



Sizes 65 .. 230



Weight 0.33 kg .. 16.3 kg



Gripping moment 6 Nm .. 934 Nm



Opening angle per finger 20°



Workpiece weight 1.1 kg .. 43 kg

Application example





Universal Angular Gripper

Robust 2-finger angular gripper with spring-loaded gripping force safety device

Area of application

For universal use in clean and slightly dirty environments

Your advantages and benefits

Variable top jaw design as gripper is available both as a jaw version (-B) and a finger version (-F)

FPS measuring system monitoring of jaw position or of 5 ranges by means of the add-on FPS sensor

Gripping force safety device always integrated for reliable, controlled production

Can be used in tough environments thanks to the gripper's sturdy construction



General information on the series

Working principle Positively driven lever mechanism

Housing material Aluminum alloy, hard-anodized

Base jaw material Steel

Actuation

Pneumatic, with filtered compressed air (10 μ m): Dry, lubricated or non-lubricated Pressure medium: Required quality class of compressed air according to DIN ISO 8573-1: Quality class 4

Warranty

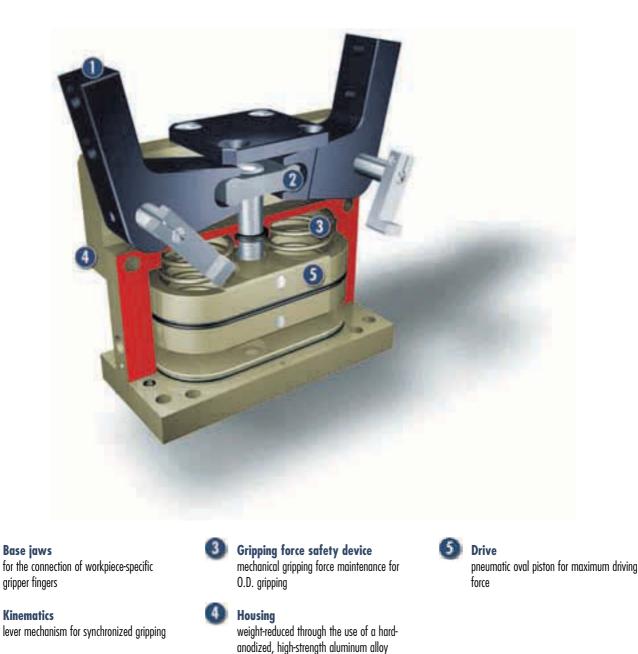
24 months

Scope of delivery

Brackets for proximity switches, switching lugs, guide sleeves, O-rings for direct connection, assembly and operating manual with manufacturer's declaration



Sectional diagram



Function description

The piston is moved up or down by means of compressed air. The kinematics use the guided lever system to transform the vertical motion into the synchronous, angular movement of the base jaws.

Options and special information

This series is especially suitable for handling crankshafts and camshafts.



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Accessories

SCHUNK accessories - the suitable complement for the highest level of functionality, reliability and controlled production of all automation modules.



Centering sleeves







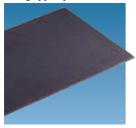
W/WK/KV/GK

sensor cables





HKI gripper pads



SDV-P pressure maintenance valves





sensor

FPS flexible position

V sensor distributors



() 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 can find more detailed information on our accessory range in the "Accessories" catalog section.

General information on the series

Gripping moment

is the arithmetic total of gripping moments for each base jaw.

Finger length

is measured from the upper edge of the gripper housing in the direction of the main axis. If the max. permitted finger length is exceeded, as with heavy fingers, the speed of movement of the jaws must be restricted and/or the opening angle reduced. The service life of the gripper may be reduced.

Repeat accuracy

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

Workpiece weight

The recommended workpiece weight is calculated for a force-type connection with a friction coefficient of 0.1 and a safety of 2 against slippage of the workpiece on acceleration due to gravity g. Considerably heavier workpiece weights are permitted with form-fit gripping.

Closing and opening times

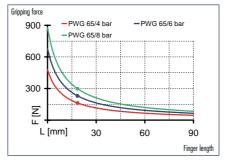
Closing and opening times are purely the times that the base jaws or fingers are in motion. Valve switching times, hose filling times or PLC reaction times are not included in the above times and must be taken into consideration when determining cycle times.



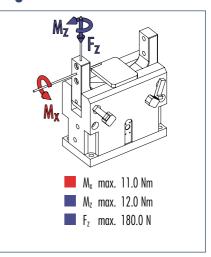
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Gripping force, O.D. gripping



Finger load



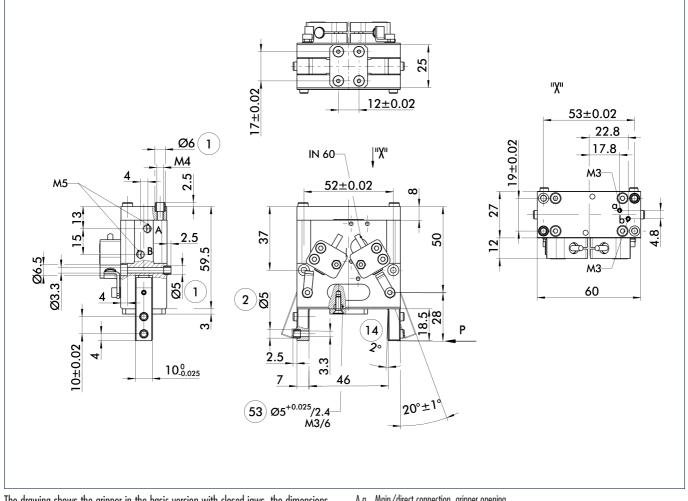
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

