



Superior Clamping and Gripping



Product Information

File tool CRT

Compliant. Flexible. Robust.

Pneumatic file tool CRT

Pneumatically driven file with radial compensation for machining workpieces

Field of application

for automatic deburring of different workpieces, geometries, and materials in a reproducible quality



Advantages – Your benefits

Flexibility in radial direction for a simplified robot programming

Use of proven files for simple automation of manual deburring processes

Flexible use on the robot arm or as a stationary unit

Simple exchange of wear parts for maximum system availability and minimum spare parts requirements

Robust bearing for an optimized service life

The compensation force can be adjusted means of compressed air. for high-quality deburring results in any installation position

Lock function for the Y axis for an oscillating compensation only in the X-axis



Sizes
Quantity: 1



File stroke
5 mm



Number of idle
running strokes
12000 1/min

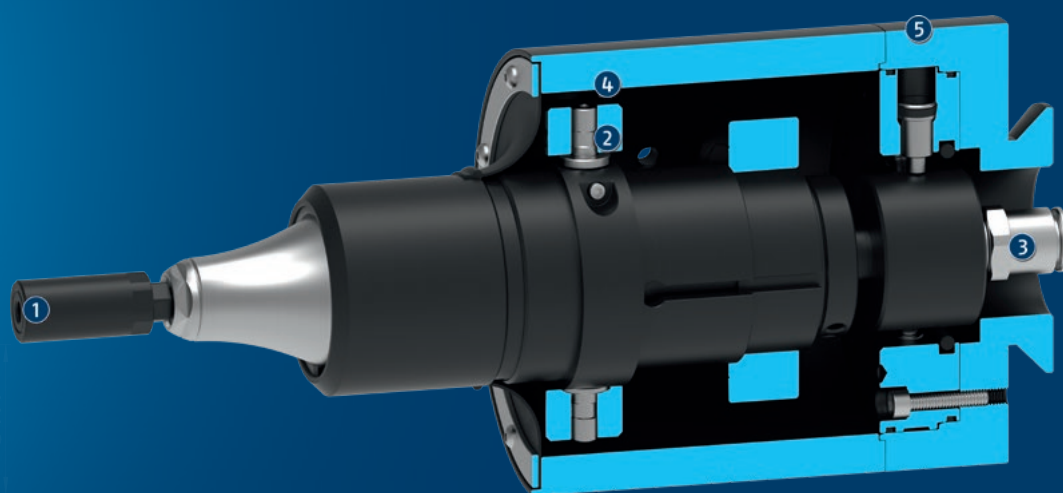


Compensation
angle, radial
 $\pm 1.8^\circ$

Functional description

The unit is driven by a pneumatic motor. The motor is gimbal-mounted to compensate for tolerances on the workpiece contour. The toolholder mounting is held by a file holder as standard for files with a 5 mm shank. The Y-axis can

optionally be fixed by a set screw. This means that pendulum compensation is only possible in the X axis. The compliance force is controlled via a second air connection. Depending on the pressure setting, a variable contact force acts on the file tool.



① **Tool holder**
for files

② **Gimballed system**
for a robust compensation function

③ **Air connection**
for the supply of the motor

④ **Locking function for Y axis**
for an oscillating compensation in the X-axis

⑤ **Air connection**
for adjusting the compliance force

General notes about the series

Mounting: on the robot arm or as a stationary unit

Actuation: pneumatic, via filtered (<5 µm, dry) and oiled compressed air (1-2 drops per minute)

Scope of delivery: Spindle with collet and pneumatic screw connections.

Warranty: 24 months

Ambient conditions: Please note that the unit is not suitable for use in an area where coolants or cutting fluids are present.



Application example

Robot-guided deburring of fins of a milled heatsink.

- | | |
|---------------------------|--|
| ❶ Pneumatic file tool CRT | ❺ Quick-change system SWS |
| ❷ Deburring spindle RCV | ❻ Quick-change adapter SWA |
| ❸ Heat sink | ❼ Storage module pin and bushing for CRT |
| ❹ TANDEM KSP plus | |

SCHUNK offers more ...

The following components make the product CRT even more productive – the suitable addition for the highest functionality, flexibility, reliability, and controlled production.



Quick change system



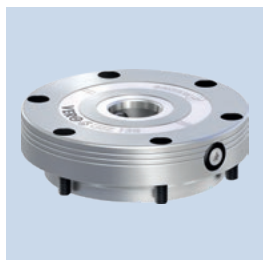
Manual change system



Force/torque sensor



2-finger parallel gripper



Quick-change Pallet System



Clamping force block



2-finger small components gripper



3-Finger Centric Gripper

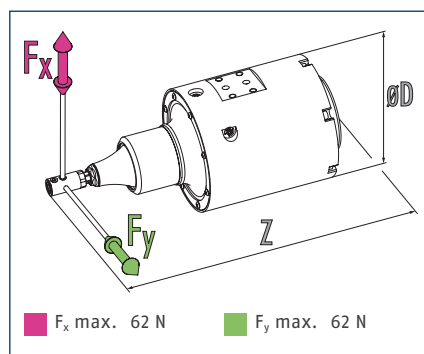
① For more information on these products can be found on the following product pages or at schunk.com. Please contact us: SCHUNK technical hotline +49-7133-103-2696

Options and special information

Universally: Due to its flexible assembly options, the CRT file tool is not only restricted for use on a robot arm. It can also be used as a fixed tool with a moving workpiece.



