

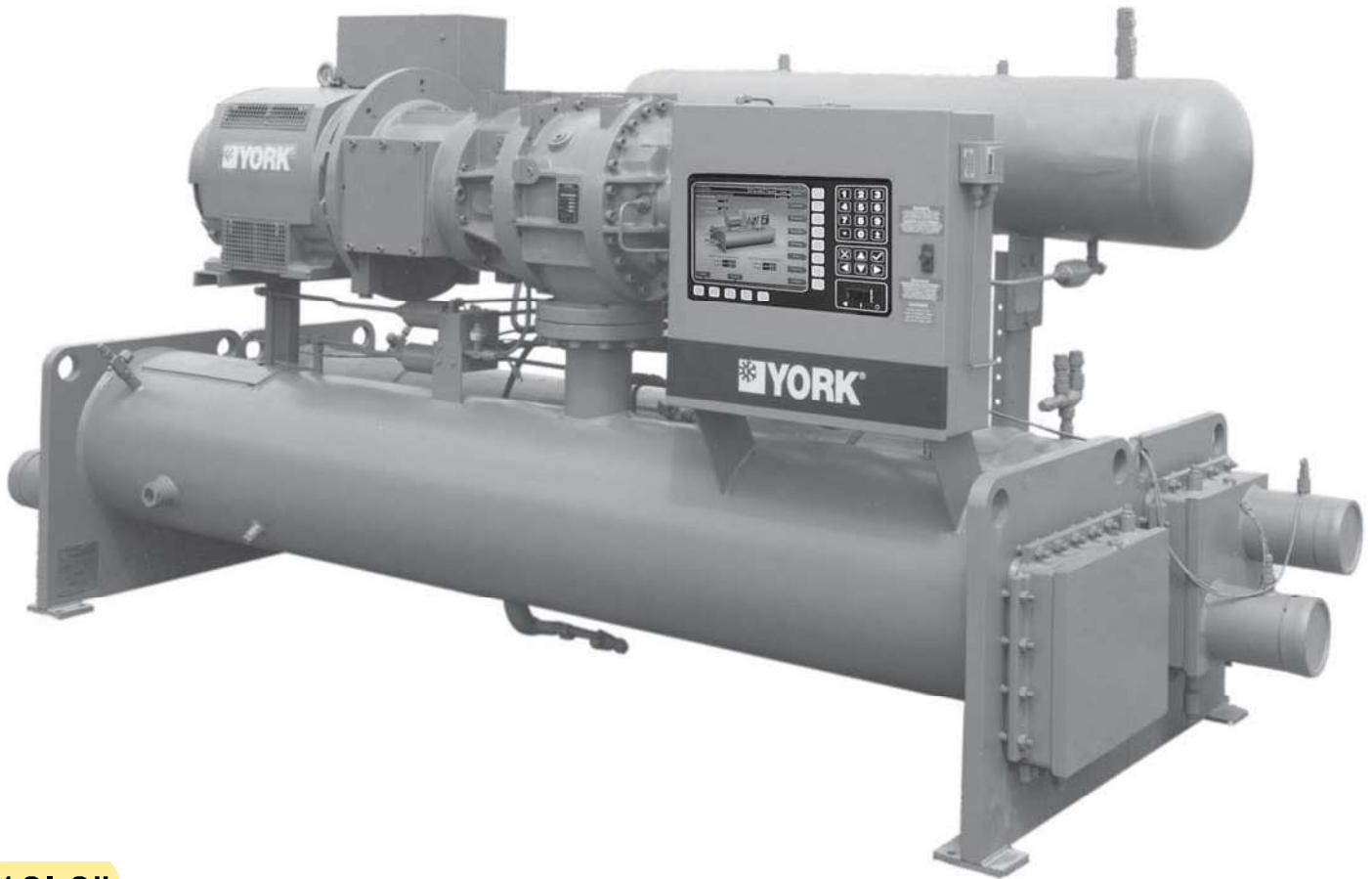
Model #: YSCBCAS2-CGES
Serial #: SKXM-866350

FORM 160.80-EG1 (511)

2011
190 Tons



BY JOHNSON CONTROLS



L: 13' 3"
W: 5' 4"
H: 6' 6"

Shipping Weight: 12,377 lbs
Operating Weight: 13,483 lbs

*Model YS Rotary Screw Liquid Chillers
Design Level E*



100 thru 675 tons
(315 thru 2375 KW)
R-134



Products are produced at a facility whose quality-management systems are ISO9001 certified.

