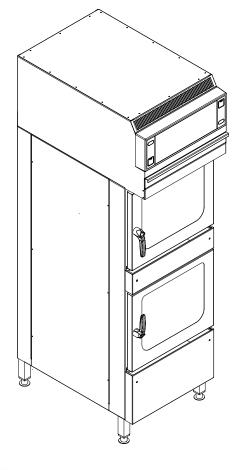


Read the operating instructions prior to commissioning

# FlexFusion® ELECTRIC SPACE\$AVER PLUS TEAM





FM08-639-B • 12/13/2018

FM08-639-B

en-US

# Installation manual

Model

FSDE**610** 



Henny Penny Corporation P.O.Box 60 Eaton,OH 45320 USA

Phone +1 937 456-8400 Fax +1 937 456-8402

Toll free in USA Phone +1 937 417-8417 Fax +1 937 417-8434

www.hennypenny.com



1 Introduction	. 5
1.1 About this manual	5
1.1.1 Explanation of signs	
1.2 Personnel qualifications	7
1.3 Use of the unit	7
1.4 Warranty	7
2 Safety instructions	. 8
3 Description of the unit	10
3.1 Overview of the unit	
3.2 Unit and connection data	10
A Transporting the unit	16
4 Transporting the unit	
4.1 Transporting the unit to the installation site	
4.2 Unpacking the unit	10
5 Installing the unit	18
5.1 Minimum clearances	
5.2 Lifting the unit off the pallet	19
5.3 Installing the unit on the unit legs	
5.4 Aligning the unit	
5.5 Inspecting the recirculation hood filter	
5.6 Fastening the unit to the floor	
5.6.1 Securing the unit to prevent tipping	20
6 Connecting the unit	24
6.1 Opening and closing the housing	24
6.1.1 Removing and attaching the rear panel	24
6.2 Making the electrical connection	
6.2.1 Connecting the electrical connection line	
6.2.2 Connecting the power optimization system	
6.2.3 Connecting the potential equalization	
6.3 Connecting the kitchen guiding system	
<ul><li>6.4 Performing the basic setting of the control</li><li>6.4.1 Changing the basic setting of the control</li></ul>	
6.5 Making the water connection	
6.5.1 Connecting the drinking water connection line	
6.5.2 Connecting softened drinking water to both connections	
<ul><li>6.6 Making the waste water connection</li><li>6.6.1 Connecting the waste water line to a permanent connection</li></ul>	
7 Testing the function	36
7.1 Inspecting the recirculation hood	
7.2 Checking the controls	

7.3 Checking the inspection of the cooking chamber door	36
7.4 Heating and rinsing the unit	37
8 Putting the unit into service	38
8.1 Nameplate	38
8.2 Filling out the Start-up operation report	38



# **1** Introduction

### 1.1 About this manual

The installation instructions are part of the unit and contain information on safe installation of the unit.

Observe the following notes and adhere to them:

- Read the installation instructions completely prior to installation.
- Make the installation instructions available to the installation fitter at the operating site at all times.
- Preserve the installation instructions throughout the service life of the unit.
- Insert any additions from the manufacturer.
- Pass on the installation instructions to any subsequent operator of the unit.
- Target groupThe target group of the installation instructions is trained qualified<br/>personnel that is familiar with installing and operating the unit.
  - **Figures** All figures in this manual are intended as examples. Discrepancies can arise between this and the actual unit.



# 1.1.1 Explanation of signs

	Imminent danger		
	Failure to comply will lead to death or very severe injuries.		
	Potential danger		
	Failure to comply can lead to death or v	very severe injuries.	
	Dangerous situation		
	Failure to comply can lead do slight to r	noderately severe injuries.	
NOTICE	Property damage		
	Failure to comply can cause property damage.		
INFORMATION	Information		
	Notes for better understanding and operation of the unit.		
	Symbol / sign	Meaning	
	•	Listing of information.	
	$\rightarrow$	Action steps which can be performed in any sequence.	
	1.	Action steps which must be performed in the specified sequence.	
	2.		
	Result of an action performed or additional information relating to it.		



#### **1.2 Personnel qualifications**

#### **Explanation of qualification**

Skilled personnel	• A skilled person is someone who, on the basis of their technical training, knowledge and experience as well as familiarity with the applicable standards, can assess the assigned work and recognize pos- sible dangers.
-------------------	--

Type of activity	Qualification
Electrical connection	<ul><li>Electrician</li><li>Specialized training</li><li>Employee of the responsible technical company</li></ul>
Water connection	<ul> <li>Water specialist</li> <li>Specialized training</li> <li>Employee of the responsible technical company</li> </ul>
Waste water connection	<ul> <li>Waste water specialist</li> <li>Specialized training</li> <li>Employee of the responsible technical company</li> </ul>

#### 1.3 Use of the unit

This unit is intended to be used solely for commercial purposes, particularly in commercial kitchens.

#### 1.4 Warranty

The warranty is void and safety is no longer assured in the event of:

- · Improper conversion or technical modifications of the unit,
- Improper use,
- Improper startup, operation or maintenance of the unit,
- Problems resulting from failure to observe these instructions.



# 2 Safety instructions

	The unit complies with applicable safety standards. Residual risks associated with operation or risks resulting from incorrect operation cannot be ruled out and are mentioned specifically in the safety instructions and warnings.		
	The installation fitter must be familiar with regional regulations and observe them.		
	The installation fitter must observe the safety instructions in these installation instructions and in the "Safety information" chapter of the operating instructions.		
<b>.</b>	Observe applicable international, European and national laws, regulations, standards and directives for the unit when transporting, setting up and connecting it.		
Improper installation	Risk of property damage and personal injury from improper installation		
	Install the unit only as specified in these installation instructions.		
	<ul> <li>Do not add anything to the unit or modify the unit.</li> </ul>		
	Use only original spare parts.		
Transportation and storage	e Risk of personal injury and property damage from improper transportation and improper storage		
	• Store the unit in a dry, frost-free environment.		
	<ul> <li>Observe the safety regulations for the lifting gear used.</li> </ul>		
	<ul> <li>Attach the unit to the lifting gear securely during transport and installation, and prevent it from dropping.</li> </ul>		
	• Transport the unit in an upright position, do not tilt or stack.		
	<ul> <li>Pay attention to protruding parts when transporting the unit without packaging.</li> </ul>		
Fire prevention	Risk of fire from combustible surfaces		
	Observe general fire prevention regulations.		
Organizational measures	Risk of property damage and personal injury from lack of organizational measures		
	• Identify danger zones when transporting, installing and connecting the unit.		
	<ul> <li>Prior to starting the installation tasks, notify any operator present about the procedure.</li> </ul>		
	<ul> <li>Prior to starting the installation task, discuss how to behave in an emergency.</li> </ul>		
	Use equipment and protective gear suitable for the activity.		
	<ul> <li>Brace housing components to prevent them from falling over and dropping.</li> </ul>		

FM08-639-B

# Installation Risk of property damage and personal injury from improper installation

- Ensure that the installation area has adequate load-bearing capacity.
- · Wear safety shoes and protective gloves.

