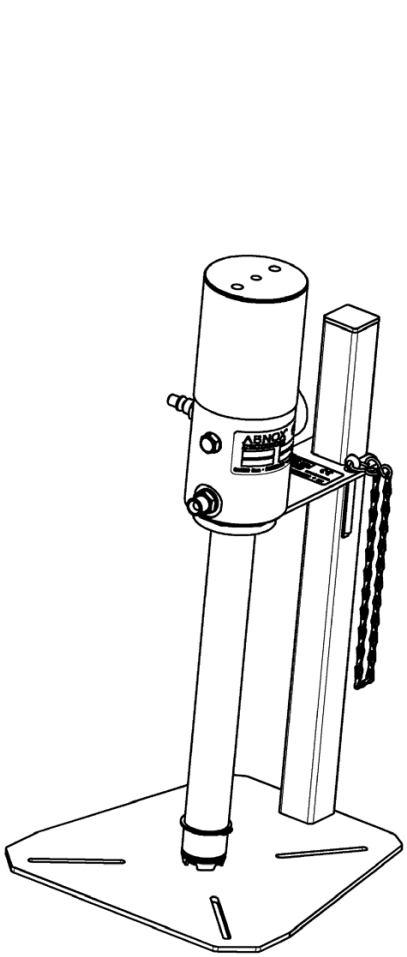
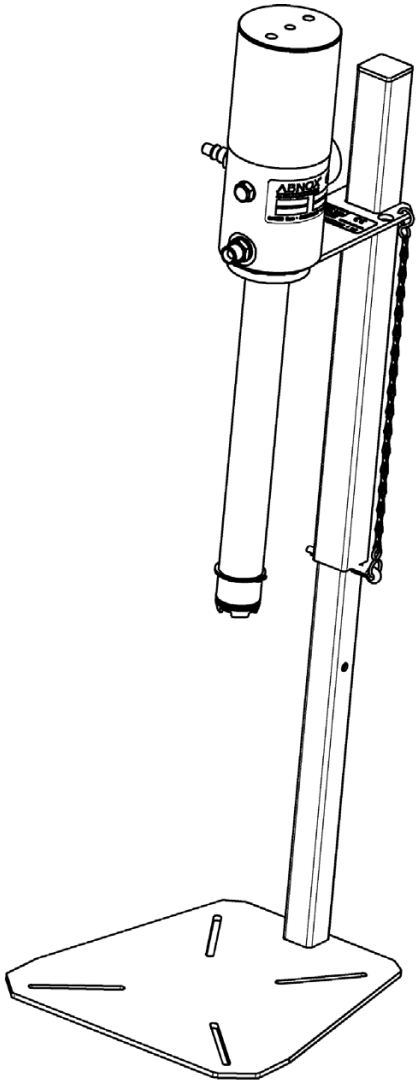
ABNOX®
High Pressure Hydraulic & Lubrication

Operating Manual

Lubricating Unit air-operated
Container 1 – 5 kg

Construction type	**40650.20**	**Pressure Ratio**	**5:1**
	40655.20	**Pressure Ratio**	**10:1**
	40656.20	**Pressure Ratio**	**20:1**
	40658.20	**Pressure Ratio**	**60:1**





Operating Manual Art. No. 40650-85-02

Manufacturer

ABNOX AG
Langackerstrasse 25
CH-6330 Cham
Schweiz

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Declaration

We, the end customer, confirm herewith, that we have read and understood this operating manual, further that we have instructed and tested all employees and any other persons who will operate the products described below.

Company stamp:

Place and date of issue:

Signature:

Declaration of Manufacturer – CE-Marking:

Lubricating Equipment
Metering Technology for Grease and Oil
High Pressure Hydraulic
Customised Developments

ABNOX®
High Pressure Hydraulic & Lubrication

CE

Konformitätserklärung

Declaration of Conformity

Nr.:
No.
249

im Sinne der Maschinenrichtlinie 98/37/EG; Anhang IIA
as defined by Machinery Directive 98/37/EC Annex IIA

Hersteller:
Manufacturer

ABNOX AG
Langackerstrasse 25
CH - 6330 Cham
Tel.: +41 41 780 44 50 / E-Mail: info@abnox.com

Beschreibung der Maschine
Description of the machinery

Bezeichnung:
Designation
Förderanlage pneumatisch Gebinde 1 - 5 kg / Übersetzungen 5:1; 10:1; 20:1; 25:1; 60:1

Typ:
Type
40650.20, 40655.20, 40656.20, 40657.20, 40658.20

Ident-Nr./Fabrik-Nr.:
Ident. No./ Serial No.

■ Der Hersteller erklärt hiermit, dass die Maschine mit den einschlägigen Bestimmungen der Maschinenrichtlinie 98/37/EG übereinstimmt.
The manufacturer hereby declares that the machinery complies with the relevant provisions of Machinery Directive 98/37/EC.

■ Der Hersteller erklärt hiermit, dass die Maschine ebenfalls mit den Bestimmungen folgender Richtlinien übereinstimmt:
The manufacturer hereby declares that the machinery also complies with the provisions of the following directives:

■ Der Hersteller erklärt hiermit, dass die Maschine ebenfalls mit nachstehenden harmonisierten Normen übereinstimmt:
The manufacturer hereby declares that the machinery also complies with the provisions of the following harmonised standards:
EN 12100-1, EN 12100-2

Andere angewandte Normen und techn. Spezifikationen:
Other applied standards and technical specifications:

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Ort
Place
Cham

Datum
Date
15.02.2006

Roberto Bernich - Leiter Qualitätsmanagement
Angaben zum Unterzeichner
Particulars of the signatory

Unterschrift
Signature

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1 Safety Instructions

IMPORTANT
We kindly request that the customer may study this operating manual carefully, in order acquaint himself with the safe and efficient operation of this product. Please keep this manual for future reference.



This operating manual includes important instructions and details for safe and appropriate operation of the equipment. It supports the operating and maintenance staff, thus helping to reduce safety hazard, repair cost and down time, as well as to enhance reliability and service life considerably. It is therefore important at all times that any persons who may be operating or otherwise be in charge of the equipment have access to this document.

1.1 *Signs for hazard, hints and directions*

In this document, all text sections related to safety aspects are marked with a warning sign.



WARNING
Warning indications point out information regarding hazard of injury or property damage, if the product is handled or operated improperly.

In this document, all text sections related to technical requirements are marked with this indication sign.



NOTE
Indication signs point at useful information and hints. Disregarding of these may cause failure, inefficiency or breakdown.

1.2 *Basic Safety Directions*

Basic requirements for safe handling and trouble-free operation of this equipment are the following conditions:



- The equipment must not be used for purposes other than those intended.
- The equipment must not be modified. In case if modifications the customer takes all responsibility. In case of a need for modification to the equipment, please contact ABNOX AG.
- Make sure that the equipment is always in safe operating condition. Qualified staff shall perform functional tests and checks for damage at regular intervals. Authorized staff only shall do disassembly, and according to operation instructions only. To ensure appropriate expertise of the customer's staff, ABNOX AG offers training courses upon request.
- The customer takes responsibility for the compliance to all appropriate safety measures.
- Never operate the equipment if its orifice is pointing towards a person.
- Before begin of maintenance work, always disconnect equipment from air pressure supply and grease feed pipe.
- Check all pipes, hoses and screw connectors for leaks and visible damage at regular intervals. Immediately remove all damage!
- Exposure of the sensors to magnetic fields may cause malfunction of the sensors.
- Ensure and verify by regular checks, that working place, equipment and environment are kept in a clean and clearly arranged state.
- Rules and regulations regarding the prevention of accidents that apply to the working site must be observed.

1.3 *Responsibilities of Operating Company and Staff*

- Reliable and trained staff only should be authorized to work with the equipment, and responsibilities clearly assigned to individuals.
- Maintenance of electrical components of the equipment must be performed by a professional electrician, or under supervision of a professional electrician, and according to electro-technical regulations.
- Maintenance of hydraulic equipment should be assigned to staff with hydraulics know-how and experience only!

1.4 *Staff Training*

- Persons should not work with the equipment unless they have been suitably trained and made familiar with the equipment.
- Responsibilities of personnel for assembly work, commissioning, operation, setting up, maintenance, transport and repair should be clearly assigned to individuals.
- Persons in training may work with the equipment under supervision of an experienced person only.

1.5 *Hazard of Working with Equipment / Device*

All equipment and devices are built to the state of the art and according to accredited safety rules. Nevertheless, safety hazard to the user or third persons, or deficiencies of the plant or its parts may occur if the equipment is not properly used.



The equipment must be used:

- Exclusively for its intended purpose,
- Only if working condition of equipment ensures full technical safety.
- Technical faults, which may degrade safety, must be repaired immediately.

1.6 *Safety and Protection of Equipment*

- Make sure that all protection devices are installed properly and in functional condition, each time before starting the equipment.
- Protection devices must not be removed unless the equipment has been shut down and a safeguard against restart established.

1.7 *Personal Protective Gear and Complementary Measures*

- The user company is responsible for providing the required personal protective gear.
- All safety devices and installations should be tested at regular intervals.

1.8 *Usage of Equipment according to Intended Purpose*

The equipment may be used only under the specified operating conditions. The equipment must be used exclusively for metering of lubrication means according to detailed specification in chapter 2.1 of this operating manual.
Any usage other than or beyond that specified herein is regarded as not according to the intended purpose. The manufacturer company assumes no responsibility for any damage resulting from such improper usage.

