HUSSMANN®

CoreLink™

Defrost Sync Setup

CoreLink™

Case Controller **HUSSMANN®**

Application Manual
Application Version 3.4.0 and above

IMPORTANT

Keep with controller for

future reference!

MANUAL- CORELINK DEFROST SYNC SETUP

Introduction

CoreLink has the ability to synchronize defrost with other CoreLink case controllers.

A single CoreLink case controller can manage up to 8 adjacent controllers in the system. This communication occurs over TCP/IP protocol. Each controller must be configured with a specific IP address identifier compatible with the preferred network.

This system has the benefit of being completely isolated as a small system group, up to 9 controllers, and with the option to expand to a large store network operation.

Hardware Requirements

- CoreLink Case Controller
- Ethernet Cables
- 16 Port Network Switch
- USB to Ethernet 2.0 Adaptor

Note:
USB to Ethernet adaptor must be Hussmann approved USB 2.0 unit. Generic adaptors could have compatibility issues.

Software Requirements

- Application Version 3.4 or higher
- Web UI 2.3 or higher
- BIOS 2020052000 or higher

System Setup

Defrost Sync Settings can be accessed within the CoreLink Web UI under *Config>Defrost.*

To access CoreLink Web UI, enter controller IP in open browser address bar. Click enter to launch the CoreLink log-in page. Enter username/password credentials to enter site.

Check application version information in the system tab. Make sure the current application and Web UI are compatible before you continue.

Assigning Controllers

Access the defrost menu for defrost sync settings. **ONLY** one CoreLink controller within a defrost group can be set to PRIMARY, all other controllers are set to SECONDARY.

Defrost Sync Mode

To enable this mode, look for **Defrost Sync Mode** in the defrost menu.

Defrost Sync Mode:	Disable

DEFAULT = Disabled

Here users can set the controller as either DISABLE / PRIMARY / SECONDARY

During setup, the user will have to access each controller one at a time to set the defrost sync mode setting.

Description of Operation

The primary controller will establish connection with the secondary controllers.

Once the connection is established, the Primary controller will synchronize it's defrost parameters and clock with the secondary controllers.

Should a user decide to use different settings, the modification only needs to be made within the Primary controller.

Defrost Sequence

Defrost Delay
Defrost
Drip
Wait

Change defrost sequence timing in the Web UI under *Config>Defrost>Defrost Sequence*

When the primary controller defrost countdown reaches 0:00 TIME, the primary controller will begin the defrost sync operation. Defrost count can be viewed from the status page of the Web UI.

The primary controller will enter defrost. The compressors will turn off and valves will move to 0%. A command is sent to the secondary controllers to enter defrost. The primary controller checks the status of all secondary controllers until defrost delay is accomplished.

Each controller will independently manage itself for most of the defrost cycle.

Defrost Delay – Pump down, time before defrost outputs turn on.

Defrost – The main defrost period when defrost outputs are ON depending on controller configuration.

Drip – Time period that defrost output is OFF and coil is allowed to drip moisture.

Wait – Controller is in a wait status for the duration of its timer. During this state, the controller is waiting for the primary controller to send END WAIT command.

When the primary controller enters the wait period, it begins to check the status of the other secondary controllers in the system.

When all other controllers reach a wait status, the primary controller will send out the END WAIT command. During this time period the primary controller will end its own WAIT and the secondary controllers. All controllers will enter refrigeration simultaneously.

In case of ERROR the secondary controllers will failsafe defrost on their own after one hour if a defrost command is not received from primary.

