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BETRIEBSANLEITUNG UND SICHERHEITSVORSCHRIFTEN
OPERATING AND SAFETY INSTRUCTIONS
MODE D'EMPLOI ET DE SÉCURITÉ
ISTRUZIONI PER L'USO E DI SICUREZZA

CR 25 A

Ab Serie-Nr. 2500

From serie no 2500

A partir du no de série 2500

A partire dal no. di serie 2500

Handgerät zum Umreifen mit Stahlband

Hand tool for steel strapping

Appareil pour le cerclage par feuillard d'acier

Apparecchio per reggiare con reggetta d'acciaio



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1

TECHNICAL DATA

Weight	3.2 kg (7 lbs)
Dimensions	Length 302 mm (17.75") Width 130 mm (5") Height 180 mm (7")
Tension force	Up to approx. 3000 N
Tension speed	75 mm/s (3"/s)
Air pressure	Maximum 6 bar static
Air consumption	
– Tensioning	4 NI/s
– Sealing	3.4 NI
Air connection	G 1/4" (1/4" NPT)
Sealing	Sealjoint with 1 notch
Emission sound pressure levels, measurement type A (EN ISO 11202)	L_{pA} 83 dB (A)
Vibrations at handle (EN ISO 8662-1)	$a_{h,w} < 2,5 \text{ ms}^{-2}$
STEEL STRAP	
Strap width	13, 16, 19 mm (1/2", 5/8", 3/4")
Normal quality: Strap thickness	0.40–0.63 mm (.015"–.024")
Tensile strength	Up to approx. 850 N/mm ² (117'000 lbs/in ²)
High strength quality: Strap thickness	0.40–0.63 mm (.015"–.024")
Tensile strength	Up to approx. 1100 N/mm ² (156'000 lbs/in ²)
SEALS	
Strap width 13 mm	CSP 411
Strap width 16 mm	CSP 511
Strap width 19 mm	CSP 611

DECLARATION OF AGREEMENT

We take sole responsibility for declaring that the tool CR 25 A, to which this declaration refers, is in full compliance with the current requirements of the guidelines laid down by the council on 22th June 1998 (98/37/EEC), "Machine Guidelines".

According to norm:
EN 292-1, EN 292-2, EN 349, EN 983, EN 1050
prEN 792-2

CH-8953 Dietikon, February 2002

Manager
Sales & Marketing:



R. Kieffer

Manager
Engineering:



M. Binder

2

GENERAL INFORMATION

These operating instructions are intended to simplify familiarisation with the strapping tool and the possibilities of application for the intended purpose. The operating instructions contain important information concerning the safe, proper and efficient use of the strapping tool. Observation of the information will help to avoid danger, reduce repairs and stoppages and increase the reliability and service life of the strapping tool.

The operating instructions must always be available at the place of operation of the strapping tool. They must be read and observed by all persons concerned with work on the strapping tool. This work specifically includes operation, refilling of operating material, fault elimination and maintenance.

In addition to the operating instructions and the regulations for accident prevention effective in the country of use and place of application, the recognised technical regulations for safety and proper working must also be observed.



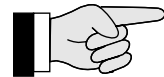
CAUTION!

Used where there is danger to life and health.



WARNING!

Used for danger which can cause material damage.



NOTE!

Used for general information and information which if not followed can cause faults in the operating sequence.

2.1 INFORMATION ON ENVIRONMENTAL PROTECTION

This tool is manufactured without any physical or chemical substances which could be dangerous to health. For disposal of all the parts, the governmental instructions must be observed.

3

SAFETY INSTRUCTIONS



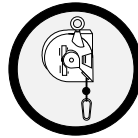
Inform yourself!
Read the operating instructions carefully.



Do not use a bottled air or gas source!
Do not operate this tool by using a bottled air or gas source



Protect yourself!
When operating the tool, wear eye, face and hand protection (cut-proof gloves).



Caution:
If work is carried out using a spring balancer, only a spring balancer that complies with the safety regulations may be used.



Warning:
Strap will snap forward!
When cutting the strap, hold the upper portion and stand safely away from the strap.
Caution:
The lower strap will snap forward.



Original ORGAPACK seals must be used exclusively.



Warning:
Strap could break!
Do not stand in line with the strap while it is tensioned. The strap could break!



Original ORGAPACK spare parts must be used exclusively!
Not using original spare parts will dissolve the warranty and the liability.



Caution:
Danger of squeezing!
Do not put your fingers into the tension wheel area.

Use for the intended purpose

The tool is intended for strapping round packages, bundles of sectional steel, pipes etc.

This tool was designed and manufactured for safe handling during the strapping operation.



Caution:
Only strap packed goods!
Do not put hands or other parts of the body between the strap and the package during the strapping process.

The tool processes steel straps only.

Possible misuse

The use of plastic straps is not possible.



