

NSK

ROBOT MODULE™ MR SERIES

High precision motor ready linear system adaptable to common motor sizes including NEMA 23, 34 and 60mm metric frame motors.



STAY IN MOTION. STAY IN CONTROL.

QUICK REFERENCE

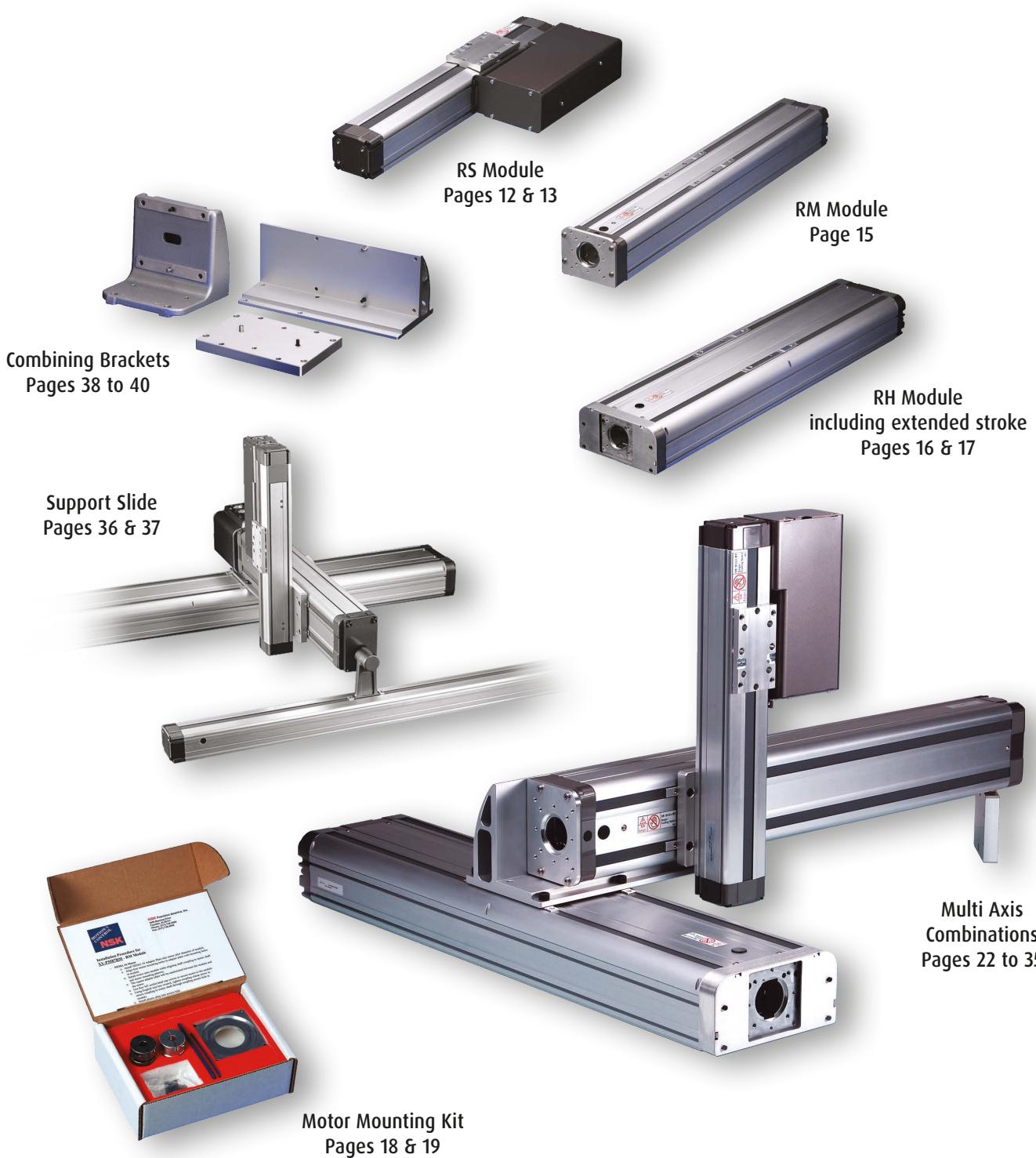


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GENERAL, FEATURES AND CAD DOWNLOADS

GENERAL

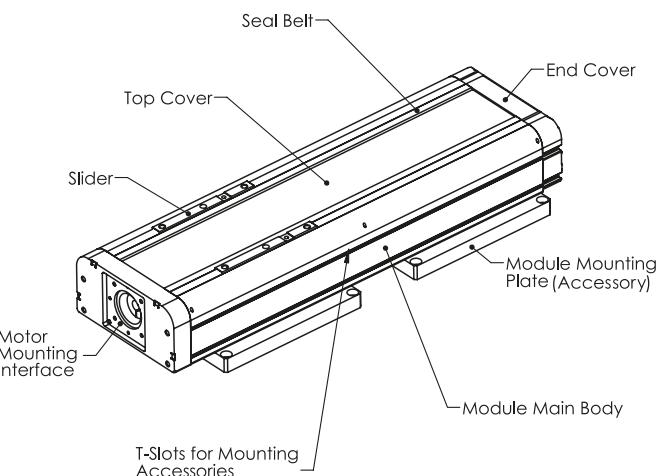
Robot Modules are complete linear axis high precision systems for semiconductor, electronic, medical and automated assembly and production applications. High-quality NSK Linear Guides, NSK Ball Screws and NSK Monocarriers ensure high level of mechanical reliability and U.S. manufacturing results in faster product delivery. NSK offers this sophisticated technology in an ergonomic design enclosed in an aluminum housing. The motorless design of these Robot Modules allows users the flexibility to choose their preferred motors when designing new systems or automating existing processes.

FEATURES

Utilization of NSK Robot Modules provides the following advantages:

- › NSK components ensure high mechanical reliability of each axis resulting in systems with high rigidity, long life and smooth motion.
- › Reduced time and labor costs associated with a pre-assembled axis.
- › 3 different types available - RS (small), RM (medium) and RH (heavy) to meet application stroke and payload requirements.
- › Standard patented K1™ Lubrication Units on the NSK Ball Screws, Linear Guides and Monocarriers provide maintenance-free operation up to 10,000 km or 5 years.
- › Combination brackets are available for attaching individual Robot Modules together into two- or three-axes configurations.
- › Module Mounting Plates are available for attaching Robot Modules to your machine.
- › Motor Mounting Kits are available for 60mm metric frame, NEMA 23 and NEMA 34 motor interfaces.
- › Optional Stroke Limit and Home Position sensor kits.
- › Motorless design offers user flexibility for motors of choice.
- › Most Robot Modules sizes available from stock.
- › Equipped with seal belt for dust proofing.

Module Construction



CAD DATA DOWNLOADS

NSK has partnered with SolidComponents™ to offer you easy access to CAD files and technical information. Visit SolidComponents (<http://npa.solidcomponents.com>) to download CAD files and technical information.



Multi Axis Combinations
(Pages 22 to 35)



RS Module
(Pages 12 & 13)



RM Module
(Page 15)



RH Module
(Pages 16 & 17)



Motor Mounting Kit
(Pages 18 & 19)



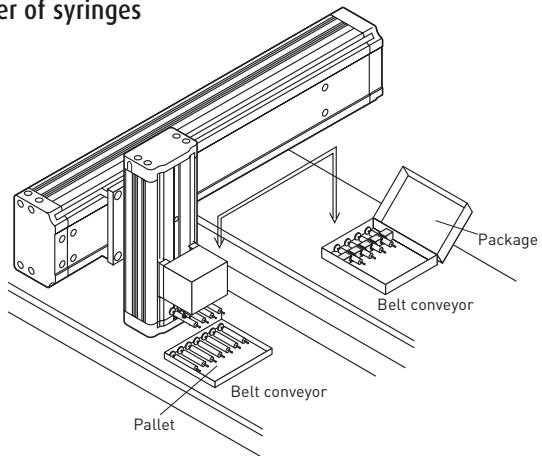
Support Slide
(Pages 36 & 37)



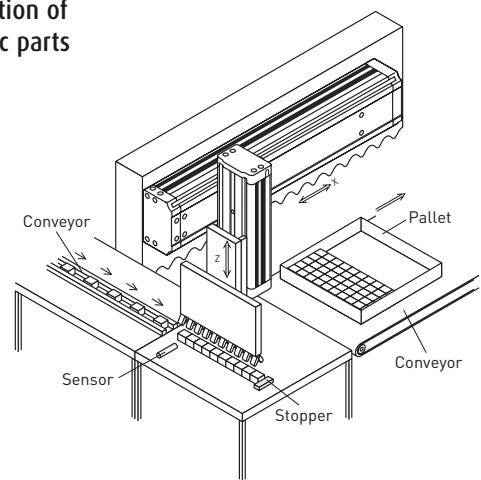
Combining Brackets
(Pages 38 to 40)

APPLICATION EXAMPLES

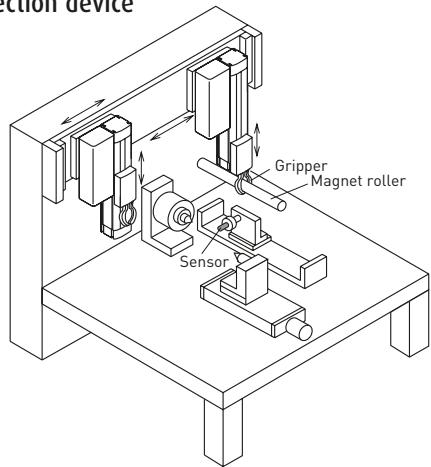
1 - Transfer of syringes



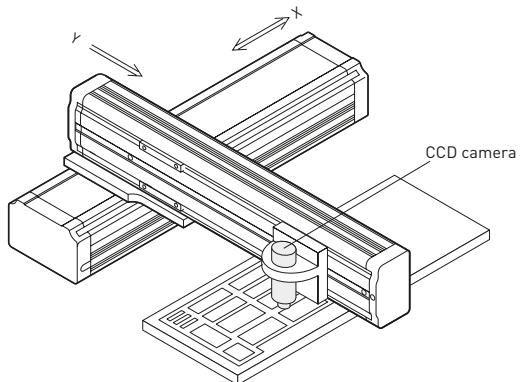
2 - Palletization of electronic parts



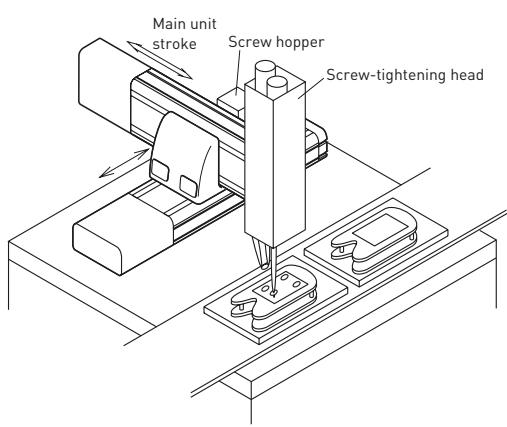
3 - Loader/unloader for inspection device



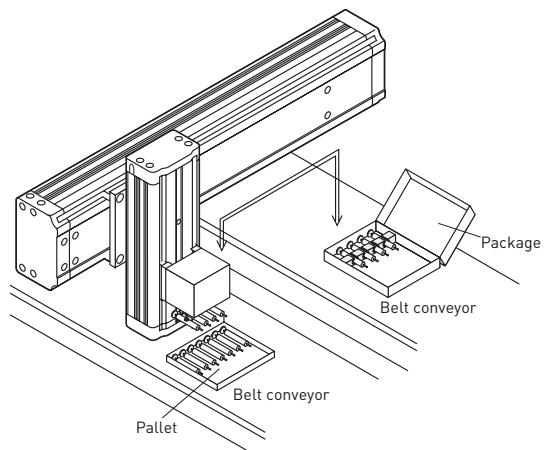
4 - Loader/unloader for inspection device



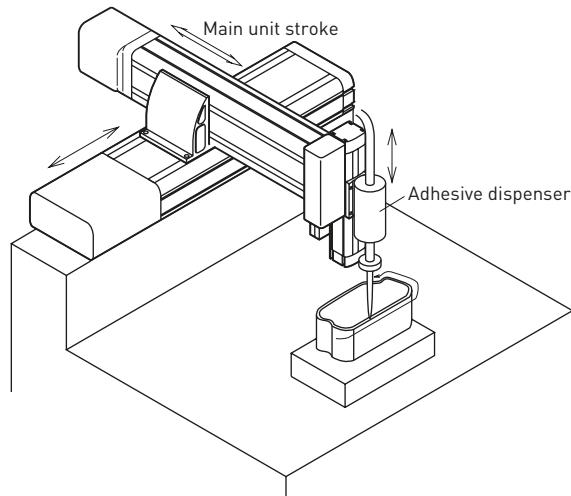
5 - Screw-tightening machine in assembly line



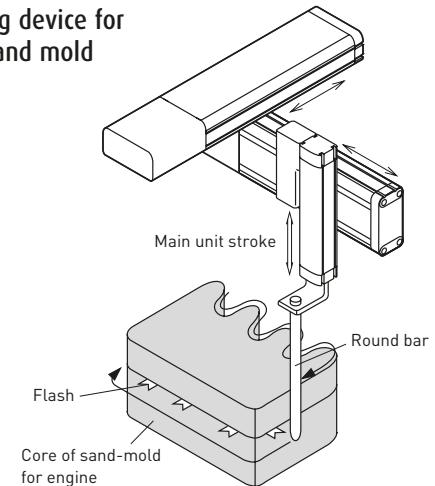
6 - Work feed in stamping machine



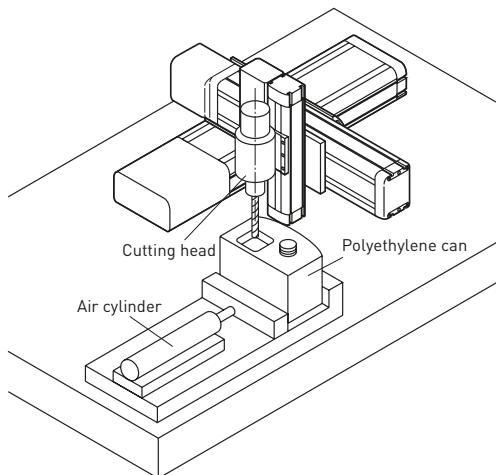
7 - Automobile taillight bonding



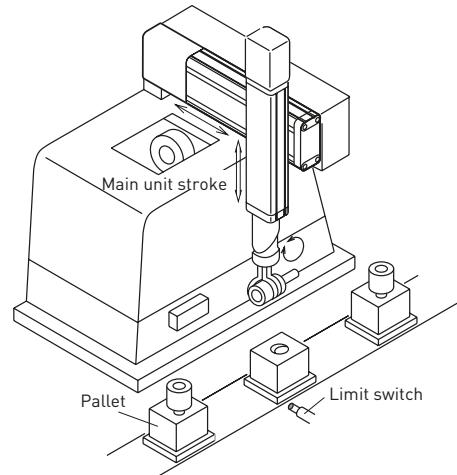
8 - Deflashing device for core of sand mold



9 - Polyethylene can processing machine

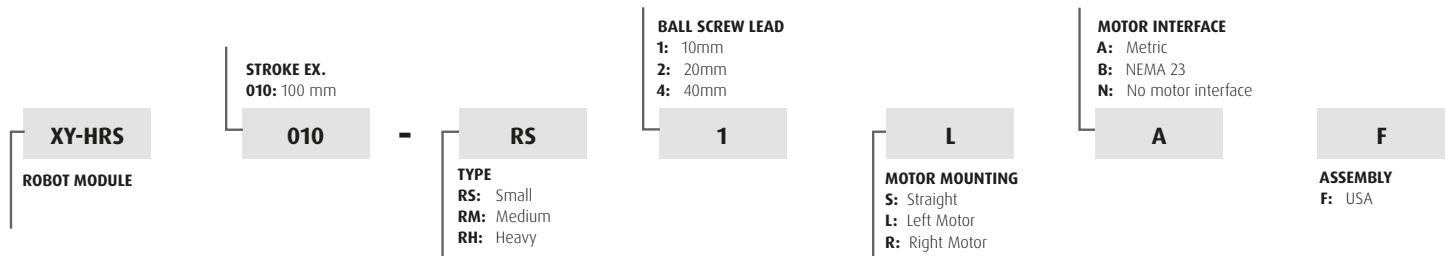


10 - Parts loader/unloader for processing machinery



REFERENCE NUMBERS

The reference number for the Robot Module is composed of the basic specifications of the unit.



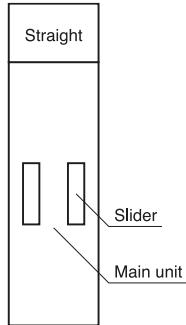
RS Module ordering directions

The RS Module is delivered with right or left motor mounts pre-assembled. It is not available in a straight motor mount configuration or with no motor mount attached. The RS Modules are available with metric or NEMA 23 motor mounting hole patterns.

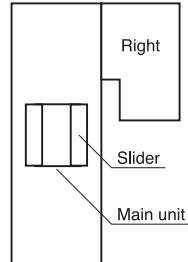
RH and RM Module ordering directions

Both the modules and motor mounting kits are purchased separately. Motor mounting kits for the RM and RH modules are available with metric, NEMA 23 or NEMA 34 motor mounting hole patterns.

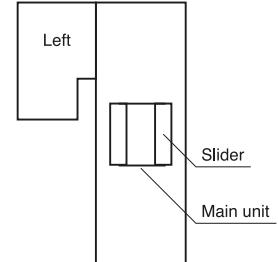
Straight Motor



Right Motor



Left Motor



List of Modules

| ROBOT MODULE | STROKE (MM) | | | | | | | | | | | | | | BALL SCREW LEAD | PAYLOAD, KG ¹ | | LINEAR GUIDE MOMENT CAPACITIES NM ² | | |
|--------------|-------------|-----|-----|-----|-----|-----|------|------|------|------|------|------|------|------|-----------------|--------------------------|----------|--|----------|--------|
| | 100 | 200 | 300 | 400 | 500 | 600 | 700 | 800 | 900 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | HORIZONTAL | VERTICAL | ROLLING | PITCHING | YAWING |
| RS Type | 100 | 200 | 300 | 400 | 500 | | | | | | | | | | 10mm | 20 | 20 | 32 | 24 | 24 |
| RM Type | | 250 | 350 | 450 | | 750 | 950 | | | | | | | | 10mm | 40 | 40 | 70 | 120 | 120 |
| RM Type | | 250 | 350 | 450 | | 750 | 950 | | | | | | | | 20mm | 40 | 20 | 70 | 120 | 120 |
| RH Type | | 300 | 400 | 500 | 600 | 800 | 1000 | | | | | | | | 10mm | 200 | 40 | 600 | 450 | 400 |
| RH Type | | 300 | 400 | 500 | 600 | 800 | 1000 | 1200 | 1400 | 1600 | 1800 | 2000 | 20mm | 80 | 20 | 600 | 450 | 400 | | |
| RH Type | | | | | | | | | 1200 | 1400 | 1600 | 1800 | 2000 | 40mm | 80 | 20 | 600 | 450 | 400 | |

Notes:

1) If your payload exceeds listed value contact NSK.

