | 1612 | 1098 | 2115 |
| ZH-600G | 1481 | 1098 | 2215 |
| ZH-600GE | 1612 | 1098 | 2215 |
| ZH-750G | 1581 | 1118 | 2295 |
| ZH-750GE | 1748 | 1152 | 2295 |
| ZH-1000GE | 1730 | 1456 | 2310 |
| ZH-1000GF | 1890 | 1456 | 2310 |
| ZH-1500GE | 1972 | 1915 | 2305 |
| ZH-1500GF | 1845 | 1915 | 2305 |
| ZH-2000GE | 1958 | 1908 | 2360 |
| ZH-2000GF | 1855 | 1908 | 2360 |

※ 以上尺寸僅供參考，請依實際尺寸為準。
Above Dimensions are for Reference Only, Please Refer to the Actual Product Size.

O 型給水預熱器 O TYPE FEED WATER PREHEATER

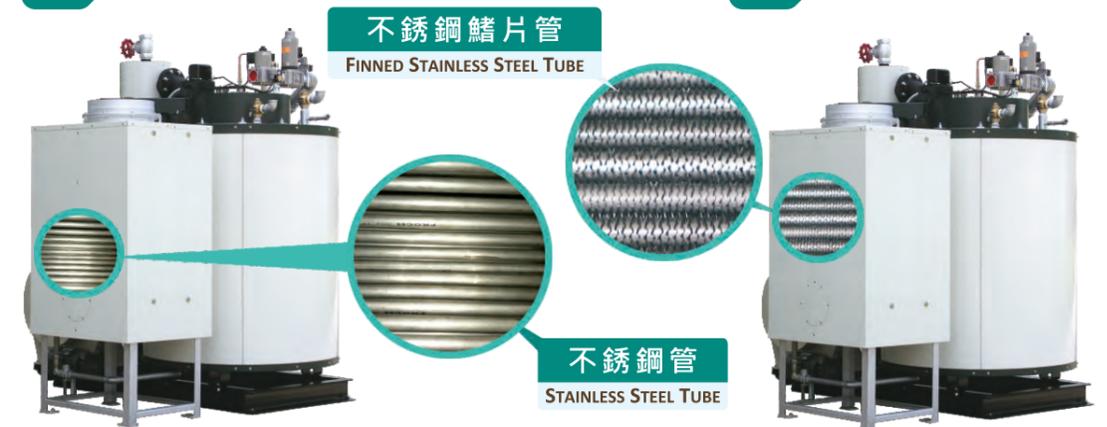
E 型給水預熱器 E TYPE FEED WATER PREHEATER



O 型及 E 型給水預熱器爐管使用無縫鋼管經噴砂、熱浸鍍鋅處理降低低溫腐蝕發生，延長使用壽命
O type and E type feed water preheater uses seamless steel tube processed with sand blasting and hot dip galvanized. These processes can prevent low-temperature corrosion and extend the use-life.

G 型給水預熱器 G TYPE FEED WATER PREHEATER

F 型給水預熱器 F TYPE FEED WATER PREHEATER



G型及F型給水預熱器，獨特不銹鋼熱交換管的設計燃燒效率可更高且節能效果更佳
G type & F type feed water preheater use the unique design stainless steel heat exchange tubes which increase both combustion and energy efficiency.

i 不同燃料搭配不同型式的給水預熱器，讓你鍋爐運轉更順暢，給你更好的鍋爐燒效率及效能效率的感受
Different fuel types apply with different types of feed water preheaters; which make the boiler run more smoothly and bring you higher combustion efficiency and better boiler performance.



多樣化、獨特性的安全控制功能保護措施，提升鍋爐使用的安全性及壽命。

THE DIVERSITY AND UNIQUE SAFETY CONTROL PROTECTION FUNCTIONS

ENHANCE THE BOILER SAFETY AND EXTEND THE DURABILITY

爐體溫度偵測器 BOILER BODY TEMPERATURE SENSOR



可偵測蒸汽的溫度，當溫度超出設定值時自動斷電停機，確保鍋爐運轉安全。
The sensor helps to check the steam temperature. When the temperature exceeds the set value, the boiler would self deenergize to ensure boilers operation safely.

