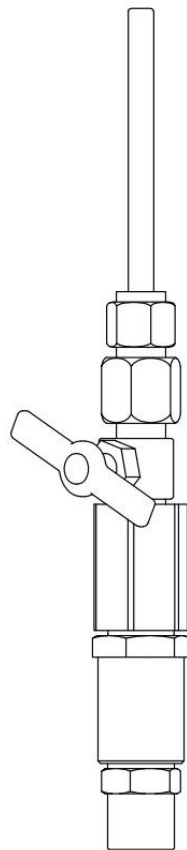




# Installation and operating manual

OCI  
(Oil Content Indicator)



Please read the following instructions carefully before installing the product. Trouble free and safe operating of the product can only be guaranteed if recommendations and conditions stated in this manual are respected.

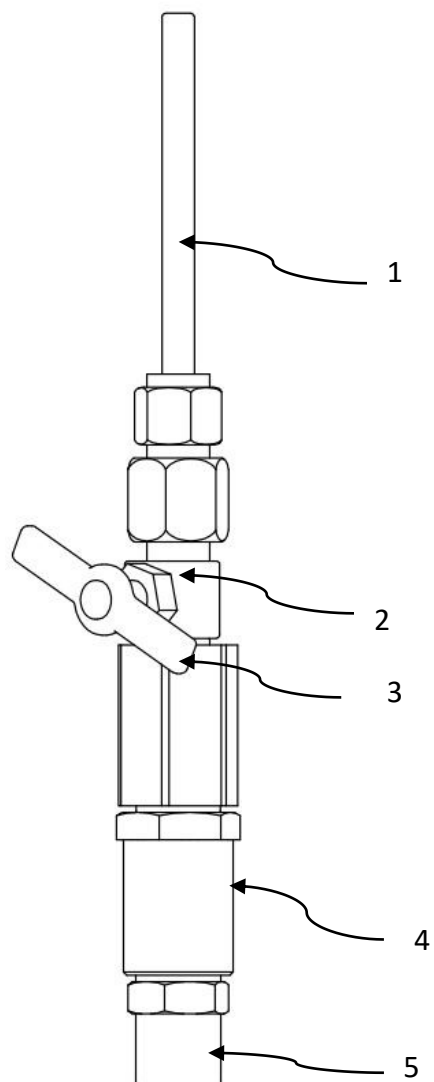
2300194 – Omega\_Air\_User\_Manual\_Oil\_Content\_Indicator\_OCI\_eng  
17.2.2021

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## Components

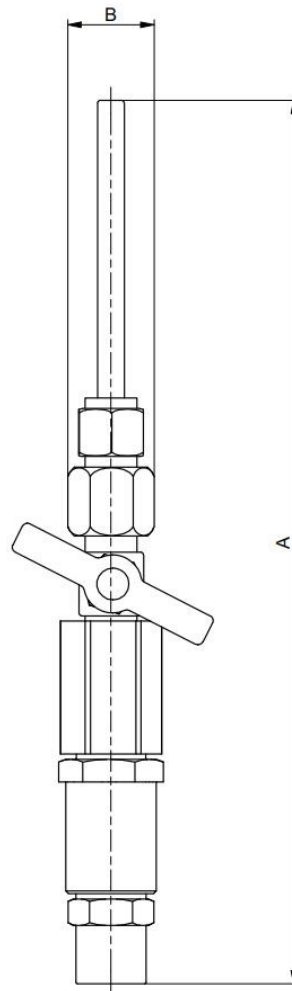
	Part
1	Oil indicator cartridge
2	Needle valve
3	Needle valve handle
4	Pressure reducing valve
5	¼" BSP thread connection



**Technical data**

Pressure range	0.68 -16 barg 0.68 – 8.6 barg	10 -232 psig 10 – 125 psig
Air consumption	0.07 mL/s/kPA	1.9 scim/psig
Operating temperature	1.5°C – 49°C	32°F – 120°F
Oil concentration range (W/W) <sup>(1)</sup>	0,012 – 30 mg/m <sup>3</sup> 0.01 – 25 ppm by weight 0 – 3 oz/100000 scf	
Connection	1/4"	
Mass	134 g	0.295
Dimensions	A	166 mm 6.54 inch
	B	16.2 mm 0.64 inch
Accessory	A-4000-121 Oil indicator replacement cartridge	

(1) Weight of oil per weight of air



## Safety instructions

The relevant safety at work and accident prevention regulations, plus operating instructions, shall apply for operating the indicator. The indicator has been constructed in accordance with the generally recognized rules of engineering. It complies with the requirements of directive 2014/68/EU concerning pressure equipment.