| Description | | PWG 65-F | PWG 65-B | |
|-----------------------------------|--------------------|----------|----------|--|
| | ID | 0302630 | 0302631 | |
| Connection version | | | Base jaw | |
| Opening angle per jaw | [°] | 20.0 | 20.0 | |
| Opening angle per jaw up to | [°] | 2.0 | 2.0 | |
| Closing moment | [Nm] | 6.44 | 6.44 | |
| Closing moment ensured by spring | [Nm] | 1.7 | 1.7 | |
| Weight | [kg] | 0.33 | 0.33 | |
| Recommended workpiece weight | [kg] | 1.1 | 1.1 | |
| Air consumption per double stroke | [cm ³] | 8.0 | 8.0 | |
| Nominal pressure | [bar] | 6.0 | 6.0 | |
| Minimum pressure | [bar] | 4.0 | 4.0 | |
| Maximum pressure | [bar] | 8.0 | 8.0 | |
| Closing time | [s] | 0.01 | 0.01 | |
| Opening time | [s] | 0.02 | 0.02 | |
| Max. permitted finger length | [mm] | 60.0 | 60.0 | |
| Max. permitted weight per finger | [kg] | 0.15 | 0.15 | |
| IP class | | 20 | 20 | |
| Min. ambient temperature | [°[] | -10.0 | -10.0 | |
| Max. ambient temperature | [°[] | 90.0 | 90.0 | |
| Repeat accuracy | [mm] | 0.05 | 0.05 | |



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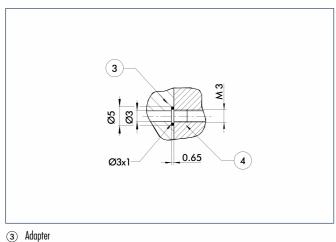
Main views



The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- (1) The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the springloaded, mechanical gripping force safety device.
- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing Gripper connection
- 1 Finger connection 2
- Clamping reserve per finger (14)
- Connection for shaft support 53

Hoseless direct connection

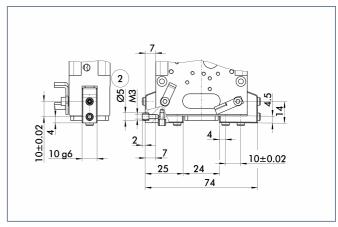


Gripper

(4)

The direct connection is used for supplying compressed air to the gripper without vulnerable hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Jaw version

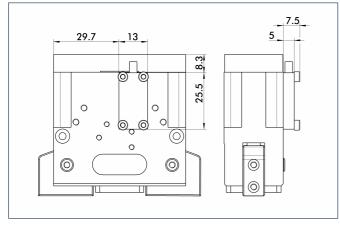


(2) Finger connection



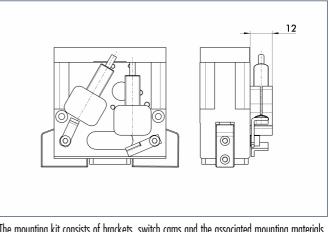
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FPS measuring system



In the PWG, up to 3 intermediate positions can be monitored by the FPS flexible position sensor.

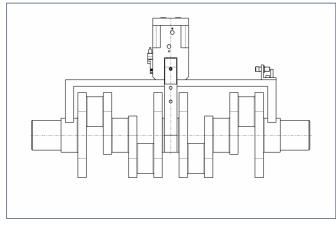
Mounting kit for proximity switch



The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

| Description | ID | |
|-------------|---------|--|
| HG-PWG 65 | 0300764 | |

Shaft support

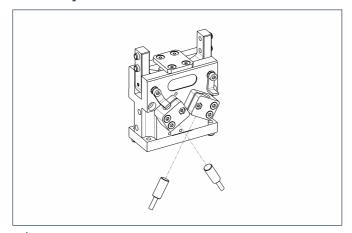


We will supply the complete module for handling crankshafts and camshafts on request.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.



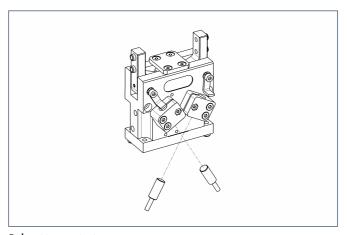
Sensor system



End position monitoring:

| Description | ID | Recommended product | |
|-------------|---------|---------------------|--|
| IN 60/S-M12 | 0301585 | | |
| IN 60/S-M8 | 0301485 | • | |
| INK 60/S | 0301553 | | |

Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



End position monitoring:

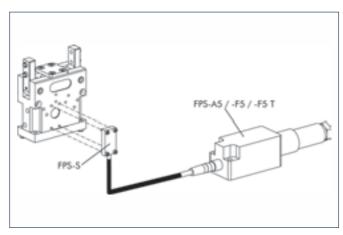
Inductive proximity switches, mounted with mounting kit

| Description | ID | Recommended product | |
|--------------|---------|---------------------|--|
| HG-PWG 65 | 0300764 | | |
| IN 80/S-M12 | 0301578 | | |
| IN 80/S-M8 | 0301478 | • | |
| IN-B 80/S-M8 | 0301477 | | |
| INK 80/S | 0301550 | | |
| INK 80/SL | 0301579 | | |

- Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

| Extension cables for | proximity switches/magnetic switch | les |
|----------------------|------------------------------------|-----|
| Description | ID | |
| GK 3-M8 | 0301622 | |
| KV 10-M12 | 0301596 | |
| KV 10-M8 | 0301496 | |
| KV 20-M12 | 0301597 | |
| KV 20-M8 | 0301497 | |
| KV 3-M12 | 0301595 | |
| KV 3-M8 | 0301495 | |
| W 3-M12 | 0301503 | |
| W 5-M12 | 0301507 | |
| WK 3-M8 | 0301594 | |
| WK 5-M8 | 0301502 | |

Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Measuring system:

| FPS | position | monitor | |
|-----|----------|---------|--|
| n | | | |

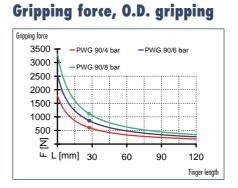
| Description | ID | |
|-------------|---------|--|
| FPS-A5 | 0301802 | |
| FPS-F5 | 0301805 | |
| FPS-F5 T | 0301807 | |
| FPS-S 13 | 0301705 | |

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

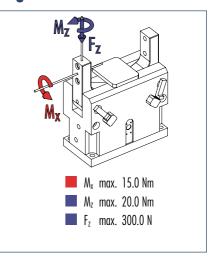


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Finger load

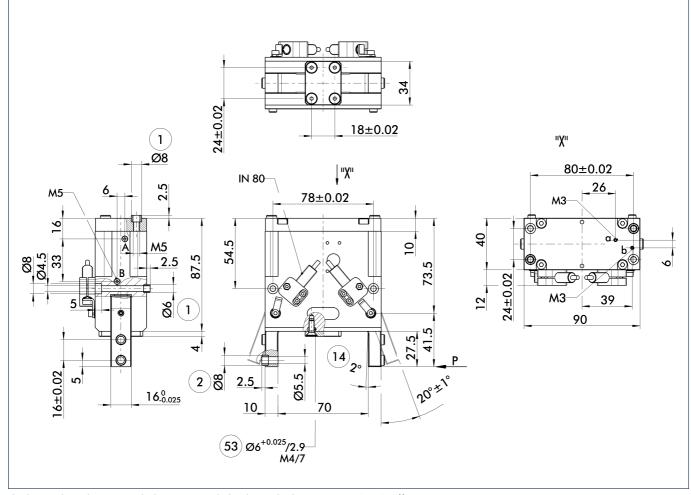


① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

| Description | | PWG 90-F | PWG 90-B | |
|-----------------------------------|--------------------|----------|----------|--|
| | ID | 0302632 | 0302633 | |
| Connection version | | | Base jaw | |
| Opening angle per jaw | [°] | 20.0 | 20.0 | |
| Opening angle per jaw up to | [°] | 2.0 | 2.0 | |
| Closing moment | [Nm] | 35.69 | 35.69 | |
| Closing moment ensured by spring | [Nm] | 9.0 | 9.0 | |
| Weight | [kg] | 0.99 | 1.06 | |
| Recommended workpiece weight | [kg] | 4.3 | 4.3 | |
| Air consumption per double stroke | [cm ³] | 35.0 | 35.0 | |
| Nominal pressure | [bar] | 6.0 | 6.0 | |
| Minimum pressure | [bar] | 4.0 | 4.0 | |
| Maximum pressure | [bar] | 8.0 | 8.0 | |
| Closing time | [S] | 0.03 | 0.03 | |
| Opening time | [S] | 0.06 | 0.06 | |
| Max. permitted finger length | [mm] | 80.0 | 80.0 | |
| Max. permitted weight per finger | [kg] | 0.5 | 0.5 | |
| IP class | | 20 | 20 | |
| Min. ambient temperature | [°[] | -10.0 | -10.0 | |
| Max. ambient temperature | [°[] | 90.0 | 90.0 | |
| Repeat accuracy | [mm] | 0.05 | 0.05 | |



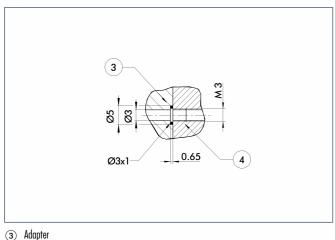
Main views



The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- (1) The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the springloaded, mechanical gripping force safety device.
- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing Gripper connection
- 1 Finger connection 2
- Clamping reserve per finger (14)
- Connection for shaft support 53

Hoseless direct connection

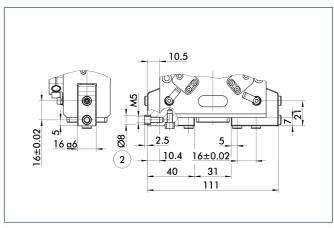


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Gripper (4)

The direct connection is used for supplying compressed air to the gripper without vulnerable hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Jaw version

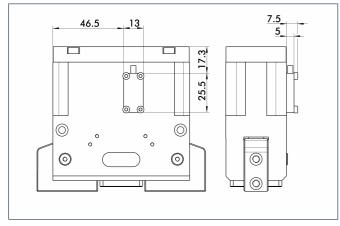


(2) Finger connection



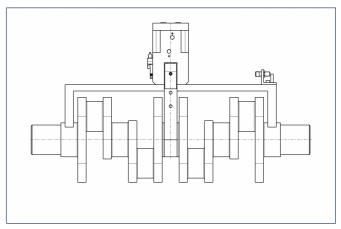
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FPS measuring system



In the PWG, up to 3 intermediate positions can be monitored by the FPS flexible position sensor.