全量式安全閥 FULL BORE SAFETY VALVE



構造精密、穩定性高、吹洩量大，超壓時開啟及壓力下降時關閉，準確性高，絕無洩漏情形。
Precise construction; high stability; great discharge capacity; automatically switches on when excessive pressure and closes up when pressure drops down; excellent accuracy and no leakage occurrence.

水管溫度偵測 WATER TUBE TEMPERATURE SENSOR



可偵測水管溫度，以檢測鍋爐是否有產生水垢。若偵測到溫度上升至設定溫度時，則鍋爐會自動停止運轉。
To detect the temperature of water tubes in order to examine whether water has scaled in boiler. If the temperature reaches to the set value, the boiler will stop its operation automatically.

送風馬達 DRAFT FAN



馬達特殊設計大幅縮短了馬達外觀的長度，使其運轉時更穩定、壽命更長、噪音更低。
The design in draft fan has decreased its length effectually; hence when the draft fan operates both stability and effective duration will increase, but noise will decrease.

瓦斯電磁閥 GAS SOLENOID VALVE



採用德製DUNGS品質好、流量設定準確、故障率低、安全性高
Use German made DUNGS which has high quality, high accuracy on flow setting, high safety rate and low failure rate.

| ZH-600G | ZH-600GE | ZH-750G | ZH-750GE | ZH-1000GE | ZH-1000GF | ZH-1500GE | ZH-1500GF | ZH-2000GE | ZH-2000GF |
|---------|----------|---------|----------|-----------|-----------|-----------|-----------|-----------|-----------|
| 600 | | 750 | | 1000 | | 1500 | | 2000 | |
| 323000 | | 404300 | | 539000 | | 808000 | | 1080000 | |
| 7.5 | | 7.8 | | 9.9 | | 9.9 | | 9.9 | |
| 10 | | 10 | | 10 | | 10 | | 10 | |
| 102 | | 106 | | 176 | | 176 | | 163 | |
| 88 | 93 | 88 | 93 | 92 | 96 | 92 | 96 | 92 | 96 |
| N | Y | N | Y | Y | | Y | | Y | |
| ON-OFF | | ON-OFF | | TWO-STAGE | | TWO-STAGE | | TWO-STAGE | |
| 37.1 | 35.1 | 46.4 | 43.9 | 59.2 | 56.7 | 88.7 | 85.0 | 118.6 | 113.6 |
| 32.0 | 30.3 | 40.1 | 37.9 | 51.1 | 49.0 | 76.6 | 73.4 | 102.4 | 98.2 |
| 33.7 | 31.9 | 42.1 | 39.9 | 53.7 | 51.5 | 80.6 | 77.2 | 107.7 | 103.2 |
| 3.2 | | 3.2 | | 3.9 | | 7.9 | | 11.4 | |
| 1.5 | | 1.5 | | 1.5 | | 2.2 | | 3.7 | |
| 1.5 | | 1.5 | | 2.2 | | 5.5 | | 7.5 | |
| 0.2 | | 0.2 | | 0.2 | | 0.2 | | 0.2 | |
| 950 | 1100 | 1040 | 1250 | 1640 | 1690 | 1930 | 1900 | 2050 | 2000 |
| 40 | | 40 | | 40 | | 50 | | 50 | |
| 25 | | 25 | | 40 | | 40 | | 40 | |
| 25 | | 25 | | 25 | | 25 | | 40 | |
| 32 | | 40 | | 50 | | 50 | | 65 | |
| 25 | | 25 | | 25 | | 25 | | 25 | |
| 25 | | 25 | | 32 | | 25&25 | | 25&32 | |
| / | | / | | 10 | | 10 | | 10 | |
| 200 | | 250 | | 330 | | 360 | | 360 | |
| 3.5 | | 3.5 | | 5.5 | | 8.0 | | 14 | |
| 1481 | 1612 | 1581 | 1748 | 1730 | 1890 | 1972 | 1845 | 1958 | 1855 |
| 1098 | 1098 | 1118 | 1152 | 1456 | 1456 | 1915 | 1915 | 1908 | 1908 |
| 2215 | 2215 | 2295 | 2295 | 2310 | 2310 | 2305 | 2305 | 2360 | 2360 |



