

Technical Data, Circuit diagrams and Data Sheets

SBR Small Sewage Treatment Plant Klaro E Professional
SBR Small Sewage Treatment Plant easyOne

Control unit
KLcontrol.S
KLcontrol.M



Table of contents

1. TECHNICAL DATA FOR CONTROLS	2
2. CIRCUIT DIAGRAMS	3
3. DATA SHEETS / COMPRESSOR INSTRUCTIONS	7

1. Technical data for controls

1. Technical data for controls

1.1 Technical Data for KLcontrol

	KLARO <i>control.S</i>	KLARO <i>control.M</i>
As per control panel bay housing	DIN IEC 61554	DIN IEC 61554
Front panel dimensions	192 mm wide, 72 mm high	192 mm wide, 96 mm high
	120 mm deep	165 mm deep
Controls (without USB port)	IP65	IP65
Saving the configuration (protected against power failure)	to EEPROM	to EEPROM
Update function	via USB	via USB
Log entries	10,000	10,000
Mains voltage (AC)	100 V – 240 V	100 V – 240 V
Mains frequency	50 Hz – 60 Hz	50 Hz – 60 Hz
Power consumption (rated value))	6.3 A	12.5 A
Overvoltage category	2	2
Contamination level	2	2
Communication module interface	RS232	RS232
Graphic display	2.8" colour	3.2" colour

1.2 Operating environment

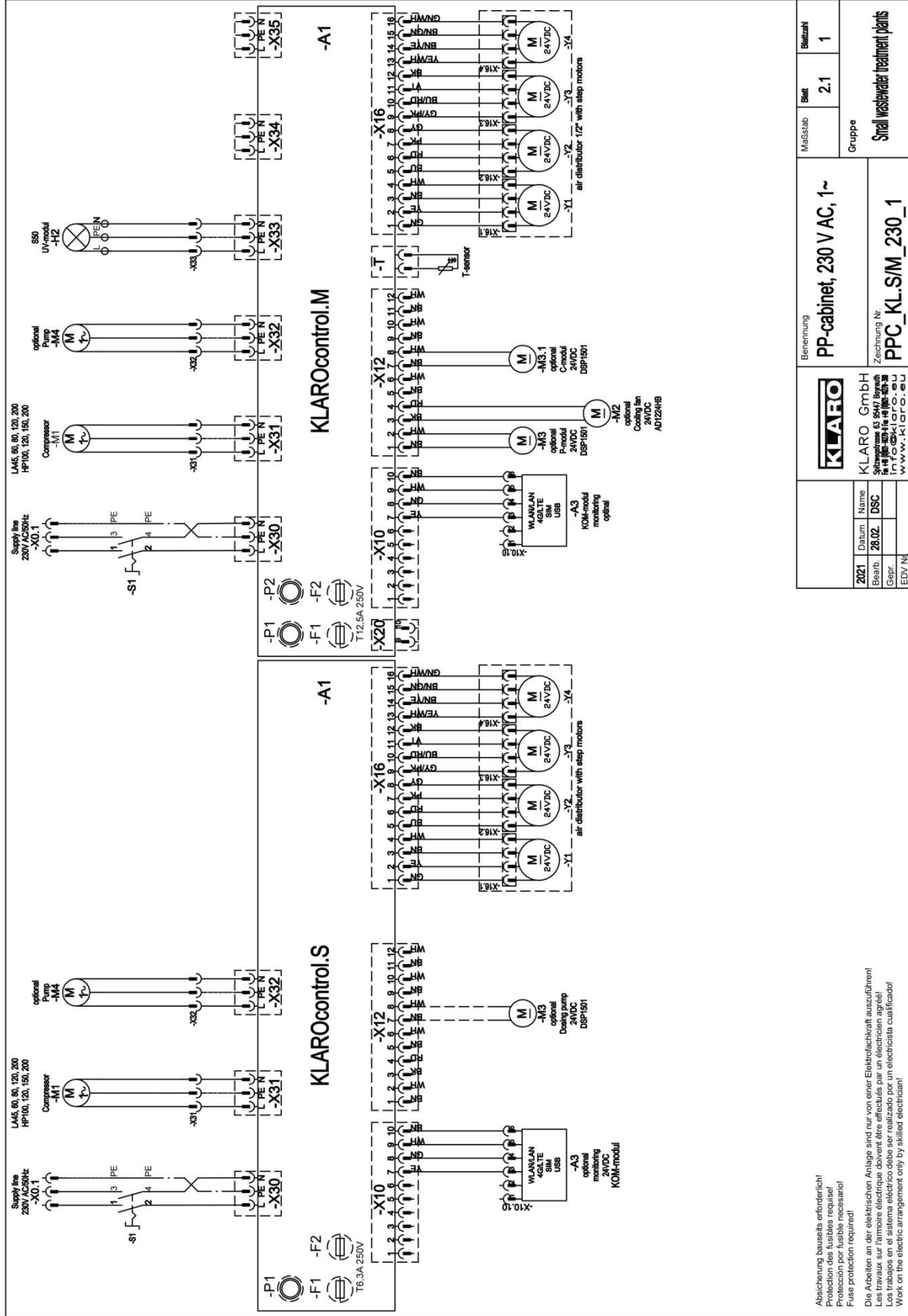
The KLARO*control* wastewater treatment system controller may only be operated inside a control cabinet, frost-free and dry. Operating environment inside the control cabinet:

- Temperature of the installation room: +10 °C to +40 °C
- Relative humidity of the installation room: < 60 %
- Not for use in potentially explosive atmospheres! There must be no risk of fire or explosion in the operating environment.

