Carrier

United Technologies

turn to the experts

AQUAEDGE™

19XR

Centrifugal Liquid Chiller

Cooling Capacity：300~1650 RT (single-stage)

800~3000 RT (two-stage)

Turn To The Experts

Inheriting a rich legacy of innovation including inventing modern air-conditioning, Carrier has been a global leader in innovations for Heating Ventilation Air Conditioning (HVAC) and refrigeration solutions. Carrier is a part of UTC Climate, Controls & Security, a unit of United Technologies Corp., a leading provider to the aerospace and building systems industries worldwide.

With a broad portfolio of advanced technical patent awards, our global R&D center in Shanghai develops innovative heat, ventilation and air-conditioning (HVAC) solutions.

In 1998, Time magazine named Dr. Carrier oneof its 20 most influential builders and titans of the 20th century.

Model Number Nomenclature

19XR/XR-C/XR-E

19XR - 65 65 467 DJ S 52

Description
19XR-High Efficiency Centrifugal Liquid Chiller
19XRV-High Efficiency Centrifugal Liquid Chiller with VFD

Evaporator Size

Condenser Size

Compressor Code
Compressor Frame
Single-stage: 3, 4, 5
Two-stage: C, E

Motor Code

Motor Voltage Code
52: 400V-3Ph-50Hz
53: 3kV-3Ph-50Hz
54: 3.3kV-3Ph-50Hz
55: 6.3kV-3Ph-50Hz
5A: 10kV-3Ph-50Hz
5B: 11kV-3Ph-50Hz
62: 380V-3Ph-60Hz
63: 416V-3Ph-60Hz
67: 3.3kV-3Ph-60Hz
68: 4.16kV-3Ph-60Hz
69: 6.9kV-3Ph-60Hz
6A: 11kV-3Ph-60Hz

Motor Efficiency Code
For Compressor Frame 3, 4, 5
H-High Efficiency
S-Standard Efficiency
For Compressor Frame C/E and 19XR3 Optimization Product
Gear Code

Note: Carrier is dedicated to continuous product development. Components list will vary to meet different demands
*Availability please check with local sales office

19XR-6/7

19XR- A4H A4H 648 J N 7

Description
19XR-High Efficiency Centrifugal Liquid Chiller

Evaporator Size

Condenser Size

Compressor Code
First Digit Indicates Compressor Frame
Two-stage: 6, 7

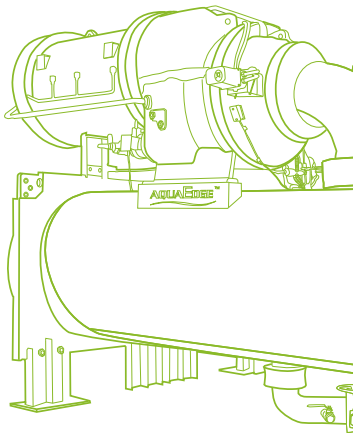
Gear Code

Motor Code

Motor Voltage code
4: 3kV-3Ph-50Hz
5: 3.3kV-3Ph-50Hz
6: 6.3kV-3Ph-50Hz
7: 10kV-3Ph-50Hz
8: 11kV-3Ph-50Hz
F: 3.3kV-3Ph-60Hz
G: 4.16kV-3Ph-60Hz
H: 6.9kV-3Ph-60Hz
J: 11kV-3Ph-60Hz

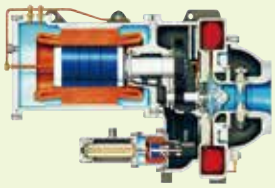
Energy-saving and High Efficiency

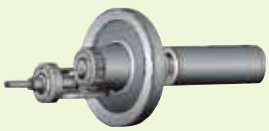
- Key components of compressor are designed with advanced aircraft engine technologies.
- Taper pipe diffuser is applied in single stage compressor to improve compressor efficiency. Carrier patent of split rotational diffuser inner ring can rotate with load change, adjust area and direction of flow channel, thus greatly improve the part load performance and reliability of chiller.
- Non-blade diffuser designed for two-stage compressor, combined with inner-stage economizer improves chiller performance and makes it a better choice of high lift application.
- High performance tubing - Tubing with internally and externally enhanced fins improves chiller performance by reducing overall resistance to heat transfer. The new heat exchanger reduces refrigerant charge and manufacturing cost.
- Carrier patent AccuMeter™ system regulates refrigerant flow according to load conditions, provides a liquid seal at all operating conditions and eliminates unintentional hot gas bypass.Thus ensure the part load performance of chiller.（Only for single stage compressor)



Stable Operation

- Variable inlet guide vanes - The guide vanes are connected with air-water piping, reducing installation craft-quality cable and controlled by a precise electronic actuator. The vanes regulate inlet flow to provide high efficiency through a wide operating range.
- Diffuser design-pipe diffuser design uses jet engine technology, increasing centrifugal compressor peak efficiency (single-stage only). Two-stage compressor utilizes vane-less diffuser to meet high lift application requirement with stable operation.
- Semi-hermetic Motors—cooling is accomplished by spraying liquid refrigerant on the motor windings. This highly efficient motor cooling method also eliminates the potential for shaft seal leaks and refrigerant/oil loss.



