



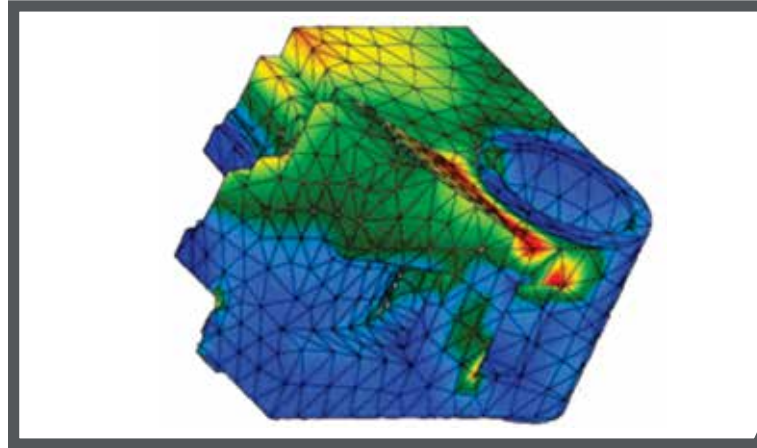
## THE OMEGA SERVO 3C



150-910 TON

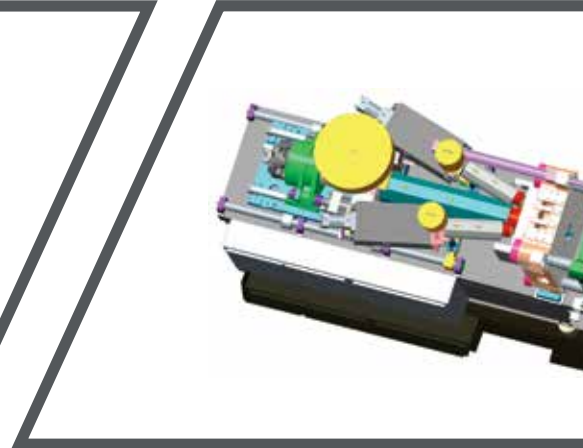
# THE OMEGA SERVO 3C

The OMEGA 3 Colour Series is Fully Hydraulic Direct Locking Ram Type Machine.

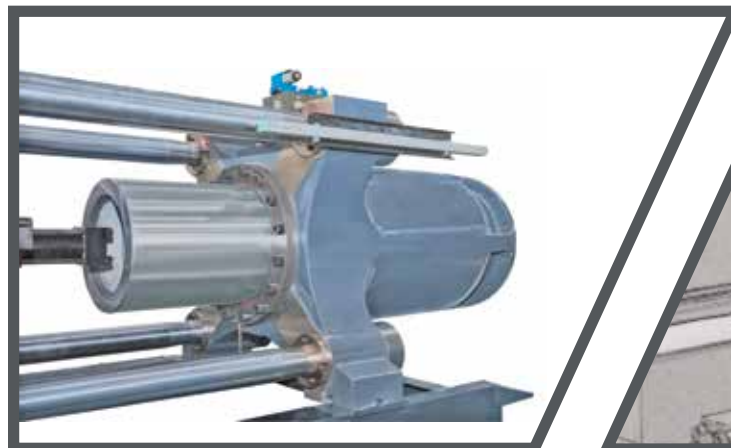


**Finite Element Analysis (FEA) for Machine Components**

- Provides Maximum Strength to Weight Ratio



**Top View - Injection unit**



**Mono Seal & No Piston Rings**

- Long Life of Sealing System
- Ease of Maintenance

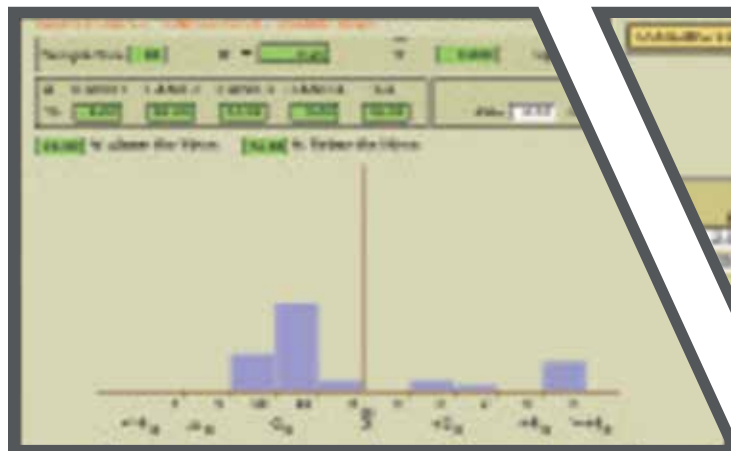


**Hydraulic Valves Mounted Close to Actuators**

- Fast Response From Actuator to Control Unit

**More Use of Hoses**

- Quieter Machine Operation



**Additional Control Features**

- Parameter Entry in Absolute Values
- On Board I/O Diagnosis
- User Customized Menu
- Mold Data Storage-80 Nos.