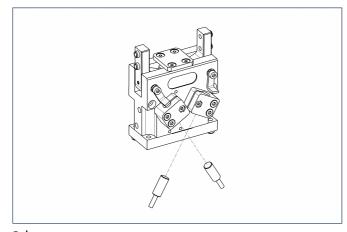
Shaft support



We will supply the complete module for handling crankshafts and camshafts on request.



Sensor system

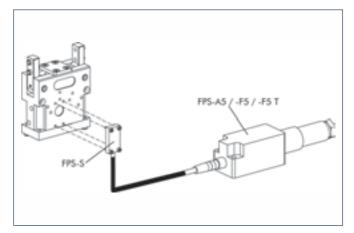


End position monitoring:

| Ind | uctive | proximity | switches, | for dire | ct mounting | |
|-----|--------|-----------|-----------|----------|-------------|--|
| - | | | | | - | |

| Description | ID | Recommended product |
|--------------|---------|---------------------|
| IN 80/S-M12 | 0301578 | |
| IN 80/S-M8 | 0301478 | • |
| IN-B 80/S-M8 | 0301477 | |
| INK 80/S | 0301550 | |

Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



Measuring system:

| FPS position monit | or | |
|--------------------|---------|--|
| Description | ID | |
| FPS-A5 | 0301802 | |
| FPS-F5 | 0301805 | |
| FPS-F5 T | 0301807 | |
| FPS-S 13 | 0301705 | |
| KV 05 | 0301598 | |
| KV 1 | 0301599 | |
| KV 10 | 0301801 | |

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

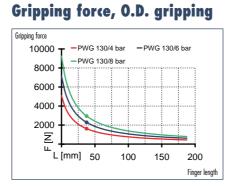
| Extension cables f | or proximity switches/magnetic sv | witches |
|--------------------|-----------------------------------|---------|
| Description | ID | |
| GK 3-M8 | 0301622 | |
| KV 10-M12 | 0301596 | |
| KV 10-M8 | 0301496 | |
| KV 20-M12 | 0301597 | |
| KV 20-M8 | 0301497 | |
| KV 3-M12 | 0301595 | |
| KV 3-M8 | 0301495 | |
| W 3-M12 | 0301503 | |
| W 5-M12 | 0301507 | |
| WK 3-M8 | 0301594 | |
| WK 5-M8 | 0301502 | |
| | | |

Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.

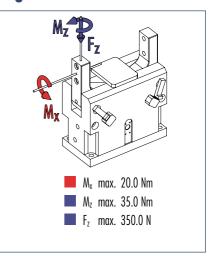


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Finger load



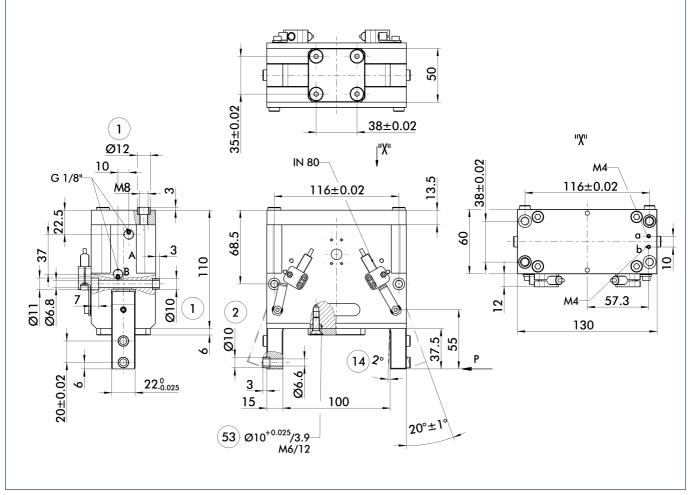
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

| Description | | PWG 130-F | PWG 130-B | |
|-----------------------------------|--------------------|-----------|-----------|--|
| | ID | 0302634 | 0302635 | |
| Connection version | | | Base jaw | |
| Opening angle per jaw | [°] | 20.0 | 20.0 | |
| Opening angle per jaw up to | [°] | 2.0 | 2.0 | |
| Closing moment | [Nm] | 125.4 | 125.4 | |
| Closing moment ensured by spring | [Nm] | 34.2 | 34.2 | |
| Weight | [kg] | 2.6 | 2.8 | |
| Recommended workpiece weight | [kg] | 11.0 | 11.0 | |
| Air consumption per double stroke | [cm ³] | 120.0 | 120.0 | |
| Nominal pressure | [bar] | 6.0 | 6.0 | |
| Minimum pressure | [bar] | 4.0 | 4.0 | |
| Maximum pressure | [bar] | 8.0 | 8.0 | |
| Closing time | [S] | 0.1 | 0.1 | |
| Opening time | [S] | 0.19 | 0.19 | |
| Max. permitted finger length | [mm] | 125.0 | 125.0 | |
| Max. permitted weight per finger | [kg] | 1.0 | 1.0 | |
| IP class | | 20 | 20 | |
| Min. ambient temperature | [°[] | -10.0 | -10.0 | |
| Max. ambient temperature | [°C] | 90.0 | 90.0 | |
| Repeat accuracy | [mm] | 0.05 | 0.05 | |



