



# MMC PRESS CONDENSED CATALOG

35-1,200 Metric Tons Capacity



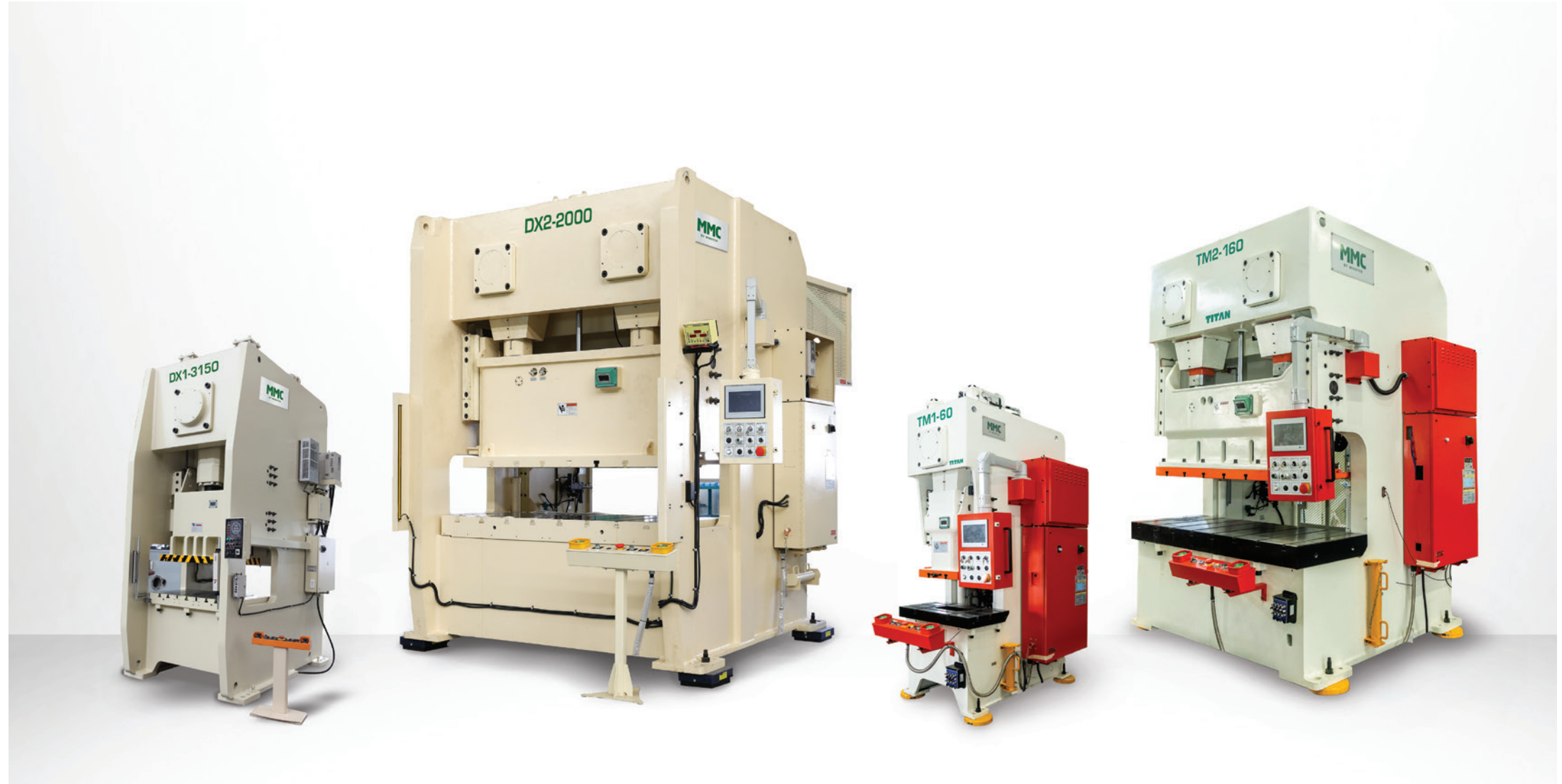
## PRODUCT OVERVIEW

The Nidec Minster Corporation's MMC Press Line offers metal stampers a wide range of cost-effective solutions. Mechanical and servo press offerings include single and two-point gap, unitized frame straightsides, and a full complement of tie rod construction straightside machines with crankshaft or eccentric geared drives in two or four-point configurations up to 1,200 tons capacity.

In collaboration with the CFG Machinery Company, MMC Presses have been engineered and built to provide a combination of reliable performance, quality and value. All machines meet or exceed JIS Class 1 accuracy standards, and are equipped with a variety of features to help improve productivity.

MMC Presses can be custom-engineered to meet a wide range of specific manufacturing requirements. In addition, many standard models are in stock for short term or immediate delivery and start-up.

All MMC products are supported by the highly-responsive Nidec Press & Automation global customer service organization.



- 1 Designed and manufactured to meet or exceed JIS Class 1 accuracy standards.
- 2 Rigid steel frames to help minimize deflection and provide better accuracy while increasing tooling life.
- 3 Precision machined gears, forged steel crankshafts, and other drive train components are designed for smooth, quiet, and long-life press operation.
- 4 MMC's Mitsubishi PLC-based or custom controls provide simple operation, while a YASKAWA VFD allows for fine-tuning the press speed to best suit the application.
- 5 Fast-acting hydraulic overload protection system allows for quick reaction to problems.
- 6 MMC brand presses comply with ANSI-B11 Series and NFPA 79 standards.



TM1 & TM2 SERIES GAP FRAME MECHANICAL PRESSES  
35-315 Metric Tons

Standard Features

- Automatic recirculating oil lubrication
  - Automatic oil counterbalance lubrication
  - Articulated control arm mounting
  - Area Die Lights
  - Fabricated steel frame
  - Wet clutch/brake
  - Hydraulic overload protection
  - 6-point slide guiding
  - Single gear reduction drive
  - Isolator mounts
  - Built to JIS Class 1 accuracy standards
- Powered die height adjustment w/ electronic readout in millimeter and inch
  - PLC-based control with 10” color touch screen
    - 8 channel PLS
    - 8 input die protection

Optional Features

- Auto shutheight ADJ
- Built-in tonnage monitor

Customization

While one of our standard configuration presses may be perfectly suitable for your needs, that may not always be the case. In such instances, all MMC presses can be custom-engineered to meet a wide variety of your special production requirements. These are just some of the special features we can provide — even if a one-off!