## Servo Motor The New Edge Technology

Energy Saving  
Upto 50%

### Replacement of Standard Induction Motor with Servo Motor

#### Reduced Heat Generation

- Only Delivers Hydraulic Oil as it is Needed
- Reduced Heat Generation in Hydraulic Oil
- Results in Longer Life for Hydraulic Components & Enhanced oil Life
- Heat Load on Factory & Cooling Water Consumption is Reduced
- Influence of Oil Temperature on Machine Repeatability is reduced
- Improves Cycle Precision & Repeatability



**Servo Motor**

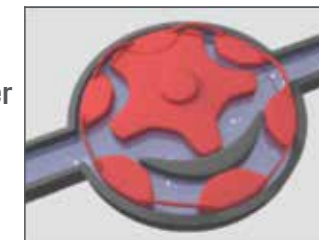
(3 Phase Synchronous Motor with Permanent Magnets)

#### Servo Motor

- Improved Repeatability
  - Closed Loop System
- Reduced Energy Consumption
  - Servo Motor RPM can Vary From 0 to 3000
- Increased Accuracy & Precision
  - Rotation can be Controlled to a Fraction of a Degree
- High Response
  - Reduced System Inertia
- Noise Reduction
  - Quiet Gear Pump
  - Variable Speed Operations When Required

#### Internal Gear Pump

- Reduced Sensitivity to Contamination
- Increased Reliability and Lower Maintenance Costs
  - Only 2 Moving Parts
  - No Internal Wear Parts
  - Lower Cost Spare Parts
- Bidirectional Pump for Fast Response in Pressure Control
- Pump is stopped intermittently during the cycle
- Constant & Non-Pulsating Discharge Regardless of Pressure Condition
- Low Operating Noise



**Standard Induction Motor**

(3 Phase Asynchronous Motor)

STANDARD FEATURES

| CLAMP                                                                                     |
|-------------------------------------------------------------------------------------------|
| Hollow Headless Ram with Mono Seal & No Piston Rings                                      |
| Large Prefill Designed for Fast Tonnage Build-up                                          |
| Rapid Traverse Cylinders                                                                  |
| Conical Strain Rod Nuts & Controlled Stress on Tie Rods                                   |
| Adjustable moving Platen Skates                                                           |
| Rigid Cast Platens with FEA                                                               |
| Adjustable Pressure setting of Closing & Opening Stage                                    |
| Proportional Speed Control with 5 Closing & 5 Opening Speed                               |
| Adjustable 2 Stage Mold Safety Pressure & 1 Stage Speed                                   |
| Position Based Ramping for Accurate Position Switching - Precise Speed & Pressure Control |
| Linear Position Transducer for Accurate Clamp Position Control                            |
| Sensitive Mold Protection with Try Again Circuit                                          |
| Stage Wise Actual Time Display                                                            |
| Insert Molding Program                                                                    |

| INJECTION                                                                                                                                                                                                                      |
|--------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Fully balanced & Proven MILACRON Auxiliary Injection Unit Design -Maintains Centre of Gravity                                                                                                                                  |
| Multi Sequence Setting of Patterns through Screen                                                                                                                                                                              |
| 6 Stage Injection Velocity & 15 Stage Injection Pressure Profile for Primary Units                                                                                                                                             |
| 2 Different options of Operation of the Auxiliary Units <ul style="list-style-type: none"><li>- Pulses with 1 Stage Injection Speed &amp; Pressure</li><li>- 10 Stage Injection with Separate Speed &amp; Delay Time</li></ul> |
| 5 Stage Screw Speed & 5 Stage Back Pressure Control (Setting) through Screen for Primary Units                                                                                                                                 |
| Dedicated RPM & Back Pressure setting for Auxiliary Units                                                                                                                                                                      |
| Digital setting of Extruder RPM & Digital Read out of Actual RPM                                                                                                                                                               |
| Wide Choice of Injection Units with A-B Screw / Barrel Combinations                                                                                                                                                            |
| Nozzle Contact Force by Pressure Switch                                                                                                                                                                                        |
| Switch Over from Fill to Pack based on Position or Time                                                                                                                                                                        |
| Linear Transducer for both Injection Units for Precise Design & Pattern                                                                                                                                                        |
| Injection Decompression Before/ After Refilling or Both                                                                                                                                                                        |
| Semi-Auto Purge, Cold Slug removal & Intrusion Molding Programs                                                                                                                                                                |
| Chequered Plate below Purge Area                                                                                                                                                                                               |
| Sprue Break with Timer                                                                                                                                                                                                         |
| Injection start, Suck-back & Melt Decompression -Delay Timer                                                                                                                                                                   |
| Graphically Adjustable Alarm Bands for Injection Pressure                                                                                                                                                                      |

| TEMPERATURE CONTROL                                 |
|-----------------------------------------------------|
| Actual Current Display of Heating Zones             |
| Heater Failure & Thermocouple Failure Detection     |
| Accurate PID Temperature Control settable on Screen |
| Feed Throat Temperature Indication                  |
| Auto Heat Startup & Shutdown                        |
| Insulated Heater Band                               |
| Heat Standby after set number of Cycles             |
| Soak Timer for Cold Start Protection                |
| High / Low Temperature Alarm                        |
| Set & Actual Temperature Data with Bar Graph        |
| Insulated Heater Band                               |

