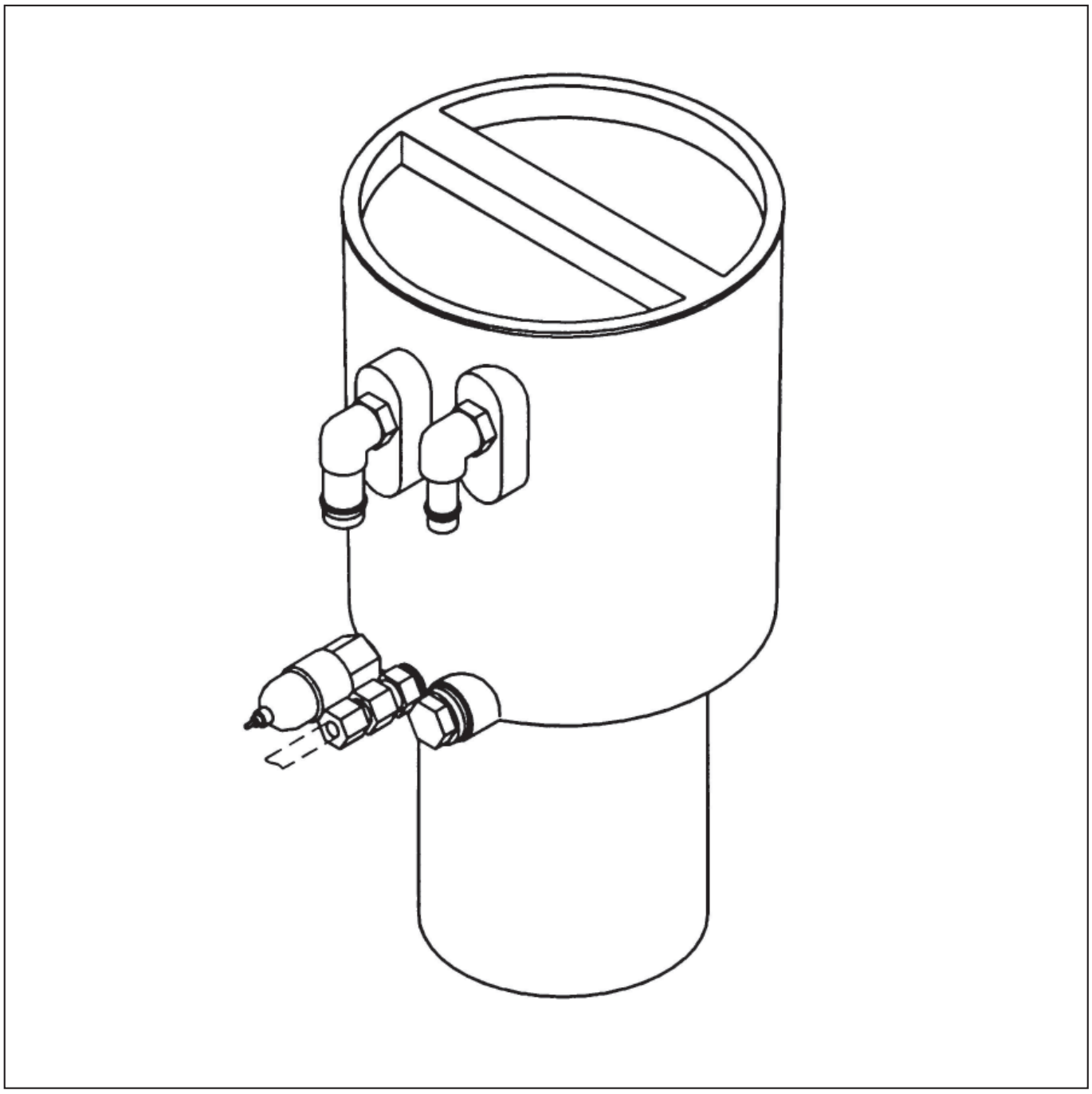
Oil/Water Separating Unit

67 603 62 111 (ÖWT 15)
67 708 62 511 (ÖWT 30)

Operating Instructions



19 611 28 001

Version 1106

Contact Information

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Contents

encl.: Technical Drawing

1. Preface

These operating instructions should make it easier for personnel to familiarise themselves with the oil/water separating unit (hereinafter referred to as ÖWT) 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.