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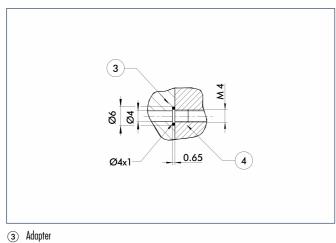
Main views



The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.
- A,a Main/direct connection, gripper opening B,b Main/direct connection, gripper closing
- (1) Gripper connection
- Finger connection
- (14) Clamping reserve per finger
- 53 Connection for shaft support

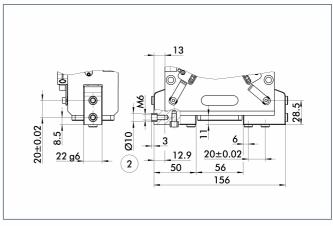
Hoseless direct connection



⁽⁴⁾ Gripper

The direct connection is used for supplying compressed air to the gripper without vulnerable hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Jaw version



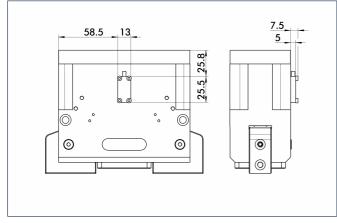
(2) Finger connection





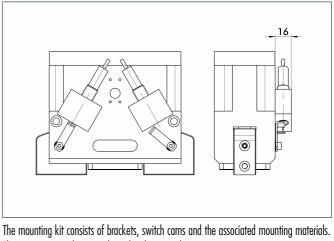
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FPS measuring system



In the PWG, up to 3 intermediate positions can be monitored by the FPS flexible position sensor.

Mounting kit for proximity switch



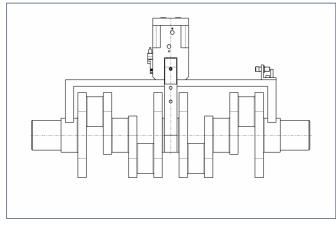
The proximity switches must be ordered separately.

Description

|--|

ID

Shaft support



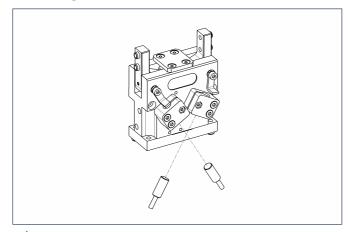
We will supply the complete module for handling crankshafts and camshafts on request.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.



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Sensor system

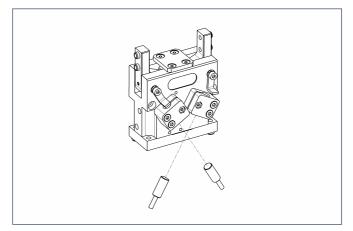


End position monitoring:

| Inductiv | e proximity | [,] switches, | for direct | mounting |
|----------|-------------|------------------------|------------|----------|
|----------|-------------|------------------------|------------|----------|

| Description | ID | Recommended product |
|--------------|---------|---------------------|
| IN 80/S-M12 | 0301578 | |
| IN 80/S-M8 | 0301478 | • |
| IN-B 80/S-M8 | 0301477 | |
| INK 80/S | 0301550 | |

Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



End position monitoring:

INK 120/S

| Inductive proximity switches, mounted with mounting kit | | | |
|---|---------|---------------------|--|
| Description | ID | Recommended product | |
| HG-PWG 130-230 | 0300763 | | |
| IN 120/S-M12 | 0301592 | • | |

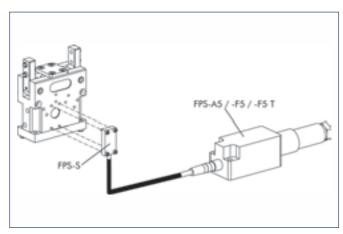
0301562

Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



Extension cables for proximity switches/magnetic switches Description ID GK 3-M8 0301622 KV 10-M12 0301596 KV 10-M8 0301496 KV 20-M12 0301597 KV 20-M8 0301497 KV 3-M12 0301595 KV 3-M8 0301495 W 3-M12 0301503 W 5-M12 0301507 WK 3-M8 0301594 WK 5-M8 0301502

Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Measuring system:

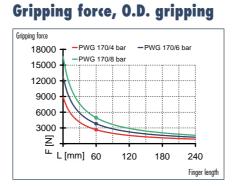
| FPS position monito | r | |
|---------------------|---------|--|
| Description | ID | |
| FPS-A5 | 0301802 | |
| FPS-F5 | 0301805 | |
| FPS-F5 T | 0301807 | |
| FPS-S 13 | 0301705 | |

