



華晶精密工業有限公司

FLY GIN CO., LTD.



機械軸封 & 迴轉接頭 & 疏水閥

Mechanical Seals & Rotary Joints & Steam Traps

<http://www.flygin-lhs.com>

[Http://www.lhs0955887677.com](http://www.lhs0955887677.com)



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一. 機械軸封啟動與操作的要點

- 裝有機械軸封的泵浦在啟動時最重要的就是考慮機械軸封的本體是否已浸在泵液之中，否則若在乾燥狀態下啟動，軸封表面將會產生乾磨而磨損。
- 泵浦試車時先是瞬間送電然後停車，以測知轉向是否正確，在送電前必須確知泵浦已先作啟動注給動作，即機械軸封應在潮濕狀態，最好在作啟動注給時先用手輕轉動泵軸使其注給液體能到達軸封各部位。
- 啟動前填料函需先放氣，即使已注液體進入泵浦內，填料函內部仍可能有氣體聚積，如能開放氣閥放氣才能保證內部有泵液充滿。
- 檢查管路安裝的情形，決定啟動注給的方法這對低揚程的泵浦尤其重要。
- 備用泵浦最好每星期一次用手轉動數個整轉再加三分之一轉，如有可能每台泵浦不要停太久，如能定時使備用泵浦轉數分鐘，對泵浦的其他零件及間隙的維持都有益。

1. The operation of Mechanical Seal

- In order to prevent the dry milling effect between the two contact faces of the mechanical seal, please make sure the liquid/water level is above the mechanical seal. Otherwise, the heating effect will damage the contact surface which leads to leakage after some time.
- When the pump is ready to be started, please just turn on the pump for a few seconds to make sure the rotation of the pump is correct. Of course, it is better to rotate the main pump by hand before turn the switch of the main pump so as to wet the mechanical seal, to make sure that each part of the mechanical seal had been wetted before normal continuous rotation.
- In order to make sure there is no air inside the stuffing area, please lose the stopper to release air to assure the liquid/water is fully filled side the case.
- Double check the piping system to decide how to activate the pump, which will affect the flow of the liquid/water, this is special important for low head pump system.
- It is recommended to turn the spare/idle pump system manually for more than one revolution weekly. If it is possible, please don't put the pump remind idle for long, it is suggested to turn on the pump for a few minutes periodically. It will benefit for the pump and the other device concerned.



二. 泵浦密封的問題

- 泵浦的外殼是固定的，泵浦軸與葉輪是轉動，由於它的轉動，泵浦殼內部就產生壓力狀況，軸心與泵殼之間間隙會造成液體洩漏出來，若是泵殼內部成真空狀態，空氣就會經間隙吸入不論是漏出或吸入，都會使泵浦操作失常污染環境，所以在泵浦設計和運用上及該位置的密封是不可缺的。
- 機械軸封有動環與靜環兩部份組成一組件，通常有三個點止漏：1 動環迫緊 2 靜環迫緊 3 動環與靜環兩個接觸面，以上三點有任何一點損壞就產生洩漏，一般機械軸封洩漏通常發生在兩個接觸面磨損為最多，次之為動環迫緊與軸心互磨產生溝痕而由溝痕處洩漏。機械軸封分多彈簧式、

單彈簧式、金屬伸縮管式、鐵氟龍伸縮管式、雙頭多、單彈簧式及平衡式、非平衡式。

- 多彈簧式：彈簧小數量多壓力平衡均勻，其缺點是彈簧易受雜物卡住失去彈性且因振動而折斷，又彈性疲乏較為顯著。
- 單彈簧式：不易折斷在高粘度及受雜質較多情形下也不受影響，缺點平衡度較差，長度較長。
- 金屬伸縮管：是由金屬薄片組合起來代替彈簧及密封效果，它綜合單彈簧和多彈簧的優點，壓力平均，扭力震動也容易吸收，缺點易於伸縮管接縫斷裂洩漏。

★註：壓力在 11kg/cm^2 以內使用非平衡式， 12kg/cm^2 以上使用平衡式。

2. The problem of Mechanical Seal

- As every one knows that the case of the pump of the pump is stationary while the Impeller and the pump shaft are rotating parts. Because of this rotation, it creates pressure inside the case, so the liquid will leak from the gap between the shaft and the case. If inside the pump is in vacuum condition, then the air will be sucked into the case. No matter it is leaking or sucking, it will pollute the environment. Therefore we must provide seal system in the pump and usage of the seal system.
- A mechanical seal composes of moving part and stationary part. Usually, there are three points to stop the leakage: (1)Rotating packing (2)stationary packing (3)the contact area between rotating ring and stationary ring. If there is a damage in any part of the above three points, leakage of liquid is unpreventable. Usually, the leakage is mainly from the point (3), then point (1) and point (2).
- Mechanical seal is further subdivided into type multi-spring type, single spring type, metallic flex type, P.T.F.E. flex type, Dual cartridge and

single cartridge double end spring/single spring and balanced and non-balanced type.

- Multi-spring type: many small spring, pressure is evenly distributed. The drawback is that the spring will be easily jammed/broken by foreign substances and the spring will become fatigue easily.
- Single spring: it will not be easily broken and function well under high viscosity and high TDS, but it is quite difficult to balance and it is longer
- Metallic flex type: it is composed of metallic plate to substitute the spring, it has the advantages of single and multi spring type mechanical seal, even pressure distribution, it can absorb huge vibration, and the drawback is that the metallic plate breaks easily and leakage is the result.

★ Note: For pressure below 11kg/cm^2 , suggest to use unbalanced type, And when the pressure is above 12kg/cm^2 , use balance type.



三. 機械軸封的環境控制

- 機械軸封的材質根據設計決定後，經安裝完成運轉，泵浦的溫度、壓力及化學成份都與軸封有關，如果設計沒有問題，而機械軸封在運轉中仍會損壞，其原因除安裝不良之外就是周圍環境如溫度、壓力、清潔狀況等不符合規定的關係，所以環境控制很重要。
- 整個組件各部份都需要同時考慮高溫及化學溶液的侵襲對高溫來說，使密封區間在冷液中冷卻是最好的方法。
- 有些物質在常溫時會凝結成固態，而它在液態時卻又能作為很優良的清潔潤滑劑，這種在機械軸封處就不應冷卻而是加熱（如水玻璃、重油）。
- 另有一項溫度方面的重要考慮是填料函中泵液的沸點，雖然泵液可以保持在沸點以下，但若是填料函

內散熱效率不好，就可能會有熱量的積聚，這些熱量有些是由泵液而來，有些是密封環表面摩擦所生，如果在填料函中積聚的熱量使溫度超過泵液的溫度，則軸封表面間液磨時會氣化，變成局部乾磨，一般的規定填料函內液體的溫度必須維持在低於泵浦入口壓力狀態下的沸點至少 15°C ，因為如果在填料函內蒸發就會使該處的泵液變濃，可能會有鹽類礦物質及有磨損能力的雜質沈積下來充塞機械密封的空隙，造成快速的磨損。

- 管線若易於鏽蝕或泵液所含雜質太多等都不易達成密封的效果，如何將這些雜質帶走或與密封件隔離是很重要的工作。

3. Mechanical seal environmental control

- The use of the material and the design of the mechanical seal depends on the operation, pump temperature, working pressure and chemical composition. Even if there is no defect in the design, the mechanical seal still has the chance to be damaged during the operation, the reasons for that apart from the defect in the installation, the surrounding temperature, pressure and cleanliness also contribute the reason of damage the seal. Therefore, environmental control is very important also.
- As a whole, we have to consider the high temperature and the chemical solving agent during the selection of the material for different parts of the seal.
- Some of the materials will become solid from when the temperature is below boiling point. When it is in liquid form, it is a very good cleaning/lubrication agent, under this situation the mechanical seal location should be heated rather than cooled.
- Another issue to be considered is boiling point of the liquid (filler), even though the liquid may be under boiling point, but if the filler can not disperse the heat efficiently, there will be some heat reminded. This kind of heat may come from pump liquid, some heat comes from friction between the shaft and the mechanical seal o-ring. If temperature is higher the temperature of the liquid, then it will be vaporized and become dry. Usually, the temperature in this area should be around 15 deg C lower than the liquid inside the pump. If it vaporizes the concentration become higher, then the impurity will sedimentate and cause damage to the mechanical seal.
- If the piping is not a rust proof and the impurity is high, the mechanical seal sealing effect is not good. It is very important to separate these impurity or to remove these impurity.



DU2- (非平衡式-U型 P.T.F.E.)

最高壓力：12公斤／平方公分
最高周速：25米／秒
適合溫度：-50°C ~300°C

DU3- (非平衡式-O型 橡膠圈)

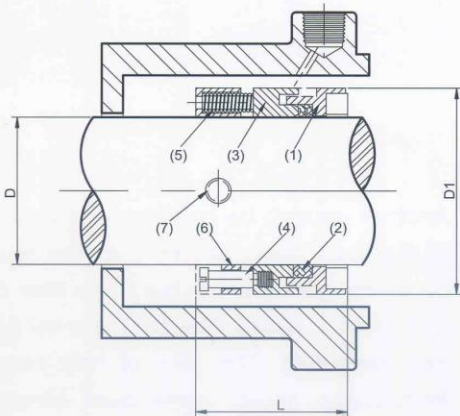
最高壓力：12公斤／平方公分
最高周速：25米／秒
適合溫度：-30°C ~250°C

DU2- (UNBALANCE, U-PACKING P.T.F.E.)

MAX. PRESSURE: 12kg/cm²
MAX. SPEED: 25m/sec
TEMP LIMIT: -50°C ~300°C

DU3- (UNBALANCE, O-RING RUBBER)

MAX. PRESSURE: 12kg/cm²
MAX. SPEED: 25m/sec
TEMP LIMIT: -30°C ~250°C



編號	品名	材質
1	動環	SIC/SUS 316
2	止漏環	(DU2)鐵氟龍 (DU3)橡膠
3	驅動環	SUS 316
4	驅動柱	SUS 316
5	彈簧	SUS 304
6	彈簧座	SUS 316
7	螺絲	SUS 316

P/NO	IDENTIFICATION	MATERIAL
1	SEAL RING	SIC/SUS 316
2	SHAFT PACKING	(DU2)P.T.F.E. (DU3)RUBBER
3	DRIVE RING	SUS 316
4	DRIVE PIN	SUS 316
5	SPRING	SUS 304
6	SPRING SEAT	SUS 316
7	SET SCREW	SUS 316

D	D1	L
Ø20	Ø34	35
Ø22	Ø36	35
Ø24	Ø38	35
Ø25	Ø39	35
Ø28	Ø42	35
Ø30	Ø44	35
Ø32	Ø46	35
Ø33	Ø47	35
Ø35	Ø49	35
Ø38	Ø54	38
Ø40	Ø56	38
Ø42	Ø58	38
Ø43	Ø59	38
Ø45	Ø61	38
Ø48	Ø64	38
Ø50	Ø66	39
Ø52	Ø68	40
Ø53	Ø69	40
Ø55	Ø71	40
Ø58	Ø76	41
Ø60	Ø78	41
Ø63	Ø81	41
Ø65	Ø83	41
Ø67	Ø85	41
Ø70	Ø90	42
Ø75	Ø95	42
Ø80	Ø100	42
Ø85	Ø105	43
Ø90	Ø110	45
Ø95	Ø115	45
Ø100	Ø120	45



DB2



DB2- (平衡式-U型 P.T.F.E.)