- ZH-xxxx G indicates Gas boiler.
- Standard power is 3-Phase / 220v / 60Hz. Notice of change, if any, is required.
- Fuel consumption is calculated at low heat value: 13A = 9900 kcal/Nm³; LPG Propane = 11460 kcal/kg; LPG Butane = 10900 kcal/kg.
- Gas supply pressure 13A=200 mmAq; LPG=280 mmAq, 1000kg/h-2000 kg/h model supply pressure 0.8~3.5 kg/cm². Installation of pressure reducing device, gas entrance to the boiler to reduce 400~1000 mmAq.
※Low pressure supply should be stable, depressurization can't be too rapid, and the gas flow should be sufficient.
- Partial modification for improvement is allowed without notice.
- Boiler efficiency tolerance value ±1%.

鍋爐效率性能 & 標準規格 BOILER PERFORMANCE & STANDARD SPECIFICATIONS

| 項目ITEM | | 型式MODEL | ZH-100G | ZH-200G | ZH-300G | ZH-300GE | ZH-400G | ZH-400GE | ZH-500G | ZH-500GE | |
|--|----------------------------------|--------------------------|--------------------|---------|---------|----------|---------|----------|---------|----------|------|
| 性能 PERFORMANCE | 換算蒸發量 EQUIVALENT OUTPUT | kg/h | 100 | 200 | 300 | | 400 | | 500 | | |
| | 發生熱量 HEAT OUTPUT | kcal/h | 53900 | 108000 | 162000 | | 216000 | | 269000 | | |
| | 傳熱面積 HEATING SURFACE AREA | m ² | 2.8 | 3.7 | 5.1 | | 5.6 | | 8.3 | | |
| | 最高壓力 MAX.PRESSURE | kgf/cm ² | 10 | 10 | 10 | | 10 | | 10 | | |
| | 保有水量 WATER CONTENT | L | 33 | 48 | 75 | | 80 | | 95 | | |
| | 鍋爐效率 BOILER EFFICIENCY | % | 88 | 88 | 88 | 93 | 88 | 93 | 88 | 93 | |
| | 給水預熱器 WATER PREHEATER | / | N | N | N | Y | N | Y | N | Y | |
| | 燃燒方式 COMBUSTION TYPE | / | ON-OFF | ON-OFF | ON-OFF | | ON-OFF | | ON-OFF | | |
| | 燃料消耗量 FUEL CONSUMPTION | 13A | Nm ³ /h | 6.2 | 12.4 | 18.6 | 17.6 | 24.8 | 23.5 | 30.9 | 29.2 |
| | | LPG PROPANE BUTANE | kg/h | 5.3 | 10.7 | 16.1 | 15.2 | 21.4 | 20.3 | 26.7 | 25.2 |
| | | | kg/h | 5.6 | 11.3 | 16.9 | 16.0 | 22.5 | 21.3 | 28.0 | 26.5 |
| 本體設備電力 ELECTRICAL POWERCAPACITY | | kw | 1 | 1 | 1.35 | | 1.7 | | 2.45 | | |
| 輔機電力 POWER OF AUXILIARY EQUIPMENT | 給水泵馬達 WATER PUMP MOTOR | kw | 0.4 | 0.4 | 0.75 | | 0.75 | | 1.5 | | |
| | 送風機馬達 EXHAUSTING FAN MOTOR | | 0.4 | 0.4 | 0.4 | | 0.75 | | 0.75 | | |
| | 控制盤 CONTROL PANEL | | 0.2 | 0.2 | 0.2 | | 0.2 | | 0.2 | | |
| 製品重量 PRODUCT WEIGHT | | kg | 366 | 470 | 620 | 720 | 640 | 740 | 910 | 1060 | |
| 接管口徑 PIPE DIAMETERS | 燃料入口管徑 FUEL INLET DIA | 13A | 20 | 25 | 25 | | 25 | | 40 | | |
| | | LPG | 15 | 15 | 20 | | 20 | | 25 | | |
| | 給水入口管徑 FEED WATER INLET DIA | | 15 | 15 | 20 | | 20 | | 25 | | |
| | 蒸汽出口管徑 STEAM OUTLET DIA | mm | 20 | 25 | 25 | | 25 | | 32 | | |
| | 爐水排放管徑 BOILER-WATER DRAIN DIA | | 25 | 25 | 25 | | 25 | | 25 | | |
| | 安全閥管徑 SAFETY VALVE DIA | | 20 | 20 | 20 | | 20 | | 25 | | |
| | 自動排放管徑 AUTO BLOWDOWN DIA | | / | / | / | | / | | / | | |
| | 煙囪外徑 CHIMNEY DIA | φmm | 150 | 150 | 150 | | 150 | | 200 | | |
| 引入電源線徑 POWER WIRE INLET DIA | | mm ² | 2.0 | 2.0 | 2.0 | | 2.0 | | 2.0 | | |
| 尺寸 SIZE | 鍋爐尺寸 BOILER DIMENSIONS | 長 LENGTH | 1020 | 1154 | 1279 | 1477 | 1279 | 1477 | 1481 | 1612 | |
| | | 寬 WIDTH | 711 | 788 | 915 | 915 | 915 | 915 | 1098 | 1098 | |
| | | 高 HEIGHT | 1550 | 1615 | 1804 | 1804 | 1904 | 1904 | 2115 | 2115 | |



