

## Introduction

Liquid and moisture indicating sight glasses are used in refrigeration and air-conditioning systems as a means of visually checking refrigerant quality and quantity.

This is particularly important with HFC refrigerants using polyester oil due to its hygroscopic ability as this combination will react with moisture creating both acids and alcohol. They are also ideally suited for installation in the returning oil line from an oil separator to the compressor.

Heldon L&M sight glasses are manufactured in two distinct versions.

**a. Hermetically sealed;** Have a large glass diameter to allow for a better viewing angle and larger moisture indicator. They are available with or without a flow indicator ball assembly. Machined from a forged brass billet and pressed closed following final assembly their unique double seal arrangement gives them superior sealing ability and longer service life.

**b. Screw top:** Used mainly in vessels for viewing liquid level and available with a floating indicator ball. The Heldon range of screw in sight glasses includes those for retrofitting in older plants as well as steel weld in versions and large jumbo's in stainless steel and brass.

Suitable for liquid, suction and oil lines with all fluorinated refrigerants and oils up to 4200kpa safe working pressure. Heldon also offer the unique option of a flow and level indicating red ball in our popular sizes. This, coupled with their fast moisture indication and large range of connection options, are the ideal choice for OEM's, new installations and service replacement.



## Features

### Features

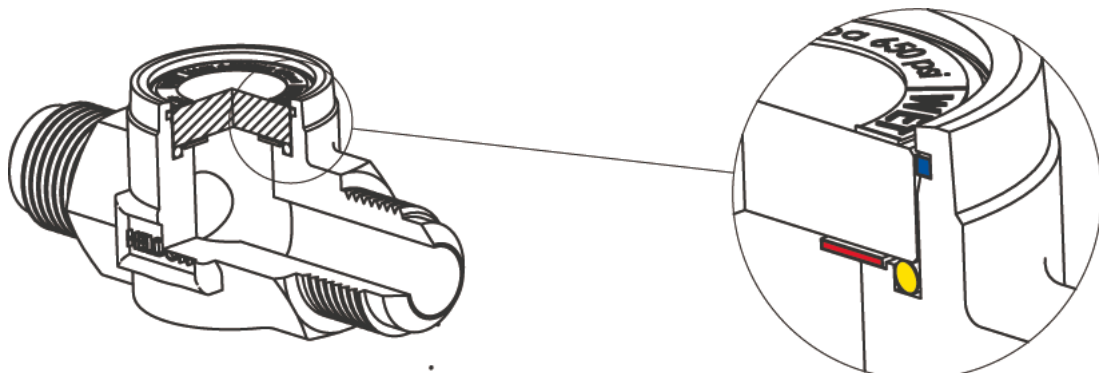
- Designed for maximum flow and minimal pressure drop.
- Solid forged brass construction.
- Solid copper extended connectors. (Solder version).
- Suitable for all fluorinated refrigerants up to 4200kpa.
- Large sight glass and moisture indicator.
- Working range -40°C to 85°C.
- Available with flow indicating red ball.

### Benefits

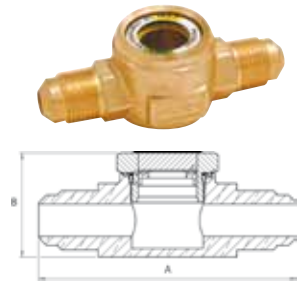
- Negligible loss in system efficiency.
- Strong stable platform.
- Easy installation and soldering.
- Compatible with most fluorinated refrigerants and oils.
- Better viewing angle and clarity.
- Suitable for a wide range of applications.
- Quick identification of flow and liquid quantity.

## Manufacturing Standards

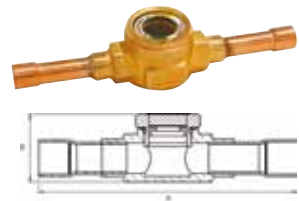
Manufactured in accordance with AS / NZ 1677.2



