

NORTH AMERICA

5 683 Hines Drive
Ann Arbor, MI 48108
USA
Tel +1 734 585 9500
Fax +1 734 352 3700

EUROPE

2, Avenue Blaise Pascal
38090 Vaulx Milieu
FRANCE
Tel +33 4 74 82 24 00
Fax +33 4 74 82 24 44
sales&marketing@tecumseh.com

MALAYSIA

No. 18, Jalan Sultan Mohamed 4,
Selat Klang Utara,
42000 Port Klang,
Selangor Darul Ehsan
MALAYSIA
Tel +60 3 3176 3886
Fax +60 3 3176 3890

BRAZIL

Rua Ray Wesley Herrick,
700 São Carlos SP, 13565-090
BRAZIL
Tel +55 16 3362 3000
Fax +55 16 3363 7219

INDIA

Balanagar Industrial Township,
Hyderabad, 500 037
INDIA
Tel +91 40 30116993/94

CHINA

Tecumseh Compressor
(Guangzhou) Co., Ltd.
Room 634, Wuzi Building,
201 Guangbao Avenue,
Guangzhou Free Trade Zone,
CHINA
Code: 510730
Tel +86 20 8221 8072
Fax +86 20 8205 7456

For more information
on products by Tecumseh,
please visit our website
www.tecumseh.com



Tecumseh reserves the right to change information contained in this document without notification.
© 2014 Tecumseh Products Company.
All rights reserved.

AJ Series Compressor
catalog EN - 10/2014



actitudes.com - Photos © Tecumseh - © Thinkstock



Tecumseh

Cooling for a Better Tomorrow™

www.tecumseh.com

COMMERCIAL
REFRIGERATION

AJ²

Series Compressor



IMPROVED
EFFICIENCY

QUIET
OPERATION

ECO-FRIENDLY

M1.31ab-Ib

K5211/2v

F311-K/DA

06101001001



38.4

12:RE

**OPTIMIZED FOR
HFO & HC REFRIGERANTS**

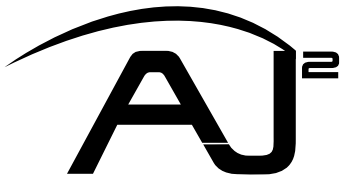


Tecumseh



Built for Today. Ready for Tomorrow.


Cooling for a Better Tomorrow™



Built for Today. Ready for Tomorrow.

Throughout its history, Tecumseh Products Company has been a leader in providing customers with efficient and reliable products for commercial refrigeration and air conditioning applications. As a result, commercial refrigeration equipment manufacturers, wholesale distributors and service contractors continue to demand the AJ compressor for their specific needs. Following on the path of its predecessor, the AJ² delivers best-in-class efficiency, a wider range, a smaller size envelope, in addition to Tecumseh's standard for reliability.

Key Features and Benefits



SAFE AND EASY ELECTRICAL CONNECTION
Patented moulded plug virtually eliminates wiring errors, reduces installation time and improves enclosure rating.

COMPACTNESS
Redesigned housing lowers height for most of the range. Maximum housing height for models available with new refrigerants will be 268 mm.

ECO-FRIENDLY
Designed for optimum performance with "green" HC (Hydrocarbon) refrigerant R290 (propane) and HFO (R1234yf).

VERSATILE
A variety of suction and discharge connection diameters and types (valve or tube) are offered to facilitate easy installation and serviceability.

PERFORMANCE
Re-designed valve plate and refrigerant gas handling result in improved compressor efficiency.

LOW NOISE
Redesigned housing and suction/discharge muffler system lowers the overall sound level.

PROVEN RELIABILITY
Over 20 million AJ compressors currently in operation in normal to severe duty applications.

WHY A NEW AJ²?

- The AJ compressor range is an established commercial refrigeration standard. Now, Tecumseh is pleased to introduce the next generation AJ, the AJ².
- The AJ² range is ready for tomorrow with HFO and HC refrigerants, while still supporting current refrigerants.
- In order to facilitate HFO introduction, the current AJ R134a range is now dual-refrigerant rated (R1234yf/R134a).

Table of Contents

| | |
|--|-----------|
| Introduction | 2 |
| Key Features and Benefits | 2 |
| Why a New AJ ² ? | 2 |
| A Major Innovation – Te-Connect | 3 |
| Agency Approvals | 3 |
| AJ² Cooling Capacity Range | 4 |
| Compressor Model Nomenclature | 4 |
| AJ ² Serial Label | 4 |
| 50 Hz – Commercial Positive Refrigeration | 5 |
| 50 Hz – Commercial Negative Refrigeration | 5 |
| 60 Hz – Commercial Positive Refrigeration | 6 |
| 60 Hz – Commercial Negative Refrigeration | 6 |
| Voltages | 7 |
| Rating Point Conditions | 7 |
| Electrical Drawings & Motor Types | 8 |
| Compressor Tube Connections | 9 |
| Compressor Dimensions | 9 |
| Packaging | 10 |
| What's in a Single Pack? | 10 |
| What's in a Multiple Pack? | 10 |
| Applications | 11 |
| Professional Refrigeration Equipment | 11 |

TECUMSEH INTRODUCES A MAJOR INNOVATION WITH PATENTED Te-Connect

▶ Safe and Secure Connection

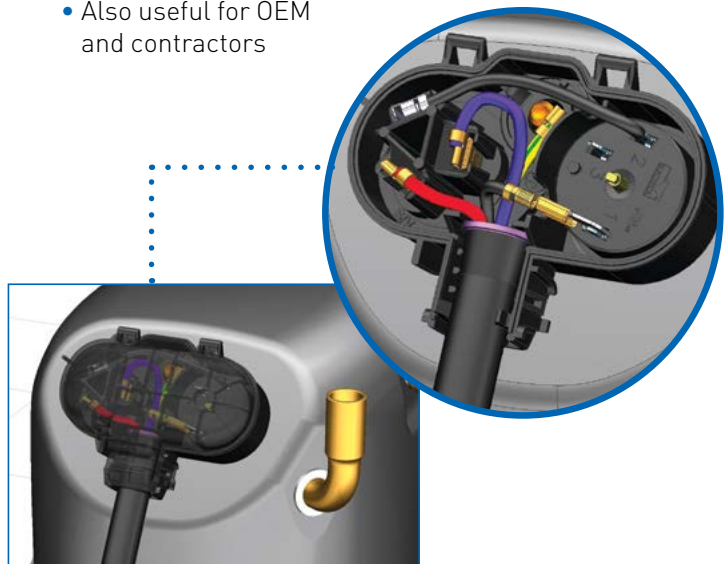
- Virtually eliminates wiring errors
- Electrical insulation required for HC refrigerants
- Earth ground integrated