Do not exceed the air pressure!
Do not exceed the recommended air pressure



Use safety coupling!
For connecting the air hose to the tool, use only a safety coupling

4

DESCRIPTION

4.1 DESIGN

- 1 Compressed air connection
- 2 Yellow button (Sealing)
- 3 Green button (Tensioning)
- 4 Handle
- 5 Pressure reducing valve
- 6 Compressed air motor
- 7 Tension wheel and tension plug
- 8 Base plate
- 9 Sealing jaws
- 10 Compressed air cylinder
- 11 Suspension bow

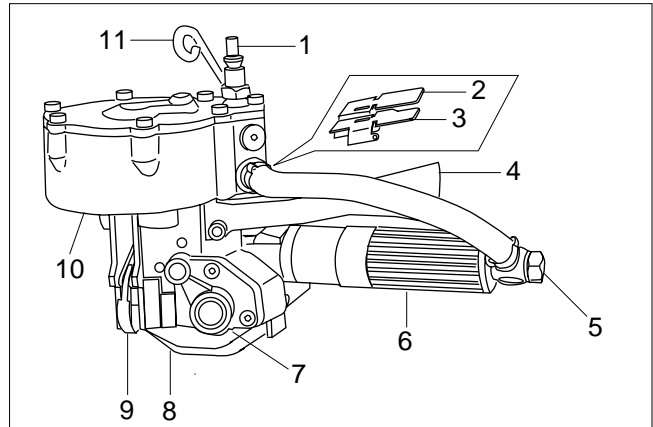


Fig. 1

4.2 FUNCTION

- Feed the strap manually through the seal (2/1).
- Bend the strap start (2/5).
- Tensioning by feed wheel principle (2/4).
- Sealing by notching (2/2) the seal.
- Strap cut with knife (2/3)

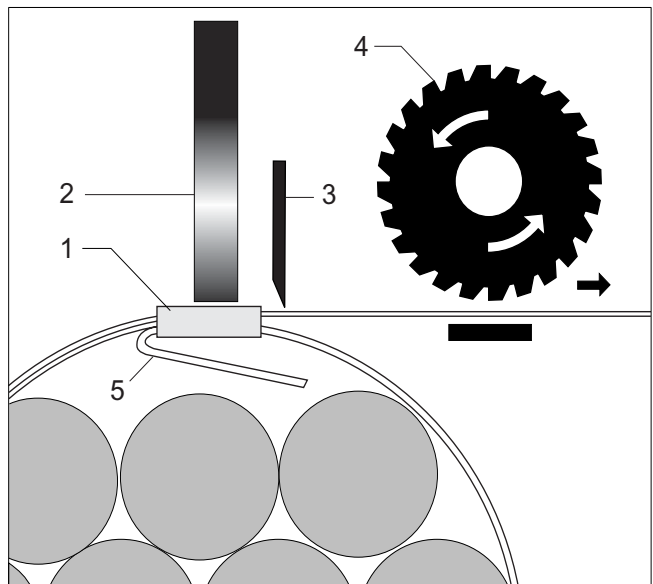


Fig. 2

5

INITIAL OPERATION

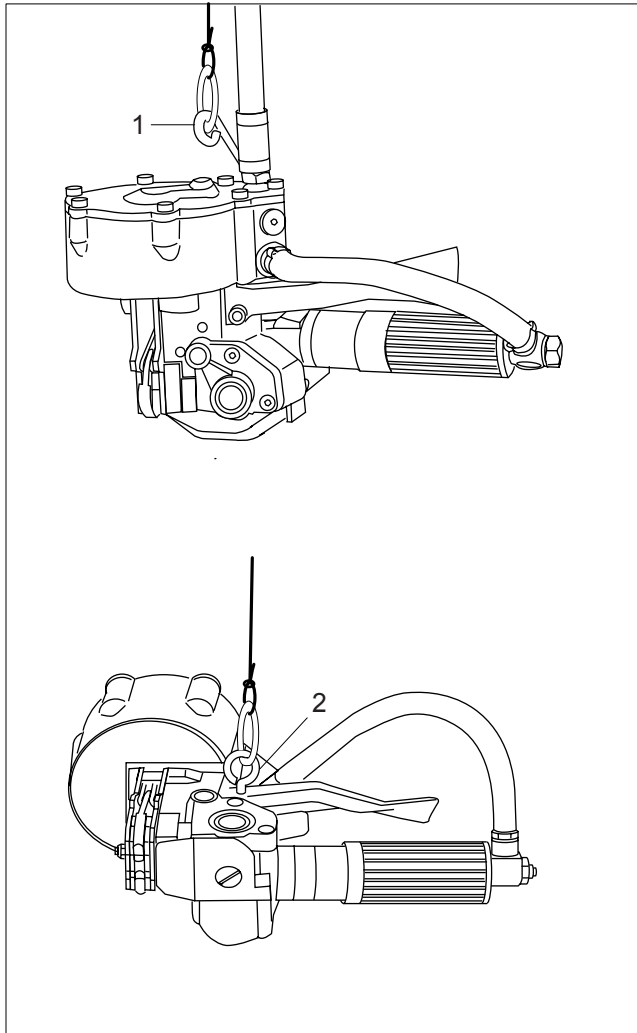


Fig. 3

5.1 SUSPENDING THE TOOL

If the tool is equipped with a suspension bow (3/1) it can be suspended on a spring balancer. By mounting an M6-eye bolt (3/2) it is possible to perform horizontal strapping.

5.2 COMPRESSED-AIR CONNECTION

Motor and sealing piston are lubricated by oil mist of the compressed air. Properly prepared compressed air is therefore essential for trouble-free operation of the tool. This can only be ensured by a reliably functioning maintenance unit, consisting of water separator, pressure reducing valve with pressure gauge and oil mist lubricator.

The oil mist lubricator should supply sufficient oil. The length of the hose between the CR 25 A and the maintenance unit should not exceed 5 m (15 ft). The internal diameter of the pipe should be at least 10 mm ($\frac{3}{8}$ "). It must be ensured that the hose does not form loops, where oil can collect.

6

OPERATING INSTUCTIONS

6.1 OPERATING THE TOOL

- Draw the strap from the dispenser, slide the strap through the seal (4/1) and wind strap around the package.
- Push the strap start a second time through the seal.

