

Introduction

Sight Glasses are used throughout the Refrigeration and Air-conditioning Industries as an easy means of visually checking the levels of liquid refrigerant and compressor oil in a system. Typically located on Liquid Receivers, Suction Accumulators, Surge Drums, Liquid Level columns and Oil management systems, Sight Glasses provide a quick and easy means of determining the operating status of the system and its liquid levels.

Heldon is excited to announce the newest addition to their ever expanding range: **Rotalock Sight Glasses.**

In what will prove to be another step forward in the area of monitoring and serviceability for the industry, Heldon offer the convenience of a Sight Glass with the superior seal tight locking joint of a Rotalock fitting.

An Industry favourite, the Rotalock utilises a connection that consists of both a male & female component, that when joined compress a sacrificial Teflon washer. By compressing this Teflon washer, a seal is created that can maintain its integrity regardless of large changes in temperature and constant system vibration.



Features

Our Research and Development team have incorporated the following features that raise the bar of Sight Glasses:

A nickel plated steel body with a range of fused soda glass viewing lenses ensure excellent visibility for the operator. Sight Glass available with either 1 1/4" or 2 1/4" Rotalock nut. Combined with a dedicated Teflon washer, this assembly provides a superior seal tight locking joint.

Simple 3 piece design incorporates a Locking nut, Glass lens assembly and "Quad-ring" Teflon washer.

Four different styles available:

Clear lens, Dimple lens, Frost Shield and the Clear lens with Ball float (on 1 1/4" only).

The Frost Shield option allows clear viewing of liquid levels under frosting conditions or when insulation material is present.

The Rotalock Sight Glass range is suitable for all fluorinated refrigerants and their oils.

Operating Temperature Range of -40°C to 85°C.

The Safe Working Pressure is rated at 5,200 kPa.

Burst test pressure is rated at 26 MPa.

Benefits

The nickel plating provides outstanding corrosion resistance. The rugged fused glass design will not break. Choose the lens that best suits the application.

Rotalock fitting provides enhanced sealing capability & less chance of leakage.

The rugged UNF thread (12 t.p.i) means the nut hangs on tight.

Easy installation requires no special tooling. Just fit in place, tension correctly and GO.

A glass lens option to suit every need, complete ready to install.

For Low Temperature applications a Frost Shield option is available.

The Rotalock Sight Glass is perfectly suited for use in today's industry.

Heldon Quality. Enough said.



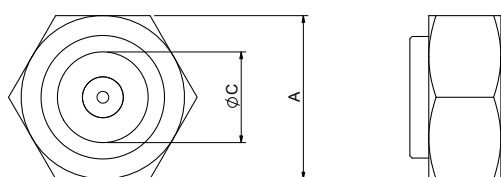
Manufacturing Standards

Manufactured in accordance with AS / NZ 1677.2

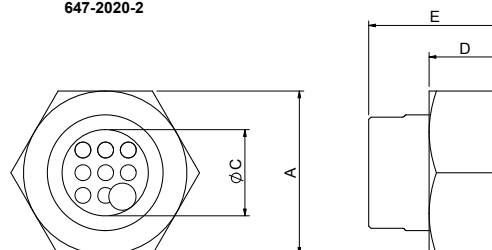
Heldon Rotalock Sight Glass Range

Rotalock Sight Glasses							
Part Number	Description	Body Size	Rotalock Connection	Nut Size A	Lens Size B	Lens Dia. C	Total Weight grams
647-2020-1	R/L Sight Glass - Dimpled	1 1/4" OD	1 1/4" - 12 UNF	35 mm	11 mm	19 mm	72 grams
647-2020-2	R/L Sight Glass - with Ball Float	1 1/4" OD	1 1/4" - 12 UNF	35 mm	20 mm	19 mm	86 grams
647-2020-3	R/L Sight Glass - Flat	1 1/4" OD	1 1/4" - 12 UNF	35 mm	11 mm	19 mm	72 grams
647-2020-4	R/L Sight Glass - Frost Shield	1 1/4" OD	1 1/4" - 12 UNF	35 mm	25 mm	17 mm	135 grams
647-3636-1	R/L Sight Glass - Frost Shield	2 1/4" OD	2 1/4" - 12 UNF	65 mm	31 mm	38 mm	454 grams
647-3636-2	R/L Sight Glass - Dimpled	2 1/4" OD	2 1/4" - 12 UNF	65 mm	21 mm	38 mm	401 grams