Proper usage of equipment according to intended purpose comprises also:

- Observing and adherence to all operating instructions stated in this document.
- Adherence to inspection and maintenance tasks.

1.9 *Inappropriate Usage*

The manufacturer company assumes no responsibility for any damage resulting from such inappropriate usage.

1.10 *Service and Maintenance, Fault Repair*

- The specified calibration and maintenance work should be performed timely according to the maintenance schedule.
- Inform operators prior to execution of calibration and maintenance work.
- Disconnect equipment from mains supply and safeguard against restart (warning sign „Do not switch on“)
- Make sure that all screw connectors and fittings are fastened tightly.
- After completion of maintenance work test all functions and all safety devices.

1.11 *Warranty and Liability*

On principle, the clauses of the agreement in writing of the manufacturer company apply. ABNOX AG exclude all warranty and liability claims in case of damage to persons or material, if they have been caused by, but not limited to, one or more causes stated below:

- Usage of equipment other than that according to the intended purpose
- Work on equipment by persons other than those authorized to work with the equipment
- Improper transport, storage, assembly, commissioning, operation or maintenance of equipment
- Operation of equipment containing faulty safety devices, or safety devices not fitted properly, or safety devices that are out of function
- Neglecting instructions regarding safety, transport, storage, assembly, commissioning, maintenance and setting-up, as stated by the operations manual
- Modification of equipment not authorized by the manufacturer company
- Manipulation of pressure control device, change of supply pressure without authorisation by the manufacturer company
- Insufficient monitoring of equipment parts which are subject to wear
- Repairs executed improperly, use of spare parts from other suppliers
- Catastrophic impacts, e.g. by external matters or force majeure risks.

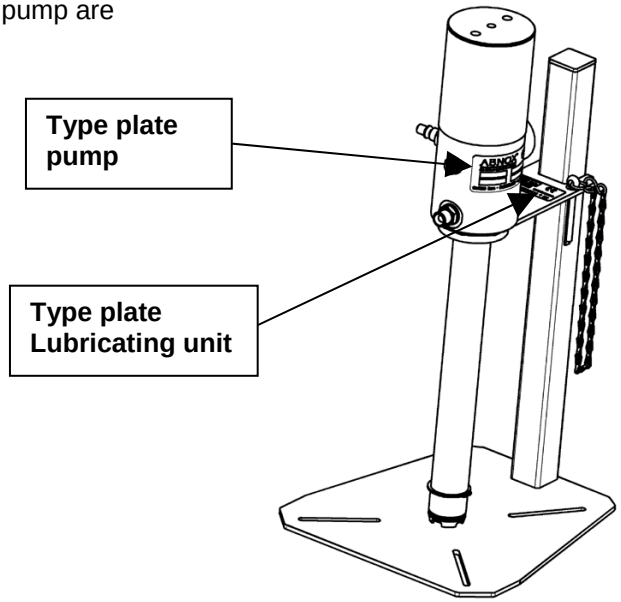
2 Description of Product

2.1 *Purpose of Product*

Pumping systems are suited for pumping lubricants, filling small cartridges and tubes and as a feeding pump for ABNOX metering valves.
They are also made to lubricate equipment and machinery with grease.

2.2 *Labelling*

The Lubricating Unit and the pump are identified by a Type plate.



NOTE
Please indicate the product information shown on the type plates when requesting spare parts or technical support.

2.3 *Function*

All pumping systems were filled with test grease and tested for function.
The pump will operate immediately the air supply is connected. Allow the unit to operate until grease appears at the outlet. If necessary, use air release valve.
The unit is now ready for use. (See operating manual of feed pump.)

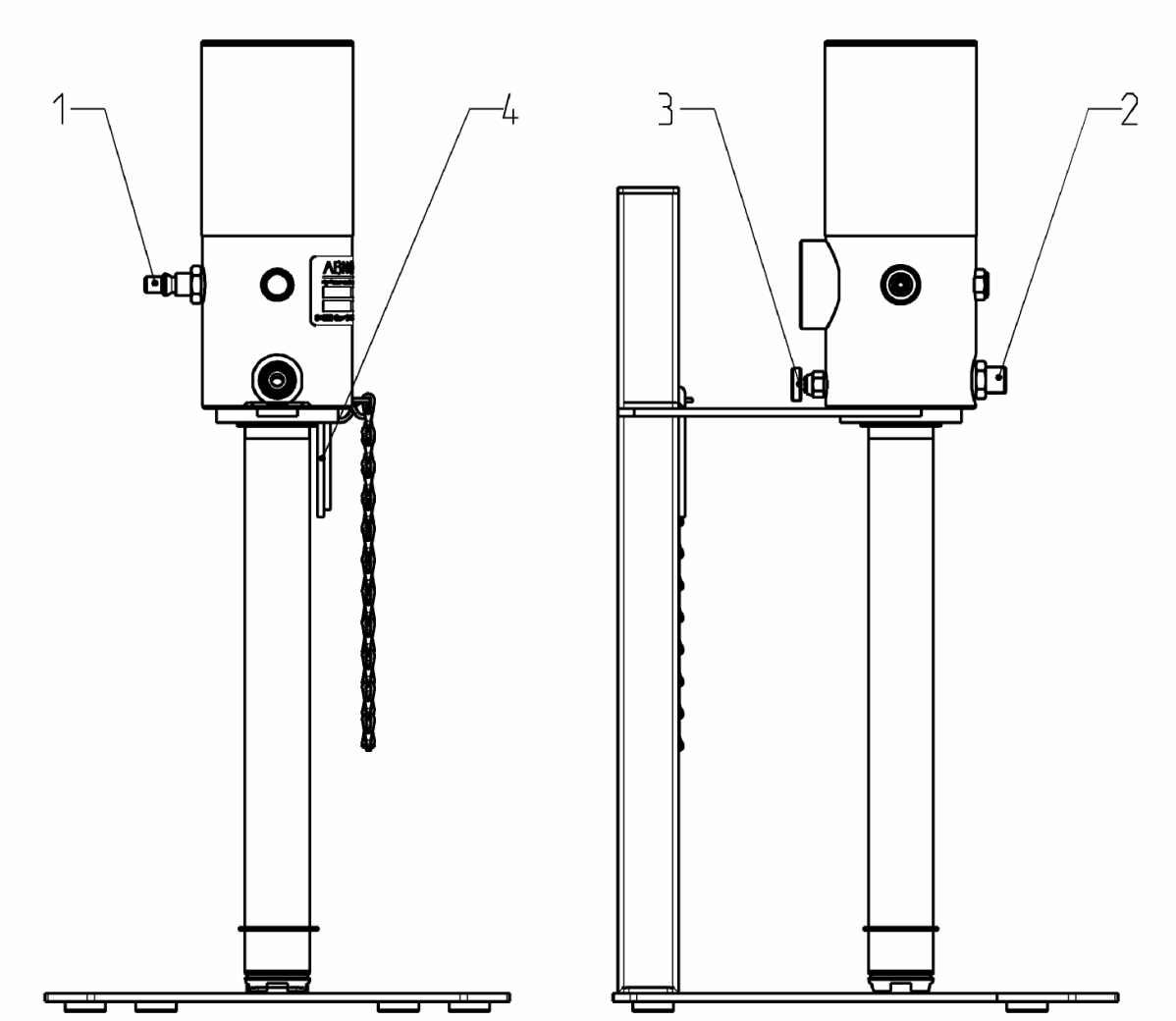
40650.20 – 5:1
40655.20 – 10:1
These pumps are suited for pumping lubricants, filling small cartridges and tubes and as a feeding pump for ABNOX metering valves.
To span long distances another transmission has to be chosen.
40656.20 – 20:1
This pump is suited for pumping lubricants, filling small cartridges and tubes and as a feeding pump for ABNOX metering valves. This transmission applicable for spanning long distances.
40658.20 – 60:1
This lubricating unit is designed to lubricate equipment and machinery with grease.

2.4 *Overview of Construction Types / Technical Data*

2.4.1 All Pressure Ratio (5:1, 10:1, 20:1, 60:1)

LEGEND

Pos.	Description
1	Air connection
2	Grease supply
3	Air vent
4	Vertical lock



2.4.1.1 40650.20 Technical Data

Schutzvermerk nach ISO 16016 / Protection notices ISO 16016

Modell Model	5:1
Bauform Construction type	Pneumatisch Air-Operated
Ausfuehrung Version	Gebinde 1 - 5 kg Container 1 - 5 kg
Anschluss Innengewinde P Connection Internal Thread P	G 1/4" 1/4" BSP
Anschluss Innengewinde E Connection Internal Thread E	M8 x 1
Anschluss Innengewinde 1 Connection Internal Thread 1	G 1/4" 1/4" BSP
Inhalt Gebinde [kg] Capacity Container [kg]	1 - 5
Gebinde-innen-Ø [mm] Container-internal-dia [mm]	210
Gebindehoeche [mm] Container height [mm]	285
Ansaugrohr-Ø [mm] Suction tube dia. [mm]	32
Ansaugrohrlaenge [mm] Suction Tube Length [mm]	288
Betriebsdruck bei 6 bar [bar] Operating Pressure at 6 bar [bar]	27
Max. Druck [bar] Max. Pressure [bar]	45
Min. pneum. Betriebsdruck [bar] Min. Operating Air Pressure [bar]	2
Max. pneum. Betriebsdruck [bar] Max. Operating Air Pressure [bar]	10
Optimaler pneum. Betriebsdruck [bar] Optimum Operating Air Pressure [bar]	6
Druckuebersetzung Pressure Ratio	5:1
Foerdermenge [cm³/min] Output [cm³/min]	1500
Foerdermenge / Doppelhub [cm³/min] Output / Double Stroke [cm³/min]	20
Max. Luftverbrauch [l/min] Max. Air Consumption [l/min]	150
Min. Temperatur [°C] Min. Temperature [°C]	10
Max. Temperatur [°C] Max. Temperature [°C]	40
Max. Penetration NLGI-Klasse Max. Penetration NLGI Classification	3
Max. dynamische scheinbare Viskositaet [m Pa.s] Max. Apparent Dynamic Viscosity [m Pa.s]	5000
CE - Zertifiziert CE - Certification	Ja Yes

Hauptabmessung : 479/783x250x230 mm

ERP ID Nr.: 0

Massstab: 1:1

	Datum	Visum
Gez.	16.03.06	LI
Gepr.	.	.
Freigabe	.	.

