

Operating instructions and spare parts list

Stapling machine HM 15

Machine no. 131887

Date of issue: 2013





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1. General

The STAGO - HM 15 places the least requirement to the qualification of the operators due to its robustness and simple operation mode and therefore, it is also suitable for operators changing frequently.

With the STAGO - HM 15 block and saddle staplings can be executed in the fold.



The machine is equipped with a clinch equipment meaning that the bottom side of the staple is pressed in a flat way on the paper.

Clinch stapling



In addition to normal staples the use of loop staples is also possible with this machine. Brochures can be stapled directly without any additional perforation.

Loop staple

The machine corresponds to the directives of the professional association. It is VDE certified and awarded with the sign of approval of the professional association "Tested Safety".



2. Technical data HM 15

Voltage 230 V / 50 Hz or 115 V / 60 Hz Power 230 V 90 Watt 115 V 100 Watt Nominal current 230 V 0,80 A 115 V 2,1 A Noise pressure level 70 dB(A) 650 × 650 × 400 mm Machine size Table size 640 × 370 mm Weight 47 kg Staple dimensions Staple type 64 $0,66 \times 0,73$ mm Length up to 20 mm $0,42 \times 0,51$ mm Length up to 8 mm Staple type 36 Staple type R 24 $0,48 \times 0,68$ mm Length up to 8 mm $0,43 \times 0,53$ mm Length up to 8 mm Staple type R 26 Magazine content Staple type 64 400 pieces 500 pieces Staple type 36 Staple type R 24 500 pieces Staple type R 26 500 pieces Packaging size of staple 5000 pieces Stapling thickness (maximum) Staple type 64 15 mm Staple type 36 4 mm Staple type R 24 4 mm

4 mm

Staple type R 26



3. The staples

In order to ensure an operation without interference only ORIGINAL STAGO quality staples should be used. Non-original staples possessing an inferior material quality or poor treatment are not allowed to be employed. Damages resulting from the application of non-original staples are excluded from the warranty.

3.1 Staple type 64 (0,66 mm \times 0,73 mm)

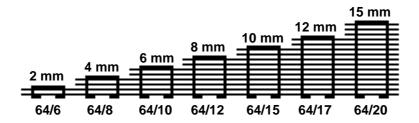


Illustration 1: STAGO - staples type 64

The shank length of the staple to select is always 4-5 mm longer than the stapling thickness of the stack. All staples of this type can be used without modification or adjustment of the machine.

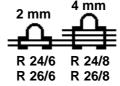
3.2 Staple type 36 (0,42 mm \times 0,51 mm)



Illustration 2: STAGO - staples type 36

For folding staplings with thin paper and few layers the staple type 64 proves to be too thick sometimes. In this case the thin wire staple type 36 is available. The use of this staple type requires a simple modification of the machine, which is described in chapter 6.1. The staple type 26/8 is available for hard papers.

3.3 Loop staple type R 24 / R 26



Illustarion 3: STAGO - Loop staples type R 26 / R 24

With this type of staple the direct stapling of brochures without the need of an addiontal perforation is possible. The use of these staples require a modification. In this case the magazine, the front plate and the ejector blade is to replace. This modification is described in chapter 6.3.



4. Safety instructions

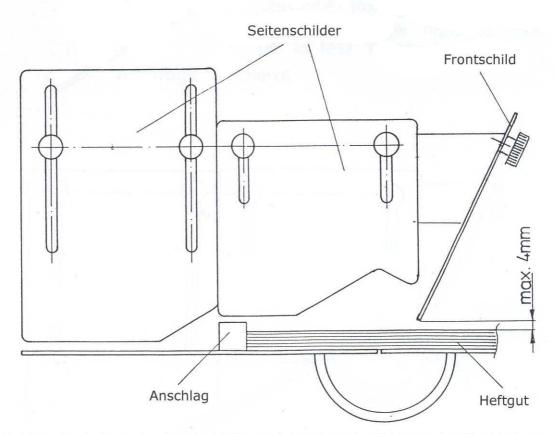
- Before connecting the mains plug it has to be verified if the voltage indicated on the name plate corresponds to the supply voltage.
- The machine is not allowed to be touched on the folding table during transport. For the transport the handles situated on the hood are to be used. The machine can also be touched on the base plate.
- Before the stapling is executed the hand protection has to be adjusted, without fail, to the stapling type, which means to block stapling or saddle stapling and to the staple thickness. Particularly in case of a large stack thickness a remaining danger exists in the stack head.

