2PF

AIR CHUCK

FEATURES OF PRODUCT



- SLIDE WEDGE 형식의 2조 평형 개폐형 그리퍼
- 고강성 JAW 소재 사용
- 배면포트이용가능
- 강력한 파지력 실현
- 근접 스위치 적용
- 특수 열처리로 내구성 증대

ORDERING CODE

2PF - 30 - 2 - L - NC - BP - PS

제품명 Product Name

실린더규격 Cylinder Size

20	20 mm
25	25 mm
30	30 mm
40	40 mm
50	50 mm
63	63 mm
90	90 mm
100	100mm

그리퍼 Gripper Number

2	2개

스트로크 옵션
무기호/표준
L/롱스트로크
(표준품과 디멘전동일/
표준품대비 파지력15%약함)

PORT OPTION
무기호/측면포트(표준)
BP / 밑면 배관 접속구

스프링 내장 파지력 유지 장치 옵션
NC(Narmal Close) : 스프링을 이용한 상시 클로즈 타입으로, 압력 하강시에도 파지력을 유지시켜 워크의 낙하를 방지.
NO(Normal Open) : 스프링을 이용한 상시 오픈 타입으로, 압력 하강시에도 파지력을 유지시켜 워크의 낙하를 방지.

센서명칭 Sensor Name

PS/NPN	3선식	Cable Length	2M
PSS/NPN	3선식	Cable Length	2M
PSSP/PNP	3선식	Cable Length	2M

* 기타센서 부착시 본사에 문의 바라며, 센서 상세 페이지를 참조바랍니다.

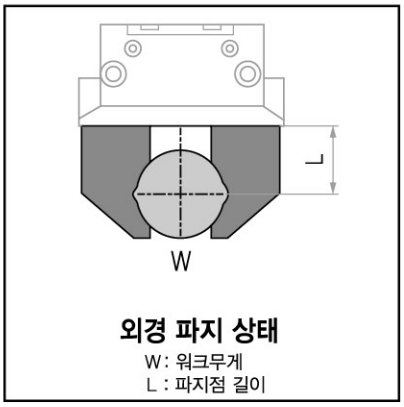
PRODUCT CONTENTS

모델명	2PF202		2PF252		2PF302		2PF402		2PF502		2PF632		2PF902		2PF1002	
	2PF202	2PF202L	2PF252	2PF252L	2PF302	2PF302L	2PF402	2PF402L	2PF502	2PF502L	2PF632	2PF632L	2PF902	2PF902L	2PF1002	2PF1002L
실린더경(mm)	20		25		30		40		50		63		90		100	
개폐행정(mm)	8	10	12	16	16	20	20	26	26	32	32	38	50	56	60	70
이론파지력 (kgf)	8.6/9.5		12.3/15		18.2/20.5		32.8/38		50.7/60.4		79.3/89.3		107/114		162/178	
배관 접속구	M5					PT 1/8										
제품중량(kgf)	0.13		0.27		043		0.75		1.3		2.4		5.5		9.2	
사용 유체	청정공기															
사용압력	0.3~0.7 Mpa															
사용 온도(℃)	0~60															
반복정밀도(mm)	±0.01		±0.01		±0.01		±0.01		±0.02		±0.02		±0.02		±0.02	

⚠ 주의(Caution)

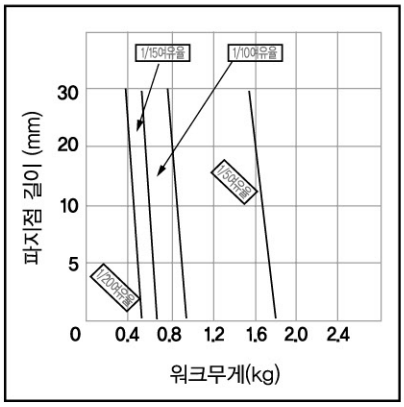
어태치먼트 길이(L값)를 파지능력 선도상의 허용 길이보다 길게 사용하게 되면 가이드부에 악영향을 주어 내구성에 문제가 발생되오니 반드시 파지능력 선도상의 허용길이내에서 사용하십시오.

