

# History

| 년    | 월  | 내용                                                     |
|------|----|--------------------------------------------------------|
| 2004 | 07 | (주)엘피케이 설립(파주시 법원읍 법원리 484)                            |
|      | 12 | 직교좌표 로봇 3종 개발 완료                                       |
| 2005 | 02 | 실용신안등록 (작동의 이상유무를 외부에서 육안으로 확인 할 수 있는 직교좌표 로봇)         |
|      | 04 | BALL SCREW 구동 TYPE 3종, Timing Belt 구동 TYPE 4종 로봇 개발 완료 |
|      | 07 | 판매 대리점 9개사 개설                                          |
|      | 08 | LINEAR ACTUATOR 4종 개발 완료                               |
| 2006 | 02 | WAFER 이송용 SCARA로봇 2종 개발 완료                             |
|      | 05 | CLEAN ROOM 적용 직교좌표 로봇 4종 개발 완료                         |
| 2007 | 05 | 본사 공장 이전(파주시 교하읍 송촌리 414-3)                            |
|      | 10 | 벤처기업 확인                                                |
|      | 12 | ISO 9001인증                                             |
| 2008 | 01 | 기술연구소 인정(설립:2007.12)                                   |
|      |    | INNO-BIZ 확인                                            |
|      |    | 실용신안등록(리니어 로봇)                                         |
|      |    | 특허등록(수평유지테이블이 구비된 리니어 로봇)                              |
| 2009 | 04 | CE 인증                                                  |
| 2010 | 10 | 본사 공장 이전(부천시 소사구 소사본동 137-1)                           |
|      | 11 | 벤처기업 확인                                                |
|      | 12 | ISO 9001, ISO 14001 인증                                 |
|      |    | 부품,소재전문기업 확인(지식경제부)                                    |
| 2011 | 03 | 실용신안등록(수평이동장치용 리니어 모터의 냉각수단)                           |
|      | 04 | INNO-BIZ 확인                                            |
|      | 09 | 경기도 유망중소기업 인증                                          |
|      | 10 | 실용신안등록(수평이동장치용 커버 처짐 방지수단)                             |
| 2012 | 01 | NC사업부 신설(장비 사업 진출)                                     |
|      | 07 | 레이저가공기 2종 개발 완료                                        |
|      | 09 | Miniature Robot 4종 개발 완료                               |
|      | 11 | 레이저마킹기 개발 완료                                           |
| 2013 | 02 | 실용신안등록(리니어 로봇의 슬라이더 베이스 절단부 결속 장치)                     |
|      | 03 | 특허등록(리니어 로봇의 구동벨트 끊김 안전을 위한 자동 제동장치)                   |
|      | 04 | 특허등록(리니어 로봇 이송시스템의 이송벨트 요동방지장치)                        |
|      | 06 | 한국로봇산업진흥원 로봇시범보급사업 선정                                  |
|      | 07 | 부품소재 전문기업 확인(산업통상자원부)                                  |
|      | 08 | CE인증 획득                                                |
|      | 10 | 한국거래소 코넥스시장 상장                                         |
|      | 12 | 작전동 공장 취득                                              |
| 2014 | 05 | 본사 공장 이전(인천광역시 계양구 작전동 682-1)                          |
|      | 08 | 특허등록(베큘수단이 구비된 수치제어 가공기용 피가공물 공급장치 및 그 공급방법)           |
|      |    | 특허등록(자동중심정렬 공급수단이 구비된 평판 소재용 수치 제어 가공기)                |
|      | 11 | 특허등록(매엽식 감광성 수지막 제거장치)                                 |
| 2015 | 01 | 특허등록(직선 이동형 클린 로봇)                                     |
|      |    | 특허등록(클린 커버 밀착 구조를 갖는 이동 유닛 및 이를 갖는 수평 이동형 직선 로봇)       |
|      | 11 | 코스닥 시장 이전 상장 예비심사 승인                                   |
| 2016 | 12 | 서운일반산업단지 토지 매입 (1,500평)                                |
|      | 01 | 서운산업단지 입주 계약 체결(계약구청)                                  |
|      |    | 중국지사(심천) 현지 사무소 개설                                     |
| 2017 | 06 | (주)코아시스템즈 지분 인수 : STAGE사업 시장 진입                        |
|      | 01 | 로봇부품인증지원기업체 선정                                         |
|      | 10 | CE인증(BP시리즈)                                            |
| 2018 | 08 | 기술평가 우수기업 인증(NICE신용평가)                                 |
|      |    | ISO 9001, ISO 14001 인증                                 |
|      | 10 | 중국사무소(심천) 신규 임대                                        |

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## 안전 조치 사항

1. 작업자는 Robot의 운반, 설치, 시운전시 안전을 위하여 작업복, 장갑, 헬멧, 안전화, 안전장구 등을 반드시 착용하여야 한다.
2. 당사의 Robot는 고속으로 운전하는 정밀한 제품이므로 충격이 가해지지 않도록 반드시 자중이 큰 구조물에 고정 한 후 작동 시켜야 한다.
3. Robot 의 안전한 운전을 위하여 안전 망을 설치하고, 동작으로 인한 작업 반경 위험지역 내에 사람과 장애물이 있는지를 확인하고 반드시 이를 제거 후 작동 시킨다.
4. Robot 의 보수 및 점검, Setting등을 위하여 Robot의 동작 영역 내로 진입할 경우, 제어기 오 동작으로 인해 Robot과 충돌 할 우려가 있습니다. 이러한 위험성으로 안전을 위하여 반드시 전원의 OFF 상태를 확인한다.
5. Robot 의 구동에 사용되는 Cable등이 외부에 노출되거나 심하게 굽힘이 발생하여서는 안되며, 어떤 이유 등으로 인해 Cable 및 Connector의 파손이 있을 시 이를 즉시 교체 하여야 한다.
6. Robot는 당사에서 허용한 부하 및 속도 이상으로 운전을 하여서는 안되며, 과부하와 높은 속도는 Robot의 파손 및 수명 단축의 직접적인 원인이 됩니다.
7. Robot의 운전을 기계적인 장애물을 사용해서 강제 정지를 하여서는 절대 안되며, 내부에 볼트 등과 같은 이물질이 혼입되면 Robot 파손의 원인이 되므로 절대적으로 주의하십시오.
8. 당사의 Robot을 설치 및 시운전하기 전 사용설명서를 충분히 숙지 하여야 한다.

## 보관 유의 사항

1. Robot의 보관 및 사용 환경은 다음의 조건을 만족하는 환경이 되어야 합니다.
  - 실내의 직사광선이 닿지 않는 곳
  - 주위의 대형 열원으로부터 로봇 전체에 복사열이 직접 닿지 않는 곳
  - 주위온도는 0℃ ~ 40℃
  - 습도는 85% 이하 이어야 하며, 이슬이 맺히지 않는 곳
  - 부식성 GAS 및 가연성 GAS가 없는 곳
  - 주위에 다량의 분진이 발생하지 않는 곳
  - 0.3G를 초과하는 진동이 전달되지 않는 곳
  - 심한 자력, 전자파, 자외선, 방사선이 없는 곳
2. Robot의 보관하는 과정에 제품 위로 올라가거나 무거운 물건을 적재하면 파손의 위험이 있으니 충격이 가해지지 않도록 주의하여 주시기 바랍니다.
3. Robot을 보관할 경우에는 Box 포장을 하여 2단 이하로 포장 BOX의 상하 면을 바뀌지 않도록 수평 바닥에 적재하여 주시기 바랍니다.
4. 당사의 Robot은 이동 또는 적재에 대한 환경적인 문제에 관한 별도의 시험이 이루어져 있지 않습니다. 만약 정밀 기기로서의 세심한 주의가 없으면 사용수명에 막대한 영향을 줄지도 모르는 문제점이 발생할 수 있습니다.

5. 본 제품은 외부의 분진 및 충격으로부터 Robot을 보호할 수 있도록 세척된 종이 BOX, 발포제 및 비닐로 포장되어 있습니다.
6. LM GUIDE 및 BALL SCREW에는 그리스가 도포되어 있으나 장기간 보관 시 부식 및 녹 등이 발생 할 수 있습니다.

## 운반 및 이동 방법

1. 본 제품은 고속으로 운전하는 정밀한 제품이므로 운반하는 과정에 충격이 가해지지 않도록 절대 주의 바랍니다.
2. 운반 시 충격이 있을 경우 제품에 손상이 발생할 수 있으며, 특히 Servo Motor가 부착되어 있을 경우 외부에 충격이 있을 경우에는 Servo Motor Encoder 및 Encoder Cover의 파손이 있을 수 있으므로 특히 주의 바랍니다.
3. Robot이 2축 이상 조립되어 출고하는 제품의 경우 공장에서 조립검사 및 출하검사를 실시하고 포장하여 출고 하나, 외부의 충격이 있을 경우에는 조립 정도가 틀어질 수도 있으므로 특히 주의 바랍니다.
4. 본 제품은 외부가 알루미늄으로 되어 있으므로 거친 표면과 마찰이 있거나, 날카로운 물체와 부딪힐 경우 표면에 손상을 입을 수 있으므로 취급에 주의 바랍니다.
5. 무거운 제품은 운반 시 단독으로 작업하여 낙하하는 일이 없도록 주의 바랍니다.
6. 단거리 운반 및 이동 시 Robot의 End Cover나 Cable을 절대 잡지 마십시오. 운반 시에는 항상 수평을 유지하며 3군데 이상을 지지하도록 들어야 합니다.
7. 장거리 이동 시에는 수평을 유지한 상태에서 Robot의 몸체와 Slider가 움직이지 않도록 고정 한 후 이동하여 주십시오.
8. 포장박스에서 Robot을 꺼내거나 Robot을 운반할 때에는 항상 수평을 유지하여 주십시오. 만약 Brake가 없는 Servo Motor가 적용된 Robot을 수직으로 세웠을 경우 Slide 부분이 자중에 의해 미끄러지며 손가락을 다칠 우려가 있습니다.

## 고장 발생 및 조치

1. 당사 Robot에 이상이 발생하여 신고하시기 전에 아래 조치 방법을 참조하시어 응급처치 하시기 바랍니다.

| 상태     | 원인                                | 조치                                                            |
|--------|-----------------------------------|---------------------------------------------------------------|
| 기계적 소음 | 1. 설치면 평밀도(평면도, 불량)               | Thickness Tape등을 이용 설치면 평밀도(평면도, 보정 후 재설치)                    |
|        | 2. 이물질 혼입                         | 그리스 및 이물질 제거 후 그리스 재 주입                                       |
|        | 3. 제한 속도 이상에서의 사용                 | 속도를 제한 속도 이하로 사용                                              |
|        | 4. Coupling 조립 중심선 틀어짐 및 풀림       | Coupling 재 체결 및 교체<br>(진동 상태 및 제한 가 감속 시간 이하에서는 Coupling이 풀림) |
|        | 5. 그리스 부족                         | 그리스 및 이물질 제거 후 그리스 재 주입                                       |
|        | 6. GAIN 오 설정                      | P, I Gain 조정                                                  |
|        | 7. 부적절한 Timing Belt Tension       | Timing Belt Tension 조절                                        |
|        | 8. Ball Screw 손상 또는 15000Hr 이상 가동 | Ball Screw 교체                                                 |

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|                 |                                       |                                                                                       |
|-----------------|---------------------------------------|---------------------------------------------------------------------------------------|
| 기계적 소음          | 9. LM Guide 손상 또는 15000Hr 이상 가동       | LM Guide 교체                                                                           |
|                 | 10. Servo Motor Brake의 비정상 작동         | Servo Motor 교체                                                                        |
|                 | 11. Timing Belt Pulley 평행도 불량         | Timing Belt Tension 조절 방법에 의한 평행도 맞춤                                                  |
|                 | 12. 과부하                               | 부하를 낮추거나 가 감속 시간을 길게 조절                                                               |
|                 | 13. Slide Table 충돌 및 기계적 간섭에 의한 강제 정지 | 사건 재발 방지 및 부품 교체                                                                      |
|                 | 14. 제한 가 감속 시간 이하에서의 사용               | 가 감속 시간을 길게 조절                                                                        |
|                 | 15. 설치면 강성부족                          | 설치 면 강성 보완 및 기계 본체를 기초 볼트로 바닥 고정                                                      |
|                 | 16. 기계부 몸체 파손으로 인한 간섭                 | 부품 교체                                                                                 |
| 진동              | 1. 제한 속도 이상에서의 사용                     | 속도를 제한 속도 이하로 사용                                                                      |
|                 | 2. 제한 가 감속 시간 이하에서의 사용                | 가 감속 시간을 길게 조절                                                                        |
|                 | 3. 설치면 강성부족                           | 설치 면 강성 보완 및 기계 본체를 기초 볼트로 바닥 고정                                                      |
|                 | 4. Robot 설치용 Bolt 체결 불량               | 적합한 길이의 볼트가 완전히 체결되었는지 확인<br>상기의 사항 확인 후 규격의 체결 토크로 체결<br>볼트의 풀림 방지 대책 확립 (록타이트 도포 등) |
|                 | 5. 과부하                                | 부하를 낮추거나 가 감속 시간을 길게 조절                                                               |
|                 | 6. Slide Table 충돌 및 기계적 간섭에 의한 강제 정지  | 사건 재발 방지 및 부품 교체                                                                      |
|                 | 7. 부적절한 Timing Belt Tension           | Timing Belt Tension 조절                                                                |
|                 | 8. GAIN 오 설정                          | P, I Gain 조정                                                                          |
|                 | 9. 타 기기와의 공진                          | 가 감속과 속도를 조절                                                                          |
| 반복<br>정밀도 불량    | 1. Ball Screw 손상                      | Ball Screw 교체                                                                         |
|                 | 2. 설치면 정밀도(평면도, 불량)                   | 상기의 설치면 정밀도(평면도, 불량 항목 참조)                                                            |
|                 | 3. Position Gain 이 낮음                 | Position Gain 높임                                                                      |
|                 | 4. Robot 설치용 Bolt 체결 불량               | 상기의 "Robot 설치용 Bolt 체결 불량" 항목 참조                                                      |
|                 | 5. 설치면 강성 부족                          | 상기의 "설치면 강성부족" 항목 참조                                                                  |
|                 | 6. Coupling 풀림 또는 파손                  | Coupling 재체결 또는 교체                                                                    |
| 위치<br>정밀도 불량    | 1. 기계적 Lead 오차                        | 공정상 위치 결정 정밀도가 필요한 경우 당사 연락 할 것.                                                      |
|                 | 2. Pitch/Rev (Gear Ratio, 값이 틀림)      | Pitch/Rev (Gear Ratio, 값 수정)                                                          |
|                 | 3. Home Sensor와 Encoder Z상의 일치 또는 근접  | 티치 펜던트 상에서 원점 완료 후 Z 상 Pulse값이 1000~7000<br>이외의 경우 Home Sensor 또는 Coupling 위치 조절      |
| Sensor<br>동작 불량 | 1. Sensor와 Magnet 간 간격이 크다            | Sensor 간격조절                                                                           |
|                 | 2. Sensor 파손                          | Sensor 교체                                                                             |
|                 | 3. 원점 Parameter 오 설정 원점               | Parameter 재설정                                                                         |



|                 |                                          |                   |
|-----------------|------------------------------------------|-------------------|
| 불안정한<br>동작 및 폭주 | 1. Robot Cable 불량                        | Cable 교체          |
|                 | 2. 부적절한 Cableveyor 사용으로 인한 Cable 단선      | 적절한 Cableveyor 선정 |
|                 | 3. Body Connector 및 내부 Connector의 불완전 접속 | Connector 접속 확인   |

2. 동일 증상이 계속 나타나는 경우 구입하신 대리점이나 당사로 연락하십시오.

3. 당사 연락처

주식회사LPK로보틱스

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|     |                                   |
|-----|-----------------------------------|
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| 93  | LP Cartesian ROBO System          |
| 135 | BP Timing Belt ROBO System        |
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# Manual Stage



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Manual Stage Common Guidance

Actuator

Micrometer Head



Micrometer Head는 연삭 가공된 암나사와 수나사로 구성되어 정밀한 위치를 결정하는 기구입니다.

Adjustment Screw



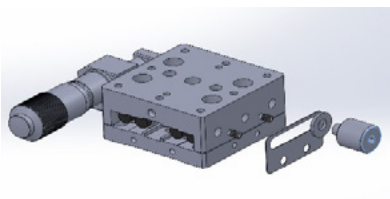
Adjustment Screw는 정밀 위치 결정용으로 개발되었으며 Actuator Screw Pitch 세분화로 더 정밀한 위치결정 조정이 가능합니다.

Specification of Actuator

| Actuator         | Model | Travel Range | Minimum Scale | Screw Pitch(mm/p) |
|------------------|-------|--------------|---------------|-------------------|
| Micrometer Head  |       | 6.5mm        | 10μm          | 0.5mm/p           |
|                  |       | 13mm         | 10μm          | 0.5mm/p           |
|                  |       | 15mm         | 10μm          | 0.5mm/p           |
|                  |       | 25mm         | 10μm          | 0.5mm/p           |
|                  |       | 50mm         | 10μm          | 0.5mm/p           |
| Adjustment Screw |       | 9.6mm        | -             | 0.3mm/p           |
|                  |       | 12.7mm       | -             | 0.3mm/p           |
|                  |       | 25.4mm       | -             | 0.3mm/p           |
|                  |       | 50.8mm       | -             | 0.3mm/p           |

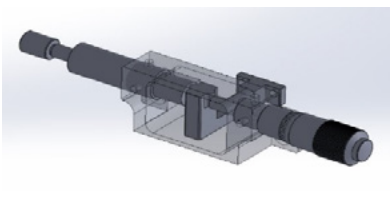
Locking Mechanism

Clamp of Linear Stage



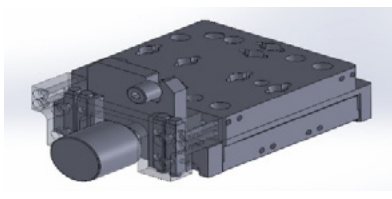
Micrometer Head는 연삭 가공된 암나사와 수나사로 구성되어 정밀한 위치를 결정하는 기구입니다.

Clamp of Rotary Stage



Adjustment Screw는 정밀 위치 결정용으로 개발 되었으며 Actuator Screw Pitch 세분화로 더 정밀한 위치결정 조정이 가능합니다.

Clamp of Handle



Adjustment Screw는 정밀 위치 결정용으로 개발 되었으며 Actuator Screw Pitch 세분화로 더 정밀한 위치결정 조정이 가능합니다.

# Manual Stage Common Guidance

## Option Lubricant Change

고객의 요청에 따라 Grease 변경이 가능합니다.

해당 품목 : Clean Grease 또는 Vacuum Grease

- Grease 이외, 부품 / 표면처리 / 조립환경은 동일합니다.
- 해당 Grease의 교환은 환경(Clean Room, Vacuum)의 사용을 보장하지는 않습니다.

※ Clean Grease

※ Vacuum Grease

※ Grease 도포 부위

- Guide : Sliding Face, Bearing, Screw, worm & wheel, Rack & Pinion
- Micrometer Head & Adjustment Screw



## Assemble a Manual Stage

Stage를 취부 시, Table을 이송 또는 Actuator를 충분히 회전시켜 취부 구멍 위치 확보 후, 취부합니다.

※ Table을 억지로 고정, 되돌릴 때에는 Spring 반동에 의한 심각한 손상이 발생될 수 있으니 주의하여 작업하시기 바랍니다.



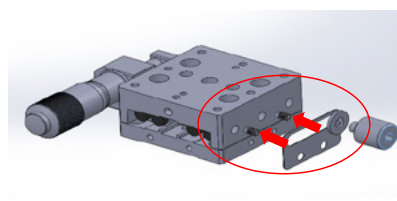
## Attention

### Delicate Treatment



Stage를 떨어뜨렸을 경우, 전송면에 전동체가 부딪힌 흔적이 나타나게 되어, 원활한 운동을 할 수 없으며 정도에도 영향을 주기에 신중하게 취급해야 합니다.

### Pre-Load



설치면의 정밀도나 예압의 조정이 불충분한 상태로 사용하는 경우 내부 베어링의 운동 저하 및 가이드 휨의 원인으로 제품의 수명에도 영향을 줍니다.

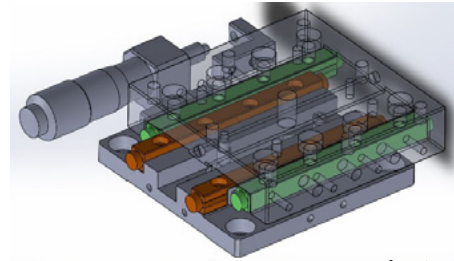
해당 예압 조정이 필요 시, 반드시 당사에 연락을 취하여 안내를 받으시기 바랍니다.

## Manual Linear Stage

### Tutorial

#### Cross Roller Guide Type

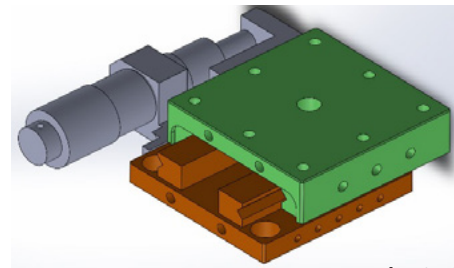
크로스 롤러 가이드란 90°의 V홈을 가지는 롤러의 레일과 원통 니들로 구성된 안내방식입니다. (그림-1 참조) 롤러 레일의 슬라이딩 면은 담금질 연삭 과정으로 평면 정도가 높으며 경질로 마감되었습니다. 원통 니들은 2개의 롤러 레일 사이에 서로 교차하여 배치되어 있습니다. 스테이지 구동 시 롤러 레일 사이의 여러 개의 원통 니들이 움직이기에 정지 시에서 움직일 때의 마찰 변화가 적고 동작 시 미끄러짐이 발생하기 어렵습니다. 또한, 크로스롤러가이드는 선접촉으로 하중을 지탱하기 때문에 볼 가이드 구조보다 강성이 좋습니다. 또한 롤러 레일과 원통 니들 간의 예압을 정밀하게 관리하여 높은 정도와 강성을 유지합니다.



[ 그림-1 ]

#### Linear Ball Guide Type

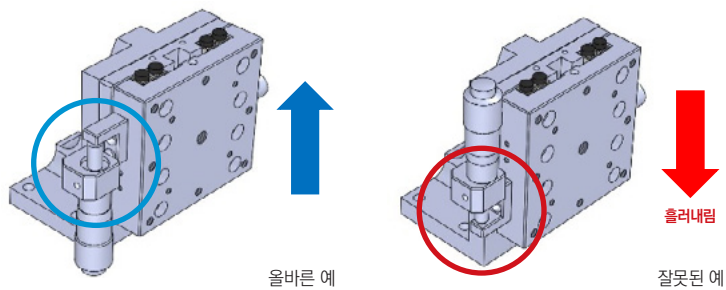
리니어 볼가이드란 90°의 V홈을 가지는 롤러의 레일과 볼로 구성된 안내방식입니다. (그림-2 참조) 롤러 레일면은 연삭 과정으로 평면 정도가 높습니다. 볼은 슬라이딩면이 만드는 V홈 사이에 배치되어 있습니다. V면과 볼은 서로 4점 접촉으로 동작 시 미끄러짐이 발생하기 어렵습니다. 또한 예압관리는 마이크로 단위의 볼 크기로 이루어지기 때문에 부품 수도 적으며, 공간적으로 컴팩트합니다.



[ 그림-2 ]

#### Z축 사용시 주의사항

일반적으로 스테이지는 동작 시에 받는 영향이 스테이지 상면에 전달되는 것을 피하기 위해 마이크로미터 헤드 블록을 하면에 취부합니다. 단, 이 상태에서 그림-3 과 같이 세워서 이용하는 경우 스테이지 내부의 스프링이 늘어나는 방향으로 부하가 걸리기 때문에 충격에 의해 스테이지가 추락하는 경우가 있습니다. 공간적인 제약이 있는 경우, 문의 바랍니다.

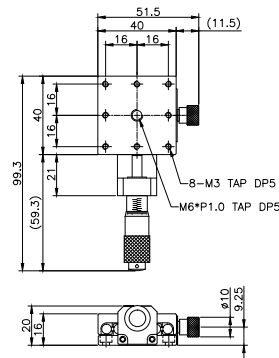
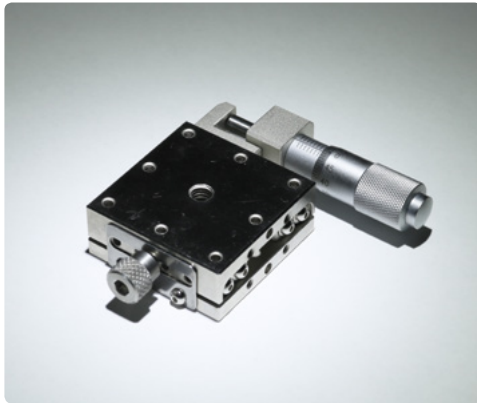


# Manual Linear Stage IX-40 Seriea

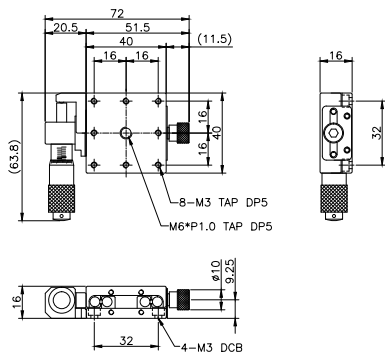
LEADING PRIDE KOREA

## IX-40C / IX-40L / IX-40R

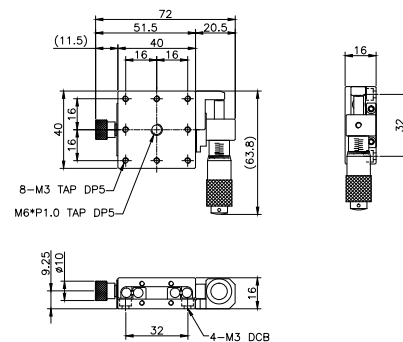
Manual  
Stage



IX-40C



IX-40L



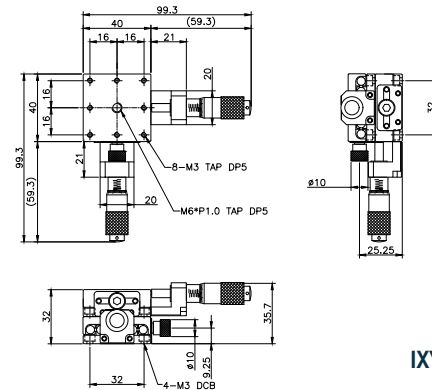
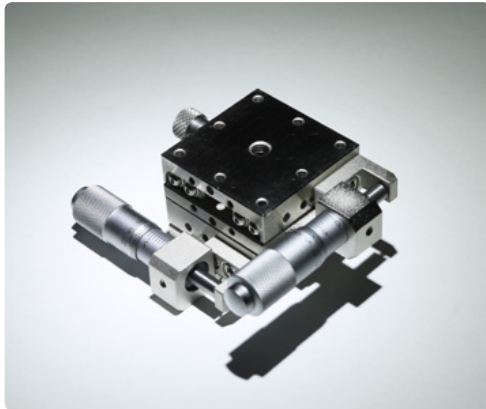
IX-40R

### Specification of Actuator

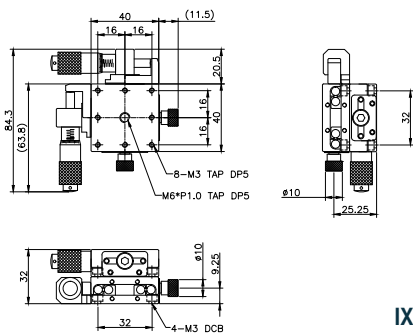
| Model                       | IX-40C                     | IX-40L | IX-40R |
|-----------------------------|----------------------------|--------|--------|
| Table Dimension (mm)        | 40 X 40                    |        |        |
| Position of Micrometer Head | Center                     | Left   | Right  |
| Travel Range (mm)           | ±6.5                       |        |        |
| Guide Type                  | Linear Ball Guide          |        |        |
| Readable Resolution (mm)    | 0.01                       |        |        |
| Parallelism (mm)            | 0.02                       |        |        |
| Running Parallelism (mm)    | 0.01                       |        |        |
| Load Capacity (kg)          |                            | 7      |        |
| Weight (kg)                 | 0.21                       | 0.21   | 0.21   |
| Table Material              |                            | Steel  |        |
| Finish Treatment            | Electroless Nickel Plating |        |        |

# IX-40 Series Manual Stage \_ Linear

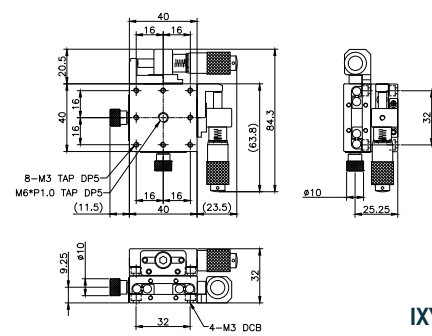
## IXY-40C / IXY-40L / IXY-40R



IXY-40C



IXY-40L



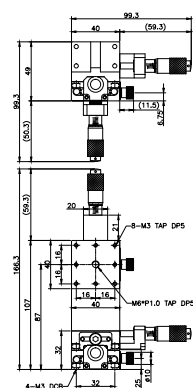
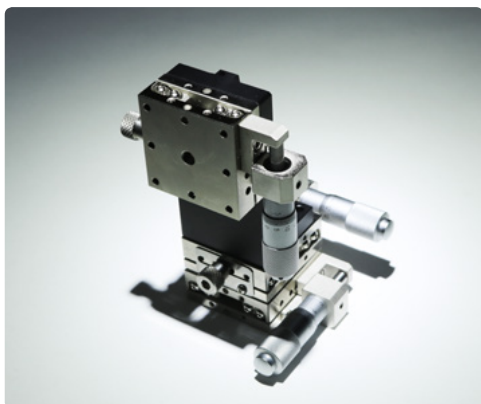
IXY-40R

### Specification of Actuator

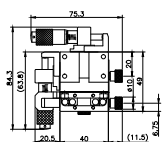
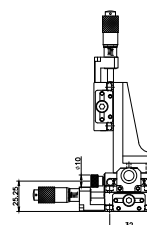
| Model                       | IXY-40C                    | IXY-40L | IXY-40R |
|-----------------------------|----------------------------|---------|---------|
| Table Dimension (mm)        | 40 X 40                    |         |         |
| Position of Micrometer Head | Center                     | Left    | Right   |
| Travel Range (mm)           | ±6.5                       |         |         |
| Guide Type                  | Linear Ball Guide          |         |         |
| Readable Resolution (mm)    | 0.01                       |         |         |
| Parallelism (mm)            | 0.02                       |         |         |
| Running Parallelism (mm)    | 0.01                       |         |         |
| Load Capacity (kg)          | 6.7                        |         |         |
| Weight (kg)                 | 0.42                       | 0.42    | 0.42    |
| Table Material              | Steel                      |         |         |
| Finish Treatment            | Electroless Nickel Plating |         |         |



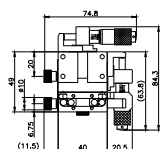
# IXYZ-40C / IXYZ-40L / IXYZ-40R



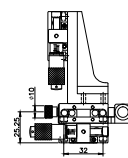
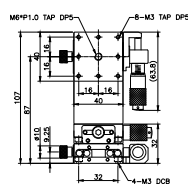
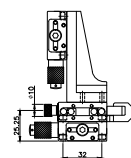
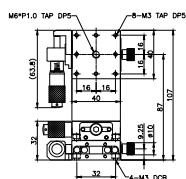
IXYZ-40C



IXYZ-40L



IXYZ-40R

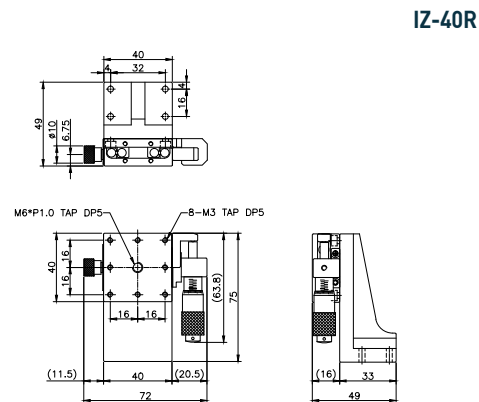
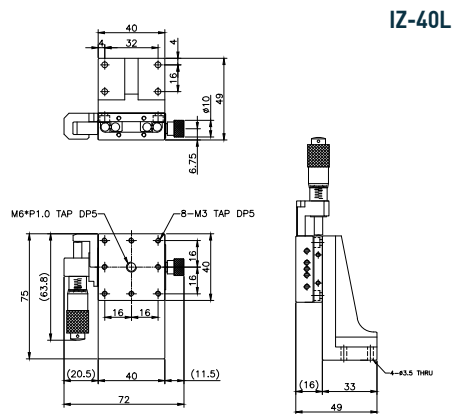
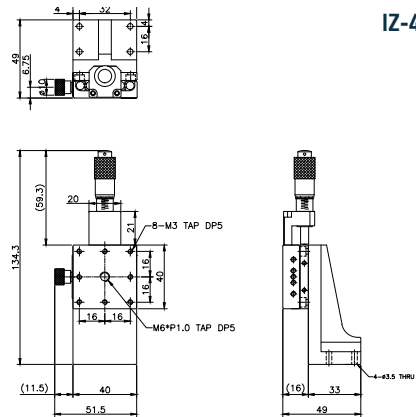


## Specification of Actuator

| Model                       | IXYZ-40C                   | IXYZ-40L | IXYZ-40R |
|-----------------------------|----------------------------|----------|----------|
| Table Dimension (mm)        | 40 X 40                    |          |          |
| Position of Micrometer Head | Center                     | Left     | Right    |
| Travel Range (mm)           | ±6.5                       |          |          |
| Guide Type                  | Linear Ball Guide          |          |          |
| Readable Resolution (mm)    | 0.01                       |          |          |
| Parallelism (mm)            | 0.02                       |          |          |
| Running Parallelism (mm)    | 0.01                       |          |          |
| Load Capacity (kg)          | 3.5                        |          |          |
| Weight (kg)                 | 0.73                       | 0.73     | 0.73     |
| Table Material              | Steel                      |          |          |
| Finish Treatment            | Electroless Nickel Plating |          |          |

# IX-40 Series Manual Stage \_ Linear

## IZ-40C / IZ-40L / IZ-40R



### Specification of Actuator

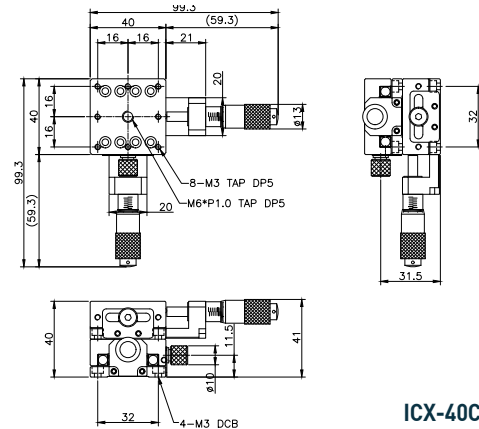
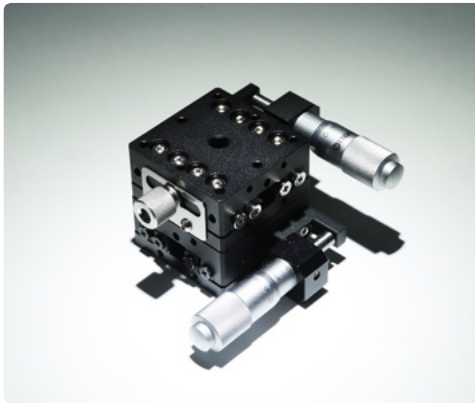
| Model                       | IZ-40C                     | IZ-40L | IZ-40R |
|-----------------------------|----------------------------|--------|--------|
| Table Dimension (mm)        | 40 X 40                    |        |        |
| Position of Micrometer Head | Center                     | Left   | Right  |
| Travel Range (mm)           | ±6.5                       |        |        |
| Guide Type                  | Linear Ball Guide          |        |        |
| Readable Resolution (mm)    | 0.01                       |        |        |
| Parallelism (mm)            | 0.02                       |        |        |
| Running Parallelism (mm)    | 0.01                       |        |        |
| Load Capacity (kg)          | 3.5                        |        |        |
| Weight (kg)                 | 0.31                       | 0.31   | 0.31   |
| Table Material              | Steel                      |        |        |
| Finish Treatment            | Electroless Nickel Plating |        |        |

# Manual Linear Stage ICX-40 Seriea

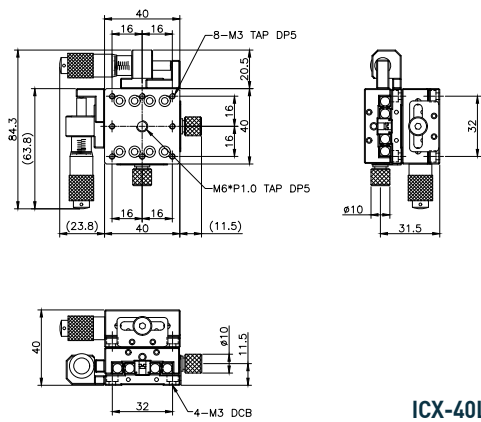
LEADING PRIDE KOREA

## ICX-40C / ICX-40L / ICX-40R

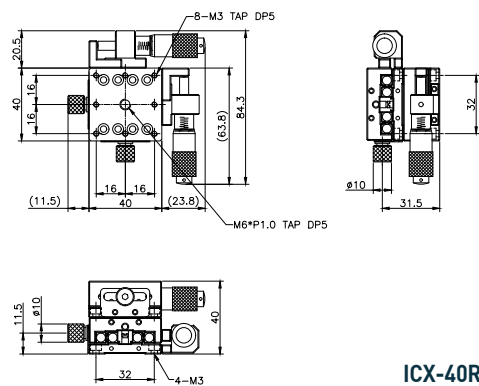
Manual  
Stage



ICX-40C



ICX-40L

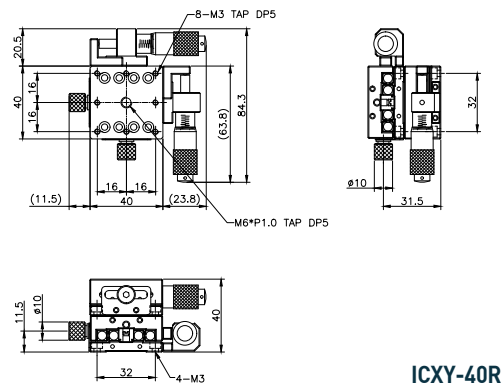
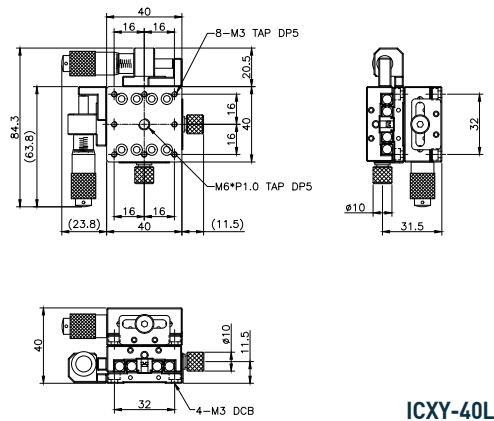
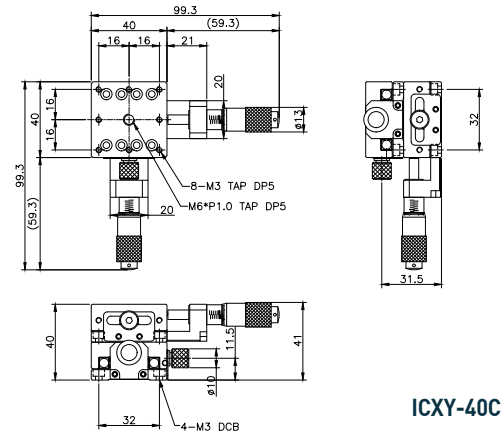
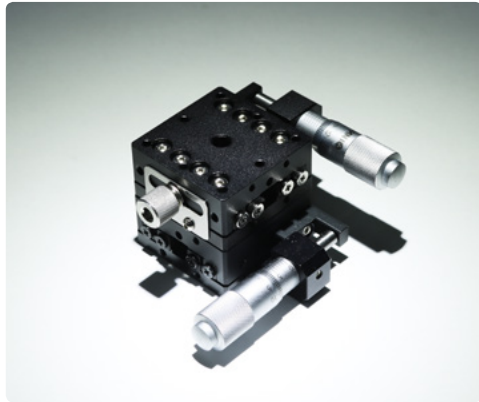


ICX-40R

### Specification of Actuator

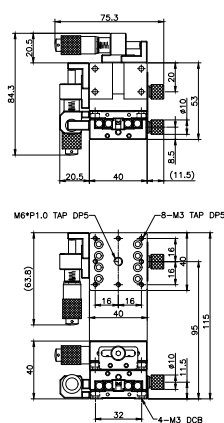
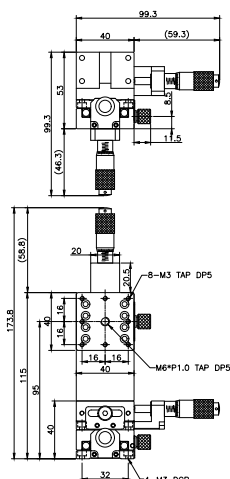
| Model                       | ICX-40C            | ICX-40L | ICX-40R |
|-----------------------------|--------------------|---------|---------|
| Table Dimension (mm)        | 40 X 40            |         |         |
| Position of Micrometer Head | Center             | Left    | Right   |
| Travel Range (mm)           | ±6.5               |         |         |
| Guide Type                  | Cross Roller Guide |         |         |
| Readable Resolution (mm)    | 0.01               |         |         |
| Parallelism (mm)            | 0.03               |         |         |
| Running Parallelism (mm)    | 0.02               |         |         |
| Load Capacity (kg)          | 2                  |         |         |
| Weight (kg)                 | 0.15               | 0.15    | 0.15    |
| Table Material              | Aluminum           |         |         |
| Finish Treatment            | Black Anodized     |         |         |

## ICXY-40C / ICXY-40L / ICXY-40R

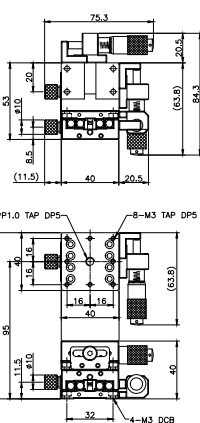


### Specification of Actuator

| Model                       | ICXY-40C           | ICXY-40L | ICXY-40R |
|-----------------------------|--------------------|----------|----------|
| Table Dimension (mm)        | 40 X 40            |          |          |
| Position of Micrometer Head | Center             | Left     | Right    |
| Travel Range (mm)           | ±6.5               |          |          |
| Guide Type                  | Cross Roller Guide |          |          |
| Readable Resolution (mm)    | 0.01               |          |          |
| Parallelism (mm)            | 0.03               |          |          |
| Running Parallelism (mm)    | 0.02               |          |          |
| Load Capacity (kg)          | 2                  |          |          |
| Weight (kg)                 | 0.3                | 0.3      | 0.3      |
| Table Material              | Aluminum           |          |          |
| Finish Treatment            | Black Anodized     |          |          |



Technical drawing of a mechanical part, likely a valve or actuator, showing dimensions: 20, 31.5, 32, and 10.

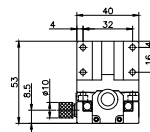
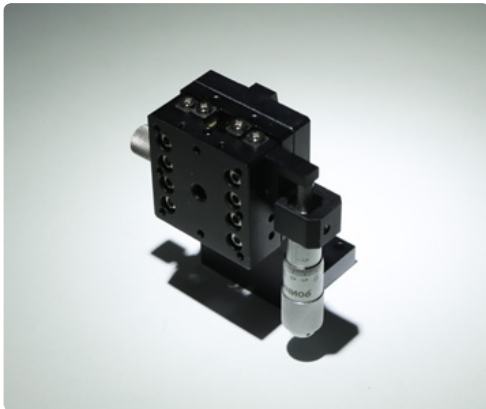


Technical drawing of a mechanical part, likely a valve or actuator, showing dimensions: 20, 31.5, and 32.

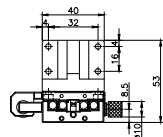
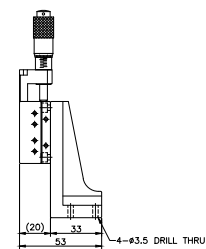
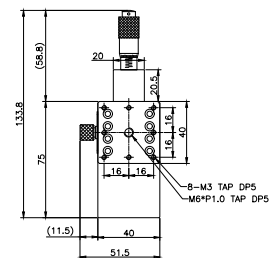
| Model                       | ICXY-40C           | ICXY-40L | ICXY-40R |
|-----------------------------|--------------------|----------|----------|
| Table Dimension (mm)        | 40 X 40            |          |          |
| Position of Micrometer Head | Center             | Left     | Right    |
| Travel Range (mm)           | ±6.5               |          |          |
| Guide Type                  | Cross Roller Guide |          |          |
| Readable Resolution (mm)    | 0.01               |          |          |
| Parallelism (mm)            | 0.03               |          |          |
| Running Parallelism (mm)    | 0.02               |          |          |
| Load Capacity (kg)          | 1                  |          |          |
| Weight (kg)                 | 0.5                | 0.5      | 0.5      |
| Table Material              | Aluminum           |          |          |
| Finish Treatment            | Black Anodized     |          |          |

# ICX-40 Series Manual Stage \_ Linear

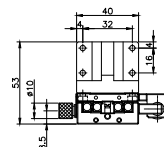
## ICZ-40C / ICZ-40L / ICZ-40R



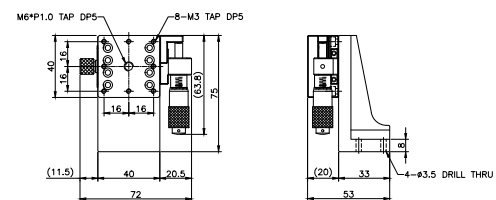
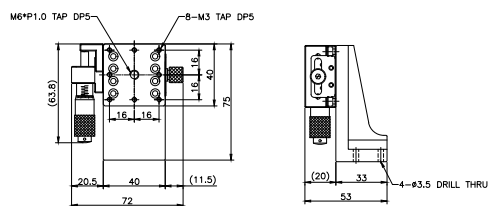
ICZ-40C



ICZ-40L



**ICZ-40R**



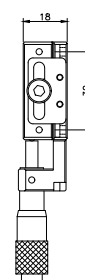
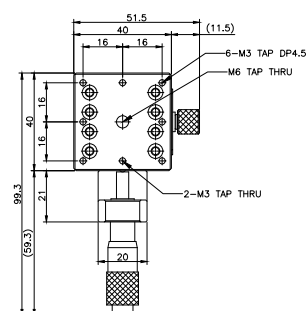
## Specification of Actuator

| Model                       | ICZ-40C            | ICZ-40L | ICZ-40R |
|-----------------------------|--------------------|---------|---------|
| Table Dimension (mm)        | 40 X 40            |         |         |
| Position of Micrometer Head | Center             | Left    | Right   |
| Travel Range (mm)           | ±6.5               |         |         |
| Guide Type                  | Cross Roller Guide |         |         |
| Readable Resolution (mm)    | 0.01               |         |         |
| Parallelism (mm)            | 0.03               |         |         |
| Running Parallelism (mm)    | 0.02               |         |         |
| Load Capacity (kg)          | 1                  |         |         |
| Weight (kg)                 | 0.2                | 0.2     | 0.2     |
| Table Material              | Aluminum           |         |         |
| Finish Treatment            | Black Anodized     |         |         |

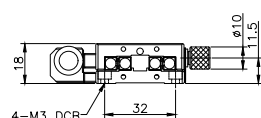
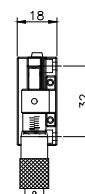
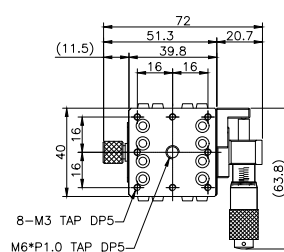
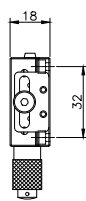
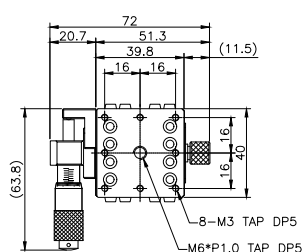
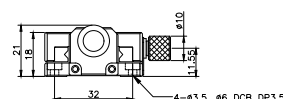
# Manual Linear Stage ICX-40(18H) Seriea

# LEADING PRIDE KOREA

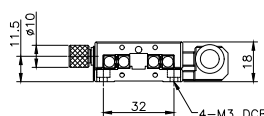
## ICX-40C(18H) / ICX-40L(18H) / ICX-40R(18H)



ICX-40C(18H)



ICX-40L(18H)



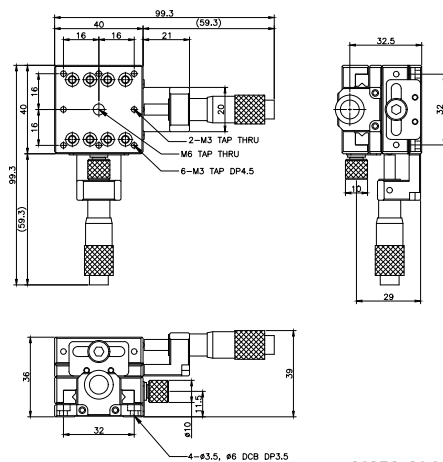
ICX-40R(18H)

## Specification of Actuator

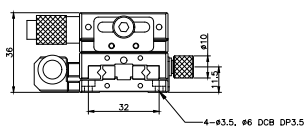
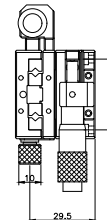
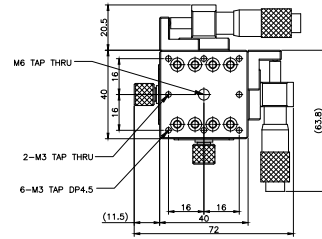
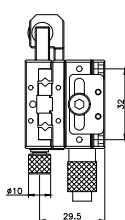
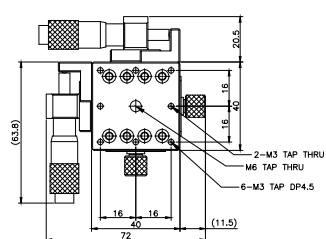
| Model                       | ICX-40C(18H)       | ICX-40L(18H) | ICX-40R(18H) |
|-----------------------------|--------------------|--------------|--------------|
| Table Dimension (mm)        | 40 X 40            |              |              |
| Position of Micrometer Head | Center             | Left         | Right        |
| Travel Range (mm)           | ±6.5               |              |              |
| Guide Type                  | Cross Roller Guide |              |              |
| Readable Resolution (mm)    | 0.01               |              |              |
| Parallelism (mm)            | 0.03               |              |              |
| Running Parallelism (mm)    | 0.02               |              |              |
| Load Capacity (kg)          | 2                  |              |              |
| Weight (kg)                 | 0.14               | 0.14         | 0.14         |
| Table Material              | Aluminum           |              |              |
| Finish Treatment            | Black Anodized     |              |              |

# ICX-40(18H) Series Manual Stage \_ Linear

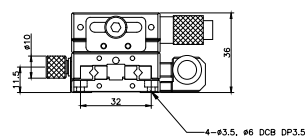
## ICXY-40C(18H) / ICXY-40L(18H) / ICXY-40R(18H)



ICXY-40C (18H)



### ICXY-40L (18H)



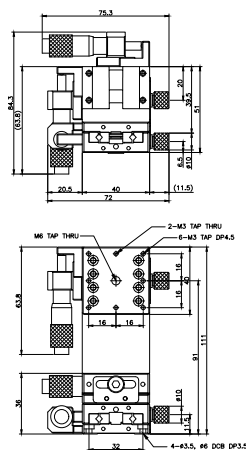
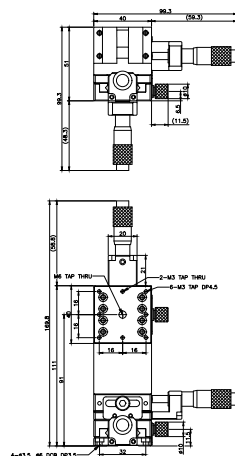
### ICXY-40R (18H)

## Specification of Actuator

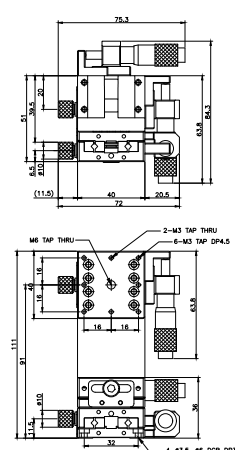
| Model                       | ICXY-40C(18H)  | ICXY-40L(18H)      | ICXY-40R(18H) |
|-----------------------------|----------------|--------------------|---------------|
| Table Dimension (mm)        |                | 40 X 40            |               |
| Position of Micrometer Head | Center         | Left               | Right         |
| Travel Range (mm)           |                | ±6.5               |               |
| Guide Type                  |                | Cross Roller Guide |               |
| Readable Resolution (mm)    |                | 0.01               |               |
| Parallelism (mm)            |                | 0.03               |               |
| Running Parallelism (mm)    |                | 0.02               |               |
| Load Capacity (kg)          |                | 2                  |               |
| Weight (kg)                 | 0.28           | 0.28               | 0.28          |
| Table Material              | Aluminum       |                    |               |
| Finish Treatment            | Black Anodized |                    |               |



## A black and white photograph of a complex mechanical assembly, likely a valve or actuator. The assembly consists of a black rectangular body with various ports and a central cylindrical component. The body has several circular ports on its front and side faces. A central cylindrical component, possibly a piston or a valve stem, extends from the front of the body. The assembly is mounted on a base plate with several mounting holes. The background is a plain, light-colored surface.



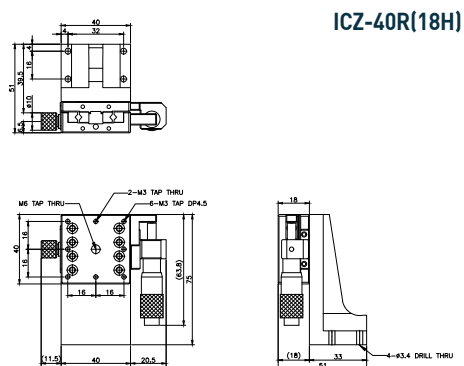
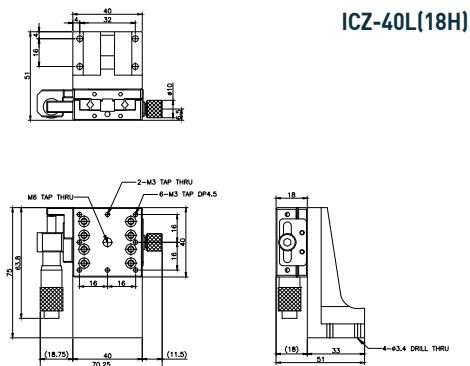
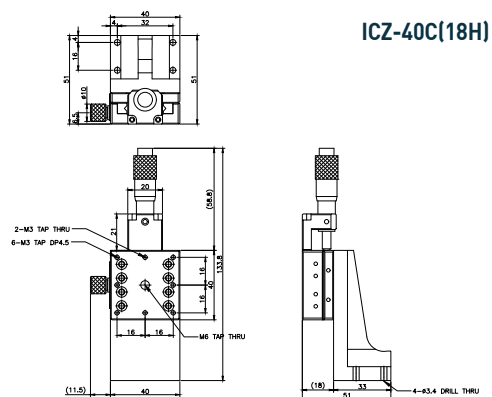
Technical drawing of the front view of the mechanical part. The drawing shows a symmetrical component with a central vertical section and two side sections. Key dimensions are indicated: a width of 18 at the top, a height of 15 for the upper section, a height of 28.5 for the lower section, and a width of 32 at the bottom. The drawing includes hatching to indicate different materials or sections.



| Model                       | ICXYZ-40C(18H)     | ICXYZ-40L(18H) | ICXYZ-40R(18H) |
|-----------------------------|--------------------|----------------|----------------|
| Table Dimension (mm)        | 40 X 40            |                |                |
| Position of Micrometer Head | Center             | Left           | Right          |
| Travel Range (mm)           | ±6.5               |                |                |
| Guide Type                  | Cross Roller Guide |                |                |
| Readable Resolution (mm)    | 0.01               |                |                |
| Parallelism (mm)            | 0.03               |                |                |
| Running Parallelism (mm)    | 0.02               |                |                |
| Load Capacity (kg)          | 1                  |                |                |
| Weight (kg)                 | 0.47               | 0.47           | 0.47           |
| Table Material              | Aluminum           |                |                |
| Finish Treatment            | Black Anodized     |                |                |

# ICX-40(18H) Series Manual Stage \_ Linear

## ICZ-40C (18H) / ICZ-40L (18H) / ICZ-40R (18H)



### Specification of Actuator

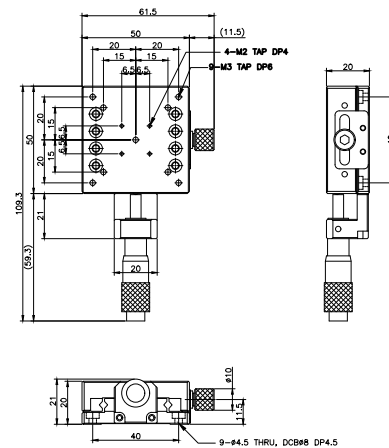
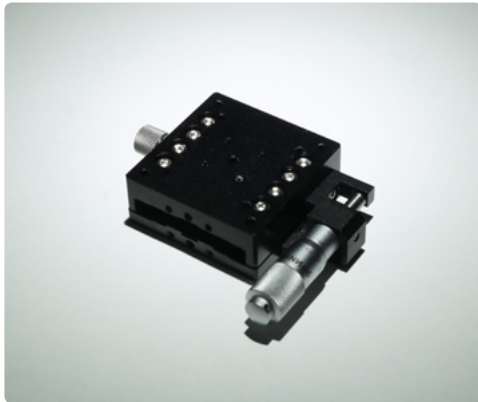
| Model                       | ICZ-40C(18H)       | ICZ-40L(18H) | ICZ-40R(18H) |
|-----------------------------|--------------------|--------------|--------------|
| Table Dimension (mm)        | 40 X 40            |              |              |
| Position of Micrometer Head | Center             | Left         | Right        |
| Travel Range (mm)           | ±6.5               |              |              |
| Guide Type                  | Cross Roller Guide |              |              |
| Readable Resolution (mm)    | 0.01               |              |              |
| Parallelism (mm)            | 0.03               |              |              |
| Running Parallelism (mm)    | 0.02               |              |              |
| Load Capacity (kg)          | 1                  |              |              |
| Weight (kg)                 | 0.185              | 0.185        | 0.185        |
| Table Material              | Aluminum           |              |              |
| Finish Treatment            | Black Anodized     |              |              |

# Manual Linear Stage ICX-50 Seriea

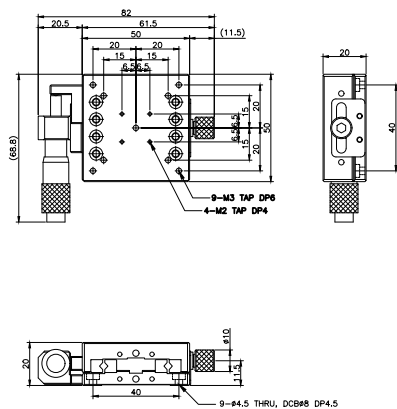
LEADING PRIDE KOREA

## ICX-50C / ICX-50L / ICX-50R

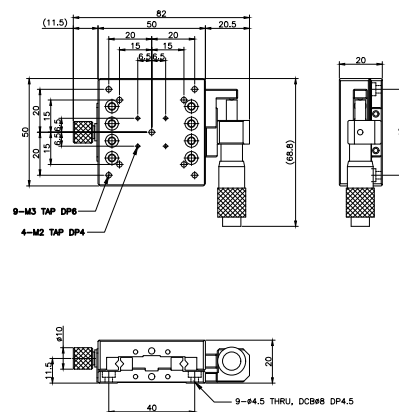
Manual  
Stage



ICX-50C



ICX-50L



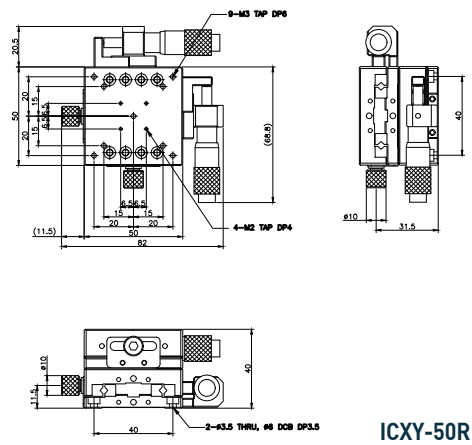
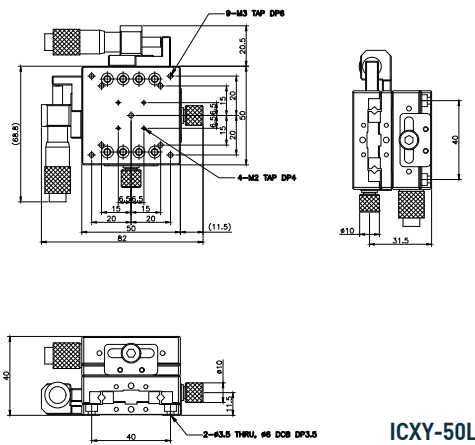
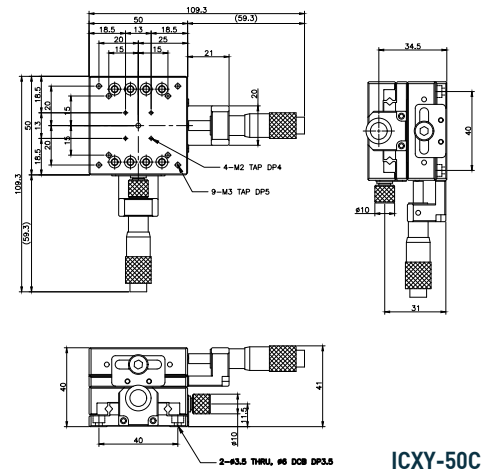
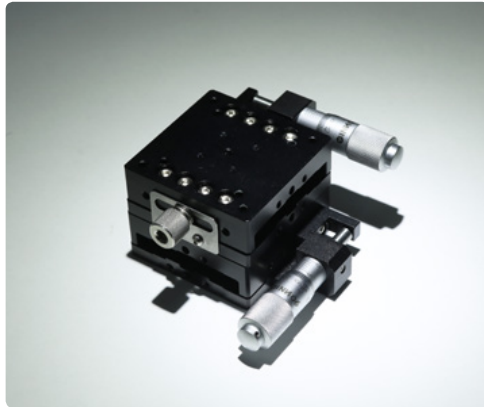
ICX-50R

### Specification of Actuator

| Model                       | ICX-50C            | ICX-50L | ICX-50R |
|-----------------------------|--------------------|---------|---------|
| Table Dimension (mm)        | 50 X 50            |         |         |
| Position of Micrometer Head | Center             | Left    | Right   |
| Travel Range (mm)           | ±6.5               |         |         |
| Guide Type                  | Cross Roller Guide |         |         |
| Readable Resolution (mm)    | 0.01               |         |         |
| Parallelism (mm)            | 0.03               |         |         |
| Running Parallelism (mm)    | 0.02               |         |         |
| Load Capacity (kg)          | 3                  |         |         |
| Weight (kg)                 | 0.25               | 0.25    | 0.25    |
| Table Material              | Aluminum           |         |         |
| Finish Treatment            | Black Anodized     |         |         |

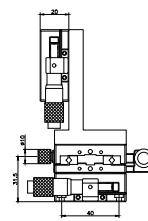
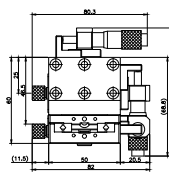
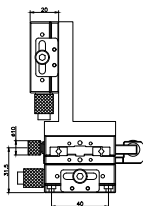
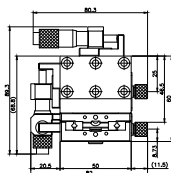
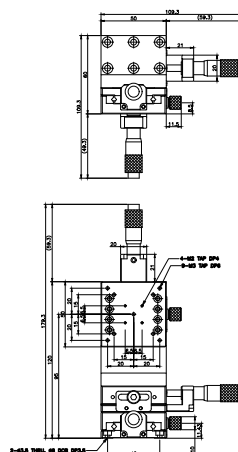
# ICX-50 Series Manual Stage \_ Linear

## ICXY-50C / ICXY-50L / ICXY-50R



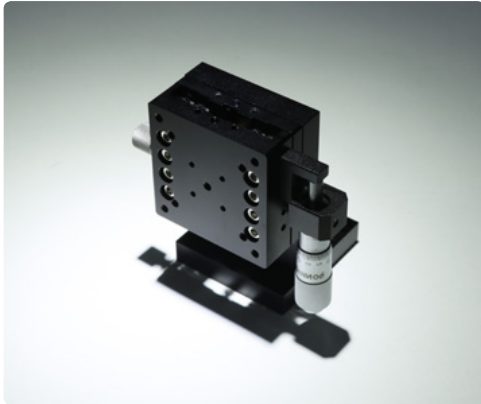
### Specification of Actuator

| Model                       | ICXY-50C           | ICXY-50L | ICXY-50R |
|-----------------------------|--------------------|----------|----------|
| Table Dimension (mm)        | 50 X 50            |          |          |
| Position of Micrometer Head | Center             | Left     | Right    |
| Travel Range (mm)           | ±6.5               |          |          |
| Guide Type                  | Cross Roller Guide |          |          |
| Readable Resolution (mm)    | 0.01               |          |          |
| Parallelism (mm)            | 0.03               |          |          |
| Running Parallelism (mm)    | 0.02               |          |          |
| Load Capacity (kg)          | 2.5                |          |          |
| Weight (kg)                 | 0.5                | 0.5      | 0.5      |
| Table Material              | Aluminum           |          |          |
| Finish Treatment            | Black Anodized     |          |          |

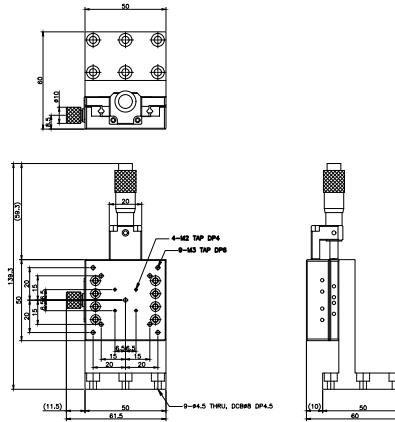


| Model                       | ICXYZ-50C          | ICXYZ-50L | ICXYZ-50R |
|-----------------------------|--------------------|-----------|-----------|
| Table Dimension (mm)        | 50 X 50            |           |           |
| Position of Micrometer Head | Center             | Left      | Right     |
| Travel Range (mm)           | ±6.5               |           |           |
| Guide Type                  | Cross Roller Guide |           |           |
| Readable Resolution (mm)    | 0.01               |           |           |
| Parallelism (mm)            | 0.03               |           |           |
| Running Parallelism (mm)    | 0.02               |           |           |
| Load Capacity (kg)          | 1                  |           |           |
| Weight (kg)                 | 0.92               | 0.92      | 0.92      |
| Table Material              | Aluminum           |           |           |
| Finish Treatment            | Black Anodized     |           |           |

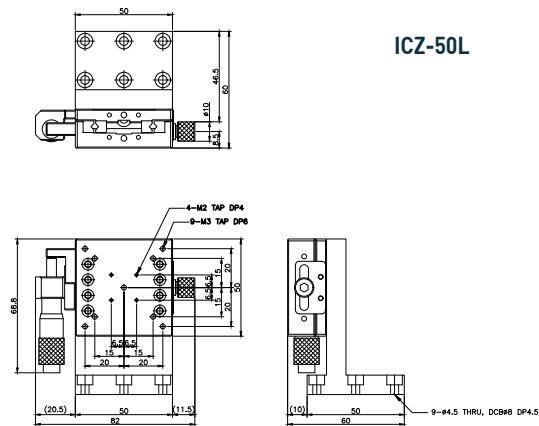
## ICZ-50C / ICZ-50L / ICZ-50R



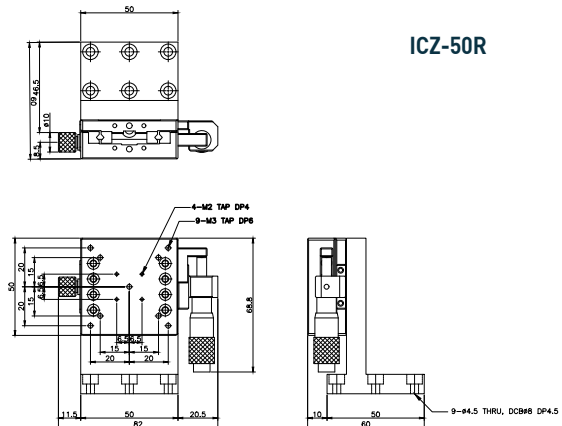
ICZ-50C



ICZ-50L



ICZ-50R



### Specification of Actuator

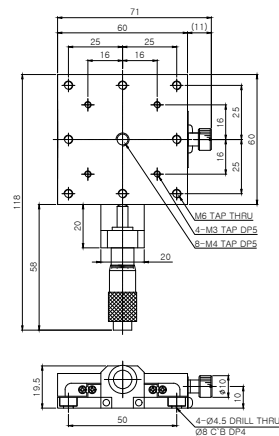
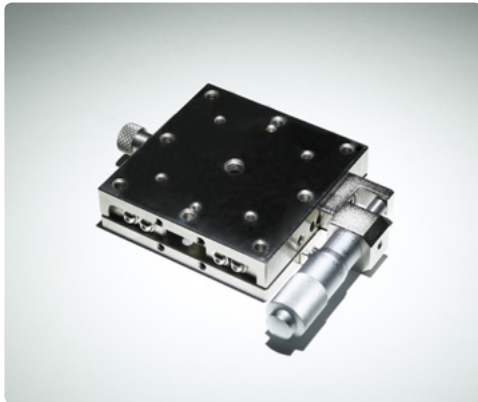
| Model                       | ICZ-50C            | ICZ-50L | ICZ-50R |
|-----------------------------|--------------------|---------|---------|
| Table Dimension (mm)        | 50 X 50            |         |         |
| Position of Micrometer Head | Center             | Left    | Right   |
| Travel Range (mm)           | ±6.5               |         |         |
| Guide Type                  | Cross Roller Guide |         |         |
| Readable Resolution (mm)    | 0.01               |         |         |
| Parallelism (mm)            | 0.03               |         |         |
| Running Parallelism (mm)    | 0.02               |         |         |
| Load Capacity (kg)          | 1                  |         |         |
| Weight (kg)                 | 0.42               | 0.42    | 0.42    |
| Table Material              | Aluminum           |         |         |
| Finish Treatment            | Black Anodized     |         |         |

# Manual Linear Stage IX-60 Seriea

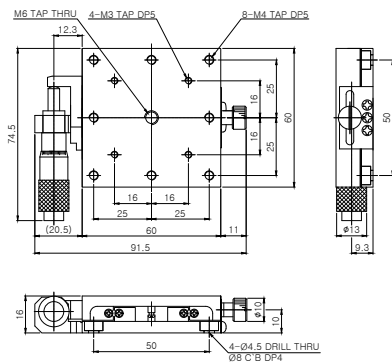
LEADING PRIDE KOREA

## IX-60C / IX-60L / IX-60R

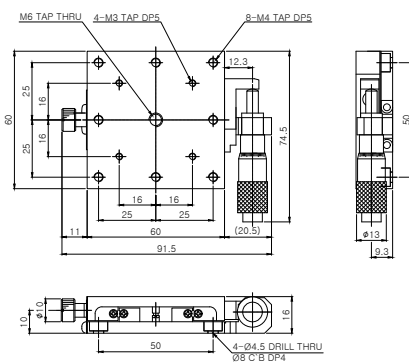
Manual  
Stage



IX-60C



IX-60L



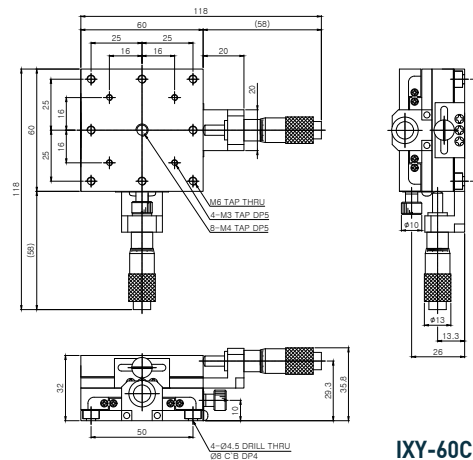
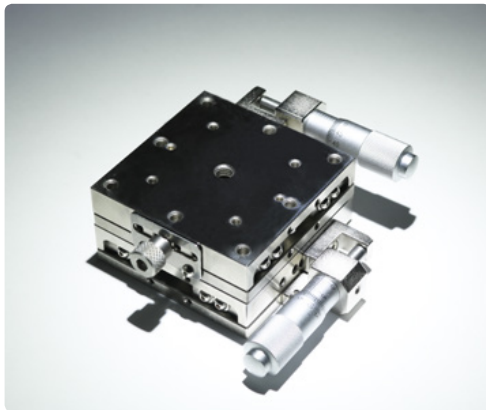
IX-60R

### Specification of Actuator

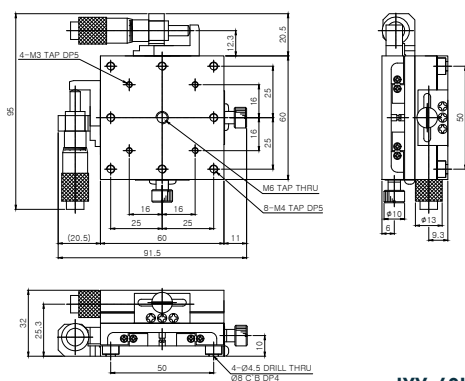
| Model                       | IX-60C                     | IX-60L | IX-60R |
|-----------------------------|----------------------------|--------|--------|
| Table Dimension (mm)        | 60 X 60                    |        |        |
| Position of Micrometer Head | Center                     | Left   | Right  |
| Travel Range (mm)           | ±6.5                       |        |        |
| Guide Type                  | Linear Roller Guide        |        |        |
| Readable Resolution (mm)    | 0.01                       |        |        |
| Parallelism (mm)            | 0.02                       |        |        |
| Running Parallelism (mm)    | 0.02                       |        |        |
| Load Capacity (kg)          | 12                         |        |        |
| Weight (kg)                 | 0.43                       | 0.43   | 0.43   |
| Table Material              | Steel                      |        |        |
| Finish Treatment            | Electroless Nickel Plating |        |        |

# IX-60 Series Manual Stage\_Linear

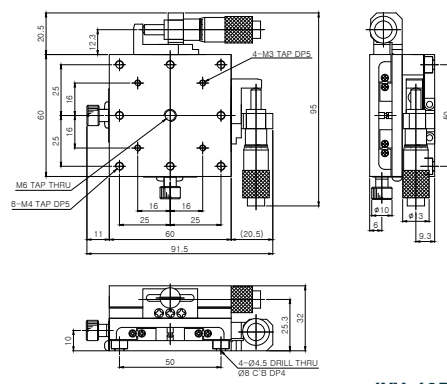
## IXY-60C / IXY-60L / IXY-60R



IXY-60C



IXY-60L



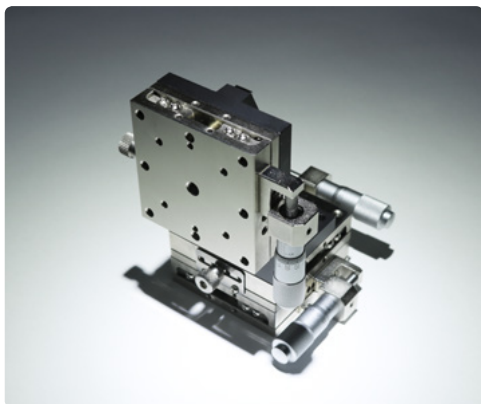
IXY-60R

## Specification of Actuator

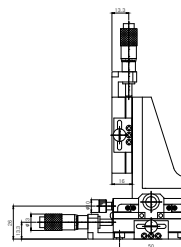
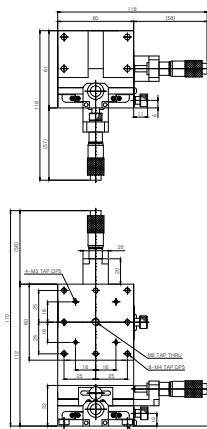
| Model                       | IXY-60C                    | IXY-60L | IXY-60R |
|-----------------------------|----------------------------|---------|---------|
| Table Dimension (mm)        | 60 X 60                    |         |         |
| Position of Micrometer Head | Center                     | Left    | Right   |
| Travel Range (mm)           | ±6.5                       |         |         |
| Guide Type                  | Linear Roller Guide        |         |         |
| Readable Resolution (mm)    | 0.01                       |         |         |
| Parallelism (mm)            | 0.02                       |         |         |
| Running Parallelism (mm)    | 0.01                       |         |         |
| Load Capacity (kg)          | 11.5                       |         |         |
| Weight (kg)                 | 0.86                       | 0.86    | 0.86    |
| Table Material              | Steel                      |         |         |
| Finish Treatment            | Electroless Nickel Plating |         |         |



# IXYZ-60C / IXYZ-60L / IXYZ-60R

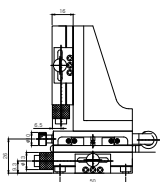
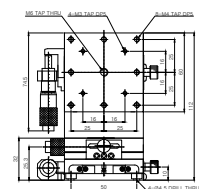
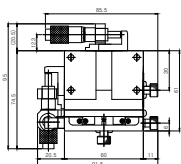


IXYZ-60C

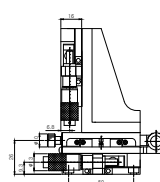
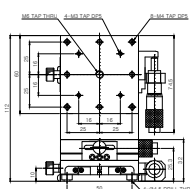
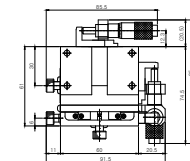


Manual  
Stage

IXYZ-60L



IXYZ-60R

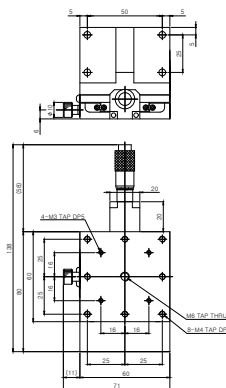
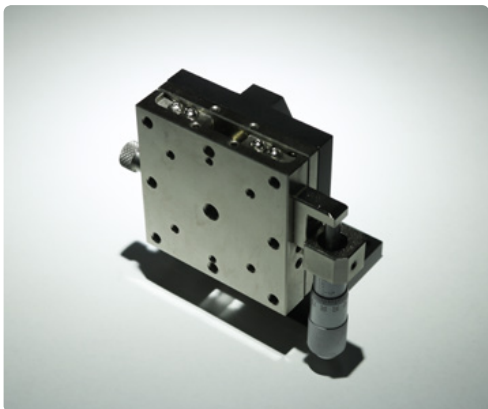


## Specification of Actuator

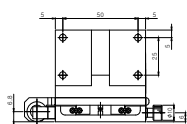
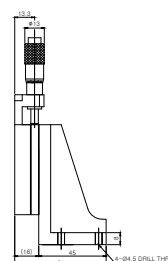
| Model                       | IXYZ-60C                   | IXYZ-60L | IXYZ-60R |
|-----------------------------|----------------------------|----------|----------|
| Table Dimension (mm)        | 60 X 60                    |          |          |
| Position of Micrometer Head | Center                     | Left     | Right    |
| Travel Range (mm)           | ±6.5                       |          |          |
| Guide Type                  | Linear Roller Guide        |          |          |
| Readable Resolution (mm)    | 0.01                       |          |          |
| Parallelism (mm)            | 0.02                       |          |          |
| Running Parallelism (mm)    | 0.01                       |          |          |
| Load Capacity (kg)          | 6                          |          |          |
| Weight (kg)                 | 1.45                       | 1.45     | 1.45     |
| Table Material              | Steel                      |          |          |
| Finish Treatment            | Electroless Nickel Plating |          |          |

# IX-60 Series Manual Stage \_ Linear

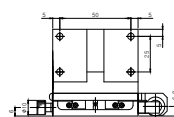
## IZ-60C / IZ-60L / IZ-60R



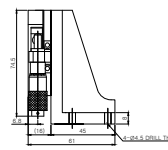
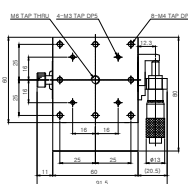
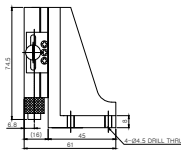
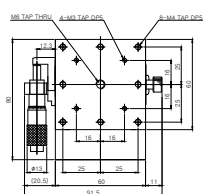
IZ-60C



IZ-60L



IZ-60R



### Specification of Actuator

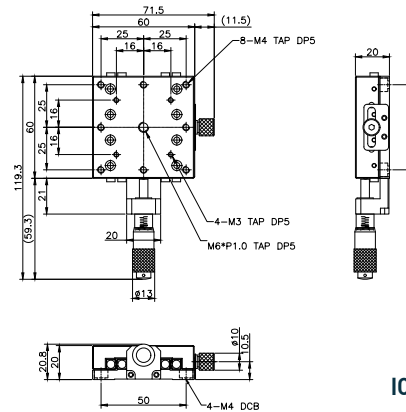
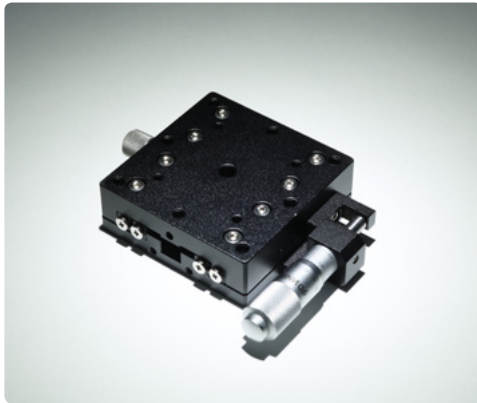
| Model                       | IZ-60C                     | IZ-60L | IZ-60R |
|-----------------------------|----------------------------|--------|--------|
| Table Dimension (mm)        | 60 X 60                    |        |        |
| Position of Micrometer Head | Center                     | Left   | Right  |
| Travel Range (mm)           | ±6.5                       |        |        |
| Guide Type                  | Linear Roller Guide        |        |        |
| Readable Resolution (mm)    | 0.01                       |        |        |
| Parallelism (mm)            | 0.02                       |        |        |
| Running Parallelism (mm)    | 0.01                       |        |        |
| Load Capacity (kg)          | 6                          |        |        |
| Weight (kg)                 | 0.58                       | 0.58   | 0.58   |
| Table Material              | Steel                      |        |        |
| Finish Treatment            | Electroless Nickel Plating |        |        |

# Manual Linear Stage ICX-60 Seriea

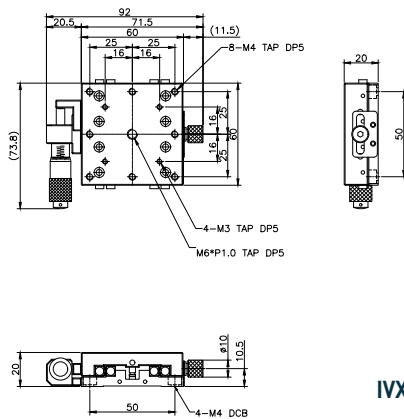
LEADING PRIDE KOREA

## ICX-60C / ICX-60L / ICX-60R

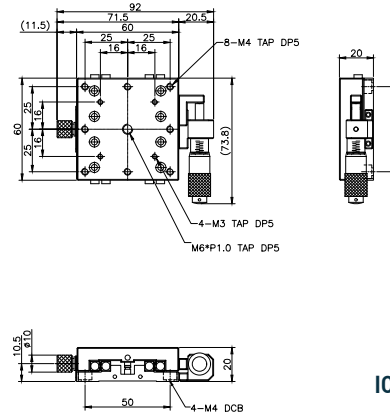
Manual  
Stage



ICX-60C



ICX-60L



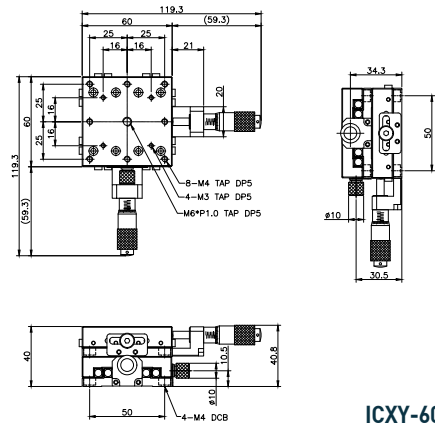
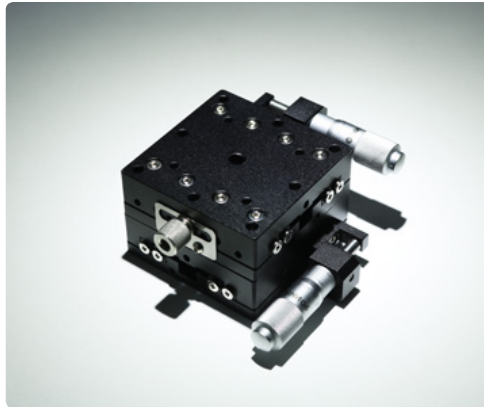
ICX-60R

### Specification of Actuator

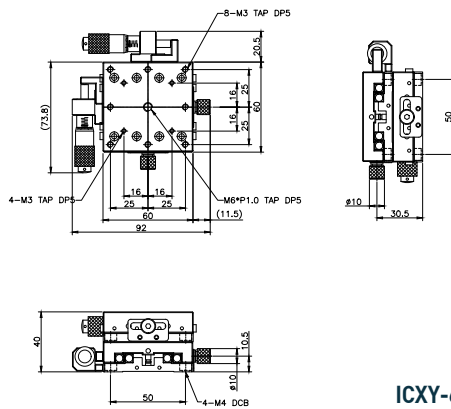
| Model                       | ICX-60C            | ICX-60L | ICX-60R |
|-----------------------------|--------------------|---------|---------|
| Table Dimension (mm)        | 60 X 60            |         |         |
| Position of Micrometer Head | Center             | Left    | Right   |
| Travel Range (mm)           | $\pm 6.5$          |         |         |
| Guide Type                  | Cross Roller Guide |         |         |
| Readable Resolution (mm)    | 0.01               |         |         |
| Parallelism (mm)            | 0.03               |         |         |
| Running Parallelism (mm)    | 0.02               |         |         |
| Load Capacity (kg)          | 5                  |         |         |
| Weight (kg)                 | 0.32               | 0.32    | 0.32    |
| Table Material              | Aluminum           |         |         |
| Finish Treatment            | Black Anodized     |         |         |

# ICX-60 Series Manual Stage \_ Linear

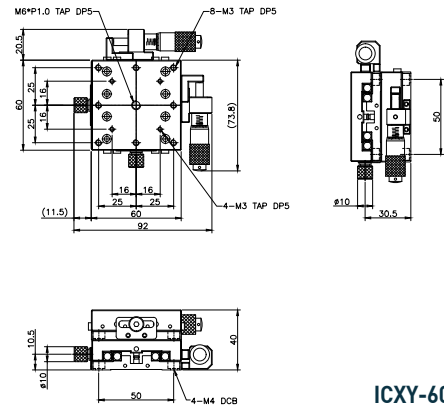
## ICXY-60C / ICXY-60L / ICXY-60R



ICXY-60C



ICXY-60L

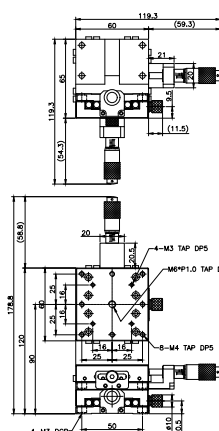
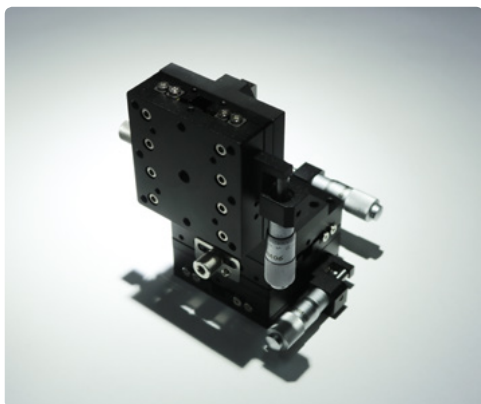


ICXY-60R

### Specification of Actuator

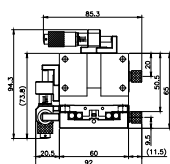
| Model                       | ICXY-60C           | ICXY-60L | ICXY-60R |
|-----------------------------|--------------------|----------|----------|
| Table Dimension (mm)        | 60 X 60            |          |          |
| Position of Micrometer Head | Center             | Left     | Right    |
| Travel Range (mm)           | ±6.5               |          |          |
| Guide Type                  | Cross Roller Guide |          |          |
| Readable Resolution (mm)    | 0.01               |          |          |
| Parallelism (mm)            | 0.03               |          |          |
| Running Parallelism (mm)    | 0.02               |          |          |
| Load Capacity (kg)          | 4                  |          |          |
| Weight (kg)                 | 0.64               | 0.64     | 0.64     |
| Table Material              | Aluminum           |          |          |
| Finish Treatment            | Black Anodized     |          |          |

# ICXYZ-60C / ICXYZ-60L / ICXYZ-60R

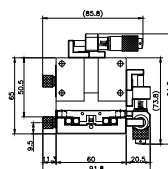


ICXYZ-60C

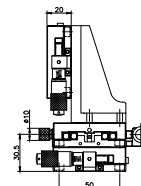
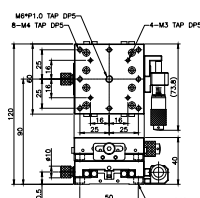
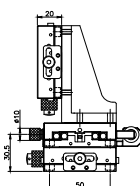
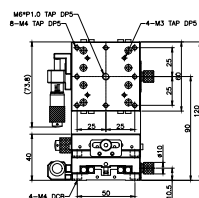
Manual  
Stage



ICXYZ-60L



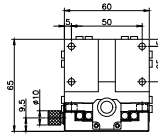
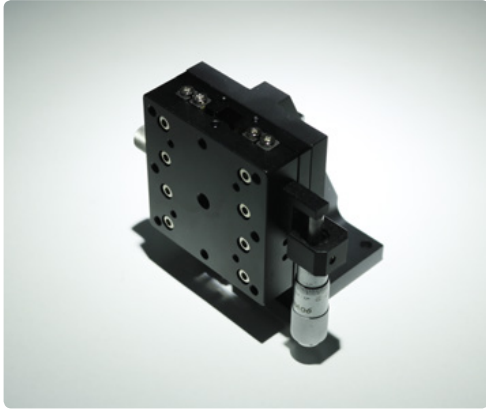
ICXYZ-60R



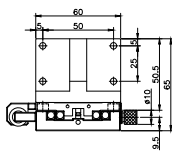
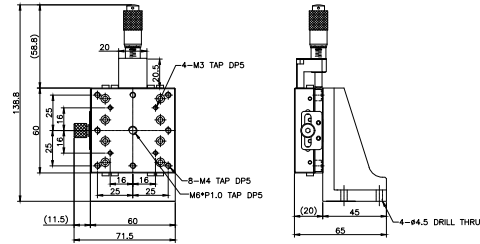
## Specification of Actuator

| Model                       | ICXYZ-60C          | ICXYZ-60L | ICXYZ-60R |
|-----------------------------|--------------------|-----------|-----------|
| Table Dimension (mm)        | 60 X 60            |           |           |
| Position of Micrometer Head | Center             | Left      | Right     |
| Travel Range (mm)           | ±6.5               |           |           |
| Guide Type                  | Cross Roller Guide |           |           |
| Readable Resolution (mm)    | 0.01               |           |           |
| Parallelism (mm)            | 0.03               |           |           |
| Running Parallelism (mm)    | 0.02               |           |           |
| Load Capacity (kg)          | 2                  |           |           |
| Weight (kg)                 | 1.18               | 1.18      | 1.18      |
| Table Material              | Aluminum           |           |           |
| Finish Treatment            | Black Anodized     |           |           |

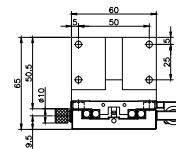
## ICZ-60C / ICZ-60L / ICZ-60R



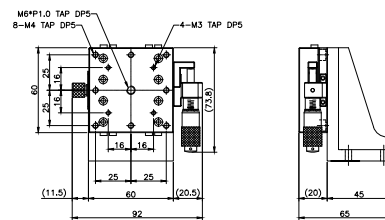
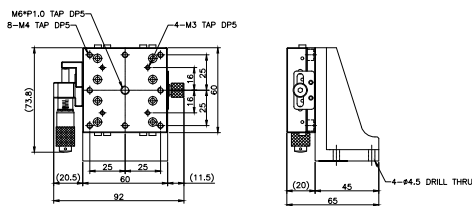
ICZ-60C



ICZ-60L



ICZ-60R



### Specification of Actuator

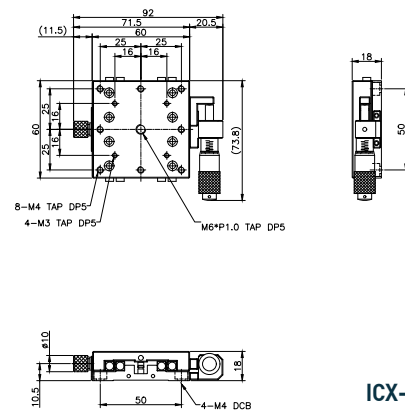
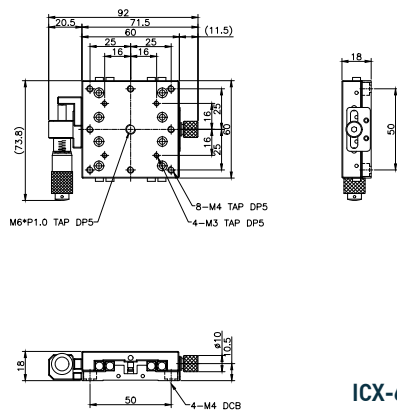
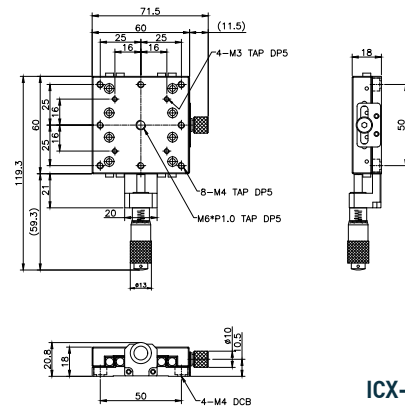
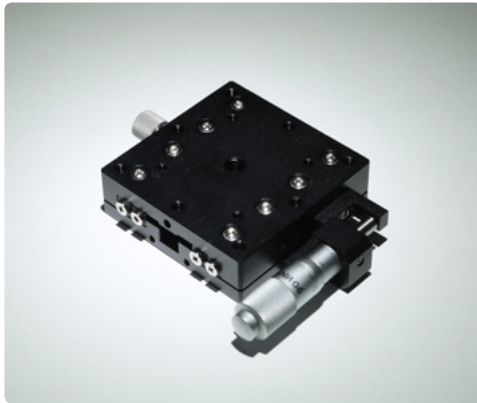
| Model                       | ICZ-60C            | ICZ-60L | ICZ-60R |
|-----------------------------|--------------------|---------|---------|
| Table Dimension (mm)        | 60 X 60            |         |         |
| Position of Micrometer Head | Center             | Left    | Right   |
| Travel Range (mm)           | ±6.5               |         |         |
| Guide Type                  | Cross Roller Guide |         |         |
| Readable Resolution (mm)    | 0.01               |         |         |
| Parallelism (mm)            | 0.03               |         |         |
| Running Parallelism (mm)    | 0.02               |         |         |
| Load Capacity (kg)          | 2                  |         |         |
| Weight (kg)                 | 0.54               | 0.54    | 0.54    |
| Table Material              | Aluminum           |         |         |
| Finish Treatment            | Black Anodized     |         |         |

# Manual Linear Stage ICX-60(18H) Seriea

LEADING PRIDE KOREA

## ICX-60C(18H) / ICX-60L(18H) / ICX-60R(18H)

Manual  
Stage

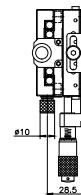
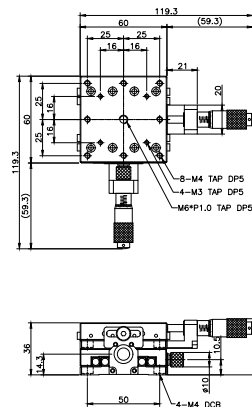
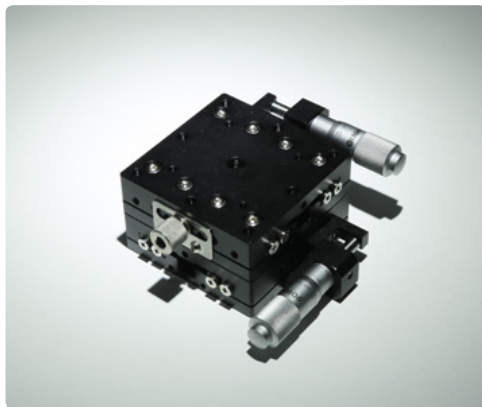


### Specification of Actuator

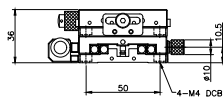
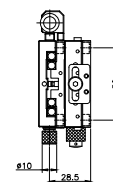
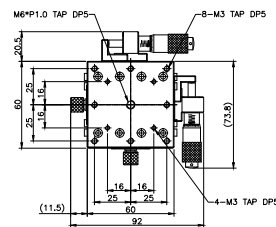
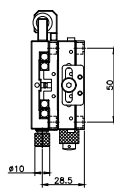
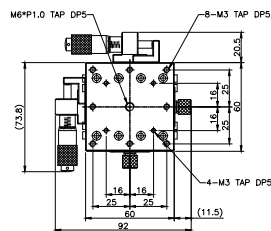
| Model                       | ICX-60C(18H)       | ICX-60L(18H) | ICX-60R(18H) |
|-----------------------------|--------------------|--------------|--------------|
| Table Dimension (mm)        | 60 X 60            |              |              |
| Position of Micrometer Head | Center             | Left         | Right        |
| Travel Range (mm)           | ±6.5               |              |              |
| Guide Type                  | Cross Roller Guide |              |              |
| Readable Resolution (mm)    | 0.01               |              |              |
| Parallelism (mm)            | 0.03               |              |              |
| Running Parallelism (mm)    | 0.02               |              |              |
| Load Capacity (kg)          | 5                  |              |              |
| Weight (kg)                 | 0.3                | 0.3          | 0.3          |
| Table Material              | Aluminum           |              |              |
| Finish Treatment            | Black Anodized     |              |              |

# ICX-60(18H) Series Manual Stage \_ Linear

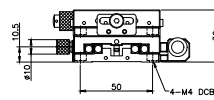
## ICXY-60C(18H) / ICXY-60L(18H) / ICXY-60R(18H)



**ICXY-60C(18H)**



**ICXY-60L(18H)**



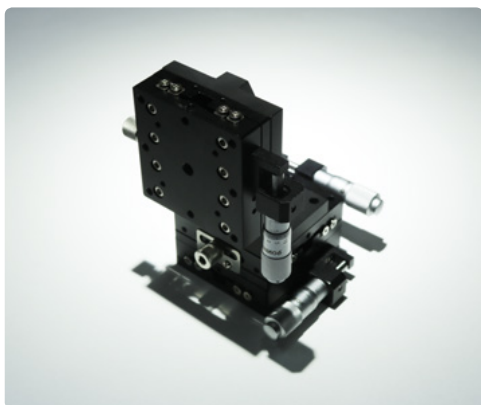
**ICXY-60R(18H)**

### Specification of Actuator

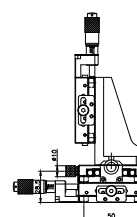
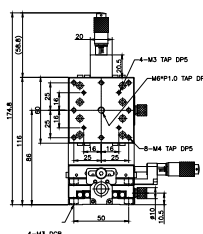
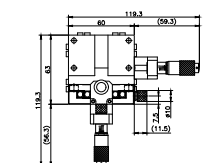
| Model                       | ICXY-60C(18H)      | ICXY-60L(18H) | ICXY-60R(18H) |
|-----------------------------|--------------------|---------------|---------------|
| Table Dimension (mm)        | 60 X 60            |               |               |
| Position of Micrometer Head | Center             | Left          | Right         |
| Travel Range (mm)           | ±6.5               |               |               |
| Guide Type                  | Cross Roller Guide |               |               |
| Readable Resolution (mm)    | 0.01               |               |               |
| Parallelism (mm)            | 0.03               |               |               |
| Running Parallelism (mm)    | 0.02               |               |               |
| Load Capacity (kg)          | 4                  |               |               |
| Weight (kg)                 | 0.6                | 0.6           | 0.6           |
| Table Material              | Aluminum           |               |               |
| Finish Treatment            | Black Anodized     |               |               |



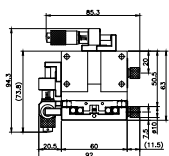
# ICXYZ-60C(18H) / ICXYZ-60L(18H) / ICXYZ-60R(18H)



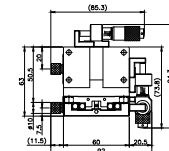
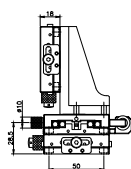
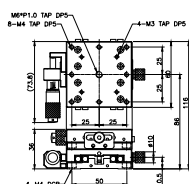
ICXYZ-60C(18H)



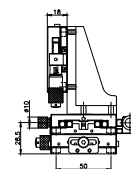
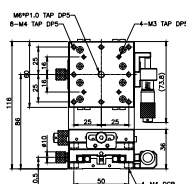
Manual  
Stage



ICXYZ-60L(18H)



ICXYZ-60R(18H)

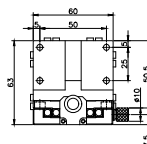
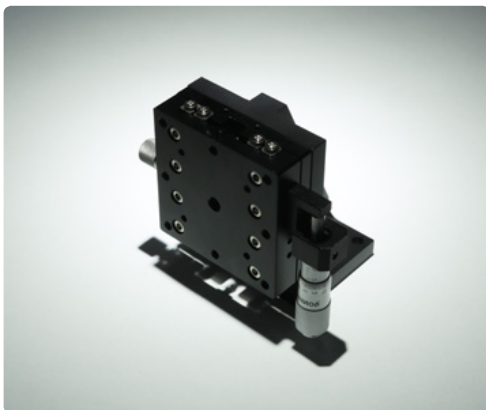


## Specification of Actuator

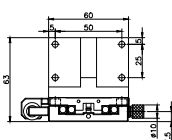
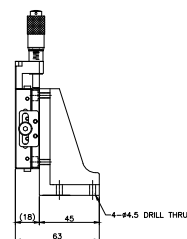
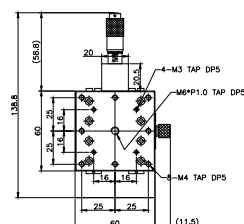
| Model                       | ICXYZ-60C(18H)     | ICXYZ-60L(18H) | ICXYZ-60R(18H) |
|-----------------------------|--------------------|----------------|----------------|
| Table Dimension (mm)        | 60 X 60            |                |                |
| Position of Micrometer Head | Center             | Left           | Right          |
| Travel Range (mm)           | ±6.5               |                |                |
| Guide Type                  | Cross Roller Guide |                |                |
| Readable Resolution (mm)    | 0.01               |                |                |
| Parallelism (mm)            | 0.03               |                |                |
| Running Parallelism (mm)    | 0.02               |                |                |
| Load Capacity (kg)          | 2                  |                |                |
| Weight (kg)                 | 1.12               | 1.12           | 1.12           |
| Table Material              | Aluminum           |                |                |
| Finish Treatment            | Black Anodized     |                |                |

# ICX-60(18H) Series Manual Stage \_ Linear

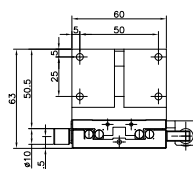
## ICZ-60C(18H) / ICZ-60L(18H) / ICZ-60R(18H)



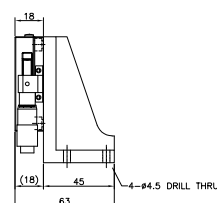
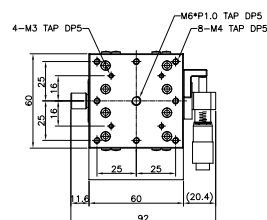
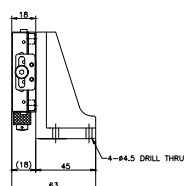
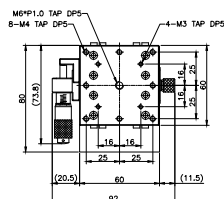
ICZ-60C(18H)



ICZ-60L(18H)



ICZ-60R(18H)



### Specification of Actuator

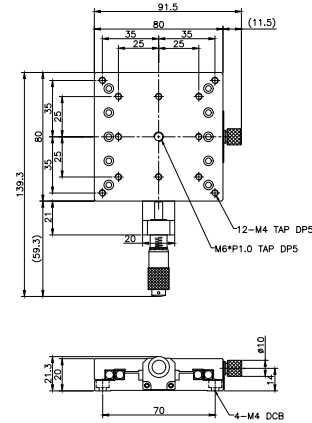
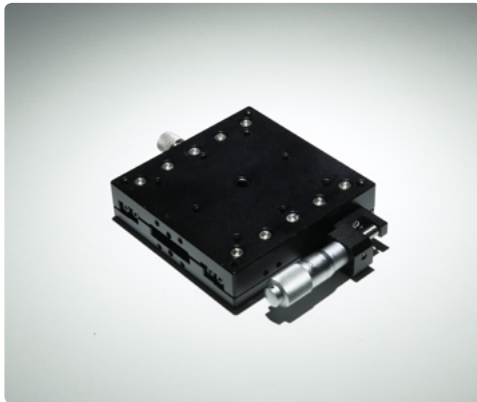
| Model                       | ICZ-60C(18H)       | ICZ-60L(18H) | ICZ-60R(18H) |
|-----------------------------|--------------------|--------------|--------------|
| Table Dimension (mm)        | 60 X 60            |              |              |
| Position of Micrometer Head | Center             | Left         | Right        |
| Travel Range (mm)           | ±6.5               |              |              |
| Guide Type                  | Cross Roller Guide |              |              |
| Readable Resolution (mm)    | 0.01               |              |              |
| Parallelism (mm)            | 0.03               |              |              |
| Running Parallelism (mm)    | 0.02               |              |              |
| Load Capacity (kg)          | 2                  |              |              |
| Weight (kg)                 | 0.52               | 0.52         | 0.52         |
| Table Material              | Aluminum           |              |              |
| Finish Treatment            | Black Anodized     |              |              |

# Manual Linear Stage ICX-80-13 Seriea

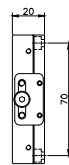
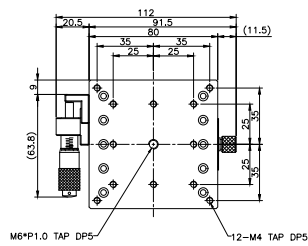
LEADING PRIDE KOREA

## ICX-80C-13 / ICX-80L-13 / ICX-80R-13

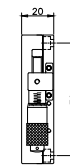
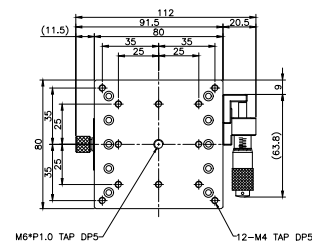
Manual  
Stage



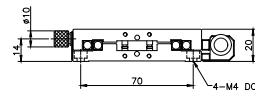
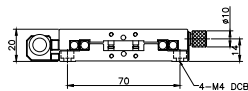
ICX-80C-13



ICX-80L-13



ICX-80R-13

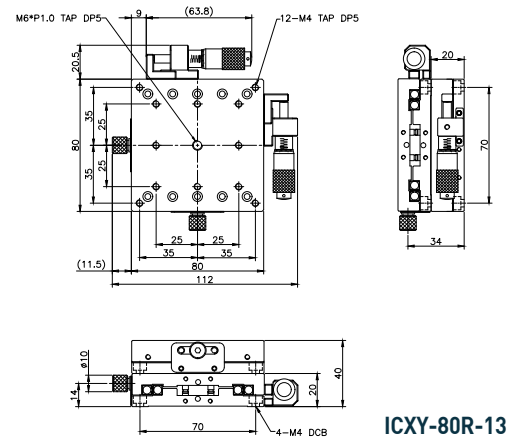
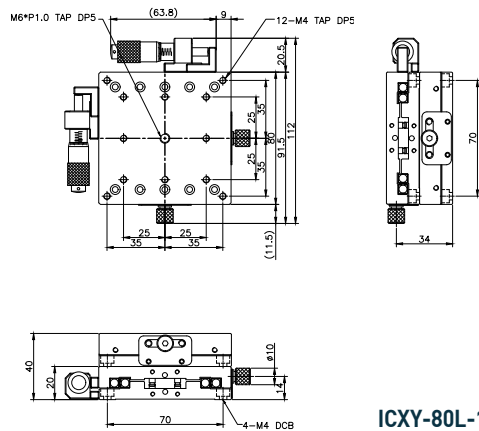
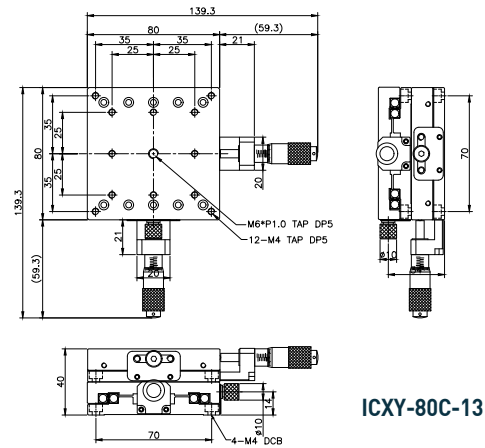
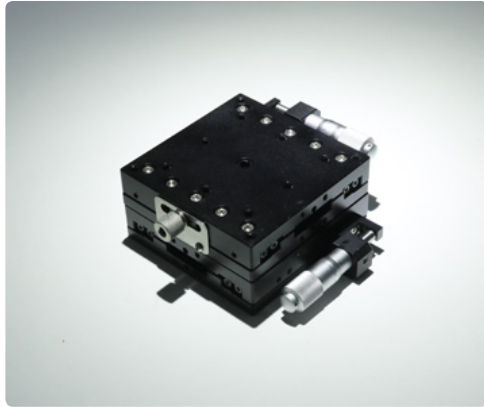


### Specification of Actuator

| Model                       | ICX-80C-13         | ICX-80L-13 | ICX-80R-13 |
|-----------------------------|--------------------|------------|------------|
| Table Dimension (mm)        | 80 X 80            |            |            |
| Position of Micrometer Head | Center             | Left       | Right      |
| Travel Range (mm)           | ±6.5               |            |            |
| Guide Type                  | Cross Roller Guide |            |            |
| Readable Resolution (mm)    | 0.01               |            |            |
| Parallelism (mm)            | 0.03               |            |            |
| Running Parallelism (mm)    | 0.015              |            |            |
| Load Capacity (kg)          | 2                  |            |            |
| Weight (kg)                 | 0.39               | 0.4        | 0.4        |
| Table Material              | Aluminum           |            |            |
| Finish Treatment            | Black Anodized     |            |            |

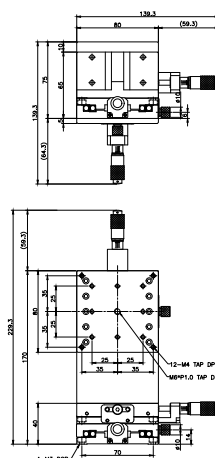
# ICX-80-13 Series Manual Stage \_ Linear

## ICXY-80C-13 / ICXY-80L-13 / ICXY-80R-13

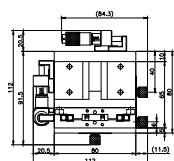
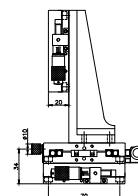
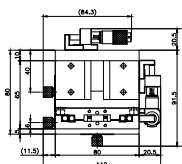
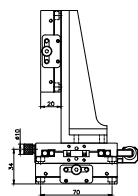


### Specification of Actuator

| Model                       | ICXY-80C-13        | ICXY-80L-13 | ICXY-80R-13 |
|-----------------------------|--------------------|-------------|-------------|
| Table Dimension (mm)        | 80 X 80            |             |             |
| Position of Micrometer Head | Center             | Left        | Right       |
| Travel Range (mm)           | ±6.5               |             |             |
| Guide Type                  | Cross Roller Guide |             |             |
| Readable Resolution (mm)    | 0.01               |             |             |
| Parallelism (mm)            | 0.03               |             |             |
| Running Parallelism (mm)    | 0.015              |             |             |
| Load Capacity (kg)          | 9                  |             |             |
| Weight (kg)                 | 0.78               | 0.8         | 0.8         |
| Table Material              | Aluminum           |             |             |
| Finish Treatment            | Black Anodized     |             |             |



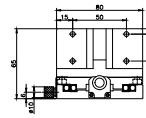
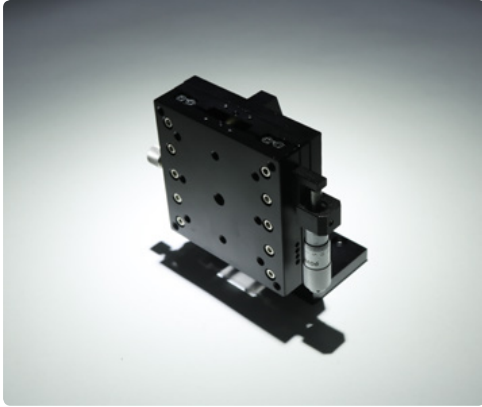
Technical drawing of the 'L' type machine. The side view shows a vertical column with a horizontal base. Dimensions include a vertical height of 20, a horizontal distance of 452, and a base width of 70. The front view shows a similar profile with a horizontal distance of 70.