2. Safety

2.1 Warning notices and symbols

!

All instructions marked with this symbol in the operating instructions must be observed closely in order to guarantee the operational reliability of the ÖWT.

2.2 Proper use

The ÖWT was constructed using state-of-the-art technology in accordance with recognised safety specifications. However, operational reliability may be affected if:

– the ÖWT is used incorrectly or for a purpose for which it was not designed,

- the operating conditions change,

- conversions are carried out without consultation with the manufacturer,

- necessary maintenance and repair work is not performed.

Use the ÖWT only if in perfect condition and in accordance with the respective technical specifications, observing correct procedures regarding safety and danger in compliance with the operating instructions.

In particular, malfunctions that may affect safety must be eliminated immediately.

The ÖWT is designed exclusively for filtering condensate containing oil. Other applications, e.g. filtering liquid foods or luxury goods, aggressive, combustible and/or explosive materials, is considered incorrect use. In this case, the manufacturer/supplier will reject all liability in event of resultant damage.

The risk shall be borne by the user alone.

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 materials hazardous to health and the environment. The operator of the ÖWT filter is responsible for providing the necessary specified safety equipment.

2.3 Operational safety

The ÖWT must only be maintained and operated by qualified, authorised personnel.

Never use modes of operation that may affect the operational reliability of the ÖWT.

The operator is obliged to check the ÖWT once a week for external visible signs of damage or faults and changes that may affect operational reliability (including operating behaviour), and report them immediately.

For safety reasons, unauthorised conversions or modifications of any kind to the ÖWT are not permitted under any circumstances. **Any warranty claims will be voided with immediate effect.**

For all work involving commissioning, operation, modifications of conditions of use and modes of operation, maintenance, inspection and repair, the shutdown procedures specified in the operating instructions must be followed.

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

3. Function and working principle

The main task of the ÖWT is to process condensate containing oil (emulsion) that accumulates in the coolers of compressors. The processed water can then be discharged into the public drainage system (note: read Point 4.1!), while the oil is either directed back into the compressor coolant circuit or disposed of appropriately.

The condensate enters the ÖWT via the inlet (Item 1, Fig. 1). Make sure that air pockets do not form in the condensate to prevent foaming and/or overflowing (see Chapter 4). The system pressure forces the oily condensate through the oil/water separation box first of all (Item 2, Fig. 1).

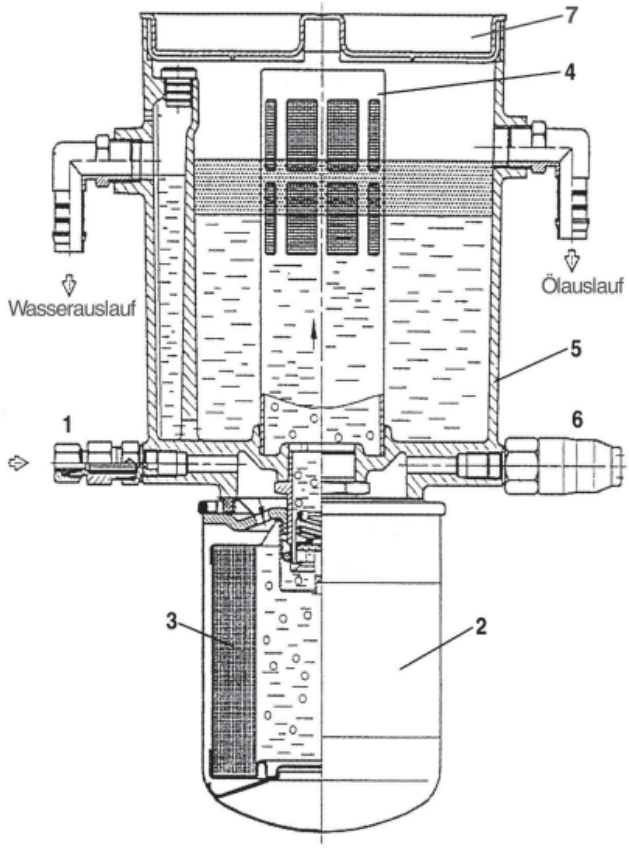


Fig. 1: Oil/water separating unit (diagram of principle)