CoreLink Network Setup

1. Determine defrost group network scheme and IP address controller

1.1 Preview store network legend to determine the CoreLink IP addresses and primary/secondary controller defrost scheme
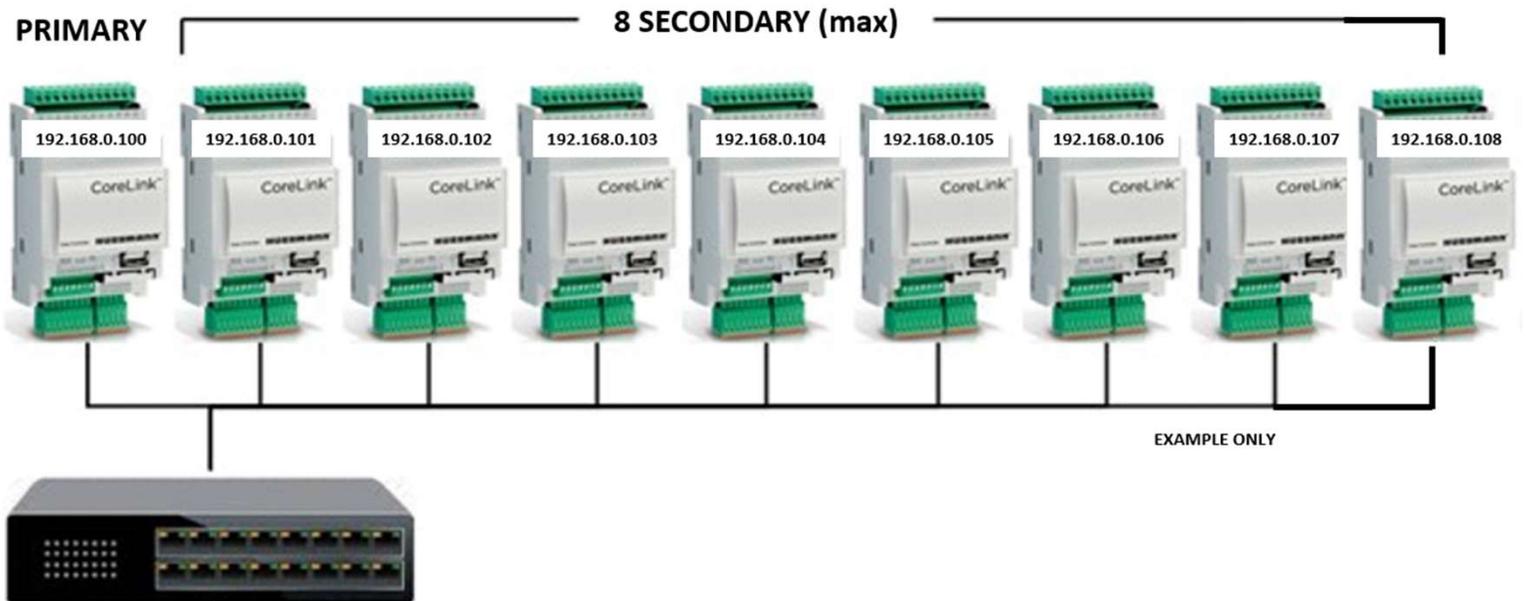
2. Connecting to CoreLink and modifying the IP address

2.1 Log into CoreLink and navigate to System menu

2.1.1 Select the pencil icon to modify IP address

2.2 From the CoreLink network settings menu

      2.2.1 Modify the IP address last 3 digits per network scheme

      2.2.2 Select [Apply]

      2.2.3 Return to System menu

HUSSMANN Status Config ▾ Alarms Commands I/O ▾ System Analysis Energy Diagnosis ▾ commission ▾