2. Circuit diagrams

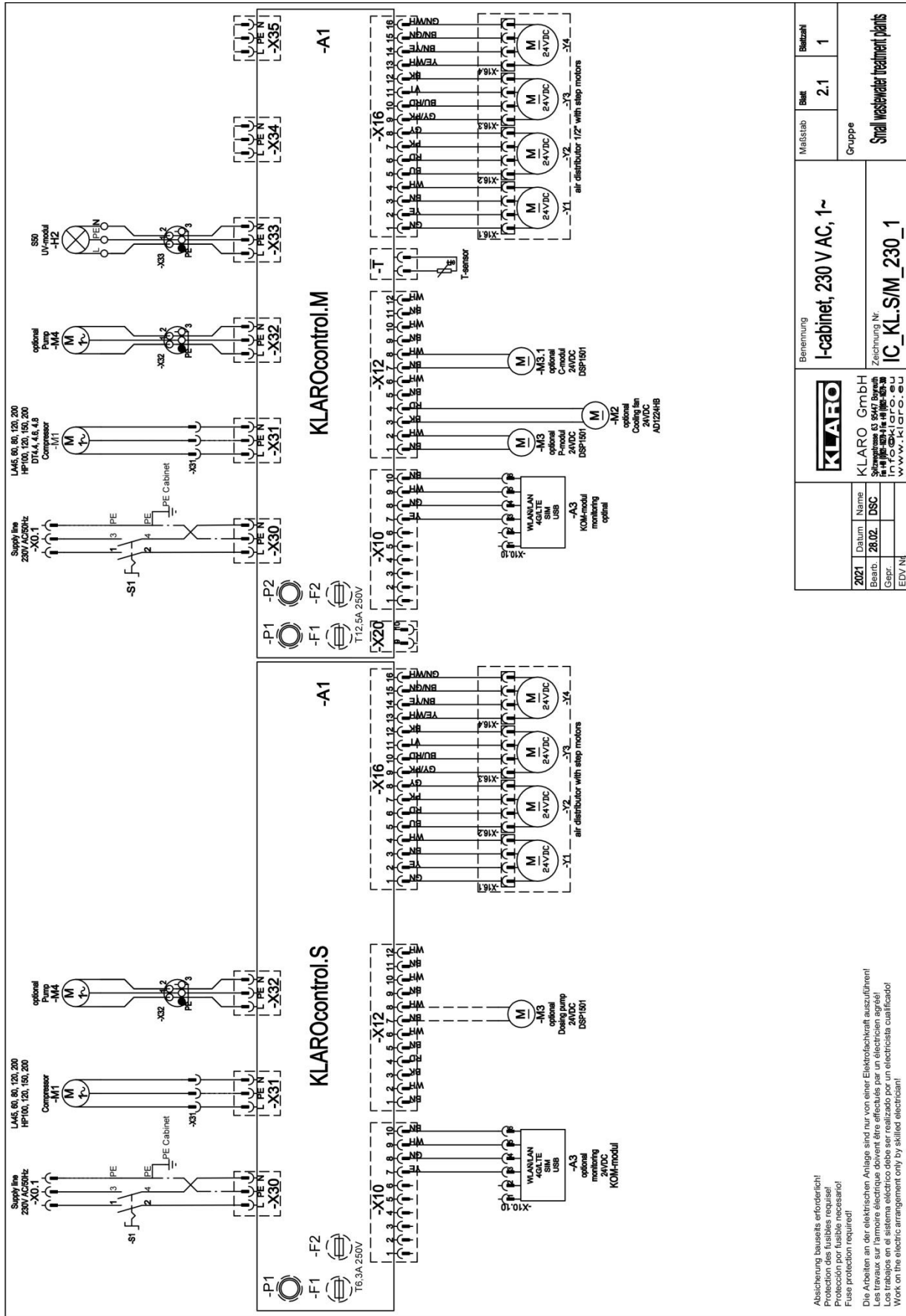
2. Circuit diagrams

2.1 PP-Cabinet with KLcontrol.S and KLcontrol.M



2. Circuit diagrams

2.2 I-Cabinet with KLcontrol.S and KLcontrol.M



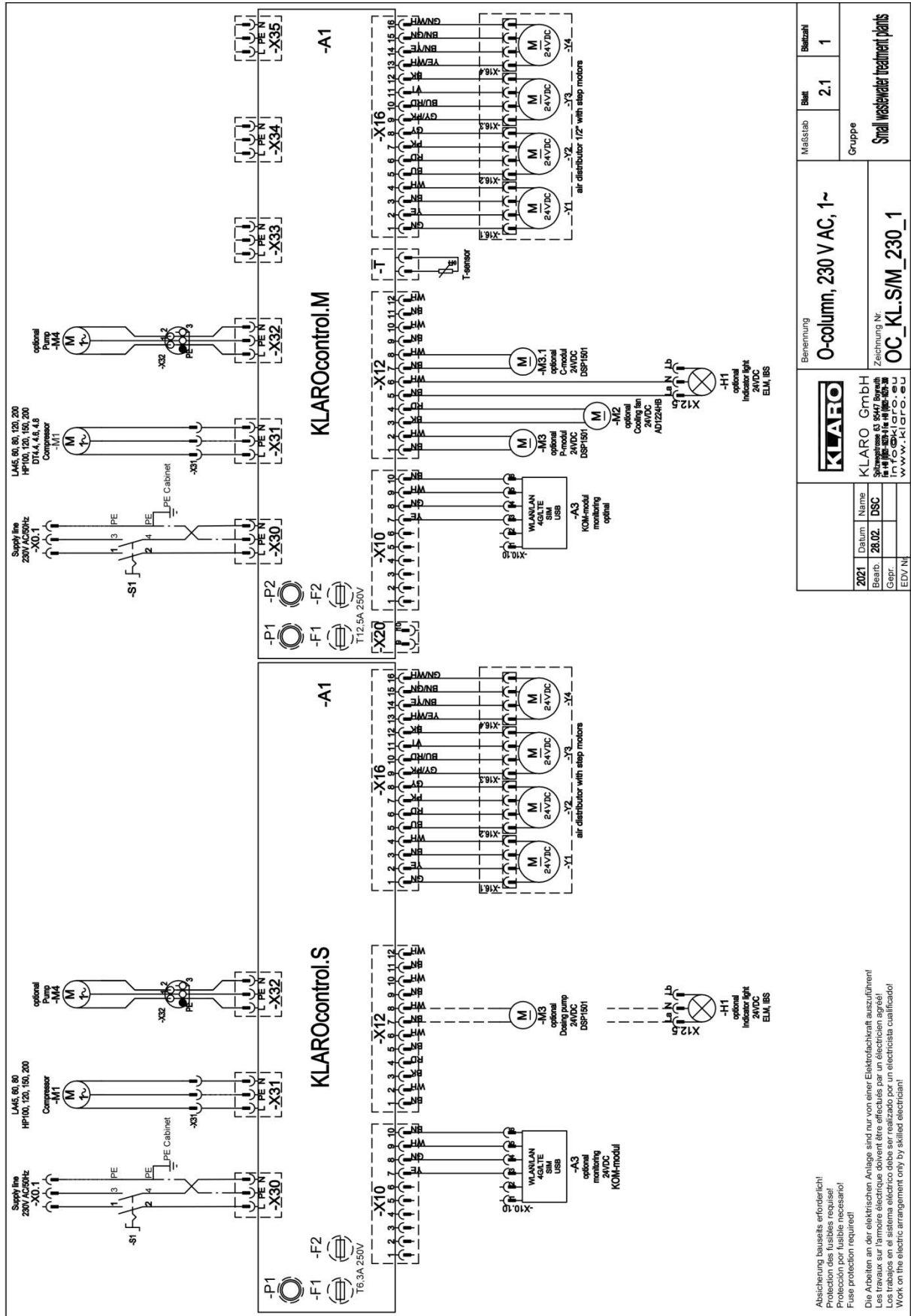
Absicherung bzw. alle erforderlich!
Protection des fusibles requis!
Protección por fusible necesario!
Fuse protection required!

Die Arbeiten an der elektrischen Anlage sind nur von einer Elektrofachkraft auszuführen!
Les travaux sur l'installation électrique doivent être réalisés par un electricien qualifié!
Work on the electric arrangement only by skilled electrician!

		Benennung	I-cabinet, 230 V AC, 1~		Blattzahl	1
2021	Datum	Name	IC_KL.SM_230_1		Blatt	2.1
Bearb.	28.02.	DSC	Gruppe		Small wastewater treatment plants	
Gepr.			Zeichnung Nr.			
EDW Nj			www.klaro.eu			

2. Circuit diagrams

2.3 A-Column with KLcontrol.S and KLcontrol.M



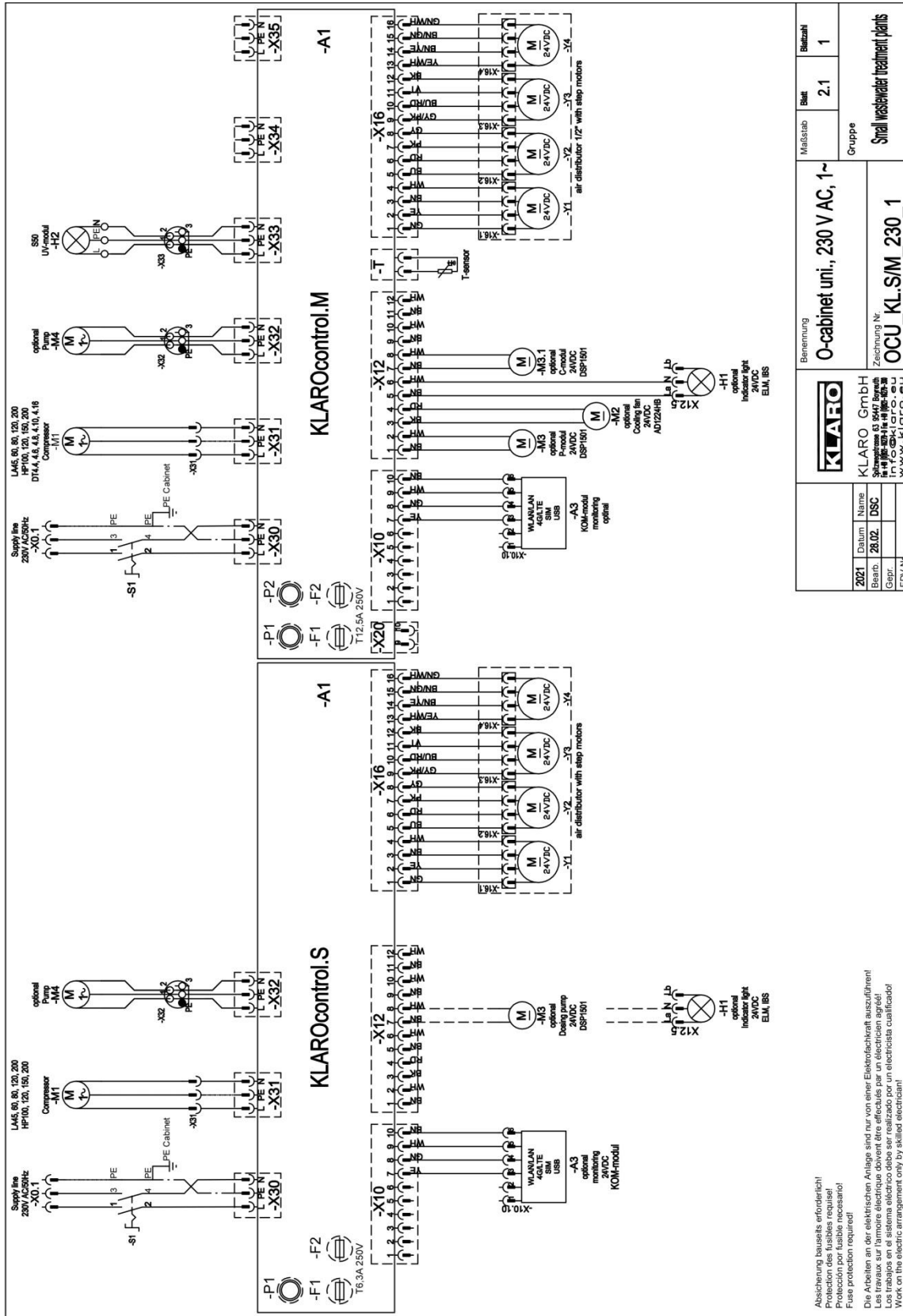
Benennung		O-column, 230 V AC, 1~	
Messstab	Blatt	2.1	1
Gruppe			
Small wastewater treatment plants			
KlARo GmbH		Zeichnung Nr.	
Klarostraße 33, 84714 Ising		OC_KL.S/M_230_1	
info@klaro.eu			
www.klaro.eu			
2021	Datum	Name	
Bearb.	28.02.	DSC	
Gepr.			
EDV/Nr.			

Absicherung bauseits erforderlich!
 Protection des lieux requis!
 Próbki zabezpieczenia wymagane!
 Fuse protection required!

Die Arbeiten an der elektrischen Anlage sind nur von einer Elektrofachkraft auszuführen!
 Les travaux sur l'armoire électrique doivent être effectués par un électricien agréé!
 Los trabajos en el sistema eléctrico deben realizarse por un electricista cualificado!
 Work on the electric arrangement only by skilled electrician!

2. Circuit diagrams

2.4 A-Cabinet with KLcontrol.S and KLcontrol.M



		Benennung O-cabinet uni., 230 V AC, 1~	Maßstab 2.1	Blatt 1	Blanzahl 1
2021 Datum	Name DSC	Gruppe Small wastewater treatment plants			
Bezb. Gepr.	Zeichnung Nr. OCU_KL.S/M_230_1	KLARO GmbH Industriestraße 14 42699 Solingen info@klaro.eu www.klaro.eu			
EDV Nr.					

Absicherung bauseits erforderlich!
 Protection des fusibles requise!
 Fuse protection required!

Die Arbeiten an der elektrischen Anlage sind nur von einer Elektrofachkraft auszuführen!
 Les travaux sur l'ouvrage électrique doivent être effectués par un électricien agréé!
 Los trabajos en el sistema eléctrico deben ser realizados por un electricista cualificado!
 Work on the electric arrangement only by skilled electrician!

3. Data sheets / Compressor instructions

3. Data sheets / Compressor instructions

Data sheets, operating and service instructions for:

- Nitto piston compressor
- Becker rotary vane compressor

Note:

The Becker rotary vane compressors used by us are equipped with a relief valve, which is factory preset to a maximum pressure of 0.5 bar.

The normal operating pressure of our systems is < 0.3 bar. If the pressure in the system should exceed 0.5 bar (e.g. due to a kinked air hose), part of the air is blown off via the relief valve. This protects the compressor against damage or excessive wear.

MEDO LA BLOWER
INSTRUCTION MANUAL
INSTALLATION & MAINTENANCE



CONTENTS

- 1. Model and Specifications 2
- 2. Dimensions 2
- 3. Safety Instruction 3
- 4. Installation (Septic tank application) 4
- 5. Maintenance 5
- Parts List(LA-288/LA-45B) 8
- Parts List(LA-60A/LA-80A) 9
- Parts List(LA-100/LA-120) 10

 This instruction manual should be read and understood thoroughly before any installation and maintenance work is executed.

After reading this instruction manual, please keep it handy for reference.

3. Safety Instruction

Explanation of Diagrammatic Expressions

The term "Attention" used in this manual is to alert you to dangers such as the following:

Degree of Danger Indicated by The Term

This term indicates the possibility that continuing to work while ignoring this "Attention", or working incorrectly without full understanding, may cause personal injury or physical damage.



The Meaning of the Symbols

Symbols

This symbol advises you of an item which should **BE NOTED** (including Danger and Warning) and the general notes will be shown by a picture, word or explanatory text inside or along the symbol mark.



This symbol advises you of an action which must **NOT BE TAKEN (IS PROHIBITED)** in order to avoid danger. The general actions which must not be taken will be shown by a picture or explanatory text inside or along the symbol mark.



This symbol advises you of an action which must **BE TAKEN (IS MANDATORY)** in order to avoid danger and the general emphasis of the action which must be taken will be shown by a picture or explanatory text inside or along the symbol mark.

Safety and Operating Instructions

The following safety precautions should always be followed to reduce the risk of breakdown and/or accident.

