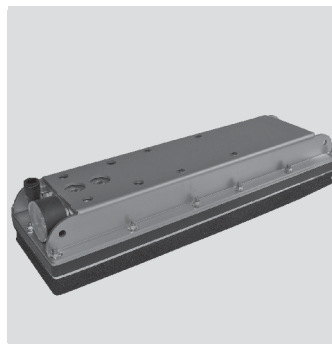
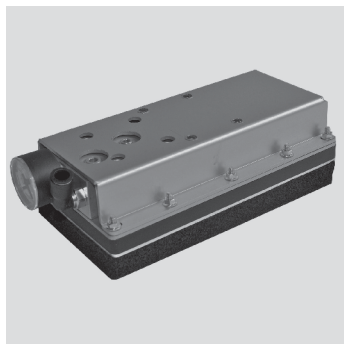


Vacuum gripping systems at a glance	106
Customized vacuum grippers	107
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Advantages / Benefits

Vacuum grippers:

- > Finely graded series for the handling of dense or porous products
- > Integrated vacuum generation
- > Energy saving function as intelligent valve technology closes unused suction openings
- > Contamination-proof design ensures high availability and process safety
- > Suitable for fast cycle times
- > Simple installation and operation
- > Wide range of standard products as well as rapid implementation of customized solutions

Foam rubber mats:

- > Long service life of the foam mats thanks to very high resistance to wear and high aging stability
- > Wide range of foams for quick adaptation to different products
- > Fast and non-destructive exchange of vacuum mats ensures high productivity with minimum down times

Application

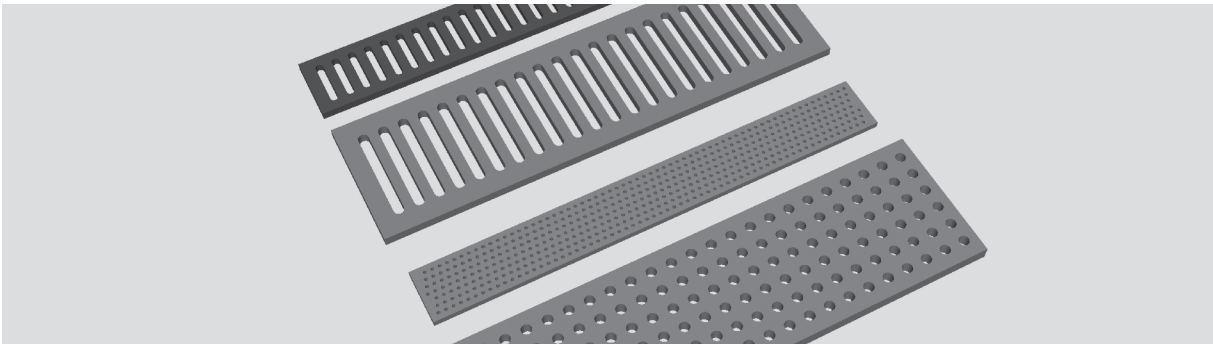
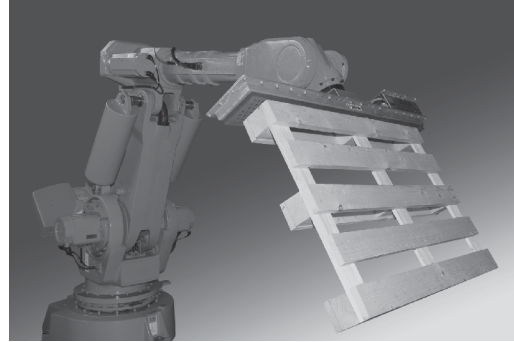
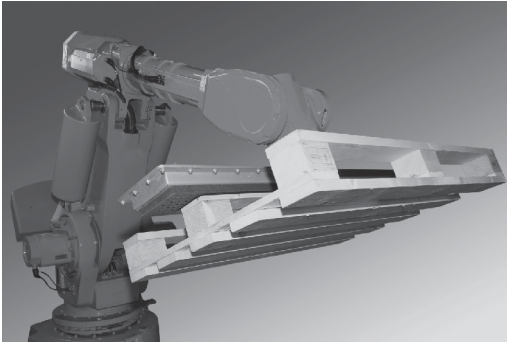
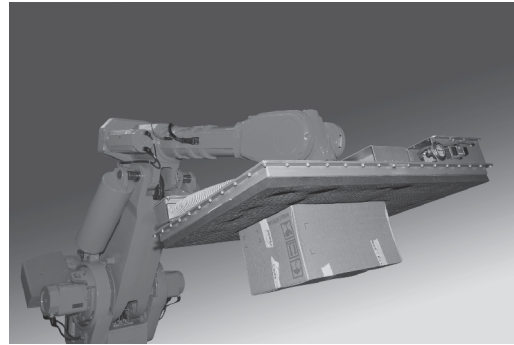
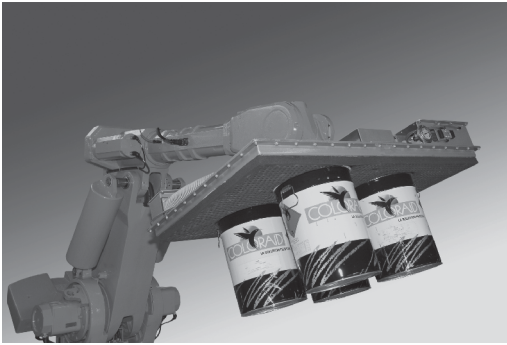
- > Automated handling processes: Palettizing, depalletizing, separation and sorting
- > Safe operation Independent of material properties such as surface, porosity, size and weight
- > Undefined take-up positions
- > High gripping flexibility: one piece or entire product layer
- > Under harsh conditions (dust, humidity, ...)