The oprating personnel has to be made aware of this dangerous area. The hand protection consists of one height adjustable front protection and 1 side protections, repsepectively. The distance between front protection and stack is only allowed to a **maximum of 4 mm.** The lateral protections are to attach as closely as possible to the stack.

Seitenschilder – Lateral plates Frontschild - Front plate

Anschlag - Stop Heftgut - stake

Correct adjustment of the front plate and the lateral plates with block stapling

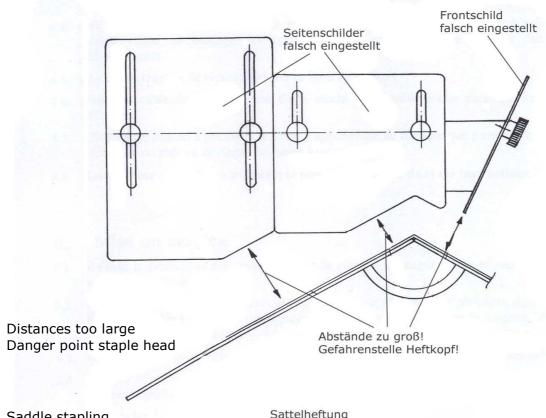


Richtige Einstellung des Frontschildes und der Seitenschilder bei der Blockheftung



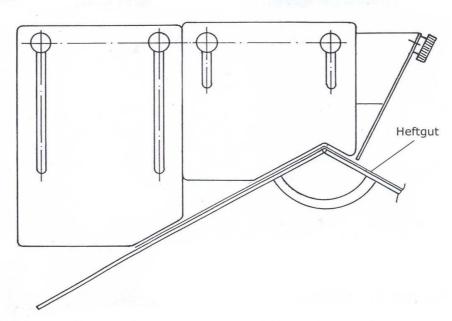
4. Safety instructions

Lateral plates adjustes incorrectly Front plate adjusted incorrectly



Saddle stapling

Sattelheftung



Richtige einstellung des Frontschildes und der Seitenschilder bei der Sattelheftung Correct adjustment of the front plate and the lateral plates with the saddle stapling



4. Safety instructions

- The stapling process is never allowed to be executed without a stack, as otherwise the staples get jammed in the channel resulting in interruptions
- The mains plug has to be disconnected with each repair work!
- The connecting cable of the machine has to be installed in such a way that no danger of stamble exists.
- The foot switch and the approriate cable are to allocate in such a way, that no danger of stumble exists and/or it is limited to the required maximum
- The machine is only allowed to be used for the purpose described in this instruction!



5. Start-up

- 1. Lift hand protection guard, press catch on the magazine upwards and pull out the magazine towards the front.
- 2. Insert staples with the desired shank length (see name plate or chapter 3). Do not use single staples! Push in the machine until the catching can be heard.
- 3. Adjust length and depth stops on the work bench according to scale.
- 4. Hand protection guard has to be adjusted according to stack thickness (see 4. safety instructions)
- 5. Connect machine and switch on main switch.
- 6. Insert stack and release stapling by means of foot switch.



