

PARJET CO., LTD.



T - Seals

T型密封件

 ISO 9001

 IATF 16949

 ISO 14001



培凱有限公司
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T Seals T型密封件



T Seals consist of a T-shaped elastomer with backup rings on both sides that ensures dynamic stability within the groove and prevents twisting like an O-ring.

The base of the T-shaped elastomer pushes against the bottom of the groove to form a static seal (fig.1). Its structure allows the backup rings to press against the extrusion gap, preventing damage caused by the pressure. (fig. 2) T Seals function similarly to O-rings once installed, providing excellent sealing performance even at low pressure. Under fluid pressure, the backup rings will close the extrusion gap, enabling the seal to withstand higher pressures.

For long-stroke hydraulic cylinders, extrusion gaps may be affected during operations. Factors include pressure fluctuations, component wear, side loads, expansion of cylinder under pressure, and even ovality of the cylinder bore or rod-end misalignment. These factors can cause uneven extrusion issues. T Seals feature backup rings on both sides ensure zero extrusion gaps and can respond quickly to cyclical pressure changes, they are highly suitable for applications with longer strokes and rapid pressure fluctuations.

T Seals是由T型彈性體加上兩側背托環組成，可使密封件在溝槽內保持動態穩定，不會像O Ring一樣產生扭轉。

T型彈性體的根部頂住溝槽底部形成靜態密封，因其結構會使背托環推向密封間隙，防止橡膠因壓力而造成擠出破壞。T Seal 安裝後如同O Ring 般可以於低壓時即可有密封功能(如圖一)，而背托環於流體壓力下，可以關閉擠出間隙，因而可以承受更大的壓力(如圖二)。

對於長行程液壓缸而言，在作動期間，擠出的間隙會受到壓力變動、元件磨損及側附載，缸管受到壓力的呼吸作用，甚至缸壁內徑是橢圓形，桿端偏心等效應，如此將會造成擠出問題不平均。由於T Seal的兩側背托環可維持零擠出間隙，且能快速反應壓差，極非常適用較長行程，壓力快速波動的應用。

After Installation (Without Pressure)
組裝後 (無壓力)

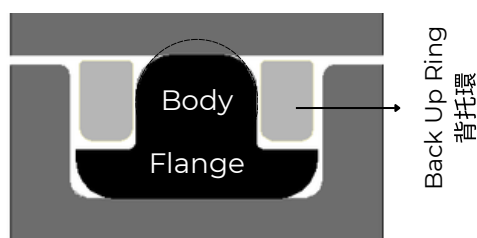


Fig.1 圖一

With Pressure
加壓力

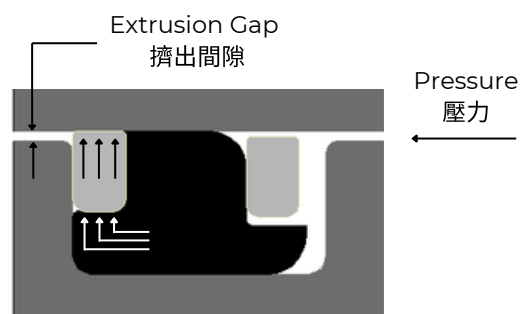
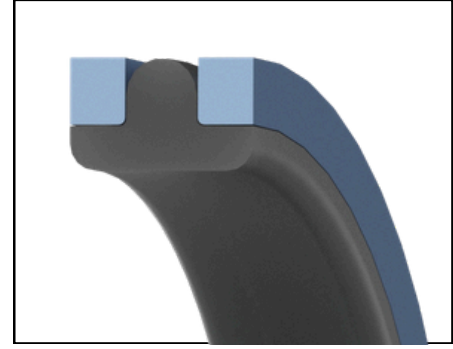
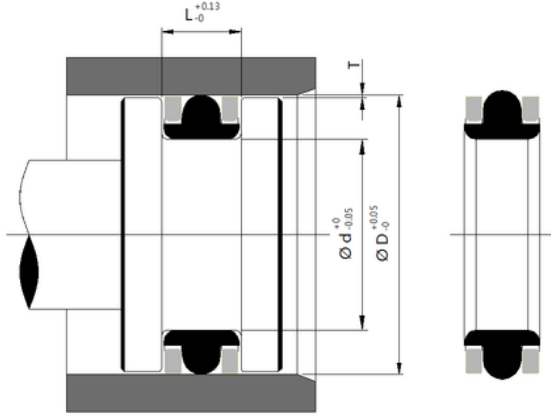


