

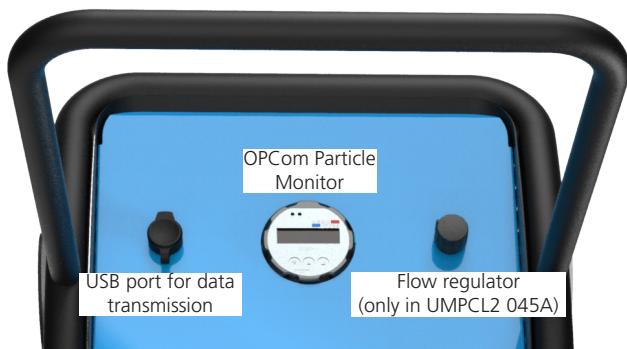
Oil Service Unit

# UMPCL2 045

With integrated particle monitor · Optionally with adjustable flow range 20 - 70 l/min / 5.3 - 18.5 gpm



UMPCL2 045



Front panel of the UMPCL2 045



Switching valve 1



Switching valve 2

## Description

The UMPCL2 045 is an oil service unit designed for filling and cleaning of hydraulic or lubrication systems and for transferring of fluids. Its compact size and ergonomic design allow easy handling in minimal work spaces.

### Protection of systems through ultra-fine filtration

The EXAPOR®MAX ultra-fine filter element is the heart of the UMPCL2. A high separation efficiency and a large dirt-holding capacity of the filter elements (up to 4000 g) make the UMPCL2 an economical choice for our customers.

### Monitored filtration

The unit is equipped with the OCom Particle Monitor which permanently measures fluid cleanliness class during the cleaning or filling process. The data stored in the internal memory can be transmitted to a computer via USB port installed in the front panel.

### Flexible and universal device

Optionally, the unit can be equipped with frequency inverter and potentiometer for adjusting the flow rate in the range of 20 - 70 l/min / 5.3 -18.5 gpm. This additional feature makes the UMPCL2 even more universal device and extends its use to smaller and larger systems. The flow rate can be adapted to the actual need depending on the tank size and / or required speed of the filtration / oil transfer. Operation of the unit at a smaller flow allows you to extend the life of the filter element by increasing its capacity even up to 4000g

### Switching valve 1 for changing operating modes

Installed in the pump block - to switch between two modes: "filtering" and "pumping without filtering".

### Switching valve 2 for selecting the sampling point

Installed in the front panel - for cleanliness measurement: "behind filter" (e.g. when filling systems) or "before filter" (e.g. for tank cleaning).

## Characteristics

### Flow rate

UMPCL2 045F: 45 l/min / 11.9 gpm

UMPCL2 045A: 20 up to 70 l/min / 5.3 up to 18.5 gpm

### Operating pressure

max. 7 bar / 101 psi

### Viscosity range\*

15 - 1100 mm<sup>2</sup>/s - continuous operation, flow 20 l/min / 5.3 gpm

15 - 600 mm<sup>2</sup>/s - continuous operation, flow 45 l/min / 11.9 gpm

15 - 400 mm<sup>2</sup>/s - continuous operation, flow 70 l/min / 18.5 gpm

\* An exact measurement of the oil cleanliness class is only possible within a viscosity range from 15 mm<sup>2</sup>/s to 300 mm<sup>2</sup>/s / 70 SUS to 1160 SUS

### Temperature range of fluids

0 °C ... +65 °C / +32 °F ... +149 °F

(also see table Viscosity Range)

### Ambient temperature range

0 °C ... +50 °C / +32 °F ... +122 °F

### Applicable filter elements

- › EXAPOR®MAX - for solid particles
- › EXAPOR®SPARK PROTECT - for solid particles and protection against electrostatic discharges (oils with low electrical conductivity < 500 pS/m at 20 °C)
- › EXAPOR®AQUA - for free water and solid particles

### Dirt holding capacity

The dirt holding capacity depends on the flow rate. The table below shows the dirt holding capacity values according to ISO16889 for different filter elements and various flow ranges.