ATTENTION To Prevent Electric Shock And Fire

- ① Don't install the blower where it will be flooded with water. ⚡
 - ② Electrical work must be done by a qualified electrician. ⚡
 - ③ The power supply should be the rated voltage shown on the label on the blower and be fitted with an earth leakage breaker and over current breaker. ⚡
 - ④ The power outlet used should be waterproof and include an earth connected to ground. ⚡
 - ⑤ If the supply cord is damaged, it must be replaced by the manufacturer or its service agent or similarly qualified person in order to avoid a hazard. ⚡
 - ⑥ Don't place any objects on the electric cable. ⚡
 - ⑦ Be sure to unplug the blower before starting maintenance. ⚡
 - ⑧ Be sure to put the Upper Case back after maintenance. ⚡
 - ⑨ Don't touch the metal part of the blower until it is cooled down as the blower runs very hot. ⚡
- Ignoring any of the above may cause an electric shock, a fire or a burn.

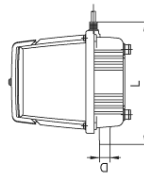
1. Model and Specifications

Model	LA-28B	LA-45B	LA-60A	LA-80A	LA-100	LA-120
Standard Voltage *	120V AC OR 230V AC					
Rated Frequency	50Hz/60Hz					
Rated Pressure	0.011MPa(0.11kgf/cm ²)	0.015MPa(0.15kgf/cm ²)	0.015MPa(0.15kgf/cm ²)	0.018MPa(0.18kgf/cm ²)	0.018MPa(0.18kgf/cm ²)	0.018MPa(0.18kgf/cm ²)
Operating Pressure	0.005 ~ 0.02MPa (0.05 ~ 0.2kgf/cm ²)	0.005 ~ 0.02MPa (0.05 ~ 0.2kgf/cm ²)	0.005 ~ 0.02MPa (0.05 ~ 0.2kgf/cm ²)	0.005 ~ 0.02MPa (0.05 ~ 0.2kgf/cm ²)	0.005 ~ 0.02MPa (0.05 ~ 0.2kgf/cm ²)	0.005 ~ 0.02MPa (0.05 ~ 0.2kgf/cm ²)
Rated Airflow	28ℓ/min.	45ℓ/min.	80ℓ/min.	100ℓ/min.	100ℓ/min.	120ℓ/min.
Power Consumption	29/26W	47/45W	64/60W	86/80W	100/95W	130/118W
Weight	2.9kg	3.0kg	5.0kg	5.3kg	9.4kg	9.4kg

* The unit must only be operated at the voltage as indicated on the outer casing of the blower.

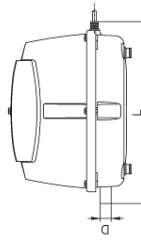
2. Dimensions

LA-28B/LA-45B



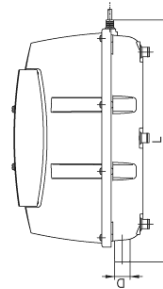
L=207mm
W=182mm
H=205mm
D=18mmOD

LA-60A/LA-80A



L=307mm
W=190mm
H=208mm
D=18mmOD

LA-100/LA-120



L=408mm
W=210mm
H=232mm
D=26mmOD

4. Installation (Septic Tank Application)

1. Installation site selection

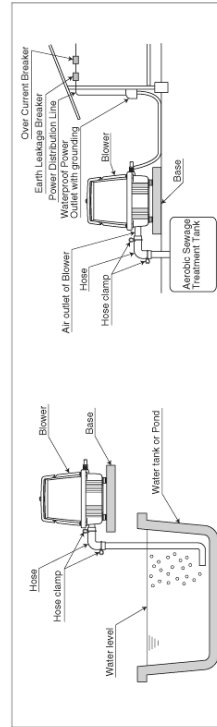
1. Install near the septic tank. If the pipeline is long, the sewage treatment may not perform well due to an insufficient airflow.
2. Install in a place which is convenient for maintenance.
3. Don't install over a manhole or on soft ground.
4. Avoid areas where wind-blown leaves and dust gathers.
5. Install in a well ventilated place.
6. Install at least 30cm away from the wall of a house.
7. Installation in the shade is recommended to suppress heat generation of the blower.
8. Don't install the blower where it will be flooded with water.
9. Don't install where there is excess moisture or humidity.

2. Method of Installation

1. The base should be made of concrete strong enough to bear the weight and block vibration from the blower.
2. The base should be at least 10cm above the ground level and 5cm larger than the external dimensions of the blower.
3. Provide a separate power outlet to be only used for the blower.
4. Electrical work must be done by a qualified electrician.
5. The power supply should be the rated voltage shown on the label on the blower and be fitted with an earth leakage breaker and over-current breaker.
6. The power outlet used should be waterproof and include an earth connected to ground.
7. Place the blower horizontally on the base.
8. A soft rubber hose must be used for connection between the air outlet of the blower and the pipe.
9. The rubber hose must be fastened with hose clamps.
10. When making the connection, level the air outlet and the pipe to ensure the hose is not kinked or blocked.
11. Before starting the operation of the blower, ensure that the water level in the septic tank is appropriate and the valves on the pipeline are properly opened.

3. Start operation

1. Insert the power plug into the power outlet with full contact so that the plug itself does not wobble. Incomplete connection may cause an electric shock or a fire.
- After starting operation ensure that there is;
 - No air leakage from the hose and the pipe connection.
 - No abnormal noise from the blower.
 - No vibration transmitted to the ground due to strained piping.



5. Maintenance (Refer the sketches on the next page)

1. Cautions

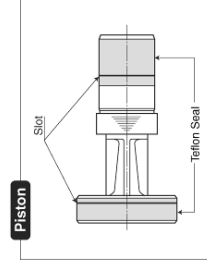
1. MEDO blowers are OILLESS. Never lubricate them.
2. All blowers have already been precisely adjusted. Never disassemble them.
- (Do not try to loosen the Hex Bolts on the Endcap)

2. Replacement of Filter Element

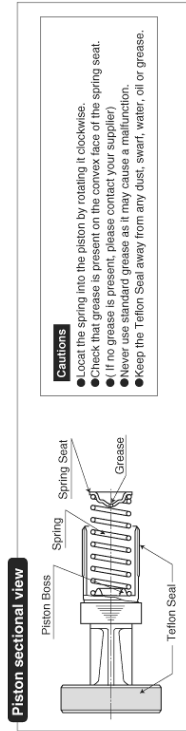
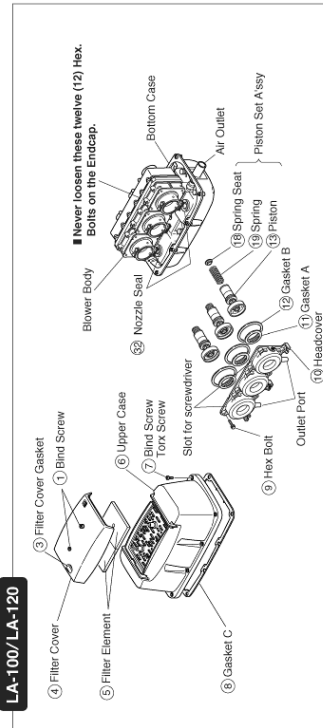
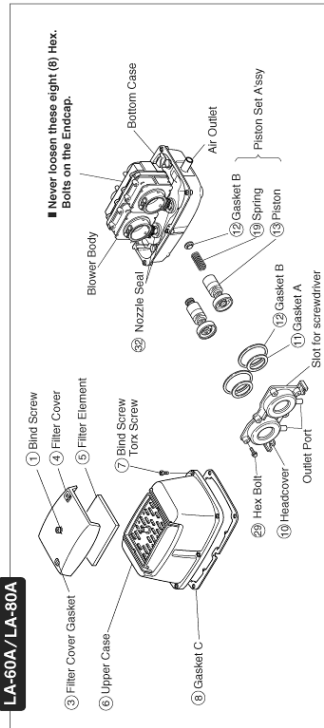
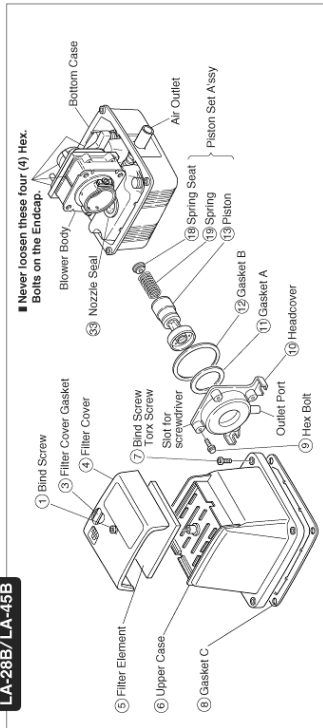
1. Be sure to unplug the blower before starting the replacement work.
 2. Loosen the Bind Screw (1) and remove the Filter Cover (4).
 3. Remove the Filter Element (5) from the Upper Case (6) and replace with new One(s). At the same time, clean the air inlet of the Filter Cover (4) and the Upper Case (6).
 4. Assemble the Filter Cover (4) with the Filter Cover Gasket (3) securely positioned.
 5. Mount the Filter Cover (4) to the Upper Case (6), then tighten with the Bind Screw (5) (1).
 6. Time to replace the Filter Element
- It is recommended that the Filter Element(s) is cleaned or replaced with new one(s) depending on the extent of its deterioration as determined by the atmospheric conditions around the application. The filter element(s) should be checked every three months.

3. Replacement of Piston Set Assy

1. Be sure to unplug the blower before starting the maintenance work.
2. Remove the Upper Case (6), loosen all the Hex Bolts (9) on the Headcover (10) and remove it. In case it is hard to remove the Headcover (10) insert a flat head screwdriver to the slot(s) on the edge of the Headcover (10) and twist the screwdriver gently to open.
3. Take out the Piston Set Assy(s).
4. Replace all Piston Set Assys, Gasket A (11) and Gasket B (12) with new ones. Be sure to keep the Teflon Seal of the Piston (13) away from any dust, swarf, water, oil or grease. Try not to touch the Teflon Seal of the Piston (13) with your fingers.
5. Insert the Piston Set Assy(s) into the Pump Body. Install Gasket A (11) on the Headcover (10) and Gasket B (12) on the Pump Body, then fasten the Headcover (10) with the Hex Bolts (9). Tighten the Hex Bolts (9) evenly and alternately then gradually fully tighten.
6. Before putting the Upper Case (6) back, start the blower and check if there is any air leakage along the Headcover (10) or the Nozzle Seal(s) (33) by briefly blocking the air outlet. In case there is an air leakage along the Headcover (10), re-position Gasket A (11) and Gasket B (12) then re-fasten the Hex Bolts (9). In case there is an air leakage along the Nozzle Seal(s) (33) check if the nozzle seal is installed on the air tank properly and press the pump body down to allow the outlet port of the Headcover to catch the Nozzle Seal(s) correctly.
7. Put the Upper Case (6) back after installing Gasket C (8) on the Bottom Case properly. Fasten the Bind Screws/Torx Screws (7) evenly and alternately.
8. Time to replace the Piston Set Assy



- It is suggested that the Piston Set Assy is replaced every 12 to 24 months depending on the extent of pressure and airflow drop of the blower. There is a slot on each Teflon Seal of the Piston. The slot shows the degree of wear. If one or both slots have gone, the replacement of the Piston Set Assy is recommended.