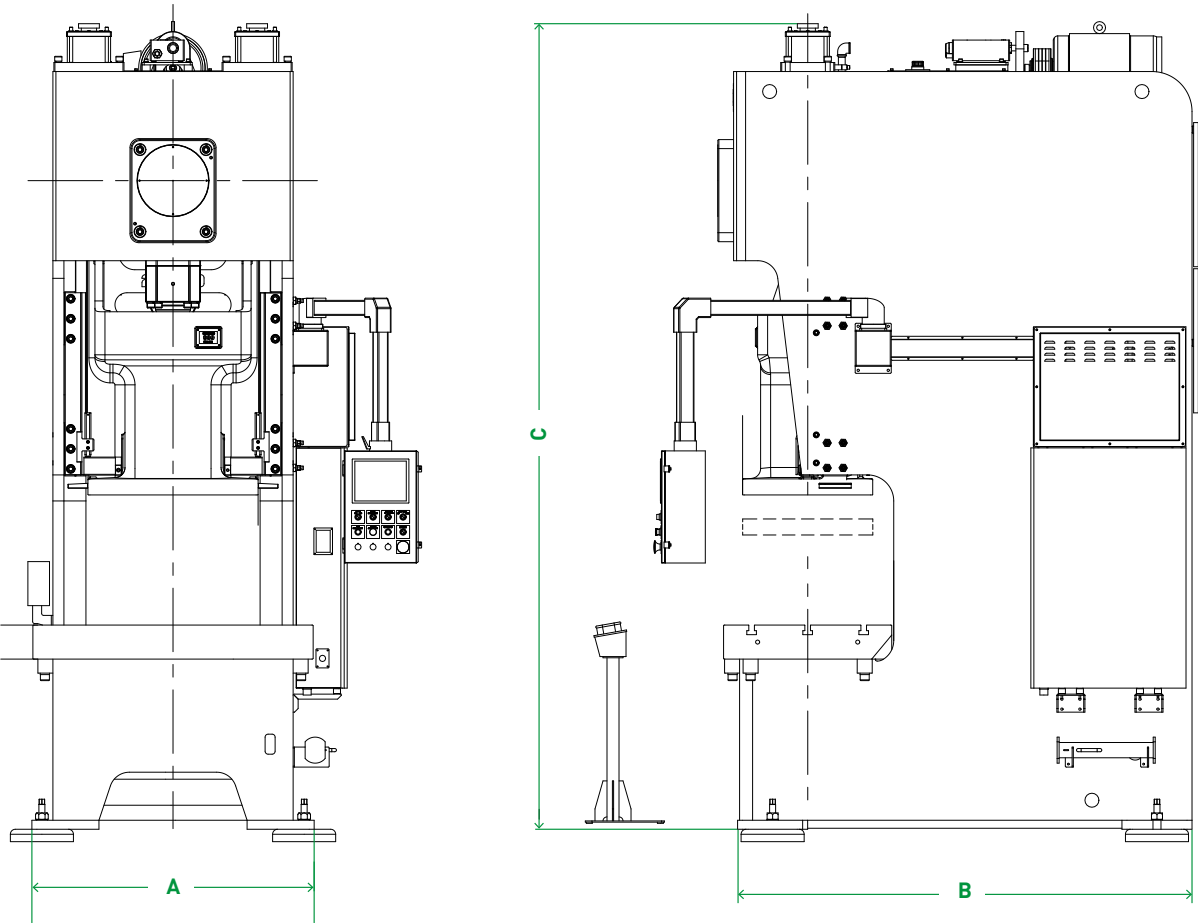
- 8-point slide guiding
- Inclined (or incline-able forms)
- Non-geared (flywheel-type) drive for higher speed applications
- Custom stroke and die height
- Custom high-energy drive for tough forming or drawing applications
- Custom slide and bolster dimensions
- Custom controls
- Custom die cushions
- Quick die change equipment
- Point-of-operation guarding
- Coil feed lines and automation

SPECIFICATIONS & DIMENSIONS  
TM1 Series

|                                  |     | TM1-35        | TM1-45        |        | TM1-60        |        | TM1-80        |            | TM1-110        |           |
|----------------------------------|-----|---------------|---------------|--------|---------------|--------|---------------|------------|----------------|-----------|
| Press Type                       |     | L             | L             | S      | L             | S      | L             | S          | L              | S         |
| Capacity in Tons                 |     | 35 metric ton | 45 metric ton |        | 60 metric ton |        | 80 metric ton |            | 110 metric ton |           |
|                                  |     | 37.5 US ton   | 49.5 US ton   |        | 66 US ton     |        | 88 US ton     |            | 121 US ton     |           |
| Torque Capacity from BDC         | mm  | 3.2           | 3.2           | 1.6    | 4             | 2      | 5             | 3.2        | 5              | 3.2       |
|                                  | in  | 0.126         | 0.126         | 0.063  | 0.157         | 0.079  | 0.197         | 0.126      | 0.197          | 0.126     |
| Approximate Press Weight         | kg  | 3,000         | 3,800         |        | 5,600         |        | 7,000         |            | 9,500          |           |
|                                  | lb  | 6,600         | 8,360         |        | 12,320        |        | 15,400        |            | 20,900         |           |
| Stroke Length                    | mm  | 70            | 80            | 50     | 120           | 60     | 150           | 100        | 180            | 110       |
|                                  | in  | 2.75          | 3.15          | 1.97   | 4.72          | 2.36   | 5.91          | 3.94       | 7.09           | 4.33      |
| Speed Range at Full Tonnage      | spm | 60-120        | 50-100        | 75-150 | 45-90         | 60-120 | 40-75         | 55-110     | 30-60          | 50-100    |
| Area of Slide, R-L x F-B         | mm  | 360 x 250     | 400 x 300     |        | 500 x 360     |        | 700 x 460     |            | 960 x 520      |           |
|                                  | in  | 14.17 x 9.84  | 15.75 x 11.81 |        | 19.69 x 14.17 |        | 27.56 x 18.11 |            | 37.80 x 20.47  |           |
| Recommended Max Upper Die Weight | kg  | 260           | 300           |        | 300           |        | 500           |            | 550            |           |
|                                  | lb  | 575           | 660           |        | 660           |        | 1,100         |            | 1210           |           |
| Bolster Plate Thickness          | mm  | 90            | 90            |        | 90            |        | 100           |            | 120            |           |
|                                  | in  | 3.54          | 3.54          |        | 3.54          |        | 3.94          |            | 4.72           |           |
| Area of Bolster, R-L x F-B       | mm  | 800 x 400     | 850 x 440     |        | 900 x 500     |        | 1,000x600     | 1,000x460  | 1,150x680      | 1,150x520 |
|                                  | in  | 31.49 x 15.75 | 33.46 x 17.32 |        | 35.43 x 19.69 |        | 39.4x23.6     | 39.4x18.11 | 45.3x26.8      | 45.3x20.5 |
| Throat Depth, F-B                | mm  | 175           | 225           |        | 255           |        | 305           | 235        | 350            | 270       |
|                                  | in  | 6.88          | 8.86          |        | 10.04         |        | 12.01         | 9.25       | 13.78          | 10.63     |
| Bed Deflection                   | mm  | 1/6,000       | 1/6,000       |        | 1/6,000       |        | 1/6,000       |            | 1/6,000        |           |
|                                  | in  | 0.0018        | 0.0018        |        | 0.0018        |        | 0.0018        |            | 0.0018         |           |
| Shutheight Maximum (SDAU)        | mm  | 220           | 250           |        | 310           |        | 330           | 300        | 350            | 320       |
|                                  | in  | 8.66          | 9.84          |        | 12.20         |        | 12.99         | 11.81      | 13.78          | 12.60     |
| Shutheight Adjustment            | mm  | 55            | 60            |        | 75            |        | 80            |            | 80             |           |
|                                  | in  | 2.16          | 2.36          |        | 2.95          |        | 3.15          |            | 3.15           |           |
| Drive Motor                      | kw  | 2.2           | 3.7           |        | 5.5           |        | 7.5           |            | 7.5            |           |
|                                  | hp  | 3             | 5.0           |        | 7.4           |        | 10.1          |            | 10.1           |           |