| Filter element                                 | Fineness (β=200) | Dirt-holding capacity according to ISO 16889 | Water capacity | Flow rate |
|--|------------------|--|----------------|-----------|
| EXAPOR®<br><b>MAX2</b><br>V7.1560-103          | 3 μm             | 4000g  | -              | 20 l/min  |
|  |                  | 1950g  | -              | 45 l/min  |
|  |                  | 1360g  | -              | 70 l/min  |
| EXAPOR®<br><b>MAX2</b><br>V7.1560-03           | 5 μm             | 4000   | -              | 20 l/min  |
|  |                  | 1980 g                                       | -              | 45 l/min  |
|  |                  | 1400g  | -              | 70 l/min  |
| EXAPOR®<br><b>MAX3</b><br>V7.1560-06           | 10 μm            | 4000g  | -              | 20 l/min  |
|  |                  | 1980 g                                       | -              | 45 l/min  |
|  |                  | 1440g  | -              | 70 l/min  |
| EXAPOR®<br><b>Spark Protect</b><br>Z7.1560-103 | 3 μm             | 4000g  | -              | 20 l/min  |
|  |                  | 1950g  | -              | 45 l/min  |
|  |                  | 1360g  | -              | 70 l/min  |
| EXAPOR®<br><b>AQUA</b><br>Y7.1560-05           | 7 μm             | 1190 g                                       | 1520 ml        | 20 l/min  |
|  |                  | 590 g  | 1520 ml        | 45 l/min  |
|  |                  | 420 g  | 1520 ml        | 70 l/min  |

### Clogging indicator

optical clogging indication DG 042-04

(all types) Δp = 3,5 ±0,5 bar

### Hydraulic connection

Suction side:

Hose DN 32, length 2.7 m / 8.9 ft with suction lance 0.4 m

Suction strainer:

Screen element 280 μm, ordering code S9.0417-13

Pressure side\*\*

Hose DN 25, length 2.7 m / 8.9 ft with pressure lance 0.4 m

### Permitted suction heights

max. 2 m (unfilled)

max. 6 m (in operating condition)

### Hydraulic fluids

Mineral oil and biodegradable fluids

(HEES and HETG, see info service sheet 00.20).

Other fluids on request.

### Weight

approx. 85 kg / 187.4 lbs

### Operating and transport position

Operating position: upright

Transport position: upright or horizontal

### Electrical motor types (see also order code)

UMPCL2 045F:

3 ~ 400 / 460 V 50/60 Hz, 1.1 kW / 1.5hp

1 ~ 220 - 240VAC 50/60 Hz, 1.1 kW / 1.5hp

1 ~ 110 -120VAC 50/60 Hz, 0,75 kW / 1hp

UMPCL2 045A:

3 ~ 400/460 V 50/60 Hz, 1.1 kW / 1.5hp

### Electrical connection\*\*\*

Cable length 6 m / 19.7 ft with the electric plug.

To select the required electric plug see order code.

### Accessories

\*\* Pressure hose extension (max. 5 m) - see order code

\*\*\* Electric cable extension - see order code

Long suction lance DN32x1000mm, order code LA 32X1000

Long pressure lance DN25x1000mm, order code LA 25X1000

Other lances on request.

## Ordering code

UMPCL2 045

/

| Type of unit                                      | Code       |
|---|------------|
| Oil service unit with integrated particle monitor | UMPCL2 045 |








| Nominal flow                                     | Hydr. symbol | Code |
|--|--------------|------|
| Fixed nominal flow 45 l/min / 11.9 gpm           | 1            | F    |
| Adjustable flow range 20-70 l/min / 5.3-18.5 gpm | 2            | A    |

| Filter element       |   |                |                      |             | Code |
|----------------------|---|----------------|----------------------|-------------|------|
|                      | Fineness ( $\beta=200$ )<br>Dirt-holding capacity according to<br>ISO 16889 and nominal flow<br>45 l/min / 11.9 gpm | Water capacity | Spare filter element |             |      |
| EXAPOR®MAX 2         | 3 $\mu$ m   | 1950 g         | -                    | V7.1560-103 | V003 |
| EXAPOR®MAX 2         | 5 $\mu$ m   | 1980 g         | -                    | V7.1560-03  | V005 |
| EXAPOR®MAX 2         | 10 $\mu$ m  | 1980 g         | -                    | V7.1560-06  | V010 |
| EXAPOR®SPARK PROTECT | 3 $\mu$ m   | 1950 g         | -                    | Z7.1560-103 | Z003 |
| EXAPOR®AQUA          | 7 $\mu$ m   | 590 g          | 1520 ml              | Y7.1560-05  | Y007 |

| Power supply voltage  | Code  |
|-----------------------|-------|
| 1~220-240 VAC 50/60Hz | 23050 |
| 3~400-460 VAC 50/60Hz | 40050 |
| 1~110-120 VAC 50/60Hz | 11050 |

