

# Compact Ejectors SCPSc-L / SCPSi-L

Suction rate from 227 l/min to 323 l/min



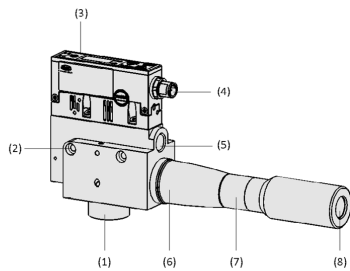
## Suitability for industry specific applications

### Application

- Compact ejector for handling highly permeable as well as suction tight workpieces
- Handling of not rigid workpieces such as bags or cardboard boxes
- Use in robot handling and on linear axes
- Pick and place applications with shortest cycle times
- For systems with limited space and high dynamics when gripping parts
- Typically used for fully automated part handling



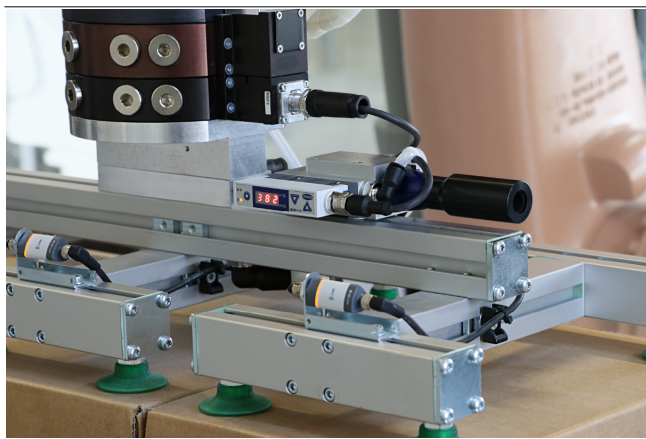
Compact Ejectors SCPSc-L / SCPSi-L



### Design

- Pneumatic connections (1) and (5)
- Mounting holes (2)
- Display and control element: SCPSc-L (with bar display) and SCPSi-L (with display) (3)
- Central electrical connection via M12-5 plug (4)
- Integrated multi-stage nozzle (6) with retaining cap and inserted silencer (7)
- Exhaust air outlet (8)

System design Compact Ejectors SCPSc-L / SCPSi-L



Central vacuum generation by compact ejector SCPSi-L

### Product highlights

- Efficient eco nozzle technology for high suction rate with minimized compressed air consumption
- Simple, tool-free exchange of SEP nozzles for fast cleaning due to modular design
- Transfer and output of device and process parameters, both in IO-Link and in SIO mode
- Vacuum connection G1/2" for a wide range of capacities through flexible use of the SEP 22 nozzles

### Designation code Compact Ejectors SCPSc-L / SCPSi-L

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|                |   |           |   |             |   |           |   |              |   |            |
|----------------|---|-----------|---|-------------|---|-----------|---|--------------|---|------------|
| <b>SCPSi-L</b> | – | <b>HV</b> | – | <b>3-16</b> | – | <b>NC</b> | – | <b>M12-5</b> | – | <b>PNP</b> |
| <b>1</b>       |   | <b>2</b>  |   | <b>3</b>    |   | <b>4</b>  |   | <b>5</b>     |   | <b>6</b>   |

### 1 – Abbreviated designation

| Code    | Version                |
|---------|------------------------|
| SCPS-L  | With bar display       |
| SCPS-L  | With display           |
| SCPSi-L | With display (IO-Link) |

### 2 – Nozzle type

| Code | Type        |
|------|-------------|
| HV   | High vacuum |

### 3 – Nozzle size

| Code | Diameter in mm  |
|------|-----------------|
| 3-16 | ø 1.6 (3-stage) |
| 3-20 | ø 2.0 (3-stage) |

### 4 – Idle position suction valve

| Code | Type            |
|------|-----------------|
| NC   | Normally closed |
| NO   | Normally open   |

### 5 – Connection electrical

| Code  | Connection  |
|-------|-------------|
| M12-5 | M12, 5-pole |

### 6 – Switching function

| Code | Type             |
|------|------------------|
| PNP  | Switches to plus |

Compact ejector SCPS-L / SCPSc-L / SCPSi-L is delivered as a ready-to-connect product (without connection cable).

