HYDRON SERVO 2K
2 Component Hydraulic Injection Moulding Machine

Design Advantages & Features

**CLAMP**
- Hollow Headless Ram with Mono Seal & No Piston Rings
- Large Profile Designed for Fast Tonnage Build-up
- Rapid Traverse Cylinders
- Consist Small Rods & Controlled Stress on Tie Rods
- Adjustable moving Plate Skates
- Rigid Cast Platen with FSA
- Adjustable Pressure setting of Closing & Opening Stage
- Proportional Speed Control with S Closing & S Opening Speed
- Adjustable 2 Stage mould 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 mould Protection with Try Again Circuit
- Stage Wise Actual Time Display
- Insert Moulding Program
- Actual Tonnage Display on Screen

**EJECTOR**
- Knock-Out Bar
- 2 Stage Programmable Ejector Forward Profile with Soft Eject
- Ejector Speed & Pressure adjustable on Screen
- Linear Transducer for Ejector Position
- Pululating Ejector Strokes upto 9 Pulses
- Intermediate Retract Set Point
- Ejector Stay Forward & Forward Dwell Timer

**MAIN INJECTION UNIT**
- 5 Stage Injection Velocity & 15 Stage Injection Pressure Profile
- 5 Stage Screw Speed & 5 Stage Back Pressure Control
- Control through Screen
- Digital setting of Extruder RPM & Digital Read out of Actual RPM
- Wide Choice of Injection Units with A-B-C Screw/Barrel Combinations
- Easy Injection Unit Swivelling
- Switch Over from Fill to Pack based on Position or Time
- Linear Position Transducer for accurate Injection Position Control
- Injection Decompression Before / After Refilling or Both
- Semi-Auto Melt, Cold Melt removal & Intrusion Moulding Programs
- Aluminum Chequered Plate below Purge Area
- Sprue Break with Timer
- Injection start, Suck-back & Melt Decompression - Delay Timer
- Graphically Adjustable Alarm Bends for Injection Pressure
- Sliding Hopper

**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
- Heat Standby after set number of Cycles
- Soak Timer for Cold Start Protection
- High / Low Temperature Alarm
- Set & Actual Temperature Data with Bar Graph

**CONTROLS**
- 22 Parameter Monitoring for last 1000 cycles with Graphics
- 3.5” TFT Color Display with Alpha - Numeric Keypad
- Actual Injection Speed & Pressure Graph Display
- 80 Mould Data Storage
- Configurable Multi-level Password with Operator’s Name
- Graphically Presentation of last 48 Hours Production
- Daily Production Units of last 1 Year
- Customized Setup Menu
- High / Low Limit Display for Each Adjustable Parameter
- 7” Display - Analog & Digital
- Timer Precision on 0.01 Second
- Change Log Menu (Logs last 100 Set Points Changes with Time & Date
- Statistical Process Control (SPC) with Graphs
- Process Mode: Functions with its Co-functions on a Single Key Press
- Note Pad & Maintenance Scheduling
- Freely Programmable Smart Output & Inputs
- 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

**HYDRAULICS**
- Servo Motor Driven Pump
- Ergonomic Hydraulic Layout for Easy Approach
- Valves Placed near Actuators for Rapid Response
- Pre-Heating Circuit for Hydraulic Oil
- Low Oil Level Audible Alarm & Motor Shut Down
- Continuous Oil Filtration with 10 Micron Filter
- Audible Alarm for Filter Clogging

**AVAILABLE OPTIONS**
- Process Data Monitoring
- Mould Data Storage
- Auto lubrication on Secondary Injection Unit with Monitoring
- Sealant supply to Oil Filter
- Soft Keys for Fast Access of Select Menus
- Audible Alarm for Filter Clogging
- Analog to Digital Conversion
- 5 Stage Screw Speed & 10 Stage Back Pressure Control
- 6 Stage Injection Velocity & 10 Stage Injection Pressure Profile
- Switch over from Fill to Pack based on Position or Time
- Accurate Injection Position Control through Direct Servo
- Injection Decompression Before / After Refilling or Both
- Injection start, Suck-back & Melt Decompression - Delay Timer
- Auto lubrication on Secondary injection Unit with Monitoring
- Mould Data Storage
- Process Data Monitoring

