

為何需要「鐵氟龍導引密封件」

由於製程設備日益複雜精密，空油壓缸早已脫離過去單純的負載提供者，如何精確地定位、即時而平順地作動，已成為普遍性的需求，鐵氟龍導引密封件可以大幅改善傳統的橡膠密封件的高滑動摩擦係數及滯滑效應，多年來在歐美日的成功應用績效，其優異的性能獲得設計者與使用著的肯定；而鐵氟龍具有出色的耐磨耗性可明顯改善往復式密封件的使用壽命，對維護人員更是一大福音。

另外，對於環境較嚴苛的應用（如高粉塵、高溫、化學品，油田（井）、間歇作動等），如建設機械、化學製程、鋼品鍍面烤漆、燃煤電廠鍋爐、高溫窯爐等，亦可以有效且長期地保持密封性能，因而避免重要設備故障或產線停機的重大損失。

鐵氟龍的潔淨無污染本質，使得鐵氟龍導引密封件也廣受食品、製藥、半導體等相關製程的歡迎。鐵氟龍導引密封件主要應用於往復式的軸、活塞及柱塞的密封與刮塵，亦可應用於旋轉的密封。



Why PTFE Glide Seal is required for Cylinders to achieve better performance

The hydraulic and pneumatic cylinders act as not only actuator but also precise positioner to meet increasing demands derived from more complex process equipment. Elastomer energized PTFE Glide seals can provide much lower friction without any stick-slip effect to guarantee smooth Running even for intermittent operation or long-stroke application. They perform reliable sealing function even under high service pressure and/or high surface speed. PTFE with inherent low friction and wear resistant property can effectively improve service life of the seal on reciprocating applications and help reduce maintenance cost.

Moreover, it also preferred in certain unfavorable applications such as construction equipment, chemical process, off-shore, galvanizing and color coating line and coal-fired power plant where dusty, high-temperature, aggressive media, or intermittent movement are quite common in sealing environment.

FDA approved PTFE Glide Seals are widely adopted by foodstuff, pharm, and semiconductor process equipment. Rotary PTFE Seals are also available.

鐵氟龍導引密封件的構造與作動原理

受到背後 O 型環的彈力致動，使唇尖輕壓接觸軸或活塞表面而發揮作用。鐵氟龍密封件依應用的條件而有各種形式，如單動與雙動的密封唇設計便有明顯的不同，目前亦有針對適用於標準 O 型環構槽而開發的鐵氟龍導引密封件。

Design

The PTFE Glide seal sets consist of a PTFE sealing element and a rubber O-ring functions as elastic energizer. The required sealing effect is achieved by radial pressure, produced by the preloaded element and system pressure, on the lip against mating surface. Various seal profiles can fit most of single and double acting cylinders. Some compact profiles have been well developed to fit AS 568A standard O-ring grooves for one or two back-up rings.

鐵氟龍導引密封件的特性

- 摩擦係數低、耐磨耗
- 可應用動態高壓場合
- 耐酸鹼及各種化學品
- 耐擠出性良好
- 尺寸整齊、安裝容易
- 乾淨、無污染之虞，可應用於食品、製藥、生技等製程

Outstanding features of PTFE Glide Seals are:

- Excellent gliding characteristics due to low friction
- Wear resistance can be improved by proprietary fillers
- Very good in sealing most of chemicals
- High extrusion resistance
- Good thermal conductivity
- Full range of sizes available
- Easy fitting

鐵氟龍導引密封件的主要應用

- 低起動壓力、低滑動摩擦油壓缸，如軋機 AGC 油壓缸
- 低滑動摩擦、無滯滑氣壓缸
- 柱塞式油壓缸
- 腐蝕環境下之空油壓缸
- 高溫用低摩擦空油壓缸
- 工作母機、建設機械用空油壓缸
- 摩擦 / 擠出 / 射出成形設備用空油壓缸
- 精密控制用空油壓缸

Applications

- Low break-out and low friction hydraulic cylinder
- Low friction and no stick-slip pneumatic cylinder
- Plunger
- Cylinders in corrosive environment
- Low friction cylinders in high-temperature application
- Cylinders for machine tool and construction equipment
- Cylinders for Press/Extrusion/Injection molding equipment
- Cylinders for precise control application

鐵氟龍導引密封件的形式

5.1 鐵氟龍刮塵件 PTFE Wipers

鐵氟龍刮塵件主要應用於一般橡膠刮塵件無法滿足嚴苛操作條件或環境的場合。其主要功能在於主要阻隔於異物進入密封面，因此可以保護密件及其後的導引環與軸承不受異物汙染而造成磨耗或損傷。

受到背後 O 型環的彈力致動，使唇尖輕壓接觸軸或活塞表面而發揮作用。ParJet 的標準材料是青銅填料鐵氟龍與 NBR(O 型環)，主要應用於各式空油壓缸及相似的應用上。

PTFE wipers are mainly used where wipers of other materials would fail because of the particular operating conditions involved. Their function lies in preventing foreign particles or fluids from preventing into the sealing area, thereby protecting the seals, guides and bearings behind the wipers from wear and damage.

Sealing pressure on PTFE wiper lip is usually energized by an elastic O-ring. The standard material combination is bronze filled PTFE and NBR. This is mainly utilized in hydraulic and pneumatic application.

5.2 鐵氟龍導引密封件 PTFE Glide Seal Sets

鐵氟龍導引密封件主要應用於往復式的軸、活塞及柱塞的密封，其中 RA、RB、RC、PA、PB、PC 型已成功使用於油壓系統，在軋機 AGC、工作母機、油壓控制元件、壓模 / 擠出 / 射出成形設備、建設機械及車輛等應用上，發揮優異的密封性能。

PD 型是針對氣壓應用而開發的，具有起動摩擦低、作動平順、無滯滑效應、以及長時間放置後亦可瞬間順利起動的特性，特別適用於間歇作動的用途。

若密封件的一側為大氣，應搭配鐵氟龍刮塵使用，才能獲得預期的密封功能與使用壽命。

對於特殊的應用場合，可選用適用的鐵氟龍與 O 型環材質。

PTFE Glide seal sets are mainly used to seal reciprocating rods, pistons and plungers. The types RA, RB, RC, PA, PB, and PC are mainly used in hydraulic applications. They have proven their excellent performance in, for example, machine tools, molding machines, control devices, construction equipment and vehicles. The PD profile is specially designed for use in pneumatic applications. If a seal set is to be used as end seal, we recommend a wiper also be adopted. The profiles come in various material combinations to meet the requirements of the particular application.

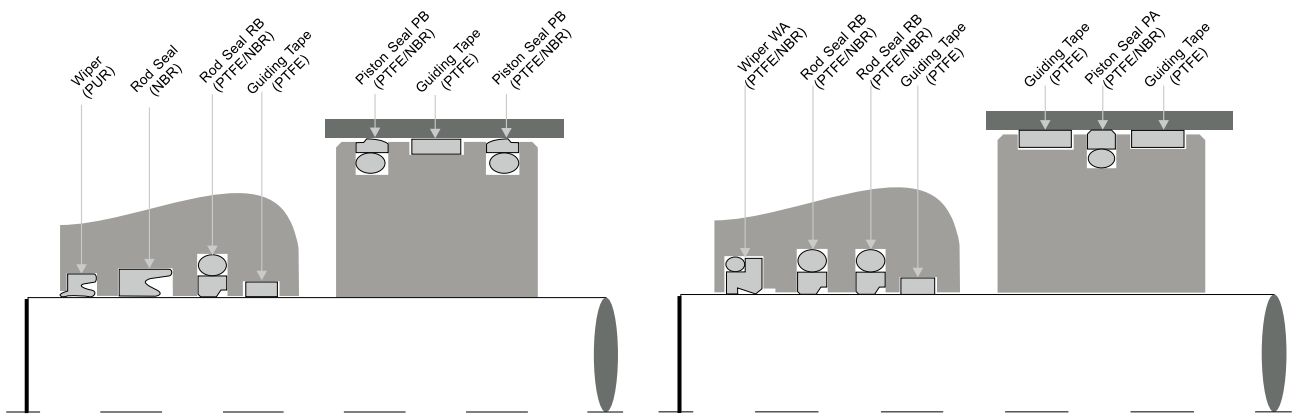
5.3 取代標準 O 型環的鐵氟龍密封件 PTFE Glide Seal Sets for O-ring fitting areas

RC 與 PC 型鐵氟龍密封件係針對動態油壓應用的 O 型環的缺點而開發，其特殊設計可直接安裝於符合 AS 568A 標準的溝槽內。藉由鐵氟龍密封件與密封件的低滑動摩擦，可大幅改善 O 型環的動態特性，因而可應用於較高的滑動速度，降低摩擦而提升使用壽命。選用時應特別注意原 O 型環溝槽的寬度 (亦即原來是否有背托環，及背托環的數量)，此密封件的標準材質組合為青銅填料鐵氟龍 +NBR O 型環。

Seal sets of type RC and PC can be used in hydraulic applications in place of dynamically stressed O-rings. Existing grooves can be used as fitting area if they conform to the US standard AS 568A. These seal sets enable the dynamic behavior to be improved, as a result of which higher gliding speeds, smoother running properties and higher wear resistance are attained.

PTFE Glide Seal sets can also be used in O-ring fitting areas designed for one or two backup rings.

Care must be taken in the design to ensure that the groove width L is selected according to the number of back-up rings. The standard material combination is modified PTFE and NBR (O-ring).



5.4 旋轉軸密封件 PTFE Rotary Glide Seal Sets

鐵氟龍旋轉軸密封性主要應用於旋轉定位軸與樞軸上，具有特別地的滯滑效應，故起動力低、轉動平順、控制性佳。為了保證在困難的操作條件仍有上述的性能，通常在滑動面有環狀油溝。我們亦可提供特殊形狀的旋轉軸密封件，以滿足客戶的特殊應用需求。

PTFE rotary Glide Seal sets are mainly used to seal rotating transmission leadthroughs or pivot drives and are characterized by their special low stick-slip tendency. To guarantee operation even under difficult conditions, the gliding surface has circumferential lubrication grooves.

We offer type TR as standard profile for rotary glide sealing application. Other profiles can also be provided upon request.

If the rotary seal set is used as end seal, a protective wiper should be fitted. The standard material combination is carbon filled PTFE and NBR (O-ring).

安裝要點

安裝前確認溝槽與密封面必須完全潔淨、無毛邊銳角，進行安裝時應採用適當的導引工具。其中 O 型還須先裝入溝槽再裝上鐵氟龍密封件。若安裝位置位於內部較深處，應先壓入斜椎環 (kidney shape)，再利用密封件裝配用 pliers 放入溝槽內。對於外部安裝場和，必須先以裝配套環漲開在放入溝槽內。

Fitting instructions

The seal sets should be used together with suitable guide elements. The fitting areas must be cleaned and trimmed carefully before fitting. When fitting the PTFE Glide Seal sets, the O-ring should be placed in the groove first. In the case of inside sealing applications the sealing ring must then be pressed into a kidney shape with fitting pliers and inserted in its groove. In the case of outside sealing applications it must be expanded with a fitting sleeve and expansion mandrel before inserting in its groove.

A divided fitting area should be provided for rod seal sets and corresponding wipers up to a diameter of 30 mm. The sealing element should be restored to its original shape with a suitable calibration sleeve or calibration mandrel. The necessary fitting and calibration tools can be delivered on request.

安裝導角與表面粗糙度

型式	安裝導角	Ra/Rmax[μ m]			
		密封溝槽		滑動密封面	
		槽底	兩側	缸徑	軸
刮塵件	15-20°	≦ 1.6/6.3	≦ 4/16	—	≦ 0.4/1.6
密封件	20°	≦ 1.6/6.4	≦ 4/17	≦ 0.6/2.5	≦ 0.4/1.6
旋轉密封件	15°	≦ 2.5/10	≦ 0.4/1.6	—	≦ 0.4/1.6
導引環	15°	≦ 1.6/6.3	≦ 4/19	—	≦ 0.4/1.6

Fitting Bevels and Surface Roughness

Type	Fitting bevel	Ra/Rmax[μ m]			
		Seal gland		Gliding surface	
		Groove bottom	Groove flank	Cylinder bore	Rod, Shaft
Wiper	15-20°	≦ 1.6/6.3	≦ 4/16	—	≦ 0.4/1.6
Seal set	20°	≦ 1.6/6.4	≦ 4/17	≦ 0.6/2.5	≦ 0.4/1.6
Rotary seal set	15°	≦ 2.5/10	≦ 0.4/1.6	—	≦ 0.4/1.6
Guide ring	15°	≦ 1.6/6.3	≦ 4/19	—	≦ 0.4/1.6

橡膠件材質表 (O-RING & X-RING & D-RING)

O 型環編號 O-Ring Code	材質 Compound	物料編號 Parjet compound	硬度 (Shore A) Hardnes (Shore A)	耐溫 (° C) Temperature range
0	不含橡膠件，僅鐵氟龍密封件 No O-Ring .Code used for the PTFE component of the sealing set			
1	NBR	N100A-70	70±5	-40 ~ 100
2	VITON	V100A-75	75±5	-25 ~ 250
3	NBR	N100A-90	90±5	-30 ~ 100
4	VITON	N100A-90	90±5	-25 ~ 250
5	NBR	N100A-80	80±5	-30 ~ 100
6	NBR	N134A-70	70±5	-40 ~ 100
7	EPDM	E100A-70	70±5	-40 ~ 100
8	SILICONE			
9	HPU			

複合材料材質規格表

複合材料規格 – 鐵氟龍複合材料材質表

鐵氟龍複合材料材質表							
材質編號	填充料比例	顏色	應用溫度 (°C)		應用範圍	特色	產品
			最低	最高			
01T	純鐵氟龍	白色	-190	+220	<ul style="list-style-type: none"> 化學工業 食品工業 半導體 	<ul style="list-style-type: none"> 優越的耐化學性質 磨擦係數低 可選用 FDA 認證品級 	<ul style="list-style-type: none"> 背托環 彈簧制動密封件
02T	鐵氟龍 + 40% 銅粉	綠色	-150	+260	<ul style="list-style-type: none"> 高機械應力應用 液壓密封應用 	<ul style="list-style-type: none"> 優越的耐磨性 抗擠出性佳 抗潛變性佳 	<ul style="list-style-type: none"> 格來圈 耐磨環 背托環
03T	鐵氟龍 + 23% 碳 + 2% 石墨	黑色	-190	+260	<ul style="list-style-type: none"> 高機械應力應用 水 / 油壓機械 旋轉密封應用 	<ul style="list-style-type: none"> 優越的耐磨性 抗潛變性佳 	<ul style="list-style-type: none"> 格來圈 背托環 氣壓用耐磨環 彈簧制動密封件
04T	鐵氟龍 + 40% 銅粉	咖啡色	-150	+260	<ul style="list-style-type: none"> 高機械應力應用 液壓密封應用 	<ul style="list-style-type: none"> 優越的耐磨性 抗擠出性佳 抗潛變性佳 	<ul style="list-style-type: none"> 格來圈
05T	鐵氟龍 + 10% 碳纖維	灰黑色	-260	+260	<ul style="list-style-type: none"> 水壓機械 海水應用 短衝程高頻率作動 	<ul style="list-style-type: none"> 在水中應用下擁有優越的耐磨性 優越的抗壓強度 適用於高速動態應用 	<ul style="list-style-type: none"> 格來圈 彈簧制動密封件
06T	鐵氟龍 + 25% 玻璃纖維	乳白色	-190	+260	<ul style="list-style-type: none"> 中負荷液壓缸 	<ul style="list-style-type: none"> 優越的抗化學性 抗潛變性佳 低介電常數 	<ul style="list-style-type: none"> 格來圈 背托環 耐磨環
07T	鐵氟龍 + 10% EKONOL	米黃色	-200	+260	<ul style="list-style-type: none"> 中等機械應力應用 用於軟質的軸面 旋轉密封應用 	<ul style="list-style-type: none"> 抗化學性有限 不適用於高 水中 	<ul style="list-style-type: none"> 彈簧制動油封 旋轉軸密封件 唇型油封
08T	鐵氟龍 + E 碳	黑色	-190	+260	<ul style="list-style-type: none"> 中等機械應力應用 用於硬質的軸面 水 / 油乳化液 	<ul style="list-style-type: none"> 受限於碳成分，抗化學性較有限 	<ul style="list-style-type: none"> 彈簧制動油封
09T	鐵氟龍 + 15% 石墨	深灰色	-190	+220	<ul style="list-style-type: none"> 低機械應力應用 用於軟質軸面 	<ul style="list-style-type: none"> 受限於石墨成分，抗化學性有限 	<ul style="list-style-type: none"> 彈簧制動密封件
10T	鐵氟龍 + 15% 玻璃纖維 + 5% 二硫化鉬	灰色	-190	+260	<ul style="list-style-type: none"> 中等機械應力應用 中負荷液壓密封應用 	<ul style="list-style-type: none"> 抗潛變性佳 優越的耐化學性質 優越的耐磨性 低介電常數 	<ul style="list-style-type: none"> 彈簧制動密封件 旋轉軸密封件 背托環

複合材料規格 – 塑料材質

塑料材質							
材質編號	填充料	顏色	度 (°C)		應用範圍	特色	產品
			最低	最高			
G2X	聚胺脂 95 Shore A	紅色	-20	115	<ul style="list-style-type: none"> 液壓應用 氣壓應用 	<ul style="list-style-type: none"> 優越的耐磨性及抗擠出性 耐水解佳 	<ul style="list-style-type: none"> 刮塵環 格來圈 斯特封
G3X	聚胺脂 93 Shore A	綠色	-30	110	<ul style="list-style-type: none"> 液壓應用 氣壓應用 	<ul style="list-style-type: none"> 優越的耐磨性及抗擠出性 耐水解佳 	<ul style="list-style-type: none"> 刮塵環 格來圈 斯特封
G1Y	聚胺脂 57 Shore D	黃色	-30	110	<ul style="list-style-type: none"> 液壓應用 氣壓應用 	<ul style="list-style-type: none"> 優越的耐磨性及抗擠出性 耐水解佳 	<ul style="list-style-type: none"> 刮塵環 格來圈 斯特封
N1X	丁晴橡膠 85 Shore A	黑色	-30	110	<ul style="list-style-type: none"> 液壓應用 氣壓應用 	<ul style="list-style-type: none"> 一般標準用 	<ul style="list-style-type: none"> 刮塵環 U 型圈
V1X	氟化橡膠 85 Shore A	黑色	-20	200	<ul style="list-style-type: none"> 液壓應用 氣壓應用 	<ul style="list-style-type: none"> 耐高溫 	<ul style="list-style-type: none"> 刮塵環 U 型圈
V2X	氟化橡膠 82 Shore A	咖啡色	-20	200	<ul style="list-style-type: none"> 液壓應用 氣壓應用 	<ul style="list-style-type: none"> 耐高溫 	<ul style="list-style-type: none"> 刮塵環 U 型圈

COMPOUNDS

COMPOUND SPECIFICATIONS – PTFE MATERIALS

PTFE							
Material code	Compound	Color	Temp. (°C)		Application	Characteristics	Products
			MIN.	MAX.			
01T	VIRGIN PTFE	WHITE	-190	220	· CHEMICAL INDUSTRY · FOOD INDUSTRY · SEMI-CONDUCTOR	· HIGH CHEMICAL RESISTANCE · LOW COEFFICIENT OF FRICTION	· BACK-UP RINGS · HIPERSEALS
02T	PTFE + 40% BRONZE	GREEN	-150	260	· HIGH MECHANICAL STRESS · HYDRAULIC APPLICATIONS	· OUTSTANDING WEAR RESISTANCE · EXTRUSION RESISTANCE · CREEP RESISTANCE	· GLIDE RINGS · HYDRAULIC GUIDANCE TAPE · BACK-UP RINGS
03T	PTFE + 23% CARBON + 2% RAPHITE	BLACK	-190	260	· HIGH MECHANICAL STRESS · WATER/OIL HYDRAULICS · ROTARY SEALING	· HIGH WEAR RESISTANCE · CREEP RESISTANCE	· GLIDE RINGS · BACK-UP RINGS · PNEUMATIC GUIDANCE TAPE · HIPERSEAL
04T	PTFE + 40% BRONZE	BROWN	-150	260	· HIGH MECHANICAL STRESS · HYDRAULIC APPLICATIONS	· OUTSTANDING WEAR RESISTANCE · EXTRUSION RESISTANCE · CREEP RESISTANCE	· GLIDE RINGS
05T	PTFE + 10% CARBON FIBER	GREY	-200	260	· WATER HYDRAULICS · SEAWATER · SHORT STROKES WITH HIGH OPERATION FREQUENCY	· VERY GOOD WEAR RESISTANCE PROPERTIES IN WATER · EXCELLENT COMPRESSIVE STRENGTHS · SUITABLE FOR DYNAMIC APPLICATIONS AT HIGH SPEED	· GLIDE RINGS · HIPERSEALS
06T	PTFE + 25% GLASS FIBER	DARK GREEN	-190	260	· MEDIUM-DUTY HYDRAULIC APPLICATIONS	· HIGH CHEMICAL RESISTANCE · HIGH CREEP RESISTANCE · ELECTRICAL PROPERTIES LIKE VIRGIN PTFE	· GLIDE RINGS · BACK-UP RINGS · GUIDE RINGS
07T	PTFE + 10% EKONOL	BEIGE	-200	260	· MEDIUM MECHANICAL STRESS · SOFTER SEALING SURFACES · ROTARY SEALING	· LIMITED CHEMICAL RESISTANCE · LIMITED USE IN HOT WATER	· HIPERSEALS · ROTARY GLIDE RINGS · LIP SEALS
08T	PTFE + E-CARBON	BLACK	-190	260	· MEDIUM MECHANICAL STRESS · HARD SEALING SURFACES · WATER/OIL EMULSIONS	· CHEMICAL RESISTANCE LIMITED BY CARBON	· HIPERSEALS
09T	PTFE + 15% GRAPHITE	DARK GREY	-190	220	· LOW MECHANICAL STRESS · SOFT SEALING SURFACES	· CHEMICAL RESISTANCE LIMITED GRAPHITE	· HIPERSEALS
10T	PTFE + 15% GLASS FIBER + 5% MOS2	GREY	-190	260	· MEDIUM MECHANICAL STRESS · MEDIUM-DUTY HYDRAULIC APPLICATIONS	· HIGH CREEP STRENGTH · HIGH CHEMICAL RESISTANCE · OUTSTANDING WEAR RESISTANCE · ELECTRICAL PROPERTIES LIKE VIRGIN PTFE	· HIPERSEALS · ROTARY SEALS · BACK-UP RINGS

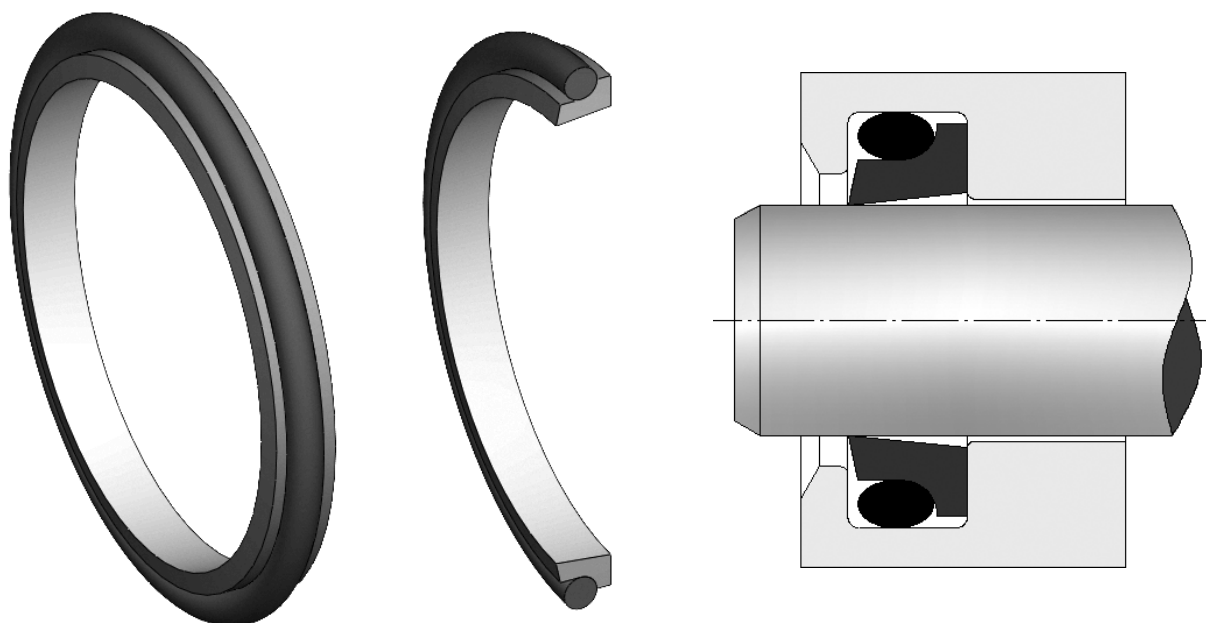
COMPOUND SPECIFICATIONS – PLASTIC MATERIALS

PLASTIC							
Material code	Compound	Color	Temp. (°C)		Application	Characteristics	Products
			MIN.	MAX.			
G2X	HPU 95 Shore A	RED	-20	115	· HYDRAULIC APPLICATIONS · PNEUMATIC APPLICATIONS	· ABRASION & EXTRUSION RESISTANCE · HYDROLYSIS RESISTANCE	· WIPERS · GLIDE RINGS · SLIPPER RING
G3X	PU 93 Shore A	GREEN	-30	110	· HYDRAULIC APPLICATIONS · PNEUMATIC APPLICATIONS	· ABRASION & EXTRUSION RESISTANCE · HYDROLYSIS RESISTANCE	· WIPERS · GLIDE RINGS · SLIPPER RING
G1Y	C-HPU 57 Shore D	YELLOW	-30	110	· HYDRAULIC APPLICATIONS · PNEUMATIC APPLICATIONS	· ABRASION & EXTRUSION RESISTANCE · HYDROLYSIS RESISTANCE	· WIPERS · GLIDE RINGS · SLIPPER RING
N1X	NBR 85 Shore A	BLACK	-30	110	· HYDRAULIC APPLICATIONS · PNEUMATIC APPLICATIONS	· GENERAL APPLICATION	· WIPERS · U-CUPS
V1X	VITON 85 Shore A	BLACK	-20	200	· HYDRAULIC APPLICATIONS · PNEUMATIC APPLICATIONS	· HIGH TEMPERATURE RESISTANCE	· WIPERS · U-CUPS
V2X	VITOM 82 Shore A	BROWN	-20	200	· HYDRAULIC APPLICATIONS · PNEUMATIC APPLICATIONS	· HIGH TEMPERATURE RESISTANCE	· WIPERS · U-CUPS

刮塵環 (Wipers)

型式	圖示	氣壓 / 油壓 (Hyd./Pneu)	壓力 (bar)	工作溫度 (°C)	速度 (m/s)	頁數 (Page.)
WA		H	—	-40~+200	4.0	P.10
WB		H	—	-40~+200	4.0	P.14
WD		H	—	-60~+200	4.0	P.18
WE		H	—	-60~+200	5.0	P.22
WF		H	—	-60~+200	5.0	P.26
UA2		H/P	—	-25~+100	1.0	P.29
AV		H	—	-10~+115	1.0	P.32

刮塵環 WA 型
PTFE Wiper Ring – type WA



刮塵環主要用於防止灰塵、異物進入被密封的軸或柱塞，WA 型刮塵環因採用鐵氟龍，故具有最小的啟動與滑動摩擦力以及優異的耐磨性，故可長期發揮預期的刮塵功能。

The function of wiper rings is to prevent dust, dirt and foreign material from immigrating into sealing rods and plungers. It features minimal break-out and dynamic friction to guarantee no stick-slip. PTFE compound enhances wear resistance to retain anticipated performance over a long period of time.

應用範圍

溫度 - 40 ~ 200°C

速度 ≤ 4 m/s

標準材質 銅填料

註：可依使用條件選用其他材質

Application Range

Temperature - 40 ~ 200°C

Speed ≤ 4 m/s

Standard Material Bronze filled PTFE

Other materials are available for specified conditions

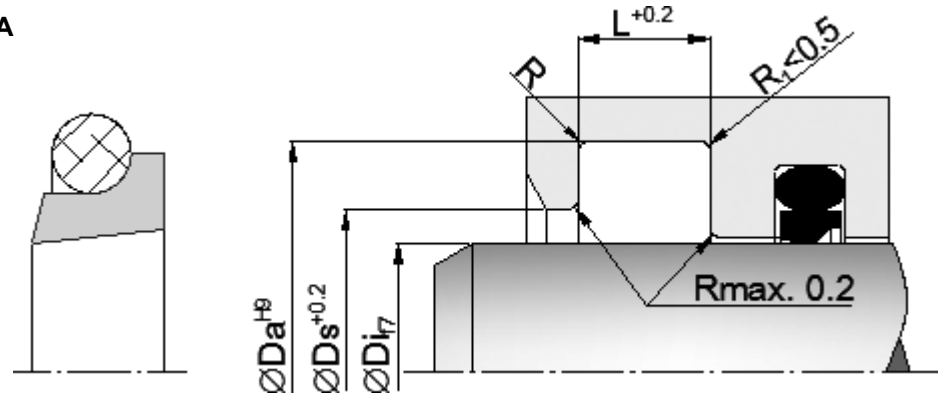
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽開口直徑 Groove Opening Dia.	溝槽 R 角 Radius	截面 Gland Code	O 型環 O-ring C.S.
ϕ Di	ϕ Da	L	ϕ Ds	R		
6.0 ~ 11.9	Di + 4.8	3.7	Di + 2.7	0.4	A	1.78
12.0 ~ 64.9	Di + 6.8	5.0	Di + 3.5	0.4	B	2.62
65.0 ~ 250.9	Di + 8.8	6.0	Di + 4.0	0.4	C	3.53
251.0 ~ 420.9	Di + 12.2	8.4	Di + 4.5	0.4	D	5.33
421.0 ~ 650.9	Di + 16.0	11.0	Di + 5.2	0.4	E	6.99
651.0 ~	Di + 20.0	14.0	Di + 6.6	0.4	F	8.40

刮塵環 WA 型

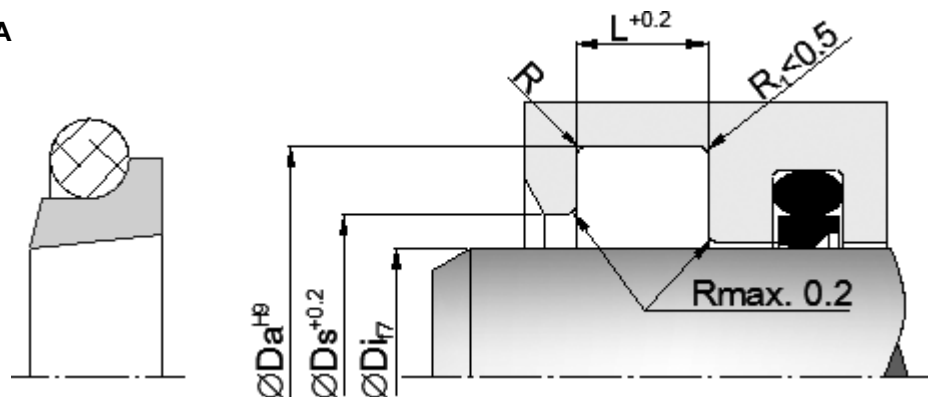
PTFE Wiper Ring – type WA



溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L				Di	Da	Ds	L			
4	8.8	6.7	3.7	2-009	5.28	1.78	60	66.8	63.5	5.0	2-143	61.60	2.62
5	9.8	7.7	3.7	2-010	6.07	1.78	60	68.8	64.0	6.0	2-229	59.92	3.53
8	12.8	10.7	3.7	2-012	9.25	1.78	65	71.8	68.5	5.0	2-146	66.34	2.62
10	14.8	12.7	3.7	2-013	10.82	1.78	65	73.8	69.0	6.0	2-231	66.27	3.53
10	16.8	13.5	5.0	2-112	12.37	2.62	70	76.8	73.5	5.0	2-149	71.12	2.62
12	18.8	15.5	5.0	2-113	13.94	2.62	70	78.8	74.0	6.0	2-233	72.62	3.53
14	20.8	17.5	5.0	2-114	15.54	2.62	75	83.8	79.0	6.0	2-234	75.79	3.53
15	19.8	17.7	3.7	2-016	15.60	1.78	80	86.8	83.5	5.0	2-152	82.22	2.62
15	21.8	18.5	5.0	2-115	17.12	2.62	80	88.8	84.0	6.0	2-236	82.14	3.53
18	24.8	21.5	5.0	2-117	20.29	2.62	85	91.8	88.5	5.0	2-152	82.22	2.62
20	24.8	22.7	3.7	2-019	20.35	1.78	85	93.8	89.0	6.0	2-237	85.32	3.53
20	26.8	23.5	5.0	2-118	21.89	2.62	90	96.8	93.5	5.0	2-153	88.57	2.62
24	30.8	27.5	5.0	2-120	25.07	2.62	90	98.8	94.0	6.0	2-239	91.67	3.53
25	29.8	27.7	3.7	2-023	26.70	1.78	95	103.8	99.0	6.0	2-241	98.02	3.53
25	31.8	28.5	5.0	2-121	26.64	2.62	100	106.8	103.5	5.0	2-155	101.27	2.62
28	34.8	31.5	5.0	2-123	29.82	2.62	100	108.8	104.0	6.0	2-242	101.19	3.53
30	34.8	32.7	3.7	2-026	31.47	1.78	105	111.8	108.5	5.0	2-155	101.27	2.62
30	36.8	33.5	5.0	2-124	31.42	2.62	105	113.8	109.0	6.0	2-244	107.54	3.53
32	38.8	35.5	5.0	2-126	34.59	2.62	110	116.8	113.5	5.0	2-156	107.62	2.62
35	39.8	37.7	3.7	2-028	34.65	1.78	110	118.8	114.0	6.0	2-245	110.72	3.53
35	41.8	38.5	5.0	2-127	36.17	2.62	115	121.8	118.5	5.0	2-157	113.97	2.62
38	44.8	41.5	5.0	2-130	40.94	2.62	115	123.8	119.0	6.0	2-247	117.07	3.53
40	46.8	43.5	5.0	2-131	42.52	2.62	120	128.8	124.0	6.0	2-249	123.42	3.53
42	48.8	45.5	5.0	2-132	44.2	2.62	125	131.8	128.5	5.0	2-159	126.67	2.62
45	51.8	48.5	5.0	2-134	47.29	2.62	125	133.8	129.0	6.0	2-250	126.59	3.53
48	54.8	51.5	5.0	2-136	50.47	2.62	130	136.8	133.5	5.0	2-159	126.67	2.62
50	56.8	53.5	5.0	2-137	52.07	2.62	130	138.8	134.0	6.0	2-252	132.94	3.53
50	58.8	54.0	6.0	2-226	50.39	3.53	135	141.8	138.5	5.0	2-160	133.02	2.62
55	61.8	58.5	5.0	2-140	56.82	2.62	135	143.8	139.0	6.0	2-253	136.12	3.53
55	63.8	59.0	6.0	2-228	26.74	3.53	140	146.8	143.5	5.0	2-161	139.37	2.62

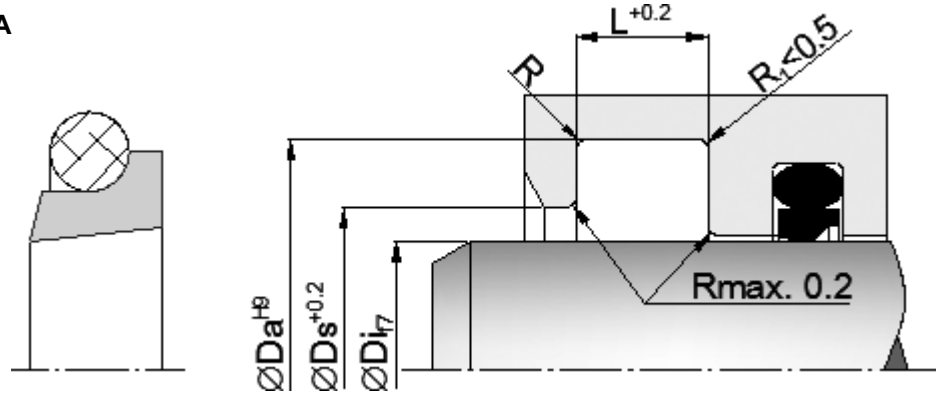
刮塵環 WA 型

PTFE Wiper Ring – type WA



溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L				Di	Da	Ds	L			
140	148.8	144.0	6.0	2-255	142.47	3.53	260	272.2	264.5	8.4	2-378	266.07	5.33
145	153.8	149.0	6.0	2-256	145.64	3.53	270	278.8	274.0	6.0	2-275	266.29	3.53
150	156.8	153.5	5.0	2-163	152.07	2.62	270	282.2	274.5	8.4	2-379	278.77	5.33
150	158.8	154.0	6.0	2-258	151.99	3.53	280	288.8	284.0	6.0	2-276	278.99	3.53
155	161.8	158.5	5.0	2-163	152.07	2.62	280	292.2	284.5	8.4	2-379	278.77	5.33
155	163.8	159.0	6.0	2-258	151.99	3.53	290	298.8	294.0	6.0	2-277	291.69	3.53
160	168.8	164.0	6.0	2-260	164.69	3.53	290	302.2	294.5	8.4	2-380	291.47	5.33
160	172.2	164.5	8.4	2-362	158.12	5.33	300	308.8	304.0	6.0	2-277	291.69	3.53
165	177.2	169.5	8.4	2-363	164.47	5.33	300	312.2	304.5	8.4	2-381	304.17	5.33
170	178.8	174.0	6.0	2-261	171.04	3.53	310	318.8	314.0	6.0	2-278	304.39	3.53
175	183.8	179.0	6.0	2-262	177.39	3.53	310	322.2	314.5	8.4	2-381	304.17	5.33
180	188.8	184.0	6.0	2-263	183.74	3.53	320	332.2	324.5	8.4	2-382	329.57	5.33
180	192.2	184.5	8.4	2-365	177.17	5.33	330	338.8	334.0	6.0	3-279	329.79	3.53
185	193.8	189.0	6.0	2-263	183.74	3.53	330	342.2	334.5	8.4	2-382	329.57	5.33
185	197.2	189.5	8.4	2-366	183.52	5.33	340	352.2	344.5	8.4	2-382	329.57	5.33
190	198.8	194.0	6.0	2-264	190.09	3.53	340	356.0	345.2	11.0	2-456	342.27	6.99
195	203.8	199.0	6.0	2-265	196.44	3.53	350	362.2	354.5	8.4	2-383	354.97	5.33
195	207.2	199.5	8.4	2-368	196.22	5.33	360	372.2	364.5	8.4	2-383	354.97	5.33
200	208.8	204.0	6.0	2-266	202.79	3.53	360	376.0	365.2	11.0	2-457	354.97	6.99
200	212.2	204.5	8.4	2-369	202.57	5.33	370	382.2	374.5	8.4	2-383	354.97	5.33
210	218.8	214.0	6.0	2-267	209.14	3.53	380	392.2	384.5	8.4	2-384	380.37	5.33
210	222.2	214.5	8.4	2-370	208.92	5.33	380	396.0	385.2	11.0	2-459	380.37	6.99
220	228.8	224.0	6.0	2-269	221.84	3.53	390	402.2	394.5	8.4	2-384	380.37	5.33
220	232.2	224.5	8.4	2-372	221.62	5.33	390	406.0	395.2	11.0	2-460	393.07	6.99
230	238.8	234.0	6.0	2-271	234.54	3.53	400	412.2	404.5	8.4	2-385	405.26	5.33
230	242.2	234.5	8.4	2-373	227.97	5.33	400	416.0	405.2	11.0	2-460	393.07	6.99
240	248.8	244.0	6.0	2-272	240.89	3.53	410	422.2	414.5	8.4	2-385	405.26	5.33
240	252.2	244.5	8.4	2-375	240.67	5.33	410	426.0	415.2	11.0	2-461	405.26	6.99
250	258.8	254.0	6.0	2-274	253.59	3.53	420	432.2	424.5	8.4	2-386	430.66	5.33
250	262.2	254.5	8.4	2-376	247.02	5.33	430	442.2	434.5	8.4	2-386	430.66	5.33

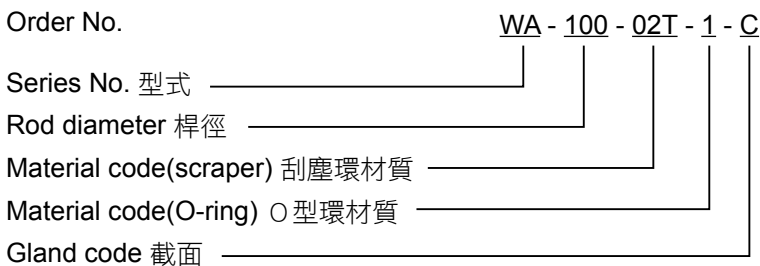
刮塵環 WA 型
PTFE Wiper Ring – type WA



溝槽尺寸 / Grove				AS568	內徑	線徑	溝槽尺寸 / Grove				AS568	內徑	線徑
Di	Da	Ds	L	code	mm	mm	Di	Da	Ds	L	code	mm	mm
430	446.0	435.2	11.0	2-463	430.66	6.99	570	586.0	575.2	11.0	2-472	582.68	6.99
440	456.0	445.2	11.0	2-464	443.36	6.99	580	596.0	585.2	11.0	2-472	582.68	6.99
450	466.0	455.2	11.0	2-465	443.36	6.99	600	616.0	605.2	11.0	2-473	608.08	6.99
460	476.0	465.2	11.0	2-465	468.76	6.99	610	626.0	615.2	11.0	2-473	608.08	6.99
470	486.0	475.2	11.0	2-466	468.76	6.99	620	636.0	625.2	11.0	2-474	633.48	6.99
480	492.2	484.5	8.4	2-388	481.41	5.33	630	646.0	635.2	11.0	2-474	633.48	6.99
480	496.0	485.2	11.0	2-467	481.46	6.99	640	656.0	645.2	11.0	2-475	658.88	6.99
490	506.0	495.2	11.0	2-468	494.16	6.99	700	720.0	706.6	14.0	P705	704.50	8.40
500	516.0	505.2	11.0	2-469	506.86	6.99	750	770.0	756.6	14.0	P755	754.50	8.40
520	536.0	525.2	11.0	2-470	532.26	6.99	800	820.0	806.6	14.0	P805	804.50	8.40
530	546.0	535.2	11.0	2-470	532.26	6.99	850	870.0	856.6	14.0	P855	854.50	8.40
540	556.0	545.2	11.0	2-470	532.26	6.99	900	920.0	906.6	14.0	P905	904.50	8.40
550	566	555.2	11.0	2-471	557.66	6.99	950	970.0	956.6	14.0	P955	954.50	8.40
560	576.0	565.2	11.0	2-471	557.66	6.99							

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，刮塵環請參照 P.6，O 型環請參照 P.5

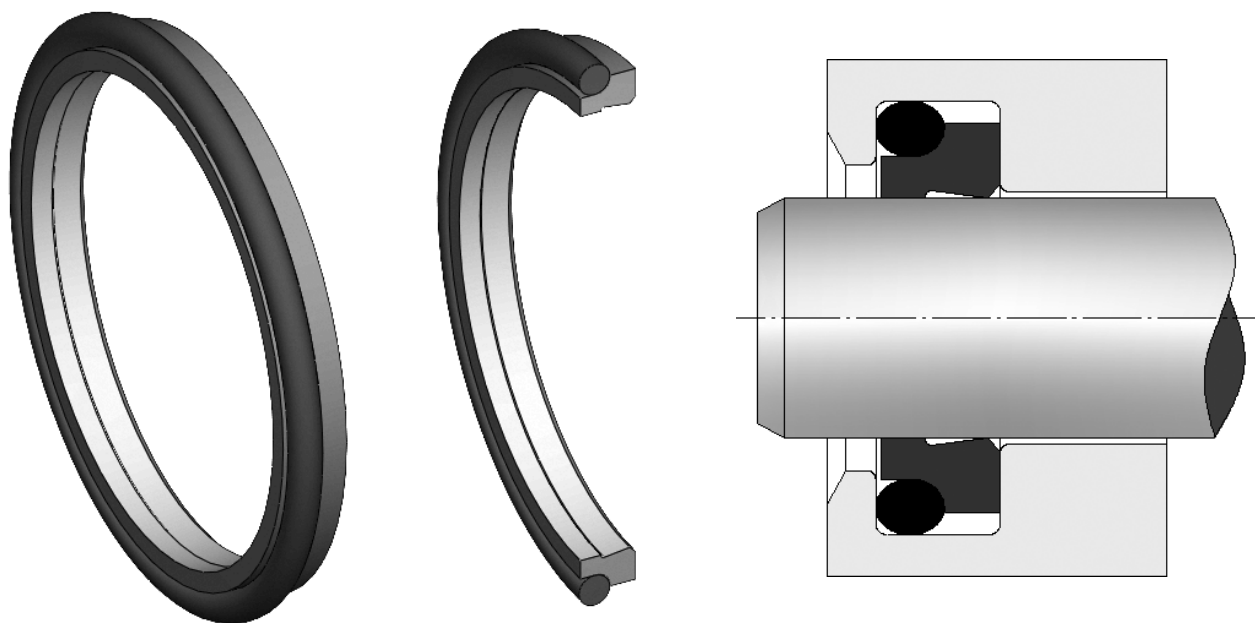
註：軸徑大於 1000.0mm 時，數字前加上 K。

例如刮塵環尺寸 1180x1200x14mm 訂購時請註明 WA-K1180-02T-1-F。

Note : For diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for wiper ring 1180x1200x14mm should be denominated as WA-K1180-02T-1-F.

刮塵環 WB 型

PTFE Wiper Ring – type WB



刮塵環主要用於防止灰塵、異物進入被密封的軸或柱塞，WB 型刮塵環因採用鐵氟龍，故具有最小的啟動與滑動摩擦力以及優異的耐磨性，故可長期發揮預期的刮塵功能。

The function of wiper rings is to prevent dust, dirt and foreign material from immigrating into sealing rods and plungers. It features minimal break-out and dynamic friction to guarantee no stick-slip. PTFE compound enhances wear resistance to retain anticipated performance over a long period of time.

應用範圍

溫度 - 40 ~ 200°C

速度 ≤ 4 m/s

標準材質 銅填料

註：可依使用條件選用其他材質

Application Range

Temperature - 40 ~ 200°C

Speed ≤ 4 m/s

Standard Material Bronze filled PTFE

Other materials are available for specified conditions

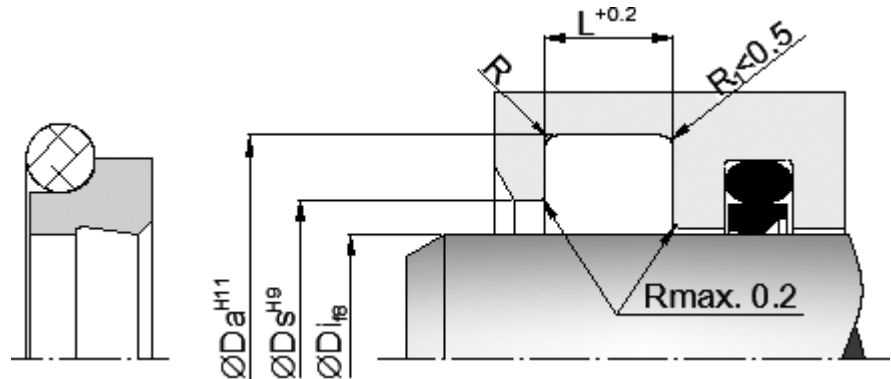
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽開口直徑 Groove Opening Dia.	溝槽 R 角 Radius	截面 Gland Code	O 型環 O-ring C.S.
ϕ Di	ϕ Da	L	ϕ Ds	R		
6.0 ~ 11.9	Di + 4.8	3.7	Di + 1.5	0.4	A	1.78
12.0 ~ 64.9	Di + 6.8	5.0	Di + 1.5	0.4	B	2.62
65.0 ~ 250.9	Di + 8.8	6.0	Di + 2.0	0.4	C	3.53
251.0 ~ 420.9	Di + 12.2	8.4	Di + 2.0	0.4	D	5.33
421.0 ~ 650.9	Di + 16.0	11.0	Di + 2.5	0.4	E	6.99
651.0 ~	Di + 20.0	14.0	Di + 2.5	0.4	F	8.40

刮塵環 WB 型

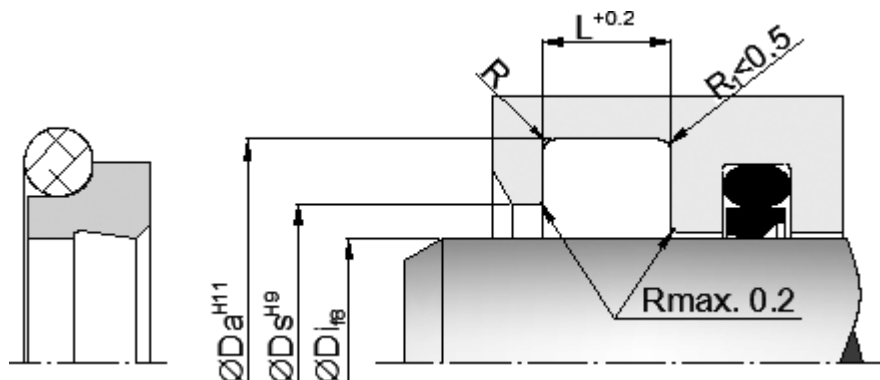
PTFE Wiper Ring – type WB



溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L				Di	Da	Ds	L			
4	8.8	5.5	3.7	2-009	5.28	1.78	45	53.8	47.0	6.0	2-225	47.22	3.53
5	9.8	6.5	3.7	2-010	6.07	1.78	48	54.8	49.5	5.0	2-136	50.47	2.62
7	11.8	8.5	3.7	2-011	7.65	1.78	50	56.8	51.5	5.0	2-137	52.07	2.62
8	12.8	9.5	3.7	2-012	9.25	1.78	52	58.8	53.5	5.0	2-138	53.64	2.62
10	14.8	11.5	3.7	2-013	10.82	1.78	55	61.8	56.5	5.0	2-140	56.82	2.62
10	16.8	11.5	5.0	2-112	12.37	2.62	55	63.8	57.0	6.0	2-228	56.74	3.53
12	18.8	13.5	5.0	2-113	13.94	2.62	58	64.8	59.5	5.0	2-142	59.99	2.62
14	20.8	15.5	5.0	2-114	15.54	2.62	60	66.8	61.5	5.0	2-143	61.60	2.62
15	19.8	16.5	3.7	2-016	15.60	1.78	65	71.8	66.5	5.0	2-146	66.34	2.62
15	21.8	16.5	5.0	2-115	17.12	2.62	65	73.8	67.0	6.0	2-231	66.27	3.53
16	22.8	17.5	5.0	2-116	18.72	2.62	70	76.8	71.5	5.0	2-149	71.12	2.62
18	24.8	19.5	5.0	2-117	20.29	2.62	70	78.8	72.0	6.0	2-233	72.62	3.53
20	24.8	21.5	3.7	2-019	20.35	1.78	75	83.8	77.0	6.0	2-234	75.79	3.53
20	26.8	21.5	5.0	2-118	21.89	2.62	80	86.8	81.5	5.0	2-152	82.22	2.62
24	30.8	25.5	5.0	2-120	25.07	2.62	80	88.8	82.0	6.0	2-236	82.14	3.53
25	29.8	26.5	3.7	2-023	26.70	1.78	85	93.8	87.0	6.0	2-237	85.32	3.53
25	31.8	26.5	5.0	2-121	26.64	2.62	90	98.8	92.0	6.0	2-239	91.67	3.53
26	32.8	27.5	5.0	2-122	28.24	2.62	95	103.8	97.0	6.0	2-241	98.02	3.53
28	34.8	29.5	5.0	2-123	29.82	2.62	100	106.8	101.5	5.0	2-155	101.27	2.62
30	34.8	31.5	3.7	2-026	31.47	1.78	100	108.8	102.0	6.0	2-242	101.19	3.53
30	36.8	31.5	5.0	2-124	31.42	2.62	105	113.8	107.0	6.0	2-244	107.54	3.53
32	38.8	33.5	5.0	2-126	34.59	2.62	110	118.8	112.0	6.0	2-245	110.72	3.53
35	39.8	36.5	3.7	2-028	34.65	1.78	115	123.8	117.0	6.0	2-247	117.07	3.53
35	41.8	36.5	5.0	2-127	36.17	2.62	120	126.8	121.5	5.0	2-158	120.32	2.62
37	43.8	38.5	5.0	2-129	39.34	2.62	120	128.8	122.0	6.0	2-249	123.42	3.53
38	44.8	39.5	5.0	2-130	40.94	2.62	125	131.8	126.5	5.0	2-159	126.67	2.62
40	46.8	41.5	5.0	2-131	42.52	2.62	125	133.8	127.0	6.0	2-250	126.59	3.53
40	48.8	42.0	6.0	2-224	44.04	3.53	130	138.8	132.0	6.0	2-252	132.94	3.53
42	48.8	43.5	5.0	2-132	44.12	2.62	135	141.8	136.5	5.0	2-160	133.02	2.62
45	51.8	46.5	5.0	2-134	47.29	2.62	135	143.8	137.0	6.0	2-253	136.12	3.53

刮塵環 WB 型

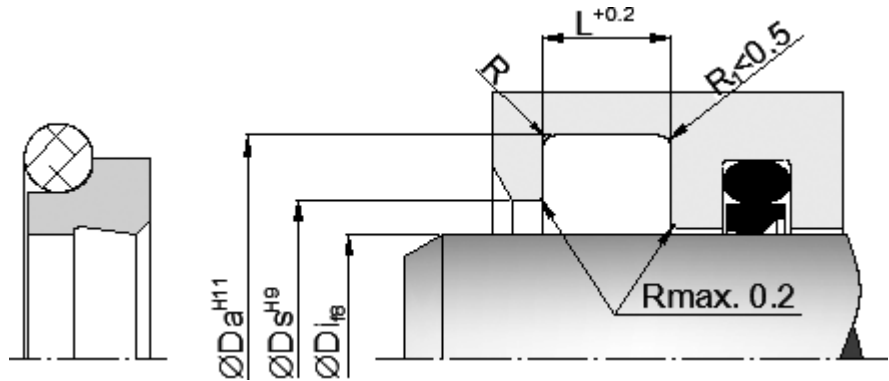
PTFE Wiper Ring – type WB



溝槽尺寸 / Grove				AS568	內徑	線徑	溝槽尺寸 / Grove				AS568	內徑	線徑
Di	Da	Ds	L	code	mm	mm	Di	Da	Ds	L	code	mm	mm
140	146.8	141.5	5.0	2-161	139.37	2.62	250	262.2	252.0	8.4	2-377	253.37	5.33
140	148.8	142.0	6.0	2-255	142.47	3.53	260	272.2	262.0	8.4	2-378	266.07	5.33
145	153.8	147.0	6.0	2-256	145.64	3.53	270	282.2	272.0	8.4	2-379	278.77	5.33
150	156.8	151.5	5.0	2-163	152.07	2.62	280	288.8	282.0	6.0	2-276	278.99	3.53
150	158.8	152.0	6.0	2-258	151.99	3.53	280	292.2	282.0	8.4	2-379	278.77	5.33
155	161.8	156.5	5.0	2-163	152.07	2.62	290	298.8	292.0	6.0	2-277	291.69	3.53
155	163.8	157.0	6.0	2-259	158.34	3.53	290	302.2	292.0	8.4	2-380	291.47	5.33
160	168.8	162.0	6.0	2-260	164.69	3.53	300	312.2	302.0	8.4	2-381	304.17	5.33
165	177.2	167.0	8.4	2-363	164.47	5.33	310	322.2	312.0	8.4	2-381	404.17	5.33
170	178.8	172.0	6.0	2-261	171.04	3.53	320	332.2	322.0	8.4	2-382	329.57	5.33
175	183.8	177.0	6.0	2-262	177.39	3.53	330	338.8	332.0	6.0	2-279	329.79	3.53
175	187.2	177.0	8.4	2-365	177.17	5.33	330	342.2	332.0	8.4	2-382	329.57	5.33
180	188.8	182.0	6.0	2-263	183.74	3.53	340	352.2	342.0	8.4	2-382	329.57	5.33
180	192.2	182.0	8.4	2-366	183.52	5.33	340	356.0	342.5	11.0	2-456	342.27	6.99
185	193.8	187.0	6.0	2-263	183.74	3.53	350	362.2	352.0	8.4	2-383	354.97	5.33
185	197.2	187.0	8.4	2-366	183.52	5.33	350	366.0	352.5	11.0	2-457	354.97	6.99
190	198.8	192.0	6.0	2-264	190.09	3.53	360	372.2	362.0	8.4	2-383	354.97	5.33
195	203.8	197.0	6.0	2-265	196.44	3.53	370	382.2	372.0	8.4	2-383	354.97	5.33
195	207.2	197.0	8.4	2-368	196.22	5.33	380	392.2	382.0	8.4	2-384	380.37	5.33
200	208.8	202.0	6.0	2-266	202.79	3.53	380	396.0	382.5	11.0	2-459	380.37	6.99
200	212.2	202.0	8.4	2-369	202.57	5.33	390	402.2	392.0	8.4	2-384	380.37	5.33
210	218.8	212.0	6.0	2-267	209.14	3.53	390	406.0	392.5	11.0	2-460	393.07	6.99
210	222.2	212.0	8.4	2-370	208.92	5.33	400	412.2	402.0	8.4	2-385	405.26	5.33
220	228.8	222.0	6.0	2-269	221.84	3.53	410	422.2	412.0	8.4	2-385	405.26	5.33
220	232.2	222.0	8.4	2-372	221.62	5.33	420	432.2	422.5	8.4	2-386	430.66	5.33
225	233.8	227.0	6.0	2-270	228.19	3.53	430	442.2	432.0	8.4	2-386	430.66	5.33
230	238.8	232.0	6.0	2-271	234.54	3.53	430	446.0	432.5	11.0	2-463	430.66	6.99
230	242.2	232.0	8.4	2-374	234.32	5.33	440	456.0	442.5	11.0	2-464	443.36	6.99
240	248.8	242.0	6.0	2-272	240.89	3.53	450	466.0	452.5	11.0	2-465	456.03	6.99
250	258.8	252.0	6.0	2-274	253.59	3.53	460	476.0	462.5	11.0	2-466	468.76	6.99

刮塵環 WB 型

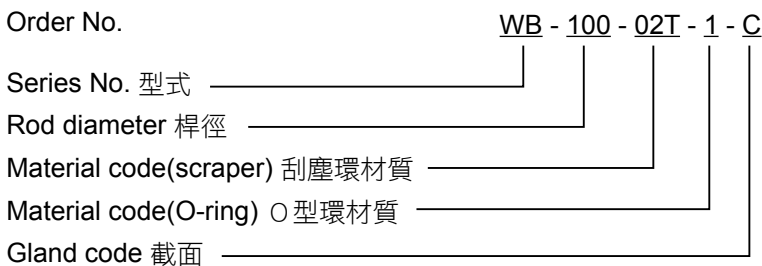
PTFE Wiper Ring – type WB



溝槽尺寸 / Grove				AS568	內徑	線徑	溝槽尺寸 / Grove				AS568	內徑	線徑
Di	Da	Ds	L	code	mm	mm	Di	Da	Ds	L	code	mm	mm
470	486.0	472.5	11.0	2-466	468.76	6.99	1000	1020	1002.5	14.0	P1005	1004.5	8.40
480	492.2	482.0	8.4	2-388	481.41	5.33	1050	1070	1052.5	14.0	P1055	1054.5	8.40
480	496.0	482.5	11.0	2-467	481.46	6.99	1100	1120	1102.5	14.0	P1105	1104.5	8.40
490	506.0	492.5	11.0	2-468	494.16	6.99	1150	1170	1152.5	14.0	P1155	1154.5	8.40
500	516.0	502.5	11.0	2-469	506.86	6.99							
530	542.2	532.0	8.4	2-390	532.21	5.33							
530	546.0	532.5	11.0	2-470	532.26	6.99							
580	596.0	582.5	11.0	2-472	582.68	6.99							
630	646.0	632.5	11.0	2-474	633.48	6.99							
700	720.0	702.5	14.0	P705	704.5	8.40							
750	770.0	752.5	14.0	P755	754.5	8.40							
800	820.0	802.5	14.0	P805	804.5	8.40							
850	870.0	852.5	14.0	P855	854.5	8.40							
900	920.0	902.5	14.0	P905	904.5	8.40							
950	970.0	952.5	14.0	P955	954.5	8.40							

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，刮塵環請參照 P.6，O 型環請參照 P.5

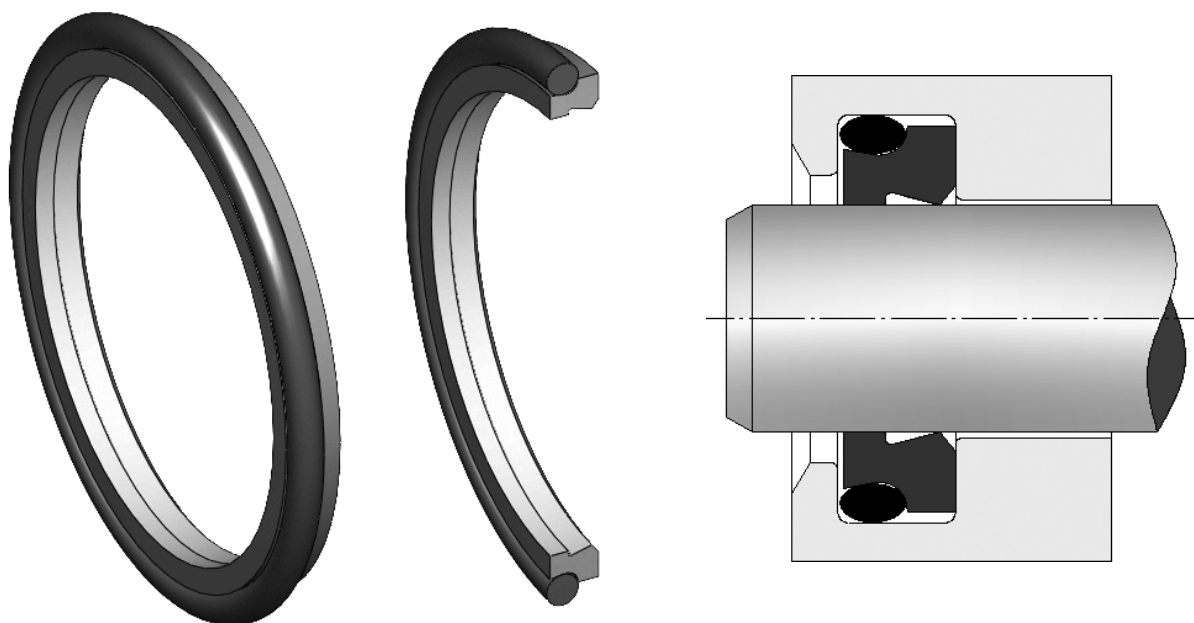
註：軸徑大於 1000.0mm 時，數字前加上 K。

例如刮塵環尺寸 1180x1200x14mm 訂購時請註明 WB-K1180-02T-1-F。

Note : For diameter $\geq 1000.0\text{mm}$, K should be added in prefix, e.g. for wiper ring 1180x1200x14mm should be denominated as WB-K1180-02T-1-F.

