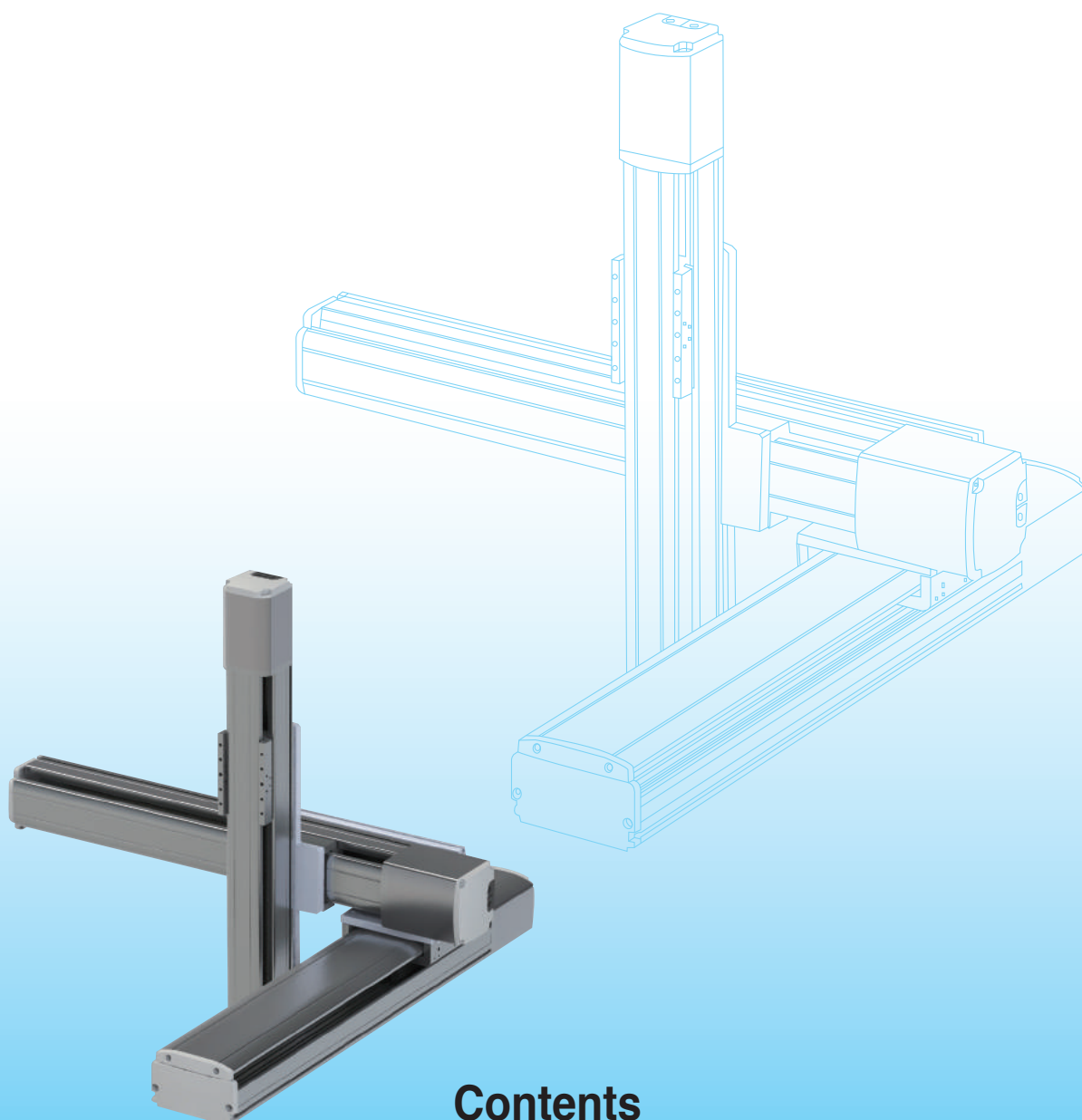


New! CARTESIAN ROBOT / DRA series



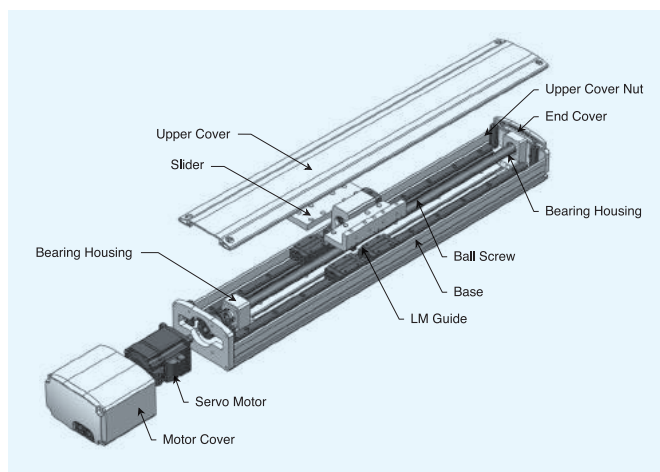
Contents

| | |
|-----------------------------------|---------|
| Feature | 31 _ 33 |
| Ordering Model | 34 |
| Model List | 35 |
| Specification Table | 36 _ 41 |
| DRA Series - Ballscrew type | 42 _ 59 |
| DRA(P)70A,B ~ DRA(P)200A,B | |
| DRA-70, 90B-SD / DRA-120, 170A-SD | |

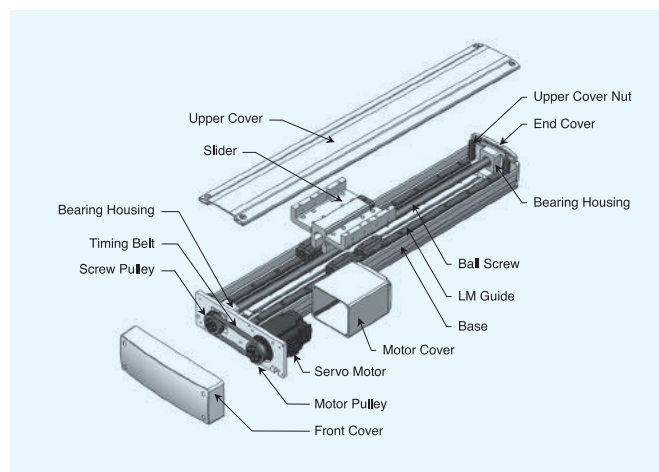
Feature

1. Structure

Straight(In-Line) type



Parallel(side mount) type



2. Feature (특장점)

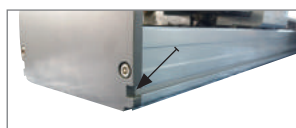
- 1) 기존 자사 제품 대비 Compact한 전장, Down sizing
ex1) DRA70 (100mm 축소), DRA120 (105mm 축소)
ex2) Down sizing (DRM80 → DRA70, DRM130 → DRA120, DRM160 → DRA140)
- 2) 기존 자사 제품 대비 고강성 구조 실현
- 3) 중대형 제품군(DRA175, 200)에서 기존 제품 대비 낮은 높이 → 공간 효율성 증대
- 4) 소형 제품군(DRA70, 90)바디 강성 향상, 최대 스트로크 확대, 타사 대비 낮은 높이
- 5) 소형제품군의 측면 User slot rail 채용
- 6) 우수한 소음 특성
- 7) 투명 병렬커버 기본 채용



- 8) 유지보수 편의성 증대 - 어퍼커버 분리 편리성 확보



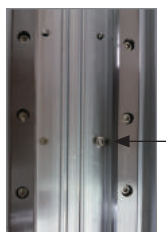
- 9) 유지보수 편의성 증대 - 유저 슬롯홈 너트 삽입 용이



- 10) 어퍼커버 강성 대폭 증대 - 처짐 및 파손방지



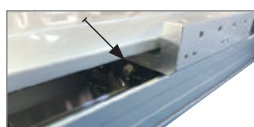
- 11) 로봇의 취부 상부/하부 고정방식 공용화



- 12) 유지보수가 편리한 내부 케이블 처리 구조



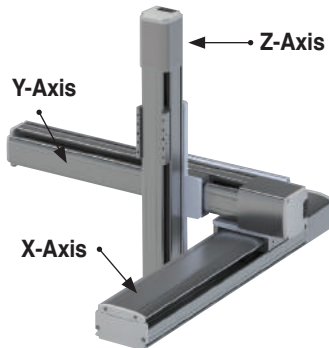
- 13) 그리스 외부주입구조 기본 채용



3. X, Y, Z -Axis Naming & Parallel type

1) X,Y, Z Axis - X,Y and Z axes are combined together depending on combination. Moment is useful as a reference for assembly.

(X,Y,Z축 조합 요청에 따라 구성될 수 있습니다. 모멘트는 조합 예시를 참조합니다.)



▶ X-Axis : X-axis is fixed to the worktable and payload weigh down horizontally on X-axis.

(X축 : X축은 작업테이블에 고정되며, 수평상태에서 작용되는 하중을 지지한다.)

Payload = Y&Z-Axis weight + Tool + work Weight.

(가반하중은 Y&Z축의 자중 + 작업대상물 + 툴의 무게)

▶ Y-Axis : Wallmounted Payload

(Y축 : 벽걸이형태에서 작용되는 하중)

Payload = Z-Axis weight + Tool + work Weight.

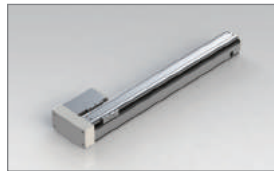
(가반하중은 Y&Z축의 자중 + 작업대상물 + 툴의 무게)

▶ Z-Axis : Tool is moving up and down and Payload weigh down on vertically on Z-axis.

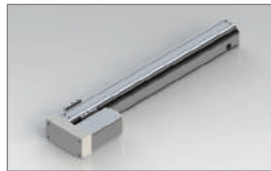
(Z축 : 툴과 작업대상물이 수직으로 작용되는 하중)



Type : S



Type : LP





Type : RP



Type : BP

4. Controller

Single axis controller and Multi axes Controller are applicable.

| Controller | Model | Type | Number of controlled axis | Page |
|---|--------|------------------------|---------------------------|------|
|  | iMS-Jp | Single axis Controller | 1 axis | 236 |
|  | iM-U | Multi axes Controller | 2~8 axes | 242 |

New Ballscrew Type

DRA 70~200 A(B)

■ DRA70A(B)-S



■ DRA90A(B)-S



■ DRA120A(B)-S



■ DRA140A(B)-S



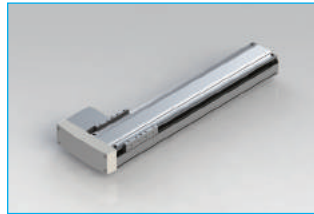
■ DRA70A(B)-P



■ DRA90A(B)-P



■ DRA120A(B)-P



■ DRA140A(B)-P



■ DRA140C(D)-S



■ DRA170A(B)-S



■ DRA200A(B)-S



■ DRA140C(D)-P



■ DRA170A(B)-P



■ DRA200A(B)-P



Ordering Model

| ① | ② | ③ | ④ | ⑤ | ⑥ | ⑦ | ⑧ | ⑨ |
|--------|------------|--------|--------|-------------|---------|------|--------|--------|
| Series | Base width | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
| DRA | 70 | A | - S | - 100 | - I | - 10 | - ST50 | - S1 |

① Series

New!

Name of series : DRA series is New Cartesian Robot

DRA : New Cartesian Robot, Single axis, High stiffness, Compact Design

DRAP : New Cartesian Robot, Single axis, High stiffness, Compact Design High Precision

② Base width

The base width of each models

③ Type 1

Models type of DRA series

A, B, C, D

* This rule does not apply to DRM Series

④ Type 2

The type of actuator or drive

S : Ballscrew, Straight type (Motor in-Line type)

LP : Ballscrew, Left side parallel type (Motor side mount-Left)

RP : Ballscrew, Right side parallel type (Motor side mount-Right)

BP : Ballscrew, Rear side parallel type (Motor side mount-Bottom)

SD : Ballscrew, Dual Slider, Straight type (Motor in-line type)

DL : Ballscrew, Dual Slider, Left side parallel type (Motor side mount-Left)

DR : Ballscrew, Dual Slider, Right side parallel type (Motor side mount-Right)

B : Belt, Deceleration by Pulley

BG : Belt, Deceleration by Reducer, top side parallel type

R : Rack & Pinion

G : Guide(Slave)-axis

*Guide-axis model includes series, base width, type, and stroke in the ordering model (Ex: DRA70-G-400)

⑤ Motor

Motor capacity(W)

(Ex : 100 = 100W) / 100B = 100W(Brake)

⑥ Encoder

A : Absolute Encoder

The current slider position will be retained even after the power is turned off, so origin return is not required when the power is turned on.

I : Incremental Encoder

The slider position data will be cleared once the power is turned off, so origin return is required whenever the power is turned on.

⑦ Lead

The speed of Ballscrew type is decided by lead length and the speed of belt type is decided by reduction gear rate.

(Ex : 05=Lead 5mm)

* 3,000RPM is maximum speed of the standard servo motor.

Speed is different by payload and operation conditions.

⑧ Stroke

The operation range of cartesian robot

(Ex : ST300=300mm)

⑨ Option

The Options to be equipped on the robot

* Sensor Option

S1 : In the robot by magnetic sensor

S2 : In the robot by magnetic sensor. Org

S3 : External photo sensor 3

* ETC Option

K : K1 seal grease for the LM guide

R : Retainer seal grease for the LM guide

Model List

New!

DRA Series

Ballscrew type(Single slider)

| Series | Base width | Type 1 | - | Type 2 | - | Motor | - | Encoder | - | Lead | - | Stroke | - | Option | | |
|-------------|------------|--------|---|---------------------|---|-------|---|---------|-------------------------|--------------|-----------|----------|---|---------------|---|------------|
| DRA DRAP | 70 | A, B | - | S LP RP BP | - | 100 | - | I A | - | 05 / 10 / 20 | - | 50 ~ 700 | - | S1 ~ S3 | - | K R |
| | 90 | | - | | - | 200 | - | | 05 / 10 / 20 / 30 | - | 50 ~ 1500 | | | | | |
| | 120 | | - | | - | - | - | | - | 50 ~ 1500 | | | | | | |
| | 140 | A, B | - | | - | 400 | - | | 05 / 10 20 / 30 / 40 | - | 50 ~ 2000 | | | | | |
| | | C, D | - | | - | - | - | | | 50 ~ 1500 | | | | | | |
| | 170 | A, B | - | | - | 750 | - | | - | - | 50 ~ 2000 | | | | | |
| 200 | - | | - | 750~1000 | - | - | - | - | | | | | | | | |

Dual slider

| Series | Base width | Type 1 | - | Type 2 | - | Motor | - | Encoder | - | Lead | - | Stroke | - | Option | | |
|-------------|------------|--------|---|--------|---|-------|---|---------|------------------------|--------------|------------|-----------|---|---------------|---|------------|
| DRA DRAP | 70 | A, B | - | SD | - | 100 | - | I A | - | 05 / 10 / 20 | - | 100 ~ 300 | - | S1 ~ S3 | - | K R |
| | 90 | | - | DL | - | 200 | - | | 05 / 10 / 20 / 30 | - | 100 ~ 400 | | | | | |
| | 120 | | - | DR | - | - | - | | 05 / 10 / 20 / 30 / 40 | - | 100 ~ 400 | | | | | |
| | 170 | | - | - | - | 750 | - | | - | - | 400 ~ 1200 | | | | | |

| | 2100 | 2200 | 2300 | 2400 | 2500 | Lead (mm) | Rated speed (mm/s) | Motor (W) | Payload at rated acceleration (kg) | | Payload by acceleration(kg) | | | | | | | |
|--|------|------|------|------|------|-----------|--------------------|-----------|------------------------------------|----------|-----------------------------|------|------|------|------|------|------|------|
| | | | | | | | | | Horizontal | Vertical | 0.3G | 0.4G | 0.5G | 0.6G | 0.7G | 0.8G | 0.9G | 1.0G |
| | | | | | | 5 | 250 | 100 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 100 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 100 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 100 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 100 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 100 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 80 | 25 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 30 | 12 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 15 | 6 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 110 | 23 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 58 | 12 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 30 | 5 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 10 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 160 | 30 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 90 | 30 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 50 | 20 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 20 | 10 | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 120 | 23 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 100 | 12 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 65 | 5 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 27 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 160 | 40 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 90 | 50 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 50 | 20 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 20 | 10 | - | - | - | - | - | - | - | - |
| | | | | | | 40 | 2000 | 400 | 10 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 120 | 34 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 100 | 32 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 57 | 10 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 22 | 3 | - | - | - | - | - | - | - | - |
| | | | | | | 40 | 2000 | 400 | 9 | - | - | - | - | - | - | - | - | - |
| | 40 | 40 | 40 | 30 | 30 | 5 | 250 | 750 | 240 | 80 | - | - | - | - | - | - | - | - |
| | 90 | 80 | 70 | 70 | 60 | 10 | 500 | 750 | 180 | 80 | - | - | - | - | - | - | - | - |
| | 170 | 150 | 140 | 130 | 120 | 20 | 1000 | 750 | 90 | 30 | - | - | - | - | - | - | - | - |
| | 260 | 240 | 220 | 200 | 190 | 30 | 1500 | 750 | 50 | 20 | - | - | - | - | - | - | - | - |
| | 350 | 320 | 290 | 270 | 250 | 40 | 2000 | 750 | 25 | 10 | - | - | - | - | - | - | - | - |
| | 40 | 40 | 30 | 30 | 30 | 5 | 250 | 750 | 150 | 30 | - | - | - | - | - | - | - | - |
| | 80 | 70 | 70 | 60 | 60 | 10 | 500 | 750 | 120 | 40 | - | - | - | - | - | - | - | - |
| | 160 | 140 | 130 | 120 | 110 | 20 | 1000 | 750 | 70 | 28 | - | - | - | - | - | - | - | - |
| | 240 | 220 | 200 | 190 | 180 | 30 | 1500 | 750 | 49 | 12 | - | - | - | - | - | - | - | - |
| | 320 | 300 | 270 | 250 | 230 | 40 | 2000 | 750 | 25 | 8 | - | - | - | - | - | - | - | - |
| | 40 | 40 | 40 | 30 | 30 | 5 | 250 | 750 | 240 | 80 | - | - | - | - | - | - | - | - |
| | 80 | 80 | 70 | 70 | 60 | 10 | 500 | 750 | 180 | 80 | - | - | - | - | - | - | - | - |
| | 170 | 150 | 140 | 130 | 120 | 20 | 1000 | 750 | 90 | 30 | - | - | - | - | - | - | - | - |
| | 260 | 240 | 220 | 200 | 190 | 30 | 1500 | 750 | 50 | 20 | - | - | - | - | - | - | - | - |
| | 640 | 310 | 290 | 270 | 250 | 40 | 2000 | 750 | 25 | 10 | - | - | - | - | - | - | - | - |
| | 40 | 40 | 30 | 30 | 30 | 5 | 250 | 750 | 165 | 35 | - | - | - | - | - | - | - | - |
| | 80 | 70 | 70 | 60 | 60 | 10 | 500 | 750 | 135 | 45 | - | - | - | - | - | - | - | - |
| | 150 | 140 | 130 | 120 | 110 | 20 | 1000 | 750 | 80 | 30 | - | - | - | - | - | - | - | - |
| | 240 | 220 | 200 | 190 | 170 | 30 | 1500 | 750 | 56 | 16 | - | - | - | - | - | - | - | - |
| | 310 | 290 | 270 | 250 | 230 | 40 | 2000 | 750 | 29 | 9 | - | - | - | - | - | - | - | - |