WORK 외경 파지 능력선도

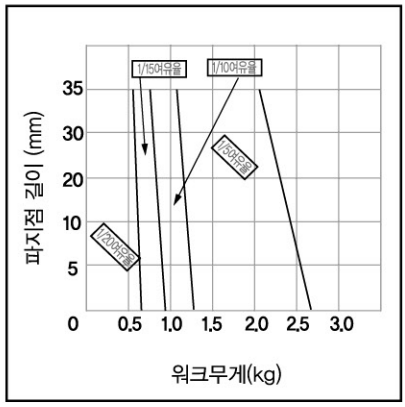


외경 파지 상태
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L : 파지점 길이

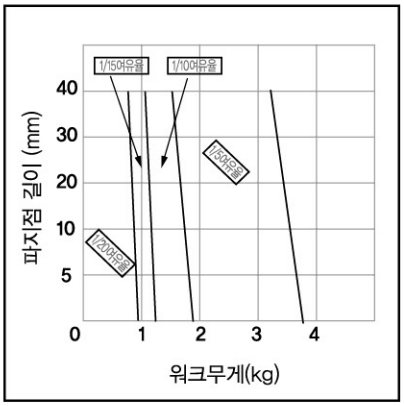
◆2PF202



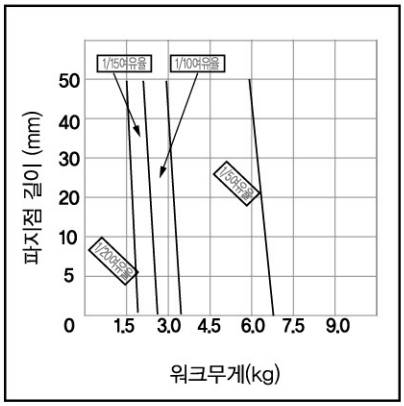
◆2PF252



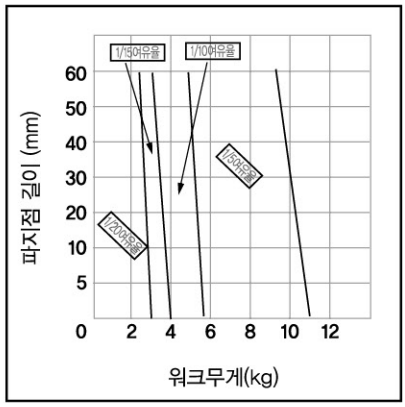
◆2PF302



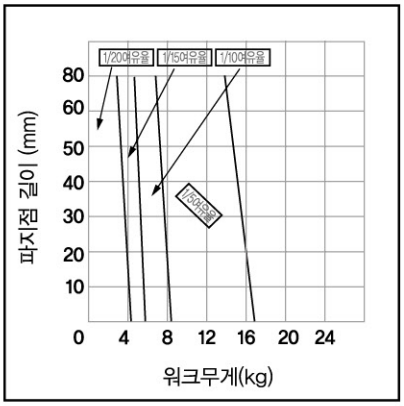
◆2PF402



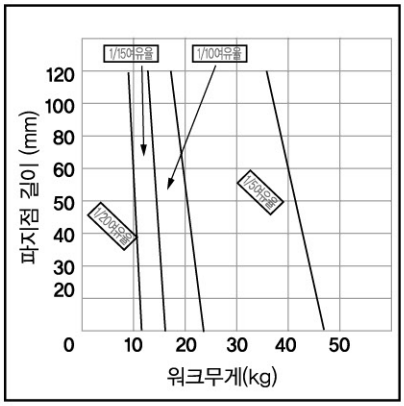
◆2PF502



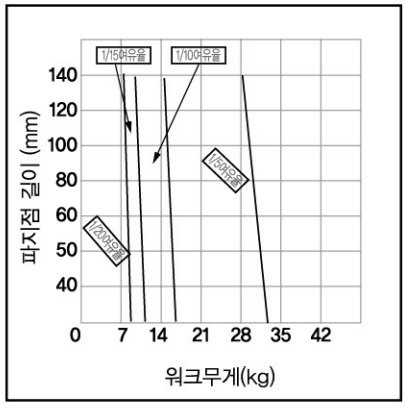
◆2PF632



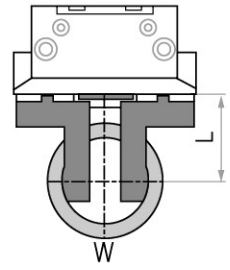
◆2PF902



◆2PF1002



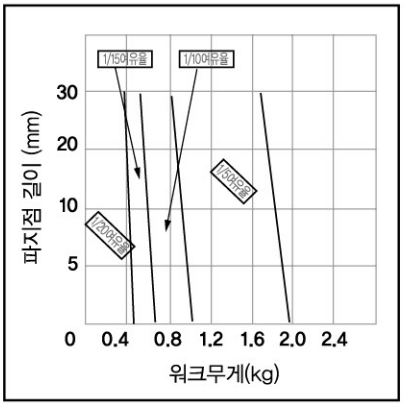
WORK 내경 파지 능력선도



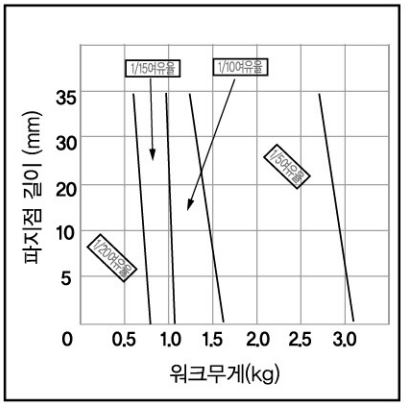
내경 파지 상태

W : 워크무게
L : 파지점 길이

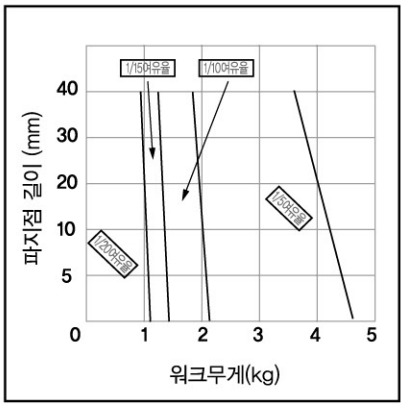
◆2PF202



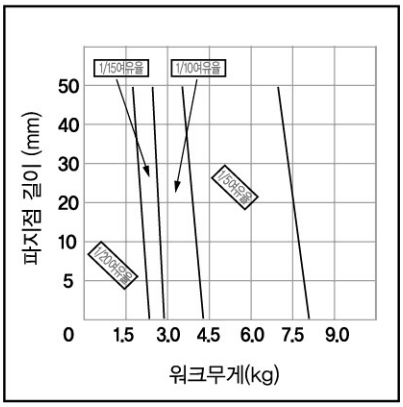
◆2PF252



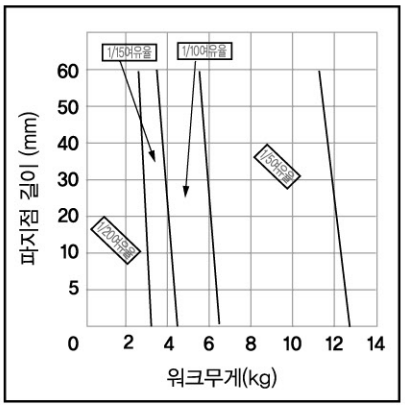
◆2PF302



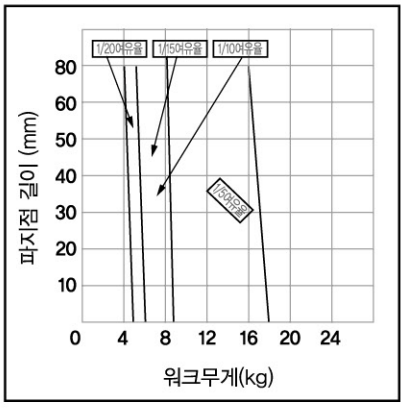
◆2PF402



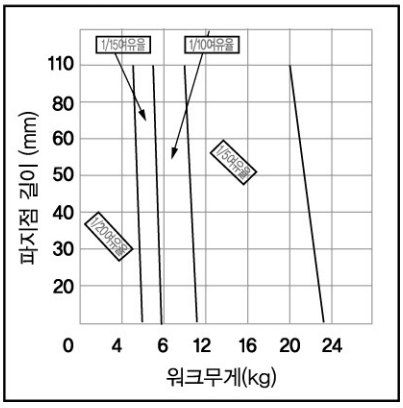