刮塵環 WD 型

PTFE Wiper Ring – type WD



此型刮塵環適用於雙向滑動應用，可以有效地防止灰塵、異物進入被密封的軸或柱塞，WD 型刮塵環與 WB 型材質、結構與性能均相近，但內唇油側斜面較大，故殘留油膜較厚，在較佳的應用環境下有較長的使用壽命。

The function of wiper rings is a double-acting scraper with two back-to-back arranged scraping lips. The O-ring provides constant pressure of the scraping lips against the sliding rod surface over a long period of time. It features minimal break-out and dynamic friction to guarantee no stick-slip by premium PTFE compound.

應用範圍

溫度 - 60 ~ 200°C

速度 ≤ 4 m/s

標準材質 銅填料

註：可依使用條件選用其他材質

Application Range

Temperature - 60 ~ 200°C

Speed ≤ 4m/s

Standard Material Bronze filled PTFE

Other materials are available for specified conditions

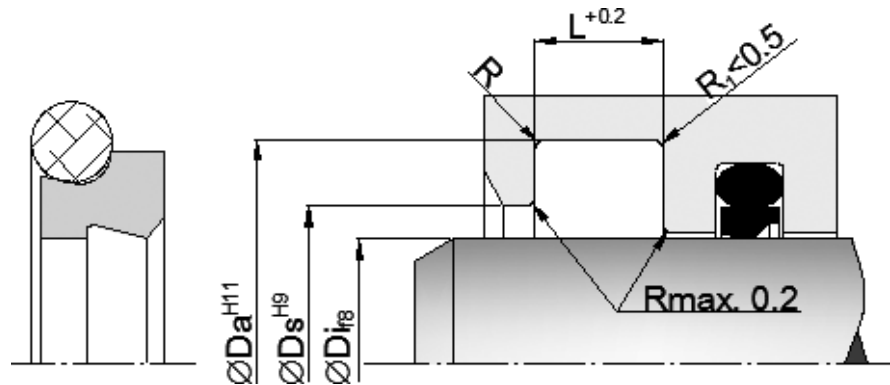
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽開口直徑 Groove Opening Dia.	溝槽 R 角 Radius	截面 Gland Code	O 型環 O-ring C.S.
ϕ Di	ϕ Da	L	ϕ Ds	R		
19.0 ~ 39.9	Di + 7.6	4.2	Di + 1.5	0.8	A	2.62
40.0 ~ 69.9	Di + 8.8	6.3	Di + 1.5	0.8	B	2.62
70.0 ~ 139.9	Di + 12.2	8.1	Di + 2.0	1.0	C	3.53
140.0 ~ 399.9	Di + 16.0	9.5	Di + 2.5	1.5	D	5.33
400.0 ~ 649.9	Di + 24.0	14.0	Di + 2.5	1.5	E	6.99
650.0 ~	Di + 27.3	16.0	Di + 2.5	2.0	F	8.40

刮塵環 WD 型

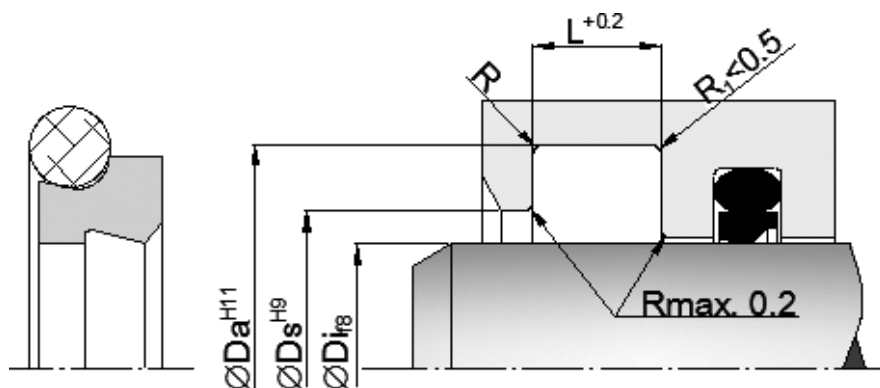
PTFE Wiper Ring – type WD



溝槽尺寸 / Grove				AS568	內徑	線徑	溝槽尺寸 / Grove				AS568	內徑	線徑
Di	Da	Ds	L	code	mm	mm	Di	Da	Ds	L	code	mm	mm
20	27.6	21.5	4.2	2-118	21.89	2.62	85	97.2	87.0	8.1	2-238	88.49	3.53
25	32.6	26.5	4.2	2-122	28.24	2.62	90	98.8	91.5	6.3	2-154	94.92	2.62
28	35.6	29.5	4.2	2-123	29.82	2.62	90	102.2	92.0	8.1	2-240	94.84	3.53
30	37.6	31.5	4.2	2-125	32.99	2.62	95	103.8	96.5	6.3	2-155	101.27	2.62
30	38.8	31.5	6.3	2-126	34.59	2.62	95	107.2	97.0	8.1	2-242	101.19	3.53
32	39.6	33.5	4.2	2-126	34.59	2.62	97	109.2	99.0	8.1	2-242	101.19	3.53
35	42.6	36.5	4.2	2-128	37.77	2.62	99	111.2	101	8.1	2-243	104.37	3.53
35	43.8	36.5	6.3	2-129	39.64	2.62	100	108.8	101.5	6.3	2-155	101.27	2.62
36	43.6	37.5	4.2	2-128	37.77	2.62	100	112.2	102.0	8.1	2-243	104.37	3.53
40	47.6	41.5	4.2	2-131	42.52	2.62	105	117.2	107.0	8.1	2-245	110.72	3.53
40	48.8	41.5	6.3	2-132	44.12	2.62	105	121.0	107.5	9.5	2-348	110.49	5.33
42	50.8	43.5	6.3	2-133	45.69	2.62	110	118.8	111.5	6.3	2-157	113.97	2.62
45	52.6	46.5	4.2	2-134	47.29	2.62	110	122.2	112.0	8.1	2-246	113.89	3.53
45	53.8	46.5	6.3	2-135	48.90	2.62	110	126.0	112.5	9.5	2-350	116.84	5.33
50	57.6	51.5	4.2	2-137	52.07	2.62	115	127.2	117.0	8.1	2-248	120.24	3.53
50	58.8	51.5	6.3	2-138	53.64	2.62	115	131.0	117.5	9.5	2-351	120.02	5.33
55	63.8	56.5	6.3	2-141	58.42	2.62	120	132.2	122.0	8.1	2-249	123.42	3.53
55	67.2	57.0	8.1	2-229	59.92	3.53	120	136.0	122.5	9.5	2-353	126.37	5.33
56	64.8	57.5	6.3	2-142	59.99	2.62	125	133.8	126.5	6.3	2-159	126.67	2.62
60	68.8	61.5	6.3	2-144	63.17	2.62	125	137.2	127.0	8.1	2-251	129.77	3.53
60	72.2	62.0	8.1	2-231	66.27	3.53	125	141.0	127.5	9.5	2-354	129.54	5.33
63	71.8	64.5	6.3	2-146	66.34	2.62	130	142.2	132.0	8.1	2-253	136.12	3.53
65	73.8	66.5	6.3	2-147	67.95	2.62	130	146.0	132.5	9.5	2-356	135.89	5.33
65	77.2	67.0	8.1	2-232	69.44	3.53	135	147.2	137.0	8.1	2-254	139.29	3.53
70	78.8	71.5	6.3	2-150	72.69	2.62	135	151.0	137.5	9.5	2-357	139.07	5.33
70	82.2	72.0	8.1	2-234	75.79	3.53	140	152.2	142.0	8.1	2-256	145.64	3.53
75	87.2	77.0	8.1	2-235	78.97	3.53	140	156.0	142.5	9.5	2-359	145.42	5.33
80	88.8	81.5	6.3	2-152	82.22	2.62	145	157.2	147.0	8.1	2-258	151.99	3.53
80	92.2	82.0	8.1	2-237	85.32	3.53	145	161.0	147.5	9.5	2-361	151.77	5.33
85	93.8	86.5	6.3	2-153	88.57	2.62	150	162.2	152.0	8.1	2-258	151.99	3.53

刮塵環 WD 型

PTFE Wiper Ring – type WD

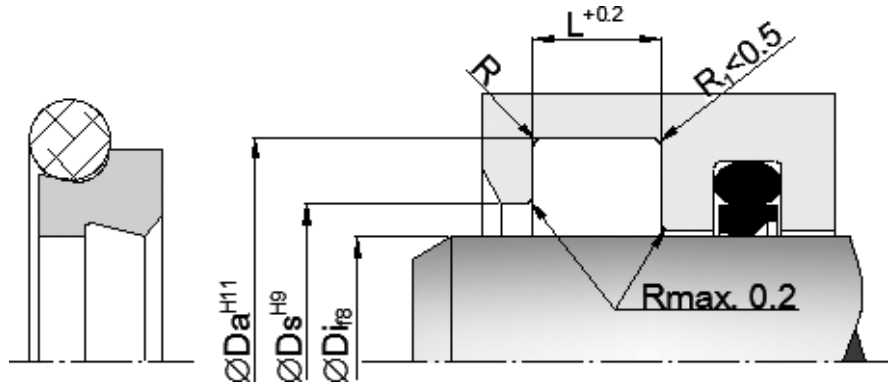


溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L			
150	166.0	152.5	9.5	2-361	151.77	5.33
153	169.0	155.5	9.5	2-362	158.12	5.33
155	167.2	157.0	8.1	2-259	158.34	3.53
155	171.0	157.5	9.5	2-362	158.12	5.33
160	172.2	162.0	8.1	2-260	164.69	3.53
160	176.0	162.5	9.5	2-363	164.47	5.33
165	177.2	167.0	8.1	2-261	171.04	3.53
165	181.0	167.5	9.5	2-364	170.82	5.33
170	182.2	172.0	8.1	2-261	171.04	3.53
170	186.0	172.5	9.5	2-365	177.17	5.33
175	187.2	177.0	8.1	2-262	177.39	3.53
175	191.0	177.5	9.5	2-365	177.17	5.33
180	192.2	182.0	8.1	2-263	183.74	3.53
180	196.0	182.5	9.5	2-366	183.52	5.33
185	197.2	187.0	8.1	2-264	190.09	3.53
190	202.2	192.0	8.1	2-265	196.44	3.53
190	206.0	192.5	9.5	2-368	196.22	5.33
192	208.0	194.5	9.5	2-368	196.22	5.33
195	207.2	197.0	8.1	2-265	196.44	3.53
195	211.0	197.5	9.5	2-368	196.22	5.33
200	212.2	202.0	8.1	2-266	202.79	3.53
200	216.0	202.5	9.5	2-369	202.57	5.33
210	222.2	212.0	8.1	2-268	215.49	3.53
210	226.0	212.5	9.5	2-371	215.27	5.33
220	232.2	222.0	8.1	2-269	221.84	3.53
220	236.0	222.5	9.5	2-372	221.62	5.33
230	242.2	232.0	8.1	2-271	234.54	3.53
230	246.0	232.5	9.5	2-374	234.32	5.33
240	256.0	242.5	9.5	2-376	247.02	5.33
250	262.2	252.0	8.1	2-274	253.59	3.53

溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L			
250	266.0	252.5	9.5	2-377	253.37	5.33
260	272.2	262.0	8.1	2-275	266.29	3.53
260	276.0	262.5	9.5	2-378	266.07	5.33
270	286.0	272.5	9.5	2-379	278.77	5.33
270	294.0	272.5	14.0	2-451	278.77	6.99
280	292.2	282.0	8.1	2-276	278.99	3.53
280	296.0	282.5	9.5	2-379	278.77	5.33
280	304.0	282.5	14.0	2-452	291.47	6.99
300	316.0	302.5	9.5	2-381	304.17	5.33
310	334.0	312.5	14.0	2-454	316.87	6.99
320	332.2	322.0	8.1	2-279	329.79	3.53
320	336.0	322.5	9.5	2-382	329.57	5.33
320	344.0	322.5	14.0	2-455	329.57	6.99
330	346.0	332.5	9.5	2-382	329.57	5.33
350	366.0	352.5	9.5	2-383	354.97	5.33
360	372.2	362.0	8.1	2-280	355.19	3.53
360	384.0	362.5	14.0	2-458	367.67	6.99
370	394.0	372.5	14.0	2-459	380.37	6.99
380	396.0	382.5	9.5	2-384	380.37	5.33
400	416.0	402.5	9.5	2-385	405.26	5.33
400	424.0	402.5	14.0	2-461	405.26	6.99
410	434.0	412.5	14.0	2-462	417.96	6.99
420	444.0	422.5	14.0	2-463	430.66	6.99
440	464.0	442.5	14.0	2-464	443.36	6.99
450	466.0	452.5	9.5	2-387	456.06	5.33
450	474.0	452.5	14.0	2-465	456.06	6.99
460	484.0	462.5	14.0	2-466	468.76	6.99
470	494.0	472.5	14.0	2-467	481.46	6.99
500	516.0	502.5	9.5	2-389	506.81	5.33
500	524.0	502.5	14.0	2-469	506.86	6.99

刮塵環 WD 型

PTFE Wiper Ring – type WD



溝槽尺寸 / Grove				AS568	內徑	線徑
Di	Da	Ds	L	code	mm	mm
550	574.0	552.5	14.0	—	564.30	6.99
600	624.0	602.5	14.0	2-473	608.08	6.99
650	674.0	652.5	14.0	2-475	658.88	6.99
650	677.3	652.5	16.0	P655	654.5	8.40
700	727.3	702.5	16.0	P705	704.5	8.40
750	777.3	752.5	16.0	P755	754.5	8.40
800	827.3	802.5	16.0	P805	804.5	8.40
850	877.3	852.5	16.0	P855	854.5	8.40
900	927.3	902.5	16.0	P905	904.5	8.40
950	977.3	952.5	16.0	P955	954.5	8.40
1000	1027.3	1002.5	16.0	P1005	1004.5	8.40
1050	1077.3	1052.5	16.0	P1055	1054.5	8.40
1100	1127.3	1102.5	16.0	P1105	1104.5	8.40
1150	1177.3	1152.5	16.0	P1155	1154.5	8.40

※ 特殊尺寸亦可提供

訂購範例 (How to order)

Order No. WD - 100 - 02T - 1 - C

Series No. 型式 _____

Rod diameter 桿徑 _____

Material code (scraper) 刮塵環材質 _____

Material code (O-ring) O型環材質 _____

Gland code 截面 _____

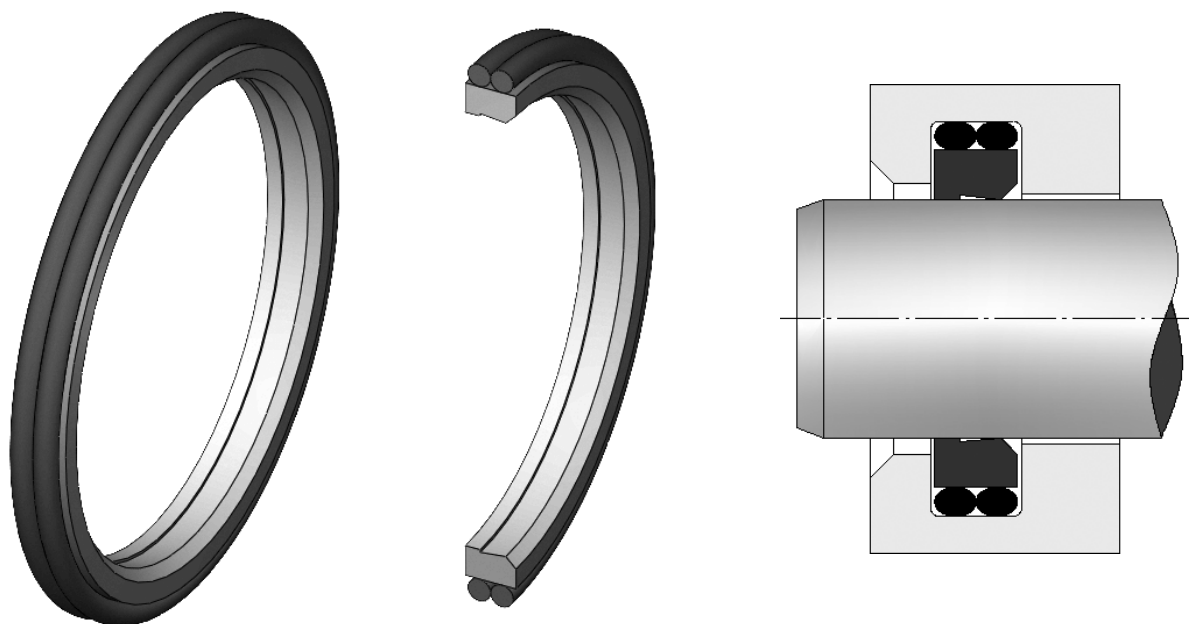
※ 可依使用條件選用其他材質，刮塵環請參照 P.6，O 型環請參照 P.5

註：桿徑大於 1000.0mm 時，數字前加上 K。

例如刮塵環尺寸 1180x1207.3x16mm 訂購時請註明 WD-K1180-02T-1-F。

Note : For rod diameter $\geq 1000.0\text{mm}$, K should be added in prefix, e.g. for wiper ring 1180x1207.3x16mm should be denominated as WD-K1180-02T-1-F

刮塵環 WE 型
PTFE Wiper Ring – type WE



此型刮塵環適用於雙向滑動應用，具有雙密封唇，外唇為刮塵設計而內唇有動密封功能；並利用雙 O 形環提供 PTFE 密封件適度地抵緊滑動桿件，故具有優異的刮塵與初步密封雙效。由於雙 O 形環的均衡致能能力可應用於短行程而作動頻仍如堆高機、射出成形機、壓床、農業機械等場合。對採用回泵能力不足的密封設計，建議在溝槽底部加開洩壓孔。

The wiper rings is a double-acting scraper with two O-rings functioned as elastic energizer to preload the PTFE compound ring. Its profile seal ring consists of a sealing lip and a wiper edge. The double O-ring design can improve rod sealing performance under short-stroke and high-frequency motion that is common application in fork-lift trucks, injection molding machines, compression molding press, and agriculture equipment. A small bore hole for relieving pressure is recommended for some combined seals that lack of sufficient pump-back capability.

應用範圍

溫度 - 60 ~ 200°C
速度 ≤ 5 m/s
標準材質 銅填料
註：可依使用條件選用其他材質

Application Range

Temperature - 60 ~ 200°C
Speed ≤ 5 m/s
Standard Material Bronze filled PTFE
Other materials are available for specified conditions

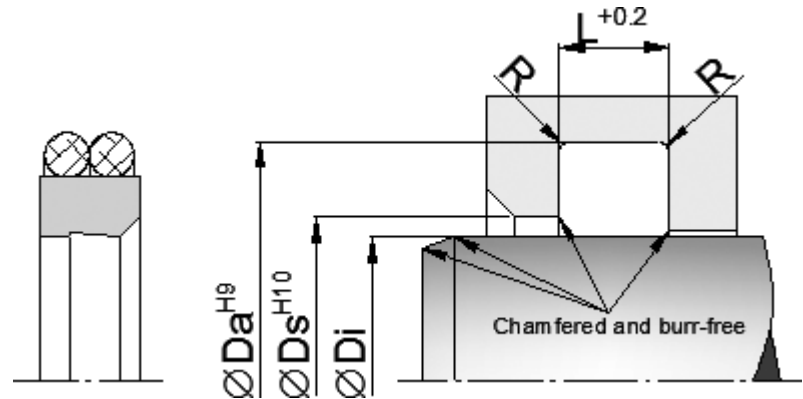
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽開口直徑 Groove Opening Dia.	溝槽 R 角 Radius	截面 Gland Code	O 型環 O-ring C.S.
ϕ Di	ϕ Da	L	ϕ Ds	R		
19.0 ~ 39.9	Di + 7.6	4.2	Di + 1.0	0.4	A	1.78
40.0 ~ 69.9	Di + 8.8	6.3	Di + 1.5	1.2	B	2.62
70.0 ~ 139.9	Di + 12.2	8.1	Di + 2.0	2.0	C	3.53
140.0 ~ 499.9	Di + 16.0	11.5	Di + 2.0	2.0	D	5.33
500.0 ~ 649.9	Di + 24.0	15.5	Di + 2.0	2.0	E	6.99
650.0 ~	Di + 27.3	18.0	Di + 2.5	2.0	F	8.40

刮塵環 WE 型

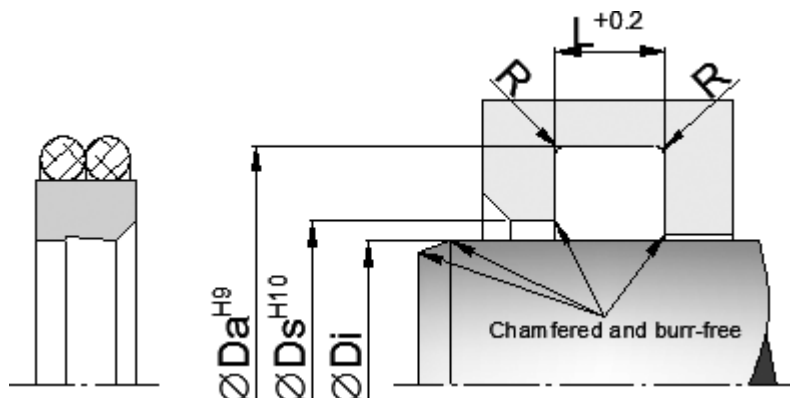
PTFE Wiper Ring – type WE



溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L				Di	Da	Ds	L			
20	27.6	21.0	4.2	2-021	23.52	1.78	115	131.0	117.0	11.5	2-351	120.02	5.33
25	32.6	26.0	4.2	2-024	28.30	1.78	120	132.2	122.0	8.1	2-249	123.42	3.53
30	37.6	31.0	4.2	2-028	34.65	1.78	120	136.0	122.0	11.5	2-352	123.19	5.33
30	38.8	31.5	6.3	2-125	32.99	2.62	125	137.2	127.0	8.1	2-251	129.77	3.53
40	47.6	41.0	4.2	2-031	44.17	1.78	125	141.0	127.0	11.5	2-354	129.54	5.33
40	48.8	41.5	6.3	2-132	44.12	2.62	130	142.2	132.0	8.1	2-252	132.94	3.53
45	53.8	46.5	6.3	2-135	48.90	2.62	130	146.0	132.0	11.5	2-355	132.72	5.33
50	57.6	51.0	4.2	2-034	53.70	1.78	135	147.2	137.0	8.1	2-254	139.29	3.53
50	58.8	51.5	6.3	2-138	53.64	2.62	135	151.0	137.0	11.5	2-357	139.07	5.33
55	63.8	56.5	6.3	2-141	58.42	2.62	140	152.2	142.0	8.1	3-256	145.64	3.53
55	67.2	57.0	8.1	2-229	59.92	3.53	140	156.0	142.0	11.5	2-359	145.42	5.33
60	68.8	61.5	6.3	2-144	63.17	2.62	145	157.2	147.0	8.1	2-257	148.82	3.53
60	72.2	62.0	8.1	2-230	63.09	3.53	145	161.0	147.0	11.5	2-360	148.59	5.33
65	77.2	67.0	8.1	2-232	69.44	3.53	150	162.2	152.0	8.1	2-258	151.99	3.53
70	78.8	71.5	6.3	2-150	72.69	2.62	150	166.0	152.0	11.5	2-361	151.77	5.33
70	82.2	72.0	8.1	2-234	75.79	3.53	155	171.0	157.0	11.5	2-362	158.12	5.33
75	87.2	77.0	8.1	2-235	78.97	3.53	155	167.2	157.0	8.1	2-259	158.34	3.53
80	88.8	81.5	6.3	2-152	82.22	2.62	160	172.2	162.0	8.1	2-260	164.69	3.53
80	92.2	82.0	8.1	2-237	85.32	3.53	160	176.0	162.0	11.5	2-363	164.47	5.33
85	93.8	86.5	6.3	2-153	88.57	2.62	165	181.0	167.0	11.5	2-364	170.82	5.33
85	97.2	87.0	8.1	2-238	88.49	3.53	170	182.2	172.0	8.1	2-261	171.04	3.53
90	102.2	92.0	8.1	2-240	94.84	3.53	170	186.0	172.0	11.5	2-364	170.82	5.33
95	103.8	96.5	6.3	2-154	94.92	2.62	175	191.0	177.0	11.5	2-365	177.17	5.33
95	107.2	97.0	8.1	2-241	98.02	3.53	180	192.2	182.0	8.1	2-263	183.74	3.53
100	112.2	102.0	8.1	2-243	104.37	3.53	180	196.0	182.0	11.5	2-366	183.52	5.33
105	117.2	107.0	8.1	2-254	110.72	3.53	185	197.2	187.0	8.1	2-264	190.09	3.53
105	121.0	107.0	11.5	2-348	110.49	5.33	185	201.0	187.0	11.5	2-367	189.87	5.33
110	122.2	112.0	8.1	2-246	113.89	3.53	190	202.2	192.0	8.1	2-264	190.09	3.53
110	126.0	112.0	11.5	2-349	113.67	5.33	190	206.0	192.0	11.5	2-367	189.87	5.33
115	127.2	117.0	8.1	2-248	120.24	3.53	195	207.2	197.0	8.1	2-266	202.79	3.53

刮塵環 WE 型

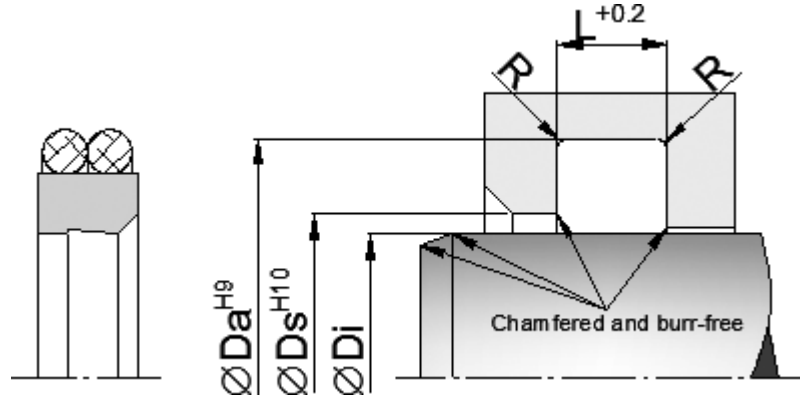
PTFE Wiper Ring – type WE



溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L			
195	211.0	197.0	11.5	2-368	196.22	5.33
200	212.2	202.0	8.1	2-266	202.79	3.53
200	216.0	202.0	11.5	2-369	202.57	5.33
210	222.2	212.0	8.1	2-268	215.49	3.53
210	226.0	212.0	11.5	2-371	215.27	5.33
220	232.2	222.0	8.1	2-268	221.84	3.53
220	236.0	222.0	11.5	2-372	221.62	5.33
230	242.2	232.0	8.1	2-271	234.54	3.53
230	246.0	232.0	11.5	2-374	234.32	5.33
240	252.2	242.0	8.1	2-272	240.89	3.53
240	256.0	242.0	11.5	2-375	240.67	5.33
250	262.2	252.0	8.1	2-274	253.59	3.53
250	266.0	252.0	11.5	2-377	253.37	5.33
280	292.2	282.0	8.1	2-276	278.99	3.53
290	302.2	292.0	8.1	2-277	291.69	3.53
290	306.0	292.0	11.5	2-380	291.47	5.33
300	312.2	302.0	8.1	2-278	304.39	3.53
300	316.0	302.0	11.5	2-381	304.17	5.33
320	344.0	322.0	15.5	2-455	329.57	6.99
330	346.0	332.0	11.5	2-382	329.57	5.33
350	366.0	352.0	11.5	2-383	354.97	5.33
350	374.0	352.0	15.5	2-457	354.97	6.99
360	384.0	362.0	15.5	2-458	367.67	6.99
370	394.0	372.0	15.5	2-459	380.37	6.99
380	396.0	382.0	11.5	2-384	380.37	5.33
390	414.0	392.0	15.5	2-460	393.07	6.99
400	416.0	402.0	11.5	2-385	405.26	5.33
400	424.0	402.0	15.5	2-461	405.26	6.99
410	434.0	412.0	15.5	2-462	417.96	6.99
420	444.0	422.0	15.5	2-463	430.66	6.99

溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L			
430	446.0	432.0	11.5	2-386	430.66	5.33
440	464.0	442.0	15.5	2-464	443.36	6.99
450	474.0	452.0	15.5	2-465	456.06	6.99
460	484.0	462.0	15.5	2-466	468.76	6.99
480	496.0	482.0	11.5	2-388	481.41	5.33
490	514.0	492.0	15.5	2-468	494.16	6.99
500	524.0	502.0	15.5	2-469	506.86	6.99
530	546.0	532.2	11.5	2-390	532.21	5.33
530	554.0	532.0	15.5	2-470	532.26	6.99
550	574.0	552.0	15.5	2-471	557.66	6.99
550	577.3	552.5	18.0	P550	549.50	8.40
560	587.3	562.5	18.0	P560	559.50	8.40
570	597.3	572.5	18.0	P570	569.50	8.40
580	604.0	582.0	15.5	2-472	582.68	6.99
580	607.3	582.5	18.0	P580	579.50	8.40
590	617.3	592.5	18.0	P590	589.50	8.40
600	624.0	602.0	15.5	2-473	608.08	6.99
600	627.3	602.5	18.0	P600	599.50	8.40
630	654.0	632.0	15.5	2-474	633.48	6.99
650	674.0	652.0	15.5	2-475	658.88	6.99
650	677.3	652.5	18.0	P650	649.50	8.40
700	727.3	702.5	18.0	P700	699.50	8.40
750	777.3	752.5	18.0	P750	749.50	8.40
800	827.3	802.5	18.0	P800	799.50	8.40
850	877.3	852.5	18.0	P850	849.50	8.40
900	927.3	902.5	18.0	P900	899.50	8.40
950	977.3	952.5	18.0	P950	949.50	8.40
1000	1027.3	1002.5	18.0	P1000	999.50	8.40
1050	1077.3	1052.5	18.0	P1050	1050.0	8.40
1100	1127.3	1102.5	18.0	P1100	1100.0	8.40

刮塵環 WE 型
PTFE Wiper Ring – type WE



溝槽尺寸 / Grove				AS568 code	內徑 mm	線徑 mm
Di	Da	Ds	L			
1150	1177.3	1152.5	18.0	P1150	1150.0	8.40
1200	1227.3	1202.5	18.0	P1200	1200.0	8.40
1250	1277.3	1252.5	18.0	P1250	1250.0	8.40
1300	1327.3	1302.5	18.0	P1300	1300.0	8.40
1350	1377.3	1352.5	18.0	P1350	1350.0	8.40
1400	1427.3	1402.5	18.0	P1400	1400.0	8.40
1450	1477.3	1452.5	18.0	P1450	1450.0	8.40

※ 特殊尺寸亦可提供

訂購範例 (How to order)

Order No. WE - 100 - 02T - 1 - C

Series No. 型式 _____

Rod diameter 桿徑 _____

Material code (scraper) 刮塵環材質 _____

Material code (O-ring) O型環材質 _____

Gland code 截面 _____

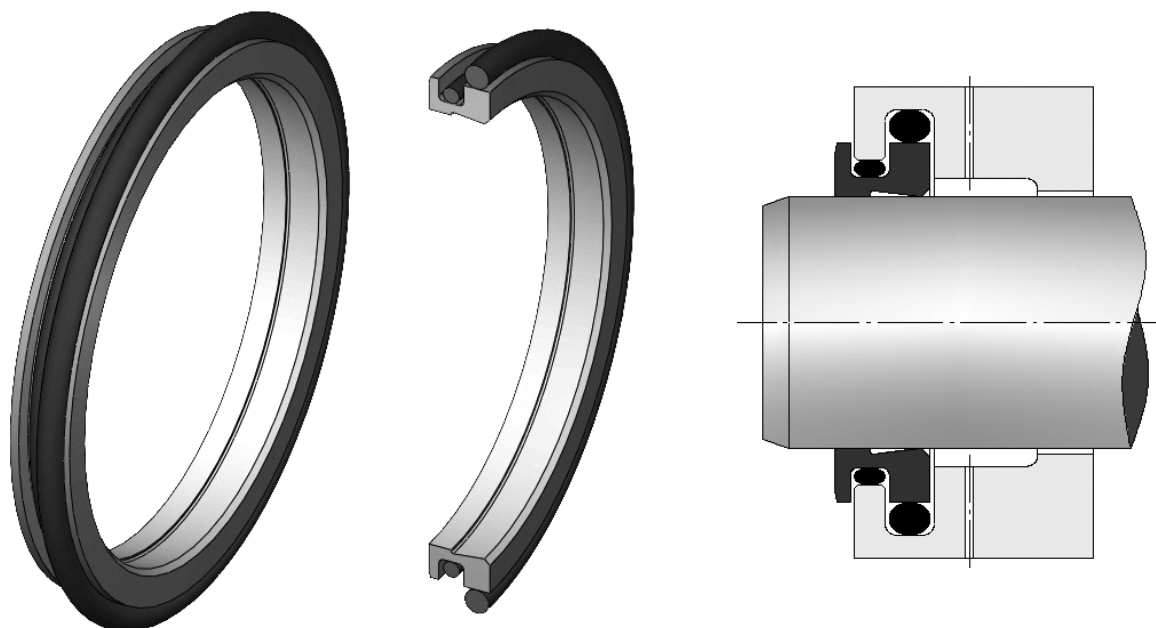
※ 可依使用條件選用其他材質，刮塵環請參照 P.6，O 型環請參照 P.5

註：桿徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1180x1207.3x18mm 訂購時請註明 WE-K1180-02T-1-F。

Note : For rod diameter \geq 1000.0mm, K should be added in prefix, e.g. for wiper ring 1180x1207.3x18mm should be denominated as WE-K1180-02T-1-F

刮塵環 WF 型
PTFE Wiper Ring – type WF



此型刮塵環適用於大直徑的雙向滑動應用，具有雙密封唇，外唇為刮塵設計而內唇有動密封功能；並利用一大一小 O 形環對 PTFE 密封件內外唇的不同抵緊力，提供非常優異的刮塵性能。由於雙 O 形環的均衡致能能力可應用於較大桿徑、短行程而作動頻仍如鋼鐵廠油壓缸、射出成形機、油壓壓床等場合。

The wiper rings is especially suitable for large rod diameter cylinders that is very common in steel industry. The low-friction PTFE profile ring is preloaded by two different O-rings that provide self-regulated energizing to two scraping lips. The special design can provide optimum dust extruding and overall tightness in harsh environment application.

應用範圍

溫度 - 60 ~ 200°C
 速度 ≤ 5m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Temperature - 60 ~ 200°C
 Speed ≤ 5 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

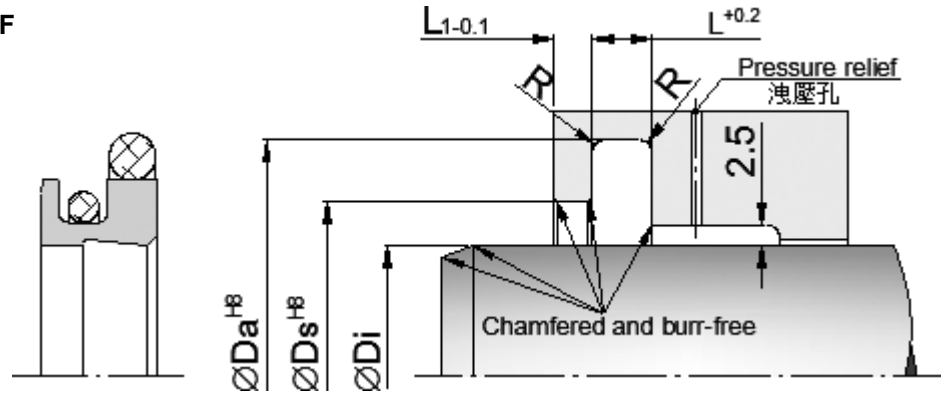
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom		溝槽寬 Groove Width		密封件高度 Seal Height	溝槽 R 角 Radius	截面 Gland Code	O 型環 O-ring C.S.	
	ϕ Da	ϕ Ds	L	L1				H	R
100.0 ~ 299.9	Di + 22.2	Di + 10.7	6.3	4.2	13.5	1.2	A	5.33	5.33
300.0 ~ 629.9	Di + 33.0	Di + 15.1	8.1	6.3	18.4	1.2	B	6.99	5.33
630.0 ~	Di + 36.5	Di + 15.1	9.5	6.3	19.8	2.0	C	8.40	5.33

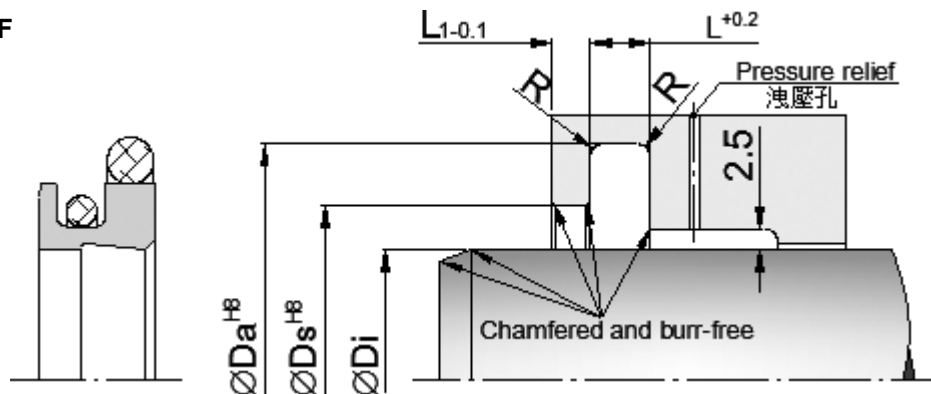
刮塵環 WF 型

PTFE Wiper Ring – type WF



溝槽尺寸 /Grove					油封高度 H	AS568 code	內徑 mm	線徑 mm	UAD-Ri code	內徑 mm	線徑 mm
Di	Da	Ds	L	L1							
100	122.2	110.7	6.3	4.2	13.5	2-348	110.49	5.33	2-243	104.37	3.53
110	132.2	120.7	6.3	4.2	13.5	2-351	120.02	5.33	2-246	113.89	3.53
120	142.2	130.7	6.3	4.2	13.5	2-354	129.54	5.33	2-249	123.42	3.53
130	152.2	140.7	6.3	4.2	13.5	2-357	139.07	5.33	2-252	132.94	3.53
140	162.2	150.7	6.3	4.2	13.5	2-361	151.77	5.33	2-255	142.47	3.53
150	172.2	160.7	6.3	4.2	13.5	2-362	158.12	5.33	2-258	151.99	3.53
160	182.2	170.7	6.3	4.2	13.5	2-364	170.82	5.33	2-260	164.69	3.53
170	192.2	180.7	6.3	4.2	13.5	2-365	177.17	5.33	2-261	171.04	3.53
180	202.2	190.7	6.3	4.2	13.5	2-367	189.87	5.33	2-263	183.74	3.53
190	212.2	200.7	6.3	4.2	13.5	2-369	202.57	5.33	2-264	190.09	3.53
200	222.2	210.7	6.3	4.2	13.5	2-370	208.92	5.33	2-266	202.79	3.53
210	232.2	220.7	6.3	4.2	13.5	2-372	221.62	5.33	2-267	209.14	3.53
220	242.2	230.7	6.3	4.2	13.5	2-373	227.97	5.33	2-269	221.84	3.53
230	252.2	240.7	6.3	4.2	13.5	2-375	240.67	5.33	2-271	234.54	3.53
240	262.2	250.7	6.3	4.2	13.5	2-376	247.02	5.33	2-272	240.89	3.53
280	302.2	290.7	6.3	4.2	13.5	2-380	291.47	5.33	2-276	278.99	3.53
300	333	315.1	8.1	6.3	18.4	2-454	316.87	6.99	2-381	304.17	5.33
350	383	365.1	8.1	6.3	18.4	2-458	367.67	6.99	2-383	354.97	5.33
380	413	395.1	8.1	6.3	18.4	2-460	393.07	6.99	2-384	380.37	5.33
400	433	415.1	8.1	6.3	18.4	2-462	417.96	6.99	2-385	405.26	5.33
430	463	445.1	8.1	6.3	18.4	2-464	443.36	6.99	2-386	430.66	5.33
480	513	495.1	8.1	6.3	18.4	2-468	494.16	6.99	2-388	481.41	5.33
630	666.5	645.1	9.5	6.3	19.8	—	650.00	8.40	2-394	633.00	5.33
640	676.5	655.1	9.5	6.3	19.8	—	660.00	8.40	2-394	633.00	5.33
660	696.5	675.1	9.5	6.3	19.8	—	680.00	8.40	2-395	658.00	5.33
670	706.5	685.1	9.5	6.3	19.8	—	690.00	8.40	—	674.00	5.33
680	716.5	695.1	9.5	6.3	19.8	—	700.00	8.40	—	684.00	5.33
740	776.5	755.1	9.5	6.3	19.8	—	760.00	8.40	—	744.00	5.33
770	806.5	785.1	9.5	6.3	19.8	—	790.00	8.40	—	774.00	5.33
800	836.5	815.1	9.5	6.3	19.8	—	820.00	8.40	—	804.00	5.33

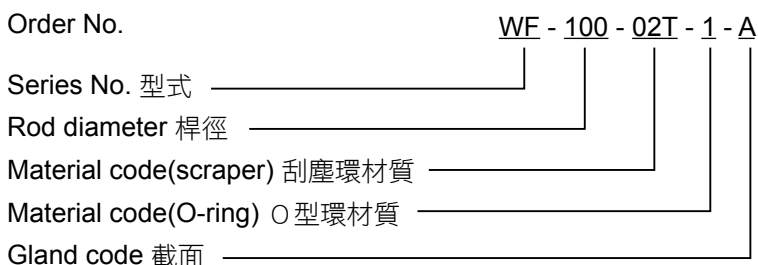
刮塵環 WF 型
PTFE Wiper Ring – type WF



溝槽尺寸 /Grove					油封高度 H	AS568 code	內徑 mm	線徑 mm	UAD-Ri code	內徑 mm	線徑 mm
Di	Da	Ds	L	L1							
820	856.5	835.1	9.5	6.3	19.8	—	840.00	8.40	—	824.00	5.33
830	866.5	845.1	9.5	6.3	19.8	—	850.00	8.40	—	834.00	5.33
850	886.5	865.1	9.5	6.3	19.8	—	870.00	8.40	—	854.00	5.33
890	926.5	905.1	9.5	6.3	19.8	—	910.00	8.40	—	894.00	5.33
950	986.5	965.1	9.5	6.3	19.8	—	970.00	8.40	—	954.00	5.33
970	1006.5	985.1	9.5	6.3	19.8	—	990.00	8.40	—	974.00	5.33
1150	1186.5	1165.1	9.5	6.3	19.8	—	1170.00	8.40	—	1154.00	5.33
1350	1386.5	1365.1	9.5	6.3	19.8	—	1370.00	8.40	—	1354.00	5.33

※ 特殊尺寸亦可提供

訂購範例 (How to order)



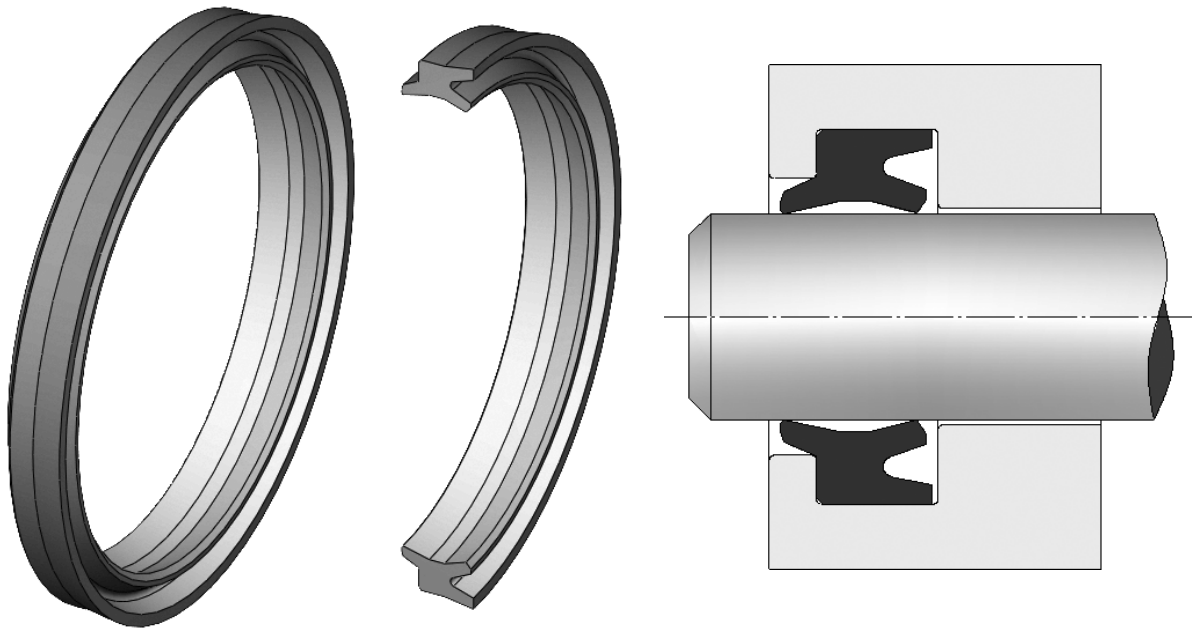
※ 可依使用條件選用其他材質，刮塵環請參照 P.6，O 型環請參照 P.5

註：桿徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1180x1216.5x9.5mm 訂購時請註明 WF-K1180-02T-1-C。

Note : For rod diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1180x1216.5x9.5mm should be denominated as WF-K1180-02T-1-C.

軸用雙唇防塵油封 UA2 型
Double-lip Wiper – type UA2



UA2 型軸用雙唇防塵油封具有雙密封唇設計，可安裝於封閉型溝槽，有效地阻止粉塵、碎屑進入、防止液壓外漏流失，避免耐磨環刮傷並維持密封件的長效功能。材質可依工作溫度選用 NBR 或 Viton。

UA2 profile effectively prevents dust, dirt, grains of sand and chippings of metal by special double wiping lips made of NBR or Viton. The smaller profile provides easier installation even for solid gland.

應用範圍

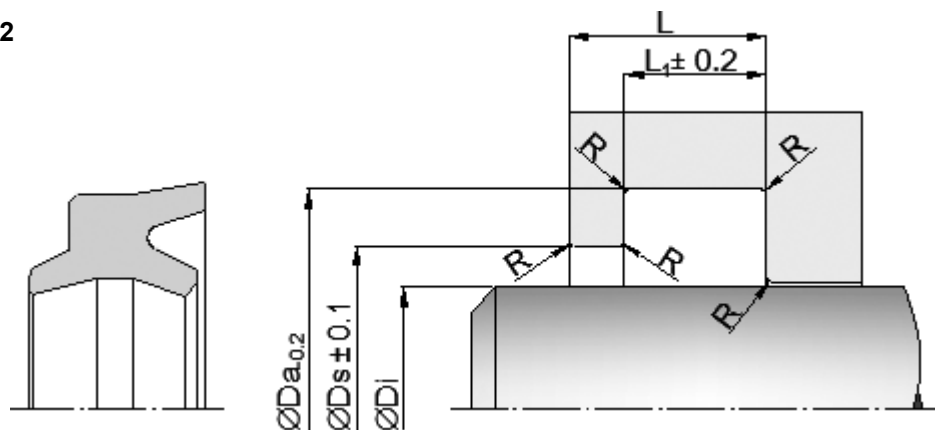
溫度 -25~+100°C (NBR)
 -20~+150°C (Viton)
 速度 ≤ 1.0 m/s
 流體 液壓
 材質 NBR/Viton

Application Range

Temperature -25~+100°C (NBR)
 -20~+150°C (Viton)
 Speed ≤ 1.0 m/s
 Medium Hydraulic oils
 Material NBR/Viton

軸用雙唇防塵油封 UA2 型

Double-lip Wiper – type UA2



溝槽尺寸 / Grove					訂單編號	溝槽尺寸 / Grove					訂單編號
Di	Da	Ds	L	L1	Order code	Di	Da	Ds	L	L1	Order code
14	22	18.3	7.0	5.0	UA2 012A N1X	105	115	110	10.0	7.0	UA2 105A N1X
16	24	20.3	7.0	5.0	UA2 016A N1X	106	116	111	10.0	7.0	UA2 106A N1X
18	26	22.3	7.0	5.0	UA2 018A N1X	110	120	115	10.0	7.0	UA2 110A N1X
20	28	24.3	7.0	5.0	UA2 020A N1X	112	122	117	10.0	7.0	UA2 112A N1X
22	30	26.3	7.0	5.0	UA2 022A N1X	115	125	120	10.0	7.0	UA2 115A N1X
28	36	32.3	7.0	5.0	UA2 028A N1X	118	128	123	10.0	7.0	UA2 118A N1X
30	38	34	8.0	6.0	UA2 030A N1X	125	138	132	11.0	8.0	UA2 125A N1X
32	40	36	8.0	6.0	UA2 032A N1X	132	145	139	11.0	8.0	UA2 132A N1X
35	43	39	8.0	6.0	UA2 035A N1X	140	153	147	11.0	8.0	UA2 140A N1X
36	44	40	8.0	6.0	UA2 036A N1X	145	158	152	11.0	8.0	UA2 145A N1X
38	46	42	8.0	6.0	UA2 038A N1X	150	163	157	11.0	8.0	UA2 150A N1X
40	48	44	8.0	6.0	UA2 040A N1X	160	173	167	11.0	8.0	UA2 160A N1X
45	43	49	8.0	6.0	UA2 045A N1X	160	174	167	11.0	8.0	UA2 160B N1X
50	58	54	8.0	6.0	UA2 050A N1X	165	178	172	11.0	8.0	UA2 165A N1X
53	61	57	8.0	6.0	UA2 053A N1X	170	185	178	17.0	12.0	UA2 170A N1X
55	63	59	8.0	6.0	UA2 055A N1X	175	188	182	11.0	8.0	UA2 175A N1X
56	64	60	8.0	6.0	UA2 056A N1X	180	193	187	11.0	8.0	UA2 180A N1X
60	68	64	8.0	6.0	UA2 060A N1X	180	194	187	11.0	8.0	UA2 180B N1X
63	71	67	8.0	6.0	UA2 063A N1X	185	198	192	11.0	8.0	UA2 185A N1X
65	73	69	8.0	6.0	UA2 065A N1X	200	213	207	11.0	8.0	UA2 200A N1X
67	75	71	8.0	6.0	UA2 067A N1X	205	218	212	11.0	8.0	UA2 205A N1X
70	80	75	10.0	7.0	UA2 070A N1X	210	223	217	11.0	8.0	UA2 210A N1X
71	81	76	10.0	7.0	UA2 071A N1X	224	237	231	11.0	8.0	UA2 224A N1X
75	85	80	10.0	7.0	UA2 075A N1X	240	256	248	15.0	11.0	UA2 240A N1X
80	90	85	10.0	7.0	UA2 080A N1X	250	266	258	14.0	10.0	UA2 250A N1X
85	95	90	10.0	7.0	UA2 085A N1X	250	266	258	15.0	11.0	UA2 250B N1X
90	100	95	10.0	7.0	UA2 090A N1X	280	296	288	14.0	10.0	UA2 280A N1X
95	105	100	10.0	7.0	UA2 095A N1X	355	375	365	16.0	11.0	UA2 355A N1X
100	110	105	10.0	7.0	UA2 100A N1X	500	520	510	17.5	12.5	UA2 500A N1X

※ 特殊尺寸亦可提供

訂購範例 (How to order)

NBR:

Order No. UA2 - 014A - N1X

Series No. 型式 _____|_____|_____

Rod diameter 桿徑 _____|_____|_____

Material code(scraper) 刮塵環材質 _____|_____|_____

Viton:

Order No. UA2 - 014A - V1X

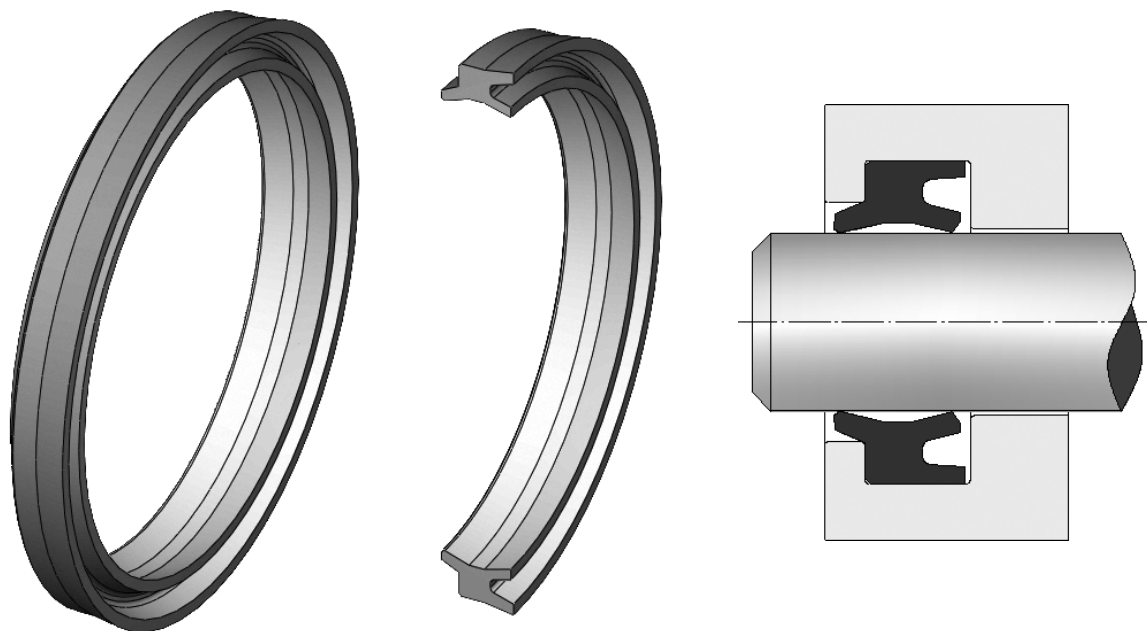
Series No. 型式 _____|_____|_____

Rod diameter 桿徑 _____|_____|_____

Material code(scraper) 刮塵環材質 _____|_____|_____

軸用雙唇防塵油封 AV 型

Double-lip Wiper – type AV



AV 型軸用雙唇防塵油封具有雙密封唇設計，採用耐水解、耐磨耗的 TPU，可安裝於封閉型溝槽，有效地阻止粉塵、碎屑進入、防止液壓外漏流失，避免耐磨環刮傷並維持密封件的長效功能。

AV profile effectively prevents dust, dirt, grains of sand and chippings of metal by special double wiping lips made of TPU with good Hydrolysis and high wear resistance. The smaller profile provides easier installation even for solid gland.

