



YCWS (HFC-407C) 60 HZ WATER COOLED LIQUID CHILLERS

INSTALLATION, OPERATION AND
MAINTENANCE

New Release

Form 201.24-NM3.1 (202)

YCWS WATER COOLED LIQUID CHILLERS YCWS0100SB – 0240SB (ADDENDUM FOR HFC-407C MODELS)



00546VIP

**89 TONS THROUGH 209 TONS
(313kW THROUGH 735kW)**

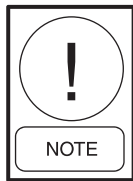


60 HERTZ
STYLE A
REFRIGERANT TYPE: HFC-407C

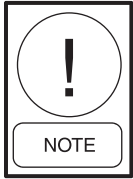


TABLE OF CONTENTS

Nomenclature 3
Physical Data 4
Motor Protection Dip Switch Settings 5
Electrical Data 6
 Multi-Point Power Supply 6 - 9
 Single Point Power Supply 10 -11



This addendum addresses only specification changes pertaining to YCWS units using HFC-407C as a refrigerant. For all other information, refer to Form 201.24-NM3. Please note that electrical data and motor protection dip switch settings are different between R22 and HFC-407C models and that information is contained in this addendum.



Units using HFC-407C are shipped with a 10 lb. (4.5 Kg) holding charge in the refrigerant system. The system charge must be added during unit installation.

MICROPANEL DIP SWITCH SETTINGS

Refer to 201.24-NM3, Section 4.7 for Micropanel dip switch settings, **except for Switch 3**. Follow the instructions below to ensure Switch 3 is properly set for HFC-407C operation.

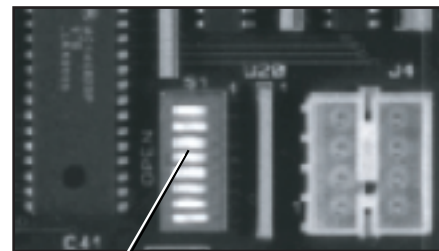
SWITCH 3: Refrigerant

Open: = 407C

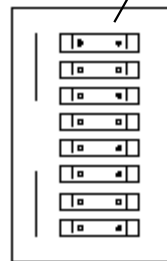
S 1 - 3 R E F R I G E R A N T
R - 407C



The R-407C mode (switch open) MUST be selected. The closed position MUST NOT be selected. Incorrect selection of this switch may cause serious damage to the chiller.



LD06630



“OPEN” Position:
Left side of switch pushed in

“CLOSED” Position:
Right side of switch pushed in

ENLARGED PHOTOGRAPH OF DIP SWITCHES ON MICROPROCESSOR BOARD

NOMENCLATURE

YCWS0140SB46YAA

1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
BASE PRODUCT TYPE		PRODUCT TYPE		NOMINAL CAPACITY				UNIT DESIGNATOR	REFRIGERANT	VOLTAGE/STARTER			DESIGN / DEVELOPMENT LEVEL	
Y	C	W	S	#	#	#	#	S	B	1	7	Y	A	A
: YORK		: Chiller		kW				Standard Unit	:R-407C	1	7	:Wye-Delta	:Design Series F	
: Water Cooled		S: Screw								2	8		:Engineering	
										4	0		Change	
										4	6		or PIN Level	
										5	8			

