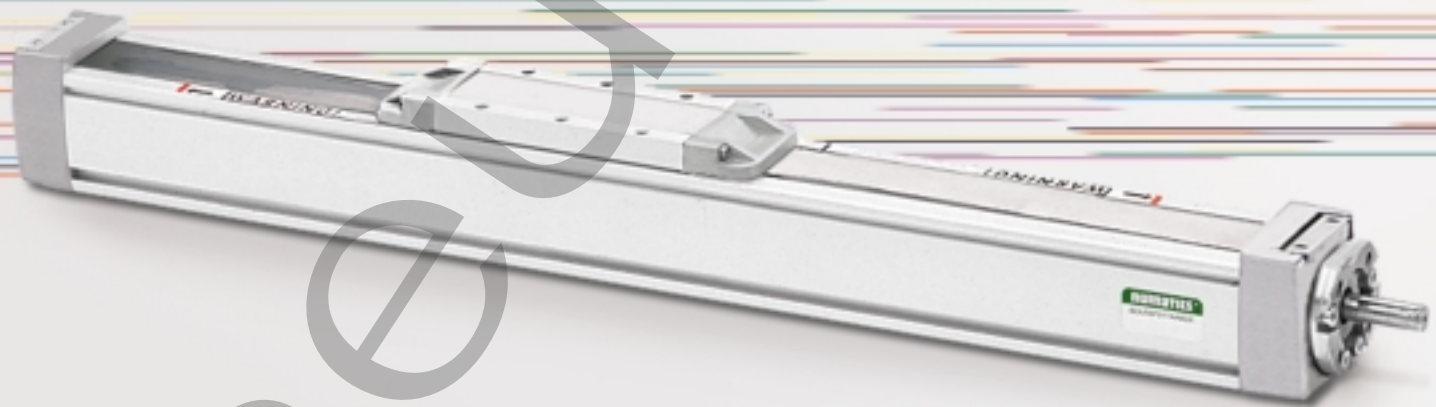


ORDER  
ONLINE



Electrical  
Actuator



***SDU Series***

***Screw Drive Unit***

*We're everywhere you need us to be!*



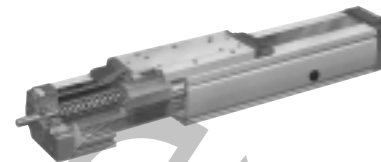
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|  |     |
|--|-----|
| <b>SDU Series Screw Drive Unit</b> ..... | 3-5 |
| Features and Benefits .....              | 3   |
| How To Order .....                       | 3   |
| Dimensions .....                         | 4   |
| Specifications .....                     | 5   |

Pneuhair



SDU Series  
Screw Drive Unit



## Screw Drive Unit

The ball screw drive provides precise positioning and high load carrying capability. High stiffness and repeatability characterize the ball screw drive. Stroke lengths to 19.7 feet are standard.

Thrust loads up to 1100 lbs. (Square rail model shown above)

Suitable for mounting in any position horizontal, vertical, inverted or on an incline.

Low torque required to drive the load due to high efficiency ball screw drive.

Linear bearings provide low stick slip for precise positioning and ease of moving load.

Magnetic cover strip protects the ball guides from contaminants and effectively seals the profile from the environment.

Low profile saddle.

Tensioning station on cover strip helps eliminate stretching of the strip to extend life.

T-slots for mounting feet or limit switches.

Ball screw support allows higher speeds with longer stroke actuators.

Mounting feet are modular for ease of installation.