Industry examples:

- > Packaging technology, timber, chemicals and building materials

Construction

- > Integrated vacuum generation with ejectors, thereby ideally adaptable to the prevailing operating parameters
- > External vacuum generation if required (side channel blowers for porous products: high volume flow)
- > Aluminum plate for the take-up of the ejectors and vacuum meter
- > Integrated bore-holes or patented valve system
- > Vacuum mats, ideally matched with the workpiece to be handled
- > Bore-hole diameter and distance between each hole can be adapted to the application
 - TL version: without valve technology (with flow resistors)
 - TC version: with valve technology



Advantages / Benefits

Customized vacuum grippers:

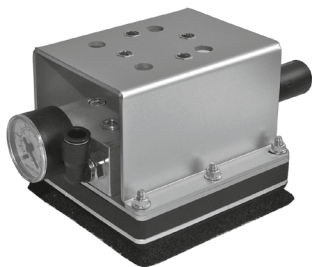
- > Freely configurable, highly efficient ejector modules for flexible and economic adaptation to the vacuum requirements of the goods to be handled
- > Wide range of side channel blowers as an energy-saving alternative, especially when handling materials with high porosity and correspondingly high air demand
- > Implementation of customized gripper sizes and functional extensions, such as release and/or vacuum control
- > Flexible adjustment of the valve system for maximum process safety and reliability as well as long service life
- > Design and delivery of individual gripper modules up to complete gripper systems for attachment to robots or to portal or crane systems

Customized vacuum mats:

- > Vacuum mats precisely adjustable to application thanks to variety of materials
- > Highly wear- and aging-resistant
- > Quick, non-destructive and residue-free replacement, when needed, of vacuum mats without tools or pre-handling
- > Cost-effective initial investment as well as reduced operating costs
- > Vacuum mats are perfectly matched to the FIPA range of vacuum grippers
- > Fast and economic realization of individual sizes, qualities and hole patterns, also as an alternative fit for major gripper systems on the market



Vacuum grippers 70x70



Product Description

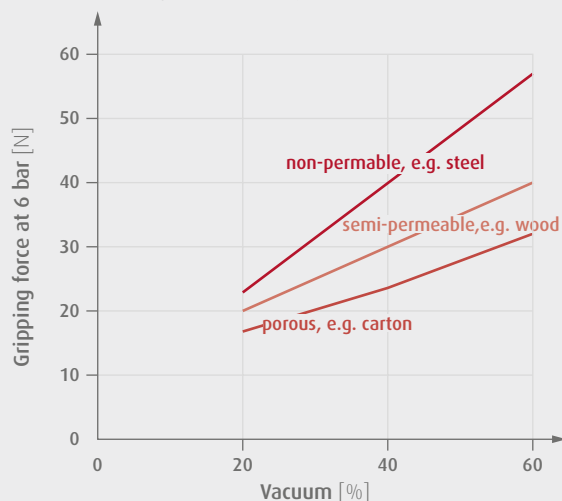
- > Use in virtually all automated handling processes: Palletising, de-palletising, separating, sorting
- > Integrated vacuum generation
- > TL Design: with flow resistors
- > Contamination-proof design ensures high availability and process safety
- > Suitable for fast cycle times
- > Simple installation and operation
- > Fast and easy replacement of the foam mats

Technical Data

Item no.	Air consumption at 6 bar [l/min]	Suction power against atmosphere [Nl/min]	Final vacuum [%]	Weight [kg]	Suitable foam rubber mat
TL70x70-3010	26,4	46,2	60	0,3	PPF70.70-3010
TL70x70-5010	105	198	60	0,8	PPF70.70-5010