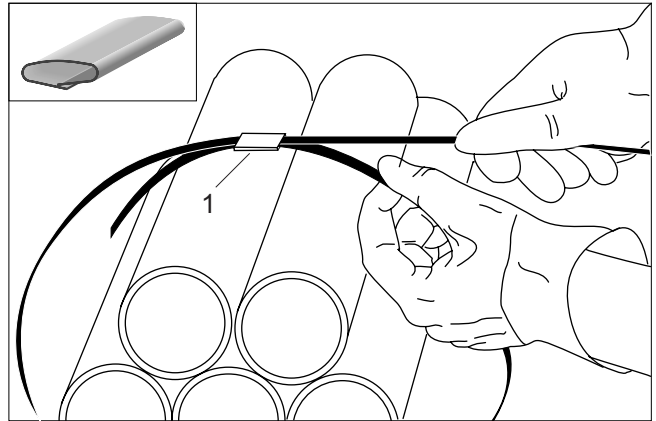


Fig. 4

- Bend the strap start (5/1) below the seal 3–4 cm (1–2").
- Pull the strap tightly by hand and take a portion of the strap leading to the dispenser with the left hand approx. 20 cm (8") away from the seal.

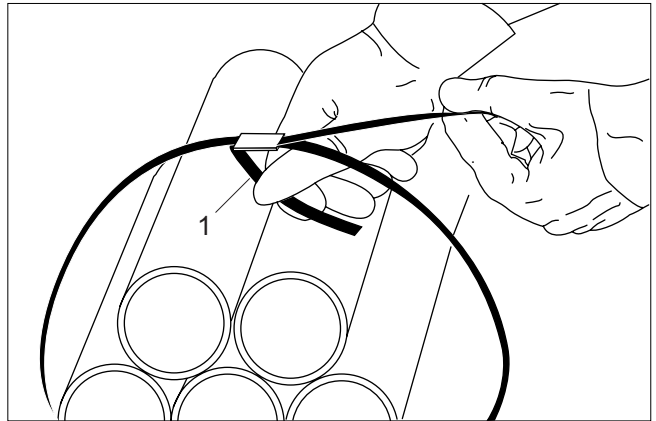


Fig. 5

- Hold the handle (6/1) of the tool in the right hand and raise the motor up to the stop.
- Insert the strap below the tension wheel completely into strap guide. At the same time push the tool forward against the seal.
- Release the motor.

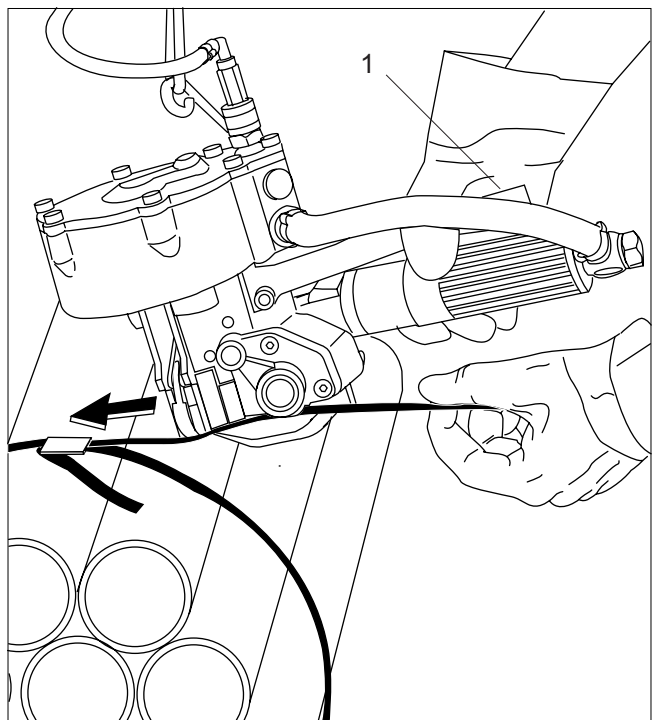


Fig. 6

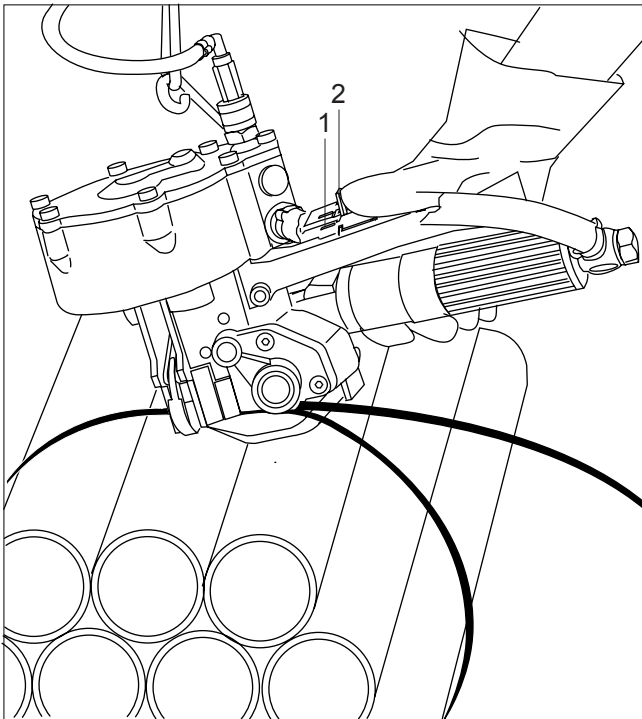



Fig. 7


Tensioning

- Press the green button completely down with the thumb of the right hand. Release green button. The strap is tensioned until the air motor stops.

 The tensioning force can be infinitely adjusted (see chapter 7.1).

Interrupting the tensioning process

- Press catch (7/2) to the left, green button rises and tensioning is interrupted.

