

# MAXIMA MM 310 WP

## CLAMP UNIT SPECIFICATIONS

|                                     | English  |             | Metric  |            |
|-------------------------------------|----------|-------------|---------|------------|
|                                     |          |             |         |            |
| Clamp Force                         | tons     | 310         | kN      | 2750       |
| Clamp Opening Force                 | tons     | 14          | kN      | 124        |
| Clamp Stroke                        | in.      | 41.7        | mm      | 1060       |
| Clamp Speed Open                    | in./sec. | 45          | mm/sec. | 1143       |
| Clamp Speed Close                   | in./sec. | 45          | mm/sec. | 1143       |
| Maximum Daylight                    | in.      | 49.6        | mm      | 1260       |
| Min/Max Mold Thickness              | in.      | 7.9 / 25.6  | mm      | 200 / 650  |
| Maximum Mold Weight                 | lbs.     | 8,295       | kgs     | 3762       |
| Platen Size ( H x V )               | in.      | 47.0 x 47.0 | mm      | 1195 x 940 |
| Distance Between Tie Rods ( H x V ) | in.      | 36.0 x 26.0 | mm      | 915 x 660  |
| Tie Rod Diameter                    | in.      | 4.53        | mm      | 115        |
| Ejector Stroke (Max)                | in.      | 6.3         | mm      | 160        |
| Ejector Force @2000 psi             | tons     | 8.0         | kN      | 71         |

## MACHINE SPECIFICATIONS

|                               | English |        | Metric |       |
|-------------------------------|---------|--------|--------|-------|
|                               |         |        |        |       |
| Overall Length (w/ 3470 IU)   | in.     | 259.4  | mm     | 6588  |
| Overall Width                 | in.     | 88.6   | mm     | 2251  |
| Overall Height                | in.     | 87.1   | mm     | 2300  |
| Shipping Weight (without oil) | lbs.    | 30,795 | kg     | 13970 |
| Hydraulic System Pressure     | psi     | 2,950  | bar    | 203   |
| Variable Volume Pump Capacity | gpm     | 66     | L/min  | 250   |
| Fixed Pump Capacity           | gpm     | 15     | L/min  | 57    |
| Injection and Extruder        | gpm     | 66     | L/min  | 250   |
| Eject and Core Pull           | gpm     | 15     | L/min  | 57    |
| Electric Motor                | hp      | 60     | kw     | 45    |
| Total Oil Reservoir Capacity  | gal     | 174    | L      | 659   |
| Heat Exchanger Water @85° F   | gpm     | 15     | L/min  | 56.7  |



## INJECTION UNIT SPECIFICATIONS

|                                       | English              | A      | B      | C      | Metric               | A     | B     | C     |
|---------------------------------------|----------------------|--------|--------|--------|----------------------|-------|-------|-------|
| Injection Capacity Maximum            |                      |        |        |        |                      |       |       |       |
| G.P. Styrene (theoretical)            | oz                   | 12     | 15     | 22     | g                    | 340   | 425   | 624   |
| Displacement                          | in <sup>3</sup>      | 23.3   | 28.8   | 41.4   | cm <sup>3</sup>      | 382   | 471   | 679   |
| Injection Pressure Maximum            | psi                  | 32,600 | 29,800 | 20,700 | bar                  | 2248  | 2055  | 1428  |
| Injection Rate - Standard             | in <sup>3</sup> /sec | 17     | 21     | 31     | cm <sup>3</sup> /sec | 279   | 344   | 508   |
| Injection Rate - MAXIMA PLUS          | in <sup>3</sup> /sec | 48     | 59     | 86     | cm <sup>3</sup> /sec | 786   | 966   | 1409  |
| Screw Stroke                          | in                   | 9.4    | 9.4    | 9.4    | mm                   | 240   | 240   | 240   |
| Screw Diameter                        | in                   | 1.77   | 1.97   | 2.36   | mm                   | 45    | 50    | 60    |
| Screw L/D                             |                      | 26.9   | 24.2   | 20.0   |                      | 26.9  | 24.2  | 22.0  |
| Low Torque Screw Speed Maximum        | rpm                  | 449    | 404    | 337    | rpm                  | 449   | 404   | 337   |
| Low Torque at Screw                   | in-lb                | 8,900  | 8,900  | 8,900  | Nm                   | 1005  | 1005  | 1005  |
|                                       | @ psi                | 2,900  | 2,900  | 2,900  | @ bar                | 200   | 200   | 200   |
| Recovery Rate (GP Styrene) calculated | oz/sec               | 1.6    | 2.0    | 2.7    | gr/sec               | 46    | 57    | 76    |
| High Torque Screw Speed Maximum       | rpm                  | 449    | 404    | 337    | rpm                  | 449   | 404   | 337   |
| High Torque at Screw                  | in-lb                | 13,300 | 13,300 | 13,300 | Nm                   | 1502  | 1502  | 1502  |
|                                       | @ psi                | 2,900  | 2,900  | 2,900  | @ bar                | 200   | 200   | 200   |
| Recovery Rate (GP Styrene) calculated | oz/sec               | 1.6    | 2.0    | 2.7    | gr/sec               | 46    | 57    | 76    |
| Number of Pyrometers (barrel/nozzle)  |                      | 4 / 1  | 4 / 1  | 4 / 1  |                      | 4 / 1 | 4 / 1 | 4 / 1 |
| Total Heat Capacity                   | kW                   | 16.8   | 16.8   | 16.8   | kW                   | 16.8  | 16.8  | 16.8  |