Fine oil droplets then flow through an element (Item 3, Fig. 1) to form larger drops. The difference in viscosity of oil in relation to water causes the oil droplets to rise. A cylindrical strainer (Item 4, Fig. 1) in the tank (Item 5, Fig. 1) helps separate the oil from the water. When the maintenance switch (Item 6, Fig. 1) triggers an electrical signal, this indicates that the oil/water separation box needs replacing.

If contamination in the system (e.g. rust particles) is discharged in large quantities together with the condensate, a preliminary filter unit with an extremely fine filter (< 20 µm) should be installed to extend the service life of the separation box.

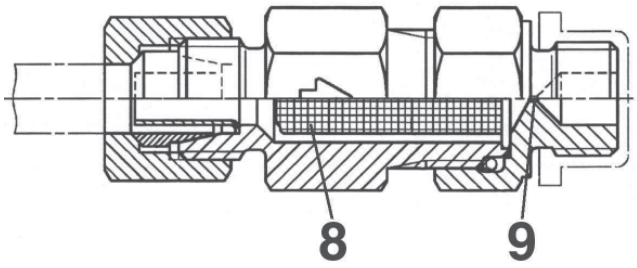


Fig. 2: Screw fitting

4. Installation instructions

! Operate the ÖWT only in a vertical position and in stationary installations. The ÖWT is not suitable for mobile use! Do not use the ÖWT at temperatures below +5° C.

! Make sure that air pockets do not form in the condensate. A condensate drain that can be controlled either via a float or level sensor must be fitted upstream of the ÖWT to ensure that air pockets do not interfere with the separation process.

– Connect the supply, water outlet and oil outlet pipes (see Fig. 1).

– Connect the maintenance switch (Item 6, Fig. 1).

– The oil collection tank (not included) must be vented sufficiently to make sure that the ÖWT functions reliably.

– Remove the cover (Item 7, Fig. 1).

– Check whether the cylindrical strainer (Item 4, Fig. 1) is seated firmly in the ring groove on the housing (Item 5, Fig. 1). The cylindrical strainer will not function correctly if it floats upwards!

– Fill the housing (Item 5, Fig. 1) and attached oil/water separation box (Item 2, Fig. 1) with water until it reaches the water outlet.

– Replace the cover (Item 7, Fig. 1).

4.1 Operation

The ÖWT functions according to coalescence and gravitational separation principles automatically.
The ÖWT separates the majority of the emulsified oil from the water. Less than 20 mg/l of oil remains so the water can be discharged into the public drainage system.

The statutory limit value may differ from region to region, depending on current applicable laws. Ask the relevant local authorities for the exact values.

Only use oils approved by the compressor manufacturer!

5. Maintenance

The oil/water separation box (Item 2, Fig. 1) must be replaced if the maintenance switch triggers (Item 6, Fig. 1), after 2000 operating hours or once a year at the latest.

– Unscrew the oil/water separation box (Item 2, Fig. 1) using a belt wrench. When the box is unscrewed, a non-return valve closes automatically to prevent the tank from emptying.

– Fill the new oil/water separation box up to the top edge and screw on by hand.

– After placing the gasket on the sealing surface, tighten the oil/water separation box another half a turn. The non-return valve should then open automatically.

– Check the cylindrical strainer (Item 4, Fig. 1) regularly for leaks, especially during cold weather, and clean if necessary.

