

# Start-up/Service Instructions

for use by heating contractor

**VIESSMANN®**

Vitocell 300-H

EHA Series

Indirect-fired domestic hot water storage tank

42 to 119 USG (160 to 450 L)



## VITOCCELL® 300-H



*Product may not be exactly as shown*

### IMPORTANT

**Read and save these instructions  
for future reference.**

## Safety, Installation and Warranty Requirements

Please ensure that these instructions are read and understood before commencing installation. Failure to comply with the instructions listed below and details printed in this manual can cause product/property damage, severe personal injury, and/or loss of life. Ensure all requirements below are understood and fulfilled (including detailed information found in manual subsections).

### ■ Licensed professional heating contractor

The installation, adjustment, service and maintenance of this equipment must be performed by a licensed professional heating contractor.

► *Please see section entitled "Important Regulatory and Installation Requirements".*



### ■ Advice to owner

Once the installation work is complete, the heating contractor must familiarize the system operator/ultimate owner with all equipment, as well as safety precautions/requirements, shutdown procedure, and the need for professional service annually before the heating season begins.

### ■ Product documentation

Read all applicable documentation before commencing installation. Store documentation near product in a readily accessible location for reference in the future by service personnel.

► *For a listing of applicable literature, please see section entitled "Important Regulatory and Installation Requirements".*



### ■ Warranty

Information contained in this and related product documentation must be read and followed. Failure to do so renders the warranty null and void.



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## Important Regulatory and Installation Requirements

### Instructing the system user

The installer of the system is responsible to ensure the system operator/ultimate owner is made familiar with the system functioning, its activation, and its shut-down. The operator/ultimate owner should also be instructed to complete and mail the warranty registration form in order to be eligible for limited warranty.

### Initial start-up

Initial start-up must be performed by a qualified heating contractor. Completion of the Maintenance Record by the heating contractor is also required.

### Working on the equipment

The installation, adjustment, service, and maintenance of this equipment must be done by a licensed professional heating contractor who is qualified and experienced in the installation, service, and maintenance of hot water heating systems. There are no user serviceable parts on this equipment.

Ensure main power supply to equipment, the heating system, and all external controls has been deactivated. Close main oil or gas supply valve. Take precautions in both instances to avoid accidental activation of power during service work.

### Technical literature

Literature applicable to all aspects of the Vitocell:

- Technical Data Manual
- Installation Instructions
- Start-up/Service Instructions
- Operating Instructions and User's Information Manual

### ►The following topics must be covered:

Proper system operation sequence.

Explain the equipment as well as the need for combustion air. Demonstrate an emergency shut-down, what to do and what not.

Explain that there is no substitute for proper maintenance to help ensure safe operation.

### ►The Maintenance Record is located on page 10 of this manual.

### ►Please carefully read this manual prior to attempting installation. Any warranty is null and void if these instructions are not followed.

This product must be installed observing not only the information and instructions provided in the pertinent product literature (see list below), but also all local, provincial/state plumbing and building codes as they apply to this product and all periphery equipment

For information regarding other Viessmann System Technology componentry, please reference documentation of the respective product.

We offer frequent installation and service seminars to familiarize our partners with our products. Please inquire.

### ►The completeness and functionality of field supplied electrical controls and components must be verified by the heating contractor. These include low-water cut-offs, flow switches (if used), staging controls, pumps, motorized valves, air vents, thermostats, temperature controls, etc.

### ►Leave all literature at the installation site and advise the system operator/ultimate owner where the literature can be found. Contact Viessmann for additional copies.

## About These Instructions



Take note of all symbols and notations intended to draw attention to potential hazards or important product information. These include "WARNING", "CAUTION", and "IMPORTANT". See below.



### WARNING

Indicates an imminently hazardous situation which, if not avoided, could result in substantial product/property damage, serious injury or loss of life.

► Warnings draw your attention to the presence of potential hazards or important product information.



### CAUTION

Indicates an imminently hazardous situation which, if not avoided, may result in minor injury or product/property damage.

► Cautions draw your attention to the presence of potential hazards or important product information.

### IMPORTANT

► Helpful hints for installation, operation or maintenance which pertain to the product.



► This symbol indicates that additional, pertinent information is to be found.



► This symbol indicates that other instructions must be referenced.

## Necessary Tools



### CAUTION

Never use a metal brush to clean tank interior or heat exchanger - only plastic material may be used.

#### Special Items

- Torque wrench

#### Cleaning supplies

- High pressure washer
- Chemical cleaning liquid
- Cleaning cloth

#### Parts

- Gasket for inspection opening

## Initial Start-up

### IMPORTANT

Tightening the inspection and clean-out opening is not necessary.

### IMPORTANT

Use hemp and pipe dope on all threaded stainless steel nipples on tank.



For initial start-up of the tank, see Operating Instructions and User's Information Manual of tank.

1. Fill tank with domestic potable water.
2. Check heating side and domestic water side adaptors for leaks. Tighten if necessary.
3. Check sensor well for leaks. Tighten if necessary.
4. Verify proper operation of temperature and pressure relief valve (T&P valve).

## Service



### WARNING

Water being drained may be hot!

Inspection and (if necessary) cleaning of tank must take place within 2 years of initial start-up and as required thereafter.

#### Shut down heating system

Ensure main power supply to equipment, the heating system, and all external controls has been deactivated.

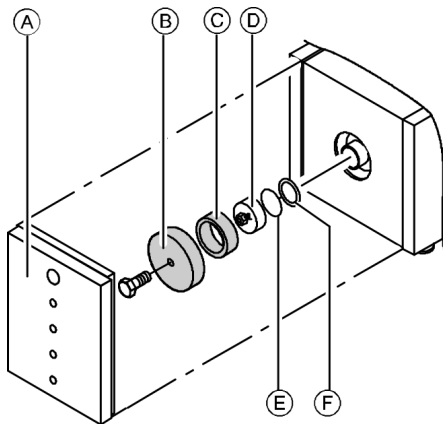
Take precautions in all instances to avoid accidental activation.

#### Check all connections

- Check heating side and domestic water side adaptors for leaks. Tighten if necessary.
- Check sensor well for leaks. Tighten if necessary.

#### Ensure proper operation of all safety devices

Verify proper operation of temperature and pressure relief valve (T&P valve).

**Service** (continued)**CAUTION**

Never use a metal brush to clean tank interior or heat exchanger - only plastic material may be used.

**WARNING**

Never use any cleaners containing muriatic acid. Follow the manufacturer's instructions and warnings when utilizing chemical cleaners for deliming and cleaning devices. Solutions used for cleaning stainless steel equipment in food processing are usually suitable.

**IMPORTANT**

The Maintenance Record is found on page 12 of this manual.

**Clean inside of tank**

1. Drain domestic water from DHW tank.
2. Remove front panel (A), insulation (B), insulation ring (C), and thermometer sensor.
3. Remove cover (D), stainless steel dome (E), and seal (F).
4. To prevent chemicals from entering piping, disconnect tank from domestic cold water piping system via adaptor.
5. Remove loose build-ups with a pressure washer.
6. Remove stubborn build-ups which are resistant to the pressure washer with chemical cleaner.
7. Rinse interior of tank thoroughly after use of chemical cleaners.
8. Reconnect tank to domestic water piping.
9. Replace seal (F) inside tank cap (D) with a new seal every time tank is opened.
10. Install stainless steel ring (E) and tank cap with a torque of 118 lb.ft (160 Nm)
11. Fill tank with domestic cold potable water.
12. Install insulation ring (C), insulation (B), thermometer sensor and front panel (A).
13. Record the completion of these service procedures in the Maintenance Record. The Maintenance Record is found on page 12 of this manual.

**Place system in operation again**

Ensure main power supply to equipment, the heating system, and all external controls is reactivated.

**Shut-down**

In the event that the building is unoccupied and not heated and the danger of frost within the structure exists, the tank as well as the heat exchanger coil must be drained. In case the heating system is filled with an antifreeze (which must be of non-toxic composition), only the tank must be drained of domestic water, and all valves in the domestic hot water and domestic cold water piping except for the main fill valve must remain open. Ensure the DHW recirculation pump is deactivated if applicable).

## Recovery

### Recovery rates of an individual tank

#### Heat-up time

The stated heating times are achieved when the maximum recovery rate of the domestic hot water tank is made available at the respective supply temperature and with a domestic hot water rise from 50 to 140°F (10 to 60°C).

| Storage Capacity                 | USG<br>(L) | 42<br>(160)            | 53<br>200 | 92<br>350 | 119<br>450 |
|----------------------------------|------------|------------------------|-----------|-----------|------------|
| Heating water supply temperature |            | Heat-up time (minutes) |           |           |            |
| 194°F (90°C)                     |            | 19                     | 18        | 15        | 20         |
| 176°F (80°C)                     |            | 26                     | 25        | 20        | 26         |
| 158°F (70°C)                     |            | 34                     | 32        | 31        | 40         |

### Recovery rates of a multiple tank installation

#### Max. domestic hot water draw rate (over 10-minute period)

Domestic hot water rise from 50 to 113°F (10 to 45°C)

| Battery Storage Capacity         | USG<br>(L)       | 184<br>(700)   | 238<br>(1000) | 357<br>(1500) |
|----------------------------------|------------------|----------------|---------------|---------------|
| Heating water supply temperature |                  | Max. draw rate |               |               |
| 194°F (90°C)                     | USGPM<br>(L/min) | 21.9<br>(83)   | 31.7<br>(120) | 43.3<br>(164) |
| 176°F (80°C)                     | USGPM<br>(L/min) | 21.9<br>(83)   | 30.1<br>(114) | 40.7<br>(154) |
| 158°F (70°C)                     | USGPM<br>(L/min) | 20.3<br>(77)   | 27.7<br>(105) | 37.8<br>(143) |

**EHA Series, 42 and 53 USG (160 and 200 L)**

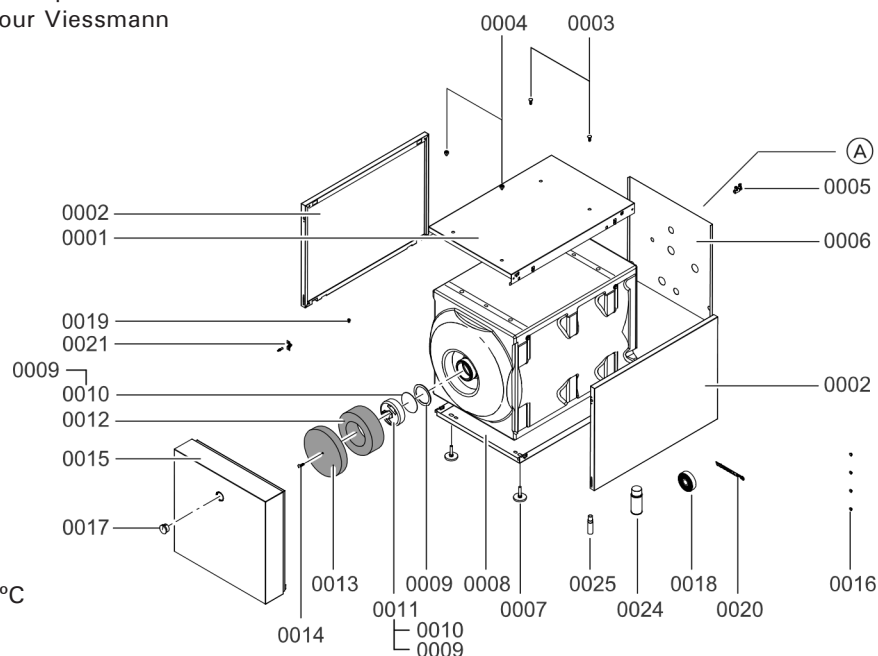
|                    |                   |
|--------------------|-------------------|
| <b>Model No.</b>   | <b>Serial No.</b> |
| 42 USG (160 L) EHA | 7537408□□□□□□□□   |
| 53 USG (200 L) EHA | 7537409□□□□□□□□   |

**Ordering Replacement Parts:**

Please provide tank Model and Serial Number from rating plate (A) when ordering replacement parts.  
Order replacement components from your Viessmann distributor.

**Parts for Tank Assembly**

- 0001 Top panel
- 0002 Side panel (left/right)
- 0003 Panel plug (set of 6)
- 0004 Positioning plugs (set of 2)
- 0005 Sensor clamp
- 0006 Rear panel
- 0007 Leveling bolt (each)
- 0008 Base panel
- 0009 Gasket, 115 x 92 x 3 mm
- 0010 Dome cover 4"
- 0011 Tank cleanout cover, 110 mm
- 0012 Insulation ring
- 0013 Insulation for cover
- 0014 Panel plug with lamallae
- 0015 Front panel
- 0016 Panel cap
- 0017 Accessory pack, thermometer °F / °C
- 0018 Decorative stripe
- 0019 Spring clip
- 0020 Nameplate
- 0021 Accessory pack,  
front panel hardware (set of 2)
- 0024 Touch-up spray paint, silver
- 0025 Touch-up paint stick, silver

**Other Parts (not illustrated)**

- 0100 Installation Set \* 1
- 0101 Tee, 3/4" brass, lead-free
- 0102 Reduction coupling, 1-1/2" lead-free
- 0103 T & P valve, 150 psi lead-free
- 0104 Sensor well, 1/2" x 400 mm
- 0110 Technical Literature Set
- 0120 Installation Instructions
- 0121 Service Instructions
- 0122 Operating Instructions
- 0123 Parts List, Vitocell 300 EHA
- 0124 Parts List, Installation Set
- 0125 Warranty Sheet

\* 1 For Installation Set  
please see separate Parts List.

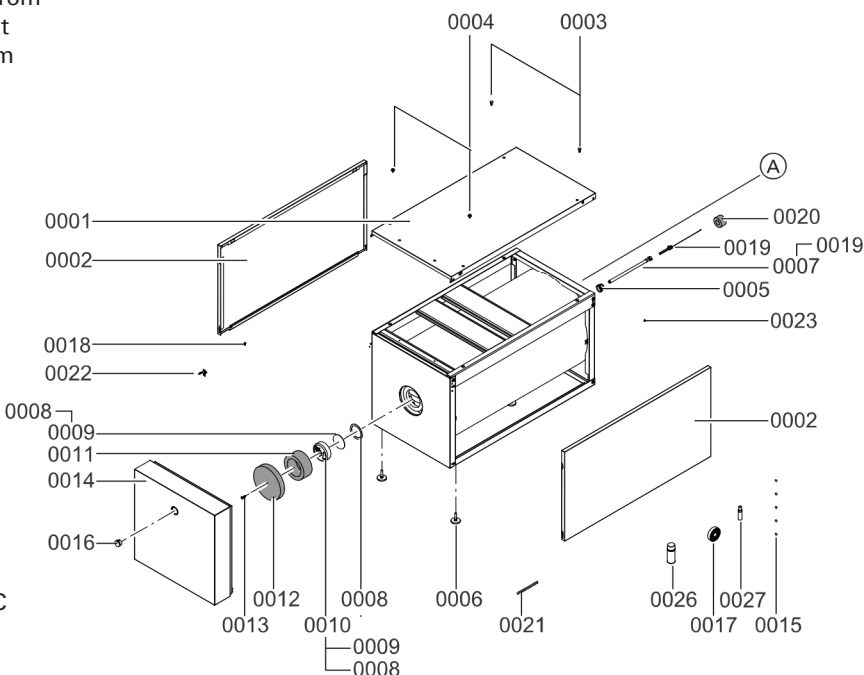
**Model No.** 92 USG (350 L) EHA **Serial No.** 7537410□□□□□□□□

Please provide Model and Serial Number from rating plate (A) when ordering replacement parts. Order replacement components from your Viessmann distributor.

- 0001 Top panel
- 0002 Side panel (left/right)
- 0003 Panel plug
- 0004 Positioning plugs (set of 2)
- 0005 Coupling, brass reduction 1 ¼" – ½"
- 0006 Leveling bolt (each)
- 0007 Sensor well, ½" x 400 mm
- 0008 Gasket, 115 x 92 x 3 mm
- 0009 Dome cover, 110 mm
- 0010 Tank cleanout cap, 4"
- 0011 Insulation ring
- 0012 Insulation for cover
- 0013 Panel plug with lamallae
- 0014 Front panel
- 0015 Panel cap (set of 5)
- 0016 Accessory pack, thermometer °F/°C
- 0017 Decorative stripe
- 0018 Spring clip
- 0019 Sensor mounting hardware
- 0020 Insulation for tank sensor well
- 0021 Nameplate
- 0022 Accessory pack,  
front panel hardware (set of 2)
- 0023 Protective plug
- 0026 Touch-up spray paint, silver
- 0027 Touch-up paint stick, silver

0100 Installation Set \*1  
0101 Reduction coupling, 1 x ¾" lead-free  
0102 T & P valve, 150 psi lead-free  
0110 Technical Literature Set  
0120 Installation Instructions  
0121 Service Instructions  
0122 Operating Instructions  
0123 Parts List, Vitocell 300 EHA  
0124 Parts List, Installation Set  
0125 Warranty Sheet

\* 1 For Installation Set  
please see separate Parts List.



**EHA Series, 119 USG (450 L)**

**Model No.** 119 USG (450 L) EHA      **Serial No.** 7537411□□□□□□□□

**Ordering Replacement Parts:**

Please provide Model and Serial Number from rating plate (A) when ordering replacement parts. Order replacement components from your Viessmann distributor.

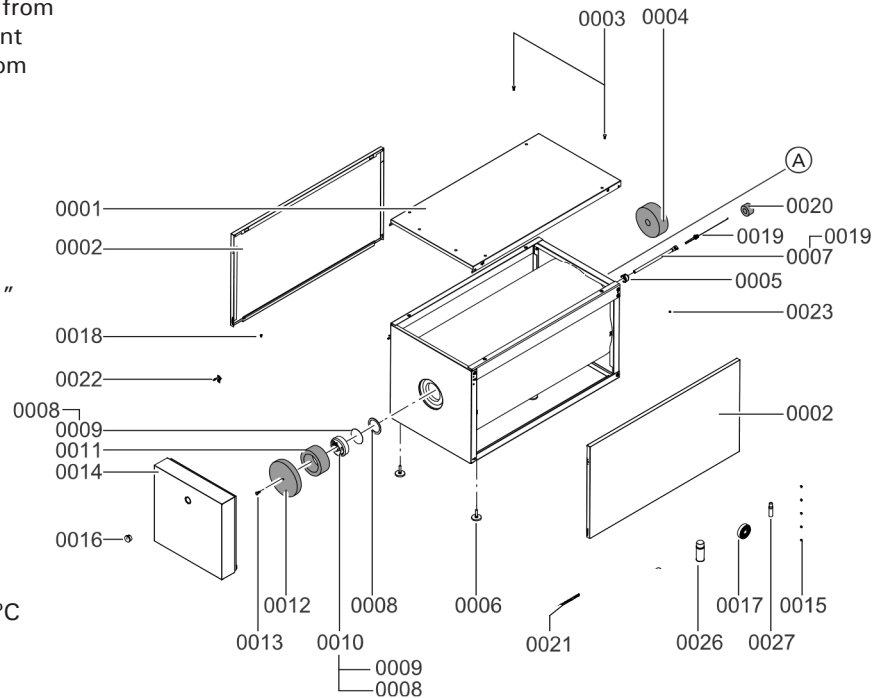
**Parts for Tank Assembly**

- 0001 Top panel
- 0002 Side panel (left/right)
- 0003 Panel plug
- 0004 Insulation
- 0005 Coupling, brass reduction 1 ¼" – ½"
- 0006 Leveling bolt (each)
- 0007 Sensor well, ½" x 400 mm
- 0008 Gasket, 115 x 92 x 3 mm
- 0009 Dome cover, 110 mm
- 0010 Tank cleanout cap, 4"
- 0011 Insulation ring
- 0012 Insulation
- 0013 Panel plug with lamallae
- 0014 Front panel
- 0015 Panel cap (set of 5)
- 0016 Accessory pack, thermometer °F/°C
- 0017 Decorative stripe
- 0018 Spring clip
- 0019 Sensor mounting hardware
- 0020 Insulation, tank sensor well
- 0021 Nameplate
- 0022 Accessory pack, front panel hardware (set of 2)
- 0023 Protective plug
- 0026 Touch-up spray paint, silver
- 0027 Touch-up paint stick, silver

**Other Parts (not illustrated)**

- 0100 Installation Set \*1
- 0101 Reduction coupling, 1 ¼ x ¾" lead-free
- 0102 T & P valve, 150 psi lead-free
- 0110 Technical Literature Set
- 0120 Installation Instructions
- 0121 Service Instructions
- 0122 Operating Instructions
- 0123 Parts List, Vitocell 300 EHA
- 0124 Parts List, Installation Set
- 0125 Warranty Sheet

\*1 For Installation Set  
please see separate Parts List.



Maintenance Record

|       |          |                     |                     |                     |                     |
|-------|----------|---------------------|---------------------|---------------------|---------------------|
|       | Start-up | Maintenance/Service | Maintenance/Service | Maintenance/Service | Maintenance/Service |
| date: |          |                     |                     |                     |                     |
| by:   |          |                     |                     |                     |                     |

|       |  |                     |                     |                     |                     |
|-------|--|---------------------|---------------------|---------------------|---------------------|
|       |  | Maintenance/Service | Maintenance/Service | Maintenance/Service | Maintenance/Service |
| date: |  |                     |                     |                     |                     |
| by:   |  |                     |                     |                     |                     |

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Technical information subject to change without notice.