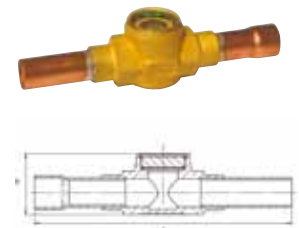
Male SAE to Male SAE		Dimensions		Weight	Carton
Part No.	Connection	A	B	kg	qty
650-0404H	1/4 MSAE x 1/4 MSAE	72	27	.155	56
650-0404HB	1/4 MSAE x 1/4 MSAE w/ball float	72	27	.155	56
650-0606H	3/8 MSAE x 3/8 MSAE	76	27	.175	56
650-0606HB	3/8 MSAE x 3/8 MSAE w/ball float	76	27	.175	56
650-0808H	1/2 MSAE x 1/2 MSAE	83	34	.230	56
650-0808HB	1/2 MSAE x 1/2 MSAE w/ball float	83	34	.230	56
650-1010H	5/8 MSAE x 5/8 MSAE	88	34	.235	56
650-1010HB	5/8 MSAE x 5/8 MSAE w/ball float	88	34	.235	56



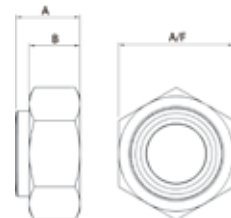
Female Solder with Extended Copper Tails		Dimensions		Weight	Carton
Part No.	Connection	A	B	kg	qty
665-0404H	1/4 ID x 1/4 ID extended tails	101	27	.165	56
665-0404HB	1/4 ID x 1/4 ID extended tails w/ball float	101	27	.165	56
665-0606H	3/8 ID x 3/8 ID extended tails	119	27	.175	56
665-0606HB	3/8 ID x 3/8 ID extended tails w/ball float	119	27	.175	56
665-0808H	1/2 ID x 1/2 ID extended tails	146	27	.175	56
665-0808HB	1/2 ID x 1/2 ID extended tails w/ball float	146	27	.175	56
665-1010H	5/8 ID x 5/8 ID extended tails	146	33	.235	56
665-1010HB	5/8 ID x 5/8 ID extended tails w/ball float	146	33	.235	56
665-1212H	3/4 ID x 3/4 ID extended tails	173	33	.260	48
665-1212HB	3/4 ID x 3/4 ID extended tails w/ball float	173	33	.260	48



Male Solder to Female Solder		Dimensions		Weight	Carton
Part No.	Connection	A	B	kg	qty
668-0404H	1/4 ID x 1/4 OD Solder	101	27	.165	56
668-0606H	3/8 ID x 3/8 OD Solder	119	27	.175	56
668-0808H	1/2 ID x 1/2 OD Solder	146	27	.175	56
668-1010H	5/8 ID x 5/8 OD Solder	146	33	.235	56
668-1212H	3/4 ID x 3/4 OD Solder	160	33	.260	48

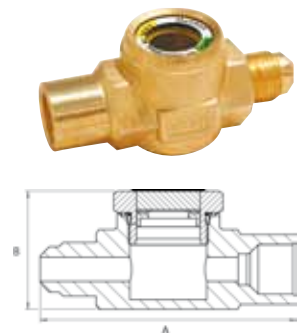


Rotalock Sight Glasses		Weight	Carton
Part No.	Description	kg	qty
647-2020-1	1 1/4" Rotalock Sight Glass - Dimple	.75	120
647-2020-2	1 1/4" Rotalock Sight Glass - Ball Float	.75	120
647-2020-3	1 1/4" Rotalock Sight Glass - Flat	.75	120

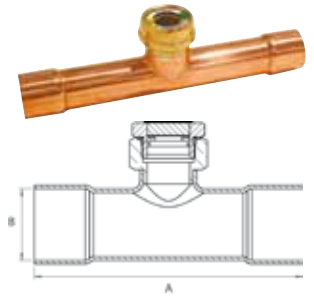


Safe working pressure: 5,200 kPa

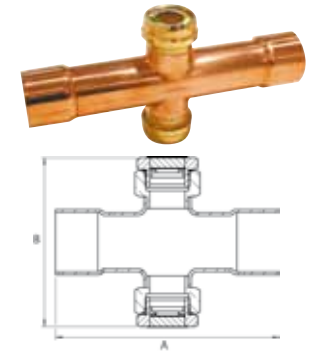
Male SAE to Female SAE		Dimensions		Weight	Carton
Part No.	Connection	A	B	kg	qty
655-0404H	1/4 MSAE x 1/4 FSAE	61	27	.155	56
655-0606H	3/8 MSAE x 3/8 FSAE	76	33	.175	56
655-0808H	1/2 MSAE x 1/2 FSAE	72	33	.230	56