– Regularly disconnect the screw fitting at the outlet (Item 1, Fig. 1) depending on dirt quantities (e.g. rust particles) and clean the filter insert (Item 8, Fig. 2) and hole (Item 9, Fig. 2).

6. Storage of oil/water separation boxes

Oil/water separation boxes should be protected from exposure to dust, moisture and damage. Store vertically, preferably in their original packaging.

It is practical to keep at least one replacement separation box in stock for each oil/water separation box being used.

7. Technical data, tested oils and areas of application

7.1 Technical data

	67 708 62 511 (ÖWT 30)	67 603 62 111 (ÖWT 15)
Housing volume	6.3 l	3.6 l
Max. flow rate	30 l/h	15 l/h
Perm. operating overpressure	14 bar	
Condensate temperature	5 to 45 °C	
Empty weight	4.5 kg	3.0 kg

Maintenance switches for 67 603 62 111 and 67 708 62 511	Order no. 59 010 79 110
Switching point	2 ± 0.5 bar
Switching capacity	100 VA
Switching voltage	42 V max.
Tightening torque	30 ± 10 Nm

7.2 Approved oils

Lubricating oil as per DIN 51506
(e.g. Blue Energy, Shell Comptella, DEA Actrol)

Lubricating oil as per DIN 51515
(e.g. elf Turboelf)

Hydraulic oil as per DIN 51524
(e.g. DEA Actis)