[illegible]

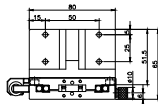
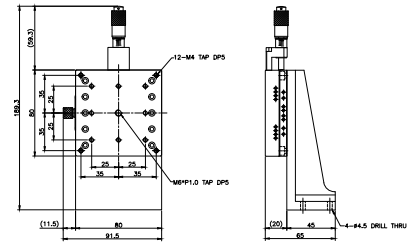
| Model                       | ICXYZ-80C-13       | ICXYZ-80L-13 | ICXYZ-80R-13 |
|-----------------------------|--------------------|--------------|--------------|
| Table Dimension (mm)        | 80 X 80            |              |              |
| Position of Micrometer Head | Center             | Left         | Right        |
| Travel Range (mm)           | ±6.5               |              |              |
| Guide Type                  | Cross Roller Guide |              |              |
| Readable Resolution (mm)    | 0.01               |              |              |
| Parallelism (mm)            | 0.03               |              |              |
| Running Parallelism (mm)    | 0.015              |              |              |
| Load Capacity (kg)          | 3                  |              |              |
| Weight (kg)                 | 1.45               | 1.48         | 1.48         |
| Table Material              | Aluminum           |              |              |
| Finish Treatment            | Black Anodized     |              |              |

# ICX-80-13 Series Manual Stage \_ Linear

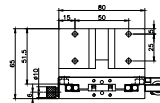
## ICZ-80C-13/ ICZ-80L-13 / ICZ-80R-13



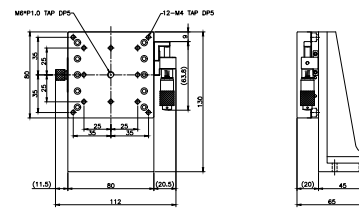
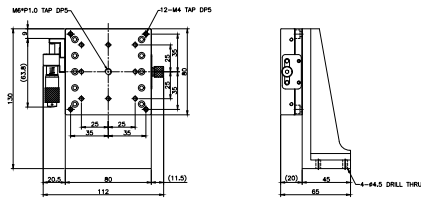
ICZ-80C-13



ICZ-80L-13



ICZ-80R-13



### Specification of Actuator

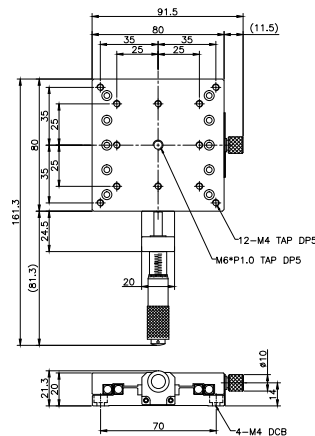
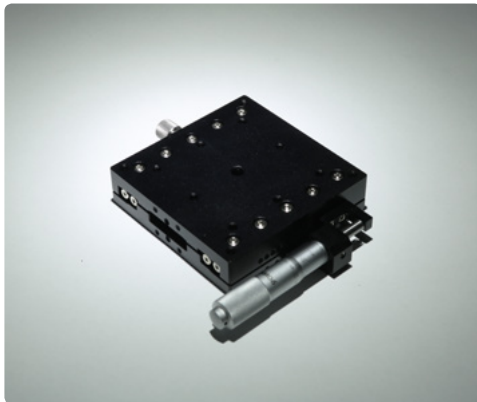
| Model                       | ICZ-80C-13         | ICZ-80L-13 | ICZ-80R-13 |
|-----------------------------|--------------------|------------|------------|
| Table Dimension (mm)        | 80 X 80            |            |            |
| Position of Micrometer Head | Center             | Left       | Right      |
| Travel Range (mm)           | ±6.5               |            |            |
| Guide Type                  | Cross Roller Guide |            |            |
| Readable Resolution (mm)    | 0.01               |            |            |
| Parallelism (mm)            | 0.03               |            |            |
| Running Parallelism (mm)    | 0.015              |            |            |
| Load Capacity (kg)          | 3                  |            |            |
| Weight (kg)                 | 0.67               | 0.68       | 0.68       |
| Table Material              | Aluminum           |            |            |
| Finish Treatment            | Black Anodized     |            |            |

# Manual Linear Stage ICX-80-25 Seriea

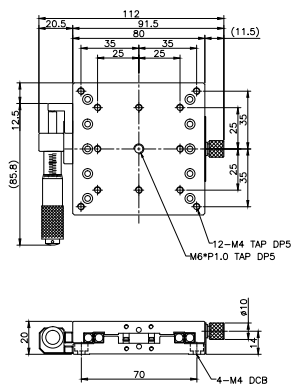
LEADING PRIDE KOREA

## ICX-80C-25 / ICX-80L-25 / ICX-80R-25

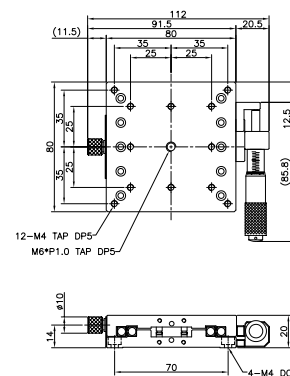
Manual  
Stage



ICX-80C-25



ICX-80L-25



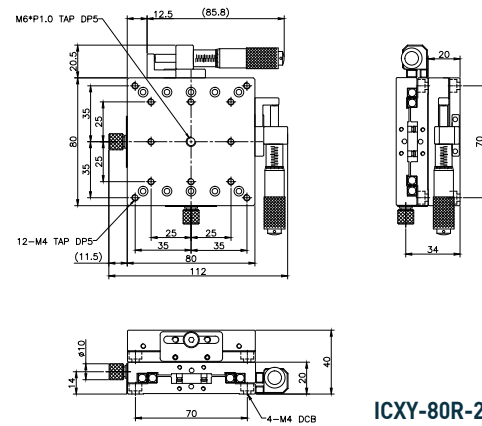
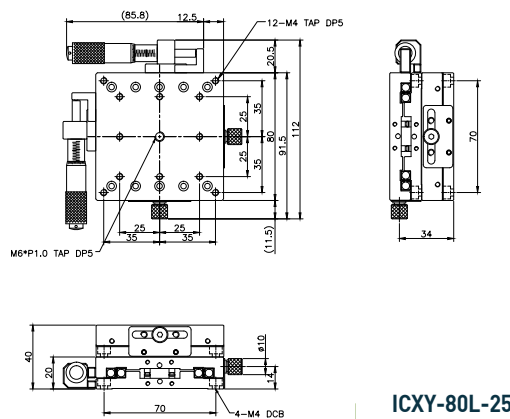
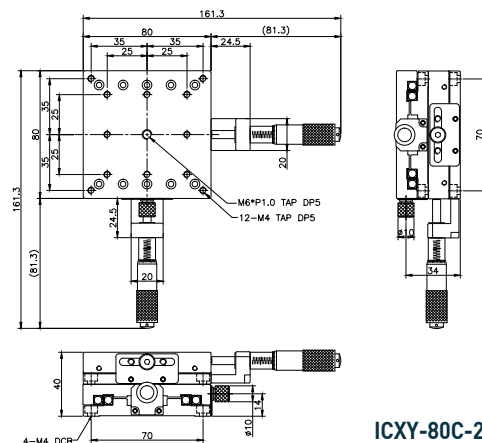
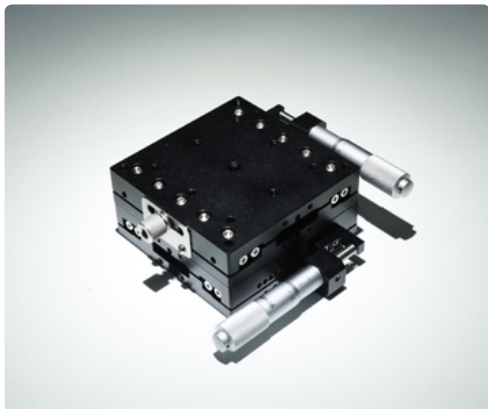
ICX-80R-25

### Specification of Actuator

| Model                       | ICX-80C-25         | ICX-80L-25 | ICX-80R-25 |
|-----------------------------|--------------------|------------|------------|
| Table Dimension (mm)        | 80 X 80            |            |            |
| Position of Micrometer Head | Center             | Left       | Right      |
| Travel Range (mm)           | $\pm 12.5$         |            |            |
| Guide Type                  | Cross Roller Guide |            |            |
| Readable Resolution (mm)    | 0.01               |            |            |
| Parallelism (mm)            | 0.03               |            |            |
| Running Parallelism (mm)    | 0.015              |            |            |
| Load Capacity (kg)          | 10                 |            |            |
| Weight (kg)                 | 0.41               | 0.41       | 0.41       |
| Table Material              | Aluminum           |            |            |
| Finish Treatment            | Black Anodized     |            |            |

# ICX-80-25 Series Manual Stage \_ Linear

## ICXY-80C-25 / ICXY-80L-25 / ICXY-80R-25

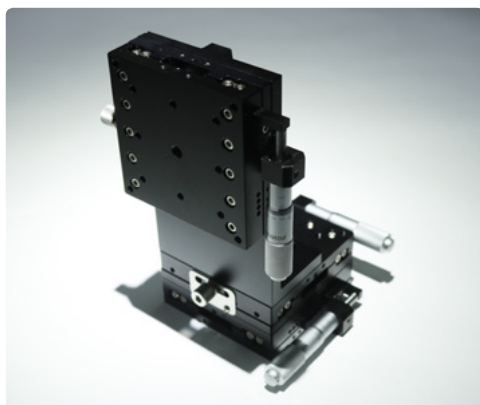


## Specification of Actuator

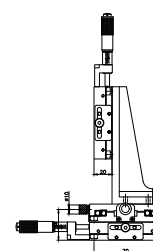
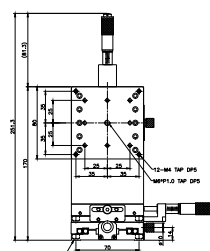
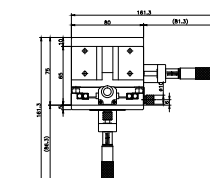
| Model                       | ICXY-80C-25        | ICXY-80L-25 | ICXY-80R-25 |
|-----------------------------|--------------------|-------------|-------------|
| Table Dimension (mm)        | 80 X 80            |             |             |
| Position of Micrometer Head | Center             | Left        | Right       |
| Travel Range (mm)           | ±12.5              |             |             |
| Guide Type                  | Cross Roller Guide |             |             |
| Readable Resolution (mm)    | 0.01               |             |             |
| Parallelism (mm)            | 0.03               |             |             |
| Running Parallelism (mm)    | 0.015              |             |             |
| Load Capacity (kg)          | 9                  |             |             |
| Weight (kg)                 | 0.82               | 0.82        | 0.82        |
| Table Material              | Aluminum           |             |             |
| Finish Treatment            | Black Anodized     |             |             |



# ICXYZ-80C-25 / ICXYZ-80L-25 / ICXYZ-80R-25

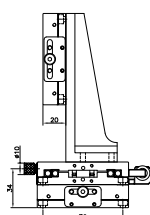
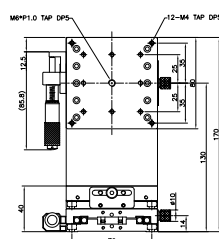
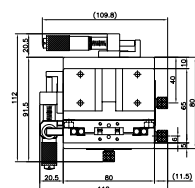


ICXYZ-80C-25

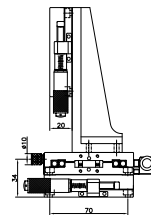
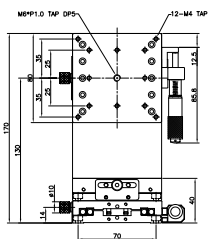
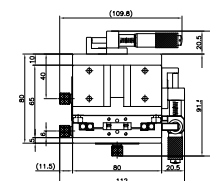


Manual  
Stage

ICXYZ-80L-25



ICXYZ-80R-25

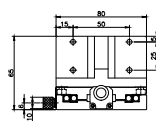
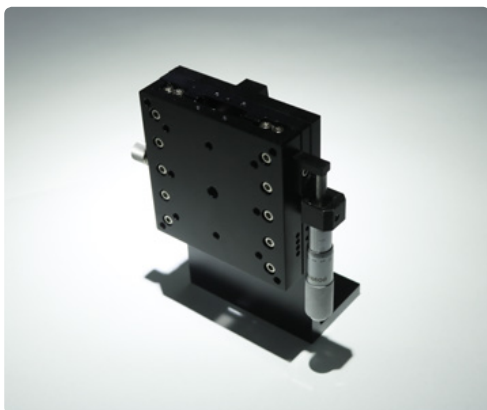


## Specification of Actuator

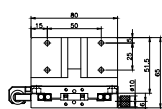
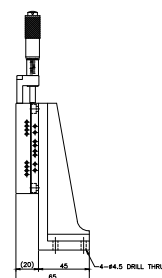
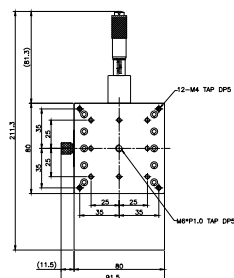
| Model                       | ICXYZ-80C-25       |      |       |
|-----------------------------|--------------------|------|-------|
| Table Dimension (mm)        | 80 X 80            |      |       |
| Position of Micrometer Head | Center             | Left | Right |
| Travel Range (mm)           | ±12.5              |      |       |
| Guide Type                  | Cross Roller Guide |      |       |
| Readable Resolution (mm)    | 0.01               |      |       |
| Parallelism (mm)            | 0.03               |      |       |
| Running Parallelism (mm)    | 0.015              |      |       |
| Load Capacity (kg)          | 3                  |      |       |
| Weight (kg)                 | 1.51               | 1.51 | 1.51  |
| Table Material              | Aluminum           |      |       |
| Finish Treatment            | Black Anodized     |      |       |

# ICX-80-25 Series Manual Stage \_ Linear

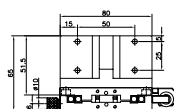
## ICZ-80C-25/ ICZ-80L-25 / ICZ-80R-25



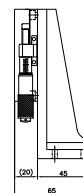
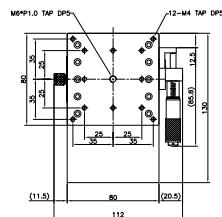
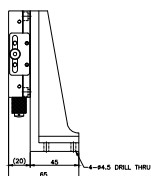
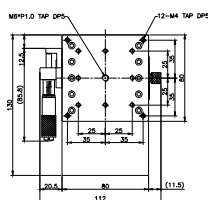
ICZ-80C-13



ICZ-80L-13



ICZ-80R-13



### Specification of Actuator

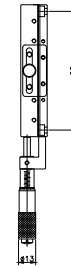
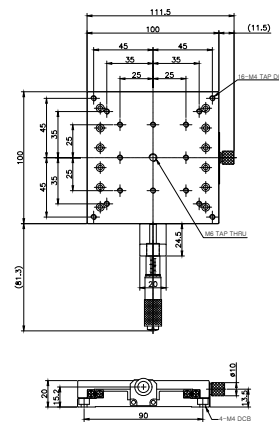
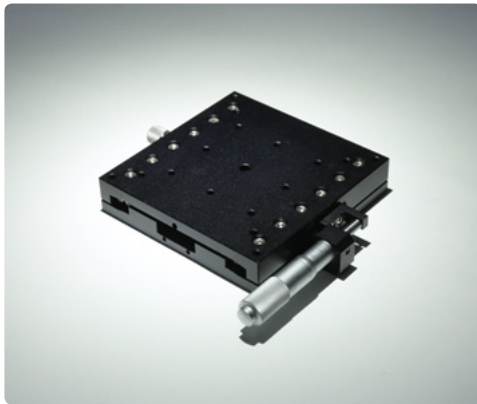
| Model                       | ICZ-80C-25         | ICZ-80L-25 | ICZ-80R-25 |
|-----------------------------|--------------------|------------|------------|
| Table Dimension (mm)        | 80 X 80            |            |            |
| Position of Micrometer Head | Center             | Left       | Right      |
| Travel Range (mm)           | ±12.5              |            |            |
| Guide Type                  | Cross Roller Guide |            |            |
| Readable Resolution (mm)    | 0.01               |            |            |
| Parallelism (mm)            | 0.03               |            |            |
| Running Parallelism (mm)    | 0.015              |            |            |
| Load Capacity (kg)          | 3                  |            |            |
| Weight (kg)                 | 0.69               | 0.69       | 0.69       |
| Table Material              | Aluminum           |            |            |
| Finish Treatment            | Black Anodized     |            |            |

# Manual Linear Stage ICX-100-25 Series

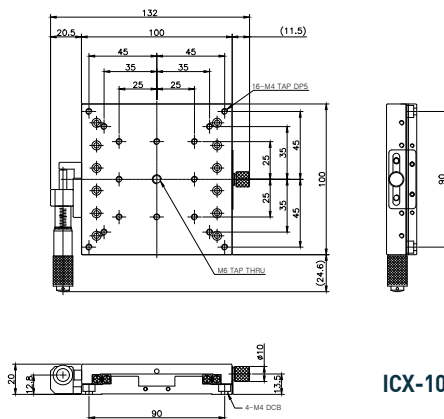
LEADING PRIDE KOREA

## ICX-100C-25 / ICX-100L-25 / ICX-100R-25

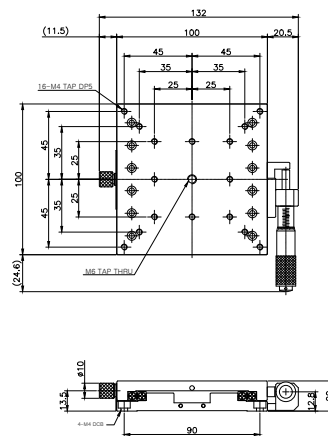
Manual  
Stage



ICX-100C-25



ICX-100L-25



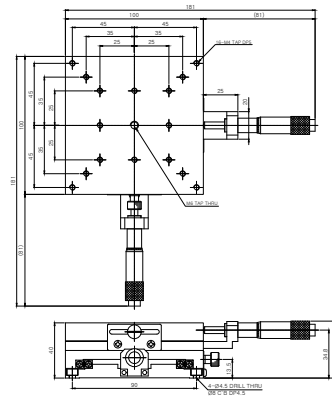
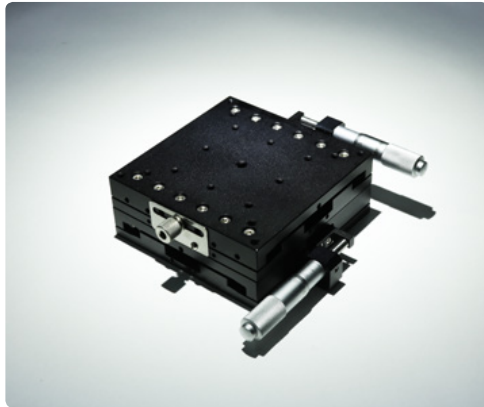
ICX-100R-25

### Specification of Actuator

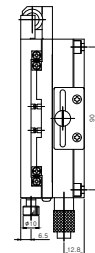
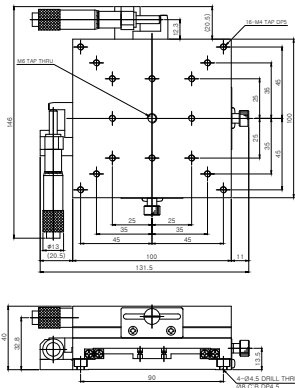
| Model                       | ICX-100C-25        | ICX-100L-25 | ICX-100R-25 |
|-----------------------------|--------------------|-------------|-------------|
| Table Dimension (mm)        | 100 X 100          |             |             |
| Position of Micrometer Head | Center             | Left        | Right       |
| Travel Range (mm)           | $\pm 12.5$         |             |             |
| Guide Type                  | Cross Roller Guide |             |             |
| Readable Resolution (mm)    | 0.01               |             |             |
| Parallelism (mm)            | 0.03               |             |             |
| Running Parallelism (mm)    | 0.015              |             |             |
| Load Capacity (kg)          | 12                 |             |             |
| Weight (kg)                 | 1                  | 1           | 1           |
| Table Material              | Aluminum           |             |             |
| Finish Treatment            | Black Anodized     |             |             |

# ICX-100-25 Series Manual Stage \_ Linear

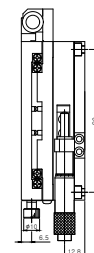
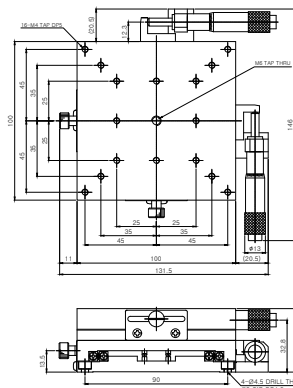
## ICXY-100C-25 / ICXY-100L-25 / ICXY-100R-25



ICXY-100C-25



ICXY-100L-25

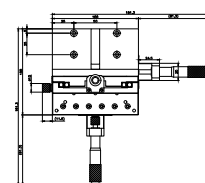


ICXY-100R-25

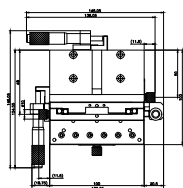
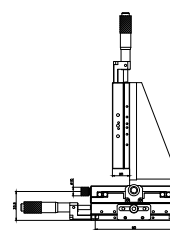
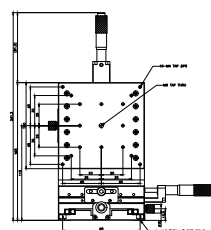
### Specification of Actuator

| Model                       | ICXY-100C-25       | ICXY-100L-25 | ICXY-100R-25 |
|-----------------------------|--------------------|--------------|--------------|
| Table Dimension (mm)        | 100 X 100          |              |              |
| Position of Micrometer Head | Center             | Left         | Right        |
| Travel Range (mm)           | ±12.5              |              |              |
| Guide Type                  | Cross Roller Guide |              |              |
| Readable Resolution (mm)    | 0.01               |              |              |
| Parallelism (mm)            | 0.03               |              |              |
| Running Parallelism (mm)    | 0.015              |              |              |
| Load Capacity (kg)          | 11                 |              |              |
| Weight (kg)                 | 2                  | 2            | 2            |
| Table Material              | Aluminum           |              |              |
| Finish Treatment            | Black Anodized     |              |              |

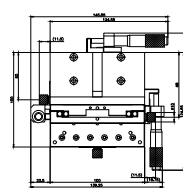
# ICXYZ-100C-25 / ICXYZ-100L-25 / ICXYZ-100R-25



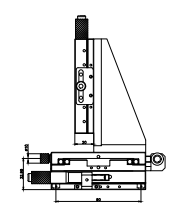
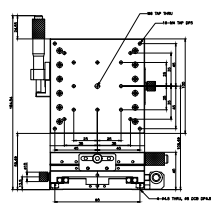
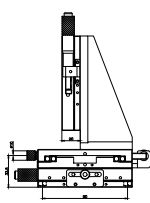
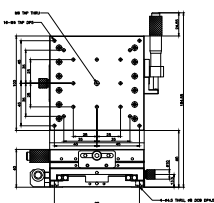
ICXYZ-100C-25



ICXYZ-100C-25



ICXYZ-100C-25

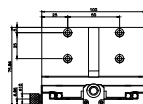


## Specification of Actuator

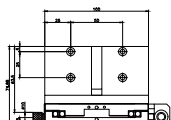
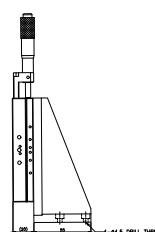
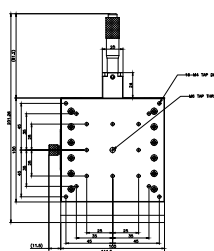
| Model                       | ICXYZ-100C-25      | ICXYZ-100L-25 | ICXYZ-100R-25 |
|-----------------------------|--------------------|---------------|---------------|
| Table Dimension (mm)        | 100 X 100          |               |               |
| Position of Micrometer Head | Center             | Left          | Right         |
| Travel Range (mm)           | ±12.5              |               |               |
| Guide Type                  | Cross Roller Guide |               |               |
| Readable Resolution (mm)    | 0.01               |               |               |
| Parallelism (mm)            | 0.03               |               |               |
| Running Parallelism (mm)    | 0.015              |               |               |
| Load Capacity (kg)          | 3                  |               |               |
| Weight (kg)                 | 3.5                | 3.5           | 3.5           |
| Table Material              | Aluminum           |               |               |
| Finish Treatment            | Black Anodized     |               |               |

# ICX-100-25 Series Manual Stage \_ Linear

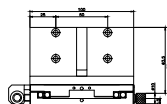
## ICZ-100C-25 / ICZ-100L-25 / ICZ-100R-25



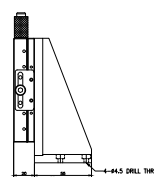
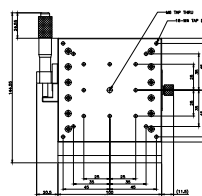
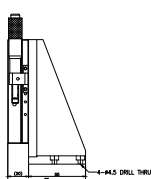
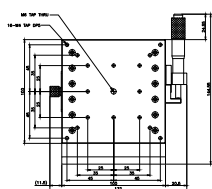
ICZ-100C-25



ICZ-100L-25



ICZ-100R-25



### Specification of Actuator

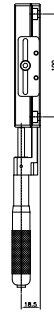
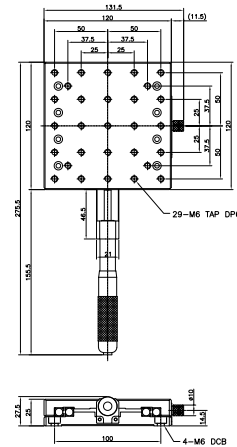
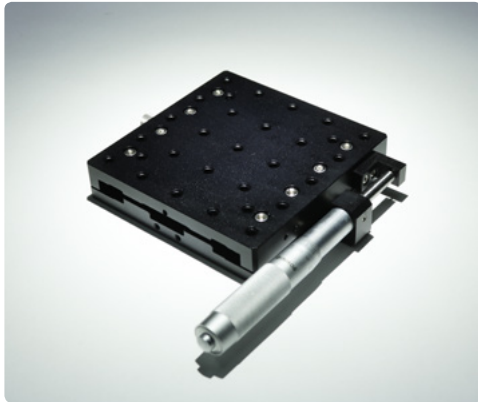
| Model                       | ICZ-100C-25        | ICZ-100L-25 | ICZ-100R-25 |
|-----------------------------|--------------------|-------------|-------------|
| Table Dimension (mm)        | 100 X 100          |             |             |
| Position of Micrometer Head | Center             | Left        | Right       |
| Travel Range (mm)           | $\pm 12.5$         |             |             |
| Guide Type                  | Cross Roller Guide |             |             |
| Readable Resolution (mm)    | 0.01               |             |             |
| Parallelism (mm)            | 0.03               |             |             |
| Running Parallelism (mm)    | 0.015              |             |             |
| Load Capacity (kg)          | 3                  |             |             |
| Weight (kg)                 | 1.5                | 1.5         | 1.5         |
| Table Material              | Aluminum           |             |             |
| Finish Treatment            | Black Anodized     |             |             |

# Manual Linear Stage ICX-120-50 Seriea

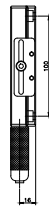
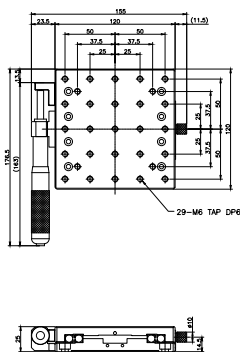
LEADING PRIDE KOREA

## ICX-120C-50 / ICX-120L-50 / ICX-120R-50

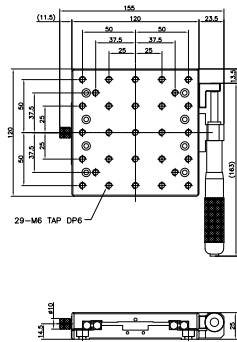
Manual  
Stage



ICX-120C-50



ICX-120L-50



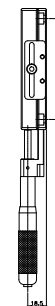
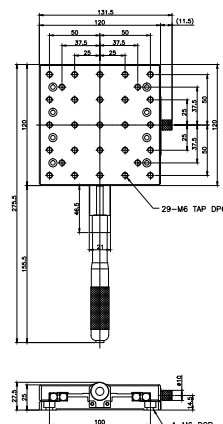
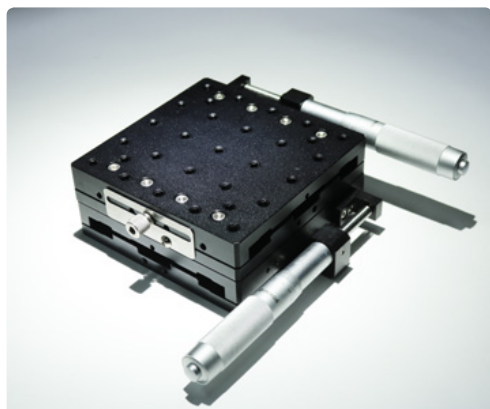
ICX-120R-50

### Specification of Actuator

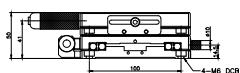
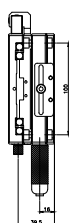
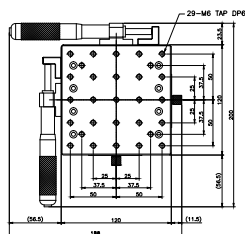
| Model                       | ICX-120C-50        | ICX-120L-50 | ICX-120R-50 |
|-----------------------------|--------------------|-------------|-------------|
| Table Dimension (mm)        | 120 X 120          |             |             |
| Position of Micrometer Head | Center             | Left        | Right       |
| Travel Range (mm)           | ±25                |             |             |
| Guide Type                  | Cross Roller Guide |             |             |
| Readable Resolution (mm)    | 0.01               |             |             |
| Parallelism (mm)            | 0.03               |             |             |
| Running Parallelism (mm)    | 0.02               |             |             |
| Load Capacity (kg)          | 12                 |             |             |
| Weight (kg)                 | 1.5                | 1.5         | 1.5         |
| Table Material              | Aluminum           |             |             |
| Finish Treatment            | Black Anodized     |             |             |

# ICX-120-50 Series Manual Stage \_ Linear

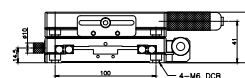
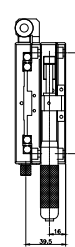
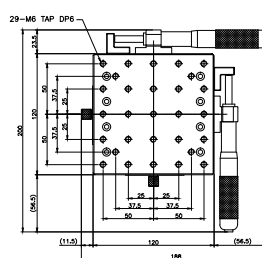
## ICXY-120C-50 / ICXY-120L-50 / ICXY-120R-50



ICXY-120C-50



ICXY-120L-50



ICXY-120R-50

### Specification of Actuator

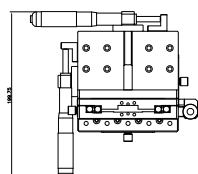
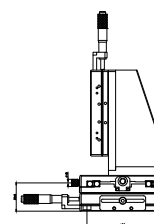
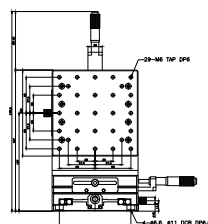
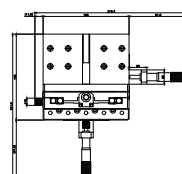
| Model                       | ICXY-120C-50       | ICXY-120L-50 | ICXY-120R-50 |
|-----------------------------|--------------------|--------------|--------------|
| Table Dimension (mm)        | 120 X 120          |              |              |
| Position of Micrometer Head | Center             | Left         | Right        |
| Travel Range (mm)           | ±25                |              |              |
| Guide Type                  | Cross Roller Guide |              |              |
| Readable Resolution (mm)    | 0.01               |              |              |
| Parallelism (mm)            | 0.03               |              |              |
| Running Parallelism (mm)    | 0.02               |              |              |
| Load Capacity (kg)          | 11                 |              |              |
| Weight (kg)                 | 3                  | 3            | 3            |
| Table Material              | Aluminum           |              |              |
| Finish Treatment            | Black Anodized     |              |              |



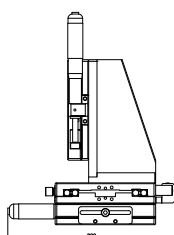
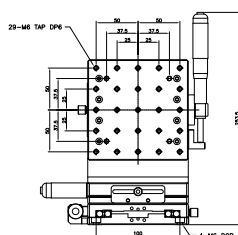
# ICXYZ-120C-50 / ICXYZ-120L-50 / ICXYZ-120R-50



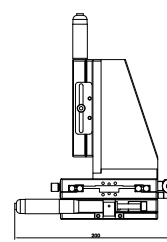
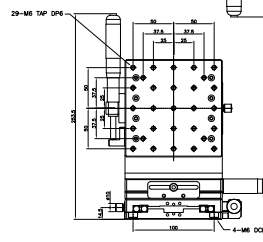
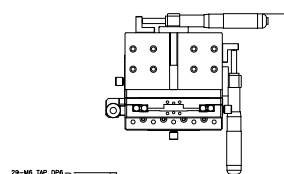
ICXYZ-120C-50



ICXYZ-120L-50



ICXYZ-120R-50

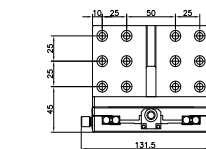


## Specification of Actuator

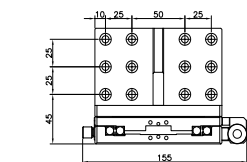
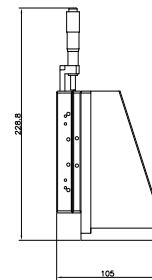
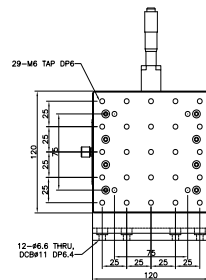
| Model                       | ICXYZ-120C-50      | ICXYZ-120L-50 | ICXYZ-120R-50 |
|-----------------------------|--------------------|---------------|---------------|
| Table Dimension (mm)        | 120 X 120          |               |               |
| Position of Micrometer Head | Center             | Left          | Right         |
| Travel Range (mm)           | ±25                |               |               |
| Guide Type                  | Cross Roller Guide |               |               |
| Readable Resolution (mm)    | 0.01               |               |               |
| Parallelism (mm)            | 0.03               |               |               |
| Running Parallelism (mm)    | 0.02               |               |               |
| Load Capacity (kg)          | 3                  |               |               |
| Weight (kg)                 | 5.8                | 5.8           | 5.8           |
| Table Material              | Aluminum           |               |               |
| Finish Treatment            | Black Anodized     |               |               |

# ICX-120-50 Series Manual Stage \_ Linear

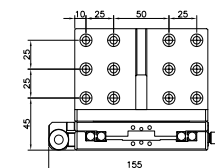
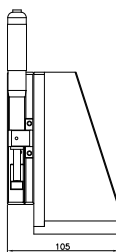
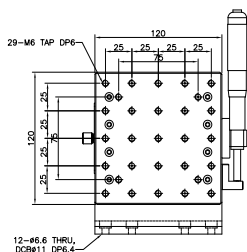
## ICZ-120C-50 / ICZ-120L-50 / ICZ-120R-50



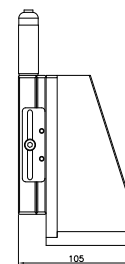
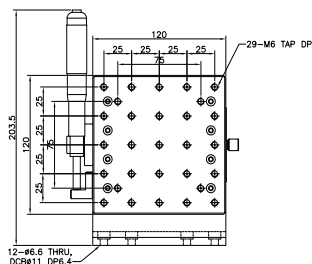
**ICZ-100C-25**



**ICZ-100L-25**



**ICZ-100R-25**



## Specification of Actuator

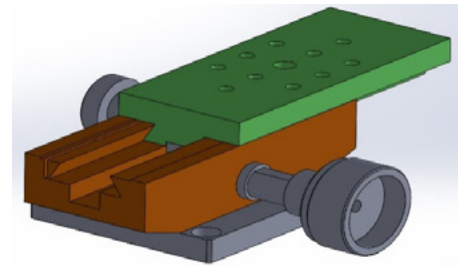
| Model                       | ICZ-120C-50        | ICZ-120L-50 | ICZ-120R-50 |
|-----------------------------|--------------------|-------------|-------------|
| Table Dimension (mm)        | 120 X 120          |             |             |
| Position of Micrometer Head | Center             | Left        | Right       |
| Travel Range (mm)           | ±25                |             |             |
| Guide Type                  | Cross Roller Guide |             |             |
| Readable Resolution (mm)    | 0.01               |             |             |
| Parallelism (mm)            | 0.03               |             |             |
| Running Parallelism (mm)    | 0.02               |             |             |
| Load Capacity (kg)          | 3                  |             |             |
| Weight (kg)                 | 2.3                | 2.3         | 2.3         |
| Table Material              | Aluminum           |             |             |
| Finish Treatment            | Black Anodized     |             |             |

## Tutorial

### Dovetail Slide Type

도브테일 슬라이드란, 접촉하는 2개의 면으로 구성된 안내방식입니다(그림-1).

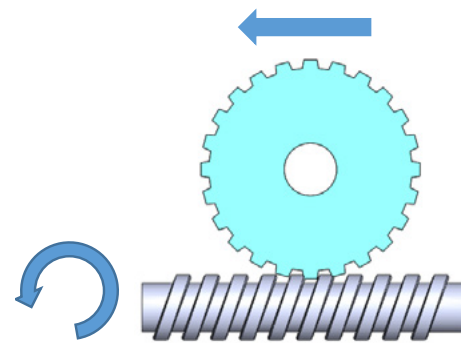
고정면과 이동면이 슬라이딩하기에 구조가 간소하며 사이에 이물질이 들어가기 어려운 구조입니다. 또한 지탱하는 접촉면적이 커서 충격하중과 큰 하중에 잘 견딜 수 있습니다.



[ 그림-1 ]

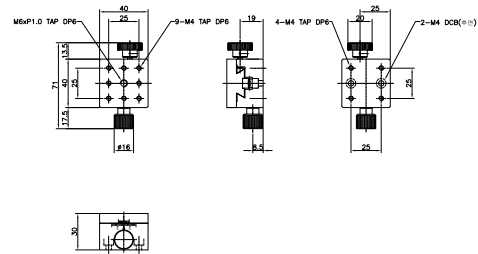
### Worm and Worm Wheel

원&웜휠의 맞물림으로 인해 강력한 힘을 낼 수 있습니다. 결과적으로 감속구동이 되지만 그로 인해 정밀한 보내기가 가능합니다.

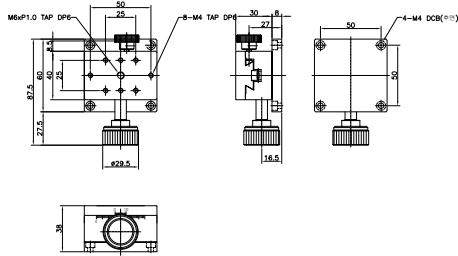


[ 그림-2 ]

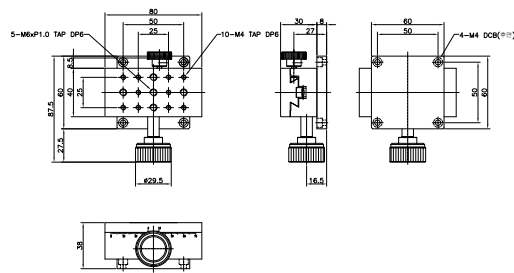
## ID1-40P / ID1-46P / ID1-48P



ID1-40P



ID1-46P

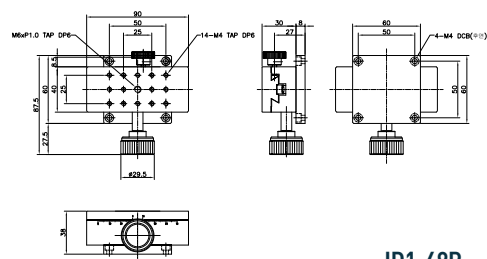


ID1-48P

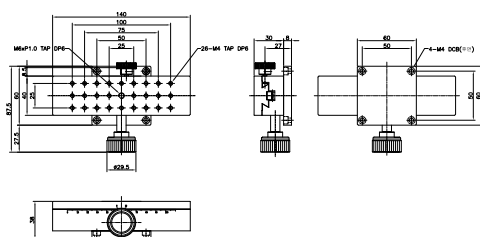
### Specification of Actuator

| Model                    | ID1-40P                | ID1-46P                | ID1-48P                |
|--------------------------|------------------------|------------------------|------------------------|
| Table Dimension (mm)     | 40 X 40                | 40 X 60                | 40 X 80                |
| Travel Range (mm)        | ±10                    | ±15                    | ±25                    |
| Guide Type               | Dovetail Rack & Pinion | Dovetail Rack & Pinion | Dovetail Rack & Pinion |
| Readable Resolution (mm) | 0.1                    | 0.1                    | 0.1                    |
| Parallelism (mm)         | 0.03                   | 0.03                   | 0.03                   |
| Running Parallelism (mm) | 2.5                    | 3                      | 3.5                    |
| Load Capacity (kg)       | 0.2                    | 0.31                   | 0.34                   |
| Weight (kg)              | 2.3                    | 2.3                    | 2.3                    |
| Table Material           | Aluminum               | Aluminum               | Aluminum               |
| Finish Treatment         | Black Anodized         | Black Anodized         | Black Anodized         |

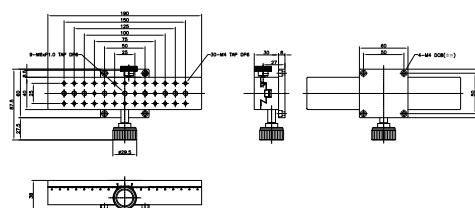
## ID1-49P / ID1-414P / ID1-419P



ID1-49P



ID1-414P

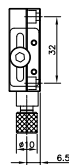
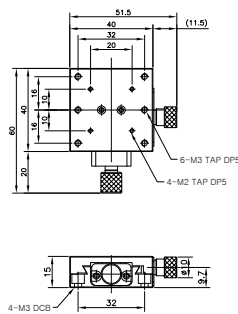
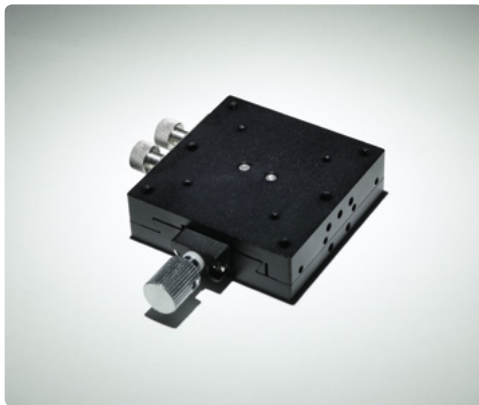


ID1-419P

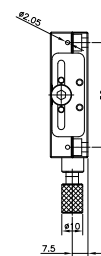
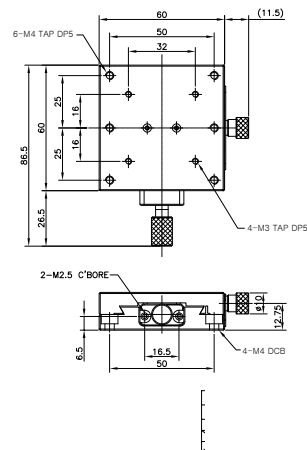
### Specification of Actuator

| Model                    | ID1-49P                | ID1-414P               | ID1-419P               |
|--------------------------|------------------------|------------------------|------------------------|
| Table Dimension (mm)     | 40 X 90                | 40 X 140               | 40 X 190               |
| Travel Range (mm)        | ±30                    | ±50                    | ±80                    |
| Guide Type               | Dovetail Rack & Pinion | Dovetail Rack & Pinion | Dovetail Rack & Pinion |
| Readable Resolution (mm) | 0.1                    | 0.1                    | 0.1                    |
| Parallelism (mm)         | 0.03                   | 0.03                   | 0.03                   |
| Running Parallelism (mm) | 4                      | 4                      | 5                      |
| Load Capacity (kg)       | 0.4                    | 0.55                   | 1                      |
| Weight (kg)              | 2.3                    | 2.3                    | 2.3                    |
| Table Material           | Aluminum               | Aluminum               | Aluminum               |
| Finish Treatment         | Black Anodized         | Black Anodized         | Black Anodized         |

## ID1-40S / ID1-60S



ID1-40S



ID1-60S

### Specification of Actuator

| Model                    | ID1-40S          | ID1-60S          |
|--------------------------|------------------|------------------|
| Table Dimension (mm)     | 40 X 40          | 60 X 60          |
| Travel Range (mm)        | ±10              | ±15              |
| Guide Type               | Dovetail & Screw | Dovetail & Screw |
| Readable Resolution (mm) | 0.1              | 0.1              |
| Straightness (mm)        | 0.03             | 0.03             |
| Load Capacity (kg)       | 2                | 3                |
| Weight (kg)              | 0.17             | 0.2              |
| Table Material           | Aluminum         | Aluminum         |
| Finish Treatment         | Black Anodized   | Black Anodized   |
| Finish Treatment         | Black Anodized   | Black Anodized   |

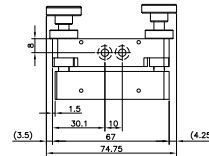
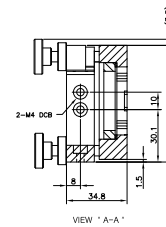
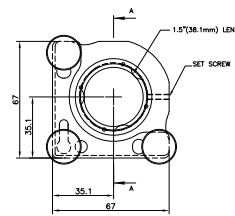
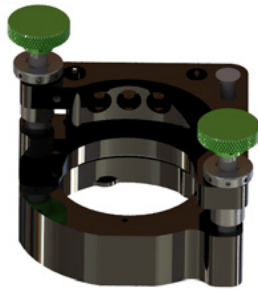
# Manual Stage Optical Mount

LEADING PRIDE KOREA

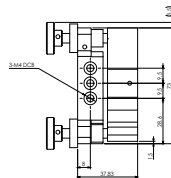
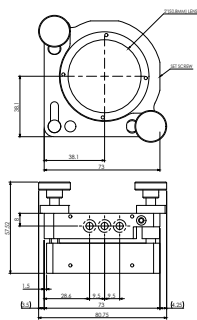
## Manual Stage Optical Mount

IMM15-3LK / IMM20-2LK / IMM20-T45

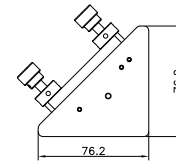
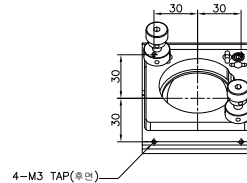
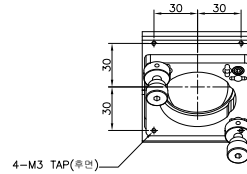
Manual  
Stage



IMM15-3LK



IMM20-2LK



IMM20-T45

### Specification of Actuator

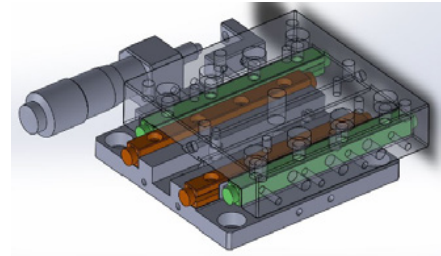
| Model                    | IMM15-3LK                     | IMM20-2LK                     | IMM20-T45                     |
|--------------------------|-------------------------------|-------------------------------|-------------------------------|
| Optic Dimension (mm)     | 1.5 in (38.1mm)               | 2 in (50.8mm)                 | 2 in (50.8mm)                 |
| Mechanism                | Kinematic                     | Kinematic                     | Kinematic                     |
| Drive Type               | 3 Point Knob                  | 2 Point Knob                  | 2 Point Knob                  |
| Adjustments              | Z, $\phi$ X, $\phi$ Y         | $\phi$ X, $\phi$ Y            | $\phi$ X, $\phi$ Y            |
| Special Features         | Center Mount                  | Center Mount                  | Center Mount                  |
| Angular Range            | $\pm 3^\circ$                 | $\pm 3^\circ$                 | $\pm 4^\circ$                 |
| Adjustments Screw Thread | 72 TPI                        | 72 TPI                        | 72 TPI                        |
| Mounting Type            | Clearance Hole for 8-32 or M4 | Clearance Hole for 8-32 or M4 | Clearance Hole for 8-32 or M4 |
| Weight (kg)              | 0.23                          | 0.24                          | 0.49                          |
| Table Material           | Aluminum                      | Aluminum                      | Aluminum                      |
| Finish Treatment         | Black Anodized                | Black Anodized                | Black Anodized                |

## Tutorial

### Cross Roller Guide Type

크로스롤러 가이드란 90°의 V홈을 가지는 롤러의 레일과 원통 니들로 구성된 안내방식입니다. (그림-1 참조) 롤러 레일의 슬라이딩 면은 담금질 연삭 과정으로 평면 정도가 높으며 경질로 마감되었습니다.

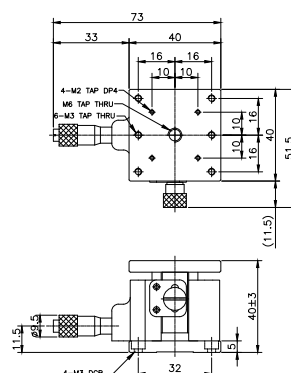
원통 니들은 2개의 롤러 레일 사이에 서로 교차하여 배치되어 있습니다. 스테이지 구동 시 롤러 레일 사이의 여러 개의 원통 니들이 움직이기에 정지 시에서 움직일 때의 마찰 변화가 적고 동작 시 미끄러짐이 발생하기 어렵습니다. 또한, 크로스롤러가이드는 선접촉으로 하중을 지탱하기 때문에 볼 가이드 구조보다 강성이 좋습니다. 또한 롤러 레일과 원통 니들 간의 예압을 정밀하게 관리하여 높은 정도와 강성을 유지합니다.



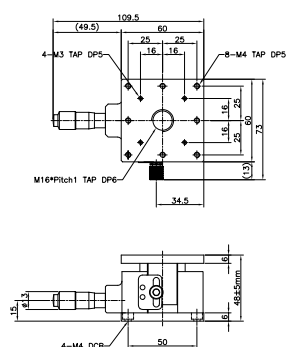
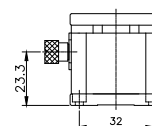
[ 그림-1 ]



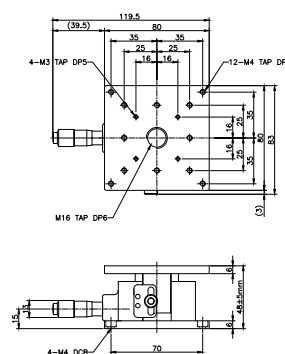
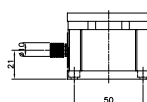
# ICHZ-40 / ICHZ-60 / ICHZ-80



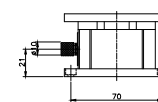
ICHZ-40



ICHZ-60



ICHZ-80

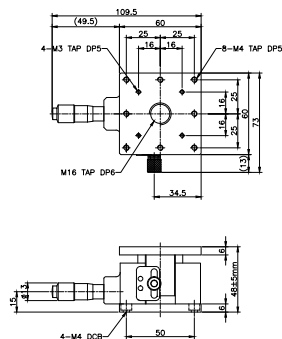
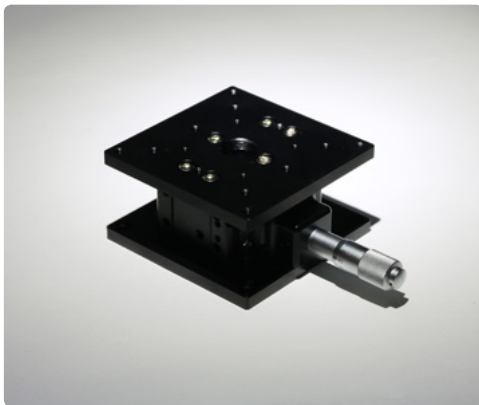


## Specification of Actuator

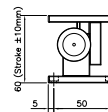
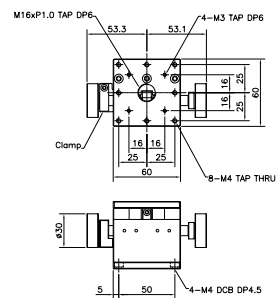
| Model                    | ICHZ-40            | ICHZ-60            | ICHZ-80            |
|--------------------------|--------------------|--------------------|--------------------|
| Table Dimension (mm)     | 40 X 40            | 60 X 60            | 80 X 80            |
| Travel Range (mm)        | ±3                 | ±5                 | ±5                 |
| Guide Type               | Cross Roller Guide | Cross Roller Guide | Cross Roller Guide |
| Readable Resolution (mm) | 0.01               | 0.01               | 0.01               |
| Parallelism (mm)         | 0.06               | 0.065              | 0.08               |
| Running Parallelism (mm) | 0.025              | 0.025              | 0.02               |
| Load Capacity (kg)       | 3                  | 5                  | 5                  |
| Weight (kg)              | 0.15               | 0.45               | 0.55               |
| Table Material           | Aluminum           | Aluminum           | Aluminum           |
| Finish Treatment         | Black Anodized     | Black Anodized     | Black Anodized     |

# ICHZ Series Manual Stage \_ Horizontal Z-Axis

## ICHZ-60-M / IDHZ-60-M



**ICHZ-60-M**



IDHZ-60-M

## Specification of Actuator

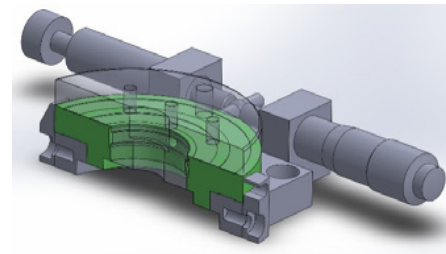
| Model                    | ICHZ-60-M          | IDHZ-60-M          |
|--------------------------|--------------------|--------------------|
| Table Dimension (mm)     | 60 X 60            | 60 X 60            |
| Travel Range (mm)        | ±5                 | ±10                |
| Guide Type               | Cross Roller Guide | Cross Roller Guide |
| Readable Resolution (mm) | 0.01               | 0.1                |
| Parallelism (mm)         | 0.08               | 0.1                |
| Running Parallelism (mm) | 0.02               | 0.03               |
| Load Capacity (kg)       | 5                  | 1.5                |
| Weight (kg)              | 0.3                | 0.47               |
| Table Material           | Aluminum           | Aluminum           |
| Finish Treatment         | Black Anodized     | Black Anodized     |

## Tutorial

### Slide Bush

슬라이드 가이드란 접촉하는 2개의 면으로 구성된 안내방식입니다.(그림-1)

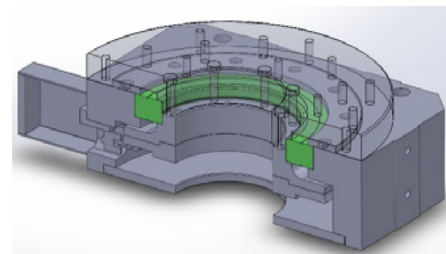
고정면과 이동면이 슬라이딩하기에 구조가 간소하며, 사이에 이물질이 들어가기 어려운 구조입니다. 또한 지탱하는 접촉면적이 커서 충격하중과 큰 하중에 잘 견딜 수 있습니다.



[ 그림-1 ]

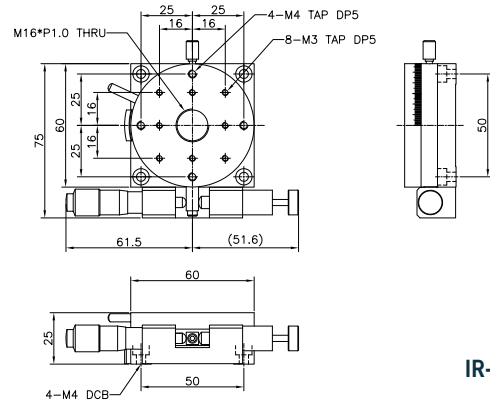
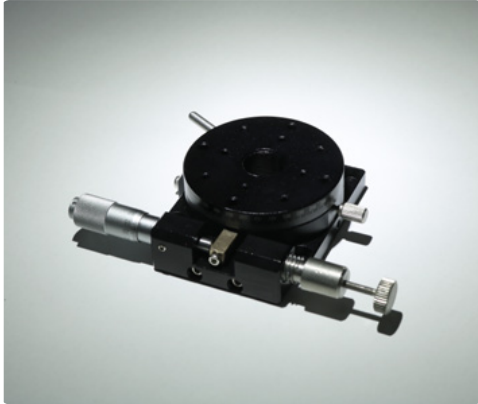
### Cross Roller Bearing

크로스롤러 베어링이란 90°의 V홈을 가지는 롤러 레일과 원통 니들로 구성된 안내방식입니다. 롤러 레일의 슬라이딩 면은 담금질 마무리로 평면 정도가 높고 경질로 마감되어 있습니다. 원통 니들은 2개의 롤러 레일 사이에 교차하여 배치되어 있으며, 스테이지가 구동할 때에는 롤러 레일 사이의 여러 개의 원통 니들이 움직이기 때문에 정지 시에서 움직일 때의 마찰 변화가 적고, 동작 시 미끄러짐이 발생하기 어렵습니다. 크로스롤러 가이드 특성상 선접촉으로 하중을 지탱하는 볼가이드 방식보다 강성이 높습니다.

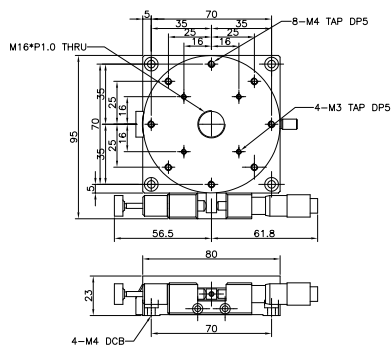


[ 그림-2 ]

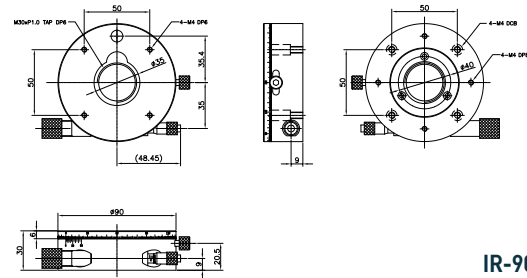
## IR-60 / IR-80 / IR-90



IR-60



IR-80



IR-90

### Specification of Actuator

| Model                    | IR-60 (L,R)            | IR-80 (L,R)            | IR-90 (L,R)            |
|--------------------------|------------------------|------------------------|------------------------|
| Table Dimension (mm)     | Ø60                    | Ø80                    | Ø90                    |
| Travel Range (mm)        | Coarse:Ø360°, Fine:±5° | Coarse:Ø360°, Fine:±5° | Coarse:Ø360°, Fine:±5° |
| Guide Type               | Bush                   | Bush                   | Bush                   |
| Readable Resolution (mm) | 1°                     | 1°                     | 1°                     |
| Straightness (mm)        | 0.03                   | 0.03                   | 0.03                   |
| Load Capacity (kg)       | 3                      | 4                      | 3                      |
| Weight (kg)              | 1                      | 1.2                    | 1.3                    |
| Table Material           | Aluminum               | Aluminum               | Aluminum               |
| Finish Treatment         | Black Anodized         | Black Anodized         | Black Anodized         |



# Motorized Stage



Tutorial

Linear

Rotary

# Motorized Stage

## Motorized Stage Common Guidance

### Option Motor Change

#### 모터 교환에 관해서

고객사님의 요청에 따라, 표준 모터를 지정하신 모터로 변경할 수 있습니다.

- 교환 모터의 사양에 따라서는 카달로그 스펙을 만족하지 못하는 경우가 있습니다.
- 스텝핑 모터 이외의 교환은 표준 모터로만 정도검사를 실시합니다.

#### 교환비용

모터 교환비용은 Inno6로 문의주세요.

동형모터 교환비 : 표준모터와 같은 취부 사이즈, 축경의 스텝핑 모터인 경우 이형모터 교환비:표준모터와 취부사이즈 또는 축경이 다른 경우

- 교환비용에는 모터비용은 포함되어 있지 않기 때문에 사급이 아닌 경우 별도 비용이 발생합니다.
- 이형모터 교환비는 모터부 원반 이 있는 기종은 모터부 원반없이 제작됩니다. 필요한 경우는 별도 추가 비용이 발생 합니다.
- 모터 교환비는 모터의 형상에 따라 별도 비용이 발생할 수 있습니다. 반드시 변경하실 모터의 형식을 알려주시기 바랍니다.

### Option Lubricant Change

고객의 요청에 따라 Grease 변경이 가능합니다.

해당 품목 : Clean Grease or Vacuum Grease

- Grease 이외, 부품 / 표면처리 / 조립환경은 동일합니다.
- 해당 Grease의 교환은 환경(Clean Room, Vacuum)의 사용을 보장하지는 않습니다.

※ Clean Grease

※ Vacuum Grease

※ Grease 도포 부위

- Guide : Sliding Face, Bearing, Screw, worm & wheel, Rack & Pinion
- Micrometer Head & Adjustment Screw

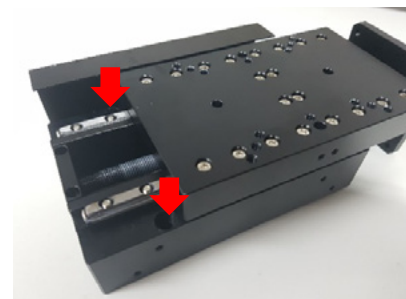


### Stage installation

스테이지를 다른 스테이지 또는 정반에 취부 할 때는 스테이지와 모터 컨트롤러 또한 모터 드라이버를 연결 하고, 나사의 취부 구멍이 보일 때까지 테이블면을 이동시킵니다. 스테이지 취부 구멍 위치를 확보하기 위해 스페이서도 옵션으로 준비되어 있습니다.

※ 스테이지에 따라 구동만으로는 취부 구멍이 확보되지 않는 경우가 있습니다. 모터의 축을 직접 돌려 테이블 면을 이동시키면 센서에 손상을 주는 등 심각한 파손이 발생할 수 있습니다.

취부 구멍 확보된 시점에서 이동을 멈추고 주의하여 작업해주세요.



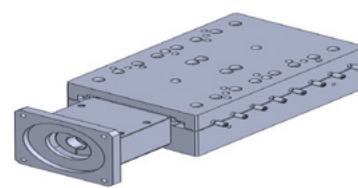
### Attention

#### Delicate Treatment



Stage를 떨어뜨렸을 경우, 전동면에 전동체가 부딪힌 흔적이 나타나게 되어, 원활한 운동을 할 수 없으며 정도에도 영향을 주기에 신중하게 취급해야 합니다.

#### Pre-Load



설치면의 정밀도나 예압의 조정이 불충분한 상태로 사용하는 경우 내부 베어링의 운동 저하 및 가이드 휨의 원인으로 제품의 수명에도 영향을 줍니다. 해당 예압 조정이 필요 시, 반드시 당사에 연락을 취하여 안내를 받으시기 바랍니다.

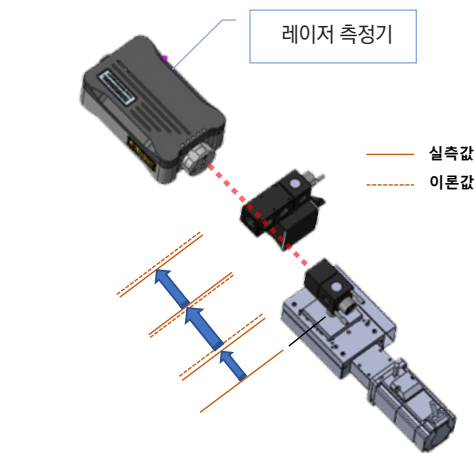
# Motorized Stage Common Guidance

## Measurement

### 누적 리드 오차 (위치 결정 정도)

Accumulated Lead Error (Positioning Accuracy)

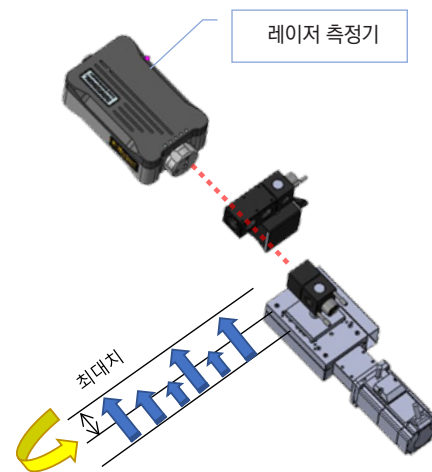
기준점에서 한 방향으로 일정 간격으로 순차적 위치결정을 실시하고, 각각의 위치 결정 지점에서의 측정값(기준점에서 실제로 이동한 위치)과 지령값(지령한 실제로 이동해야 하는 위치)의 차이를 테이블의 이동범위에서 측정하고 그 차이의 최대 차이값을 누적 리드오차 (위치 결정 정도)라고 합니다.



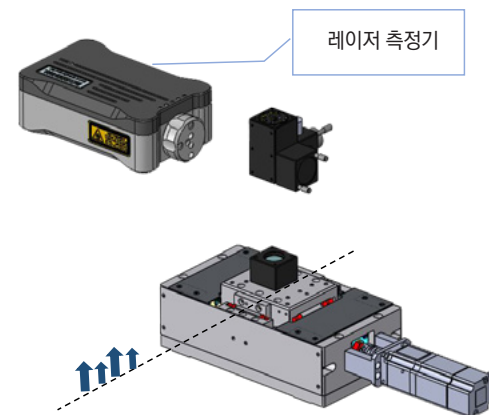
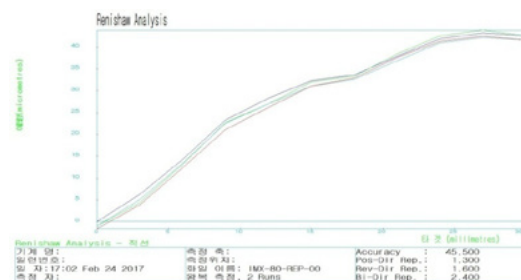
### 한방향 반복 위치 결정 정도

Uni-Repeatability

임의의 한 점에서 같은 방향으로 위치결정을 하고 그 위치를 측정합니다. 이 측정점에 대해서 반복측정을 하고 그 최대 차이를 구합니다. 이 조작을 소정의 위치에서 하고 구한 값의 최대값의 1/2에 ±를 붙인 값을 반복 위치 결정 정도라고 합니다.



Motorized Linear Stage



Motorized Horizontal Z-Axis Stage

# Motorized Stage

## Motorized Stage Common Guidance

### 양방향 반복 위치 결정 정도

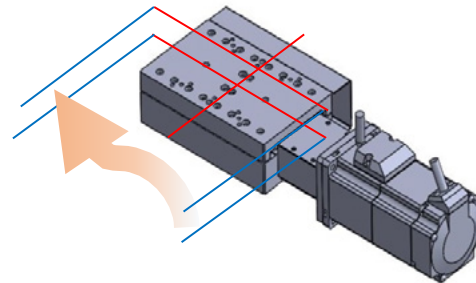
Bi-Repeatability

소정의 위치에 대해서 정방향부터 위치 결정하고 그 위치를 측정합니다.(M1) 그리고 정 방향으로 이동 한 후, 부방향으로 같은 양의 지령을 주고 이동시켜 위치결정을 하고 그 위치를 측정합니다.(M1') 그리고 부방향으로 이동한 후 정방향으로 같은 양의 지령을 주고 이동시켜 위치결정을 하고 그 위치를 측정합니다.(M2) 이 위치결정 측정을 정방향, 부방향으로 반복 실시하고, 각각의 차이를 구해 그 값을 평균화 한 소정의 위치 안에서서의 최대값을 Bi-Repeatability이라고 합니다.

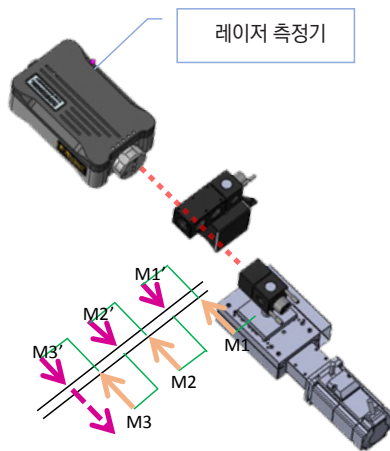
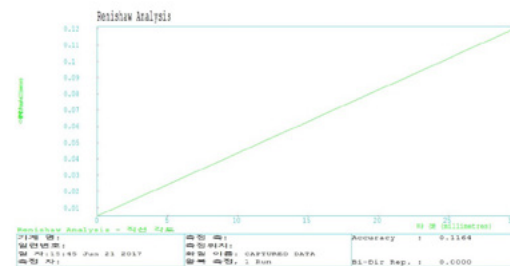
단, 소정의 위치란, X스테이지 중앙, 양끝의 3점이고, 스위벨 및 Z스테이지는 중앙의 1점으로 합니다.

### 수직 진직도

Straightness(Within the Vertical Plan)



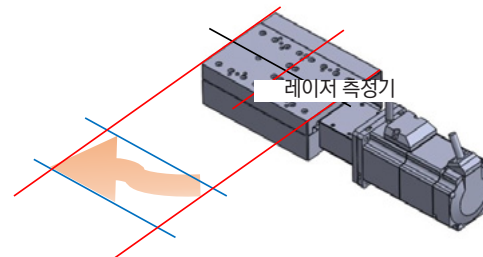
Motorized Linear Stage



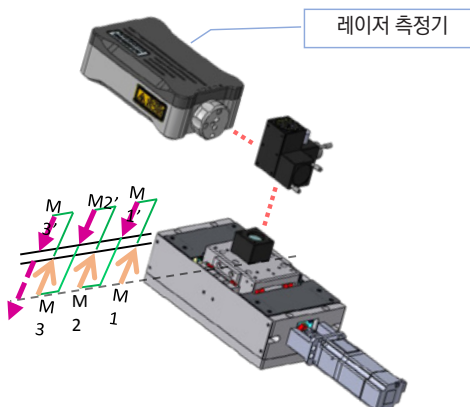
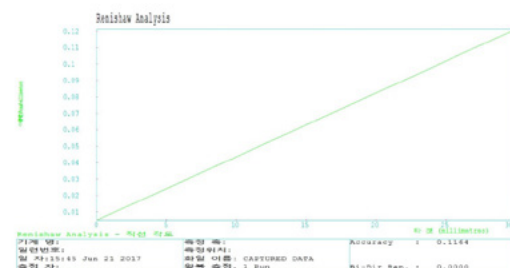
Motorized Linear Stage

### 수평 진직도

Straightness(Within the Horizontal Plan)



Motorized Linear Stage



Motorized Horizontal Z-Axis Stage

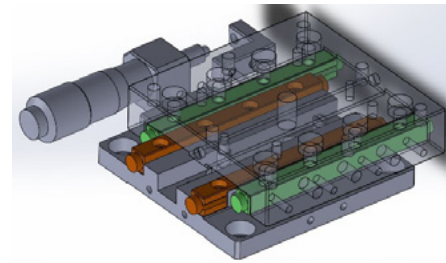


## Tutorial

### Cross Roller Guide Type

크로스롤러 가이드란 90°의 V홈을 가지는 롤러의 레일과 원통 니들로 구성된 안내방식입니다. (그림-1 참조) 롤러 레일의 슬라이딩 면은 담금질 연삭 공정으로 평면 정도가 높으며 경질로 마감되었습니다.

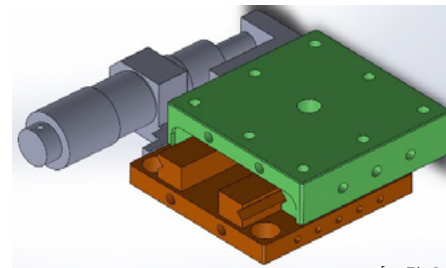
원통 니들은 2개의 롤러 레일 사이에 서로 교차하여 배치되어 있습니다. 스테이지 구동 시 롤러 레일 사이의 여러 개의 원통 니들이 움직이기에 정지 시에서 움직일 때의 마찰 변화가 적고 동작 시 미끄러짐이 발생하기 어렵습니다. 또한, 크로스롤러가이드는 선접촉으로 하중을 지탱하기 때문에 볼 가이드 구조보다 강성이 좋습니다. 또한 롤러 레일과 원통 니들 간의 예압을 정밀하게 관리하여 높은 정도와 강성을 유지합니다.



[ 그림-1 ]

### Linear Ball Guide Type

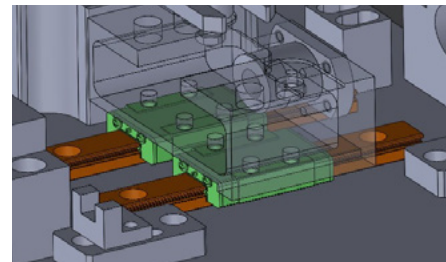
리니어 볼가이드란 90°의 V홈을 가지는 롤러의 레일과 볼로 구성된 안내방식입니다. (그림-2 참조) 롤러 레일면은 연삭 공정으로 평면 정도가 높습니다. 볼은 슬라이딩면이 만드는 V홈 사이에 배치되어 있습니다. V면과 볼은 서로 4점 접촉으로 동작 시 미끄러짐이 발생하기 어렵습니다. 또한 예압관리는 마이크로 단위의 볼 크기로 이루어지기 때문에 부품 수도 적으며, 공간적으로 컴팩트합니다.



[ 그림-2 ]

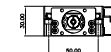
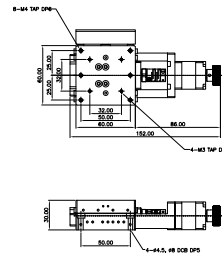
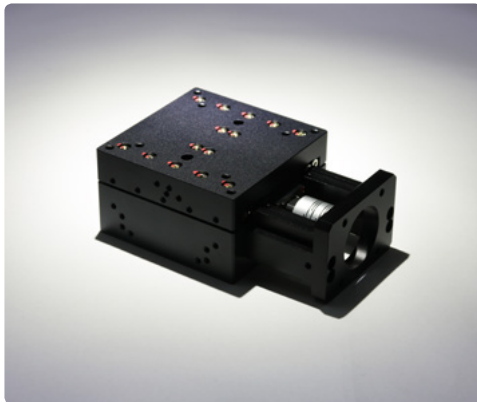
### LM Guide Type

LM 가이드란 레일과 순환하는 볼로 구성된 안내방식입니다. 그림-3 과 같이 볼은 레일의 홈에서 구르고 LM블록 끝에 설치된 엔드캡으로 회수되고, LM블록 본체에 있는 순환구멍을 통해 다른 편 끝으로 돌아가는 순환 구조입니다. 레일은 슬라이딩면의 담금질 마감으로 인해 평면 정도가 높고 경질로 마감되어 있으며, 볼은 슬라이딩 면이 만드는 원통홈 사이에 배치되어 있습니다. 원통면과 볼은 4점 접촉으로 인하여 동작 시 미끄러짐이 발생하기 어렵습니다.

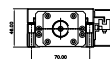
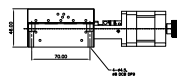
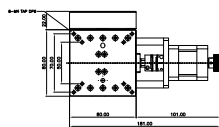


[ 그림-3 ]

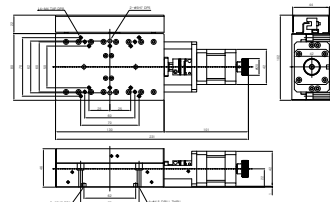
## IMX-60 /IMX-80 / IMX-812



IMX-60



IMX-80



IMX-812

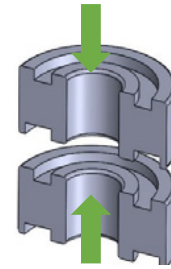
### Specification of Actuator

| Model                    | IMX-60                                       | IMX-80                                       | IMX-812                                      |
|--------------------------|----------------------------------------------|----------------------------------------------|----------------------------------------------|
| Table Dimension (mm)     | 60x60                                        | 80x80                                        | 80x130                                       |
| Travel Range (mm)        | 20                                           | 30                                           | 60                                           |
| Travel Guide             | Ball Screw Ø6 Lead 1mm<br>Cross Roller Guide | Ball Screw Ø8 Lead 1mm<br>Cross Roller Guide | Ball Screw Ø8 Lead 1mm<br>Cross Roller Guide |
| Resolution (mm)          | 0.002/Pulse (Full Step)                      | 0.002/Pulse (Full Step)                      | 0.002/Pulse (Full Step)                      |
| Max Speed (mm/s)         | 20 (10kHz)                                   | 10 (10kHz)                                   | 10 (10kHz)                                   |
| Ball Screw Grade (JIS)   | C5 (C7)                                      | C5 (C7)                                      | C5 (C7)                                      |
| Accuracy (μm)            | 5 (10)                                       | 7 (12)                                       | 7 (12)                                       |
| Uni-Repeatability (μm)   | ±0.5 (±1)                                    | ±0.5 (±1)                                    | ±0.5 (±1)                                    |
| Bi-Repeatability (μm)    | ±1.5 (±3)                                    | ±0.5 (±1)                                    | ±1.5 (±3)                                    |
| Pitching (Arc sec)       | 30"                                          | 30"                                          | 30"                                          |
| Yawing (Arc sec)         | 25"                                          | 25"                                          | 30"                                          |
| Parallelism (mm)         | 0.02                                         | 0.02                                         | 0.02                                         |
| Running Parallelism (mm) | 0.01                                         | 0.01                                         | 0.015                                        |
| Straightness (mm)        | 0.008                                        | 0.008                                        | 0.008                                        |
| Load Capacity (Kg)       | 5                                            | 10                                           | 15                                           |
| Weight (Kg)              | 0.44                                         | 1.4                                          | 1.8                                          |
| Material                 | Aluminum                                     | Aluminum                                     | Aluminum                                     |
| Finish Treatment         | Black Anodized                               | Black Anodized                               | Black Anodized                               |
| Motor Model              | CRK523HPBPB (5P STEP)                        | PK-545-NBW (5P STEP)                         | PK-545-NBW (5P STEP)                         |
| Drive Model              | Motor Drive set                              | CRD5107PB                                    | CRD5107PB                                    |
| Sensor                   | 1 Home Sensor,<br>2 Limit Sensor             | 1 Home Sensor,<br>2 Limit Sensor             | 1 Home Sensor,<br>2 Limit Sensor             |
| Connector Spec.          | HR-10A-10J-12P (Male) (HRS)                  | SRCN6A21-16P(Female) (SAMWOO)                | SRCN6A21-16P(Female) (SAMWOO)                |

## Tutorial

### Angular Bearing

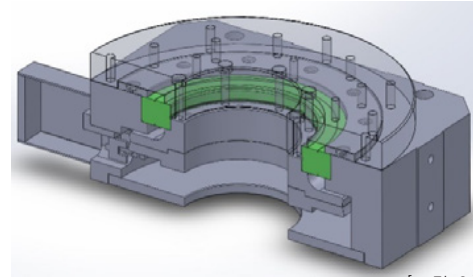
앵글러 베어링이란 접촉각을 가진 베어링으로 한 방향의 Axial 하중 또는 합성하중을 받는 경우에 매우 적합합니다. (그림-1 참조) 베어링 배열 또한 대향방향으로 서로 마주보게 하여 사용하므로, Radial 방향과 Axial 방향의 양방향의 하중에 대하여 강성을 가지게 할 수 있습니다.



[그림-1]

### Cross Roller Bearing

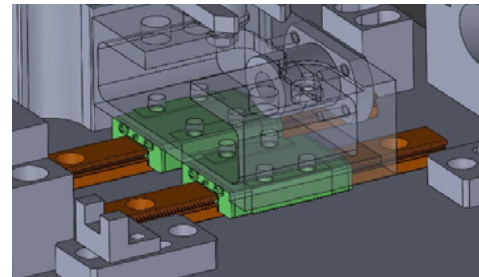
크로스롤러 베어링이란 90°의 V홈을 가지는 롤러 레일과 원통 니들로 구성된 안내방식입니다. 롤러 레일의 슬라이딩 면은 담금질 마무리로 평면 정도가 높고 경질로 마감되어 있습니다. 원통 니들은 2개의 롤러 레일 사이에 교차하여 배치되어 있으며, 스테이지가 구동할 때에는 롤러 레일 사이의 여러 개의 원통 니들이 움직이기 때문에 정지 시에서 움직일 때의 마찰 변화가 적고, 동자가시 미끄러짐이 발생하기 어렵습니다. 크로스롤러 가이드 특성상 선접촉으로 하중을 지탱하는 볼가이드 방식보다 강성이 높습니다.



[그림-2]

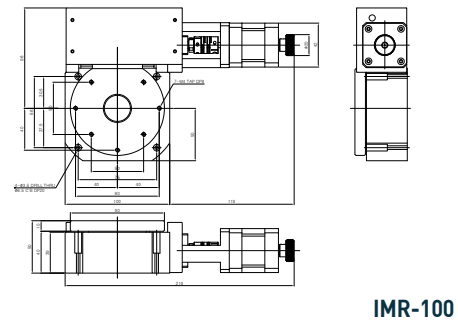
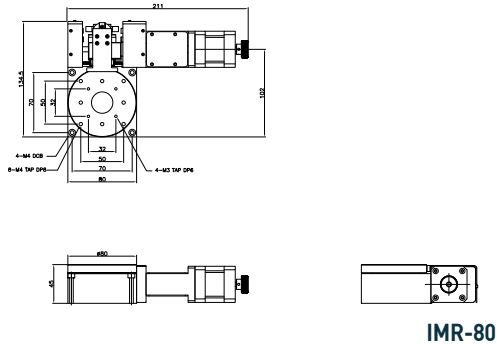
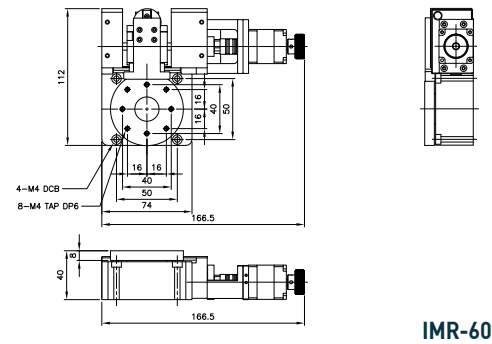
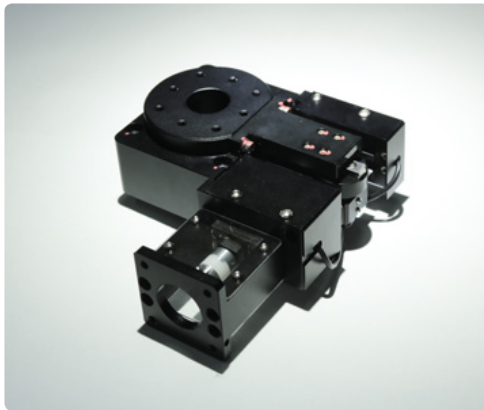
### LM Guide (Sub Guide)

LM 가이드란 레일과 순환하는 볼로 구성된 안내방식입니다. 그림-3 과 같이 볼은 레일의 홈에서 구르고 LM블록 끝에 설치된 엔드캡으로 회수되고, LM블록 본체에 있는 순환구멍을 통해 다른 편 끝으로 돌아가는 순환 구조입니다. 레일은 슬라이딩면의 담금질 마감으로 인해 평면 정도가 높고 경질로 마감되어 있으며, 볼은 슬라이딩 면이 만드는 원통홈 사이에 배치되어 있습니다. 원통면과 볼은 4점 접촉으로 인하여 동작 시 미끄러짐이 발생하기 어렵습니다.



[그림-3]

## IMR-60 / IMR-80 / IMR-100



### Specification of Actuator

| Model                | IMR-60                                            | IMR-80                                            | IMR-100                                           |
|----------------------|---------------------------------------------------|---------------------------------------------------|---------------------------------------------------|
| Table Dimension (mm) | Ø60                                               | Ø80                                               | Ø60                                               |
| Travel Range (mm)    | ±5°                                               | ±5°                                               | ±5°                                               |
| Travel Guide         | Ball Screw Ø6 Lead 1mm<br>LM Guide, Trust Bearing | Ball Screw Ø6 Lead 1mm<br>LM Guide, Trust Bearing | Ball Screw Ø6 Lead 1mm<br>LM Guide, Trust Bearing |
| Resolution (mm)      | 0.0027°/Pulse (Full Step)                         | 0.002°/Pulse (Full Step)                          | 0.0018°/Pulse (Full Step)                         |
| Max Speed            | 10°/s (5kHz)                                      | 10°/s (5kHz)                                      | 10°/s (5kHz)                                      |
| Ball Screw Grade     | C7                                                | C7                                                | C7                                                |
| Accuracy             | 0.05°                                             | 0.05°                                             | 0.05°                                             |
| Uni-Repeatability    | ±0.007°                                           | ±0.01°                                            | ±0.01°                                            |
| Backlash             | 0.02°                                             | 0.02°                                             | 0.02°                                             |
| Parallelism (mm)     | 0.04                                              | 0.04                                              | 0.04                                              |
| Load Capacity (Kg)   | 5                                                 | 5                                                 | 8                                                 |
| Weight (Kg)          | 1.6                                               | 2                                                 | 4                                                 |
| Material             | Aluminum                                          | Aluminum                                          | Aluminum                                          |
| Finish Treatment     | Black Anodized                                    | Black Anodized                                    | Black Anodized                                    |
| Motor Model          | PK-545-NBW (5P STEP)                              | PK-545-NBW (5P STEP)                              | PK-545-NBW (5P STEP)                              |
| Drive Model          | CRD5107PB                                         | CRD5107PB                                         | CRD5107PB                                         |
| Sensor               | 1 Home Sensor,<br>2 Limit Sensor                  | 1 Home Sensor,<br>2 Limit Sensor                  | 1 Home Sensor,<br>2 Limit Sensor                  |
| Connector Spec.      | HR-10A-10J-12P                                    | HR-10A-10J-12P                                    | HR-10A-10J-12P                                    |



# Alignment UVW

IAU Series

# Alignment UVW

Alignment UVW

## IAU Series Model Code

IAU L - 200 10 - C - 3 O - PK545NBW - ■ - L■

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩

### ① INNO6 Alignment UVW

#### ② Type

빈칸 - Ball\_Screw Type

L - Liner Motor Type

#### ③ Mover Size

200 - 200mm x 200mm

300 - 300mm x 300mm

400 - 400mm x 400mm

500 - 500mm x 500mm

etc ...

#### ④ STROKE

10 - XY :  $\pm 5\text{mm}$

20 - XY :  $\pm 10\text{mm}$

30 - XY :  $\pm 15\text{mm}$

Theta :  $\pm 2.5^\circ$

(The rotation is the maximum at the center)

#### ⑤ Guide Type

C - Cross Roller Guide

L - LM Guide

#### ⑥ Ball\_Screw Lead

L1 - Lead 1mm

L2 - Lead 2mm

L5 - Lead 5mm

etc ...

#### ⑦ Motor / Drive 포함여부

빈칸 - 모두포함

X - 모두제외

M - 모터만포함

D - 드라이브만포함

#### ⑧ Motor Model

#### ⑨ Motor Maker

O - Oriental (Stepping)

A - Autonics (Stepping)

M - Mitsubishi (Servo)

Y - Yaskawa (Servo)

F - Fastech (Stepping & Servo)

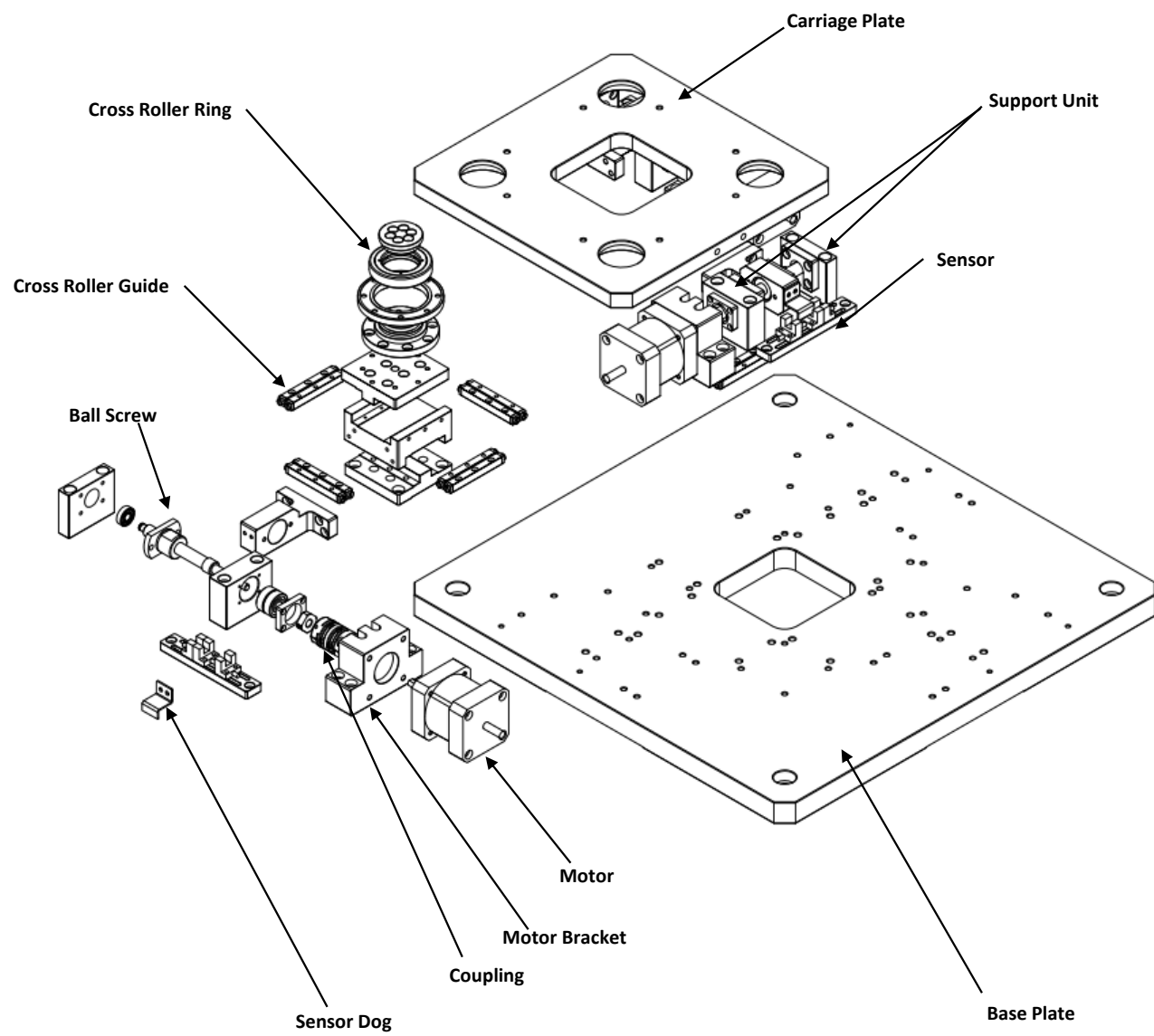
etc ...

#### ⑩ Configuration

3 - 3-Axis

4 - 4-Axis

## Alignment UVW Structure

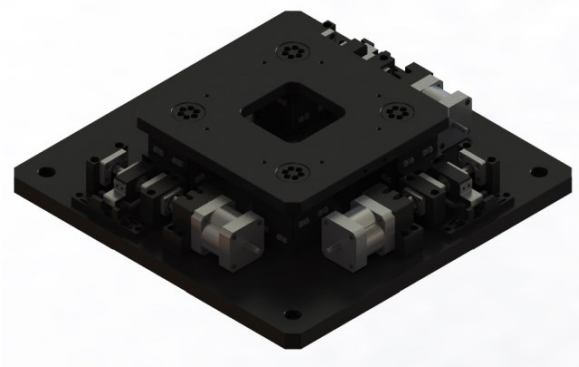


Alignment UVW

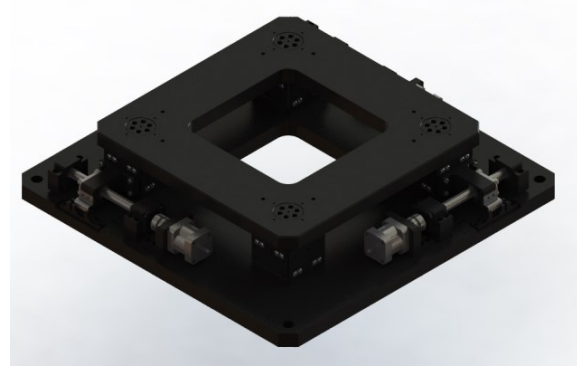
# IAU Series

LEADING PRIDE KOREA

## IAU-20010C-3 / IAU-40020C-3 / IAU-40010C-3 / IAU-50010C-3



IAU-20010C-3



IAU-30010C-3

### Specification of Actuator

| UVW                           | IAU-20010C-3■                    | IAU-30010C-3■ | IAU-40020C-3■                     | IAU-50020C-3■ |
|-------------------------------|----------------------------------|---------------|-----------------------------------|---------------|
| TableDimension(mm)            | 200x200                          | 300x300       | 400x400                           | 500x500       |
| Travel Range<br>(X방향/Y방향/θ방향) | ±5mm/±5mm/±2.5°                  |               | ±10mm/±10mm/±2.5°                 |               |
| Travel Guide                  | 볼나사ø8 Lead1mm,Cross Roller Guide |               | 볼나사ø14 Lead2mm,Cross Roller Guide |               |
| Resolution(mm)                | 0.002/Pulse(Full Step)           |               | 0.004/Pulse(Full Step)            |               |
| Maximun Speed                 | 10mm/sec(5kHz)                   |               | 20mm/sec(5kHz)                    |               |
| BallScrew Grade               | C5(C7)                           |               |                                   |               |
| Uni-Repeatability             | ±0.5(±1.5)μm                     |               | ±0.5(±2)μm                        |               |
| Bi-Repeatability              | ±1.5(±3)μm                       |               | ±1.5(±5)μm                        |               |
| Parallelism(mm)               | 0.04                             |               |                                   | 0.05          |
| Running Parallelism(mm)       | 0.02                             | 0.02          | 0.03                              | 0.03          |
| Load Capacity(kg)             | 30                               | 50            | 80                                | 80            |
| Material                      | Aluminum                         |               |                                   |               |
| Weight(kg)                    | 15                               | 20            | 40                                | 50            |
| Sensor                        | 1 Home Sensor, 2limit Sensor     |               |                                   |               |

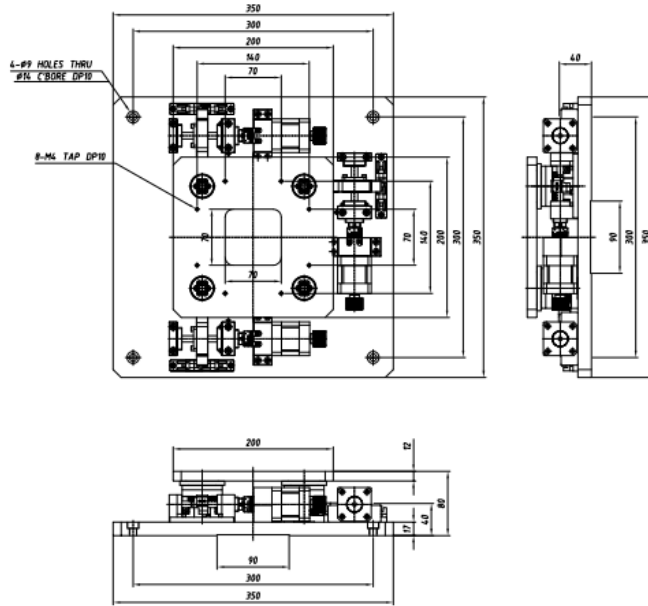
주1 : 회전량은 스테이지의 중앙위치에서만 만족합니다. 직선 이동 후 회전시 회전량을 만족하지 못합니다.

주2 : 볼나사의 등급 선택 가능합니다. C7등급의 경우 정밀도 스펙은 괄호() 안의 수치와 같습니다.

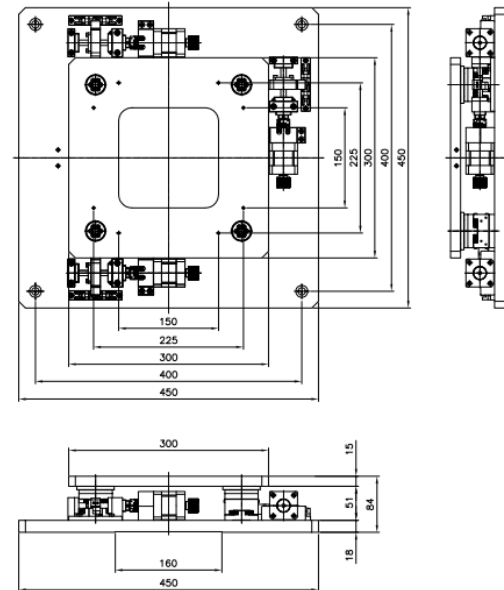
주3 : 표준은 5상 스테핑모터입니다. 모터(AC서보 등) 변경 적용 가능합니다.



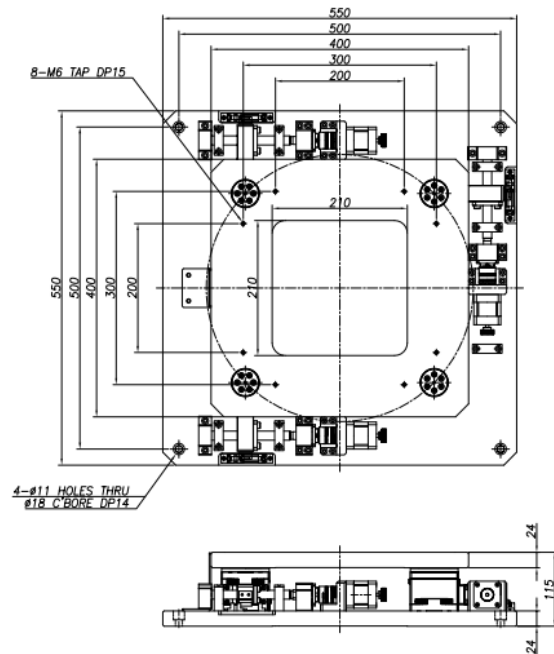
# IAU-20010C-3 / IAU-40020C-3 / IAU-40010C-3 / IAU-50010C-3



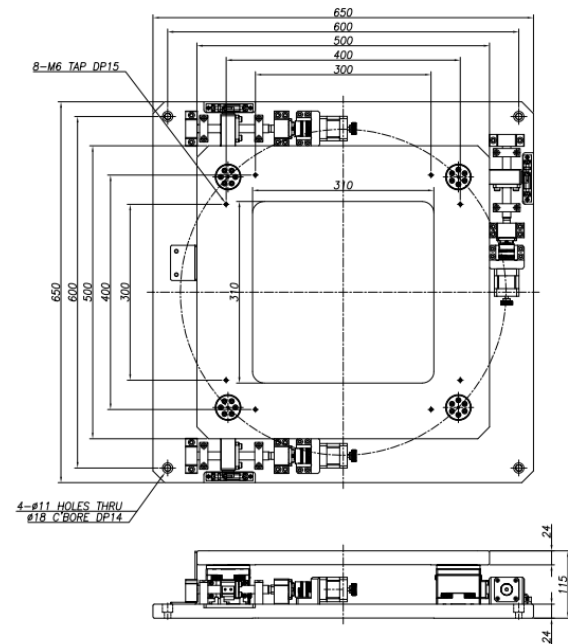
IAU-20010C-3



IAU-30010C-3



IAU-40010C-3



IAU-50010C-3

Alignment  
UWV

## UVW 이송량 계산식(3-Axis)

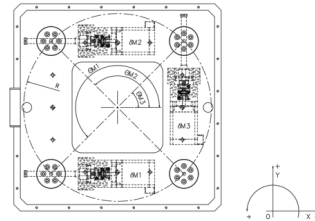
### 1. 이송량 계산

■  $\Delta \Theta$ 에 따른 축별 상대 이송량을 구하기 위한 식은 다음과 같다

- >  $\delta M1 = R \cos(\delta \Theta + \Theta M1 + \Theta \bigcirc) - R \cos(\Theta M1 + \Theta \bigcirc)$
- >  $\delta M2 = R \cos(\delta \Theta + \Theta M2 + \Theta \bigcirc) - R \cos(\Theta M2 + \Theta \bigcirc)$
- >  $\delta M3 = R \sin(\delta \Theta + \Theta M3 + \Theta \bigcirc) - R \sin(\Theta M3 + \Theta \bigcirc)$

■ 기호 해설

- >  $\delta \square$  :  $\square$  Axis의 상대 이송량(mm)
- >  $\Theta \square$  :  $\square$  Axis에 조립된 베어링 중심의 각도 위치( $^\circ$ )
- >  $\Theta \bigcirc$  : 구동전의 상판 각도( $^\circ$ )
- >  $\delta \Theta$  : 상판의 회전각( $^\circ$ )
- > R : 각 Axis에 연결된 베어링 중심에서 상판 중심까지의 거리



### 2. 이송량 계산(예시)

■ 조건

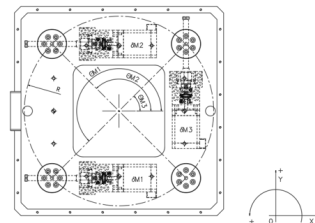
- > R145,  $\Theta M1=225^\circ$ ,  $\Theta M2=135^\circ$ ,  $\Theta M3=45^\circ$ ,  $\Theta \bigcirc = 0^\circ$

■ 동작 순서

- > 예시1 : X방향으로 +1mm, Y방향으로 +0.5mm 평행 이동
- > 예시2 : 상판의 중심을 회전중심으로 +2°회전

■ 해설

- > 예시1 :  $\delta M1 = +1\text{mm}$ ,  $\delta M2 = +1\text{mm}$ ,  $\delta M3 = +0.5\text{mm}$
- > 예시2 :  $\delta M1 = 145 \cos(2+225+0) - 145 \cos(225+0) = +3.640721\text{mm}$
- $\delta M2 = 145 \cos(2+135+0) - 145 \cos(135+0) = -3.5158\text{mm}$
- $\delta M3 = 145 \sin(2+45+0) - 145 \sin(45+0) = +3.5158\text{mm}$



## UVW 이송량 계산식(4-Axis)

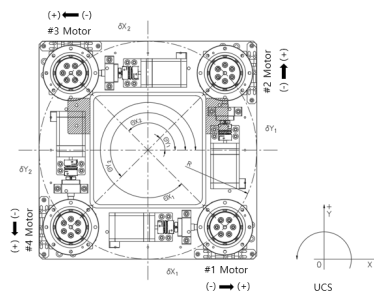
### 1. 이송량 계산

■  $\Delta \Theta$ 에 따른 축별 상대 이송량을 구하기 위한 식은 다음과 같다

- >  $\delta X_1(\#1 \text{ Motor}) = R \cos(\delta \Theta + \Theta X_1 + \Theta \bigcirc) - R \cos(\Theta X_1 + \Theta \bigcirc)$
- >  $\delta X_2(\#3 \text{ Motor}) = -(R \cos(\delta \Theta + \Theta X_2 + \Theta \bigcirc) - R \cos(\Theta X_2 + \Theta \bigcirc))$
- >  $\delta Y_1(\#2 \text{ Motor}) = R \sin(\delta \Theta + \Theta Y_1 + \Theta \bigcirc) - R \sin(\Theta Y_1 + \Theta \bigcirc)$
- >  $\delta Y_2(\#4 \text{ Motor}) = -(R \sin(\delta \Theta + \Theta Y_2 + \Theta \bigcirc) - R \sin(\Theta Y_2 + \Theta \bigcirc))$

■ 기호 해설

- >  $\delta \square$  :  $\square$  Axis의 상대 이송량(mm)
- >  $\Theta \square$  :  $\square$  Axis에 조립된 베어링 중심의 각도 위치( $^\circ$ )
- >  $\Theta \bigcirc$  : 구동전의 상판 각도( $^\circ$ )
- >  $\delta \Theta$  : 상판의 회전각( $^\circ$ )
- > R : 각 Axis에 연결된 베어링 중심에서 상판 중심까지의 거리



### 2. 이송량 계산(예시)

■ 조건

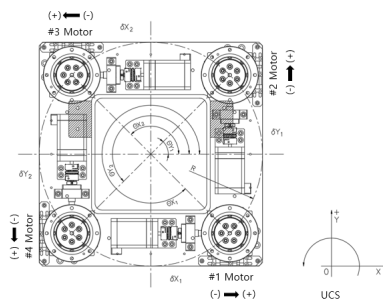
- > R160,  $\Theta X_1=315^\circ$ ,  $\Theta X_2=135^\circ$ ,  $\Theta Y_1=45^\circ$ ,  $\Theta Y_2=225^\circ$ ,  $\Theta \bigcirc = 0^\circ$

■ 동작 순서

- > 예시1 : X방향으로 +1mm, Y방향으로 +0.5mm 평행 이동
- > 예시2 : 상판의 중심을 회전중심으로 +2°회전

■ 해설

- > 예시1 :  $\delta X_1(\#1 \text{ Motor}) = +1\text{mm}$ ,  $\delta X_2(\#3 \text{ Motor}) = -1\text{mm}$
- $\delta Y_1(\#2 \text{ Motor}) = +0.5\text{mm}$ ,  $\delta Y_2(\#4 \text{ Motor}) = -0.5\text{mm}$
- > 예시2 :  $\delta X_1(\#1 \text{ Motor}) = 160 \cos(2+315+0) - 160 \cos(315+0) = +3.8795\text{mm}$
- $\delta X_2(\#3 \text{ Motor}) = -\{160 \cos(2+135+0) - 160 \cos(135+0)\} = +3.8795\text{mm}$
- $\delta Y_1(\#2 \text{ Motor}) = 160 \sin(2+45+0) - 160 \sin(45+0) = +3.8795\text{mm}$
- $\delta Y_2(\#4 \text{ Motor}) = -\{160 \sin(2+225+0) - 160 \sin(225+0)\} = +3.8795\text{mm}$





## Miniature ROBO System **MP Series**

MP040 Series

MCP040 Series

MP060 Series

MCP060 Series

# MP Series Model Code

|    |    |   |   |   |   |     |   |    |   |   |   |   |   |      |   |   |    |    |   |
|----|----|---|---|---|---|-----|---|----|---|---|---|---|---|------|---|---|----|----|---|
| MP | 40 | - | S | T | - | 100 | - | 10 | B | R | 5 | - | S | 1220 | - | B | R1 | E1 | C |
| ①  | ②  |   | ③ | ④ |   | ⑤   |   | ⑥  | ⑦ | ⑧ | ⑨ |   | ⑩ | ⑪    |   | ⑫ | ⑬  | ⑭  | ⑮ |

## ① Series

MP - Standard Type  
MCP - Clean Type (Option)

## ② Body Size

40 - Base Width 40mm  
60 - Base Width 60mm

## ③ Motor Shape

S - Straight Coupling Type  
L - Parallel Left Pulley Type  
R - Parallel Right Pulley Type  
U - Parallel Under Pulley Type

## ④ Base Mount Hole

T - Tap

## ⑤ Stroke

The Distance Between - Limit and + Limit (mm)

## ⑥ Motor Capacity Option

None - Without Motor (Standard)  
05 - Motor Rated Output 50W  
10 - Motor Rated Output 100W

## ⑦ Motor Brake

None - Without Brake  
B - With Brake

## ⑧ Reduction Gear Option

None - Without Reduction Gear (Standard)  
R - With Reduction Gear

## ⑨ Reduction Gear Ratio Option

None - Without Reduction Gear (Standard)  
03~10 - With Reduction Gear Ratio

## ⑩ Speed (Motor 3000 rpm)

L - Ball Screw Lead 5 mm (250 mm/sec)  
N - Ball Screw Lead 10 mm (500 mm/sec)  
S - User Special Ball Screw (Option)

## ⑪ Speed Special Option

1220 - Ball Screw Diameter(12) & Lead(20) (User Option)

## ⑫ Robot Color Option

None - Soft White Anodizing (Standard)  
B - Soft Black Anodizing

## ⑬ Surface Treatment Option

None - Without Surface Treatment (Standard)  
R1 - LM Rail Raydent  
S1 - Ball Screw Shaft Raydent  
RS1 - LM Rail + Ball Screw Shaft Raydent  
RS2 - LM Rail and Block + Ball Screw Shaft and Nut Raydent

## ⑭ Sensor Option

None - Without Sensor (Standard)  
E1 - External Photo Sensor Only  
E2 - External Photo Sensor + Connector  
E3 - External Photo Sensor + Connector + Cable

## ⑮ Cableveyor Option

None - Without Cableveyor (Standard)  
C - With Cableveyor

# Miniature ROBO System MP040 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                 |      |
|------------------------------------------------|-------------------------------------------------|------|
| • AC Servo Motor Output                        | 50W                                             | 100W |
| • AC Servo Motor RPM                           | 3000 RPM                                        |      |
| • Repeatability                                | ±0.02 mm                                        |      |
| • Deceleration Mechanism                       | Ball Screw(Class 10), Rolled Ø12 Lead 10mm, 5mm |      |
| • Stroke (mm)                                  | 10 ~ 700                                        |      |
| • LM Guide Bearing                             | One Way 12N-1BLOCK                              |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 0.99E + 05, Iy = 1.10E + 05                |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-----------------------|-----|-----------|-----|-----|-----|-----|-----|-----|-----|
| Max Speed<br>(mm/sec) | Ø12 | Lead 10mm | 500 |     |     |     |     |     | 440 |
|                       |     | Lead 05mm | 250 |     |     |     |     |     | 220 |

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 50W            | 100W            |
|-----------------------|-----|-----------|----------------|-----------------|
| Max Payload<br>(kg)   | Ø12 | Lead 10mm | Horizontal : 4 | Horizontal : 6  |
|                       |     |           | Vertical : 2   | Vertical : 4    |
|                       |     | Lead 05mm | Horizontal : 8 | Horizontal : 10 |
|                       |     |           | Vertical : 2   | Vertical : 4    |

주1) Stroke : 300mm, Speed : Max speed, Acceleration : 0.2sec, Servo motor Rotate : 3000rpm, Pause time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

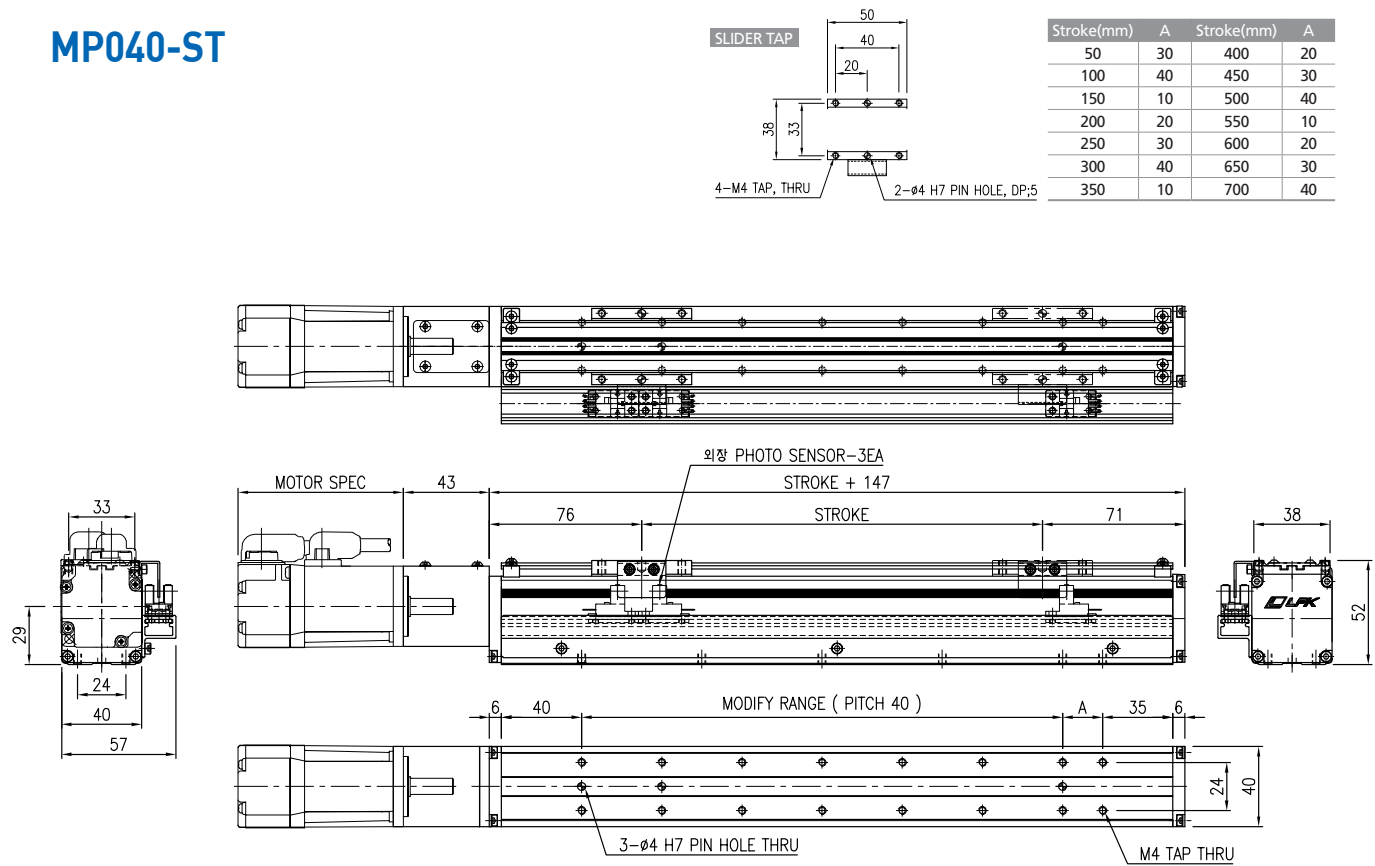
## Robot Weight

| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|
| Weight (Kg) | Straight |  | 1.8 | 2   | 2.4 | 2.6 | 2.8 | 3   | 3.2 |
|             | Parallel |  | 2   | 2.2 | 2.6 | 2.8 | 3   | 3.2 | 3.4 |

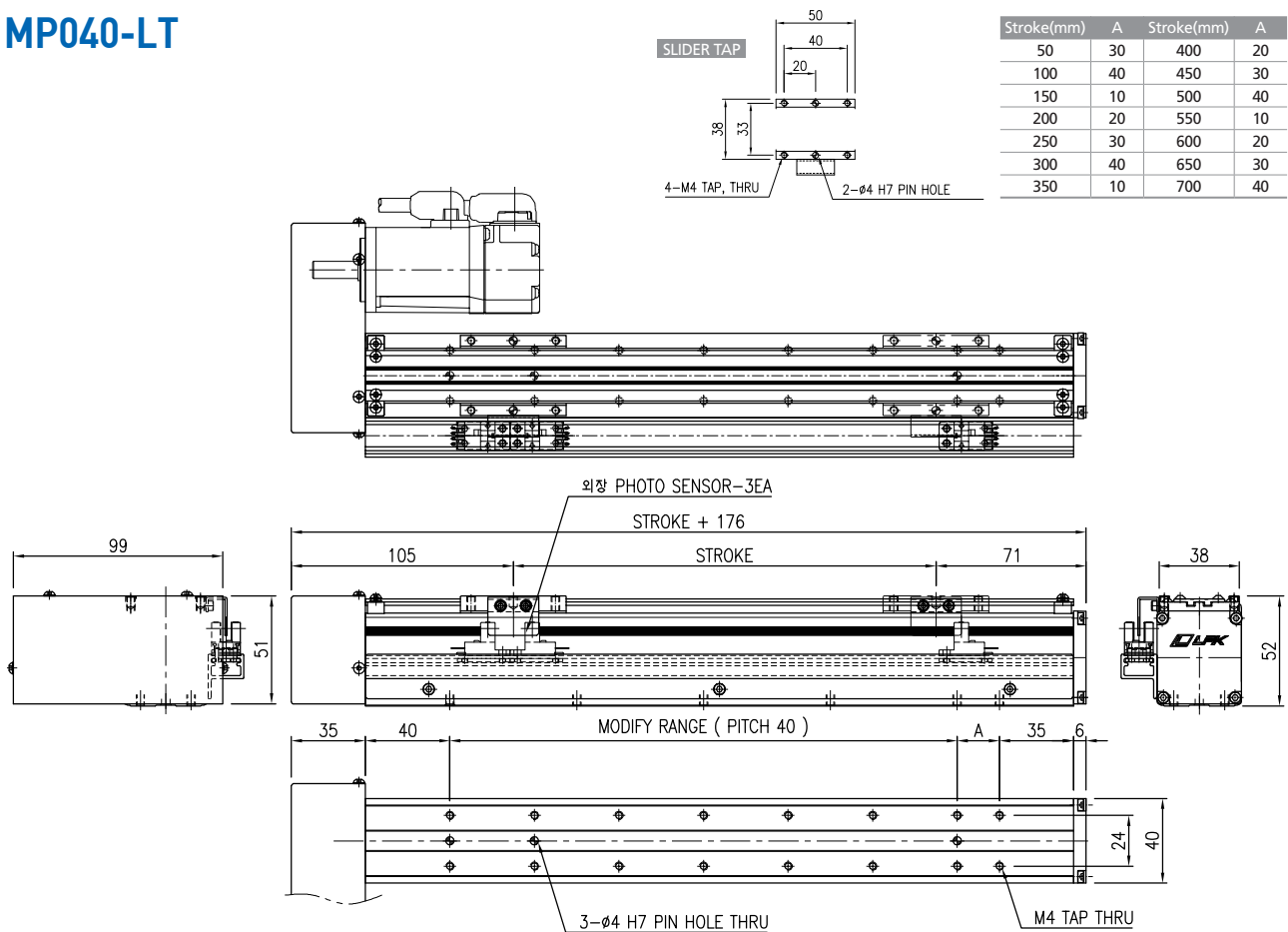
The weight of the model equipped with a brake is 0.65Kg heavier than this value.