### Electric plug - code and description below \*

Other types - on request

| No code<br>Default for<br>code 23050  | G   | J   | No code<br>Default for<br>code 11050  | I6  | I4  | No code<br>Default for code 40050  |
|---|---|---|---|---|---|--|
| 220-250 VAC   | 220-250 VAC   | 220-240 VAC   | 100-127 VAC   | 200-250 VAC<br>INDUSTRIAL   | 110-130 VAC<br>INDUSTRIAL   | 380-480 VAC<br>INDUSTRIAL  |
| 15 A<br>TYPE E/F<br>(CEE7/7<br>Unischuko)   | 13 A<br>TYPE G<br>(BS 1363)   | 10 A<br>TYPE J (T12)  | 15 A<br>TYPE B<br>(NEMA<br>5-15P)   | Type 013-6<br>16A-6h<br>3-pins<br>(2P+PE)   | Type 013-4<br>16A-4h<br>3-pins<br>(2P+PE)   | Type 715-6<br>16A-6h<br>5-pins (3P+N+PE), IEC 60309<br>With phase crossover          |
|  |  |  |  |  |  |  |

### Optional pressure hose extension (maximum 5 m / 16.4 ft)

Example of order: **P4.5** - pressure hose length 4.5 m / 14.8 ft

P\_.\_

### Optional electric cable extension \*\*

Example of order: **C8.5** - cable length 8.5 m / 27.8 ft

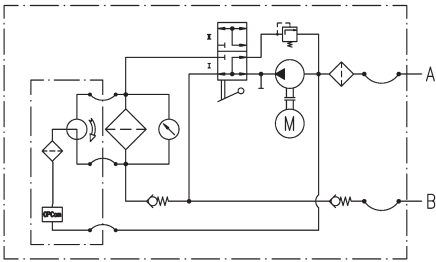
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### Order example:

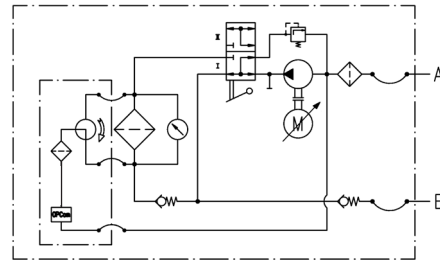
**UMPCL2 045A-V003/23050C9.5** - oil service unit with integrated particle monitor, version with adjustable flow range 20 - 70 l/min / 5.3 - 18.5 gpm filter element 3  $\mu$ m, input voltage 1~230 VAC and customized length of electric cable 9.5 m / 31 ft

## Hydraulic symbol

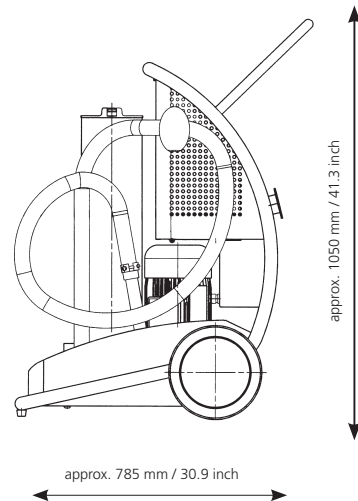
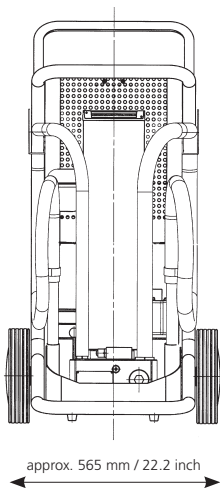
1: (UMPCL2 045F...)



2: (UMCL2 045A...)



## Dimensions



## Other types of mobile oil service units

In the portfolio of ARGO-HYTOS you can find, other types of mobile filtration systems:

### UM2 045



Basic mobile service unit  
For more details, see data sheet on [www.argo-hytos.com](http://www.argo-hytos.com) or click this [Link](#)

### UMPC2 045



Mobile service unit with integrated particle monitor, oil condition sensor touch display and printer  
For more details, see data sheet on [www.argo-hytos.com](http://www.argo-hytos.com) or click this [Link](#)