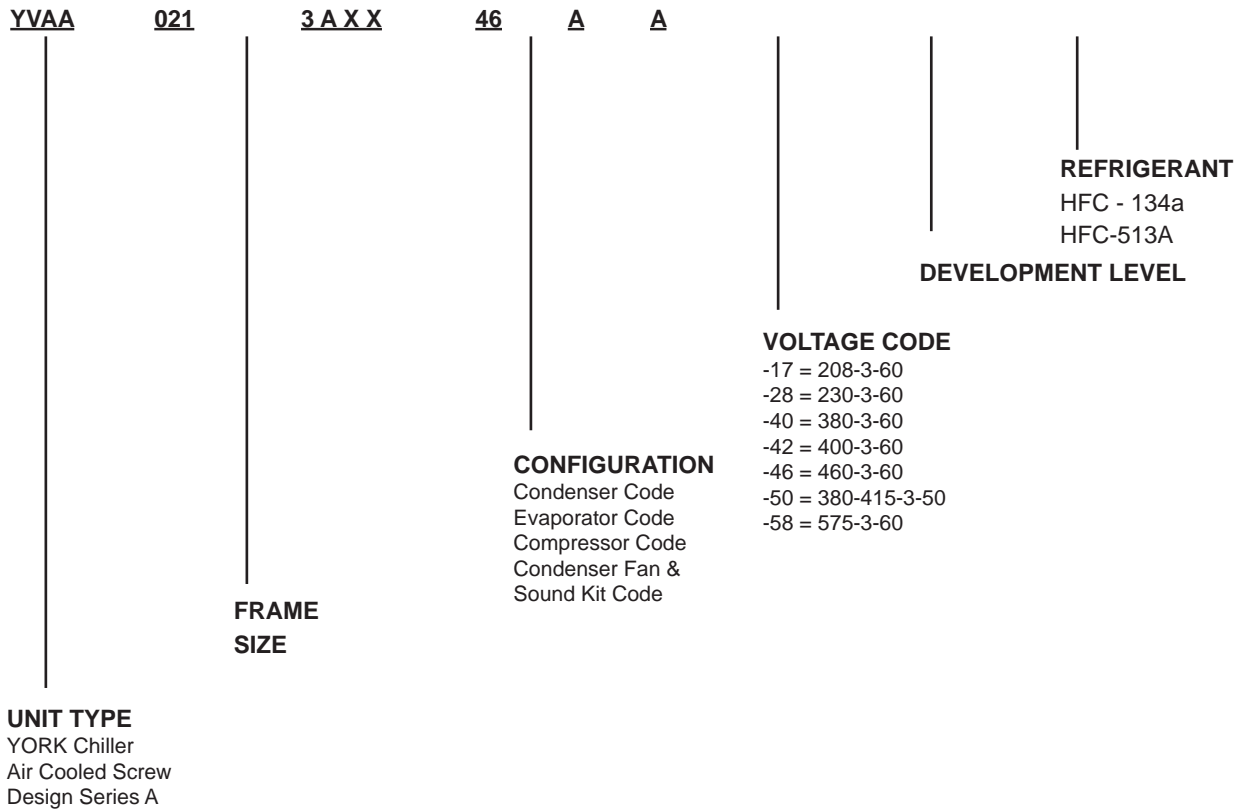


Model YVAA Air-Cooled Screw Compressor Liquid Chillers With Variable Speed Drive Style A

150-500 Tons
525-1750 kW
2 Compressor
50 and 60 Hz
HFC-134a or
HFC-513A



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

Physical Data - Microchannel Coil - English (SI)

The data shown in this table is applicable to selected typical configurations. Other configurations are available through our configuration/selection software. Please contact your nearest Johnson Controls Sales Office for the chiller configuration that best matches your specific needs.

