

30th
Anniversary

舒瑞普
式熱交換器



SRP TAIWAN 舒瑞普®



Heat Exchanger

HotWater 哈瓦特® SINCE 1992

公司簡介

- 1992 瑞典swep AB 設立台灣舒瑞普公司，成立亞洲銷售據點與開發市場之用，同時承接初期維修業務。
- 2000 台灣舒瑞普在北京設立北京舒瑞普公司開始熱交換器生產。
- 2003 台灣舒瑞普公司設立北京哈瓦特換熱機組公司，開始機組生產。
- 2007 瑞典SWEP 被併購，台灣買回台灣舒瑞普及北京哈瓦特公司所有股份，更改英文名稱為Taiwan SRP 及圖樣商標。
中文舒瑞普名稱為台灣舒瑞普1992年註冊及擁有。因此中文名稱及商標維持不變。
同年投資瑞典Airec AB 公司股份，獲得技術，開始跨足氣體熱交換器領域。
- 2016 投資 德國 En-Save 公司，獲得 ESS 熱能源回收技術。
- 2017 與英國 Allards International Limited 合作，設立銷售辦公室與工廠。開始殼板熱交換器生產。
- 2020 樹林工廠成立
- 2022 舒瑞普成立30周年



- 1992 Swep AB, Sweden established Swep Taiwan for sales and market development as well as preliminary maintenance operations in Asia.
- 2000 Swep Taiwan established Swep Beijing for the production of heat exchangers.
- 2003 Swep Taiwan established Hotwater, Beijing(DHS) for the production of heat exchange sub-station units.
- 2007 Swep Taiwan bought back shares of Swep Taiwan and Hotwater DHS, Beijing from Swep Sweden before the merger with Dover. After this change in the shareholders, the entity renamed its English name and trademark to Taiwan SRP, while the Chinese name and logo "台灣舒瑞普" remained the same as it was registered and possessed by Swep Taiwan in 1992.
Same year Bought shares of Airec AB, Sweden to acquire the technology required to step into the field of Gas heat exchangers.
- 2016 Bought shares of En-Save, Germany to acquire ESS thermal energy recycling technology.
- 2017 Partnered with British Allards International Limited and established the sales offices and production facility for Shell and Plate heat exchangers.
- 2020 Established New factory in new Taipei city.
- 2022 Our company has a history of 30 years.

CERTIFICATES



設計規範 Design code

- ASME section viii division 1
- Lloyd's register
- ABS
- DNV GL Marine
- China CCS
- CR classification society
- CNS-9788
- High Pressure Gas Taiwan
- Bureau Veritas Marine Offshore



品質管理 Quality System

- EN3834--2
- ISO 9001-2015.
- ISO-14001
- ASME U Stamp
- ASME U Stamp-Welding
- PED 2014/68/EU Module H
- CNS-9788

PRODUCTION

生產

“板片”為熱交換器組成不可或缺的核心配件。

從墊片式熱交換器到殼板式熱交換器，背負不同換熱效能的專利板片是所有產品的核心部件。

對於板片沖壓技術的精進與最高品質的追求，一直是台灣舒瑞普三十年來致力的目標。我們相信只有嚴格的質量控制與不懈的改進方法，才是確保最高質量的不二法門。

板片的選用取決於熱交換中的介質，從生活用水的SUS304,316L,船舶與海水冷卻所需的鈦合金，到與高腐蝕流體匹配的哈氏合金，在板片的沖壓過程當中，會隨著母材的特性隨時修正，流體的腐蝕的程度可能會遠比最初預計的更高，即使是最苛刻的工況，確保板片長遠的使用壽命，一直是舒瑞普努力尋找的解決方案。

“Plates, the core components of heat exchangers”

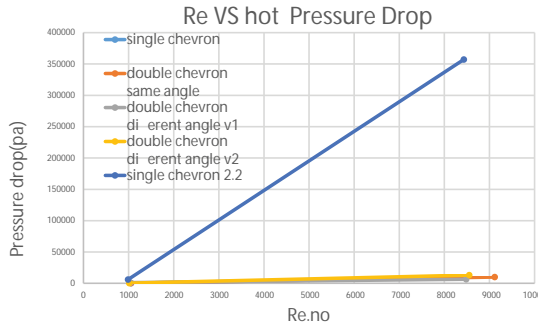
From gasket heat exchangers to shell-and-plate heat exchangers, patented plates with different heat exchange performance constitute the core of all products. For the past 30 years, the pursuit of the refinement and the highest quality of plate stamping technology has always been the goal that Srp Taiwan strives for. We believe that only rigorous quality control and relentless improvements are the only way to ensure product stability.

