

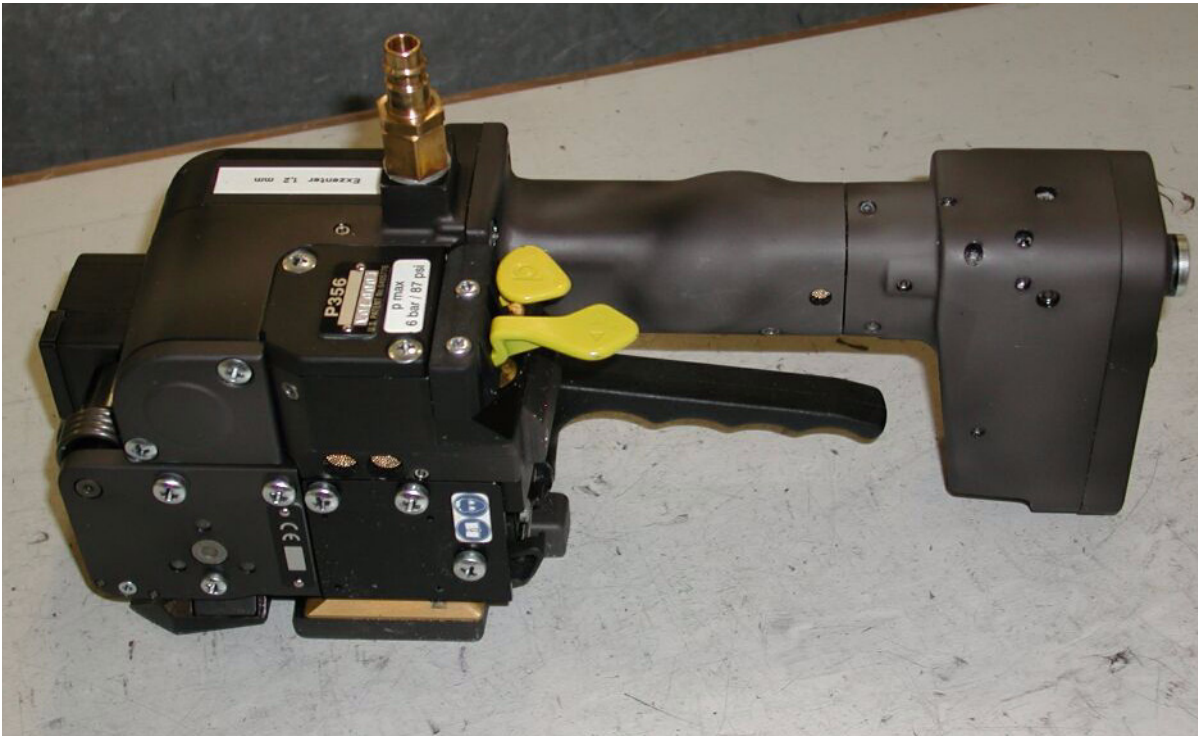
**Order from Allstrap 866-779-2673**

# **FROMM**

OPERATION MANUAL / SPARE PARTS LIST

## **PNEUMATIC PLASTIC STRAPPING TOOL MODEL P356**

49.0374.01



### **CE Declaration of conformity**

We declare that the machine P356  
is in conformity with the following standard or  
standardised documents:  
98/37/EEC

FROMM Holding AG  
Hinterbergstrasse 26  
CH - 6330 Cham  
14.05.2004

  
R.Fromm  
Director



49037401.en/MAS/© 03.07

Distributed By:

**Allstrap**

1719 Kenny Rd  
Columbus, OH, 43212

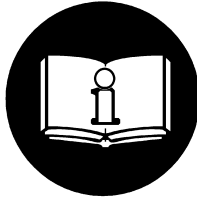
	<b>INDEX</b>	<b>PAGE</b>
<b>1</b>	<b>SAFETY INSTRUCTIONS</b>	<b>3</b>
<b>2</b>	<b>TECHNICAL DATA</b>	<b>4</b>
<b>3</b>	<b>CHART OF TYPES</b>	<b>5</b>
<b>4</b>	<b>WARRANTY CONDITIONS AND LIABILITY</b>	<b>5</b>
<b>5</b>	<b>APPROPRIATE USE</b>	<b>5</b>
<b>6</b>	<b>INSTALLATION</b>	<b>6</b>
6.1	Compressed air connection . . . . .	6
6.2	Accessories . . . . .	6
6.3	Adjustments . . . . .	8
6.3.1	Preselecting of strap tension and tensioning speed . . . . .	8
6.3.2	Adjusting the welding time . . . . .	8
<b>7</b>	<b>OPERATING ELEMENTS</b>	<b>9</b>
<b>8</b>	<b>OPERATION</b>	<b>9</b>
8.1	Feeding the strap around the package . . . . .	9
8.2	Inserting the strap . . . . .	10
8.3	Tensioning the strap . . . . .	10
8.4	Sealing the straps . . . . .	11
8.5	Removing the tool . . . . .	11
8.6	Seal - Control. . . . .	11
<b>9</b>	<b>EXCHANGE OF WEARING PARTS</b>	<b>12</b>
9.1	Exchange of tensioning wheel and grippers . . . . .	12
9.2	Exchange of cutter, welding stop gripper and welding gripper . . . . .	13
9.3	Adjustment of the coupler P35.0146 . . . . .	14
<b>10</b>	<b>PNEUMATIC SCHEMATIC</b>	<b>15</b>
<b>11</b>	<b>SERVICE</b>	<b>15</b>
<b>12</b>	<b>CLEANING</b>	<b>15</b>
<b>13</b>	<b>SPARE PARTS LIST 49.0374.01</b>	<b>21</b>

Distributed By:

**Allstrap**1719 Kenny Rd  
Columbus, OH, 43212

# 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.

## 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.

## 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.

## 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.

Distributed By:

**Allstrap**

1719 Kenny Rd

Columbus, OH, 43212

## 2 TECHNICAL DATA

### Description of the tool

The tool model P356 has been designed to strap packages with plastic strapping. The plastic strapping is fed around the package manually or in combination with a strap feeder. The straps are inserted in the tool, automatically tensioned, sealed by friction welding and separated.

<b>Tool size</b>	<b>without suspension bracket</b>	<b>with suspension bracket</b>
Length:	335 mm / 13.2"	393 mm / 15.5"
Width:	107 mm / 4.2"	107 mm / 4.2"
Height:	137 mm / 5.4"	280 mm / 11"
Weight:	5.4 kg / 11.9 lbs	5.8 kg / 12.8 lbs

### Sound information

The A-weighted equivalent continuous sound level at the work place of the machine operator is typical 79 dB (A).

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

### Vibration information

The weighted effective value of the acceleration typically amounts to less than 2,5m/s<sup>2</sup>.

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

### Strap material

Strap qualities: PET (Polyester) plain or embossed.

**Use only plastic straps recommended by your sales shop (name and address on the rear of the operation manual).**

Strap dimensions: 16.0 - 19.0 mm / 5/8 - 3/4" x 0.4 - 1.35 mm / .016 - .053" (see chart of types).

**Use only plastic straps with the correct strap dimensions for your tool.**

### Strap tension with steady air pressure of 5.5bar / 80 psi.

Tensioning force\*: Adjustable from 800 - max. 3700 N / 180 - max. 830 lbs.

Tensioning speed\*: approx. 85 - 160 mm/s / 3.3 - 6.3 inch/sec.

Joint strength\*: approx. 75% of the tensile strength of the plastic strap.

\* The value depends on the strap quality.

### Air pressure

Joining thread / Air tube: G 1/4 / Min. inside diameter = 9 mm

Air pressure: The maximum air pressure allowed is 6.0 bars / 87 psi.  
The standard working air pressure is 5.5 bar / 80 psi.

Air unit: min. G 3/8

Air line in front of air unit : min. 1/2"

Air flow of air unit: min. 570 NI/min / 21 cu.ft/min with a maxim pressure drop of 0.5 bar / 7.25 psi.

Air consumption

Tensioning: approx. 8 NI / 0.30 cu.ft uncompressed air per second.

Sealing: approx. 8 NI / 0.30 cu.ft uncompressed air per second.

Oil for air unit: HL / CL ISO VG 10

Distributed By:

**Allstrap**

1719 Kenny Rd

Columbus, OH, 43212

### 3 CHART OF TYPES

Item No.	Model	Strap width	Strap thickness
49.0363	P356/16/0.65-1.05	16.0 mm / 5/8"	0.65 - 1.05 mm / .026 - .041"
49.0364	P356/16/1.06-1.35	16.0 mm / 5/8"	1.06 - 1.35 mm / .042 - .053"
49.0373	P356/19/0.40-0.64	19.0 mm / 3/4"	0.40 - 0.64 mm / .016 - .025"
49.0374	P356/19/0.65-1.05	19.0 mm / 3/4"	0.65 - 1.05 mm / .026 - .041"
49.0375	P356/19/1.06-1.35	19.0 mm / 3/4"	1.06 - 1.35 mm / .042 - .053"

### 4 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.

### 5 APPROPRIATE USE

The tool model P356 has been designed to strap packages with plastic 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.

Distributed By:

**Allstrap**

1719 Kenny Rd  
Columbus, OH, 43212

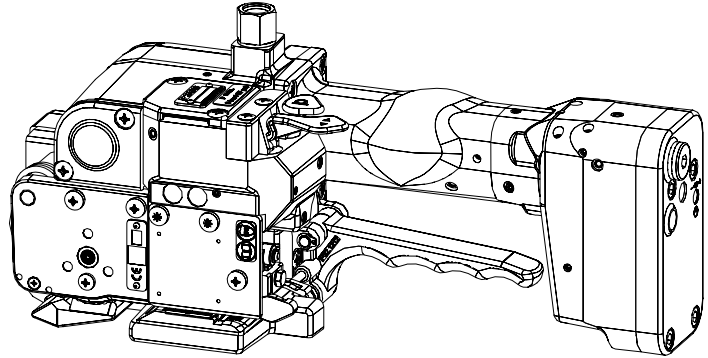
## 6 INSTALLATION

### 6.1 Compressed air connection

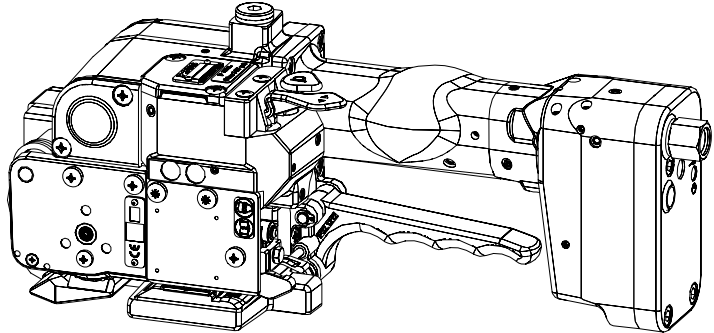
The compressed air is to be connected to the tool preferably by a quick disconnecter (G1/4). An air-unit consisting of a separator for water and dirt, a pressure regulator with a manometer and a lubricator must be installed within a range of 15 ft / 5 meters. The compressed air must be free from dirt, rust and moisture.