6.0 Modification and replacment work

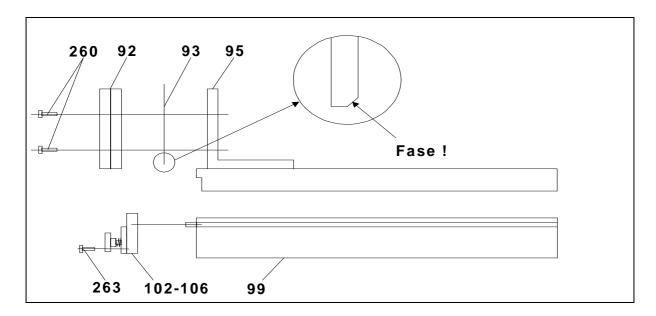


Illustration 2: Extract taken from the spare parts drawing

Staple type	Ejector blade (93)	Front plate (102-106)	Cover plate (92)	Magazine (99)
64	344 304 400	344 0601 900	344 308 400	344 0602 900
36	344 304 410	344 0601 910	344 308 400	344 0602 900
R 24	344 324 400	344 0611 900	344 325 400	344 0610 900
R 26	344 324 400	344 0612 900	344 325 400	344 0610 900

Table 1: Part no. of the replacement parts for different staple types

6.1 Modification to a different staple type

For folding staplings with thin paper and few layers the staple type 64 proves to be too thick sometimes. In this case the thin wire staple type 36 is available. The use of this staple type requires a simple modification of the machine. It is only necessare to exchange the ejector blade and the front plate. In this case the subsequent steps are to take:

First the protective plate is unscrewed. Then the hand protection is swivelled upwards until it is engaged. Now, the screws pos. 260 and pos. 263 can be unscrewed using a hexagon socket screw key SW 3. Afterwards, the cover plate pos. 92 and the front plate pos. 102-106 can be removed completely. The ejector blade pos. 93 and the front place can be replaced according to table 1. In doing so, the correct position of the chamfer has to be observed without fail. The chamfer of the ejector blade has to in the rear (see illustration 2). Now, the front plate, the upper cover plate as well as the protective plate are to screw on and the hand protection has to be swivelled downwards. The machine is now ready for operation.



6.0 Modification and replacement work

6.1 Replacement of the ejector blade

The ejector blade is a wearing part. Only a replacement of this part in due time enables a good stapling. The stapling with a worn-out or damaged ejector blade can lead to defective results. The replacement of the ejector blade is executed according to the present instruction

6.2 Application of loop staple R 26 or R 24

If using the loop staple R26 or R 24 a modification is required. The modification is to be executed as described in chapter 6.1. The magazine (position 99) has to be replaced too. The magazine can be removed towards the front, if the ejector blade is dismantled.



7. Maintenance

The STAGO HM 15 is equipped with maintenance-free bearing. Thus, only a very low amount of maintenance is required.

In regular intervals, the ejector blade, the clinch lock as well as the clinch fingers are to be verified for wear and are to replace.

Furthermore, from time to time, the slots in the magazine are to clean with the cleaning hook supplied removing the adhesive film and dust of the staples.



8. Trouble-shooting

Fault	Reason /Remedy
Stapling process ist not executed	 Protection plate is in inferior position Magazine not connected correctly Machine not switched on The mains plug is not connected The fuse for the feed line is defective The fuse in the electronic is defective The electronic has failed
The bottom side of the staple is not turned over completely	 Prolong clinch rod: For this purpose both hexagon nuts pos. 243 (left-handed thread) and pos. 239 (right-handed thread) are unscrewed by means of a flat spanner SW 13 and the pressure bar pos. 135 is turned to the right. Tighten the nut firmly. Verify clinch finger for wearing and replace clinch, if required.
The bottom side of the staple is pushed in strongly	 Chorten clinch rod: For this purpose both hexagon nuts pos. 243 (left-handed thread) and pos. 239 (right-handed thread) are unscrewed by means of a flat spanner SW 13 and the pressure bar pos. 135 is turned to the left. Tighten the nut firmly. Verify clinch finger for wearing and replace clinch, if required.
Staple is pushed in too strongly	Reduce pressing force. For this purpose turn screw pos. 142 to the left
The upper side of the staple is protrusive	 Increase pressing force. For this purpose turn screw pos. 142 to the right. Verify ejector blade for wearing and replace it, if required.

