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<th>Forced Air</th>
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<td>4-7</td>
<td>32-35</td>
<td>31.4</td>
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</tbody>
</table>

*Some storage conditions may vary depending on varieties of fruits and vegetables. When multiple cooling methods are indicated, one or combinations of methods may be from 10°C to 20°C depending on conditions. This guide is intended for general use only. Consult TRJ Refrigeration, Inc. for details.*
Get Legs... For longer shelf life

Precooling will ensure the longest possible shelf life, or in industry terms: "legs".

Without proper precooling, produce begins to lose its value. Proper precooling retains that just picked freshness that consumers demand. TRJ has the solution. Their experience and advanced design solutions can extend shelf life, increasing your repeat business.

When it comes down to it, proper precooling really is as important as choosing the right seed. TRJ has based their reputation on providing fast, yet economical precooling systems that continually ensure excellent arrivals, long shelf life, satisfied customers and increased profits for growers and shippers.

Many of the features and benefits of TRJ systems are unique to TRJ. Take advantage of their years of experience for precooling systems that will give your produce legs!

TRJ has been awarded the Red Book Credit Services Business Character Award for maintaining a reputation of high ethical trading practices, business competence and financial stability.

TRJ, your single source for Parts

TRJ's parts and equipment sales department can provide virtually any part for your refrigeration or mechanical system. Count on competitive prices from a knowledgeable sales team, backed by experienced engineers. Here are just a few of the manufacturers whose equipment and parts we sell:

---

Shown below: system comprised of a 90 ton modular ice bin, plate icemaker and a Posijector™ for broccoli icing operation

Shown left: (3) 350 horsepower ammonia screw compressors for a large freezing project

---

1

TRJ Refrigeration Inc. • 1617 Pacific Avenue • Suite 118 • Oxnard, CA 93033 • Tel: (805) 240-3434 • Fax: (805) 240-3430 • World Wide Web: www.trj-inc.com • E-mail: sales@trj-inc.com

TOLL-FREE PARTS HOTLINE: 888-840-3434

24 hours a day/7 days a week or E-mail a parts quote request.

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TRJ Refrigeration Inc. • 1617 Pacific Avenue • Suite 118 • Oxnard, CA 93033 • Tel: (805) 240-3434 • Fax: (805) 240-3430 • World Wide Web: www.trj-inc.com • E-mail: sales@trj-inc.com
Suitable for: • Artichokes • Asparagus • Avocados • Green Beans • Beets • Broccoli • Brussels Sprouts • Cantaloupes • Carrots • Celery • Cherries • Endive • Greens • Kale • Leeks • Nectarines • Parsley • Peaches • Radishes • Romaine Lettuce • Spinach • Sweet Corn • Turnips • Watercress and more

TRJ hydrocoolers provide a fast, reliable and efficient means of cooling many water tolerant fruits and vegetables. TRJ hydrocoolers are custom designed to meet your specific needs including integrated conveyors, booth, pumps and refrigeration systems.

Benefits
- Extends shelf life by cooling produce fast
- Cools crops up to 15 times faster than air
- Hydrates some products, reduces wilting
- Rinses while it cools
- Flexible means of cooling produce packed in bins, bulk, or palletized
- Relative low cost and little maintenance

Features
- Capacities range from 5,000 to 60,000 pounds per hour
- Units can be designed to operate with stand-alone or central plant refrigeration systems
- Variable speed conveyor drives on powered units allow for changing cooling requirements
- Plate or pipe style cooling coils available
- Cooling surfaces are located above product for improved sanitary design
- Cold water recirculation includes easy to clean filtration system
- Epoxy coated booths, optional stainless steel construction for more sanitary applications
- Easy clean reservoirs and water distribution pans
- A ammonia or “Freon” based systems available
- Energy saving advanced controls
- Anti-bacterial systems available

TRJ provides customers with a comprehensive range of services such as feasibility studies, system design, build, installation, service and maintenance, existing system analysis and recommendations for performance improvements. TRJ utilizes superior technology and advanced refrigeration techniques to provide innovative solutions to your specific cooling and freezing needs.

Designed in accordance with applicable industry standards, our systems meet or exceed the requirements or suggestions and recommendations of A SHRAE, IIAR, RETA of which we are members.

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Extend Shelf Life by Removing Field Heat Fast!

Whether it’s flake, plate, shell, block or crushed ice, TRJ engineers can store and distribute it any way that suits your budget, through the use of automatic storage bins, pneumatic conveying systems, screw conveyors and liquid ice pumping systems.