#### Electrical connection Risk of fire from improper connection

- Observe applicable regional regulations of the electric supplier.
- Ensure that only electricians licensed by the electric supplier connect the unit.
- Ensure that the electrical system is earthed by a protective earthing conductor.
- Note the information on the nameplate.

#### Danger of electric shock from live components.

- Prior to working on the electrical system, switch off the unit, disconnect the electrical system from the mains and prevent power from being switched on again. Check to ensure the system is dead.
- Use only insulated tools.

# Commissioning Risk of property damage and personal injury from improper commissioning

- Read the operating instructions prior to commissioning. Observe the safety instructions in these installation instructions and in the "Safety information" chapter of the operating instructions.
- Only put the unit into service after a successful function test in its assembled state.
- Put the unit into service only after it has reached room temperature.
- Observe the units during operation.



# **3 Description of the unit**

### 3.1 Overview of the unit

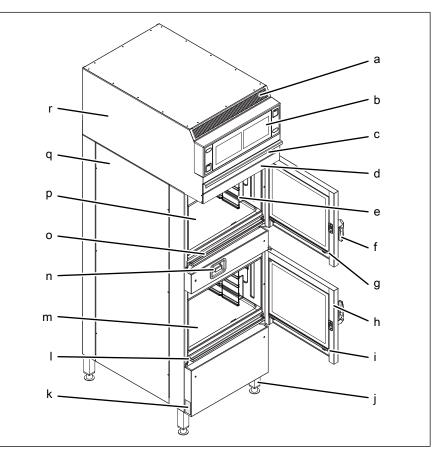


Image: Floor-standing unit

- a Air outlet
- b Operating unit
- c Filter drawer
- d Condensate baffle
- e Hang-in frame
- f Door handle
- g Discharge channel for top door
- h Cooking chamber door
- i Discharge channel for bottom door

- j Unit leg
- k Nameplate
- I Discharge channel for bottom unit
- m Cooking chamber in bottom unit
- n Hand shower (optional)
- o Discharge channel for top unit
- p Cooking chamber in top unit
- q Housing
- r Recirculation hood

### 3.2 Unit and connection data

610		
550 (21,65) x 880 (34,65) x 1908 (75,12)		
Weight		
220 (485,1)		



FM08-639-B

Size	610			
Emissions				
Heat dissipation at a connected load of 400 V				
Latent heat (W)	2808			
Sensible heat dissipation (W)	1872			
Noise level (db(A))	< 65			
Operating environment				
Temperature (°C (°F))	5 (41 ) — 40 (104 )			
Relative air moisture (%) non-condensing	95			
Electrical connection				
Protection class	IPX5			
Connection terminal (mm² (sqin))	6 (0,0093)			
Connection line	One connection line	Two connection lines		
		Information per connection line		
Type of connection	3PE AC 50/60 Hz, 3NPE AC 50/60 Hz	-		
Voltage (V)	200			
Connected load (kW)	14	7		
Fuse (A)	50	25		
Voltage (V)	208			
Connected load (kW)	14.8	7.4		
Fuse (A)	50	25		
Voltage (V)	220			
Connected load (kW)	16.8	8.4		
Fuse (A)	50	25		
Voltage (V)	230			
Connected load (kW)	18.2 9.1			
Fuse (A)	50 25			
Voltage (V)	240			
Connected load (kW)	19.6 9.8			
Fuse (A)	50 25			
Voltage (V)	380			
Connected load (kW)	14.8	7.4		
Fuse (A)	25 16			
Voltage (V)	400	400		
Connected load (kW)	15.6 7.8			
Fuse (A)	25	16		
Voltage (V)	415			
Connected load (kW)	16.2	8.1		

Size	610			
Fuse (A)	25 16			
Voltage (V)	440			
Connected load (kW)	15.8 7.9			
Fuse (A)	25 16			
Type of connection	2PE AC 50/60 Hz			
Voltage (V)	208			
Connected load (kW)	10.6	5.3		
Fuse (A)	63	35		
Voltage (V)	240			
Connected load (kW)	13.8	6.9		
Fuse (A)	63	35		
Type of connection	1NPE AC 50/60 Hz			
Voltage (V)	220			
Connected load (kW)	11.6	5.8		
Fuse (A)	63	35		
Voltage (V)	230			
Connected load (kW)	12.8	6.4		
Fuse (A)	63	35		
Voltage (V)	240			
Connected load (kW)	13.8	6.9		
Fuse (A)	63	35		
Power optimization system				
Connection terminal (mm² (sqin))	2,5 (0,0039)			
Softened drinking water connect	tion			
Type of water	Softened drinking water, cold			
Carbonate hardness CaCO <sub>3</sub> (mmol/l (ppm))	< 0,9 (90 ppm)			
Chloride CI (mg/l)	< 100			
Iron Fe (mg/l)	< 0.2			
Connection pressure (kPa (psi))	200 (29) — 600 (87)			
Connection (")	R 3/4 male thread			
Drinking water connection				
Type of water	Drinking water, cold			
Carbonate hardness CaCO <sub>3</sub> (mmol/l (ppm))	< 4 (400 ppm)			
Connection pressure (kPa (psi))	200 (29) — 600 (87)			
Connection (")	R 3/4 male thread			
Water consumption for steaming *				

Size	610			
Softened drinking water (l/h (gal/h))	20 (5,28)			
Water consumption for Combis	teaming *			
Softened drinking water (l/h (gal/h))	4,4 (1,16)			
Water consumption for WaveCl	ean cleaning program *			
Softened drinking water (I (gal))	2,5 l (0,66)			
Drinking water (I (gal))	35 I (9,25)			
Waste water connection				
Waste water type	Dirty water			
Maximum length (m (ft))	1 (3,3) with a drop of at least 5 % or 3°			
Temperature-resistant to (°C (°F))	95 (203 )			
Connection (mm (in))	50 (1,97)			
Maximum flow rate (l/min (gal/ min))	10 (2,64)			
* Applies to both cooking chambe	rs together			

#### Fastening to the floor

Absolutely essential for the following unit types		
TKECOD610	Only for unit on casters	

#### Basic setting of the control

Basic setting	Parameter s	Standard value	Range of adjustment	Explanation
Supply voltage	14	400	100 — 500 V	Enter the local, mean voltage between the line conductors.
Date / time			yyyy - mm - dd	Year - Month - Day
			hh : mm	Hour : Minute
Altitude	2	0 — 999	0 — 999 m (3277 ft)	Request the altitude above sea level from the local weather station. If the altitude is unknown, enter 0 — 999 m (3277 ft).
			1000 m (3280 ft) — 1999 m (6557 ft)	
			2000 m (6560 ft) — 2499 m (8197 ft)	
			2500 m (8200 ft) or higher	
Volume of audible signal		Medium	Individual	Sets the volume.
Temperature unit	1	°C	°C	Celsius (°C)
setting			°F	Fahrenheit (°F)