▶ Time is Money

- Connect compressor wiring in less than 2 seconds
- A real Plug-&-Play function
- Requires fewer components to inventory

▶ Added Value

- Tecumseh knowledge
- Unique and powerful connection
- Also useful for OEM and contractors



AGENCY APPROVALS



AJ² COOLING CAPACITY RANGE

| | | Cooling Capacity at 50 Hz | | | | | | | | | |
|-------------|---------|---------------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|
| Application | Btu/h | 853 | 1 705 | 2 558 | 3 410 | 4 263 | 5 115 | 5 968 | 6 820 | 7 673 | 8 525 |
| | Watt | 250 | 500 | 750 | 1 000 | 1 250 | 1 500 | 1 750 | 2 000 | 2 250 | 2 500 |
| Refrigerant | | | | | | | | | | | |
| HBP | R22 | | | | | | | | | | |
| | R134a | | | | | | | | | | |
| | R1234yf | | | | | | | | | | |
| | R404A | | | | | | | | | | |
| LBP | R290 | | | | | | | | | | |
| | R404A | | | | | | | | | | |

COMPRESSOR MODEL NOMENCLATURE

| C | AJ | 4 | 4 | 92 | - | Y | FZ |
|-------------------|---|-------------|--------------|------------------|-------------|---------|----|
| Stator Definition | Compressor Family (First Two Digits) | Application | Digit Number | Cooling Capacity | Refrigerant | Voltage | |

No letter = single-phase low starting torque

C = single-phase high starting torque

T = three-phase

AJ

Number of digits composing the cooling capacity

Corresponding to the two first figures of the cooling capacity expressed in BTU/h
In this example total digits 4, with cooling capacity 92 means 9200 BTU/h at 60 Hz

Primary Refrigerants

| |
|-------------------|
| A = R12 |
| B = R410A |
| C = R407C |
| E/T = R22 |
| H = R1234yf |
| N = R134a/R1234yf |
| U = R290 |
| Y = R134a |
| Z = R404A/R507 |

Primary Application Parameters

| Evap Temperature | Rating Point | Motor Starting Torque |
|------------------|-------------------|-----------------------|
| 1. Low | -23,3 °C / -10 °F | Normal |
| 2. Low | -23,3 °C / -10 °F | High |
| 3. High | +7,2 °C / +45 °F | Normal |
| 4. High | +7,2 °C / +45 °F | High |
| 5. Air Cond | +7,2 °C / +45 °F | Normal |
| 6. Medium | -6,6 °C / +20 °F | Normal |
| 7. Medium | -6,6 °C / +20 °F | High |
| 8. Air Cond | +9,4 °C / +49 °F | Normal |
| 9. Commercial | -6,6 °C / +20 °F | High |
| 0. Commercial | -6,6 °C / +20 °F | Normal |

Approved Voltage

| |
|----------------------------------|
| CZ = 208/50/1 - 230/60/1 |
| FZ = 220-240/50/1 |
| GZ = 208-220/50/1 |
| HZ = 208-220/60/1 |
| KZ = 220/50/3 - 220/60/3 |
| TZ = 400/50/3 - 440/60/3 |
| XA = 100/50/1 - 115/60/1 |
| XD = 200/50/1 - 208-230/60/1 |
| XV = 265/60/1 |
| WZ = 208/230/50/1 - 220-230/60/1 |



NOTE: For explanation of compressor families and codes, contact Tecumseh Products Company.

| | | | |
|---|-------------------------|---|---------------------------------|
| 1 | Bill of Material Number | 5 | Maximum Allowable Pressure |
| 2 | Model Number | 6 | Minimum and Maximum Temperature |
| 3 | Appropriate Refrigerant | 7 | Test Pressure (1,1 x PS) |
| 4 | Serial Number | 8 | Test Date |