# MP040 Series Miniature ROBO System

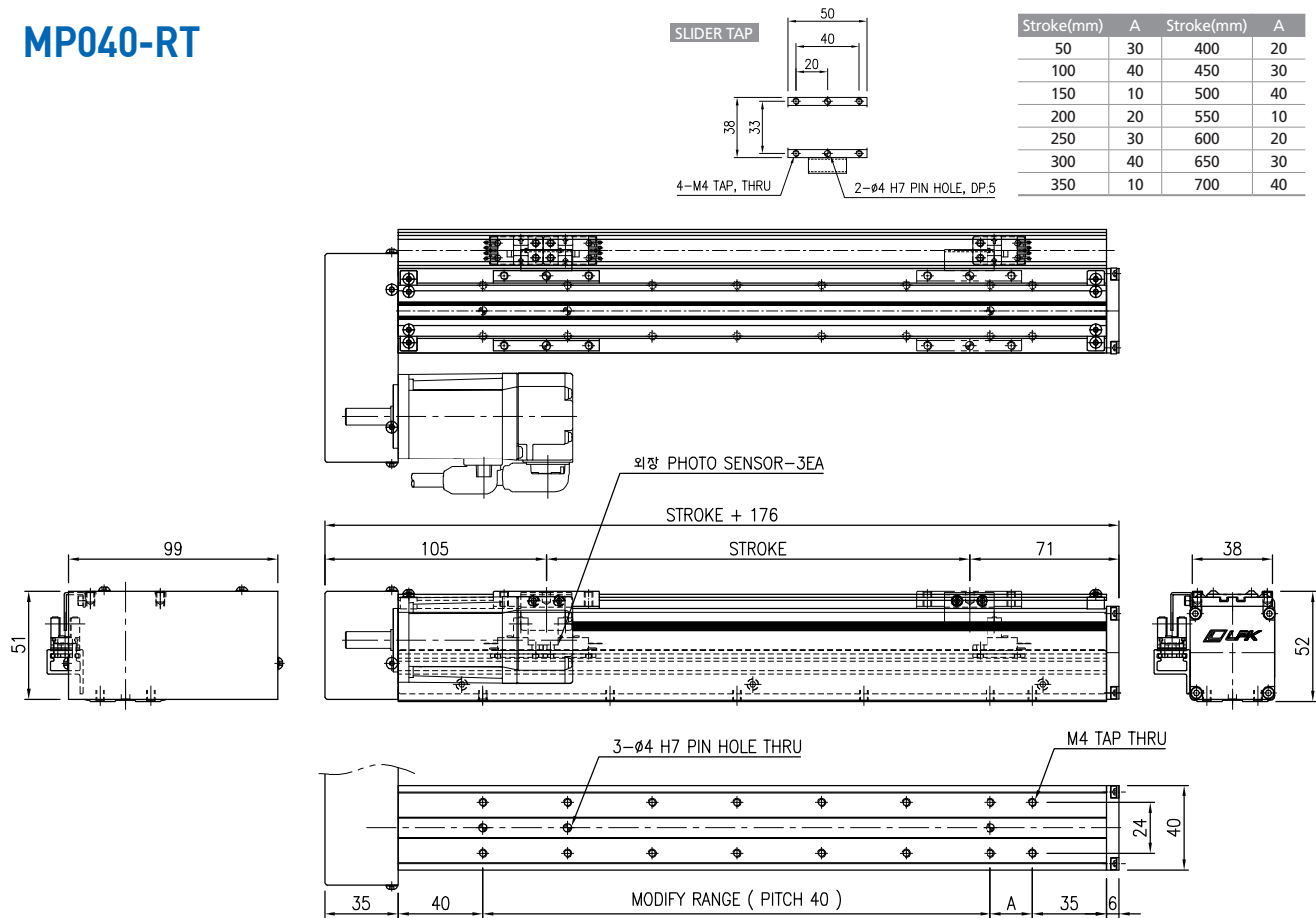
## MP040-ST



## MP040-LT

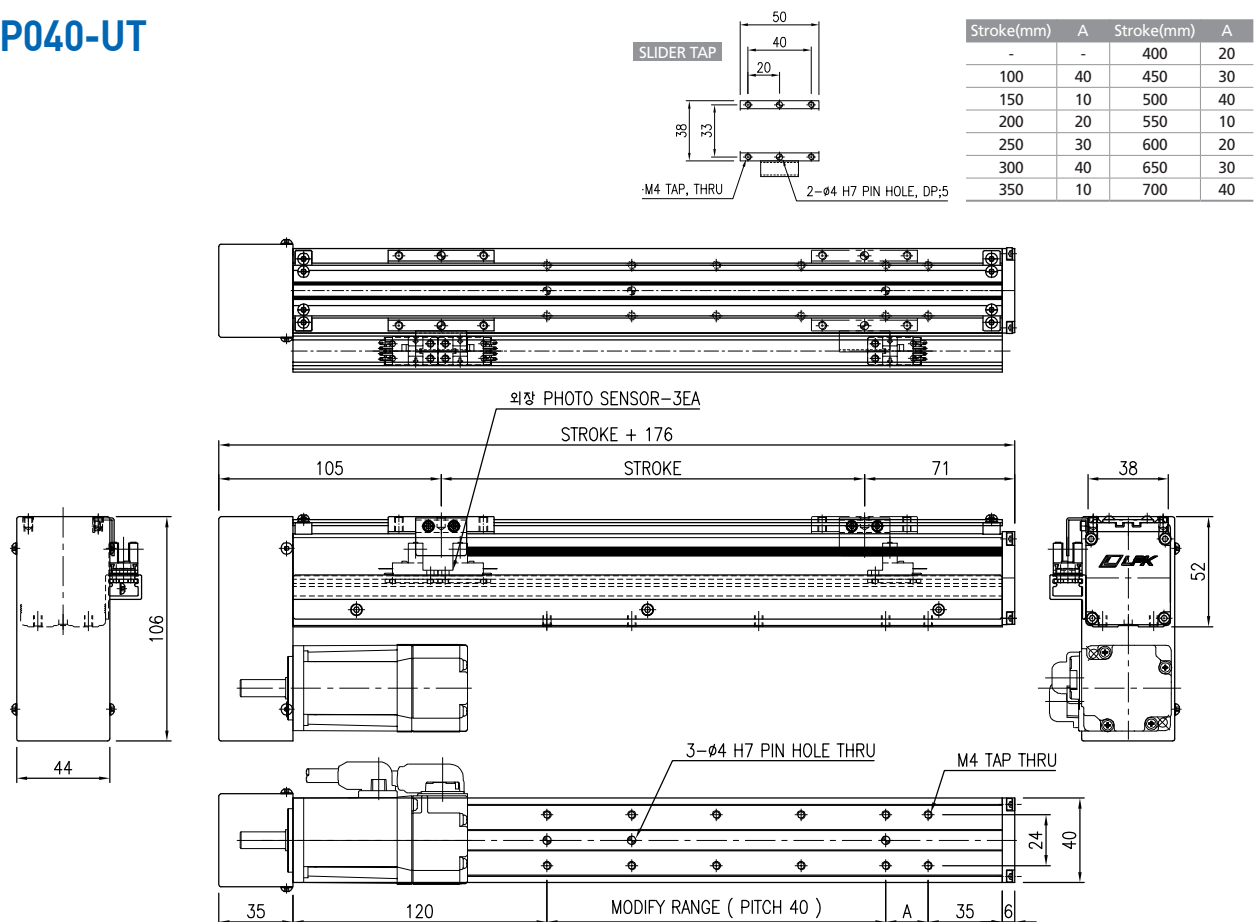


## MP040-RT



MP  
Miniature  
ROBO System

## MP040-UT



# Miniature ROBO System MCP040 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                 |      |
|------------------------------------------------|-------------------------------------------------|------|
| • AC Servo Motor Output                        | 50W                                             | 100W |
| • AC Servo Motor RPM                           | 3000 RPM                                        |      |
| • Repeatability                                | ±0.02 mm                                        |      |
| • Deceleration Mechanism                       | Ball Screw(Class 10), Rolled Ø12 Lead 10mm, 5mm |      |
| • Stroke (mm)                                  | 10 ~ 700                                        |      |
| • LM Guide Bearing                             | One Way 12N-1BLOCK                              |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 0.99E + 05, Iy = 1.10E + 05                |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-----------------------|-----|-----------|-----|-----|-----|-----|-----|-----|-----|
| Max Speed<br>(mm/sec) | Ø12 | Lead 10mm | 500 |     |     |     |     |     | 440 |
|                       |     | Lead 05mm | 250 |     |     |     |     |     | 220 |

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 50W            | 100W            |
|-----------------------|-----|-----------|----------------|-----------------|
| Max Payload<br>(kg)   | Ø12 | Lead 10mm | Horizontal : 4 | Horizontal : 6  |
|                       |     |           | Vertical : 2   | Vertical : 4    |
|                       |     | Lead 05mm | Horizontal : 8 | Horizontal : 10 |
|                       |     |           | Vertical : 2   | Vertical : 4    |

주1) Stroke : 300mm, Speed : Max speed, Acceleration : 0.2sec, Servo motor Rotate : 3000rpm, Pause time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

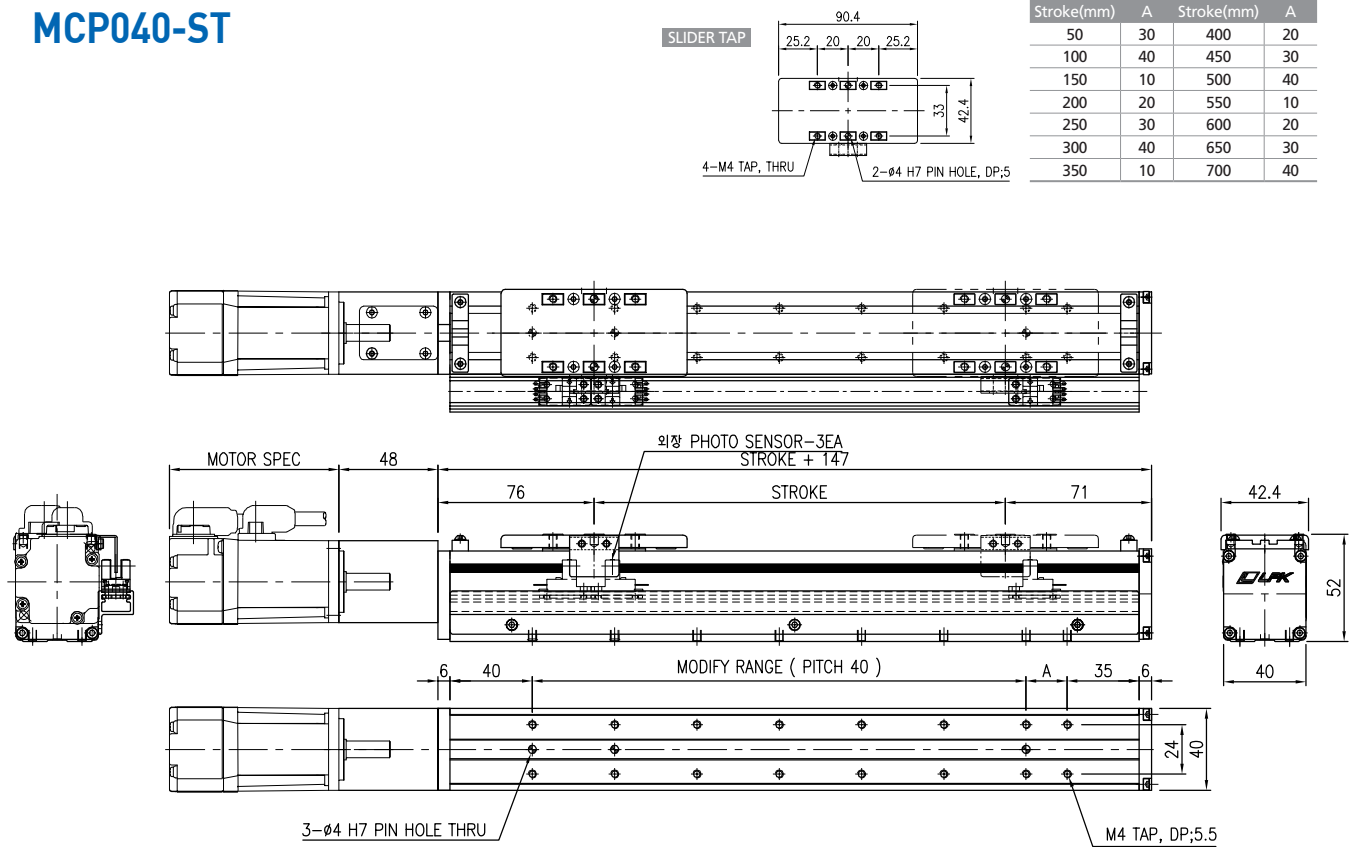
## Robot Weight

| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|
| Weight (Kg) | Straight |  | 1.8 | 2   | 2.4 | 2.6 | 2.8 | 3   | 3.2 |
|             | Parallel |  | 2   | 2.2 | 2.6 | 2.8 | 3   | 3.2 | 3.4 |

The weight of the model equipped with a brake is 0.65Kg heavier than this value.

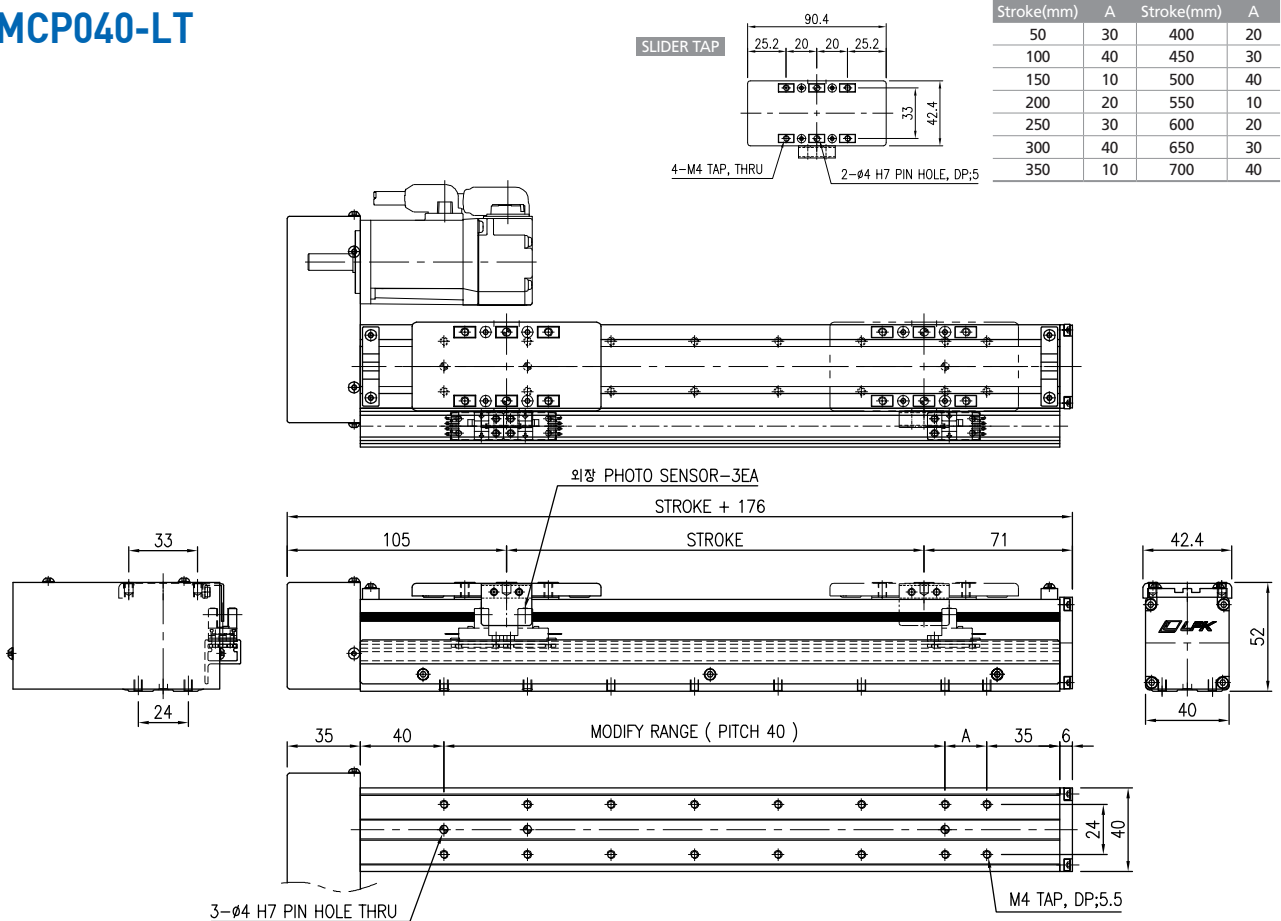


## MCP040-ST



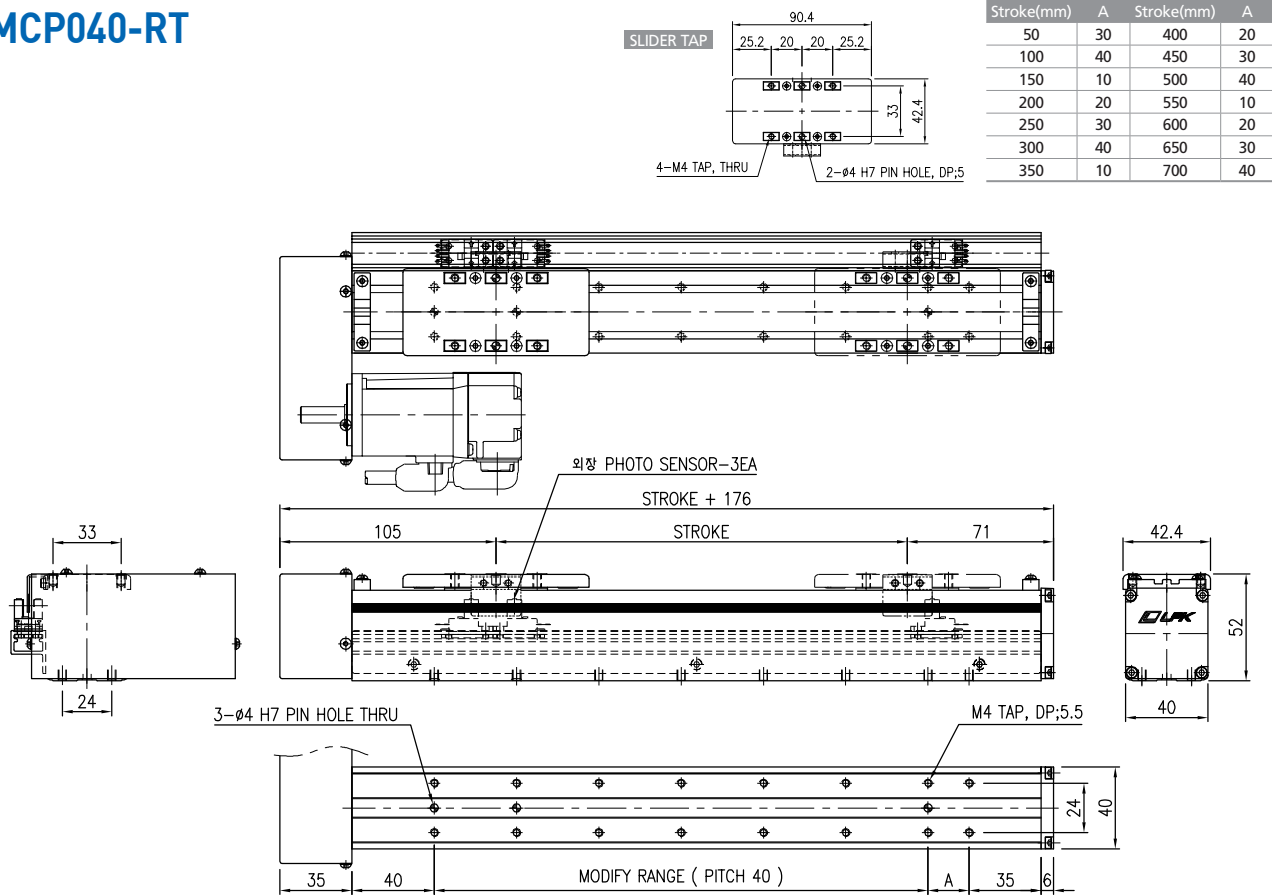
MP  
Miniature  
ROBO System

## MCP040-LT

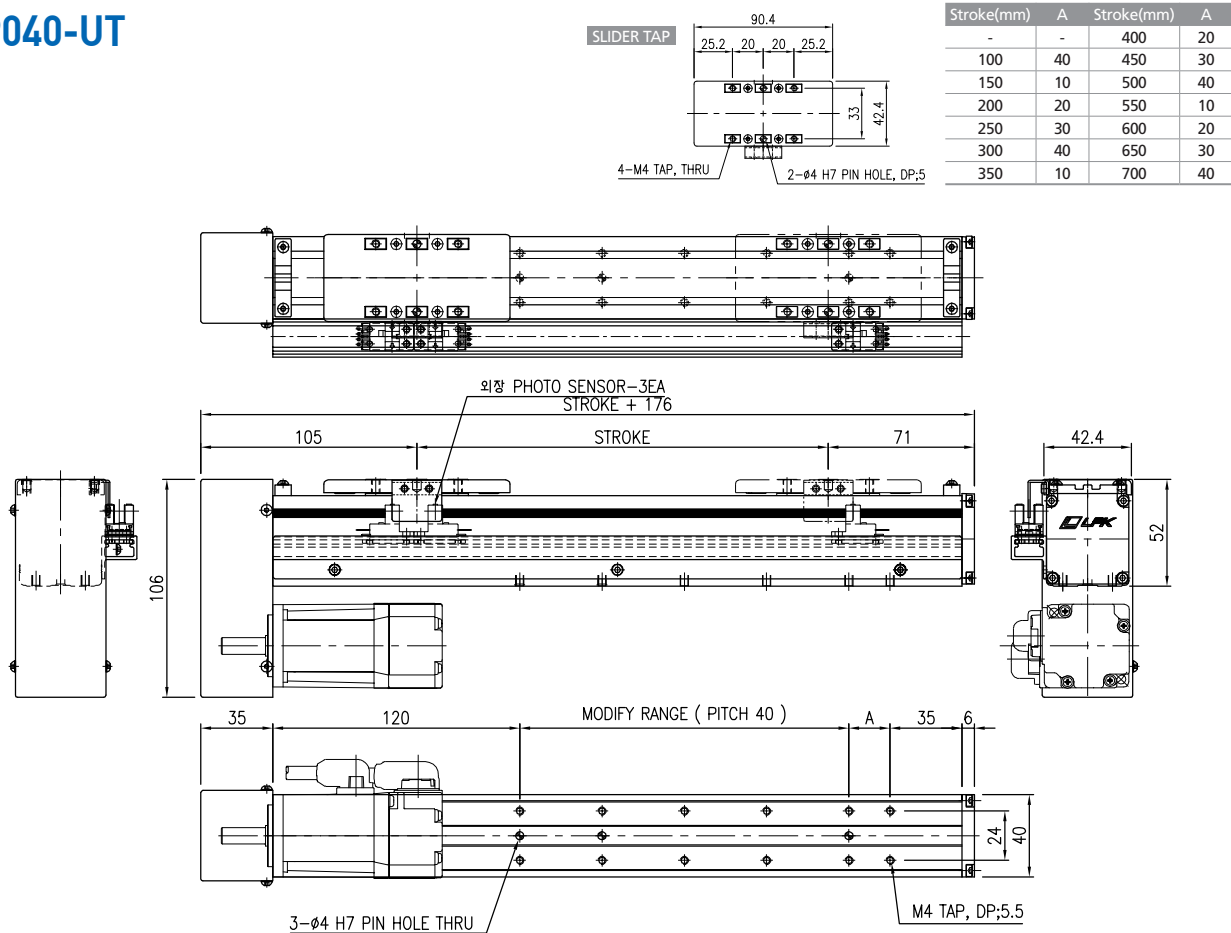


# MCP040 Series Miniature ROBO System

## MCP040-RT



## MP040-UT



# Miniature ROBO System MP060 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                 |
|------------------------------------------------|-------------------------------------------------|
| • AC Servo Motor Output                        | 100W                                            |
| • AC Servo Motor RPM                           | 3000 RPM                                        |
| • Repeatability                                | ±0.02 mm                                        |
| • Deceleration Mechanism                       | Ball Screw(Class 10), Rolled Ø12 Lead 10mm, 5mm |
| • Stroke (mm)                                  | 10 ~ 700                                        |
| • LM Guide Bearing                             | One Way 12WN-1BLOCK                             |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 2.59E + 05, Iy = 4.71E + 05                |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-----------------------|-----|-----------|-----|-----|-----|-----|-----|-----|-----|
| Max Speed<br>(mm/sec) | Ø12 | Lead 10mm | 500 |     |     |     |     |     | 430 |
|                       |     | Lead 05mm | 250 |     |     |     |     |     | 210 |

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            |
|-----------------------|-----|-----------|-----------------|
| Max Payload<br>(kg)   | Ø12 | Lead 10mm | Horizontal : 6  |
|                       |     |           | Vertical : 4    |
|                       |     | Lead 05mm | Horizontal : 10 |
|                       |     |           | Vertical : 4    |

주1) Stroke : 300mm, Speed : Max speed, Acceleration : 0.2sec, Servo motor Rotate : 3000rpm, Pause time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

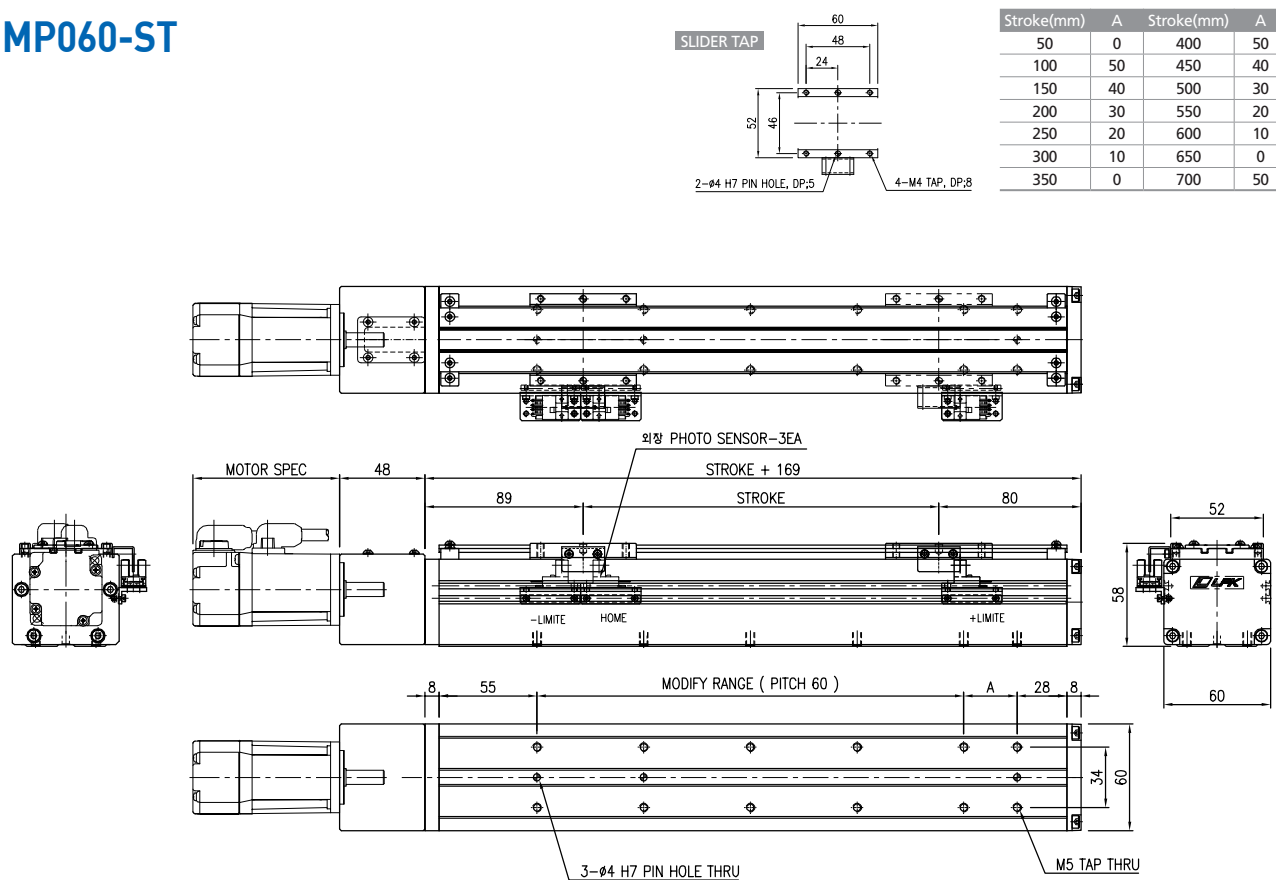
## Robot Weight

| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|
| Weight (Kg) | Straight |  | 2.8 | 3.1 | 3.4 | 3.7 | 4   | 4.3 | 4.6 |
|             | Parallel |  | 3   | 3.3 | 3.6 | 3.9 | 4.2 | 4.5 | 4.8 |

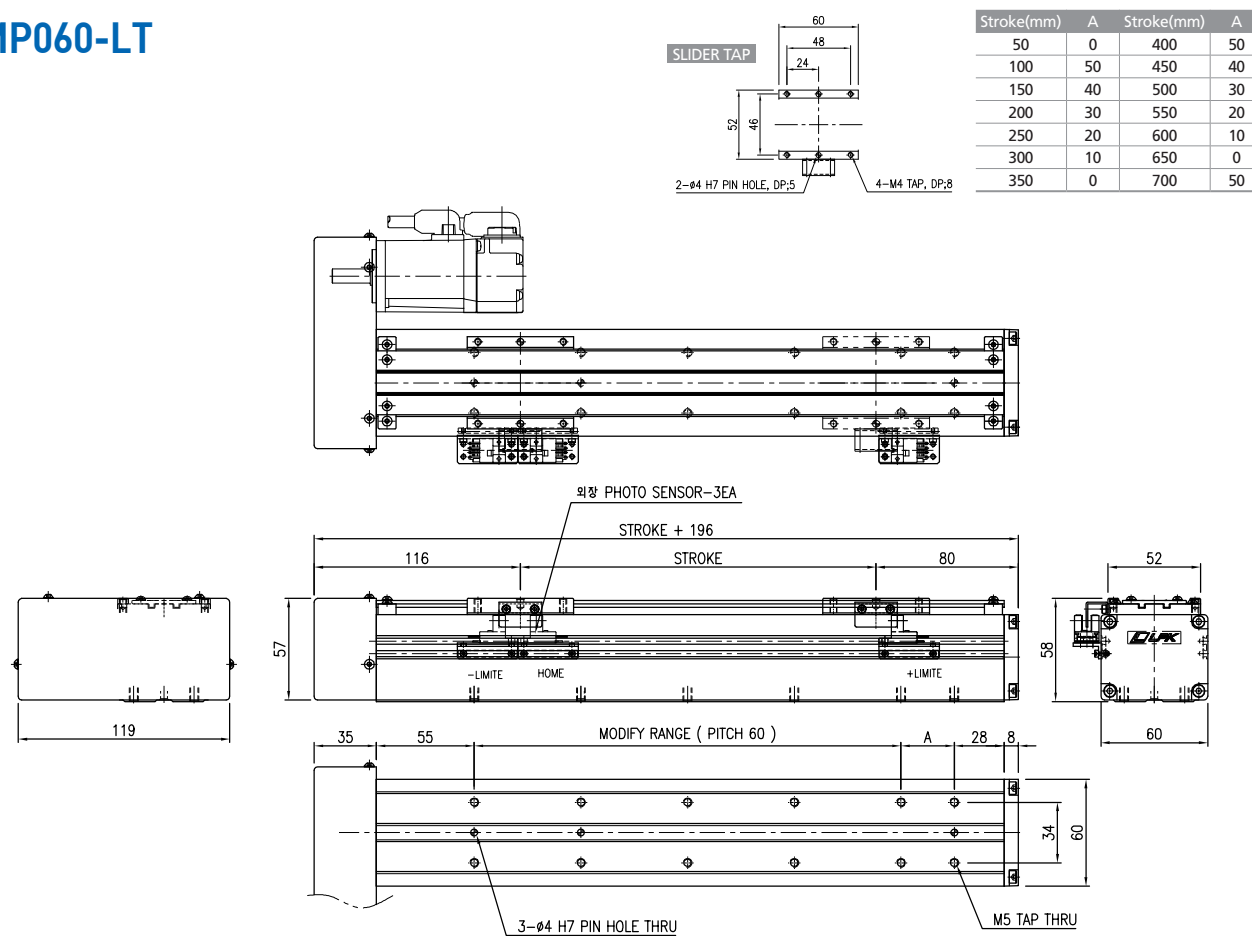
The weight of the model equipped with a brake is 0.65Kg heavier than this value.

# MP060 Series Miniature ROBO System

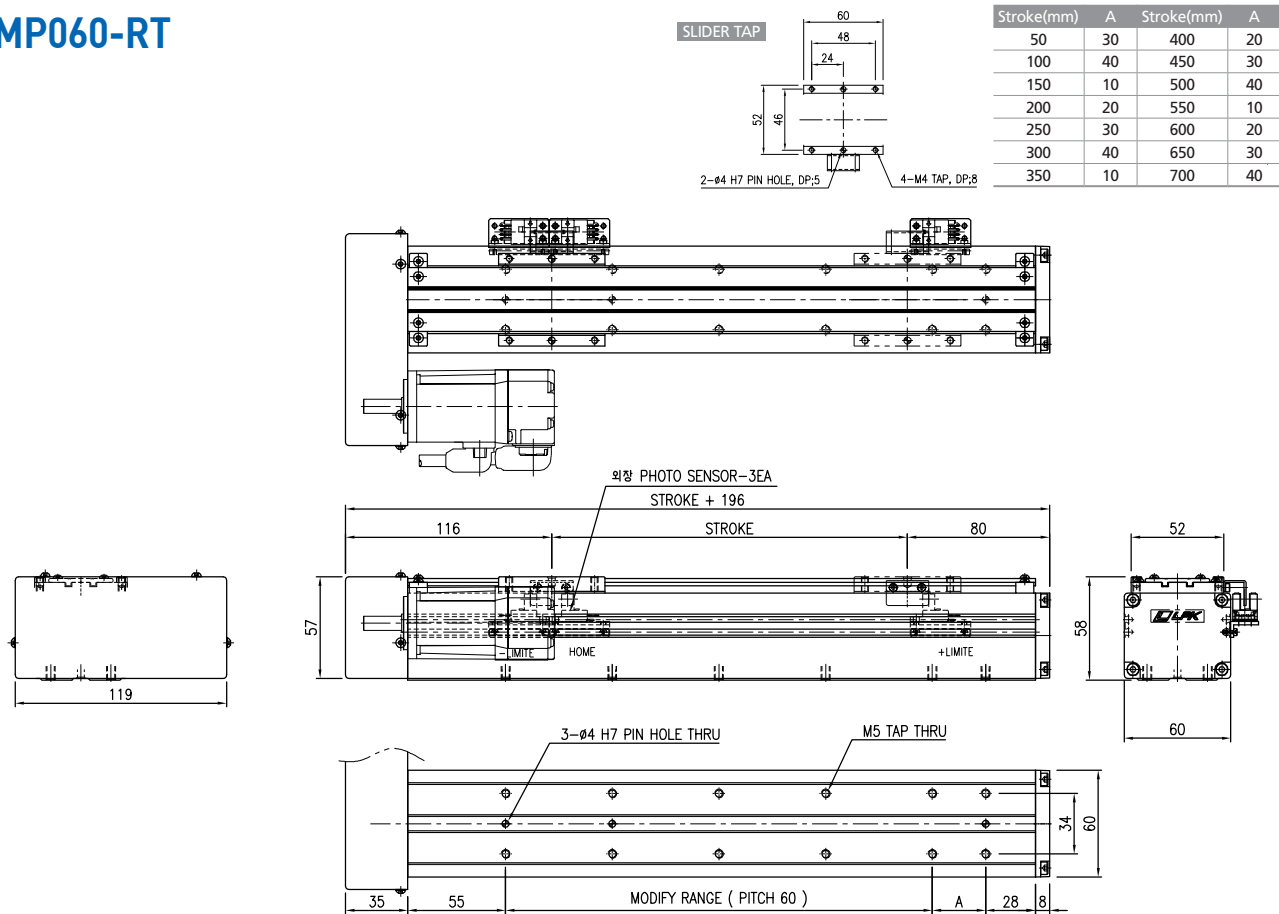
## MP060-ST



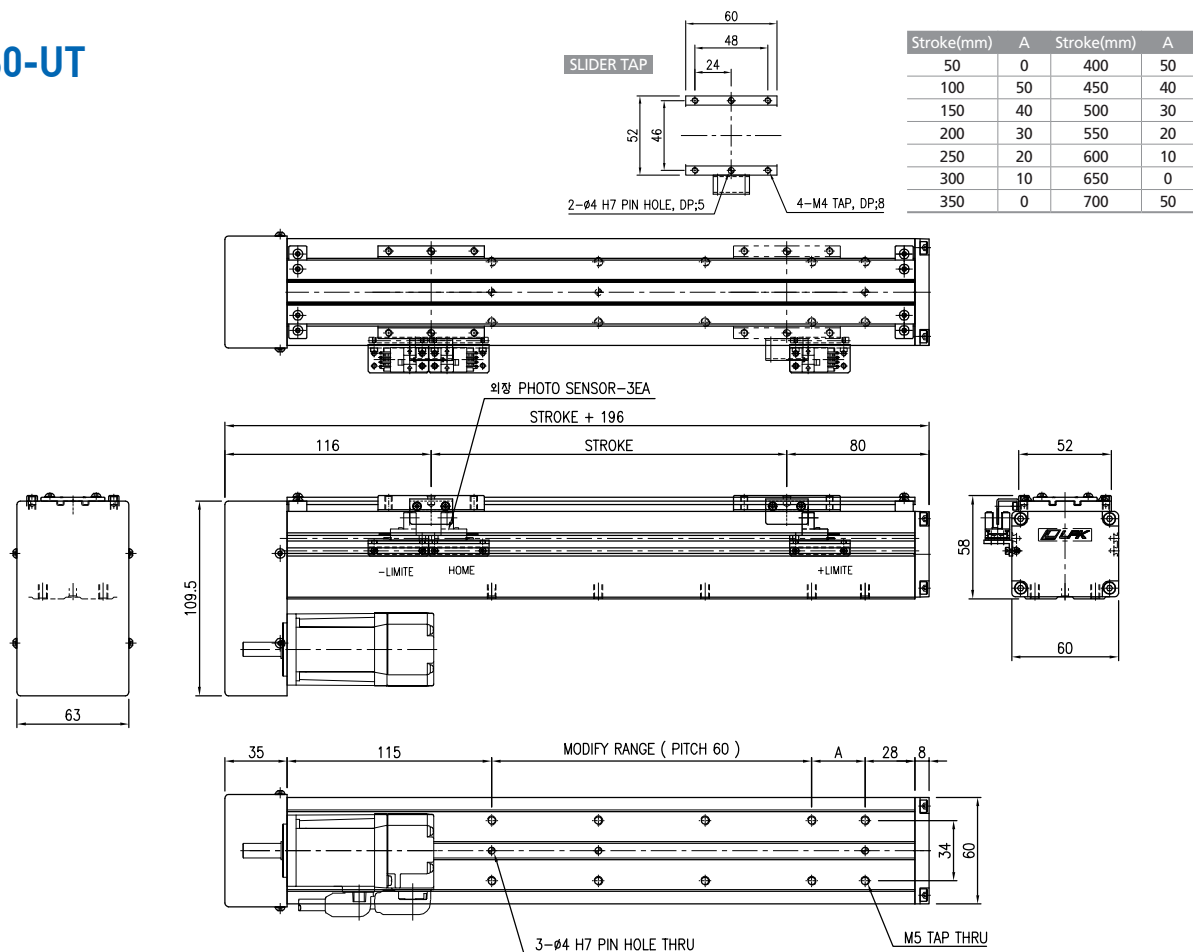
## MP060-LT



## MP060-RT



## MP060-UT



# Miniature ROBO System MCP060 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                 |
|------------------------------------------------|-------------------------------------------------|
| • AC Servo Motor Output                        | 100W                                            |
| • AC Servo Motor RPM                           | 3000 RPM                                        |
| • Repeatability                                | ±0.02 mm                                        |
| • Deceleration Mechanism                       | Ball Screw(Class 10), Rolled Ø12 Lead 10mm, 5mm |
| • Stroke (mm)                                  | 10 ~ 700                                        |
| • LM Guide Bearing                             | One Way 12WN-1BLOCK                             |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 2.59E + 05, Iy = 4.71E + 05                |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-----------------------|-----|-----------|-----|-----|-----|-----|-----|-----|-----|
| Max Speed<br>(mm/sec) | Ø12 | Lead 10mm | 500 |     |     |     |     |     | 430 |
|                       |     | Lead 05mm | 250 |     |     |     |     |     | 210 |

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            |
|-----------------------|-----|-----------|-----------------|
| Max Payload<br>(kg)   | Ø12 | Lead 10mm | Horizontal : 6  |
|                       |     |           | Vertical : 4    |
|                       |     | Lead 05mm | Horizontal : 10 |
|                       |     |           | Vertical : 4    |

주1) Stroke : 300mm, Speed : Max speed, Acceleration : 0.2sec, Servo motor Rotate : 3000rpm, Pause time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

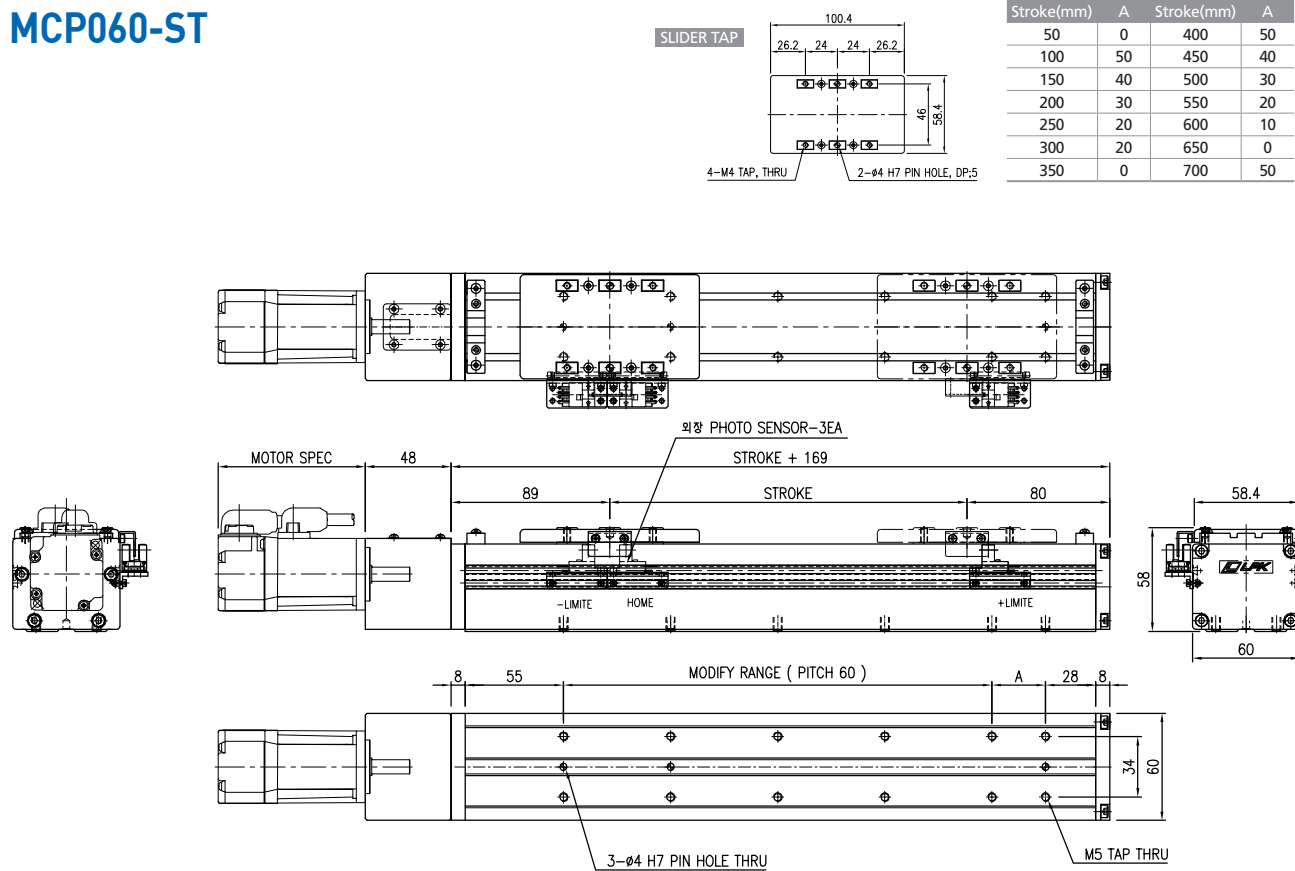
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## Robot Weight

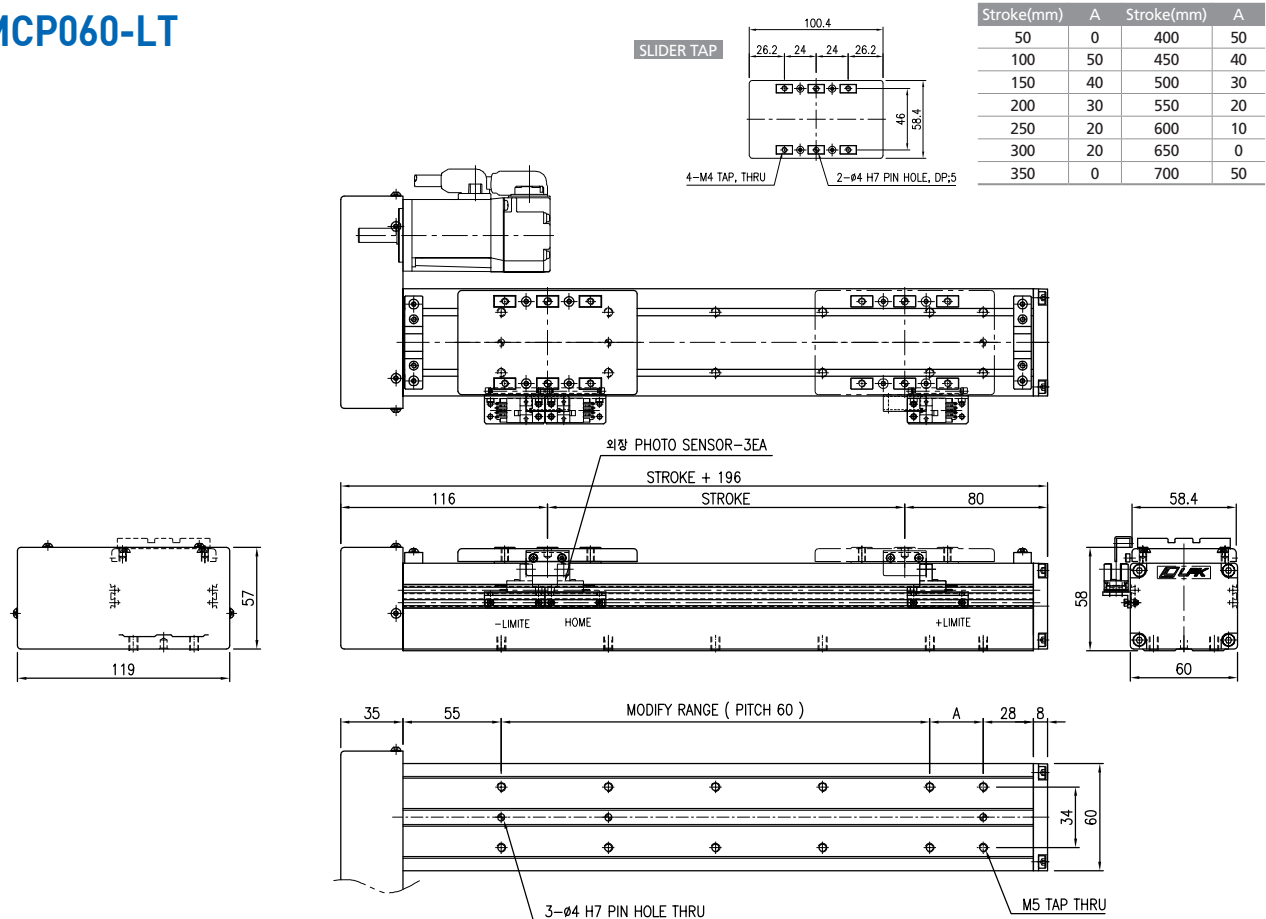
| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|
| Weight (Kg) | Straight |  | 2.8 | 3.1 | 3.4 | 3.7 | 4   | 4.3 | 4.6 |
|             | Parallel |  | 3   | 3.3 | 3.6 | 3.9 | 4.2 | 4.5 | 4.8 |

The weight of the model equipped with a brake is 0.65Kg heavier than this value.

## MCP060-ST

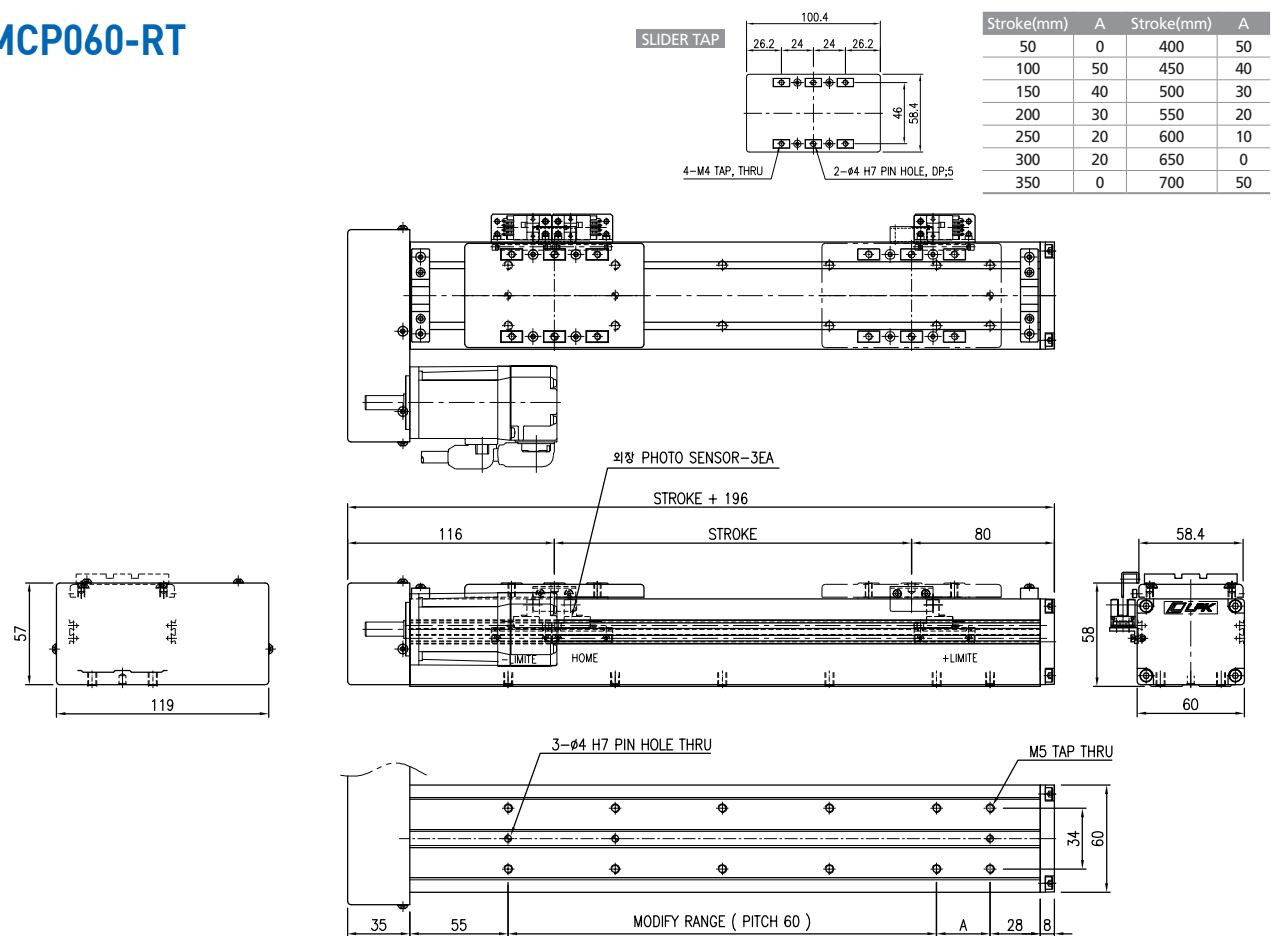


## MCP060-LT

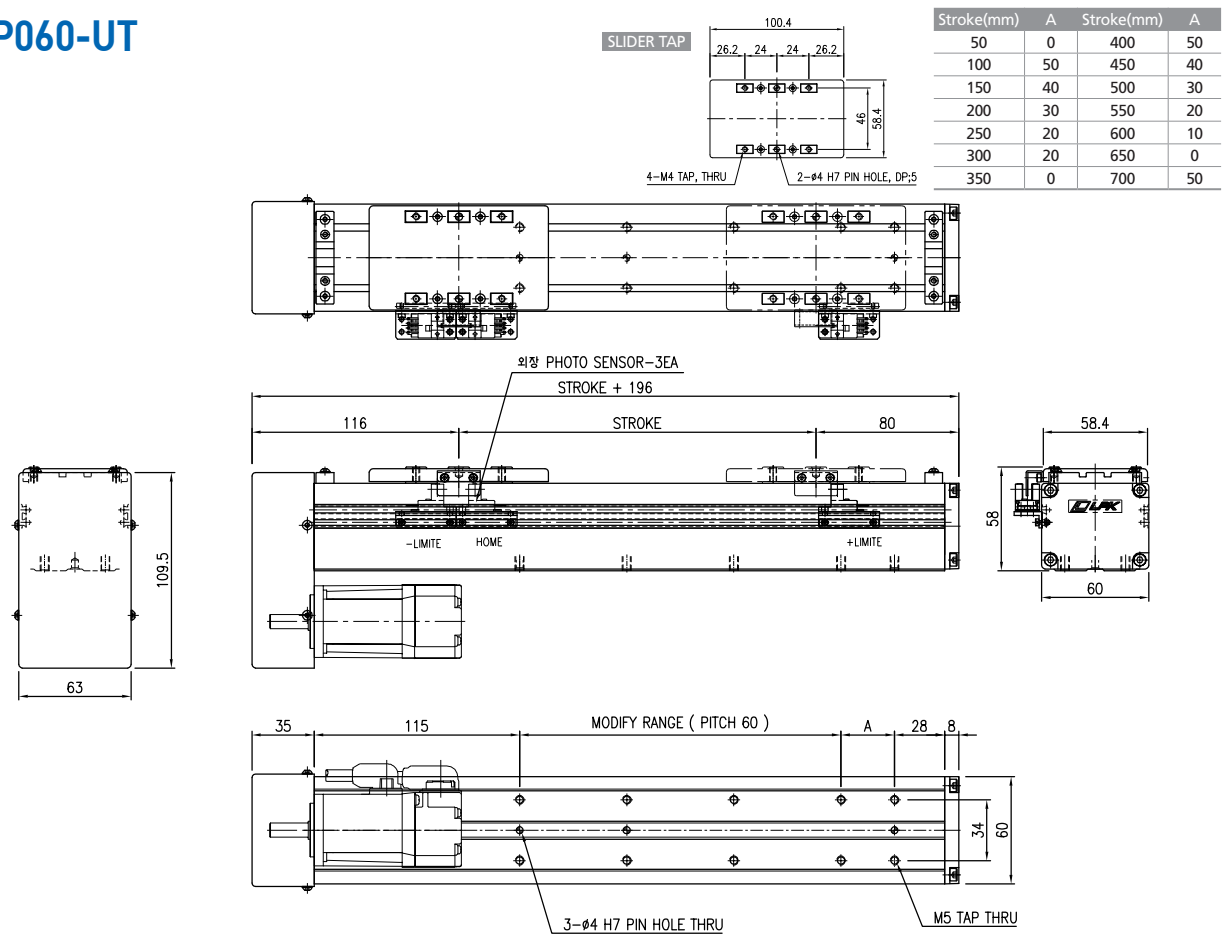


# MCP060 Series Miniature ROBO System

## MCP060-RT



## MCP060-UT







## Cartesian ROBO System LP Series

LP050 Series

LP068 Series

LP070 Series

LP090 Series

LP092-1 Series

LP092 Series

LP120 Series

LP160 Series

LP200 Series



# LP Series Model Code

LP 090 - 2 S T1 - 800L - 40 B R5 - S 1530 - B R1 E1 C

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭ ⑮

## ① 형식 Type

형식 Type - LPK Co., Ltd. Cartesian Robot, Ball Screw Type

## ② Model

050 - Robot Body Width 55 mm, Height 100  
 068 - Robot Body Width 68 mm, Height 78  
 070 - Robot Body Width 70 mm, Height 66  
 090 - Robot Body Width 85 mm, Height 72  
 092 - Robot Body Width 88 mm, Height 92  
 120 - Robot Body Width 124 mm, Height 86  
 160 - Robot Body Width 158 mm, Height 108  
 200 - Robot Body Width 198 mm, Height 124

## ③ Slide Table Q'ty

None - Slide Table 1 Set (Standard)  
 2~5 - Slide Table Q'ty (Option)

## ④ Motor Shape

S - Straight Coupling Type  
 L - Parallel Left Pulley Type  
 R - Parallel Right Pulley Type  
 U - Parallel Under Pulley Type

## ⑤ Base Mount Hole

T - Tap Type  
 T1 - Tap Type - Lm Block 1Block (LP092 Only)  
 B - Counter Bore Type  
 B1 - Counter Bore Type - Lm Block 1Block (LP092 Only)

## ⑥ Stroke

The Distance Between - Limit and + Limit (mm)

## ⑦ Motor Capacity

05 - Motor Rated Output 50W  
 10 - Motor Rated Output 100W  
 20 - Motor Rated Output 200W  
 40 - Motor Rated Output 400W  
 70 - Motor Rated Output 750W  
 1K - Motor Rated Output 1KW (Option)

## ⑧ Motor Brake

None - Without Brake  
 B - With Brake

## ⑨ Reduction Gear Ratio Option

None - Without Reduction Gear (Standard)  
 R3~10 - With Reduction Gear Ratio

## ⑩ Speed (Motor 3000 rpm)

L - Ball Screw Pitch 5 mm ( 250 mm/sec )  
 N - Ball Screw Pitch 10 mm ( 500 mm/sec )  
 H - Ball Screw Pitch 20 mm ( 1000 mm/sec )  
 S - User Special Ball Screw (Option)

## ⑪ Speed Special Option

1530 - Ball Screw Diameter(15) & Lead(30) (User Option)

## ⑫ Robot Color Option

None - Soft White Anodizing (Standard)  
 B - Soft Black Anodizing

## ⑬ Surface Treatment Option

None - Without Surface Treatment (Standard)  
 R1 - LM Rail Raydent  
 S1 - Ball Screw Shaft Raydent  
 RS1 - LM Rail + Ball Screw Shaft Raydent  
 RS2 - LM Rail and Block + Ball Screw Shaft and Nut Raydent

## ⑭ Sensor Option

None - DC-24V Proximity LED Sensor (Standard)  
 E1 - External Photo Sensor Only  
 E2 - External Photo Sensor + Connector  
 E3 - External Photo Sensor + Connector + Cable

## ⑮ Cableveyor Option

None - Without Cableveyor (Standard)  
 C - With Cableveyor

# Cartesian ROBO System LP050 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                               |
|------------------------------------------------|-----------------------------------------------|
| • AC Servo Motor Output                        | 100W                                          |
| • AC Servo Motor RPM                           | 3000 RPM                                      |
| • Repeatability                                | ±0.02 mm                                      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm |
| • Stroke (mm)                                  | 10 ~ 1300                                     |
| • LM Guide Bearing                             | One Way 15V-2BLOCK                            |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing              |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 5.00E + 04, Iy = 2.61E + 05              |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 975 | 770 | 620 | 515  | 430  | 365  | 315  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 480 | 375 | 305 | 250  | 210  | 180  | 155  |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 240 | 190 | 150 | 125  | 105  | 90   | 75   |

주1) Stroke 1300mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            |  |  |
|-----------------------|-----|-----------|-----------------|--|--|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 3  |  |  |
|                       |     |           | Vertical : 3    |  |  |
|                       |     | Lead 10mm | Horizontal : 14 |  |  |
|                       |     |           | Vertical : 8    |  |  |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec,  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

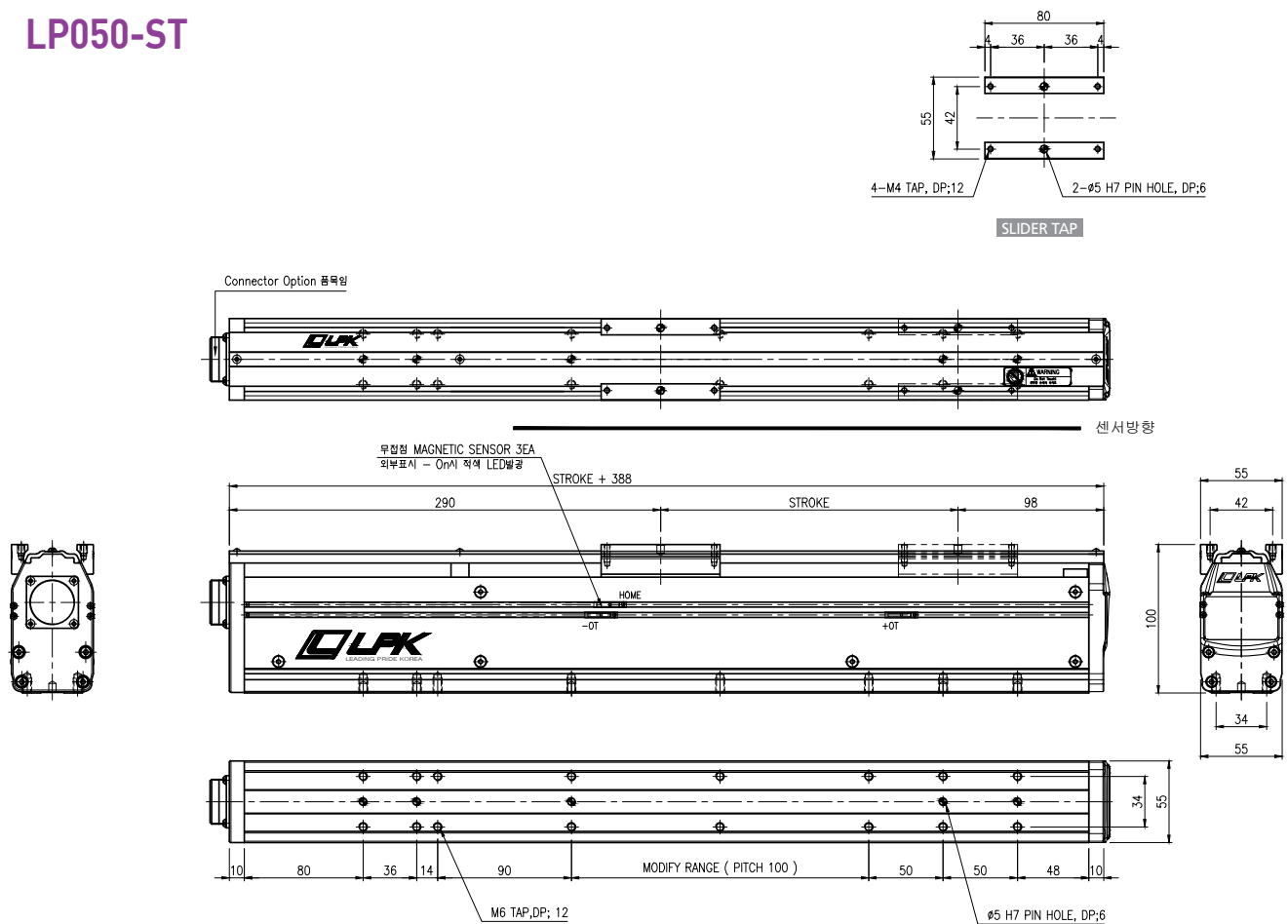
## Robot Weight

| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Weight (Kg) | Straight |  | 4.9 | 5.5 | 6.1 | 6.7 | 7.3 | 7.9 | 8.5 | 9.1 | 9.7 | 10.3 | 10.9 | 11.5 | 12.1 |
|             | Parallel |  | 4.7 | 5.3 | 5.9 | 6.5 | 7.1 | 7.7 | 8.3 | 8.9 | 9.5 | 10.1 | 10.7 | 11.3 | 11.9 |

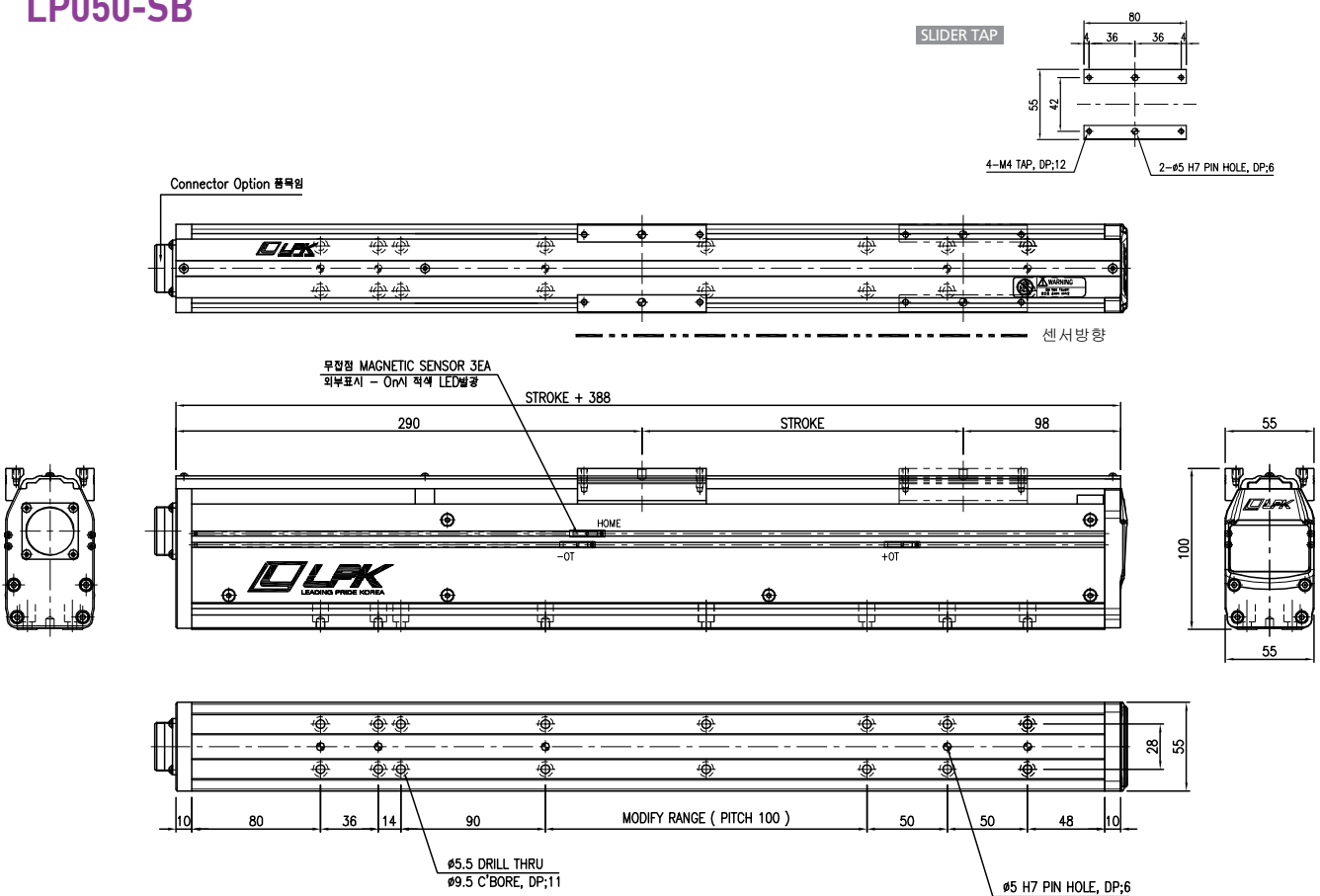
The weight of the model equipped with a brake is 0.35 Kg heavier than this value.

# LP050 Series Cartesian ROBO System

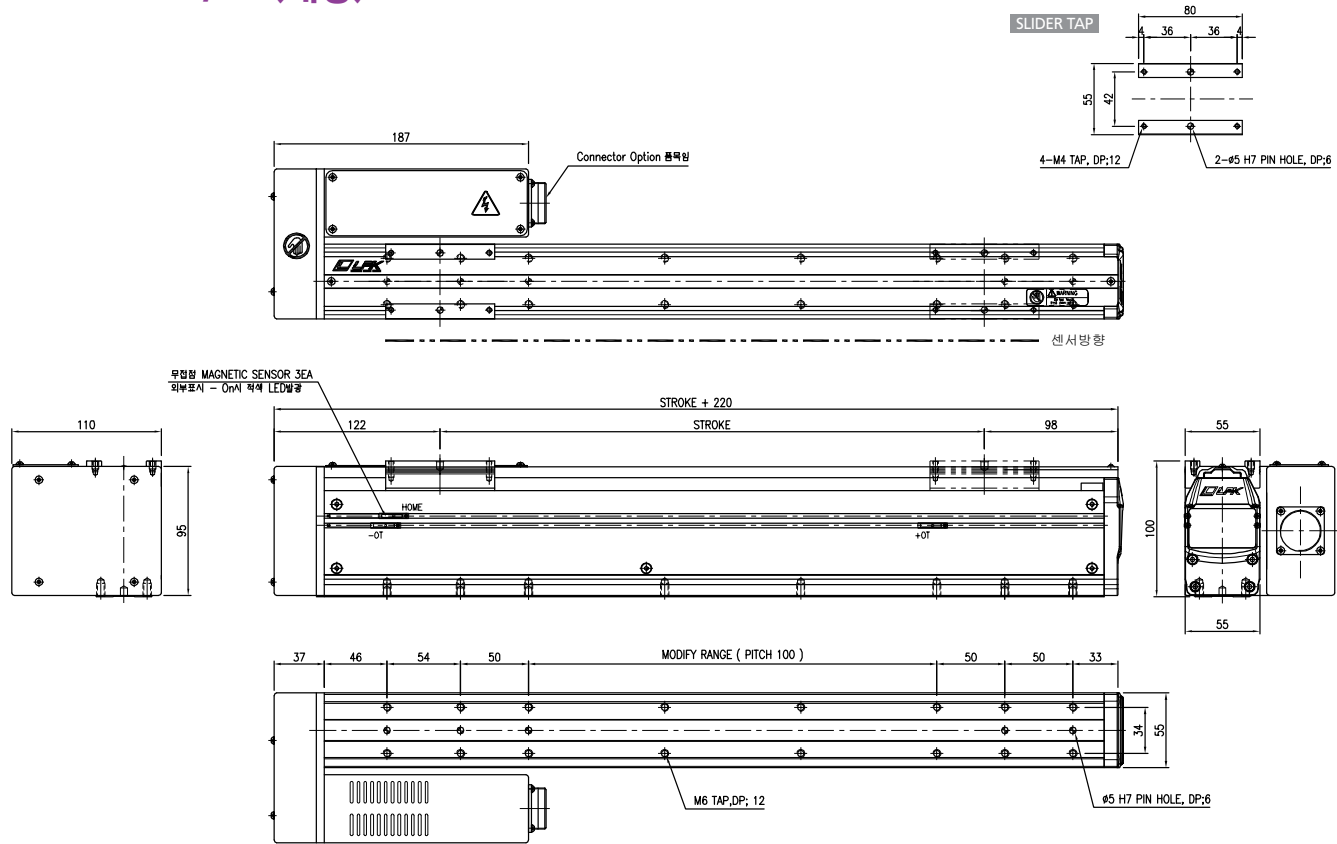
## LP050-ST



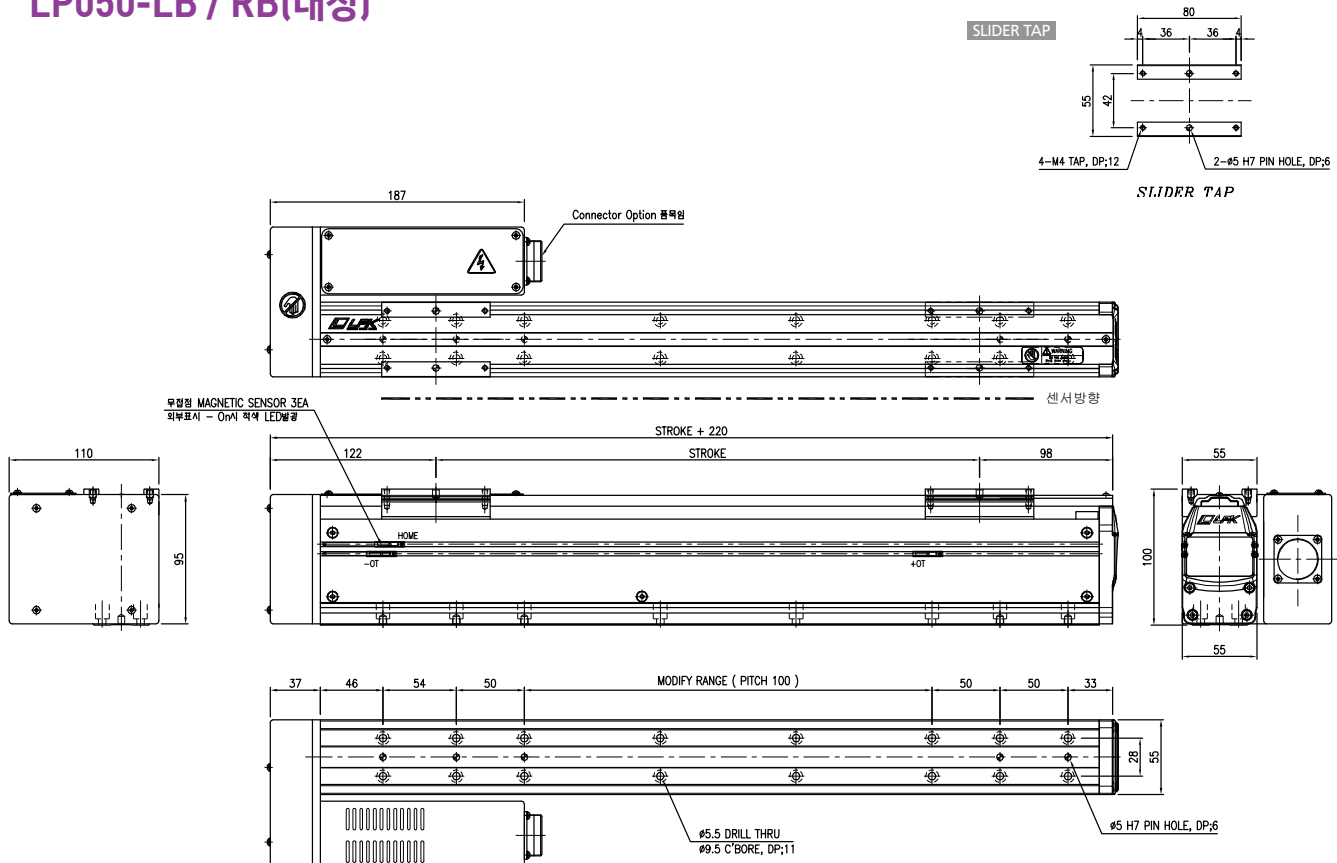
## LP050-SB



## LP050-LT / RT(대칭)

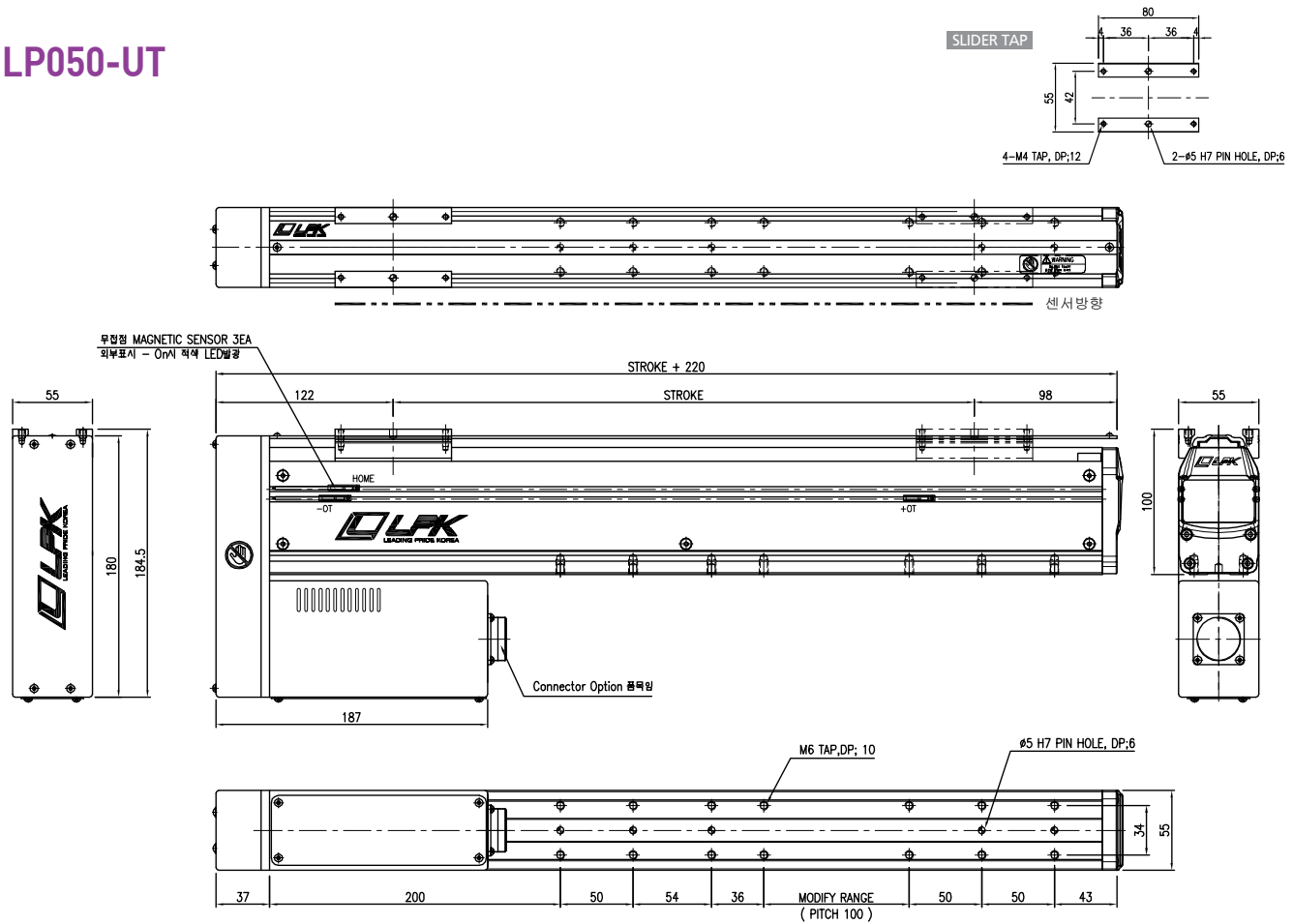


## LP050-LB / RB(대칭)

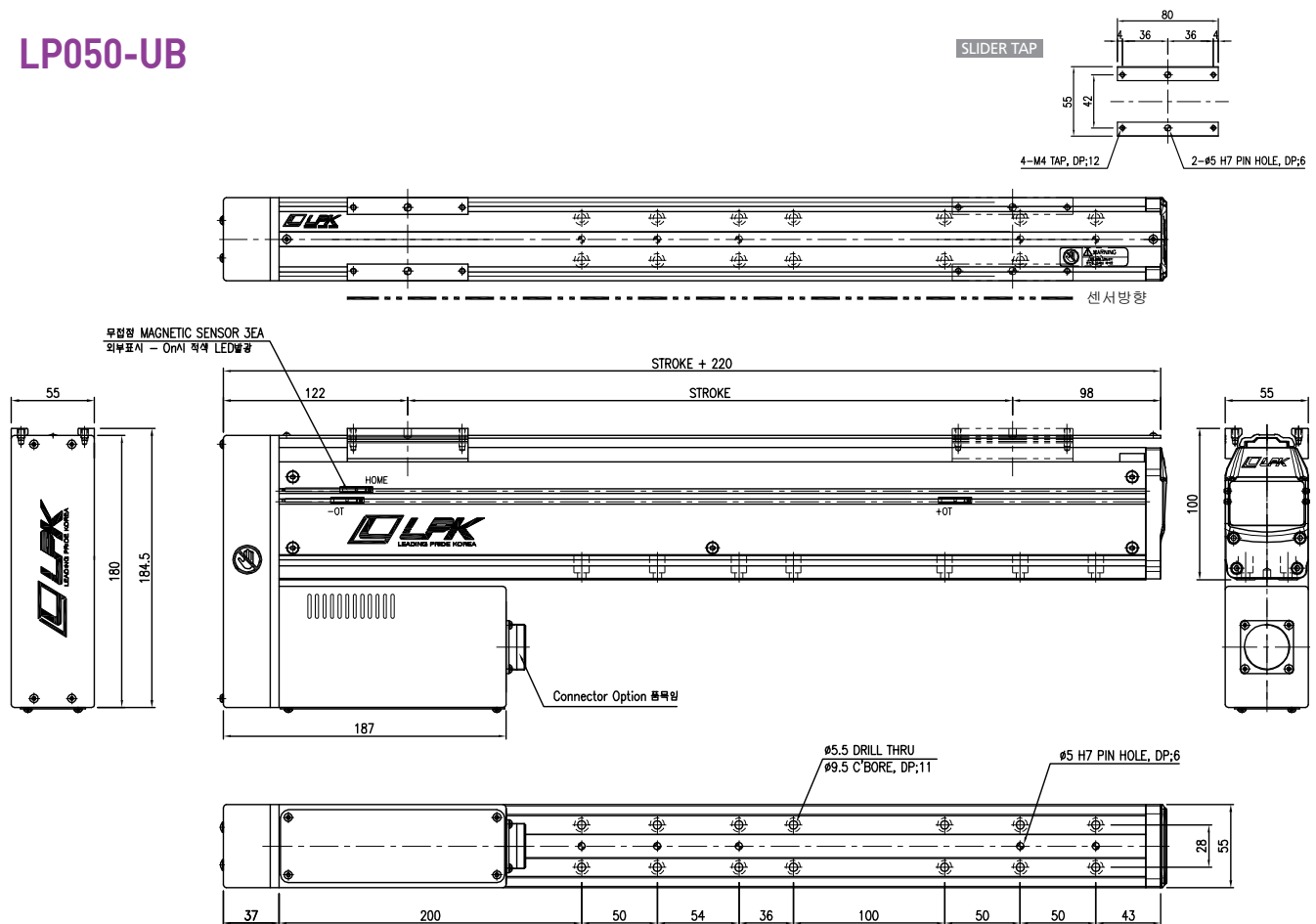


# LP050 Series Cartesian ROBO System

## LP050-UT



## LP050-UB



## Cartesian ROBO System LP068 Series

### Specification

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 100W                                                     |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |
| • Repeatability                                | ±0.02 mm                                                 |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm            |
| • Stroke (mm)                                  | 10 ~ 1300                                                |
| • LM Guide Bearing                             | One Way 15W-1BLOCK                                       |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 4.68E + 05, I <sub>y</sub> = 9.06E + 05 |

### Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 975 | 770 | 620 | 515  | 430  | 365  | 315  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 480 | 375 | 305 | 250  | 210  | 180  | 155  |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 240 | 190 | 150 | 125  | 105  | 90   | 75   |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망.

주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

### 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            |  |  |
|-----------------------|-----|-----------|-----------------|--|--|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 3  |  |  |
|                       |     |           | Vertical : 1.5  |  |  |
|                       |     | Lead 10mm | Horizontal : 12 |  |  |
|                       |     |           | Vertical : 2.5  |  |  |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec

Servo motor Rotate : 3000rpm, Pause Time : 0 sec

Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

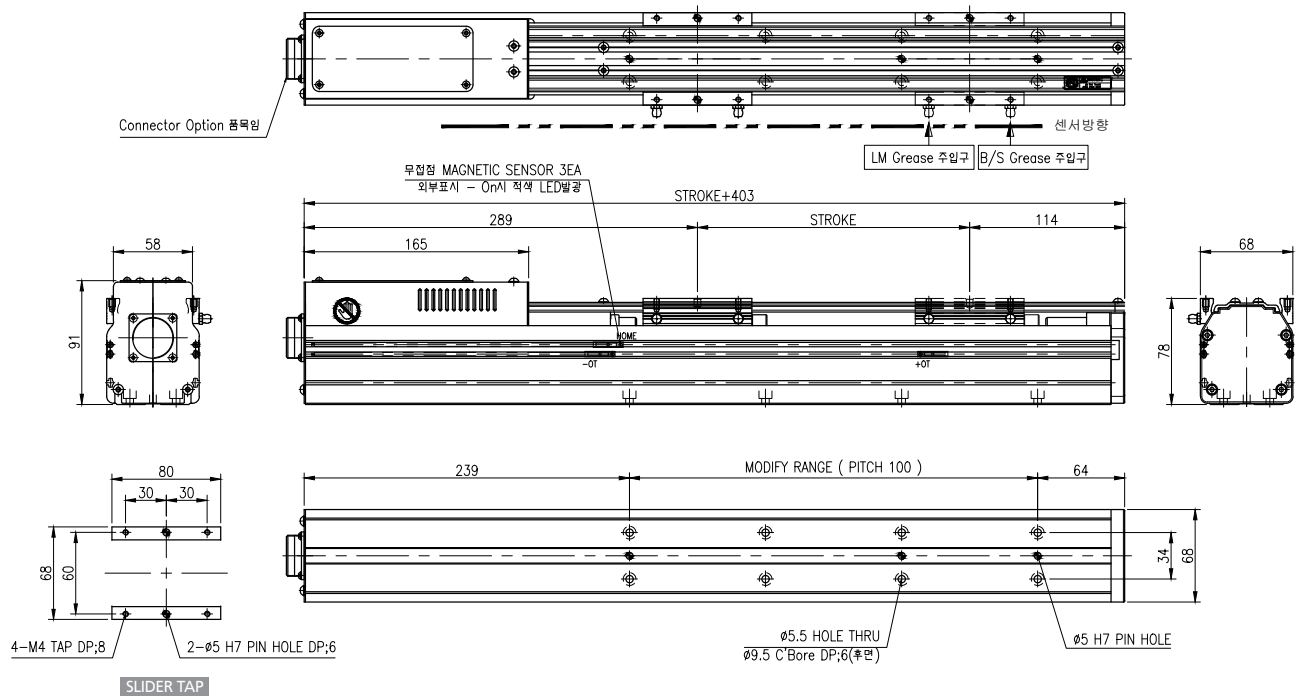
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

### Robot Weight

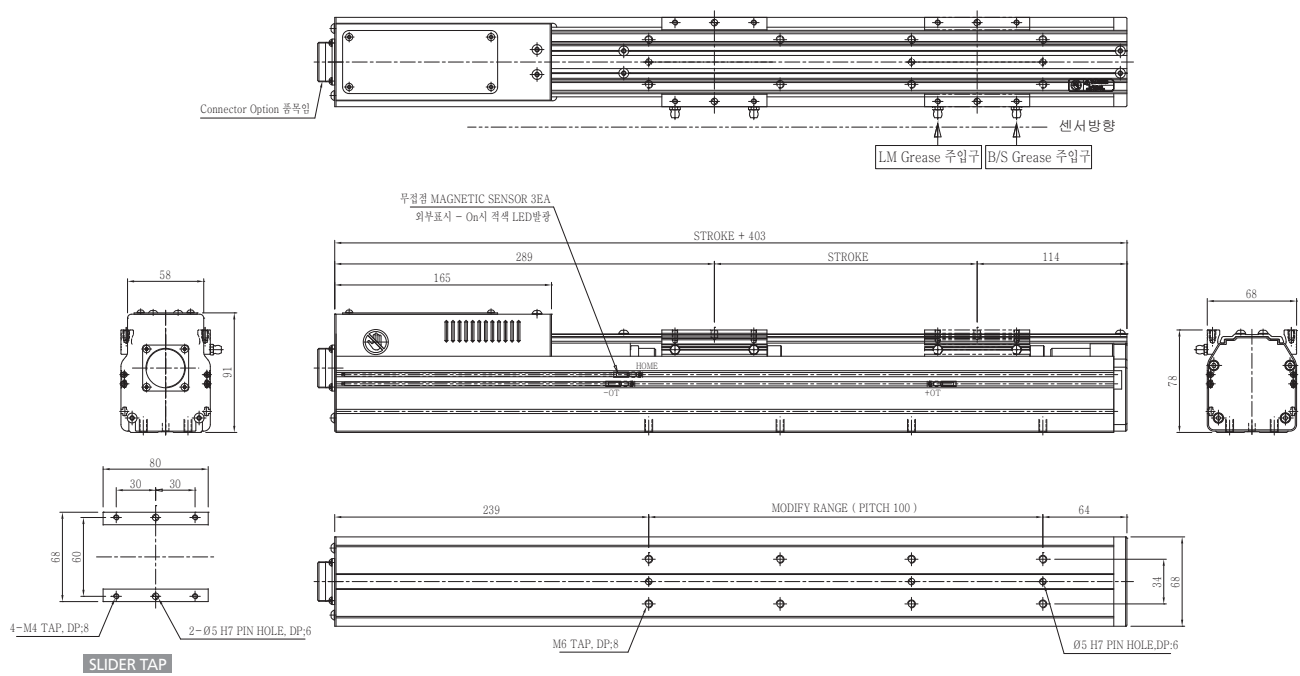
| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Weight (Kg) | Straight |  | 4.8 | 5.4 | 6   | 6.6 | 7.2 | 7.8 | 8.4 | 9   | 9.6 | 10.2 | 10.8 | 11.4 | 12   |
|             | Parallel |  | 5   | 5.6 | 6.2 | 6.8 | 7.4 | 8   | 8.6 | 9.2 | 9.8 | 10.4 | 11   | 11.6 | 12.2 |

# LP068 Series Cartesian ROBO System

## LP068-SB-10

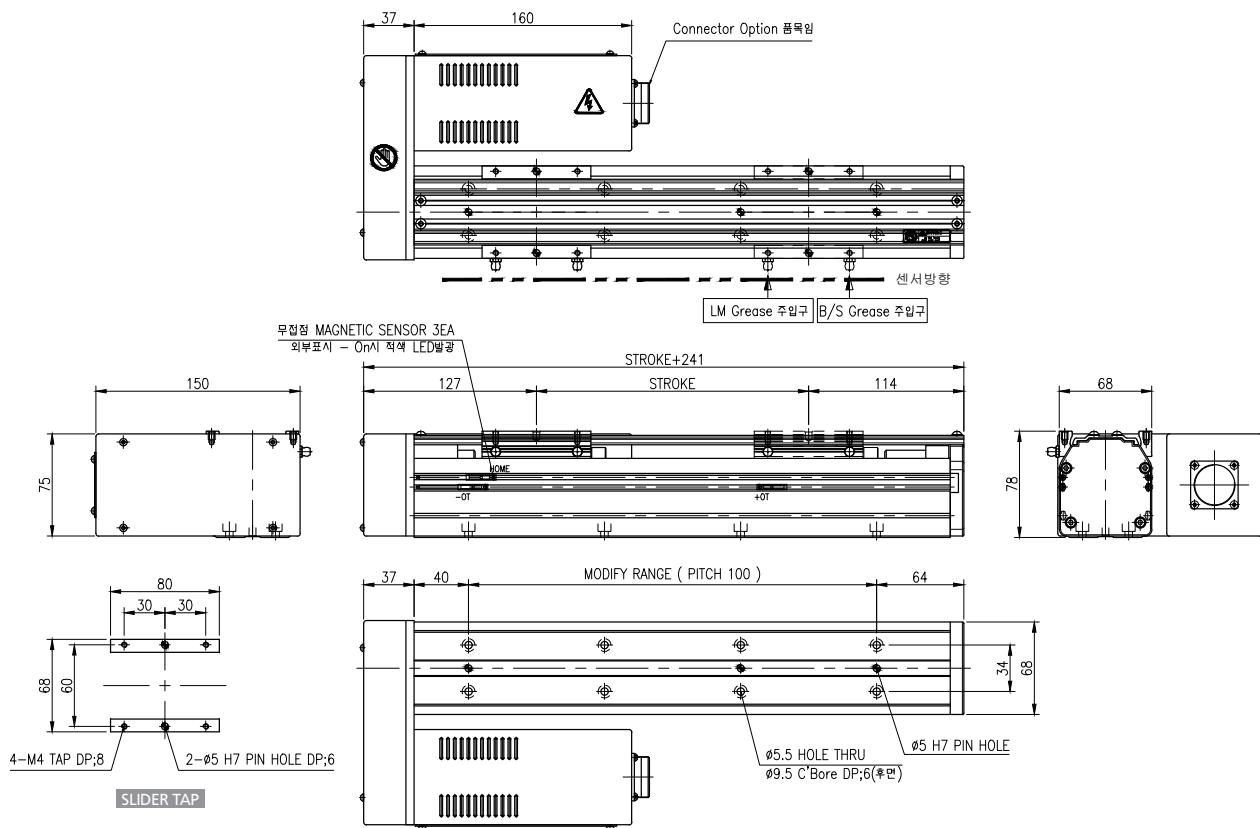


## LP068-ST-10

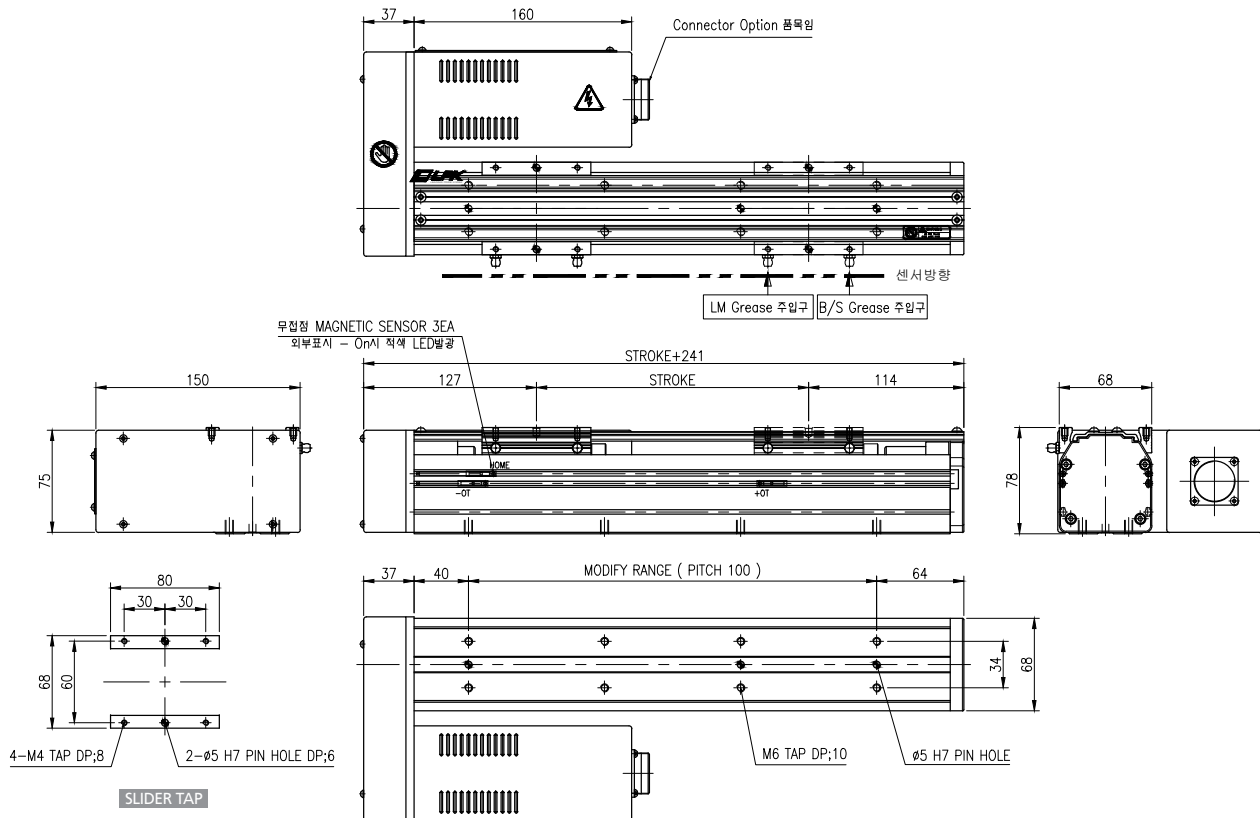




## LP068-LB-10 / RB-10(대칭)

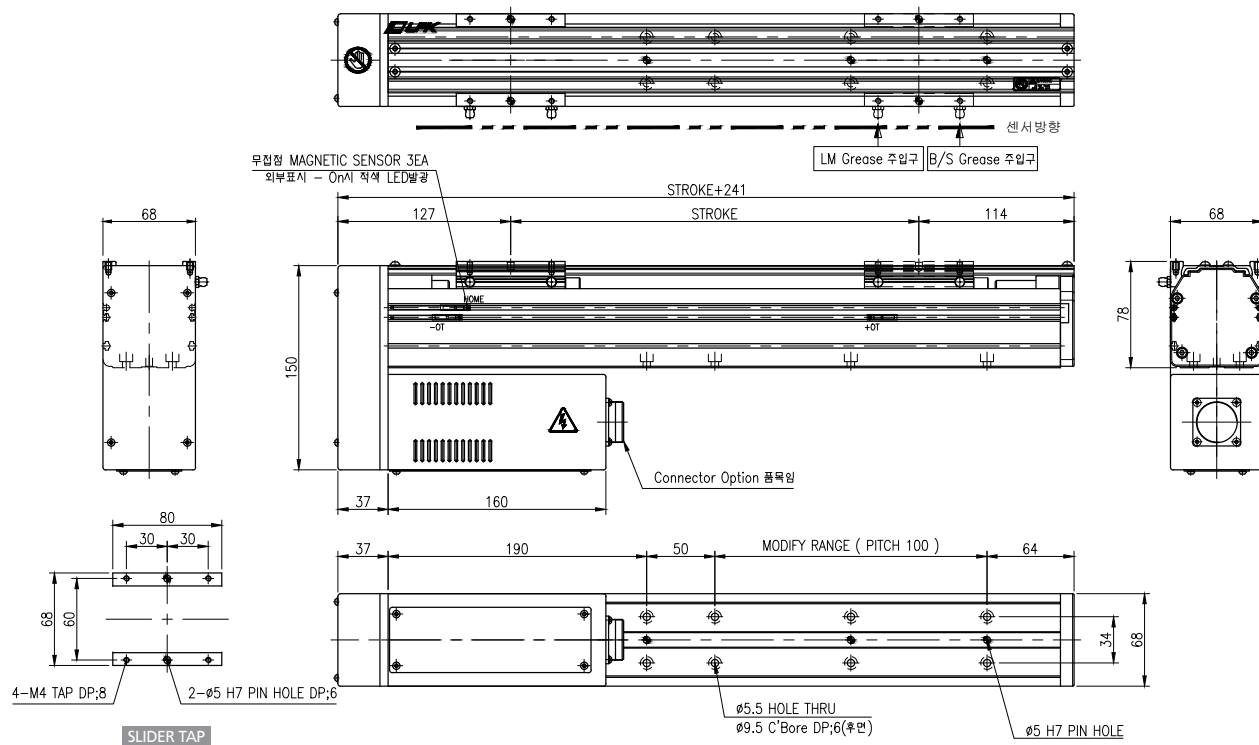


## LP068-LT-10 / RT-10(대칭)

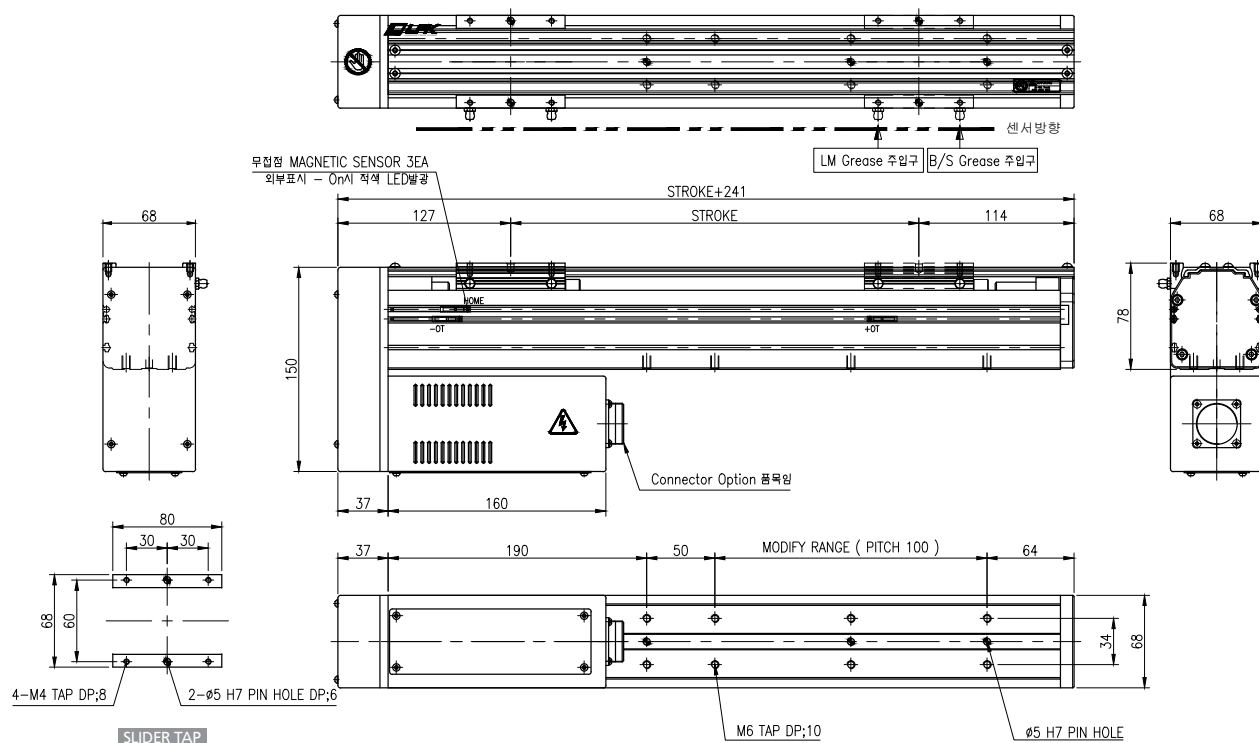


# LP068 Series Cartesian ROBO System

## LP068-UB-10



## LP068-UT-10



# Cartesian ROBO System LP070 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                               |
|------------------------------------------------|-----------------------------------------------|
| • AC Servo Motor Output                        | 100W                                          |
| • AC Servo Motor RPM                           | 3000 RPM                                      |
| • Repeatability                                | ±0.02 mm                                      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm |
| • Stroke (mm)                                  | 10 ~ 1300                                     |
| • LM Guide Bearing                             | One Way 24-2BLOCK                             |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing              |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 1.83E + 05, Iy = 1.09E + 06              |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 970 | 765 | 620 | 515  | 430  | 365  | 315  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 475 | 375 | 305 | 250  | 210  | 180  | 155  |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 235 | 185 | 150 | 125  | 105  | 90   | 75   |

주1) Stroke 1300mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            |  |  |
|-----------------------|-----|-----------|-----------------|--|--|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 3  |  |  |
|                       |     |           | Vertical : 3    |  |  |
|                       |     | Lead 10mm | Horizontal : 13 |  |  |
|                       |     |           | Vertical : 8    |  |  |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec,  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

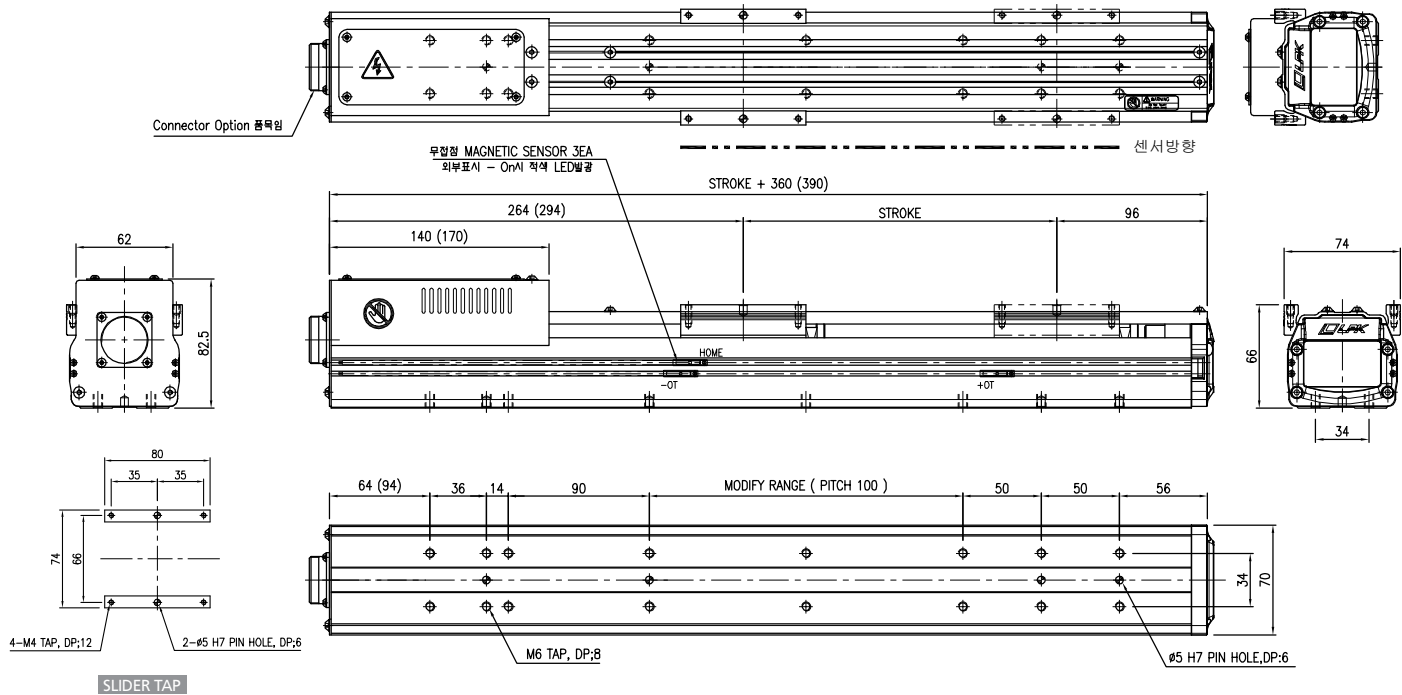
## Robot Weight

| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Weight (Kg) | Straight |  | 4.4 | 4.9 | 5.5 | 6   | 6.6 | 7.2 | 7.8 | 8.4 | 8.9 | 9.4  | 10   | 10.6 | 11.2 |
|             | Parallel |  | 4.5 | 5.1 | 5.6 | 6.2 | 6.8 | 7.3 | 7.9 | 8.5 | 9.1 | 9.7  | 10.2 | 10.8 | 11.4 |

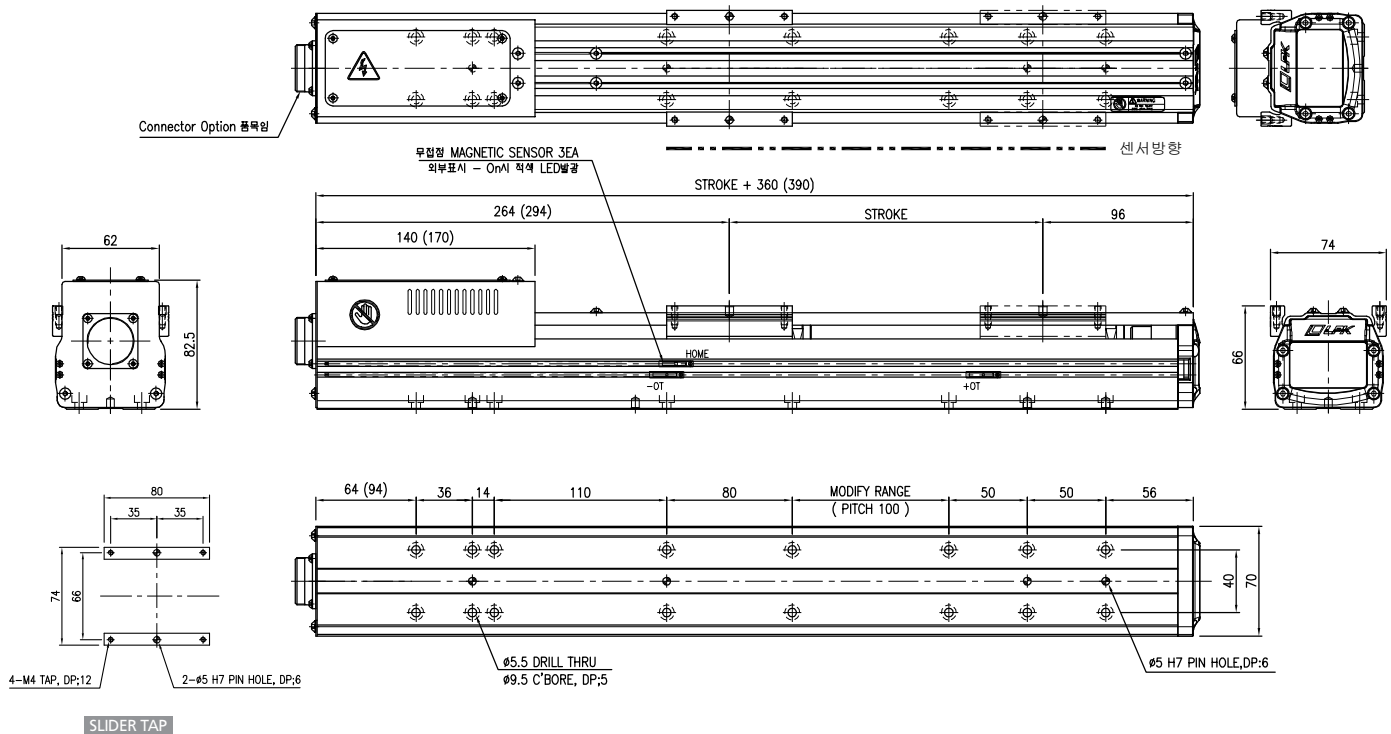
The weight of the model equipped with a brake is 0.35 Kg heavier than this value.

# LP070 Series Cartesian ROBO System

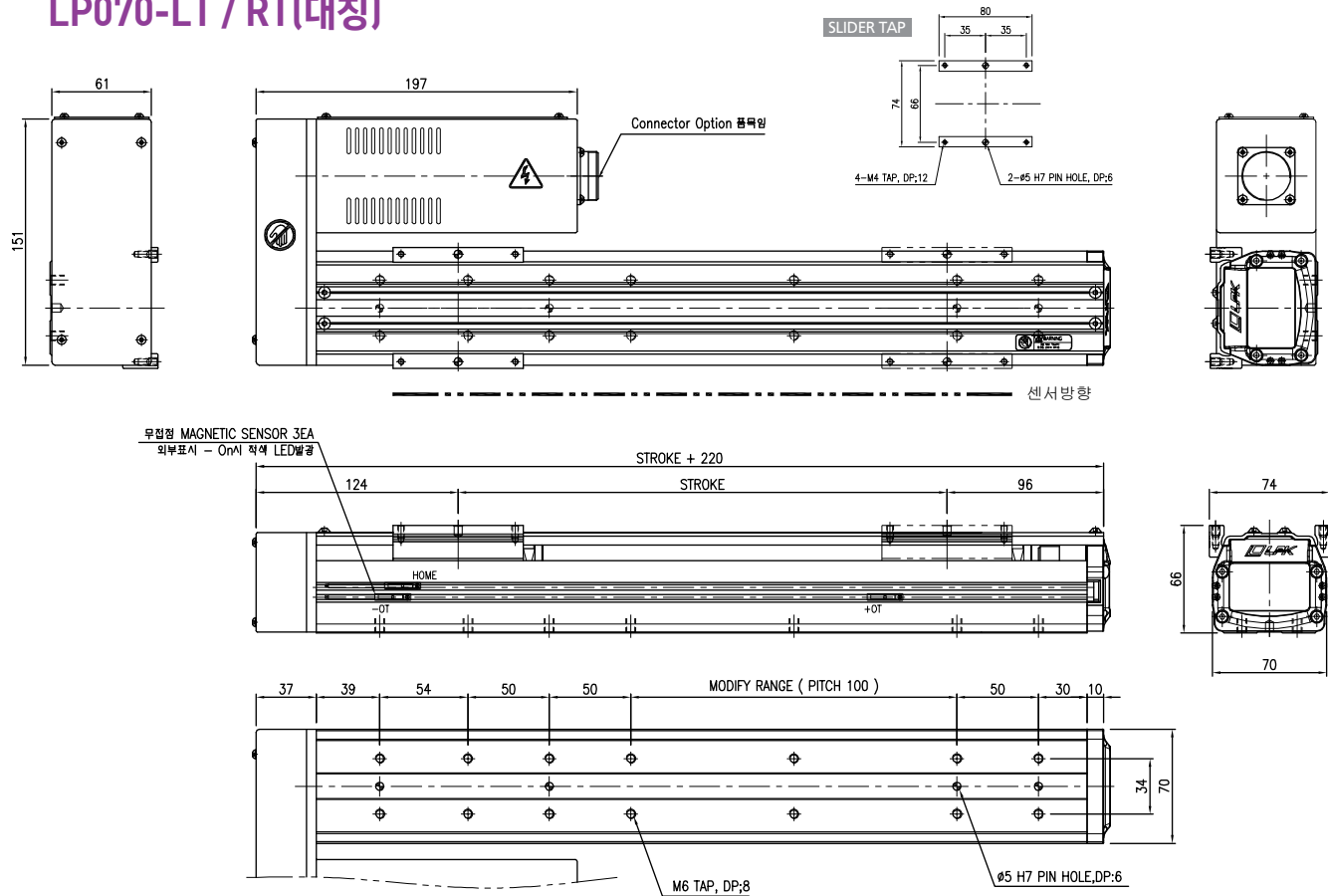
## LP070-ST ( )100W Brake Motor dimension.



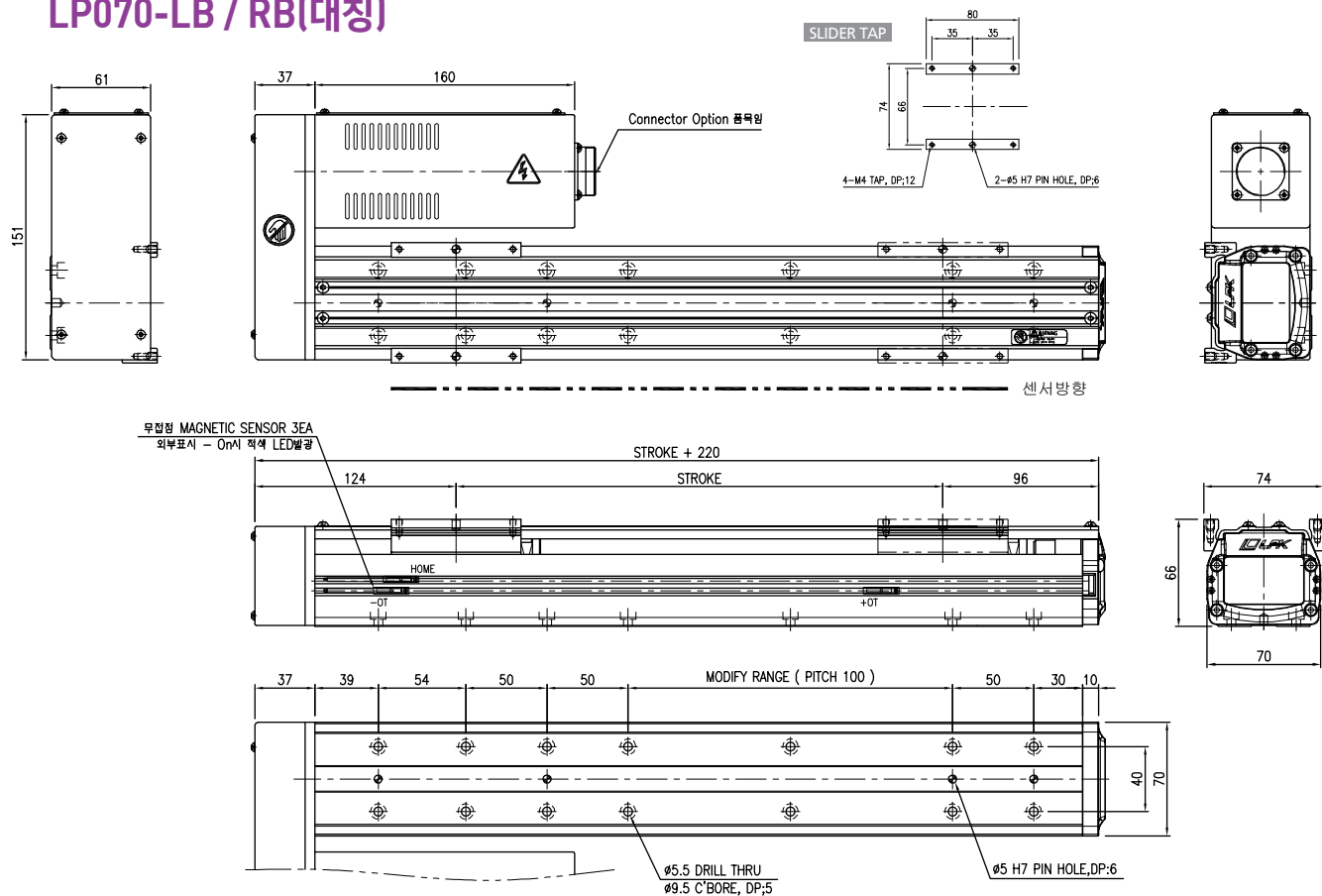
## LP070-SB ( )100W Brake Motor dimension.



