

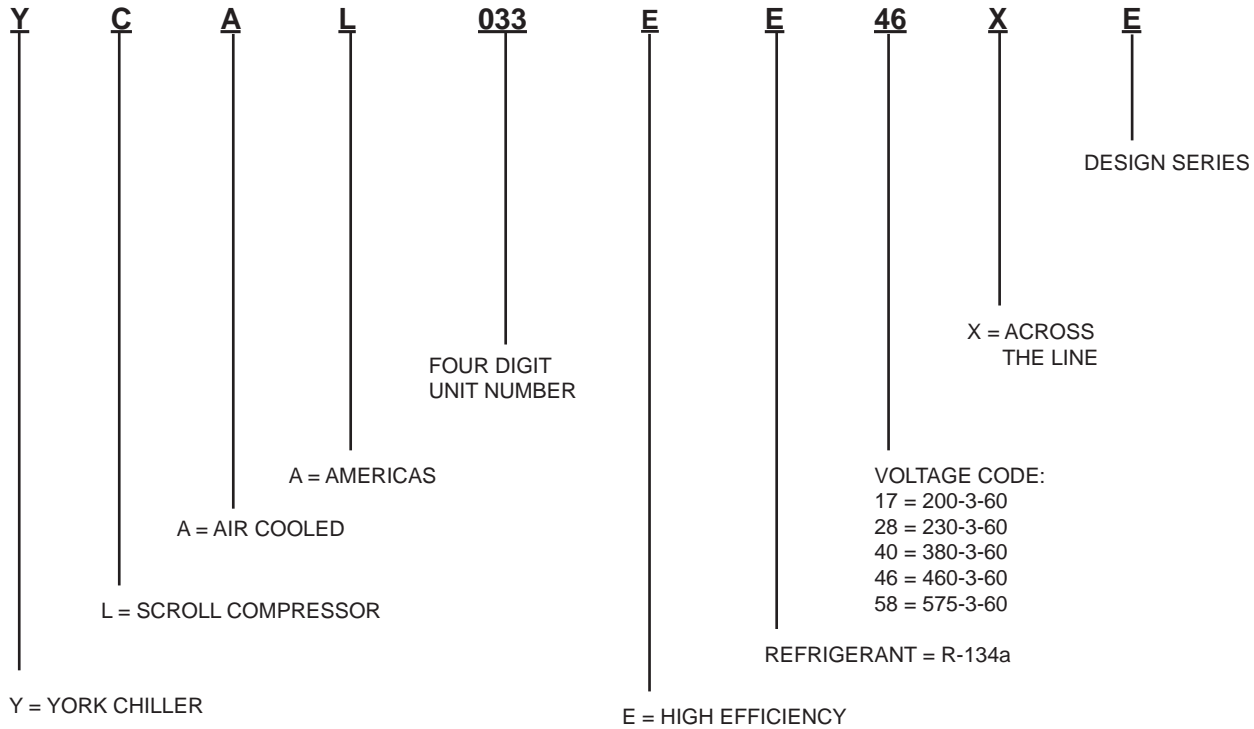
MODEL YCAL AIR-COOLED SCROLL CHILLERS WITH BRAZED PLATE HEAT EXCHANGERS STYLE B

15 – 65 TON
53 – 218 kW
60 Hz
R-410A



BY JOHNSON CONTROLS

Nomenclature



Approvals

- ASME Boiler and Pressure Vessel Code – Section VIII Division 1.
- AHRI Standard 550/590 and 551/591.
- UL 1995 – Heating and Cooling Equipment
- ASHRAE 15 – Safety Code for Mechanical Refrigeration
- ASHRAE Guideline 3 – Reducing Emission of Halogenated Refrigerants in Refrigeration and Air-Conditioning Equipment and Systems
- N.E.C. – National Electrical Code
- OSHA – Occupational Safety and Health Act



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

Physical Data and Nominal Ratings

60HZ

MODEL YCAL00		19	22	28	33	43	46	52	56	66
LENGTH		109.8	109.8	118.6	118.6	144.8	144.8	148.8	148.8	153.6
WIDTH		44.7	44.7	44.7	44.7	90.6	90.6	90.6	90.6	90.6
HEIGHT		46.1	46.1	50	50	47.8	47.8	62.6	62.6	62.6
NOMINAL TONS		14.5	17.8	24.3	28	34.9	38	45.2	45.2	60.1
Number of Refrigerant Circuits		1	1	1	1	2	2	2	2	2
Refrig. Chg, Opt, R-410A (lbs) ckt1/ckt2		25	30	45	50	35/35	40/35	45/45	50/50	65/65
Oil Charge, gallons ckt1/ckt2		1.8	1.8	1.7	2.2	1.8/1.8	1.8/1.8	1.7/1.7	1.7/1.7	2.3/2.2
Shipping Weight	Alum. Fin Coils, lbs	1454	1567	1799	2034	2942	2968	3196	3208	4097
	Copper Fin Coils, lbs	1597	1781	2005	2240	3300	3326	3673	3685	4703
Operating Weight	Alum. Fin Coils, lbs	1481	1597	1829	2077	2967	3001	3233	3245	4142
	Copper Fin Coils, lbs	1624	1811	2035	2283	3325	3359	3710	3722	4748
NOMINAL COMPRESSOR CAPACITY										
Compressor 1		8	10	15	15	10	12	13	15	20
Compressor 2		8	10	13	15	10	12	13	15	20
Compressor 3		–	–	–	–	–	–	–	–	–
Compressor 4		–	–	–	–	10	10	13	15	15
Compressor 5		–	–	–	–	10	10	13	15	15
Compressor 6		–	–	–	–	–	–	–	–	–
Condenser Total Face Area ft ²		34.7	34.7	43.5	43.5	87	87	116	116	128
Number of Rows Deep	Ckt. 1	2	3	3	3	2	2	3	3	3
	Ckt. 2	–	–	–	–	2	2	3	3	3
Fins per Inch		17	17	13	13	17	17	17	17	13
CONDENSER FANS, LOW SOUND										
Number of Fans	Ckt. 1	2	2	2	2	2	2	2	2	2
	Ckt. 2	–	–	–	–	2	2	2	2	2
Fan Power hp/fan		0.3	0.3	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Fan RPM		920	920	950	950	950	950	950	950	950
Total Chiller CFM		10833	10833	20000	20000	39500	39500	43333	43333	43333
CONDENSER FANS, ULTRA QUIET										
Number of Fans	Ckt. 1	2	2	2	2	2	2	2	2	2
	Ckt. 2	–	–	–	–	2	2	2	2	2
Fan Power hp/fan		1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2	1.2
Fan RPM		698	698	698	698	698	698	698	698	698
Total Chiller CFM		20000	20000	20000	20000	39500	39500	43333	43333	43333
EVAPORATOR										
Water Volume Gallons		1.2	1.6	2.5	3.2	2.7	3.5	3.5	4.1	4.9
Max Water Side Pressure PSIG		300	300	300	300	300	300	300	300	300
Max Refrig Side Pressure PSIG		450	450	450	450	450	450	450	450	450
Min. Chiller Water Flow GPM		10	10	10	10	40	40	60	60	60
Max. Chiller Water Flow GPM		150	150	150	150	200	200	300	300	300
Water Connection Size Inches		2	2	2	2	3	3	3	3	3