SPECIFICATIONS & DIMENSIONS  
TM1 Series

|                                  |     | TM1-160        |             | TM1-200        |             | TM1-250        |             | TM1-315        |             |
|----------------------------------|-----|----------------|-------------|----------------|-------------|----------------|-------------|----------------|-------------|
| Press Type                       |     | L              | S           | L              | S           | L              | S           | L              | S           |
| Capacity in Tons                 |     | 160 metric ton |             | 200 metric ton |             | 250 metric ton |             | 315 metric ton |             |
|                                  |     | 176 US ton     |             | 220 US ton     |             | 275 US ton     |             | 346.5 US ton   |             |
| Torque Capacity from BDC         | mm  | 6              | 3.2         | 6              | 4.5         | 7              | 4.5         | 7              | 4.5         |
|                                  | in  | 0.236          | 0.126       | 0.236          | 0.177       | 0.276          | 0.177       | 0.276          | 0.177       |
| Approximate Press Weight         | kg  | 13,000         |             | 20,000         |             | 26,000         |             | 29,000         |             |
|                                  | lb  | 28,600         |             | 44,000         |             | 57,200         |             | 63,800         |             |
| Stroke Length                    | mm  | 200            | 130         | 200            | 160         | 200            | 160         | 250            | 160         |
|                                  | in  | 7.87           | 5.12        | 7.87           | 6.30        | 7.87           | 6.30        | 9.84           | 6.30        |
| Speed Range at Full Tonnage      | SPM | 25-50          | 40-80       | 25-45          | 35-70       | 20-40          | 30-60       | 20-40          | 30-60       |
| Area of Slide, R-L x F-B         | mm  | 980 x 580      |             | 1100 x 650     |             | 1200 x 700     |             | 1200 x 700     |             |
|                                  | in  | 38.58 x 22.83  |             | 43.31 x 25.59  |             | 47.24 x 27.56  |             | 47.24 x 27.56  |             |
| Recommended Max Upper Die Weight | kg  | 550            |             | 900            |             | 900            |             | 920            |             |
|                                  | lb  | 1,210          |             | 1,980          |             | 1,980          |             | 2,024          |             |
| Bolster Plate Thickness          | mm  | 150            |             | 170            |             | 180            |             | 180            |             |
|                                  | in  | 5.91           |             | 6.69           |             | 7.09           |             | 7.09           |             |
| Area of Bolster, R-L x F-B       | mm  | 1250 x 760     | 1250x600    | 1400 x 840     | 1400x680    | 1500 x 900     | 1500x710    | 1600 x 900     | 1600x710    |
|                                  | in  | 49.2x29.92     | 49.21x23.62 | 55.12x33.07    | 55.12x26.77 | 59.06x35.43    | 59.06x27.95 | 62.99x35.43    | 62.99x27.95 |
| Throat Depth, F-B                | mm  | 390            | 310         | 430            | 350         | 460            | 380         | 460            | 380         |
|                                  | in  | 15.35          | 12.20       | 16.93          | 13.78       | 18.11          | 14.96       | 18.11          | 14.96       |
| Bed Deflection                   | mm  | 1/6,000        |             | 1/6,000        |             | 1/6,000        |             | 1/6,000        |             |
|                                  | in  | 0.0018         |             | 0.0018         |             | 0.0018         |             | 0.0018         |             |
| Shutheight Maximum (SDAU)        | mm  | 450            | 400         | 450            | 400         | 450            | 400         | 450            | 400         |
|                                  | in  | 17.72          | 15.75       | 17.72          | 15.75       | 17.72          | 15.75       | 17.72          | 15.75       |
| Shutheight Adjustment            | mm  | 100            |             | 110            |             | 120            |             | 120            |             |
|                                  | in  | 3.94           |             | 4.33           |             | 4.72           |             | 4.72           |             |
| Drive Motor                      | kW  | 11             |             | 15             |             | 15             |             | 18.5           |             |
|                                  | hp  | 14.7           |             | 20.1           |             | 20.1           |             | 24.8           |             |