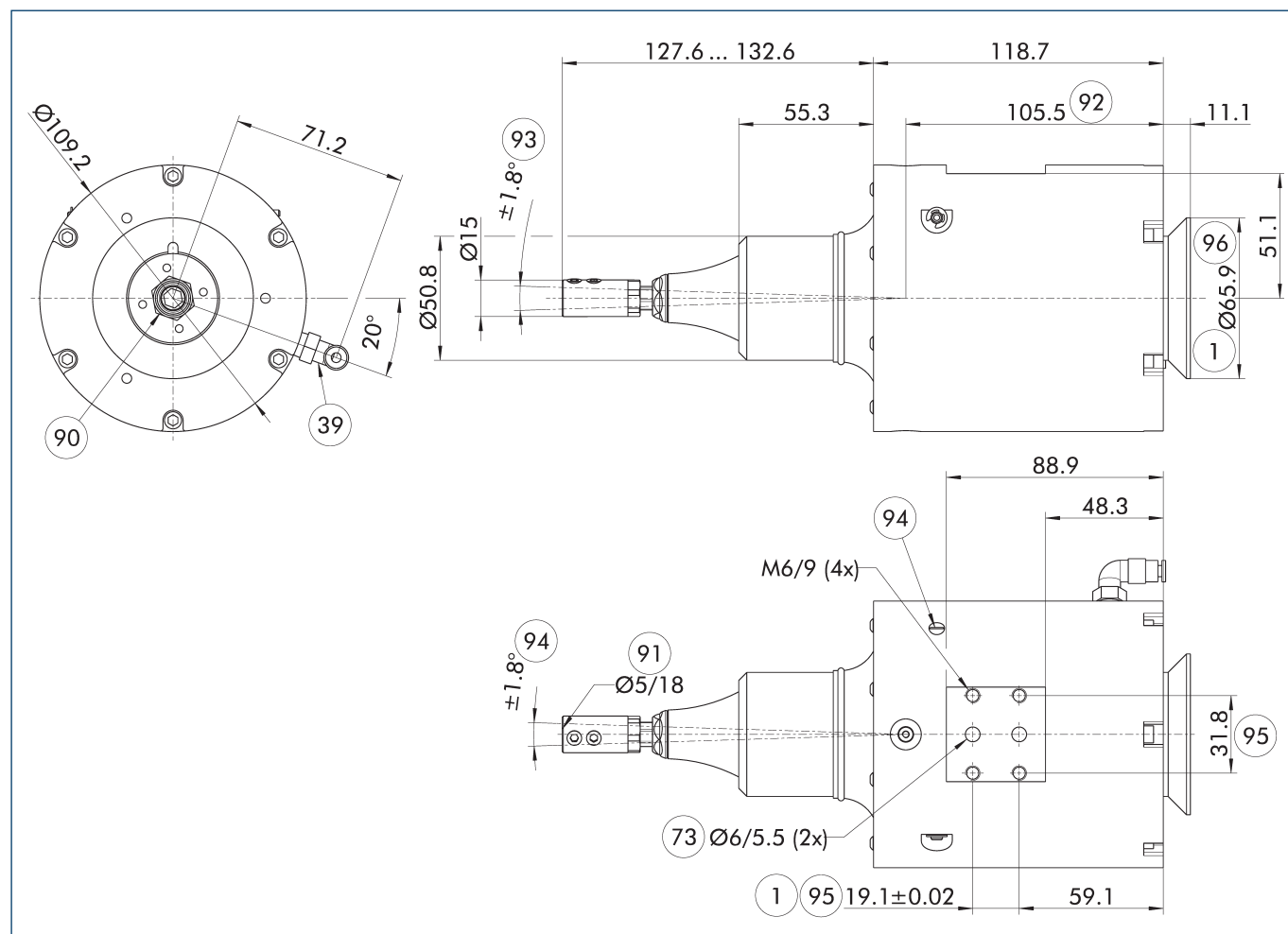
Dimensions and maximum loads



Technical data

Description		CRT 12-5
ID		1427058
Max. compensation angle X	[°]	±1.8
Max. compensation X	[mm]	±8
Max. compensation angle Y	[°]	±1.8
Max. compensation Y	[mm]	±8
Axis fixation		integrated
Recommended compensation path	[mm]	±4
Min./max. compensation force	[N]	18/62
Min./max. compensation pressure	[bar]	1/4.1
File stroke	[mm]	5
Number of idle running strokes	[1/min]	12000
Operating pressure	[bar]	6.2
Noise emission	[dB(A)]	85
maximum air consumption	[l/s]	2.8
Tool holder		File holder Ø 5 mm
Air connection spindle		10 mm
Compensation air connection		10 mm
Weight	[kg]	3.08
Min./max. ambient temperature	[°C]	5/35
Dimensions Ø D x Z	[mm]	109.2 x 251.3