4. Purchasing suggestion for the maintenance parts

1 Filter Element

Model	Part No.	Quantity
LA-28B/LA-45B/LA-100/LA-120	LB02369	10pcs.set
LA-60A/LA-80A	LB03937	10pcs.set

2 Repair Parts Kit

Model	Part No.	Quantity
LA-28B	LB01288	1 set
LA-45B	LB03514	1 set
LA-60A	LB03519	1 set
LA-80A	LB03517	1 set
LA-100/LA-120	LB04151	1 set

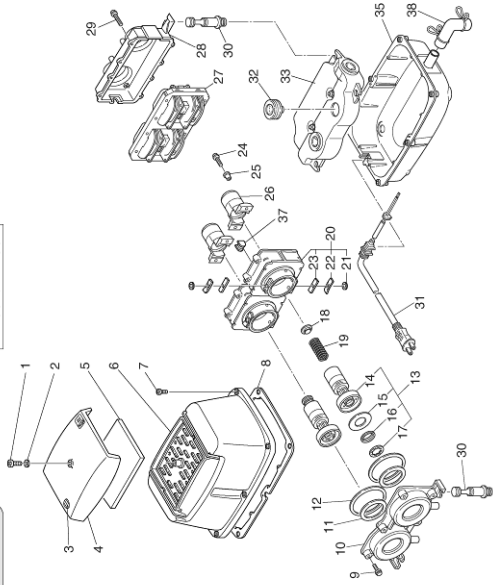
3 Contents of Repair Parts Kit

Parts Included	LA-28B/LA-45B	LA-60A/LA-80A	LA-100/LA-120
5 Filter Element	1	1	2
11 Gasket A	1	2	3
12 Gasket B	1	2	3
13 Piston	1	2	3
18 Spring Seat	1	2	3
19 Spring	1	2	3

3. Data sheets / Compressor instructions

LA-60A/LA-80A

Exploded View

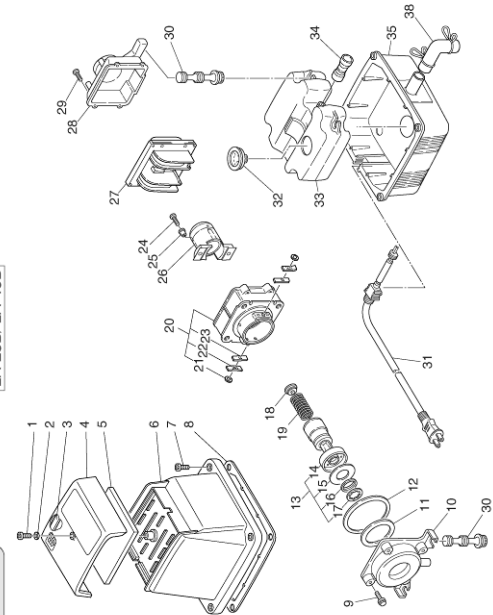


Parts List

No.	Part Name	LA60A	QTY	LA80A	QTY	No.	Part Name	LA60A	QTY	LA80A	QTY
1	Blind Screw	LP30581	2	LP30581	1	27	Field Core Assy P	LB04001	1	LB04005	1
2	Seal Washer	LP30635	2	LP30635	2		Field Core Assy Q	LB05126	1	LB05134	1
3	Filter Cover Gasket	LQ02607	2	LQ02607	2		Field Core Assy E	LB05059	1	LB05048	1
4	Filter Cover	LB02131	1	LB02131	1	28	Endcap	LQ03767	1	LQ03767	1
5	Filter Element	LQ02730	1	LQ02730	1	29	Hex Bolt	LP31316	8	LP31316	8
6	Upper Case	LB04597	1	LB04597	1	30	Rubber Feet	LQ04256	4	LQ04256	4
7	Blind Screw UL	LP30581	6	LP30581	6	31	Cable Assy UK	LB05341	1	LB05341	1
8	Torx Screw CE	LQ03082	6	LQ03082	6		Cable Assy D	LB05307	1	LB05307	1
9	Gasket C	LQ03768	1	LQ03768	1		Cable Assy A	LB05220	1	LB05220	1
10	Hex Bolt	LP31316	6	LP31316	6		Cable Assy J	LQ01037	1	LQ01037	1
11	Hexcover	LQ03766	2	LQ03773	2		Cable Assy UL	LB04770	1	LB04770	1
12	Gasket A	LQ01043	2	LQ01043	2	32	Nozzle Seal	LQ02598	3	LQ02598	3
13	Gasket B	LQ01042	2	LQ01042	2	33	Air Tank Assy	LB04600	1	LB04600	1
14	Piston	LB03132	2	LB03132	2	34	Joint Hose				
15	Piston Sub Assy	LB03133	2	LB03133	2	35	Bottom Case	LB04599	1	LB04599	1
16	Inlet Valve	LP30916	2	LP30916	2	36	Cushion				
17	Valve Retainer A	LP11548	2	LP11548	2	37	Rubber Plug	LQ03775	1	LQ03775	1
18	CS Ring	LP12948	2	LP12948	2	OPTION					
19	Spring Seat	LP12155	2	LP12155	2	38	Hose Assy				
20	Spring	LP30620	2	LQ02743	2						
21	Housing	LB03184	2	LB03184	2		LA07475				
22	SE Ring	LP12475	4	LP12475	4						
23	Valve Retainer B	LP13735	4	LP13735	4						
24	Outlet Valve	LP10359	4	LP10359	4						
25	Screw 5 x 20	LP12599	4	LP12599	4						
26	Insulation Bush	LP10355	4	LP10355	4						
27	Rear Cylinder	LB02443	2	LB02443	2						

LA-28B/LA-45B

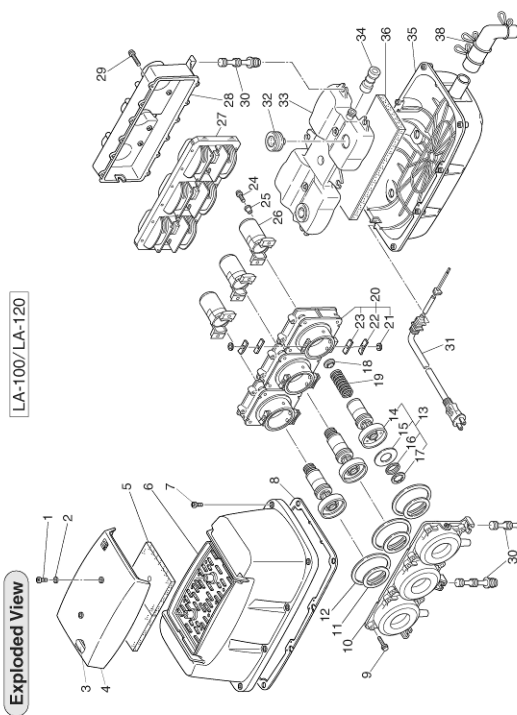
Exploded View



Parts List

No.	Part Name	LA28B	QTY	LA45B	QTY	LA28B	QTY	LA45B	QTY
1	Blind Screw	LP30581	1	LP30581	1	27	Field Core Assy P	LB04586	1
2	Seal Washer	LP30635	2	LP30635	2		Field Core Assy Q	LB04028	1
3	Filter Cover Gasket	LQ02607	2	LQ02607	2		Field Core Assy E	LB04038	1
4	Filter Cover	LQ02575	1	LQ02575	1	28	Endcap	LQ02892	1
5	Filter Element	LQ02605	1	LQ02605	1	29	Hex Bolt	LP31316	4
6	Upper Case	LB02937	1	LB02937	1	30	Rubber Feet	LQ04256	4
7	Blind Screw UL	LP30581	4	LP30581	4	31	Cable Assy UK	LB05341	1
8	Torx Screw CE	LQ03082	4	LQ03082	4		Cable Assy D	LB05307	1
9	Gasket C	LQ02601	1	LQ02601	1		Cable Assy A		
10	Hex Bolt	LP31316	4	LP31316	4		Cable Assy J	LQ01037	1
11	Hexcover	LQ02567	1	LQ02083	1		Cable Assy UL	LB04770	1
12	Gasket A	LQ01043	1	LQ01043	1	32	Nozzle Seal	LQ02598	1
13	Gasket B	LQ01042	1	LQ01042	1	33	Air Tank Assy	LB02587	1
14	Piston	LA70625	1	LB03132	1	34	Joint Hose	LQ02602	1
15	Piston Sub Assy	LA70626	1	LB03133	1	35	Bottom Case	LB02938	1
16	Inlet Valve	LP30916	1	LP30916	1	36	Cushion		
17	Valve Retainer A	LP11548	1	LP11548	1	37	Rubber Plug		
18	CS Ring	LP12948	1	LP12948	1	OPTION			
19	Spring Seat	LP12155	1	LP12155	1	38	Hose Assy		
20	Spring	LP30620	1	LQ02743	1				
21	Housing	LB03184	1	LB03184	1		LA07475		
22	SE Ring	LP12475	2	LP12475	2				
23	Valve Retainer B	LP13735	2	LP13735	2				
24	Outlet Valve	LP10359	2	LP10359	2				
25	Screw 5 x 20	LP12599	2	LP12599	2				
26	Insulation Bush	LP10355	2	LP10355	2				
27	Rear Cylinder	LA71843	1	LA71843	1				

3. Data sheets / Compressor instructions



LA-100/LA-120

Parts List

No.	Part Name	LA100	LA120	QTY	No.	Part Name	LA100	LA120	QTY	LA100	LA120	QTY
1	Blind Screw	LP30581	2	27	Field Core Assy P	LB04855	1	LB04909	1			
2	Seal Washer	LP30655	4	28	Field Core Assy O	LB04180	1	LB04171	1			
3	Filter Cover Gasket	LQ03101	2	29	Field Core Assy E	LQ03108	1	LQ03108	1			
4	Filter Cover	LB30769	1	28	Endcap	LP31316	12	LP31316	12			
5	Filter Element	LQ02605	2	29	Hex Bolt	LQ03089	6	LQ03089	6			
6	Upper Case	LB03763	1	30	Rubber Feet	LB05341	1	LB05341	1			
7	Blind Screw UL	LP30681	8	31	Cable Assy UK	LB05307	1	LB05307	1			
8	Tors Screw CE	LQ03082	8		Cable Assy D	LB05220	1	LB05220	1			
9	Gasket C	LQ03091	1		Cable Assy A	LQ01037	1	LQ01037	1			
10	Hex Bolt	LP31316	12		Cable Assy J	LB04770	1	LB04770	1			
11	Headcover	LB03834	1		Cable Assy UL	LQ02598	2	LQ02598	2			
12	Gasket A	LQ01299	3	32	Nozzle Seal	LB03771	1	LB03771	1			
13	Gasket B	LQ01400	3	33	Air Tank Assy	LQ03096	1	LQ03096	1			
14	Piston	LB03779	3	34	Joint Hose	LB03762	1	LB03762	1			
15	Piston Sub Assy	LB03780	3	35	Bottom Case	LQ03112	1	LQ03112	1			
16	Inlet Valve	LQ03230	3	36	Cushion							
17	Valve Retainer A	LP11548	3	37	Rubber Plug							
18	CS Ring	LP12948	3	OPTION								
19	Spring Seat	LP10357	3	38	Hose Assy							
20	Spring	LQ03117	3									
21	Housing	LB03778	3		LB04119							
22	SE Ring	LP12475	6									
23	Valve Retainer B	LP13735	6									
24	Outlet Valve	LP10359	6									
25	Screw 5 x 20	LP12599	6									
26	Insulation Bush	LP10355	6									
27	Rear Cylinder	LB01415	3									



NITTO
NITTO KOHKI CO.,LTD.