2) The individual moment capacities are defined as the value at which the fatigue life is 10,000 km when that moment acts continuously on the linear guide.

SINGLE AXIS SELECTION

RS Module - Left Motor Mount

| REFERENCE NUMBER | MOTOR MOUNTING KIT | MODULE MOUNTING PLATE | LIMIT SENSOR KIT | SQUARE NUT |
|------------------|--------------------|-----------------------|------------------|-------------|
| XY-HRS010-RS1LAF | | | | |
| XY-HRS020-RS1LAF | | | | |
| XY-HRS030-RS1LAF | | | | |
| XY-HRS040-RS1LAF | | | | |
| XY-HRS050-RS1LAF | | | | |
| XY-HRS010-RS1LBF | Pre-installed | XY-P170S-2 | XY-L3544RM | XY-P170M3-1 |
| XY-HRS020-RS1LBF | | | | |
| XY-HRS030-RS1LBF | | | | |
| XY-HRS040-RS1LBF | | | | |
| XY-HRS050-RS1LBF | | | | |

RS Module - Right Motor Mount

| REFERENCE NUMBER | MOTOR MOUNTING KIT | MODULE MOUNTING PLATE | LIMIT SENSOR KIT | SQUARE NUT |
|------------------|--------------------|-----------------------|------------------|-------------|
| XY-HRS010-RS1RAF | | | | |
| XY-HRS020-RS1RAF | | | | |
| XY-HRS030-RS1RAF | | | | |
| XY-HRS040-RS1RAF | | | | |
| XY-HRS050-RS1RAF | | | | |
| XY-HRS010-RS1RBF | Pre-installed | XY-P170S-2 | XY-L3544RM | XY-P170M3-1 |
| XY-HRS020-RS1RBF | | | | |
| XY-HRS030-RS1RBF | | | | |
| XY-HRS040-RS1RBF | | | | |
| XY-HRS050-RS1RBF | | | | |

RM Module - Straight Motor Mount

| REFERENCE NUMBER | MOTOR MOUNTING KIT | MODULE MOUNTING PLATE | LIMIT SENSOR KIT | SQUARE NUT |
|------------------|--|-----------------------|------------------|-------------|
| XY-HRS025-RM1SNF | | | | |
| XY-HRS025-RM2SNF | | | | |
| XY-HRS035-RM1SNF | XY-P5586RM (NEMA 23-1/4" shaft) or XY-P5587RM (NEMA 34-3/8" shaft) | | | |
| XY-HRS035-RM2SNF | | | | |
| XY-HRS045-RM1SNF | XY-P5588RM (Metric) or XY-P5717RM (NEMA 23-3/8" shaft) | XY-P170M-1 | XY-L3543RM | XY-P170M3-1 |
| XY-HRS045-RM2SNF | | | | |
| XY-HRS055-RM1SNF | | | | |
| XY-HRS055-RM2SNF | | | | |
| XY-HRS075-RM1SNF | | | | |
| XY-HRS075-RM2SNF | | | | |
| XY-HRS095-RM1SNF | | | | |
| XY-HRS095-RM2SNF | | | | |

RH Module - Straight Motor Mount, Stroke ≤ 1000mm

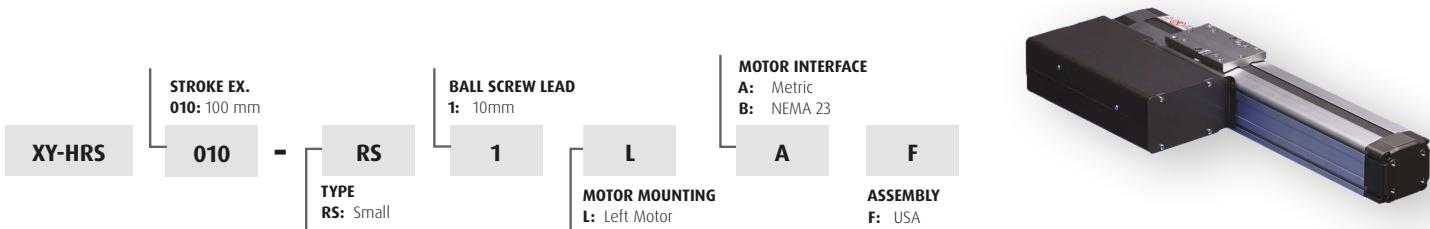
| REFERENCE NUMBER | MOTOR MOUNTING KIT | MODULE MOUNTING PLATE | LIMIT SENSOR KIT | SQUARE NUT |
|------------------|--|-----------------------|------------------|-------------|
| XY-HRS030-RH1SNF | | | | |
| XY-HRS030-RH2SNF | | | | |
| XY-HRS040-RH1SNF | XY-P5586RM (NEMA 23-1/4" shaft) or XY-P5587RM (NEMA 34-3/8" shaft) | | | |
| XY-HRS040-RH2SNF | XY-P5588RM (Metric) or XY-P5717RM (NEMA 23-3/8" shaft) | XY-P170H-1 | XY-L3542RM | XY-P170M3-1 |
| XY-HRS050-RH1SNF | XY-P5588RM (Metric) or XY-P5718RM (NEMA 34-1/2" shaft) | | | |
| XY-HRS050-RH2SNF | | | | |
| XY-HRS060-RH1SNF | | | | |
| XY-HRS060-RH2SNF | | | | |
| XY-HRS080-RH1SNF | | | | |
| XY-HRS080-RH2SNF | | | | |
| XY-HRS100-RH1SNF | | | | |
| XY-HRS100-RH2SNF | | | | |

RH Module - Left and Right Motor Mount, Stroke > 1200mm

| REFERENCE NUMBER | MOTOR MOUNTING KIT | MODULE MOUNTING PLATE | LIMIT SENSOR KIT | SQUARE NUT |
|------------------|--|-----------------------|------------------|-------------|
| XY-HRS120-RH2SNF | XY-P5743RM NEMA 23, 1:1 or XY-P5744RM NEMA 23, 2:1 | | | |
| XY-HRS120-RH4SNF | | | | |
| XY-HRS140-RH2SNF | | | | |
| XY-HRS140-RH4SNF | | | | |
| XY-HRS160-RH2SNF | XY-P5745RM NEMA 34, 1:1 or XY-P5746RM NEMA 34, 2:1 | XY-P170H-1 | XY-L3542RM | XY-P170M3-1 |
| XY-HRS160-RH4SNF | | | | |
| XY-HRS180-RH2SNF | | | | |
| XY-HRS180-RH4SNF | | | | |
| XY-HRS200-RH2SNF | | | | |
| XY-HRS200-RH4SNF | XY-P5748RM Metric, 2:1 | | | |

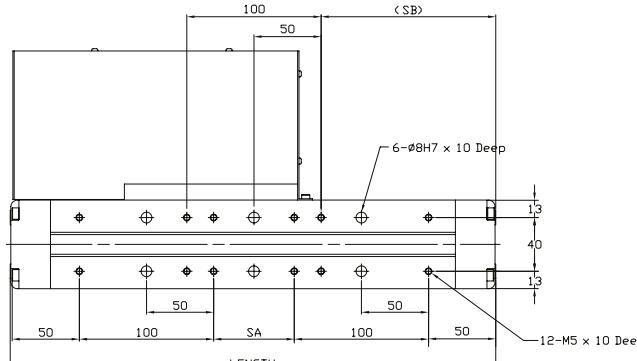
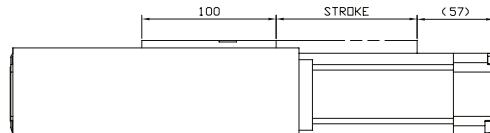
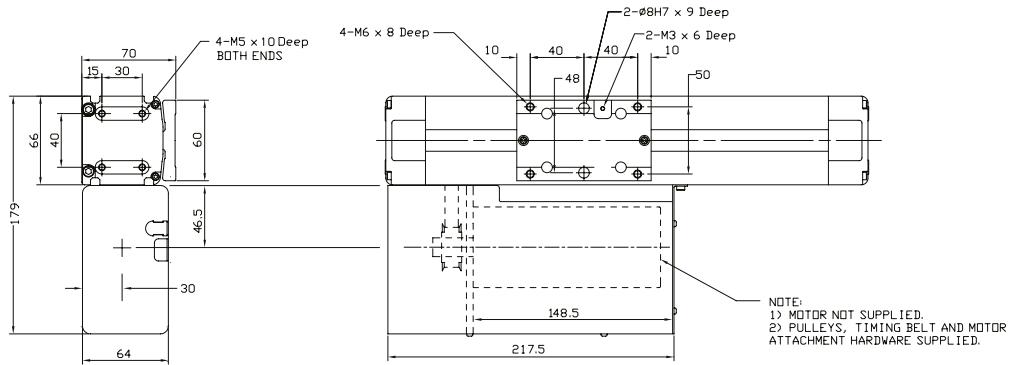
RS MODULE

LEFT MOTOR MOUNT



Note: Reference number designates modules with motor mounting kit.

| REFERENCE NUMBER | NOMINAL STROKE, MM | STROKE LIMIT +/- 2MM | BALLSCREW LEAD, MM | L MM | SA MM | SB MM | SPEED MAX MM/S | INERTIA KG-M ² | BREAKAWAY TORQUE, N-M | MASS KG | PAYLOAD, KG ¹ | | BACKLASH, MM |
|------------------|--------------------|----------------------|--------------------|------|-------|-------|----------------|---------------------------|-----------------------|---------|--------------------------|------|--------------|
| | | | | | | | | | | | HORIZ | VERT | |
| XY-HRS010-RS1L*F | 100 | 110 | 10 | 360 | 60 | 130 | 972 | 1.58E-05 | 0.07 | 4.9 | 20 | 20 | 0.02 |
| XY-HRS020-RS1L*F | 200 | 210 | | 460 | 160 | 180 | 972 | 1.74E-05 | | 5.5 | 20 | 20 | |
| XY-HRS030-RS1L*F | 300 | 310 | | 560 | 260 | 230 | 972 | 1.90E-05 | | 6.2 | 20 | 20 | |
| XY-HRS040-RS1L*F | 400 | 410 | | 660 | 360 | 280 | 972 | 2.06E-05 | | 6.8 | 20 | 20 | |
| XY-HRS050-RS1L*F | 500 | 510 | | 760 | 460 | 330 | 725 | 2.22E-05 | | 7.5 | 20 | 20 | |



Options

| | REF PAGE |
|-----------------------|-------------|
| Limit Sensor Kit | XY-L3544RM |
| Module Mounting Plate | XY-P170S-2 |
| Square Nut | XY-P170M3-1 |

Linear Guide Moment Capacities²

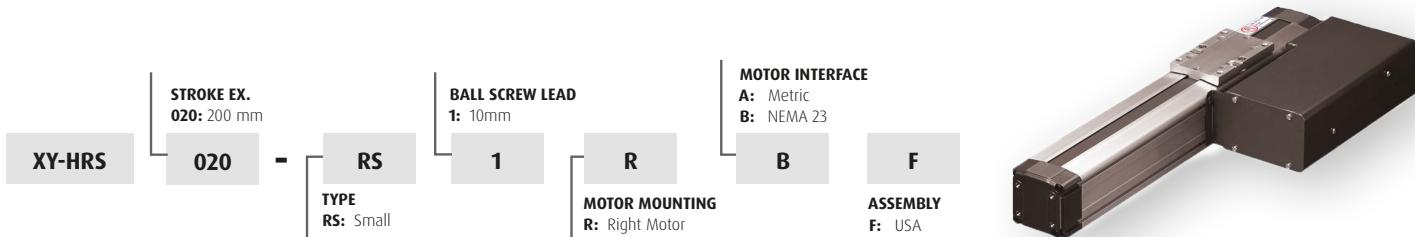
| | | |
|-----------------|------|----|
| Rolling Moment | [Nm] | 33 |
| Pitching Moment | [Nm] | 25 |
| Yawing Moment | [Nm] | 25 |

Note: Maximum input torque is 1.9 N-m
 1) If your payload exceeds listed value contact NSK.
 2) The individual moment capacities are defined as the value at which the fatigue life is 10,000 km when that moment acts continuously on the linear guide.

RS MODULE

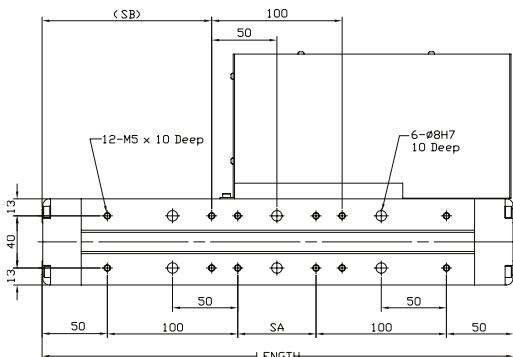
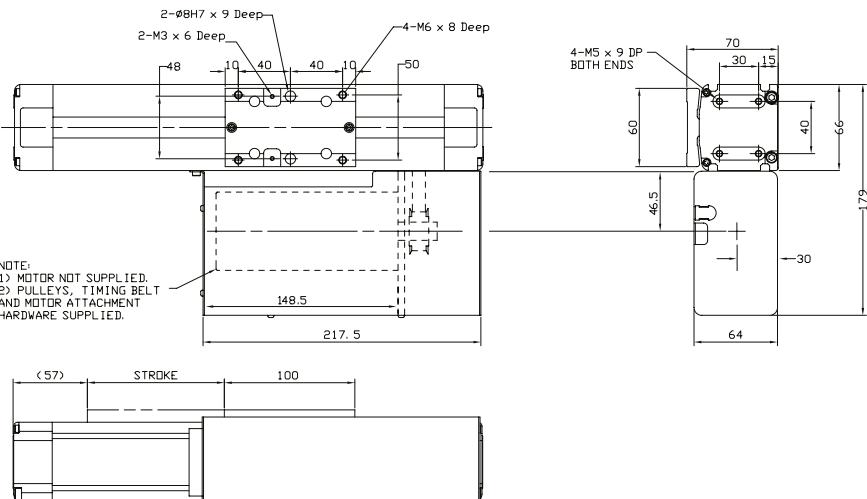
RIGHT MOTOR MOUNT

NSK



Note: Reference number designates modules with motor mounting kit.

| REFERENCE NUMBER | NOMINAL STROKE, MM | STROKE LIMIT +/- 2MM | BALLSCREW LEAD, MM | L MM | SA MM | SB MM | SPEED MAX MM/S | INERTIA KG-M² | BREAKAWAY TORQUE, N-M | MASS KG | PAYLOAD, KG ¹ | | BACKLASH, MM |
|------------------|--------------------|----------------------|--------------------|------|-------|-------|----------------|---------------|-----------------------|---------|--------------------------|------|--------------|
| | | | | | | | | | | | HORIZ | VERT | |
| XY-HRS010-RS1R*F | 100 | 110 | 10 | 360 | 60 | 130 | 972 | 1.58E-05 | 0.07 | 4.9 | 20 | 20 | 0.02 |
| XY-HRS020-RS1R*F | 200 | 210 | | 460 | 160 | 180 | 972 | 1.74E-05 | | 5.5 | 20 | 20 | |
| XY-HRS030-RS1R*F | 300 | 310 | | 560 | 260 | 230 | 972 | 1.90E-05 | | 6.2 | 20 | 20 | |
| XY-HRS040-RS1R*F | 400 | 410 | | 660 | 360 | 280 | 972 | 2.06E-05 | | 6.8 | 20 | 20 | |
| XY-HRS050-RS1R*F | 500 | 510 | | 760 | 460 | 330 | 725 | 2.22E-05 | | 7.5 | 20 | 20 | |



Note: Maximum input torque is 1.9 N-m

- 1) If your payload exceeds listed value contact NSK.
- 2) The individual moment capacities are defined as the value at which the fatigue life is 10,000 km when that moment acts continuously on the linear guide.

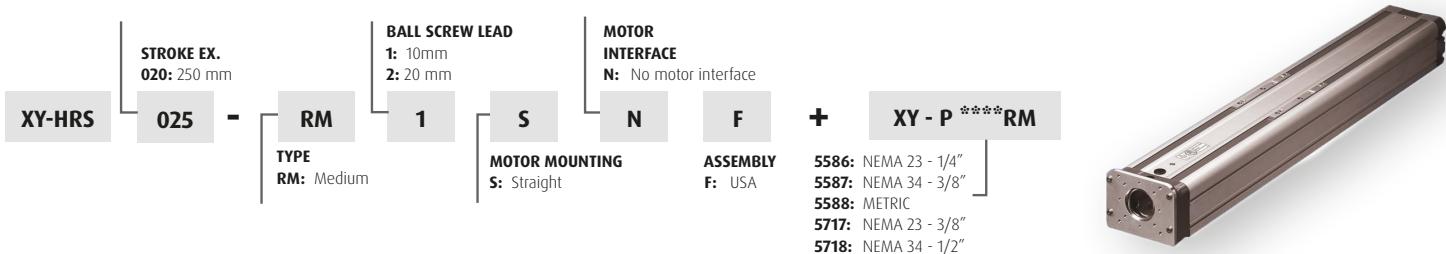
Options

| REF PAGE | | |
|-----------------------|-------------|----|
| Limit Sensor Kit | XY-L3544RM | 42 |
| Module Mounting Plate | XY-P170S-2 | 41 |
| Square Nut | XY-P170M3-1 | 43 |

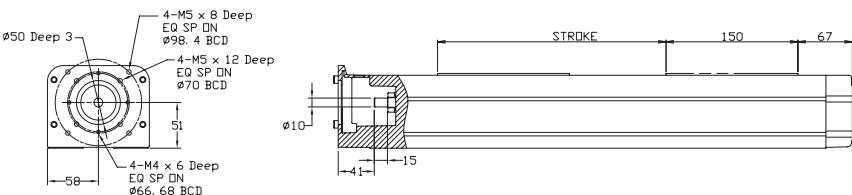
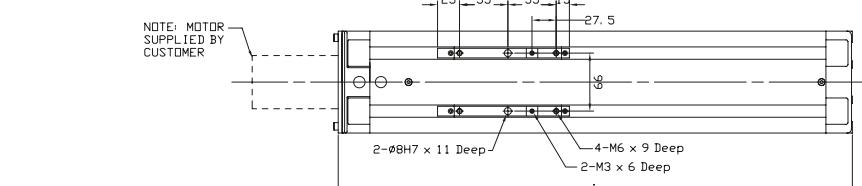
Linear Guide Moment Capacities²

| | | |
|-----------------|------|----|
| Rolling Moment | [Nm] | 33 |
| Pitching Moment | [Nm] | 25 |
| Yawing Moment | [Nm] | 25 |