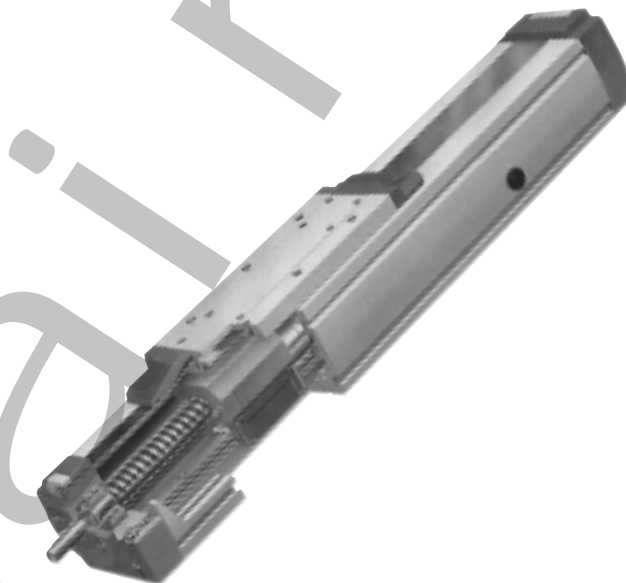
Motor mounting for all NEMA standard 23, 34 and 42 frame motors.

Rodless design allows the load to be mounted directly to the carriage, eliminates the need for support bearings and reduces overall length of the unit.

NEMA standard gearheads mount directly to the unit.

Optional NuMate™ mounting pattern is available.

Custom designs such as dual carriage units, special motor mounts and special carriage attachments are available.



## How to Order

**SDU 55 P 060 A B 6 D X**

**Series**

55  
75  
100

**Carriage Support**

P = Prism Guided  
B = Ball / Rail Guided

**Stroke**

001 to 236 Inches

**Mounting Brackets**

A = 2 Brackets  
B = 3 Brackets  
C = 4 Brackets  
D = 5 Brackets  
E = 6 Brackets

**Motor Mounting**

A = NEMA 23  
B = NEMA 34  
C = NEMA 42  
X = No Mount

**NuMate Interface**

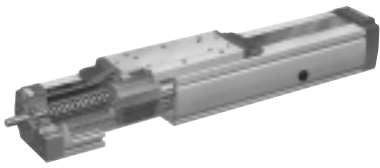
A = "A" Mount  
B = "B" Mount  
C = "C" Mount  
D = "D" Mount  
E = "E" Mount  
X = No Mount

**Sensing Position**

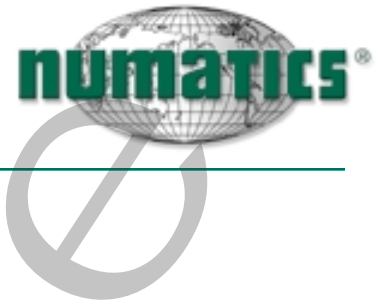
A = Single Position Extended  
B = Single Position Retract  
C = Two Position  
D = No Sensing  
E = Three Position  
F = Four Position

