

## Moisture indicator sight glasses



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IGLOO moisture indicator sight glasses, by visualizing the state of the liquid refrigerant, allow to formulate a correct diagnosis of refrigeration and air conditioning systems.

IGLOO sight glasses can be mounted directly in-line and are used to identify:

- The degree of moisture in the refrigerant
- Insufficient subcooling
- A lack of refrigerant fluid
- In the liquid line, the state of the refrigerant
- In the return line from the oil separator, the oil flow

IGLOO sight glasses contain an indicator insert that changes color from green (dry) to yellow (wet) passing through intermediate shades of chartreuse green according to the degree of moisture in the refrigerant.

### Features

- Wide temperature range: from -30°C to +80°C
- Provides easy and quick indication of:
  - High degree of moisture in the system
  - Lack of subcooling or refrigerant fluid
- High purity tempered glass-crystal
  - Easy inspection
  - Eliminates risk of explosion
- The same indicator can be used for all types of refrigerants
  - Suitable for HC, HFC, HFO refrigerants (and their blends)
  - Large size indicator insert, ring-shaped
  - Proven resistance to dirt and contaminants
- Hermetically sealed construction
  - Non-dismountable
  - Burst-proof (glass breaks above 300 bar, but does not explode)
- All sight glasses produced are individually tested
  - Pressure resistance test at 70bar
  - Helium leak test in high vacuum chamber according to EN 1779.B6
- Available in threaded versions (SAE Flare 45°), brazed and saddle

## Moisture indicator sight glasses

### Approvals

CE (PED, RoHS, REACH), EAC

### Humidity level

The moisture indicator of IGLOO sight glasses has been developed to operate with all HC, HFC, HFO refrigerants (and their blends).

When choosing the appropriate components to preserve the refrigeration system, pay attention to the fact that hermetic compressors only tolerate very low moisture values, while semi-hermetic or other types of compressors normally tolerate higher moisture levels in the refrigerant fluid.

The color of the indicator insert reflects the degree of moisture in the refrigerant fluid: values below the "green/dry" threshold are to be considered synonymous with operation under optimal conditions in terms of protection from the harmful effects attributable to the degree of moisture. In other words, the filter drier is working correctly.

When the intense green color begins to fade, the color change has begun and therefore the indicator must be watched very carefully because the indicator could soon become completely yellow and when this occurs it is a clear signal that the capacity of the filter drier is exhausted and should be replaced as soon as possible.

After approximately 24 hours from filter replacement the sight glass should be checked again in order to verify that it has returned completely green, meaning that the filter replacement has been performed properly.

		Moisture content in the refrigerant (ppm)					
		R22	R134a	R404A	R407C	R410A	R507
<b>Safe</b>	Green / Dry	<60	<75	<30	<30	<30	<30
<b>Attention</b>	Chartreuse	60	75	30	30	30	30
<b>Dangerous</b>	Yellow / Moist	>60	>75	>30	>30	>30	>30

*Please contact our technical department for moisture values referred to other refrigerants*

**Technical information** Suitable for HC, HFC, HFO refrigerants (and their blends). Not suitable for Ammonia and CO<sub>2</sub> R744.

IGLOO sight glasses are guaranteed for a leak rate lower than 0.1 gram/year of refrigerant.

### *Sight glasses, liquid and moisture indicators*

<b>MIF Series</b>	external-internal thread (male-female, flare 45°)	-30 ÷ +80 °C -22 ÷ +176 °F	48bar 700psig
<b>MIM Series</b>	external-external thread (male-male, flare 45°)		
<b>MIS Series</b>	ODF Connections (aka ODS) for inch and mm tubes		
<b>MIT Series</b>	Brazing connection "saddle type"		

## Moisture indicator sight glasses

### Standard supply

Sight glasses are supplied individually packaged inside cardboard boxes including assembly instructions and CE certificate.

### Available models

*MIF sight glasses with moisture indicator, external-internal thread (male-female)*



Mod.	Thread ANSI/ASME B1.1		Flare connection SAE J513	PED 2014/68/EU
	external thread (male)	internal thread (female)		Risk cat.
MIF-4	7/16" - 20 UNF	7/16" - 20 UNF	1/4"	Excluded Art.4 Par.3
MIF-6	5/8" - 18 UNF	5/8" - 18 UNF	3/8"	
MIF-8	3/4" - 16 UNF	3/4" - 16 UNF	1/2"	
MIF-10	7/8" - 14 UNF	7/8" - 14 UNF	5/8"	
MIF-12	1.1/16" - 14 UNS	1.1/16" - 14 UNS	3/4"	

*MIM sight glasses with moisture indicator, external-external thread (male-male)*



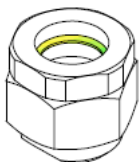
Mod.	Thread ANSI/ASME B1.1		Flare connection SAE J513	PED 2014/68/EU
	external thread (male)	external thread (male)		Risk cat.
MIM-4	7/16" - 20 UNF	7/16" - 20 UNF	1/4"	Excluded Art.4 Par.3
MIM-6	5/8" - 18 UNF	5/8" - 18 UNF	3/8"	
MIM-8	3/4" - 16 UNF	3/4" - 16 UNF	1/2"	
MIM-10	7/8" - 14 UNF	7/8" - 14 UNF	5/8"	
MIM-12	1.1/16" - 14 UNS	1.1/16" - 14 UNS	3/4"	

*MIS sight glasses with moisture indicator, ODF connections*



Mod.	ODF Connections (aka ODS)		PED 2014/68/EU
	mm	inch	Risk cat.
MIS-M6	O.D. 6mm	-	Excluded Art.4 Par.3
MIS-4	-	O.D. 1/4"	
MIS-6	-	O.D. 3/8"	
MIS-M10	O.D. 10mm	-	
MIS-M12	O.D. 12mm	-	
MIS-8	-	O.D. 1/2"	
MIS-10	O.D. 16mm	O.D. 5/8"	
MIS-M18	O.D. 18mm	-	
MIS-12	O.D. 19mm	O.D. 3/4"	
MIS-14	O.D. 22mm	O.D. 7/8"	

*MIT sight glasses with moisture indicator, saddle type*



Mod.	Saddle brazed on tubes of the following size		PED 2014/68/EU
	mm	pollici	Classe di rischio
MIT-10	16mm	5/8"	Excluded Art.4 Par.3
MIT-12	19mm	3/4"	
MIT-14	22mm	7/8"	
MIT-18	28mm	1.1/8"	
MIT-22	35mm	1.3/8"	
MIT-26	42mm	1.5/8"	
MIT-34	54mm	2.1/8"	