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simply high temperature technology

## HEATING ELEMENT ACCESSORIES

The suitable accessories for your electric heating elements made of molybdenum disilicide (MoSiz)

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## 1 Overview

The product range includes a wide range of accessories for connecting electric heating elements made of molybdenum disilicide ( $\mathrm{MoSi}_{2}$ ). These include element holders (single-shank and two-shank holders), contact straps, air nozzles and passage bricks. We also manufacture a dense, fixed anchor system, consisting also of a passage brick and a sealing plate.

For the heating element sizes $3 / 6 \mathrm{~mm}$ and $4 / 9 \mathrm{~mm}$, you will receive single-holders made of stainless steel and ceramic double-holders. For the element size $4 / 9 \mathrm{~mm}$, we also offer double-holders with ceramic brackets in a profile sheet, which can be flexibly adapted to the heating element. For an element size of $6 / 12 \mathrm{~mm}$ we also supply stainless steel single holders as well as double holders with ceramic brackets. We generally recommend using of ceramic double holders, as these holders are characterized by easy handling during installation and enable uniform contact pressure in comparison to single holders.

Our contact straps are made of aluminium mesh. The special contact ends allow a uniform and durable pressure on the aluminization of the heating element, even under temperature stress. Depending on the size of the element, we offer contact straps in various lengths from 100 mm to 300 mm Power to Power, Element to Element and Power to Element types.

When using refractory passage bricks, the anchor systems facilitate the installation and removal of heating elements, thereby minimizing the risk of breakage. We offer two systems in which passage bricks are manufactured individually according to your specifications. They are suitable for application temperatures up to $1600^{\circ} \mathrm{C}\left(2912{ }^{\circ} \mathrm{F}\right)$.

## Your benefits:

$\checkmark \quad$ Simple and flexible handling of the two-shank holders
$\checkmark \quad$ Different lengths and sizes of contact straps
$\checkmark \quad$ Uniform contact pressure of the contact straps prevents voltage peaks
$\checkmark \quad$ Individual production of the passage bricks according to your specifications

## 2 Accessories

### 2.1 Contact straps

Contact strap: Power to Power


| Element size <br> $[\mathrm{mm}]$ | L <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{d}$ <br> $[\mathrm{mm}]$ | b <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: |
| $3 / 6$ | $100,150,200$ | 6.5 | 18 |
| $4 / 9$ | $100,150,200$ | 6.5 | 18 |
| $6 / 12$ | $100,150,200,250,300$ | 8.3 | 30 |
| $9 / 18$ | $150,200,250,300$ | 8.3 | 30 |
| $12 / 24$ | $150,200,250,300$ | 8.3 | 40 |

Special lengths available on request.

## Contact strap: Power to Element



Contact strap Power to Element for $3 / 6 \mathrm{~mm}$ and $4 / 9 \mathrm{~mm}$.


Contact strap Power to Element for $6 / 12 \mathrm{~mm}$.

| Element size <br> $[\mathrm{mm}]$ | L <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{d}$ <br> $[\mathrm{mm}]$ | b <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: |
| $3 / 6$ | $100,150,200,250,300$ | 6.5 | 18 |
| $4 / 9$ | $100,150,200,250$ | 6.5 | 18 |
| $6 / 12$ | $100,150,200,250,300$ | 8.3 | 30 |
|  | Special lengths available on request. |  |  |

Double contact strap: Power to Element for big elements


## Contact strap: Element to Element



Contact strap Element to Element for $3 / 6 \mathrm{~mm}$ and $4 / 9 \mathrm{~mm}$.


