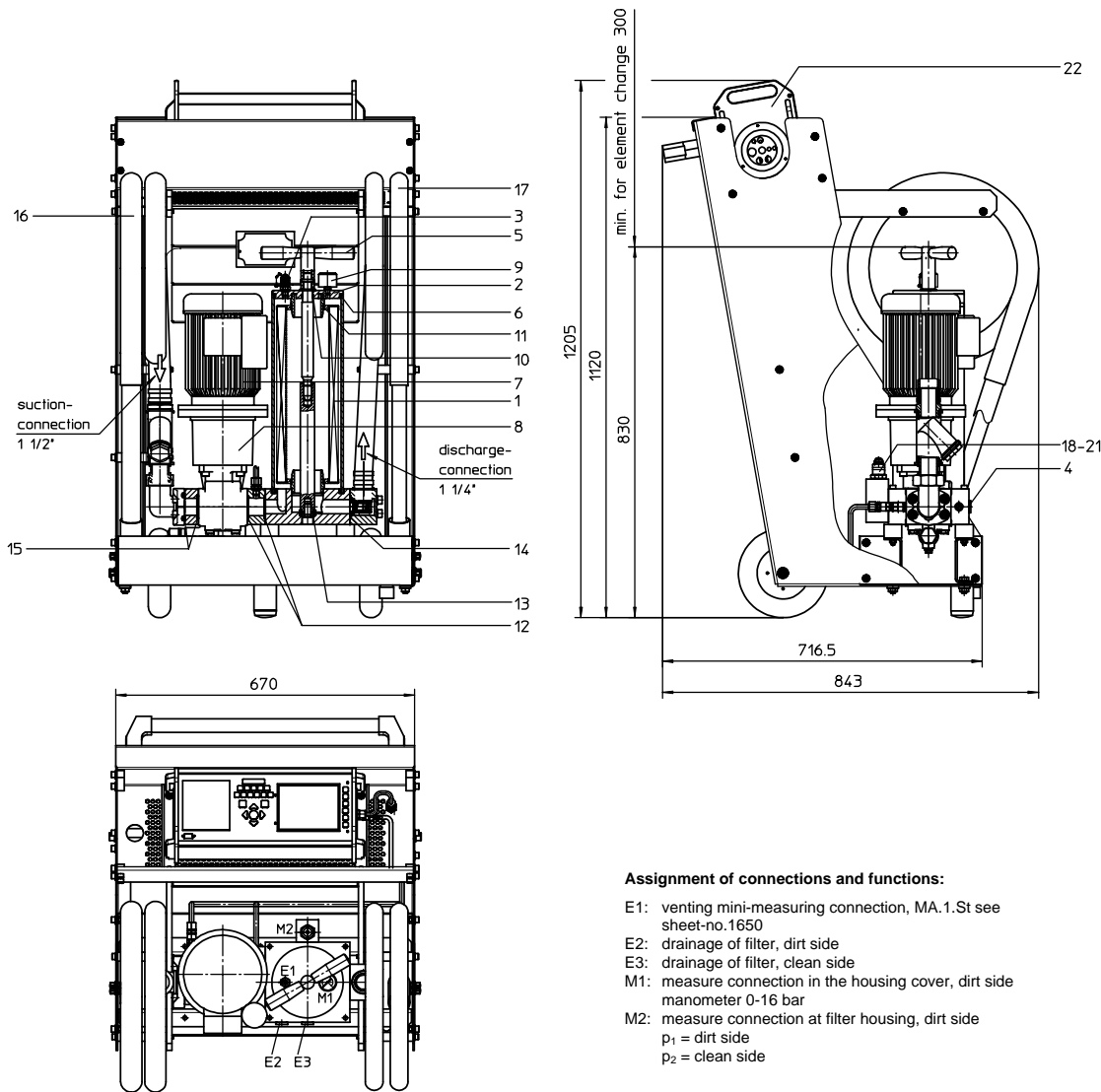


**FILTER UNIT, mobile for contamination control**  
**Series UMCC 40 PN 8**

Sheet No.  
**4033**



**Assignment of connections and functions:**

- E1: venting mini-measuring connection, MA.1.St see sheet-no.1650
- E2: drainage of filter, dirt side
- E3: drainage of filter, clean side
- M1: measure connection in the housing cover, dirt side manometer 0-16 bar
- M2: measure connection at filter housing, dirt side
  - p<sub>1</sub> = dirt side
  - p<sub>2</sub> = clean side