◆2PF502



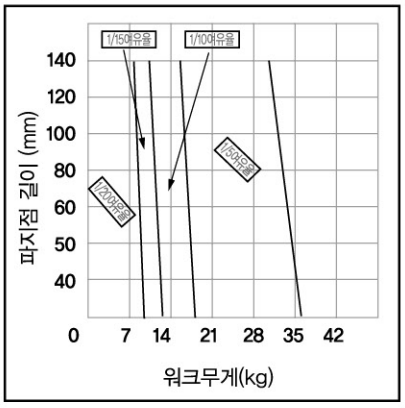
◆2PF632



◆2PF902



◆2PF1002



AIR CHUCK의 파지력과 WORK의 중량과의 관계

■ **일반적으로 AIR CHUCK의 파지력에 대한 WORK의 중량은 통상 파지력 값의 1/10 이하의 값을 적용합니다. 그러나 작업형태에 딸 아래와 같은 요소에 의해 변할 수 있습니다.**

❶ 공작물의 재질과 어태치먼트의 마찰계수를 증가 시킬수록 파지할 수 있는 무게는 증가됩니다.

❷ 직진 또는 회전운동으로 공작물을 이송할 경우 정지시의 충격(가속에 따른 관성저항)을 감소 시킬수록 AIR CHUCK의 파지력을 증강시킬 수 있습니다.

❸ 공작물을 파지한 상태에서 수직운동보다는 수평운동이 파지력에 영향이 더 적게 미칩니다.

❹ 상대적으로 평형개폐형 AIR CHUCK이 지점개폐형 보다 파지력이 우수합니다.

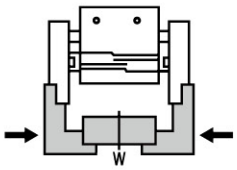
❺ 어태치먼트 길이를 파지능력 선도상의 허용 길이보다 길게 사용하게 되면 가이드부에 악영향을 주어 내구성에 문제가 발생되오니 반드시 파지능력 선도상의 허용길이내에서 사용하십시오.

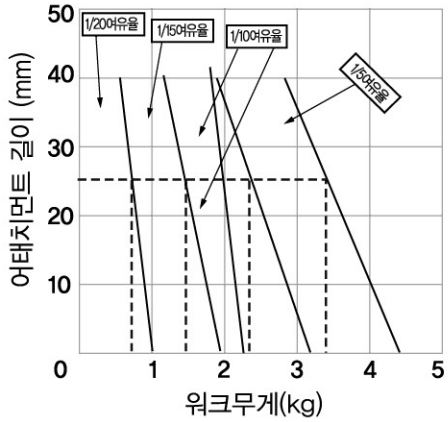
어태치먼트-파지능력 선도 확인하는 방법

■ 아래의 파지능력선도는 5kgf/㎠의 에어 압력 공급시 워크의 무게에 따른 어태치먼트 길이의 상관관계를 나타낸 선도입니다.

■ 위에 언급한 5가지 사항에 따라 워크의 파지력 값이 다양하게 변하기 때문에 우측과 같은 마찰력과 이송속도 관계표를 참고하여 파지력의 여유율값을 결정하여 주십시오.

■ 워크를 파지할때 어태치먼트에 걸어 저속으로 반송할경우 파지능력 여유율값을 1/5까지 가능합니다.





