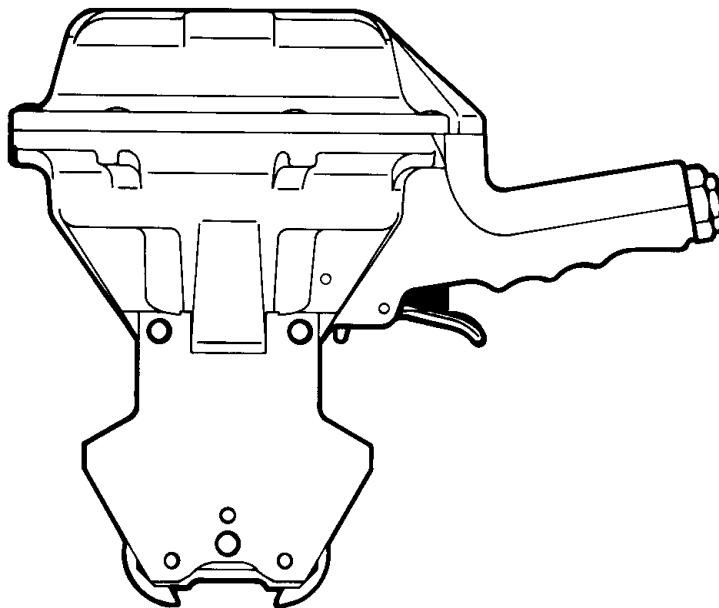


FROMM

OPERATION MANUAL / SPARE PARTS LIST

PNEUMATIC SEALER MODEL A461.0002

13.4510.01 - 13.4511.01



CE Declaration of conformity

We declare that the machine A461
is in conformity with the following standard or
standardised documents:
98/37/EEC

FROMM Holding AG
Hinterbergstrasse 26
CH - 6330 Cham
25.02 2004

R.Fromm
Director



13451001.en/MAS/© 02.04
13451101.en

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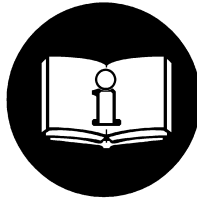
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1 SAFETY INSTRUCTIONS

Read these instructions carefully. Failure to follow these instructions can result in severe personal injury.



Eye injury hazard

Failure to wear safety glasses with side shields can result in severe eye injury or blindness. Always wear safety glasses with side shields which conform to ANSI Standard Z87.1.



Operation

Tool must not be used by persons not properly trained in their use. Before tensioning strap, read and understand the tool operating instructions. Failure to follow the operating instructions or improper load positioning could result in strap breakage. Become familiar with your tool and keep fingers away from areas that can pinch or cut.

Joints

You are fully responsible to review the joints made by your tool. Become familiar with the seal control and seal adjustment described in this operation manual. Misformed joints may not secure the load and could cause serious injury. Never handle or ship any load with improperly formed joints.

Dispensing strap

Only dispense strap from a dispenser specifically designed for strap. Tuck strap end back into dispenser when not in use.

Protective gloves

When handling strap, always wear protective gloves.



Strap warnings

Never use strap as a means of pulling or lifting loads. Failure to follow these warnings can result in severe personal injury.

Strap breakage hazard

Improper operation of the tool, excessive tensioning, using strap not recommended for this tool or sharp corners on the load can result in a sudden loss of strap tension or in strap breakage during tensioning, which could result in the following:

- A sudden loss of balance causing you to fall.
- Both tool and strap flying violently towards your face.

Note as follows:

- If the load corners are sharp, use edge protectors.
- Place the strap correctly around a properly positioned load.
- Positioning yourself in-line with the strap, during tensioning and sealing, can result in severe personal injury from flying strap or tool. When tensioning or sealing, position yourself to one side of the strap and keep all bystanders away.
- Use the correct strap quality, strap width, strap gauge and strap tensile strength recommended in this manual for your tool. Using strap not recommended for this tool can result in strap breakage during tensioning.

Cutting tensioned strap

When cutting strapping, use the proper strapping cutter and keep other personnel and yourself at a safe distance from the strap. Always stand to side of the strap, away from the direction the loosened strap end will fly. Use only cutters designed for strap and never hammers, pliers, hacksaws, axes, etc.