**ELECTRIC SECONDARY INJECTION UNIT**
- Injection by Dedicated Servo Motor
- Refilling by Dedicated Servo Motor
- Separate Controller for Secondary Injection Unit
- 6 Stage Injection Velocity & 10 Stage Injection Pressure Profile
- 3 Stage Screw Speed & 3 Stage Back Pressure Control
- Setting through Screen
- Digital setting of Extruder RPM & Digital Read out of Actual RPM
- Wide Choice of Injection Units with A-B-C Screw/Barrel Combinations
- Switch Over from Fill to Pack based on Position or Time
- Accurate Injection Position Control through Direct Servo
- Injection Decompression Before / After Refilling or Both
- Injection start, Suck-back & Melt Decompression - Delay Timer
- Auto lubrication on Secondary Injection Unit with Monitoring
- Mould Data Storage
- Process Data Monitoring

**AVAILABILITY**
- High Productivity
- Precision & Consistency
- Energy Efficiency
- Robust Construction
Advanced Clamp Design
- Separate Prefill Tank
- Fast Tonnage Build-up
- Special Hydraulics for Fast Clamp Movements

 Separate Prefill Tank
Fast Tonnage Build-up
Special Hydraulics for Fast Clamp Movements

Closed Loop PID Temperature Control
- Provides precise Temperature Control
- Excellent Process Control & Stability

Precise Linear Guideways
- Frictionless Linear Bearing
- Guideways improve the Injection Power & Cylinder Alignment

Vertical Electric Secondary Injection Unit
- Injection by Dedicated Servo Motor
- Refilling by Dedicated Servo Motor

Twin Cylinder Injection Unit
- Uniform Load Distribution across Screw Centerline

Servo Motor
- Outstanding Energy Saving
- Faster Response towards Hydraulic System
- Excellent Shot Weight Consistency
- Reduced Noise Level

Endure-II - Advanced User Friendly Control
- Ergonomic Layout
- High Speed Microprocessor
- Direct Access Menu Keys
- Graphical Presentation of Machine Features
- Self Diagnostic & Fault Finding Capability
- Parameter Entry in Absolute Value
- Central Monitoring System
- Statistical Process Control (SPC)

Wide Skates for Platen Supports
- Reduced Platen Deflection
- Enhanced Life of Tie-bars
- Higher Mould Carrying Capacity

Generous Mould Space
- Accommodates Large Moulds

Large Ram Diameter
- Provides Uniform Force Distribution across Platen
- Provides Excellent Mould Squareness & Parallelism
- Reduces Mould Wear

Drive Panel (Stand Alone)

Wide Skates for Platen Supports
- Reduced Platen Deflection
- Enhanced Life of Tie-bars
- Higher Mould Carrying Capacity

Precise Linear Guideways
- Frictionless Linear Bearing
- Guideways improve the Injection Power & Cylinder Alignment

Important Criterion for Machine Selection:
- Customer to arrange for Rotary Table or Mould Indexing Mechanism if applicable
- Please check Horizontal & Vertical Movement of Secondary Injection Unit to match your Mould
- Customer to check for Mould size to fit into Machine Dimensions

Wide Skates for Platen Supports
- Reduced Platen Deflection
- Enhanced Life of Tie-bars
- Higher Mould Carrying Capacity

Closed Loop PID Temperature Control
- Provides precise Temperature Control
- Excellent Process Control & Stability

Endure-II - Advanced User Friendly Control
- Ergonomic Layout
- High Speed Microprocessor
- Direct Access Menu Keys
- Graphical Presentation of Machine Features
- Self Diagnostic & Fault Finding Capability
- Parameter Entry in Absolute Value
- Central Monitoring System
- Statistical Process Control (SPC)
**HYDRON SERVO 2K**