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

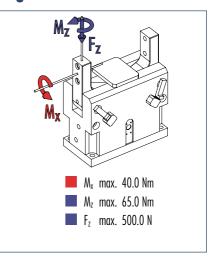


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Finger load



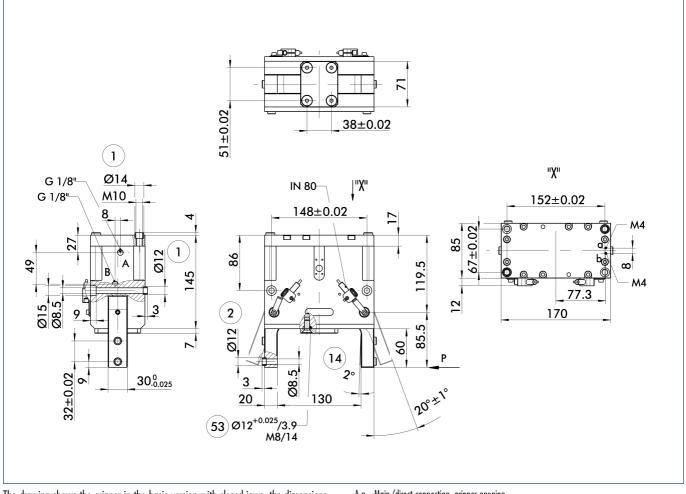
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

| Description | | PWG 170-F | PWG 170-B | |
|-----------------------------------|--------------------|-----------|-----------|--|
| | ID | 0302636 | 0302637 | |
| Connection version | | | Base jaw | |
| Opening angle per jaw | [°] | 20.0 | 20.0 | |
| Opening angle per jaw up to | [°] | 2.0 | 2.0 | |
| Closing moment | [Nm] | 324.9 | 324.9 | |
| Closing moment ensured by spring | [Nm] | 80.4 | 80.4 | |
| Weight | [kg] | 6.6 | 7.0 | |
| Recommended workpiece weight | [kg] | 19.0 | 19.0 | |
| Air consumption per double stroke | [cm ³] | 320.0 | 320.0 | |
| Nominal pressure | [bar] | 6.0 | 6.0 | |
| Minimum pressure | [bar] | 4.0 | 4.0 | |
| Maximum pressure | [bar] | 8.0 | 8.0 | |
| Closing time | [s] | 0.27 | 0.27 | |
| Opening time | [s] | 0.3 | 0.3 | |
| Max. permitted finger length | [mm] | 160.0 | 160.0 | |
| Max. permitted weight per finger | [kg] | 2.5 | 2.5 | |
| IP class | | 20 | 20 | |
| Min. ambient temperature | [° (] | -10.0 | -10.0 | |
| Max. ambient temperature | [° (] | 90.0 | 90.0 | |
| Repeat accuracy | [mm] | 0.05 | 0.05 | |



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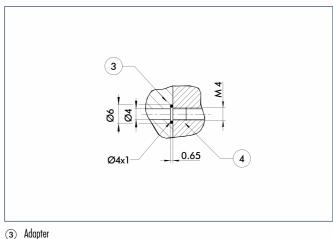
Main views



The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- (1) The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the springloaded, mechanical gripping force safety device.
- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing Gripper connection
- 1 Finger connection 2
- <u>(14)</u> Clamping reserve per finger
- Connection for shaft support 53

Hoseless direct connection

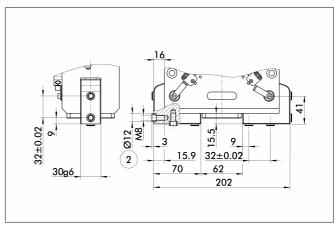


³ Gripper

(4)

The direct connection is used for supplying compressed air to the gripper without vulnerable hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Jaw version

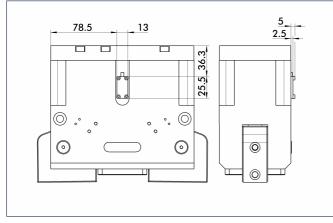


(2) Finger connection



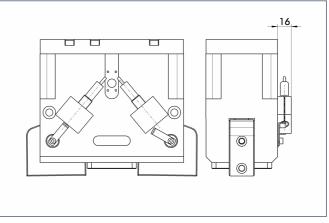
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FPS measuring system



In the PWG, up to 3 intermediate positions can be monitored by the FPS flexible position sensor.

Mounting kit for proximity switch



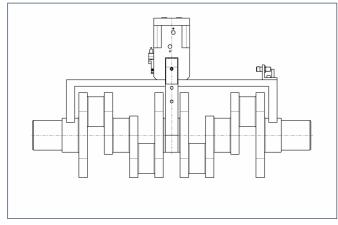
The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

| | • | ••• | |
|-------------|---|-----|--|
| Description | | | |

| HG-PWG 130-230 0300763 | |
|------------------------|--|

ID

Shaft support



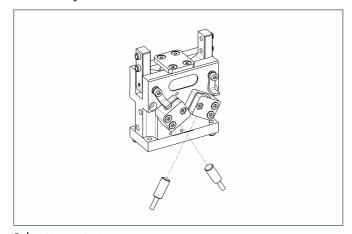
We will supply the complete module for handling crankshafts and camshafts on request.

You can find more detailed information and individual parts of the above-mentioned accessories in the "Accessories" catalog section.