Benennung:
Foerderanlage 5:1
Lubricating Unit 5:1

ABNOX®
Langackerstrasse 25
CH-6330 Cham
www.abnox.com

Zeichnungsnummer: M40650-20
Blatt Nr.: 2
Anzahl Bl.: 2

Zust.	Aenderung	Datum	Visum
01	06-070	15.01.07	LI

Modell: 40650-20.ASSEM
Z.-Format: A4
Ursp.: -
Ers. f.: 40650.00

3D-modelliert (Pro/ENGINEER)

2.4.1.2 40655.20 Technical Data

Schutzvermerk nach ISO 16016 / Protection notices ISO 16016

Modell Model	10:1
Bauform Construction type	Pneumatisch Air-Operated
Ausfuehrung Version	Gebinde 1 - 5 kg Container 1 - 5 kg
Anschluss Innengewinde P Connection Internal Thread P	G 1/4" 1/4" BSP
Anschluss Innengewinde E Connection Internal Thread E	M8 x 1
Anschluss Innengewinde 1 Connection Internal Thread 1	G 1/4" 1/4" BSP
Inhalt Gebinde [kg] Capacity Container [kg]	1 - 5
Gebinde-innen-Ø [mm] Container-internal-dia [mm]	210
Gebindehoeche [mm] Container height [mm]	285
Ansaugrohr-Ø [mm] Suction tube dia. [mm]	32
Ansaugrohrlaenge [mm] Suction Tube Length [mm]	288
Betriebsdruck bei 6 bar [bar] Operating Pressure at 6 bar [bar]	67
Max. Druck [bar] Max. Pressure [bar]	111
Min. pneum. Betriebsdruck [bar] Min. Operating Air Pressure [bar]	2
Max. pneum. Betriebsdruck [bar] Max. Operating Air Pressure [bar]	10
Optimaler pneum. Betriebsdruck [bar] Optimum Operating Air Pressure [bar]	6
Druckuebersetzung Pressure Ratio	10:1
Foerdermenge [cm³/min] Output [cm³/min]	1190
Foerdermenge / Doppelhub [cm³/min] Output / Double Stroke [cm³/min]	20
Max. Luftverbrauch [l/min] Max. Air Consumption [l/min]	217
Min. Temperatur [°C] Min. Temperature [°C]	10
Max. Temperatur [°C] Max. Temperature [°C]	40
Max. Penetration NLGI-Klasse Max. Penetration NLGI Classification	3
Max. dynamische scheinbare Viskositaet [m Pa.s] Max. Apparent Dynamic Viscosity [m Pa.s]	5000
CE - Zertifiziert CE - Certification	Ja Yes

Hauptabmessung : 479/783x250x230 mm — ERP ID Nr.: 0

Massstab: 1:1

	Datum	Visum
Gez.	16.03.06	LI
Gepr.	.	.
Freigabe	.	.

Benennung:
Foerderanlage 10:1
Lubricating Unit 10:1

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Langackerstrasse 25
CH-6330 Cham
www.abnox.com

Zeichnungsnummer: M40655-20
Blatt Nr.: 2
Anzahl Bl.: 2

Zust.	Aenderung	Datum	Visum
01	06-070	15.01.07	LI

Modell: 40655-20.ASSEM | Z.-Format: A4
Ursp.: - | Ers. f.: 40655.00

3D-modelliert (Pro/ENGINEER)

2.4.1.3 40656.20 Technical Data

Schutzvermerk nach ISO 16016 / Protection notices ISO 16016

Modell Model	20:1
Bauform Construction type	Pneumatisch Air-Operated
Ausfuehrung Version	Gebinde 1 - 5 kg Container 1 - 5 kg
Anschluss Innengewinde P Connection Internal Thread P	G 1/4" 1/4" BSP
Anschluss Innengewinde E Connection Internal Thread E	M8 x 1
Anschluss Innengewinde 1 Connection Internal Thread 1	G 1/4" 1/4" BSP
Inhalt Gebinde [kg] Capacity Container [kg]	1 - 5
Gebinde-innen-Ø [mm] Container-internal-dia [mm]	210
Gebindehoeche [mm] Container height [mm]	285
Ansaugrohr-Ø [mm] Suction tube dia. [mm]	32
Ansaugrohrlaenge [mm] Suction Tube Length [mm]	288
Betriebsdruck bei 6 bar [bar] Operating Pressure at 6 bar [bar]	115
Max. Druck [bar] Max. Pressure [bar]	191
Min. pneum. Betriebsdruck [bar] Min. Operating Air Pressure [bar]	2
Max. pneum. Betriebsdruck [bar] Max. Operating Air Pressure [bar]	10
Optimaler pneum. Betriebsdruck [bar] Optimum Operating Air Pressure [bar]	6
Druckuebersetzung Pressure Ratio	20:1
Foerdermenge [cm³/min] Output [cm³/min]	890
Foerdermenge / Doppelhub [cm³/min] Output / Double Stroke [cm³/min]	7.5
Max. Luftverbrauch [l/min] Max. Air Consumption [l/min]	150
Min. Temperatur [°C] Min. Temperature [°C]	10
Max. Temperatur [°C] Max. Temperature [°C]	40
Max. Penetration NLGI-Klasse Max. Penetration NLGI Classification	3
Max. dynamische scheinbare Viskositaet [m Pa.s] Max. Apparent Dynamic Viscosity [m Pa.s]	5000
CE - Zertifiziert CE - Certification	Ja Yes

Hauptabmessung : 479/783x250x230 mm — ERP ID Nr.: 0

Massstab: 1:1

	Datum	Visum
Gez.	16.03.06	LI
Gepr.	.	.
Freigabe	.	.

Benennung:
Foerderanlage 20:1
Lubricating Unit 20:1

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Zeichnungsnummer: M40656-20
Blatt Nr.: 2
Anzahl Bl.: 2

Zust.	Aenderung	Datum	Visum
01	06-070	15.01.07	LI

Modell: 40656-20.ASSEM | Z.-Format: A4
Ursp.: - | Ers. f.: -

3D-modelliert (Pro/ENGINEER)

2.4.1.4 40658.20 Technical Data

Schutzvermerk nach ISO 16016 / Protection notices ISO 16016

Modell Model	60:1
Bauform Construction type	Pneumatisch Air-Operated
Ausfuehrung Version	Gebinde 1 - 5 kg Container 1 - 5 kg
Anschluss Innengewinde P Connection Internal Thread P	G 1/4" 1/4" BSP
Anschluss Innengewinde E Connection Internal Thread E	M8 x 1
Anschluss Innengewinde 1 Connection Internal Thread 1	G 1/4" 1/4" BSP
Inhalt Gebinde [kg] Capacity Container [kg]	1 - 5
Gebinde-innen-Ø [mm] Container-internal-dia [mm]	210
Gebindehoeche [mm] Container height [mm]	285
Ansaugrohr-Ø [mm] Suction tube dia. [mm]	32
Ansaugrohrlaenge [mm] Suction Tube Length [mm]	288
Betriebsdruck bei 6 bar [bar] Operating Pressure at 6 bar [bar]	335
Max. Druck [bar] Max. Pressure [bar]	555
Min. pneum. Betriebsdruck [bar] Min. Operating Air Pressure [bar]	2
Max. pneum. Betriebsdruck [bar] Max. Operating Air Pressure [bar]	10
Optimaler pneum. Betriebsdruck [bar] Optimum Operating Air Pressure [bar]	6
Druckuebersetzung Pressure Ratio	60:1
Foerdermenge [cm³/min] Output [cm³/min]	500
Foerdermenge / Doppelhub [cm³/min] Output / Double Stroke [cm³/min]	7.5
Max. Luftverbrauch [l/min] Max. Air Consumption [l/min]	217
Min. Temperatur [°C] Min. Temperature [°C]	10
Max. Temperatur [°C] Max. Temperature [°C]	40
Max. Penetration NLGI-Klasse Max. Penetration NLGI Classification	3
Max. dynamische scheinbare Viskositaet [m Pa.s] Max. Apparent Dynamic Viscosity [m Pa.s]	5000
CE - Zertifiziert CE - Certification	Ja Yes

Hauptabmessung : 479/783x250x230 mm — ERP ID Nr.: 0

Massstab: 1:1

	Datum	Visum
Gez.	16.03.06	LI
Gepr.	.	.
Freigabe	.	.