#### Possible connections at the tool

Factory produced the connection for the air supply is prepared from the top.



According to requirement the connection can also be assembled to the rear end of the tool.



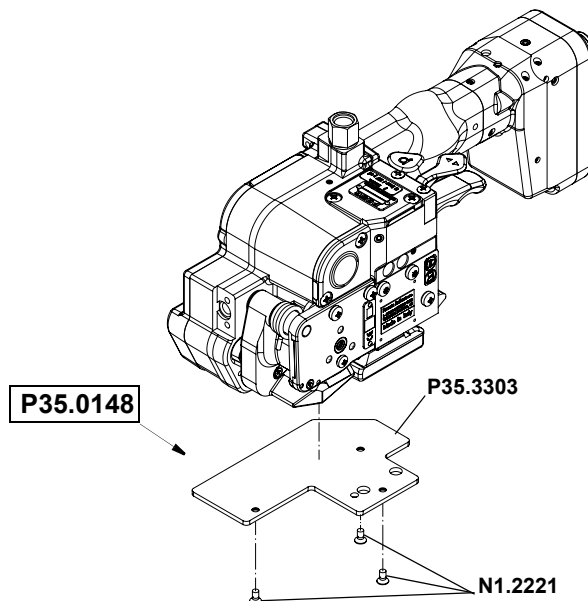
### 6.2 Accessories



**Use only parts and accessories mentioned in the operating instruction. Using other parts or accessories can cause injuries to you and other persons.**

#### Wearing plate

As an option, tool can be equipped with a wearing plate to protect base from excessive wear on abrasive package surfaces (like bricks, concrete blocks etc.). The complete wearing plate can be ordered together with the fastening screws under item number P35.0148.

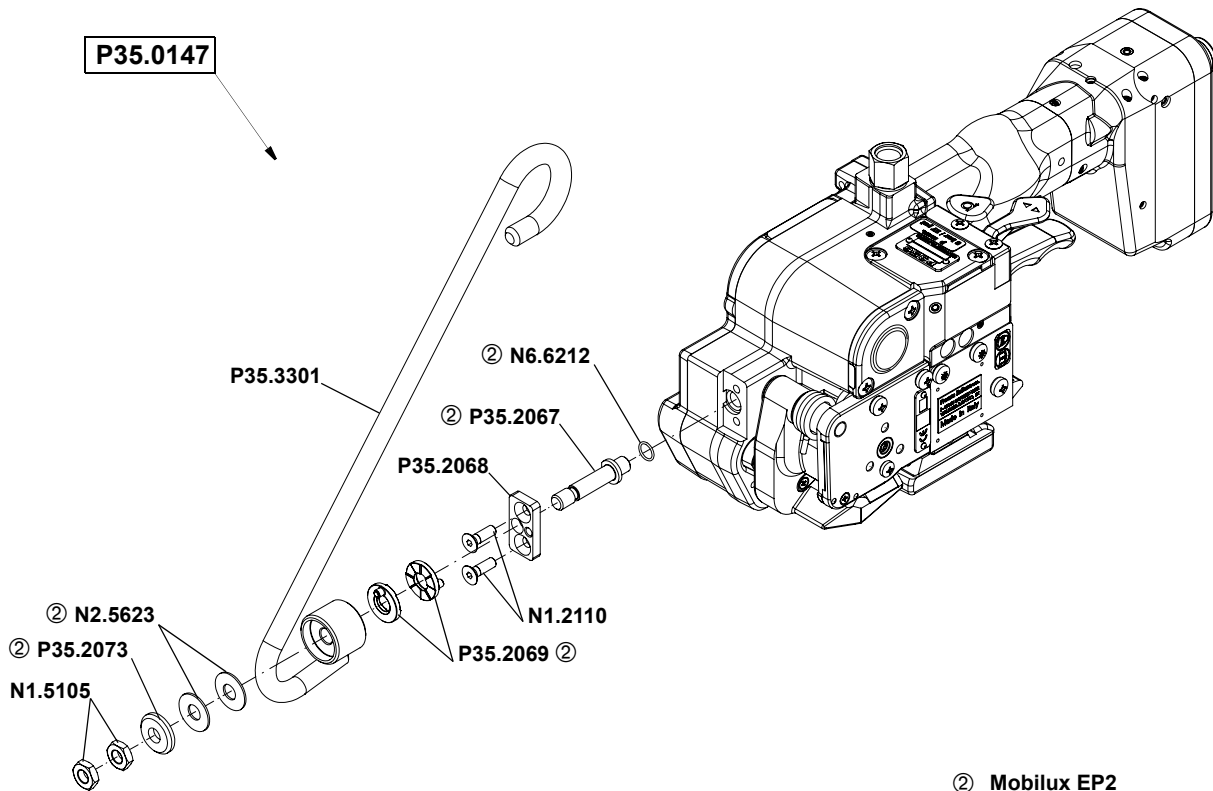
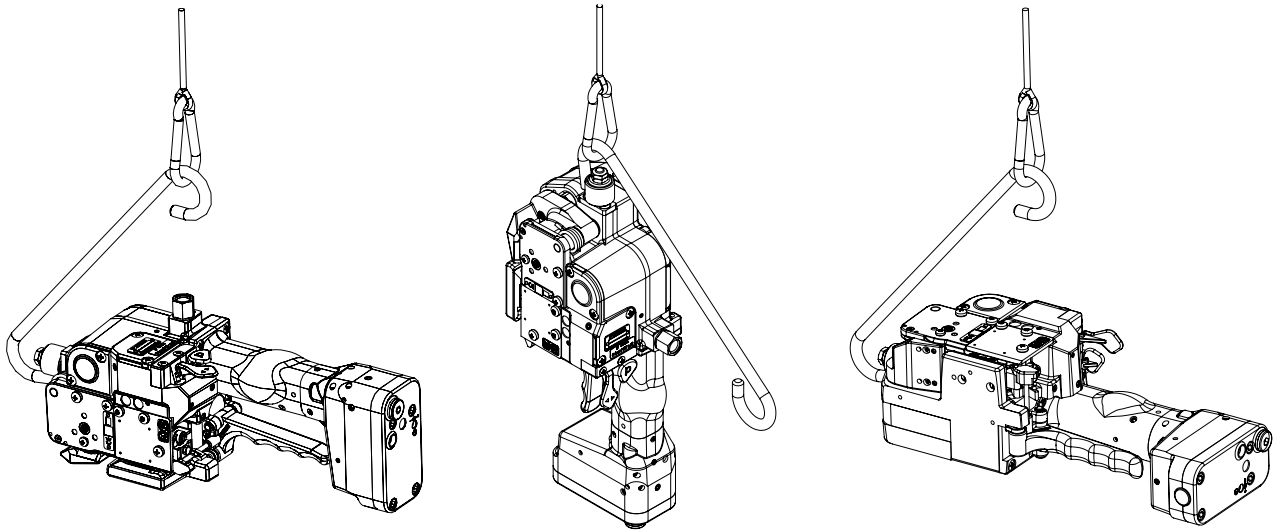


Distributed By:  
**Allstrap**

1719 Kenny Rd  
Columbus, OH, 43212

### Suspension of tool

It is possible to suspend the tool on a spring loaded balancer using the suspension bracket P35.0147 which is supplied with the tool. The suspension bracket has been designed in such a way, that the tool can be used for all three working positions.



② Mobilux EP2

Distributed By:  
**Allstrap**  
 1719 Kenny Rd  
 Columbus, OH, 43212



### 6.3 Adjustments

#### 6.3.1 Preselecting of strap tension and tensioning speed



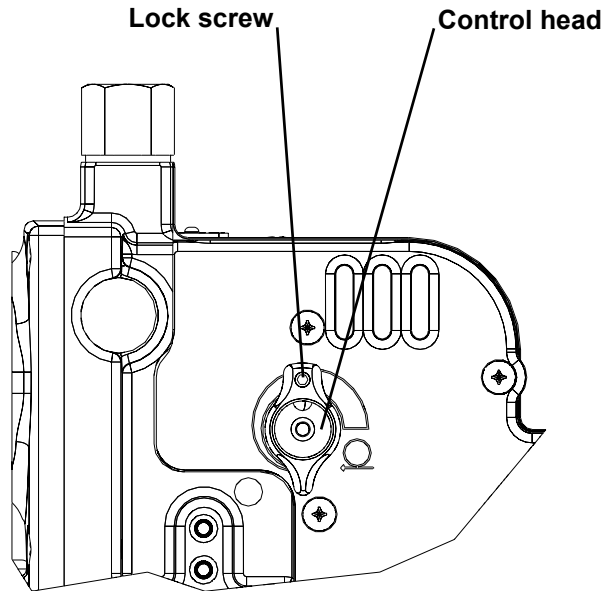
**Do not adjust the tensioning force too high.  
If the tensioning force is higher than the tensioning strength of the strap,  
the strap will tear while the tensioning.**

Tensioning force and tensioning speed can be preselected at the control head.

Loose lock screw;  
press the control head against the tool  
and turn it.

Turning clockwise increases;  
turning counterclockwise decreases the  
tensioning force and the tensioning speed  
resp..

Tight lock screw.

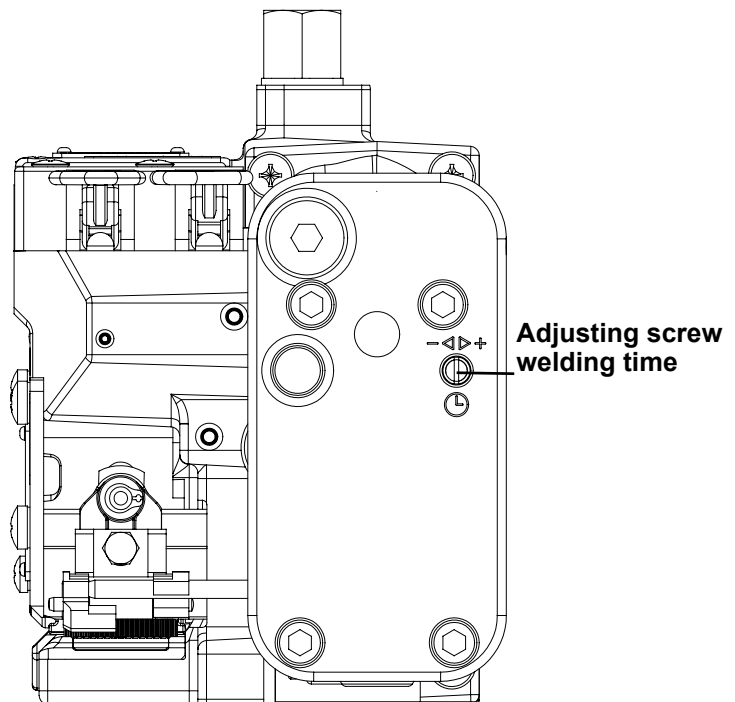


#### 6.3.2 Adjusting the welding time

Depending on the size and quality of the strap,  
different welding times are required.

The welding time can be adjusted at the  
adjusting crew.

Turning clockwise increases,  
turning counterclockwise decreases the  
welding time.

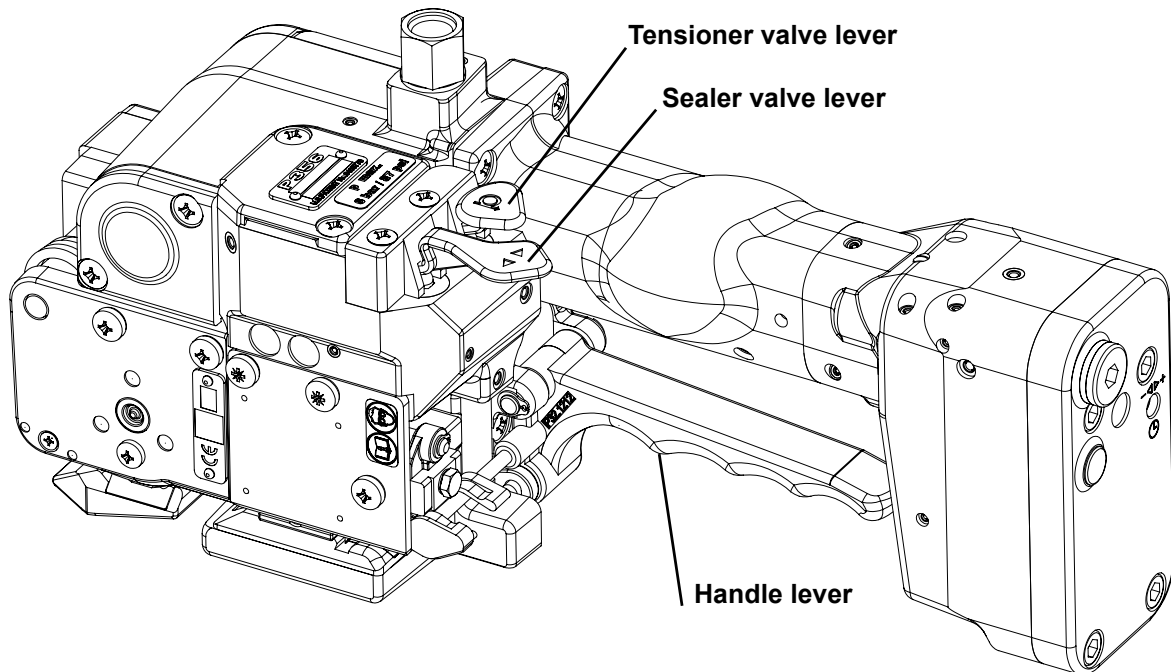


Distributed By:  
**Allstrap**

1719 Kenny Rd  
Columbus, OH, 43212



## 7 OPERATING ELEMENTS



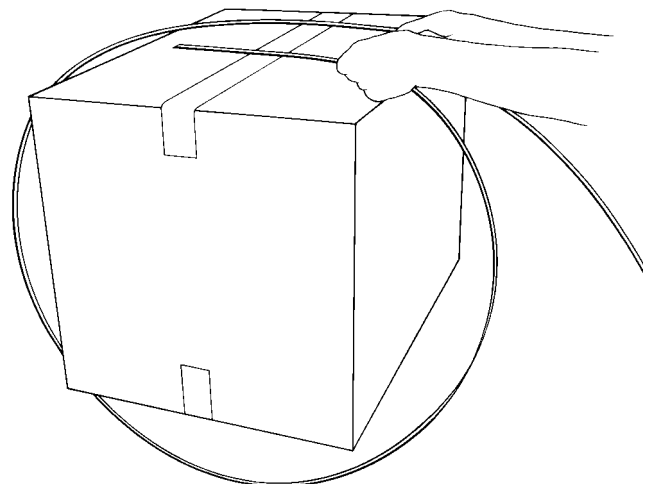
## 8 OPERATION

### 8.1 Feeding the strap around the package

The strapping is fed around the package as illustrated.



**Warning! The plastic strap which will be welded must be free from oil, grease and other dirt.  
Dirty plastic straps can't be welded correct!**



Distributed By:  
**Allstrap**

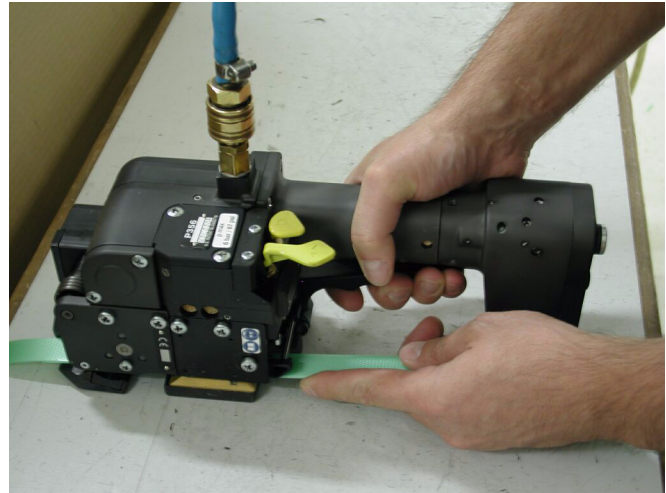
1719 Kenny Rd  
Columbus, OH, 43212

### 8.2 Inserting the strap

Pull up the handle lever firmly with your right hand.

Insert the two straps well aligned on each other into the strap guide using your left hand.

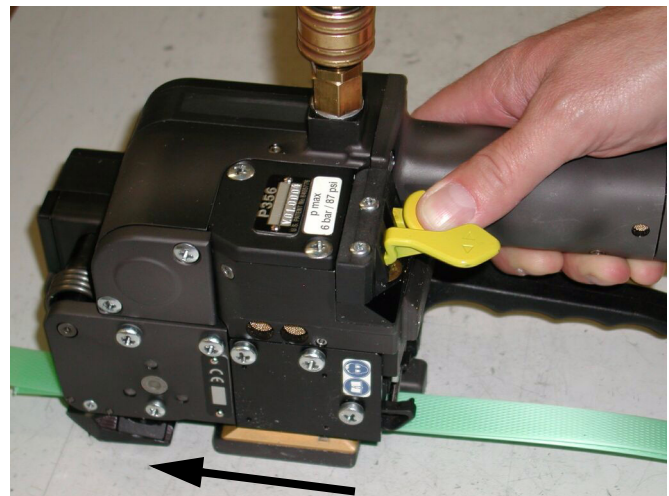
Release the handle lever.



### 8.3 Tensioning the strap

Press down the tensioner valve lever and then release it again after the desired strap tension has been reached.

The tensioning operation can be interrupted and restarted at any time.



**The tool must carry out a balance movement while tensioning.**

**Therefore:**

- Don't hinder the tools movement in the signed direction.

**Disregard:**

- The feed wheel slips on the strap without tensioning it.

Distributed By:

**Allstrap**

1719 Kenny Rd  
Columbus, OH, 43212

### 8.4 Sealing the straps

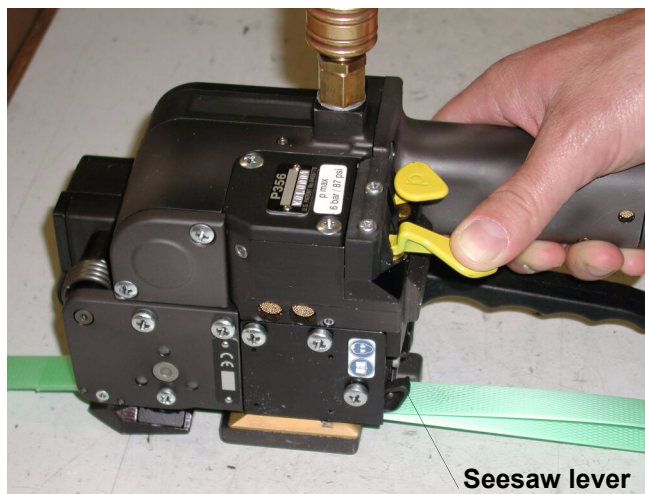
Press down and release immediately the sealing valve lever.

The plastic strap is welded and cut off from the strap coil at the same time.

**After the expiration of the adjusted sealing time, the seal has to cool down approx. 2 sec.**

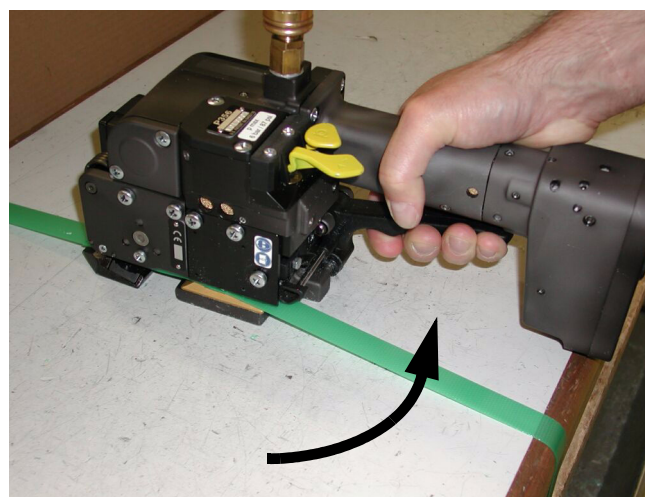
During that time, the tool can not be removed from the sealed strap.

After the expiration of the adjusted cooling time the welding jaw and the seesaw levers move upwards. Now the tool can be removed from the strap.



### 8.5 Removing the tool

Pull up the handle lever, pull the tool right / backwards and off the strapping.



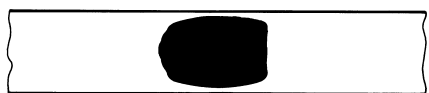
### 8.6 Seal - Control

A regular control of the seal is necessary. The seal can be examined visually. Make a seal, peel it apart and examine it as follows:



#### Correct seal

The seal must be completely welded over the whole width of the strap on a length of ca. 19 mm. Minor quantities of fused plastic may overflow on sides.



#### Welding time too short

The plastic strap is not welded over the whole width of the strap. The seal efficiency is insufficient.

Warning! Straps with insufficient seal strength must be removed from the package!

Adjust the welding time (see 6.3.2).



#### Welding time too long

If the welding time is too long the straps are overheated. The fused plastic overflows on both sides of the straps. The seal efficiency is affected.

Warning! Straps with insufficient seal strength must be removed from the package!

Adjust the welding time (see 6.3.2).

## 9 EXCHANGE OF WEARING PARTS

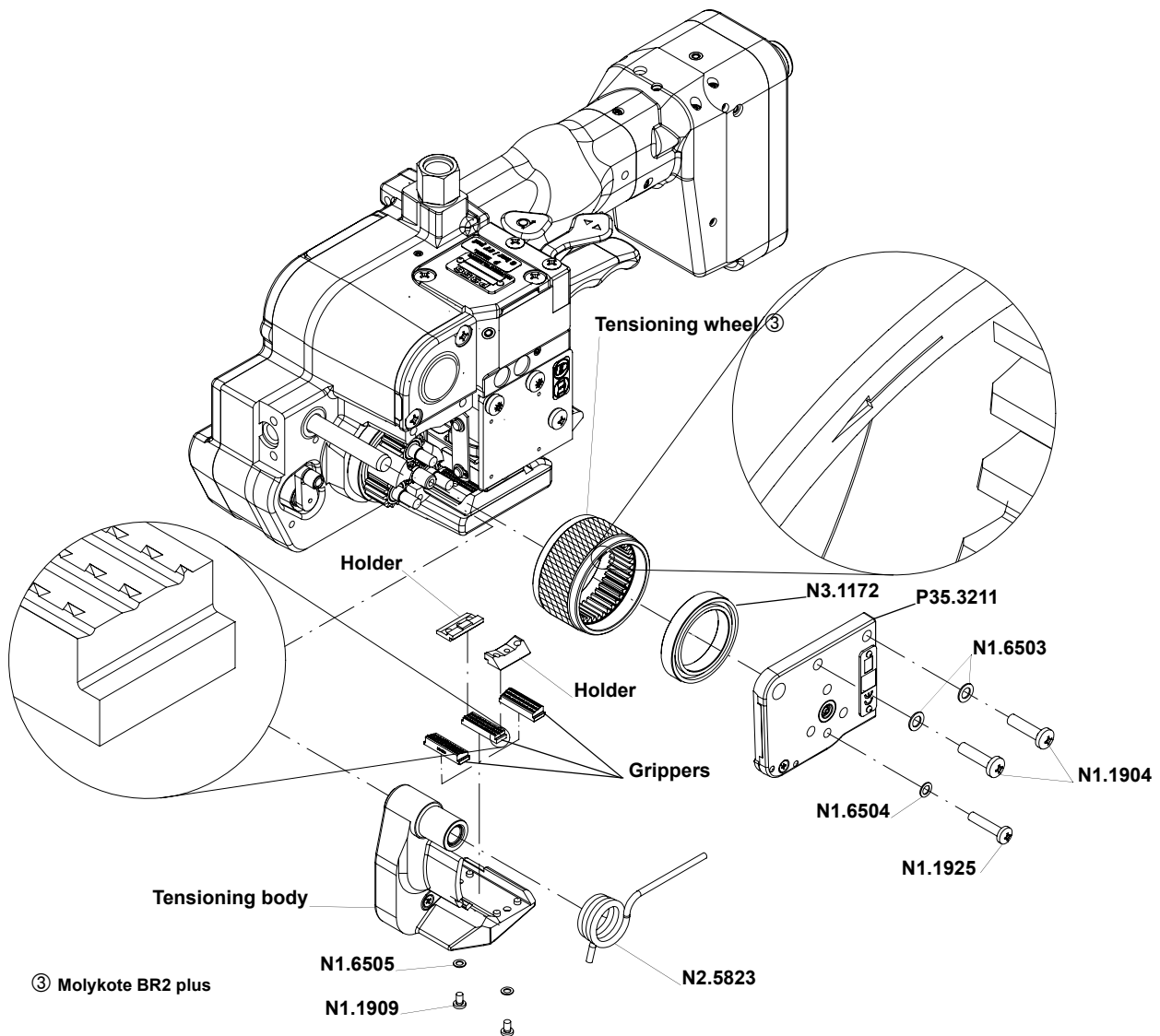


Before any maintenance work always disconnect the tool from the air supply.

### 9.1 Exchange of tensioning wheel and grippers

#### Disassembling

- Unscrew end cover P35.3211 and remove it;
- Remove the torsion spring N2.5823;
- Remove the tensioning body;
- Remove the tensioning wheel together with the bearing N3.1172 from the tool;
- Unscrew the holders and remove them from the tensioning body;
- Remove the grippers from the tensioning body.



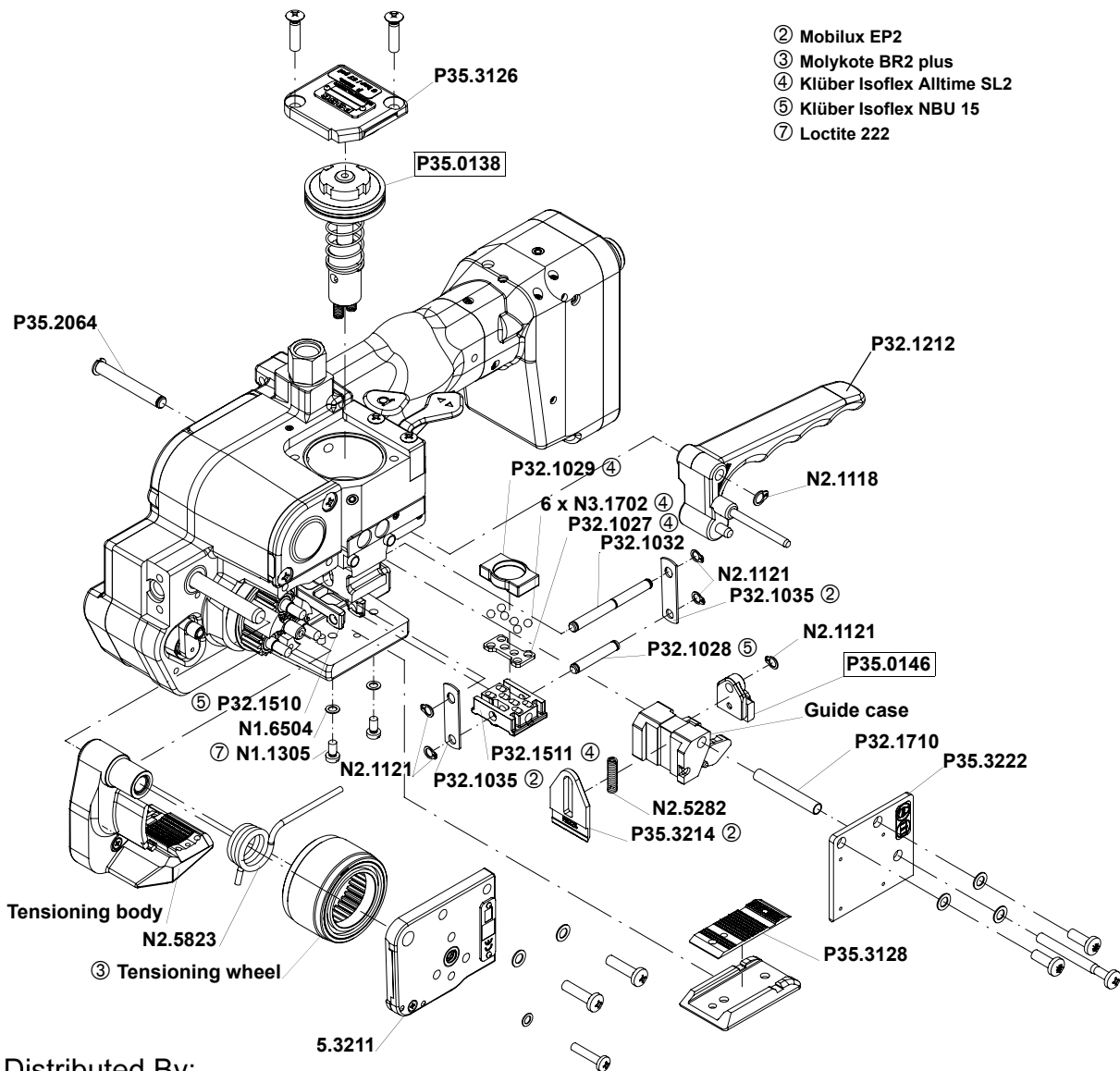
#### Assembling

Assembling in opposite order. Observe the following:

- Lubricate the internal tothing of the tensioning wheel with Molykote BR 2 plus.



**Observe the position of the tensioning wheel. The direction of rotation of the tensioning wheel is marked at the front of the tensioning wheel (see drawing).  
Observe the position of the grippers (see drawing).**



Distributed By:  
**Allstrap**

1719 Kenny Rd  
 Columbus, OH, 43212

**Assembling**

Assembling in opposite order. Observe the following:



**When inserting the piston pay attention to the proper seat of the piston in the thrust piece.  
Pay attention to the fitting position of the cutter (see drawing).  
Safe the screws N1.1305 with Loctite 222.**

**Lubrication**

- Lubricate the rocker and the bolt P32.1028 in the area of the welding jaw with Klüber Isoflex NBU 15.
- Lubricate the balls, ball cage and the running surface of the balls on the welding gripper with Klüber Isoflex Alltime SL2.
- Lubricate the cutter and the driver with Mobilux EP2.

**9.3 Adjustment of the coupler P35.0146**

The coupler is adjusted in our works.

In case of replacing the seesaw lever, the coupler or the lever body, the coupler has to be readjusted.

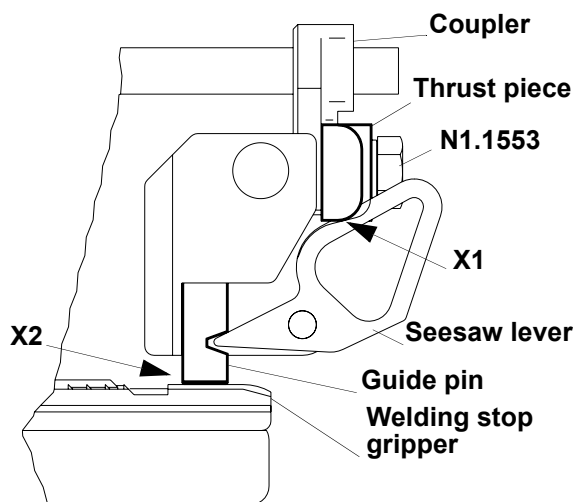
Procedure as follows:

The tool is disconnected from the air supply.  
The coupler is fitted into the tool.

- Loosen screw N1.1553.
- Displace thrust piece P35.3223, so that it touches the two seesaw levers without moving them.
- Retighten screw N1.1553.

**Control:**

The thrust piece must touch the seesaw levers (X1).  
Both guide pins must sit on the welding stop gripper (X2).



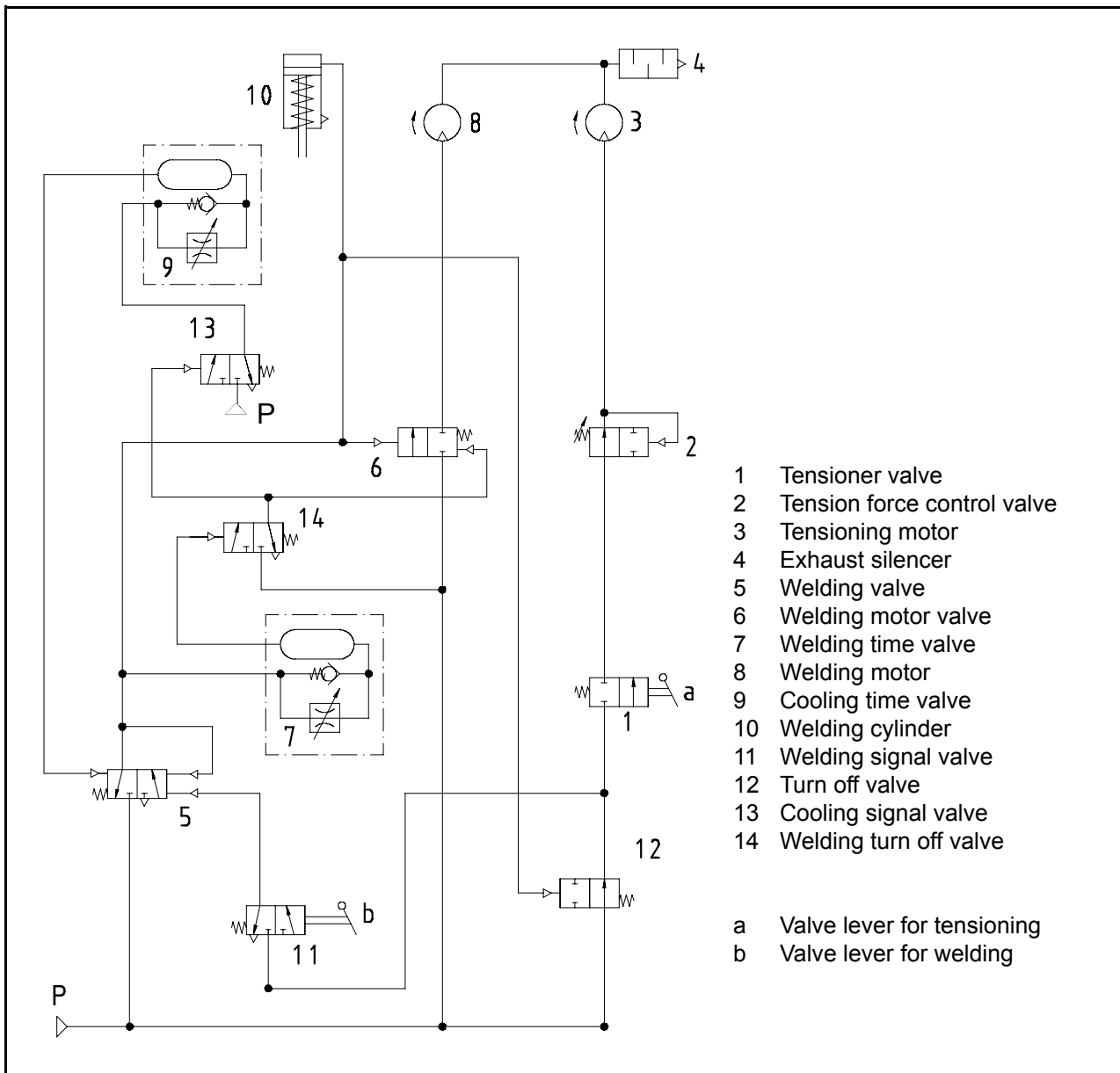
Distributed By:

**Allstrap**

1719 Kenny Rd  
Columbus, OH, 43212



## 10 PNEUMATIC SCHEMATIC



## 11 SERVICE

Servicing and repair work must only be carried out by authorized service centres.

If the tool breaks down or does no longer operate do not disassemble it. Send it fully assembled to the local service center (see name and address on the rear page of this manual). Use original packing.

The pneumatic plastic strapping tool P356 is a high performance tool. We strongly recommend you to have it serviced by an authorized service shop after 12 months at the latest if used one shift per day. If used two or more shifts per day the tool has to be serviced after a shorter period of time.

## 12 CLEANING

Clean strap gripping parts from strap abrasion regularly using compressed air (do not use any mechanical tool for cleaning).

When cleaning the surface of the tool do not use water or aggressive solvents!

Distributed By:

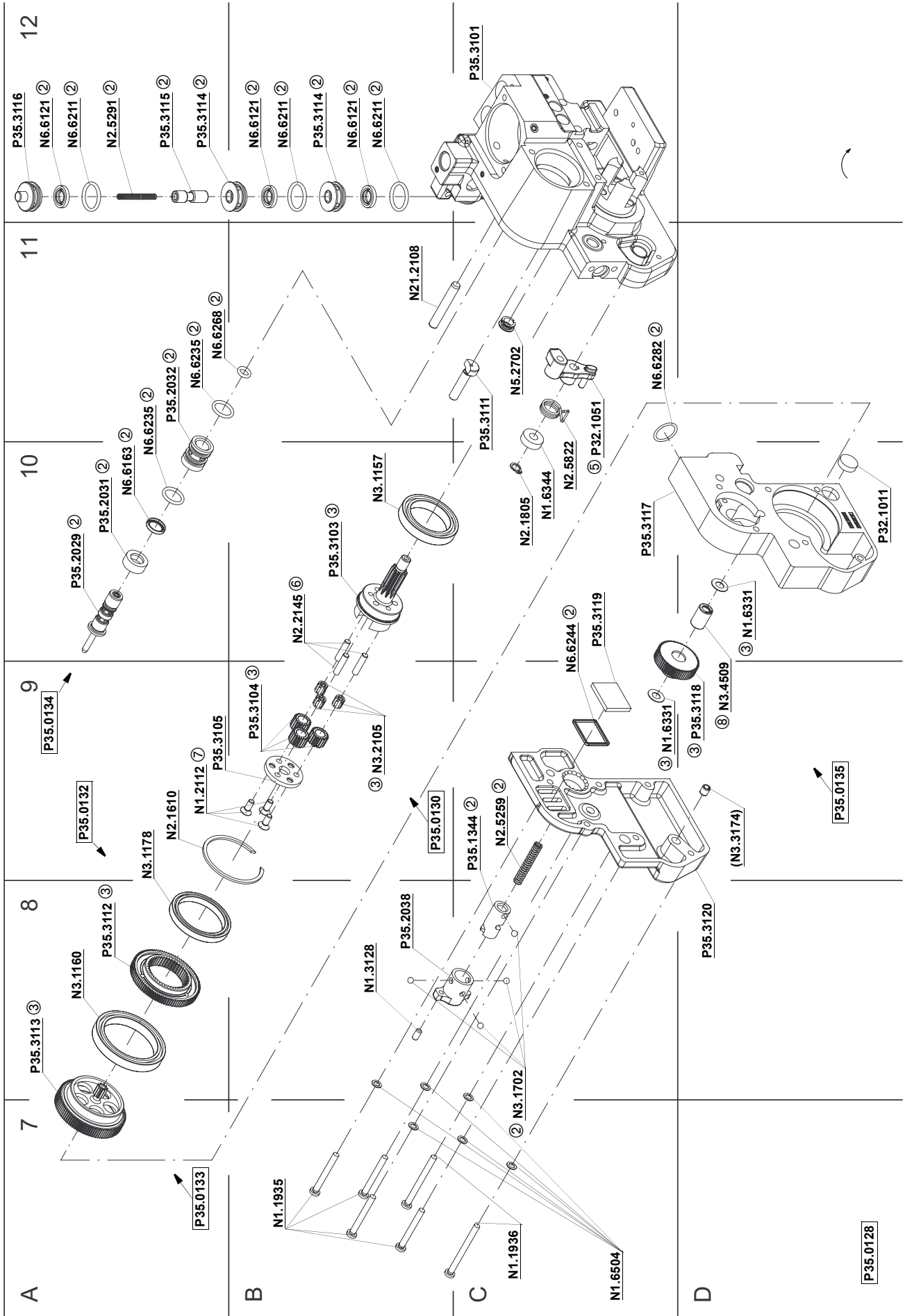
**Allstrap**

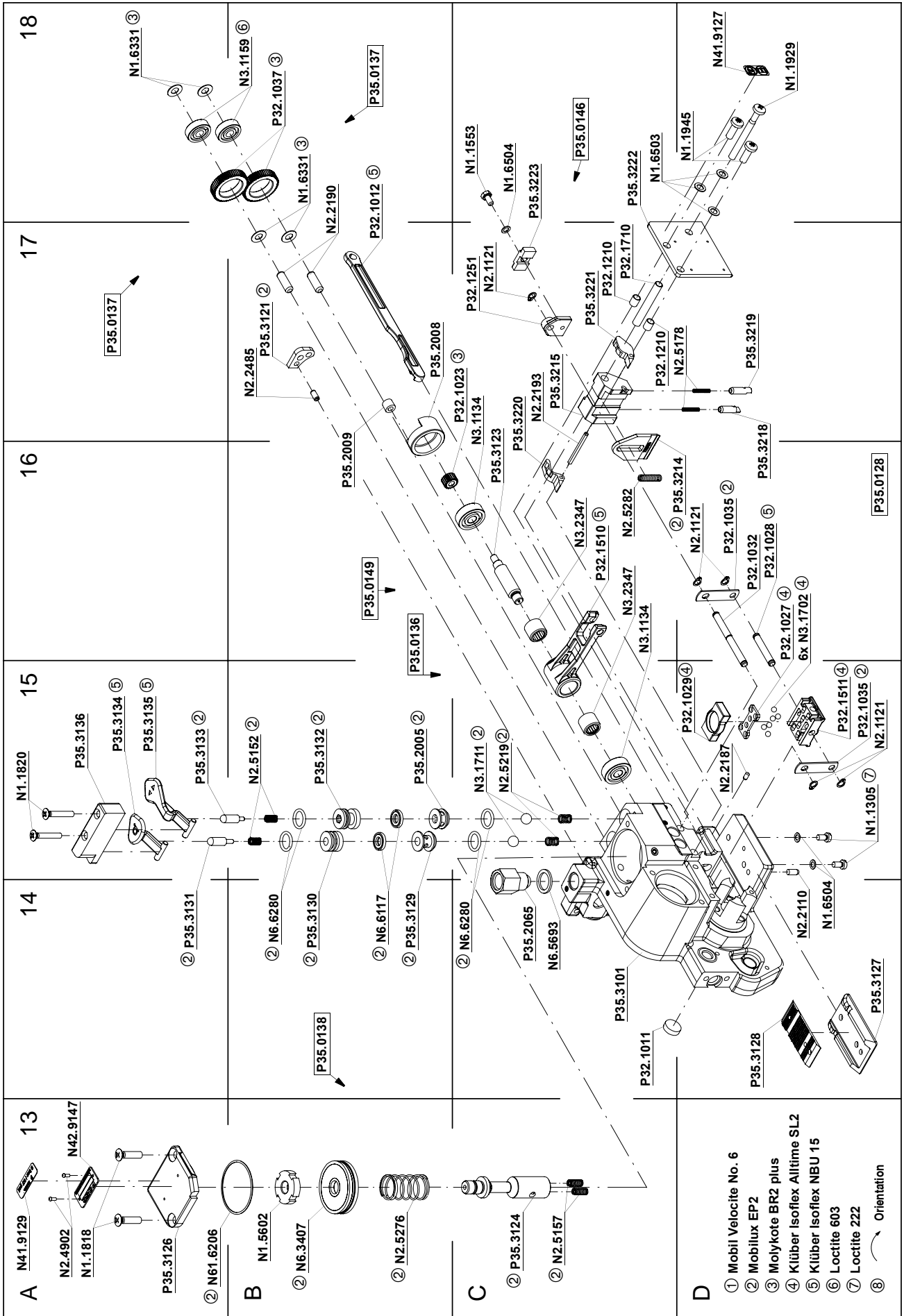
1719 Kenny Rd

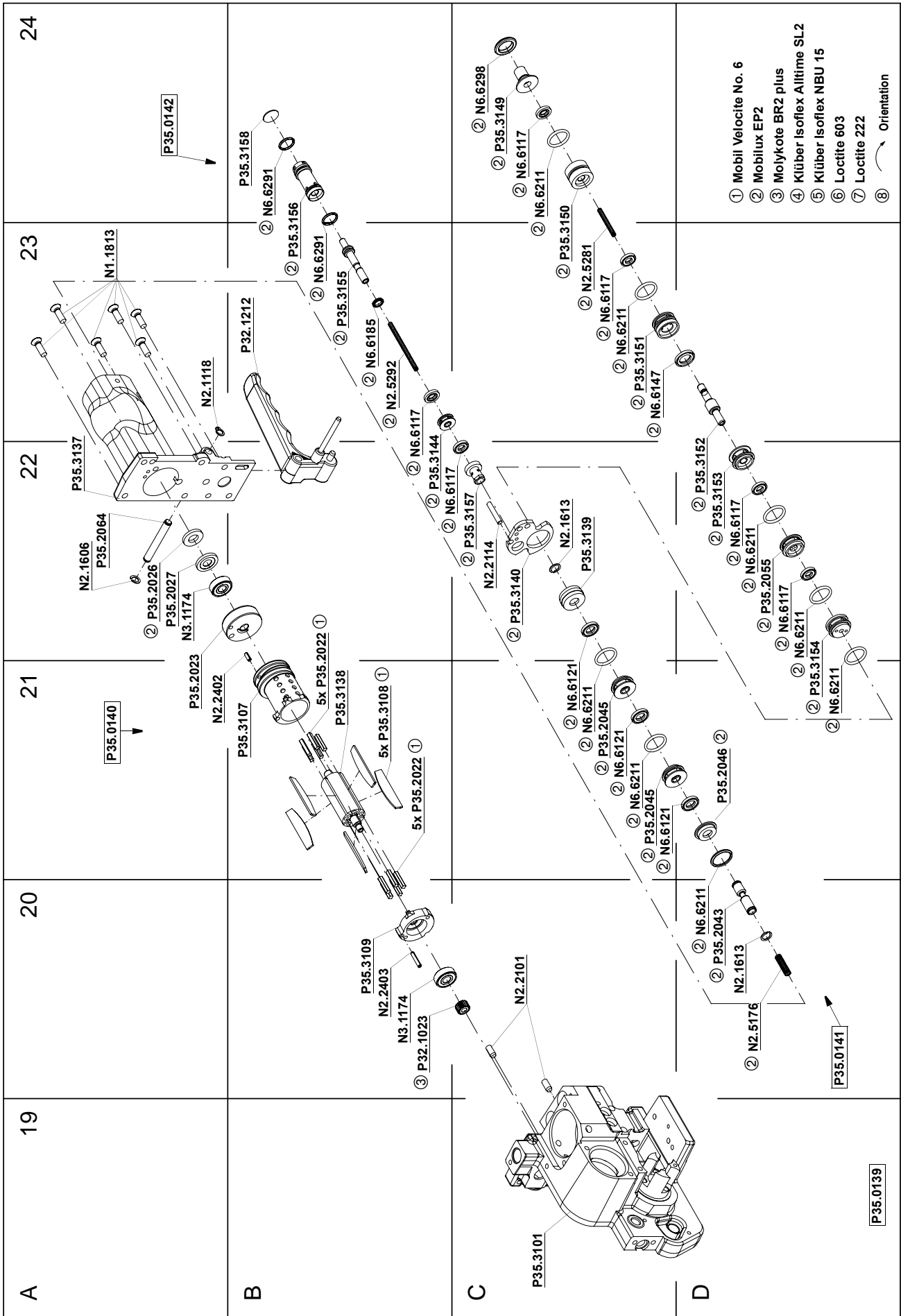
Columbus, OH, 43212

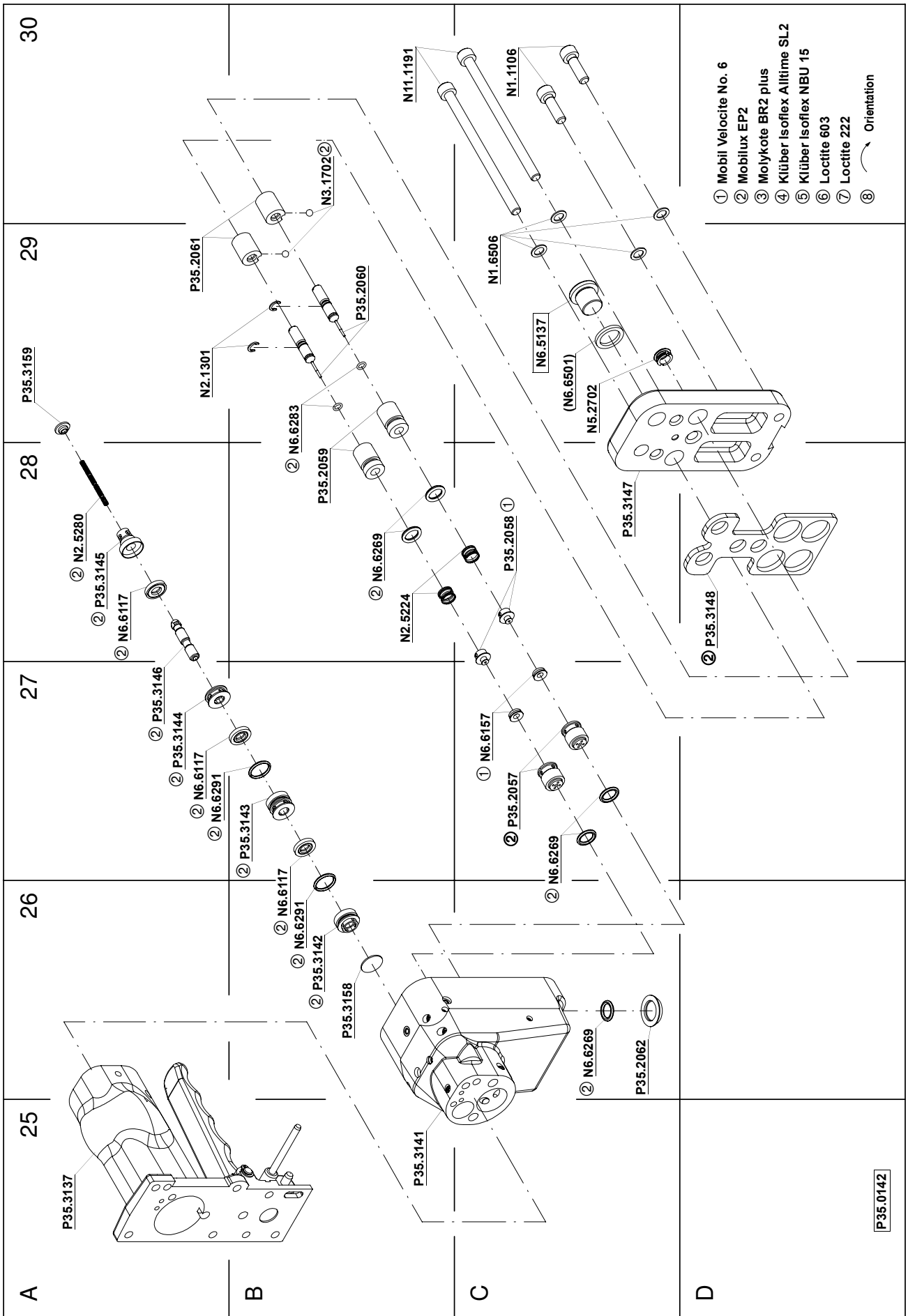












49.0374.01	P356/19/0.65-1.05		P356.0001.01		09.08.04	
Item-No.		in group	Pcs.	Description	Dimension	Field
N11.1191		P35.0139	2	FLAT HEAD SCREW	M6 X 100	B30
N1.1106		P35.0142	2	SCREW	M6 X 20	C30
N1.1305		P35.0128	2	SCREW	M4 X 7.8	D15
N1.1553		P35.0146	1	HEXAGON SCREW	M4 X 8	C18
N1.1813		P35.0128	6	SCREW	M5 X 16	A23
N1.1818		P35.0128	4	SCREW	M5 X 20	C6+
N1.1820		P35.0128	2	SCREW	M4 X 25	A15
N1.1904			2	SCREW	M5 X 20	C5
N1.1909			2	FLAT HEAD SCREW	M3 X 5	D2
N1.1925			1	SCREW	M4 X 20	D5
N1.1929			1	SCREW	M5 X 50	D18
N1.1935		P35.0128	4	FLAT HEAD SCREW	M4 X 35	B7
N1.1936		P35.0128	2	FLAT HEAD SCREW	M4 X 45	C7
N1.1945			2	SCREW	M5 X 14	D18
N1.2110		P35.0147	2	COUNTERSUNK SCREW	M5 X 16	--
N1.2112		P35.0130	3	COUNTERSUNK SCREW	M4 X 10	A9
N1.2216			2	COUNTERSUNK SCREW	M3 X 8	C4+
N1.3128		P35.0128	1	SOCKET SET SCREW	M4 X 8	B8
N1.5105		P35.0147	2	HEXAGON NUT	M8	--
N1.5602		P35.0138	1	SLOTTED ROUND NUT	M10 X 1	B13
N1.6331		P35.0128	6	SPACER WASHER	6 X 12 X 0.5	C9+
N1.6344		P35.0128	1	SPACER PIECE	6.3 X 15 X 5	C10
N1.6503			5	SAFETY WASHER	M5	C5+
N1.6504			1	SAFETY WASHER	M4	D5
N1.6504		P35.0128	8	SAFETY WASHER	M4	C7+
N1.6504		P35.0146	1	SAFETY WASHER	M4	C18
N1.6505			2	SAFETY WASHER	M3	D3
N1.6506		P35.0139	2	SAFETY WASHER	M6	C29
N1.6506		P35.0142	2	SAFETY WASHER	M6	C29
N21.2101		P35.0129	3	PARALLEL PIN	5 h6 X 40	B2
N21.2102		P35.0145	2	PARALLEL PIN	3 m6 X 8	C4
N21.2108		P35.0128	1	PARALLEL PIN	6 m6 X 40	B11
N2.1118			1	SECURITY RING	6	A23
N2.1121			1	SECURITY RING	5	C17
N2.1121		P35.0128	4	SECURITY RING	5	D15+
N2.1301		P35.0142	2	CIRCLIP	6	A29
N2.1606			1	SPRING RING	SW6	A22
N2.1610		P35.0128	1	SPRING RING	SB44	A9
N2.1613		P35.0141	2	SPRING RING		D20+
N2.1805		P35.0128	1	TENSIONING RING	6	C10
N2.2101		P35.0128	2	PARALLEL PIN	5 m6 X 12	C20
N2.2110		P35.0129	1	PARALLEL PIN	4 m6 X 10	D14
N2.2114		P35.0139	1	PARALLEL PIN	4 m6 X 24	C22
N2.2145		P35.0130	3	PARALLEL PIN	4 h6 X 18	B10
N2.2187		P35.0129	1	PARALLEL PIN	3 m6 X 6	D15
N2.2189		P35.0143	4	PARALLEL PIN	3 m6 X 5	D2
N2.2190		P35.0128	2	PARALLEL PIN	6 h6 X 18	B18
N2.2193			1	PARALLEL PIN	3 m6 X 32	C17
N2.2402		P35.0131	1	DOWEL PIN	3 X 8	A4
N2.2402		P35.0140	1	DOWEL PIN	3 X 8	A21
N2.2403		P35.0131	1	DOWEL PIN	3 X 16	A3
N2.2403		P35.0140	1	DOWEL PIN	3 X 16	B20

[ ] = Group

\* = Wearing parts

49.0374.01	P356/19/0.65-1.05		P356.0001.01		09.08.04
Item-No.	in group	Pcs.	Description	Dimension	Field
N2.2485	P35.0129	1	DOWEL PIN	4 X 8	B17
N2.3342	P35.0128	1	FEATHER KEY	2 X 2 X 10	D1
N2.4902		4	HAMMER HEAD BOLT	1.85 X 4.76	C5+
N2.5152	P35.0128	2	PRESSURE SPRING	0.5 X 4.9 X 15/9.5	B15
N2.5157	P35.0128	2	PRESSURE SPRING	0.6 X 4.8 X 20/15.5	C13
N2.5176	P35.0139	1	PRESSURE SPRING	0.6 X 5.5 X 31/17.5	D20
N2.5178		2	PRESSURE SPRING	0.32 X 2.82 X 20.5/ 20.5	D17
N2.5219	P35.0128	2	PRESSURE SPRING	0.7 X 5.7 X 12/6	C15
N2.5224	P35.0142	2	PRESSURE SPRING	0.5 X 9 X 17/6.5	B28
N2.5259	P35.0128	1	PRESSURE SPRING	0.9 X 5.9 X 36.5/21.5	C9
N2.5276	P35.0128	1	PRESSURE SPRING	1.25 X 19.2 X 77/9.50	B13
N2.5280	P35.0142	1	PRESSURE SPRING	0.4 X 2.8 X 47/48.5	A28
N2.5281	P35.0142	1	PRESSURE SPRING	0.5 X 3.6 X 40/33.5	C23
N2.5282		1	PRESSURE SPRING	0.8 X 4.8 X 27/17.5	C16
N2.5291	P35.0128	1	PRESSURE SPRING	0.55 X 3.6 X 40/33.5	A12
N2.5292	P35.0142	1	PRESSURE SPRING	0,55 X 3,6 X 71/59,5	B23
N2.5623	P35.0147	2	CUP SPRING	20 X 8.2 X 1/1.55	--
N2.5822	P35.0128	1	TORSION SPRING	1.25 X 12/3.75	C10
N2.5823		1	TORSION SPRING	2.8 X 17/4	D3
N3.1134	P35.0128	1	BALL BEARING	7 X 22 X 7	C16
N3.1134	P35.0149	1	BALL BEARING	7 X 22 X 7	C17
N3.1157	P35.0130	1	BALL BEARING	30 X 42 X 7	B10
N3.1159	P35.0137	1	BALL BEARING	6 X 19 X 6	B18
N3.1160	P35.0133	1	BALL BEARING	40 X 52 X 7	A8
N3.1172		2	BALL BEARING	30 X 42 X 7	B3+
N3.1174	P35.0131	2	BALL BEARING	7 X 19 X 6	A3+
N3.1174	P35.0140	2	BALL BEARING	7 X 19 X 6	A22+
N3.1178	P35.0132	1	BALL BEARING	35 X 44 X 5	A9
N3.1702	P35.0128	10	BALL	4 MM	C8+
N3.1702	P35.0142	2	BALL	4 MM	B30
N3.1711	P35.0128	2	BALL	8 MM	C15
N3.2105	P35.0130	3	NEEDLE CAGE	K 4 X 7 X 7 TN	B9
N3.2107		3	NEEDLE CAGE	K 5 X 9 X 13 TN	B3
N3.2347	P35.0136	2	NEEDLE BUSH	10 X 14 X 12	C16
N3.2356	P35.0145	1	NEEDLE CASE	7 X 11 X 9	C4
N3.3150	P35.0143	3	SLIDE-BEARING	8 X 10 X 12	C2
N3.3172	P35.0129	1	SLIDE-BEARING	8 X 10 X 10	C1
N3.3174	P35.3120	1	SLIDE-BEARING	4 X 5.5 X 6	D9
N3.4509	P35.0135	1	NEEDLE FREE WHEELING	6 X 10 X 15	D9
N41.9127		1	ADHESIVE LABEL	20 X 10 X 0.1	D18
N41.9129		1	ADHESIVE LABEL	p max. 6 bar/87 psi	A13
N42.9147		1	TYPE PLATE	P356	A13
N4.9159		1	LABEL	<<CE>>	C5
N5.2702		2	COVER		C11+
N61.6206	P35.0128	1	O-RING	34.65 X 1.78	A13
N6.3407	P35.0138	1	PISTON ASSEMBLY	40 X 8	B13
[N6.5137]		1	SEALING SCREW		C29
N6.5693		1	PACKING RING		C14
N6.6117	P35.0128	2	SEAL	6 X 13 X 2.3	B14
N6.6117	P35.0142	9	SEAL	6 X 13 X 2.3	B22+
N6.6121	P35.0128	3	SEAL	8 X 15 X 2.3	A12+
N6.6121	P35.0141	3	SEAL	8 X 15 X 2.3	C21
N6.6147	P35.0142	1	SEAL	10 X 17 X 2.3	C23

[] = Group

\* = Wearing parts



49.0374.01	P356/19/0.65-1.05		P356.0001.01		09.08.04	
Item-No.		in group	Pcs.	Description	Dimension	Field
N6.6157		P35.0142	2	PACKING RING	4 MM	C27
N6.6163		P35.0134	1	SEAL	10 X 13.6 X 2.3	A10
N6.6185		P35.0142	1	PACKING RING	10 X 6,5 X 1,4	B23
N6.6211		P35.0128	3	O-RING	16 X 2	A12+
N6.6211		P35.0141	3	O-RING	16 X 2	D20+
N6.6211		P35.0142	5	O-RING	16 X 2	D21+
N6.6212		P35.0147	1	O-RING	8 X 1	--
N6.6235		P35.0134	2	O-RING	12 X 2	A11
N6.6237		P35.0128	1	O-RING	33 X 1.5	B6
N6.6244		P35.0128	1	O-RING	22 X 2	C10
N6.6268		P35.0134	1	O-RING	6 X 2.5	A11
N6.6269		P35.0142	5	O-RING	8.5 X 2.0	C26+
N6.6280		P35.0128	4	O-RING	11 X 2	B14+
N6.6282		P35.0128	1	O-RING	14 X 1.5	C11
N6.6283		P35.0142	2	O-RING	4 X 1	B29
N6.6291		P35.0142	4	O-RING	11.5 X 1.5	B23+
N6.6298		P35.0142	1	O-RING	13 X 3,5	C24
N6.6501		N6.5137	1	FLAT SEAL	18 X 13 X 2	C29
P32.1011		P35.0128	2	FELT		D10+
P32.1012		P35.0128	1	COUPLER		B18
P32.1023		P35.0140	1	PINION		B20
P32.1023		P35.0149	1	PINION		C17
P32.1027		P35.0128	1	BALL CAGE		D16
P32.1028		P35.0128	1	BOLT		D16
P32.1029		P35.0128	1	THRUST PIECE		D15
P32.1032		P35.0128	1	DRIVING PIN		D16
P32.1035		P35.0128	2	DRIVER		D15+
P32.1037		P35.0137	1	SPUR WHEEL		B18
P32.1050		P35.0128	1	FRONT TOGGLE LINK		C1
P32.1051		P35.0128	1	LEVER		C11
P32.1210			2	CENTERING SLEEVE		C17
[P32.1212]			1	HANDLE LEVER		B23
P32.1216			1	PRESSURE ROLLER		D1
P32.1228			1	HOLDER		C3
P32.1229			1	HOLDER		C2
P32.1251		P35.0146	1	COUPLER		C17
P32.1510		P35.0136	1	ROCKER		C16
P32.1511	*	P35.0128	1	WELDING GRIPPER		D15
P32.1710			1	CENTERING SLEEVE		C17
P32.1712			3	DOWEL		B3
P32.1719	*		1	GRIPPER		C2
P32.1720	*		1	GRIPPER		C2
P32.1721	*		1	GRIPPER		C3
P32.1723			1	STRAP STOP		D3
P32.1724			1	STRAP GUIDE		C4
[P35.0128]			1	BASE MODEL		C1+
[P35.0129]		P35.0128	1	BODY		A1
[P35.0130]		P35.0128	1	IDLER STEP		B9
[P35.0131]		P35.0128	1	MOTOR CELL		A3
[P35.0132]		P35.0128	1	WHEEL		A9
[P35.0133]		P35.0128	1	SPUR WHEEL		A7
[P35.0134]		P35.0128	1	VALVE		A9
[P35.0135]		P35.0128	1	RATCHET WHEEL		D9
[P35.0136]		P35.0128	1	ROCKER		B16

[ ] = Group

\* = Wearing parts

49.0374.01	P356/19/0.65-1.05		P356.0001.01		09.08.04
Item-No.	in group	Pcs.	Description	Dimension	Field
[P35.0137]	P35.0128	2	SPUR WHEEL		A17+
[P35.0138]	P35.0128	1	PISTON		B14
[P35.0139]	P35.0128	1	HANDLE HOUSING		D19
[P35.0140]	P35.0139	1	MOTOR CELL		A21
[P35.0141]	P35.0139	1	VALVE		D20
[P35.0142]	P35.0139	1	VALVE HEAD		A24+
[P35.0143]		1	TENSIONING BODY		D2
[P35.0145]		1	END COVER		D4
[P35.0146]		1	COUPLER		C18
[P35.0147]		1	SUSPENSION		--
[P35.0149]	P35.0128	1	WELDING EXCENTRIC		B16
P35.1344	P35.0128	1	SLIDE GATE		C9
P35.2005	P35.0128	1	EXHAUST RING		B15
P35.2008	P35.0128	1	BEARING SUPPORT		B17
P35.2009	P35.0128	1	TORSIONAL STOP		B16
P35.2022	P35.0131	10	FELT		A4+
P35.2022	P35.0140	10	FELT		B21
P35.2023	P35.0131	1	END PLATE		B5
P35.2023	P35.0140	1	END PLATE		A21
P35.2026	P35.0128	1	SPRING		B6
P35.2026	P35.0139	1	SPRING		A22
P35.2027	P35.0128	1	THRUST PIECE		B6
P35.2027	P35.0139	1	THRUST PIECE		A22
[P35.2029]	P35.0134	1	CONTROL ROD		A10
P35.2031	P35.0134	1	END RING		A10
P35.2032	P35.0134	1	VALVE SHELL		A11
P35.2038	P35.0128	1	CONTROL HEAD		B8
P35.2043	P35.0141	1	COUPLER		D20
P35.2045	P35.0141	2	SUSTAINING RING		C21
P35.2046	P35.0141	1	END RING		D21
P35.2055	P35.0142	1	SUSTAINING RING		D22
P35.2057	P35.0142	2	THROTTLE SEAT		C27
P35.2058	P35.0142	2	THROTTLE BODY		C28
P35.2059	P35.0142	2	GUIDE		B28
P35.2060	P35.0142	2	THROTTLE SCREW		B29
P35.2061	P35.0142	2	THROTTLE HOLDER		A29
P35.2062	P35.0142	1	DISK		C26
P35.2064		1	HANDLE SHAFT		A22
P35.2065		1	AIR CONNECTION		C14
P35.2067	P35.0147	1	BOLT		--
P35.2068	P35.0147	1	FLANGE		--
P35.2069	P35.0147	2	RATCHET DISK		--
P35.2073	P35.0147	1	DISK		--
[P35.3101]	P35.0129	1	BODY		A1+
P35.3102	P35.0129	1	SWIVEL SHAFT		C2
P35.3103	P35.0130	1	PLANET SHAFT		B10
P35.3104	P35.0130	3	IDLER GEAR		B9
P35.3105	P35.0130	1	COVER		A9
P35.3106	P35.0131	1	ROTOR		B4
P35.3107	P35.0131	1	JACKET		A4
P35.3107	P35.0140	1	JACKET		B21
P35.3108	* P35.0131	5	VANE		B5
P35.3108	* P35.0140	5	VANE		B21
P35.3109	P35.0131	1	END PLATE		A3

[] = Group

\* = Wearing parts

49.0374.01	P356/19/0.65-1.05		P356.0001.01		09.08.04	
Item-No.		in group	Pcs.	Description	Dimension	Field
P35.3109		P35.0140	1	END PLATE		B20
P35.3110		P35.0128	1	COVER		C6
P35.3111		P35.0128	1	SHAFT		C11
P35.3112		P35.0132	1	WHEEL		A8
P35.3113		P35.0133	1	SPUR WHEEL		A8
P35.3114		P35.0128	2	SUSTAINING RING		A12+
P35.3115		P35.0128	1	COUPLER		A12
P35.3116		P35.0128	1	SUSTAINING RING		A12
P35.3117		P35.0128	1	GEAR BODY		C10
P35.3118		P35.0135	1	SPUR WHEEL		D9
P35.3119		P35.0128	1	EXHAUST SILENCER		C10
[P35.3120]		P35.0128	1	GEARING COVER		D8
P35.3121		P35.0128	1	SEAL PLATE		B17
P35.3123		P35.0149	1	WELDING EXCENTRIC		C16
P35.3124		P35.0138	1	PISTON ROD		C13
P35.3126		P35.0128	1	COVER		A13
P35.3127		P35.0128	1	STEEL INSERT		D14
P35.3128	*	P35.0128	1	WELDING STOP GRIPPER		D14
P35.3129		P35.0128	1	EXHAUST RING		B14
P35.3130		P35.0128	1	GUIDE		B14
P35.3131		P35.0128	1	TOUCH BOLT		A14
P35.3132		P35.0128	1	GUIDE		B15
P35.3133		P35.0128	1	TOUCH BOLT		A15
P35.3134		P35.0128	1	LEVER		A15
P35.3135		P35.0128	1	LEVER		A15
P35.3136		P35.0128	1	LEVER BODY		A15
[P35.3137]		P35.0139	1	HANDLE HOUSING		A22+
P35.3138		P35.0140	1	ROTOR		B21
P35.3139		P35.0141	1	SUSTAINING RING		C22
P35.3140		P35.0139	1	SEAL PLATE		C22
[P35.3141]		P35.0142	1	ADAPTOR		B25
P35.3142		P35.0142	1	SUSTAINING RING		B26
P35.3143		P35.0142	1	SUSTAINING RING		B27
P35.3144		P35.0142	2	SUSTAINING RING		B22+
P35.3145		P35.0142	1	SUSTAINING RING		A28
P35.3146		P35.0142	1	COUPLER		A27
[P35.3147]		P35.0142	1	COVER		C28
P35.3148		P35.0142	1	SEAL PLATE		D28
P35.3149		P35.0142	1	END RING		C24
P35.3150		P35.0142	1	INTERMEDIATE RING		C23
P35.3151		P35.0142	1	SUSTAINING RING		C23
P35.3152		P35.0142	1	COUPLER		D22
P35.3153		P35.0142	1	SUSTAINING RING		D22
P35.3154		P35.0142	1	EXHAUST RING		D21
P35.3155		P35.0142	1	COUPLER		B23
P35.3156		P35.0142	1	SUSTAINING RING		B23
P35.3157		P35.0142	1	SUSTAINING RING		C22
P35.3158		P35.0142	2	DISK		B24+
P35.3159		P35.0142	1	DISK		A29
P35.3201			3	IDLER GEAR		B3
P35.3203	*		1	TENSIONING WHEEL		B4
P35.3204		P35.0143	1	TENSIONING BODY		D2
P35.3211		P35.0145	1	END COVER		C4
P35.3214	*		1	CUTTER		D16

[ ] = Group

\* = Wearing parts

49.0374.01	P356/19/0.65-1.05		P356.0001.01		09.08.04	
Item-No.		in group	Pcs.	Description	Dimension	Field
P35.3215			1	GUIDE CASE		C17
P35.3218			1	GUIDE PIN		D16
P35.3219			1	GUIDE PIN		D17
P35.3220			1	SEESAW LEVER		C17
P35.3221			1	SEESAW LEVER		C17
P35.3222			1	COVER		C18
P35.3223		P35.0146	1	THRUST PIECE		C18
[P35.3301]		P35.0147	1	SUSPENSION BRACKET		--

Distributed By:  
**Allstrap**  
 1719 Kenny Rd  
 Columbus, OH, 43212