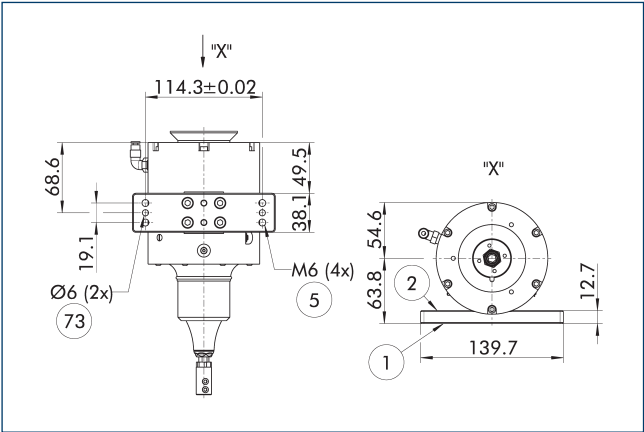
Main view



The main view shows the unit in its basic version.

- | | |
|--------------------------------|--|
| ① Robot-side connection | ⑨③ max. radial compensation (x axis) |
| ③⑨ Compensation air connection | ⑨④ max. radial compensation (y axis, lockable) |
| ⑦③ Fit for centering pins | ⑨⑤ radial mounting option |
| ⑨① Air connection motor | ⑨⑥ axial mounting option |
| ⑨① Tool holder | |
| ⑨② Pivot | |

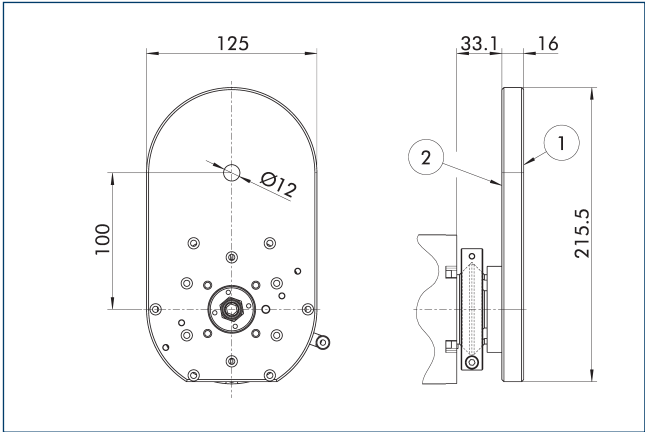
Adapter plates, radial



- ① Robot-side connection
- ② Tool-side connection
- ⑤ Through hole for connection with screws
- ⑦③ Fit for centering pins

Description	ID	
Adapter plate		
A-AOV/CRT/RCE-250/490/RCE-radial	1420116	

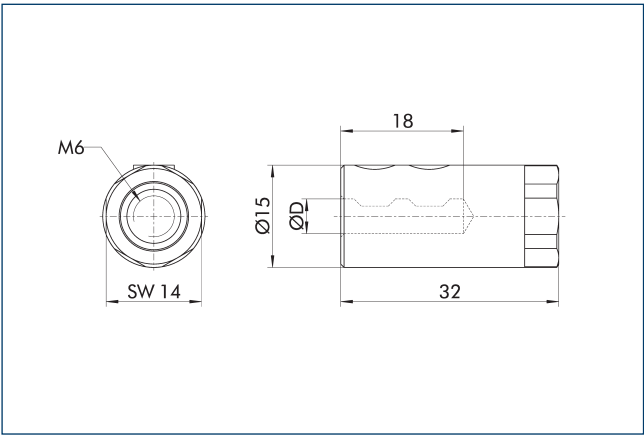
Adapter plates axial



- ① Robot-side connection
 - ② Tool-side connection
- Tool-side blank adapter plate to be machined by the customer.

Description	ID	
Adapter plate		
A-CRT-Axial-Offset-Blank	1453532	

File holder



Description	ID	Diameter D
		[mm]
File holder		
CRT-CHUCK-3MM	1453570	3
CRT-CHUCK-4MM	1453874	4
CRT-CHUCK-5MM	1453877	5
CRT-CHUCK-6MM	1453878	6

- ① The file holder with Ø 5 is included in the scope of delivery and is mounted by default.

SCHUNK GmbH & Co. KG
Spann- und Greiftechnik

Bahnhofstr. 106 - 134
D-74348 Lauffen/Neckar
Tel. +49-7133-103-0
Fax +49-7133-103-2399
info@de.schunk.com
schunk.com

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J. Lehmann

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