Physical Data and Nominal Ratings (Cont'd)

50HZ

MODEL YCAL00		19	22	28	33	43	46	52	56	66
LENGTH		2788.9	2788.9	3012.4	3012.4	3677.9	3677.9	3779.5	3779.5	3901.4
WIDTH		1135.4	1135.4	1135.4	1135.4	2301.2	2301.2	2301.2	2301.2	2301.2
HEIGHT		1170.9	1170.9	1270	1270	1214.1	1214.1	1590	1590	1590
NOMINAL TONS		51	62.6	85.4	98.4	122.7	133.6	158.9	158.9	211.2
Number of Refrigerant Circuits		1	1	1	1	2	2	2	2	2
Refrig. Chg, Opt, R-410A (kg) ckt1/ ckt2		11.3	13.6	20.4	22.7	15.9/15.9	18.1/15.9	20.4/20.4	22.7/22.7	29.5/29.5
Oil Charge, gallons ckt1/ckt2		6.8	6.8	6.5	8.3	6.8/6.8	6.8/6.8	6.4/6.4	6.4/6.4	8.7/8.3
Shipping	Alum. Fin Coils, lbs	659.5	710.8	816	922.6	1334.5	1346.3	1449.7	1455.1	1858.4
Weight	Copper Fin Coils, lbs	724.4	807.8	909.5	1016	1496.9	1508.6	1666	1671.5	2133.2
Operating	Alum. Fin Coils, lbs	671.8	724.4	829.6	942.1	1345.8	1361.2	1466.5	1471.9	1878.8
Weight	Copper Fin Coils, lbs	736.6	821.5	923.1	1035.6	1508.2	1523.6	1682.8	1688.3	2153.7
NOMINAL COMPRESSOR CAPACITY										
Compressor 1		28.1	35.1	52.7	52.7	35.1	42.2	45.7	52.7	70.3
Compressor 2		28.1	35.1	45.7	52.7	35.1	42.2	45.7	52.7	70.3
Compressor 3		–	–	–	–	–	–	–	–	–
Compressor 4		–	–	–	–	35.1	35.1	45.7	52.7	52.7
Compressor 5		–	–	–	–	35.1	35.1	45.7	52.7	52.7
Compressor 6		–	–	–	–	–	–	–	–	–
CONDENSER										
Total Face Area m ²		3.2	3.2	4	4	8.1	8.1	10.8	10.8	11.9
Number of Rows Deep	Ckt. 1	2	3	3	3	2	2	3	3	3
	Ckt. 2	–	–	–	–	2	2	3	3	3
Fins per Inch		17	17	13	13	17	17	17	17	13
CONDENSER FANS, ULTRA QUIET										
Number of Fans	Ckt. 1	2	2	2	2	2	2	2	2	2
	Ckt. 2	–	–	–	–	2	2	2	2	2
Fan Power kW/fan		0.2	0.2	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Fan RPM		920	920	950	950	950	950	950	950	950
Total Chiller CFM		5112.6	5112.6	9438.9	9438.9	18641.7	18641.7	20450.7	20450.7	20450.7
CONDENSER FANS, ULTRA QUIET										
Number of Fans	Ckt. 1	2	2	2	2	2	2	2	2	2
	Ckt. 2	–	–	–	–	2	2	2	2	2
Fan Power hp/fan		0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9	0.9
Fan RPM		698	698	698	698	698	698	698	698	698
Total Chiller CFM		9438.9	9438.9	9438.9	9438.9	18641.7	18641.7	20450.7	20450.7	20450.7
EVAPORATOR										
Water Volume Liters		5.5	7.3	11.4	14.5	12.3	15.9	15.9	18.6	22.3
Max Water Side Pressure Barg		20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7	20.7
Max Refrig Side Pressure Barg		31	31	31	31	31	31	31	31	31
Min. Chiller Water Flow l/s		0.6	0.6	0.6	0.6	2.5	2.5	3.8	3.8	3.8
Max. Chiller Water Flow l/s		9.5	9.5	9.5	9.5	12.6	12.6	18.9	18.9	18.9
Water Connections Size Inches		2	2	2	2	3	3	3	3	3