NETZSCH

Proven Excellence.

Operating Manual

Sealing Press

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DOCUMENTATION

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General Information

In the design of your instrument, we endeavor to take individual solutions into account and to include these in the documentation.

However, in order to keep the scope of the technical documentation at a reasonable level, we must limit the description to a standard model.

We ask for your understanding, if additional information particular to your instrument is not included within the scope of the standard instructions. This additional information can always be found on the corresponding information sheets.

All technical data, instrument features and other information described in these operating instructions are presented to the best of our knowledge and in accordance with the technical standards of the instrument at the time of printing.

We welcome any comments, suggestions or new ideas concerning the instrument and these operating instructions. Please address them to:

NETZSCH-Gerätebau GmbH
Wittelsbacherstraße 42
D - 95100 SELB
Telephone: +49 (0) 9287 881- 0
Telefax: +49 (0) 9287 881- 505
E-Mail: at@netzsch.com
Internet: http://www.netzsch-thermal-analysis.com

Safety Information

Read the operating instructions of your NETZSCH-Instrument.

Legend of Symbols

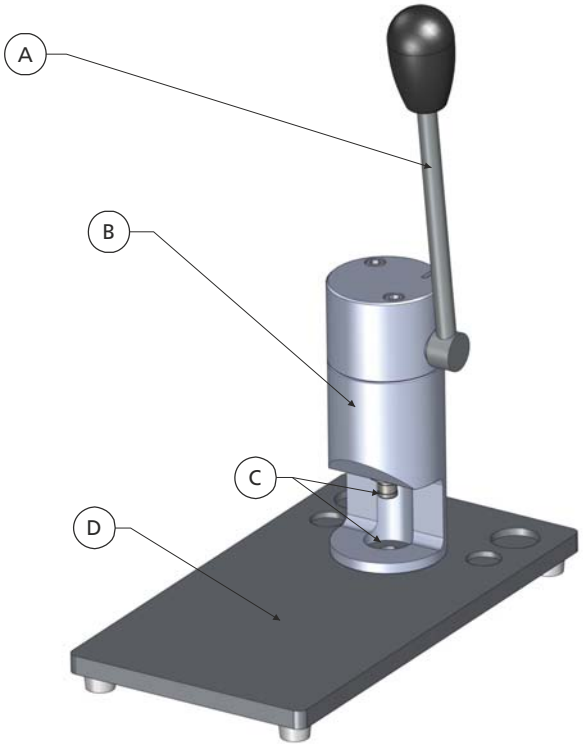
Below listed symbols could be present in this manual to indicate risks and information.

 **NOTE**	This sets particularly important information apart from the rest of the text.
 **ATTENTION**	These instructions must be followed exactly to avoid injury to the user and damage to the instrument.
	This symbol refers to more detailed information which can be found elsewhere, e.g. in the software manual.
	The tools listed next to this symbol are required for the installation or modification of your instrument.
	**HOT SURFACES!** Do not touch hot parts/surfaces of the instrument or accessories - **Danger of burning!**
	**COLD SURFACES!** Do not touch cold parts/surfaces of the instrument or accessories - **Danger of frostbite!**
	**WARNING!** **Hand injury risk!**
	**DANGER!** **Electric shock risk!**
	**ATTENTION!** Before opening the instrument disconnect all mains plugs and secure it to prevent reactivation.

Principle of Operation

The sealing press 6.240.10-80.0.00 is used for sealing different types of crucibles. For each type of crucible there is a different toolkit available (see available toolkits). In order to seal a crucible it must be placed with the corresponding lid on the lower part of the toolkit. The lever must be pressed down with a continuous motion and the crucible is closed respectively cold welded. The necessary force is defined by a spring in the press housing.