TCP/IP

IP address:
192.168.0.100

Netmask:
255.255.255.0

Network:
192.168.0.0

Gateway:
192.168.0.2

DNS:
192.168.0.254

Secondary DNS:
8.8.8.8

Port

HTTP port:
80

HTTPS port:
443

Modbus slave port:
502

Isa WB port:
1131

Isa Binding port:
1113

Visoprog port:
6666

SSH port:
22

Modbus RTU

Modbus slave:
Enabled

Address:
9

Baud Rate, Parity, Data Bits, Stop Bits:
9600,N,8,1

Other

VisoGraph Baud Rate:
38400

Timezone:
DEFAULT

Clock synchronization:
Disabled

NTP server:
193.204.114.232

Apply   Restore Default Configuration

EXAMPLE ONLY

2.3 From the System menu

      2.3.1 Reboot CoreLink to accept the new IP address

Reboot Controller   Reboot

2.4 Log into CoreLink with new IP address

CoreLink   ×   +

← → C ⌂ ⚠ Not secure 192.168.0.100/level_3/#/status

HUSSMANN   Status

Primary CoreLink Defrost Configuration

1. Commission Primary controller IP address per Network Setup
2. Confirm the system clock is up to date on the Primary controller
1.1 The clock can be synchronized through the System tab or Self-Test
3. Modify Primary controller defrost parameters

3.1 **Once the Primary controller establishes connection with a Secondary controller, all defrost parameters, and the clock will synchronize.**

3.1.1 Modify the Defrost Sync Mode to **primary**

3.1.2 Modify the Number of secondaries to **number of secondary controllers**

3.1.3 Add the IP addresses of **secondary controllers from defrost group** and select [Apply]

3.1.3.1 User can [Cancel] the controller reboot

3.1.4 Modify Defrost Time Mode to **Specific Time**

3.1.5 Modify the Defrost Start Time to **desired defrost time** for defrost group and select [Apply]

3.1.6 Select [OK] to reboot for new defrost settings to apply

Reboot Notification

192.168.0.100 says

Changes to these settings will not take effect until the controller is rebooted. Would you like to reboot the controller now?

OK   Cancel

Example Only

HUSSMANN | Status Config▾ Alarms▾ Commands I/O▾ System Analysis Energy Diagnosis▾ | February 25, 2022 12:29:18 PM | commission▾

Refrigeration	**Defrost**		**IP Defrost Sync**	
Compressor	Defrost Mode:	Electric	Defrost Sync Mode:	Primary
Superheat	Defrost Termination Mode:	Temperature	Number of Secondaries:	8
Defrost	Termination Temperature Sensor:	Defrost Terminate	Secondary IP 1:	192.168.0.101
Fans	Termination Temperature Setpoint:	48.0 (0 to 90) °F	Secondary IP 2:	192.168.0.102
Alarm Settings	Temperature Combination:	Min	Secondary IP 3:	192.168.0.103
Anti-Sweat	Defrost Time Mode:	Specific Start Time	Secondary IP 4:	192.168.0.104
Valve Parameters	Defrost Interval:	24	Secondary IP 5:	192.168.0.105
Auxiliary Sensors	Defrost Start Time:	7:00 AM	Secondary IP 6:	192.168.0.106
	Defrosts Per Day:	1	Secondary IP 7:	192.168.0.107
	Dual Temp Defrost Output:	Disable	Secondary IP 8:	192.168.0.108

Apply   Apply

Defrost Sequence			**Dual Temperature Defrost Sequence**		
Defrost Delay:	0	(0 to 30) min	Dual Temp Defrost Delay:	0	(0 to 30) min
Min Defrost Duration:	15	(1 to 360) min	Dual Temp min Defrost Duration:	15	(1 to 360) min
Max Defrost Duration:	45	(1 to 360) min	Dual Temp Max Defrost Duration:	45	(1 to 360) min
Drip Time:	0	(0 to 30) min	Dual Temp Drip Time:	0	(0 to 30) min
Max Wait:	31	min	Dual Temp Defrost Maximum Wait Time:	31	min

Apply **Max Wait Automatically calculates during reboot**   Apply

*If a BAS system is initiating defrost, Primary controller needs to be in Interval time mode

Secondary CoreLink Defrost Configuration

1. Commission Secondary controller IP address per Network Setup

2. Modify Secondary controller defrost sync mode

      2.1 Modify the <u>Defrost Sync Mode</u> to **secondary**

      2.1 Select [Apply] and select [OK] to reboot for new defrost
            settings to apply

*Once the Secondary controller reboots and establishes connection to the Primary controller, all defrost parameters, and the clock will synchronize. All defrost parameter modifications must be configured in the Primary controller

