

# Questionnaire F 350 | FIPA Gripper assembly

Company

Name

Street

City, State, Zip Code

Phone/Fax

## Gripper assembly

Please complete the following questionnaire carefully, so that we can select the optimal product for you.

Please help us to offer you the best service:

- > Please send us 3D-CAD Data of your part, tool and sprue (in STEP or IGES file format)
- > If you have no 3D-CAD Data available, please send us 2D-Drawings with measure details
- > If possible, please send us a photo or a sample
- > Please send us drawings of the robot adapter (2D, AutoCAD or PDF)

We will contact you if important information is missing. Please note, only if all information is completely available, we can ensure the optimal choice for you.

## Handling

### 1. Robot type

- Linear
- Swivel axes \_\_\_\_\_ No. of axes
- Model name \_\_\_\_\_

- Robot Entry  Top  Side
- Robot Wrist Flip  Yes  No
- Robot Wrist Rotation  Yes  No
- Robot Payload Capacity \_\_\_\_\_ kg

Existing Quick Change System

- Yes  No

Manufacturer / Type:

\_\_\_\_\_

### 2. Media supply

- Number of vacuum circuits \_\_\_\_\_
- Number of compressed air circuits  
\_\_\_\_\_ bar
- Hose diameter \_\_\_\_\_ mm  OD  ID
- Hose length \_\_\_\_\_ mm

### 3. Vacuum generation

- By FIPA
- By the customer
- Number of ejectors \_\_\_\_\_ Type \_\_\_\_\_
- Pump
- Side channel blower
- Other: \_\_\_\_\_

### 4. Field bus connection:

- ASI
  - Profibus
  - Other: \_\_\_\_\_
- \_\_\_\_\_
- \_\_\_\_\_

### 5. Electric gripper system interface - continued on the next page

Sensor type  PNP  NPN

Electrical connector type (Robot side):

- M8 connector (3 pins) (Female connector at robot)
- M12 connector (4 pins) (Female connector at robot)
- SUB-D connector (25 pins) (Female connector at robot, please attach specification incl. pin-out!)

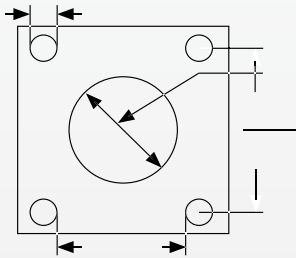
**5. Electric gripper system interface - continuation**

- Electrical contacts at quick-change system (please attach specification incl. pin-out!)
- Other (please specify) \_\_\_\_\_

In order to keep the wiring simple and to save digital inputs at the controller unit, sensors can be AND-combined to supply a common output signal. This common output signal will be positive as long as all sensors supply a positive output signal. Please specify which sensors shall be AND-combined (e.g. "all part detection sensors"); \_\_\_\_\_

**Gripper Mounting**

**1. Sketch - robot adapter plate**



**2. Robot adapter plate**

Size \_\_\_\_\_ mm  
 Spring loaded  Lift \_\_\_\_\_ mm  
 Type: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 \_\_\_\_\_

**3. Gripper base plate**

Size \_\_\_\_\_ mm  
 Spring loaded  Lift \_\_\_\_\_ mm  
 Type: \_\_\_\_\_  
 Name: \_\_\_\_\_  
 \_\_\_\_\_

**4. Comments:** \_\_\_\_\_

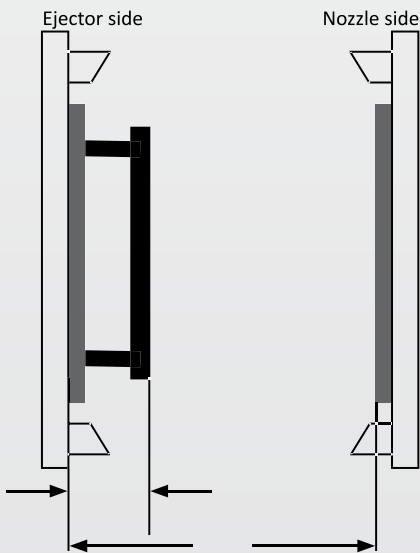
**Tool**

**1. Tool opening size** \_\_\_\_\_ mm

**2. Robot space requirement in x-direction** \_\_\_\_\_ mm  
 Robot space requirement in y-direction \_\_\_\_\_ mm  
 Robot space requirement in z-direction \_\_\_\_\_ mm