Benennung: Foerderanlage 60:1 / Lubricating Unit 60:1

ABNOX
Langackerstrasse 25
CH-6330 Cham
www.abnox.com

Zeichnungsnummer: M40658-20 — Blatt Nr.: 2 — Anzahl Bl.: 2

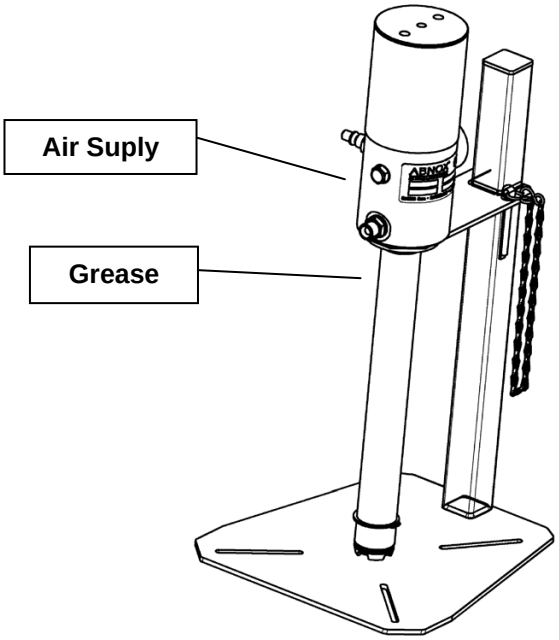
Zust.	Aenderung	Datum	Visum
01	06-070	15.01.07	LI

Modell: 40658-20.ASSEM — Z.-Format: A4 — Ursp.: - — Ers. f.: 40658.00

3D-modelliert (Pro/ENGINEER)

2.5 *Connection Diagram*

NOTE
ABNOX AG recommend the use of a maintenance unit to ensure clean air supply.



3 Packing and Transport

3.1 *Packing*

Preparation and packing of equipment is provided by ABNOX AG and is designed for transportation to the “first destination”.
The packaging must not be exposed to additional strain. The packaging and its contents should be protected from humidity. Ambient temperature during transport and storage must be maintained within –20 °C to +40°C.

3.2 *Transport Damage*

Should damage due to transportation be discovered by the incoming goods inspection, the following procedure should be observed:

- Inform Transport Company (Carrier Company, railways etc.)
- Write damage report
- Inform supplier company

3.3 *Intermediate Storage*

Storage in an aggressive or moist environment or outdoors may lead to corrosion or other damage. ABNOX AG will not assume liability for such damage. Temperature must be kept within –20 °C to +40°C during transport and intermediate storage.

4 Mounting Site / Insertion into Plant

- All legal requirements for the mounting site should be identified and verified on site whether they are fulfilled.
- Prior to installation of the equipment, or insertion into the plant respectively, the condition of the floor and the size of the surrounding space should be checked, to ensure safety of operation for both personnel and equipment. The installation or insertion into the plant respectively, shall be such, that continuous operation at a high safety level is ensured.
- The installation of the equipment, as well as commissioning of the equipment, or storage, shall be conducted by specialists trained and made familiar with the equipment only.
- The equipment is not designed for use in areas with exposure to weather influence.
- Operation or storage of the equipment in an aggressive or moist environment or outdoors may lead to corrosion or other damage. ABNOX AG will not assume liability for such damage.

5 Definition of Interfaces

See drawing set, dimensioned drawings at rear of operating manual: Connectors for air and grease supply.

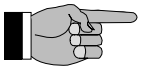
6 Installation

The equipment shall be installed at the intended operating site, under consideration of the conditions specified in chapter 4.

7 Commissioning



NOTE
In order to ensure optimal operation of device, make sure that the air supply pressure is set to approx. 6 bar.

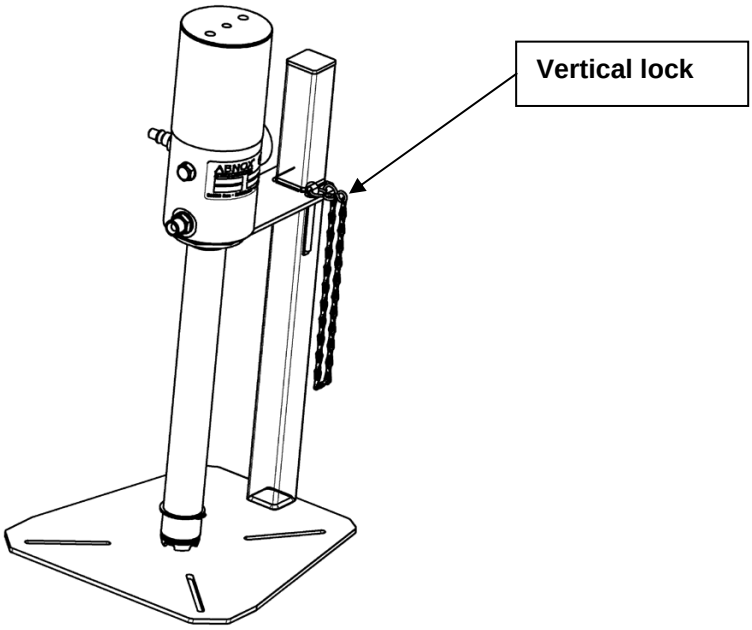


NOTE
All devices are tested by the manufacturer prior to shipping. Due to testing, residues of test liquid may be found inside the devices (pumps).

The pump will operate immediately the air supply is connected. Allow the unit to operate until grease appears at the outlet. If necessary, use air release valve.
The unit is now ready for use.

8 Operation

8.1 *Control Elements*



9 Troubleshooting

NOTE
Troubleshooting should be performed by a trained specialist only.

9.1 *Fault – Cause – Action*

NOTE
No special tools are required for the actions stated below.

Fault	Possible cause	Action
The air motor operates, but no grease is pumped	Air entrainment within the lubricant or within the pump system	Check feed pump. Press the follower plate on to the grease until grease appears through the central guide tube. Open grease control valve and use air-release valve. (See operating manual of feed pump)
		Check venting screw of feed pump (See operating manual of feed pump)
	Leak	Check device, all connections and all hoses
Contamination in pump system	Particles, or contaminants, will hinder the perfect operation of the pump	Remove pump from grease keg. Unscrew the grease inlet connection and clean all parts. (When mounted: Press the follower plate on to the grease until grease appears through the central guide tube. Open grease control valve and use air-release valve.)

If this does not cure the problem, please contact your supplier.

10 Taking out of Service

10.1 *Short Interruption*

For short interruptions (over night or during weekends), switch off main switch. Pressure inside equipment is removed and electrical power off (check signalling and dials).

10.2 *Long-term Interruption*

Please observe procedure stated below when taking equipment out of service for longer periods:

- Switch off main switch.
- Disconnect mains plug.
- Pressure inside equipment must be removed (check signalling and dials).

10.3 *Final Shut-down of Equipment*

For shut-down of equipment, please follow this procedure:

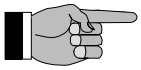
- Switch off main switch.
- Disconnect mains plug.
- Pressure inside equipment must be removed (check signalling and dials).
- Drain grease or oil and take care of proper disposal.



WARNING
Danger of accidents und environmental hazard: Do not spill grease or oil.
Take care of proper disposal of grease and oil (hazardous waste).

11 Maintenance

This chapter explains how to perform maintenance of the equipment. The maintenance table shows what should be checked and at which intervals.



NOTE
This chapter does not explain how to repair damage of the equipment. Damage repair shall be executed exclusively by skilled and trained experts, or by staff of the manufacturer's customer service.

11.1 *Maintenance Plan*



WARNING
As a rule, all work must be executed with the equipment shut down only. The main switch must be switched of and the mains plug disconnected from electrical supply. Pressure inside the pneumatic and the hydraulic systems must be removed.

The maintenance intervals stated below are valid for single shift operation of the equipment. In case of multiple-shift or very intensive operation, maintenance intervals are shortened accordingly. Also take into account other influences on maintenance need, such as dirty environment.