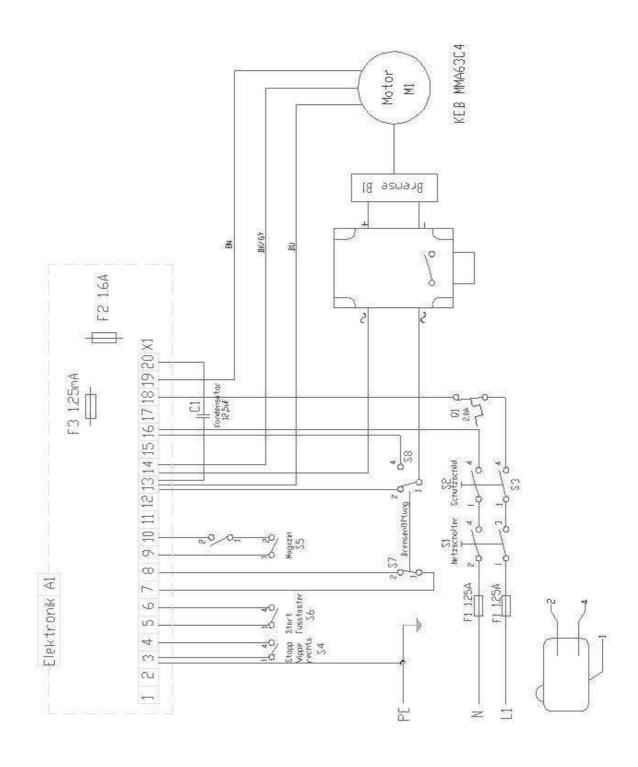


8. Trouble-shooting

Fault	Reason /Remedy	
stapling process	Switch off principal switch immediately! • Stack is too hard • Staple type is stucked in the staple channel after previous stapling without previous stapling Remedy:	
	At first press control lever pos. 117 situated on the left side of the machine in position III. Afterwards, it is possible to insert the wrench SW 5 into the boring of the hatch handle and into the hexagon. Now, the machine is switched on again and the wrench is turned into the clockwise direction until the magazine is lifted from the stake. The control lever is now taken into position II and the wrench is removed. Afterwards, the front plate is to be unscrewed by using the wrench (see chapter 6.1). The remaining parts of the staple are to remove from the front plate and the magazine. Now, the front plate can be screwed on again. Now, the foot switch is released. The machine moves back to the final position and is now ready for operation.	



9. Circuit diagram HM 15 230V / 50 Hz





Pos.	Description	Pcs.	Part no.	Remarks
1	Table premounted	1	344 0513 300	
2	Table clip right	1	344 0517 400	
3	Table clip left	1	344 0518 400	
4	Scissor	4	344 171 401	
5	Reinforcement angle	1	344 181 402	
7	Clinch finger	2	344 123 400	
9	Pressure piece	4	344 234 400	
10	Screw-down element	4	344 233 400	
12	Tooth belt	2	344 209 900	11mm wide
13	Lateral stop	2 2 2	344 0519 410	150mm long
14	Depth stop		344 0519 400	290mm long
15	Protective plate	1	344 252 400	
16	Hood cpl.	1	344 0566 900	
17	Bracket cpl.	1	344 0547 401	
18	Hand protection left -right	2	344 237 400	
19	Hand protection in front	1	344 236 300	
20	Locking bush	1	344 246 400	
21	Indexing bolt	1	344 247 400	
22	Pressure spring	1	344 250 900	
23	Switching ring	1	344 249 400	
24	Stop bolt	1	344 245 400	
25	Hatch handle right	1	344 272 900	
26	Hatch handle with opening	1	344 272 400	
27	Retaining pin	1	344 244 400	
28	Type plate	1	344 188 400	
30	Micro switch forced opening	1	300 808 900	
33	Washer	1	344 131 400	
34	Washer	1	344 132 400	
35	Bolt for pressure lever	1	344 137 400	
36	Washer	1	344 149 900	
37	Pressure lever	1	344 0509 400	
38	Disc	3	364 170 400	
39	Bolt for stapling arm	1	344 143 400	
40	Pressure spring for stapling arm	1	344 199 900	
45	Distance bolt left	2	344 267 400	
46	Distance bolt right	2	344 268 400	
47	Retaining bar	2	344 269 400	
48	Hand protection left - right	2	344 270 400	