NOTES

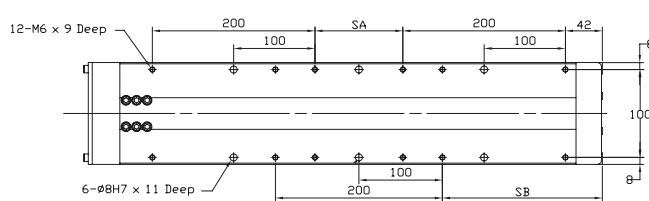
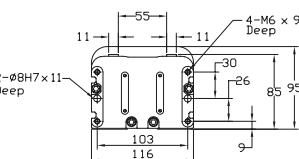


| REFERENCE NUMBER | NOMINAL STROKE, MM | STROKE LIMIT +/- 2MM | BALLSCREW LEAD, MM | L MM | SA MM | SB MM | SPEED MAX MM/S | INERTIA KG-M ² | BREAKAWAY TORQUE, N-M | MASS KG | PAYLOAD, KG ¹ | | BACKLASH, MM |
|------------------|--------------------|----------------------|--------------------|------|-------|-------|----------------|---------------------------|-----------------------|---------|--------------------------|------|--------------|
| | | | | | | | | | | | HORIZ | VERT | |
| XY-HRS025-RM1SNF | 250 | 260 | 10 | 586 | 70 | 177 | 778 | 3.50E-05 | 0.26 | 9.5 | 40 | 40 | 0.005 |
| XY-HRS025-RM2SNF | | | 20 | | | | 1556 | 4.83E-05 | 0.39 | 9.0 | 40 | 20 | |
| XY-HRS035-RM1SNF | 350 | 360 | 10 | 686 | 170 | 227 | 778 | 3.89E-05 | 0.26 | 10.5 | 40 | 40 | 0.005 |
| XY-HRS035-RM2SNF | | | 20 | | | | 1556 | 5.22E-05 | 0.39 | 10.0 | 40 | 20 | |
| XY-HRS045-RM1SNF | 450 | 460 | 10 | 786 | 270 | 277 | 778 | 4.28E-05 | 0.26 | 11.5 | 40 | 40 | 0.005 |
| XY-HRS045-RM2SNF | | | 20 | | | | 1556 | 5.61E-05 | 0.39 | 11.0 | 40 | 20 | |
| XY-HRS055-RM1SNF | 550 | 560 | 10 | 886 | 370 | 327 | 778 | 4.67E-05 | 0.26 | 12.5 | 40 | 40 | 0.005 |
| XY-HRS055-RM2SNF | | | 20 | | | | 1556 | 6.00E-05 | 0.39 | 12.0 | 40 | 20 | |
| XY-HRS075-RM1SNF | 750 | 760 | 10 | 1086 | 570 | 427 | 650 | 5.45E-05 | 0.26 | 15.5 | 40 | 40 | 0.005 |
| XY-HRS075-RM2SNF | | | 20 | | | | 1300 | 6.78E-05 | 0.39 | 15.0 | 40 | 20 | |
| XY-HRS095-RM1SNF | 950 | 960 | 10 | 1286 | 770 | 527 | 583 | 1.72E-04 | 0.26 | 17.5 | 40 | 40 | 0.005 |
| XY-HRS095-RM2SNF | | | 20 | | | | 1167 | 1.79E-04 | 0.39 | 17.0 | 40 | 20 | |



Motor Mounting Kits

| REF PAGE |
|-----------------------------|
| NEMA 23 - 1/4" shaft |
| XY-P5586RM |
| 18 |
| NEMA 23 - 3/8" shaft |
| XY-P5717RM |
| 18 |
| NEMA 34 - 3/8" shaft |
| XY-P5587RM |
| 18 |
| NEMA 34 - 1/2" shaft |
| XY-P5718RM |
| 19 |
| 60mm Frame Metric Motor Kit |
| XY-P5588RM |
| 19 |



Note: Maximum input torque is 3.8 N-m

1) If your payload exceeds listed value contact NSK.

2) The individual moment capacities are defined as the value at which the fatigue life is 10,000 km when that moment acts continuously on the linear guide.

Options

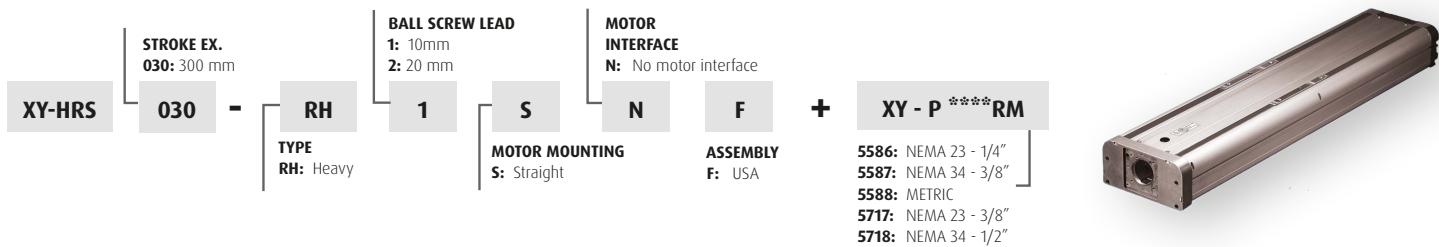
| REF PAGE |
|-----------------------|
| Limit Sensor Kit |
| XY-L3543RM |
| 42 |
| Module Mounting Plate |
| XY-P170M-1 |
| 41 |
| Square Nut |
| XY-P170M3-1 |
| 43 |

Linear Guide Moment Capacities²

| | | |
|-----------------|------|-----|
| Rolling Moment | [Nm] | 70 |
| Pitching Moment | [Nm] | 120 |
| Yawing Moment | [Nm] | 120 |

RH MODULE

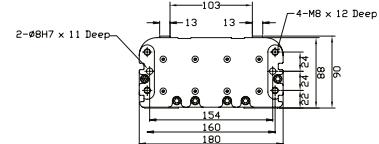
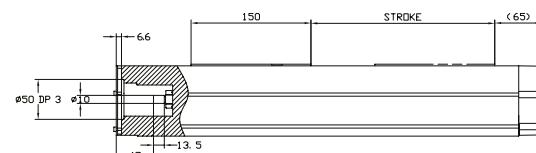
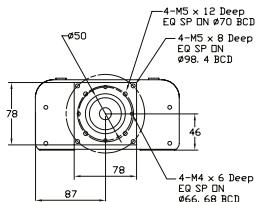
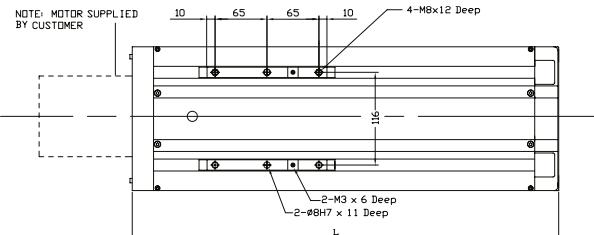
STRAIGHT MOTOR MOUNT + MOTOR MOUNTING KIT



| REFERENCE NUMBER | NOMINAL STROKE, MM | STROKE LIMIT +/- 2MM | BALLSCREW LEAD, MM | L MM | SA MM | SB MM | SPEED MAX MM/S | INERTIA KG-M ² | BREAKAWAY TORQUE, N-M | MASS KG | PAYLOAD, KG ¹ | | BACKLASH, MM |
|------------------|--------------------|----------------------|--------------------|------|-------|-------|----------------|---------------------------|-----------------------|---------|--------------------------|------|--------------|
| | | | | | | | | | | | HORIZ | VERT | |
| XY-HRS030-RH1SNF | 300 | 310 | 10 20 | 612 | 100 | 190 | 778 | 4.12E-05 | 0.7 | 18 | 200 | 40 | 0.005 |
| XY-HRS030-RH2SNF | | | | | | | 1556 | 7.12E-05 | 1.3 | 17 | 80 | 20 | |
| XY-HRS040-RH1SNF | 400 | 410 | 10 20 | 712 | 200 | 240 | 778 | 4.51E-05 | 0.7 | 20 | 200 | 40 | 0.005 |
| XY-HRS040-RH2SNF | | | | | | | 1556 | 7.51E-05 | 1.3 | 19 | 80 | 20 | |
| XY-HRS050-RH1SNF | 500 | 510 | 10 20 | 812 | 300 | 290 | 778 | 4.90E-05 | 0.7 | 22 | 200 | 40 | 0.005 |
| XY-HRS050-RH2SNF | | | | | | | 1556 | 7.90E-05 | 1.3 | 21 | 80 | 20 | |
| XY-HRS060-RH1SNF | 600 | 610 | 10 20 | 912 | 400 | 340 | 778 | 5.29E-05 | 0.7 | 24 | 200 | 40 | 0.005 |
| XY-HRS060-RH2SNF | | | | | | | 1556 | 8.29E-05 | 1.3 | 23 | 80 | 20 | |
| XY-HRS080-RH1SNF | 800 | 810 | 10 20 | 1112 | 600 | 440 | 671 | 6.07E-05 | 0.7 | 28 | 200 | 40 | 0.005 |
| XY-HRS080-RH2SNF | | | | | | | 1341 | 9.07E-05 | 1.3 | 27 | 80 | 20 | |
| XY-HRS100-RH1SNF | 1000 | 1010 | 10 20 | 1312 | 800 | 540 | 583 | 1.72E-04 | 0.7 | 33 | 200 | 40 | 0.005 |
| XY-HRS100-RH2SNF | | | | | | | 1167 | 2.02E-04 | 1.3 | 32 | 80 | 20 | |

Motor Mounting Kits

| | REF PAGE |
|-----------------------------|------------|
| NEMA 23 - 1/4" shaft | XY-P5586RM |
| NEMA 23 - 3/8" shaft | XY-P5717RM |
| NEMA 34 - 3/8" shaft | XY-P5587RM |
| NEMA 34 - 1/2" shaft | XY-P5718RM |
| 60mm Frame Metric Motor Kit | XY-P5588RM |

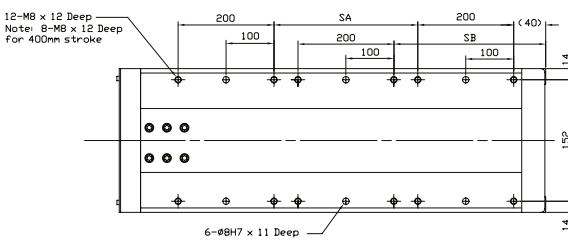


Options

| | REF PAGE |
|-----------------------|-------------|
| Limit Sensor Kit | XY-L3542RM |
| Module Mounting Plate | XY-P170H-1 |
| Square Nut | XY-P170M3-1 |

Linear Guide Moment Capacities²

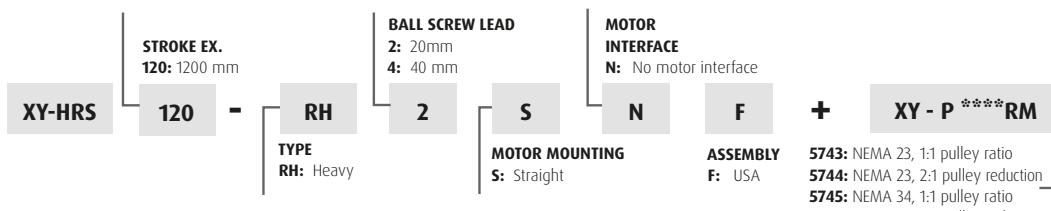
| | | |
|-----------------|------|-----|
| Rolling Moment | [Nm] | 600 |
| Pitching Moment | [Nm] | 450 |
| Yawing Moment | [Nm] | 400 |



Note: Maximum input torque is 3.8 N-m

1) If your payload exceeds listed value contact NSK.

2) The individual moment capacities are defined as the value at which the fatigue life is 10,000 km when that moment acts continuously on the linear guide.



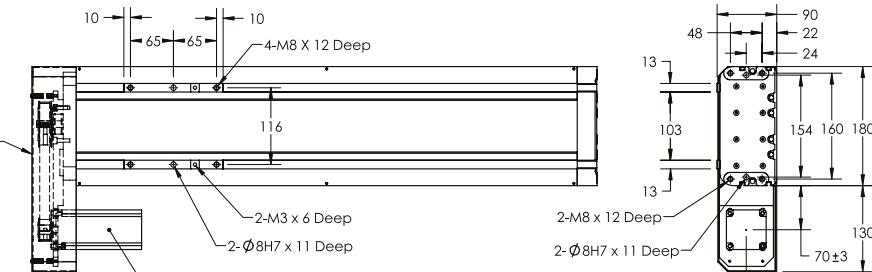
5743: NEMA 23, 1:1 pulley ratio
5744: NEMA 23, 2:1 pulley reduction
5745: NEMA 34, 1:1 pulley ratio
5746: NEMA 34, 2:1 pulley reduction
5747: METRIC, 1:1 pulley ratio
5748: METRIC, 2:1 pulley reduction

| REFERENCE NUMBER | NOMINAL STROKE, MM | STROKE LIMIT +/- 2MM | BALLSCREW LEAD, MM | L MM | SA MM | SB MM | SPEED MAX MM/S | INERTIA KG-M ² | BREAKAWAY TORQUE, N-M | MASS KG | PAYLOAD, KG ¹ | | BACKLASH, MM |
|------------------|--------------------|----------------------|--------------------|------|-------|-------|----------------|---------------------------|-----------------------|---------|--------------------------|------|--------------|
| | | | | | | | | | | | HORIZ | VERT | |
| XY-HRS120-RH2SNF | 1200 | 1210 | 20 | 1548 | 1000 | 640 | 837 | 1.46E-04 | 1.3 | 41 | 200 | 40 | 0.005 |
| XY-HRS120-RH4SNF | | | 40 | | | | 1673 | 1.76E-04 | 1.9 | 40 | 80 | 20 | |
| XY-HRS140-RH2SNF | 1400 | 1410 | 20 | 1748 | 1200 | 740 | 617 | 1.70E-04 | 1.3 | 45 | 200 | 40 | 0.005 |
| XY-HRS140-RH4SNF | | | 40 | | | | 1235 | 2.00E-04 | 1.9 | 44 | 80 | 20 | |
| XY-HRS160-RH2SNF | 1600 | 1610 | 20 | 1948 | 1400 | 840 | 474 | 1.95E-04 | 1.3 | 50 | 200 | 40 | 0.005 |
| XY-HRS160-RH4SNF | | | 40 | | | | 949 | 2.25E-04 | 1.9 | 49 | 80 | 20 | |
| XY-HRS180-RH2SNF | 1800 | 1810 | 20 | 2148 | 1600 | 940 | 376 | 2.20E-04 | 1.3 | 54 | 200 | 40 | 0.005 |
| XY-HRS180-RH4SNF | | | 40 | | | | 751 | 2.50E-04 | 1.9 | 53 | 80 | 20 | |
| XY-HRS200-RH2SNF | 2000 | 2010 | 20 | 2348 | 1800 | 1040 | 305 | 2.44E-04 | 1.3 | 58 | 200 | 40 | 0.005 |
| XY-HRS200-RH4SNF | | | 40 | | | | 610 | 2.74E-04 | 1.9 | 57 | 80 | 20 | |

NOTE:
1) MOTOR ADAPTER KIT SHOWN INSTALLED FOR CLARITY.
2) MOTOR ADAPTER KIT SOLD SEPARATELY.

Motor Mounting Kits

| | REF PAGE |
|--------------------------------|------------|
| NEMA 23 - 1:1 pulley ratio | XY-P5743RM |
| NEMA 23 - 2:1 pulley reduction | XY-P5744RM |
| NEMA 34 - 1:1 pulley ratio | XY-P5745RM |
| NEMA 34 - 1:1 pulley reduction | XY-P5746RM |
| Metric, 1:1 pulley ratio | XY-P5747RM |
| Metric, 2:1 pulley reduction | XY-P5748RM |

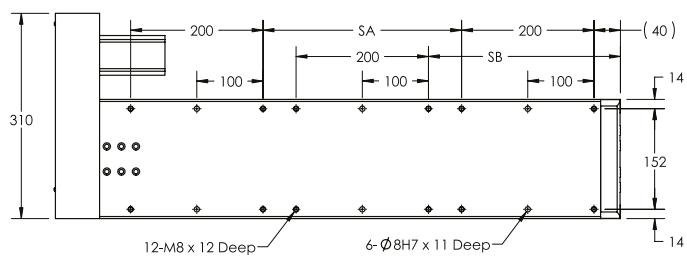


Options

| | REF PAGE |
|-----------------------|-------------|
| Limit Sensor Kit | XY-L3542RM |
| Module Mounting Plate | XY-P170H-1 |
| Square Nut | XY-P170M3-1 |

Linear Guide Moment Capacities²

| | | |
|-----------------|------|-----|
| Rolling Moment | [Nm] | 600 |
| Pitching Moment | [Nm] | 450 |
| Yawing Moment | [Nm] | 400 |



1) If your payload exceeds listed value contact NSK.
 2) The individual moment capacities are defined as the value at which the fatigue life is 10,000 km when that moment acts continuously on the linear guide.

MOTOR MOUNTING KITS

Motor Mounting Kits provide the hardware necessary to connect NEMA 23, NEMA 34 or 60mm Frame Metric motors to the base module. These kits allow the user the flexibility to attach motors of their choice to the base module.

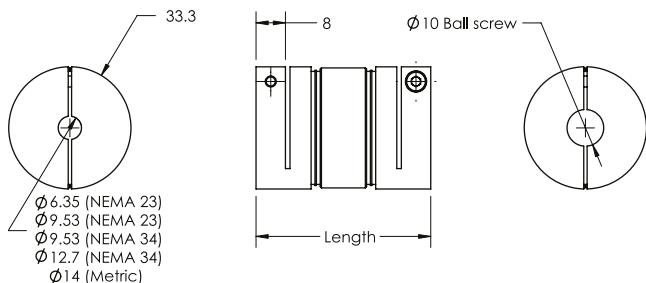
See opposite page for definition of the various motor interfaces.

There are two kits for the RS module, five kits for RH/RM $\leq 1000\text{mm}$ and six kits for the RH extended module $> 1200\text{mm}$.

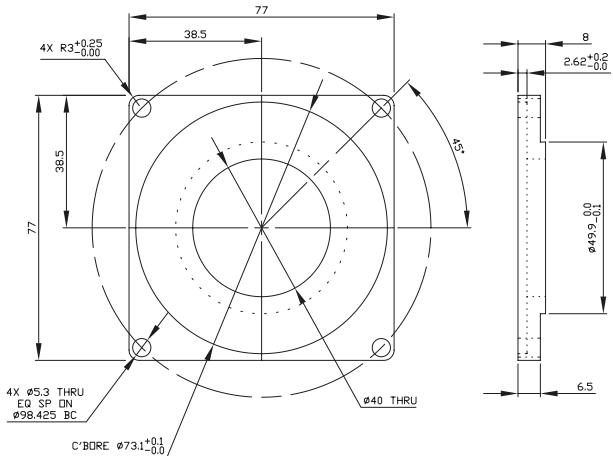
The motor mounting kit for the RS module comes installed and ready to accept the user's motor.