Fig.2 圖二

活塞密封件 BP Reciprocating Piston Seal BP



Application Range 應用範圍:

Pressure 壓力: ≤ 210 bar

Temperature 溫度: -40°C ~ 100°C

Speed 速度: ≤ 0.5m/s

備註: 詳細工況取決於不同材質, 請參閱下方材料組合說明。
Note: The actual limits will depend on the material, please refer to the info below

活塞徑 Piston Diameter	溝槽底徑 Groove Bottom	溝槽寬度 Groove Width	間隙 Gap	O型環線徑 O Ring C/S	O形環代碼 O Ring Code
Ø D	Ø d	L	T	Thickness	
10 - 12.9	D - 4.5	3.6	0.03	2.62	B
13 - 44.9	D - 6.2	4.8	0.04	3.53	C
45 - 129.9	D - 9.4	7.1	0.06	5.33	D
130 - 500	D - 12.2	9.5	0.09	6.99	E

材質組合

Material Combination:

- NBR 75 + POM
- NBR 75 + PTFE
- NBR 75 + PEEK
- Viton 75 + PTFE
- Viton 75 + PEEK

代碼

Material Code:

- 01
- 02
- 03
- 04
- 05

耐溫

Temperature Range:

- 40°C ~ 100°C
- 40°C ~ 100°C
- 40°C ~ 100°C
- 30°C ~ 200°C
- 30°C ~ 200°C

耐壓

Pressure Rating:

- 5,000psi
- 3,000psi
- 10,000psi
- 3,000psi
- 10,000psi

速度

Speed:

- ≤ 0.5m/s
- ≤ 0.5m/s
- ≤ 0.5m/s
- ≤ 0.5m/s
- ≤ 0.5m/s

Order code 選購範例

Type 型式: BP

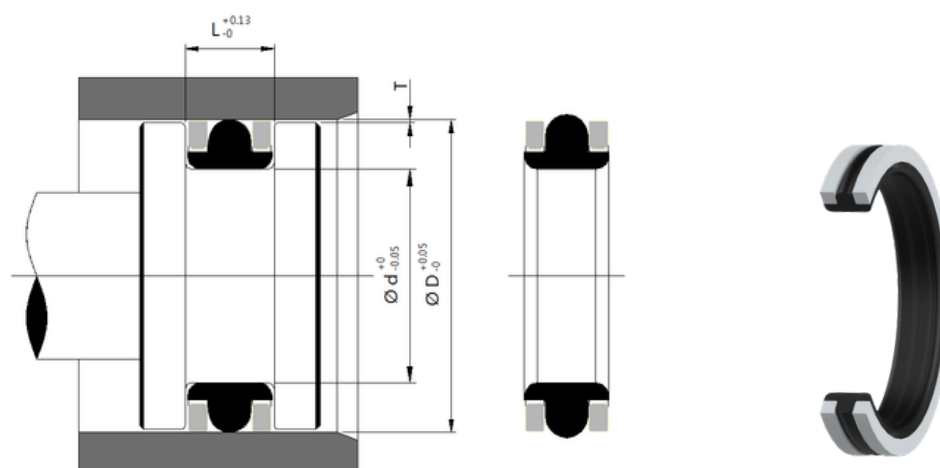
Piston Diameter 缸徑: 100mm

Groove Bottom 底徑: 90.6mm

Groove Width 寬度: 7.1mm

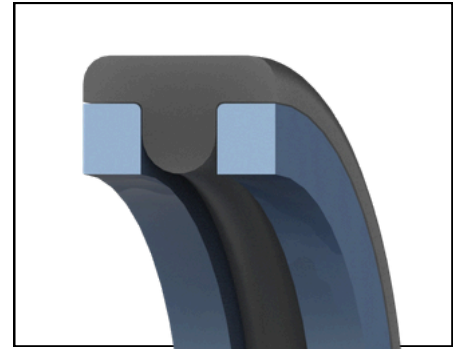
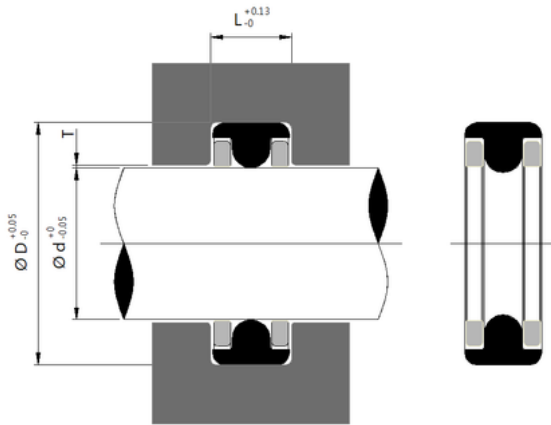
Material 材料組合: NBR+POM

Order Code 產品編號: BP - 100 - 01 - D



外徑 OD	內徑 ID	寬 Width	外徑 OD	內徑 ID	寬 Width	外徑 OD	內徑 ID	寬 Width
10	5.5	3.6	120	110.6	7.1	280	267.8	9.5
12	7.5	3.6	125	115.6	7.1	290	277.8	9.5
15	8.8	4.8	130	117.8	9.5	300	287.8	9.5
16	9.8	4.8	135	122.8	9.5	310	297.8	9.5
20	13.8	4.8	140	127.8	9.5	320	307.8	9.5
25	18.8	4.8	145	132.8	9.5	330	317.8	9.5
30	23.8	4.8	150	137.8	9.5	340	327.8	9.5
32	25.8	4.8	155	142.8	9.5	350	337.8	9.5
40	33.8	4.8	165	152.8	9.5	370	357.8	9.5
45	35.6	7.1	160	147.8	9.5	360	347.8	9.5
50	40.6	7.1	170	157.8	9.5	380	367.8	9.5
60	50.6	7.1	175	162.8	9.5	390	377.8	9.5
63	53.6	7.1	180	167.8	9.5	400	387.8	9.5
65	55.6	7.1	185	172.8	9.5	410	397.8	9.5
70	60.6	7.1	190	177.8	9.5	420	407.8	9.5
75	65.6	7.1	195	182.8	9.5	430	417.8	9.5
80	70.6	7.1	200	187.8	9.5	440	427.8	9.5
85	75.6	7.1	210	197.8	9.5	450	437.8	9.5
90	80.6	7.1	220	207.8	9.5	460	447.8	9.5
95	85.6	7.1	230	217.8	9.5	470	457.8	9.5
100	90.6	7.1	240	227.8	9.5	480	467.8	9.5
105	95.6	7.1	250	237.8	9.5	490	477.8	9.5
110	100.6	7.1	260	247.8	9.5	500	487.8	9.5
115	105.6	7.1	270	257.8	9.5			

活塞桿密封件 BR Reciprocating Rod Seal BR



Application Range 應用範圍:

Pressure 壓力: ≤ 210 bar

Temperature 溫度: -40°C ~ 100°C

Speed 速度: ≤ 0.5m/s

備註: 詳細工況取決於不同材質, 請參閱下方材料組合說明。
Note: The actual limits will depend on the material, please refer to the info below