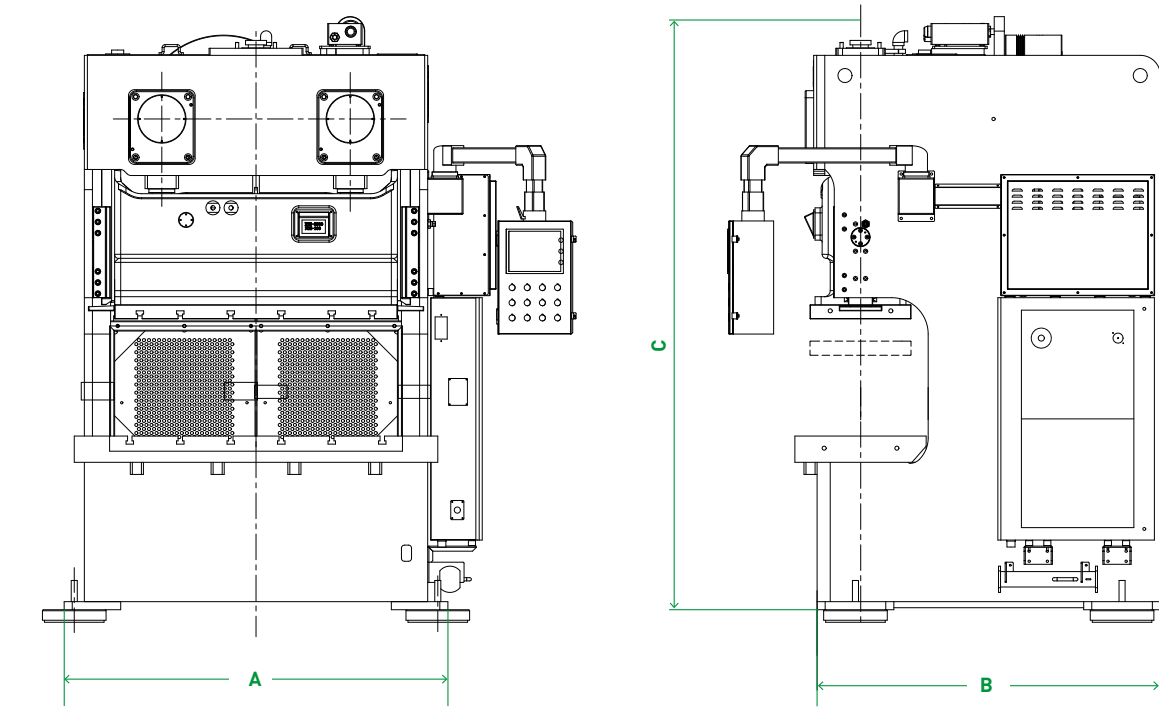


|   |    | TM1-35 | TM1-45 | TM1-60 | TM1-80 | TM1-110 | TM1-160 | TM1-200 | TM1-250 | TM1-315 |
|---|----|--------|--------|--------|--------|---------|---------|---------|---------|---------|
| A | mm | 750    | 790    | 910    | 1060   | 1110    | 1250    | 1410    | 1600    | 1700    |
| B | mm | 1315   | 1335   | 1495   | 1635   | 1790    | 1960    | 2270    | 2460    | 2715    |
| C | mm | 2600   | 2600   | 2930   | 3155   | 3300    | 3900    | 4500    | 4700    | 4900    |

\* Above specifications are subject to change when custom specifications apply.

SPECIFICATIONS & DIMENSIONS  
TM2 Series

|                                  |     | TM2-110        |               | TM2-160        |               | TM2-200        |               | TM2-250        |                | TM2-315        |                |
|----------------------------------|-----|----------------|---------------|----------------|---------------|----------------|---------------|----------------|----------------|----------------|----------------|
| Press Type                       |     | L              | S             | L              | S             | L              | S             | L              | S              | L              | S              |
| Capacity in Tons                 |     | 110 metric ton |               | 160 metric ton |               | 200 metric ton |               | 250 metric ton |                | 315 metric ton |                |
|                                  |     | 121 US ton     |               | 176 US ton     |               | 220 US ton     |               | 275 US ton     |                | 346.5 US ton   |                |
| Torque Capacity from BDC         | mm  | 5              | 3.2           | 6              | 3.2           | 6              | 3.2           | 7              | 4.5            | 7              | 4.5            |
|                                  | in  | 0.197          | 0.126         | 0.236          | 3.2           | 0.236          | 0.126         | 0.276          | 0.177          | 0.276          | 0.177          |
| Approximate Press Weight         | kg  | 13,500         |               | 19,500         |               | 28,000         |               | 35,000         |                | 43,000         |                |
|                                  | lb  | 29,700         |               | 42,900         |               | 61,600         |               | 77,000         |                | 94,600         |                |
| Stroke Length                    | mm  | 180            | 110           | 200            | 130           | 250            | 150           | 280            | 170            | 280            | 170            |
|                                  | in  | 7.09           | 4.33          | 7.87           | 5.12          | 9.84           | 5.91          | 11.02          | 6.69           | 11.02          | 6.69           |
| Speed Range at Full Tonnage      | SPM | 35-65          | 50-100        | 30-55          | 40-85         | 25-45          | 35-70         | 20-35          | 30-60          | 25-35          | 30-60          |
| Area of Slide, L-R x F-B         | mm  | 1,400 x 500    |               | 1,600 x 550    |               | 1,850 x 650    |               | 2,100 x 700    |                | 2,100 x 700    |                |
|                                  | in  | 55.12 x 19.69  |               | 62.99 x 21.65  |               | 72.83 x 25.59  |               | 82.68 x 27.56  |                | 82.68 x 27.56  |                |
| Recommended Max Upper Die Weight | kg  | 450            |               | 1,000          |               | 1,200          |               | 1,600          |                | 1,800          |                |
|                                  | lb  | 990            |               | 2,200          |               | 2,640          |               | 3,520          |                | 3,960          |                |
| Bolster Plate Thickness          | mm  | 130            |               | 150            |               | 170            |               | 170            |                | 180            |                |
|                                  | in  | 5.12           |               | 5.91           |               | 6.69           |               | 6.69           |                | 7.09           |                |
| Area of Bolster, L-R x F-B       | mm  | 1,800 x 650    | 1,800 x 520   | 2,000 x 760    | 2,000 x 600   | 2,400 x 840    | 2,400 x 680   | 2,700 x 900    | 2,700 x 760    | 2,700 x 900    | 2,700 x 760    |
|                                  | in  | 70.87 x 25.59  | 70.87 x 20.47 | 78.74 x 29.92  | 78.74 x 23.62 | 94.49 x 33.07  | 94.49 x 26.77 | 106.30 x 35.43 | 106.30 x 29.92 | 106.30 x 35.43 | 106.30 x 29.92 |
| Throat Depth, F-B                | mm  | 335            | 270           | 390            | 310           | 430            | 350           | 460            | 390            | 460            | 390            |
|                                  | in  | 13.19          | 270           | 15.35          | 12.20         | 16.93          | 13.78         | 18.11          | 15.35          | 18.11          | 15.35          |
| Bed Deflection Across            | mm  | 1/6,000        |               | 1/6,000        |               | 1/6,000        |               | 1/6,000        |                | 1/6,000        |                |
|                                  | in  | 0.0015         |               | 0.0015         |               | 0.0015         |               | 0.0015         |                | 0.00145        |                |
| Shutheight Maximum (SDAU)        | mm  | 400            | 350           | 450            | 400           | 500            | 450           | 550            | 450            | 550            | 450            |
|                                  | in  | 15.75          | 13.78         | 17.72          | 15.75         | 19.69          | 17.72         | 21.62          | 17.72          | 21.65          | 17.72          |
| Shutheight Adjustment            | mm  | 100            |               | 100            |               | 120            |               | 120            |                | 120            |                |
|                                  | in  | 3.94           |               | 3.94           |               | 4.72           |               | 4.72           |                | 4.72           |                |
| Drive Motor                      | kW  | 11             |               | 11             |               | 15             |               | 15             |                | 18.5           |                |
|                                  | hp  | 15             |               | 15             |               | 20             |               | 20             |                | 25             |                |