2 Component Hydraulic Injection Moulding Machine

**Servo Powered Hydraulic Direct Locking Ram Type Machine**

- **Hollow Headless Ram**
  - Minimized Friction - Faster Clamp Movement

- **Vertical Electric Secondary Injection Unit**
  - Injection by Dedicated Servo Motor
  - Refilling by Dedicated Servo Motor

- **Mono Seal & No Piston Rings**
  - Long Life of Sealing System
  - Ease of Maintenance

- **Fully Guided Knock Out Bar**
  - Provides Multi Point Ejection & Even Ejection Force

- **Cartridge Valves**
  - Smooth Operations
  - Low Energy Dissipation

- **Finite Element Analysis (FEA) for Machine Components**
  - Provides Maximum Strength to Weight Ratio

- **Additional Control Features**
  - Parameter Entry in Absolute Values
  - User Customized Menu
  - On Board I/O Diagnosis
  - Mould Data Storage - 80 Nos.

**Hydraulic Valves Mounted Close to Actuators**
- Fast Response From Actuator to Control Unit

**More Use of Hoses**
- Quieter Machine Operation

**Can Bus System with Servo System**
- Significant effect on overall Machine Performance as Servo System is Faster double than DFE System
- Better Energy Efficiency as compare to DFE + VFD

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**Servo Motor**

The New Edge Technology

**Replacement of Standard Induction Motor with Servo Motor**

**Reduced Heat Generation**
- Only delivers hydraulic oil as it is needed
- Reduces 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**
- 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 & 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 conditions
- Low operating noise

**Standard Induction Motor**
(3 Phase Asynchronous Motor)

**Servo Motor**
(3 Phase Synchronous Motor with Permanent Magnets)
## Technical Specifications

### MODEL

**HYDRON SERVO 2K 150**

<table>
<thead>
<tr>
<th>INTERNATIONAL SIZE</th>
<th>HYDRON SERVO 2K 150</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAIN INJECTION UNIT</strong></td>
<td><strong>SECONDARY INJECTION UNIT</strong></td>
</tr>
<tr>
<td><strong>POWER PACK</strong></td>
<td><strong>POWER PACK</strong></td>
</tr>
<tr>
<td><strong>INJECTION UNIT</strong></td>
<td><strong>INJECTION UNIT</strong></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td><strong>B</strong></td>
</tr>
<tr>
<td><strong>INJECTION CAPACITY (GVPS)</strong></td>
<td>11.5 kW</td>
</tr>
<tr>
<td><strong>THEORETICAL DISPLACEMENT</strong></td>
<td>259</td>
</tr>
<tr>
<td><strong>INJECTION PRESSURE</strong></td>
<td>2592</td>
</tr>
<tr>
<td><strong>MAXIMUM INJECTION RATE</strong></td>
<td>239</td>
</tr>
<tr>
<td><strong>TOTAL HEAT CAPACITY</strong></td>
<td>11.3</td>
</tr>
<tr>
<td><strong>TOTAL OIL TANK CAPACITY</strong></td>
<td>415</td>
</tr>
<tr>
<td><strong>WATER REQUIREMENT (Inlet temp. 29°C)</strong></td>
<td>75</td>
</tr>
<tr>
<td><strong>CLAMP FORCE</strong></td>
<td>150</td>
</tr>
<tr>
<td><strong>CLAMP STROKE</strong></td>
<td>625</td>
</tr>
<tr>
<td><strong>MAXIMUM DAYLIGHT</strong></td>
<td>825</td>
</tr>
<tr>
<td><strong>MAXIMUM MOLD WEIGHT</strong></td>
<td>2600</td>
</tr>
<tr>
<td><strong>PLATE SIZE (H x V)</strong></td>
<td>715 x 715</td>
</tr>
<tr>
<td><strong>DISTANCE BETWEEN TIE ROD</strong></td>
<td>510 x 510</td>
</tr>
<tr>
<td><strong>TIE ROD DIAMETER</strong></td>
<td>80</td>
</tr>
<tr>
<td><strong>EJECTOR FORCE</strong></td>
<td>4.5</td>
</tr>
<tr>
<td><strong>MOULD WEIGHT CAPACITY</strong></td>
<td>1500</td>
</tr>
</tbody>
</table>