Head Office
9-4, Nakakogami 2-chome,
Ohta-ku, Tokyo, 146-8555 Japan
Phone:03(3755)9592 Fax:03(3753)8791
URL <http://www.nitto-kohki.co.jp>
e-mail:s-linear@nitto-kohki.co.jp

MEDO U.S.A., INC.
4525 TURNBERRY DRIVE, HANOVER PARK
IL 60103, U.S.A.
TEL(630)924-8811 FAX(630)924-0808

NITTO KOHKI EUROPE CO., LTD.
UNIT 21 THE EMPIRE CENTRE, IMPERIAL WAY
WATFORD, HERTS, WD24 4TS, U.K.
TEL(01923)239668 FAX(01923)248815

NITTO KOHKI AUSTRALIA PTY. LTD.
UNIT 1, 11 BOORAN DRIVE, UNDERWOOD
QUEENSLAND 4119, AUSTRALIA
TEL(07)5722437 FAX(07)5722437

NITTO KOHKI DEUTSCHLAND GMBH.
IM MEISSEL 6 7111 WALDENBUCH, GERMANY
TEL(0715)722436 22705 FAX(0715)722437

3. Data sheets / Compressor instructions



1. Warning Notice		
	High Voltage Only qualified staff may work on electronic components	
	High Voltage according to ANSI American, National Standards Institute	
	Qualified Staff Marked operations may only be executed by qualified electricians	
	Automatic Start-Up When servicing the device must be turned off	
	Hot Surface will cause burns. Let device cool down before maintenance	
	Note Ignoring notices will cause severe damage to the pump	
2. Interdiction		
	Pump works without oil Avoid absorption of oil fumes	
	Marked areas may not be subject to weight	
	Liquids may not be conveyed	
	Explosive substances may not be conveyed	
	Flammable Substances may not be conveyed	
	Toxic Substances may not be conveyed	
	Assembly Incorrect fitting position	
3. Rules		
	Wear protective goggles	
	Wear protective gloves	
	Wear protective ear-muffs Sound level information e.g. 85 dB (A)	
4. Advice		
	Active principle Rotary vane pump Only air may be conveyed	
	Active principle side channel fan only air may be conveyed	
	Maintenance Regularly execute the marked procedures	
	Storing / Assembly Protect pump from humidity	
	Assembly Characteristic data is valid up to 800m above sea level	
	Further Information (optional Data) - name plate - Internet	
	Specification Vacuum pump	
	Specification Compressor	
	Safety valve	
	Factory-made Revolving field clockwise as pre-requisite for pump attachment	
	Switch interval Not more than 10x per hour	
	Arrange Motor-circuit switch	
	Blow out marked areas with air pressure	
	Maintenance interval Observe minimum gate valve measurement every 3.000 hours	
	Filter Maintenance Service according to dust accumulation exchange old cartridge dispose old	

3. Data sheets / Compressor instructions

3

4

5

6

7

8

MAX. 10x /h

ON OFF

U2-L1 U2-L2
V1-L1 V1-L2
U1-L1 U1-L2

BECKER

DT 4.4

Betriebsanleitung
Operating Instructions
Instructions de service
Istruzioni d'uso
Handleiding
Instrucciones para el manejo
Manual de instruções
Naudojimos instrukcija
Kasutusjuhend
Lietošanas instrukcija
Οδηγίες χρήσης
取扱説明書
사용설명서

Driftsinstruks
Driftsinstruktioner
Käyttöohje
Driftsvejledning
Instrukcija obслуги
Kezelési útmutató
Návod k obsluze
Navodilo za uporabo
Návod na obsluhu
El Kitabi
Инструкция по эксплуатации
使用说明书

2006/42/EG

CE

MAX. PRESSURE

MAX.

DIN EN ISO 3744

$L_{pA} = 60 \text{ dB(A)} - 50\text{Hz}$
 $L_{pA} = 60,5 \text{ dB(A)} - 60\text{Hz}$
 $K_{pA} = 3 \text{ dB(A)}$

$A > 100\text{mm}$
 $A > 4"$

$> 5^\circ\text{C}/41^\circ\text{F}$
 $< 45^\circ\text{C}/113^\circ\text{F}$

max. 800mm

max. 90%


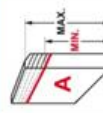






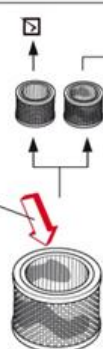

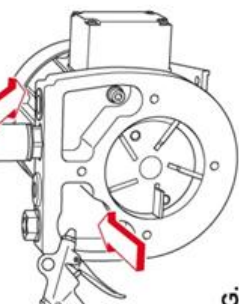


7 kg
15,4 lbs

1

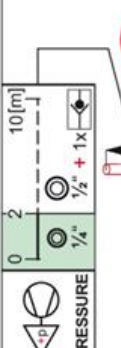
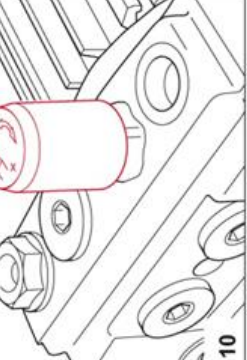
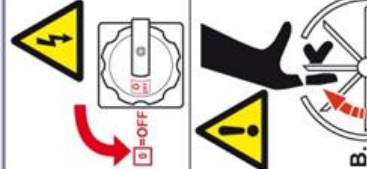

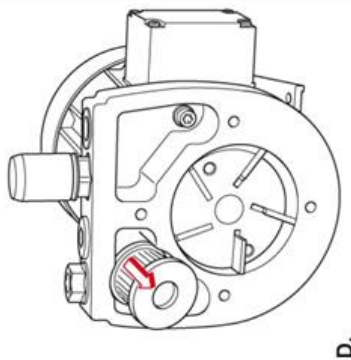
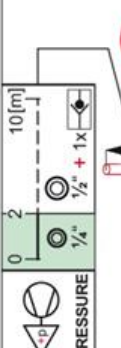
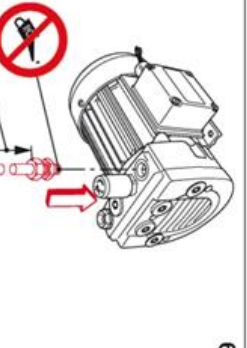
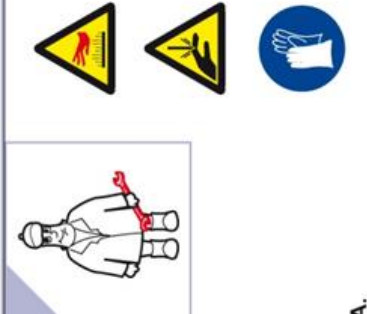
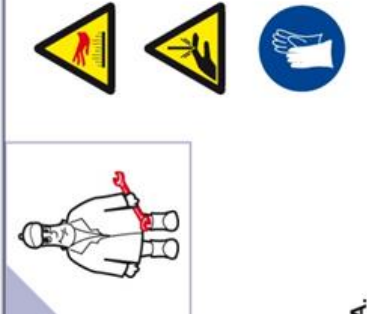
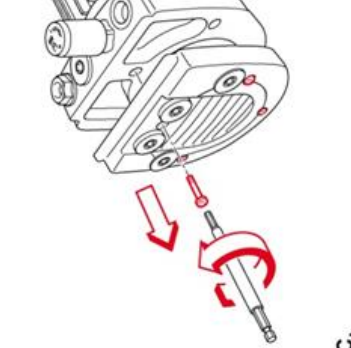
2

AIR

3. Data sheets / Compressor instructions

 <p>3000 h</p>	 <p>$A_{\text{max}} > 11\text{mm}$ $A_{\text{min}} < 11\text{mm}$</p>	<p>DT 4.4 → No. 90138700005 (SET)</p>	 <p>500 h</p>	 <p>1- (DT 4.4 EW)</p>		 <p>Gebr. Becker GmbH Hölkler Feld 29-31 D-42279 Wuppertal info@becker-international.com</p>  <p>www.becker-international.com Sales and service network</p>
	 <p>D: 25 mm H: 24 mm No.: 909580</p>			  <p>www.becker-international.com</p>		

www.becker-international.com

<p>MAX. +1.0 bar +29.5 in.HG</p> 			 <p>$n=0\text{min}^{-1}$ 2-3 Min</p>	
<p>9</p> 				

www.becker-international.com

3. Data sheets / Compressor instructions



DT 4.6/0-61

Betriebsanleitung
Operating Instructions
Instructions de service
Instruzioni d'uso
Handledning
Instrucciones para el manejo
Manual de instruções
Manuale de instrucții
Naudojimos instrukcija
Kasutusjuhend
Lietošanas instrukcija
Облүіс хрїтїс
取扱説明書
사용설명서

2006/42/EG

Driftsinstruks
Driftsinstruktioner
Käyttöohje
Driftsvejledning
Instrukcija usluzi
Kezelési útmutató
Návod k obsluze
Navodilo za uporabo
Návod na obsluhu
Ei Kitabi
Инструкция по эксплуатации
使用说明书

<p>3</p>	<p>4</p>
<p>5</p>	<p>6</p>
<p>7</p>	<p>8</p>



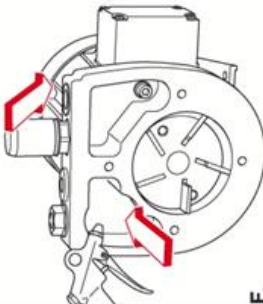



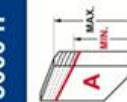
	<p>AIR</p>
<p>MAX. PRESSURE</p>	<p>MAX. m³/h</p>
<p>L_{PA} = 67 dB(A) - 50Hz L_{PA} = 69 dB(A) - 60Hz K_{PA} = 3 dB(A)</p>	<p>DIN EN ISO 3744</p>

<p>7 kg 15.4 lbs</p>	<p>2</p>
<p>> 5°C/41°F < 45°C/113°F</p>	<p>max. 90%</p>
<p>max. 800m</p>	
<p>A > 100mm A > 4"</p>	

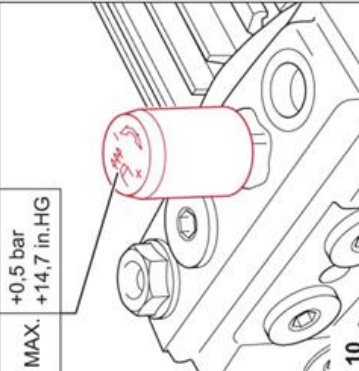
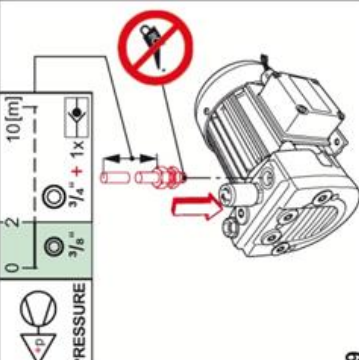
www.becker-international.com