## LP070-LT / RT(대칭)

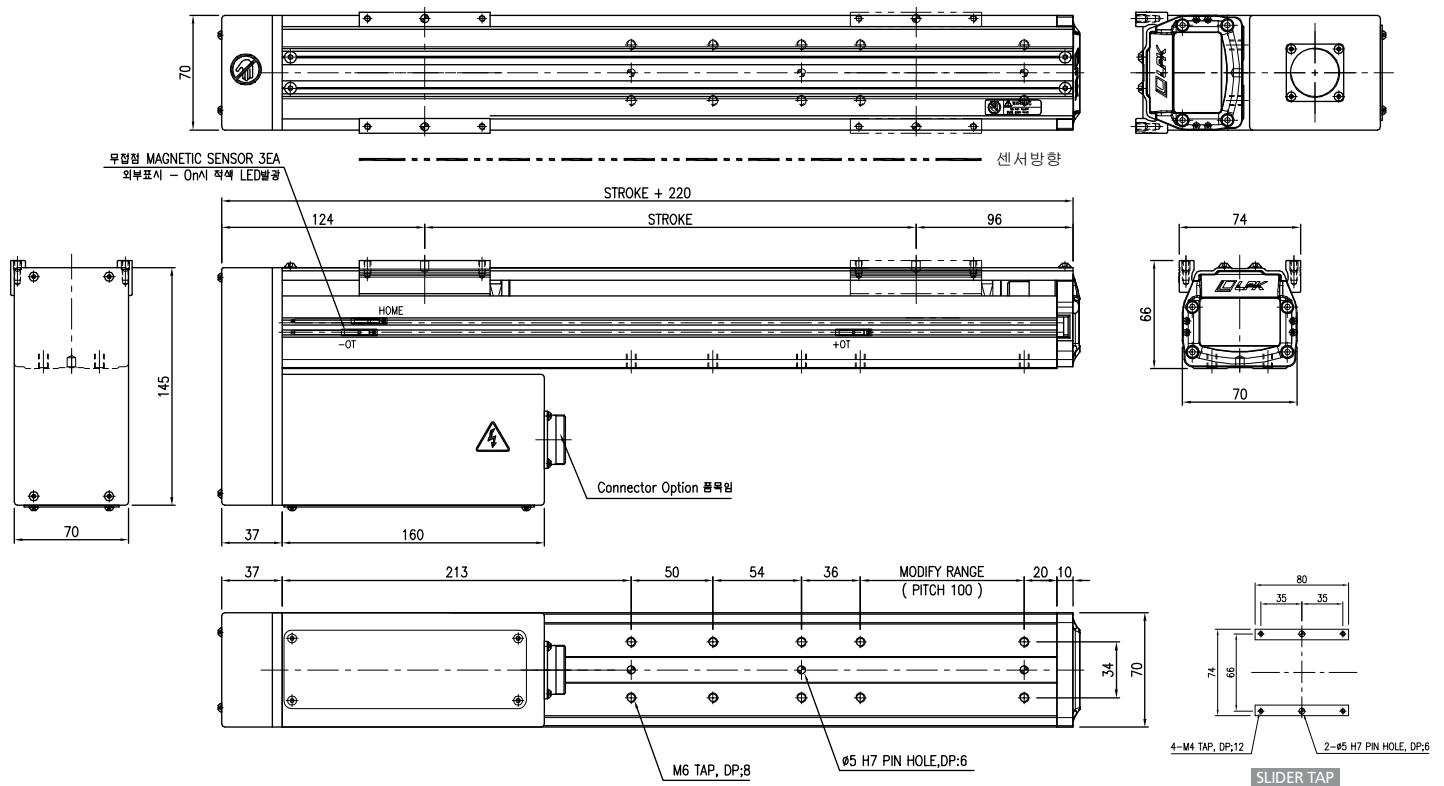


## LP070-LB / RB(대칭)

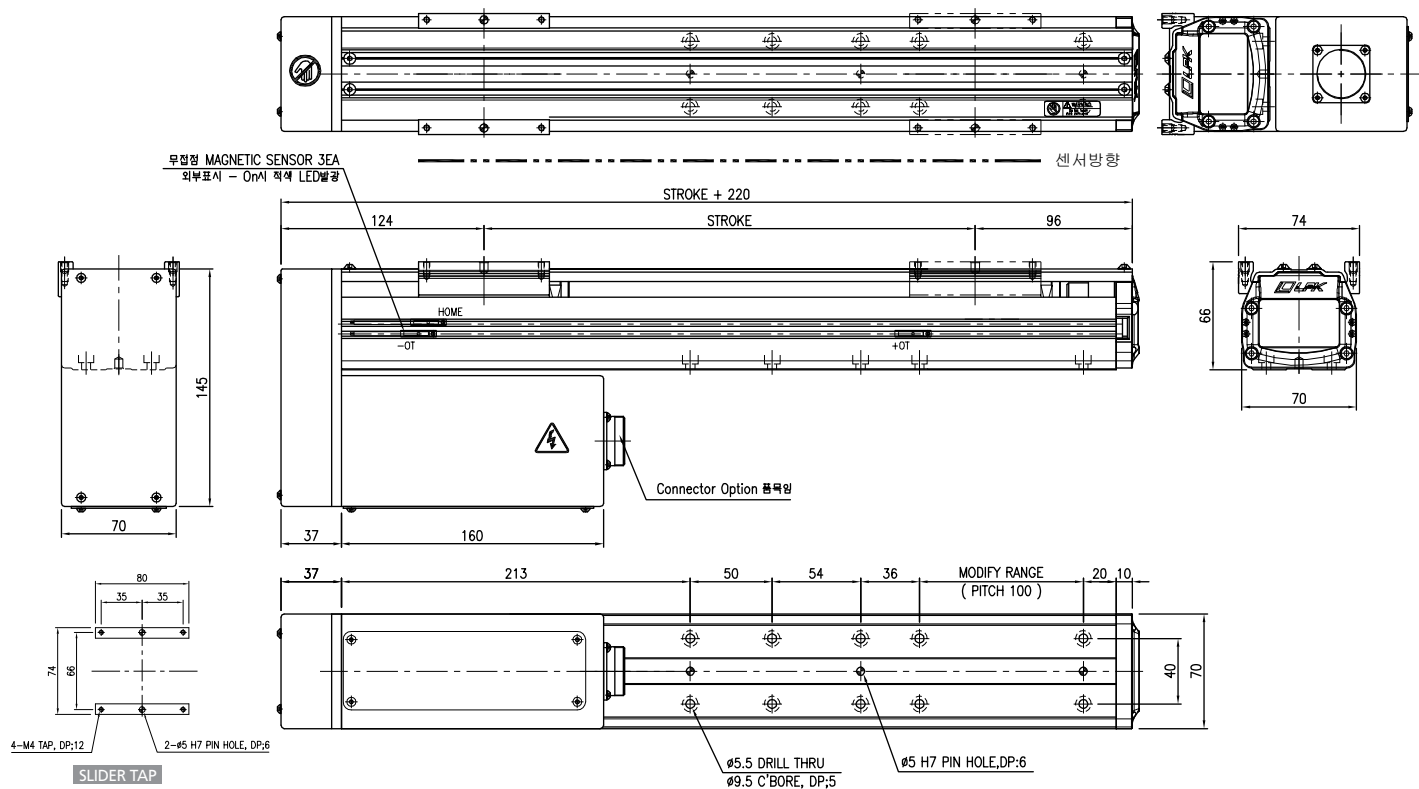


# LP070 Series Cartesian ROBO System

## LP070-UT



## LP070-UB



# Cartesian ROBO System LP090 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 100W                                                     | 200W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm            |      |
| • Stroke (mm)                                  | 10 ~ 1300                                                |      |
| • LM Guide Bearing                             | One Way 42-2BLOCK                                        |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 1.83E + 05, I <sub>y</sub> = 1.09E + 06 |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 955 | 755 | 615 | 505  | 425  | 365  | 315  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 470 | 370 | 300 | 250  | 210  | 180  | 155  |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 235 | 185 | 150 | 125  | 105  | 90   | 75   |

주1) Stroke 1300mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            | 200W            |
|-----------------------|-----|-----------|-----------------|-----------------|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 2  | Horizontal : 28 |
|                       |     |           | Vertical : 2    | Vertical : 8    |
|                       |     | Lead 10mm | Horizontal : 12 | Horizontal : 30 |
|                       |     |           | Vertical : 8    | Vertical : 16   |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

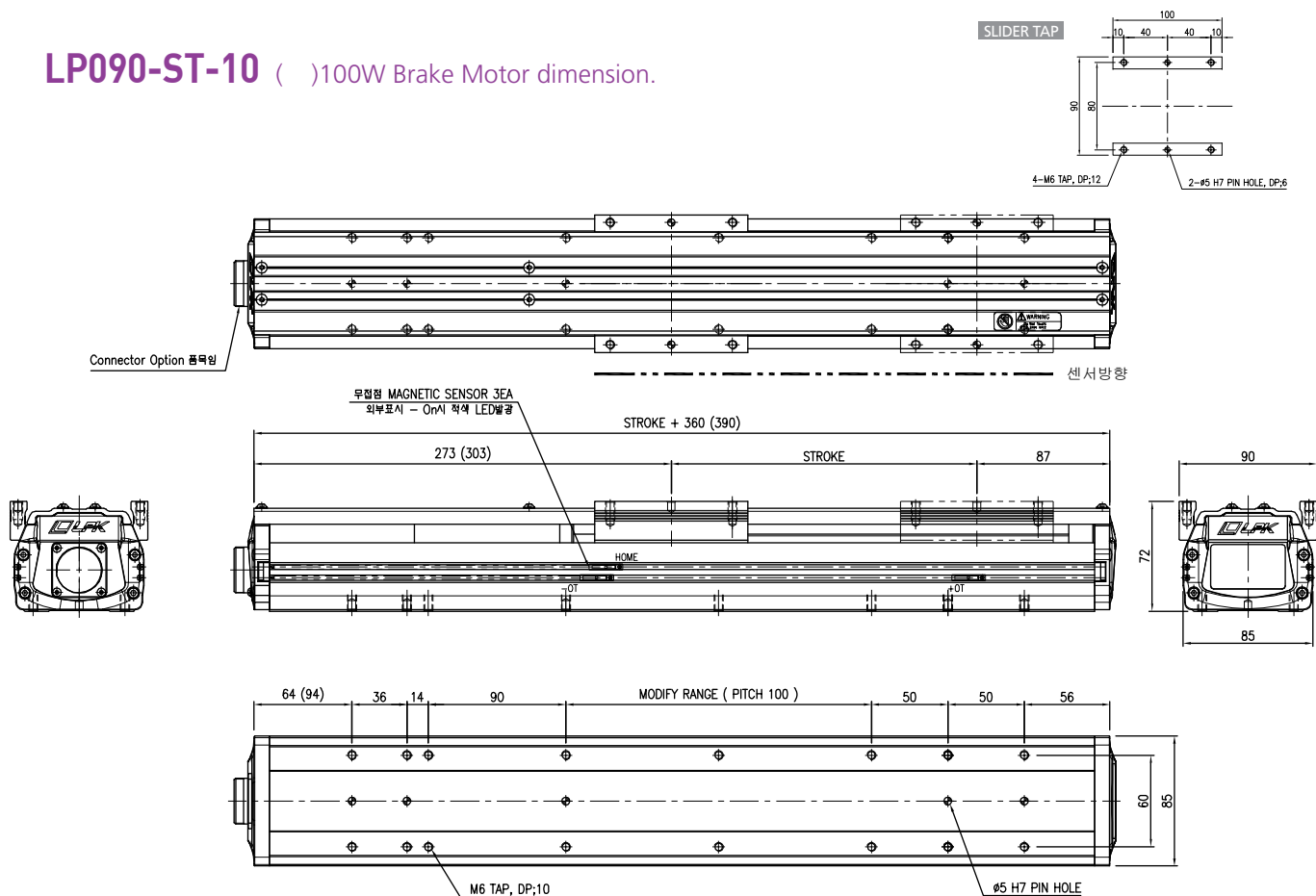
## Robot Weight

| Stroke (mm)    |          |      | 100 | 200 | 300 | 400 | 500 | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 |
|----------------|----------|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 100W | 6.2 | 7   | 7.8 | 8.7 | 9.5 | 10.3 | 11.2 | 12   | 12.8 | 13.7 | 14.5 | 15.3 | 16.2 |
|                |          | 200W | 6.7 | 7.5 | 8.3 | 9.2 | 10  | 10.8 | 11.7 | 12.5 | 13.3 | 14.2 | 15   | 15.8 | 16.7 |
|                | Parallel | 100W | 5.7 | 6.4 | 7   | 7.7 | 8.4 | 9.1  | 9.8  | 10.4 | 11.1 | 11.8 | 12.5 | 13.2 | 13.8 |
|                |          | 200W | 6.2 | 6.9 | 7.5 | 8.2 | 8.9 | 9.6  | 10.3 | 10.9 | 11.6 | 12.3 | 13   | 13.7 | 14.3 |

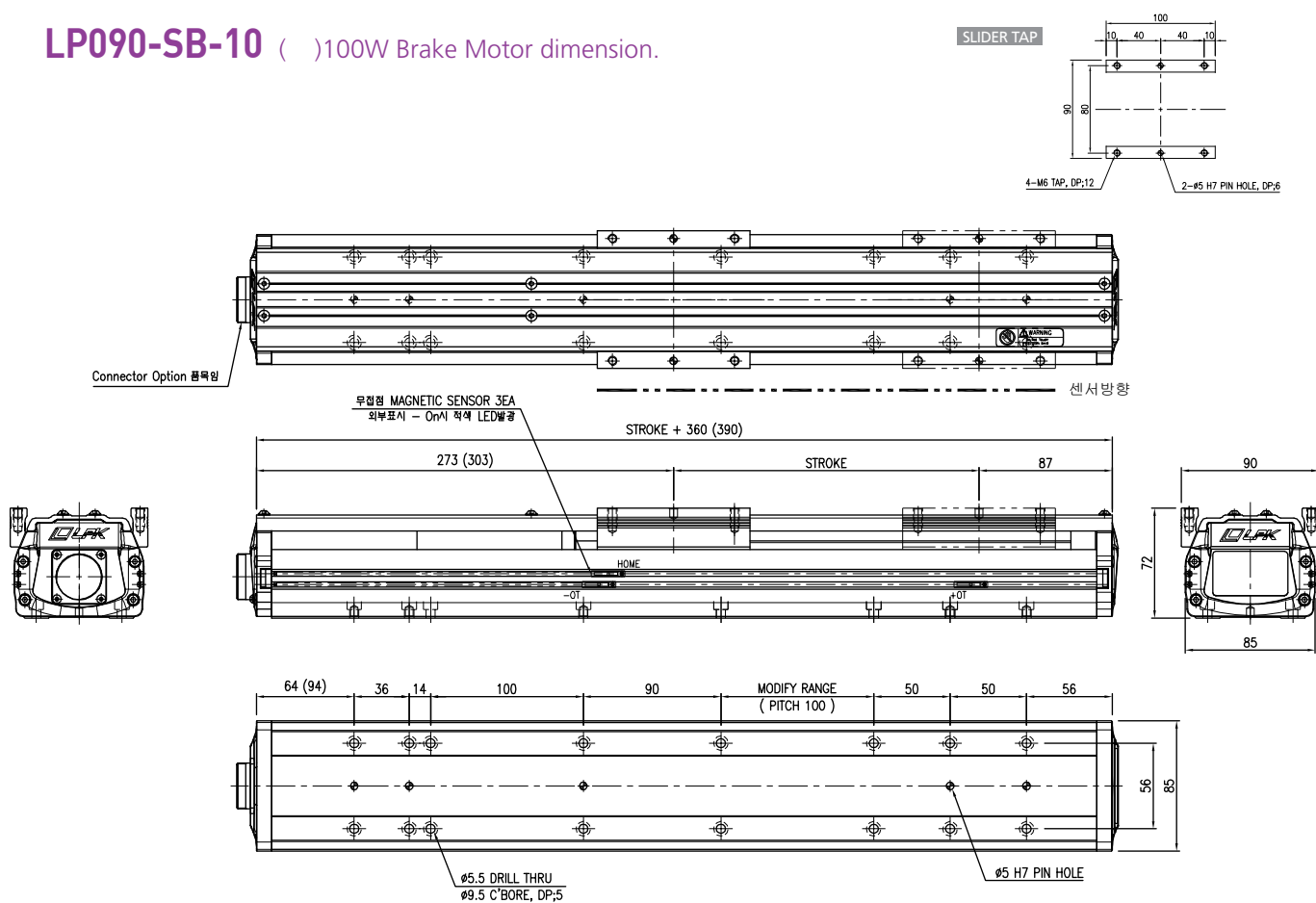
The weight of the model equipped with a brake is 0.35Kg(0.65Kg) heavier than this value.

# LP090 Series Cartesian ROBO System

## LP090-ST-10 ( )100W Brake Motor dimension.

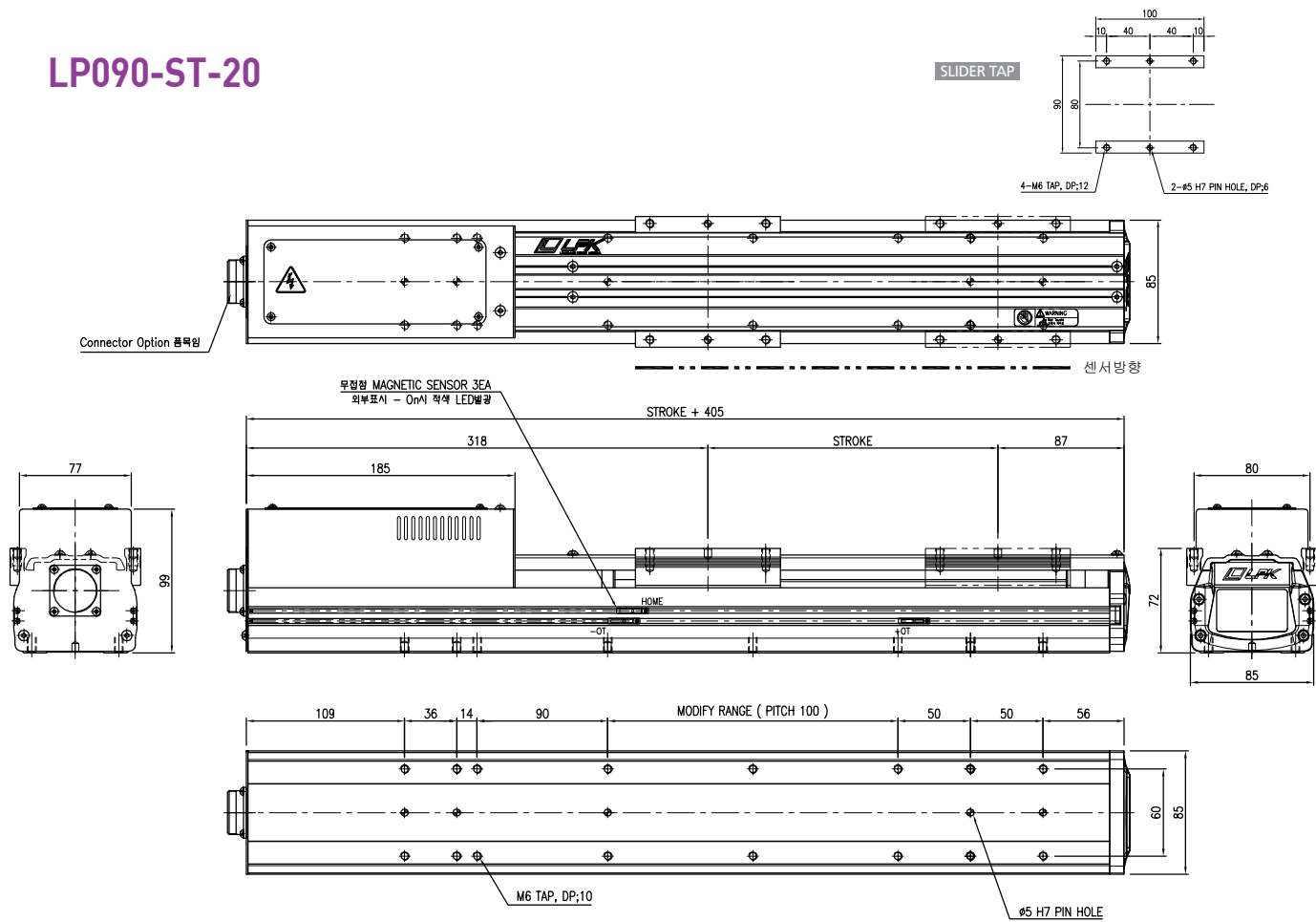


## LP090-SB-10 ( )100W Brake Motor dimension.

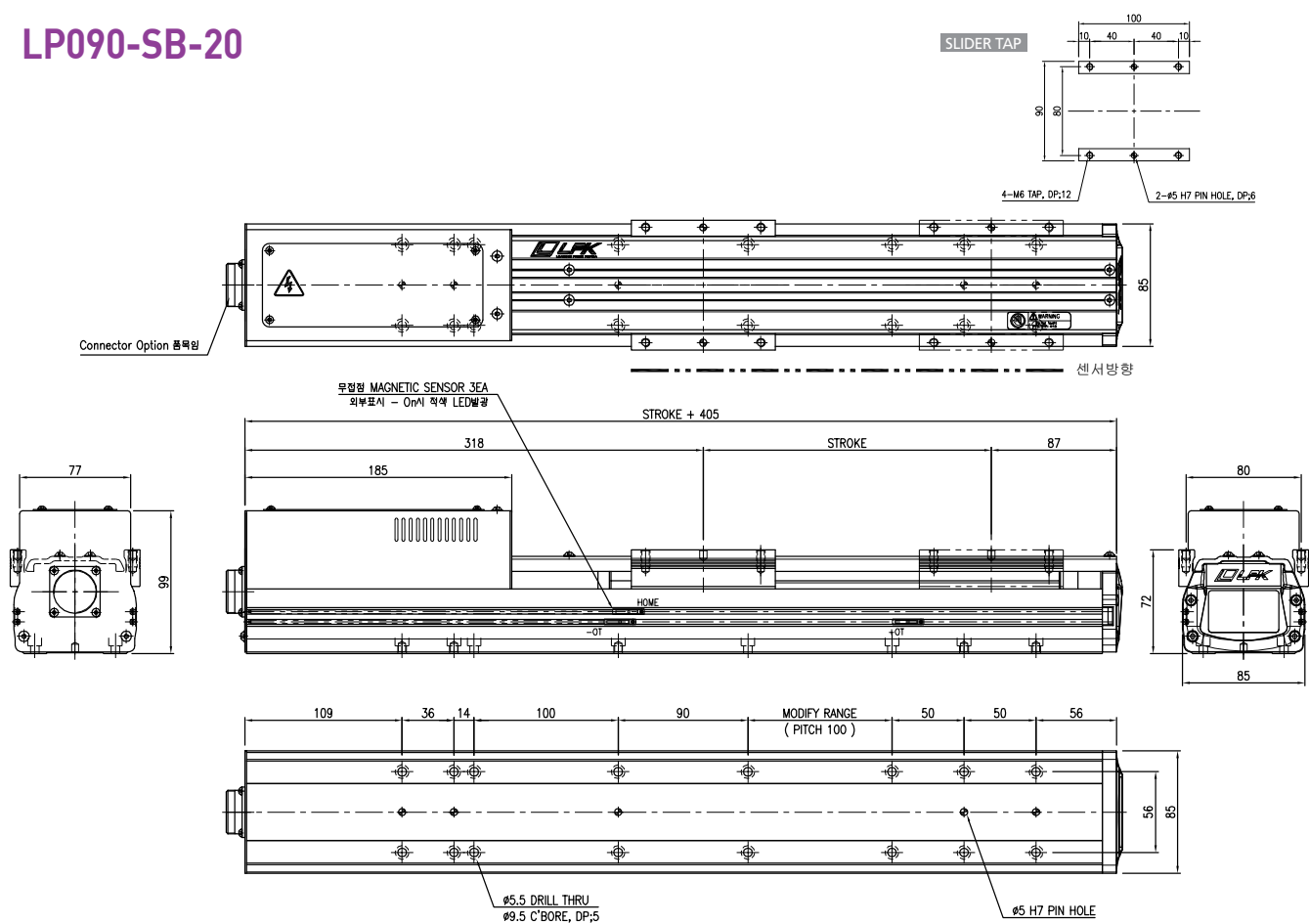




## LP090-ST-20

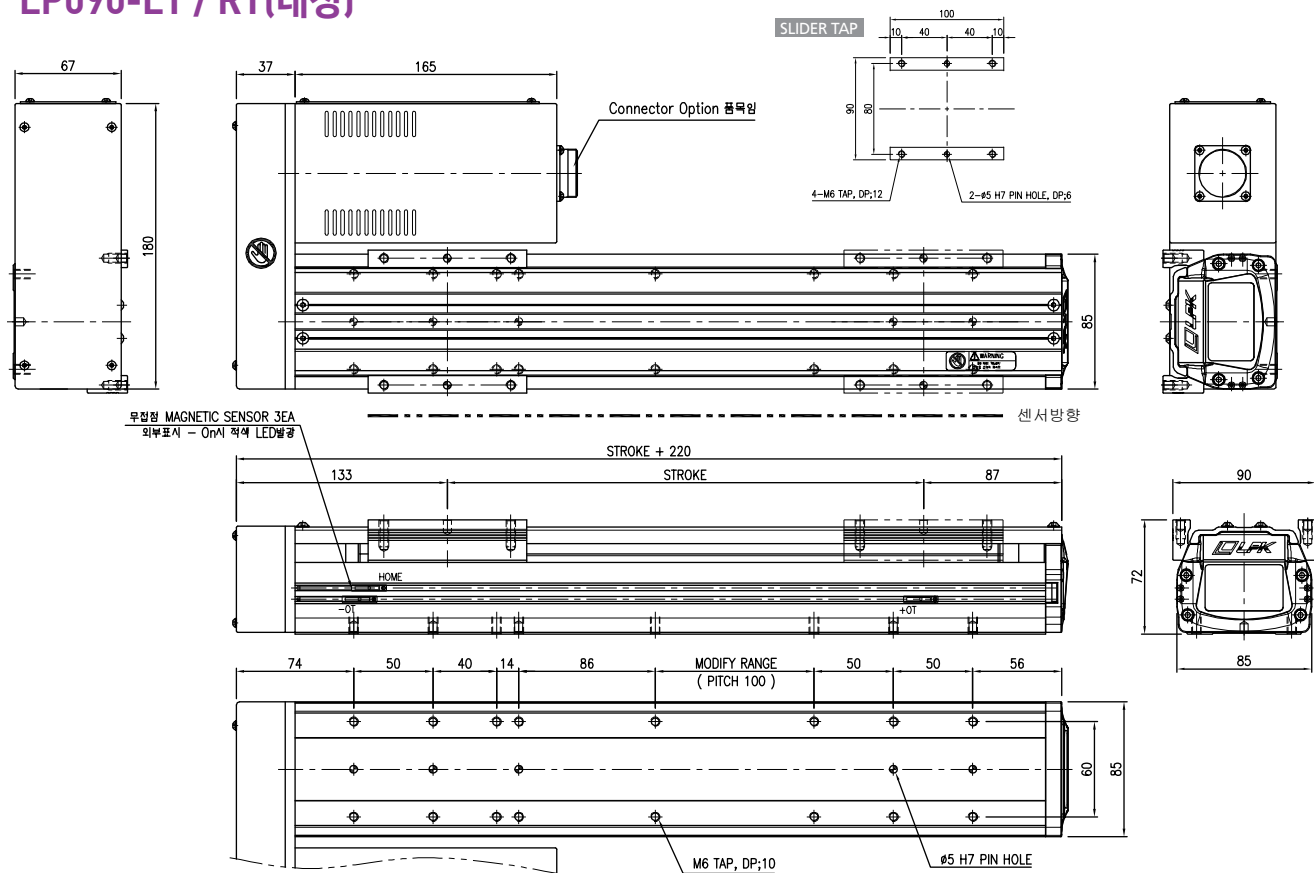


## LP090-SB-20

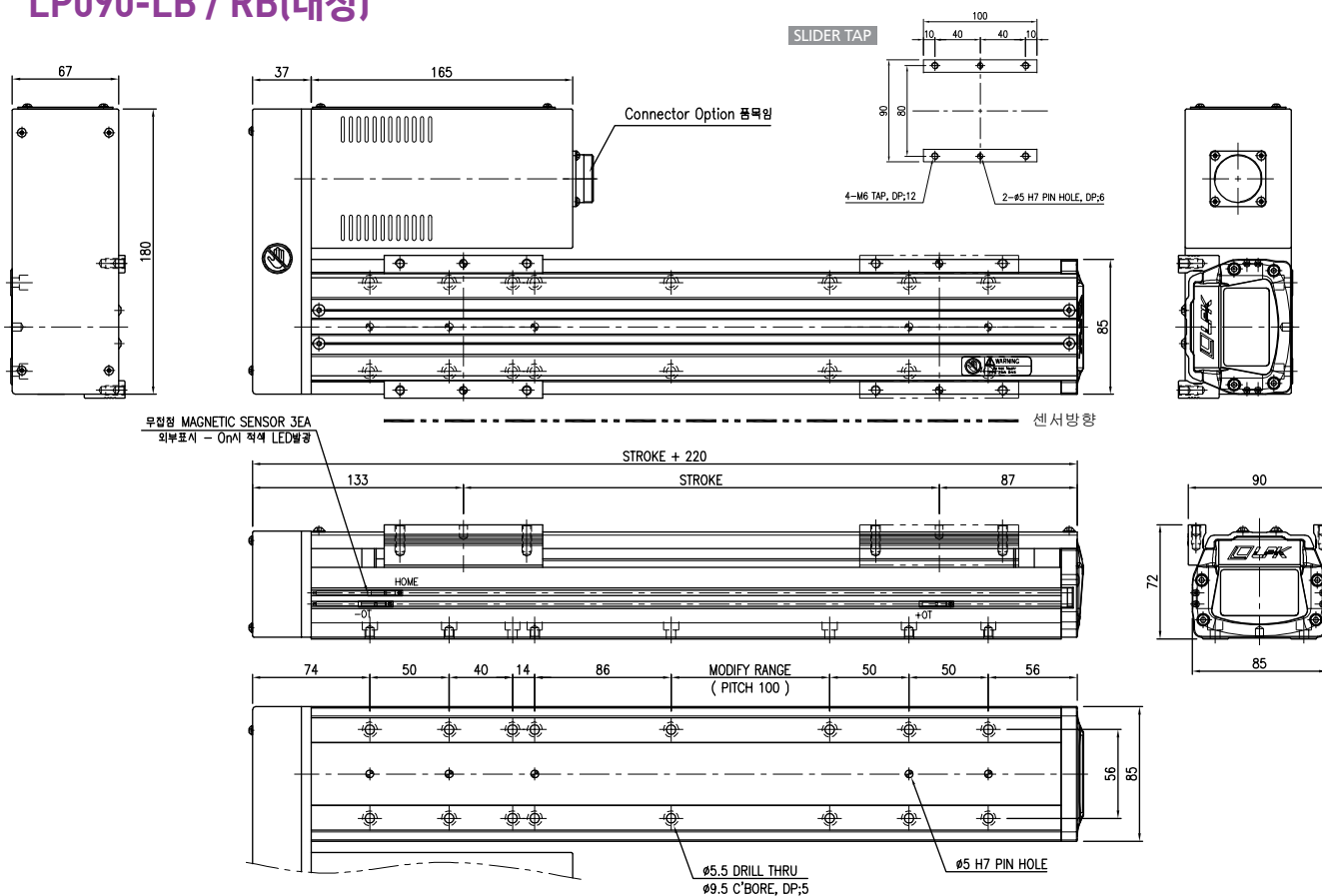


# LP090 Series Cartesian ROBO System

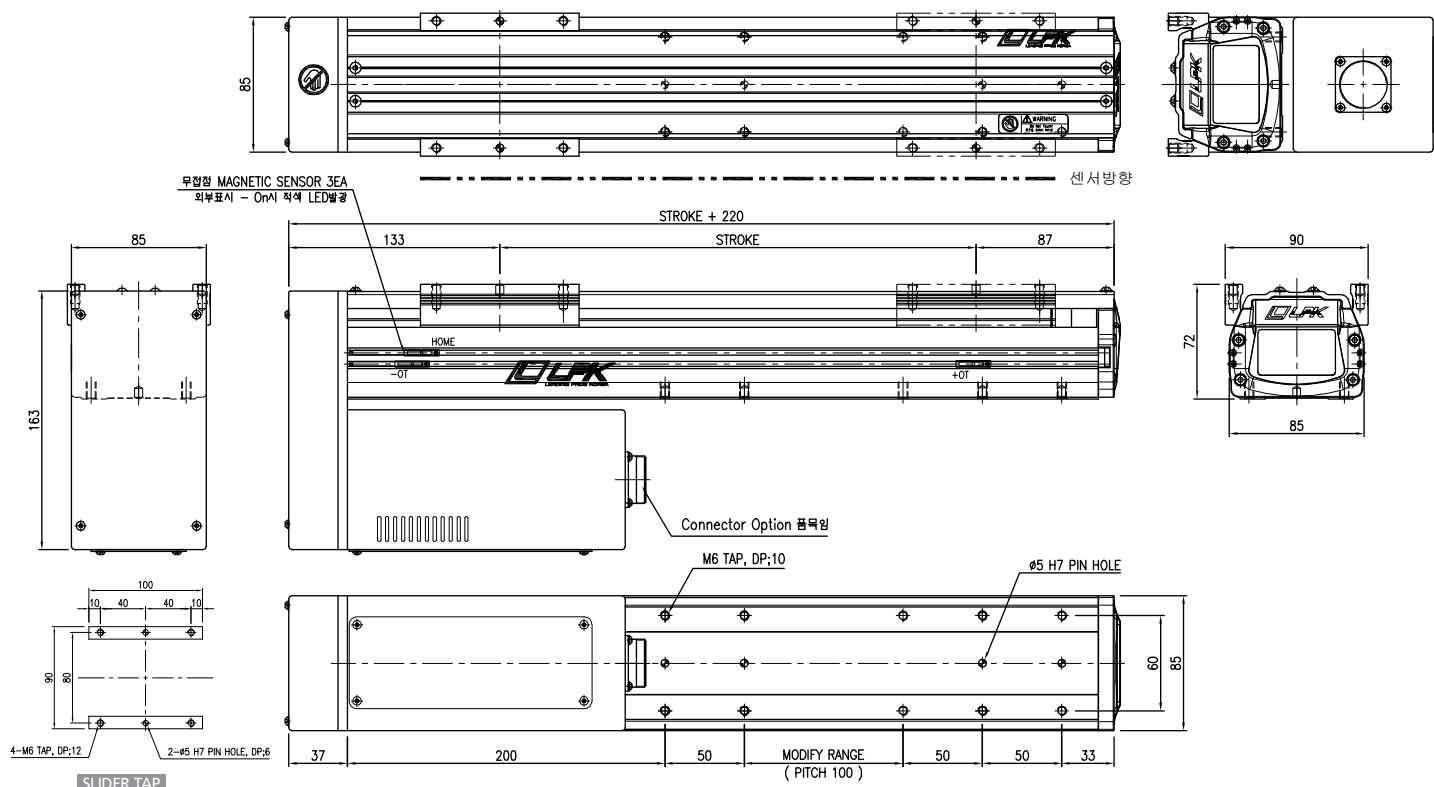
## LP090-LT / RT(대칭)



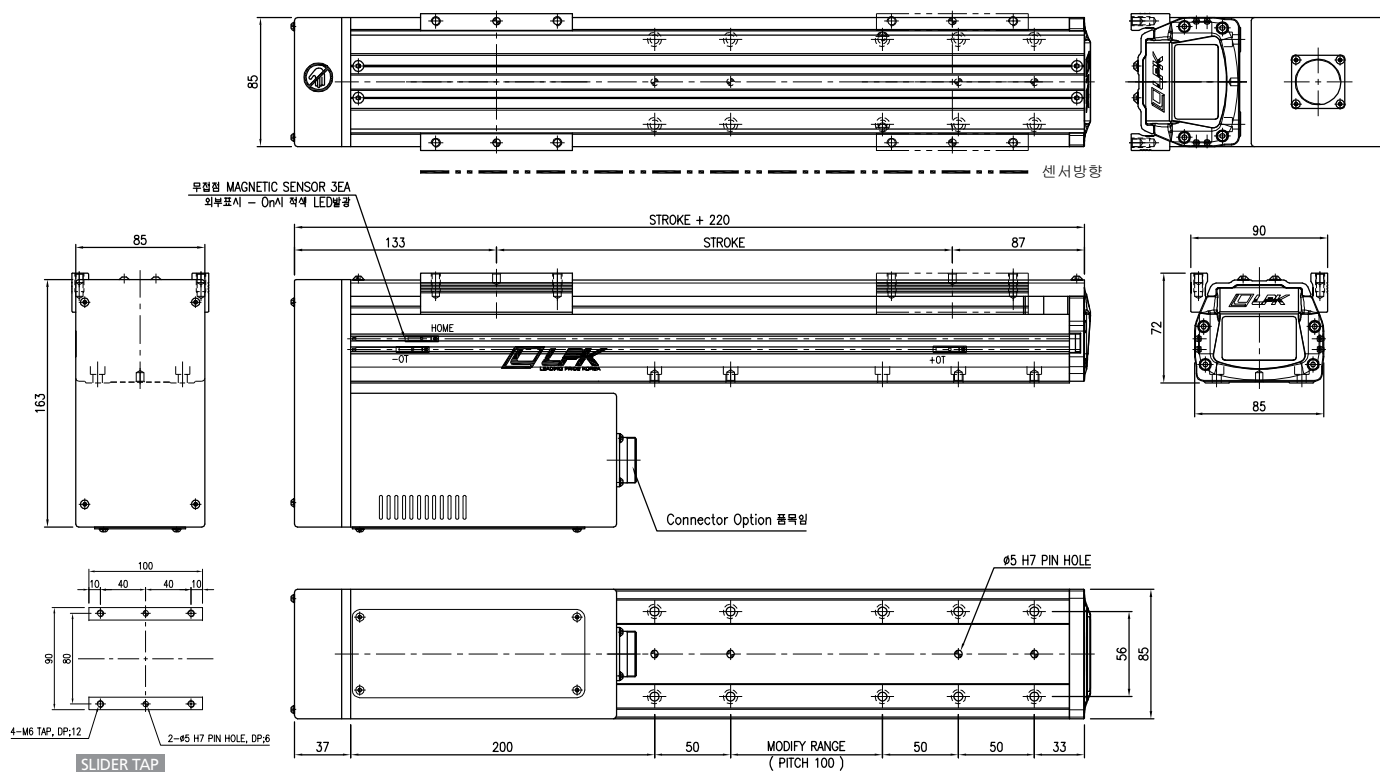
## LP090-LB / RB(대칭)



## LP090-UT



## LP090-UB



# Cartesian ROBO System LP092-1 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 100W                                                     | 200W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm            |      |
| • Stroke (mm)                                  | 10 ~ 1300                                                |      |
| • LM Guide Bearing                             | One Way 20W-1BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 5.45E + 05, I <sub>y</sub> = 1.77E + 06 |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     |     | 800 | 635 | 525  | 440  | 375  | 320  |
|                       |     | Lead 10mm | 500  |     |     |     |     | 495 | 385 | 315 | 255 | 215  | 185  | 155  |      |
|                       |     | Lead 05mm | 250  |     |     |     |     | 245 | 195 | 155 | 130 | 105  | 90   | 80   |      |

주1) Stroke 1300mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            | 200W            |
|-----------------------|-----|-----------|-----------------|-----------------|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 3  | Horizontal : 8  |
|                       |     |           | Vertical : 1    | Vertical : 2    |
|                       |     | Lead 10mm | Horizontal : 12 | Horizontal : 20 |
|                       |     |           | Vertical : 3    | Vertical : 4    |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Servo motor Load Inertia : 12배 이하, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

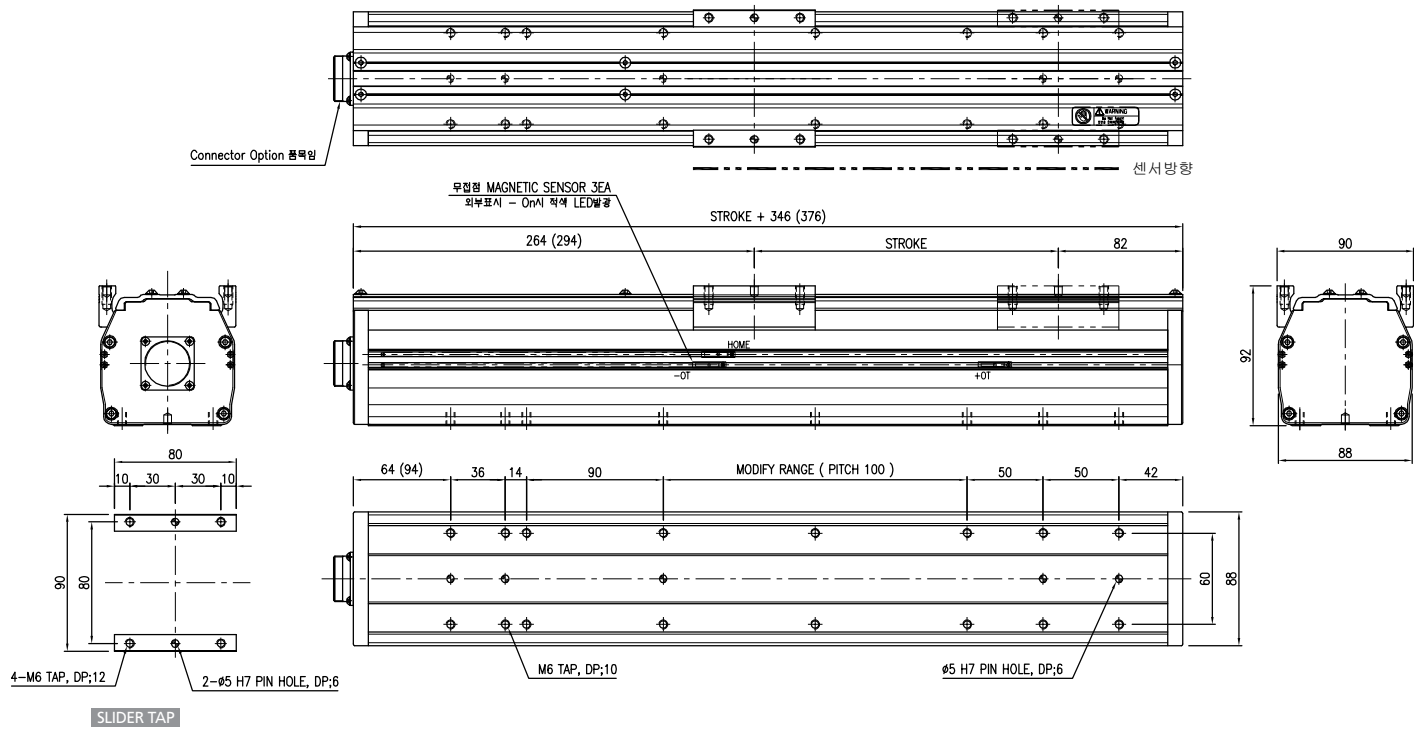
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## Robot Weight

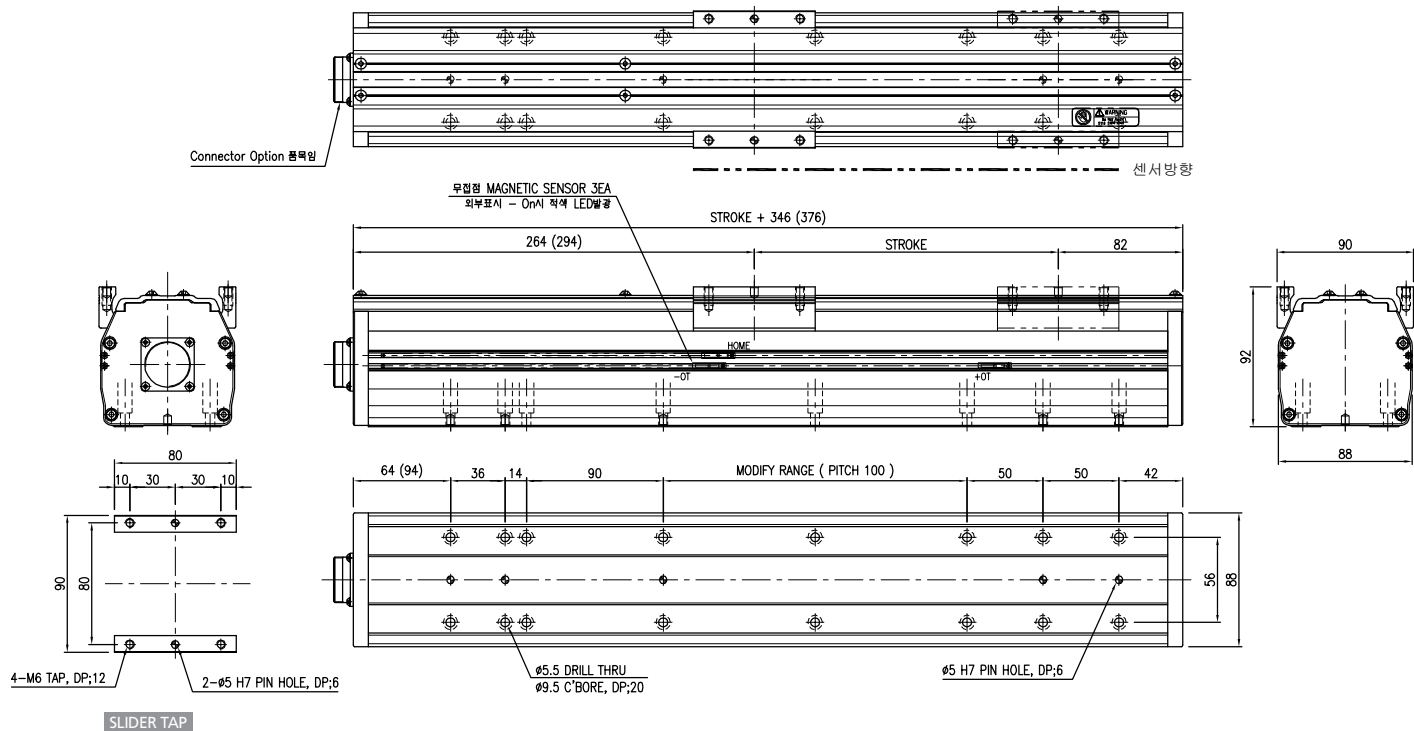
| Stroke (mm)    |          |      | 100 | 200 | 300 | 400 | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 |
|----------------|----------|------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 100W | 6.5 | 7.4 | 8.3 | 9.2 | 10.1 | 11   | 11.9 | 12.8 | 13.7 | 14.6 | 15.5 | 16.4 | 17.3 |
|                |          | 200W | 6.8 | 7.7 | 8.6 | 9.5 | 10.4 | 11.3 | 12.2 | 13.1 | 14   | 14.9 | 15.8 | 16.7 | 17.6 |
|                | Parallel | 100W | 5.6 | 6.5 | 7.4 | 8.3 | 9.2  | 10.1 | 11   | 11.9 | 12.8 | 13.7 | 14.6 | 15.5 | 16.4 |
|                |          | 200W | 6   | 6.9 | 7.8 | 8.7 | 9.6  | 10.5 | 11.4 | 12.3 | 13.2 | 14.1 | 15   | 15.9 | 16.8 |

The weight of the model equipped with a brake is 0.35Kg(0.65Kg) heavier than this value.

## LP092-ST1-10 ( )100W Brake Motor dimension.

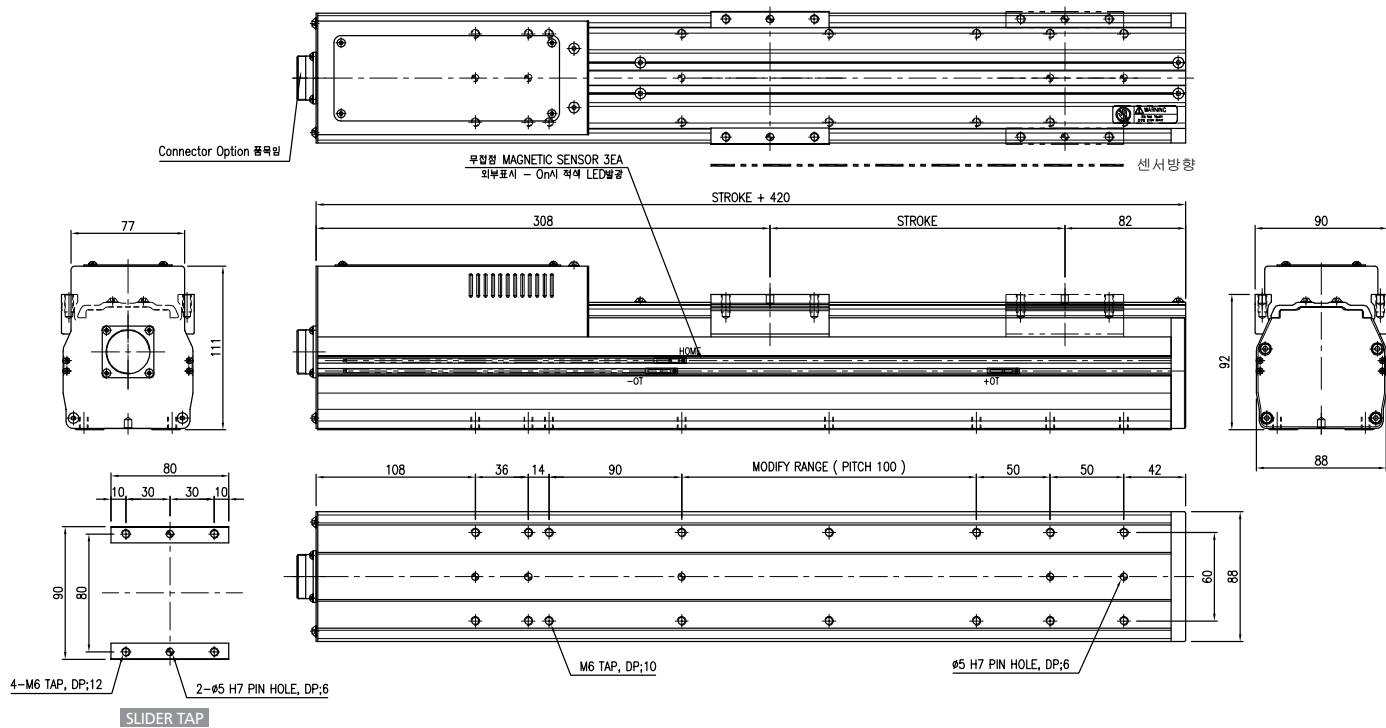


## LP092-SB1-10 ( )100W Brake Motor dimension.

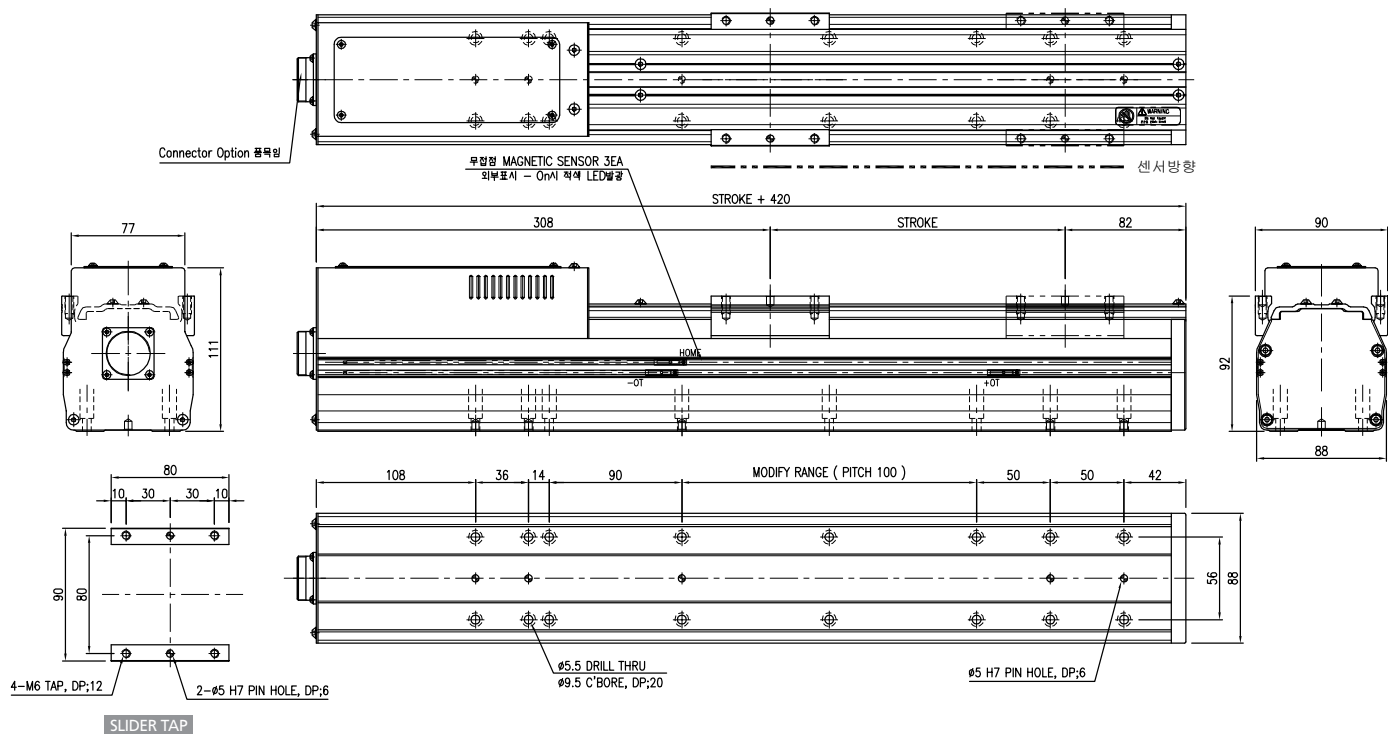


# LP092-1 Series Cartesian ROBO System

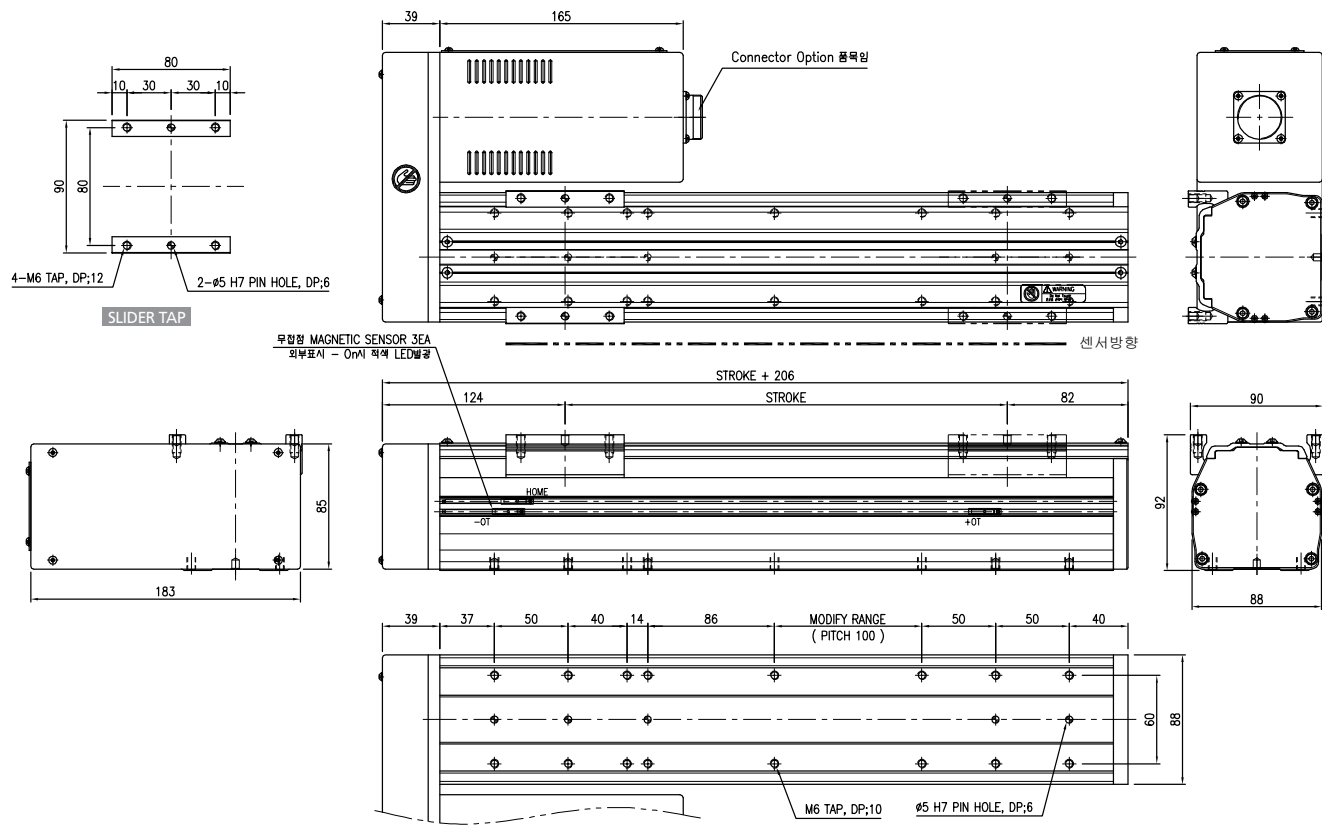
## LP092-ST1-20



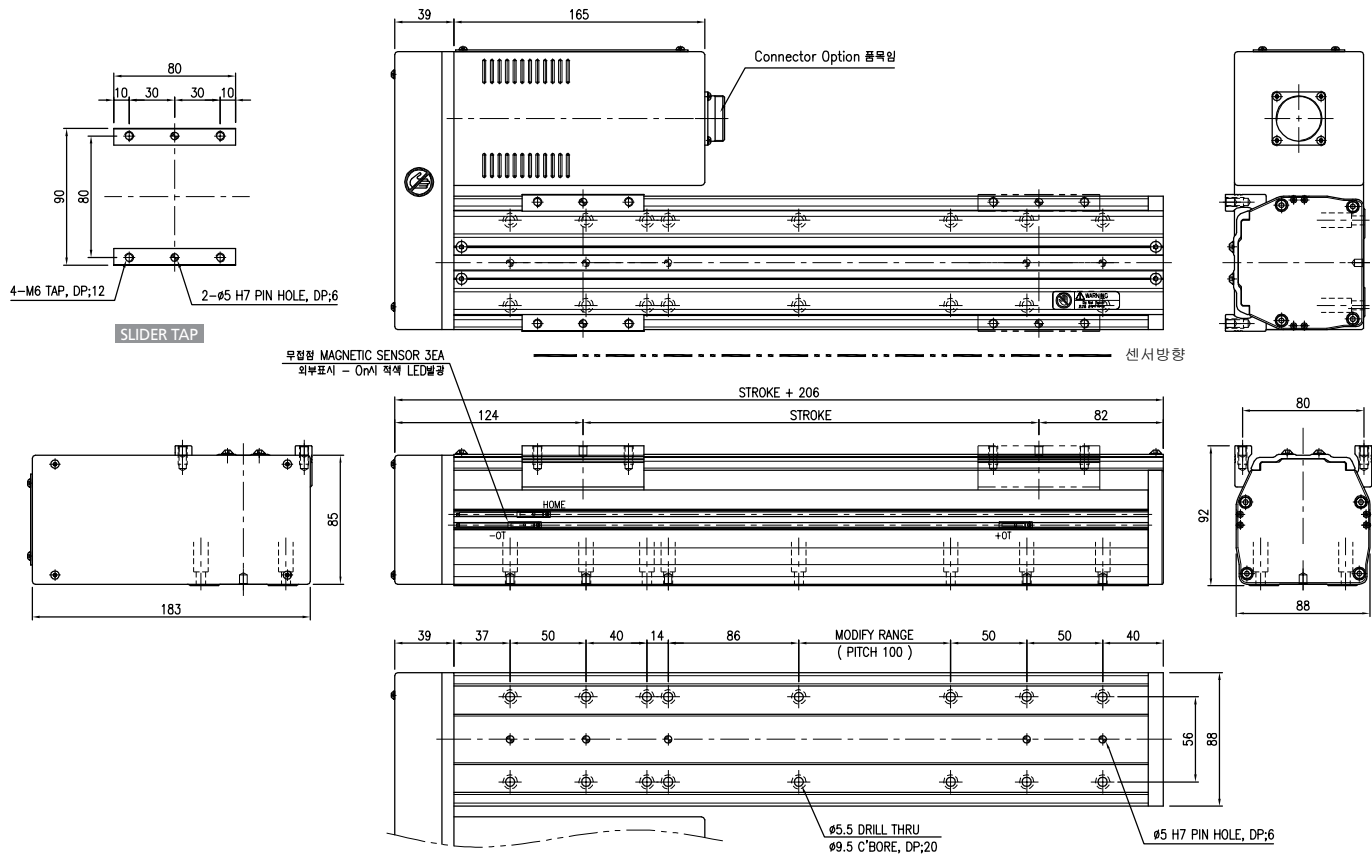
## LP092-SB1-20



## LP092-LT1 / RT1(대칭)

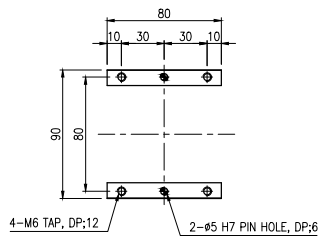


## LP092-LB1 / RB1(대칭)

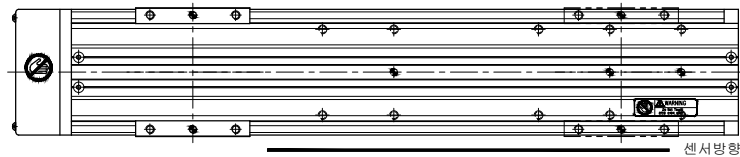
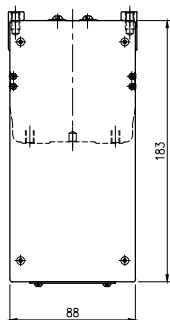


# LP092-1 Series Cartesian ROBO System

## LP092-UT1

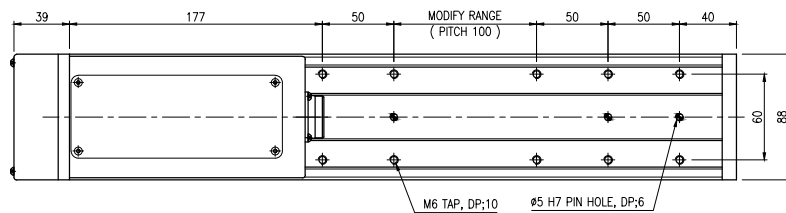
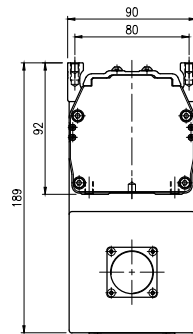
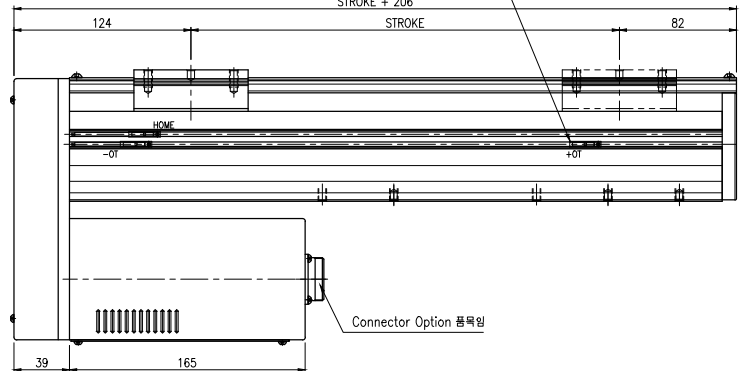


SLIDER TAP

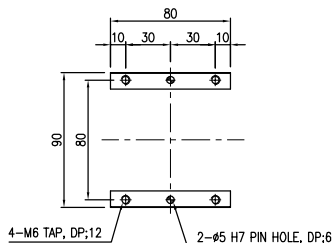


무접점 MAGNETIC SENSOR 3EA  
외부표시 - 0m시 적외 LED발광

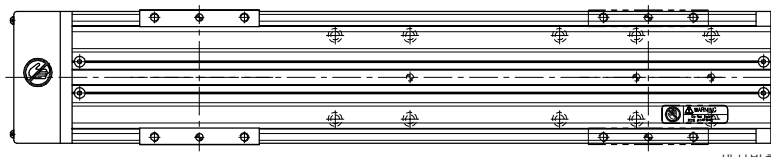
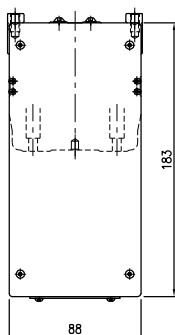
STROKE + 206



## LP092-UB1

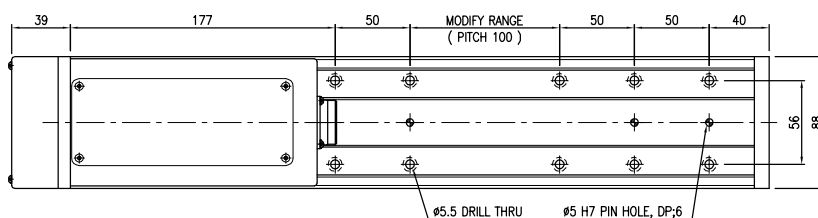
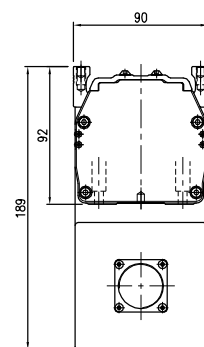
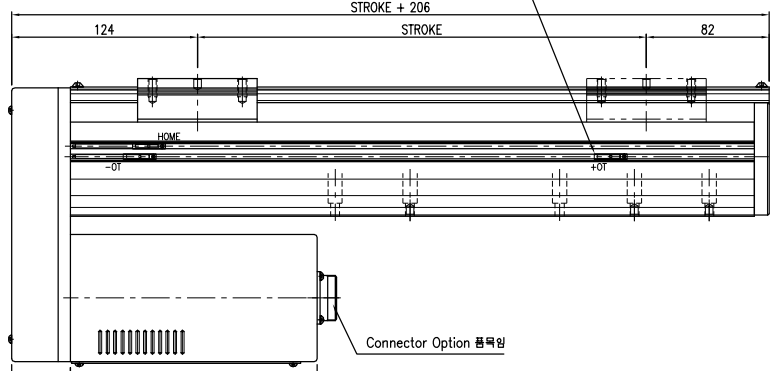


SLIDER TAP



무접점 MAGNETIC SENSOR 3EA  
외부표시 - 0m시 적외 LED발광

STROKE + 206





# Cartesian ROBO System LP092 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 100W                                                     | 200W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm            |      |
| • Stroke (mm)                                  | 10 ~ 1300                                                |      |
| • LM Guide Bearing                             | One Way 20W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 5.45E + 05, I <sub>y</sub> = 1.77E + 06 |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 855 | 686 | 560 | 465  | 395  | 340  | 295  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 420 | 335 | 275 | 230  | 195  | 165  | -    |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 210 | 165 | 138 | 115  | 95   | 80   | -    |

주1) Stroke 1300mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            | 200W            |
|-----------------------|-----|-----------|-----------------|-----------------|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 4  | Horizontal : 15 |
|                       |     |           | Vertical : 2.5  | Vertical : 8    |
|                       |     | Lead 10mm | Horizontal : 20 | Horizontal : 30 |
|                       |     |           | Vertical : 8    | Vertical : 20   |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

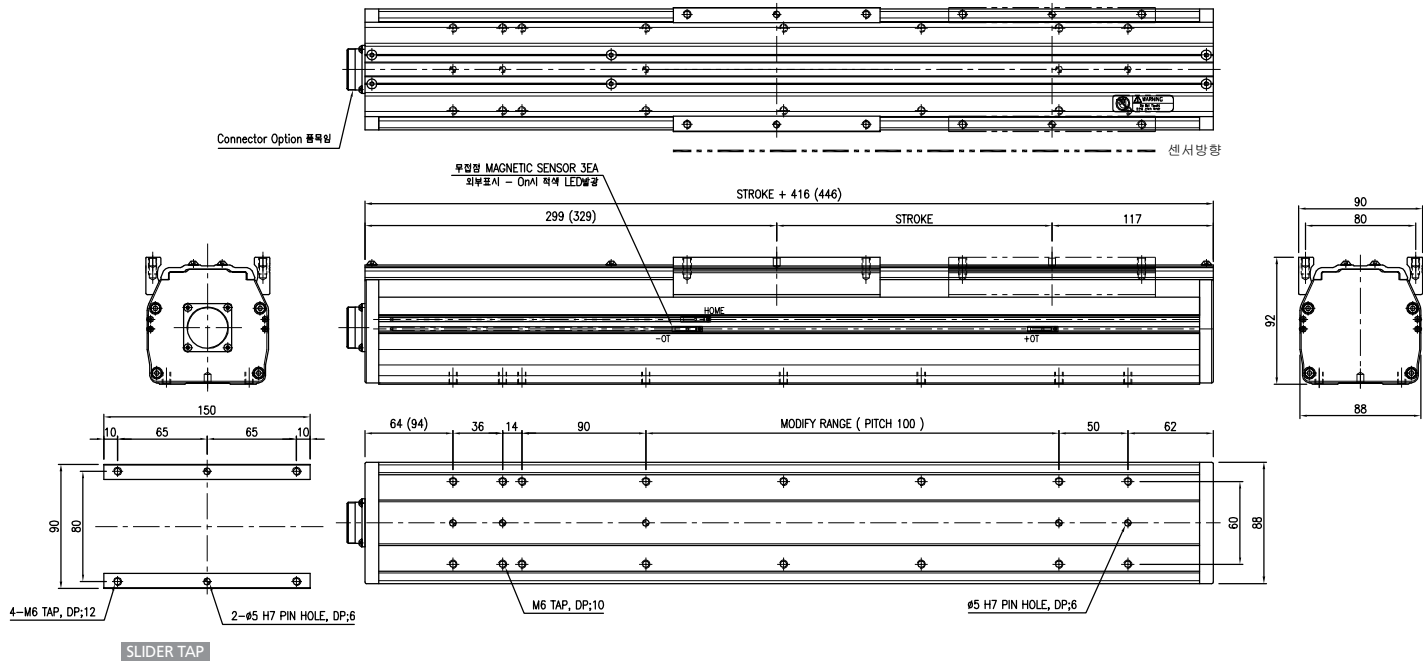
## Robot Weight

| Stroke (mm)    |          |      | 100 | 200 | 300 | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 |
|----------------|----------|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 100W | 7.8 | 8.7 | 9.6 | 10.5 | 11.4 | 12.3 | 13.2 | 14.1 | 15   | 15.9 | 16.8 | 17.7 | 18.6 |
|                |          | 200W | 8.1 | 9   | 9.9 | 10.8 | 11.7 | 12.6 | 13.5 | 14.4 | 15.3 | 16.2 | 17.1 | 18   | 18.9 |
|                | Parallel | 100W | 6.9 | 7.8 | 8.7 | 9.6  | 10.5 | 11.4 | 12.3 | 13.2 | 14.1 | 15   | 15.9 | 16.8 | 17.7 |
|                |          | 200W | 7.3 | 8.2 | 9.1 | 10   | 10.9 | 11.8 | 12.7 | 13.6 | 14.5 | 15.4 | 16.3 | 17.2 | 18.1 |

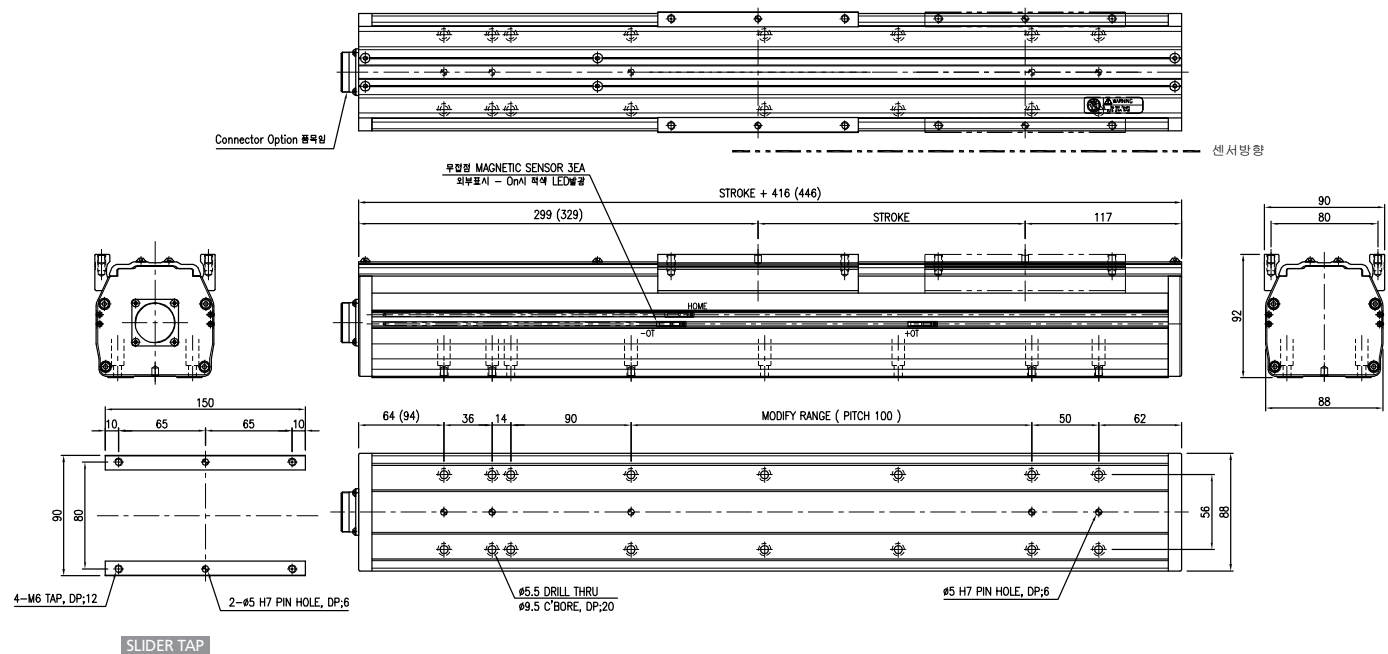
The weight of the model equipped with a brake is 0.35Kg(0.65Kg) heavier than this value.

# LP092 Series Cartesian ROBO System

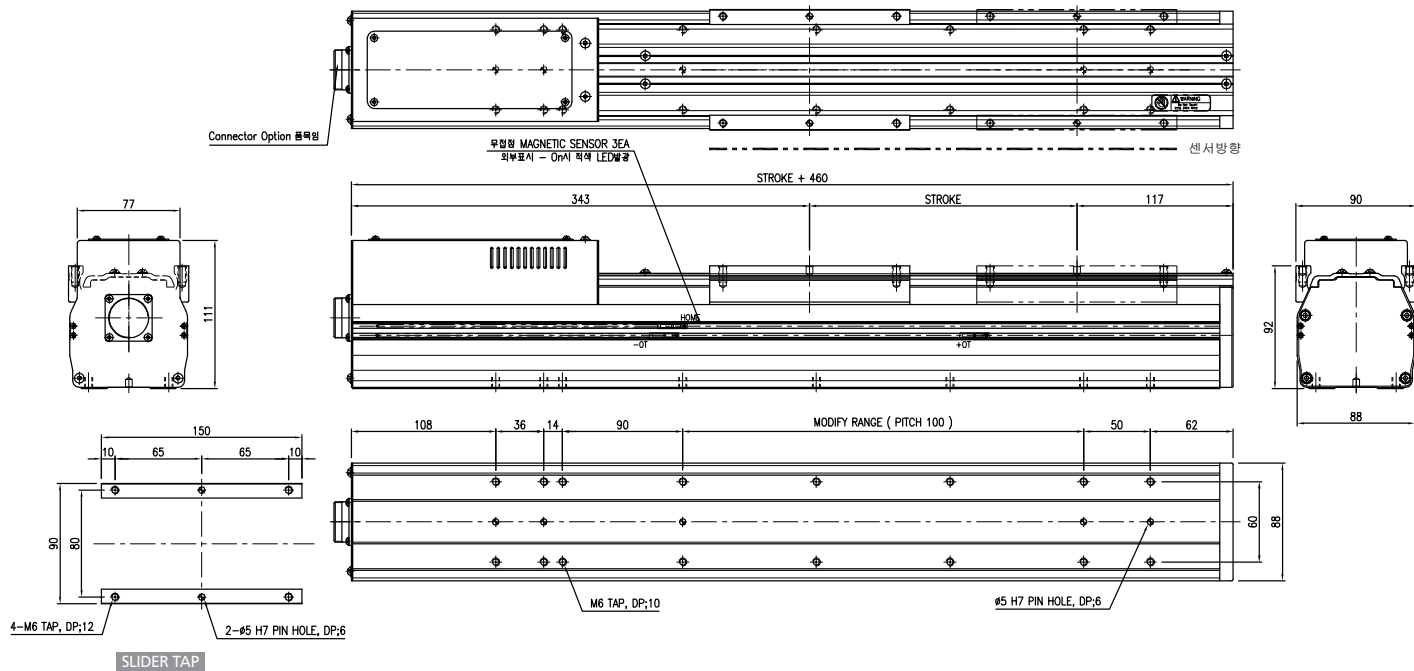
## LP092-ST-10 ( )100W Brake Motor dimension.



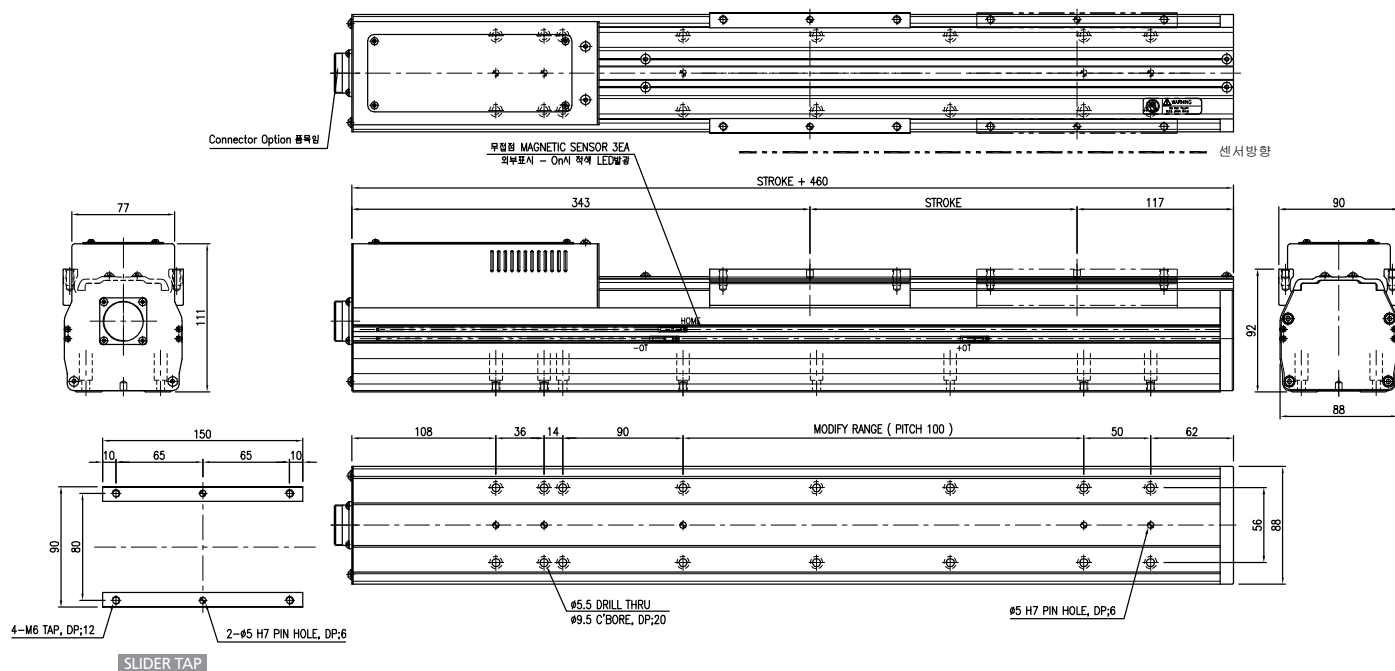
## LP092-SB-10 ( )100W Brake Motor dimension.



## LP092-ST-20

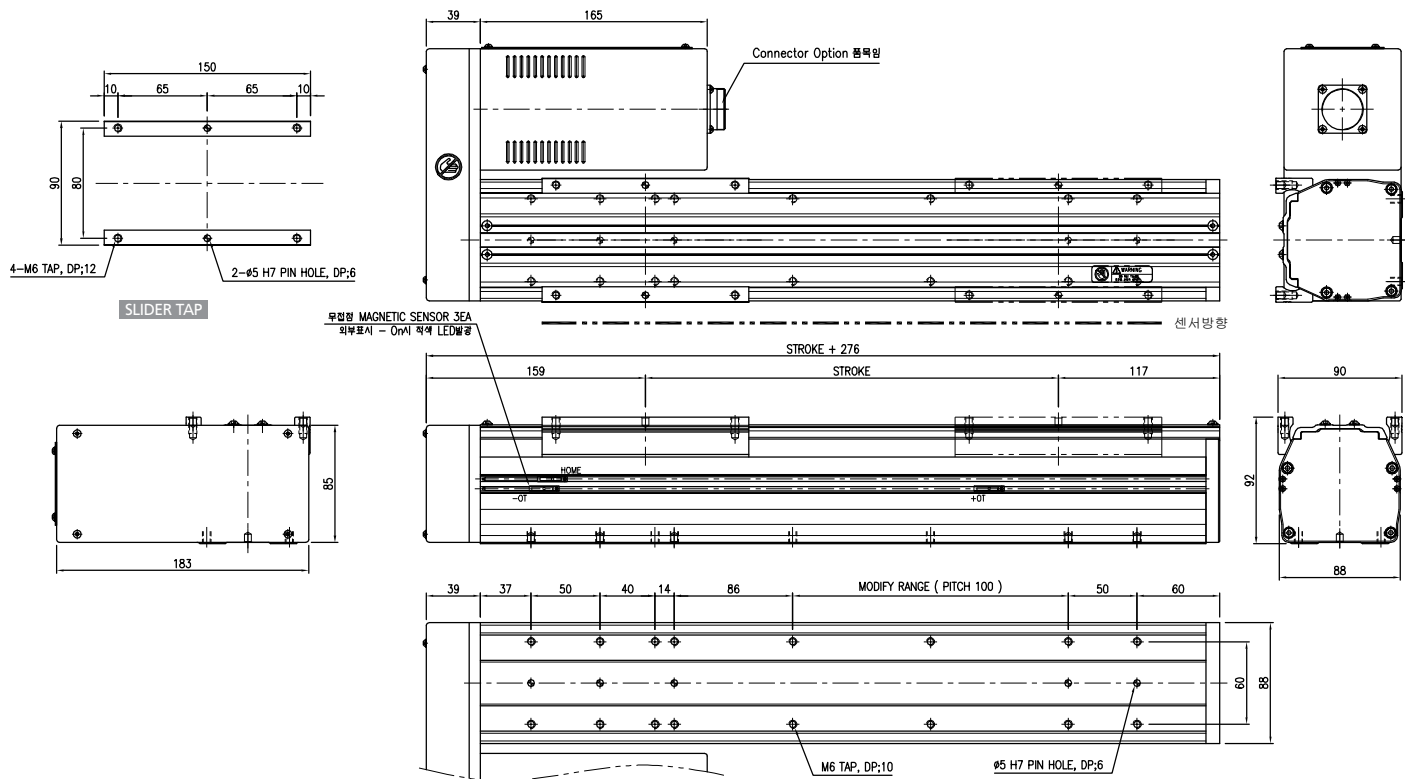


## LP092-SB-20

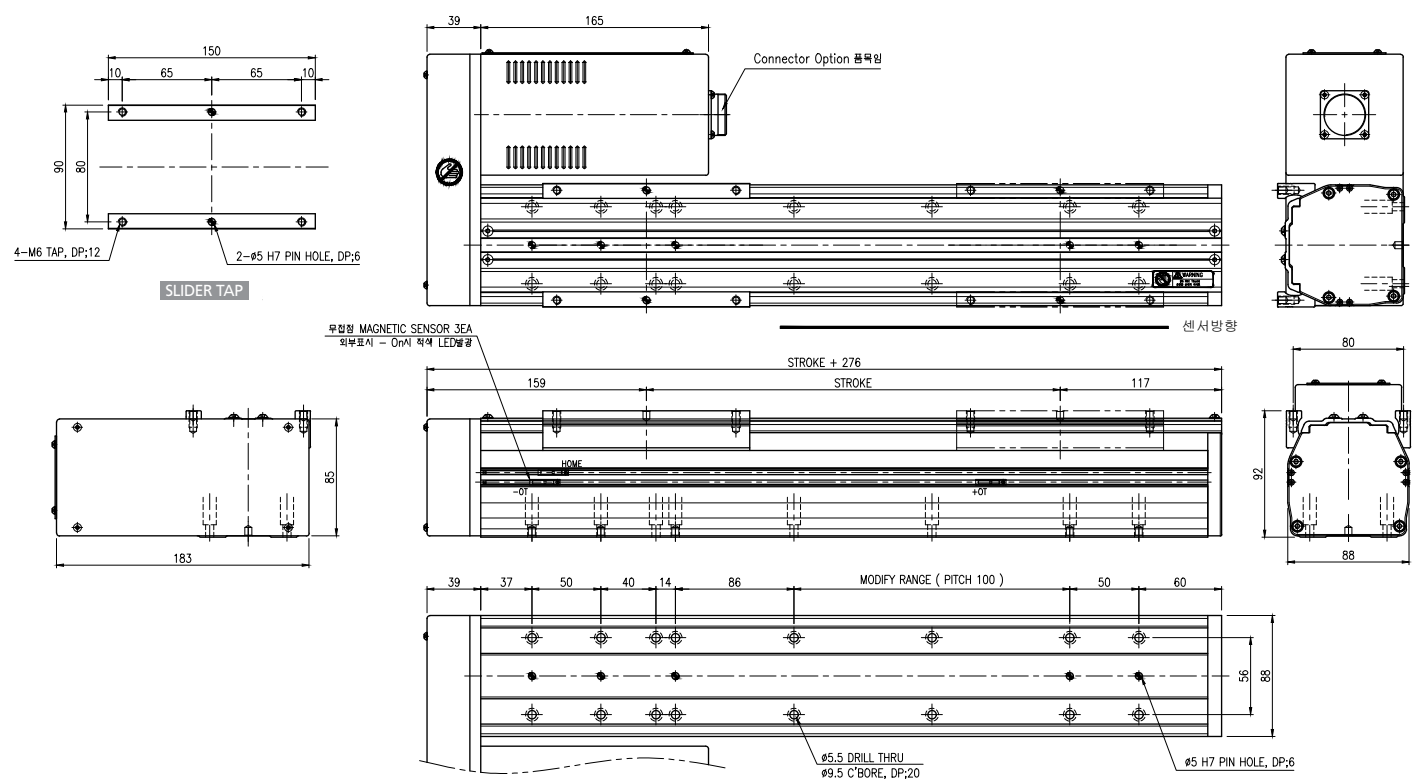


# LP092 Series Cartesian ROBO System

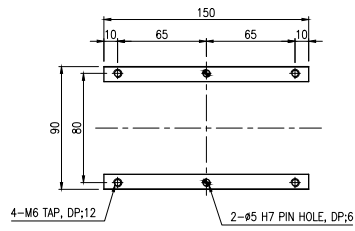
## LP092-LT / RT(대칭)



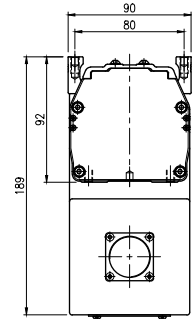
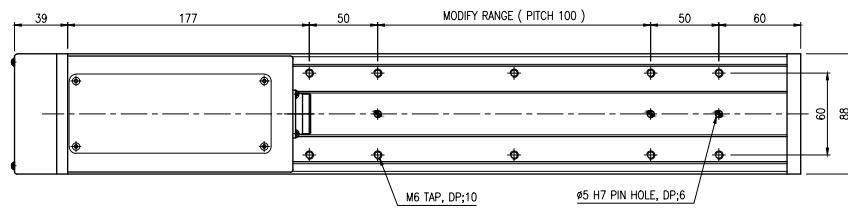
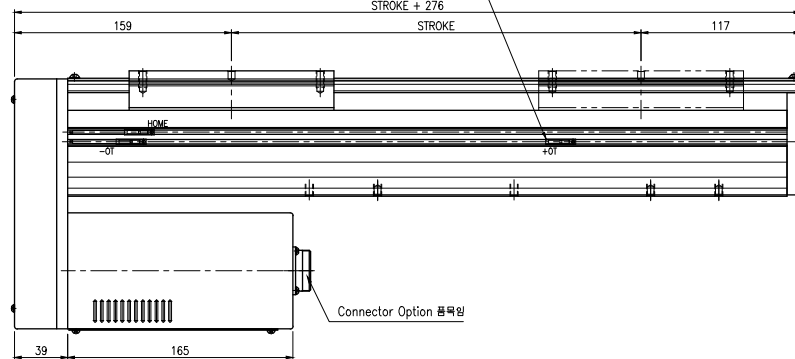
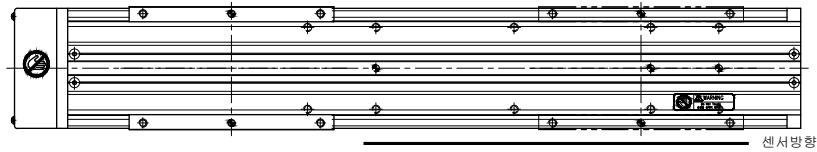
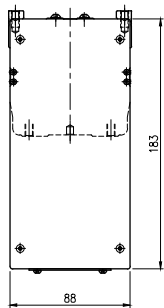
## LP092-LB / RB(대칭)



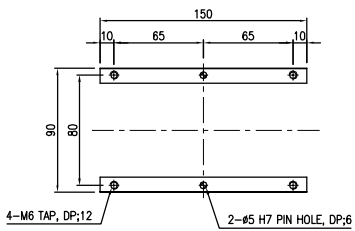
## LP092-UT



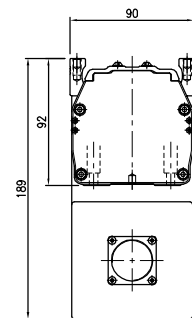
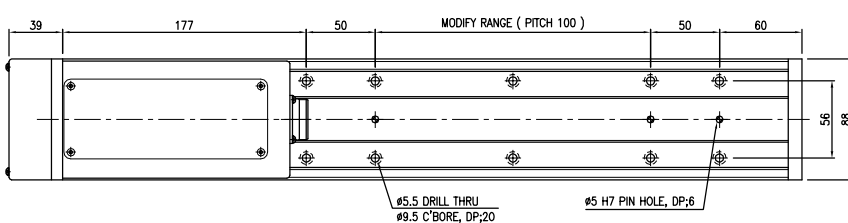
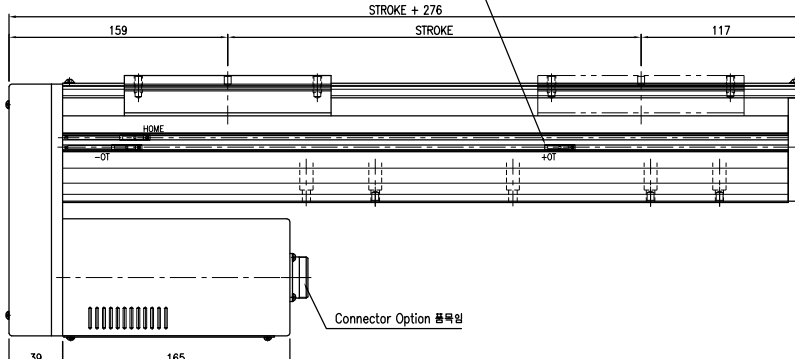
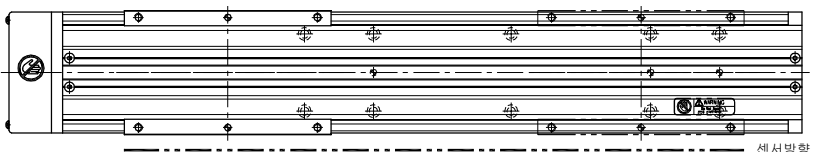
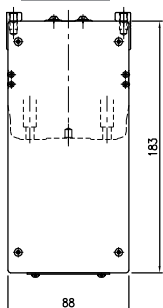
SLIDER TAP



## LP092-UB



SLIDER TAP



# Cartesian ROBO System LP120 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                               |      |
|------------------------------------------------|-----------------------------------------------|------|
| • AC Servo Motor Output                        | 200W                                          | 400W |
| • AC Servo Motor RPM                           | 3000 RPM                                      |      |
| • Repeatability                                | ±0.02 mm                                      |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm |      |
| • Stroke (mm)                                  | 10 ~ 1500                                     |      |
| • LM Guide Bearing                             | Two Way 15W-2BLOCK                            |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing              |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 4.71E + 05, Iy = 4.66E + 06              |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 945 | 750 | 610 | 505  | 425  | 360  | 310  | 270  | 240  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 465 | 370 | 300 | 245  | 205  | 175  | 150  | -    | -    |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 230 | 185 | 150 | 120  | 105  | 85   | 75   | -    | -    |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 200W            | 400W            |
|-----------------------|-----|-----------|-----------------|-----------------|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 28 | Horizontal : 45 |
|                       |     |           | Vertical : 10   | Vertical : 20   |
|                       |     | Lead 10mm | Horizontal : 50 | Horizontal : 80 |
|                       |     |           | Vertical : 22   | Vertical : 38   |

주1) Stroke : 500mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

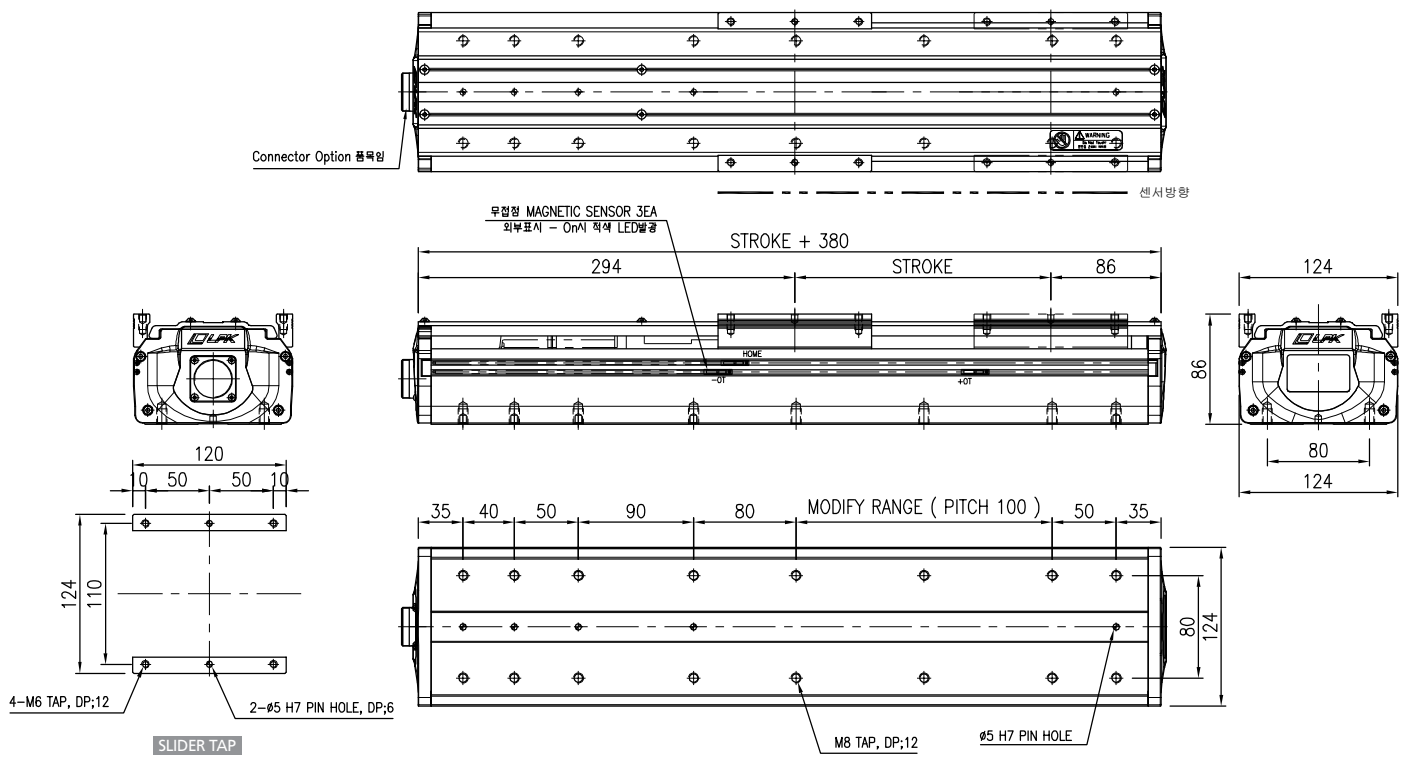
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## Robot Weight

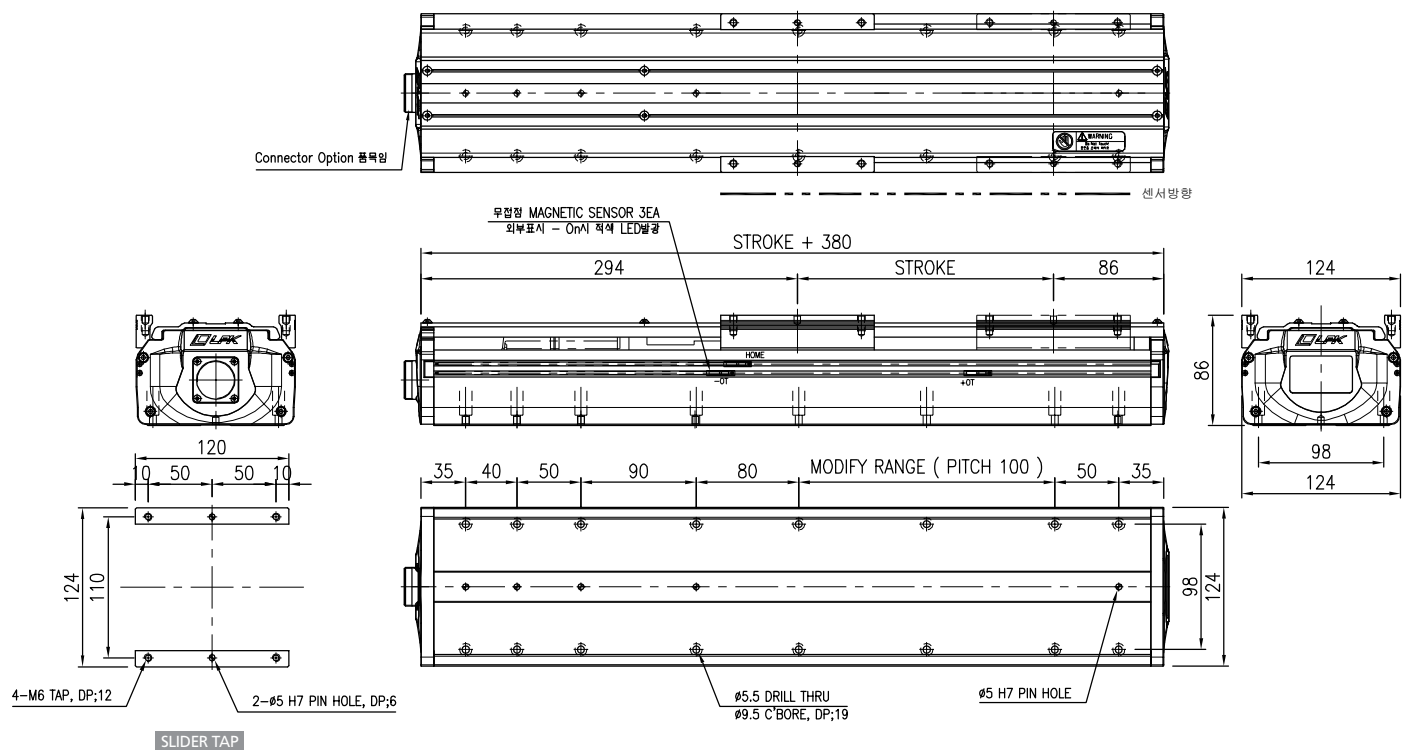
| Stroke (mm)    |          |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|----------------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 200W | 9.6  | 10.4 | 11.2 | 12.0 | 12.8 | 13.6 | 14.4 | 15.2 | 16.0 | 16.8 | 17.6 | 18.4 | 19.2 | 20.0 | 20.8 |
|                |          | 400W | 10.1 | 10.9 | 11.7 | 12.5 | 13.3 | 14.1 | 14.9 | 15.7 | 16.5 | 17.3 | 18.1 | 18.9 | 19.7 | 20.5 | 21.3 |
|                | Parallel | 200W | 8.8  | 9.6  | 10.4 | 11.2 | 12.0 | 12.8 | 13.6 | 14.4 | 15.2 | 16.0 | 16.8 | 17.6 | 18.4 | 19.2 | 20.0 |
|                |          | 400W | 9.3  | 10.1 | 10.9 | 11.7 | 12.5 | 13.3 | 14.1 | 14.9 | 15.7 | 16.5 | 17.3 | 18.1 | 18.9 | 19.7 | 20.5 |

The weight of the model equipped with a brake is 0.65Kg heavier than this value.

## LP120-ST

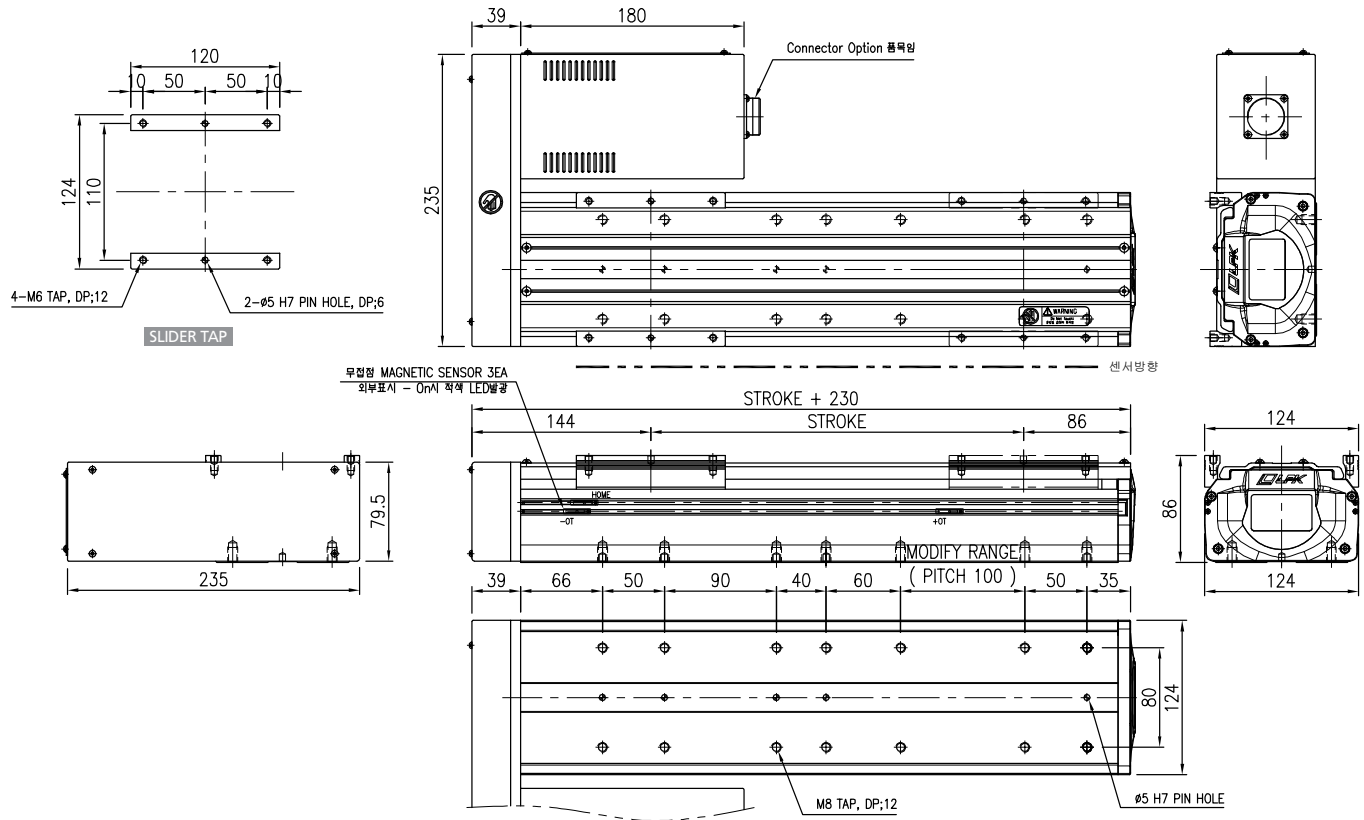


## LP120-SB

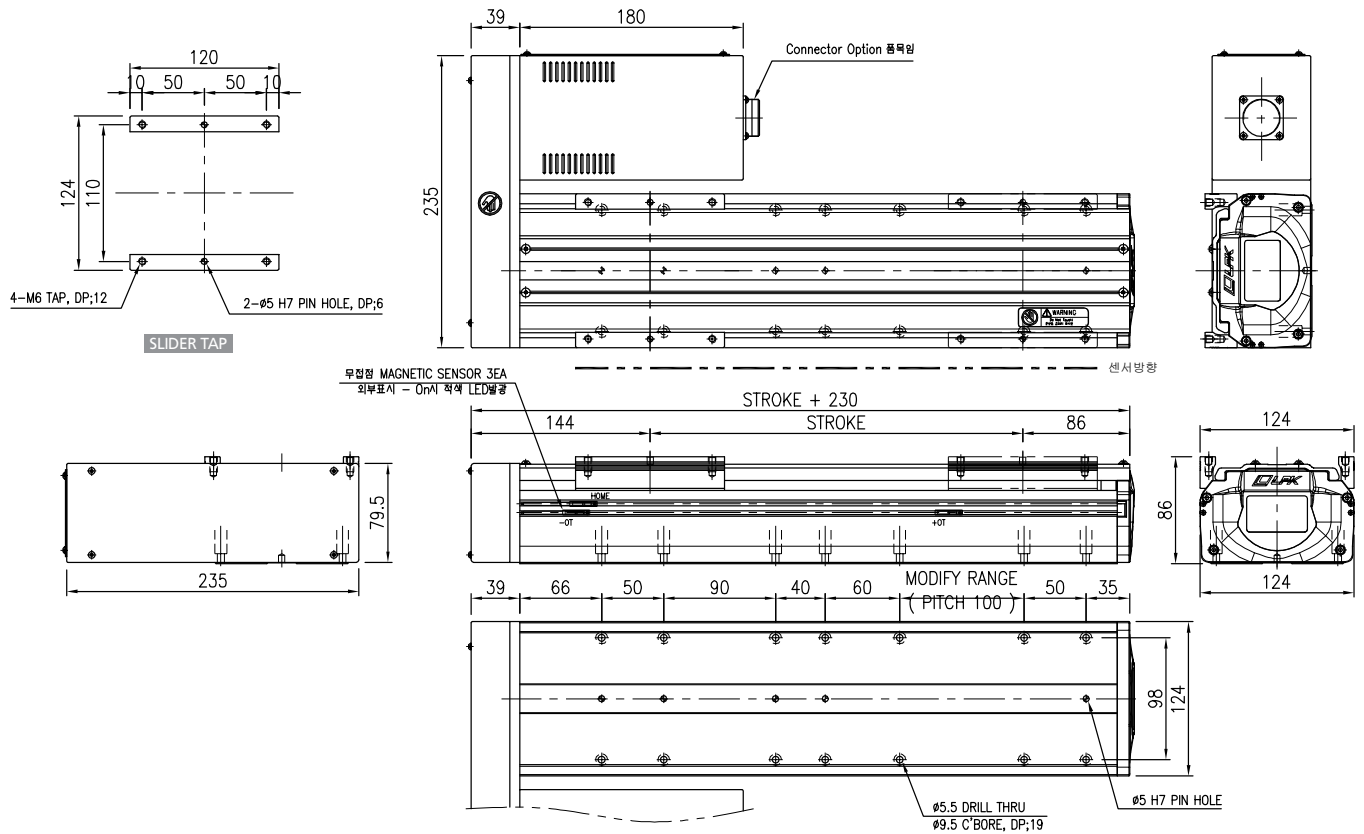


# LP120 Series Cartesian ROBO System

## LP120-LT / RT(대칭)

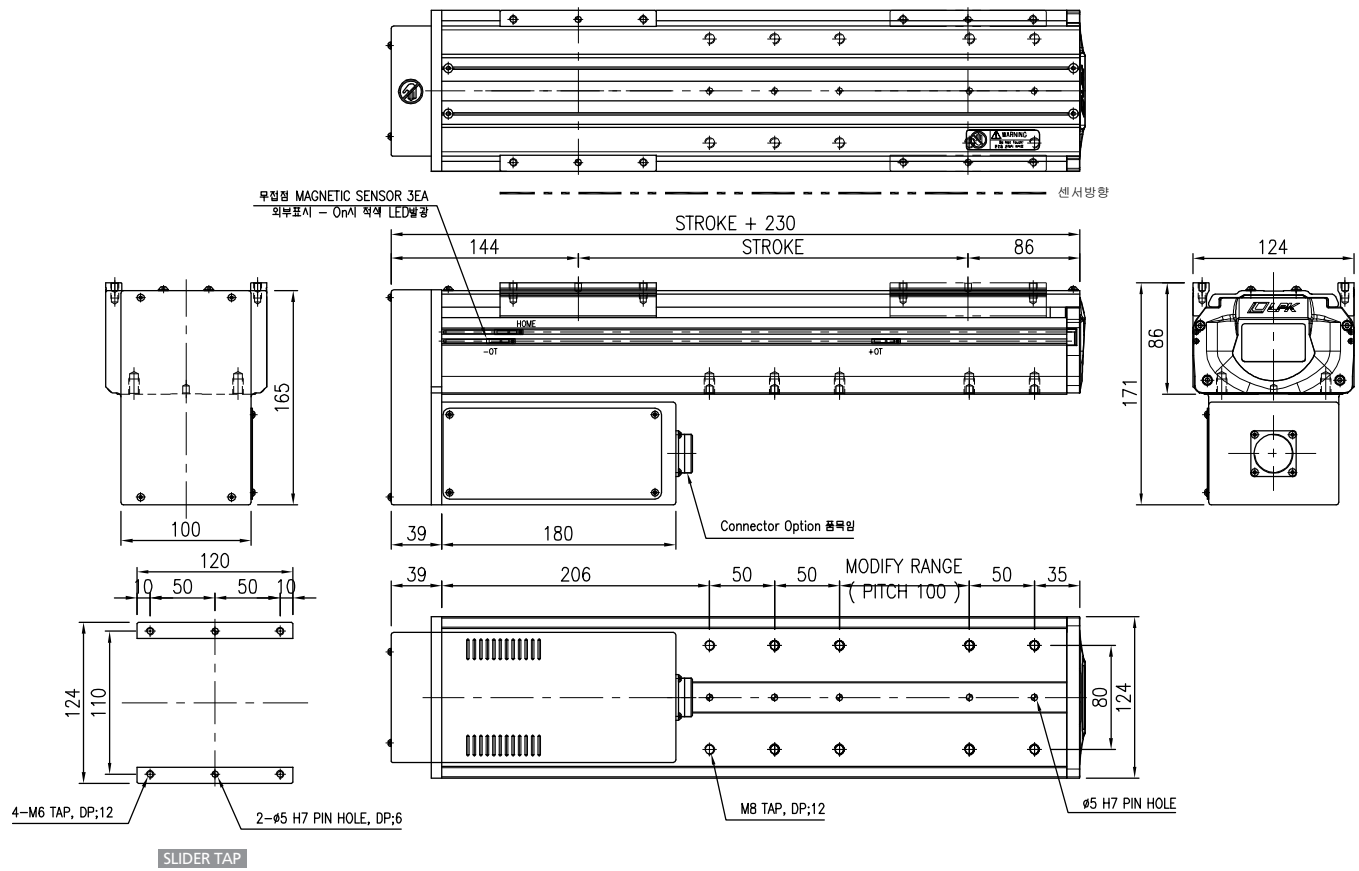


## LP120-LB / RB(대칭)

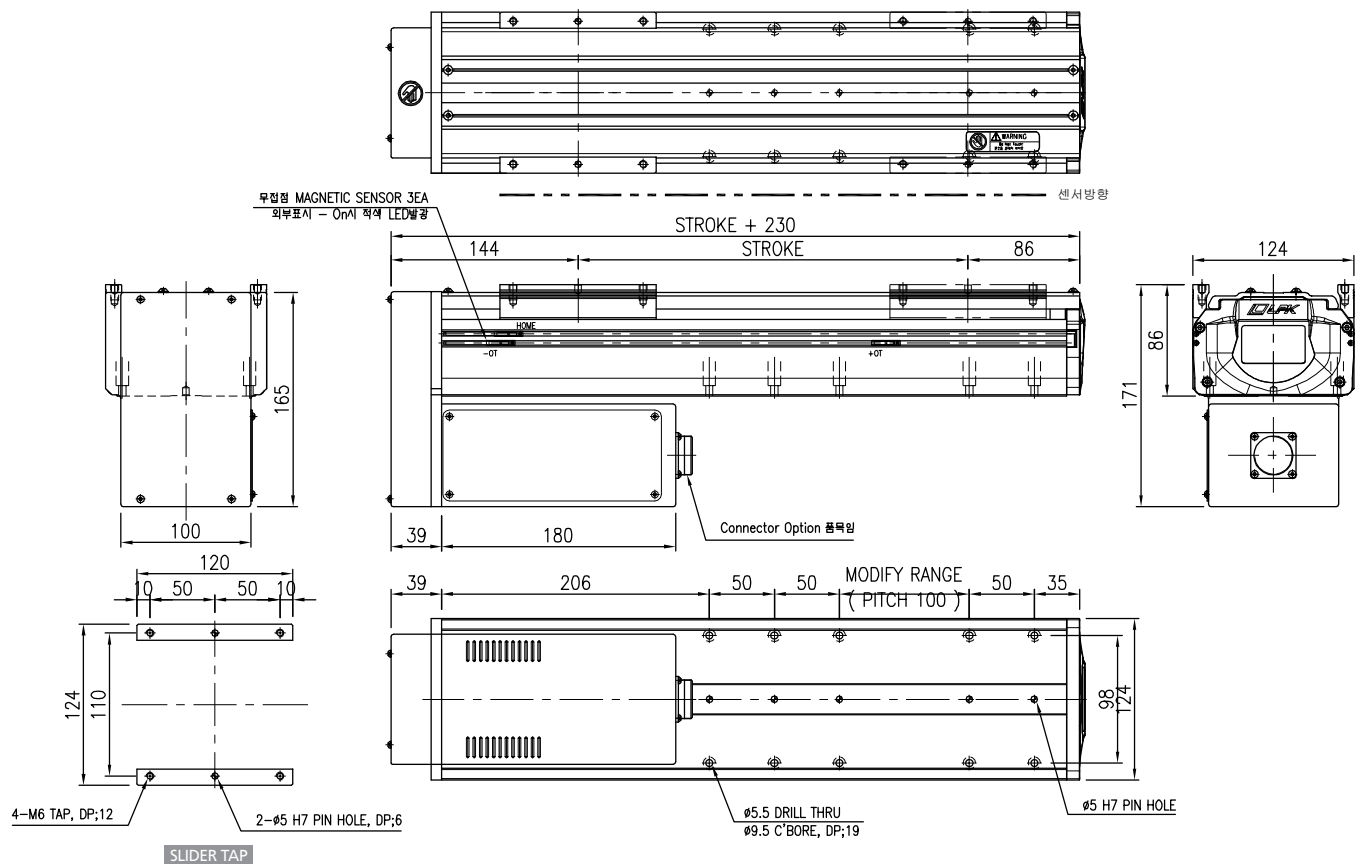




## LP120-UT



## LP120-UB



# Cartesian ROBO System LP160 Series

LEADING PRIDE KOREA

## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 400W                                                     | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15, Ø20 Lead 20mm, 10mm, 5mm       |      |
| • Stroke (mm)                                  | 10 ~ 2200                                                |      |
| • LM Guide Bearing                             | Two Way 20W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 8.41E + 05, I <sub>y</sub> = 1.01E + 07 |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 |   |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|---|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 825 | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | - |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 405 | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |   |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 200 | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |   |
|                       | Ø20 | Lead 20mm | 1000 |     |     |     |     |     | 895 | 735 | 615 | 520  | 450  | 390  | 340  | 300  | 270  | 240  | 215  | 195  | 180  | 160  | 150  |      |   |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 460 | 375 | 315 | 265  | 230  | 200  | 175  | 155  | 135  | 120  | -    | -    | -    | -    | -    | -    |   |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 230 | 185 | 155 | 130  | 115  | 100  | 85   | 75   | 65   | 60   | -    | -    | -    | -    | -    | -    |   |

주1) Stroke 2200mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 400W            | 750W            |     |           | 400W            | 750W            |
|-----------------------|-----|-----------|-----------------|-----------------|-----|-----------|-----------------|-----------------|
| Max<br>Payload (kg)   | Ø15 | Lead 20mm | Horizontal : 35 | Horizontal : 80 | Ø20 | Lead 20mm | Horizontal : 30 | Horizontal : 70 |
|                       |     |           | Vertical : 20   | Vertical : 30   |     |           | Vertical : 20   | Vertical : 30   |
|                       |     | Lead 10mm | Horizontal : 80 | Horizontal : 80 |     | Lead 10mm | Horizontal : 75 | Horizontal : 80 |
|                       |     |           | Vertical : 40   | Vertical : 45   |     |           | Vertical : 40   | Vertical : 45   |

주1) Stroke : 500mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

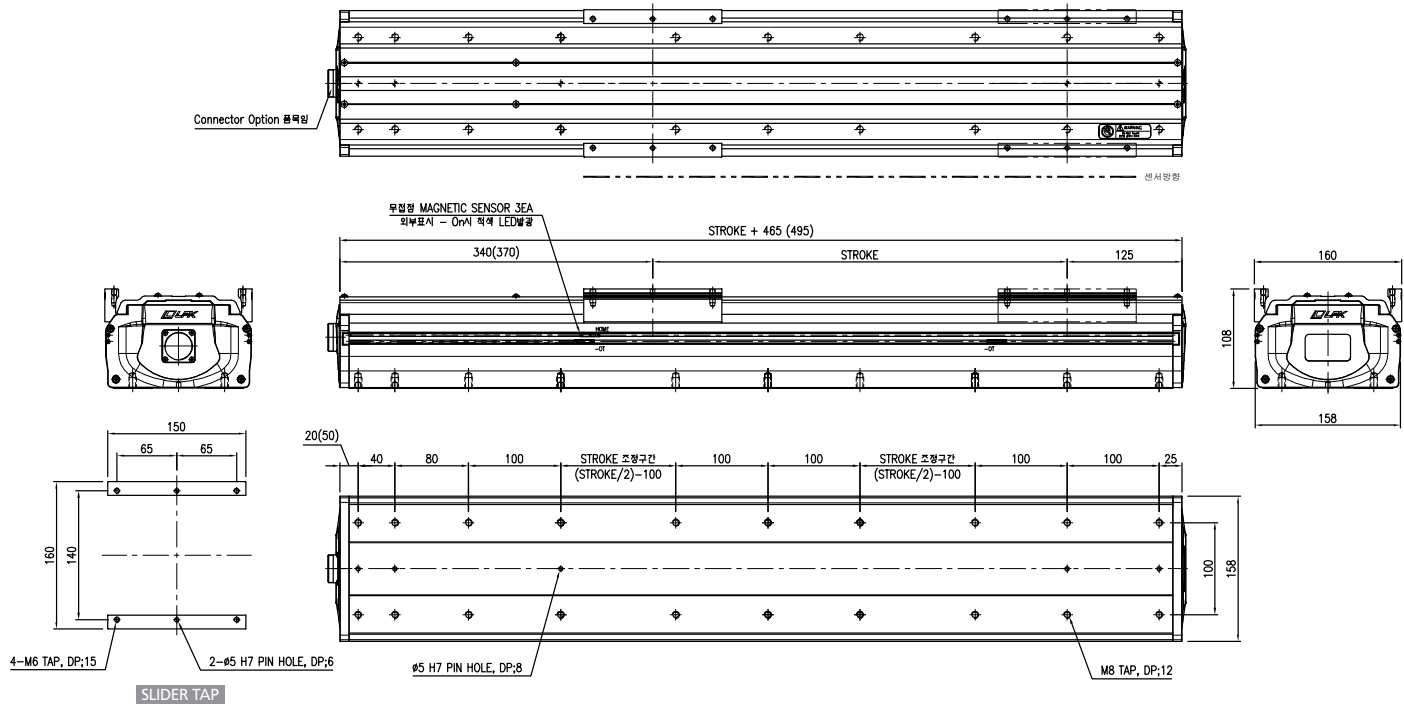
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## Robot Weight

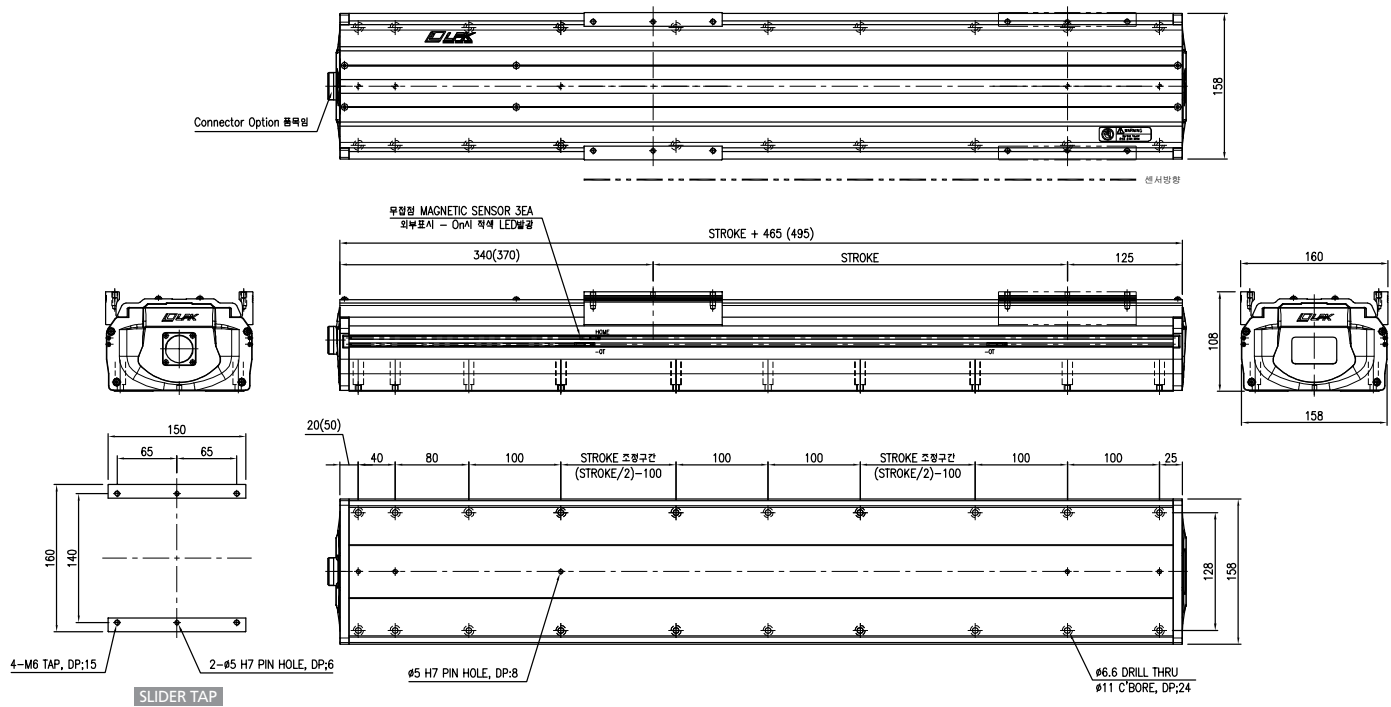
| Stroke (mm)    |          |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 |
|----------------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 400W | 15.8 | 17.6 | 19.4 | 21.2 | 23.0 | 24.8 | 26.6 | 28.4 | 30.2 | 32.0 | 33.8 | 35.6 | 37.4 | 39.2 | 41.0 | 42.8 | 44.6 | 46.4 | 48.2 | 50.0 | 51.8 | 53.6 |
|                |          | 750W | 17.2 | 19.0 | 20.8 | 22.6 | 24.4 | 26.2 | 28.0 | 29.8 | 31.6 | 33.4 | 35.2 | 37.0 | 38.8 | 40.6 | 42.4 | 44.2 | 46.0 | 47.8 | 49.6 | 51.4 | 53.2 | 55.0 |
|                | Parallel | 400W | 17.2 | 18.5 | 19.8 | 21.1 | 22.4 | 23.7 | 25.0 | 26.3 | 27.6 | 28.9 | 30.2 | 31.5 | 32.8 | 34.1 | 35.4 | 36.7 | 38.0 | 39.3 | 40.6 | 41.9 | 43.2 | 44.5 |
|                |          | 750W | 18.6 | 19.9 | 21.2 | 22.5 | 23.8 | 25.1 | 26.4 | 27.7 | 29.0 | 30.3 | 31.6 | 32.9 | 34.2 | 35.5 | 36.8 | 38.1 | 39.4 | 40.7 | 42.0 | 43.3 | 44.6 | 45.9 |

The weight of the model equipped with a brake is 0.65Kg (1.2Kg) heavier than this value.