|   |    | TM2-110 | TM2-160 | TM2-200 | TM2-250 | TM2-315 |
|---|----|---------|---------|---------|---------|---------|
| A | mm | 1900    | 2200    | 2550    | 2700    | 2700    |
| B | mm | 1745    | 1970    | 2275    | 2585    | 2680    |
| C | mm | 3109    | 2470    | 4100    | 4500    | 4600    |

\* Above specifications are subject to change when custom specifications apply.

## DX1 & DX2 SERIES “D” FRAME MECHANICAL PRESSES

### 110-315 Metric Tons

#### Standard Features

- Fabricated steel frame with one-piece side frames to greatly reduce angular deflection
- Wet clutch/brake
- Hydraulic overload protection
- 6-point slide guiding
- Single gear reduction drive
- Powered die height adjustment w/ electronic readout
- Automatic lubrication
- PLC-based control with 10” color touch screen
  - 8 channel PLS
  - 8 input die protection
- Isolator mounts
- 1/7,000 mm frame deflection for more accurate parts and longer tooling life
- Built to JIS Class 1 accuracy standards

#### Customization

While one of our standard configuration presses may be perfectly suitable for your needs, that may not always be the case. In such instances, all MMC presses can be custom-engineered to meet a wide variety of your special production requirements. These are just some of the special features we can provide — even if a one-off!

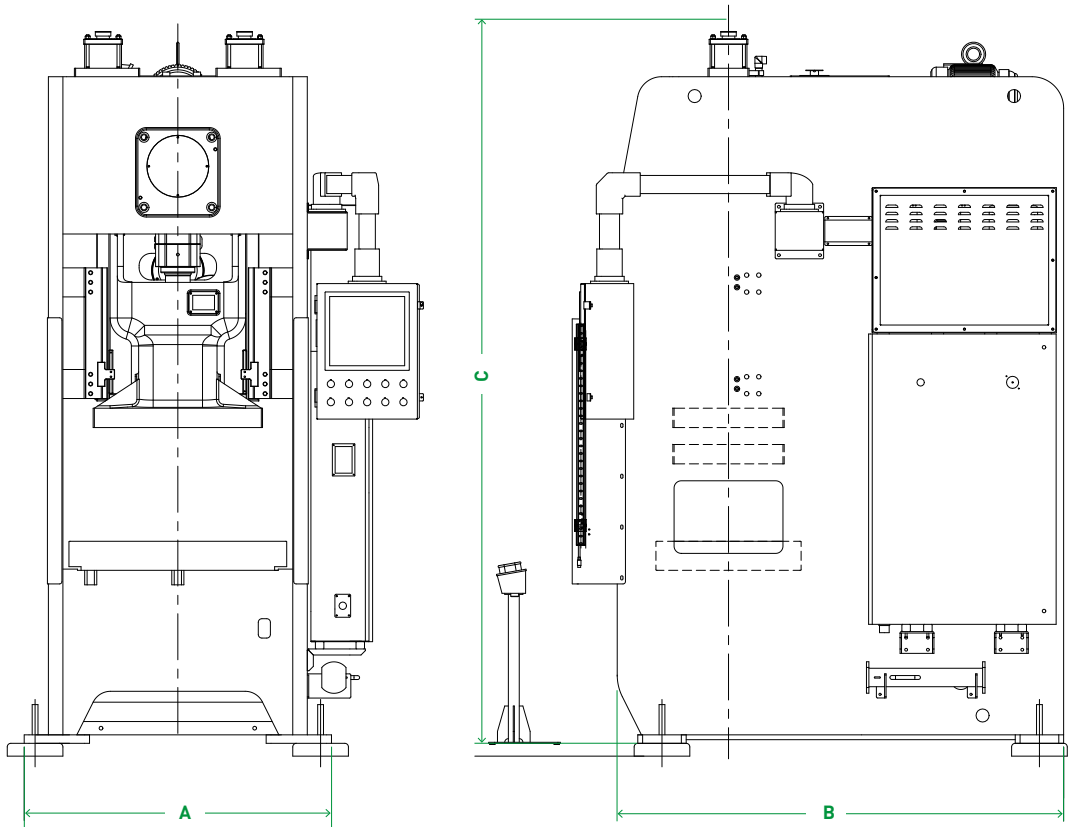
- 8-point slide guiding
- Non-geared (flywheel-type) drive for higher speed applications
- Recirculating oil lubrication
- Custom stroke and die height
- Custom high-energy drive for tough forming or drawing applications
- Custom slide and bolster dimensions
- Custom controls
- Custom die cushions