Fall hazard

Keep your working area tidy. Untidiness of your working area may cause a risk of injury. Maintaining improper footing and/or balance when operating the tool can cause you to fall. Before tensioning and especially in elevated areas, always establish good balance. Both feet should be securely placed on a flat, solid surface, especially when working in elevated areas. Do not use the tool when you are in an awkward position. Pay attention to the rules and regulations for preventions of accident which are valid for the work place.

Tool hazards

A well maintained tool is a safe tool! Check tool regularly for broken or worn parts. Do not operate a tool with broken or worn parts. Never modify any tool. Modification can result in severe bodily injury.

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2 WARRANTY CONDITIONS AND LIABILITY

FROMM Holding AG warrants all its strapping tools and machine heads during a period of 90 days from the date of sale. The warranty includes all deficiencies clearly resulting from poor manufacturing or faulty materials. Damage claims as a result of production shutdowns and claims for damage to persons and to property resulting from warranty deficiencies cannot be asserted by the customer.

The warranty excludes:

- wearing parts
- deficiencies resulting from improper installing, incorrect handling and maintaining the tool
- deficiencies resulting from using the tool without or with defective security- and safety devices
- disregard of directions in the operation manual
- arbitrary modifications of the tool
- deficient control of wearing parts
- deficient repair works of the tool
- Use of consumable products not recommended by FROMM Holding AG

We reserve the right to modify the product at any time in order to improve its quality.

3 APPROPRIATE USE

The tool model A461 has been designed to strap packages with steel strapping exclusively.

The warranty / liability excludes:

- non appropriate use of the tool,
- disregard of directions in the operation manual,
- disregard of control- and maintenance instructions.

4 CHART OF TYPES A461.0002

Item No.	Model	Strap width	Strap thickness	
			Uniflex	Ultraflex
13.4310	A461/19/0.63-0.70/N	19mm / 3/4"	0.63-0.70mm / .025"- .028"	0.63-0.70mm / .025"- .028"
13.4311	A461/19/0.63-0.70/P	19mm / 3/4"	0.63-0.70mm / .025"- .028"	0.63-0.70mm / .025"- .028"
13.4312	A461/19/0.8-1.00/N	19mm / 3/4"	0.80-1.00mm / .031"- .040"	0.80-1.0mm / .031"- .040"
13.4313	A461/19/0.80-1.00/P	19mm / 3/4"	0.80-1.00mm / .031"- .040"	0.80-1.0mm / .031"- .040"
13.4410	A461/25/0.80-1.00UNI/ 0.80-0.90ULT/N	25mm / 1"	0.80-1.00mm / .031"- .040"	0.80-0.90mm / .031"- .035"
13.4411	A461/25/0.80-1.00UNI/ 0.80-0.90ULT/P	25mm / 1"	0.80-1.00mm / .031"- .040"	0.80-0.90mm / .031"- .035"
13.4510	A461/32/0.80-0.90/N	32mm / 1 1/4"	0.80-0.90mm / .031"- .035"	0.80-0.90mm / .031"- .035"
13.4511	A461/32/0.80-0.90/P	32mm / 1 1/4"	0.80-0.90mm / .031"- .035"	0.80-0.90mm / .031"- .035"
13.4512	A461/32/1.00UNI/N	32mm / 1 1/4"	1.00mm / .040"	--
13.4513	A461/32/1.00UNI/P	32mm / 1 1/4"	1.00mm / .040"	--

UNI = Uniflex (Regular Duty max. 850 N/mm² / 123'000 psi)

ULT = Ultraflex (High Tensile max. 1100 N/mm² / 160'000 psi)

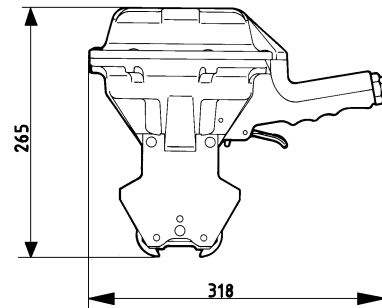
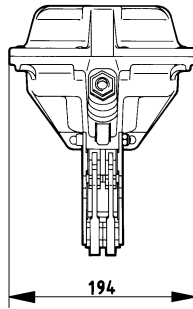
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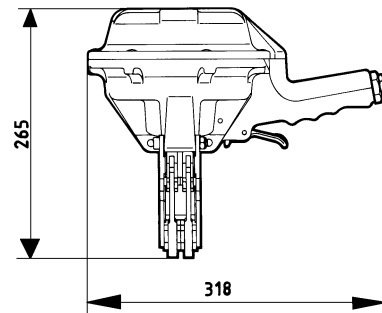
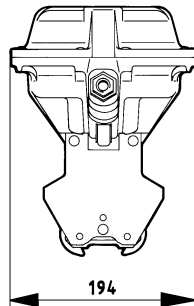
5 TECHNICAL DATA