## LP160-ST ( )750W Brake Motor dimension.

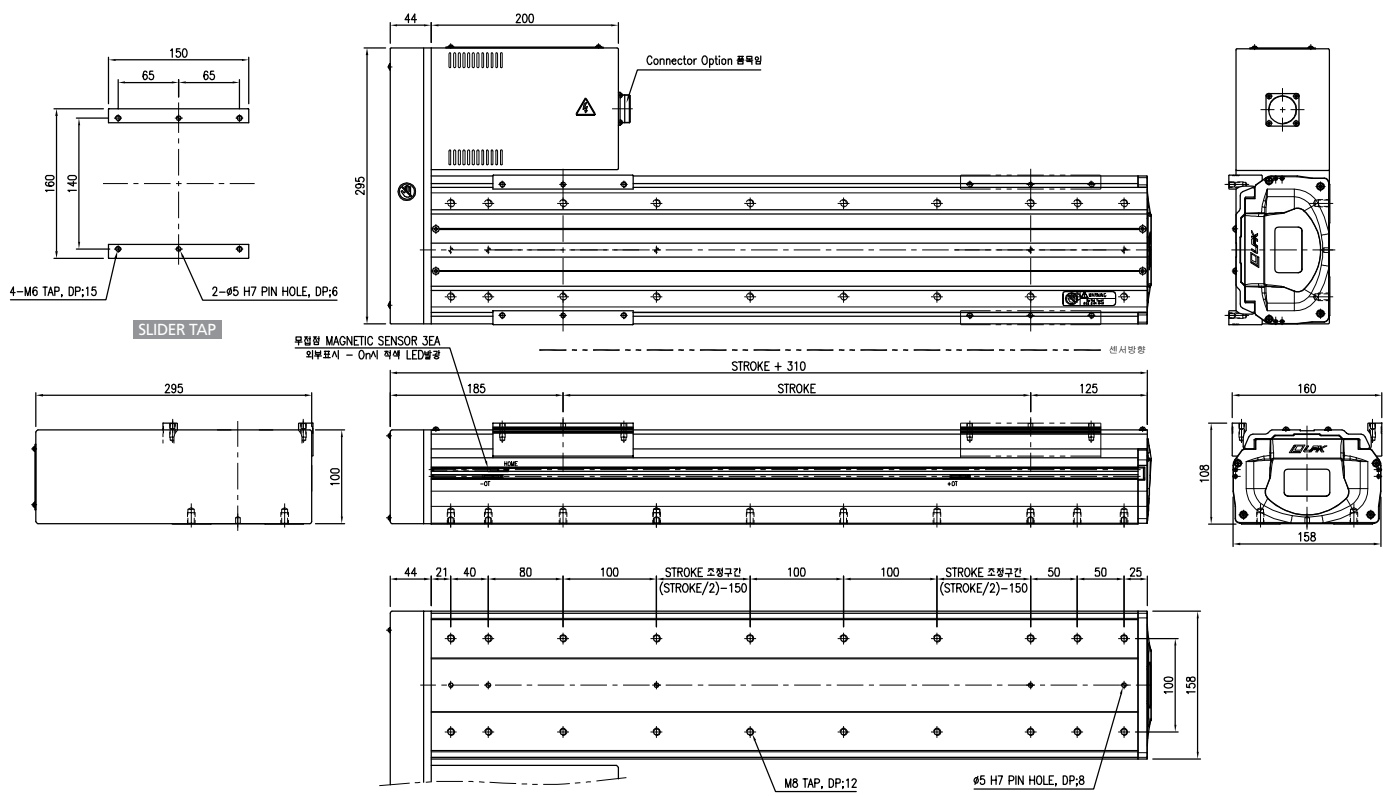


## LP160-SB ( )750W Brake Motor dimension.

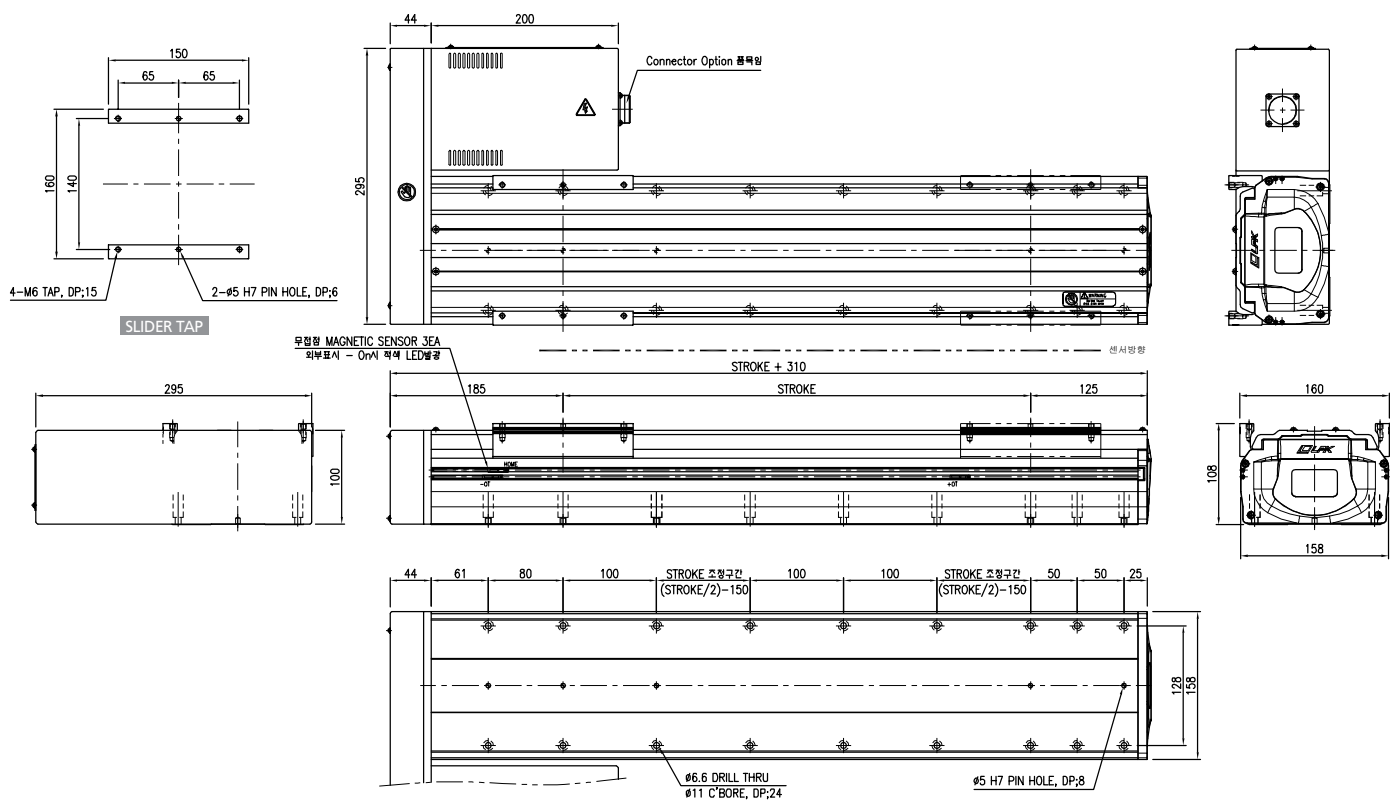


## LP160 Series Cartesian ROBO System

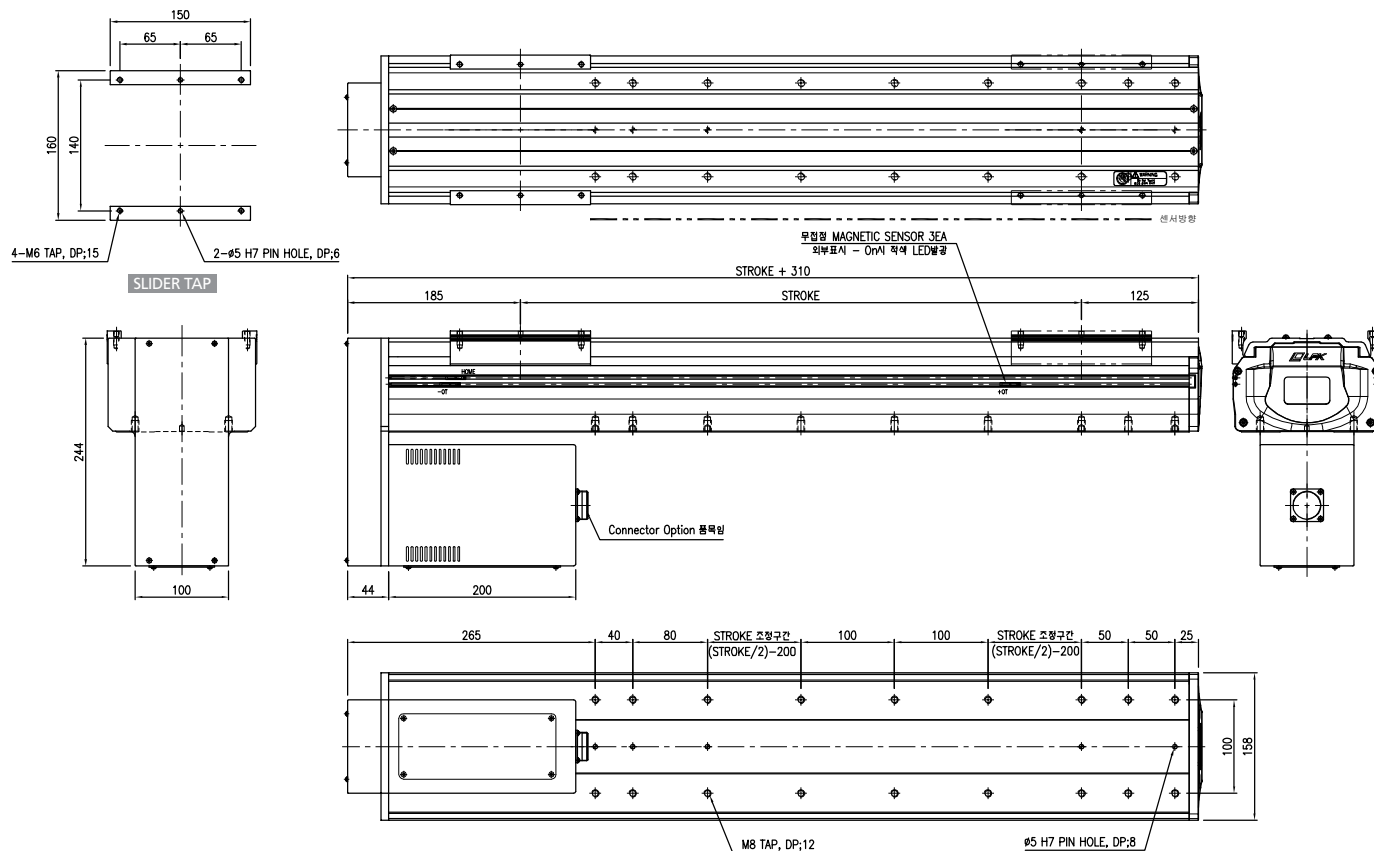
## LP160-LT / RT(대칭)



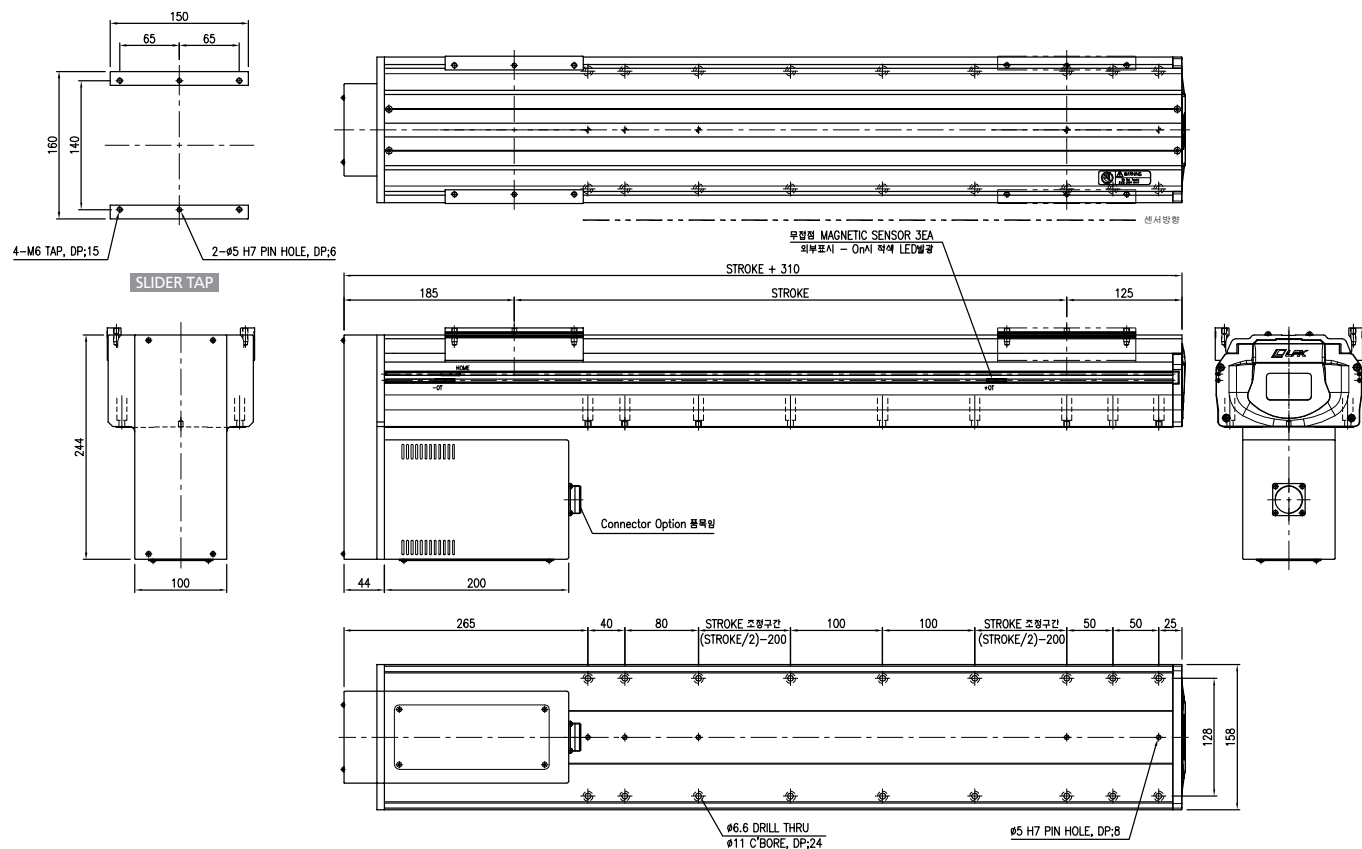
## LP160-LB / RB(대칭)



## LP160-UT



## LP160-UB



# Cartesian ROBO System

## LP200 Series

### Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 400W                                                     | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø20 Lead 20mm, 10mm, 5mm            |      |
| • Stroke (mm)                                  | 10 ~ 2100                                                |      |
| • LM Guide Bearing                             | Two Way 25W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 2.03E + 06, I <sub>y</sub> = 2.46E + 07 |      |

### Stroke By Max Speed

| Stroke (mm)           |     |           | 100 | 200 | 300 | 400  | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
|-----------------------|-----|-----------|-----|-----|-----|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø20 | Lead 20mm |     |     |     | 1000 |     |     |     | 870 | 715 | 600  | 510  | 440  | 380  | 335  | 295  | 265  | 235  | 210  | 190  | 175  | 160  |
|                       |     | Lead 10mm |     |     |     | 500  |     |     |     | 445 | 365 | 305  | 260  | 225  | 195  | 170  | 150  | 135  | -    | -    | -    | -    | -    |
|                       |     | Lead 05mm |     |     |     | 250  |     |     |     | 220 | 180 | 150  | 130  | 110  | 95   | 85   | 75   | 65   | -    | -    | -    | -    | -    |

주1) Stroke 2100mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

### 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 400W            | 750W             |
|-----------------------|-----|-----------|-----------------|------------------|
| Max Payload<br>(kg)   | Ø20 | Lead 20mm | Horizontal : 50 | Horizontal : 100 |
|                       |     |           | Vertical : 20   | Vertical : 38    |
|                       |     | Lead 10mm | Horizontal : 80 | Horizontal : 120 |
|                       |     |           | Vertical : 40   | Vertical : 60    |

주1) Stroke : 500mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

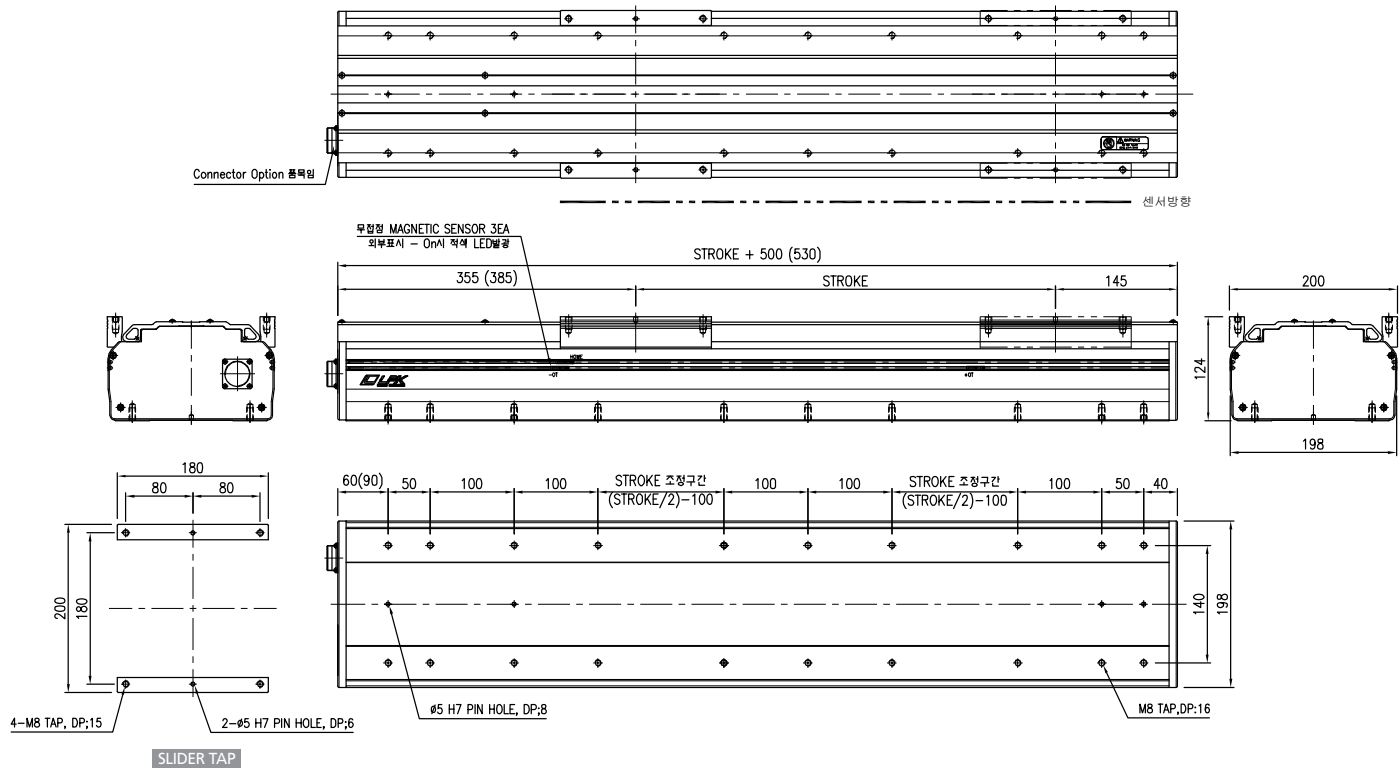
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

### Robot Weight

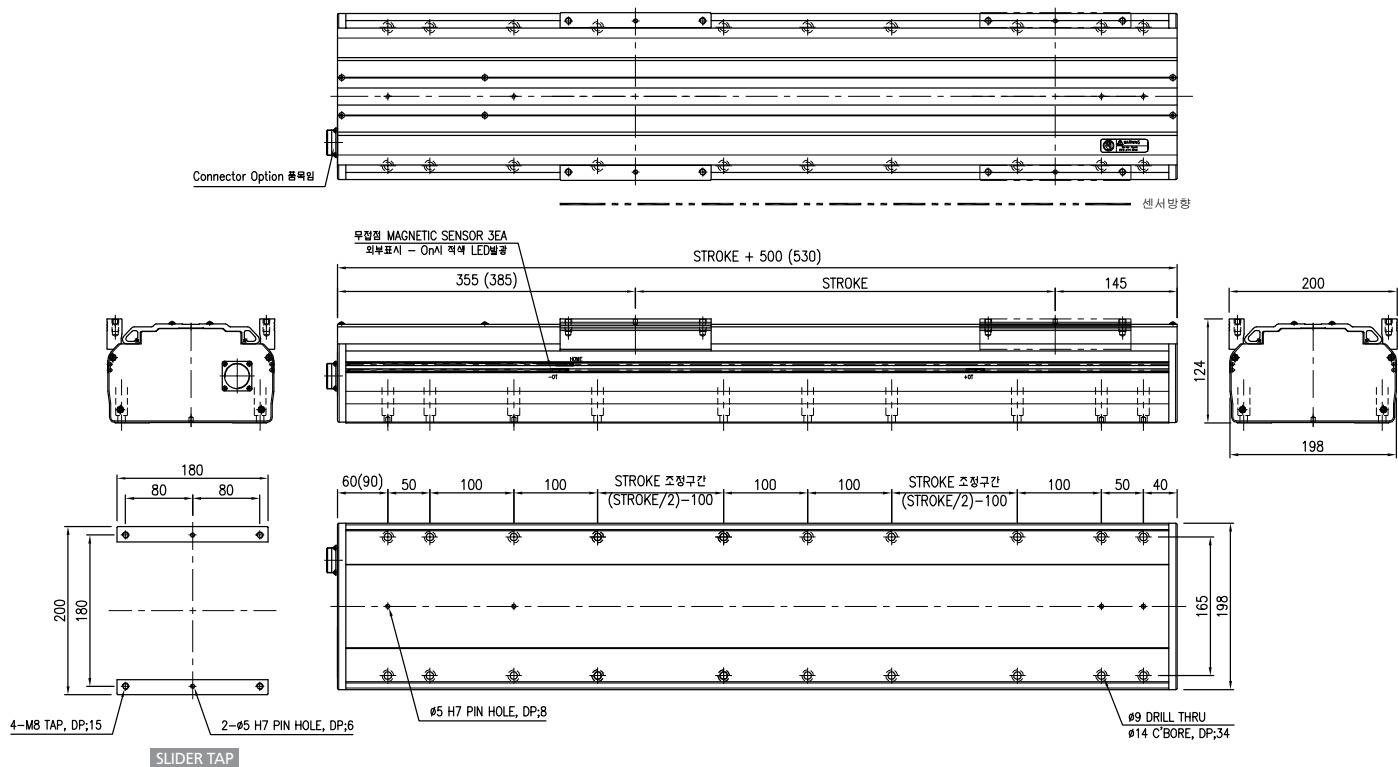
| Stroke (mm)    |          |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
|----------------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 400W | 24.6 | 26.6 | 28.6 | 30.6 | 32.6 | 34.6 | 36.6 | 38.6 | 40.6 | 42.6 | 44.6 | 46.6 | 48.6 | 50.6 | 52.6 | 54.6 | 56.6 | 58.6 | 60.6 | 62.6 | 64.6 |
|                |          | 750W | 26.0 | 28.0 | 30.0 | 32.0 | 34.0 | 36.0 | 38.0 | 40.0 | 42.0 | 44.0 | 46.0 | 48.0 | 50.0 | 52.0 | 54.0 | 56.0 | 58.0 | 60.0 | 62.0 | 64.0 | 66.0 |
|                | Parallel | 400W | 23.1 | 25.1 | 27.1 | 29.1 | 31.1 | 33.1 | 35.1 | 37.1 | 39.1 | 41.1 | 43.1 | 45.1 | 47.1 | 49.1 | 51.1 | 53.1 | 55.1 | 57.1 | 59.1 | 61.1 | 63.1 |
|                |          | 750W | 24.5 | 26.5 | 28.5 | 30.5 | 32.5 | 34.5 | 36.5 | 38.5 | 40.5 | 42.5 | 44.5 | 46.5 | 48.5 | 50.5 | 52.5 | 54.5 | 56.5 | 58.5 | 60.5 | 62.5 | 64.5 |

The weight of the model equipped with a brake is 0.65Kg (1.2Kg) heavier than this value.

## LP200-ST ( ) 750W Brake Motor dimension.

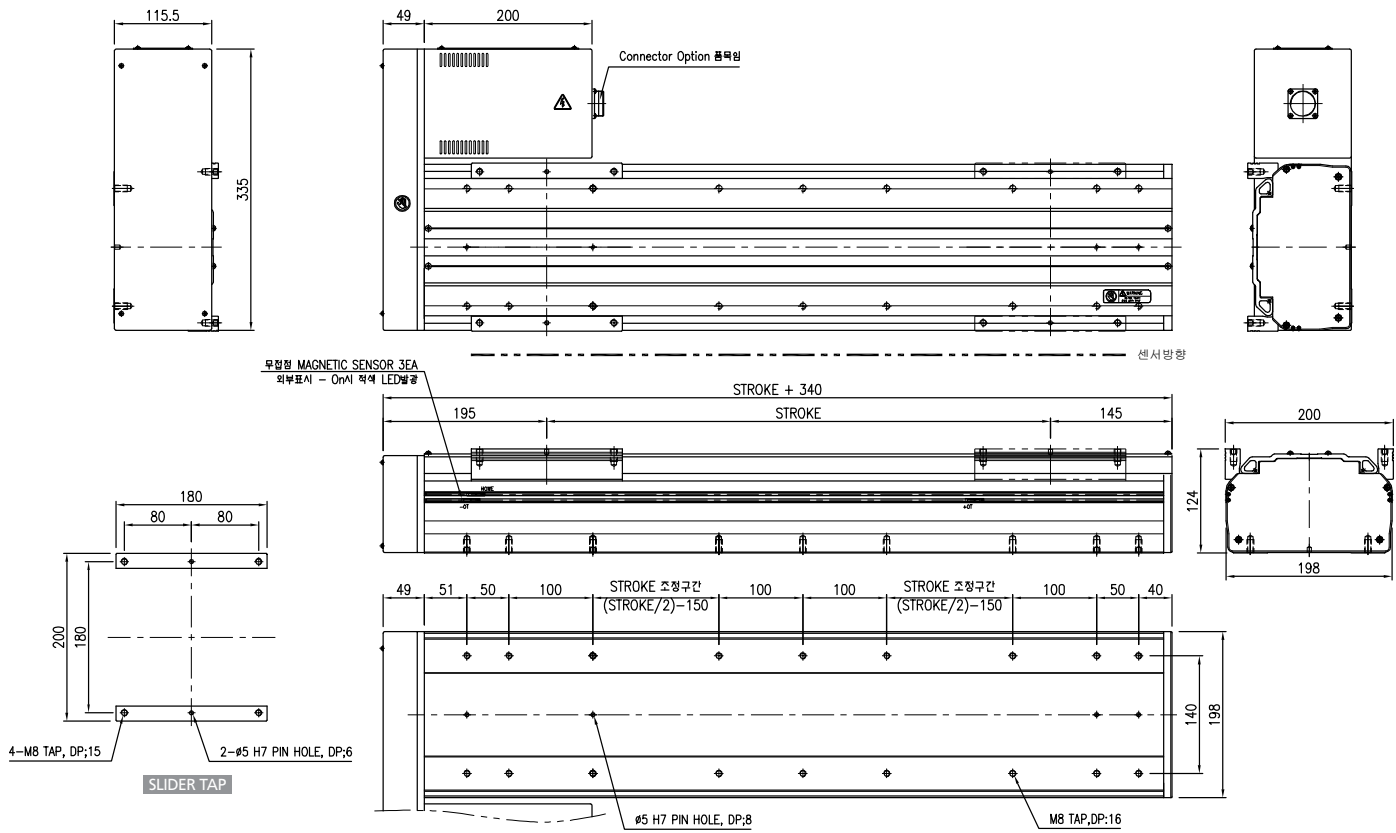


## LP200-SB ( ) 750W Brake Motor dimension.

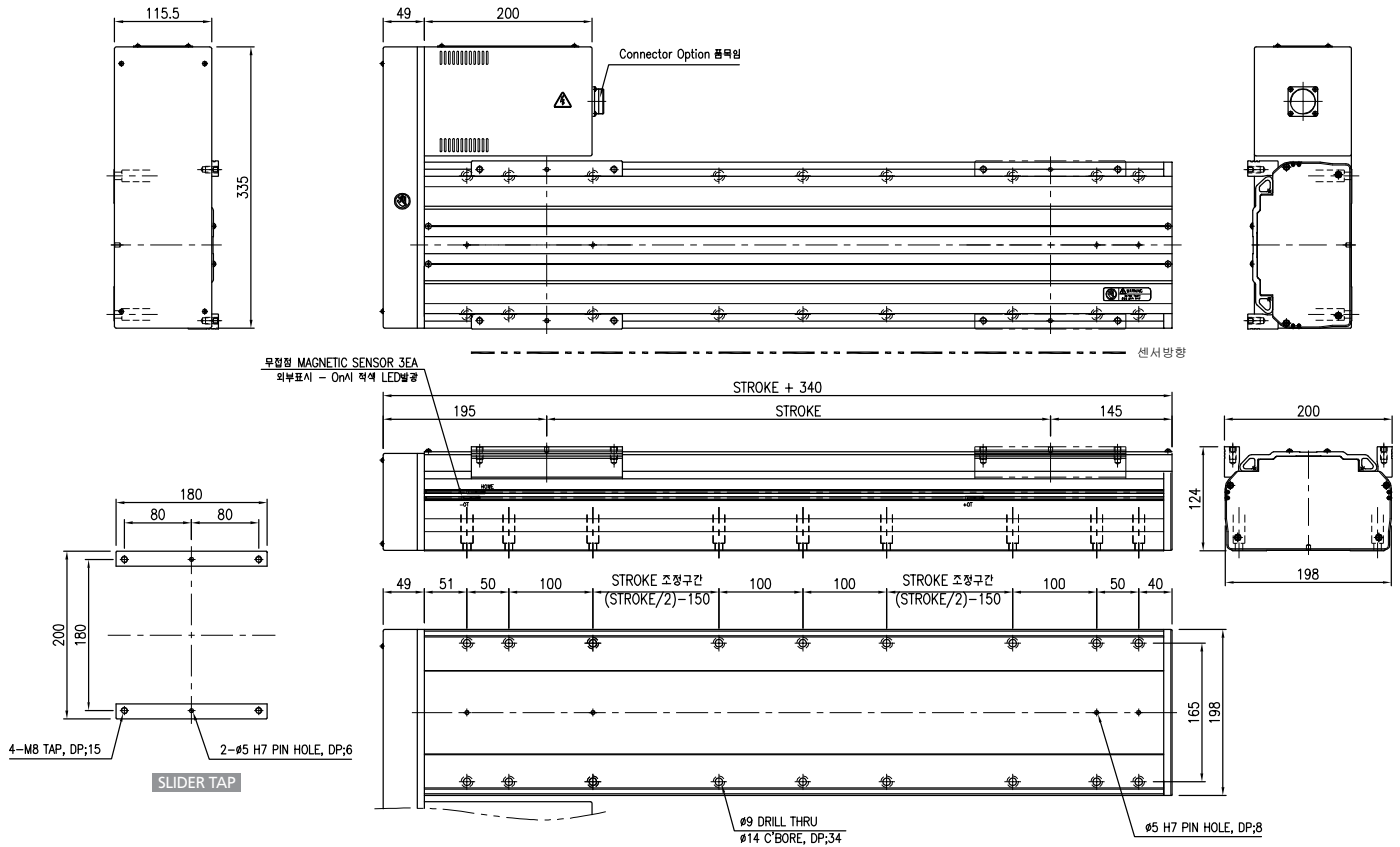


# LP200 Series Cartesian ROBO System

## LP200-LT / RT(대칭)



## LP200-LB / RB(대칭)





Technical drawings of the SLIDER TAP assembly, including dimensions and labels:

- Top View (Top Left):** Shows a rectangular component with a width of 180 and a height of 200. It features four M8 taps (DP:15) and two #5 H7 pin holes (DP:6). The distance between the taps is 80, and the distance between the pin holes is 80.
- Side View (Bottom Left):** Shows a rectangular component with a width of 130 and a height of 250.
- Top View (Main):** Shows the main assembly with a total width of 200 and a height of 124. It includes a magnetic sensor (3FA) and a connector option. The distance between the taps is 195, and the distance between the pin holes is 145. The stroke length is 340.
- Side View (Main):** Shows the main assembly with a total width of 200 and a height of 198. It includes a magnetic sensor (3FA) and a connector option. The distance between the taps is 195, and the distance between the pin holes is 145. The stroke length is 340.
- Detail View (Bottom Right):** Shows a detailed view of the assembly with dimensions 49, 251, 50, 100, 100, 100, 50, and 40. It includes a magnetic sensor (3FA) and a connector option. The stroke length is 340.



Timing Belt ROBO System

# BP Series

BP090 Series

BP092-1 Series

BP092 Series

BP120 Series

BP160 Series

BP200 Series

# BP Series Model Code

|    |     |   |   |   |   |    |   |      |   |    |    |   |   |    |    |   |
|----|-----|---|---|---|---|----|---|------|---|----|----|---|---|----|----|---|
| BP | 120 | - | 2 | F | L | T1 | - | 800L | - | 40 | R5 | - | B | R1 | E1 | C |
| ①  | ②   |   | ③ | ④ | ⑤ | ⑥  |   | ⑦    |   | ⑧  | ⑨  |   | ⑩ | ⑪  | ⑫  | ⑬ |

## ① 형식 Type

BP - LPK Co., Ltd. Cartesian Robot, Timing Belt Type

## ② Model

090 - Robot Body Width 85 mm, Height 72  
 092 - Robot Body Width 88 mm, Height 92  
 120 - Robot Body Width 124 mm, Height 86  
 160 - Robot Body Width 158 mm, Height 108  
 200 - Robot Body Width 198 mm, Height 124

## ③ Slide Table Q'ty

None - Slide Table 1 Set (Standard)  
 2~5 - Slide Table Q'ty (Option)

## ④ Driving Shape

S - Straight Coupling Type  
 F - Parallel Front Pulley Type  
 D - Parallel Top Pulley Type  
 U - Parallel Under Pulley Type

## ⑤ Motor Shape

L - Motor Left Position Type  
 R - Motor Right Position Type

## ⑥ Base Mount Hole

T - Tap Type  
 T1 - Tap Type - Lm Block 1Block (BP092 Only)  
 B - Counter Bore Type  
 B1 - Counter Bore Type - Lm Block 1Block (BP092 Only)

## ⑦ Stroke

The Distance Between - Limit and + Limit (mm)

## ⑧ Motor Capacity

10 - Motor Rated Output 100W  
 20 - Motor Rated Output 200W  
 40 - Motor Rated Output 400W  
 70 - Motor Rated Output 750W  
 1K - Motor Rated Output 1KW (Option)

## ⑨ Reduction Gear Ratio Option

None - Without Reduction Gear (Standard)  
 R3~10 - With Reduction Gear Ratio

## ⑩ Robot Color Option

None - Soft White Anodizing (Standard)  
 B - Soft Black Anodizing

## ⑪ Surface Treatment Option

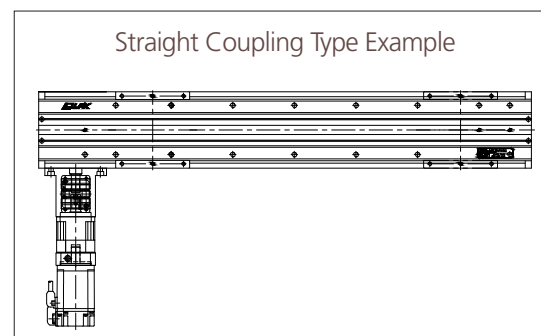
None - Without Surface Treatment (Standard)  
 R1 - LM Rail Raydent  
 R2 - LM Rail and Block Raydent

## ⑫ Sensor Option

None - DC-24V Proximity LED Sensor (Standard)  
 E1 - External Photo Sensor Only  
 E2 - External Photo Sensor + Connector  
 E3 - External Photo Sensor + Connector + Cable

## ⑬ Cableveyor Option

None - Without Cableveyor (Standard)  
 C - With Cableveyor



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 200W                                                     | 400W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.1 mm                                                  |      |
| • Drive System                                 | Timing Belt                                              |      |
| • Pulley Reduction Ratio (Standard)            | 1500 rpm (1/2)                                           |      |
| • Stroke (mm)                                  | 100 ~ 1500                                               |      |
| • Drive Pulley & P.C.D                         | T5-15NT , Ø23.87                                         |      |
| • Drive Belt                                   | T5, 23W                                                  |      |
| • LM Guide Bearing                             | One Way 42-2BLOCK                                        |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 1.83E + 05, I <sub>y</sub> = 1.09E + 06 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 200W |      |     |     | 400W |      |     |     |
|------------------------------|------|------|-----|-----|------|------|-----|-----|
| Reduction Ratio(Reducer)     | 2    | 3    | 5   | 10  | 2    | 3    | 5   | 10  |
| Max Speed (mm/sec)           | 1875 | 1250 | 750 | 375 | 1875 | 1250 | 750 | 375 |
| Max Payload(kg) (Horizontal) | 8    | 16   | 28  | 35  | 11   | 16   | 28  | 35  |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당 왕복수 : Max, 수명 시간&거리 : 20000 이상 조건임.

주3) 벽면 부착(Wall Mount)사용 조건 시 당사로 문의 요망.

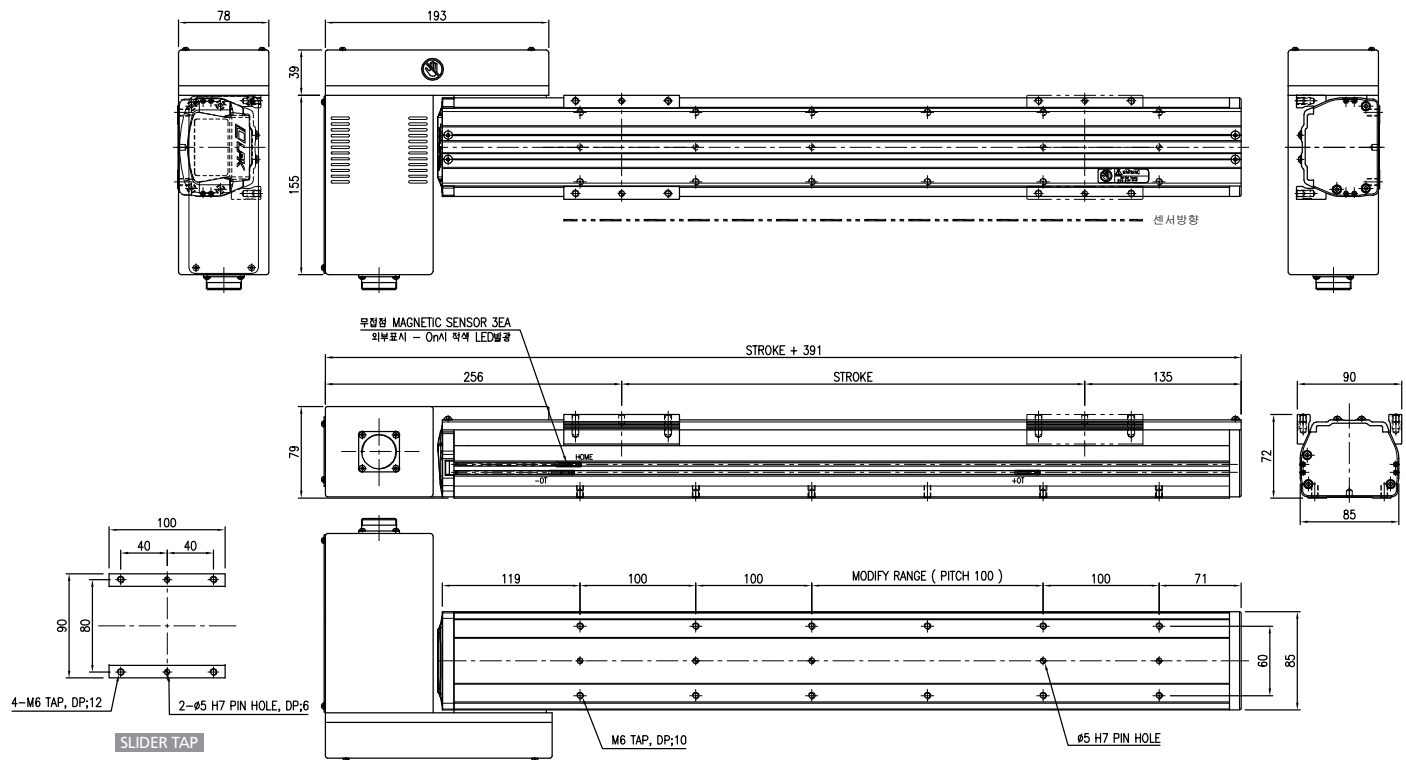
주4) 감속기 사용 시 일부 품목의 치수가 변경될 수 있음. 당사로 문의 요망

## Robot Weight

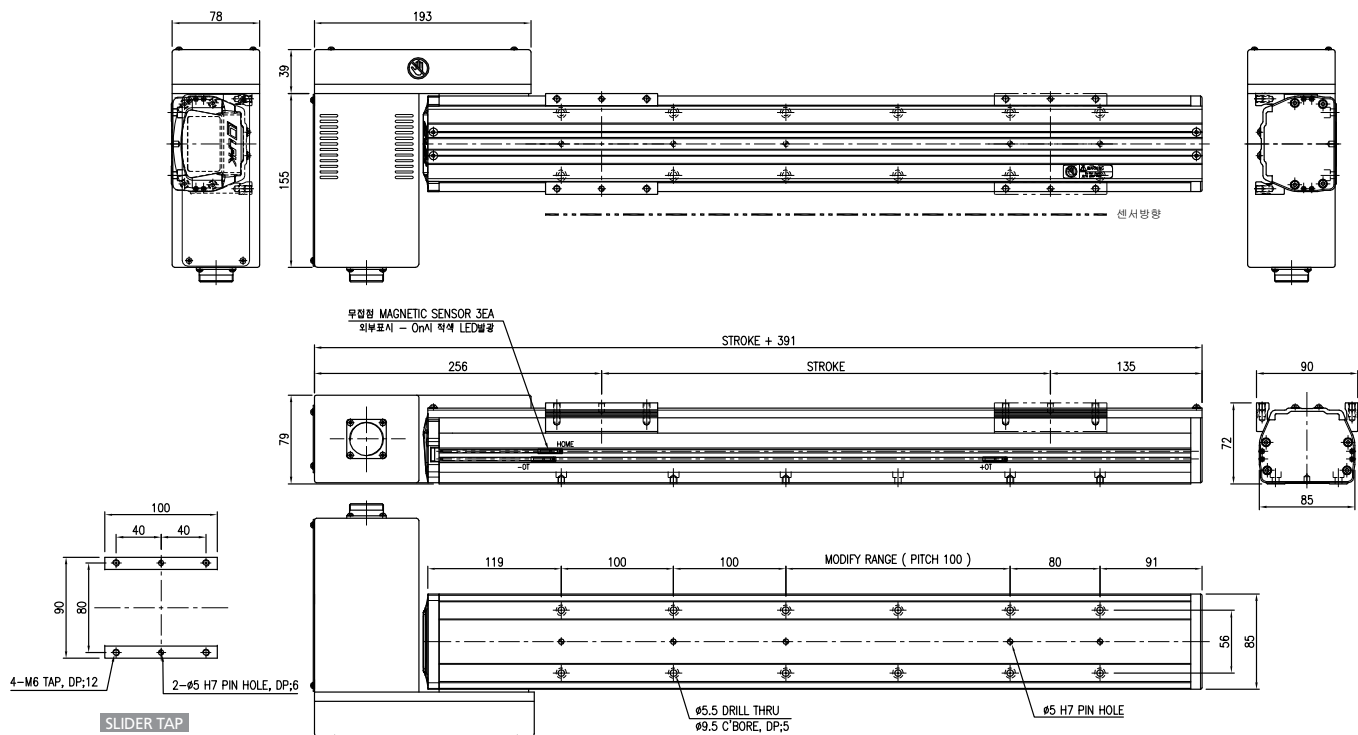
| Stroke (mm) |      | 100 | 200 | 300 | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|-------------|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 200W | 8.1 | 8.7 | 9.3 | 9.9  | 10.5 | 11.1 | 11.7 | 12.3 | 12.9 | 13.5 | 14.1 | 14.7 | 15.3 | 15.9 | 16.5 |
|             | 400W | 8.6 | 9.2 | 9.8 | 10.4 | 11   | 11.6 | 12.2 | 12.8 | 13.4 | 14   | 14.6 | 15.2 | 15.8 | 16.4 | 17   |

## BP090 Series Timing Belt ROBO System

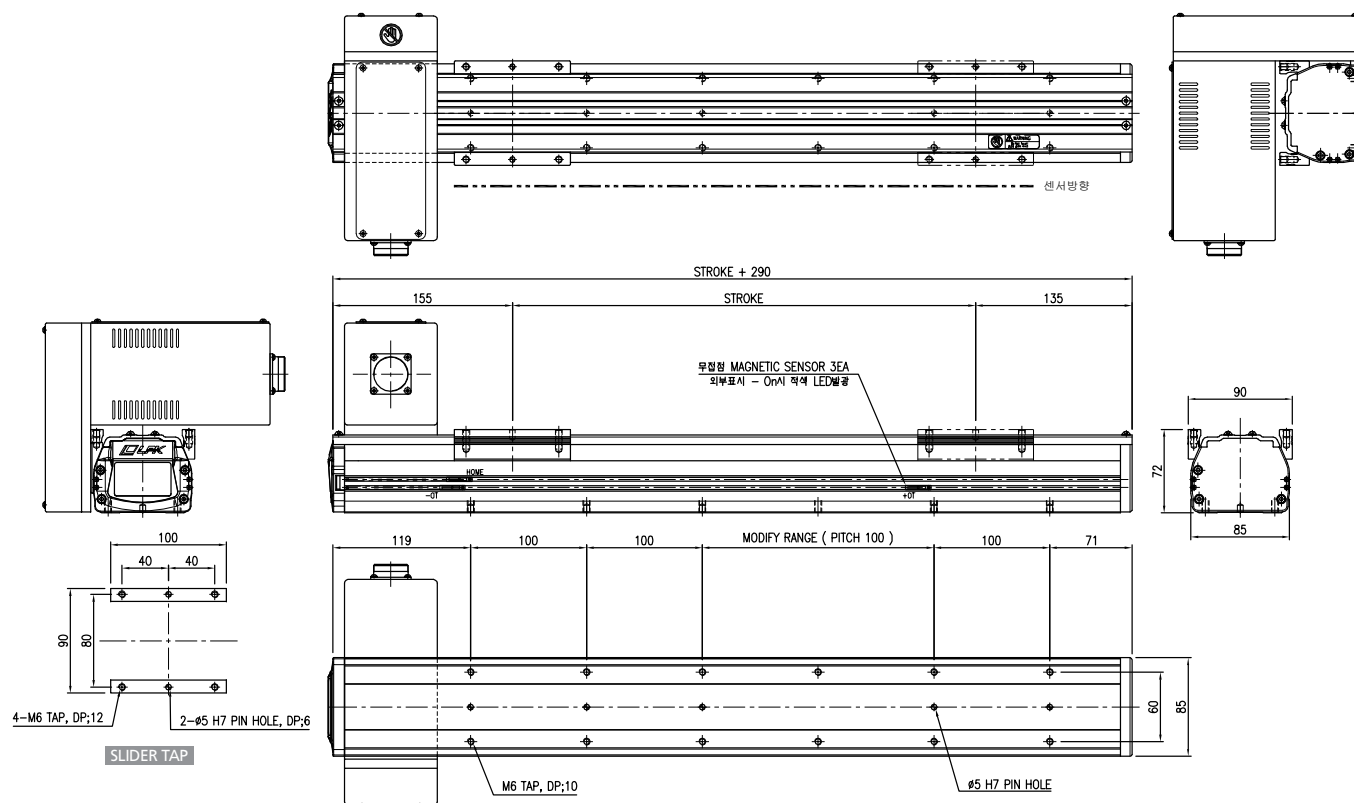
## BP090-FLT / FRT(대칭)



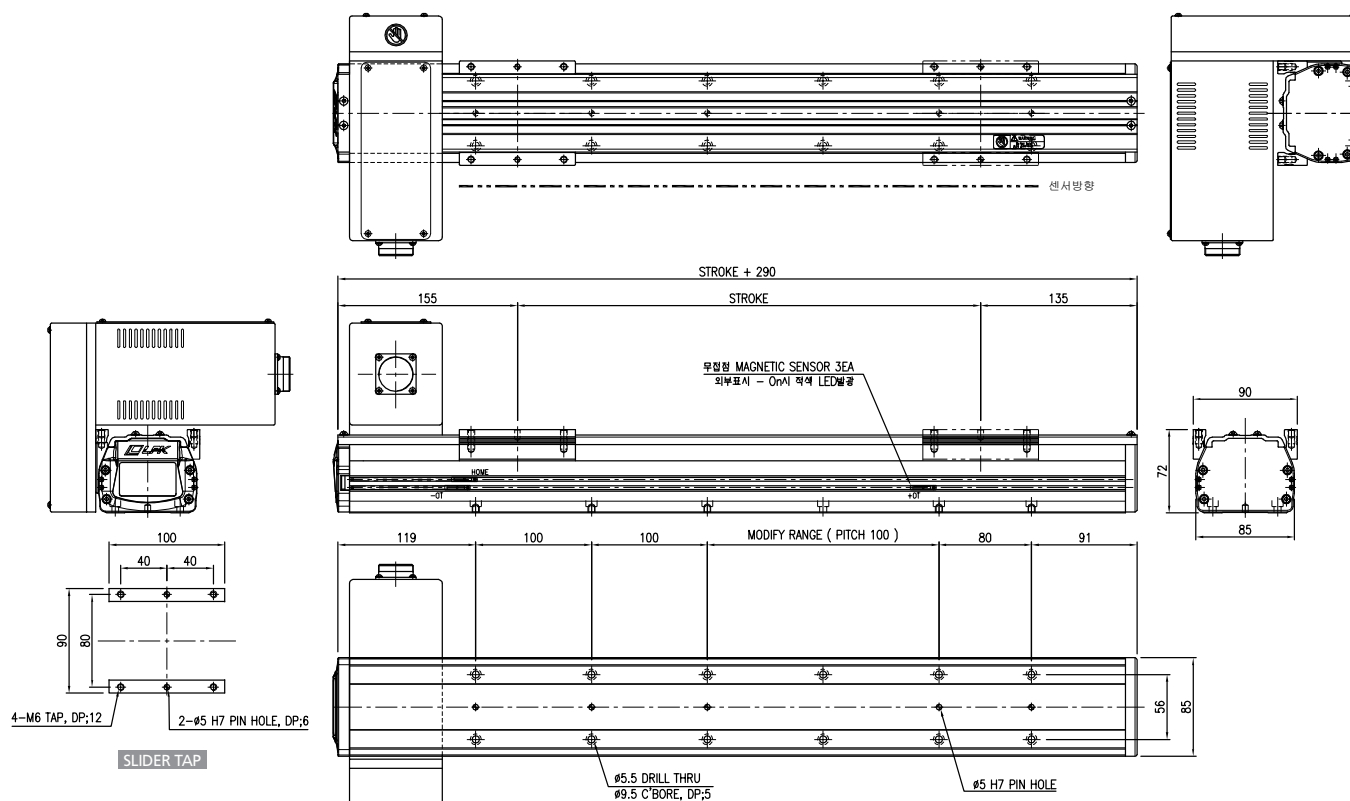
BP090-FLB / FRB(대칭)



## BP090-DLT / DRT(대칭)

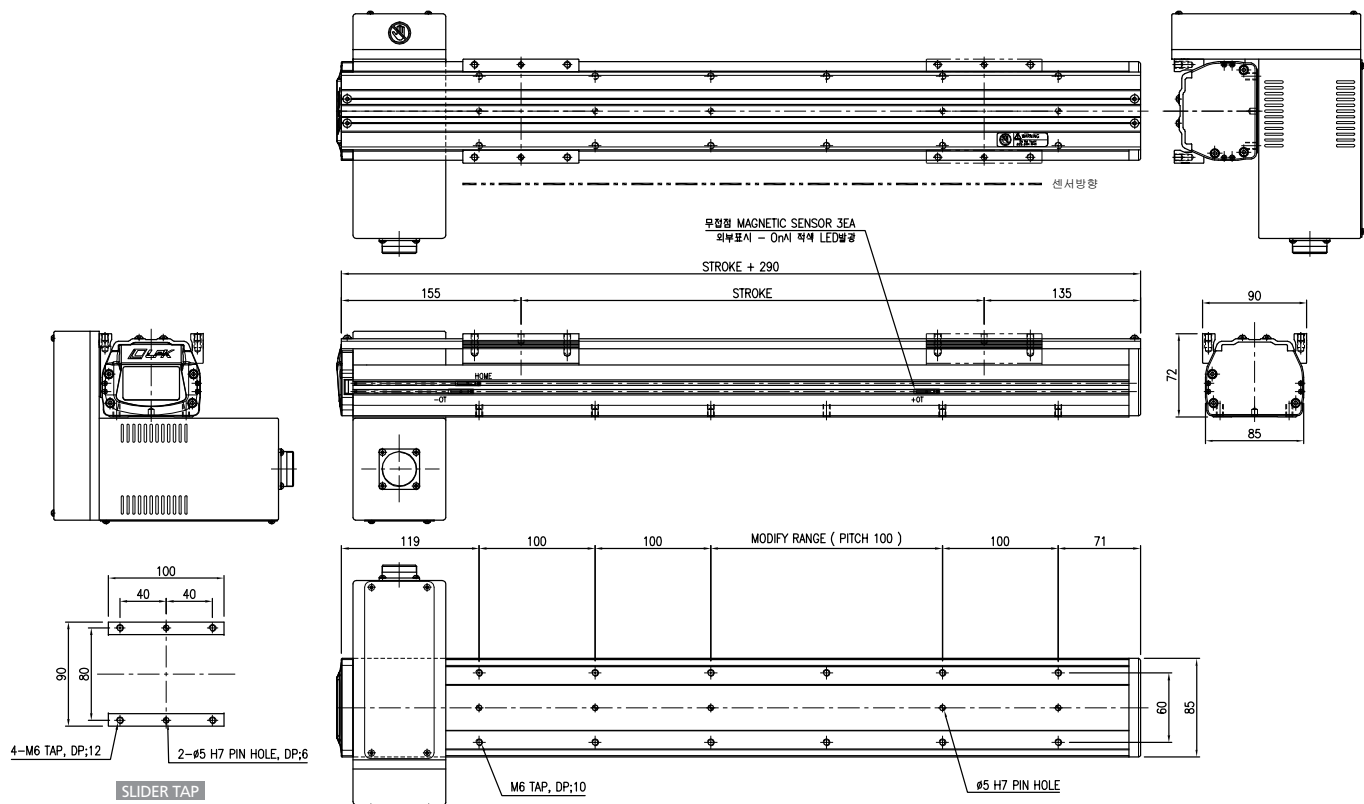


## BP090-DLB / DRB(대칭)

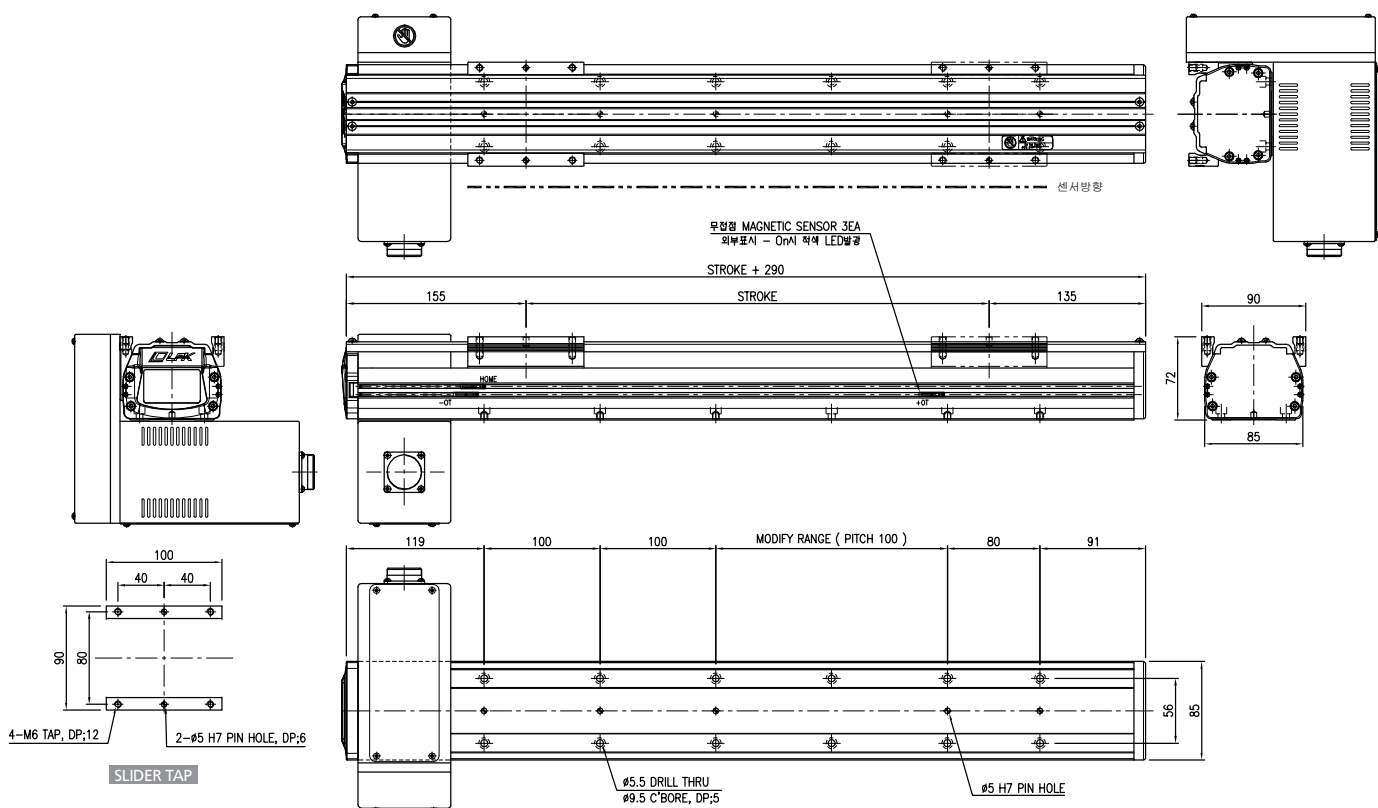


# BP090 Series Timing Belt ROBO System

## BP090-ULT / URT(대칭)



## BP090-ULB / URB(대칭)





## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 200W                                                     | 400W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.1 mm                                                  |      |
| • Drive System                                 | Timing Belt                                              |      |
| • Pulley Reduction Ratio (Standard)            | 1500 rpm (1/2)                                           |      |
| • Stroke (mm)                                  | 100 ~ 1500                                               |      |
| • Drive Pulley & P.C.D                         | T5-15NT , Ø23.87                                         |      |
| • Drive Belt                                   | T5, 23W                                                  |      |
| • LM Guide Bearing                             | One Way 20W-1BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 5.45E + 05, I <sub>y</sub> = 1.77E + 06 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 200W |      |     |     | 400W |      |     |     |
|------------------------------|------|------|-----|-----|------|------|-----|-----|
| Reduction Ratio(Reducer)     | 2    | 3    | 5   | 10  | 2    | 3    | 5   | 10  |
| Max Speed (mm/sec)           | 1875 | 1250 | 750 | 375 | 1875 | 1250 | 750 | 375 |
| Max Payload(kg) (Horizontal) | 4    | 8    | 15  | 25  | 9    | 12   | 20  | 25  |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당 왕복수 : Max, 수명 시간&거리 : 20000 이상 조건임.

주3) 벽면 부착(Wall Mount)사용 조건 시 당사로 문의 요망.

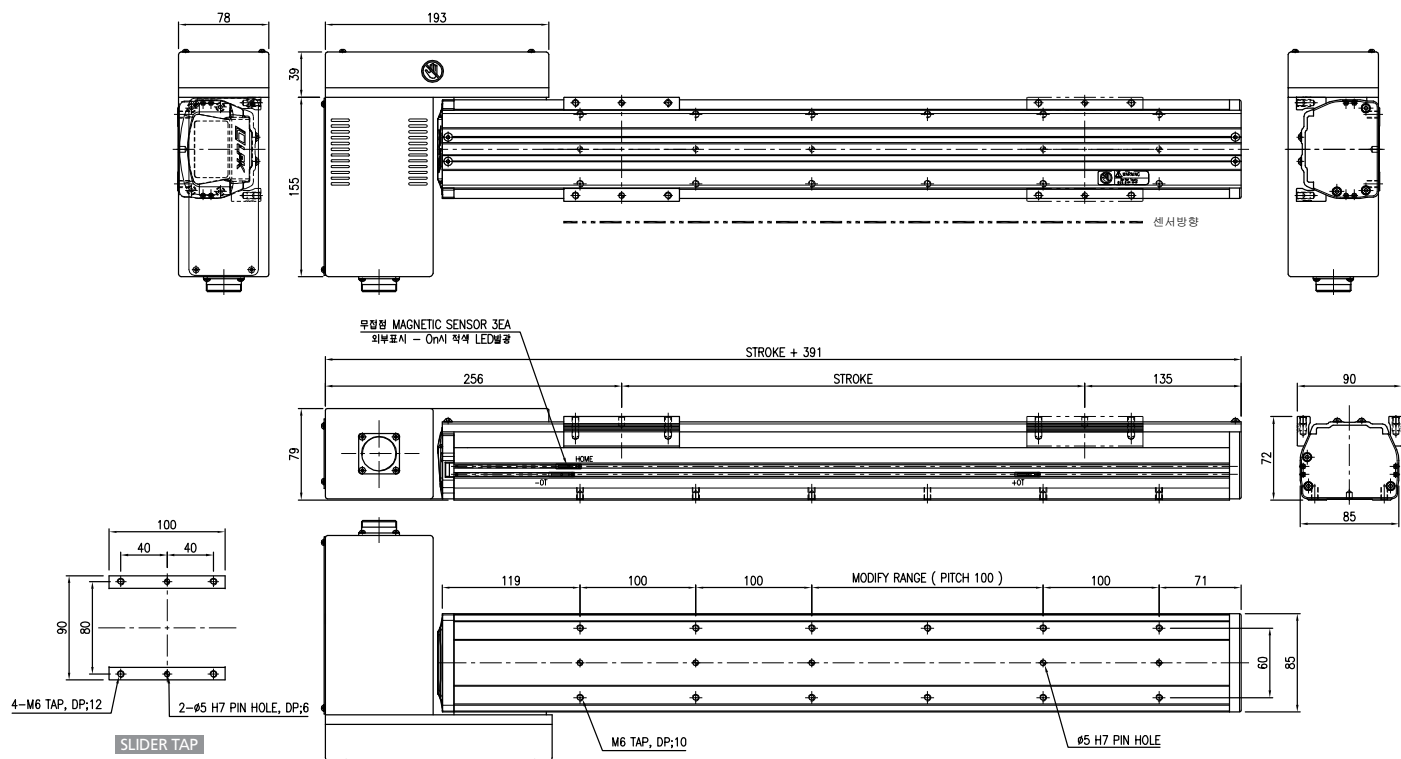
주4) 감속기 사용 시 일부 품목의 치수가 변경될 수 있음. 당사로 문의 요망

## Robot Weight

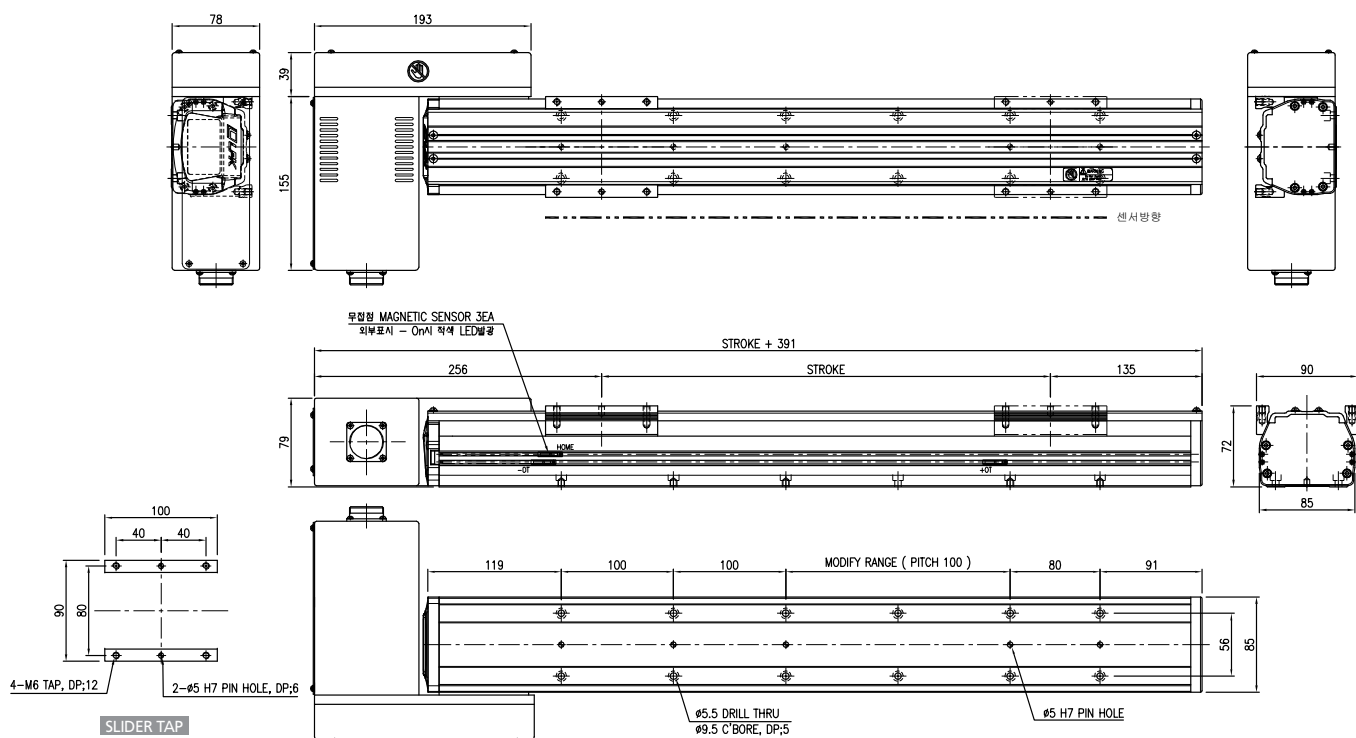
| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 200W | 10.7 | 11.3 | 11.9 | 12.5 | 13.1 | 13.7 | 14.3 | 14.9 | 15.5 | 16.1 | 16.7 | 17.3 | 17.9 | 18.5 | 19.1 |
|             | 400W | 11.2 | 11.8 | 12.4 | 13   | 13.6 | 14.2 | 14.8 | 15.4 | 16   | 16.6 | 17.2 | 17.8 | 18.4 | 19   | 19.6 |

# BP092-1 Series Timing Belt ROBO System

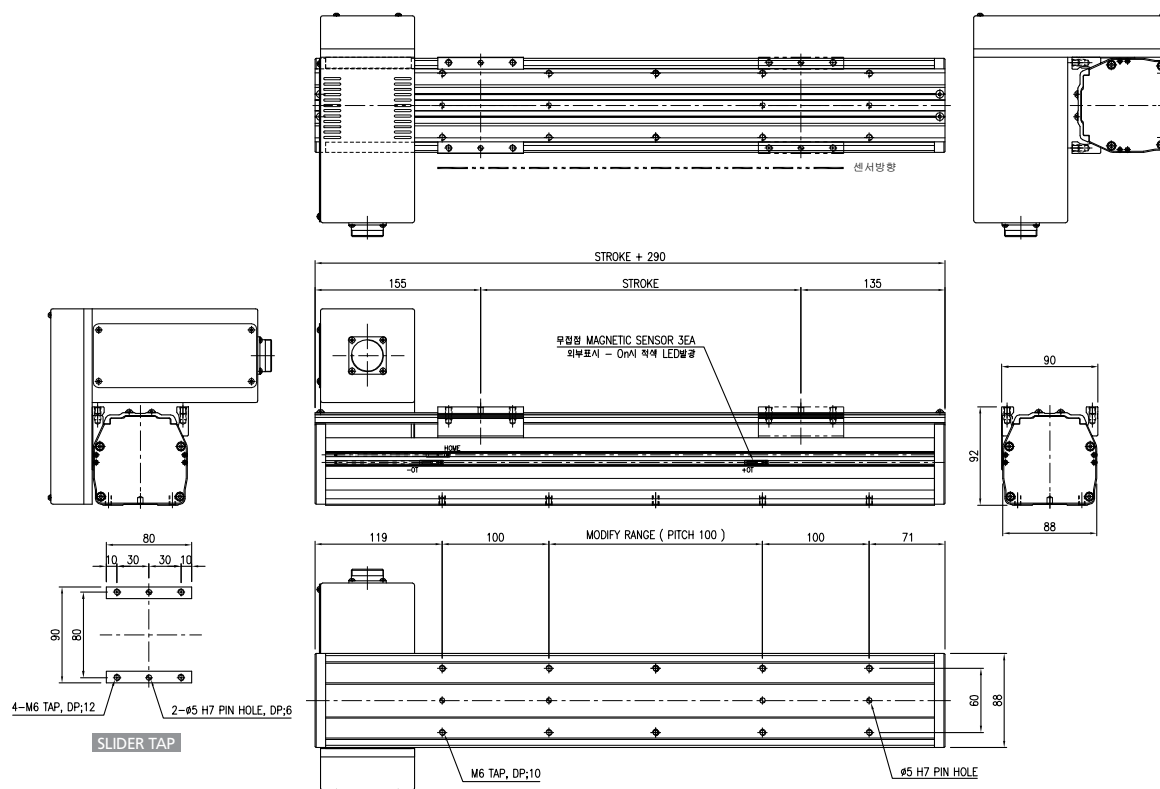
## BP090-FLT / FRT(대칭)



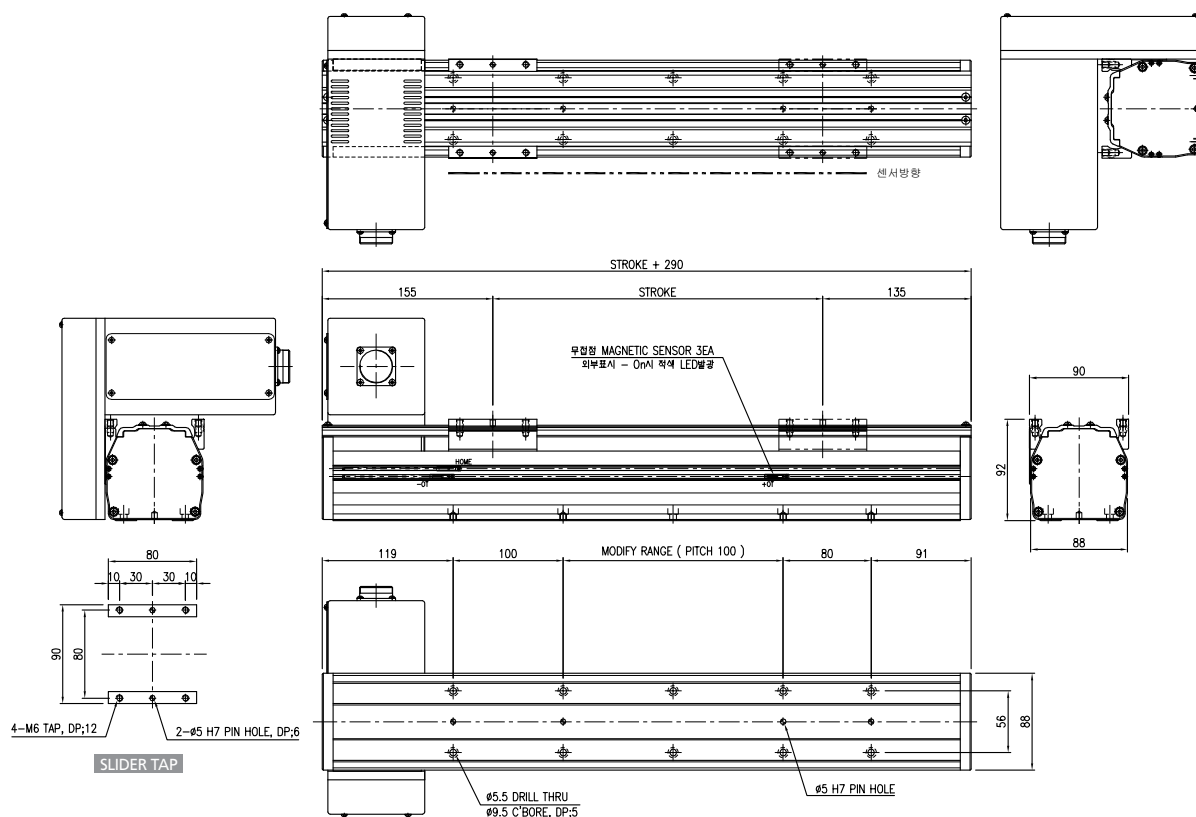
## BP090-FLB / FRB(대칭)



## BP092-DLT1 / DRT1(대칭)

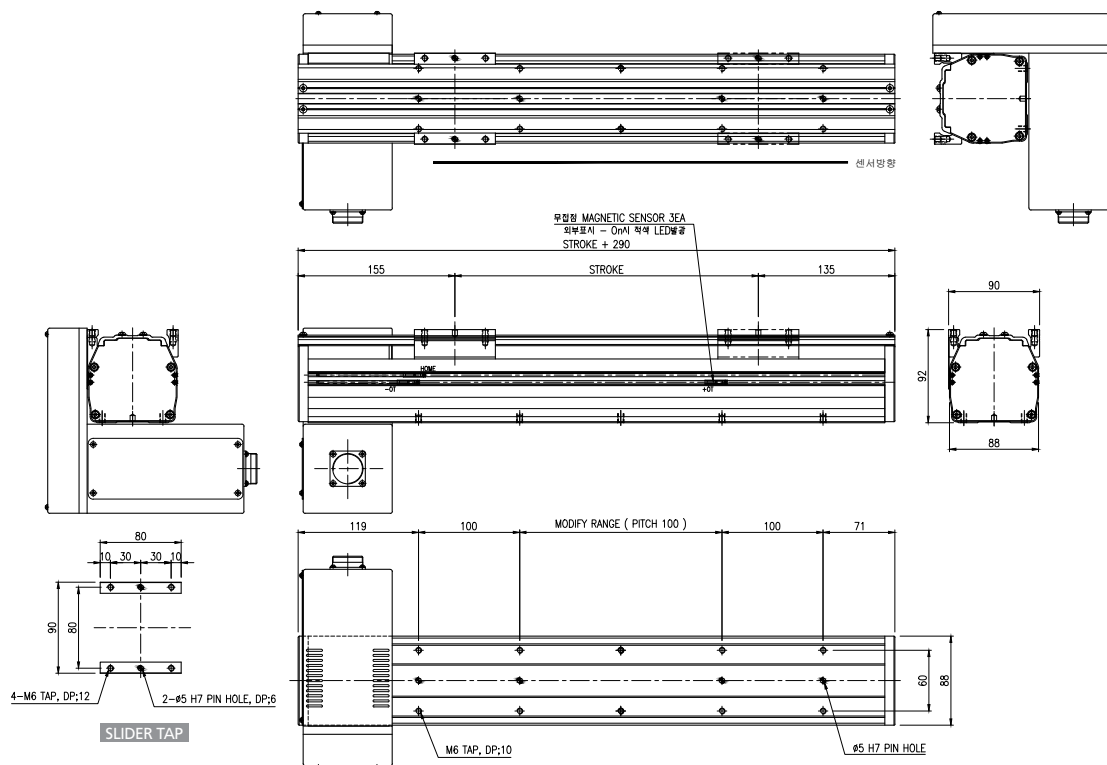


## BP092-DLB1 / DRB1(대칭)

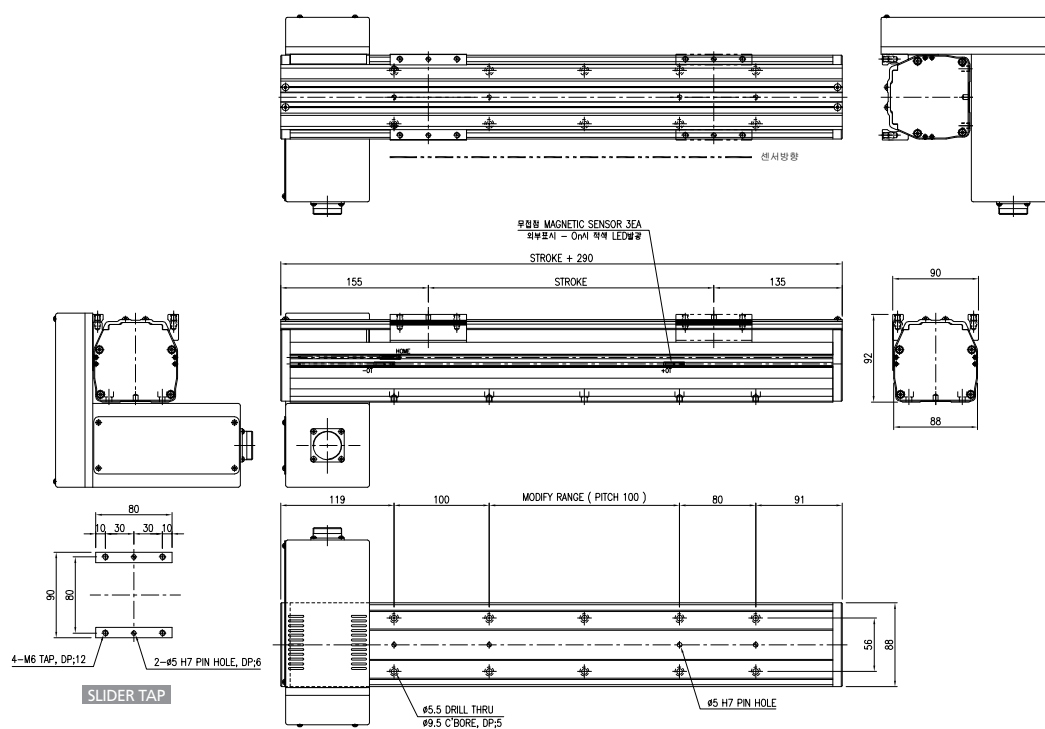


# BP092-1 Series Timing Belt ROBO System

## BP092-ULT1 / URT1(대칭)



## BP092-ULB1 / URB1(대칭)



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 200W                                                     | 400W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.1 mm                                                  |      |
| • Drive System                                 | Timing Belt                                              |      |
| • Pulley Reduction Ratio (Standard)            | 1500 rpm (1/2)                                           |      |
| • Stroke (mm)                                  | 100 ~ 1500                                               |      |
| • Drive Pulley & P.C.D                         | T5-15NT , Ø23.87                                         |      |
| • Drive Belt                                   | T5, 23W                                                  |      |
| • LM Guide Bearing                             | One Way 20W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 5.45E + 05, I <sub>y</sub> = 1.77E + 06 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 200W |      |     |     | 400W |      |     |     |
|------------------------------|------|------|-----|-----|------|------|-----|-----|
| Reduction Ratio(Reducer)     | 2    | 3    | 5   | 10  | 2    | 3    | 5   | 10  |
| Max Speed (mm/sec)           | 1875 | 1250 | 750 | 375 | 1875 | 1250 | 750 | 375 |
| Max Payload(kg) (Horizontal) | 8    | 15   | 30  | 50  | 18   | 25   | 40  | 50  |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

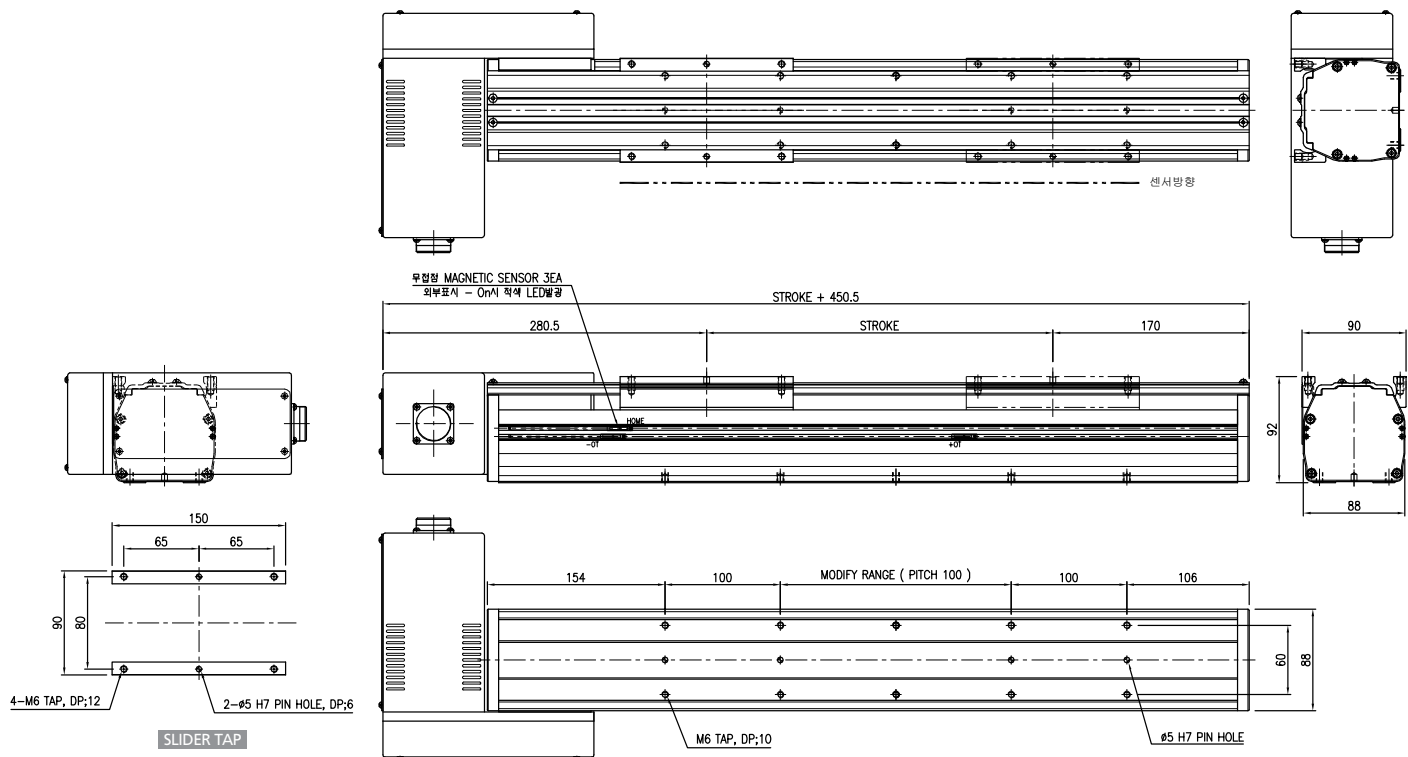
주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

## Robot Weight

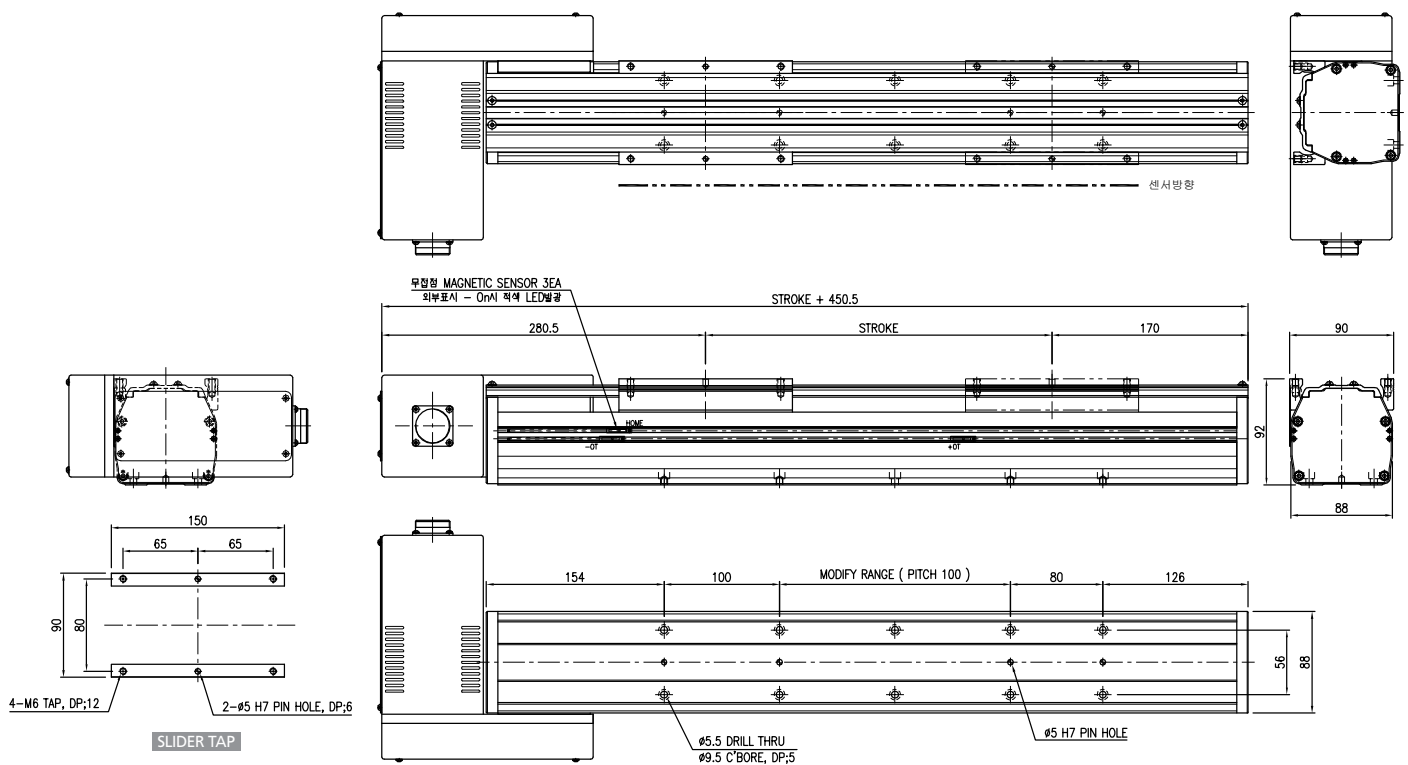
| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 200W | 12   | 12.6 | 13.2 | 13.8 | 14.4 | 15   | 15.6 | 16.2 | 16.8 | 17.4 | 18   | 18.6 | 19.2 | 19.8 | 20.4 |
|             | 400W | 12.5 | 13.1 | 13.7 | 14.3 | 14.9 | 15.5 | 16.1 | 16.7 | 17.3 | 17.9 | 18.5 | 19.1 | 19.7 | 20.3 | 20.9 |

# BP092 Series Timing Belt ROBO System

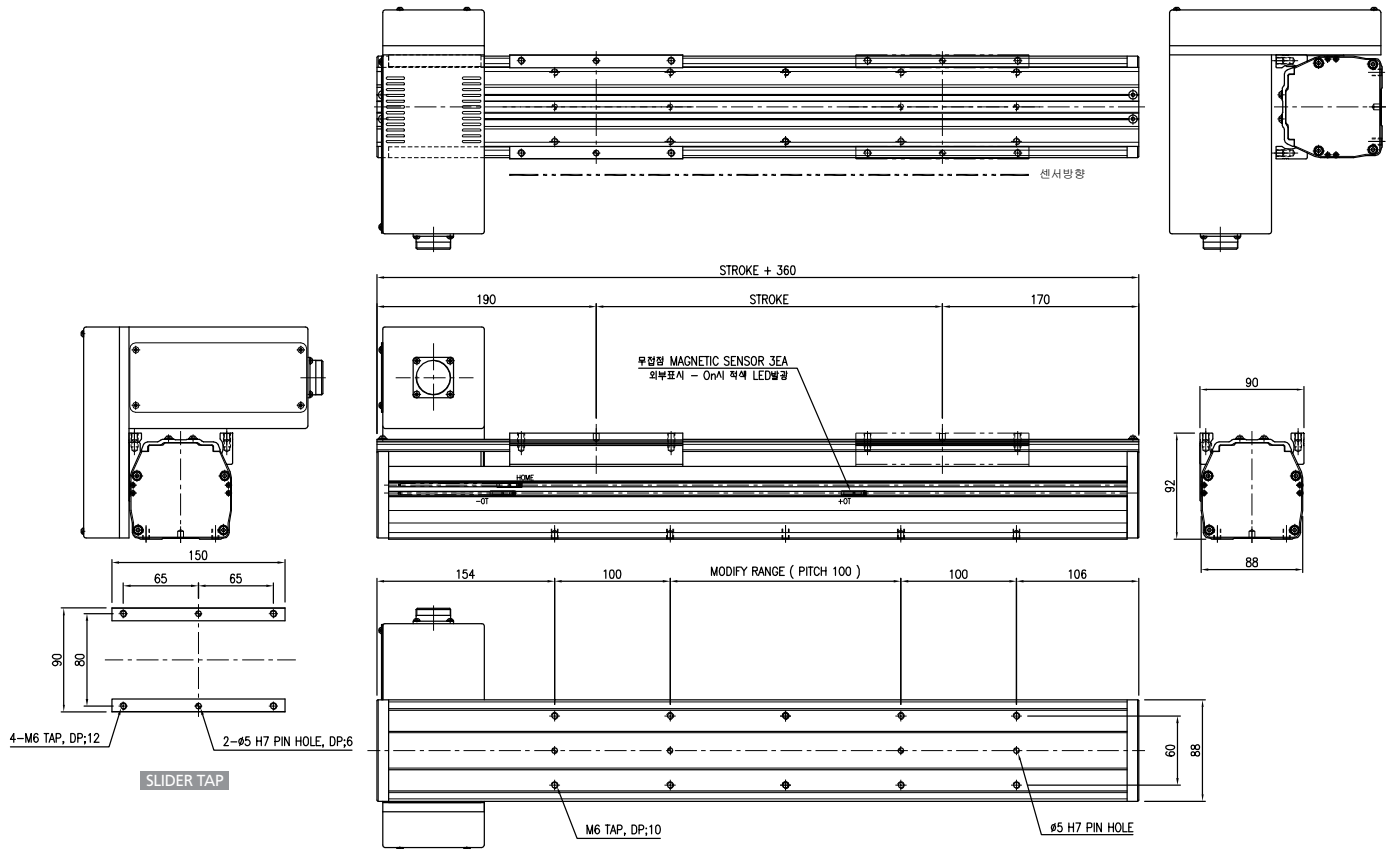
## BP092-FLT / FRT(대칭)



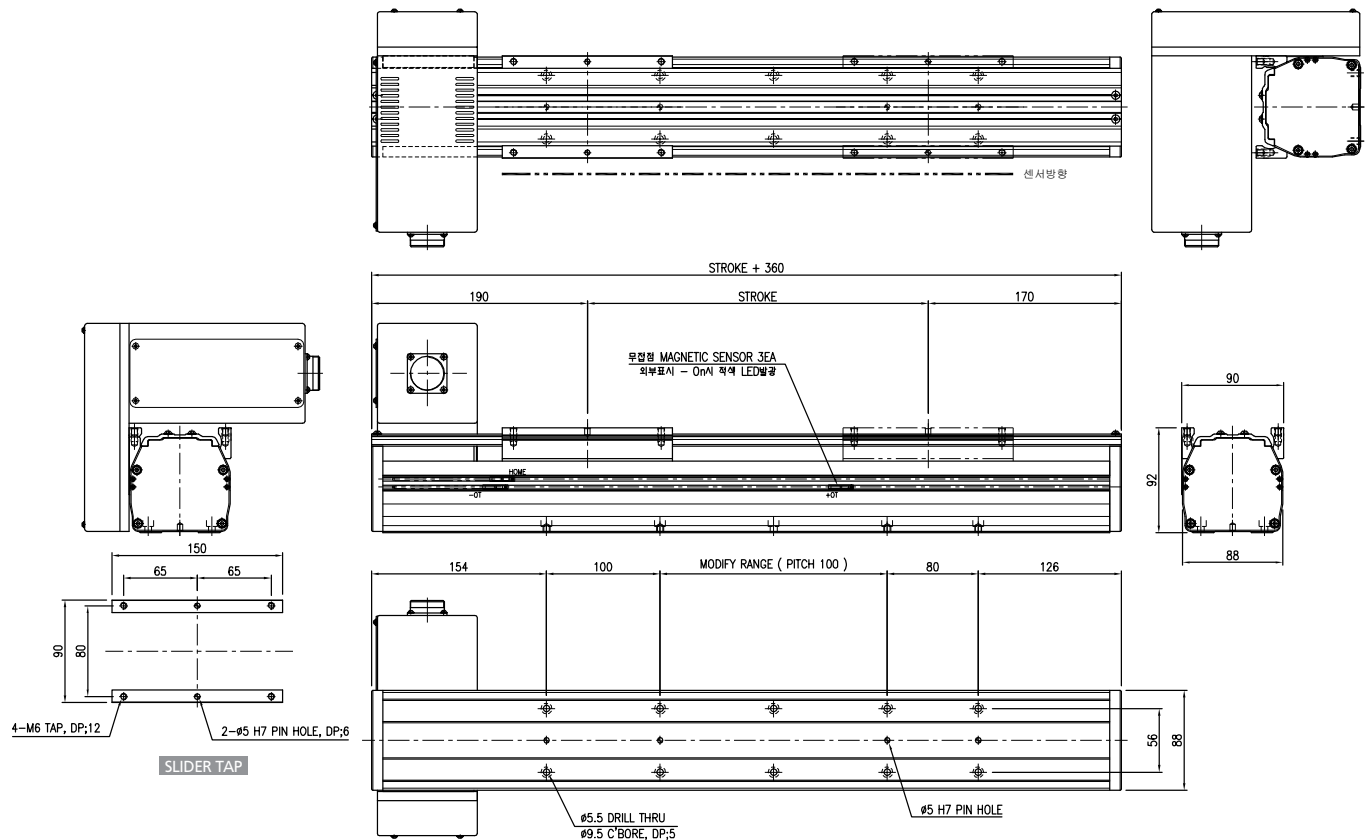
## BP092-FLB / FRB(대칭)



## BP092-DLT / DRT(대칭)

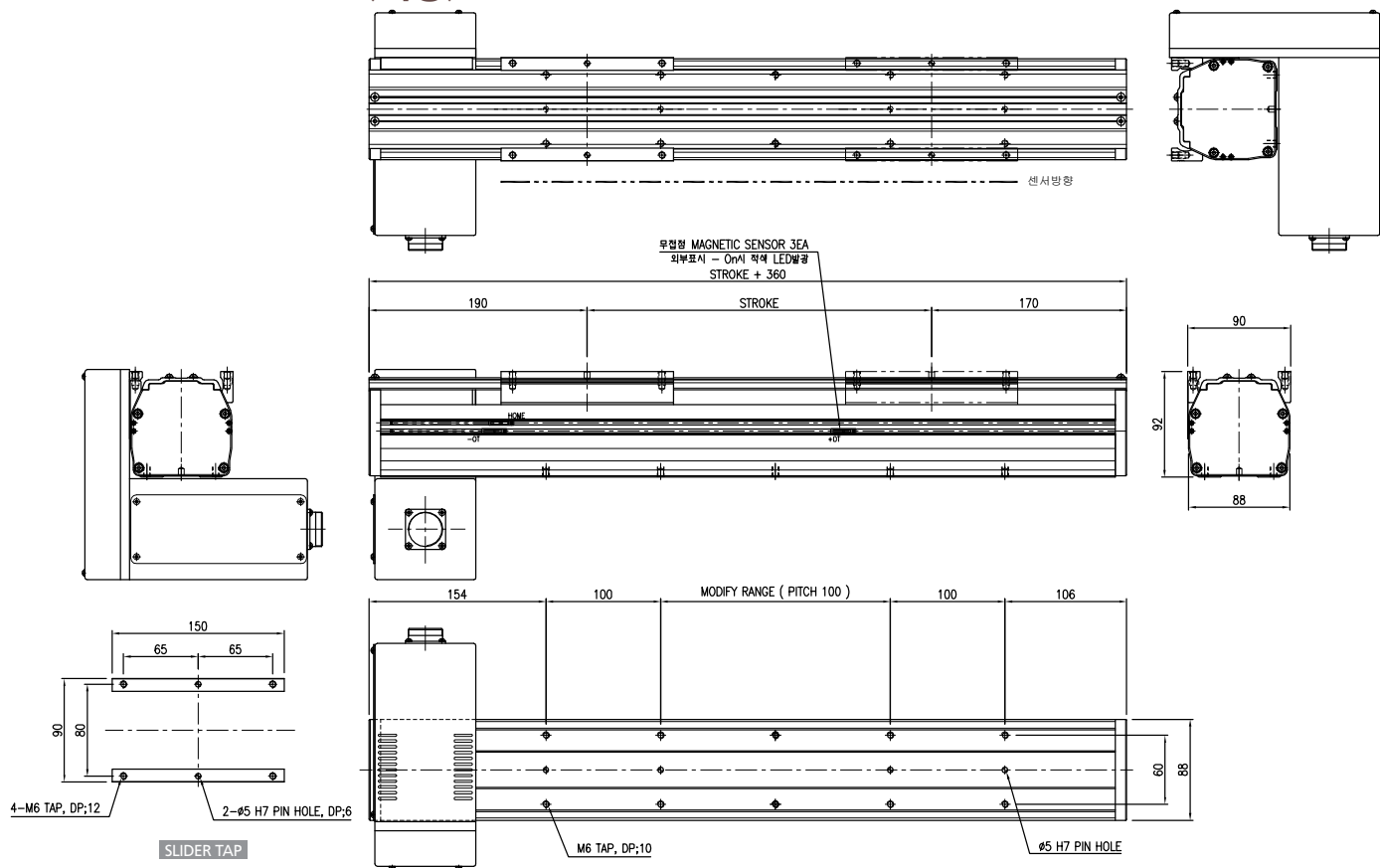


## BP092-DLB / DRB(대칭)

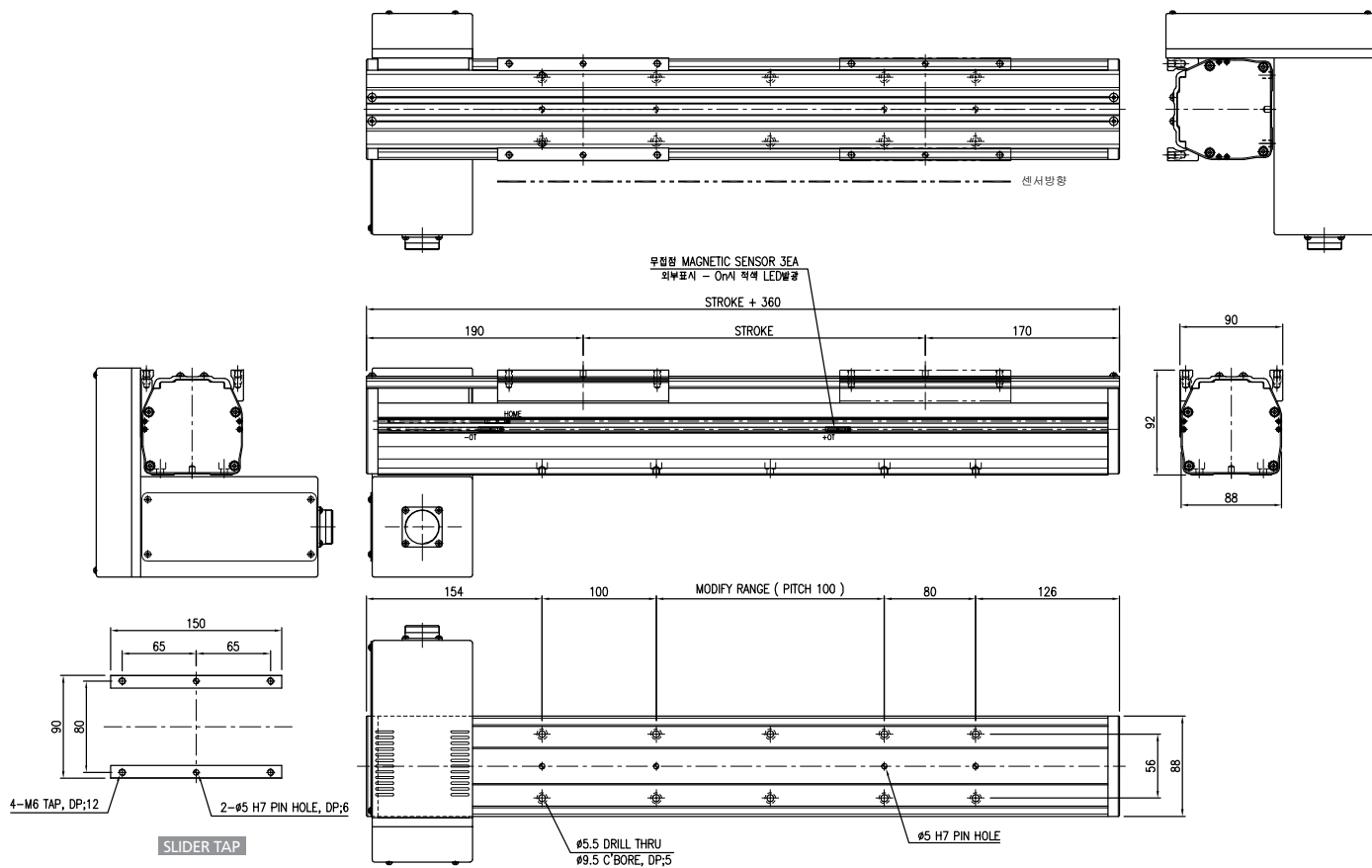


# BP092 Series Timing Belt ROBO System

## BP092-ULT / URT(대칭)



## BP092-ULB / URB(대칭)





## Specification

|                                                |                                                          |                 |
|------------------------------------------------|----------------------------------------------------------|-----------------|
| • AC Servo Motor Output                        | 400W                                                     | 750W            |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |                 |
| • Repeatability                                | ±0.1 mm                                                  |                 |
| • Drive System                                 | Timing Belt                                              |                 |
| • Pulley Reduction Ratio (Standard)            | 400W                                                     | 1184rpm (1/2.5) |
|                                                | 750W                                                     | 1500rpm (1/2)   |
| • Stroke (mm)                                  | 100 ~ 2000                                               |                 |
| • Drive Pulley & P.C.D                         | S5M-21NT , Ø33.42                                        |                 |
| • Drive Belt                                   | S5M, 25W                                                 |                 |
| • LM Guide Bearing                             | Two Way 15W-2BLOCK                                       |                 |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |                 |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 4.71E + 05, I <sub>y</sub> = 4.66E + 06 |                 |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |      |      |     | 750W |      |      |     |
|------------------------------|------|------|------|-----|------|------|------|-----|
| Reduction Ratio(Reducer)     | 2.5  | 3    | 5    | 10  | 2    | 3    | 5    | 10  |
| Max Speed (mm/sec)           | 2072 | 1750 | 1050 | 525 | 2625 | 1750 | 1050 | 525 |
| Max Payload(kg) (Horizontal) | 4    | 15   | 45   | 70  | 18   | 35   | 45   | 70  |

주1) Stroke 2000mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec

Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

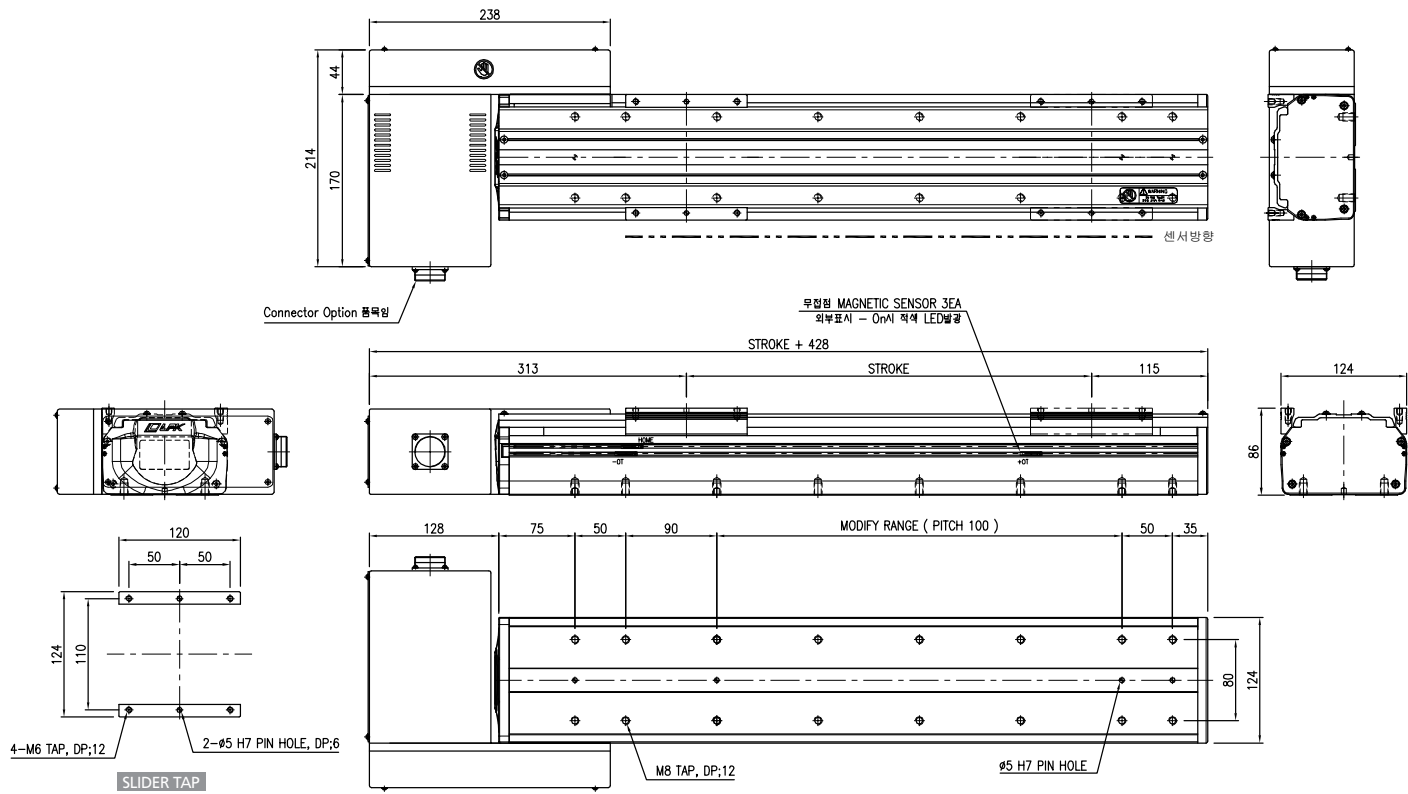
주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

## Robot Weight

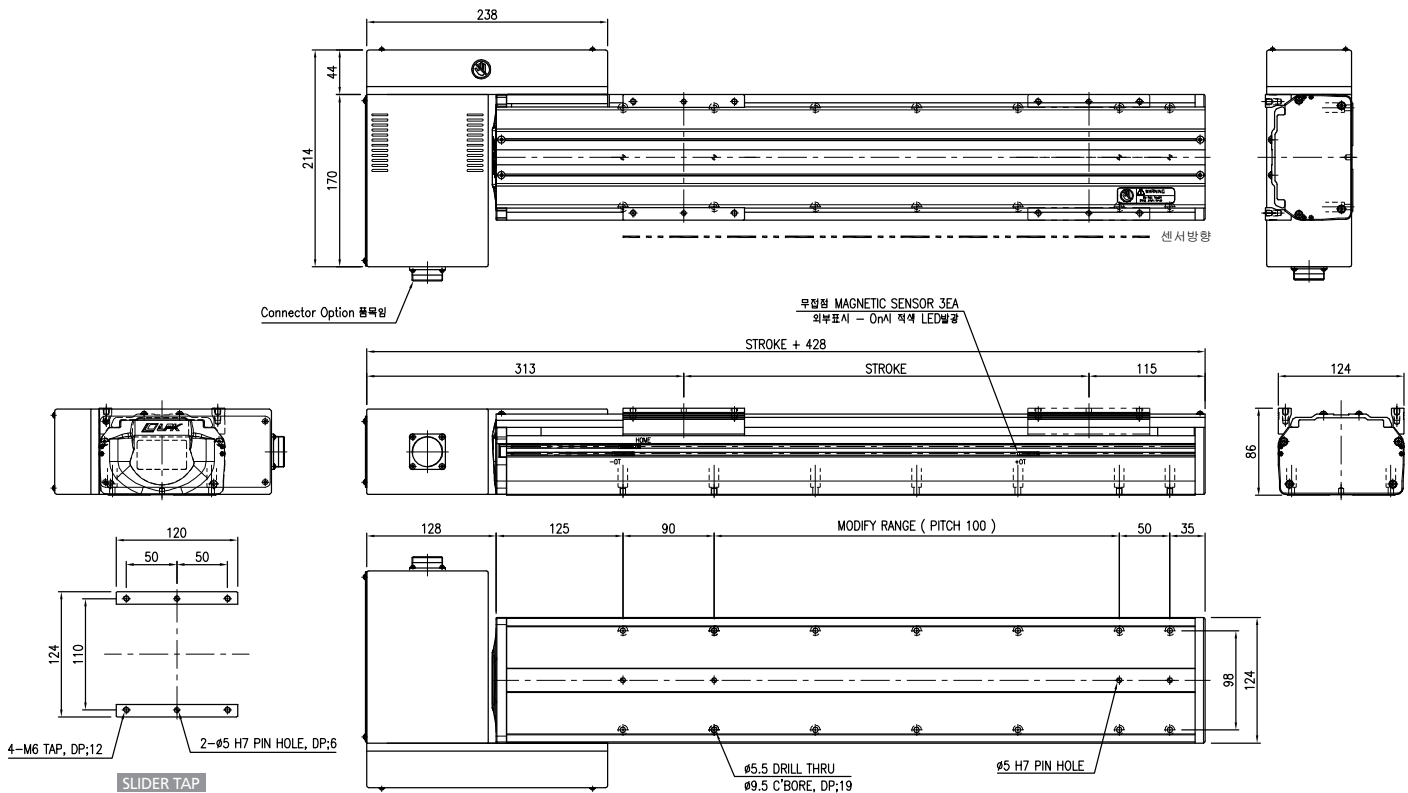
| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 400W | 10.7 | 11.7 | 12.7 | 13.7 | 14.7 | 15.7 | 16.7 | 17.7 | 18.7 | 19.7 | 20.7 | 21.7 | 22.7 | 23.7 | 24.7 | 25.7 | 26.7 | 27.7 | 28.7 | 29.7 |
|             | 750W | 12.3 | 13.3 | 14.3 | 15.3 | 16.3 | 17.3 | 18.3 | 19.3 | 20.3 | 21.3 | 22.3 | 23.3 | 24.3 | 25.3 | 26.3 | 27.3 | 28.3 | 29.3 | 30.3 | 31.3 |

# BP120 Series Timing Belt ROBO System

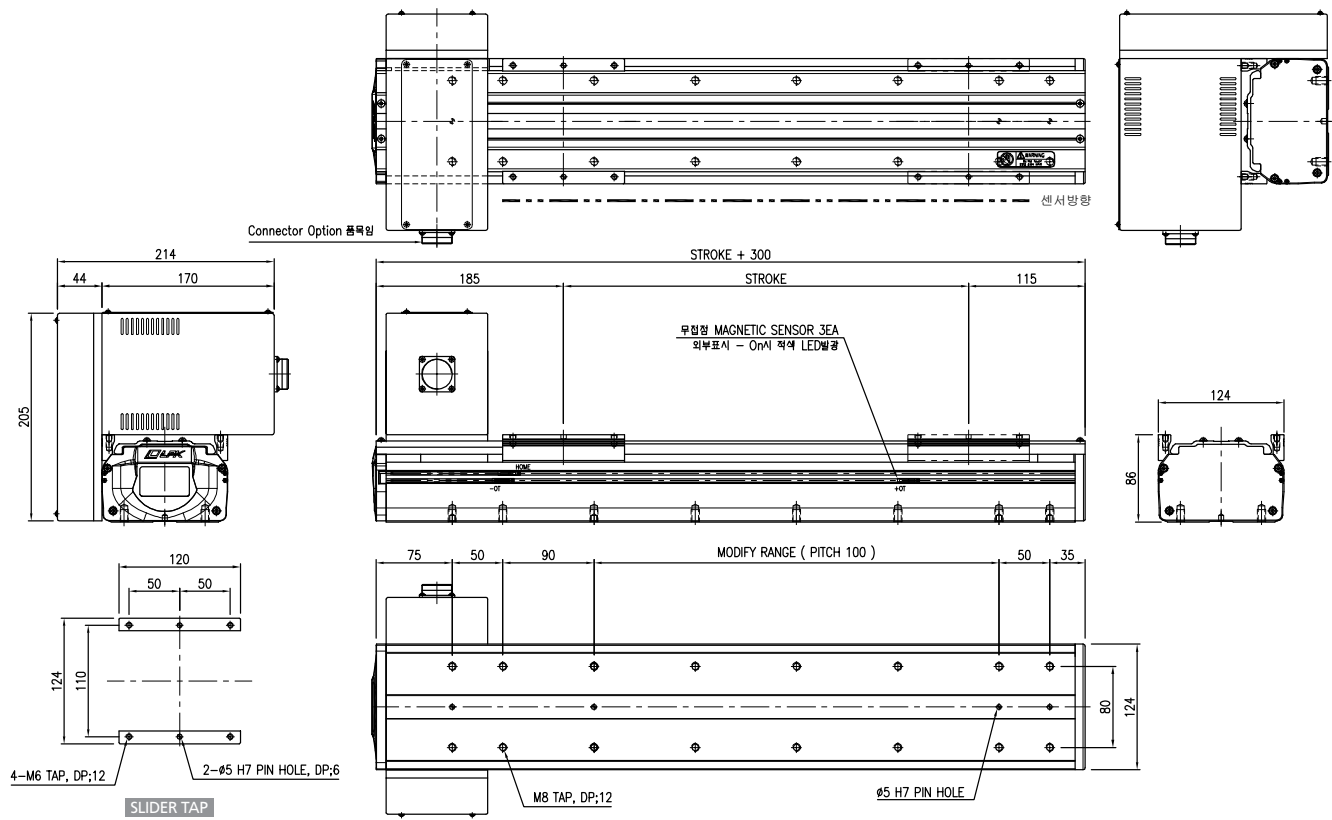
## BP120-FLT / FRT(대칭)



