

MANHOLE COVERS

GENERAL INFORMATION

Liquip design and manufacture a range of round manhole covers to suit individual customer preferences with the choice of up to four attachment points for the addition of over fill probes, vapour vents, dip & fill tubes and Diptronic® tank gauging. Sizes range from 400 mm – 500 mm (16" – 20").

Most are constructed of a cast Aluminium man-hole cover and bridge and handle with provision for pad locking the handle for security. The VOH800 Range is a steel plated style manhole cover.

Additional security can be achieved with a non opening bridge & handle design.

REGULATIONS

Liquip manholes and vents are designed to comply with worldwide standards including: Australia, UK, Europe, France & USA

DROP-TEST

Several models of Liquip man hole covers are Drop Test Approved to Australian, UK and US standards.

Drop tested manhole covers offer additional security in the event of a tanker rollover and help to prevent environmental damage and commercial loss through loss of product in a roll over situation.

MANHOLE BOLTING

Several methods of positioning manhole covers are available.

Clamp Band: A single clamp fits around the circumference of the manhole cover and manhole coaming which is tightened using a single bolt. Care must be taken to fit this clamp band according to instructions to ensure manhole cover integrity.

Bolt Pattern: The manhole cover is attached to the manhole coaming using a 24 bolt pattern,

Wing Nut: Used on Swing back and pressure hatches.

EMERGENCY VENT

All VOH series man hole covers incorporate a 225 mm (9") emergency vent and a pressure vacuum vent,

The emergency vent is a safety device which is designed to open, relieve surge pressure and then close in the event of a tanker roll over, this action prevents rupturing of the tanker shell. It can also be utilized to top load the tanker and is fitted with a two stage handle release to prevent hatch blow back when opening under pressure

All VOH series manhole covers are also equipped with a pressure/vacuum vent which is used for thermal relief of each compartment and incorporates shut off in the event of a roll over.

Please note that this is not suitable for bottom loading with the man hole cover in the closed position, a separate vapour vent should be fitted for this operation.

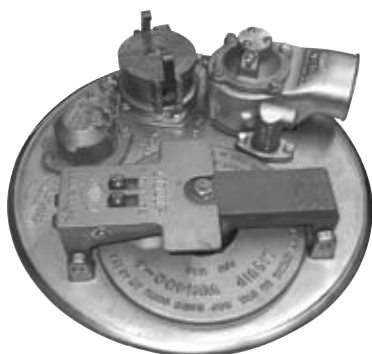
ACCESSORIES

UG101 Ullage Gauge

Accessory blank plates

Man-hole cover sightglass

Weather hatches



VOH200 SERIES

400mm (16") MANHOLE COVER

Cast aluminium construction, this manhole cover features two equipment mounting positions for Over Fill and Vapour Recovery. Any mounting position not used can be securely blanked off until required.

Ideal for either Top or Bottom loading.

MOUNTING

Clamp-Band mounted to corresponding coaming

VOH200U-15M Mild Steel Coaming

VOH200U-30 Aluminium Coaming

VENTS

A standard 1" pressure vacuum vent and 225 mm (9") two stage emergency vent are included as standard on this series.

Please note: The pressure vacuum vent is for thermal expansion only and not for bottom loading vapour venting or vapour recovery.

A 225mm emergency pressure vent (also called fire engulfment vent) is also included on all models enabling bulk pressure release in event of a fire or rollover.

OPTIONS

Gravity Latch

Lockable Bridge & Handle

ACCESSORIES

UG101 Ullage gauge

AVV3.0-10 Blank Plate

VOH700TH-14 Overfill probe position blank plate

VOH700-22 Manhole cover sight glass

VOH200-5 Overfill probe Holders

VOH400-10 Lock Key

DROP TEST

VOH200 Series Drop Test Approved

VOH210 Not Drop Test Approved



VOH410 SERIES

455mm (18") diameter MANHOLE COVER

Cast Aluminium construction with four equipment mounting positions the VOH410 series is the premier manhole cover in the Liquip range. This manhole cover is 455mm (18") in diameter and is ideal for either top or bottom loading.

MOUNTING

Clamp-Band mounted to corresponding coaming

VOH300-15P Aluminium Coaming

VOH300-17 Mild Steel Coaming - Not Drop Test Approved

VENTS

All Liquip manhole covers come standard with 1" thermal pressure and vacuum vent complying with recognised industry codes. They are Australian drop test approved and incorporate a rollover ball to completely shut off the vent in event of a tanker rollover.

Please note: The pressure vacuum vent is for thermal expansion only and not for bottom loading vapour venting or vapour recovery.

A 225mm emergency pressure vent (also called fire engulfment vent) is also included on all models enabling bulk pressure release in event of a fire or rollover.