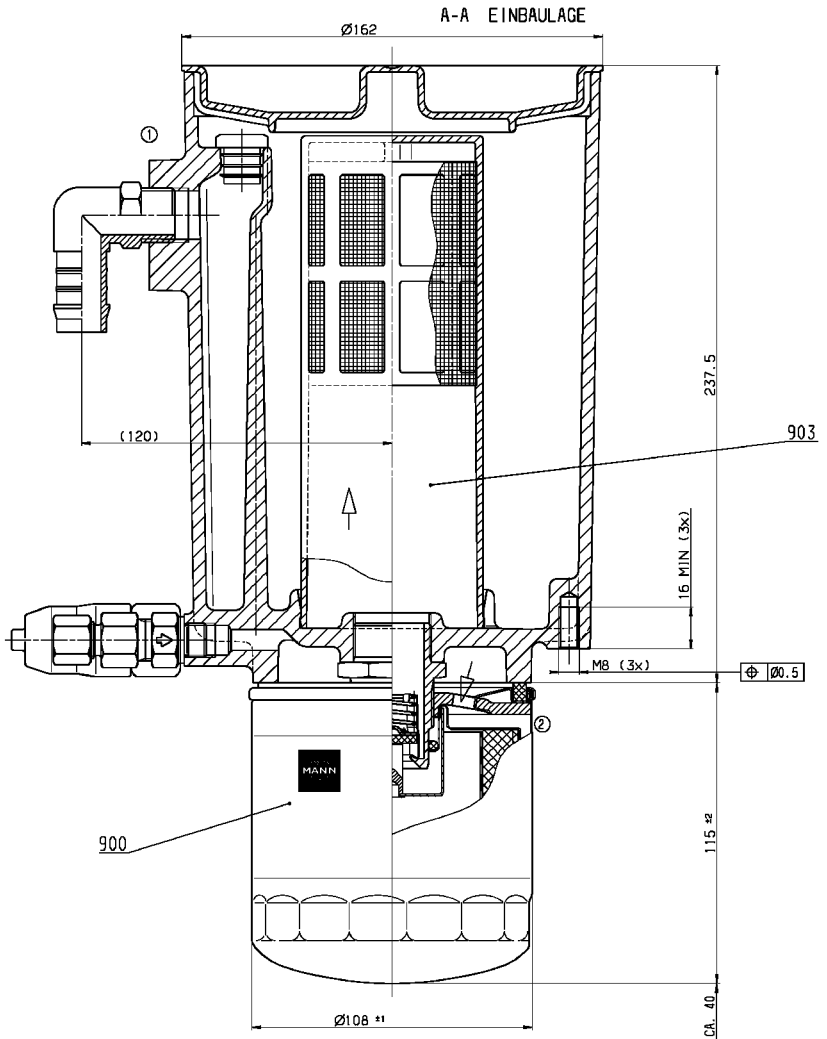
8. Spare parts list

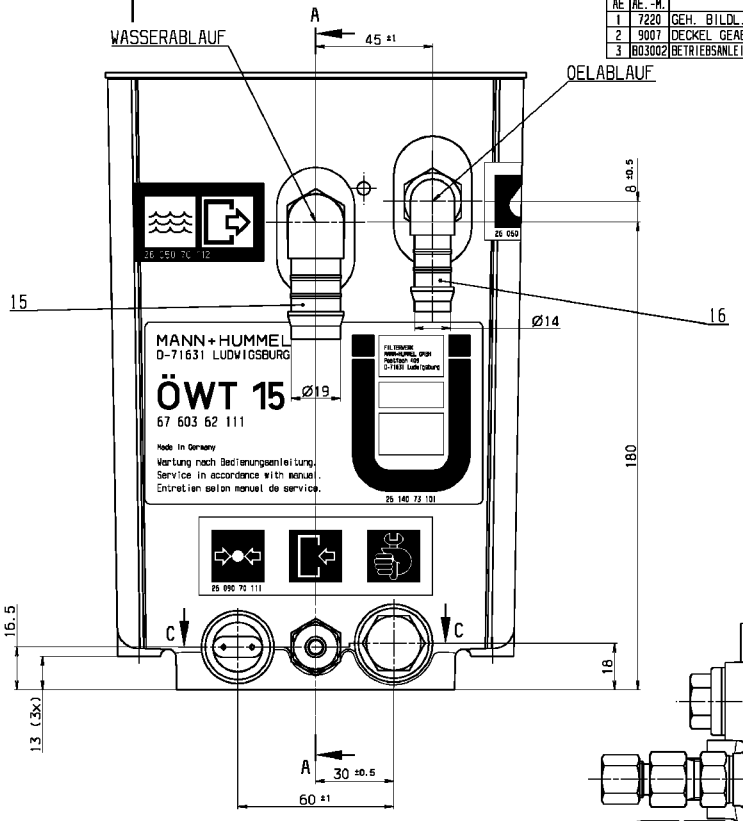
See accompanying project drawing

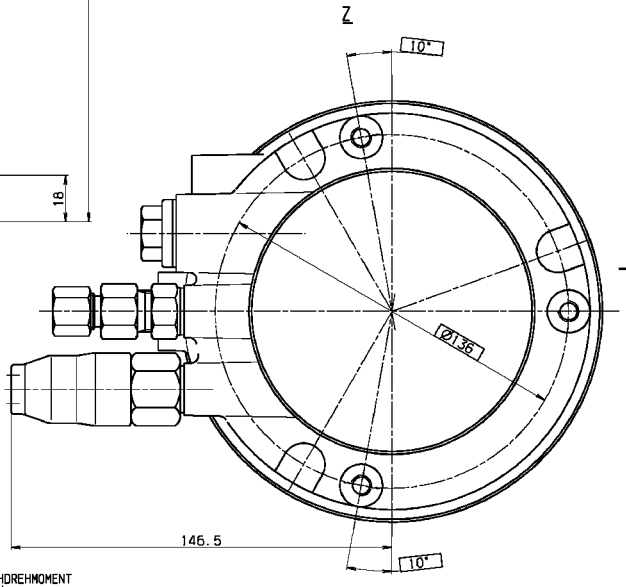
9. Disposal of components

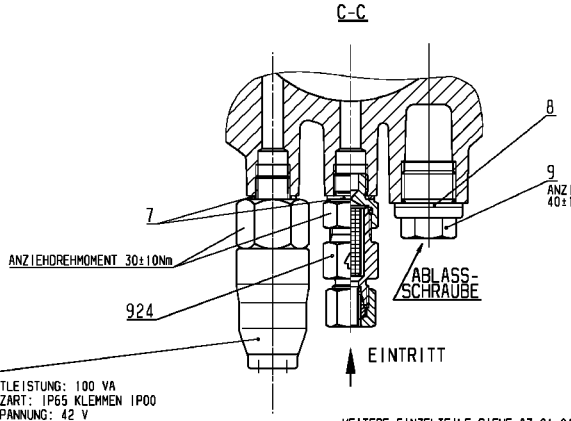
Component	Material	Disposal
Cover	PP-TV 40	Plastic recycling
Cylindrical strainer	PA6 GF 30	Plastic recycling
Housing and screw fittings	Aluminium, metal	Scrap metal
Oil/water separation box	Steel and filter paper	In accordance with local regulations
W screw connectors	PA6.6	Plastic recycling

AE	AE.-M.	AENDERUNG	DATUM	BEARB.	GEPR.
1	7220	GEH. BILDL. GEAEND., STOPFEN NEU, DRAUFS. BERICHTIGT	4.3.96	RUFF	WOLF
2	9007	DECKEL GEAENDERT	07.11.01	HERRMANN	WOLF
3	B03002	BETRIEBSANLEITUNG 19 611 28 001 (POS.18) IN ERSATZTEILLISTE HINZUGEFUGT	21.03.02	HERRMANN	JÄGER









DURCHFLUSS NUR IN PFEILRICHTUNG ZULAESSIG
BETRIEB NUR IN EINBAULAGE ZULAESSIG