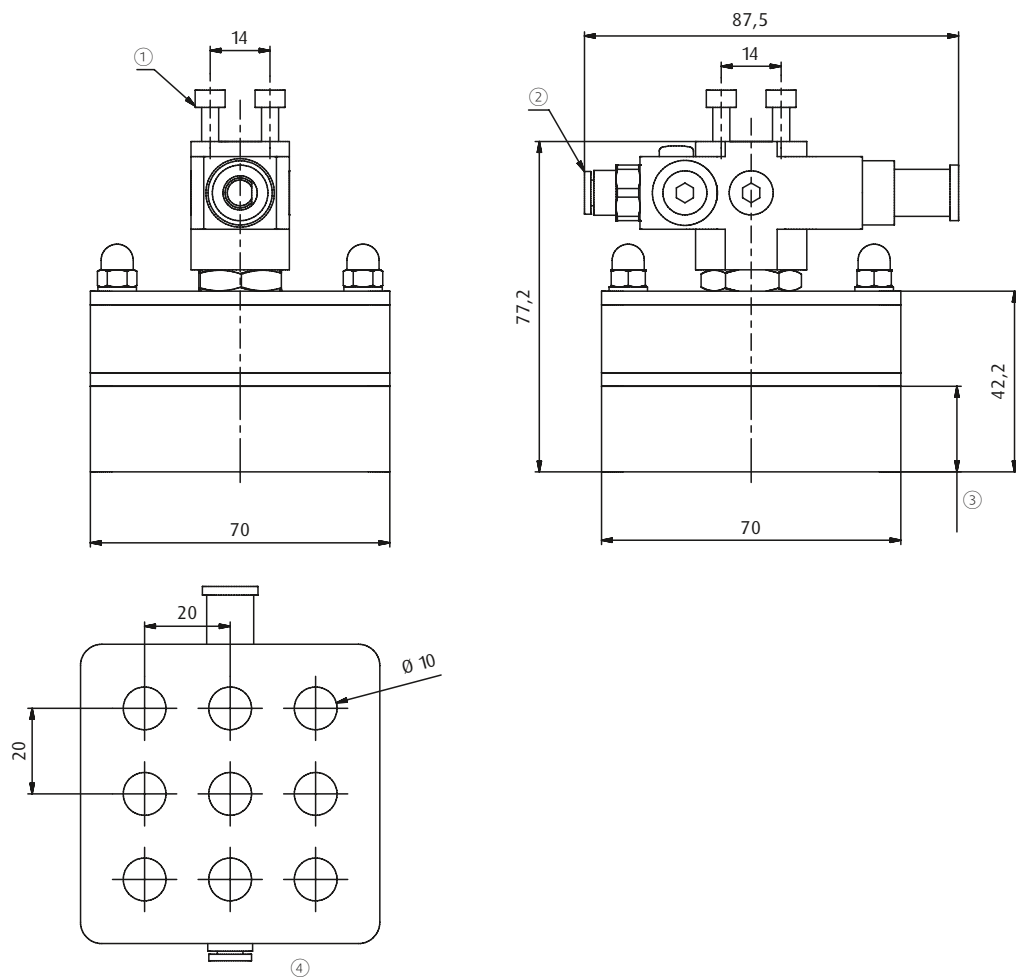
Diagrams

- > Holding force at 6 bar depends on the vacuum when working with different permeable materials (values at 100% coverage of the vacuum gripper / minimum 80% coverage recommended)





Dimensions



① = Fixing with M4 screws

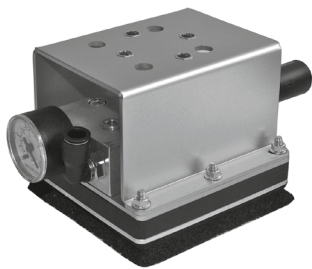
② = 6 mm quick-fitting

③ = 20 mm foam rubber mat

④ = 9 boreholes



Vacuum grippers 120x120



Product Description

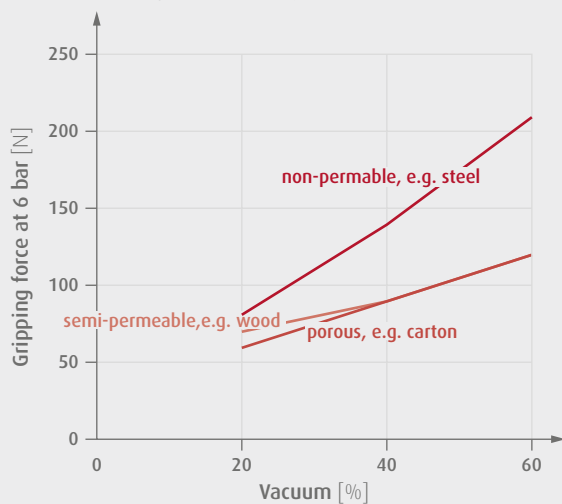
- > Use in virtually all automated handling processes: Palletising, de-palletising, separating, sorting
- > Integrated vacuum generation
- > TL Design: with flow resistors
- > Contamination-proof design ensures high availability and process safety
- > Suitable for fast cycle times
- > Simple installation and operation
- > Fast and easy replacement of the foam mats

Technical Data

Item no.	Air consumption at 6 bar [Nl/min]	Suction power against atmosphere [Nl/min]	Final vacuum [%]	Weight [kg]	Suitable foam rubber mat
TL120x120-P20	240	405	60	1,4	PPF120.120-P20

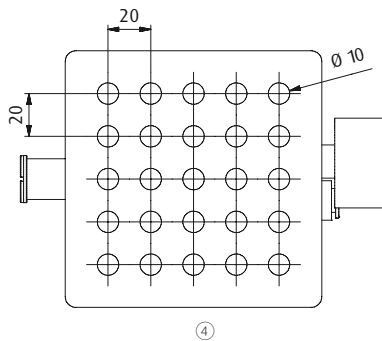
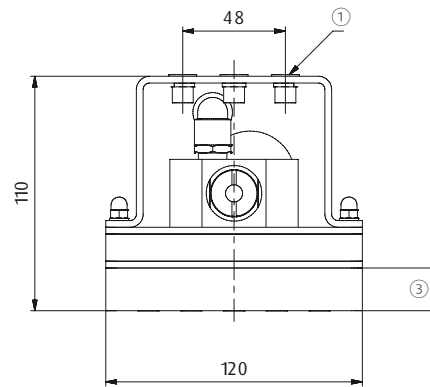
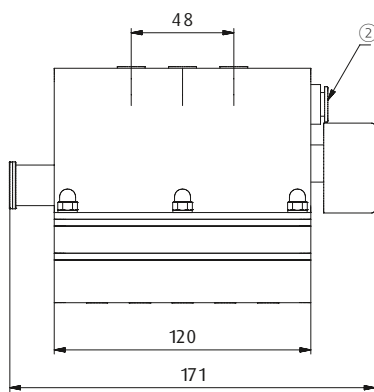
Diagrams