| EJECTOR                                                      |
|--------------------------------------------------------------|
| Knock-Out Bar                                                |
| 2 Stage Programmable Ejector Forward Profile with Soft Eject |
| Ejector Speed & Pressure adjustable on Screen                |
| Linear Transducer for Ejector Position                       |
| Pulsating Ejector Strokes upto 9 Pulses                      |
| Intermediate Retract Set Point                               |
| Ejector Stay Forward & Forward Dwell Timer                   |
| Ejector on Fly (550 to 910 T)                                |

| CONTROLS                                                            |
|---------------------------------------------------------------------|
| 22 Parameter Monitoring for last 1000 cycles with Graphics          |
| 10.4" TFT Color Display with Alpha - Numeric Keypad                 |
| Actual Injection Speed & Pressure Graph Display                     |
| 80 Mold Data Storage                                                |
| Configurable Multilevel Password with Operator's Name               |
| Graphical Presentation of Hourly Production                         |
| Customized Setup Menu                                               |
| High / Low Limit Display for Each Adjustable Parameter              |
| I / O diagnosis - Analog & Digital                                  |
| Timer Precision in 0.01 Second                                      |
| Change Log Menu: logs last 100 Set Points Changes with Time & Date  |
| Statistical Process Control (SPC) with Graphics                     |
| Process Mode: Functions with its Co-functions on a Single Key Press |
| Note Pad & Maintenance Scheduling                                   |
| Freely Programmable Smart Outputs                                   |
| Over View Screen with Graphical Display of Machine Functions        |
| Soft Keys for Fast Access of Select Menus                           |
| Auto shut down                                                      |
| Visual & Audible Alarm                                              |
| 1000 Alarm History with Date & Time Log                             |
| Printer Interface with USB Port                                     |
| Axis wise Graphical Cycle time Analysis                             |
| Batch Counter with option to turn off the motor                     |
| Mold data / Process data / Change log saving to External USB device |

| AVAILABLE OPTIONS                           |
|---------------------------------------------|
| Hydraulic Core Pull                         |
| Feed Throat Temperature Control             |
| Oil Temperature Control                     |
| Part Drop Detect for Single Cavity          |
| Water Battery with Temperature Indicator    |
| Water Manifolds                             |
| Robot Interface (SPI / EUROMAP)             |
| Ejector on Fly (100 to 450T)                |
| T-slot Platens (150-350 Ton)                |
| Extended Daylight with Ram Spacer           |
| Air Ejection                                |
| Eject Retract Limit Switch Verification     |
| Bimetallic Barrel & Hardened / Coated Screw |

STANDARD FEATURES

| HYDRAULICS                                      |
|-------------------------------------------------|
| Servo Motor Driven Pump                         |
| Dedicated Power Pack for Auxiliary Units        |
| Ergonomic Hydraulic Layout for Easy Approach    |
| Valves Placed near Actuators for Rapid Response |
| Pre-Healing Circuit for Hydraulic Oil           |
| Low Oil Level Audible Alarm & Motor Shut Down   |
| Continuous Oil Filtration with 10 Micron Filter |
| Audible Alarm for Filter Clogging               |



THE OMEGA SERVO 3C  
TONNAGE: 150

Injection Unit 550

TECHNICAL SPECIFICATIONS

OMEGA SERVO 3C 150

| INTERNATIONAL SIZE                   |        | 1500-550           |      | 180              | 180              |
|--------------------------------------|--------|--------------------|------|------------------|------------------|
| POWER PACK *                         |        | 13.6 kW            |      | 11.5 kW          | 11.5 kW          |
|                                      | UNIT   | PRIMARY UNIT       |      | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A45                | B45  | B28              | B28              |
| INJECTION UNIT SPECIFICATIONS        |        |                    |      |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 303                | 374  | 84               | 84               |
| THEORETICAL DISPLACEMENT             | cc     | 318                | 393  | 88               | 88               |
| INJECTION PRESSURE MAX.              | bar    | 1728               | 1400 | 2067             | 2067             |
| INJECTION RATE                       | cc/sec | 199                | 245  | 62               | 62               |
| INJECTION SCREW STROKE               | mm     | 200                | 200  | 110              | 110              |
| SCREW DIAMETER                       | mm     | 45                 | 50   | 32               | 32               |
| SCREW L/D RATIO                      |        | 22.2               | 20   | 20               | 20               |
| SCREW SPEED                          | rpm    | 339                | 339  | 208              | 208              |
| SCREW TORQUE ^                       | Nm     | 931                | 931  | 374              | 374              |
| PLASTICIZING RATE                    | gm/sec | 38                 | 51   | 8                | 8                |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 3+1                |      | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 17.1               |      | 6.6              | 6.6              |
| CLAMP UNIT SPECIFICATIONS            |        |                    |      |                  |                  |
| CLAMP FORCE                          | ton    | 150                |      |                  |                  |
| CLAMP STROKE                         | mm     | 625                |      |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 825                |      |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 200                |      |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 715 x 715          |      |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 510 x 510          |      |                  |                  |
| TIE ROD DIAMETER                     | mm     | 85                 |      |                  |                  |
| EJECTOR STROKE                       | mm     | 160                |      |                  |                  |
| EJECTOR FORCE                        | ton    | 4.5                |      |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 1050 (525 + 525)   |      |                  |                  |
| GENERAL                              |        |                    |      |                  |                  |
| SERVO DRIVE *                        | kW     | 13.6               |      | 11.5             | 11.5             |
| OIL TANK CAPACITY                    | L      | 405                |      | 240              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 90                 |      | 100              |                  |
| CONNECTED LOAD                       | kW     | 66.9               |      |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 6.34 x 2.02 x 2.32 |      |                  |                  |
| MACHINE WEIGHT                       | kg     | 9800               |      |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE OMEGA SERVO 3C  
TONNAGE: 200

