

*SIMUREFR™* simulates three *generic* versions of *low-temperature* and *medium-temperature* refrigeration systems. These include a **reach-in case** with *random defrost*, a **reach-in freezer** with *electric defrost*, and a **walk-in freezer** with *hot-gas defrost*. The trainee may select the type of refrigerant for the simulated system. Box and ambient temperatures are adjustable and continuously updated and displayed on the screen. The cut-in and differential settings for the pressurestat, thermostat, and low-pressure switch are also adjustable, as well as the defrost and TXV settings.

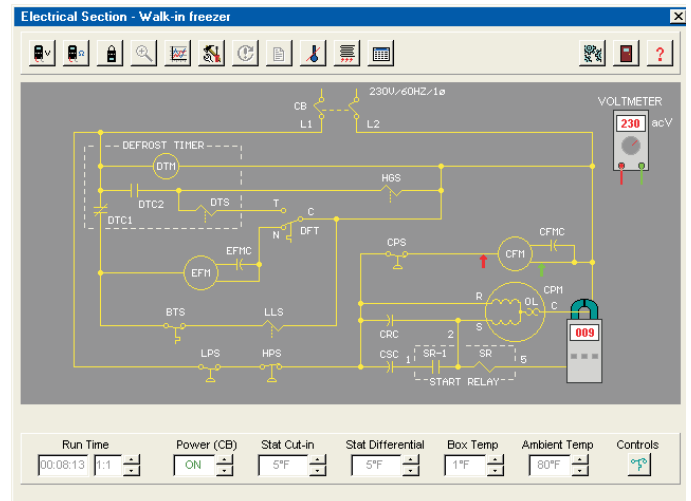
Animated mechanical and electrical schematic diagrams of the simulated refrigeration system are provided in “real-time”. The **mechanical diagrams** show refrigerant flow, as well as the *liquid*, *vapor*, *liquid/vapor*, and *superheated vapor* states of the refrigerant. Also, the liquid level in the receiver is shown. In the **electrical ladder diagrams**, the controls and switch contacts constantly change state as the system operates. Providing a means of visually tracing the refrigerant and current flow during system operation, makes it much easier for the trainee to understand how a refrigeration system is supposed to work.

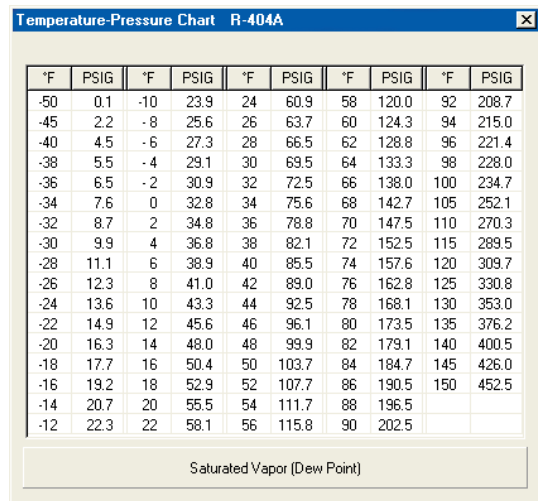
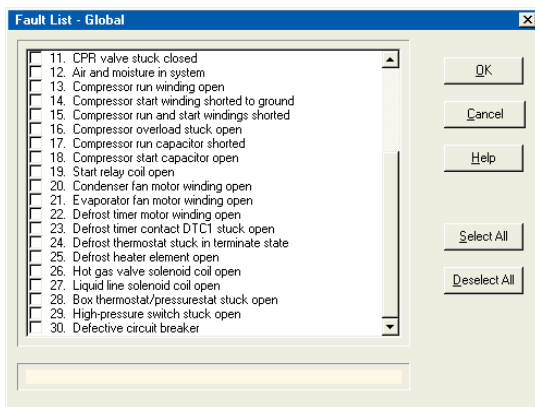
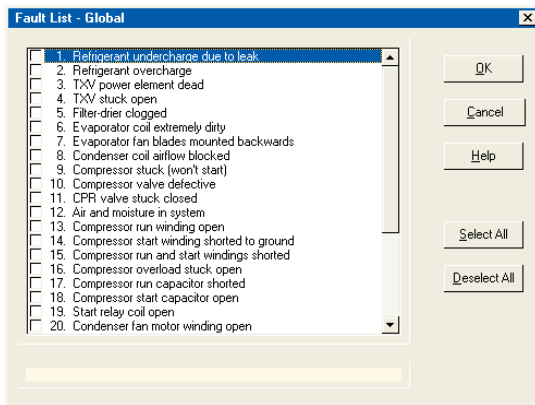
Pressure-temperature charts, specifications, and an electrical nomenclature are available on-screen. In addition, the trainee can “zoom” into the system to visually inspect various components, including dirt or ice on coils, and bubbles in the liquid sight glass.

