

Specimen Holders

User's Guide



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Probenhalter

Bedienungsanweisung

Porte-échantillons

Guide de l'utilisateur



Specimen Holders User's Guide

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User's Guide

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1. Introduction

Struers specimen holders are designed for simultaneous preparation of specimens, fixed at the same level in the specimen holder.

The specimen holders have a coupling stud that fits the coupling of the grinding/polishing equipment.

Two types of coupling stud are available:

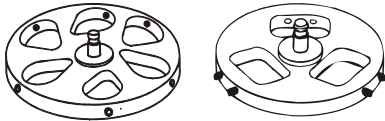
- with a ball joint or
- with a rubber impregnated construction.

Both can be moved to within a deviation of 10° from upright position. When pressed against the preparation disc, the specimen holder will “float” on the surface of the inserted specimens, thus allowing for minor alignment imperfections in specimens and preparation disc. A specimen holder without holes or a separate coupling stud with driving disc is available for custom made specimen holders.

Application on Various Machines

Please refer to the [*Struers Specimen Holders brochure*](#) for details of the range available.

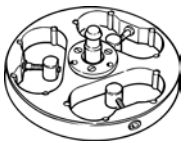
Holders for Round or Rectangular Specimens



For irregular, cold and hot mounted or unmounted specimens, Struers offers a number of special specimen holders with teardrop or rectangular holes. Specimen holders 02606939, 02606916 and 02606933 are delivered with special clamping plates, distributing the pressure more evenly on the specimen, thus facilitating levelling and clamping.

The range of specimen holders for unmounted specimens includes \varnothing 140, \varnothing 160 and \varnothing 200 mm sizes in aluminium and/or stainless steel with 3, 4, 5, 6 or 12 holes.

Holders for Round Specimens



Specimen holders for cold and hot mounted or unmounted, round specimens, designed with a rubber impregnated coupling stud. When fixing specimens in these specimen holders, two specimens are secured at a time by tightening a single screw.

A wide range of this type of specimen holder is available; including \varnothing 140, \varnothing 160 and \varnothing 200 mm sizes with 6, 8, 10 or 12 holes. Holders of this type are only available in aluminium.

Inserts are also available for reducing the hole diameter for the specimens. Hole size can be changed from 50 mm to 40 mm, from 40 mm to 30 mm and from 30 mm to 25 mm.

*Specimen Holders
User's Guide*

HOLDERS with Clamps

These holders are used for clamping wire ends or plates. Three individual, detachable clamps are fitted on a specimen holder. This allows for easier fixing of several samples, preparation of both faces, and even cutting of specimens fitted in the clamps prior to preparation.

HOLDERS without Holes

A type of specimen holders used for large, plane parallel specimens, which are glued to the surface. These holders can also be used for producing tailor-made solutions should you have special requirements. The range of holders includes \varnothing 160 mm and \varnothing 200 mm sizes in both stainless steel and aluminium.

Levelling the Specimens

Uniforce Levelling Apparatus



Uniforce is a device for fast and accurate levelling of specimens in a specimen holder. Through precise levelling, subsequent plane grinding time can be reduced to a minimum.

With Uniforce, the projection of specimens from the holder can be adjusted to 3 or 6 mm, with 3 mm being the standard. Uniforce is available in two models, 04886102, where both the holder and the specimens are spring loaded for easier clamping, and 04886101, where only the specimen holder is fixed.

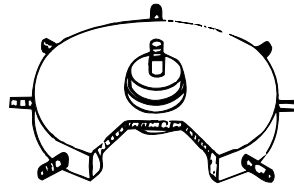
Specifications	Cat. No:
<i>Uniforce, advanced model</i> Device for levelling of specimens in specimen holders \varnothing 140, \varnothing 160, and \varnothing 200 mm. With pressure foot for positioning the specimens	04886102
<i>Uniforce, basic model</i> Device for levelling of specimens in specimen holders \varnothing 140, \varnothing 160, and \varnothing 200 mm	04886101
<i>Uniforce, for Hexamatic</i> Device for levelling of specimens in specimen holders \varnothing 140 mm	05946200

2. Operation

HOLDERS for Round or Rectangular Specimens

Specimen holders for round or rectangular specimens are designed for any shape of specimen, provided the specimen has parallel sides in the longitudinal direction and a height of at least 15 mm. In addition, specimen holders with tear-drop shaped holes may be used for round specimens and for round hot or cold mounted specimens of any diameter in the range $\varnothing 10-55$ mm.