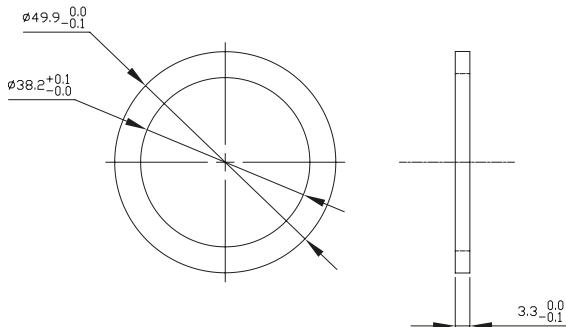
Shaft Coupling



NEMA 34 Motor Adapter Plate RH/RM $\leq 1000\text{mm}$



NEMA 23 Motor Adapter Ring RH/RM $\leq 1000\text{mm}$



RS MODULE

PN XY-P5584RM, 60mm Frame Metric Motor Kit

- › 60mm Frame Metric Motor Plate
- › 60mm Frame Metric Motor Mounting Nut Plate
- › Motor Shaft Pulley, Ø14mm ID
- › Timing Belt
- › Qty 4, M5 x 14 Socket Head Cap Screw

PN XY-P5585RM, NEMA 23 Motor Mounting Kit

- › NEMA 23 Motor Plate
- › NEMA 23 Motor Mounting Nut Plate
- › Motor Shaft Pulley, Ø1/4" ID, Ø3/8" ID
- › Timing Belt
- › Qty 4, M4 x 14 Socket Head Cap Screw

RH/RM MODULES - STROKE $\leq 1000\text{MM}$

PN XY-P5586RM, NEMA 23 Ø1/4" Motor Mounting Kit

- › NEMA 23 Motor Adapter Ring
- › Jaw Type Shaft Coupling, Ø10mm x Ø1/4" x 47.6mm long
- › Disk Type Shaft Coupling, Ø10mm x Ø1/4" x 44.5mm long
- › Qty 4, M4 x 8 Socket Head Cap Screw

PN XY-P5717RM, NEMA 23 Ø3/8" Motor Mounting Kit

- › NEMA 23 Motor Adapter Ring
- › Jaw Type Shaft Coupling, Ø10mm x Ø3/8" x 47.6mm long
- › Disk Type Shaft Coupling, Ø10mm x Ø3/8" x 44.5mm long
- › Qty 4, M4 x 8 Socket Head Cap Screw

PN XY-P5587RM, NEMA 34 Ø3/8" Motor Mounting Kit

- › NEMA 34 Motor Adapter Plate
- › Jaw Type Shaft Coupling, Ø10mm x Ø3/8" x 47.6mm long
- › Disk Type Shaft Coupling, Ø10mm x Ø3/8" x 44.5mm long
- › Qty 4, M5 x 16 Socket Head Cap Screw

PN XY-P5718RM, NEMA 34 ø1/2" Motor Mounting Kit

- › NEMA 34 Motor Adapter Plate
- › Jaw Type Shaft Coupling, ø10mm x ø1/2" x 47.6mm long
- › Disk Type Shaft Coupling, ø10mm x ø1/2" x 44.5mm long
- › Qty 4, M5 x 16 Socket Head Cap Screw

PN XY-P5588RM, 60mm Frame Metric Motor Kit

- › Jaw Type Shaft Coupling, ø10mm x ø14mm x 47.6mm long
- › Disk Type Shaft Coupling, ø10mm x ø14mm x 44.5mm long
- › Qty 4, M5 x 16 Socket Head Cap Screw

RH MODULE STROKES → 1200MM

PN XY-P5743RM, NEMA 23, 1:1 Pulley Ratio, Motor Mounting Kit

- › NEMA 23 Motor Mounting Plate
- › NEMA 23 Motor Mounting Nut Plate
- › Belt Cover
- › Qty 4, M3 Hex Standoff
- › Motor Pulley, 1/4" ID, 31.83 PD
- › Motor Pulley, 3/8" ID, 31.83 PD
- › Ballscrew Pulley, 10mm ID, 31.83 PD
- › Timing Belt
- › Assorted Fasteners

PN XY-P5745RM NEMA 34, 1:1 Pulley Ratio, Motor Mounting Kit

- › NEMA 34 Motor Mounting Plate
- › NEMA 34 Motor Mounting Nut Plate
- › Belt Cover
- › Qty 4, M3 Hex Standoff
- › Motor Pulley, 3/8" ID, 31.83 PD
- › Motor Pulley, 1/2" ID, 31.83 PD
- › Ballscrew Pulley, 10mm ID, 31.83 PD
- › Timing Belt
- › Assorted Fasteners

PN XY-P5747RM, Metric 60mm, 1:1 Pulley Ratio, Motor Mounting Kit

- › Metric Motor Mounting Plate
- › Nut Plate, Metric Motor
- › Belt Cover
- › Qty 4, M3 Hex Standoff
- › Motor Pulley, 14mm ID, 31.83 PD
- › Ballscrew Pulley, 10mm ID, 31.83 PD
- › Timing Belt
- › Assorted Fasteners

SHAFT COUPLINGS FEATURES:

Jaw Type - three piece coupling consisting of two hubs and a spider. The spider is made from polyurethane thereby providing damping and protection against impulse loads. The spider is pressed into the hubs providing zero backlash operation.

Disk Type - five piece coupling consisting of two hubs, a center member and thin metallic disks that transmit torque. Disk type couplings provide higher torsional rigidity with lower inertia than other coupling types.

PN XY-P5744RM, NEMA 23, 2:1 Pulley Reduction, Motor Mounting Kit

- › NEMA 23 Motor Mounting Plate
- › NEMA 23 Motor Mounting Nut Plate
- › Belt Cover
- › Qty 4, M3 Hex Standoff
- › Motor Pulley, 1/4" ID, 31.83 PD
- › Motor Pulley, 3/8" ID, 31.83 PD
- › Ballscrew Pulley, 10mm ID, 63.66 PD
- › Timing Belt
- › Assorted Fasteners

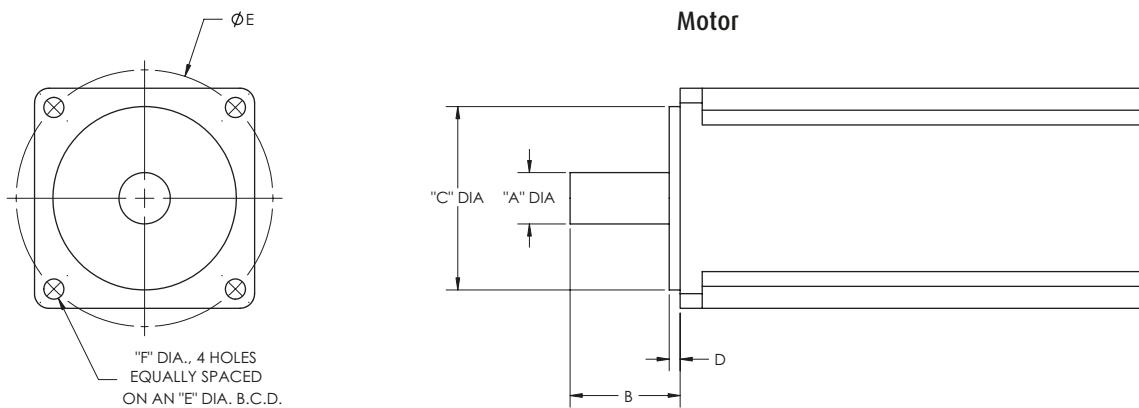
PN XY-P5746RM, NEMA 34, 2:1 Pulley Reduction, Motor Mounting Kit

- › NEMA 34 Motor Mounting Plate
- › NEMA 34 Motor Mounting Nut Plate
- › Belt Cover
- › Qty 4, M3 Hex Standoff
- › Motor Pulley, 3/8" ID, 31.83 PD
- › Motor Pulley, 1/2" ID, 31.83 PD
- › Ballscrew Pulley, 10mm ID, 63.66 PD
- › Timing Belt
- › Assorted Fasteners

PN XY-P5748RM, Metric 60mm, 2:1 Pulley Reduction, Motor Mounting Kit

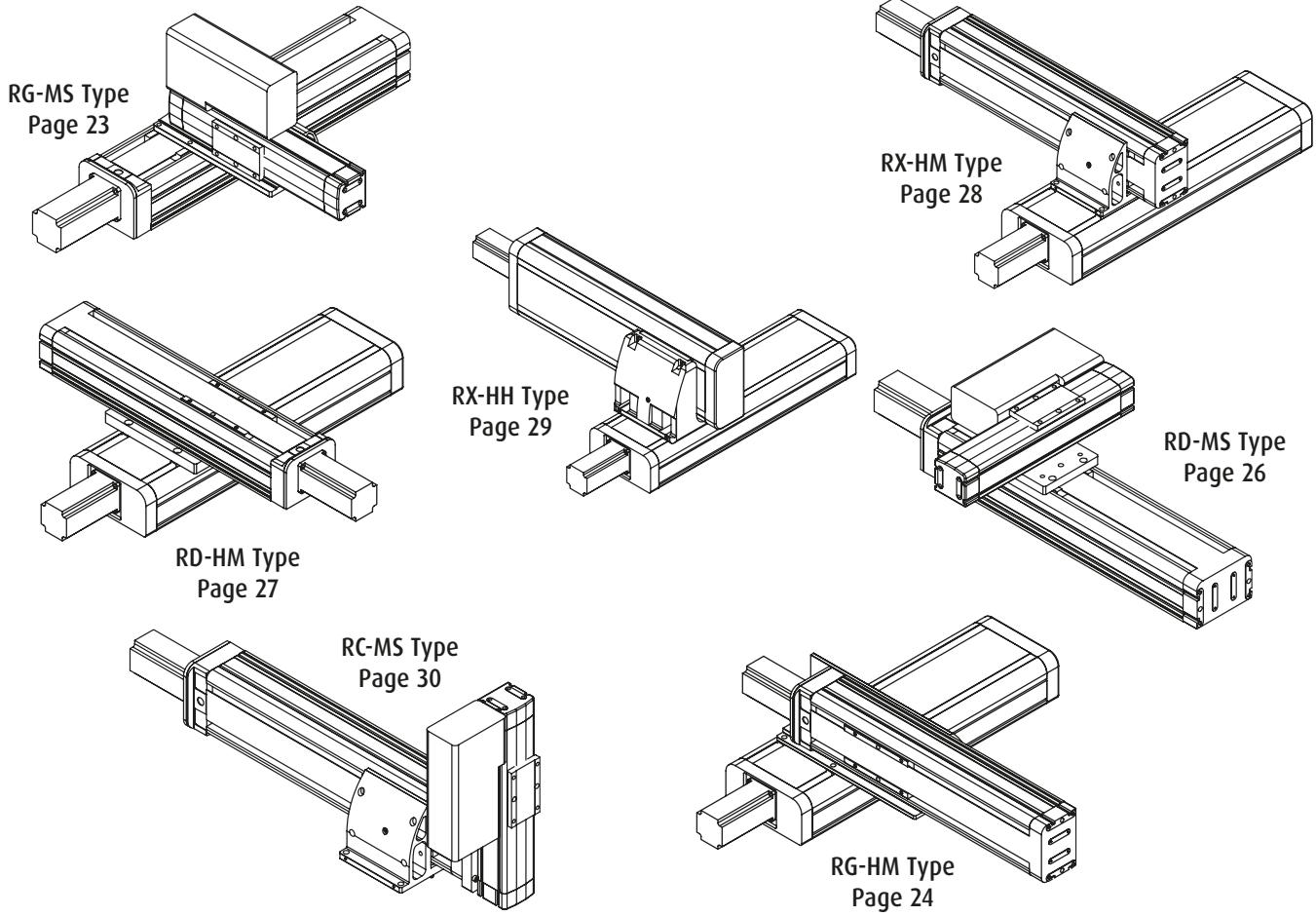
- › Metric Motor Mounting Plate
- › Metric Motor Mounting Nut Plate
- › Belt Cover
- › Qty 4, M3 Hex Standoff
- › Motor Pulley, 14mm ID, 31.83 PD
- › Ballscrew Pulley, 10mm ID, 63.66 PD
- › Timing Belt
- › Assorted Fasteners

MOTOR INTERFACE DIMENSIONS



| ITEM | DIMENSION | MOTOR INTERFACE | | |
|------|-------------------------------|-----------------|--------------|---------------|
| | | METRIC 60MM | NEMA 23 | NEMA 34 |
| A | Motor Shaft Diameter | 14 | 6.35 or 9.53 | 9.53 or 12.70 |
| B | Motor Shaft Length | 30 | 20.57 | 31.75 |
| C | Pilot Diameter | 50 | 38.10 | 73.03 |
| D | Pilot Length | 3 | 2.36 | 2.36 |
| E | Mounting Bolt Circle Diameter | 70 | 66.68 | 98.43 |
| F | Bolt Hole Size | 5.5 | 4.95 | 5.54 |

2 AXIS COMBINATIONS

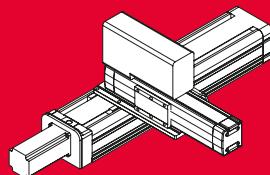


2-Axis Selection

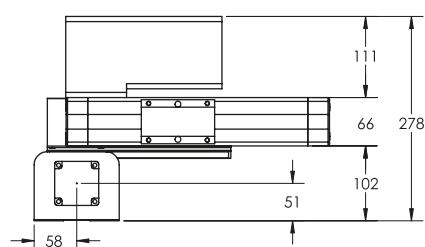
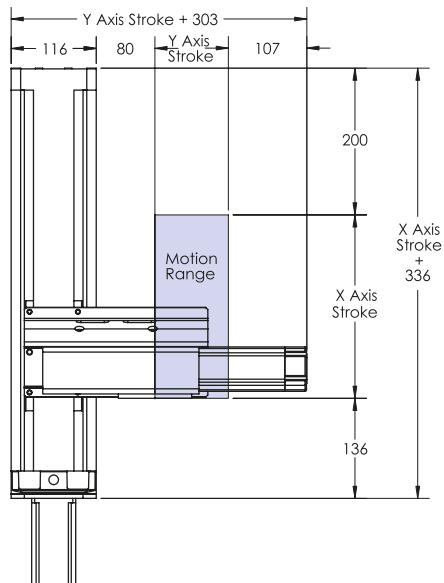
| COMBINATION | TYPE | X AXIS | Y AXIS | COMBINING BRACKET | MODULE MOUNTING PLATE | LIMIT SENSOR KIT | SQUARE NUT |
|--------------|-------------|----------------------------------|--------------------------------|-----------------------------|-----------------------|--------------------|-------------|
| RG-MS | Type A or B | XY-HRSO**5-RM*SNF & XY-P **** RM | XY-HRSO**0-RS1R*F | XY-P175GMS-1 | XY-P170M-1 | X Axis: XY-L3543RM | XY-P170M3-1 |
| | | | | | | Y Axis: XY-L3544RM | |
| RG-HM | Type A or C | XY-HRSO**0-RH*SNF & XY-P **** RM | XY-HRSO**5-RM*SNF & XY-P****RM | XY-P175GHM-1 | XY-P170H-1 | X Axis: XY-L3542RM | XY-P170M3-1 |
| | Type B or D | | | | | Y Axis: XY-L3543RM | |
| RD-MS | Type A | XY-HRSO**5-RM*SNF & XY-P **** RM | XY-HRSO**0-RS1L*F | XY-P175DMS-1 | XY-P170M-1 | X Axis: XY-L3543RM | XY-P170M3-1 |
| | Type B | | XY-HRSO**0-RS1R*F | | | Y Axis: XY-L3544RM | |
| RD-HM | Type A or B | XY-HRSO**0-RH*SNF & XY-P **** RM | XY-HRSO**5-RM*SNF & XY-P****RM | XY-P175DHM-1 | XY-P170H-1 | X Axis: XY-L3542RM | XY-P170M3-1 |
| | | | | | | Y Axis: XY-L3543RM | |
| RX-HM | Type A or B | XY-HRSO**0-RH*SNF & XY-P **** RM | XY-HRSO**5-RM*SNF & XY-P****RM | XY-P175XHM-1 | XY-P170H-1 | X Axis: XY-L3542RM | XY-P170M3-1 |
| | | | | | | Y Axis: XY-L3543RM | |
| RX-HH | Type A or B | XY-HRSO**0-RH*SNF & XY-P **** RM | XY-HRSO**0-RH*SNF & XY-P****RM | XY-P175XHH-1 | XY-P170H-1 | XY-L3542RM | XY-P170M3-1 |
| | | | | | | XY-L3544RM | |
| RC-MS | Type A | XY-HRSO**5-RM*SNF & XY-P **** RM | XY-HRSO**0-RS1L*F | XY-P175CMS-1 & XY-P175XHM-1 | NA | X Axis: XY-L3543RM | XY-P170M3-1 |
| | Type B | | XY-HRSO**0-RS1R*F | | | Y Axis: XY-L3544RM | |

COMBINATION TYPE: RG-MS

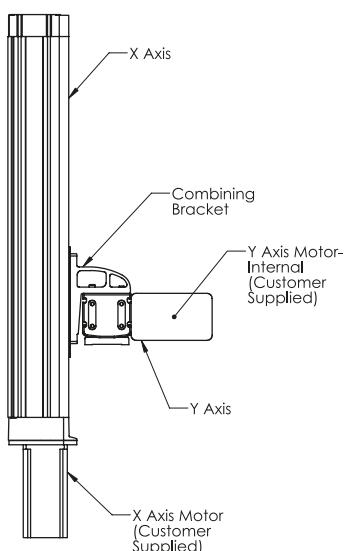
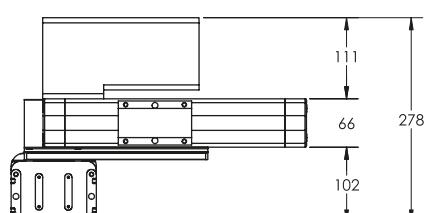
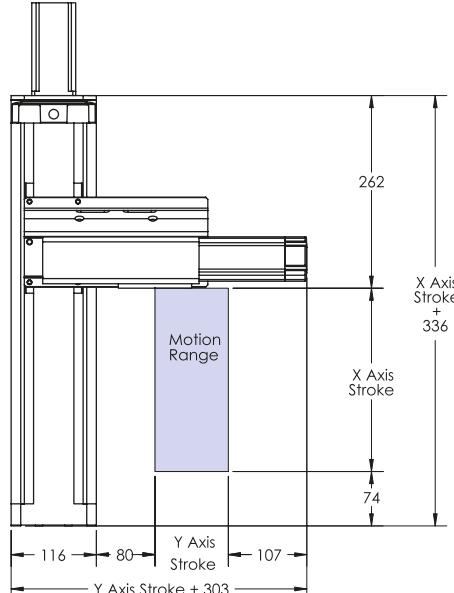
NSK



Type A



Type B



Note: Assembly of system required

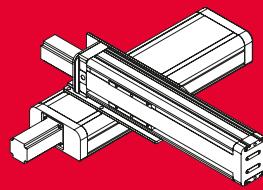
Combination Type and Reference Numbers

| COMBINATION TYPE | TYPE A OR B | REF PAGE |
|------------------------------|------------------|----------|
| X Axis | XY-HRS0*5-RM*SNF | 15 |
| X Axis Motor Mounting Kit | XY-P****RM | 18 & 19 |
| Y Axis | XY-HRS0*0-RS1R*F | 13 |
| XY Combining Bracket | XY-P175GMS-1 | 39 |
| Options: | | |
| Limit Sensor Kit, X Axis | XY-L3543RM | 42 |
| Limit Sensor Kit, Y Axis | XY-L3544RM | 42 |
| X Axis Module Mounting Plate | XY-P170M-1 | 41 |
| Square Nut | XY-P170M3-1 | 43 |