WHEN	WHAT	HOW	WHO
Weekly	Check device for leak proofness	Visual inspection	User company expert
Monthly	Check device, all connections and all hoses for leak proofness	Visual inspection	User company expert

11.2 *Customer Service / Support*

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Langackerstrasse 25
CH-6330 Cham
Schweiz

Tel. +41 (0) 41 780 44 55
Fax +41 (0) 41 780 44 50

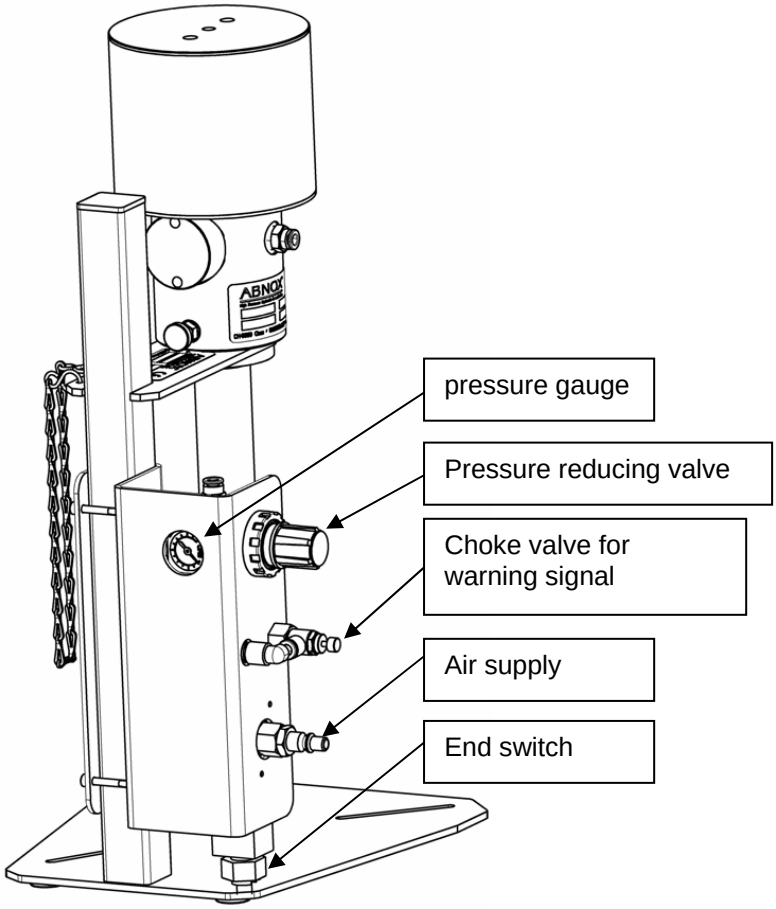
E-Mail info@abnox.com
Internet www.abnox.com

12 Operating Supplies

No special operating supplies are required for the equipment.

13 Accessories (Optional)

- Low level indicator with audible alarm and pressure reducing valve (Art. No. 40685.00)



The option of low level indicator with audiable alarm and pressure reducing valve combines the advantages of the drum pumps with the standard grease supply system. If the charging level is low the pump shuts down automatically thanks to a pneumatic end switch and avoids the air suction in the lubricant system. Additionally an audible warning signal indicates the stop of the conveyance. The signal sound level is continuously adjustable with a choke valve.

The warning signal can be shut down by separating the system from the air pressure and a new restart of the drum pump at the lifting of the complete pump unit can be avoided. The oulet speed resp. the supply pressure of the drum pump can be adjusted with the integrated pressure reducing valve with pressure gauge.

- Pressure reducing valve (Art. No. 48285.00)
- Pressure reducing valve with filter (Art. No. 40243.00)
- Pressure reducing valve with connector and air coupling for high pressure hose connection with an air conduction (Art. No. 42307.00)
- Container centring (Art. No. 40683.00)

14 Drawings

Dimensioned drawings, drawings and lists of spare parts are contained in the part „Drawing Set“ at the rear of this operating manual.

15 Spare Parts

Drawings and lists of spare parts and of seal parts are contained in the part „Drawing Set“ at the rear of this operating manual.

16 Resale

This operating manual is part of the equipment and hence to be included in the delivery scope when reselling.

17 Material Disposal



WARNING
Lubricant material must be treated as hazardous waste.

18 Training

- Persons trained and made familiar with the equipment exclusively shall conduct work on the equipment. It is indispensable that this person has read and understood the operating manual, and is capable to control the equipment in all operating states, and that the person knows how to handle all safety hazards.
- Responsibilities of personnel for assembly work, commissioning, operation, setting up, maintenance, transport and repair should be clearly assigned to individuals.
- Persons in training may work with the equipment under supervision of an experienced person only.

19 Shut-down of equipment

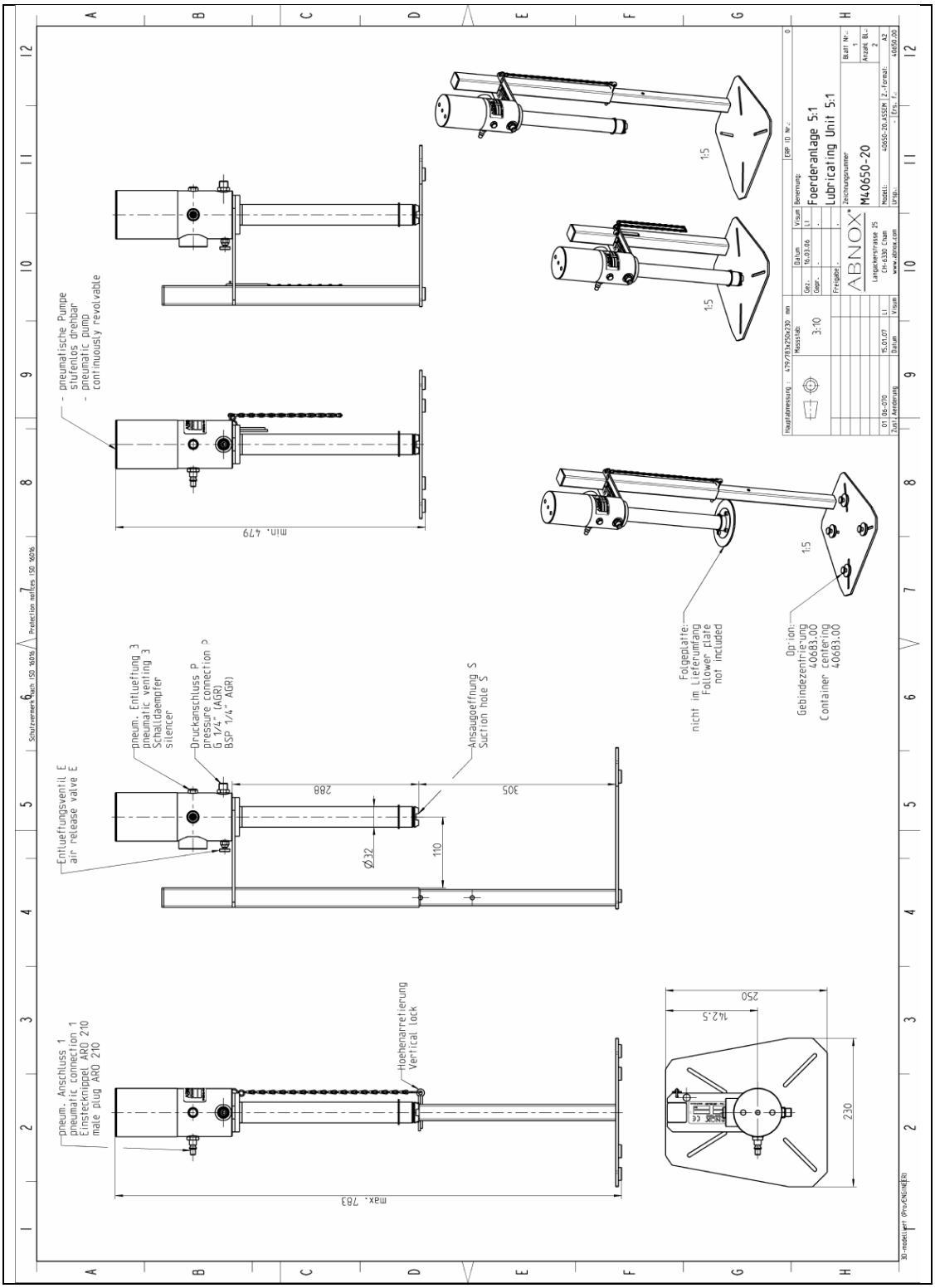


WARNING
Materials and liquids shall be individually handled and disposed of in a professional manner and in compliance with the applying national legal regulations.