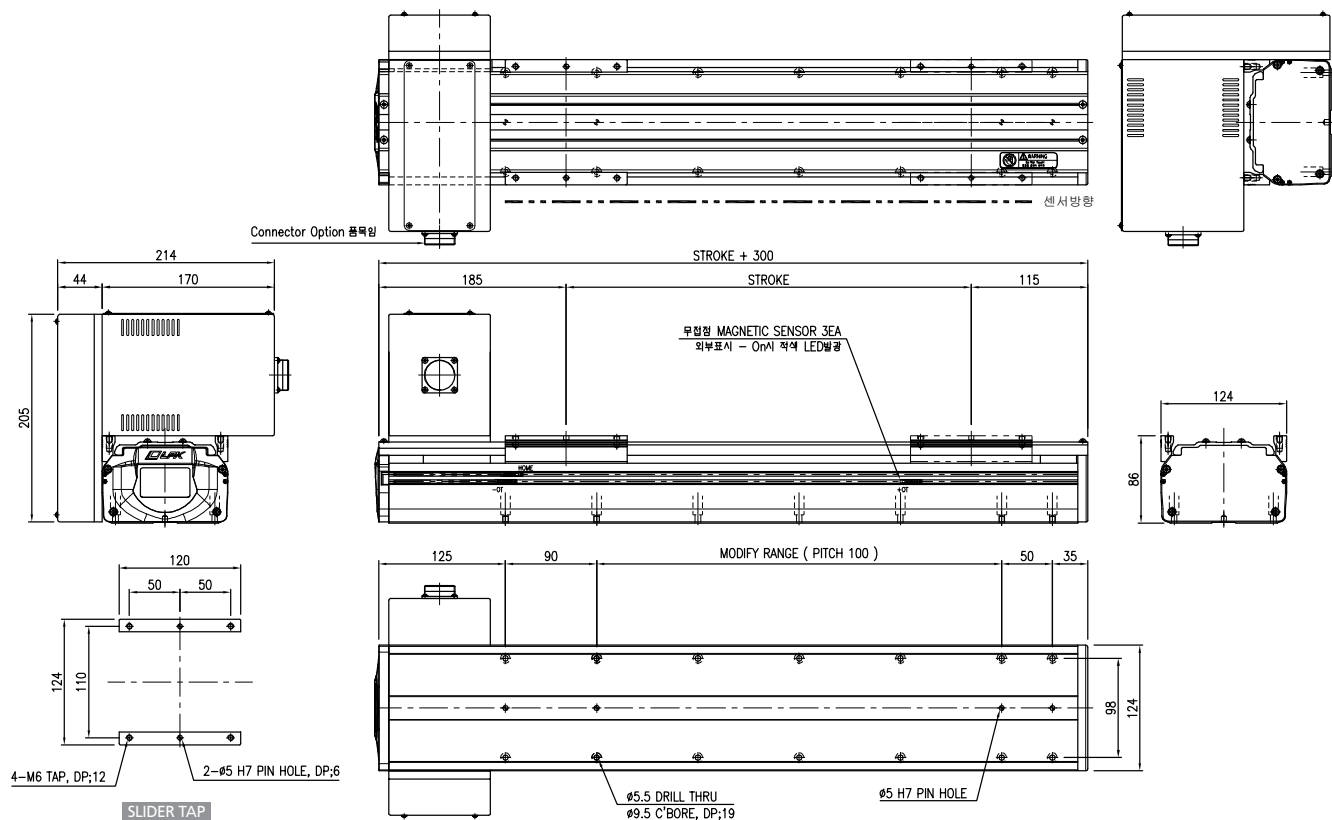
## BP120-FLB / FRB(대칭)



## BP120-DLT / DRT(대칭)

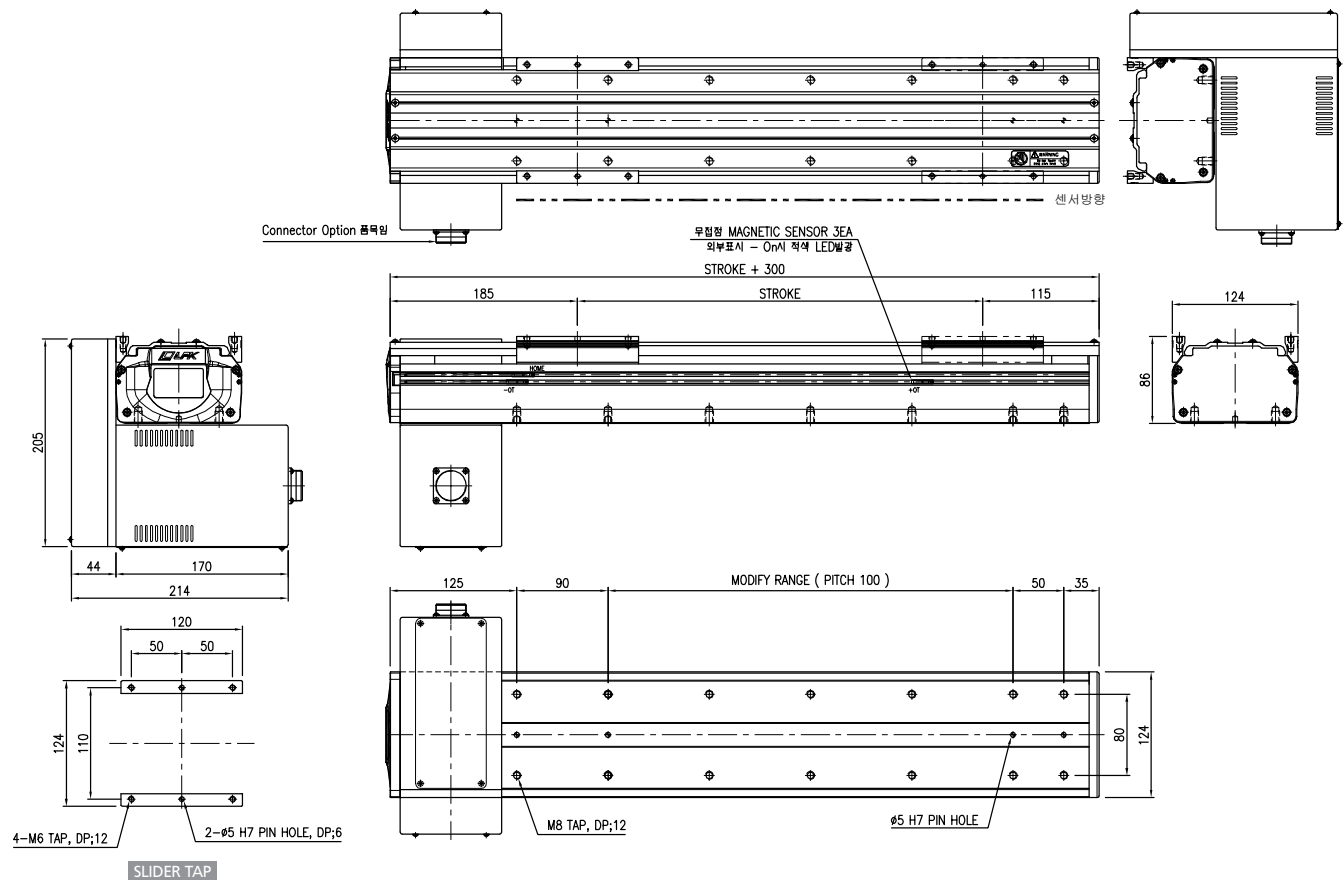


## BP120-DLB / DRB(대칭)

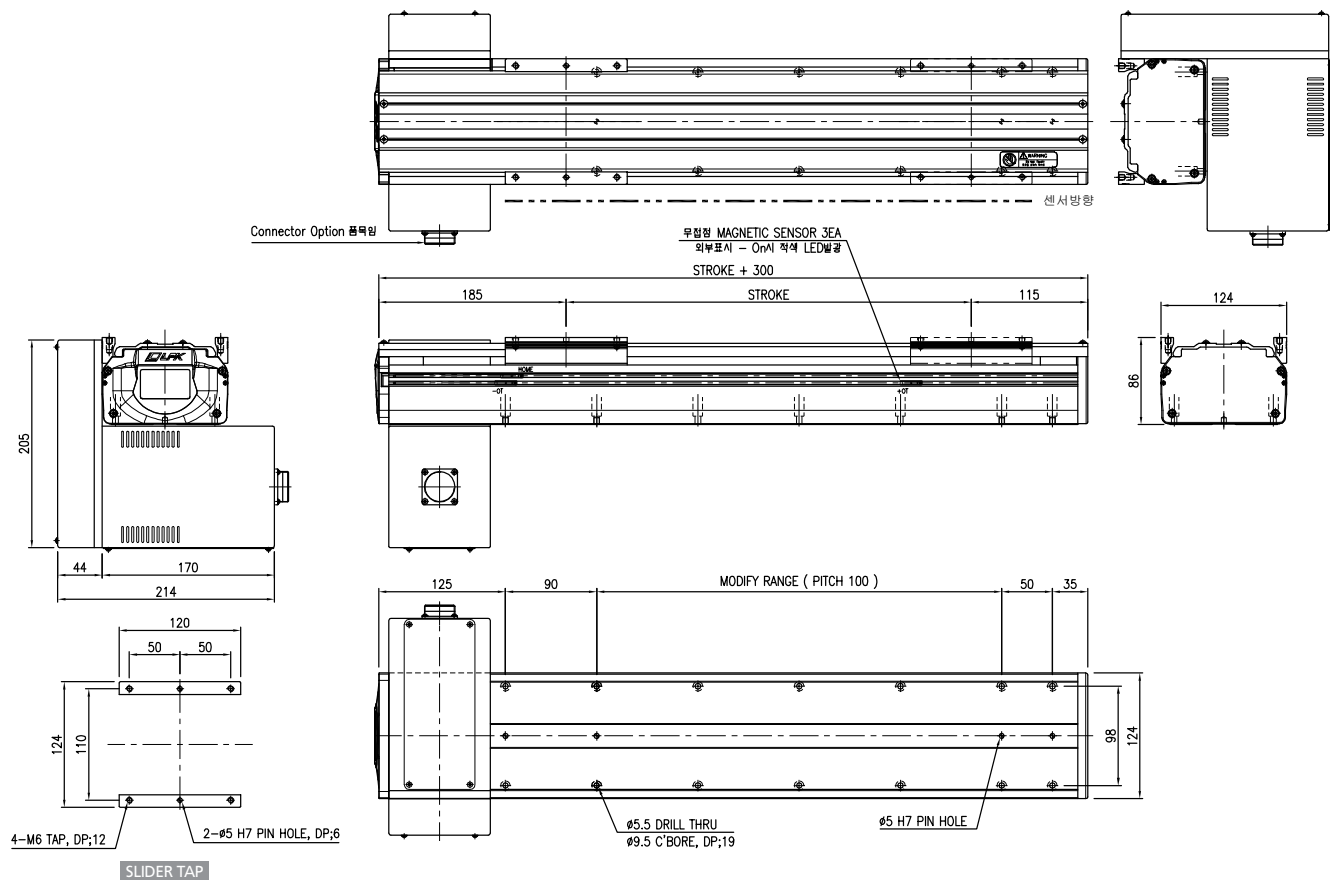


# BP120 Series Timing Belt ROBO System

## BP120-ULT / URT(대칭)



## BP120-ULB / URB(대칭)



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 400W                                                     | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.1 mm                                                  |      |
| • Drive System                                 | Timing Belt                                              |      |
| • Pulley Reduction Ratio (Standard)            | 1200rpm (1/2.5)                                          |      |
| • Stroke (mm)                                  | 100 ~ 2500                                               |      |
| • Drive Pulley & P.C.D                         | S5M-21NT , Ø33.42                                        |      |
| • Drive Belt                                   | S5M, 30W                                                 |      |
| • LM Guide Bearing                             | Two Way 20W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 8.41E + 05, I <sub>y</sub> = 1.01E + 07 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |      |      |     | 750W |      |      |     |
|------------------------------|------|------|------|-----|------|------|------|-----|
| Reduction Ratio(Reducer)     | 2.5  | 3    | 5    | 10  | 2.5  | 3    | 5    | 10  |
| Max Speed (mm/sec)           | 2100 | 1750 | 1050 | 525 | 2100 | 1750 | 1050 | 525 |
| Max Payload(kg) (Horizontal) | 8    | 12   | 45   | 100 | 35   | 50   | 80   | 120 |

Stroke 2500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec

Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

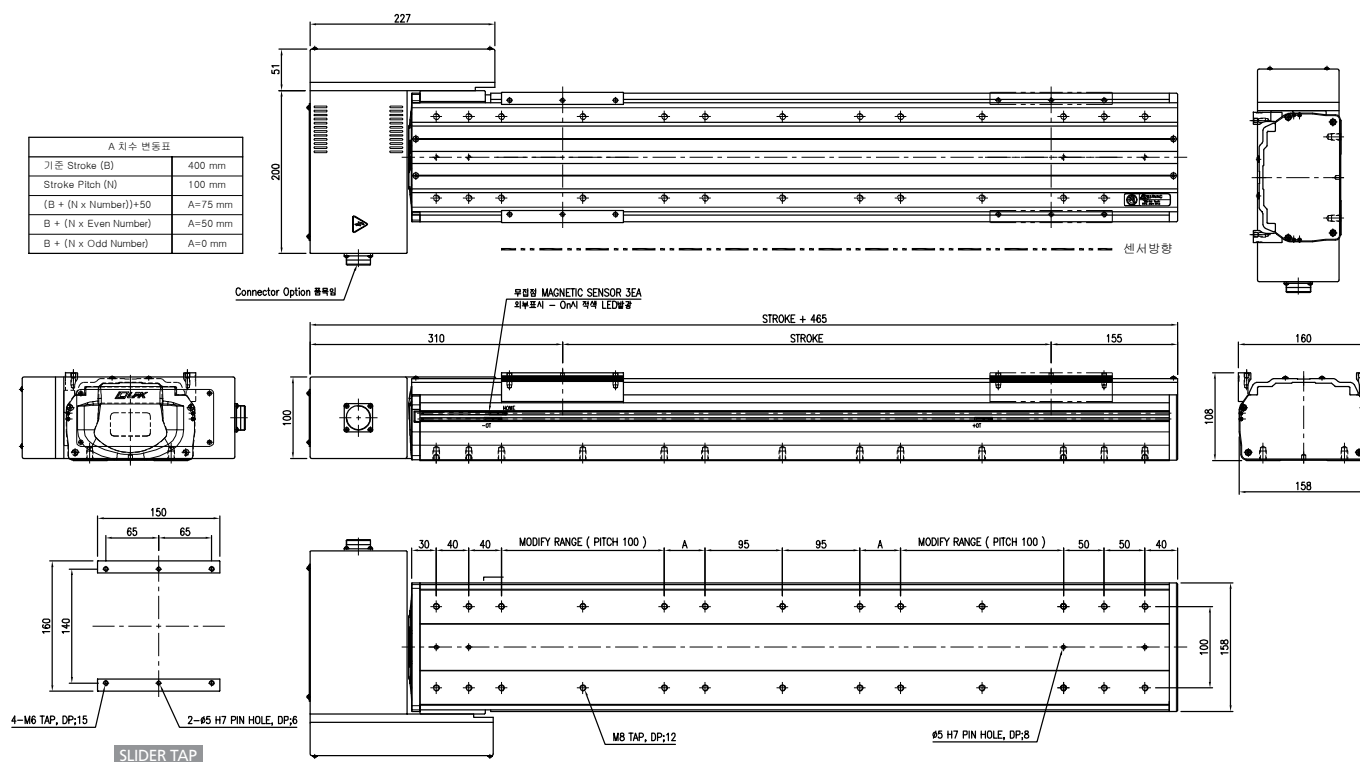
## Robot Weight

| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 400W | 17.9 | 19.4 | 20.9 | 22.4 | 23.9 | 25.4 | 26.9 | 28.4 | 29.9 | 31.4 | 32.9 | 34.4 | 35.9 | 37.4 | 38.9 | 40.4 | 41.9 | 43.4 | 44.9 | 46.4 | 47.9 | 49.4 | 50.9 | 52.4 | 53.9 |
|             | 750W | 19.5 | 21   | 22.5 | 24   | 25.5 | 27   | 28.5 | 30   | 31.5 | 33   | 34.5 | 36   | 37.5 | 39   | 40.5 | 42   | 43.5 | 45   | 46.5 | 48   | 49.5 | 51   | 52.5 | 54   | 55.5 |

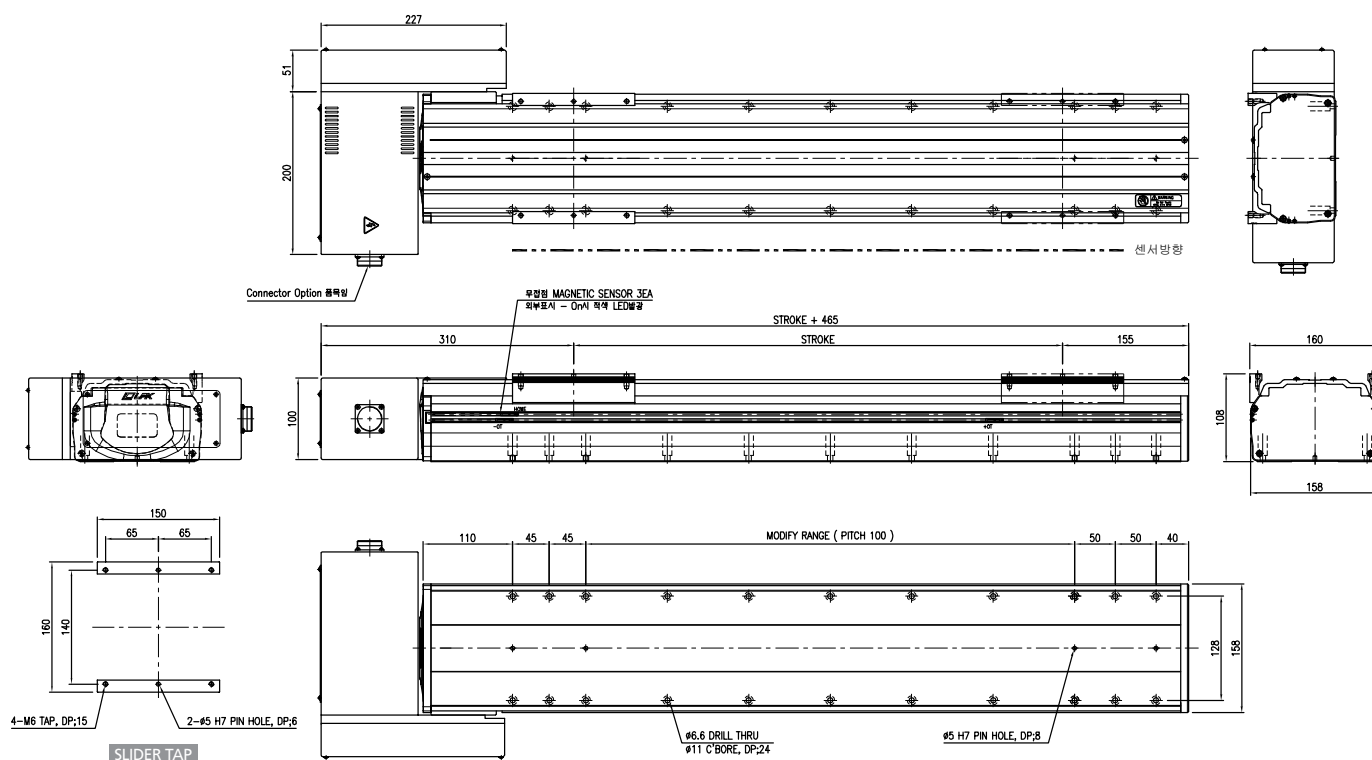
# BP160 Series Timing Belt ROBO System

## BP160-FLT / FRT(대칭)

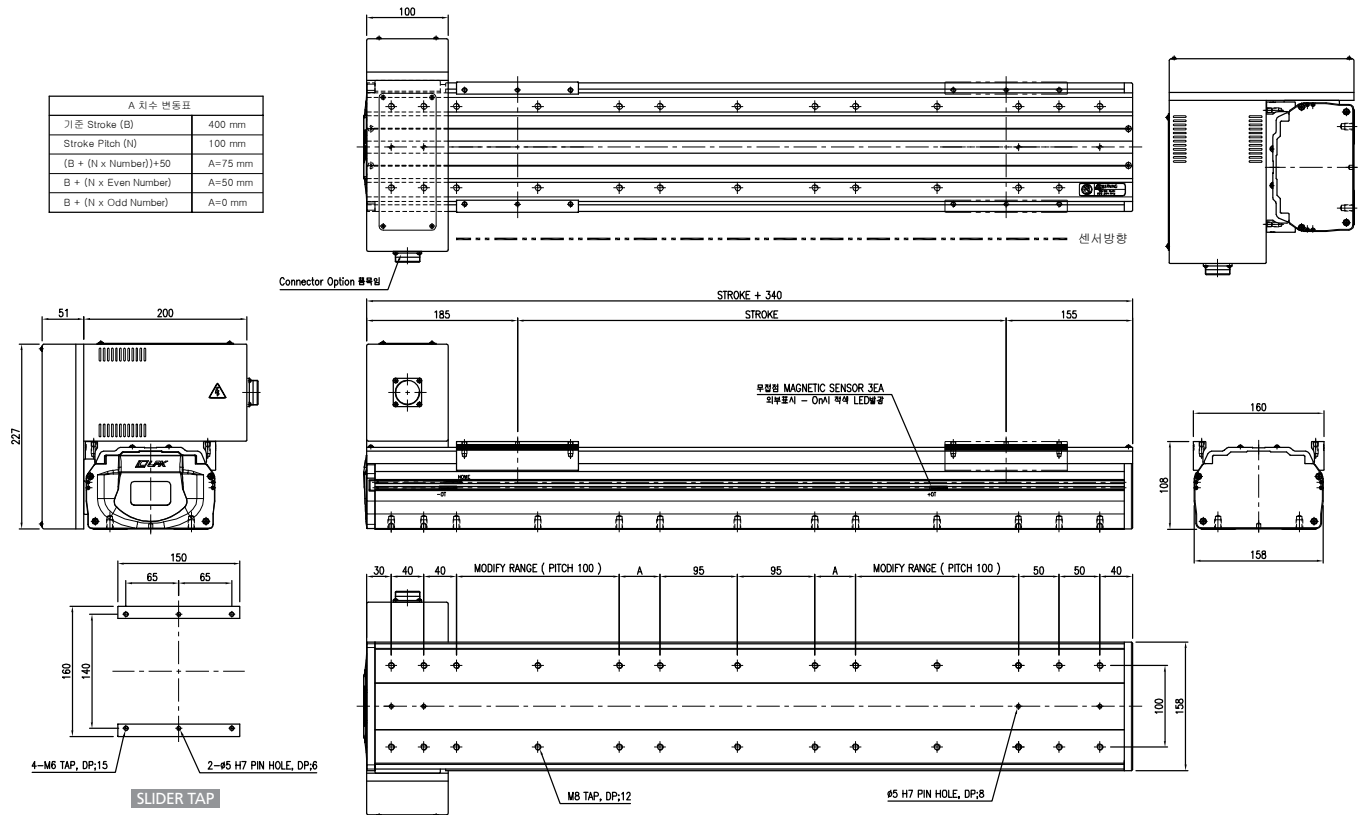
|                                          |         |
|------------------------------------------|---------|
| 기준 Stroke (B)                            | 400 mm  |
| Stroke Pitch (N)                         | 100 mm  |
| $(B + (N \times \text{Number})) \div 50$ | A=75 mm |
| $B + (N \times \text{Even Number})$      | A=50 mm |
| $B + (N \times \text{Odd Number})$       | A=0 mm  |



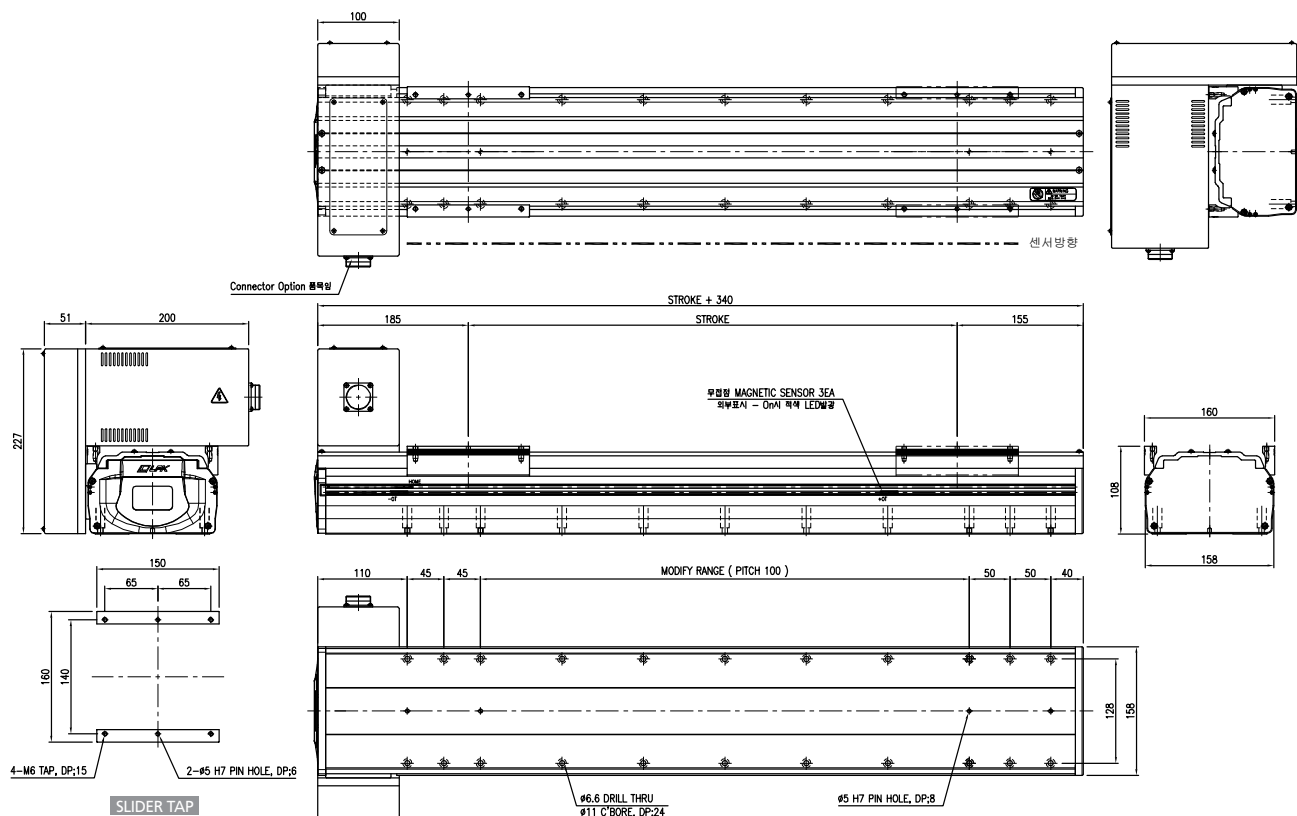
BP160-FLB / FRB(대칭)



## BP160-DLT / DRT(대칭)



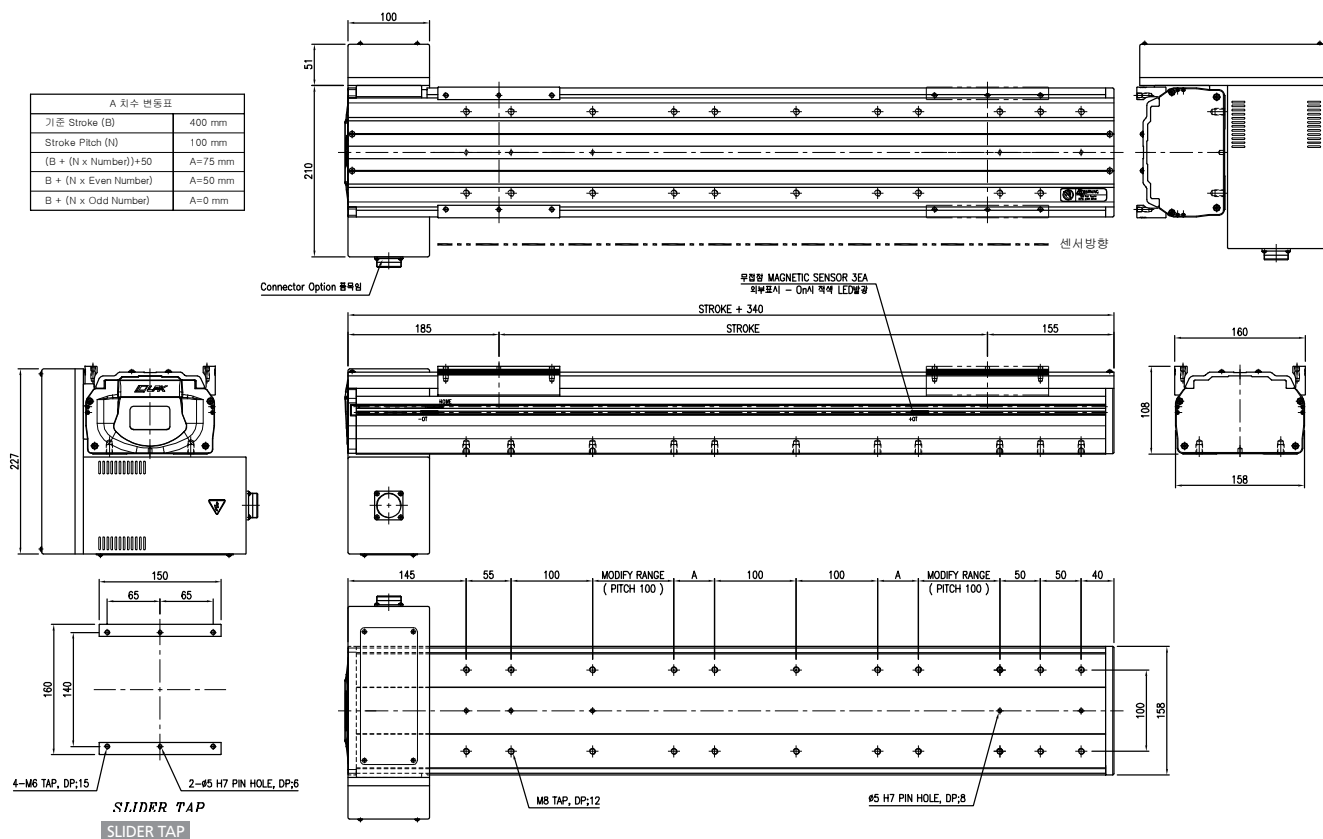
## BP160-DLB / DRB(대칭)



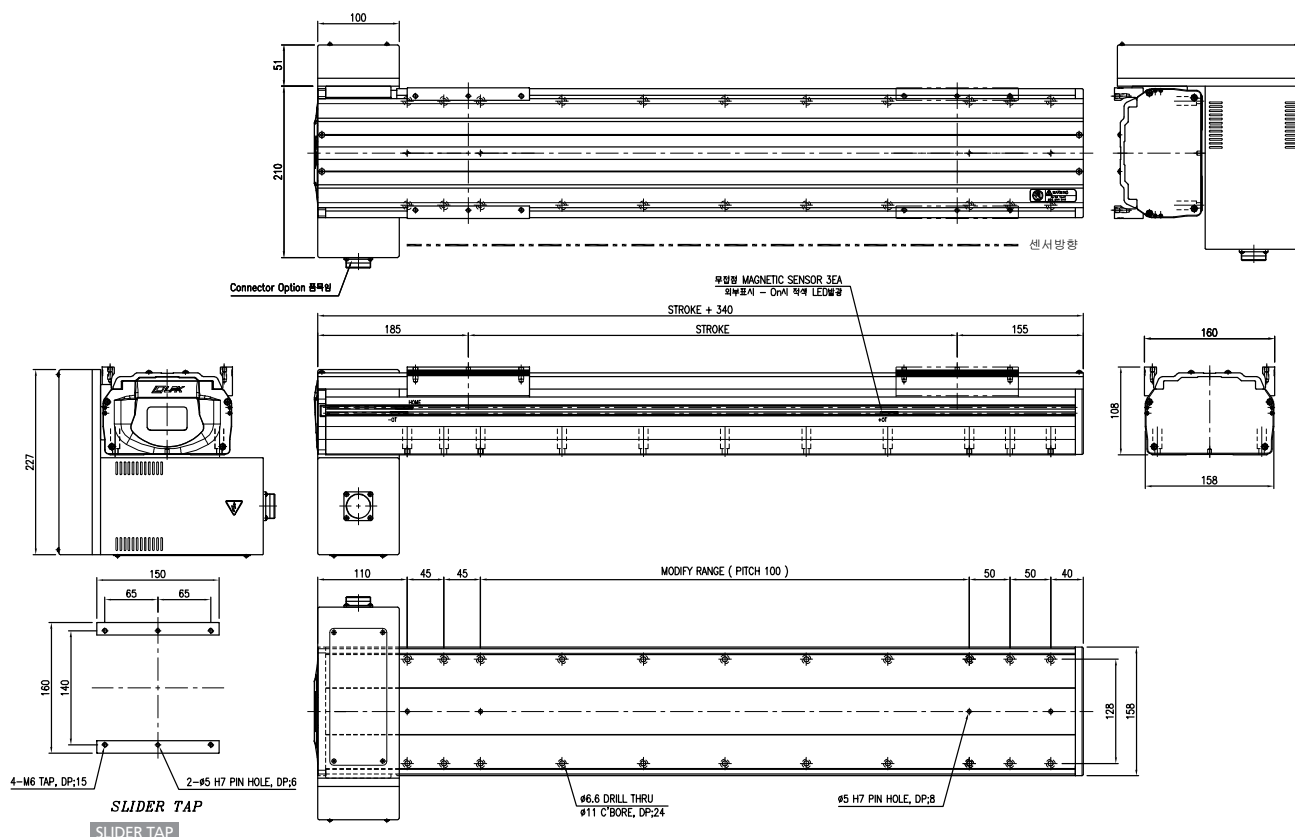
# BP160 Series Timing Belt ROBO System

## BP160-ULT / URT(대칭)

|                                       |         |
|---------------------------------------|---------|
| 기준 Stroke (B)                         | 400 mm  |
| Stroke Pitch (N)                      | 100 mm  |
| $(B + (N \times \text{Number})) + 50$ | A=75 mm |
| $B + (N \times \text{Even Number})$   | A=50 mm |
| $B + (N \times \text{Odd Number})$    | A=0 mm  |



## BP160-ULB / URB(대칭)





## Specification

|                                                |                                  |      |
|------------------------------------------------|----------------------------------|------|
| • AC Servo Motor Output                        | 400W                             | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                         |      |
| • Repeatability                                | ±0.1 mm                          |      |
| • Drive System                                 | Timing Belt                      |      |
| • Pulley Reduction Ratio (Standard)            | 1000rpm (1/3)                    |      |
| • Stroke (mm)                                  | 100 ~ 2500                       |      |
| • Drive Pulley & P.C.D                         | S5M-27NT , Ø42.97                |      |
| • Drive Belt                                   | S5M, 50W                         |      |
| • LM Guide Bearing                             | Two Way 25W-2BLOCK               |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 1.85E + 06, Iy = 2.61E + 07 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |      |     | 750W |      |     |
|------------------------------|------|------|-----|------|------|-----|
| Reduction Ratio(Reducer)     | 3    | 5    | 10  | 3    | 5    | 10  |
| Max Speed (mm/sec)           | 2250 | 1350 | 675 | 2250 | 1350 | 675 |
| Max Payload(kg) (Horizontal) | 5    | 25   | 100 | 20   | 90   | 150 |

주1) Stroke 2500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

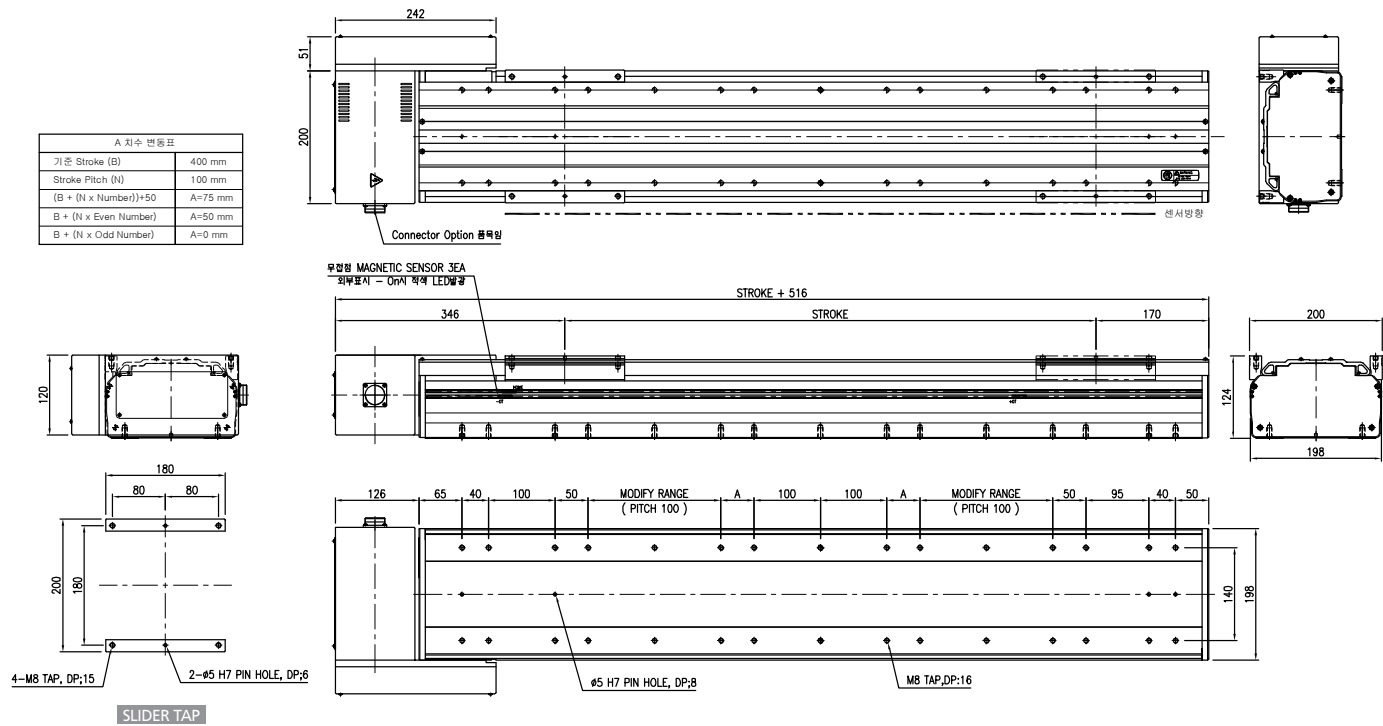
주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

## Robot Weight

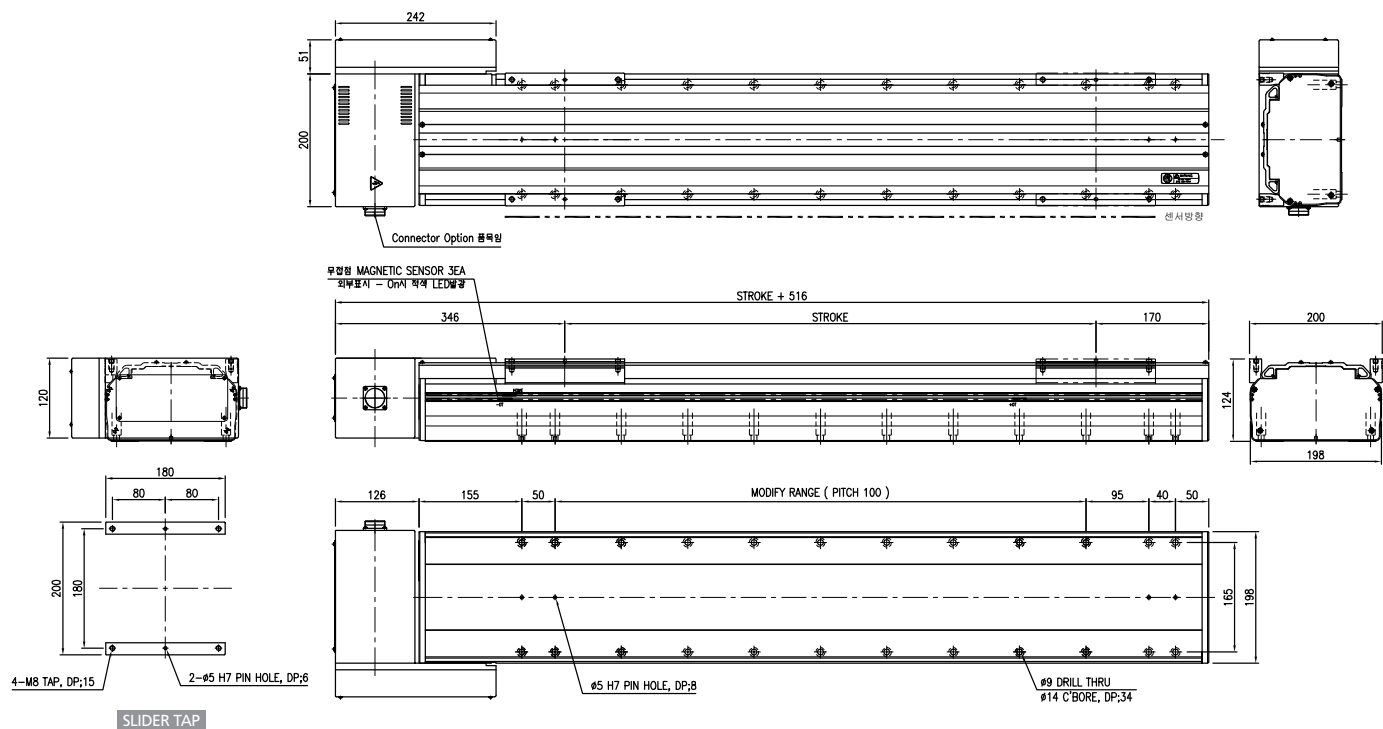
| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 400W | 24.1 | 26.4 | 28.7 | 31   | 33.3 | 35.6 | 37.9 | 40.2 | 42.5 | 44.8 | 47.1 | 49.4 | 51.7 | 54   | 56.3 | 58.6 | 60.9 | 63.2 | 65.5 | 67.8 | 70.1 | 72.4 | 74.7 | 77   | 79.3 |
|             | 750W | 24.7 | 27   | 29.3 | 31.6 | 33.9 | 36.2 | 38.5 | 40.8 | 43.1 | 45.4 | 47.7 | 50   | 52.3 | 54.6 | 56.9 | 59.2 | 61.5 | 63.8 | 66.1 | 68.4 | 70.7 | 73   | 75.3 | 77.6 | 79.9 |

# BP200 Series Timing Belt ROBO System

## BP200-FLT / FRT(대칭)



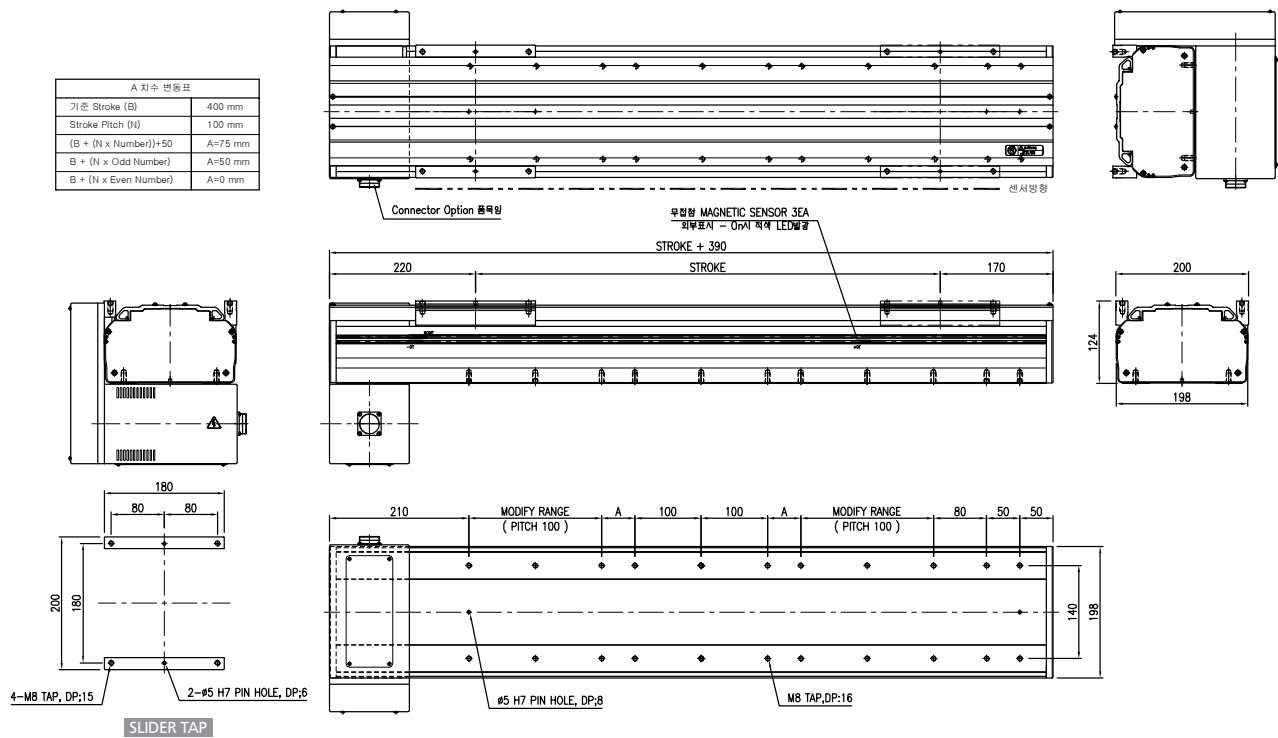
## BP200-FLB / FRB(대칭)



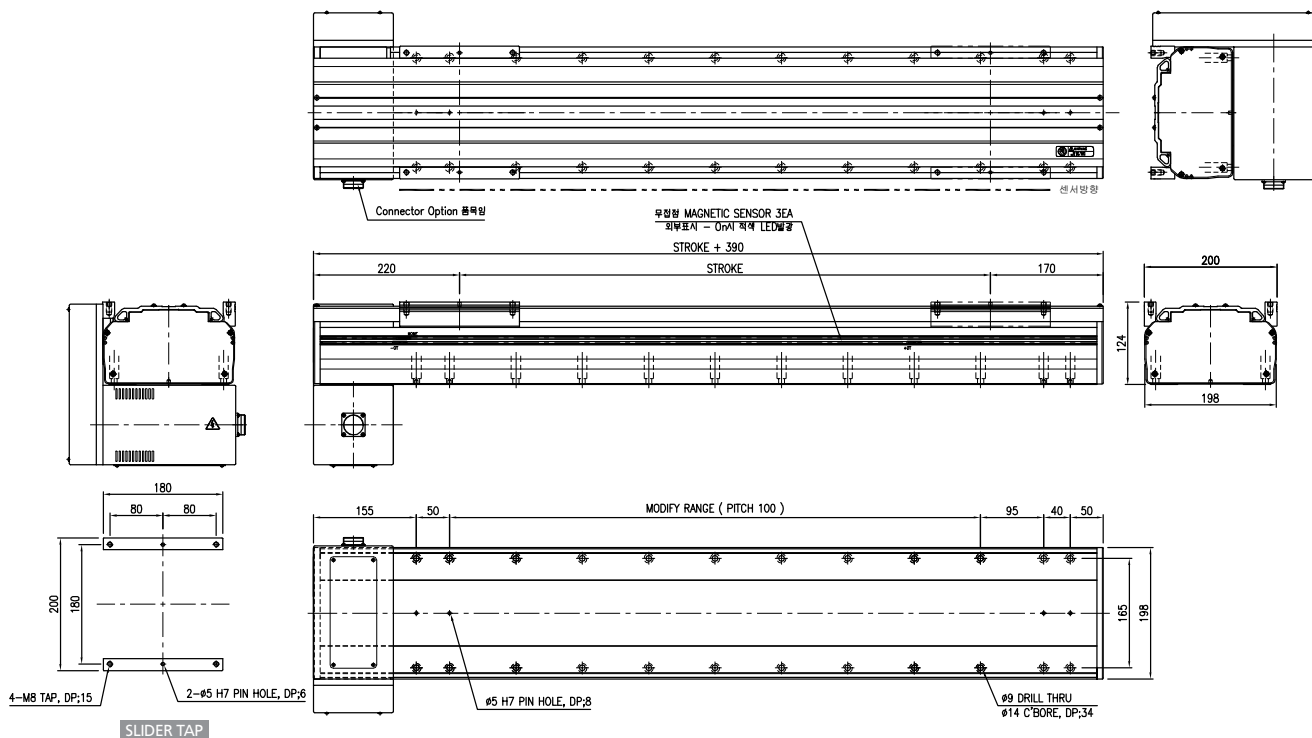


# BP200 Series Timing Belt ROBO System

## BP200-ULT / URT(대칭)



## BP200-ULB / URB(대칭)





## Cartesian Clean ROBO System **LCP Series**

LCP068 Series

LCP070 Series

LCP090 Series

LCP120 Series

LCP160 Series

LCP200 Series

LCP 090 - S T - 500L - 40 B R5 - S 1530 - B R1 E1 C

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫ ⑬ ⑭

## ① 형식 Type

LCP - LPK Co., Ltd. Cartesian Clean Robot, Ball Screw Type

## ② Model

068 - Robot Body Width 68 mm, Height 94  
070 - Robot Body Width 70 mm, Height 82  
090 - Robot Body Width 90 mm, Height 90  
120 - Robot Body Width 124 mm, Height 94  
160 - Robot Body Width 158 mm, Height 115  
200 - Robot Body Width 198 mm, Height 130

## ③ Motor Shape

S - Straight Coupling Type  
L - Parallel Left Pulley Type  
R - Parallel Right Pulley Type  
U - Parallel Under Pulley Type

## ④ Base Mount Hole

T - Tap Type

## ⑤ Stroke

The Distance Between - Limit and + Limit (mm)

## ⑥ Motor Capacity

05 - Motor Rated Output 50W  
10 - Motor Rated Output 100W  
20 - Motor Rated Output 200W  
40 - Motor Rated Output 400W  
70 - Motor Rated Output 750W  
1K - Motor Rated Output 1KW (Option)

## ⑦ Motor Brake

None - Without Brake  
B - With Brake

## ⑧ Reduction Gear Ratio Option

None - Without Reduction Gear (Standard)  
R3~10 - With Reduction Gear Ratio

## ⑨ Speed (Motor 3000 rpm)

L - Ball Screw Pitch 5 mm ( 250 mm/sec )  
N - Ball Screw Pitch 10 mm ( 500 mm/sec )  
H - Ball Screw Pitch 20 mm ( 1000 mm/sec )  
S - User Special Ball Screw (Option)

## ⑩ Speed Special Option

1530 - Ball Screw Diameter(15) & Lead(30) (User Option)

## ⑪ Robot Color Option

None - Soft White Anodizing (Standard)  
B - Soft Black Anodizing

## ⑫ Surface Treatment Option

None - Without Surface Treatment (Standard)  
R1 - LM Rail Raydent  
S1 - Ball Screw Shaft Raydent  
RS1 - LM Rail + Ball Screw Shaft Raydent  
RS2 - LM Rail and Block + Ball Screw Shaft and Nut Raydent

## ⑬ Sensor Option

None - DC-24V Proximity LED Sensor (Standard)  
E1 - External Photo Sensor Only  
E2 - External Photo Sensor + Connector  
E3 - External Photo Sensor + Connector + Cable

## ⑭ Cableveyor Option

None - Without Cableveyor (Standard)  
C - With Cableveyor

## Specification

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 100W                                                     |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |
| • Repeatability                                | ±0.02 mm                                                 |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm            |
| • Stroke (mm)                                  | 10 ~ 1300                                                |
| • LM Guide Bearing                             | One Way 15W-1BLOCK                                       |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 4.68E + 05, I <sub>y</sub> = 9.06E + 05 |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100 | 200 | 300 | 400  | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|-----|-----|-----|------|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm |     |     |     | 1000 |     |     | 895 | 710 | 580 | 480  | 405  | 350  | 300  |
|                       |     | Lead 10mm |     |     |     | 500  |     |     | 440 | 350 | 285 | 235  | 200  | 170  | 145  |
|                       |     | Lead 05mm |     |     |     | 250  |     |     | 220 | 175 | 140 | 115  | 100  | 85   | 75   |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망.

주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            |  |  |
|-----------------------|-----|-----------|-----------------|--|--|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 3  |  |  |
|                       |     |           | Vertical : 1.5  |  |  |
|                       |     | Lead 10mm | Horizontal : 12 |  |  |
|                       |     |           | Vertical : 2.5  |  |  |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec,

Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

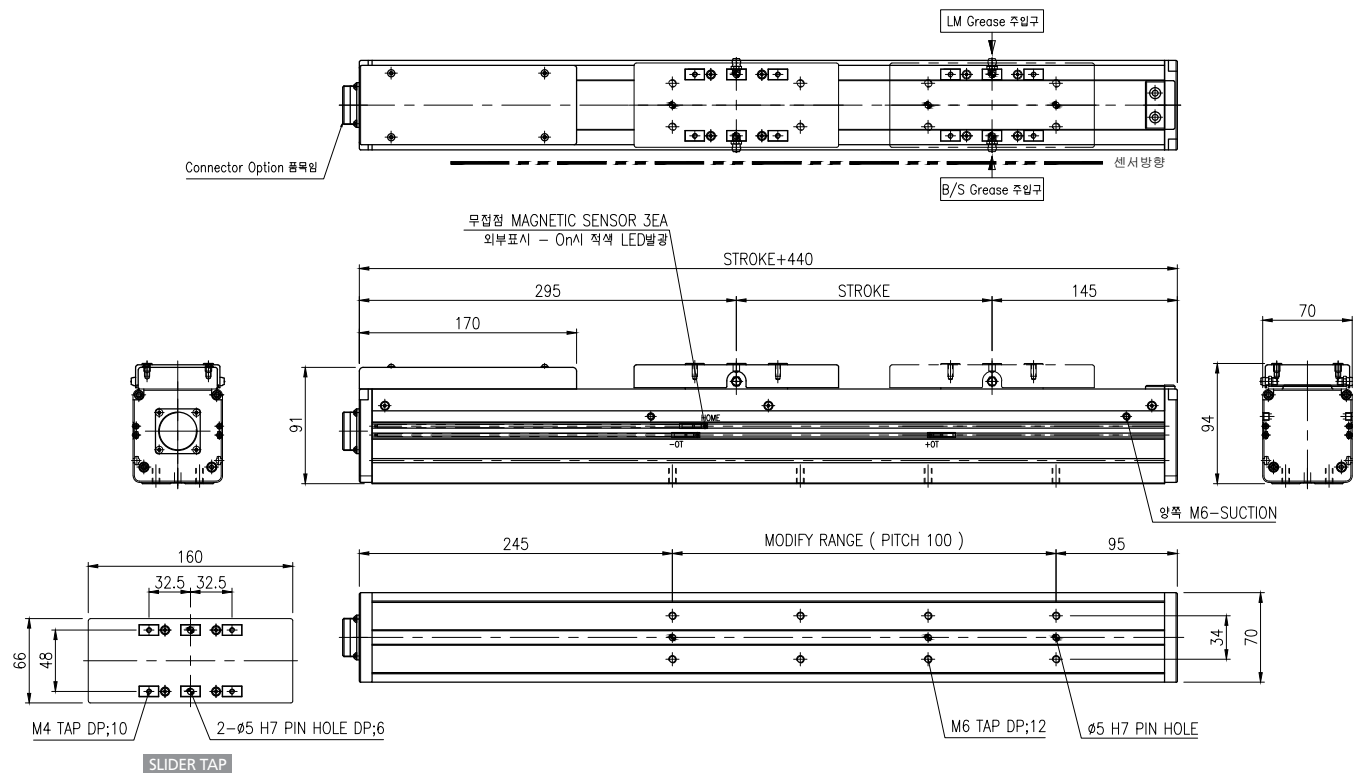
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## Robot Weight

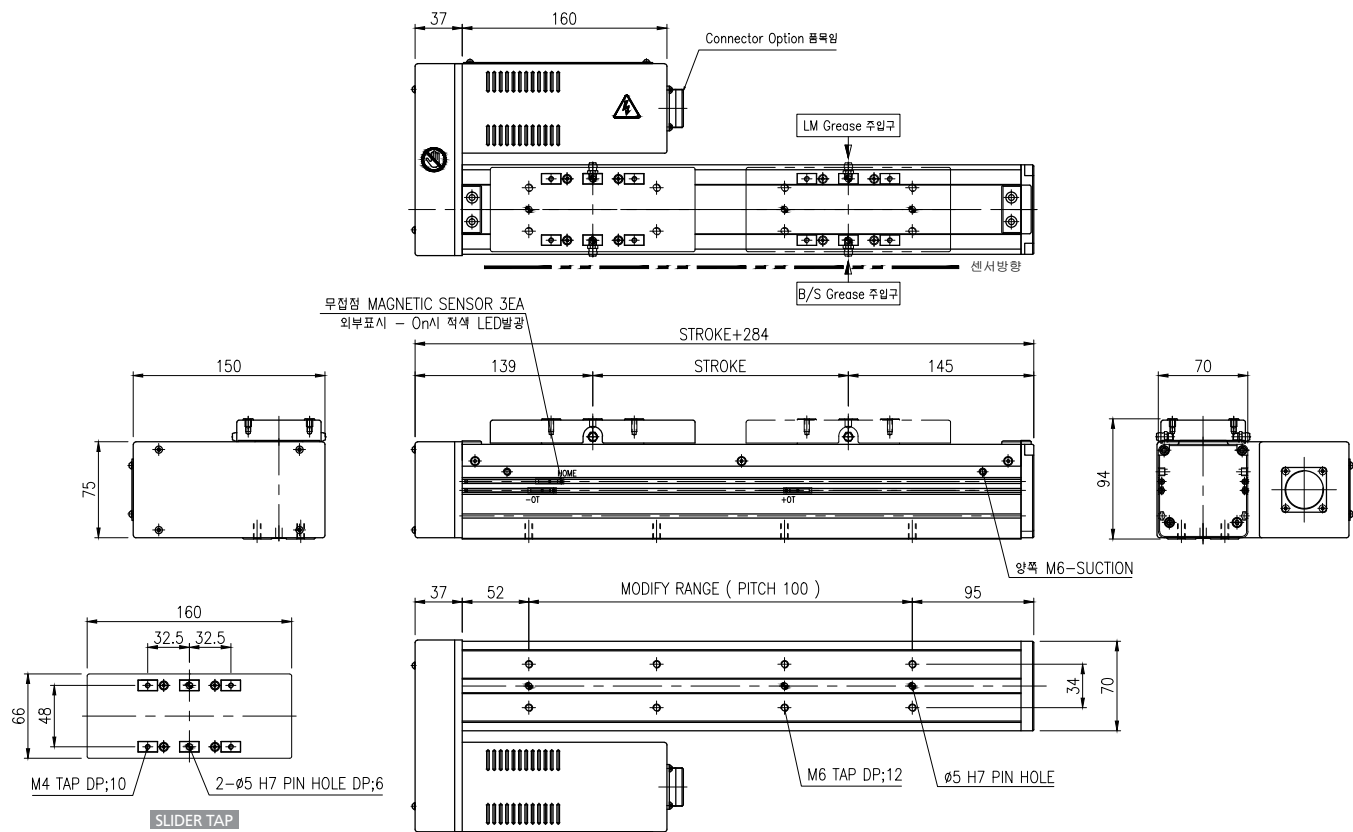
| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800  | 900  | 1000 | 1100 | 1200 | 1300 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| Weight (Kg) | Straight |  | 5.6 | 6.3 | 7   | 7.7 | 8.4 | 9.1 | 9.8 | 10.5 | 11.2 | 11.9 | 12.6 | 13.3 | 14   |
|             | Parallel |  | 5.6 | 6.3 | 7   | 7.7 | 8.4 | 9.1 | 9.8 | 10.5 | 11.2 | 11.9 | 12.6 | 13.3 | 14   |

# LCP068 Series Cartesign Clean ROBO System

## LCP068-ST-10

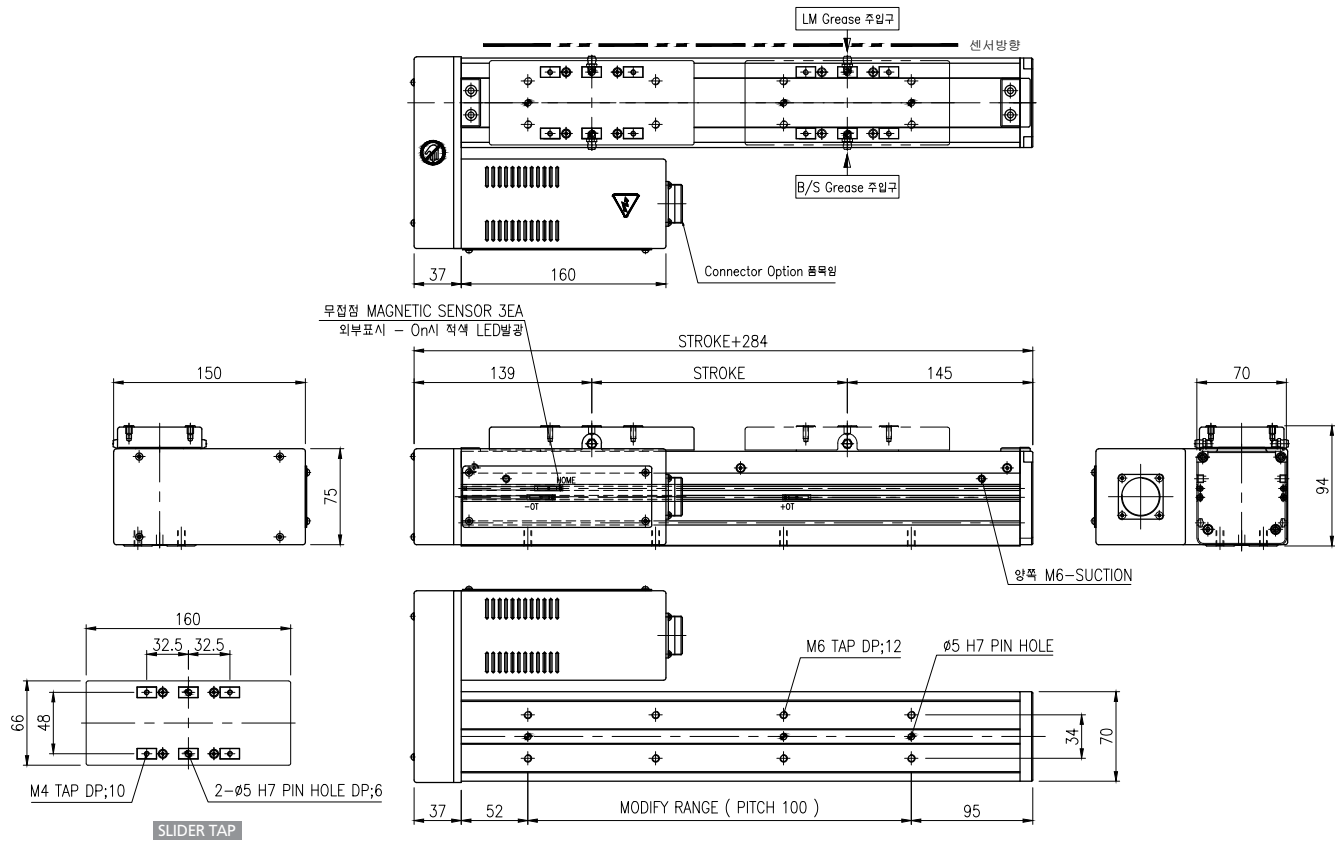


## LCP068-LT-10

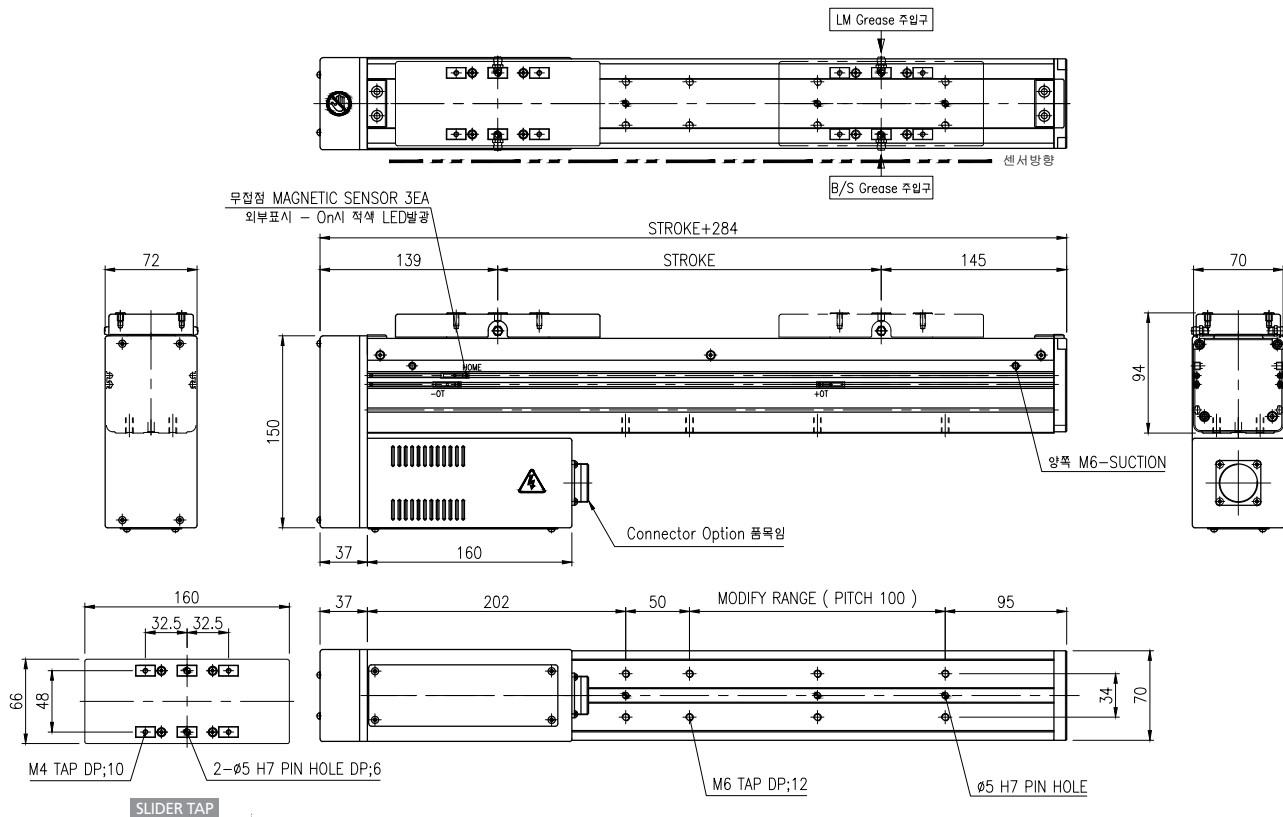




## LCP068-RT-10



## LCP068-UT-10



## Specification

|                                                |                                               |
|------------------------------------------------|-----------------------------------------------|
| • AC Servo Motor Output                        | 100W                                          |
| • AC Servo Motor RPM                           | 3000 RPM                                      |
| • Repeatability                                | ±0.02 mm                                      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm |
| • Stroke (mm)                                  | 10 ~ 1200                                     |
| • LM Guide Bearing                             | One Way 24-2BLOCK                             |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing              |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 2.60E + 05, Iy = 6.97E + 05              |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 970 | 765 | 620 | 515  | 430  | 365  | 315  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 475 | 375 | 305 | 250  | 210  | 180  | 155  |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 235 | 185 | 150 | 125  | 105  | 90   | 75   |

주1) Stroke 1300mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            |  |  |
|-----------------------|-----|-----------|-----------------|--|--|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 3  |  |  |
|                       |     |           | Vertical : 3    |  |  |
|                       |     | Lead 10mm | Horizontal : 13 |  |  |
|                       |     |           | Vertical : 8    |  |  |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec,  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

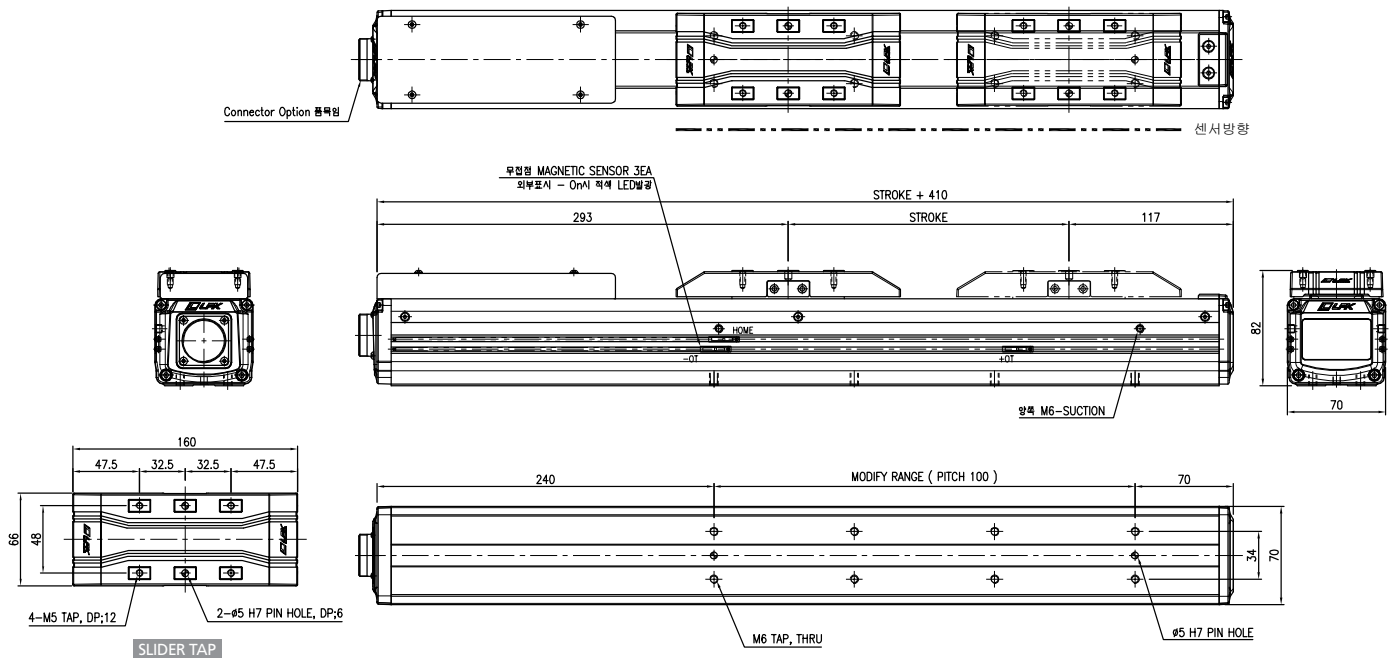
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## Robot Weight

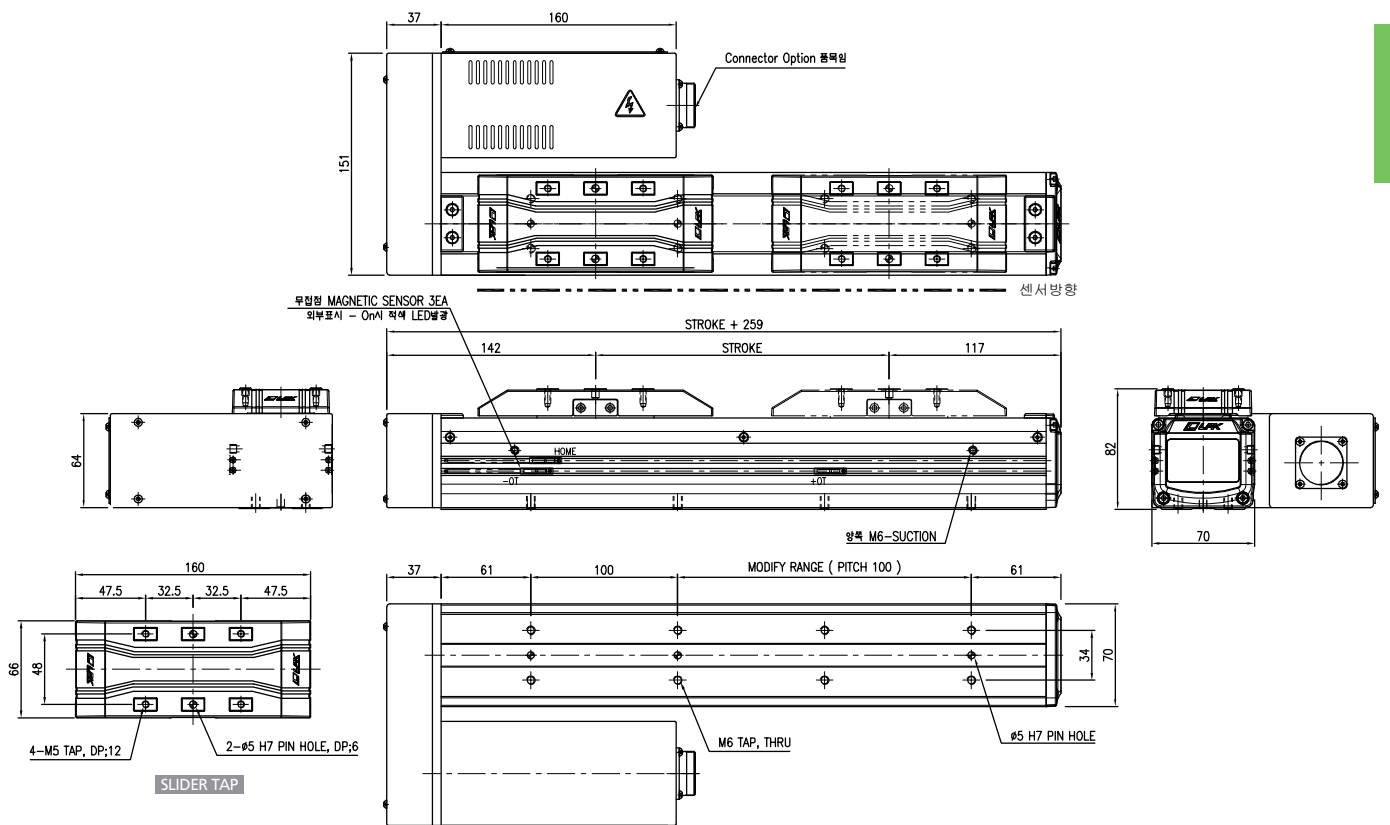
| Stroke (mm) |          |  | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 |
|-------------|----------|--|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|
| Weight (Kg) | Straight |  | 4.4 | 4.9 | 5.5 | 6   | 6.6 | 7.2 | 7.8 | 8.4 | 8.9 | 9.4  | 10   | 10.6 | 11.2 |
|             | Parallel |  | 4.5 | 5.1 | 5.6 | 6.2 | 6.8 | 7.3 | 7.9 | 8.5 | 9.1 | 9.7  | 10.2 | 10.8 | 11.4 |

The weight of the model equipped with a brake is 0.35 Kg heavier than this value.

## LCP070-ST

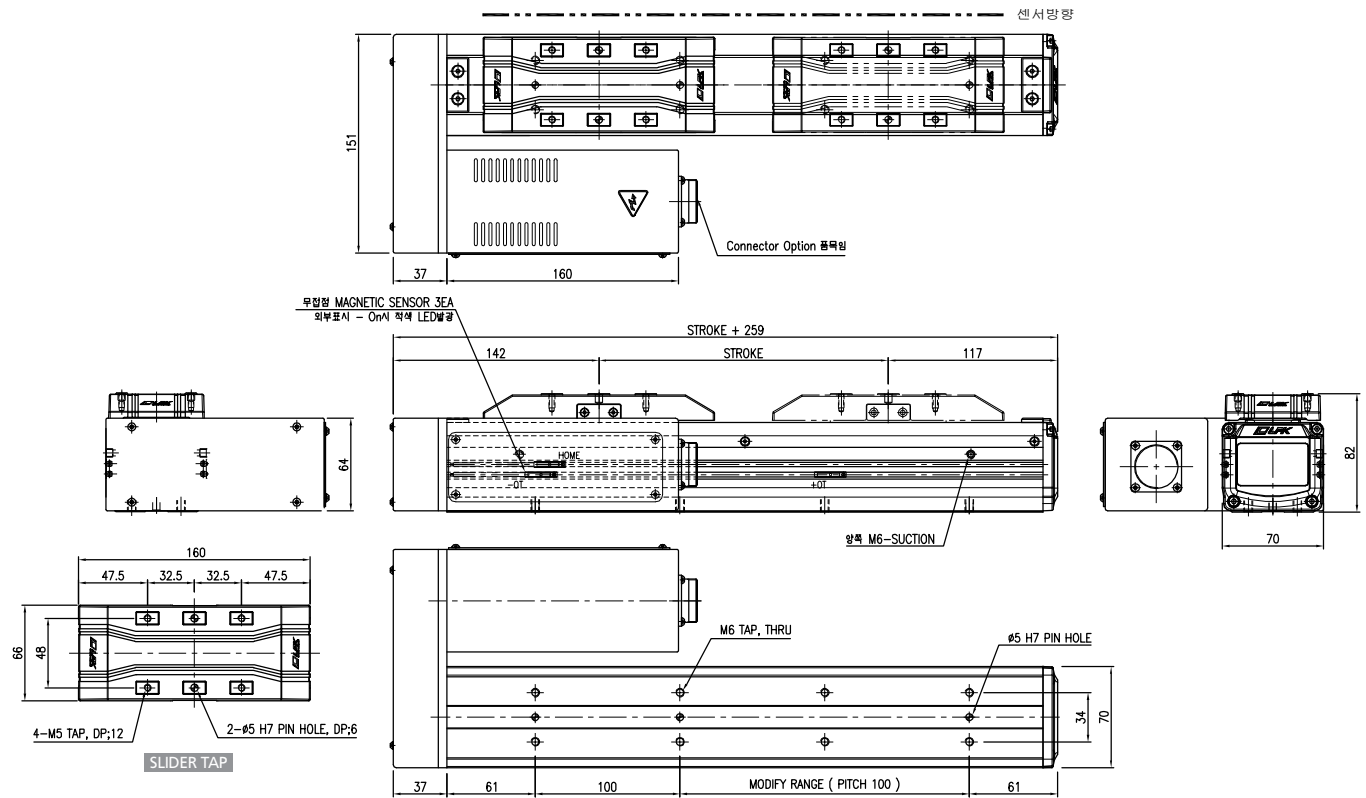


## LCP070-LT

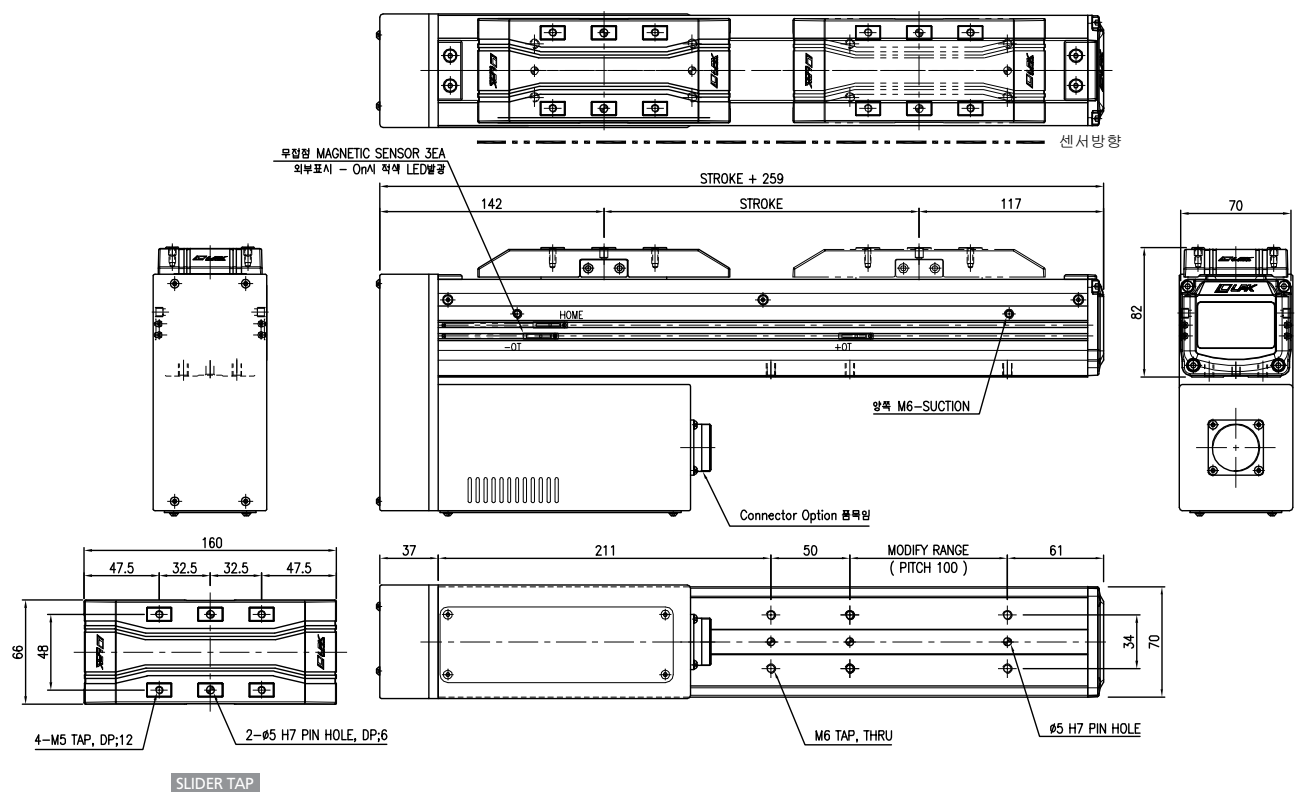


# LCP070 Series Cartesign Clean ROBO System

## LCP070-RT



## LCP070-UT



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 100W                                                     | 200W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm            |      |
| • Stroke (mm)                                  | 10 ~ 1200                                                |      |
| • LM Guide Bearing                             | One Way 42-2BLOCK                                        |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 4.13E + 05, I <sub>y</sub> = 1.60E + 06 |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 920 | 730 | 595 | 495  | 415  | 355  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 450 | 360 | 290 | 240  | 205  | 175  |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 225 | 180 | 145 | 120  | 100  | 85   |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망. 주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 100W            | 200W            |
|-----------------------|-----|-----------|-----------------|-----------------|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 2  | Horizontal : 28 |
|                       |     |           | Vertical : 2    | Vertical : 8    |
|                       |     | Lead 10mm | Horizontal : 12 | Horizontal : 30 |
|                       |     |           | Vertical : 8    | Vertical : 16   |

주1) Stroke : 300mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

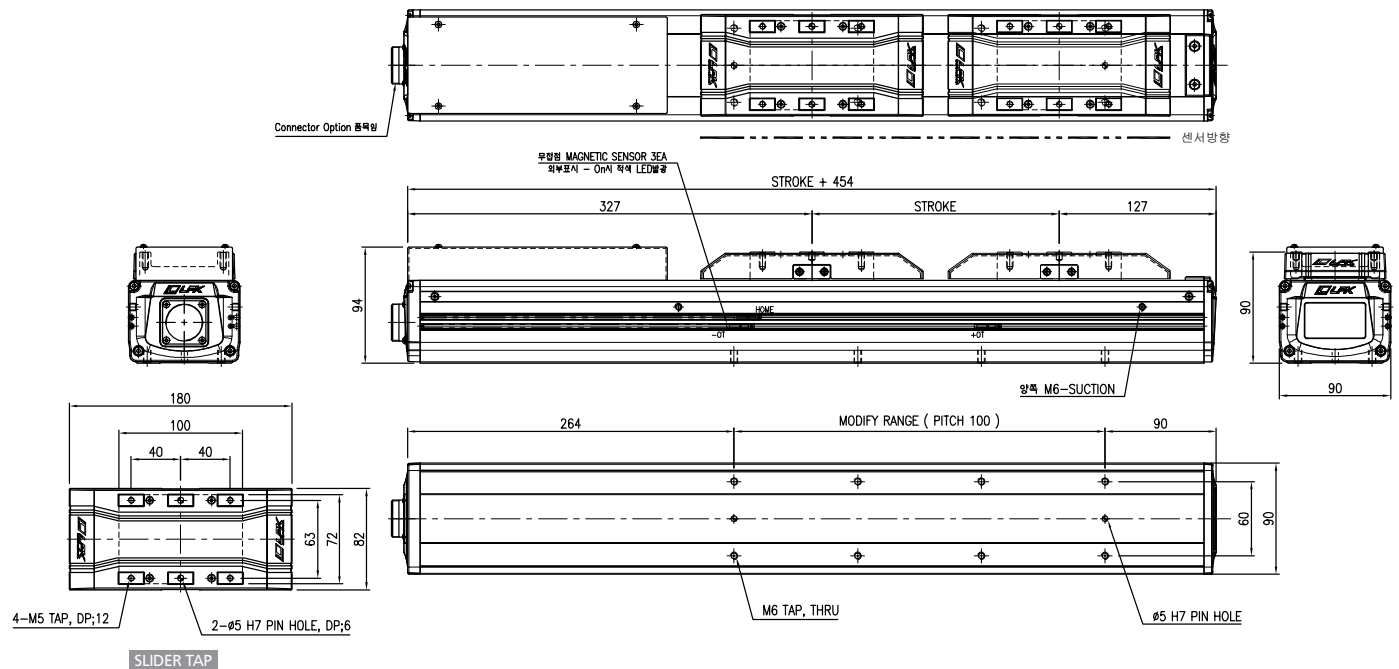
## Robot Weight

| Stroke (mm)    |          |      | 100 | 200 | 300 | 400 | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 |
|----------------|----------|------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 100W | 6.5 | 7.4 | 8.3 | 9.2 | 10.1 | 11   | 11.9 | 12.8 | 13.7 | 14.6 | 15.5 | 16.4 |
|                |          | 200W | 6.9 | 7.8 | 8.7 | 9.6 | 10.5 | 11.4 | 12.3 | 13.2 | 14.1 | 15   | 15.9 | 16.8 |
|                | Parallel | 100W | 6.5 | 7.2 | 7.9 | 8.6 | 9.3  | 10   | 10.7 | 11.4 | 12.1 | 12.8 | 13.5 | 14.2 |
|                |          | 200W | 6.8 | 7.5 | 8.2 | 8.9 | 9.6  | 10.3 | 11   | 11.7 | 12.4 | 13.1 | 13.8 | 14.5 |

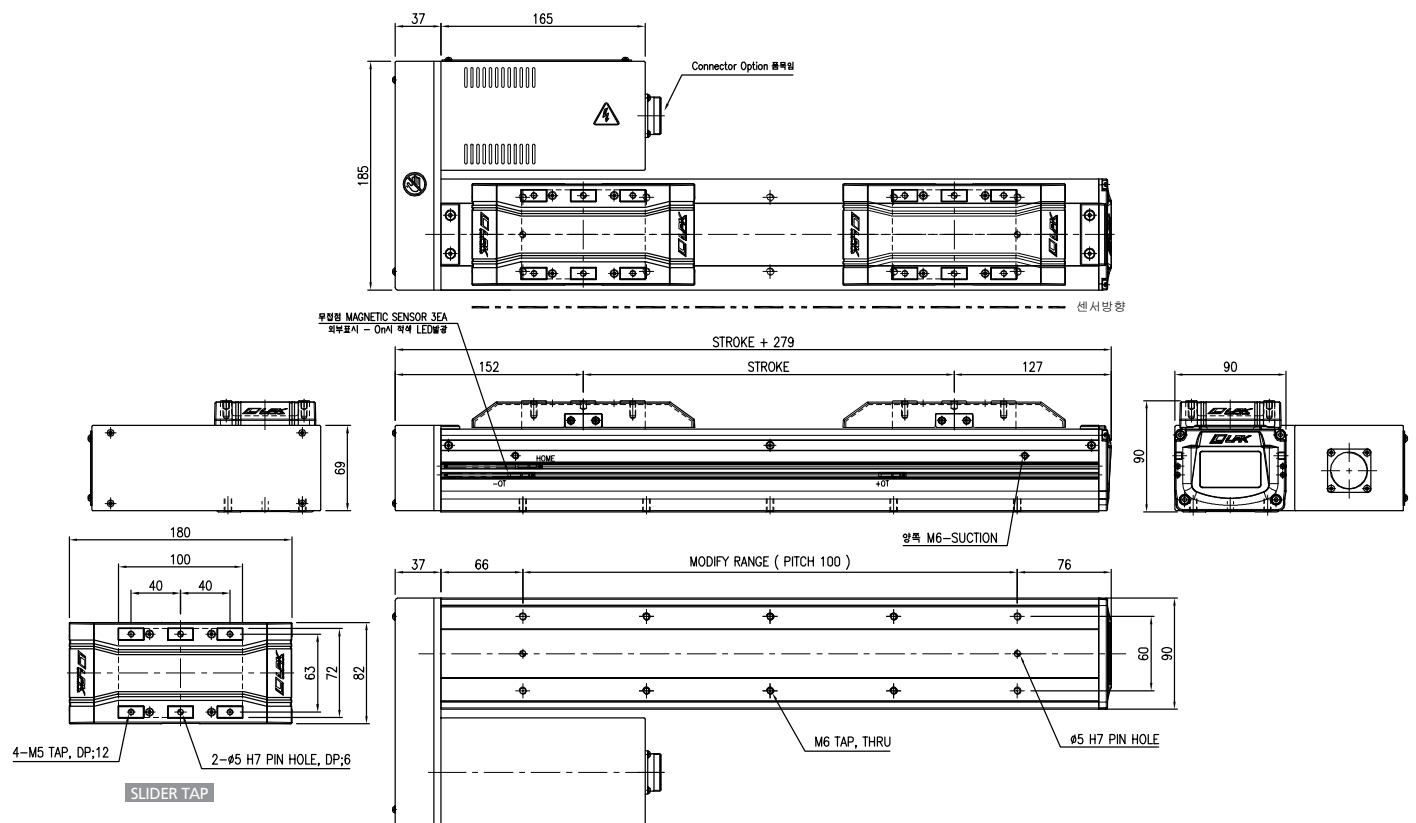
The weight of the model equipped with a brake is 0.35Kg(0.65Kg) heavier than this value.

# LCP090 Series Cartesign Clean ROBO System

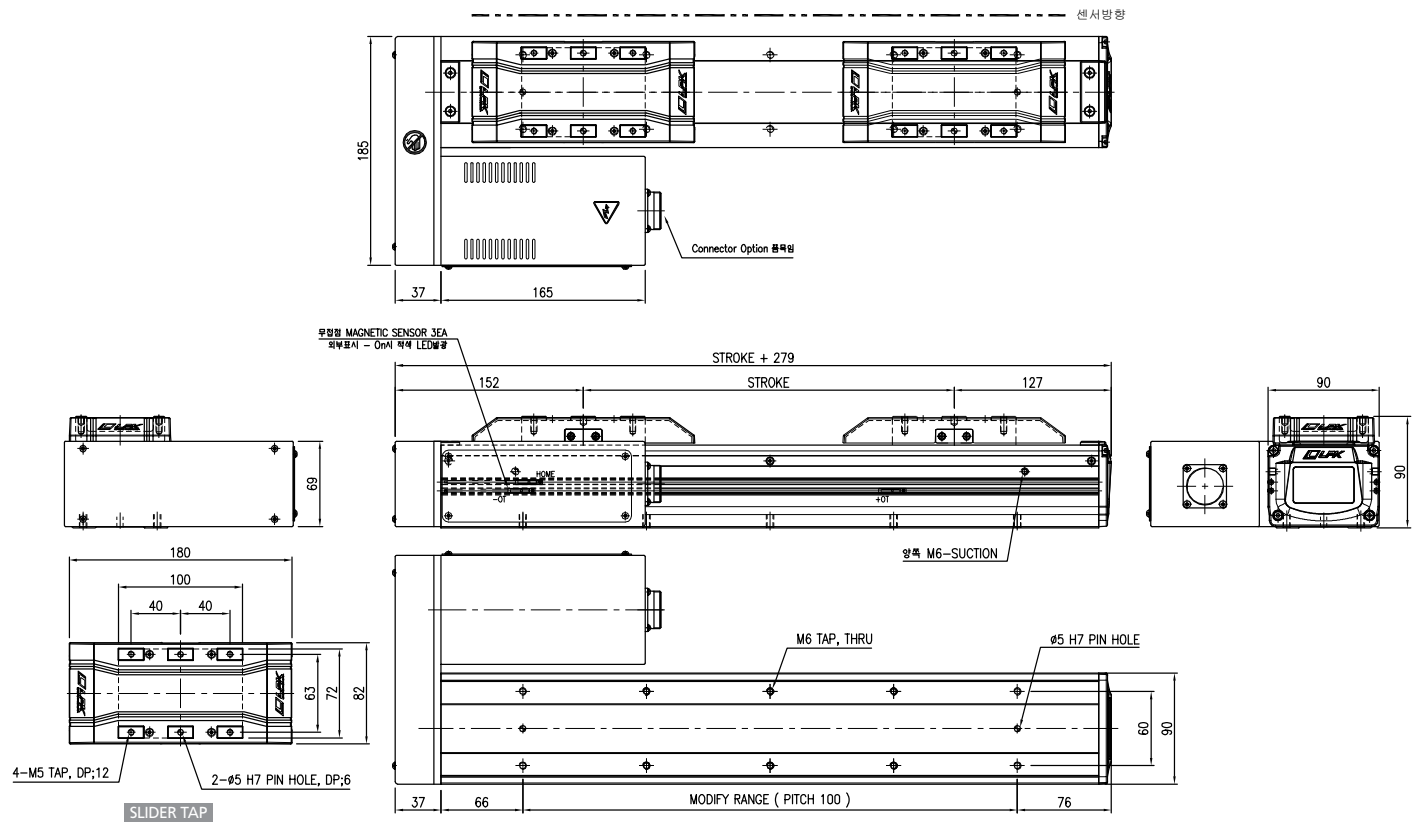
## LCP090-ST



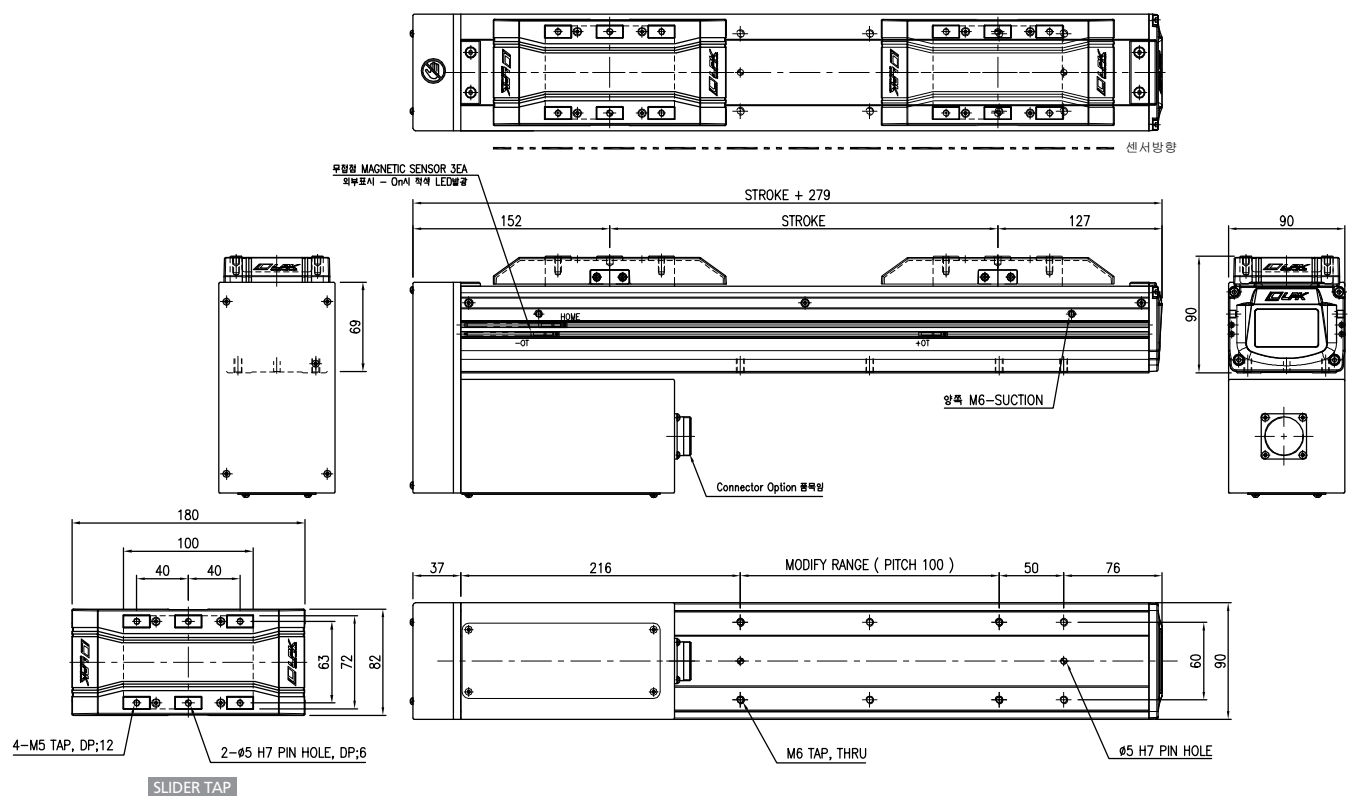
## LCP090-LT



## LCP090-RT



## LCP090-UT



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 200W                                                     | 400W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15 Lead 20mm, 10mm, 5mm            |      |
| • Stroke (mm)                                  | 10 ~ 1500                                                |      |
| • LM Guide Bearing                             | Two Way 15W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 5.89E + 05, I <sub>y</sub> = 4.60E + 06 |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100  | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm | 1000 |     |     |     |     |     | 885 | 705 | 575 | 480  | 405  | 345  | 300  | 260  | 230  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 435 | 345 | 280 | 235  | 200  | 170  | -    | -    | -    |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 215 | 170 | 140 | 115  | 100  | 85   | -    | -    | -    |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 200W            |  | 400W            |  |
|-----------------------|-----|-----------|-----------------|--|-----------------|--|
| Max Payload<br>(kg)   | Ø15 | Lead 20mm | Horizontal : 28 |  | Horizontal : 45 |  |
|                       |     |           | Vertical : 10   |  | Vertical : 20   |  |
|                       |     | Lead 10mm | Horizontal : 50 |  | Horizontal : 50 |  |
|                       |     |           | Vertical : 22   |  | Vertical : 38   |  |

주1) Stroke : 500mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

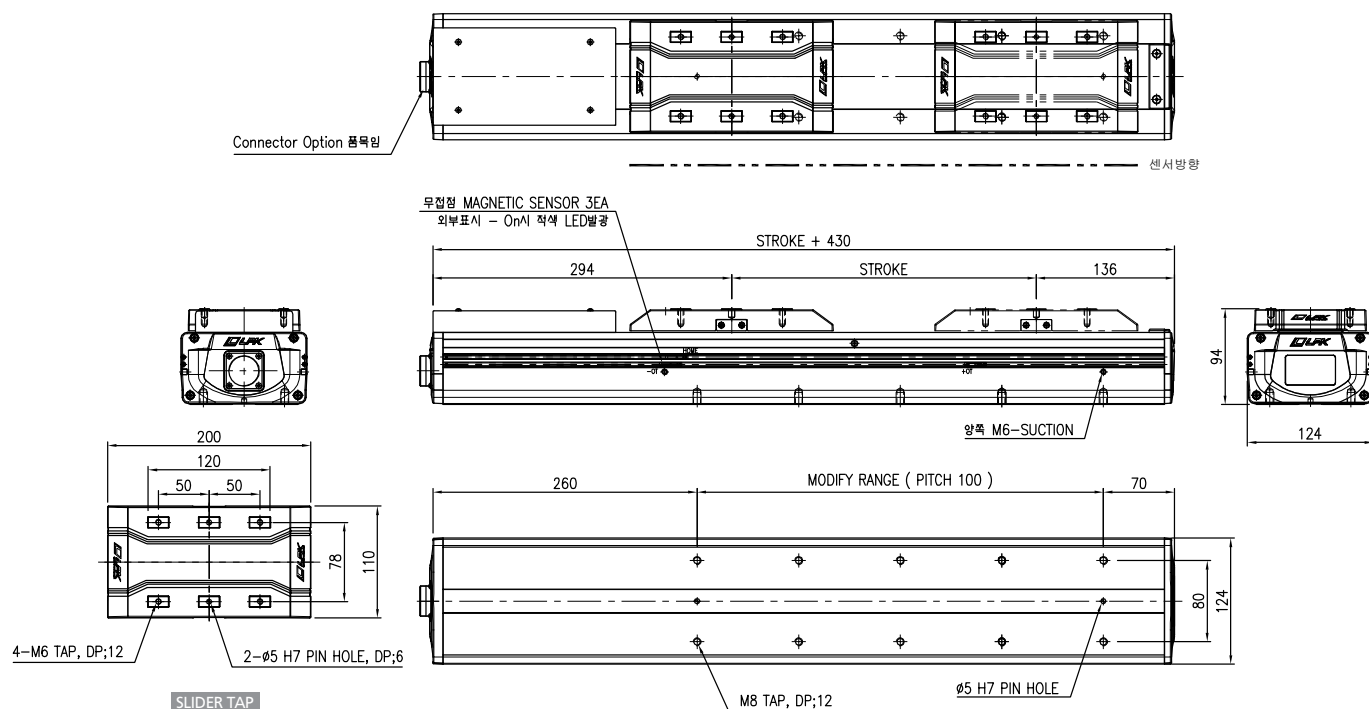
## Robot Weight

| Stroke (mm)    |          |      | 100 | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|----------------|----------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 200W | 8.4 | 9.5  | 10.6 | 11.7 | 12.8 | 13.9 | 15.0 | 16.1 | 17.2 | 18.3 | 19.4 | 20.5 | 21.6 | 22.7 | 23.8 |
|                |          | 400W | 8.9 | 10.0 | 11.1 | 12.2 | 13.3 | 14.4 | 15.5 | 16.6 | 17.7 | 18.8 | 19.9 | 21.0 | 22.1 | 23.2 | 24.3 |
|                | Parallel | 200W | 8.4 | 9.5  | 10.6 | 11.7 | 12.8 | 13.9 | 15.0 | 16.1 | 17.2 | 18.3 | 19.4 | 20.5 | 21.6 | 22.7 | 23.8 |
|                |          | 400W | 8.9 | 10.0 | 11.1 | 12.2 | 13.3 | 14.4 | 15.5 | 16.6 | 17.7 | 18.8 | 19.9 | 21.0 | 22.1 | 23.2 | 24.3 |

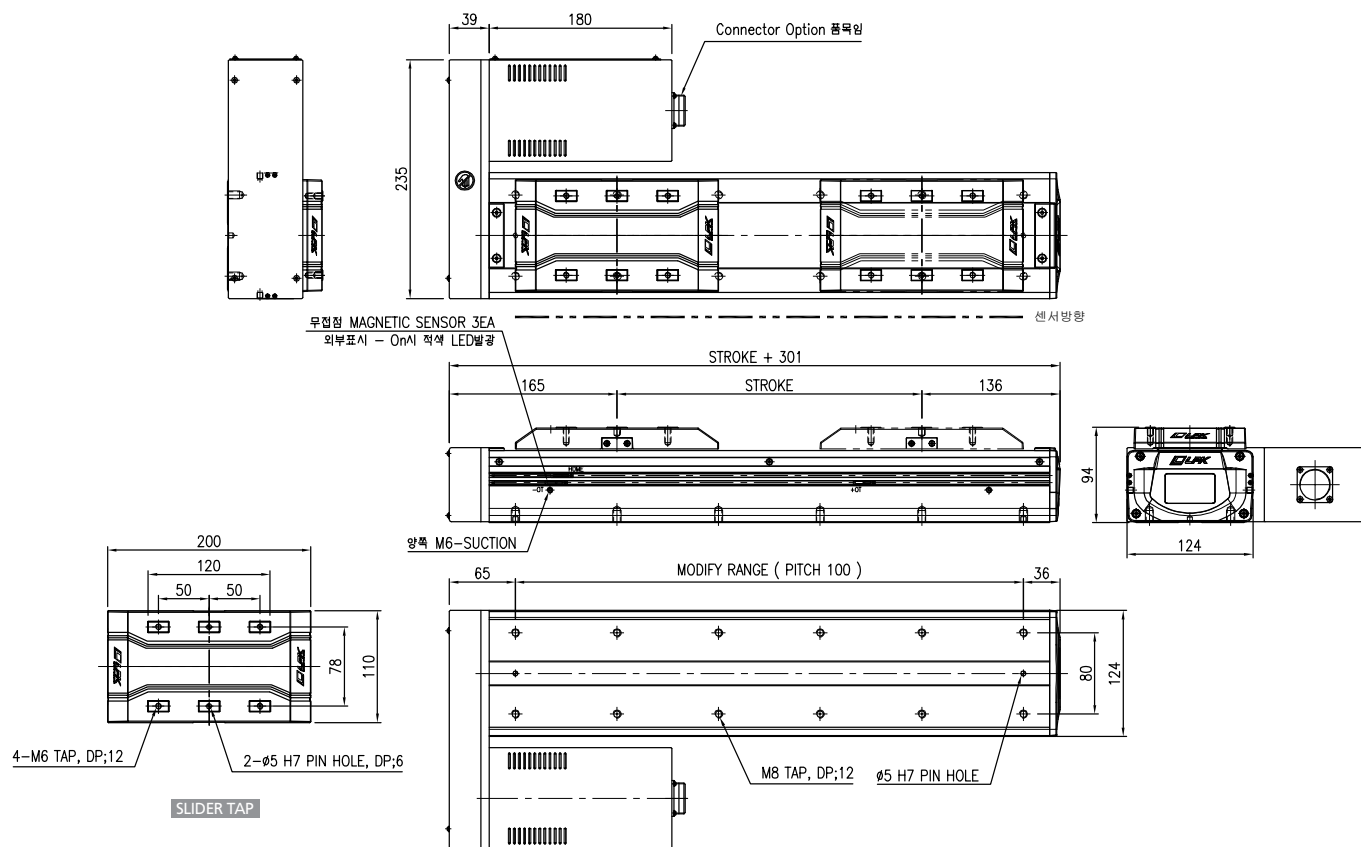
The weight of the model equipped with a brake is 0.65Kg heavier than this value.



## LCP120-ST

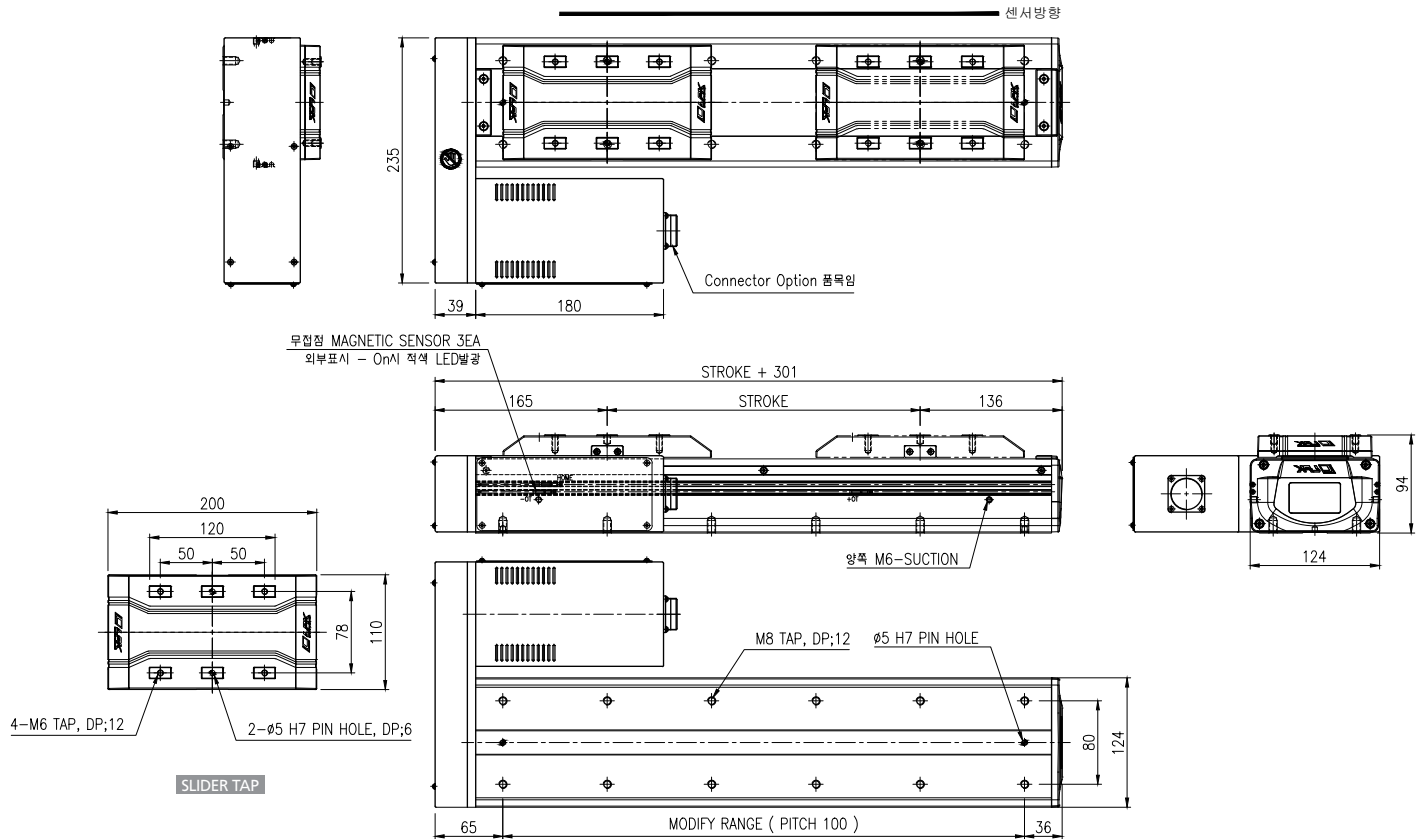


## LCP120-LT

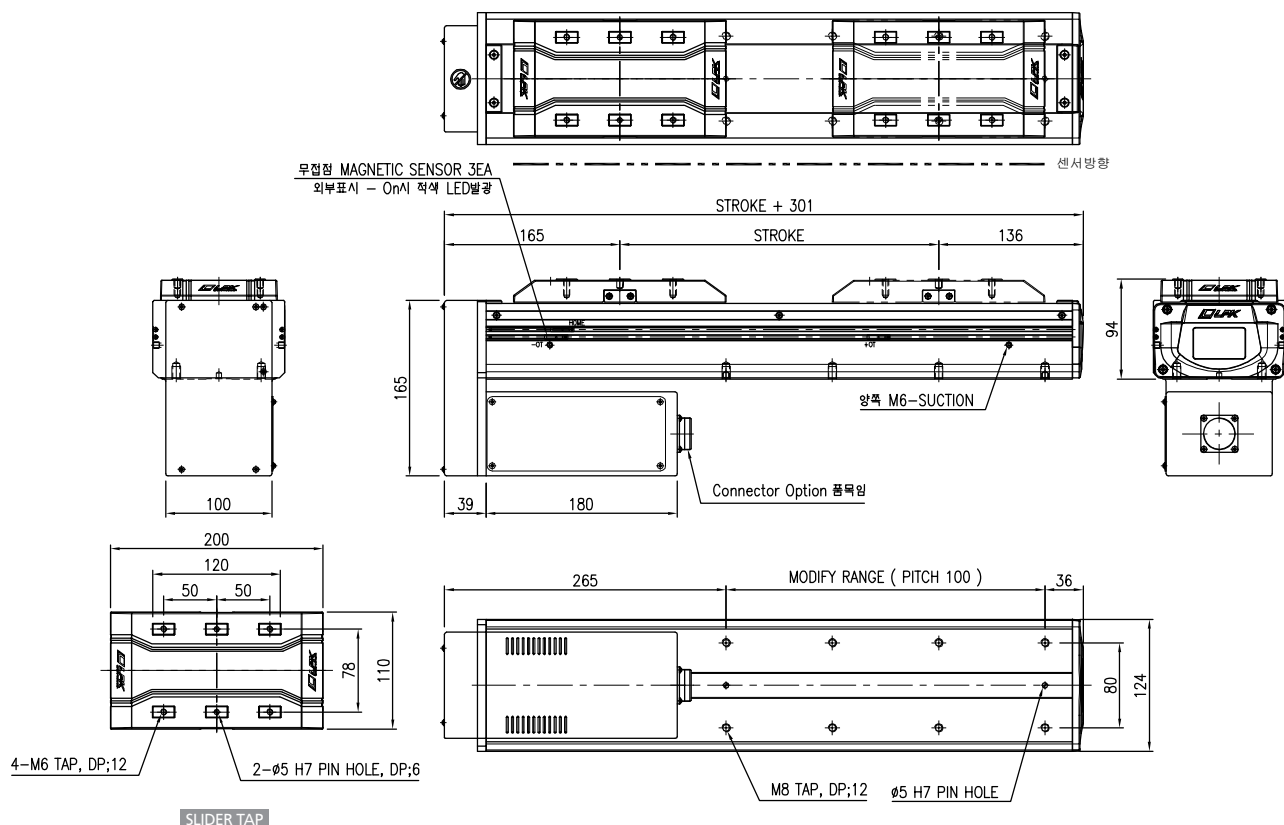


# LCP120 Series Cartesign Clean ROBO System

## LCP120-RT



## LCP120-UT



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 400W                                                     | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø15, Ø20 Lead 20mm, 10mm, 5mm       |      |
| • Stroke (mm)                                  | 10 ~ 2200                                                |      |
| • LM Guide Bearing                             | Two Way 20W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 1.54E + 06, I <sub>y</sub> = 1.12E + 07 |      |

## Stroke By Max Speed

| Stroke (mm)           |     |           | 100 | 200 | 300 | 400  | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 |
|-----------------------|-----|-----------|-----|-----|-----|------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø15 | Lead 20mm |     |     |     | 1000 |     |     | 815 | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
|                       |     | Lead 10mm |     |     |     | 500  |     |     | 400 | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
|                       |     | Lead 05mm |     |     |     | 250  |     |     | 200 | -   | -   | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    | -    |
|                       | Ø20 | Lead 20mm |     |     |     | 1000 |     |     |     | 890 | 730 | 610  | 520  | 445  | 385  | 340  | 300  | 265  | 240  | 215  | 195  | 175  | 160  | 150  |
|                       |     | Lead 10mm |     |     |     | 500  |     |     |     | 455 | 375 | 310  | 265  | 225  | 195  | 175  | 150  | 135  | 120  | -    | -    | -    | -    | -    |
|                       |     | Lead 05mm |     |     |     | 250  |     |     |     | 225 | 185 | 155  | 130  | 115  | 100  | 85   | 75   | 65   | 60   | -    | -    | -    | -    | -    |

주1) Stroke 2200mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 400W            | 750W            |     |           | 400W            | 750W            |
|-----------------------|-----|-----------|-----------------|-----------------|-----|-----------|-----------------|-----------------|
| Max<br>Payload (kg)   | Ø15 | Lead 20mm | Horizontal : 35 | Horizontal : 80 | Ø20 | Lead 20mm | Horizontal : 30 | Horizontal : 70 |
|                       |     |           | Vertical : 20   | Vertical : 30   |     |           | Vertical : 20   | Vertical : 30   |
|                       |     | Lead 10mm | Horizontal : 80 | Horizontal : 80 |     | Lead 10mm | Horizontal : 75 | Horizontal : 80 |
|                       |     |           | Vertical : 40   | Vertical : 45   |     |           | Vertical : 40   | Vertical : 45   |

주1) Stroke : 500mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

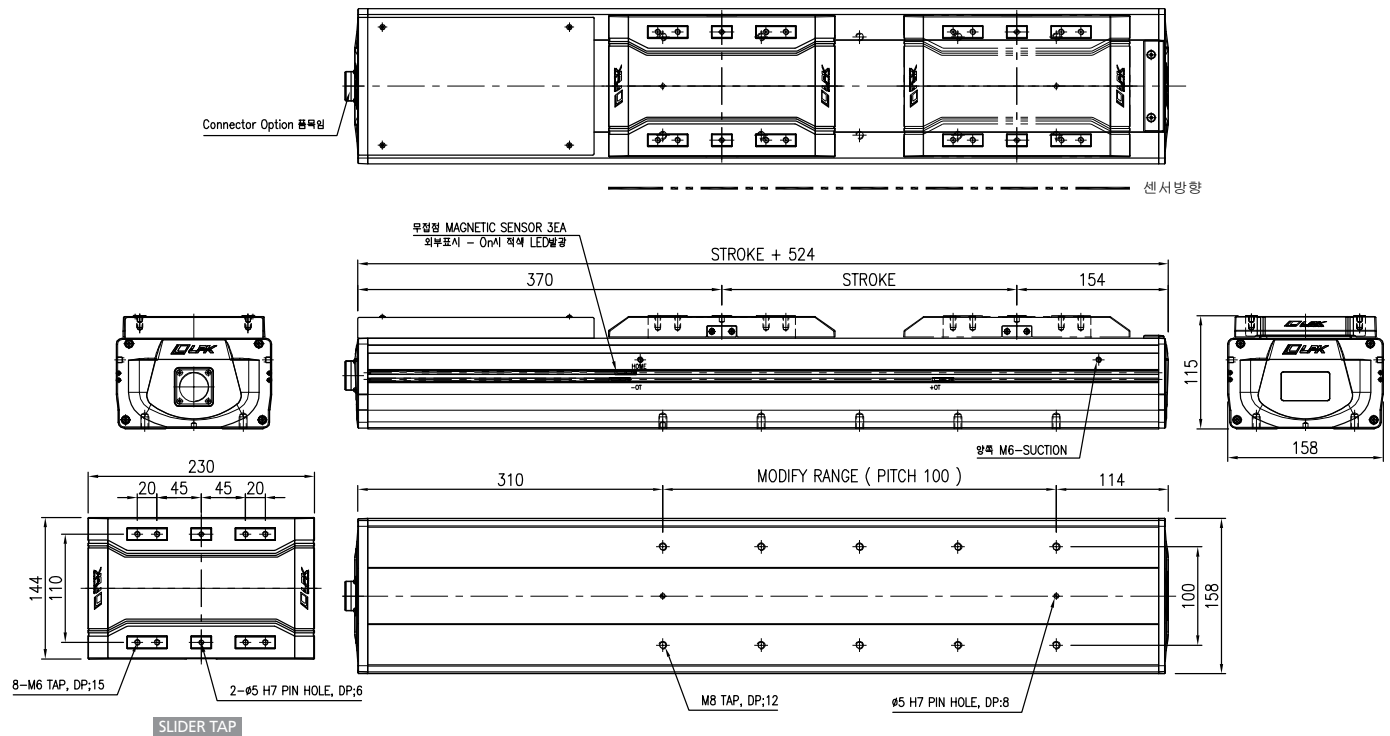
## Robot Weight

| Stroke (mm) |          |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 |
|-------------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | Straight | 400W | 14.7 | 16.3 | 17.9 | 19.5 | 21.1 | 22.7 | 24.3 | 25.9 | 27.5 | 29.1 | 30.7 | 32.3 | 33.9 | 35.5 | 37.1 | 38.7 | 40.3 | 41.9 | 43.5 | 45.1 | 46.7 | 48.3 |
|             |          | 750W | 16.1 | 17.7 | 19.3 | 20.9 | 22.5 | 24.1 | 25.7 | 27.3 | 28.9 | 30.5 | 32.1 | 33.7 | 35.3 | 36.9 | 38.5 | 40.1 | 41.7 | 43.3 | 44.9 | 46.5 | 48.1 | 49.7 |
|             | Parallel | 400W | 14.5 | 16.0 | 17.5 | 19.0 | 20.5 | 22.0 | 23.5 | 25.0 | 26.5 | 28.0 | 29.5 | 31.0 | 32.5 | 34.0 | 35.5 | 37.0 | 38.5 | 40.0 | 41.5 | 43.0 | 44.5 | 46.0 |
|             |          | 750W | 15.9 | 17.4 | 18.9 | 20.4 | 21.9 | 23.4 | 24.9 | 26.4 | 27.9 | 29.4 | 30.9 | 32.4 | 33.9 | 35.4 | 36.9 | 38.4 | 39.9 | 41.4 | 42.9 | 44.4 | 45.9 | 47.4 |

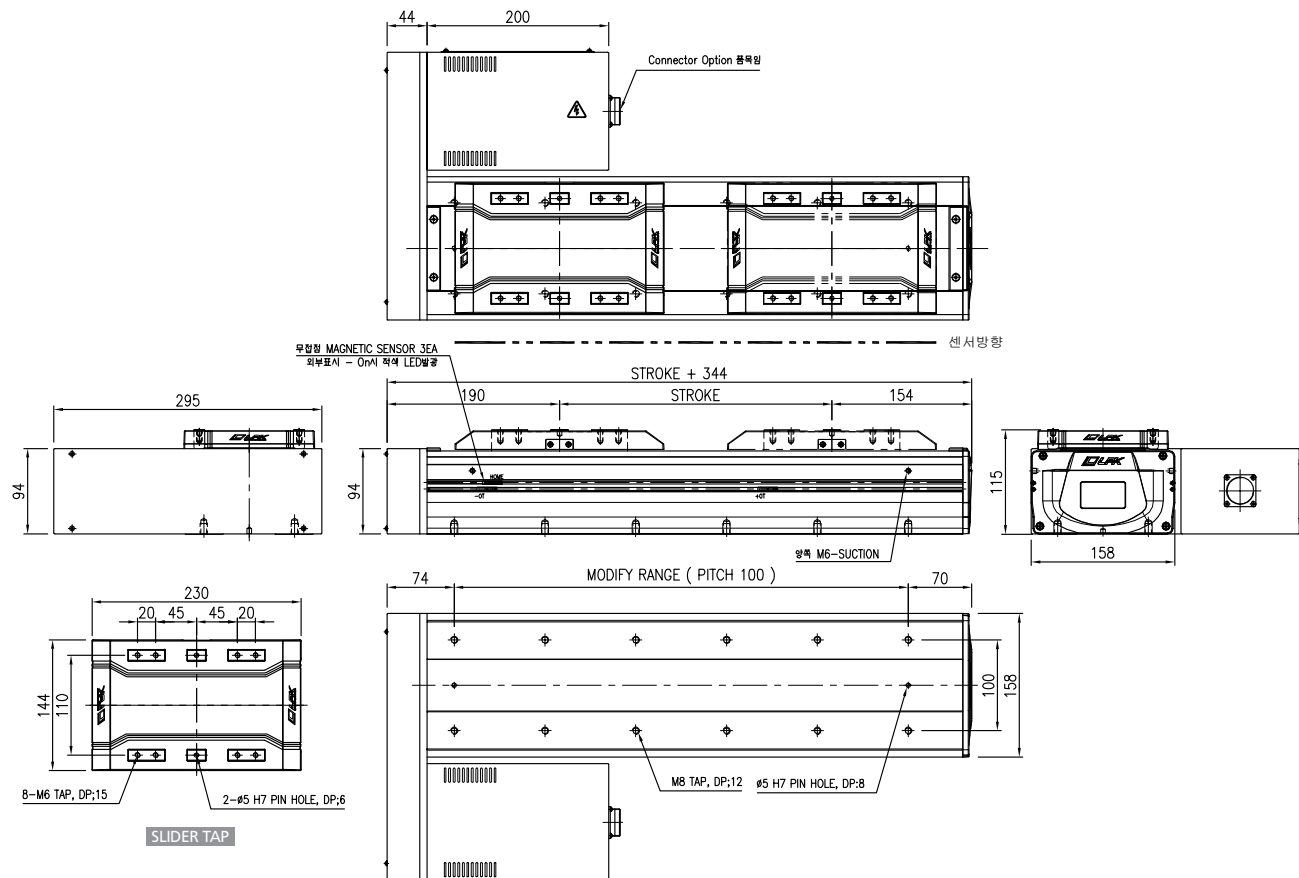
The weight of the model equipped with a brake is 0.65Kg (1.2Kg) heavier than this value.

