

ProVent® 400

Series 39 310 70 700

Operating Instructions

**MANN+
HUMMEL**



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1. Preface

These operating instructions should make it easier for personnel to familiarize themselves with the ProVent® and to use it in the various application areas for which it was designed.

The operating instructions contain important information on operating the components safely, correctly and economically. These instructions must be followed in order to avoid danger, reduce repair costs and down times and increase the reliability and working life of your machine.

The instructions must be made accessible to every person working with the filter.

Furthermore, these instructions must be supplemented as necessary with the applicable national regulations regarding accident prevention and environmental protection (in particular the disposal of removed parts).

We reserve the right to make technical modifications to the filter and/or modify the content of these operating instructions.

encl: Technical Drawing

2. Safety

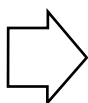
2.1 Warning notices and symbols



All instructions in the operating instructions that affect safety are marked with this symbol. Ignoring the symbol may endanger personnel.



All instructions marked with this symbol must be observed closely in order to avoid damage to or the destruction of unit components.



This symbol indicates that special attention must be paid to these instructions in order to ensure trouble-free, economical operation.

2.2 Proper use

The ProVent® was constructed using state-of-the-art technology in accordance with recognised safety specifications. However, the functional safety of downstream assemblies may be affected if:

- the ProVent® is used incorrectly or for a purpose for which it was not intended,
- the operating conditions are altered
- conversions are carried out without consultation with the manufacturer,
- necessary maintenance and repair work is not performed.

Use the ProVent® only if in perfect condition and in accordance with the respective technical specifications, observing correct procedures regarding safety and dangers, and in compliance with the operating instructions. In particular, malfunctions that may affect safety must be eliminated immediately.

Intended use also includes observing operating instructions and complying with inspection and maintenance requirements.

The filter manufacture is **not** liable for dangers caused by the product being filtered. This applies in particular for the processing of hazardous materials. The operator of the ProVent® is responsible for providing the necessary, specified safety equipment.

2.3 Operational safety

All modes of operation that may affect operational safety of the ProVent® must be avoided.

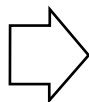
Independent conversions or modifications to the ProVent® are not permitted under any circumstances. **Furthermore, any warranty claims would become invalid with immediate effect.**

All labelling and identification marks on the ProVent® must be legible at all times.

3. Description

The ProVent® is a crankcase ventilation system that essentially consists of a housing, cover with pressure regulating valve, oil separator and retainer.

The ProVent® can be used as an open system (oil separator only) or closed system (with blow-by gas feedback and crankcase pressure control).



Observe the environmental regulations in the relevant country!

4. Installation

The ProVent® can be positioned in the retainer at twelve increments of 30°.

- Open the fixing bracket on the back of the retainer.
- Turn ProVent® to required position.
- Attach the fixing bracket.
- Mount retainer with ProVent® in a vertical position.
- Attach hose lines at inlet, outlet and oil return connectors and secure using hose clamps.

To guarantee safe operation, the ProVent® should be protected from dirt (by fitting splash guards).

5. Maintenance



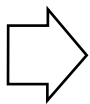
Only carry out maintenance work when the motor is switched off. Never start without an oil separator and/or cover.



Danger of burns from hot air that may escape. Housing, cover and hoses can become very hot.

The maintenance of the ProVent® essentially involves replacing the oil separator.

Check the ProVent® regularly for damage and external soiling.



High-pressure cleaners may not be used, as water may enter the oil circuit!

5.1 Maintenance intervals

The oil separator must be replaced in accordance with specifications from the device manufacturer or after 1000 operating hours at the latest.



Maintenance intervals may need to be shortened depending on the operating conditions.

5.2 Removing the oil separator

- Open the cover by turning anticlockwise and remove together with the oil separator element. Should the cover be difficult to move, a tool (e.g. screwdriver) can be used to help turn the cover.
- Remove the oil separator from the cover and dispose of in accordance with local regulations.