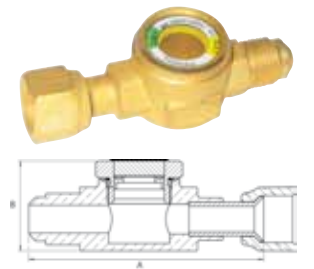
Part No.	Connection	Dimensions		Weight kg	Carton qty
		A	B		
670-1414	7/8 ID Solder	101	27	.220	48
670-1818	1 1/8 ID Solder	119	27	.285	48
670-2222	1 3/8 ID Solder	146	27	.485	24
670-2626	1 5/8 ID Solder	146	33	.510	24
670-3434	2 1/8 ID Solder	160	33	.735	20



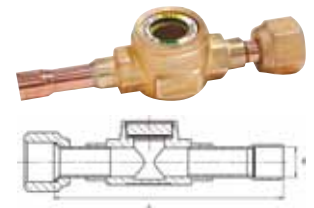
Rotalock Sight Glasses					
Part No.	Connection	Dimensions		Weight kg	Carton qty
		A	B		
675-1414	7/8 ID Solder	160	72	.410	32
675-1818	1 1/8 ID Solder	160	78	.440	32
675-2222	1 3/8 ID Solder	200	84	.500	24
675-2626	1 5/8 ID Solder	200	91	.580	24
675-3434	2 1/8 ID Solder	200	104	.650	20



Male SAE to Female SAE					
Part No.	Connection	Dimensions		Weight kg	Carton qty
		A	B		
658-0404H	1/4 MSAE x 1/4 F/Swivel	77	27	.170	56
658-0606H	3/8 MSAE x 3/8 F/Swivel	82	27	.200	56
658-0808H	1/2 MSAE x 1/2 F/Swivel	88	33	.250	56
658-1010H	5/8 MSAE x 5/8 F/Swivel	94	33	.260	56



Single Port - Copper ID					
Part No.	Connection	Dimensions		Weight kg	Carton qty
		A	B		
659-0404H	1/4 ID Solder x 1/4 F/Swivel	92	27	.170	56
659-0606H	3/8 ID Solder x 3/8 F/Swivel	104	27	.200	56
659-0808H	1/2 ID Solder x 1/2 F/Swivel	119	27	.250	56
659-1010H	5/8 ID Solder x 5/8 F/Swivel	123	33	.260	56



Moisture Content Vs Colour Change Indication (ppm of water)	Liquid Temperature (°C)								
	Dry (green)			Caution (light green)			Wet (Yellow)		
	25	40	50	25	40	50	25	40	50
R12	<5	<5	<5	5-25	5-40	5-70	>25	>40	>70
R134a	<20	<35	<60	20-130	35-160	60-200	>130	>160	>200
R22	<25	<35	<50	25-145	35-200	50-290	>145	>200	>290
R407C	<25	<40	<60	25-150	40-230	60-360	>150	>230	>360
R410A	<30	<60	<75	30-170	60-280	75-420	>170	>280	>420
R404A/507	<15	<25	<45	15-120	25-150	45-180	>120	>150	>180
R502		<5	<5	<10	5-50	5-90	10-150	>50	>90
>150									

## Spares and Accessories

### Spare Parts & Retrofit

Part No.	Description
644-024	Plated steel - Sight glass assy 24mm (c/w O-ring and teflon gasket)
649-01	Seal Kit Gasket & Viton O rings (pkt of 10)
977-3326	Fibre Gasket to suit - #610-20



## Male BSP Assemblies -Hermetic Brass Adaptors

Part No.	Description
610-12	Steel Top / Brass Adapt. - Sight glass 3/4 MBSP

## Jumbo

Part No.	Description
611-20	Plated Steel Jumbo Sight Glass
612-24A2	Stainless Steel Jumbo Sight Glass
610-20	Brass Top One Piece Jumbo Sight glass 1 1/4 MBSPP (c/w gasket)



## Weld / Solder Spigots

Part No.	Description
681-14	Plated steel Top / Brass Spigot. - 7/8 (solder)
647-024	Weldable Steel Spigot For Sight Glass



## Ball float

Part No.	Description
612-121	Ball float- Plated Steel Top / Brass Adaptor 3/4 NPT
611-121	Ball float- Plated Steel Top / Steel Adaptor 3/4 BSP.
682-141	Plated steel Top / Steel Spigot. - 24mm OD (Ball Float)