|                                       |     | DX1-110        |             | DX1-160        |             | DX1-200        |             |
|---------------------------------------|-----|----------------|-------------|----------------|-------------|----------------|-------------|
| Press Type                            |     | L              | S           | L              | S           | L              | S           |
| Capacity in Tons                      |     | 100 metric ton |             | 160 metric ton |             | 200 metric ton |             |
|                                       |     | 121 US ton     |             | 176 US ton     |             | 220 US ton     |             |
| Torque Capacity from BDC              | mm  | 5              | 3.2         | 6              | 3.2         | 6              | 4.5         |
|                                       | in  | 0.197          | 0.126       | 0.236          | 0.126       | 0.236          | 0.177       |
| Approximate Press Weight              | kg  | 11,500         |             | 17,000         |             | 25,000         |             |
|                                       | lb  | 25,300         |             | 37,400         |             | 55,000         |             |
| Stroke Length                         | mm  | 180            | 70          | 200            | 80          | 200            | 90          |
|                                       | in  | 7.09           | 2.76        | 7.87           | 3.15        | 7.87           | 3.54        |
| Speed Range at Full Tonnage           | SPM | 30-60          | 65-135      | 25-50          | 55-110      | 25-45          | 45-90       |
| Area of Slide, R-L x F-B              | mm  | 800 x 520      |             | 900 x 580      |             | 1,000 x 650    |             |
|                                       | in  | 31.50 x 20.47  |             | 35.43 x 22.83  |             | 39.37 x 25.59  |             |
| Recommended Max Upper Die Weight      | kg  | 550            |             | 550            |             | 900            |             |
|                                       | lb  | 1,210          |             | 1,210          |             | 1,980          |             |
| Bolster Plate Thickness               | mm  | 120            |             | 150            |             | 170            |             |
|                                       | in  | 4.72           |             | 5.91           |             | 6.69           |             |
| Area of Bolster, R-L x F-B            | mm  | 1,000 x 680    | 1,000 x 520 | 1,150 x 760    | 1,150 x 600 | 1,250 x 840    | 1,250 x 680 |
|                                       | in  | 39.37x26.77    | 39.37x20.47 | 45.28x29.92    | 45.28x23.62 | 49.21x33.07    | 49.21x26.77 |
| Side Opening                          | mm  | 500            |             | 600            |             | 600            |             |
|                                       | in  | 19.69          |             | 23.62          |             | 23.62          |             |
| Bed Deflection Across 67% of Die Area | mm  | 1/7,000        |             | 1/7,000        |             | 1/7,000        |             |
|                                       | in  | 0.0015         |             | 0.0015         |             | 0.0015         |             |
| Shutheight Maximum (SDAU)             | mm  | 350            | 300         | 400            | 350         | 450            | 400         |
|                                       | in  | 13.78          | 11.81       | 15.75          | 13.78       | 17.72          | 15.75       |
| Shutheight Adjustment                 | mm  | 80             |             | 100            |             | 110            |             |
|                                       | in  | 3.15           |             | 3.94           |             | 4.33           |             |
| Drive Motor                           | kW  | 7.5            |             | 11             |             | 15             | 18.5        |
|                                       | hp  | 10.1           |             | 14.7           |             | 20.1           | 24.8        |

SPECIFICATIONS & DIMENSIONS  
DX1 Series

|                                       |     | DX1-250        |               | DX1-315        |               |
|---------------------------------------|-----|----------------|---------------|----------------|---------------|
| Press Type                            |     | L              | S             | L              | S             |
| Capacity in Tons                      |     | 250 metric ton |               | 315 metric ton |               |
|                                       |     | 275 US ton     |               | 346.5 US ton   |               |
| Torque Capacity from BDC              | mm  | 6.5            | 4.5           | 7              | 4.5           |
|                                       | in  | 0.256          | 0.177         | 0.276          | 0.177         |
| Approximate Press Weight              | kg  | 28,000         |               | 32,000         |               |
|                                       | lb  | 61,600         |               | 70,400         |               |
| Stroke Length                         | mm  | 200            | 90            | 250            | 90            |
|                                       | in  | 7.87           | 3.54          | 9.84           | 3.54          |
| Speed Range at Full Tonnage           | SPM | 20-40          | 40-80         | 20-40          | 45-75         |
| Area of Slide, R-L x F-B              | mm  | 1,000 x 700    |               | 1,000 x 700    |               |
|                                       | in  | 39.37 x 27.56  |               | 39.37 x 27.56  |               |
| Recommended Max Upper Die Weight      | kg  | 900            |               | 920            |               |
|                                       | lb  | 1,980          |               | 2,024          |               |
| Bolster Plate Thickness               | mm  | 180            |               | 180            |               |
|                                       | in  | 7.09           |               | 7.09           |               |
| Area of Bolster, R-L x F-B            | mm  | 1,250 x 840    | 1,250 x 680   | 1,250 x 840    | 1,250 x 680   |
|                                       | in  | 49.21 x 33.07  | 49.21 x 26.77 | 49.21 x 33.07  | 49.21 x 26.77 |
| Side Opening                          | mm  | 770            |               | 770            |               |
|                                       | in  | 30.31          |               | 30.31          |               |
| Bed Deflection Across 67% of Die Area | mm  | 1/7,000        |               | 1/7,000        |               |
|                                       | in  | 0.0015         |               | 0.0015         |               |
| Shutheight Maximum (SDAU)             | mm  | 450            | 400           | 450            | 400           |
|                                       | in  | 17.72          | 15.75         | 17.72          | 15.75         |
| Shutheight Adjustment                 | mm  | 120            |               | 120            |               |
|                                       | in  | 4.72           |               | 4.72           |               |
| Drive Motor                           | kW  | 15             | 18.5          | 18.5           | 22            |
|                                       | hp  | 20.1           | 24.8          | 24.8           | 29.5          |