最高壓力：35公斤／平方公分
 最高周速：25米／秒
 適合溫度：-50°C ~300°C

DB2- (BALANCE, U-PACKING P.T.F.E.)

MAX. PRESSURE: 35kg/cm²
 MAX. SPEED: 25m/sec
 TEMP LIMIT: -50°C ~300°C

DB3

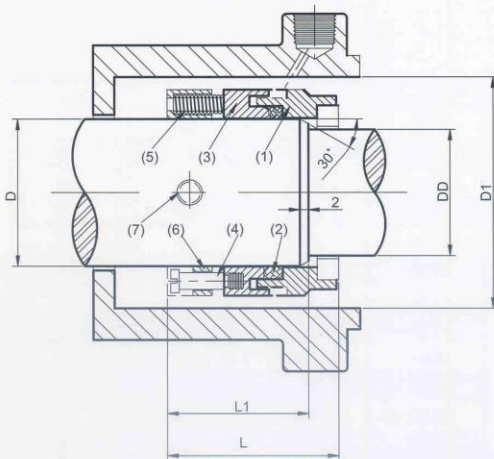


DB3- (平衡式-O型 橡膠圈)

最高壓力：35公斤／平方公分
 最高周速：25米／秒
 適合溫度：-30°C ~250°C

DB3- (BALANCE, O-RING RUBBER)

MAX. PRESSURE: 35kg/cm²
 MAX. SPEED: 25m/sec
 TEMP LIMIT: -30°C ~250°C



編號	品名	材質
1	動環	SIC/SUS 316
2	止漏環	(DB2)鐵氟龍 (DB3)橡膠
3	驅動環	SUS 316
4	驅動柱	SUS 316
5	彈簧	SUS 304
6	彈簧座	SUS 316
7	螺絲	SUS 316

P/NO	IDENTIFICATION	MATERIAL
1	SEAL RING	SIC/SUS 316
2	SHAFT PACKING	(DB2)P.T.F.E. (DB3)RUBBER
3	DRIVE RING	SUS 316
4	DRIVE PIN	SUS 316
5	SPRING	SUS 304
6	SPRING SEAT	SUS 316
7	SET SCREW	SUS 316

D	DD	D1	L	L1
Ø25	Ø22	Ø39	40	33
Ø28	Ø24	Ø42	40	33
Ø30	Ø25	Ø44	40	33
Ø33	Ø28	Ø47	40	33
Ø35	Ø30	Ø49	40	33
Ø38	Ø33	Ø54	42	35
Ø40	Ø35	Ø56	42	35
Ø43	Ø38	Ø59	43	35
Ø45	Ø40	Ø61	43	35
Ø48	Ø43	Ø64	43	35
Ø50	Ø45	Ø66	44	36
Ø53	Ø48	Ø69	44	36
Ø55	Ø50	Ø71	44	36
Ø58	Ø53	Ø76	46	37
Ø60	Ø55	Ø78	46	37
Ø63	Ø58	Ø81	46	37
Ø65	Ø60	Ø83	46	37
Ø67	Ø62	Ø85	46	37
Ø70	Ø65	Ø90	46	37
Ø75	Ø70	Ø95	46	37
Ø80	Ø75	Ø100	46	37
Ø85	Ø80	Ø105	46	37
Ø90	Ø85	Ø110	49	39
Ø95	Ø90	Ø115	49	39
Ø100	Ø95	Ø120	49	39



DKU2- (非平衡式-U型 P.T.F.E.)

最高壓力：12公斤/平方公分
最高周速：15米/秒
適合溫度：-50°C ~300°C

KU3- (非平衡式-O型 橡膠圈)

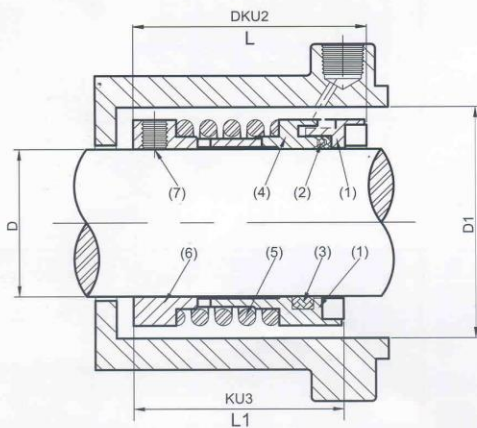
最高壓力：12公斤/平方公分
最高周數：15米/秒
適合溫度：-30°C ~250°C

DKU2- (UNBALANCE, U-PACKING P.T.F.E.)

MAX. PRESSURE: 12kg/cm²
MAX. SPEED: 15m/sec
TEMP LIMIT: -50°C ~300°C

KU3- (UNBALANCE, O-RING RUBBER)

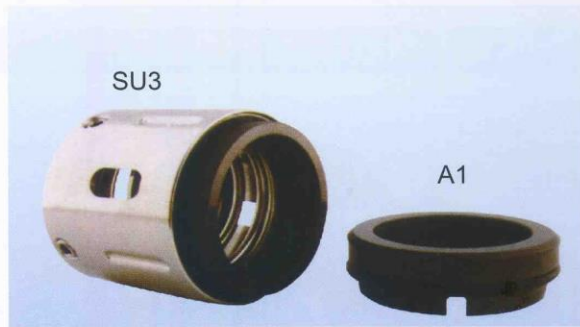
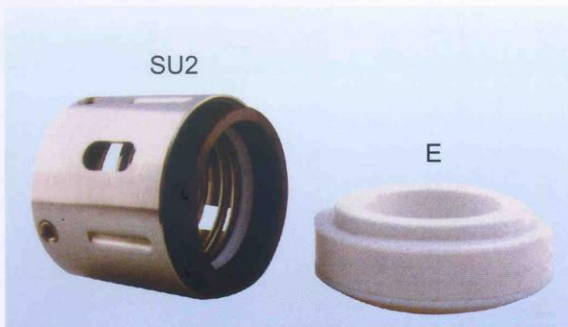
MAX. PRESSURE: 12kg/cm²
MAX. SPEED: 15m/sec
TEMP LIMIT: -30°C ~250°C



編號	品名	材質
1	動環	SIC/SUS 316
2	止漏環	U型 鐵氟龍 O型 橡膠
3	驅動環	SUS 316
4	驅動柱	SUS 316
5	彈簧	SUS 304
6	彈簧座	SUS 316
7	螺絲	SUS 316

P/NO	IDENTIFICATION	MATERIAL
1	SEAL RING	SIC/SUS 316
2	SHAFT PACKING	U-RING P.T.F.E.
3	SHAFT PACKING	O-RING RUBBER
4	DRIVE PIN	SUS 316
5	SPRING	SUS 304
6	SPRING SEAT	SUS 316
7	SET SCREW	SUS 316

D	D1	DKU2	KU3
Ø20	Ø34	46	41
Ø22	Ø36	46	41
Ø24	Ø38	48	43
Ø25	Ø39	48	43
Ø28	Ø42	50	45
Ø30	Ø44	50	45
Ø32	Ø46	50	45
Ø33	Ø47	50	45
Ø35	Ø49	54	49
Ø38	Ø54	57	53
Ø40	Ø56	59	55
Ø42	Ø58	59	55
Ø43	Ø59	59	55
Ø45	Ø61	59	55
Ø48	Ø64	59	55
Ø50	Ø66	62	60
Ø52	Ø68	63	61
Ø53	Ø69	63	61
Ø55	Ø71	63	61
Ø58	Ø76	66	63
Ø60	Ø78	66	63
Ø63	Ø81	66	63
Ø65	Ø83	70	67
Ø67	Ø85	70	67
Ø70	Ø90	71	68
Ø75	Ø95	75	72
Ø80	Ø100	75	72
Ø85	Ø105	80	77
Ø90	Ø110	80	77
Ø95	Ø115	85	82
Ø100	Ø120	85	82



SU2- (非平衡式-V型 P.T.F.E.)

最高壓力：12公斤／平方公分
最高周數：25米／秒
適合溫度：-50°C ~300°C

SU3- (非平衡式-O型 橡膠圈)

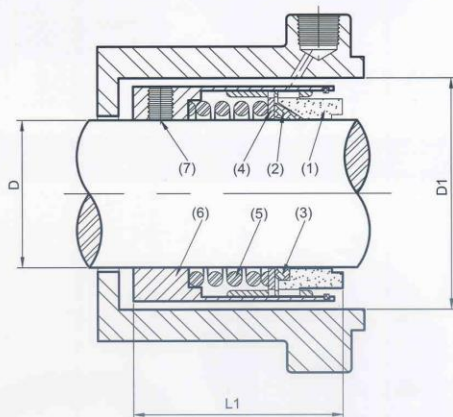
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最高周數：25米／秒
適合溫度：-30°C ~150°C

SU2- (UNBALANCE, V-PACKING P.T.F.E.)