Pos.	Description	Pcs.	Part no.	Remarks
50	Electric housing for electronic	1	344 0539 900	
51	Relay	1	344 217 900	230 V
	Relay		344 350 900	115 V
52	Fuse for electonic card 230 V	1		1,6 A idle
	Fuse for electonic card 115 V	1		3,15 A idle
53	Card guiding	2	344 527 900	
54	Terminal block	1	344 528 900	
55	Fuse holder with screw cup	2	300 075 900	
56	Fuse 230 V	2		1,25 A idle
	Fuse 115 V	2 2 2 1		2,5 A idle
57	Screwed cable gland	2	300 092 900	Pg 9
58	Plastic hexagon nut	2		Pg 9
59	Plug and socket bar		344 290 900	
60	Plug and socket bar	1	344 290 910	
61	Relay socket	1	344 220 900	
62	Rocker switch On / Off	1	300 076 900	
63	Foot switch cpl. with cable	1	300 0100 900	
64	Supply cable with plug	1	300 071 900	
65	Cable tree cpl.	1	344 0534 900	
66	Motor protection switch	1	366 155 900	230 V
	Motor protection switch	1	344 351 900	115 V
69	Rocker	1	344 126 200	
70	Electronic card 230 V	1	344 0529 900	
	Electronic card 115 V	1	344 0529 910	
71	Motor	1	344 266 900	230 V / 50 Hz
		1	344 266 910	115 V / 60 Hz
72	Motor condensator	1	344 222 900	
73	Driving wheel for motor	1	344 212 400	
74	Bolt for principal bearing	1	344 218 400	
75	Timing belt pulley large	1	344 154 300	
76	Micro switch	4	300 082 900	
77	Insulating plate	6	300 083 900	
78	Retaining ring	1	344 133 400	
79	Belt tensioner	1	344 151 300	
80	Clip	1	344 208 401	
81	Hexagon screw	2	344 112 400	
82	Ind.part for belt tensioner	1	344 194 401	
83	Driving wheel in front	1	344 0507 900	
84	Intermediate ring for bearing	1	344 159 400	
85	Intermediate wheel small	1	344 155 400	
86	Wheel bearing bolt	1	344 156 400	
87	Curve	1	344 161 400	
88	Tension disc	1	344 160 401	