**1. Type index:**

**1.1. Filter unit: (ordering example)**

**UMCC. 40. 6VG. 10. B. P. -. P30. W06. L03. L28. AOR. CCS2**

|   |   |   |   |   |   |   |   |   |    |    |    |    |
|---|---|---|---|---|---|---|---|---|----|----|----|----|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 | 9 | 10 | 11 | 12 | 13 |
|---|---|---|---|---|---|---|---|---|----|----|----|----|

- 1 **series:**  
UMCC = filter unit, mobile for contamination control
- 2 **nominal size:** 40
- 3 **filter-material and filter- fineness:**  
10 VG = 10 µm<sub>(e)</sub>, 6 VG = 7 µm<sub>(e)</sub>, 3 VG = 5 µm<sub>(e)</sub>, 1 VG = 4 µm<sub>(e)</sub> Interpor fleece (glass fibre)  
10 WVG = 10 µm<sub>(e)</sub>, 3 WVG = 5 µm<sub>(e)</sub> Watersorp-filter element
- 4 **resistance of pressure difference for filter element:**  
10 = Δp 10 bar
- 5 **filter element design:**  
B = both sides open
- 6 **sealing material:**  
P = Nitrile (NBR)  
V = Viton (FPM), by agreement
- 7 **filter element specification:**  
- = standard  
VA = stainless steel  
IS06 = see sheet-no. 31601
- 8 **pump unit:**  
P30 = pump unit 30, NG 40.25 (standard-pump unit)
- 9 **motor: (W = alternating current motor)**

| motor             | electrical connection | volume flow | max. viscosity | doc.-no.                          |
|-------------------|-----------------------|-------------|----------------|-----------------------------------|
| W06 <sup>1)</sup> | 230V                  | 50Hz        | 35,5 l/min     | 400 mm <sup>2</sup> /s<br>43056-4 |
| W09 <sup>1)</sup> | 110V                  | 60Hz        | 42,5 l/min     | 400 mm <sup>2</sup> /s<br>43057-4 |

<sup>1)</sup> standard-motor

- 10 **suction connection 1 1/2"** : (see sheet-no. 31961-4)  
L03 = hose-lance-protective filter  
L04 = hose-fitting-lance-protective filter
- 11 **discharge connection 1 1/4"** : (see sheet-no. 40572-4)  
L28 = hose-lance  
L29 = hose-fitting-lance
- 12 **clogging indicator at M2:**  
AOR = visual, Δp 2,5 bar, see sheet-no. 1606  
AOC = visual, Δp 2,5 bar, see sheet-no. 1606
- 13 **contamination control system:**  
- = without  
CCS2 = with contamination control system CCS2

**1.2. Filter element: (ordering example)**

**01NR. 630. 6VG. 10. B. P. -**

|   |   |   |   |   |   |   |
|---|---|---|---|---|---|---|
| 1 | 2 | 3 | 4 | 5 | 6 | 7 |
|---|---|---|---|---|---|---|

- 1 **series:**  
01NR. = standard-return-line filter element according to DIN 24550, T4
- 2 **nominal size:** 630
- 3 - 7 | see type index-filter unit

**Notice:**

Only operate all motors listed on this data sheet in combination with the pump unit specified on the type plate under item 8.

Changes of measures and design are subject to alteration!

## 2. Spare parts:

| item | designation                  | qty. | dimension               | article-no.        |
|------|------------------------------|------|-------------------------|--------------------|
| 1    | filter element               | 1    | 01NR. 630               |                    |
| 2    | housing cover                | 1    | 30600-3                 | 315492             |
| 3    | mini-measuring connection    | 1    | MA.1.ST                 | 305453             |
| 4    | screw plug                   | 2    | G ½                     | 304678             |
| 5    | straining screw              | 1    | 30595-3                 | 316312             |
| 6    | O-ring                       | 1    | 140 x 6                 | 315392 (NBR)       |
| 7    | electric motor               | 1    | according to type index |                    |
| 8    | pump unit P30                | 1    | NG 40,25                | 326584             |
| 9    | manometer                    | 1    | visual Ø 40             | 317847             |
| 10   | O-ring                       | 1    | 22 x 3                  | 304387 (NBR)       |
| 11   | O-ring                       | 2    | 70 x 4                  | 306253 (NBR)       |
| 12   | O-ring                       | 2    | 45 x 3                  | 304991 (NBR)       |
| 13   | O-ring                       | 1    | 18 x 3                  | 304359 (NBR)       |
| 14   | O-ring                       | 1    | 45 x 3                  | 304991 (NBR)       |
| 15   | O-ring                       | 2    | 47,22 x 3,53            | 305078 (NBR)       |
| 16   | suction hose 1 ½"            | 1    | according to type index |                    |
| 17   | discharge hose 1 ¼"          | 1    | according to type index |                    |
| 18   | clogging indicator, visual   | 1    | AOR or AOC              | see sheet-no. 1606 |
| 19   | O-ring                       | 1    | 15 x 1,5                | 315357 (NBR)       |
| 20   | O-ring                       | 1    | 22 x 2                  | 304708 (NBR)       |
| 21   | O-ring                       | 2    | 14 x 2                  | 304342 (NBR)       |
| 22   | contamination control system | 1    | CCS2                    | 320595             |