活塞桿徑 Rod Diameter	溝槽底徑 Groove Bottom	溝槽寬度 Groove Width	間隙 Gap	O型環線徑 O Ring C/S	O形環代碼 O Ring Code
Ø d	Ø D	L	T	Thickness	
4 - 7.9	d + 4.5	3.6	0.03	2.62	B
8 - 39.9	d + 6.2	4.8	0.04	3.53	C
40 - 114.9	d + 9.4	7.1	0.06	5.33	D
115 - 300	d + 12.2	9.5	0.09	6.99	E

材質組合 Material Combination:	代碼 Material Code:	耐溫 Temperature Range:	耐壓 Pressure Rating:	速度 Speed:
NBR 75 + POM	01	-40°C ~ 100°C	5,000psi	≤ 0.5m/s
NBR 75 + PTFE	02	-40°C ~ 100°C	3,000psi	≤ 0.5m/s
NBR 75 + PEEK	03	-40°C ~ 100°C	10,000psi	≤ 0.5m/s
Viton 75 + PTFE	04	-30°C ~ 200°C	3,000psi	≤ 0.5m/s
Viton 75 + PEEK	05	-30°C ~ 200°C	10,000psi	≤ 0.5m/s

Order code 選購範例

Type 型式: BR

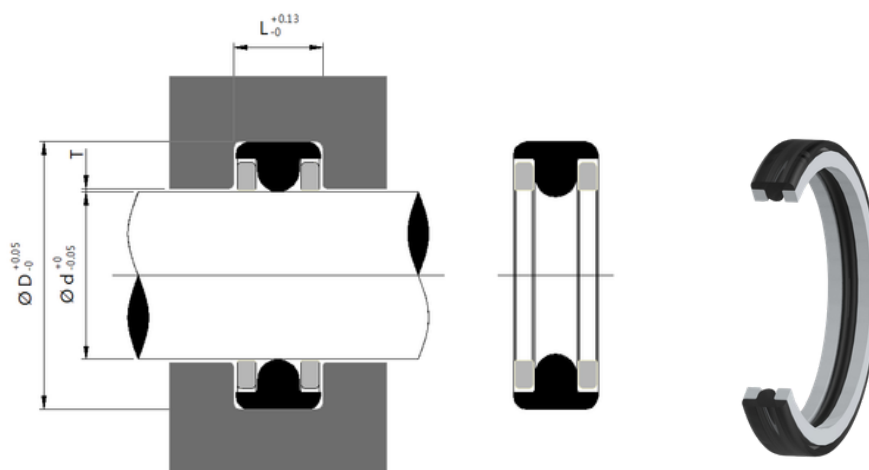
Rod Diameter 缸徑: 100mm

Groove Bottom 底徑: 109.4mm

Groove Width 寬度: 7.1mm

Material 材料組合: NBR+POM

Order Code 產品編號: BR - 100 - 01 - D



内径 ID	外径 OD	寬 Width	内径 ID	外径 OD	寬 Width
4	8.5	3.6	90	99.4	7.1
5	9.5	3.6	95	104.4	7.1
6	10.5	3.6	100	109.4	7.1
7	11.5	3.6	105	114.4	7.1
8	14.2	4.8	110	119.4	7.1
10	16.2	4.8	115	127.2	9.5
12	18.2	4.8	120	132.2	9.5
16	22.2	4.8	130	142.2	9.5
14	20.2	4.8	140	152.2	9.5
20	26.2	4.8	150	162.2	9.5
25	31.2	4.8	160	172.2	9.5
30	36.2	4.8	170	182.2	9.5
32	38.2	4.8	180	192.2	9.5
35	41.2	4.8	190	202.2	9.5
40	49.4	7.1	200	212.2	9.5
45	54.4	7.1	210	222.2	9.5
50	59.4	7.1	220	232.2	9.5
55	64.4	7.1	230	242.2	9.5
56	65.4	7.1	240	252.2	9.5
60	69.4	7.1	250	262.2	9.5
65	74.4	7.1	260	272.2	9.5
70	79.4	7.1	270	282.2	9.5
75	84.4	7.1	280	292.2	9.5
80	89.4	7.1	290	302.2	9.5
85	94.4	7.1	300	312.2	9.5



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