#### Description of the unit

Basic setting	Parameter s	Standard value	Range of adjustment	Explanation	
Volume unit	34	ml	(ml)	Milliliter (ml)	
			(fl.oz.)	Fluid ounce (fl.oz.)	
	35	Imperial	Imperial (fl.oz.)	Imperial fluid ounces	
		(fl.oz.)	U.S. (fl.oz.)	U.S. fluid ounces	
Water filter maintenance	44	0	0 — 99900 I (26393,66 gal)	Water quantity up to the maintenance message.	
				0 = No maintenance message	
Network		DHCP	Network address and DHCP	Select and set interface.	
Kitchen control	652	Disabled	0 = Disabled	Indicates whether the kitchen guiding	
technology			1 = Active	system is in use.	
	659	Ethernet	0 = Ethernet	Type of signal transmission (interface)	
			1 = Serial		
	653	1188	0 — 65535	TCP port setting	
	654	254	0 — 254	Unit address	
80 % power	3	100	80 %	Power can be limited to 80 % (for special applications).	
			100 %		
Power optimization	42	Off	On	If a power optimization system is	
system			Off	connected, "On" must be selected for the unit to heat.	
Settings parameters				<ol> <li>Set parameters via the roller.</li> <li>Tap the "Read" button to display the set values.</li> <li>Specify another value via the button panel.</li> <li>Press the "Write" button to save the new value.</li> </ol>	

# Basic setting of control (Advanced)

Basic setting	Parameter s	Standard value	Range of adjustment	Explanation
Condensation-hood after-running time	5	60	0 – 600 s	Time extension for the condensation hood, after the cooking chamber door has been opened
Generator mode	45	0	0 = No	When a generator is used to supply
			1 = Yes	electricity
Steam elimination	48	1	0 = Low	Sets the steam elimination level
			1 = Normal	
			2 = High	
Time format	675	0	0 = 24 h	Set the 12-h or 24-h time format
			1 = 12 h	

Basic setting	Parameter s	Standard value	Range of adjustment	Explanation
Format for cooking	676	0	0 = hh:mm	Display format for cooking program times
program times			1 = mm:ss	
			2 = automatic	



# 4 Transporting the unit

	<ul><li>Risk of property damage and personnel injury from tipping unit</li><li>Stay clear of lifted unit.</li><li>Move lifted unit carefully.</li></ul>
NOTICE	<ul> <li>Risk of property damage from improper transport</li> <li>Transport the unit upright.</li> <li>Do not tilt or stack the unit.</li> <li>Pay attention to protruding parts when transporting the unpacked unit.</li> </ul>
	Prior to transporting the unit to the installation site, ensure that:

- The roadway has adequate load-bearing capacity.
- Wall openings are large enough.

# 4.1 Transporting the unit to the installation site

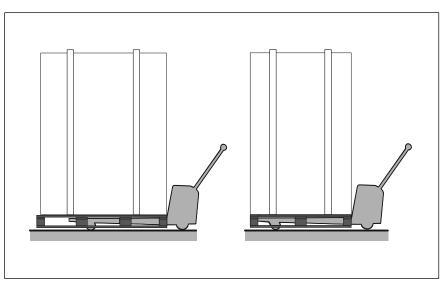


Image: Lengthwise and crosswise transport on pallet

 $\rightarrow$  Use suitable transport means to move unit to its installation site.

# 4.2 Unpacking the unit

	<ul><li>Risk of injury from sharp edges</li><li>Wear protective gloves.</li></ul>	
INFORMATION	When unpacking the unit, inspect it for transport damage. Do not install damaged units or put into service.	

HENNY PENNY Engineered to Last

- 1. Remove the packaging.
- 2. Pull the protective film off the unit.
- 3. Remove all packaging material from the cooking chamber.
- 4. Clean the unit (See Operating instructions).
- 5. Enter the information from the nameplate into the Start-up operation report.
- 6. Enter the information from the nameplate into the Operating instructions.



# 5 Installing the unit

	<ul><li>Risk of crushing from improper installation</li><li>Protect the unit and work area during installation and alignment.</li></ul>
	Risk of fire from failure to observe applicable regional fire preven- tion regulations
	Observe applicable regional fire prevention regulations.
NOTICE	<ul><li>Risk of property damage from overheating of the unit</li><li>Do not install the unit close to heat sources.</li></ul>
NOTICE	
NOTICE	

# 5.1 Minimum clearances

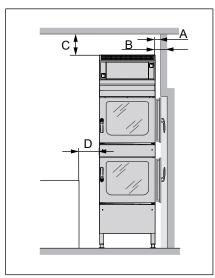


Image: Minimum clearances to walls, ceiling or units

А	В	C *	D	
	100 (3,94)	50 (1,97)		
All dimensions in mm (in)				
* Depends on the kitchen ventilation system and quality of ceiling material				

The following clearances from walls, ceilings or other equipment must be maintained when installing the unit:

• Clearance to deep-fat fryers, at least one length of the hand shower at left and right.

#### 5.2 Lifting the unit off the pallet

	Risk of property damage and personnel injury from tipping unit
	Stay clear of lifted unit.
	Move lifted unit carefully.
Prerequisit	e Unit unpacked Protective film removed Unit cleaned
	<ol> <li>Slide the forks of the pallet truck under the unit.</li> <li>Carefully lift the unit off the pallet.</li> </ol>
	and the sure labored

#### 5.3 Installing the unit on the unit legs

Prerequisite The floor must support the weight of the unit

- 1. Use appropriate lifting gear to lift the unit.
- 2. Install the unit in accordance with the planning drawing.
- 3. Align the unit lengthwise and crosswise (see "Aligning the unit").

#### 5.4 Aligning the unit

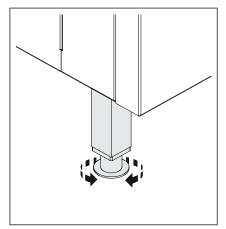
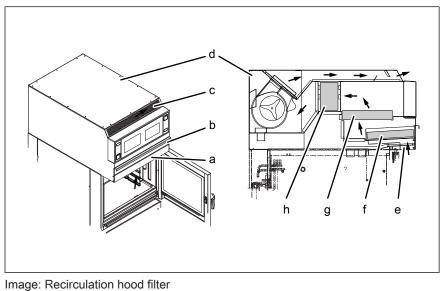


Image: Aligning the unit on the unit legs

- 1. Place a spirit level on the unit.
- 2. Align the unit horizontally by screwing the unit legs in or out.
- 3. Fill out the start-up operation report.