The selection of plates depends on the medium in heat exchange, ranging from SUS304, 316L for domestic water, titanium alloys required for vessel and seawater cooling, to Hastelloy that is matched with highly corrosive fluids. During the stamping process of the plates, the fluid status is modified promptly according to the characteristics of the base material. The degree of corrosion may be much higher than initially expected. Even in the most severe working conditions, ensuring the long-term service life of the plates has always been the persistent aim of SRP Taiwan.



技術

熱傳是熱交換器的核心基礎，熱交換的原理是將熱能從一次側經由傳熱板傳遞到二次側。台灣SRP的熱交換器可用於冷卻、加熱、冷凝、蒸發和餘熱回收等用途。特殊傳熱板透過特殊方式固定在不同外形的產品當中。



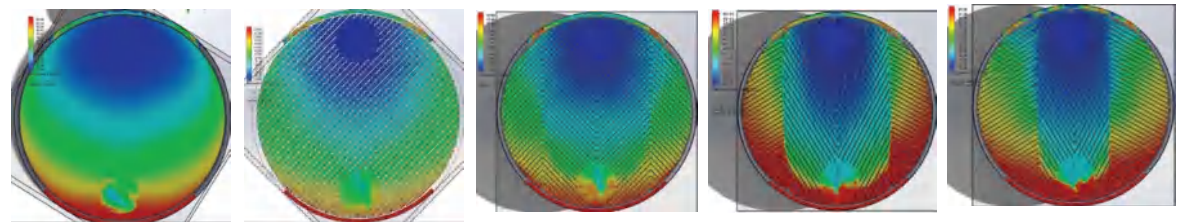
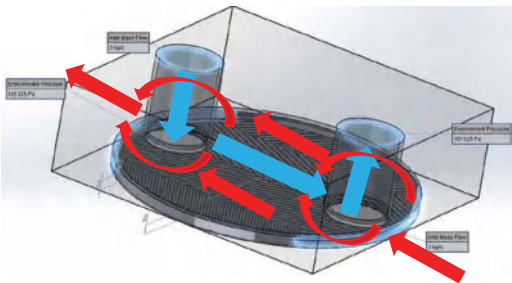
台灣舒瑞普的熱交換器處於換熱技術的領先地位，無一台熱交換器是完全相同的。工程師會依據您的需求進行設計與選型，所有的設計都從選用適合的產品開始，同時經過熱負荷與流體分析 (CFD) 去模擬流體各種分布的效率，力求最佳的換熱效能。

產品的最終尺寸與設計不是固定的，可以根據客戶的需求與現場的工況還有空間限制，進行調整以達到完美匹配。



Heat transfer is the fundamental core of heat exchangers. The principle of heat exchange is to transfer the heat energy from the primary side to the secondary side via heat transfer plates. Our heat exchangers can be used for applications such as cooling, heating, condensation, evaporation, afterheat recovery. Special heat transfer plates are fixed in products of different shapes by welding or bolt-tightening.

SRP Taiwan's heat exchangers are in a leading position in heat exchange technology, and no heat exchanger is ever the same. SRP's engineers can design and select models according to customers' needs. All designs start from the selection of suitable products. Also, through thermal load and computational fluid dynamics (CFD), the efficiency of various distributions of fluids are simulated, so as to optimize the efficiency of heat exchange. The final dimension and design of the product can vary and adjustments can be made according to customers' needs, site conditions and space constraints to achieve a perfect match with all conditions.





人工銲接

銲接與板片生產並列熱交換器生產中的兩大核心技術。

高質量的銲接是舒瑞普一貫追求的精神，也確保舒瑞普產品的最大耐用性。除傳統不銹鋼外，我們的銲接團隊也能夠銲接哈氏合金、純鎳、鈦合金等特殊金屬。

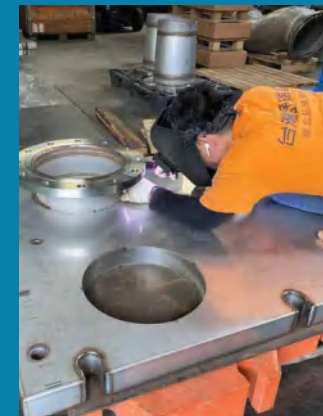
台灣舒瑞普的銲接除一般銲接，也提供雷射自動銲接、電漿電弧自動銲接，自動GMAW機與手工GTAW銲接。

Welding and plate production are the two core technologies in producing in-line heat exchangers.