**Sensing Type**

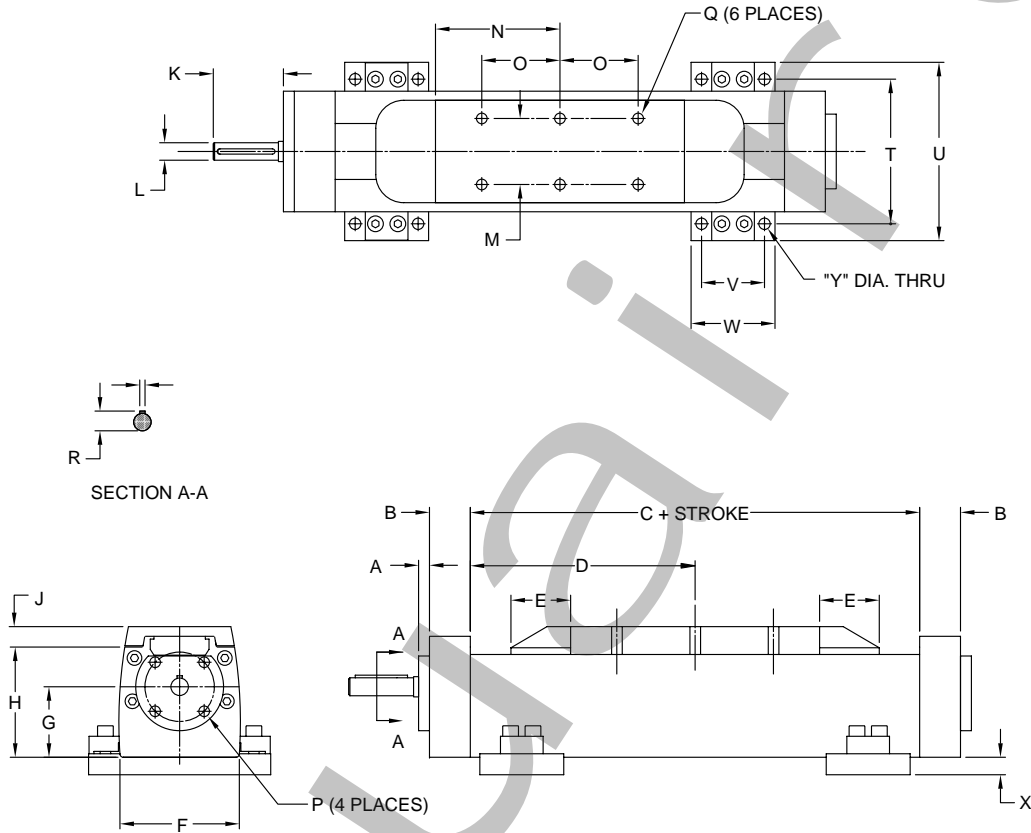
Standard Cord Set  
1 = Hall Effect - PNP (sourcing)  
2 = Hall Effect - NPN (sinking)  
3 = Reed Switch  
6 = No Sensing  
Quick Disconnect Cord Set  
Z = Hall Effect - PNP (sourcing)  
Y = Hall Effect - NPN (sinking)  
X = Reed Switch



SDU Series  
Screw Drive Unit



SDU Dimensions



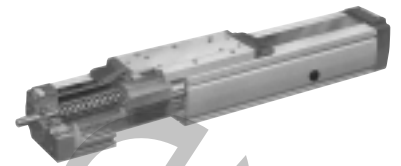
|   | SDU 55          | SDU 75            | SDU 100          |
|---|-----------------|-------------------|------------------|
| A | 0.35 (9.0)      | 0.43 (11.0)       | 0.39 (10.0)      |
| B | 1.14 (29.0)     | 1.26 (32.0)       | 1.46 (37.0)      |
| C | 11.66 + STROKE  | 12.93 + STROKE    | 16.06 + STROKE   |
| D | 5.83 (148.0)    | 6.45 (164.0)      | 8.04 (204.0)     |
| E | 1.30 (33.0)     | 1.46 (37.0)       | 2.13 (54.0)      |
| F | 2.28 (58.0)     | 3.39 (86.0)       | 4.25 (108.0)     |
| G | 1.26 (32.0)     | 1.85 (47.0)       | 2.52 (64.0)      |
| H | 2.17 (55.0)     | 2.95 (75.0)       | 3.94 (100.0)     |
| J | 0.55 (14.0)     | 0.69 (17.5)       | 0.73 (18.5)      |
| K | 1.18 (30.0)     | 2.70 (68.5)       | 2.50 (63.5)      |
| L | 0.44 (11.0)     | 0.63 (16.0)       | 0.63 (16.0)      |
| M | 1.61 (41.0)     | 2.36 (60.0)       | 2.36 (60.0)      |
| N | 2.32 (59.0)     | 2.83 (72.0)       | 4.45 (113)       |
| O | 1.50 (38.0)     | 2.09 (53.0)       | 2.80 (71.0)      |
| P | 10-32 HELI-COIL | 5/16-18 HELI-COIL | 3/8-16 HELI-COIL |
| Q | 10-32 HELI-COIL | 5/16-18 HELI-COIL | 3/8-16 HELI-COIL |
| R | 0.478 (12.5)    | 0.706 (18.0)      | 0.706 (18.0)     |
| S | 0.125 (4.0)     | 0.188 (5.0)       | 0.188 (5.0)      |
| T | 3.00 (76.2)     | 4.00 (101.5)      | 5.175 (131.4)    |
| U | 3.74 (95.0)     | 5.00 (127.0)      | 6.375 (161.9)    |
| V | 1.50 (38.0)     | 2.00 (50.8)       | 2.25 (57.2)      |
| W | 2.00 (50.8)     | 2.75 (70.0)       | 3.00 (76.7)      |
| X | 0.375 (9.5)     | 0.50 (12.7)       | 0.625 (15.9)     |
| Y | 0.28 (7.1)      | 0.34 (8.7)        | 0.40 (10.3)      |