: 0100: 0120: 0140
: 0180: 0200: 0220
: 0240

PHYSICAL DATA

ENGLISH

MODEL YCWS	0100SB	0120SB	0140SB	0180SB	0200SB	0220SB	0240SB
General Unit Data							
Nominal Unit Capacity (Tons)	88.5	106.2	125.6	155.1	175.6	191.0	208.8
Number of Independent Refrigerant Circuits	2	2	2	2	2	2	2
Refrigerant Charge, HFC-407C, Ckt 1/Ckt. 2 (lbs.)	100/100	100/120	120/120	210/220	220/220	220/240	240/240
Oil Charge, Ckt. 1/Ckt. 2, (gal.)	2/2	2/3	3/3	3/3	3/3	3/3	3/3
Shipping Weight (lbs.)	7323	7632	7972	11722	11840	11897	12006
Operating Weight (lbs.)	8160	8469	8809	13256	13374	13393	13502
Compressors, Semi-Hermetic Twin Screw							
Quantity per Chiller	2	2	2	2	2	2	2
Nominal Size, Ckt. 1/ Ckt. 2	F/F	F/C	C/C	C/A	A/A	A/B	B/B
Condenser - Code							
Water Volume (gal.)	26	26	26	61	61	61	61
Maximum Water Side Pressure (PSIG)	150	150	150	150	150	150	150
Maximum Refrigerant Side Pressure (PSIG)	330	330	330	330	330	330	330
Dia. x Length, inches	16 x 108	16 x 108	16 x 108	18 x 156	18 x 156	18 x 156	18 x 156
Water Nozzle Connection Size, (inches)	5	5	5	6	6	6	6
Evaporator, Direct Expansion - Code							
Water Volume (gals.)	64	64	64	94	94	107	107
Maximum Water Side Pressure (PSIG)	150	150	150	150	150	150	150
Maximum Refrigerant Side Pressure (PSIG)	300	300	300	300	300	300	300
Dia. x Length, inches	19-1/2x 108	19-1/2x 108	19-1/2 x 108	21-1/4 x 156	21-1/4x 156	21-1/4x 156	21-1/4 x 156
Water Nozzle Connection Size, (inches)	8	8	8	8	8	8	8

SI

MODEL YCWS	0100SB	0120SB	0140SB	0180SB	0200SB	0220SB	0240SB
General Unit Data							
Nominal Unit Capacity (kW)	312.0	374.7	443.2	545.6	617.9	672.0	734.9
Number of Independent Refrigerant Circuits	2	2	2	2	2	2	2
Refrigerant Charge, HFC-407C, Ckt 1/Ckt. 2 (kgs.)	46/46	46/55	55/55	95/100	100/100	100/109	109/109
Oil Charge, Ckt. 1/Ckt. 2, (l)	7.6 / 7.6	7.6 / 11.4	11.4 / 11.4	11.4 / 11.4	11.4 / 11.4	11.4 / 11.4	11.4 / 11.4
Shipping Weight (kg.)	3322	3464	3616	5317	5370	5396	5446
Operating Weight (kg.)	3701	3841	3996	6013	6066	6075	6124
Compressors, Semi-Hermetic Twin Screw							
Quantity per Chiller	2	2	2	2	2	2	2
Nominal Size, Ckt. 1/ Ckt. 2	F/F	F/C	C/C	C/A	A/A	A/B	B/B
Condenser - Code							
Water Volume (l)	98	98	98	230	230	230	230
Maximum Water Side Pressure (barg)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Maximum Refrigerant Side Pressure (barg)	22.8	22.8	22.8	22.8	22.8	22.8	22.8
Dia. x Length, mm	406 x 2743	406 x 2743	406 x 2743	457 x 3963	457 x 3963	457 x 3963	457 x 3963
Water Nozzle Connection Size, (inches)	5	5	5	6	6	6	6
Evaporator, Direct Expansion - Code							
Water Volume (l/s)	242	242	242	357	357	406	406
Maximum Water Side Pressure (barg)	10.0	10.0	10.0	10.0	10.0	10.0	10.0
Maximum Refrigerant Side Pressure (barg)	22.7	22.7	22.7	22.7	22.7	22.7	22.7
Dia. x Length, mm	495 x 2743	495 x 2743	495 x 2743	540 x 3963	540 x 3963	540 x 3963	540 x 3963
Water Nozzle Connection Size, (inches)	8	8	8	8	8	8	8

MOTOR PROTECTION DIP SWITCH SETTINGS

**STAR DELTA OPEN TRANSITION STARTING –
200V/60 HZ**

YCWS	SYSTEM	SYS X MOTOR CURRENT = 100% FLA	SYS X MP INPUT VOLTAGE = 125% FLA	115% FLA	AMP SET	DIP SWITCH SETTINGS ON							
						-FMP LEFT = 1				RIGHT = 0			
						1 2 8	6 4 8	3 2 2	1 6 6	8	4	2	1
0100	1 & 2	151	2.42	174	100	0	1	1	0	0	1	0	0
0120	1	149	2.39	171	99	0	1	1	0	0	0	1	1
	2	202	3.24	232	134	1	0	0	0	0	1	1	0
0140	1 & 2	202	3.24	232	134	1	0	0	0	0	1	1	0
0180	1	193	3.09	222	128	1	0	0	0	0	0	0	0
	2	246	3.94	283	163	1	0	1	0	0	0	1	1
0200	1 & 2	246	3.94	283	163	1	0	1	0	0	0	1	1
0220	1	246	3.94	283	163	1	0	1	0	0	0	1	1
	2	295	4.73	339	196	1	1	0	0	0	1	0	0
0240	1 & 2	295	4.73	339	196	1	1	0	0	0	1	0	0