Unit



A Lever

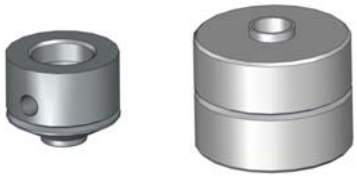
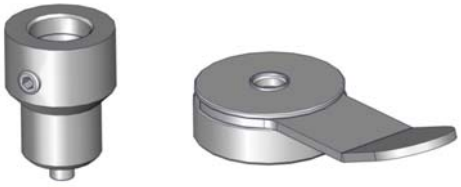
B Press housing

C Toolkit fastener

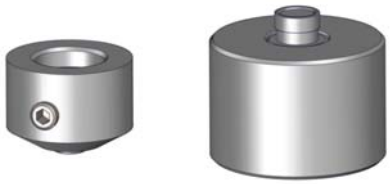
D Base plate

Sealing press 6.240.10-80.0.00

Available Toolkits

6.240.10-81.0.00 	Type of crucible: 	Toolkit for pressure-tight cold welding of Al crucibles, Ø 6 mm: series 6.239.2-64.5xx
6.240.10-82.0.00 	Type of crucible: 	Toolkit for pressure-tight cold welding of Al crucibles, Ø 6 mm: series 6.240.10-65.1xx
6.240.10-83.0.00 	Type of crucible: 	Toolkit for pressure-tight sealing of the medium pressure crucibles: 6.240.1-68.1.00
6.240.10-85.0.00 	Type of crucible: 	Toolkit for pressure-tight cold welding of concavus pans: series DSC21400A66.xxx NGB814672
DSC21400A80.030-00 	Type of crucible: 	Toolkit for pressing in the slide-in lids (NGB815051) into the concavus pan (NGB814672). Especially for polymer foil samples.

6.240.10-84.0.00



Type of crucible:

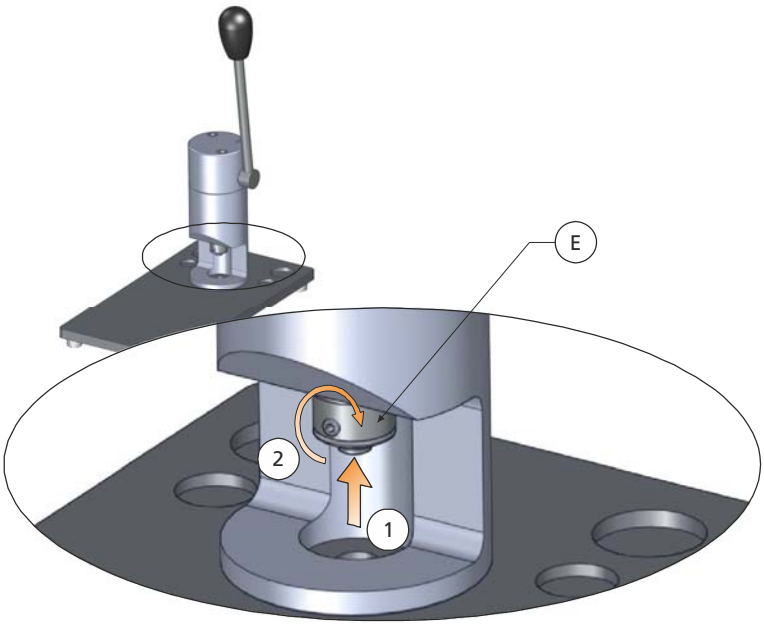
Stamping tool kit for aluminum crucibles for SFI-measurements (Solid Fat Index):
NGB810405 (SFI-measurements)