〈파지능력선도〉

■ **이송속도 및 워크 마찰계수에 따른 파지능력 여유율 표**

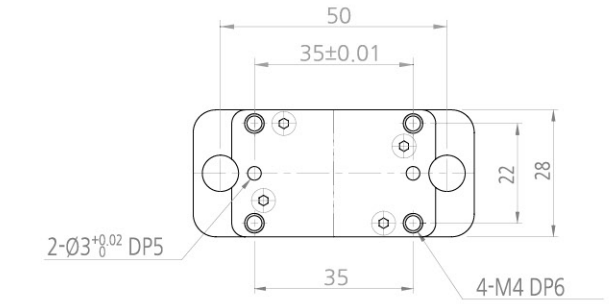
이송속도		워크와 어태치먼트의 마찰계수	파지능력 여유율 값
저속	100mm/sec이하	대	1/5
		소	1/10
중속	100~300mm/sec	대	1/10
		소	1/15
	300~500mm/sec	대	1/15
		소	1/20
고속	500~1000mm/sec	-	1/30

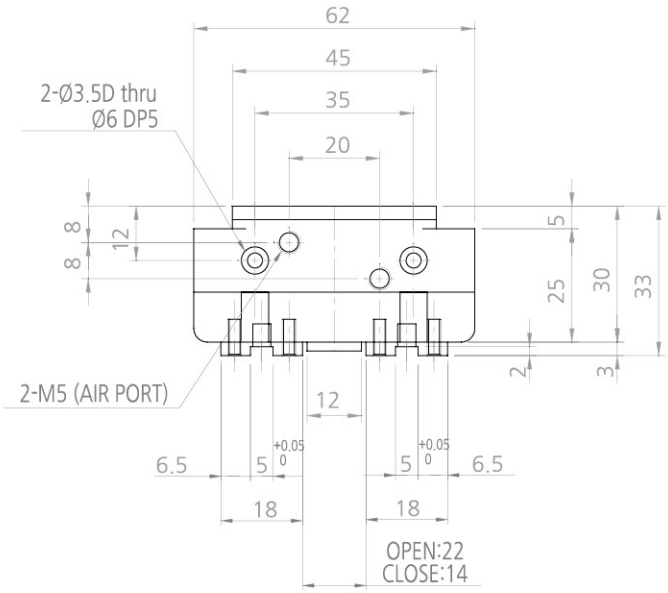
■ 파지능력 선도 해석 예 (좌측 파지능력 선도 참고)

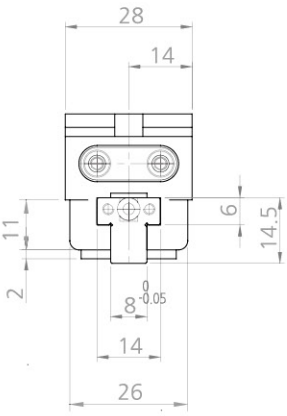
1. 워크무게(W) = 0.8kgf, 여유율정도 1/20일 경우 어태치먼트 길리(L)는 25mm 이하로 설정하고, 여유율 값이 1/10을 적용할 경우 어태치먼트 길이는 40mm 이하로 설정합니다.

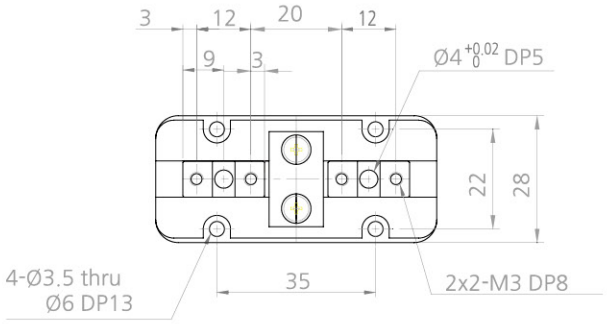
2. 최애 어태치먼트 길이가 25mm의 조건에서 여유율 값이 1/20, 1/15, 1/10, 1/5일 경우 최대 파지할 수 있는 워크 무게는 각각 0.8kgf, 1.5kgf, 2.3kgf, 3.4kgf이 됩니다.

TECHNICAL DRAWING – 2PF202

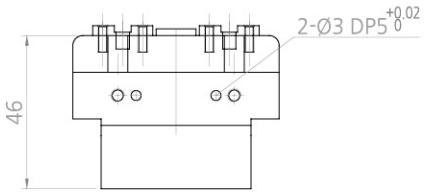




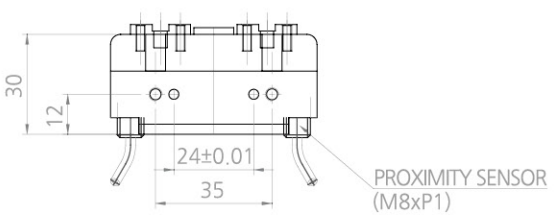




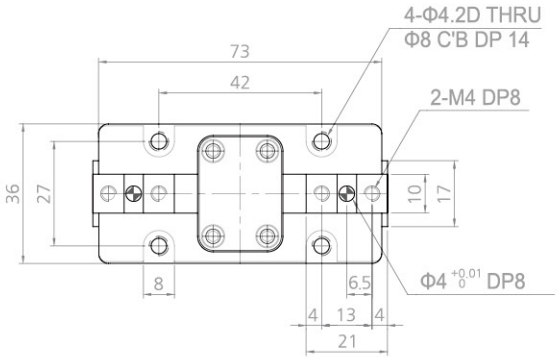
◈ 2PF202 + NO/NC
(NORMAL OPEN/NORMAL CLOSE 옵션)