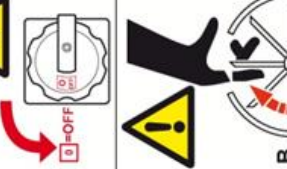



www.becker-international.com

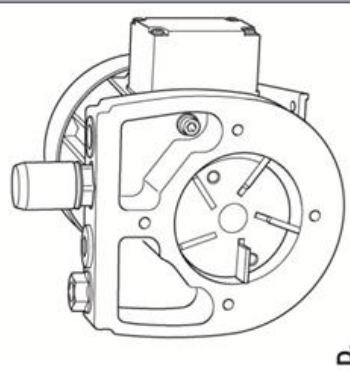
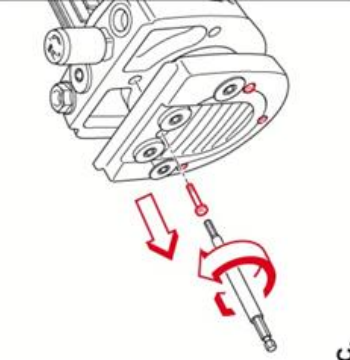
3. Data sheets / Compressor instructions

 		 <p> $A_{min} > 12.5mm$ $A_{min} < 12.5mm$ </p> 	<p>DT 4.6 → No. 90138800005 (SET)</p>
 <p>3000 h</p>		<p>F.</p>	

 <p> Gebr. Becker GmbH Hölker Feld 29-31 D-42279 Wuppertal info@becker-international.com </p>	 <p> SERVICE www.becker-international.com Sales and service network </p>
 <p>www.becker-international.com</p>	<p>www.becker-international.com</p>

 <p> MAX. +0,5 bar +14,7 in.HG </p>	 <p>9</p>
---	--

  <p>OFF</p>	   <p>A.</p>
--	---

 <p> n=0min⁻¹ 2-3 Min </p>	 <p>D.</p>
--	--

3. Data sheets / Compressor instructions



Betriebsanleitung
 Operating Instructions
 Instruccions de service
 Istruzioni d'uso
 Handleiding
 Instrucciones para el manejo
 Manual de instruções
 Naudojimosi instrukcija
 Kasutusjuhend
 Lietošanas instrukcija
 Облүчүс Хригилс
 取扱説明書
 사용설명서

Driftsinstruks
 Driftsinstruktioner
 Käyttöohje
 Driftsvejledning
 Instrukcija obслуги
 Kezeleléi útmutató
 Návod k obsluze
 Navodilo za uporabo
 Návod na obsluhu
 El Kitabı
 Инструкция по эксплуатации
 使用说明書

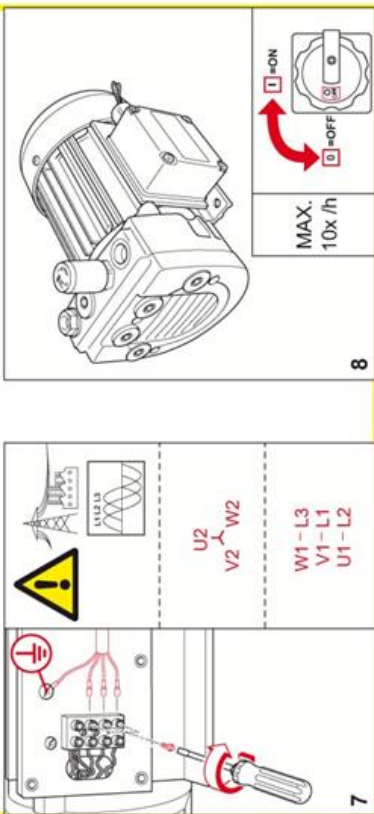
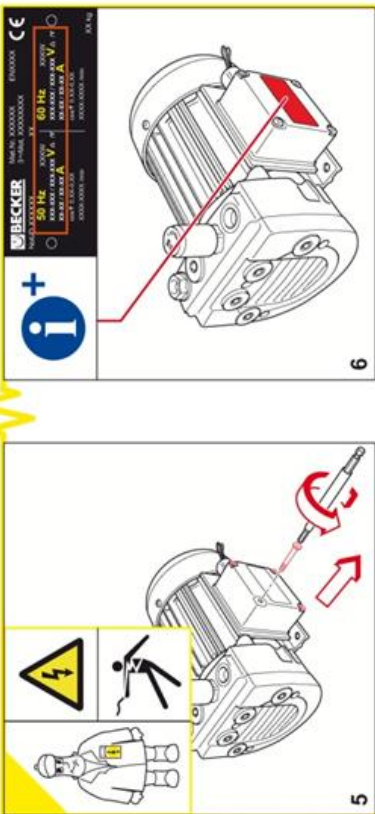
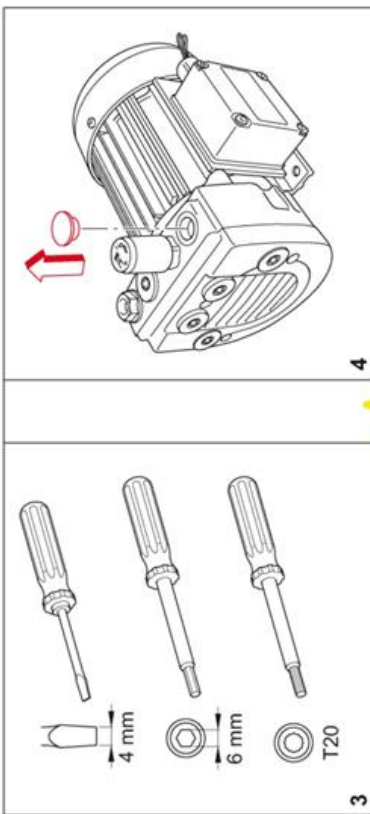
DT 4.8

2006/42/EG



	AIR		
	MAX. PRESSURE		
	MAX. m ³ /h		
	DIN EN ISO 3744		
	L _{WA} = 58 dB(A) - 50Hz L _{WA} = 61,5 dB(A) - 60Hz K _{WA} = 3 dB(A)		

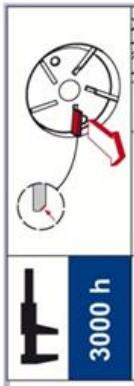

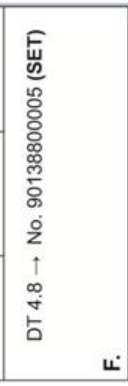
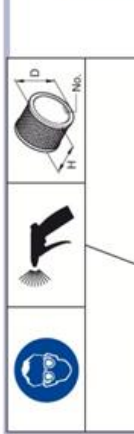
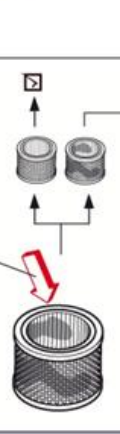
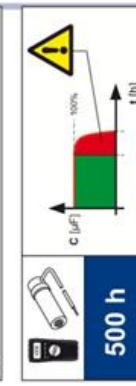
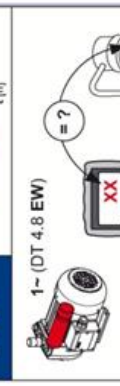


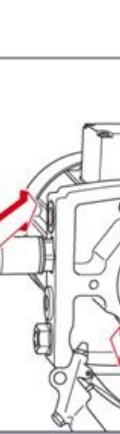
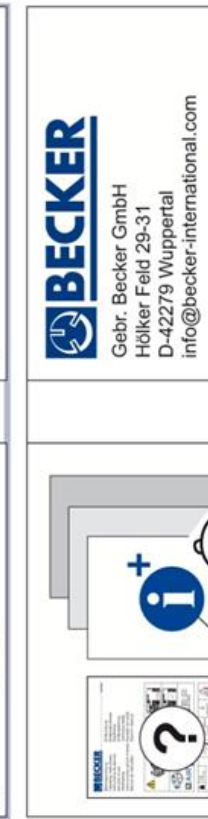
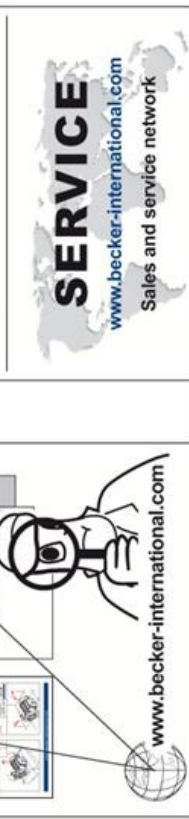
				11,5 kg 25,3 lbs
	A > 100mm A > 4"		max. 90%	
	> 5°C/41°F < 45°C/113°F		max. 800mm	

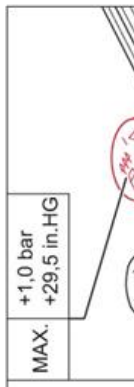
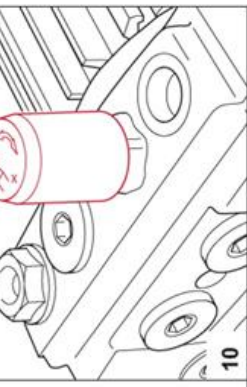



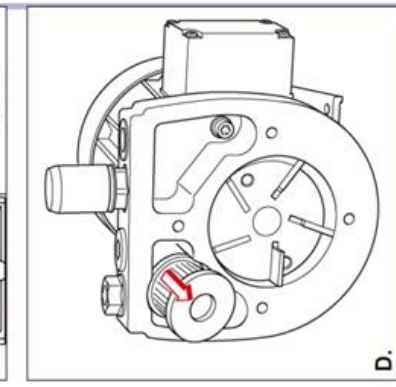
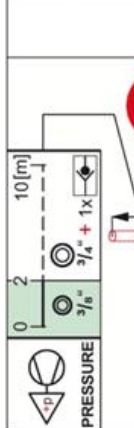




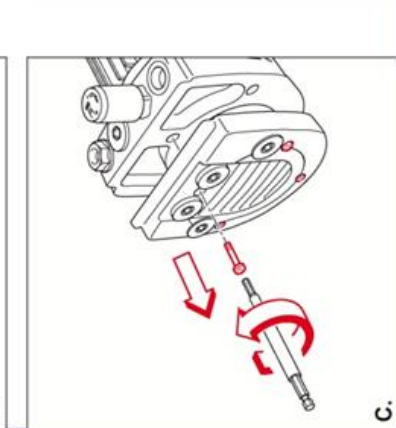


www.becker-international.com

www.becker-international.com

3. Data sheets / Compressor instructions

 <p>3000 h</p>	 <p>$A_{\text{max}} > 12,5\text{mm}$ $A_{\text{min}} < 12,5\text{mm}$</p>	 <p>DT 4.8 → No. 90138800005 (SET)</p>
 <p>D: 30 mm H: 32 mm No.: 909581</p>		<p>F.</p>
 <p>500 h</p>	 <p>1- (DT 4.8 EW)</p>	
		<p>H.</p>
 <p>Gebr. Becker GmbH Hölder Feld 29-31 D-42279 Wuppertal info@becker-international.com</p>	 <p>SERVICE www.becker-international.com Sales and service network</p>	