**STAR DELTA OPEN TRANSITION STARTING –
230V/60 HZ**

YCWS	SYSTEM	SYS X MOTOR CURRENT = 100% FLA	SYS X MP INPUT VOLTAGE = 125% FLA	115% FLA	AMP SET	DIP SWITCH SETTINGS ON							
						-FMP LEFT = 1				RIGHT = 0			
						1 2 8	6 4 2	3 2 6	1 6 6	8	4	2	1
0100	1 & 2	131	2.10	151	87	0	1	0	1	0	1	1	1
0120	1	130	2.08	150	86	0	1	0	1	0	1	1	0
	2	177	2.84	204	117	0	1	1	1	0	1	0	1
0140	1 & 2	175	2.80	201	116	0	1	1	1	0	1	0	0
0180	1	168	2.69	193	111	0	1	1	0	1	1	1	1
	2	214	3.43	246	142	1	0	0	0	1	1	1	0
0200	1 & 2	214	3.43	246	142	1	0	0	0	1	1	1	0
0220	1	214	3.43	246	142	1	0	0	0	1	1	1	0
	2	256	4.10	294	170	1	0	1	0	1	0	1	0
0240	1 & 2	256	4.10	294	170	1	0	1	0	1	0	1	0

**STAR DELTA OPEN TRANSITION STARTING –
380V/60 HZ**

YCWS	SYSTEM	SYS X MOTOR CURRENT = 100% FLA	SYS X MP INPUT VOLTAGE = 125% FLA	115% FLA	AMP SET	DIP SWITCH SETTINGS ON							
						-FMP LEFT = 1				RIGHT = 0			
						1 2 8	6 4 2	3 2 6	1 6 6	8	4	2	1
0100	1 & 2	79	1.27	91	52	0	0	1	1	0	1	0	0
0120	1	79	1.27	91	52	0	0	1	1	0	1	0	0
	2	108	1.73	124	72	0	1	0	0	1	0	0	0
0140	1 & 2	106	1.70	122	70	0	1	0	0	0	1	1	0
0180	1	101	1.62	116	67	0	1	0	0	0	0	1	1
	2	130	2.08	150	86	0	1	0	1	0	1	1	0
0200	1 & 2	130	2.08	150	86	0	1	0	1	0	1	1	0
0220	1	130	2.08	150	86	0	1	0	1	0	1	1	0
	2	155	2.48	178	103	0	1	1	0	0	1	1	1
0240	1 & 2	155	2.48	178	103	0	1	1	0	0	1	1	1

**STAR DELTA OPEN TRANSITION STARTING –
460V/60 HZ**

YCWS	SYSTEM	SYS X MOTOR CURRENT = 100% FLA	SYS X MP INPUT VOLTAGE = 125% FLA	115% FLA	AMP SET	DIP SWITCH SETTINGS ON							
						-FMP LEFT = 1				RIGHT = 0			
						1 2 8	6 4 2	3 2 6	1 6 6	8	4	2	1
0100	1 & 2	65	1.04	75	43	0	0	1	0	1	0	1	1
0120	1	65	1.04	75	43	0	0	1	0	1	0	1	1
	2	89	1.43	102	59	0	0	1	1	1	0	1	1
0140	1 & 2	88	1.41	101	58	0	0	1	1	1	0	1	0
0180	1	84	1.35	97	56	0	0	1	1	1	0	1	0
	2	108	1.73	124	72	0	1	0	0	1	0	0	0
0200	1 & 2	108	1.73	124	72	0	1	0	0	1	0	0	0
0220	1	108	1.73	124	72	0	1	0	0	1	0	0	0
	2	128	2.05	147	85	0	1	0	1	0	1	0	1
0240	1 & 2	128	2.05	147	85	0	1	0	1	0	1	0	1