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Sensor system

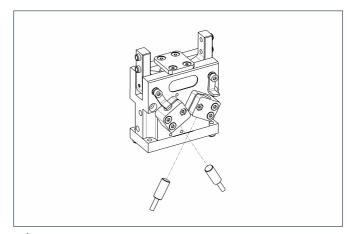


End position monitoring:

| Inductive | proximity | v switches | , for c | lirect | mounting | |
|-----------|-----------|------------|---------|--------|----------|--|
|-----------|-----------|------------|---------|--------|----------|--|

| Description | ID | Recommended product |
|--------------|---------|---------------------|
| IN 80/S-M12 | 0301578 | |
| IN 80/S-M8 | 0301478 | • |
| IN-B 80/S-M8 | 0301477 | |
| INK 80/S | 0301550 | |

Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



End position monitoring:

INK 120/S

| Inductive proximity switches, mounted with mounting kit | | | |
|---|---------|---------------------|--|
| Description | ID | Recommended product | |
| HG-PWG 130-230 | 0300763 | | |
| IN 120/S-M12 | 0301592 | • | |

0301562

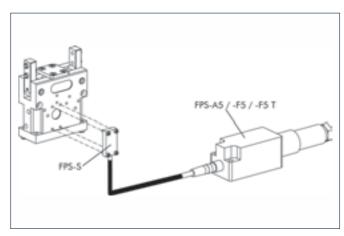
Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



Description ID GK 3-M8 0301622 KV 10-M12 0301596 KV 10-M8 0301496 KV 20-M12 0301597 KV 20-M8 0301497 KV 3-M12 0301595 KV 3-M8 0301495 W 3-M12 0301503 W 5-M12 0301507 WK 3-M8 0301594 WK 5-M8 0301502

Extension cables for proximity switches/magnetic switches

Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Measuring system:

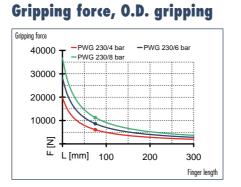
| FPS position monitor | r | |
|----------------------|---------|--|
| Description | ID | |
| FPS-A5 | 0301802 | |
| FPS-F5 | 0301805 | |
| FPS-F5 T | 0301807 | |
| FPS-S 13 | 0301705 | |

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

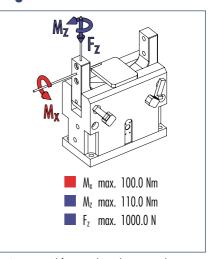


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Finger load



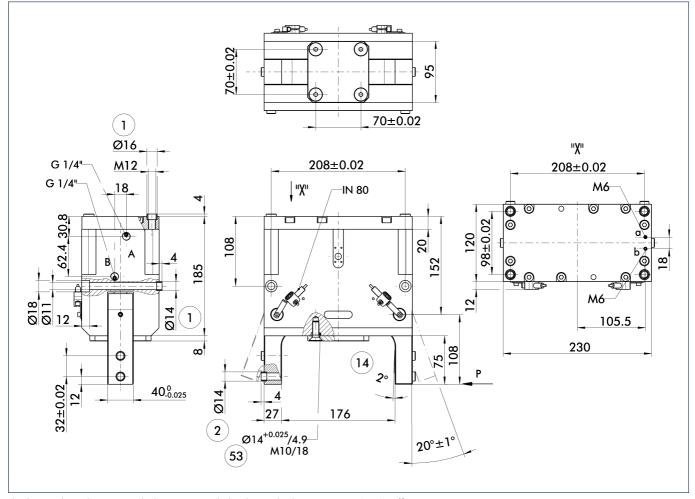
① Moments and forces apply per base jaw and may occur simultaneously. If the max. permitted finger weight is exceeded, it is imperative to throttle the air pressure so that the jaw movement occurs without any hitting or bouncing. Service life may be reduced.

| Description | | PWG 230-F | PWG 230-B | |
|-----------------------------------|--------------------|-----------|-----------|--|
| | ID | 0302638 | 0302639 | |
| Connection version | | | Base jaw | |
| Opening angle per jaw | [°] | 20.0 | 20.0 | |
| Opening angle per jaw up to | [°] | 2.0 | 2.0 | |
| Closing moment | [Nm] | 934.2 | 934.2 | |
| Closing moment ensured by spring | [Nm] | 237.6 | 237.6 | |
| Weight | [kg] | 15.8 | 16.3 | |
| Recommended workpiece weight | [kg] | 43.0 | 43.0 | |
| Air consumption per double stroke | [cm ³] | 860.0 | 860.0 | |
| Nominal pressure | [bar] | 6.0 | 6.0 | |
| Minimum pressure | [bar] | 4.0 | 4.0 | |
| Maximum pressure | [bar] | 8.0 | 8.0 | |
| Closing time | [s] | 0.35 | 0.35 | |
| Opening time | [s] | 0.45 | 0.45 | |
| Max. permitted finger length | [mm] | 200.0 | 200.0 | |
| Max. permitted weight per finger | [kg] | 4.0 | 4.0 | |
| IP class | | 20 | 20 | |
| Min. ambient temperature | [° (] | -10.0 | -10.0 | |
| Max. ambient temperature | [° (] | 90.0 | 90.0 | |
| Repeat accuracy | [mm] | 0.05 | 0.05 | |



Pneumatic • 2-Finger Angular Grippers • Universal Angular Grippers

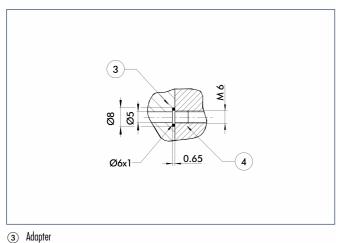
Main views



The drawing shows the gripper in the basic version with closed jaws, the dimensions do not include the options described below.

