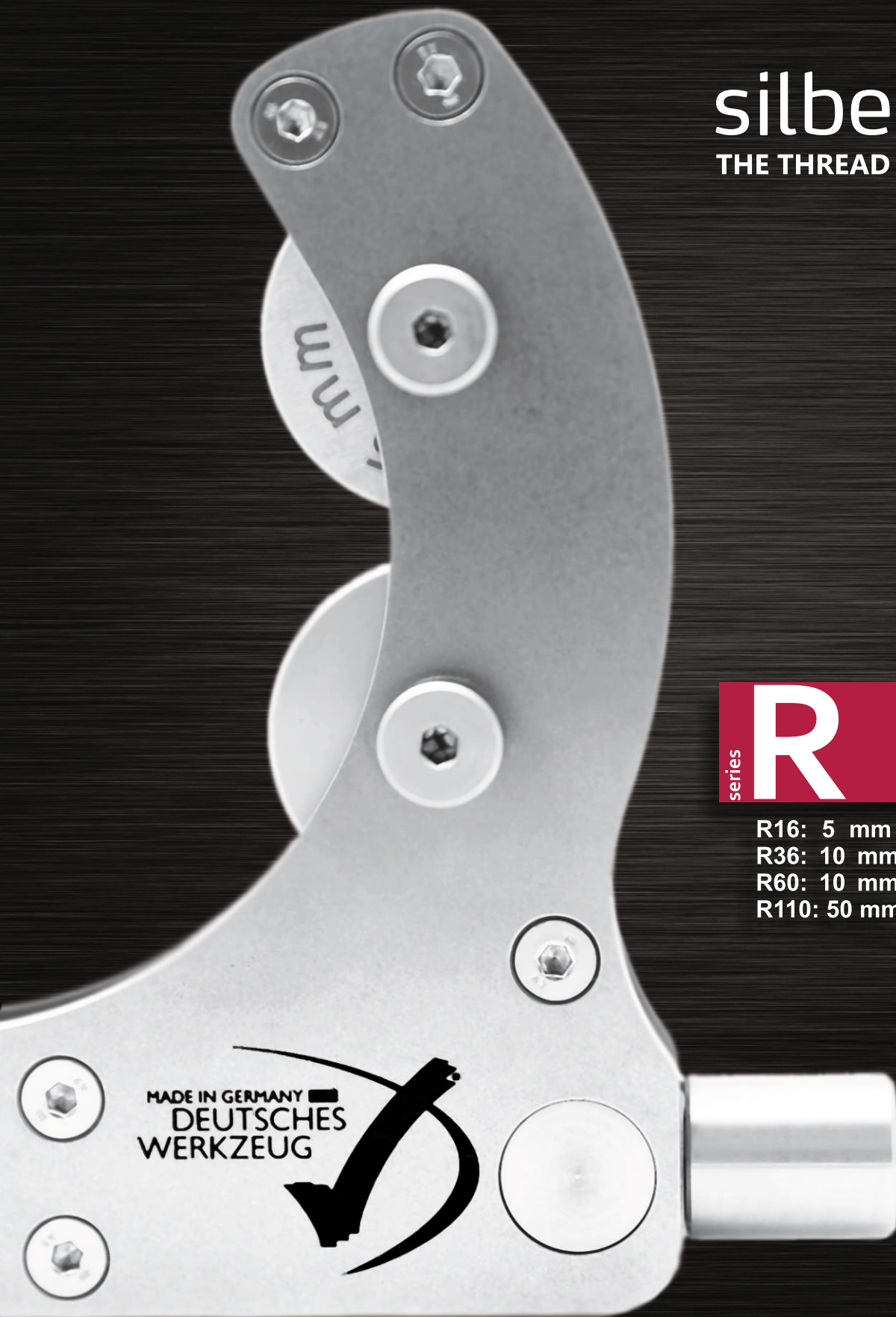


silbertool®

THE THREAD REPAIR TOOL.



series **R**

- R16: 5 mm - 16 mm
- R36: 10 mm - 36 mm
- R60: 10 mm - 60 mm
- R110: 50 mm - 110 mm

