

## UBE Servomax Features

### Standard Machine Features

- Full servo-hydraulic gear pump system
- Closed-loop pressure and flow control
- PLC-based full color touch screen HMI
- Energy efficient - saves 70% over traditional hydraulic systems
- Low noise levels < 70 dBA
- Automatic clamp tonnage compensation circuit
- Combined operation for ejector and core operation during clamp movement
- Significantly reduced hydraulic cooling requirement
- Extended oil life
- One corepull on stationary and two corepull on moving standard
- SPI / EU robot interface
- Ejector return confirmation
- Tip stroke ejection with intermediate return stroke setting
- SPI ejector and mold mounting pattern
- Semi-automatic purge
- Five zones of barrel heaters and two zones of nozzle heaters
- Hardened screw and barrel
- High-speed screw motor
- Leveling pads and anchor bolts
- Automatic lubrication
- Internal mold recipe storage

### Optional Machine Features

- Integrated sequential valve gates
- Integrated hot runner control
- Full independent screw and clamp motion / simultaneous operation
- Working platforms
- Extended L:D - 24:1
- Air eject / air blow
- Quick mold change
- Dieprest (low-pressure molding)
- Elevated machine base
- High-wear / high-performance screws and barrels
- Auxiliary power outlets
- RJG interface
- In-mold hydraulic eject

## UBE Servomax US Series Specification Sheet

| Clamping Force              | US Ton | Metric [Ton] | 1000W          | [900W]            | 1500W          | [1300W]           |
|-----------------------------|--------|--------------|----------------|-------------------|----------------|-------------------|
| Tie bar spacing (H x V)     | inch   | (mm)         | 60.00 x 50.00  | (1524 x 1270)     | 72.00 x 52.00  | (1828.8 x 1320.8) |
| Platen size                 | inch   | (mm)         | 76.92 x 66.59  | (1954.0 x 1700.0) | 97.64 x 77.56  | (2480.0 x 1970.0) |
| Die thickness (min. - max.) | inch   | (mm)         | 19.69 - 52.75  | (500 - 1340)      | 20.00 - 58.66  | (508 - 1489.96)   |
| Clamping stroke             | inch   | (mm)         | 55.11          | (1400)            | 59.06          | (1500)            |
| Daylight (min. - max.)      | inch   | (mm)         | 74.80 - 107.86 | (1900 - 2740)     | 79.06 - 117.72 | (2008 - 2989.96)  |
| Ejector force               | ton    | (m ton)      | 27.6           | (24.80)           | 42             | (38.18)           |
| Ejector stroke              | inch   | (mm)         | 7.87           | (200.00)          | 9.84           | (249.94)          |
| Dry cycle EU6               | --     | --           | 4.0 seconds    | --                | 5.5 seconds    | --                |

| Injection Unit                    |                |              | i80                        | i80            | i139                              | i139           |
|-----------------------------------|----------------|--------------|----------------------------|----------------|-----------------------------------|----------------|
| Screw type                        |                |              | A                          | B              | A                                 | B              |
| Screw diameter                    | inch           | (mm)         | 3.94 (100)                 | 4.41 (112)     | 4.72 (120)                        | 5.2 (132)      |
| Theoretical injection vol.        | cu. in.        | cm3          | 277.96 (4555)              | 348.69 (5714)  | 496.92 (8143)                     | 601.27 (9853)  |
| Injection weight (GPPS)           | lbs.           | (kg)         | 9.25 (4.2)                 | 11.60 (5.26)   | 16.51 (7.49)                      | 19.98 (9.06)   |
| Injection weight (GPPS)           | oz.            | (g)          | 147.8 (4190)               | 185.40 (5256)  | 264.23 (7490)                     | 319.75 (9064)  |
| Max. injection pressure           | psi            | Mpa          | 24890 (171.74)             | 19820 (136.65) | 24240 (167.134)                   | 20040 (138.17) |
| Injection rate                    | cu. in. / sec. | (cm3 / sec.) | 71.9 (1164)                | 90 (1459)      | 79.16 (1297.7)                    | 95.78 (1570)   |
| Screw speed (max)                 | RPM            | RPM          | 173                        | 173            | 173                               | 173            |
| Plasticating capacity             | lb. / hr.      | kg. / hr.    | 1430.3 (648.8)             | 1747.6 (792.7) | 1820 (825)                        | 2224 (978)     |
| Motor capacity                    | HP             | --           | 55 + 55 + 55 = 165         | --             | 55 + 55 + 55 + 55 = 220           | --             |
| Motor capacity                    | kW             | --           | 41.3 + 41.3 + 41.3 = 123.9 | --             | 41.3 + 41.3 + 41.3 + 41.3 = 177.2 | --             |
| Heater capacity                   | barrel         | --           | 56.7                       | --             | 56.8                              | --             |
| Reservoir capacity                | US gal.        | --           | 400                        | --             | 450                               | --             |
| Reservoir capacity                | L              | --           | 1514                       | --             | 1703.39                           | --             |
| Nozzle center height (exc. grout) | inch           | --           | 62.6                       | --             | 68.9                              | --             |
| Nozzle center height (exc. grout) | mm             | --           | 1590                       | --             | 1750                              | --             |
| Machine dimension (L x W x H)     | inch           | --           | 506 x 143 x 111            | --             | 561 x 158 x 119                   | --             |
| Machine dimension (L x W x H)     | mm             | --           | 12832 x 3612 x 2814        | --             | 14237 x 4016 x 3025               | --             |
| Machine weight                    | lbs.           | --           | 114000                     | --             | 174800                            | --             |
| Machine weight                    | kgs.           | --           | 52000                      | --             | 79300                             | --             |

