

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

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

Tel.: (33) 251.45.47.00 Production Division
 Tel.: (33) 251.45.46.46 After Sales Service

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EQUIPMENT CHARACTERISTICS

ROBOT MODEL : SR 4040 S3 VISUAL

Serial number : P12900



STANDARD VERSION

- * **Application** : Load handling
- * **Mechanical Structure**..... : Cartesian (See File D)
- * **Mechanical model**..... : **SR 4040 S3**
 - . Robot weight (kilograms) : 850kg
 - . Nominal load (kilograms) : 20 kg
 - . Outer dimensions, Y carriage and Z arm retracted (millimetres)..... : 3910*2400*1520 mm
 - . Pneumatic operating pressure (bars) : 6 bars \pm 10%
 - . Maximum admissible pneumatic pressure (bars)..... : 7 bars
 - . Nominal compressed air consumption (litres per minute) : 200 l/min
 - . Max. instant compressed air consumption (litres per minute) : 800 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)..... : 380 V \pm 10% three-phase w/out neutral
 - . Operating frequency (Hertz) : 50/60 Hz
 - . Nominal power (kilovolt Amperes) : 5 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..... : 2 16 inputs / 16 outputs modules
(digital optocoupled input, 24 VDC 10mA/ digital static output, 6 to 35 VDC 500mA)
 - . Input / Output interface in the cabinet : 1 16 inputs / 16 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) : 2500 mm
- . Motorization : Servo-controlled brushless
- . Instantaneous linear speed (metres per second)..... : 3.5 m/s
- . Stop control..... : PTP linear numerical
- . Display resolution (millimetres) : 0.1 mm
- . Positioning precision ΔL_x (millimetres) : ± 0.5 mm
- . Placing repeatability rx (millimetres) : ± 0.1 mm
- . Unloading side : see layout drawing (file D)
- . Spacer between robot and platen : fixed under beam

HORIZONTAL DEMOULDING MOVEMENT : Y

- . Stroke (millimetres) : 1000 mm
- . Motorization : Servo-controlled brushless
- . Instantaneous linear speed (metres per second)..... : 3.2 m/s
- . Stop control..... : PTP linear numerical
- . Display resolution (millimetres) : 0.1 mm
- . Positioning precision ΔL_y (millimetres) : ± 0.5 mm
- . Placing repeatability ry (millimetres) : ± 0.1 mm

VERTICAL MOVEMENT : Z

- . Stroke (millimetres) : 1500 mm
- . Motorization : Servo-controlled brushless
- . Instantaneous linear speed (metres per second)..... : 4 m/s
- . Stop control..... : PTP linear numerical
- . Display resolution (millimetres) : 0.1 mm
- . Positioning precision ΔL_z (millimetres) : ± 0.5 mm
- . Placing repeatability rz (millimetres)..... : ± 0.1 mm

WRIST ROTATIONS

- . Standard R1 pneumatic rotation (degrees)..... : 0 - 90°
- . Pneumatic R2 rotation mounted on R1 (degrees) : 0 - 180° or 0 - 90°
- . Retractable intermediate stop on R2 : 0 - 180° and 0 - 90°
- . Flexible ancillary unit on axes : Y and Z

PNEUMATIC EQUIPMENT

- . Removing from platen side : fixed and mobile through manual configuration
- . Control system :
 - . Vacuum and pressure : 2
 - . Vacuum : /
 - . Bistable pressure..... : 2
 - . Monostable pressure..... : /

PERIPHERALS

Safety fence made in profile and mesh with a door and a shuttle for a conveyor belt

Conversion between Metric and U.S. Customary units

Weight

| | | |
|------------------------|---|---------------------|
| 1 kilogram (kg) | = | 2.21 pounds (lbs) |
| 1 metric ton (1000 kg) | = | 1.10 short ton |
| 1 pound (lb) | = | 0.45 kilograms (kg) |
| 1 short ton (2000 lbs) | = | 0.91 metric tons |

Distance

| | | |
|-------------------|---|------------------------|
| 1 millimeter (mm) | = | 0.04 inches |
| 1 centimeter (cm) | = | 0.39 inches |
| 1 meter (m) | = | 3.28 feet |
| | = | 1.09 yards |
| 1 kilometer (km) | = | 0.62 miles |
| 1 inch | = | 25.4 millimeters (mm) |
| | = | 2.54 centimeters (cm) |
| 1 foot | = | 30.48 centimeters (cm) |
| 1 yard | = | 0.91 meters (m) |
| 1 mile | = | 1.61 kilometers (km) |

Temperature conversion between Celsius and Fahrenheit

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$$

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$$

Conversion entre les unités Métriques et les unités américaines

Poids

| | | |
|----------------------------|---|-----------------------|
| 1 kilogramme (kg) | = | 2.21 livres (lbs) |
| 1 tonne métrique (1000 kg) | = | 1.10 short ton |
| 1 livre (lb) | = | 0.45 kilogrammes (kg) |
| 1 short ton (2000 lbs) | = | 0.91 tonne métrique |

Distance

| | | |
|-------------------|---|------------------------|
| 1 millimètre (mm) | = | 0.04 pouces |
| 1 centimètre (cm) | = | 0.39 pouces |
| 1 mètre (m) | = | 3.28 pieds |
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| 1 kilomètre (km) | = | 0.62 miles |
| 1 pouce | = | 25.4 millimètres (mm) |
| | = | 2.54 centimètres (cm) |
| 1 pied | = | 30.48 centimètres (cm) |
| 1 yard | = | 0.91 mètres (m) |
| 1 mile | = | 1.61 kilomètres (km) |

Conversion des températures : Celsius et Fahrenheit

$$^{\circ}\text{C} = (^{\circ}\text{F} - 32) / 1.8$$

$$^{\circ}\text{F} = (^{\circ}\text{C} \times 1.8) + 32$$