Available accessories: connection cable, ejector module, silencer, filter

### Ordering data Compact Ejectors SCPSc-L / SCPSi-L

| Type                         | Part no.                                                                                             |
|------------------------------|------------------------------------------------------------------------------------------------------|
| SCPSc-L HV 3-16 NO M12-5 PNP | 10.02.02.07517                                                                                       |
| SCPSc-L HV 3-16 NC M12-5 PNP | 10.02.02.07516                                                                                       |
| SCPSc-L HV 3-20 NO M12-5 PNP | 10.02.02.07519                                                                                       |
| SCPSc-L HV 3-20 NC M12-5 PNP | 10.02.02.07518                                                                                       |
| SCPSi-L HV 3-16 NO M12-5     | 10.02.02.06052  |
| SCPSi-L HV 3-16 NC M12-5     | 10.02.02.06051  |
| SCPSi-L HV 3-20 NO M12-5     | 10.02.02.06050  |
| SCPSi-L HV 3-20 NC M12-5     | 10.02.02.05827  |
| SCPSc-L HV 3-16 NO M12-5 PNP | 10.02.02.06057                                                                                       |
| SCPSc-L HV 3-16 NC M12-5 PNP | 10.02.02.06058                                                                                       |
| SCPSc-L HV 3-20 NO M12-5 PNP | 10.02.02.06055                                                                                       |
| SCPSc-L HV 3-20 NC M12-5 PNP | 10.02.02.06056                                                                                       |

### Ordering data Spare parts Compact Ejectors SCPSc-L / SCPSi-L

| Type               | Part no.                       |
|--------------------|--------------------------------|
| Holder cap SHC     | SHC 3 22 10.02.01.01810        |
| Holder cap SHC     | SHC 3 22 10.02.01.01514        |
| Ejector module SEP | SEP HV 3 16 22 10.02.01.01397  |
| Ejector module SEP | SEP HV 3 20 22 10.02.01.01631  |
| Silencer           | SD 29x70 SHC 22 10.02.01.01517 |
| Silencer           | SD 29x121.5 SHC 10.02.01.01831 |

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### Ordering data Accessories Compact Ejectors SCPSc-L / SCPSi-L

| Type                                                         | Part no.                 |
|--------------------------------------------------------------|--------------------------|
| Connection cable, M12 5-pole, 5 m, PUR, straight             | ASK B-M12-5 5000 K-5P    |
| Connection cable, M12 5-pole, M12 5-pole, 2 m, PUR, straight | ASK B-M12-5 2000 S-M12-5 |
| Ejector module SEP                                           | SEP HV 3 16 22           |
| Ejector module SEP                                           | SEP HV 3 20 22           |
| Silencer                                                     | SD 29x70 SHC 22          |
| Silencer                                                     | SD 29x121.5 SHC          |
| Vacuum cup filter                                            | VFT G1/2-IG 100          |
|                                                              | 10.07.01.00126           |

### Technical data Compact Ejectors SCPSc-L / SCPSi-L

| Type         | Degree of evacuation [%] | Suction rate (max.) [l/min] | Suction rate (max.) [m³/h] | Air consumption suction [l/min]* | Air consumption suction [m³/h]** | Air consumption blow-off [m³/h] |
|--------------|--------------------------|-----------------------------|----------------------------|----------------------------------|----------------------------------|---------------------------------|
| SCPSc-L 3-16 | 90                       | 227                         | 13.6                       | 102                              | 6.1                              | 15.4                            |
| SCPSc-L 3-20 | 90                       | 323                         | 19.4                       | 172                              | 10.3                             | 15.4                            |
| SCPSi-L 3-16 | 90                       | 227                         | 13.6                       | 102                              | 6.1                              | 15.4                            |
| SCPSi-L 3-20 | 90                       | 323                         | 19.4                       | 172                              | 10.3                             | 15.4                            |
| SCPS-L 3-16  | 90                       | 227                         | 13.6                       | 102                              | 6.1                              | 15.4                            |
| SCPS-L 3-20  | 90                       | 323                         | 19.4                       | 172                              | 10.3                             | 15.4                            |