### Side Holes

- M16x40 MM DEEP (12 NOS)
- Ø27.0 THRU, (12) HOLES & K/O BAR
- Ø160.0 (+0.040/0.000) WITHOUT LOCATING RING
- Ø125.0 (+0.040/0.00) WITH LOCATING RING

### Important Criteria for Machine Selection:
- Customer to arrange for Rotary Table or Mould Indexing Mechanism built-in to Mould
- Please check Horizontal & Vertical movement of Secondary Injection Unit to match your Mould
- Please check Horizontal & Vertical movement of Indexing Mechanism inbuilt into Mould

### Machine Dimensions (L x W x H) in mm

- 5.55 x 1.53 x 3.58
- 5.55 x 1.53 x 3.58
- 5.79 x 1.53 x 3.58

### Note:

- Under Specified Conditions

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### MODEL

**HYDRON SERVO 2K 200**

<table>
<thead>
<tr>
<th>INTERNATIONAL SIZE</th>
<th>HYDRON SERVO 2K 200</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MAIN INJECTION UNIT</strong></td>
<td><strong>SECONDARY INJECTION UNIT</strong></td>
</tr>
<tr>
<td><strong>POWER PACK</strong></td>
<td><strong>POWER PACK</strong></td>
</tr>
<tr>
<td><strong>INJECTION UNIT</strong></td>
<td><strong>INJECTION UNIT</strong></td>
</tr>
<tr>
<td><strong>A</strong></td>
<td><strong>B</strong></td>
</tr>
<tr>
<td><strong>INJECTION CAPACITY (GVPS)</strong></td>
<td>13.6 kW</td>
</tr>
<tr>
<td><strong>THEORETICAL DISPLACEMENT</strong></td>
<td>380</td>
</tr>
<tr>
<td><strong>INJECTION PRESSURE</strong></td>
<td>2192</td>
</tr>
<tr>
<td><strong>MAXIMUM INJECTION RATE</strong></td>
<td>320</td>
</tr>
<tr>
<td><strong>TOTAL HEAT CAPACITY</strong></td>
<td>13.1</td>
</tr>
<tr>
<td><strong>TOTAL OIL TANK CAPACITY</strong></td>
<td>525</td>
</tr>
<tr>
<td><strong>WATER REQUIREMENT (Inlet temp. 29°C)</strong></td>
<td>150</td>
</tr>
<tr>
<td><strong>CLAMP FORCE</strong></td>
<td>200</td>
</tr>
<tr>
<td><strong>CLAMP STROKE</strong></td>
<td>750</td>
</tr>
<tr>
<td><strong>MAXIMUM DAYLIGHT</strong></td>
<td>950</td>
</tr>
<tr>
<td><strong>MAXIMUM MOLD WEIGHT</strong></td>
<td>2600</td>
</tr>
<tr>
<td><strong>PLATE SIZE (H x V)</strong></td>
<td>560 x 560</td>
</tr>
<tr>
<td><strong>DISTANCE BETWEEN TIE ROD</strong></td>
<td>560 x 560</td>
</tr>
<tr>
<td><strong>TIE ROD DIAMETER</strong></td>
<td>95</td>
</tr>
<tr>
<td><strong>EJECTOR FORCE</strong></td>
<td>7.5</td>
</tr>
<tr>
<td><strong>MOULD WEIGHT CAPACITY</strong></td>
<td>1900</td>
</tr>
</tbody>
</table>

### Side Holes

- M20x50 DEEP (84 HOLES ON STATIONARY PLATEN)
- M20x50 DEEP (76 HOLES ON MOVING PLATEN)

### Important Criteria for Machine Selection:
- Customer to arrange for Rotary Table or Mould Indexing Mechanism built-in to Mould
- Please check Horizontal & Vertical movement of Secondary Injection Unit to match your Mould
- Customer to check for Mould size to fit into Machine Dimensions

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### Notes:

- Under Specified Conditions

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**HYDRON SERVO 2K**

- 2 Component Hydraulic Injection Moulding Machine
- Under Specified Conditions

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**Component Dimensions in mm**

- **A** MINIMUM DEEP (.015 HOLES ON MOVING PLATE)
- **B** MINIMUM DEEP (.015 HOLES ON STATIONARY PLATE)
- **C** MINIMUM DEEP (.015 HOLES ON STATIONARY PLATE)
- **D** MINIMUM DEEP (.015 HOLES ON STATIONARY PLATE)
## Technical Specifications

### HYDRON SERVO 2K 250

**Model:** 2 Component Hydraulic Injection Moulding Machine

### International Size

<table>
<thead>
<tr>
<th>Feature</th>
<th>Unit 1540</th>
<th>Unit 2290</th>
<th>Unit 3470</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Pack</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Injection Unit</strong></td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
</tr>
<tr>
<td><strong>Connected Load A</strong> (Main Unit)</td>
<td>25.1</td>
<td>25.1</td>
<td>25.1</td>
</tr>
<tr>
<td><strong>Connected Load B</strong> (Secondary Unit)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Oil Tank Capacity</strong></td>
<td>ltr</td>
<td>ltr</td>
<td>ltr</td>
</tr>
<tr>
<td><strong>Main Unit Hopper Capacity</strong></td>
<td>kg</td>
<td>60</td>
<td></td>
</tr>
<tr>
<td><strong>Machine Dimensions (L x W x H)</strong></td>
<td>m</td>
<td>8.05 x 2.01 x 3.88</td>
<td>8.57 x 2.01 x 3.88</td>
</tr>
<tr>
<td><strong>Machine Weight</strong></td>
<td>kg</td>
<td>15000</td>
<td>16000</td>
</tr>
</tbody>
</table>

### Important Criteria for Machine Selection:

- Customer to arrange for 'Rotary Table or Mould Indexing Mechanism' inbuilt into Mould
- Please check horizontal & vertical movement of Secondary Injection Unit to match your mould
- Machine Dimensions

### HYDRON SERVO 2K 350

**Model:** 2 Component Hydraulic Injection Moulding Machine

### International Size

<table>
<thead>
<tr>
<th>Feature</th>
<th>Unit 1540</th>
<th>Unit 2290</th>
<th>Unit 3470</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Power Pack</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Injection Unit</strong></td>
<td>kW</td>
<td>kW</td>
<td>kW</td>
</tr>
<tr>
<td><strong>Connected Load A</strong> (Main Unit)</td>
<td>25.1</td>
<td>25.1</td>
<td>25.1</td>
</tr>
<tr>
<td><strong>Connected Load B</strong> (Secondary Unit)</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
<tr>
<td><strong>Total Oil Tank Capacity</strong></td>
<td>ltr</td>
<td>ltr</td>
<td>ltr</td>
</tr>
<tr>
<td><strong>Main Unit Hopper Capacity</strong></td>
<td>kg</td>
<td>3600</td>
<td></td>
</tr>
<tr>
<td><strong>Machine Dimensions (L x W x H)</strong></td>
<td>m</td>
<td>8.05 x 2.01 x 3.88</td>
<td>8.57 x 2.01 x 3.88</td>
</tr>
<tr>
<td><strong>Machine Weight</strong></td>
<td>kg</td>
<td>15000</td>
<td>16000</td>
</tr>
</tbody>
</table>

### Important Criteria for Machine Selection:

- Customer to arrange for 'Rotary Table or Mould Indexing Mechanism' inbuilt into Mould
- Please check horizontal & vertical movement of Secondary Injection Unit to match your mould
- Machine Dimensions
## Technical Specifications