#### 5.5 Inspecting the recirculation hood filter



e Vapor inlet

Air filter

f

g

Filter mat (yellow)

h Activated charcoal filter

hage. Recirculation hood life

- a Condensation baffle
- b Filter drawer
- c Air outlet
- d Recirculation hood

#### Prerequisite Unit dead

Step ladder set up securely

- 1. Remove the filter drawer with the filter.
- 2. Unhook the condensation baffle.
- 3. Check that the air filter is located correctly in the holder.
  - $\hookrightarrow$  Make sure that the filter is in the correct position.
  - $\rightarrow$  The air filter lies in the holders.
- 4. Hook the condensation baffle back in.
- 5. Check that the yellow filter mat is firmly located in the filter drawer.
- 6. Push the filter drawer in as far as the end stop.
- 7. Fill out the start-up operation report.

#### 5.6 Fastening the unit to the floor

#### 5.6.1 Securing the unit to prevent tipping

Risk of accident from insufficient fastening
 Unit can tip over
<ul> <li>Depending on the unit type, suitable measures must be taken to fasten the unit to the floor.</li> </ul>
<ul> <li>Comply with the requirements for the condition of the floor.</li> </ul>
<ul> <li>Comply with the requirements for the means of fastening.</li> </ul>

• Follow the manufacturer's instructions for using the means of fastening.

Depending on the size, it is essential that certain combisteamer types or combisteamers used in combination with a Stapelkit (stacking kit), a recirculation hood, an underframe or base cabinet be secured to prevent tipping.

Unit types that must be secured to prevent tipping (see "Unit and connection data").

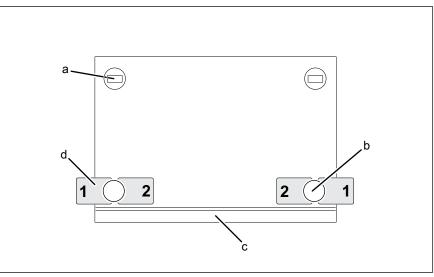


Image: Arrangement of floor plates (view from above)

a Unit leg with castors

b Unit leg

c Cooking chamber door d Floor plate

A special set of fasteners is either supplied by the manufacturer or available as an accessory to secure the unit against tipping.

The set of fasteners includes two floor fasteners and all components required for bolting or gluing to the floor.

The unit is fastened by means of two floor fasteners, as indicated in the drawing.

#### Floor without steam barrier

In the case of floors without a steam barrier, the floor plates are bolted to the floor using the bolts provided.



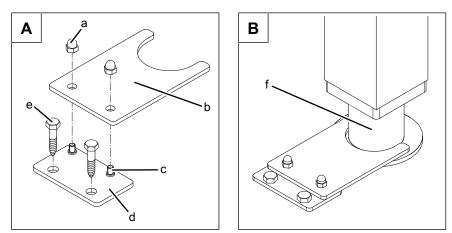


Image: A: Position of floor plate; B: floor plate bolted to the floor

a Cap nut	
-----------	--

b Holding plate

- d Floor plate
- е
- c Upright bolt

e Lag bolt f Unit leg

#### **Requirements** The floor must support the weight of the unit

The floor must be clean and suitable for the manner of fastening Unit set up and aligned in accordance with the planning drawing

- 1. Insert the floor plate from the fastener set into the holding plate as shown in the drawing.
- 2. Screw on the cap nuts hand-tight.
- 3. Align the floor plates in position 1-1 or 2-2 on the unit leg as shown in the drawing and mark the fastening holes in the floor.
- 4. Mark the position of all unit legs on the floor.
- 5. Using appropriate lifting gear, move the unit so that the holes can be drilled in the floor.
- 6. Drill holes matching the diameter of the anchor sufficiently deep in the floor.
- 7. Carefully place the unit in the installation position.
- 8. Screw on the cap nuts and remove the holding plate from the floor plate.
- 9. Screw the floor plate to the floor using the anchors and bolts supplied.
- 10. Ensure that sealing of the floor is restored after the bolts are screwed in.
- 11. Place the holding plate on the floor plate and fasten in place with cap nuts.
- 12. Fill out the start-up operation report.

#### Floor with steam barrier

In the case of floors with a steam barrier, the floor plates are not screwed to the floor but fastened with the enclosed adhesive.

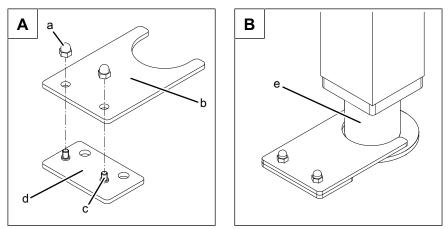


Image: A: Position of floor plate; B: floor plate glued to the floor

a Cap nut

- d Floor plate
- e Unit leg
- b Holding plate Upright bolt с

**Requirements** The floor must support the weight of the unit

The floor must be clean and suitable for the manner of fastening Unit set up and aligned in accordance with the planning drawing

- 1. Insert the floor plate from the fastener set into the holding plate as shown in the drawing.
- 2. Screw on the cap nuts hand-tight.
- 3. Align the floor fasteners in position 1-1 or 2-2 on the unit leg as shown in the drawing and mark the floor.
- 4. Screw on the cap nuts and remove the holding plate from the floor plate.
- 5. Fasten the floor plates to the floor with the enclosed adhesive.
  - $\rightarrow$  Follow the instructions of the adhesive manufacturer.
  - $\rightarrow$  Apply the adhesive in accordance with the manufacturer's instructions.
  - $\rightarrow$  Observe the drying time in the manufacturer's instructions.
- 6. Place the holding plate on the floor plates and fasten in place with cap nuts.
- 7. Fill out the start-up operation report.



# 6 Connecting the unit

▲ DANGER	Risk of personal injury and property damage from electric shoo	
	<ul> <li>Before working on the unit, ensure that the unit is dead.</li> <li>Do not ensure the unit with the bousing energy</li> </ul>	
	Do not operate the unit with the housing open.	
	Risk of injury from sharp edges <ul> <li>Wear protective gloves.</li> </ul>	
NOTICE	<ul><li>Risk of property damage from damage to the lines</li><li>Remove and attach housing components carefully.</li></ul>	
	remove and attach housing components carefully.	

#### 6.1 Opening and closing the housing

#### 6.1.1 Removing and attaching the rear panel

#### Remove the rear panel.

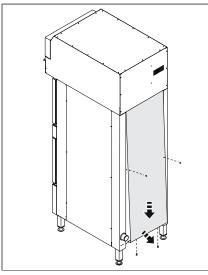


Image: Remove the rear panel.

- 1. Unscrew the screws on the rear panel.
- 2. Remove the rear panel.

#### Attaching the rear panel

# NOTICE

### Risk of property damage from leaky housing

- Check seals when attaching the housing parts.
- Replace damaged seals.





