



MODEL #: Y/CAS0230EC46YGADBTXXXXXLXXXX44XXXXXXXAXXBVXXXXXL
XXXXXXXXXX

S/N: RFNM00863Z

Millennium®

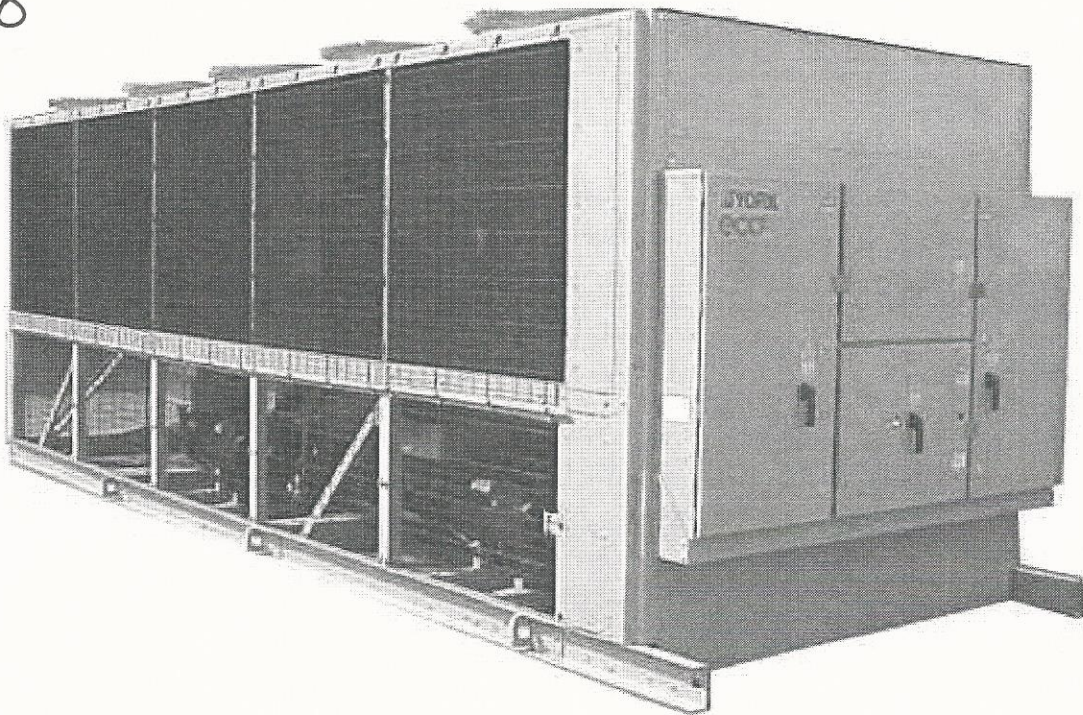
Air Cooled Screw Liquid Chillers (STYLE G)