應用範圍

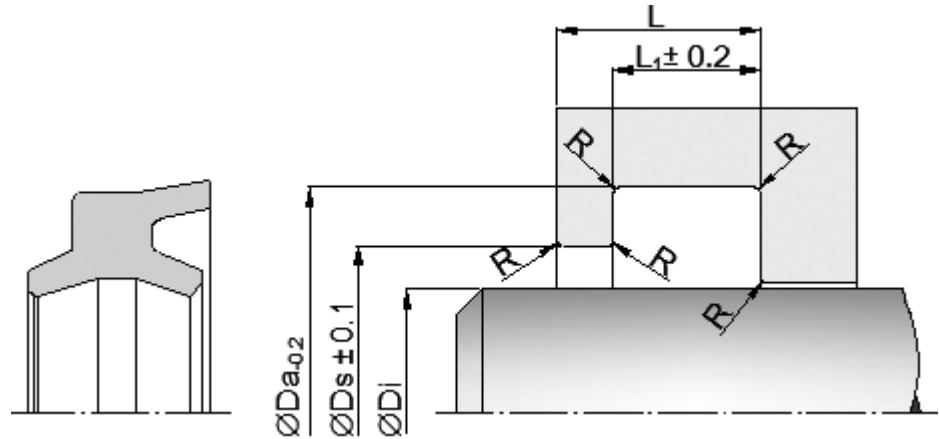
溫度 -10 ~ +110°C
 速度 ≤ 1.0 m/s
 流體 液壓
 材質 聚胺脂

Application Range

Temperature -10 ~ +110°C
 Speed ≤ 1.0 m/s
 Medium Hydraulic oils
 Material TPU

軸用雙唇防塵油封 AV 型

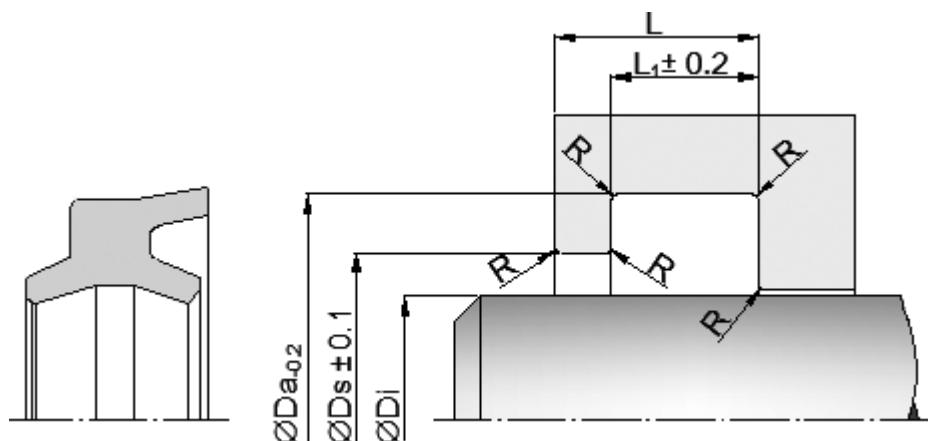
Double-lip Wiper – type AV



溝槽尺寸 / Grove					訂單編號	溝槽尺寸 / Grove					訂單編號
Di	Da	Ds	L	L1	Order code	Di	Da	Ds	L	L1	Order code
14	22	18.3	7.0	5.0	AV 014A G3X	76	86	81	10.0	7.0	AV 076A G3X
16	24	20.3	7.0	5.0	AV 016A G3X	78	88	83	10.0	7.0	AV 078A G3X
18	26	22.3	7.0	5.0	AV 018A G3X	80	90	85	10.0	7.0	AV 080A G3X
20	28	24.3	7.0	5.0	AV 020A G3X	82	92	87	10.0	7.0	AV 082A G3X
22	30	26.3	7.0	5.0	AV 022A G3X	84	94	89	10.0	7.0	AV 084A G3X
24	32	28.3	7.0	5.0	AV 024A G3X	86	96	91	10.0	7.0	AV 086A G3X
26	34	30.3	7.0	5.0	AV 026A G3X	88	98	93	10.0	7.0	AV 088A G3X
28	36	32.3	7.0	5.0	AV 028A G3X	90	100	95	10.0	7.0	AV 090A G3X
30	38	34	8.0	6.0	AV 030A G3X	92	102	97	10.0	7.0	AV 092A G3X
32	40	36	8.0	6.0	AV 032A G3X	94	104	99	10.0	7.0	AV 094A G3X
34	42	38	8.0	6.0	AV 034A G3X	96	106	101	10.0	7.0	AV 096A G3X
36	44	40	8.0	6.0	AV 036A G3X	98	108	103	10.0	7.0	AV 098A G3X
38	46	42	8.0	6.0	AV 038A G3X	100	110	105	10.0	7.0	AV 100A G3X
40	48	44	8.0	6.0	AV 040A G3X	102	112	107	10.0	7.0	AV 102A G3X
42	50	46	8.0	6.0	AV 042A G3X	104	114	109	10.0	7.0	AV 104A G3X
44	52	48	8.0	6.0	AV 044A G3X	106	116	111	10.0	7.0	AV 106A G3X
46	54	50	8.0	6.0	AV 046A G3X	108	118	113	10.0	7.0	AV 108A G3X
48	56	52	8.0	6.0	AV 048A G3X	110	120	115	10.0	7.0	AV 110A G3X
50	58	54	8.0	6.0	AV 050A G3X	112	122	117	10.0	7.0	AV 112A G3X
52	60	56	8.0	6.0	AV 052A G3X	114	124	119	10.0	7.0	AV 114A G3X
54	62	58	8.0	6.0	AV 054A G3X	116	126	121	10.0	7.0	AV 116A G3X
56	64	60	8.0	6.0	AV 056A G3X	118	128	123	10.0	7.0	AV 118A G3X
58	66	62	8.0	6.0	AV 058A G3X	120	133	127	11.0	8.0	AV 120A G3X
60	68	64	8.0	6.0	AV 060A G3X	122	135	129	11.0	8.0	AV 122A G3X
62	70	66	8.0	6.0	AV 062A G3X	124	137	131	11.0	8.0	AV 124A G3X
64	72	68	8.0	6.0	AV 064A G3X	126	139	133	11.0	8.0	AV 126A G3X
66	74	70	8.0	6.0	AV 066A G3X	128	141	135	11.0	8.0	AV 128A G3X
68	78	73	10.0	7.0	AV 068A G3X	130	143	137	11.0	8.0	AV 130A G3X
70	80	75	10.0	7.0	AV 070A G3X	132	145	139	11.0	8.0	AV 132A G3X
72	82	77	10.0	7.0	AV 072A G3X	134	147	141	11.0	8.0	AV 134A G3X
74	84	79	10.0	7.0	AV 074A G3X	136	149	143	11.0	8.0	AV 136A G3X

軸用雙唇防塵油封 AV 型

Double-lip Wiper – type AV



溝槽尺寸 / Grove					訂單編號	溝槽尺寸 / Grove					訂單編號
Di	Da	Ds	L	L1	Order code	Di	Da	Ds	L	L1	Order code
138	151	145	11.0	8.0	AV 138A G3X	230	246	237	15.0	11.0	AV 230A G3X
140	153	147	11.0	8.0	AV 140A G3X	235	251	242	15.0	11.0	AV 235A G3X
142	155	149	11.0	8.0	AV 142A G3X	240	256	247	15.0	11.0	AV 240A G3X
144	157	151	11.0	8.0	AV 144A G3X	245	261	252	15.0	11.0	AV 245A G3X
146	159	153	11.0	8.0	AV 146A G3X	250	266	257	15.0	11.0	AV 250A G3X
148	161	155	11.0	8.0	AV 148A G3X						
150	163	157	11.0	8.0	AV 150A G3X						
155	168	162	11.0	8.0	AV 155A G3X						
160	173	167	11.0	8.0	AV 160A G3X						
165	178	172	11.0	8.0	AV 165A G3X						
170	183	177	11.0	8.0	AV 170A G3X						
175	188	182	11.0	8.0	AV 175A G3X						
180	193	187	11.0	8.0	AV 180A G3X						
185	198	192	11.0	8.0	AV 185A G3X						
190	203	197	11.0	8.0	AV 190A G3X						
195	208	202	11.0	8.0	AV 195A G3X						
200	213	207	11.0	8.0	AV 200A G3X						
205	218	212	11.0	8.0	AV 205A G3X						
210	223	217	11.0	8.0	AV 210A G3X						
215	228	222	11.0	8.0	AV 215A G3X						
220	233	227	11.0	8.0	AV 220A G3X						
225	241	232	15.0	11.0	AV 225A G3X						

※ 特殊尺寸亦可提供

訂購範例 (How to order)

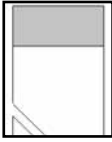
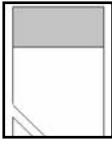
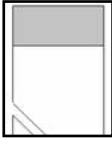
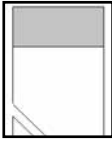
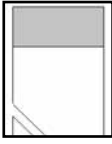
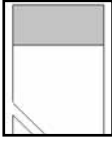
Order No. AV - 014A - G3X

Series No. 型式 _____

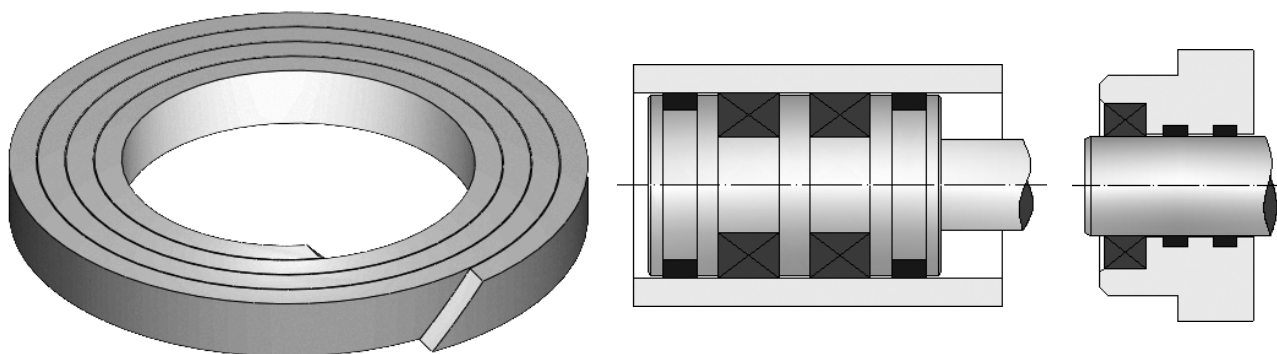
Rod diameter 桿徑 _____

Material code (scraper) 刮塵環材質 _____

導引環 (Guiding Rings/Tapes)

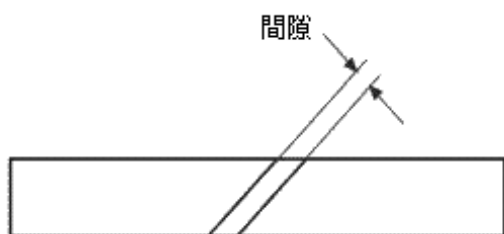
型式	圖示	材質編號 (Material code)	材質內容 (Material ontent)	壓縮強度 (Mpa)	工作溫度 (°C)	速度 (m/s)	頁數 (Page.)
GB		B050T	合成強化纖維		-40~+130	1.0	P.36
		B200T	聚酯纖維經由 酚醛樹脂浸漬壓製	320	-40~+130	1.0	
		B550T	聚酯纖維經由 酚醛樹脂浸漬壓製	270	-40~+130	1.0	
GD		02T	銅填料	25	-60~+200	15	P.39
GR		B200	合成纖維 + 酚醛樹脂 + 鐵氟龍	310	-40~+130	1.0	P.41
		B500	合成纖維經由 酚醛樹脂 + 鐵氟龍浸漬後 纏繞	350	-40~+130	1.0	

耐磨環 GB 型
Guide Ring – Type GB

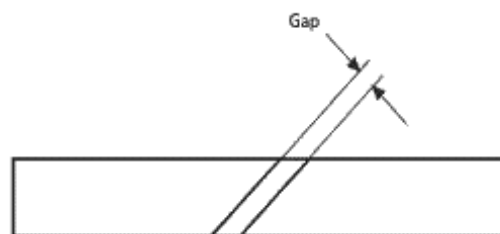


GB 導正帶適用於大直徑液壓缸 (> 100mm)，主要的材料有 B050T、B200T 與 B550T 三種，均可承受相當高的負荷，耐腐蝕、不吸水，適用於各種液壓流體。而且表面經特殊處理，有許多微孔如小油池可發揮潤滑作用，滑動摩擦係數低，故與金屬面的滑動性良好。B200T、B050T 為聚酯纖維經酚醛樹脂浸漬壓制而成，機械強度高、物性優異，加上特殊的表面處理，故適用於如建設機械、農機以及各種惡劣工況下的液壓缸。導正帶可以整捲供貨，最大長度為 5500mm，亦可依據所需直徑與切口型式供應。

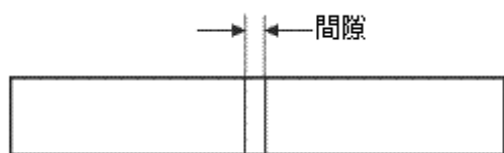
GB guiding tapes are widely used in hydraulic cylinders, especially for very big diameters. The B050T and B200T consists of pressed, phenolic resin quoted, synthetic fiber plates and B550T consists of same resin but polyester fiber. Diminutive induced pores on the surface take effect as lubricate reservoir. Both materials are appropriate for high strain, maintenance-free and corrosion-resistant. They are good in agriculture and construction machinery, even under disadvantageous conditions. GB profile is also available in spiral version in different diameters upon request.



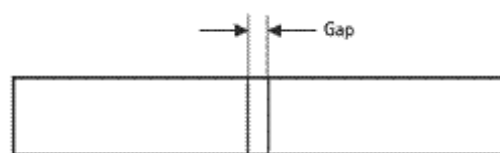
標準設計：斜切



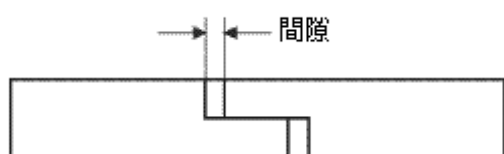
Standard design: Diagonal cut



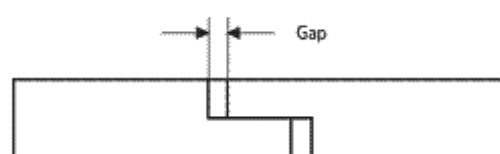
特殊設計：直切



Special design: Straight 90° cut



特殊設計：Z 切



Special design: Stepped Z-cut

技術規範

B050T 的技術規範

試驗項目	試驗標準	特性值
最大徑向壓力		100 N/mm ² 500 N/mm ²
工作溫度		-60 ~ +120°C
滑動摩擦係數 (乾)	DIN 53375	0.15 μ
最大滑動速度		1.0 m/s

Technical specifications of B050T

Test item	Test Standard	value
Radial pressure		100 N/mm ² 500 N/mm ²
Working temperature range		-60 ~ +120°C
Sliding friction coeff. against steel(Dry)	DIN 53375	0.15 μ
Max. sliding speed		1.0 m/s

B200T 的技術規範

試驗項目	試驗標準	特性值
抗壓強度	EN ISO 604	320 N/mm ²
工作溫度		-50 ~ +130°C
滑動摩擦係數	DIN 53375	0.025 μ
最大滑動速度		1.0 m/s

Technical specifications of B200T

Test item	Test Standard	value
Compressive strength, vertical	EN ISO 604	320 N/mm ²
Working temperature range		-50 ~ +130°C
Sliding friction coeff. against steel	DIN 53375	0.025 μ
Max. sliding speed		1.0 m/s

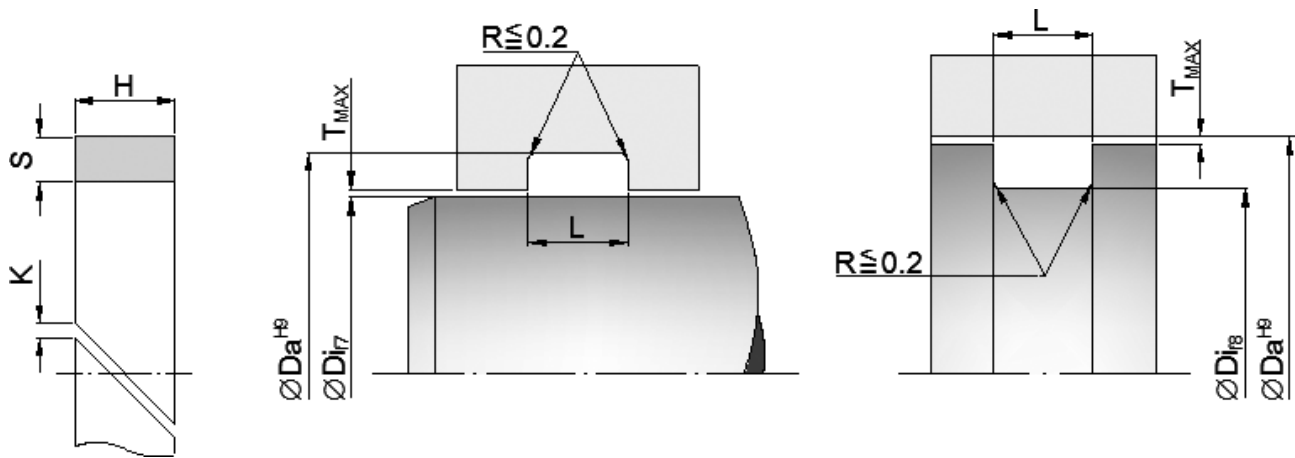
B550T 的技術規範

試驗項目	試驗標準	特性值
抗壓強度	EN ISO 604	270 N/mm ²
工作溫度		-40 ~ +130°C
滑動摩擦係數	DIN 53375	0.03 μ
最大滑動速度		1.0 m/s

Technical specifications of B550T

Test item	Test Standard	value
Compressive strength, vertical	EN ISO 604	270 N/mm ²
Working temperature range		-40 ~ +130°C
Sliding friction coeff. against steel	DIN 53375	0.03 μ
Max. sliding speed		1.0 m/s

耐磨環 GB 型
Guide Ring – Type GB



耐磨環厚度 S	溝槽寬度 L	耐磨環長度 U	訂購編號 Order code
2.5	5.6	5000	GB 25056 B050T
2.5	5.6	5500	GB 25056 B200T
2.5	5.6	5500	GB 25056 B550T
2.5	9.7	5000	GB 25097 B050T
2.5	9.7	5500	GB 25097 B200T
2.5	9.7	5500	GB 25097 B550T
2.5	15	5000	GB 25150 B050T
2.5	15	5500	GB 25150 B200T
2.5	15	5500	GB 25150 B550T
2.5	20	5000	GB 25200 B050T
2.5	20	5500	GB 25200 B200T
2.5	20	5500	GB 25200 B550T
2.5	25	5000	GB 25250 B050T
2.5	25	5500	GB 25250 B200T
2.5	25	5500	GB 25250 B550T
2.5	30	5000	GB 25300 B050T
2.5	30	5500	GB 25300 B200T
2.5	30	5500	GB 25300 B550T

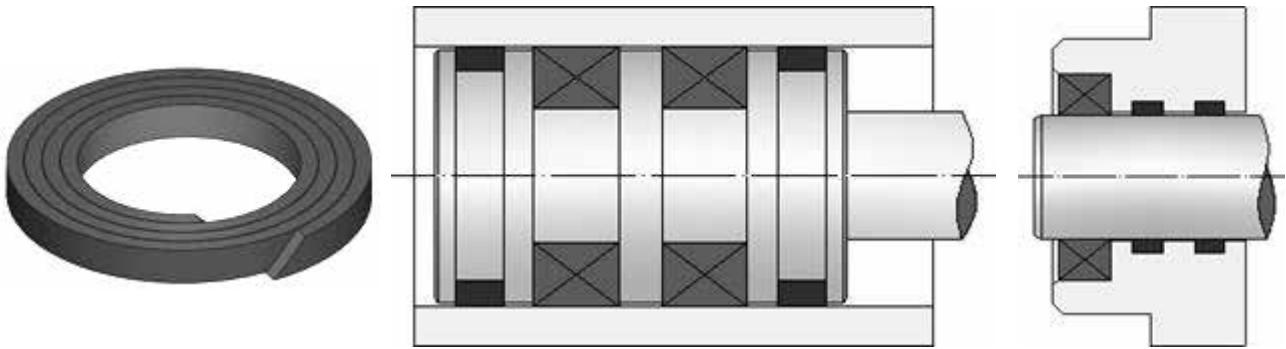
訂購範例 (How to order)

Order No. GB - 25056 - B050T

Series No. 型式 _____

Measurements 尺寸 _____

Material code 耐磨環材質 _____

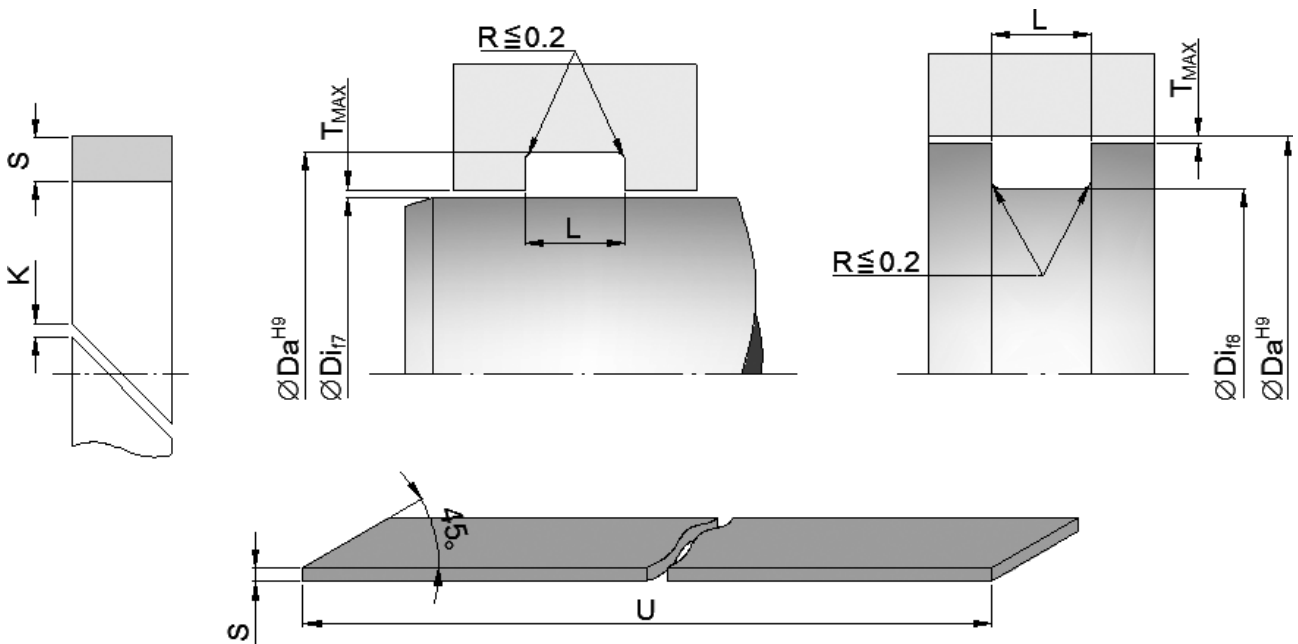
耐磨環 GD 型**PTFE Guide Ring – Type GD**

GD 導正帶採用銅填料鐵氟龍材質，可依據實際需求自行裁切，具有高載荷、低磨擦與低磨耗等特性，即使在低速高負荷下亦無滯滑效應，故適用於液壓缸的活塞與活塞桿，完全可免除金屬滑動面接觸之虞。

GP guide tape is specially designed for hydraulic cylinders with outstanding load capacity, low friction and low wear due to special formula of bronze-filled PTFET. No risk to get stick-slip even under low sliding and high lateral load. GP guide elements can be supplied as ready-to-fit cut lengths for piston and rod guidance applications, stick-slip free running and high thermal and chemical resistance. Standard material of GP guide bands is PTFE-Bronze compound which can be applied in light to medium duty. Other PTFE compound like PTFE-Carbon and PTFE-Carbon/Graphite are also available upon request.

耐磨環 GD 型

PTFE Guide Ring – Type GD



耐磨環厚度 S	溝槽寬度 L	耐磨環長度 U	訂購編號 Order code	
2.5	5.6	18000~20000(有壓花)	GD 25056 02T	
2.5	9.7	18000~20000(有壓花)	GD 25097 02T	
2.5	15	18000~20000(有壓花)	GD 25150 02T	
2.5	20	18000~20000(有壓花)	GD 25200 02T	
2.5	25	18000~20000(有壓花)	GD 25250 02T	
2.5	30	18000~20000(有壓花)	GD 25300 02T	
耐磨環長度 /Guide				
Di/Da	U — Rod	U — Piston	Tol. U	K
≦ 45	$U = \pi \cdot (d+S) - K$	$U = \pi \cdot (D-S) - K$	±0.25	1.8
> 45			±0.40	3.5
> 80			±0.60	4.4
> 100			±0.80	5.6
> 125			±1.00	6.6
> 150			±1.20	8.0
> 180			±1.40	9.5
> 215			±1.60	12.0
> 270			±1.80	15.5
> 330			±2.00	19.0

訂購範例 (How to order)

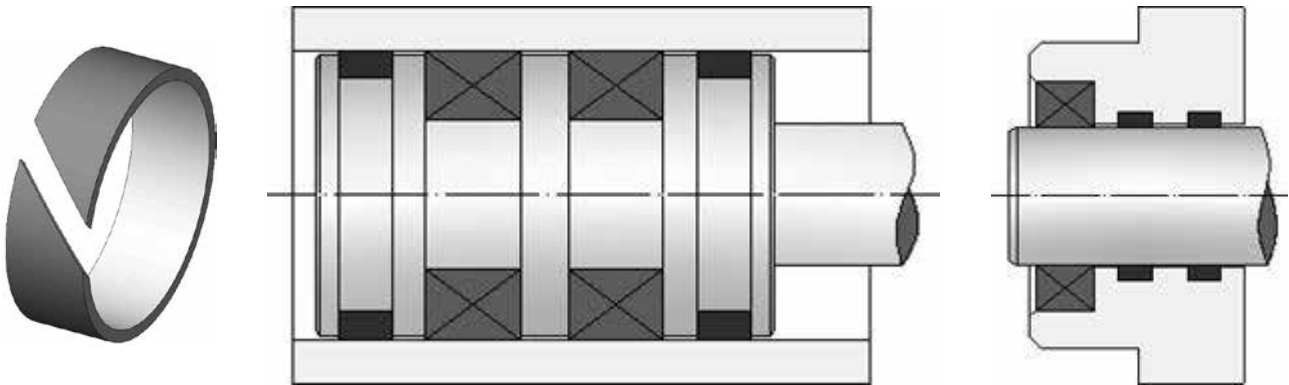
Order No. GD - 25056 - 02T

Series No. 型式 _____

Measurements 尺寸 _____

Material code 耐磨環材質 _____

耐磨環 GR 型
Guide Ring – Type GR



GR 導正環適用於重型液壓缸的桿與活塞導正，尺寸精密、易組裝、耐磨耗、吸振佳、主要的材料有 B200 與 B500 兩種，均可承受較大的側向負荷，優於一般熱固性塑膠。B200 為酚醛樹脂與棉編織層的複合材，B500 為合成纖維經酚醛樹脂與鐵氟龍浸漬後後纏繞而成的，機械強度更高、物性優異。活塞導正環及桿徑 50mm 以下的桿導正環，應採用開放溝槽設計。

Guide rings of fabric-based laminates (fabric composites) are used for heavy-duty pistons and rods serving to prevent mechanical contact between the moving parts and absorbing any side loads. B200 is a phenolic resin laminated fabric made up of impregnated cotton fabric webs. B500 is a phenolic resin-bonded synthetic fiber laminated fabric with embedded PTFE. This material exhibits very high load-bearing capacity, outstanding sliding properties and is characterized by its extreme high resilience. The material undergoes no swelling, and negligible water absorption. An open housing is recommended for piston guiding and rod diameters up to 50 mm.

導引環的寬度計算

$$B_{\min} \geq F_r \times S_F / (F_q \times D_k \text{ or } D_s)$$

其中， B_{\min} = 導引環的最小寬度 (mm)

F_r = 最大徑向負荷 (N)

S_F = 安全係數 (建議取 3~4)

F_q = 抗壓強度 (N/m)

D_k = 活塞直徑 (mm)

D_s = 桿徑 (mm)

Calculation of minimum Guide ring width

$$B_{\min} \geq F_r \times S_F / (F_d \times D_k \text{ or } D_s)$$

B_{\min} = Guide ring width min. (mm)

F_r = Max. radial load (N)

S_F = Safety factor (3 - 4 is recommended)

F_q = Compressive strength (N/m)

D_k = Piston diameter (mm)

D_s = Rod diameter (mm)

註：此算式 GB、GD 皆適用。

技術規範

B200 的技術規範

試驗項目	試驗標準	特性值
抗壓強度	EN ISO 604	290 N/m
工作溫度		-40 ~ +130°C
滑動摩擦係數	DIN 53375	
最大滑動速度		1.0 m/s

Technical specifications of B200

Test item	Test Standard	value
Compressive strength, vertical	EN ISO 604	290 N/m
Working temperature range		-40 ~ +130°C
Sliding friction coeff. against steel	DIN 53375	
Max. sliding speed		1.0 m/s

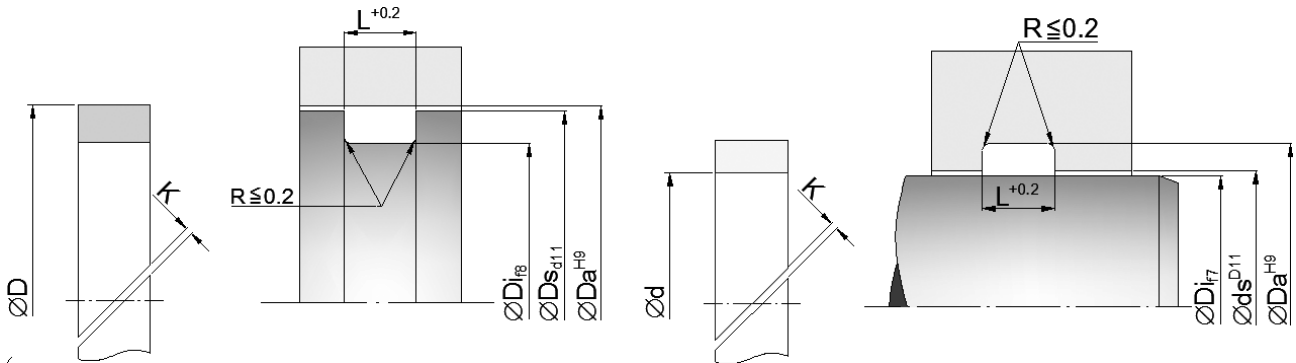
B500 的技術規範

試驗項目	試驗標準	特性值
抗壓強度	EN ISO 604	350 N/m
工作溫度		-50 ~ +130°C
滑動摩擦係數	DIN 53375	0.025 μ
最大滑動速度		1.0 m/s

Technical specifications of B500

Test item	Test Standard	value
Compressive strength, vertical	EN ISO 604	350 N/m
Working temperature range		-50 ~ +130°C
Sliding friction coeff. against steel	DIN 53375	0.025 μ
Max. sliding speed		1.0 m/s

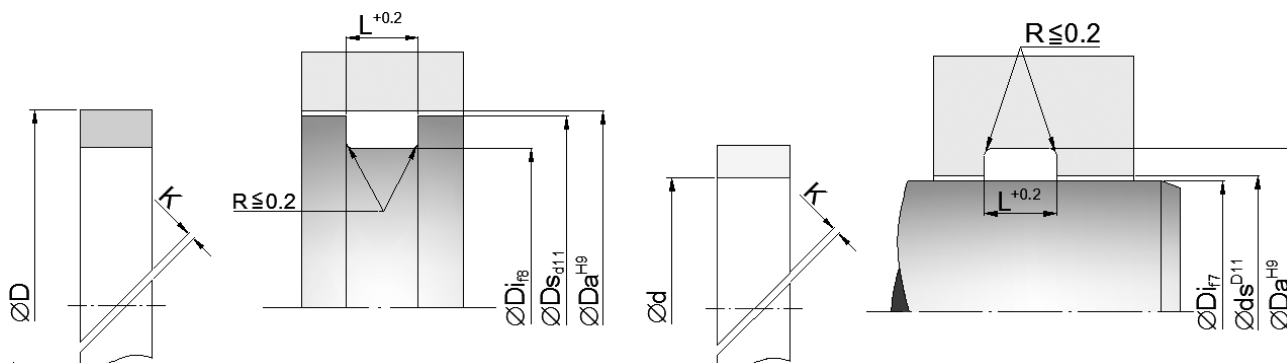
耐磨環 GR 型
Guide Ring – Type GR



溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
20	25	4.0	20.2	24.8	GR A201 B200
20	25	4.0	20.2	24.8	GR A201 B500
20	25	5.6	20.2	24.8	GR A202 B200
20	25	5.6	20.2	24.8	GR A202 B500
20	25	9.7	20.2	24.8	GR A203 B200
20	25	9.7	20.2	24.8	GR A203 B500
25	30	5.6	25.2	29.8	GR A251 B200
25	30	5.6	25.2	29.8	GR A251 B500
25	30	9.7	25.2	29.8	GR A252 B200
25	30	9.7	25.2	29.8	GR A252 B500
30	35	5.6	30.2	34.8	GR A301 B200
30	35	5.6	30.2	34.8	GR A301 B500
30	35	9.7	30.2	34.8	GR A302 B200
30	35	9.7	30.2	34.8	GR A302 B500
35	40	4.0	35.3	39.7	GR A351 B200
35	40	4.0	35.3	39.7	GR A351 B500
35	40	5.6	35.3	39.7	GR A352 B200
35	40	5.6	35.3	39.7	GR A352 B500
35	40	9.7	35.3	39.7	GR A353 B200
35	40	9.7	35.3	39.7	GR A353 B500
35	45	15.0	35.3	44.7	GR A354 B200
35	45	15.0	35.3	44.7	GR A354 B500
40	45	4.0	40.4	44.6	GR A401 B200
40	45	4.0	40.4	44.6	GR A401 B500
40	45	5.6	40.4	44.6	GR A402 B200
40	45	5.6	40.4	44.6	GR A402 B500
40	45	9.7	40.4	44.6	GR A403 B200

溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
40	45	9.7	40.4	44.6	GR A403 B500
40	45	15.0	40.4	44.6	GR A404 B200
40	45	15.0	40.4	44.6	GR A404 B500
42	47	9.7	42.4	46.6	GR A421 B200
45	50	5.6	45.4	49.6	GR A451 B200
45	50	5.6	45.4	49.6	GR A451 B500
45	50	6.3	45.4	49.6	GR A452 B200
45	50	6.3	45.4	49.6	GR A452 B500
45	50	9.7	45.4	49.6	GR A453 B200
45	50	9.7	45.4	49.6	GR A453 B500
45	50	15.0	45.4	49.6	GR A454 B200
45	50	15.0	45.4	49.6	GR A454 B500
50	55	5.6	50.4	54.6	GR A501 B200
50	55	5.6	50.4	54.6	GR A501 B500
50	55	6.3	50.4	54.6	GR A502 B200
50	55	6.3	50.4	54.6	GR A502 B500
50	55	9.7	50.4	54.6	GR A503 B200
50	55	9.7	50.4	54.6	GR A503 B500
50	55	20.0	50.4	54.6	GR A504 B200
50	55	20.0	50.4	54.6	GR A504 B500
55	60	5.6	55.4	59.6	GR A551 B200
55	60	5.6	55.4	59.6	GR A551 B500
55	60	6.3	55.4	59.6	GR A552 B200
55	60	6.3	55.4	59.6	GR A552 B500
55	60	9.7	55.4	59.6	GR A553 B200
55	60	9.7	55.4	59.6	GR A553 B500
55	60	15.0	55.4	59.6	GR A554 B200

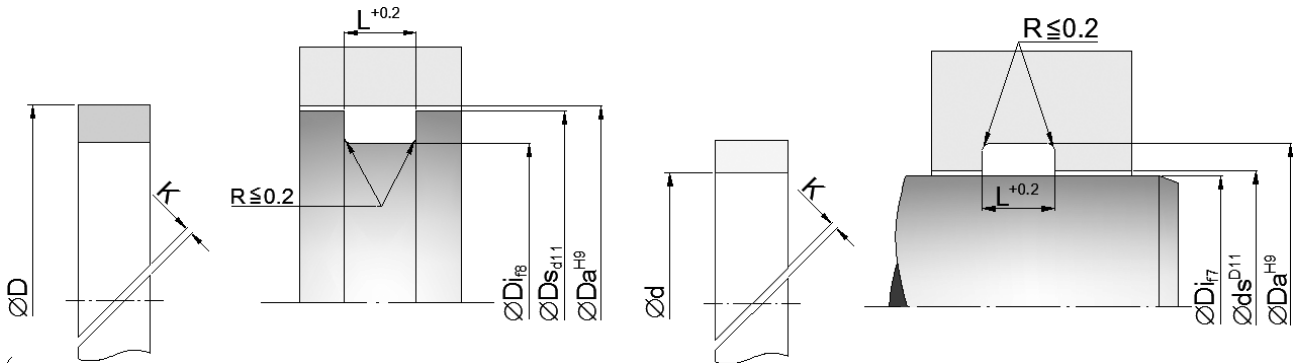
耐磨環 GR 型
Guide Ring – Type GR



溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
55	60	15.0	55.4	59.6	GR A554 B500
58	63	5.6	58.4	62.6	GR A581 B200
58	63	15.0	58.4	62.6	GR A582 B200
60	65	5.6	60.5	64.5	GR A601 B200
60	65	5.6	60.5	64.5	GR A601 B500
60	65	6.3	60.5	64.5	GR A602 B200
60	65	6.3	60.5	64.5	GR A602 B500
60	65	9.7	60.5	64.5	GR A603 B200
60	65	9.7	60.5	64.5	GR A603 B500
60	65	15.0	60.5	64.5	GR A604 B200
60	65	15.0	60.5	64.5	GR A604 B500
60	65	25.0	60.5	64.5	GR A605 B200
60	65	25.0	60.5	64.5	GR A605 B500
65	70	5.6	65.5	69.5	GR A651 B200
65	70	5.6	65.5	69.5	GR A651 B500
65	70	9.7	65.5	69.5	GR A652 B200
65	70	9.7	65.5	69.5	GR A652 B500
65	70	15.0	65.5	69.5	GR A653 B200
65	70	15.0	65.5	69.5	GR A653 B500
65	70	16.0	65.5	69.5	GR A654 B200
65	70	16.0	65.5	69.5	GR A654 B500
70	75	6.3	70.5	74.5	GR A701 B200
70	75	6.3	70.5	74.5	GR A701 B500
70	75	9.7	70.5	74.5	GR A702 B200
70	75	9.7	70.5	74.5	GR A702 B500
70	75	15.0	70.5	74.5	GR A703 B200
70	75	15.0	70.5	74.5	GR A703 B500

溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
70	75	50.0	70.5	74.5	GR A704 B200
70	75	50.0	70.5	74.5	GR A704 B500
75	80	5.6	75.5	79.5	GR A751 B200
75	80	5.6	75.5	79.5	GR A751 B500
75	80	6.3	75.5	79.5	GR A752 B200
75	80	6.3	75.5	79.5	GR A752 B500
75	80	9.7	75.5	79.5	GR A753 B200
75	80	9.7	75.5	79.5	GR A753 B500
75	80	15.0	75.5	79.5	GR A754 B200
75	80	15.0	75.5	79.5	GR A754 B500
80	85	5.6	80.5	84.5	GR A801 B200
80	85	5.6	80.5	84.5	GR A801 B500
80	85	6.3	80.5	84.5	GR A802 B200
80	85	6.3	80.5	84.5	GR A802 B500
80	85	9.7	80.5	84.5	GR A803 B200
80	85	9.7	80.5	84.5	GR A803 B500
80	85	15.0	80.5	84.5	GR A804 B200
80	85	15.0	80.5	84.5	GR A804 B500
80	85	16.0	80.5	84.5	GR A805 B200
80	85	16.0	80.5	84.5	GR A805 B500
80	85	25.0	80.5	84.5	GR A806 B200
80	85	25.0	80.5	84.5	GR A806 B500
80	85	40.0	80.5	84.5	GR A807 B200
80	85	40.0	80.5	84.5	GR A807 B500
80	85	50.0	80.5	84.5	GR A808 B200
80	85	50.0	80.5	84.5	GR A808 B500
85	90	9.7	85.5	89.5	GR A851 B200

耐磨環 GR 型
Guide Ring – Type GR

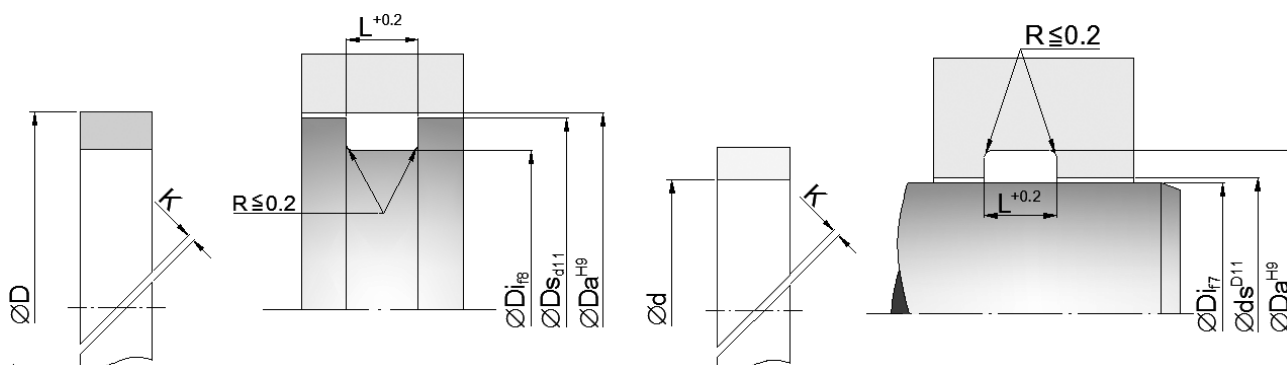


溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
85	90	9.7	85.5	89.5	GR A851 B500
85	90	15.0	85.5	89.5	GR A852 B200
85	90	15.0	85.5	89.5	GR A852 B500
85	90	40.0	85.5	89.5	GR A853 B200
85	90	40.0	85.5	89.5	GR A853 B500
85	95	25.0	85.5	94.5	GR A854 B200
85	95	25.0	85.5	94.5	GR A854 B500
87	92	9.7	87.5	91.5	GR A871 B200
90	95	9.7	90.5	94.5	GR A901 B200
90	95	9.7	90.5	94.5	GR A901 B500
90	95	15.0	90.5	94.5	GR A902 B200
90	95	15.0	90.5	94.5	GR A902 B500
90	95	25.0	90.5	94.5	GR A903 B200
90	95	25.0	90.5	94.5	GR A903 B500
90	95	50.0	90.5	94.5	GR A904 B200
90	95	50.0	90.5	94.5	GR A904 B500
90	100	15.0	90.5	99.5	GR A905 B200
90	100	15.0	90.5	99.5	GR A905 B500
95	100	9.7	95.6	99.4	GR A951 B200
95	100	9.7	95.6	99.4	GR A951 B500
95	100	15.0	95.6	99.4	GR A952 B200
95	100	15.0	95.6	99.4	GR A952 B500
95	100	40.0	95.6	99.4	GR A953 B200
95	100	40.0	95.6	99.4	GR A952 B500
100	105	9.7	100.6	104.4	GR B001 B200
100	105	9.7	100.6	104.4	GR B001 B500
100	105	15.0	100.6	104.4	GR B002 B200

溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
100	105	15.0	100.6	104.4	GR B002 B500
100	105	16.0	100.6	104.4	GR B003 B200
100	105	16.0	100.6	104.4	GR B003 B500
100	105	25.0	100.6	104.4	GR B004 B200
100	105	25.0	100.6	104.4	GR B004 B500
100	105	60.0	100.6	104.4	GR B005 B200
100	105	60.0	100.6	104.4	GR B005 B500
100	110	25.0	100.6	109.4	GR B006 B200
100	110	25.0	100.6	109.4	GR B006 B500
105	110	9.7	105.6	109.4	GR B051 B200
105	110	9.7	105.6	109.4	GR B051 B500
105	110	15.0	105.6	109.4	GR B052 B200
105	110	15.0	105.6	109.4	GR B052 B500
105	110	25.0	105.6	109.4	GR B053 B200
105	110	25.0	105.6	109.4	GR B053 B500
107	112	14.8	107.6	111.4	GR B071 B200
110	115	9.7	110.6	114.4	GR B101 B200
110	115	9.7	110.6	114.4	GR B101 B500
110	115	15.0	110.6	114.4	GR B102 B200
110	115	15.0	110.6	114.4	GR B102 B500
110	120	15.0	110.6	119.4	GR B103 B200
110	120	15.0	110.6	119.4	GR B103 B500
110	125	25.0	110.6	124.4	GR B104 B200
110	125	25.0	110.6	124.4	GR B104 B500
115	120	9.7	115.6	119.4	GR B151 B200
115	120	9.7	115.6	119.4	GR B151 B500
115	120	15.0	115.6	119.4	GR B152 B200

耐磨環 GR 型

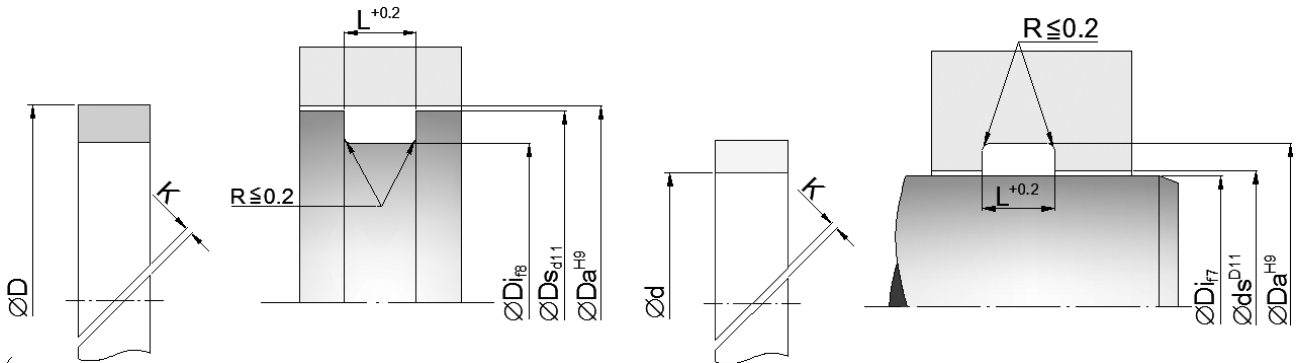
Guide Ring – Type GR



溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
115	120	15.0	115.6	119.4	GR B152 B500
115	120	25.0	115.6	119.4	GR B153 B200
115	120	25.0	115.6	119.4	GR B153 B500
120	125	9.7	120.6	124.4	GR B201 B200
120	125	9.7	120.6	124.4	GR B201 B500
120	125	15.0	120.6	124.4	GR B202 B200
120	125	15.0	120.6	124.4	GR B202 B500
120	125	25.0	120.6	124.4	GR B203 B200
120	125	25.0	120.6	124.4	GR B203 B500
125	130	5.6	125.6	129.4	GR B251 B200
125	130	5.6	125.6	129.4	GR B251 B500
125	130	9.7	125.6	129.4	GR B252 B200
125	130	9.7	125.6	129.4	GR B252 B500
125	130	15.0	125.6	129.4	GR B253 B200
125	130	15.0	125.6	129.4	GR B253 B500
125	130	25.0	125.6	129.4	GR B254 B200
125	130	25.0	125.6	129.4	GR B254 B500
130	135	15.0	130.6	134.4	GR B301 B200
130	135	15.0	130.6	134.4	GR B301 B500
130	135	12.5	130.6	134.4	GR B302 B200
135	140	9.7	135.6	139.4	GR B351 B200
135	140	9.7	135.6	139.4	GR B351 B500
135	140	15.0	135.6	139.4	GR B352 B200
135	140	15.0	135.6	139.4	GR B352 B500
135	140	20.0	135.6	139.4	GR B353 B200
135	140	20.0	135.6	139.4	GR B353 B500
135	140	25.0	135.6	139.4	GR B354 B200

溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
135	140	25.0	135.6	139.4	GR B354 B500
140	145	9.7	140.7	144.3	GR B401 B200
140	145	9.7	140.7	144.3	GR B401 B500
140	145	15.0	140.7	144.3	GR B402 B200
140	145	15.0	140.7	144.3	GR B402 B500
140	145	25.0	140.7	144.3	GR B403 B200
140	145	25.0	140.7	144.3	GR B403 B500
145	150	9.7	145.7	149.3	GR B451 B200
145	150	9.7	145.7	149.3	GR B451 B500
145	150	15.0	145.7	149.3	GR B452 B200
145	150	15.0	145.7	149.3	GR B452 B500
145	150	20.0	145.7	149.3	GR B453 B200
145	150	20.0	145.7	149.3	GR B453 B500
150	155	9.7	150.7	154.3	GR B501 B200
150	155	9.7	150.7	154.3	GR B501 B500
150	155	15.0	150.7	154.3	GR B502 B200
150	155	15.0	150.7	154.3	GR B502 B500
150	155	25.0	150.7	154.3	GR B503 B200
150	155	25.0	150.7	154.3	GR B503 B500
150	155	14.8	150.7	154.3	GR B504 B200
155	160	9.7	155.7	159.3	GR B551 B200
155	160	9.7	155.7	159.3	GR B551 B500
155	160	15.0	155.7	159.3	GR B552 B200
155	160	15.0	155.7	159.3	GR B552 B500
155	160	20.0	155.7	159.3	GR B553 B200
155	160	20.0	155.7	159.3	GR B553 B500
155	160	25.0	155.7	159.3	GR B554 B200

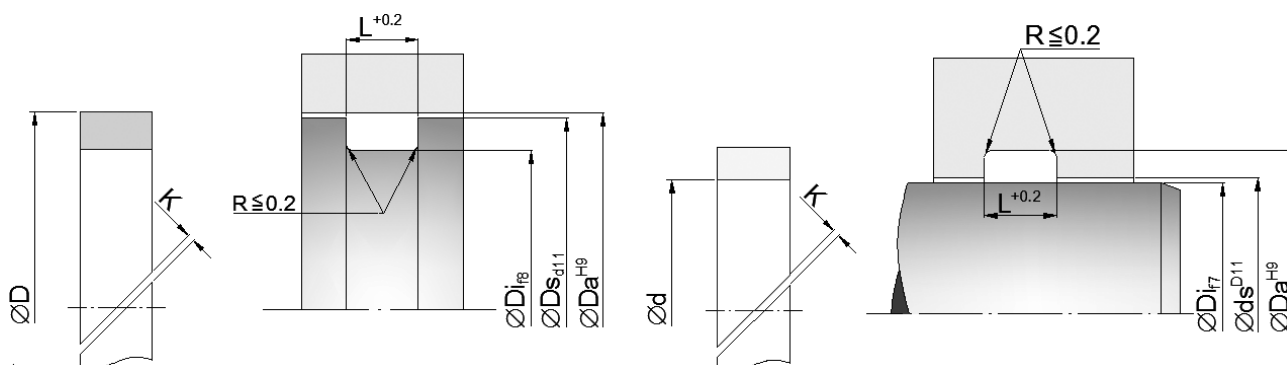
耐磨環 GR 型
Guide Ring – Type GR



溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
155	160	25.0	155.7	159.3	GR B554 B500
160	165	9.7	160.7	164.3	GR B601 B200
160	165	9.7	160.7	164.3	GR B601 B500
160	165	15.0	160.7	164.3	GR B602 B200
160	165	15.0	160.7	164.3	GR B602 B500
160	165	25.0	160.7	164.3	GR B603 B200
160	165	25.0	160.7	164.3	GR B603 B500
160	166	31.7	160.7	165.3	GR B604 B200
160	166	31.7	160.7	165.3	GR B604 B500
165	170	9.7	165.7	169.3	GR B651 B200
165	170	9.7	165.7	169.3	GR B651 B500
165	170	9.7	165.7	169.3	GR B652 B200
165	170	9.7	165.7	169.3	GR B652 B500
165	170	15.0	165.7	169.3	GR B653 B200
165	170	15.0	165.7	169.3	GR B653 B500
170	175	9.7	170.7	174.3	GR B701 B200
170	175	9.7	170.7	174.3	GR B701 B500
170	175	15.0	170.7	174.3	GR B702 B200
170	175	15.0	170.7	174.3	GR B702 B500
170	175	25.0	170.7	174.3	GR B703 B200
170	175	25.0	170.7	174.3	GR B703 B500
175	180	9.7	175.7	179.3	GR B751 B200
175	180	9.7	175.7	179.3	GR B751 B500
175	180	15.0	175.7	179.3	GR B752 B200
175	180	15.0	175.7	179.3	GR B752 B500
175	180	25.0	175.7	179.3	GR B753 B200
175	180	25.0	175.7	179.3	GR B753 B500

溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
180	185	15.0	180.7	184.3	GR B801 B200
180	185	15.0	180.7	184.3	GR B801 B500
185	190	15.0	185.7	189.3	GR B851 B200
185	190	15.0	185.7	189.3	GR B851 B500
185	190	20.0	185.7	189.3	GR B852 B200
185	190	20.0	185.7	189.3	GR B852 B500
190	195	15.0	190.7	194.3	GR B901 B200
190	195	15.0	190.7	194.3	GR B901 B500
190	200	15.0	190.7	199.3	GR B902 B200
190	200	15.0	190.7	199.3	GR B902 B500
195	200	9.7	195.7	199.3	GR B951 B200
195	200	9.7	195.7	199.3	GR B951 B500
195	200	15.0	195.7	199.3	GR B952 B200
195	200	15.0	195.7	199.3	GR B952 B500
195	200	25.0	195.7	199.3	GR B953 B200
195	200	25.0	195.7	199.3	GR B953 B500
200	205	15.0	200.7	204.3	GR C001 B200
200	205	15.0	200.7	204.3	GR C001 B500
200	205	25.0	200.7	204.3	GR C002 B200
200	205	25.0	200.7	204.3	GR C002 B500
205	210	15.0	205.7	209.3	GR C051 B200
205	210	15.0	205.7	209.3	GR C051 B500
205	210	25.0	205.7	209.3	GR C052 B200
205	210	25.0	205.7	209.3	GR C052 B500
210	215	25.0	210.7	214.3	GR C101 B200
210	215	25.0	210.7	214.3	GR C101 B500
215	220	9.7	215.7	219.3	GR C151 B200

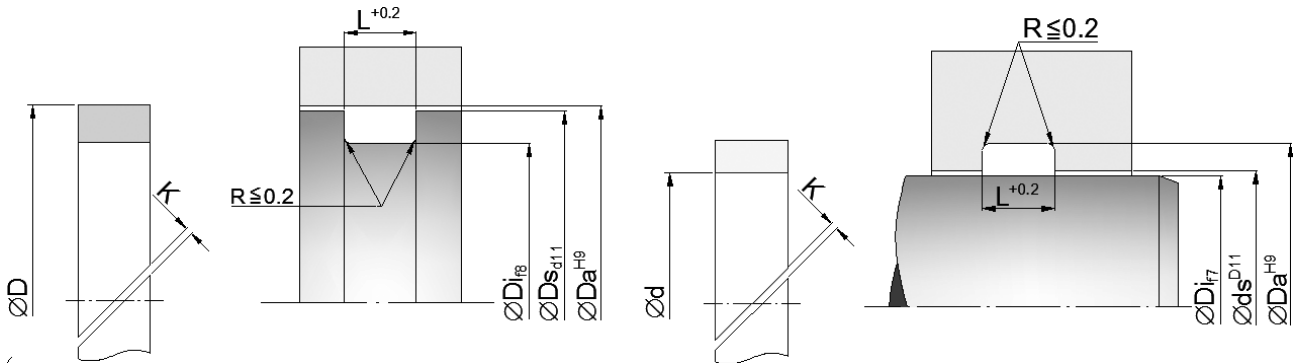
耐磨環 GR 型
Guide Ring – Type GR



溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
215	220	9.7	215.7	219.3	GR C151 B500
215	220	15.0	215.7	219.3	GR C152 B200
215	220	15.0	215.7	219.3	GR C152 B500
215	220	20.0	215.7	219.3	GR C153 B200
215	220	20.0	215.7	219.3	GR C153 B500
215	220	25.0	215.7	219.3	GR C154 B200
215	220	25.0	215.7	219.3	GR C154 B500
220	225	15.0	220.7	224.3	GR C201 B200
220	225	15.0	220.7	224.3	GR C201 B500
220	225	25.0	220.7	224.3	GR C202 B200
220	225	25.0	220.7	224.3	GR C202 B500
220	228	25.0	220.7	227.3	GR C203 B200
220	228	25.0	220.7	227.3	GR C203 B500
220	230	25.0	220.7	229.3	GR C204 B200
220	230	25.0	220.7	229.3	GR C204 B500
225	230	15.0	225.7	229.3	GR C251 B200
225	230	15.0	225.7	229.3	GR C251 B500
230	235	15.0	230.7	234.3	GR C301 B200
230	235	15.0	230.7	234.3	GR C301 B500
235	240	9.7	235.7	239.3	GR C351 B200
235	240	9.7	235.7	239.3	GR C351 B500
235	240	15.0	235.7	239.3	GR C352 B200
235	240	15.0	235.7	239.3	GR C352 B500
235	240	35.0	235.7	239.3	GR C353 B200
235	240	35.0	235.7	239.3	GR C353 B500
241	247	50.0	241.7	246.3	GR C411 B200
245	250	9.7	245.7	249.3	GR C451 B200

溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
245	250	9.7	245.7	249.3	GR C451 B500
245	250	15.0	245.7	249.3	GR C452 B200
245	250	15.0	245.7	249.3	GR C452 B500
245	250	16.0	245.7	249.3	GR C453 B200
245	250	16.0	245.7	249.3	GR C453 B500
245	250	20.0	245.7	249.3	GR C454 B200
245	250	20.0	245.7	249.3	GR C454 B500
245	250	25.0	245.7	249.3	GR C455 B200
245	250	25.0	245.7	249.3	GR C455 B500
250	255	15.0	250.7	254.3	GR C501 B200
250	255	15.0	250.7	254.3	GR C501 B500
250	255	25.0	250.7	254.3	GR C502 B200
250	255	25.0	250.7	254.3	GR C502 B500
250	258	25.0	250.7	257.3	GR C503 B200
250	258	25.0	250.7	257.3	GR C503 B500
255	260	15.0	255.7	259.3	GR C551 B200
255	260	15.0	255.7	259.3	GR C551 B500
260	265	15.0	260.7	264.3	GR C601 B200
260	265	15.0	260.7	264.3	GR C601 B500
260	265	25.0	260.7	264.3	GR C602 B200
260	265	25.0	260.7	264.3	GR C602 B500
265	270	15.0	265.7	269.3	GR C651 B200
265	270	15.0	265.7	269.3	GR C651 B500
270	275	25.0	270.7	274.3	GR C701 B200
270	275	25.0	270.7	274.3	GR C701 B500
275	280	9.7	275.8	279.2	GR C751 B200
275	280	9.7	275.8	279.2	GR C751 B500