Injection Unit 940

TECHNICAL SPECIFICATIONS

OMEGA SERVO 3C 200

| INTERNATIONAL SIZE                   |        | 2000-940           |      | 180              | 180              |
|--------------------------------------|--------|--------------------|------|------------------|------------------|
| POWER PACK *                         |        | 13.6 kW            |      | 11.5 kW          | 11.5 kW          |
|                                      | UNIT   | PRIMARY UNIT       |      | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A50                | B50  | B28              | B28              |
| INJECTION UNIT SPECIFICATIONS        |        |                    |      |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 467                | 565  | 84               | 84               |
| THEORETICAL DISPLACEMENT             | cc     | 491                | 594  | 88               | 88               |
| INJECTION PRESSURE MAX.              | bar    | 1900               | 1570 | 2067             | 2067             |
| INJECTION RATE                       | cc/sec | 226                | 274  | 62               | 62               |
| INJECTION SCREW STROKE               | mm     | 250                | 250  | 110              | 110              |
| SCREW DIAMETER                       | mm     | 50                 | 55   | 32               | 32               |
| SCREW L/D RATIO                      |        | 22                 | 20   | 20               | 20               |
| SCREW SPEED                          | rpm    | 293                | 293  | 208              | 208              |
| SCREW TORQUE ^                       | Nm     | 1305               | 1305 | 374              | 374              |
| PLASTICIZING RATE                    | gm/sec | 44                 | 55   | 8                | 8                |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 3+1                |      | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 20.4               |      | 6.6              | 6.6              |
| CLAMP UNIT SPECIFICATIONS            |        |                    |      |                  |                  |
| CLAMP FORCE                          | ton    | 200                |      |                  |                  |
| CLAMP STROKE                         | mm     | 750                |      |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 950                |      |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 200                |      |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 820 x 820          |      |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 560 x 560          |      |                  |                  |
| TIE ROD DIAMETER                     | mm     | 95                 |      |                  |                  |
| EJECTOR STROKE                       | mm     | 160                |      |                  |                  |
| EJECTOR FORCE                        | ton    | 7.5                |      |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 1450 (725 + 725)   |      |                  |                  |
| GENERAL                              |        |                    |      |                  |                  |
| SERVO DRIVE *                        | kW     | 13.6               |      | 11.5             | 11.5             |
| OIL TANK CAPACITY                    | L      | 425                |      | 240              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 180                |      | 100              |                  |
| CONNECTED LOAD                       | kW     | 70.2               |      |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 6.59 x 2.29 x 2.43 |      |                  |                  |
| MACHINE WEIGHT                       | kg     | 12700              |      |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE OMEGA SERVO 3C  
TONNAGE: 250

Injection Unit 1190

TECHNICAL SPECIFICATIONS

OMEGA SERVO 3C 250

| INTERNATIONAL SIZE                   |        | 2500-1190         |      | 180              | 180              |
|--------------------------------------|--------|-------------------|------|------------------|------------------|
| POWER PACK *                         |        | 13.6 kW           |      | 11.5 kW          | 11.5 kW          |
|                                      | UNIT   | PRIMARY UNIT      |      | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A55               | B55  | B28              | B28              |
| INJECTION UNIT SPECIFICATIONS        |        |                   |      |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 588               | 821  | 84               | 84               |
| THEORETICAL DISPLACEMENT             | cc     | 618               | 863  | 88               | 88               |
| INJECTION PRESSURE MAX.              | bar    | 1918              | 1373 | 2067             | 2067             |
| INJECTION RATE                       | cc/sec | 213               | 297  | 62               | 62               |
| INJECTION SCREW STROKE               | mm     | 260               | 260  | 110              | 110              |
| SCREW DIAMETER                       | mm     | 55                | 65   | 32               | 32               |
| SCREW L/D RATIO                      |        | 23.6              | 20   | 20               | 20               |
| SCREW SPEED                          | rpm    | 207               | 207  | 208              | 208              |
| SCREW TORQUE ^                       | Nm     | 1852              | 1852 | 374              | 374              |
| PLASTICIZING RATE                    | gm/sec | 39                | 62   | 8                | 8                |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 4+1               |      | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 26.7              |      | 6.6              | 6.6              |
| CLAMP UNIT SPECIFICATIONS            |        |                   |      |                  |                  |
| CLAMP FORCE                          | ton    | 250               |      |                  |                  |
| CLAMP STROKE                         | mm     | 830               |      |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 1080              |      |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 250               |      |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 880 x 880         |      |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 620 x 620         |      |                  |                  |
| TIE ROD DIAMETER                     | mm     | 100               |      |                  |                  |
| EJECTOR STROKE                       | mm     | 160               |      |                  |                  |
| EJECTOR FORCE                        | ton    | 7.5               |      |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 1680 (840 + 840)  |      |                  |                  |
| GENERAL                              |        |                   |      |                  |                  |
| SERVO DRIVE *                        | kW     | 13.6              |      | 11.5             | 11.5             |
| OIL TANK CAPACITY                    | L      | 655               |      | 240              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 180               |      | 100              |                  |
| CONNECTED LOAD                       | kW     | 76.5              |      |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 7.66 x 2.3 x 2.66 |      |                  |                  |
| MACHINE WEIGHT                       | kg     | 14100             |      |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE OMEGA SERVO 3C  
TONNAGE: 350