Benefits of Using Ice
- Remove field heat fast and extend shelf life
- Show your customers evidence of adequate precooling
- Maintain product freshness by slowing respiration
- Decrease moisture losses & resulting wilting or shriveling
- Control the growth of microorganisms
- Help retain natural sugars in some crops

Applications for Ice
- Liquid Ice Injection
- Top icing cartons and bins of produce
- Bulk commercial ice sales
- Export shipments
- Packaging ice for consumer use
- Track icing
- Cart icing
- Railcar icing
- Water chilling

ICEMAKERS

Benefits of Ownership
- Save cost! Manufacture ice for as little as 1/10 of the cost of commercially purchased ice. Larger systems save even more energy costs by making ice during lower cost energy periods.
- Save labor costs through automation.
- Make your operation more self-sufficient by lowering outside source dependency.

Icemaker Features
- Efficient, simple and reliable
- Self contained units reduce installation costs
- Industrial quality construction
- Corrosion resistant construction
- Variable ice thickness to suit different applications
- USDA approved for food processing plants
- Portable and modular systems available
- Reliable PLC controls automate the icemaker; reduces downtime

OPTION CODES:
- DF - Dual Function
- LP - Low Profile
- HGD - Hot Gas Defrost
- WD - Water Defrost
- AD - Air Defrost

MODEL SF-32 SF-38 LF-32 LF-38 LA-32 LA-38
PALLETS/CYCLE 8 8 12 12 12 12
HORSEPOWER 15 15 15 15 15 15
DF X X X X X
LP X X X X X
HGD X X X X X
WD X X X X
AD X X
TR REQ'D 22 22 38 38 38 38
APPROX WT (LBS) 3900 3900 4300 4300 4300 4300

Notes:
1. Optimum pallets per cycle, however, number of pallets varies by product
2. Dimensions for low profile units available on request
3. Hot gas defrost recommended only on multiple unit installations
4. Consult factory for application suitability
5. TR is Tons Refrigeration (capacity)
6. Special options and configurations available on all models
7. Maximum pallet height shown. Unit built to accommodate customer’s highest pallet
8. Consult TRJ for compressor system details
9. Specifications subject to change without notice
**Forced Air Coolers**

TRJ’s Forced Air Coolers’ versatility allows for cooling of almost any fruit or vegetable and can function as a precooling unit and a room cooler.

Suitable for: • Artichokes • Avocados • Green Beans • Brussels Sprouts • Cabbage • Cantaloupes • Cauliflower • Cherries • Cucumbers • Grapes • Honeydews • Kiwi • Nectarines • Onions (dry) • Peaches • Sweet Peppers • Plums • Summer Squash • Strawberries • Tomatoes and more

**Benefits**

- Increase shelf life by removing field heat fast
- Rapid cooling system with quick product turnaround
- Efficient and quiet operation
- Modular construction allows for relocation
- Simple installation compared to plenum type systems
- No special ducting required
- No water resistant cartons required
- Fans can operate at relatively high static pressures
- More energy efficient than room cooling
- Can be located in existing cold rooms

**Features**

- High surface area cooling coil
- High air flow fan capacity
- Galvanized steel housing for long term protection against corrosion
- Optimum temperature differential to achieve desired relative humidity
- Optional digital controls
- Optional two speed control for room cooling conditions
- Ammonia and “Freon” models available
- Various defrosting options

---

**Ice Storage Systems**

TRJ provides various designs of ice storage systems using equipment such as automatic ice rakes, screw conveyors and insulated enclosures to best suit your needs.

**Benefits & Features**

- Save energy costs by accumulating ice during off peak hours
- Save labor costs through automation
- Most efficient use of storage space by complete leveling of ice
- Store ice in a sanitary, all galvanized steel bin
- Stainless steel option available
- Delivers ice with the simple turn of a switch
- Allows buffer storage for ice availability during icemaker maintenance
- Conserve ice by insulating it from ambient conditions

**System Configurations**

**Portable Ice Systems**

**Benefits & Features**

- Two-piece, pre-engineered and fully packaged systems
- Standard units range from 20 to 150 tons ice manufacturing
- 40 to 150 tons automatic storage capacity
- Higher resale value and equity
- Easier to finance since the entire investment can be moved
- Can be operational in one day
- Generate additional income through off-site leasing
- Allows owner to move the entire investment to equipment
- Reduced site work coordination of subcontractors
- Single source design, performance & construction responsibility