MAX. PRESSURE: 12kg/cm²
MAX. SPEED: 25m/sec
TEMP LIMIT: -50°C ~300°C

SU3- (UNBALANCE, O-RING RUBBER)

MAX. PRESSURE: 12kg/cm²
MAX. SPEED: 25m/sec
TEMP LIMIT: -30°C ~150°C



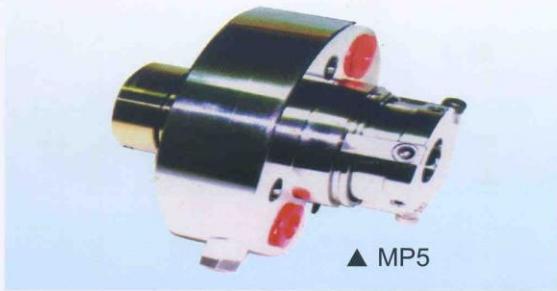
D	D1	L
Ø20	Ø36	41
Ø22	Ø38	41
Ø24	Ø40	43
Ø25	Ø41	43
Ø28	Ø44	45
Ø30	Ø46	45
Ø32	Ø48	45
Ø33	Ø49	45
Ø35	Ø51	49
Ø38	Ø56	53
Ø40	Ø58	55
Ø42	Ø60	55
Ø43	Ø61	55
Ø45	Ø63	55
Ø48	Ø66	55
Ø50	Ø68	60
Ø52	Ø70	61
Ø53	Ø71	61
Ø55	Ø73	61
Ø58	Ø78	63
Ø60	Ø79	63
Ø63	Ø83	63
Ø65	Ø86	67
Ø67	Ø88	67
Ø70	Ø92	68
Ø75	Ø98	72
Ø80	Ø103	72
Ø85	Ø108	77
Ø90	Ø114	77
Ø95	Ø119	82
Ø100	Ø124	82

編號	品名	材質
1	動環	SIC/SUS 316
2	止漏環	U型 鐵氟龍
3	止漏環	O型 橡膠
4	驅動環	SUS 316
5	彈簧	SUS 304
6	彈簧座	SUS 316
7	螺絲	SUS 316

P/NO	IDENTIFICATION	MATERIAL
1	SEAL RING	SIC/SUS 316
2	SHAFT PACKING	U-RING P.T.F.E.
3	SHAFT PACKING	O-RING RUBBER
4	DRIVE RING	SUS 316
5	SPRING	SUS 304
6	SPRING SEAT	SUS 316
7	SET SCREW	SUS 316



TYPE MP5 CARTRIDGE 機械軸封



▲ MP5

TYPE MP9 雙層水冷式機械軸封



▲ MP9

TYPE GB3 高轉數、氣密專用機械軸封



▲ GB3

▲ FZ1

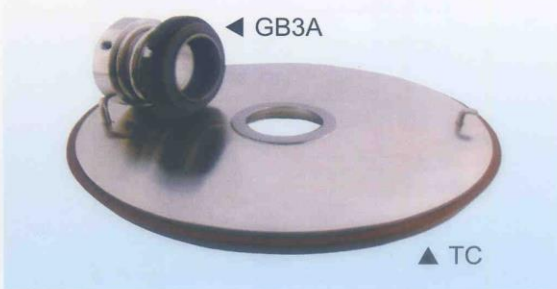
TYPE KU3B 船舶專用機械軸封



▲ KU3B

▲ B3

TYPE GB3A 高流量食品級泵浦專用機械軸封



▲ GB3A

▲ TC

TYPE MU1 汙水、廢水用機械軸封



▲ MU1

▲ AX1

TYPE GB3B 高流量食品級泵浦專用機械軸封



▲ GB3B

▲ FZ2

TYPE EU3R 廢水、化工用機械軸封

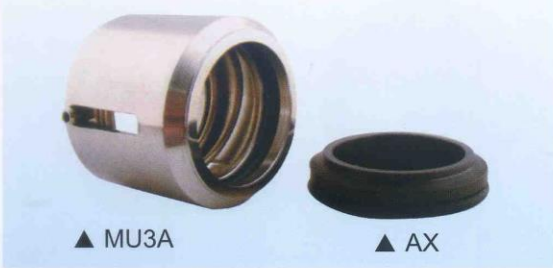


▲ EU3R

▲ AX



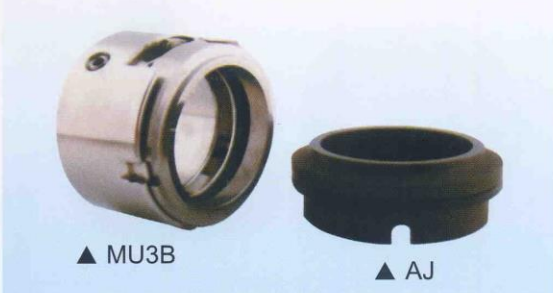
TYPE MU3A 汙水、化工用機械軸封



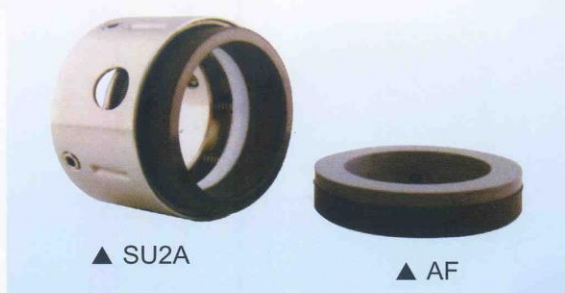
TYPE MU3G 廢水、化工用機械軸封



TYPE MU3B 化工用機械軸封



TYPE SU2A 耐腐蝕性、極高溫、極低溫用化工機械軸封



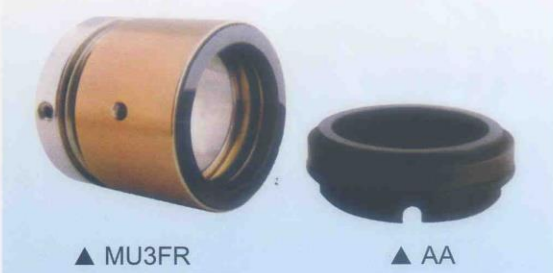
TYPE MU3E 化工用機械軸封



TYPE SU2B 耐腐蝕性、極高溫、極低溫用化工機械軸封



TYPE MU3FR 廢水、化工用機械軸封



TYPE SU3A 工業製程用化工機械軸封



※本目錄軸封型式以非平衡式代表，如需平衡式，請諮詢本公司工程部門。



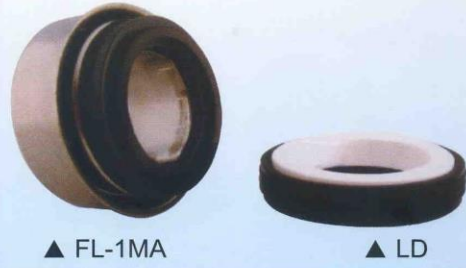
TYPE TU3 耐高黏度多沉積物流體用化工機械軸封



▲ TU3

▲ B4

TYPE FL-1MA 水泵浦用機械軸封



▲ FL-1MA

▲ LD

TYPE XB1 耐強腐蝕性流體用化工機械軸封



▲ XB1

▲ EB

TYPE FL-111S 水泵浦用機械軸封



▲ FL-111S

▲ LC

TYPE XB3 化工機械軸封



▲ XB3

▲ A1

TYPE FL-111L 水泵浦用機械軸封



▲ FL-111L

▲ LB

TYPE LR82A 迷宮式機械軸封—風車



▲ LR82A 風車

TYPE HO 水泵浦用機械軸封



▲ HO



INVERTED BUCKET STEAM TRAPS





蒸汽疏水閥功能

昂貴的燃油已迫使工廠經營、管理及保全維護人員，不得不重視整個蒸汽系統的效率問題，為了節約能源，必須研究各種方法使蒸汽能有效的利用，檢討是否會有蒸汽從管路或機器中洩漏，浪費了價昂的熱能。首先值得檢討的，毫無疑問即是蒸汽疏水閥。雖然蒸汽疏水閥在整個蒸汽系統中所佔的金額少，體積小，但它能否適當及正確的操作，往往會影響整個蒸汽系統的效率，直接影響成本。提高蒸汽效率，正確地選用及維護蒸汽疏水閥乃是一個重要的關鍵。

FUNCTIONS OF STEAM TRAPS

Increasing expensive fuels have already caught the attention of the factory management and maintenance personnel on re-evaluate the efficiency of steam system utilization. For saving energy, various possible methods or means of using steam more efficiently and more productively shall be researched, such as checking intensely for screening out the leakage or possible leaking of steam from the pipes or machine joints to prevent from wasting high cost thermoenergy.

Among items to be checked, what shall be checked with the first priority are the Steam Traps undoubtedly. Although costwise a Steam Trap costs very limited in comparison with that of the whole Steam System, besides dimensionwise. It is compact; however the correct and proper installation and operations of steam traps do improve the efficiency of the whole steam system significantly and therefore they are directly cost effective. When it comes to enhance the Steam Efficiency, optioning smartly and correctly the Steam Traps and properly maintaining them play vitally important roles.

蒸汽疏水閥略述

FGC筒式蒸汽疏水閥（溜水器）外殼採用鑄鐵（CAST IRON）內部零件由不鏽鋼及合金鋼組成機械動作式疏水閥，氣來關水來排，性能優越，決不洩漏蒸汽，容量大，排水量高，開關動作靈敏，節省能源，鑄鐵上蓋可拆卸保養，易於更換零件，不必拆卸管路，內部合金鋼組件經熱處理後硬度可達HRC58° ~ 61° 不易磨損，使用年限長，合乎國際水準，深獲國內外使用者之好評。

本產品適用於發電廠、石化廠、紡織染整、食品工業、造紙業、冷凍乾燥機、合板業、醫院、飯店…等，本公司創立於1974年專業生產疏水閥工廠，規格齊全，品質保證，合理價格、交貨迅速，歡迎各界參觀、洽詢。

SUMMARY ON STEAM TRAPS

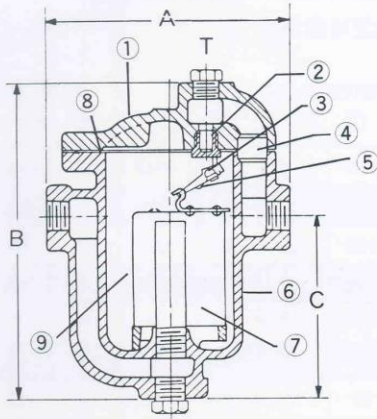
A FLYGIN Inverted Bucket Type Steam Trap comes with a cast iron casing, the internal components and parts made of stainless steel and alloy steel ideally configured as a mechanical function steam trap. It shuts automatically when senses air and discharges when senses condensate water, and functions, extraordinarily. It never leaks, offers a large capacity, high discharge volume, high sensitivity switches, therefore proves to be amazingly energy-saving. The cast iron top cover is easy to remove for maintenance, replacing parts without troubles of removing the pipes. The alloy steely components treated with heat-treatment has a the hardness up to HRC 58° ~ 61° , resistant from wearing, and enjoys long lifetime.

FLYGIN steam traps have been proven to be up to the world class quality and have been noticed and admired by the users through out the world. This series is excellent for Electricity generators, Petroleum Refinery Plants, Textile Mills. Dyeing & Finishing Factories, Food industry, Paper industry, Freezing & Drying Machines, Plywood Manufacturing, hospitals, hotels, etc. FLYGIN was founded in 1974 and has been one of the leading expertized steam trap manufacturers in Taiwan. We have been noticed for offering full ranges of steam traps in guaranteed quality at reasonable prices, and efficient delivery. Your enquiry and visit are always sincerely invited.