Contents

FORM 160.80-EG1 (511) 1

Introduction..... 3

Ratings 4

OptiView Control Center 5

Mechanical Specifications..... 13

Accessories and Modifications..... 18

Unit Components..... 20

Application Data 22

Dimensions - Std 30

Dimensions - Std..... 34

Weights - Std..... 38

Dimensions - Metric 40

Weights - Metric..... 48

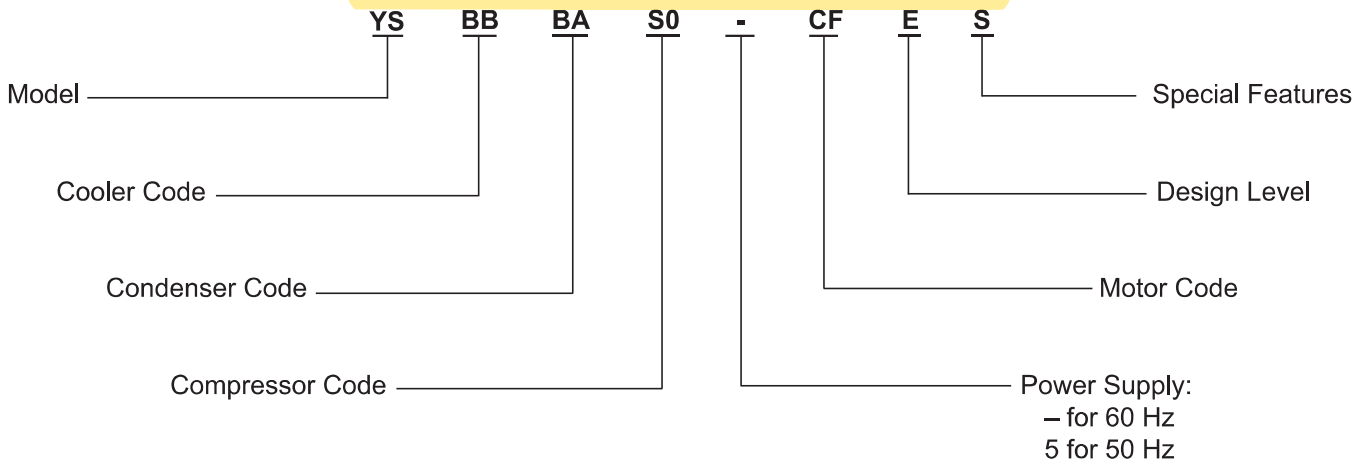
Guide Specifications 50

Metric Conversion Tables..... 56

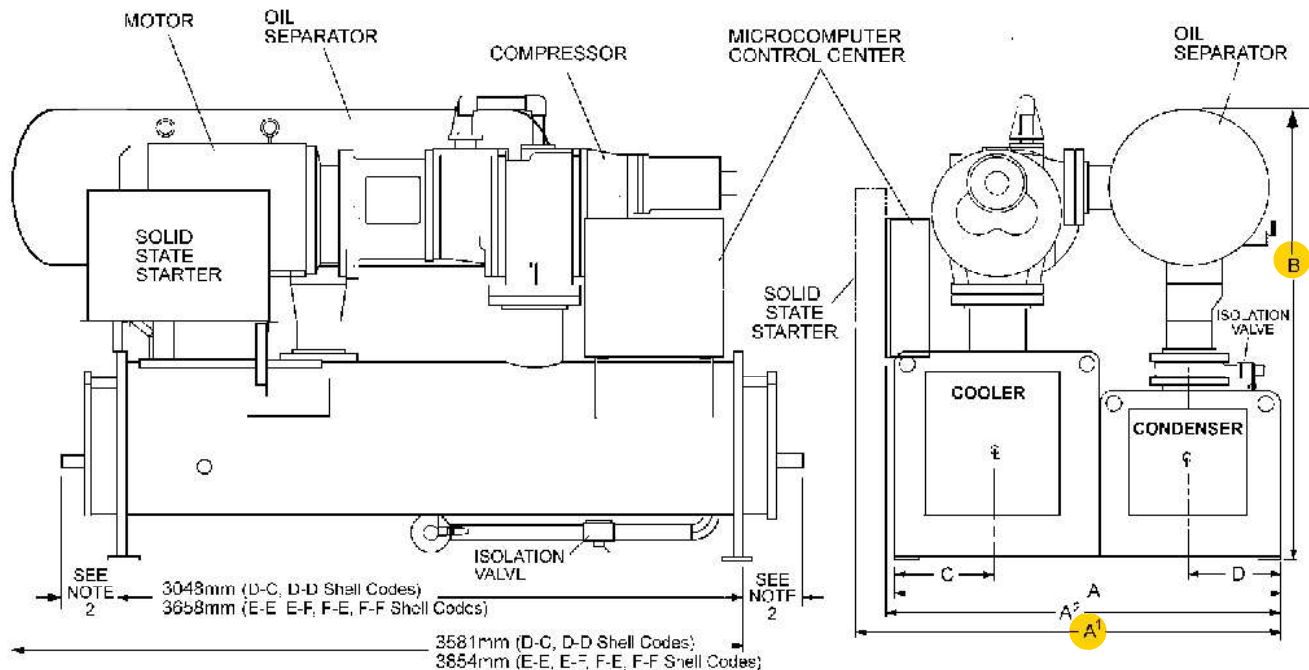
NOMENCLATURE

The model number denotes the following characteristics of the unit:

YS CB CA S2 - CG E S



S0 - S3 COMPRESSOR R-134a UNITS (50 and 60 Hz)



| DIMENSION | S0 and S1 COMPRESSOR | | | | S2 COMPRESSOR | | | S2 and S3 COMPRESSOR | | | |