### Vertical IU Nozzle Position Data

<table>
<thead>
<tr>
<th>Model</th>
<th>HYDRON SERVO 2K 450</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>MODEL</strong></td>
<td><strong>HYDRON SERVO 2K 450</strong></td>
</tr>
<tr>
<td><strong>INTERNATIONAL SIZE</strong></td>
<td><strong>4000 - 2290</strong></td>
</tr>
<tr>
<td><strong>POWER PACK</strong></td>
<td><strong>9.8 kW</strong></td>
</tr>
<tr>
<td><strong>INJECTION UNIT</strong></td>
<td><strong>9.8 kW</strong></td>
</tr>
<tr>
<td><strong>INJECTION PRESSURE MAX.</strong></td>
<td><strong>2238 bar</strong></td>
</tr>
<tr>
<td><strong>INJECTION SCREW STROKE</strong></td>
<td><strong>320 mm</strong></td>
</tr>
<tr>
<td><strong>SCREW DIAMETER</strong></td>
<td><strong>50 mm</strong></td>
</tr>
<tr>
<td><strong>Screw Pitch</strong></td>
<td><strong>88 mm</strong></td>
</tr>
<tr>
<td><strong>SCREW SPEED</strong></td>
<td><strong>25.7 rpm</strong></td>
</tr>
<tr>
<td><strong>SCREW TORQUE</strong></td>
<td><strong>780 Nm</strong></td>
</tr>
<tr>
<td><strong>PLASTICIZING RATE (GPPS)</strong></td>
<td><strong>2290 gm/sec</strong></td>
</tr>
<tr>
<td><strong>PLASTICIZING RATE (BARRIER SCREW)</strong></td>
<td><strong>1784 gm/sec</strong></td>
</tr>
<tr>
<td><strong>NO. OF PYROMETERS (BARREL+NOZZLE)</strong></td>
<td><strong>4+1</strong></td>
</tr>
<tr>
<td><strong>TOTAL HEAT CAPACITY</strong></td>
<td><strong>49.6 kW</strong></td>
</tr>
<tr>
<td><strong>CLAMP UNIT</strong></td>
<td><strong>450 ton</strong></td>
</tr>
<tr>
<td><strong>CLAMP STROKE</strong></td>
<td><strong>1100 mm</strong></td>
</tr>
<tr>
<td><strong>MINIMUM MOULD HEIGHT</strong></td>
<td><strong>400 mm</strong></td>
</tr>
<tr>
<td><strong>PLATEN SIZE (H x V)</strong></td>
<td><strong>1200 x 1200 mm</strong></td>
</tr>
<tr>
<td><strong>EJECTOR STROKE</strong></td>
<td><strong>200 mm</strong></td>
</tr>
<tr>
<td><strong>EJECTOR FORCE</strong></td>
<td><strong>11.5 ton</strong></td>
</tr>
<tr>
<td><strong>MOLD WEARING CAPACITY</strong></td>
<td><strong>5500 kg</strong></td>
</tr>
</tbody>
</table>

### Important Criterion for Machine Selection:
- Customer to arrange for Rotory Table or Mould Indexing Mechanism inbuilt into Mould
- Please check Horizontal & Vertical movement of Secondary Injection Unit to match your Mould
- Customer to check for Mould Size to fit into Machine Dimensions

---

### Vertical Secondary Injection Unit - 120 V

<table>
<thead>
<tr>
<th>Model</th>
<th>Dimension A</th>
<th>Dimension B</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Max. (mm)</strong></td>
<td><strong>Min. (mm)</strong></td>
<td><strong>Max. (mm)</strong></td>
</tr>
<tr>
<td>HYDRON SERVO 2K 150</td>
<td>300 84</td>
<td>447 197</td>
</tr>
<tr>
<td>HYDRON SERVO 2K 200</td>
<td>300 84</td>
<td>506 256</td>
</tr>
<tr>
<td>HYDRON SERVO 2K 250</td>
<td>300 84</td>
<td>538 288</td>
</tr>
<tr>
<td>HYDRON SERVO 2K 350</td>
<td>300 84</td>
<td>596 348</td>
</tr>
<tr>
<td>HYDRON SERVO 2K 450</td>
<td>300 84</td>
<td>693 443</td>
</tr>
</tbody>
</table>

**Note**: Vertical IU Nozzle Position Data for SEIU 300 V shall be provided upon request.
HYDRON SERVO 2K
2 Component Hydraulic Injection Moulding Machine