Contact strap Element to Element for $6 / 12 \mathrm{~mm}$.

| Element size <br> $[\mathrm{mm}]$ | L <br> $[\mathrm{mm}]$ | b <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: |
| $3 / 6$ | $100,150,200,250,300$ | 18 |
| $4 / 9$ | $100,150,200,250$ | 18 |
| $6 / 12$ | $100,150,200,250,300$ | 30 |
|  | Special lengths available on request. |  |

### 2.2 Single-shank holders

Single-shank holder made of stainless steel


| Element size <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{d}$ <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{D}$ <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: |
| $3 / 6$ | 6.5 | 14 |
| $4 / 9$ | 9.5 | 22 |
| $6 / 12$ | 13.5 | 32 |
| $9 / 18$ | 19.5 | 42 |
| $12 / 24$ | 26 | 48 |

Single-shank holder made of stainless steel


| Element size <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{d}$ <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{D}$ <br> $[\mathrm{mm}]$ | B <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: |
| $3 / 6$ | 6.5 | 14 | 10.5 |
| $4 / 9$ | 9.5 | 22 | 13 |
| $6 / 12$ | 13.5 | 32 | 13.2 |
| $9 / 18$ | 19.5 | 42 | 14 |
| $12 / 24$ | 26 | 48 | 14 |

### 2.3 Two-shank holders

Two-shank holder made of ceramic


| Element size <br> $[\mathrm{mm}]$ | $a$ <br> $[\mathrm{~mm}]$ | h <br> $[\mathrm{mm}]$ | t <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: |
| $3 / 6$ | 25 | 10 | 12 |
| $4 / 9$ | 25 | 10 | 12 |

Two-shank holder with ceramic brackets


| Element size <br> $[\mathrm{mm}]$ | a <br> $[\mathrm{mm}]$ | h <br> $[\mathrm{mm}]$ | b <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: |
| $3 / 6$ | $25,30,35$ | 14 | 25 |
| $4 / 9$ | $25,30,35$ | 14 | 25 |
| $6 / 12$ | $40,50,60$ | 22 | 45 |
| $9 / 18$ | $40,50,60$ | 22 | 52 |
| $12 / 24$ | $60,80,100$ | 22 | 60 |

### 2.4 Anchor systems

Anchor systems with passage bricks


System 1 made of:

1) Passage brick
2) Lower gasket for air nozzle
3) Upper gasket for air nozzle
4) Two-shank holder with ceramic brackets
5) Anchoring
6) Air nozzle


## System 2 made of:

1) Passage brick
2) Sealing cord
3) Sealing ring made of ceramic
4) Calcium silicate plate and gasket
5) Two-shank holder with ceramic brackets
6) Anchoring

Passage bricks


Gaskets for air nozzles


| Element size <br> $[9 / 18 \mathrm{~mm}]$ | $\varnothing \mathrm{d}$ <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{D}$ <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: |
| Upper gasket | 17 | 38 |
| Lower gasket | 22 | 42 |

Sealing ring made of steatite ceramic


Sealing cord


Calcium silicate plate


| Element size <br> $[\mathrm{mm}]$ | A <br> $[\mathrm{mm}]$ | B <br> $[\mathrm{mm}]$ | a <br> $[\mathrm{mm}]$ | $\varnothing$ d <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{D}$ <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| $6 / 12$ | 150 | 150 | 50 | 13 | 21 |
| $9 / 18$ | 180 | 180 | 60 | 20 | 28 |
| $12 / 24$ | 180 | 180 | 80 | 26 | 32 |

Special dimensions available on request.

Gasket for calcium silicate plate


| Element size <br> $[\mathrm{mm}]$ | A <br> $[\mathrm{mm}]$ | B <br> $[\mathrm{mm}]$ | a <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{d}$ <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| $6 / 12$ | 150 | 150 | 50 | 12 |
| $9 / 18$ | 180 | 180 | 60 | 18 |
| $12 / 24$ | 180 | 180 | 80 | 24 |

Special dimensions available on request.

## Anchoring



| Consisting of: | - Anchor pin |
| :--- | :--- |
|  | - Fastening yoke |
|  | - Locking pin |

Air nozzle


| Element size <br> $[\mathrm{mm}]$ | $a$ <br> $[\mathrm{~mm}]$ | $\varnothing \mathrm{D}$ <br> $[\mathrm{mm}]$ | $\varnothing \mathrm{d}$ <br> $[\mathrm{mm}]$ |
| :---: | :---: | :---: | :---: |
| $9 / 18$ | 60 | 42 | 19.5 |