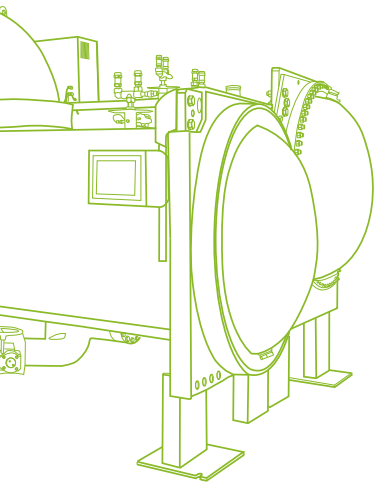


Environmental Leadership

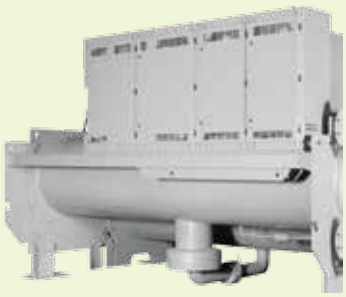
- Designed specifically for chlorine-free HFC-134a refrigerant (the environmentally preferred HFC-134a refrigerant with zero-ozone-depletion potential)

Flexible Combination

- 19XR/XR(V) AquaEdge chiller provides a complete line of compressors, motors and heat exchangers, ensuring the best combination of chiller components regardless of tonnage, lift, and efficiency specifications.
- Carrier offers multiple starters choices for different power supply application.
- 19XR(V) AquaEdge chiller can be equipped with high tier LF2 VFD which with Active Rectifier, the harmonic distortion (THD) ≤ 5%, fully comply IEEE519-1992 requirement, also the fundamental power factor can be up to 0.99. With the help of VFD, the IPLV.IP of 19XR(V) can achieve to 11.0.
- Colorful Touch Screen - friendly human machine interface , graphical display screens for the main components and support multi languages.



Free-standing VFD starter



Unit-mounted VFD starter

Convenient Installation

- Water boxes are equipped with standard flanges, which provides the ease of field piping.
- Positive pressure design can save valuable mechanical room space with reducing 35% chiller size compared with low pressure design. In addition, it eliminates the need for purge system to save the cost for customer.
- Refrigerant-cooled oil cooler, no need for field water piping, reduce installation cost.
- Cooler and condenser are designed and manufactured in accordance with relevant GB code. The unit isolation valves facilitate the condenser as a liquid container during the transition season, which provides ease of maintenance.

Carrier PIC5+ Control System - Intelligent Colorful Touch Screen

- Carrier two-stage centrifugal chiller equips latest PIC5+ control system with strong control and monitoring function during chiller operation. The PIC5+ control system applies a 10.5 inch colorful touch screen, which can support more than ten language choices for customer, real time display of operation parameters with pictures makes it more human friendly and comfortable interface for operation. This PIC5+ control system simulates and monitors chiller operation, adjusts cooling or heating capacity according to load change and provides various protection during operation.

Reliable Start-up and Operation

- PIC5+ control system provides customer security code to avoid any setting change without authorization. There are three levels of access with individual security code.
- When chiller receives start-up order, controller will conduct following pre-start safety checking, to ensure parameters like oil sump temperature, condensing pressure, bearing temperature, motor winding temperature, discharge temperature, evaporator saturated temperature and average line voltage etc. are normal.
- During chiller operation, except for the function of monitoring main operation parameters PIC5+ control system also has capability to record and display trend curve, which is real time trend of key components during operation. It ensures effective and reliable operation of chiller by optimized intelligent and dynamic control algorithm.
- PIC5+ control system has comprehensive protection during operation, such as oil sump temperature control, surge protection, overvoltage and overcurrent protection, discharge temperature overheat protection, bearing temperature overheat protection, evaporator and condenser anti-freeze protection, low discharge superheat protection etc. in order to ensure chiller long time reliable operation.

Effective Failure Diagnostic

- PIC5+ control system has failure diagnostic function and can be easily accessed via touch screen for detail chiller operation parameters. If control system detects failure the alarm will be initiated and related code will be recorded in alarm menu. The alarm records can be automatically saved by PIC5+ control system. Customer or Carrier service technician can read and delete alarm records by Carrier service/PCDCT tools.
- PIC5+ control system has additional pre-diagnostic function. Different with diagnostic function, information displayed from this function is mainly for maintenance purpose. For an example, to inform customer periodically replace lubricant and filter from this function.
- PIC5+ control system has email alarm function. PIC5+ control system can automatically send out an email with one or more alarm information to customer or service people through effective email address when alarm exists.