- > Holding force at 6 bar depends on the vacuum when working with different permeable materials (values at 100% coverage of the vacuum gripper / minimum 80% coverage recommended)





Dimensions



① = Fixing with M6 screws

② = 10 mm quick-fitting

③ = 20 mm foam rubber mat

④ = 25 boreholes



Vacuum grippers 120x230



Product Description

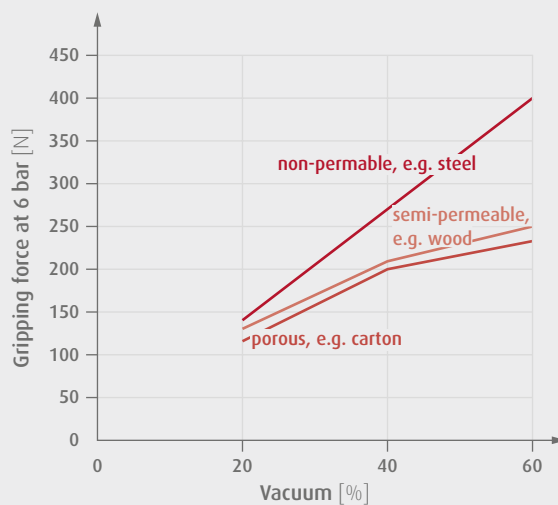
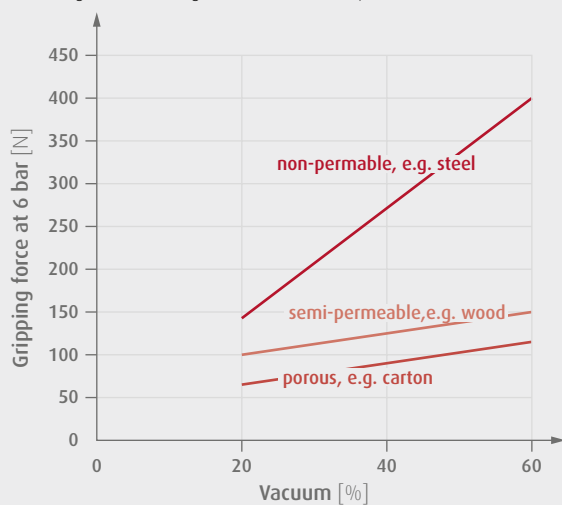
- > Use in virtually all automated handling processes: Palletising, de-palletising, separating, sorting
- > Integrated vacuum generation
- > TL Design: with flow resistor
- > TC Design: with valve technology allows unoccupied suction openings to be sealed, thereby saving energy
- > Contamination-proof design ensures high availability and process safety
- > Suitable for fast cycle times
- > Simple installation and operation
- > Fast and easy replacement of the foam mats

Technical Data

Item no.	Air consumption at 6 bar [N/min]	Suction power against atmosphere [N/min]	Final vacuum [%]	Weight [kg]	Suitable foam rubber mat
TL120x230-P20	105	198	60	1,55	PPF120.230-P20
TL120x230-P40	105	198	60	1,55	PPF120.230-P40
TC120x230-P20	105	360	60	2,3	PPF120.230-P20
TC120x230-P40	105	198	60	2,3	PPF120.230-P40

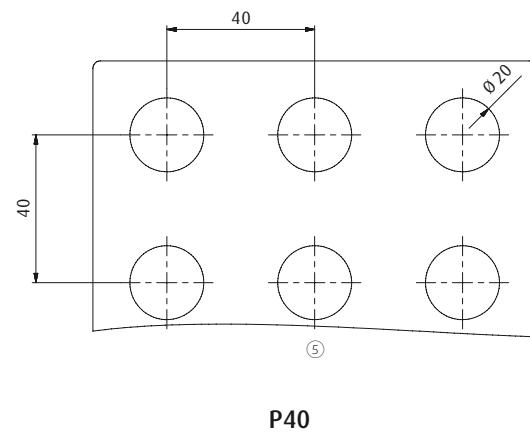
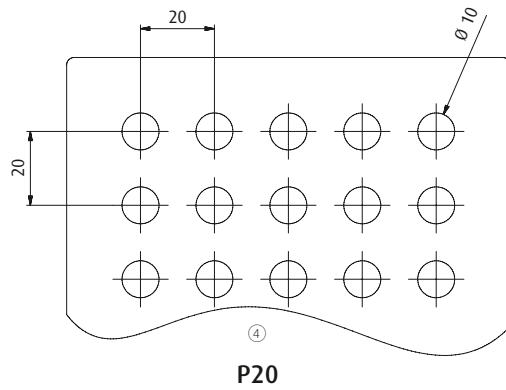
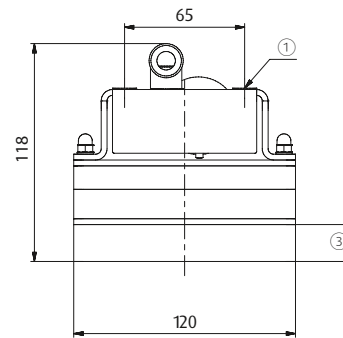
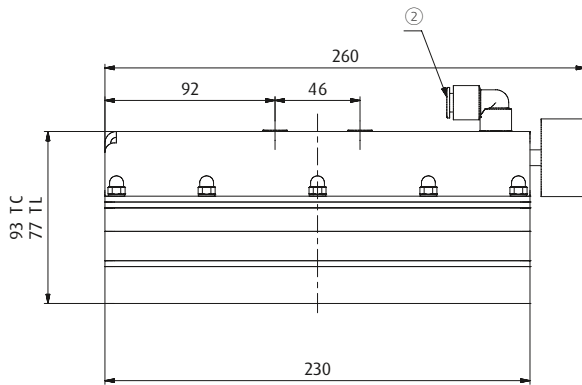
Diagrams