MADE IN GERMANY
DEUTSCHES
WERKZEUG



Content:

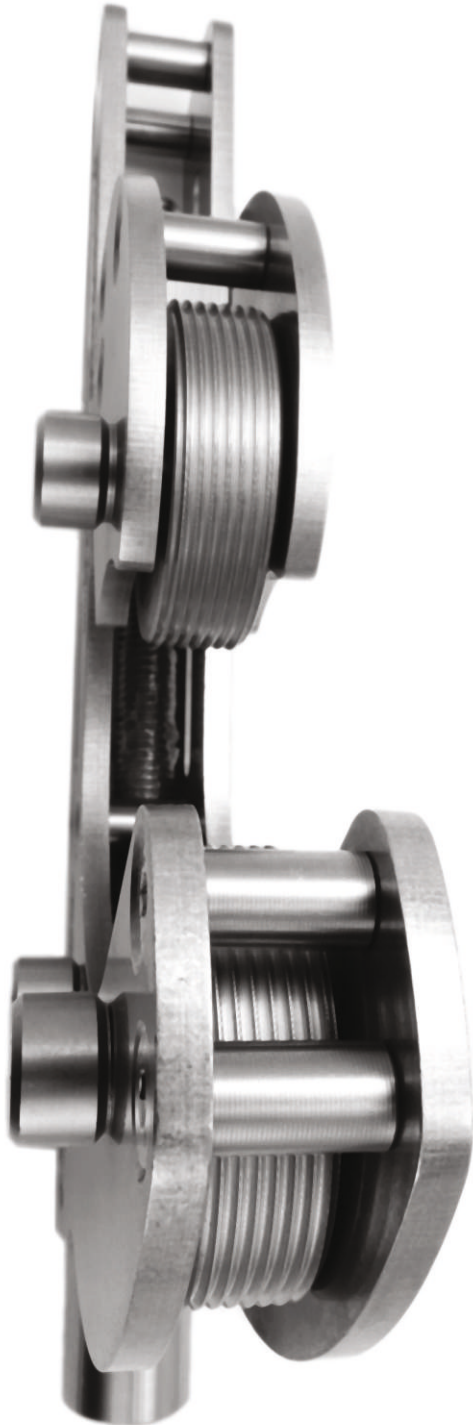
Silbertool Thread Repair Tool - page 1
Silbertool Rolling Process - page 2
Rotating bending test - page 3
Achievable Mean Surface Finish Test - page 4
Micro Hardness Rolled Thread Test - page 5

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External Thread Repair Tools:

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Silbertool R36 - page 8
Silbertool R60 - page 10
Silbertool R110 - page 11

Handling - page 13



Do Not Replace - Repair!

Original parts are repaired and preserved instead of being replaced.

SAFETY FIRST!

External threads are repaired without removal of material and thereby not weakened.

One Tool Fits All

Silbertool - Thread Repair Tool works on all threads such as metric, fine and imperial threads.

Higher Endurance

Material Testing Institute (MPA), Hanover have proven that a thread repaired with Silbertool withstands the same static and dynamic loads as a new undamaged thread. Moreover, they even showed higher fatigue endurance limit.

Cold Hardening

During the process the surface of the thread is hardened by cold hardening.

Made in Germany

We create innovative tools and solutions that delight generations. The products meet highest German standards according to the seal of approval "Made in Germany". Only the best choice of material, precise implementation and conscientious quality controls meet Silbertool demands.

Silbertool Rolling Process

While working on any type of mechanical component it is only a matter of time before you struggle with a damaged thread. In many cases a damaged thread will require a replacement of the entire component.

Preserving the original shape of the thread is crucial for the safety of the mechanical components. That's why using a technology which removes material and weakens the thread can be dangerous.

Silbertool uses **the first non - cutting external thread repair technology in the world** and repairs the thread by forming it back to its original geometry.

Moreover the static and dynamic strengths are restored completely, the surface of the thread is hardened by cold hardening and the original parts are preserved.

Silbertool Rolling Process works on any external tread!