## INJECTION UNIT SPECIFICATIONS

|                                       | English              | A      | B      | C      | Metric               | A     | B     | C     |
|---------------------------------------|----------------------|--------|--------|--------|----------------------|-------|-------|-------|
| Injection Capacity Maximum            |                      |        |        |        |                      |       |       |       |
| G.P. Styrene (theoretical)            | oz                   | 18     | 26     | 36     | g                    | 510   | 737   | 1021  |
| Displacement                          | in <sup>3</sup>      | 33.5   | 48.3   | 65.8   | cm <sup>3</sup>      | 550   | 792   | 1078  |
| Injection Pressure Maximum            | psi                  | 32,400 | 28,100 | 20,600 | bar                  | 2234  | 1938  | 1421  |
| Injection Rate - Standard             | in <sup>3</sup> /sec | 15     | 22     | 31     | cm <sup>3</sup> /sec | 246   | 361   | 508   |
| Injection Rate - MAXIMA PLUS          | in <sup>3</sup> /sec | 59     | 86     | 117    | cm <sup>3</sup> /sec | 966   | 1409  | 1917  |
| Screw Stroke                          | in                   | 11.0   | 11.0   | 11.0   | mm                   | 280   | 280   | 280   |
| Screw Diameter                        | in                   | 1.97   | 2.36   | 2.76   | mm                   | 50    | 60    | 70    |
| Screw L/D                             |                      | 28.5   | 23.6   | 20.0   |                      | 28.5  | 23.6  | 22.0  |
| Low Torque Screw Speed Maximum        | rpm                  | 404    | 337    | 289    | rpm                  | 404   | 337   | 289   |
| Low Torque at Screw                   | in-lb                | 14,200 | 14,200 | 14,200 | Nm                   | 1603  | 1603  | 1603  |
|                                       | @ psi                | 2,900  | 2,900  | 2,900  | @ bar                | 200   | 200   | 200   |
| Recovery Rate (GP Styrene) calculated | oz/sec               | 2.0    | 2.7    | 3.2    | gr/sec               | 57    | 76    | 90    |
| High Torque Screw Speed Maximum       | rpm                  | 296    | 296    | 289    | rpm                  | 296   | 296   | 289   |
| High Torque at Screw                  | in-lb                | 21,300 | 21,300 | 21,300 | Nm                   | 2405  | 2405  | 2405  |
|                                       | @ psi                | 2,900  | 2,900  | 2,900  | @ bar                | 200   | 200   | 200   |
| Recovery Rate (GP Styrene) calculated | oz/sec               | 1.5    | 2.4    | 3.2    | gr/sec               | 42    | 67    | 90    |
| Number of Pyrometers (barrel/nozzle)  |                      | 4 / 1  | 4 / 1  | 4 / 1  |                      | 4 / 1 | 4 / 1 | 4 / 1 |
| Total Heat Capacity                   | kW                   | 24.9   | 24.9   | 24.9   | kW                   | 24.9  | 24.9  | 24.9  |

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|                                       | English              | A      | B      | C      | Metric               | A     | B     | C     |
|---------------------------------------|----------------------|--------|--------|--------|----------------------|-------|-------|-------|
| Injection Capacity Maximum            |                      |        |        |        |                      |       |       |       |
| G.P. Styrene (theoretical)            | oz                   | 30     | 41     | 54     | g                    | 851   | 1162  | 1531  |
| Displacement                          | in <sup>3</sup>      | 55.2   | 75.2   | 98.2   | cm <sup>3</sup>      | 905   | 1232  | 1609  |
| Injection Pressure Maximum            | psi                  | 32,400 | 26,900 | 20,600 | bar                  | 2234  | 1855  | 1421  |
| Injection Rate - Standard             | in <sup>3</sup> /sec | 21     | 29     | 37     | cm <sup>3</sup> /sec | 344   | 475   | 606   |
| Injection Rate - MAXIMA PLUS          | in <sup>3</sup> /sec | 86     | 117    | 153    | cm <sup>3</sup> /sec | 1409  | 1917  | 2507  |
| Screw Stroke                          | in                   | 12.6   | 12.6   | 12.6   | mm                   | 320   | 320   | 320   |
| Screw Diameter                        | in                   | 2.36   | 2.76   | 3.15   | mm                   | 60    | 70    | 80    |
| Screw L/D                             |                      | 22.0   | 22.9   | 20.0   |                      | 22.0  | 22.9  | 22.0  |
| Low Torque Screw Speed Maximum        | rpm                  | 337    | 289    | 253    | rpm                  | 337   | 289   | 253   |
| Low Torque at Screw                   | in-lb                | 22,300 | 22,300 | 22,300 | Nm                   | 2518  | 2518  | 2518  |
|                                       | @ psi                | 2,900  | 2,900  | 2,900  | @ bar                | 200   | 200   | 200   |
| Recovery Rate (GP Styrene) calculated | oz/sec               | 2.7    | 3.2    | 4.0    | gr/sec               | 76    | 90    | 115   |
| High Torque Screw Speed Maximum       | rpm                  | 221    | 221    | 221    | rpm                  | 221   | 221   | 221   |
| High Torque at Screw                  | in-lb                | 34,700 | 34,700 | 34,700 | Nm                   | 3918  | 3918  | 3918  |
|                                       | @ psi                | 2,900  | 2,900  | 2,900  | @ bar                | 200   | 200   | 200   |
| Recovery Rate (GP Styrene) calculated | oz/sec               | 1.8    | 2.4    | 3.5    | gr/sec               | 50    | 69    | 100   |
| Number of Pyrometers (barrel/nozzle)  |                      | 4 / 1  | 4 / 1  | 4 / 1  |                      | 4 / 1 | 4 / 1 | 4 / 1 |
| Total Heat Capacity                   | kW                   | 24.3   | 29.1   | 29.1   | kW                   | 24.3  | 29.1  | 29.1  |