- > Holding force at 6 bar depending on the vacuum when working with different permeable materials (values at 100% coverage of the vacuum gripper / 80% coverage – for TL design – is recommended)





Dimensions



① = Fixing with M6 screws

② = 10 mm quick-fitting

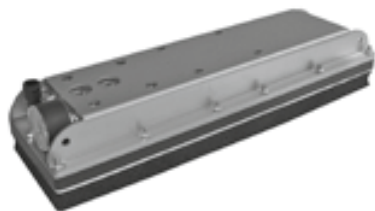
③ = 20 mm foam rubber mat

④ = 50 boreholes

⑤ = 15 boreholes



Vacuum grippers 120x400



Product Description

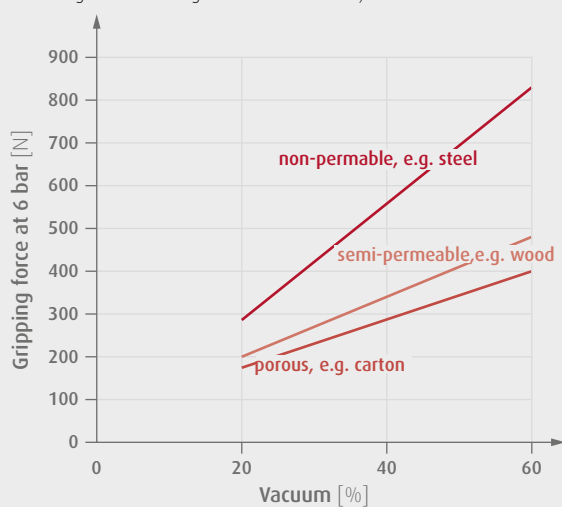
- > Use in virtually all automated handling processes: Palletising, de-palletising, separating, sorting
- > Integrated vacuum generation
- > TL Design: with flow resistor
- > TC Design: with valve technology, allows unoccupied suction openings to be sealed, thereby saving energy
- > Contamination-proof design ensures high availability and process safety
- > Suitable for fast cycle times
- > Simple installation and operation
- > Fast and easy replacement of the foam mats

Technical Data

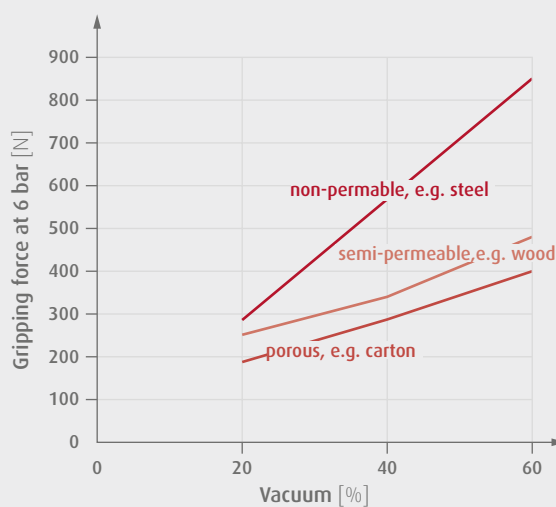
Item no.	Air consumption at 6 bar [N/min]	Suction power against atmosphere [N/min]	Final vacuum [%]	Weight [kg]	Suitable foam rubber mat
TL120x400-P20	210	396	60	2,5	PPF120.400-P20
TC120x400-P20	210	360	60	3,55	PPF120.400-P20
TL120x400-P40	105	198	60	2,5	PPF120.400-P40
TC120x400-P40	105	360	60	3,55	PPF120.400-P40

Diagrams

- > Holding force at 6 bar depending on the vacuum when working with different permeable materials (values at 100% coverage of the vacuum gripper / 80% coverage – for TL design – is recommended)