**STAR DELTA OPEN TRANSITION STARTING –
575V/60 HZ**

YCWS	SYSTEM	SYS X MOTOR CURRENT = 100% FLA	SYS X MP INPUT VOLTAGE = 125% FLA	115% FLA	AMP SET	DIP SWITCH SETTINGS ON							
						-FMP LEFT = 1				RIGHT = 0			
						1 2 8	6 4 2	3 2 6	1 6 6	8	4	2	1
0100	1 & 2	53	0.85	61	35	0	0	1	0	0	0	1	1
0120	1	52	0.83	60	35	0	0	1	0	0	0	1	1
	2	71	1.14	82	47	0	0	1	0	1	1	1	1
0140	1 & 2	70	1.12	81	46	0	0	1	0	1	1	1	0
0180	1	67	1.07	77	44	0	0	1	0	1	1	0	0
	2	85	1.36	98	56	0	0	1	1	1	0	0	0
0200	1 & 2	85	1.36	98	56	0	0	1	1	1	0	0	0
0220	1	85	1.36	98	56	0	0	1	1	1	0	0	0
	2	103	1.65	118	68	0	1	0	0	0	1	0	0
0240	1 & 2	103	1.65	118	68	0	1	0	0	0	1	0	0

ELECTRICAL DATA

MULTI POINT POWER SUPPLY (SEE 201.24-NM3, FIG. 13, PAGE 30)

(Each of the two field provided power supply circuits individually protected with branch circuit protection. Field connections to factory provided Terminal Block (std), Non-Fused Disconnects (opt) or individual system Circuit Breakers (opt) in each of the two motor control centers.)

SYSTEM #1							
CHILLER MODELS	VOLT CODE HZ	MIN ⁽¹⁾ CIR. MCA	MIN NF DISC SW	MIN DUAL FUSE	MAX DUAL FUSE MAX CB	RLA	Y-D LRA
YCWS0100SB	-17	189	200	250	300	151	404
YCWS0120SB		187	200	225	300	149	404
YCWS0140SB		253	250	350	450	202	591
YCWS0180SB		242	250	300	400	193	591
YCWS0200SB		308	400	400	500	246	708
YCWS0220SB		308	400	400	500	246	708
YCWS0240SB		369	400	450	600	295	708
YCWS0100SB	-28	164	200	200	250	131	354
YCWS0120SB		163	150	200	250	130	354
YCWS0140SB		219	250	300	350	175	481
YCWS0180SB		210	200	300	350	168	481
YCWS0200SB		268	250	350	450	214	642
YCWS0220SB		268	250	350	450	214	642
YCWS0240SB		320	400	400	500	256	642
YCWS0100SB	-40	99	100	125	175	79	219
YCWS0120SB		99	100	125	175	79	219
YCWS0140SB		133	150	175	225	106	285
YCWS0180SB		127	150	175	225	101	285
YCWS0200SB		163	150	200	250	130	343
YCWS0220SB		163	150	200	250	130	343
YCWS0240SB		194	200	250	300	155	343
YCWS0100SB	-46	82	100	100	125	65	174
YCWS0120SB		82	100	100	125	65	174
YCWS0140SB		110	150	150	175	88	228
YCWS0180SB		105	100	150	175	84	228
YCWS0200SB		135	150	175	225	108	280
YCWS0220SB		135	150	175	225	108	280
YCWS0240SB		160	150	200	250	128	280
YCWS0100SB	-58	67	100	80	110	53	138
YCWS0120SB		65	60	80	110	52	138
YCWS0140SB		88	100	110	150	70	182
YCWS0180SB		84	100	110	150	67	182
YCWS0200SB		107	100	150	175	85	224
YCWS0220SB		107	100	150	175	85	224
YCWS0240SB		129	150	175	225	103	224