| Clamping Force              | US Ton | Metric [Ton] | 2000           | [1800W]       | 2500W            | [2200W]       |
|-----------------------------|--------|--------------|----------------|---------------|------------------|---------------|
| Tie bar spacing (H x V)     | inch   | (mm)         | 70.87 x 62.99  | (1800 x 1600) | 84 x 64          | (2134 x 1626) |
| Platen size                 | inch   | (mm)         | 102.36 x 90.55 | (2600 x 2300) | 125 x 95         | (3175 x 2413) |
| Die thickness (min. - max.) | inch   | (mm)         | 35.43 - 74.80  | (900 - 1900)  | 34.65 - 74.02    | (880 x 1880)  |
| Clamping stroke             | inch   | (mm)         | 66.93          | (1700)        | 66.93            | 1700          |
| Daylight (min. - max.)      | inch   | (mm)         | 102.36         | 2600          | 101.58 -# 140.95 | (2580 x 3580) |
| Ejector force               | ton    | (m ton)      | 51.9           | (47.00)       | 51.9             | (47.00)       |
| Ejector stroke              | inch   | (mm)         | 11.81          | (300.00)      | 11.81            | 300.00        |
| Dry cycle EU6               | --     | --           | 7.00 seconds   | 7.00 seconds  | 8.5 seconds      | 8.5 seconds   |

| Injection Unit                    |                |              | i228  | i228   | i228  | i228   |
|-----------------------------------|----------------|--------------|---|--------|---|--------|
| Screw type                        |                |              | A   | A      | A   | A      |
| Screw diameter                    | inch           | (mm)         | 5.51  | 140    | 5.51  | 140    |
| Theoretical injection vol.        | cu. in.        | cm3          | 7.89  | 12929  | 7.89  | 12929  |
| Injection weight (GPPS)           | lbs.           | (kg)         | 26.22   | 1184   | 26.22   | 1184   |
| Injection weight (GPPS)           | oz.            | (g)          | 419.58  | 11894  | 419.58  | 11894  |
| Max. injection pressure           | psi            | Mpa          | 27500   | 189.48 | 27500   | 189.48 |
| Injection rate                    | cu. in. / sec. | (cm3 / sec.) | 116.38  | 1907   | 116.38  | 1907   |
| Screw speed (max)                 | RPM            | RPM          | 150   | 150    | 150   | 150    |
| Plasticating capacity             | lb. / hr.      | kg / hr      | 2229.15   | 1061   | 2229.15   | 1061   |
| Motor capacity                    | HP             | --           | 55 + 55 + 55 + 55 + 55 + 55 = 330               | --     | 55 + 55 + 55 + 55 + 55 + 55 = 330               | --     |
| Motor capacity                    | kW             | --           | 41.3 + 41.3 + 41.3 + 41.3 + 41.3 + 41.3 = 247.8 | --     | 41.3 + 41.3 + 41.3 + 41.3 + 41.3 + 41.3 = 247.8 | --     |
| Heater capacity                   | barrel         | --           | 92.8  | --     | 92.8  | --     |
| Reservoir capacity                | US gal.        | --           | 900   | --     | 900   | --     |
| Reservoir capacity                | L              | --           | 3407  | --     | 3407  | --     |
| Nozzle center height (exc. grout) | inch           | --           | 78.44   | --     | 84.64   | --     |
| Nozzle center Height (exc. grout) | mm             | --           | 1992  | --     | 2150  | --     |
| Machine dimension (L x W x H)     | inch           | --           | 650 x 146 x 138                                 | --     | 642 x 170 x 177                                 | --     |
| Machine dimension (L x W x H)     | mm             | --           | 16500 x 3700 x 3500                             | --     | 16307 x 4318 x 4496                             | --     |
| Machine weight                    | lbs.           | --           | 276000  | --     | 373000  | --     |
| Machine weight                    | kgs.           | --           | 125194  | --     | 169193  | --     |