High-quality welding is the persistent pursuit of Taiwan Srp, which ensures the maximum durability of our products.

In addition to conventional stainless steels, our welding team can also able to weld special metals such as Hastelloy, pure nickel, titanium alloys, etc.

In addition to general welding, Taiwan SRP also offers automatic laser welding, automatic plasma arc welding, automatic GMAW machine and manual GTAW welding.



LASER AUTOMATIC & WELDING



雷射自動焊接

雷射自動銲接是銲接工藝在人工銲接後，一大的突破性發展。

其最大的好處是消除了人工銲接長期以來存在的不一致性，也是目前

業界中最精準的銲接方法之一，使雷射銲接成為熱交換器銲接的首選。

與所有銲接應用相同，銲接過後的部分須保持與母材的一致性，雷射銲接在銲接過程當中，沒有添加填充材料，確保了品質的穩定性。

舒瑞普目前備有4000W/2000W/1000W等大功率自動雷射銲接機。

After manual welding, automatic laser welding makes a major breakthrough development of welding technology.

Its biggest benefit lies in that it eliminates the long-standing inconsistency seen in the result of manual welding, which is also one of the most accurate welding methods in the industry at present, making laser welding the first choice for welding of heat exchangers.

Same as in all other welding applications, the post-weld part must be consistent with the base metal. During the laser welding process, no filler material is added to ensure the stability of the quality.

SRP Taiwan currently has high-power automatic laser welding machines of 4000W/2000W/1000W, etc.

製造設備

台灣舒瑞普目前擁有捲板機、1000KW, 2000KW 4000KW雷射自動銲接機、快速落孔機、特製機械手臂、銲接銲道清洗機、光譜分析儀、超聲波震動儀等同時備有3000噸、4000噸、6000噸與12000噸大型沖壓設備共六台，為台灣當前唯一有能力生產大尺寸板片式熱交換器製造商，不需仰賴進口。配備齊全，可以應付各式大型熱交換器之生產與運送。

舒瑞普目前可生產板片最大尺寸為2000m x 3800mm，板片平整性佳，產品組裝精確度高。

除用於台灣市場外，也出口至海外市場包含中國、美國、歐洲、澳洲、日本、韓國、印度，橫跨五大洲等，三十年來為值得信賴與之熱交換器專業製造商。

SRP Taiwan currently has plate rolling machines, 1000KW/2000KW/4000KW laser automatic welding machines, rapid drilling machines, special robotic arms, welding machine and weld bead cleaning machines, optical spectrum analyzers, ultrasonic vibrators, etc. The Company also has totally six large-scale stamping equipment of 3,000/4,000/6,000/12,000 tons. It is currently the only manufacturer in Taiwan capable of producing large-dimension plate heat exchangers without relying on imports. With a full array of equipment, the Company can handle the production and delivery of various large-scale heat exchangers.

At present, the maximum dimension of the plates that can be produced is 1253m x 3870mm, and the maximum heat exchange area of a single plate can reach 4.62m². The flatness of the plate is good and the accuracy of product assembly is high.



In addition to being used in the Taiwan market, the product is also exported to overseas markets including China, the United States, Europe, Australia, Japan, South Korea and India spanning over five continents, etc. For the past 30 years, SRP Taiwan has been a reliable and professional manufacturer of heat exchangers.

MANUFACTURING



GASKET PLATE HEAT EXCHANGER

墊片式熱交換器

墊片式熱交換器以金屬換熱板與密封墊片為主體，還有前後檔板螺桿螺帽等框架配件。

金屬板片上以專利設計的板紋形成通道，冷熱側流體分別進入通道，冷熱流體在通道中交遞，進而達到熱能交換的目的。主要原理為，將熱流體中的熱能傳遞到冷流體的工業設備。

能夠用於工業製程的升溫與冷卻，於在不同工況中，也可視為阻絕溫度，避免流體直接接觸，或是阻絕壓力的設備。

產品可依據用戶現場不同工況情況進行選型，現今業界運用相當廣泛。

The gasket heat exchanger consists of mainly metal heat exchange plates and sealing gaskets, along with other frames accessories such as front and back frame, bolts and nuts. The metal plate surface is designed with patented patterns which forms fluid channels. After the hot and cold side of fluids enter the channel, respectively, they exchange energy in the channel, thus serving the purpose of exchange of heat energy.