Install a Toolkit / Operation of the sealing press

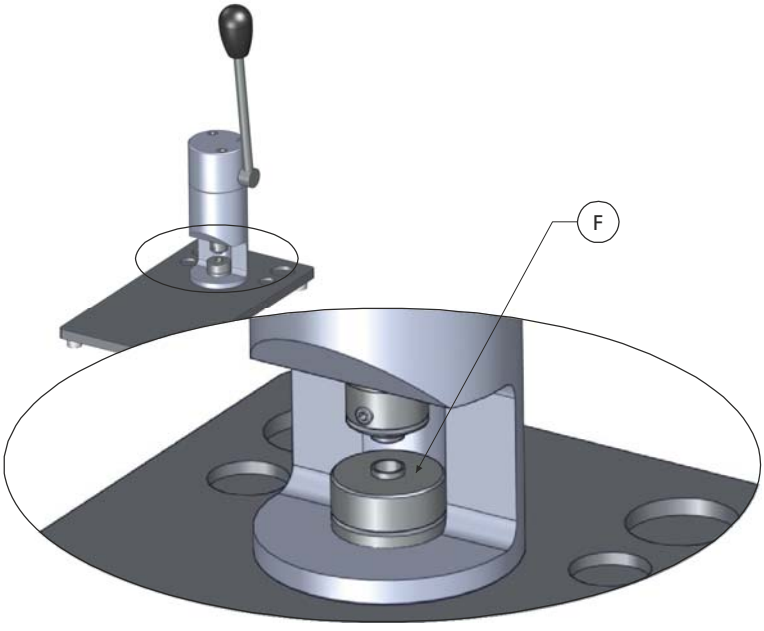
Required Tools

	 Allen key size 2 (included in scope of delivery)