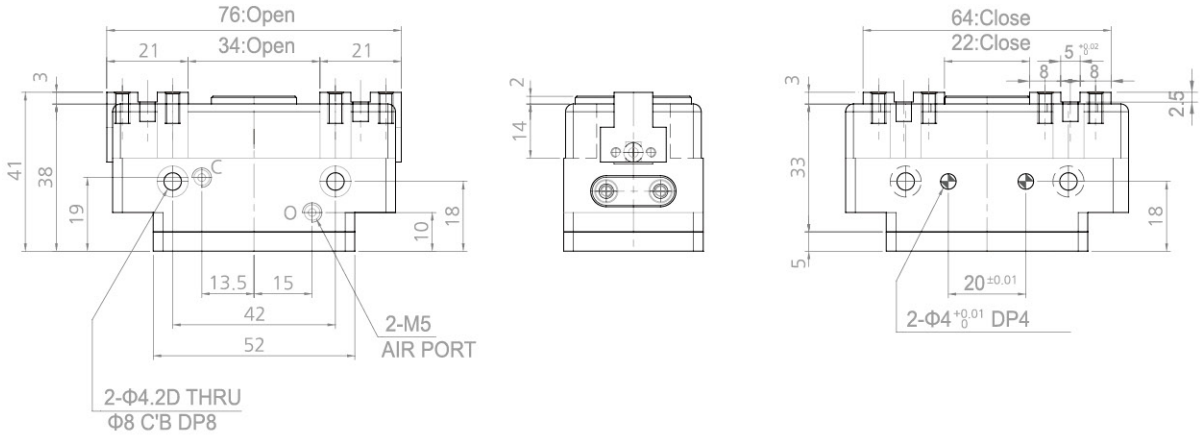


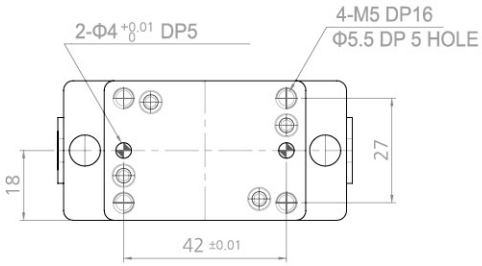
◈ 2PF222L
(롱스트로크 옵션)



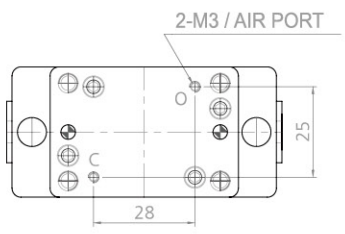
TECHNICAL DRAWING – 2PF252



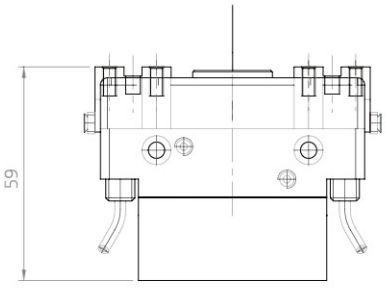




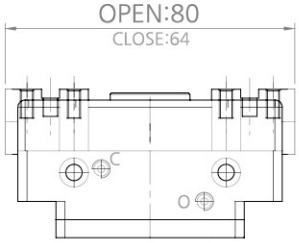
◈ 2PF252 – BP
(배면포트 옵션)



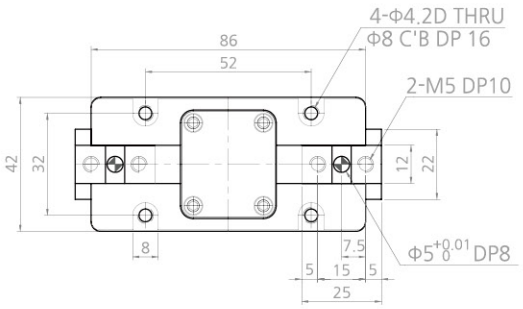
◈ 2PF252 + NO/NC
(NORMAL OPEN/NORMAL CLOSE 옵션)

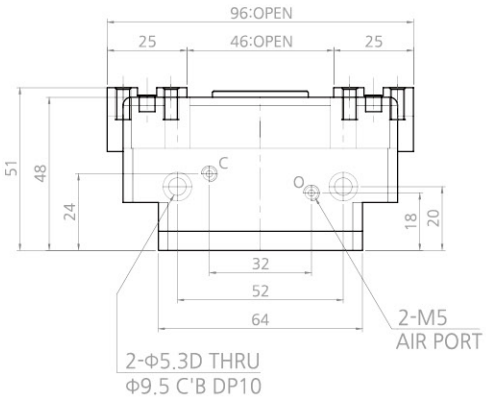


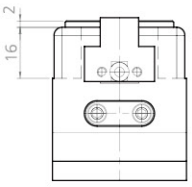
◈ 2PF252L
(롱스트로크 옵션)