**Modular Ice Systems**

**Benefits & Features**

- Modular, factory built and tested icemaking packages
- Field erected ice storage bins
- Sizes range from 20-300 tons per day icemaking
- 20-280 tons storage
- Lowest cost for automatic systems
- Easily erected and dismantled
- Can be installed inside of existing cold rooms or warehouses
- Simple to maintain and operate
- Completely integrated components ensure compatibility and successful performance

---

**Why Buy a TRJ Ice System?**

Put TRJ’s many years of experience to work for you to ensure that these factors and many others are adequately addressed:

- Initial cost and return on investment
- Ice type and inherent properties
- Storage and distribution design
- Location of equipment
- Utility rebates
- Future expansion
- Site preparation

---

Receivers can look for the SuperFlow™ logo on your cartons as their assurance of a quality precooled product. Call TRJ for free camera ready artwork.

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1617 Pacific Avenue • Suite 118 • Oxnard, CA 93033 • Tel: (805) 240-3434 • Fax: (805) 240-3430 • World Wide Web: www.trj-inc.com • E-mail: sales@trj-inc.com
LIQUID ICE INJECTORS

One Step Precooling and Body Icing

Suitable for any ice tolerant fresh products such as:
Broccoli • Sweet Corn • Carrots • Radishes • Greens
Cantaloupes • Brussels Sprouts • Green Onions • Parsley and more

Labor Saving - Up to ten times faster than shovel icing palletized produce. Our one step precooling and body icing process has become one of the fastest and most foolproof means of preserving fresh vegetables, since the ice totally envelops the product.

Save Costs by Reducing Carton Size - Liquid ice fully surrounds the product, so in most cases the carton size can be reduced when compared to top iced cartons.

Positive Injection Results in a Thorough Icing Job -
This is why we call them Posi-jectors™. Good arrivals demand a consistent, thorough icing job, nothing less. Getting the job done right the first time is critical. Our unit employs a pumping system which forces the liquid ice directly into the carton. Others rely on less positive methods, which can result in costly re-icing and excessive handling.

Salt Free Mixture - Reduces concerns with equipment and truckbed corrosion, effluent contamination and diet conscious buyers. Other systems require salt to operate.

Accepts Any Type of Ice -
Including crushed block, plate, flake, tube and shell ice.

Adjustable Injection Pressure -
For delicate products the injection pressure is easily adjusted to gently yet positively inject the liquid ice into each and every carton.

Adaptability To Shed Pack Systems -
Suitable for shed packed produce since liquid ice can be injected into closed or open cartons.

Ease of Installation -
Systems are delivered utility ready for quick installation.
Liquid Ice Injectors
One Step Precooling and Body Icing

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Adaptability To Shed Pack Systems - Suitable for shed packed produce since liquid ice can be injected into closed or open cartons.

Ease of Installation - Systems are delivered utility ready for quick installation.

Technical Features
- Positive Injection
- Cold water recovery system increases efficiency, saves ice
- Powered turntable allows access to all sides of pallet
- Capacities available from 400-1000 cartons per hour
- Corrosion resistant epoxy finish for long life
- A adjustable injection pressure allows for icing delicate products
- Factory wired for single point power connection

Options
- Powered pallet infeed and discharge conveyors with common cold water recovery (replaces turntable)
- Static platform for staging iced pallets, with cold water recovery
- Top icing conveyor systems for shed packed produce
- Single injection probe available for irregular stacking configurations
- Ice delivery systems
- 300# Ice Block Crusher
- Anti-bacterial systems available
- Custom configurations
- Leasing & financing available

Specifications & Dimensions

POSI-JECTOR CAPACITY DIMENSIONS (inches) CONNECTED LOAD/3PH,60HZ WATER AIR SHIPPING WT OPERATING WT

<table>
<thead>
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<th>MODEL</th>
<th>CARTRIDGE/H</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
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</tbody>
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Dimensions and specifications are subject to change without notice. Do not use for construction.