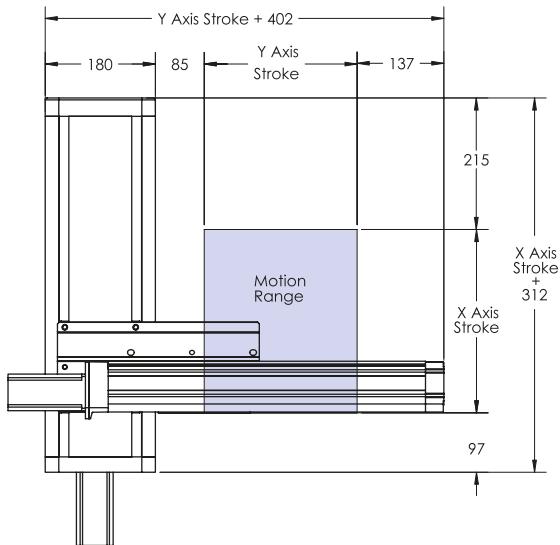
Transportable Mass Table [kg]

| ACCELERATION M/S ² | Y AXIS STROKE, MM | | | | |
|----------------------------------|-------------------|-----|-----|-----|-----|
| | 100 | 200 | 300 | 400 | 500 |
| 4.9 | 20 | 15 | 11 | 8 | 6 |
| 9.8 | 18 | 12 | 9 | 6.5 | 5 |

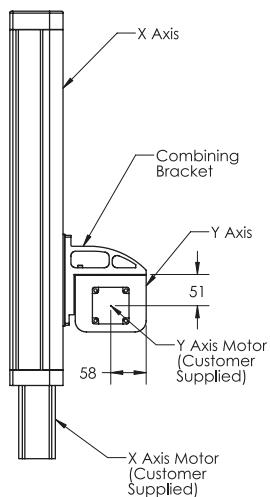
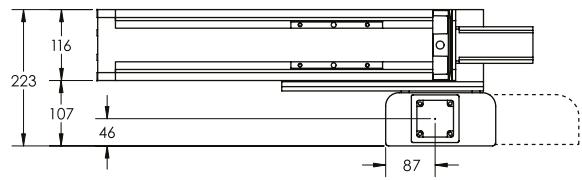
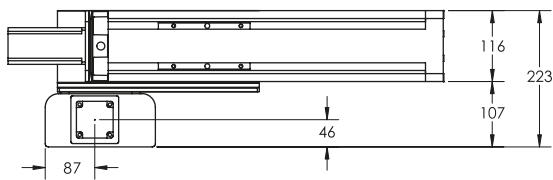
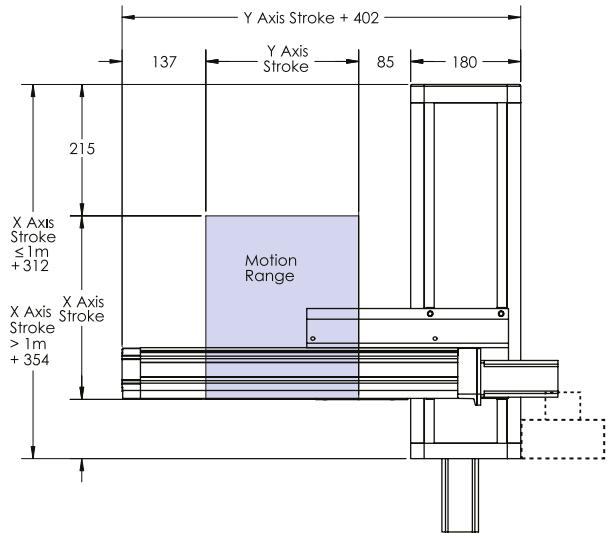
COMBINATION TYPE: RG-HM



Type A

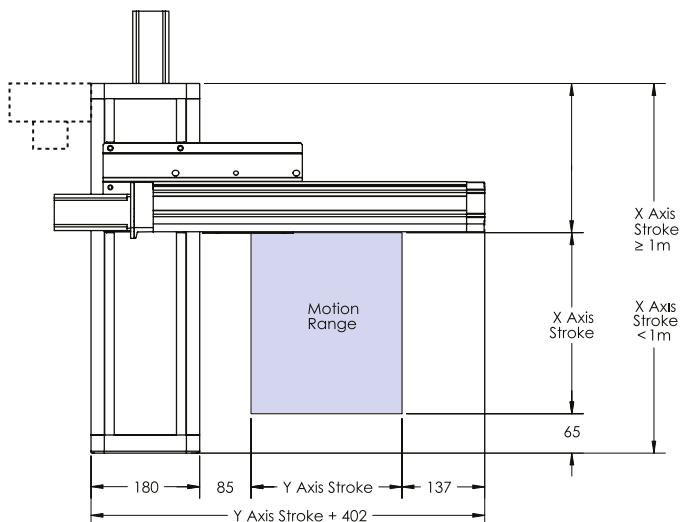


Type B

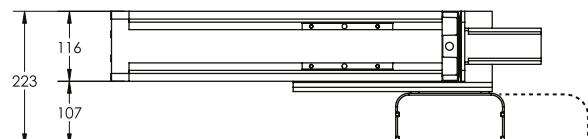
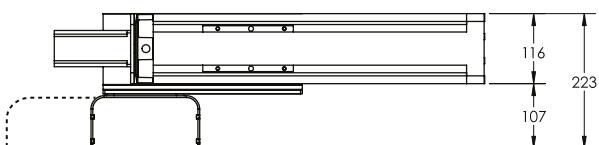
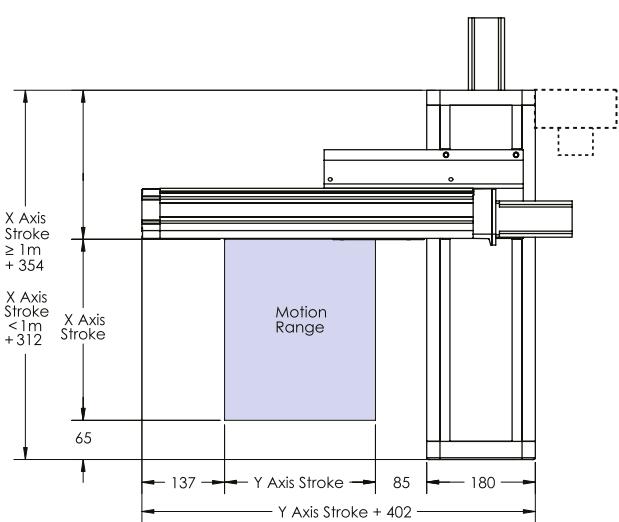


Note: Assembly of system required

Type C



Type D



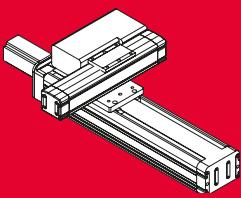
Combination Type and Reference Numbers

| COMBINATION TYPE | TYPE A OR C | TYPE B OR D | REF PAGE |
|------------------------------|-------------------------------------|---------------------|----------|
| X Axis | XY-HRS0**0-RH²SNF | | 16 & 17 |
| X Axis Motor Mounting Kit | XY-P****RM | | 18 & 19 |
| Y Axis | XY-HRS0*5-RM²SNF | | 15 |
| Y Axis Motor Mounting Kit | XY-P****RM | | 18 & 19 |
| XY Combining Bracket | XY-P175GHM-1 | XY-P175GHM-2 | 39 |
| Options: | | | |
| Limit Sensor Kit, X Axis | XY-L3542RM | | 42 |
| Limit Sensor Kit, Y Axis | XY-L3543RM | | 42 |
| X Axis Module Mounting Plate | XY-P170H-1 | | 41 |
| Square Nut | XY-P170M3-1 | | 43 |

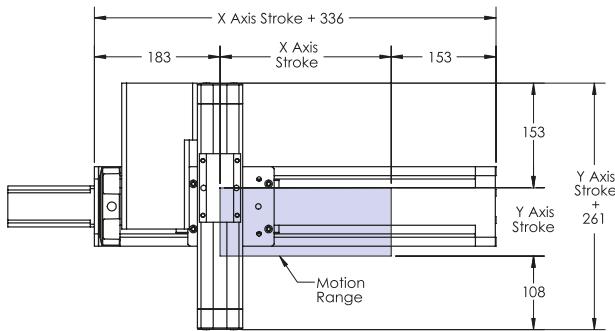
Transportable Mass Table [kg]

| ACCELERATION M/S ² | Y AXIS STROKE, MM | | | | | |
|----------------------------------|-------------------|-----|-----|-----|-----|-----|
| | 250 | 350 | 450 | 550 | 750 | 950 |
| 4.9 | 40 | 40 | 40 | 40 | 33 | 24 |
| 9.8 | 40 | 40 | 33 | 28 | 19 | 13 |

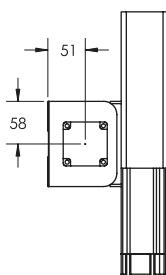
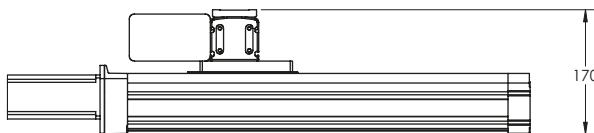
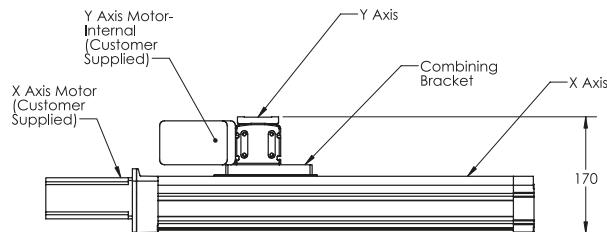
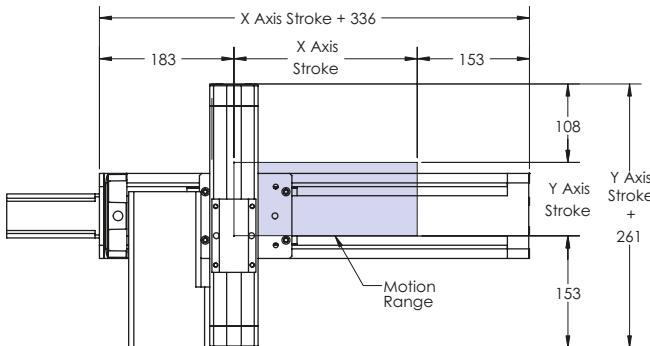
COMBINATION TYPE: RD-MS



Type A



Type B



Note: Assembly of system required

Combination Type and Reference Numbers

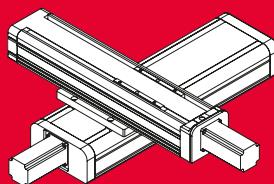
| COMBINATION TYPE | TYPE A | TYPE B | REF PAGE |
|------------------------------|------------------|------------------|----------|
| X Axis | XY-HRS0*5-RM*SNF | | 15 |
| X Axis Motor Mounting Kit | XY-P****RM | | 18 & 19 |
| Y Axis | XY-HRS0*0-RS1L*F | XY-HRS0*0-RS1R*F | 12 & 13 |
| XY Combining Bracket | XY-P175DMS-1 | | 39 |
| Options: | | | |
| Limit Sensor Kit, X Axis | XY-L3543RM | | 42 |
| Limit Sensor Kit, Y Axis | XY-L3544RM | | 42 |
| X Axis Module Mounting Plate | XY-P170M-1 | | 41 |
| Square Nut | XY-P170M3-1 | | 43 |

Transportable Mass Table [kg]

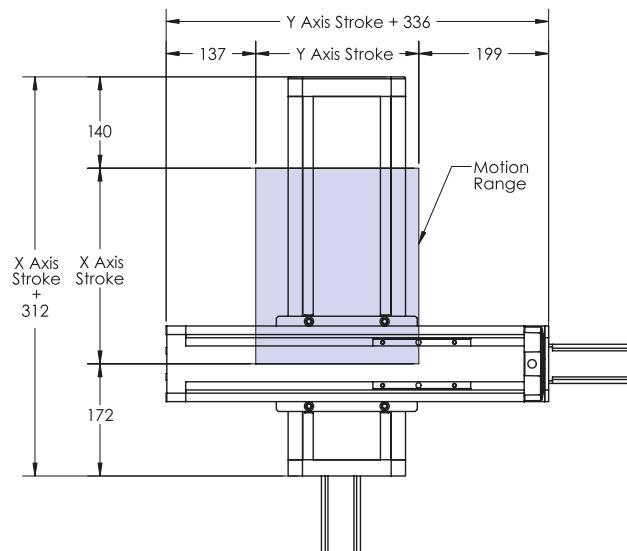
| ACCELERATION M/S ² | Y AXIS STROKE, MM | | | | |
|----------------------------------|-------------------|-----|-----|-----|-----|
| | 100 | 200 | 300 | 400 | 500 |
| 4.9 | 20 | 20 | 20 | 20 | 20 |
| 9.8 | 20 | 20 | 20 | 20 | 20 |

COMBINATION TYPE: RD-HM

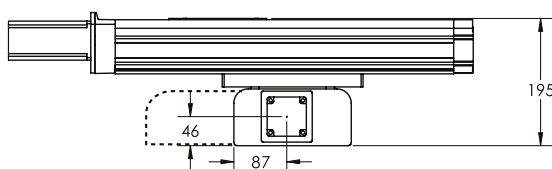
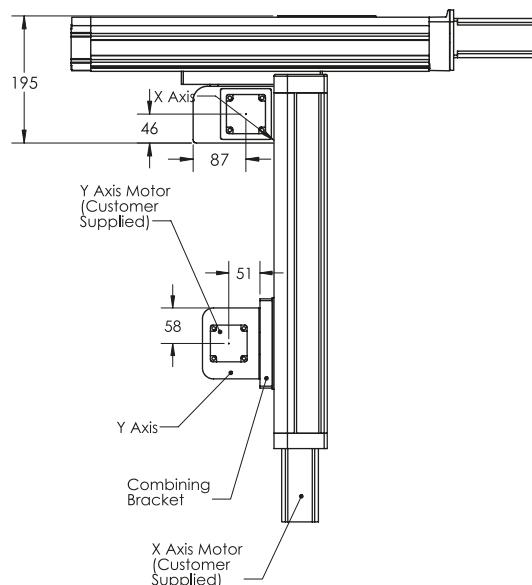
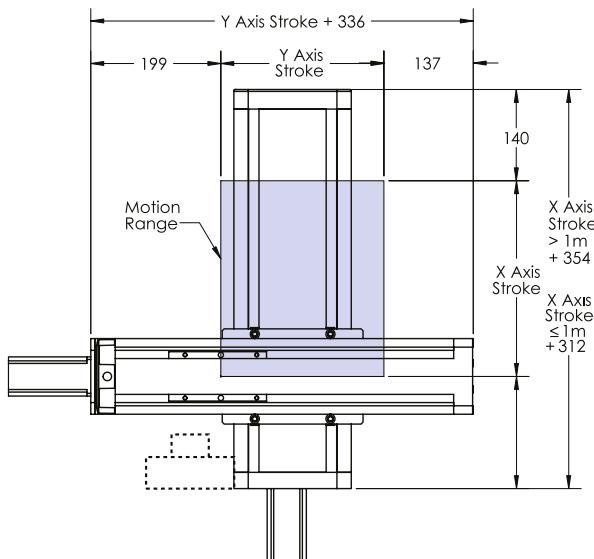
NSK



Type A



Type B



Combination Type and Reference Numbers

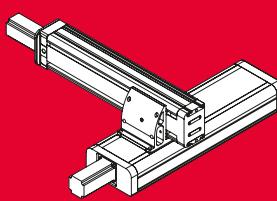
| COMBINATION TYPE | TYPE A OR B | REF PAGE |
|------------------------------|--------------------------|----------|
| X Axis | XY-HRS0**0-RH*SNF | 16 & 17 |
| X Axis Motor Mounting Kit | XY-P****RM | 18 & 19 |
| Y Axis | XY-HRS0*5-RM*SNF | 15 |
| Y Axis Motor Mounting Kit | XY-P****RM | 18 & 19 |
| XY Combining Bracket | XY-P175DHM-1 | 39 |
| Options: | | |
| Limit Sensor Kit, X Axis | XY-L3542RM | 42 |
| Limit Sensor Kit, Y Axis | XY-L3543RM | 42 |
| X Axis Module Mounting Plate | XY-P170H-1 | 41 |
| Square Nut | XY-P170M3-1 | 43 |

Note: Assembly of system required

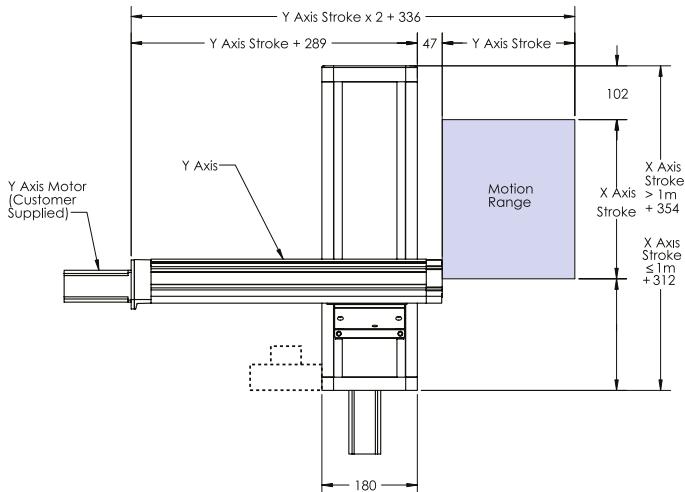
Transportable Mass Table [kg]

| ACCELERATION M/S ² | Y AXIS STROKE, MM | | | | | |
|----------------------------------|-------------------|-----|-----|-----|-----|-----|
| | 250 | 350 | 450 | 550 | 750 | 950 |
| 4.9 | 40 | 40 | 40 | 40 | 40 | 40 |
| 9.8 | 40 | 40 | 40 | 40 | 40 | 40 |

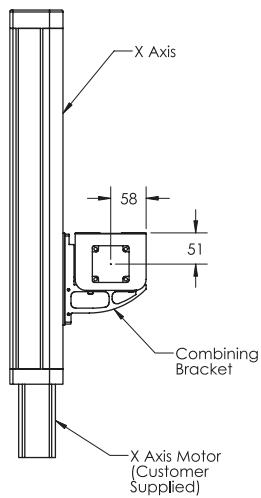
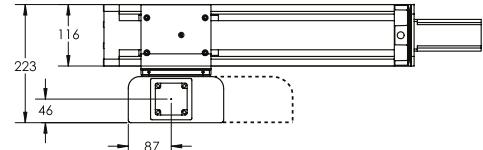
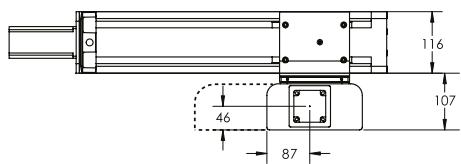
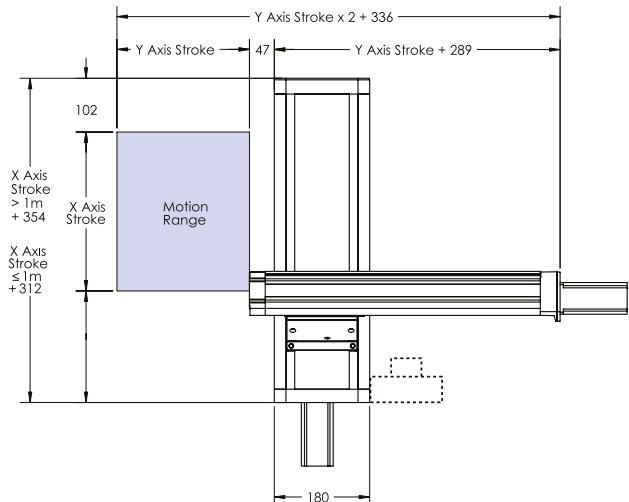
COMBINATION TYPE: RX-HM