- ZH-xxxx G 代表瓦斯鍋爐。
- 供應電源為 三相 / 220v / 60Hz 標準品，電源異動請另行通知。
- 燃料低位發熱量：13A=9900 kcal/Nm³；LPG Propane =11460 kcal/kg；LPG Butane =10900 kcal/kg。
- 瓦斯供給壓力 13A：200 mmAq / LPG：280 mmAq。1000 kg/h ~ 2000 kg/h 機種中壓供氣 0.8~3.5 kgf/cm²，鍋爐瓦斯入口前加裝減壓系統減至 400~1000 mmAq。*低壓供氣壓力要穩定，壓降不可太大，流量要足夠。
- 產品因改良需要，可做部份修改，不另行通知。
- 鍋爐效率之誤差容許值為±1%。

自動排放裝置 Automatic Discharge Device



可偵測爐水濃縮電導度；當電導度達到排放標準時，鍋爐會自動將爐水排出。可穩定控制爐水的品質提高蒸汽品質，避免爐體苛性脆化、水垢產生降低鍋爐效率及水管損壞。
Use to detect boiler water concentrated electrical conductivity. The boiler water will self-discharge when the electrical conductivity reaches the discharge standard. This device helps to control boiler water's quality, improve steam quality and avoid furnace caustic embrittling. It also prevents water scale which reduce the boiler effectiveness and damage the water tubes.

水位控制裝置 WATER LEVEL CONTROLLING DEVICE



給水量不足檢知：微電腦自己做運算檢知，有效防止鍋爐無水空燒，及水泵故障退化之前的報知；水位控制異常檢知：微電腦自我診斷，有效防止水位電極棒斷線，短路或因水垢附著而產生的故障。

WATER INSUFFICIENCY INSPECTOR: Self-examined by the Microcomputer; effectively prevent idle combustion; respond to the malfunction of pumps before operation shutdowns.
WATER LEVEL CONTROL ERROR INSPECTING: Self-examined by the Microcomputer; efficiently prevents disconnection of water-level electrode rods, short cuts or operation faults caused by scale coherence.