Validate Defrost Sync Group

1. Validate defrost group network configuration

1.1 With the entire defrost group connected to the network switch, log into the group's Primary CoreLink controller

1.1.1 Navigate to Commands menu

1.1.2 Select **Defrost Sync Initiate** [Start]

1.2 All CoreLink configured within the defrost group should activate defrost and perform the configured defrost sequence

Appendix A- Syncing System Clock

There are situations in which the user finds that the CoreLink controller does not display the correct time and con not be sync through the System menu. This Appendix Section will detail two methods of setting the time on the CoreLink through self-test.

1. Connect to CoreLink
    1.1 Connect to the CoreLink controller following the steps outlined in Appendix A – 1. CoreLink Quick Connection Guide.

2. Self Test Function
    2.1 Select the "Diagnosis" tab.
   2.2 Select "Self Test" tab
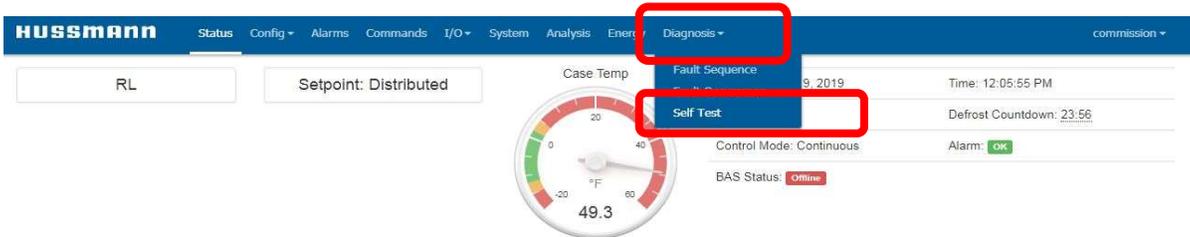
3. Configure and perform "Date and Time" test
    3.1 Select "Custom" from "1. Select Tests"
    3.2 Check "Configuration" then "Date and Time Test". All other tests should not be selected automatically
    3.3 Enter Name "2. Verify case model above and enter your name"
    3.4 Select "Start"
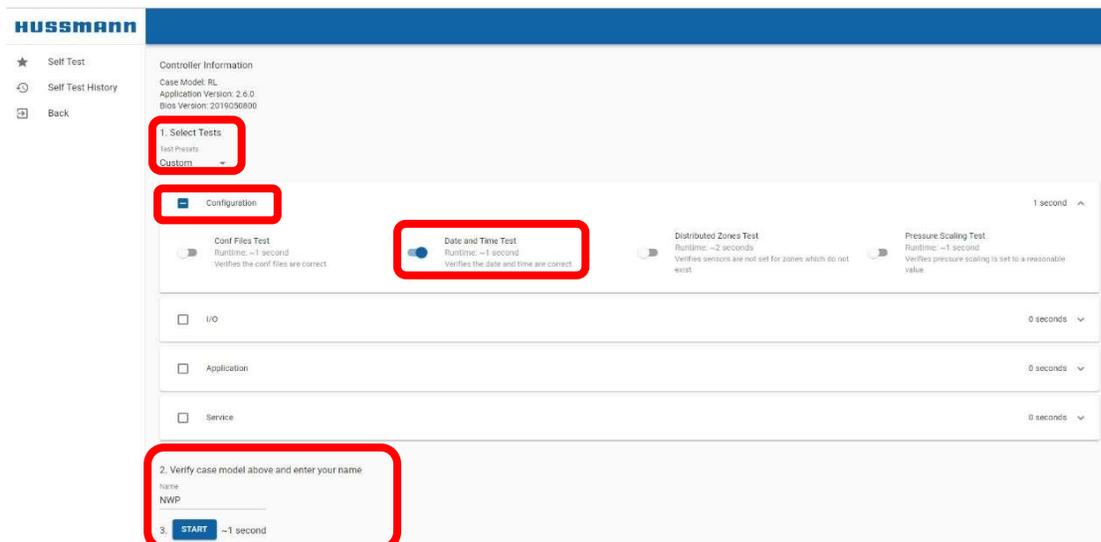
This Appendix Section details the process of accessing the CoreLink controller when the IP address of the controller is unknown. This method is similar to programming a CoreLink controller via the USB stick method detailed in **Section 4. Insert USB Flash Drive.**

