### Kenos<sup>®</sup> KSL



- KSL series is a flexible solution for the handling or manipulation of objects with different shapes and dimensions. Designed with a foam body for a lighter gripper that is safe to work around.
- Uninterrupted processes in rugged and dusty environments thanks to its high duty, robust design, materials and valve technology.
- A cobot friendly designed gripper with a very low weight allowing maximizing cobot payload, lifting up to 30 kg (66 lb).
- Low downtimes due to the magnetic EasyFoam system for quick and easy replacement of the foam.
- Equipped with 24mm thick EPDM foam with standard hole size for various picking applications.
- Flow restriction is the choice when the gripper is fully covered. A gripper equipped with flow restriction can operate upside-down.
- Equipped with a single stage high flow cartridge.
- Plug&Play solution with UR cap for UR cobots.

#### Technical data

| Description                   | Unit | Value                       |
|-------------------------------|------|-----------------------------|
| Feed pressure, max            | MPa  | 0,7                         |
| Temperature range             | °C   | 0-50                        |
| Weight                        | g    | 714                         |
| Materials (body and manifold) | -    | AL, EVA, HDPE, Carbon fibre |
| Noise level range             | dBA  | 75-85                       |
| Connection, compressed air    | mm   | 6                           |
| Material foam                 | -    | EPDM                        |

#### Vacuum flow

| Feed pressure<br>pump / nozzle | Air consumption | Vacuum flow (NI/s) at different vacuum levels (-kPa) |      |      |      |      |      |      |    | Max vacuum |
|--------------------------------|-----------------|--|------|------|------|------|------|------|----|------------|
| MPa                            | NI/s            | 0  | 10   | 20   | 30   | 40   | 50   | 60   | 70 | -kPa       |
| 0.55                           | 3.68            | 4.48   | 4.34 | 3.92 | 3.30 | 2.22 | 1.61 | 1.04 | 0  | 65         |

#### **Evacuation time**

| Feed pressure<br>pump / nozzle | Air<br>consumption | Evacuation time (s/I) to reach different vacuum levels (-kPa) |    |     |     |     |     | Max vacuum |      |
|--------------------------------|--------------------|---|----|-----|-----|-----|-----|------------|------|
| MPa                            | NI/s               | 10  | 20 | 30  | 40  | 50  | 60  | 70         | -kPa |
| 0.55                           | 3.68               | 0   | 0  | 0.1 | 0.1 | 0.2 | 0.3 | 0.5        | 65   |

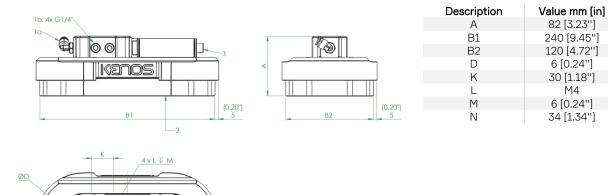
#### Gripping force

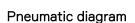
| Gripping force* at different vacuum levels, gripper with foam |    |     |     |     |     |     |     |  |
|---|----|-----|-----|-----|-----|-----|-----|--|
| -kPa  | 10 | 20  | 30  | 40  | 50  | 60  | 70  |  |
| Ν   | 55 | 111 | 166 | 222 | 277 | 333 | 388 |  |

\*Theoretic gripping force at optimum feed pressure on rigid and stable surface with completely covered module, without safety factor.

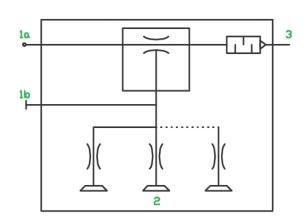
# KENOS

#### **Dimensional drawing**





Ν



| Pos. | Description  |
|------|--|
| 1a   | Compressed air supply for vacuum                       |
| 1b   | Compressed air supply for blow-off /<br>Vacuum sensing |
| 2    | Vacuum   |
| 3    | Exhaust  |

#### Ordering information – Current configuration

| Description    | Product code KSL.240.120.N241.FR15.S1.1STH.X |
|----------------|--|
| Dimensions     | Gripper size 240x120mm                       |
| Foam type      | Standard EPDM foam                           |
| Foam thickness | 24mm foam                                    |
| Hole diameter  | Standard hole size                           |
| Technology     | Flow reduction 1,5mm                         |
| Vacuum source  | 1 cartridge single stage high flow           |
| Options        | Without fixing interface                     |

#### Ordering information, spare part foam

| <b>o</b> 7111           |                       |
|-------------------------|-----------------------|
| Description             | Product code          |
| FOAM,                   |                       |
| Gripper size 240x120mm, |                       |
| Standard EPDM foam,     | FOAM.KSL.240.120.N241 |
| 24mm foam,              |                       |
| Standard hole size      |                       |
|                         |                       |

#### Values specified in this data sheet are tested at (unless otherwise stated):

- Room temperature (20°C [68°F] ± 3°C [5.5°F]). Standard atmosphere (101.3 [29.9 inHg] ± 1.0 kPa [0.3 inHg]). •
- Relative humidity 20-70%. •
- Compressed air quality, DIN ISO 8573-1 class 4. •

## Ιζέπο

#### KSL.240.120.N241.FR15.S1.1STH.X Specifications subject to change without notice. 22 February 2023

# KENOS