See pages 3 & 4 for more information about complete systems including ice-making, ice storage and ice distribution systems.
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• Okra • Onions (dry) • Peaches • Sweet Peppers • Plums
• Summer Squash • Strawberries • Tomatoes and more

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- Generate additional income through off-site leasing
- Allows owner to move the entire investment in equipment
- Reduced site work coordination of subcontractors
- Single source design, performance & construction responsibility

**Modular Ice Systems**

**Benefits & Features**
- Modular, factory built and tested icemaking packages
- Field erected ice storage bins
- Sizes range from 20-300 tons per day icemaking
- 20-280 tons storage
- Lowest cost for automatic systems
- Easily erected and dismantled
- Can be installed inside of existing cold rooms or warehouses
- Simple to maintain and operate
- Completely integrated components ensure compatibility and successful performance

**Why Buy a TRJ Ice System?**

Put TRJ’s many years of experience to work for you to ensure that these factors and many others are adequately addressed:

- Initial cost and return on investment
- Ice type and inherent properties
- Storage and distribution design
- Location of equipment
- Utility rebates
- Future expansion
- Site preparation

**Ice Storage Systems**

**Benefits & Features**
- Modern raker system for flake ice
- Modular 30 ton automatic ice storage
- Dual portable ice systems
- Receivers can look for the **SuperFlow** logo on your cartons as their assurance of a quality precooled product. Call TRJ for free camera ready artwork.

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1617 Pacific Avenue • Suite 118 • Oxnard, CA 93033 • Tel: (805) 240-3434 • Fax: (805) 240-3430 • World Wide Web: www.trj-inc.com • E-mail: sales@trj-inc.com
Ice Makers

Benefits of Ownership

- Save costs! Manufacture ice for as little as 1/10 of the cost of commercially purchased ice. Larger systems save even more energy costs by making ice during lower cost energy periods.
- Save labor costs through automation.
- Make your operation more self-sufficient by lowering outside source dependency.

Icemaker Features

- Efficient, simple and reliable
- Self contained units reduce installation costs
- Industrial quality construction
- Corrosion resistant construction
- Variable ice thickness to suit different applications
- USDA approved for food processing plants
- Portable and modular systems available
- Reliable PLC controls automate the icemaker; reduces downtime

Applications for Ice

- Liquid Ice Injection
- Top icing cartons and bins of produce
- Bulk commercial ice sales
- Export shipments
- Packaged ice for consumer use

Benefits of Using Ice

- Remove field heat fast and extend shelf life
- Show your customers evidence of adequate precooling
- Maintain product freshness by slowing respiration
- Decrease moisture losses & resulting wilting or shriveling
- Control the growth of microorganisms
- Help retain natural sugars in some crops

Extend Shelf Life by Removing Field Heat Fast!

Whether it’s flake, plate, tube, shell, block or crushed ice, TRJ engineers can store and distribute it any way that suits your budget, through the use of automatic storage bins, pneumatic conveying systems, screw conveyors and liquid ice pumping systems.

Benefits of Ownership

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TRJ Superflow™ Forced Air Coolers

Dimensional Information

<table>
<thead>
<tr>
<th>Model</th>
<th>A</th>
<th>B</th>
<th>C</th>
<th>D</th>
<th>E</th>
<th>F</th>
<th>G</th>
<th>H</th>
</tr>
</thead>
<tbody>
<tr>
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<td>102-1/2&quot;</td>
<td>54-3/4&quot;</td>
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<td>122-1/2&quot;</td>
<td>133&quot;</td>
<td>97-3/4&quot;</td>
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<td>133&quot;</td>
<td>97-3/4&quot;</td>
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<td>LF-32</td>
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<td>110&quot;</td>
<td>62-3/4&quot;</td>
<td>60-1/2&quot;</td>
<td>89&quot;</td>
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<td>147&quot;</td>
<td>105-3/4&quot;</td>
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<td>LF-38</td>
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<td>110&quot;</td>
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<td>60-1/2&quot;</td>
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<td>62&quot;</td>
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<td>134&quot;</td>
<td>105&quot;</td>
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</tbody>
</table>

The optional dual function package (option DF) provides the added capability for the unit to function as a precooler and a room cooling unit. This is proven to be a popular option since it provides greater flexibility. It includes a two speed motor and a special control package. Also available with electronic variable speed drive control.

Notes:

1. Optimum pallets per cycle, however, number of pallets varies by product
2. Dimensions for low profile units available on request
3. Hot gas defrost recommended only on multiple unit installations
4. Consult factory for application suitability
5. TR 10 Tons Refrigeration (capacity)
6. Special options and configurations available on all models
7. Maximum pallet height shown. Unit built to accommodate customer’s highest pallet
8. Consult TRJ for compressor system details
9. Specifications subject to change without notice

Specifications and options are subject to change without notice. Do not use for construction.