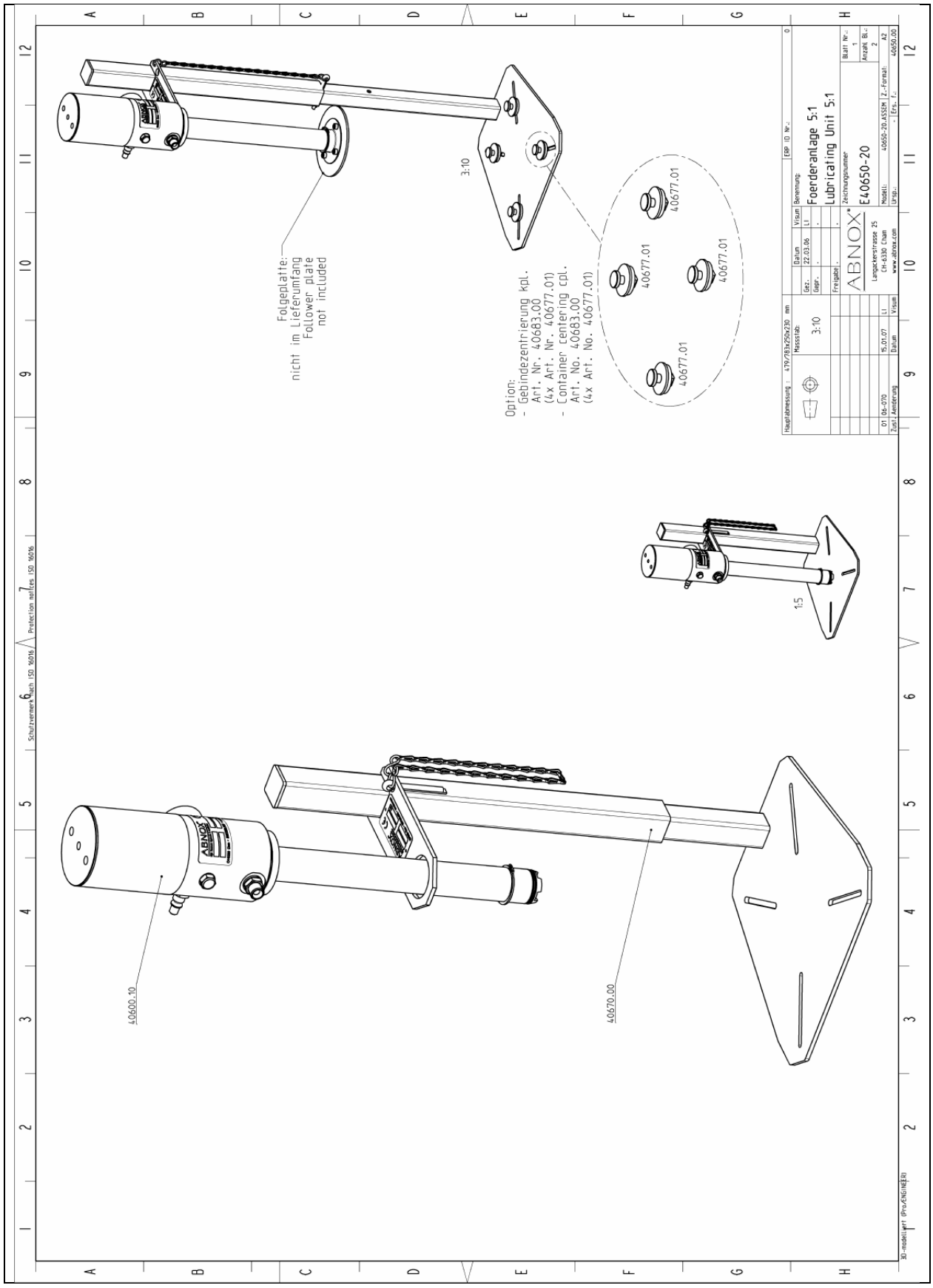
20 Appendix

Draving Set 40650.20

Dimensioned Drawing M40650.20



Drawing of Spare Parts E40650.20



List of Spare Parts E40650.20

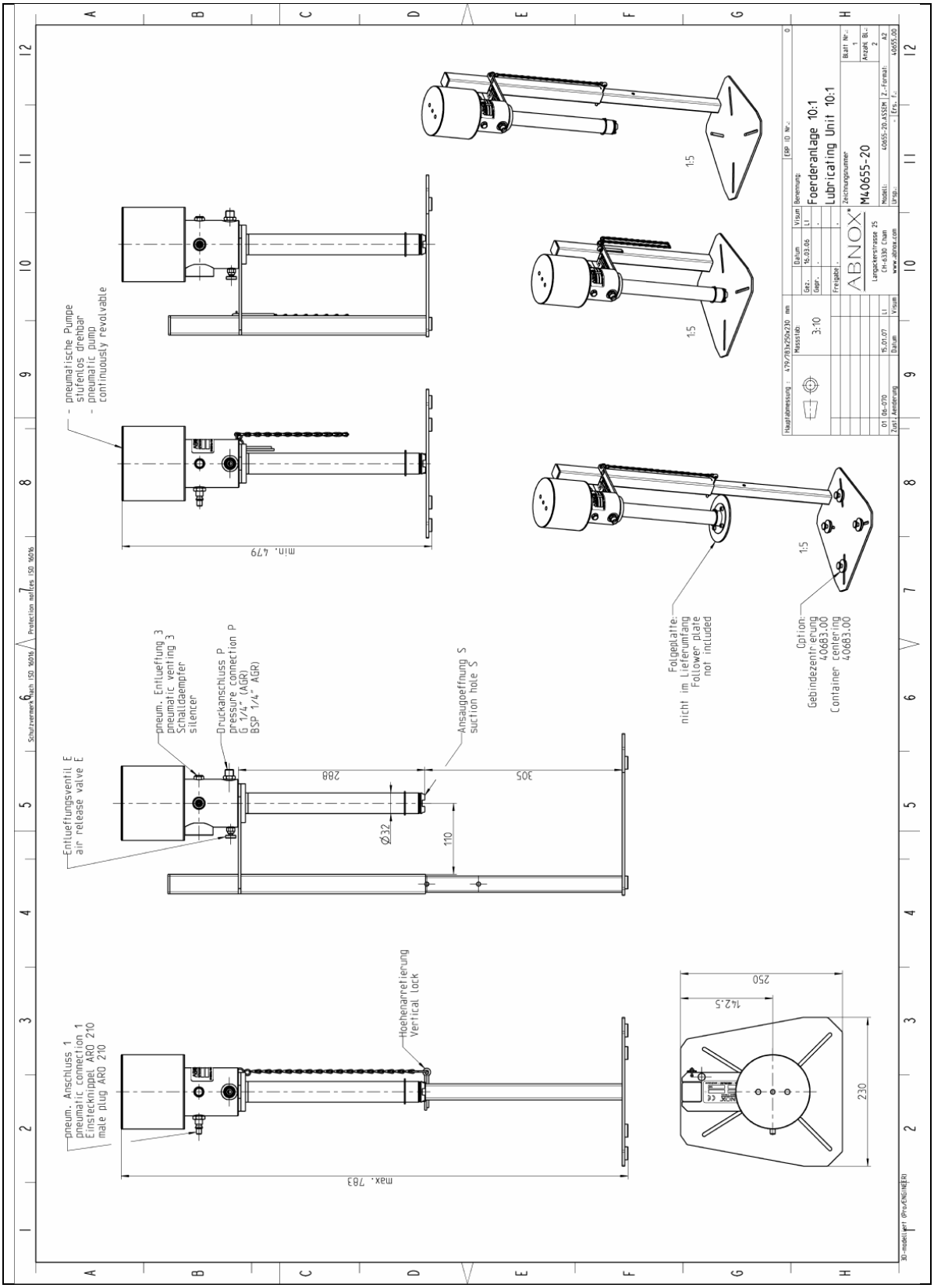
Artikelnummer:	E40650.20	**Datum/Date:**	15.01.2007
Article-No.	E40650.20	**Änderung/Update Index:**	01

Bezeichnung:	Förderanlage	5:1
	Pneumatisch	Gebinde 1 - 5 kg
Description:	Lubricating Unit	5:1
	Air-Operated	Container 1 - 5 kg

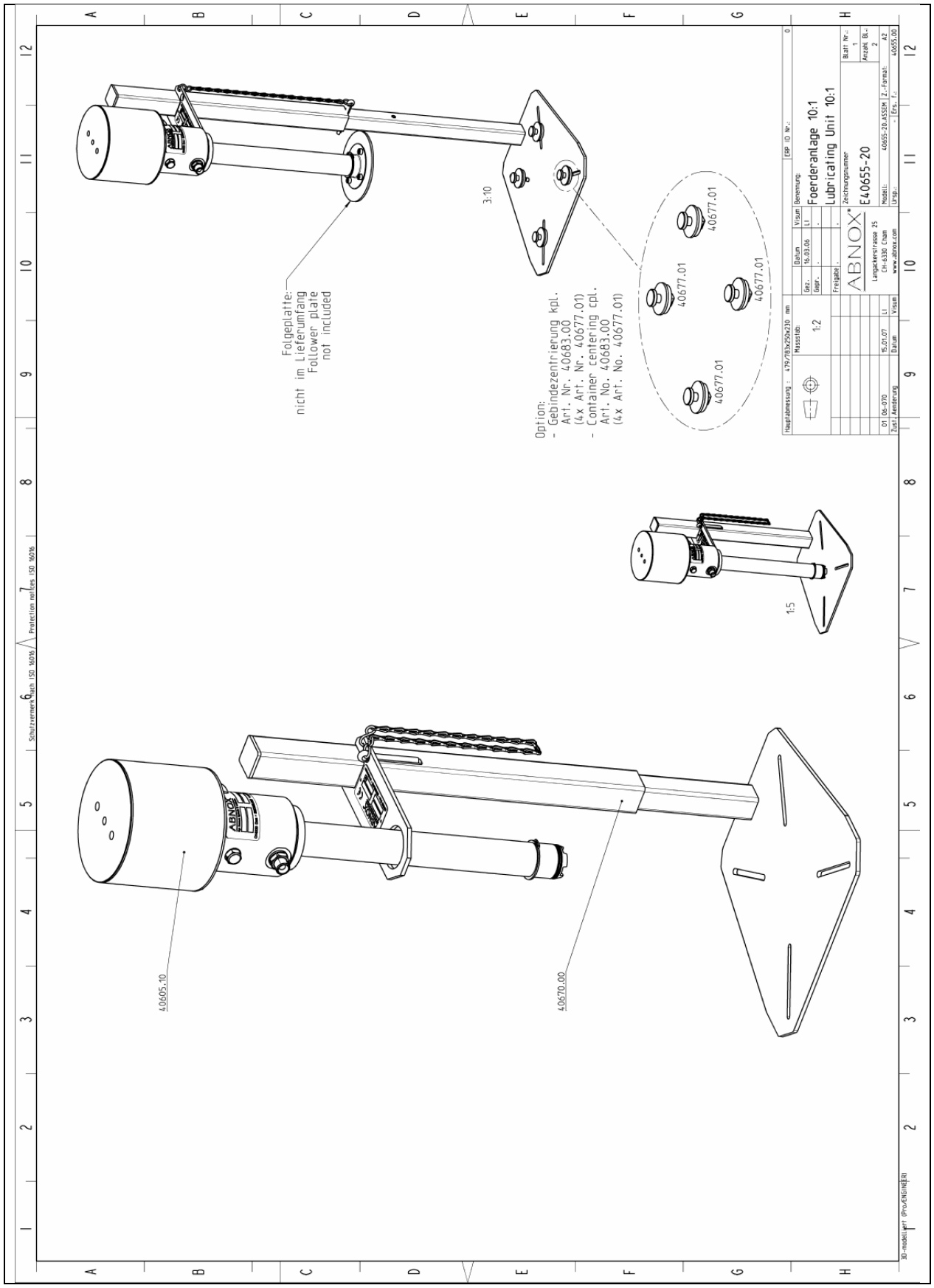
Art-Nr./Art-No.	**Bezeichnung**	**Description**	**Menge/pieces**
40600.10	Pneumatische Pumpe	Pneumatic pump	1
40670.00	Ständer kpl.	Support frame cpl.	1
40683.00	Gebindezentrierung kpl.	Container centering cpl.	1
40677.01	Gebindezentrierung	Container centering	4