Flexible Interface and Connection

- The installation of Carrier PIC5+ colorful touch screen is very flexible. It greatly improves the convenience that customer can install touch screen at any corner of the chiller. “(Only for 19XR-6/7)”

- PIC5+ control system facilitates various accesses, such as LEN, USB and Carrier CCN access to meet customer and service people selections. PIC5+ is compatible with Carrier i-Vu control network and integrated BACnet/IP protocol. PIC5+ also facilitates protocol converter for Modbus and LonWorks to simplify the seamless connection with building control systems.

Main Page

- Control system main page operation and primary parameters monitored:
  1)Main page button
  2)menu page button
  3)Log in /Language button
  4)Start-up/Stop page button
  5)Alarm menu button
  6)Setting point
  7)Chiller load percentage
  8)Inlet Guide Vane position percentage
  9)Oil sump temperature
  10)Oil pressure difference
  11)Condensing water pump status
  12)Chilled water pump status
  13)Condenser water inlet/outlet temperature
  14)Evaporator water inlet/outlet temperature
  15)Condenser saturated temperature and pressure
  16)Evaporator saturated temperature and pressure

- Customer can easily read primary information of chiller, components status and access to other interfaces from this page. They are:
  • General parameter page
  • Temperature/Pressure page
  • Input/Output parameter page
  • Water system parameter page
  • Operation time
  • Mode
  • Graphic data trend

19XR Two-stage Centrifugal Chiller

In 2013, Carrier introduced a high-efficiency two-stage centrifugal chiller to deliver continuous energy saving and environmental protection, as well as the most comprehensive range of air-conditioning, heat pump, energy recovery, ice thermal storage, VFD and high-voltage applications.

Environmental Leadership

The system has been designed specifically for chlorine-free HFC-134a refrigerant, the environmentally preferred HFC-134a refrigerant with zero-ozone depletion potential.

Industry-leading Efficiency

19XR chillers can achieve up to 6.6 full load COP_R and 7.5 IPLV.IP (without VFD) or 11.0 IPLV.IP (with VFD) at AHRI conditions.

- Advanced technology two stage high efficiency compressor , design specifically for HFC-134a.
- New blunt leading-edge IGV for part load efficiency improvement.
- An interstage economizer that improves system and efficiency and increases capacity.


Two-stage Compressor


IGV


Impeller


Economizer

Wide Application

The innovative two-stage compressor provides a dramatic range of capabilities. With a maximum LWT of 65℃ and a minimum LCWT of -6℃, the 19XR two-stage centrifugal chiller is ideal wherever energy conservation and environmental protection are required.

Stable Operation

The two-stage compressor has excellent load-adjustment capabilities to achieve high efficiency and stability at a variety of load and temperature conditions, including its minimum load of 10%.
The 19XR two-stage centrifugal chiller also features a refrigerant cooled semi-hermetic low current inrush motor, eliminating the need for shaft seal and oil refrigerant containment components.
Double-grooved tube sheets make a superior leak-tight joint when combined with roller expansion.

Low Sound Level

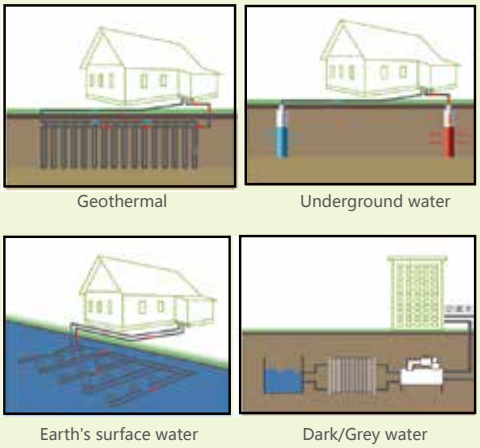
For ultra-quiet operation, the advanced two-stage compressor has an optimized aero-structural design and allows lower impeller speed.

Modular Construction

The cooler, condenser and compressor assemblies are compact and entirely bolted together. This design makes the chiller ideally suited for replacement projects where ease of disassembly and reassembly at the jobsite is essential.

Heat Pump Application

The heat pump system utilizes natural energy storage in soil, bedrock, groundwater, surface water, wastewater and air to satisfy demand for building cooling, heating and hot water.