Type A



Type B



Note: Assembly of system required

Combination Type and Reference Numbers

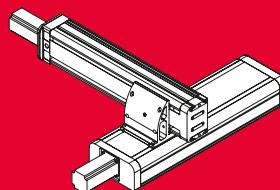
| COMBINATION TYPE | TYPE A OR B | REF PAGE |
|------------------------------|-------------------|----------|
| X Axis | XY-HRS0**0-RH*SNF | 16 & 17 |
| X Axis Motor Mounting Kit | XY-P****RM | 18 & 19 |
| Y Axis | XY-HRS05-RM*SNF | 15 |
| Y Axis Motor Mounting Kit | XY-P****RM | 18 & 19 |
| XY Combining Bracket | XY-P175XHM-1 | 40 |
| Options: | | |
| Limit Sensor Kit, X Axis | XY-L3542RM | 42 |
| Limit Sensor Kit, Y Axis | XY-L3543RM | 42 |
| X Axis Module Mounting Plate | XY-P170H-1 | 41 |
| Square Nut | XY-P170M3-1 | 43 |

Transportable Mass Table [kg]

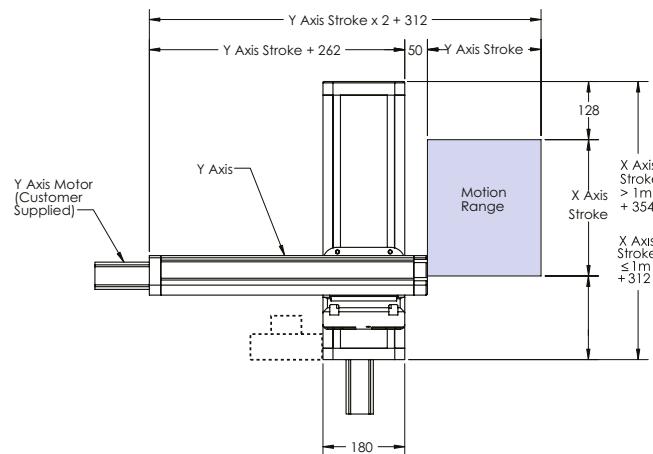
| ACCELERATION M/S ² | Y AXIS STROKE, MM | | | | | |
|----------------------------------|-------------------|-----|-----|-----|-----|-----|
| | 250 | 350 | 450 | 550 | 750 | 950 |
| 3.3 | 24 | 19 | 15 | 12 | 7 | 3 |
| 4.9 | 21 | 16 | 12 | 9 | 5 | 2 |

COMBINATION TYPE: RX-HH

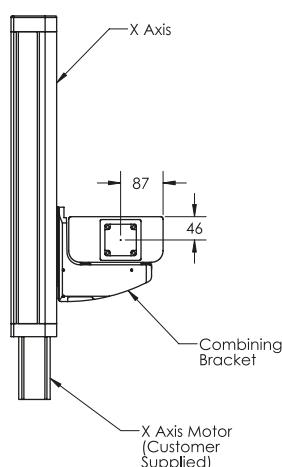
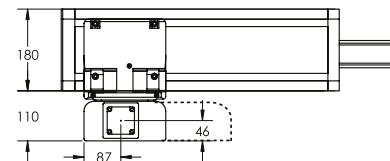
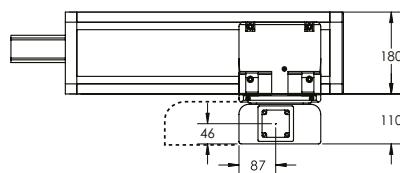
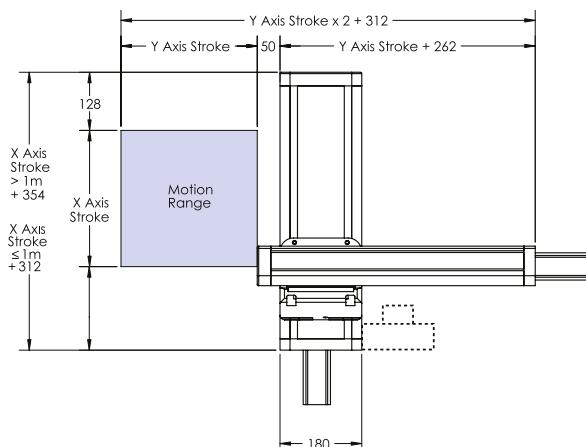
NSK



Type A



Type B



Note: Assembly of system required

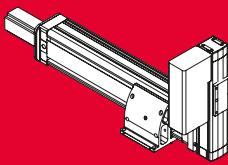
Combination Type and Reference Numbers

| COMBINATION TYPE | TYPE A OR B | REF PAGE |
|------------------------------|-------------------|----------|
| X Axis | XY-HRS0**0-RH*SNF | 16 & 17 |
| X Axis Motor Mounting Kit | XY-P****RM | 18 & 19 |
| Y Axis | XY-HRS0*0-RH*SNF | 16 & 17 |
| Y Axis Motor Mounting Kit | XY-P****RM | 18 & 19 |
| XY Combining Bracket | XY-P175XHH-1 | 40 |
| Options: | | |
| Limit Sensor Kit, X Axis | XY-L3542RM | 42 |
| Limit Sensor Kit, Y Axis | XY-L3542RM | 42 |
| X Axis Module Mounting Plate | XY-P170H-1 | 41 |
| Square Nut | XY-P170M3-1 | 43 |

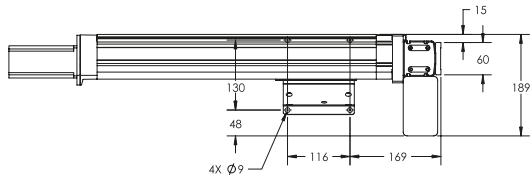
Transportable Mass Table [kg]

| ACCELERATION M/S ² | Y AXIS STROKE, MM | | | | | |
|----------------------------------|-------------------|-----|-----|-----|-----|------|
| | 300 | 400 | 500 | 600 | 800 | 1000 |
| 3.3 | 40 | 40 | 40 | 40 | 29 | 29 |
| 4.9 | 40 | 40 | 40 | 39 | 28 | 19 |

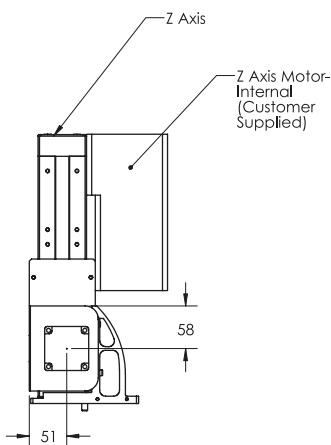
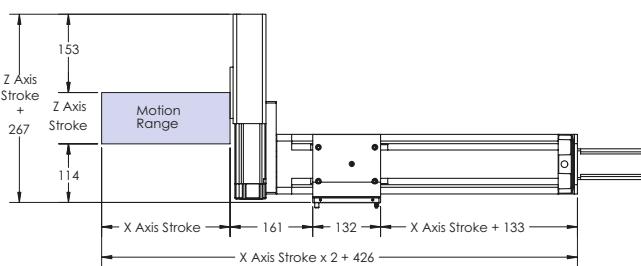
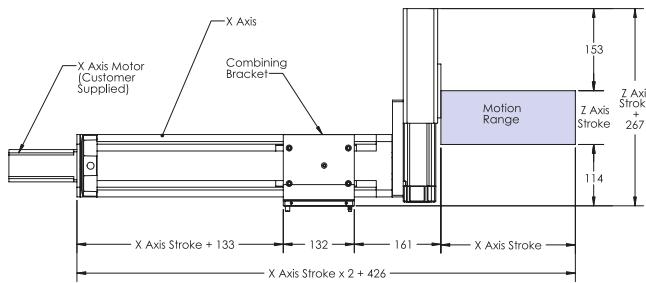
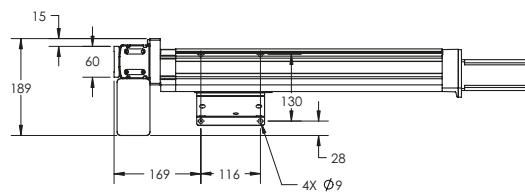
COMBINATION TYPE: RC-MS



Type A



Type B



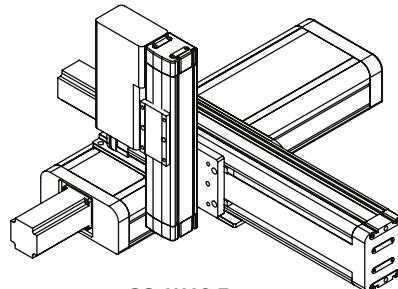
Note: Assembly of system required

Combination Type and Reference Numbers

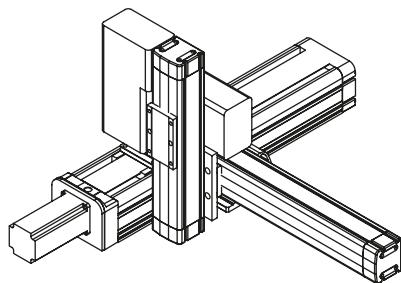
| COMBINATION TYPE | TYPE A | TYPE B | REF PAGE |
|------------------------------|------------------|----------------------------|----------|
| X Axis | XY-HRS0*5-RM*SNF | | 15 |
| X Axis Motor Mounting Kit | | XY-P****RM | 18 & 19 |
| Z Axis | XY-HRS0*0-RS1L*F | XY-HRS0*0-RS1R*F | 12 & 13 |
| XY Combining Bracket | | XY-P175XHM-1, XY-P175CMS-1 | 40 |
| Options: | | | |
| Limit Sensor Kit, X Axis | | XY-L3543RM | 42 |
| Limit Sensor Kit, Z Axis | | XY-L3544RM | 42 |
| X Axis Module Mounting Plate | | NA | 41 |
| Square Nut | | XY-P170M3-1 | 43 |

Transportable Mass Table [kg]

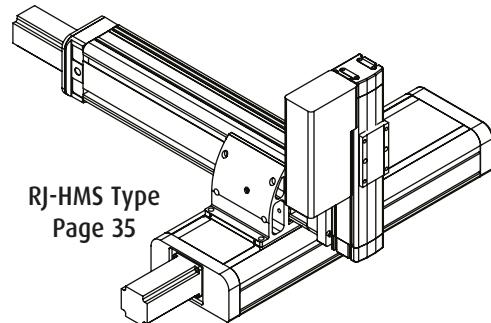
| Z AXIS STROKE | ACCELERATION M/S ² | X AXIS STROKE, MM | | | |
|---------------|-------------------------------|-------------------|-----|-----|-----|
| | | 250 | 350 | 450 | 550 |
| 100mm | 3.9 | 8 | 8 | 8 | 5.4 |
| | 4.9 | 8 | 8 | 5.4 | 2.4 |
| 200mm | 3.9 | 8 | 8 | 7 | 4.7 |
| | 4.9 | 8 | 8 | 4.7 | 1.7 |



RP-HMS Type
Page 32



RP-MSS Type
Page 34

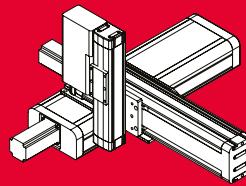


RJ-HMS Type
Page 35

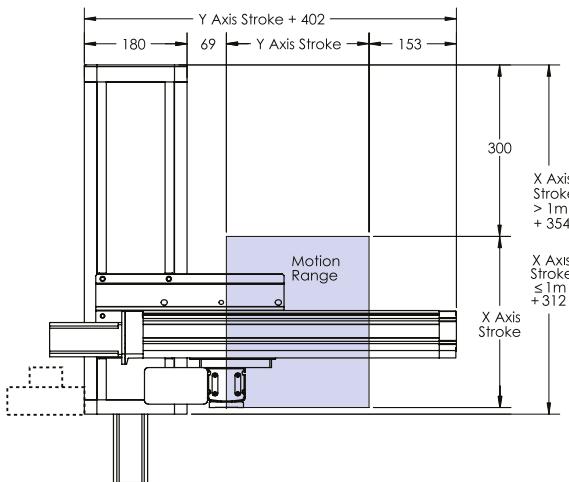
3-Axis Selection

| COMBINATION | TYPE | X AXIS | Y AXIS | Z AXIS | XY COMBINING BRACKET | YZ COMBINING BRACKET | MODULE MOUNTING PLATE | LIMIT SENSOR KIT | SQUARE NUT |
|-------------|-------------|-------------------------------|-------------------------------|------------------|----------------------|----------------------|-----------------------|--|-------------|
| RJ-HMS | Type A | XY-HRS0*0-RH*SNF & XY-P****RM | XY-HRS0*5-RM*SNF & XY-P****RM | XY-HRS0*0-RS1L*F | XY-P175XHM-1 | XY-P175CMS-1 | XY-P170H-1 | X Axis: XY-L3542RM Y Axis: XY-L3543RM Z Axis: XY-L3544RM | XY-P170M3-1 |
| | Type B | | | XY-HRS0*0-RS1R*F | | | | | |
| RP-HMS | Type A or C | XY-HRS0*0-RH*SNF & XY-P****RM | XY-HRS0*5-RM*SNF & XY-P****RM | XY-HRS0*0-RS1L*F | XY-P175GHM-1 | XY-P175DMS-1 | XY-P170H-1 | X Axis: XY-L3542RM Y Axis: XY-L3543RM Z Axis: XY-L3544RM | XY-P170M3-1 |
| | Type B or D | | | XY-HRS0*0-RS1R*F | XY-P175GHM-2 | | | | |
| RP-MSS | Type A or B | XY-HRS0*5-RM*SNF & XY-P****RM | XY-HRS0*0-RS1R*F | XY-HRS0*0-RS1L*F | XY-P175GMS-1 | XY-P175DSS-1 | XY-P170M-1 | X Axis: XY-L3543RM Y Axis: XY-L3544RM Z Axis: XY-L3544RM | |

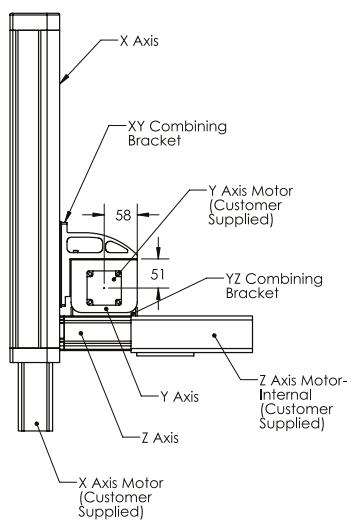
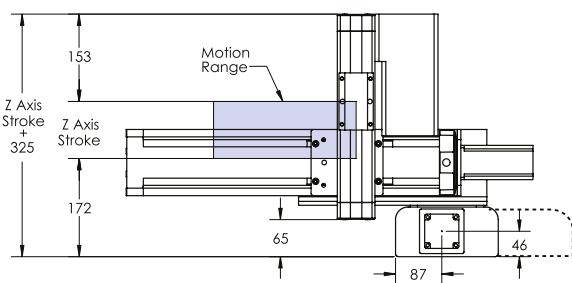
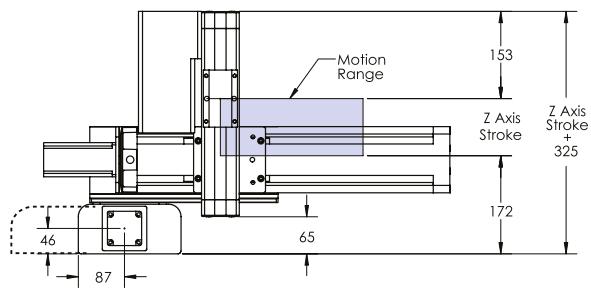
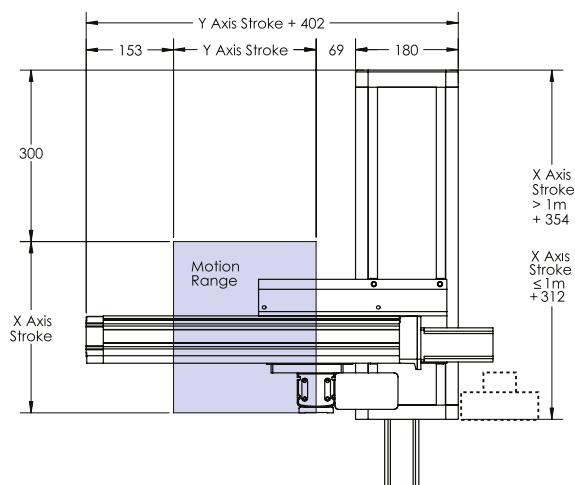
COMBINATION TYPE: RP-HMS



Type A

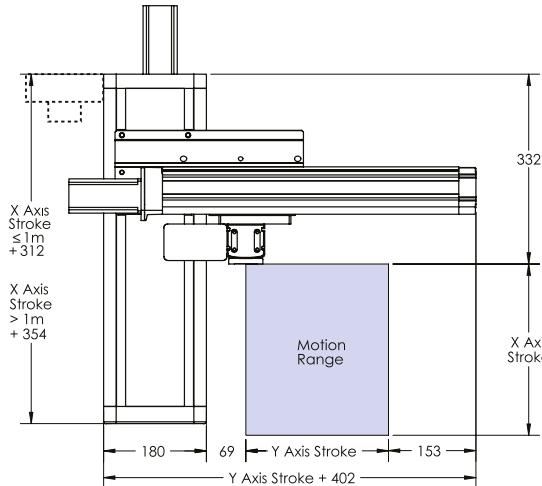


Type B

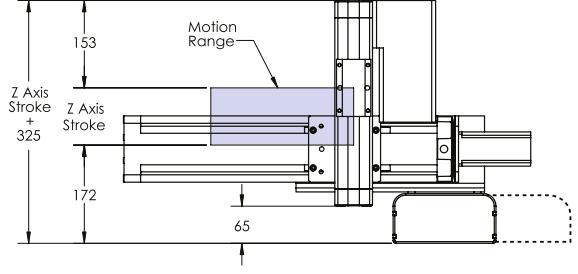
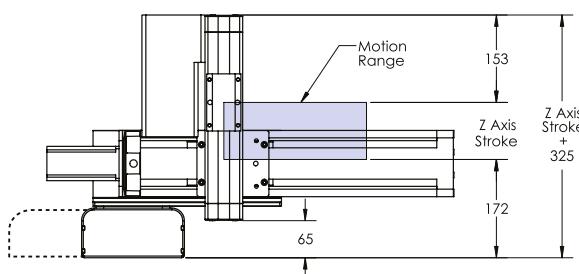
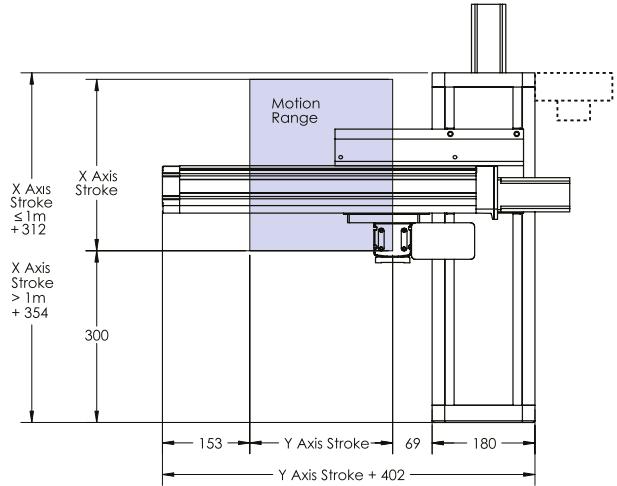