1. Obtain Software Package

Contact Hussmann for specific software package for **IP Address Recovery**. This file is "**TempIP.zip**". You will need to provide Hussmann with the following:
- Customer (site) Information
- Model and Serial number of case
- Case is endcap or center case
- Type of expansion device
- Refrigerant type

Based on this information, you will be emailed the "**TempIP.zip**" file ready to place on a Flash Drive.

2. Copy/Extract TempIP.zip File

READ AND PERFORM THE FOLLOWING STEPS CAREFULLY. FAILURE TO DO SO WILL RESULT IN THE CONTROLLER NOT RECOVERING PROPERLY.

Copy the "**TempIP.zip**" file onto your flash drive. No other files should be on this drive.   Below is what this will look like on the flash drive when using Windows:
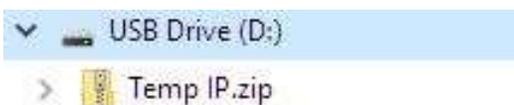
Extract the folders/files. This is done by right-clicking the file and selecting the option from a pop-up menu. The files on the flash drive will now look like this:
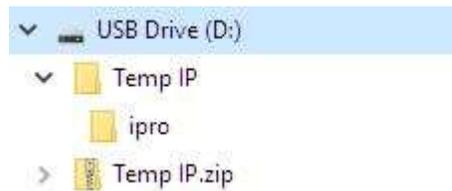
Next, move the **ipro** folder out of the parent folder by dragging and dropping the file directly into the USB Drive folder:
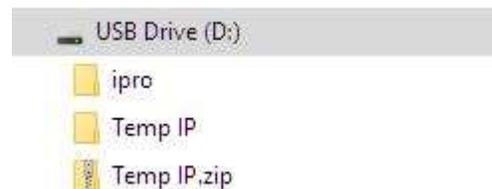
Finally, delete all files EXCEPT the **ipro** folder. The files in the flash drive will look like this:

See next page for further steps

Appendix B- IP Recovery (cont)

This Appendix Section continues to detail the process of accessing the CoreLink controller when the IP address of the controller is unknown. This method is similar to programming a CoreLink controller via the USB stick method detailed in **Section 4. Insert USB Flash Drive.**

3. Configure IP

While the CoreLink is powered, insert USB drive into USB port on controller. Allow 1 minute for the IP Address update to take place. Remove drive and connect laptop. One of the following methods can now be used to recover and set the controller IP Address.

Method 1. CoreLink WebUI Method

- Open your browser and type **192.168.0.250** into the navigation bar at the top of the window
- Navigate to the SYSTEM tab
- Click the "PENCIL" icon next to the IP Address
- Select "Restore Default Configuration" to set the default IP Address of 192.168.0.250 **OR** enter the IP Address desired.
- Reboot controller

