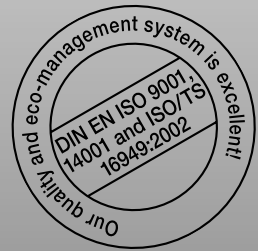


4080 Tool



BOLLHOFF

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I - TOOL DESCRIPTION

Tool function

The 4080 tool is intended to crimp RIVKLE® blind rivet nuts into previously drilled supports or punched holes in the parent material.

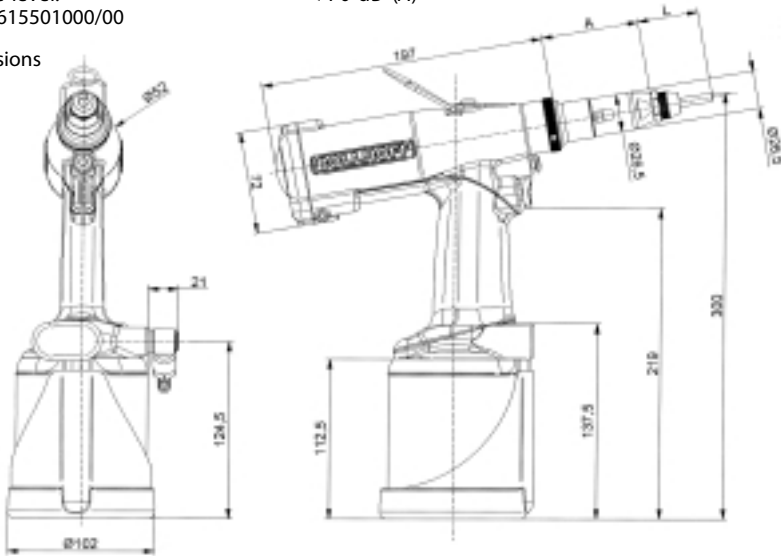
Stroke installation

This tool allows crimping RIVKLE® items according to the stroke installation method

Features

- Installation capacity: RIVKLE® M3 to M12, steel (max. load: 21 kN at 6 bar)
 - Max. stroke: 7 mm
 - Operating pressure: 5.5 bar min. to 7 bar max.
 - Weight, equipped as M6: 2.6 kg
 - Air consumption: 8 L
 - Noise level: < 70 dB (A)
- Art.: 23615501000/00

Dimensions



		M3	M4	M5	M6	M8	M10	M12
Standard rod	A	68	68	68	68	68	68	68
	L	32	31	41	42	42	52	56
Commercial screw	A	59	59	59	59	59		
	L	33	34	40	42	47		

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SAFETY: BEFORE ANY INTERVENTION ON THE 4068 TOOL, DISCONNECT THE COMPRESSED AIR FITTING

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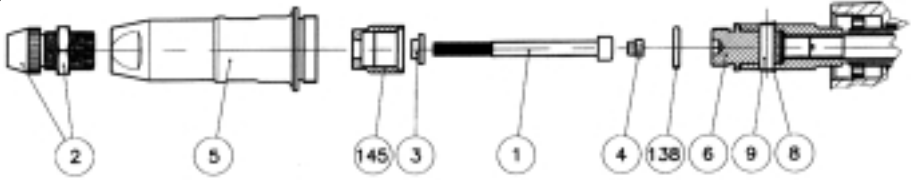
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1