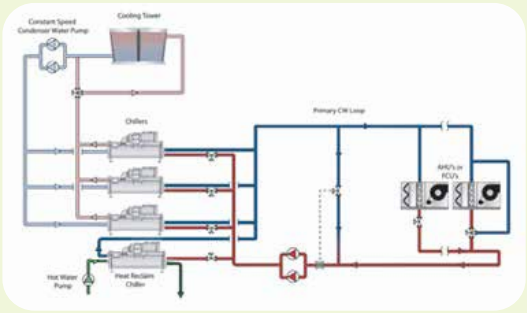


Heat Pump System Benefits
- Cooling/heating
- Improved system efficiency
- Use of low-grade energy

19XR-E Benefits
- Wide range of applications with high efficiency
- Hot water temperature (LWT) up to 65℃

Energy Recovery Application

Discharging condenser heat via a cooling tower not only causes thermal pollution but is a tremendous waste for locations with high demand for heating, such as hotels, factories and hospitals.

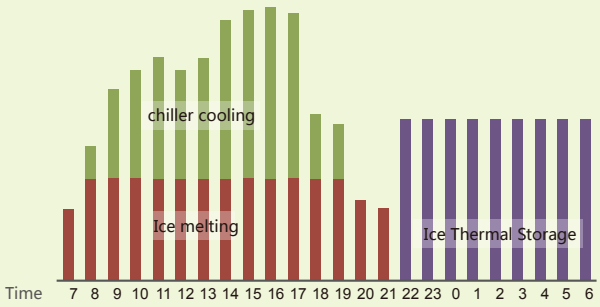


Energy Recovery System Benefits
- Reduced boiler size and operating time
- Reduced cooling tower size and waste heat discharge
- Improved system efficiency by 15-25%

19XR-E Benefits
- High efficiency operation
- Hot water temperature(LWT) up to 65℃

Ice Thermal Storage Application

The chiller stores energy as ice during the night, when electricity costs and utilization are low. This energy is then discharged to satisfy cooling loads when electricity costs peak during the day, greatly reducing building operating costs.



Ice Thermal Storage System Benefits
- Reduced chiller and cooling tower size
- Reduced chiller operating time
- Operational cost savings by using off-peak electricity
- Backup cooling in emergency situations

19XR-E Benefits
- Stable 24-hour operation
- Suitable for variable voltage and VFD applications
- Minimum leaving water temp (LCWT): -6℃
- Suitable for cold air distribution district cooling systems

Performance Data

Air-conditioning (380V-3ph-50Hz)

Model	Chiller				Motor		Evaporator			Condenser			Unit Dimensions			Weight		
	Cooling Capacity		Input Power	Full load COP_R	RLA	LRA	Flow Rate	Pressure Drop	Water Connection	Flow Rate	Pressure Drop	Water Connection	Length	Width	Height	Operating	Rigging (w/o Refrigerant)	Refrigerant Charge
	kW	Tons	kW	W/W	A	A	l/s	kPa	mm	l/s	kPa	mm	mm	mm	mm	kg	kg	kg
19XR-303132HUBU52	1055	300	197.0	5.355	338.5	745	50.4	86.4		60.3	65.9		4172	1707	2073	6628	5801	371
19XR-313433HUCT52	1231	350	221.4	5.560	380.5	843	58.8	84.3		69.9	56.1		4172	1707	2073	6997	6053	396
19XR-313234HUEU52	1407	400	255.2	5.513	439.0	1046	67.2	107	DN200	80	84.7	DN200	4172	1707	2073	6965	6046	396
19XR-404035HUFT52	1583	450	288.4	5.489	496.2	1119	75.6	77.9		90.1	78.1		4365	1908	2153	8097	6808	483
19XR-414138HUGU52	1758	500	310.0	5.672	525.4	1176	84.0	78.1		99.6	77.2		4365	1908	2153	8386	7004	508
19XR-505138HUGT52	1934	550	337.5	5.730	569.3	1176	92.4	71.3		109.4	51.5		4460	2054	2137	9488	7788	609
19XR-5P504QEDDS52	2110	600	388.3	5.434	677.9	1357	100.8	68.8	DN200	120.1	70.8		4460	2054	2207	9945	8393	493
19XR-5R514QELEH52	2286	650	416.6	5.487	730.2	1521	109.2	66.8		130.2	70.7		4460	2054	2207	10526	8864	524
19XR-5Q524R5LFH52	2462	700	451.8	5.449	781.3	1637	117.6	83.9		140.3	71.5		4460	2054	2207	10591	8932	510
19XR-656545FLGH52	2638	750	492.1	5.361	860.0	1794	126.0	83.6		150.6	80.5	DN250	5000	2124	2261	12549	10290	809
19XR-6R614T5LGH52	2638	750	459.9	5.736	806.7	1794	126.0	58.4		148.9	64.0		4480	2124	2261	11546	9589	579
19XR-6X65C49VGJ52	2813	800	482.0	5.836	830.1	1845	134.4	86.9	DN250	158.4	88.3		5000	2139	2638	12630	10498	714
19XR-6Z66C65VFG52	2813	800	470.9	5.974	809.3	1570	134.4	72.8		157.9	78.8		5000	2139	2638	12917	10656	752
19XR-6X67C69VHJ52	3165	900	541.1	5.849	911.2	2083	151.2	108.0		178.2	89.2		5000	2139	2638	12908	10698	714
19XR-7P71C89VGG52	3165	900	523.4	6.047	895.1	1845	151.2	74.0	DN300	177.4	66.8	DN300	5169	2515	2744	16436	13492	949
19XR-6Y67C89VHJ52	3517	1000	604.4	5.819	1013.9	2083	168.1	120	DN250	198	108	DN250	5000	2139	2638	12999	10744	735
19XR-7070C89VHG52	3517	1000	581.0	6.053	976.1	2083	168.1	108		196.8	94.9		5169	2515	2744	16922	13870	1134
19XR-7P71E53MDB52	3869	1100	680.1	5.689	1145.1	2362	184.9	107	DN300	218.4	97.8	DN300	5169	2515	2902	17510	14551	964
19XR-7171E51MDB52	3869	1100	635.6	6.087	1071.9	2362	184.9	106		216.3	96.1		5169	2515	2902	18597	15324	1207
19XR-7Q72E53MEB52	4220	1200	736.7	5.728	1251.3	2729	201.7	105.0		238.0	99.9		5169	2515	2902	18022	14888	1002
19XR-8P81E51MEB52	4220	1200	697.5	6.050	1187.4	2729	201.7	72.6		236.3	76.5		5205	2711	2950	20493	16671	1113
19XR-8P80E63MFB52	4572	1300	799.8	5.716	1359.5	3276	218.5	84.0	DN350	257.8	102	DN350	5205	2711	2950	20294	16548	1113
19XR-8P81E63MFB52	4924	1400	863.1	5.705	1462.5	3276	235.3	96.2		277.7	103		5205	2711	2950	20558	16736	1113
19XR-8R84E63MFB52	5275	1500	910.6	5.793	1539.5	3276	252.1	83.4		297.2	84.9		5205	2711	2950	21781	17487	1204