UNIT FRAME	15	16	17	18	19	19	20	21	21	21
CONDENSER CODE	3	5	8	3	5	8	0	3	5	8
EVAPORATOR CODE	B	B	C	A	A	B	C	A	C	C
GENERAL UNIT DATA										
Number of Independent Refrigerant Circuits	2									
Refrigerant Charge, R-134a, or R-513A, Circuit.-1/Circuit.-2, lbs (kg)	175/175 (79/79)	190/190 (86/86)	225/225 (102/102)	175/155 (79/70)	190/170 (86/77)	220/195 (100/88)	205/205 (93/93)	175/175 (79/79)	225/225 (102/102)	240/240 (109/109)
Oil Charge, Circuit.-1/Circuit.-2, gal (liters)	2.1/2.0 (8.0/7.7)	2.2/2.2 (8.5/8.5)	2.5/2.5 (9.3/9.3)	2.4/2.0 (9.2/7.7)	2.6/2.1 (9.7/8.0)	2.7/2.2 (10.4/8.5)	2.6/2.6 (10.0/10.0)	2.5/2.5 (9.3/9.3)	2.8/2.8 (10.5/10.5)	2.9/2.9 (10.8/10.8)
Minimum Load %	10%									
Chassis Dimensions - Length, inches (mm)	203.3 (5163)	247.2 (6280)	291.2 (7397)	247 (6274)	291.2 (7397)	335.2 (8514)	226 (5741)	291.2 (7397)	291.2 (7397)	335.2 (8514)
Chassis Dimensions - Width, inches (mm)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)
Chassis Dimensions - Height, inches (mm)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)
COMPRESSORS, SEMI-HERMETIC SCREW										
Quantity per Chiller	2									
CONDENSER FANS										
Number Circuit-1/Circuit-2	4/4	5/5	6/6	6/4	7/5	8/6	4/4	6/6	6/6	7/7
Air on Condenser (Min/Max), °F (°C)	0°F/131°F (-17.8°C/55°C)									
EVAPORATOR, SHELL AND TUBE HYBRID FALLING FILM ²										
Water Volume, gal (liters)	58 (220)	58 (220)	71 (269)	48 (182)	48 (182)	58 (220)	71 (269)	48 (182)	71 (269)	71 (269)
Leaving Water Temperature (Min/Max), °F (°C) ²	40/70 (4.4/21.1)									
Maximum Water Side Pressure, psig (barg)	150 (10.3)									
Maximum Refrigerant Side Pressure, psig (barg)	235 (16.2)									
Evaporator Drain Connection, inches (mm)	3/4 (19)									

NOTES:

- Shipping and operating weights are not show as selected options may add weight to unit. Contact your nearest Johnson Controls Sales office for weight data.
- For leaving liquid temperature below 40°F(4.4°C) or above 70°F (21.1°C), contact your nearest Johnson Controls Sales Office for application requirements.

Physical Data - Microchannel Coil - English (SI) (Cont'd)

The data shown in this table is applicable to selected typical configurations. Other configurations are available through our configuration/selection software. Please contact your nearest Johnson Controls Sales Office for the chiller configuration that best matches your specific needs.

UNIT FRAME	23	24	24	26	27	27	27	27	29	30
CONDENSER CODE	3	5	8	3	0	3	5	8	5	3
EVAPORATOR CODE	B	C	C	B	D	D	E	E	E	C
GENERAL UNIT DATA										
Number of Independent Refrigerant Circuits	2									
Refrigerant Charge, R-134a or R-513A, Circuit.-1/Circuit.-2, lbs (kg)	210/190 (95/86)	250/225 (113/102)	250/250 (113/113)	210/210 (95/95)	250/250 (114/114)	265/265 (120/120)	265/265 (120/120)	270/270 (122/122)	310/265 (141/120)	290/245 (132/111)
Oil Charge, Circuit.-1/Circuit.-2, gal (liters)	2.7/2.6 (10.1/9.7)	2.9/2.8 (11.1/10.5)	2.9/2.9 (11.1/11.1)	2.7/2.7 (10.1/10.1)	3.0/3.0 (11.4/11.4)	3.0/3.0 (11.4/11.4)	3.0/3.0 (11.4/11.4)	3.1/3.1 (11.6/11.6)	4.2/3.1 (15.9/11.7)	4.1/3.0 (15.5/11.4)
Minimum Load %	10%									
Chassis Dimensions - Length, inches (mm)	291.2 (7397)	335.2 (8514)	379.1 (9631)	335.2 (8514)	291.2 (7397)	335.2 (8514)	335.2 (8514)	379.2 (9631)	379.2 (9631)	379.2 (9631)
Chassis Dimensions - Width, inches (mm)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)
Chassis Dimensions - Height, inches (mm)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)
COMPRESSORS, SEMI-HERMETIC SCREW										
Quantity per Chiller	2									
CONDENSER FANS										
Number Circuit-1/Circuit-2	7/5	8/6	8/8	7/7	6/6	7/7	7/7	8/8	9/7	9/7
Air on Condenser (Min/Max), °F (°C)	0°F/131°F (-17.8°C/55°C)									
EVAPORATOR, SHELL AND TUBE HYBRID FALLING FILM ²										
Water Volume, gal (liters)	58 (220)	71 (269)	71 (269)	58 (220)	82 (310)	82 (310)	113 (428)	113 (428)	113 (428)	71 (269)
Leaving Water Temperature (Min/Max), °F (°C) ²	40/70 (4.4/21.1)									
Maximum Water Side Pressure, psig (barg)	150 (10.3)									
Maximum Refrigerant Side Pressure, psig (barg)	235 (16.2)									
Evaporator Drain Connection, inches (mm)	3/4 (19)									