Draving Set 40655.20

Dimensioned Drawing M40655.20



Drawing of Spare Parts E40655.20



List of Spare Parts E40655.20

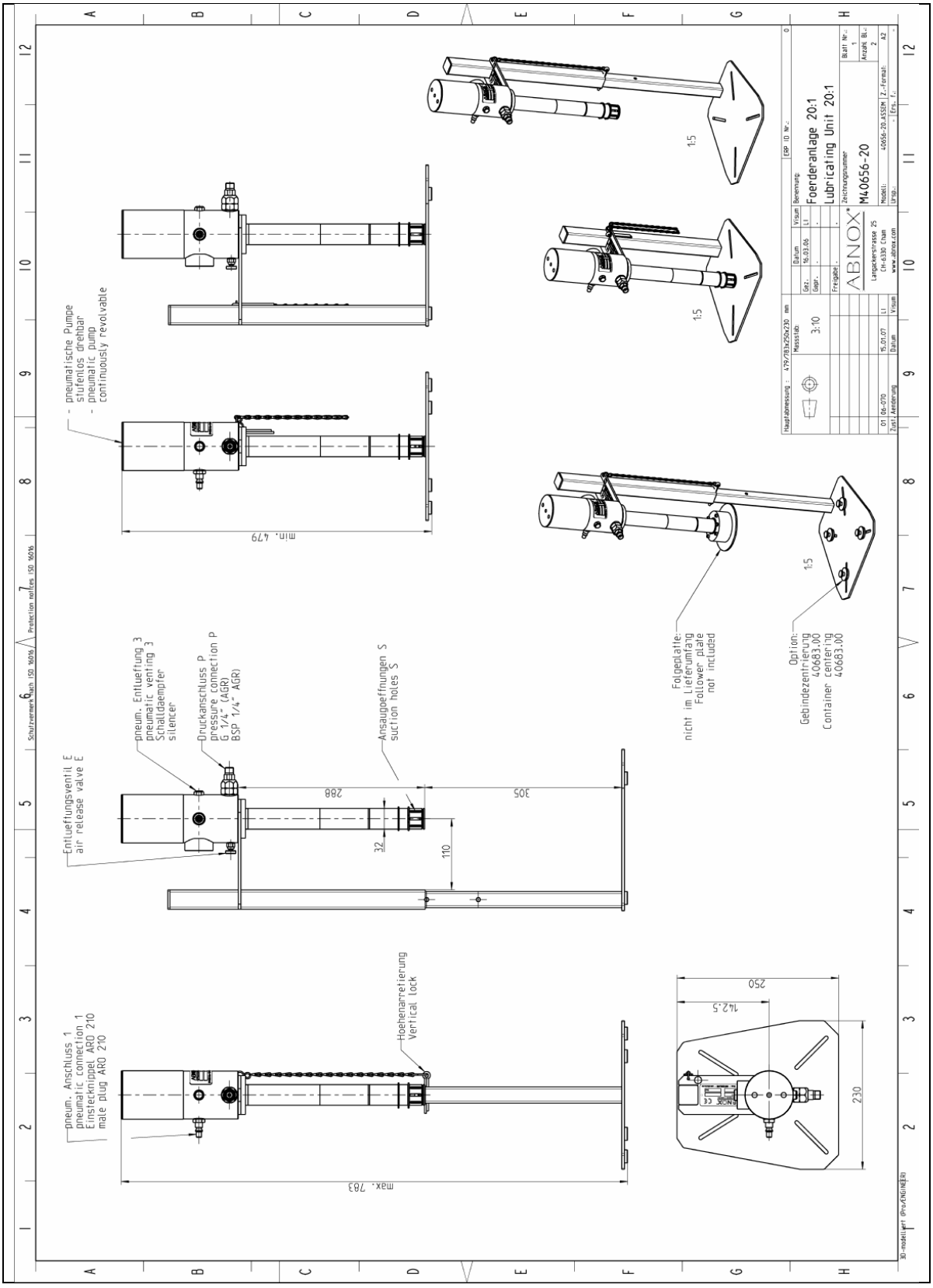
Artikelnummer:	E40655.20	**Datum/Date:**	15.01.2007
Article-No.	E40655.20	**Änderung/Update Index:**	01

Bezeichnung:	Förderanlage	10:1
	Pneumatisch	Gebinde 1 - 5 kg
Description:	Lubricating Unit	10:1
	Air-Operated	Container 1 - 5 kg

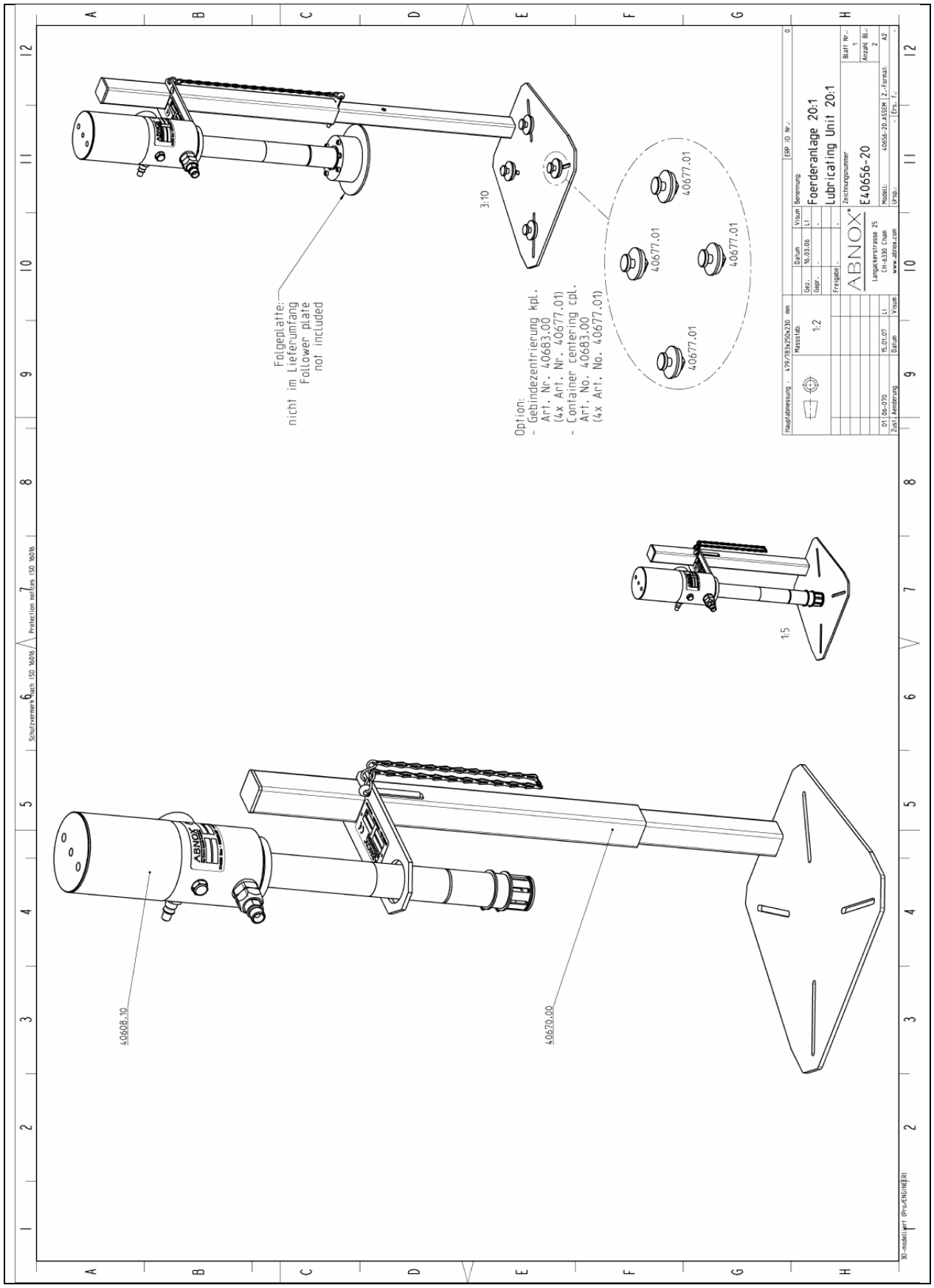
Art-Nr./Art-No.	**Bezeichnung**	**Description**	**Menge/pieces**
40605.10	Pneumatische Pumpe	Pneumatic pump	1
40670.00	Ständer kpl.	Support frame cpl.	1
40683.00	Gebindezentrierung kpl.	Container centering cpl.	1
40677.01	Gebindezentrierung	Container centering	4

