



# Ball & Crossed Roller Slides

## General Information

All dimensions in mm  
 General tolerances:  
 $\pm 0.13\text{mm}$   
 Material:  
 See tables

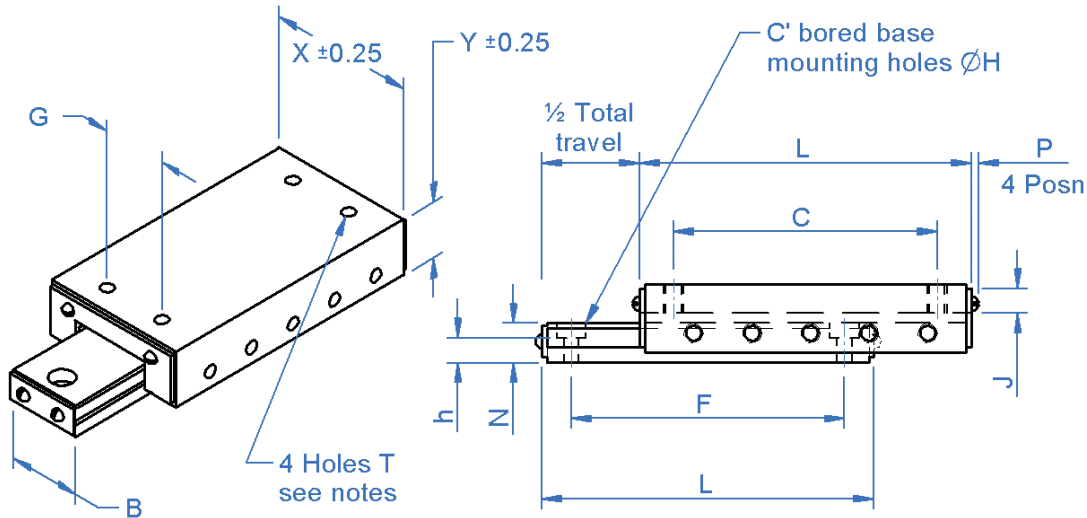
Notes:  
 6 holes - SA3-6  
 8 holes - SA3-9  
 10 holes - SA3-12

## Associated Products

Fasteners  
 Leadscrews

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## Drawing dimension and mounting table

| Ballslide Series | Dimensions                     |                        |                       |                            |                       | Mounting Details         |                              |               |         |
|------------------|--------------------------------|------------------------|-----------------------|----------------------------|-----------------------|--------------------------|------------------------------|---------------|---------|
|                  | Carriage Width X<br>$\pm 0.25$ | Height Y<br>$\pm 0.25$ | Screw P<br>$\pm 0.25$ | Base Width B<br>$\pm 0.25$ | Depth N<br>$\pm 0.25$ | Base                     |                              | Carriage      |         |
|                  |                                |                        |                       |                            |                       | Hole Dia H<br>$\pm 0.25$ | Through Dist h<br>$\pm 0.25$ | Thread Size T | Depth J |
| CA               | 9.5                            | 5.8                    | 1.3                   | 4.0                        | 3.4                   | M2*                      | 3.4                          | M2            | 2.29    |
| DA & XDA         | 14.2                           | 8.0                    | 1.0                   | 6.4                        | 4.7                   | 2.2                      | 2.5                          | M2            | 2.54    |
| EA & XEA         | 19.0                           | 10.4                   | 1.0                   | 9.5                        | 6.3                   | 3.2                      | 2.9                          | M3            | 3.30    |
| MA               | 25.4                           | 12.7                   | 1.0                   | 12.7                       | 6.3                   | 4.2                      | 2.9                          | M3            | 5.33    |
| NA & XNA         | 26.9                           | 13.4                   | 1.0                   | 12.7                       | 7.9                   | 4.2                      | 3.3                          | M4            | 4.83    |
| SA1 & XSA1       | 38.0                           | 15.8                   | 1.3                   | 19.0                       | 8.6                   | 4.2                      | 4.0                          | M4            | 6.35    |
| SA2 & XSA2       | 44.0                           | 19.0                   | 2.0                   | 22.2                       | 10.2                  | 4.2                      | 5.6                          | M4            | 8.13    |
| SA3 & XSA3       | 66.5                           | 25.4                   | 2.0                   | 38.1                       | 15.9                  | 5.3                      | 10.6                         | M5            | 8.38    |

