

Manufacturer :  
SEPRO ROBOTIQUE  
Rue Bessemer  
Z.I Les Ajoncs  
F85002 La Roche-sur-Yon Cedex

Distributor :  
SEPRO ROBOTIQUE Distribution  
Rue Bessemer  
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F85002 La Roche-sur-Yon Cedex

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Import company :  
SEPRO ROBOTIQUE UK  
2, Fitzhamon Court Featherstone Road  
WOLVERTON MILL  
MILTON KEYNES MK12 6LB (ENGLAND)

<p style="text-align: center;"><b>EQUIPMENT CHARACTERISTICS</b> ROBOT MODEL : <b>SR 4020 PROGRESS VISUAL</b> Serial number : <b>P11437</b> </p>
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**STANDARD VERSION**

- \* **Application**..... : Load handling
- \* **Mechanical Structure** ..... : Cartesian (See File D)
- \* **Mechanical model**..... : **SR 4020 PROGRESS**
  - . Robot weight (kilograms)..... : 450 kg
  - . Nominal load (kilograms)..... : 6 kg
  - . Outer dimensions, Y carriage and Z arm retracted (millimetres)..... : 3030 x 1630 x 1285 mm
  - . Pneumatic operating pressure (bars)..... : 6 bars  $\pm$  10%
  - . Maximum admissible pneumatic pressure (bars)..... : 7 bars
  - . Nominal compressed air consumption (litres per minute)..... : 140 l/min
  - . Max. instant compressed air consumption (litres per minute) ..... : 225 l/min
- \* **Electronic control system Model**..... : **VISUAL**
  - . Weight of control cabinet (kilograms)..... : 200 kg
  - . Outer dimensions (millimetres)..... : 750 x 700 x 2300mm
  - . Operating power supply voltage (volts)..... : 415 V  $\pm$  10% three-phase w/out neutral
  - . Operating frequency (Hertz)..... : 50/60 Hz
  - . Nominal power (kilovolt Amperes)..... : 3 kVA
  - . Maximum power consumption ..... : depends on robot cycle
  - . Programming..... : Manual data entry
  - . RAM internal program memory storage..... : 8 Mb
  - . Input / Output interface on the robot ..... : 1 x 16 inputs / 16 outputs modules  
..... : 1 x 8 inputs / 8 outputs modules  
(digital optocoupled input, 24 VDC 10mA/ digital static output, 6 to 35 VDC 500mA)
  - . Printer link interface..... : Centronics ® Standard
  - . IMM link interface (real-time and digital) ..... : Connection to EUROMAP 12 standard
  - . PC ® link interface..... : RS 232 serial link for program editor

**ENVIRONMENT** (See file H)

- . Storage temperature / transport (degrees Celsius)..... : -25°C to + 55°C
- . Operating temperature (degrees Celsius)..... : +5°C to + 40°C
- . Relative humidity (percentage)..... : 30 to 95% without condensation
- . Maximum altitude (metres)..... : 2000m
- . Electromagnetic compatibility as per CEI 801 :
  - . Radio frequency in common mode (volts)..... : 10 V
  - . Electrostatic discharges (kilovolts)..... : 8 kV
  - . Rapid transients on power supply (kilovolts)..... : 4 kV
  - . Rapid transients on inputs/outputs by coupling (kilovolts)..... : 2 kV
  - . Symmetrical high-energy pulses (kilovolts)..... : 1 kV
  - . Asymmetrical high-energy pulses (kilovolts)..... : 2 kV
  - . Power transients at 1 Hz (milliseconds)..... : 10 ms
  - . Slow voltage variations of 1 volt per second..... : -15% to + 10%
- . Sound level (See file X):
  - . Acoustic pressure level (weighted continuous decibel A)..... : 70 dbA

**HORIZONTAL MOVEMENT OF CARRIAGE ON BEAM : X**

- . Stroke (millimetres)..... : 2000 mm
- . Motorization..... : Asynchronous
- . Instantaneous linear speed (metres per second)..... : 1.3 m/s
- . Stop control..... : PTP linear numerical
- . Display resolution (millimetres)..... : 0.1 mm
- . Positioning precision  $\Delta L_x$  (millimetres)..... :  $\pm 1$  mm
- . Placing repeatability rx (millimetres)..... :  $\pm 0.5$  mm
- . Unloading side..... : see layout drawing (file D)

**HORIZONTAL DEMOULDING MOVEMENT : Y**

- . Stroke (millimetres)..... : 600 mm
- . Motorization..... : Asynchronous
- . Instantaneous linear speed (metres per second)..... : 1 m/s
- . Stop control..... : PTP linear numerical
- . Display resolution (millimetres)..... : 0.1 mm
- . Positioning precision  $\Delta L_y$  (millimetres)..... :  $\pm 1$  mm
- . Placing repeatability ry (millimetres)..... :  $\pm 0.5$  mm

**VERTICAL MOVEMENT : Z**

- . Stroke (millimetres)..... : 1250 mm
- . Motorization..... : Servo-controlled brushless
- . Instantaneous linear speed (metres per second)..... : 5 m/s
- . Stop control..... : PTP linear numerical
- . Display resolution (millimetres)..... : 0.1 mm
- . Positioning precision  $\Delta L_z$  (millimetres)..... :  $\pm 0.5$  mm
- . Placing repeatability rz (millimetres)..... :  $\pm 0.1$  mm

**WRIST ROTATIONS**

- . Standard R1 pneumatic rotation (degrees)..... : 0 - 90°
- . Pneumatic R2 rotation mounted on R1 (degrees)..... : 0 - 180° or 0 - 90°

**PNEUMATIC EQUIPMENT**

- . Removal from platen side..... : fixed and mobile through manual configuration
- . Control system :
  - . Vacuum and pressure..... : 1