 If the items to be strapped are mainly delicate products, it is recommended to remove the catch. The green button will then no longer be locked when pressed down.

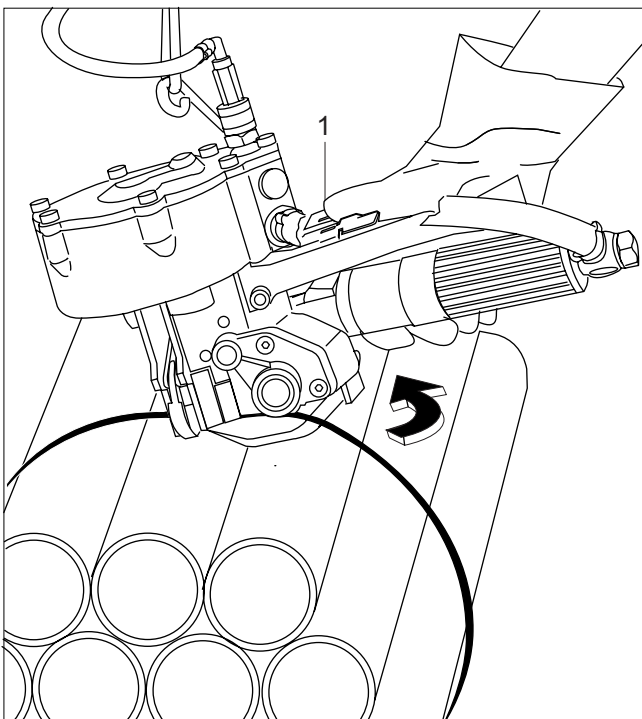


Fig. 8

Sealing

- Press the yellow button (8/1) with the right thumb until the seal is notched and the strap is cut off.
- Raise the motor to the stop and swivel the tool away from the strapping to the right at the rear.

Check of seal

To obtain the maximum seal efficiency, the notches have to be cut properly into the seal. If these notches are not correctly cut, replace jaws and notcher (see Chapter 7.5).

7

PREVENTIVE AND CORRECTIVE MAINTENANCE

7.1 ADJUSTING TENSIONING FORCE/
TENSIONING SPEED

- Set air pressure at pressure reducing valve of maintenance unit to 4–6 bar.
- With a screwdriver adjust pressure reducing valve (9/1) of air motor, so that the motor stops when the required tension is reached. It should be ensured that the seal is notched properly and that the strap is cut off.

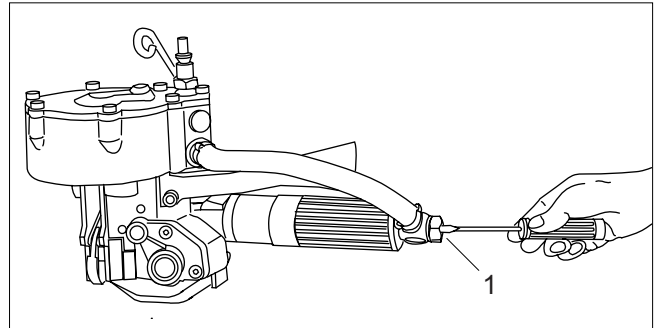



Fig. 9

7.2 SETTING CLEARANCE BETWEEN TENSION
WHEEL AND TENSION PLUG

 The tension wheel and the tension plug must not touch (damage the teeth). If the spacing is too great, the strap slips through before the final tension is reached.

- Disconnect tool from air supply.
- Loosen set screw (10/1).
- Set tension plug (10/2) with screwdriver, so that the clearance between tension wheel and tension plug is 0.1–0.25 mm (.0039"–.0098"). Turning clockwise decreases the clearance, turning counterclockwise increases the clearance.
- Turn tension plug so that a notch of the tension plug points in the direction of the set screw (10/1).
- Tighten set screw (10/1).
- Check clearance, reset if necessary.

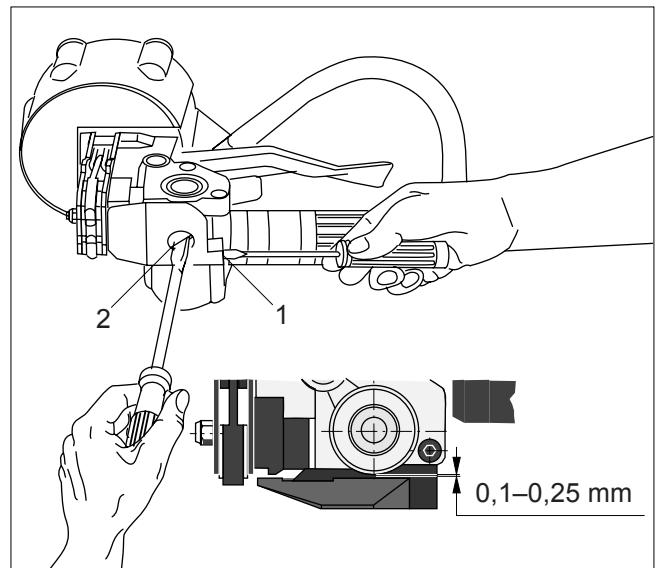



Fig. 10

7.3 REPLACING TENSION WHEEL

 If the tension wheel spins before the required strap tension is reached, the tension wheel must be replaced (precondition: clearance set correctly, see chapter 7.2).

Removal

- Disconnect tool from air supply.
- Remove two cylinder screws (11/1).
- Carefully remove cover (11/2) from tension shaft.
- Remove counter washer (11/3), thrust bearing (11/4) and tension wheel (11/5). Replace tension wheel.