1. The required rollers are mounted in the tool which is then placed next to the damaged part.
2. The Silbertool is tightened up and manually rotated around the work piece to restore the thread completely.

The Material Testing Institute (MPA), Hanover has proven that a thread repaired with Silbertool shows an even higher fatigue endurance limit than a new thread.

Repair safe and easy with Silbertool – The thread repair tool !

We are here to support you.

silbertool[®] *Team*

Firmness of external thread rolled with Silbertool Rolling Process vs. machine cut thread

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ROTATING BENDING TEST

88%

88% firmer than a cut thread.

72 340

38 360

RBT

F = 210 N/mm²
f = 60Hz

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THE THREAD REPAIR TOOL.

72 340
revolutions

Cut Thread
38 360
revolutions

**revolutions - the number of cycles until the specimen brake in the Bending Test Simulator.*

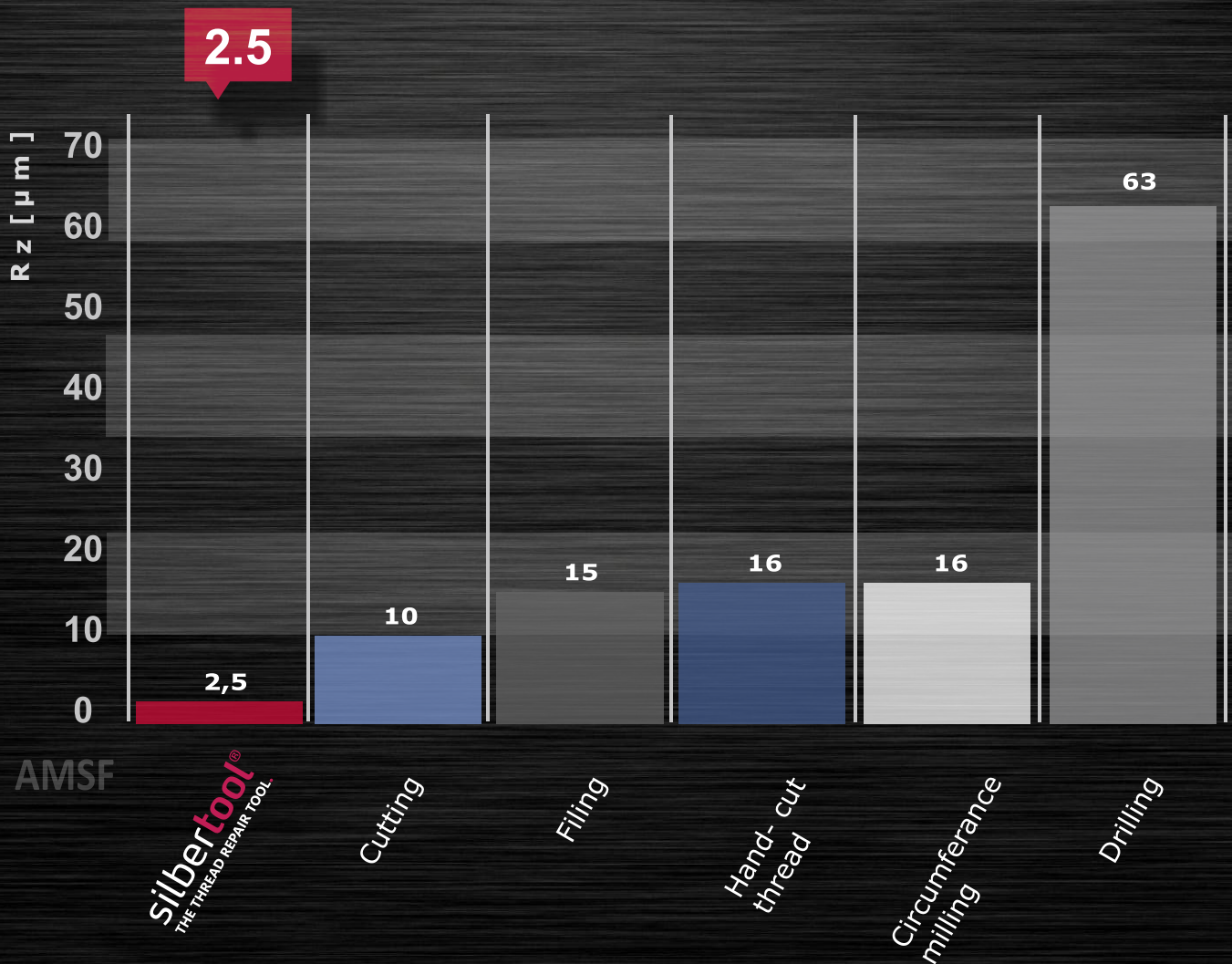
A thread repaired with Silbertool has a smoothest surface than most known production processes for creating thread. The smooth surface is one of the main factors reducing the corrosion.