50 Hz

COMMERCIAL POSITIVE REFRIGERATION

| Model Number | Displacement cm ³ | Motor Type | Cooling Capacity (Watt)* | | | | | | | EN 12900 Evap Temp -10 °C | | Tube Connections | | | Weight kg | Height mm | |
|------------------------|---------------------------------|------------|------------------------------|------|-------------|------|------|------|------|---------------------------------|--------------|----------------------------|------------------------------|----------------------------|--------------|--------------|-------|
| | | | Evaporating Temperature (°C) | | | | | | | P input (Watt) | COP (W/W) | Suction (mm/ inches) | Discharge (mm/ inches) | Process (mm/ inches) | | | |
| | | | -15 | -10 | -5 | 0 | +5 | +10 | +15 | | | | | | | | |
| R1234yf HBP | CAJ/TAJ 4492N | 25,9 | CSIR/TRI | 881 | 1162 | 1478 | 1834 | 2239 | 2698 | 3219 | 701 | 1,66 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 20 | 280 |
| | CAJ/TAJ 4511N | 32,7 | CSR/TRI | 1157 | 1489 | 1866 | 2293 | 2776 | 3318 | 3926 | 798 | 1,87 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 21 | 280 |
| | CAJ/TAJ 4513N | 34,45 | CSR/TRI | 1207 | 1543 | 1926 | 2365 | 2866 | 3436 | 4084 | 857 | 1,80 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 21 | 280 |
| R134a HBP | CAJ/TAJ 4452Y | 15,2 | CSIR/TRI | 443 | 607 | 799 | 1026 | 1293 | 1606 | 1972 | 399 | 1,52 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 18 | 268 |
| | CAJ/TAJ 4461Y | 18,3 | CSIR/TRI | 574 | 756 | 977 | 1243 | 1560 | 1934 | 2372 | 472 | 1,60 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 18 | 268 |
| | CAJ/TAJ 4476Y | 22,8 | CSIR/TRI | 652 | 888 | 1163 | 1484 | 1856 | 2287 | 2781 | 557 | 1,59 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 18 | 268 |
| | CAJ/TAJ 4492N | 25,9 | CSIR/TRI | 825 | 1115 | 1452 | 1847 | 2307 | 2841 | 3457 | 649 | 1,72 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 20 | 280 |
| | CAJ/TAJ 4511N | 32,7 | CSR/TRI | 1135 | 1496 | 1913 | 2397 | 2956 | 3599 | 4335 | 766 | 1,95 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 21 | 280 |
| | CAJ/TAJ 4513N | 34,45 | CSR/TRI | 1214 | 1591 | 2028 | 2533 | 3118 | 3791 | 4562 | 844 | 1,89 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 21 | 280 |
| R404A HBP | CAJ/TAJ 9480Z | 15,2 | CSR/TRI | 920 | 1159 | 1434 | 1752 | 2117 | 2535 | 3013 | 692 | 1,67 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 20 | 268 |
| | CAJ/TAJ 9510Z | 18,3 | CSR/TRI | 1158 | 1453 | 1794 | 2187 | 2639 | 3157 | 3749 | 844 | 1,72 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 21 | 280 |
| | CAJ/TAJ 9513Z | 24,2 | CSR/TRI | 1423 | 1827 | 2290 | 2819 | 3422 | 4106 | 4879 | 990 | 1,85 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 22 | 280 |
| | CAJ/TAJ 4517Z | 25,95 | CSR/TRI | 1648 | 2070 | 2552 | 3104 | 3736 | 4459 | 5283 | 1122 | 1,84 | 15,9 - 5/8" | 9,5 - 3/8" | 6,35 - 1/4" | 22 | 280 |
| | CAJ/TAJ 4519Z | 34,45 | CSR/TRI | 2129 | 2699 | 3342 | 4069 | 4896 | 5833 | 6896 | 1595 | 1,69 | 15,9 - 5/8" | 9,5 - 3/8" | 6,35 - 1/4" | 22 | 280** |
| R22 HBP | CAJ/TAJ 9480T | 15,2 | CSR/TRI | 838 | 1062 | 1329 | 1644 | 2015 | 2450 | 2956 | 616 | 1,72 | 12,7 / 1/2" | 7,9 / 5/16" | 6,35 / 1/4" | 20 | 268 |
| | CAJ/TAJ 9510T | 18,3 | CSR/TRI | 1052 | 1328 | 1653 | 2034 | 2480 | 3000 | 3601 | 749 | 1,77 | 15,9 / 5/8" | 7,9 / 5/16" | 6,35 / 1/4" | 21 | 280 |
| | CAJ/TAJ 9513T | 24,2 | CSR/TRI | 1342 | 1716 | 2157 | 2674 | 3278 | 3979 | 4787 | 894 | 1,92 | 15,9 / 5/8" | 7,9 / 5/16" | 6,35 / 1/4" | 22 | 280 |
| | CAJ/TAJ 4517E | 25,95 | CSR/TRI | 1541 | 2009 | 2527 | 3096 | 3712 | 4373 | 5077 | 1004 | 2,00 | 15,9 / 5/8" | 9,5 / 3/8" | 6,35 / 1/4" | 22 | 280 |
| | CAJ/TAJ 4519T | 34,45 | CSR/TRI | 2223 | 2768 | 3390 | 4088 | 4857 | 5696 | 6600 | 1419 | 1,95 | 15,9 / 5/8" | 9,5 / 3/8" | 6,35 / 1/4" | 23 | 280** |

* Cooling capacity (Watt) at EN12900 Rating Conditions (+45 °C Condensing Temperature, 0K Sub-cooling, +20 °C Return Gas) - ** Excepted KZ voltage: 292 mm / 11,5 inches

COMMERCIAL NEGATIVE REFRIGERATION

| Model Number | Displacement cm ³ | Motor Type | Cooling Capacity (Watt)* | | | | | | EN 12900 Evap Temp -35 °C | | Tube Connections | | | Weight kg | Height mm | |
|----------------------|---------------------------------|------------|------------------------------|------------|------|------|------|------|---------------------------------|--------------|----------------------------|------------------------------|----------------------------|--------------|--------------|-------|
| | | | Evaporating Temperature (°C) | | | | | | P abs (Watt) | COP (W/W) | Suction (mm/ inches) | Discharge (mm/ inches) | Process (mm/ inches) | | | |
| | | | -35 | -30 | -25 | -20 | -15 | -10 | | | | | | | | |
| R290 LBP | CAJ2446U | 26,2 | CSR | 628 | 852 | 1083 | 1322 | 1612 | 1973 | 538 | 1,17 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 22 | 268 |
| | CAJ2464U | 34,5 | CSR | 827 | 1122 | 1427 | 1742 | 2124 | 2599 | 709 | 1,17 | 12,7 - 1/2" | 9,5 - 3/8" | 6,35 - 1/4" | 23 | 268 |
| R404A LBP | CAJ/TAJ 2428Z | 15,2 | CSIR/TRI | 306 | 434 | 589 | 773 | 991 | 1246 | 368 | 0,83 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 19 | 268 |
| | CAJ/TAJ 2432Z | 18,3 | CSR/TRI | 381 | 542 | 738 | 971 | 1247 | 1567 | 417 | 0,91 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 20 | 268 |
| | CAJ2440Z | 21 | CSR/TRI | 463 | 647 | 870 | 1135 | 1446 | 1807 | 499 | 0,93 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 21 | 280 |
| | CAJ/TAJ 2446Z | 26,2 | CSR/TRI | 627 | 859 | 1133 | 1451 | 1819 | 2241 | 604 | 1,04 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 21 | 280 |
| | CAJ/TAJ 2464Z | 34,5 | CSR/TRI | 828 | 1116 | 1459 | 1864 | 2336 | 2882 | 845 | 0,98 | 15,9 - 5/8" | 9,5 - 3/8" | 6,35 - 1/4" | 22 | 280** |