|---------------------------------|--------------------------------------|------------|------------|------------|---------------|-----------|-----------|----------------------|-----------|-----------|-----------|
| | SHELL CODES (Evaporator – Condenser) | | | | | | | | | | |
| | B-B | B-C | C-B | C-C | B-B | B-C | C-B | C-C | C-D | D-C | D-D |
| A | 4'-2-7/8" | | | | 5'-2-1/2" | | | 5'-2-1/2" | | | |
| A' | 4'-6-3/4" | 4'-6-1/4" | 4'-6-3/4" | 4'-6-1/4" | 5'-3-3/4" | | | 5'-3-3/4" | | | |
| B – OVERALL HEIGHT ³ | 5'-8-5/8" | 5'-11-1/2" | 5'-10-1/4" | 5'-11-1/2" | 5'-11-1/4" | 6'-3-1/4" | 6'-3-1/4" | 6'-3-1/4" | 6'-7-5/8" | 6'-8-3/4" | 6'-9-3/8" |
| C – COOLER C/L | 1'-1-7/8" | | | | 1'-5" | | | 1'-5" | | | |
| D – CONDENSER C/L | 0'-11-5/8" | | | | 1'-2-1/4" | | | 1'-2-1/4" | | | |

Refer to Tables 6 and 7 on pages 26 & 27 for valid compressor/shell/motor combinations.