- 1. Carefully press in the rear panel.
- 2. Screw in the screws on the rear panel.
- ightarrow The rear panel must be in contact with the unit on all sides.

#### 6.2 Making the electrical connection

#### **Electrical installation work**

Electrical installation work on the electric system and the unit may only be performed by a specialist company, which is approved by the electric utility company in the particular region. The applicable regional regulations, standards and guidelines must be observed, as well as the connection conditions imposed by the electric utility company responsible.

#### Technical qualifications for electrical installation tasks

Electrical installation tasks on the electrical system and the unit may be carried out only by an electrician provided by the specialist company contracted.

The unit must be connected in accordance with the information on the nameplate and the instructions of this manual.

#### Wiring diagram

The wiring diagram is included with the unit.

The wiring diagram and additional documents are available on the manufacturer's Internet page by entering the serial number of the unit (see Imprint).

#### **Electrical connection line**

Minimum requirements for the unit's electrical connection line to the electrical supply mains:

Connection	Electrical connection line	
Permanent connection for fixed installation with a cable from the unit to a separate connection box.	Rubber sheath cable, oil-resistant, shrouded and flexible in accordance with IEC 60245-57 (for example:	
Connection of the unit with a connector.	H05RN-F).	
Permanent connection for fixed installation with a hard-wired line directly connected to the unit.	PVC sheathed cable for permanent installation in buildings or damp and wet rooms.	

#### **Permanent connection**

#### 

Risk of property damage and personal injury from improper installation

• In the case of a permanent connection, install an all-pin separating device before the unit.



Install an all-pin separating device if the unit will be connected permanently to the electrical supply mains.

#### **Plug-in connection**

	Risk of property damage and personal injury from improper instal- lation		
	The plug-in connection must be readily accessible.		
	If the unit is connected with a plug to the electrical supply mains, use plugs and sockets according to IEC60309. The socket must be readily accessible so that the unit can be disconnected from the electrical supply mains at any time.		
	Insulation monitoring In the case of an unearthed network (IT network), the unit can be incorporated into the insulation monitoring.		
	Fault current device		
	Image: RCD switch type A circuit symbol		

The unit can be connected to a fault current device.

If a residual-current circuit breaker is used, the residual-current circuit breaker installed must be type A (RCD type A) to ensure that AC fault currents and pulsating DC fault currents are detected.

If the unit is connected to electrical supply mains without a neutral conductor, a type B fault current circuit breaker (RCD type B), which is sensitive to all types of current, must be installed.

The unit generates a small fault current through use of special electronic components. To ensure that the residual current device does not trip during normal operation, each unit should have its own residual current device.



#### **Potential equalization**

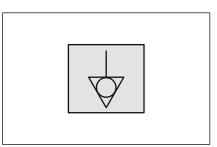


Image: Potential equalization symbol

The unit can be included in a potential equalization system by means of appropriately sized wiring.

#### 6.2.1 Connecting the electrical connection line

Risk of personal injury and property damage from electric shock
<ul> <li>Before working on the unit, ensure that the unit has been disconnected from the power supply.</li> </ul>
Risk of personal injury and property damage from electric shock

- Before connecting, ensure that the electrical connection line is dead.
- Ensure that the electrical connection line is undamaged.

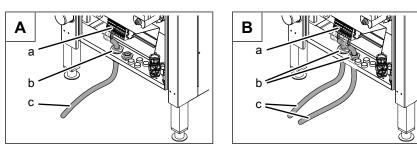


Image: A: Unit with one electrical connection; B: Unit with two electrical connections

- a Connection terminals
- c Electrical connection line
- b Threaded cable connection

#### Prerequisite Unit dead

Electrical connection line dead Rear panel removed

- 1. Feed the electrical connection line into the unit through the threaded cable connection.
- 2. Connect the electrical connection line in accordance with the wiring diagram.
- 3. Secure the electrical connection line with cable ties.
- 4. Tighten the threaded cable connection securely to provide strain relief.



- 5. Close the housing (see "Opening and closing the housing").
- 6. Fill out the start-up operation report.

#### 6.2.2 Connecting the power optimization system

<b>▲ DANGER</b>	<ul> <li>Risk of personal injury and property damage from electric shock</li> <li>Before working on the unit, ensure that the unit has been disconnected from the power supply.</li> </ul>
▲ DANGER	<ul> <li>Risk of personal injury and property damage from electric shock</li> <li>Before connecting, ensure that the electrical connection line is dead.</li> </ul>

Ensure that the electrical connection line is undamaged.

The unit can be connected to a power optimization system designed to DIN 18875 with a potential-free contact. The potential-free contact is used to link the unit to the control.

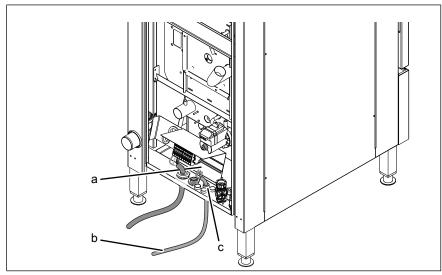


Image: Connecting the power optimization system

- a Connection terminals for power c Threaded cable connection optimization system
- b Electrical connection line for power optimization system

#### Prerequisite Unit dead

Electrical connection line dead Housing opened

- 1. Pull the electrical connection line into the unit through the cable gland.
- 2. Route the electrical connection line to the connection terminals.
- 3. Connect the electrical connection line in accordance with the wiring diagram.
- 4. Secure the electrical connection line with cable ties.



FM08-639-B

- 5. Register the power optimization system in the basic settings of the control (see "Making the basic settings of the control").
- 6. Fill out the Start-up operation report.

#### 6.2.3 Connecting the potential equalization

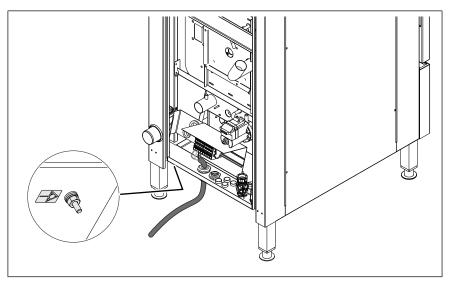


Image: Connecting the potential equalization

- 1. Route and connect the potential equalization line to the marked connection.
- 2. Fill out the Start-up operation report.

#### 6.3 Connecting the kitchen guiding system

The units can be connected to a kitchen guiding system using an RJ45 plug.