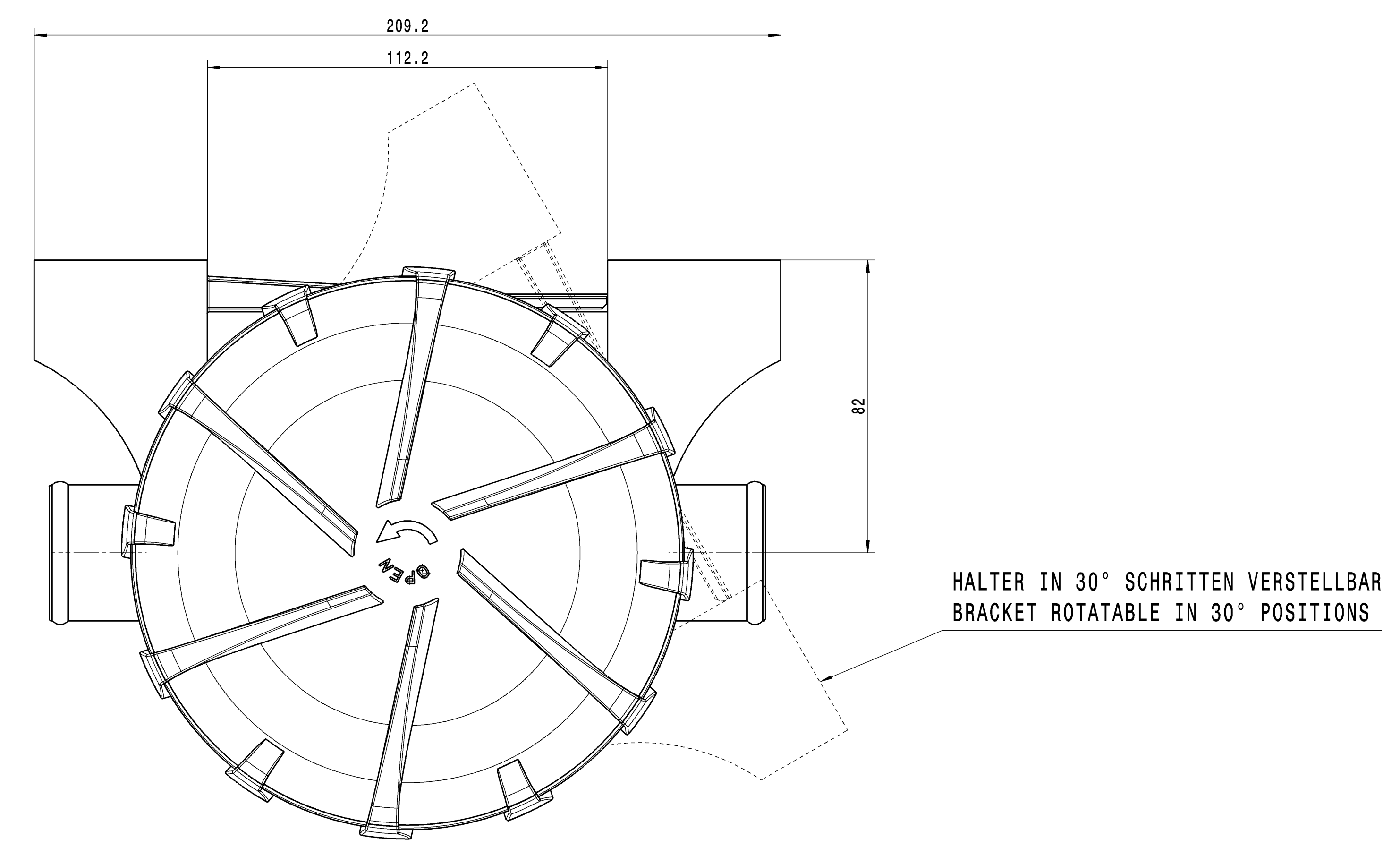
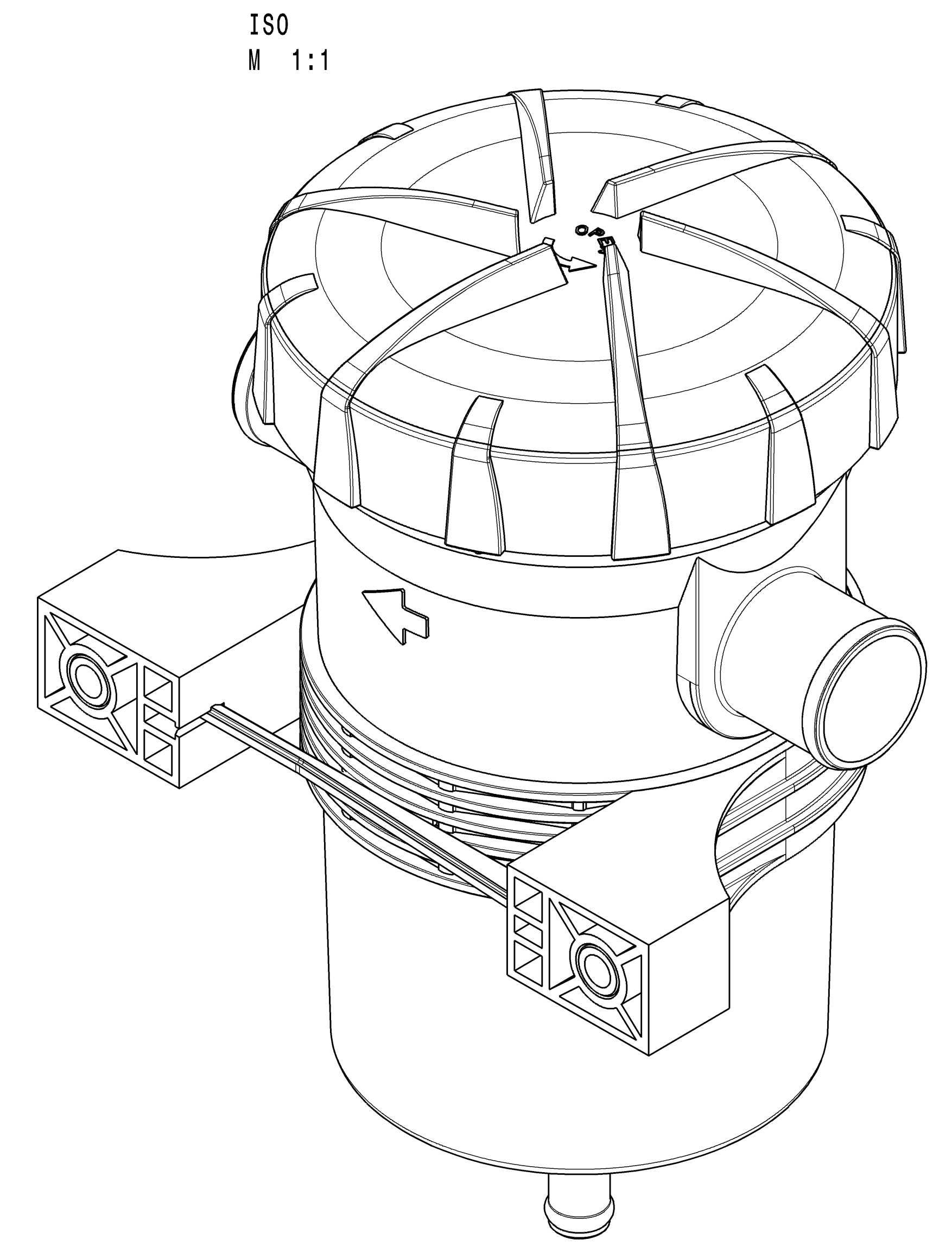