Method 2. Dixell Panel Method

- Open your browser and type **192.168.0.250/panel** into the navigation bar at the top of the window
- Navigate to the CONFIGURE tab
- Select "Restore Default Configuration" to set the default IP Address of 192.168.0.250 **OR** enter the IP Address desired.
- Reboot controller
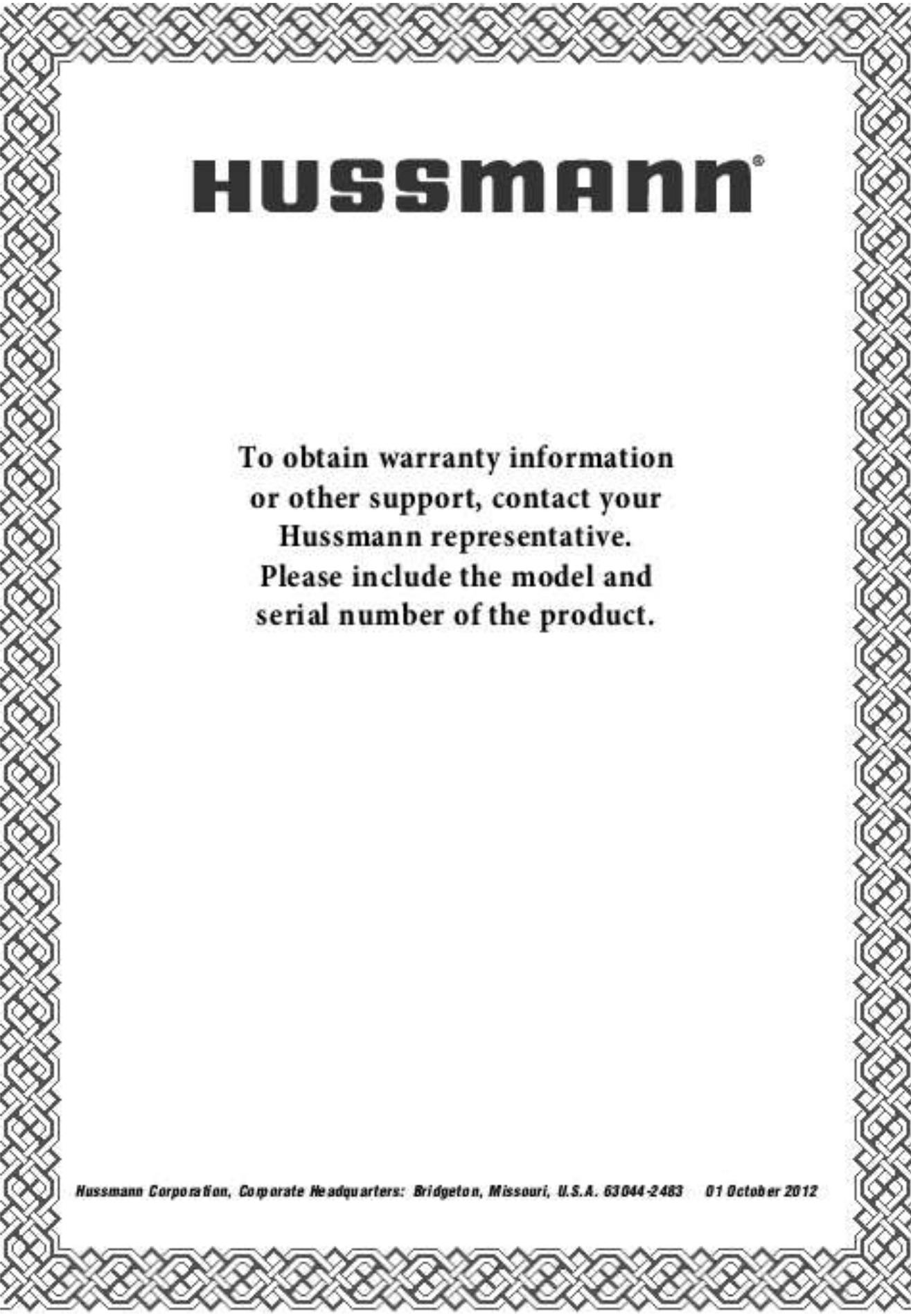
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To obtain warranty information
or other support, contact your
Hussmann representative.
Please include the model and
serial number of the product.