ELECTRICAL DATA

SYSTEM #2							
CHILLER MODELS	VOLT CODE HZ	MIN ⁽¹⁾ CIR. MCA	MIN NF DISC SW	MIN DUAL FUSE	MAX DUAL FUSE MAX CB	RLA	Y-D LRA
YCWS0100SB	-17	189	200	250	300	151	404
YCWS0120SB		253	250	350	450	202	591
YCWS0140SB		253	250	350	450	202	591
YCWS0180SB		308	400	400	500	246	708
YCWS0200SB		308	400	400	500	246	708
YCWS0220SB		369	400	450	600	295	708
YCWS0240SB		369	400	450	600	295	708
YCWS0100SB	-28	164	200	200	250	131	354
YCWS0120SB		222	250	300	350	177	481
YCWS0140SB		219	250	300	350	175	481
YCWS0180SB		268	250	350	450	214	642
YCWS0200SB		268	250	350	450	214	642
YCWS0220SB		320	400	400	500	256	642
YCWS0240SB		320	400	400	500	256	642
YCWS0100SB	-40	99	100	125	175	79	219
YCWS0120SB		135	150	175	225	108	285
YCWS0140SB		133	150	175	225	106	285
YCWS0180SB		163	150	200	250	130	343
YCWS0200SB		163	150	200	250	130	343
YCWS0220SB		194	200	250	300	155	343
YCWS0240SB		194	200	250	300	155	343
YCWS0100SB	-46	82	100	100	125	65	174
YCWS0120SB		112	150	150	200	89	228
YCWS0140SB		110	150	150	175	88	228
YCWS0180SB		135	150	175	225	108	280
YCWS0200SB		135	150	175	225	108	280
YCWS0220SB		160	150	200	250	128	280
YCWS0240SB		160	150	200	250	128	280
YCWS0100SB	-58	67	100	80	110	53	138
YCWS0120SB		89	100	110	150	71	182
YCWS0140SB		88	100	110	150	70	182
YCWS0180SB		107	100	150	175	85	224
YCWS0200SB		107	100	150	175	85	224
YCWS0220SB		129	150	175	225	103	224
YCWS0240SB		129	150	175	225	103	224

INCOMING WIRE RANGE SELECTIONS (CONT.)

MULTI POINT WIRING SYSTEM #1

CHILLER MODEL	VOLT CODE	TERM BLK	TERMINAL BLK CUSTOMER GROUND	N-F DISC	N-F DISC SW CUSTOMER GROUND	CKT. BRKER	CKT.BRKR CUSTOMER GROUND
YCWS0100SB	-17	#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0120SB		#1/0 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0140SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0180SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0200SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 2 - 4/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0220SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 2 - 4/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0240SB		(2) #2 - 4/0 AWG	(2) # 6 - 1/0 AWG	(2) #3/0 - 250 KCM	# 2 - 4/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0100SB	-28	#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0120SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0140SB		#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 4 - 3/0 AWG
YCWS0180SB		#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#6 - 1/0 KCM	# 4 - 3/0 AWG
YCWS0200SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0220SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0240SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 2 - 4/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0100SB	-40	#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG
YCWS0120SB		#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG
YCWS0140SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0180SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0200SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0220SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0240SB		#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0100SB	-46	#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0120SB		#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0140SB		#6 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG
YCWS0180SB		#6 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG
YCWS0200SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0220SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0240SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0100SB	-58	#18 - 2 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG
YCWS0120SB		#18 - 2 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG
YCWS0140SB		#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0180SB		#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0200SB		#6 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG
YCWS0220SB		#6 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG
YCWS0240SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	#6 - 350KCM	# 6 - 1/0 AWG

NOTES: (for Electrical Data on pages 6-11)

1. Minimum Circuit Ampacity (MCA) is based on 125% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit, per N.E.C. Article 430-24. If the optional Factory-mounted Control Transformer is provided, add the following MCA values to the electrical tables for the system providing power to the transformer: -50, add 5 amps;
2. The minimum recommended disconnect switch is based on 115% of the rated load amps for all loads included in the circuit, per N.E.C. Article 440.
3. Minimum fuse size is based upon 150% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit to avoid nuisance trips at start-up due to lock rotor amps. It is not recommended in applications where brown outs, frequent starting and stopping of the unit, and/or operation at ambient temperatures in excess of 35°C (95°F) is anticipated.
4. Maximum fuse size is based upon 225% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit, per N.E.C. Article 440-22.