NOTES:

- Shipping and operating weights are not show as selected options may add weight to unit. Contact your nearest Johnson Controls Sales office for weight data.
- For leaving liquid temperature below 40°F(4.4°C) or above 70°F (21.1°C), contact your nearest Johnson Controls Sales Office for application requirements.

Physical Data - Microchannel Coil - English (SI) (Cont'd)

The data shown in this table is applicable to selected typical configurations. Other configurations are available through our configuration/selection software. Please contact your nearest Johnson Controls Sales Office for the chiller configuration that best matches your specific needs.

UNIT FRAME	30	30	31	32	33	34	34	36	37	37
CONDENSER CODE	5	8	8	3	3	3	5	8	3	5
EVAPORATOR CODE	C	E	E	E	C	E	E	J	F	J
GENERAL UNIT DATA										
Number of Independent Refrigerant Circuits	2									
Refrigerant Charge, R-134a or R-513A, Circuit.-1/ Circuit.-2, lbs (kg)	295/250 (134/114)	315/275 (143/125)	315/295 (143/134)	295/295 (134/134)	290/290 (132/132)	310/310 (141/141)	315/315 (143/143)	475/320 (216/145)	420/245 (191/111)	470/310 (213/141)
Oil Charge, Circuit.-1/ Circuit.-2, gal (liters)	4.1/3.0 (15.5/11.4)	4.3/3.2 (16.3/12.1)	4.3/3.3 (16.3/12.5)	4.1/4.1 (15.5/15.5)	4.1/4.1 (15.5/15.5)	4.2/4.2 (15.9/15.9)	4.3/4.3 (16.3/16.3)	5.6/5.0 (21.2/19.0)	5.3/2.9 (20.1/11.0)	5.6/4.3 (21.2/16.3)
Minimum Load %	10%									
Chassis Dimensions - Length, inches (mm)	423.1 (10748)	423.1 (10748)	467.1 (11865)	379.2 (9631)	423.1 (10748)	423.1 (10748)	467.1 (11865)	511 (12979)	467.1 (11864)	467.1 (11864)
Chassis Dimensions - Width, inches (mm)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2243)	88.3 (2243)	88.3 (2243)
Chassis Dimensions - Height, inches (mm)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.7 (2405)	94.7 (2405)	94.7 (2405)
COMPRESSORS, SEMI-HERMETIC SCREW										
Quantity per Chiller	2									
CONDENSER FANS										
Number Circuit-1/Circuit-2	10/8	10/8	8/8	8/8	9/9	9/9	10/10	14/8	13/7	13/7
Air on Condenser (Min/Max), °F (°C)	0°F/131°F (-17.8°C/55°C)									
EVAPORATOR, SHELL AND TUBE HYBRID FALLING FILM ²										
Water Volume, gal (liters)	71 (269)	113 (428)	113 (428)	113 (428)	71 (269)	113 (428)	113 (428)	147 (556)	96 (363)	147 (556)
Leaving Water Temperature (Min/Max), °F (°C) ²	40/70 (4.4/21.1)									
Maximum Water Side Pressure, psig (barg)	150 (10.3)									
Maximum Refrigerant Side Pressure, psig (barg)	235 (16.2)									
Evaporator Drain Connection, inches (mm)	3/4 (19)									

NOTES:

- Shipping and operating weights are not show as selected options may add weight to unit. Contact your nearest Johnson Controls Sales office for weight data.
- For leaving liquid temperature below 40°F(4.4°C) or above 70°F (21.1°C), contact your nearest Johnson Controls Sales Office for application requirements.

Physical Data - Microchannel Coil - English (SI) (Cont'd)

The data shown in this table is applicable to selected typical configurations. Other configurations are available through our configuration/selection software. Please contact your nearest Johnson Controls Sales Office for the chiller configuration that best matches your specific needs.