Ballscrew type(side mount)

| Single slider | Stroke(mm), maximum speed(mm/s) | | | | | | | | | | | | | | | | | | | | |
|---------------|---------------------------------|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | |
| DRA-70A-P | 250 | | | | | 230 | 180 | | | | | | | | | | | | | | |
| | 500 | | | | | 480 | 370 | | | | | | | | | | | | | | |
| | 1000 | | | | | 950 | 740 | | | | | | | | | | | | | | |
| DRA-70B-P | 250 | | | | | 230 | 180 | | | | | | | | | | | | | | |
| | 500 | | | | | 480 | 370 | | | | | | | | | | | | | | |
| | 1000 | | | | | 950 | 740 | | | | | | | | | | | | | | |
| DRA-90A-P | 250 | | | | | 210 | 170 | 140 | 120 | 100 | 80 | 70 | 60 | 60 | | | | | | | |
| | 500 | | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 110 | | | | | | | |
| | 1000 | | | | | 870 | 690 | 570 | 470 | 400 | 340 | 300 | 260 | 230 | | | | | | | |
| | 1500 | | | | | 1300 | 1040 | 850 | 710 | 600 | 510 | 450 | 390 | 340 | | | | | | | |
| DRA-90B-P | 250 | | | | | 210 | 170 | 140 | 120 | 100 | 80 | 70 | 60 | 60 | | | | | | | |
| | 500 | | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 110 | | | | | | | |
| | 1000 | | | | | 870 | 690 | 570 | 470 | 400 | 340 | 300 | 260 | 230 | | | | | | | |
| | 1500 | | | | | 1300 | 1040 | 850 | 710 | 600 | 510 | 450 | 390 | 340 | | | | | | | |
| DRA-120A-P | 250 | | | | | 210 | 170 | 140 | 120 | 100 | 90 | 70 | 70 | 60 | | | | | | | |
| | 500 | | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 120 | | | | | | | |
| | 1000 | | | | | 870 | 690 | 570 | 470 | 410 | 350 | 300 | 270 | 230 | | | | | | | |
| | 1500 | | | | | 1300 | 1040 | 850 | 710 | 620 | 530 | 460 | 400 | 350 | | | | | | | |
| DRA-120B-P | 250 | | | | | 220 | 180 | 140 | 120 | 100 | 90 | 70 | 70 | 60 | 50 | | | | | | |
| | 500 | | | | | 440 | 350 | 290 | 240 | 200 | 170 | 150 | 130 | 120 | 100 | | | | | | |
| | 1000 | | | | | 900 | 720 | 580 | 490 | 410 | 350 | 300 | 270 | 230 | 210 | | | | | | |
| | 1500 | | | | | 1350 | 1080 | 880 | 730 | 620 | 530 | 460 | 400 | 350 | 310 | | | | | | |
| DRA-140A-P | 250 | | | | | 210 | 170 | 140 | 120 | 100 | 90 | 70 | 70 | 60 | | | | | | | |
| | 500 | | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 120 | | | | | | | |
| | 1000 | | | | | 870 | 690 | 570 | 470 | 410 | 350 | 300 | 270 | 230 | | | | | | | |
| | 1500 | | | | | 1300 | 1040 | 850 | 710 | 620 | 530 | 460 | 400 | 350 | | | | | | | |
| DRA-140B-P | 250 | | | | | 200 | 160 | 130 | 110 | 100 | 80 | 70 | 60 | 60 | 50 | | | | | | |
| | 500 | | | | | 410 | 330 | 270 | 230 | 190 | 160 | 140 | 120 | 110 | 100 | | | | | | |
| | 1000 | | | | | 830 | 670 | 550 | 460 | 390 | 330 | 290 | 250 | 220 | 200 | | | | | | |
| | 1500 | | | | | 1240 | 1000 | 820 | 690 | 580 | 500 | 430 | 380 | 340 | 300 | | | | | | |
| DRA-140C-P | 250 | | | | | 240 | 200 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | | | |
| | 500 | | | | | 480 | 400 | 330 | 280 | 240 | 210 | 180 | 160 | 140 | 130 | 110 | 100 | 90 | | | |
| | 1000 | | | | | 940 | 770 | 640 | 540 | 470 | 400 | 350 | 310 | 280 | 250 | 220 | 200 | 180 | | | |
| | 1500 | | | | | 1470 | 1200 | 1000 | 850 | 730 | 630 | 550 | 480 | 430 | 390 | 350 | 310 | 290 | | | |
| | 2000 | | | | | 1960 | 1600 | 1330 | 1130 | 970 | 840 | 730 | 650 | 570 | 510 | 460 | 420 | 380 | | | |
| DRA-140D-P | 250 | | | | | 220 | 180 | 150 | 130 | 110 | 100 | 80 | 80 | 70 | 60 | 50 | 50 | 40 | | | |
| | 500 | | | | | 430 | 360 | 300 | 260 | 220 | 190 | 170 | 150 | 130 | 120 | 110 | 100 | 90 | | | |
| | 1000 | | | | | 850 | 700 | 590 | 500 | 430 | 380 | 330 | 290 | 260 | 230 | 210 | 190 | 180 | | | |
| | 1500 | | | | | 1320 | 1090 | 920 | 780 | 670 | 590 | 510 | 460 | 410 | 360 | 330 | 300 | 270 | 250 | | |
| | 2000 | | | | | 1760 | 1450 | 1220 | 1040 | 900 | 780 | 690 | 610 | 540 | 490 | 440 | 400 | 360 | 330 | | |
| DRA-170A-P | 250 | | | | | 240 | 200 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | | | |
| | 500 | | | | | 480 | 390 | 330 | 280 | 240 | 210 | 180 | 160 | 140 | 130 | 110 | 100 | 90 | | | |
| | 1000 | | | | | 930 | 760 | 640 | 540 | 460 | 400 | 350 | 310 | 280 | 250 | 220 | 200 | 180 | | | |
| | 1500 | | | | | 1450 | 1190 | 990 | 840 | 720 | 620 | 550 | 480 | 430 | 380 | 340 | 310 | 280 | | | |
| | 2000 | | | | | 1930 | 1580 | 1320 | 1120 | 960 | 830 | 730 | 640 | 570 | 510 | 460 | 420 | 380 | | | |
| DRA-170B-P | 250 | | | | | 180 | 150 | 130 | 110 | 100 | 80 | 70 | 70 | 60 | 50 | 50 | 40 | 40 | | | |
| | 500 | | | | | 350 | 300 | 250 | 220 | 190 | 170 | 150 | 130 | 120 | 110 | 100 | 90 | 80 | | | |
| | 1000 | | | | | 690 | 580 | 490 | 430 | 370 | 330 | 290 | 260 | 230 | 210 | 190 | 170 | 160 | | | |
| | 1500 | | | | | 1070 | 900 | 770 | 660 | 580 | 510 | 450 | 400 | 360 | 330 | 300 | 270 | 250 | | | |
| | 2000 | | | | | 1430 | 1200 | 1020 | 880 | 770 | 680 | 600 | 540 | 480 | 430 | 390 | 360 | 330 | | | |
| DRA-200A-P | 250 | | | | | 230 | 190 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | | | |
| | 500 | | | | | 470 | 380 | 320 | 270 | 230 | 200 | 180 | 160 | 140 | 120 | 110 | 100 | 90 | | | |
| | 1000 | | | | | 910 | 750 | 630 | 530 | 460 | 400 | 350 | 310 | 270 | 240 | 220 | 200 | 180 | | | |
| | 1500 | | | | | 1420 | 1160 | 970 | 820 | 710 | 610 | 540 | 480 | 420 | 380 | 340 | 310 | 280 | | | |
| | 2000 | | | | | 1890 | 1550 | 1300 | 1100 | 940 | 820 | 720 | 630 | 560 | 500 | 450 | 410 | 370 | | | |
| DRA200B-P | 250 | | | | | 230 | 190 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | 40 | | |
| | 500 | | | | | 470 | 380 | 320 | 270 | 230 | 200 | 180 | 160 | 140 | 120 | 110 | 100 | 90 | 80 | | |
| | 1000 | | | | | 910 | 750 | 630 | 530 | 460 | 400 | 350 | 310 | 270 | 240 | 220 | 200 | 180 | 170 | | |
| | 1500 | | | | | 1420 | 1160 | 970 | 820 | 710 | 610 | 540 | 480 | 420 | 380 | 340 | 310 | 280 | 260 | | |
| | 2000 | | | | | 1890 | 1550 | 1300 | 1100 | 940 | 820 | 720 | 630 | 560 | 500 | 450 | 410 | 370 | 340 | | |

| | 2100 | 2200 | 2300 | 2400 | 2500 | Lead (mm) | Rated speed (mm/s) | Motor (W) | Payload at rated acceleration (kg) | | Payload by acceleration(kg) | | | | | | | |
|--|------|------|------|------|------|-----------|--------------------|-----------|------------------------------------|----------|-----------------------------|------|------|------|------|------|------|------|
| | | | | | | | | | Horizontal | Vertical | 0.3G | 0.4G | 0.5G | 0.6G | 0.7G | 0.8G | 0.9G | 1.0G |
| | | | | | | 5 | 250 | 100 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 100 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 100 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 100 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 100 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 100 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 22 | 15 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 15 | 7 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 80 | 25 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 30 | 12 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 15 | 6 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 5 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 200 | 110 | 23 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 200 | 58 | 12 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 200 | 30 | 5 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 200 | 10 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 160 | 30 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 90 | 30 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 50 | 20 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 20 | 10 | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 120 | 23 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 100 | 12 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 65 | 5 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 27 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 160 | 40 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 90 | 50 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 50 | 20 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 20 | 10 | - | - | - | - | - | - | - | - |
| | | | | | | 40 | 2000 | 400 | 10 | - | - | - | - | - | - | - | - | - |
| | | | | | | 5 | 250 | 400 | 120 | 34 | - | - | - | - | - | - | - | - |
| | | | | | | 10 | 500 | 400 | 100 | 32 | - | - | - | - | - | - | - | - |
| | | | | | | 20 | 1000 | 400 | 57 | 10 | - | - | - | - | - | - | - | - |
| | | | | | | 30 | 1500 | 400 | 22 | 3 | - | - | - | - | - | - | - | - |
| | | | | | | 40 | 2000 | 400 | 9 | - | - | - | - | - | - | - | - | - |
| | 40 | 40 | 40 | 30 | 30 | 5 | 250 | 750 | 240 | 80 | - | - | - | - | - | - | - | - |
| | 90 | 80 | 70 | 70 | 60 | 10 | 500 | 750 | 180 | 80 | - | - | - | - | - | - | - | - |
| | 170 | 150 | 140 | 130 | 120 | 20 | 1000 | 750 | 90 | 30 | - | - | - | - | - | - | - | - |
| | 260 | 240 | 220 | 200 | 190 | 30 | 1500 | 750 | 50 | 20 | - | - | - | - | - | - | - | - |
| | 350 | 320 | 290 | 270 | 250 | 40 | 2000 | 750 | 25 | 10 | - | - | - | - | - | - | - | - |
| | 40 | 30 | 30 | 30 | 30 | 5 | 250 | 750 | 150 | 30 | - | - | - | - | - | - | - | - |
| | 70 | 70 | 60 | 60 | 50 | 10 | 500 | 750 | 120 | 40 | - | - | - | - | - | - | - | - |
| | 150 | 130 | 120 | 120 | 110 | 20 | 1000 | 750 | 70 | 28 | - | - | - | - | - | - | - | - |
| | 230 | 210 | 190 | 180 | 170 | 30 | 1500 | 750 | 49 | 12 | - | - | - | - | - | - | - | - |
| | 300 | 280 | 260 | 240 | 220 | 40 | 2000 | 750 | 25 | 8 | - | - | - | - | - | - | - | - |
| | 40 | 40 | 40 | 30 | 30 | 5 | 250 | 750 | 240 | 80 | - | - | - | - | - | - | - | - |
| | 80 | 80 | 70 | 70 | 60 | 10 | 500 | 750 | 180 | 80 | - | - | - | - | - | - | - | - |
| | 170 | 150 | 140 | 130 | 120 | 20 | 1000 | 750 | 90 | 30 | - | - | - | - | - | - | - | - |
| | 260 | 240 | 220 | 200 | 190 | 30 | 1500 | 750 | 50 | 20 | - | - | - | - | - | - | - | - |
| | 640 | 310 | 290 | 270 | 250 | 40 | 2000 | 750 | 25 | 10 | - | - | - | - | - | - | - | - |
| | 40 | 40 | 30 | 30 | 30 | 5 | 250 | 750 | 165 | 35 | - | - | - | - | - | - | - | - |
| | 80 | 70 | 70 | 60 | 60 | 10 | 500 | 750 | 135 | 45 | - | - | - | - | - | - | - | - |
| | 150 | 140 | 130 | 120 | 110 | 20 | 1000 | 750 | 80 | 30 | - | - | - | - | - | - | - | - |
| | 240 | 220 | 200 | 190 | 170 | 30 | 1500 | 750 | 56 | 16 | - | - | - | - | - | - | - | - |
| | 310 | 290 | 270 | 250 | 230 | 40 | 2000 | 750 | 29 | 9 | - | - | - | - | - | - | - | - |

DRG series

DRA series

DRM series

DRMC series

DLM series

DTR series

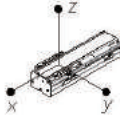
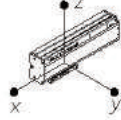
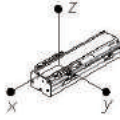
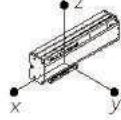
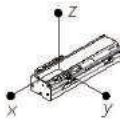
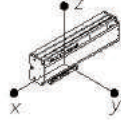
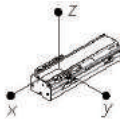
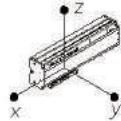
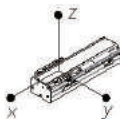
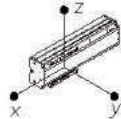
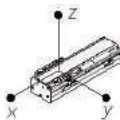
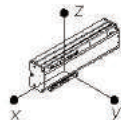
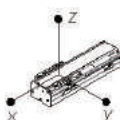
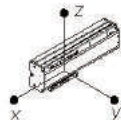
DSA series








Transfer Robot

iMS-Jp series

iM-U series & ACC

Allowable for over hang weight(acceleration = 0.3sec / Speed = 250 ~ 1000 mm/sec)

| Model | | Payload(kg) | Speed(mm/s) | X(mm) | Y(mm) | Z(mm) | | Payload(kg) | |
|----------|---|-------------|-------------|-------|-------|-------|---|-------------|--|
| DRA-70B |  | 22 | 250 | 280 | 85 | 7000 |  | 22 | |
| | | 15 | 500 | 400 | 130 | 4000 | | 15 | |
| | | 5 | 1000 | 880 | 300 | 3950 | | 5 | |
| DRA-90B |  | 80 | 250 | 155 | 40 | 3100 |  | 80 | |
| | | 30 | 500 | 380 | 120 | 4000 | | 30 | |
| | | 15 | 1000 | 550 | 190 | 2200 | | 15 | |
| DRA-120A |  | 80 | 250 | 220 | 250 | 4600 |  | 80 | |
| | | 30 | 500 | 520 | 520 | 4900 | | 30 | |
| | | 15 | 1000 | 820 | 750 | 3100 | | 15 | |
| DRA-140A |  | 160 | 250 | 120 | 220 | 2500 |  | 160 | |
| | | 90 | 500 | 210 | 330 | 2100 | | 90 | |
| | | 50 | 1000 | 315 | 370 | 1250 | | 50 | |
| DRA-140C |  | 160 | 250 | 90 | 135 | 2000 |  | 160 | |
| | | 90 | 500 | 190 | 240 | 1900 | | 90 | |
| | | 50 | 1000 | 275 | 300 | 1080 | | 50 | |
| DRA-170A |  | 240 | 250 | 135 | 200 | 2950 |  | 240 | |
| | | 180 | 500 | 190 | 270 | 1750 | | 390 | |
| | | 90 | 1000 | 320 | 390 | 1210 | | 90 | |
| DRA-200A |  | 240 | 250 | 195 | 390 | 3800 |  | 240 | |
| | | 180 | 500 | 275 | 460 | 2500 | | 180 | |
| | | 90 | 1000 | 430 | 550 | 1600 | | 90 | |

| | Speed(mm/s) | X(mm) | Y(mm) | Z(mm) | | Payload(kg) | Speed(mm/s) | X(mm) | Y(mm) | Z(mm) |
|--|-------------|-------|-------|-------|---|-------------|-------------|-------|-------|-------|
| | 250 | 190 | 95 | 3450 |  | 15 | 250 | 360 | 265 | - |
| | 500 | 220 | 135 | 2400 | | 7 | 500 | 770 | 550 | - |
| | 1000 | 620 | 310 | 2400 | | | | | | - |
| | 250 | 110 | 55 | 2500 |  | 25 | 250 | 440 | 440 | - |
| | 500 | 330 | 140 | 3300 | | 12 | 500 | 880 | 880 | - |
| | 1000 | 550 | 220 | 2200 | | 6 | 1000 | 1300 | 1300 | - |
| | 250 | 140 | 140 | 3400 |  | 25 | 250 | 450 | 450 | - |
| | 500 | 370 | 440 | 3900 | | 12 | 500 | 900 | 900 | - |
| | 1000 | 600 | 720 | 2500 | | 6 | 1000 | 1500 | 1500 | - |
| | 250 | 80 | 100 | 1800 |  | 30 | 250 | 550 | 450 | - |
| | 500 | 150 | 210 | 1450 | | 30 | 500 | 550 | 450 | - |
| | 1000 | 200 | 310 | 800 | | 20 | 1000 | 610 | 510 | - |
| | 250 | 125 | 105 | 2500 |  | 40 | 250 | 420 | 540 | - |
| | 500 | 220 | 210 | 2000 | | 50 | 500 | 310 | 420 | - |
| | 1000 | 310 | 290 | 1250 | | 20 | 1000 | 700 | 800 | - |
| | 250 | 165 | 155 | 3750 |  | 80 | 250 | 300 | 400 | - |
| | 500 | 225 | 235 | 2100 | | 80 | 500 | 250 | 350 | - |
| | 1000 | 365 | 380 | 1410 | | 30 | 1000 | 940 | 1030 | - |
| | 250 | 145 | 200 | 3100 |  | 80 | 250 | 500 | 400 | - |
| | 500 | 185 | 290 | 1780 | | 80 | 500 | 400 | 300 | - |
| | 1000 | 300 | 465 | 1200 | | 30 | 1000 | 985 | 885 | - |

DRA-70B-S

Ballscrew type, Base Width 70mm



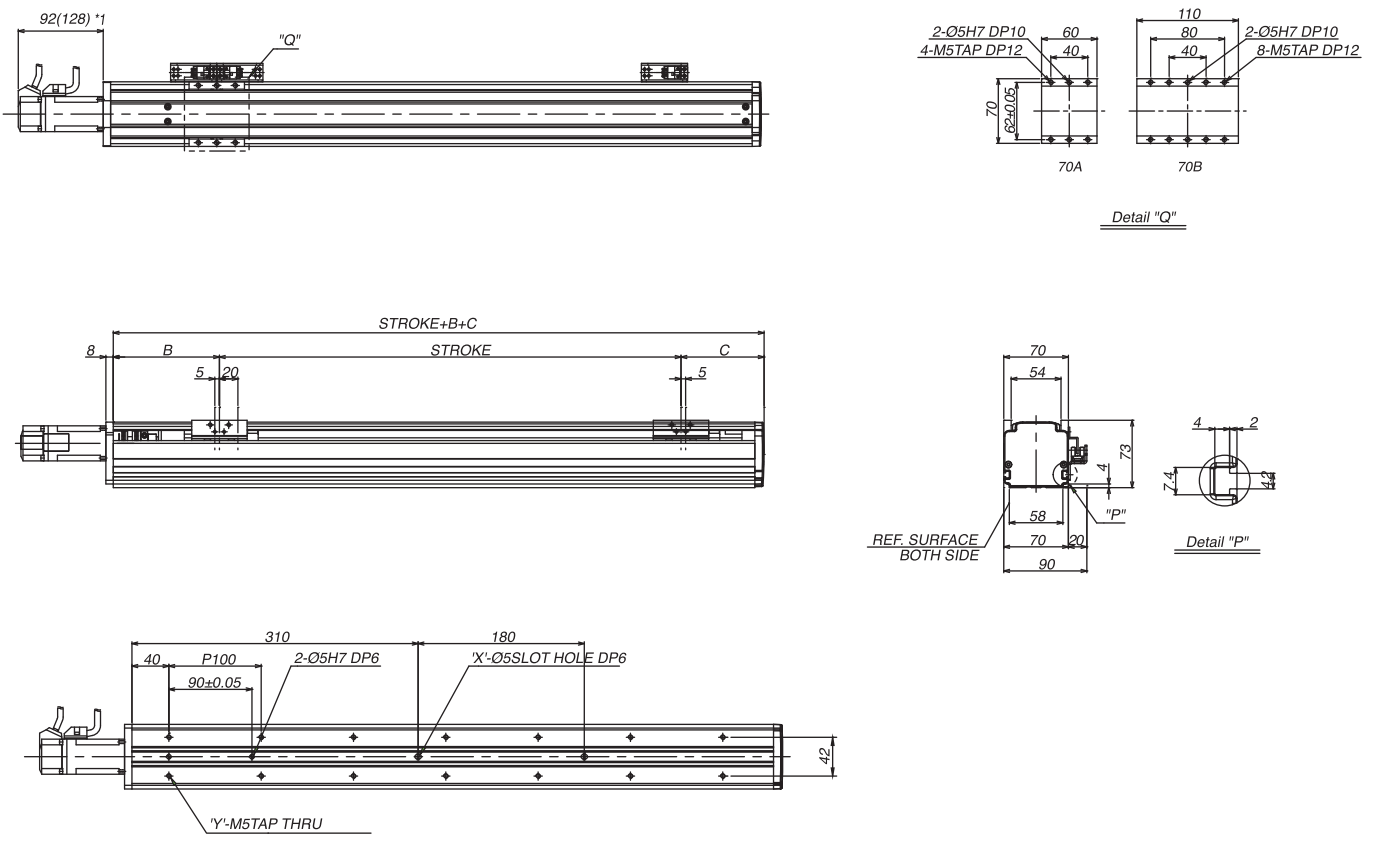
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|--|------------------------------------|---------------------------------|-------------------------------------|---------------------------|---|-----------|
| DRA | 70B | S | 100 | I | 10 | ST50 | S3 |
| A: 1Rail 1Block No.15 B: 1Rail 2Block No.15 | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 100 : 100W 100(B) : 100W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm | 50:50mm ~ 750:750mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 | |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | | | | |
|-------------------------|------------------------|--|---------------------|------------------------|---------------|--|
| Driving Type | Ballscrew Φ 12 C7 | LM Guide | No.15 1Rail 2 Block | Position Repeatability | ± 0.02 mm | |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | | |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|------|-----------|-----------|-------------|----|---------------|------------------|-------------|
| Model | Hor' | | | Ver' | | | | |
| DRA-70B-□-100-L05-□-□ | | 100 | 5 | 22 | 15 | 400 | 250 | 50~750 |
| DRA-70B-□-100-L10-□-□ | | | 10 | 15 | 7 | 200 | 500 | |
| DRA-70B-□-100-L20-□-□ | | | 20 | 5 | 0 | 100 | 1000 | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | |
|-------------------------------|---------------------------------------|----------------------|-----|------|-----|-----|-----|-----|-----|-----|
| Model | Speed(mm/s) | Stroke | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 750 |
| DRA-70B-S-100-L05-□-□ | Speed(mm/s) | | | 250 | | | | 230 | 180 | 160 |
| DRA-70B-S-100-L10-□-□ | Speed(mm/s) | | | 500 | | | | 480 | 370 | 330 |
| DRA-70B-S-100-L20-□-□ | Speed(mm/s) | | | 1000 | | | | 950 | 740 | 650 |
| Mass(kg) | $\approx 0.005 * \text{Stroke} + 2.5$ | 2.7 | 3 | 3.5 | 4 | 4.6 | 5.1 | 5.6 | 6.1 | 6.4 |

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|-------|-----|-----|-----|
| 70A-S | 60 | 115 | 90 |
| 70B-S | 110 | 140 | 115 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| X | 0 | | | 1 | | | | 2 | | | | 3 | | 4 | |
| Y | 4 | 6 | | 8 | | 10 | | 12 | | 14 | | 16 | | 18 | |

| Applicable controllers | | |
|------------------------|----------------------|------|
| Controller | Max. controlled axes | Page |
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

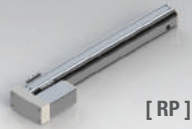
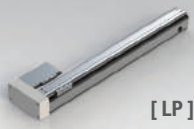
Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.