壓力顯示及壓力開關 PRESSURE DISPLAY AND SWITCH



鍋爐運轉狀態變化，蒸汽量之發生狀態也會隨其變化，假使蒸發快速，隨之壓力也漸漸增加，這壓力的變化可由壓力表表示出來，壓力開關使用蒸汽專用不銹鋼膨脹管，耐久性高，確保運轉安全。

The formation of steam would change as the boiler's operation status varies. If evaporation accelerates, the pressure within the boiler would increase as well. This increase in pressure will be displayed by the pressure gauge. The pressure switch is made of stainless steel expandable tubes for steam. It has excellent durability which ensures operation safety.

程式控制器 PROGRAM CONTROLLER



一體成型的控制器，保持線路運轉安全，維修容易控制回路漏電檢知：防止瓦斯鍋爐控制回路，因漏電而不正常作動而產生的故障，確保鍋爐運轉的安全。
Integrated controller; ensures circuit operating safety; can be easily repaired. Inspector of electricity leakage in circuit control: Prevents malfunction caused by electricity leakage in the circuit control of a gas boiler, hence ensure boiler's operating safety.

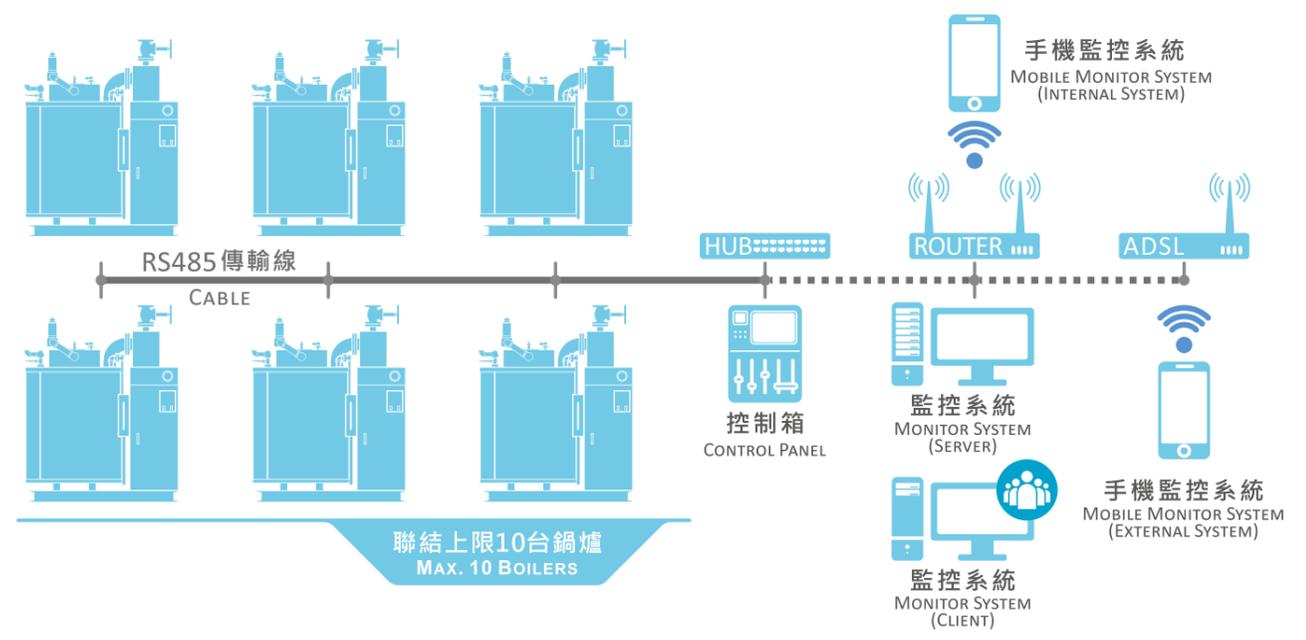
瓦斯壓力開關 GAS PRESSURE SWITCH



採用德製DUNGS品質好、壓力設定準確、故障率低、安全性高。
Use German made DUNGS, which has high quality, high accuracy on pressure setting, high safety rate and low failure rate.