The plate heat exchanger can be used for heating and cooling during industrial processes. In different working conditions, it can also be regarded as a device to block the temperature, to avoid direct contact of fluids or to block pressure. Models of products can be selected according to the different working conditions of the user's site, which are widely used in the industry today.

適用產業 APPLICABLE INDUSTRY

化工 *Chemical Engineering* 空調製冷 *Air Conditioning* 發電廠 *Power Plants*
石油工業 *Petroleum* 機械製造 *Mechanic Manufacturing* 海事 *Maritime*
冶金金屬業 *Metallurgical Metals Industry* 食品業 *Food Processing*

板片材質
Plate Materials

304 / 316L / 317 / 904 / Ti / MO254 / Ti-pd / C276

墊片材質
Gasket Materials

NBR / EPDM / Viton / CR / PTFE

接口尺寸
Nozzle Connection

DN25-500

換熱機組

換熱機組是集成熱交換器、泵、儀錶、感測器、電器控制及閥門管路於一體的機電一體化設備。

其整體設定精密，所需空間小。經過科學計算和優化設計，硬體優良，PLC程式化控制系統，控制端操作簡單方便，節能環保。省去客戶自行採購組裝的時間，替不同需求的客戶提供全方位整合且單一的換熱器系統。

可用於區域供熱/製冷系統，生活熱水系統，餘熱回收，海水淡化，石油化工，食品酒業，飲料，電子製造，醫藥，電力，冶金，其他熱交換系統等諸多領域。

A Sub-Station Unit is an integrated plant consisting of a Heat Exchanger, Pumps, Meters, Sensors, Electrical Controls, Valves and Piping.

The Unit features sophisticated settings and a small footprint. The excellent hardware design results from scientific calculation and optimization. Its Programmable Logic Control (PLC) System is easy to operate, power saving, and environmentally friendly.

It saves the time that customers would otherwise needed to purchase and assemble on their own. It provides a comprehensive and integrated heat exchanging system for customers having different needs.

Applicable to versatile fields including zoned heat supply / refrigeration systems, livelihood hot water systems, heat recycling, seawater desalination, petrochemical engineering, food and wine industry, beverage, electronic manufacturing, pharmaceutical, electricity, metallurgy, and other heat exchange systems.



HEAT EXCHANGER

適用產業 APPLICABLE INDUSTRY

化工 *Chemical Engineering* 石化相關產業 *Petrochemical industry*
石油與天然氣產業 *Oil and gas industry* 能源 *Energy Industry*
製冷 *Refrigeration Industry*

SHELL / PLATE

殼板式熱交換器

殼板式熱交換器在殼內放置板片，殼側流體與板側流體藉由板片進行熱交換。

結合板式換熱器(Plate)所需空間小與高熱傳的優點，同時逆流不易結垢的特性，加上管殼式換熱器(Shell and tube)可耐高壓，相對穩定的特點於一身的新形態熱交換器。

其佔地面積小，操作簡單吊掛方便，維修保養容易結合目前市場主流熱交換器優點，高熱傳堅固耐高溫高壓，同時沒有墊片耗材，產品運作穩定。

我司目前共提供以下四種規格之板殼換熱器，同時可設計為全銲接式拆式與可拆式兩種 SRP20/SRP40/SRP75/SR0100。

Plates are placed in the Shell and Plate heat exchangers and heat exchange is carried out between the shell-side fluid and the plate-side fluid through the plates.

With the advantage of high heat transfer and the characteristics of un-prone to fouling due to countercurrent and the high-pressure resistance similar to that of the shell and tube heat exchangers, the plate heat exchangers are relatively stable and only require to take up a small space, thus making the plate heat exchangers the new type of heat exchanger with all the best features combined.

The plate heat exchangers only need to occupy a small space, are easy to operate, easy to install, easy to maintain, do not require consumables such as gasket, have high efficiency of heat transfer, are high temperature- and high pressure-resistant, thus ultimately operating relatively steadily.

