

# HMI - Hermetic Moisture Indicators

## Application

The HMI is designed to provide an accurate method of determining the moisture content of a system's refrigerant. The HMI has a unique high accuracy moisture indicator for CFC, HCFC, and HFC refrigerants.

## Features

- Highest sensitivity moisture indicator available
- Hermetic, leak-free construction
- Single indicator for all common refrigerants
- Accurate color calibration at low ppm levels and higher temperatures
- Wide angle viewing/high visibility window for ease of monitoring
- All brass corrosion resistant body for fewer leaks
- Solid copper connections.



## Specifications

- Maximum working pressure: 680 psig
- UL/CUL file number: SA 9566

### Nomenclature

| EXAMPLE: HMI 1TT4           |        |  |                              |
|-----------------------------|--------|--|------------------------------|
| HMI                         | 1      | TT                                     | 4                            |
| Hermetic Moisture Indicator | Series | Connection Style<br>TT = Sweat x Sweat | Connection Size<br>(in 1/8") |

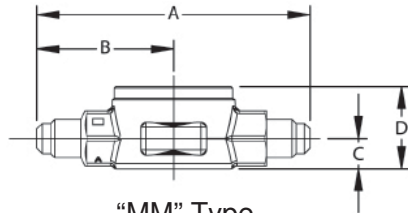
## Moisture Content Color Code (ppm H<sup>2</sup>O)

| Indication Liquid Temperature | Dry (Dark Blue) |       |       | Caution (Purple) |       |       | Wet (Salmon) |       |       |
|-------------------------------|-----------------|-------|-------|------------------|-------|-------|--------------|-------|-------|
|                               | 75°F            | 100°F | 125°F | 75°F             | 100°F | 125°F | 75°F         | 100°F | 125°F |
| R-134a                        | 20              | 35    | 60    | 35               | 55    | 85    | 130          | 160   | 190   |
| R-448A, R-449A                | 30              | 55    | 75    | 50               | 85    | 120   | 165          | 290   | 420   |
| R-404A/507                    | 15              | 25    | 45    | 33               | 50    | 80    | 120          | 150   | 180   |

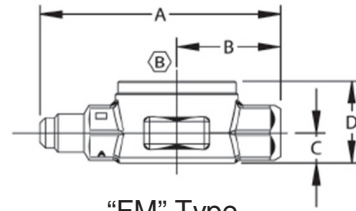
| Indication Liquid Temperature | Dry (Dark Blue) |      |      |      | Caution (Purple) |      |      |      | Wet (Salmon) |      |      |      |
|-------------------------------|-----------------|------|------|------|------------------|------|------|------|--------------|------|------|------|
|                               | -40°F           | -4°F | 32°F | 68°F | -40°F            | -4°F | 32°F | 68°F | -40°F        | -4°F | 32°F | 68°F |
| R-744                         | 3               | 6    | 11   | 20   | 5                | 10   | 19   | 34   | 16           | 32   | 63   | 116  |

# HMI - Hermetic Moisture Indicators

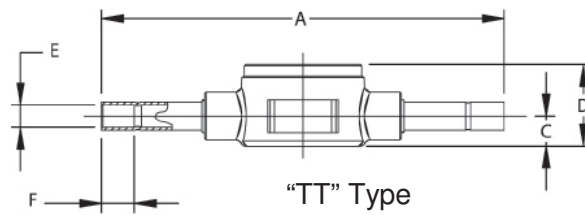
## Dimensional Data



“MM” Type  
Male Flare x Male Flare



“FM” Type  
Female Flare x Male Flare



“TT” Type  
Sweat x Sweat (ODF)

## Dimensional Data (in)

| Type Number | Connection Size | A    | B    | C    | D    | E    | F Min |
|-------------|-----------------|------|------|------|------|------|-------|
| HMI-1MM2    | 1/4 SAE         | 3.13 | 1.56 | 0.34 | 0.94 |      |       |
| HMI-1MM3    | 3/8 SAE         | 3.38 | 1.69 | 0.34 | 0.94 |      |       |
| HMI-1MM4    | 1/2 SAE         | 3.62 | 1.81 | 0.47 | 1.19 |      |       |
| HMI-1MM5    | 5/8 SAE         | 3.88 | 1.94 | 0.47 | 1.19 |      |       |
| HMI-1TT2    | 1/4 ODF         | 5.56 |      | 0.34 | 0.94 | 0.25 | 0.38  |
| HMI-1TT3    | 3/8 ODF         | 5.61 |      | 0.34 | 0.94 | 0.38 | 0.40  |
| HMI-1TT4    | 1/2 ODF         | 5.87 |      | 0.47 | 1.19 | 0.50 | 0.50  |
| HMI-1TT5    | 5/8 ODF         | 5.87 |      | 0.61 | 1.19 | 0.63 | 0.63  |
| HMI-1TT6    | 3/4 ODF         | 6.56 |      | 0.61 | 1.5  | 0.75 | 0.63  |
| HMI-1TT7    | 7/8 ODF         | 6.31 |      | 0.61 | 1.5  | 0.88 | 0.75  |
| HMI-1TT9    | 1 1/8 ODF       | 6.59 |      | 0.67 | 1.37 | 1.13 | 0.90  |
| HMI-1FM2    | 1/4 SAE FM      | 2.75 | 1.19 | 0.34 | 0.94 |      |       |
| HMI-1FM3    | 3/8 SAE FM      | 3.00 | 1.31 | 0.47 | 1.19 |      |       |
| HMI-1FM4    | 1/2 SAE FM      | 3.22 | 1.41 | 0.47 | 1.19 |      |       |

# IHL - Series Saddle Type Liquid and Moisture Indicators

## Application

Designed for use with all common refrigerants in larger diameter liquid lines from 1-1/8 up to 2-5/8 ODF.

## Features, Advantages and Benefits

- \* Solid copper connections.
- \* Replaceable moisture indicator.
- \* Wide angle viewing for high visibility.
- \* Accurate color calibration at low ppm level and higher temperatures.
- \* Approved by: UL file SA9566  
CSA file LR100624
- \* Maximum Working Pressure 34.5 bar.
- \* Burst Pressure 172.4 bar.

IHL series saddle type liquid and moisture indicators are designed to provide an accurate method of determining the quality and moisture content of a system's refrigerant, determining when the moisture content is dangerously wet and when the liquid line filter-drier is no longer effective. An indicator element ring is highly sensitive to moisture and gradually changes color in relation to changes in the system moisture content.

IHL saddle type liquid and moisture indicators are constructed of a steel removable sight glass assembly and a brass bushing brazed to a copper tube. The sight glass with a wide angle view, allows for easy inspection of the refrigerant system.

### Nomenclature

| EXAMPLE: IHL-11S |                          |                              |
|------------------|--------------------------|------------------------------|
| IHL              | 11                       | S                            |
| Series           | Connections size in 1/8" | Connection style:<br>S = ODF |

## Dimensional Data

|         | CONNECTION TYPE<br>mm (inch) | OVERALL LENGTH<br>mm (in) | OVERALL HEIGHT<br>mm (in) |
|---------|------------------------------|---------------------------|---------------------------|
| IHL-9S  | 1-1/8 SOLDER                 | 160 (6.30)                | 65 (2.55)                 |
| IHL-11S | 1-3/8 SOLDER                 | 180 (7.09)                | 71 (2.80)                 |
| IHL-13S | 1-5/8 SOLDER                 | 200 (7.87)                | 78 (3.05)                 |