 <p>0 2 10 [m] PRESSURE $\frac{3}{16}$ + 1x</p>	 <p>MAX. +1,0 bar +29,5 in. HG</p>			 <p>n=0min⁻¹ 2-3 Min</p>	 <p>D.</p>
 <p>9.</p>					 <p>C.</p>

www.becker-international.com

www.becker-international.com

3. Data sheets / Compressor instructions

BECKER

DT 4.16

<p>Betriebsanleitung Operating Instructions Instructions de service Istruzioni d'uso Handledning Manual de instrucciones Manual de instruções Naudojimosi instrukcija Kasutusjuhend Lietošanas instrukcija Обу́чієс хрїтїєс 取扱説明書 사용설명서</p>	<p>Driftsinstruks Driftsinstruktioner Käyttöohje Driftsvejledning Instrukcja obsługi Kezelési útmutató Návod k obsluze Navodilo za uporabo Návod na obsluhu Ei Kitabi Инструкція по експлуатації 使用说明書</p>	<p>2006/42/EG</p> <p>CE</p> <p>RECYCLE</p> <p>DATE 19.03.2007</p> <p>100% RECYCLED</p>	<p>MAX. PRESSURE</p> <p>MAX. \dot{V}</p> <p>DIN EN ISO 3744</p> <p>$L_{pA} = 62 \text{ dB(A)} - 50\text{Hz}$ $L_{pA} = 64 \text{ dB(A)} - 60\text{Hz}$ $K_{pA} = 3 \text{ dB(A)}$</p>	<p>1</p> <p>2</p> <p>3</p> <p>4</p> <p>5</p> <p>6</p> <p>7</p> <p>8</p> <p>9</p> <p>10</p> <p>11</p> <p>12</p> <p>13</p> <p>14</p> <p>15</p> <p>16</p> <p>17</p> <p>18</p> <p>19</p> <p>20</p> <p>21</p> <p>22</p> <p>23</p> <p>24</p> <p>25</p> <p>26</p> <p>27</p> <p>28</p> <p>29</p> <p>30</p> <p>31</p> <p>32</p> <p>33</p> <p>34</p> <p>35</p> <p>36</p> <p>37</p> <p>38</p> <p>39</p> <p>40</p> <p>41</p> <p>42</p> <p>43</p> <p>44</p> <p>45</p> <p>46</p> <p>47</p> <p>48</p> <p>49</p> <p>50</p> <p>51</p> <p>52</p> <p>53</p> <p>54</p> <p>55</p> <p>56</p> <p>57</p> <p>58</p> <p>59</p> <p>60</p> <p>61</p> <p>62</p> <p>63</p> <p>64</p> <p>65</p> <p>66</p> <p>67</p> <p>68</p> <p>69</p> <p>70</p> <p>71</p> <p>72</p> <p>73</p> <p>74</p> <p>75</p> <p>76</p> <p>77</p> <p>78</p> <p>79</p> <p>80</p> <p>81</p> <p>82</p> <p>83</p> <p>84</p> <p>85</p> <p>86</p> <p>87</p> <p>88</p> <p>89</p> <p>90</p> <p>91</p> <p>92</p> <p>93</p> <p>94</p> <p>95</p> <p>96</p> <p>97</p> <p>98</p> <p>99</p> <p>100</p>
---	--	--	---	---

3. Data sheets / Compressor instructions

<p>F.</p>	<p>H.</p>	<p>Gebr. Becker GmbH Hölkler Feld 29-31 D-42279 Wuppertal info@becker-international.com</p> <p>www.becker-international.com Sales and service network</p>
<p>F1 D: 58 mm H: 40 mm No.: 909519</p> <p>F2 D: 60 mm H: 40 mm No.: 909542</p> <p>3000 h</p> <p>DT 4.16 → No. 90134700007 (SET)</p>	<p>$A_{min} > 21mm$</p> <p>$A_{min} < 21mm$</p> <p>MAX. MIN.</p> <p>A</p> <p>www.becker-international.com</p>	<p>www.becker-international.com</p>

<p>MAX. +1,0 bar +29,5 in. Hg</p> <p>9</p>	<p>OFF</p> <p>$n=0min^{-1}$ 2-3 Min</p> <p>B.</p>	<p>F1</p> <p>F2</p> <p>D.</p>
<p>10</p>	<p>A.</p>	<p>C.</p>



Betriebsanleitung
Operating Instructions
Instructions de service
Istruzioni d'uso
Handledning
Instrucciones para el manejo
Manual de instruções
Naudojimosi instrukcija
Kasutusjuhend
Lietošanas instrukcija
Οδηγίες Χρήσης
取扱説明書
사용설명서

DT 4.25K

Driftsinstruks
Driftsinstruktioner
Käyttöohje
Driftvejledning
Instrukcja obsługi
Kezelési útmutató
Návod k obsluze
Navodilo za uporabo
Návod na obsluhu
El Kitabı
Инструкция по эксплуатации
使用说明书

2006/42/EG



AIR

$L_{pA} = 65 \text{ dB(A) - 50Hz}$	$L_{pA} = 68 \text{ dB(A) - 60Hz}$	$K_{pA} = 3 \text{ dB(A)}$	

36.5 kg
80.5 lbs

www.becker-international.com

3. Data sheets / Compressor instructions

www.becker-international.com

3. Data sheets / Compressor instructions



Betriebsanleitung
 Operating Instructions
 Instructions de service
 Istruzioni d'uso
 Handleiding
 Instrucciones para el manejo
 Manual de instruções
 Naudojimosi instrukcija
 Kasutusjuhend
 Lietošanas instrukcija
 Driftsinstruks
 Driftsinstruktioner
 Käyttöohje
 Driftsvejledning
 Instrukcja obsługi

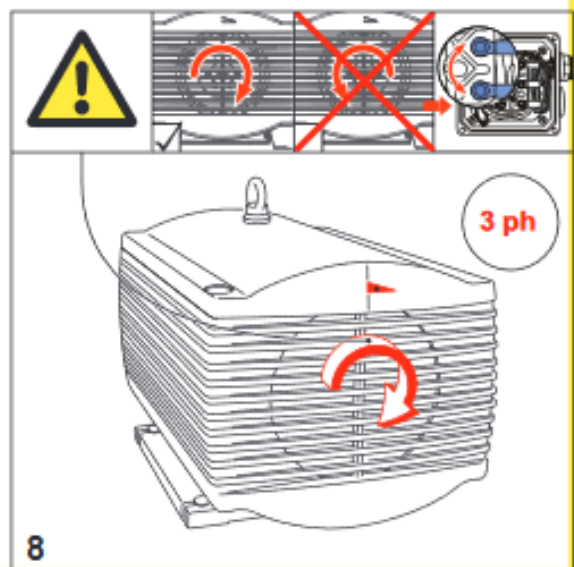
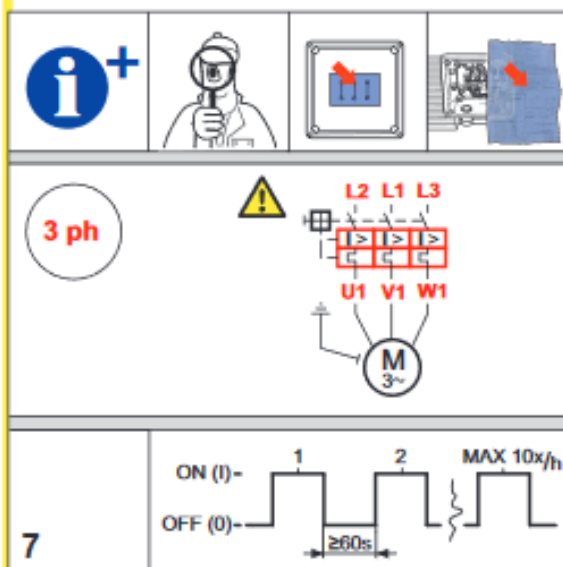
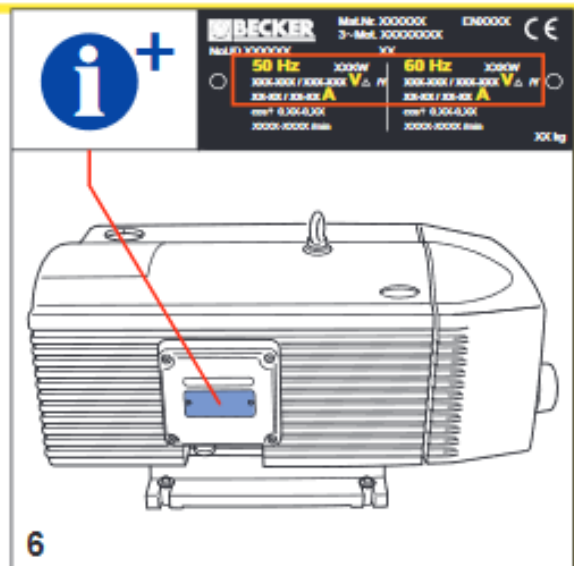
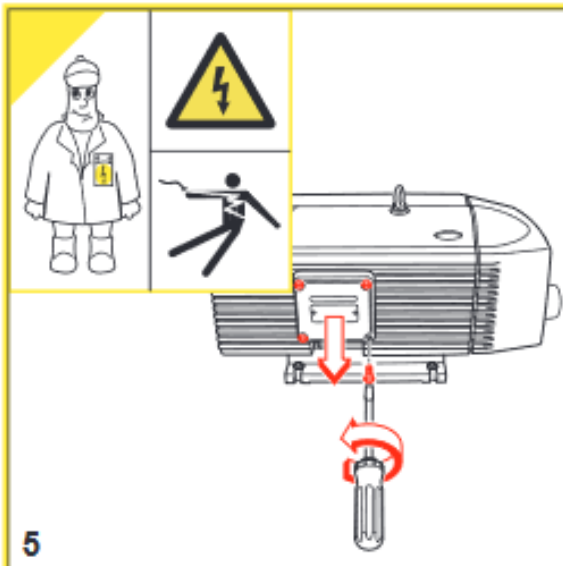
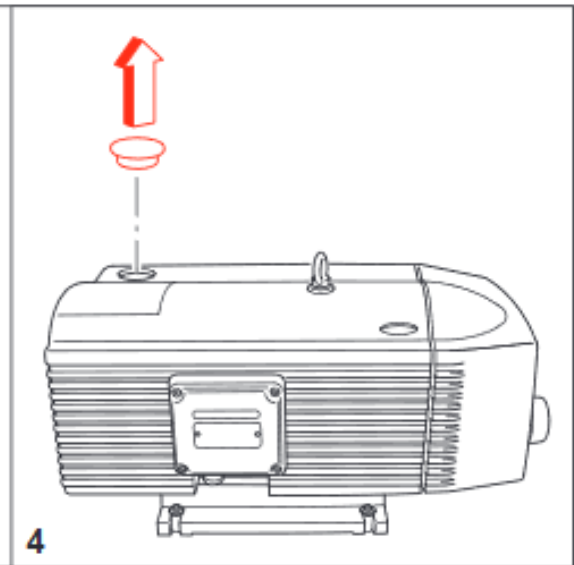
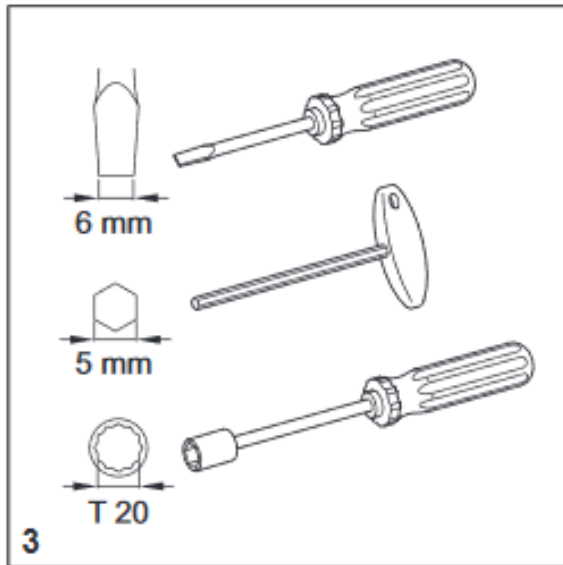
Kezelési útmutató
 Návod k obsluze
 Navodilo za uporabo
 Návod na obsluhu
 Upute za rad
 Manual de operatii
 Treoracha Oibriúcháin
 Οδηγίες χρήσης
 El Kitabi
 Инструкции за експлоатация
 Инструкция по эксплуатации
 取扱説明書
 사용설명서
 使用说明书