Pos.	Description	Pcs.	Part no.	Remarks
89	Bronce bush	8	12×16×10	
90	Bolt for pressure ring	1	344 179 400	
91	Pressure ring	1	344 162 400	
92	Upper cover plate	1	344 308 400	For staple type 36/64
	·	1	344 325 400	For staple type R 26 /
				R 24
93	Ejector blade	1	344 304 400	For staple type 64
		1	344 304 410	For staple tapye 36
		1	344 324 400	For staple type R 26 /
				R 24
94	Pressure spring	1	362 809 900	
95	Support profile with angle cpl.	1	344 0603 900	
96	Catch cpl.	1	344 0514 400	
97	Staple lever	1	344 202 400	
98	Bolt for staple arm	1	344 178 400	
99	Magazine cpl.	1	344 0602 900	With channel and
				saddle
		1	344 0610 900	For staple type R 26 /
				R 24
100	Staple slider cpl.	1	344 0515 400	
101	Tension spring for staple slider	1	344 204 400	
102	Front plate cpl.	1	344 0601 900	For staple type 64
		1	344 0601 910	For staple type 36
		1	344 0611 900	For staple R 24
		1	344 0612 900	For staple R 26
103	Spacer	1	344 305 400	For staple type 64
	Spacer	1	344 305 410	For staple type 36
105	Pressure spring	1	362 826 900	
106	Knurled screw	1	DIN 464-	
			M4x12	
107	Cover angle	1	344 219 400	
108	Staple arm cpl.	1	344 139 300	
109	Screw for cylinder	1	344 294 900	
110	Tension spring bolt	1	344 104 400	
111	Bronce bolt for staple arm	2	16×22×16	
112	Cover sheet	1	344 184 300	
113	Basic plate cpl.	1	344 0575 400	
114	Bearing support premounted	1	344 0551 900	
115	Bronce bolt with bearing support	2	25×30×20	
116	Stroke lever cpl.	1	344 0512 400	
117	Control lever cpl.	1	344 0576 400	
118	Control plate cpl.	1	344 0577 400	
119	Tension spring	1	344 231 900	
120	Clip cpl.	1	344 0510 300	



Pos.	Description	Pcs.	Part no.	Remarks
125 126 127 128 129 130 132 135 136 137 138 139 140 141 142 143 144	Bearing support Clinch lever cpl. Finger Clinch plate Intermediate position Guide pin Clinch slider Pressure bar Rubber foot Hood fastening angle Bolt for lever Bolt for clip Retaining piece for spring Pressure spring Cyl. Head screw Hexagon socket Star handle Angle head right	1 1 2 2 2 1 1 4 1 1 1 1 2 3	344 0505 400 344 0522 400 344 117 400 344 120 400 344 121 400 344 124 400 344 163 400 344 163 400 300 046 900 344 105 400 344 111 400 344 307 400 344 307 400 344 309 900 344 321 400 300 062 900 344 265 900	
145 150	Angle head left Tool accessories: Dirt hook Key for hexagon socket screw Einmaulschlüssel Key for hexagon socket srew straight	1 1 1 1 1	344 284 900 344 0579 900 300 345 400	SW 3 / 4 / 8 SW 13 SW 5
6	Spare parts components: Clinch lock cpl. Finger protection cpl. Timing belt pulley cpl. Belt tensioner Pressure bar cpl. Notch cpl. Interference suppressor Staple head cpl.	1 1 1 1 1 1 1	344 0543 900 344 0546 901 344 0506 900 344 0508 900 344 0524 900 344 0561 900 344 0578 900 344 0600 900	Pos. 128-132+NT Pos. 17-19,45-48+NT Pos.75,78,85,86+NT Pos. 79-82+NT Pos. 135,269,270 Pos. 20-22+NT Pos. 117-118+NT Pos. 76-77,92-96,99- 107,201,203,260,263 268