Installation

- Install the parts in reverse order.
- The 45°-chamfer of the tension wheel must be out-side.
- Secure cylinder screws (11/1) with Loctite 243.
- Set clearance between tension wheel and tension plug (see chapter 7.2).

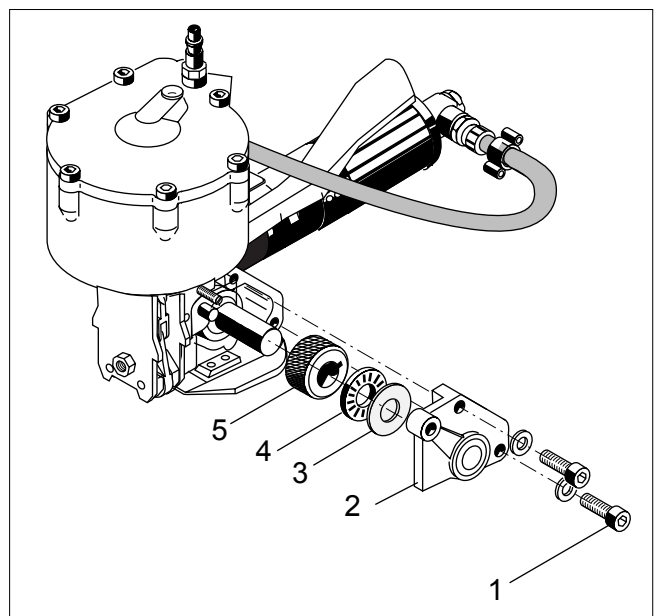


Fig. 11

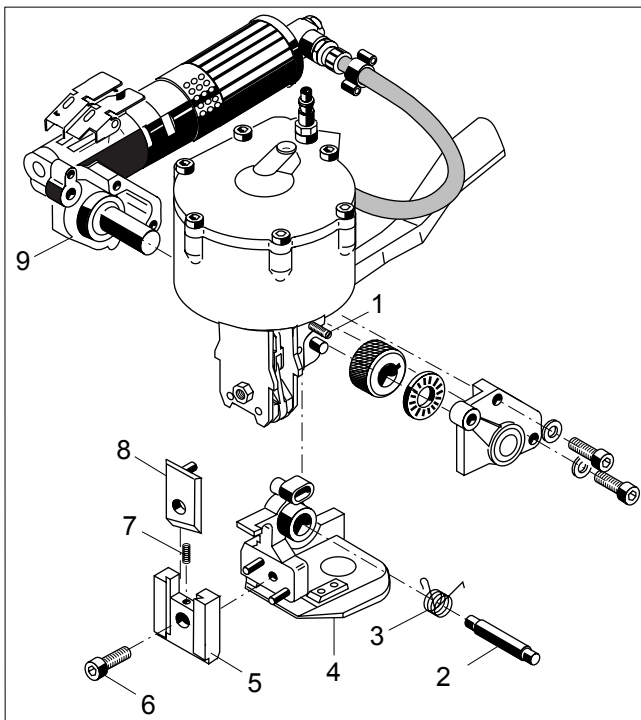


Fig. 12

7.4 REPLACING CUTTING KNIFE

Removal

- Remove tension wheel (see chapter 7.3).
- Remove gear housing (12/9) including air motor and shaft.
- With screwdriver loosen special screw (12/1).
- Remove shaft (12/2) and compression spring (12/3).
- Remove base plate (12/4).
- Remove cylinder screw (12/6).
- Remove cutter guide (12/5), remove and replace cutting knife (12/8). Observe position of spring (12/7).

Installation

- Install the parts in reverse order.
- Secure cylinder screw (12/6) and special screw (12/1) with Loctite 243.
- After installation of gear housing (12/9) hang up compression spring (12/3) with screwdriver.

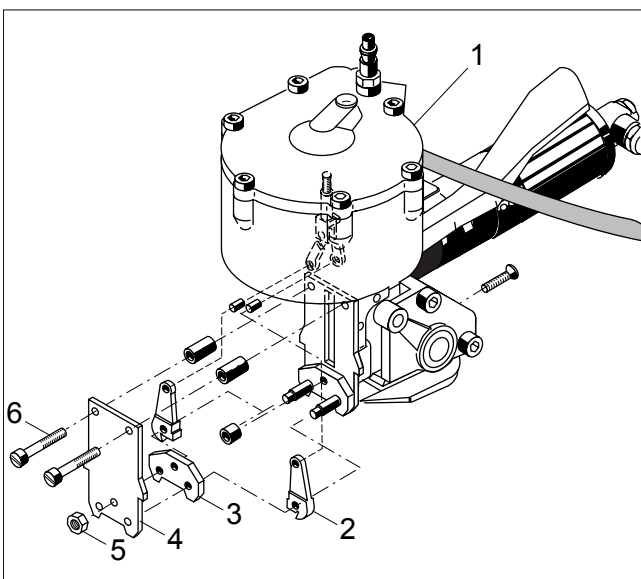


Fig. 13

7.5 REPLACING JAWS AND NOTCHER

Removal

- Connect the tool to the air supply, depress yellow button (13/1) and hold it in position.
- Disconnect the tool from air supply and release yellow button.
- Remove two special screws (13/6).
- Take down jaw unit.
- Remove lock nut (13/5).
- Remove front plate (13/4), remove and replace notcher (13/3) and jaws (13/2).

Installation

- Install the parts in reverse order.
- Secure special screws (13/6) with Loctite 243.

7.6 CLEANING THE TOOL

- The tool should be regularly cleaned. Especially the tension wheel and the jaw unit should be kept clean. The easiest way to do this, is to use compressed air and to blow out the dust (wear eye protection).