ZUL. BETRIEBSUEBERDRUCK 14 bar

SCHALTLEISTUNG: 100 VA
SCHUTZART: IP65 KLEMMEN IP00
MAX.SPANNUNG: 42 V
KONTAKTART: OEFFNER

SCHALTDRUCK: 2±0.5 bar

MIT 2 KABELDURCHFUEHRUNGEN
FUER 1.7mm BIS 2.2mm
KABELDURCHMESSER

* WEITERE EINZELTEILE SIEHE AZ 21 014 15 951

POS.	BENENNUNG	BESTELL-NR.	FREMD-NR.
926	WARTUNGSSCHALTER	59 010 79 110	
* 924	VERSCHRAUBUNG VST.	21 014 15 951	
903	SIEBROHR VST.	67 700 47 999	
900	OEL-WASSER-TRENNBOX	67 603 59 271	
(3) 18	BETRIEBSANLEITUNG	19 611 28 001	
16	W-EINSCHRAUBTUELLE	02 011 38 322	
15	W-EINSCHRAUBTUELLE	02 011 38 326	
9	VERSCHLUSS-SCHRAUBE	01 439 08 000	
8	DICHTRING	01 901 01 021	
7	DICHTRING	01 901 01 014	

ERSATZTEILLISTE

OBERFLAECHEN NACH DIN ISO 1302	
FORM.- UND LAGETOLERANZEN NACH DIN ISO 1101	
WERKSTUECKKANTEN NACH DIN 6784	
MASSE OHNE TOLERANZANGABEN:	
LAENGEN ± 3	
RADIEN FASEN ± -	
WINKEL ± -	
CAD-ZEICHNUNG	