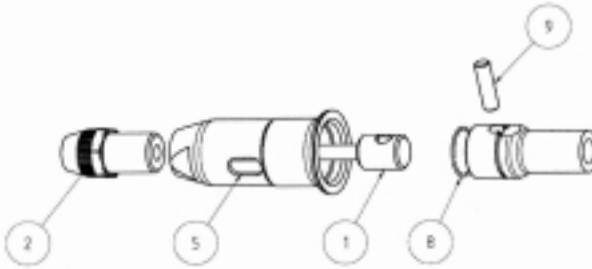




	1+2+3+4	1*	2	3	4
M3	236 803 03 000	CHC ISO4762 DIN912 : M3 x 60	236 113 03 030	236 803 03 040	236 803 03 010
M4	236 803 04 000	CHC ISO4762 DIN912 : M4 x 60	236 113 04 030	236 803 04 040	236 803 04 010
M5	236 803 05 000	CHC ISO4762 DIN912 : M5 x 70	236 113 05 030	236 803 05 040	236 803 05 010
M6	236 803 06 000	CHC ISO4762 DIN912 : M6 x 70	236 113 06 030	236 803 06 040	236 803 06 010
M8	236 803 08 000	CHC ISO4762 DIN912 : M8 x 70	236 113 08 030		236 803 08 010

*: 2368030X020 (10 screws)
No. 145 + 138 + 6 = 236 803 00 216

Tab. 1
No. 5 = 236 153 00 043

2



				
	N°1	N°2	N°1	N°2
M3	236 113 03 020	236 113 03 030	376 113 03 020	376 113 03 030
M4	236 113 04 020	236 113 04 030	376 113 04 020	376 113 04 030
M5	236 113 05 020	236 113 05 030	376 113 05 020	376 113 05 030
M6	236 113 06 020	236 113 06 030	376 113 06 020	376 113 06 030
M8	236 113 08 020	236 113 08 030	376 113 08 020	376 113 08 030
M10	236 113 10 020	236 113 10 030	376 113 10 020	376 113 10 030
M12	236 153 10 020	236 113 12 030		

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Tooling for RIVKLE[®] item installation with socket head cap screw mandrel

1 (p. 12)

SOCKET HEAD CAP SCREW CHC DIN912

Screw replacement

- Loosen anvil locknut and unscrew anvil (2)
- Unscrew nose-piece (5)
- Fit screw (1) through washer (3), suitable for the required diameter (no washer for M8)
- Fit drive end piece (4) into screw (1) recess
- Slide the assembly into pull-out bush (7)
- Re-install nose-piece (5)
- Re-install anvil and locknut (2)

STANDARDS TOOLS

Setting tooling for RIVKLE[®] or RIVKLE[®] stud (with special female mandrel)

2 (p. 12)

If you already use an OPEN tool, the existing female mandrel can be re-used.

Tooling replacement (with special female mandrel)

- Keep nose-piece (5) in place; loosen anvil locknut, then remove anvil (2) and locknut.
- Drive out pin (9) by means of a drift without damaging retaining ring (8) and release mandrel entirely (1).
- Re-install new mandrel (1) and fit pin (9) again, ensuring that it is retained by retaining ring (8).
- Screw in nose-piece (5) again and torque to 15 Nm.
- Screw in new anvil (2) again inside nose piece and lock by means of locknut.

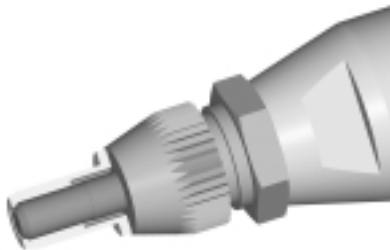
III - TOOL OPERATION

Anvil position adjustment versus mandrel **3**

- Anvil position depends on RIVKLE[®] length before crimping.
- Adjust anvil position as indicated in figure 3.
- After adjustment, lock anvil locknut (2) to 10 Nm torque..

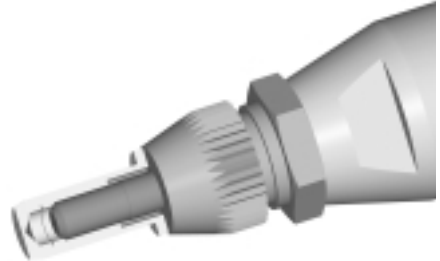
3

OPEN RIVKLE[®]



Flush-mounted mandrel at RIVKLE[®] end

BLIND RIVKLE[®]



Mandrel at 1 turn from thread bottom

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Connection to compressed air system

All tools are air-driven, at an optimum pressure of 6 bar. We recommend the use of air treatment units including lubrication, filtering and pressure control on the compressed air supply system. These devices must be installed at maximum 3 metres from the tool in order to ensure optimum tool service life and minimum maintenance.