Injection Unit 2350

TECHNICAL SPECIFICATIONS

OMEGA SERVO 3C 350

| INTERNATIONAL SIZE                   |        | 3500-1980          | 3500-2350 | 220              | 220              |
|--------------------------------------|--------|--------------------|-----------|------------------|------------------|
| POWER PACK *                         |        | 25.1 kW            |           | 11.5 kW          | 11.5 kW          |
|                                      | UNIT   | PRIMARY UNIT       |           | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A70                | B70       | B32              | B32              |
| INJECTION UNIT SPECIFICATIONS        |        |                    |           |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 1172               | 1530      | 126              | 126              |
| THEORETICAL DISPLACEMENT             | cc     | 1232               | 1608      | 132              | 132              |
| INJECTION PRESSURE MAX.              | bar    | 1602               | 1462      | 1633             | 1633             |
| INJECTION RATE                       | cc/sec | 367                | 480       | 109              | 109              |
| INJECTION SCREW STROKE               | mm     | 320                | 320       | 130              | 130              |
| SCREW DIAMETER                       | mm     | 70                 | 80        | 36               | 36               |
| SCREW L/D RATIO                      |        | 22.9               | 20        | 20               | 20               |
| SCREW SPEED                          | rpm    | 187                | 187       | 288              | 288              |
| SCREW TORQUE ^                       | Nm     | 3347               | 3347      | 374              | 374              |
| PLASTICIZING RATE                    | gm/sec | 69                 | 93        | 17               | 17               |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 5+1                |           | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 33.3               |           | 7.6              | 7.6              |
| CLAMP UNIT SPECIFICATIONS            |        |                    |           |                  |                  |
| CLAMP FORCE                          | ton    | 350                |           |                  |                  |
| CLAMP STROKE                         | mm     | 1060               |           |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 1360" / 1660       |           |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 300" / 600         |           |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 1010 x 1010        |           |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 710 x 710          |           |                  |                  |
| TIE ROD DIAMETER                     | mm     | 125                |           |                  |                  |
| EJECTOR STROKE                       | mm     | 200                |           |                  |                  |
| EJECTOR FORCE                        | ton    | 7.5                |           |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 2900 (1450 + 1450) |           |                  |                  |
| GENERAL                              |        |                    |           |                  |                  |
| SERVO DRIVE *                        | kW     | 25.1               |           | 11.5             | 11.5             |
| OIL TANK CAPACITY                    | L      | 905                |           | 305              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 180                |           | 100              |                  |
| CONNECTED LOAD                       | kW     | 96.6               |           |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 8.71 x 2.35 x 2.73 |           |                  |                  |
| MACHINE WEIGHT                       | kg     | 19300              |           |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE  
# WITH RAM SPACER

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE OMEGA SERVO 3C

TONNAGE: 450

Injection Unit 3340

TECHNICAL SPECIFICATIONS

THE OMEGA SERVO 3C

TONNAGE: 550

Injection Unit 4850

TECHNICAL SPECIFICATIONS

OMEGA SERVO 3C 450

| INTERNATIONAL SIZE                   |        | 4500-3340          |      | 450              | 450              |
|--------------------------------------|--------|--------------------|------|------------------|------------------|
| POWER PACK *                         |        | 27.2 kW            |      | 11.5 kW          | 11.5 kW          |
|                                      | UNIT   | PRIMARY UNIT       |      | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A80                | B80  | B40              | B40              |
| INJECTION UNIT SPECIFICATIONS        |        |                    |      |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 1722               | 2179 | 227              | 227              |
| THEORETICAL DISPLACEMENT             | cc     | 1810               | 2290 | 239              | 239              |
| INJECTION PRESSURE MAX.              | bar    | 1843               | 1456 | 1899             | 1899             |
| INJECTION RATE                       | cc/sec | 477                | 603  | 118              | 118              |
| INJECTION SCREW STROKE               | mm     | 360                | 360  | 150              | 150              |
| SCREW DIAMETER                       | mm     | 80                 | 90   | 45               | 45               |
| SCREW L/D RATIO                      |        | 22.5               | 20   | 20               | 20               |
| SCREW SPEED                          | rpm    | 157                | 157  | 181              | 181              |
| SCREW TORQUE ^                       | Nm     | 4868               | 4868 | 1077             | 1077             |
| PLASTICIZING RATE                    | gm/sec | 78                 | 104  | 20               | 20               |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 5+1                |      | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 44.7               |      | 13.7             | 13.7             |
| CLAMP UNIT SPECIFICATIONS            |        |                    |      |                  |                  |
| CLAMP FORCE                          | ton    | 450                |      |                  |                  |
| CLAMP STROKE                         | mm     | 1100               |      |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 1500'' / 1850      |      |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 400' / 750         |      |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 1200 x 1200        |      |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 830 x 830          |      |                  |                  |
| TIE ROD DIAMETER                     | mm     | 140                |      |                  |                  |
| EJECTOR STROKE                       | mm     | 200                |      |                  |                  |
| EJECTOR FORCE                        | ton    | 11.5               |      |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 4800 (2400 + 2400) |      |                  |                  |
| GENERAL                              |        |                    |      |                  |                  |
| SERVO DRIVE *                        | kW     | 27.2               |      | 11.5             | 11.5             |
| OIL TANK CAPACITY                    | L      | 1160               |      | 420              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 240                |      | 100              |                  |
| CONNECTED LOAD                       | kW     | 122.3              |      |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 10.55 x 2.7 x 2.96 |      |                  |                  |
| MACHINE WEIGHT                       | kg     | 25500              |      |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE  
# WITH RAM SPACER