KUNDENVERMERKE

ISO 128

MASS-STAB 1:1

	K12	DATUM	NAME
BEARB.		21.09.95	JOKSCHAS
GEPR.		05.02.96	WOLF
GESEHEN		05.02.96	WOLF

FILTERWERK MANN + HUMMEL GMBH D-71631 LUDWIGSBURG

ANGEBOTSZEICHNUNG
SCHUTZVERMERK NACH DIN 34 BEACHTEN

BENENNUNG **MANN**
OEL-WASSER-TRENNGERAET

ZEICHNUNGS-NR. 67 603 62 111 AE 3

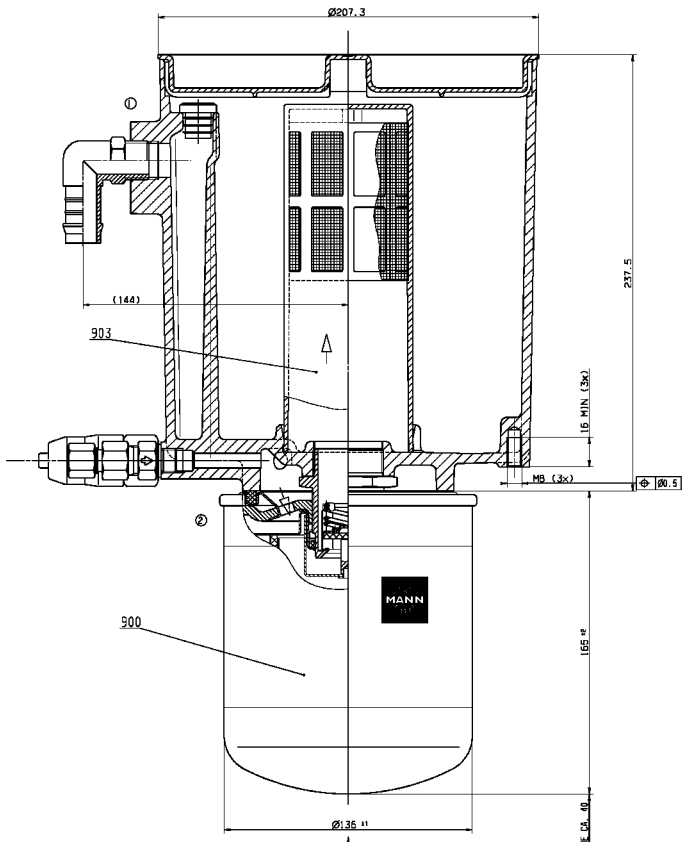
AEHNLICH 67 603 62 101

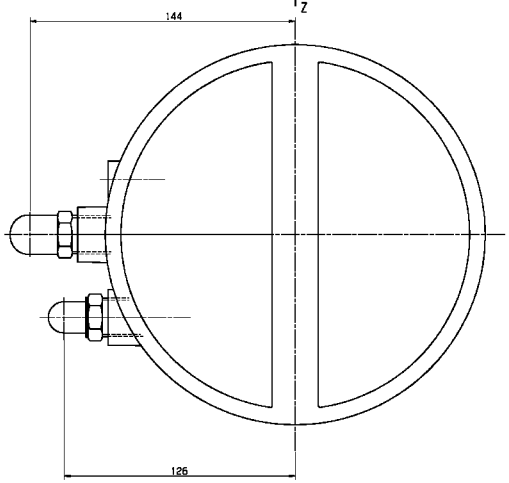
ERSATZ FUER

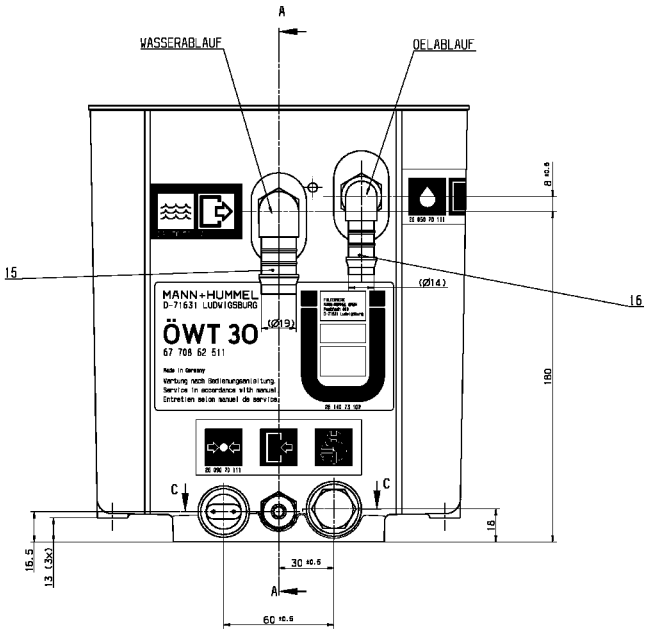
A1

AE	BE. NR.	ÄNDERUNG	DATUM	BEARB.	GEPR.
1	7220	GEH. DICHT., GEAEND., STOPFEN NEU	1.3.96	RUFF	WOLF
2	9037	POS.900 DECKEL GEAENDERT	07.11.01	HERRMANN	WOLF
3	B03002	BETRIEBSANLEITUNG 19 611 28 001 (POS.19) IN ERSATZTEILLISTE HINZUGEFUEGT	21.03.02	HERRMANN	JOOS