- Place the specimen holder in Uniforce levelling apparatus or on a levelling disc.
- Arrange at least three specimens symmetrically around the centre of the disc to ensure an even and balanced rotation.
- Clamp the specimens by carefully tightening the screws. Always choose a length of screw which will leave a minimum part of the screw projecting from the disc and which uses the whole length of the thread through the specimen holder.
- After clamping, make sure that the fixation of the specimens is absolutely firm.



Specimens for holder 02606921 must be plane parallel. If 3 specimens are to be clamped, they must have the same thickness (min. 14 mm).

Holders for Round Specimens

Specimen holders designed for round cold and hot mounted specimens. The diameter of the specimens should be between 29-50 mm.

- Place the specimen holder in Uniforce levelling apparatus or on a levelling disc.
- Fill all specimen holes with specimens or with blinds.
- For smaller specimens, use inserts to reduce the hole size.
- Clamp the specimens by carefully tightening the screws. After clamping, make sure that the specimens are firmly secured.

Holders for Hot Mounted Specimens

Note:

Clamping specimens with too small a diameter may result in damage to the clamping mechanism.

Holders without Holes

Fastening the Specimens to the Specimen Holder Surface

Use *Ud* to fasten the specimens to the surface.

Machining your own Specimen Holes

For certain purposes you may want to machine a set of special holes in a specimen holder without holes. Always remember to place such holes symmetrically (look at the placing of the holes in Struers specimen holder)

Placing Specimens on a Specimen Holder without Holes

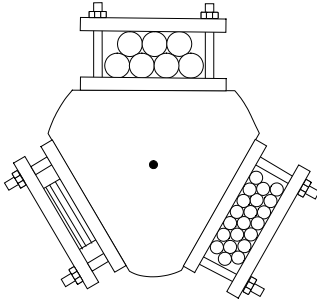
The specimen holder surface must be:

- clean and dry
- plane
- degreased

The specimens must be:

- placed symmetrically
- of the same height
- Max. specimen height 12-14 mm

HOLDERS WITH CLAMPS



Remove the clamps from the specimen holder and insert the specimens, e.g. plates or wire. Fasten the specimens with the screws. It may be necessary to place a piece of cardboard between the specimens and the clamp and tighten the screws again.

Fasten the clamp in a cut-off machine:

- Cut all the specimens in the clamp to the same length, about 5 mm from the edge.
- Put the clamps back in the specimen holder and fasten the holder in Uniforce.

All 3 clamps are prepared simultaneously.

3. Maintenance

Regular maintenance is recommended to ensure trouble-free use of the Specimen Holder.

Weekly

- Clean the Specimen Holder thoroughly.
- Check the coupling of the specimen holder.
If the coupling is too loose or too tight (compared to when delivered) please contact the Struers Service Department.

Monthly

- Remove the screws for clamping the specimens.
- Clean and lubricate the screws before replacing.

4. Selection Guide / Auswahlhilfe / Guide de sélection

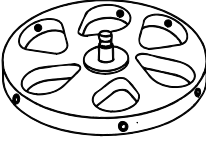
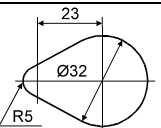
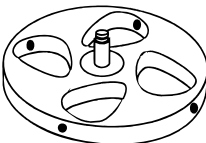
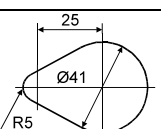
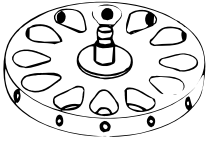
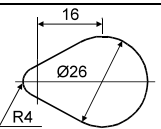
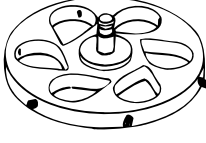
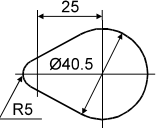

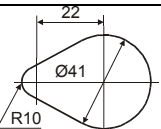
On the following pages you will find a complete listing of all available Struers specimen holders and accessories and the Struers equipment they are used on. The drawings are not to scale.

Auf den folgenden Seiten finden Sie eine komplette Liste aller erhältlichen Probenhalterscheiben, Zubehör und die Geräte mit denen die Probenhalterscheiben verwendet werden. Die Zeichnungen sind nicht maßgerecht.