	Risk of personal injury and property damage from electric shoc	
	<ul> <li>Before working on the unit, ensure that the unit is dead.</li> </ul>	
<ul> <li>Do not operate the unit with the housing open.</li> </ul>		
Minimum requirements for the network cable		

Type of network	Ethernet
Cable quality	4-pair shrouded patch cable Cat-6 S/FTP
Connection to unit	Shrouded RJ45 connector



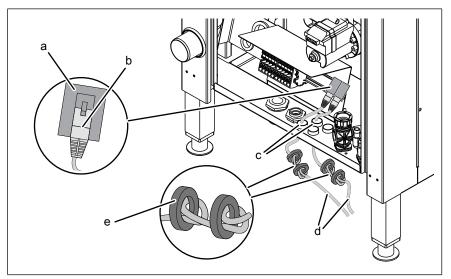


Image: Connecting the kitchen guiding system

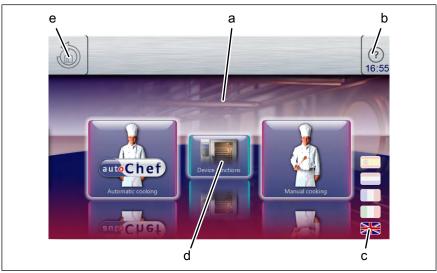
- a RJ45 socket
- b RJ45 connector
- c Threaded cable connection
- d Network cable
- e Ferrite ring

#### Prerequisite Unit dead

Housing opened

- 1. Pull the network cable into the unit through the cable gland.
- 2. Route the network cable through the two ferrite rings, with one winding through each.
- 3. Connect the network cable to the unit with the RJ45 connector.
- 4. Register the network in the basic control setting (see "Making the basic control setting").
- 5. Fill out the Start-up operation report.





#### 6.4 Performing the basic setting of the control

Image: Main menu

- a Main menu
- b FlexiHelp button
- c Language selection
- d "Unit functions" button
- e Back button

#### 6.4.1 Changing the basic setting of the control

By entering the password "2100", the basic setting for the installation can be displayed and changed.

INFORMATION	The basic settings are made in the dialogue.
	Advanced settings are made via the parameters for the settings.
Prerequisite	
	The Main menu is displayed
	1. Tap the "Unit functions" button.
	→ The <i>Unit functions</i> menu is displayed.
	2. Tap the "Unit settings" field.
	<ul> <li>→ The <i>PIN</i> window opens.</li> <li>3. Enter the password.</li> </ul>
	4. Tap the <i>Confirm</i> button.
	→ The <i>Unit settings</i> menu is displayed.
	The basic settings can be changed (see "Unit and connection data").
	5. Fill out the Start-up operation report.



# 6.5 Making the water connection

#### Drinking water installation tasks

	Drinking water installation tasks on drinking water lines and the unit may only be performed by a specialist company, which is approved by the drinking water utility company in the particular region. The applicable regional regulations, standards and guidelines must be observed, as well as the connection conditions imposed by the drinking water utility company responsible.
	Technical qualifications for drinking water installation tasks
	Drinking water installation tasks on drinking water lines and the unit may be carried out only by a water specialist provided by the specialist company contracted.
	The unit has a connection for permanent installation to the drinking water supply.
	The unit is equipped with a permanent connection for:
	<ul> <li>Softened drinking water for steam generation</li> </ul>
	Drinking water for cooling, rinsing and cleaning
	Hygiene risk from contaminated drinking water
	<ul> <li>The connection to the drinking water supply must be equipped with a back- flow preventer.</li> </ul>
NOTICE	Risk of property damage from the wrong water quality
	• Ensure that the water quality complies with the unit and connection data.
INFORMATION	Always connect both water connections to the unit.

#### 6.5.1 Connecting the drinking water connection line

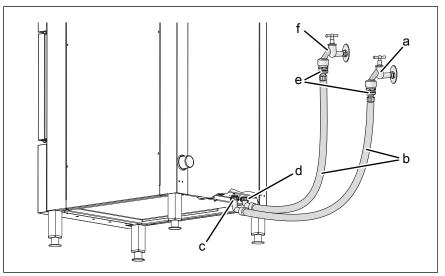


Image: Water connection

- a Softened drinking water
- b Connection line
- c Softened drinking water connection
- d Drinking water connection
- e Backflow preventer
- f Drinking water

**Prerequisite** Water pressure complies with specifications (see "Unit and connection data")

Backflow preventer installed

Pressure-resistant connection lines suitable for tap water are available

- 1. Connect the connection lines to the drinking water taps using seals.
- 2. Flush the connection lines thoroughly.
- 3. Insert dirt filters into the water connections on the unit.
- 4. Connect the drinking water connection line to the unit.
- 5. Connect the connection line for softened drinking water to the unit.
- 6. Open the tap water valves and check the threaded connectors for leaks.
- 7. Fill out the Start-up operation report.



#### 6.5.2 Connecting softened drinking water to both connections

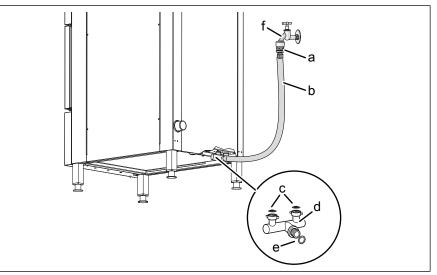


Image: Connecting softened drinking water to both connections

- a Backflow preventer
- d T-piece

b Connection linec Dirt filter

e Seal f Softened drinking water

If only softened drinking water is available at the installation site, use a T-piece to connect both water connections on the unit to each other.

# **Prerequisite** Water pressure complies with specifications (see "Unit and connection data")

Backflow preventer installed

Pressure-tight connection line suitable for drinking water is available

- 1. Connect the connection line to the tap for softened drinking water using a seal.
- 2. Flush the connection line thoroughly.
- 3. Insert dirt filters into the water connections on the unit.
- 4. Connect T-piece to the unit.
- 5. Connect the connection line for softened drinking water to the Tpiece using a seal.
- 6. Open the drinking water tap and check the threaded fittings for leakage tightness.
- 7. Fill out the Start-up operation report.

#### 6.6 Making the waste water connection

#### Waste water installation tasks

Waste water installation tasks on waste water systems and the unit may only be carried out by a specialized company that is responsible for waste water systems. The applicable regional regulations, standards and guidelines must be observed, as well as the connection conditions imposed by the operator of the waste water company responsible.

#### Technical qualifications for waste water installation tasks

Waste water installation tasks on waste water lines and the unit may be carried out only by a waste water specialist provided by the specialist company contracted.

#### 6.6.1 Connecting the waste water line to a permanent connection

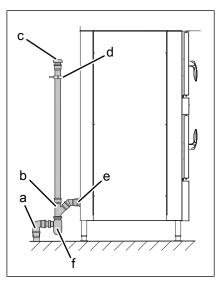


Image: Waste water line with vacuum breaker to a permanent connection

- a Waste water mains
  - Waste water line
- c Vacuum breaker

h

- d Pipe clamp
- e Waste water connection
- f Waste water mains siphon

#### **INFORMATION**

Install a vacuum breaker in the waste water line.