8

PARTS LIST 1174.200.100/11

When ordering please indicate part number and quantity

Explosion drawing see page 28

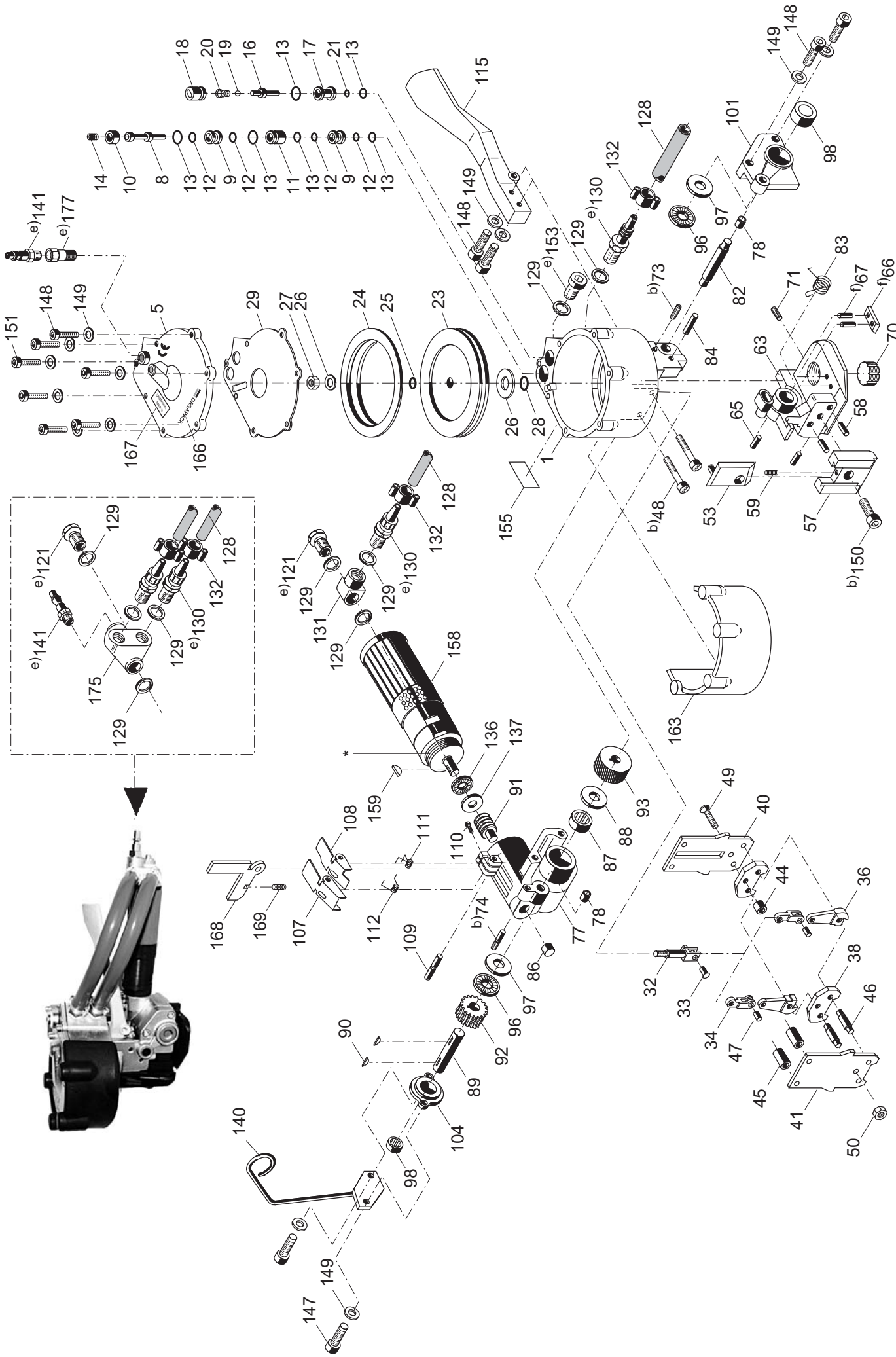
* Recommended spare parts

Pos.	Part no	Part name	Quantity
1	1174.200.115	Cylinder	1
2			
3			
4			
5	1174.200.114	Cylinder cover	1
6			
7			
8	1820.100.036	Valve stem, long	1
9	1820.100.030	Sleeve	2
10	1820.100.033	Ring	1
11	1820.100.034	Sleeve	1
12	1927.601.020	O-Ring, \varnothing 10 x 2	4
13	1927.601.600	O-Ring, \varnothing 16.1	6
14	1820.010.208	Compression spring	1
15			
16	1820.100.035	Valve stem, short	1
17	1820.100.031	Sleeve	1
18	1820.100.032	Sleeve	1
19	1925.010.802	Ball	1
20	1820.010.047	Compression spring conical	1
21	1927.600.420	O-Ring, \varnothing 4 x 2	1
22			
23	1174.200.120	Piston	1
24	1928.011.050	Piston ring, \varnothing 105	1
25	1927.600.610	O-Ring, \varnothing 6 x 1,5	1
26	1820.020.261	Washer	2
27	1916.306.062	Lock washer, M 6	1
28	1927.601.010	O-Ring, \varnothing 10 x 1,5	1
29	1174.200.137	Gasket	1
30			
31			
32	1174.200.131	Slider	1
33	1820.030.413	Bolt	1
34	1174.200.128	Link	2
35			
* 36	1174.200.141	Jaw	13 mm 2
* 36	1174.200.142	Jaw	16 mm 2
* 36	1174.200.143	Jaw	19 mm 2
37			
38	1174.200.125	Notcher	13 mm 2
38	1174.200.126	Notcher	16 mm 2
38	1174.200.127	Notcher	19 mm 2
39			
40	1174.200.132	Plate	1
41	1174.200.133	Front plate	13 mm 1
41	1174.200.134	Front plate	16 mm 1
41	1174.200.135	Front plate	19 mm 1
42			
43			
44	1820.020.262	Bushing	1
45	1820.020.263	Bushing	2