INSPECTION HATCH

The 225mm emergency vent doubles as an easy to open inspection hatch for top loading or visual inspection of tank contents. A two stage opening mechanism enables internal pressure to be released before completely opening the hatch cover.

OPTIONS

Gravity Latch

Lockable Bridge & Handle

ACCESSORIES

UG101 Ullage Gauge

AVV3.0-10 Vapour Recovery Blank Plate

VOH700TH-13 Dip & Fill Blank Plate

VOH200-14 Overfill Probe Blank Plate

VOH700-22 Sight Glass

VOH400-10 Lock Key

DROP TEST

Passes the Australian and CEN Drop Tests



VOH500 SERIES

500mm (20") MANHOLE COVER

Cast Aluminium construction. It features three mounting positions for vapour recovery, overfill protection, dipstick or Diptronic accessories.

Any mounting position not utilized can be securely blanked off until required.

MOUNTING

24 bolt pattern to corresponding coaming

VOH500-14A Aluminium Coaming

VOH500-17M Mild Steel Coaming

VENTS

A standard 1" pressure vacuum vent and 9" (225mm) emergency vent are standard on this model.

Please note: The pressure vacuum vent is for thermal expansion only and not designed for bottom loading, vapour venting or vapour recovery.

A 225mm emergency pressure vent (also called fire engulfment vent) is also included on all models enabling bulk pressure release in event of a fire or rollover.

The VOH500 Series can be used for either top or bottom loading with provision for a vapour vent and overfill probe, or top loading through the emergency vent. All major components are cast aluminium, keeping weight to a minimum while providing security.

OPTIONS

Gravity Latch

Lockable Handle

ACCESSORIES

7237Z Blank Plate for accessory mounting positions.

PJB301 Overfill Probe Holder

VOH400-10 Lock Key

DROP TEST

Passes the Australian and CEN Drop Tests



VOH750 SERIES

455mm (18") MANHOLE COVER

Cast Aluminium construction. Features three equipment mounting positions for Overfill Probe, Vapour Recovery, Dip Tube or Diptronic applications.

Any mounting position not used can be securely blanked off until required.

Ideal for either top or bottom loading.

MOUNTING

24 Bolt Pattern for mounting to corresponding coaming

VOH700-26 Aluminium Coaming

VOH700-26M Mild Steel Coaming

VENTS

All Liquip manhole covers come standard with 1" thermal pressure and vacuum vent complying with recognised industry codes. They incorporate a rollover ball to completely shut off the vent in event of a tanker rollover.

Please note: The pressure vacuum vent is for thermal expansion only and not for bottom loading vapour venting or vapour recovery.

INSPECTION HATCH

The 225mm emergency vent (fire engulfment vent) doubles as an easy to open inspection hatch for top loading or visual inspection of tank contents. A two stage opening mechanism enables internal pressure to be released before completely opening the hatch cover.

OPTIONS

Gravity Latch

Lockable Bridge & Handle

ACCESSORIES

AVV3.0-10 Vapour Recovery Blank Plate

VOH700TH-13 Dip & Fill Blank Plate

VOH700TH-14 Overfill Blank Plate

VOH700-22 Sight Glass

UG101 Ullage Gauge

DROP TEST

Passes the Australian and CEN Drop Tests



VOH800 SERIES

500mm (20") MANHOLE COVER

Plated steel construction. Features maximum three mounting positions for vapour recovery, overfill protection and dip and fill accessories.

Made to order with mounting positions as required.

MOUNTING

Mount with clampband, coaming and clampband supplied

VENTS

A standard pressure vacuum vent is fitted to the 10" (250mm) emergency vent. This vent (fire engulfment vent) allows bulk pressure release in event of a fire or rollover.

Designed for top or bottom loading this manhole cover is NOT drop test approved.

ACCESSORIES

PJB300 Overfill Probe Holder



SWING HATCH SH303

The SH303 swing hatch is a 441mm swing easy access style manhole cover. It features an integral emergency vent and provision for a pressure vacuum vent.

It comes complete with weld in coaming available in Aluminium, Mild Steel or Stainless Steel.

Various seal materials available to suit a wide range of applications.

It fully passes the Australian Drop Test and additionally complies with UK and US regulations.

This model is also available in a clean skin configuration, (SH302) with no pressure vacuum vent for dangerous goods application (see below).

ACCESSORIES

PVV204 Pressure Vacuum Vent



SWING HATCH SH302

The SH302 cleanskin hatch cover comes complete with weld in coaming in Mild Steel, Aluminium or Stainless Steel.

The SH302 has no provision for pressure or vacuum relief.

Various seal materials available to suit a wide range of applications.

Optional full stainless steel construction (no vents)



EMERGENCY HATCH

Emergency Hatch EH230 Series

This 225 mm (9") unit is available in aluminium only.