REFRIGERANT RELIEF VALVE CONNECTIONS

| SHELL CODE | EVAPORATOR SIZE | CONDENSER SIZE |
|------------|-----------------|----------------|
| B, C | 3/4" FPT SINGLE | 3/4" FPT DUAL |
| D | 1" FPT SINGLE | 3/4" FPT DUAL |

NOTES:

- All dimensions are approximate. Certified dimensions are available on request.
- Determine overall unit length by adding water box dimension to tube sheet length:
5-1/4" for compact return box
14" for compact water box with ANSI/AWWA C-606 couplings water nozzles
Add 1/2" to each compact water box with optional flanged water nozzles
- Unit height includes steel mounting plates under tube sheets. To determine overall height, add 7/8" for neoprene isolators (1" for optional spring isolators).

Weights - Std

R-134a UNITS

| SHELL CODE EVAP. - COND. | COM-PRES-SOR | SHIP-PING WT. (Lbs.) | OPER-ATING WT. (Lbs.) | REFRIG-ERANT CHARGE (Lbs. R-134a) |
|--------------------------|--------------|----------------------|-----------------------|-----------------------------------|
| BA-BA | S0 | 8,388 | 9,019 | 441 |
| BA-BB | S0 | 8,538 | 9,235 | 441 |
| BB-BA | S0 | 8494 | 9187 | 414 |
| BB-BB | S0 | 8644 | 9403 | 414 |
| BA-CA | S0 | 9,142 | 9,996 | 468 |
| BA-CB | S0 | 9,416 | 10,388 | 468 |
| BB-CA | S0 | 9,271 | 10186 | 432 |
| BB-CB | S0 | 9,545 | 10,579 | 432 |
| CA-BA | S0 | 9,297 | 10,084 | 558 |
| CA-BB | S0 | 9,448 | 10,299 | 558 |
| CB-BA | S0 | 9,528 | 10,412 | 558 |
| CB-BB | S0 | 9,679 | 10,627 | 558 |
| CA-CA | S0 | 10,011 | 11,020 | 585 |
| CA-CB | S0 | 10,285 | 11,413 | 585 |
| CB-CA | S0 | 10,242 | 11,348 | 585 |
| CB-CB | S0 | 10,516 | 11,740 | 585 |
| BA-BA | S1 | 8,454 | 9,085 | 441 |
| BA-BB | S1 | 8,608 | 9,301 | 441 |
| BB-BA | S1 | 8,560 | 9,253 | 414 |
| BB-BB | S1 | 8,711 | 9,469 | 414 |
| BA-CA | S1 | 9,208 | 9,974 | 468 |
| BA-CB | S1 | 9,482 | 10,454 | 468 |
| BB-CA | S1 | 9,337 | 10,252 | 432 |
| BB-CB | S1 | 9,611 | 10,645 | 432 |
| CA-BA | S1 | 9,363 | 10,150 | 558 |
| CA-BB | S1 | 9,513 | 10,365 | 558 |
| CB-BA | S1 | 9,594 | 10,478 | 558 |
| CB-BB | S1 | 9,745 | 10,693 | 558 |
| CA-CA | S1 | 10,077 | 11,086 | 585 |
| CA-CB | S1 | 10,351 | 11,479 | 585 |
| CB-CA | S1 | 10,308 | 11,414 | 585 |
| CB-CB | S1 | 10,582 | 11,806 | 585 |
| BA-BA | S2 | 10,542 | 11,174 | 441 |
| BA-BB | S2 | 10,693 | 11,390 | 441 |
| BB-BA | S2 | 10,648 | 11,342 | 414 |
| BB-BB | S2 | 10,797 | 11,558 | 414 |
| BA-CA | S2 | 11,298 | 12,065 | 468 |
| BA-CB | S2 | 11,571 | 12,547 | 468 |
| BB-CA | S2 | 11,426 | 12,342 | 432 |
| BB-CB | S2 | 11,701 | 12,735 | 432 |
| CA-BA | S2 | 11,452 | 12,241 | 558 |
| CA-BB | S2 | 11,604 | 12,457 | 558 |
| CB-BA | S2 | 11,683 | 12,567 | 558 |
| CB-BB | S2 | 11,833 | 12,783 | 558 |
| CA-CA | S2 | 12,146 | 13,155 | 612 |
| CA-CB | S2 | 12,419 | 13,547 | 612 |
| CB-CA | S2 | 12,377 | 13,483 | 612 |
| CB-CB | S2 | 12,650 | 13,874 | 612 |