1. Injection Volume is calculated in Poly Styrene 2. Plasticating is calculated in Poly Styrene 3. All Specifications are subject to change without notice



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# UBE SERVOMAX HYDRAULIC

Save Energy • Reduce Noise • Increase Efficiency





## THE ENERGY-SAVING SERVO HYDRAULIC FROM THE WORLD LEADER IN LARGE INJECTION MACHINES



Closed-Loop Clamp Servo Control



Servo Motors & Pumps

### Servo Motor Gear Pump Drive

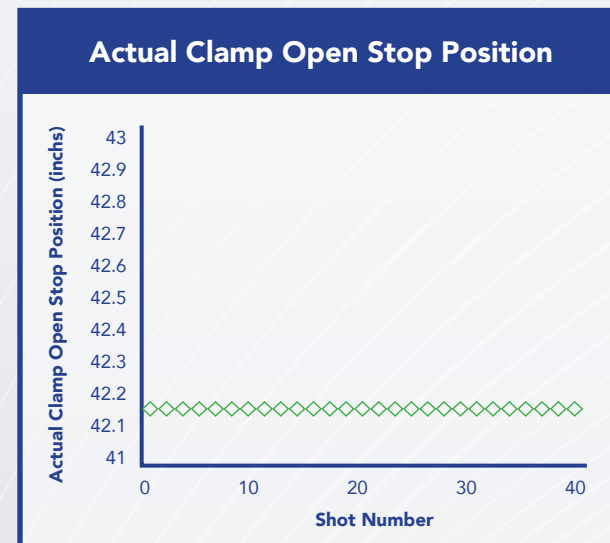
- Fully closed-loop on flow & pressure
- Bi-directional monolith hydraulics
- Instant response
- Maximum performance



Piston Screw Motor

### Piston Screw Motor

- High speed & high torque
- 173 RPM [std. on US1000]

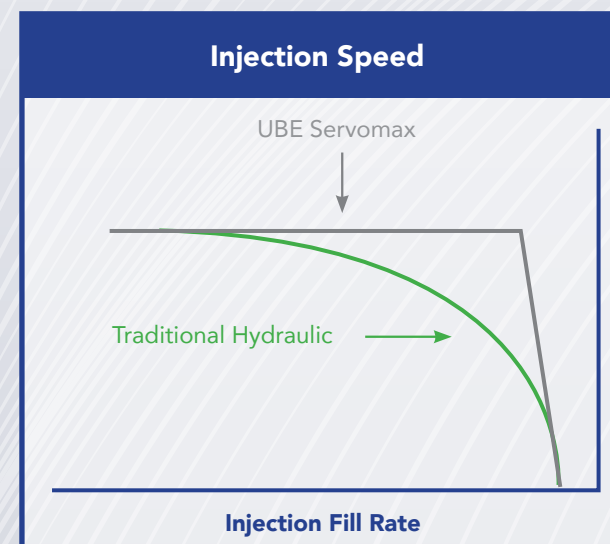


### UBE Servomax

- Multi-servo electric motors
- Bidirectional, face-mounted gear pumps
- Closed-loop pressure & flow - all AXES
- Eject and cores - "On the fly"
- Absolute process control
- Proven toggle system
- Wide platen design
- Lowest hydraulic energy consumption
- Low-oil temperatures
- Quiet [<70 dBA] operation

### Servomax Performance

- Fast dry cycles
  - » US1000 - 4.0 seconds [EU6]
  - » US1500 - 5.2 seconds [EU6]
- Fast injection fill rates
  - » Servo response provides near-linear acceleration
- Hi-speed, hi-torque screw motor
  - » 173 RPM [higher speeds available]
- Independent servo screw drive available



Main Menu



Barrel Temperature Control



Clamp Open / Close Profile



UBE Navigator Control Full-Color Touch Screen HMI



Injection Control

| UBE Servomax US1000 Energy |              |              |
|----------------------------|--------------|--------------|
| Traditional Hydraulic      | All Electric | UBE Servomax |
| 77.7 Kwh                   |              |              |
|                            | 24.1 Kwh     | 25.5 Kwh     |