Ensure that installation complies with local laws for operation and routine testing of pressure equipment at the place of installation.

Operator/user of the tower should make himself familiar with the function, installation and start-up of the unit. All the safety information is always intended to ensure your personal safety.

- Do not exceed max. operating pressure or operating temperature range (see data label).
- Do not use the indicator in hazardous areas with potentially explosive atmospheres.
- All installation and maintenance work on the tower may only be carried out by trained and experienced specialists.
- It is forbidden to carry out any kind of modification on the indicator.
- Depressurize the system before carrying out the installation work.
- Use original spare parts only.
- Use the device for appropriate purpose only.



### Appropriate use

OCI series Oil Content Indicators are designed for indicating oil carryover from compressed air and vacuum systems. This appliance must be used only for the purpose for which it was specifically designed. All other uses are to be considered incorrect and will void warranty.

Specifically:

- indicator can only be used for "GROUP 2" fluids (PED 2014/68/EU).
- indicator cannot be used for explosive, toxic, flammable, corrosive and "GROUP 1" fluids (PED 2014/68/EU).

The manufacturer will under no circumstances be responsible for any damage resulting from improper, incorrect or unreasonable use.

Use genuine spare parts only. Any damage or malfunction caused by the use of unguenuine parts is not covered by Warranty or Product Liability.

## Installation

### OIL INDICATOR – MEASUREMENT PROCEDURE

- Open the needle valve to start measuring the amount of oil in air. Once the needle valve of the indicator has been opened, it should be exposed for some time, to get best results. Record exposure time and average pressure.
- After use close the needle valve. At the time of new test, the cartridge must be replaced with the new one (before replacing makes sure that the needle valve is fully closed).
- If oil is presented in air, it will color a white material in the tube. The rate of color travel will be proportional to the amount of oil presented. For converting oil indicator value to parts per million values use the conversion graph below.

**In humid air, moisture may wash traces of dye up the tube, creating a light pink area above the dark red area. When calculating oil entrainment, measure only to the top of the dark red column.**

