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Dear customer,
this questionnaire is intended to provide us with the necessary information for producing a fast and technically correct proposed solution or quotation.

Please check the appropriate answers to the questions on pages 1 and 2 and/or provide the requested parameters. The information on page 3 is needed for a detailed quotation (sketches or drawings on separate sheets are always helpful).

We will call you immediately if we have any further questions.

Company: _____

Address: _____

Contact: _____

Tel.: _____ Fax: _____

E-mail: _____

1. What do you want to handle?

Shape: _____

Material:

Wood Metal Cardboard/paper Plastic Glass Other: _____

Surface finish:

Smooth Flat Rough Dry Moist Oily Dusty Porous Structured

Temperature: _____ °C Working area: Indoors Outdoors

Are there any chemicals, acids, vapours, solvents, etc. in the vicinity? If so, which? _____

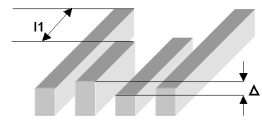
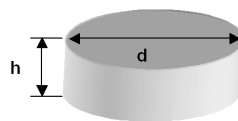
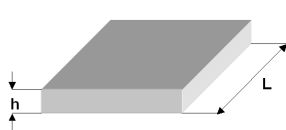
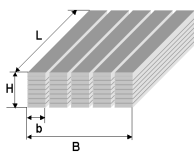
2. What are the shape, dimensions and weight of the workpieces?

Stack/pallet

Plate/block/sheet

Disc/cylinder

Single strips, beams, boards



Other: _____

| | Length L | Length l1 | Width B | Width b | Height H | Height h | Height Δh | d | Weight |
|-------------|----------|-----------|---------|---------|----------|----------|-----------|----|--------|
| Min. | mm | mm | mm | mm | mm | mm | mm | mm | kg |
| Max. | mm | mm | mm | mm | mm | mm | mm | mm | kg |

2.1 Are there any apertures, holes, etc. in the workpiece? -> Sketch:

2.2 What is the worst height:width ratio (h:b)? ____:____

2.3 Do the workpieces have to be separated?

No Yes, because of: porosity adhesion forces

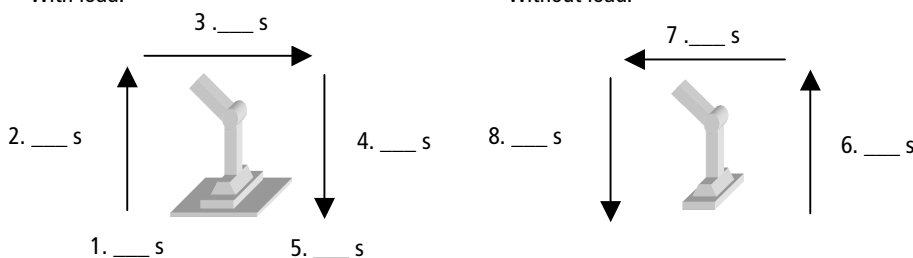
Sketch:

3. Description of the working cycle:

-> If possible, specify the duration of each individual step in the cycle

With load:

Without load:



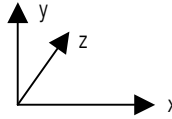
- | | |
|--------------------------|----------------------------|
| 1: Gripping | 5: Releasing |
| 2: Lifting vertically | 6: Idle travel, vertical |
| 3: Transport, horizontal | 7: Idle travel, horizontal |
| 4: Blowing off, vertical | 8: Idle travel, vertical |

Total cycle duration: ____ s

Gripping time: ____ s

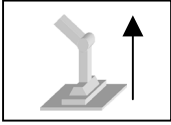
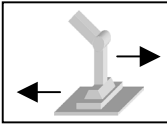
Release time: ____ s

3.1 What are the maximum acceleration values?



X-axis: _____ m/s²
 Y-axis: _____ m/s²
 Z-axis: _____ m/s²

Which way is the load lifted?