* Cooling capacity (Watt) at EN12900 Rating Conditions (+40 °C Condensing Temperature, 0K Sub-cooling, +20 °C Return Gas) - ** Excepted KZ voltage: 292 mm / 11,5 inches

60 Hz

COMMERCIAL POSITIVE REFRIGERATION

| Model Number | Displacement cm ³ | Motor Type | Cooling Capacity (Btu/h)* | | | | | | | EN 12900 Evap Temp +14 °F | | Tube Connections | | | Weight lbs | Height inches | |
|------------------------|---------------------------------|------------|------------------------------|------|--------------|-------|-------|-------|-------|---------------------------------|--------------|----------------------------|------------------------------|----------------------------|---------------|------------------|------|
| | | | Evaporating Temperature (°F) | | | | | | | P input (Watt) | COP (W/W) | Suction (mm/ inches) | Discharge (mm/ inches) | Process (mm/ inches) | | | |
| | | | +5 | +14 | +23 | +32 | +41 | +50 | +59 | | | | | | | | |
| R1234yf HBP | CAJ/TAJ 4492N | 25,9 | CSIR/TRI | 3545 | 4676 | 5947 | 7380 | 9009 | 10856 | 12953 | 841 | 1,63 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 44,1 | 11,0 |
| | CAJ/TAJ 4511N | 32,7 | CSR/TRI | 4656 | 5991 | 7508 | 9227 | 11170 | 13351 | 15797 | 958 | 1,83 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 46,3 | 11,0 |
| | CAJ/TAJ 4513N | 34,45 | CSR/TRI | 4857 | 6209 | 7750 | 9516 | 11532 | 13826 | 16433 | 1028 | 1,77 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 46,3 | 11,0 |
| R134a HBP | CAJ/TAJ 4452Y | 15,2 | CSIR/TRI | 1783 | 2442 | 3215 | 4128 | 5203 | 6462 | 7935 | 479 | 1,50 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 39,7 | 10,6 |
| | CAJ/TAJ 4461Y | 18,3 | CSIR/TRI | 2310 | 3042 | 3931 | 5002 | 6277 | 7782 | 9544 | 566 | 1,58 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 39,7 | 10,6 |
| | CAJ/TAJ 4476Y | 22,8 | CSIR/TRI | 2624 | 3573 | 4680 | 5971 | 7468 | 9202 | 11190 | 668 | 1,57 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 39,7 | 10,6 |
| | CAJ/TAJ 4492N | 25,9 | CSIR/TRI | 3320 | 4487 | 5843 | 7432 | 9283 | 11432 | 13910 | 779 | 1,69 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 44,1 | 11,0 |
| | CAJ/TAJ 4511N | 32,7 | CSR/TRI | 4567 | 6020 | 7698 | 9645 | 11894 | 14482 | 17443 | 919 | 1,92 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 46,3 | 11,0 |
| | CAJ/TAJ 4513N | 34,45 | CSR/TRI | 4885 | 6402 | 8160 | 10192 | 12546 | 15254 | 18357 | 1013 | 1,85 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 46,3 | 11,0 |
| R404A HBP | CAJ/TAJ 9480Z | 15,2 | CSR/TRI | 3702 | 4664 | 5770 | 7050 | 8518 | 10200 | 12124 | 830 | 1,65 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 44,1 | 10,6 |
| | CAJ/TAJ 9510Z | 18,3 | CSR/TRI | 4660 | 5847 | 7219 | 8800 | 10619 | 12703 | 15085 | 1013 | 1,69 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 46,3 | 11 |
| | CAJ/TAJ 9513Z | 24,2 | CSR/TRI | 5726 | 7351 | 9215 | 11343 | 13769 | 16522 | 19632 | 1188 | 1,81 | 15,9 - 5/8" | 7,9 - 5/16" | 6,35 - 1/4" | 48,5 | 11 |
| | CAJ/TAJ 4517Z | 25,95 | CSR/TRI | 6631 | 8329 | 10269 | 12490 | 15033 | 17942 | 21258 | 1346 | 1,81 | 15,9 - 5/8" | 9,5 - 3/8" | 6,35 - 1/4" | 48,5 | 11 |
| | CAJ/TAJ 4519Z | 34,45 | CSR/TRI | 8567 | 10860 | 13448 | 16373 | 19701 | 23471 | 27748 | 1914 | 1,66 | 15,9 - 5/8" | 9,5 - 3/8" | 6,35 - 1/4" | 48,5 | 11** |
| R22 HBP | CAJ/TAJ 9480T | 15,2 | CSR/TRI | 3980 | 4917 | 6008 | 7247 | 8630 | 10150 | 11801 | 781 | 1,85 | 12,7 / 1/2" | 7,9 / 5/16" | 6,35 / 1/4" | 44,1 | 10,6 |
| | CAJ/TAJ 9510T | 18,3 | CSR/TRI | 4859 | 5977 | 7264 | 8713 | 10318 | 12072 | 13969 | 979 | 1,79 | 15,9 / 5/8" | 7,9 / 5/16" | 6,35 / 1/4" | 46,3 | 11 |
| | CAJ/TAJ 9513T | 24,2 | CSR/TRI | 5578 | 7097 | 8862 | 10918 | 13307 | 16071 | 19254 | 1113 | 1,87 | 15,9 / 5/8" | 7,9 / 5/16" | 6,35 / 1/4" | 48,5 | 11 |
| | CAJ/TAJ 4517E | 25,95 | CSR/TRI | 6302 | 8209 | 10284 | 12520 | 14910 | 17447 | 20123 | 1291 | 1,86 | 15,9 / 5/8" | 9,5 / 3/8" | 6,35 / 1/4" | 48,5 | 11 |
| | CAJ/TAJ 4519T | 34,45 | CSR/TRI | 9310 | 11343 | 13741 | 16490 | 19577 | 22900 | 26713 | 1675 | 1,99 | 15,9 / 5/8" | 9,5 / 3/8" | 6,35 / 1/4" | 50,7 | 11** |