Installation of a Toolkit

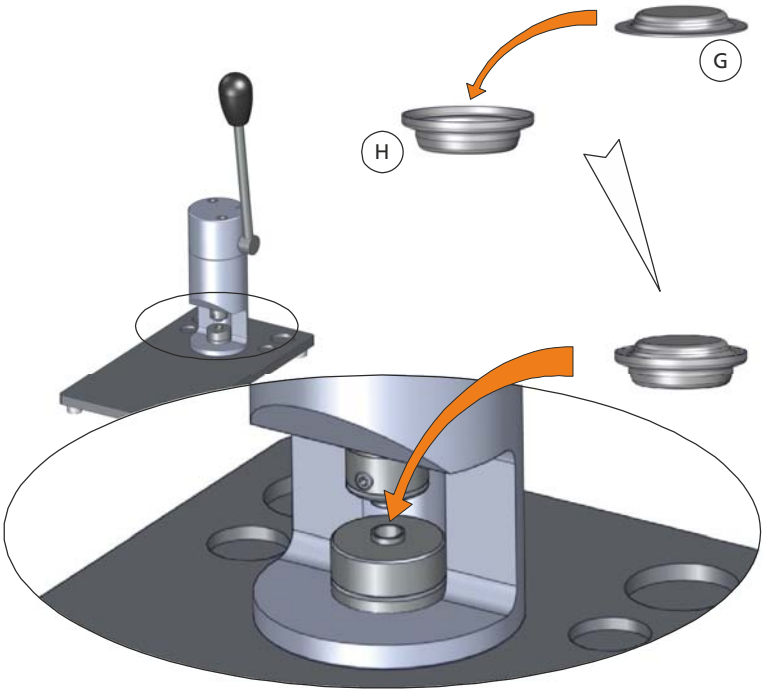


1. Insert the upper part Ⓔ of the toolkit atop the upper toolkit fastener (from below).
2. Fix it with the grub screw.



3. Insert the bottom part Ⓕ of the toolkit into the bottom toolkit fastener.

Operation of the Sealing Press

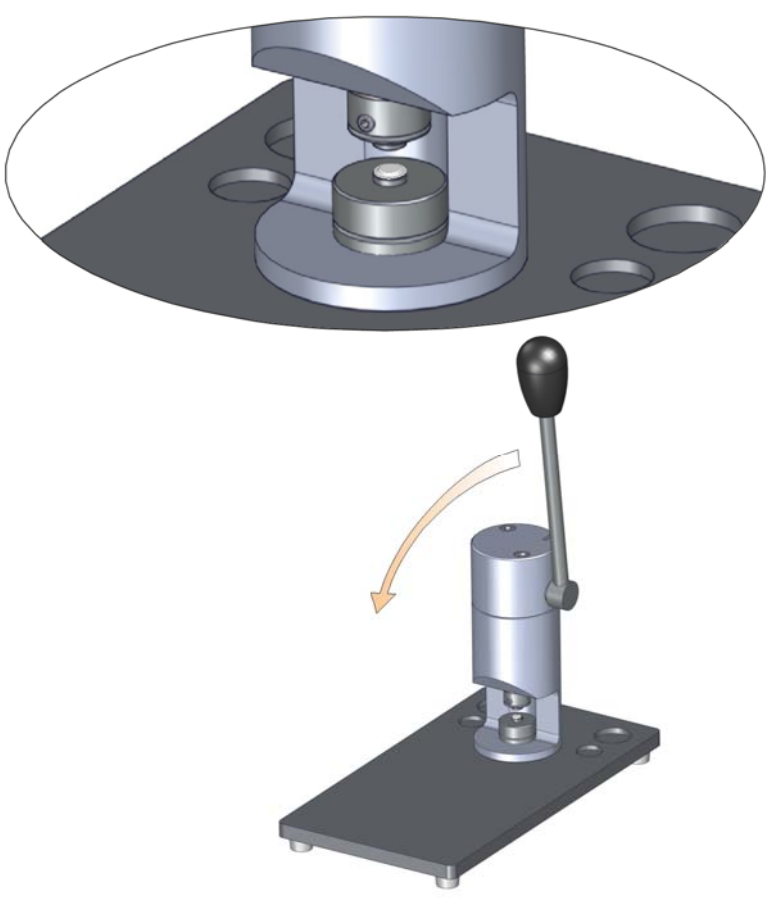


4. After installation of the correct toolkit put a lid (G) centered onto the crucible (H).

ATTENTION!

Lid must be centered!

5. Use tweezers to place the crucible (incl. lid) onto the bottom part of the toolkit carefully.



6. Press the lever down with a continuous motion until the limit stop.

WARNING!

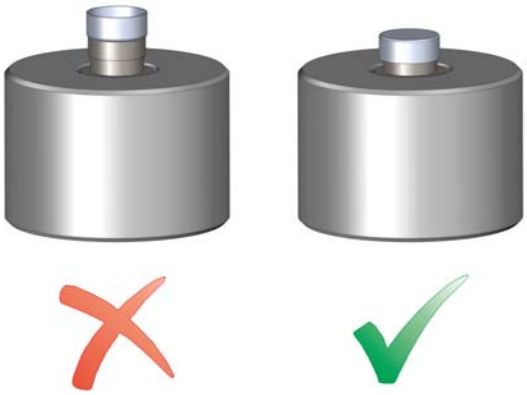
Hand injury risk!

7. Release the lever.

   The crucible is now cold-welded.

NOTE!

For pressure tight cold welding it is recommended to keep the lever in the limit stop position at least 5 seconds.

	For usage of **Toolkit 6.240.10-84.0.00** place the crucible inversely with tweezers carefully onto the bottom part of the toolkit. Execute step 6 and 7. The bottom of the crucible is formed now.

Technical Data

Crucible set DSC21400A66.010.00

The sealing press 6.240.10-80.0.00 with the toolkit 6.240.10-85.0.00 is used for the pressure-tight sealing of Al crucibles. The lid of the crucible is designed so that it can be placed optionally with the bulged area upwards or downwards and can be welded. In the first case with the bulged lid upwards it results in a sample volume of 40 µl and in the second case with the bulged lid downwards it results in a sample volume of 30 µl. The reduced dead volume provides special advantages for small sample quantities. The cold welding of the crucibles warrants a high reproducibility of the measuring results which is important for samples with volatile components.

material:	aluminium 99.5%
sample volume:	
lid bulge outwards:	max. 40 µl
lid bulge inwards:	30 µl
liquid or powdery samples:	25 µl
max. temperature:	600°C
diameter:	
crucible area (inside):	4.6 mm
crucible area (outside):	7.0 mm
height:	
(crucible with lid)	
lid bulge outwards:	3.1 mm
lid bulge inwards:	2.7 mm
delivery form:	nealed, washed packaged 96 pcs., each

