Grippers with Spindle Interface

Special Grippers · Grippers with Spindle Interface

Weight
0.8 kg .. 3.9 kg

Gripping force
70 N .. 1200 N

Stroke per finger
4 mm .. 10 mm

Layout of the work area in the machining center

Example of a handling and machining sequence:
1. Gripper removes blank from magazine and feeds it to the clamping station — part is clamped
2. Station changes to tools, part is machined
3. Station changes to gripper
4. Finished part is placed in magazine, cycle commences again from the beginning

Workpiece magazine
Clamping device
   NSL 400 pneumatic clamping station with ROTA TPS 160 chuck

Gripper with spindle interface
   HSK-A 50 / PGN-plus 80
   with wireless RSS sensor system

Machine table
Universal Gripper
PGN-plus/PZN-plus universal gripper with HSK-A spindle interface according to DIN 69893, Capto C6 or KM

Area of application
Unit for the fully automated loading and unloading of machining centers through their own axes

Your advantages and benefits
Low-price module
comprising a PGN-/PZN-plus universal gripper and a spindle interface

Common spindle interfaces (HSK-A, Capto C6, KM)
for the fully automated loading of the machining center through its own axes. Further spindle interfaces for use in your machine available on request.

Fast, automated gripper changeover
from tool magazine

Fully automated workpiece changeover
without the use of robots

General information on the series
Working principle
Pressure distributor and wedge-hook kinematics

Housing material
Aluminum alloy, hard-anodized

Base jaw material
Blackened steel

Spindle interface material
Heat-treated, hot-work steel

Actuation
Hydraulic via internal coolant supply (filtered, max. particle size 30 µm) or pneumatic via filtered compressed air (10 µm): Dry, lubricated or non-lubricated. Pressure medium: Requirements on quality of the compressed air according to DIN ISO 8573-1: 6 4 4.

Warranty
24 months

Scope of delivery
Centering sleeves, assembly and operating manual
Grippers with Spindle Interface

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Sectional diagram

1. **HSK-A Mount**
   for automatic tool/gripper changeover in the spindle

2. **Adapter plate with integrated pressure distributor**
   for a large pressure range

3. **Multiple-tooth guidance**
   high moment capabilities of base jaw guidance with minimum play for long fingers

4. **Base jaws**
   for the connection of workpiece-specific gripper fingers

5. **Kinematics**
   wedge-hook principle for high power transmission and synchronous gripping

6. **Housing**
   weight-reduced through the use of a hard-anodized, high-strength aluminum alloy

**Function description**

The pressure produced by the central internal supply of coolant is reduced by the pressure distributor, which is integrated in the adapter plates. The gripper can then be subjected to pressure, and can allow the base jaws to grip via the piston and wedge hook. During the gripping process, the gripper continuously lets out coolant via the flow control valve on the side.

**Options and special information**

Please be aware that when used in extreme conditions (e.g. coolant, casting or grinding dust), the life of the products may be considerably shortened. Other workpiece interfaces available on request. Please note that connection A of grippers in IS version must not be hermetically sealed as connection B of grippers in IS version.
Accessories

For the exact size of the required accessories, availability of this size and the designation and ID, please refer to the additional views at the end of the size in question. You will find more detailed information on our accessory range in the „Accessories“ catalog section.

General information on the series

Gripping force
is the arithmetic total of the gripping force applied to each jaw at distance P (see illustration), measured from the upper edge of the gripper. The gripping force is stated at a set effective pressure of 6 bar.

Finger length
is measured from the upper edge of the gripper housing in the direction of the main axis.

Repeat accuracy
is defined as the spread of the limit position after 100 consecutive strokes.

Closing and opening times
The closing and opening times depend greatly on the flow and pressure of the coolant supply and on the resulting flow resistance.

Gripping principle
Grippers for I.D. gripping are available on request.
The permitted finger loads of the AS versions are identical to those of the IS versions.

- When commissioned on a machine tool, the grippers must be set to the pressure of the drive medium. Please use our setting kit, ID 0308599, for this purpose. Grippers with the “IS” designation are for O.D. gripping, those with the “AS” designation for I.D. gripping. In the IS version, the gripper is closed via the pressure of the medium; in the AS version, the pressure of the medium opens the gripper. Alternatively, gripping can be achieved by spring force, and the release with the pressure of the medium.

### Technical data

<table>
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<tr>
<th>Description</th>
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Moments and forces apply per base jaw and may occur simultaneously. My may arise in addition to the moment generated by the gripping force itself.
Capto C6 PZN-plus 64 AS/IS

1. Gripper connection
2. Finger connection

Please refer to the gripper in question for more detailed information. Suitable gripper accessories can be found in the additional views at the end of the gripper size in question.

Capto C6 PZN-plus 100 AS/IS

1. Gripper connection
2. Finger connection

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