* Cooling capacity (Btu/h) at EN12900 Rating Conditions (+113 °F Condensing Temperature, 0K Sub-cooling, +68 °F Return Gas) - ** Excepted KZ voltage: 292 mm/11.5 inches

COMMERCIAL NEGATIVE REFRIGERATION

| Model Number | Displacement cm ³ | Motor Type | Cooling Capacity (Btu/h)* | | | | | | | EN 12900 Evap Temp -31 °F | | Tube Connections | | | Weight lbs | Height inches |
|----------------------|---------------------------------|------------|------------------------------|-------------|------|------|------|------|-------|---------------------------------|--------------|----------------------------|------------------------------|----------------------------|---------------|------------------|
| | | | Evaporating Temperature (°F) | | | | | | | P input (Watt) | COP (W/W) | Suction (mm/ inches) | Discharge (mm/ inches) | Process (mm/ inches) | | |
| | | | -31 | -22 | -13 | -4 | +5 | +14 | | | | | | | | |
| R290 LBP | CAJ2446U | 26,2 | CSR | 2527 | 3428 | 4358 | 5319 | 6486 | 7939 | 646 | 1,15 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 48,5 | 10,6 |
| | CAJ2464U | 34,5 | CSR | 3328 | 4515 | 5742 | 7009 | 8547 | 10458 | 851 | 1,15 | 12,7 - 1/2" | 9,5 - 3/8" | 6,35 - 1/4" | 50,7 | 10,6 |
| R404A LBP | CAJ/TAJ 2428Z | 15,2 | CSIR/TRI | 1231 | 1746 | 2370 | 3110 | 3988 | 5014 | 442 | 0,82 | 12,7 - 1/2" | 6,35 - 1/4" | 6,35 - 1/4" | 41,9 | 10,6 |
| | CAJ/TAJ 2432Z | 18,3 | CSR/TRI | 1533 | 2181 | 2970 | 3907 | 5018 | 6305 | 500 | 0,90 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 44,1 | 10,6 |
| | CAJ2440Z | 21 | CSR/TRI | 1863 | 2603 | 3501 | 4567 | 5818 | 7271 | 599 | 0,91 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 46,3 | 11 |
| | CAJ/TAJ 2446Z | 26,2 | CSR/TRI | 2523 | 3456 | 4559 | 5839 | 7319 | 9017 | 725 | 1,02 | 12,7 - 1/2" | 7,9 - 5/16" | 6,35 - 1/4" | 46,3 | 11 |
| | CAJ/TAJ 2464Z | 34,5 | CSR/TRI | 3332 | 4491 | 5871 | 7500 | 9400 | 11597 | 1014 | 0,96 | 15,9 - 5/8" | 9,5 - 3/8" | 6,35 - 1/4" | 48,5 | 11** |

* Cooling capacity (Btu/h) at EN12900 Rating Conditions (+104 °F Condensing Temperature, 0K Sub-cooling, +68 °F Return Gas) - ** Excepted KZ voltage: 292 mm/11.5 inches

VOLTAGES

50 Hz

| MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE |
|--------------|------------------------|--------------|-------------------|--------------|--------------------|--------------|--------------------|----------|-------------------|
| CAJ/TAJ4452Y | XA, FZ, GZ, TZ | CAJ/TAJ9480Z | XA, FZ, GZ, TZ | CAJ/TAJ9480T | XA, FZ, GZ, TZ | CAJ/TAJ2428Z | XA, FZ, GZ, TZ | CAJ2446U | FZ |
| CAJ/TAJ4461Y | XA, CZ, FZ, GZ, WZ, TZ | CAJ/TAJ9510Z | XA, FZ, GZ, TZ | CAJ/TAJ9510T | XA, FZ, GZ, KZ, TZ | CAJ/TAJ2432Z | XA, FZ, GZ, TZ | CAJ2464U | FZ |
| CAJ/TAJ4476Y | XA, CZ, FZ, GZ, WZ, KZ | CAJ/TAJ9513Z | XA, FZ, GZ, TZ | CAJ/TAJ9513T | FZ, GZ, TZ | CAJ2440Z | FZ | | |
| CAJ/TAJ4492N | XA, CZ, FZ, GZ, TZ | CAJ/TAJ4517Z | FZ, GZ, KZ, TZ | CAJ/TAJ4517E | FZ, GZ, KZ, TZ | CAJ/TAJ2446Z | XA, FZ, GZ, KZ, TZ | | |
| CAJ/TAJ4511N | CZ, FZ, GZ, TZ | CAJ/TAJ4519Z | FZ, GZ, KZ, TZ | CAJ/TAJ4519T | GZ, KZ, TZ | CAJ/TAJ2464Z | XA, FZ, GZ, KZ, TZ | | |
| CAJ/TAJ4513N | FZ, TZ | | | | | | | | |