6 times smoother than a hand cut thread

6

ACHIEVABLE MEAN SURFACE FINISH TEST

63 16 15 10 2.5



AMSF

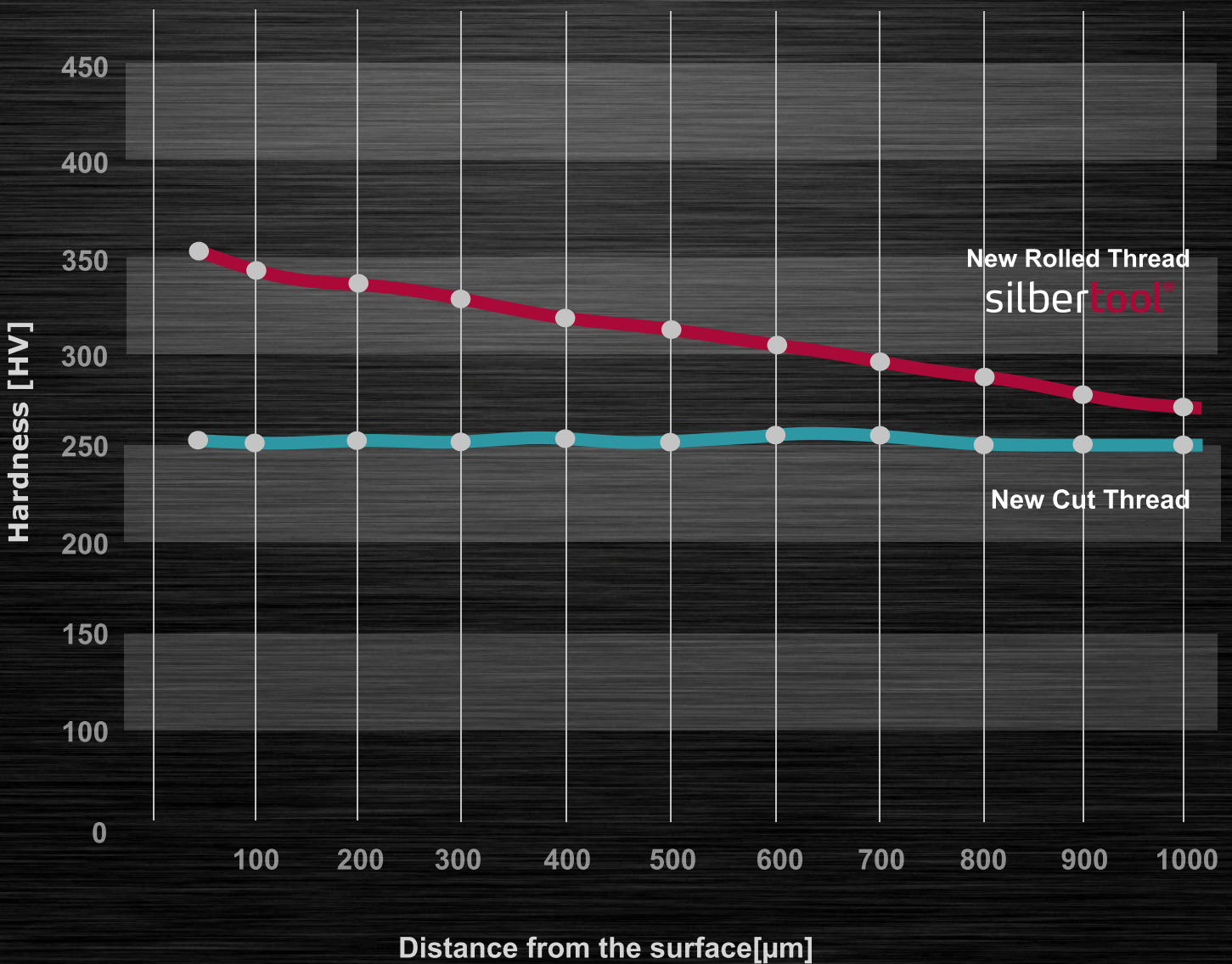
This test shows the results of cold hardening using the Silbertool Rolling Process. These results were compared to the hardness of new cut threads.

