## **FIPA.** Vacuum cups for sheet metal handling







## Г.РЛ

## FIPA vacuum cups for sheet metal handling



For 30 years, FIPA GmbH has been an innovative partner in vacuum and gripper systems for handling a wide range of products.

FIPA offers enhanced solutions for the sheet metal and metal processing industry with a newly developed series of vacuum cups.

Our task is to find the right solution for our customers.

FIPA – your partner for sheet metal handling

Rainer Mehrer CEO of FIPA GmbH

The sheet metal and metal processing industry places very high demands on process reliability.

The vacuum cups for sheet metal handling from FIPA meet these challenges and demonstrate excellent characteristics for the dynamic handling of oily and dry sheet metal.

The vacuum cups were especially developed for handling sheet metal and are characterised by a very long cycle life, which has also been successfully demonstrated against vacuum cups of competitors in practical operation.









## FIPA vacuum cups for sheet metal handling

The long service life is enabled by means of a new high wear-resistant, oilresistant NBR material and a special vacuum suction cup construction which minimises the load on the vacuum cup during handling. This can reduce the number of vacuum cup changes and so help to cut operation costs.



The special design of the large-area anti-slip supports on the underside of the vacuum cups accommodate very high lateral forces, thereby enabling high acceleration for the dynamic handling of oily sheet metal. In addition to this, they prevent deep-drawing and deformation of thin metal sheets. The flexible sealing lip adapts to the surface and guarantees a good vacuum level and high retention force even on curved metal sheets.

• Flexible sealing lip for a high retention force on curved metal sheets

Anti-slip supports for absorbing lateral forces and preventing deformation





# FIPA vacuum cups for sheet metal handling are characterised by:

- Long cycle life
- Optimised adaptation to curved metal sheets
- High retention force
- Excellent absorption of lateral forces
- Free of paint wetting impairment substances (PWIS)





## FIPA vacuum cups for sheet metal handling

### NBR flat vacuum cup

for the dynamic handling of oily metal sheets | SM-F

• High degree of positioning accuracy

#### NBR bellows vacuum cup with 1.5 bellows for the dynamic handling of oily metal sheets | SM-B

• Excellent adaptation to curved surfaces





NBR oval vacuum cup for the dynamic handling of oily metal sheets | SM-OF

 High process reliability owing to multiple sealing lips **NBR oval vacuum cup with 1.5 bellows** for the dynamic handling of oily metal sheets | SM-OB

• Suitable for oblong or cylindrical sheet metal parts in restricted spaces







## Other vacuum cups for sheet metal handling

- **PU bellows vacuum cup with 1.5 and 2.5 bellows** for oil-free metal sheets | SP-BX1 and SP-BX2
  - Highly wear-resistant PU material Varioflex<sup>®</sup> for dry surfaces



- NBR bellows vacuum cup with 1.5 and 2.5 bellows universal | SBU1 and SBU2
  - Gentle attachment to sensitive surfaces



NBR flat and bellows suction plates heavy duty | SFPL-D and SBPL-E

• Lifting of very heavy loads with good adaptation to concave or convex surfaces



 Suction attachment of variable product geometries, e.g. perforated plates, with high process reliability





## ΓιΡΛ

## **Expertise in vacuum and gripper systems**

#### SAFE-LOCK quick-changer system Interface between the robot and gripper system

 Innovative snap-in connection with visual locking indication prevents the gripper from disengaging with high acceleration and vibration forces (protected by patent)



## **Grippers** with HNBR gripper jaws

 Gripper with fully coated gripper jaws for delicate handling without scratching (protected by utility model)



**Compact ejectors** with automatic air-saving function

 Compact ejectors with an integrated automatic air-saving function for maximum economy in vacuum generation

#### Magnetic grippers electric or pneumatic

 For handling a wide variety of metal sheets and ferromagnetic workpieces with and without holes or cut-outs







## **Gripper systems from FIPA**

#### Gripper design

• FIPA benefits include long-standing know-how from project planning to the commissioning and delivery of gripper and vacuum systems

#### Gripper systems

 In addition to gripper systems based on the S, M and XLine aluminium profiles, customised solutions made of aluminium or CFRP can be realised



# ELE CONTRACTOR

#### FIPALIFT Lifting technology| Tube lifters

• FIPALIFT tube lifters are manually operated lifting systems which are individually tailored to customer requirements

#### FIPALIFT Lifting technology | Crane technology

• The FIPA crane technology can be used with a large number of special solutions in a wide range of production environments







## Service is our company principle



#### Personal advice:

FIPA is renowned for its exceptional service culture and professional project management.

Do you need individual advice? We will be happy to support you either over the phone or in person on site.



#### **Outstanding service:**

Our specialists provide assistance starting from project planning to delivery, and design complete customized gripper systems. FIPA experts test your workpiece samples in our own laboratory to select the optimum handling solution.



#### Speedy delivery:

Fast, reliable delivery to ensure maximum customer satisfaction.



#### **FIPA Worldwide**

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