### HOW TO DETERMINE OIL CONCENTRATION FROM GRAPH

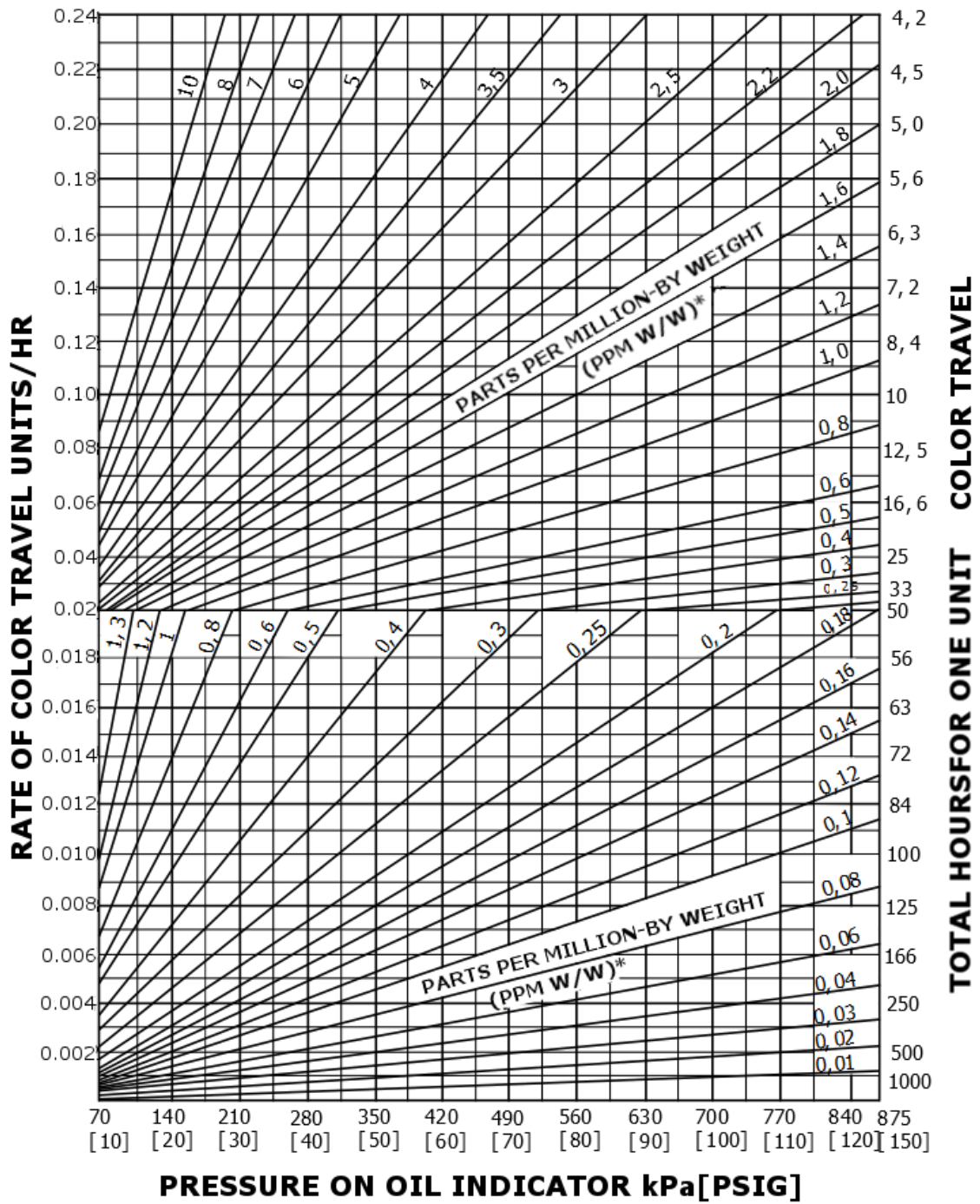
The speed of colour travel is a function of system pressure and oil concentration. To determine the oil concentration from graph it is necessary to have the following:

- Measurement of system pressure. In case of variation in pressure, the average value of pressure should be used in calculations.
- Measurement of the time, required for colour to travel one unit of scale height (useful when the measurement stops at colour level precisely 1 unit mark- use the scale right from graph). When the colour reaches FIRST unit mark stop the measurement. Find number of hours under pressure and find the mark on the right side of graph.

OR

- Measurement of the rate of units travelled in an hour (useful when the measurement stops at colour level between units marks- use the scale left from graph). Divide the units travelled with the total time under pressure. Find the mark on the left side of graph.

Oil concentration in PPM is determined from the intersection of system pressure and colour travel rate.



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\*W / W =Weight of oil per weight of airNote: Multiply PPM by 1,2 to obtain mg/m<sup>3</sup>

Multiply PPM by 0,12 to obtain oz/100000SCF

For any Rate of Colour Travel above 0.24 units/h, the measured rate should be divided by any factor which will bring it into the range of the graph. This number should then be used to determine the oil concentration (PPM). This concentration must then be multiplied by the same factor used previously to determine the actual oil concentration.

**Example:** The Rate of Travel on the high-pressure side of a pressure reducing valve (80 PSIG [560 kPa]) is found to be 0.5 units/hr. Divide this rate by five ( $0.5 \div 5 = 0.1$  units/h) to bring it into the range of the conversion graph. Locate this new rate on the chart, showing a concentration of 1.4 PPM. Multiply this concentration by the previous factor ( $1.4 \times 5 = 7.0$  PPM) to obtain the actual oil concentration in the air being tested.

## Maintenance



**Attention!**  
**Before maintenance depressurize the system!**

- Replace measuring cartridge after every use.
- Carry out a check for leaks once the maintenance work has been finished.

## Warranty exclusion

**The guarantee shall be void if:**

- The installation and operating manual was not followed with respect to installation, initial commissioning and maintenance.
- The unit was not operated properly and appropriately.
- The unit was operated when it was clearly defective.
- Non-original spare parts or replacement parts were used.
- The unit was not operated within the permissible technical parameters.
- Unauthorized constructional changes were made to the unit or if the unit has been opened/disassembled by an unauthorized person.





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