網路遠端監控系統 REMOTE CONTROL SYSTEM



- 診斷鍋爐運轉狀況及協助故障排除
IDENTIFY BOILER'S OPERATING CONDITIONS AND ASSIST WITH TROUBLESHOOTING
- 同時監視並控制多台鍋爐運轉
MONITOR AND CONTROL SEVERAL BOILERS CONCURRENTLY
- 連接志豪維修中心
CONNECT WITH ZU HOW SERVICE CENTER

- 記錄故障時間、位置、蒸發量、燃料消耗量、給水量、蒸汽壓力、水管溫度、排氣溫度、給水溫度
RECORD:
MALFUNCTION TIME, MALFUNCTION POSITION, EVAPORATION AMOUNT, FUEL CONSUMPTION, FEED WATER AMOUNT, STEAM PRESSURE, WATER TUBE TEMPERATURE, EXHAUST TEMPERATURE AND FEED WATER TEMPERATURE
- 記錄統整 & 列印日報表及月報表
INTEGRATE RECORDS & PRINT DAILY REPORTS AND MONTHLY REPORTS

| | | | | | | | | | |
|---------|---------|---------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|
| ZH-100G | ZH-200G | ZH-300G | ZH-400G | ZH-500G | ZH-600G | ZH-750G | ZH-1000G | ZH-1500G | ZH-2000G |
| FV20A | FV25A | FV32A | FV32A X 1 | FV25A X 2 | FV32A X 1 | FV25A X 2 | FV32A X 1 | FV25A X 2 | FV32A X 1 |
| ZH-100G | ZH-200G | ZH-300G | ZH-400G | ZH-500G | ZH-600G | ZH-750G | ZH-1000G | ZH-1500G | ZH-2000G |
| 20A | 25A | 32A | 40A | 50A | 65A | 65A | 65A | 65A | 65A |
| ZH-100G | ZH-200G | ZH-300G | ZH-400G | ZH-500G | ZH-600G | ZH-750G | ZH-1000G | ZH-1500G | ZH-2000G |
| φ 150 | φ 200 | φ 250 | φ 330 | φ 360 |

| | | | |
|-----------|------------------------|--------------|------------------------------|
| 01. 加壓機 | Water Booster Pump | 12. 蒸汽出口閥 | Steam Valve |
| 02. 軟水機 | Soft-water Conditioner | 13. 安全閥 | Safety Valve |
| 03. 藥液槽 | Chemical Tank | 14. 壓力開關 | Pressure Switch |
| 04. 藥注機 | Dosing Pump | 15. 壓力表 | Pressure Gauge |
| 05. 軟水槽 | Soft-water Tank | 16. 風壓開關 | Air Pressure Switch |
| 06. 給水泵浦 | Feed Water Pump | 17. 球塞閥 | Ball Valve |
| 07. 排放閥 | Discharge Valve | 18. 法蘭 | Flange |
| 08. 鍋爐本體 | Boiler Body | 19. 瓦斯電磁閥 | Gas Solenoid Valve |
| 09. 水位計 | Water Gauge | 20. 二段式瓦斯電磁閥 | Two-stage Gas Solenoid Valve |
| 10. 煙囪 | Chimney | 21. 瓦斯高/低壓開關 | Gas High/Low Pressure Switch |
| 11. 汽水分離器 | Steam Separator | 22. 瓦斯過濾器 | Gas Strainer |