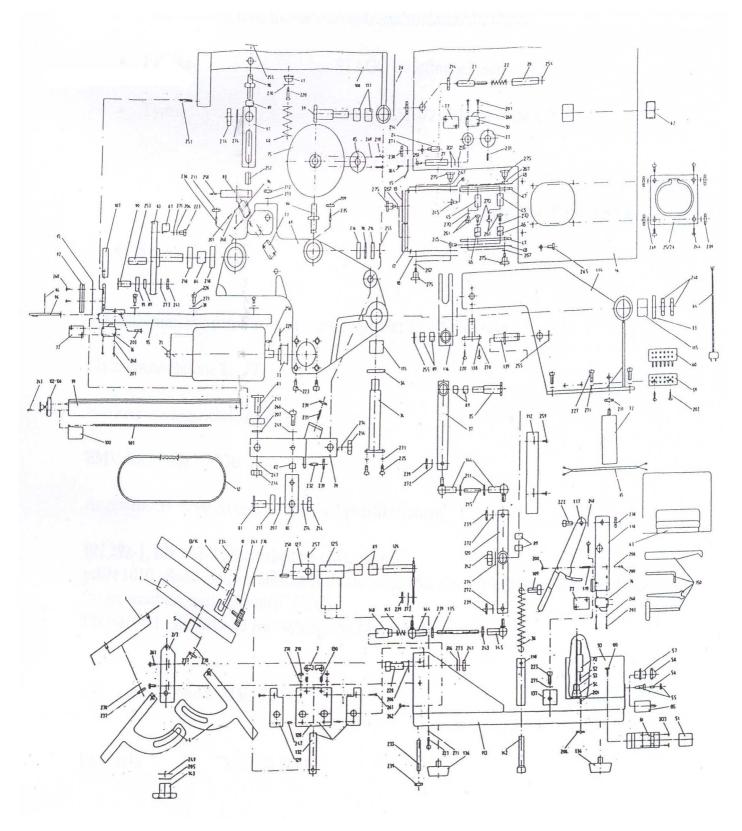
Pos.	Description	Pcs.	Part no.	Remarks
199	Cyl.head screw with slot	1	DIN 84-M4x10	zinc coated
200	Cyl.head screw with slot	2	DIN 84-M3×6	zinc coated
201	Cyl.head screw with slot	6	DIN 84-M3×16	zinc coated
202	Cyl.head screw with slot	2	DIN 84-M3×16	zinc coated
203	Cyl.head screw with slot	5	DIN 84-M3×25	zinc coated
204	Disc	1	DIN 125-B6,4	zinc coated
205	Disc	2	DIN 125-B8,4	zinc coated
206	Disc	4	DIN 125-B10,5	zinc coated
207	Disc	3	DIN 125-B13	zinc coated
208	Hexagon nut flat	3	DIN 439-M3	zinc coated
209	Hexagon nut flat	8	DIN 439-M4	zinc coated
210	Hexagon nut flat	2	DIN 439-M5	zinc coated
211	Hexagon nut flat	4	DIN 439-M8	zinc coated
212	Hexagon nut flat	1	DIN 439-M10	zinc coated
214	Hexagon nut flat	7	DIN 439-M12	zinc coated
215	Set screw	1	DIN 551-M8×40	
216	Grooved ball bearing	2	DIN 625-6001-2Z	
217	Grooved ball bearing	2	DIN 625-6201-	
			2RS1	
218	Grooved ball bearing	2	DIN 625-6202-	
			2RS1	
219	Cyl.head screw Hexagon socket	2	DIN 912-M4×30	
221	Cyl.head screw Hexagon socket	2	DIN 912-M6×10	
222	Cyl.head screw Hexagon socket	1	DIN 912-M6×10	
223	Cyl.head screw Hexagon socket	8	DIN 912-M6×12	
224	Cyl.head screw Hexagon socket	2	DIN 912-M6×14	
225	Cyl.head screw Hexagon socket	3	DIN 912-M6×18	
226	Cyl.head screw Hexagon socket	3	DIN 912-M6×20	
227	Cyl.head screw Hexagon socket	4	DIN 912-M8×20	
228	Cyl.head screw Hexagon socket	2	DIN 912-M10×30	
229	Set screw	1	DIN 913-M5×8	
230	Set screw	1	DIN 913-M5×10	
231	Set screw	1	DIN 913-M8×16	
232	Set screw	1	DIN 913-M8×25	
233	Set screw	1	DIN 913-M8×50	
234	Set screw	4	DIN 914-M4×6	
235	Set screw	1	DIN 914-M4×16	
236	Set screw	1	DIN 915-M8×25	l
237	Hexagon nut	11	DIN 934-M5	zinc coated
238	Hexagon nut	3	DIN 934-M6	zinc coated
239	Hexagon nut	8	DIN 934-M8	zinc coated
240	Hexagon nut	2	DIN 936-M16×1,5	zinc coated
241	Hexagon nut	3	DIN 934-M10	zinc coated