(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-70B-P

Ballscrew type, Base Width 70mm



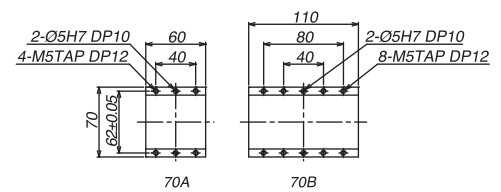
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|------------|--|------------------------------------|---------------------------------|-------------------------------------|---------------------------|---|
| DRA | 70B | LP | 100 | I | 10 | ST50 | S3 |
| A: 1Rail 1Block No.15 B: 1Rail 2Block No.15 | | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 100 : 100W 100(B) : 100W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm | 50:50mm ~ 750:750mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | |
|-------------------------|------------------------|--|---------------------|
| Driving Type | Ballscrew Φ 12 C7 | LM Guide | No.15 1Rail 2 Block |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km |
| | | Position Repeatability | \pm 0.02mm |

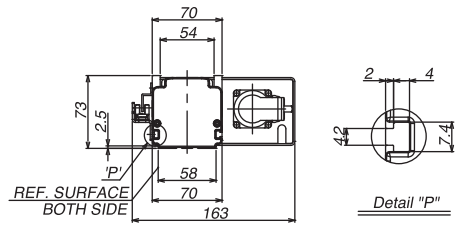
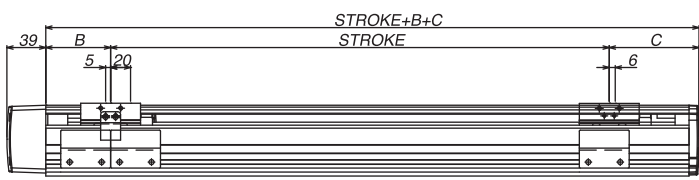
| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|------|-----------|-----------|-------------|----|---------------|------------------|-------------|
| Model | Hor' | | | Ver' | | | | |
| DRA-70B-□-100-L05-□-□ | | 100 | 5 | 22 | 15 | 400 | 250 | 50~750 |
| DRA-70B-□-100-L10-□-□ | | | 10 | 15 | 7 | 200 | 500 | |
| DRA-70B-□-100-L20-□-□ | | | 20 | 5 | 0 | 100 | 1000 | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | |
|-------------------------------|---------------------------------------|----------------------|-----|-----|-----|-----|-----|-----|-----|-----|
| Model | | Stroke | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 750 |
| DRA-70B-□P-100-L05-□-□ | Speed(mm/s) | 250 | | | 230 | | | 180 | 160 | |
| DRA-70B-□P-100-L10-□-□ | Speed(mm/s) | 500 | | | 480 | | | 370 | 330 | |
| DRA-70B-□P-100-L20-□-□ | Speed(mm/s) | 1000 | | | 950 | | | 740 | 650 | |
| Mass(kg) | $\approx 0.005 * \text{Stroke} + 2.5$ | 2.7 | 3 | 3.5 | 4 | 4.6 | 5.1 | 5.6 | 6.1 | 6.4 |

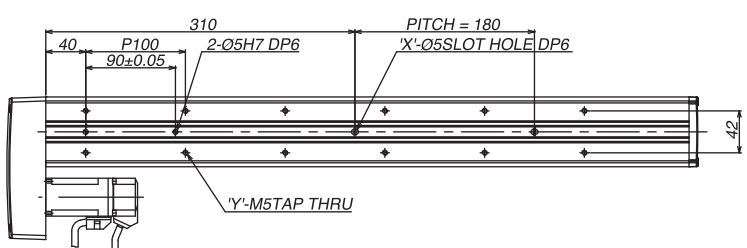
Dimension



Detail "Q"



Detail "P"



*1: () is Brake Motor Dimension

| | A | B | C |
|-------|-----|----|-----|
| 70A-P | 60 | 65 | 90 |
| 70B-P | 110 | 90 | 115 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| X | | 0 | | | 1 | | | | 2 | | | | 3 | | 4 |
| Y | 4 | | 6 | | 8 | | 10 | | 12 | | 14 | | 16 | | 18 |

Applicable controllers

| Controller | Max. controlled axes | Page |
|------------|----------------------|------|
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

- Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.
- This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-90B-S

Ballscrew type, Direct Coupled Motor,
Base Width 90mm



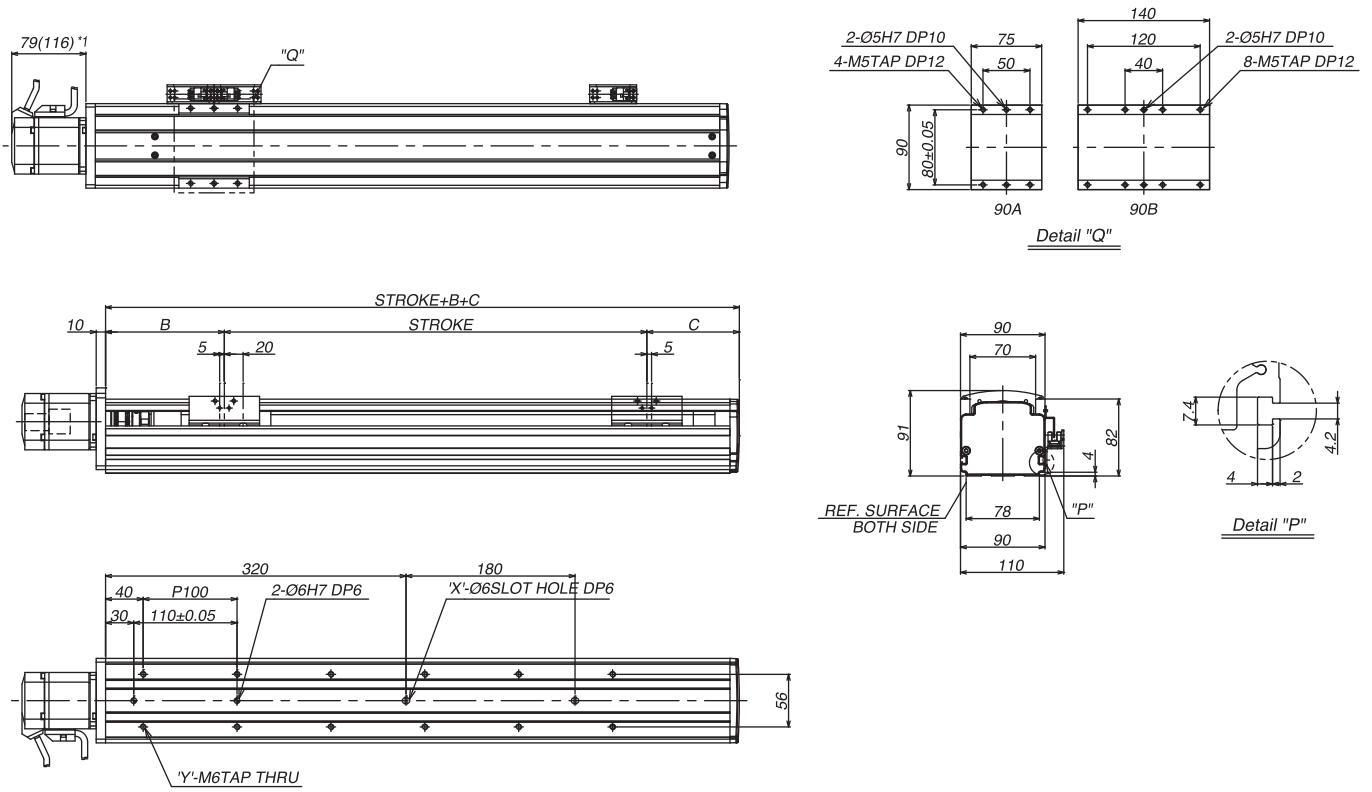
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|------------|--|------------------------------------|---------------------------------|--|-----------------------------|---|
| DRA | 90B | S | 200 | I | 10 | ST50 | S3 |
| A: 1Rail 1Block No.20 B: 1Rail 2Block No.20 | | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 200 : 200W 200(B) : 200W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm | 50:50mm ~ 1500:1500mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | | | | |
|-------------------------|------------------------|--|---------------------|------------------------|---------------|--|
| Driving Type | Ballscrew $\Phi 15$ C7 | LM Guide | No.20 1Rail 2 Block | Position Repeatability | ± 0.02 mm | |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | | |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|------|-----------|-----------|-------------|----|---------------|------------------|-------------|
| Model | Hor' | | | Ver' | | | | |
| DRA-90B-□-200-L05-□-□ | | 200 | 5 | 80 | 25 | 800 | 250 | 50~1500 |
| DRA-90B-□-200-L10-□-□ | | | 10 | 30 | 12 | 400 | 500 | |
| DRA-90B-□-200-L20-□-□ | | | 20 | 15 | 6 | 200 | 1000 | |
| DRA-90B-□-200-L30-□-□ | | | 30 | 5 | - | 134 | 1500 | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | | | | | | | | |
|-------------------------------|--|----------------------|-----|-----|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| DRA-90B-S-200-L05-□-□ | | | | | 250 | | | | 210 | 170 | 140 | 120 | 100 | 80 | 70 | 60 | 60 |
| DRA-90B-S-200-L10-□-□ | | | | | 500 | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 110 |
| DRA-90B-S-200-L20-□-□ | | | | | 1000 | | | | 870 | 690 | 570 | 470 | 400 | 340 | 300 | 260 | 230 |
| DRA-90B-S-200-L30-□-□ | | | | | 1500 | | | | 1300 | 1040 | 850 | 710 | 600 | 510 | 450 | 390 | 340 |
| Mass(kg) | $\approx 0.0076 * \text{Stroke} + 4.1$ | 4.5 | 4.9 | 5.6 | 6.4 | 7.1 | 7.9 | 8.7 | 9.4 | 10.2 | 10.9 | 11.7 | 12.5 | 13.2 | 14 | 14.7 | 15.5 |

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|-------|-----|-------|------|
| 90A-S | 75 | 126.5 | 98.5 |
| 90B-S | 140 | 159 | 131 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| X | 0 | | 1 | | | | | 2 | | | 3 | | | 4 | | | | 5 | | | 6 | | | 7 | | | 8 | | | |
| Y | 4 | 6 | 8 | 10 | | 12 | | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | | | | | | | | | | | | |

| Applicable controllers | | |
|------------------------|----------------------|------|
| Controller | Max. controlled axes | Page |
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.

(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-90B-P

Ballscrew type, Direct Coupled Motor,
Base Width 90mm



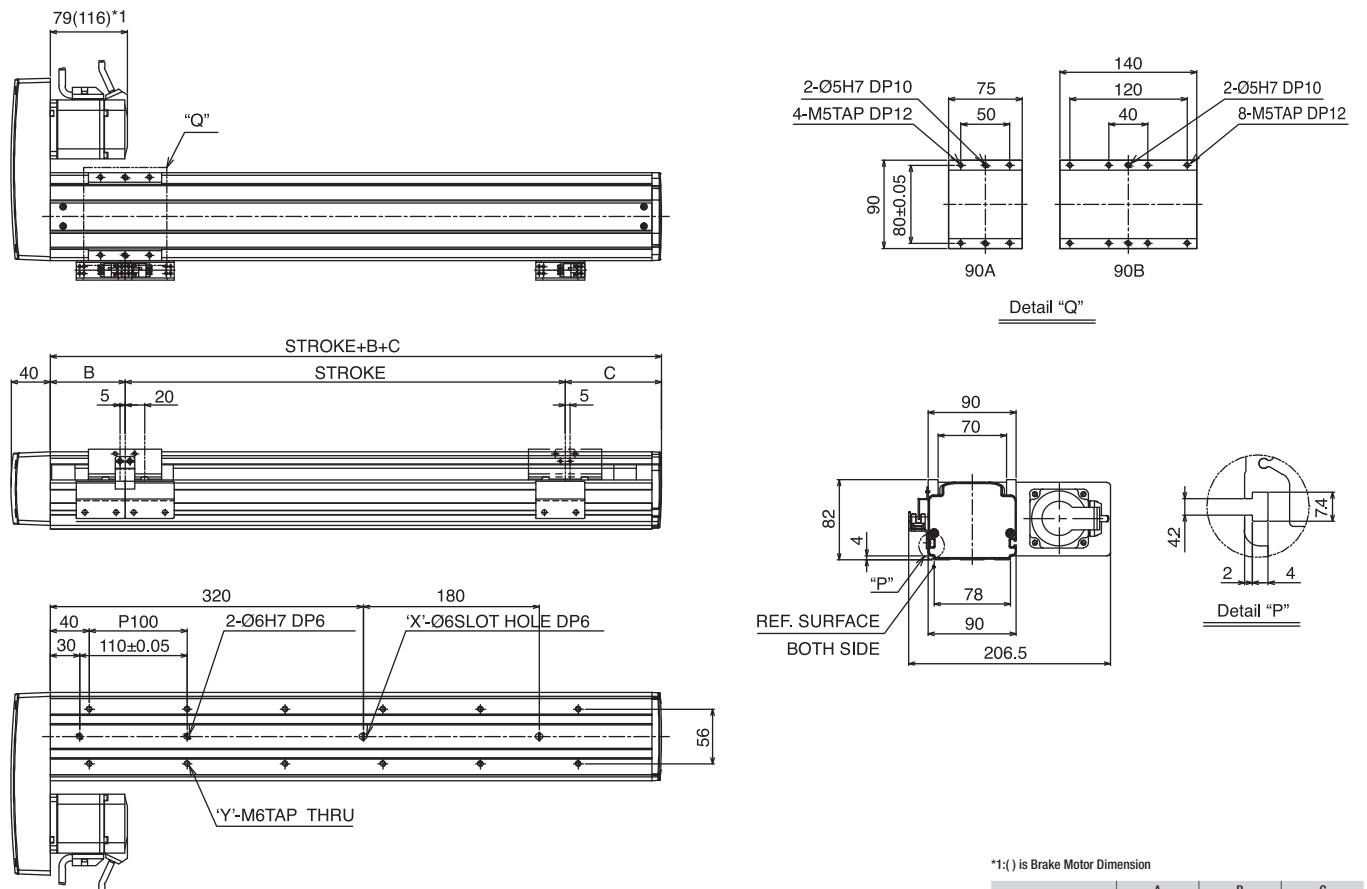
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|--|------------------------------------|---------------------------------|--|-----------------------------|---|-----------|
| DRA | 90B | LP | 200 | I | 10 | ST50 | S3 |
| A:1Rail 1Block No.20 B:1Rail 2Block No.20 | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 200 : 200W 200(B) : 200W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm | 50:50mm ~ 1500:1500mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 | |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | |
|-------------------------|------------------------|--|---------------------|
| Driving Type | Ballscrew Φ 15 C7 | LM Guide | No.20 1Rail 2 Block |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km |
| | | Position Repeatability | \pm 0.02mm |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|--|-----------|-----------|-------------|------|---------------|------------------|-------------|
| Model | | | | Hor' | Ver' | | | |
| DRA-90B-□-200-L05-□-□ | | 200 | 5 | 80 | 25 | 800 | 250 | 50~1500 |
| DRA-90B-□-200-L10-□-□ | | | 10 | 30 | 12 | 400 | 500 | |
| DRA-90B-□-200-L20-□-□ | | | 20 | 15 | 6 | 200 | 1000 | |
| DRA-90B-□-200-L30-□-□ | | | 30 | 5 | - | 134 | 1500 | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | | | | | | | | |
|-------------------------------|---------------------------------|----------------------|-----|-----|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|
| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 |
| DRA-90B-□P-200-L05-□-□ | | | | | 250 | | | | 210 | 170 | 140 | 120 | 100 | 80 | 70 | 60 | 60 |
| DRA-90B-□P-200-L10-□-□ | | | | | 500 | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 110 |
| DRA-90B-□P-200-L20-□-□ | | | | | 1000 | | | | 870 | 690 | 570 | 470 | 400 | 340 | 300 | 260 | 230 |
| DRA-90B-□P-200-L30-□-□ | | | | | 1500 | | | | 1300 | 1040 | 850 | 710 | 600 | 510 | 450 | 390 | 340 |
| Mass(kg) | \approx 0.0076 * Stroke + 4.1 | 4.5 | 4.9 | 5.6 | 6.4 | 7.1 | 7.9 | 8.7 | 9.4 | 10.2 | 10.9 | 11.7 | 12.5 | 13.2 | 14 | 14.7 | 15.5 |

Dimension



| | | *1: () is Brake Motor Dimension | | |
|-------|--|----------------------------------|------|------|
| | | A | B | C |
| 90A-P | | 75 | 76.5 | 98.5 |
| 90B-P | | 140 | 109 | 131 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | | | | | | | | | | | | | | | | | | | | | | |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|--|--|----|
| X | | 0 | | 1 | | | | 2 | | | | | 3 | | | | | | 4 | | | | 5 | | | | 6 | | | | 7 | | | 8 | | | | | | | | | | | | | | | | | | |
| Y | | 4 | | 6 | | | | 8 | | | | | 10 | | | | | | 12 | | | | 14 | | | | 16 | | | | 18 | | | 20 | | | 22 | | | 24 | | | 26 | | | 28 | | | 30 | | | 32 |

| Applicable controllers | | | Note |
|------------------------|----------------------|------|---|
| Controller | Max. controlled axes | Page | (1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다. (2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다. |
| iM-U | 8 axes | 242 | |
| iMS-Jp | 1 axis | 236 | |