Brine application (10kV-3Ph-50Hz)

Model	Chiller				Motor		Evaporator			Condenser			Unit Dimensions			Weight		
	Cooling Capacity		Input Power	Full load COP_R	RLA	LRA	Flow Rate	Pressure Drop	Water Connection	Flow Rate	Pressure Drop	Water Connection	Length	Width	Height	Operating	Rigging (w/o Refrigerant)	Refrigerant Charge
	kW	Tons	kW	W/W	A	A	l/s	kPa	mm	l/s	kPa	mm	mm	mm	mm	kg	kg	kg
19XR-7072E45MDE5A	2462	700	600.8	4.098	41.3	231	158.0	129		210.2	80.1		5169	2515	2902	19108	15895	1148
19XR-7R74E55MFE5A	2813	800	697.6	4.032	47.8	244	180.6	95.6	DN300	240.8	97.1	DN300	5169	2515	2902	18772	15503	1039
19XR-8R84E65MFE5A	3165	900	778.0	4.068	53.2	244	203.2	72.4		270.5	71.9		5205	2711	2950	22154	17860	1204
19XR-8787E65MFE5A	3517	1000	836.4	4.205	57.2	244	225.8	135	DN350	298.6	116	DN350	5731	2711	2950	24302	19628	1549

Note:
1. The above selections are based on entering/leaving chilled water temperature:12/7℃; entering/leaving cooled water temperature:32/37℃. Cooler fouling factor is 0.0176 m²℃/kW and condenser fouling factor is 0.044 m²℃/kW.
2. The above brine application selections are based on entering/leaving chilled water temperature:-2/-6℃; entering/leaving cooled water temperature:30/33.5℃. Cooler fouling factor is 0.0176 m²℃/kW and condenser fouling factor is 0.044 m²℃/kW, 25% ethylene glycol.
3. Carrier will select specific models using computer on different requests for tonnage, lift, and efficiency. For details, please contact local agencies.
4. Standard water box pressure is 1.0MPa, and can provide 1.6MPa, 2.0MPa as option; For more requirements, please contact local agencies.
5. The above selections are made based on the voltage being 380V/10kV. For details or customized selections, please contact local agencies.
6. 60Hz selections are also available. Please contact local agencies to get more support.