5.1 Dimensions

Assembling "N"



Assembling "P"



Weight net: 4.2 kg / 9.3 lbs

5.2 Compressed air

Joining thread: G 1/4" or G 3/8"
 Tube: Min. inside diam. = 8 mm / 5/16"
 Max. air pressure: 6 bar / 87 psi
 Air consumption: 7.25 NI / 0.26 cu.ft./seal

5.3 Steel strap

Width: 19 - 32 mm / 3/4" - 1 1/4"
 Thickness: 0.63 - 1.0 mm / .025" - .040" maximal
 Tensile strength: 600 - 1100 N/mm² / 87 000 - 160 000 psi
 Finish: Waxed, smooth edges

5.4 Seals

Strap width:	Seal dimensions:
19mm	19 x 45 x 0.9 mm / 3/4" x 1/3/4" x .035", with overlapping flanges
25mm	25 x 45 x 0.9 mm / 1" x 1/3/4" x .035", with overlapping flanges
32mm	32 x 45 x 0.9 mm / 1 1/4" x 1/3/4" x .035", with overlapping flanges

5.5 Joint

Joint strength: approx. 75% of the strap's tensile strength
 A double notch (two pairs of cut notches) is made per cycle.

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5.6 Sound information

The A-weighted equivalent continuous sound level at the work place of the machine operator is typical 84 dB (A).

This value was determined according to DIN 45 635 T3 (11.85).

5.7 Vibration information

The weighted effective value of the acceleration typically amounts to less than 2,5m/s².

This value was determined according to DIN EN 28 662 T1 (01.93).

6 INSTALLATION

6.1 Compressed air connection

The compressed air is connected to the reducing coupling N6.5133 using a coupling. An air-unit consisting of a separator for water and dirt, a pressure regulator with a manometer and a lubricator should be installed within a distance of 15 ft/5 meters. The compressed air must be free from dirt, rust and moisture.

6.2 Suspension of tool

It is possible to suspend the tool on a spring loaded balancer using various suspension brackets. They have to be ordered separately (see paragraph "ACCESSORIES").

7 MAINTENANCE

Depending on the working conditions and the use of the tool the following maintenance has to be made periodically:

7.1 Air-unit

- Checking the air-pressure daily (never exceed 87 psi / 6,0 bar).
- Checking oil-level daily.
- Checking the water separator daily (unless automatic), draining when necessary.
- Cleaning the filter following the instructions of the manufacturer of the air-unit.

Oil for the air unit

HL or CL ISO-VG 10

7.2 Lubrication

When being exchanged, all valve parts and other movable parts have to be greased with grease of type ESSO BEACON 2 or with some equivalent product.

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8 USE

8.1 Feeding the strap

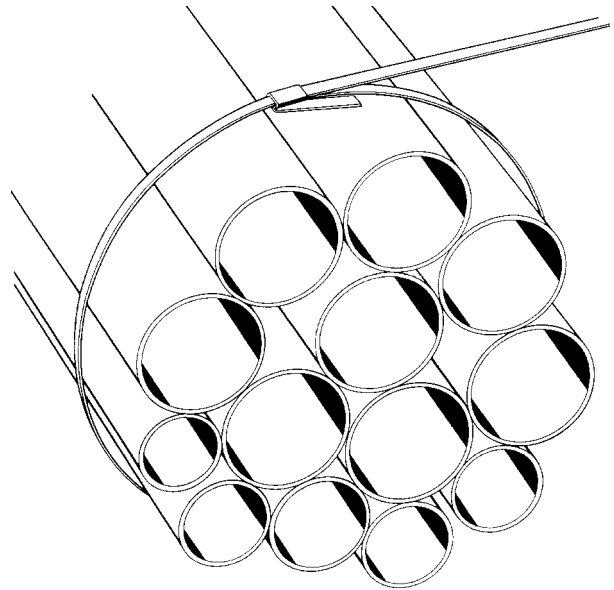
The strap is fed through the seal, around the package to be strapped and pushed again through the seal. Then the strap end is bent. Afterwards the operator tensions the loose hoop manually making sure that the bent strap end is adjacent to the object to be strapped.