The weld-in 150mm coaming is available in Aluminium, Mild Steel or Stainless Steel.

For safety the hatch has a two stage opening and also acts as an emergency vent. It also incorporates a standard Liquip pressure vacuum vent for thermal relief of the tanker (optional). It is supplied as a complete unit ready for fitting to a tanker or storage tank.

OPTIONS

A wide variety of seals are available depending on the product being stored or transported



PRESSURE HATCH

Pressure Hatch PH18 (18") and PH20 (20") Series

Pressure vessel hatches in a range of sizes and specifications for use with road, rail or storage tanks. Cover is manufactured from cast aluminum.

The standard range of hatches, the PH 18" (460mm) and PH 20" (510 mm) allow secure access to pressure vessels for filling, cleaning and inspection.

They are supplied as a complete unit with coaming in mild steel or aluminium ready for fitting to a tank.

They comply with Australian pressure vessel standards and AS 1210.

Cam handles are adjustable without opening the hatch or depressurisation of the vessel.

OPTIONS

Steel or Aluminium Weld rings



Liquip manufactured blank plates can be fitted to any unused mounting positions on the manhole covers. They are fastened from the underside of the manhole cover providing security and weather proofing. Gaskets and fasteners are supplied with each blank plate.

BLANK PLATE FOR OVER-FILL PROBE POINT

VOH 700TH-14 (BLIND TAPPED) for added security - VOH200 & VOH750 only.

VOH 200-14 (THROUGH HOLE) - VOH410 only

Blank plates supplied complete with gasket and fasteners.



BLANK PLATE FOR DIP AND FILL POINT

VOH 700TH-13 (BLIND TAPPED) for added security - VOH200 & VOH750 only

VOH-16 (THROUGH HOLE) - VOH410 only

Fits VOH200, VOH400 & VOH700 series manhole covers.

7237Z fits VOH500 series manhole covers

Blank plates supplied complete with gasket and fasteners.



BLANK PLATE FOR VAPOUR POINT

AVV3.0-10 (BLIND TAPPED) for security fits VOH200, VOH410 & VOH750 series manhole Covers.

7237Z fits the VOH500 series Manhole Covers.

Blank plates supplied complete with gasket and fasteners.



ULLAGE GAUGE UG101

The Liquip Ullage Gauge can be mounted to any Liquip manhole cover. Once fitted and the compartment calibrated, it can be securely locked and sealed in position allowing easy verification of product level within each compartment.





MANHOLE COVER SIGHTGLASS VOH700-22

The manhole cover sight-glass (VOH700-22) is a manhole mounted sight glass designed to enable visual checking of the ullage gauge and liquid level inside each compartment without opening the manhole. It has a cast aluminium body and toughened glass window with a protective cover to prevent damage and dirt build up.

HWC 304 HATCH WEATHER COVERS

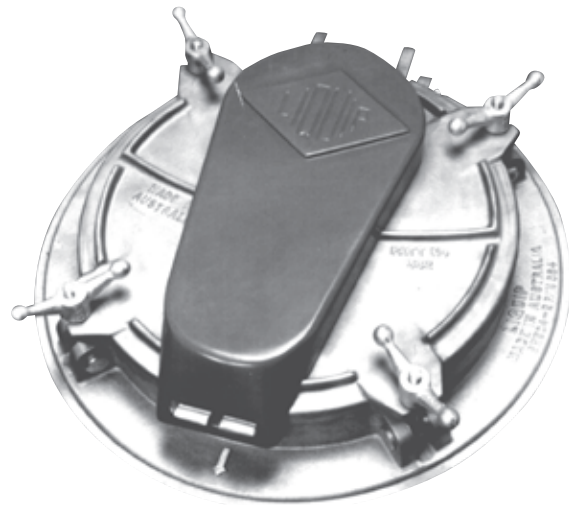
Fits SH303 swing back hatches. Provides extra protection against ingress of dust and water through vents. Simple spring clip allows for removal for maintenance, plus clip has built-in movement providing ample venting through the emergency vent should overfill occur.

OPTION AND RELATED EQUIPMENT

To fit Liquip swing-back hatches only. Stock colour green.

TECHNICAL DATA

Fibreglass cover. Stainless steel spring clip. Lifts at equivalent of 1 kPa pressure. Wt. 0.43 kg.



HATCH WEATHER COVER

The Liquip hatch cover mounts onto the manhole.

The quick release rubber clamp allows quick opening and closing of the cover.

The clamp is made of petrol-resistant neoprene.

The weather cover is an additional safeguard against the entry of water into the tank, commonly used when carrying Jet A1 or Avgas.

Fibreglass green cover.

Overall size: 495mm for round hatches

HWC301 for VOH400 Manholes

HWC700 for VOH700 Manholes