**Prerequisite** The waste water line complies with the specifications (see "Unit and connection data")

- 1. Install waste water line up to connection to the waste water system.
- 2. Secure waste water line with pipe clamps.
- 3. Fill the siphon of the unit with drinking water.
- 4. Fill out the Start-up operation report.



# 7 Testing the function

A DANGER	Risk of personal injury and property damage from unsuccessful operational check	
	<ul><li>Do not put the unit into service.</li><li>Contact customer service.</li></ul>	
Prerequisite       Electrical connection made         Water connection made       Waste water connection made         Unit cleaned       Unit cleaned		
7.1 Inspecting the reci	rculation hood	
Prerequisite	e Cooking chamber door closed	
	<ol> <li>Switch on the unit.</li> <li>→ Recirculation hood fan runs continuously.</li> <li>Open cooking chamber door.</li> <li>→ Recirculation hood fans run faster.</li> <li>→ Recirculation hood is connected correctly.</li> <li>Switch off the unit.</li> <li>Fill out the start-up operation report.</li> </ol>	
7.2 Checking the controls		
	<ol> <li>Switch on the unit and start any cooking program (see operating instructions).</li> </ol>	

- → Set the cooking chamber temperature to a higher temperature than the current cooking chamber temperature.
- $\hookrightarrow$  The unit heats up.
- $\hookrightarrow$  Once the set temperature is reached, heating switches off.
- $\rightarrow$  The temperature no longer increases.
- $\hookrightarrow$  The controls are functioning.
- 2. Switch off the unit.
- 3. Fill out the Start-up operation report.

#### 7.3 Checking the inspection of the cooking chamber door

- 1. Switch on the unit and start any cooking program (see operating instructions).
  - $\hookrightarrow$  The unit heats up.
  - $\hookrightarrow$  The fan is turning.

- 2. Open the cooking chamber door during operation.
  - $\rightarrow$  The unit shuts off the heating function.
  - $\rightarrow$  The fan comes to a stop.
  - $\hookrightarrow$  The monitoring of the cooking chamber door is functioning.
- 3. Close the cooking chamber door.
- 4. Switch off the unit.
- 5. Fill out the Start-up operation report.

#### 7.4 Heating and rinsing the unit

- 1. Switch on the unit.
- 2. Tap the "Manual cooking" button.

 $\hookrightarrow$  The Manual cooking menu is displayed.

- 3. Run the unit in the Steaming mode for 15 minutes at 100 °C.
- 4. Rinse the cooking chamber thoroughly with clear water.
- 5. Run the unit in the hot air mode for 5 minutes at 180 °C.
- 6. Open the cooking chamber door and leave it ajar until the unit is used again.
- 7. Fill out the start-up operation report.



# 8 Putting the unit into service

#### **INFORMATION**

If the unit is not put into service immediately after being connected and the function check, all inspections must be repeated.

Prerequisite	Electrical connection made
	Water connection made
	Waste water connection made
	Function successfully tested
	Housing closed

- 1. Instruct operator.
- 2. Fill out the start-up operation report.

#### 8.1 Nameplate

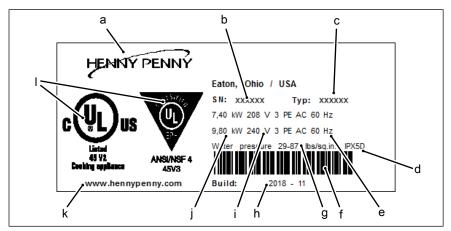


Image: Nameplate information

- a Manufacturer
- b Serial number
- c Type number
- d Protection class
- e Frequency
- f Barcode

- g Connection pressure for water
- h Year of manufacture
- i Type of connection
- j Electrical connected load
- k Manufacturer's web address
- I Certificate

### 8.2 Filling out the Start-up operation report

General information	Yes	No
Information from the nameplate entered?		
SN: Typ:		
E:		
Bez:		
Item-Nr.: (if listed)		

General information		Yes	No
Obvious damage to the unit? What and where?:			
Unit levelled?			
General ir	nformation	Yes	No
Unit fastened to floor?			
secured against tipping	secured against shifting		
Screwed to floor	Screwed to floor		
Glued to floor	Glued to floor		
Electrical	connection	Yes	No
Electrical connection made properly?			
Potential equalization	Power optimization system		
Potential-free contact			
Electrical connections made properly?	·		
Fault current device connected directly before this u	nit?		
Fault current device connected before this and other units?			
Kitchen guiding system		Yes	No
Kitchen guiding system connected properly?			
Basic setting	of the control	Yes	No
Temperature unit set?			
⊡°C	└°F		
Date and time set?			
Software version identified?			
Version:			
Altitude set?			
0 — 999 m (3277 ft)	1000 m (3280 ft) — 1999 m (6557 ft)		
2000 m (6560 ft) — 2499 m (8197 ft)	2500 m (8200 ft) or higher		
80% power set?			
100 %	80 %		
Supply voltage set?			
Voltage: V			
Audible signal volume set?			
Low High			
Low	High		