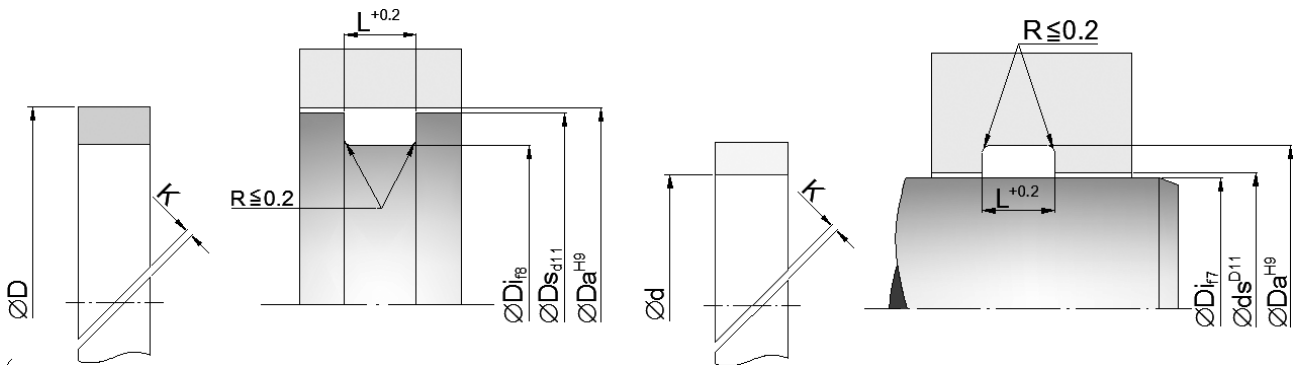
耐磨環 GR 型
Guide Ring – Type GR



溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
275	280	15.0	275.8	279.2	GR C752 B200
275	280	15.0	275.8	279.2	GR C752 B500
275	280	20.0	275.8	279.2	GR C753 B200
275	280	20.0	275.8	279.2	GR C753 B500
275	280	25.0	275.8	279.2	GR C754 B200
275	280	25.0	275.8	279.2	GR C754 B500
280	285	15.0	280.8	284.2	GR C801 B200
280	285	15.0	280.8	284.2	GR C801 B500
280	285	25.0	280.8	284.2	GR C802 B200
280	285	25.0	280.8	284.2	GR C802 B500
280	290	25.0	280.8	289.2	GR C803 B200
280	290	25.0	280.8	289.2	GR C803 B500
280	290	35.0	280.8	289.2	GR C804 B200
280	290	35.0	280.8	289.2	GR C804 B500
285	290	15.0	285.8	289.2	GR C851 B200
285	290	15.0	285.8	289.2	GR C851 B500
285	290	20.0	285.8	289.2	GR C852 B200
285	290	20.0	285.8	289.2	GR C852 B500
285	290	25.0	285.8	289.2	GR C853 B200
285	290	25.0	285.8	289.2	GR C853 B500
295	300	15.0	295.8	299.2	GR C951 B200
295	300	15.0	295.8	299.2	GR C951 B500
295	300	20.0	295.8	299.2	GR C952 B200
295	300	20.0	295.8	299.2	GR C952 B500
295	300	24.0	295.8	299.2	GR C953 B200
295	300	24.0	295.8	299.2	GR C953 B500
295	300	25.0	295.8	299.2	GR C954 B200

溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code
295	300	25.0	295.8	299.2	GR C954 B500
300	305	15.0	301.0	304.0	GR D001 B200
300	305	15.0	301.0	304.0	GR D001 B500
300	305	25.0	301.0	304.0	GR D002 B200
300	305	25.0	301.0	304.0	GR D002 B500
305	310	15.0	306.0	309.0	GR D051 B200
305	310	15.0	306.0	309.0	GR D051 B500
310	315	25.0	311.0	314.0	GR D101 B200
310	315	25.0	311.0	314.0	GR D101 B500
315	320	15.0	316.0	319.0	GR D151 B200
315	320	15.0	316.0	319.0	GR D151 B500
315	320	25.0	316.0	319.0	GR D152 B200
315	320	25.0	316.0	319.0	GR D152 B500
320	325	15.0	321.0	324.0	GR D201 B200
320	325	15.0	321.0	324.0	GR D201 B500
320	325	25.0	321.0	324.0	GR D202 B200
320	325	25.0	321.0	324.0	GR D202 B500
325	330	15.0	326.0	329.0	GR D251 B200
325	330	15.0	326.0	329.0	GR D251 B500
325	330	20.0	326.0	329.0	GR D252 B200
325	330	20.0	326.0	329.0	GR D252 B500
325	330	25.0	326.0	329.0	GR D253 B200
325	330	25.0	326.0	329.0	GR D253 B500
330	335	15.0	331.0	334.0	GR D301 B200
330	335	15.0	331.0	334.0	GR D301 B500
330	335	25.0	331.0	334.0	GR D302 B200
330	335	25.0	331.0	334.0	GR D302 B500

耐磨環 GR 型
Guide Ring – Type GR



溝槽尺寸 / Grove					訂單編號	溝槽尺寸 / Grove					訂單編號
Di	Da	L	ds	Ds	Order code	Di	Da	L	ds	Ds	Order code
335	340	15.0	336.0	339.0	GR D351 B200	375	380	20.0	376.0	379.0	GR D751 B200
335	340	15.0	336.0	339.0	GR D351 B500	375	380	20.0	376.0	379.0	GR D751 B500
345	350	25.0	346.0	349.0	GR D451 B200	375	380	25.0	376.0	379.0	GR D752 B200
345	350	25.0	346.0	349.0	GR D451 B500	375	380	25.0	376.0	379.0	GR D752 B500
350	355	15.0	351.0	354.0	GR D501 B200	395	400	25.0	396.0	399.0	GR D951 B200
350	355	15.0	351.0	354.0	GR D501 B500	395	400	25.0	396.0	399.0	GR D951 B500
350	355	25.0	351.0	354.0	GR D502 B200	445	450	25.0	446.0	449.0	GR E451 B200
350	355	25.0	351.0	354.0	GR D502 B500	445	450	25.0	446.0	449.0	GR E451 B500
350	360	25.0	351.0	359.0	GR D503 B200	480	485	20.0	481.0	484.0	GR E801 B200
350	360	25.0	351.0	359.0	GR D503 B500	480	485	20.0	481.0	484.0	GR E801 B500
355	360	20.0	356.0	359.0	GR D551 B200	495	500	15.0	496.0	499.0	GR E951 B200
355	360	20.0	356.0	359.0	GR D551 B500	495	500	15.0	496.0	499.0	GR E951 B500
355	360	25.0	356.0	359.0	GR D552 B200	575	580	25.0	576.0	579.0	GR F751 B200
355	360	25.0	356.0	359.0	GR D552 B500	575	580	25.0	576.0	579.0	GR F751 B500
355	360	40.0	356.0	359.0	GR D553 B200	600	605	25.0	601.0	604.0	GR G001 B200
355	360	40.0	356.0	359.0	GR D553 B500	600	605	25.0	601.0	604.0	GR G001 B500

訂購範例 (How to order)

Order No. GR - A201 - B200

Series No. 型式 _____

Measurements 尺寸 _____

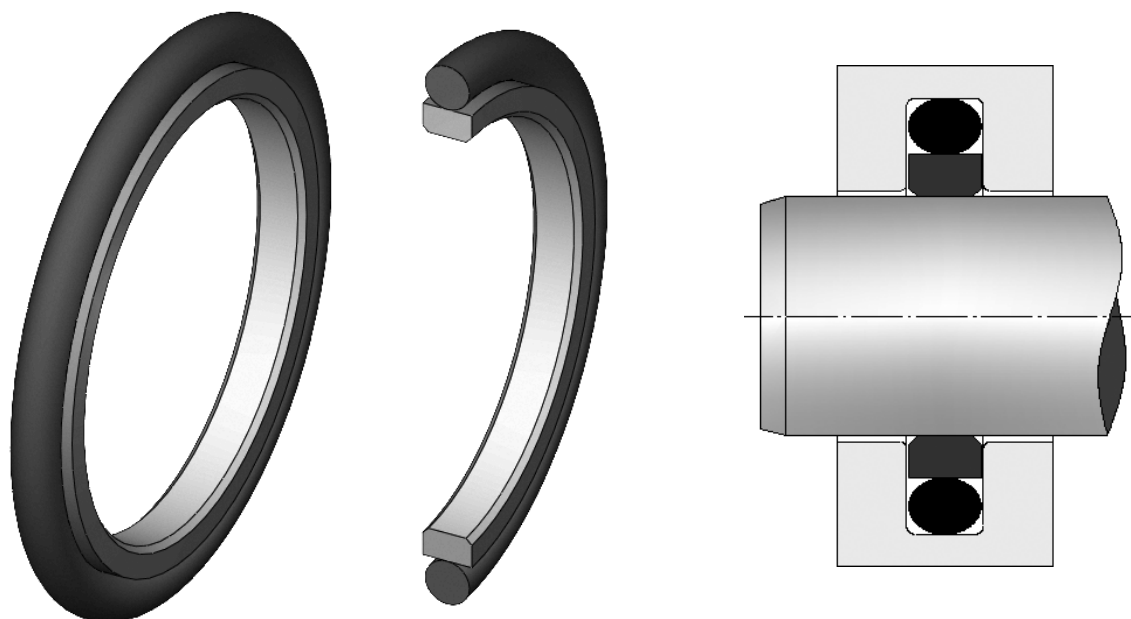
Material code 耐磨環材質 _____

桿密封件 (Rod Seals)

型式	圖示	氣壓 / 油壓 (Hyd./Pneu)	壓力 (bar)	工作溫度 (°C)	速度 (m/s)	頁數 (Page.)
RA		H	400	-30~+200	4.0	P.52
RB		H	400	-60~+200	4.0	P.56
RC		H	350	-60~+200	4.0	P.60
RL		H	16	-60~+200	4.0	P.63
RM		H	400	-60~+200	5.0	P.66
RN		H	400	-60~+200	5.0	P.70
RV		H	350	-40~+200	0.5	P.74
UF1		H/P	140	-25~+100	0.5	P.77
R4		H	400	-35~+110	0.5	P.80

RA 型桿密封件

PTFE Rod Seal Set – type RA



適用於雙動油壓缸、致動器及滑軸式閥件的桿密封件，例如控制用油壓缸、伺服控制系統、工作母機及建設機械。RA 型桿密封件具有最小的啟動與滑動摩擦力，即使在低速、快速來回或間歇滑動的應用下，仍能確保優異的低阻力密封性能。

Rpd seal is suitable for bi-directional pressurization, hydraulic cartridge and spool valves such as control cylinders, cervo- controlles systems, machine tools, and construction machinery. It offers low break-out and running friction to guarantee steady movement even at low speed or intermittent but frequent reciprocating action.

應用範圍

壓力 ≤ 400 bar
 溫度 $-30 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 銅填料

註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-30 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Bronze filled PTFE

Other materials are available for specified conditions

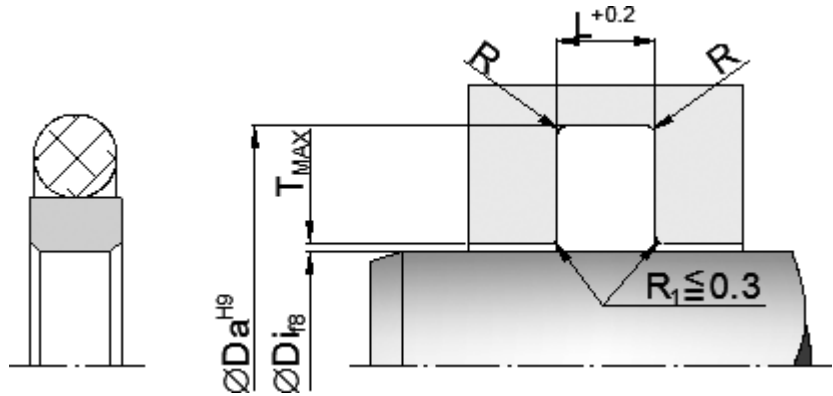
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	溝槽間隙 Gap			截面 Gland Code	O 型環 O-ring C.S.
				T				
ϕ Di	ϕ Da	L	R	100bar	200bar	400bar		
4 ~ 7.9	Di + 4.9	2.2	0.5	0.3	0.2	0.1	A	1.78
8 ~ 18.9	Di + 7.3	3.2	0.5	0.4	0.25	0.15	B	2.62
19 ~ 37.9	Di + 10.7	4.2	0.5	0.4	0.25	0.15	C	3.53
38 ~ 199.9	Di + 15.1	6.3	0.9	0.5	0.3	0.2	D	5.33
200 ~ 255.9	Di + 20.5	8.1	0.9	0.5	0.3	0.2	E	6.99
256 ~ 649.9	Di + 24.0	8.1	0.9	0.6	0.35	0.25	F	6.99
650 ~ 999.9	Di + 27.3	9.5	0.9	0.7	0.4	0.3	G	8.40
1000.0 ~	Di + 38.0	13.8	0.9	0.7	0.4	0.3	H	12.00

RA 型桿密封件

PTFE Rod Seal Set – type RA

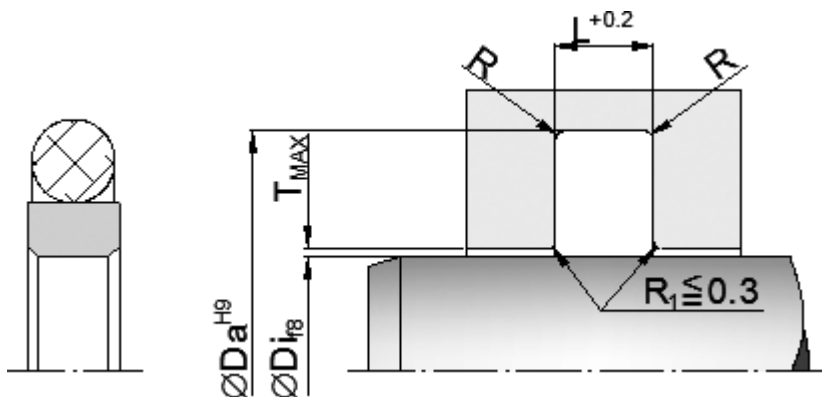


溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
5	9.9	2.2	2-010	6.07	1.78
10	14.9	2.2	2-013	10.82	1.78
10	17.3	3.2	2-112	12.37	2.62
15	22.3	3.2	2-116	18.72	2.62
15	25.7	4.2	2-210	18.64	3.53
20	30.7	4.2	2-214	24.99	3.53
25	35.7	4.2	2-217	29.74	3.53
30	40.7	4.2	2-220	34.52	3.53
30	45.1	6.3	2-324	34.29	5.33
35	45.7	4.2	2-222	37.69	3.53
35	50.1	6.3	2-326	40.64	5.33
40	50.7	4.2	2-224	44.04	3.53
40	55.1	6.3	2-328	46.99	5.33
45	60.1	6.3	2-329	50.17	5.33
50	65.1	6.3	2-331	56.52	5.33
55	70.1	6.3	2-332	59.69	5.33
60	75.1	6.3	2-334	66.04	5.33
65	75.7	4.2	2-232	69.44	3.53
65	80.1	6.3	2-335	69.22	5.33
70	80.7	4.2	2-233	72.62	3.53
70	85.1	6.3	2-337	75.57	5.33
75	85.7	4.2	2-235	78.97	3.53
75	90.1	6.3	2-339	81.92	5.33
80	90.7	4.2	2-236	82.14	3.53
80	95.1	6.3	2-340	85.09	5.33
85	95.7	4.2	2-238	88.49	3.53
85	100.1	6.3	2-342	91.44	5.33
90	105.1	6.3	2-343	94.62	5.33
95	105.7	4.2	2-241	98.02	3.53
95	110.1	6.3	2-345	100.97	5.33
100	110.7	4.2	2-243	104.37	3.53

溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
100	115.1	6.3	2-346	104.14	5.33
105	115.7	4.2	2-244	107.54	3.53
105	120.1	6.3	2-348	110.49	5.33
110	120.7	4.2	2-246	113.89	3.53
110	125.1	6.3	2-350	116.84	5.33
115	125.7	4.2	2-247	117.07	3.53
115	130.1	6.3	2-351	120.02	5.33
120	135.1	6.3	2-353	126.37	5.33
120	140.5	8.1	2-429	126.37	6.99
125	140.1	6.3	2-354	129.54	5.33
125	145.5	8.1	2-431	132.72	6.99
130	145.1	6.3	2-356	135.89	5.33
130	150.5	8.1	2-432	135.59	6.99
135	150.1	6.3	2-357	139.07	5.33
135	155.5	8.1	2-434	142.24	6.99
140	155.1	6.3	2-359	145.42	5.33
140	160.5	8.1	2-436	148.59	6.99
145	160.1	6.3	2-360	148.59	5.33
145	165.5	8.1	2-437	151.77	6.99
150	165.1	6.3	2-361	151.77	5.33
150	170.5	8.1	2-438	158.12	6.99
155	170.1	6.3	2-362	158.12	5.33
160	175.1	6.3	2-363	164.47	5.33
165	180.1	6.3	2-364	170.82	5.33
165	185.5	8.1	2-440	170.82	6.99
170	185.1	6.3	2-365	177.17	5.33
170	190.5	8.1	2-441	177.17	6.99
175	190.1	6.3	2-365	177.17	5.33
180	195.1	6.3	2-366	183.52	5.33
185	200.1	6.3	2-367	189.87	5.33
190	205.1	6.3	2-368	196.22	5.33

RA 型桿密封件

PTFE Rod Seal Set – type RA

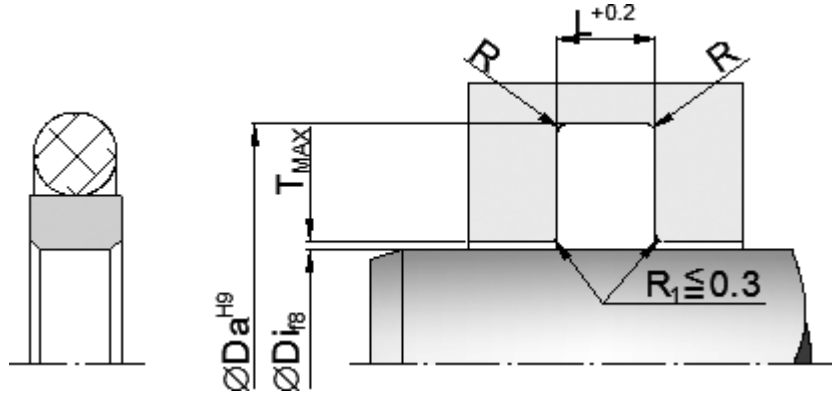


溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
190	210.5	8.1	2-444	196.22	6.99
195	210.1	6.3	2-368	196.22	5.33
195	215.5	8.1	2-445	202.57	6.99
200	215.1	6.3	2-369	202.57	5.33
200	220.5	8.1	2-445	202.57	6.99
210	225.1	6.3	2-371	215.27	5.33
210	230.5	8.1	2-446	215.27	6.99
220	235.1	6.3	2-372	221.62	5.33
220	240.5	8.1	2-447	227.97	6.99
230	250.5	8.1	2-448	240.67	6.99
230	254.0	8.1	2-448	240.67	6.99
240	260.5	8.1	2-449	240.67	6.99
240	264.0	8.1	2-449	253.37	6.99
250	270.5	8.1	2-449	253.37	6.99
260	280.5	8.1	2-450	266.07	6.99
260	284.0	8.1	2-450	266.07	6.99
270	294.0	8.1	2-451	278.77	6.99
280	304.0	8.1	2-452	291.47	6.99
290	310.5	8.1	2-452	291.47	6.99
290	314.0	8.1	2-453	304.17	6.99
300	320.5	8.1	2-453	304.17	6.99
300	324.0	8.1	2-453	304.17	6.99
310	330.5	8.1	2-454	316.87	6.99
310	334.0	8.1	2-454	316.87	6.99
320	344.0	8.1	2-455	329.57	6.99
330	354.0	8.1	2-456	342.27	6.99
340	360.5	8.1	3-456	342.27	6.99
340	364.0	8.1	2-457	354.97	6.99
350	370.5	8.1	2-457	354.97	6.99
350	374.0	8.1	2-457	354.97	6.99
360	380.5	8.1	2-458	367.67	6.99

溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
360	384.0	8.1	2-458	367.67	6.99
370	394.0	8.1	2-459	380.37	6.99
380	400.5	8.1	2-459	380.37	6.99
380	404.0	8.1	2-460	393.07	6.99
390	410.5	8.1	2-460	393.07	6.99
390	414.0	8.1	2-461	405.26	6.99
400	420.5	8.1	2-461	405.26	6.99
400	424.0	8.1	2-461	405.26	6.99
410	430.5	8.1	2-462	417.96	6.99
410	434.0	8.1	2-462	417.96	6.99
420	444.0	8.1	2-463	430.66	6.99
430	450.5	8.1	2-463	430.66	6.99
430	454.0	8.1	2-464	443.36	6.99
440	460.5	8.1	2-464	443.36	6.99
440	464.0	8.1	2-464	443.36	6.99
450	470.5	8.1	2-465	456.06	6.99
450	474.0	8.1	2-465	456.06	6.99
460	484.0	8.1	2-466	468.76	6.99
470	494.0	8.1	2-467	481.46	6.99
480	500.5	8.1	2-467	481.46	6.99
480	504.0	8.1	2-468	494.16	6.99
490	510.5	8.1	2-468	494.16	6.99
490	514.0	8.1	2-469	506.86	6.99
500	524.0	8.1	2-469	506.86	6.99
520	544.0	8.1	2-470	532.26	6.99
530	554.0	8.1	—	543.50	6.99
550	574.0	8.1	2-471	557.66	6.99
560	584.0	8.1	—	564.30	6.99
570	594.0	8.1	2-472	582.68	6.99
600	624.0	8.1	2-473	608.08	6.99
620	644.0	8.1	2-474	633.48	6.99

RA 型桿密封件

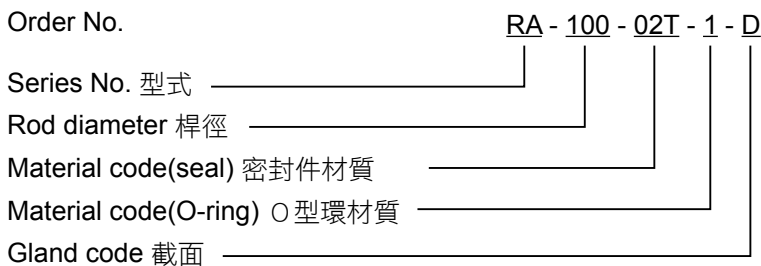
PTFE Rod Seal Set – type RA



溝槽尺寸 / Grove			AS568	內徑	線徑	溝槽尺寸 / Grove			AS568	內徑	線徑
Di	Da	L	code	mm	mm	Di	Da	L	code	mm	mm
640	664.0	8.1	2-475	658.88	6.99	955	982.3	9.5	—	968.00	8.40
650	674.0	8.1	2-475	658.88	6.99	1000	1038.0	13.8	—	1016.0	12.00
650	677.3	9.5	—	660.00	8.40	1100	1138.0	13.8	—	1116.0	12.00
660	687.3	9.5	—	673.00	8.40	1200	1238.0	13.8	—	1216.0	12.00
680	707.3	9.5	—	693.00	8.40	1330	1368.0	13.8	—	1346.0	12.00
700	727.3	9.5	—	695.00	8.40						
730	757.3	9.5	—	743.00	8.40						
760	787.3	9.5	—	733.00	8.40						
780	807.3	9.5	—	793.00	8.40						
800	827.3	9.5	—	810.00	8.40						
800	877.3	9.5	—	863.00	8.40						
880	907.3	9.5	—	893.00	8.40						
900	927.3	9.5	—	910.00	8.40						
930	957.3	9.5	—	940.00	8.40						

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

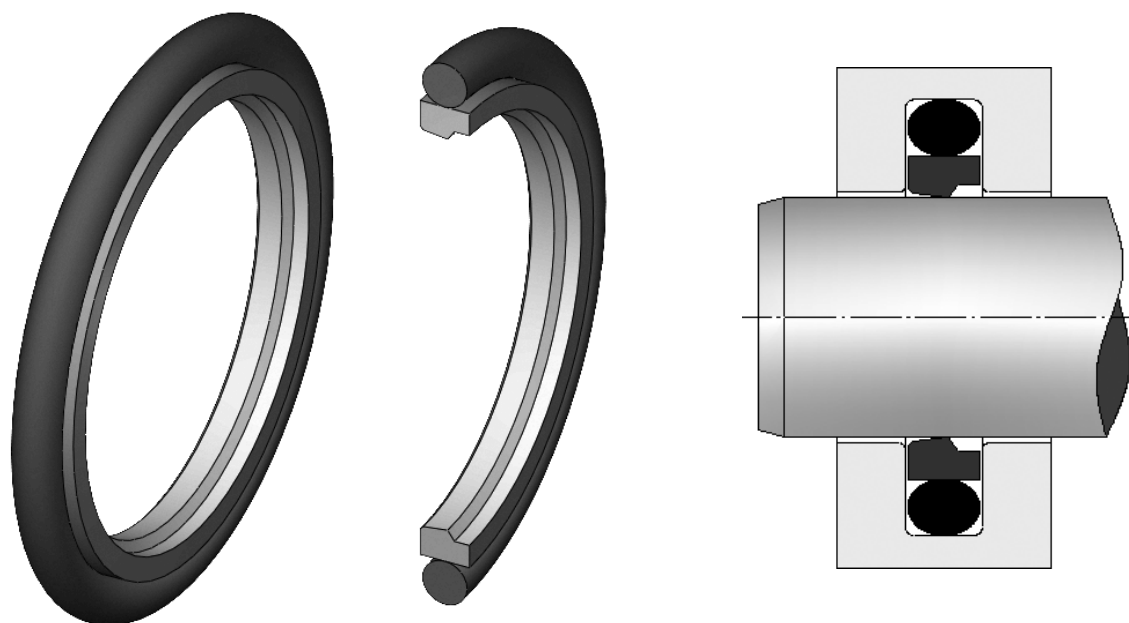
註：軸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1238x13.8mm 訂購時請註明 RA-K1200-02T-1-H。

Note : For rod diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1238x13.8mm should be denominated as RA-K1200-02T-1-H.

RB 型桿密封件

PTFE Rod Seal Set – type RB



適用於單動油壓缸的桿密封件，若成對配置亦可應用於雙動油壓缸。典型的應用包括：控制用油壓缸、伺服控制系統、工作母機及建設機械等。

Single seal is designed for uni-directional pressurization rods in hydraulic applications but it is also appropriate for double-acting pistons in hydraulic cylinders if two sealing sets are arranged. Typical applications include control cylinders, servo-controlled systems, machine tools, and construction machinery.

應用範圍

壓力 ≤ 400 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

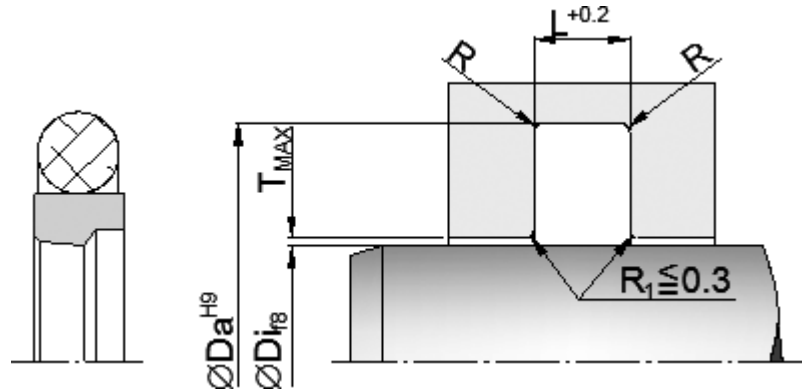
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	溝槽間隙 Gap			截面 Gland Code	O 型環 O-ring C.S.
				T				
ϕ Di	ϕ Da	L	R	100bar	200bar	400bar		
4 ~ 7.9	Di + 4.9	2.2	0.5	0.3	0.2	0.1	A	1.78
8 ~ 18.9	Di + 7.3	3.2	0.5	0.4	0.25	0.15	B	2.62
19 ~ 37.9	Di + 10.7	4.2	0.5	0.4	0.25	0.15	C	3.53
38 ~ 199.9	Di + 15.1	6.3	0.9	0.5	0.3	0.2	D	5.33
200 ~ 255.9	Di + 20.5	8.1	0.9	0.5	0.3	0.2	E	6.99
256 ~ 649.9	Di + 24.0	8.1	0.9	0.6	0.35	0.25	F	6.99
650 ~ 999.9	Di + 27.3	9.5	0.9	0.7	0.4	0.3	G	8.40
1000.0 ~	Di + 38.0	13.8	0.9	0.7	0.4	0.3	H	12.00

RB 型桿密封件

PTFE Rod Seal Set – type RB

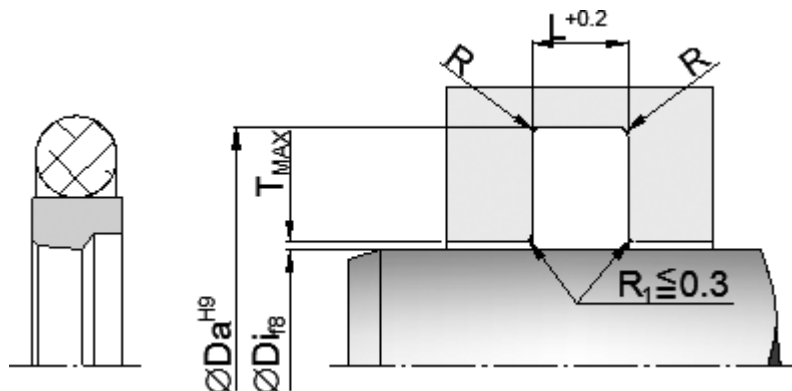


溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
5	9.9	2.2	2-010	6.07	1.78
10	14.9	2.2	2-013	10.82	1.78
10	17.3	3.2	2-112	12.37	2.62
15	22.3	3.2	2-116	18.72	2.62
15	25.7	4.2	2-211	20.22	3.53
20	27.3	3.2	2-118	21.89	2.62
20	30.7	4.2	2-214	24.99	3.53
25	32.3	3.2	2-121	26.64	2.62
25	35.7	4.2	2-217	29.74	3.53
30	40.7	4.2	2-220	34.52	3.53
30	45.1	6.3	2-324	34.29	5.33
35	45.7	4.2	2-222	37.69	3.53
35	50.1	6.3	2-326	40.64	5.33
40	50.7	4.2	2-224	44.04	3.53
40	55.1	6.3	2-328	46.99	5.33
45	55.7	4.2	2-225	47.22	3.53
45	60.1	6.3	2-329	50.17	5.33
50	65.1	6.3	2-331	56.52	5.33
55	65.7	4.2	2-228	56.74	3.53
55	70.1	6.3	2-332	59.69	5.33
60	75.1	6.3	2-324	66.04	5.33
65	75.7	4.2	2-232	69.44	3.53
65	80.1	6.3	2-335	69.22	5.33
70	80.7	4.2	2-233	72.62	3.53
70	85.1	6.3	2-337	75.57	5.33
75	85.7	4.2	2-235	78.97	3.53
75	90.1	6.3	2-339	81.92	5.33
80	90.7	4.2	2-236	82.14	3.53
80	95.1	6.3	2-340	85.09	5.33
85	95.7	4.2	2-238	88.49	3.53
85	100.1	6.3	2-342	91.44	5.33

溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
90	100.7	4.2	2-239	91.67	3.53
90	105.1	6.3	2-343	94.62	5.33
95	105.7	4.2	2-241	98.02	3.53
95	110.1	6.3	2-345	100.97	5.33
100	110.7	4.2	2-242	101.19	3.53
100	115.1	6.3	2-346	104.14	5.33
105	115.7	4.2	2-244	107.54	3.53
105	120.1	6.3	2-348	110.49	5.33
110	120.7	4.2	2-246	113.89	3.53
110	125.1	6.3	2-350	116.84	5.33
115	125.7	4.2	2-247	117.07	3.53
115	130.1	6.3	2-351	120.02	5.33
120	135.1	6.3	2-353	126.37	5.33
120	140.5	8.1	2-429	126.37	6.99
125	140.1	6.3	2-354	129.54	5.33
125	145.5	8.1	2-431	132.72	6.99
130	145.1	6.3	2-356	135.89	5.33
130	150.5	8.1	2-432	135.89	6.99
135	150.1	6.3	2-357	139.07	5.33
135	155.5	8.1	2-434	142.24	6.99
140	155.1	6.3	2-359	145.42	5.33
140	160.5	8.1	2-435	145.42	6.99
145	160.1	6.3	2-360	148.59	5.33
150	165.1	6.3	2-361	151.77	5.33
150	170.5	8.1	2-438	158.12	6.99
155	170.1	6.3	2-362	158.12	5.33
155	175.5	8.1	2-438	158.12	6.99
160	175.1	6.3	2-363	164.47	5.33
165	180.1	6.3	2-364	170.82	5.33
165	185.5	8.1	2-440	170.82	6.99
170	185.1	6.3	2-365	177.17	5.33

RB 型桿密封件

PTFE Rod Seal Set – type RB

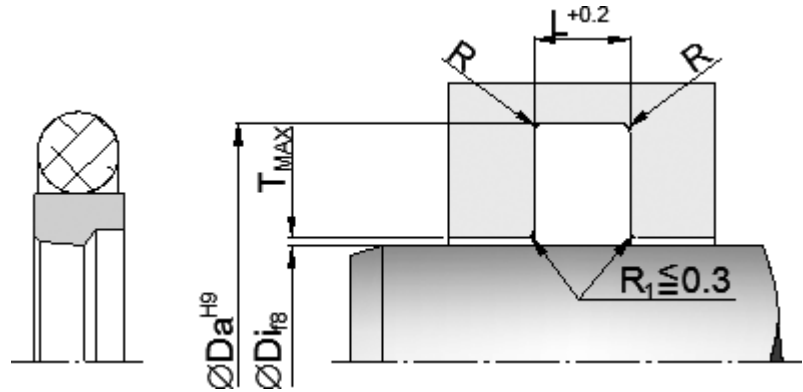


溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
175	190.1	6.3	2-365	177.17	5.33
180	195.1	6.3	2-366	183.52	5.33
180	200.5	8.1	2-442	183.52	6.99
185	200.1	6.3	2-367	189.87	5.33
190	205.1	6.3	2-368	196.22	5.33
195	210.1	6.3	2-368	196.22	5.33
200	220.5	8.1	2-445	202.57	6.99
210	225.1	6.3	2-371	215.27	5.33
210	230.5	8.1	2-446	215.27	6.99
220	235.1	6.3	2-372	221.62	5.33
220	240.5	8.1	2-447	227.97	6.99
230	250.5	8.1	2-448	240.67	6.99
230	254.0	8.1	2-448	240.67	6.99
240	260.5	8.1	2-448	240.67	6.99
250	270.5	8.1	2-449	253.37	6.99
260	280.5	8.1	2-450	266.07	6.99
260	284.0	8.1	2-450	266.07	6.99
270	290.5	8.1	2-451	278.77	6.99
270	294.0	8.1	2-451	278.77	6.99
280	304.0	8.1	2-452	291.47	6.99
290	310.5	8.1	2-452	291.47	6.99
290	314.0	8.1	2-453	304.17	6.99
300	324.0	8.1	2-453	304.17	6.99
310	330.5	8.1	2-454	316.87	6.99
310	334.0	8.1	2-454	316.87	6.99
320	340.5	8.1	2-455	329.57	6.99
320	344.0	8.1	2-455	329.57	6.99
330	354.0	8.1	2-456	342.27	6.99
340	360.5	8.1	3-456	342.27	6.99
340	364.0	8.1	2-457	354.97	6.99
350	374.0	8.1	2-457	354.97	6.99

溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
360	380.5	8.1	2-458	367.67	6.99
360	384.0	8.1	2-458	367.67	6.99
370	394.0	8.1	2-459	380.37	6.99
380	400.5	8.1	2-459	380.37	6.99
380	404.0	8.1	2-460	393.07	6.99
390	410.5	8.1	2-460	393.07	6.99
390	414.0	8.1	2-461	405.26	6.99
400	420.5	8.1	2-461	405.26	6.99
400	424.0	8.1	2-461	405.26	6.99
410	430.5	8.1	2-462	417.96	6.99
410	434.0	8.1	2-462	417.96	6.99
420	440.5	8.1	2-462	417.96	6.99
420	444.0	8.1	2-463	430.66	6.99
430	454.0	8.1	2-464	443.36	6.99
440	460.5	8.1	2-464	443.36	6.99
440	464.0	8.1	2-464	443.36	6.99
450	470.5	8.1	2-465	456.06	6.99
450	474.0	8.1	2-465	456.06	6.99
460	484.0	8.1	2-466	468.76	6.99
470	494.0	8.1	2-467	481.46	6.99
480	504.0	8.1	2-468	494.16	6.99
490	514.0	8.1	2-469	506.86	6.99
500	524.0	8.1	2-469	506.86	6.99
520	544.0	8.1	2-470	532.26	6.99
530	554.0	8.1	2-470	532.26	6.99
550	574.0	8.1	2-471	557.66	6.99
560	584.0	8.1	—	564.30	6.99
570	594.0	8.1	2-472	582.68	6.99
600	624.0	8.1	2-473	608.08	6.99
620	644.0	8.1	2-474	633.48	6.99
640	664.0	8.1	2-475	658.88	6.99

RB 型桿密封件

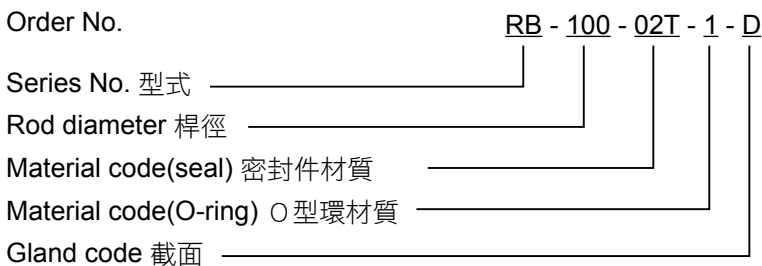
PTFE Rod Seal Set – type RB



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L				Di	Da	L			
650	677.3	9.5	—	660.00	8.40	1100	1138.0	13.8	—	1116.0	12.00
660	687.3	9.5	—	673.00	8.40	1200	1238.0	13.8	—	1216.0	12.00
680	707.3	9.5	—	693.00	8.40	1330	1368.0	13.8	—	1346.0	12.00
700	727.3	9.5	—	695.00	8.40						
730	757.3	9.5	—	743.00	8.40						
760	787.3	9.5	—	733.00	8.40						
780	807.3	9.5	—	793.00	8.40						
800	827.3	9.5	—	810.00	8.40						
850	877.3	9.5	—	863.00	8.40						
880	907.3	9.5	—	893.00	8.40						
900	927.0	9.5	—	910.00	8.40						
930	957.3	9.5	—	943.00	8.40						
955	982.3	9.5	—	968.00	8.40						
1000	1038.0	13.8	—	1016.0	12.00						

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

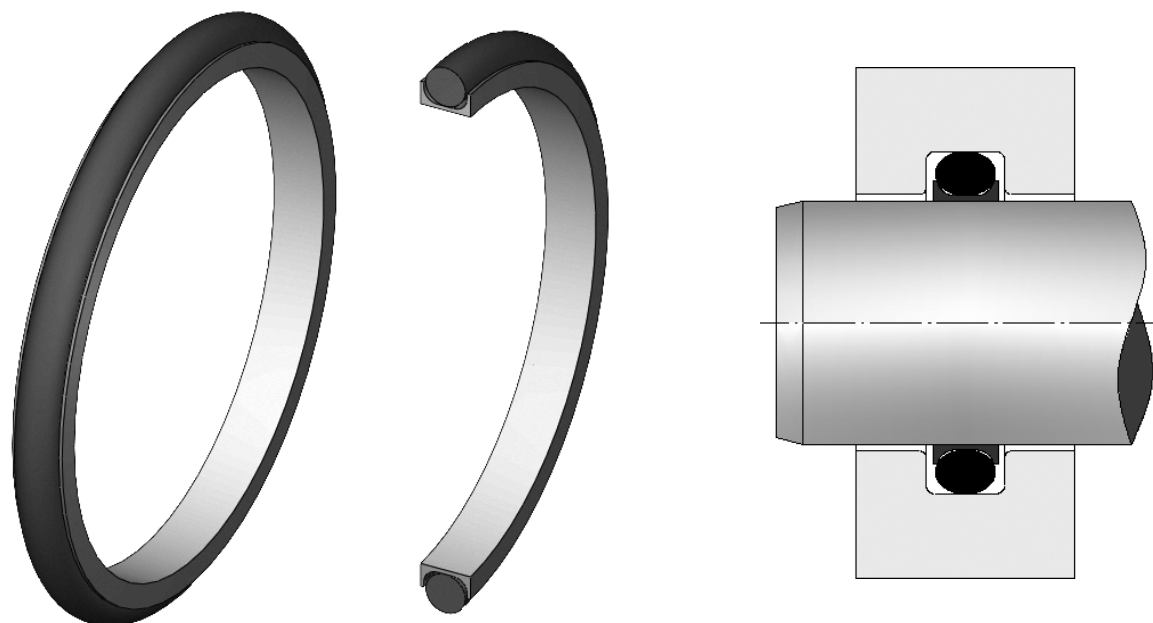
註：軸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1238x13.8mm 訂購時請註明 RB-K1200-02T-1-H。

Note : For rod diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1238x13.8mm should be denominated as RB-K1200-02T-1-H.

RC 型桿密封件

PTFE Rod Seal Set – type RC



可完全取代應用於雙動油壓缸桿密封的標準 O 形環。由於特殊的密封材質與密封機構，故具有優異的耐擠出性、耐化學性與低摩擦阻力，即使低速作動時也能確保無滯滑效應。

A unique piston seal is design to retrofit standard O-ring gland in bi-directional pressurization, hydraulic applications. It benefits higher extrusion resistance, excellent chemical resistance, and no stick-slip movement even in low velocities.

應用範圍

壓力 ≤ 350 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 純鐵氟龍
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 350 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Virgin PTFE
 Other materials are available for specified conditions

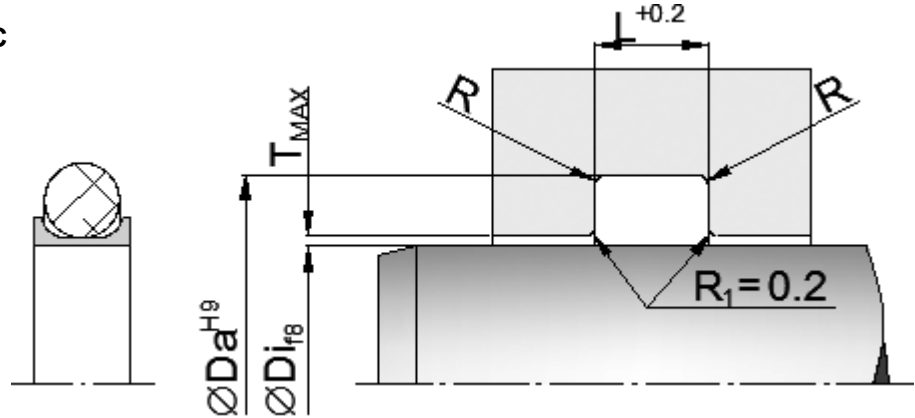
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width			溝槽 R 角 Radius	擠出間隙 Gap	截面 Gland Code	O 型環 O-ring C.S.
		0	1	2				
ϕ Di	ϕ Da				R	T		
4 ~ 9.9	Di + 2.9	2.4	3.8	5.3	0.4	0.1	A	1.78
10 ~ 19.9	Di + 4.5	3.6	4.65	6.2	0.4	0.15	B	2.62
20 ~ 39.9	Di + 6.2	4.8	5.7	7.7	0.6	0.25	C	3.53
40 ~ 119.9	Di + 9.4	7.1	8.5	10.8	0.8	0.35	D	5.33
120 ~ 649.9	Di + 12.2	9.5	11.2	14.7	0.8	0.5	E	6.99
650 ~ 999.9	Di + 15.0	11.0	14	17.0	1.0	0.6	F	8.40

RC 型桿密封件

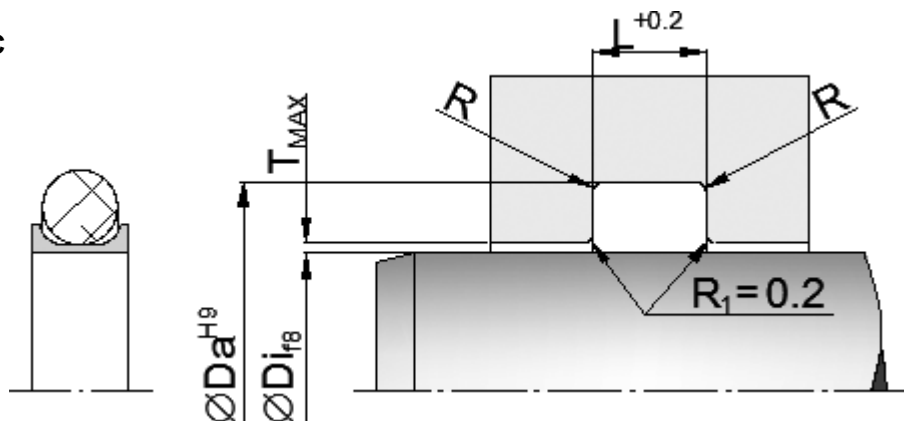
PTFE Rod Seal Set – type RC



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L				Di	Da	L			
5	7.9	2.4	2-009	5.28	1.78	120	129.4	7.1	2-351	120.02	5.33
10	12.9	2.4	2-012	9.25	1.78	120	132.2	9.5	2-427	120.02	6.99
10	14.5	3.6	2-111	10.77	2.62	125	134.4	7.1	2-352	123.19	5.33
15	19.5	3.6	2-114	5.54	2.62	125	137.2	9.5	2-429	126.37	6.99
15	21.2	4.8	2-208	15.47	3.53	130	139.4	7.1	2-354	129.54	5.33
20	24.5	3.6	2-117	20.29	2.62	130	142.2	9.5	2-432	135.89	6.99
20	26.2	4.8	2-211	21.82	3.53	135	144.4	7.1	2-356	135.89	5.33
25	29.5	3.6	2-120	25.07	2.62	135	147.2	9.5	2-432	135.89	6.99
25	31.2	4.8	2-214	24.99	3.53	140	149.4	7.1	2-357	139.07	5.33
30	36.2	4.8	2-217	29.74	3.53	140	152.2	9.5	2-433	139.07	6.99
30	39.4	7.1	2-231	29.51	5.33	145	154.4	7.1	2-359	145.42	5.33
35	41.2	4.8	2-220	34.52	3.53	145	157.2	9.5	2-435	145.42	6.99
35	44.4	7.1	2-324	34.29	5.33	150	159.4	7.1	2-360	148.59	5.33
40	49.4	7.1	2-326	40.64	5.33	150	162.2	9.5	2-437	151.77	6.99
45	54.4	7.1	2-327	43.82	5.33	160	172.2	9.5	2-438	158.12	6.99
50	56.2	4.8	2-226	50.39	3.53	165	174.4	7.1	2-363	164.47	5.33
50	59.4	7.1	2-329	50.17	5.33	165	177.2	9.5	2-439	164.47	6.99
55	64.4	7.1	2-330	53.34	5.33	170	179.4	7.1	2-364	170.82	5.33
60	66.2	4.8	2-229	59.92	3.53	170	182.2	9.5	2-440	170.82	6.99
60	69.4	7.1	2-332	59.69	5.33	180	192.2	9.5	2-442	183.52	6.99
65	74.4	7.1	2-334	66.04	5.33	185	197.2	9.5	2-442	183.52	6.99
75	84.4	7.1	2-337	75.57	5.33	190	199.4	7.1	2-367	189.87	5.33
85	94.4	7.1	2-340	85.09	5.33	190	202.2	9.5	2-443	189.87	6.99
90	99.4	7.1	2-342	91.44	5.33	195	207.2	9.5	2-444	196.22	6.99
95	104.4	7.1	2-343	94.62	5.33	200	212.2	9.5	2-445	202.57	6.99
100	109.4	7.1	2-345	100.97	5.33	210	222.2	9.5	2-446	215.27	6.99
105	114.4	7.1	2-346	104.14	5.33	220	232.2	9.5	2-446	215.27	6.99
110	119.4	7.1	2-348	110.49	5.33	270	282.2	9.5	2-450	266.07	6.99
115	124.4	7.1	2-350	116.84	5.33	280	292.2	9.5	2-451	278.77	6.99
115	127.2	9.5	2-425	113.67	6.99	290	302.2	9.5	2-452	291.47	6.99

RC 型桿密封件

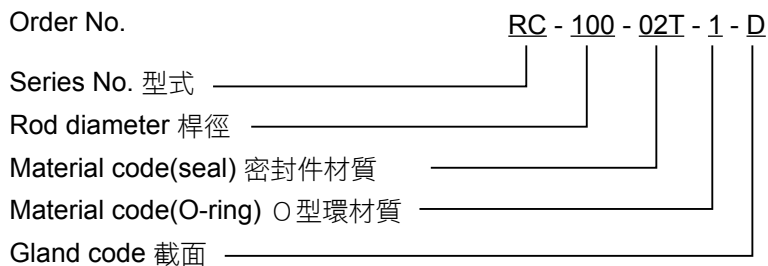
PTFE Rod Seal Set – type RC



溝槽尺寸 / Grove			AS568	內徑	線徑	溝槽尺寸 / Grove			AS568	內徑	線徑
Di	Da	L	code	mm	mm	Di	Da	L	code	mm	mm
300	312.2	9.5	2-453	304.17	6.99	510	522.2	9.5	2-469	506.86	6.99
310	322.2	9.5	2-454	316.87	6.99	530	542.2	9.5	2-470	532.26	6.99
320	332.2	9.5	2-454	316.87	6.99	560	572.2	9.5	2-471	557.66	6.99
330	342.2	9.5	2-455	329.57	6.99	580	592.2	9.5	2-472	582.68	6.99
340	352.2	9.5	2-456	342.27	6.99	610	622.2	9.5	2-473	608.08	6.99
350	362.2	9.5	2-457	354.97	6.99	630	642.2	9.5	2-474	633.48	6.99
360	372.2	9.5	2-457	354.97	6.99						
370	382.2	9.5	2-458	367.67	6.99						
380	392.2	9.5	2-459	380.37	6.99						
390	402.2	9.5	2-460	393.07	6.99						
400	412.2	9.5	2-461	405.26	6.99						
420	432.2	9.5	2-462	417.96	6.99						
430	442.2	9.5	2-463	430.66	6.99						
440	452.2	9.5	2-464	443.36	6.99						
460	472.2	9.5	2-464	456.06	6.99						
470	482.2	9.5	3-466	468.76	6.99						
480	492.2	9.5	2-467	481.46	6.99						
490	502.2	9.5	2-468	494.16	6.99						

※ 特殊尺寸亦可提供

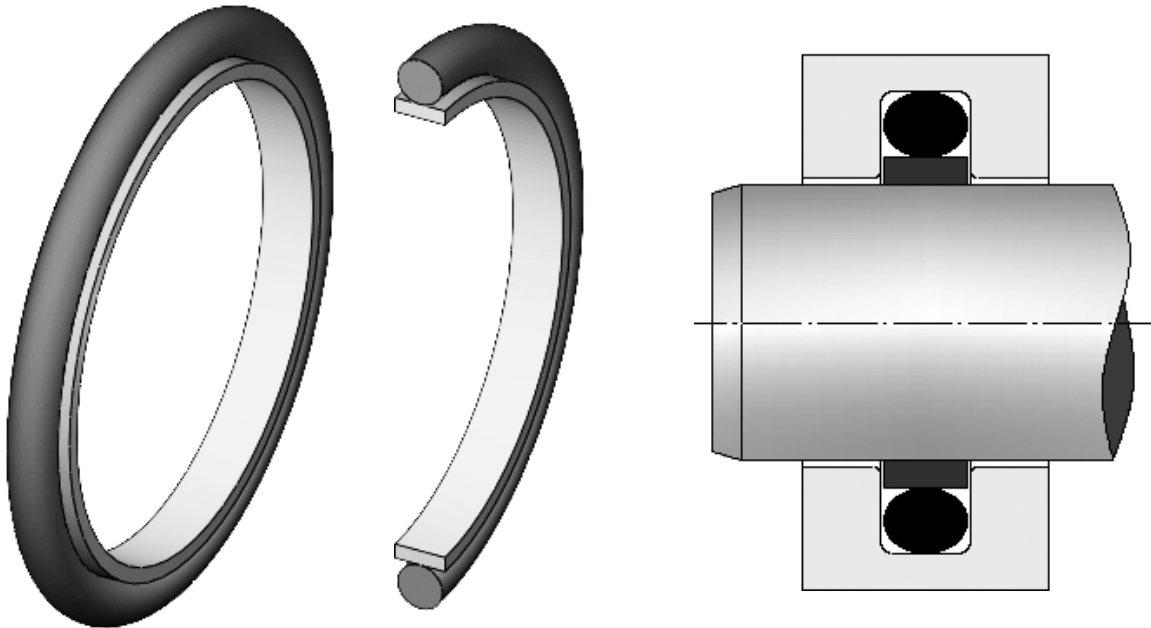
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

RL 型桿密封件

PTFE Rod Seal Set – type RL



適用於雙動油壓缸、致動器及滑軸式閥件的軸密封件，例如控制用油壓缸、伺服控制系統、工作母機及建設機械。RL 型軸密封件具有與 RA 型相似的特性，但只能應用於較低壓力，即使在惡劣的環境也能發揮優異的密封性能。

Rod seal is suitable for bi-directional pressurization, hydraulic cartridge and spool valves such as control cylinders, servo-controlled systems, machine tools, and construction machinery. It is dedicated for lower pressure but better sealing in dusty environment.

應用範圍

壓力 ≤ 16 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 碳精填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 16 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Carbon filled PTFE
 Other materials are available for specified conditions

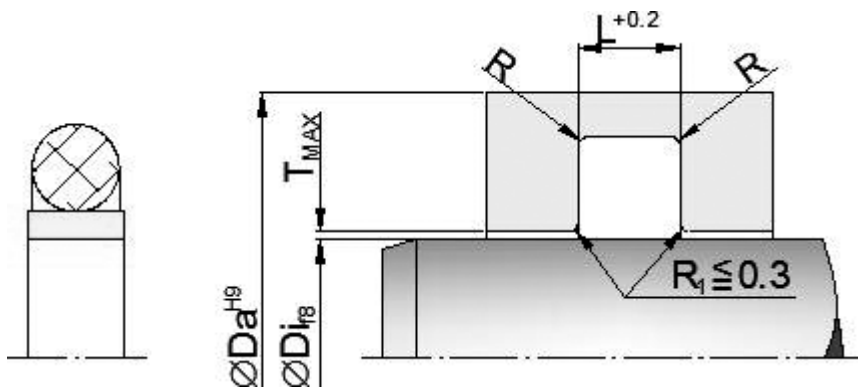
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

軸徑 Piston Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	溝槽間隙 Gap	截面 Gland Code	O 型環 O-ring C.S.
ϕ Di	ϕ Da	L	Rmax	T		
4 ~ 7.9	Di + 4.0	2.0	0.5	0.2	A	1.78
8 ~ 18.9	Di + 6.0	2.85	0.5	0.25	B	2.62
19 ~ 37.9	Di + 7.5	3.8	0.5	0.25	C	3.53
38 ~ 119.9	Di + 12.5	5.6	0.9	0.5	D	5.33
120 ~ 164.9	Di + 15.0	7.55	0.9	0.5	E	6.99
165 ~ 219.9	Di + 18.0	7.55	0.9	0.75	F	6.99
220 ~ 400	Di + 24.0	7.55	0.9	1.0	G	6.99

RL 型桿密封件

PTFE Rod Seal Set – type RL

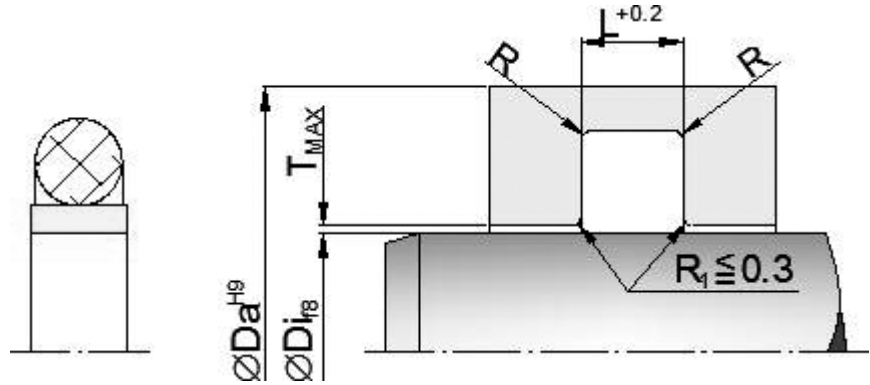


溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
5	9.0	2.00	2-010	6.07	1.78
10	14.0	2.00	2-013	10.82	1.78
10	16.0	2.85	2-111	10.77	2.62
15	19.0	2.00	2-016	15.60	1.78
15	21.0	2.85	2-114	15.54	2.62
15	22.5	3.80	2-208	15.47	3.53
20	26.0	2.85	2-117	20.29	2.62
20	27.5	3.80	2-211	20.22	3.53
25	31.0	2.85	2-121	26.64	2.62
25	32.5	3.80	2-215	26.57	3.53
30	36.0	2.85	2-124	31.42	2.62
30	37.5	3.80	2-218	31.34	3.53
30	42.5	5.60	2-323	32.69	5.33
35	42.5	3.80	2-221	36.09	3.53
35	47.5	5.60	2-325	37.47	5.33
40	47.5	3.80	2-223	40.87	3.53
45	52.5	3.80	2-225	47.22	3.53
45	57.5	5.60	2-328	46.99	5.33
50	57.5	3.80	2-226	50.39	3.53
50	62.5	5.60	2-330	53.34	5.33
55	67.5	5.60	2-331	56.52	5.33
60	67.5	3.80	—	61.24	3.53
60	72.5	5.60	2-333	62.87	5.33
65	72.5	3.80	2-231	66.27	3.53
65	77.5	5.60	2-335	69.22	5.33
70	82.5	5.60	2-336	72.39	5.33

溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
75	82.5	3.80	2-234	75.79	3.53
75	87.5	5.60	2-337	75.57	5.33
80	92.5	5.60	2-339	81.92	5.33
85	97.5	5.60	2-341	88.27	5.33
85	100.0	7.55	—	85.00	6.99
90	102.5	5.60	2-342	91.44	5.33
95	107.5	5.60	2-344	97.79	5.33
100	112.5	5.60	2-345	100.97	5.33
105	117.5	5.60	2-347	107.32	5.33
105	120.0	7.55	—	107.31	6.99
110	122.5	5.60	2-349	113.67	5.33
115	127.5	5.60	2-350	116.84	5.33
115	130.0	7.55	2-426	116.84	6.99
120	132.5	5.60	2-351	120.02	5.33
120	135.0	7.55	2-427	120.02	6.99
125	137.5	5.60	2-353	126.37	5.33
125	140.0	7.55	2-429	126.37	6.99
130	142.5	5.60	2-355	132.72	5.33
130	145.0	7.55	2-431	132.72	6.99
135	147.5	5.60	2-356	135.89	5.33
135	150.0	7.55	2-432	135.89	6.99
140	152.5	5.60	2-358	142.24	5.33
140	155.0	7.55	2-434	142.24	6.99
145	157.5	5.60	2-359	145.42	5.33
145	160.0	7.55	2-435	145.42	6.99
145	163.0	7.55	2-436	148.59	6.99

RL 型桿密封件

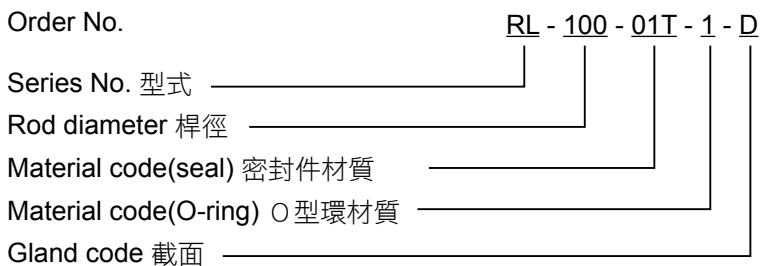
PTFE Rod Seal Set – type RL



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L				Di	Da	L			
150	165.0	7.55	2-437	151.77	6.99	300	318.0	7.55	2-453	304.17	6.99
160	175.0	7.55	2-438	158.12	6.99	400	424.0	7.55	2-461	405.26	6.99
165	183.0	7.55	2-440	170.82	6.99						
175	190.0	7.55	2-441	177.17	6.99						
175	193.0	7.55	—	180.54	6.99						
180	198.0	7.55	2-442	183.52	6.99						
185	200.0	7.55	2-442	183.52	6.99						
185	203.0	7.55	2-443	189.87	6.99						
190	208.0	7.55	2-443	189.87	6.99						
195	210.0	7.55	2-444	196.22	6.99						
195	213.0	7.55	2-444	196.22	6.99						
200	215.0	7.55	2-445	202.57	6.99						
250	268.0	7.55	2-449	253.37	6.99						
260	278.0	7.55	2-450	266.07	6.99						
280	304.0	7.55	2-451	278.77	6.99						

※ 特殊尺寸亦可提供

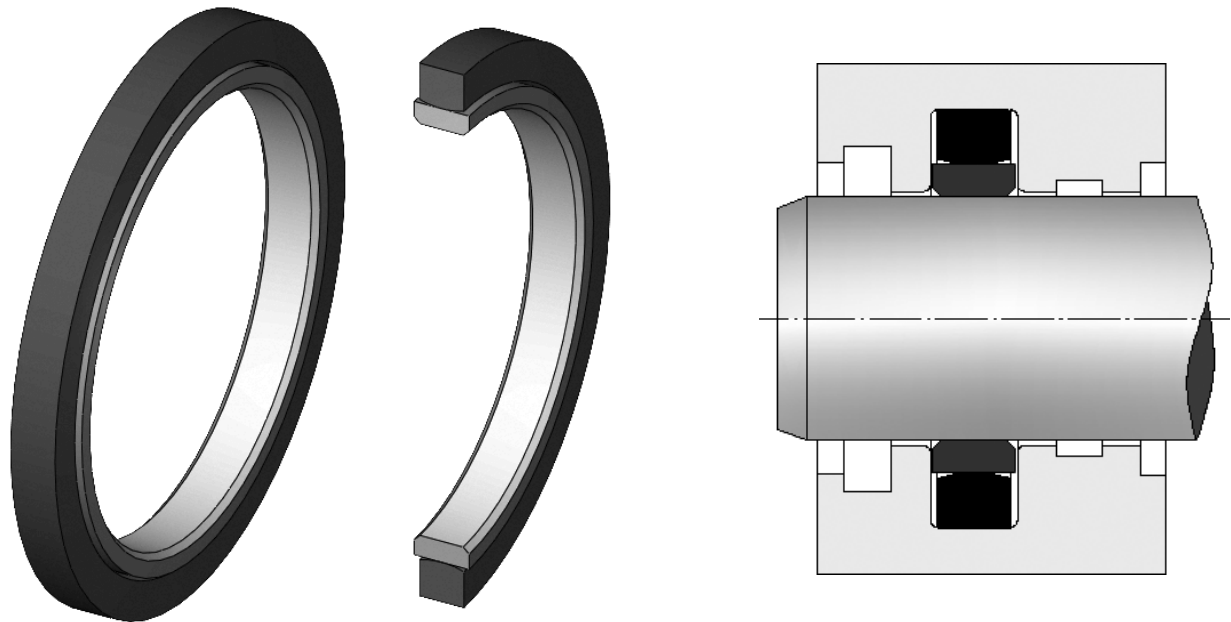
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

RM 型桿密封件

PTFE Rod Seal Set – type RM



兩件式桿密封件，由一個密封環與一提供預負荷的凸面橡膠環組成，抗擠出強度高、無扭轉變形之虞、高壓穩定性相當優異，適用於重負載且大直徑的油壓應用。此型密封件不僅可提供與滑動活塞較穩定的高接觸壓力且磨擦力低，滑動平順完全沒有滯滑效應。適用於鋼鐵廠板胚連鑄機的扇形段 (segment) 滾筒群油壓缸、船舶油壓缸、射出成型機模壓油壓缸、重載用機械手。

Two-part piston seal set for hydraulics used in segment cylinder of continuous slab caster, marine, injection molding machine, and heavy-duty manipulator. Thanks to the special design, type PM is characterized as high-pressure stability, very good extrusion resistance, low friction, and no stick-slip effect.