Note: Assembly of system required

Type C



Type D



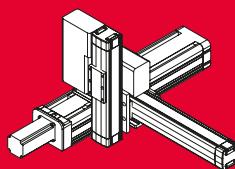
Combination Type and Reference Numbers

| COMBINATION TYPE | TYPE A | TYPE B | REF PAGE |
|------------------------------|--------------------|-------------------|----------|
| X Axis | XY-HRS***0-RH**SNF | | 16 & 17 |
| X Axis Motor Mounting Kit | XY-P*****RM | | 18 & 19 |
| Y Axis | XY-HRS0**5-RM**SNF | | 15 |
| Y Axis Motor Mounting Kit | XY-P*****RM | | 18 & 19 |
| Z Axis | XY-HRS0**0-RS1L*F | XY-HRS0**0-RS1R*F | 12 & 13 |
| XY Combining Bracket | XY-P175GHM-1 | XY-P175GHM-2 | 39 |
| YZ Combining Bracket | | XY-P175DMS-1 | 39 |
| Options: | | | |
| Limit Sensor Kit, X Axis | XY-L3542RM | | 42 |
| Limit Sensor Kit, Y Axis | XY-L3543RM | | 42 |
| Limit Sensor Kit, Z Axis | XY-L3544RM | | 42 |
| X Axis Module Mounting Plate | XY-P170H-1 | | 41 |
| Square Nut | XY-P170M3-1 | | 43 |

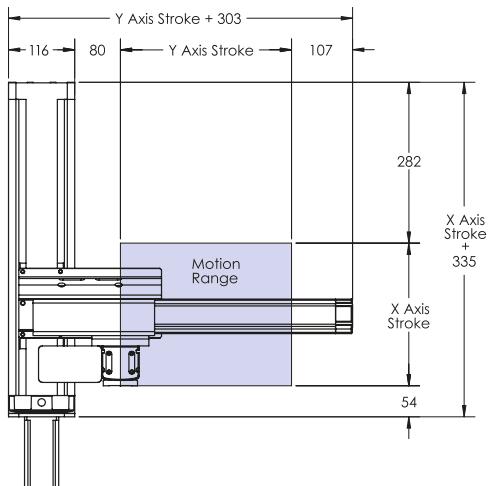
Transportable Mass Table [kg]

| Z AXIS STROKE | ACCELERATION M/S ² | Y AXIS STROKE, MM | | | | | |
|------------------|----------------------------------|-------------------|-----|-----|-----|------|-----|
| | | 250 | 350 | 450 | 550 | 750 | 950 |
| 100 or 200 | 4.9 | 20 | 20 | 20 | 20 | 20 | 16 |
| | 9.8 | 20 | 20 | 20 | 20 | 12.6 | 6.6 |

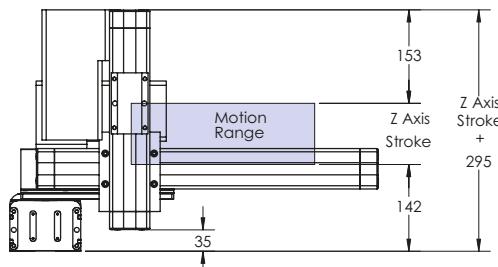
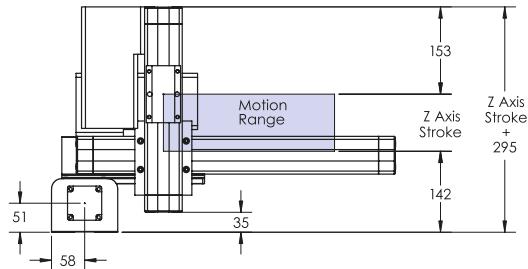
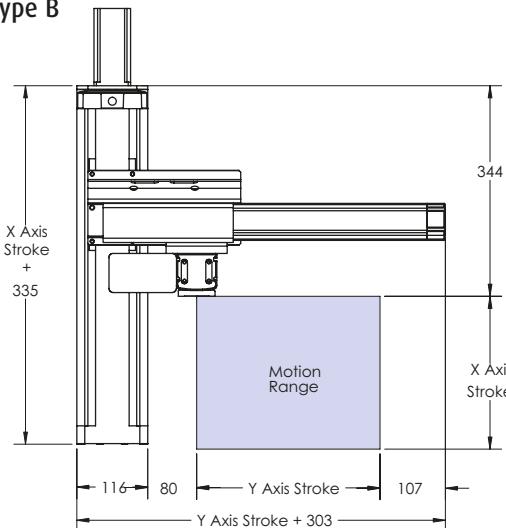
COMBINATION TYPE: RP-MSS



Type A

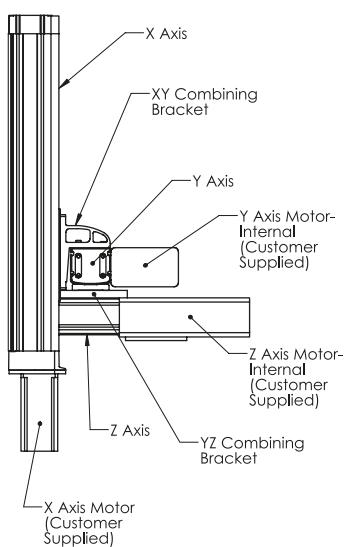


Type B



Combination Type and Reference Numbers

| COMBINATION TYPE | TYPE A AND B | REF PAGE |
|------------------------------|------------------|----------|
| X Axis | XY-HRS0*5-RM*SNF | 15 |
| X Axis Motor Mounting Kit | XY-P***RM | 18 & 19 |
| Y Axis | XY-HRS0*0-RS1R*F | 13 |
| Z Axis | XY-HRS0*0-RS1L*F | 12 |
| XY Combining Bracket | XY-P175GMS-1 | 39 |
| YZ Combining Bracket | XY-P175DSS-1 | 38 |
| Options: | | |
| Limit Sensor Kit, X Axis | XY-L3543RM | 42 |
| Limit Sensor Kit, Y Axis | XY-L3544RM | 42 |
| Limit Sensor Kit, Z Axis | XY-L3544RM | 42 |
| X Axis Module Mounting Plate | XY-P170M-1 | 41 |
| Square Nut | XY-P170M3-1 | 43 |



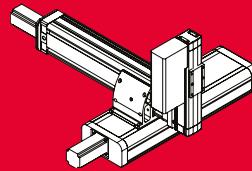
Note: Assembly of system required

Transportable Mass Table [kg]

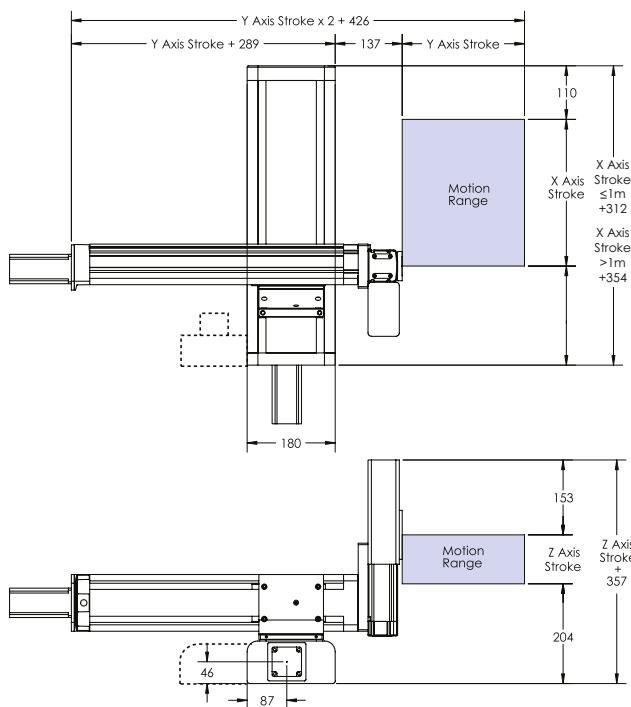
| Z AXIS STROKE | ACCELERATION M/S ² | X AXIS STROKE, MM | | | |
|---------------|-------------------------------|-------------------|-----|-----|-----|
| | | 100 | 200 | 300 | 400 |
| 100mm | 4.9 | 8 | 8 | 4.8 | 1.8 |
| | 9.8 | 8 | 5.8 | 2.8 | - |
| 200mm | 4.9 | 8 | 8 | 4.1 | 1.1 |
| | 9.8 | 8 | 5.1 | 2.1 | - |

COMBINATION TYPE: RJ-HMS

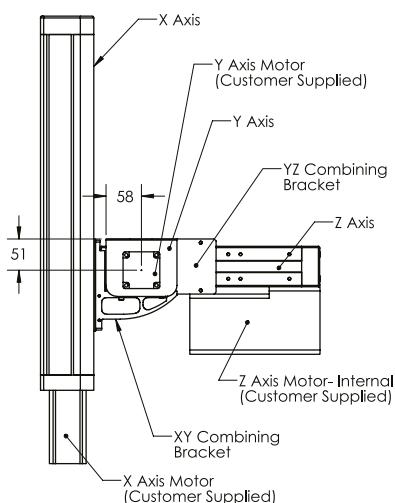
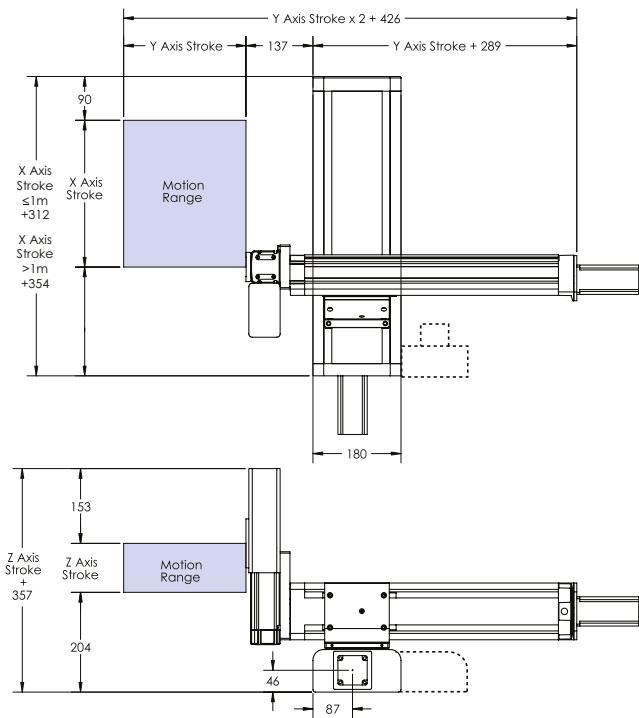
NSK



Type A



Type B



Note: Assembly of system required

Combination Type and Reference Numbers

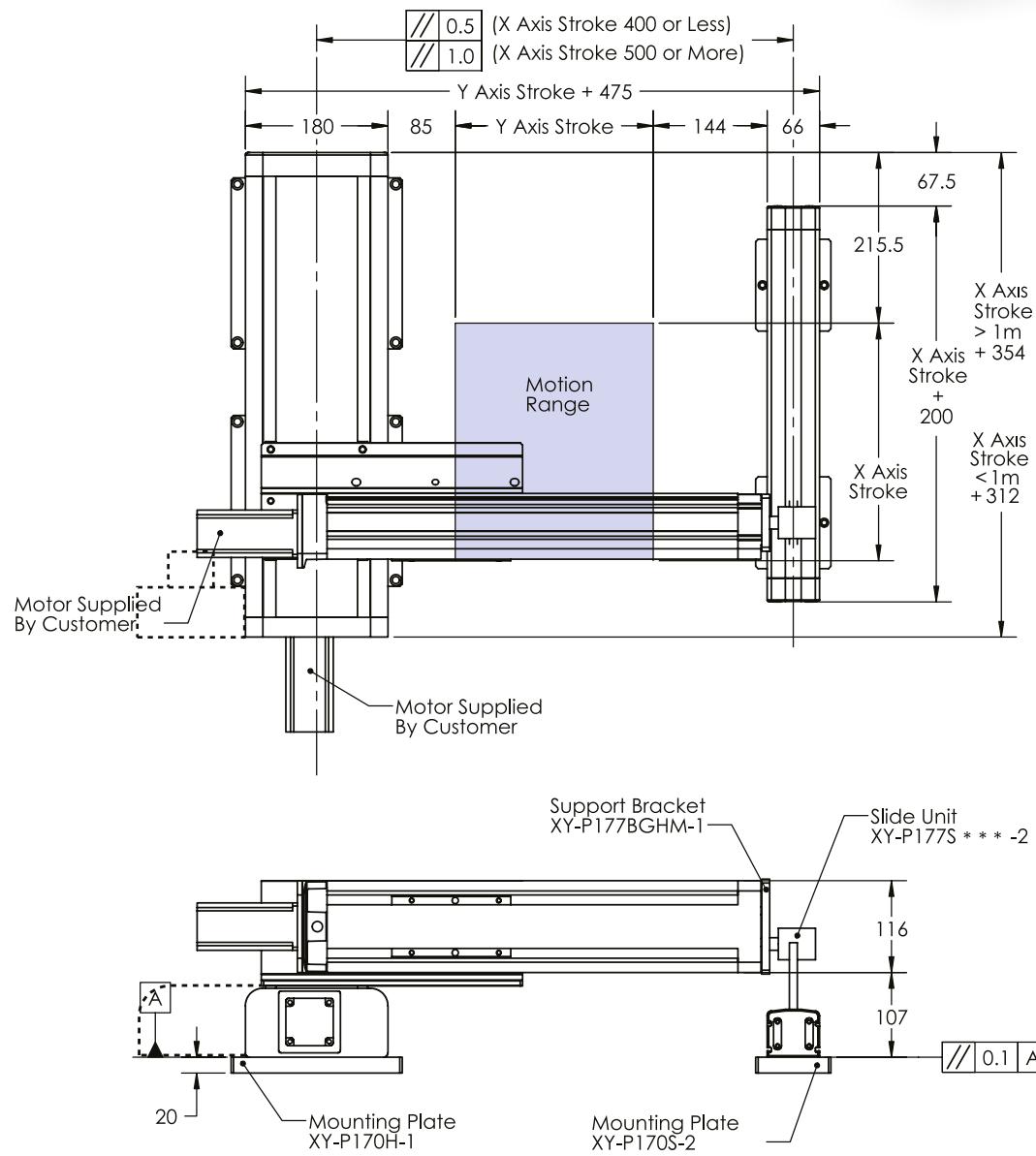
| COMBINATION TYPE | TYPE A | TYPE B | REF PAGE |
|------------------------------|------------------|------------------|----------|
| X Axis | XY-HRS**0-RH*SNF | | 16 & 17 |
| X Axis Motor Mounting Kit | XY-P***RM | | 18 & 19 |
| Y Axis | XY-HRS0*5-RM*SNF | | 15 |
| Y Axis Motor Mounting Kit | XY-P***RM | | 18 & 19 |
| Z Axis | XY-HRS0*0-RS1L*F | XY-HRS0*0-RS1R*F | 12 & 13 |
| XY Combining Bracket | XY-P175XHM-1 | | 40 |
| YZ Combining Bracket | XY-P175CMS-1 | | 40 |
| Options: | | | |
| Limit Sensor Kit, X Axis | XY-L3542RM | | 42 |
| Limit Sensor Kit, Y Axis | XY-L3543RM | | 42 |
| Limit Sensor Kit, Z Axis | XY-L3544RM | | 42 |
| X Axis Module Mounting Plate | XY-P170H-1 | | 41 |
| Square Nut | XY-P170M3-1 | | 43 |

Transportable Mass Table [kg]

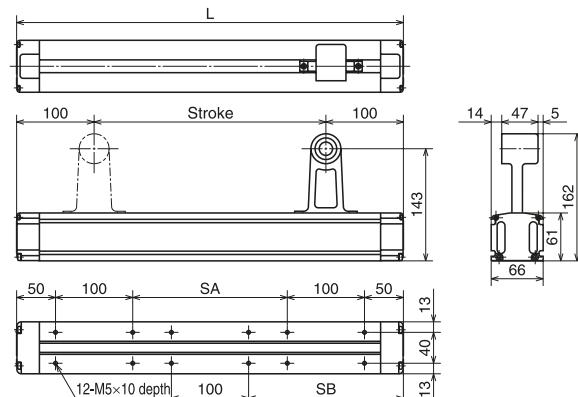
| Z AXIS STROKE | ACCELERATION M/S ² | X AXIS STROKE, MM | | | |
|---------------|-------------------------------|-------------------|-----|-----|-----|
| | | 250 | 350 | 450 | 550 |
| 100mm | 3.3 | 8 | 8 | 8 | 5.4 |
| | 4.9 | 8 | 8 | 5.4 | 2.4 |
| 200mm | 3.3 | 8 | 8 | 7.7 | 4.7 |
| | 4.9 | 8 | 8 | 4.7 | 1.7 |

ACCESSORIES - SUPPORT SLIDE

FOR COMBINATION TYPES: RG-HM AND RP-HMS



Slide unit



Example of reference number:

XY-P177S030-2

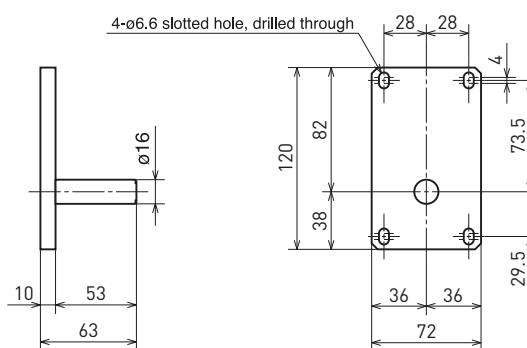
Stroke Ex.