DRA-120A-S

Ballscrew type, Direct Coupled Motor,
Base Width 120mm



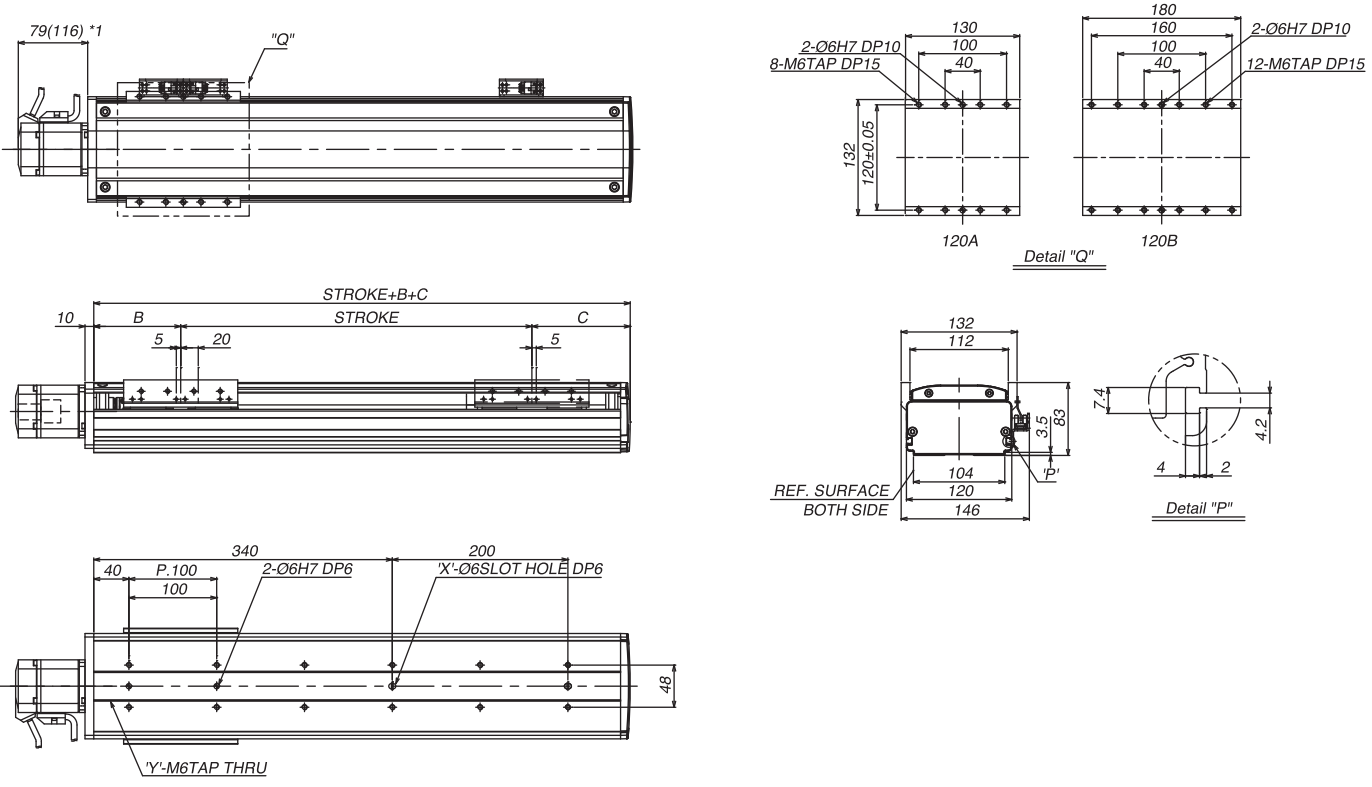
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|-------------|--|------------------------------------|---------------------------------|--|-----------------------------|---|
| DRA | 120A | S | 200 | I | 10 | ST50 | S3 |
| A: 2Rail 4Block No.15 B: 2Rail 6Block No.15 | | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 200 : 200W 200(B) : 200W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm | 50:50mm ~ 1500:1500mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | |
|-------------------------|------------------------|--|---------------------|
| Driving Type | Ballscrew Φ 15 C7 | LM Guide | No.15 2Rail 4 Block |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km |
| | | Position Repeatability | \pm 0.02mm |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|------|-----------|-----------|-------------|----|---------------|------------------|-------------|
| Model | Hor' | | | Ver' | | | | |
| DRA-120A-□-200-L05-□-□ | | 200 | 5 | 80 | 25 | 800 | 250 | 50~1500 |
| DRA-120A-□-200-L10-□-□ | | | 10 | 30 | 12 | 400 | 500 | |
| DRA-120A-□-200-L20-□-□ | | | 20 | 15 | 6 | 200 | 1000 | |
| DRA-120A-□-200-L30-□-□ | | | 30 | 5 | - | 134 | 1500 | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | | | | | | | | | |
|-------------------------------|--------------|--|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|----|
| Model | Speed (mm/s) | Stroke | | | | | | | | | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | |
| DRA-120A-S-200-L05-□-□ | | 250 | | | | | | 210 | 170 | 140 | 120 | 100 | 90 | 70 | 70 | 60 | | |
| DRA-120A-S-200-L10-□-□ | | 500 | | | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 120 | | |
| DRA-120A-S-200-L20-□-□ | | 1000 | | | | | | 870 | 690 | 570 | 470 | 410 | 350 | 300 | 270 | 230 | | |
| DRA-120A-S-200-L30-□-□ | | 1500 | | | | | | 1300 | 1040 | 850 | 710 | 620 | 530 | 460 | 400 | 350 | | |
| Mass(kg) | A Type | $\approx 0.0076 * \text{Stroke} + 5.6$ | 5.7 | 6.2 | 7.3 | 8.3 | 9.3 | 10.4 | 11.4 | 12.4 | 13.5 | 14.5 | 16 | 17 | 18 | 19 | 20 | 21 |
| | B Type | $\approx 0.0076 * \text{Stroke} + 6.4$ | 6.9 | 7.4 | 8.4 | 9.5 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-----|
| 120A-S | 130 | 99 | 112 |
| 120B-S | 180 | 124 | 137 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| X | 0 | | | 1 | | | | | 2 | | | | 3 | | | | | 4 | | | 5 | | | | 6 | | | 7 | | |
| Y | 4 | 6 | 8 | 10 | | | | 12 | 14 | | | 16 | 18 | | | 20 | 22 | | | 24 | 26 | | | 28 | 30 | | 32 | 34 | | |

| Applicable controllers | | | Note |
|------------------------|----------------------|------|---|
| Controller | Max. controlled axes | Page | |
| iM-U | 8 axes | 242 | (1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다. (2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다. |
| iMS-Jp | 1 axis | 236 | |

DRA-120A-P

Ballscrew type, Direct Coupled Motor,
Base Width 120mm



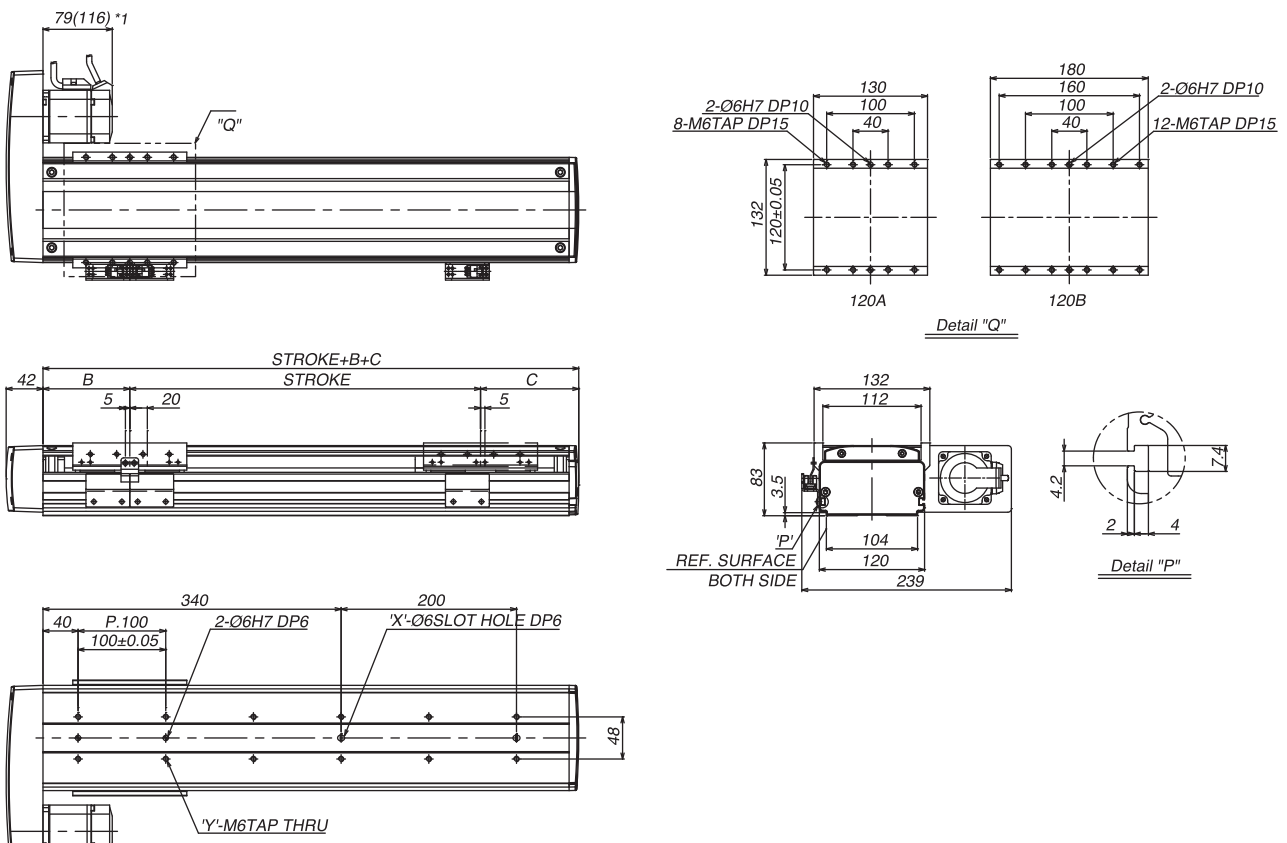
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|-------------|--|------------------------------------|---------------------------------|--|-----------------------------|---|
| DRA | 120A | LP | 200 | I | 10 | ST50 | S3 |
| A: 2Rail 4Block No.15 B: 2Rail 6Block No.15 | | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 200 : 200W 200(B) : 200W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm | 50:50mm ~ 1500:1500mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | | | | | |
|-------------------------|------------------------|--|---------------------|------------------------|--------------|--|--|
| Driving Type | Ballscrew Φ 15 C7 | LM Guide | No.15 2Rail 4 Block | Position Repeatability | \pm 0.02mm | | |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | | | |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|------|-----------|-----------|-------------|----|---------------|------------------|-------------|
| Model | Hor' | | | Ver' | | | | |
| DRA-120A-□-200-L05-□-□ | | 200 | 5 | 80 | 25 | 800 | 250 | 50~1500 |
| DRA-120A-□-200-L10-□-□ | | | 10 | 30 | 12 | 400 | 500 | |
| DRA-120A-□-200-L20-□-□ | | | 20 | 15 | 6 | 200 | 1000 | |
| DRA-120A-□-200-L30-□-□ | | | 30 | 5 | - | 134 | 1500 | |
| | | | | | | | | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | | | | | | | | | |
|-------------------------------|-------------|---------------------------------|-----|------|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|----|
| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | |
| DRA-120A-□P-200-L05-□-□ | | | | | 250 | | | | 210 | 170 | 140 | 120 | 100 | 90 | 70 | 70 | 60 | |
| DRA-120A-□P-200-L10-□-□ | | | | 500 | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 120 | | |
| DRA-120A-□P-200-L20-□-□ | | | | 1000 | | | | 870 | 690 | 570 | 470 | 410 | 350 | 300 | 270 | 230 | | |
| DRA-120A-□P-200-L30-□-□ | | | | 1500 | | | | 1300 | 1040 | 850 | 710 | 620 | 530 | 460 | 400 | 350 | | |
| Mass(kg) | A Type | \approx 0.0076 * Stroke + 5.6 | 5.7 | 6.2 | 7.3 | 8.3 | 9.3 | 10.4 | 11.4 | 12.4 | 13.5 | 14.5 | 16 | 17 | 18 | 19 | 20 | 21 |
| | B Type | \approx 0.0076 * Stroke + 6.4 | 6.9 | 7.4 | 8.4 | 9.5 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 |

Dimension



| *1: () is Brake Motor Dimension | | | |
|----------------------------------|-----|-----|-----|
| | A | B | C |
| 120A-P | 130 | 99 | 112 |
| 120B-P | 180 | 124 | 137 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| X | | 0 | | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | | 7 | | |
| Y | 4 | 6 | 8 | 10 | | | | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | | | | | | | | | | | |

| Applicable controllers | | | Note |
|------------------------|----------------------|------|--|
| Controller | Max. controlled axes | Page | (1) Required cable length is 30m. 케이블 길이는 30m입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다. (2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다. |
| iM-U | 8 axes | 242 | |
| iMS-Jp | 1 axis | 236 | |

DRA-140A-S

Ballscrew type, Direct Coupled Motor,
Base Width 140mm



[S]

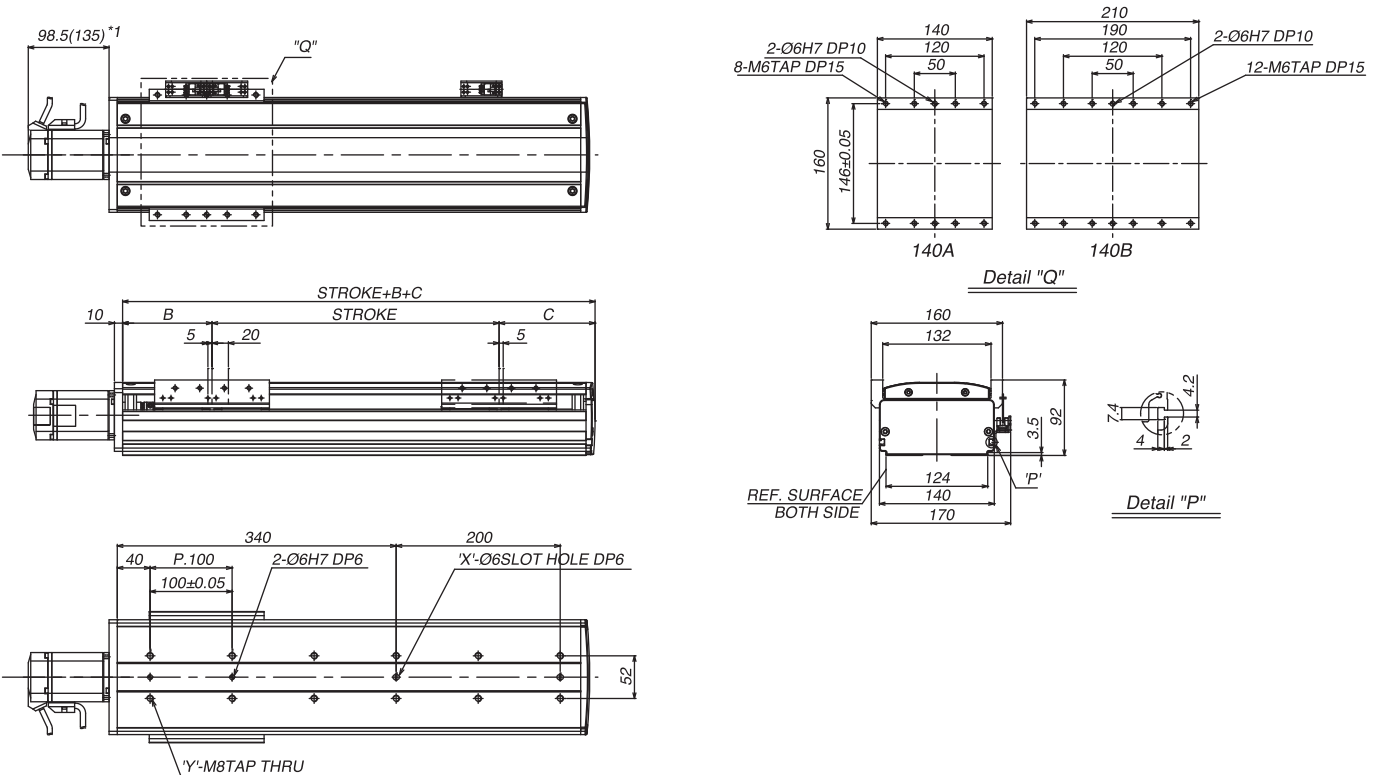
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|--------|--|------------------------------------|---------------------------------|--|-----------------------------|---|
| DRA | 140A | S | 400 | I | 10 | ST50 | S3 |
| A: 2Rail 4Block No.20 B: 2Rail 6Block No.20 | | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 400 : 400W 400(B) : 400W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm | 50:50mm ~ 1500:1500mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | | | | | |
|-------------------------|------------------------|--|---------------------|------------------------|---------------|--|--|
| Driving Type | Ballscrew Φ 15 C7 | LM Guide | No.20 2Rail 4 Block | Position Repeatability | ± 0.02 mm | | |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | | | |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|------|-----------|-----------|-------------|-----|---------------|------------------|-------------|
| Model | Hor' | | | Ver' | | | | |
| DRA-140A-□-400-L05-□-□ | 400 | 400 | 5 | 160 | 30 | 1620 | 250 | 50~1500 |
| DRA-140A-□-400-L10-□-□ | | | 90 | 30 | 810 | 500 | | |
| DRA-140A-□-400-L20-□-□ | | | 50 | 20 | 405 | 1000 | | |
| DRA-140A-□-400-L30-□-□ | | | 20 | 10 | 270 | 1500 | | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | | | | | | | | | |
|-------------------------------|-------------|--|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | |
| DRA-140A-S-400-L05-□-□ | 250 | | | | | | | | | | | | | | | | | |
| DRA-140A-S-400-L10-□-□ | 500 | | | | | | | | | | | | | | | | | |
| DRA-140A-S-400-L20-□-□ | 1000 | | | | | | | | | | | | | | | | | |
| DRA-140A-S-400-L30-□-□ | 1500 | | | | | | | | | | | | | | | | | |
| Mass(kg) | A Type | $\approx 0.0142 * \text{Stroke} + 7.5$ | 8.1 | 8.9 | 10.3 | 11.7 | 13.2 | 14.6 | 16.1 | 17.5 | 18.9 | 20.4 | 21.8 | 22.3 | 22.7 | 23.2 | 23.6 | 24.0 |
| | B Type | $\approx 0.0142 * \text{Stroke} + 9.6$ | 10.3 | 11 | 12.4 | 13.9 | 15.3 | 16.8 | 18.2 | 19.6 | 21.1 | 22.5 | 24 | 25.4 | 26.8 | 28.3 | 29.7 | 31.2 |

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-----|
| 140A-S | 140 | 109 | 117 |
| 140B-S | 210 | 144 | 152 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| X | 0 | | | 1 | | | | 2 | | | | 3 | | | | 4 | | | | 5 | | | | 6 | | | | 7 | | |
| Y | 6 | 8 | 10 | | 12 | | | 14 | | 16 | | 18 | | 20 | | 22 | | 24 | | 26 | | 28 | | 30 | | 32 | | 34 | | |

| Applicable controllers | | |
|------------------------|----------------------|------|
| Controller | Max. controlled axes | Page |
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.