All air hoses MUST MANDATORILY FEATURE AN INNER DIAMETER OF AT LEAST 6.4 mm

Operating method

The tool can be operated in all positions, either carried in hand or suspended.

Operating procedure

- Connect the air supply to the tool.
- Offer up the RIVKLE[®] onto the mandrel. A slight pressure will start the motor and automatically initiate RIVKLE[®] screwing in onto the nose-piece, then motor shutdown (Push-Pull system).
- Introduce the RIVKLE[®] into the hole in intended application.
- Press the trigger and keep depressed until the device is fully released. This action both crimps the RIVKLE[®] into the intended application and releases it from the mandrel (by unscrewing).

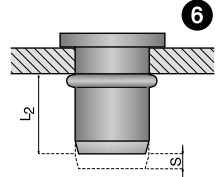


CAUTION: THE TRIGGER MUST BE KEPT DEPRESSED FOR THE ENTIRE CYCLE. RELEASING THE TRIGGER WOULD RESULT IN FAULTY CRIMPING.

Crimping pressure adjustment



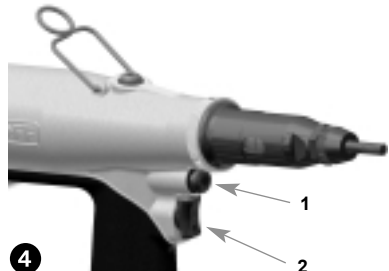
- Check that air system pressure is set between 5,5 and 7 bar.
- Before crimping, adjust stroke to 0 by turning the adjustment ring to minimum position in (-) direction.
- Gradually increase crimping stroke by turning the adjustment ring towards (+). This adjustment ring features 3 index marks. 1/3 turn corresponds to 0.5 mm (1 complete turn = 1.5 mm).
- At each step, test RIVKLE[®] crimping quality, until obtaining optimum crimping.
- Optimum crimping (dimension s) is indicated in your RIVKLE[®] catalogue **6**



CAUTION: WHEN DELIVERED, THE TOOL IS DELIBERATELY SET TO 0 MM STROKE. THEREFORE, IT IS MANDATORY TO ADJUST THE DEVICE WHEN PUTTING INTO SERVICE. EXCESSIVE STROKE CAN DAMAGE RIVKLE[®] TAPPED THREADS, AS WELL AS THE MANDREL, OR PREVENT MANDREL UNSCREWING. WHEN CORRECT CRIMPING IS OBTAINED, RECORD THE POSITION OF THE INDEX MARK ON THE ADJUSTMENT RING, FOR REFERENCE.

Unscrewing button **4**

In case of unscrewing problem, the 4080 tool is equipped with an unscrewing control button on top of the crimping trigger. To start unscrewing, press unscrewing button (1), then press crimping trigger 2 at the same time.



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General maintenance

OPERATION	FREQUENCY
Check that the installed tool corresponds to your RIVKLE®	At each adjustment
Check that tool crimping stroke is suitable for the selected RIVKLE® (see pressure adjustment).	Once daily
Check mandrel condition; replace as required.	Once daily
Check that "screwing - crimping - unscrewing" operations are controlled by pressure exercised on the mandrel and the trigger, without RIVKLE® loaded.	Once daily
Check that first RIVKLE® is screwed in down to the anvil.	/
Always keep mandrel perpendicular to parent material.	/
Lightly oil mandrel.	Every 50 RIVKLE® crimped
After use, protect mandrel with a RIVKLE®	/

Occasional maintenance

IMPORTANT NOTE: TOOL MAINTENANCE MUST BE ENSURED BY COMPETENT TECHNICIANS. THE OPERATOR MUST NOT CARRY OUT TOOL MAINTENANCE OR REPAIR, UNLESS SUITABLY TRAINED FOR THIS PURPOSE.

