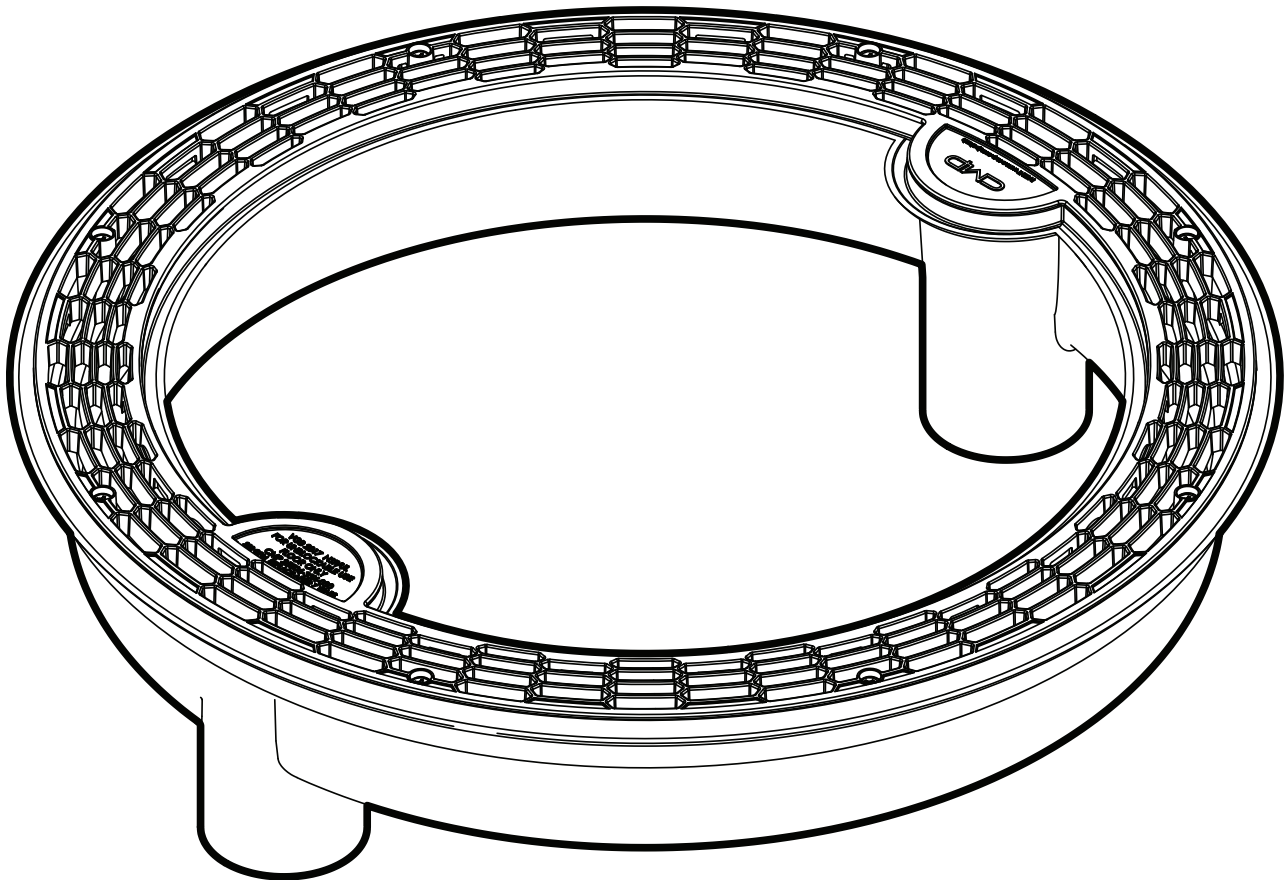




## 20" UNBLOCKABLE RING DRAIN

25506-33X-00



All Custom Molded Products main drains are listed and tested in strict accordance to the requirements of ANSI/APSP - 16 2017, the current standard of reference for the Virginia Graeme Baker Act, and compliant to the latest Consumer Product Safety Commission (CPSC) requirements.