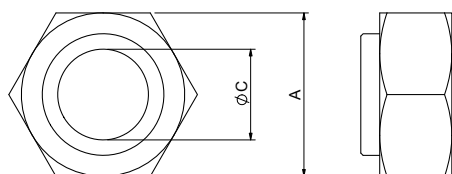
647-2020-1



647-2020-2

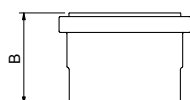


647-2020-3



Rotalock Sight Glasses

Part Number	Dimension E	Dimension D
647-2020-1	20 mm	16 mm
647-2020-2	20 mm	16 mm
647-2020-3	29 mm	16 mm
647-2020-4	35 mm	16 mm
647-3636-1	46 mm	25 mm
647-3636-2	37 mm	25 mm



Frost Shield

To properly view the refrigeration systems liquid level's under frosting conditions or when external insulation is fixed in place, a Frost Shield should be employed. The Frost Shield is made of Perspex and features a Nitrile o-ring.

Frost Shield			
Item	Part Number	Length	Diameter
1 1/4"	647-20-4-FS	20 mm	17 mm
2 1/4"	647-36-4-FS	63 mm	38 mm



Part Number Structure & Nomenclature

To demonstrate Heldon Nomenclature, a typical Part Number would read # 647-2020-1. The following table will explain further:

Nomenclature Series Number	Glass Body Size	Rotalock Connection Size	Glass Type
i.e 647-XXXX-X	i.e 647 - 20XX - X i.e 647 - 36XX - X	i.e 647 - XX20 - X i.e 647 - XX36 - X	i.e 647 - XXXX 1 or 2 or 3 or 4
647 = Rotalock Sight Glass	20 = 1 1/4" OD Body 36 = 2 1/4" OD Body	20 = 1 1/4" - 12 UNF 36 = 2 1/4" - 12 UNF	647-2020-1 = 1 1/4" OD Dimpled 647-2020-2 = 1 1/4" OD with Ball Float 647-2020-3 = 1 1/4" OD Flat Glass 647-2020-4 = 1 1/4" OD Frost Shield Type 647-3636-1 = 2 1/4" OD Frost Shield Type 647-3636-2 = 2 1/4" OD Dimpled

Quad-Ring Teflon Washer	
Size	Product Number
1 1/4" Sight Glass	800-26XX-20
2 1/4" Sight Glass	800-26XX-36

Heldon Recommended Rotalock Sight Glass Torque Settings

Rotalock Stub Size	Torque Setting (N.m)
Rotalock 1 1/4" - 12 UNF	120 - 135
Rotalock 2 1/4" - 12 UNF	165 - 190

*Please note that these Torque settings must be adhered to as over tensioning the nut could result in fracturing the Glass Lens.

Installation

When installing a Rotalock Sight Glass please observe the following precautions:

The Rotalock Sight Glass is best positioned in an accessible location away from possible traffic and harm.

A compatible male threaded spigot is required to be in place on the refrigeration plant.

The refrigeration system must be pumped down or all refrigerant recovered before installation is to occur. If Sight Glasses are to be installed as part of an oil management system, oil must be isolated and equipment free of pressure before commencing work.

Carefully remove assembly from packaging.

Visually check parts before installation, for any signs of apparent damage.

Make sure parts are clean and free of debris.

Carefully fit new Quad-Ring Teflon washer into the Rotalock spigot's face groove. Lubricate the Teflon washer with clean refrigeration oil. Assemble Sight Glass and thread on Rotalock nut finger tight. Tension to the recommended torque setting as specified. Note that over-tensioning a Rotalock Sight Glass can result in fracturing the Glass lens and so void warranty.

Before putting into service, thoroughly leak test the complete assembly under pressure.

Leak testing must be completed before inserting the Frost Shield Perspex.

When installing the Frost Shield, lightly coat the Perspex's o-ring with clean refrigeration oil. Press the Frost Shield into the nickel plated housing, taking note of the escaping air venting from the drilled hole on the Sight Glass body. With air vented, Perspex can butt up to Glass lens correctly.

Caution

Only competent, trained refrigeration mechanics should install or service Rotalock Sight Glasses. The stated pressure and temperature limits should never be exceeded. Sight Glass lenses should be inspected routinely and replaced if damaged. Escaping refrigerant is hazardous to both the environment and to your health.