\*At optimal operating pressure (4 bar)

\*\*At optimal operating pressure (4 bar)

| Type         | Sound pressure level free [dB(A)]* | Sound pressure level suction [dB(A)] | Pressure range (operating pressure) [bar] | Recommended hose internal diameter compressed air [mm]** | Recommended hose internal diameter vacuum [mm]*** | Weight [g] | Operating temperature [°C] |
|--------------|------------------------------------|--------------------------------------|-------------------------------------------|----------------------------------------------------------|---------------------------------------------------|------------|----------------------------|
| SCPSc-L 3-16 | 80                                 | 72                                   | 4.0 ... 6.0 bar                           | 6                                                        | 12                                                | 460        | 0 ... 50 °C                |
| SCPSc-L 3-20 | 81                                 | 77                                   | 4.0 ... 6.0 bar                           | 6                                                        | 14                                                | 460        | 0 ... 50 °C                |
| SCPSi-L 3-16 | 80                                 | 72                                   | 4.0 ... 6.0 bar                           | 6                                                        | 12                                                | 460        | 0 ... 50 °C                |
| SCPSi-L 3-20 | 81                                 | 77                                   | 4.0 ... 6.0 bar                           | 6                                                        | 16                                                | 460        | 0 ... 50 °C                |
| SCPS-L 3-16  | 80                                 | 72                                   | 4.0 ... 6.0 bar                           | 6                                                        | 12                                                | 460        | 0 ... 50 °C                |
| SCPS-L 3-20  | 81                                 | 77                                   | 4.0 ... 6.0 bar                           | 6                                                        | 14                                                | 460        | 0 ... 50 °C                |

\*At optimal operating pressure (4 bar)

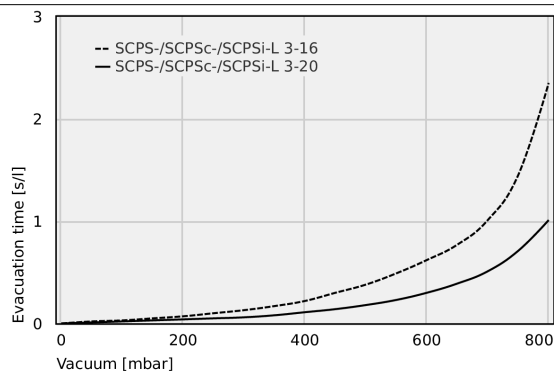
\*\*For max. length 2 m

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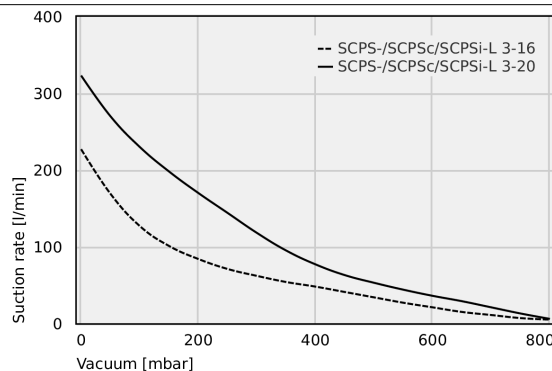
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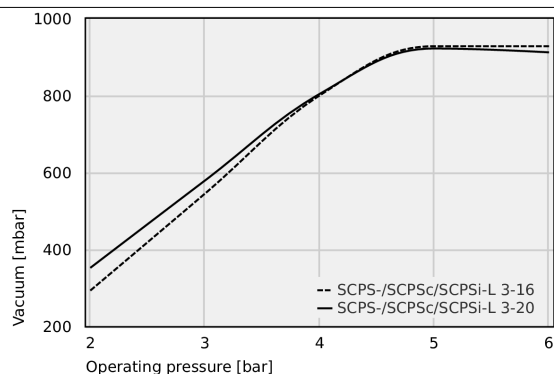
### Performance data Compact Ejectors SCPSc-L / SCPSi-L



Evacuation time for various vacuum ranges [s/l]



Suction rate at various degrees of evacuation [l/min]