FIG A-1 LEFT SIDE INLET/RIGHT SIDE OUTLET

圖A-1 左進 / 右出 牙口型

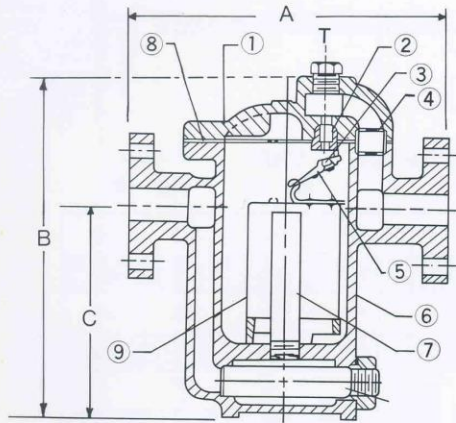


圖A-1 疏水閥型號 011~014
FIG. A-1 TRAP MODEL NO. 011~014

OUTSIDE 外形	DIMENSION 尺寸	UNIT 單位	:mm 厘米			
TRAP NO.	011	012	013	014		
(A)INLET TO OUTLET	127	165	197	229		
(B)HEIGHT	175	230	299	346		
(C)BOTTOM TO C/L	108	136	178	198		
(T)TEST PLUG	$\frac{1}{4}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"		
CONNECTING PIPE	$\frac{1}{2}$ ", $\frac{3}{4}$ ", 1"	$\frac{3}{4}$ ", 1"	1"	$1\frac{1}{4}$ ", $1\frac{1}{2}$ "		
MOP DG/CM ²	17	17	17	17		
WEIGHT/KG	2.7	7.2	12.8	21		

★此型疏水閥能裝配汽水分離器及逆止閥，特別適用於圓筒烘乾機能節約能源。

This steam trap can be equipped internally with the differential condensate controller (DC) and check valve. It is specially for energy saving in the cylinder dryer.



圖A-3疏水閥型號 011F~016F
FIG. A-3 TRAP MODEL NO. 011F~016F

FIG A-3 LEFT SIDE INLET/RIGHT SIDE OUTLET

圖A-3 左進 / 右出 法蘭口型

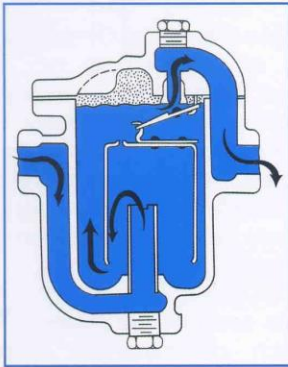
OUTSIDE 外形	DIMENSION 尺寸						UNIT 單位	:mm 厘米
	011F	012F	013F	014F	015F	016F		
TRAP NO.	011F	012F	013F	014F	015F	016F		
(A) FLANGE TO FLANGE	160	210	257	286	315	356		
(B) HEIGHT	148	234	314	367	402	474		
(C) BOTTOM TO C/L	109	135	195	214	205	305		
(T) TEST PLUG	$\frac{1}{4}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"	1"	1"		
(F) JIS 10K	$\frac{1}{2}$ ", $\frac{3}{4}$ ", 1"	$\frac{3}{4}$ ", 1"	1"	$1\frac{1}{4}$ ", $1\frac{1}{2}$ "	$1\frac{1}{2}$ ", 2"	2"		
MOPDG/CM ²	10	17	17	17	17	17		
WEIGHT/KG	4	10	18.5	27	32	46		

★此型疏水閥連體法蘭，配管方便

This trap is equipped with integrated flanges, and is simple easy to do the piping

材質說明 PARTS/COMPONENTS

PARTS/COMPONENTS		MATERIAL		PARTS/COMPONENTS		MATERIAL	
1.	Top Cover 上蓋	Cast iron	鑄鐵	6.	Main Body 本體	Cast iron	鑄鐵
2.	Valve Seat 閥座	Heat-treated Chromed steel	合金	7.	Passage Tube 通水管	Carbon steel	碳鋼
3.	Valve 閥	Ditto	同上	8.	Packing 迫緊	Asbestos	石棉
4.	Passage Ring 通水環	Stainless steel	不鏽鋼	9.	Bucket 倒筒	Stainless steel	不鏽鋼
5.	Lever Control 連桿	Stainless steel	不鏽鋼	10.		Stainless steel	不鏽鋼
5-1	Valve Guide Plate 腰子片	Stainless steel	不鏽鋼				

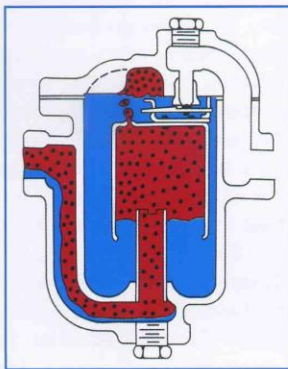


圖B-1

當最初的冷凝水進入疏水閥內時經由通水管及桶子的下緣而出，這時因桶子重往下沉落，控制閥閘因而也跟隨張開，然後冷凝水就經過張開的閥門口排放出。

FIG, B-1

In the beginning, the condensate flows internally from the bottom edge of the passage tube of the bucket. This cause the bucket to sink down due the heavy weight. As a result, the valve is widely opened. Therefore the condensate is discharged through the Widely-Opened valve.

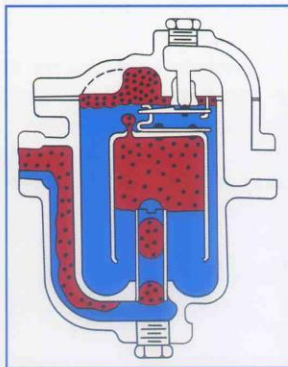


圖B-2

冷凝水排放過後，這時來的蒸汽將桶子往上推頂，連帶頂住控制閥，直到關閉為止。接著空氣及二次蒸汽由桶子上端的出汽孔排出，當任何蒸汽經過時都會凝結成冷凝水。

FIG, B-2

After a while. The condensate is completely discharged out and at the same time the incoming steam rises the bucket up to the top and force the valve to close. Then the air and secondary steam pass through the bucket outlet. When any steam passing through the bucket is condensed as condensate.

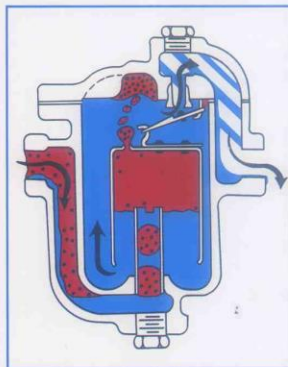


圖B-3

當冷凝水進入後，會使水位升高，在水平高於中線時，桶子會輕微的拉動連桿。然而控制閥尚未打開，直到冷凝水位到達打開線，這時蒸汽和冷凝水回收頭之間有壓差。

FIG, B-3

When the condensae enters the ductet. It causes the level to rise, Upwards. When the level rises above the middle line, it slightly pull on the lever but the valve is not opened yet. On the other hand, it opens the valve wten the level reaches the opening line due the pressure difference between the steam and the condensate return header.



圖B-4

當冷凝水位到達打開線時桶子的重量乘上槓桿率，就超過控制閥的壓力，桶子瞬間就下沈而拉開閥閘。隨後累積的空氣也會跟著冷凝水一起被排放掉。這個排放動作一直持續到更多的蒸汽進來，使桶子再度漂浮頂住，這樣一來，整個循環又重新開始。

FIG, B-4

If the condensate level reaches the opening line, then the product of the weight of the bucket tines the leverage exceed the pressure of the valve. The bucket immediately sink down and cause the valve to open. The accumulated air is also discharged after the discharging of the condensate. The action will maintain until more and more incoming steam cause the bucket to float up As a sequence, the cycle begins to repeat.



華晶 自動差壓冷凝水控制閥疏水閥簡稱(DC)係設計應用於冷凝水排放點低必須上揚或快速排放的機器，由於排放點低須將冷凝水提昇上揚通常稱為虹吸。

當冷凝水上揚時造成了壓力降低時會引起部份的蒸汽及二次蒸汽被吸入虹吸管中。因疏水閥它不會分辨蒸汽、空氣，只要是氣體它就關閉造成空氣閉鎖(AIR BINDING)，阻礙了後面來的冷凝水排放。

水的抗阻為鋼板60倍，空氣的抗阻是鋼板的160倍。DC將有助於快速時二次蒸汽及空氣引至冷凝水控制室經旁通(BY PASS)排放出的蒸汽可導至冷凝水回收管或收集筒作為其他低壓低溫使用。(圖C-1)

DC 特別適用於滾筒烘乾機(圖C-2)可將②、③、④、⑤、⑥滾筒內經旁通(BY PASS)所排放出的二次蒸汽銀①滾筒，可達到節省能源的目的地。

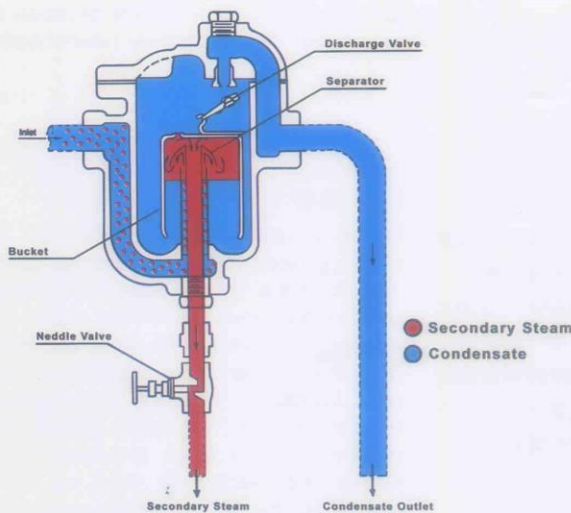


FIG C-1
C-1

FLYGIN Automatic Differential Condensate Control Valve Trap, also known as DC, is especially designed for the applications in which either the low discharging location level of condensate has to be highered or the water has to be discharged rapidly. Usually the discharging location level is low, therefore, it is necessary to elevate the condensate, and such elevation is usually know as "siphon"

When condensate ascends the pressure is lowered, under such circumstances some portion of steam is in taken into the siphon tube. However, a typical trap shuts automatically whenever it senses any air or steam because a trap is unable to differ steam from air, such unwanted shutting causes Air Binding which stops any further condensate following from being discharged. As we are aware, Water REsistance is about 60 times of that of steel, while Air Resistance is about 160 times of that of steel, A DC fa cilitates the system with rapidly guiding the Secondary Steam and Air into the Condensate Control Chamber. The steam being discharged through the by-Pass is guided to the Condensate Recollection Tube or Strainer for applications under low pressure and low temperature sir-cumstances.(As shown in Fig. C-1)

A FLYGIN DC is especially excellent for the energy saving design for Cylindrical Dryers(as shown in Fig. C-2). The Secondary Steam being discharged from Roller 2, 3, 4, 5 and 6 through the respective (By-Pass) can be led into Roller 1 so as to save energy substantially