**Die-Casting Machine**

**1. Sketch**



Tie-bar thickness: \_\_\_\_\_ mm  
 Tie-bar spacing - horizontal: \_\_\_\_\_ mm  
 Tie-bar spacing - vertical: \_\_\_\_\_ mm

Type of Mold:  Hot Runner       3-Plate Mold  
 Vertical Corepull       Subgated  
 Other Explain Below

Ejection:  Moving Half       Fixed Half  
 Do parts fall or sag during or after ejection?  Yes       No  
 Is any force, twisting, bending, lifting required to remove parts?  
 Yes       No  
 Double lift?  Yes       No

Description \_\_\_\_\_

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## Component

### 1. Material

- Fabric
- Film
- Metal
- Magnetic material
- Silicone
- Plastic \_\_\_\_\_ Type
- Other: \_\_\_\_\_

### 2. Surface

- Non-marking
- Matt
- Shiny
- Textured
- Grained
- Other: \_\_\_\_\_

### 3. Subsequent process stages

- Cutting station
- Other: \_\_\_\_\_

### 4. Feeding of injection-mold

- Roll
- Magazine
- Provisioning
- Vibrating conveyor

### 5. Further Information

Part Name / I.D. \_\_\_\_\_

Part temperature during ejection: \_\_\_\_\_ °C

Total shot weight: \_\_\_\_\_

Number of cavities: \_\_\_\_\_

## Application

### 1. Item Insert

- Ejector side
  - Nozzle side
- Technical specifications available
- Yes  No

### 2. Item placed on:

- Conveyor belt
- Pallet
- Container
- Tray
- Fixture
- Other: \_\_\_\_\_

### 3. Cycle time:

Withdrawal time \_\_\_\_\_ seconds

Feeding time \_\_\_\_\_ seconds

Total cycle time \_\_\_\_\_ seconds

### 4. Description of process

## Gripper Design

### 1. Gripper elements

- |   |                                |  |   |  |
|---|--------------------------------|--|---|--|
| <input type="checkbox"/> Vacuum cups _____ (quantity)       | <input type="checkbox"/> Fixed | <input type="checkbox"/> Spring loaded | <input type="checkbox"/> Lifting cylinder |  |
| <input type="checkbox"/> Gripper fingers _____ (quantity)   | <input type="checkbox"/> Fixed | <input type="checkbox"/> Spring loaded | <input type="checkbox"/> Lifting cylinder | With monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Parallel grippers _____ (quantity) | <input type="checkbox"/> Fixed | <input type="checkbox"/> Spring loaded | <input type="checkbox"/> Lifting cylinder | With monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Sprue grippers _____ (quantity)    | <input type="checkbox"/> Fixed | <input type="checkbox"/> Spring loaded | <input type="checkbox"/> Lifting cylinder | With monitoring <input type="checkbox"/> Yes <input type="checkbox"/> No |
| <input type="checkbox"/> Magnetic grippers _____ (quantity) | <input type="checkbox"/> Fixed | <input type="checkbox"/> Spring loaded | <input type="checkbox"/> Lifting cylinder |  |
| <input type="checkbox"/> Air nippers _____ (quantity)       | <input type="checkbox"/> Fixed | <input type="checkbox"/> Spring loaded | <input type="checkbox"/> Lifting cylinder |  |
| <input type="checkbox"/> Needle grippers _____ (quantity)   | <input type="checkbox"/> Fixed | <input type="checkbox"/> Spring loaded | <input type="checkbox"/> Lifting cylinder |  |

### 2. Part inspection

- Vacuum \_\_\_\_\_ (quantity)
- Optical \_\_\_\_\_ (quantity)

### 3. Degating Required

- N/A
- On EOAT
- Separate degate station

### 4. Further information

Gripper dimensions (LxWxH in mm) \_\_\_\_\_

Dimensions of inserted parts (preferably supply drawing or sample part) \_\_\_\_\_

- Functional/requirement specification  Yes  No of \_\_\_\_\_ to be used
- Relevant factory standards  Yes  No of \_\_\_\_\_ to be used

5. Comments: \_\_\_\_\_