(mm)

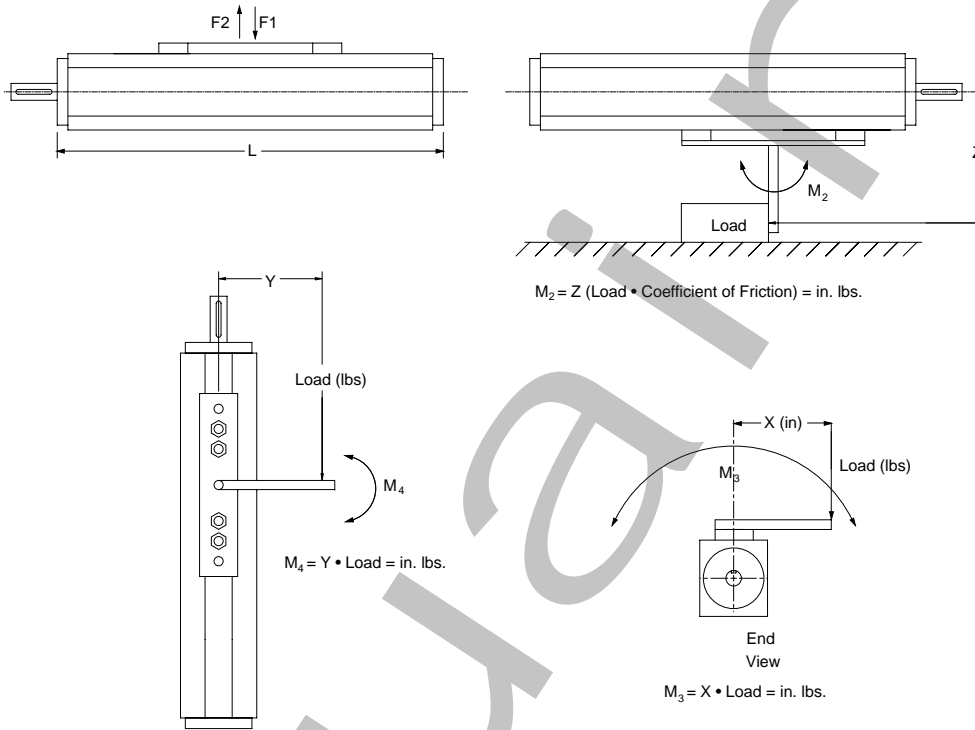
| SDU SERIES<br>STROKE/SUPPORTS | SDU 55 | SDU 75 | SDU 100 |
|-------------------------------|--------|--------|---------|
| REQUIRED                      |        |        |         |
| 1" to 48"                     | 2      | 2      | 2       |
| 49" to 84"                    | 3      | 3      | 3       |
| 85" to 132"                   | 4      | 4      | 3       |
| 133" to 180"                  | 5      | 5      | 4       |
| 181" to 240"                  | 6      | 6      | 5       |