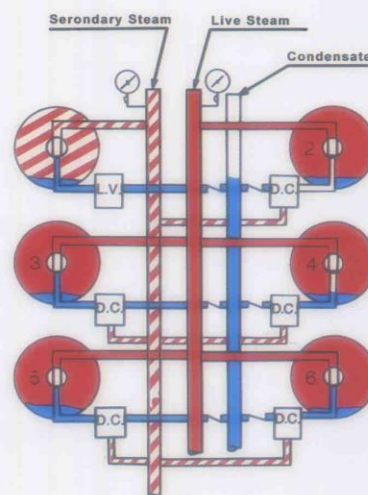


FIG C-2
C-2



疏水閥裝配要點

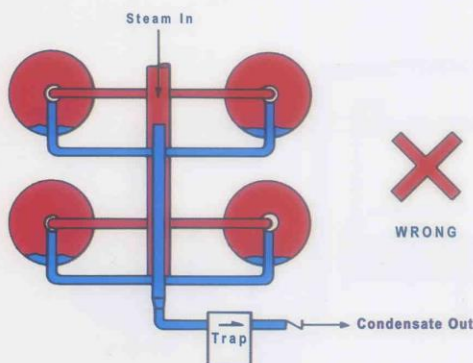
- 配置於容易維修的地方
- 應配置低於熱交換器及管線最低點
- 儘量靠近蒸汽加熱器的位置
- 倒筒式疏水閥裝置要注意平行及垂直

如何選擇疏水閥

- 使用機器種類
- 冷凝水排水量 / 每小時
- 最高操作壓力及背壓
- 使用牙口或法蘭口的管徑大小

避免二組機台用一組蒸汽疏水閥

利用蒸汽加熱的機器切勿為節省幾個疏水閥而共同使用一個疏水閥(圖D-1)因為不同的機器、蒸汽冷凝後的壓降差不同導致出口壓力高的機器阻礙了另一台出口壓力低的機台不能順利排出冷凝水結果降低效益造成熱能浪費，且加長了加工的時間使成本增高。疏水閥正確的裝置法(圖D-2)是每一個熱交換器裝置一個疏水閥，排放到共同的回收管。



圖D-1 (FIG D-1)

KEY POINTS FOR INSTALLING YOUR STEAM TRAP

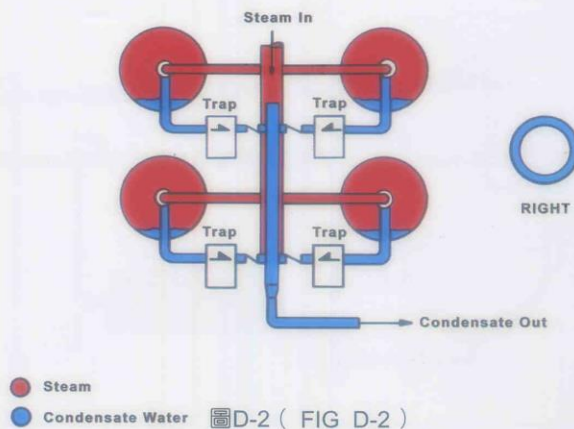
- Install it in a readily accessible location to ease maintenance.
- Install it at the lowest possible level of the Heat Exchanger and Piping.
- Keep it as close as possible to the Steam Heater.
- Install your inverted Bucket Type Steam Trap with full attention on keeping it right vertical and paralleled.

HOW TO ORDER YOUR IDEAL STEAM TRAP PROMPERLY

- Clarify the kind of target machine to be equipped with a trap.
- Measure the possible Condensate Discharge Volume per hour.
- Measure the maximum operation pressure and rear pressure.
- Measure the diameters of the pipe for dentate.type flanged outlet.

ADVOIDING TWO STEAM HEATERS FROM FROM BEING DRAINED BY ONE STEAM TRAP

It is strongly warned not to have your single Steam Trap shared by two or more steam-heating machines (as shown in Fig. D1) for saving cost of necessary steam traps. The reason is that the pressure drop difference caused by condensate in each machine is different from that in another machine, the machine giving higher outlet pressure stops or interferes the machine giving lower pressure to discharge the condensate normally, the heating effect is badly lowered; and waste of energy, longer work time, ect. become unavoidable, cost is therefore increased heavily. The correct configuration for installing your Steam Traps is recommended follows (as shown in Fig. D-2): Install a Steam Trap for each Heatconfigured to be connected to a common recollection tube.



圖D-2 (FIG D-2)



為何蒸汽疏水閥是蒸汽系統中不可缺的？

在工場使用蒸汽系統中冷凝水是必然產生的物質，因為利用蒸汽加熱過程當中，經過熱移轉、蒸汽轉化成冷凝水滴，而這冷凝水滴必須快速在管路中排出以免影響蒸汽加熱的效益，也因為這理由蒸汽疏水閥自然成了蒸汽系統中的主件之一，若我們忽略了快速排出冷凝水將會導致無法昇溫讓蒸汽加熱系統失效。

為節約能源及提高熱能利用率一般我們都會考慮另外安裝冷凝水回收管路至蒸汽鍋爐。而這回收管路我們建議安裝於設備頂部空間作稍有斜度管路順流快速回至蓄水槽或集氣桶再經由幫浦，打入鍋爐提高熱能。如圖Figo如果回收管路走地面。因地板的不平而影響水流須等整支管至注滿水時才能流回蓄水槽或集氣桶其間熱能將會降低無法達到熱能快速回收的目的地。由於回收管路走地面妨礙作業人員及保養人員的通路降低工作效率影響整廠美觀。

WHY IS A STEAM TRAP AN UNNEGLECTABLE UNIT IN A STEAM SYSTEM?

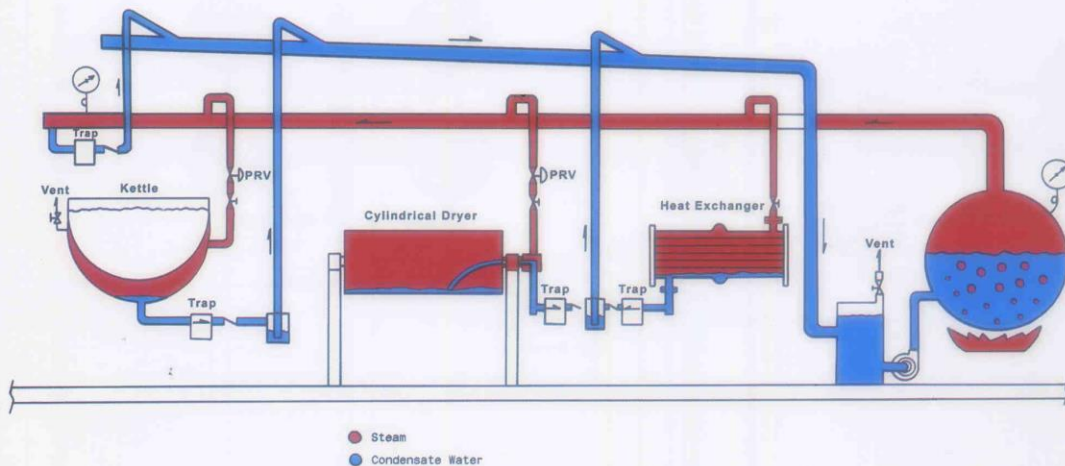
During the operations of a steam system in a plant condensate is generated without any exception. During heating with steam, the transferring of heat makes steam condense into condensate drops, and the condensate shall be discharged from the system through the piping for preventing from the steam heating efficiency. As a matter of the fact, this is why a Steam Trap is one of the essential units in steam system. Once we fail to take good care of discharging condensate rapidly from the system, the failure of being unable to bring up the temperature will ruin the steam heating system.

For energy saving and higher effective heat utilization rate, it is generally considered to equip the system, with condensate recollection pipe link to the steam boiler.

It is recommended to install the pipes in the top room in a slightly inclined direction to speed up the flow of the condensate into the Water Reservoir type steam collection bucket, then, through the help of the pump, the condensate is enforced into the Steam Boiler and enhances the thermo-energy there (as shown in Fig).

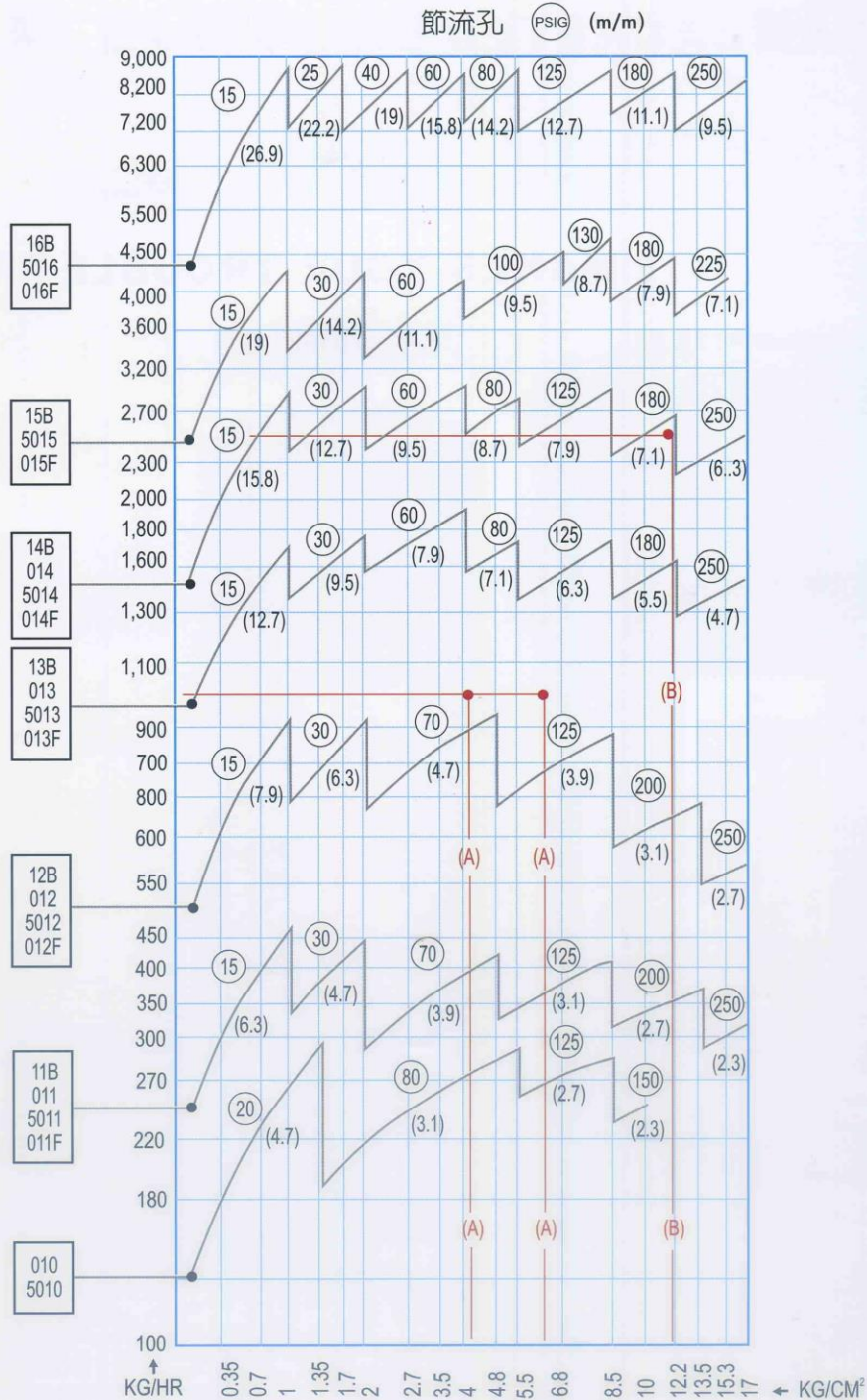
In case of the recollection pipe system is installed along the floor surface, the following disadvantages will be found:

- (1) The pipes climbing up and down along the floor surface can cause condensate water to be stopped in the pipe section at lower level until the whole pipe system is filled up with condensate, then, it can be sent to Water Reservoir or Steam collection bucket. Therefore, the heat is heavily lowered, and purpose of heat-recovery is not achieved.
- (2) The recollection pipe system can interfere the workers and maintenance personnel from walking smoothly and lower work efficiency Besides, it affects the out-look of the factory.