60 Hz

| MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE | MODELS | VOLTAGE AVAILABLE |
|--------------|--------------------|--------------|-------------------|--------------|-------------------|--------------|-------------------|----------|-------------------|
| CAJ/TAJ4452Y | XA, HZ, TZ | CAJ/TAJ9480Z | XA, HZ, TZ | CAJ/TAJ9480T | XA, HZ, TZ | CAJ/TAJ2428Z | XA, HZ, TZ | CAJ2446U | XA |
| CAJ/TAJ4461Y | XA, CZ, HZ, WZ, TZ | CAJ/TAJ9510Z | XA, HZ, TZ | CAJ/TAJ9510T | XA, HZ, KZ, TZ | CAJ/TAJ2432Z | XA, HZ, TZ | CAJ2464U | XA |
| CAJ/TAJ4476Y | XA, CZ, HZ, WZ, KZ | CAJ/TAJ9513Z | XA, HZ, TZ | CAJ/TAJ9513T | HZ, TZ | CAJ2440Z | XA | | |
| CAJ/TAJ4492N | XA, CZ, HZ, TZ | CAJ/TAJ4517Z | KZ, HZ, TZ | CAJ/TAJ4517E | HZ, KZ, TZ | CAJ/TAJ2446Z | XA, HZ, KZ, TZ | | |
| CAJ/TAJ4511N | CZ, HZ, TZ | CAJ/TAJ4519Z | KZ, HZ, TZ | CAJ/TAJ4519T | KZ, TZ | CAJ/TAJ2464Z | XA, HZ, KZ, TZ | | |
| CAJ/TAJ4513N | TZ | | | | | | | | |

| CODE | VOLTAGE |
|------|-------------------------------|
| CZ | 208V 1~ 50 Hz / 230V 1~ 60 Hz |
| FZ | 220 - 240V 1~ 50 Hz |
| GZ | 208 - 220V 1~ 50 Hz |
| HZ | 208 - 220V 1~ 60 Hz |

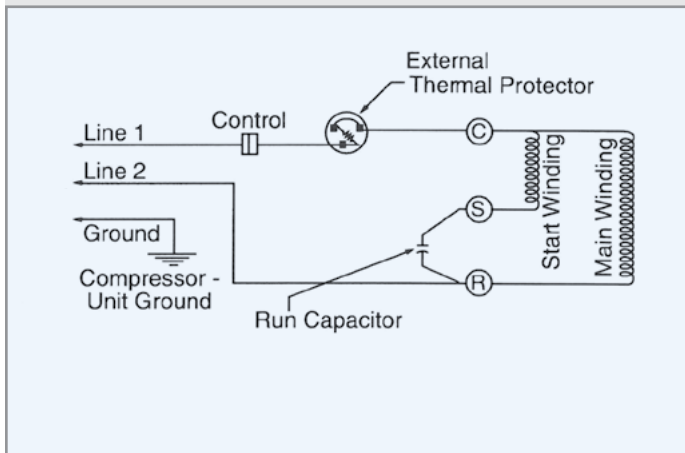
| CODE | VOLTAGE |
|------|---------------------------------|
| KZ | 220V 3~ 50Hz / 220V 3~ 60 Hz |
| TZ | 400V 3~ 50Hz / 440V 3~ 60 Hz |
| WZ | 208-230V~ 50Hz / 220-230V~ 60Hz |
| XA | 100V 1~ 50Hz / 115V 1~ 60Hz |

RATING POINT CONDITIONS

| | | Evaporating Temperature | Condensing Temperature | Return Gaz | Ambiant Temperature | Liquid Temperature |
|------------------|----|-------------------------|------------------------|------------|---------------------|--------------------|
| HMP | | | | | | |
| ASHRAE 46 | °F | 23 | 130 | 90 | 90 | 120 |
| | °C | -5 | 54,4 | 32,2 | 32,2 | 48,8 |
| EN 12900 | °F | 14 | 113 | 89,6 | 89,6 | 113 |
| | °C | -10 | 45 | 32 | 32 | 45 |
| LBP | | | | | | |
| ASHRAE 32 | °F | -10 | 130 | 90 | 90 | 90 |
| | °C | -23,3 | 54,4 | 32,2 | 32,2 | 32,2 |
| EN 12900 | °F | -31 | 104 | 89,6 | 68 | 104 |
| | °C | -35 | 40 | 32 | 20 | 40 |

ELECTRICAL DRAWINGS & MOTOR TYPES

P.S.C.



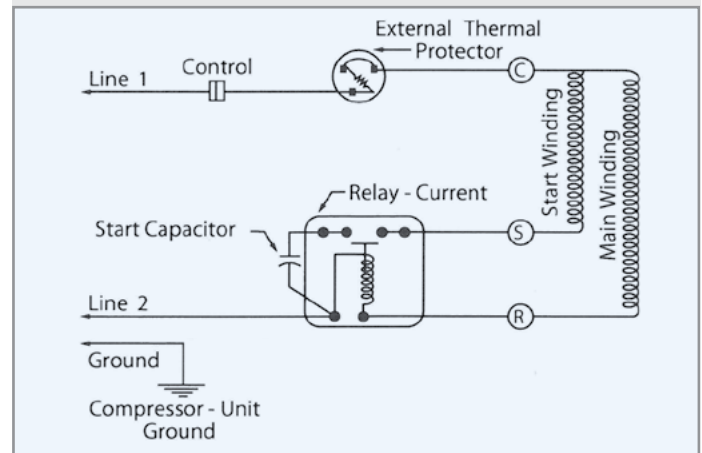
Permanent Split Capacitor (PSC)

A run capacitor is wired in series with the start winding. Both run capacitor and start winding remain in the circuit during start and after motor start-up. This normal starting torque is sufficient for capillary and other self-equalizing system.

Electrical components:

- 1 run capacitor
- 1 external overload protector fitted on the compressor
- 1 earth connection.

C.S.I.R.



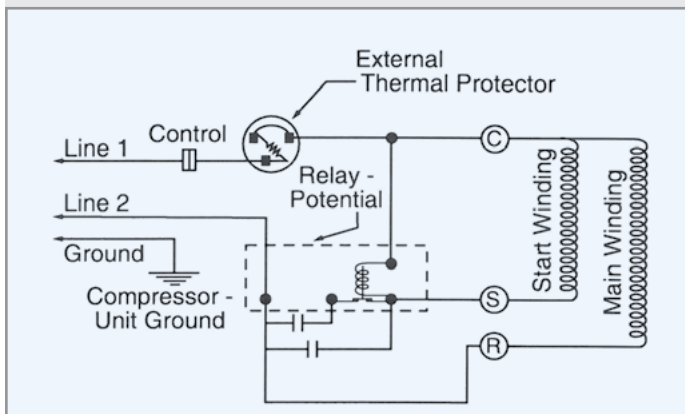
Capacitor Start Induction Run (CSIR)

A start capacitor is included in series with start winding to produce a higher starting torque. During Start-up, the start winding is energized through an electromagnetic relay and start capacitor. This is commonly used on commercial refrigeration systems through 3/4 HP.