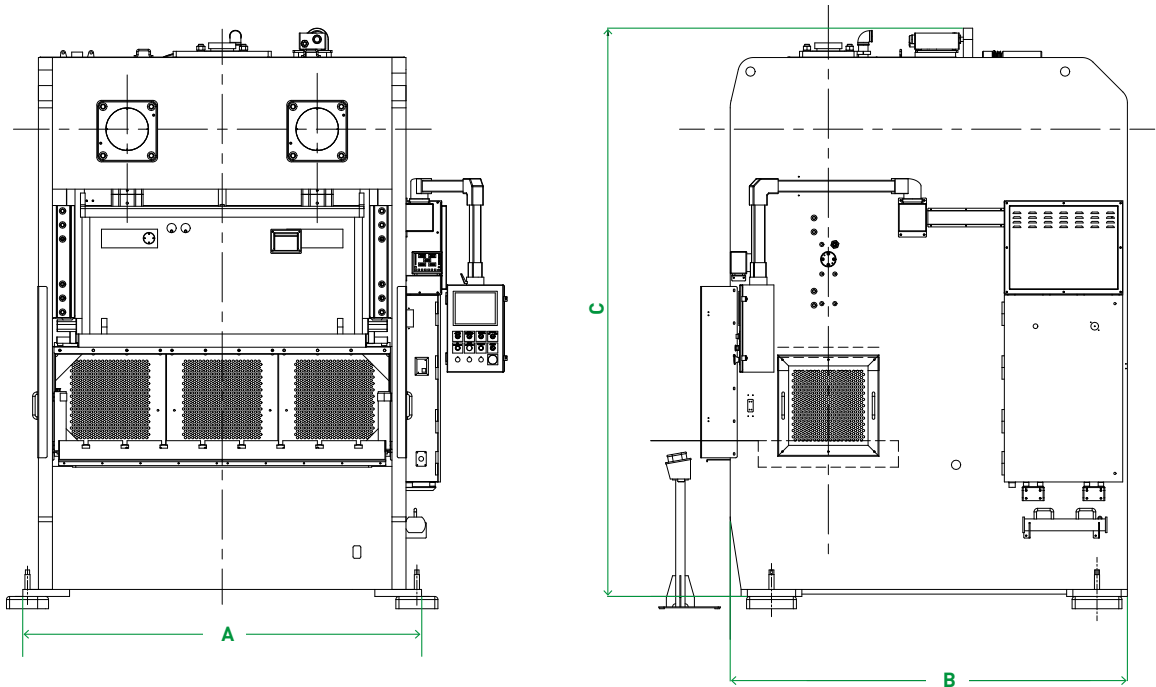
|   |    | DX1-110 | DX1-160 | DX1-200 | DX1-250 | DX1-315 |
|---|----|---------|---------|---------|---------|---------|
|   |    | L       | L       | L       | L       | L       |
| A | mm | 1380    | 1600    | 1760    | 1790    | 1810    |
| B | mm | 2000    | 2210    | 2515    | 2990    | 2790    |
| C | mm | 3060    | 3495    | 4090    | 4200    | 4560    |

\* Above specifications are subject to change when custom specifications apply.

SPECIFICATIONS & DIMENSIONS  
DX2 Series

|                                       |     | DX2-110        |        | DX2-160        |       | DX2-200        |       | DX2-250        |       | DX2-315        |       |
|---------------------------------------|-----|----------------|--------|----------------|-------|----------------|-------|----------------|-------|----------------|-------|
| Press Type                            |     | L              | S      | L              | S     | L              | S     | L              | S     | L              | S     |
| Capacity in Tons                      |     | 110 metric ton |        | 160 metric ton |       | 200 metric ton |       | 250 metric ton |       | 315 metric ton |       |
|                                       |     | 121 US tons    |        | 176 US ton     |       | 220 US ton     |       | 275 US ton     |       | 346.5 US ton   |       |
| Torque Capacity from BDC              | mm  | 5              | 3.2    | 6              | 3.2   | 6              | 3.2   | 7              | 4.5   | 7              | 4.5   |
|                                       | in  | 0.197          | 0.126  | 0.236          | 0.126 | 0.236          | 0.126 | 0.276          | 0.177 | 0.276          | 0.177 |
| Approximate Press Weight              | kg  | 16,000         |        | 21,000         |       | 29,500         |       | 37,500         |       | 46,500         |       |
|                                       | lb  | 35,200         |        | 46,200         |       | 64,900         |       | 82,500         |       | 102,300        |       |
| Stroke Length                         | mm  | 180            | 110    | 200            | 130   | 250            | 150   | 280            | 170   | 280            | 170   |
|                                       | in  | 7.09           | 4.33   | 7.87           | 5.12  | 9.84           | 5.91  | 11.02          | 6.69  | 11.02          | 6.69  |
| Speed Range at Full Tonnage           | SPM | 35-65          | 50-100 | 30-55          | 40-85 | 25-45          | 35-70 | 20-35          | 30-60 | 25-35          | 30-60 |
| Area of Slide, R-L x F-B              | mm  | 1,400 x 500    |        | 1,600 x 550    |       | 1,850 x 650    |       | 2,100 x 700    |       | 2,100 x 700    |       |
|                                       | in  | 55.12 x 19.69  |        | 62.99 x 21.65  |       | 72.83 x 25.59  |       | 82.68 x 27.56  |       | 82.68 x 27.56  |       |
| Recommended Max Upper Die Weight      | kg  | 450            |        | 1,000          |       | 1,200          |       | 1,600          |       | 1,800          |       |
|                                       | lb  | 990            |        | 2,200          |       | 2,640          |       | 3,520          |       | 3,960          |       |
| Bolster Plate Thickness               | mm  | 130            |        | 150            |       | 170            |       | 170            |       | 180            |       |
|                                       | in  | 5.12           |        | 5.91           |       | 6.69           |       | 6.69           |       | 7.09           |       |
| Area of Bolster, R-L x F-B            | mm  | 1,600 x 700    |        | 1,800 x 800    |       | 2,100 x 900    |       | 2,400 x 1,000  |       | 2,400 x1,000   |       |
|                                       | in  | 62.99 x 27.56  |        | 70.87 x 31.50  |       | 82.68 x 35.43  |       | 94.49 x 39.37  |       | 94.49 x 39.37  |       |
| Side Opening                          | mm  | 450            |        | 500            |       | 600            |       | 650            |       | 650            |       |
|                                       | in  | 17.72          |        | 19.69          |       | 23.62          |       | 25.59          |       | 259.59         |       |
| Bed Deflection Across 67% of Die Area | mm  | 1/7,000        |        | 1/7,000        |       | 1/7,000        |       | 1/7,000        |       | 1/7,000        |       |
|                                       | in  | 0.0015         |        | 0.0015         |       | 0.0015         |       | 0.0015         |       | 0.0015         |       |
| Shutheight Maximum (SDAU)             | mm  | 400            | 350    | 450            | 400   | 500            | 450   | 550            | 450   | 550            | 450   |
|                                       | in  | 15.75          | 13.78  | 17.72          | 15.75 | 19.69          | 17.72 | 21.65          | 17.72 | 21.65          | 17.72 |
| Shutheight Adjustment                 | mm  | 100            |        | 100            |       | 120            |       | 120            |       | 120            |       |
|                                       | in  | 3.94           |        | 3.94           |       | 4.72           |       | 4.72           |       | 4.72           |       |
| Drive Motor                           | kW  | 11             |        | 11             |       | 15             |       | 15             |       | 15             |       |
|                                       | hp  | 15             |        | 15             |       | 20             |       | 20             |       | 20             |       |