INCOMING WIRE RANGE SELECTIONS (CONT.)**MULTI POINT WIRING SYSTEM #2**

CHILLER MODEL	VOLT CODE	TERM BLK	TERMINAL BLK CUSTOMER GROUND	N-F DISC	N-F DISC SW CUSTOMER GROUND	CKT. BRKER	CKT.BRKR CUSTOMER GROUND
YCWS0100SB	-17	#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 6 - 350 KCM	# 6 - 1/0 AWG
YCWS0120SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0140SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0180SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0200SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 2 - 4/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0220SB		(2) #2 - 4/0 AWG	(2) # 6 - 1/0 AWG	250 - 500 KCM	# 2 - 4/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0240SB		(2) #2 - 4/0 AWG	(2) # 6 - 1/0 AWG	(2) #3/0 - 250 KCM	# 2 - 4/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0100SB	-28	#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0120SB		#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 4 - 300 KCM	# 4 - 3/0 AWG
YCWS0140SB		#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 4 - 300 KCM	# 4 - 3/0 AWG
YCWS0180SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 2 - 4/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0200SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0220SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG	(2) 250 - 500 KCM	# 4 - 3/0 AWG
YCWS0240SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 2 - 4/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0100SB	-40	#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	# 4 - 300 KCM	# 8 - 2 AWG
YCWS0120SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0140SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0180SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0200SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0220SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 6 - 350 KCM	# 6 - 1/0 AWG
YCWS0240SB		#2 - 300 AWG	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 6 - 350 KCM	# 6 - 1/0 AWG
YCWS0100SB	-46	#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0120SB		#6 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 4 - 300 KCM	# 8 - 2 AWG
YCWS0140SB		#6 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 4 - 300 KCM	# 8 - 2 AWG
YCWS0180SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0200SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0220SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0240SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG	# 4 - 300 KCM	# 6 - 1/0 AWG
YCWS0100SB	-58	#18 - 2 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG
YCWS0120SB		#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0140SB		#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0180SB		#6 - 1/0 AWG	# 8 - 2 AWG	#14 - 1/0 AWG	# 8 - 2 AWG	# 4 - 300 KCM	# 8 - 2 AWG
YCWS0200SB		#6 - 1/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 4 - 300 KCM	# 8 - 2 AWG
YCWS0220SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 6 - 350 KCM	# 6 - 1/0 AWG
YCWS0240SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 8 - 2 AWG	# 6 - 350 KCM	# 6 - 1/0 AWG

- Circuit breakers supplied by third party vendors must be certified by local electrical standards. Maximum size is based on 225% of the rated load amps for the largest motor plus 100% of the rated load amps for all other loads included in the circuit.
- The "INCOMING WIRE RANGE" is the minimum and maximum wire size that can be accommodated by the unit wiring lugs. The (2) preceding the wire range indicates the number of termination points available per phase of the wire range specified. Actual wire size and number of wires per phase must be determined based on the National Electrical Code, using copper connectors only. Field wiring must also comply with local codes.
- A ground lug is provided for each compressor system to accommodate a field grounding conductor per N.E.C. Table 250-95. A control circuit grounding lug is also supplied.
- The supplied disconnect is a "Disconnecting Means" as defined in the N.E.C. 100, and is intended for isolating the unit for the available power supply to perform maintenance and troubleshooting. This disconnect is not intended to be a Load Break Device.
- Field Wiring by others which complies to the National Electrical Code & Local Codes.

ELECTRICAL DATA (CONT'D)

SINGLE-POINT POWER SUPPLY (SEE 201.24-NM3 FIGS. 14 & 15, PAGE 30 & 31)

(One field provided power supply circuit to the control panel. Field connections to factory provided Terminal Blocks (opt) or Non-Fused Disconnect (opt). Individual system Circuit Breakers, Non-Fused Disconnects or Class 'J' Fuse/Fuse Blocks in each motor control center.)