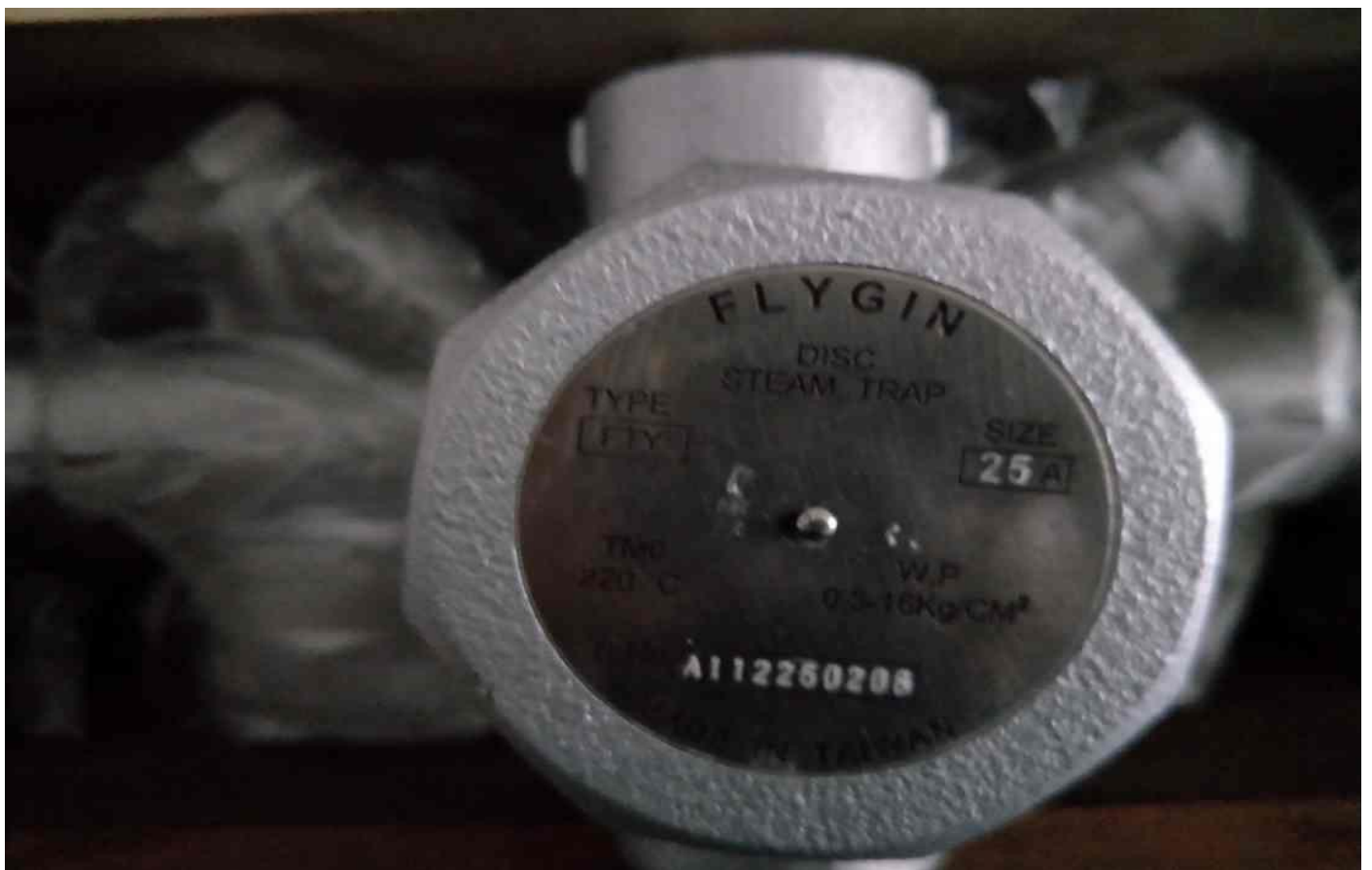




連續排水能量表 CAPACITY CHART



倒筒式蒸汽疏水閥





02-09-FTY-碟式疏水閥 1吋

蒸汽保温型碟式蒸汽疏水阀

STEAM JACKETED DISC STEAM TRAPS

IT MAKES YOUR TROUBLE FREE.



FLYGIN



蒸汽保溫型碟式蒸汽疏水閥

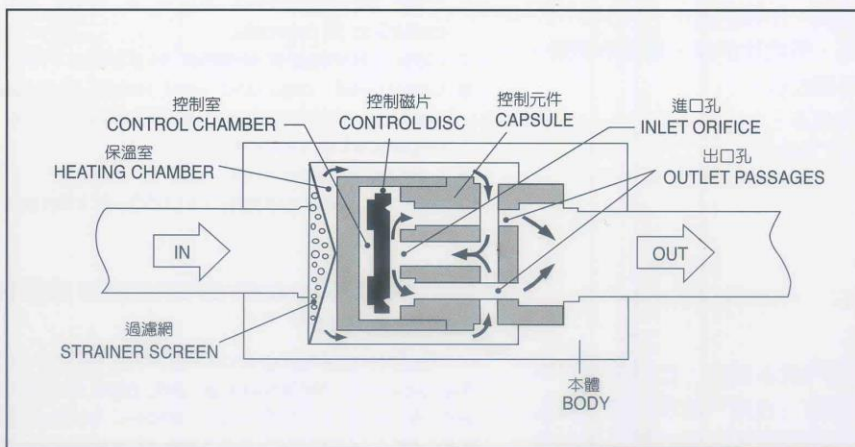
- 用於壓力0.7KG/cm²-42KG/cm²
- 排水量達1295KG /Hr

STEAM JACKETED DISC STEAM TRAP

- Pressure from 0.7kg/cm²- 42kg/cm²
- Capacities to 1,295kg/hr



- FD系列保溫型碟式蒸汽疏水閥體積小，空間狹小地方最為適用，結構簡單，只有碟片為活動部份。由於結構簡單，體積小，對抗水槌之能力特佳，同時急速開啓及間歇排放動作，可產生清洗作用。
- Series FD steam jacketed disc steam trap is very small and is consequently used on many applications where space is quite limited. Simply constructed, it contains only one moving part, the disc itself. Beside the disc trap's simplicity and small size, it also offers advantages such as resistance to water hammer, snap opening and intermittent operation for a steady purging action.



• 動作原理

冷凝水及空氣進入保溫室，經由控制元件進口達到蒸汽控制室，冷凝水及空氣推開控制碟片，從出口孔排出，冷凝水排完後，蒸汽來到控制室，使蒸汽控制室壓力增加，碟片開關，當控制室蒸汽冷凝壓力降低碟片開啓，如此周而復始操作。

• OPERATION

Condensate and air entering the trap pass through the heating chamber around the control chamber and through the inlet orifice. This flow lifts the DISC and condensate flows through to the outlet passages. When condensate has been discharged, then steam reaches the control chamber and increases pressures in the control chamber and the disc closes the orifice. When control chamber pressure reduced since condensation, cause the disc open. The trap recloses in the presence of steam and the cycle is repeated.



FD系列蒸汽保溫型碟式疏水閥能量和按裝法

FD STEAM JACKETED DISC STEAM TRAP CAPACITY AND INSTALLATIONS

• FD系列碟式疏水閥排水能量表KG/Hr

• CAPACITIES OF SERIES FD DISC TRAPS

口徑 CONNECTION		$\frac{3}{8}$ " , $\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
DIFFERENTIAL PRESSURE KG/CM ² 差壓	0.7	115	170	230
	1.75	140	205	280
	3.5	180	260	310
	5.25	205	310	415
	7	230	355	480
	10.5	280	430	585
	14	315	490	680
	21	385	590	845
	28	430	685	985
	42	540	875	1295

• 特點及效益

- 1 蒸汽保溫設計，蒸汽疏水閥操作不受大氣溫影響。
2. 蒸汽用量小之地方，排放效果特佳。
3. 正常冷凝水量時，無蒸汽洩漏，超少量冷凝水時，只有些微洩漏。
4. 蒸汽疏水閥開啓時，能完全排除冷凝水。
5. 體積小，容易按裝，且內部控制元件可替換。
6. 不靠輻射散熱操作，可外包保溫。
- 7 內可附不鏽鋼濾網，不易阻塞。
8. 控制碟片及閥座，熱處理鉻鋼，經精密研磨，使用壽命長，可靠性佳。
9. 價格低廉，節約成本。
10. 抗背壓能力達進口壓65%。

• 按裝操作指導

按裝：

在按裝碟式蒸汽疏水閥前，必需清潔管線污垢、結垢，及雜物。在蒸汽疏水閥進口端也需按裝停止閥，才易於保養。碟式蒸汽疏水閥，任何方位皆可按裝，只要確認冷凝水之流向，並依蒸汽疏水閥名版上之箭頭按裝即可。

操作：

啓動時，徐徐開啓前端停止閥讓蒸汽疏水閥預熱，同時大量冷凝水會排出，當停止閥全開時，蒸汽疏水閥即能自動排出，空氣和冷凝水。任何輕微之撞擊聲，是正常的，是由於碟片迅速開啓時之動作聲。它所產生的震波，可破壞管內空氣及水膜，如此可達到清洗試管作

• SPECIFICATION AND ADVANTAGES

- 1 Steam Jacketed design assures controlled operation unaffected by atmospheric conditions.
2. Excellent capability for handling light loads.
3. No steam loss at normal condensate loads, negligible steam loss on extremely light loads.
4. Complete discharge of all condensate when trap opens.
5. Small size, ease to install. Easy capsulated renewal.
6. May be insulated since it does not rely on radiation to operate.
- 7 Optional integral strainer available. Free from dirt.
8. Controlled disc and seat made of heated treaed chrome steel, ground and lapped, long life and dependable service.
9. Low price. Low cost.
10. Against back pressure to 65% of inlet pressure.