- The SDV-P pressure maintenance valve can also be used (see "Accessories" catalog section) for I.D. or O.D. gripping as an alternative or in addition to the spring-loaded, mechanical gripping force safety device.
- A,a Main/direct connection, gripper opening
- B,b Main/direct connection, gripper closing
- $\textcircled{1} \quad \text{Gripper connection} \quad$
- (2) Finger connection
- (1) Clamping reserve per finger
- **53** Connection for shaft support

Hoseless direct connection

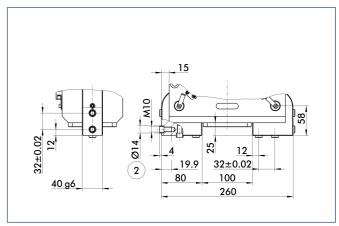


⁽⁴⁾ Gripper

(4) Ulipper

The direct connection is used for supplying compressed air to the gripper without vulnerable hoses. Instead, the pressure medium is fed through bore-holes in the mounting plate.

Jaw version

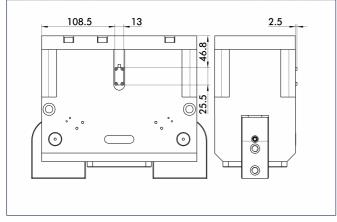


 $[\]textcircled{2} \quad \text{Finger connection} \quad \\$



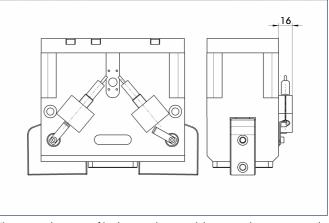
Pneumatic • 2-Finger Angular Grippers • Universal Angular Grippers

FPS measuring system



In the PWG, up to 3 intermediate positions can be monitored by the FPS flexible position sensor.

Mounting kit for proximity switch



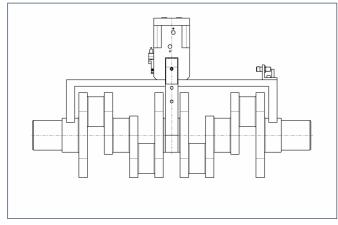
The mounting kit consists of brackets, switch cams and the associated mounting materials. The proximity switches must be ordered separately.

| | F | |
|-----|----------|--|
| Des | cription | |

| HG-PWG 130-230 | 0300763 | |
|----------------|---------|--|
| 101110 100 200 | 0000100 | |

ID

Shaft support

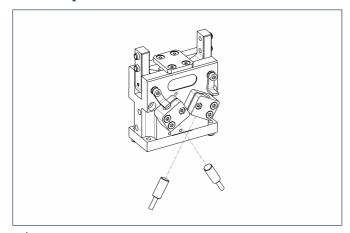


We will supply the complete module for handling crankshafts and camshafts on request.



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Sensor system

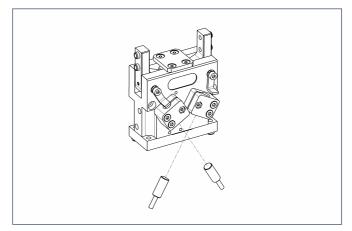


End position monitoring:

| Inductive proximity switches, | for direct | mounting |
|-------------------------------|------------|---------------------|
| Description | ID | Recommended product |

| Description | עו | Nocommonaca produci |
|--------------|---------|---------------------|
| IN 80/S-M12 | 0301578 | |
| IN 80/S-M8 | 0301478 | • |
| IN-B 80/S-M8 | 0301477 | |
| INK 80/S | 0301550 | |
| | | |

(1) Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.



End position monitoring:

INK 120/S

| Inductive proximity switches, mounted with mounting kit | | | |
|---|---------|---------------------|--|
| Description | ID | Recommended product | |
| HG-PWG 130-230 | 0300763 | | |
| IN 120/S-M12 | 0301592 | • | |

0301562

(1) Two sensors (NO contacts) are required for each gripper, plus extension cables as an option.

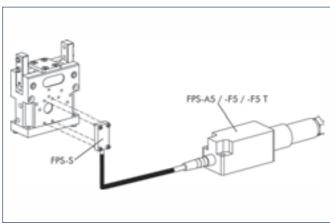


Description ID GK 3-M8 0301622 KV 10-M12 0301596 KV 10-M8 0301496 KV 20-KV 20-KV 3-N KV 3-M W 3-M

Extension cables for proximity switches/magnetic switches

| KV 20-M12 | 0301597 | |
|-----------|---------|--|
| KV 20-M8 | 0301497 | |
| KV 3-M12 | 0301595 | |
| KV 3-M8 | 0301495 | |
| W 3-M12 | 0301503 | |
| W 5-M12 | 0301507 | |
| WK 3-M8 | 0301594 | |
| WK 5-M8 | 0301502 | |
| | | |

① Please note the minimum permitted bending radii for the sensor cables, which are generally 35 mm.



Measuring system:

| гос | | · |
|-----|----------|---------|
| ۲rs | position | monitor |

| Description | ID | |
|-------------|---------|--|
| FPS-A5 | 0301802 | |
| FPS-F5 | 0301805 | |
| FPS-F5 T | 0301807 | |
| FPS-S 13 | 0301705 | |

When using an FPS system, an FPS sensor (FPS-S) and an electronic processor (FPS-F5 / F5 T or A5) are required for each gripper as well as a mounting kit (AS), if listed. Cable extensions (KV) are available as options in the "Accessories" catalog section.