L, C & F dimension, see part number on page 49.  
 \* For CA series slides, H holes are threaded and not counterbored.

## Specifications

| Feature                  | Ball Slide                                                           | Crossed Roller Slide<br>(higher load capacity) |
|--------------------------|----------------------------------------------------------------------|------------------------------------------------|
| Straight line accuracy   | 0.0005mm/mm                                                          | 0.0001mm/mm                                    |
| Positional repeatability | 0.005mm                                                              | 0.0025mm                                       |
| Coefficient of friction  | 0.003 typical                                                        | 0.003 typical                                  |
| Construction             | Aluminium carriage and base<br>Hardened steel rods and balls/rollers |                                                |
|                          | Steel end caps                                                       | Stainless steel end caps                       |
| Finish:                  | Carriage                                                             | Clear anodised                                 |
|                          | Base                                                                 | Black anodised                                 |
|                          |                                                                      | Black anodised                                 |

# Ball & Crossed Roller Slides



Part number selection table

| Part Number  |                | Total Travel<br>Min | Slide Length<br>L<br>±0.25 | Hole Centres<br>C<br>±0.25 | Hole Centres<br>F<br>±0.25 | Hole Centres<br>G<br>±0.25 | Dynamic Load Capacity (N) |                |
|--------------|----------------|---------------------|----------------------------|----------------------------|----------------------------|----------------------------|---------------------------|----------------|
| Ball Bearing | Crossed Roller |                     |                            |                            |                            |                            | Ball Bearing              | Crossed Roller |
| CA-1         | --             | 13                  | 19.0                       | 13.0                       | 10.0                       | 4.0                        | 6.67                      | --             |
| CA-2         | --             | 25                  | 32.0                       | 26.0                       | 20.0                       |                            | 6.67                      | --             |
| CA-3         | --             | 38                  | 44.0                       | 37.0                       | 30.0                       |                            | 6.67                      | --             |
| DA-1         | XDA-1          | 13                  | 27.0                       | 15.0                       | 19.0                       | 6.0                        | 19.62                     | 137.34         |
| DA-2         | XDA-2          | 25                  | 52.0                       | 41.0                       | 35.0                       |                            | 39.24                     | 245.25         |
| DA-3         | XDA-3          | 50                  | 78.0                       | 66.0                       | 60.0                       |                            | 49.05                     | 294.30         |
| DA-4         | --             | 75                  | 103.0                      | 92.0                       | 86.0                       |                            | 58.86                     | --             |
| DA-5         | --             | 100                 | 128.0                      | 117.0                      | 89.0                       |                            | 78.48                     | --             |
| DA-6         | --             | 127                 | 154.0                      | 142.0                      | 114.0                      |                            | 78.48                     | --             |
| EA-1         | XEA-1          | 13                  | 27.0                       | 15.0                       | 19.0                       | 9.0                        | 39.24                     | 215.82         |
| EA-2         | XEA-2          | 25                  | 52.0                       | 41.0                       | 35.0                       |                            | 49.05                     | 343.35         |
| EA-3         | XEA-3          | 50                  | 78.0                       | 66.0                       | 60.0                       |                            | 49.05                     | 412.02         |
| EA-4         | --             | 75                  | 103.0                      | 92.0                       | 86.0                       |                            | 58.86                     | --             |
| EA-5         | --             | 100                 | 128.0                      | 117.0                      | 89.0                       |                            | 68.67                     | --             |
| EA-6         | --             | 127                 | 154.0                      | 142.0                      | 114.0                      |                            | 78.48                     | --             |
| MA-1         | --             | 13                  | 40.0                       | 32.0                       | 32.0                       | 10.0                       | 49.05                     | --             |