Dans les pages suivantes, se trouve une liste complète de tous les portes-échantillons et accessoires Struers disponibles ainsi que l'équipement Struers sur lequel ils sont utilisés. Les dessins ne sont pas à l'échelle.


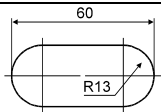
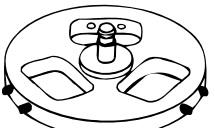
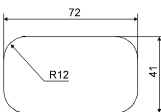
Code Symbols/ Kennzeichnung/ Code Symbols	Legend/ Beschreibung/ Légende
Code Kennwort Code	Stainless Steel Rostfreier Stahl Acier Inoxidable
Code Kennwort Code	Aluminium Aluminium Aluminium
●	Recommended Empfohlen Recommandé
○	Possible, but not suited for all purposes Möglich, aber nicht für alle Zwecke geeignet Possible, mais pas adapté à tous les objectifs

**Holders for Round or Rectangular Specimens / Halter für runde oder rechteckige Proben /
 Porte-échantillons pour échantillons ronds ou rectangulaires**

Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Holes Ausparung Orifices	Specimen \varnothing Proben \varnothing Echantillon \varnothing	Hole Dimensions Abmessung der Ausparungen Dimensions des orifices	Cat. No: Kat. Nr. No. de cat.	MAPS/ MAPS-2	AbraPol-20 Ab	aPlan-20	TegraPol-3X/ TegraForce/ Tegramin-30	TegraPol-2X/ TegraForce/ Tegramin-25	TegraPol-1X/ TegraForce-1
	140 mm	6	10-32 mm		02606935		○	○	○	●	
					02606936		○	○	○	●	
	140 mm	4	10-42 mm		02606933		○	○	○	●	
					02606934		○	○	○	●	
	160 mm	12	10-25.5 mm		02606917		●	●	●	○	
					02606940	●					
	160 mm	6	12-40 mm		02606916		●	●	●	○	
					02606939	●					
					02606915		●	●	●	○	
	120 mm	3	15-40 mm		05226908					●	

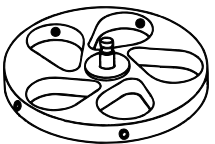
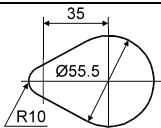
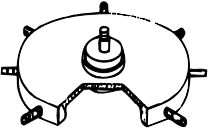

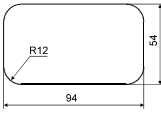
(1/3)

**Holders for Round or Rectangular Specimens / Halter für runde oder rechteckige Proben /
 Porte-échantillons pour échantillons ronds ou rectangulaires**

Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Holes Aussparung Orifices	Specimen \varnothing Proben \varnothing Echantillon \varnothing	Hole Dimensions Abmessung der Aussparungen Dimensions des orifices	Cat. No: Kat. Nr. No. de cat.	MAPS/ MAPS-2	AbraPol-20	AbraPlan-20	TegraPol-3X/ TegraForce/ Tegramin-30	TegraPol-2X/ TegraForce/ Tegramin-25
	160 mm	6	Max. 25 x 34 mm		02606918		•	•	•	○
					02606941	•				
	160 mm	3	Max. 48 x 40 mm		02606920		•	•	•	○
					02606942	•				

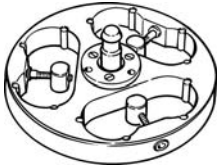
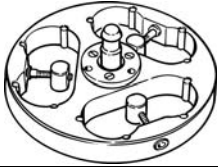
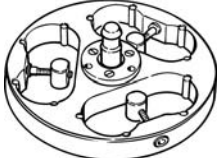
(2/3)

**Holders for Round or Rectangular Specimens / Halter für runde oder rechteckige Proben /
 Porte-échantillons pour échantillons Ronds ou rectangulaires**

Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Holes Aussparung Orifices	Specimen \varnothing Proben \varnothing Echantillon \varnothing	Hole Dimensions Abmessung der Aussparungen Dimensions des orifices	Cat. No: Kat. Nr. No. de cat.	MAPS/ MAPS-2	AbraPol-20	AbraPlan-20	TegraPol-3X/ Tegra Force/ Tegramin-30	TegraPol-2X/ Tegra Force/ Tegramin-25
	200 mm	5	27-55 mm		02606923		•	•	○	
					02606944	•				
	200 mm	3 1	Max. \varnothing 70 mm Max. \varnothing 180 mm		02606921		•	•	○	
	200 mm	3	Max. 53-70 mm		02606922		•	•	○	
					02606943	•				