Design Advantages & Features

CLAMP
• Hollow Headless Ram with Mono Seal & No Piston Rings
• Large Profile Designed for Fast Tonnage Build-up
• Rapid Traverse Cylinders
• Consil Stream Rod Nuts & Controlled Stress on Tie Rods
• Adjustable moving Platen Skates
• Rigid Cast Platen with FSA
• Adjustable Pressure setting of Closing & Opening Stage
• Proportional Speed Control with S/Closing & S 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 Mould Protection with Try Again Circuit
• Stage Wise Actual Time Display
• Insert Moulding Program
• Actual Tonnage Display on Screen

CONTROLS
• 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 up to 9 Pulses
• Intermediate Retract Set Point
• Ejector Stay Forward & Forward Dwell Timer

MAIN INJECTION UNIT
• 6 Stage Injection Velocity & 15 Stage Injection Pressure Profile
• 5 Stage Screw Speed & 5 Stage Back Pressure Control
• Digital setting of Extruder RPM & Digital Read out of Actual RPM
• Wide Choice of Injection Units with A-B-Screw/Barrel Combinations
• Easy Injection Unit Swivelling
• Switch Over from Fill to Pack based on Position or Time
• Linear Position Transducer for Accurate Injection Position Control
• Injection Decompression Before/After Refilling or Both
• Semi-Auto Purple. Cold Slug removal & Intrusion Moulding Programs
• Aluminium Chequered Plate below Purge Area
• Sprue Break with Timer
• Injection start, Suck-back & Melt Decompression - Delay Timer
• Graphically Adjustable Alarm Bands for Injection Pressure
• Sliding Hopper

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
• Heat standby after set number of Cycles
• Cool Timer for Cold Start Protection
• High / Low Temperature Alarm
• Set & Actual Temperature Data with Bar Graph

ELECTRIC SECONDARY INJECTION UNIT
• Injection by Dedicated Servo Motor
• Refilling by Dedicated Servo Motor
• Separate Controller for Secondary Injection Unit
• 6 Stage Injection Velocity & 10 Stage Injection Pressure Profile
• 3 Stage Screw Speed & 3 Stage Back Pressure Control
• Digital setting of Extruder RPM & Digital Read out of Actual RPM
• Wide Choice of Injection Units with A-B-C Screw/Barrel Combinations
• Switch Over from Fill to Pack based on Position or Time
• Accurate Injection Position Control through Direct Servo
• Injection Decompression Before/After Refilling or Both
• Injection start, Suck-back & Melt Decompression - Delay Timer
• Auto lubrication on Secondary injection Unit with Monitoring
• Mould Data Storage
• Process Data Monitoring
• Audible Alarm for Filter Clogging

HYDRAULICS
• Auto shut down
• Soft Keys for Fast Access of Select Menus
• Over View Screen with Graphical Display of Machine Functions
• Process Mode: Functions with its Co-fuctions on a Single Key Press
• Change Log Menu: logs last 100 Set Points Changes with Time & Date
• Timer Precision in 0.01 Second
• I/O diagnosis - Analog & Digital
• Process Data Monitoring
• Visual & Audible Alarm
• Note Pad & Maintenance Scheduling
• Daily Production Data of Last 1 Year
• Graphically Presentation of Last 48 Hours Production
• 80 Mould Data Storage

AVAILABLE OPTIONS
• Air Ejection
• Hydraulic Core pull
• Feed Throat Temperature Control
• PID Oil Temperature Control
• Part Drop Detect for Single Cylinder
• Water Battery with Temperature Indicator
• Water Manifolds
• Robot Interface (SPI / EUROMAP)
• Extra Heating Zones
• Needle Contact Force by Pressure Switch
• Jam Bar
• T-List Platters
• Extended Daylight with Ram Spacer
• Eject Return Limit Switch
• Insulated Heater Band
• Bimetallic Barrel & Hardened / Coated Screw

Note: All specifications and prices are subject to change without prior notice. Actual figures may vary due to local market conditions. Specifications and prices are based on the latest data available at the time of production. Photographs 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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