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MICRO HARDNESS ROLLED THREAD TEST

39%

39% harder than
a cut thread.






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R16

Silbertool R16
External Thread Repair Tool
5 mm - 16 mm



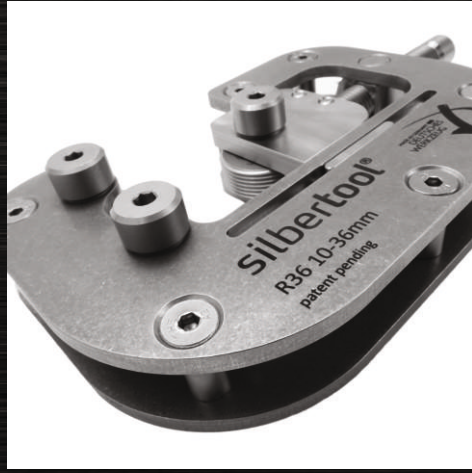
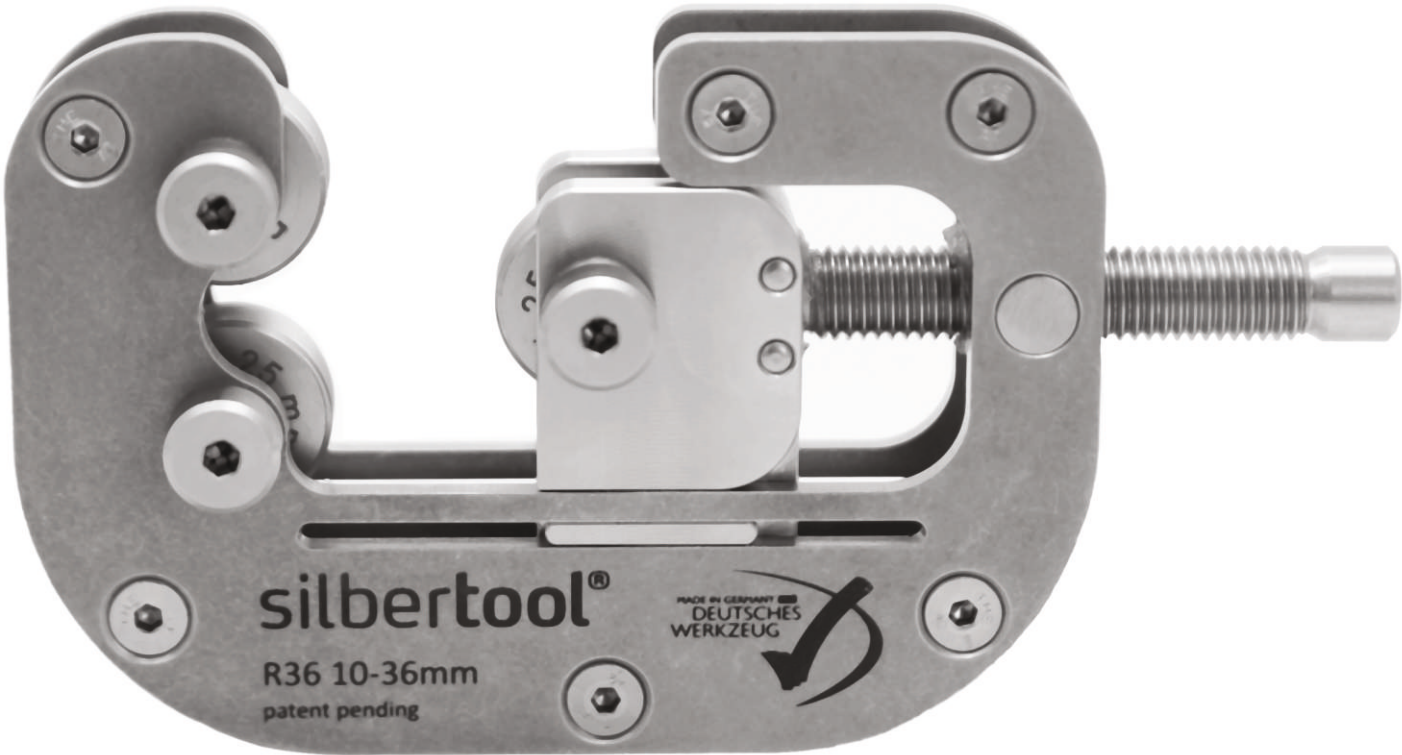
One Tool Fits All - R16