(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-140A-P

Ballscrew type, Direct Coupled Motor,
Base Width 140mm



| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|------------|-------------|-----------|-------------|----------|-----------|-------------|-----------|
| DRA | 140A | LP | 400 | I | 10 | ST50 | S3 |

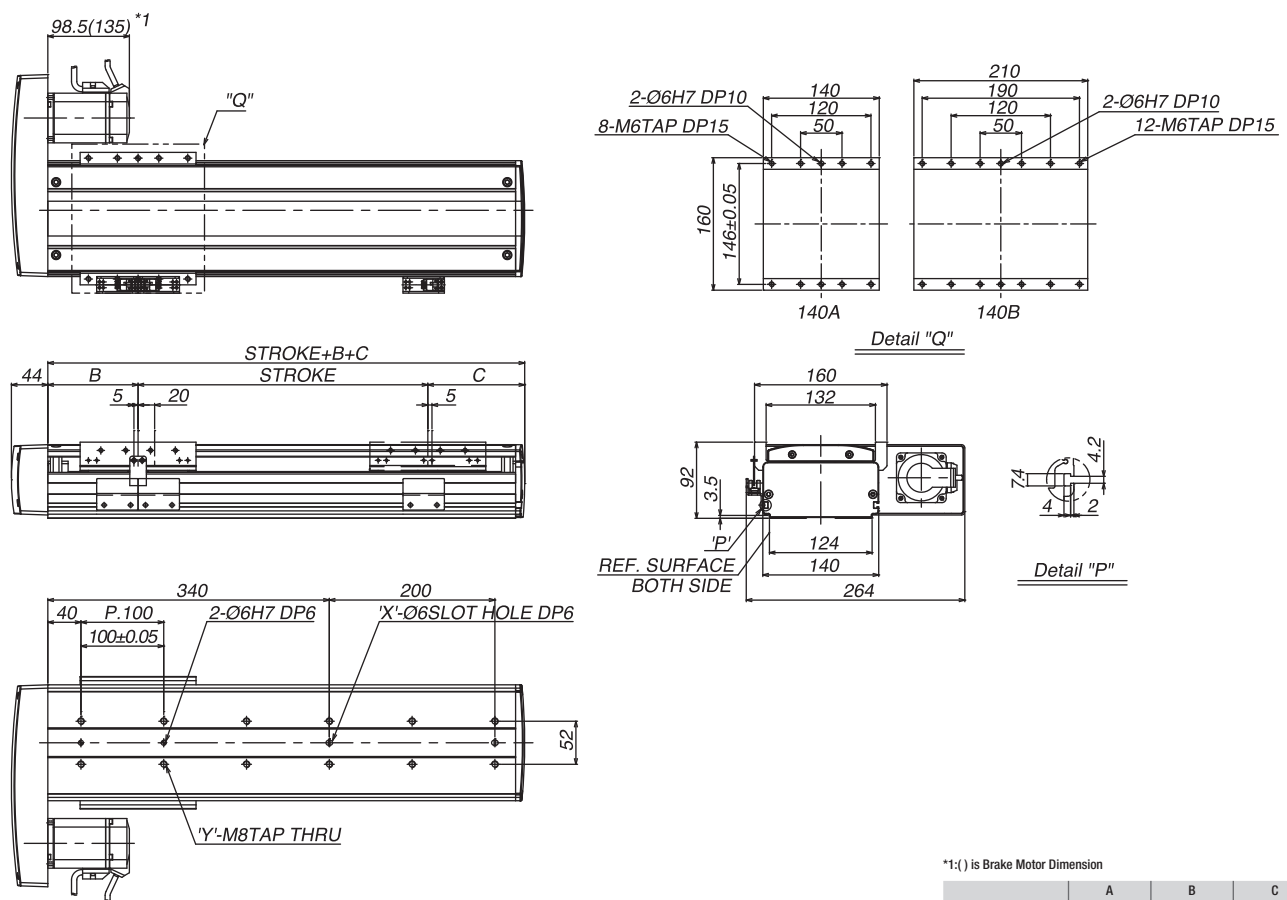
A: 2Rail 4Block No.20 S : Straight 400 : 400W I : Incremental 05 : 05mm 50: 50mm S1 : In the robot by magnetic sensor
 B: 2Rail 6Block No.20 LP : Motor Left 400(B) : 400W(Brake) A : Absolute 10 : 10mm ~ S2 : In the robot by magnetic sensor. Org
 RP : Motor Right 20 : 20mm 1500: 1500mm S3 : External photo sensor 3
 BP : Motor Bottom 30 : 30mm

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | |
|-------------------------|------------------------|--|---------------------|
| Driving Type | Ballscrew Φ 15 C7 | LM Guide | No.20 2Rail 4 Block |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km |
| | | Position Repeatability | \pm 0.02mm |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|-----|-----------|-----------|-------------|------|---------------|------------------|-------------|
| Model | | | | Hor' | Ver' | | | |
| DRA-140A-□-400-L05-□-□ | 400 | 400 | 5 | 160 | 30 | 1620 | 250 | 50~1500 |
| DRA-140A-□-400-L10-□-□ | | | 10 | 90 | 30 | 810 | 500 | |
| DRA-140A-□-400-L20-□-□ | | | 20 | 50 | 20 | 405 | 1000 | |
| DRA-140A-□-400-L30-□-□ | | | 30 | 20 | 10 | 270 | 1500 | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | | | | | | | | | |
|-------------------------------|-------------|---------------------------------|------|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Model | | Stroke | | | | | | | | | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | |
| DRA-140A-□P-400-L05-□-□ | Speed(mm/s) | | | | 250 | | | | 210 | 170 | 140 | 120 | 100 | 90 | 70 | 70 | 60 | |
| DRA-140A-□P-400-L10-□-□ | Speed(mm/s) | | | | 500 | | | | 430 | 340 | 280 | 230 | 200 | 170 | 150 | 130 | 120 | |
| DRA-140A-□P-400-L20-□-□ | Speed(mm/s) | | | | 1000 | | | | 870 | 690 | 570 | 470 | 410 | 350 | 300 | 270 | 230 | |
| DRA-140A-□P-400-L30-□-□ | Speed(mm/s) | | | | 1500 | | | | 1300 | 1040 | 850 | 710 | 620 | 530 | 460 | 400 | 350 | |
| Mass(kg) | A Type | \approx 0.0142 * Stroke + 7.5 | 8.1 | 8.9 | 10.3 | 11.7 | 13.2 | 14.6 | 16.1 | 17.5 | 18.9 | 20.4 | 21.8 | 22.3 | 22.7 | 23.2 | 23.6 | 24.0 |
| | B Type | \approx 0.0142 * Stroke + 9.6 | 10.3 | 11 | 12.4 | 13.9 | 15.3 | 16.8 | 18.2 | 19.6 | 21.1 | 22.5 | 24 | 25.4 | 26.8 | 28.3 | 29.7 | 31.2 |

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-----|
| 140A-P | 140 | 109 | 117 |
| 140B-P | 210 | 144 | 152 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|
| X | 0 | | | 1 | | | | 2 | | | | 3 | | | | 4 | | | 5 | | | | 6 | | | | 7 | | | |
| Y | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | | | | | | | | | | | | | | | |

| Applicable controllers | | | Note |
|------------------------|----------------------|------|---|
| Controller | Max. controlled axes | Page | (1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다. (2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다. |
| iM-U | 8 axes | 242 | |
| iMS-Jp | 1 axis | 236 | |

DRA-140C-S

Ballscrew type, Direct Coupled Motor,
Base Width 140mm



| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|--------|--|------------------------------------|---------------------------------|---|-----------------------------|---|
| DRA | 140C | S | 400 | I | 20 | ST50 | S3 |
| C:2Rail 4Block No.15 D:2Rail 6Block No.15 | | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 400 : 400W 400(B) : 400W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm 40 : 40mm | 50:50mm ~ 2000:2000mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

| Specifications | | | | | |
|-------------------------|------------------------|--------------|---------------------|------------------------|--------------|
| Driving Type | Ballscrew Φ 20 C7 | LM Guide | No.15 2Rail 4 Block | Position Repeatability | \pm 0.02mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

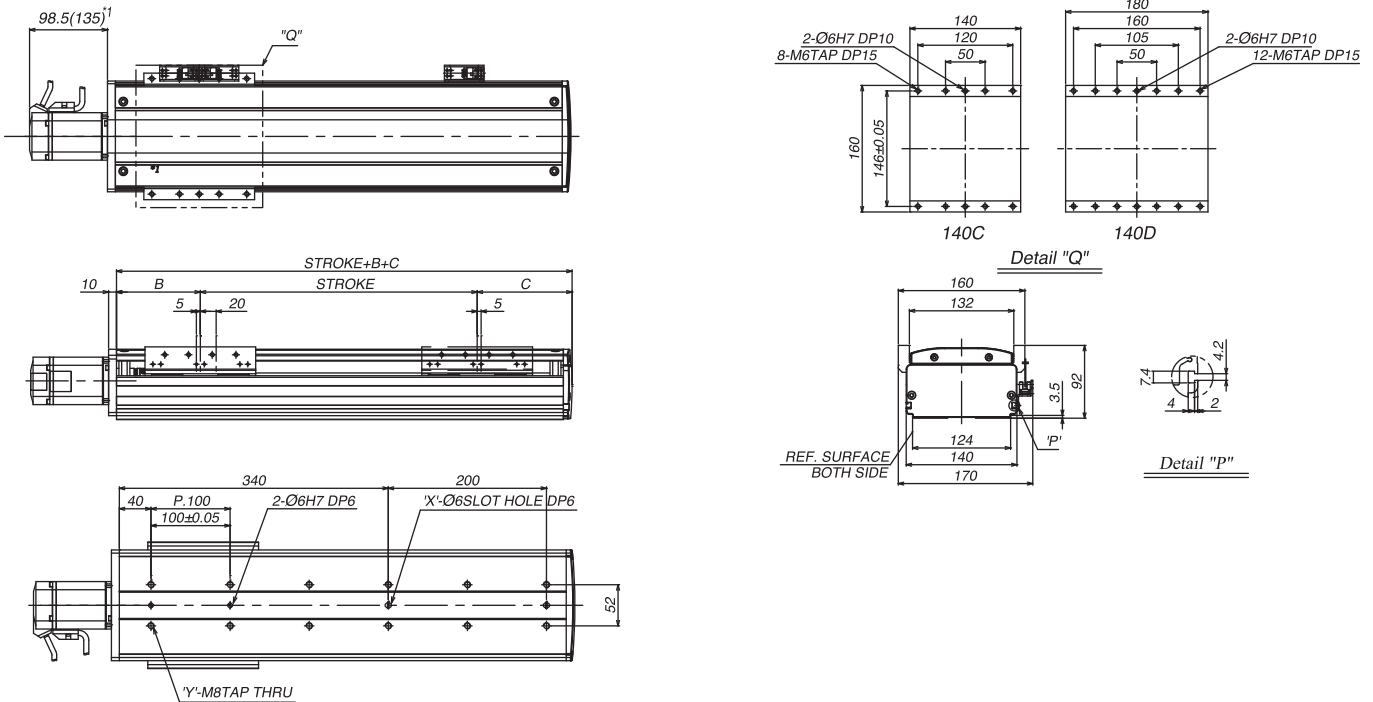
* Payload 및 LM Guide의 사양은 Type A의 조건임.

| Actuator Specifications | | | | | | | |
|-------------------------|-----------|-----------|------------------|------------------|---------------|------------------|-------------|
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
| | | | Hor ¹ | Ver ¹ | | | |
| DRA-140C-□-400-L05-□-□ | 400 | 5 | 160 | 40 | 1620 | 250 | 300~2000 |
| DRA-140C-□-400-L10-□-□ | | 10 | 90 | 50 | 810 | 500 | |
| DRA-140C-□-400-L20-□-□ | | 20 | 50 | 20 | 405 | 1000 | |
| DRA-140C-□-400-L30-□-□ | | 30 | 20 | 10 | 270 | 1500 | |
| DRA-140C-□-400-L40-□-□ | | 40 | 10 | - | 200 | 2000 | |

| Stroke, Velocity & Robot Mass | | Stroke | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|-------------|--|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Model | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 | | | | |
| DRA-140C-S-400-L05-□-□ | Speed(mm/s) | 250 | | | | 240 | 200 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | | | | | | | | |
| DRA-140C-S-400-L10-□-□ | Speed(mm/s) | 500 | | | | 480 | 400 | 330 | 280 | 240 | 210 | 180 | 160 | 140 | 130 | 110 | 100 | 90 | | | | | | | | |
| DRA-140C-S-400-L20-□-□ | Speed(mm/s) | 1000 | | | | 940 | 770 | 640 | 540 | 470 | 400 | 350 | 310 | 280 | 250 | 220 | 200 | 180 | | | | | | | | |
| DRA-140C-S-400-L30-□-□ | Speed(mm/s) | 1500 | | | | 1470 | 1200 | 1000 | 850 | 730 | 630 | 550 | 480 | 430 | 390 | 350 | 310 | 290 | | | | | | | | |
| DRA-140C-S-400-L40-□-□ | Speed(mm/s) | 2000 | | | | 1960 | 1600 | 1330 | 1130 | 970 | 840 | 730 | 650 | 570 | 510 | 460 | 420 | 380 | | | | | | | | |
| Mass(kg) | A Type | $\approx 0.0144 * \text{Stroke} + 7.5$ | | | | 8.2 | 8.9 | 10.4 | 12 | 13.4 | 14.9 | 16.3 | 17.8 | 19.2 | 20.6 | 22.1 | 23.5 | 25 | 26.4 | 27.9 | 29.3 | 30.8 | 32.2 | 33.7 | 35.1 | 36.5 |
| | B Type | $\approx 0.0145 * \text{Stroke} + 9$ | | | | 9.7 | 10.5 | 11.9 | 13.3 | 14.7 | 16.2 | 17.6 | 19.1 | 20.5 | 22 | 23.4 | 24.9 | 26.3 | 27.8 | 29.2 | 30.6 | 32.1 | 33.5 | 35 | 36.4 | 37.9 |

* 파나소닉 모터 기준 산정 무게임.

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-----|
| 140C-S | 140 | 106 | 120 |
| 140D-S | 180 | 126 | 140 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | | | | | | | | |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|----|----|----|----|----|----|----|-----|
| X | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | | |
| Y | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 64 | 66 | 68 | 70 | 72 | 74 | 76 | 78 | 80 | 82 | 84 | 86 | 88 | 90 | 92 | 94 | 96 | 98 | 100 |

| Applicable controllers | | |
|------------------------|----------------------|------|
| Controller | Max. controlled axes | Page |
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.

(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-140C-P

Ballscrew type, Direct Coupled Motor,
Base Width 140mm



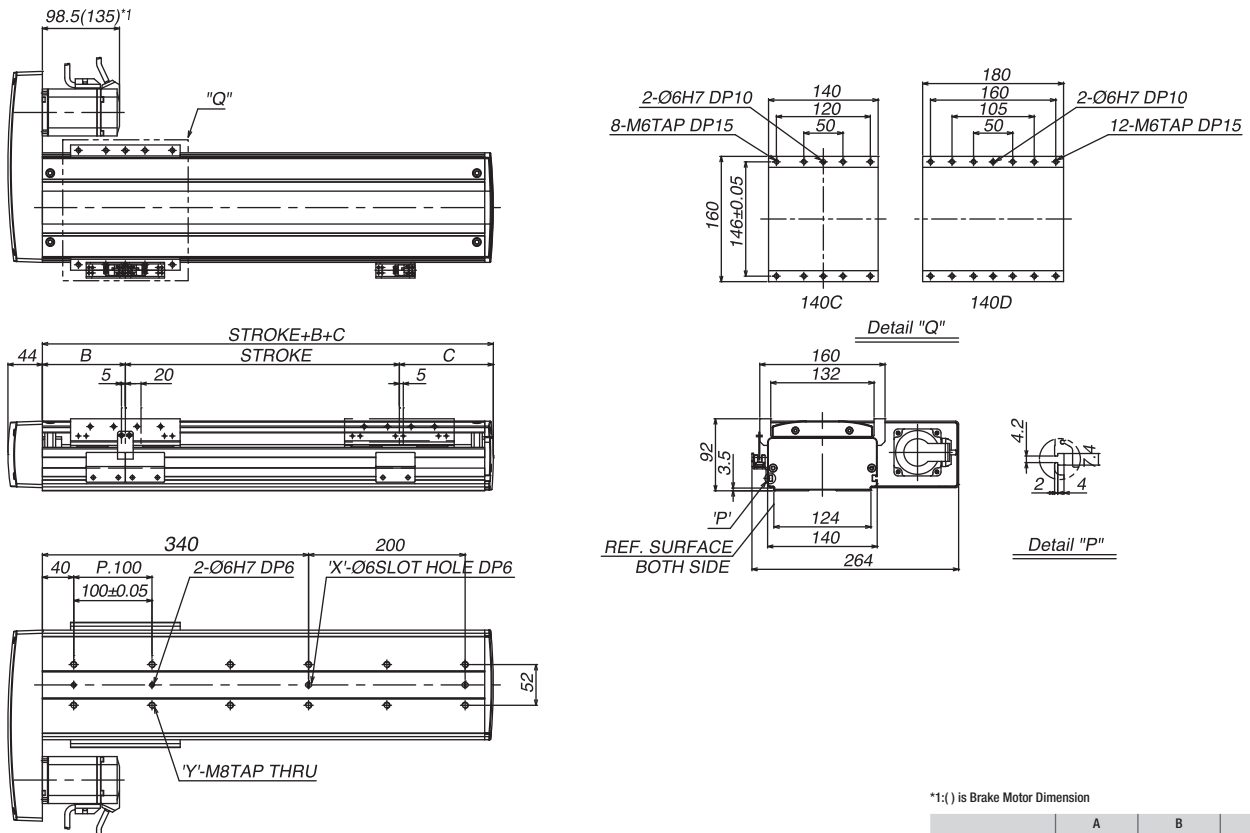
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|--|------------------------------------|---------------------------------|---|-----------------------------|---|-----------|
| DRA | 140C | LP | 400 | I | 20 | ST50 | S3 |
| C:2Rail 4Block No.15 D:2Rail 6Block No.15 | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 400 : 400W 400(B) : 400W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm 40 : 40mm | 50:50mm ~ 2000:2000mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 | |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | |
|-------------------------|------------------------|--|---------------------|
| Driving Type | Ballscrew $\phi 20$ C7 | LM Guide | No.15 2Rail 4 Block |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km |
| Position Repeatability | ±0.02mm | | |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|-----|-----------|-----------|-------------|------|---------------|------------------|-------------|
| Model | | | | Hor' | Ver' | | | |
| DRA-140C-□-400-L05-□-□ | 400 | 400 | 5 | 160 | 40 | 1620 | 250 | 300~2000 |
| DRA-140C-□-400-L10-□-□ | | | 10 | 90 | 50 | 810 | 500 | |
| DRA-140C-□-400-L20-□-□ | | | 20 | 50 | 20 | 405 | 1000 | |
| DRA-140C-□-400-L30-□-□ | | | 30 | 20 | 10 | 270 | 1500 | |
| DRA-140C-□-400-L40-□-□ | | | 40 | 10 | - | 200 | 2000 | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | | | | | | | | | | | | | | | | | | |
|-------------------------------|-------------|--|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | | | | | | |
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 | 1300 | 1400 | 1500 | 1600 | 1700 | 1800 | 1900 | 2000 |
| DRA-140C-□P-400-L05-□-□ | 250 | | | | | | | | | 240 | 200 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 |
| DRA-140C-□P-400-L10-□-□ | 500 | | | | | | | | | 480 | 400 | 330 | 280 | 240 | 210 | 180 | 160 | 140 | 130 | 110 | 100 | 90 |
| DRA-140C-□P-400-L20-□-□ | 1000 | | | | | | | | | 940 | 770 | 640 | 540 | 470 | 400 | 350 | 310 | 280 | 250 | 220 | 200 | 180 |
| DRA-140C-□P-400-L30-□-□ | 1500 | | | | | | | | | 1470 | 1200 | 1000 | 850 | 730 | 630 | 550 | 480 | 430 | 390 | 350 | 310 | 290 |
| DRA-140C-□P-400-L40-□-□ | 2000 | | | | | | | | | 1960 | 1600 | 1330 | 1130 | 970 | 840 | 730 | 650 | 570 | 510 | 460 | 420 | 380 |
| Mass(kg) | A Type | $\approx 0.0144 * \text{Stroke} + 7.5$ | | | | | | | | | | | | | | | | | | | | |
| | B Type | $\approx 0.0145 * \text{Stroke} + 9$ | | | | | | | | | | | | | | | | | | | | |
| | | 8.2 | 8.9 | 10.4 | 12 | 13.4 | 14.9 | 16.3 | 17.8 | 19.2 | 20.6 | 22.1 | 23.5 | 25 | 26.4 | 27.9 | 29.3 | 30.8 | 32.2 | 33.7 | 35.1 | 36.5 |
| | | 9.7 | 10.5 | 11.9 | 13.3 | 14.7 | 16.2 | 17.6 | 19.1 | 20.5 | 22 | 23.4 | 24.9 | 26.3 | 27.8 | 29.2 | 30.6 | 32.1 | 33.5 | 35 | 36.4 | 37.9 |

Dimension



| *1: () is Brake Motor Dimension | | | |
|----------------------------------|-----|-----|-----|
| | A | B | C |
| 140C-P | 140 | 106 | 120 |
| 140D-P | 180 | 126 | 140 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| X | 0 | | 1 | | 2 | | | | | | | 3 | | | | 4 | | | | | 5 | | | | 6 | | | | 7 | | | | 8 | | | | 9 | | | 10 | |
| Y | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | | | | | | | | | | | | | | | | | | | | | |

| Applicable controllers | | |
|------------------------|----------------------|------|
| Controller | Max. controlled axes | Page |
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.