Electrical components:

- 1 electromagnetic relay
- 1 external overload protector fitted on the compressor
- 1 start capacitor
- 1 earth connection.

C.S.R.



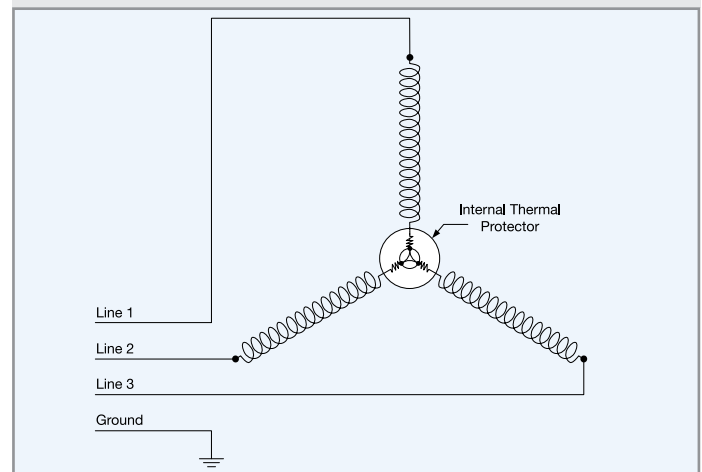
Capacitor Start and Run (CSR)

This motor arrangement uses a start capacitor and a run capacitor in parallel with each other and in series with the motor start winding. A potential relay removes the start capacitor from the circuit after the motor startup. The start winding remains energized with the run capacitor in series while the motor is in operation. This motor has high starting torque, runs efficiently, and is used on many refrigeration applications.

Electrical components:

- 1 external overload protector fitted on the compressor
- 1 electrical box containing:
 - 1 electromagnetic potential relay
 - 1 start capacitor fitted with a discharge resistance
 - 1 terminal block
 - 1 earth connection
 - 1 external run capacitor with fixing brackets
- 1 earth connection.

TRI



Three Phase Induction Motor (TRI)

The motor is connected to the neutral point of the star connections. Three phase compressors are protected by an internal overload, which cuts out three phases simultaneously in case of too high winding motor temperature and high current.



Compressor Tube Connections

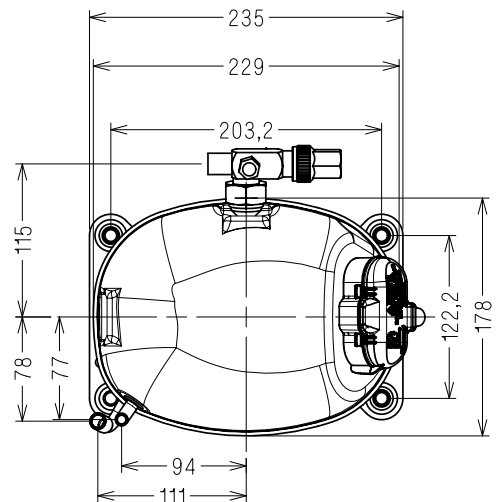
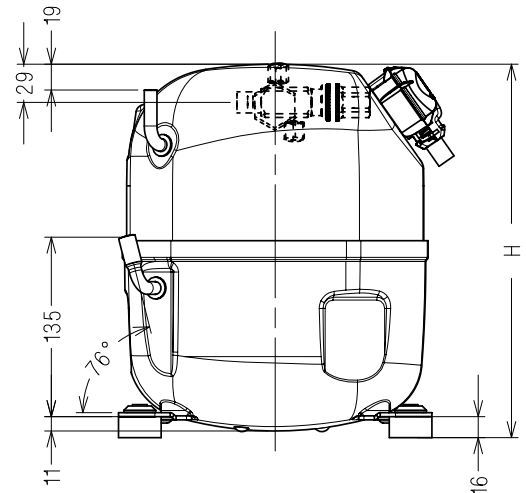


Oil equalization
Optional
(For tandem compressor
and parallel system)

| | Nature | Configuration |
|---|------------------|---------------|
| 1 | Suction tube | Option* |
| 2 | Suction rotalock | Option* |

* Choose one of these configurations

Compressor Dimensions



| H = 268 mm | H = 280 mm | H = 292 mm |
|-----------------|---------------|-----------------|
| H = 10.6 inches | H = 11 inches | H = 11.5 inches |
| CAJ/TAJ 4452Y | CAJ/TAJ 4492N | TAJ4519Z-KZ |
| CAJ/TAJ 4461Y | CAJ/TAJ 4511N | TAJ2464Z-KZ |
| CAJ/TAJ 4476Y | CAJ/TAJ 4513N | - |
| CAJ/TAJ9480Z | CAJ/TAJ9510Z | - |
| CAJ/TAJ2428Z | CAJ/TAJ9513Z | - |
| CAJ/TAJ2432Z | CAJ/TAJ4517Z | - |
| CAJ2446U | CAJ/TAJ4519Z | - |
| CAJ2464U | CAJ2440Z | - |
| - | CAJ/TAJ2446Z | - |
| - | CAJ/TAJ2464Z | - |

PACKAGING

What's in a Single Pack?