SDU Series  
Screw Drive Unit



SDU Technical Specifications



| DESCRIPTION         | SDU 55      | SDU 55B     | SDU 75       | SDU 75B      | SDU 100      | SDU 100B     |
|---------------------|-------------|-------------|--------------|--------------|--------------|--------------|
| Maximum Stroke      | 9.8 feet    | 9.8 feet    | 16.4 feet    | 16.4 feet    | 19.7 feet    | 19.7 feet    |
| Maximum Thrust Load | 450 lbs.    | 450 lbs.    | 562 lbs.     | 562 lbs.     | 1124 lbs.    | 1124 lbs.    |
| Accuracy            | ±0.005      | ±0.005      | ±0.005       | ±0.005       | ±0.005       | ±0.005       |
| Repeatability       | ±0.004      | ±0.002      | ±0.004       | ±0.002       | ±0.004       | ±0.004       |
| Carriage Weight     | 2.43 lbs.   | 2.43 lbs.   | 4.4 lbs.     | 4.4 lbs.     | 4.85 lbs.    | 4.85 lbs.    |
| Radial Load         | 106 lbs.    | 106 lbs.    | 265 lbs.     | 265 lbs.     | 398 lbs.     | 398 lbs.     |
| Torsional Load      | 45 ft.-lbs. | 45 ft.-lbs. | 134 ft.-lbs. | 134 ft.-lbs. | 224 ft.-lbs. | 224 ft.-lbs. |
| Screw Diameter      | 0.630 in.   | 0.630 in.   | 0.787 in.    | 0.787 in.    | 0.984 in.    | 0.984 in.    |
| Screw Lead          | 0.787 in.   | 0.787 in.   | 0.787 in.    | 0.787 in.    | 0.984 in.    | 0.984 in.    |
| Base Unit Weight    | 10.8 lbs.   | 11.6 lbs.   | 17.6 lbs.    | 21.7 lbs.    | 38.6 lbs.    | 43.7 lbs.    |
| Adder/In. of Stroke | 0.3 lbs.    | 0.3 lbs.    | 0.5 lbs.     | 0.6 lbs.     | 0.8 lbs.     | 0.95 lbs.    |
| Operating Temp.     | 0 to 158F   | 0 to 158F   | 0 to 158F    | 0 to 158F    | 0 to 158F    | 0 to 158F    |

| OVERALL LENGTH (L-DIMENSION) |                |                |                |                |                |                |
|------------------------------|----------------|----------------|----------------|----------------|----------------|----------------|
| 0 Screw Supports             | Stroke + 14.39 | Stroke + 14.39 | Stroke + 15.98 | Stroke + 15.98 | Stroke + 19.13 | Stroke + 19.53 |
| 1 Screw Support              | N/A            | N/A            | Stroke + 20.00 | Stroke + 19.45 | Stroke + 20.39 | Stroke + 21.58 |
| 2 Screw Supports             | N/A            | N/A            | Stroke + 24.02 | Stroke + 23.39 | Stroke + 24.33 | Stroke + 25.51 |

| MAXIMUM LOAD CAPACITIES |              |              |              |               |               |               |
|-------------------------|--------------|--------------|--------------|---------------|---------------|---------------|
| F1                      | 88 lbs.      | 198 lbs.     | 319 lbs.     | 440 lbs.      | 660 lbs.      | 1100 lbs.     |
| F2                      | 56 lbs.      | 127 lbs.     | 230 lbs.     | 282 lbs.      | 475 lbs.      | 704 lbs.      |
| M2                      | 203 in. lbs. | 424 in. lbs. | 708 in. lbs. | 1150 in. lbs. | 2433 in. lbs. | 3540 in. lbs. |
| M3                      | 79 in. lbs.  | 44 in. lbs.  | 398 in. lbs. | 159 in. lbs.  | 1062 in. lbs. | 477 in. lbs.  |
| M4                      | 79 in. lbs.  | 44 in. lbs.  | 398 in. lbs. | 159 in. lbs.  | 1062 in. lbs. | 477 in. lbs.  |