030: 300 mm

For stroke 300 to 1,000

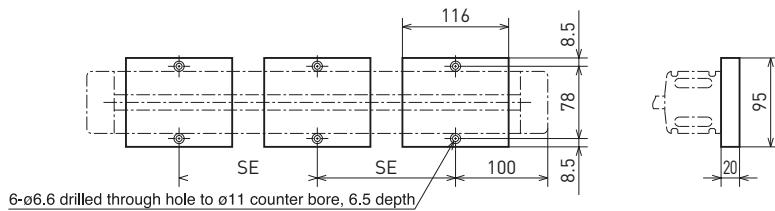
| PART NUMBER | STROKE, MM | L, MM | SA, MM | SB, MM | SE, MM | MASS, KG |
|---------------|------------|-------|--------|--------|--------|----------|
| XY-P177S030-2 | 300 | 500 | 200 | 200 | 150 | 4.8 |
| XY-P177S040-2 | 400 | 600 | 300 | 250 | 200 | 5.4 |
| XY-P177S050-2 | 500 | 700 | 400 | 300 | 250 | 6.0 |
| XY-P177S060-2 | 600 | 800 | 500 | 350 | 300 | 6.6 |
| XY-P177S080-2 | 800 | 1000 | 700 | 450 | 400 | 7.8 |
| XY-P177S100-2 | 1000 | 1200 | 900 | 550 | 500 | 9.0 |

Support bracket



Reference number:
XY-P177BGHM-1

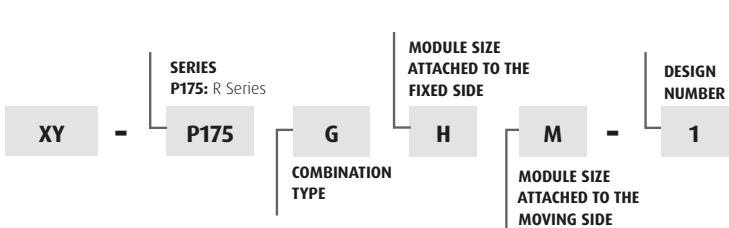
Module mounting plate



Reference number:
XY-P170S-2

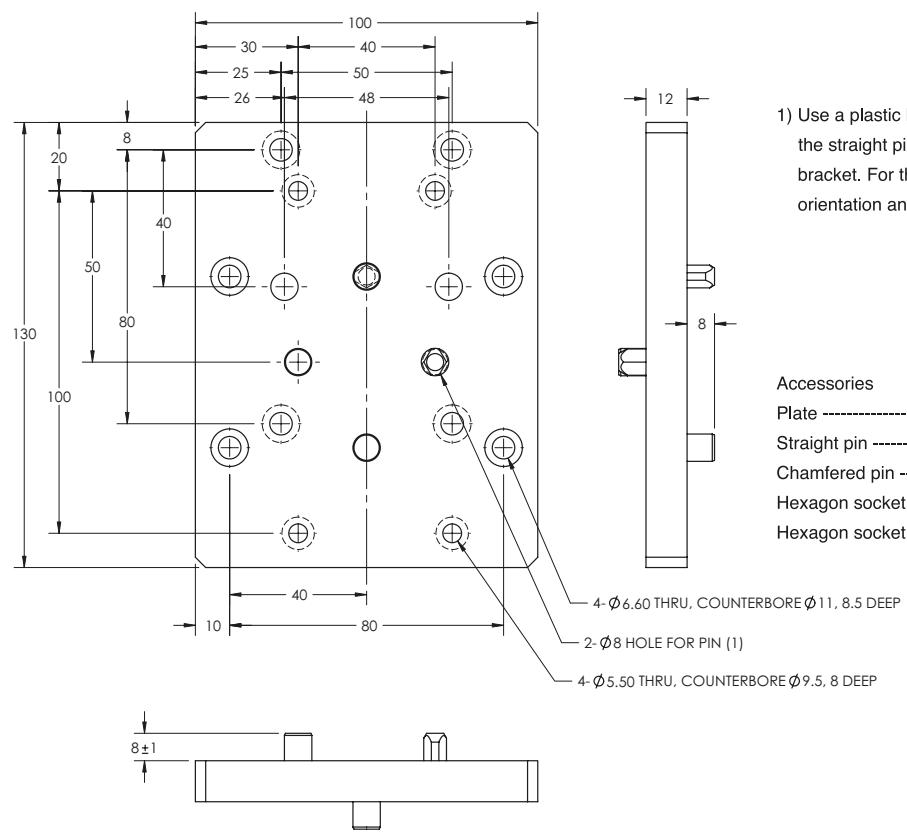
* We recommend three plates per slide. Reference number designates a quantity of 1 plate.

COMBINING BRACKETS



- › Brackets for combining modules into 2-axis and 3-axis mechanisms.
 - › Combining brackets contain dowel pins to ensure a high reproducibility of assembly accuracy.

XY-P175DSS-1

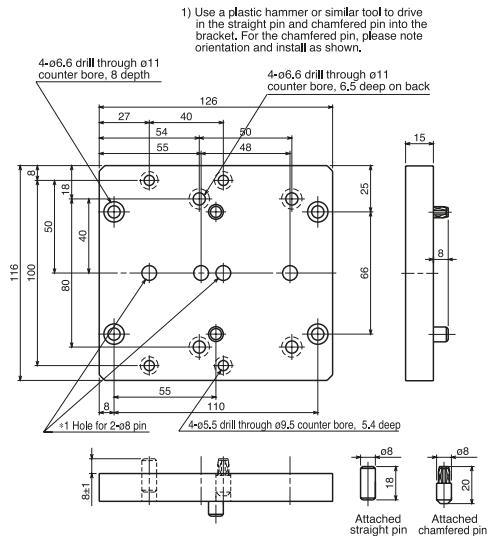


- 1) Use a plastic hammer or similar tool to install the straight pin and chamfered pin into the bracket. For the chamfered pin, please note orientation and install as shown.

Accessories

Plate ----- 1 pc.
Straight pin ----- 1 pc.
Chamfered pin ----- 1 pc.
Hexagon socket head cap screw M5×18 --- 8 pcs.
Hexagon socket head cap screw M6×10 --- 8 pcs.

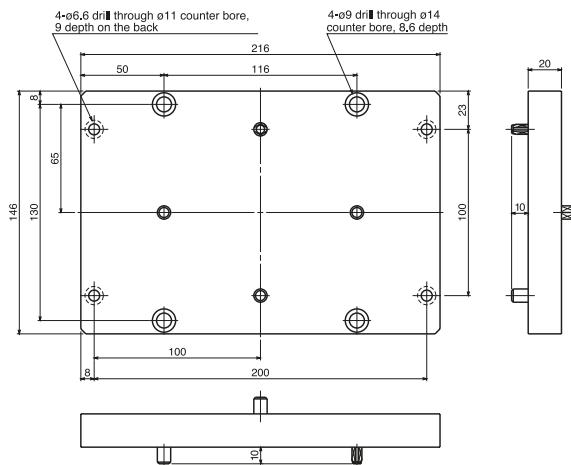
XY-P175DMS-1



About 0.6kg

Accessories:
Straight pin 1 pc.
Chamfered pin 1 pc.
Hexagon socket head cap screw M5×18 4 pcs.
Hexagon socket head cap screw M6×16 8 pcs.

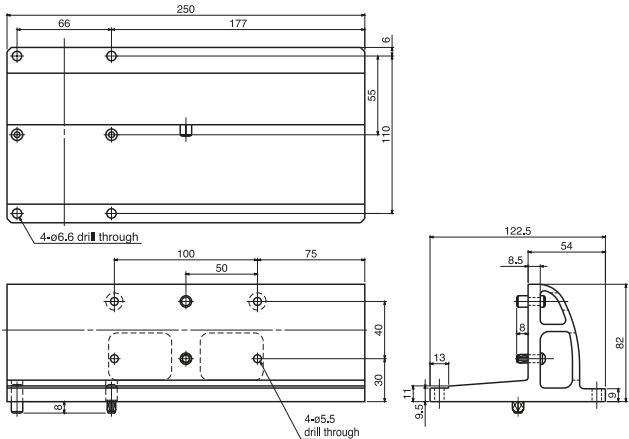
XY-P175DHM-1



About 1.6kg

Accessories
Hexagon socket head cap screw M6×20 4 pcs.
Hexagon socket head cap screw M8×25 4 pcs.

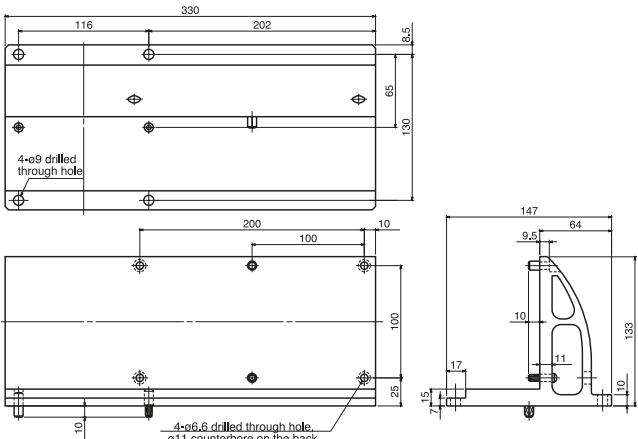
XY-P175GMS-1



About 1.6kg

Accessories
Hexagon socket head cap screw M6×18 ----- 4 pcs.
Hexagon socket head cap screw M5×16 ----- 4 pcs.

XY-P175GHM-1

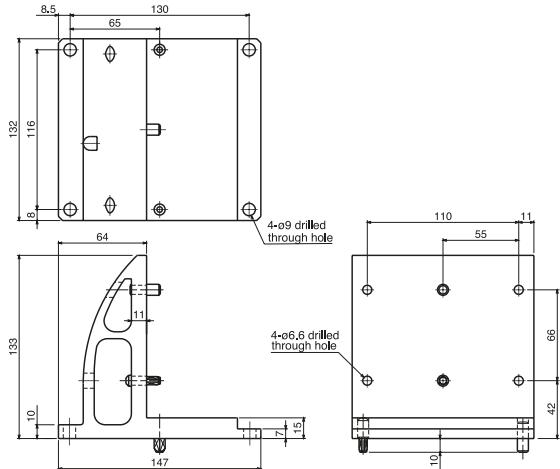


Accessories
Hexagon socket head cap screw M8×20 4 pcs.

Mirror image bracket; XY-P175GHM-2

COMBINING BRACKETS (CONTINUED)

XY-P175XHM-1

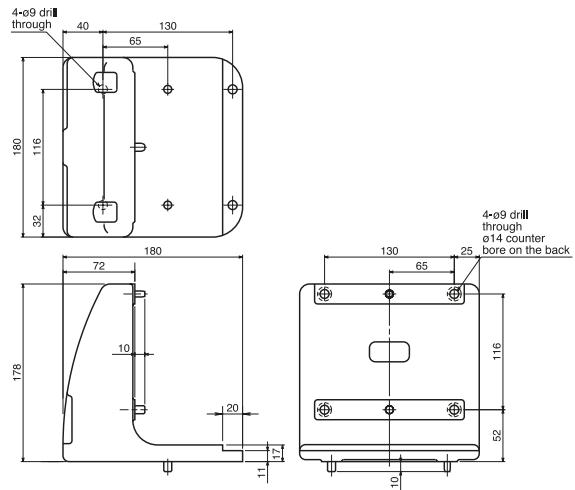


About 1.4kg

Accessories

Hexagon socket head cap screw M8×20 ----- 4 pcs.
Hexagon socket head cap screw M6×20 ----- 4 pcs.

XY-P175XHH-1

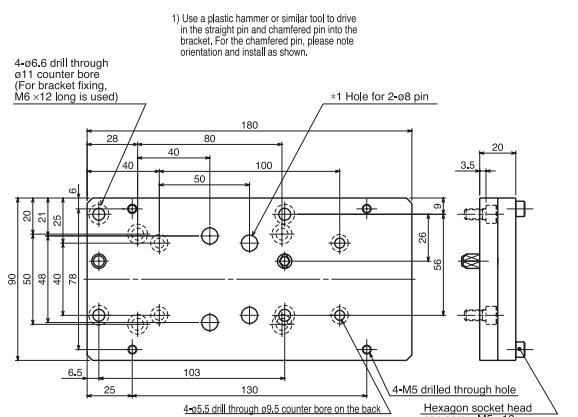


About 4.0kg

Accessory

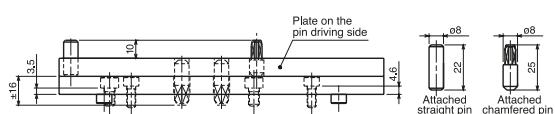
Hexagon socket head cap screw M8×25 ----- 8 pcs.

XY-P175CMS-1



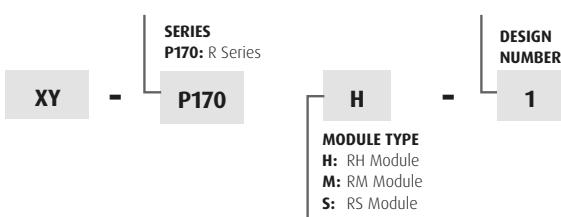
About 0.9kg

Accessories:
Straight pin ----- 1 pc.
Chamfered pin ----- 1 pc.
Hexagon socket head cap screw M5×12 ----- 4 pcs.
Hexagon socket head cap screw M5×18 ----- 4 pcs.
Hexagon socket head cap screw M6×10 ----- 4 pcs.
Hexagon socket head cap screw M6×12 ----- 4 pcs.



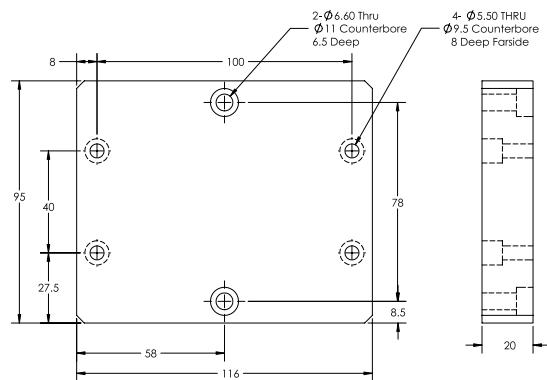
MODULE MOUNTING PLATES

NSK



- These plates are used for mounting the module in a "top down manner".
- Two mounting plates are required per fixed module.
- Part number designates a quantity of one mounting plate.

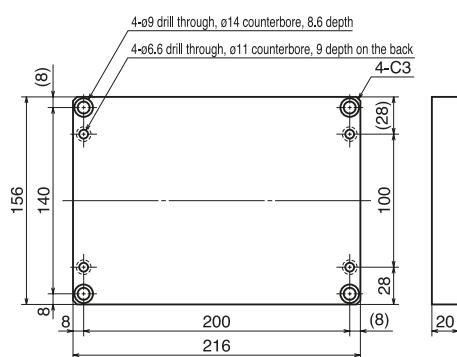
XY-P170S-2



About 0.4kg

Accessory
Hexagon socket head bolt M5 x 20 — 4 pcs

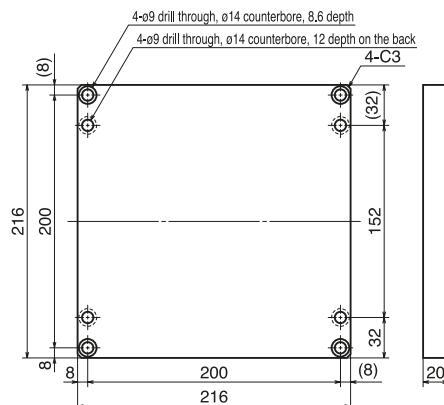
XY-P170M-1



About 1.8kg

Accessory
Hexagon socket head bolt M6×20 ---- 4 pcs.

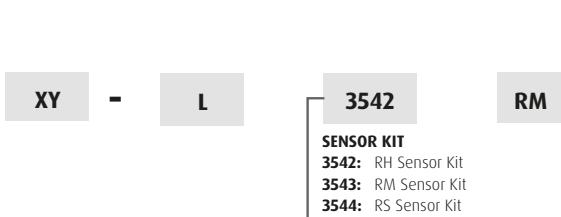
XY-P170H-1



About 2.4kg

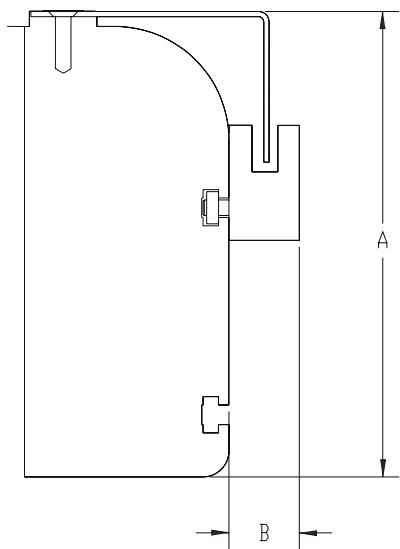
Accessory
Hexagon socket head bolt M8×20 ---- 4 pcs.

LIMIT SENSOR KITS



- › Provides necessary hardware to set module stroke limits and home position externally.
- › Specially designed kit for each module type.
- › Sensors are mounted using module T-slots for maximum flexibility in positioning sensors.
- › Kits come with "High-Flex" sensor cable for high reliability.
- › Sensor flag mounts below slider mounting surface.

Module Cross Section



| | DIMENSION A | DIMENSION B |
|-----------|-------------|-------------|
| RH Module | 90mm | 14mm |
| RM Module | 85mm | 14mm |
| RS Module | 70mm | 14mm |



RH MODULE SENSOR KIT- PN XY-L3542RM

- › RH Module Limit Sensor Flag qty 1
- › Limit Sensor (Omron EE-SX672A) qty 3
- › Limit Sensor Cable with Connector, 2m long (Omron EE-1010-R2M) qty 3
- › Limit Sensor T-Slot Nut Plate..... qty 3
- › M3 x 8 Socket Head Cap Screw qty 6
- › M3 x 6 Flat Head Screw..... qty 1

RM MODULE SENSOR KIT- PN XY-L3543RM

- › RM Module Limit Sensor Flag..... qty 1
- › Limit Sensor (Omron EE-SX672A) qty 3
- › Limit Sensor Cable with Connector, 2m long (Omron EE-1010-R2M) qty 3
- › Limit Sensor T-Slot Nut Plate..... qty 3
- › M3 x 8 Socket Head Cap Screw qty 6
- › M3 x 6 Flat Head Screw..... qty 1

RS MODULE SENSOR KIT- PN XY-L3544RM

- › RS Module Limit Sensor Flag..... qty 1
- › Limit Sensor (Omron EE-SX672A) qty 3
- › Limit Sensor Cable with Connector, 2m long (Omron EE-1010-R2M) qty 3
- › Limit Sensor T-Slot Nut Plate..... qty 3
- › M3 x 8 Socket Head Cap Screw qty 6
- › M3 x 6 Flat Head Screw..... qty 1

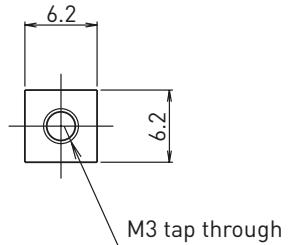
SQUARE NUT FOR MODULE T-SLOTS

NSK

XY - P170 M 3 - 1

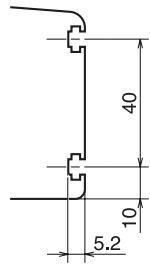
XY-P170M3-1

- › This nut is used to secure accessories to the side of the module.
- › Nuts are supplied in sets of 4.
- › T-slot locations are shown below for the various module types.

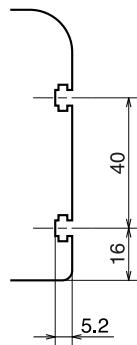


T-SLOT LOCATIONS ON MODULES

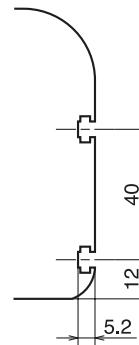
RS Module



RM Module



RH Module





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NSK Argentina SRL
Buenos Aires
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Latin America
NSK Latin America Inc.
Miramar FL
1.305.477.0605

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