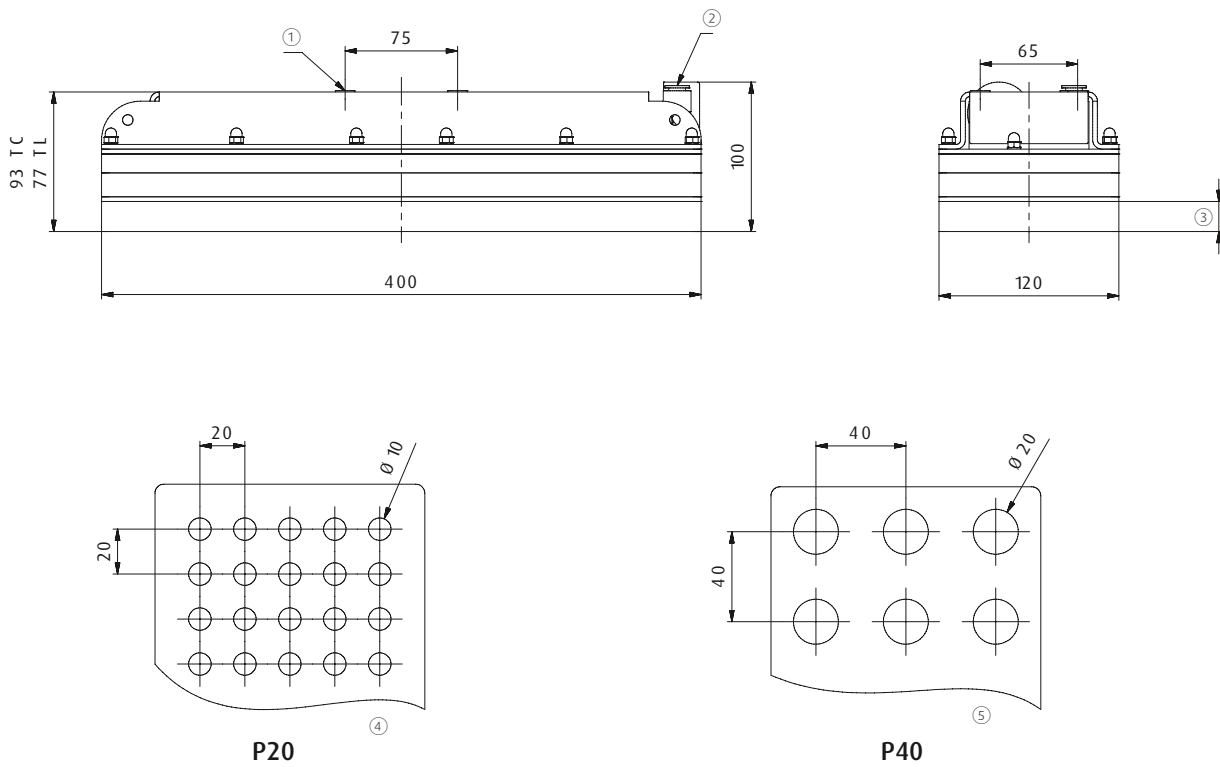
TL120x400-P20 | TL120x400-P40



TC120x400-P20 | TC120x400-P40



Dimensions



- ① = Fixing with M6 screws ② = 10 mm quick-fitting ③ = 20 mm foam rubber mat ④ = 95 boreholes
 ⑤ = 30 boreholes



Vacuum grippers 200x400



Product Description

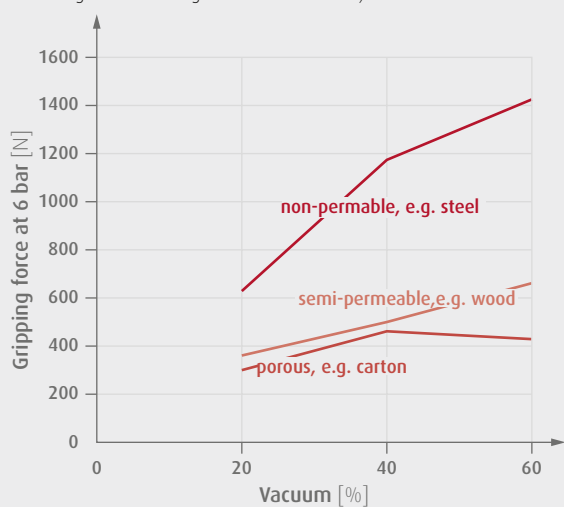
- > Use in virtually all automated handling processes: Palletising, de-palletising, separating, sorting
- > Integrated vacuum generation
- > TL Design: with a flow resistor
- > TC Design: with valve technology, allows unoccupied suction openings to be sealed, thereby saving energy
- > Contamination-proof design ensures high availability and process safety
- > Suitable for fast cycle times
- > Simple installation and operation
- > Fast and easy replacement of the foam mats

Technical Data

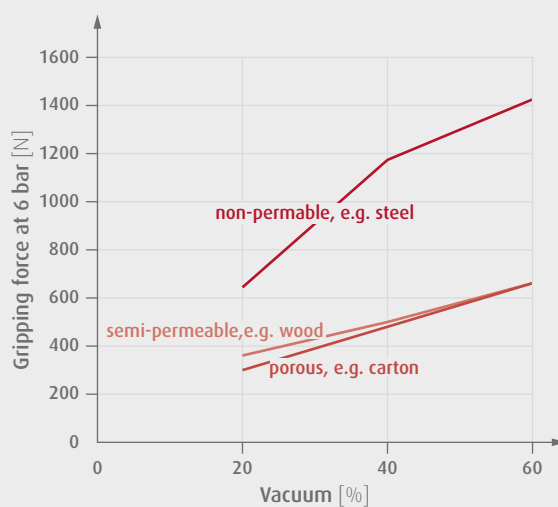
Item no.	Air consumption at 6 bar [N/min]	Suction power against atmosphere [N/min]	Final vacuum [%]	Weight [kg]	Suitable foam rubber mat
TL200x400-P20	420	792	60	3,9	PPF200.400-P20
TC200x400-P20	420	1.440	60	6,15	PPF200.400-P20
TL200x400-P40	210	792	60	3,9	PPF200.400-P40
TC200x400-P40	210	720	60	6,15	PPF200.400-P40