Performance Data

Air-conditioning (10kV-3Ph-50Hz)

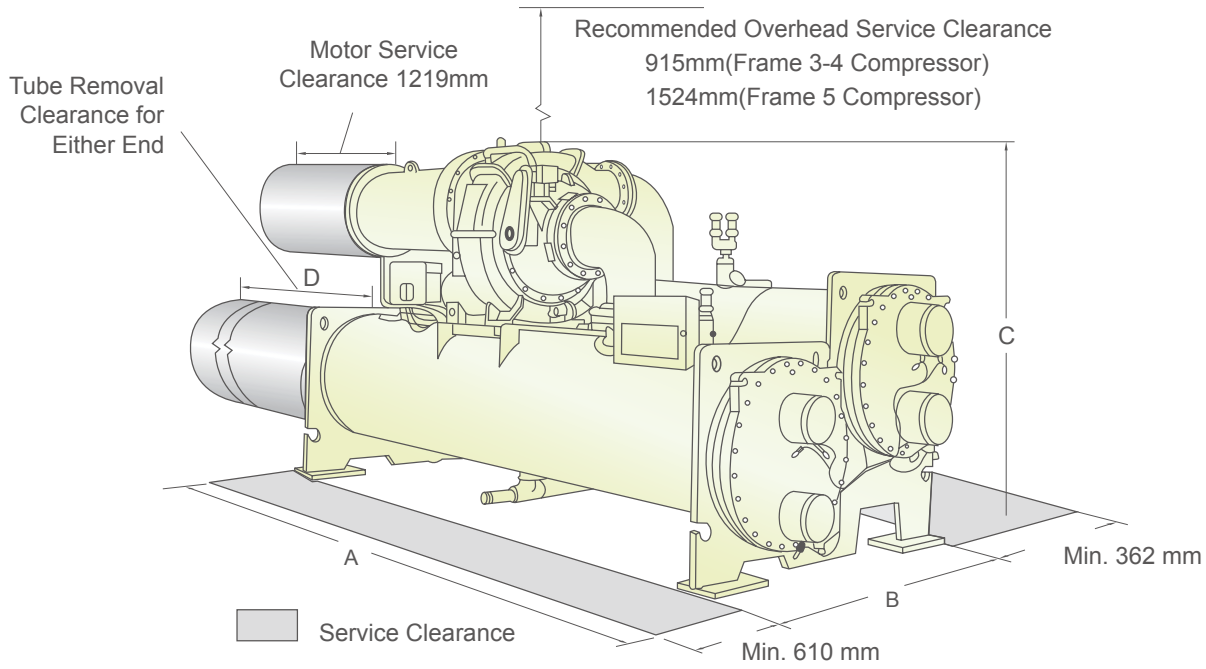
Model	Chiller				Motor		Evaporator			Condenser			Unit Dimensions			Weight		
	Cooling Capacity		Input Power	Full load COP_R	RLA	LRA	Flow Rate	Pressure Drop	Water Connection	Flow Rate	Pressure Drop	Water Connection	Length	Width	Height	Operating	Rigging (w/o Refrigerant)	Refrigerant Charge
	kW	Tons	kW	W/W	A	A	l/s	kPa	mm	l/s	kPa	mm	mm	mm	mm	kg	kg	kg
19XR-7P704V5LHH5A	3165	900	555.9	5.693	37.9	200	151.2	74.0		179.3	80.0		5169	2426	2750	16158	13403	836
19XR-70704W6LHH5A	3517	1000	620.2	5.671	41.8	200	168.1	108.0		198.5	96.4		5169	2426	2750	16924	13985	1020
19XR-7P71E53MDB5A	3869	1100	680.9	5.682	45.2	231	184.9	107.0	DN300	218.5	97.8	DN300	5169	2515	2902	18081	15122	964
19XR-7171E51MDB5A	3869	1100	637.1	6.073	42.4	231	184.9	106.0		216.4	96.1		5169	2515	2902	19168	15895	1207
19XR-7Q72E53MFB5A	4220	1200	735.3	5.739	48.9	244	201.7	105.0		237.9	99.8		5169	2515	2902	18460	15326	1002
19XR-8P81E51MFB5A	4220	1200	696.8	6.056	46.4	244	201.7	72.6		236.3	76.4		5205	2711	2950	20931	17109	1113
19XR-8P80E63MFB5A	4572	1300	798.6	5.725	53.1	244	218.5	84.0		257.8	102.0		5205	2711	2950	20667	16920	1113
19XR-8Q81E63MFB5A	4572	1300	786.8	5.811	52.3	244	218.5	72.6	DN350	257.4	89.5	DN350	5205	2711	2950	21173	17231	1156
19XR-8P81E63MFB5A	4924	1400	862.1	5.712	57.2	244	235.3	96.2		277.7	103.0		5205	2711	2950	20931	17109	1113
19XR-8R84E63MFB5A	5275	1500	909.5	5.800	60.3	244	252.1	83.4		297.1	84.9		5205	2711	2950	22154	17860	1204
19XR-878750EMHH5A	5803	1650	988.0	5.873	63.9	299	277.3	148.0		326.0	136.0		5731	2711	3029	24500	19955	1420
19XR-A4FA45626JN7	5627	1600	957.9	5.874	63.0	366	268.9	67.7		316.4	90.1		5270	3051	3484	32178	26818	1321
19XR-A4FA46638JN7	5979	1700	1018.0	5.873	66.8	366	285.7	76.1		336.3	84.9		5270	3051	3484	32616	27090	1321
19XR-A4FA47638JN7	6330	1800	1070.0	5.916	70.0	366	302.5	85.0		355.8	82.0	DN400	5270	3051	3484	33012	27335	1321
19XR-A4FA47638JP7	6682	1900	1132.0	5.903	74.6	399	319.3	94.3	DN400	375.5	90.5		5270	3051	3484	33012	27335	1321
19XR-A4FA47648JQ7	7034	2000	1204.0	5.842	79.2	430	336.1	104.0		395.8	99.6		5270	3051	3484	33012	27335	1321
19XR-A6FB66648JQ7	7385	2100	1224.0	6.033	80.3	430	352.9	127.0		414.2	93.1	DN450	5879	3185	3484	36913	29922	1650
19XR-A6GB66648JQ7	7737	2200	1282.0	6.035	83.9	430	369.7	122.0		433.9	101.0		5879	3185	3484	37267	30111	1706
19XR-B6FC65718TU7	8089	2300	1318.0	6.137	87.2	550	386.5	97.0		452.5	78.9		6020	3658	3742	48871	40146	1908
19XR-B6FC65710TU7	8440	2400	1380.0	6.116	91.2	550	403.3	105.0		472.4	85.2		6020	3658	3742	48871	40146	1908
19XR-B6GC65720TU7	8792	2500	1441.0	6.101	95.1	550	420.1	94.5		492.2	91.8		6020	3658	3742	49424	40473	1939
19XR-B6GC66720TV7	9144	2600	1485.0	6.158	98.2	555	436.9	102.0	DN450	511.4	83.1	DN500	6020	3658	3742	50247	40989	1939
19XR-C6FC66720TV7	9496	2700	1538.0	6.174	101.6	555	453.7	81.3		530.8	88.9		6073	3797	3812	53502	43670	2082
19XR-C6FC66730TV7	9847	2800	1604.0	6.139	105.7	555	470.5	87.2		550.5	95.1		6073	3797	3812	53502	43670	2082
19XR-C6FC67730TV7	10199	2900	1650.0	6.181	108.6	555	487.3	93.3		570.1	86.5		6073	3797	3812	54361	44204	2082
19XR-C6FC67730TW7	10551	3000	1709.0	6.174	112.4	614	504.2	99.6		589.7	92.0		6073	3797	3812	54361	44204	2082