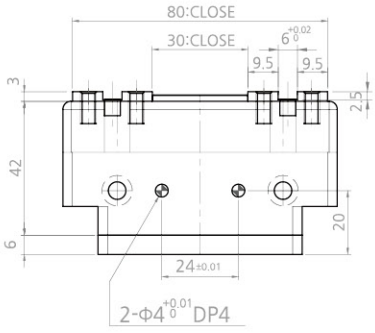


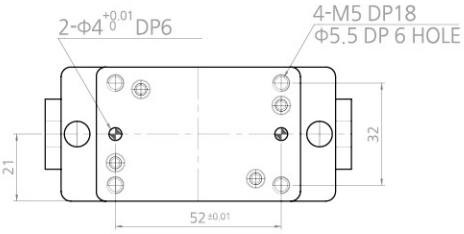
TECHNICAL DRAWING – 2PF302



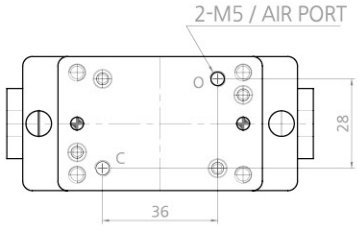




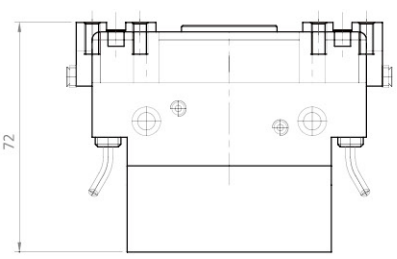




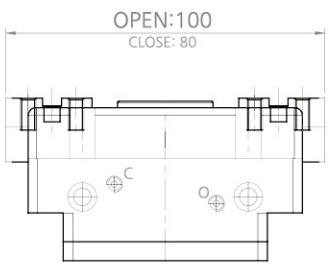
◈ 2PF302 –BP
(배면포트옵션)



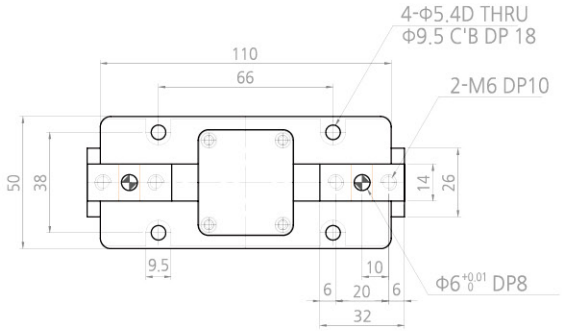
◈ 2PF302 + NO/NC
(NORMAL OPEN/NORMAL CLOSE 옵션)

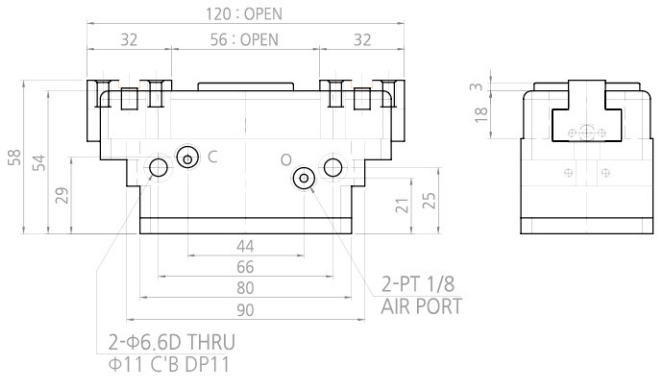


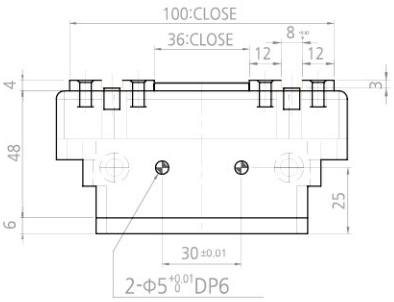
◈ 2PF302L
(롱스트로크옵션)

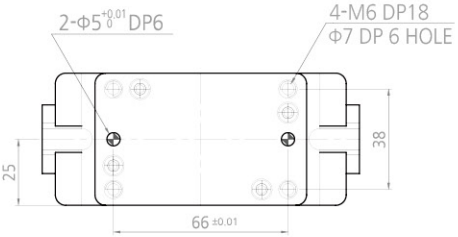


TECHNICAL DRAWING –2PF402

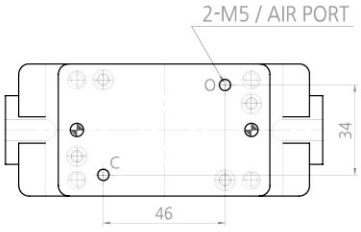




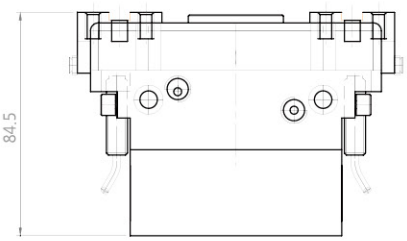




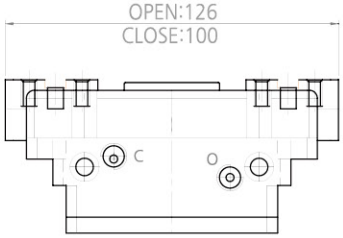
◈ 2PF402 –BP
(배면포트옵션)



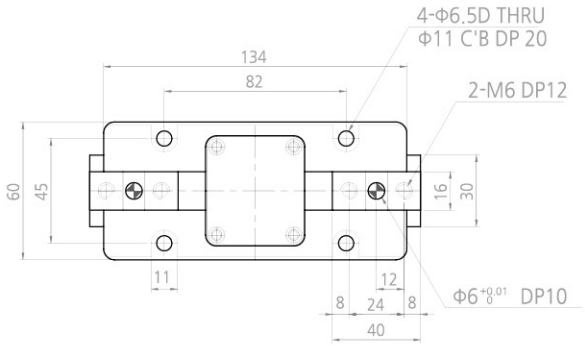
◈ 2PF402 + NO/NC
(NORMAL OPEN/NORMAL CLOSE 옵션)