SPECIFICATIONS & DIMENSIONS  
DX2 Series



|   |    | DX2-110 | DX2-160 | DX2-200 | DX2-250 | DX2-315 |
|---|----|---------|---------|---------|---------|---------|
| A | mm | 2020    | 2370    | 2740    | 3000    | 3180    |
| B | mm | 1960    | 2230    | 2550    | 2850    | 2850    |
| C | mm | 2940    | 3270    | 3750    | 3750    | 4230    |

\* Above specifications are subject to change when custom specifications apply.

SPECIFICATIONS & DIMENSIONS  
SX2, SE2, SE4 Press Series

Standard Features

- Standard 1/8,000 mm deflection on bed and slide, 1/9,000 mm or less available
- Wet clutch and brake
- Hydraulic overload protection

Customization

- Link motion drive feature option available
- Moving bolsters exiting in front/rear or left/right available
- Pneumatic die cushions available
- Various automations for parts handling by industrial robots, de-stacker, 3-axis servo transfer, manipulations, palletizers/racking system available
- **Specifications of the press can be customized per customer requirement**

SX2 Series, Straightside Tie Rod Frame, 2-Point  
Crankshaft Drive Presses

|                             | SX2 SERIES                       |                       |
|-----------------------------|----------------------------------|-----------------------|
| Capacity                    | 400-1,200 metric ton             | 440 - 1,320 US ton    |
| Rating Point                | 6-13 mm                          | 0.23 - 0.50 in        |
| Stroke Length               | 300-450 mm                       | 12-18 in              |
| Speed Range at Full Tonnage | 10 - 60 SPM                      |                       |
| Dieheight (SDAU)            | 600 - 1,000 mm                   | 23-40 in              |
| Slide Adjustment            | 150 - 250 mm                     | 6 - 10 in             |
| Area of Slide / Bolster     | 2,500 x 1,300 - 5,500 x 1,550 mm | 98 x 51 - 216 x 71 in |

## SPECIFICATIONS & DIMENSIONS

### SX2, SE2, SE4 Press Series

#### SE2 Series, Straightside Tie Rod Frame, 2-Point Eccentric Gear Drive Presses

|                             | SE2 SERIES                        |                       |
|-----------------------------|-----------------------------------|-----------------------|
| Capacity                    | 300-1,200 metric ton              | 330 - 1,320 US ton    |
| Rating Point                | 8 - 13 mm                         | 0.30 - 0.50 in        |
| Stroke Length               | 500 - 800 mm                      | 20 - 32 in            |
| Speed Range at Full Tonnage | 10 - 20 SPM                       |                       |
| Dieheight (SDAU)            | 800 - 1,300 mm                    | 32 - 52 in            |
| Slide Adjustment            | 300 - 600 mm                      | 12 - 24 in            |
| Area of Slide / Bolster     | 2,1500 x 1,300 - 6,500 x 1,800 mm | 85 x 52 - 256 x 71 in |

#### SE4 Series, Straightside Tie Rod Frame, 4-Point Eccentric Gear Drive Presses

|                             | SE4 SERIES                       |                       |
|-----------------------------|----------------------------------|-----------------------|
| Capacity                    | 400-1,200 metric ton             | 440 - 1,320 US ton    |
| Rating Point                | 8 - 13 mm                        | 0.30 - 0.50 in        |
| Stroke Length               | 500 - 800 mm                     | 20 - 32 in            |
| Speed Range at Full Tonnage | 10 - 20 SPM                      |                       |
| Dieheight (SDAU)            | 800 - 1,300 mm                   | 43 - 52 in            |
| Slide Adjustment            | 300 - 600 mm                     | 10 - 20 in            |
| Area of Slide / Bolster     | 2,500 x 2,000 - 6,000 x 2,500 mm | 98 x 78 - 236 x 98 in |

## MMC-PC3 CONTROL

### Standard Features

- 10 Inch color touchscreen HMI providing a clear, intuitive interface displaying:
  - » Machine functions
  - » Current operating status
  - » Crankshaft angle and operating speed (SPM) shown via a clock-style dial
  - » Motor current value
  - » Real-time English error messages (with logging of all occurred faults)
  - » Preventive maintenance logs and reminders
- Self-diagnostic functions
- 30 tool storage (expandable upon request)
- 8-channel die protection system (multi-functional; 6 detection modes, 3 stopping modes, and associated angles per channel; counting functions; capable of covering various die types; settings can be individually saved to corresponding die library)

### Optional Features

- Built-in Tonnage Monitoring: Capable of per-channel + total tonnage alarms. Also enables die tonnage management by setting upper and lower tonnage limits for each die within its corresponding die library, thereby monitoring the real-time stamping load on the die.



- 8-channel electronic cams (can be individually assigned to dies and saved to corresponding tool library)
- Brake monitoring, including 90-degree stopping time tests for periodic verification of clutch/brake operation status
- Log of total clutch/brake engagement cycles (for maintenance purposes).
- Two-level password access for changing production parameters and clearing faults
- Adjustable micro-inching settings
- Multiple counters (Production counter / 6-digit, Preset counter / 6-digit, Batch counter / 6-digit, Maintenance counter / 6-digit, Clutch action timer / 9-digit, Life counter / 9-digit)
- Keyed main motor direction switch (Forward - Reverse)
- Motorized slide/die height adjustment.
- Keyed operating mode selector switch (Inch - Single Stroke - OFF - Continuous)

- External Tonnage Gauge Support: Monitors only the alarm settings configured on an external tonnage gauge.
- Automatic Die Height Adjustment: Die height parameters can be saved within the die library for convenient recall during subsequent use.
- Automatic Balancer Pressure Adjustment: Balancer pressure settings, correlated with die weight parameters, can be saved within the die library for convenient recall during subsequent use.



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