0  0 

3.2 Do other parts need to be handled in addition to the workpiece?

Separators Spacers Empty pallet Other: _____

4. How intrinsically rigid is the workpiece?

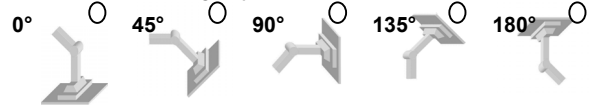


5. In which position is the load to be transported?

Horizontal Vertical

Direction of swivelling: (please check)

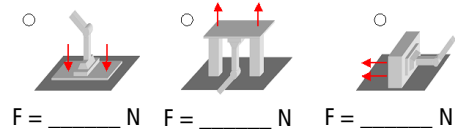
0° 45° 90° 135° 180°



6. How strongly may the gripper be pressed against the workpiece?

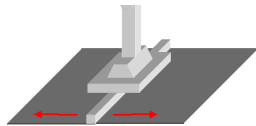
No limit Up to _____ N

Pressure pattern:



F = _____ N F = _____ N F = _____ N

7. Positioning accuracy



Is the workpiece position defined?

Yes, namely: centered against stop _____
 No, the maximum permissible positioning error is : _____ mm

8. How is the workpiece gripped?

From above From below From the side



9. Where may the workpiece be gripped?

Anywhere Only in certain places This results in a greater leverage

10. Interface specifications:

- Details of gripper weight: max. _____kg none specified
- Are there any definitions for the connection conditions? (enclose sketch if necessary) Yes No
- Requirements for interfaces? Electrical, pneumatic, sensors (e.g. manufacturer's restrictions, regulations):

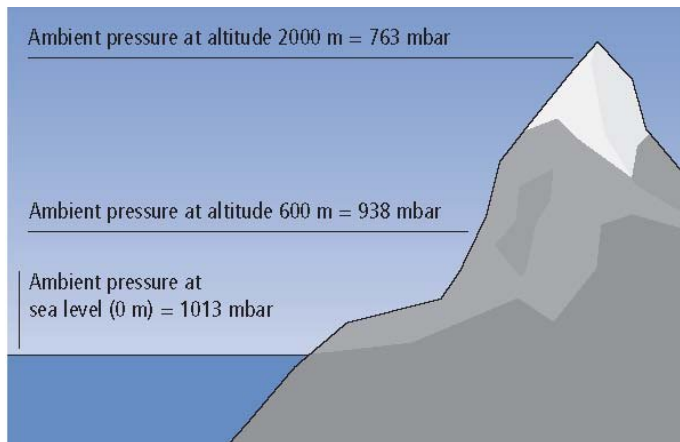
11. How is the vacuum to be generated?

| | | | |
|--|----------------------------------|---|---------------------------------------|
| <input type="checkbox"/> Electrically: | | <input type="checkbox"/> Pneumatically (ejector): | <input type="checkbox"/> Not defined: |
| <input type="checkbox"/> Pump: | <input type="checkbox"/> Blower: | | |
| Voltage? _____ V | | Compressed air available? _____ bar | |
| Frequency? _____ V | | | |

12. Which control voltage is to be used for valves, switches, etc.?

Control voltage: 24V DC 230V AC Other: _____ V AC/ DC

13. At which ambient pressure or altitude is the work to be done?



_____ mbar
 _____ meter over sea level

14. Project schedules if order is placed

For information only, implementation date not known
 Order already exists for the entire equipment
 Order will probably be placed on: _____
 Project will probably be implemented on: _____

15. Sample parts / Suction test

Samples available Suction test possible
 → Schmalz will gladly carry out a suction test free of charge if you provide suitable sample parts. Alternatively, you can ask for a sample gripper and carry out your own tests!

Additional details:

- Number of FX grippers needed per year: approx. _____ units / For this project: _____ units
- Do you already use vacuum grippers? No Yes, the following types: _____
- Would you like sensors to check that parts have been gripped? Yes No
- Desired data for quotation: _____ . _____ . _____
- Desired date for commissioning: _____ . _____ . _____
- Are you: plant manufacturer or end user
- The contact person for this project is _____

16. Enclosures

Layout Drawings Description Other: _____