應用範圍

壓力 ≤ 400 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 5 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 5 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

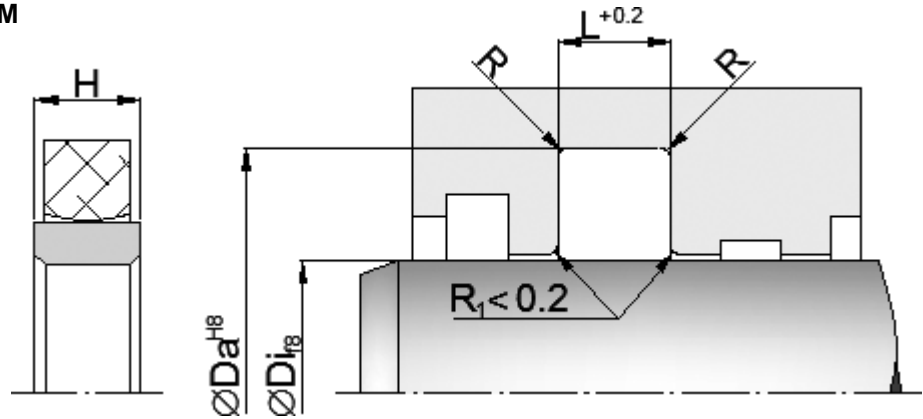
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	密封件高度 Seal Height	溝槽 R 角 Radius	截面 Gland Code
ϕ Di	ϕ Da	L	H	R	
50 ~ 69.9	Di + 15.0	7.5	7.0	0.3	A
70 ~ 219.9	Di + 20.0	10.0	9.35	0.4	B
220 ~ 309.9	Di + 25.0	12.5	11.7	0.4	C
310 ~ 539.9	Di + 30.0	15.0	14.0	0.8	D
540 ~ 699.9	Di + 35.0	17.5	16.4	1.2	E
700 ~ 1150.0	Di + 40.0	20.0	18.7	1.2	F

RM 型桿密封件

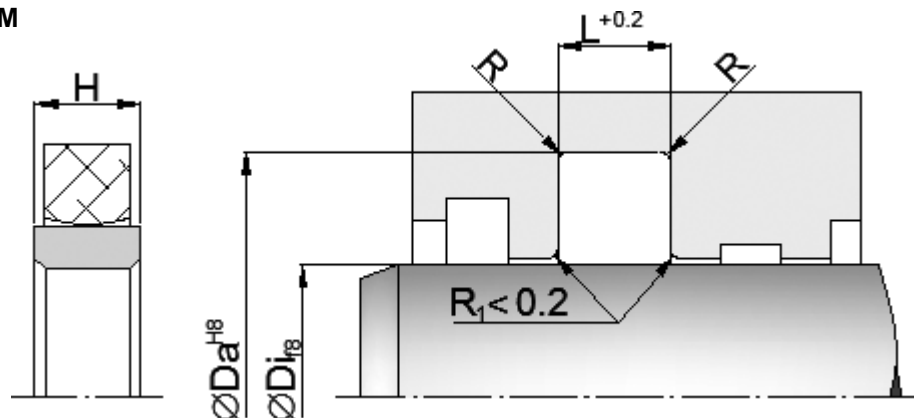
PTFE Rod Seal Set – type RM



溝槽尺寸 / Grove				油封高度	溝槽尺寸 / Grove				油封高度
Di	Da	L	H		Di	Da	L	H	
50	65	7.5	7.0		130	150	10.0	9.35	
55	70	7.5	7.0		135	150	7.5	7.0	
60	75	7.5	7.0		135	155	10.0	9.35	
60	80	10.0	9.35		140	155	7.5	7.0	
65	80	7.5	7.0		140	160	10.0	9.35	
65	85	10.0	9.35		145	165	10.0	9.35	
70	85	7.5	7.0		150	170	10.0	9.35	
70	90	10.0	9.35		150	175	12.5	11.7	
75	90	7.5	7.0		155	175	10.0	9.35	
75	95	10.0	9.35		155	180	12.5	11.7	
80	95	7.5	7.0		160	180	10.0	9.35	
80	100	10.0	9.35		160	185	12.5	11.7	
85	100	7.5	7.0		165	185	10.0	9.35	
85	105	10.0	9.35		165	190	12.5	11.7	
90	105	7.5	7.0		170	190	10.0	9.35	
90	110	10.0	9.35		170	195	12.5	11.7	
95	110	7.5	7.0		175	195	10.0	9.35	
95	115	10.0	9.35		175	200	12.5	11.7	
100	115	7.5	7.0		180	200	10.0	9.35	
100	120	10.0	9.35		180	205	12.5	11.7	
105	120	7.5	7.0		185	205	10.0	9.35	
105	125	10.0	9.35		200	225	12.5	11.7	
110	125	7.5	7.0		210	230	10.0	9.35	
110	130	10.0	9.35		210	235	12.5	11.7	
115	130	7.5	7.0		220	240	10.0	9.35	
115	135	10.0	9.35		220	245	12.5	11.7	
120	135	7.5	7.0		230	250	10.0	9.35	
120	140	10.0	9.35		230	255	12.5	11.7	
125	140	7.5	7.0		240	260	10.0	9.35	
125	145	10.0	9.35		240	265	12.5	11.7	
130	145	7.5	7.0		250	270	10.0	9.35	

RM 型桿密封件

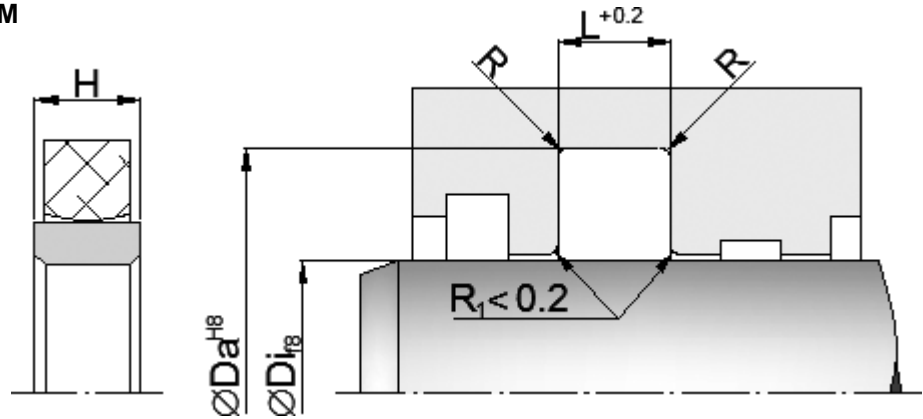
PTFE Rod Seal Set – type RM



溝槽尺寸 / Grove			油封高度 H	溝槽尺寸 / Grove			油封高度 H
Di	Da	L		Di	Da	L	
250	275	12.5	11.7	420	445	12.5	11.7
260	280	10.0	9.35	420	450	15.0	14.0
260	285	12.5	11.7	440	470	15.0	14.0
270	295	12.5	11.7	440	475	17.5	16.4
270	300	15.0	14.0	460	490	15.0	14.0
280	305	12.5	11.7	460	495	17.5	16.4
280	310	15.0	14.0	480	510	15.0	14.0
290	315	12.5	11.7	480	515	17.5	16.4
290	320	15.0	14.0	500	530	15.0	14.0
300	325	12.5	11.7	500	535	17.5	16.4
300	330	15.0	14.0	520	550	15.0	14.0
310	335	12.5	11.7	520	555	17.5	16.4
310	340	15.0	14.0	540	570	15.0	14.0
320	345	12.5	11.7	540	575	17.5	16.4
320	350	15.0	14.0	560	590	15.0	14.0
330	355	12.5	11.7	560	595	17.5	16.4
330	360	15.0	14.0	580	610	15.0	14.0
340	365	12.5	11.7	580	615	17.5	16.4
340	370	15.0	14.0	600	630	15.0	14.0
350	375	12.5	11.7	600	635	17.5	16.4
350	380	15.0	14.0	630	665	17.5	16.4
360	385	12.5	11.7	630	670	20.0	18.7
360	390	15.0	14.0	660	695	17.5	16.4
370	395	12.5	11.7	660	700	20.0	18.7
370	400	15.0	14.0	690	725	17.5	16.4
380	405	12.5	11.7	690	730	20.0	18.7
380	410	15.0	14.0	720	755	17.5	16.4
390	415	12.5	11.7	720	760	20.0	18.7
390	420	15.0	14.0	750	785	17.5	16.4
400	425	12.5	11.7	750	790	20.0	18.7
400	430	15.0	14.0	780	815	17.5	16.4

RM 型桿密封件

PTFE Rod Seal Set – type RM



溝槽尺寸 / Grove			油封高度	溝槽尺寸 / Grove			油封高度
Di	Da	L	H	Di	Da	L	H
780	820	20.0	18.7	1250	1290	20.0	18.7
800	835	17.5	16.4	1300	1340	20.0	18.7
800	840	20.0	18.7	1350	1390	20.0	18.7
840	875	17.5	16.4	1400	1440	20.0	18.7
840	880	20.0	18.7	1450	1490	20.0	18.7
880	915	17.5	16.4				
880	920	20.0	18.7				
920	955	17.5	16.4				
920	960	20.0	18.7				
960	1000	20.0	18.7				
1000	1040	20.0	18.7				
1050	1090	20.0	18.7				
1100	1140	20.0	18.7				
1150	1190	20.0	18.7				
1200	1240	20.0	18.7				

※ 特殊尺寸亦可提供

訂購範例 (How to order)

Order No. RM - 100 - 02T - 1 - B

Series No. 型式 _____

Rod diameter 桿徑 _____

Material code(seal) 密封件材質 _____

Material code(D-ring) D 型環材質 _____

Gland code 截面 _____

※ 可依使用條件選用其他材質，密封件請參照 P.6，D 型環請參照 P.5

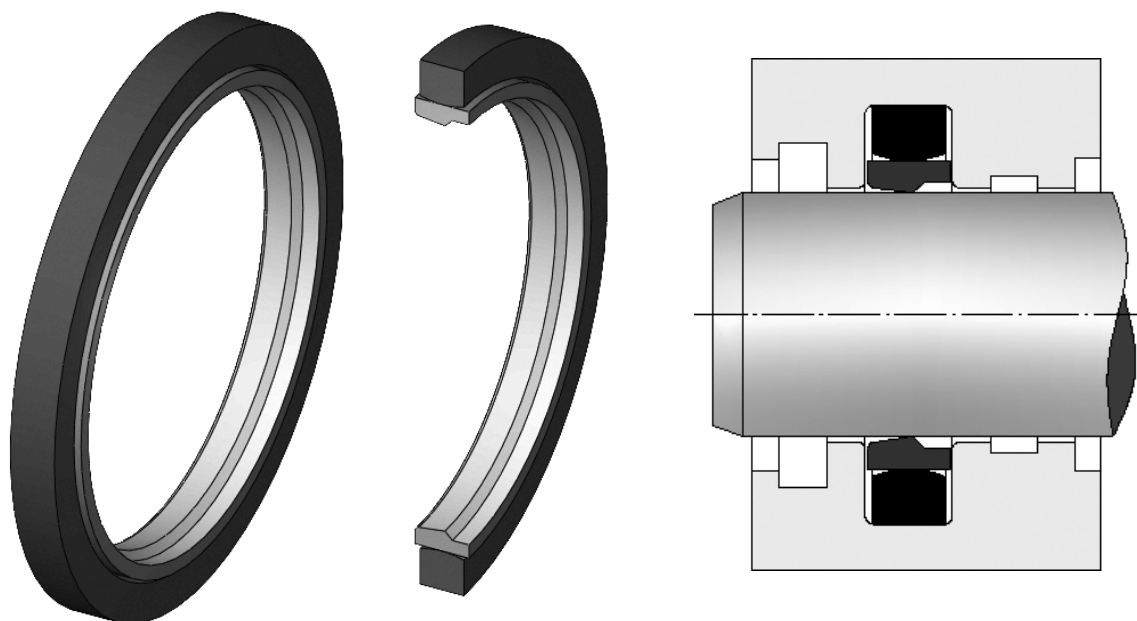
註：缸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1160x20mm 訂購時請註明 RM-K1200-02T-1-F。

Note : For rod diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1160x20mm should be denominated as RM-K1200-02T-1-F.

RN 型桿密封件

PTFE Rod Seal Set – type RN



兩件式活塞桿密封件，由一個密封環與一提供預負荷的凸面橡膠環組成，抗擠出强度高、無扭轉變形之虞、高壓穩定性相當優異，適用於重負載且大直徑的油壓應用。此型密封件不僅可提供與滑動桿較穩定的高接觸壓力且摩擦力低，滑動平順完全沒有滯滑效應。適用於鋼鐵廠板胚連續鑄機的扇形段 (segment) 滾筒群油壓缸、船舶油壓缸、射出成型機模壓油壓缸、重載用機械手。

Two-part rod seal set for hydraulics used in segment cylinder of continuous slab caster, marine, injection molding machine, and heavy-duty manipulator. Thanks to the special design, type RN is characterized as high-pressure stability, very good extrusion resistance, low friction, and no stick-slip effect.

應用範圍

壓力 ≤ 400 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 5 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 5 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

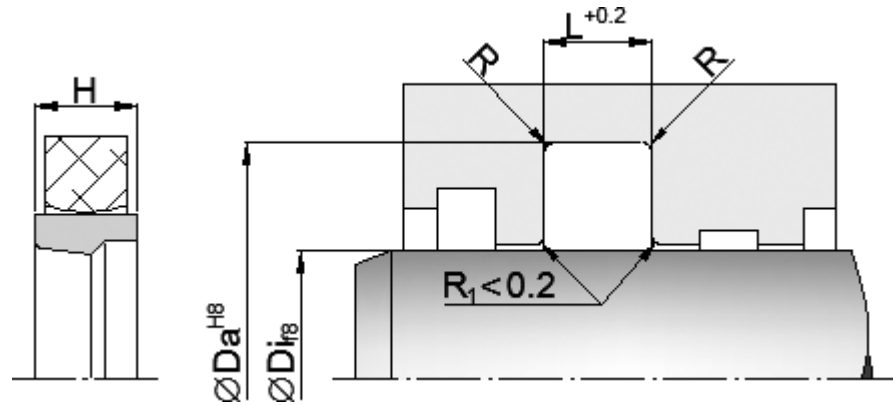
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	密封件高度 Seal Height	溝槽 R 角 Radius	截面 Gland Code
ϕ Di	ϕ Da	L	H	R	
50 ~ 69.9	Di + 15.0	7.5	7.0	0.3	A
70 ~ 219.9	Di + 20.0	10.0	9.4	0.4	B
220 ~ 309.9	Di + 25.0	12.5	11.7	0.4	C
310 ~ 539.9	Di + 30.0	15.0	14.0	0.8	D
540 ~ 699.9	Di + 35.0	17.5	16.4	1.2	E
700 ~ 1150.0	Di + 40.0	20.0	18.7	1.2	F

RN 型棒密封件

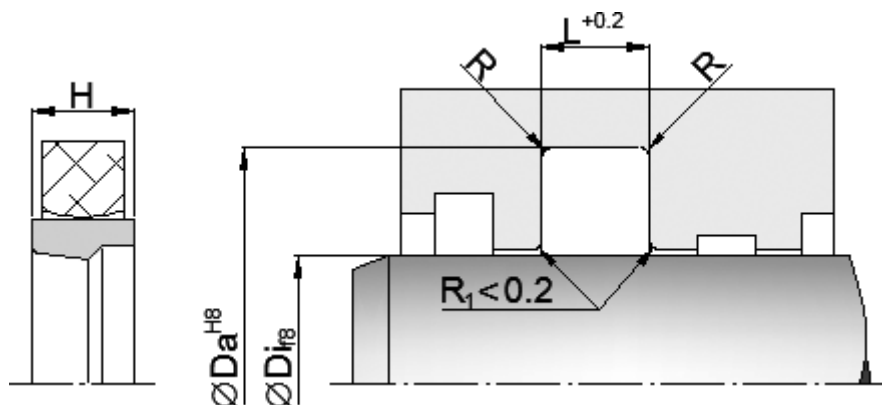
PTFE Rod Seal Set – type RN



溝槽尺寸 / Grove				油封高度	溝槽尺寸 / Grove				油封高度
Di	Da	L	H		Di	Da	L	H	
50	65	7.5	7.0		130	145	7.5	7.0	
55	70	7.5	7.0		130	150	10.0	9.4	
60	75	7.5	7.0		135	150	7.5	7.0	
60	80	10.0	9.4		135	155	10.0	9.4	
65	80	7.5	7.0		140	155	7.5	7.0	
65	85	10.0	9.4		140	160	10.0	9.4	
70	85	7.5	7.0		145	165	10.0	9.4	
70	90	10.0	9.4		150	170	10.0	9.4	
75	90	7.5	7.0		150	175	12.5	11.7	
75	95	10.0	9.4		155	175	10.0	9.4	
80	95	7.5	7.0		155	180	12.5	11.7	
80	100	10.0	9.4		160	180	10.0	9.4	
85	100	7.5	7.0		160	185	12.5	11.7	
85	105	10.0	9.4		165	185	10.0	9.4	
90	105	7.5	7.0		165	190	12.5	11.7	
90	110	10.0	9.4		170	190	10.0	9.4	
95	110	7.5	7.0		170	195	12.5	11.7	
95	115	10.0	9.4		175	195	10.0	9.4	
100	115	7.5	7.0		175	200	12.5	11.7	
100	120	10.0	9.4		180	200	10.0	9.4	
105	120	7.5	7.0		180	205	12.5	11.7	
105	125	10.0	9.4		185	205	10.0	9.4	
110	125	7.5	7.0		185	210	12.5	11.7	
110	130	10.0	9.4		190	210	10.0	9.4	
115	130	7.5	7.0		190	215	12.5	11.7	
115	135	10.0	9.4		195	215	10.0	9.4	
120	135	7.5	7.0		195	220	12.5	11.7	
120	140	10.0	9.4		200	220	10.0	9.4	
125	140	7.5	7.0		200	225	12.5	11.7	
125	145	10.0	9.4		210	230	10.0	9.4	

RN 型桿密封件

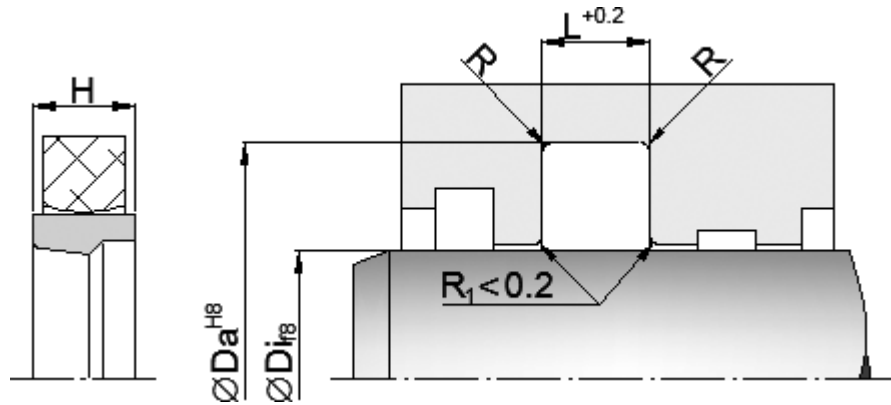
PTFE Rod Seal Set – type RN



溝槽尺寸 / Grove				油封高度	溝槽尺寸 / Grove				油封高度
Di	Da	L	H		Di	Da	L	H	
210	235	12.5	11.7		360	390	15.0	14.0	
220	240	10.0	9.4		370	395	12.5	11.7	
220	245	12.5	11.7		370	400	15.0	14.0	
230	250	10.0	9.4		380	405	12.5	11.7	
230	255	12.5	11.7		380	410	15.0	14.0	
240	260	10.0	9.4		390	415	12.5	11.7	
240	265	12.5	11.7		390	420	15.0	14.0	
250	270	10.0	9.4		400	425	12.5	11.7	
250	275	12.5	11.7		400	430	15.0	14.0	
260	280	10.0	9.4		420	445	12.5	11.7	
260	285	12.5	11.7		420	450	15.0	14.0	
270	295	12.5	11.7		440	470	15.0	14.0	
270	300	15.0	14.0		440	475	17.5	16.4	
280	305	12.5	11.7		460	490	15.0	14.0	
280	310	15.0	14.0		460	495	17.5	16.4	
290	315	12.5	11.7		480	510	15.0	14.0	
290	320	15.0	14.0		480	515	17.5	16.4	
300	325	12.5	11.7		500	530	15.0	14.0	
300	330	15.0	14.0		500	535	17.5	16.4	
310	335	12.5	11.7		520	550	15.0	14.0	
310	340	15.0	14.0		520	555	17.5	16.4	
320	345	12.5	11.7		540	570	15.0	14.0	
320	350	15.0	14.0		540	575	17.5	16.4	
330	355	12.5	11.7		560	590	15.0	14.0	
330	360	15.0	14.0		560	595	17.5	16.4	
340	365	12.5	11.7		580	610	15.0	14.0	
340	370	15.0	14.0		580	615	17.5	16.4	
350	375	12.5	11.7		600	630	15.0	14.0	
350	380	15.0	14.0		600	635	17.5	16.4	
360	385	12.5	11.7		630	665	17.5	16.4	

RN 型桿密封件

PTFE Rod Seal Set – type RN



溝槽尺寸 / Grove				油封高度	溝槽尺寸 / Grove				油封高度
Di	Da	L	H		Di	Da	L	H	
630	670	20.0	18.7		880	915	17.5	16.4	
660	695	17.5	16.4		880	920	20.0	18.7	
660	700	20.0	18.7		920	955	17.5	16.4	
690	725	17.5	16.4		920	960	20.0	18.7	
690	730	20.0	18.7		960	1000	20.0	18.7	
720	755	17.5	16.4		1000	1040	20.0	18.7	
720	760	20.0	18.7		1050	1090	20.0	18.7	
750	785	17.5	16.4		1100	1140	20.0	18.7	
750	790	20.0	18.7		1150	1190	20.0	18.7	
780	815	17.5	16.4		1200	1240	20.0	18.7	
780	820	20.0	18.7		1250	1290	20.0	18.7	
800	835	17.5	16.4		1300	1340	20.0	18.7	
800	840	20.0	18.7		1350	1390	20.0	18.7	
840	875	17.5	16.4		1400	1440	20.0	18.7	
840	880	20.0	18.7		1450	1490	20.0	18.7	

※ 特殊尺寸亦可提供

訂購範例 (How to order)

Order No. RN - 100 - 02T - 1 - B

Series No. 型式 _____

Rod diameter 桿徑 _____

Material code(seal) 密封件材質 _____

Material code(D-ring) D 型環材質 _____

Gland code 截面 _____

※ 可依使用條件選用其他材質，密封件請參照 P.6，D 型環請參照 P.5

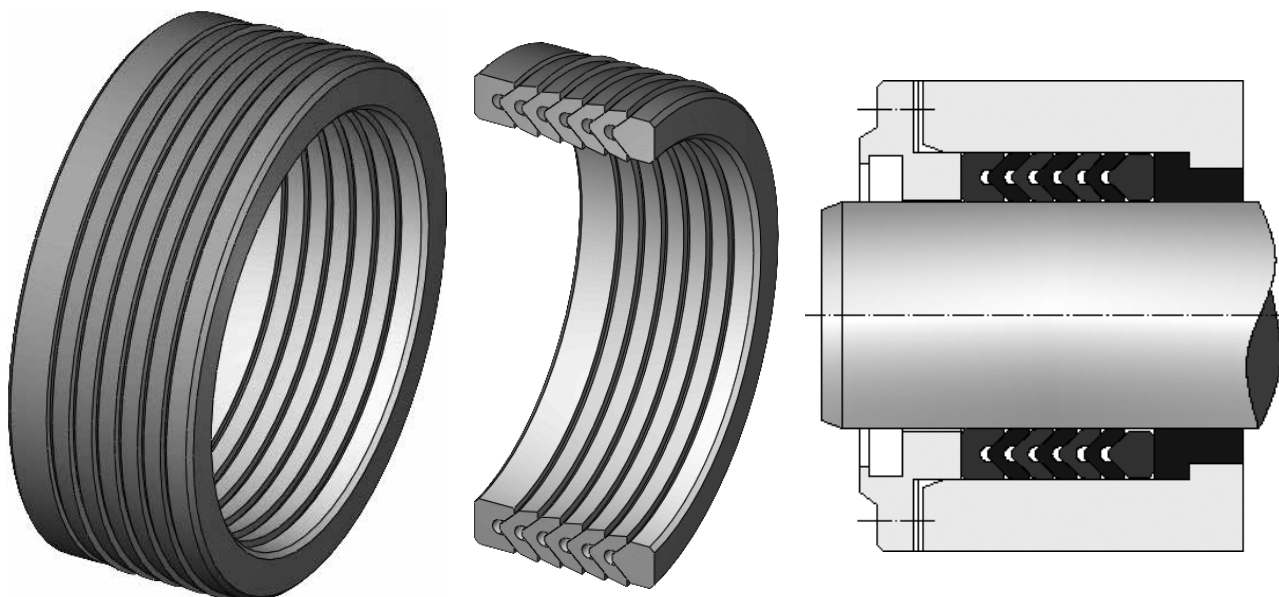
註：缸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1160x20mm 訂購時請註明 RN-K1200-02T-1-F。

Note : For rod diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1160x20mm should be denominated as RN-K1200-02T-1-F.

RV 型桿密封件

Rod V Packing – type RV



RV 型桿密封件由壓環、支撐環、數個填料鐵氟龍 V 型環組成，穩定性及耐磨性能佳，於重負荷應用亦無擠出破壞之虞。即使在嚴苛的工作條件下，如瞬間的壓力或溫度變化、軸向或徑向振動等仍具有良好的密封效果，適用於液壓油、水和乳化油等流體。多密封唇設計有利於壓力分配予較佳的密封效果，液壓缸維修時，可加切口以利組裝。

The rod PTFE Rod V Packing type RV, consisting of several chevron or V pressure rings and header ring plus 1 back-up ring, is extremely suitable for medium for medium to heavy duty applications. The distinctive hinge-like action of each V ring permits quick reaction to pressure or temperature changes and no adverse effect under axial/radial vibration. The multiple lip configurations automatically distribute pressure and an effective seal along the shaft. It is possible to split the seals to facilitate installation in case maintenance.

應用範圍

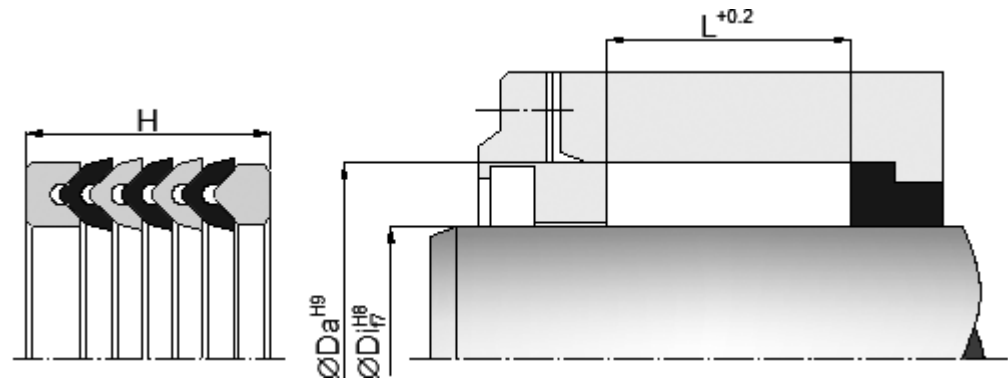
壓力 $\leq 350\text{bar}$
 溫度 $-40 \sim 200^{\circ}\text{C}$
 速度 $\leq 0.5 \text{ m/s}$
 標準材質 碳纖填料鐵氟龍、NBR
 註：可依使用條件選用其他材質

Application Range

Pressure $\leq 350\text{bar}$
 Temperature $-40 \sim 200^{\circ}\text{C}$
 Speed $\leq 0.5 \text{ m/s}$
 Standard Material Carbon fibre filled PTFE+NBR
 Other materials are available for specified conditions

RV 型桿密封件

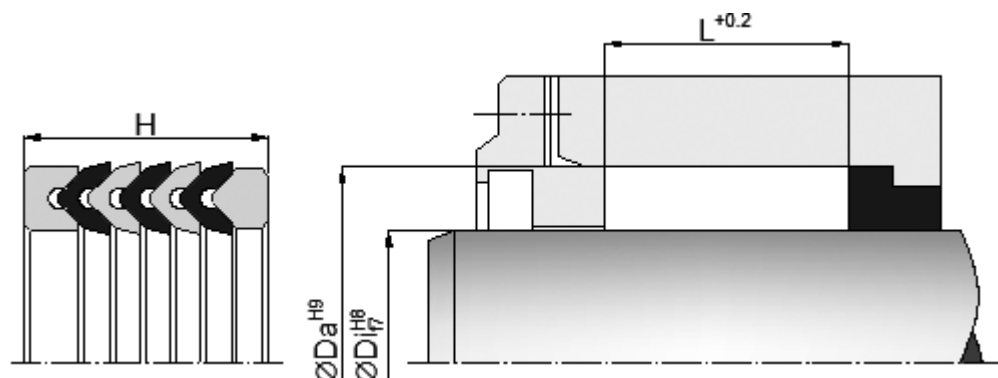
Rod V Packing – type RV



溝槽尺寸 / Grove			油封高度	訂購編號	溝槽尺寸 / Grove			油封高度	訂購編號
Di	Da	L	H	Order code	Di	Da	L	H	Order code
8	18	18.5	18.5	RV-008-01-M2	45	65	27.5	27.5	RV-045-01-M3
10	20	18.5	18.5	RV-010-01-M2	50	65	22.5	22.5	RV-050-01-M2
10	22	22.5	22.5	RV-010-01-M3	50	70	30.0	30.0	RV-050-01-M3
12	22	18.5	18.5	RV-012-01-M2	55	70	22.5	22.5	RV-055-01-M2
14	24	18.5	18.5	RV-014-01-M2	55	75	30.0	30.0	RV-055-01-M3
16	26	18.5	18.5	RV-016-01-M2	56	76	37.0	37.0	RV-056-01-M3
16	28	22.5	22.5	RV-016-01-M3	60	75	22.5	22.5	RV-060-01-M2
18	28	18.5	18.5	RV-018-01-M2	60	80	37.0	37.0	RV-060-01-M3
20	30	18.5	18.5	RV-020-01-M2	63	83	37.0	37.0	RV-063-01-M3
20	32	22.5	22.5	RV-020-01-M3	65	80	22.5	22.5	RV-065-01-M2
22	32	18.5	18.5	RV-022-01-M2	65	85	40.0	40.0	RV-065-01-M3
22	34	22.5	22.5	RV-022-01-M3	70	85	22.5	22.5	RV-070-01-M2
24	34	18.5	18.5	RV-024-01-M2	70	90	40.0	40.0	RV-070-01-M3
25	37	22.5	22.5	RV-025-01-M2	75	90	22.5	22.5	RV-075-01-M2
25	40	22.5	22.5	RV-025-01-M3	75	95	40.0	40.0	RV-075-01-M3
27	39	22.5	22.5	RV-027-01-M2	80	95	22.5	22.5	RV-080-01-M2
28	43	22.5	22.5	RV-028-01-M3	80	100	40.0	40.0	RV-080-01-M3
30	42	22.5	22.5	RV-030-01-M2	85	100	22.5	22.5	RV-085-01-M2
30	45	22.5	22.5	RV-030-01-M3	85	105	40.0	40.0	RV-085-01-M3
32	44	22.5	22.5	RV-032-01-M2	90	105	22.5	22.5	RV-090-01-M2
32	47	22.5	22.5	RV-032-01-M3	90	110	40.0	40.0	RV-090-01-M3
35	47	22.5	22.5	RV-035-01-M2	95	110	30.0	30.0	RV-095-01-M2
35	50	22.5	22.5	RV-035-01-M3	95	115	40.0	40.0	RV-095-01-M3
36	51	22.5	22.5	RV-036-01-M3	100	115	30.0	30.0	RV-100-01-M2
37	49	22.5	22.5	RV-037-01-M2	100	120	40.0	40.0	RV-100-01-M3
40	52	22.5	22.5	RV-040-01-M2	105	120	30.0	30.0	RV-105-01-M2
40	55	22.5	22.5	RV-040-01-M3	110	125	30.0	30.0	RV-110-01-M2
42	54	22.5	22.5	RV-042-01-M2	110	130	40.0	40.0	RV-110-01-M3
42	57	27.5	27.5	RV-042-01-M3	115	130	30.0	30.0	RV-115-01-M2
45	60	22.5	22.5	RV-045-01-M2	115	140	46.0	46.0	RV-115-01-M3

RV 型桿密封件

Rod V Packing – type RV



溝槽尺寸 / Grove			油封高度 H	訂購編號 Order code	溝槽尺寸 / Grove			油封高度 H	訂購編號 Order code
Di	Da	L			Di	Da	L		
120	135	34	34	RV-120-01-M2	190	220	60	60	RV-190-01-M3
120	145	46	46	RV-120-01-M3	200	220	40	40	RV-200-01-M2
125	140	34	34	RV-125-01-M2	200	230	60	60	RV-200-01-M3
125	150	46	46	RV-125-01-M3	210	230	40	40	RV-210-01-M2
130	145	34	34	RV-130-01-M2	220	240	40	40	RV-220-01-M2
135	150	34	34	RV-135-01-M2	220	250	60	60	RV-220-01-M3
140	155	34	34	RV-140-01-M2	230	250	40	40	RV-230-01-M2
140	165	46	46	RV-140-01-M3	240	260	40	40	RV-240-01-M2
150	170	40	40	RV-150-01-M2	250	270	40	40	RV-250-01-M2
150	180	60	60	RV-150-01-M3	260	280	40	40	RV-260-01-M2
160	180	40	40	RV-160-01-M2	270	290	40	40	RV-270-01-M2
160	190	60	60	RV-160-01-M3	280	300	40	40	RV-280-01-M2
170	190	40	40	RV-170-01-M2	290	310	40	40	RV-290-01-M2
180	200	40	40	RV-180-01-M2	300	320	40	40	RV-300-01-M2
180	210	60	60	RV-180-01-M3	320	360	78	78	RV-320-01-M3
190	210	40	40	RV-190-01-M2					

※ 特殊尺寸亦可提供

訂購範例 (How to order)

Order No. RV - 050 - 01 - M2

Series No. 型式 _____

Rod diameter 桿徑 _____

Material combination 材質組合 _____

* 可選用材質組合：

01 : 05T+NBR

02 : 05T+VITON

03 : 02T+NBR

04 : 02T+VITON

05 : HPU+POM

06 : HPU+PA

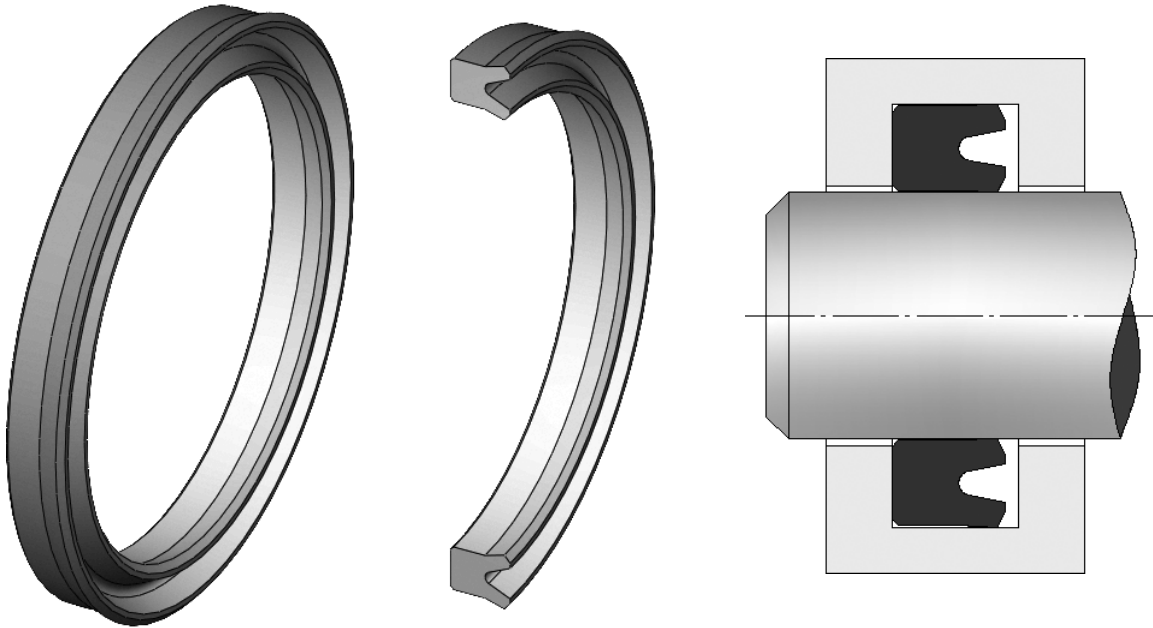
Order No. RV - 063 - 01 - M3

Series No. 型式 _____

Rod diameter 桿徑 _____

Material combination 材質組合 _____

軸孔兩用 U 型油封 UF1 型
 Rod/Piston U-cup seal – type UF1



UF1 型油封可選用 NBR 或 Viton 材質，適用於活塞與活塞桿之密封，具有對稱形小截面，易組裝可應用於封閉型溝槽。

UF1 profile is a symmetrical hydraulic piston/rod seal made of NBR or Viton. The smaller profile provides easier installation even for solid gland.

應用範圍

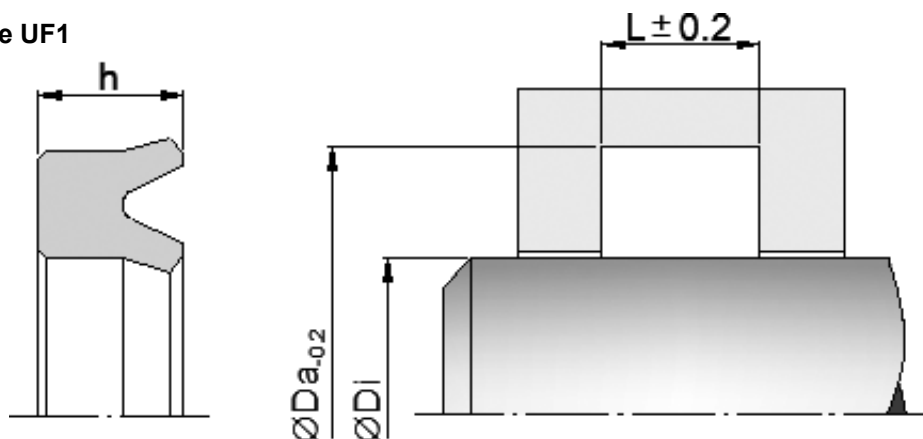
壓力 ≤ 140 bar
 工作溫度 -25 ~ +100°C (NBR)
 -20 ~ +150°C (VITON)
 線速度 ≤ 0.5 m/s
 流體 油壓
 材質 NBR/Viton

Application Range

Pressure ≤ 140 bar
 Temperature -25 ~ +100°C (NBR)
 -20 ~ +150°C (VITON)
 Speed ≤ 0.5 m/s
 Medium Hydraulic oils
 Material NBR/Viton

軸孔兩用 U 型油封 UF1 型

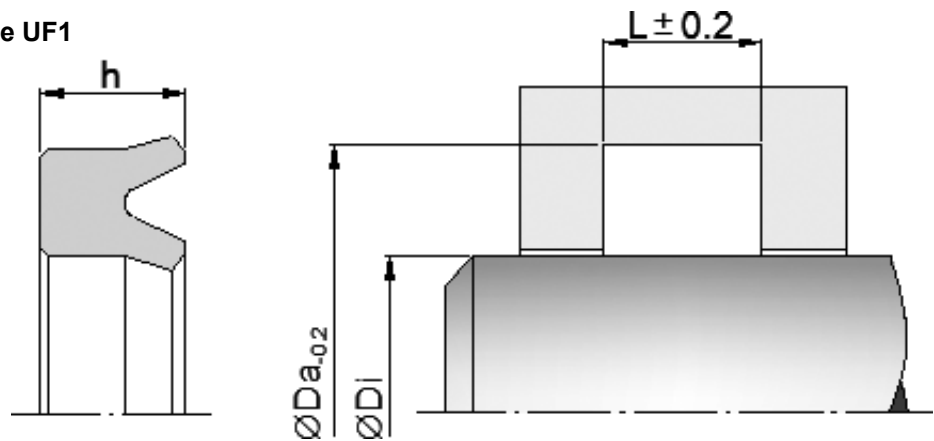
Rod/Piston U-cup seal – type UF1



溝槽尺寸 / Grove				訂購編號	溝槽尺寸 / Grove				訂購編號
Di	Da	h	L	Order code	Di	Da	h	L	Order code
14	22	5.0	5.7	UF1 014A N1X	58	68	6.0	7.0	UF1 058A N1X
18	26	5.0	5.7	UF1 018A N1X	60	71	7.0	8.0	UF1 060A N1X
20	28	5.0	5.7	UF1 020A N1X	62	72	6.0	7.0	UF1 062A N1X
22	30	5.0	5.7	UF1 022A N1X	64	74	6.0	7.0	UF1 064A N1X
22.4	30	5.0	5.7	UF1 022B N1X	66	76	6.0	7.0	UF1 066A N1X
23.5	31.5	5.0	5.7	UF1 023A N1X	70	80	6.0	7.0	UF1 070A N1X
24	32	5.0	5.7	UF1 024A N1X	72	82	6.0	7.0	UF1 072A N1X
26	34	5.0	5.7	UF1 026A N1X	74	84	6.0	7.0	UF1 074A N1X
28	36	5.0	5.7	UF1 028A N1X	76	86	6.0	7.0	UF1 076A N1X
30	40	6.0	7.0	UF1 030A N1X	78	88	6.0	7.0	UF1 078A N1X
32	42	6.0	7.0	UF1 032A N1X	80	90	6.0	7.0	UF1 080A N1X
31.5	41.5	6.0	7.0	UF1 031A N1X	82	90	6.0	7.0	UF1 082A N1X
34	44	6.0	7.0	UF1 034A N1X	84	90	6.0	7.0	UF1 084A N1X
35.5	45	6.0	7.0	UF1 035A N1X	85	100	9.0	10.0	UF1 085A N1X
35.5	45.5	6.0	7.0	UF1 035B N1X	90	105	9.0	10.0	UF1 090A N1X
36	46	6.0	7.0	UF1 036A N1X	95	110	9.0	10.0	UF1 095A N1X
38	48	6.0	7.0	UF1 038A N1X	98	112	8.5	9.5	UF1 098A N1X
40	50	6.0	7.0	UF1 040A N1X	100	115	9.0	10.0	UF1 100A N1X
42	50	6.0	7.0	UF1 042A N1X	106	120	8.5	9.5	UF1 106A N1X
44	50	6.0	7.0	UF1 044A N1X	112	125	8.5	9.5	UF1 112A N1X
45	56	7.0	8.0	UF1 045A N1X	112	125	9.0	10.0	UF1 112B N1X
46	56	6.0	7.0	UF1 046A N1X	118	132	8.5	9.5	UF1 118A N1X
48	58	6.0	7.0	UF1 048A N1X	125	140	9.0	10.0	UF1 125A N1X
50	60	6.0	7.0	UF1 050A N1X	130	145	9.0	10.0	UF1 130A N1X
52	60	6.0	7.0	UF1 052A N1X	132	145	8.5	9.5	UF1 132A N1X
54	60	6.0	7.0	UF1 054A N1X	136	150	8.5	9.5	UF1 136A N1X
56	66	6.0	7.0	UF1 056A N1X	140	155	9.0	10.0	UF1 140A N1X

軸孔兩用 U 型油封 UF1 型

Rod/Piston U-cup seal – type UF1



溝槽尺寸 / Grove				訂購編號
Di	Da	h	L	Order code
145	160	9.0	10.0	UF1 145A N1X
150	165	9.0	10.0	UF1 150A N1X
155	170	9.0	10.0	UF1 155A N1X
160	175	9.0	10.0	UF1 160A N1X
165	180	9.0	10.0	UF1 165A N1X
175	190	9.0	10.0	UF1 175A N1X
180	200	12.0	13.0	UF1 180A N1X
190	210	12.0	13.0	UF1 190A N1X
200	220	12.0	13.0	UF1 200A N1X
204	224	12.0	13.0	UF1 204A N1X
224	244	12.0	13.0	UF1 224A N1X
230	250	12.0	13.0	UF1 230A N1X
240	260	12.0	13.0	UF1 240A N1X
250	270	12.0	13.0	UF1 250A N1X

訂購範例 (How to order)

NBR :

Order No. UF1 - 014A - N1X

Series No. 型式 _____

Rod diameter 桿徑 _____

Material code(seal) 密封件材質 _____

Vtion :

Order No. UF1 - 014A - V1X

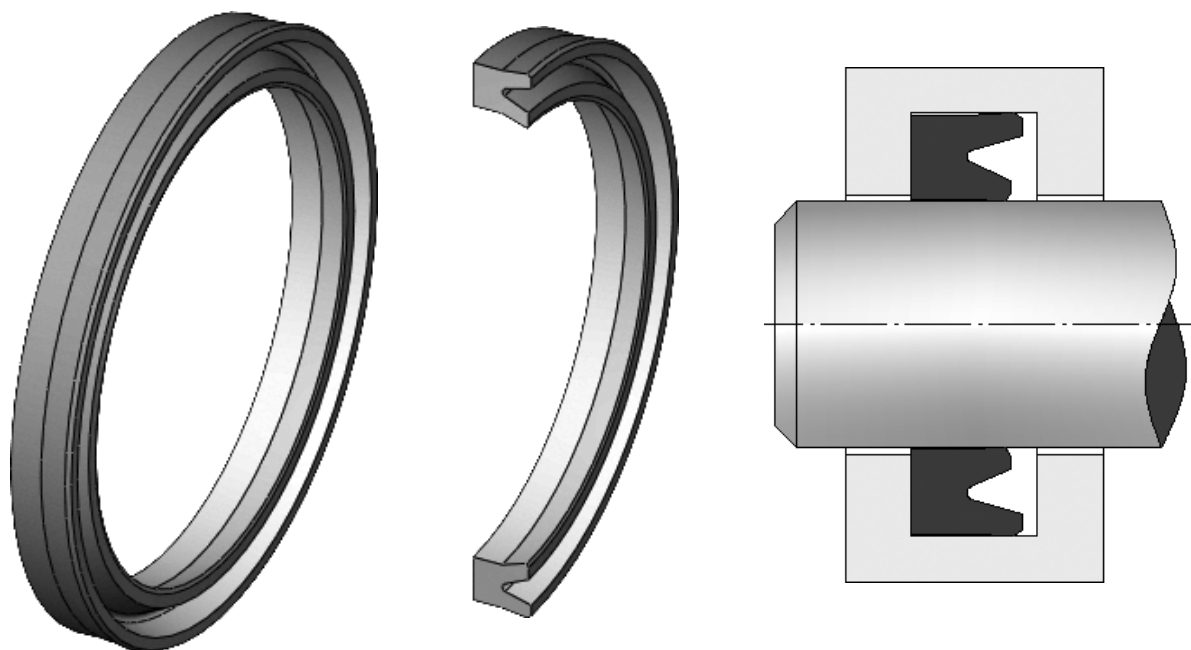
Series No. 型式 _____

Rod diameter 桿徑 _____

Material code(seal) 密封件材質 _____

軸用 U 型油封 R4 型

Rod U-cup seal – type R4



R4 型油封採用耐水解的 TPU 材質，適用於活塞桿之密封，具有對稱形小截面，易組裝可應用於封閉型溝槽。同時，具有優異的耐磨耗、耐擠出、耐瞬間高壓的能力，加上特殊的設計，可避免背壓所造成的密封失效。

R4 profile is a symmetrical hydraulic rod seal made of TPU with good Hydrolysis and high wear resistance. The knife trimmed, beveled lip contacts the bore or rod to provide enhanced low to high pressure sealing and wiping action.

應用範圍

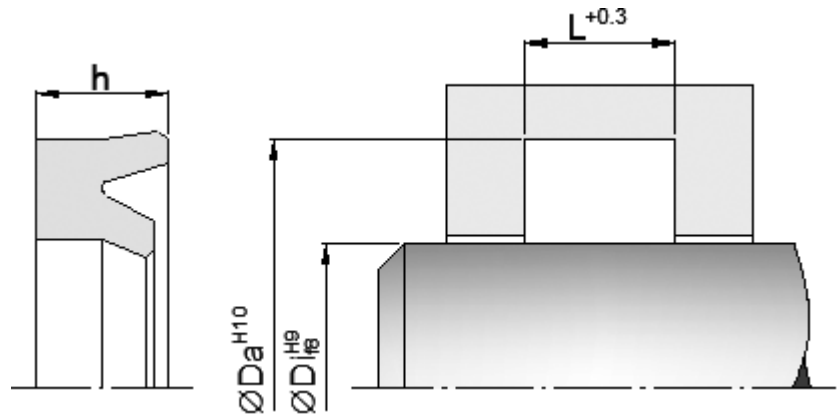
工作壓力 ≤ 400 bar
 工作溫度 $-35 \sim +110^{\circ}\text{C}$
 線速 ≤ 0.5 m/s
 流體 油壓
 材質 聚胺脂

Application Range

Pressure ≤ 400 bar
 Temperature $-35 \sim +110^{\circ}\text{C}$
 Speed ≤ 0.5 m/s
 Medium Hydraulic oils
 Material TPU

軸用 U 型油封 R4 型

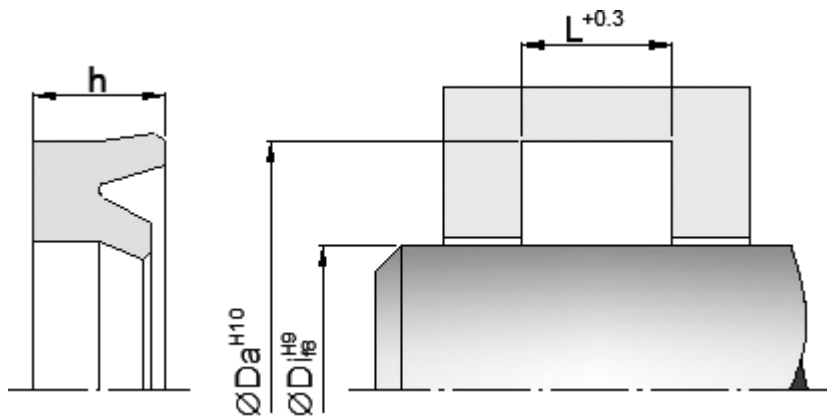
Rod U-cup seal – type R4



溝槽尺寸 / Grove				訂購編號	溝槽尺寸 / Grove				訂購編號
Di	Da	h	L	Order code	Di	Da	h	L	Order code
18	26	5.0	5.7	R4 018A G3X	85	100	9.0	10.0	R4 085A G3X
20	28	5.0	5.7	R4 020A G3X	90	105	9.0	10.0	R4 090A G3X
22.5	30	5.0	5.7	R4 022A G3X	95	110	9.0	10.0	R4 095A G3X
23.5	31.5	5.0	5.7	R4 023A G3X	98	112	8.5	9.5	R4 098A G3X
25	35	5.0	5.7	R4 025A G3X	100	115	9.0	10.0	R4 100A G3X
28	35.5	5.0	5.7	R4 028A G3X	106	120	8.5	9.5	R4 106A G3X
30	40	6.0	7.0	R4 030A G3X	112	125	9.0	10.0	R4 112A G3X
31.5	41.5	6.0	7.0	R4 031A G3X	125	140	9.0	10.0	R4 125A G3X
35	45	6.0	7.0	R4 035A G3X	136	150	8.5	9.5	R4 136A G3X
35.5	45	6.0	7.0	R4 035B G3X	145	160	9.0	10.0	R4 145A G3X
40	50	6.0	7.0	R4 040A G3X	150	165	9.0	10.0	R4 150A G3X
45	55	6.0	7.0	R4 045A G3X	155	170	9.0	10.0	R4 155A G3X
45	56	7.0	8.0	R4 045B G3X	160	175	9.0	10.0	R4 160A G3X
50	60	6.0	7.0	R4 050A G3X	165	180	9.0	10.0	R4 165A G3X
53	63	6.0	7.0	R4 053A G3X	170	185	9.0	10.0	R4 170A G3X
55	65	6.0	7.0	R4 055A G3X	175	190	9.0	10.0	R4 175A G3X
56	66	6.0	7.0	R4 056A G3X	180	200	12.0	13.0	R4 180A G3X
60	70	6.0	7.0	R4 060A G3X	190	210	12.0	13.0	R4 190A G3X
60	71	7.0	8.0	R4 060B G3X	200	220	12.0	13.0	R4 200A G3X
63	73	6.0	7.0	R4 063A G3X	204	224	12.0	13.0	R4 204A G3X
65	75	6.0	7.0	R4 065B G3X	210	230	12.0	13.0	R4 210A G3X
67	77	6.0	7.0	R4 067A G3X	220	240	12.0	13.0	R4 220A G3X
70	80	6.0	7.0	R4 070A G3X	225	245	12.0	13.0	R4 225A G3X
71	81	6.0	7.0	R4 071A G3X	230	250	12.0	13.0	R4 230A G3X
80	90	6.0	7.0	R4 080A G3X	240	260	12.0	13.0	R4 240A G3X

軸用 U 型油封 R4 型

Rod U-cup seal – type R4



溝槽尺寸 / Grove				訂購編號
Di	Da	h	L	Order code
250	270	12.0	13.0	R4 250A G3X
260	285	16.0	17.0	R4 260A G3X
270	295	16.0	17.0	R4 270A G3X
280	305	16.0	17.0	R4 280A G3X
290	315	16.0	17.0	R4 290A G3X
300	325	16.0	17.0	R4 300A G3X

訂購範例 (How to order)

Order No. R4 - 018A - G3X

Series No. 型式 _____

Rod diameter 桿徑 _____

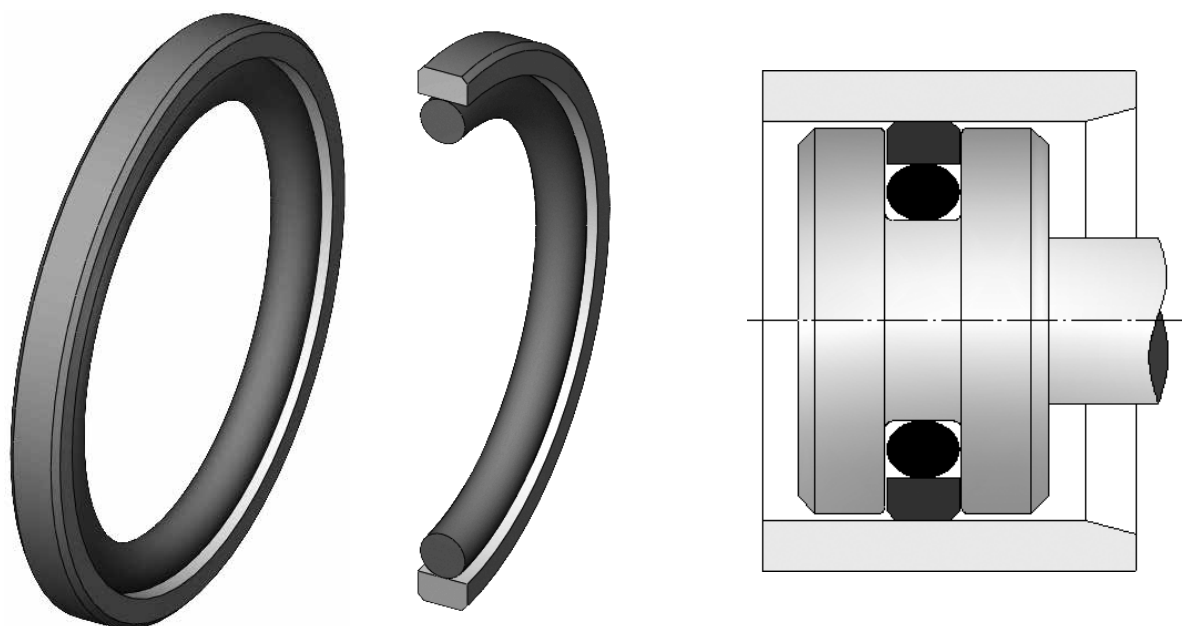
Material code(seal) 密封件材質 _____

活塞密封件 (Piston Seals)

型式	圖示	氣壓 / 油壓 (Hyd./Pneu)	壓力 (bar)	工作溫度 (°C)	速度 (m/s)	頁數 (Page.)
PA		H	400	-40~+200	4.0	P.84
PB		H	400	-60~+200	4.0	P.88
PC		H	350	-60~+200	4.0	P.92
PD		H	16	-60~+200	4.0	P.95
PE		H	400	-30~+200	2.0	P.98
PF		H	600	-30~+200	3.0	P.101
PM		H	400	-60~+200	5.0	P.104
PN		H	400	-60~+200	5.0	P.108
PV		H	500	-40~+200	0.5	P.112
UF1		H/P	140	-25~+100	0.5	P.115
P4		H	400	-35~+110	0.5	P.118

PA 型活塞密封件

PTFE Piston Seal Set – type PA



適用於雙動油壓缸、致動器及滑軸式閥件的活塞密封件，例如控制用油壓缸、伺服控制系統、工作母機及建設機械。PA 型活塞密封件具有最小的啟動與滑動摩擦力，即使在低速、快速來回或間歇滑動的應用下，仍能確保優異的低阻力密封性能。

Piston seal is suitable for bi-directional pressurization, hydraulic cartridge and spool valves such as control cylinders, servo-controlled systems, machine tools, and construction machinery. It offers low break-out and running friction to guarantee steady movement even at low speed or intermittent but frequent reciprocating action.