• INSTALLATION AND OPERATING INSTRUCTIONS:
INSTALLATION:

Before installing the Disc trap, be sure to blow out the pipe line removing all dirt, pipe scale, pipe chips, etc. A hand shutoff valve should be installed on the inlet side of the trap for ease of maintenance.

The Disc Trap can be installed in any position. Be sure to install trap in the direction of condensate flow. Disc Traps are marked with arrow on nameplate.

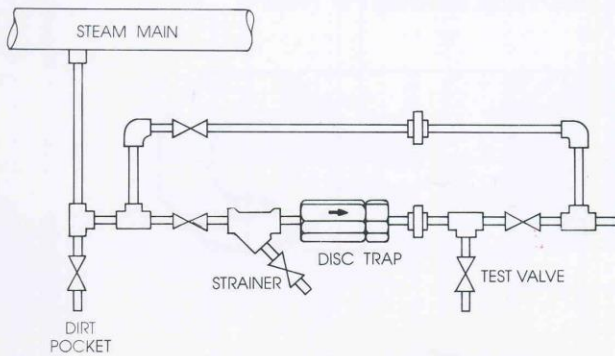
OPERATION:

On start up, open hand valve slowly allowing time for trap to warm up and large quantities of condensate to discharge. When the hand valve is fully open, the trap will operate automatically, discharging air and condensate. Any slight banging noise is nommal because the snap action of the disc on opening, produces a shock wave that helps break up air and water pockets thus purging the line.

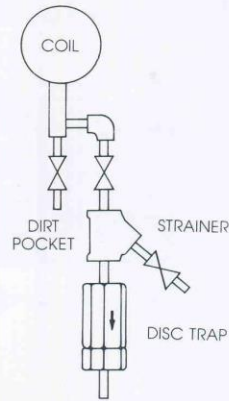


FD系列蒸汽保溫型碟式疏水閥能量安裝法

FD STEAM JACKETED DISC STEAM TRAP CAPACITY AND INSTALLATIONS



HORIZONTAL HOOKUP



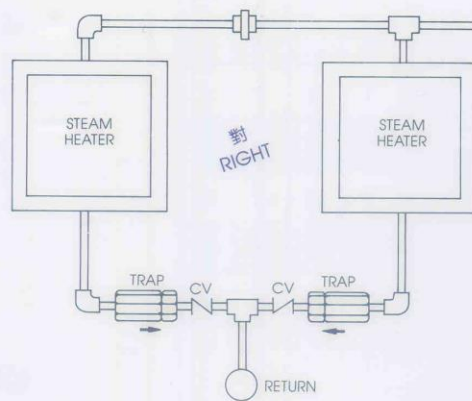
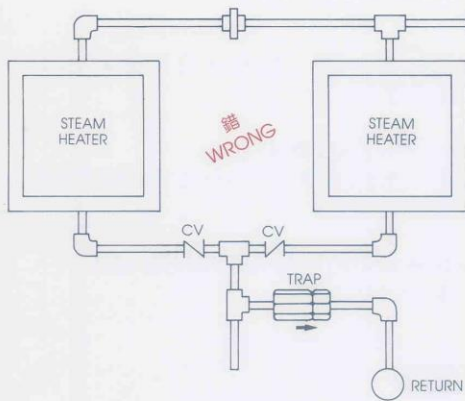
VERTICAL HOOKUP

• 避免二組機台共用一組蒸汽疏水閥

假如兩組以上機台共用壹組蒸汽疏水閥將使壹組或多組機台之冷凝水或空氣不易到達蒸汽疏水閥，因不同機台之不同，蒸汽冷凝率將導致不同之蒸汽壓降。蒸汽壓力錶不能分辨之壓降差，已足以使高壓機台之蒸汽阻礙低壓機台之冷凝水，空氣之排放。結果會降低排放量降低熱效益及浪費燃料。

• Avoid Two Steam Heater Drained By One Trap

If more than one drain point is connected to a single trap, condensate and air from one or more of the units may fail to reach the trap. Any difference in condensing rates will result in a difference in the steam pressure drop. A pressure drop difference too small to register on a pressure gauge is enough to let steam from the higher pressure drip point block the flow of air (or even condensate) from the lower pressure drip point. The net result is reduced heating, output and fuel waste.



• 兩組熱機共用壹組蒸汽疏水閥將產生短路現象。

• Two steam heater drained by a single trap may result in short circuiting.

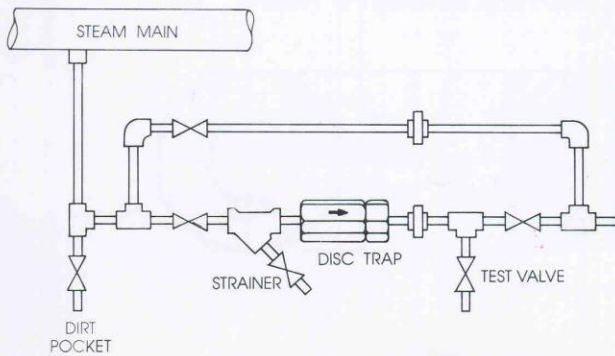
• 每一組熱機，個別安裝壹組蒸汽疏水閥短路現象不會發生。可確保高效率。

• Short circuiting is impossible when each unit is drained by its own trap. Higher efficiency is assured.

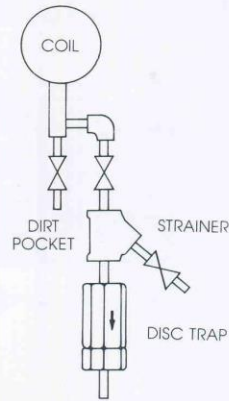


FD系列蒸汽保溫型碟式疏水閥能量安裝法

FD STEAM JACKETED DISC STEAM TRAP CAPACITY AND INSTALLATIONS



HORIZONTAL HOOKUP



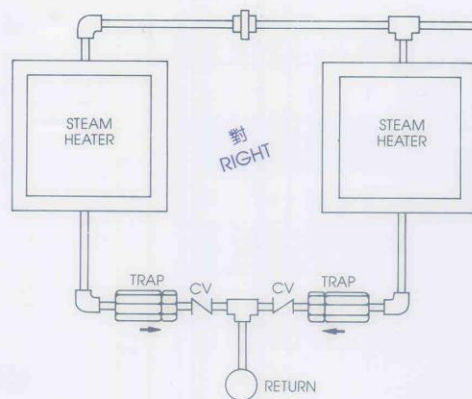
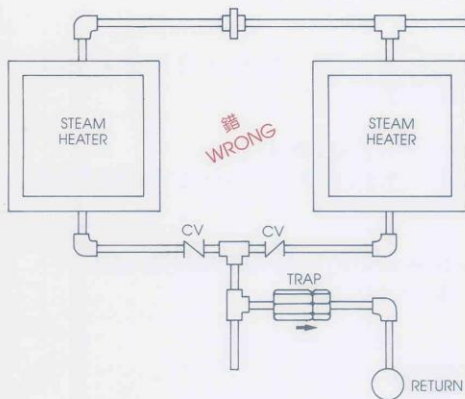
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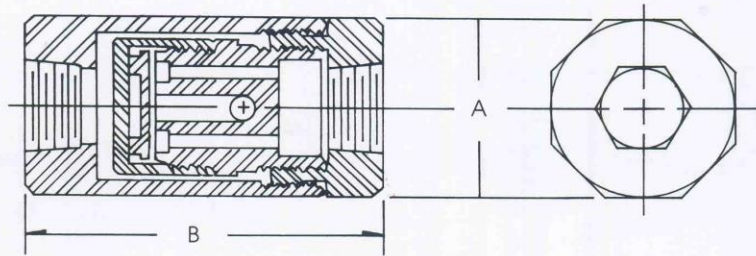
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FD系列碟式疏水閥外型圖、尺寸表

PHYSICAL DATA SERIES FD TRAPS

• FD 系列碟式疏水閥外型圖 SERIES FD TRAPS



• 材質表 LISSST OF MATERIAL

名稱 NAME OF PART	材質 MATERIAL
本體 BODY	高碳鋼 CARBON STEEL
過濾網 STRAINER SCREEN	不鏽鋼 SUS 304 STAINLESS STEEL
控制元件 CAPSULE	熱處理鉻鋼 HEAT TREATED CHROME STEEL
碟片、閥座 DISC AND SEAT	熱處理鉻鋼 HEAT TREATED CHROME STEEL

• FD系列碟式疏水閥尺寸表 PHYSICAL DATA SERIES FD TRAPS

TYPE	型式	FD-1A	FD-1	FD-2	FD-3
PIPE CONNECTIONS	口徑	$\frac{3}{8}$ "	$\frac{1}{2}$ "	$\frac{3}{4}$ "	1"
"A"(DIAMETER)	外徑	32mm	32mm	41mm	32mm
"B"(LENGTH)	長度	76mm	87mm	100mm	117mm
WEIGHT KG	重量	0.34	0.34	0.80	1.36
MIN. P KG/CM ²	最低壓力	0.75	0.75	0.75	0.75
MAX P KG/CM ²	最高壓力	42	42	42	42

• 蒸汽洩漏表 STEAM LOSS TABLE KG/HR

孔徑 orifice m/m	壓力 KG/cm ²			
	2	5	7	10
1	1	2	3	4
2	4	9	12	17
3	9	10	27	38
4	16	35	48	67
5	25	55	76	105

例

蒸汽壓力7KG/cm²時，有3m/m 孔洩漏蒸汽全年浪費多少金錢？

(假設蒸汽每KG成本為NT\$0.5)

從左表蒸汽洩漏表可知每小時有27KG蒸汽洩漏，全年浪費金額為：

$$27\text{KG}/\text{Hr} \times 24 (\text{時}) \times 30 (\text{日}) \times 12 (\text{月}) \times 0.5 = \text{NT}\$116,640.00$$

EXAMPLE

How much wasted cost of 3 m/m orifice steam leaks st 7 kg/cm² steam pressure per year?