Diagrams

- > Holding force at 6 bar depending on the vacuum when working with different permeable materials (values at 100% coverage of the vacuum gripper / 80% coverage – for TL design – is recommended)



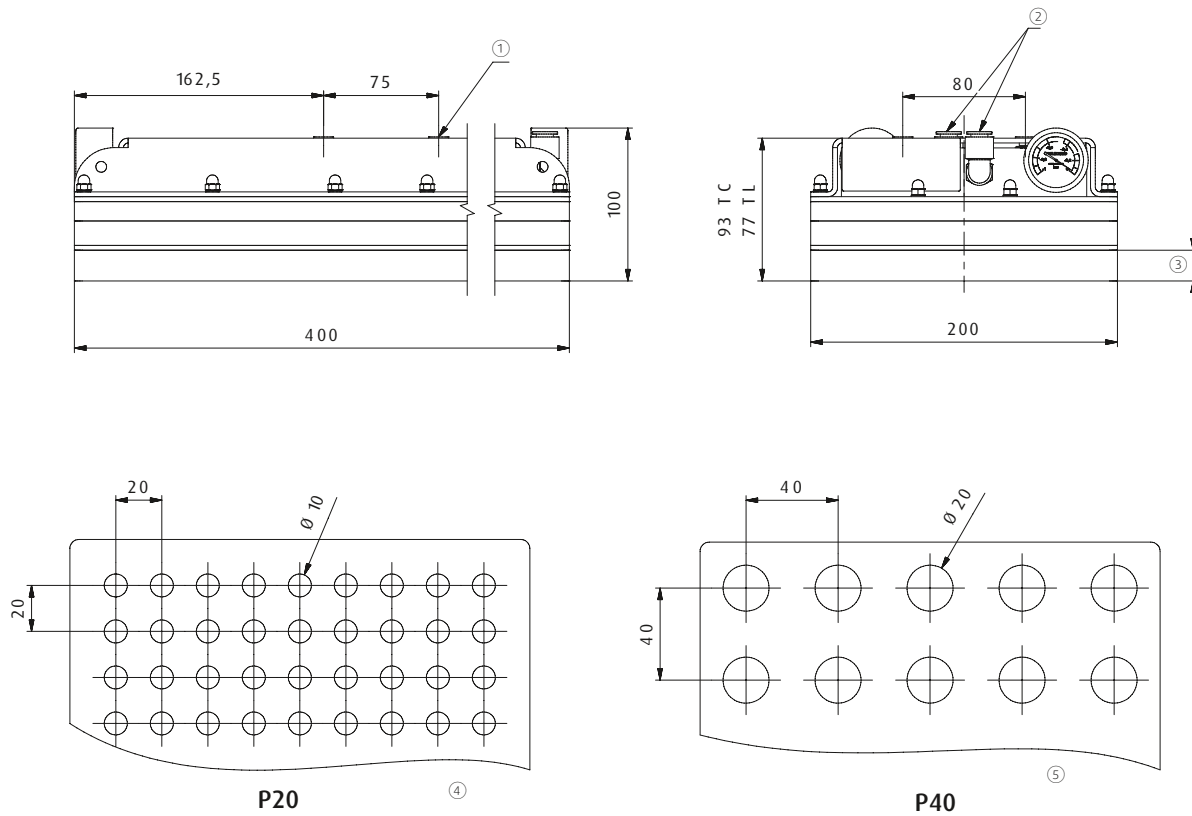
TL200x400-P20 | TL200x400-P40



TC200x400-P20 | TC200x400-P40



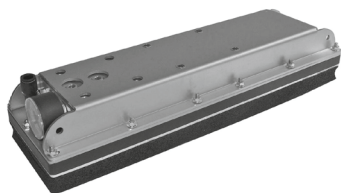
Dimensions



- ① = Fixing with M6 screws
- ② = 10 mm quick-fitting
- ③ = 20 mm foam rubber mat
- ④ = 171 boreholes
- ⑤ = 50 boreholes



Vacuum grippers 160x600



Product Description

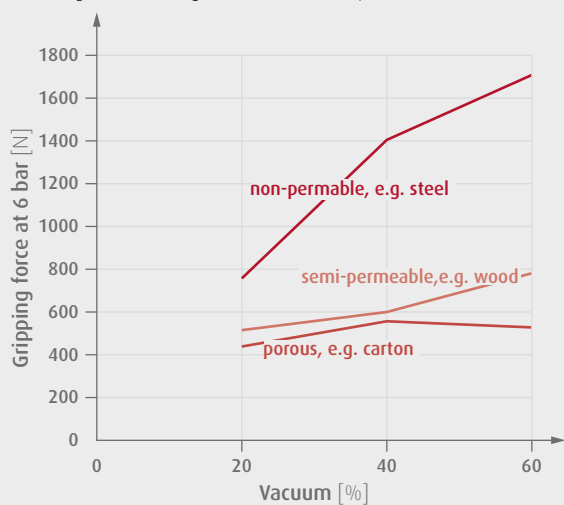
- > Use in virtually all automated handling processes: Palletising, de-palletising, separating, sorting
- > Integrated vacuum generation
- > TL Design: with a flow resistor
- > TC Design: with valve technology, allows unoccupied suction openings to be sealed, thereby saving energy
- > Contamination-proof design ensures high availability and process safety
- > Suitable for fast cycle times
- > Simple installation and operation
- > Fast and easy replacement of the foam mats