UNIT FRAME	39	41	42	42	44	47	48	49	50	52
CONDENSER CODE	8	3	5	8	3	5	3	0	0	3
EVAPORATOR CODE	J	H	H	J	G	J	G	K	J	J
GENERAL UNIT DATA										
Number of Independent Refrigerant Circuits	2									
Refrigerant Charge, R-134a or R-513A, Circuit.-1/ Circuit.-2, lbs (kg)	475/360 (216/163)	460/345 (209/156)	480/365 (218/166)	475/385 (215/175)	370/370 (168/168)	445/445 (202/202)	385/385 (175/175)	390/390 (179/179)	405/405 (184/184)	445/445 (202/202)
Oil Charge, Circuit.-1/ Circuit.-2, gal (liters)	5.6/5.1 (21.2/19.3)	5.5/4.3 (20.8/16.3)	5.6/4.4 (21.2/16.7)	5.6/5.1 (21.2/19.3)	5.0/5.0 (18.9/18.9)	5.8/5.8 (22.0/22.0)	5.1/5.1 (19.3/19.3)	5.2/5.2 (19.7/19.7)	5.2/5.2 (19.7/19.7)	5.4/5.4 (20.4/20.4)
Minimum Load %	10%									
Chassis Dimensions - Length, inches (mm)	555.3 (14104)	467.1 (11864)	555.3 (14104)	599.3 (15222)	555.3 (14104)	599.3 (15222)	599.3 (15222)	467.1 (11864)	467.1 (11865)	599.3 (15222)
Chassis Dimensions - Width, inches (mm)	88.3 (2243)	88.3 (2243)	88.3 (2243)	88.3 (2243)	88.3 (2243)	88.3 (2243)	88.4 (2244)	88.3 (2242)	88.3 (2243)	88.3 (2243)
Chassis Dimensions - Height, inches (mm)	94.7 (2405)	94.7 (2405)	94.7 (2405)	94.7 (2405)	94.7 (2405)	94.7 (2405)	94.7 (2405)	94.6 (2403)	94.7 (2405)	94.7 (2405)
COMPRESSORS, SEMI-HERMETIC SCREW										
Quantity per Chiller	2									
CONDENSER FANS										
Number Circuit-1/Circuit-2	14/10	12/8	14/10	14/12	12/12	13/13	13/13	10/10	10/10	13/13
Air on Condenser (Min/Max), °F (°C)	0°F/131°F (-17.8°C/55°C)									
EVAPORATOR, SHELL AND TUBE HYBRID FALLING FILM ²										
Water Volume, gal (liters)	147 (556)	130 (492)	130 (492)	147 (556)	96 (363)	147 (556)	96 (363)	130 (492)	147 (556)	147 (556)
Leaving Water Temperature (Min/Max), °F (°C) ²	40/70 (4.4/21.1)									
Maximum Water Side Pressure, psig (barg)	150 (10.3)									
Maximum Refrigerant Side Pressure, psig (barg)	235 (16.2)									
Evaporator Drain Connection, inches (mm)	3/4 (19)									

NOTES:

- Shipping and operating weights are not show as selected options may add weight to unit. Contact your nearest Johnson Controls Sales office for weight data.
- For leaving liquid temperature below 40°F(4.4°C) or above 70°F (21.1°C), contact your nearest Johnson Controls Sales Office for application requirements.

Physical Data - Round Tube Coil

The data shown in this table is applicable to selected typical configurations. Other configurations are available through our configuration/selection software. Please contact your nearest Johnson Controls Sales Office for the chiller configuration that best matches your specific needs.