Draving Set 40656.20

Dimensioned Drawing M40656.20



Drawing of Spare Parts E40656.20



List of Spare Parts E40656.20

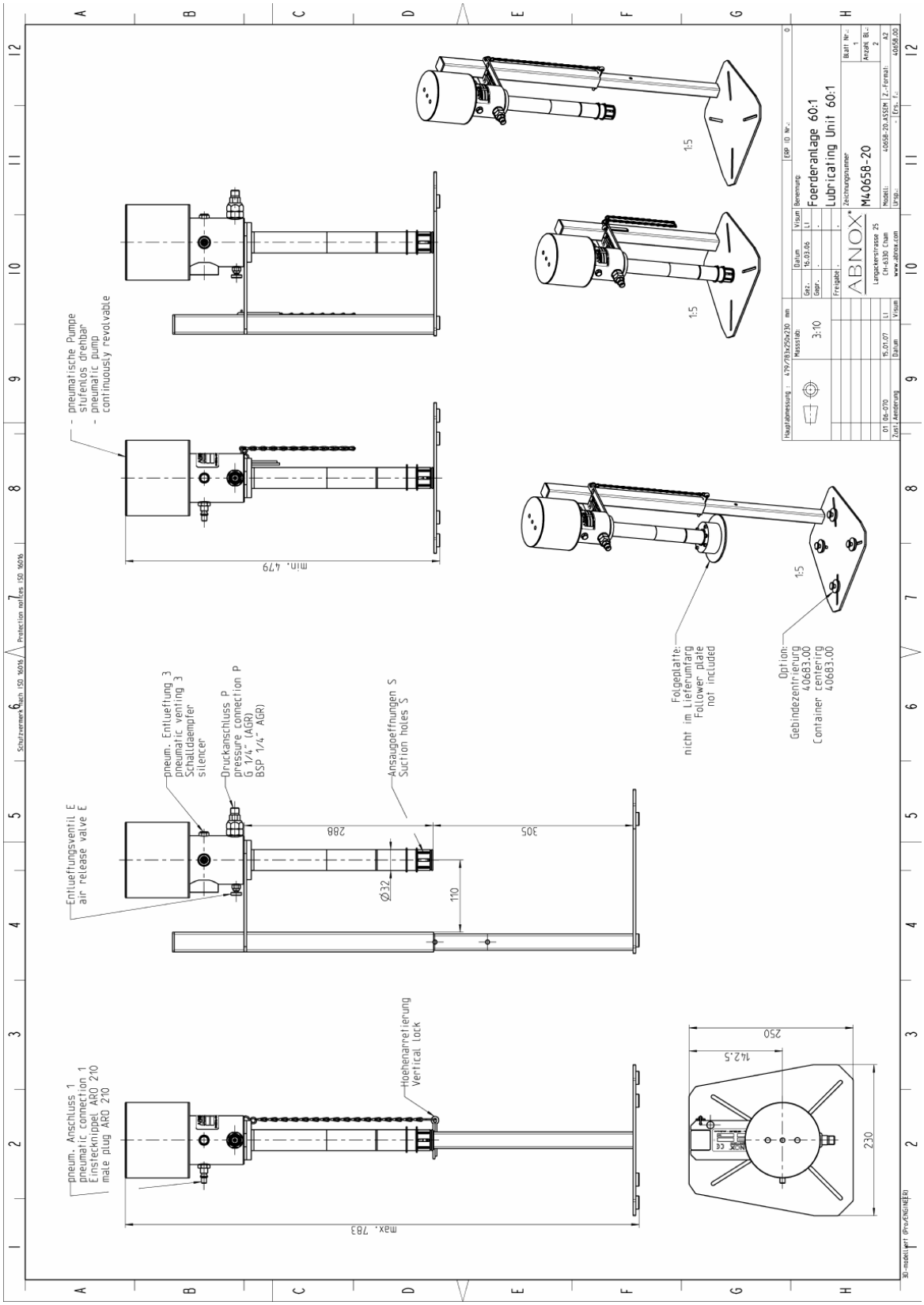
Artikelnummer:	E40656.20	**Datum/Date:**	15.01.2007
Article-No.	E40656.20	**Änderung/Update Index:**	01

Bezeichnung:	Förderanlage Pneumatisch	20:1 Gebinde 1 - 5 kg
Description:	Lubricating Unit Air-Operated	20:1 Container 1 - 5 kg

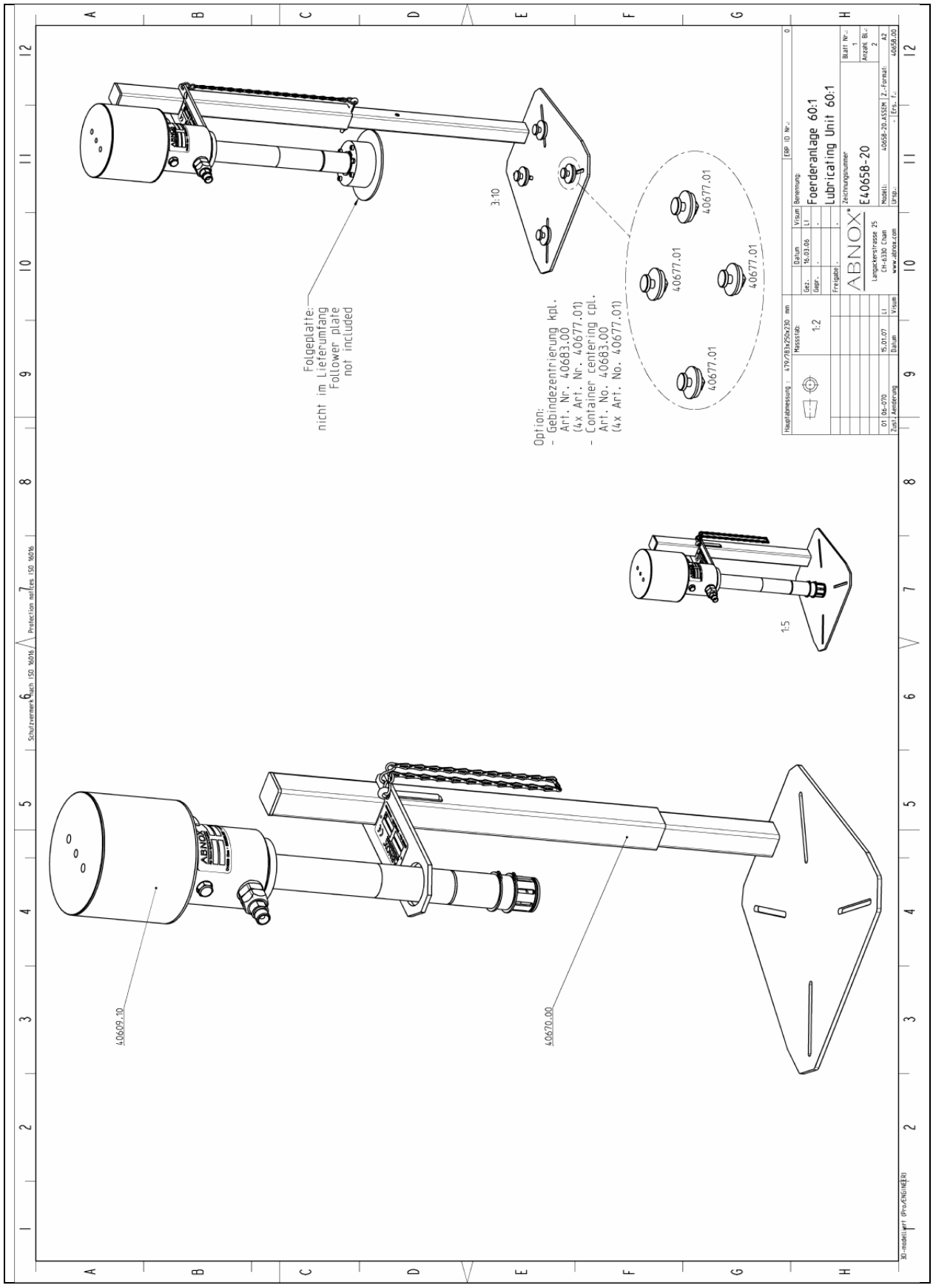
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40670.00	Ständer kpl.	Support frame cpl.	1
40683.00	Gebindezentrierung kpl.	Container centering cpl.	1
40677.01	Gebindezentrierung	Container centering	4

Draving Set 40658.20

Dimensioned Drawing M40658.20



Drawing of Spare Parts E40658.20



List of Spare Parts E40658.20

Artikelnummer:	E40658.20	**Datum/Date:**	15.01.2007
Article-No.	E40658.20	**Änderung/Update Index:**	01

Bezeichnung:	Förderanlage Pneumatisch	60:1 Gebinde 1 - 5 kg
Description:	Lubricating Unit Air-Operated	60:1 Container 1 - 5 kg

Art-Nr./Art-No.	**Bezeichnung**	**Description**	**Menge/pieces**
40609.10	Pneumatische Pumpe	Pneumatic pump	1
40670.00	Ständer kpl.	Support frame cpl.	1
40683.00	Gebindezentrierung kpl.	Container centering cpl.	1
40677.01	Gebindezentrierung	Container centering	4

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