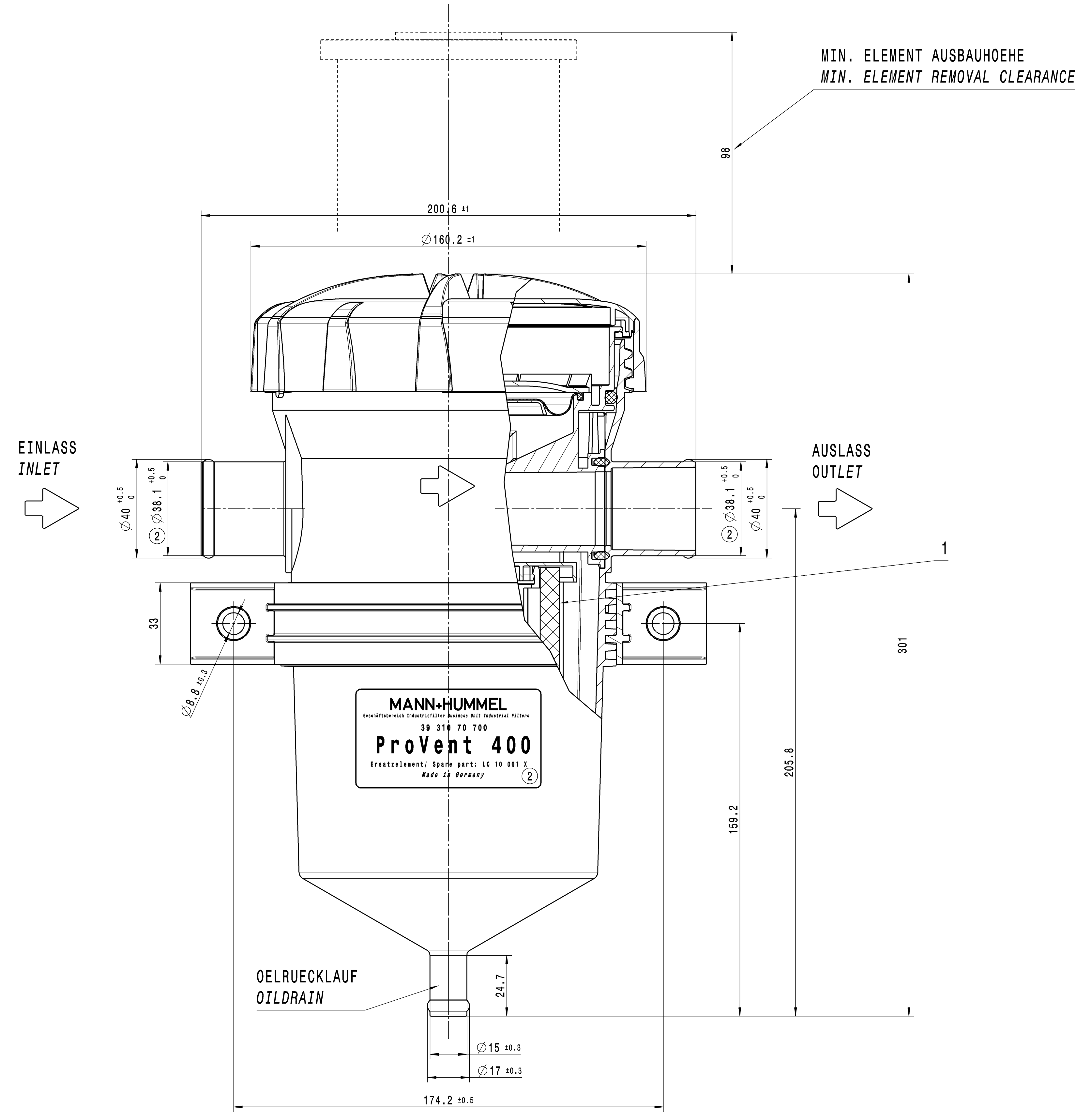
5.3 Assembly