The compressed air supply must be disconnected before any maintenance or removal operation.

Every 500,000 cycles, the tool must be entirely dismantled and all worn or damaged items replaced.

It is also recommended to replace all items contained in the repair kits.

Any removal operation should be performed in good cleanliness conditions.

Maintenance kit

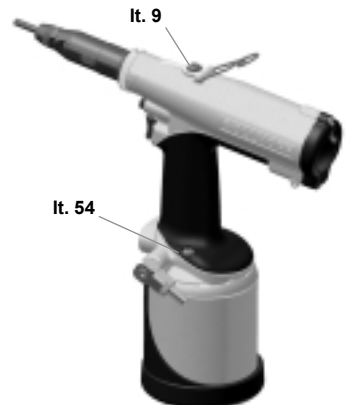
In order to facilitate maintenance, we recommend the use of special maintenance tools in order not to damage your tool.

Repair kit	N ° 236 155 00 220
Special maintenance tools	Upon request

Oil level filling

EXCLUSIVELY USE HYDROLUB H68 CONDAT OIL OR SIMILAR.

- Disconnect compressed air supply.
- Remove upper oil filling threaded plug, It. 9, and screw It. 54.
- Using a mandrel, push back pneumatic piston It. 37 down to tank bottom, It. 36.
- Check oil level through port (It. 9), and fill as required, to reach the lower section of the tapped port.
- Re-install threaded plug It. 9 with seal It. 10 & screw It. 54.
- Reconnect the compressed air supply and check the crimping pressure after several cycles of the trigger.
- In case of insufficient stroke, repeat the operations.