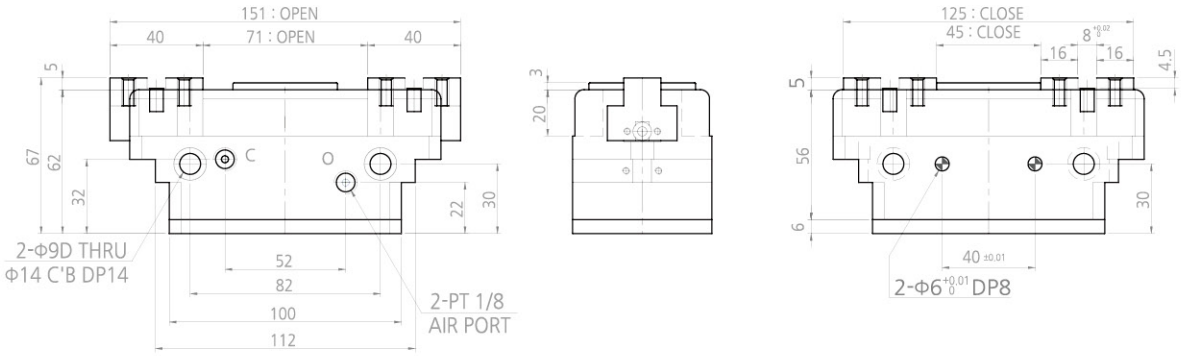


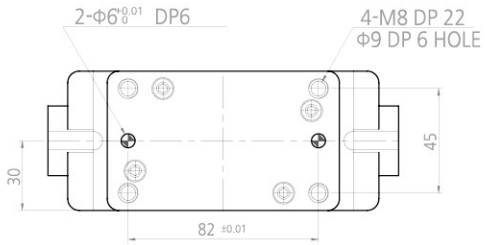
◈ 2PF402L
(롱스트로크옵션)



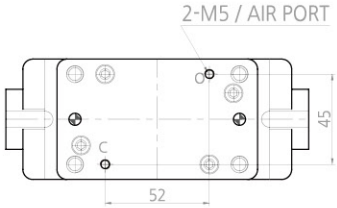
TECHNICAL DRAWING – 2PF502



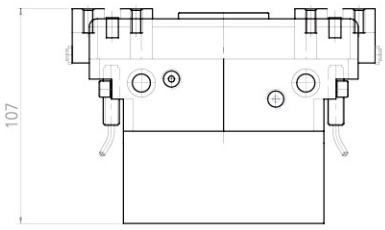




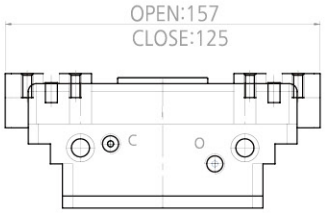
◈ 2PF502 – BP
(배면포트옵션)



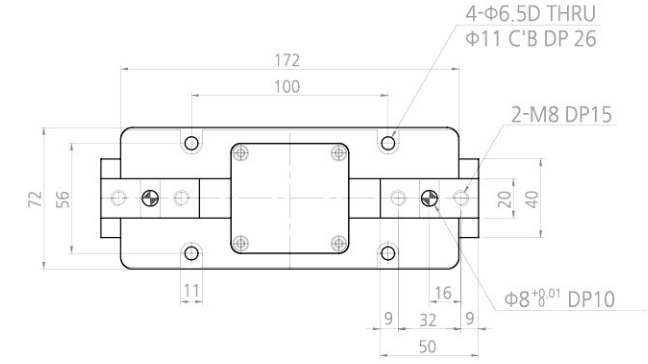
◈ 2PF502 + NO/NC
(NORMAL OPEN/NORMAL CLOSE 옵션)

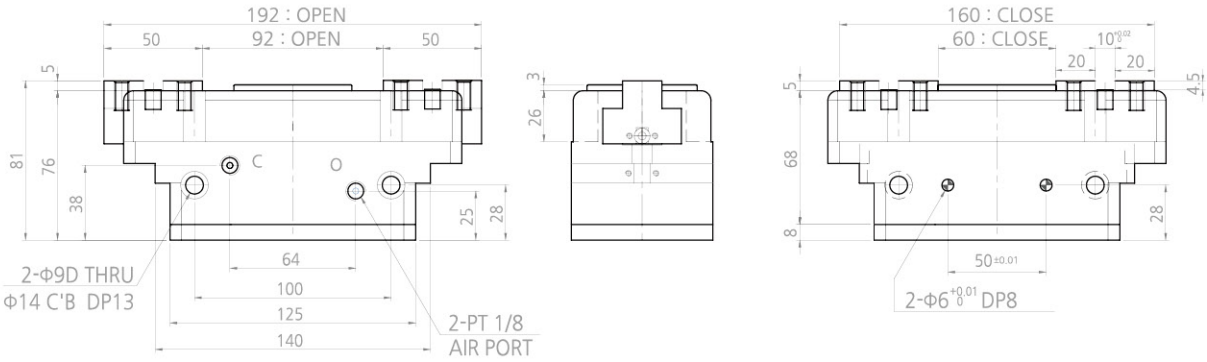


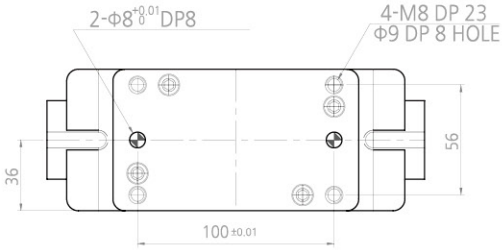
◈ 2PF502L
(롱스트로크옵션)