應用範圍

壓力 ≤ 400 bar
 溫度 $-40 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-40 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

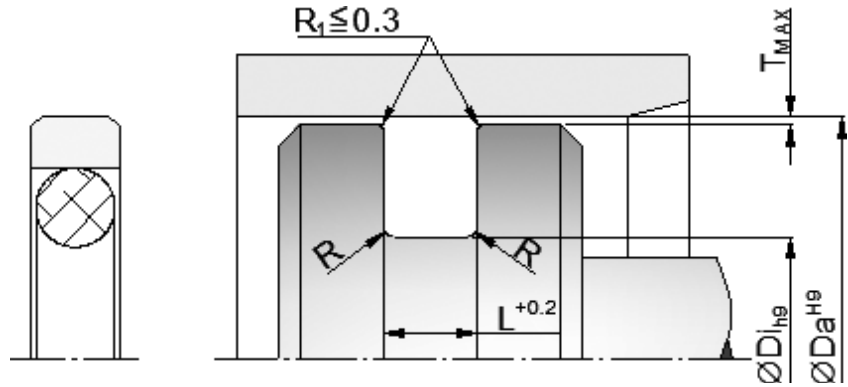
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Piston Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	溝槽間隙 Gap			截面 Gland Code	O 型環 O-ring C.S.
				T				
ϕ Da	ϕ Di	L	R	100bar	200bar	400bar		
8 ~ 14.9	Da - 4.9	2.2	0.5	0.3	0.2	0.1	A	1.78
15 ~ 39.9	Da - 7.5	3.2	0.5	0.4	0.25	0.15	B	2.62
40 ~ 79.9	Da - 11.0	4.2	0.5	0.4	0.25	0.15	C	3.53
80 ~ 132.9	Da - 15.5	6.3	0.9	0.5	0.3	0.2	D	5.33
133 ~ 329.9	Da - 21.0	8.1	0.9	0.5	0.3	0.2	E	6.99
330 ~ 669.9	Da - 24.5	8.1	0.9	0.6	0.35	0.25	F	6.99
670 ~ 999.9	Da - 28.0	9.5	0.9	0.7	0.4	0.3	G	8.4
1000 ~	Da - 38.0	13.8	0.9	0.7	0.4	0.3	H	12.0

PA 型活塞密封件

PTFE Piston Seal Set – type PA

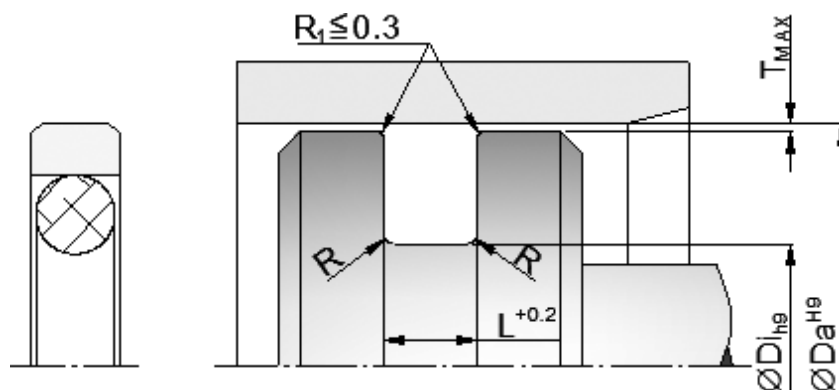


溝槽尺寸 / Grove			AS568 code	内徑 mm	線徑 mm
Da	Di	L			
10	5.1	2.2	2-008	4.47	1.78
15	10.1	2.2	2-012	9.25	1.78
15	7.5	3.2	2-109	7.59	2.62
20	15.1	2.2	2-015	14.00	1.78
20	12.5	3.2	2-111	10.77	2.62
25	20.1	2.2	2-018	18.77	1.78
25	17.5	3.2	2-115	17.12	2.62
30	22.5	3.2	2-118	21.89	2.62
30	19.0	4.2	2-210	18.64	3.53
35	27.5	3.2	2-121	26.64	2.62
35	24.0	4.2	2-213	23.39	3.53
40	32.5	3.2	2-124	31.42	2.62
40	29.0	4.2	2-216	28.17	3.53
45	37.5	3.2	2-127	36.17	2.62
45	34.0	4.2	2-219	32.92	3.53
50	42.5	3.2	2-131	42.52	2.62
50	39.0	4.2	2-222	37.69	3.53
55	47.5	3.2	2-134	47.29	2.62
55	44.0	4.2	2-224	44.04	3.53
60	49.0	4.2	2-225	47.22	3.53
60	44.5	6.3	2-327	43.85	5.33
65	54.0	4.2	2-227	53.57	3.53
65	49.5	6.3	2-328	46.99	5.33
70	59.0	4.2	2-228	56.74	3.53
70	54.5	6.3	2-330	53.34	5.33
75	64.0	4.2	2-230	63.09	3.53
75	59.5	6.3	2-331	56.52	5.33
80	69.0	4.2	2-232	69.44	3.53
80	64.5	6.3	2-333	62.87	5.33
85	74.0	4.2	2-233	72.62	3.53
85	69.5	6.3	2-335	69.22	5.33

溝槽尺寸 / Grove			AS568 code	内徑 mm	線徑 mm
Da	Di	L			
90	79.0	4.2	2-235	78.97	3.53
90	74.5	6.3	2-336	72.39	5.33
95	84.0	4.2	2-236	82.14	3.53
95	79.5	6.3	2-338	78.74	5.33
100	89.0	4.2	2-238	88.49	3.53
100	84.5	6.3	2-339	81.92	5.33
105	94.0	4.2	2-239	91.67	3.53
105	89.5	6.3	2-341	88.27	5.33
110	94.5	6.3	2-343	94.62	5.33
110	89.0	8.1	—	85.00	6.99
115	99.5	6.3	2-344	97.79	5.33
120	104.5	6.3	2-346	104.14	5.33
120	99.0	8.1	—	98.00	6.99
125	109.5	6.3	2-347	107.32	5.33
130	114.5	6.3	2-349	113.67	5.33
130	109.0	8.1	—	107.31	6.99
135	119.5	6.3	2-350	116.84	5.33
135	114.0	8.1	2-425	113.67	6.99
140	124.5	6.3	2-352	123.19	5.33
140	119.0	8.1	2-426	116.84	6.99
145	129.5	6.3	2-354	129.54	5.33
145	124.0	8.1	2-428	123.19	6.99
150	134.5	6.3	2-356	135.89	5.33
150	129.0	8.1	2-429	126.37	6.99
155	139.5	6.3	2-356	135.89	5.33
155	134.0	8.1	2-431	132.72	6.99
160	144.5	6.3	2-358	142.24	5.33
160	139.0	8.1	2-433	139.07	6.99
165	149.5	6.3	2-360	148.59	5.33
165	144.0	8.1	2-434	142.24	6.99
170	149.0	8.1	2-436	148.59	6.99

PA 型活塞密封件

PTFE Piston Seal Set – type PA

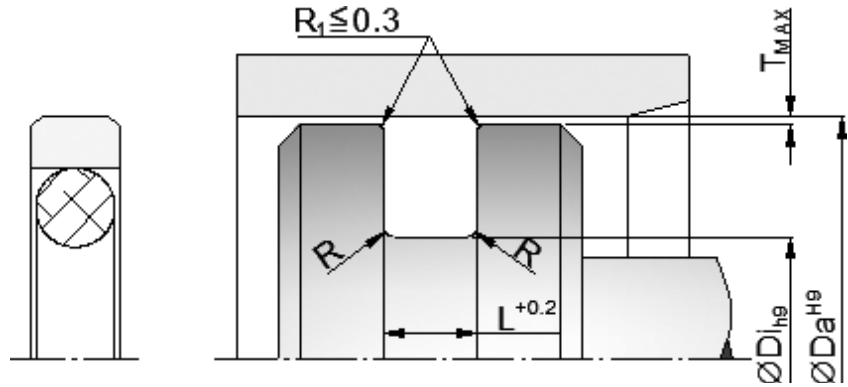


溝槽尺寸 / Grove			AS568 code	内径 mm	線径 mm
Da	Di	L			
175	159.5	6.3	2-362	158.12	5.33
175	154.0	8.1	2-437	151.77	6.99
180	164.5	6.3	2-363	164.47	5.33
180	159.0	8.1	2-438	158.12	6.99
185	169.5	6.3	2-363	164.47	5.33
185	164.0	8.1	2-439	164.47	6.99
190	169.0	8.1	2-439	164.47	6.99
195	174.0	8.1	2-440	170.82	6.99
200	184.5	6.3	2-366	183.52	5.33
200	179.0	8.1	2-441	177.17	6.99
210	194.5	6.3	2-367	189.87	5.33
210	189.0	8.1	2-442	183.52	6.99
220	204.5	6.3	2-369	202.57	5.33
220	199.0	8.1	2-444	196.22	6.99
230	214.5	6.3	2-370	208.92	5.33
230	209.0	8.1	2-445	202.57	6.99
240	219.0	8.1	2-446	215.27	6.99
240	215.5	8.1	2-446	215.27	6.99
250	229.0	8.1	2-447	227.97	6.99
250	225.5	8.1	2-447	227.97	6.99
260	239.0	8.1	2-447	227.97	6.99
270	249.0	8.1	2-448	240.67	6.99
270	245.5	8.1	2-448	240.67	6.99
280	259.0	8.1	2-449	253.37	6.99
290	269.0	8.1	2-450	266.07	6.99
290	265.5	8.1	2-449	253.37	6.99
300	279.0	8.1	2-451	278.77	6.99
300	275.5	8.1	2-450	266.07	6.99
310	289.0	8.1	2-451	278.77	6.99
320	299.0	8.1	2-452	291.47	6.99
320	295.5	8.1	2-452	291.47	6.99

溝槽尺寸 / Grove			AS568 code	内径 mm	線径 mm
Da	Di	L			
330	305.5	8.1	2-453	304.17	6.99
340	319.0	8.1	2-454	316.87	6.99
340	315.5	8.1	2-453	304.17	6.99
350	325.5	8.1	2-454	316.87	6.99
360	339.0	8.1	2-455	329.57	6.99
360	335.5	8.1	2-455	329.57	6.99
370	349.0	8.1	2-456	342.27	6.99
370	345.5	8.1	2-456	342.27	6.99
380	355.5	8.1	2-457	354.97	6.99
390	369.0	8.1	2-458	367.67	6.99
390	365.5	8.1	2-457	354.97	6.99
400	375.5	8.1	2-458	367.67	6.99
410	389.0	8.1	2-459	380.37	6.99
410	385.5	8.1	2-459	380.37	6.99
420	395.5	8.1	2-460	393.07	6.99
430	409.0	8.1	2-461	405.26	6.99
430	405.5	8.1	2-461	405.26	6.99
440	419.0	8.1	2-462	417.96	6.99
440	415.5	8.1	2-462	417.96	6.99
450	425.5	8.1	2-462	417.96	6.99
460	439.0	8.1	2-463	430.66	6.99
460	435.5	8.1	2-463	430.66	6.99
470	449.0	8.1	2-464	443.36	6.99
470	445.5	8.1	2-464	443.36	6.99
480	459.0	8.1	2-465	456.06	6.99
480	455.5	8.1	2-465	456.06	6.99
490	465.5	8.1	2-465	456.06	6.99
500	479.0	8.1	2-466	468.76	6.99
500	475.5	8.1	2-466	468.76	6.99
510	485.5	8.1	2-467	481.46	6.99
520	499.0	8.1	2-468	494.16	6.99

PA 型活塞密封件

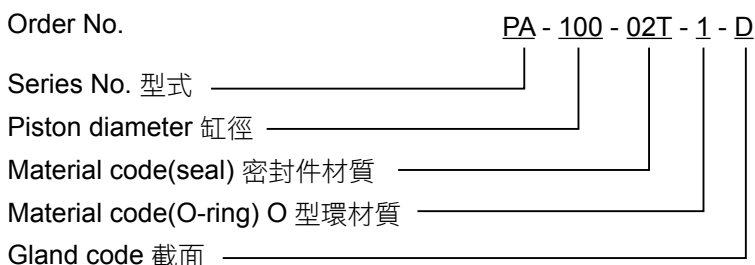
PTFE Piston Seal Set – type PA



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Da	Di	L				Da	Di	L			
520	495.5	8.1	2-468	494.16	6.99	740	712.0	9.5	—	710.00	8.40
530	509.0	8.1	2-469	506.86	6.99	780	752.0	9.5	—	750.00	8.40
530	505.5	8.1	2-468	494.16	6.99	800	772.0	9.5	—	770.00	8.40
550	525.5	8.1	2-469	506.86	6.99	900	872.0	9.5	—	888.00	8.40
570	545.5	8.1	2-470	532.26	6.99	1000	962.0	13.8	—	1020.0	12.00
580	559.0	8.1	2-471	557.66	6.99	1070	1032	13.8	—	1300.0	12.00
580	555.5	8.1	2-471	557.66	6.99	1200	1162	13.8	—	1160.0	12.00
600	575.5	8.1	2-471	557.66	6.99	1225	1187	13.8	—	1185.0	12.00
620	595.5	8.1	2-472	582.68	6.99	1500	1462	13.8	—	1460.0	12.00
630	609.0	8.1	2-473	608.08	6.99						
640	619.0	8.1	2-473	608.08	6.99						
640	615.5	8.1	2-473	608.08	6.99						
650	622.0	9.5	—	635.00	8.40						
660	635.5	8.1	2-474	633.48	6.99						
700	672.0	9.5	—	660.00	8.40						
710	682.0	9.5	—	680.00	8.40						

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

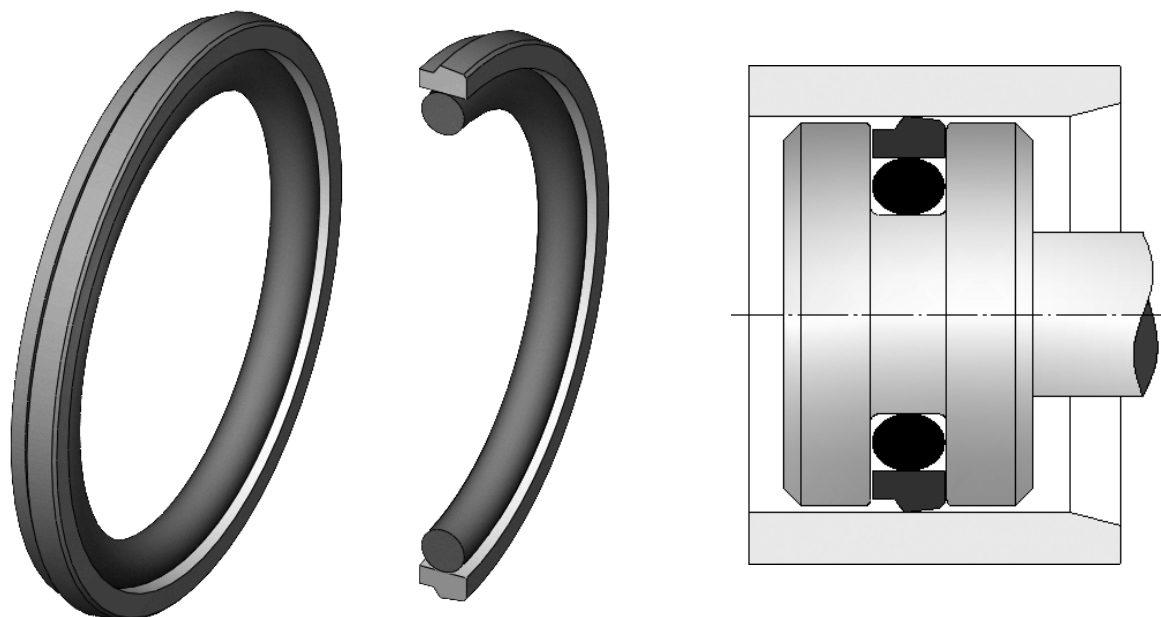
註：缸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1162x13.8mm 訂購時請註明 PA-K1200-02T-1-H。

Note : For bore diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1162x13.8mm should be denominated as PA-K1200-02T-1-H.

PB 型活塞密封件

PTFE Piston Seal Set – type PB



適用於單動油壓缸的活塞密封件，若成對配置亦可應用於雙動油壓缸。典型應用包括：控制用油壓缸、伺服控制系統、工作母機及建設機械等。

Single seal is designed for uni-directional pressurization pistons in hydraulic applications but it is also appropriate for double-acting pistons in hydraulic cylinders if two sealing sets are arranged. Typical applications include control cylinders, servo-controlled systems, machine tools, and construction machinery.

應用範圍

壓力 ≤ 400 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

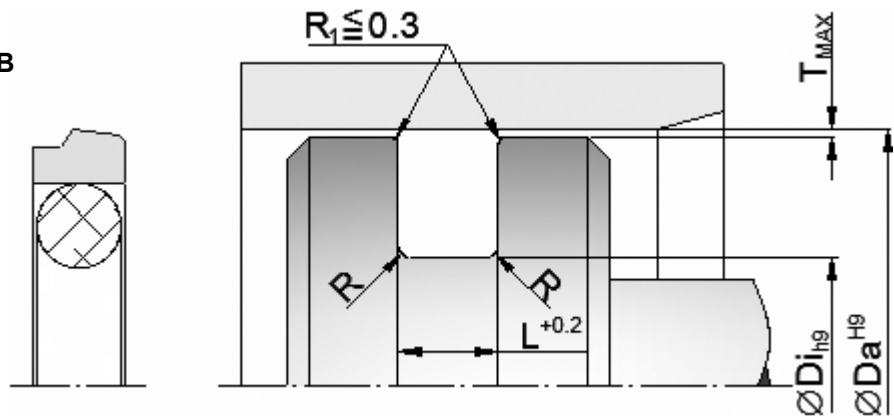
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Piston Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	溝槽間隙 Gap			截面 Gland Code	O 型環 O-ring C.S.
				T				
ϕ Da	ϕ Di	L	R	100bar	200bar	400bar		
8 ~ 16.9	Da - 4.9	2.2	0.5	0.3	0.2	0.1	A	1.78
17 ~ 26.9	Da - 7.3	3.2	0.5	0.4	0.25	0.15	B	2.62
27 ~ 59.9	Da - 10.7	4.2	0.5	0.4	0.25	0.15	C	3.53
60 ~ 199.9	Da - 15.1	6.3	0.9	0.5	0.3	0.2	D	5.33
200 ~ 255.9	Da - 20.5	8.1	0.9	0.5	0.3	0.2	E	6.99
256 ~ 669.9	Da - 24.0	8.1	0.9	0.6	0.35	0.25	F	6.99
670 ~ 999.9	Da - 27.3	9.5	0.9	0.7	0.4	0.3	G	8.4
1000 ~	Da - 38.0	13.8	0.9	0.7	0.4	0.3	H	12.0

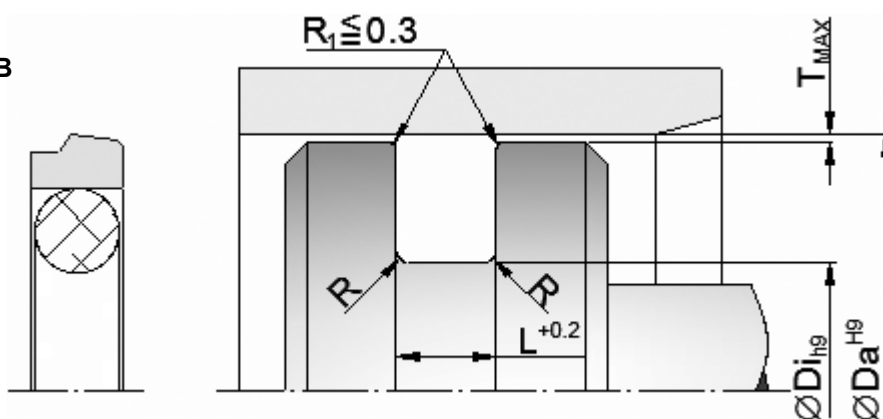
PB 型活塞密封件

PTFE Piston Seal Set – type PB



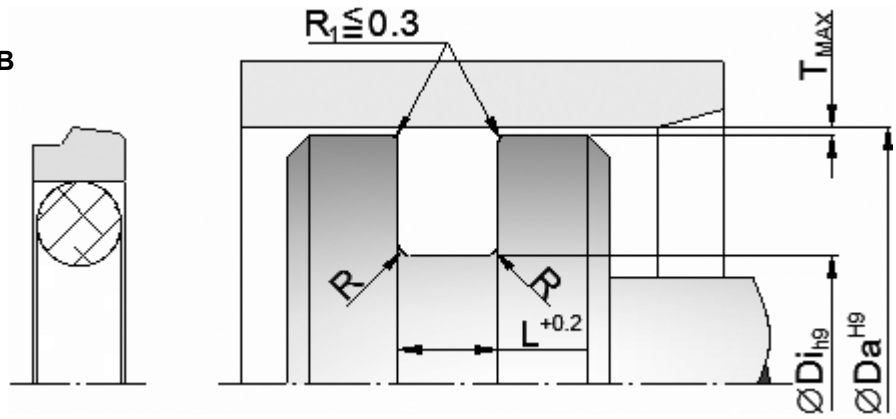
溝槽尺寸 / Grove			AS568 code	内徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	内徑 mm	線徑 mm
Da	Di	L				Da	Di	L			
10	5.1	2.2	2-008	4.47	1.78	95	79.9	6.3	2-338	78.74	5.33
15	10.1	2.2	2-012	9.25	1.78	95	74.5	8.1	—	73.00	6.99
15	7.7	3.2	2-109	7.59	2.62	100	84.9	6.3	2-339	81.92	5.33
20	15.1	2.2	2-015	14.00	1.78	100	79.5	8.1	—	78.00	6.99
20	12.7	3.2	2-112	12.37	2.62	105	89.9	6.3	2-341	88.27	5.33
25	17.7	3.2	2-115	17.12	2.62	105	84.5	8.1	—	83.00	6.99
25	14.3	4.2	2-207	13.87	3.53	110	94.9	6.3	2-342	91.44	5.33
30	22.7	3.2	2-118	21.89	2.62	110	89.5	8.1	—	88.00	6.99
30	19.3	4.2	2-210	18.64	3.53	115	99.9	6.3	2-344	97.79	5.33
35	27.7	3.2	2-121	26.64	2.62	115	94.5	8.1	—	93.00	6.99
35	24.3	4.2	2-213	23.39	3.53	120	104.9	6.3	2-346	104.14	5.33
40	32.7	3.2	2-124	31.42	2.62	120	99.5	8.1	—	98.00	6.99
40	29.3	4.2	2-216	28.17	3.53	125	109.9	6.3	2-347	107.32	5.33
45	34.3	4.2	2-219	32.92	3.53	125	104.5	8.1	—	103.00	6.99
45	29.9	6.3	2-321	29.51	5.33	130	114.9	6.3	2-349	113.67	5.33
50	39.3	4.2	2-222	39.69	3.53	130	109.5	8.1	—	108.00	6.99
50	34.9	6.3	2-323	32.69	5.33	135	114.5	8.1	2-425	113.67	6.99
55	44.3	4.2	2-224	44.04	3.53	140	119.5	8.1	2-426	116.84	6.99
60	49.3	4.2	2-225	47.22	3.53	145	129.9	6.3	2-354	129.54	5.33
60	44.9	6.3	2-327	43.82	5.33	145	124.5	8.1	2-428	123.19	6.99
65	54.3	4.2	2-227	53.57	3.53	150	134.9	6.3	2-355	132.72	5.33
65	49.9	6.3	2-328	46.99	5.33	150	129.5	8.1	2-429	126.37	6.99
70	59.3	4.2	2-228	56.74	3.53	155	139.9	6.3	2-35	135.89	5.33
70	54.9	6.3	2-330	53.34	5.33	155	134.5	8.1	2-431	132.72	6.99
75	59.9	6.3	2-331	56.52	5.33	160	144.9	6.3	2-358	142.24	5.33
80	64.9	6.3	2-333	62.87	5.33	160	139.5	8.1	2-432	135.59	6.99
80	59.5	8.1	—	58.00	6.99	165	149.9	6.3	2-360	148.59	5.33
85	69.9	6.3	2-335	69.22	5.33	165	144.5	8.1	2-434	142.24	6.99
85	64.5	8.1	—	63.00	6.99	170	149.5	8.1	2-435	145.42	6.99
90	74.9	6.3	2-336	72.39	5.33	175	159.9	6.3	2-362	158.12	5.33
90	69.5	8.1	—	68.00	6.99	180	164.9	6.3	2-363	164.47	5.33

PB 型活塞密封件
PTFE Piston Seal Set – type PB



溝槽尺寸 / Grove			AS568 code	内径 mm	線径 mm	溝槽尺寸 / Grove			AS568 code	内径 mm	線径 mm
Da	Di	L				Da	Di	L			
180	159.5	8.1	2-438	158.12	6.99	400	376.0	8.1	2-458	367.67	6.99
190	174.9	6.3	2-364	170.82	5.33	410	389.5	8.1	2-459	380.37	6.99
190	169.5	8.1	2-439	164.47	6.99	410	386.0	8.1	2-459	380.37	6.99
200	184.9	6.3	2-366	183.52	5.33	420	396.0	8.1	2-460	393.07	6.99
200	179.5	8.1	2-441	177.17	6.99	430	409.5	8.1	2-461	405.26	6.99
205	184.5	8.1	2-442	183.52	6.99	430	406.0	8.1	2-461	405.26	6.99
210	189.5	8.1	2-442	183.52	6.99	440	419.5	8.1	2-462	417.96	6.99
220	204.9	6.3	2-369	202.57	5.33	440	416.0	8.1	2-461	405.26	6.99
220	199.5	8.1	2-444	196.22	6.99	450	426.0	8.1	2-462	417.96	6.99
230	209.5	8.1	—	208.92	6.99	460	436.0	8.1	2-463	430.66	6.99
240	219.5	8.1	2-446	215.27	6.99	470	449.5	8.1	2-464	443.36	6.99
250	229.5	8.1	2-447	227.97	6.99	470	446.0	8.1	2-464	443.36	6.99
250	226.0	8.1	2-447	227.97	6.99	480	456.0	8.1	2-465	456.06	6.99
260	236.0	8.1	2-447	227.97	6.99	490	466.0	8.1	2-465	456.06	6.99
270	246.0	8.1	2-448	240.67	6.99	500	476.0	8.1	2-466	468.76	6.99
280	256.0	8.1	2-449	253.37	6.99	520	499.5	8.1	2-468	494.16	6.99
300	279.5	8.1	2-451	278.77	6.99	540	516.0	8.1	2-469	506.86	6.99
300	276.0	8.1	2-450	266.07	6.99	560	536.0	8.1	2-470	532.26	6.99
310	286.0	8.1	2-451	278.77	6.99	570	546.0	8.1	2-470	532.26	6.99
320	299.5	8.1	2-452	291.47	6.99	590	566.0	8.1	2-471	557.66	6.99
320	296.0	8.1	2-452	291.47	6.99	600	576.0	8.1	2-471	557.66	6.99
330	306.0	8.1	2-453	304.17	6.99	610	586.0	8.1	2-472	582.68	6.99
340	319.5	8.1	2-454	316.87	6.99	640	616.0	8.1	—	613.92	6.99
340	316.0	8.1	2-454	316.87	6.99	650	626.0	8.1	—	624.00	6.99
345	324.5	8.1	2-454	316.87	6.99	660	636.0	8.1	2-474	633.47	6.99
350	326.0	8.1	2-454	316.87	6.99	670	646.0	8.1	2-474	633.48	6.99
360	336.0	8.1	2-455	329.57	6.99	700	672.7	9.5	—	670.00	8.40
370	346.0	8.1	2-456	342.27	6.99	730	702.7	9.5	—	700.00	8.40
380	356.0	8.1	2-457	354.97	6.99	760	732.7	9.5	—	730.00	8.40
390	369.5	8.1	2-458	367.67	6.99	780	752.7	9.5	—	750.00	8.40
390	366.0	8.1	2-458	357.67	6.99	800	772.7	9.5	—	770.00	8.40

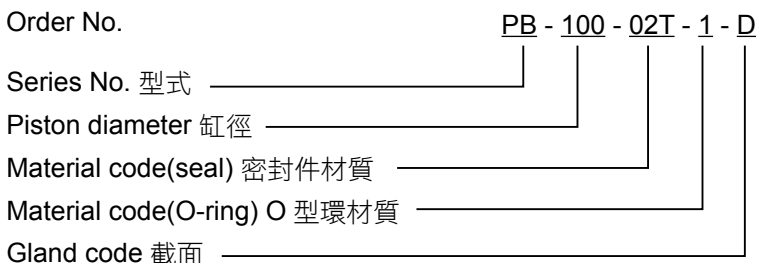
PB 型活塞密封件
PTFE Piston Seal Set – type PB



溝槽尺寸 / Grove			AS568	內徑	線徑
Da	Di	L	code	mm	mm
860	832.7	9.5	—	830.00	8.40
850	822.7	9.5	—	820.00	8.40
900	872.7	9.5	—	870.00	8.40
920	892.7	9.5	—	890.00	8.40
1000	972.7	9.5	—	970.00	8.40
1000	1038.0	13.8	—	1016.0	12.00
1200	1172.7	9.5	—	1170.0	8.40
1200	1238.0	13.8	—	1216.0	12.00

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

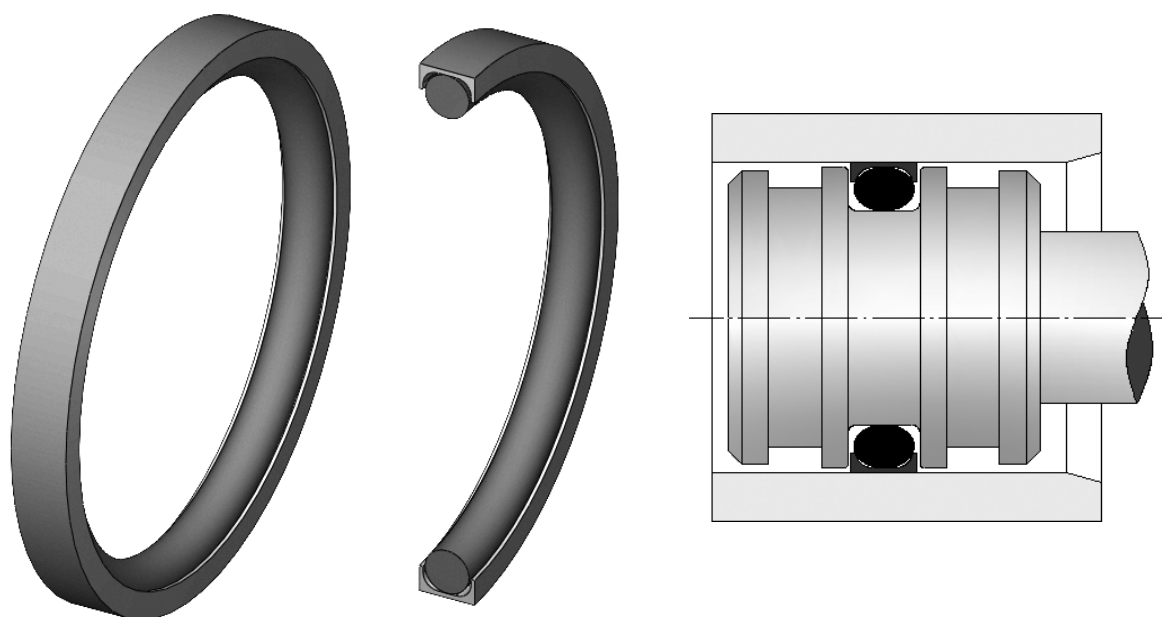
註：缸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1162x13.8mm 訂購時請註明 PB-K1200-02T-1-H。

Note : For bore diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1162x13.8mm should be denominated as PB-K1200-02T-1-H.

PC 型活塞密封件

PTFE Piston Seal Set – type PC



可完全取代應用於雙動油壓缸活塞密封的標準 O 形環。由於特殊的密封材質與密封機構，故具有優異的耐擠出性、耐化學性與低摩擦阻力，即使低速作動時也能確保無滯滑效應。

A unique piston seal is design to retrofit standard O-ring gland in bi-directional pressurization, hydraulic applications. It benefits higher extrusion resistance, excellent chemical resistance, and no stick-slip movement even in low velocities.

應用範圍

壓力 ≤ 350 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 純鐵氟龍
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 350 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Virgin PTFE
 Other materials are available for specified conditions

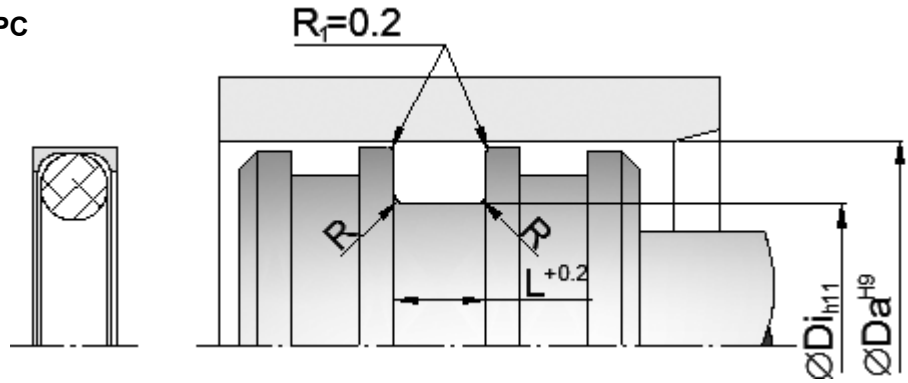
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Cylinder Bore	溝槽底徑 Groove Bottom	溝槽寬 (含背托環) Groove Width			溝槽 R 角 Radius	擠出間隙 Gap	截面 Gland Code	O 型環 O-ring C.S.
		0	1	2				
ϕ Da	ϕ Di				R	T		
8 ~ 13.9	Da - 2.9	2.4	3.8	5.3	0.4	0.1	A	1.78
14 ~ 24.9	Da - 4.5	3.6	4.65	6.2	0.4	0.15	B	2.62
25 ~ 45.9	Da - 6.2	4.8	5.7	7.7	0.6	0.25	C	3.53
46 ~ 124.9	Da - 9.4	7.1	8.5	10.8	0.8	0.35	D	5.33
125 ~ 669.9	Da - 12.2	9.5	11.2	14.7	0.8	0.5	E	6.99
670 ~ 999.9	Da - 15.0	11.0	14	17	1.0	0.6	F	8.40

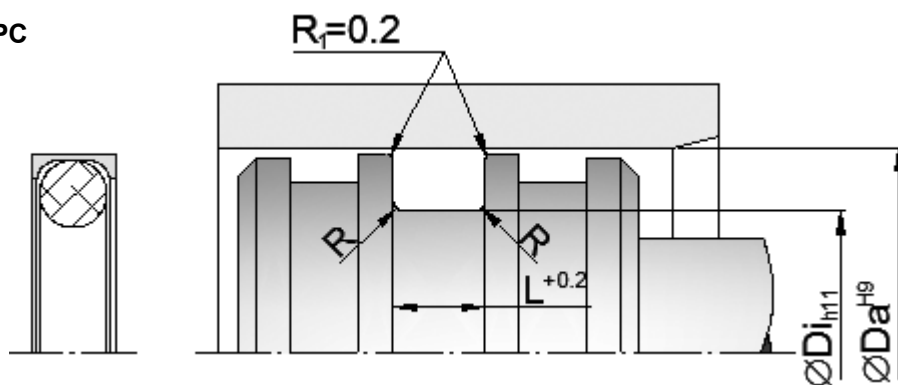
PC 型活塞密封件

PTFE Piston Seal Set – type PC



溝槽尺寸 / Grove			AS568 code	内径 mm	線径 mm	溝槽尺寸 / Grove			AS568 code	内径 mm	線径 mm
Da	Di	L				Da	Di	L			
10	7.1	2.4	2-010	6.07	1.78	115	105.6	7.1	2-346	104.14	5.33
15	10.5	3.6	2-110	9.19	2.62	120	110.6	7.1	2-348	110.49	5.33
20	15.5	3.6	2-113	13.94	2.62	125	115.6	7.1	2-350	116.84	5.33
20	13.8	4.8	2-206	12.29	3.53	125	112.8	9.5	2-425	113.67	6.99
25	20.5	3.6	2-117	20.29	2.62	130	120.6	7.1	2-351	120.02	5.33
25	18.8	4.8	2-210	18.64	3.53	130	117.8	9.5	2-426	116.84	6.99
30	25.5	3.6	2-120	25.07	2.62	135	125.6	7.1	2-353	126.37	5.33
30	23.8	4.8	2-213	23.39	3.53	135	122.8	9.5	2-428	123.19	6.99
35	30.5	3.6	2-123	29.82	2.62	140	130.6	7.1	2-354	129.54	5.33
35	28.8	4.8	2-216	28.17	3.53	140	127.8	9.5	2-429	126.37	6.99
35	25.6	7.1	2-318	24.77	5.33	145	135.6	7.1	2-356	135.89	5.33
40	33.8	4.8	2-219	32.92	3.53	145	132.8	9.5	2-431	132.72	6.99
40	30.6	7.1	2-321	29.51	5.33	150	140.6	7.1	2-357	139.07	5.33
45	38.8	4.8	2-222	37.69	3.53	150	137.8	9.5	2-432	135.89	6.99
50	40.6	7.1	2-325	37.47	5.33	155	145.6	7.1	2-359	145.42	5.33
55	45.6	7.1	2-327	43.82	5.33	155	142.8	9.5	2-434	142.24	6.99
60	53.8	4.8	2-227	53.57	3.53	160	150.6	7.1	2-361	151.77	5.33
60	50.6	7.1	2-329	50.17	5.33	160	147.8	9.5	2-436	148.59	6.99
65	55.6	7.1	2-330	53.34	5.33	165	152.8	9.5	2-437	151.77	6.99
70	63.8	4.8	2-230	63.09	3.53	170	157.8	9.5	2-438	158.12	6.99
70	60.6	7.1	2-332	59.69	5.33	175	165.6	7.1	2-363	164.47	5.33
75	68.8	4.8	2-231	66.27	3.53	175	162.8	9.5	2-439	164.47	6.99
75	65.6	7.1	2-333	62.87	5.33	180	170.6	7.1	2-364	170.82	5.33
80	70.6	7.1	2-334	69.22	5.33	185	172.8	9.5	2-440	170.82	6.99
85	78.8	4.8	2-234	75.79	3.53	190	177.8	9.5	2-441	177.17	6.99
85	75.6	7.1	2-336	72.39	5.33	195	182.8	9.5	2-442	183.52	6.99
90	80.6	7.1	2-338	78.74	5.33	200	190.6	7.1	2-367	189.87	5.33
95	85.6	7.1	2-339	81.92	5.33	200	187.8	9.5	2-442	183.52	6.99
100	90.6	7.1	2-341	88.27	5.33	210	200.6	7.1	2-369	202.57	5.33
105	95.6	7.1	2-343	94.62	5.33	210	197.8	9.5	2-444	196.22	6.99
110	100.6	7.1	2-344	97.79	5.33	220	210.6	7.1	2-370	208.92	5.33

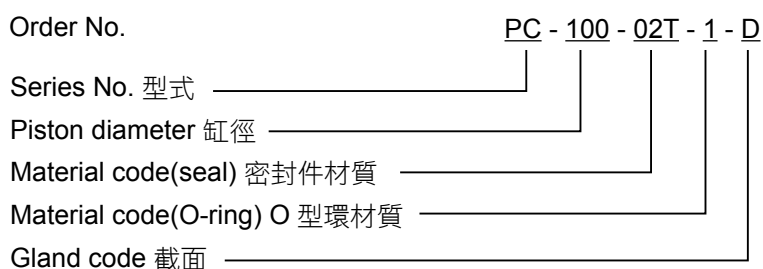
PC 型活塞密封件
PTFE Piston Seal Set – type PC



溝槽尺寸 / Grove			AS568	內徑	線徑	溝槽尺寸 / Grove			AS568	內徑	線徑
Da	Di	L	code	mm	mm	Da	Di	L	code	mm	mm
220	207.8	9.5	2-445	202.57	6.99	390	377.8	9.5	2-458	367.67	6.99
230	220.6	7.1	2-371	215.27	5.33	400	387.8	9.5	2-459	380.37	6.99
230	217.8	9.5	2-446	215.27	6.99	420	407.8	9.5	2-461	405.26	6.99
240	227.8	9.5	2-447	227.97	6.99	430	417.8	9.5	2-461	405.26	6.99
250	240.6	7.1	2-374	234.32	5.33	450	437.8	9.5	2-463	430.66	6.99
250	237.8	9.5	—	236.00	6.99	460	447.8	9.5	2-464	443.36	6.99
260	250.6	7.1	2-376	247.02	5.33	470	457.8	9.5	2-465	456.06	6.99
270	257.8	9.5	2-449	253.37	6.99	480	467.8	9.5	2-465	456.06	6.99
280	267.8	9.5	2-450	266.07	6.99	500	487.8	9.5	2-467	481.46	6.99
290	280.6	7.1	2-379	278.77	5.33	510	497.8	9.5	2-468	494.16	6.99
300	287.8	9.5	2-451	278.77	6.99	520	507.8	9.5	2-469	506.86	6.99
310	300.6	7.1	2-381	291.47	5.33	550	537.8	9.5	2-470	532.26	6.99
310	297.8	9.5	2-452	291.47	6.99	570	557.8	9.5	2-471	557.66	6.99
320	307.8	9.5	2-453	304.17	6.99	600	587.8	9.5	2-472	582.68	6.99
330	317.8	9.5	2-454	316.87	6.99	650	637.8	9.5	2-474	633.48	6.99
350	337.8	9.5	2-455	329.57	6.99						
360	347.8	9.5	2-456	342.27	6.99						
370	357.8	9.5	2-457	354.97	6.99						
380	367.8	9.5	2-458	367.67	6.99						

※ 特殊尺寸亦可提供

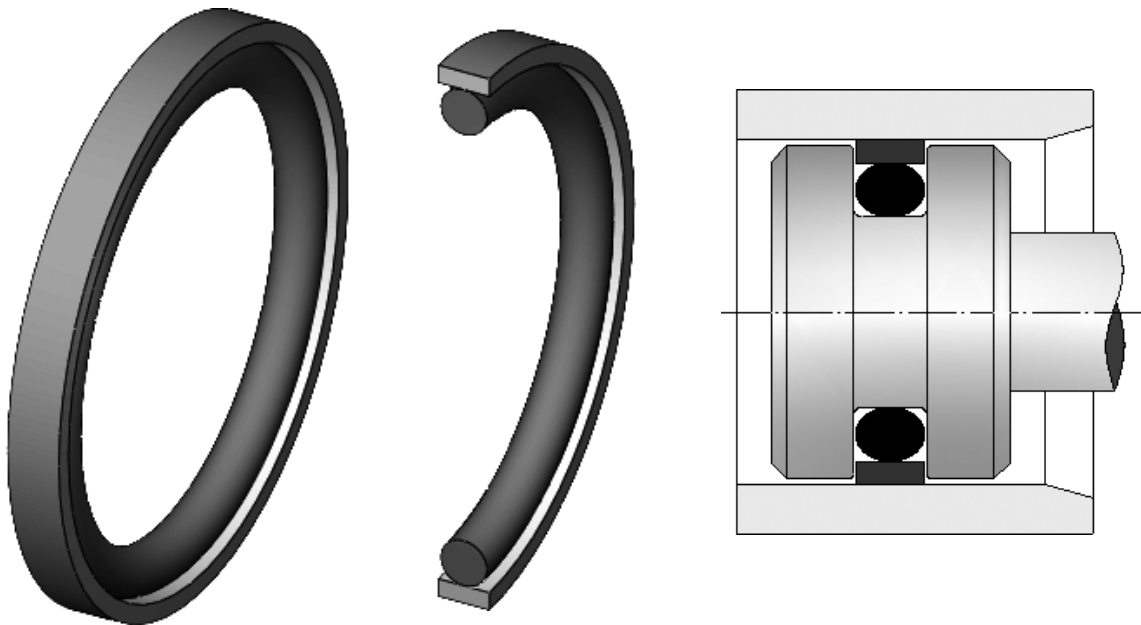
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

PD 型活塞密封件

PTFE Piston Seal Set – type PD



以 O 型環致動的鐵氟龍密封環適用於雙動氣壓缸的活塞密封，例如控制用氣壓缸、快速致動缸、伺服控制氣壓系統等。特殊的設計適用於一體成形的氣壓缸活塞，並同時擁有優異的耐擠出性與低摩擦阻力。

A PTFE sealing ring energized by an O-ring is designed for bi-directional pressurization, pneumatic pistons, such as in control cylinders, in quick acting cylinders, and servo-assisted equipment.

It is dedicated for assembly on an integral piston to serve as a high extrusion resistance but very low sliding friction sealing in pneumatic applications.

應用範圍

壓力 ≤ 16 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 4 m/s
 標準材質 碳精填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 16 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 4 m/s
 Standard Material Carbon filled PTFE
 Other materials are available for specified conditions

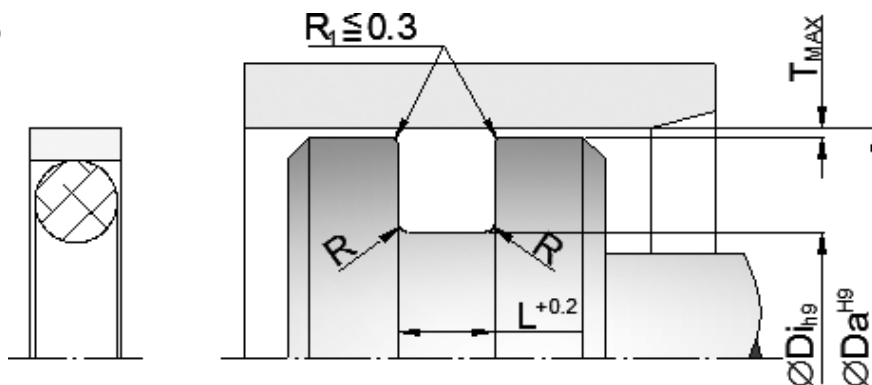
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Piston Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	擠出間隙 Gap	截面 Gland Code	O 型環 O-ring C.S.
ϕDa	ϕDi	L	Rmax	T		
7 ~ 15.9	Da - 4.0	2.0	0.5	0.2	A	1.78
16 ~ 26.9	Da - 6.0	2.85	0.5	0.25	B	2.62
27 ~ 49.9	Da - 7.5	3.8	0.5	0.25	C	3.53
50 ~ 129.9	Da - 12.5	5.6	0.9	0.5	D	5.33
130 ~ 179.9	Da - 15.0	7.55	0.9	0.5	E	6.99
180 ~ 239.9	Da - 18.0	7.55	0.9	0.75	F	6.99
240 ~ 420	Da - 24.0	7.55	0.9	1.0	G	6.99

PD 型活塞密封件

PTFE Piston Seal Set – type PD

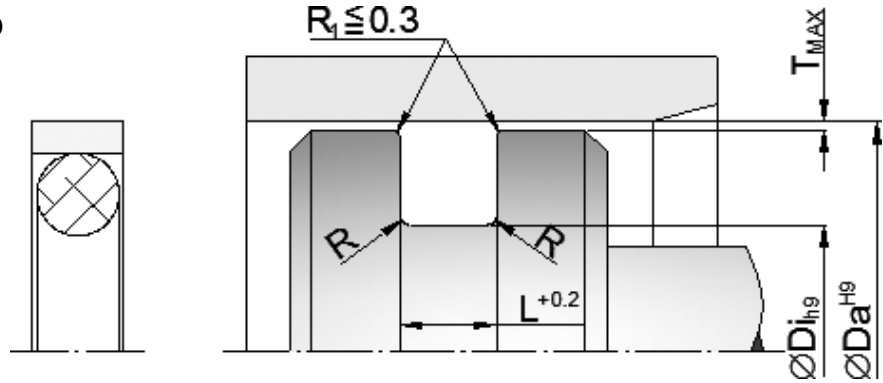


溝槽尺寸 / Grove			AS568 code	内徑 mm	線徑 mm
Da	Di	L			
10	6.0	2.00	2-010	6.07	1.78
15	11.0	2.00	2-013	10.82	1.78
20	16.0	2.00	2-016	15.60	1.78
20	14.0	2.85	2-113	13.94	2.62
25	19.0	2.85	2-116	18.72	2.62
25	17.5	3.80	2-209	17.04	3.53
30	24.0	2.85	2-119	23.47	2.62
30	22.5	3.80	2-212	21.82	3.53
35	29.0	2.85	2-122	28.24	2.62
35	27.5	3.80	2-215	26.57	3.53
40	32.5	3.80	2-219	32.92	3.53
40	27.5	5.60	2-319	26.34	5.33
45	37.5	3.80	2-221	37.69	3.53
45	32.5	5.60	2-322	31.12	5.33
50	42.5	3.80	2-223	40.87	3.53
50	37.5	5.60	2-325	37.47	5.33
55	47.5	3.80	2-225	47.22	3.53
55	42.5	5.60	2-326	40.64	5.33
60	52.5	3.80	2-226	50.39	3.53
60	47.5	5.60	2-328	46.99	5.33
65	57.5	3.80	2-228	56.74	3.53
65	52.5	5.60	2-329	50.17	5.33
70	57.5	5.60	2-331	56.52	5.33
75	67.5	3.80	2-231	66.27	3.53
75	62.5	5.60	2-333	62.87	5.33
80	67.5	5.60	2-334	66.04	5.33

溝槽尺寸 / Grove			AS568 code	内徑 mm	線徑 mm
Da	Di	L			
85	72.5	5.60	2-336	72.39	5.33
90	82.5	3.80	2-236	82.14	3.53
90	77.5	5.60	2-337	75.57	5.33
95	82.5	5.60	2-339	81.92	5.33
100	87.5	5.60	2-340	85.09	5.33
100	85.0	7.55	—	83.00	6.99
105	92.5	5.60	2-342	91.44	5.33
110	97.5	5.60	2-344	97.79	5.33
115	102.5	5.60	2-345	100.97	5.33
120	107.5	5.60	2-347	107.32	5.33
125	112.5	5.60	2-348	110.49	5.33
130	117.5	5.60	2-350	116.84	5.33
130	115.0	7.55	2-425	113.67	6.99
135	122.5	5.60	2-351	120.02	5.33
135	120.0	7.55	2-426	116.84	6.99
140	127.5	5.60	2-353	126.37	5.33
140	125.0	7.55	2-428	123.19	6.99
145	132.5	5.60	2-354	129.54	5.33
150	135.0	7.55	2-431	132.72	6.99
155	142.5	5.60	2-358	142.24	5.33
155	140.0	7.55	2-433	139.07	6.99
155	137.0	7.55	2-432	135.89	6.99
160	145.0	7.55	2-434	142.24	6.99
160	142.0	7.55	2-433	139.07	6.99
165	150.0	7.55	2-436	148.59	6.99
165	147.0	7.55	2-435	145.42	6.99

PD 型活塞密封件

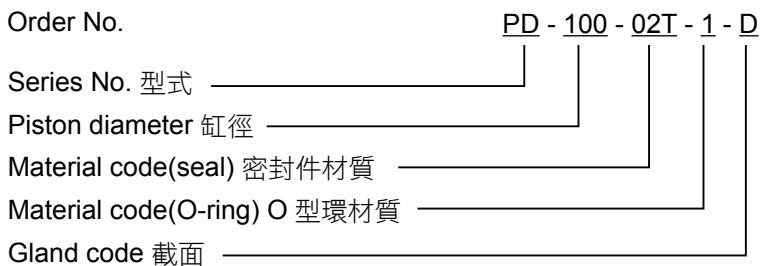
PTFE Piston Seal Set – type PD



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Da	Di	L				Da	Di	L			
170	152.0	7.55	2-437	151.77	6.99	240	216.0	7.55	2-446	215.27	6.99
175	160.0	7.55	2-438	158.12	6.99	250	226.0	7.55	2-446	215.27	6.99
175	157.0	7.55	2-437	151.77	6.99	260	242.0	7.55	2-448	240.67	6.99
180	165.0	7.55	2-439	164.47	6.99	270	252.0	7.55	2-448	240.67	6.99
185	170.0	7.55	2-439	164.47	6.99	290	266.0	7.55	2-449	253.37	6.99
190	172.0	7.55	2-440	170.82	6.99	310	292.0	7.55	2-452	291.47	6.99
195	180.0	7.55	2-441	177.17	6.99	340	316.0	7.55	2-453	304.17	6.99
195	177.0	7.55	2-440	170.82	6.99	380	356.0	7.55	2-457	354.97	6.99
200	185.0	7.55	2-442	183.52	6.99	390	366.0	7.55	2-457	354.97	6.99
200	182.0	7.55	2-441	177.17	6.99						
210	195.0	7.55	2-443	189.87	6.99						
210	186.0	7.55	2-442	183.52	6.99						
220	202.0	7.55	2-444	196.22	6.99						
220	196.0	7.55	2-443	189.87	6.99						
230	212.0	7.55	2-445	202.57	6.99						

※ 特殊尺寸亦可提供

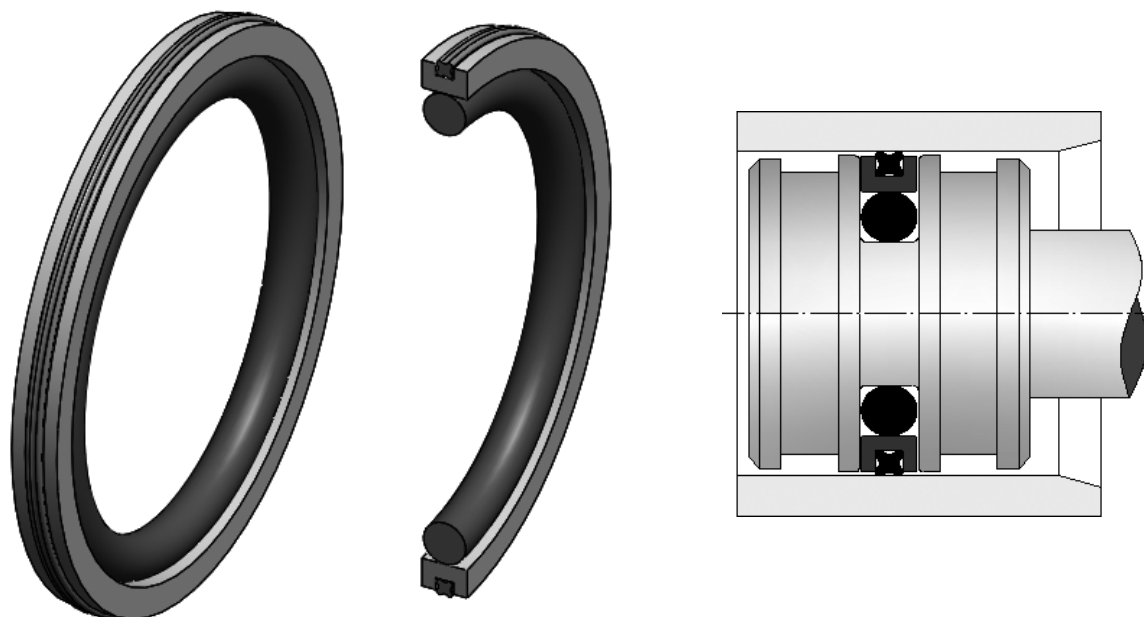
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

PE 型活塞密封件

PTFE Piston Seal Set – type PE



PE 型活塞密封件為一雙動型密封件，由一個 PTFE 密封環、一個 QUAD 環與一提供預負荷的 O 形環組成，密封環兩側均有徑向凹槽，以確保在任何狀況下密封環與 O 形環均能受到流體的均壓作用而發揮穩定的高壓密封性能。由於加入 QUAD 環的特殊設計，密封性能優於一般 O 形環致動鐵氟龍密封件，可將桿側與活塞側的不同流體加以分離。定位與持壓性能佳、無滯滑效應，適用於工作母機、沖床、蓄壓器、重負荷懸吊油壓缸等應用。

PE piston seal set is a double-acting seal consisting of a PTFE seal ring, a QUAD-Ring and an O-Ring as preload element. Four radial notches on both sides of the PTFE seal ring ensure direct pressurized effect on the seal set through media under any working condition. The combination of a QUAD-Ring and the PTFE seal ring provides not only excellent sealing performance but any application requiring media separation such as accumulator and positioning cylinder. Other applications include machine tools, presses, and heavy-duty suspension cylinders.

