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## INDICATORS

Of liquid and humidity

### Product informations

A liquid and moisture indicator designed to display the state of the refrigerant, allowing correct diagnosis of refrigeration and air conditioning systems; it also offers the possibility of being mounted directly in line.

### Used to identify

- the moisture content in refrigerant
- lack of sub-cooling
- refrigerant deficiency
- in liquid line, the condition of refrigerant
- in return line from the oil separator, the flow of oil

This product contains a sensitive indicator that reflects a colour, depending on the moisture content of the refrigerant, changing from **green (dry)** to **yellow (wet)** going through **intermediate shades** of "chartreuse" green depending on the degree of humidity in the refrigerant.

### Product features

- provides fast and easy indication of:
  - system high moisture content
  - lack of subcooling or low system charge
- high purity tempered crystal



## Indicators

- easy viewing
- eliminates risk of explosion
- the same indicator can be used for all refrigerants
  - suitable for *HCFC, HFC and R744 (CO<sub>2</sub>)* refrigerants
  - big size, annular indicator ring
  - proven dirt resistance
- hermetic sealed design
  - not dismountable
  - explosion proof
- all the sight glasses are singly leak tested and pressure tested
  - pressure test at 70 bar
  - leak test with helium in a high vacuum chamber according to EN 1779.B6

## Humidity levels

The moisture indicator has been developed to work with all refrigerants, be aware that hermetic compressors only tolerate very low moisture content, while semi-hermetic and other compressors normally tolerate higher moisture contents in the refrigerant. Also, polyester oil for *HFC refrigerants (R134a, R404A, R407C)* reacts with water in a hydrolysis generating acid and alcohol. For this reason normally acceptable moisture concentration with HFC refrigerants is sensibly lower than with *HCFC refrigerants (R22)*. The colour on the indicator reflects the moisture content of the refrigerant: values under "green/dry" are to be considered as perfect condition meaning full protection against harmful effects from moisture or, in other words, the filter drier is working properly. When the green colour starts to fade, the colour change has begun and the indicator should therefore be watched more carefully because when the colour changes to yellow it is a clear signal that the capacity of the filter drier is exceeded and should be replaced as soon as possible. After about 24 hours from the replacing of the filter drier the sight glass should be controlled again to verify that green colour has been resetted, meaning that the replacing of the filter drier has been properly done.

<i>HUMIDITY CONTENT INTO REFRIGERANT (PPM)</i>						
	<i>R22</i>	<i>R134A</i>	<i>R404A</i>	<i>R407C</i>	<i>R410A</i>	<i>R507</i>



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HUMIDITY CONTENT INTO REFRIGERANT (PPM)							
<b>SAFE</b>	<b>GREEN / DRY</b>	<60	<75	<30	<30	<30	<30
<b>ATTENTION</b>	<b>CHARTREUSE</b>	60	75	30	30	30	30
<b>DANGER</b>	<b>YELLOW / WET</b>	>60	>75	>30	>30	>30	>30

## Technical Features

<b>TEMPERATURE RANGE</b>	- 30°C ÷ + 80°C
<b>PRESSURE RESISTANCE TEST</b>	48 BAR
<b>COMPATIBLE REFRIGERANTS</b>	HCFC, HFC E R744 (CO <sub>2</sub> )
<b>CONTROL LIGHT GLASS DIAMETER</b>	Ø 33 MM

SKU	INLET CONNECTION	OUTPUT CONNECTION	DIAMETER	A	B	C	D
11990	SAE 1/4" M	SAE 1/4" M	Ø 33 MM	72,5 MM	18 MM	36,25 MM	5,9 MM
11991	SAE 3/8" M	SAE 3/8" M	Ø 33 MM	77,5 MM	22,5 MM	38,75 MM	8,4 MM
11992	SAE 1/2" M	SAE 1/2" M	Ø 33 MM	86 MM	26,5 MM	43 MM	10,9 MM
11995	SAE 1/4" M	SAE 1/4" F	Ø 33 MM	63,5 MM	22,5 MM	38,25 MM	8,4 MM
11996	SAE 3/8" M	SAE 3/8" F	Ø 33 MM	68,75 MM	26,5 MM	38,75 MM	10,9 MM
11997	SAE 1/2" M	SAE 1/2" F	Ø 33 MM	71,5 MM	30 MM	43,25 MM	12,4 MM

SKU	MODEL	PRICE
00000011990	INDICATOR 1/4" MM - Ø 33 MM - 1 PCS.	€21.85 VAT EXCLUDED
00000011991	INDICATOR 3/8" MM - Ø 33 MM - 1 PCS.	€25.4 VAT EXCLUDED



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SKU	MODEL	PRICE
00000011992	INDICATOR 1/2" MM - Ø 33 MM - 1 PCS.	€29.5 VAT EXCLUDED
00000011995	INDICATOR 1/4" MF - Ø 33 MM - 1 PCS.	€21.85 VAT EXCLUDED
00000011996	INDICATOR 3/8" MF - Ø 33 MM - 1 PCS.	€34.05 VAT EXCLUDED
00000011997	INDICATOR 1/2" MF - Ø 33 MM - 1 PCS.	€39.6 VAT EXCLUDED