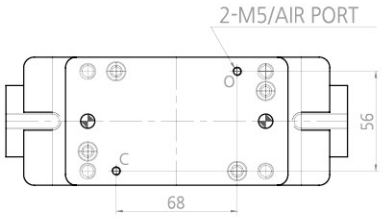
TECHNICAL DRAWING – 2PF632



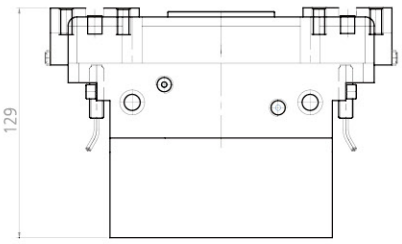




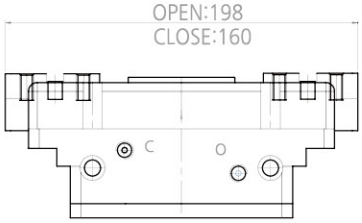
◈ 2PF632 – BP
(배면포트옵션)



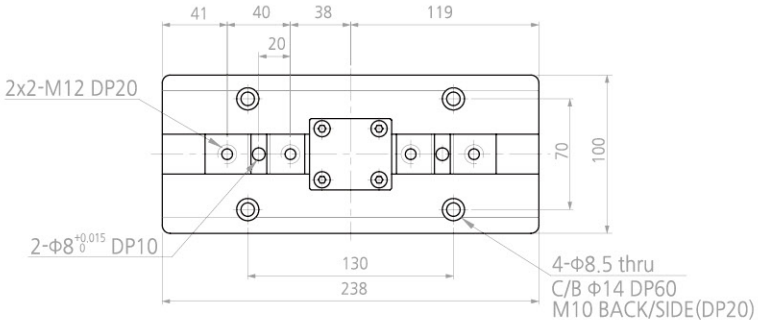
◈ 2PF632 + NO/NC
(NORMAL OPEN/NORMAL CLOSE 옵션)

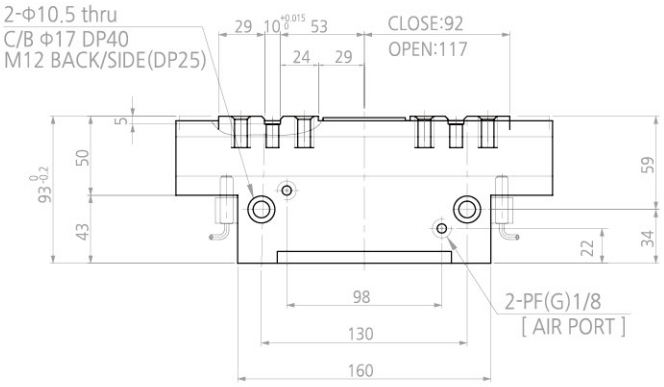


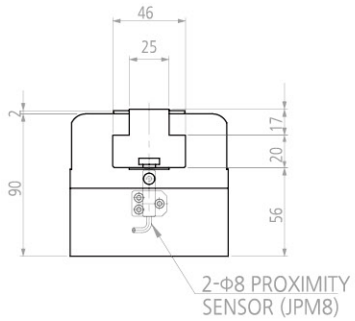
◈ 2PF632L
(롱스트로크옵션)

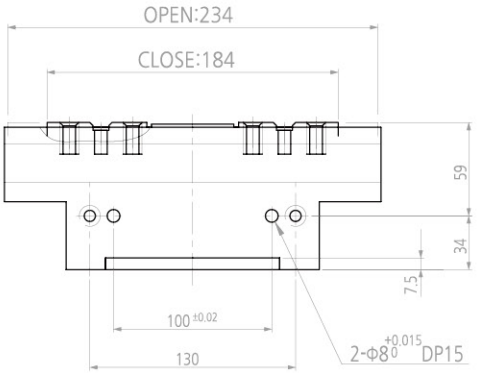


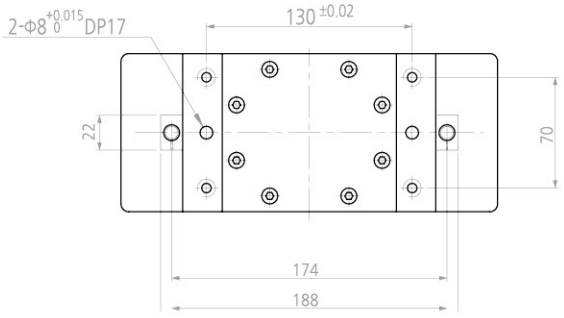
TECHNICAL DRAWING – 2PF902



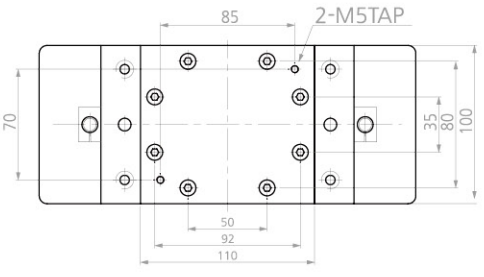








BP OPTION DIMENSION



2-M5 (AIR PORT)

TECHNICAL DRAWING – 2PF1002