Always wear safety glasses with side shields which conform to ANSI Standard Z87.1.

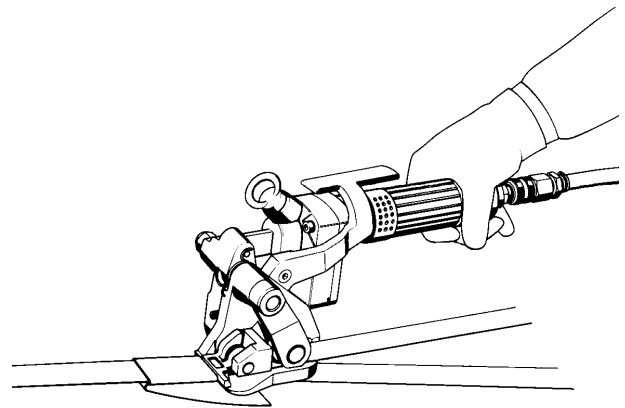


When handling strap, always wear protective gloves.



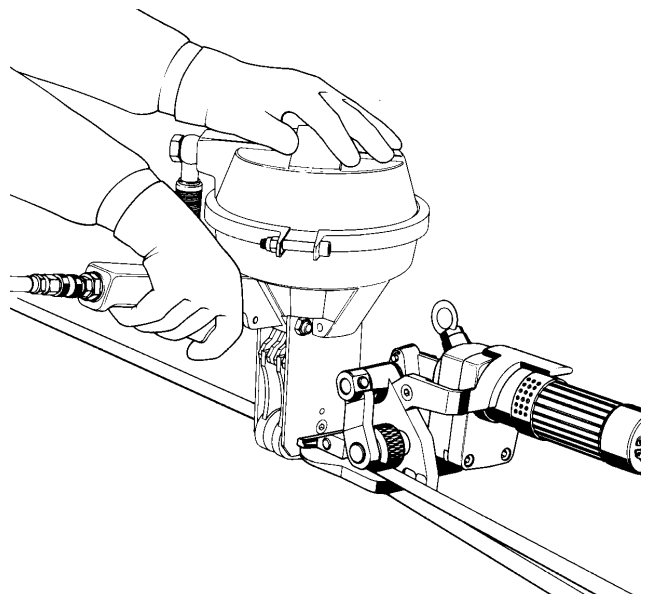
8.2 Tensioning the strap

The strap is tensioned with a suitable tensioner (e. g. Fromm model A451).