YR: 2004

230 TONS

460-3-60

R-22



28971AR



130 - 200 TONS



Metric Conversions

125 - 420 TONS
(439 - 1460 kW)
60 Hz



200, 230, 380,
460, & 575 Models

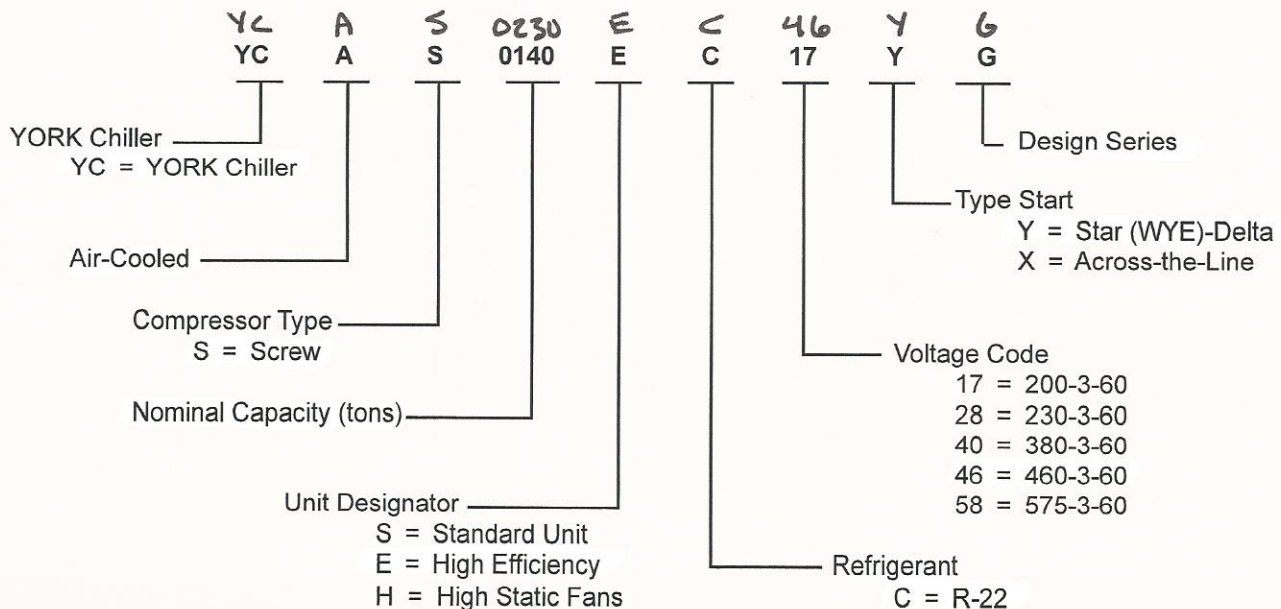


TABLE OF CONTENTS

Introduction	3
Specifications	4
Accessories and Options	7
Temperatures and Flows	10
Water Pressure Drop	12
Ratings – English Units - R22	14
Ratings – SI Units - R22	26
Physical Data	32
Operating Weights – Aluminum Fin Coils	60
Isolator Selection – Aluminum Fin Coils	61
Operating Weights – Copper Fin Coils	62
Isolator Selection – Copper Fin Coils	63
Isolator Details	64
Electrical Data	66
Electrical Data	68
Electrical Notes	74
Electrical Notes (Continued)	75
Power Connection Options	76
Typical Control Wiring	80
Application Data	82
Guide Specifications	83

NOMENCLATURE

The Model Number denotes the following characteristics of the unit:



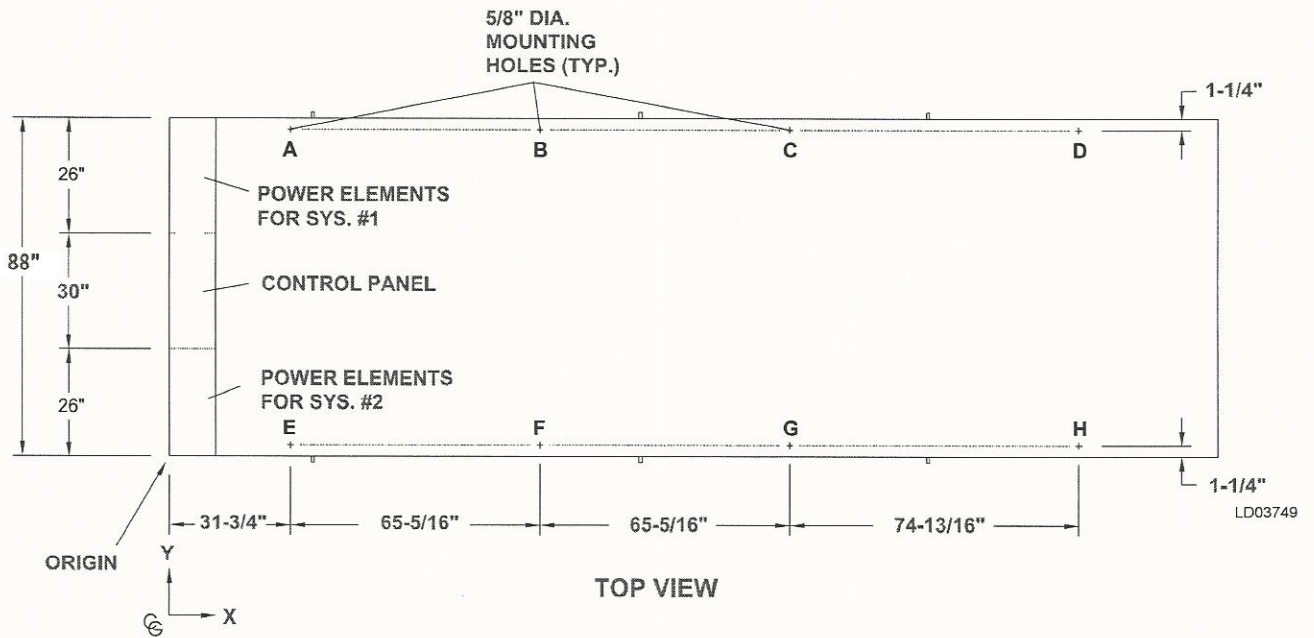
Physical Data

ENGLISH UNITS

MODEL NUMBER YCAS									
	0130EC	0140EC	0150EC	0160EC	0170EC	0180EC	0200EC	0210EC	0230EC
General Unit Data									
Unit Capacity at ARI Conditions, Tons	121.1	130.1	145.3	157.1	164.3	171.6	186.7	194.8	209.1
Number of Independent Refrigerant Circuits	2	2	2	2	2	2	2	2	2
Refrigerant Charge, R-22, Ckt.-1 / Ckt.-2, lbs.	180 / 180	180 / 180	180 / 190	190 / 190	190 / 190	190/190	220/220	220/220	220/220
Oil Charge, Ckt.-1 / Ckt.-2, gallons	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5	5 / 5
Shipping Weight:									
Aluminum Fin Coils, lbs.	9,888	10,110	10,599	10,583	10,694	10,805	11,849	11,970	12,081
Copper Fin Coils, lbs.	11,154	11,376	11,865	11,849	11,960	12,071	13,441	13,552	13,663
Operating Weight:									
Aluminum Fin Coils, lbs.	10,315	10,537	11,263	11,247	11,358	11,469	12,513	12,634	12,745
Copper Fin Coils, lbs.	11,581	11,803	12,529	12,513	12,624	12,735	14,105	14,216	14,327
Compressors, DXS Semihermetic Twin Screw									
Quantity per Chiller	2	2	2	2	2	2	2	2	2
Nominal Ton Size, Ckt.-1 / Ckt.-2	62 / 62	68 / 68	78 / 68	78 / 78	85 / 78	85/85	95/95	105/95	105/105
Refrigerant Economizer, Ckt.-1 / Ckt.-2	No / No	Yes / Yes	No / Yes	No / No	Yes / No	Yes / Yes	No / No	Yes / No	Yes / Yes
Condensers, High Efficiency Fin / Tube with Integral Subcooler									
Total Chiller Coil Face Area, ft ²	256	256	256	256	256	256	320	320	320
Number of Rows	3	3	3	3	3	3	3	3	3
Fins per Inch	13	13	13	13	13	13	13	13	13
CONDENSER FANS									
Number, Ckt.-1 / Ckt.-2	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4	4 / 4	5 / 5	5 / 5	5 / 5
Standard Fans									
Fan Motor, HP / kW	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8
Fan & Motor RPM	1140	1140	1140	1140	1140	1140	1140	1140	1140
Fan Diameter, inches	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4
Fan Tip Speed, feet/min.	10,575	10,575	10,575	10,575	10,575	10,575	10,575	10,575	10,575
Total Chiller Airflow, CFM	114,400	114,400	114,400	114,400	114,400	114,400	143,000	143,000	143,000
Low Noise Fans									
Fan Motor, HP / kW	2 / 1.53	2 / 1.53	2 / 1.53	2 / 1.53	2 / 1.53	2 / 1.8	2 / 1.8	2 / 1.8	2 / 1.8
Fan & Motor Speed, RPM	840	840	840	840	840	1140	1140	1140	1140
Fan Diameter, inches	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4
Fan Tip Speed, feet/min.	7,792	7,792	7,792	7,792	7,792	10,575	10,575	10,575	10,575
Total Chiller Airflow, cfm	112,400	112,400	112,400	112,400	112,400	114,400	143,000	143,000	143,000
High Static Fans									
Fan Motor, HP / kW	5 / 3.79	5 / 3.79	5 / 3.79	5 / 3.79	5 / 3.79	5 / 3.79	5 / 3.79	5 / 3.79	5 / 3.79
Fan & Motor RPM	1140	1140	1140	1140	1140	1,140	1,140	1,140	1,140
Fan Diameter, inches	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4	35.4
Fan Tip Speed, feet/min.	10,575	10,575	10,575	10,575	10,575	10,575	10,575	10,575	10,575
Total Chiller Airflow, CFM (@0.4" additional static)	114,400	114,400	114,400	114,400	114,400	114,400	143,000	143,000	143,000
Evaporator, Direct Expansion									
Water Volume, gallons	53	53	55	55	55	55	79	79	79
Maximum ¹ Water Side Pressure, PSIG	150	150	150	150	150	150	150	150	150
Maximum Refrigerant Side Pressure, PSIG	350	350	350	350	350	350	350	350	350
Minimum Chilled Water Flow Rate, GPM	138	138	200	200	200	200	250	250	250
Maximum Chilled Water Flow Rate, GPM	525	525	600	600	600	600	750	750	750
Water Connections, inches	8	8	8	8	8	8	8	8	8

¹ Optional 300 PSIG Waterside available

7'4"



CENTER OF GRAVITY (Alum.)			
YCAS	X	Y	Z
0200	119.4"	43.2"	38.0"
0210	119.4"	43.2"	38.0"
0230	119.4"	43.2"	38.0"

CENTER OF GRAVITY (Copper)			
YCAS	X	Y	Z
0200	122.3"	43.3"	41.0"
0210	122.3"	43.3"	41.0"
0230	122.3"	43.3"	41.0"