Heating application (10kV-3Ph-50Hz)

Model	Chiller				Motor		Evaporator			Condenser			Unit Dimensions			Weight		
	Cooling Capacity		Input Power	Full load COP_R	RLA	LRA	Flow Rate	Pressure Drop	Water Connection	Flow Rate	Pressure Drop	Water Connection	Length	Width	Height	Operating	Rigging (w/o Refrigerant)	Refrigerant Charge
	kW	Tons	kW	W/W	A	A	l/s	kPa	mm	l/s	kPa	mm	mm	mm	mm	kg	kg	kg
19XR-7071E35MFD5A	3517	1000	696.9	5.047	46.4	244	134.6	73.6		170.7	60.6		5169	2515	2902	18748	15605	1148
19XR-7072E35MFD5A	3869	1100	760.0	5.091	50.5	244	148.4	87.7	DN300	187	62.5	DN300	5169	2515	2902	19009	15796	1148
19XR-7172E37MFD5A	4220	1200	873.3	4.832	58	244	159.7	82.7		203.5	73.1		5169	2515	2902	19330	15987	1207
19XR-7274E45MFD5A	4572	1300	890.1	5.137	59.1	244	175.7	86.1		220.9	80.3		5169	2515	2902	19695	16213	1256
19XR-8284E45MHD5A	4924	1400	948.6	5.191	61.4	299	189.7	67.8	DN350	237.5	54.8	DN350	5205	2711	2950	23144	18742	1382

Note:
1. The above selections are based on entering/leaving chilled water temperature:12/7℃; entering/leaving cooling water temperature:32/37℃. Cooler fouling factor is 0.0176 m²℃/kW and condenser fouling factor is 0.044 m²℃/kW.
2. The above heating application selections are baed on entering/leaving chilled water temperature 10/5℃; entering/leaving cooling water temperature 40/45℃.Cooler fouling factor is 0.0176 m²℃/kW and condenser fouling factor is 0.044 m²℃/kW.
3. Carrier will select specific models using computer on different requests for tonnage, lift, and efficiency. For details, please contact local agencies.
4. Standard water box pressure is 1.0MPa, and can provide 1.6MPa, 2.0MPa as option; For more requirements, please contact local agencies.
5. The above selections are made based on the voltage being 10kV. For details or customized selections, please contact local agencies.
6. 60Hz selections are also available. Please contact local agencies to get more support.