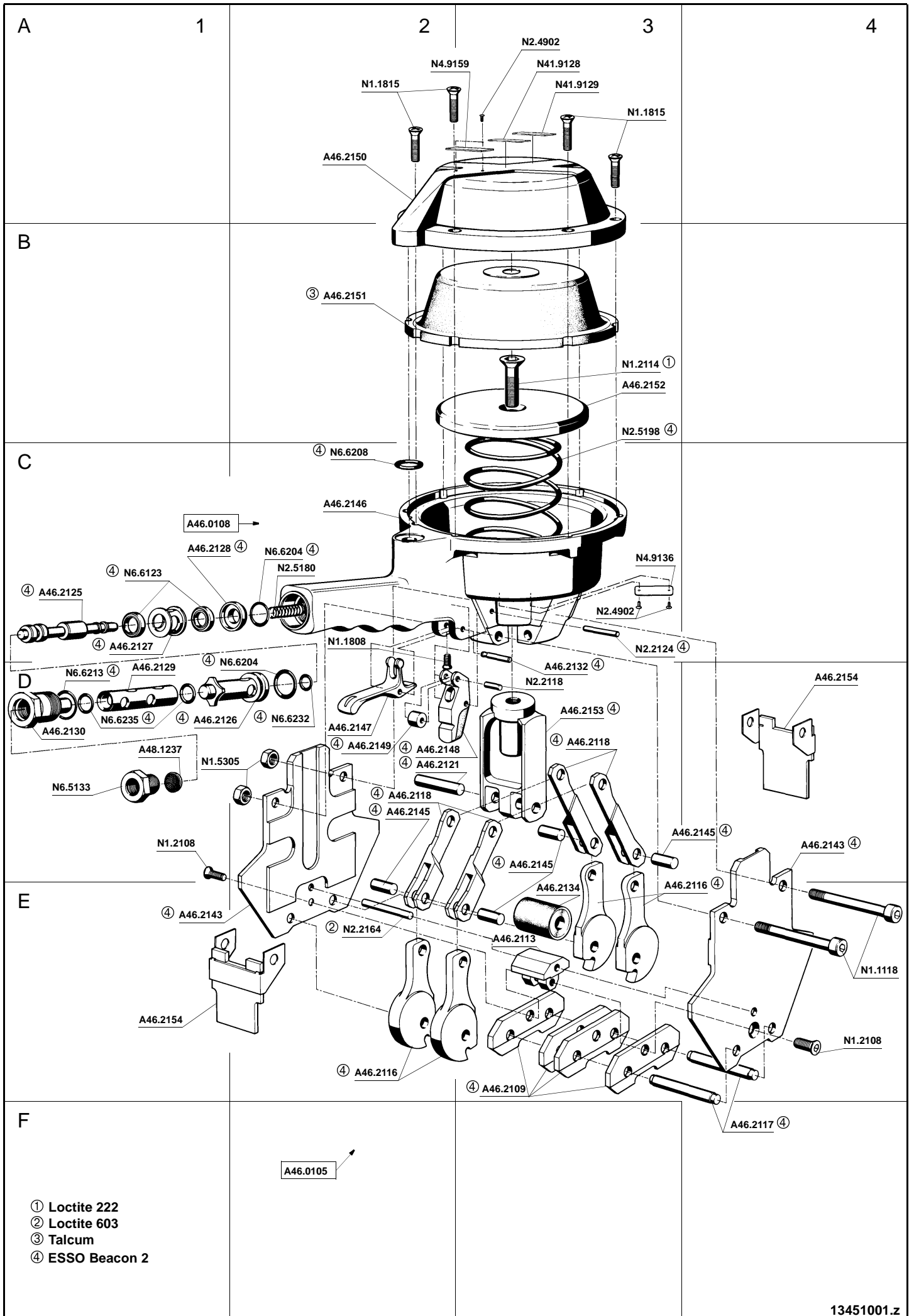
8.3 Sealing the strap

Place the sealer on top centre of the seal. Notch the seal with the strap by pushing the valve lever until it stops. It is possible to release the valve lever immediately after pushing because of the tools automatic sealing cycle. Remove the sealer after finishing sealing cycle.



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9 SPARE PARTS LIST 13.4510.01/13.4511.01