UNIT FRAME	15	18	21	23	26	27	27	30
CONDENSER CODE	3	3	3	3	3	0	3	3
EVAPORATOR CODE	B	A	A	B	B	D	D	C
GENERAL UNIT DATA								
Number of Independent Refrigerant Circuits	2							
Refrigerant Charge, R-134a or R-513A, Circuit.-1/Circuit.-2, lbs (kg)	211/211 (96/96)	229/191 (104/87)	229/229 (104/104)	273/235 (124/107)	273/273 (124/124)	304/304 (138/138)	328/328 (149/149)	371/308 (168/140)
Oil Charge, Circuit.-1/Circuit.-2, gal (liters)	2.1/2.0 (8.0/7.7)	2.4/2.0 (9.2/7.7)	2.5/2.5 (9.3/9.3)	2.7/2.6 (10.1/9.7)	2.7/2.7 (10.1/10.1)	3.0/3.0 (11.4/11.4)	3.0/3.0 (11.4/11.4)	4.1/3.0 (15.5/11.4)
Minimum Load %	10%							
Chassis Dimensions - Length, inches (mm)	203.3 (5163)	247 (6274)	291.2 (7397)	291.2 (7397)	335.2 (8514)	291.2 (7397)	335.2 (8514)	379.2 (9631)
Chassis Dimensions - Width, inches (mm)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2242)
Chassis Dimensions - Height, inches (mm)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.6 (2403)
COMPRESSORS, SEMI-HERMETIC SCREW								
Quantity per Chiller	2							
CONDENSER FANS								
Number Circuit-1/Circuit-2	4/4	6/4	6/6	7/5	7/7	6/6	7/7	9/7
Air on Condenser (Min/Max), °F (°C)	0°F/131°F (-17.8°C/55°C)							
EVAPORATOR, SHELL AND TUBE HYBRID FALLING FILM ²								
Water Volume, gal (liters)	58 (220)	48 (182)	48 (182)	58 (220)	58 (220)	82 (310)	82 (310)	71 (269)
Leaving Water Temperature (Min/Max), °F (°C) ²	40/70 (4.4/21.1)							
Maximum Water Side Pressure, psig (barg)	150 (10.3)							
Maximum Refrigerant Side Pressure, psig (barg)	235 (16.2)							
Evaporator Drain Connection, inches (mm)	3/4							

NOTES:

- Shipping and operating weights are not show as selected options may add weight to unit. Contact your nearest Johnson Controls Sales office for weight data.
- For leaving liquid temperature below 40°F(4.4°C) or above 70°F (21.1°C), contact your nearest Johnson Controls Sales Office for application requirements.

Physical Data - Round Tube Coil (Cont'd)

The data shown in this table is applicable to selected typical configurations. Other configurations are available through our configuration/selection software. Please contact your nearest Johnson Controls Sales Office for the chiller configuration that best matches your specific needs.

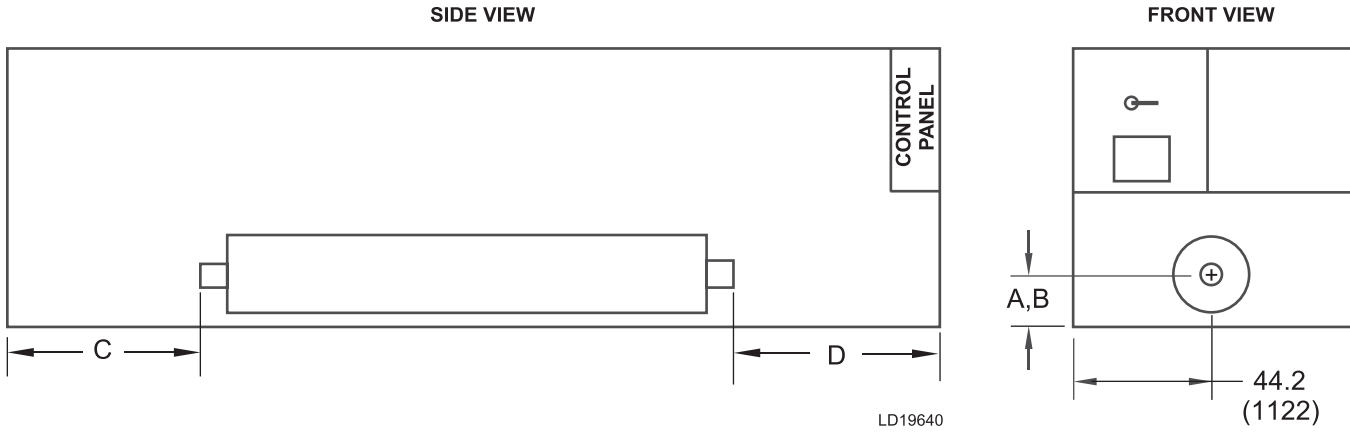
UNIT FRAME	32	33	34	37	41	44	48	49	52
CONDENSER CODE	3	3	3	3	3	3	3	0	3
EVAPORATOR CODE	E	C	E	F	H	G	G	K	J
GENERAL UNIT DATA									
Number of Independent Refrigerant Circuits	2								
Refrigerant Charge, R-134a or R-513A, Circuit.-1/Circuit.-2, lbs (kg)	367/367 (166/166)	371/371 (168/168)	391/391 (177/177)	537/308 (244/140)	568/417 (258/189)	478/478 (217/217)	502/502 (228/228)	480/480 (218/218)	562/562 (255/255)
Oil Charge, Circuit.-1/Circuit.-2, gal (liters)	4.1/4.1 (15.5/15.5)	4.1/4.1 (15.5/15.5)	4.2/4.2 (15.9/15.9)	5.3/2.9 (20.1/11.0)	5.5/4.3 (20.8/16.3)	5.0/5.0 (18.9/18.9)	5.1/5.1 (19.3/19.3)	5.2/5.2 (19.7/19.7)	5.8/5.8 (22.0/22.0)
Minimum Load %	10%								
Chassis Dimensions - Length, inches (mm)	379.2 (9631)	423.1 (10748)	423.1 (10748)	467.1 (11864)	467.1 (11864)	555.3 (14104)	599.3 (15222)	467.1 (11864)	599.3 (15222)
Chassis Dimensions - Width, inches (mm)	88.3 (2242)	88.3 (2242)	88.3 (2242)	88.3 (2243)	88.3 (2243)	88.3 (2243)	88.4 (2244)	88.3 (2242)	88.3 (2243)
Chassis Dimensions - Height, inches (mm)	94.6 (2403)	94.6 (2403)	94.6 (2403)	94.7 (2405)	94.7 (2405)	94.7 (2405)	94.7 (2405)	94.6 (2403)	94.7 (2405)
COMPRESSORS, SEMI-HERMETIC SCREW									
Quantity per Chiller	2								
CONDENSER FANS									
Number Circuit-1/Circuit-2	8/8	9/9	9/9	13/7	12/8	12/12	13/13	10/10	13/13
Air on Condenser (Min/Max), °F (°C)	0°F/131°F (-17.8°C/55°C)								
EVAPORATOR, SHELL AND TUBE HYBRID FALLING FILM ²									
Water Volume, gal (liters)	113 (428)	71 (269)	113 (428)	96 (363)	130 (492)	96 (363)	96 (363)	130 (492)	147 (556)
Leaving Water Temperature (Min/Max), °F (°C) ²	40/70 (4.4/21.1)								
Maximum Water Side Pressure, psig (barg)	150 (10.3)								
Maximum Refrigerant Side Pressure, psig (barg)	235 (16.2)								
Evaporator Drain Connection, inches (mm)	3/4								