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

OMEGA SERVO 3C 550

| INTERNATIONAL SIZE                   |        | 5500-4340           | 5500-4850 | 1080             | 1080             |
|--------------------------------------|--------|---------------------|-----------|------------------|------------------|
| POWER PACK *                         |        | 38.7 kW             |           | 13.6 kW          | 13.6 kW          |
|                                      | UNIT   | PRIMARY UNIT        |           | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A90                 | B90       | B50              | B50              |
| INJECTION UNIT SPECIFICATIONS        |        |                     |           |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 2421                | 2989      | 565              | 565              |
| THEORETICAL DISPLACEMENT             | cc     | 2545                | 3142      | 594              | 594              |
| INJECTION PRESSURE MAX.              | bar    | 1705                | 1544      | 1820             | 1820             |
| INJECTION RATE                       | cc/sec | 592                 | 731       | 163              | 163              |
| INJECTION SCREW STROKE               | mm     | 400                 | 400       | 250              | 250              |
| SCREW DIAMETER                       | mm     | 90                  | 100       | 55               | 55               |
| SCREW L/D RATIO                      |        | 22.2                | 20        | 20               | 20               |
| SCREW SPEED                          | rpm    | 152                 | 152       | 198              | 198              |
| SCREW TORQUE ^                       | Nm     | 6355                | 6355      | 1247             | 1247             |
| PLASTICIZING RATE                    | gm/sec | 101                 | 128       | 37               | 37               |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 5+1                 |           | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 58.6                |           | 20.4             | 20.4             |
| CLAMP UNIT SPECIFICATIONS            |        |                     |           |                  |                  |
| CLAMP FORCE                          | ton    | 550                 |           |                  |                  |
| CLAMP STROKE                         | mm     | 1140                |           |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 1676                |           |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 536                 |           |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 1245 x 1245         |           |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 870 x 870           |           |                  |                  |
| TIE ROD DIAMETER                     | mm     | 160                 |           |                  |                  |
| EJECTOR STROKE                       | mm     | 200                 |           |                  |                  |
| EJECTOR FORCE                        | ton    | 12                  |           |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 7060 (3530 + 3530)  |           |                  |                  |
| GENERAL                              |        |                     |           |                  |                  |
| SERVO DRIVE *                        | kW     | 38.7                |           | 13.6             | 13.6             |
| OIL TANK CAPACITY                    | L      | 1375                |           | 600              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 300                 |           | 120              |                  |
| CONNECTED LOAD                       | kW     | 165.3               |           |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 10.17 x 2.99 x 3.18 |           |                  |                  |
| MACHINE WEIGHT                       | kg     | 36000               |           |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE

All machine dimensions and specifications are subject to change. Values are for reference only. These values are for standard machine power.