Junior Box

Overload included on single phase only

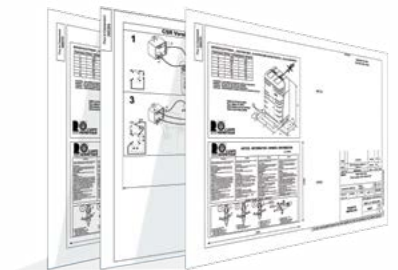


Te-Connect



Silent-Block

| CHECKLIST | |
|-----------|---------------------------|
| ✓ | Compressor |
| ✓ | Installation Instructions |
| ✓ | Junior Box |
| ✓ | Te-Connect |
| ✓ | Silent-Block |
| ✓ | Relay |
| ✓ | Potential Relay |
| ✓ | Terminal Block |
| ✓ | Run Capacitor |
| ✓ | Start Capacitor |



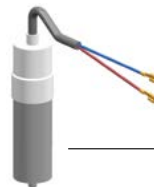
Installation Instructions

INCLUDED

Example shown not representative of all applications



Start Capacitor



Run Capacitor



Terminal Block



Potential Relay

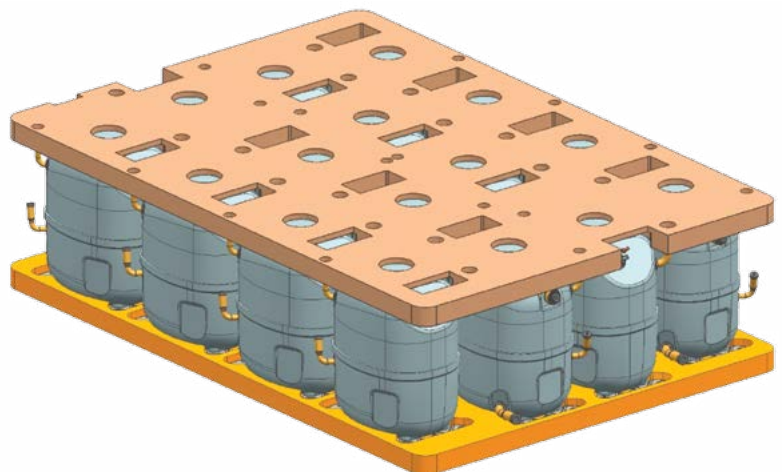


Relay

What's in a Multiple Pack?

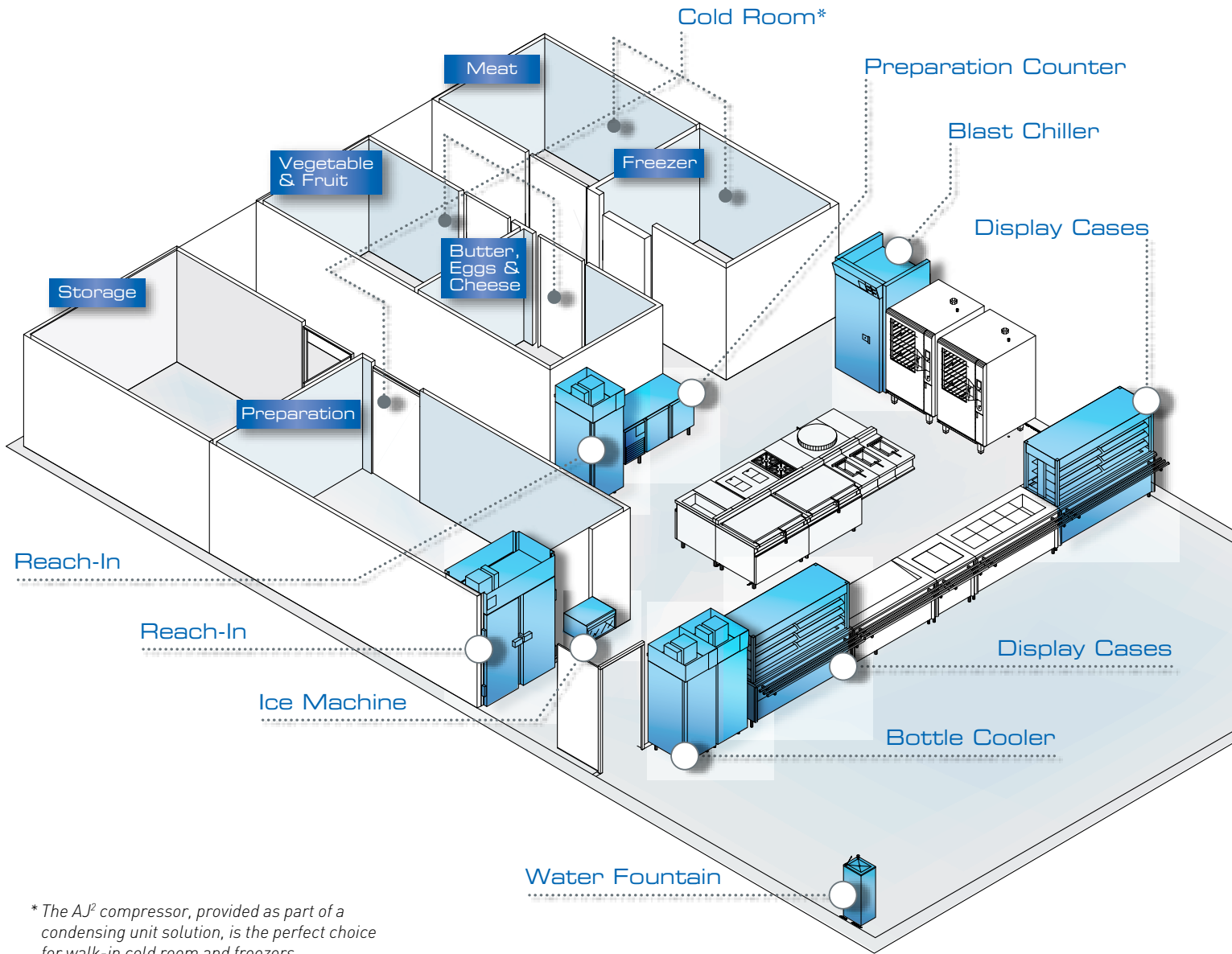
Possible Configurations

- 1 Compressors with electrical box**
12 per layer
2 layers per pallet
- 2 PSC or CSR Compressors without electrical box**
14 per layer
2 layers per pallet
- 3 Bare Compressors without electrical box**
16 per layer
2 layers per pallet



APPLICATIONS

Professional Refrigeration Equipment



* The AJ² compressor, provided as part of a condensing unit solution, is the perfect choice for walk-in cold room and freezers.