Article	Article - No.	EAN - No.	 [mm]	 [mm]	 [g]	
R16 tool	300	4260402350011	5 - 16	0,5 - 2	145	
set of rollers	301	4260402350028	5 - 16	0,5	19	
	302	4260402350035	5 - 16	0,75	19	
	303	4260402350042	5 - 16	0,8	19	
	304	4260402350059	5 - 16	1	19	
	305	4260402350066	5 - 16	1,25	19	
	306	4260402350073	5 - 16	1,5	19	
	307	4260402350080	5 - 16	1,75	19	
	308	4260402350097	5 - 16	2	19	
metric	301.1	4260402350103	5 - 16	0,5	19	
	302.1	4260402350110	5 - 16	0,75	19	
	303.1	4260402350127	5 - 16	0,8	19	
	304.1	4260402350134	5 - 16	1	19	
	305.1	4260402350141	5 - 16	1,25	19	
	306.1	4260402350158	5 - 16	1,5	19	
	307.1	4260402350165	5 - 16	1,75	19	
	308.1	4260402350172	5 - 16	2	19	
	UNC/UNF/UNEF ANSI B1.1				threads per inch	
		321	4260402350189	5 - 16	32	19
322		4260402350196	5 - 16	28	19	
323		4260402350202	5 - 16	24	19	
324		4260402350219	5 - 16	20	19	
325		4260402350226	5 - 16	18	19	
326		4260402350233	5 - 16	16	19	
327		4260402350240	5 - 16	14	19	
328		4260402350257	5 - 16	13	19	
329		4260402350264	5 - 16	12	19	
320		4260402350271	5 - 16	11	19	
BSW/BSF/BSPP/BS 84/ DIN ISO 228	341	4260402350288	5 - 16	32	19	
	342	4260402350295	5 - 16	28	19	
	343	4260402350301	5 - 16	26	19	
	344	4260402350318	5 - 16	24	19	
	345	4260402350325	5 - 16	20	19	
	346	4260402350332	5 - 16	19	19	
	347	4260402350349	5 - 16	18	19	
	348	4260402350356	5 - 16	16	19	
	349	4260402350363	5 - 16	14	19	
	350	4260402350370	5 - 16	12	19	
	351	4260402350387	5 - 16	11	19	