應用範圍

壓力 ≤ 400 bar
 溫度 $-30 \sim 200^{\circ}\text{C}$
 速度 ≤ 2 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-30 \sim 200^{\circ}\text{C}$
 Speed ≤ 2 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

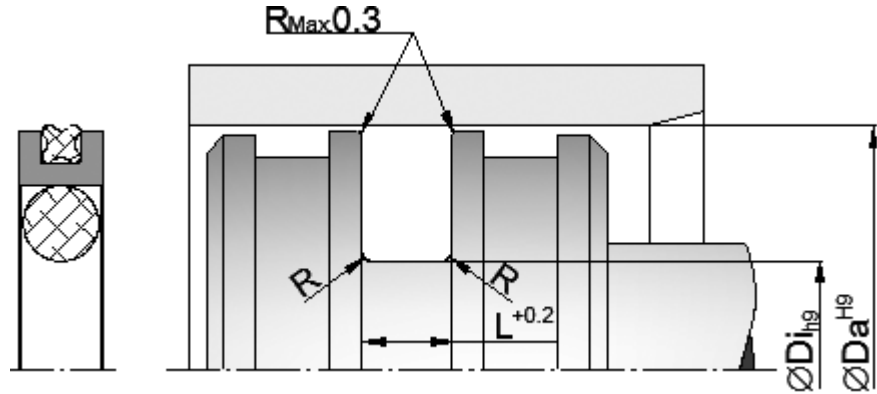
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Cylinder Bore	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	截面 Gland Code	O 型環 O-ring C.S.	QUAD 型環 QUAD-ring C.S.
ϕDa	ϕDi	L	R			
15 ~ 39.9	Da - 11.0	4.2	1.0	A	3.53	1.78
40 ~ 79.9	Da - 15.5	6.3	1.3	B	5.33	1.78
80 ~ 132.9	Da - 21.0	8.1	1.8	C	6.99	2.62
133 ~ 252.9	Da - 24.5	8.1	1.8	D	6.99	2.62
253 ~ 462.9	Da - 28.0	9.5	2.5	E	8.40	3.53
463 ~ 700.0	Da - 35.0	11.5	3.0	F	10.00	5.33

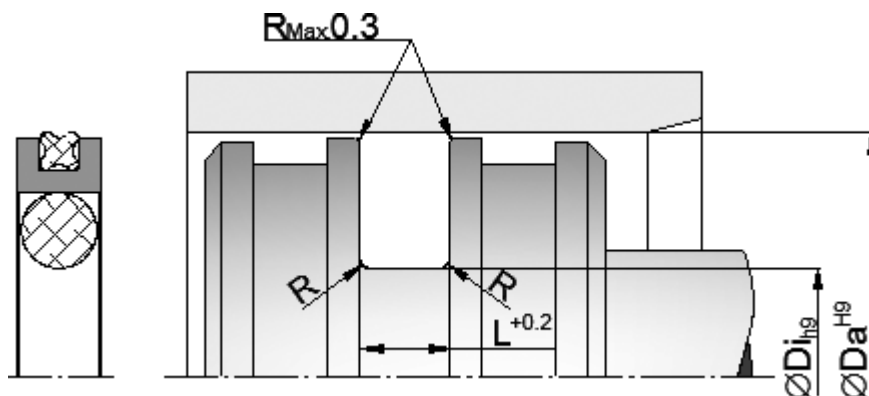
PE 型活塞密封件

PTFE Piston Seal Set – type PE



溝槽尺寸 / Grove			AS568	內徑	線徑	UAD-Ri	內徑	線徑
Da	Di	L	code	mm	mm	code	mm	mm
16	5.0	4.2	2-201	4.34	3.53	4-014	12.42	1.78
20	9.0	4.2	—	8.42	3.53	4-016	15.60	1.78
25	14.0	4.2	2-207	13.87	3.53	4-019	20.35	1.78
30	19.0	4.2	2-210	18.64	3.53	4-022	25.12	1.78
35	24.0	4.2	2-213	23.99	3.53	4-025	29.87	1.78
40	29.0	4.2	2-217	28.17	3.53	4-028	34.65	1.78
45	34.0	4.2	2-219	32.92	3.53	4-029	37.82	1.78
50	39.0	4.2	2-222	37.70	3.53	4-031	44.17	1.78
50	34.5	6.3	2-323	32.69	5.33	4-031	44.17	1.78
55	44.0	4.2	2-224	44.04	3.53	4-033	50.52	1.78
60	49.0	4.2	2-225	47.22	3.53	4-034	53.70	1.78
65	54.0	4.2	2-227	53.57	3.53	4-036	60.05	1.78
70	59.0	4.2	2-228	56.74	3.53	4-037	63.22	1.78
75	64.0	4.2	2-230	63.09	3.53	4-039	69.57	1.78
80	64.5	6.3	2-333	62.87	5.33	4-040	72.75	1.78
80	59.0	8.1	—	58.00	6.99	4-145	71.12	2.62
85	69.5	6.3	2-335	69.22	5.33	4-041	75.92	1.78
90	74.5	6.3	2-336	72.39	5.33	4-042	82.27	1.78
95	74.0	8.1	—	73.00	6.99	4-152	82.22	2.62
100	79.0	8.1	—	78.00	6.99	4-153	88.57	2.62
105	89.5	6.3	2-341	88.27	5.33	4-044	94.97	1.78
110	94.5	6.3	2-342	91.44	5.33	4-045	101.32	1.78
120	104.5	6.3	2-345	100.97	5.33	4-047	114.02	1.78
125	109.5	6.3	2-347	107.32	5.33	4-047	114.02	1.78
125	104.0	8.1	—	103.00	6.99	4-157	113.97	2.62
130	114.5	6.3	2-425	113.67	5.33	4-048	120.37	1.78
135	114.0	8.1	2-425	113.67	6.99	4-159	126.67	2.62
140	119.0	8.1	2-426	116.87	6.99	4-159	126.67	2.62
150	129.0	8.1	2-429	126.37	6.99	4-161	139.37	2.62
160	139.0	8.1	2-432	135.89	6.99	4-162	145.72	2.62
170	149.0	8.1	2-435	145.42	6.99	4-164	158.42	2.62

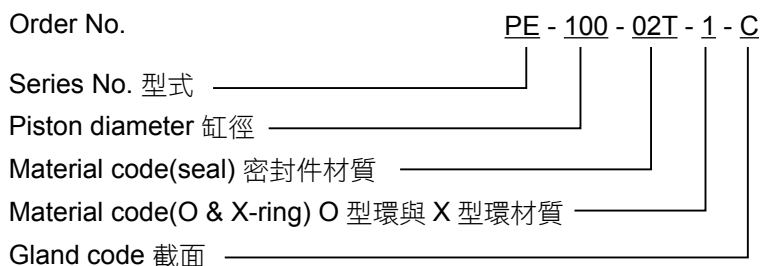
PE 型活塞密封件
PTFE Piston Seal Set – type PE



溝槽尺寸 / Grove			AS568	內徑	線徑	UAD-Ri	內徑	線徑
Da	Di	L	code	mm	mm	code	mm	mm
180	159.0	8.1	2-438	158.12	6.99	4-166	171.11	2.62
190	169.0	8.1	2-439	164.47	6.99	4-167	177.47	2.62
200	179.0	8.1	2-441	177.17	6.99	4-169	190.17	2.62
230	209.0	8.1	—	208.92	6.99	4-173	215.57	2.62
240	219.0	8.1	2-446	215.27	6.99	4-174	221.92	2.62
250	225.5	8.1	2-447	227.97	6.99	4-176	234.62	2.62
280	252.0	9.5	—	250.00	8.40	4-275	266.29	3.53
300	272.0	9.5	—	270.00	8.40	4-276	278.99	3.53
310	282.0	9.5	—	280.00	8.40	4-277	291.69	3.53
320	292.0	9.5	—	290.00	8.40	4-278	304.39	3.53
350	322.0	9.5	—	320.00	8.40	4-279	329.79	3.53
400	372.0	9.5	—	370.00	8.40	4-281	380.59	3.53
420	392.0	9.5	—	390.00	8.40	4-281	380.59	3.53
450	422.0	9.5	—	420.00	8.40	4-283	430.66	3.53
480	445.0	11.5	—	444.00	10.00	4-387	456.06	5.33
500	465.0	11.5	—	464.00	10.00	4-387	456.06	5.33
600	565.0	11.5	—	564.00	10.00	4-391	557.58	5.33
700	665.0	11.5	—	664.00	10.00	4-395	658.88	5.33

※ 特殊尺寸亦可提供

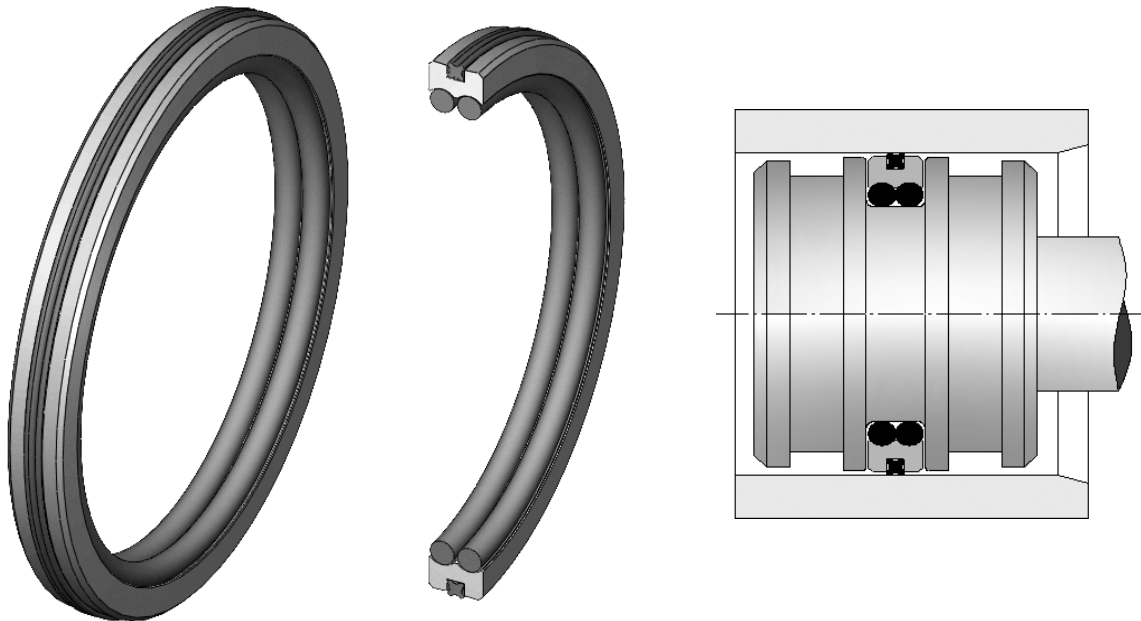
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O & X 型環請參照 P.5

PF 型活塞密封件

PTFE Piston Seal Set – type PF



PF 型活塞密封件為一雙動型密封件，由一個 PTFE 密封環、一個 QUAD 環與兩個提供預負荷的 O 形環組成，密封環具有特殊的密封唇設計，分別由兩個 O 形環致動，可確保最佳的密封壓力分布以提升氣密性能，最大工作壓力較 PE 型更高、滑動速度更快。由於加入 QUAD 環與密封唇的特殊設計，密封性能優於一般 O 形環致動鐵氟龍密封件，可將桿側與活塞側的不同流體加以分離。定位與持壓性能佳、無滯滑效應，適用於工作母機、沖床、蓄壓器、穩壓器 (stabilizer)、重負荷懸吊油壓缸等應用。

PF piston seal set is a double-acting seal consisting of a PTFE seal ring, a QUAD-Ring and two O-Rings as preload element. Special seal lips on the PTFE ring energized by two O-Rings ensure optimum pressure distribution in operation and help to enhance gas sealing performance. The combination of a QUAD-Ring and the PTFE seal ring provides not only excellent sealing performance but any application requiring media separation such as accumulator and positioning cylinder. Other applications include machine tools, presses, and heavy-duty suspension cylinders.

應用範圍

壓力 ≤ 600 bar
 溫度 $-30 \sim 200^{\circ}\text{C}$
 速度 ≤ 3 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 600 bar
 Temperature $-30 \sim 200^{\circ}\text{C}$
 Speed ≤ 3 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

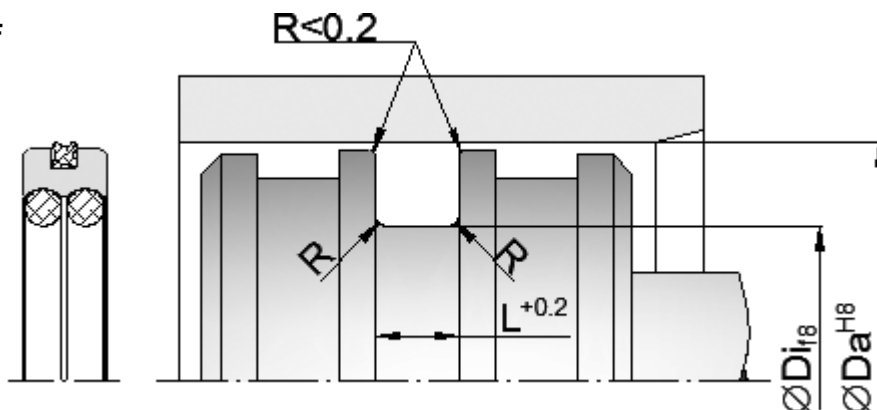
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Cylinder Borer	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	截面 Gland Code	O 型環 O-ring C.S.	QUAD 型環 QUAD-ring C.S.
ϕDa	ϕDi	L	R			
40 ~ 79.9	Da - 10.0	6.3	0.6	A	2.62	1.78
80 ~ 132.9	Da - 13.0	8.3	1	B	3.53	2.62
133 ~ 462.9	Da - 18.0	12.3	1.3	C	5.33	3.53
463 ~ 700.0	Da - 31.0	16.3	1.8	D	6.99	5.33

PF 型活塞密封件

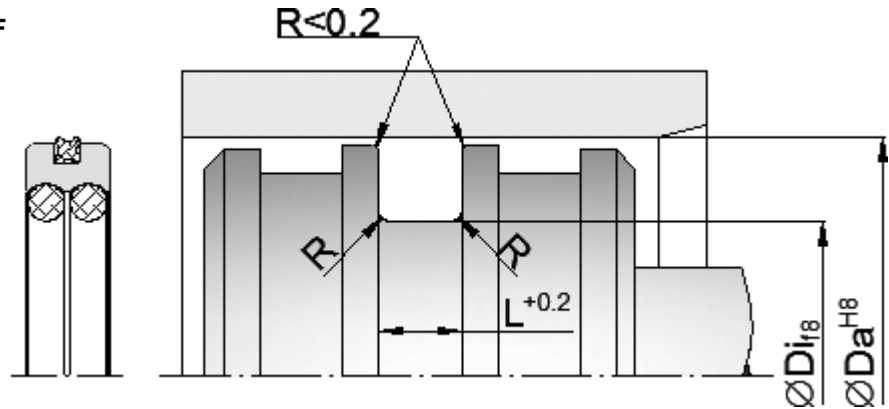
PTFE Piston Seal Set – type PF



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	UAD-Ri code	內徑 mm	線徑 mm
Da	Di	L						
40	30	6.3	2-123	29.82	2.62	4-028	34.65	1.78
45	35	6.3	2-126	34.59	2.62	4-029	37.82	1.78
50	40	6.3	2-129	39.34	2.62	4-031	44.17	1.78
55	45	6.3	2-132	44.12	2.62	4-033	50.52	1.78
60	50	6.3	2-135	48.90	2.62	4-034	53.70	1.78
63	53	6.3	2-137	52.07	2.62	4-035	56.87	1.78
65	55	6.3	2-138	53.64	2.62	4-036	60.05	1.78
70	60	6.3	2-141	58.42	2.62	4-037	63.22	1.78
75	65	6.3	2-144	63.17	2.62	4-039	69.57	1.78
80	67	8.3	2-231	66.27	3.53	4-149	71.12	2.62
85	72	8.3	2-232	69.44	3.53	4-151	75.87	2.62
90	77	8.3	2-234	75.79	3.53	4-152	82.22	2.62
95	82	8.3	2-235	78.97	3.53	4-152	82.22	2.62
100	87	8.3	2-237	85.32	3.53	4-153	88.57	2.62
105	92	8.3	2-239	91.67	3.53	4-154	94.92	2.62
110	97	8.3	2-240	94.84	3.53	4-155	101.27	2.62
115	102	8.3	2-242	101.19	3.53	4-156	107.62	2.62
120	107	8.3	2-243	104.37	3.53	4-156	107.62	2.62
125	112	8.3	2-245	110.72	3.53	4-157	113.97	2.62
130	117	8.3	2-246	113.89	3.53	4-158	120.32	2.62
135	117	12.3	2-349	113.67	5.33	4-249	123.42	3.53
140	122	12.3	2-351	120.02	5.33	4-250	126.60	3.53
150	132	12.3	2-354	129.54	5.33	4-253	136.12	3.53
160	142	12.3	2-357	139.07	5.33	4-256	145.65	3.53
170	152	12.3	2-360	148.49	5.33	4-259	158.35	3.53
180	162	12.3	2-362	158.12	5.33	4-260	164.70	3.53
190	172	12.3	2-364	170.82	5.33	4-262	177.40	3.53
200	182	12.3	2-365	177.17	5.33	4-263	183.75	3.53
210	192	12.3	2-367	189.87	5.33	4-265	196.45	3.53
220	202	12.3	2-368	196.22	5.33	4-266	202.80	3.53
230	212	12.3	2-370	208.92	5.33	4-268	215.50	3.53

PF 型活塞密封件

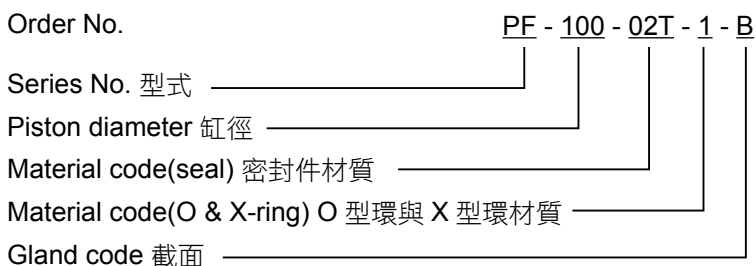
PTFE Piston Seal Set – type PF



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	UAD-Ri code	內徑 mm	線徑 mm
Da	Di	L						
240	222	12.3	2-372	221.62	5.33	4-269	221.85	3.53
250	232	12.3	2-373	227.97	5.33	4-271	234.55	3.53
280	262	12.3	2-377	253.37	5.33	4-275	266.29	3.53
300	282	12.3	2-379	278.77	5.33	4-276	278.99	3.53
320	302	12.3	2-380	291.47	5.33	4-278	304.39	3.53
350	332	12.3	2-382	329.57	5.33	4-279	329.79	3.53
400	382	12.3	2-384	380.37	5.33	4-281	380.59	3.53
420	402	12.3	2-385	405.26	5.33	4-281	380.59	3.53
450	432	12.3	2-386	430.66	5.33	4-283	430.66	3.53
480	449	16.3	2-464	443.36	6.99	4-387	456.06	5.33
500	469	16.3	2-466	468.76	6.99	4-387	456.06	5.33
600	569	16.3	2-471	557.66	6.99	4-391	557.58	5.33
700	669	16.3	2-475	658.88	6.99	4-395	658.88	5.33

※ 特殊尺寸亦可提供

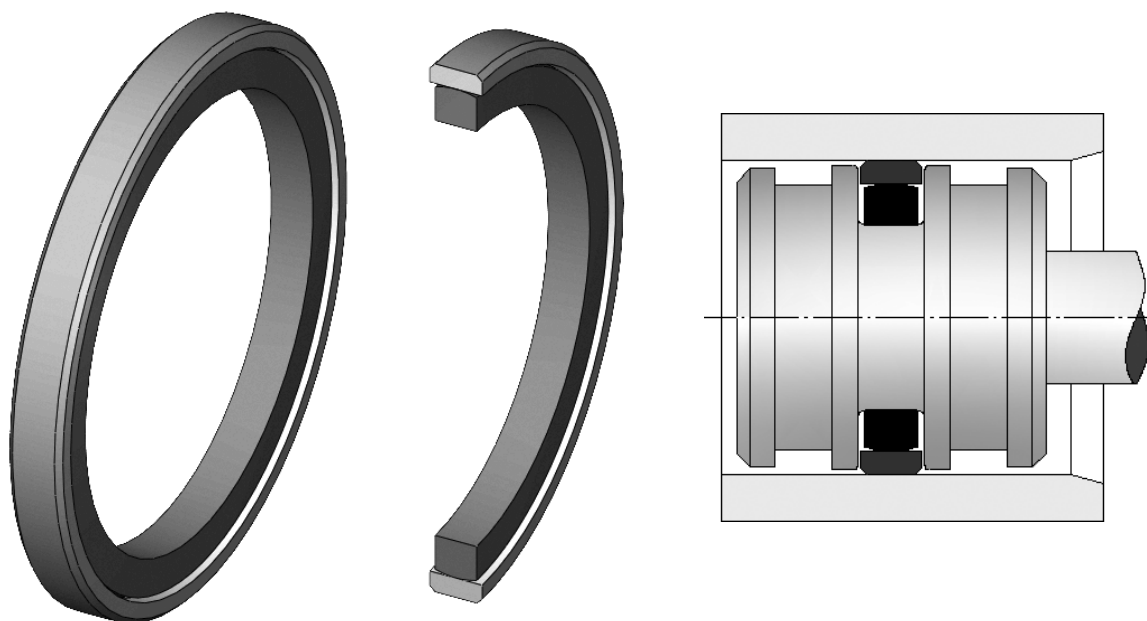
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O & X 型環請參照 P.5

PM 型活塞密封件

PTFE Piston Seal Set – type PM



兩件式活塞密封件，由一個密封環與一提供預負荷的凸面橡膠環組成，抗擠出強度高、無扭轉變形之虞、高壓穩定性相當優異，適用於重負載且大直徑的油壓應用。此型密封件不僅可提供與滑動活塞較穩定的高接觸壓力且磨擦力低，滑動平順完全沒有滯滑效應。適用於鋼鐵廠板坯連鑄機的扇形段 (segment) 滾筒群油壓缸、船舶油壓缸、射出成型機模壓油壓缸、重載用機械手。

Two-part piston seal set for hydraulics used in segment cylinder of continuous slab caster, marine, injection molding machine, and heavy-duty manipulator. Thanks to the special design, type PM is characterized as high-pressure stability, very good extrusion resistance, low friction, and no stick-slip effect.

應用範圍

壓力 ≤ 400 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 5 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 5 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

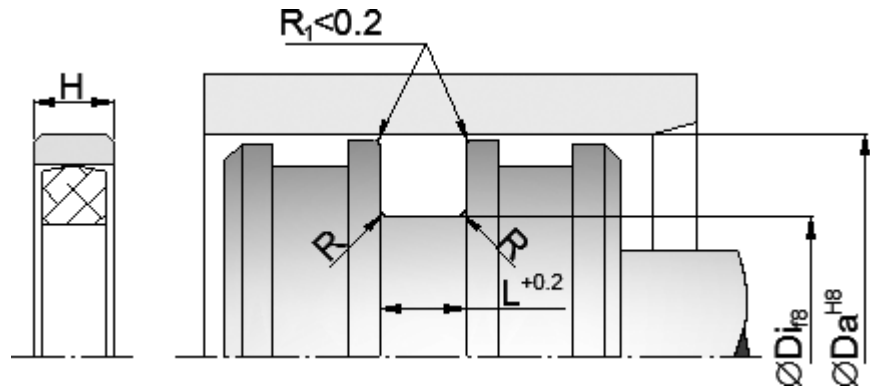
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Cylinder Borer	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	密封件高度 Seal Height	溝槽 R 角 Radius	截面 Gland Code
ϕ Da	ϕ Di	L	H	R	
80 ~ 149	Da - 20.0	10.0	9.6	0.4	A
150 ~ 240	Da - 25.0	12.5	12.0	0.4	B
241 ~ 500	Da - 30.0	15.0	14.4	0.8	C
501 ~ 769	Da - 35.0	17.5	16.8	1.2	D
700 ~	Da - 40.0	20.0	19.2	1.2	E

PM 型活塞密封件

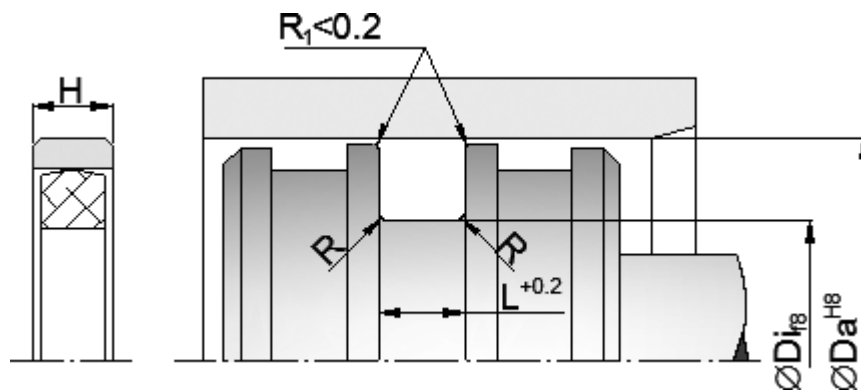
PTFE Piston Seal Set – type PM



溝槽尺寸 / Grove				油封高度 H	溝槽尺寸 / Grove				油封高度 H
Da	Di	L	H		Da	Di	L	H	
80	60	10.0	9.6	175	155	10.0	9.6		
85	65	10.0	9.6	175	150	12.5	12.0		
90	70	10.0	9.6	180	160	10.0	9.6		
95	75	10.0	9.6	180	155	12.5	12.0		
100	80	10.0	9.6	185	165	10.0	9.6		
105	85	10.0	9.6	185	160	12.5	12.0		
110	90	10.0	9.6	190	170	10.0	9.6		
115	95	10.0	9.6	190	165	12.5	12.0		
115	90	12.5	12.0	195	175	10.0	9.6		
120	100	10.0	9.6	195	170	12.5	12.0		
120	95	12.5	12.0	200	175	12.5	12.0		
125	105	10.0	9.6	200	170	15.0	14.4		
125	100	12.5	12.0	210	185	12.5	12.0		
130	110	10.0	9.6	210	180	15.0	14.4		
130	105	12.5	12.0	220	195	12.5	12.0		
135	115	10.0	9.6	220	190	15.0	14.4		
135	110	12.5	12.0	230	205	12.5	12.0		
140	120	10.0	9.6	230	200	15.0	14.4		
140	115	12.5	12.0	240	215	12.5	12.0		
145	125	10.0	9.6	240	210	15.0	14.4		
145	120	12.5	12.0	250	225	12.5	12.0		
150	130	10.0	9.6	250	220	15.0	14.4		
150	125	12.5	12.0	260	235	12.5	12.0		
155	135	10.0	9.6	260	230	15.0	14.4		
155	130	12.5	12.0	270	245	12.5	12.0		
160	140	10.0	9.6	270	240	15.0	14.4		
160	135	12.5	12.0	280	255	12.5	12.0		
165	145	10.0	9.6	280	250	15.0	14.4		
165	140	12.5	12.0	290	265	12.5	12.0		
170	150	10.0	9.6	290	260	15.0	14.4		
170	145	12.5	12.0	300	275	12.5	12.0		

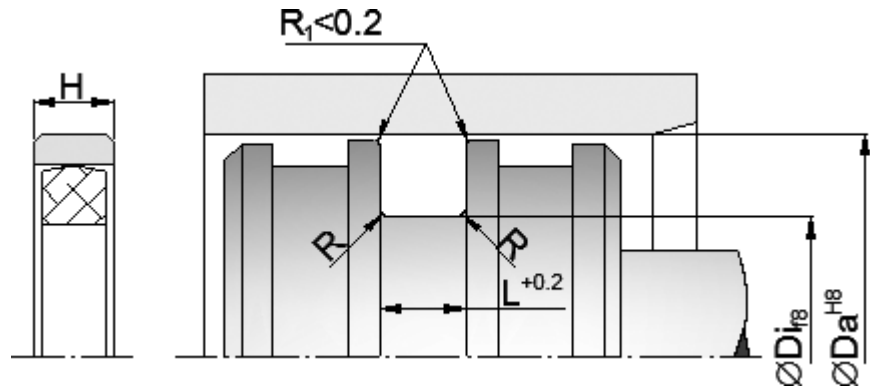
PM 型活塞密封件

PTFE Piston Seal Set – type PM



溝槽尺寸 / Grove				油封高度 H	溝槽尺寸 / Grove				油封高度 H
Da	Di	L	H		Da	Di	L	H	
300	270	15.0	14.4	520	490	15.0	14.4		
310	285	12.5	12.0	520	485	17.5	16.8		
310	280	15.0	14.4	540	510	15.0	14.4		
320	295	12.5	12.0	540	505	17.5	16.8		
320	290	15.0	14.4	560	530	15.0	14.4		
330	305	12.5	12.0	560	525	17.5	16.8		
330	300	15.0	14.4	580	550	15.0	14.4		
340	315	12.5	12.0	580	545	17.5	16.8		
340	310	15.0	14.4	600	570	15.0	14.4		
350	325	12.5	12.0	600	565	17.5	16.8		
350	320	15.0	14.4	630	600	15.0	14.4		
360	335	12.5	12.0	630	595	17.5	16.8		
360	330	15.0	14.4	640	600	20.0	19.2		
370	345	12.5	12.0	660	625	17.5	16.8		
370	340	15.0	14.4	670	630	20.0	19.2		
380	350	15.0	14.4	690	655	17.5	16.8		
380	345	17.5	16.8	700	660	20.0	19.2		
390	360	15.0	14.4	720	685	17.5	16.8		
390	355	17.5	16.8	730	690	20.0	19.2		
400	370	15.0	14.4	750	715	17.5	16.8		
400	365	17.5	16.8	760	720	20.0	19.2		
420	390	15.0	14.4	790	750	20.0	19.2		
420	385	17.5	16.8	840	800	20.0	19.2		
440	410	15.0	14.4	880	840	20.0	19.2		
440	405	17.5	16.8	920	880	20.0	19.2		
460	430	15.0	14.4	960	920	20.0	19.2		
460	425	17.5	16.8	1000	960	20.0	19.2		
480	450	15.0	14.4	1050	1010	20.0	19.2		
480	445	17.5	16.8	1100	1060	20.0	19.2		
500	470	15.0	14.4	1150	1110	20.0	19.2		
500	465	17.5	16.8	1200	1160	20.0	19.2		

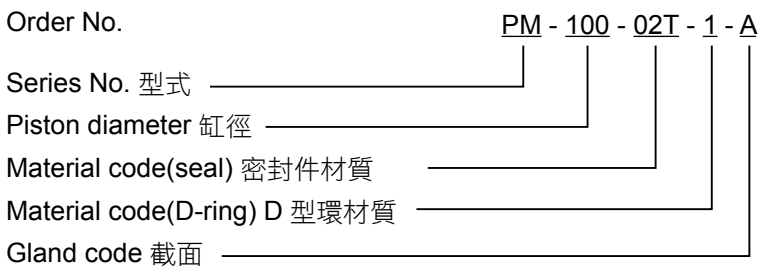
PM 型活塞密封件
PTFE Piston Seal Set – type PM



溝槽尺寸 / Grove			油封高度
Da	Di	L	H
1250	1210	20.0	19.2
1300	1260	20.0	19.2
1350	1310	20.0	19.2
1400	1360	20.0	19.2
1450	1410	20.0	19.2
1500	1460	20.0	19.2

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，D 型環請參照 P.5

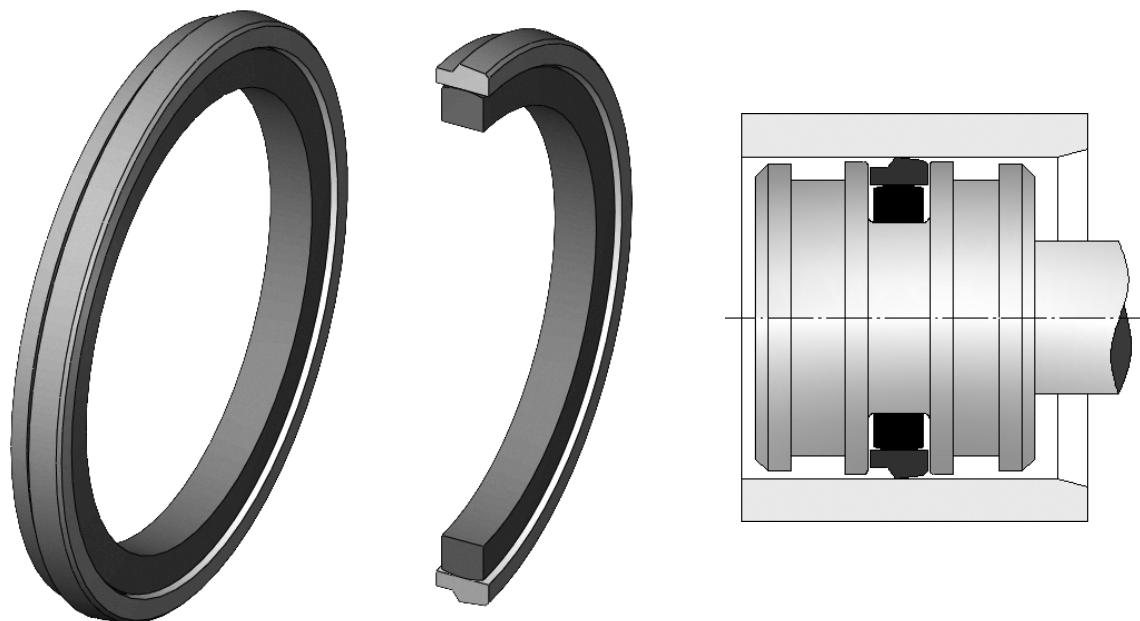
註：缸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1160x20mm 訂購時請註明 PM-K1200-02T-1-F。

Note : For bore diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1160x20mm should be denominated as PM-K1200-02T-1-F.

PN 型活塞密封件

PTFE Piston Seal Set – type PN



兩件式活塞密封件，由一個密封環與一提供預負荷的凸面橡膠環組成，抗擠出強度高、無扭轉變形之虞、高壓穩定性相當優異，適用於重負載且大直徑的油壓應用。此型密封件不僅可提供與滑動活塞較穩定的高接觸壓力且磨擦力低，滑動平順完全沒有滯滑效應。適用於鋼鐵廠板坯連鑄機的扇形段 (segment) 滾筒群油壓缸、船舶油壓缸、射出成型機模壓油壓缸、重載用機械手。

Two-part piston seal set for hydraulics used in segment cylinder of continuous slab caster, marine, injection molding machine, and heavy-duty manipulator. Thanks to the special design, type PM is characterized as high-pressure stability, very good extrusion resistance, low friction, and no stick-slip effect.

應用範圍

壓力 ≤ 400 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 5 m/s
 標準材質 銅填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 400 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 5 m/s
 Standard Material Bronze filled PTFE
 Other materials are available for specified conditions

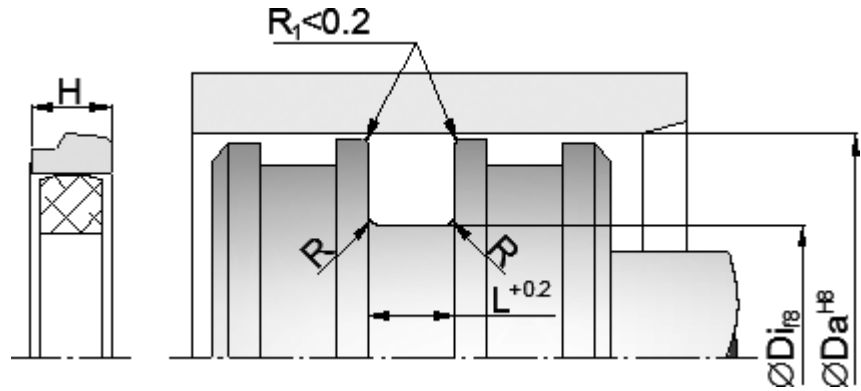
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Cylinder Borer	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	密封件高度 Seal Height	溝槽 R 角 Radius	截面 Gland Code
ϕ Da	ϕ Di	L	H	R	
80 ~ 149	Da - 20.0	10.0	9.4	0.4	A
150 ~ 240	Da - 25.0	12.5	11.7	0.4	B
241 ~ 500	Da - 30.0	15.0	14.0	0.8	C
501 ~ 769	Da - 35.0	17.5	16.4	1.2	D
700 ~	Da - 40.0	20.0	18.7	1.2	E

PN 型活塞密封件

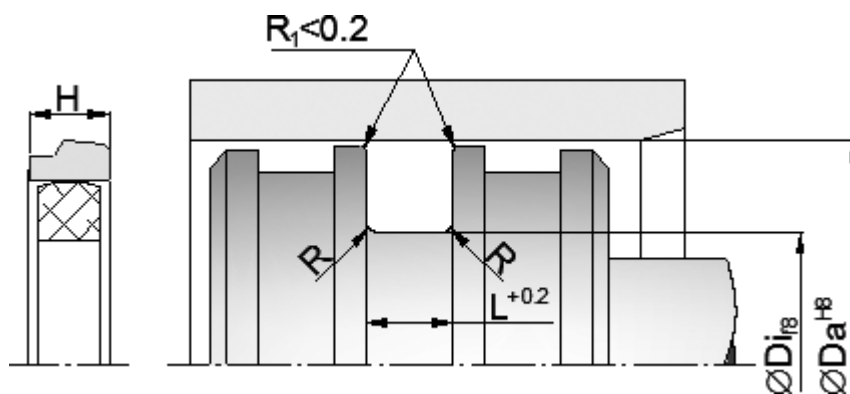
PTFE Piston Seal Set – type PN



溝槽尺寸 / Grove			油封高度	溝槽尺寸 / Grove			油封高度
Da	Di	L	H	Da	Di	L	H
80	60	10.0	9.4	170	145	12.5	11.7
85	65	10.0	9.4	175	155	10.0	9.4
90	70	10.0	9.4	175	150	12.5	11.7
95	75	10.0	9.4	180	160	10.0	9.4
100	80	10.0	9.4	180	155	12.5	11.7
105	85	10.0	9.4	185	165	10.0	9.4
110	90	10.0	9.4	185	160	12.5	11.7
115	95	10.0	9.4	190	170	10.0	9.4
115	90	12.5	11.7	190	165	12.5	11.7
120	100	10.0	9.4	195	175	10.0	9.4
120	95	12.5	11.7	195	170	12.5	11.7
125	105	10.0	9.4	200	175	12.5	11.7
125	100	12.5	11.7	200	170	15.0	14.0
130	110	10.0	9.4	210	185	12.5	11.7
130	105	12.5	11.7	210	180	15.0	14.0
135	115	10.0	9.4	220	195	12.5	11.7
135	110	12.5	11.7	220	190	15.0	14.0
140	120	10.0	9.4	230	205	12.5	11.7
140	115	12.5	11.7	230	200	15.0	14.0
145	125	10.0	9.4	240	215	12.5	11.7
145	120	12.5	11.7	240	210	15.0	14.0
150	130	10.0	9.4	250	225	12.5	11.7
150	125	12.5	11.7	250	220	15.0	14.0
155	135	10.0	9.4	260	235	12.5	11.7
155	130	12.5	11.7	260	230	15.0	14.0
160	140	10.0	9.4	270	245	12.5	11.7
160	135	12.5	11.7	270	240	15.0	14.0
165	145	10.0	9.4	280	255	12.5	11.7
165	140	12.5	11.7	280	250	15.0	14.0
170	150	10.0	9.4	290	265	12.5	11.7

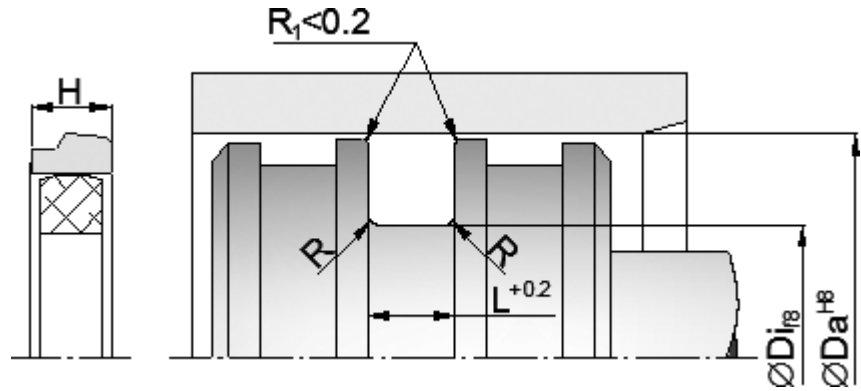
PN 型活塞密封件

PTFE Piston Seal Set – type PN



溝槽尺寸 / Grove			油封高度	溝槽尺寸 / Grove			油封高度
Da	Di	L	H	Da	Di	L	H
290	260	15.0	14.0	480	445	17.5	16.4
300	275	12.5	11.7	500	470	15.0	14.0
300	270	15.0	14.0	500	465	17.5	16.4
310	285	12.5	11.7	520	490	15.0	14.0
310	280	15.0	14.0	520	485	17.5	16.4
320	295	12.5	11.7	540	510	15.0	14.0
320	290	15.0	14.0	540	505	17.5	16.4
330	305	12.5	11.7	560	530	15.0	14.0
330	300	15.0	14.0	560	525	17.5	16.4
340	315	12.5	11.7	580	550	15.0	14.0
340	310	15.0	14.0	580	545	17.5	16.4
350	325	12.5	11.7	600	570	15.0	14.0
350	320	15.0	14.0	600	565	17.5	16.4
360	335	12.5	11.7	630	600	15.0	14.0
360	330	15.0	14.0	630	595	17.5	16.4
370	345	12.5	11.7	640	600	20.0	18.7
370	340	15.0	14.0	660	625	17.5	16.4
380	350	15.0	14.0	670	630	20.0	18.7
380	345	17.5	16.4	690	655	17.5	16.4
390	360	15.0	14.0	700	660	20.0	18.7
390	355	17.5	16.4	720	685	17.5	16.4
400	370	15.0	14.0	730	690	20.0	18.7
400	365	17.5	16.4	750	715	17.5	16.4
420	390	15.0	14.0	760	720	20.0	18.7
420	385	17.5	16.4	790	750	20.0	18.7
440	410	15.0	14.0	840	800	20.0	18.7
440	405	17.5	16.4	880	840	20.0	18.7
460	430	15.0	14.0	920	880	20.0	18.7
460	425	17.5	16.4	960	920	20.0	18.7
480	450	15.0	14.0	1000	960	20.0	18.7

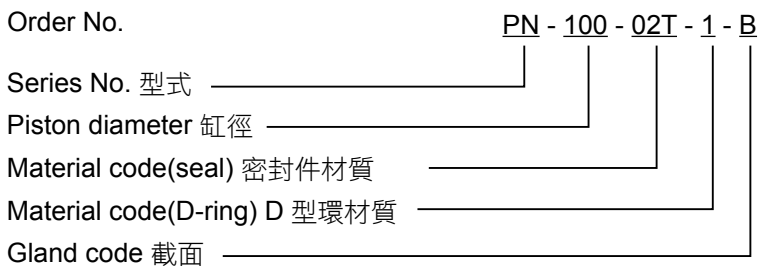
PN 型活塞密封件
PTFE Piston Seal Set – type PN



溝槽尺寸 / Grove			油封高度
Da	Di	L	H
1050	1010	20.0	18.7
1100	1060	20.0	18.7
1150	1110	20.0	18.7
1200	1160	20.0	18.7
1250	1210	20.0	18.7
1300	1260	20.0	18.7
1350	1310	20.0	18.7
1400	1360	20.0	18.7
1450	1410	20.0	18.7
1500	1460	20.0	18.7

※ 特殊尺寸亦可提供

訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，D 型環請參照 P.5

註：缸徑大於 1000.0mm 時，數字前加上 K。

例如尺寸 1200x1160x20mm 訂購時請註明 PN-K1200-02T-1-F。

Note : For bore diameter ≥ 1000.0 mm, K should be added in prefix, e.g. for seal 1200x1160x20mm should be denominated as PN-K1200-02T-1-F.

PV 型活塞密封件

Piston V Packing – type PV



PV 型活塞密封件由壓環、支撐環、1 或數個填料鐵氟龍 V 型環組成，穩定性及耐磨性能佳，即使在嚴苛的工作條件下，如瞬間的壓力或溫度變化、軸向或徑向振動等仍具有良好的密封效果，適用於液壓油、水和乳化等流體。多密封唇設計密封效果較佳並有利於壓力分配，對較差的金屬滑動面，使用壽命長。

Piston Vee Packing The Piston V Packing type PV, consisting of 1 or several chevron or V pressure rings and 1 header ring plus 1 back-up ring, is extremely suitable for medium to heavy duty applications. This seal accepts low & high pressure, vigorous conditions & also if certain misalignment between sealing gaps. The distinctive hinge-like action of each V ring permits quick reaction to pressure or temperature changes and no adverse effect under axial/radial vibration. The multiple lip configurations automatically distribute pressure and an effective seal along the shaft. It functions over a certain time period even poorer surfaces.

應用範圍

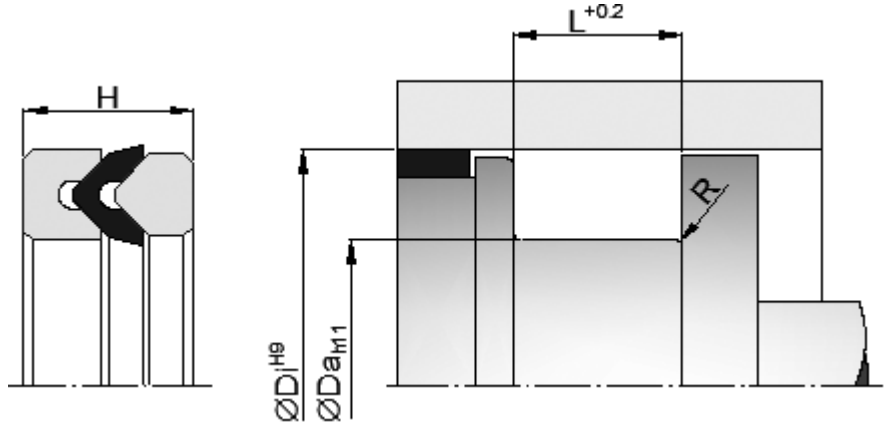
壓力 $\leq 500\text{bar}$
 溫度 $-40 \sim 200^{\circ}\text{C}$
 速度 $\leq 0.5 \text{ m/s}$
 標準材質 銅填料鐵氟龍、NBR
 註：可依使用條件選用其他材質

Application Range

Pressure $\leq 500\text{bar}$
 Temperature $-40 \sim 200^{\circ}\text{C}$
 Speed $\leq 0.5 \text{ m/s}$
 Standard Material Bronze filled PTFE+NBR
 Other materials are available for specified conditions

PV 型活塞密封件

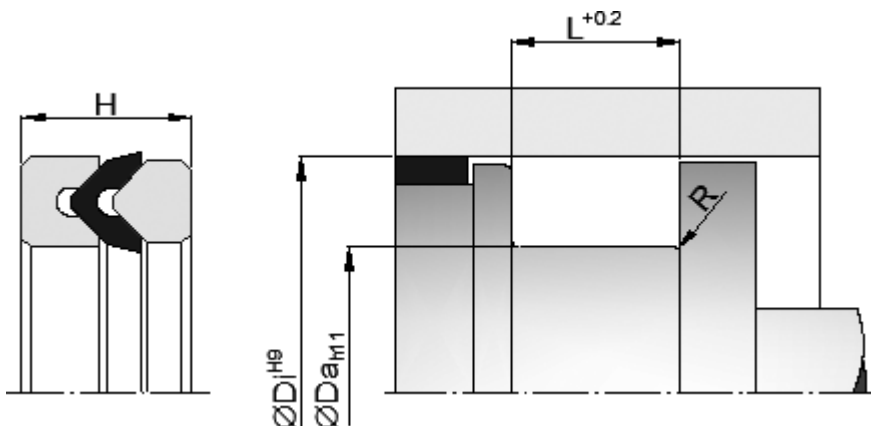
Piston V Packing – type PV



溝槽尺寸 / Grove			油封高度 H	訂購編號 Order code	溝槽尺寸 / Grove			油封高度 H	訂購編號 Order code
Da	Di	L			Da	Di	L		
20	10	9.3	9.0	PV-020-01-M4	63	48	13.0	12.5	PV-063-01-M4
22	12	9.3	9.0	PV-022-01-M4	65	50	13.0	12.5	PV-065-01-M4
24	14	9.3	9.0	PV-024-01-M4	75	55	15.2	14.5	PV-075-01-M4
25	15	9.3	9.0	PV-025-01-M4	80	60	15.2	14.5	PV-080-01-M4
26	16	9.3	9.0	PV-026-01-M4	85	65	15.2	14.5	PV-085-01-M4
28	18	9.3	9.0	PV-028-01-M4	90	70	21.2	20.5	PV-090-01-M4
30	20	9.3	9.0	PV-030-01-M4	95	75	21.2	20.5	PV-095-01-M4
32	20	10.9	10.5	PV-032-01-M4	100	80	21.2	20.5	PV-100-01-M4
34	22	10.9	10.5	PV-034-01-M4	105	85	21.2	20.5	PV-105-01-M4
35	23	10.9	10.5	PV-035-01-M4	110	90	21.2	20.5	PV-110-01-M4
36	24	10.9	10.5	PV-036-01-M4	115	95	21.2	20.5	PV-115-01-M4
40	25	11.5	11.0	PV-040-01-M4	125	100	25.8	25.1	PV-125-01-M4
42	27	11.5	11.0	PV-042-01-M4	130	105	25.8	25.1	PV-130-01-M4
44	29	11.5	11.0	PV-044-01-M4	135	110	25.8	25.1	PV-135-01-M4
45	30	11.5	11.0	PV-045-01-M4	140	115	25.8	25.1	PV-140-01-M4
46	31	11.5	11.0	PV-046-01-M4	150	120	29.0	28.0	PV-150-01-M4
50	35	11.5	11.0	PV-050-01-M4	160	130	29.0	28.0	PV-160-01-M4
52	37	11.5	11.0	PV-052-01-M4	170	140	31.5	30.5	PV-170-01-M4
55	40	11.5	11.0	PV-055-01-M4	180	150	31.5	30.5	PV-180-01-M4
58	43	11.5	11.0	PV-058-01-M4	190	160	33.5	32.5	PV-190-01-M4
60	45	11.5	11.0	PV-060-01-M4	200	170	33.5	32.5	PV-200-01-M4

PV 型活塞密封件

Piston V Packing – type PV



溝槽尺寸 / Grove			油封高度	訂購編號
Da	Di	L	H	Order code
210	180	33.5	32.5	PV-210-01-M4
220	190	33.5	32.5	PV-220-01-M4
230	200	33.5	32.5	PV-230-01-M4
240	210	33.5	32.5	PV-240-01-M4
250	220	33.5	32.5	PV-250-01-M4
260	230	33.5	32.5	PV-260-01-M4
270	240	33.5	32.5	PV-270-01-M4
280	250	33.5	32.5	PV-280-01-M4
290	260	33.5	32.5	PV-290-01-M4

※ 特殊尺寸亦可提供

※ 依材質不同，V 型片的數量會依高度做適當調整

訂購範例 (How to order)

Order No. PV - 050 - 01 - M4

Series No. 型式 _____

Piston diameter 缸徑 _____

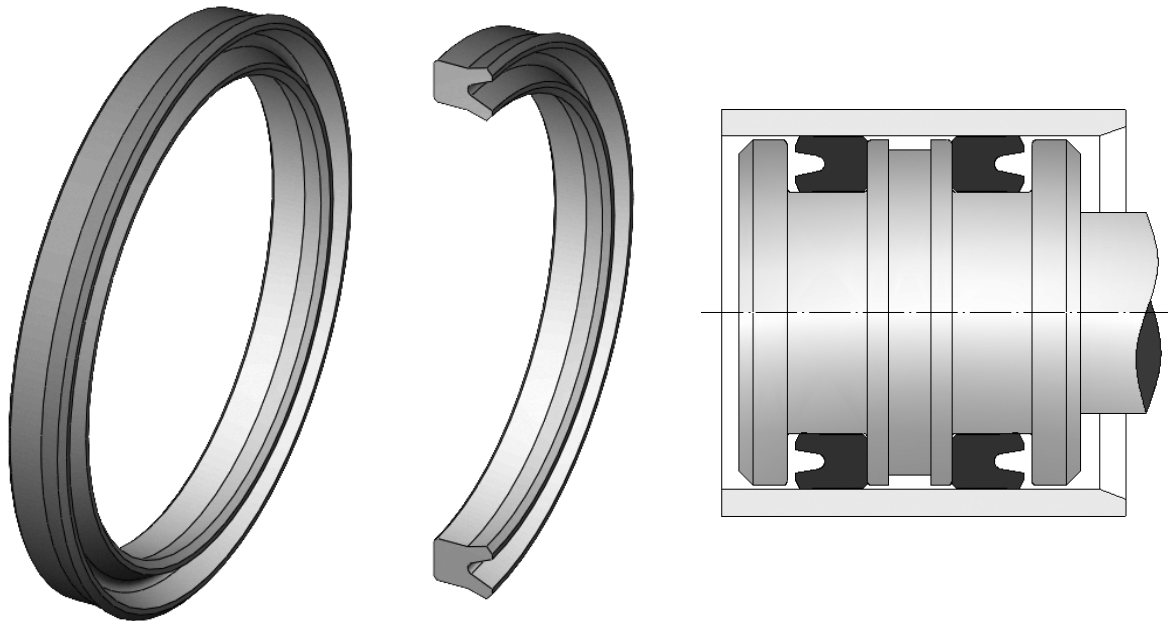
Material combination 材質組合 _____

* 可選用材質組合：

- 01 : 05T+NBR
- 02 : 05T+VITON
- 03 : 02T+NBR
- 04 : 02T+VITON
- 05 : HPU+POM
- 06 : HPU+PA

軸孔兩用 U 型油封 UF1 型

Rod/Piston U-cup seal – type UF1



UF1 型油封可選用 NBR 或 Viton 材質，適用於活塞與活塞桿之密封，具有對稱形小截面，易組裝可應用於封閉型溝槽。

UF1 profile is a symmetrical hydraulic piston/rod seal made of NBR or Viton. The smaller profile provides easier installation even for solid gland.