DT 4.40K

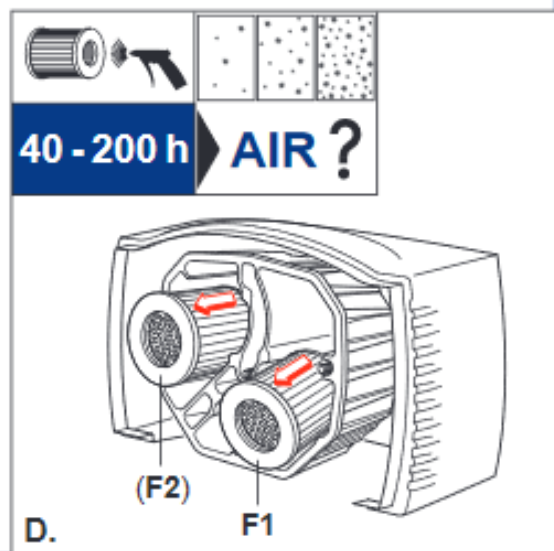
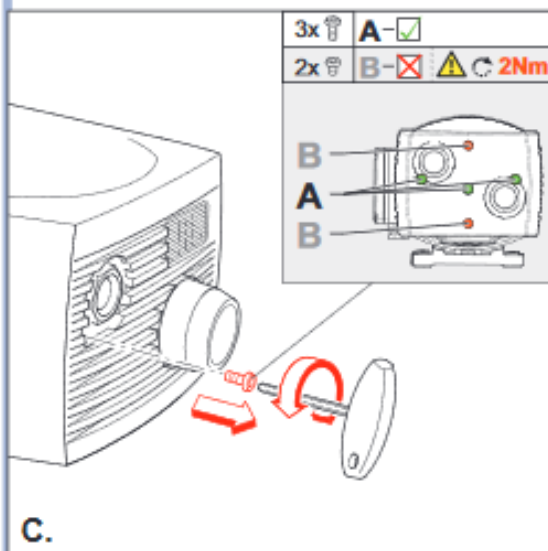
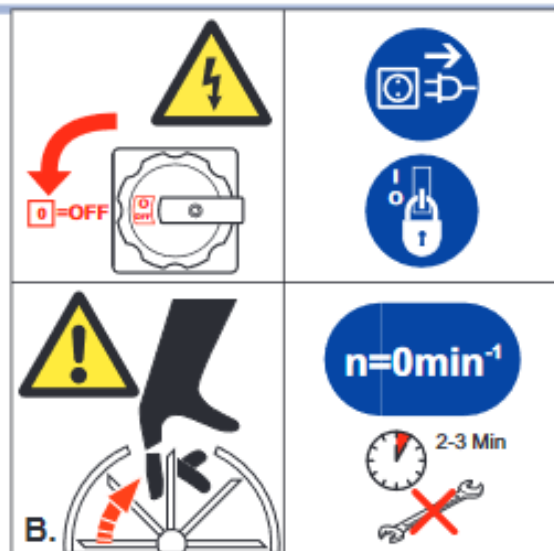
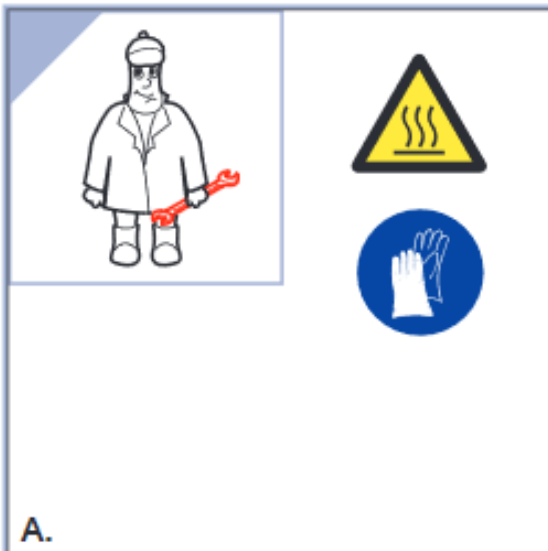
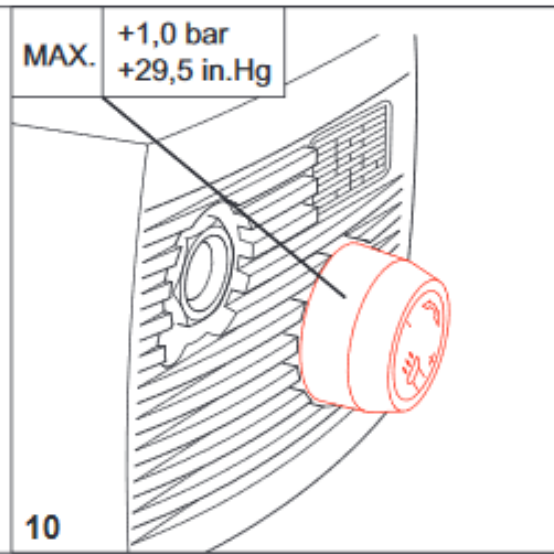
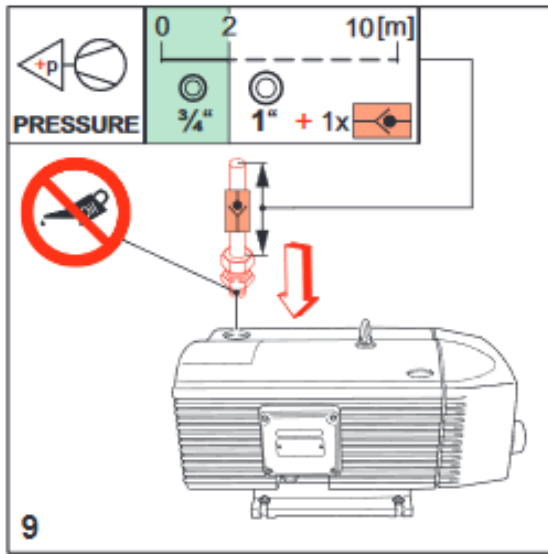
			<p>$L_{pA} = 67 \text{ dB(A)} - 50\text{Hz}$ $L_{pA} = 70 \text{ dB(A)} - 60\text{Hz}$ $K_{pA} = 3 \text{ dB(A)}$</p>

	<p>$A > 100\text{mm}$ $A > 4"$</p>	<p>$> 5^\circ\text{C}/41^\circ\text{F}$ $< 45^\circ\text{C}/113^\circ\text{F}$</p>	<p>max. 90%</p>	<p>max. 800m</p>
<p>1</p> <p>46,0 kg 101,4 lbs</p>	<p>2</p>			


3. Data sheets / Compressor instructions



3. Data sheets / Compressor instructions



3. Data sheets / Compressor instructions

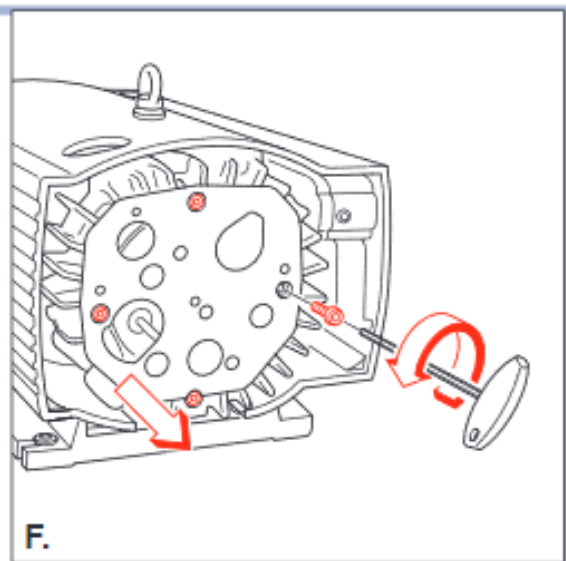


F1: D: 64 mm
H: 70 mm
No.: 90950500000

F2: D: 64 mm
H: 60 mm
No.: 90952900000

E.

EN149 - FFP3
42 CFR 84 - N100



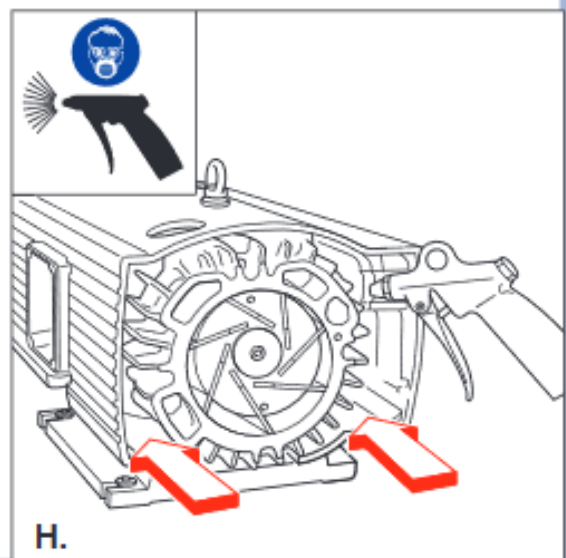
3000 h

$A_{MAX} = 43mm$
 $A_{MIN} = 28mm$

$A_{TYP} < 28mm$ 

No. 90135200007 (SET)

G.




www.becker-international.com

BECKER

Gebr. Becker GmbH
Hölker Feld 29-31
D-42279 Wuppertal
info@becker-international.com

SERVICE

www.becker-international.com
Sales and service network