THE OMEGA SERVO 3C  
TONNAGE: 660

Injection Unit 6440

TECHNICAL SPECIFICATIONS

OMEGA SERVO 3C 660

| INTERNATIONAL SIZE                   |        | 6600-5950           | 6600-6440 | 6600-5950    | 6600-6440 | 1080             | 1080             |
|--------------------------------------|--------|---------------------|-----------|--------------|-----------|------------------|------------------|
| POWER PACK *                         |        | 48.1 kW             |           | 54.4 kW      |           | 13.6 kW          | 13.6 kW          |
|                                      | UNIT   | PRIMARY UNIT        |           | PRIMARY UNIT |           | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A100                | B100      | A100         | B100      | B50              | B50              |
| INJECTION UNIT SPECIFICATIONS        |        |                     |           |              |           |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 3288                | 3978      | 3288         | 3978      | 565              | 565              |
| THEORETICAL DISPLACEMENT             | cc     | 3456                | 4181      | 3456         | 4181      | 594              | 594              |
| INJECTION PRESSURE MAX.              | bar    | 1723                | 1540      | 1723         | 1540      | 1820             | 1820             |
| INJECTION RATE                       | cc/sec | 651                 | 788       | 943          | 1141      | 163              | 163              |
| INJECTION SCREW STROKE               | mm     | 440                 | 440       | 440          | 440       | 250              | 250              |
| SCREW DIAMETER                       | mm     | 100                 | 110       | 100          | 110       | 55               | 55               |
| SCREW L/D RATIO                      |        | 22                  | 20        | 22           | 20        | 20               | 20               |
| SCREW SPEED                          | rpm    | 128                 | 128       | 174          | 174       | 198              | 198              |
| SCREW TORQUE ^                       | Nm     | 7924                | 7924      | 7924         | 7924      | 1247             | 1247             |
| PLASTICIZING RATE                    | gm/sec | 107                 | 136       | 147          | 186       | 37               | 37               |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 6+1                 |           | 6+1          |           | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 62.8                |           | 62.8         |           | 20.4             | 20.4             |
| CLAMP UNIT SPECIFICATIONS            |        |                     |           |              |           |                  |                  |
| CLAMP FORCE                          | ton    | 660                 |           |              |           |                  |                  |
| CLAMP STROKE                         | mm     | 1320                |           |              |           |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 1780                |           |              |           |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 460                 |           |              |           |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 1400 x 1400         |           |              |           |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 950 x 950           |           |              |           |                  |                  |
| TIE ROD DIAMETER                     | mm     | 170                 |           |              |           |                  |                  |
| EJECTOR STROKE                       | mm     | 200                 |           |              |           |                  |                  |
| EJECTOR FORCE                        | ton    | 12                  |           |              |           |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 9455 (4725 + 4725)  |           |              |           |                  |                  |
| GENERAL                              |        |                     |           |              |           |                  |                  |
| SERVO DRIVE *                        | kW     | 48.1                |           | 54.4         |           | 13.6             | 13.6             |
| OIL TANK CAPACITY                    | L      | 1995                |           | 1995         |           | 600              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 300                 |           | 300          |           | 120              |                  |
| CONNECTED LOAD                       | kW     | 178.9               |           | 185.2        |           |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 11.45 x 2.94 x 3.30 |           |              |           |                  |                  |
| MACHINE WEIGHT                       | kg     | 39000               |           |              |           |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE

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THE OMEGA SERVO 3C  
TONNAGE: 775

Injection Unit 10070

TECHNICAL SPECIFICATIONS

OMEGA SERVO 3C 775

| INTERNATIONAL SIZE                   |        | 7750-9160           | 7750-10070 | 1080             | 1080             |
|--------------------------------------|--------|---------------------|------------|------------------|------------------|
| POWER PACK *                         |        | 54.4 kW             |            | 13.6 kW          | 13.6 kW          |
|                                      | UNIT   | PRIMARY UNIT        |            | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A110                | B110       | B50              | B50              |
| INJECTION UNIT SPECIFICATIONS        |        |                     |            |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 5063                | 6538       | 565              | 565              |
| THEORETICAL DISPLACEMENT             | cc     | 5322                | 6872       | 594              | 594              |
| INJECTION PRESSURE MAX.              | bar    | 1722                | 1465       | 1820             | 1820             |
| INJECTION RATE                       | cc/sec | 7833                | 1011       | 163              | 163              |
| INJECTION SCREW STROKE               | mm     | 560                 | 560        | 250              | 250              |
| SCREW DIAMETER                       | mm     | 110                 | 125        | 55               | 55               |
| SCREW L/D RATIO                      |        | 22.7                | 20         | 20               | 20               |
| SCREW SPEED                          | rpm    | 173                 | 153        | 198              | 198              |
| SCREW TORQUE ^                       | Nm     | 7924                | 7924       | 1247             | 1247             |
| PLASTICIZING RATE                    | gm/sec | 184                 | 201        | 37               | 37               |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 6+1                 |            | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 66.5                |            | 20.4             | 20.4             |
| CLAMP UNIT SPECIFICATIONS            |        |                     |            |                  |                  |
| CLAMP FORCE                          | ton    | 775                 |            |                  |                  |
| CLAMP STROKE                         | mm     | 1320                |            |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 1920                |            |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 600                 |            |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 1680 x 1475         |            |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 1150 x 950          |            |                  |                  |
| TIE ROD DIAMETER                     | mm     | 190                 |            |                  |                  |
| EJECTOR STROKE                       | mm     | 200                 |            |                  |                  |
| EJECTOR FORCE                        | ton    | 18.3                |            |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 10820 (5410 + 5410) |            |                  |                  |
| GENERAL                              |        |                     |            |                  |                  |
| SERVO DRIVE *                        | kW     | 54.4                |            | 13.6             | 13.6             |
| OIL TANK CAPACITY                    | L      | 1995                |            | 600              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 300                 |            | 120              |                  |
| CONNECTED LOAD                       | kW     | 188.9               |            |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 12.88 x 3.37 x 3.30 |            |                  |                  |
| MACHINE WEIGHT                       | kg     | 44000               |            |                  |                  |