應用範圍

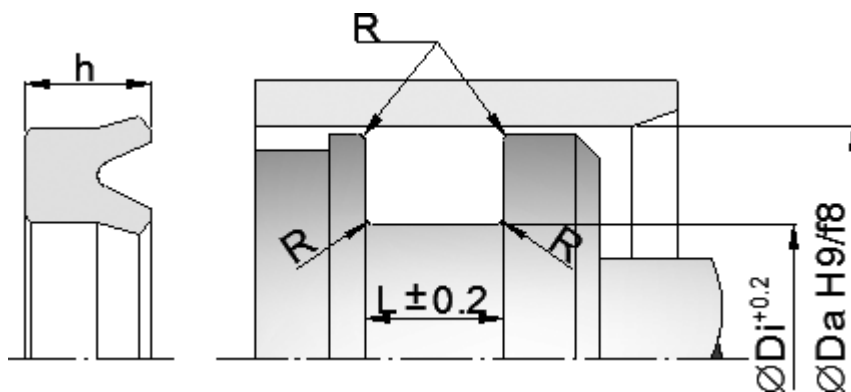
壓力 ≤ 140 bar
 工作溫度 -25 ~ +100°C (NBR)
 -20 ~ +150°C (VITON)
 線速度 ≤ 0.5 m/s
 流體 液壓
 材質 NBR/Viton

Application Range

Pressure ≤ 140 bar
 Temperature -25 ~ +100°C (NBR)
 -20 ~ +150°C (VITON)
 Speed ≤ 0.5 m/s
 Medium Hydraulic oils
 Material NBR/Viton

軸孔兩用 U 型油封 UF1 型

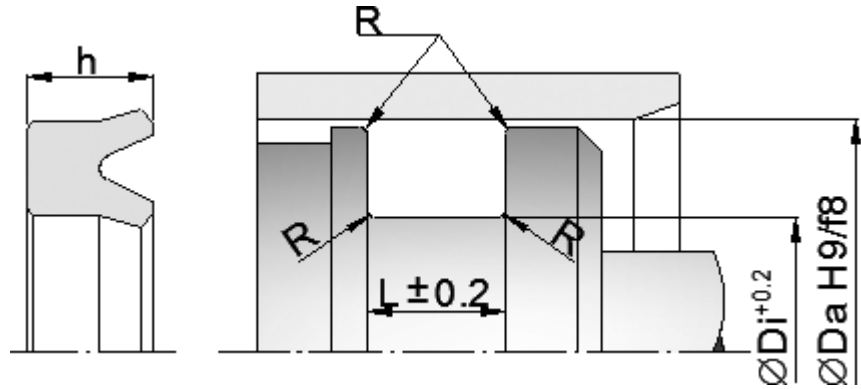
Rod/Piston U-cup seal – type UF1



溝槽尺寸 / Grove				訂購編號	溝槽尺寸 / Grove				訂購編號
Da	Di	h	L	Order code	Da	Di	h	L	Order code
22	14	5.0	5.7	UF1 014A N1X	68	58	6.0	7.0	UF1 058A N1X
24	16	5.0	5.7	UF1 016A N1X	71	60	7.0	8.0	UF1 060A N1X
26	18	5.0	5.7	UF1 018A N1X	72	62	6.0	7.0	UF1 062B N1X
28	20	5.0	5.7	UF1 020A N1X	74	64	6.0	7.0	UF1 064A N1X
30	22	5.0	5.7	UF1 022A N1X	76	66	6.0	7.0	UF1 066A N1X
30	22.4	5.0	5.7	UF1 022B N1X	78	68	6.0	7.0	UF1 068A N1X
31.5	23.5	5.0	5.7	UF1 023A N1X	80	70	6.0	7.0	UF1 070A N1X
32	24	5.0	5.7	UF1 024A N1X	82	72	6.0	7.0	UF1 072A N1X
34	26	5.0	5.7	UF1 026A N1X	84	74	6.0	7.0	UF1 074A N1X
36	28	5.0	5.7	UF1 028A N1X	86	76	6.0	7.0	UF1 076A N1X
40	30	6.0	7.0	UF1 030A N1X	88	78	6.0	7.0	UF1 078A N1X
41.5	31.5	6.0	7.0	UF1 031A N1X	90	80	6.0	7.0	UF1 080A N1X
42	32	6.0	7.0	UF1 032A N1X	90	82	6.0	7.0	UF1 082A N1X
44	34	6.0	7.0	UF1 034A N1X	90	84	6.0	7.0	UF1 084A N1X
45	35.5	6.0	7.0	UF1 035A N1X	100	85	9.0	10.0	UF1 085A N1X
45.5	35.5	6.0	7.0	UF1 035B N1X	105	90	9.0	10.0	UF1 090A N1X
46	36	6.0	7.0	UF1 036A N1X	110	95	9.0	10.0	UF1 095A N1X
48	38	6.0	7.0	UF1 038A N1X	112	98	8.5	9.5	UF1 098A N1X
50	40	6.0	7.0	UF1 040A N1X	115	100	9.0	10.0	UF1 100A N1X
50	42	6.0	7.0	UF1 042A N1X	120	106	8.5	9.5	UF1 106A N1X
50	44	6.0	7.0	UF1 044A N1X	125	112	8.5	9.5	UF1 112A N1X
56	45	7.0	8.0	UF1 045A N1X	125	112	9.0	10.0	UF1 112B N1X
56	46	6.0	7.0	UF1 046A N1X	132	118	8.5	9.5	UF1 118A N1X
58	48	6.0	7.0	UF1 048A N1X	140	125	9.0	10.0	UF1 125A N1X
60	50	6.0	7.0	UF1 050A N1X	145	130	9.0	10.0	UF1 130A N1X
60	52	6.0	7.0	UF1 052A N1X	145	132	8.5	9.5	UF1 132A N1X
60	54	6.0	7.0	UF1 054A N1X	150	136	8.5	9.5	UF1 136A N1X
66	56	6.0	7.0	UF1 056A N1X	155	140	9.0	10.0	UF1 140A N1X

軸孔兩用 U 型油封 UF1 型

Rod/Piston U-cup seal – type UF1



溝槽尺寸 / Grove				訂購編號
Da	Di	h	L	Order code
160	145	9.0	10.0	UF1 145A N1X
165	150	9.0	10.0	UF1 150A N1X
170	155	9.0	10.0	UF1 155A N1X
175	160	9.0	10.0	UF1 160A N1X
170	165	9.0	10.0	UF1 165A N1X
190	175	9.0	10.0	UF1 175A N1X
200	180	12.0	13.0	UF1 180A N1X
210	190	12.0	13.0	UF1 190A N1X
220	200	12.0	13.0	UF1 200A N1X
224	204	12.0	13.0	UF1 204A N1X
244	224	12.0	13.0	UF1 224A N1X
250	230	12.0	13.0	UF1 230A N1X
260	240	12.0	13.0	UF1 240A N1X
270	250	12.0	13.0	UF1 250A N1X

訂購範例 (How to order)

NBR :

Order No. UF1 - 014A - N1X

Series No. 型式 _____

Groove bottom 溝槽底徑 _____

Material code(seal) 密封件材質 _____

Vtion :

Order No. UF1 - 014A - V1X

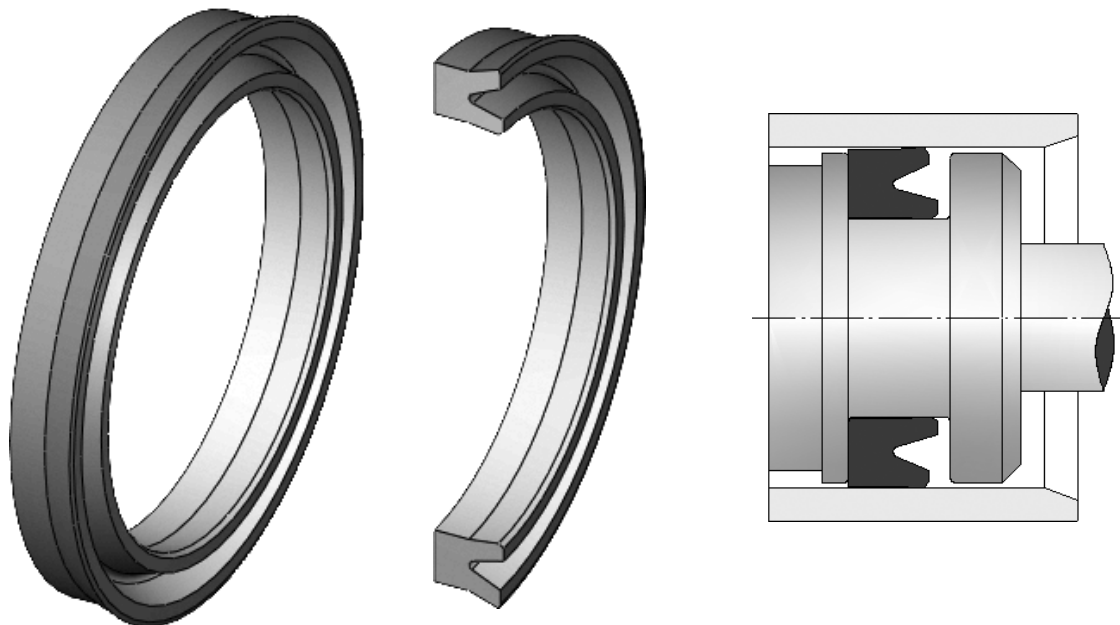
Series No. 型式 _____

Groove bottom 溝槽底徑 _____

Material code(seal) 密封件材質 _____

孔用 U 型油封 P4 型

Piston U-cup seal – type P4



P4 型油封採用耐水解的 TPU 材質，適用於活塞之密封，具有對稱形小截面，易組裝可應用於封閉型溝槽。同時，具有優異的耐磨耗、耐擠出、耐瞬間高壓的能力，加上特殊的設計，可避免背壓所造成的密封失效。

P4 profile is a symmetrical hydraulic piston seal made of TPU with good Hydrolysis and high wear resistance. The knife trimmed, beveled lip contacts the bore or rod to provide enhanced low to high pressure sealing and wiping action.

應用範圍

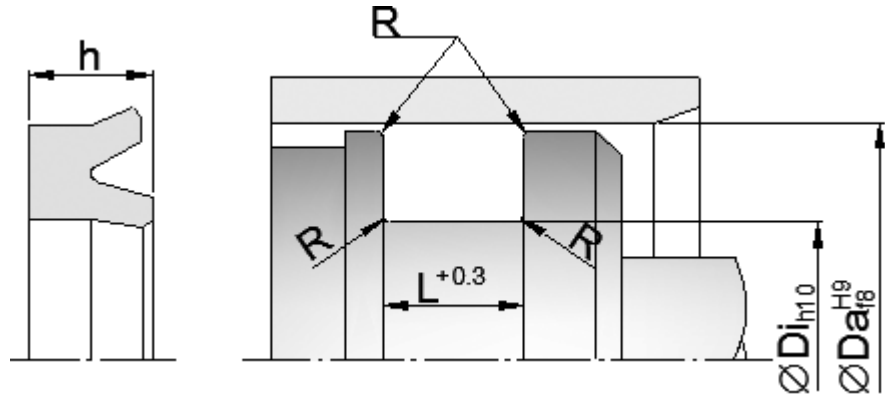
工作壓力 $\leq 400 \text{ bar}$
 工作溫度 $-35 \sim +110^{\circ}\text{C}$
 線速 $\leq 0.5 \text{ m/s}$
 流體 液壓
 材質 聚胺脂

Application Range

Pressure $\leq 400\text{bar}$
 Temperature $-35 \sim +110^{\circ}\text{C}$
 Speed $\leq 0.5 \text{ m/s}$
 Medium Hydraulic oils
 Material TPU

孔用 U 型油封 P4 型

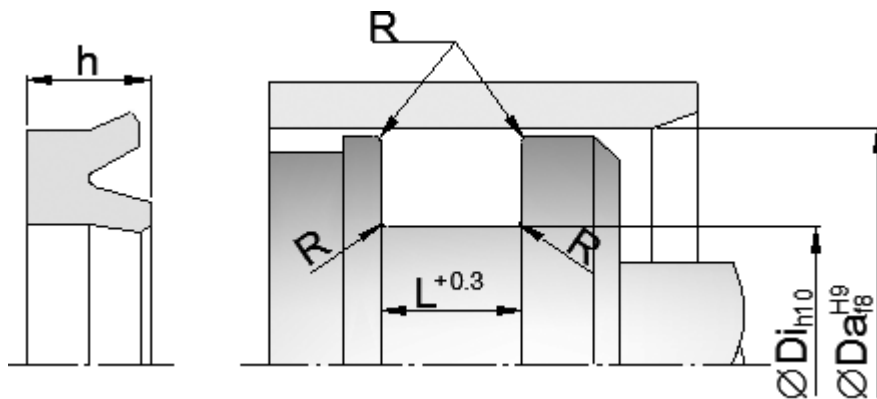
Piston U-cup seal – type P4



溝槽尺寸 / Grove				訂購編號	溝槽尺寸 / Grove				訂購編號
Da	Di	h	L	Order code	Da	Di	h	L	Order code
35.5	28	5.0	5.7	P4 035A G3X	105	90	9.0	10.0	P4 105A G3X
40	30	6.0	7.0	P4 040A G3X	110	95	9.0	10.0	P4 110A G3X
41.5	31.5	6.0	7.0	P4 041A G3X	112	95	8.5	9.5	P4 112A G3X
45	35	6.0	7.0	P4 045A G3X	115	100	9.0	10.0	P4 115A G3X
45	35.5	6.0	7.0	P4 045B G3X	120	106	8.5	9.5	P4 120A G3X
50	40	6.0	7.0	P4 050A G3X	125	112	9.0	10.0	P4 125A G3X
55	45	6.0	7.0	P4 055A G3X	140	125	9.0	10.0	P4 140A G3X
56	45	7.0	8.0	P4 056A G3X	150	136	8.5	9.5	P4 150A G3X
60	50	6.0	7.0	P4 060A G3X	160	145	9.0	10.0	P4 160A G3X
63	53	6.0	7.0	P4 063A G3X	170	155	9.0	10.0	P4 170A G3X
65	55	6.0	7.0	P4 065A G3X	175	160	9.0	10.0	P4 175A G3X
66	56	6.0	7.0	P4 066A G3X	180	165	9.0	10.0	P4 180A G3X
70	60	6.0	7.0	P4 070A G3X	190	175	9.0	10.0	P4 190A G3X
71	60	7.0	8.0	P4 071A G3X	200	180	12.0	13.0	P4 200A G3X
73	63	6.0	7.0	P4 073A G3X	210	190	12.0	13.0	P4 210A G3X
75	65	6.0	7.0	P4 075A G3X	220	200	12.0	13.0	P4 220A G3X
80	70	6.0	7.0	P4 080A G3X	224	204	12.0	13.0	P4 224A G3X
80	71	6.0	7.0	P4 080B G3X	225	205	12.0	13.0	P4 225A G3X
90	80	6.0	7.0	P4 090A G3X	230	210	12.0	13.0	P4 230A G3X
100	85	9.0	10.0	P4 100A G3X	240	220	12.0	13.0	P4 240A G3X

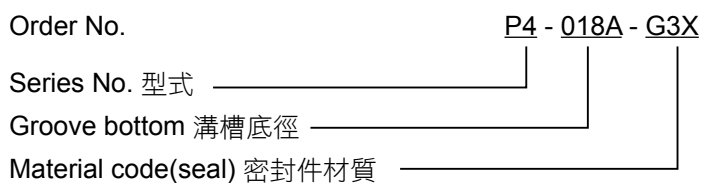
孔用 U 型油封 P4 型

Piston U-cup seal – type P4



溝槽尺寸 / Grove				訂購編號
Da	Di	h	L	Order code
250	230	12.0	13.0	P4 250A G3X
260	240	12.0	13.0	P4 260A G3X
270	250	12.0	13.0	P4 270A G3X
280	255	16.0	17	P4 280A G3X
290	265	16.0	17	P4 290A G3X
300	275	16.0	17	P4 300A G3X

訂購範例 (How to order)



旋轉密封件 (Rotary Seals)

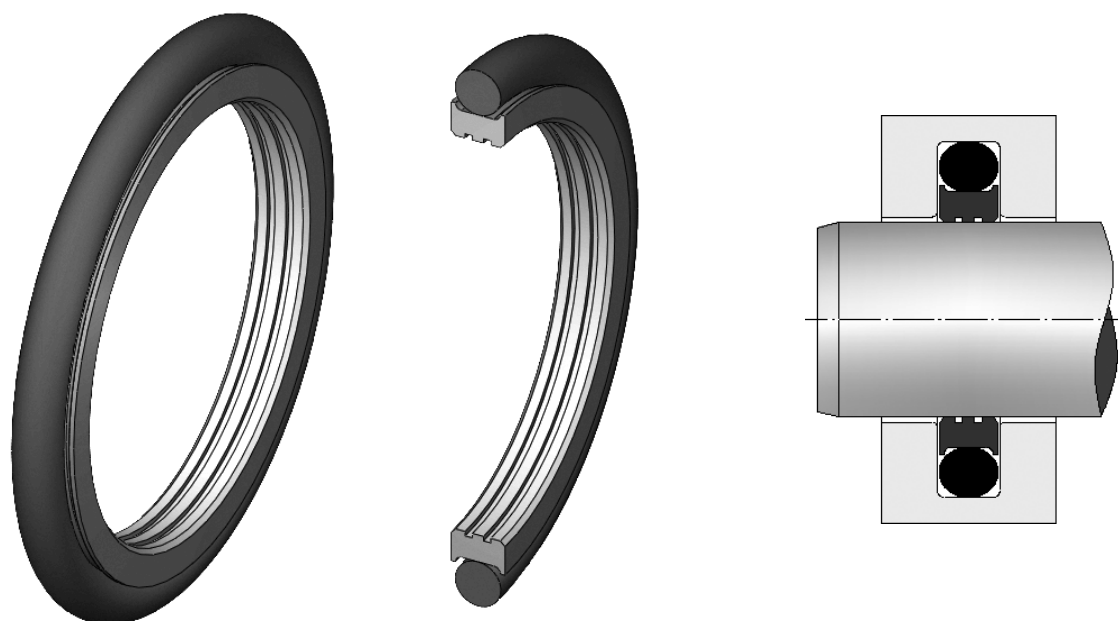
型式	圖示	氣壓 / 油壓 (Hyd./Pneu)	壓力 (bar)	工作溫度 (°C)	速度 (m/s)	頁數 (Page.)
TR		H	300	-60~+200	1.0	P.122
TP		H	300	-60~+200	1.0	P.125

PU O-ring

型式	圖示	氣壓 / 油壓 (Hyd./Pneu)	壓力 (bar)	工作溫度 (°C)	速度 (m/s)	頁數 (Page.)
PO		H	600	-35~+110	0.5	P.128

TR 型旋轉軸密封件

PTFE Rotary Seal Set – type TR



適用於狹小空間或結構簡易的旋轉軸密封，例如循跡回轉襯套、迴旋接頭、軟管捲軸（筒）、及工作母機的油壓系統。作為末端密封件時，建議在開口處加裝刮塵件。

TR rotary seal is designed for inside sealing in bi-directional pressurization applications such as rotating track bushings, swivel joints, hose reels, and in machine tool hydraulics. A wiper ring near opening is recommended if TR seal is used as an end seal.

應用範圍

壓力 ≤ 300 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 1 m/s
 標準材質 碳纖填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 300 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 1 m/s
 Standard Material Carbon Fibre filled PTFE
 Other materials are available for specified conditions

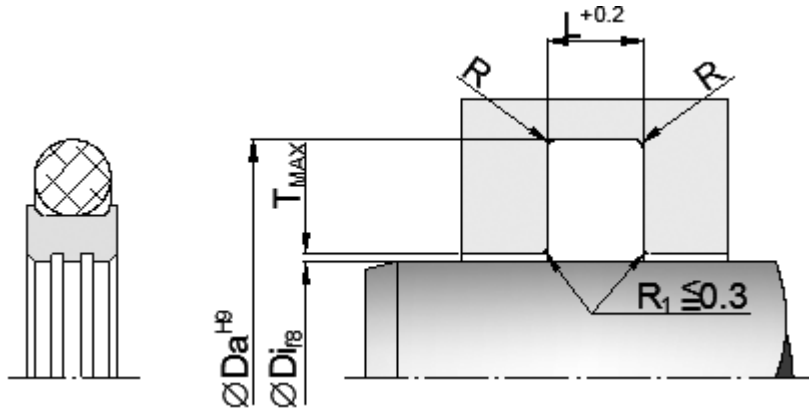
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	擠出間隙 Gap	截面 Gland Code	O 型環 O-ring C.S.
ϕ Di	ϕ Da	L	R	T		
5 ~ 7.9	Di + 4.9	2.2	0.5	0.1	A	1.78
8 ~ 18.9	Di + 7.5	3.2	0.5	0.1	B	2.62
19 ~ 37.9	Di + 11.0	4.2	0.5	0.15	C	3.53
38 ~ 199.9	Di + 15.5	6.3	0.9	0.2	D	5.33
200 ~ 255.9	Di + 21.0	8.1	0.9	0.25	E	6.99
256 ~ 650.0	Di + 24.5	8.1	0.9	0.25	F	6.99

TR 型旋轉軸密封件

PTFE Rotary Seal Set – type TR

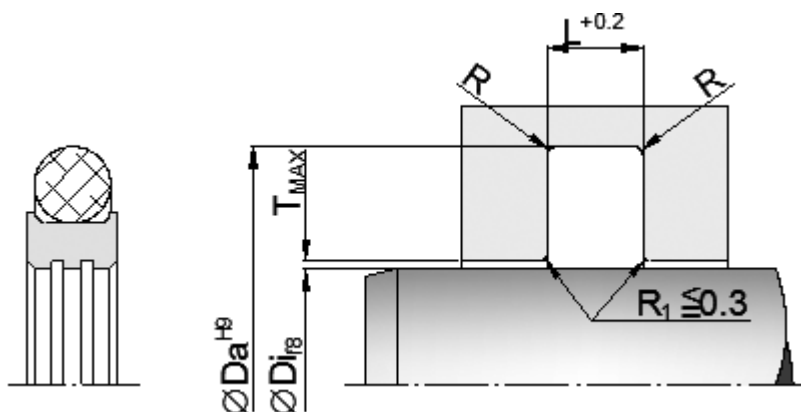


溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
5	9.9	2.2	2-010	6.07	1.78
10	14.9	2.2	2-013	10.82	1.78
10	17.5	3.2	2-112	12.37	2.62
15	22.5	3.2	2-115	17.12	2.62
15	26.0	4.2	2-210	18.64	3.53
20	27.5	3.2	2-119	23.47	2.62
20	31.0	4.2	2-213	23.39	3.53
25	32.5	3.2	2-122	28.24	2.62
25	36.0	4.2	2-217	29.74	3.53
30	37.5	3.2	2-125	32.99	2.62
30	41.0	4.2	2-220	34.52	3.53
35	42.5	3.2	2-128	37.77	2.62
35	50.5	6.3	2-326	40.64	5.33
40	51.0	4.2	2-224	44.04	3.53
45	56.0	4.2	2-226	50.39	3.53
50	61.0	4.2	2-228	56.74	3.53
55	66.0	4.2	2-229	59.92	3.53
55	70.5	6.3	2-332	59.69	5.33
60	71.0	4.2	2-230	63.09	3.53
65	76.0	4.2	2-232	69.44	3.53
65	80.5	6.3	2-335	69.22	5.33
70	81.0	4.2	2-233	72.62	3.53
70	85.5	6.3	2-337	75.57	5.33
75	86.0	4.2	2-235	78.97	3.53
75	90.5	6.3	2-338	78.74	5.33
80	91.0	4.2	2-237	85.32	3.53
85	96.0	4.2	2-238	88.49	3.53
90	101.0	4.2	2-240	94.84	3.53
90	105.5	6.3	2-343	94.62	5.33
95	106.0	4.2	2-242	101.19	3.53

溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Di	Da	L			
100	111.0	4.2	2-243	104.37	3.53
100	115.5	6.3	2-346	104.14	5.33
105	116.0	4.2	2-244	107.54	3.53
105	120.5	6.3	2-348	110.49	5.33
110	121.0	4.2	2-246	113.89	3.53
110	125.5	6.3	2-349	113.67	5.33
115	126.0	4.2	2-247	117.07	3.53
115	130.5	6.3	2-351	120.02	5.33
120	131.0	4.2	2-249	123.42	3.53
120	135.5	6.3	2-353	126.37	5.33
125	140.5	6.3	2-354	129.54	5.33
125	146.0	8.1	2-431	132.72	6.99
130	141.0	4.2	2-252	132.94	3.53
130	145.5	6.3	2-356	135.89	5.33
135	150.5	6.3	2-357	139.07	5.33
135	156.0	8.1	2-434	142.24	6.99
140	151.0	4.2	2-255	142.47	3.53
140	155.5	6.3	2-359	145.42	5.33
145	160.5	6.3	2-360	148.59	5.33
150	161.0	4.2	2-258	151.99	3.53
155	176.0	8.1	2-438	158.12	6.99
160	171.0	4.2	2-260	164.69	3.53
160	175.5	6.3	2-363	164.47	5.33
165	180.5	6.3	2-364	170.82	5.33
170	181.0	4.2	2-261	171.04	3.53
175	190.5	6.3	2-365	177.17	5.33
175	196.0	8.1	2-442	183.52	6.99
180	191.0	4.2	2-263	183.74	3.53
185	206.0	8.1	2-443	189.87	6.99
190	201.0	4.2	2-264	190.09	3.53

TR 型旋轉軸密封件

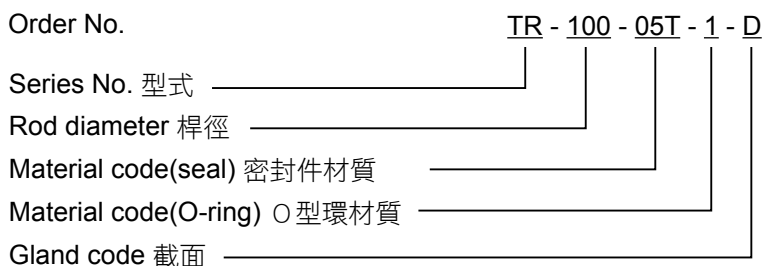
PTFE Rotary Seal Set – type TR



溝槽尺寸 / Grove			AS568	內徑	線徑	溝槽尺寸 / Grove			AS568	內徑	線徑
Di	Da	L	code	mm	mm	Di	Da	L	code	mm	mm
195	210.5	6.3	2-368	196.22	5.33	360	381.0	8.1	2-458	367.67	6.99
200	215.5	6.3	2-369	202.57	5.33	370	391.0	8.1	2-459	380.37	6.99
210	225.5	6.3	2-371	215.27	5.33	380	401.0	8.1	2-460	393.07	6.99
210	231.0	8.1	2-446	215.27	6.99	390	411.0	8.1	2-461	405.26	6.99
220	235.5	6.3	2-372	221.62	5.33	400	421.0	8.1	2-461	405.26	6.99
220	241.0	8.1	2-447	227.97	6.99	410	431.0	8.1	2-462	430.66	6.99
230	245.5	6.3	2-374	234.32	5.33	450	471.0	8.1	2-465	456.06	6.99
240	255.5	6.3	2-275	240.67	5.33	470	491.0	8.1	2-467	481.46	6.99
250	265.5	6.3	2-377	253.37	5.33	500	521.0	8.1	2-469	506.86	6.99
250	271.0	8.1	2-449	253.37	6.99	530	551.0	8.1	2-470	532.26	6.99
260	281.0	8.1	2-450	266.07	6.99	550	571.0	8.1	2-471	557.66	6.99
270	291.0	8.1	2-451	278.77	6.99	580	601.0	8.1	2-472	582.68	6.99
280	301.0	8.1	2-451	278.77	6.99	600	621.0	8.1	2-473	608.08	6.99
290	311.0	8.1	2-452	291.47	6.99	620	641.0	8.1	2-473	608.08	6.99
300	321.0	8.1	2-453	304.17	6.99	640	661.0	8.1	2-474	633.48	8.40
310	331.0	8.1	2-454	316.87	6.99	650	678.0	9.5	—	647.00	8.40
320	341.0	8.1	2-455	329.57	6.99						
330	351.0	8.1	2-456	342.27	6.99						
340	361.0	8.1	2-457	354.97	6.99						
350	371.0	8.1	2-457	354.97	6.99						

※ 特殊尺寸亦可提供

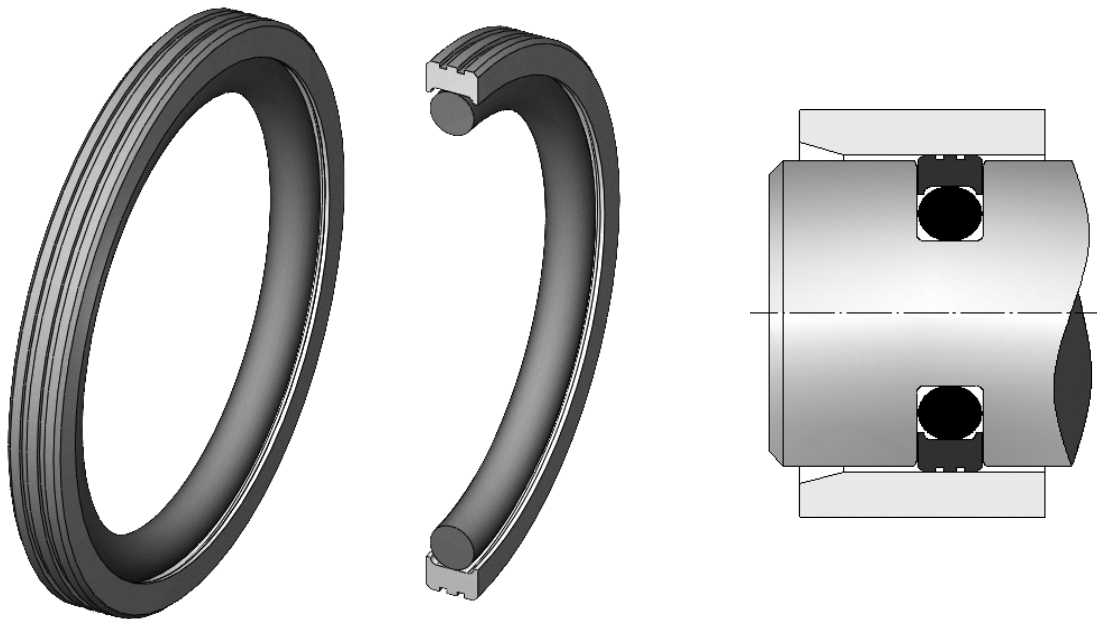
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

TP 型旋轉軸密封件

PTFE Rotary Seal Set – type TP



與 TR 型旋轉軸密封件的應用相似，但適用外壓場合。設計選型時以 TR 型為優先，TP 型次之。

TP rotary seal is alternative to TR profile but providing outside sealing in bi-directional pressurization applications. It is used only when TR seal can not be accepted.

應用範圍

壓力 ≤ 300 bar
 溫度 $-60 \sim 200^{\circ}\text{C}$
 速度 ≤ 1 m/s
 標準材質 碳纖填料
 註：可依使用條件選用其他材質

Application Range

Pressure ≤ 300 bar
 Temperature $-60 \sim 200^{\circ}\text{C}$
 Speed ≤ 1 m/s
 Standard Material Carbon Fibre filled PTFE
 Other materials are available for specified conditions

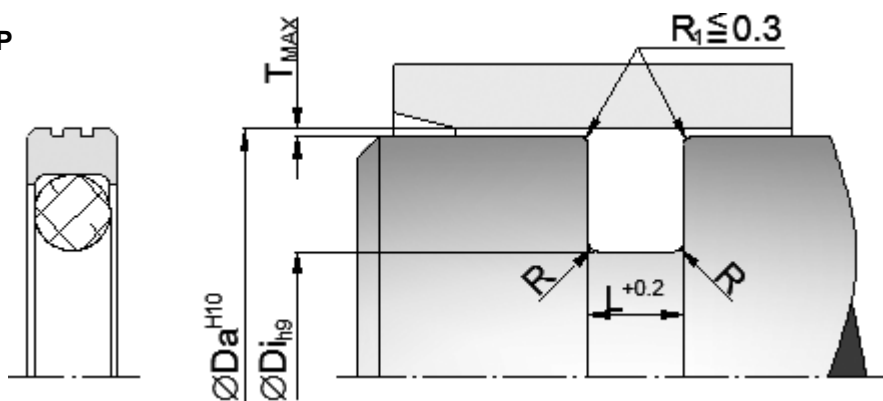
尺寸選用建議 Guidelines for the Selection of Special Sizes

unit: mm

缸徑 Cylinder Bore	溝槽底徑 Groove Bottom	溝槽寬 Groove Width	溝槽 R 角 Radius	擠出間隙 Gap	截面 Gland Code	O 型環 O-ring C.S.
ϕ Da	ϕ Di	L	R	T		
8 ~ 14.9	Da - 4.9	2.2	0.5	0.1	A	1.78
15 ~ 39.9	Da - 7.5	3.2	0.5	0.1	B	2.62
40 ~ 79.9	Da - 11.0	4.2	0.5	0.15	C	3.53
80 ~ 132.9	Da - 15.5	6.3	0.9	0.2	D	5.33
133 ~ 329.9	Da - 21.0	8.1	0.9	0.25	E	6.99
330 ~ 650.0	Da - 24.5	8.1	0.9	0.25	F	6.99

TP 型旋轉軸密封件

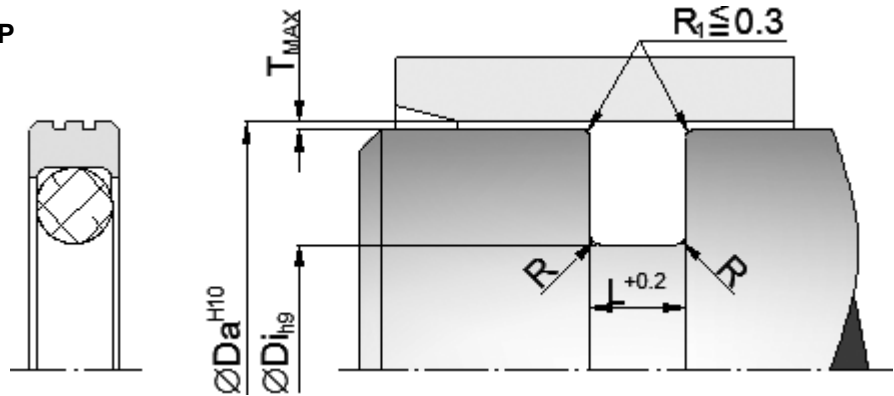
PTFE Rotary Seal Set – type TP



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Da	Di	L				Da	Di	L			
10	5.1	2.2	2-008	4.47	1.78	95	84.0	4.2	2-236	82.14	3.53
20	15.1	2.2	2-015	14.00	1.78	95	79.5	6.3	2-338	78.74	5.33
20	12.5	3.2	2-112	12.37	2.62	100	89.0	4.2	2-238	88.49	3.53
25	20.1	2.2	2-018	18.77	1.78	100	84.5	6.3	2-339	81.92	5.33
25	17.5	3.2	2-115	17.12	2.62	105	94.0	4.2	2-239	91.67	3.53
30	25.1	2.2	2-022	25.12	1.78	110	99.0	4.2	2-241	98.02	3.53
30	22.5	3.2	2-118	21.89	2.62	115	104.0	4.2	2-242	101.19	3.53
35	27.5	3.2	2-121	26.64	2.62	120	109.0	4.2	2-244	107.54	3.53
35	24.0	4.2	2-213	23.39	3.53	125	114.0	4.2	2-246	113.89	3.53
40	32.5	3.2	2-124	31.42	2.62	130	119.0	4.2	2-247	117.07	3.53
40	29.0	4.2	2-216	28.17	3.53	135	119.5	6.3	2-350	116.84	5.33
45	37.5	3.2	2-127	36.17	2.62	135	114.0	8.1	2-425	113.67	6.99
45	34.0	4.2	2-219	32.92	3.53	140	124.5	6.3	2-352	123.19	5.33
50	42.5	3.2	2-130	40.94	2.62	140	119.0	8.1	2-426	116.84	6.99
50	39.0	4.2	2-222	37.69	3.53	145	129.5	6.3	2-354	129.54	5.33
55	47.5	3.2	2-133	45.69	2.62	145	124.0	8.1	2-428	123.19	6.99
55	44.0	4.2	2-223	40.87	3.53	150	134.5	6.3	2-355	132.72	5.33
60	52.5	3.2	2-137	52.07	2.62	150	129.0	8.1	2-429	126.37	6.99
60	49.0	4.2	2-225	47.22	3.53	155	139.5	6.3	2-357	139.07	5.33
65	57.5	3.2	2-140	56.82	2.62	155	134.0	8.1	2-431	132.72	6.99
65	54.0	4.2	2-227	53.57	3.53	160	144.5	6.3	2-358	142.24	5.33
70	62.5	3.2	2-143	61.60	2.62	160	139.0	8.1	2-432	135.89	6.99
70	59.0	4.2	2-228	56.74	3.53	165	149.5	6.3	2-360	148.59	5.33
75	67.5	3.2	2-146	66.34	2.62	165	144.0	8.1	2-434	142.24	6.99
75	64.0	4.2	2-230	63.09	3.53	170	154.5	6.3	2-361	151.77	5.33
80	69.0	4.2	2-231	66.27	3.53	175	159.5	6.3	2-362	158.12	5.33
80	64.5	6.3	2-333	62.87	5.33	175	154.0	8.1	2-437	151.77	6.99
85	74.0	4.2	2-233	72.62	3.53	180	164.5	6.3	2-363	164.47	5.33
85	69.5	6.3	2-335	69.22	5.33	180	159.0	8.1	2-438	158.12	6.99
90	79.0	4.2	2-235	78.97	3.53	185	169.5	6.3	2-363	164.47	5.33
90	74.5	6.3	2-336	72.39	5.33	185	164.0	8.1	2-438	158.12	6.99

TP 型旋轉軸密封件

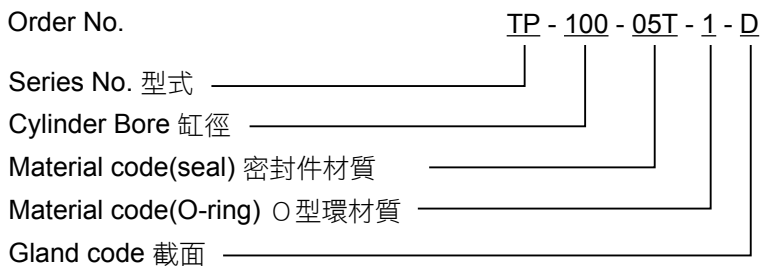
PTFE Rotary Seal Set – type TP



溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm	溝槽尺寸 / Grove			AS568 code	內徑 mm	線徑 mm
Da	Di	L				Da	Di	L			
190	174.5	6.3	2-364	170.82	5.33	370	349.0	8.1	2-456	342.27	6.99
195	179.5	6.3	2-365	177.17	5.33	380	359.0	8.1	2-457	354.97	6.99
200	184.5	6.3	2-366	183.52	5.33	390	369.0	8.1	2-458	367.67	6.99
210	194.5	6.3	2-367	189.87	5.33	410	389.0	8.1	2-459	380.37	6.99
220	204.5	6.3	2-369	202.57	5.33	420	399.0	8.1	2-460	393.07	6.99
230	214.5	6.3	2-370	208.92	5.33	430	409.0	8.1	2-461	405.26	6.99
240	224.5	6.3	2-372	221.62	5.33	440	419.0	8.1	2-462	417.96	6.99
250	234.5	6.3	2-374	234.32	5.33	450	425.5	8.1	2-462	417.96	6.99
260	244.5	6.3	2-375	240.67	5.33	460	439.0	8.1	2-463	430.66	6.99
270	254.5	6.3	2-377	253.37	5.33	470	449.0	8.1	2-464	443.36	6.99
280	264.5	6.3	2-378	266.07	5.33	480	459.0	8.1	2-465	456.06	6.99
290	265.5	8.1	2-450	266.07	6.99	500	479.0	8.1	2-466	468.76	6.99
300	284.5	6.3	2-379	278.77	5.33	500	475.5	8.1	2-466	468.76	6.99
310	294.5	6.3	2-380	291.47	5.33	550	529.0	8.1	2-470	532.26	6.99
320	304.5	6.3	2-381	304.17	5.33	550	525.5	8.1	2-470	532.26	6.99
330	309.0	8.1	2-453	304.17	6.99	600	579.0	8.1	2-472	582.68	6.99
330	305.5	8.1	2-453	304.17	6.99	600	575.5	8.1	2-471	557.66	6.99
340	319.0	8.1	2-454	316.87	6.99	650	629.0	8.1	2-474	633.48	6.99
350	329.0	8.1	2-455	329.57	6.99	690	669.0	8.1	2-475	658.88	6.99

※ 特殊尺寸亦可提供

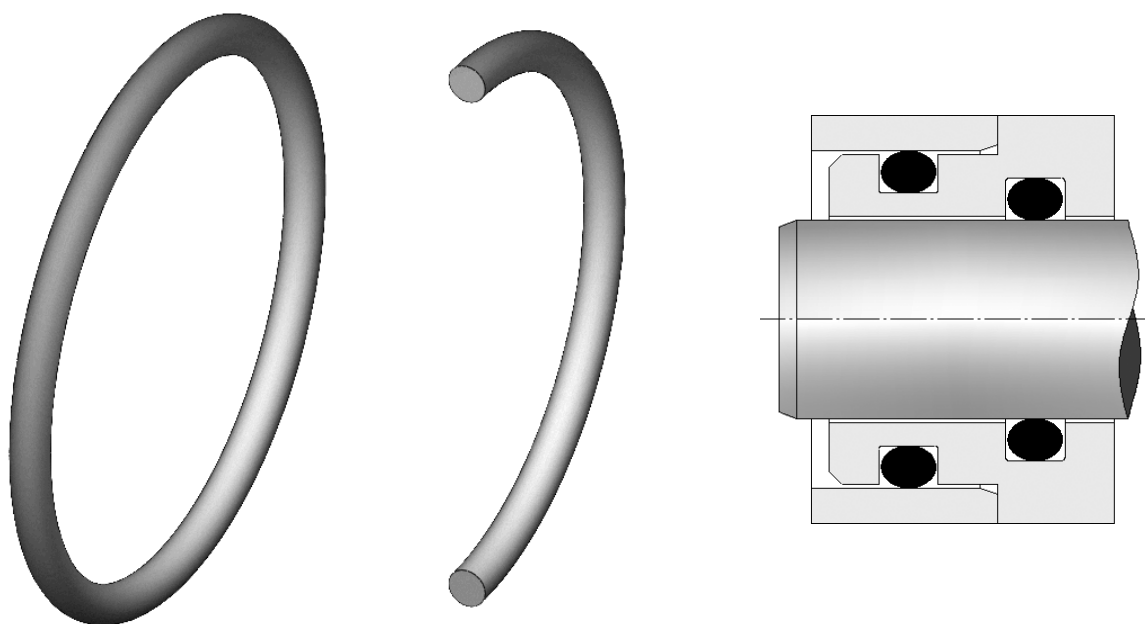
訂購範例 (How to order)



※ 可依使用條件選用其他材質，密封件請參照 P.6，O 型環請參照 P.5

空油壓用聚胺脂 O 形環 PO 型油封

TPU O-Rings for Hydraulics and Pneumatics – type PO



PO 型油封為耐水解的聚胺脂 (TPU) O 形環，壓縮率遠低於 NBR O 形環，具有優異的耐磨耗、耐擠出、耐瞬間高壓的能力。適用於有壓力脈衝或小溝槽的應用場合，如導壓閥或閥軸等的動態密封。

PO profile is a TPU O-Ring for hydraulics and pneumatics, especially in dynamic applications of pilot valves or main spool sealing. Compression set of PO profile is very low comparing with standard O-Rings. Thanks to its high abrasion and extrusion resistance, it demonstrates very good performance even in very high pulsating pressure or with restricted groove not allowing the use of back-up rings.

應用範圍

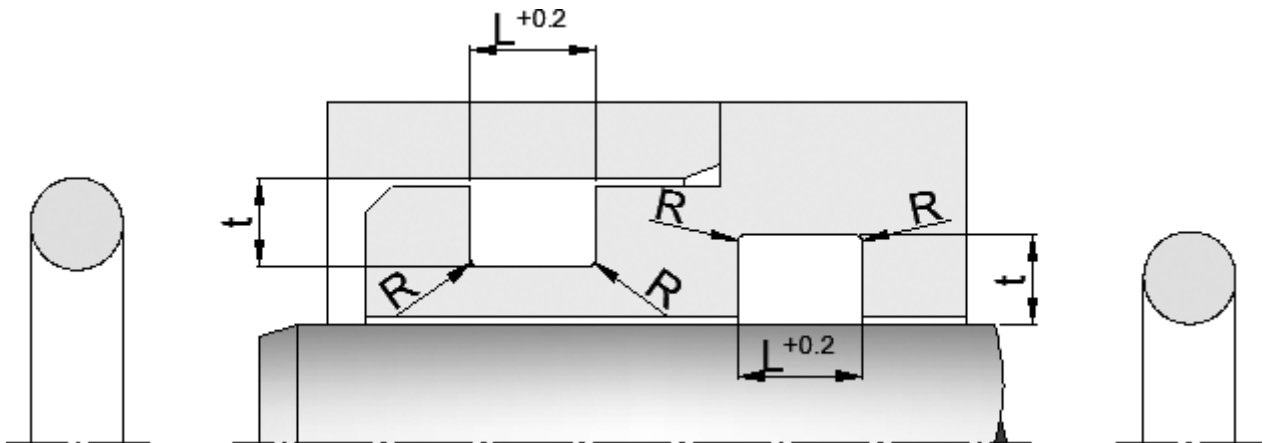
壓力 $\leq 600\text{bar}$
 溫度 $-35 \sim +110^{\circ}\text{C}$
 速度 $\leq 0.5 \text{ m/s}$
 流體 液壓、HFA、HFB
 材質 聚胺脂

Application Range

Pressure $\leq 600\text{bar}$
 Temperature $-35 \sim +110^{\circ}\text{C}$
 Dspeed $\leq 0.5 \text{ m/s}$
 Medium Hydraulic oils, HFA, HFB
 Material TPU

空油壓用聚胺脂 O 形環 PO 型油封

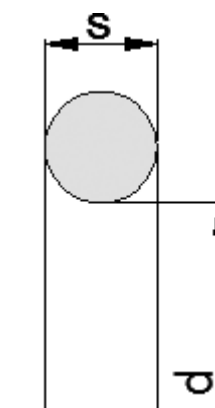
TPU O-Rings for Hydraulics and Pneumatics – type PO



線徑 s	半徑 R	溝槽深度 t					溝槽寬 (含背托環) L						
							0		1		2		
1.00	0.2	0.65	±0.05	0.70	±0.02	0.80	±0.02	1.4	+0.2	2.4	+0.2	3.4	+0.2
1.50		1.05		1.20		1.25		2.0		3.0		4.0	
1.80		1.30		1.45		1.55		2.4		3.4		4.4	
2.00		1.50		1.65		1.75		2.7		3.7		4.7	
2.50		1.95		2.10		2.20		3.4		4.9		6.4	
2.65	0.3	2.05	±0.07	2.25	±0.05	2.35	±0.05	3.6	0	5.1	0	6.6	0
3.00		2.40		2.55		2.70		4.2		5.7		7.2	
3.50		2.80		3.05		3.20		4.8		6.3		7.8	
3.55		2.85		3.10		3.25		4.8		6.3		7.8	
4.00		3.25		3.50		3.65		5.4		6.9		8.4	
5.00	0.5	4.15	±0.10	4.45	±0.05	4.65	±0.05	6.8	+0.2	8.8	+0.2	10.8	+0.2
5.30		4.40		4.70		4.90		7.2		9.2		11.2	
7.00		5.85		6.25		6.55		9.6		12.1		14.6	

空油壓用聚胺脂 O 形環 PO 型油封

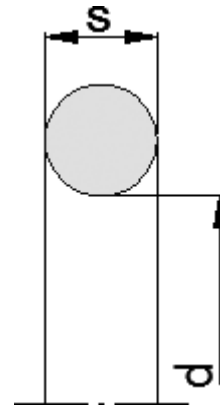
TPU O-Rings for Hydraulics and Pneumatics – type PO



內徑 d	線徑 S	訂購編號 Order code	內徑 d	線徑 S	訂購編號 Order code	內徑 d	線徑 S	訂購編號 Order code
1.78	1.70	PO 001A G3X	8.30	2.40	PO 008D G3X	14.00	2.00	PO 014B G3X
2.00	2.00	PO 002A G3X	9.00	1.50	PO 009A G3X	14.00	3.00	PO 014C G3X
2.50	1.20	PO 002B G3X	9.00	2.00	PO 009B G3X	14.03	2.61	PO 014D G3X
2.90	1.80	PO 002C G3X	9.19	2.62	PO 009C G3X	15.00	3.00	PO 015A G3X
3.00	1.50	PO 003A G3X	9.25	1.78	PO 009D G3X	15.30	2.40	PO 015B G3X
3.20	1.80	PO 003B G3X	9.30	2.40	PO 009E G3X	15.54	2.62	PO 015C G3X
3.40	1.90	PO 003C G3X	10.00	2.00	PO 010A G3X	15.60	1.78	PO 015D G3X
3.50	1.20	PO 003D G3X	10.00	2.50	PO 010B G3X	16.00	2.00	PO 016A G3X
4.00	1.50	PO 004A G3X	10.00	3.00	PO 010C G3X	16.20	2.00	PO 016B G3X
4.00	2.00	PO 004B G3X	10.30	2.40	PO 010D G3X	16.30	2.40	PO 016C G3X
4.00	2.15	PO 004C G3X	10.77	2.62	PO 010E G3X	16.40	2.00	PO 016D G3X
4.20	1.90	PO 004D G3X	10.82	1.78	PO 010F G3X	16.90	2.70	PO 016E G3X
4.60	2.00	PO 004E G3X	11.00	2.00	PO 011A G3X	17.00	2.00	PO 017A G3X
5.00	1.50	PO 005A G3X	11.00	3.00	PO 011B G3X	17.00	3.00	PO 017B G3X
5.00	2.00	PO 005B G3X	11.30	2.40	PO 011C G3X	17.12	2.62	PO 017C G3X
5.00	2.50	PO 005C G3X	11.30	2.50	PO 011D G3X	18.00	2.00	PO 018A G3X
5.28	1.78	PO 005D G3X	12.00	2.00	PO 012A G3X	18.20	3.00	PO 018B G3X
5.30	2.40	PO 005E G3X	12.00	2.50	PO 012B G3X	18.40	2.70	PO 018C G3X
5.70	1.90	PO 005F G3X	12.00	3.00	PO 012C G3X	18.64	3.53	PO 018D G3X
6.00	2.00	PO 006A G3X	12.10	2.70	PO 012D G3X	18.72	2.62	PO 018E G3X
6.30	2.40	PO 006B G3X	12.30	2.40	PO 012E G3X	19.00	2.00	PO 019A G3X
6.40	2.00	PO 006C G3X	12.37	2.62	PO 012F G3X	19.00	2.50	PO 019B G3X
6.70	2.00	PO 006D G3X	12.42	1.78	PO 012G G3X	19.20	3.00	PO 019C G3X
7.00	2.00	PO 007A G3X	13.00	2.00	PO 013A G3X	19.30	2.40	PO 019D G3X
7.00	2.40	PO 007B G3X	13.00	3.00	PO 013B G3X	19.40	2.10	PO 019E G3X
7.00	2.40	PO 007C G3X	13.30	2.40	PO 013C G3X	20.00	2.00	PO 020A G3X
7.50	2.00	PO 007D G3X	13.30	2.50	PO 013D G3X	20.00	2.50	PO 020B G3X
8.00	1.65	PO 008A G3X	13.59	2.70	PO 013E G3X	20.00	3.00	PO 020C G3X
8.00	2.00	PO 008B G3X	13.94	2.62	PO 013F G3X	20.00	5.00	PO 020D G3X
8.00	2.50	PO 008C G3X	14.00	1.78	PO 014A G3X	20.22	3.53	PO 020E G3X

空油壓用聚胺脂 O 形環 PO 型油封

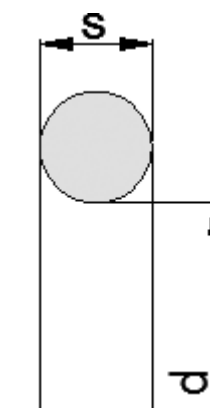
TPU O-Rings for Hydraulics and Pneumatics – type PO



內徑 d	線徑 S	訂購編號 Order code	內徑 d	線徑 S	訂購編號 Order code	內徑 d	線徑 S	訂購編號 Order code
20.30	2.40	PO 020F G3X	30.00	2.00	PO 030A G3X	47.00	2.00	PO 047A G3X
21.00	3.53	PO 021A G3X	30.30	2.40	PO 030B G3X	48.90	2.62	PO 048A G3X
21.30	2.40	PO 021B G3X	31.54	3.53	PO 031A G3X	50.00	2.00	PO 050A G3X
21.30	3.60	PO 021C G3X	32.00	2.00	PO 032A G3X	50.00	3.00	PO 050B G3X
21.82	3.53	PO 021D G3X	32.00	3.00	PO 032B G3X	50.16	5.33	PO 050C G3X
21.95	1.78	PO 021E G3X	32.00	4.00	PO 032C G3X	50.20	3.00	PO 050D G3X
22.00	1.50	PO 022A G3X	33.00	2.00	PO 033A G3X	53.34	5.33	PO 053A G3X
22.00	2.00	PO 022B G3X	33.00	3.50	PO 033B G3X	54.00	3.00	PO 054A G3X
22.20	3.00	PO 022C G3X	34.20	3.00	PO 034A G3X	55.00	4.00	PO 055A G3X
23.00	2.50	PO 023D G3X	34.52	3.53	PO 034B G3X	56.00	3.00	PO 056A G3X
23.00	3.00	PO 023E G3X	34.59	2.62	PO 034C G3X	56.00	6.00	PO 056B G3X
23.47	2.62	PO 023F G3X	35.00	2.00	PO 035A G3X	59.00	3.53	PO 059A G3X
23.50	3.60	PO 023G G3X	35.00	3.00	PO 035B G3X	59.69	5.33	PO 059B G3X
24.00	2.00	PO 024A G3X	35.20	3.00	PO 035C G3X	60.00	3.00	PO 060A G3X
24.00	2.50	PO 024B G3X	36.00	2.00	PO 036A G3X	60.00	4.00	PO 060B G3X
24.99	3.53	PO 024C G3X	36.00	3.53	PO 036B G3X	60.00	5.00	PO 060C G3X
25.00	2.00	PO 025D G3X	37.00	4.00	PO 037A G3X	64.00	3.00	PO 064A G3X
25.00	5.00	PO 025E G3X	37.69	3.53	PO 037B G3X	64.20	5.70	PO 064B G3X
25.20	3.00	PO 025F G3X	38.00	2.00	PO 038A G3X	65.00	5.00	PO 065A G3X
26.00	2.00	PO 026A G3X	39.00	2.00	PO 039A G3X	68.00	2.00	PO 068A G3X
26.20	3.00	PO 026B G3X	39.20	3.00	PO 039B G3X	68.00	3.53	PO 068B G3X
27.00	2.50	PO 027A G3X	40.00	2.00	PO 040A G3X	69.20	5.70	PO 069A G3X
28.00	2.00	PO 028A G3X	40.20	3.00	PO 040B G3X	69.21	5.33	PO 069B G3X
28.00	3.00	PO 028B G3X	40.64	5.33	PO 040C G3X	69.52	2.62	PO 069C G3X
28.00	4.00	PO 028C G3X	43.82	5.33	PO 043A G3X	70.00	3.00	PO 070A G3X
28.17	3.53	PO 028D G3X	44.00	2.00	PO 044A G3X	70.00	5.00	PO 070B G3X
28.24	2.62	PO 028E G3X	45.00	3.00	PO 045A G3X	75.00	3.00	PO 075A G3X
29.20	3.00	PO 029A G3X	45.00	3.50	PO 045B G3X	75.80	3.53	PO 075B G3X
29.74	2.95	PO 029B G3X	45.00	4.00	PO 045C G3X	79.77	5.33	PO 079A G3X
29.87	1.78	PO 029C G3X	46.99	5.33	PO 046A G3X	80.00	3.00	PO 080A G3X

空油壓用聚胺脂 O 形環 PO 型油封

TPU O-Rings for Hydraulics and Pneumatics – type PO



內徑 d	線徑 S	訂購編號 Order code	內徑 d	線徑 S	訂購編號 Order code	內徑 d	線徑 S	訂購編號 Order code
80.00	5.00	PO 080B G3X	109.60	5.70	PO 109B G3X	134.60	5.70	PO 134A G3X
82.14	3.53	PO 082A G3X	110.00	5.00	PO 110A G3X	135.00	5.00	PO 135A G3X
85.00	5.00	PO 085A G3X	110.49	5.33	PO 110B G3X	136.12	3.60	PO 136A G3X
88.00	5.33	PO 088A G3X	112.00	6.00	PO 112A G3X	151.77	6.99	PO 151A G3X
89.20	5.70	PO 089A G3X	114.60	5.70	PO 114A G3X	152.00	5.00	PO 152A G3X
90.00	5.00	PO 090A G3X	116.84	6.99	PO 116A G3X	158.00	5.70	PO 158A G3X
91.40	5.33	PO 091A G3X	119.60	5.70	PO 119A G3X	178.00	5.70	PO 178A G3X
95.00	5.00	PO 095A G3X	120.00	4.00	PO 120A G3X	190.00	5.00	PO 190A G3X
99.60	5.70	PO 099A G3X	120.00	5.00	PO 120B G3X	196.22	6.99	PO 196A G3X
100.00	5.33	PO 100A G3X	120.02	5.33	PO 120C G3X	200.00	5.00	PO 200A G3X
100.97	5.33	PO 100B G3X	124.60	5.70	PO 124A G3X	202.57	6.99	PO 202A G3X
105.00	3.00	PO 105A G3X	126.37	6.99	PO 126A G3X	225.00	5.00	PO 225A G3X
107.28	5.33	PO 107A G3X	129.54	5.33	PO 129A G3X			
109.20	5.70	PO 109A G3X	130.00	5.33	PO 130A G3X			

訂購範例 (How to order)

Order No. PO - 001A - G3X

Series No. 型式 _____

Measurements 尺寸 _____

Material code O 型環材質 _____



負責人 _____
 日期 _____
 案號 _____
 編號 _____

培凱有限公司密封件詢問表

公司名稱 _____ 分公司名 _____
 公司地址 _____
 所在城市 _____ 郵遞區號 _____
 連絡人 _____ 稱謂 _____ 連絡電話 _____
 電字郵件 _____ 傳真 _____

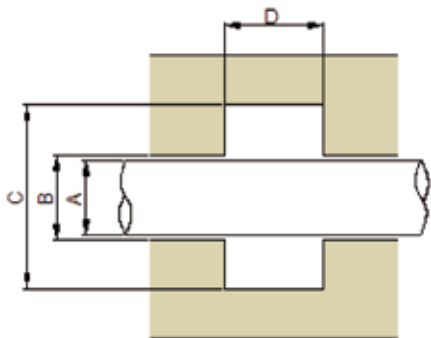
應用環境 _____
 目前使用油封 _____ 產品編號 _____
 新設計油封 _____
 預計年用量 _____ 報價數量 _____
 目前使用油封情形 _____

油封作動方式 靜態 旋轉 往返
 目前使用油封 軸 活塞 法蘭油封 壓力來源: 內 外

轉速 _____ 旋轉角度 _____ (度數) 行程 _____ 速率 _____

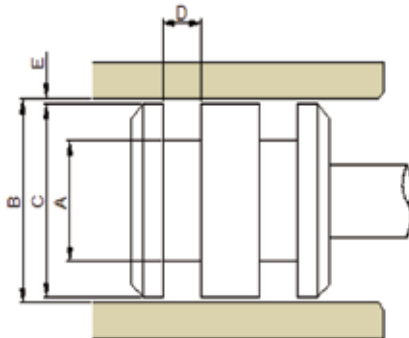
壓力 _____ 壓力方向: 單向 雙向 溫度 _____ 介質 _____

軸應用



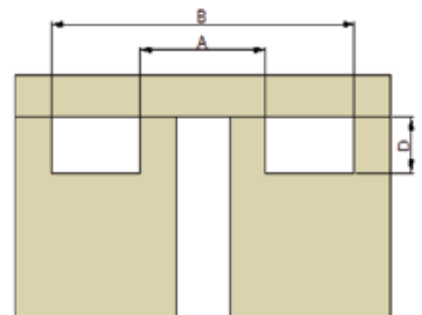
A: _____
 B: _____
 C: _____
 D: _____

活塞應用



A: _____
 B: _____
 C: _____
 D: _____
 E: _____

面密封應用



A: _____
 B: _____
 D: _____



PARJET CO., LTD.

No.36, Heye 2nd Rd., Daliao Dist., Kaohsiung City 83160, Taiwan (R.O.C.)

TEL: +886-7-788-6950 | FAX: +886-7-788-0980

E-MAIL: parjet.co@msa.hinet.net | leon@burker.com.tw

WEBSITE: www.parjet.com.tw

PARJET CO., LTD.

ENGINEERING DESIGN REQUEST FORM

Company _____ Division _____

Address _____

City _____ Zip Code _____

Contact _____ Title _____ Phone _____

Email _____ Fax _____

Application _____

Current Seal _____ P/N _____

Newly-designed Seal _____

Annual Usage _____ Quote Quantity _____

Problem(s) with Current Seal _____

Seal Motion Static Rotary Reciprocating

Seal Type Rod Piston Face Seal

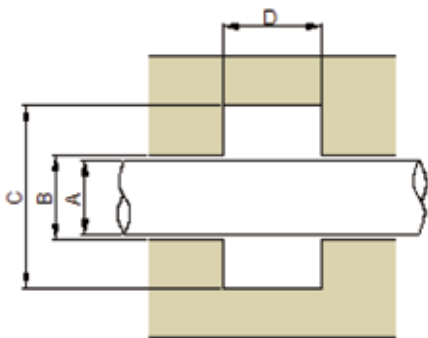
Pressure: Internal External

RPM _____ Rotation _____ (Degrees) Stroke _____ Velocity _____

Pressure _____ psi/bar Pressure Direction : Unidirectional Bidirectional

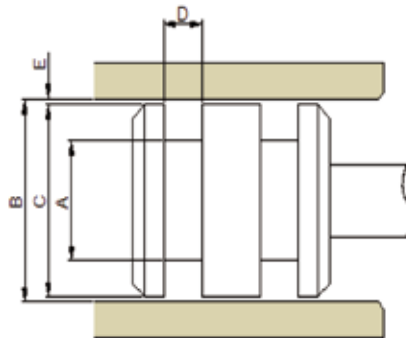
Temperature _____ Media _____

Rod/Shaft Seals



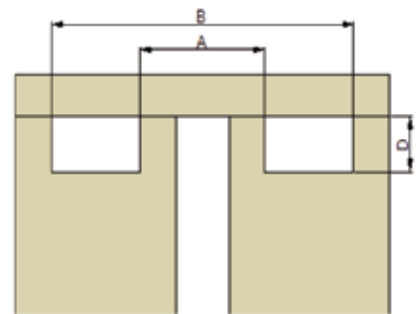
A: _____
 B: _____
 C: _____
 D: _____

Piston Seals



A: _____
 B: _____
 C: _____
 D: _____
 E: _____

Face Seals



A: _____
 B: _____
 D: _____



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