(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-170A-S

Ballscrew type, Direct Coupled Motor,
Base Width 170mm



| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|------------|-------------|----------|-------------|----------|-----------|-------------|-----------|
| DRA | 170A | S | 750 | I | 20 | ST50 | S3 |

| | | | | | | |
|--|--|------------------------------------|---------------------------------|---|-----------------------------|---|
| A:2Rail 4Block No.20 B:2Rail 6Block No.20 | S : Straight LP : Motor Left RP : Motor Right BP : Motor Bottom | 750 : 750W 750(B) : 750W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm 40 : 40mm | 50:50mm ~ 2500:2500mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |
|--|--|------------------------------------|---------------------------------|---|-----------------------------|---|

Specifications

* Payload 및 LM Guide의 사양은 Type A의 조건임.

| | | | | | |
|-------------------------|------------------------|--------------|---------------------|------------------------|--------------|
| Driving Type | Ballscrew Φ 20 C7 | LM Guide | No.20 2Rail 4 Block | Position Repeatability | \pm 0.02mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

Actuator Specifications

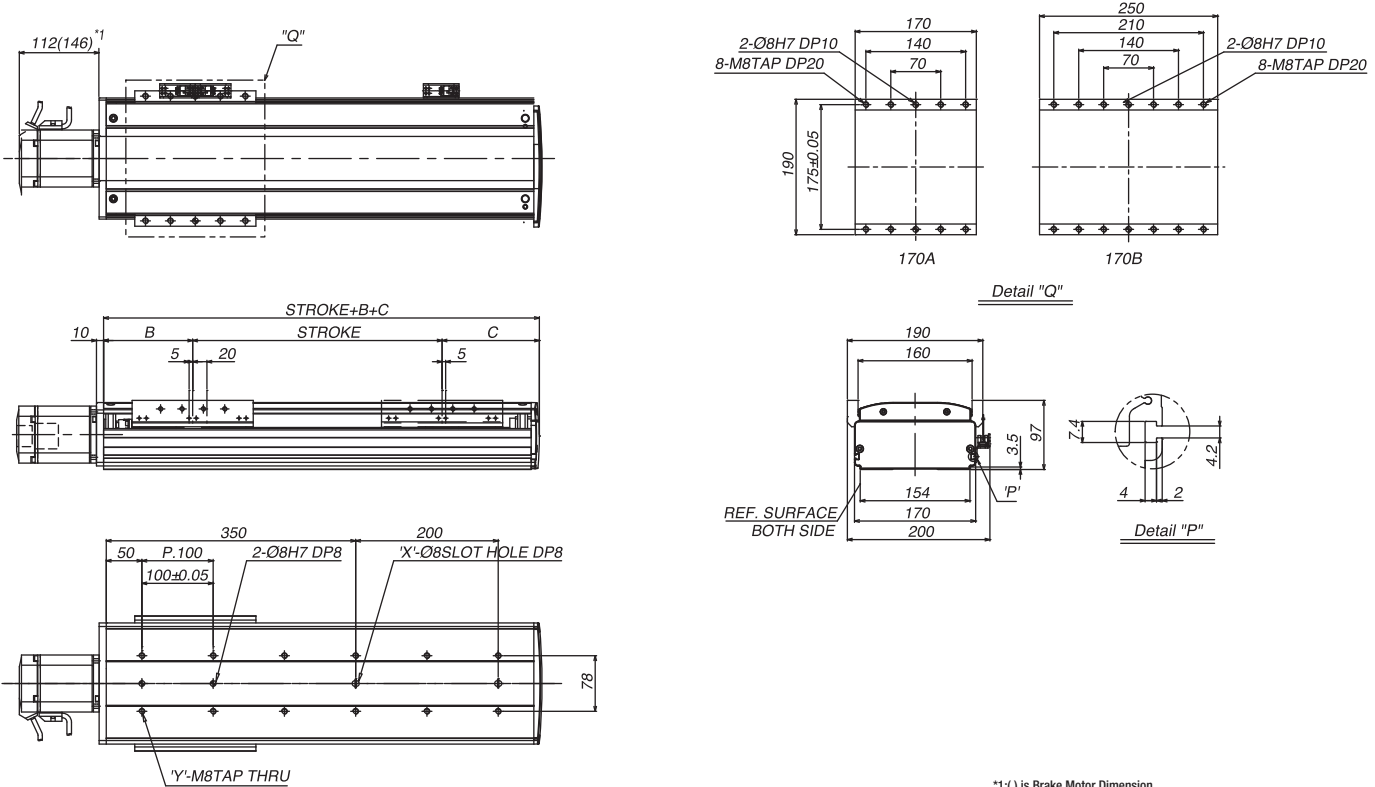
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|------------------------|-----------|-----------|-------------|------|---------------|------------------|-------------|
| | | | Hor' | Ver' | | | |
| DRA-170A-□-750-L05-□-□ | 750 | 5 | 240 | 80 | 3016 | 250 | 50~2500 |
| DRA-170A-□-750-L10-□-□ | | 10 | 180 | 80 | 1508 | 500 | |
| DRA-170A-□-750-L20-□-□ | | 20 | 90 | 30 | 754 | 1000 | |
| DRA-170A-□-750-L30-□-□ | | 30 | 50 | 20 | 503 | 1500 | |
| DRA-170A-□-750-L40-□-□ | | 40 | 25 | 10 | 377 | 2000 | |

Stroke, Velocity & Robot Mass

* 파나소닉 모터 기준 산정 무게임.

| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|--|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 50 | 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 |
| DRA-170A-S-750-L05-□-□ | Speed(mm/s) | | | | | | | | | 240 | 200 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | 40 | 40 | 40 | 30 | 30 |
| DRA-170A-S-750-L10-□-□ | Speed(mm/s) | | | | | | | | | 480 | 390 | 330 | 280 | 240 | 210 | 180 | 160 | 140 | 130 | 110 | 100 | 90 | 90 | 80 | 70 | 70 | 60 |
| DRA-170A-S-750-L20-□-□ | Speed(mm/s) | | | | | | | | | 930 | 760 | 640 | 540 | 460 | 400 | 350 | 310 | 280 | 250 | 220 | 200 | 180 | 170 | 150 | 140 | 130 | 120 |
| DRA-170A-S-750-L30-□-□ | Speed(mm/s) | | | | | | | | | 1450 | 1190 | 990 | 840 | 720 | 620 | 550 | 480 | 430 | 380 | 340 | 310 | 280 | 260 | 240 | 220 | 200 | 190 |
| DRA-170A-S-750-L40-□-□ | Speed(mm/s) | | | | | | | | | 1930 | 1580 | 1320 | 1120 | 960 | 830 | 730 | 640 | 570 | 510 | 460 | 420 | 380 | 350 | 320 | 290 | 270 | 250 |
| Mass(kg) | A Type $\cong 0.175 * \text{Stroke} + 11.5$ | 12.3 | 13.2 | 14.9 | 16.7 | 18.4 | 20.2 | 21.9 | 23.7 | 25.4 | 27.2 | 28.9 | 30.7 | 32.4 | 34.2 | 35.9 | 37.7 | 39.4 | 41.2 | 42.9 | 44.7 | 46.4 | 48.2 | 49.9 | 51.7 | 53.4 | 55.2 |
| | B Type $\cong 0.0175 * \text{Stroke} + 11.5$ | 15.3 | 16.1 | 17.9 | 19.6 | 21.4 | 23.1 | 24.9 | 26.6 | 28.4 | 30.1 | 31.9 | 33.6 | 35.4 | 37.1 | 38.9 | 40.6 | 42.4 | 44.1 | 45.9 | 47.6 | 49.4 | 51.1 | 52.9 | 54.6 | 56.4 | 58.1 |

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-------|
| 170A-S | 170 | 125 | 136.5 |
| 170B-S | 250 | 165 | 176.5 |

| | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 | 2350 | 2400 | 2450 | 2500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| X | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 64 | 66 | 68 | 70 | 72 | 74 | 76 | 78 | 80 | 82 | 84 | 86 | 88 | 90 | 92 | 94 | 96 | 98 | 100 | 102 | 104 | 106 | 108 | 110 | 112 | 114 | 116 | 118 | 120 | 122 | 124 | 126 | 128 | 130 | 132 | 134 | 136 | 138 | 140 | 142 | 144 | 146 | 148 | 150 | 152 | 154 | 156 | 158 | 160 | 162 | 164 | 166 | 168 | 170 | 172 | 174 | 176 | 178 | 180 | 182 | 184 | 186 | 188 | 190 | 192 | 194 | 196 | 198 | 200 |

Applicable controllers

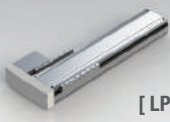
| Controller | Max. controlled axes | Page |
|------------|----------------------|------|
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.
(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-170A-P

Ballscrew type, Direct Coupled Motor,
Base Width 170mm



| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--------|--------|--------|-------------|---------|------|--------|--------|
| DRA | 170A | LP | 750 | I | 20 | ST50 | S3 |

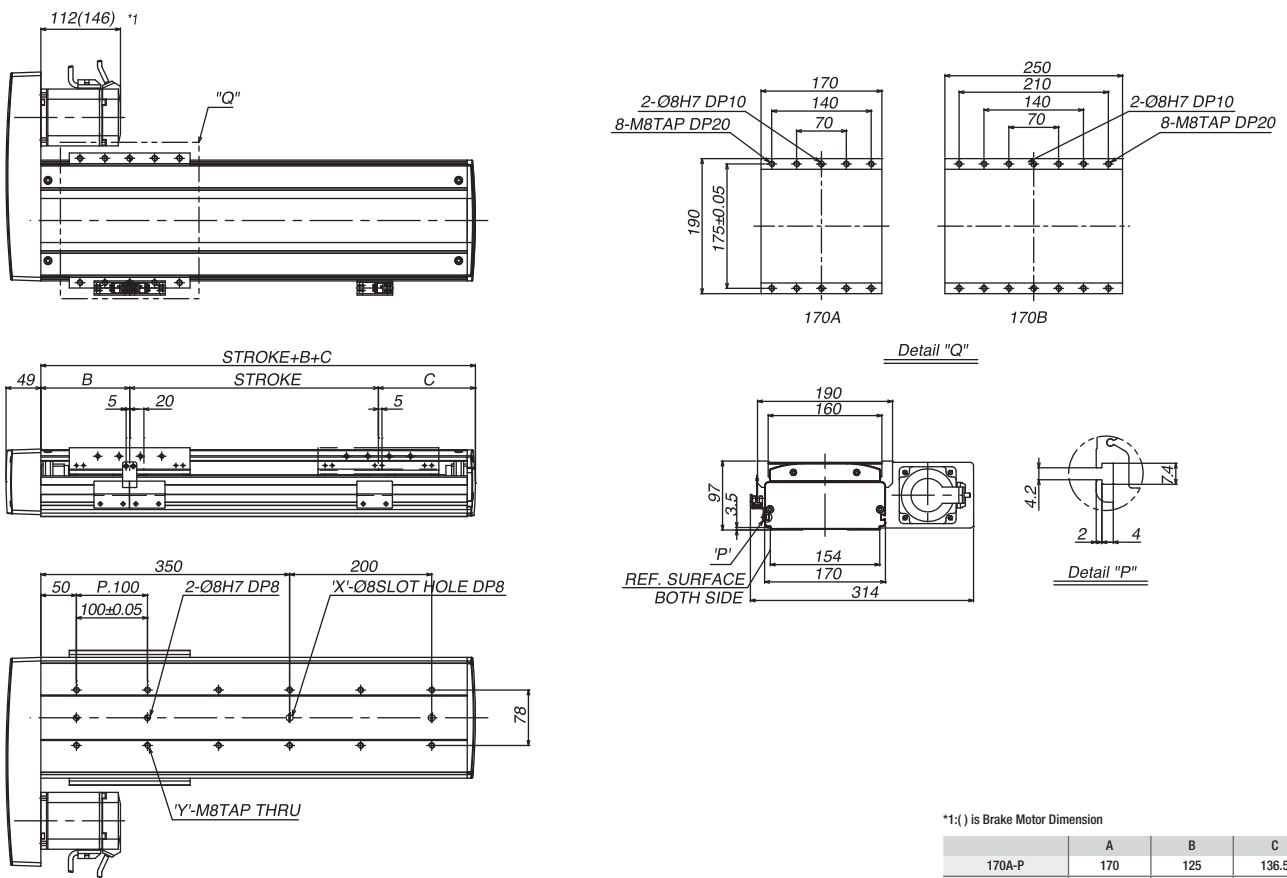
A:2Rail 4Block No.20 S : Straight 750 : 750W I : Incremental 05 : 05mm 50:50mm S1 : In the robot by magnetic sensor
 B:2Rail 6Block No.20 LP : Motor Left 750(B) : 750W(Brake) A : Absolute 10 : 10mm ~ S2 : In the robot by magnetic sensor. Org
 RP : Motor Right 20 : 20mm 2500:2500mm S3 : External photo sensor 3
 BP : Motor Bottom 30 : 30mm
 40 : 40mm

| Specifications | | | | | |
|-------------------------|------------------------|--------------|---------------------|------------------------|---------------|
| Driving Type | Ballscrew $\phi 20$ C7 | LM Guide | No.20 2Rail 4 Block | Position Repeatability | ± 0.02 mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

| Actuator Specifications | | | | | | | |
|-------------------------|-----------|-----------|-------------|------|---------------|------------------|-------------|
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
| | | | Hor' | Ver' | | | |
| DRA-170A-□-750-L05-□-□ | 750 | 5 | 240 | 80 | 3016 | 250 | 50~2500 |
| DRA-170A-□-750-L10-□-□ | | 10 | 180 | 80 | 1508 | 500 | |
| DRA-170A-□-750-L20-□-□ | | 20 | 90 | 30 | 754 | 1000 | |
| DRA-170A-□-750-L30-□-□ | | 30 | 50 | 20 | 503 | 1500 | |
| DRA-170A-□-750-L40-□-□ | | 40 | 25 | 10 | 377 | 2000 | |

| Model | | Stroke | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------------------------|-------------|---|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 50 | 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 | |
| DRA-170A-□-P-750-L05-□-□ | Speed(mm/s) | | | 250 | | | | | 240 | 200 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | 40 | 40 | 40 | 30 | 30 | | |
| DRA-170A-□-P-750-L10-□-□ | Speed(mm/s) | | | 500 | | | | | 480 | 390 | 330 | 280 | 240 | 210 | 180 | 160 | 140 | 130 | 110 | 100 | 90 | 90 | 80 | 70 | 70 | 60 | | |
| DRA-170A-□-P-750-L20-□-□ | Speed(mm/s) | | | 1000 | | | | | 930 | 760 | 640 | 540 | 460 | 400 | 350 | 310 | 280 | 250 | 220 | 200 | 180 | 170 | 150 | 140 | 130 | 120 | | |
| DRA-170A-□-P-750-L30-□-□ | Speed(mm/s) | | | 1500 | | | | | 1450 | 1190 | 990 | 840 | 720 | 620 | 550 | 480 | 430 | 380 | 340 | 310 | 280 | 260 | 240 | 220 | 200 | 190 | | |
| DRA-170A-□-P-750-L40-□-□ | Speed(mm/s) | | | 2000 | | | | | 1930 | 1580 | 1320 | 1120 | 960 | 830 | 730 | 640 | 570 | 510 | 460 | 420 | 380 | 350 | 320 | 290 | 270 | 250 | | |
| Mass(kg) | A Type | $\approx 0.175 * \text{Stroke} + 11.5$ | 12.3 | 13.2 | 14.9 | 16.7 | 18.4 | 20.2 | 21.9 | 23.7 | 25.4 | 27.2 | 28.9 | 30.7 | 32.4 | 34.2 | 35.9 | 37.7 | 39.4 | 41.2 | 42.9 | 44.7 | 46.4 | 48.2 | 49.9 | 51.7 | 53.4 | 55.2 |
| | B Type | $\approx 0.0175 * \text{Stroke} + 11.5$ | 15.3 | 16.1 | 17.9 | 19.6 | 21.4 | 23.1 | 24.9 | 26.6 | 28.4 | 30.1 | 31.9 | 33.6 | 35.4 | 37.1 | 38.9 | 40.6 | 42.4 | 44.1 | 45.9 | 47.6 | 49.4 | 51.1 | 52.9 | 54.6 | 56.4 | 58.1 |

Dimension



*1: () is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-------|
| 170A-P | 170 | 125 | 136.5 |
| 170B-P | 250 | 165 | 176.5 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 | 2350 | 2400 | 2450 | 2500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| X | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 64 | 66 | 68 | 70 | 72 | 74 | 76 | 78 | 80 | 82 | 84 | 86 | 88 | 90 | 92 | 94 | 96 | 98 | 100 | 102 | 104 | 106 | 108 | 110 | 112 | 114 | 116 | 118 | 120 | 122 | 124 | 126 | 128 | 130 | 132 | 134 | 136 | 138 | 140 | 142 | 144 | 146 | 148 | 150 | 152 | 154 | 156 | 158 | 160 | 162 | 164 | 166 | 168 | 170 | 172 | 174 | 176 | 178 | 180 | 182 | 184 | 186 | 188 | 190 | 192 | 194 | 196 | 198 | 200 | 202 | 204 | 206 | 208 | 210 | 212 | 214 | 216 | 218 | 220 | 222 | 224 | 226 | 228 | 230 | 232 | 234 | 236 | 238 | 240 | 242 | 244 | 246 | 248 | 250 |

| Applicable controllers | | | Page |
|------------------------|----------------------|--|------|
| Controller | Max. controlled axes | | |
| iM-U | 8 axes | | 242 |
| iMS-Jp | 1 axis | | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
 The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.

(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
 the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-200A-S

Ballscrew type, Direct Coupled Motor,
Base Width 200mm



| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--------|--------|--------|-------------|---------|------|--------|--------|
| DRA | 200A | S | 750 | I | 20 | ST50 | S3 |

A: 2Rail 4Block No.25
B: 2Rail 6Block No.25

S : Straight
LP : Motor Left
RP : Motor Right
BP : Motor Bottom

750 : 750W
750(B) : 750W(Brake)

I : Incremental
A : Absolute

05 : 05mm
10 : 10mm
20 : 20mm
30 : 30mm
40 : 40mm

50:50mm
~
2500:2500mm

S1 : In the robot by magnetic sensor
S2 : In the robot by magnetic sensor. Org
S3 : External photo sensor 3

Specifications

* Payload 및 LM Guide의 사양은 Type A의 조건임.

| | | | | | |
|-------------------------|------------------------|--------------|---------------------|------------------------|---------------|
| Driving Type | Ballscrew $\Phi 20$ C7 | LM Guide | No.25 2Rail 4 Block | Position Repeatability | ± 0.02 mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

Actuator Specifications

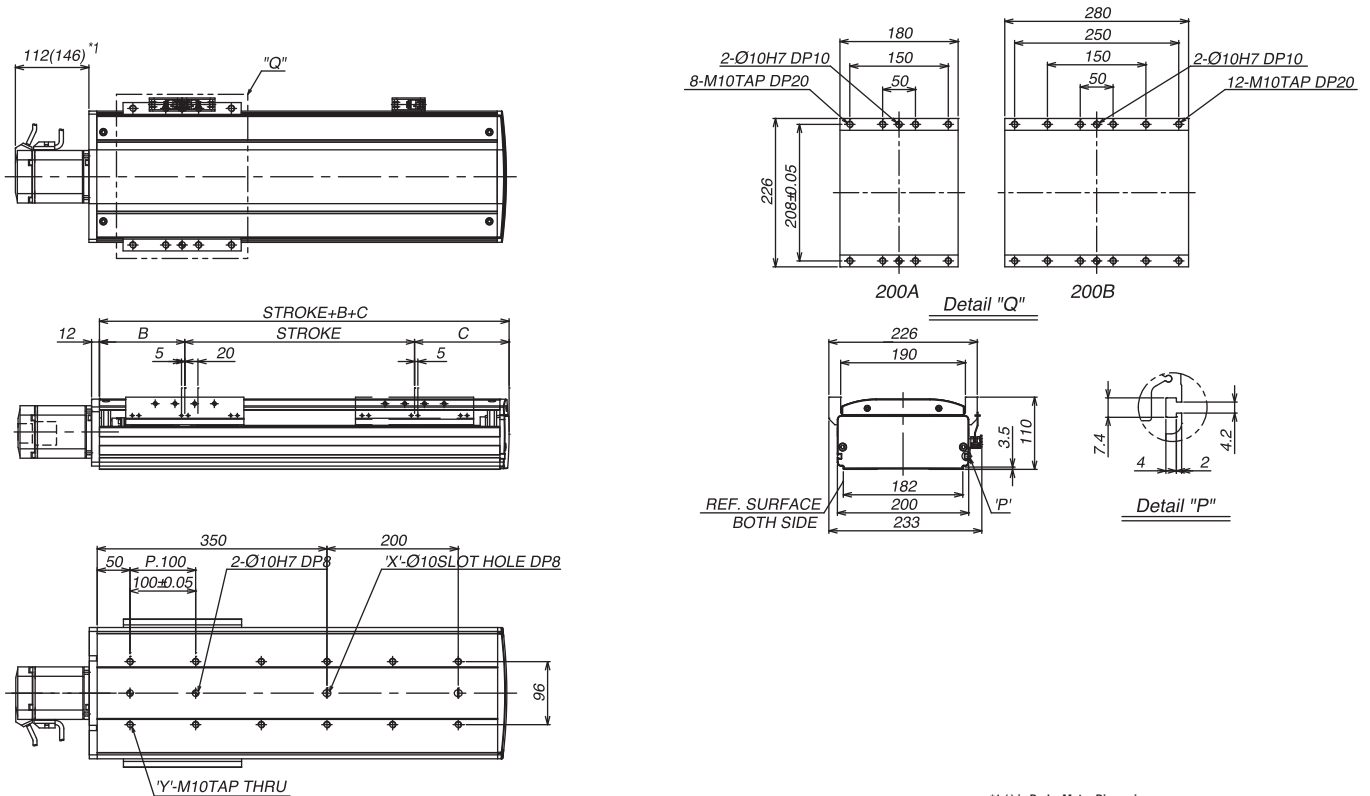
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|------------------------|-----------|-----------|-------------|------|---------------|------------------|-------------|
| | | | Hor' | Ver' | | | |
| DRA-200A-□-750-L05-□-□ | 750 | 5 | 240 | 80 | 3116 | 250 | 50~2500 |
| DRA-200A-□-750-L10-□-□ | | 10 | 180 | 80 | 1508 | 500 | |
| DRA-200A-□-750-L20-□-□ | | 20 | 90 | 30 | 754 | 1000 | |
| DRA-200A-□-750-L30-□-□ | | 30 | 50 | 20 | 503 | 1500 | |
| DRA-200A-□-750-L40-□-□ | | 40 | 25 | 10 | 377 | 2000 | |