NOTES:

- Shipping and operating weights are not show as selected options may add weight to unit. Contact your nearest Johnson Controls Sales office for weight data.
- For leaving liquid temperature below 40°F(4.4°C) or above 70°F (21.1°C), contact your nearest Johnson Controls Sales Office for application requirements.

Evaporator Options

OPTIONAL ONE-PASS EVAPORATOR



ALL DIMENSIONS - INCHES (MM)								
YVAA		A,B	C	D	E NOZZLE SIZE	WATER VOLUME. GALLONS (LITERS)	MINIMUM CHILLED WATER FLOW RATE GPM (L/S)	MAXIMUM CHILLED WATER FLOW RATE GPM (L/S)
FRAME	COND.							
15	3	20.8 (528)	6.8 (173)	34.5 (876)	8	58 (220)	500 (32)	1970 (124)
16	5	20.8 (528)	29.2 (742)	56.1 (1425)	8	58 (220)	500 (32)	1970 (124)
17	8	20.8 (528)	34.9 (886)	70 (1778)	8	71 (269)	590 (37)	2190 (138)
18	3	19.8 (503)	17.7 (450)	56.8 (1443)	6	48 (182)	400 (25)	1230 (77)
19	5	19.8 (503)	61.5 (1562)	56.7 (1440)	6	48 (182)	400 (25)	1230 (77)
19	8	21 (533)	117.3 (2979)	56.1 (1425)	8	58 (220)	500 (32)	1970 (124)
20	0	20.8 (528)	1.7 (43)	38.1 (968)	8	71 (269)	590 (37)	2190 (138)
21	3	19.8 (503)	61.7 (1567)	56.8 (1443)	6	48 (182)	400 (25)	1230 (77)
21	5	20.8 (528)	34.9 (886)	70 (1778)	8	71 (269)	590 (37)	2190 (138)
21	8	21 (533)	78.9 (2004)	70 (1778)	8	71 (269)	590 (37)	2190 (138)

Minimum Chilled Water Flow Rate is for full load selections; Variable Primary Flow ratings as low as 50% of the minimum are permitted. Glycol limits are higher. Please contact your Johnson Controls Sales Office for ratings and further information.