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• 1617 Pacific Avenue • Suite 118 • Oxnard, CA 93033 • Tel: (805) 240-3434 • Fax: (805) 240-3430 • World Wide Web: www.trj-inc.com • E-mail: sales@trj-inc.com
Sufficient for: • Artichokes • Asparagus • Avocados • Green Beans • Beets • Broccoli • Brussels Sprouts • Cantaloupes • Carrots • Celery • Cherries • Endive • Greens • Kale • Leeks • Nectarines • Parsley • Peaches • Radishes • Romaine Lettuce • Spinach • Sweet Corn • Turnips • Watercress and more

TRJ hydrocoolers provide a fast, reliable and efficient means of cooling many water tolerant fruits and vegetables. TRJ hydrocoolers are custom designed to meet your specific needs including integrated conveyors, booth, pumps and refrigeration systems.

Benefits
- Extends shelf life by cooling produce fast
- Cools crops up to 15 times faster than air
- Hydrates some products, reduces wilting
- Rinses while it cools
- Flexible means of cooling produce packed in bins, bulk, or palletized
- Relative low cost and little maintenance

Features
- Capacities range from 5,000 to 60,000 pounds per hour
- Units can be designed to operate with stand-alone or central plant refrigeration systems
- Variable speed conveyor drives on powered units allow for changing cooling requirements
- Plate or pipe style cooling coils available
- Cooling surfaces are located above product for improved sanitary design
- Cold water recirculation includes easy to clean filtration system
- Epoxy coated booths, optional stainless steel construction for more sanitary applications
- Easy clean reservoirs and water distribution pans
- Ammonia or “Freon” based systems available
- Energy saving advanced controls
- Anti-bacterial systems available

As a design, engineering and manufacturing company, TRJ Refrigeration, Inc. has considerable experience in refrigeration design, construction, installation and service of high-quality refrigeration systems. The following describes the varied types of systems designed by TRJ:

- Company engineers have carried out projects exceeding 2,000 TR
- Large central plant installations using multiple rotary screw and reciprocating compressors
- Direct expansion, gravity, mechanical pump or gas pressure fed systems
- Single and two-stage compression systems
- Critical charge systems
- Blast freezing and low temperature storage
- Secondary coolants such as water, glycols, brines, etc.
- Control systems technology such as computer control with remote monitoring
- Energy management
- Supplied to many parts of the world including Mexico, Canada and Europe
- Various industries such as fresh and frozen food, bakery, industrial ice, and fishing

TRJ provides customers with a comprehensive range of services such as feasibility studies, system design, build, installation, service and maintenance, existing system analysis and recommendations for performance improvements. TRJ utilizes superior technology and advanced refrigeration techniques to provide innovative solutions to your specific cooling and freezing needs.

Designed in accordance with applicable industry standards, our systems meet or exceed the requirements or suggestions and recommendations of A S H R A E, IIAR, RETA of which we are members.

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Get Legs... For longer shelf life.

Precooling will ensure the longest possible shelf life, or in industry terms: "legs".

Without proper precooling, produce begins to lose its value. Proper precooling retains that just picked freshness that consumers demand. TRJ has the solution. Their experience and advanced design solutions can extend shelf life, increasing your repeat business.

When it comes right down to it, proper precooling really is as important as choosing the right seed. TRJ has based their reputation on providing fast, yet economical precooling systems that continually ensure excellent arrivals, long shelf life, satisfied customers and increased profits for growers and shippers.

Many of the features and benefits of TRJ systems are unique to TRJ. Take advantage of their years of experience for precooling systems that will give your produce legs!

TRJ has been awarded the Red Book Credit Services Business Character Award for maintaining a reputation of high ethical trading practices, business competence and financial stability.

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TOLL-FREE PARTS HOTLINE: 888-840-3434
24 hours a day/7 days a week
# Precooling & Storage Guide