- Clean the housing, cover and sealing surfaces.
- Replace the O-ring in the cover (item 1, quotation drawing) and profile seals (item 2, quotation drawing) and lightly rub in a small quantity of engine oil.
- Slide the new oil separator with new, slightly oiled seal onto the spigot on the cover.
- Replace the cover with oil separator and turn clockwise until you hear it latch into place.

6. Technical data / Spare-parts

See customer drawing

AE. NO.	AE.-M. CH.-NO.	ÄNDERUNG DESCRIPTION OF CHANGE	DATUM DATE	BEARB. DRAWN	GEPR. CHECKED	GESEH. APP.
01	F06208	3D UND ZEICHNUNGSUMSTELLUNG VON CATIA V4 IN CATIA V5	15.12.06	WELDE	BOEHRING	---
01		CHANGEOVER 3D AND DRAWING FROM CATIA V4 INTO CATIA V5				
02	E91908	DURCHMESSER 38.1 WAR 35, VERKAUFSBEZEICHNUNG LC 10 001 X WAR SACHNUMMER 39 310 50 923	15.12.06	WELDE	BOEHRING	---
02		DIAMETER 38.1 WAS 35, SALES NUMBER LC 10 001 X WAS CODE NUMBER 39 310 50 923				



FORM- UND LABELTOLERANZEN TOLERANCES TO ISO 1401	KUNDENVERMERKE / CUSTOMER NOTICES
NACH/ACCORD. TO ISO 1401	XXX XXX
ISO 128	ANGEBOTSZEICHNUNG CUSTOMER DRAWING
WERKSTUECKKANTEN NACH/ACCORD. TO ISO 13715	MASS-STAB SCALE
MASS- OHNE TOLERANZANGABEN; DIM. WITHOUT TOLERANCES:	1:1
LAENGEN LENGTHS	± XX
RADIEN RADIUS	± XX
FASEN CHAMFERS	± XX
WINKEL ANGLES	± XX
PROGRAMM-NR. / PROGRAM-NO.	PROGRAMM-NR. / PROGRAM-NO.
CAD-ZEICHNUNG CAD-DRAWING	ÄHNLICH / SIMILAR
BENENNUNG / NAME	BENENNUNG / NAME
BESTELL-NR. PART-NO.	BESTELL-NR. PART-NO.
FREMD-NR. CUSTOMER-NO.	FREMD-NR. CUSTOMER-NO.
ERSATZTEILLISTE / SPARE PARTS LIST	ERSATZTEILLISTE / SPARE PARTS LIST
ZEICHNUNGS-NR. DRAWING-NO.	ZEICHNUNGS-NR. DRAWING-NO.
BLATT X SHEET	BLATT X SHEET
VON OF	VON OF
AE NO.	AE NO.
02	02
39 310 70 700	39 310 70 700
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ERSATZTEILLISTE / SPARE PARTS LIST	ERSATZTEILLISTE / SPARE PARTS LIST
ZEICHNUNGS-NR. DRAWING-NO.	ZEICHNUNGS-NR. DRAWING-NO.
BLATT X SHEET	BLATT X SHEET
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AE NO.	AE NO.
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