# LCP160 Series Cartesign Clean ROBO System

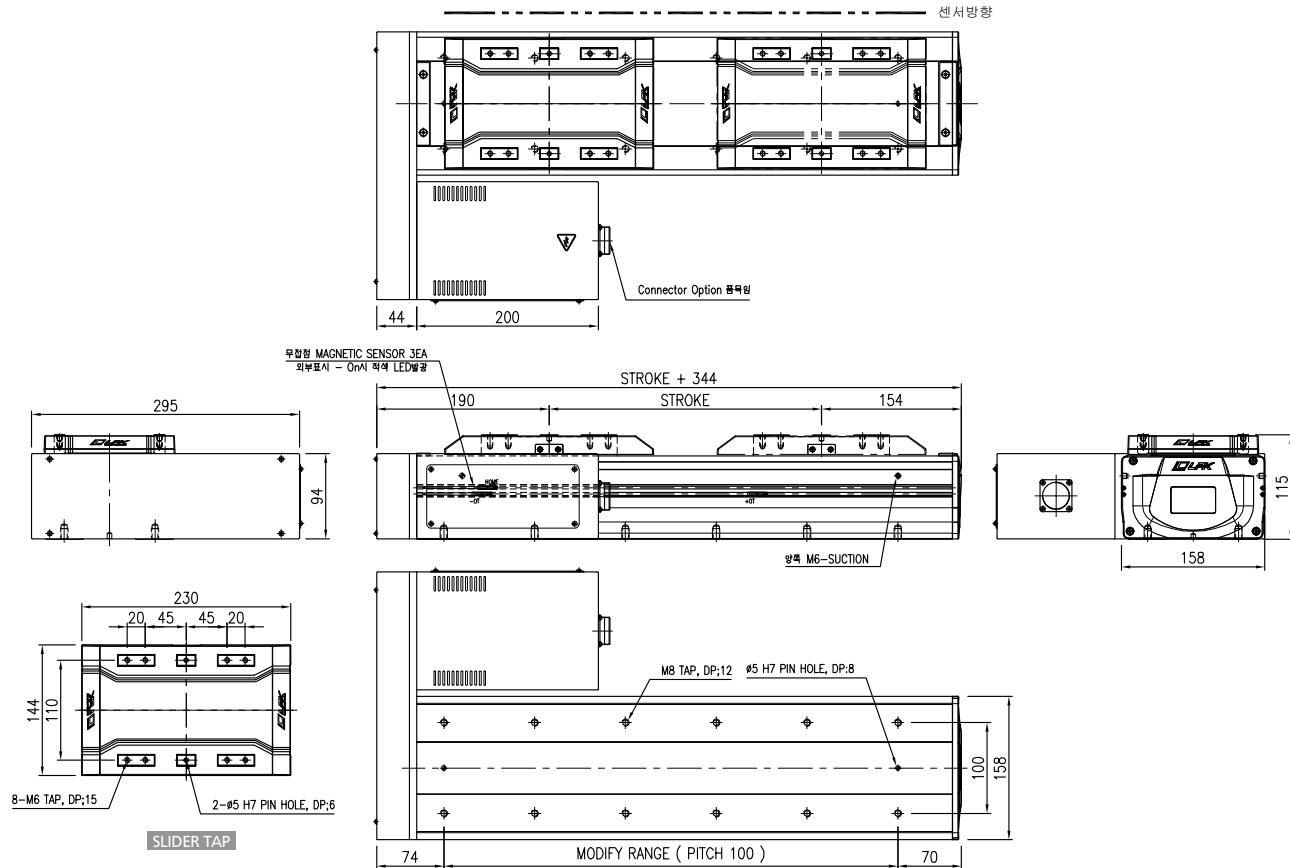
## LCP160-ST



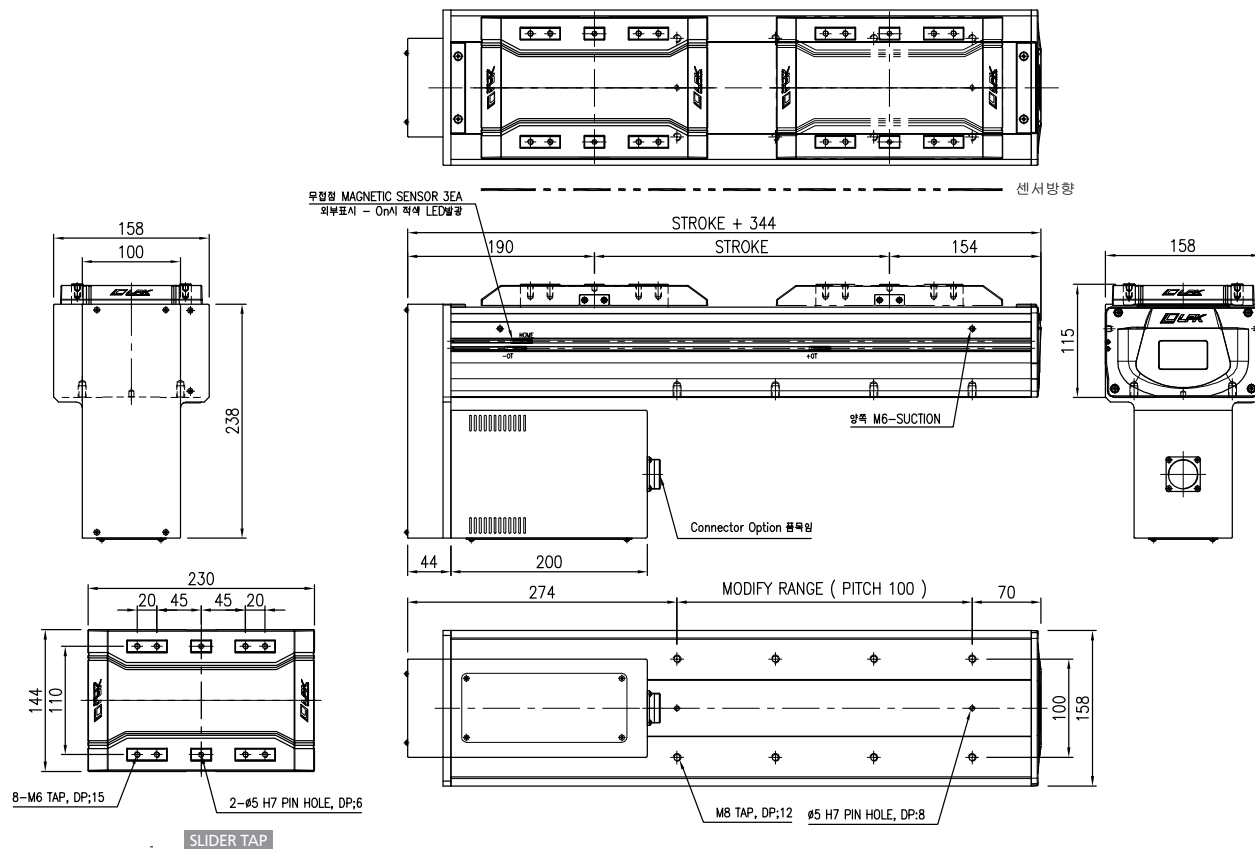
## LCP160-LT



## LCP160-RT



## LCP160-UT



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 400W                                                     | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.02 mm                                                 |      |
| • Deceleration Mechanism                       | Ball Screw(Class 7), Ø20 Lead 20mm, 10mm, 5mm            |      |
| • Stroke (mm)                                  | 10 ~ 2100                                                |      |
| • LM Guide Bearing                             | Two Way 25W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 1.85E + 06, I <sub>y</sub> = 2.61E + 07 |      |

## Stroke By Max Speed

| Stroke (mm)           |     | 100       | 200  | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
|-----------------------|-----|-----------|------|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|
| Max Speed<br>(mm/sec) | Ø20 | Lead 20mm | 1000 |     |     |     |     |     | 830 | 685 | 575  | 490  | 425  | 370  | 325  | 290  | 255  | 230  | 210  | 190  | 170  | 155  |
|                       |     | Lead 10mm | 500  |     |     |     |     |     | 425 | 350 | 295  | 250  | 215  | 190  | 165  | 145  | 130  | -    | -    | -    | -    | -    |
|                       |     | Lead 05mm | 250  |     |     |     |     |     | 210 | 175 | 145  | 125  | 105  | 95   | 80   | 70   | 65   | -    | -    | -    | -    | -    |

주1) Stroke 2100mm 초과 사용 시 당사로 필히 문의 요망. 주2) 상기 속도표는 Ball Screw 고정-지지 시 Max 값임.

## 가반 하중(Max Payload)

| AC Servo Motor Output |     |           | 400W            | 750W             |
|-----------------------|-----|-----------|-----------------|------------------|
| Max Payload<br>(kg)   | Ø20 | Lead 20mm | Horizontal : 50 | Horizontal : 100 |
|                       |     |           | Vertical : 20   | Vertical : 38    |
|                       |     | Lead 10mm | Horizontal : 80 | Horizontal : 120 |
|                       |     |           | Vertical : 40   | Vertical : 60    |

주1) Stroke : 500mm, Speed : Max Speed, Acceleration : 0.2 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

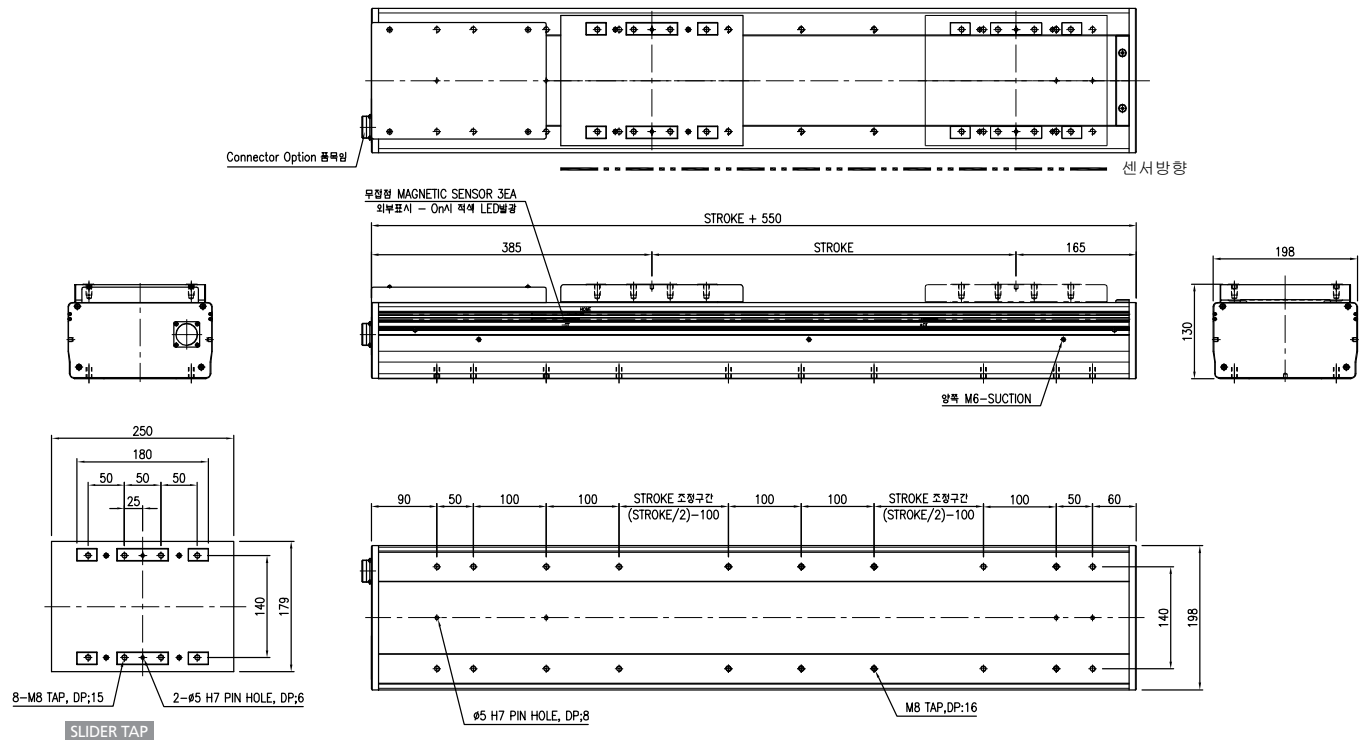
주2) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## Robot Weight

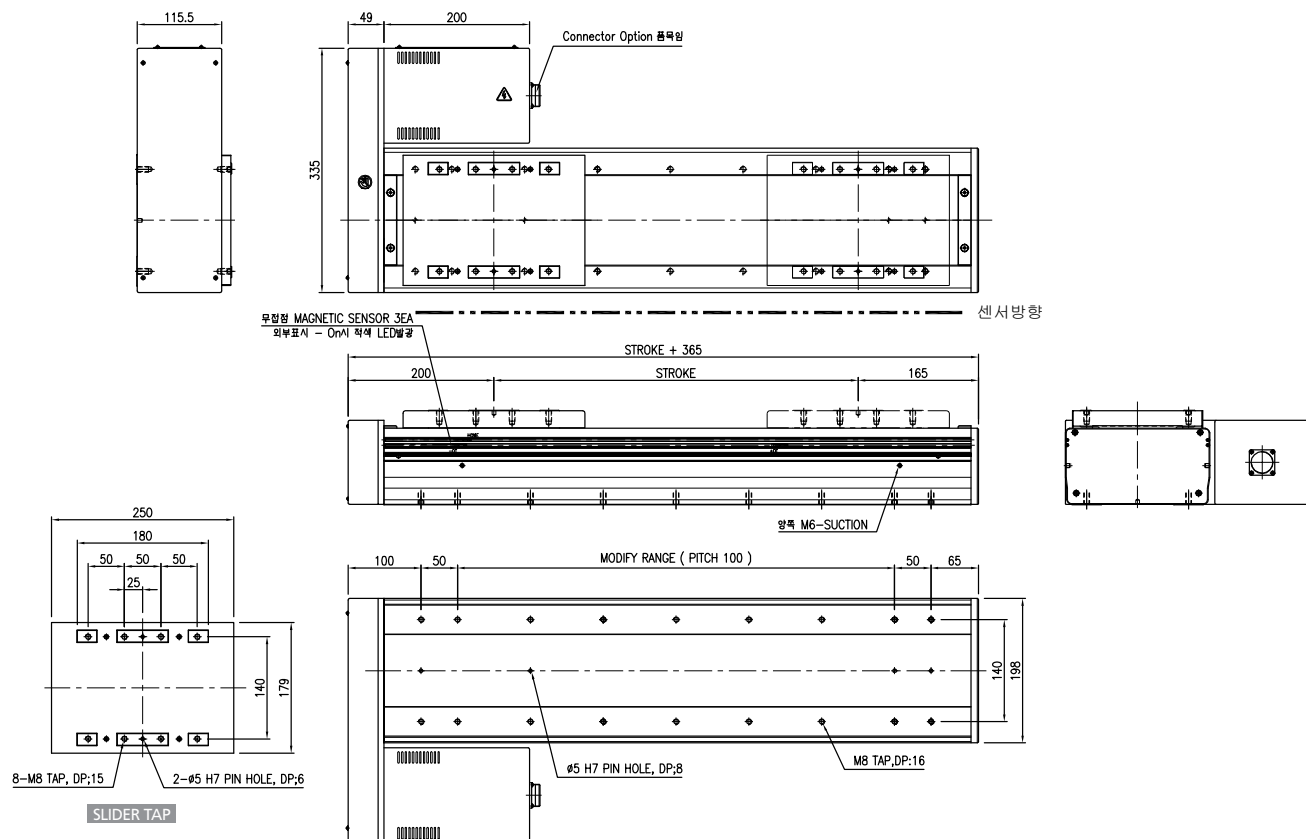
| Stroke (mm)    |          |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 |
|----------------|----------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight<br>(Kg) | Straight | 400W | 22.7 | 25.0 | 27.3 | 29.6 | 31.9 | 34.2 | 36.5 | 38.8 | 41.1 | 43.4 | 45.7 | 48.0 | 50.3 | 52.6 | 54.9 | 57.2 | 59.5 | 61.8 | 64.1 | 66.4 | 68.7 |
|                |          | 750W | 24.1 | 26.4 | 28.7 | 31.0 | 33.3 | 35.6 | 37.9 | 40.2 | 42.5 | 44.8 | 47.1 | 49.4 | 51.7 | 54.0 | 56.3 | 58.6 | 60.9 | 63.2 | 65.5 | 67.8 | 70.1 |
|                | Parallel | 400W | 21.0 | 23.4 | 25.8 | 28.2 | 30.6 | 33.0 | 35.4 | 37.8 | 40.2 | 42.6 | 45.0 | 47.4 | 49.8 | 52.2 | 54.6 | 57.0 | 59.4 | 61.8 | 64.2 | 66.6 | 69.0 |
|                |          | 750W | 22.4 | 24.8 | 27.2 | 29.6 | 32.0 | 34.4 | 36.8 | 39.2 | 41.6 | 44.0 | 46.4 | 48.8 | 51.2 | 53.6 | 56.0 | 58.4 | 60.8 | 63.2 | 65.6 | 68.0 | 70.4 |

The weight of the model equipped with a brake is 0.65Kg (1.2Kg) heavier than this value.

## LCP200-ST



## LCP200-LT







Timing Belt Clean ROBO System

# BCP Series

BCP090 Series

BCP120 Series

BCP160 Series

BCP200 Series

# BCP Series Model Code

|     |     |   |   |   |   |   |      |   |    |    |   |   |    |    |   |
|-----|-----|---|---|---|---|---|------|---|----|----|---|---|----|----|---|
| BCP | 120 | - | F | L | T | - | 500L | - | 40 | R5 | - | B | R1 | E1 | C |
| ①   | ②   |   | ③ | ④ | ⑤ |   | ⑥    |   | ⑦  | ⑧  |   | ⑨ | ⑩  | ⑪  | ⑫ |

## ① 형식 Type

BCP - LPK Co., Ltd. Cartesian Clean Robot, Timing Belt Type

## ② Model

- 090 - Robot Body Width 90 mm, Height 90
- 120 - Robot Body Width 124 mm, Height 94
- 160 - Robot Body Width 158 mm, Height 115
- 200 - Robot Body Width 198 mm, Height 130

## ③ Driving Shape

- S - Straight Coupling Type
- F - Parallel Front Pulley Type
- D - Parallel Top Pulley Type
- U - Parallel Under Pulley Type

## ④ Motor Shape

- L - Motor Left Position Type
- R - Motor Right Position Type

## ⑤ Base Mount Hole

- T - Tap Type

## ⑥ Stroke

The Distance Between - Limit and + Limit (mm)

## ⑦ Motor Capacity

- 10 - Motor Rated Output 100W
- 20 - Motor Rated Output 200W
- 40 - Motor Rated Output 400W
- 70 - Motor Rated Output 750W
- 1K - Motor Rated Output 1KW (Option)

## ⑧ Reduction Gear Ratio Option

- None - Without Reduction Gear (Standard)
- R3~10 - With Reduction Gear Ratio

## ⑨ Robot Color Option

- None - Soft White Anodizing (Standard)
- B - Soft Black Anodizing

## ⑩ Surface Treatment Option

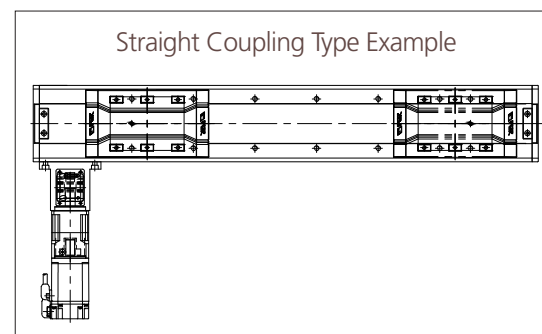
- None - Without Surface Treatment (Standard)
- R1 - LM Rail Raydent
- R2 - LM Rail and Block Raydent

## ⑪ Sensor Option

- None - DC - 24V Proximity LED Sensor (Standard)
- E1 - External Photo Sensor Only
- E2 - External Photo Sensor + Connector
- E3 - External Photo Sensor + Connector + Cable

## ⑫ Cableveyor Option

- None - Without Cableveyor (Standard)
- C - With Cableveyor



## Specification

|                                                |                                  |      |
|------------------------------------------------|----------------------------------|------|
| • AC Servo Motor Output                        | 200W                             | 400W |
| • AC Servo Motor RPM                           | 3000 RPM                         |      |
| • Repeatability                                | ±0.1 mm                          |      |
| • Drive System                                 | Timing Belt                      |      |
| • Pulley Reduction Ratio (Standard)            | 1500 rpm (1/2)                   |      |
| • Stroke (mm)                                  | 100 ~ 1500                       |      |
| • Drive Pulley & P.C.D                         | T5-15NT , Ø23.87                 |      |
| • Drive Belt                                   | T5, 23W                          |      |
| • LM Guide Bearing                             | One Way 42-2BLOCK                |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix = 4.13E + 05, Iy = 1.60E + 06 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 200W |      |     |     | 400W |      |     |     |
|------------------------------|------|------|-----|-----|------|------|-----|-----|
| Reduction Ratio(Reducer)     | 2    | 3    | 5   | 10  | 2    | 3    | 5   | 10  |
| Max Speed (mm/sec)           | 1875 | 1250 | 750 | 375 | 1875 | 1250 | 750 | 375 |
| Max Payload(kg) (Horizontal) | 8    | 16   | 28  | 35  | 11   | 16   | 28  | 35  |

주1) Stroke 1500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

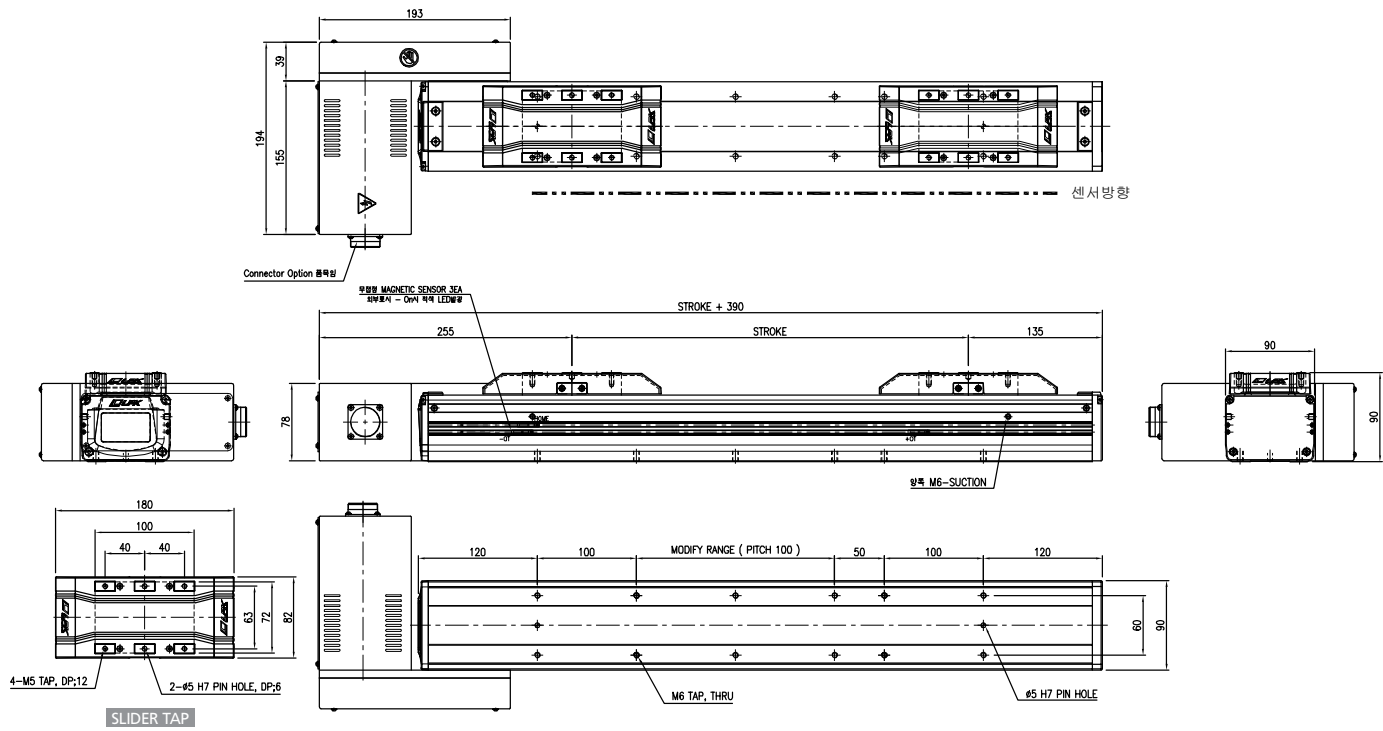
주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

## Robot Weight

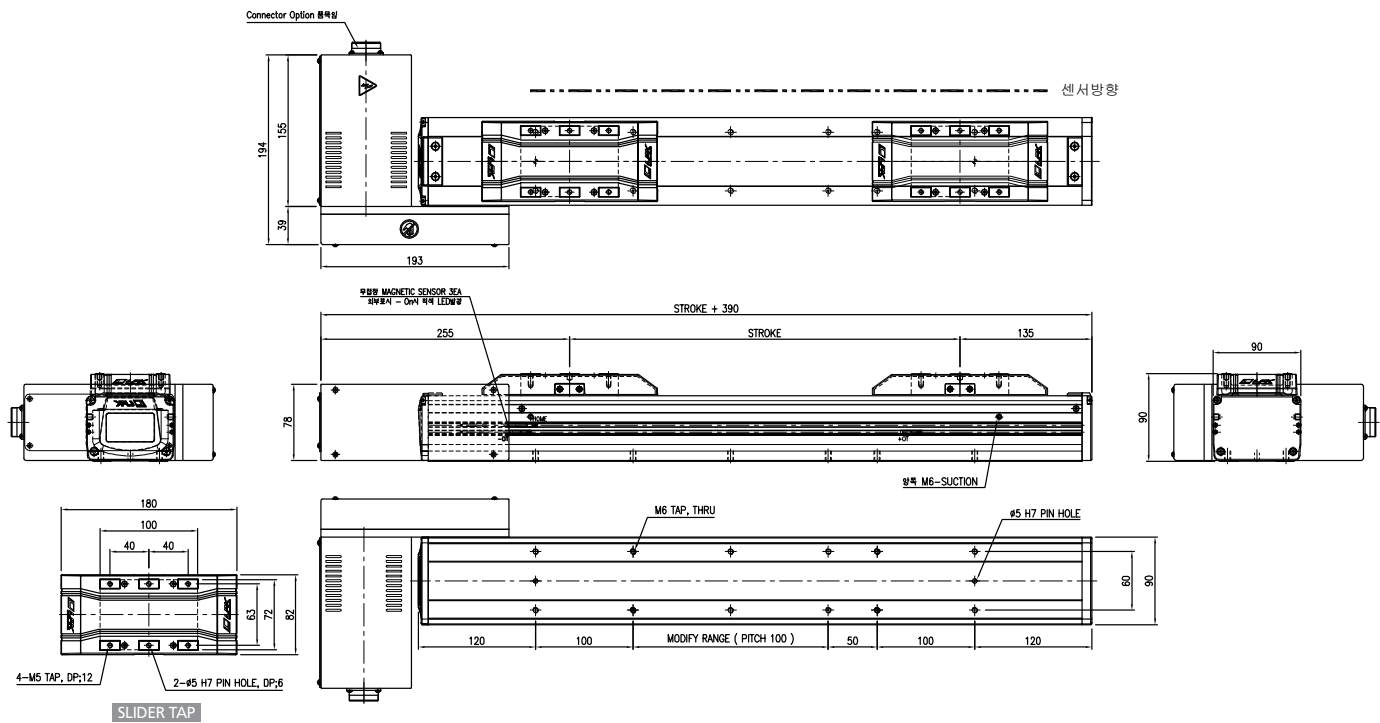
| Stroke (mm) |      | 100 | 200 | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
|-------------|------|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 200W | 8.7 | 9.3 | 9.9  | 10.5 | 11.1 | 11.7 | 12.3 | 12.9 | 13.5 | 14.1 | 14.7 | 15.3 | 15.9 | 16.5 | 17.1 |
|             | 400W | 9.2 | 9.8 | 10.4 | 11   | 11.6 | 12.2 | 12.8 | 13.4 | 14   | 14.6 | 15.2 | 15.8 | 16.4 | 17   | 17.6 |

# BCP090 Series Timing Belt Clean ROBO System

## BCP090-FLT



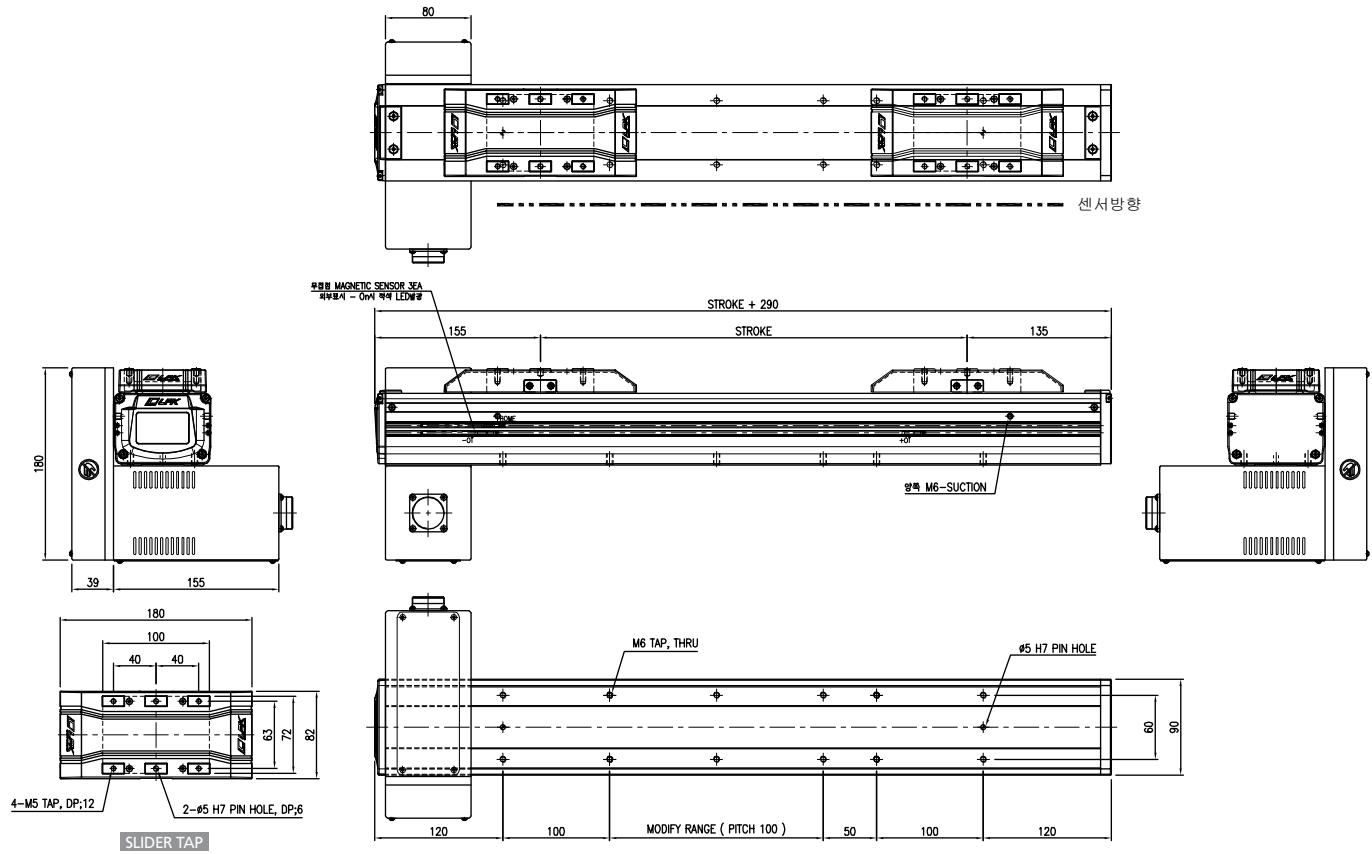
## BCP090-FRT



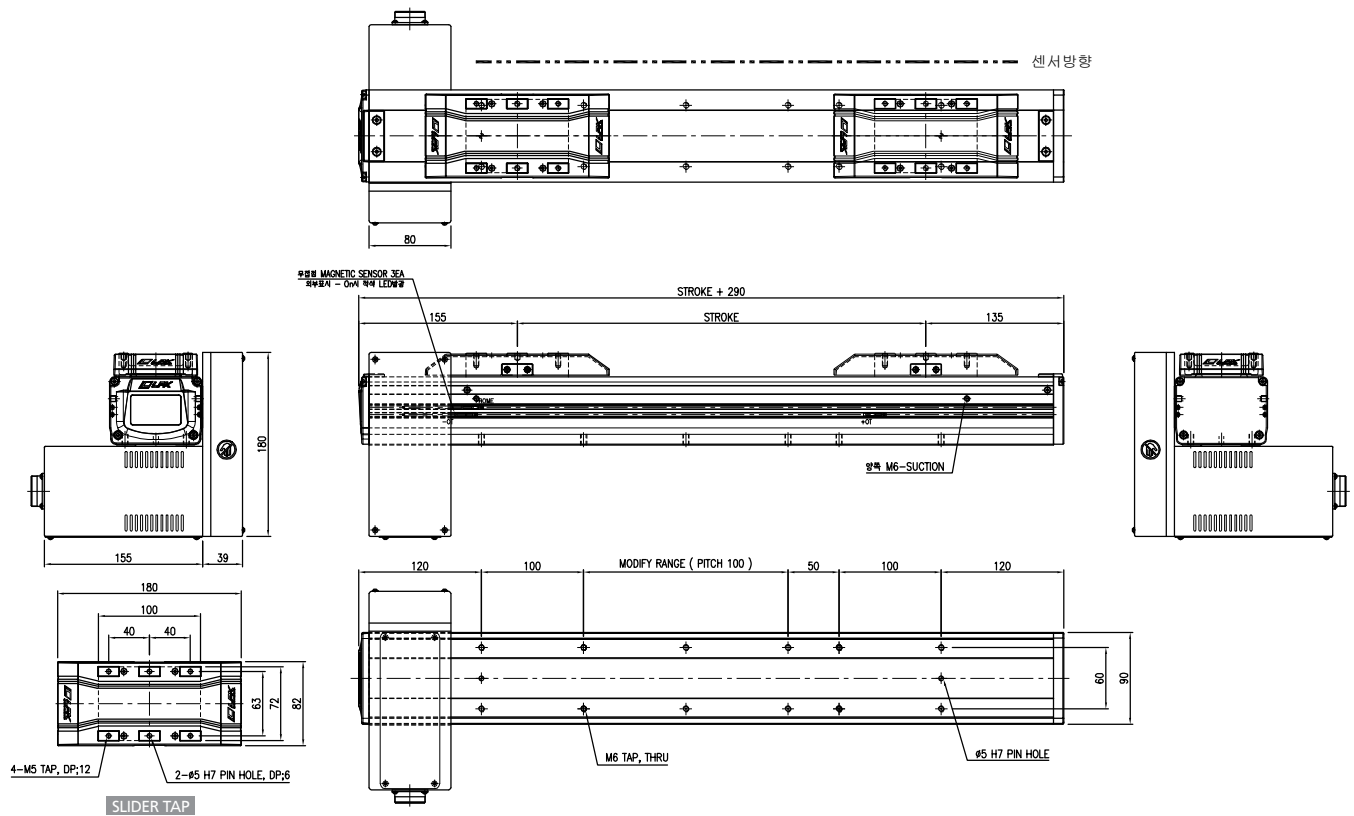


# BCP090 Series Timing Belt Clean ROBO System

## BCP090-ULT



## BCP090-URT



## Specification

|                                                |                                                          |                 |
|------------------------------------------------|----------------------------------------------------------|-----------------|
| • AC Servo Motor Output                        | 400W                                                     | 750W            |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |                 |
| • Repeatability                                | ±0.1 mm                                                  |                 |
| • Drive System                                 | Timing Belt                                              |                 |
| • Pulley Reduction Ratio (Standard)            | 400W                                                     | 1184rpm (1/2.5) |
|                                                | 750W                                                     | 1500rpm (1/2)   |
| • Stroke (mm)                                  | 100 ~ 2000                                               |                 |
| • Drive Pulley & P.C.D                         | S5M-21NT , Ø33.42                                        |                 |
| • Drive Belt                                   | S5M, 25W                                                 |                 |
| • LM Guide Bearing                             | Two Way 15W-2BLOCK                                       |                 |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |                 |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 5.89E + 05, I <sub>y</sub> = 4.60E + 06 |                 |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |      |      |     | 750W |      |      |     |
|------------------------------|------|------|------|-----|------|------|------|-----|
| Reduction Ratio(Reducer)     | 2.5  | 3    | 5    | 10  | 2.5  | 3    | 5    | 10  |
| Max Speed (mm/sec)           | 2072 | 1750 | 1050 | 525 | 2625 | 1750 | 1050 | 525 |
| Max Payload(kg) (Horizontal) | 4    | 15   | 45   | 70  | 18   | 35   | 45   | 70  |

주1) Stroke 2000mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

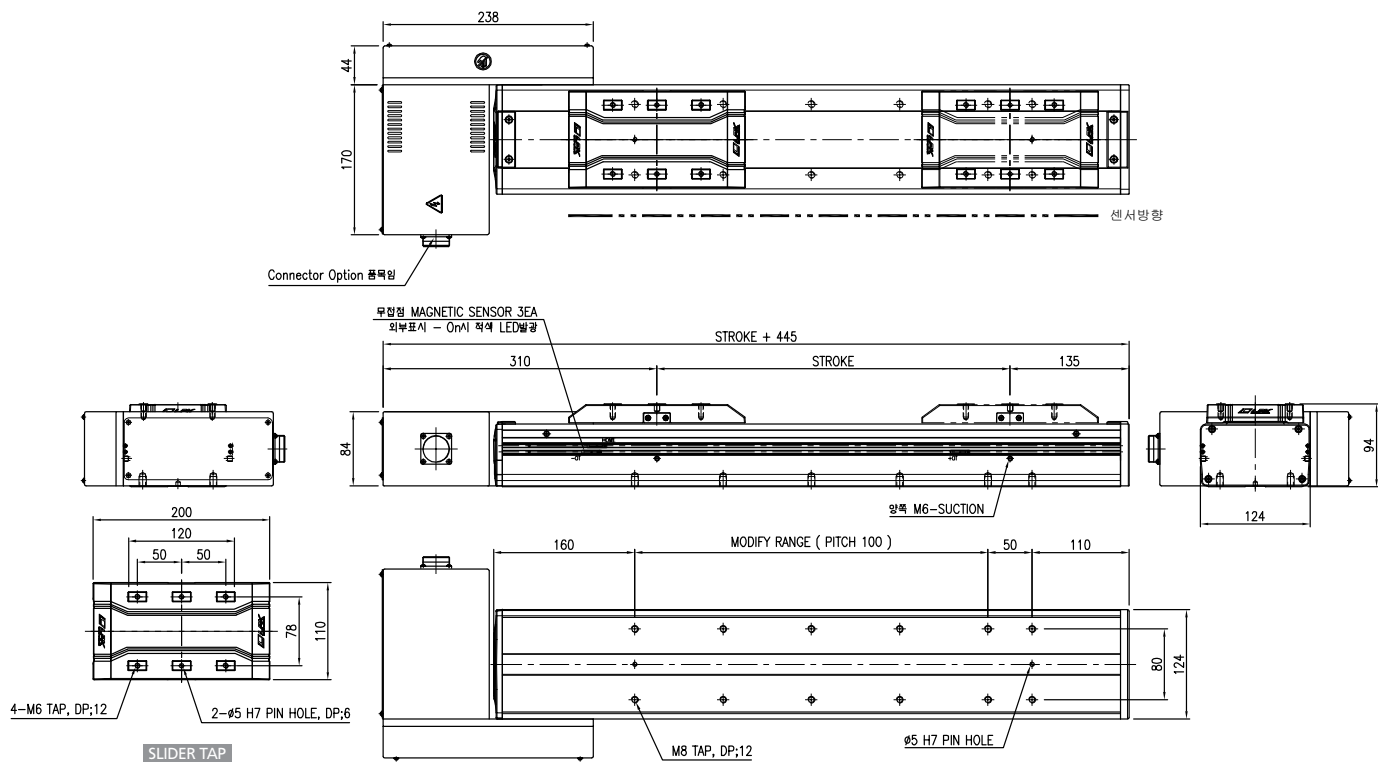
주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

## Robot Weight

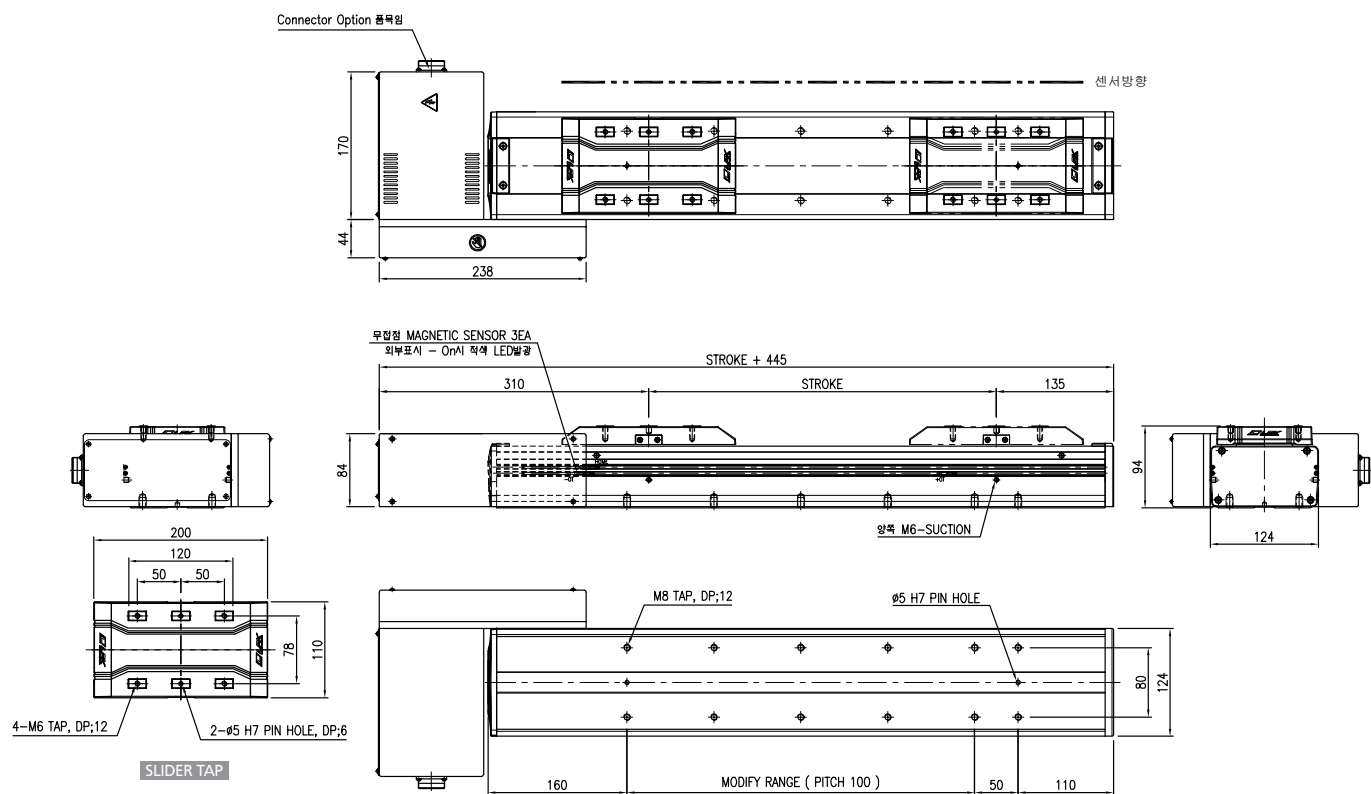
| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 400W | 10.3 | 11.3 | 12.3 | 13.3 | 14.3 | 15.3 | 16.3 | 17.3 | 18.3 | 19.3 | 20.3 | 21.3 | 22.3 | 23.3 | 24.3 | 25.3 | 26.3 | 27.3 | 28.3 | 29.3 |
|             | 750W | 11.9 | 12.9 | 13.9 | 14.9 | 15.9 | 16.9 | 17.9 | 18.9 | 19.9 | 20.9 | 21.9 | 22.9 | 23.9 | 24.9 | 25.9 | 26.9 | 27.9 | 28.9 | 29.9 | 30.9 |

## BCP120 Series Timing Belt Clean ROBO System

## BCP120-FLT

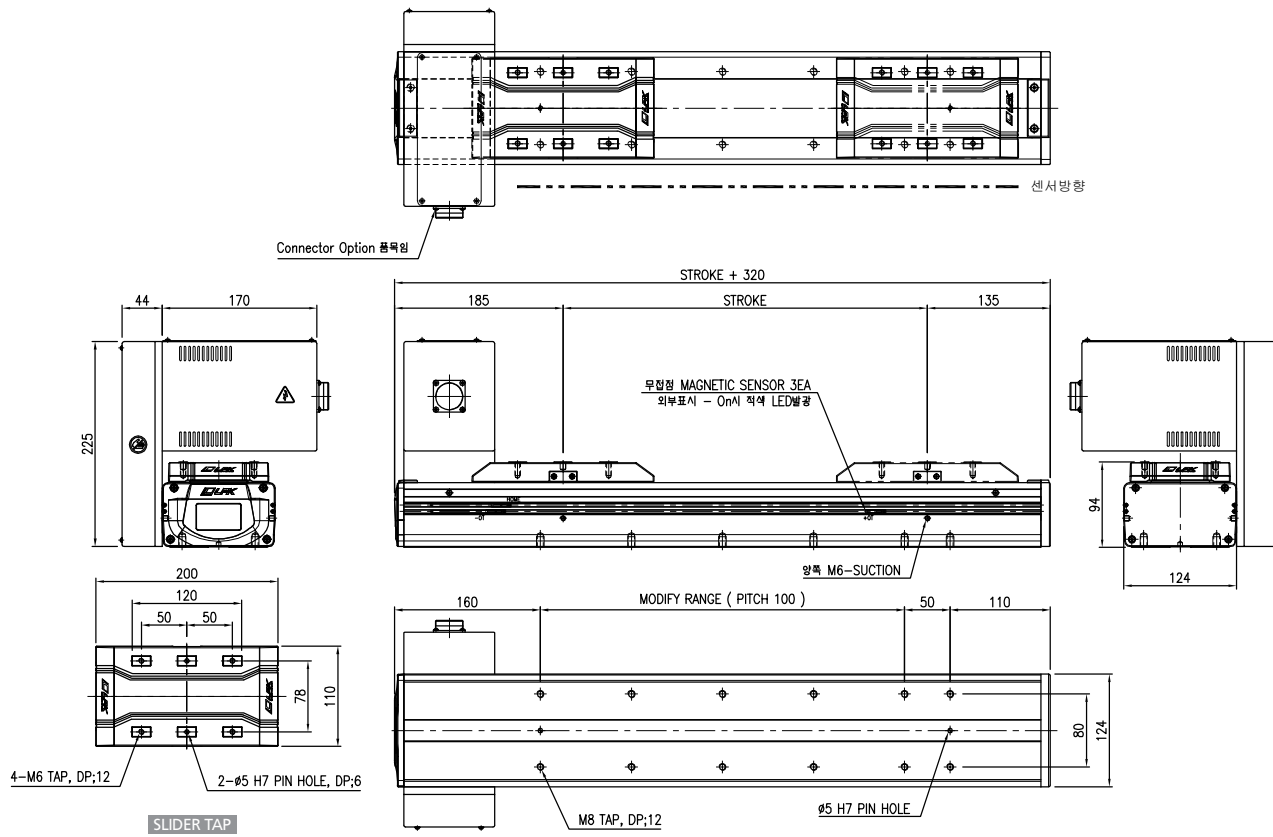


## BCP120-FRT

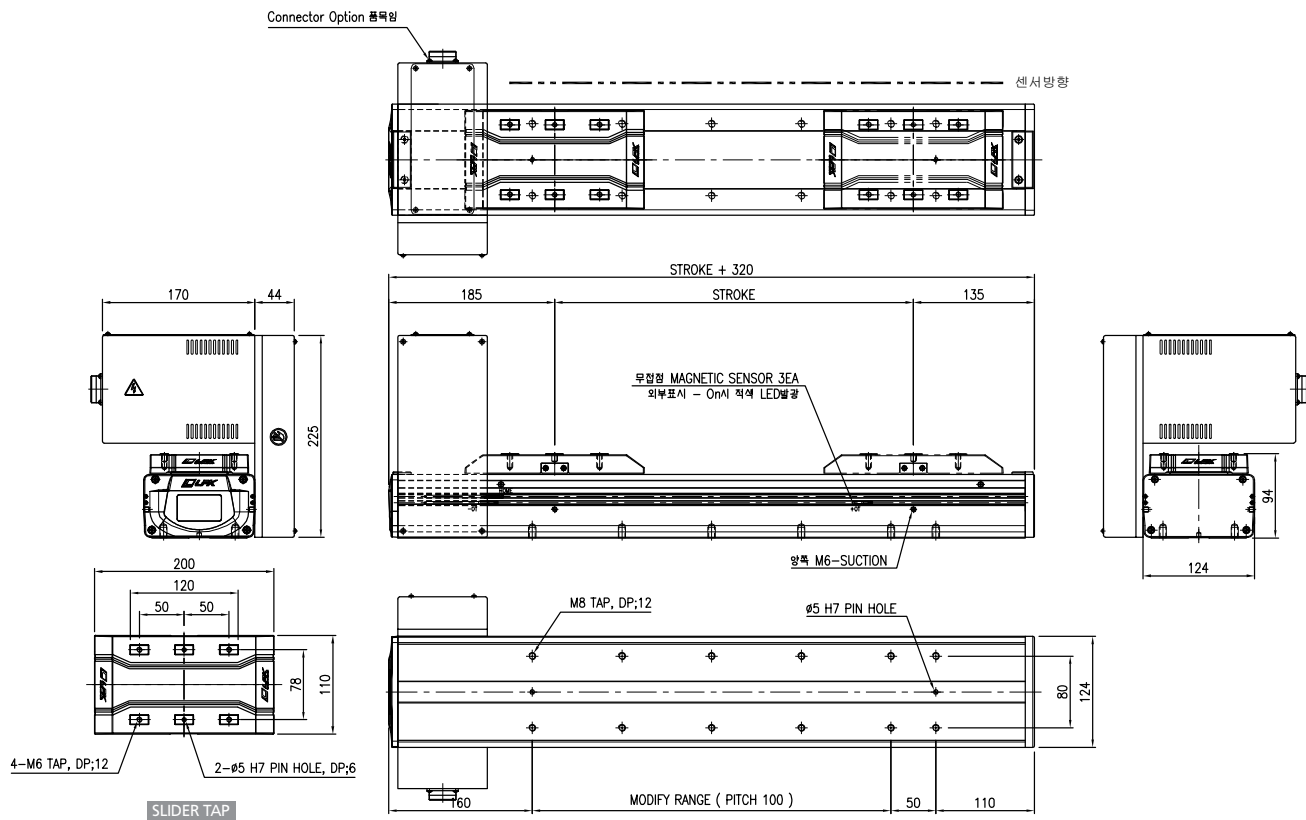




## BCP120-DLT

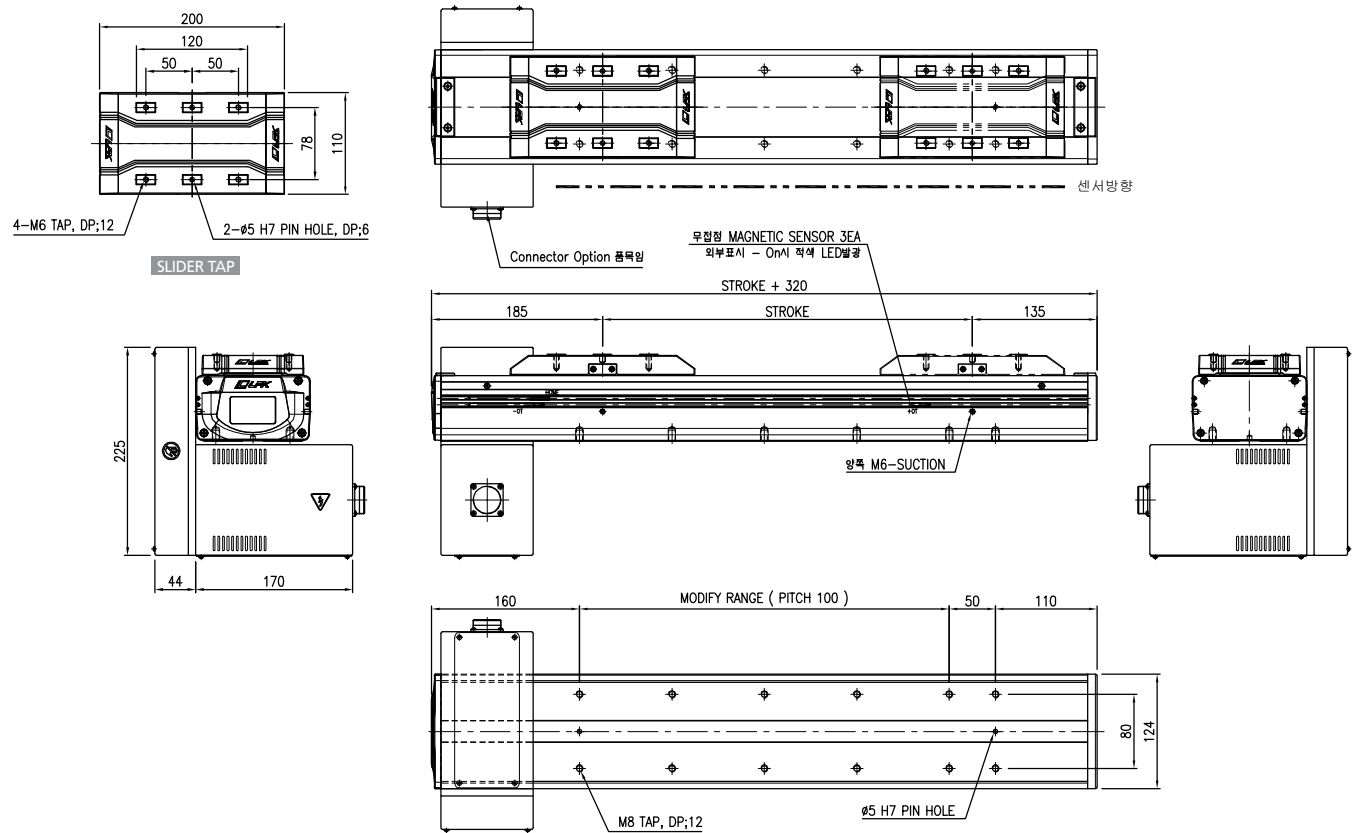


## BCP120-DRT

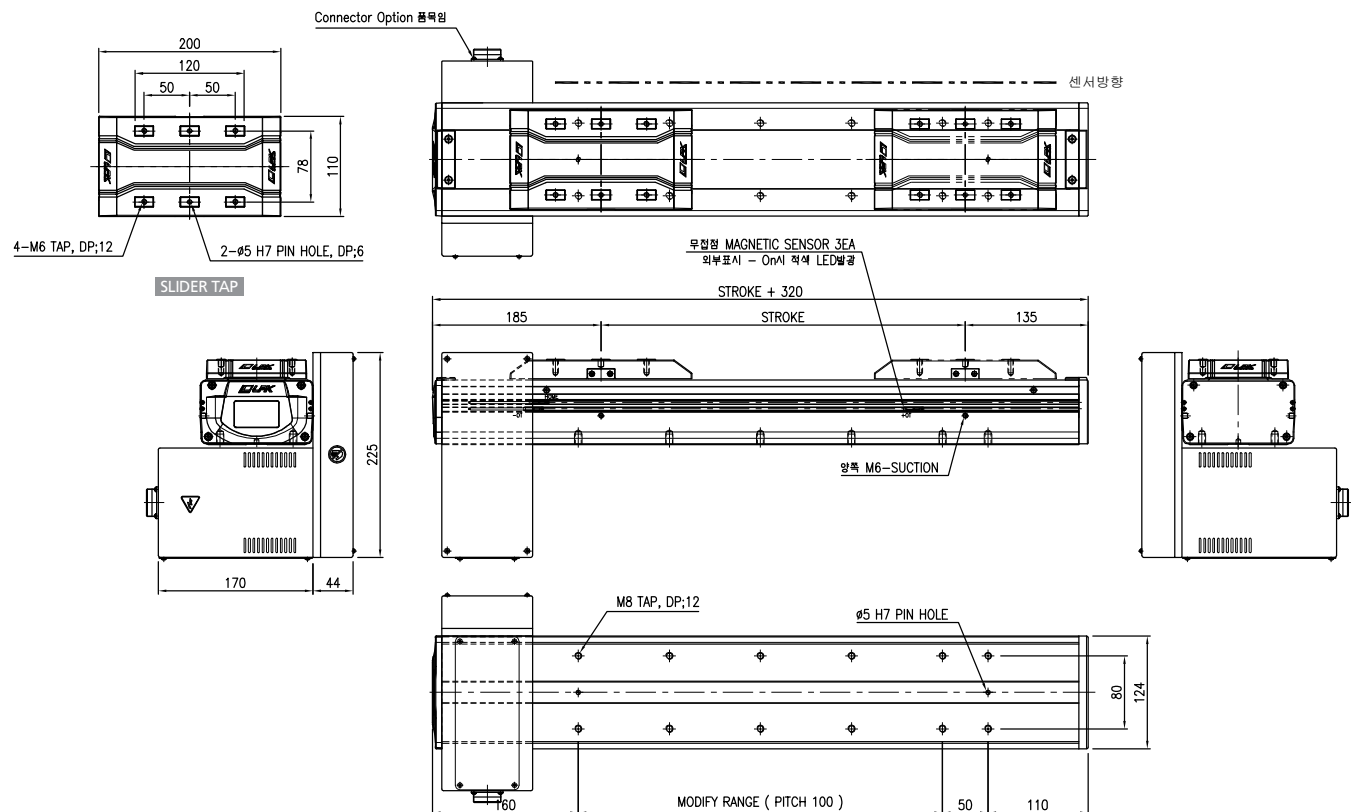


# BCP120 Series Timing Belt Clean ROBO System

## BCP120-ULT



## BCP120-URT



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 400W                                                     | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.1 mm                                                  |      |
| • Drive System                                 | Timing Belt                                              |      |
| • Pulley Reduction Ratio (Standard)            | 1200rpm (1/2.5)                                          |      |
| • Stroke (mm)                                  | 100 ~ 2500                                               |      |
| • Drive Pulley & P.C.D                         | S5M-21NT , Ø33.42                                        |      |
| • Drive Belt                                   | S5M, 30W                                                 |      |
| • LM Guide Bearing                             | Two Way 20W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 8.41E + 05, I <sub>y</sub> = 1.01E + 07 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |      |      |     | 750W |      |      |     |
|------------------------------|------|------|------|-----|------|------|------|-----|
| Reduction Ratio(Reducer)     | 2.5  | 3    | 5    | 10  | 2.5  | 3    | 5    | 10  |
| Max Speed (mm/sec)           | 2100 | 1750 | 1050 | 525 | 2100 | 1750 | 1050 | 525 |
| Max Payload(kg) (Horizontal) | 8    | 12   | 45   | 100 | 35   | 50   | 80   | 120 |

Stroke 2500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec

Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

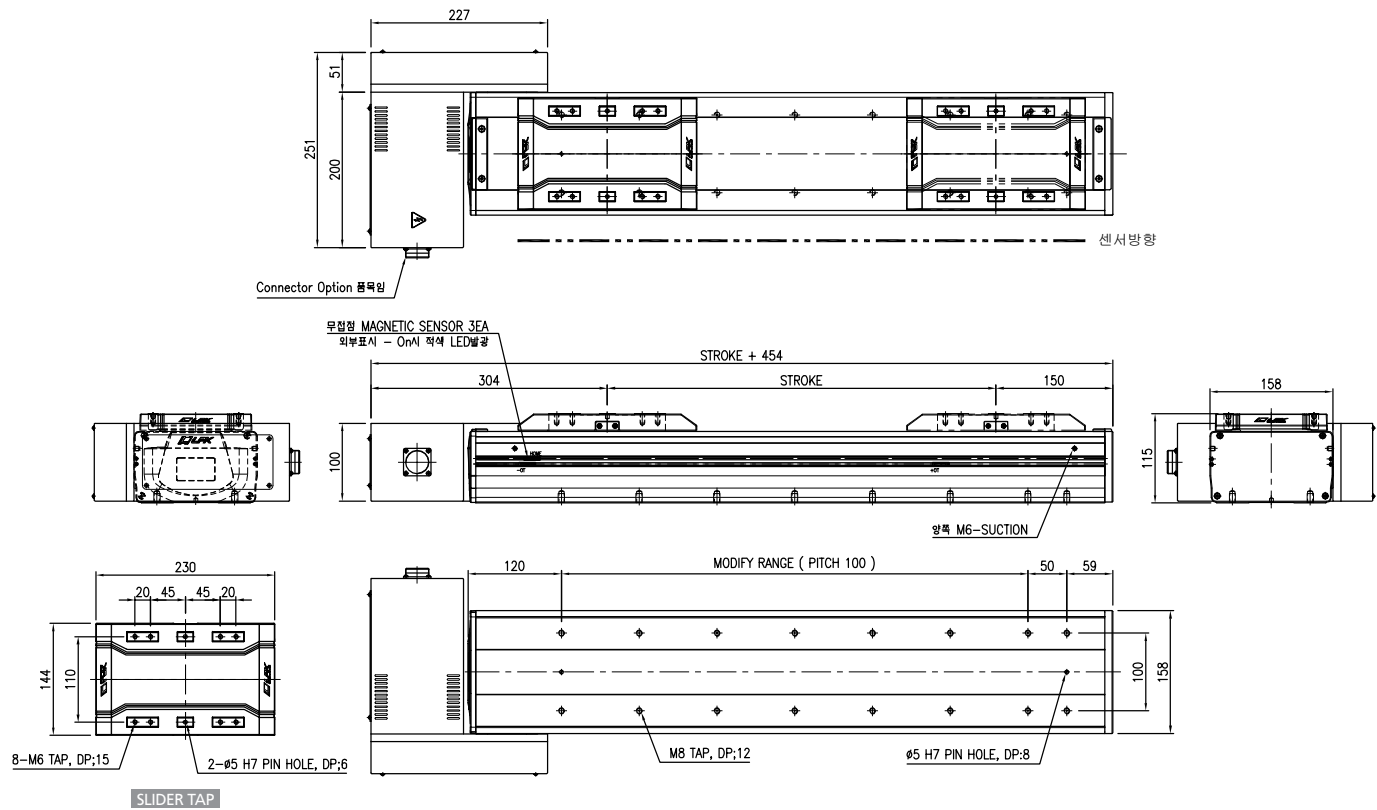
주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

## Robot Weight

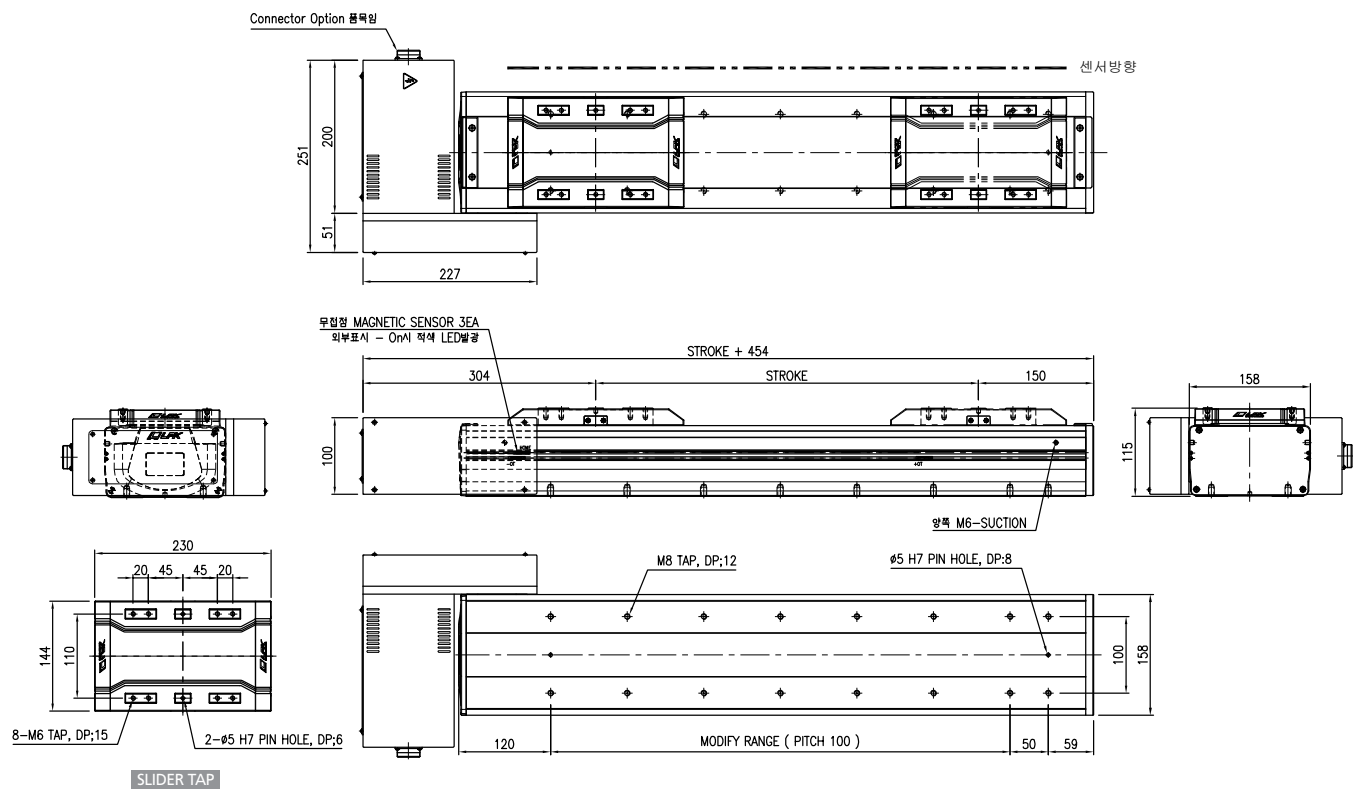
| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 400W | 16.4 | 17.9 | 19.4 | 20.9 | 22.4 | 23.9 | 25.4 | 26.9 | 28.4 | 29.9 | 31.4 | 32.9 | 34.4 | 35.9 | 37.4 | 38.9 | 40.4 | 41.9 | 43.4 | 44.9 | 46.4 | 47.9 | 49.4 | 50.9 | 52.4 |
|             | 750W | 19   | 20.5 | 22   | 23.5 | 25   | 26.5 | 28   | 29.5 | 31   | 32.5 | 34   | 35.5 | 37   | 38.5 | 40   | 41.5 | 43   | 44.5 | 46   | 47.5 | 49   | 50.5 | 52   | 53.5 | 55   |

# BCP160 Series Timing Belt Clean ROBO System

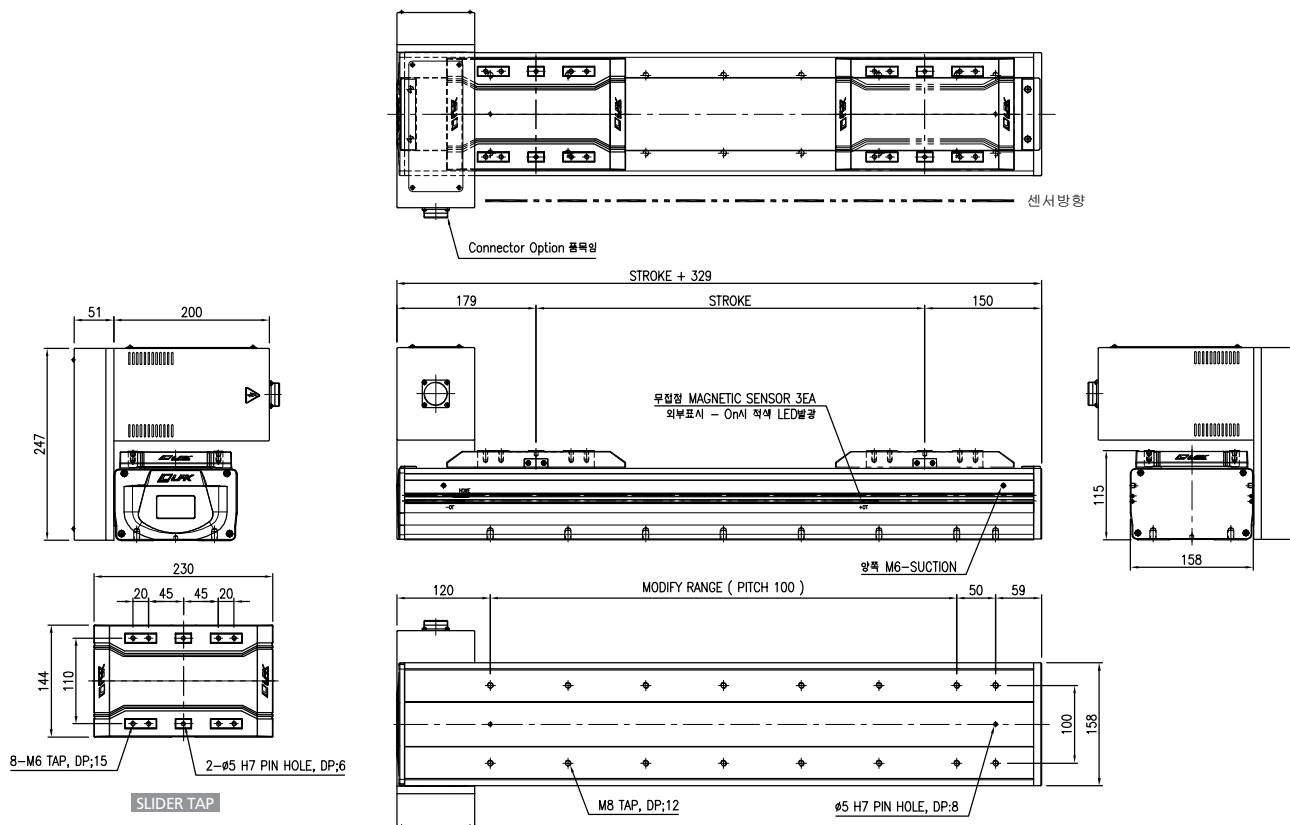
## BCP160-FLT



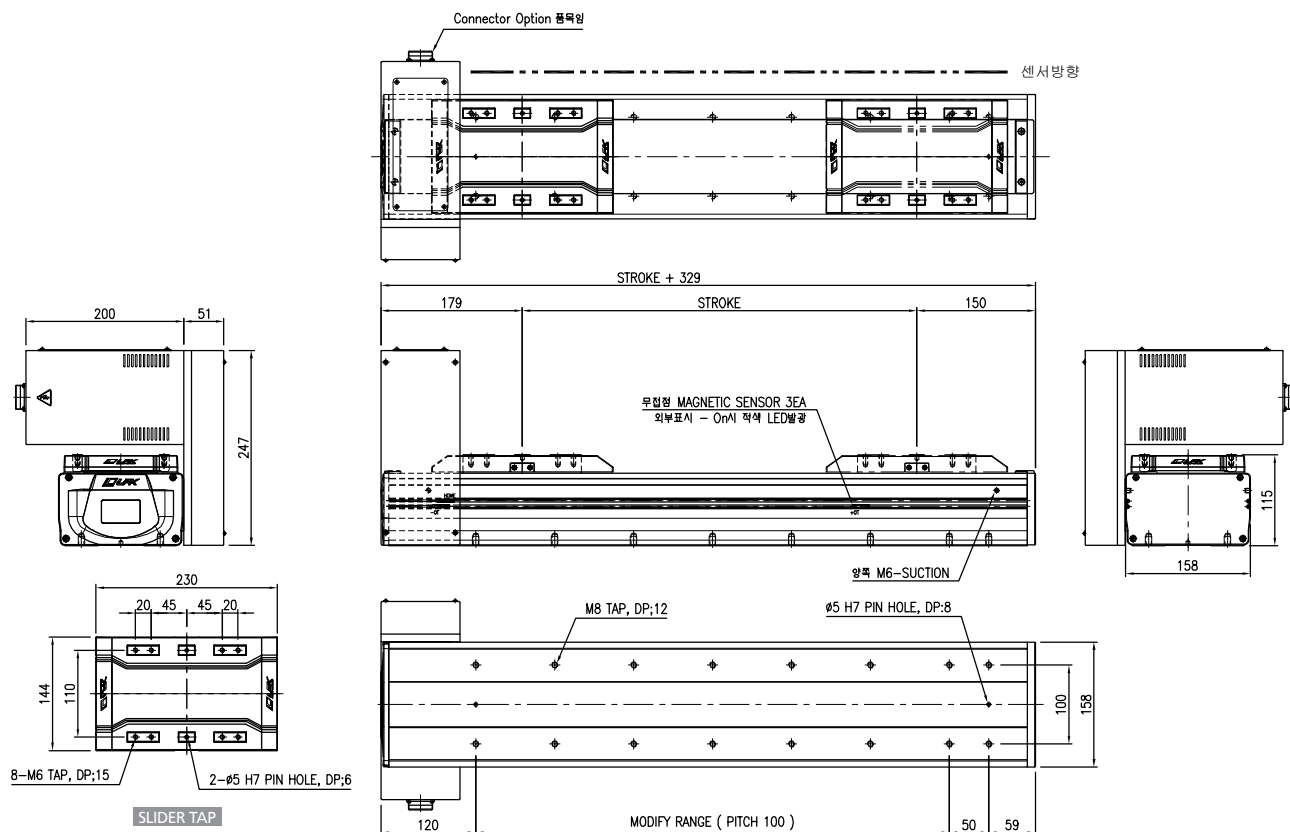
## BCP160-FRT



## BCP160-DLT

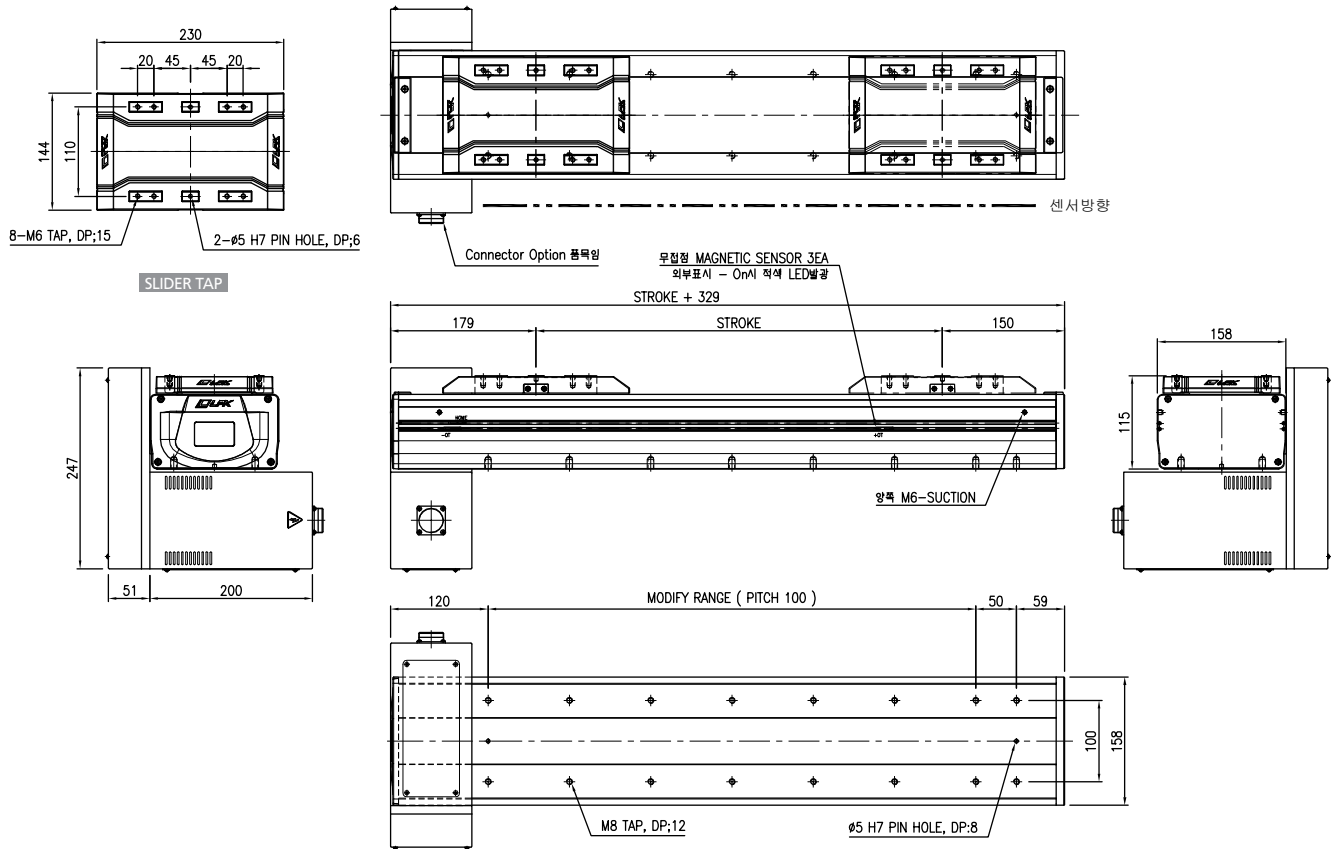


## BCP160-DRT

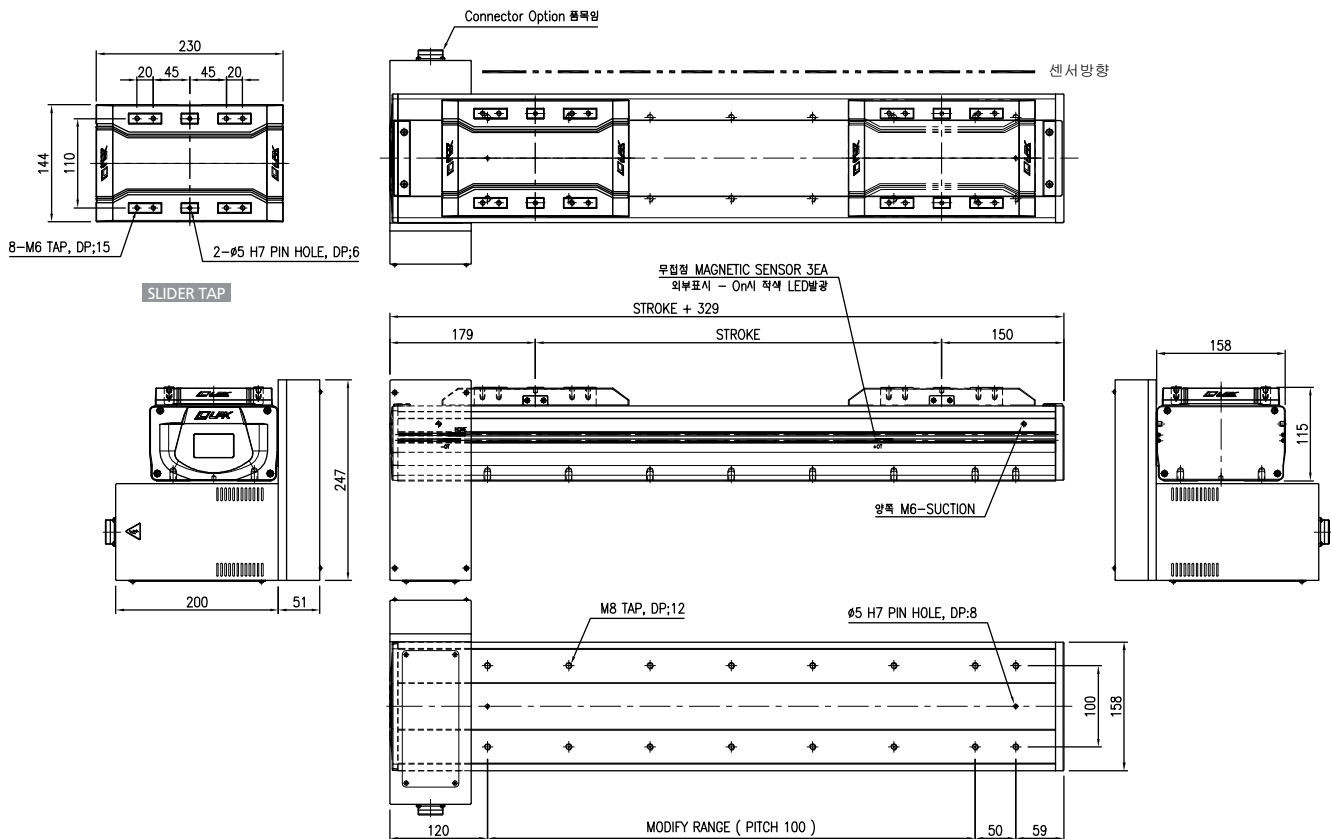


# BCP160 Series Timing Belt Clean ROBO System

## BCP160-ULT



## BCP160-URT



## Specification

|                                                |                                                          |      |
|------------------------------------------------|----------------------------------------------------------|------|
| • AC Servo Motor Output                        | 400W                                                     | 750W |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |      |
| • Repeatability                                | ±0.1 mm                                                  |      |
| • Drive System                                 | Timing Belt                                              |      |
| • Pulley Reduction Ratio (Standard)            | 1000rpm (1/3)                                            |      |
| • Stroke (mm)                                  | 100 ~ 2500                                               |      |
| • Drive Pulley & P.C.D                         | S5M-27NT , Ø42.97                                        |      |
| • Drive Belt                                   | S5M, 50W                                                 |      |
| • LM Guide Bearing                             | Two Way 25W-2BLOCK                                       |      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |      |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 1.85E + 06, I <sub>y</sub> = 2.61E + 07 |      |

## MAX SPEED &amp; Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |      |     | 750W |      |     |
|------------------------------|------|------|-----|------|------|-----|
| Reduction Ratio(Reducer)     | 3    | 5    | 10  | None | 5    | 10  |
| Max Speed (mm/sec)           | 2250 | 1350 | 675 | 2250 | 1350 | 675 |
| Max Payload(kg) (Horizontal) | 5    | 25   | 100 | 20   | 90   | 150 |

주1) Stroke 2500mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec, Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

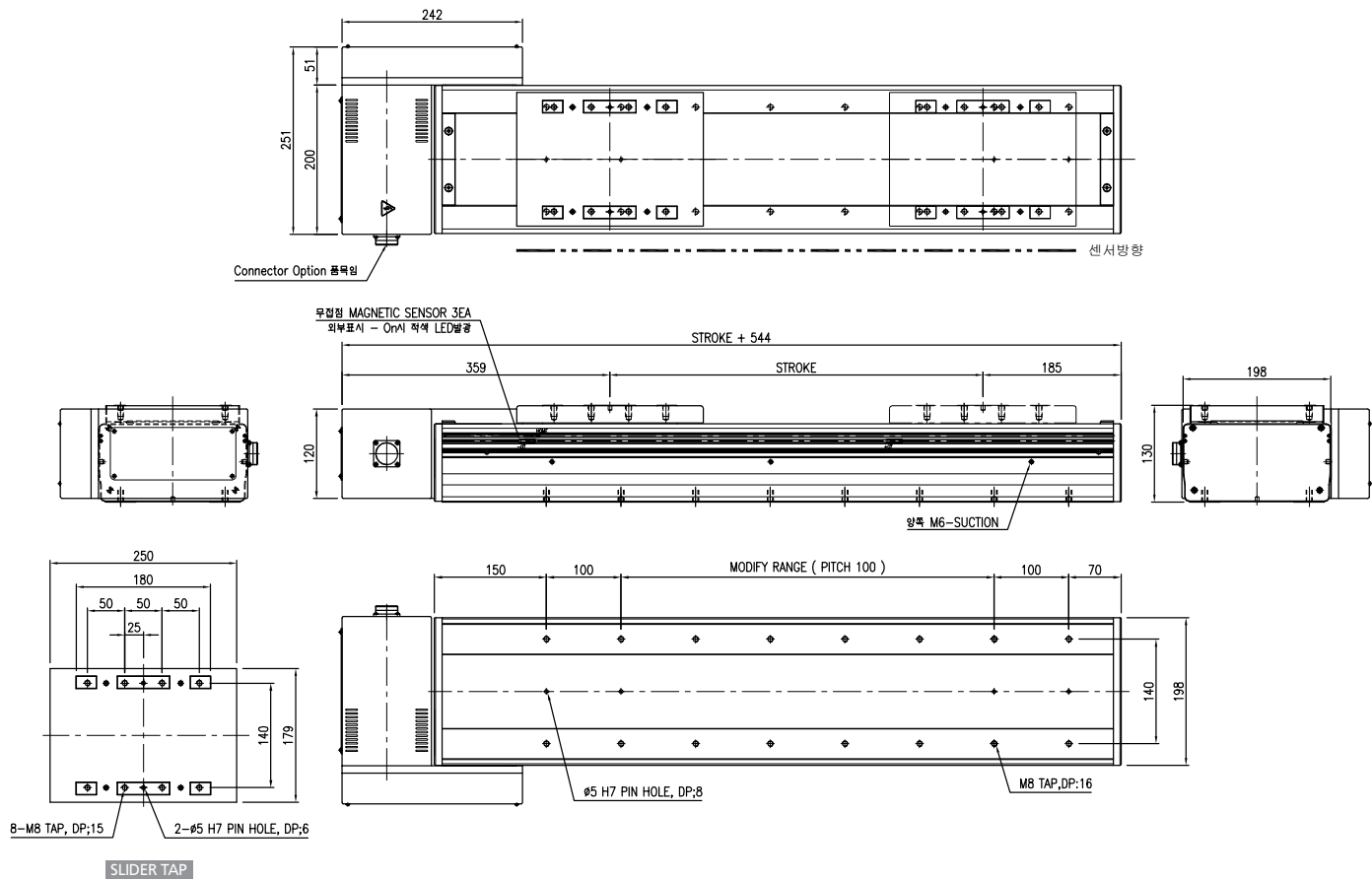
주4) 감속기 사용시 일부 품목의 치수가 변경될수 있음. 당사로 문의 요망

## Robot Weight

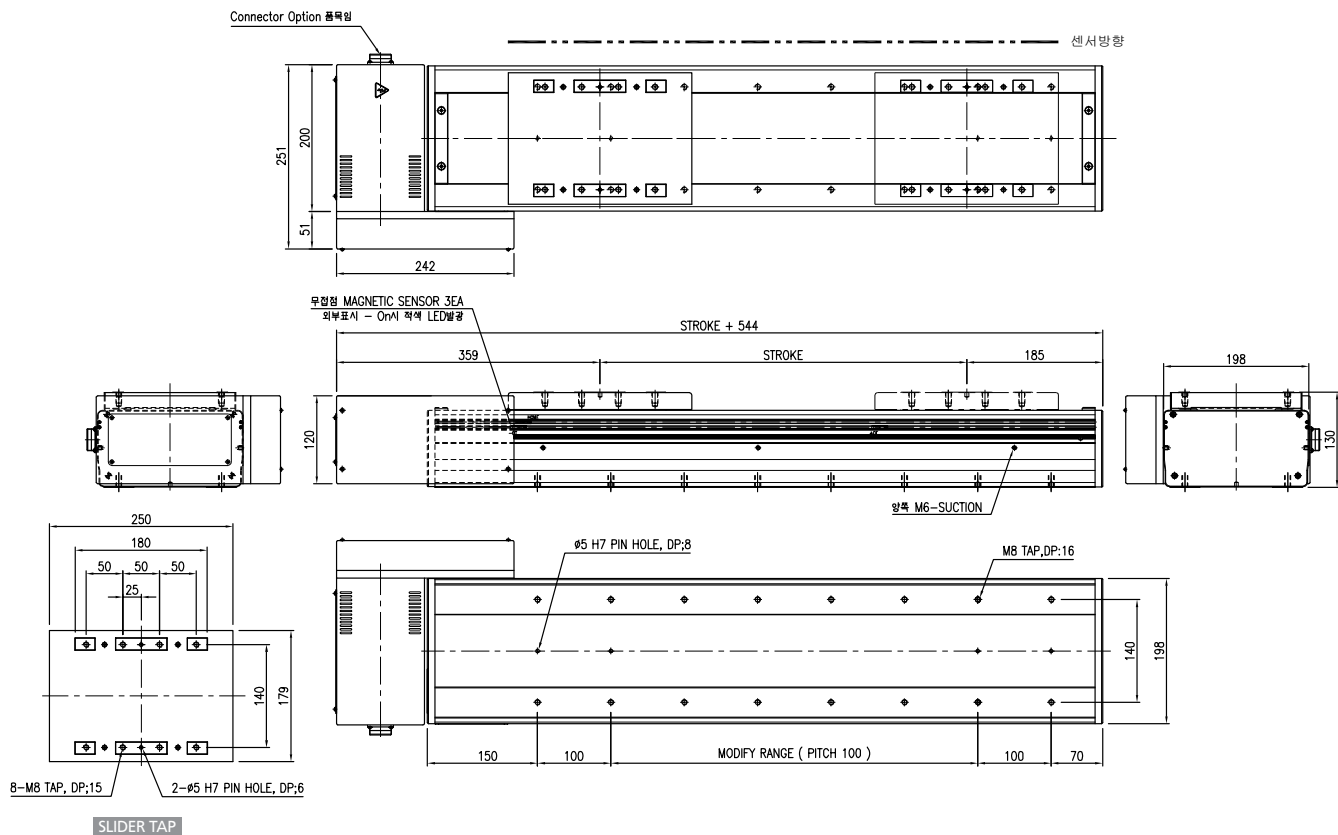
| Stroke (mm) |      | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | 2100 | 2200 | 2300 | 2400 | 2500 |
|-------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Weight (Kg) | 400W | 24.1 | 26.4 | 28.7 | 31   | 33.3 | 35.6 | 37.9 | 40.2 | 42.5 | 44.8 | 47.1 | 49.4 | 51.7 | 54   | 56.3 | 58.6 | 60.9 | 63.2 | 65.5 | 67.8 | 70.1 | 72.4 | 74.7 | 77   | 79.3 |
|             | 750W | 24.7 | 27   | 29.3 | 31.6 | 33.9 | 36.2 | 38.5 | 40.8 | 43.1 | 45.4 | 47.7 | 50   | 52.3 | 54.6 | 56.9 | 59.2 | 61.5 | 63.8 | 66.1 | 68.4 | 70.7 | 73   | 75.3 | 77.6 | 79.9 |

# BCP200 Series Timing Belt Clean ROBO System

## BCP160-FLT

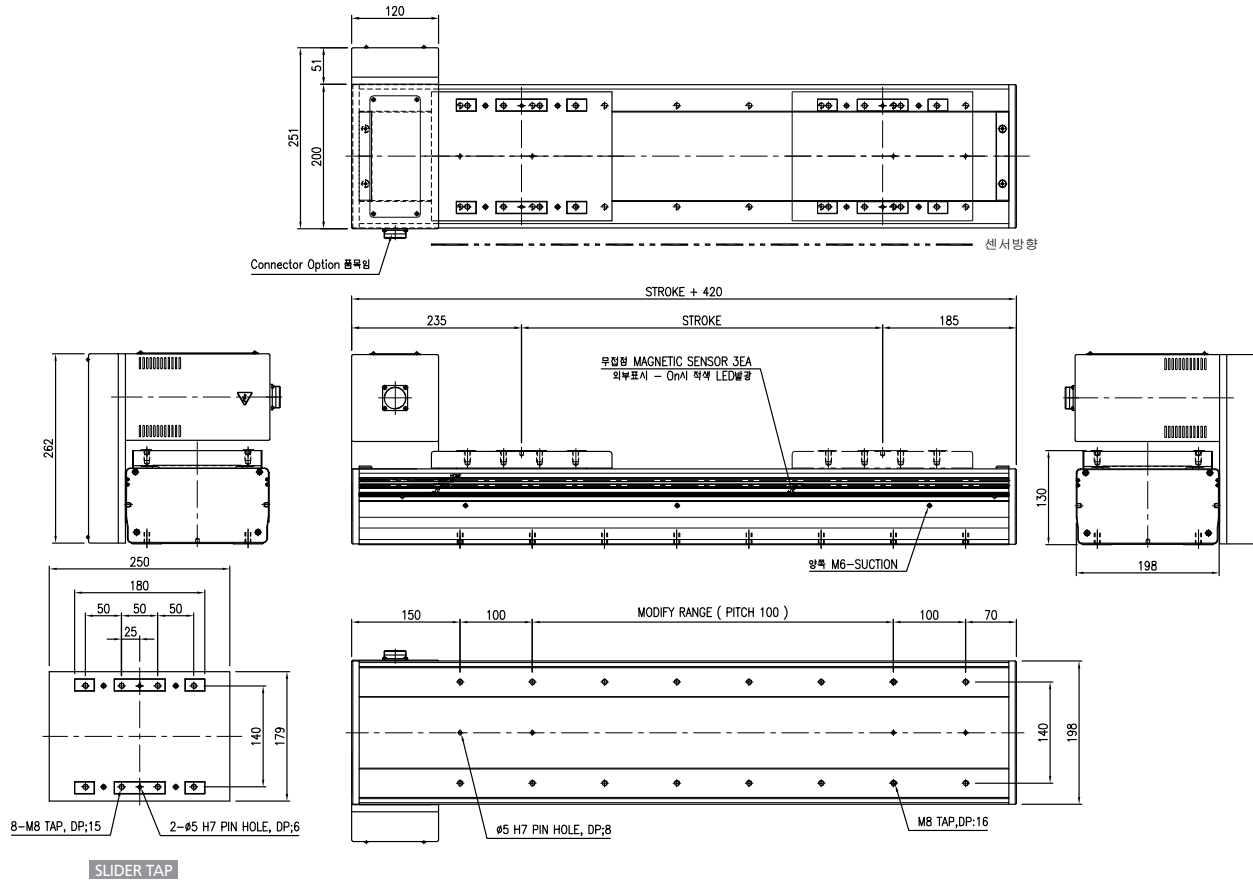


## BCP200-FRT

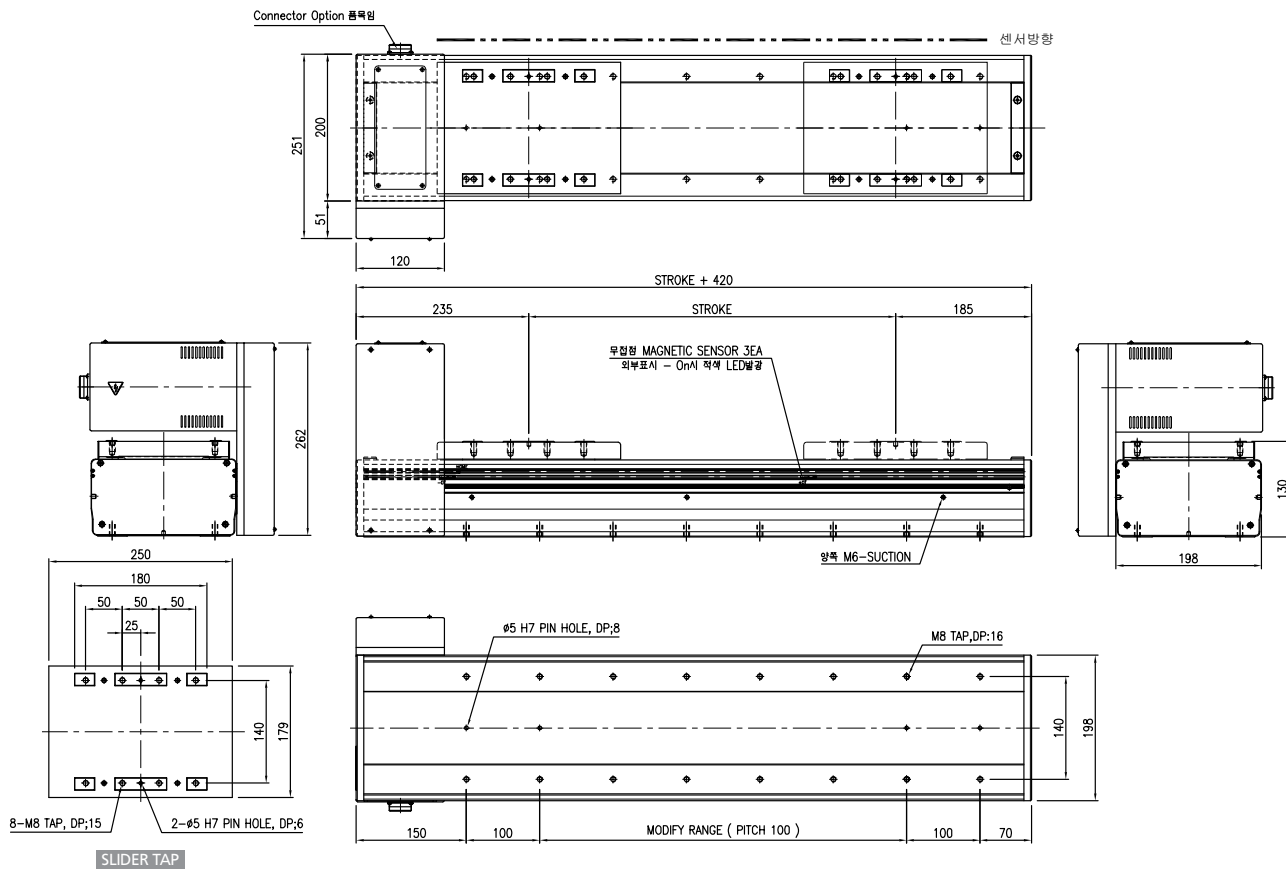




## BCP200-DLT

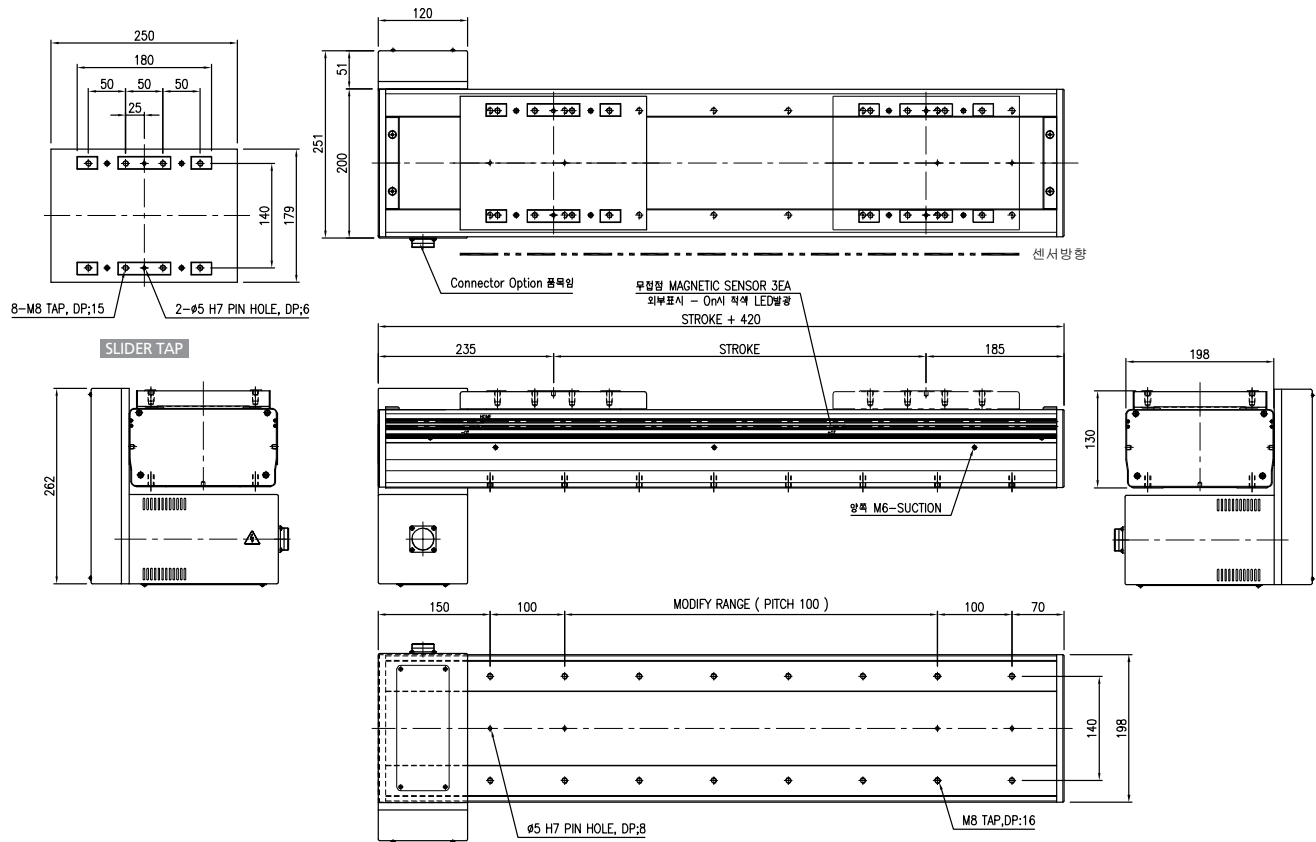


## BCP200-DRT

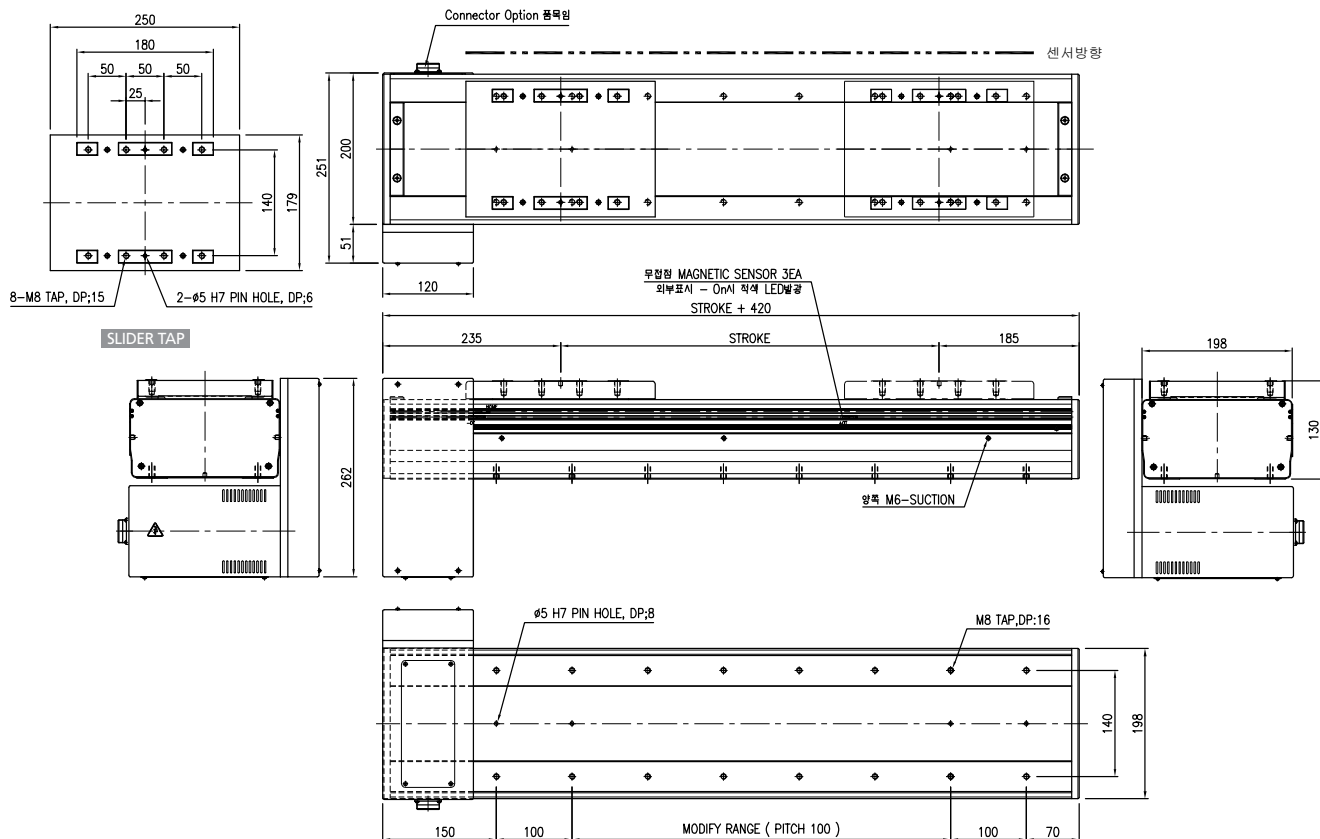


# BCP200 Series Timing Belt Clean ROBO System

## BCP200-ULT



## BCP200-URT



## BD Series

## BD080 Series

## BD100 Series

# Belt Direct ROBO System

## BD Series Model Code



BD 100 - S L T - 00 - 40 R5 - B R1 E1 C

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

### ① 형식 Type

BD - LPK Co., Ltd. Motor Direct Robot, Timing Belt Type

### ② Model

060 - Robot Width 60 mm, Height 80  
080 - Robot Width 80 mm, Height 105  
100 - Robot Width 100 mm, Height 130

### ③ Motor Shape

S - Straight Coupling Type

### ④ Motor Position

L - Motor Left Position Type  
R - Motor Right Position Type

### ⑤ Base Mount Hole

T - Tap Type

### ⑥ Stroke

The Distance Between - Limit and + Limit (mm)

### ⑦ Motor Capacity

20 - Motor Rated Output 200W  
40 - Motor Rated Output 400W

70 - Motor Rated Output 750W

1K - Motor Rated Output 1KW

### ⑧ Reduction Gear Option

R3~20 - Without Reduction Gear Ratio

### ⑨ Robot Color Option

None - Soft White Anodizing (Standard)

B - Soft Black Anodizing

### ⑩ Surface Treatment Option

None - Without Surface Treatment (Standard)

R1 - LM Rail Raydent

R2 - LM Rail and Block Raydent

### ⑪ Sensor Option

E1 - External Photo Sensor Only

E2 - External Photo Sensor + Connector

E3 - External Photo Sensor + Connector + Cable

### ⑫ Cableveyor Option

None - Without Cableveyor (Standard)

C - With Cableveyor

## SPECIFICATION

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 100~400W                                                 |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |
| • Repeatability                                | ±0.1 mm                                                  |
| • Drive System                                 | Timing Belt                                              |
| • Stroke (mm)                                  | 100 ~ 2500                                               |
| • Drive Pulley & P. C. D                       | S5M-26NT , Ø41.38                                        |
| • Drive Belt                                   | S5M, 25W                                                 |
| • LM Guide Bearing                             | One Way15-2BLOCK                                         |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 6.77E + 05, I <sub>y</sub> = 7.99E + 05 |

## MAX SPEED & Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 200W |     |     |
|------------------------------|------|-----|-----|
| Reduction Ratio (Reducer)    | 5    | 10  | 20  |
| Max Speed (mm/sec)           | 1300 | 650 | 330 |
| Max Payload(kg) (Horizontal) | 15   | 50  | 70  |

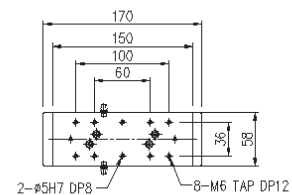
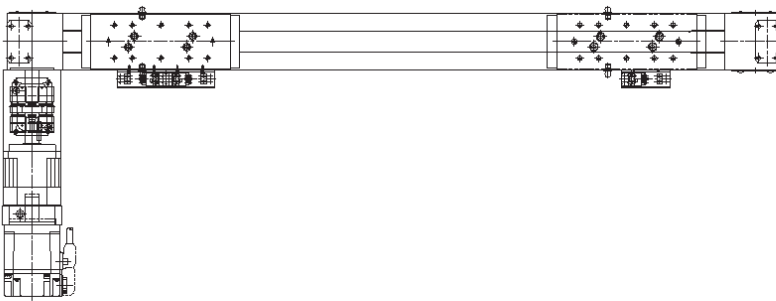
주1) Stroke 3000mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec  
 Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

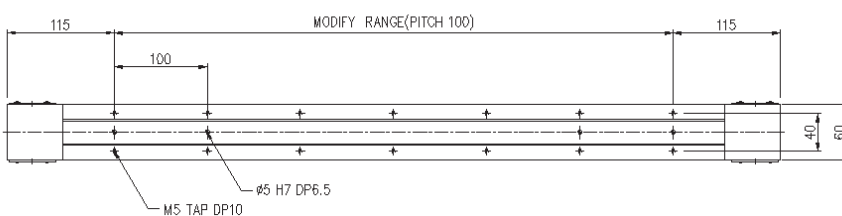
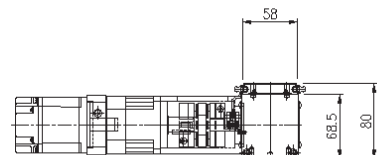
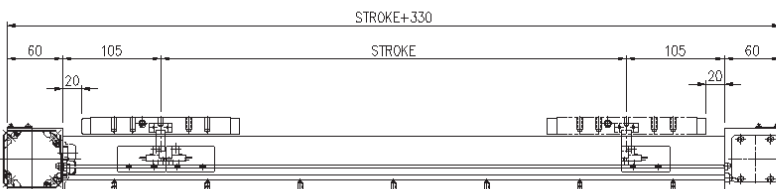
주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## ROBOT WEIGHT

| Stroke (mm) | 500 | 1000 | 1500 | 2000 | 2500 |
|-------------|-----|------|------|------|------|
| Weight (Kg) | 8   | 10.5 | 13   | 15.5 | 18   |



SLIDER TAP



# BD080 Series Belt Direct ROBO System

## SPECIFICATION

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 200~750W                                                 |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |
| • Repeatability                                | ±0.1 mm                                                  |
| • Drive System                                 | Timing Belt                                              |
| • Stroke (mm)                                  | 100 ~ 3000                                               |
| • Drive Pulley & P. C. D                       | S8M-22NT , Ø56.02                                        |
| • Drive Belt                                   | S8M, 30W                                                 |
| • LM Guide Bearing                             | One Way 20-2BLOCK                                        |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 19.2E + 05, I <sub>y</sub> = 24.5E + 05 |

## MAX SPEED & Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |     |     |
|------------------------------|------|-----|-----|
| Reduction Ratio (Reducer)    | 5    | 10  | 20  |
| Max Speed (mm/sec)           | 1760 | 880 | 440 |
| Max Payload(kg) (Horizontal) | 20   | 70  | 110 |

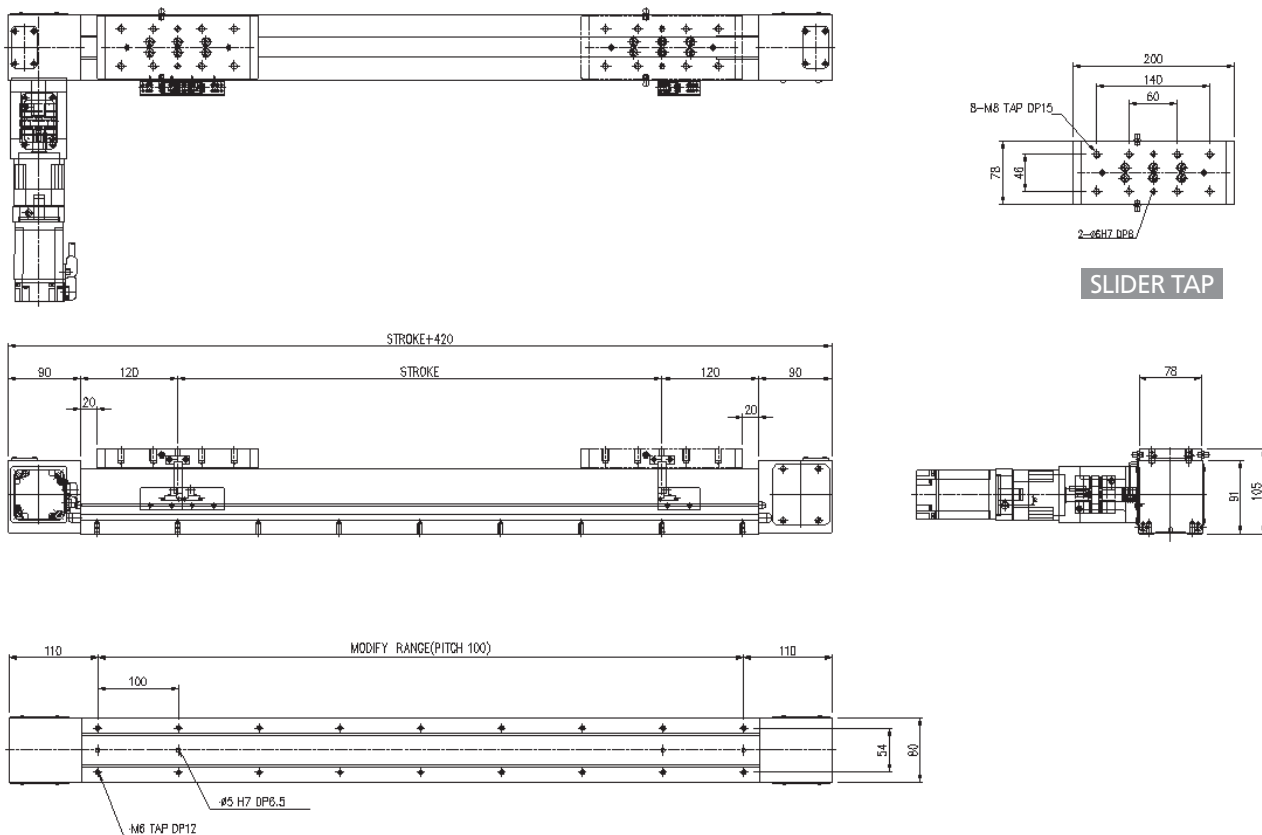
주1) Stroke 3000mm 초과 사용 시 당사로 팔히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec  
 Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## ROBOT WEIGHT

| Stroke (mm) | 500 | 1000 | 1500 | 2000 | 2500 | 3000 |
|-------------|-----|------|------|------|------|------|
| Weight (Kg) | 18  | 23.5 | 29   | 34.5 | 40   | 45.5 |