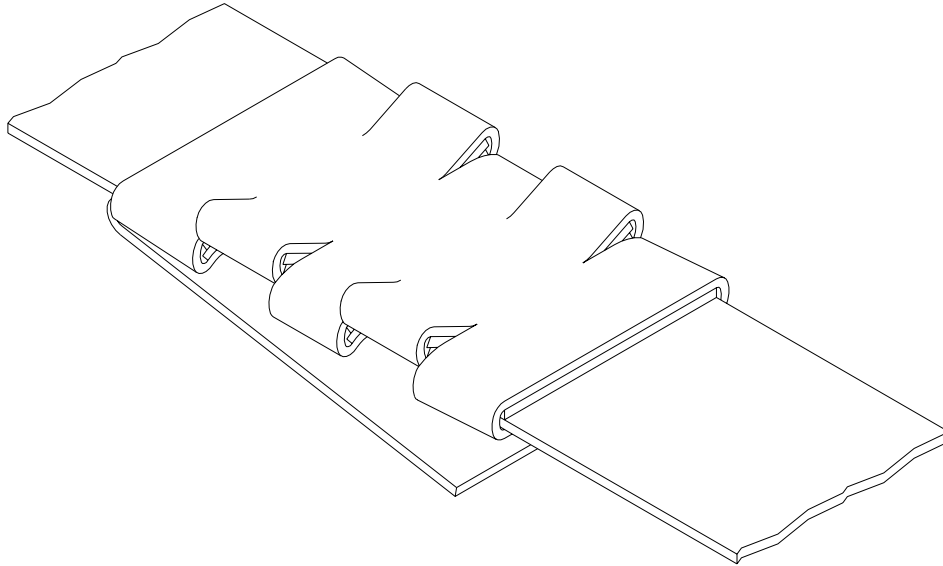
13.4510.01 13.4511.01	A461/32/0.80-0.90/N A461/32/0.80-0.90/P		A461.0002.01		15/06/98
Item-No.		Pcs.	Description	Dimension	Field
[A46.0105]		1	JAW ASSEMBLY		F2
[A46.0108]		1	CYLINDER BOTTOM		C1
A46.2109	* ->[A46.0105]	4	NOTCHING KNIFE		E3
A46.2113	->[A46.0105]	1	DISTANCE SUPPORT		E3
A46.2116	* ->[A46.0105]	4	CUTTING JAW		E2+
A46.2117	->[A46.0105]	2	JAW PIN		F4
A46.2118	->[A46.0105]	4	FRONT TOGGLE LINK		D2+
A46.2121	->[A46.0105]	1	ROD BAR BOLT		D2
A46.2125	->[A46.0108]	1	VALVE STEM		C1
A46.2126	->[A46.0108]	1	VALVE SHELL		D1
A46.2127	->[A46.0108]	1	EXHAUST RING		C1
A46.2128	->[A46.0108]	1	SUSTAINING RING		C1
A46.2129	->[A46.0108]	1	SUPPORTING TUBE		D1
A46.2130	->[A46.0108]	1	CONNECTING SCREW		D1
A46.2132	->[A46.0108]	1	LEVER SHAFT		D3
A46.2134	->[A46.0105]	1	BUFFER		E3
A46.2143	->[A46.0105]	2	SIDE PLATE		D4+
A46.2145	->[A46.0105]	4	LEVER BOLT		D2+
A46.2146	->[A46.0108]	1	CYLINDER BOTTOM		C2
A46.2147	->[A46.0108]	1	VALVE LEVER		D2
A46.2148	->[A46.0108]	1	PIVOTED LEVER		D2
A46.2149	->[A46.0108]	1	SLIDING ROLLER		D2
A46.2150		1	CYLINDER COVER		A2
A46.2151		1	DIAPHRAGM		B2
A46.2152		1	PISTON PLATE		B3
A46.2153	->[A46.0105]	1	PISTON ROD		D3
[A46.2154]		2	SAFETY GUARD		D4+
A48.1237	->[A46.0108]	1	SIEVE		D1
N1.1118		2	SCREW	M8 X 50	E4
N1.1808	->[A46.0108]	1	SCREW	M4 X 10	C2
N1.1815		7	SCREW	M6 X 25	A2+
N1.2108	->[A46.0105]	2	SOCKET COUNTERSUNK HEAD SCREW	M6 X 16	D1+
N1.2114		1	SOCKET COUNTERSUNK HEAD SCREW	M10 X 40	B3
N1.5305		2	RETAINING NUT	M8	D1
N2.2118	->[A46.0108]	1	PARALLEL PIN	4 M6 X 14	D3
N2.2124	->[A46.0108]	1	PARALLEL PIN	4 M6 X 40	C3
N2.2164	->[A46.0105]	1	PARALLEL PIN	6 M6 X 40	E2
N2.4902		4	HAMMER HEAD BOLT	1,85 X 4,76	A3+
N2.5180	->[A46.0108]	1	PRESSURE SPRING	0.8X7.8X30/8.5	C2
N2.5198		1	PRESSURE SPRING	4,5X67,5X180/7,5	B3
N4.9136		1	LABEL	<<A461>>	C3
N4.9159		1	LABEL	<<CE>>	A2
N41.9128		1	ADHESIVE LABEL		A3
N41.9129		1	ADHESIVE LABEL		A3
N6.5133	->[A46.0108]	1	REDUCING COUPLING		D1
N6.6123	->[A46.0108]	2	SEAL	12 X 19 X 2.3	C1
N6.6204	->[A46.0108]	2	O-RING	18 X 2	C2+
N6.6208		1	O-RING	14 X 2	C2
N6.6213	->[A46.0108]	1	O-RING	20 X 2	D1
N6.6232	->[A46.0108]	1	O-RING	8 X 2	D2
N6.6235	->[A46.0108]	2	O-RING	12 X 2	D1