The Company currently provides four specifications of the shell and plate heat exchangers, namely SRP20/ SRP40/ SRP75/ SRP100, all of which can be designed as fully welded and openable.

板片材質 *304 / 316L / 310 / 904 / SM0254 / C276 / Ti GR1/ Nickel 201*

Plate Materials

板側接口尺寸 *DN50~200*

Nozzles Plate

殼體材質 *Carbon Steel / 316L / 904 / SMO254 / C-276 / 304*

Shell Materials

殼側接口尺寸

Nozzle Shell

DN50~700

工作壓力

Pressure

全真空 Full vacuum~88 BAR



可拆式 OPENABLE

HEAT EXCHANGER



適用產業 APPLICABLE INDUSTRY

化工 *Chemical Engineering* 石油工業 *Petroleum* 發電廠 *Power Plants*
冶金金屬業 *Metallurgical Metals Industry* 食品業 *Food Processing*
焚化爐產業 *Incinerator Industrial* 能源 *Energy Industry*

氣體-氣體熱交換器

主要針對工業所產生的高溫廢熱氣體、或含有硫化物帶腐蝕性的氣體，做預熱或熱回收等處理。藉由預熱氣體等方式，節省能源並且維持鍋爐效率。同時降低高溫氣體排放到大氣中的溫度，藉此保護臭氧層。

在高溫氣體與二次側的低溫氣體，透過熱交換器的專利金屬板片為介質，進行換熱。

台灣舒瑞普的氣體對氣體熱交換器與傳統鰭片、金屬管式不同有著更優秀的換熱效能與抗腐蝕能力。同時改良傳統空冷氣不易清洗的特點，高效能重量輕，客戶所需空間小。

舒瑞普提供AA960/AA1000/AA1000 Mini等三種型號，同時擁有大陸、台灣、韓國、日本等四國專利。

Gas-to-gas heat exchangers are mainly used for pre-heating or heat recovery processing of the high-temperature waste heat gas or corrosive gas containing sulfides produced by industry. Through gas pre-heating, etc. energy is saved and the efficiency of the boiler is maintained. Meanwhile, the temperature of high-temperature gases emitted into atmosphere can be reduced, thereby protecting the ozone layer.

The high-temperature gas and the low-temperature gas on the secondary side can carry out heat exchange through the medium, i.e., the patented metal plate of the heat exchanger.

SRP's gas-to-gas heat exchanger is different from the conventional finned-tube and metallic-tube heat exchangers, which come with better heat exchange efficiency and corrosion resistance. Meanwhile, with high efficiency and light weight, it is characterized by the ease in cleaning (an improvement in comparison with the conventional air-cooler), which only needs to take up a small space.

SRP Taiwan offers three models, namely AA960, AA1000 and AA1000 Mini, which are also patented in four countries, namely China, Taiwan, South Korea, and Japan.

適用溫度 Temperature	Max 900°C Mix -50°C
使用材料 Materials	316L / 317 / 310 / 904 / SM0254 / Ti / C276
最大處理風量 Max Air Volume	1,000,000 Nm ³ /h



最大工作壓力 Max Work Pressure	水側 Water Side 6 Bar (g) 氣側 Air Side 0.1 Bar (g)
通常設計壓損 Nominal Design Pressure Loss	水側 Water Side 0.5 Bar (g) 氣側 Air Side 1000 pa

HEAT EXCHANGER

適用產業 APPLICABLE INDUSTRY

化工 *Chemical Engineering* 石油工業 *Petroleum* 發電廠 *Power Plants*
冶金金屬業 *Metallurgical Metals Industry* 食品業 *Food Processing*
焚化爐產業 *Incinerator Industrial* 能源 *Energy Industry*

氣體-液體及蒸汽-氣體熱交換器

適用於各種大風量低壓氣體、有機溶劑回收製程上使用。

具體作法為，利用耐高溫及腐蝕的專利特殊金屬板片為介質，在水(蒸氣)與氣體不同密度之特性進行熱交換。對於高溫氣體如夾帶有硫化物等腐蝕性的物質，在冷凝的過程當中，可以經由冷凝帶出，成為液體排放。

同時高溫氣體經過降溫後成為無害的低溫氣體後，排放到大氣中，藉此保護臭氧層，同時低溫側的冷卻水，因與高溫氣體接觸升溫，可按客戶需求回收再利用，或是進入嗅化鋰空調系統達成用廢熱節能的功效。

目前台灣舒瑞普提供AW300/AW750 兩種型號。

The gas-to-liquid heat exchanger is suitable for the processing of various high-volume, low-pressure gases and the recovery processes of organic solvent.