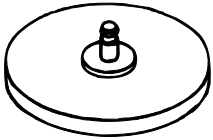
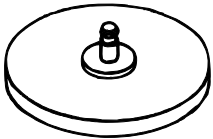
(3/3)

**Holders for Round Mounted Specimens / Halter für runde, eingebettete Proben/
 Porte-échantillons pour échantillons ronds enrobés**

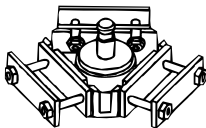
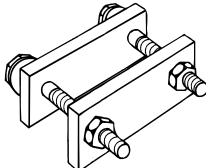
Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Holes Aussparung Orifices	Specimen \emptyset Proben \emptyset Echantillon \emptyset	Cat. No: Kat. Nr. No. de cat.	MAPS/ MAPS-2	AbraPol-20	AbraPlan-20	TegraPol-3X/ Tegra Force/ Tegramin-30	TegraPol-2X/ Tegra Force / Tegramin-25
	140 mm	6	29-32 mm	02606952				○	●
	160 mm	6 38-40	mm	02606955		●	●	●	○
		8 29-32	mm	02606954		●	●	●	○
	200 mm	6 49-52	mm	02606958		●	●	○	
		8 38-40	mm	02606957		●	●	○	
		12 24-26	mm	02606956		●	●	○	

Specimen holders/Probenhalter/Porte-échantillons
 Selection Guide/Auswahlhilfe/Guide de sélection



Holders without Holes / Halter ohne Aussparungen / Porte-échantillons sans orifices

Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Cat. No: Kat. Nr. No. de cat.	MAPS/ MAPS-2	AbraPol-20	AbraPlan-20	TegraPol-3X/ TegraForce/ Tegramin-30	TegraPol-2X/ TegraForce / Tegramin-25
	160 mm	02606926	●	●	●	●	○
		02606945	●				
		02606928		●	●	●	○
	200 mm	02606927		●	●	○	
		02606946	●				
		02606929		●	●	○	

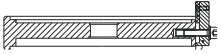
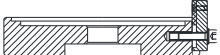
Holders with Clamps / Probenhaltern mit Spannbacken / Porte-échantillons avec mâchoires

Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Cat. No: Kat. Nr. No. de cat.	MAPS/ MAPS-2	AbraPol-20	AbraPlan-20	TegraPol-3X/ TegraForce/ Tegramin-30	TegraPol-2X/ TegraForce/ Tegramin-25
	160 mm	02606924		•	•	•	○
	Clamp for 02606924 Spannbacke für 02606924 Mâchoire pour 02606924	02606925					

Couplings / Kupplung / Accouplements

Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Cat. No: Kat. Nr. No. de cat.
	15 mm (height) for stainless steel specimen holders/ 15 mm (Höhe) für Probenhalter aus rostfreiem Stahl/ 15 mm (hauteur) pour les porte-échan. en acier inoxydable	02606930
	22 mm (height) for aluminium specimen holders/ 22mm (Höhe) für Probenhalter aus Aluminium/ 22 mm (hauteur) pour les porte-échan. en aluminium	02606931

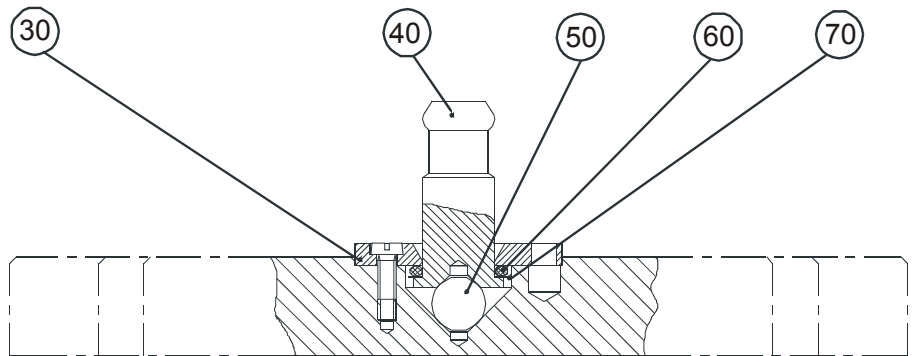
Levelling Devices / Nivelliereinheit / Dispositifs de mise à niveau