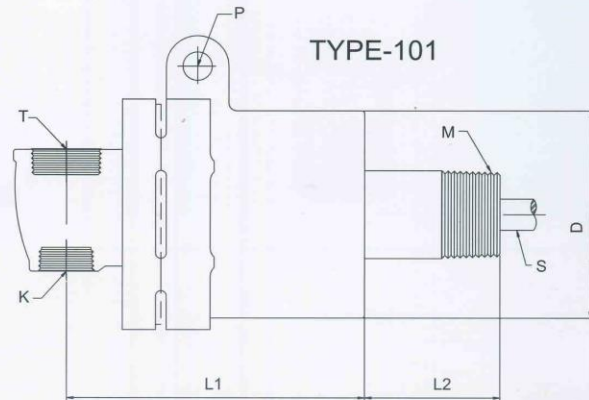
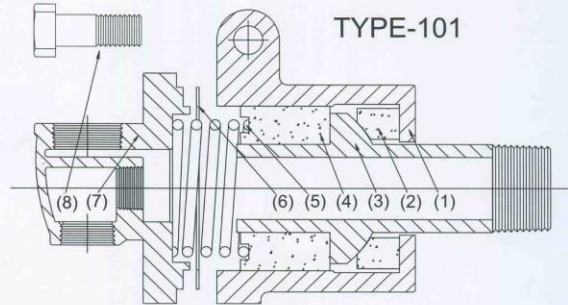
(Assuming steam costs NT\$0.5 per KG)

From steam, loss table left tells it has 27KG steam loss per hour The total wasted costs per year will be:

$$27 \text{ kg/hr} \times 24 (\text{hour}) \times 30 (\text{day}) \times 12 (\text{month}) \times 0.5 = \text{NT}\$116,640.00$$



蒸汽迴轉接頭-101



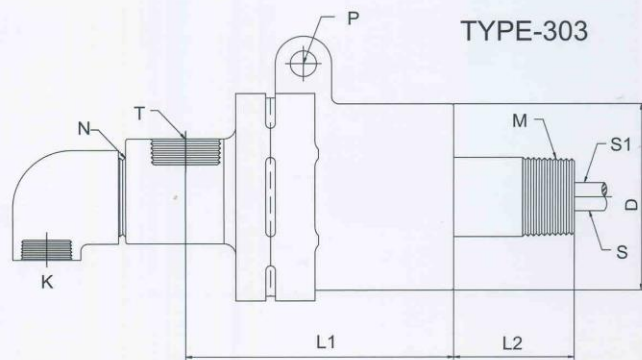
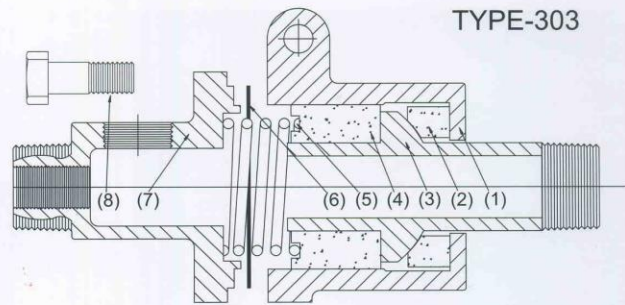
迴轉接頭

PARTS/COMPONENTS 零件 / 名稱		MATERIAL 材 質	
1	MAIN BODY 本體	CAST IRON	鑄 鐵
2	SEAL RING 封環	CARBON	石 墨
3	SHAFT 軸心	SUS 304	不鏽鋼304
4	BEARING 培林	CARBON	石 墨
5	SPRING 彈簧	SUS 304	不鏽鋼304
6	PACKING 迫緊	ASBETOS	石 棉
7	TOP COVER 上蓋	CAST IRON	鑄 鐵
8	SET SCREW 螺絲	CARBON ST	碳 鋼

規格尺寸 / NOMINAL SIZE							
M PT	T PT	K PT	S PT	P MM	D MM	L1 MM	L2 MM
1/2"	3/8"	3/8"	1/4"	9	65	88	38
3/4"	1/2"	1/2"	1/4"	9	72	108	40
1"	3/4"	1/2"	3/8"	11	80	112	51
1 1/4"	1"	1/2"	1/2"	14	92	145	55
1 1/2"	1 1/4"	3/4"	3/4"	14	118	167	60
2"	1 1/2"	1"	3/4", 1"	14	127	180	63
2 1/2"	2"	1 1/4"	1"	17	153	200	70
3"	2 1/2"	1 1/4"	1 1/4"	21	178	220	79



蒸汽迴轉接頭-303



迴轉接頭

PARTS/COMPONENTS 零件 / 名稱		MATERIAL 材 質	
1	MAIN BODY 本體	CAST IRON	鑄 鐵
2	SEAL RING 封環	CARBON	石 墨
3	SHAFT 軸心	SUS 304	不鏽鋼304
4	BEARING 培林	CARBON	石 墨
5	SPRING 彈簧	SUS 304	不鏽鋼304
6	PACKING 迫緊	ASBETOS	石 棉
7	TOP COVER 上蓋	CAST IRON	鑄 鐵
8	SET SCREW 螺絲	CARBON ST	碳 鋼

規格尺寸 / NOMINAL SIZE										
M PT	N PT	T PT	K PT	S PS	P MM	D MM	L1 MM	L2 MM	S1 KEY WAY	
1/2"	1/2"	3/8"	3/8"	1/4"	9	65	88	38		
3/4"	3/4"	1/2"	1/2"	1/4"	9	72	108	40		
1"	1"	3/4"	1/2"	3/8"	11	80	112	51	φ17.5x6寬x3深	
1 1/4"	1 1/4"	1"	1/2"	1/2"	14	92	145	55		
1 1/2"	1 1/2"	1 1/4"	1"	3/4"	14	118	167	60		
2"	2"	1 1/2"	1"	3/4", 1"	14	127	180	63		
2 1/2"	2 1/2"	2"	1 1/4"	1", 1 1/4"	17	153	200	70		
3"	3"	2 1/2"	1 1/4"	1 1/4"	21	178	220	79		



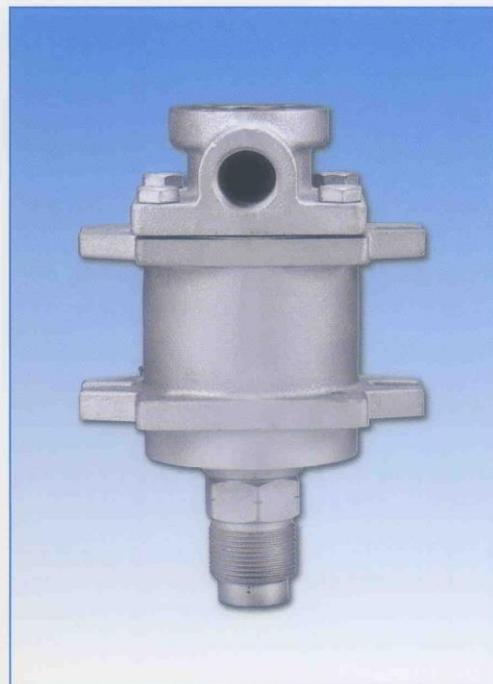
水用迴轉接頭-505



水用迴轉接頭-707



油用迴轉接頭-909



迴轉接頭

材質尺寸表

	505	707	909
材 質 MATERIAL	SUS304 不鏽鋼304	SUS304 不鏽鋼304	F.C.D. 石墨鑄鐵
規 格 尺 寸 NOMINAL SIZE	材質: 鋁 $\frac{3}{8}$ "	$\frac{3}{4}$ "	$1\frac{1}{4}$ "
	$\frac{1}{2}$ "	1"	
	$\frac{3}{4}$ "		
	1"		

華晶精密工業有限公司

TEL:(03)365-1035 FAX:(03)365-1032

水用迴轉接頭:505- 3/8"

廠牌: FLYGIN 材質:鋁 圖面如下:





蒸汽迴轉接頭法蘭式
303A-40A-SBP(插鍵槽)
法蘭片及壓迫環
紅銅墊片



SEALING RING RELATED METAL MATERIALS

Silicon Carbide Products



SILICON CARBIDE RING & SILICON CARBIDE BEARING

由各項實際測試得知碳化矽其耐強酸、強鹼及高硬度等等優異的性質已有逐漸取代其它金屬密封元件的趨勢。華晶精密研發製造的高品質碳化矽，係由粉末處理、設計、常壓燒結成形、精度加工等逐項流程奠立技術根基，進而建立金屬密封材料用途技術的優異技術。燁旺精密認為，這些應用製品的研發及生產技術，只為生產高品質機械軸封應有的基本專業知識。

From various experiments, we know silicon carbide gradually takes place of other metal sealing parts because of its excellence in acid assistance and alkaline. High quality silicon carbide that Fly-Gin sealing has formed in a powder form, sintering under normal pressure, and then design, and make in a precision process. The outstanding technology of metal sealing material has been established. In Fly-Gin Sealing's opinion, these development and production technology for applied products is requisite to make high quality mechanical seals.

CARBON GRAPHITE RING & CARBON GRAPHITE BEARING

華晶精密生產一般電極用及耐磨耗用兩種碳精石墨製品。耐磨耗用碳精細分多種等級，每一種等級都是針對各種密封流體PVT值及化學物理性質所研發，擴大其應用範圍。身為專業機械軸封製造廠，燁旺精密針對材質穩定性的要求，單就這方面，投入相當龐大的技術人力在此研究上。進而研發出耐高溫、高壓、高PV值的優異碳精，並且利用電腦數值加工技術製造高精密度碳精石墨產品。

FLY GIN Co.,Ltd. produce carbon graphite products for the use of general electrode and abrasion resistance. Every grade has been developed for PVT value of various fluids for sealing, features of chemicals and its applications. We as professional mechanical seal manufacturer, make our effort to archive material stability and development with tremendous skills and labors. We have successfully developed excellent carbon and then computer numeric technology is applied to make high density carbon graphite products.

Carbon & Graphite Products



Super-Alloy

1. 陶瓷熔射，燒結成形
2. 碳化鎢熔射，燒結成形
3. 史泰勒(Stellite)熔射
4. 氧化鋁 氧化鎢溶射
5. 表面硬化熱處理加工



其它表面處理材料— 燒結超硬金屬 淬火金屬 熔射超硬金屬

Other Surface Treatment Material-
To sinter extra hardness metal, quenched metal,
weiding extra metal

華晶精密研發一系列的表面金屬密封材料及處理技術，並直接運用在各種耐磨耗製品上。

FLY GIN Co.,Ltd. has developed a series of surface metal seals and handling technology, and directly applied them to various abrasion assistant products.



華晶精密工業有限公司
FLY GIN CO.,LTD

統一編號: 27585462

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電話:(03)365-1035 ~37

傳真:(03)365-1032

地址:334 桃園市八德區豐成街16號