Pos.	Part no	Part name	Quantity
46	1820.030.415	Bolt	2
47	1820.030.414	Bolt	2
48	1820.030.412	Special screw, M 6	2
49	1911.905.252	Counter sunk screw, M 5 x 25	1
50	1916.305.052	Lock nut, M 5	1
51			1
52			
* 53	1174.200.152	Cutter complete	13 mm 1
* 53	1174.200.124	Cutter complete	16, 19 mm 1
54			
55			
56			
57	1174.200.121	Cutter guide	1
58	1921.305.120	Straight pin, \varnothing 5m6 x 12	2
59	1820.010.207	Compression spring	1
60			
61			
62			
63	1174.200.150	Base plate complete, incl. pos. 64-67	13 mm 1
63	1174.200.148	Base plate complete, incl. pos. 64-67	16 mm 1
63	1174.200.149	Base plate complete, incl. pos. 64-67	19 mm 1
64			
65	1921.304.120	Straight pin, \varnothing 4m6 x 12	13 mm 2
65	1921.304.100	Straight pin, \varnothing 4m6 x 10	16 mm 2
65	1921.304.080	Straight pin, \varnothing 4m6 x 8	19 mm 2
* 66	1174.200.146	Strap guide	13 mm 1
* 66	1174.200.147	Strap guide	16 mm 1
* 66	1174.200.145	Strap guide	19 mm 1
* 67	1921.902.085	Roll pin, \varnothing 2,5 x 8	2
68			
69			
70	1820.040.101	Tension plug	1
71	1910.104.088	Set screw, M 4 x 8	1
72			
73	1820.030.416	Special screw, M 6	1
74	1820.030.417	Special screw, M 6	1
75			
76			
77	1174.200.116	Gear housing complete	1
78	1935.510.100	Slide bearing, \varnothing 10/12 x 10	2
79			
80			
81			
82	1820.030.410	Axe	1
* 83	1820.010.209	Torque spring	1
84	1921.804.122	Roll pin, \varnothing 4 x 12	1
85			
86	1933.908.080	Needle bearing, \varnothing 8/12 x 8	1

Pos.	Part no	Part name	Quantity
87	1933.815.120	Needle bushing, ø 15/21 x 12	1
88	1928.615.213	Gasket, ø 15/21 x 3	1
89	1820.030.411	Tension shaft	1
90	1173.200.063	Key	2
91	1820.060.082	Worm gear	1
92	1820.060.081	Worm gear wheel	1
* 93	1820.040.100	Tension wheel	1
94			
95			
96	1934.310.150	Thrust bearing, ø 15	2
97	1934.430.150	Counter washer, ø 15/28 x 0,8	2
98	1934.015.120	Needle bushing, ø 15/21 x 12	2
99			
100			
101	1174.200.118	Cover, left	1
102			
103			
104	1174.200.111	Cover, right	1
105			
106			
107	1174.200.139	Lever, yellow	1
108	1174.200.140	Lever, green	1
109	1174.200.138	Bolt	1
110	1820.030.418	Special screw, M 4	1
* 111	1820.010.211	Torque spring	1
* 112	1820.010.210	Torque spring	1
113			
114			
115	1174.200.117	Handle	1
116			
117			
118			
119			
120			
121	1940.070.723	One-way restrictor, G 1/4"	1
122			
123			
124			
125			
126			
127			
128	1173.400.044	Air hose	1
129	1941.210.720	Gasket, G 1/4"	5
130	1941.111.040	Hose connection, G 1/4"	2
131	1941.112.720	I-Connection, G 1/4"	1
132	1940.331.188	Hose clamp, ø 18	2
133			
134			
135			
136	1934.310.100	Thrust bearing, ø 10	1
137	1934.430.100	Counter washer, ø 10/22 x 0,8	1
138			
139			
140	1174.200.157	Suspension bow	1
141	1940.311.721	Air plug, G 1/4"	1
142			

Pos.	Part no	Part name	Quantity
143			
144			
145			
146			
147	1911.005.208	Cylinder screw, M 5 x 20	2
148	1911.005.168	Cylinder screw, M 5 x 16	10
149	1919.605.062	Lock washer, M 5	13
150	1911.005.128	Cylinder screw, M 5 x 12	1
151	1911.005.258	Cylinder screw, M 5 x 25	1
152			
153	1911.272.127	Locking screw, G 1/4"	1
154			
155	1820.090.068	Oil lable	1
156			
157			
158	1894.332.000	Air motor, Type LZB22 A008-50	1
159	1174.200.136	Key	1
160			
161			
162			
163	1174.200.162	Cover	1
164			
165			
166	1820.090.198	Name tag	1
167	1820.090.172	Label "Made in Switzerland"	1
Variation USA/CAN			
141	1820.100.019	Air connector, 1/4" NPT	1
177	1820.100.017	Transition connection, G 1/4"-1/4" NPT	1
Variation with device to fix the lever			
168	1174.200.155	Handle	1
* 169	1820.010.010	Compression spring	1
Variation with air connection on motor			
128	1173.400.044	Air hose	1
129	1941.210.720	Gasket, G 1/4"	2
130	1941.111.040	Hose connection, G 1/4"	2
132	1940.331.188	Hose clamp, ø 18	2
175	1174.200.154	Connection angle	1