The specific approach is to use the patented special metal plate as the medium, that is resistant to high temperature and corrosion, to carry out heat exchange between the two materials, water (steam) and gas, which have the characteristics of different densities. For high-temperature gas, such as corrosive substances containing sulfide, during the condensation process, it can be carried out through condensation and discharged as liquid. Meanwhile, the high-temperature gas becomes harmless low-temperature gas after being cooled and then is discharged into the atmosphere to protect the ozone layer. Meanwhile, the cooling water on the low-temperature side is heated up due to its contact with the high-temperature gas, which can be recovered and re-used according to customers' needs or enter the waste heat circulatory system, thus reaching the purpose of energy saving through waste heat.

Currently, SRP Taiwan offers two models, namely AW300 and AW750.

適用溫度 Temperature	Max 900°C Mix -50°C
使用材料 Materials	304 / 316L / 317 / 310 / 904 / SM0254 / TI / C276
最大處理風量 Max Air Volume	1,000,000 Nm ³ /h



最大工作壓力 Max Work Pressure	水側 Water Side 6 Bar (g) 氣側 Air Side 0.1 Bar (g)
通常設計壓損 Nominal Design Pressure Loss	水側 Water Side 1 Bar (g) 氣側 Air Side 1000 pa



大型板式熱交換器於數據中心使用,台灣

| 問題 |

大型數據中心的機房，需要維持恆溫冷卻，避免資料庫主機過熱同時節省電力。

| 應用解決方案 |

客戶夜晚時用電離峰時刻的電力，來降低冷卻用水的溫度。冷卻水存放在特殊的水塔中。日間時，再提供給機房冷卻之用，減少平日機房空調設備在白天的耗電總量，達到節省電力的作用。

Plate Heat Exchanger used in data centers, Taiwan

| ISSUES |

Machine rooms of large-scale data centers require constant-temperature cooling for preventing data storage consoles from overheating and for saving power.

| APPLICATION SOLUTIONS |

A customer uses off-peak power to chill down cooling water at nighttime and store chilled water in a specific water tower for being used to cool down the machine room during daytime. This can reduce the daytime total power consumption of machine room, thereby saving power costs.

使用材料
Materials 316L 全不鏽鋼

處理水量
Water Volume 1,170,000 Kg/h

接口尺寸
Nozzle Connection DN300

工作溫度
Working Temperature 一次側 Max 37.5 °C 二次側 Max 20.6 °C
Mix 21.1 °C Mix 28.3 °C

氣氣換熱器使用於石化行業硫磺尾氣處理環節,中國

| 問題 |

石化業的製程尾端，會排放大量充滿硫化物的高溫氣體。對環境造成汙染，也面對法令法規的罰則。

| 應用解決方案 |

安裝我司的空氣對空氣熱交換器之後，原先的高溫含硫氣體經過熱交換器與脫硫塔出來的低溫濕煙氣進行熱交換之後排入大氣。從而達到二次側濕煙氣升溫除去白煙，並且減少硫化物排放的目的。

Gas-to-Gas Heat Exchanger for sulfur tail gas treatment segment of petrochemical industry, China

| ISSUES |

A large amount of sulfide-rich high-temperature gas will be discharged from the end of petrochemical processes. This will pollute the environment and lead to statutory fines.

| APPLICATION SOLUTIONS |

After installing our Gas-to-Gas Heat Exchanger, heat exchange between the existing high-temperature sulfur rich gas and the low temperature wet fume takes place before discharging the two into the atmosphere; this results in a temperature rise of the wet fume in the secondary side and elimination of its white fume, therefore reduced emission of SOXs.

使用材料
Materials

316L 全不鏽鋼鐳射銲接

處理風量
Air Volume

50,000 Nm³/h

接口尺寸
Nozzle Connection

DN1600

考慮設備運輸過程中尺寸限制及安裝清洗之便捷進行特殊外觀優化設計，並註冊外觀專利

工作溫度
Working Temperature

一次側 Max 350 °C
Mix 170 °C

二次側 Max 50 °C
Mix 160 °C



舒瑞普[®]