UL Listed VGB Suction: Compliant to ANSI/APSP - 16 2017 & CPSC Requirements

Covered by one or more U.S. patents or pending patent applications. See [www.c-m-p.com/patents](http://www.c-m-p.com/patents) for details.

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*Please read through the entire manual before installing your new unit. Your pool drain fitting must be installed and operated as specified.*

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# A. SAFETY INSTRUCTIONS & PRECAUTIONS

When installing and using this equipment, basic safety precautions shall always be followed, including the following:

## IMPORTANT SAFETY INSTRUCTIONS.

### READ, UNDERSTAND AND FOLLOW ALL INSTRUCTIONS.

### ALWAYS PLUMB AND INSTALL ALL SUCTION FITTINGS ACCORDING TO ALL BUILDING CODES THAT APPLY IN YOUR AREA.



#### **WARNING**

When using two or more suction fittings on a common suction line, suction must be separated by a minimum of 3 ft or they must be located on two different planes.



#### **WARNING**

WARNING: DO NOT locate suction outlets on seating areas or on backrests for such seating areas.

#### **NOTICE**

Attention Installer: This manual contains important information about the installation, operation and safe use of this product. Before installing this product, read and follow all warning notices and instructions which are included. This information should be given to the owner and/or operator of this equipment.



#### **WARNING**

To reduce the risk of drowning from hair and body entrapment, install suction fittings with a marked flow rate in gallons per minute that exceeds the flow rate of your system by at least 25%. Always use multiple suction outlets. If the fitting/cover breaks, is damaged, or is missing, shut the system down immediately. Do not use the system until damaged parts have been replaced.

#### **NOTICE**

Keep hair and clothing a minimum of 12 inches from all suction fittings and drains at all times. Persons with long hair should secure hair to a minimal length or wear swimming cap. Children should never be left unattended at any time in a swimming pool, spa, or bathtub. Be sure the temperature of the water never exceeds the manufacturer's recommendations.

#### **NOTICE**

To reduce the risk of injury, installation and service should be done by a qualified Service Professional, certified electrician or authorized CMP representative.

#### **NOTICE**

NOTE: In the event that one suction outlet is completely blocked, the remaining suction outlet(s) serving that system MUST have a flow rating capable of the full flow of the pump(s) for the specific suction system.



#### **WARNING**

Increasing size of the pump may increase flow rate of suction beyond rated safety limits causing entrapment or death.

#### **NOTICE**

All Suction Outlet Fitting Assemblies (SOFAs) shall be installed in accordance with the manufacturer's installation instructions, or for Registered Design Professional SOFAs, in accordance with the registered design professional's engineering plans. Field modification made to a SOFA not authorized by the manufacturer's installation instructions shall void the SOFA certification.



#### **WARNING**

Hair or body parts blocking the spa or pool suction may become trapped and held against the suction fitting. Entrapment against the suction fittings can result in drowning or other severe injury. Never sit on or lean up against suction fittings. Never exceed the maximum allowable flow rate stated on the suction fitting. The suction fitting and fasteners should be inspected for damage or tampering before use. Missing, broken, or cracked suction fittings shall be replaced. Loose suction fittings shall be reattached or replaced before use of this facility.

#### **NOTICE**

The maximum hose length difference between any self-contained spa SOFA and the tee leading to the pump shall not exceed 13 feet (3.96 m).

#### **NOTICE**

CMP drain covers are only certified for use with CMP sumps and frames. Do not mismatch with parts from other manufacturers.