Stroke, Velocity & Robot Mass

* 파나소닉 모터 기준 산정 무게임.

| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | | | | | | | | | | | | |
|------------------------|-------------|--|-----|--|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|--|
| | | 50 | 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 | |
| DRA-200A-S-750-L05-□-□ | 250 | | | | | | | | | 230 | 190 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | 40 | 40 | 40 | 30 | 30 | |
| DRA-200A-S-750-L10-□-□ | 500 | | | | | | | | | 470 | 380 | 320 | 270 | 230 | 200 | 180 | 160 | 140 | 120 | 110 | 100 | 90 | 80 | 80 | 70 | 70 | 60 | |
| DRA-200A-S-750-L20-□-□ | 1000 | | | | | | | | | 910 | 750 | 630 | 530 | 460 | 400 | 350 | 310 | 270 | 240 | 220 | 200 | 180 | 170 | 150 | 140 | 130 | 120 | |
| DRA-200A-S-750-L30-□-□ | 1500 | | | | | | | | | 1420 | 1160 | 970 | 820 | 710 | 610 | 540 | 480 | 420 | 380 | 340 | 310 | 280 | 260 | 240 | 220 | 200 | 190 | |
| DRA-200A-S-750-L40-□-□ | 2000 | | | | | | | | | 1890 | 1550 | 1300 | 1100 | 940 | 820 | 720 | 630 | 560 | 500 | 450 | 410 | 370 | 340 | 310 | 290 | 270 | 250 | |
| Mass(kg) | | A Type $\cong 0.0216 * \text{Stroke} + 14.5$ | | B Type $\cong 0.0216 * \text{Stroke} + 19.5$ | | | | | | | | | | | | | | | | | | | | | | | | |

Dimension



*1:() is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-----|
| 200A-S | 180 | 130 | 144 |
| 200B-S | 280 | 180 | 194 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 | 2350 | 2400 | 2450 | 2500 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| X | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | | |
| Y | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 64 | 66 | 68 | 70 | 72 | 74 | 76 | 78 | 80 | 82 | 84 | 86 | 88 | 90 | 92 | 94 | 96 | 98 | 100 | 102 | 104 | 106 | 108 | 110 | 112 | 114 | 116 | 118 | 120 | 122 | 124 | 126 | 128 | 130 | 132 | 134 | 136 | 138 | 140 | 142 | 144 | 146 | 148 | 150 | 152 | 154 | 156 | 158 | 160 | 162 | 164 | 166 | 168 | 170 | 172 | 174 | 176 | 178 | 180 | 182 | 184 | 186 | 188 | 190 | 192 | 194 | 196 | 198 | 200 | 202 | 204 | 206 | 208 | 210 | 212 | 214 | 216 | 218 | 220 | 222 | 224 | 226 | 228 | 230 | 232 | 234 | 236 | 238 | 240 | 242 | 244 | 246 | 248 | 250 |

Applicable controllers

| Controller | Max. controlled axes | Page |
|------------|----------------------|------|
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

- Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.
- This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-200A-P

Ball screw type, Direct Coupled Motor,
Base Width 200mm



| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|------------|-------------|-----------|-------------|----------|-----------|-------------|-----------|
| DRA | 200A | LP | 750 | I | 20 | ST50 | S3 |

A:2Rail 4Block No.25 S : Straight 750 : 750W I : Incremental 05 : 05mm 50:50mm S1 : In the robot by magnetic sensor
 B:2Rail 6Block No.25 LP : Motor Left 750(B) : 750W(Brake) A : Absolute 10 : 10mm ~ S2 : In the robot by magnetic sensor. Org
 RP : Motor Right 20 : 20mm 2500:2500mm S3 : External photo sensor 3
 BP : Motor Bottom 30 : 30mm
 40 : 40mm

Specifications

* Payload 및 LM Guide의 사양은 Type A의 조건임.

| | | | | | |
|-------------------------|-------------------------|--------------|---------------------|------------------------|--------------|
| Driving Type | Ball screw ϕ 20 C7 | LM Guide | No.25 2Rail 4 Block | Position Repeatability | \pm 0.02mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

Actuator Specifications

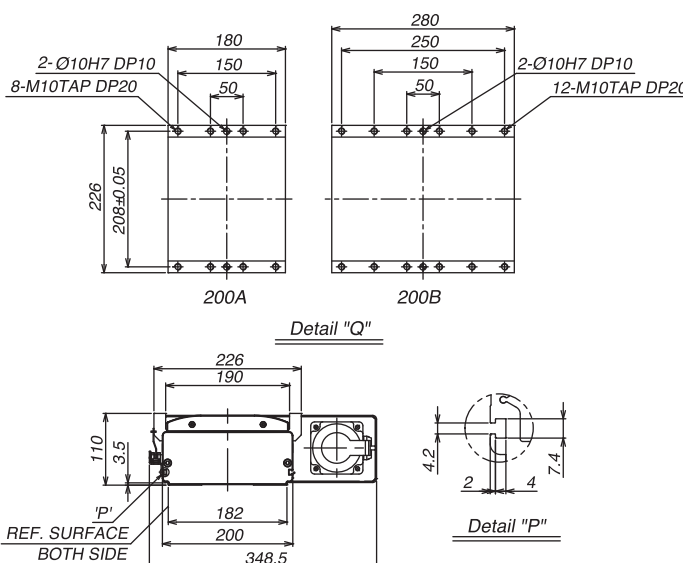
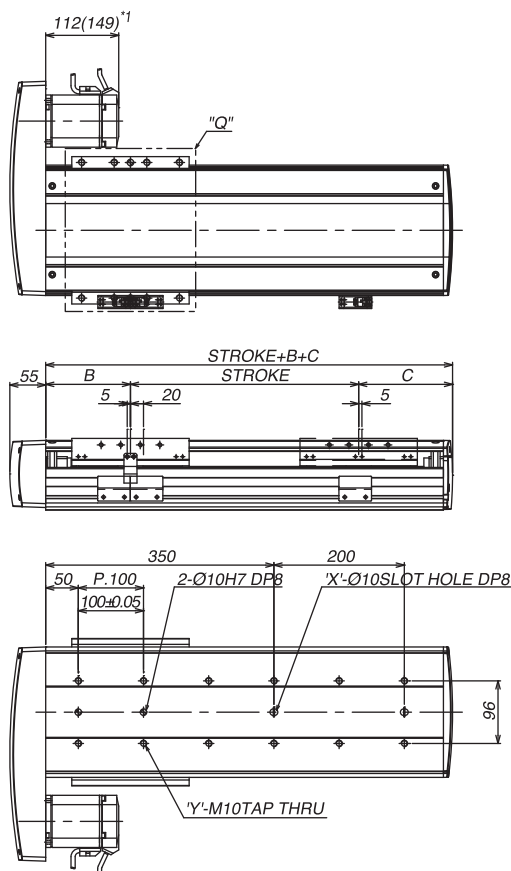
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|------------------------|-----------|-----------|-------------|------|---------------|------------------|-------------|
| | | | Hor' | Ver' | | | |
| DRA-200A-□-750-L05-□-□ | 750 | 5 | 240 | 80 | 3116 | 250 | 50~2500 |
| DRA-200A-□-750-L10-□-□ | | 10 | 180 | 80 | 1508 | 500 | |
| DRA-200A-□-750-L20-□-□ | | 20 | 90 | 30 | 754 | 1000 | |
| DRA-200A-□-750-L30-□-□ | | 30 | 50 | 20 | 503 | 1500 | |
| DRA-200A-□-750-L40-□-□ | | 40 | 25 | 10 | 377 | 2000 | |

Stroke, Velocity & Robot Mass

* 파나소닉 모터 기준 산정 무게임.

| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | | | | | | | | | | | | | | |
|-------------------------|---------------------------------------|--------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| | | 50 | 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 |
| DRA-200A-□P-750-L05-□-□ | 250 | | | | | | | | | 230 | 190 | 160 | 140 | 120 | 100 | 90 | 80 | 70 | 60 | 60 | 50 | 50 | 40 | 40 | 40 | 30 | 30 |
| DRA-200A-□P-750-L10-□-□ | 500 | | | | | | | | | 470 | 380 | 320 | 270 | 230 | 200 | 180 | 160 | 140 | 120 | 110 | 100 | 90 | 80 | 80 | 70 | 70 | 60 |
| DRA-200A-□P-750-L20-□-□ | 1000 | | | | | | | | | 910 | 750 | 630 | 530 | 460 | 400 | 350 | 310 | 270 | 240 | 220 | 200 | 180 | 170 | 150 | 140 | 130 | 120 |
| DRA-200A-□P-750-L30-□-□ | 1500 | | | | | | | | | 1420 | 1160 | 970 | 820 | 710 | 610 | 540 | 480 | 420 | 380 | 340 | 310 | 280 | 260 | 240 | 220 | 200 | 190 |
| DRA-200A-□P-750-L40-□-□ | 2000 | | | | | | | | | 1890 | 1550 | 1300 | 1100 | 940 | 820 | 720 | 630 | 560 | 500 | 450 | 410 | 370 | 340 | 310 | 290 | 270 | 250 |
| Mass(kg) | A Type \cong 0.0216 * Stroke + 14.5 | 15.6 | 16.6 | 18.8 | 21 | 23.1 | 25.3 | 27.5 | 29.6 | 31.8 | 34 | 36.1 | 38.3 | 40.4 | 42.6 | 44.8 | 46.9 | 49.1 | 51.3 | 53.4 | 55.6 | 57.7 | 59.9 | 62.1 | 64.2 | 66.4 | 68.6 |
| | B Type \cong 0.0216 * Stroke + 19.5 | 20.5 | 21.6 | 23.7 | 25.9 | 28.1 | 30.2 | 32.4 | 34.6 | 36.7 | 38.9 | 41 | 43.2 | 45.4 | 47.5 | 49.7 | 51.9 | 54 | 56.2 | 58.3 | 60.5 | 62.7 | 64.8 | 67 | 69.2 | 71.3 | 73.5 |

Dimension



*1: () is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-----|
| 200A-P | 180 | 130 | 144 |
| 200B-P | 280 | 180 | 194 |

| Stroke | 50 | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | 1250 | 1300 | 1350 | 1400 | 1450 | 1500 | 1550 | 1600 | 1650 | 1700 | 1750 | 1800 | 1850 | 1900 | 1950 | 2000 | 2050 | 2100 | 2150 | 2200 | 2250 | 2300 | 2350 | 2400 | 2450 | 2500 | | | | | | | | |
|--------|----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|-----|-----|-----|-----|-----|-----|-----|-----|
| X | 0 | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 | 14 | 15 | 16 | 17 | 18 | 19 | 20 | 21 | 22 | 23 | 24 | 25 | 26 | 27 | 28 | 29 | 30 | 31 | 32 | 33 | 34 | 35 | 36 | 37 | 38 | 39 | 40 | 41 | 42 | 43 | 44 | 45 | 46 | 47 | 48 | 49 | 50 | 51 | 52 | 53 | 54 | 55 | | |
| Y | 6 | 8 | 10 | 12 | 14 | 16 | 18 | 20 | 22 | 24 | 26 | 28 | 30 | 32 | 34 | 36 | 38 | 40 | 42 | 44 | 46 | 48 | 50 | 52 | 54 | 56 | 58 | 60 | 62 | 64 | 66 | 68 | 70 | 72 | 74 | 76 | 78 | 80 | 82 | 84 | 86 | 88 | 90 | 92 | 94 | 96 | 98 | 100 | 102 | 104 | 106 | 108 | 110 | 112 | 114 | 116 | 118 | 120 |

Applicable controllers

| Controller | Max. controlled axes | Page |
|------------|----------------------|------|
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
 The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.
 (2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
 the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-70B-SD

Ballscrew type, Dual Slider, Base Width 70mm

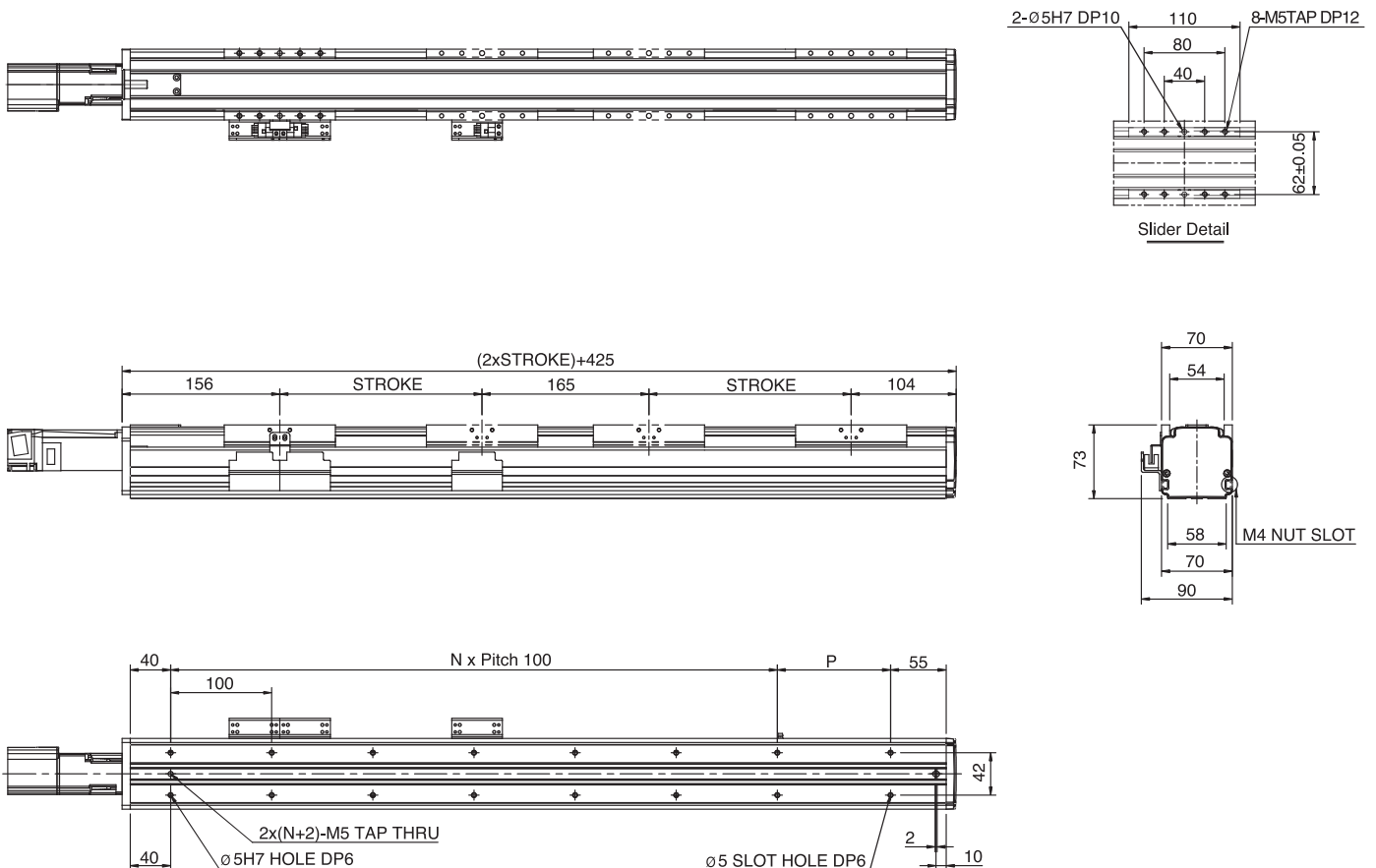
| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|------------|--|------------------------------------|---------------------------------|-------------------------------------|-----------------------------|---|
| DRA | 70B | SD | 100 | I | 10 | -200+200- | S3 |
| A:1Rail 1Block No.15 B:1Rail 2Block No.15 | | SD : Straight DL : Motor Left DR : Motor Right | 100 : 100W 100(B) : 100W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm | 100:100mm ~ 300:300mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

| Specifications | | * Payload 및 LM Guide의 사양은 Type A의 조건임. | | | | |
|-------------------------|------------------------|--|---------------------|------------------------|---------------|--|
| Driving Type | Ballscrew Φ 12 C7 | LM Guide | No.15 1Rail 2 Block | Position Repeatability | ± 0.02 mm | |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | | |

| Actuator Specifications | | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-------------------------|------|-----------|-----------|-------------|-----|---------------|------------------|-------------|
| Model | Hor' | | | Ver' | | | | |
| DRA-70B-□-100-L05-□-□ | 100 | 5 | 22 | 15 | 400 | 250 | 100~300 | |
| DRA-70B-□-100-L10-□-□ | | 10 | 15 | 7 | 200 | 500 | | |
| DRA-70B-□-100-L20-□-□ | | 20 | 5 | 0 | 100 | 1000 | | |

| Stroke, Velocity & Robot Mass | | * 파나소닉 모터 기준 산정 무게임. | | | |
|-------------------------------|---------------------------------------|----------------------|-----|-----|-----|
| Model | | Stroke | | | |
| | | 50 | 100 | 200 | 300 |
| DRA-70B-SD-100-L05-□-□ | Speed(mm/s) | 250 | | | |
| DRA-70B-SD-100-L10-□-□ | Speed(mm/s) | 500 | | | |
| DRA-70B-SD-100-L20-□-□ | Speed(mm/s) | 1000 | | | |
| Mass(kg) | $\approx 0.005 * \text{Stroke} + 2.5$ | 2.7 | 3 | 3.5 | 4 |

Dimension



| Stroke | 100 | 150 | 200 | 250 | 300 | *1:() is Brake Motor Dimension | | | | |
|--------|-----|-----|-----|-----|-----|---------------------------------|-------|-----|-----|-----|
| | X | 0 | 6 | 1 | 8 | 10 | A | B | C | |
| Y | | | | | | | 70A-S | 60 | 115 | 90 |
| | | | | | | | 70B-S | 110 | 140 | 115 |

| Stroke | N | P |
|--------|---|-----|
| 100 | 4 | 112 |
| 200 | 6 | 112 |
| 300 | 8 | 112 |

| Applicable controllers | | |
|------------------------|----------------------|------|
| Controller | Max. controlled axes | Page |
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

(1) Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다.
The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.