Volume unit set?	Basic setting of the control		Yes	No
Internet       Image: Construction system set?       Image: Construction system set?       Image: Construction set?       Image: Consected only to softened drinking water	Volume unit set?			
Power optimization system set?	ml	fl.oz. (Imperial)		
On       Off       Image: Section of the sectin section of the sectin the section of the sec	fl.oz. (U.S.)			
Water filter maintenance set?         I (gal)         I         I           No maintenance message         Maintenance message at:         I (gal)         I         I           Network configuration set?         I (gal)         I	Power optimization system set?			
No maintenance message       Maintenance message at:       I (gal)       I         Network configuration set?       IP address:       IP         Subnet mask:       Gateway:       III         Kitchen guiding system set?       IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	On	Off		
Index       I (gal)       I (gal)         Network configuration set?       IP address:       IP adddress:       IP address:	Water filter maintenance set?			
□ DHCPIP address: Gateway:□□□Subnet mask:Gateway:□□□Active□ Disabled□□□□ Ethernet□ Serial□□□TCP port:Unit address:□□□Unit address:□□□□Connection pressure within indicated range? Connection pressure:(∩NoConnection pressure:(∩□□Water connections beak-tight?□□□□Vater connections leak-tight?□□□□Vater connection made property?□□□□Unit address:□□□□□Water connections leak-tight?□□□□Vater connection made in a technically correctmontYesNoNoWaste water connection made in a technically correctmontYesNoSiphon in the building□□□□□ Fuordion ize of waste water line:mm (in)□□□Connection size of waste water line:mm (in)□□□Controls functioning?NoNo□□□Controls functioning?I□□□□Both fan speed level of recirculation hood functioning?□□□□Monitoring of cooking chamber door functioning?□□□□Image: District functioning?□□□ <t< td=""><td>No maintenance message</td><td></td><td></td><td></td></t<>	No maintenance message			
Subnet mask:       Gateway:       Image: Construction of the second of the seco	Network configuration set?			
Kitchen guiding system set?       Disabled       Image: Serial       Image		IP address:		
□ Active       □ Disabled       □ If abled       If abled	Subnet mask:	Gateway:		
Ethernet       Serial       Unit address:       Image: Consection       Yes       No         Connection pressure within indicated range?       \nt address:	Kitchen guiding system set?			
TCP port:       Unit address:       Image: I	Active	Disabled		
Unit address:       Water connection       Yes       No         Connection pressure within indicated range?       \\ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \ \	Ethernet	Serial		
Water connection       Yes       No         Connection pressure within indicated range?	TCP port:	Unit address:		
Connection pressure within indicated range?       ) kPa (psi)	Unit address:			
Connection pressure:       ( ) kPa (psi)       ( )         Water connection made properly?       ( )       ( )         Lines and connections leak-tight?       ( )       ( )         Water connections connected with T-piece?       ( )       ( )         Connected only to softened drinking water       ( )       ( )       ( )         Water connection made in a technically correct manner?       ( )       ( )       ( )         Siphon in the building       Vacuum breaker       ( )       ( )       ( )         Geneetic size of waste water line:       mm (in)       ( )       ( )       ( )         Checked filter for correct and tight fit?       Yes       No         Controls functioning?       Yes       No         Both fan speed level of recirculation hood functioning?       ( )       ( )       ( )         Monitoring of cooking chamber door functioning?       ( )       ( )       ( )       ( )	Water co	onnection	Yes	No
Water connection made properly? <ul> <li>Ines and connections leak-tight?</li> <li>Water connections connected with T-piece?</li> <li>Connected only to softened drinking water</li> <li>Connection made in a technically correct manner?</li> <li>Siphon in the building</li> <li>Vacuum breaker</li> <li>Floor drainage channel</li> <li>Connection size of waste water line:</li> <li>mm (in)</li> </ul> No           Checked filter for correct and tight fit?         Yes         No           Controls functioning?         Yes         No           Both fan speed level of recirculation hood functioning?         Image: Control functioning?         Image: Control functioning?           Monitoring of cooking chamber door functioning?         Image: Control functioning?         Image: Control functioning?         Image: Control functioning?	Connection pressure within indicated range?			
Lines and connections leak-tight?       Image: Connected with T-piece?       Image: Connected only to softened drinking water       Image: Connected only to drinking water </td <td>Connection pressure:</td> <td>() kPa (psi)</td> <td></td> <td></td>	Connection pressure:	() kPa (psi)		
Water connections connected with T-piece?	Water connection made properly?			
Connected only to softened drinking water Connected only to drinking water   Waste water connection made in a technically correct manner? Image: Connected on manual content in the building   Siphon in the building Vacuum breaker   Funnel drain Floor drainage channel   Connection size of waste water line: mm (in)   Connected filter for correct and tight fit? Yes   Function check Yes   Controls functioning? Yes   Both fan speed level of recirculation hood functioning? Image: Connection in the output content i	Lines and connections leak-tight?			
Waste water connection       Yes       No         Waste water connection made in a technically correct manner?	Water connections connected with T-piece?			
Waste water connection made in a technically correct manner?       Image: Connection in the building       Vacuum breaker         Siphon in the building       Floor drainage channel       Image: Connection size of waste water line:       mm (in)         Connection size of waste water line:       mm (in)       Image: Connection size of waste water line:       No         Connection size of waste water line:       mm (in)       Image: Connection size of waste water line:       No         Connection size of waste water line:       mm (in)       Image: Connection size of waste water line:       No         Checked filter for correct and tight fit?       Mo       Image: Controls functioning?       No         Controls functioning?       Function check       Yes       No         Both fan speed level of recirculation hood functioning?       Image: Control sing of cooking chamber door functioning?       Image: Co	Connected only to softened drinking water	Connected only to drinking water		
Siphon in the building Vacuum breaker   Funnel drain Floor drainage channel   Connection size of waste water line: mm (in)   Recirculation hood Yes   No   Checked filter for correct and tight fit?   Function check   Yes   Controls functioning?   Both fan speed level of recirculation hood functioning?   Monitoring of cooking chamber door functioning?	Waste wate	r connection	Yes	No
Funnel drain Floor drainage channel   Connection size of waste water line: mm (in)     Recirculation hood Yes   No   Checked filter for correct and tight fit?     Yes   Yes   No   Controls functioning?   Both fan speed level of recirculation hood functioning?   Monitoring of cooking chamber door functioning?	Waste water connection made in a technically corre	ct manner?		
Connection size of waste water line: mm (in)   Recirculation hood Yes   No   Checked filter for correct and tight fit?   Function check   Yes   No   Controls functioning?   Both fan speed level of recirculation hood functioning?   Monitoring of cooking chamber door functioning?	Siphon in the building	Vacuum breaker		
Recirculation hood       Yes       No         Checked filter for correct and tight fit?       □       □         Function check       Yes       No         Controls functioning?       □       □         Both fan speed level of recirculation hood functioning?       □       □         Monitoring of cooking chamber door functioning?       □       □	Funnel drain	Floor drainage channel		
Checked filter for correct and tight fit?       Image: Control contro control control contro control control control control control c	Connection size of waste water line:	mm (in)		
Function check     Yes     No       Controls functioning?     □     □       Both fan speed level of recirculation hood functioning?     □     □       Monitoring of cooking chamber door functioning?     □     □	Recirculation hood		Yes	No
Controls functioning?       Image: Control standard s	Checked filter for correct and tight fit?			
Both fan speed level of recirculation hood functioning?     Image: Constraint of the constrain	Functio	on check	Yes	No
Monitoring of cooking chamber door functioning?	Controls functioning?			
	Both fan speed level of recirculation hood functionin	g?		
Unit heated and rinsed?	Monitoring of cooking chamber door functioning?			
	Unit heated and rinsed?			

Final notes	Yes	No
Was the unit put into service?		
Comments:		
Operator trained?		

Electrical installation was made by:			
			Signature
Company	Installation fitter	Place, date	Signature

The connection to a kitchen guiding system was made by:			
			Signature
Company	Installation fitter	Place, date	

Water installation was made by:			
			<u>.</u>
			Signature
Company	Installation fitter	Place, date	

Wastewater installation was made by:			
			Signature
Company	Installation fitter	Place, date	

Function check was made by:			
			Signature
Company	Installation fitter	Place, date	

#### Operator was trained by:

1 2			
			Signature
			oignatare
Company	Installation fitter	Place, date	







Henny Penny Corporation P.O.Box 60 Eaton,OH 45320 USA

Phone +1 937 456-8400 Fax +1 937 456-8402

Toll free in USA Phone +1 937 417-8417 Fax +1 937 417-8434



Henny Penny Corp., Eaton, Ohio 45320, Revised 12/13/2018

www.hennypenny.com