## SAVE THESE INSTRUCTIONS

# B. SIZING & SPECIFICATION REFERENCE

- Suction fitting-configuration specific flow ratings NOT be exceeded at any time the pool is open to bathers.
- A system must install a suction fitting, or combination of multiple suction, such that the resulting individual suction system flow rating is greater than the pumping system's maximum system flow rate.
- To reduce the risk of drowning from hair and body entrapment, install suction fittings with a marked flow rate in gallons per minute that exceeds the flow rate of your system by at least 25%. Increasing size of the pump may increase flow rate of suction beyond rated safety limits causing entrapment or death.
- Any modification that increases the flow rate of the circulation system shall require reevaluation of the cover/grate and sump to ensure that the flow rating of the Suction Outlet Fitting Assembly is not exceeded.
- The flow rating for pools with single, or multiple unblockable SOFAs shall be determined by combining the flow rating of all SOFAs piped together in one body of water.
- NOTICE: No modification shall be made to a SOFA structure or flow path unless the new configuration has been certified as new SOFA.

TABLE 1: FLOW RATES

MAX FLOW RATE: 2.5" or 2" PLUMBING	TWO PORTS: 245.6GPM  ONE PORT: 216GPM (second plugged or used as hydrostatic valve)
FLOW RATE @1.5FPS	216GPM

TABLE 2: SPECIFICATIONS

PIPE SIZE	2.5" SPIGOT / 2" SOCKET  DO NOT adapt suction fitting to any pipe size smaller than ASTM 2" SCH 40 PVC.
OPEN AREA	46.27in²
DRAIN COVER LIFE	7 Years. Replace drain cover and screws every seven years.

- Single or multiple drain use
- PVC Sump Body. Use PVC glue to attach plumbing fittings

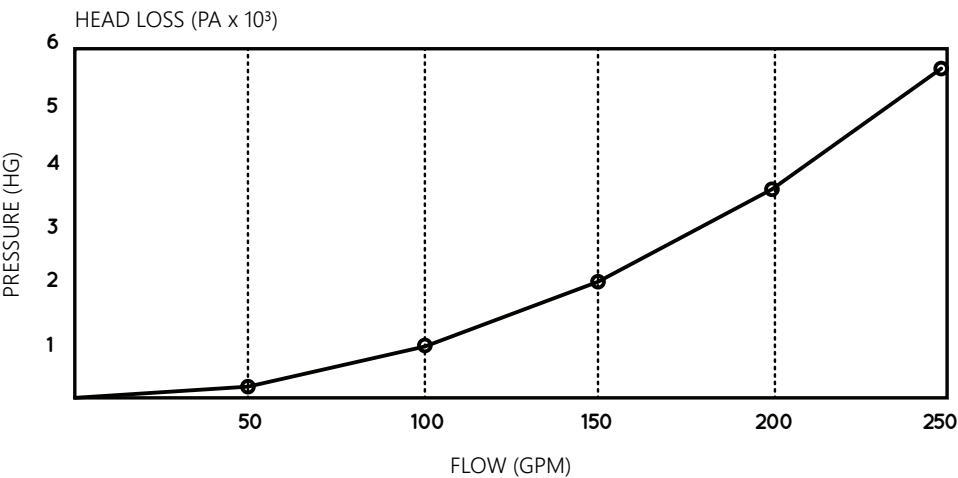


CHART 1: HEAD LOSS CHART

# C. INSTALLATION

## 1. REQUIRED FOR INSTALLATION

**Your 20" Unblockable Ring Drain includes the following:**

- Drain Sump Body
- Drain Suction Cover
- Protective Plaster Installation Cover
- Cover Screws
- 2" NPT Plugs (2)
- Optional/Not Included: Hydrostatic Relief Valve

## 2. INSTALLATION LOCATION

- This suction fitting is designed for installation on the floor or wall of concrete/gunite/shotcrete type hot tubs or pools.
- Do not mount directly under seats.

### **SAFETY CHECKLIST:**

- Suction fitting and fasteners should be observed for damage or tampering before each use.
- DO NOT adapt suction fitting to any pipe size smaller than ASTM 2.5" SCH 40 PVC.
- Missing, broken, or cracked suction fittings shall be replaced before use. Loose suction fittings shall be reattached or replaced before use.