Achievable vacuum at various operating pressures

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### Evacuation time for various vacuum ranges [s/l]

|                                      | 0    | 50   | 100  | 150  | 200  | 250  | 300  | 350  | 400  | 450  | 500  | 550  | 600  | 650  | 700  | 750  | 800  |
|--------------------------------------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|------|
| SCPS-/<br>SCPSc-/<br>SCPSi-L<br>3-16 | 0.00 | 0.02 | 0.03 | 0.05 | 0.07 | 0.10 | 0.13 | 0.17 | 0.22 | 0.30 | 0.38 | 0.49 | 0.62 | 0.77 | 1.01 | 1.45 | 2.35 |
| SCPS-/<br>SCPSc-/<br>SCPSi-L<br>3-20 | 0.00 | 0.01 | 0.02 | 0.03 | 0.04 | 0.05 | 0.06 | 0.08 | 0.11 | 0.14 | 0.18 | 0.23 | 0.30 | 0.39 | 0.51 | 0.71 | 1.01 |

### Suction rate at various degrees of evacuation [l/min]

|                                      | 0   | 50  | 100 | 150 | 200 | 250 | 300 | 350 | 400 | 450 | 500 | 550 | 600 | 650 | 700 | 750 | 800 |
|--------------------------------------|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|-----|
| SCPS-/<br>SCPSc-/<br>SCPSi-L<br>3-16 | 227 | 169 | 127 | 101 | 84  | 71  | 62  | 54  | 48  | 41  | 34  | 27  | 21  | 15  | 11  | 7   | 5   |
| SCPS-/<br>SCPSc-/<br>SCPSi-L<br>3-20 | 323 | 270 | 230 | 198 | 170 | 144 | 118 | 95  | 77  | 63  | 53  | 44  | 36  | 29  | 21  | 13  | 6   |

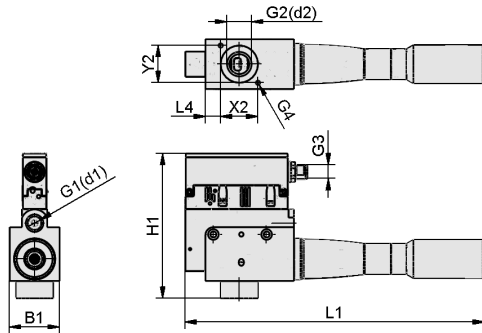
### Achievable vacuum at various operating pressures

|                          | 2   | 3   | 4   | 5   | 6   |
|--------------------------|-----|-----|-----|-----|-----|
| SCPS-/SCPSc/SCPSi-L 3-16 | 293 | 545 | 800 | 928 | 928 |
| SCPS-/SCPSc/SCPSi-L 3-20 | 352 | 579 | 804 | 922 | 912 |

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SCPS- / SCPSc- / SCPSi-L

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| Type                               | B1 [mm] | G1      | G2      | G3      | G4   | H1 [mm] | L1 [mm] | L4 [mm] | X2 [mm] | Y2 [mm] |
|------------------------------------|---------|---------|---------|---------|------|---------|---------|---------|---------|---------|
| SCPSc-L HV<br>3-16 NO M12-5<br>PNP | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSc-L HV<br>3-16 NC M12-5<br>PNP | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSc-L HV<br>3-20 NO M12-5<br>PNP | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSc-L HV<br>3-20 NC M12-5<br>PNP | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSi-L HV<br>3-16 NO M12-5        | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSi-L HV<br>3-16 NC M12-5        | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSi-L HV<br>3-20 NO M12-5        | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSi-L HV<br>3-20 NC M12-5        | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | -       | 11.5    | 28      | 28      |
| SCPSc-L HV 3-16<br>NO M12-5 PNP    | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | 224.5   | 11.5    | 28      | 28      |
| SCPSc-L HV 3-16<br>NC M12-5 PNP    | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | 224.5   | 11.5    | 28      | 28      |
| SCPSc-L HV 3-20<br>NO M12-5 PNP    | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | 230.0   | 11.5    | 28      | 28      |
| SCPSc-L HV 3-20<br>NC M12-5 PNP    | 37.5    | G1/4"-F | G1/2"-F | M12x1-M | M4-F | 109     | 230.0   | 11.5    | 28      | 28      |