| MA-2         | --             | 25                  | 65.0                       | 57.0                       | 57.0                       |                            | 49.05                     | --             |
| MA-3         | --             | 50                  | 90.0                       | 82.0                       | 82.0                       |                            | 68.67                     | --             |
| NA-1         | --             | 19                  | 40.0                       | 32.0                       | 28.0                       | 10.0                       | 68.67                     | --             |
| NA-2         | XNA-2          | 38                  | 65.0                       | 57.0                       | 54.0                       |                            | 78.48                     | 588.60         |
| NA-3         | XNA-3          | 50                  | 90.0                       | 82.0                       | 79.0                       |                            | 88.29                     | 981.00         |
| NA-4         | XNA-4          | 75                  | 116.0                      | 102.0                      | 82.0                       |                            | 107.91                    | 1177.21        |
| NA-6         | --             | 100                 | 152.0                      | 140.0                      | 102.0                      |                            | 137.34                    | --             |
| NA-8         | --             | 150                 | 203.0                      | 190.0                      | 127.0                      |                            | 156.96                    | --             |
| NA-10        | --             | 200                 | 254.0                      | 240.0                      | 178.0                      |                            | 176.58                    | --             |
| SA1-1        | XSA1-1         | 25                  | 51.0                       | 35.0                       | 37.0                       | 16.0                       | 68.67                     | 578.79         |
| SA1-2        | XSA1-2         | 50                  | 76.0                       | 60.0                       | 60.0                       |                            | 88.29                     | 774.99         |
| SA1-4        | XSA1-4         | 100                 | 152.0                      | 136.0                      | 100.0                      |                            | 156.96                    | 1363.59        |
| SA1-6        | --             | 150                 | 203.0                      | 186.0                      | 128.0                      |                            | 196.20                    | --             |
| SA1-8        | --             | 200                 | 254.0                      | 238.0                      | 178.0                      |                            | 245.25                    | --             |
| SA2-1        | XSA2-1         | 25                  | 51.0                       | 35.0                       | 38.0                       | 20.0                       | 88.29                     | 578.79         |
| SA2-2        | XSA2-2         | 50                  | 83.0                       | 65.0                       | 65.0                       |                            | 186.39                    | 774.99         |
| SA2-3        | XSA2-3         | 75                  | 102.0                      | 85.0                       | 85.0                       |                            | 235.44                    | 774.99         |
| SA2-4        | XSA2-4         | 100                 | 152.0                      | 140.0                      | 100.0                      |                            | 264.87                    | 1363.59        |
| SA2-8        | --             | 200                 | 254.0                      | 240.0                      | 178.0                      |                            | 402.21                    | --             |
| SA3-1.5      | XSA3-1.5       | 38                  | 67.0                       | 42.0                       | 42.0                       | 35.0                       | 156.96                    | 1167.39        |
| SA3-2        | XSA3-2         | 50                  | 102.0                      | 75.0                       | 75.0                       |                            | 274.68                    | 1549.98        |
| SA3-4        | XSA3-4         | 100                 | 152.0                      | 125.0                      | 125.0                      |                            | 529.74                    | 1942.38        |
| SA3-6        | XSA3-6         | 150                 | 229.0                      | 75.0 x2                    | 178.0                      |                            | 667.08                    | 3109.77        |
| SA3-9        | --             | 228                 | 305.0                      | 75.0 x3                    | 254.0                      |                            | 824.04                    | --             |
| SA3-12       | --             | 304                 | 381.0                      | 75.0 x3                    | 330.0                      |                            | 912.33                    | --             |

## General Information

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General tolerances:  
±0.13mm  
Material:  
See tables

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