CHILLER MODELS	VOLT CODE HZ	MIN ⁽¹⁾ CIR. MCA	MIN N/F DISC SW	MIN DUAL FUSE	MAX DUAL FUSE MAX CB	SYSTEM #1		SYSTEM #2	
						RLA	Y-D LRA	RLA	Y-D LRA
YCWS0100SB	-17	340	400	400	450	151	404	151	404
YCWS0120SB		402	600	500	600	149	404	202	591
YCWS0140SB		455	600	600	600	202	591	202	591
YCWS0180SB		501	600	600	700	193	591	246	708
YCWS0200SB		554	600	700	700	246	708	246	708
YCWS0220SB		615	800	700	800	246	708	295	708
YCWS0240SB		664	800	800	800	295	708	295	708
YCWS0100SB	-28	295	400	350	400	131	354	131	354
YCWS0120SB		351	400	400	500	130	354	177	481
YCWS0140SB		394	600	450	500	175	481	175	481
YCWS0180SB		436	600	500	600	168	481	214	642
YCWS0200SB		482	600	600	600	214	642	214	642
YCWS0220SB		534	600	600	700	214	642	256	642
YCWS0240SB		576	600	700	800	256	642	256	642
YCWS0100SB	-40	178	200	200	250	79	219	79	219
YCWS0120SB		214	250	250	300	79	219	108	285
YCWS0140SB		239	250	300	300	106	285	106	285
YCWS0180SB		264	400	300	350	101	285	130	343
YCWS0200SB		293	400	350	400	130	343	130	343
YCWS0220SB		324	400	400	400	130	343	155	343
YCWS0240SB		349	400	400	500	155	343	155	343
YCWS0100SB	-46	146	150	175	200	65	174	65	174
YCWS0120SB		176	200	200	250	65	174	89	228
YCWS0140SB		198	250	225	250	88	228	88	228
YCWS0180SB		219	250	250	300	84	228	108	280
YCWS0200SB		243	250	300	350	108	280	108	280
YCWS0220SB		268	400	350	350	108	280	128	280
YCWS0240SB		288	400	350	400	128	280	128	280
YCWS0100SB	-58	119	150	150	150	53	138	53	138
YCWS0120SB		141	150	175	200	52	138	71	182
YCWS0140SB		158	150	200	225	70	182	70	182
YCWS0180SB		173	200	200	250	67	182	85	224
YCWS0200SB		181	200	225	250	85	224	85	224
YCWS0220SB		214	250	250	300	85	224	103	224
YCWS0240SB		232	250	300	300	103	224	103	224

INCOMING WIRE RANGE SELECTIONS

SINGLE-POINT POWER SUPPLY

SYSTEM #1 & SYSTEM #2					
CHILLER MODEL	VOLT CODE HZ	TERM BLK	TERM BLK CUST. GROUND	N/F DISC SW	N/F DISC SW CUST. GROUND
YCWS0100SB	-17	#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0120SB		(2) #2 - 300 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0140SB		(2) #2 - 300 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0180SB		(2) #2 - 500 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0200SB		(2) #2/0 - 500 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0220SB		(2) #2/0 - 500 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0240SB		(2) #2/0 - 500 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0100SB	-28	#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0120SB		(2) #2 - 4/0 AWG	(2) # 6 - 1/0 AWG	(2) #3/0 - 250 KCM	(2) # 6 - 1/0 AWG
YCWS0140SB		(2) #2 - 300 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0180SB		(2) #2 - 300 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0200SB		(2) #2/0 - 500 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0220SB		(2) #2/0 - 500 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 4 - 3/0 AWG
YCWS0240SB		(2) #2/0 - 500 KCM	(2) # 4 - 3/0 AWG	(2) 250 - 500 KCM	(2) # 2 - 4/0 AWG
YCWS0100SB	-40	#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0120SB		#2 - 300 KCM	# 6 - 1/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0140SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0180SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0200SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0220SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0240SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0100SB	-46	#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0120SB		#2 - 4/0 AWG	# 8 - 2 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0140SB		#2 - 300 KCM	# 6 - 1/0 AWG	#4 - 300 KCM	# 6 - 1/0 AWG
YCWS0180SB		#2 - 300 KCM	# 6 - 1/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0200SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0220SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0240SB		#2/0 - 500 KCM	# 4 - 3/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG
YCWS0100SB	-58	#6 - 1/0 AWG	# 8 - 2 AWG	#2 - 4/0 AWG	# 8 - 2 AWG
YCWS0120SB		#2 - 4/0 AWG	# 8 - 2 AWG	# 6 - 350 KCM	# 6 - 1/0 AWG
YCWS0140SB		#2 - 4/0 AWG	# 8 - 2 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0180SB		#2 - 4/0 AWG	# 8 - 2 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0200SB		#2 - 300 KCM	# 6 - 1/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0220SB		#2 - 300 KCM	# 6 - 1/0 AWG	#6 - 350 KCM	# 6 - 1/0 AWG
YCWS0240SB		#2 - 300 KCM	# 6 - 1/0 AWG	250 - 500 KCM	# 4 - 3/0 AWG