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R36

Silbertool R36
External Thread Repair Tool
10 mm - 36 mm



One Tool Fits All - R36

Article	Article - No.	EAN - No.	 [mm]	 [mm]	 [g]
R36 tool	200	4260402350394	10 - 36		735
set of rollers	201	4260402350400	10 - 36	0,5	85
metric	202	4260402350417	10 - 36	0,75	85
	203	4260402350424	10 - 36	1	85
	204	4260402350431	10 - 36	1,25	85
	205	4260402350448	10 - 36	1,5	85
	206	4260402350455	10 - 36	1,75	85
	207	4260402350462	10 - 36	2	85
	208	4260402350479	10 - 36	2,5	85
	209	4260402350486	10 - 36	3	85
	210	4260402350493	10 - 36	3,5	85
	211	4260402350509	10 - 36	4	85
	201.1	4260402350516	10 - 36	0,5	85
	202.1	4260402350523	10 - 36	0,75	85
	203.1	4260402350530	10 - 36	1	85
	204.1	4260402350547	10 - 36	1,25	85
	205.1	4260402350554	10 - 36	1,5	85
	206.1	4260402350561	10 - 36	1,75	85
	207.1	4260402350578	10 - 36	2	85
	208.1	4260402350585	10 - 36	2,5	85
	209.1	4260402350592	10 - 36	3	85
	210.1	4260402350608	10 - 36	3,5	85
211.1	4260402350615	10 - 36	4	85	
UNC/UNF/UNEF ANSI B1.1				threads per inch	
	221	4260402350622	10 - 36	24	85
	222	4260402350639	10 - 36	20	85
	223	4260402350646	10 - 36	18	85
	224	4260402350653	10 - 36	16	85
	225	4260402350660	10 - 36	14	85
	226	4260402350677	10 - 36	13	85
	227	4260402350684	10 - 36	12	85
	228	4260402350691	10 - 36	11	85
	229	4260402350707	10 - 36	10	85
	230	4260402350714	10 - 36	9	85
	231	4260402350721	10 - 36	8	85
	232	4260402350738	10 - 36	7	85
BSW/BSF/BSPP/BS 84/ DIN ISO 228	241	4260402350745	10 - 36	14	85
	242	4260402350752	10 - 36	12	85
	243	4260402350769	10 - 36	11	85
	244	4260402350776	10 - 36	10	85
	245	4260402350783	10 - 36	9	85
	246	4260402350790	10 - 36	8	85
	247	4260402350806	10 - 36	7	85
	248	4260402350813	10 - 36	6	85
249	4260402350820	10 - 36	5	85	

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THE THREAD REPAIR TOOL.

R60

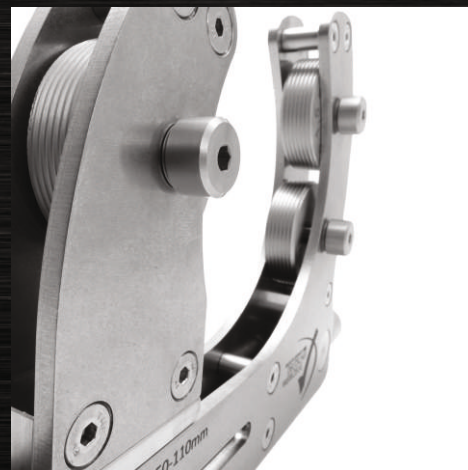
Silbertool R60
External Thread Repair Tool
10 mm - 60 mm






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THE THREAD REPAIR TOOL.