## For Fruits & Vegetables

<table>
<thead>
<tr>
<th>Commodity</th>
<th>Precooling Systems</th>
<th>Recommended Storage Temp</th>
<th>Maximum Storage Temp</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Hydrocool</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Liquid Ice</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Forced Air</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Artichokes</td>
<td>✔</td>
<td>32-36</td>
<td>29.9</td>
</tr>
<tr>
<td>Asparagus</td>
<td>✔</td>
<td>32-36</td>
<td>20.9</td>
</tr>
<tr>
<td>Avocados</td>
<td>✔</td>
<td>40-45</td>
<td>20.7</td>
</tr>
<tr>
<td>Beets, Bunched</td>
<td>✔</td>
<td>32-36</td>
<td>30.3</td>
</tr>
<tr>
<td>Broccoli</td>
<td>✔</td>
<td>32-36</td>
<td>20.9</td>
</tr>
<tr>
<td>Brussels Sprouts</td>
<td>✔</td>
<td>32-34</td>
<td>20.5</td>
</tr>
<tr>
<td>Cabbage</td>
<td>✔</td>
<td>32-34</td>
<td>30.4</td>
</tr>
<tr>
<td>Carrots, Bunched</td>
<td>✔</td>
<td>32-34</td>
<td>29.9</td>
</tr>
<tr>
<td>Carrots, Topped</td>
<td>✔</td>
<td>32-34</td>
<td>30.7</td>
</tr>
<tr>
<td>Celery</td>
<td>✔</td>
<td>32-34</td>
<td>29.6</td>
</tr>
<tr>
<td>Cherries, Sweet</td>
<td>✔</td>
<td>32-34</td>
<td>29.1</td>
</tr>
<tr>
<td>Cucumbers</td>
<td>✔</td>
<td>32-34</td>
<td>31.1</td>
</tr>
<tr>
<td>Endive, Escarole</td>
<td>✔</td>
<td>32-34</td>
<td>31.9</td>
</tr>
<tr>
<td>Grapes</td>
<td>✔</td>
<td>32-34</td>
<td>29.7</td>
</tr>
<tr>
<td>Greens, Leafy</td>
<td>✔</td>
<td>32-34</td>
<td>31.4</td>
</tr>
<tr>
<td>Honeydews</td>
<td>✔</td>
<td>45-50</td>
<td>30.5</td>
</tr>
<tr>
<td>Kale</td>
<td>✔</td>
<td>32-34</td>
<td>31.1</td>
</tr>
<tr>
<td>Kohlrabi</td>
<td>✔</td>
<td>32-34</td>
<td>29.0</td>
</tr>
<tr>
<td>Leeks</td>
<td>✔</td>
<td>32-34</td>
<td>30.7</td>
</tr>
<tr>
<td>Nectarines</td>
<td>✔</td>
<td>32-34</td>
<td>30.4</td>
</tr>
<tr>
<td>Okra</td>
<td>✔</td>
<td>45-50</td>
<td>28.7</td>
</tr>
<tr>
<td>Onions, Green</td>
<td>✔</td>
<td>32-34</td>
<td>20.4</td>
</tr>
<tr>
<td>Onions, Dry</td>
<td>✔</td>
<td>32-34</td>
<td>30.0</td>
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<tr>
<td>Peaches</td>
<td>✔</td>
<td>32-34</td>
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</tr>
<tr>
<td>Peppers, Sweet</td>
<td>✔</td>
<td>32-34</td>
<td>30.4</td>
</tr>
<tr>
<td>Plums</td>
<td>✔</td>
<td>32-34</td>
<td>30.7</td>
</tr>
<tr>
<td>Radishes, Bunch</td>
<td>✔</td>
<td>32-34</td>
<td>30.7</td>
</tr>
<tr>
<td>Romaine Lettuce</td>
<td>✔</td>
<td>32-34</td>
<td>31.7</td>
</tr>
<tr>
<td>Spinach</td>
<td>✔</td>
<td>32-34</td>
<td>31.5</td>
</tr>
<tr>
<td>Squash, Summer</td>
<td>✔</td>
<td>41-50</td>
<td>31.1</td>
</tr>
<tr>
<td>Strawberries</td>
<td>✔</td>
<td>32-34</td>
<td>30.6</td>
</tr>
<tr>
<td>Sweet Corn</td>
<td>✔</td>
<td>32-34</td>
<td>30.9</td>
</tr>
<tr>
<td>Tomatoes, Ripe</td>
<td>✔</td>
<td>45-50</td>
<td>31.0</td>
</tr>
<tr>
<td>Turnips</td>
<td>✔</td>
<td>32-34</td>
<td>30.1</td>
</tr>
<tr>
<td>Turnip Greens</td>
<td>✔</td>
<td>32-34</td>
<td>31.7</td>
</tr>
<tr>
<td>Watercress</td>
<td>✔</td>
<td>32-34</td>
<td>31.4</td>
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</tbody>
</table>

Some storage conditions may vary depending on variety of fruits and vegetables. One or more cooling methods may be indicated, one or combinations of methods may be from 20-40° depending on conditions. This guide is intended for general use only. Consult TRJ Refrigeration, Inc. for details.

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**Advanced Precooling Systems for Longer Shelf Life**

[TRJ Refrigeration Inc. logo]

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