

# S-line

## 3 AND 5-AXIS ROBOTS FOR INJECTION MOLDING MACHINES FROM 100 TO 1000T

Sevro Group has completed a redesign of its premium robots sized for plastic injection-molding machines with up to 1000 tons of clamping force.

Three new S-Line robot models have been designed to serve molding machines from 100 to 1000 tons of clamping force, with three modular options:

- a basic 3-axis servo-driven configuration
- with additional servo wrist rotations for a total of 5 axes of CNC motion
- or in special application-specific configurations such as a medical version adapted for cleanroom environments

The S Line robots are driven by the new Visual 4 control, making them suitable for the full range of injection-molding automation applications, including multi-machine, multi-robot manufacturing cells.

- New controller Visual 4
- 15% faster than the last generation
- 200mm extra demoulding stroke
- 20% increased payload capacity and 40% in a heavy load configuration
- More rigidity and precision
- New modern design
- LED status indicators on mobile



SIX MODELS TO CHOOSE FROM

S-15  
S-15X

S-25  
S-25X

S-35  
S-35X

## LED STATUS INDICATORS

The aggressive, modern aesthetic design of the new robots includes multicolor LED lights on the end of the robot mobile.

This feature, added in response to frequent customer requests, makes it easy for users to see the exact operational status of the robot even from across the shop floor.

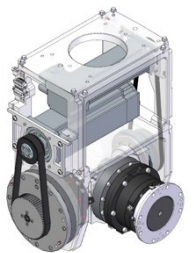


## COMPACT BEAM-MOUNTED CONTROL CABINET

Better accessibility and maintenance. The compact control cabinet is mounted on the end of the beam as standard. Its innovative feature is its flexible installation, as it can be installed on the left or right, depending on your setup, to free floor space.

## S-LINE X : THE SERVO-WRIST

The servo-driven wrist on the new S-Line robots is more compact than previous designs and all 5-axis versions can be equipped with the R3 rotation (rotation around vertical arm), which actually adds a 6th axis of motion for greater freedom of movement inside the mold space or outside the molding machine for secondary operations.



Available in three variations to fit the three sizes of robots and their needs.

- Designed for the plastic injection industry: reduced footprint and high payload capacities.
- High performances: precision, speed and torque.
- Focus pushed upon reliability and maintainability.
- Now integrated on all maintenance contract offers.

## THE COMPACT Z AXIS CONTROL BOX

- Up to 8 vacuum and 8 pressure circuits as a standard option,
- Pneumatic or servo rotation control,
- Available on all robots of the S-Line range.



## SMART LUBRICATION SYSTEM

- Easy and quick maintenance,
- Requires an annual refill only

## Y FREE MOTION : ALWAYS AVAILABLE!

The Y free function is a Sepro manufacturing standard. It simplifies the programming of part accompaniment during ejection and can reduce the cost and wear of your EOATs (simplified design).

# S-LINE

S-15	S-25	S-35
Mold clamping force (T - Metric Tons)		
100 - 300	250 - 600	450 - 1000
Horizontal stroke (mm) - Can be adaptable by 500mm steps		
1000 - 4000	1500 - 6000	2000 - 7000
<i>Maximum instantaneous speed (m/s)</i>		
3	3	3
Demold stroke (mm)		
500   700 (LD)	700   900 (LD)	900   1100 (LD)
<i>Maximum instantaneous speed (m/s)</i>		
2	2	2
Vertical stroke (mm) - Direct arm		
1000   1200	1400	1600
<i>Maximum instantaneous speed (m/s)</i>		
4	4	4
Maximum load (parts + EOAT) (kg)		
6	12	20
R1 pneumatic rotation (0-90°)		
✓	✓	✓
R1 pneumatic rotation (0-90°) + R2 pneumatic rotation (0-90-180°)		
✓	✓	✓
Part grip - Vacuum or pressure circuit		
N/A	N/A	N/A
Compact beam-mounted control cabinet		
✓	✓	✓
Smart vacuum switch		
✓	✓	✓
ECO Air function		
✓	✓	✓
Control system		
Visual 4 Plus	Visual 4 Plus	Visual 4 Plus