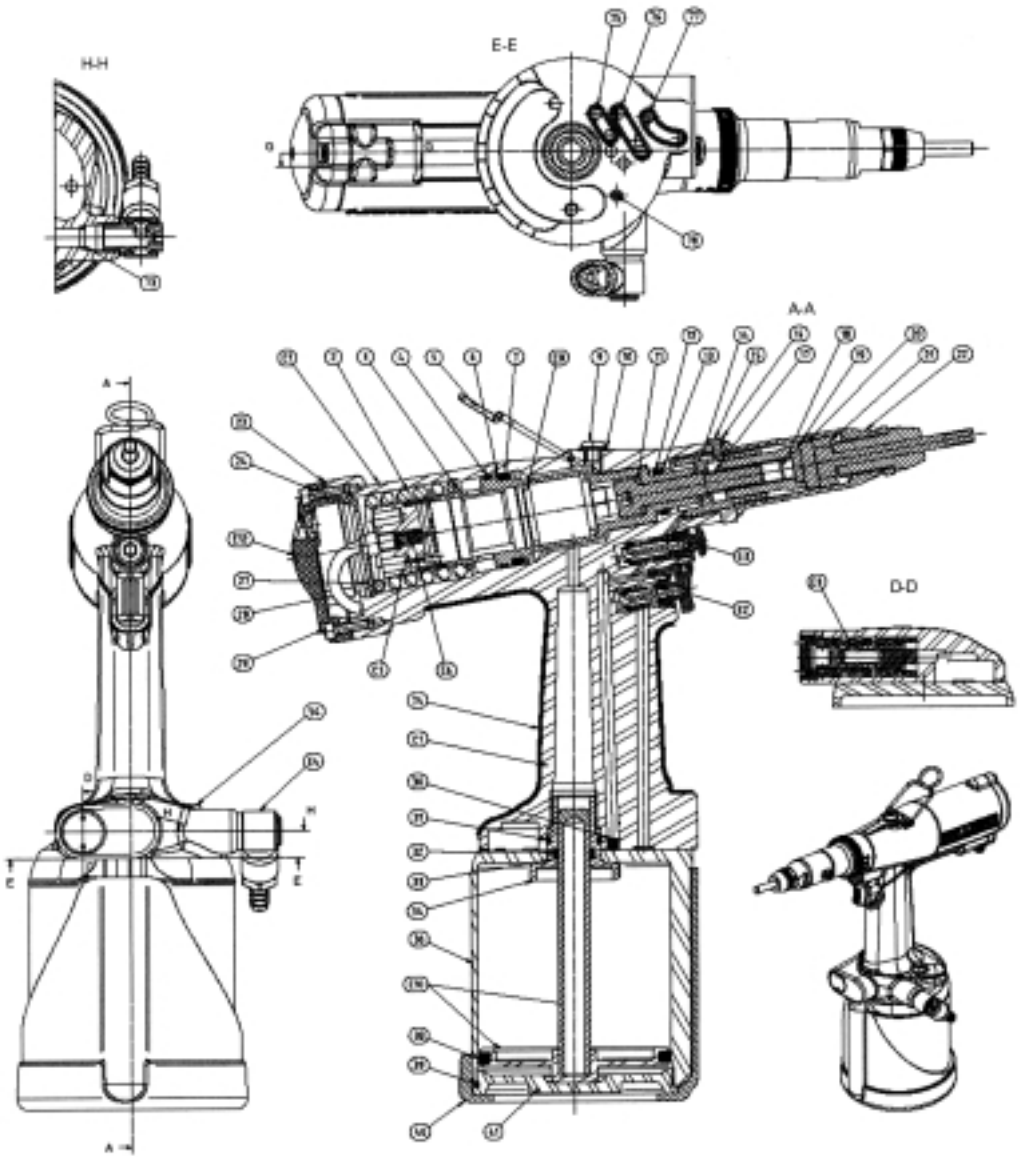
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	DESCRIPTION	Qt.	P/N
2	Spring *	1	236 153 65 030
3	Receiver piston	1	236 153 65 002
4	Guide bush *	1	236 153 00 390
5	Ring	1	236 803 00 014
6	Anti-extrusion ring *	1	236 153 65 112
7	Seal *	1	236 153 65 107
9	M6 screw	1	236 153 65 116
10	B5 ring, 8 DIA. *	1	236 153 65 113
11	Thrust washer	1	236 153 65 104
12	Seal *	1	236 153 65 034
13	Anti-extrusion ring *	1	236 153 65 111
14	Stroke stop	1	236 155 00 014
15	Pin, Ø4	1	236 155 00 015
16	Ring	1	236 155 00 016
17	Drive	1	236 153 65 012
18	M10 screw	1	C95 101 51 010
19	Pull-out pin	1	C25 110 10 100
20	Retaining ring	1	C25 110 10 410
21	Pull-out bush	1	236 155 00 021
22	Nose-piece	1	236 155 00 022
23	Rear cover seal	1	236 155 00 023
24	Circlips ring, 44 mm DIA.	1	236 153 65 101
27	Spring washer	1	236 153 65 026
28	Hose	2	236 155 00 028
29	M4 screw	2	236 155 00 029
30	Plug	2	236 155 00 030
31	Seal *	2	236 153 65 105
32	Seal *	1	236 153 65 103
33	Anti-extrusion ring *	1	236 153 65 110
34	Transmitter piston bearing	1	236 153 65 021
36	Tank	1	236 155 00 036
38	Seal *	1	236 153 65 108
39	Seal *	1	236 153 65 109
40	Tank protection	1	236 803 00 064
41	Tank plug	1	236 153 65 022
53	Filter	1	236 153 65 119
63	M8 screw	1	236 153 65 115
73	Push-pull rod *	1	236 153 65 011
74	Plastic grip	1	236 155 00 074
75	Seal *	1	236 155 00 075
76	Seal *	1	236 155 00 076
77	Seal *	1	236 155 00 077
78	Indexing bush	1	236 155 00 078
E1	Body	1	236 155 00 201
E2	Cycle start trigger	1	236 155 00 202
E3	Unscrewing button	1	236 155 00 203
E4	Air union	1	236 155 00 204
E5	Distributor valve	1	236 153 65 806
E6	Push-pull *	1	236 153 65 807
E8	Motor	1	236 153 65 800
E9	Cycle distributor valve	1	236 155 00 209
E10	Air piston	1	236 155 00 210
E11	Stroke adjustment ring	1	236 155 00 211
E12	Rear cover	1	236 155 00 212
E20	Repair kit	1	236 155 00 220