| SHELL CODE EVAP. - COND. | COM-PRES-SOR | SHIP-PING WT. (Lbs.) | OPER-ATING WT. (Lbs.) | REFRIG-ERANT CHARGE (Lbs. R-134a) |
|--------------------------|--------------|----------------------|-----------------------|-----------------------------------|
| CA-DA | S2 | 13,357 | 14,765 | 675 |
| CA-DB | S2 | 13,874 | 15,506 | 675 |
| CB-DA | S2 | 13,588 | 15,093 | 11/5/1901 |
| CB-DB | S2 | 14105 | 15833 | 675 |
| DA-CA | S2 | 13293 | 14480 | 756 |
| DA-CB | S2 | 13,577 | 14872 | 756 |
| DB-CA | S2 | 13,668 | 15008 | 756 |
| DB-CB | S2 | 13941 | 15400 | 756 |
| DC-CA | S2 | 14,026 | 15,552 | 756 |
| DC-CB | S2 | 14,299 | 15,943 | 756 |
| DA-DA | S2 | 14,549 | 16,124 | 855 |
| DA-DB | S2 | 15,066 | 16,864 | 855 |
| DB-DA | S2 | 14,869 | 16,608 | 819 |
| DB-DB | S2 | 15,386 | 17,348 | 819 |
| DC-DA | S2 | 15,215 | 17,437 | 756 |
| DC-DB | S2 | 15,732 | 16,781 | 756 |
| CA-CA | S3 | 12,360 | 13,372 | 612 |
| CA-CB | S3 | 12,633 | 13,764 | 612 |
| CB-CA | S3 | 12,591 | 13,698 | 612 |
| CB-CB | S3 | 12,865 | 14,090 | 612 |
| CA-DA | S3 | 13,574 | 14,983 | 675 |
| CA-DB | S3 | 14,090 | 15,726 | 675 |
| CB-DA | S3 | 13,804 | 15,313 | 675 |
| CB-DB | S3 | 14,324 | 16,054 | 675 |
| DA-CA | S3 | 13,497 | 14,673 | 756 |
| DA-CB | S3 | 13,770 | 15,065 | 756 |
| DB-CA | S3 | 13,861 | 15,201 | 756 |
| DB-CB | S3 | 14,134 | 15,593 | 756 |
| DC-CA | S3 | 14,219 | 15,744 | 756 |
| DC-CB | S3 | 14,491 | 16,135 | 756 |
| DA-DA | S3 | 14,741 | 16,316 | 855 |
| DA-DB | S3 | 15,258 | 17,057 | 855 |
| DB-DA | S3 | 15,061 | 16,800 | 819 |
| DB-DB | S3 | 15,578 | 17,541 | 819 |
| DC-DA | S3 | 15,408 | 17,333 | 756 |
| DC-DB | S3 | 15,925 | 18,073 | 756 |
| DA-CA | S4 | 17,068 | 18,247 | 740 |
| DA-CB | S4 | 17,341 | 18,639 | 740 |
| DB-CA | S4 | 17,431 | 18,776 | 740 |
| DB-CB | S4 | 17,705 | 19,168 | 740 |
| DC-CA | S4 | 17,791 | 19,320 | 740 |
| DC-CB | S4 | 18,064 | 19,710 | 740 |
| DA-DA | S4 | 18,313 | 19,893 | 830 |
| DA-DB | S4 | 18,833 | 20,634 | 830 |
| DB-DA | S4 | 18,635 | 20,378 | 800 |
| DB-DB | S4 | 19,153 | 21,119 | 800 |
| DC-DA | S4 | 18,983 | 20,912 | 740 |
| DC-DB | S4 | 19,426 | 21,652 | 740 |