## 3. Designation:

The mobile filter unit is intended for oil maintenance on hydraulic systems.

The area of application comprises:

- secondary flow filtration in addition to the existing operating filter
- secondary flow filtration without the action of the operating filter
- filtration when filling the oil reservoir.

The filter unit must not be used to pump contaminated hydraulic fluids and is therefore designed without a switchover fitting to bypass the filter. The compact structural design on a base plate without pipe satisfies the prerequisites for small dimensions and high reliability. The transporting trolley makes it possible to move close up to confined locations with difficult access, and to fix the accessories (such as hoses and the connection cable) in a safe and reliable manner.

Oil flowing out of the suction and/or discharge hose or the outflow openings is collected by the filter unit's oil trough, without causing any environmental damage.

The device is equipped with a gear pump driven by an E-motor. The flow conveyed by the geared pump is fed over a filter element to DIN 24550, T4, nominal size 630.

Depending on the customer's wishes, the filter fineness is either 4, 5, 7 or 10 µm<sub>(c)</sub>.

At a pressure difference > 2,5 bar, the element is polluted and has to be removed with a new element.

The filter element can be changed without tools. After removing the straining screw and taking off the housing cover, the filter element is accessible and it can be exchanged. The filter elements are supplied complete with seals. Since it is not possible to clean the elements, the user must always keep an adequate supply of spare elements in stock.

To protect against overpressure, the filter unit is fitted with a safety valve. Pressure setting about 8 bar.

The E-motor is made safe with a motor-protection-switch against overloading. At a working pressure > 8 bar, the motor-protection-switch cuts the E-motor out.

The line, venting and draining connections are identified according to their function. Drainage is necessary when cleaning the filter unit in connection with the change of filter element, and when changing the fluid medium.

In order to measure the contamination class of the oil taken in, there is a connection for the electronic particle counter CCS 2 ahead the filter. The CCS 2 is supplied complete with case and extra connection hoses and can also be used separately. When measuring at the mobile filter unit please consider that a change of the measured contamination classes is shown after an adequate operation time only, depending on the total oil volume and its mixing with the filtered oil.

To protect the pump a cleanable coarse filter made of metal wire mesh with mesh size 250 µm is being placed in the suction hose.

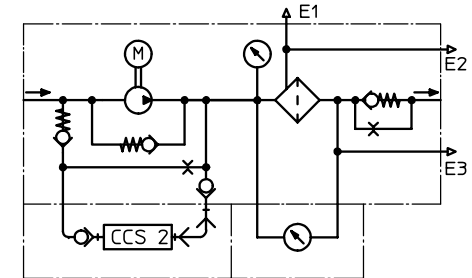
## 4. Technical data:

filter-fineness: 4, 5, 7 or 10 µm<sub>(c)</sub>  
oil temperature: -5°C to +60°C  
weight: approx. 113 kg  
operating medium: hydraulic oil based on mineral oil from 10 mm<sup>2</sup>/s,  
other media on request

Classified under the Pressure Vessel Directive 97/23/EC for mineral oil (fluid group 2), Article 3, Para. 3.

Classified under ATEX Directive 94/9/EC according to specific application (see questionnaire sheet-no. 34279-4).

## 5. Symbol:



## 6. Test methods:

Filter elements are tested according to the following ISO standards:

|           |   |
|-----------|---|
| ISO 2941  | Verification of collapse/burst resistance               |
| ISO 2942  | Verification of fabrication integrity                   |
| ISO 2943  | Verification of material compatibility with fluids      |
| ISO 3723  | Method for end load test                                |
| ISO 3724  | Verification of flow fatigue characteristics            |
| ISO 3968  | Evaluation of pressure drop versus flow characteristics |
| ISO 16889 | Multi-pass method for evaluating filtration performance |