R110

Silbertool R110
External Thread Repair Tool
50 mm - 110 mm



One Tool Fits All - R60 & R110

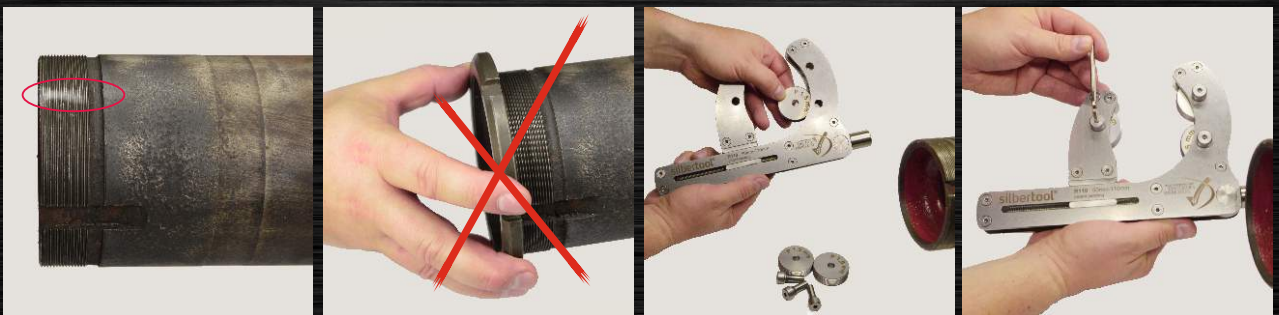
Article	Article - No.	EAN - No.	 [mm]	 [mm]	 [g]
R60 tool	100	4260402350837	10 - 60	0,5 - 3	1210
R110 tool	010	4260402350844	50 - 110	0,5 - 3	1390
set of rollers	101	4260402350851	10 -110	0,5	345
metric	102	4260402350868	10 -110	0,8	345
	103	4260402350875	10 -110	1	345
	104	4260402350882	10 -110	1,25	345
	105	4260402350899	10 -110	1,5	345
	106	4260402350905	10 -110	1,75	345
	107	4260402350912	10 -110	2	345
	108	4260402350929	10 -110	2,5	345
	109	4260402350936	10 -110	3	345
	101.1	4260402350943	10 -110	0,5	345
	102.1	4260402350950	10 -110	0,8	345
	103.1	4260402350967	10 -110	1	345
	104.1	4260402350974	10 -110	1,25	345
	105.1	4260402350981	10 -110	1,5	345
	106.1	4260402350998	10 -110	1,75	345
	107.1	4260402351001	10 -110	2	345
	108.1	4260402351018	10 -110	2,5	345
	109.1	4260402351025	10 -110	3	345
UNC/UNF/UNEF ANSI B1.1	121	4260402351032	10 -110	threads per inch 28	345
	122	4260402351049	10 -110	24	345
	123	4260402351056	10 -110	20	345
	124	4260402351063	10 -110	18	345
	125	4260402351070	10 -110	16	345
	126	4260402351087	10 -110	14	345
	127	4260402351094	10 -110	12	345
	128	4260402351100	10 -110	11	345
	129	4260402351117	10 -110	10	345
	130	4260402351124	10 -110	9	345
	BSW/BSF/BSPP/BS 84/ DIN ISO 228	141	4260402351131	10 -110	19
142		4260402351148	10 -110	18	345
143		4260402351155	10 -110	16	345
144		4260402351162	10 -110	14	345
145		4260402351179	10 -110	12	345
146		4260402351186	10 -110	11	345
147		4260402351193	10 -110	10	345
148		4260402351209	10 -110	9	345

Handling

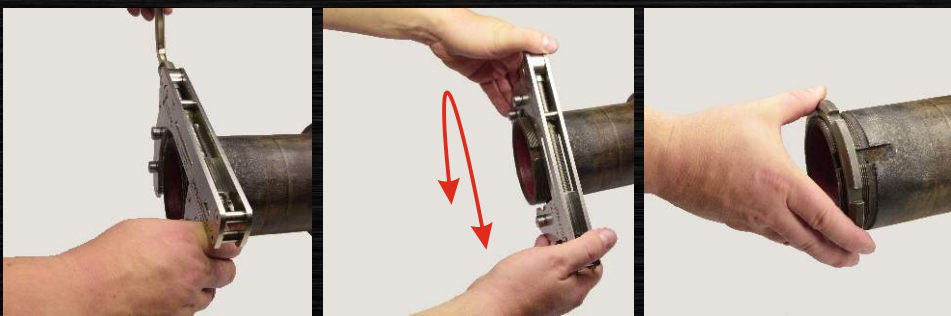
- **Silbertool** is used manually. No external energy supply is required.
- After choosing the required rollers, they are mounted into the tool.
- **Silbertool** is placed next to the damaged part of the thread.
- Using an Allen key, which is included in the delivered content, the tool is fixed and then rotated manually around the work piece.
- To reduce friction the work piece should be greased with customary lubricant.



Application R16



Application R110



silbertool®

THE THREAD REPAIR TOOL.



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DEALER: