



TW X - 98

Tyre fitting machine

twinbusch.de



INSTALLATION, OPERATION AND MAINTENANCE MANUAL



Read this entire manual carefully before installation or operation of the TW X-98. Follow the instructions strictly.

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TWIN BUSCH GMBH

Index

1. Introduction/Application	3
2. Safety precautions	3
3. Warnings	3
4. Technical Data	4
5. Transport	4
6. Unpacking	4
7. Workplace	4
8. Product diagram	5
9. Assembly instructions	6
10. Pneumatic and Electrical Connections	6
11. Controls	7
12. Function test	7
13. Tyre fitting Instructions	8-10
13.1 Loosening the tyre bead	
13.2 Locking the rim	
13.3 Demounting the tyre	
13.4 Mounting the tyre	
14. Tyre inflation warning	11
15. Inflating the tyre	11
16. Air booster-Function	12
17. Storage	12
18. Maintenance/ Water separator	13-14
19. Trouble shooting	15
20. Spare parts list	16-32
21. Pneumatic diagram	33
22. Circuit Diagram	34

1. Introduction/application

This automatic tyre machine is especially designed for the removal and fitting of standard, low section and run flat tyres up to small transporters (12" outer & 28" inner).

Attention: This machine is only designed for the removal and fitting of tyres, under no circumstances should you use this machine for any other purpose. The manufacture will not accept any responsibility for damage or injury caused by misuse.

Warning:

Please read this manual carefully before operating the TW-X98 and keep this manual safe for future reference.

Guarantee will be void if any technical changes are made to the construction of the TW-X98 without the approval of the manufacture.

2. Safety precautions

Only trained qualified personnel are allowed to operate the TW-X98 tyre fitting machine.

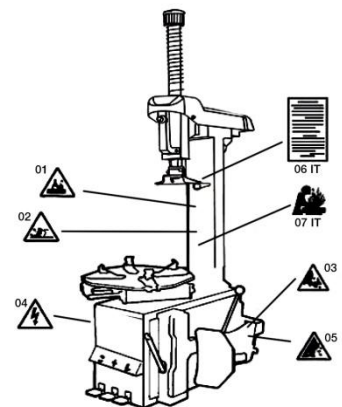
If the machine is damaged or needs parts replacement, work should be stopped immediately. For advice and repairs please contact the manufacture or dealer for further information.

The manufacture offers one year guaranty after buying for any repair within a normal usage, damage caused by misuse will not be covered. Spare parts can be ordered according to the parts list in this manual.

3. Safety warning



- 01 Keep hands clear of the mounting head during operation.
- 02 Keep hands clear of the rim clamp during operation.
- 03 Use extreme caution when operating the bead breaker, keep hands and feet clear.
Always stand to one side and be sure that the wheel is securely clamped to avoid the wheel jumping out.
- 04 Please make sure that the TW-X98 is correctly earthed.
- 05 Always wear protective clothing and safety glasses during operation.
- 06 Take note of all warnings!
 - The TW-X98 is equipped with a mechanical protection against over inflating.
 - Tyres and rims should always have the same sizes and have no signs of damage.
 - Never overinflate, always make sure of the correct tyre pressure as over inflation can lead to explosions which can cause serious injury or even death.
 - Take care when inflating tyres not to trap fingers.

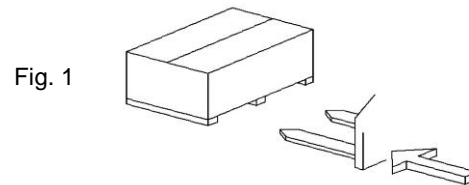


4. Technical Data

Technical Data	TW X-98
Rim diameter (outer)	12" - 26"
Rim diameter (inner)	14" - 28"
Wheel (max.)	45" (1143 mm)
Rim diameter (max.)	16" (406 mm)
Pressing weight	2500 kg
Pneumatic connection	8-10 bar
Power input	400 V / 3 Phase
Motor output	0,75 kW
Noise level	<70 dB
Net weight (ca.)	276 kg

5. Transport

To transport the TW-X93 a fork lift should be used and please take note of the lifting points (see diagram below)



6. Packing

Remove carefully the packing and make sure all needed parts for assembly (see pack list) are available. Should any parts be missing or damaged please don't hesitate to contact the manufacture or dealer.

7. Required work space

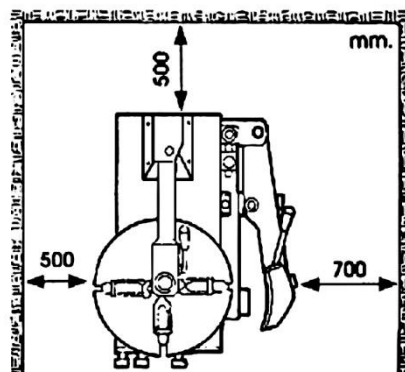


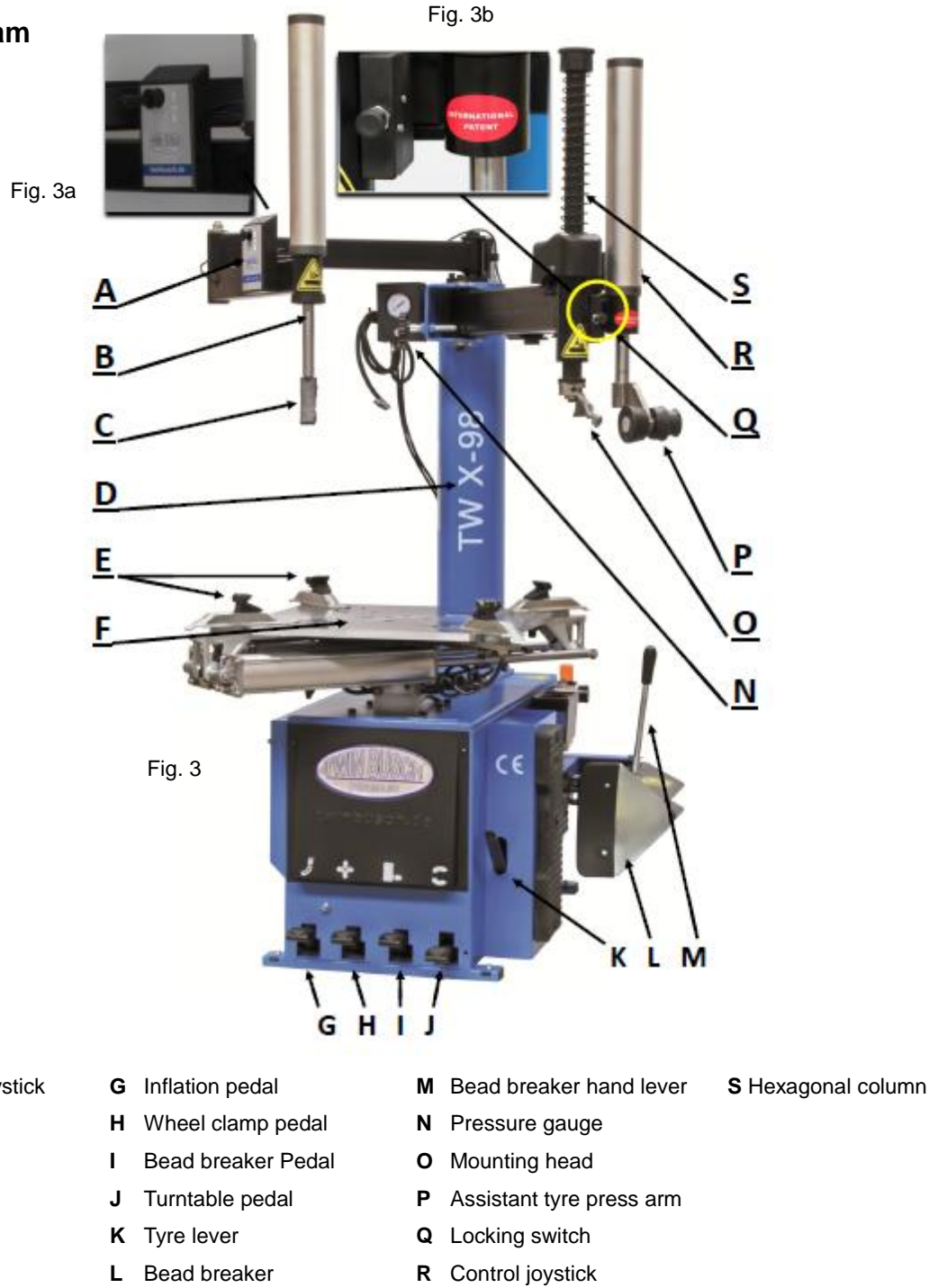
Fig. 2

Choose the designated work place for the TW-X98 according to the safety regulations. The power and air supply should be connected according to the instructions. The work place should be dry and the floor level to mount the machine, and a distance should be kept between walls (see Fig. 2).

Warning:

The TW-X98 should not be used in areas where there are dangers of explosions.

8. Product diagram



9. Assembly instructions

Prepare the needed tools and remove the machine from the packing. Place the TW-X98 in the said position (see work place) check that the machine is level and fix to the floor with appropriate raw plugs and bolts.

Mount the main post C (Fig. 4) with the nut A, Connect the pneumatic hose (Fig. 5) with connectors B+C.

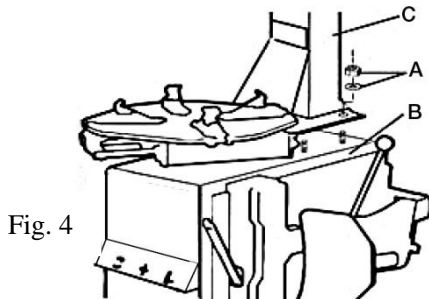


Fig. 4

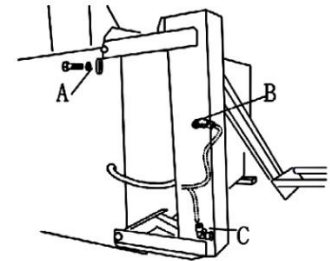


Fig. 5

10. Pneumatic and electrical connections

1. Connect the pressure gauge to the designated connector at the back of the machine.
2. Connect the TW-X98 to the compressed air supply over the regulator on the right hand side.
(Pipe/inside diameter 7~8 mm), recommended air pressure 8~10 bar.
3. Air pressure above 10 bar is not permitted and could damage the machine which would result in a refusal of guaranty from the manufacture.

Attention: If the pressure in the workshop is more than 10 bar an extra regulator should be installed.

Before the machine is connected to the power source please check that the voltage is equivalent to that of the ID plate at the back of the machine. **IMPORTANT the machine must be earthed** and connected with a 30A circuit breaker.

Attention: Check the ID plate for the correct voltage.

All electrical connections must be carried out by a qualified electrician.

The manufacture will take no responsibility through disregard to the manual.

Warning: Warning stickers should be kept clean and replaced when unreadable or damaged.

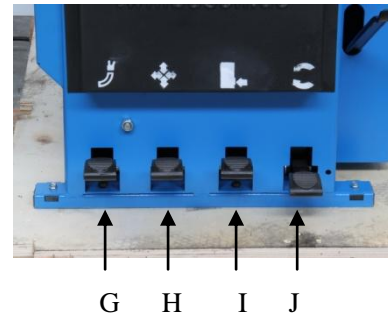
The machine should not be used when the stickers are missing.

Do not obstruct the stickers they should be readable at all times.

11. Controls

Diverse controls are shown in (Fig.3) and consist of the following:

- Locking switch (to lock and release the mounting arm Fig. 3a).
- Mounting head automatically raises ca. 2 - 3 mm when locked (Fig.3b).
- Wheel clamp used to open and close the four claws (H).
- Bead breaker pedal (I).
- Turntable pedal, up down switch (J).
- Tyre inflation pedal (G).



12. Function test

Fig. 3b

Please check that all connections are correct and working:

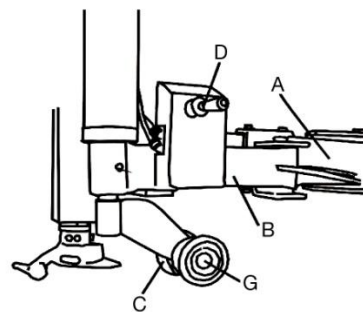
- Press the turntable pedal (J) and check that it turns in both directions.
- Hold the bead breaker lever, move the shoe over the tyre approx. 10 mm from the rim and press the pedal (I).
- Press the wheel clamp pedal (H) to open and close the claws, release to hold position.
- Pull the column locking button (Fig.3b), and the hexagonal column unlocks move the arm into position on the rim and press the button to lock. The mounting head will lift 2-3 mm automatically to protect the rim.
- Press pedal (G) to inflate or deflate the tyre.



Assistant swing arm

The swing arm and the components are as follows.

- A Main arm
- B Swing arm
- C Roller C
- D Joystick swing arm
- G Roller G



The swing arm works as follows:

The Joystick D is used to adjust the roller (C, G) up or down in order to press down the tyre when lubricating or fitting.

13. Tyre fitting instructions

Attention: Remove all weights from the rim before you start working with the machine.

13.1 Breaking the bead

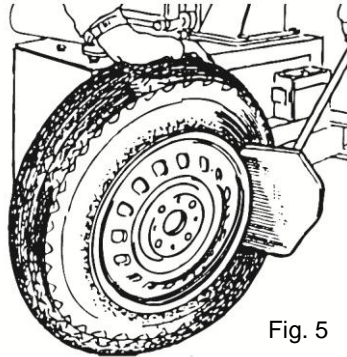


Fig. 5

Please take care when using the bead breaker, the arm presses with a force of 2500 kg and moves with a great jolt. This could lead to injury if wrongly operated.

- Be sure to let the air completely out of the tyre by removing the valve core before trying to press off the tyre.
- Open the arm with the lever by hand and roll the wheel in up to the desired point. Press the rim against the rubber support on the machine, and place the shoe (Fig. 5) 10mm away from the rim.

Press the pedal (I) and the shoe will press against the tyre, repeat this action in various positions on both sides of the wheel until the tyre is completely free from the rim.

13.2. Clamping the rim

- Make sure that all weights are removed.
- Clamp the rim using pedal (H), making sure that the wheel is in the middle of the turntable.
- Press the tyre down with the assistant arm (P) to aid with the lubrication (Fig. 6).
- Lubricate the tyre and remove.

Attention: Never place hands under the rim when clamping.

- To clamp a wheel from the inside, (wheel diameter from 12" to 26").
- To clamp a wheel on the outside (wheel diameter from 14" to 28").

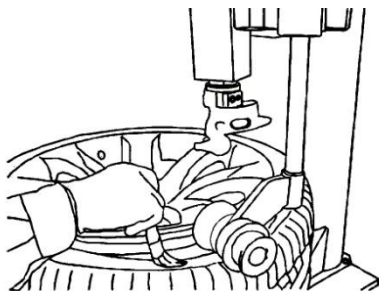


Fig. 6

13.3. Removal of the tyre

To avoid accidents always keep hands and other body parts away from moving parts when operating.

- Place the mounting head on the rim using the swing arm and adjust the distance, press the button on the swing arm to fix the position. The mounting head will automatically lift 2 or 3 mm.
- Insert the tyre lever between the tyre and right side of the mounting head and pull the tyre over the mounting head. (See Fig. 7-8).

If necessary the tyre must be pressed under the rim (using the assistant arm B) opposite to the mounting head to allow the tyre to naturally stretch over the rim without damage.



Fig. 7

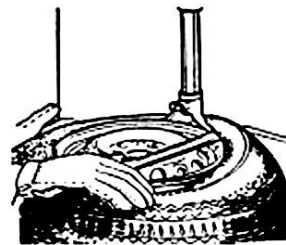


Fig.8

Caution:

If the wheel is fitted with an inner tube it is recommended to place the valve approximately 10 cm to the left of the mounting head to avoid damage to the tube.

- Hold the tyre lever in position (Fig. 8) and press the pedal (J), the turntable will turn clockwise and the tyre will be forced over the mounting head. Keep pedal pressed until the tyre is completely removed from the rim.
- When fitted remove the inner tube.
- Repeat the steps to dismount the back side of the tyre and remove from rim.

13.4. Mounting the tyre

Check tyre and rim,

Attention: Be sure that tyre and rim are of the same size to avoid accidents.

Check for damage on the rim and tyre, if damaged it should be replaced.

Take extra care with aluminium rims as hairline cracks are difficult to see and these should not be used.

Mounting the tyre:

- Replace the valve.
- Lubricate the tyre with appropriate paste.
- Clamp the rim, if it was removed.
- Turn the valve to the top position next to the mounting head.
- Place the tyre according to the markings in the right direction of rotation over the rim.
- Adjust the mounting head as in description 13.3.
- Be careful not to trap fingers when mounting tyres, keep hands away from the rim when turning the wheel.
- Place the tyre over the front side of the mounting head and push the tyre down over the rim. (Fig. 9)
- If necessary the tyre can be held in position with the assistant arm (P)
- Press the turntable pedal (J) until the tyre drops completely over the rim.
- If an inner tube is fitted then replace it before continuing with the front side of the tyre.
- Repeat the steps for the front side of the tyre.



Fig. 9

14. Inflating the tyre

Warning

Important: Inflating tyres can be very dangerous, always follow safety instruction to avoid serious injury.

Tyres can explode due to the following:

- The rim and tyre are of different sizes.
- The tyre or rim is damaged.
- The tyre pressure is over the maximum manufactures recommendation.

15. Inflating the tyre

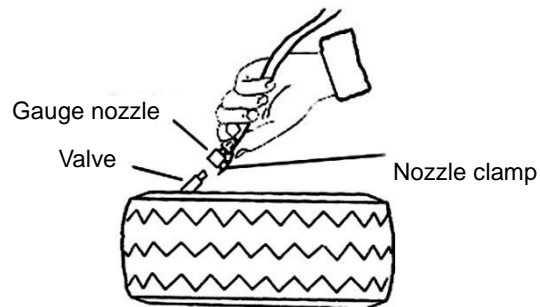


Fig. 10

- Remove the valve cap and take out the valve core.
- Hold and push the nozzle clamp over the valve completely and release the clamp.
Pump the tyre up to approximately 3 bar to ensure that the tyre is properly seated and sealed not forgetting to constantly check the pressure to avoid over inflating.
- Check that the tyre is evenly seated use tyre guidelines if available, replace the valve core and inflate to manufactures recommended pressure.

16. Air booster-Function

This device is designed to aid the inflation of tubeless tyres, through a strong air jet which pushes the tyre against the rim.

- Clamp the wheel rim (see description 13.2 claws from the inside)
- Remove the valve cap and take out the core.
- Clamp the pressure gauge over the valve and press the pedal (G) fully down, air will be forced through the jets on the claws directly under the tyre. (See Fig. 11)
- Inflate the tyre to 3 bar making sure that the tyre is properly seated. Remove the clamp and insert the valve core. Inflate the tyre to manufactures recommended pressure.

A safety valve is fitted in the machine which releases at 3.5 bar to avoid the danger of over inflating.

Attention: Tyres can still explode if the manufactures recommendations are not followed.

Warning:

Only qualified trained personnel are allowed to operate this machine. Keep hands and body parts away from the wheel while inflating.

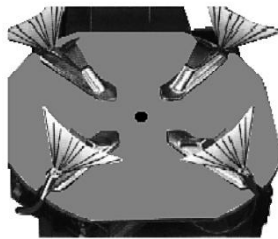


Fig.11

17. Storage

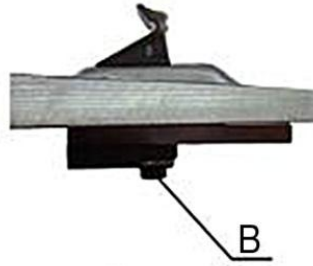
If the machine is not used for a longer period of time it should be disconnected from the power and air supply.

Lubricate all moving parts and drain the water separator/ oil vaporiser.

Protect the machine against dust by covering.

18. Maintenance

Fig. 12



Attention: Never allow unqualified people to work on this machine, all maintenance work should be carried out from professionally trained personnel. Before any maintenance work is done disconnect the power and air supply.

In order to prolong the life of your TW-X98 it is important to carry out regular maintenance and to follow the directions in this manual. Keeping your TW-X98 in good working order will save expensive repairs and prevent injury.

- Always keep your working area clean and free from dust as this will affect the liability of moving parts.
- Check the hexagonal column for movement and keep well lubricated.
- Check the assistant arms for movement and lubricate regularly.
- Check the turntable and claws daily. Clean and lubricate.
- Clean and lubricate all moving parts weekly.
- Check the oil level in the vaporiser weekly, refill when necessary. (SAE30).
- Empty the water reservoir daily.
- Check the tension of the drive belt every 6 months (Abb. 13).
- Check the jets on the claws after 6 months.
- Check the bolts under the turntable (Fig. 12-B) monthly tighten and adjust if necessary.
- Remove protective cover on the hexagonal column and check the tightness of the fixing plate nuts. (If adjustment is made reconnect the air supply and check once again).
- Adjust and clean the valve system as follows:

Remove the cover panel of the housing (Fig.14-x), unscrew the cushion valve and clean the valves (Fig. 15-A) with compressed air. Replace defect parts if needed.

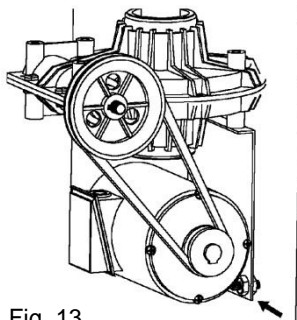


Fig. 13

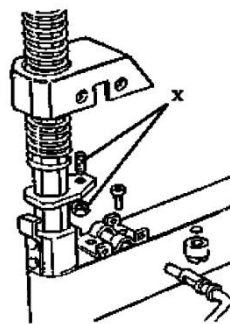


Fig. 14

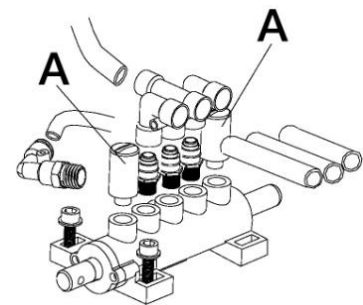
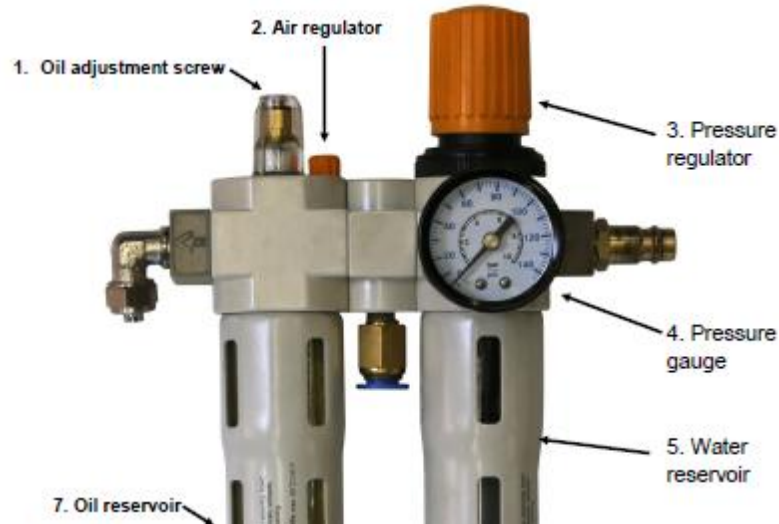


Fig. 15

Water separator / Oil vaporiser

Water separator / oil vaporiser



1 Application

The water separator works as follows:

- Compressed air flows through the chamber and the condensed water is collected in the reservoir. The oil vaporiser supplies oil to the end device.
- The falling drops of oil are vaporised by the passing air caused by a vacuum in the chamber.
- The actual oil requirement depends on the design of the system. The following values are to be used as a guideline:
- approx. 1 drop of oil/1000 litres air flow: light oil vapour
- approx. 6 drops of oil/1000 litres air flow: heavy oil vapour

Setting the pressure regulator:

- Pull the orange knob (3) up to unlock and turn towards “-“ this will close the valve.
- Turn towards “+“ and fill the system slowly until the desired pressure is achieved.
- Press the knob down to lock.

Setting the oil vaporiser:

- Fill the oil reservoir with oil approx. 60mm of recommended pneumatic lubricant.
- The air pressure can be adjusted with the small screw (2) on the top of the vaporiser.
- The oil adjustment screw (1) is preset and should not have to be adjusted, if adjustment is needed it can be done with a small screw driver. (Warning: this is only for fine adjustment of oil quantity and should be carefully adjusted until the desired level is reached).
- Disconnect the air supply before any maintenance work is carried out on the vaporiser.

Draining the water reservoir:

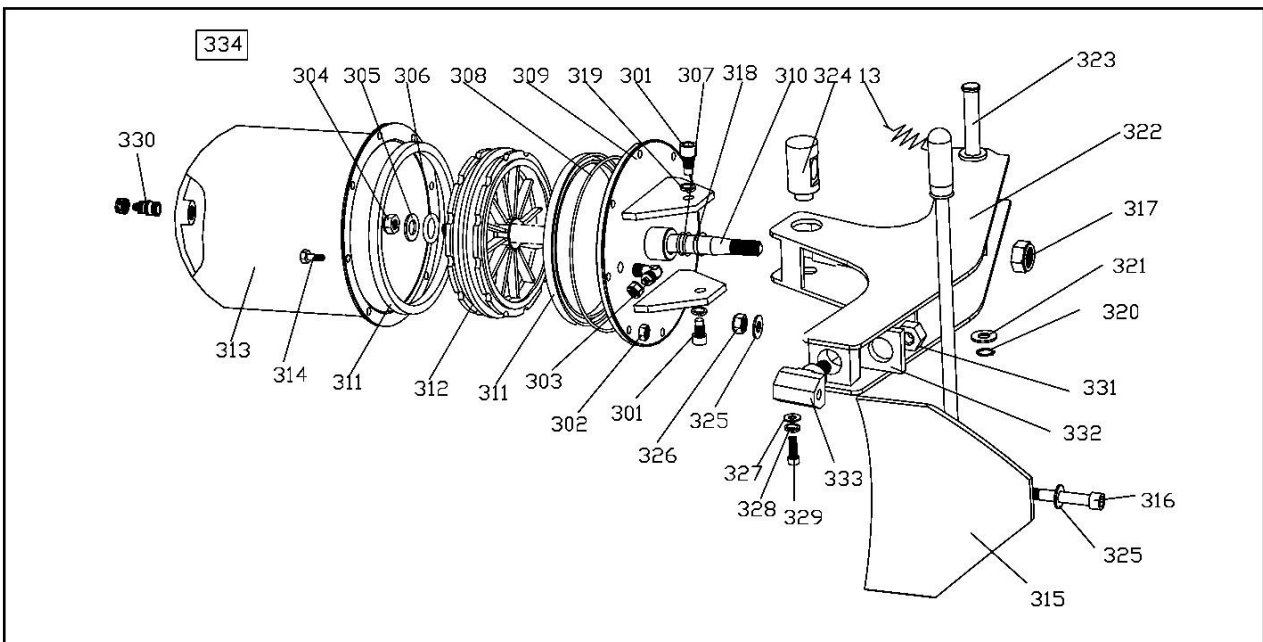
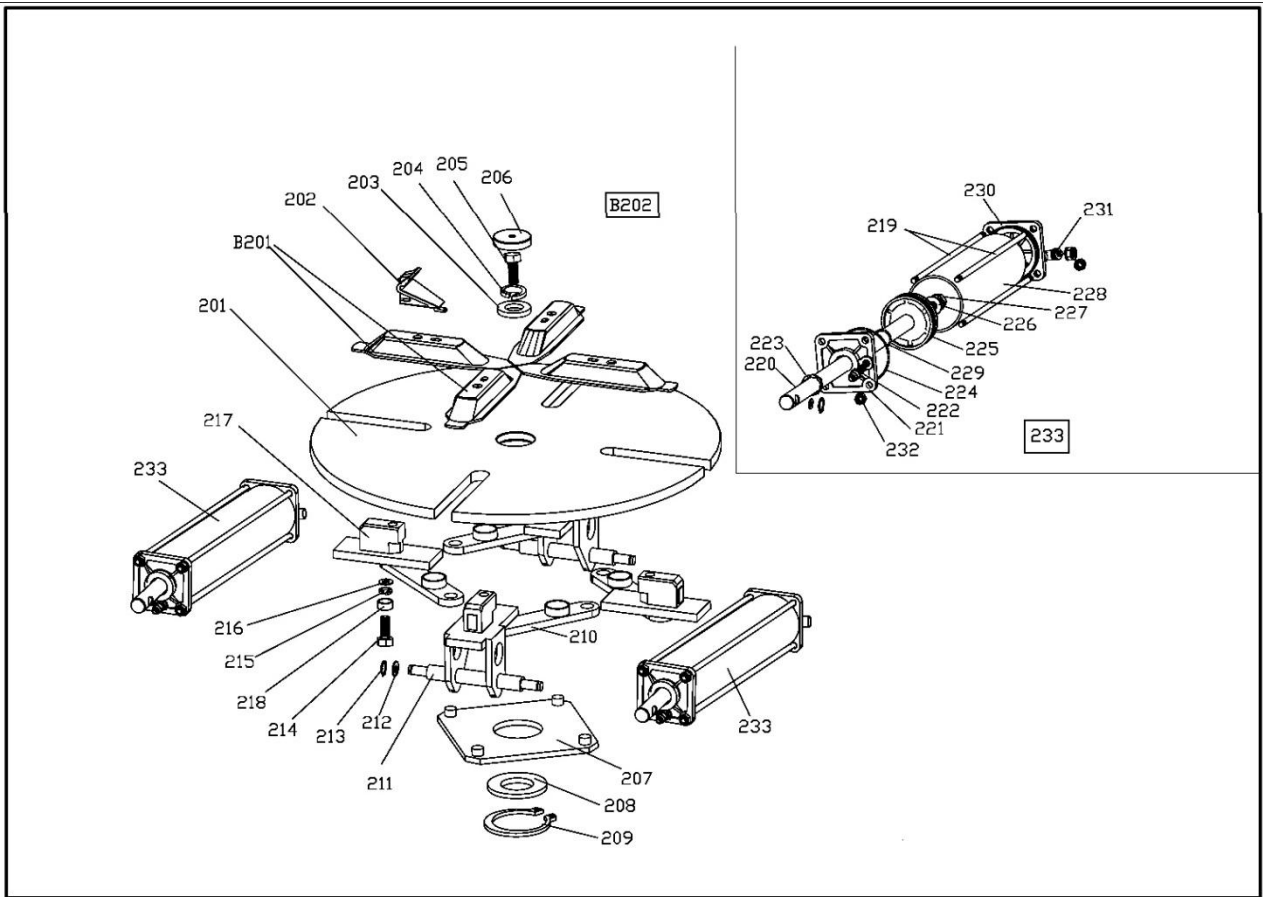
- The reservoir should be checked daily and emptied as required.
- To empty press the drain plug (6) up towards the reservoir to release the water.
- If the system is extremely dirty the reservoir should be removed and cleaned.

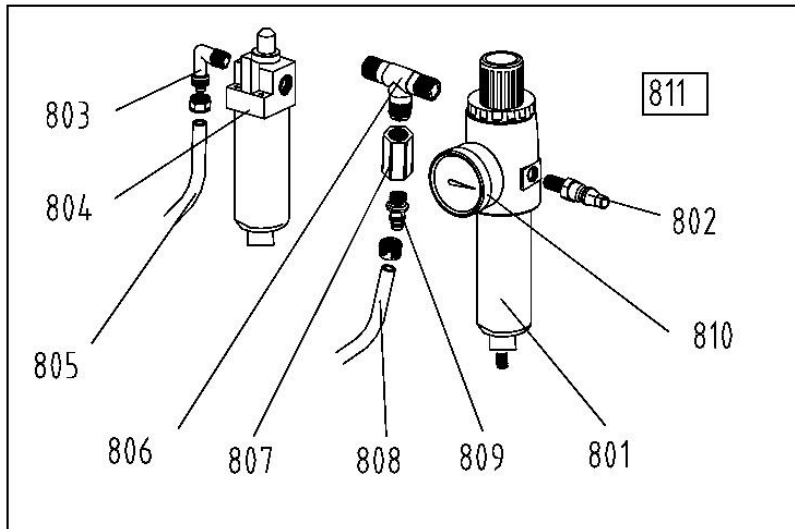
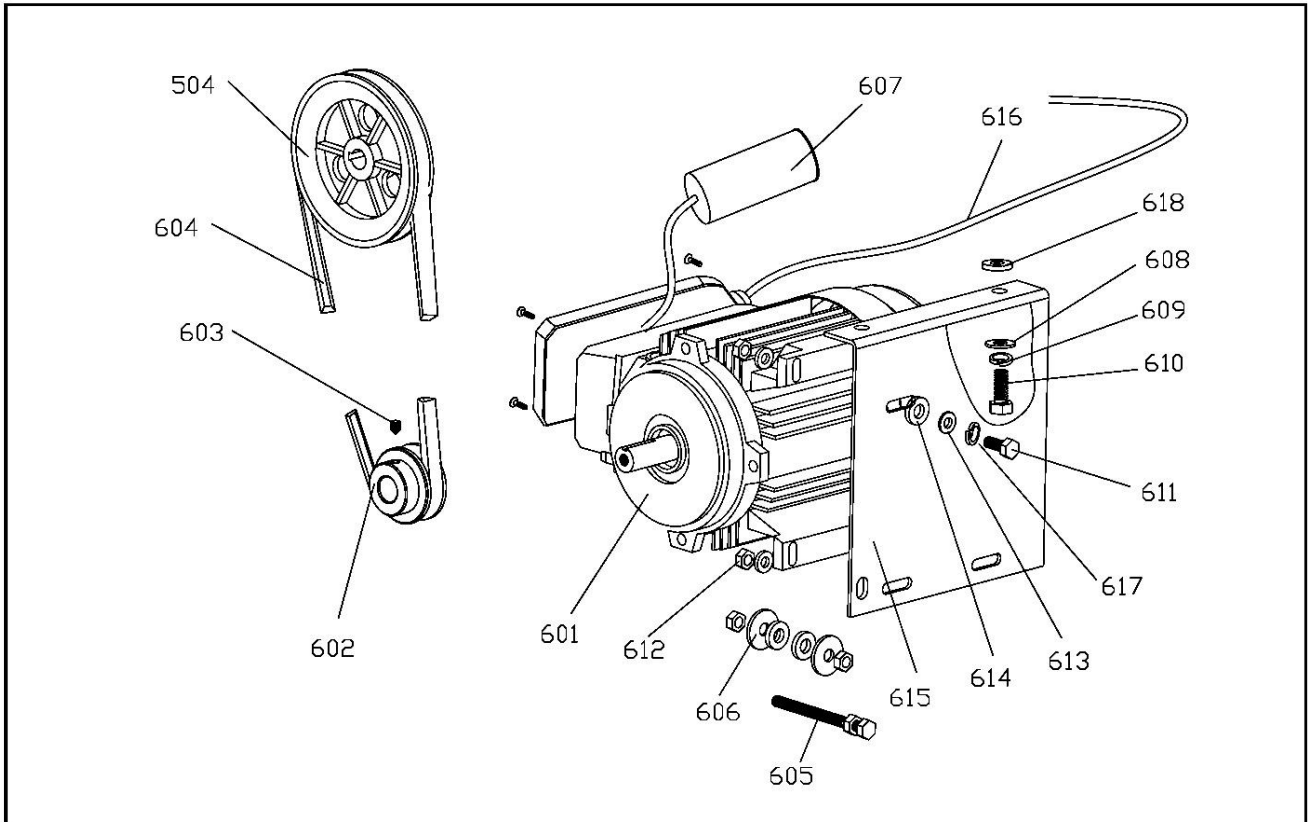
Warning: Unauthorised modifications are not permitted and will result in the loss of guaranty.

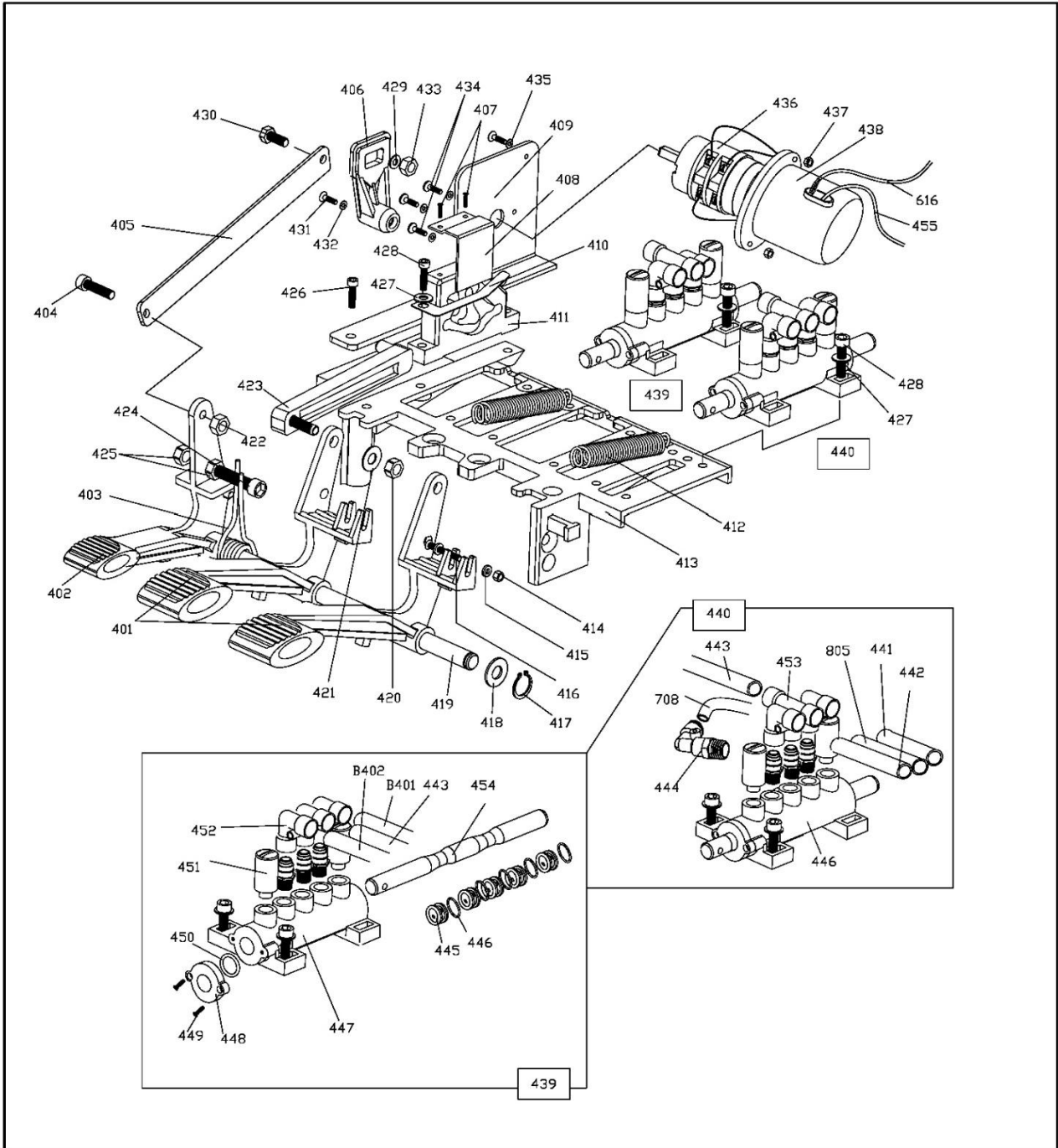
Technical changes for purposes of a technical advancement as well as deviation in colour, errors and printing mistakes are reserved.

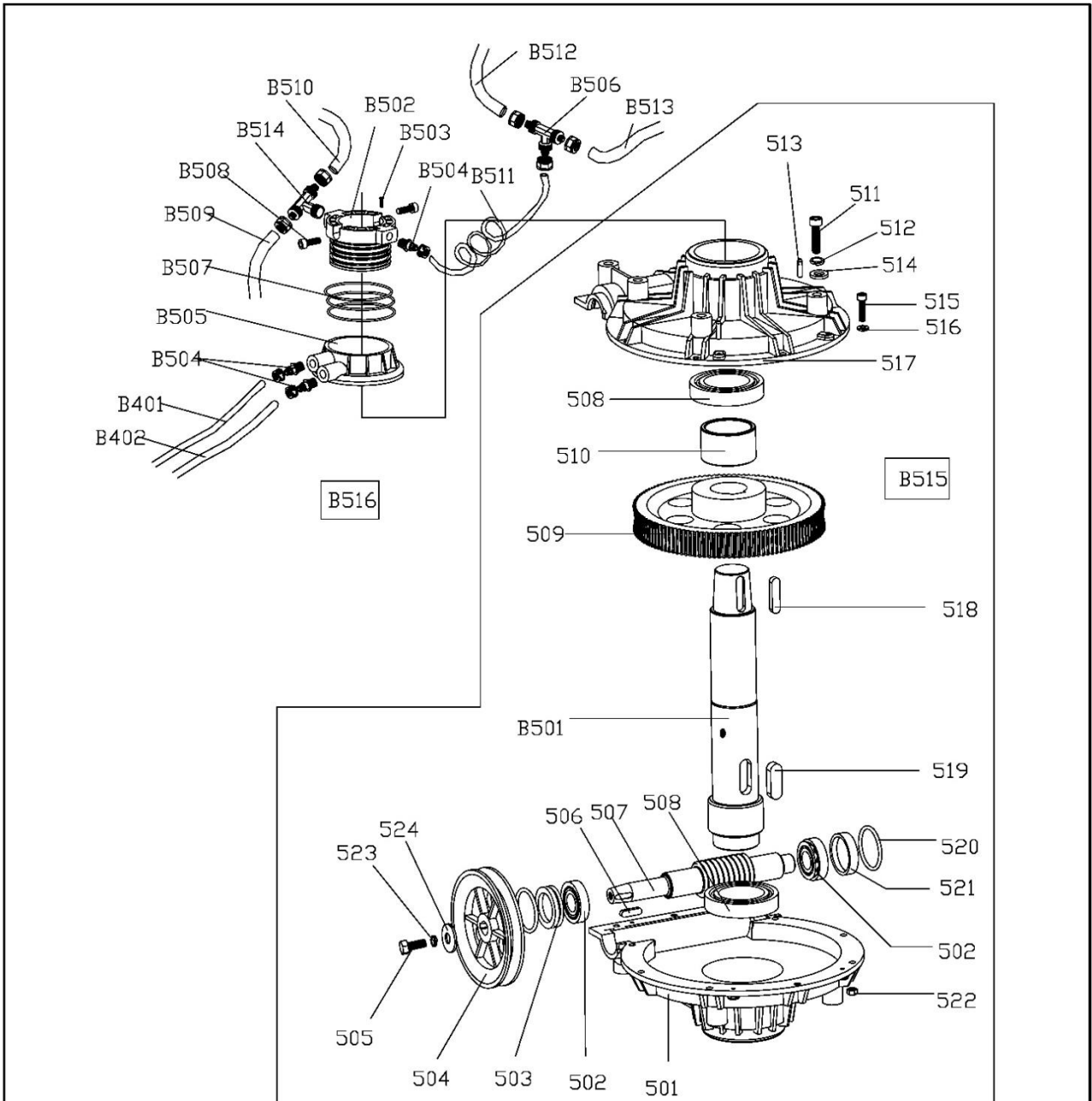
19. Trouble Shooting

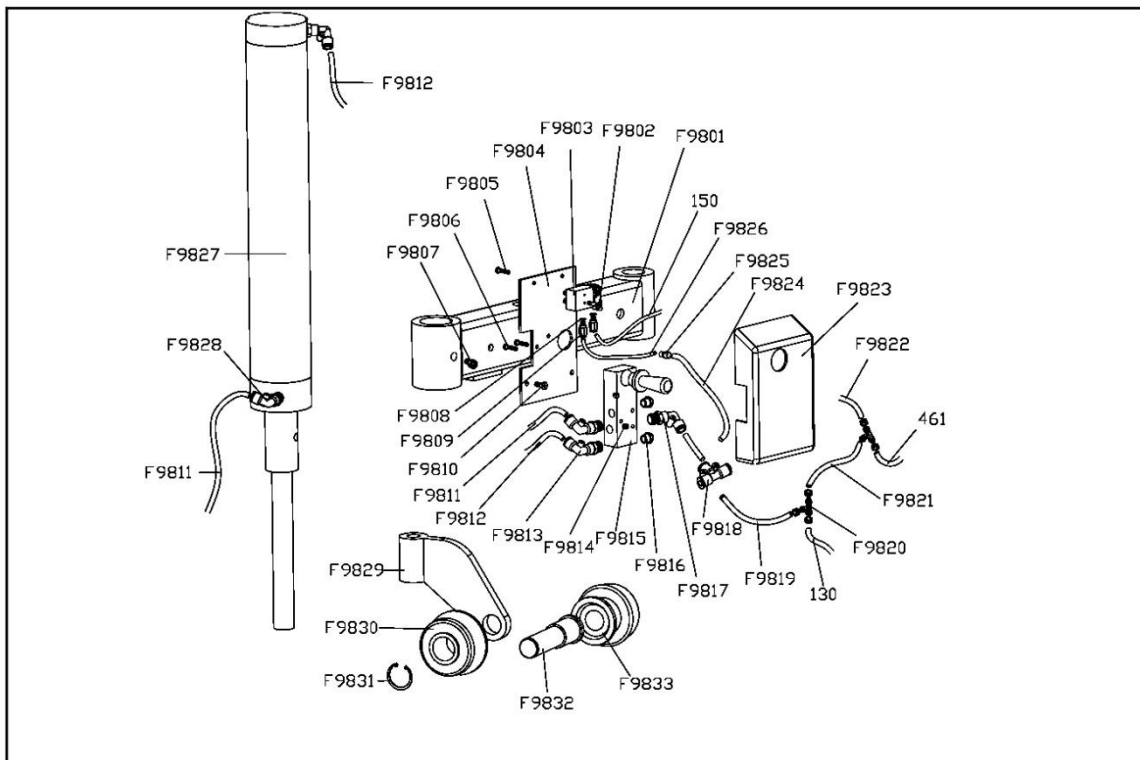
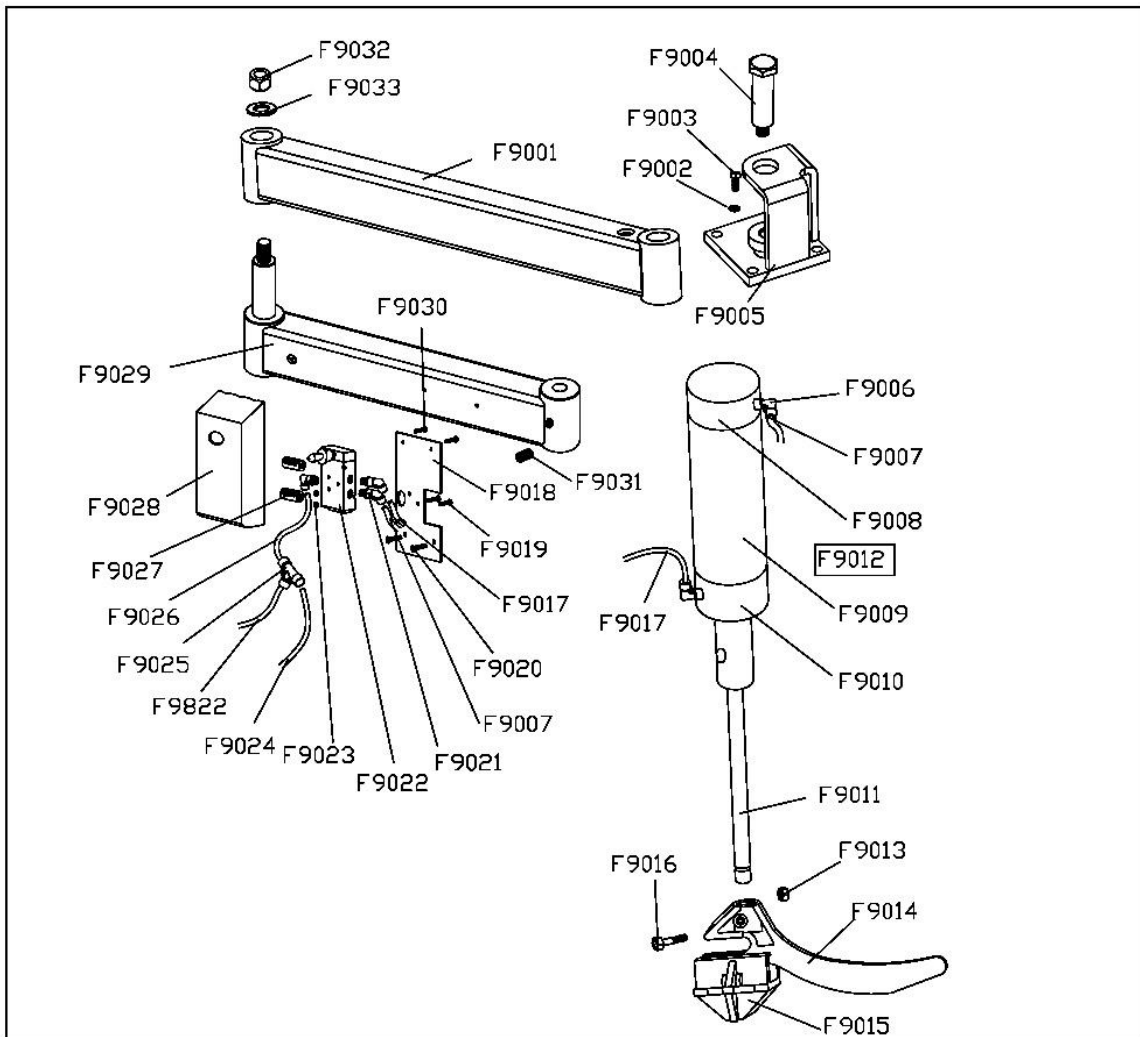
Problem	Reason	Solution
The turntable turns in only one direction	Switch malfunction	Check connections
		Replace
Turntable does not turn	Motor is defect, drive belt is loose or damaged	Replace defect parts
		Adjust belt
The claws are not locking	Leakage in air system	Check connections
	Cylinder is defect	Replace defect parts
The mounting head is touching the rim	Wrong setting on the adjustment plate	Adjust
		tighten screws
The bead breaker does not return to start position	Pedal spring is broken, blocked silencer valve	Replace
		Clean or replace
Bead breaker too weak	Insufficient pressure	Check air connections











ID	Artikel-Nr.	Zeichnungs-Nr.	Menge	Produktname
2		U228.01.08	1	Vordere Abdeckung
3		U203.01.02	1	Linke Abdeckung
4	B-01-013-006	GB/T 70	4	Schraube M6*10
5	B-02-001-007	GB/T 95	4	Unterlegscheibe φ6*14*1.2
6	B-01-013-023	GB/T 70	1	Schraube M8*15
7	B-01-011-003	GB/T 70	4	Schraube M5*16
8	B-02-001-027	GB/T 95	5	Unterlegscheibe φ8*22*2
9	C-35-003-001		4	Gummifuß
10	C-36-001-001	U200.01.50	1	Typ B Gummipuffer
11	B-01-014-002	GB/T 70	4	Schraube M6*40
12	Y-10-001-001	U200.01.58	1	Hebel
13	C-07-005-001	U200.01.36	1	Feder
14	C-35-002-001	U200.01.51	1	Gummiauflage
15	C-44-001-001	U200.01.47	1	Box
16	B-01-013-006	GB/T 70	2	Schraube M8*25
17	B-01-007-015	GB/T 70	4	Schraube M8*20
18	B-01-013-017	GB/T 70	4	Schraube M10*55
102	CX-08-005-001	U200.01.19	1	Spaltenstift
103			2	Schraube M14*30
104			2	Unterlegscheibe φ14.5*47*10
105	C-38-003-001	U200.01.55	1	Einstellgriff
106		U2098.01	1	Horizontaler Arm
107		U2098.03	1	Stift
108		U007.18.06	1	Federträger
109		U007.18.07	2	Feder
110		U007.18.09	2	Scheibe
111			1	Haltering
112	C-03-003-004	U221.03.37	1	L-Anschluss 1/8-φ6
113	CZ-40-002-001	U221.01.09.01	1	Zylinderkolben
114	C-01-002-006		1	V-Dichtung 60*50*6.5
115	B-02-001-007	GB/T 95	2	Unterlegscheibe φ6*14*1.2
116	B-01-007-011	GB/T 70	2	Schraube M6*55
117	CX-06-015-001	U221.01.09.02	1	Zylinder φ60
118	B-01-007-018	GB/T 70	1	Schraube M8*50
119		U228.01.49	1	Griff
120		U228.01.39	1	Feder
121		U228.01.59	1	Plastikabdeckung

122	B-01-001-004	GB/T 1337	1	Selbstsichernde Mutter M8
123		U228.01.22	1	Verriegelungsplatte
124	C-07-001-003	U221.01.40	2	Feder
125	C-03-003-004	U221.03.37	1	L-Anschluss 1/8- ϕ 6
126	C-15-001-001	C211011221	4	Schalldämpfer 1/8"
127			1	Tastenverriegelungs-Griff
128			1	Mutter
129			1	Ventil
130	C-06-001-003		1	Schlauch 6*4
131	C-03-003-004	U221.03.37	1	L-Anschluss 1/8- ϕ 6
132		U228.01.16	1	Vertikaler Arm
133			1	Scheibe
134	'CZ-14-001-002	U200.01.15	1	Kompletter Montagekopf
135	CX-01-010-001	U200.01.17	1	Scheibe
136	B-01-013-014	GB/T 78	1	Schraube M10*25
137	CX-08-032-001	U200.01.15.02	1	Rolle
138	CX-50-012-002	U200.01.15.01	1	Montagekopf
139	C-14-001-001	U200.01.15.04	1	Stift
140	B-01-004-016	GB/T 80	3	Schraube M12*16
141		U2098.07	1	Plastikabdeckung
142		GB/T 78	2	Schraube M4
143	C-06-001-003		1	Schlauch 6*4
144		GB/T 95	4	Unterlegscheibe ϕ 8
145		GB/T 95	4	Federscheibe ϕ 8
146		GB/T 80	4	Schraube M6
147		U2098.08	1	Pneumatische Verriegelung
148				
149			1	Anschluss M5- ϕ 4
150			1	Schlauch 4
151	B-01-001-009	GB/T95	1	Selbstsichernde Mutter M16*1.5
152			1	O-Verdichtung
201		U228.01.13	1	Scheibe ϕ 660 (U2092 ϕ 615) Drehscheibe ϕ 660 (U2092 ϕ 615)
202	CX-18-001-001	U200.01.57	4	Spannbacke
203	CX-09-006-001	U200.01.14	1	Drehplattenscheibe
204	B-02-002-006	GB/T 95	1	Federscheibe ϕ 16

205	B-01-013-022	GB/T 5781	1	Schraube M16*40
206	C-42-002-001	U200.01.44	1	Verschluss
207	CX-08-001-004	U221.01.28	1	Kontrollplatte
208	CX-09-003-001	U200.01.29	1	Scheibe
209	B-03-001-009	GB/T 894	1	Haltering $\phi 65$
210	CX-08-001-006	U221.01.31	4	Strebe
211	CX-01-019-001	U221.01.11	2	Gleitführung mit Stift
212	B-02-001-019	GB/T 95	4	Unterlegscheibe $\phi 12*25*2$
213	B-03-001-001	GB/T 894.1	4	Haltering $\phi 12$
214	B-01-013-021	GB/T 80	4	Schraube M12*80
215	B-02-002-005	GB/T 95	4	Federscheibe $\phi 12$
216	B-02-001-018	GB/T 95	4	Unterlegscheibe $\phi 12*30*3$
217	CX-01-018-001	U221.01.11.01	2	Gleitführung
218	CX-09-004-001	U200.01.30	4	Flache Abstandhalter für Spannmutter
219	C-13-001-003	U221.01.10.04	8	Spanner
220	C-08-001-003	U221.01.10.02	2	Zylinderstange
221	C-13-025-001	U200.01.10.01	2	Flansch ohne Griff
222	C-03-002-010	C2110336	2	Anschluss 1/8- $\phi 8$
223	C-01-002-004	JB/T 6997	2	V-Dichtung UHS-20*28*7.5
224	C-01-001-011	JB1092	4	O-Dichtung 63*2.65
225	C-37-001-001	U200.01.54	2	Kolben
226	B-02-001-019	GB/T 95	2	Unterlegscheibe $\phi 12*25*2$
227	B-01-002-008	GB/T 1337	2	Mutter M12*7*1.5
228	C-60-001-002	U221.01.10.05	2	Spannzylinder
229	C-01-001-007	JB1092	2	O-Dichtung 20*2.65
230	C-13-024-001	U200.01.10.03	2	Flansch ohne Griff
231	C-03-003-005	U221.03.37	2	L-Anschluss 1/8- $\phi 8$
232	B-01-001-004	GB/T 1337	16	Selbstsichernde Mutter M8
233	CZ-14-002-001	U221.01.10	2	Kompletter Spannzylinder
301	B-01-007-043	U200.01.05.05.03	2	Scheibe M14*30 Schraube M14*30
302	B-01-001-003	GB/T 41	12	Selbstsichernde Mutter M6
303	C-03-005-003	C2110353	1	L-Anschluss ¼- $\phi 8$
304	B-01-002-009	GB/T 1337	1	Mutter M16*1.5
305	B-02-001-021	GB/T 95	1	Unterlegscheibe $\phi 16*28*2$

306	C-01-001-006	JB1092	1	O-Dichtung 16*2.65
307	C-01-001-006	JB1092	2	O-Dichtung 20*2.65
308	C-01-001-014	JB1092	2	O-Dichtung 180*3.5
309	CX-03-005-001	U200.01.05.05	1	Abdrückzylinder Deckel (vorne)
310	C-08-002-001	U200.01.05.01	1	Abdrückstange
311	C-01-002-003	JB/T 1091	2	V-Dichtung 185*168*11.5
312	C-11-001-001	U200.01.05.02	1	Kolben
313	CX-50-015-001	U200.01.05.03	1	Abdrückzylinder
314	B-01-007-006	GB/T 70	12	Schraube M6*20
315		U228.01.03	1	Schaufel
316	B-01-007-030	GB/T 70	1	Schraube M12*100
317	B-01-001-009	GB/T 1337	1	Selbstsichernde Mutter M16
318	C-63-001-005	U200.01.05.08	1	Führungsband
319	B-02-002-008	GB/T 95	2	Federscheibe ϕ 14
320	B-03-001-002	GB/T 894.1	1	Haltering ϕ 14
321	B-02-001-021	GB/T 96	1	Unterlegscheibe ϕ 16*28*2
322	CX-04-001-001	U200.01.07	1	Abdrücker
323	CX-01-011-001	U200.01.04	1	Stift
324	CX-01-001-001	U200.01.05.06	1	Drehender Stift
325	B-02-001-019	GB/T 95	2	Unterlegscheibe ϕ 12*25*2
326	B-01-001-006	GB/T 1337	1	Selbstsichernde Mutter M16
327	B-02-001-011	GB/T 5287	1	Unterlegscheibe ϕ 8*30*3
328	B-02-002-003	GB/T93	1	Federscheibe ϕ 8
329	B-01-013-005	GB/T 5783	1	Schraube M8*20
330	C-03-002-010	C2110353	1	Anschluss 1/8- ϕ 8
331		GB/T 1337	1	Selbstsichernde Mutter M16
332		U228.01.03.09	1	Stift
333		U228.01.03.08	1	Stift
334	CZ-14-003-001	U200.01.05	1	Kompletter Abdrückzylinder
401	C-55-002-003	U228.01.06.03	2	Pedal
402	C-55-002-004	U228.01.06.04	1	Pedal
403	C-07-004-001	U200.01.37	1	Drehfeder
404	B-01-007-015	GB/T 70	1	Schraube M8*20
405	CX-03-013-001	U200.01.06.06	1	Verbindungsstange
406	C-38-002-001	U200.01.53	1	Schaltergriff

407	B-01-009-002	GB/T 845	2	Blechschaube ST2.9*12
408	CX-03-007-001	U200.01.06.05	1	Ventildeckel
409	CX-03-012-001	U200.01.06.08	1	Schalterunterstützun
410	C-22-001-001	U200.01.81	1	Unterlegscheibe
411	C-41-001-001	U200.01.06.15	1	Ventil
412	C-07-003-001	U200.01.38	2	Feder
413	C-51-001-001	U200.01.06.01	1	Pedalunterstützung
414	B-01-001-001	GB/T95	2	Selbstsichernde Mutter M4
415	B-02-001-002	GB/T 1337	4	Unterlegscheibe ϕ 4

416	B-01-008-005	GB/T 973	2	Schraube M4*30
417	B-03-001-001	GB/T 894.1	2	Haltering ϕ 12
418	B-02-001-019	GB/T95	2	Unterlegscheibe ϕ 12*25*2
419	CX-03-010-001	U200.01.06.07	1	Pedalwelle
420	B-01-001-004	GB/T 1337	1	selbstsichernde Mutter M8
421	B-02-001-009	GB/T 5287	1	Unterlegscheibe ϕ 8*17*1.2
422	B-01-001-004	GB/T 41	1	selbstsichernde Mutter M8
423	C-41-002-001	U200.01.06.13	1	Raststange
424	B-01-007-018	pcs	1	Schraube M8*50
425	B-01-003-001	GB/T 41	2	Mutter M8
426	B-01-007-005	GB/T 70	2	Schraube M6*16
427	B-02-001-006	GB/T95	9	Unterlegscheibe ϕ 6*12*1
428	B-01-007-006	GB/T 70	9	Schraube M6*20
429	B-02-001-006	GB/T95	1	Unterlegscheibe ϕ 6*12*1
430	B-01-007-006	GB/T 70	1	Schraube M6*20
431	B-01-008-005	GB/T 845	1	Schraube M4*30
432	B-02-001-001	GB/T95	1	Unterlegscheibe ϕ 3
433	B-01-001-003	GB/T 41	1	selbstsichernde Mutter M6
434	B-01-010-012	GB/T 845	4	Schraube M4*16
435	B-02-001-002	GB/T95	4	Unterlegscheibe ϕ 4
436	C-49-001-003		1	Schalter
437	B-01-002-002	GB/T 41	1	Mutter M4
438	C-33-005-001	U200.01.06.14	1	Schalterabdeckung
439	CZ-14-006-010		1	komplettes 5-Wege-Ventil
440	CZ-14-006-012		1	komplettes 5-Wege-Ventil
441	C-06-001-002	U200033003	1	Schlauch 5*8
442	C-06-001-002	U200033003	1	Schlauch 5*8

443	C-06-001-002	U200033003	1	Schlauch 5*8
444	C-03-003-005		1	L-Anschluss 1/8-φ8
445	C-34-001-001	U200.01.06.10	10	Abstandhalter
446	C-01-001-004	JB1092	12	O-Dichtung 12*20*4
447		U200.01.06.09	1	5-Wege-Ventil
448	C-34-001-002	U200.01.06.11	2	Ventilabdeckung
449	B-01-012-005	GB/T 70	4	Blechschraube ST2.9*16
450	C-01-001-004	JB1092	2	O-Dichtung 12*20*4
451	C-15-001-001	GB/T 70	4	Schalldämpfer 1/8
452	C-03-003-005		4	L-Anschluss 1/8-φ8
453	C-04-001-007		1	T-Anschluss 1/8-2*φ8
454	CX-50-011-001	U200.01.06.12	2	Ventilstange
455	CZ-13-037-002		1	Draht 3*1.5
456	C-34-001-008	U200.01.06.09.02	1	5-Wege-Ventil
501	CZ-50-001-001	U200.01.32.03B	1	Bodenabdeckung
502	C-16-001-001	GB/T 297	2	Lager 30204
503	C-01-003-001	GB/T 10708	1	Dichtung φ20*35*8
504	CZ-50-004-001	U200.01.32.05	1	Rolle
505	B-01-013-005	GB/T 70	1	Schraube M8*20
506	B-04-001-001	GB/T 1096	1	Taste 6*20
507	CZ-13-020-001	U200.01.32.04	1	Schneckenschraube
508	C-16-001-002	GB/T 292	2	Lager 6010
509	C-23-001-001	U200.01.32.01	1	Schneckengetriebe
510	CZ-01-020-001	U200.01.32.06	1	Abstandhalter
511	B-01-013-017	GB/T 5783	6	Schraube M10*55
512	B-02-002-004	GB/T93	6	Federscheibe φ10
513	B-06-001-001	GB/T 117	2	Stift 6*20
514	B-02-001-014	GB/T95	6	Unterlegscheibe φ10*20*2
515	B-01-007-006	GB/T 70	10	Schraube M6*20
516	B-02-001-007	GB/T95	10	Unterlegscheibe φ6*14*1.2
517	CZ-50-002-001	U200.01.32.03A	1	Oberdeckel
518	B-04-001-002	GB/T 1096	1	Taste 10*40
519	B-04-001-003	GB/T 1096	1	Taste 14*40
520	C-01-001-018	JB1092	2	O-Verdichtung φ27.8*3.1
521	C-45-001-001	U200.01.32.07	1	Dichtung
522	B-01-001-003	GB/T 1337	10	selbstsichernde Mutter M6
523	B-02-002-003	GB/T93	1	Federscheibe φ8
524	B-02-001-011	GB/T95	2	Unterlegscheibe φ8*30*3
601		C2110201	1	Motor MY8024

602	CX-01-012-001	U200.01.33	1	Motorrolle
603	B-01-004-010	GB/T 71	1	Schraube M8*12
604	S-042-000028-0	GB/T11544-1997	1	Riemen A-28
605	B-01-013-011	GB/T 71	1	Schraube M8*70
606	B-02-001-011	GB/T 71	2	Unterlegscheibe φ8.5*30*3
607		GB/T 11544	1	Kondensator
608	B-02-001-014	GB/T 1337	2	Unterlegscheibe φ10*20*2
609	B-02-002-004	GB/T93	2	Federscheibe φ10
610	B-01-013-014	GB/T 70	2	Schraube M10*25
611	B-01-013-006	GB/T 70	4	Schraube M8*25
612	B-01-003-001	GB/T95	4	Mutter M8
613	B-02-001-010	GB/T 1337	8	Unterlegscheibe φ8*22*1.5
614	C-35-005-001	U200.01.56	6	Gummischeibe
615	CX-03-008-001	U221.01.34	1	Motorhalterung
616	CZ-13-038-002	RVV	1	Draht 5*1
617	B-02-002-003	GB/T93	2	Unterlegscheibe φ8
618	C-35-005-001	U200.01.56	2	Gummischeibe
801	C-15-002-021	U2000332	1	Druckentlastungsfilter
802	C-17-001-001	U2000333	1	Düse
803	C-03-005-003	U2000343	1	L-Verbindung
804	C-15-002-004		1	Wartungseinheit
805	C-06-001-002	U200033003	1	Schlauch 5*8
806	C-04-002-001		1	T-Verbindung
807	C-03-002-006		1	Anschluss 1/4-1/4
808	C-06-001-002		1	Schlauch 5*8
809	C-03-002-010		1	Verbindung 1/8- φ8
810			1	Manometer
811	CZ-14-014-002		1	Öler-einheit
F9001	CX-25-003-001	U009.02	1	Reifenpressarm 1
F9002	B-02-002-004	GB/T 1337	4	Federscheibe φ10
F9003	B-01-004-014	GB/T 70	4	Schraube M10*30
F9004	CX-25-002-001	U009.01.03	1	Stift
F9005	CX-25-001-001	U009.01	1	Halter
F9006	C-03-003-004	U2000343	2	L-Anschluss 1/8-φ6
F9007	C-06-001-011		1	Schlauch 6*4
F9008	CX-25-004-042	U009.06.02	1	Rückabdeckung
F9009	C-60-001-007	U009.06.03	1	Lichtzylinder
F9010	CX-25-004-041	U009.06.01	1	vordere Abdeckung
F9011	C-50-024-001	U009.06.04	1	Kolbenstange φ25*750
F9012	CZ-14-002-011	U209	1	kompletter Zylinder
F9013	B-01-001-003	GB/T95	1	selbstsichernde Mutter

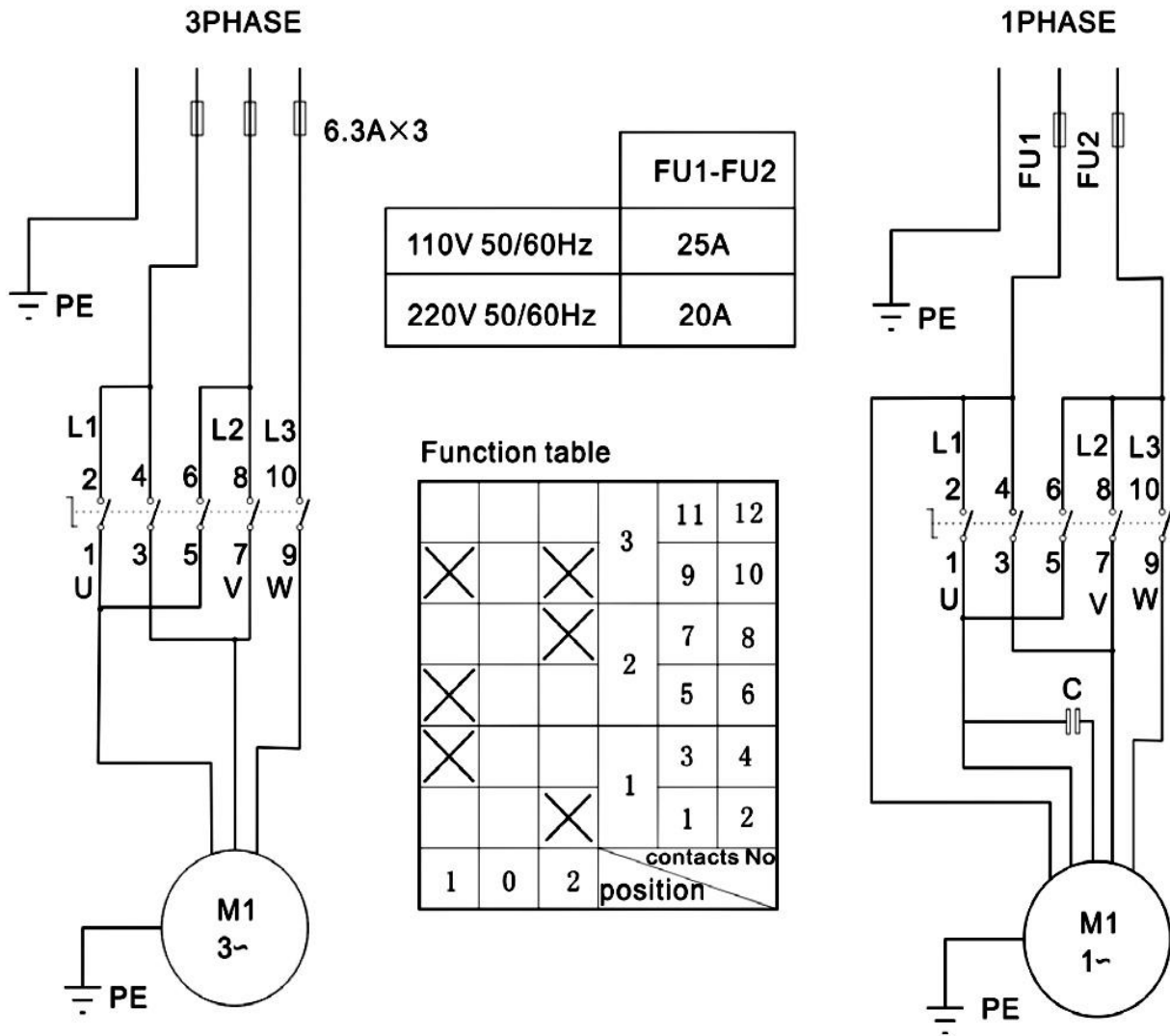
				M6
F9014	C-31-001-005	U009.04	1	Reifen Presskopf
F9015	C-31-001-003	U008.09.02	1	unterer Reifen Presskopf
F9016	B-01-007-008	GB/T 70	1	Schraube M6*30
F9017	C-06-001-011		1	Schlauch 6*4
F9018	CX-06-008-001	U005.20	1	Schalttafel
F9019	B-01-008-005	GB/T 70	4	Schraube M4*30
F9020	B-01-011-003	GB/T 70	2	Schraube M5*16
F9021	C-03-003-001		3	L-Anschluss ¼-φ6
F9022	C-05-005-001		1	Ventil
F9023	B-01-002-002		2	Mutter M4
F9024	C-06-001-011		1	Schlauch 6*4
F9025	C-03-006-002		1	T-Anschluss 3-φ6
F9026	C-06-001-011		1	Schlauch 6*4
F9027	C-15-001-001		2	Schalldämpfer 1/8
F9028	C-06-020-001	U007.18.10	1	Steuerventil Schild
F9029	CX-25-004-001	U009.03	1	Reifen Pressarm 2
F9030	B-01-008-004		2	Schraube M4*16
F9031	B-01-007-042		1	Schraube M10*16
F9032	CX-09-006-001		1	Drehscheibe
F9033	B-01-001-009		1	selbstsichernde Mutter M16*1.5
0098-2# Hilfsarm				
F9801		U2098.02	1	Reifen Pressarm
F9802		GB/T 70	2	Schraube M4
F9803			1	Reifen Pressblock
F9804	CX-06-008-001	U005.20	1	Schalttafel
F9805	B-01-008-004	GB/T 70	2	Schraube M4*16
F9806	B-01-008-005	GB/T 70	2	Schraube M4*30
F9807		GB/T 70	1	Schraube M10
F9808			2	O-Dichtung
F9809			2	Anschluss M5- φ4
F9810	B-01-010-007	GB/T 70	2	Schraube M5*10
F9811	C-06-001-011		1	Schlauch 6*4
F9812	C-06-001-011		1	Schlauch 6*4
F9813	C-03-003-001		2	L-Anschluss 1/4-φ6
F9814	B-01-002-002	GB/T 41	2	Mutter M4
F9815	C-05-005-001		1	Steuerventil
F9816			2	Schalldämpfer
F9817	C-03-003-001		1	L-Anschluss 1/4-φ6
F9818			1	T-Anschluss 3-φ6
F9819	C-06-001-011		1	Schlauch 6*4
F9820			2	T-Anschluss 1/8-2*φ6

F9821	C-06-001-011		1	Schlauch 6*4
F9822	C-06-001-011		1	Schlauch 6*4
F9823	C-06-020-001	U007.18.10	1	Steuerventilschild
F9824	C-06-001-011		1	Schlauch 6*4
F9825			1	Schnellwechseladapter
F9826			1	Schlauch 6X4
F9827			1	Zylinder
F9828	C-03-003-001		2	L-Anschluss 1/4-φ6
F9829		U2098.04	1	Reifenandrucksrolle Unterstützung
F9830		U2098.06.01	1	Reifen Pressrolle 1
F9831			1	Haltering
F9832			1	Rollenwelle
F9833		U2098.06.02	1	Reifenpressrolle 1
B001		U203.01.01	1	Körper
B201	CX-01-017-002	U200.01.12	4	Schlitten
B202		U228.01.13	1	Komplette Drehscheibe φ660
B401	C-06-001-002	U200033003	1	hose 5*8 Schlauch 5*8
B402	C-06-001-002	U200033002	1	Schlauch 5*8
B501	CZ-13-021-001	U200.01.32.02	1	Schneckenradwelle
B502	CZ-40-001-002	U200.01.43.02	12	Drehdurchführungsdorn
B503	B-01-004-001	GB/T 5783	13	Schraube M4*6
B504	C-03-002-010	C2110342	1	Anschluss 1/8"-φ8
B505	CZ-33-006-001	U200.01.43.01	1	drehendes Ventilgehäuse
B506	C-03-006-007	C2110341	3	T-Anschluss 3*φ8
B507	C-01-001-010	JB1092	2	O-Dichtung 59.9*2.62
B508	B-01-007-006	GB/T 70	1	Schraube M6*20
B509	C-06-001-002		1	Druckluftzufuhrschlauch 5*8
B510	C-06-001-002		1	Druckluftzufuhrschlauch 5*8
B511	C-58-001-001		1	Schlauch 5.5* φ8
B512	C-06-001-002		1	Abluftschlauch 5*8
B513	C-06-001-002		1	Abluftschlauch 5*8
B514	C-03-004-001	C2110341	1	T-Anschluss 1/8-2*φ8
B515	CZ-14-005-001	U200.01.32	1	komplettes Getriebe
B516	CZ-14-004-003	U200.01.43	1	Abzuschließende Drehdurchführung
B701	Y-07-001-001	U2001033001	1	Manometer
B702	Y-14-001-002	U200033003	1	Schlauch
B703	C-54-001-001	U2000334	1	Mutter
B704	C-03-002-007		1	Anschluss 1/4-1/4
B705	B-02-001-004	GB/T 1337	1	Unterlegscheibe φ13
B706	C-05-002-002	AR2000	1	pressure reducer

B707	C-03-003-002		1	L-Anschluss 1/4-φ8
B708	C-06-001-002	U200033002	1	Schlauch 5*8
B709		U2000330	1	komplettes Füllgewehr
A001		U203.01.01A	1	Körper
A201	CZ-14-007-003	U228.01.13A	1	komplette Drehscheibe Φ660A
A401	C-55-002-002	U228.01.06.02	1	Pedal
A402	CZ-14-006-0041		1	komplettes 5-Wege-Ventil
A403	CX-50-010-001	U221.01.65A	1	Ventilstange
A404	C-09-001-002		1	Stecker
A501	CZ-13-021-002	U200.01.32.02A	1	Schneckenradwelle
A502	CZ-14-004-003	U200.01.43	1	komplettes Getriebe
A01	C-03-001-007	1/4-φ10	4	Anschluss 1/4-φ10
A02	C-58-001-003	6.5*φ10	4	Schlauch 6.5* φ10
A03	C-06-001-002	5X8	1	Schlauch 5*8
A04	C-03-006-007	3*φ8	1	T-Anschluss 3*φ8
A05	C-06-001-002		1	Schlauch 5*8
A06	C-58-001-001	5.5*φ8	1	hose 5.5*φ8 Schlauch 5.5*φ8
A07	C-03-002-010	1/8-φ8	1	Anschluss 1/8-φ8
A08	C-40-003-001	U221.01.43.01A	1	drehendes Ventilgehäuse
A09	C-06-001-002		1	Schlauch 5*8
A10	C-06-001-002		1	Schlauch 5*8
A11	C-06-001-005		1	Schlauch 12*8
A12	C-06-001-005		1	Schlauch 12*8
A13	C-06-001-002		1	Schlauch 5*8
A14	B-01-007-008	GB/T 70	4	Schraube M6*30
A15	C-40-005-004	U221.01.60.05A	1	Auslassventil
A16	C-40-005-007	U221.01.60.07A	1	Gummiplatte
A17	B-01-007-006	GB/T 70	2	Schraube M6*20
A18	C-40-005-001	U221.01.60.06A	1	Auslassventilabdeckung
A19	B-01-001-003	GB/T95	6	Mutter M6
A20	C-06-001-002	5X8	1	Schlauch 5*8
A21	C-03-003-002	1/4-φ8	1	L-Anschluss 1/4-φ8
A22	CX-03-009-001	U221.01.60.08A	1	Entlüftungsventil Unterstützung
A23	B-01-001-003	GB/T95	2	Mutter M6
A24	B-01-007-005	GB/T 70	2	Schraube M6*16
A25	C-04-001-007	1/8-2*φ8	1	T-Anschluss 1/8-2*φ8
A26		GB/T95	2	Mutter M10
A27		GB/T 70	2	Schraube M10
A28			1	L-Anschluss 1"
A29			1	L-Anschluss 1"

A30		U009.07	1	Tank
A31	C-06-001-005	12X8	1	Schlauch 12*8
A32	C-05-003-001	GB-TQ-L10	1	Sicherheitsventil
A33			1	T-Anschluss
A34	C-06-001-002	12X8	1	Schlauch 12*8
A35	C-06-001-002	12X8	1	Schlauch 12*8
A36	C-03-001-004	1/2-φ12	7	Anschluss 1/2-φ12
A37	Y-14-001-001	1.5m	1	Verbindungsschlauch
A38	C-06-001-005	12X8	1	Schlauch 12*8
A39	C-06-001-005	12X8	1	Schlauch 12*8
A40	CZ-14-018-001		1	komplettes Manometer
A41	C-03-002-010	1/8-φ8	2	Anschluss 1/8-φ8
A42	C-01-001-017	89*2	1	O-Dichtung 89*2
A43	C-01-001-026	φ62*2.8	3	O-Dichtung φ62*2.8
A44	B-01-007-006	GB/T 70	2	Schraube M6*20
A45	C-06-001-002	5X8	1	Schlauch 5*8
A46	C-03-006-004	1/8-2*φ8	1	T-Anschluss 1/8-2*φ8
A47	C-06-001-002	5X8	1	Schlauch 5*8
A48	B-01-004-001	GB/T 70	2	Schraube M4*6
A49	C-40-001-001	U221.01.43.02A	1	Drehdurchführungsdorn
A50	C-03-001-003		4	Anschluss 3/8-φ10
A51			4	Scheibe
A52	C-06-031-001	221.01.70A	1	komplette Manometerbox
A53	CX-13-028-001	221.01.69.03A	1	Taste
A54	C-07-001-001	221.01.69.04A	1	Feder
A55	CX-13-019-001	221.01.69.01A	1	Ventil
A56	C-09-001-002		1	Stecker
A57	C-01-001-001	4*1.8	1	O-Dichtung 4*1.8
A58	C-01-001-002	6.9*1.8	1	O-Dichtung 6.9*1.8
A59	CX-13-029-001	221.01.69.02A	1	Welle
A60	P-23-001-001	10kg	1	Manometer
A61	CZ-13-004-001	221.01.68A	1	Sitz mit Löchern
A62		1/8-φ8	2	Anschluss 1/8-φ8
A63	B-01-008-005	GB/T 70	7	Schraube M4*30
A64	CX-06-028-001	221.01.71A	1	Manometerbox Unterstützung
A65	B-01-007-005	GB/T 70	2	Schraube M6*16
A66	B-01-001-005	GB/T95	1	selbstsichernde Mutter M10
A67	B-02-001-014	GB/T 1337	1	Unterlegscheibe φ10*20*2
A68	CX-06-050-001	U221.01.62.03A	1	Federhalter
A69	C-07-006-001	U221.01.67A	1	Feder
A70	B-01-007-026	GB/T 70	1	Schraube M10*60
A71			1	Abzuschließende Drehdurchführung

22. Circuit Diagram



Space for notes:

Space for notes:

Space for notes:



The company

Twin Busch GmbH | Amperestr. 1 | D-64625 Bensheim

declares hereby, that the **vertical tyre changer**

TW X-01, TW X-31, TW X-36, TW X-36 WDK, TW X-39, TW X-98
 (TW 1801, TW 1831, TW 1836, TW 1839, TW 1898)

serial no.

in the configuration placed on the market by us, meets the relevant safety and health requirements, as required by the following EC directive(s) in it's/their current version(s).

EG-directive(s)

2006/42/EC machine

Applied harmonized standards and regulations

EN 60204-1/A1:2009 part 1 Safety of machinery - Electrical equipment of machines

CE Certificate

CE-C-0928-11-66-02-2B	date of issue:	09.10.2013
	place of issue:	London
	technical file no.:	TF-C-0928-11-66-02-2A

Certification body

CCQS UK Ltd.,
 Level 7, Westgate House, Westgate Road,
 London W5 1YY UK
 Notified Body Appointment No. 1105

Any alteration to the equipment, improper use or installation void this declaration.

Authorized person to compile technical documentation is: Michael Glade (adress as below)



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Authorized signatory: Michael Glade
 Bensheim, 08.12.14 Qualitätsmanagement



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