\*\* WITH SPECIFIED SCREW  
\* UNDER SPECIFIED SCREW  
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE

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# THE OMEGA SERVO 3C

TONNAGE: 910

## Injection Unit 10070

## TECHNICAL SPECIFICATIONS

## NOTES

## OMEGA SERVO 3C 910

| INTERNATIONAL SIZE                   |        | 9100-9160           | 9100-10070 | 1080             | 1080             |
|--------------------------------------|--------|---------------------|------------|------------------|------------------|
| POWER PACK *                         |        | 54.4 kW             |            | 13.6 kW          | 13.6 kW          |
|                                      | UNIT   | PRIMARY UNIT        |            | AUXILIARY UNIT 1 | AUXILIARY UNIT 2 |
|                                      | METRIC | A110                | B110       | B50              | B50              |
| INJECTION UNIT SPECIFICATIONS        |        |                     |            |                  |                  |
| INJECTION CAPACITY MAX. (GPPS)       | gms    | 5063                | 6538       | 565              | 565              |
| THEORETICAL DISPLACEMENT             | cc     | 5322                | 6872       | 594              | 594              |
| INJECTION PRESSURE MAX.              | bar    | 1722                | 1465       | 1820             | 1820             |
| INJECTION RATE                       | cc/sec | 783                 | 1011       | 163              | 163              |
| INJECTION SCREW STROKE               | mm     | 560                 | 560        | 250              | 250              |
| SCREW DIAMETER                       | mm     | 110                 | 125        | 55               | 55               |
| SCREW L/D RATIO                      |        | 22.7                | 20         | 20               | 20               |
| SCREW SPEED                          | rpm    | 173                 | 153        | 198              | 198              |
| SCREW TORQUE ^                       | Nm     | 7924                | 7924       | 1247             | 1247             |
| PLASTICIZING RATE                    | gm/sec | 184                 | 201        | 37               | 37               |
| NO.OF PYROMETERS (BARREL+NOZZLE)     |        | 6+1                 |            | 3+1              | 3+1              |
| TOTAL HEAT CAPACITY                  | kW     | 66.5                |            | 20.4             | 20.4             |
| CLAMP UNIT SPECIFICATIONS            |        |                     |            |                  |                  |
| CLAMP FORCE                          | ton    | 910                 |            |                  |                  |
| CLAMP STROKE                         | mm     | 1600                |            |                  |                  |
| MAXIMUM DAYLIGHT                     | mm     | 2350                |            |                  |                  |
| MINIMUM MOLD HEIGHT                  | mm     | 750                 |            |                  |                  |
| PLATEN SIZE (H X V)                  | mm     | 2000 x 1600         |            |                  |                  |
| DISTANCE BETWEEN TIE ROD             | mm     | 1530 x 1120         |            |                  |                  |
| TIE ROD DIAMETER                     | mm     | 190                 |            |                  |                  |
| EJECTOR STROKE                       | mm     | 210                 |            |                  |                  |
| EJECTOR FORCE                        | ton    | 18.3                |            |                  |                  |
| MOLD WEIGHT CAPACITY                 | kg     | 19045 (9525 + 9525) |            |                  |                  |
| GENERAL                              |        |                     |            |                  |                  |
| SERVO DRIVE *                        | kW     | 54.4                |            | 13.6             | 13.6             |
| OIL TANK CAPACITY                    | L      | 2900                |            | 600              |                  |
| WATER REQUIREMENT (INLET TEMP. 29°C) | lpm    | 300                 |            | 120              |                  |
| CONNECTED LOAD                       | kW     | 188.9               |            |                  |                  |
| MACHINE DIMENSION (L X W X H)        | m      | 13.33 x 3.49 x 3.47 |            |                  |                  |
| MACHINE WEIGHT                       | kg     | 65000               |            |                  |                  |

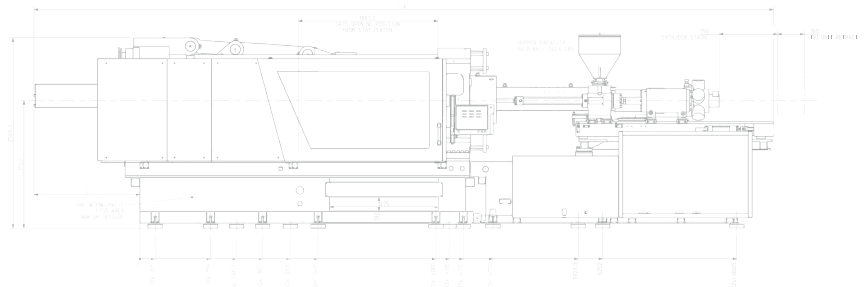
**\*\* WITH SPECIFIED SCREW**

\* UNDER SPECIFIED SCREW

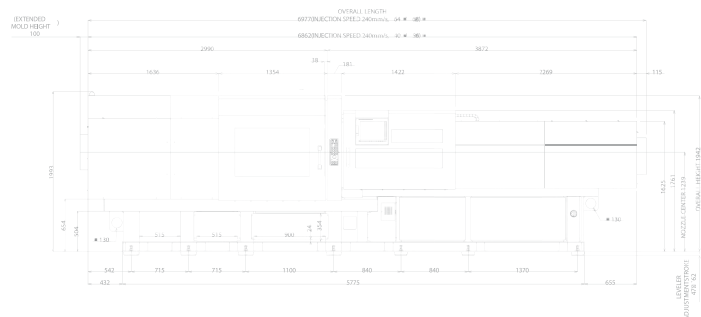
^ AT 172 BAR PRIMARY AND 120 BAR AUX UNIT REFILL PRESSURE

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All specifications reflect average values based on typical machine layouts. Actual figures will vary depending on final machine configuration. Performance specifications are based on theoretical data. Photograph may show attachments or accessories, which may not be part of the standard scope of supply. Due to continual improvements, specifications & some components are subject to change without notice.



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