Technical Data

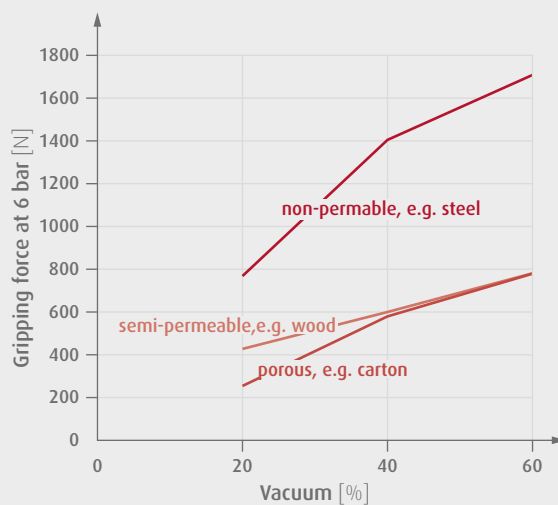
Item no.	Air consumption at 6 bar [N/min]	Suction power against atmosphere [N/min]	Final vacuum [%]	Weight [kg]	Suitable foam rubber mat
TL160x600-P20	420	792	60	4,6	PPF160.600-P20
TC160x600-P20	420	1.440	60	7,2	PPF160.600-P20
TL160x600-P40	210	396	60	4,6	PPF160.600-P40
TC160x600-P40	210	720	60	7,2	PPF160.600-P40

Diagrams

- > Holding force at 6 bar depending on the vacuum when working with different permeable materials (values at 100% coverage of the vacuum gripper / 80% coverage – for TL design – is recommended)



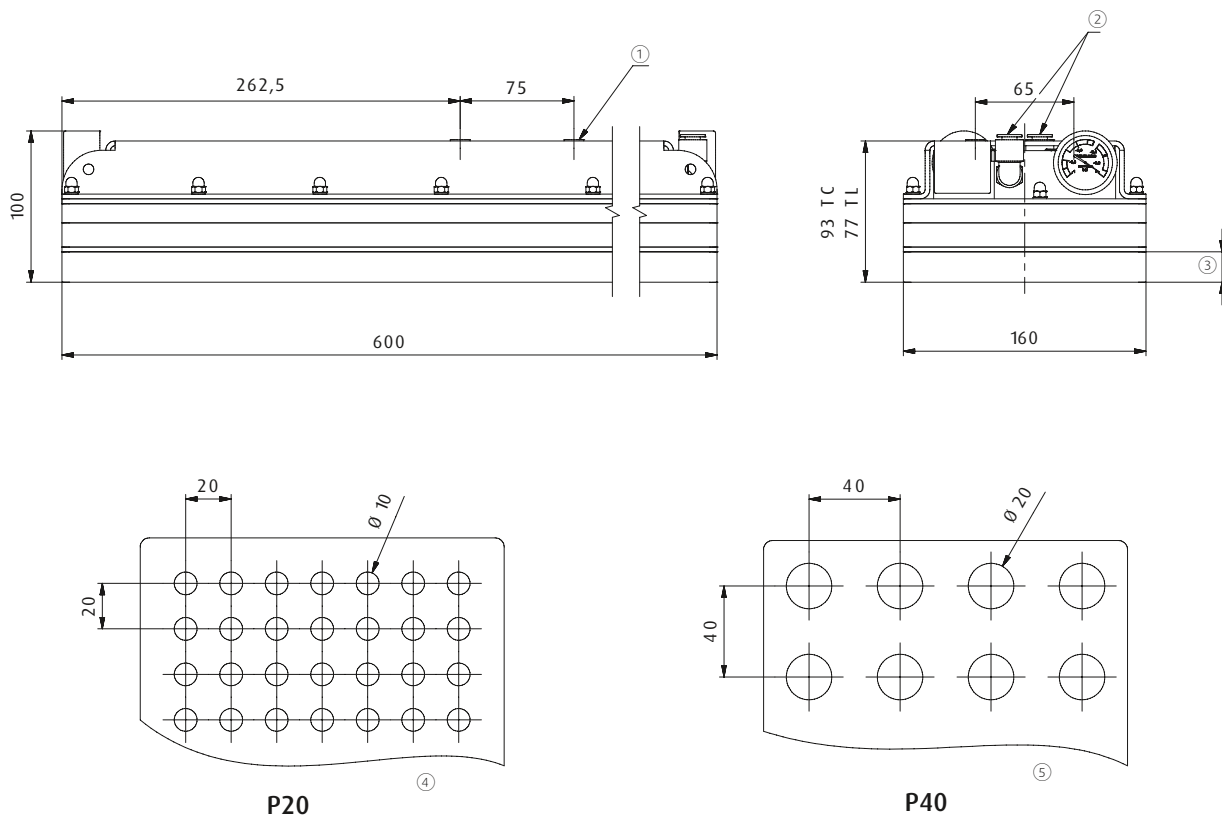
TL160x600-P20 | TL160x600-P40



TC160x600-P20 | TC160x600-P40



Dimensions



① = Fixing with M6 screws

② = 10 mm quick-fitting

③ = 20 mm foam rubber mat

④ = 203 boreholes

⑤ = 60 boreholes