Drawing Zeichnung Dessin	Diameter Durchmesser Diamètre	Cat. No: Kat. Nr. No. de cat.
	140 mm	05256903
	120 mm	05226907

5. Spare Parts / Ersatzteile / Pièces de rechange

HOLDERS for Round or Rectangular Specimens

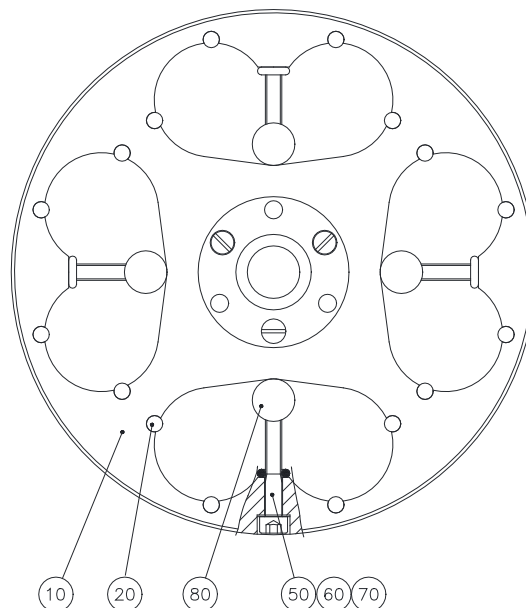
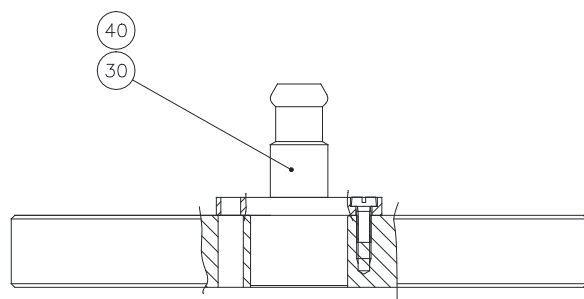
Drawing 12600803



Description/	Part no./
30 Driving disc for aluminium specimen holder.....	260MP089
30 Driving disc for stainless steel specimen holder	260MP090
40 Coupling stud	260MP111
50 Ball, stainless	260MP091
60 O-ring O 14.6 x 2.4 P5	260MP088
70 Washer 16 x 22 x 0.2	260MP087
Allen screws, pointed	
M8 x 40	260MP098
M8 x 50	260MP099
M8 x 35	260MP097
M8 x 30	260MP096
M8 x 20	260MP095
M8 x 12	2TI50812
M8 x 12	2TI50816

HOLDERS FOR ROUND SPECIMENS

Drawing 12601700B



Specimen Holders $\varnothing 140$ 6 x $\varnothing 30$ specimens

Description/	Part no./
Allen T-key 4x100	2GR02104
20 Dowl Pin $\varnothing 5 \times 18$ A4	2ZS11518
30-40 Coupling stud, vulcanized	R2601730
50-80 Counter pressure nut $\varnothing 13/M5$, complete	R2601720
70 O-ring $\varnothing 4.30-2.40$	2IO24003

Specimen Holders $\varnothing 160$ 10 x $\varnothing 25$ specimens

Allen T-key 4x100	2GR02104
20 Dowl Pin $\varnothing 5 \times 18$ A4	2ZS11518
30-40 Coupling stud, vulcanized	R2601730
50-80 Counter pressure nut $\varnothing 12/M5$, complete	R2601712
70 O-ring $\varnothing 4.30-2.40$	2IO24003

Specimen Holders $\varnothing 160$ 6 x $\varnothing 240$ specimens

Allen T-key 5x100	2GR02105
20 Dowl Pin $\varnothing 6 \times 18$ A4	2ZS11618
30-40 Coupling stud, vulcanized	R2601730
50-80 Counter pressure nut $\varnothing 15/M6$, complete	R2601711
70 O-ring $\varnothing 5.30-2.40$	2IO24005



Struers
Pederstrupvej 84, DK-2750 Ballerup