## SPECIFICATION

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 750W~1KW                                                 |
| • AC Servo Motor RPM                           | 3000 RPM / 2000 RPM                                      |
| • Repeatability                                | ±0.1 mm                                                  |
| • Drive System                                 | Timing Belt                                              |
| • Stroke (mm)                                  | 100 ~ 3000                                               |
| • Drive Pulley & P. C. D                       | S8M-28NT , Ø71.3                                         |
| • Drive Belt                                   | S8M, 50W                                                 |
| • LM Guide Bearing                             | One Way 30 -2BLOCK                                       |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 49.1E + 05, I <sub>y</sub> = 63.3E + 05 |

## MAX SPEED & Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 750W |      |     |
|------------------------------|------|------|-----|
| Reduction Ratio (Reducer)    | 5    | 10   | 20  |
| Max Speed (mm/sec)           | 2240 | 1120 | 560 |
| Max Payload(kg) (Horizontal) | 30   | 80   | 150 |

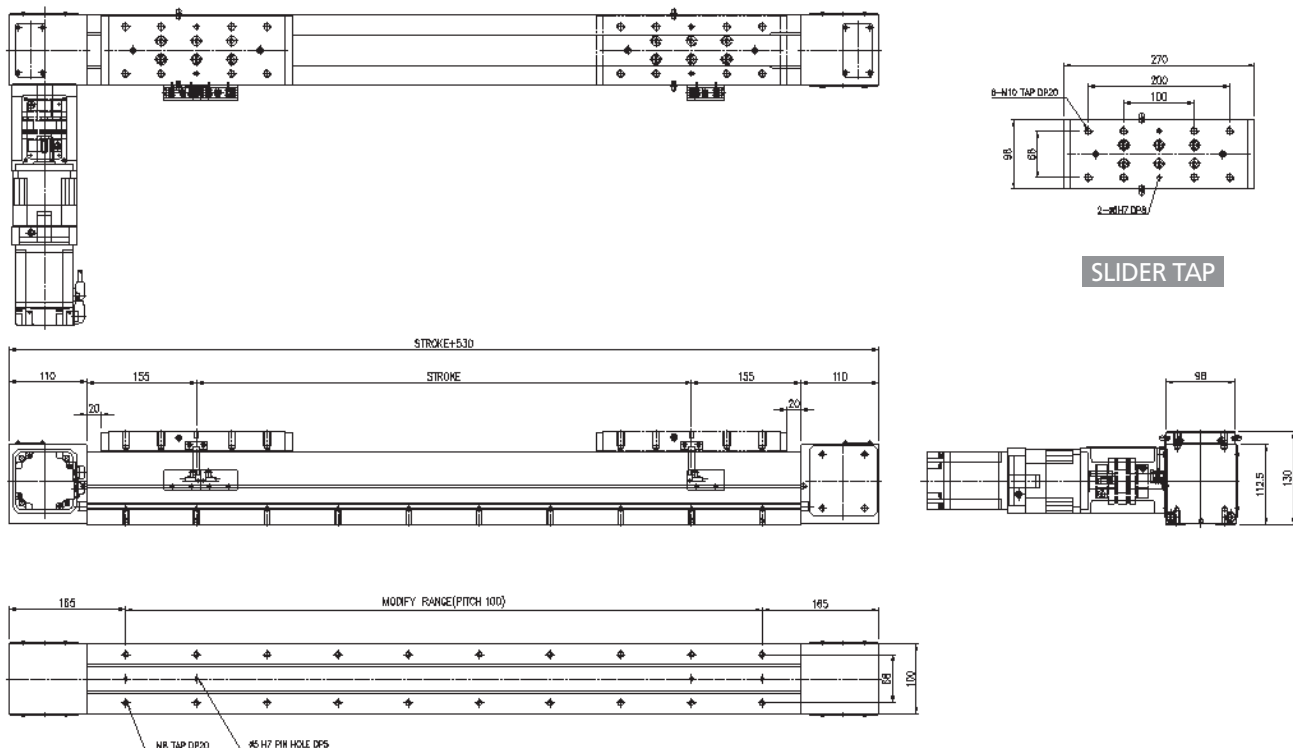
주1) Stroke 3000mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec  
 Servo motor Rotate : 3000rpm(750W), 2000rpm(1KW)/, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## ROBOT WEIGHT

| Stroke (mm) | 500  | 1000 | 1500 | 2000 | 2500 | 3000 |
|-------------|------|------|------|------|------|------|
| Weight (Kg) | 30.5 | 39   | 47.5 | 56   | 64.5 | 73   |







Belt Clean Direct ROBO System

# BCD Series

BCD060 Series

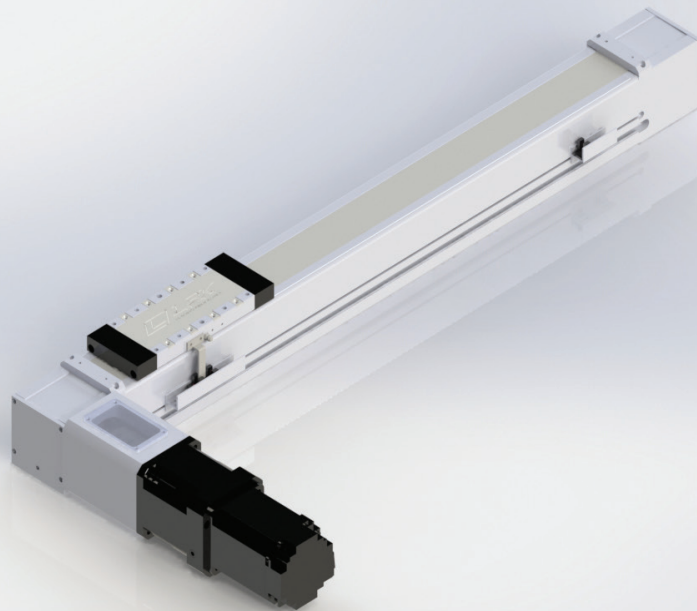
BCD080 Series

BCD0100 Series

# Belt Clean Direct ROBO System

## BCD Series Model Code

- LONG STROKE 대응 및 고속 이동 실현
- 컴팩트한 디자인과 로봇의 소형화
- 저렴한 비용과 단납기 실현
- 쉬운 유지 보수 및 벨트 장력조절
- 다양한 고객 요구 및 특수 대응 가능
- 외부 그리스 주입방식으로 그리스 주입 용이
- CLEAN TYPE으로 청정도 유지 가능



BCD 100 - S L T - 00 - 40 R5 - B R1 E1 C

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨ ⑩ ⑪ ⑫

### ① 형식 Type

BCD - LPK Co., Ltd. Motor Direct Robot, Timing Belt Clean Type

70 - Motor Rated Output 750W

1K - Motor Rated Output 1KW

### ② Model

060 - Robot Width 60 mm, Height 80

080 - Robot Width 80 mm, Height 105

100 - Robot Width 100 mm, Height 130

### ⑧ Reduction Gear Option

R3~20 - Without Reduction Gear Ratio

### ⑨ Robot Color Option

None - Soft White Anodizing (Standard)

B - Soft Black Anodizing

### ③ Motor Shape

S - Straight Coupling Type

### ⑩ Surface Treatment Option

None - Without Surface Treatment (Standard)

R1 - LM Rail Raydent

R2 - LM Rail and Block Raydent

### ④ Motor Position

L - Motor Left Position Type

R - Motor Right Position Type

### ⑪ Sensor Option

E1 - External Photo Sensor Only

E2 - External Photo Sensor + Connector

E3 - External Photo Sensor + Connector + Cable

### ⑤ Base Mount Hole

T - Tap Type

### ⑥ Stroke

The Distance Between - Limit and + Limit (mm)

### ⑫ Cableveyor Option

None - Without Cableveyor (Standard)

C - With Cableveyor

### ⑦ Motor Capacity

20 - Motor Rated Output 200W

40 - Motor Rated Output 400W

## SPECIFICATION

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 100~400W                                                 |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |
| • Repeatability                                | ±0.1 mm                                                  |
| • Drive System                                 | Timing Belt                                              |
| • Stroke (mm)                                  | 100 ~ 2500                                               |
| • Drive Pulley & P. C. D                       | S5M-26NT , Ø41.38                                        |
| • Drive Belt                                   | S5M, 25W                                                 |
| • LM Guide Bearing                             | One Way15-2BLOCK                                         |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 6.77E + 05, I <sub>y</sub> = 7.99E + 05 |

## MAX SPEED & Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 200W |     |     |
|------------------------------|------|-----|-----|
| Reduction Ratio (Reducer)    | 5    | 10  | 20  |
| Max Speed (mm/sec)           | 1300 | 650 | 330 |
| Max Payload(kg) (Horizontal) | 15   | 50  | 70  |

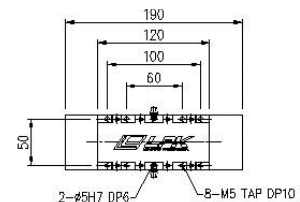
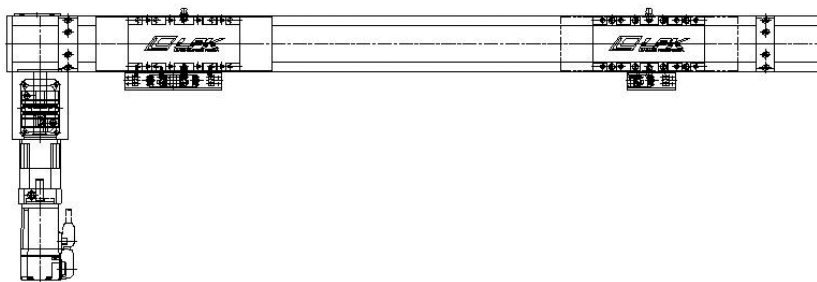
주1) Stroke 3000mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec  
 Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

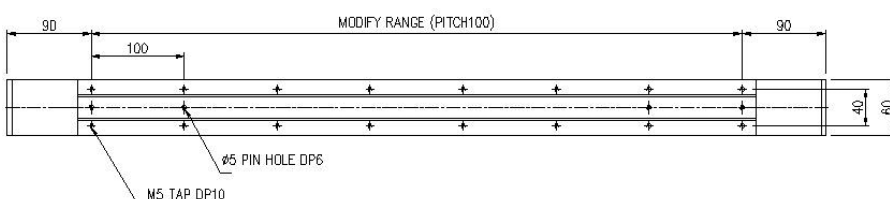
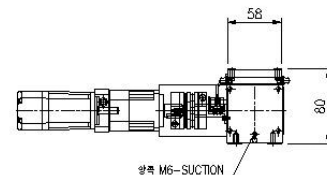
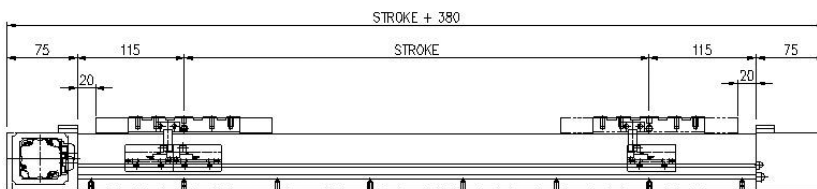
주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## ROBOT WEIGHT

| Stroke (mm) | 500 | 1000 | 1500 | 2000 | 2500 |
|-------------|-----|------|------|------|------|
| Weight (Kg) | 8   | 10.5 | 13   | 15.5 | 18   |



SLIDER TAP



# BCD080 Series Belt Clean Direct ROBO System

## SPECIFICATION

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 200~750W                                                 |
| • AC Servo Motor RPM                           | 3000 RPM                                                 |
| • Repeatability                                | ±0.1 mm                                                  |
| • Drive System                                 | Timing Belt                                              |
| • Stroke (mm)                                  | 100 ~ 3000                                               |
| • Drive Pulley & P. C. D                       | S8M-22NT , Ø56.02                                        |
| • Drive Belt                                   | S8M, 30W                                                 |
| • LM Guide Bearing                             | One Way 20-2BLOCK                                        |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 19.2E + 05, I <sub>y</sub> = 24.5E + 05 |

## MAX SPEED & Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 400W |     |     |
|------------------------------|------|-----|-----|
| Reduction Ratio (Reducer)    | 5    | 10  | 20  |
| Max Speed (mm/sec)           | 1760 | 880 | 440 |
| Max Payload(kg) (Horizontal) | 20   | 70  | 110 |

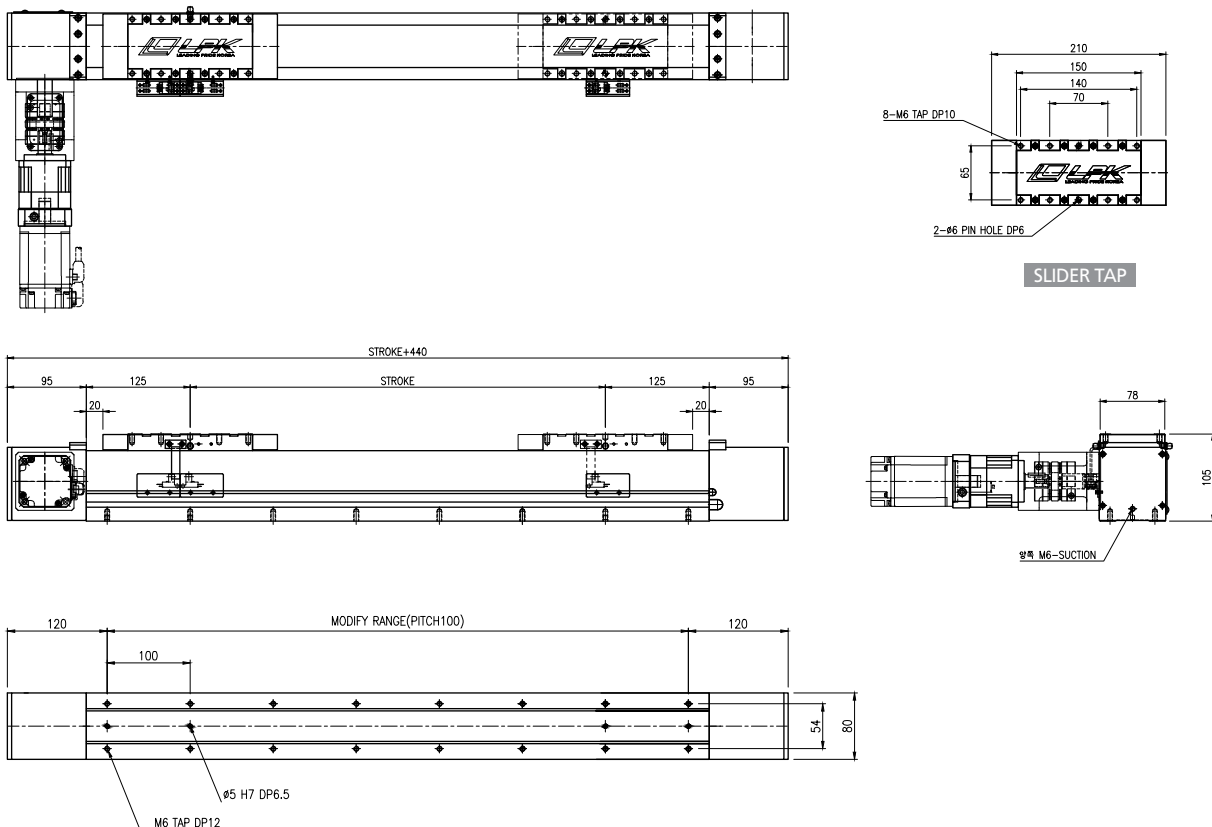
주1) Stroke 3000mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec  
 Servo motor Rotate : 3000rpm, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 20000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## ROBOT WEIGHT

| Stroke (mm) | 500  | 1000 | 1500 | 2000 | 2500 | 3000 |
|-------------|------|------|------|------|------|------|
| Weight (Kg) | 18.5 | 24   | 29.5 | 35   | 40.5 | 46   |



## SPECIFICATION

|                                                |                                                          |
|------------------------------------------------|----------------------------------------------------------|
| • AC Servo Motor Output                        | 750W~1KW                                                 |
| • AC Servo Motor RPM                           | 3000 RPM / 2000 RPM                                      |
| • Repeatability                                | ±0.1 mm                                                  |
| • Drive System                                 | Timing Belt                                              |
| • Stroke (mm)                                  | 100 ~ 3000                                               |
| • Drive Pulley & P. C. D                       | S8M-28NT , Ø71.3                                         |
| • Drive Belt                                   | S8M, 50W                                                 |
| • LM Guide Bearing                             | One Way 30 -2BLOCK                                       |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                         |
| • Base Second Moment of Area(mm <sup>4</sup> ) | I <sub>x</sub> = 49.1E + 05, I <sub>y</sub> = 63.3E + 05 |

### MAX SPEED & Max PAY LOAD (Horizontal Only)

| AC Servo Motor Output        | 750W |      |     |
|------------------------------|------|------|-----|
| Reduction Ratio (Reducer)    | 5    | 10   | 20  |
| Max Speed (mm/sec)           | 2240 | 1120 | 560 |
| Max Payload(kg) (Horizontal) | 30   | 80   | 150 |

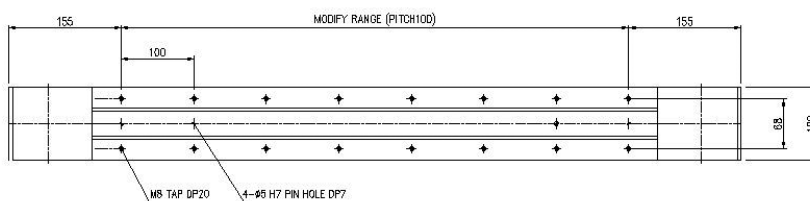
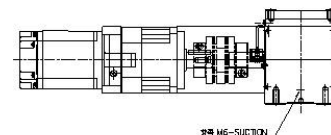
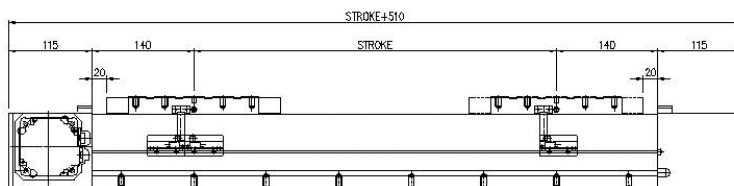
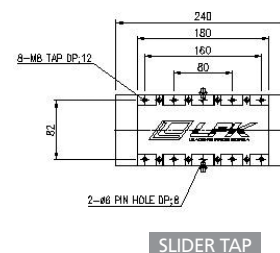
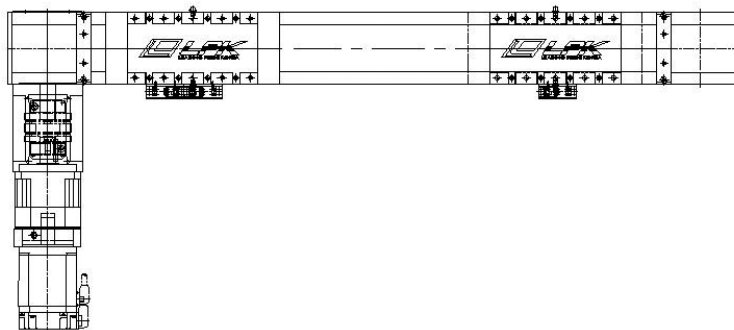
주1) Stroke 3000mm 초과 사용 시 당사로 필히 문의 요망.

주2) Stroke : 1000mm, Speed : Max Speed, Acceleration : 0.3 sec  
 Servo motor Rotate : 3000rpm(750W), 2000rpm(1KW)/, Pause Time : 0 sec  
 Lm Guide 수명 조건 : 정하중, 분당왕복수 : Max, 수명시간&거리 : 200000이상 조건임.

주3) 벽면부착(Wall Mount)사용 조건 시 당사로 문의 요망.

## ROBOT WEIGHT

| Stroke (mm) |      | 500 | 1000 | 1500 | 2000 | 2500 | 3000 |
|-------------|------|-----|------|------|------|------|------|
| Weight (Kg) | 750W | 40  | 39.5 | 48   | 56.5 | 65   | 73.5 |







Linear

# LPS Series



LPS150 Series

LPS155 Series

LPS180 Series

LPS220 Series

LPS300 Series

Linear

## LPS Series Model Code

|     |     |   |   |   |      |   |     |   |     |   |   |    |   |
|-----|-----|---|---|---|------|---|-----|---|-----|---|---|----|---|
| LPS | 220 | Y | C | - | 1500 | - | 120 | S | 010 | - | B | R1 | C |
| ①   | ②   | ③ | ④ |   | ⑤    |   | ⑥   | ⑦ | ⑧   |   | ⑨ | ⑩  | ⑪ |

### ① 형식 TType

LPS - LPK Co., Ltd. Motor Direct Robot, Linear Motor Robot Type

### ② Body Size

150 - Robot Width 150 mm  
155 - Robot Width 155 mm  
180 - Robot Width 180 mm  
220 - Robot Width 220 mm  
300 - Robot Width 300 mm

### ③ Linear Motor Maker

Y - Yaskawa Linear Motor  
M - Mitsubishi Linear Motor  
S - Sewoo Linear Motor  
P - Parker Linear Motor

### ④ Motor Shape

None - Ironcore Type Linear Motor  
C - Coreless Type Linear Motor

### ⑤ Stroke

The Distance Between - Limit and + Limit (mm)

### ⑥ Motor Capacity

The Linear Motor Peak Force(N)/10  
Ex)1200N = 120

### ⑦ Slide Table Q'ty

S - Slide Table 1 Set (Single)  
D - Slide Table 2 Set (Double)  
T - Slide Table 3 Set (Triple)  
Q - Slide Table 4 Set (Quad)  
S5~ - Slide Table Q'ty (User Option)

### ⑧ Linear Scale Resolution

The Linear Scale Resolution ( $\mu\text{m}$ ) x 10 (Digital)  
010 - Scale resolution 1 $\mu\text{m}$  (Digital)  
A - Analog Linear Scale

### ⑨ Linear Robot Color Option

W - Soft White Anodizing (Standard)  
B - Soft Black Anodizing

### ⑩ Surface Treatment Option

None - Without Surface Treatment (Standard)  
R1 - LM Rail Raydent  
R2 - LM Rail & Block Raydent

### ⑪ Cableveyor Option

None - Without Cableveyor (Standard)  
C - With Cableveyor



Linear

## LPS150 Series

LEADING PRIDE KOREA

## BASIC SPECIFICATION

|                                                |                                  |
|------------------------------------------------|----------------------------------|
| • Repeatability                                | ±2μm (Resolution 1μm)            |
|                                                | ±0.5μm (Resolution 0.1μm)        |
| • Flatness/Straightness                        | ±10μm / 300 mm                   |
| • Accuracy                                     | ±10μm / 300 mm                   |
| • Deceleration Mechanism                       | LINEAR MOTOR                     |
| • LM Guide Bearing                             | Two Way 15V-2BLOCK               |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix=3.89E+06 Iy=4.57E+06          |

## LINEAR MOTOR SPECIFICATION

| MODEL                 |            | LPS150Y        |                |                |                | LPS150M      | LPS150S                  |
|-----------------------|------------|----------------|----------------|----------------|----------------|--------------|--------------------------|
| Linear motor Maker    |            | YASKAWA        |                |                |                | MITSUBISHI   | SEWOO                    |
|                       |            | SGLFW-20A090AP | SGLFW-20A120AP | SGLFW-35A120AP | SGLFW-35A230AP | LM-H3P2A-07P | SWL-PMI10C               |
| Max Speed (mm/s)      |            | 2000           |                |                |                | 2000         | 2000                     |
| FORCE (N)             | Continuous | 25             | 40             | 80             | 160            | 70           | 18.8                     |
|                       | Max        | 86             | 125            | 220            | 440            | 175          | 56.4                     |
| Current (Arms)        | Continuous | 0.7            | 0.8            | 1.4            | 2.8            | 1.8          | 1.3                      |
|                       | Max        | 3              | 2.9            | 4.4            | 8.8            | 5.8          | 3.9                      |
| Serial Converter      |            | JZDP-D008-017  | JZDP-D008-018  | JZDP-D008-019  | JZDP-D008-020  | -            | -                        |
| Linear Encoder Signal |            | Analog         |                |                |                | Digital      | Digital                  |
| Servo Drive           |            | SGDV-1R6A05A   |                |                |                | MR-J4-40-RJ  | MADHT1507LA1 (PANASONIC) |

| MODEL                 |            | LPS150S                  |            |            | LPS150P   |           |           |
|-----------------------|------------|--------------------------|------------|------------|-----------|-----------|-----------|
| Linear motor Maker    |            | SEWOO                    |            |            | PARKER    |           |           |
|                       |            | SWL-PMI20C               | SWL-PMI30C | SWL-PMI40C | R5-1E-S   | R5-2E-S   | R5-2E-P   |
| Max Speed (mm/s)      |            | 2000                     |            |            | 2000      |           |           |
| FORCE (N)             | Continuous | 38                       | 56.8       | 75.2       | 55        | 110       | 110       |
|                       | Max        | 114                      | 170.5      | 225.7      | 175       | 350       | 350       |
| Current (Arms)        | Continuous | 1.3                      | 1.3        | 1.3        | 2.3       | 2.3       | 4.5       |
|                       | Max        | 3.9                      | 3.9        | 3.9        | 7.9       | 7.9       | 15.7      |
| Serial Converter      |            | -                        | -          | -          | -         | -         | -         |
| Linear Encoder Signal |            | Digital                  |            |            | Digital   |           |           |
| Servo Drive           |            | MADHT1507LA1 (PANASONIC) |            |            | MBDHT2510 | MBDHT2510 | MCDHT3520 |

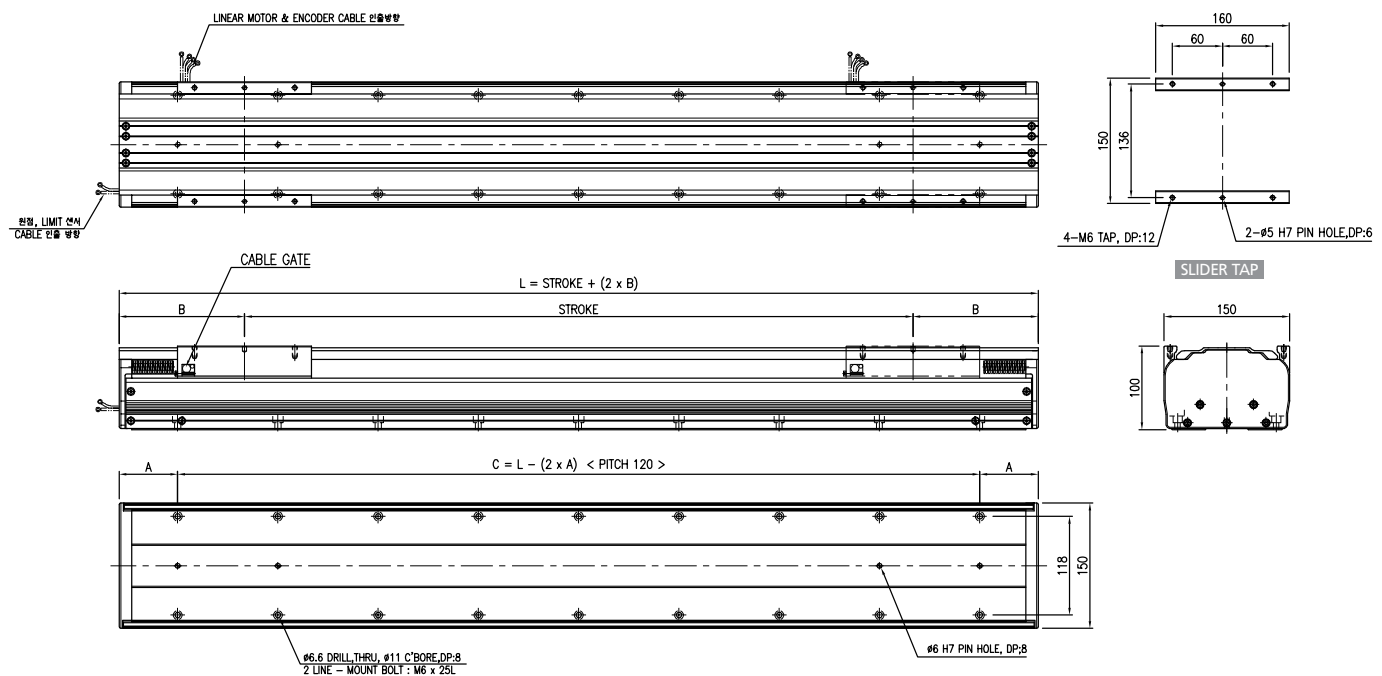
주1) 상기 MAKER 이외의 타사 MAKER 도 적용 가능. 당사로 필히 문의 요망.

## LINEAR WEIGHT

| STOKE(mm)  |                | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1500 | 2000 | 2500 |
|------------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| YASKAWA    | SGLFW-20A090AP | 14.7 | 16.3 | 17.9 | 19.5 | 21.1 | 22.7 | 24.3 | 25.9 | 27.5 | 29.1 | 30.7 | 32.3 | 37.1 | 45.1 | 53.1 |
|            | SGLFW-20A120AP | 15.4 | 17.0 | 18.6 | 20.2 | 21.8 | 23.4 | 25.0 | 26.6 | 28.2 | 29.8 | 31.4 | 33.0 | 37.8 | 45.8 | 53.8 |
|            | SGLFW-35A120AP | 17.8 | 19.6 | 21.4 | 23.2 | 25.0 | 26.8 | 28.6 | 30.4 | 32.2 | 34.0 | 35.8 | 37.6 | 43.0 | 52.0 | 61.0 |
|            | SGLFW-35A230AP | 20.2 | 22.0 | 23.8 | 25.6 | 27.4 | 29.2 | 31.0 | 32.8 | 34.6 | 36.4 | 38.2 | 40.0 | 45.4 | 54.4 | 63.4 |
| MITSUBISHI | LM-H3P2A-07P   | 14.9 | 16.5 | 18.0 | 19.6 | 21.2 | 22.8 | 24.3 | 25.9 | 27.5 | 29.0 | 30.6 | 32.2 | 36.9 | 44.7 | 52.6 |
|            | SWL-PMI10C     | 16.7 | 18.1 | 19.4 | 20.8 | 22.1 | 23.5 | 24.8 | 26.2 | 27.5 | 28.9 | 30.2 | 31.6 | 35.6 | 42.4 | 49.1 |
| SEWOO      | SWL-PMI20C     | 16.9 | 18.3 | 19.6 | 21.0 | 22.3 | 23.7 | 25.0 | 26.4 | 27.7 | 29.1 | 30.4 | 31.8 | 35.8 | 42.6 | 49.3 |
|            | SWL-PMI30C     | 17.1 | 18.5 | 19.8 | 21.2 | 22.5 | 23.9 | 25.2 | 26.6 | 27.9 | 29.3 | 30.6 | 32.0 | 36.0 | 42.8 | 49.5 |
|            | SWL-PMI40C     | 17.8 | 19.2 | 20.5 | 21.9 | 23.2 | 24.6 | 25.9 | 27.3 | 28.6 | 30.0 | 31.3 | 32.7 | 36.7 | 43.5 | 50.2 |
| PARKER     | R5-1E          | 15.7 | 17.3 | 19.0 | 20.6 | 22.2 | 23.9 | 25.5 | 27.1 | 28.7 | 30.4 | 32.0 | 33.6 | 38.5 | 46.7 | 54.8 |
|            | R5-2E          | 18.7 | 20.3 | 22.0 | 23.6 | 25.3 | 26.9 | 28.5 | 30.2 | 31.8 | 33.5 | 35.1 | 36.7 | 41.7 | 49.9 | 58.1 |

# LPS150 Series Linear

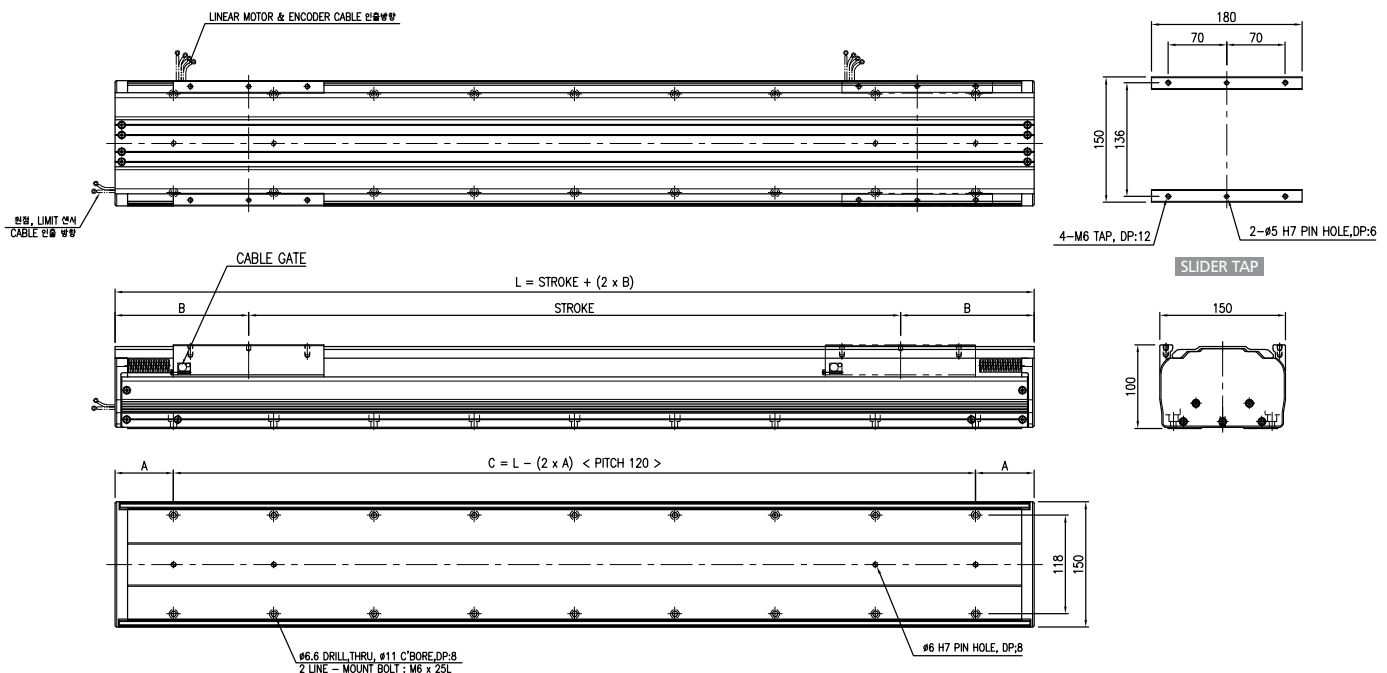
# LPS150-1



## 적용 가능 LINEAR MOTOR

| MODEL              | LPS150Y        | LPS150M      | LPS150S    |            |            | LPS150P |
|--------------------|----------------|--------------|------------|------------|------------|---------|
| Linear motor Maker | YASKAWA        | mitsubishi   | SEWOO      |            |            | PARKER  |
|                    | SGLFW-20A090AP | LM-H3P2A-07P | SWL-PMI10C | SWL-PMI20C | SWL-PMI30C | R5-1E-S |

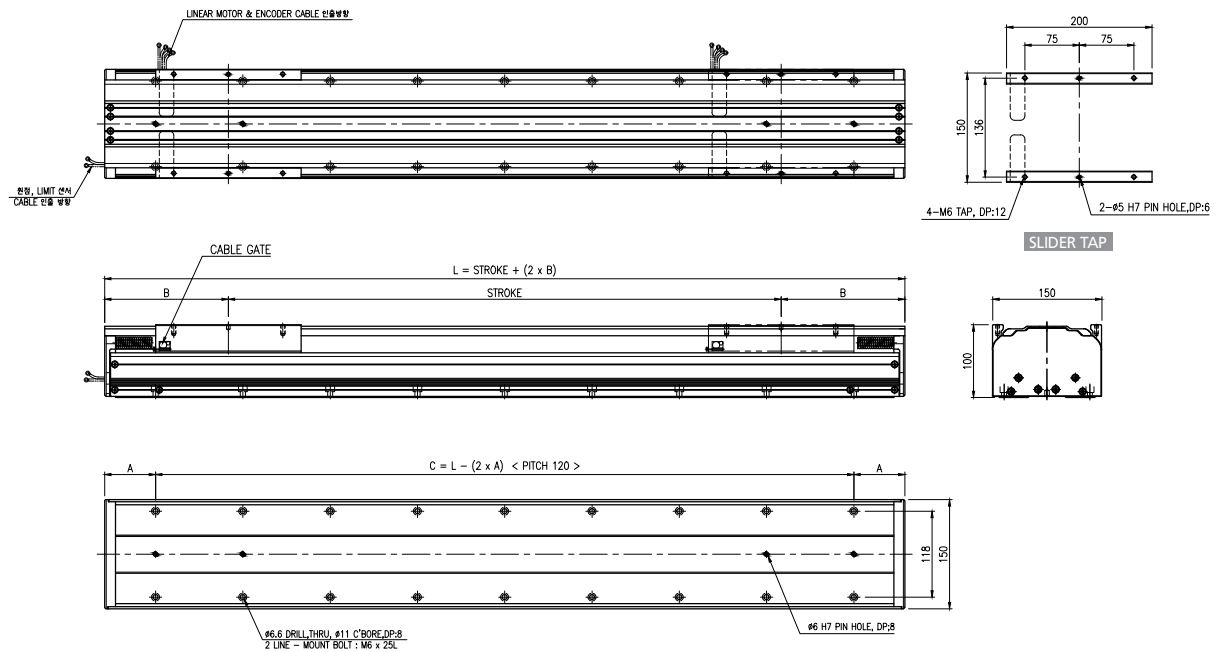
# LPS150-2



## 적용 가능 LINEAR MOTOR

| MODEL              | LPS150Y        | LPS150S    |
|--------------------|----------------|------------|
| Linear motor Maker | YASKAWA        | SEWOO      |
|                    | SGLEW-20A120AP | SWI-PMI40C |

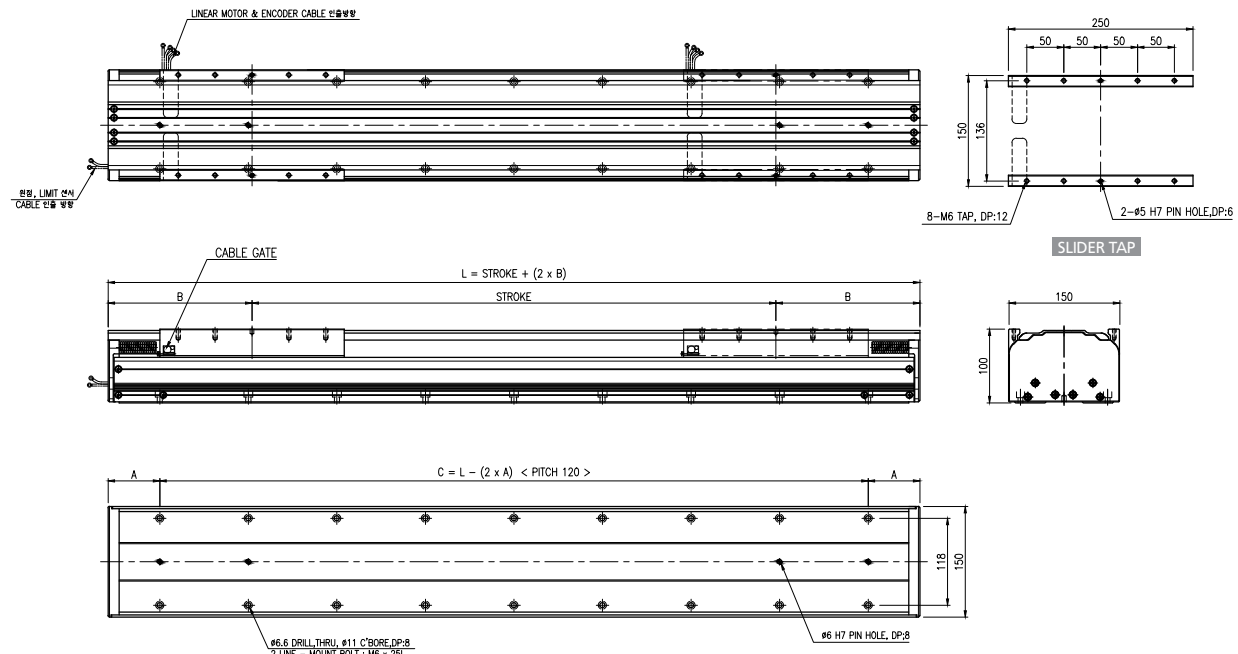
## LPS150-3



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS150Y        |
|--------------------|----------------|
| Linear motor Maker | YASKAWA        |
|                    | SGLFW-35A120AP |

## LPS150-4



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS150Y        | LPS150P            |
|--------------------|----------------|--------------------|
| Linear motor Maker | YASKAWA        | PARKER             |
|                    | SGLFW-35A230AP | R5-2E-S<br>R5-2E-P |

# Linear LPS155 Series

## BASIC SPECIFICATION

|                                                |                                  |
|------------------------------------------------|----------------------------------|
| • Repeatability                                | ±2μm (Resolution 1μm)            |
|                                                | ±0.5μm (Resolution 0.1μm)        |
| • Flatness/Straightness                        | ±10μm / 300 mm                   |
| • Accuracy                                     | ±10μm / 300 mm                   |
| • Deceleration Mechanism                       | LINEAR MOTOR                     |
| • LM Guide Bearing                             | Two Way 15W-2BLOCK ~ 4BLOCK      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix=2.56E+06 Iy=2.58E+06          |

## LINEAR MOTOR SPECIFICATION

| MODEL                 |            | LPS150Y      |              |              |              | LPS155S                  |            |            |            |
|-----------------------|------------|--------------|--------------|--------------|--------------|--------------------------|------------|------------|------------|
| Linear motor Maker    |            | MITSUBISHI   |              |              |              | SEWOO                    |            |            |            |
|                       |            | LM-H3P3A-12P | LM-H3P3B-24P | LM-H3P3C-36P | LM-H3P3D-48P | SWL-PS-10C               | SWL-PS-20C | SWL-PS-30C | SWL-PS-40C |
| Max Speed (mm/s)      |            | 2000         |              |              |              | 2000                     |            |            |            |
| FORCE (N)             | Continuous | 120          | 240          | 360          | 480          | 42.1                     | 84.5       | 125.1      | 166.7      |
|                       | Max        | 300          | 600          | 900          | 1200         | 126.3                    | 253.5      | 375.3      | 500.1      |
| Current (Arms)        | Continuous | 1.7          | 3.4          | 5.1          | 6.8          | 2                        | 2          | 2          | 2          |
|                       | Max        | 5            | 9.9          | 14.9         | 19.8         | 6                        | 6          | 6          | 6          |
| Serial Converter      |            | -            | -            | -            | -            | -                        | -          | -          | -          |
| Linear Encoder Signal |            | Digital      |              |              |              | Digital                  |            |            |            |
| Servo Drive           |            | MR-J4-40-RJ  | MR-J4-70-RJ  | MR-J4-200-RJ |              | MBDHT2510LA1 (PANASONIC) |            |            |            |

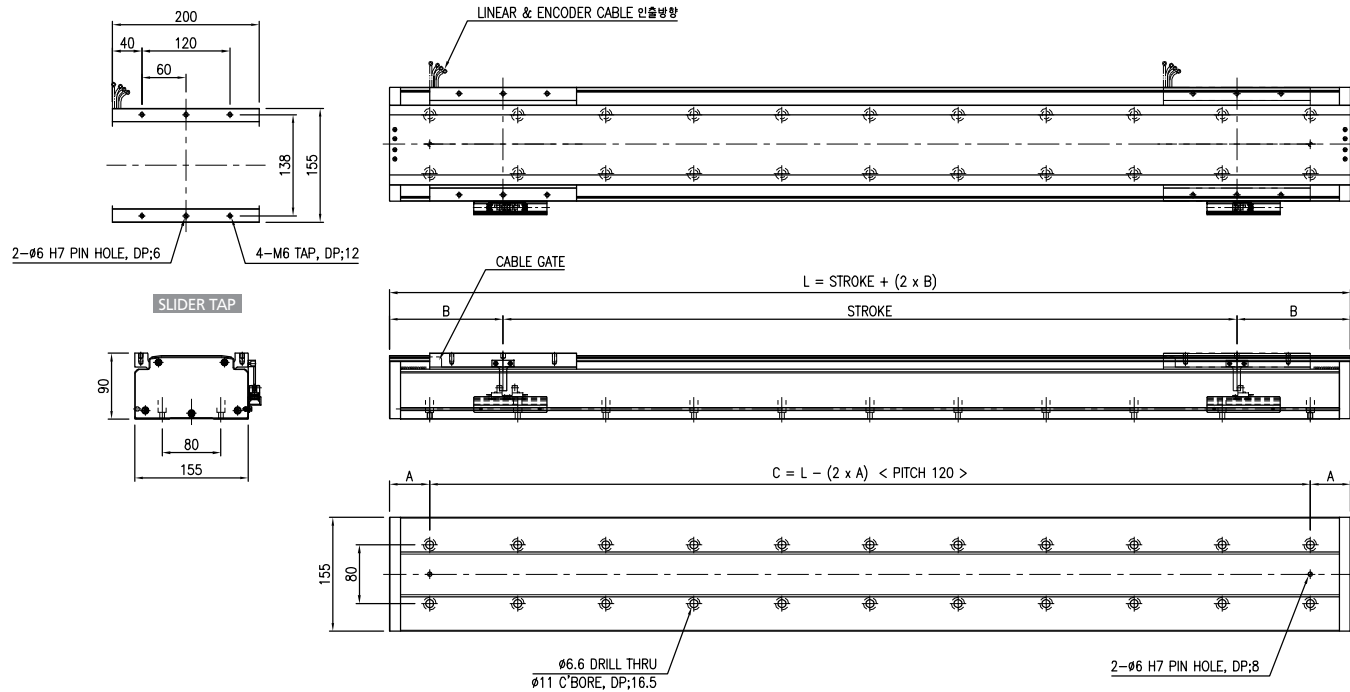
| MODEL                 |            | LPS155Y        |                | LPS155P   |           |           |
|-----------------------|------------|----------------|----------------|-----------|-----------|-----------|
| Linear motor Maker    |            | YASKAWA        |                | PARKER    |           |           |
|                       |            | SGLFW-35A120AP | SGLFW-35A230AP | R5-1E-S   | R5-2E-S   | R5-2E-P   |
| Max Speed (mm/s)      |            | 2000           |                | 2000      |           |           |
| FORCE (N)             | Continuous | 80             | 160            | 55        | 110       | 110       |
|                       | Max        | 220            | 440            | 175       | 350       | 350       |
| Current (Arms)        | Continuous | 1.4            | 2.8            | 2.3       | 2.3       | 4.5       |
|                       | Max        | 4.4            | 8.8            | 7.9       | 7.9       | 15.7      |
| Serial Converter      |            | JZDP-D008-019  | JZDP-D008-020  | -         | -         | -         |
| Linear Encoder Signal |            | Analog         |                | Digital   |           |           |
| Servo Drive           |            | SGDV-1R6A05A   | SGDV-3R8A05A   | MBDHT2510 | MBDHT2510 | MCDHT3520 |

주1) 상기 MAKER 이외의 타사 MAKER 도 적용 가능. 당사로 필히 문의 요망.

## LINEAR WEIGHT

| STROKE(mm) |                | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1500 | 2000 | 2500 |
|------------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| YASKAWA    | SGLFW-35A120AP | 17.9 | 19.5 | 21.1 | 22.7 | 24.3 | 25.9 | 27.5 | 29.1 | 30.7 | 32.3 | 33.9 | 35.5 | 40.3 | 48.3 | 56.3 |
|            | SGLFW-35A230AP | 20.3 | 21.9 | 23.5 | 25.1 | 26.7 | 28.3 | 29.9 | 31.5 | 33.1 | 34.7 | 36.3 | 37.9 | 42.7 | 50.7 | 58.7 |
| MITSUBISHI | LM-H3P3A-12P   | 16.7 | 18.3 | 19.8 | 21.4 | 22.9 | 24.5 | 26.0 | 27.6 | 29.1 | 30.7 | 32.2 | 33.8 | 38.4 | 46.2 | 53.9 |
|            | LM-H3P3B-24P   | 19.1 | 20.7 | 22.2 | 23.8 | 25.3 | 26.9 | 28.4 | 30.0 | 31.5 | 33.1 | 34.6 | 36.2 | 40.8 | 48.5 | 56.3 |
|            | LM-H3P3C-36P   | 22.8 | 24.4 | 25.9 | 27.5 | 29.0 | 30.6 | 32.1 | 33.7 | 35.2 | 36.8 | 38.3 | 39.9 | 44.5 | 52.3 | 60.0 |
|            | LM-H3P3D-48P   | 26.8 | 28.4 | 29.9 | 31.5 | 33.0 | 34.6 | 36.1 | 37.7 | 39.2 | 40.8 | 42.3 | 43.9 | 48.5 | 56.3 | 64.0 |
| SEWOO      | SWL-PS-10C     | 16.5 | 18.0 | 19.5 | 21.0 | 22.5 | 24.0 | 25.5 | 27.0 | 28.5 | 30.0 | 31.5 | 33.0 | 37.5 | 45.0 | 52.5 |
|            | SWL-PS-20C     | 16.8 | 18.3 | 19.8 | 21.3 | 22.8 | 24.3 | 25.7 | 27.2 | 28.7 | 30.2 | 31.7 | 33.2 | 37.7 | 45.1 | 52.6 |
|            | SWL-PS-30C     | 17.1 | 18.6 | 20.1 | 21.6 | 23.1 | 24.6 | 26.0 | 27.5 | 29.0 | 30.5 | 32.0 | 33.5 | 38.0 | 45.4 | 52.9 |
|            | SWL-PS-40C     | 18.8 | 20.3 | 21.8 | 23.3 | 24.8 | 26.3 | 27.7 | 29.2 | 30.7 | 32.2 | 33.7 | 35.2 | 39.7 | 47.1 | 54.6 |
| PARKER     | R5-1E          | 16.7 | 18.2 | 19.7 | 21.2 | 22.7 | 24.2 | 25.7 | 27.2 | 28.7 | 30.2 | 31.7 | 33.2 | 37.7 | 45.2 | 52.7 |
|            | R5-2E          | 18.8 | 20.3 | 21.8 | 23.3 | 24.8 | 26.3 | 27.8 | 29.3 | 30.8 | 32.3 | 33.8 | 35.3 | 39.8 | 47.3 | 54.8 |

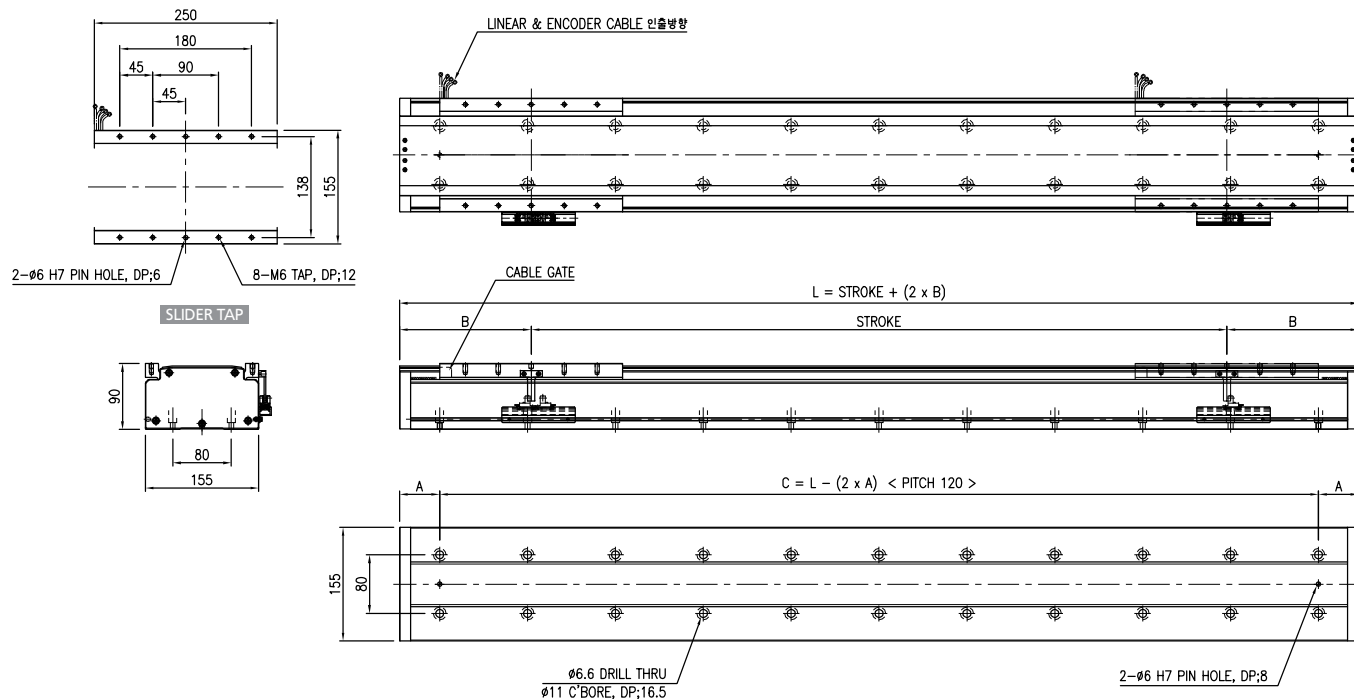
## LPS155-1



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS155Y        | LPS155M      | LPS155S    |            |            | LPS155P |
|--------------------|----------------|--------------|------------|------------|------------|---------|
| Linear motor Maker | YASKAWA        | MITSUBISHI   | SEWOO      |            |            | PARKER  |
|                    | SGLFW-35A120AP | LM-H3P3A-12P | SWL-PS-10C | SWL-PS-20C | SWL-PS-30C | R5-1E-S |

## LPS155-2

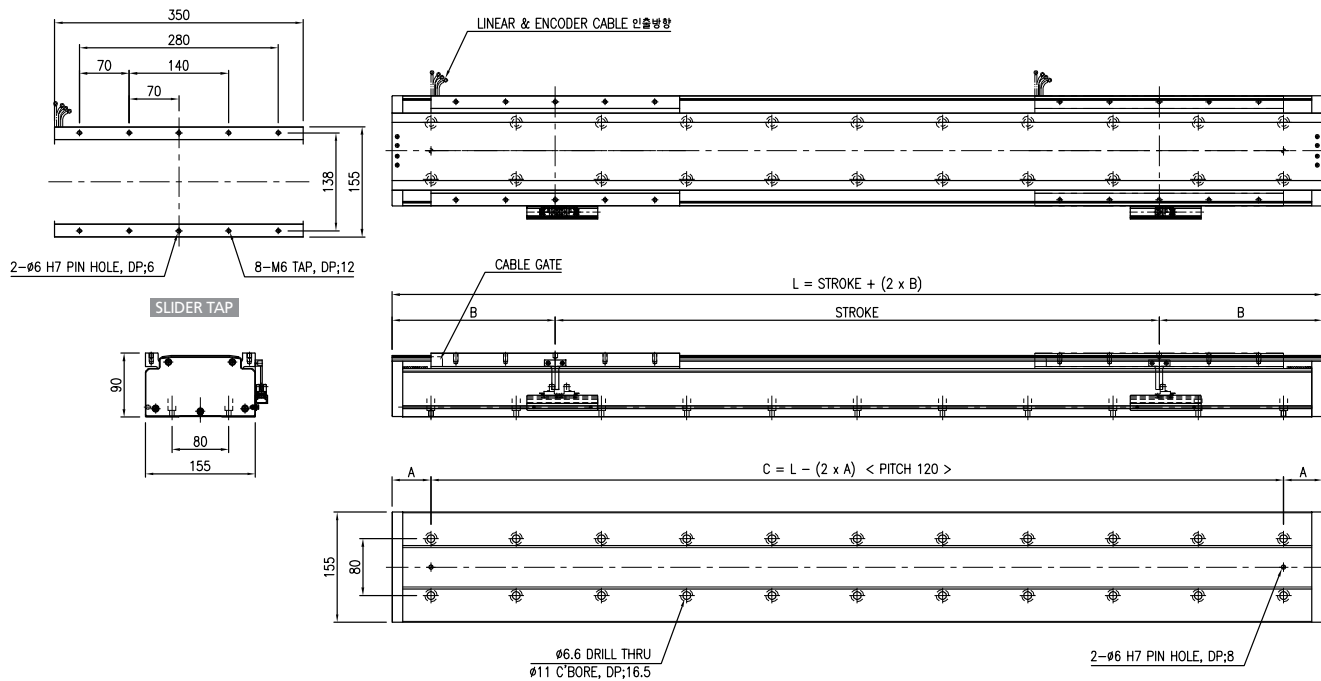


### 적용 가능 LINEAR MOTOR

| MODEL              | LPS155Y        | LPS155M      | LPS155S    | LPS155P |         |
|--------------------|----------------|--------------|------------|---------|---------|
| Linear motor Maker | YASKAWA        | MITSUBISHI   | SEWOO      | PARKER  |         |
|                    | SGLFW-35A230AP | LM-H3P3B-24P | SWL-PS-40C | R5-2E-S | R5-2E-P |

# LPS155 Series Linear

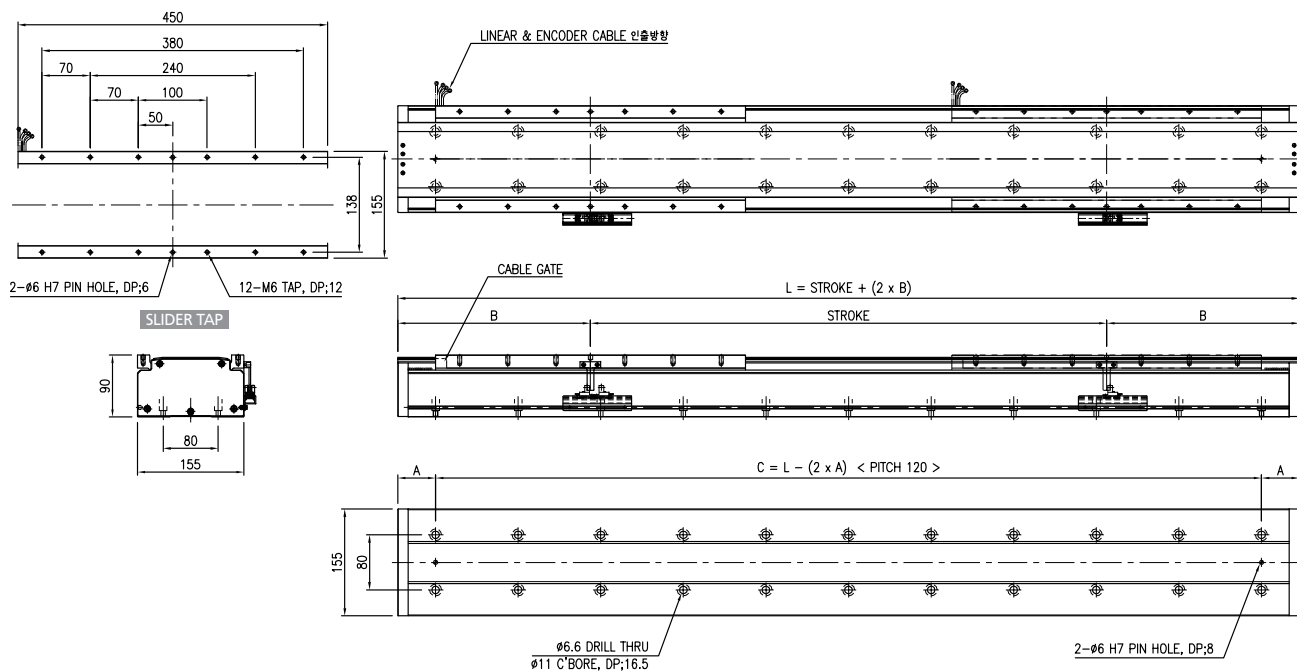
## LPS155-3



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS155M                    |
|--------------------|----------------------------|
| Linear motor Maker | MITSUBISHI<br>LM-H3P3C-36P |

## LPS155-4



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS155M                    |
|--------------------|----------------------------|
| Linear motor Maker | MITSUBISHI<br>LM-H3P3D-48P |

# Linear LPS180 Series

## BASIC SPECIFICATION

|                                                |                                  |
|------------------------------------------------|----------------------------------|
| • Repeatability                                | ±2μm (Resolution 1μm)            |
|                                                | ±0.5μm (Resolution 0.1μm)        |
| • Flatness/Straightness                        | ±10μm / 300 mm                   |
| • Accuracy                                     | ±10μm / 300 mm                   |
| • Deceleration Mechanism                       | LINEAR MOTOR                     |
| • LM Guide Bearing                             | Two Way 15W-2BLOCK ~ 4BLOCK      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix=6.14E+06 Iy=9.88E+06          |

## LINEAR MOTOR SPECIFICATION

| MODEL                 |            | LPS180M      |              |              |              | LPS180S                  |            |            |            |
|-----------------------|------------|--------------|--------------|--------------|--------------|--------------------------|------------|------------|------------|
| Linear motor Maker    |            | MITSUBISHI   |              |              |              | SEWOO                    |            |            |            |
|                       |            | LM-H3P3A-12P | LM-H3P3B-24P | LM-H3P3C-36P | LM-H3P3D-48P | SWL-PS-10C               | SWL-PS-20C | SWL-PS-30C | SWL-PS-40C |
| Max Speed (mm/s)      |            | 2000         |              |              |              | 2000                     |            |            |            |
| FORCE (N)             | Continuous | 120          | 240          | 360          | 480          | 42.1                     | 84.5       | 125.1      | 166.7      |
|                       | Max        | 300          | 600          | 900          | 1200         | 126.3                    | 253.5      | 375.3      | 500.1      |
| Current (Arms)        | Continuous | 1.7          | 3.4          | 5.1          | 6.8          | 2                        | 2          | 2          | 2          |
|                       | Max        | 5            | 9.9          | 14.9         | 19.8         | 6                        | 6          | 6          | 6          |
| Serial Converter      |            | -            | -            | -            | -            | -                        | -          | -          | -          |
| Linear Encoder Signal |            | Digital      |              |              |              | Digital                  |            |            |            |
| Servo Drive           |            | MR-J4-40-RJ  | MR-J4-70-RJ  | MR-J4-200-RJ |              | MBDHT2510LA1 (PANASONIC) |            |            |            |

| MODEL                 |            | LPS180Y        |                |                |                | LPS180P   |           |           |           |           |
|-----------------------|------------|----------------|----------------|----------------|----------------|-----------|-----------|-----------|-----------|-----------|
| Linear motor Maker    |            | YASKAWA        |                |                |                | PARKER    |           |           |           |           |
|                       |            | SGLFW-35A120AP | SGLFW-35A230AP | SGLFW-50A200AP | SGLFW-50A380AP | R7-1E-S   | R7-2E-S   | R7-2E-P   | R7-3E-S   | R7-3E-T   |
| Max Speed (mm/s)      |            | 2000           |                |                |                | 2000      |           |           |           |           |
| FORCE (N)             | Continuous | 80             | 160            | 280            | 560            | 75        | 150       | 150       | 225       | 225       |
|                       | Max        | 220            | 440            | 600            | 1200           | 229       | 458       | 458       | 687       | 687       |
| Current (Arms)        | Continuous | 1.4            | 2.8            | 5              | 10             | 2.3       | 2.3       | 4.5       | 2.3       | 6.8       |
|                       | Max        | 4.4            | 8.8            | 12.4           | 25             | 7.3       | 7.3       | 14.5      | 7.3       | 20.4      |
| Serial Converter      |            | JZDP-D008-019  | JZDP-D008-020  | JZDP-D008-181  | JZDP-D008-182  | -         | -         | -         | -         | -         |
| Linear Encoder Signal |            | Analog         |                |                |                | Digital   |           |           |           |           |
| Servo Drive           |            | SGDV-1R6A05A   | SGDV-3R8A05A   | SGDV-5R5A05A   | SGDV-120A05A   | MBDHT2510 | MBDHT2510 | MCDHT3520 | MBDHT2510 | MDDHT5540 |

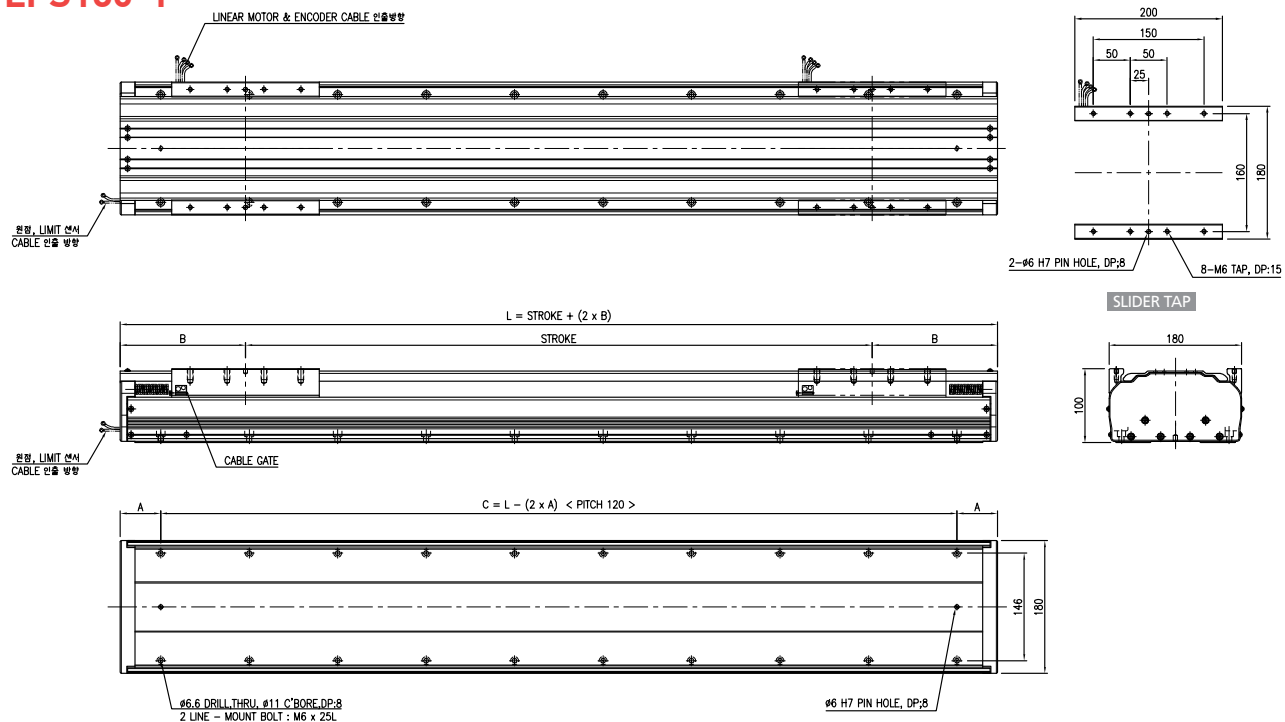
주1) 상기 MAKER 이외의 타사 MAKER 도 적용 가능. 당사로 필히 문의 요망.

## LINEAR WEIGHT

| STOKE(mm)  |                | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1100 | 1200 | 1500 | 2000 | 2500 |
|------------|----------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| YASKAWA    | SGLFW-35A120AP | 19.2 | 21.2 | 23.1 | 25.1 | 27.0 | 29.0 | 30.9 | 32.9 | 34.8 | 36.8 | 38.7 | 40.7 | 46.5 | 56.3 | 66.0 |
|            | SGLFW-35A230AP | 21.8 | 23.8 | 25.7 | 27.7 | 29.6 | 31.6 | 33.5 | 35.5 | 37.4 | 39.4 | 41.3 | 43.3 | 49.1 | 58.9 | 68.6 |
|            | SGLFW-50A200AP | 24.5 | 26.8 | 29.1 | 31.4 | 33.7 | 36.0 | 38.3 | 40.6 | 42.9 | 45.2 | 47.5 | 49.8 | 56.7 | 68.2 | 79.7 |
|            | SGLFW-50A380AP | 35.2 | 37.5 | 39.8 | 42.1 | 44.4 | 46.7 | 49.0 | 51.3 | 53.6 | 55.9 | 58.2 | 60.5 | 67.4 | 78.9 | 90.4 |
| MITSUBISHI | LM-H3P3A-12P   | 18.0 | 19.9 | 21.8 | 23.7 | 25.6 | 27.5 | 29.3 | 31.2 | 33.1 | 35.0 | 36.9 | 38.8 | 44.5 | 53.9 | 63.4 |
|            | LM-H3P3B-24P   | 20.5 | 22.4 | 24.3 | 26.2 | 28.1 | 30.0 | 31.8 | 33.7 | 35.6 | 37.5 | 39.4 | 41.3 | 47.0 | 56.4 | 65.9 |
|            | LM-H3P3C-36P   | 24.7 | 26.6 | 28.5 | 30.4 | 32.3 | 34.2 | 36.0 | 37.9 | 39.8 | 41.7 | 43.6 | 45.5 | 51.2 | 60.6 | 70.1 |
|            | LM-H3P3D-48P   | 29.1 | 31.0 | 32.9 | 34.8 | 36.7 | 38.6 | 40.4 | 42.3 | 44.2 | 46.1 | 48.0 | 49.9 | 55.6 | 65.0 | 74.5 |
| SEWOO      | SWL-PS-10C     | 17.9 | 19.7 | 21.5 | 23.4 | 25.2 | 27.0 | 28.8 | 30.6 | 32.5 | 34.3 | 36.1 | 37.9 | 43.4 | 52.5 | 61.6 |
|            | SWL-PS-20C     | 18.2 | 20.0 | 21.9 | 23.7 | 25.5 | 27.4 | 29.2 | 31.0 | 32.8 | 34.7 | 36.5 | 38.3 | 43.8 | 53.0 | 62.1 |
|            | SWL-PS-30C     | 18.5 | 20.3 | 22.2 | 24.0 | 25.8 | 27.7 | 29.5 | 31.3 | 33.1 | 35.0 | 36.8 | 38.6 | 44.1 | 53.3 | 62.4 |
|            | SWL-PS-40C     | 20.3 | 22.1 | 24.0 | 25.8 | 27.6 | 29.5 | 31.3 | 33.1 | 34.9 | 36.8 | 38.6 | 40.4 | 45.9 | 55.1 | 64.2 |
| PARKER     | R7-1E          | 19.0 | 21.0 | 23.0 | 25.0 | 27.0 | 29.0 | 31.0 | 33.0 | 35.0 | 37.0 | 39.0 | 41.0 | 47.0 | 57.0 | 67.0 |
|            | R7-2E          | 21.4 | 23.4 | 25.4 | 27.4 | 29.4 | 31.4 | 33.4 | 35.4 | 37.4 | 39.4 | 41.4 | 43.4 | 49.4 | 59.4 | 69.4 |
|            | R7-3E          | 25.8 | 27.8 | 29.8 | 31.8 | 33.8 | 35.8 | 37.8 | 39.8 | 41.8 | 43.8 | 45.8 | 47.8 | 53.8 | 63.8 | 73.8 |

# LPS180 Series Linear

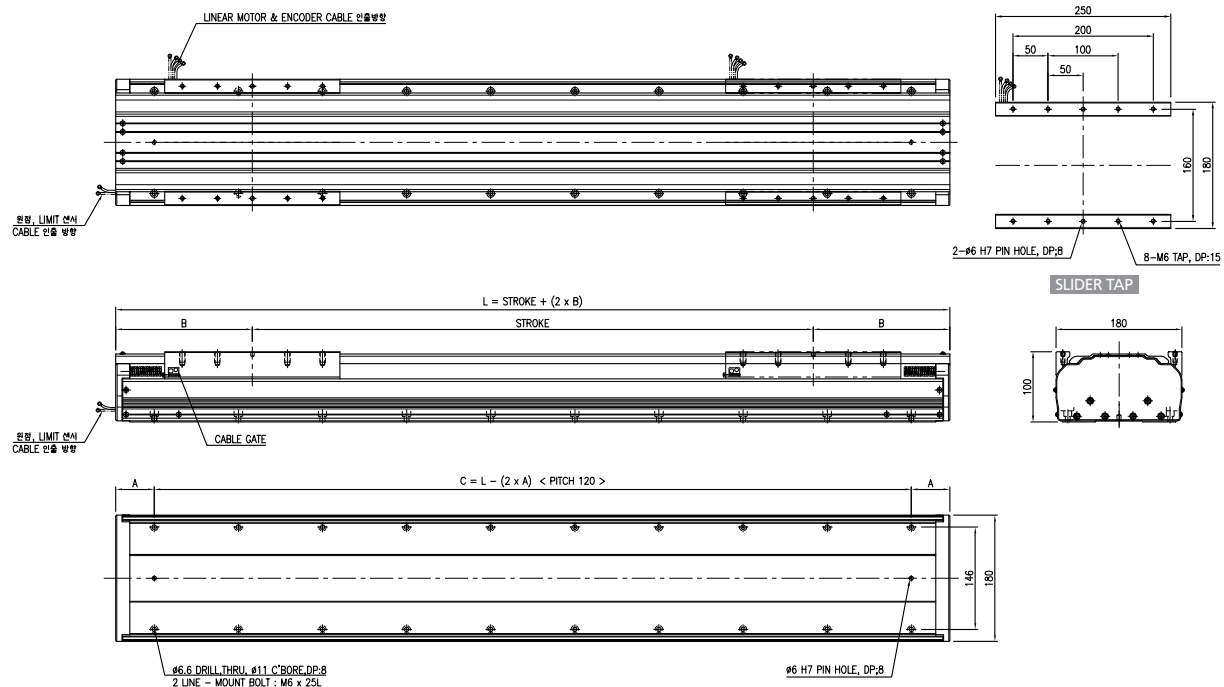
# LPS180-1



## 적용 가능 LINEAR MOTOR

| MODEL              | LPS180Y        | LPS180M      | LPS180S    |            |            | LPS180P |
|--------------------|----------------|--------------|------------|------------|------------|---------|
| Linear motor Maker | YASKAWA        | mitsubishi   | SEWOO      |            |            | PARKER  |
|                    | SGLFW-35A120AP | LM-H3P3A-12P | SWL-PS-10C | SWL-PS-20C | SWL-PS-30C | R7-1E-S |

# LPS180-2

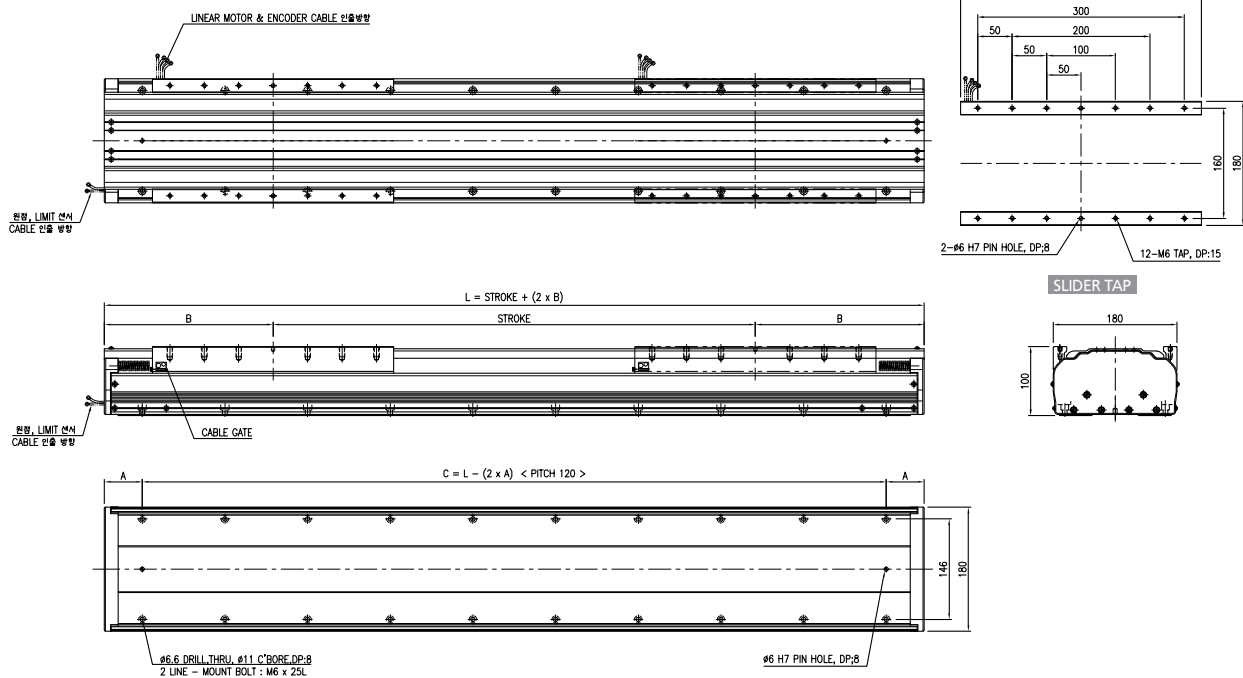


## 적용 가능 LINEAR MOTOR

| MODEL              | LPS180Y        |                | LPS180M      | LPS180S    | LPS180P |         |
|--------------------|----------------|----------------|--------------|------------|---------|---------|
| Linear motor Maker | YASKAWA        |                | mitsubishi   | SEWOO      | PARKER  |         |
|                    | SGLFW-35A230AP | SGLFW-50A200AP | LM-H3P3B-24P | SWL-PS-40C | R7-2E-S | R7-2E-P |



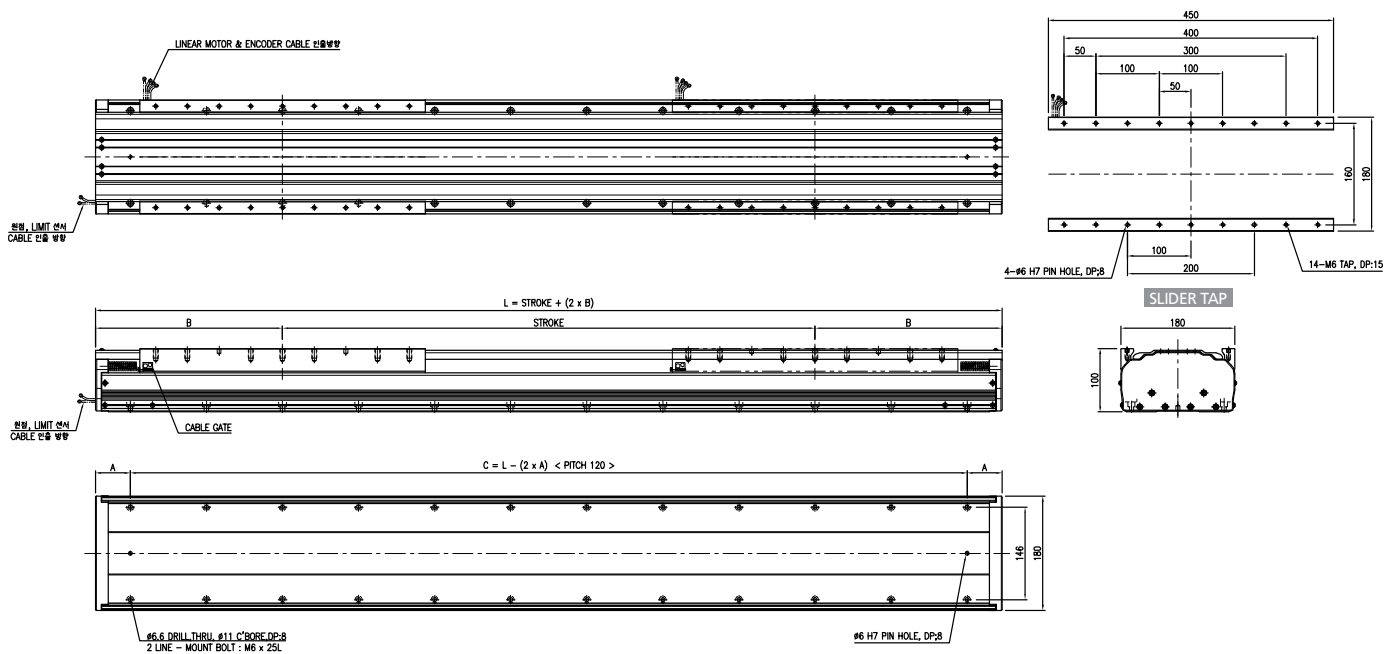
## LPS180-3



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS180M                    | LPS180P                                |
|--------------------|----------------------------|----------------------------------------|
| Linear motor Maker | MITSUBISHI<br>LM-H3P3C-36P | PARKER<br>R7-3E-S<br>PARKER<br>R7-3E-T |

## LPS180-4



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS180Y                   | LPS180M                    |
|--------------------|---------------------------|----------------------------|
| Linear motor Maker | YASKAWA<br>SGLFW-50A380AP | MITSUBISHI<br>LM-H3P3D-48P |

Linear

# LPS220 Series

LEADING PRIDE KOREA

## BASIC SPECIFICATION

|                                                |                                                    |
|------------------------------------------------|----------------------------------------------------|
| • Repeatability                                | ±2μm (Resolution 1μm)<br>±0.5μm (Resolution 0.1μm) |
| • Flatness/Straightness                        | ±10μm / 300 mm                                     |
| • Accuracy                                     | ±10μm / 300 mm                                     |
| • Deceleration Mechanism                       | LINEAR MOTOR                                       |
| • LM Guide Bearing                             | Two Way 20W-2BLOCK ~ 4BLOCK                        |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing                   |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix=9.85E+06 Iy=2.21E+07                            |

## LINEAR MOTOR SPECIFICATION

| MODEL                 | LPS220M      |              |              |              | LPS220S                  |            |            |            |            |                          |       |
|-----------------------|--------------|--------------|--------------|--------------|--------------------------|------------|------------|------------|------------|--------------------------|-------|
| Linear motor Maker    | MITSUBISHI   |              |              |              | SEWOO                    |            |            |            |            |                          |       |
|                       | LM-H3P3A-12P | LM-H3P3B-24P | LM-H3P3C-36P | LM-H3P3D-48P | SWL-PM-10C               | SWL-PM-20C | SWL-PM-30C | SWL-PM-40C | SWL-PL-10C | SWL-PL-20C               |       |
| Max Speed (m/s)       | 2000         |              |              |              | 2000                     |            |            |            |            |                          |       |
| FORCE (N)             | Continuous   | 120          | 240          | 360          | 480                      | 78.3       | 157.4      | 236.2      | 315.3      | 162.6                    | 319.3 |
|                       | Max          | 300          | 600          | 900          | 1200                     | 234.9      | 472.2      | 708.6      | 945.9      | 487.8                    | 957.9 |
| Current (Arms)        | Continuous   | 1.7          | 3.4          | 5.1          | 6.8                      | 3.8        | 3.8        | 3.8        | 3.8        | 6.4                      | 6.4   |
|                       | Max          | 5            | 9.9          | 14.9         | 19.8                     | 11.4       | 11.4       | 11.4       | 11.4       | 19.2                     | 19.2  |
| Serial Converter      | -            | -            | -            | -            | -                        | -          | -          | -          | -          | -                        | -     |
| Linear Encoder Signal | Digital      |              |              |              | Digital                  |            |            |            |            |                          |       |
| Servo Drive           | MR-J4-40-RJ  | MR-J4-70-RJ  |              | MR-J4-200-RJ | MBDHT2510LA1 (PANASONIC) |            |            |            |            | MDDHT5540LA1 (PANASONIC) |       |

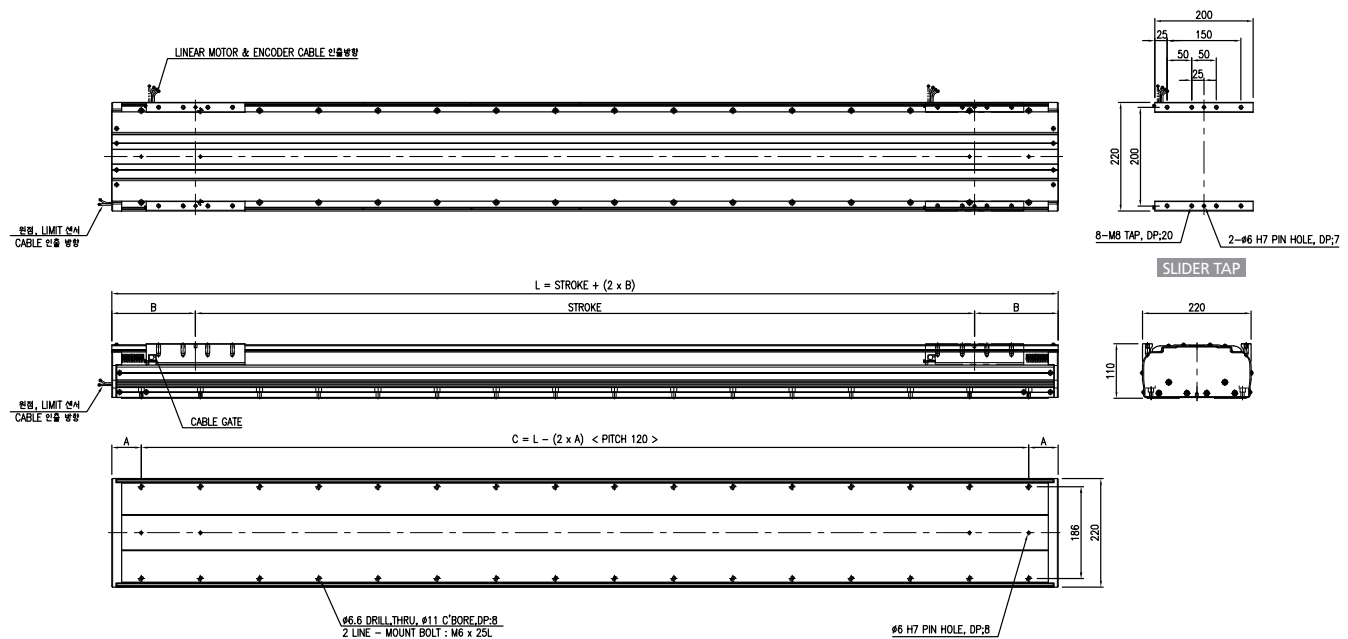
| MODEL                 | LPS220S                  |            | LPS220Y        |                | LPS220P   |           |           |           |           |      |
|-----------------------|--------------------------|------------|----------------|----------------|-----------|-----------|-----------|-----------|-----------|------|
| Linear motor Maker    | SEWOO                    |            | YASKAWA        |                | PARKER    |           |           |           |           |      |
|                       | SWL-PL-30C               | SWL-PL-40C | SGLFW-50A200AP | SGLFW-50A380AP | R7-1E-S   | R7-2E-S   | R7-2E-P   | R7-3E-S   | R7-3E-T   |      |
| Max Speed (m/s)       | 2000                     |            | 2000           |                | 2000      |           |           |           |           |      |
| FORCE (N)             | Continuous               | 480.5      | 639.3          | 280            | 560       | 75        | 150       | 150       | 225       | 225  |
|                       | Max                      | 1441.5     | 1917.9         | 600            | 1200      | 229       | 458       | 458       | 687       | 687  |
| Current (Arms)        | Continuous               | 6.4        | 6.4            | 5              | 10        | 2.3       | 2.3       | 4.5       | 2.3       | 6.8  |
|                       | Max                      | 19.2       | 19.2           | 12.4           | 25        | 7.3       | 7.3       | 14.5      | 7.3       | 20.4 |
| Serial Converter      | -                        | -          | JZDP-D008-181  | JZDP-D008-182  | -         | -         | -         | -         | -         |      |
| Linear Encoder Signal | Digital                  |            | Analog         |                | Digital   |           |           |           |           |      |
| Servo Drive           | MDDHT5540LA1 (PANASONIC) |            | SGDV-5R5A05A   | SGDV-120A05A   | MBDHT2510 | MBDHT2510 | MCDHT3520 | MBDHT2510 | MDDHT5540 |      |

주1) 상기 MAKER 이외의 타사 MAKER 도 적용 가능. 당사로 필히 문의 요망.

## LINEAR WEIGHT

| STOKE(mm)  |                | 100  | 200  | 300  | 400  | 500  | 600  | 700  | 800  | 900  | 1000 | 1500 | 2000  | 2500  | 3000  | 3500  |
|------------|----------------|------|------|------|------|------|------|------|------|------|------|------|-------|-------|-------|-------|
| YASKAWA    | SGLFW-50A200AP | 29.5 | 32.5 | 35.4 | 38.4 | 41.3 | 44.3 | 47.2 | 50.2 | 53.1 | 56.1 | 70.8 | 85.6  | 100.3 | 115.1 | 129.8 |
|            | SGLFW-50A380AP | 42.8 | 45.8 | 48.7 | 51.7 | 54.6 | 57.6 | 60.5 | 63.5 | 66.4 | 69.4 | 84.1 | 98.9  | 113.6 | 128.4 | 143.1 |
| MITSUBISHI | LM-H3P3A-12P   | 21.9 | 24.5 | 27.1 | 29.8 | 32.4 | 35.0 | 37.6 | 40.2 | 42.9 | 45.5 | 58.6 | 71.7  | 84.8  | 97.9  | 111.0 |
|            | LM-H3P3B-24P   | 25.1 | 27.7 | 30.3 | 33.0 | 35.6 | 38.2 | 40.8 | 43.4 | 46.1 | 48.7 | 61.8 | 74.9  | 88.0  | 101.1 | 114.2 |
|            | LM-H3P3C-36P   | 30.4 | 33.0 | 35.6 | 38.3 | 40.9 | 43.5 | 46.1 | 48.7 | 51.4 | 54.0 | 67.1 | 80.2  | 93.3  | 106.4 | 119.5 |
|            | LM-H3P3D-48P   | 36.3 | 38.9 | 41.5 | 44.2 | 46.8 | 49.4 | 52.0 | 54.6 | 57.3 | 59.9 | 73.0 | 86.1  | 99.2  | 112.3 | 125.4 |
| SEWOO      | SWL-PM-10C     | 23.2 | 25.9 | 28.6 | 31.4 | 34.1 | 36.8 | 39.5 | 42.2 | 45.0 | 47.7 | 61.3 | 74.9  | 88.5  | 102.1 | 115.7 |
|            | SWL-PM-20C     | 23.7 | 26.4 | 29.1 | 31.9 | 34.6 | 37.3 | 40.0 | 42.7 | 45.5 | 48.2 | 61.8 | 75.4  | 89.0  | 102.6 | 116.2 |
|            | SWL-PM-30C     | 24.3 | 27.0 | 29.7 | 32.5 | 35.2 | 37.9 | 40.6 | 43.3 | 46.1 | 48.8 | 62.4 | 76.0  | 89.6  | 103.2 | 116.8 |
|            | SWL-PM-40C     | 31.5 | 34.2 | 36.9 | 39.7 | 42.4 | 45.1 | 47.8 | 50.5 | 53.3 | 56.0 | 69.6 | 83.2  | 96.8  | 110.4 | 124.0 |
|            | SWL-PL-10C     | 26.1 | 29.1 | 32.0 | 35.0 | 38.0 | 41.0 | 43.9 | 46.9 | 49.9 | 52.8 | 67.7 | 82.5  | 97.4  | 112.2 | 127.1 |
|            | SWL-PL-20C     | 27.9 | 30.9 | 33.8 | 36.8 | 39.8 | 42.8 | 45.7 | 48.7 | 51.7 | 54.6 | 69.5 | 84.3  | 99.2  | 114.0 | 128.9 |
|            | SWL-PL-30C     | 36.8 | 39.8 | 42.7 | 45.7 | 48.7 | 51.7 | 54.6 | 57.6 | 60.6 | 63.5 | 78.4 | 93.2  | 108.1 | 122.9 | 137.8 |
|            | SWL-PL-40C     | 43.8 | 46.8 | 49.7 | 52.7 | 55.7 | 58.7 | 61.6 | 64.6 | 67.6 | 70.5 | 85.4 | 100.2 | 115.1 | 129.9 | 144.8 |
| PARKER     | R7-1E          | 23.3 | 26.0 | 28.7 | 31.5 | 34.2 | 36.9 | 39.6 | 42.3 | 45.1 | 47.8 | 61.4 | 75.0  | 88.6  | 102.2 | 115.8 |
|            | R7-2E          | 26.4 | 29.1 | 31.8 | 34.5 | 37.2 | 40.0 | 42.7 | 45.4 | 48.1 | 50.8 | 64.3 | 77.9  | 91.4  | 105.0 | 118.5 |
|            | R7-3E          | 32.0 | 34.7 | 37.4 | 40.2 | 42.9 | 45.6 | 48.3 | 51.0 | 53.8 | 56.5 | 70.1 | 83.7  | 97.3  | 110.9 | 124.5 |

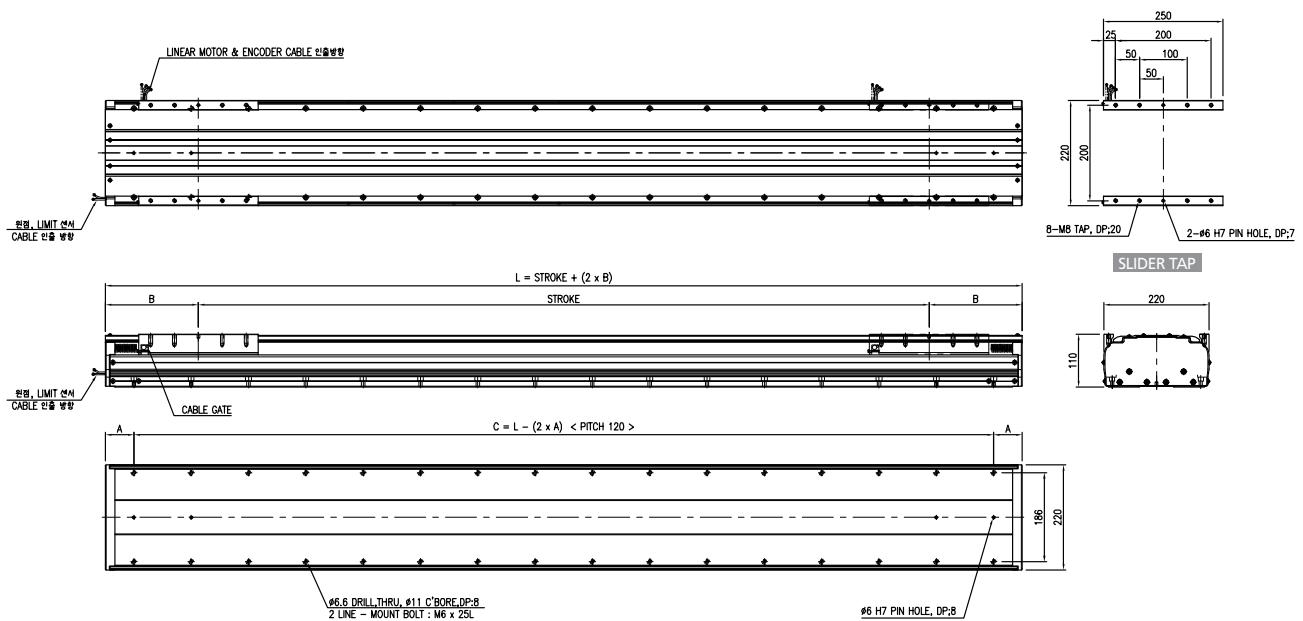
## LPS220-1



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS220M      | LPS220S    |            |            | LPS220P |
|--------------------|--------------|------------|------------|------------|---------|
| Linear motor Maker | mitsubishi   | SEWOO      |            |            | PARKER  |
|                    | LM-H3P3A-12P | SWL-PM-10C | SWL-PM-20C | SWL-PL-10C | R7-1E-S |

## LPS220-2

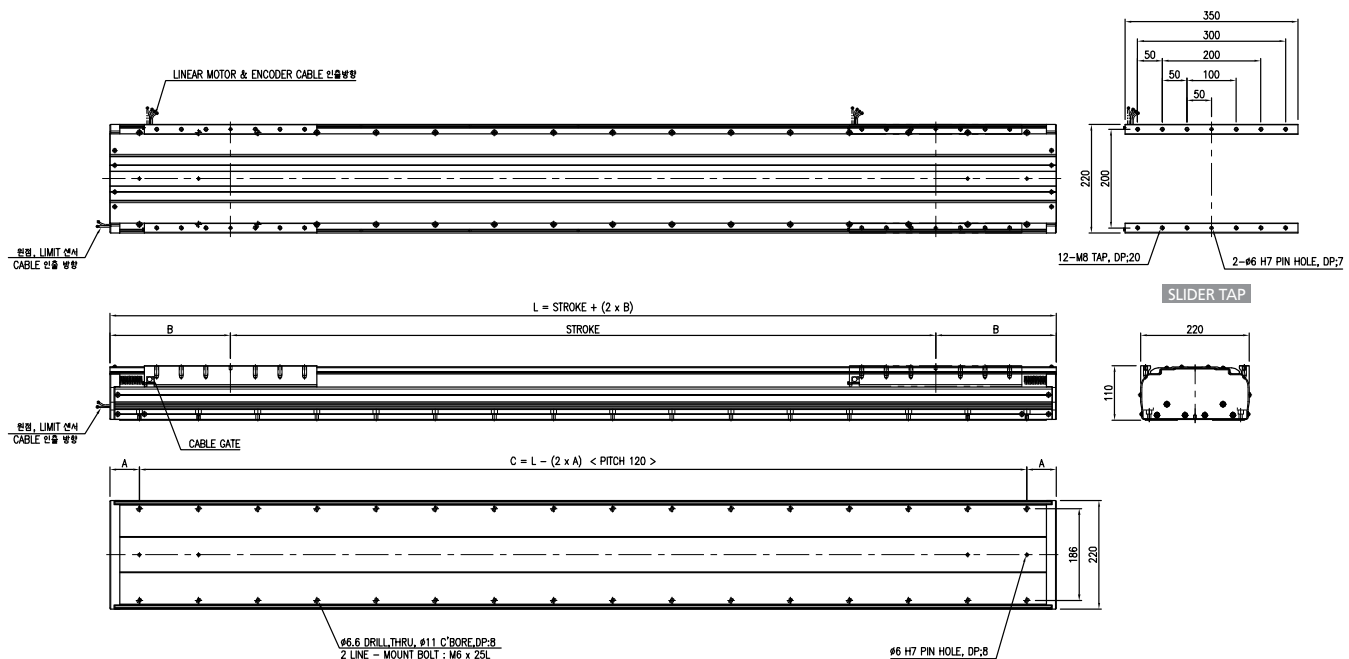


### 적용 가능 LINEAR MOTOR

| MODEL              | LPS220Y        | LPS220M      | LPS220S    |            | LPS220P |         |
|--------------------|----------------|--------------|------------|------------|---------|---------|
| Linear motor Maker | YASKAWA        | mitsubishi   | SEWOO      |            | PARKER  |         |
|                    | SGLFW-50A200AP | LM-H3P3B-24P | SWL-PM-30C | SWL-PL-20C | R7-2E-S | R7-2E-P |

# LPS220 Series Linear

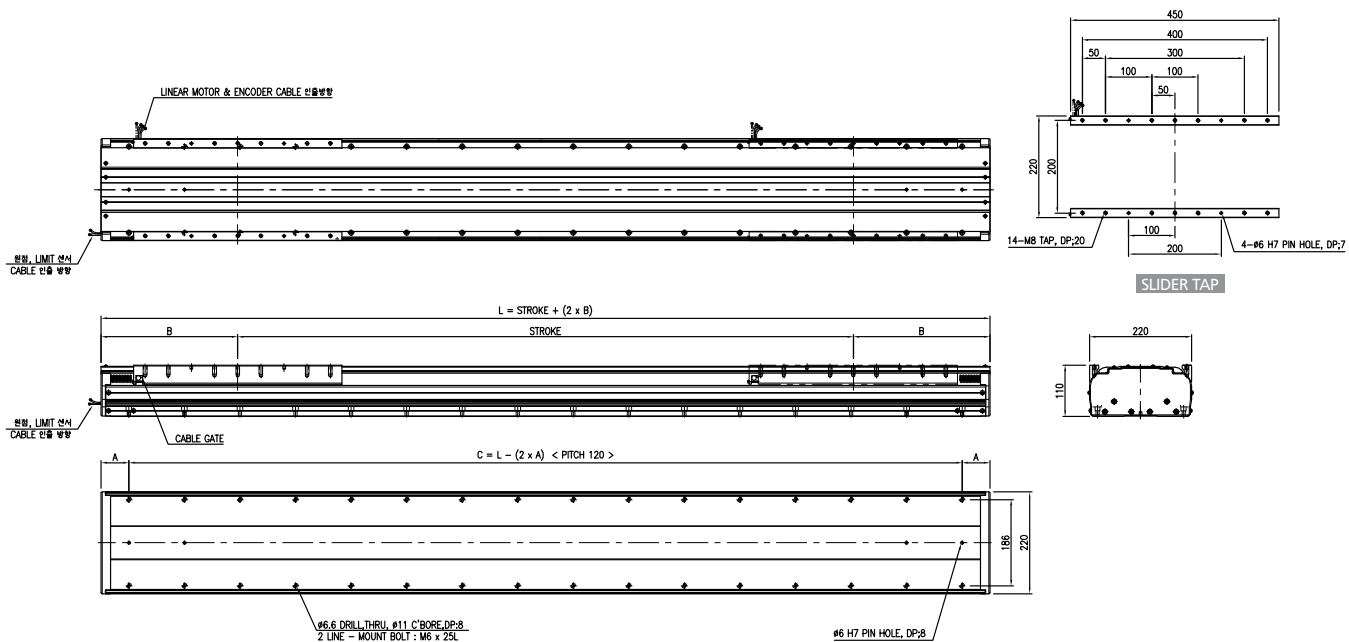
# LPS220-3



## 적용 가능 LINEAR MOTOR

| MODEL              | LPS220M      | LPS220S    |            | LPS220P |         |
|--------------------|--------------|------------|------------|---------|---------|
| Linear motor Maker | MITSUBISHI   | SEWOO      |            | PARKER  |         |
|                    | LM-H3P3C-36P | SWL-PM-40C | SWL-PL-30C | R7-3E-S | R7-3E-T |

# LPS220-4



## 적용 가능 LINEAR MOTOR

| MODEL              | LPS220Y        | LPS220M      | LPS220S    |
|--------------------|----------------|--------------|------------|
| Linear motor Maker | YASKAWA        | mitsubishi   | SEWOO      |
|                    | SGLFW-50A380AP | LM-H3P3D-48P | SWL-PL-40C |

# Linear LPS300 Series

## BASIC SPECIFICATION

|                                                |                                  |
|------------------------------------------------|----------------------------------|
| • Repeatability                                | ±2μm (Resolution 1μm)            |
|                                                | ±0.5μm (Resolution 0.1μm)        |
| • Flatness/Straightness                        | ±10μm / 300 mm                   |
| • Accuracy                                     | ±10μm / 300 mm                   |
| • Deceleration Mechanism                       | LINEAR MOTOR                     |
| • LM Guide Bearing                             | Two Way 30W-2BLOCK ~ 4BLOCK      |
| • Main Base & Slider                           | Aluminum Profile, Soft Anodizing |
| • Base Second Moment of Area(mm <sup>4</sup> ) | Ix=2.41E+07 Iy=7.11E+07          |

주) SLIDER 길이가 300mm 이상일 경우 LM BLOCK 3개 이상 사용을 권장.

## LINEAR MOTOR SPECIFICATION

| MODEL                 |            | LPS300M      |              |              |              | LPS300S      |              |              |            |
|-----------------------|------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|------------|
| Linear motor Maker    |            | MITSUBISHI   |              |              |              | SEWOO        |              |              |            |
|                       |            | LM-H3P7A-24P | LM-H3P7B-48P | LM-H3P7C-72P | LM-H3P7D-96P | SWL-PE-10C   | SWL-PE-20C   | SWL-PE-30C   | SWL-PE-40C |
| Max Speed (m/s)       |            | 2000         |              |              |              | 2000         |              |              |            |
| FORCE (N)             | Continuous | 240          | 480          | 720          | 960          | 401.8        | 822.6        | 1231.6       | 1638       |
|                       | Max        | 600          | 1200         | 1800         | 2400         | 1205.4       | 2467.7       | 3694.7       | 4915       |
| Current (Arms)        | Continuous | 3.4          | 6.8          | 10.2         | 13.6         | 11.3         | 11.3         | 11.3         | 11.3       |
|                       | Max        | 9.6          | 19.1         | 28.6         | 38.1         | 33.9         | 33.9         | 33.9         | 33.9       |
| Serial Converter      |            | -            | -            | -            | -            | -            | -            | -            | -          |
| Linear Encoder Signal |            | Digital      |              |              |              | Digital      |              |              |            |
| Servo Drive           |            | MR-J4-70-RJ  | MR-J4-200-RJ | MR-J4-350-RJ |              | MEDHT7364LA1 | MFDHTA390LA1 | MFDHTB3A2LA1 |            |

| MODEL                 |            | LPS300Y        |                | LPS300P   |           |          |
|-----------------------|------------|----------------|----------------|-----------|-----------|----------|
| Linear motor Maker    |            | YASKAWA        |                | PARKER    |           |          |
|                       |            | SGLFW-1ZA200AP | SGLFW-1ZA380AP | R10-1E-S  | R10-2E-S  | R10-2E-P |
| Max Speed (m/s)       |            | 2000           |                | 2000      |           |          |
| FORCE (N)             | Continuous | 560            | 1120           | 530       | 1060      | 1060     |
|                       | Max        | 1200           | 2400           | 1235      | 2470      | 2470     |
| Current (Arms)        | Continuous | 8.7            | 17.5           | 6.6       | 6.6       | 13.2     |
|                       | Max        | 21.6           | 43.6           | 19.8      | 19.8      | 39.6     |
| Serial Converter      |            | JZDP-D008-183  | JZDP-D008-184  | -         | -         | -        |
| Linear Encoder Signal |            | Analog         |                | Digital   |           |          |
| Servo Drive           |            | SGDV-120A05A   | SGDV-200A05A   | MDDHT5540 | MDDHT5540 | MEDHT364 |

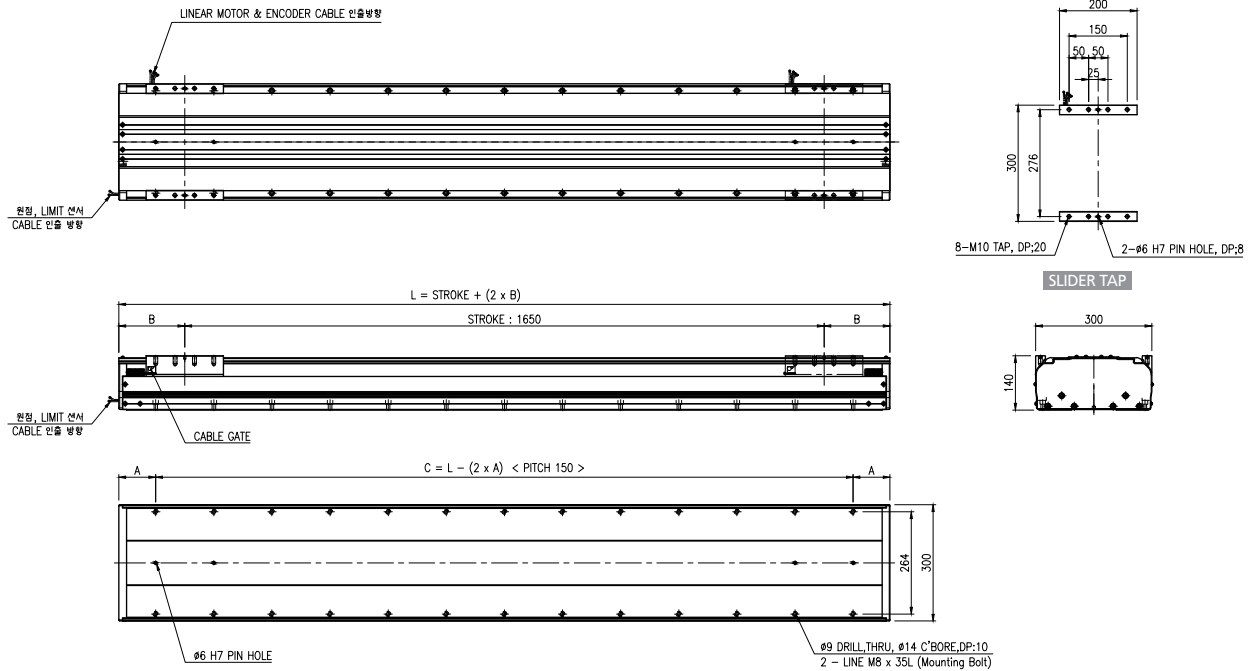
주1) 상기 MAKER 이외의 타사 MAKER 도 적용 가능. 당사로 필히 문의 요망.

## LINEAR WEIGHT

| STOKE(mm)  |                | 100  | 200  | 300  | 400  | 500  | 600   | 700   | 800   | 900   | 1000  | 1500  | 2000  | 2500  | 3000  | 3500  |
|------------|----------------|------|------|------|------|------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| YASKAWA    | SGLFW-1ZA200AP | 47.1 | 51.6 | 56.2 | 60.7 | 65.2 | 69.8  | 74.3  | 78.8  | 83.3  | 87.9  | 110.5 | 133.2 | 155.8 | 178.5 | 201.1 |
|            | SGLFW-1ZA380AP | 68.9 | 73.4 | 78.0 | 82.5 | 87.0 | 91.6  | 96.1  | 100.6 | 105.1 | 109.7 | 132.3 | 155.0 | 177.6 | 200.3 | 222.9 |
| MITSUBISHI | LM-H3P7A-24P   | 35.4 | 39.7 | 43.9 | 48.2 | 52.5 | 56.8  | 61.0  | 65.3  | 69.6  | 73.8  | 95.2  | 116.5 | 137.9 | 159.2 | 180.6 |
|            | LM-H3P7B-48P   | 40.7 | 45.0 | 49.3 | 53.5 | 57.8 | 62.1  | 66.4  | 70.7  | 74.9  | 79.2  | 100.6 | 122.0 | 143.4 | 164.8 | 186.2 |
|            | LM-H3P7C-72P   | 49.7 | 54.0 | 58.3 | 62.5 | 66.8 | 71.1  | 75.4  | 79.7  | 83.9  | 88.2  | 109.6 | 131.0 | 152.4 | 173.8 | 195.2 |
|            | LM-H3P7D-96P   | 60.3 | 64.6 | 68.9 | 73.1 | 77.4 | 81.7  | 86.0  | 90.3  | 94.5  | 98.8  | 120.2 | 141.6 | 163.0 | 184.4 | 205.8 |
| SEWOO      | SWL-PE-10C     | 40.9 | 45.5 | 50.0 | 54.6 | 59.1 | 63.7  | 68.3  | 72.8  | 77.4  | 81.9  | 104.7 | 127.5 | 150.3 | 173.1 | 195.9 |
|            | SWL-PE-20C     | 55.3 | 59.9 | 64.4 | 69.0 | 73.6 | 78.2  | 82.7  | 87.3  | 91.9  | 96.4  | 119.3 | 142.1 | 165.0 | 187.8 | 210.7 |
|            | SWL-PE-30C     | 67.4 | 72.0 | 76.5 | 81.1 | 85.7 | 90.3  | 94.8  | 99.4  | 104.0 | 108.5 | 131.4 | 154.2 | 177.1 | 199.9 | 222.8 |
|            | SWL-PE-40C     | 78.0 | 82.6 | 87.1 | 91.7 | 96.2 | 100.8 | 105.4 | 109.9 | 114.5 | 119.0 | 141.8 | 164.6 | 187.4 | 210.2 | 233.0 |
| PARKER     | R10-1E         | 48.5 | 52.4 | 56.3 | 60.3 | 64.2 | 68.1  | 72.0  | 75.9  | 79.9  | 83.8  | 103.4 | 123.0 | 142.6 | 162.2 | 181.8 |
|            | R10-2E         | 68.5 | 72.4 | 76.4 | 80.3 | 84.2 | 88.2  | 92.1  | 96.0  | 99.9  | 103.9 | 123.5 | 143.2 | 162.8 | 182.5 | 202.1 |

# LPS300 Series Linear

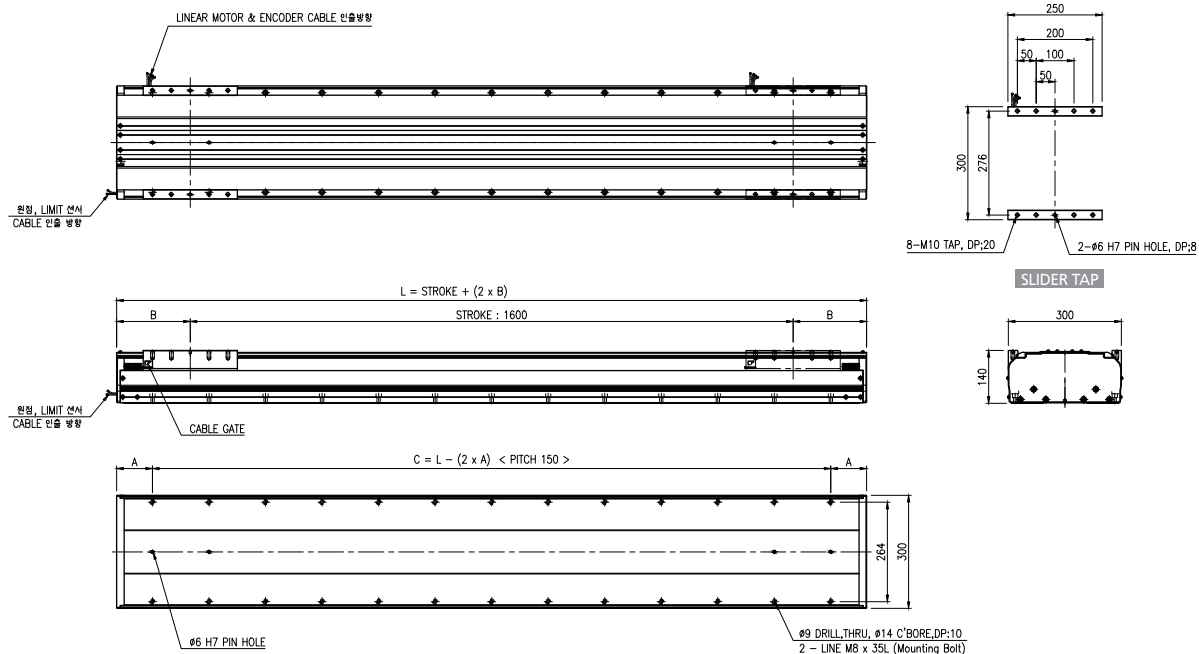
## LPS300-1



### 적용 가능 LINEAR MOTOR

| MODEL              | LPS300M                    |
|--------------------|----------------------------|
| Linear motor Maker | MITSUBISHI<br>LM-H3P7A-24P |

## LPS300-2



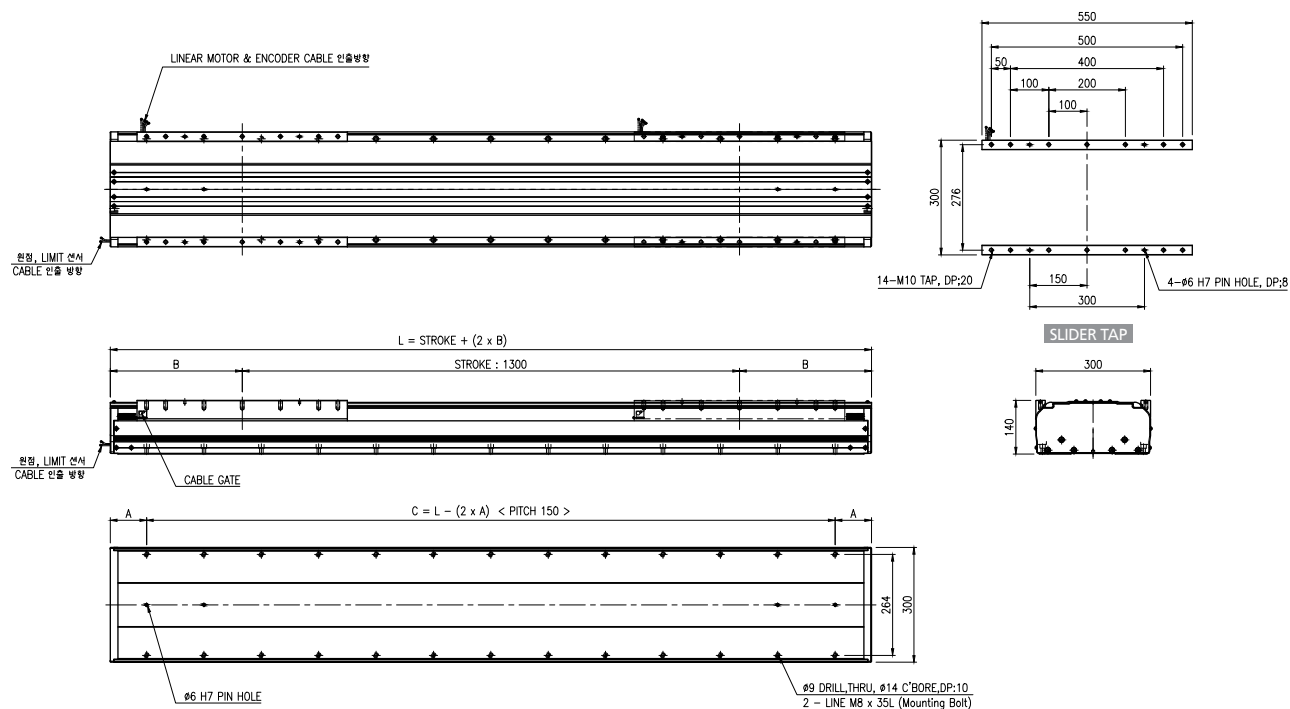
### 적용 가능 LINEAR MOTOR

| MODEL              | LPS300Y                   | LPS300M                    | LPS300S             |
|--------------------|---------------------------|----------------------------|---------------------|
| Linear motor Maker | YASKAWA<br>SGLFW-1ZA200AP | MITSUBISHI<br>LM-H3P7B-48P | SEWOO<br>SWL-PE-10C |



# LPS300 Series Linear

# LPS300-5



## 적용 가능 LINEAR MOTOR

| MODEL              | LPS300S    | LPS300P  |          |
|--------------------|------------|----------|----------|
| Linear motor Maker | SEWOO      | PARKER   |          |
|                    | SWL-PE-40C | R10-2E-S | R10-2E-P |