* Left-handed thread

b) Loctite 243 e) Loctite 577 f) Loctite 638

CR 25 A

1174.200.100/7

11.02.02 wb/hp
01.05/WFE

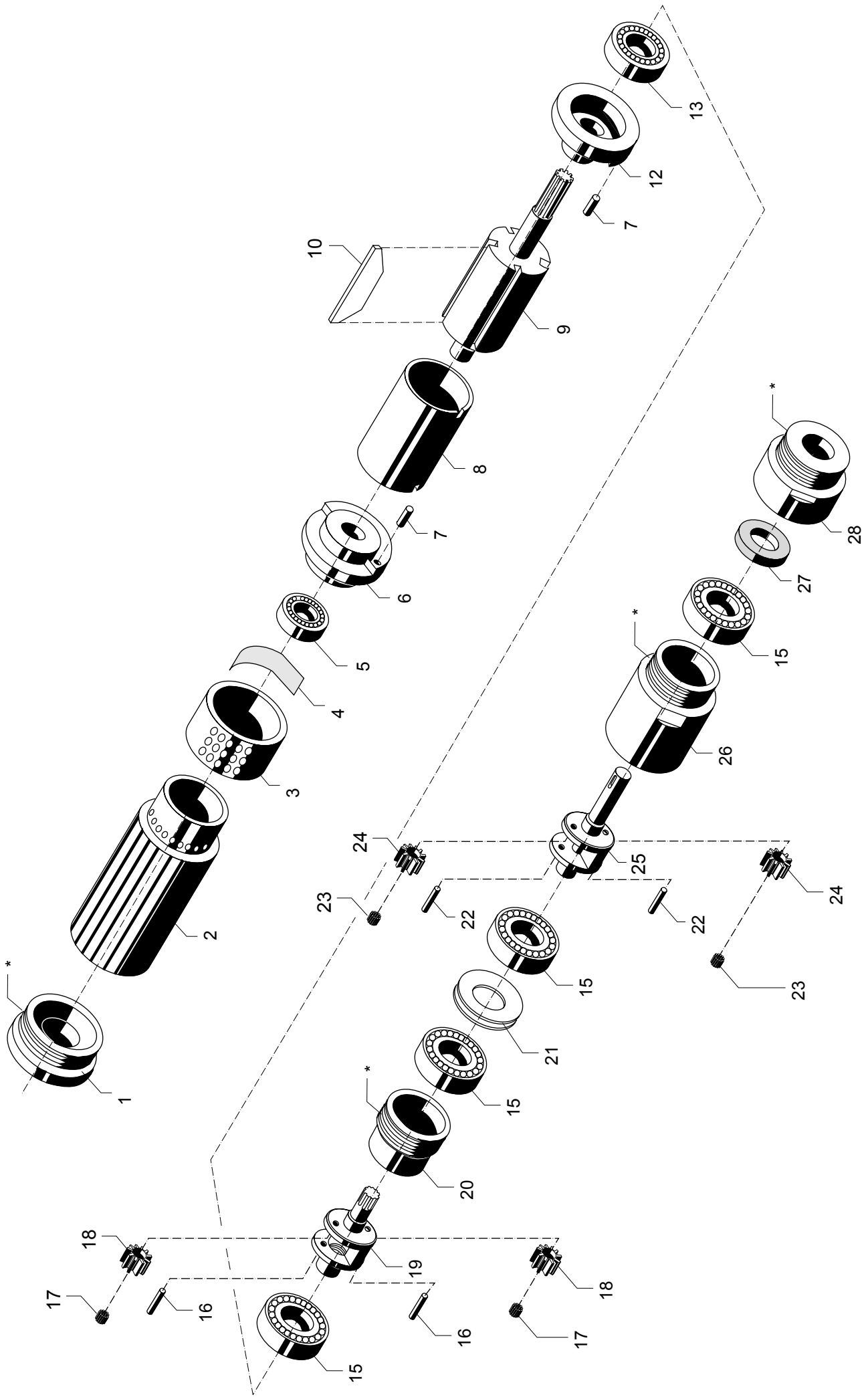
9

PARTS LIST COMPRESSED AIR MOTOR 1894.332.000/2

When ordering please indicate part number and quantity

Explosion drawing see page 30

Pos.	Part no	Part name	Quantity
1	1894.332.011	End plate	1
2	1894.332.010	Gear housing (Rear side)	1
3	1894.332.013	Silencer	1
4	1894.332.033	Mesh screen	1
5	1894.332.002	Ball bearing	1
6	1894.332.003	Bearing plate rear	1
7	1894.332.001	Pin	2
8	1894.332.005	Cylinder	1
9	1894.332.004	Rotor	1
10	1894.332.007	Blade	5
11			
12	1894.332.009	Bearing plate front	1
13	1894.332.008	Ball bearing	1
14			
15	1894.332.014	Ball bearing	4
16	1894.332.015	Shaft	2
17	1894.332.016	Bearing needle	2
18	1894.332.017	Planetary wheel	2
19	1894.332.019	Planetary cage	1
20	1894.332.020	Threaded bushing	1
21	1894.332.021	Saucer spring	2
22	1894.332.022	Shaft	2
23	1894.332.024	Bearing needle	24
24	1894.332.023	Planetary wheel	2
25	1894.332.026	Planetary cage	1
26	1894.332.029	Gear housing (Front side)	1
27	1894.432.020	Gasket	1
28	1894.332.028	Front part	1



* Left-handed thread

LZB 22 A008-50

1894.332.000/2

Mac 1/28.08.98 wb/ja