(2) This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다.
the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-90B-SD

Ballscrew type, Direct Coupled Motor,
Base Width 90mm

| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|--|------------------------------------|---------------------------------|--|-----------------------------|---|-----------|
| DRA | 90B | SD | 200 | I | 10 | -200+200- | S3 |
| A:1Rail 1Block No.20 B:1Rail 2Block No.20 | SD : Straight DL : Motor Left DR : Motor Right | 200 : 200W 200(B) : 200W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm | 100:100mm ~ 400:400mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 | |

Specifications

* Payload 및 LM Guide의 사양은 Type A의 조건임.

| | | | | | |
|-------------------------|------------------------|--------------|---------------------|------------------------|--------------|
| Driving Type | Ballscrew Φ 15 C7 | LM Guide | No.20 1Rail 2 Block | Position Repeatability | \pm 0.02mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

Actuator Specifications

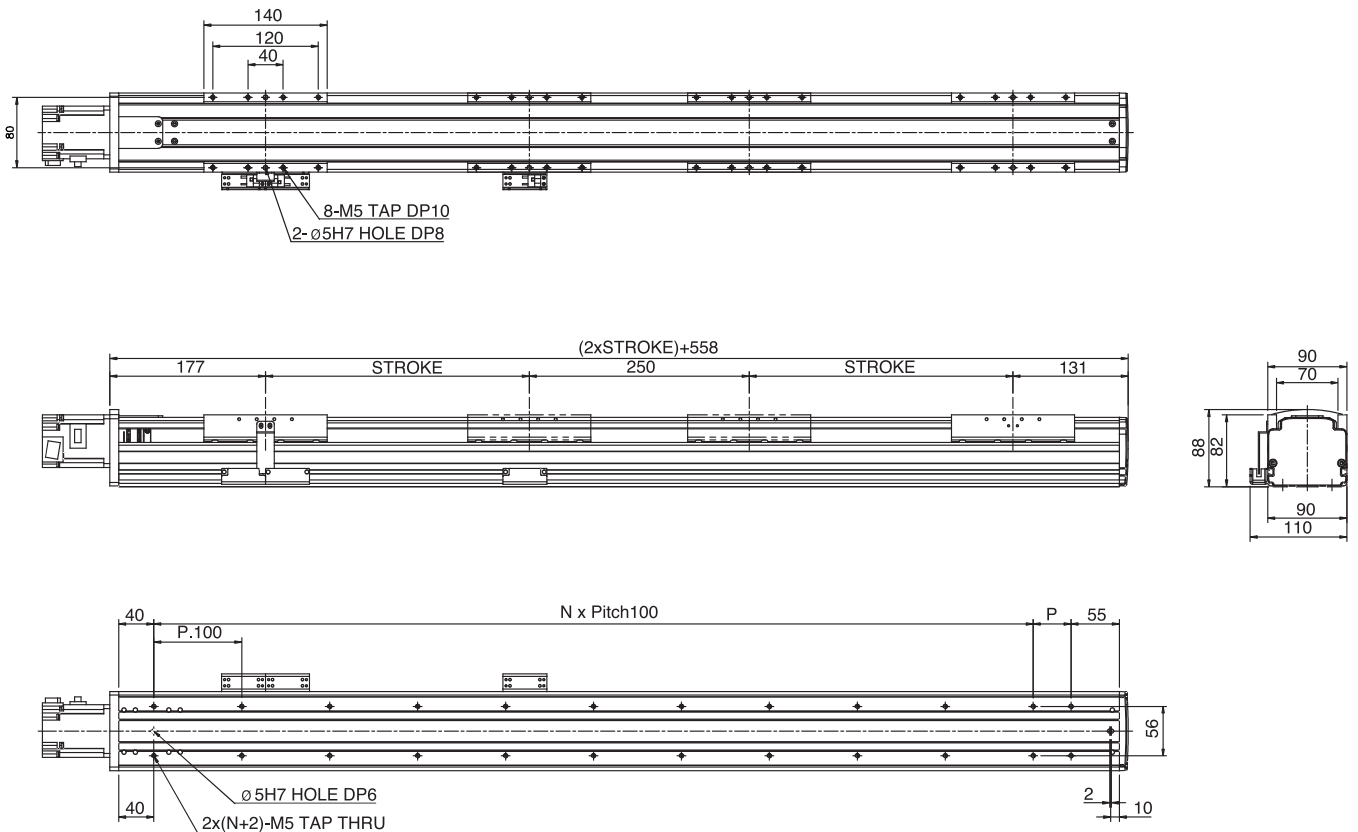
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|-----------------------|-----------|-----------|-------------|------|---------------|------------------|-------------|
| | | | Hor' | Ver' | | | |
| DRA-90B-□-200-L05-□-□ | 200 | 5 | 80 | 25 | 800 | 250 | 100~400 |
| DRA-90B-□-200-L10-□-□ | | 10 | 30 | 12 | 400 | 500 | |
| DRA-90B-□-200-L20-□-□ | | 20 | 15 | 6 | 200 | 1000 | |
| DRA-90B-□-200-L30-□-□ | | 30 | 5 | - | 134 | 1500 | |

Stroke, Velocity & Robot Mass

* 파나소닉 모터 기준 산정 무게임.

| Model | Speed (mm/s) | Stroke | | | | |
|------------------------|---------------------------------|--------|-----|------|-----|-----|
| | | 50 | 100 | 200 | 300 | 400 |
| DRA-90B-SD-200-L05-□-□ | Speed (mm/s) | | | 250 | | |
| DRA-90B-SD-200-L10-□-□ | Speed (mm/s) | | | 500 | | |
| DRA-90B-SD-200-L20-□-□ | Speed (mm/s) | | | 1000 | | |
| DRA-90B-SD-200-L30-□-□ | Speed (mm/s) | | | 1500 | | |
| Mass(kg) | \approx 0.0076 * Stroke + 4.1 | 4.5 | 4.9 | 5.6 | 6.4 | 7.1 |

Dimension



| Stroke | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------|-----|-----|-----|-----|-----|-----|-----|
| X | 0 | | 1 | | | 2 | |
| Y | 6 | | 8 | | 10 | 12 | |

*1:() is Brake Motor Dimension

| | A | B | C |
|-------|-----|-------|------|
| 90A-S | 75 | 126.5 | 98.5 |
| 90B-S | 140 | 159 | 131 |

| Stroke | N | P |
|--------|----|----|
| 100 | 6 | 43 |
| 200 | 8 | 43 |
| 300 | 10 | 43 |
| 400 | 12 | 43 |

Applicable controllers

| Controller | Max. controlled axes | Page |
|------------|----------------------|------|
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

- Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.
- This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-120A-SD

Ballscrew type, Direct Coupled Motor,
Base Width 120mm

| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|-------------|--|------------------------------------|---------------------------------|--|-----------------------------|---|
| DRA | 120A | SD | 200 | I | 10 | -200+200- | S3 |
| A:2Rail 4Block No.15 B:2Rail 6Block No.15 | | SD : Straight DL : Motor Left DR : Motor Right | 200 : 200W 200(B) : 200W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm | 100:100mm ~ 400:400mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 |

Specifications

* Payload 및 LM Guide의 사양은 Type A의 조건임.

| | | | | | |
|-------------------------|------------------------|--------------|---------------------|------------------------|--------------|
| Driving Type | Ballscrew Φ 15 C7 | LM Guide | No.15 2Rail 4 Block | Position Repeatability | \pm 0.02mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

Actuator Specifications

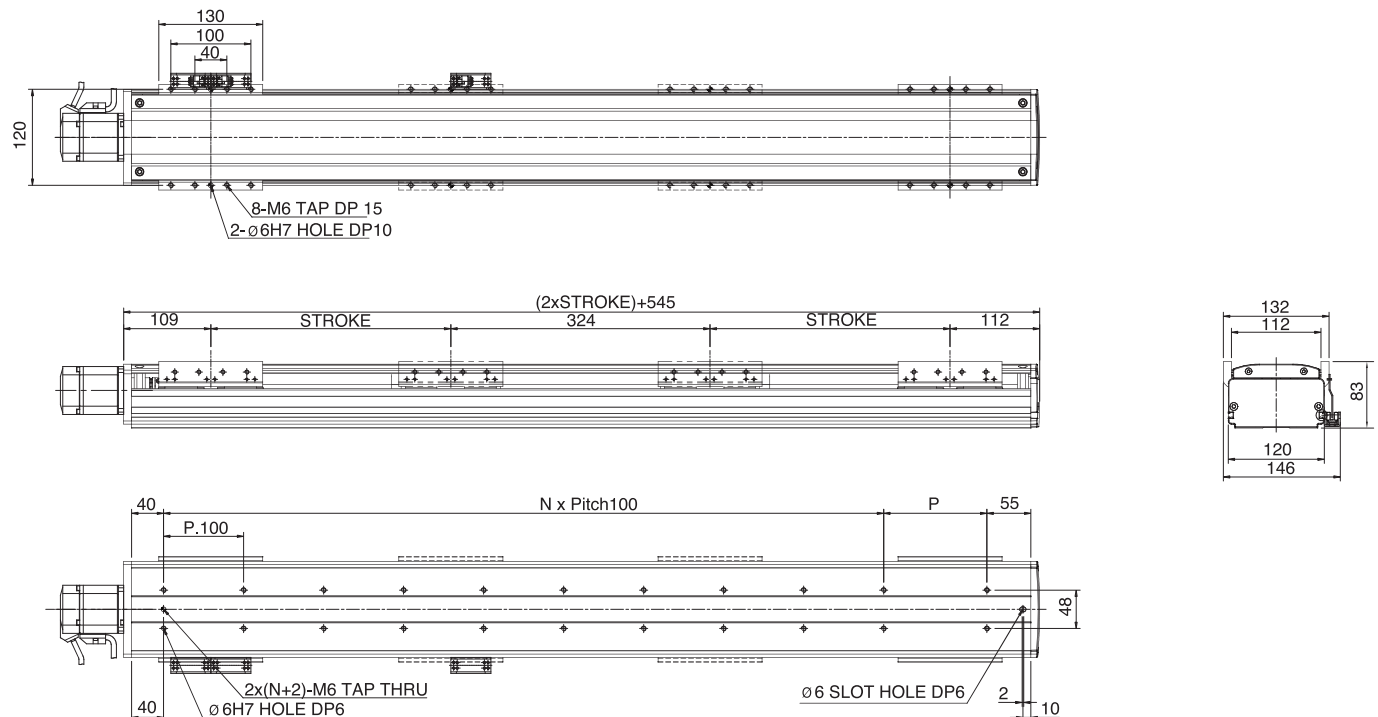
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|------------------------|-----------|-----------|-------------|------|---------------|------------------|-------------|
| | | | Hor' | Ver' | | | |
| DRA-120A-□-200-L05-□-□ | 200 | 5 | 80 | 25 | 800 | 250 | 100~400 |
| DRA-120A-□-200-L10-□-□ | | 10 | 30 | 12 | 400 | 500 | |
| DRA-120A-□-200-L20-□-□ | | 20 | 15 | 6 | 200 | 1000 | |
| DRA-120A-□-200-L30-□-□ | | 30 | 5 | - | 134 | 1500 | |

Stroke, Velocity & Robot Mass

* 파나소닉 모터 기준 산정 무게임.

| Model | Speed(mm/s) | Stroke | | | | | |
|------------------------|-------------|--|-----|------|-----|-----|-----|
| | | 50 | 100 | 200 | 300 | 400 | |
| DRA-120A-S-200-L05-□-□ | Speed(mm/s) | | | 250 | | | |
| DRA-120A-S-200-L10-□-□ | Speed(mm/s) | | | 500 | | | |
| DRA-120A-S-200-L20-□-□ | Speed(mm/s) | | | 1000 | | | |
| DRA-120A-S-200-L30-□-□ | Speed(mm/s) | | | 1500 | | | |
| Mass(kg) | A Type | $\approx 0.0076 * \text{Stroke} + 5.6$ | 5.7 | 6.2 | 7.3 | 8.3 | 9.3 |
| | B Type | $\approx 0.0076 * \text{Stroke} + 6.4$ | 6.9 | 7.4 | 8.4 | 9.5 | 11 |

Dimension



| Stroke | 100 | 150 | 200 | 250 | 300 | 350 | 400 |
|--------|-----|-----|-----|-----|-----|-----|-----|
| X | 0 | | | | 1 | | 2 |
| Y | 6 | | 8 | | | 10 | 12 |

*1:() is Brake Motor Dimension

| | A | B | C |
|--------|-----|-----|-----|
| 120A-S | 130 | 99 | 112 |
| 120B-S | 180 | 124 | 137 |

| Stroke | N | P |
|--------|----|-----|
| 100 | 5 | 129 |
| 200 | 7 | 129 |
| 300 | 9 | 129 |
| 400 | 11 | 129 |

Applicable controllers

| Controller | Max. controlled axes | Page |
|------------|----------------------|------|
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

Note

- Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.
- This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

DRA-170A-SD

Ballscrew type, Direct Coupled Motor,
Base Width 170mm

| Series | Type 1 | Type 2 | Motor Power | Encoder | Lead | Stroke | Option |
|--|--|------------------------------------|---------------------------------|---|-------------------------------|---|-----------|
| DRA | 170A | SD | 750 | I | 20 | 400+400 | S3 |
| A:2Rail 4Block No.20 B:2Rail 6Block No.20 | SD : Straight DL : Motor Left DR : Motor Right | 750 : 750W 750(B) : 750W(Brake) | I : Incremental A : Absolute | 05 : 05mm 10 : 10mm 20 : 20mm 30 : 30mm 40 : 40mm | 400:400mm ~ 1200:1200mm | S1 : In the robot by magnetic sensor S2 : In the robot by magnetic sensor. Org S3 : External photo sensor 3 | |

Specifications

* Payload 및 LM Guide의 사양은 Type A의 조건임.

| | | | | | |
|-------------------------|------------------------|--------------|---------------------|------------------------|---------------|
| Driving Type | Ballscrew $\phi 20$ C7 | LM Guide | No.20 2Rail 4 Block | Position Repeatability | ± 0.02 mm |
| Ambient Operation Temp. | 0~40°C, 85%RH 이하 | Service Lift | 15,000 km | | |

Actuator Specifications

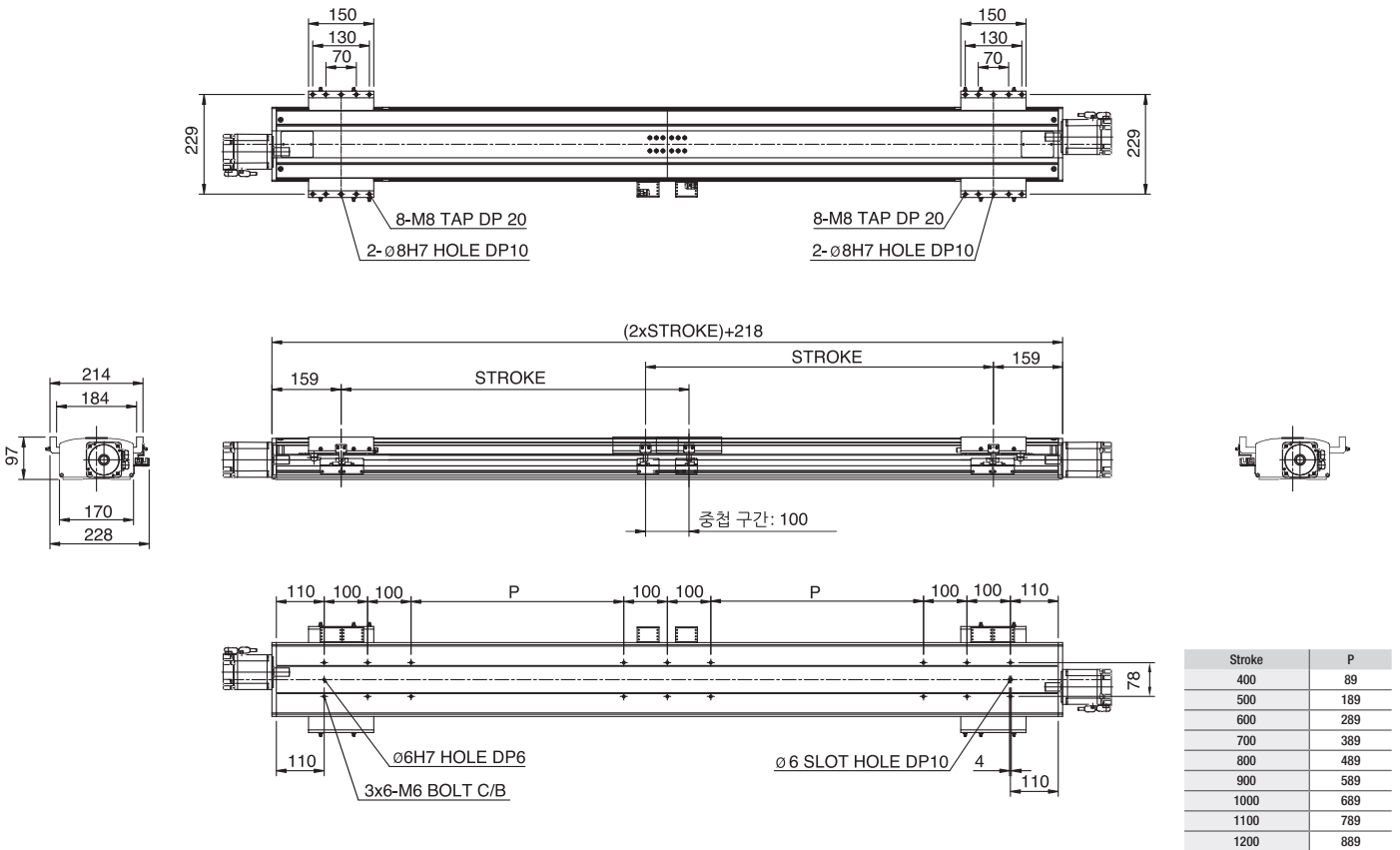
| Model | Motor (W) | Lead (mm) | Payload(kg) | | Push Force(N) | Max.Speed (mm/s) | Stroke (mm) |
|------------------------|-----------|-----------|-------------|------|---------------|------------------|-------------|
| | | | Hor' | Ver' | | | |
| DRA-170A-□-750-L05-□-□ | 750 | 5 | 240 | 80 | 3016 | 250 | 400~1200 |
| DRA-170A-□-750-L10-□-□ | | 10 | 180 | 80 | 1508 | 500 | |
| DRA-170A-□-750-L20-□-□ | | 20 | 90 | 30 | 754 | 1000 | |
| DRA-170A-□-750-L30-□-□ | | 30 | 50 | 20 | 503 | 1500 | |
| DRA-170A-□-750-L40-□-□ | | 40 | 25 | 10 | 377 | 2000 | |

Stroke, Velocity & Robot Mass

* 파나소닉 모터 기준 산정 무게임.

| Model | Speed(mm/s) | Stroke | | | | | | | | | | | | |
|------------------------|--|--------|------|------|------|------|------|------|------|------|-----|------|------|------|
| | | 50 | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1100 | 1200 |
| DRA-170A-S-750-L05-□-□ | Speed(mm/s) | 250 | | | | | | | | | | | | |
| DRA-170A-S-750-L10-□-□ | Speed(mm/s) | 500 | | | | | | | | | | | | |
| DRA-170A-S-750-L20-□-□ | Speed(mm/s) | 1000 | | | | | | | | | | | | |
| DRA-170A-S-750-L30-□-□ | Speed(mm/s) | 1500 | | | | | | | | | | | | |
| DRA-170A-S-750-L40-□-□ | Speed(mm/s) | 2000 | | | | | | | | | | | | |
| Mass(kg) | A Type $\approx 0.175 * \text{Stroke} + 11.5$ | 12.3 | 13.2 | 14.9 | 16.7 | 18.4 | 20.2 | 21.9 | 23.7 | 25.4 | 27 | 29 | 31 | 32.4 |
| | B Type $\approx 0.0175 * \text{Stroke} + 11.5$ | 15.3 | 16.1 | 17.9 | 19.6 | 21.4 | 23.1 | 24.9 | 26.6 | 28.4 | 30 | 32 | 34 | 35.4 |

Dimension



*1:() is Brake Motor Dimension

| Stroke | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 | 850 | 900 | 950 | 1000 | 1050 | 1100 | 1150 | 1200 | |
|--------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|------|------|------|------|------|--|
| X | 0 | | 1 | | 2 | | 3 | | 4 | | 5 | | 6 | | 7 | | 8 | | 9 | | 10 | | 11 | |
| Y | 6 | | 8 | | 10 | | 12 | | 14 | | 16 | | 18 | | 20 | | 22 | | 24 | | 26 | | 28 | |

| | A | B | C |
|--------|-----|-----|-------|
| 170A-S | 170 | 125 | 136.5 |
| 170B-S | 250 | 165 | 176.5 |

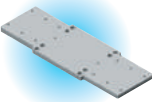



Applicable controllers

| Controller | Max. controlled axes | Page |
|------------|----------------------|------|
| iM-U | 8 axes | 242 |
| iMS-Jp | 1 axis | 236 |

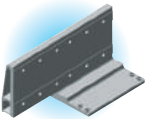
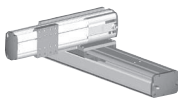


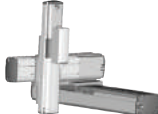
Note





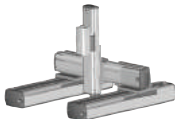


- Required cable length is option. Maximum length is 30m. 케이블 길이는 옵션입니다. 최대 30m까지 가능합니다. The performance of longer length than 15m is effected by the installation environment. 15m 이상 설치시 환경에 영향을 받을 수 있습니다.
- This is the mass of the model without brake. 상기 표준은 브레이크가 없는 모터가 포함된 무게입니다. the model equipped with a brake motor is 0.5kg heavier than this value. 브레이크는 표준무게보다 0.5kg이 추가됩니다.

Assorted combination types and Brackets


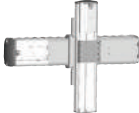
| Model | 2 Axes | 3 Axes | 4 Axes | 5 Axes |
|--|---|---|--------|--------|
|  MRB-A |  MRB-A1 |  MRB-A2 | | |
| | |  MRB-A3 | | |




| Model | 2 Axes | 3 Axes | 4 Axes | 5 Axes |
|--|---|---|--------|--------|
|  MRB-B |  MRB-B1 |  MRB-B2 | | |

| Model | 2 Axes | 3 Axes | 4 Axes | 5 Axes |
|--|---|---|--|---|
|  MRB-C |  MRB-C1 |  MRB-C2 |  MRB-C3 |  MRB-C4 |
| | |  MRB-C5 |  MRB-C6 | |

| Model | 2 Axes | 3 Axes | 4 Axes | 5 Axes |
|--|---|---|--|---|
|  MRB-D |  MRB-D1 |  MRB-D2 |  MRB-D3 |  MRB-D4 |
| | |  MRB-D5 |  MRB-D6 | |

Assorted combination types and Brackets

| Model | 2 Axes | 3 Axes | 4 Axes | 5 Axes |
|--|---|--------|--------|--------|
|  MRB-G |  MRB-G1 | | | |

| Model | 2 Axes | 3 Axes | 4 Axes | 5 Axes |
|--|---|---|--------|--------|
|  MRB-T |  MRB-T1 |  MRB-T2 | | |