Pos.	Description	Pcs.	Part no.	Remarks
242	Hexagon nut	1	DIN 934-M12	zinc coated
243	Hexagon nut	1	DIN 934-M8-LH	zinc coated
244	Rec. Countersunk flat head screw	8	DIN 965-M4×10	zinc coated
245	Rec. Countersunk flat head screw	4	DIN 965-M5×12	zinc coated
247	Split pin	2	DIN 1481-Ø3×8	
248	Disc spring	1	DIN 2093-	
			Ø18ר6.2×0.4	
249	Disc srping	3	DIN 2093-	
			Ø20ר8.2×0.9	
250	Cylinder bolt	1	DIN 6325-5m6×28	
251	Cylinder bolt	1	DIN 6325-5m6×36	
252	Cylinder bolt	1	DIN 6325-	
			12m6×28	
253	Cylinder bolt	1	DIN 6325-	
			12m6×40	
254	Circlip	1	DIN 6799-4	
255	Circlip	6	DIN 6799-10	
256	Parallel key	1	DIN 6885-	
			A4×4×16	
257	Split pin	1	DIN 7344-Ø5×24	
258	Dowel pin	1	DIN 7344-Ø6×40	
259	Lens head screw	4	DIN 7981-3,9×9,5	
260	Cyl.head screw Hexagon socket	4	DIN 7984-M5×10	
261	Cyl.head screw Hexagon socket	15	DIN 7984-M5×12	
262	Cyl.head screw Hexagon socket	1	DIN 7984-M5×16	
263	Cyl.head screw Hexagon socket	2	DIN 7984-M5×20	
264	Lense screw with cross slot	2	DIN 7985-M5×8	
265	Lense screw with cross slot	3	DIN 7985-M6×8	
266	Cyl.head screw Hexagon socket	1	DIN 7984-M8×18	
267	Disc	10	DIN 9021-5.3	zinc coated
268	Schnorr retaining washer	8	S3	
269	Schnorr retaining washer	10	S4	
270	Schnorr retaining washer	15	S5	
271	Schnorr retaining washer	12	S6	
272	Schnorr retaining washer	5	S8	
273	Schnorr retaining washer	4	S10	
274	Schnorr retaining washer	4	S12	
275	Knurled screw	10	M5×12	
276	Knurled screw	4	M6×15	



11. Spare parts drawing





EC-Declaration of Conformity

We hereby certify that the following described machine in its conception, construction and form put by us into circulation is in accordance with all the relevant essential health and safety requirements of the EC machinery directive 2006/42/EEC as amended and the national laws and regulations adopting this directive.

This declaration is no longer valid if the machine is modified without out our consent

STAGO GmbH Maschinenbau - Papierverarbeitungsmaschinen Bahnhofstraße 44 D-72639 Neuffen

• Product STAGO – Stapling Machine

• Type HM 15/HM 15-2

Automatic stapling process via foot switch

• Serial number 121781

• Year of construction 2012

The agreement with further valid guidelines/regulations following for the product is explained:

- Council Directive 2004/108/EC (December 15, 2004) on Electromagnetic Compatibility
- Low Voltage Directive (LVD) 2006/95/EC)

Applied one harmonized standards in particular:

- DIN EN ISO 12100 Safety of machinery General principles for design Risk assessment and risk reduction
- DIN EN 60204-1 Safety of machinery Electrical equipment of machine
- DIN EN ISO 13849 Safety of machinery Safety-related parts of control systems
- EN 1010-1 Safety of machinery Safety requirements for the design and construction of printing and paper converting machines Part 1: Common requirements

Authorized person for the technical documentation:

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Stago GmbH Albershausen, 2013-01-14

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