[] = Group

* = Wearing Parts

10 JOINT CONTROL

A regular control of the joint is necessary. The joint can be checked visually and the person controlling can easily judge the quality of the joint. Following illustration shows a proper joint:



Sharp edged or misformed joints which do not appear as shown have to be taken away from the load immediately. The tensile strength of these joints is insufficient and they could cause serious injury. Having faulty joints proceed as follows:

- Checking the sealing cycle for improper use.(see 8. USE)
- Having faulty joints in spite of proper use inspect the tool for worn or damaged parts. In case of wearing out or damaging replace tool parts as needed.

11 EXCHANGE OF WEARING PARTS

11.1 Exchange of cutting jaws and notching knives

Procedure:

- Unscrew cylinder cover A46.2150 (7 recessed countersunk head screws).
- Remove diaphragm A46.2151.
- Unscrew piston plate A46.2152 (screw N1.2114), push piston plate against the pressure spring at the same time.
- Remove pressure spring.
- Disassemble screws N1.1118 and remove jaw assembly.
- In order to be able to exchange notching knives and cutting jaws the side plates have to be removed from the jaw assembly. For this remove screws N1.2108.
- Assembling in opposite order.

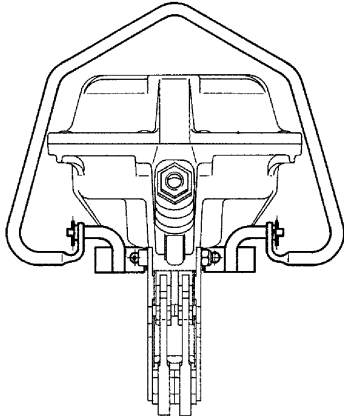
Important!

Safe screw N1.2114 with Loctite 222.

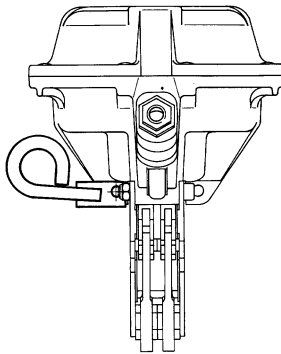
12 ACCESSORIES

Following suspension brackets can be mounted on the tool and have to be ordered separately:

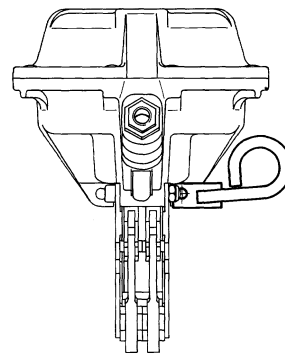
Suspensions for tool assembling „N“



Universal suspension
A46.2201
for normal, vertical and
horizontal working position

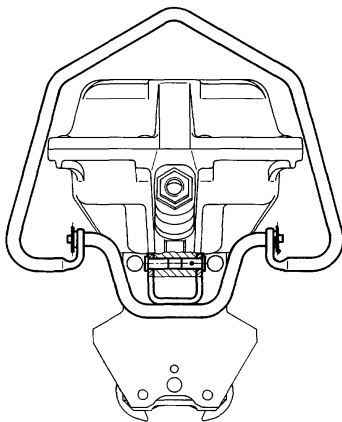


Suspension
A46.2210
left side

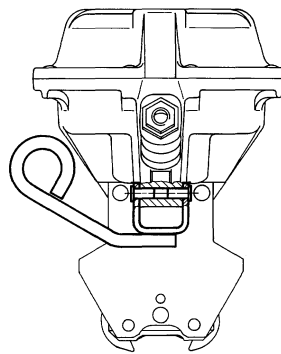


Suspension
A46.2216
right side

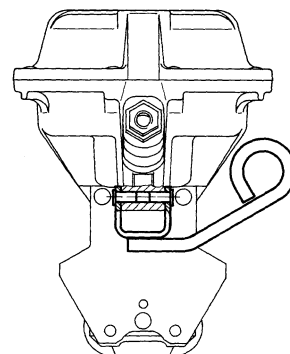
Suspensions for tool assembling „P“



Universal suspension
A46.2207
for normal, vertical and
horizontal working position



Suspension
A46.2213
left side



Suspension
A46.2218
right side

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