## OPTIONS

Part grip - Vacuum + pressure circuit MAX in standard configuration

8V + 8P		
Vertical stroke (mm) - Telescopic arm		
1000   1200   1400	1400   1600	1600   1800
<i>Maximum instantaneous speed (m/s)</i>		
3	3	3
Floor-standing control cabinet		
✓	✓	✓
Control system		
Visual 4 Pro	Visual 4 Pro	Visual 4 Pro
Cleanroom specifications		
<b>S-15</b> med	<b>S-25</b> med	<b>S-35</b> med

# S-LINE X

S-15 X	S-25 X	S-35 X
Mold clamping force (T - Metric Tons)		
100 - 300	250 - 600	450 - 1000
Horizontal stroke (mm) - Can be adaptable by 500mm steps		
1000 - 4000	1500 - 6000	2000 - 7000
<i>Maximum instantaneous speed (m/s)</i>		
3	3	3
Demold stroke (mm)		
500   700 (LD)	700   900 (LD)	900   1100 (LD)
<i>Maximum instantaneous speed (m/s)</i>		
2	2	2
Vertical stroke (mm) - Direct arm		
1000   1200	1400	1600
<i>Maximum instantaneous speed (m/s)</i>		
4	4	4
Maximum load (parts + EOAT) (kg)		
6   8 (HL)	12   15 (HL)	20   25 (HL)
R1 servo rotation (0-180°)		
✓	✓	✓
R1 servo rotation (0-180°) + R2 servo rotation (0-300°)		
✓	✓	✓
Part grip - Vacuum or pressure circuit		
N/A	N/A	N/A
Compact beam-mounted control cabinet		
✓	✓	✓
Smart vacuum switch		
✓	✓	✓
ECO Air function		
✓	✓	✓
Control system		
Visual 4 Pro	Visual 4 Pro	Visual 4 Pro

## OPTIONS

Part grip - Vacuum + pressure circuit MAX in standard configuration

8V + 8P		
Vertical stroke (mm) - Telescopic arm		
1000   1200   1400	1400   1600	1600   1800
<i>Maximum instantaneous speed (m/s)</i>		
3	3	3
Floor-standing control cabinet		
✓	✓	✓
Cleanroom specifications		
S-15 X med	S-25 X med	S-35 X med



## VISUAL 4 : MORE POWERFUL, MORE CONNECTABLE AND EASIER TO USE

Visual 4 represents the latest generation of automation-control technology developed by Sepro specifically for plastics injection molding. This project involved the development of new hardware and software solutions with enhanced features. It is entirely compatible with existing Sepro systems and programming.

Visual controls will require only a short training session to become familiar with the new platform. This new HMI offers a simplified and user-friendly interface for part removal and downstream operation programming around the injection molding machine.

- **More intuitive** improved navigation and ergonomics 25% lighter, 2 haptic shortcut buttons, quick sub-menu access...
- **More powerful**: Intel x86, up to 10 axis, 1000 programs
- **More evolutive**: standard programming protocol, html5
- **More secure**: updated cybersecurity features, Plug & Play system, secure authentication and user profile settings
- **More interconnectable** for the automation of tomorrow



## REDESIGNED OPERATOR-INTERFACE PENDANT

One of the first things one will notice about the new Visual 4 HMI is that the pendant is 25% lighter than its Visual 3 predecessor. The weight saving is the result, primarily, of moving the CPU board out of the pendant and into the main robot-control cabinet. This also results in greater data security, since critical components cannot be damaged if the pendant is dropped or otherwise compromised.

In addition to enhanced navigation and ergonomic features it also uses a powerful processor to control up to ten axes of motion, making it ideal for managing even complex molding cells, which can involve one or more than one IMM, and multiple robots in differing configurations, plus peripheral equipment that performs secondary functions like assembly, marking, inspection, packaging, and so on. It can store up to 1000 mold programs for easy recall.

**The new Visual 4 control will be available in three variations with increasing capabilities for the full range of injection-molding applications:**



is the basic configuration suits simple pick-and-place applications, providing control of up to 5 axes and 24 inputs/outputs (I/Os).



supports more mold programs, with more I/Os, and allowing more connectivity to peripheral equipment (conveyors, sortation, etc.).



is aimed at application-specific molding cells involving multiple robots, peripheral equipment and robots with special configurations.



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