* items included
in repair kit
23615500220

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V - TROUBLESHOOTING AND SOLUTIONS

Before any intervention, check oil level and air supply pressure (between 5.5 and 7 bar)

PROBLEM	PROBABLE CAUSE	SOLUTION
Damaged mandrel threads. Difficult screwing/unscrewing actions.	<ol style="list-style-type: none"> 1 - Thickness to be crimped incompatible with RIVKLE[®]. 2 - Excessive crimping stroke. 3 - Device positioning incorrect during crimping. 4 - Damaged pull-out rod threads. 	<ol style="list-style-type: none"> 1 - Check crimping stroke range in RIVKLE[®] catalogue. 2 - Repeat crimping test according to instructions. 3 - Keep mandrel/tool perpendicular to parent material. 4 - Replace mandrel as per instructions.
RIVKLE [®] threads defective after installation.	<ol style="list-style-type: none"> 1 - Damaged mandrel threads. 2 - RIVKLE[®] incompletely screwed on mandrel. 3 - Excessive crimping stroke. 4 - Thickness to be crimped incompatible with RIVKLE[®]. 	<ol style="list-style-type: none"> 1 - Replace mandrel as per instructions. 2 - Adjust anvil position as per instructions. 3 - Repeat crimping tests as per instructions. 4 - Check crimping stroke according to RIVKLE[®] catalogue.
RIVKLE [®] turns in the hole.	<ol style="list-style-type: none"> 1 - Thickness to be crimped incompatible with RIVKLE[®]. 2 - RIVKLE[®] head not bearing on anvil at the time of crimping. 3 - Insufficient crimping stroke. 	<ol style="list-style-type: none"> 1 - Check crimping stroke according to RIVKLE[®] catalogue. 2 - Ensure that head is correctly bearing, when screwing. 3 - Repeat crimping test as per instructions.
Device does not unscrew at end of crimping stroke.	<ol style="list-style-type: none"> 1 - Low compressed air pressure. 2 - Low oil level. 3 - Motor problem. 	<ol style="list-style-type: none"> 1 - Check air supply pressure. 2 - Fill oil level as per instructions in § 5. 3 - Check motor rotation at no load.
Screwing function inoperative.	<ol style="list-style-type: none"> 1 - No air supply to device. 2 - Push-Pull valve out of adjustment. 	<ol style="list-style-type: none"> 1 - Check that compressed air supply to device is ensured. 2 - Adjust Push-Pull valve per instruction item.
No crimping stroke.	<ol style="list-style-type: none"> 1 - Adjustment ring at minimum position. 2 - Low oil level in tool. 	<ol style="list-style-type: none"> 1 - Adjust crimping stroke. 2 - Fill oil level.
Tool mandrel spins continuously.	<ol style="list-style-type: none"> 1 - Push-Pull valve out of adjustment. 	<ol style="list-style-type: none"> 1 - Adjust Push-Pull valve per instruction item.
Unscrewing function inoperative (device blocked on the part). Tool stuck in the RIVKLE [®] .	<ol style="list-style-type: none"> 1 - RIVKLE[®] tapped threads or mandrel threads damaged. 2 - Low oil level. 3 - Insufficient air pressure. 	<ol style="list-style-type: none"> 1 - To release the tool: <ul style="list-style-type: none"> - position pin (9) to match an aperture in nose-piece (5) and drive pin out, - unscrew anvil (2), - release the tool. 2 - Fill oil level as per instructions in § 5. 3 - Check air pressure.

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