Eight common refrigerants may be selected for the simulated system. These include:

- R-12
- R-134a
- R-404A
- R-502
- R-22
- R-402A
- R-409A
- R-507

*SIMUREFR* provides easy-to-use “point-and-click” selection of meters and test points, and are saved to an *Instrument Log* to monitor the users’ troubleshooting skill. Temperatures may be





## SYSTEM REQUIREMENTS

*SIMUREFR* requires the following minimum IBM compatible computer:

- Pentium, Core, or equivalent processor (32 or 64-bit)
- Windows XP, Vista, 7, 8, 8.1, 10
- Hard drive, 18MB available disk space

*SIMUREFR* network version is compatible with Novell and Windows Server 2003, Server 2008, Server 2012

displayed in either *Fahrenheit* (°F) or *Celsius* (°C), and pressures may be displayed in either *imperial* (psig) or *metric* (kPa/barg). The on-screen test instruments include:

- Gauge manifold set
- Voltmeter
- Thermometers
- Ohmmeter
- Leak detector
- Clamp-on ammeter

Up to 30 commonly encountered mechanical and electrical faults may be selected, as shown in the *Fault Lists* above.

*SIMUREFR* provides testing and troubleshooting of the devices listed below, commonly found in refrigeration systems.

- |                      |                        |
|----------------------|------------------------|
| Compressor           | Run capacitor          |
| Condenser coil       | Start capacitor        |
| Evaporator coil      | Defrost heater         |
| Receiver             | Defrost timer motor    |
| TX valve (TXV/TEV)   | Defrost timer solenoid |
| CPR valve            | Defrost thermostat     |
| Filter-drier         | Box thermostat         |
| Sight glass          | Box pressurestat       |
| Condenser fan motor  | Low pressure switch    |
| Evaporator fan motor | High pressure switch   |
| Start relay          | Heater limit switch    |
| Liquid line solenoid | Condenser fan switch   |
| Hot gas solenoid     | Circuit breaker        |



## ORDERING INFORMATION

### *SIMUREFR*™ Commercial Refrigeration Simulator

#### Standalone Licenses

MR-500	1 computer license	\$695.00
MR-505	5 computer licenses	\$1,295.00
MR-511	10 computer licenses	\$1,695.00
MR-515	15 computer licenses	\$1,995.00
MR-520	20 computer licenses	\$2,295.00

#### Network Licenses

MR-540	10 seats	\$1,595.00
MR-560	25 seats	\$1,895.00
MR-570	50 seats	\$2,695.00

For further prices and ordering information, please see Page 20

# ORDERING INFORMATION

## METHODS OF ORDERING

### MAIL

Simutech Systems, Inc.  
PO Box 7212  
Beaverton OR 97007 (U.S.A.)

### PHONE

(800) 648-6209 (USA & Canada)  
(503) 649-9076  
Hours: 8:00 am to 5:00 pm Pacific Time

### FAX

(503) 649-8972

### ON-LINE STORE / E-MAIL

www.simutechsystems.com  
sales@simutechsystems.com

## METHODS OF PAYMENT

### U.S. CUSTOMERS

- Purchase Order from government agency, school, or corporation (OAC), Net 30-days
- Visa, MasterCard, or American Express
- Prepaid by check



### CANADA & INTERNATIONAL CUSTOMERS

- Purchase Order from government agency or school, Net 30-days, payable in U.S. funds
- Visa, MasterCard, or American Express
- Prepaid by International Bank Check, payable in U.S. funds

## SHIPPING

All orders are shipped *FOB shipping point* and a shipping charge is added to invoice. Shipment is normally via *UPS ground* in USA and *UPS Air* to Canada and international. *Next-day* or *second-day air* is available upon request. For Canada and international orders, GST, local taxes, and duty are not included in our prices.

**Orders are normally shipped within 24-hours**

## SYSTEM CONTENTS

Each simulator system includes the following:

- CD-ROM
- User's Manual
- Instructor's Manual
- Technical Support, unlimited, with toll-free number (USA and Canada)

- (1) Additional licenses are required if simulators are installed and used on more than one standalone computer at same campus or training facility
- (2) Network versions are valid for installation on a LAN server at one campus or training facility, for concurrent use by maximum licensed users
- (3) Network versions for more than 50 users are also available
- (4) May be used on tablets and iPads when a remote access server is used

### Prices are subject to change without notice

Note: Simutech reserves the right to refuse any order, including shipment to countries where prohibited by U.S. export laws or lacking proper international copyright protection. Export, reshipment, or resale is prohibited without prior written permission, subject to U.S. export laws.

## INSTRUCTOR INTERFACE MODULES

These *optional* programs are installed on the instructor's computer to *preselect faults* for all users at one time. Using a CD or flash drive, the faults are then uploaded to each workstation. In addition, when a printer isn't available at each workstation, these interfaces can be used to download reports, for display and printout at the instructor's computer. **These are recommended when six or more workstations are utilized without a network.** Prices are shown below:

DESCRIPTION	PART NO.	UNIT PRICE
ACINST™ Version 5.1	TA-500	\$ 195.00
HPINST™ Version 5.1	TP-500	\$ 195.00
REFRINST™ Version 5.1	TR-500	\$ 195.00
MKTINST™ Version 5.1	TS-500	\$ 195.00
GASINST™ Version 5.1	TF-500	\$ 195.00
OILINST™ Version 5.1	TO-500	\$ 195.00
HYDROINST™ Version 1.1	TB-500	\$ 195.00
GEOINST™ Version 1.0	TG-500	\$ 195.00

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iPad is a registered trademark of Apple Inc.