## 3. INSTALLATION PROCEDURE

### **PLUMBING:**

- Install sump in the pool/spa floor. Install in the center of the pool/spa OR the deepest point.
- It is only necessary to run one main suction line per drain unit
- There are maximum two ports available:
  - OPTION ONE: Plumb with two ports. Connect both ports to one main suction line. Plumbing to ports must be balanced.
  - OPTION TWO: Plumb with one port and **plug** the second unused port.
  - OPTION THREE: Plumb with one port and use the second port as a hydrostatic valve port.
- Maximum flow rates will vary depending on plumbing option chosen. See Table 1 for details.

### **FINISHING:**

- IMPORTANT! Leave the protective cover in place until plaster installation is complete.
- Finish pool with gunite/shotcrete and plaster so that it is completely level with the sump body and cover. Ensure the finish is completely level. Pool finish should not exceed the top of the sump.
- Remove the protective cover.
- When any SOFA component is held in place by the interior finish of the pool, that surface shall be free of deterioration and voids.
- Attach cover/grate with the supplied screws. Verify that the suction cover is properly tightened with the #8 316 stainless steel screw (p/n 61008-042-022) in brass inserts to 20in-lbs. DO NOT over-torque the cover screw. Excessive torque can cause premature failure of threads or damage to suction fitting increasing risk of entrapment. Start install of screws by hand to ensure proper thread engagement and to prevent cross threading. DO NOT USE POWER TOOLS TO INSTALL FASTENERS.
- SOFA components and fastener receptacles shall be clean and free of debris or obstructions during installation of cover/grate and fasteners. The use of adhesives or other attachment methods that prevent access to suction piping or SOFA components requiring periodic servicing is prohibited. Hand-check cover/grate for snugness to the sump/ frame after installation.

C. INSTALLATION

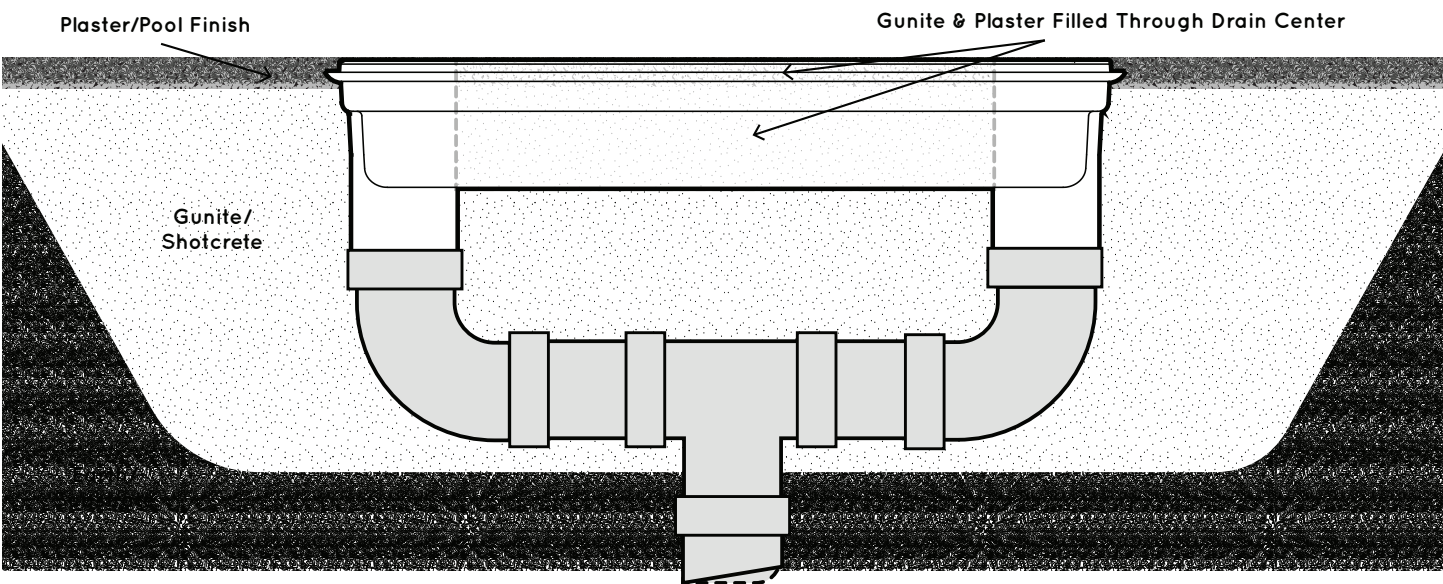


IMAGE 1 - INSTALLATION LOCATION

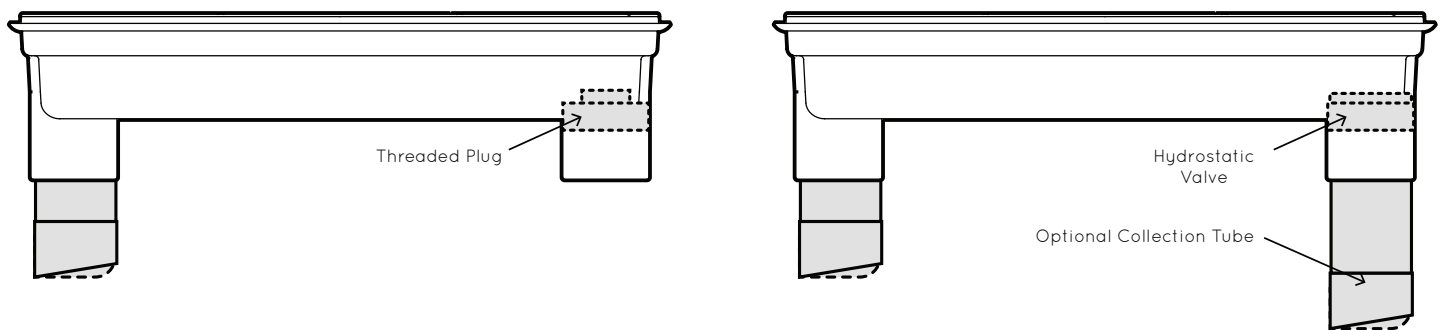


IMAGE 2 - ALTERNATE PLUMBING

# D. MAINTENANCE

## 1. INSPECTION PROCEDURE

- a. Covers/grates and all other SOFA components shall be replaced before the end of their service life. Service life begins the month and year in which a SOFA component is installed with or without water. The cover/grate and screws should be replaced at least every seven (7) years. Sump and frame service life is 30 years.
- b. Inspect pool or spa regularly to ensure that the drain cover/grate is in place and secure.
- c. Missing broken, or cracked SOFA component shall be replaced before bathers are allowed to use the spa. Loose cover/grates shall be reattached before bathers are allowed to use the pool or spa.
- d. If the cover is found with color changed, broken, cracked, missing, brittle components with chunks or pieces broken off, it must be replaced. Do not use the pool/spa/facility until a replacement is made.
- e. If there are stripped screw holes or if the brass insert receptacles are missing/removed, the SOFA must be replaced. Do not use the pool/spa/facility until a repair or replacement is made.
- f. If a drain cover/grate does not pass inspection:
  - Close the pool or spa immediately
  - Post a closure notice
  - Keep the facility closed until a new drain cover and screws are properly installed.

## 3. WINTERIZING

- Requirements for winter will vary depending on region - follow normal winter and freeze protection practices for your area.
- For areas that require partial drainage and/or clearing lines to prevent freeze damage:
  - If your suction(s) have a dedicated suction line: Use a blower to clear the suction line of water and cap or close the line with a valve to prevent freeze damage.
  - If your suction(s) are connected to a skimmer/equalizer line: Follow skimmer winterization procedures. Optionally blow and cap the suction line or fill line with foam rope/backer rod to protect from freeze damage.

# E. PART DIAGRAMS AND MEASUREMENTS

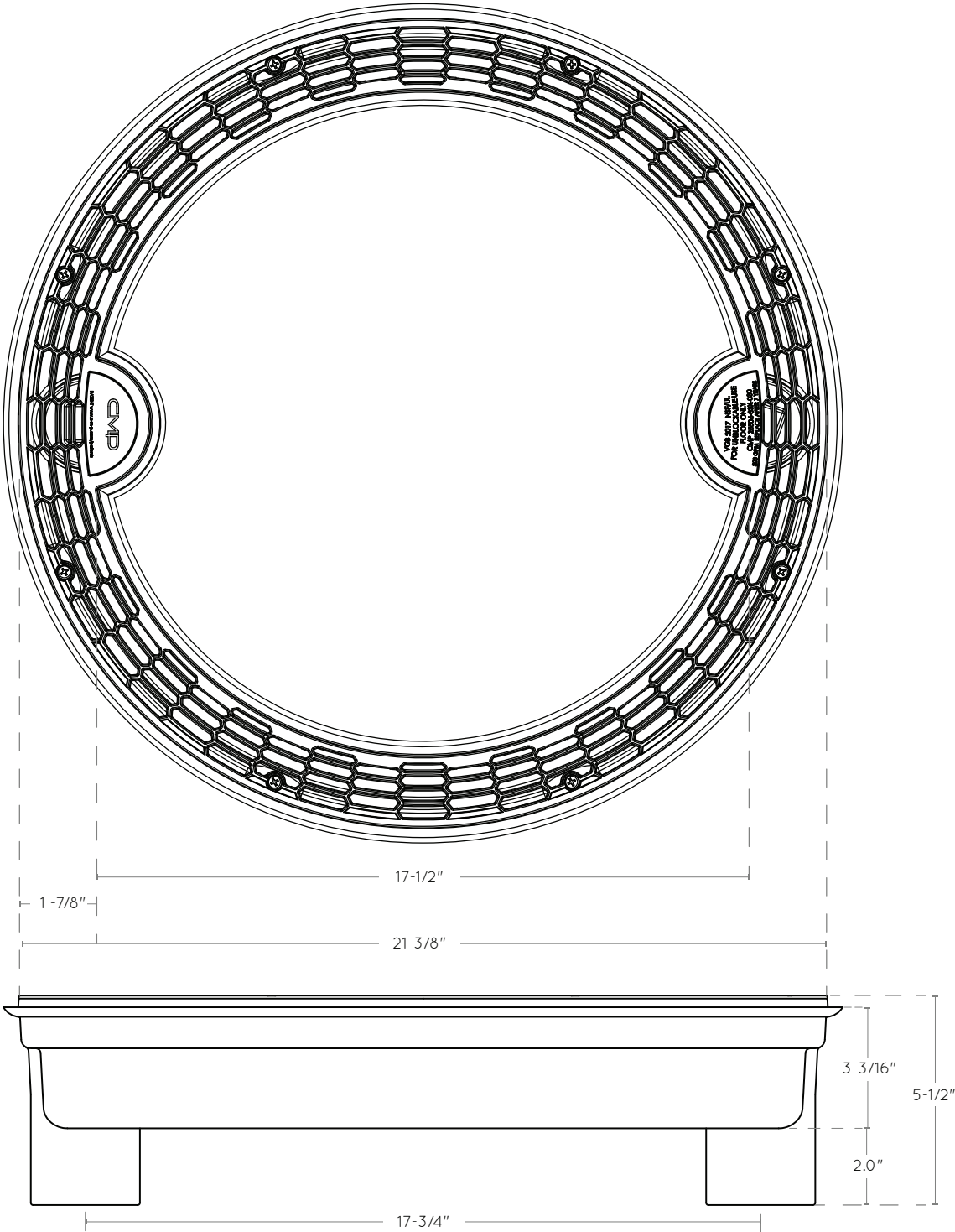
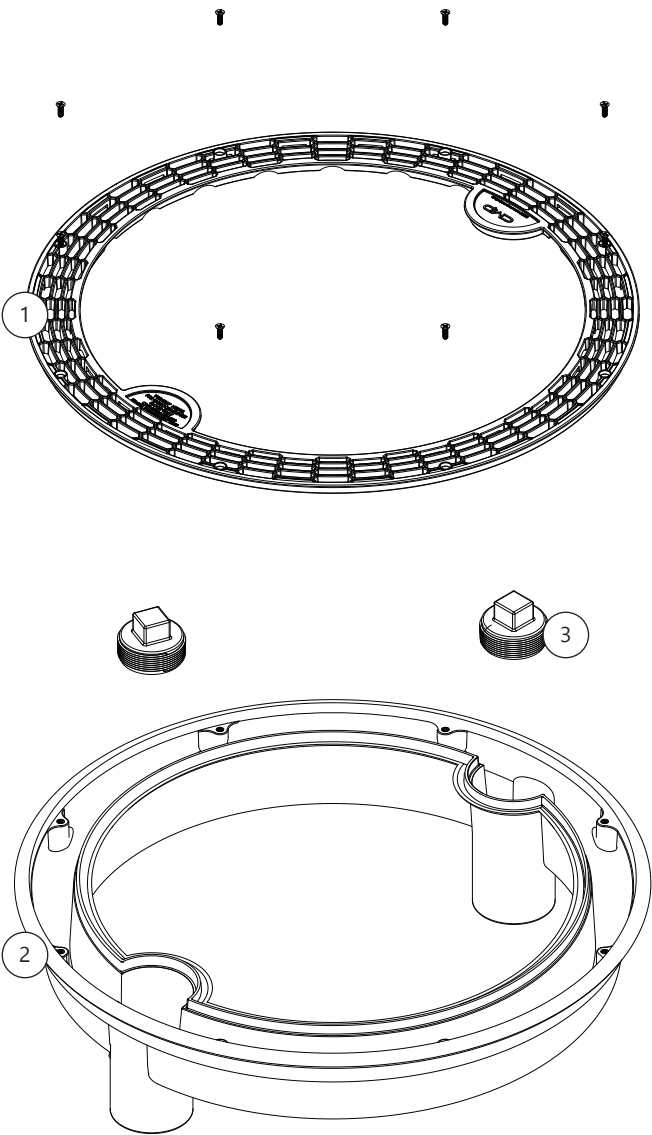


IMAGE 3 - DIMENSIONS



F. PARTS LIST



CMP P/N		DESCRIPTION
1	25506-330-000	WHITE 20" RING DRAIN COVER
2	25506-330-800	WHITE 20" RING DRAIN BODY
3	25520-050-020	2" PLUGS
—	25506-334-020	OPTIONAL HYDROSTATIC VALVE
—	—	COVER SCREWS (8)

Parts numbers not listed in product table are only available as part of a complete assembly. See [c-m-p.com](http://c-m-p.com) or pool products catalog for other color options

# SAVE THESE INSTRUCTIONS

**Record Information on this System Below & Keep for Your Records**

Installer \_\_\_\_\_

Purchased From \_\_\_\_\_

Installation Date \_\_\_\_\_

Model Number \_\_\_\_\_

Pool Size in Gallons \_\_\_\_\_

## **CMP Customer Service & Tech Support**

Toll Free: 1-800-733-9060

FAX: 770-732-7115

support@c-m-p.com

## **Warranty Questions**

RMA@c-m-p.com

## **Support Resource & Videos Online**

c-m-p.com/resourcecenter