A-A
EINBAULAGE

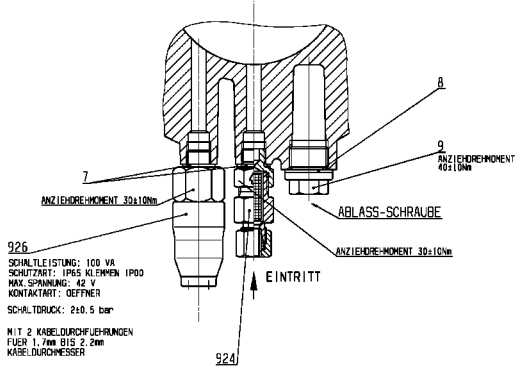


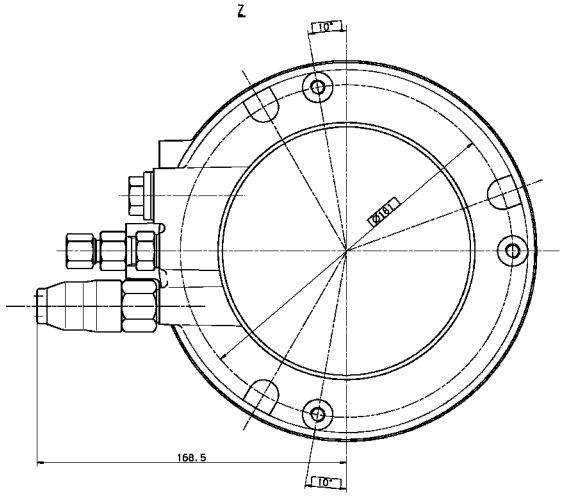




POS.900 NICHT DARGESTELLT

C-C





DURCHFLUSS NUR IN PFEILRICHTUNG ZULAESSIG
BETRIEB NUR IN EINBAULAGE ZULAESSIG

ZUL. BETRIEBSUEBERDRUCK 14 bar

* WEITERE EINZELTEILE SIEHE AZ 21 014 15 951

POS.	BENENNUNG	BESTELL-NR.	FREMD-NR.
926	WARTUNGSSCHALTER	59 010 79 110	
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8	DICHTRING	01 901 01 021	
7	DICHTRING	01 901 01 014	

ERSATZTEILLISTE

OBERFLAECHEN NACH DIN ISO 1302	
FORM- UND LAGETOLERANZEN NACH DIN ISO 1101	
WERKSTUECKKANTEN NACH DIN 6784	
MASSE OHNE TOLERANZANGABEN:	
LAENGEN	± 3
RADIEN	± -
FASEN	± -
WINKEL	± -
CAD-ZEICHNUNG	

KUNDENVERMERKE

ISO 128

MASS-STAB 1:1

	KI. 2	DATUM	NAME
BEARB.		15.09.95	JOOSCHAS
GEPR.		05.02.96	WOLF
GESEHEN		05.02.96	WOLF

FILTERWERK MANN + HUMMEL GMBH D-71631 LUDWIGSBURG

ANGEBOTSZEICHNUNG
SCHUTZVERMERK NACH DIN 34 BEACHTEN

BENENNUNG **MANN**
ÖEL-WASSER-TRENNGERAET

ZEICHNUNGS-NR. 67 708 62 511 AE 3

ÄHNLICH 67 708 62 501

ERSATZ FUER 96 770 85 004 A0

MARCH 21, 2002 15:15