Crucible set 6.239.2-64.5xx

The sealing press 6.240.10-80.0.00 with the toolkit 6.240.10-81.0.00 is used for the pressure-tight sealing of Al crucibles (6.239.2-64.5xx). The lid of the crucible is designed so that it can be placed optionally with the bulged area upwards or downwards and can be welded. In the first case with the bulged lid upwards it results in a sample volume of 40 µl and in the second case with the bulged lid downwards it results in a sample volume of 15 µl. The reduced dead volume provides special advantages both for small sample quantities and for the contact pressure of foil samples because the lid is bulged towards the crucible bottom. The cold welding of the crucibles warrants a high reproducibility of the measuring results which is important for samples with volatile components. The cold welded crucible is tight up to an maximum internal pressure of 2 bar at temperatures < 160°C. At higher temperatures the pressure load decreases as a deformation (bulging of crucible and lid) results because of the softening of the aluminium and the internal pressure.

material:	aluminium 99.5%
sample volume:	
lid bulge outwards:	max. 40 µl
lid bulge inwards:	15 µl
liquid or powdery samples:	25 µl
max. temperature:	600°C
diameter:	
crucible area (inside):	5.0 mm
crucible area (outside):	7.6 mm
height:	
(crucible with lid)	
lid bulge outwards:	2.5 mm
lid bulge inwards:	2.0 mm
delivery form:	nealed, washed packaged 100 pcs., each

Crucible set 6.240.10-65.1xx

The sealing press 6.240.10-80.0.00 with the toolkit 6.240.10-82.0.00 is used for the pressure-tight sealing of low pressure Al crucibles (6.240.10-65.1xx). Due to the bulged lid it results in an effective sample volume of 35 µl. The cold welding of the crucibles warrants a high reproducibility of the measuring results which is important for samples with volatile components. The cold welded crucible is tight up to an internal pressure of 3 bar at temperatures < 160°C and dimensionally stable. At higher temperatures the pressure load decreases as a deformation (bulging of crucible and lid) results because of the softening of the aluminium and the internal pressure.

material:	aluminium 99.5%
sample volume:	max. 35 µl
max. temperature:	600°C
diameter:	
crucible area (inside):	5 mm
crucible area (outside):	8.7 mm
height :	
crucible:	1.9 mm
crucible with lid:	3 mm
pressure:	
pressure load up to 160°C (typical value)	
dimensionally stable crucible bottom:	up to 3 bar
max. reachable	3 bar
delivery form:	nealed, washed packaged 100 pcs., each

Crucible set 6.240.1-68.1.00

The sealing press 6.240.10-80.0.00 with the toolkit 6.240.10-83.0.00 is used for the pressure-tight sealing of medium pressure Al crucibles (6.240.1-68.1.00). For sealing the crucible insert the sealing ring into the lid and push it onto the crucible. The necessary force is defined by a spring in the lower part of the toolkit. For sealing the crucibles no upper part of the toolkit is necessary. The lid is pressed directly by the press plunger.

material:	stainless steel X5CrNi1810
sample volume:	max. 120 µl
max. temperature:	
with elastomer sealing ring:	250°C
with PCTFE sealing ring:	230°C
diameter:	
crucible area (inside):	5 mm
height:	6 mm
pressure:	
pressure load:	max. 20 bar
delivery form:	set 25 pcs., with elastomer sealing rings
accessories:	PCTFE-sealing ring order No. 801 765

Slide-in for concavus pans NGB815051

The sealing press 6.240.10-80.0.00 with the toolkit DSC21400A80.030-00 is used for inserting the slide-in lids NGB815051 into the concavus pans DSC21400A66.010-00. This lid allows for the sample to be pressed onto the crucible bottom, which offers considerable advantages especially for foil-type samples. The sample thickness should be no greater than 0.6 mm. Allthough the slide-in lid does reach the inner wall of the pan around its entire circumference, it is not possible to achieve a hermetic seal. The slide-in lid can only be used with concavus pans. It is not suitable for use with other pans.

material:	aluminium 99.5%
max. temperature:	600°C
sample diameter:	max. 4.6 mm
sample height:	max. 0.6 mm
delivery form:	nealed, washed packaged 100 pcs.

NETZSCH-Gerätebau GmbH

Wittelsbacherstraße 42
95100 Selb · Germany
Tel.: +49 9287 881-0
Fax: +49 9287 881 505
at@netzsch.com

Customer Service
Tel.: +49 9287 881-555
ngb-service@netzsch.com

www.netzsch.com

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