19XR Chiller Dimensions



Evaporator Condenser Size	A-Length for NIH Waterbox (2 Passes)	B-Width	C-Height				D-Tube Removal Space for Either End
			without Unit-mounted Starter	with Unit-mounted Y- Δ/Solid State Starter			
				19XR-3	19XR-4	19XR-5	
	mm	mm	mm	mm	mm	mm	mm
3P~34	4172	1754	2073	2205			3747
3X~39	4693	1754	2073	2205			4343
4P~44	4365	1953	2153	2298			3747
4X~49	4885	1953	2153	2298			4343
5P~54	4460	2059	2207	2383	2673		3747
5X~59	4980	2059	2207	2383	2673		4343
6P~64	4480	2139	2261		2727		3747
6X~69	5000	2139	2261		2727		4343
7P~74	5169	2515	2985		3216	3324	4267
7X~79	5766	2515	2985			3324	4877
8P~84	5200	2781	3029			3427	4267
8X~89	5810	2781	3029			3427	4877

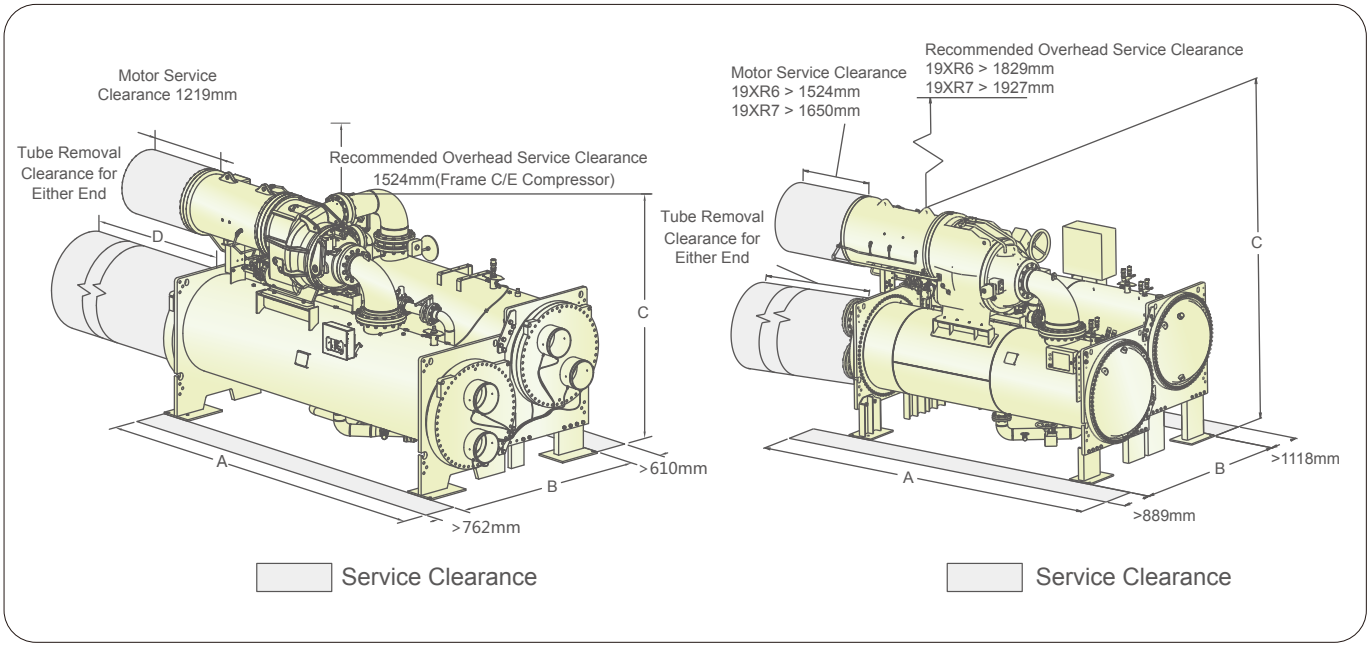
Notes: 1. A-length includes flanges with both cooler and condenser having two passes and nozzles being at the same end (drive end for standard units)
2. The above dimensions are based on the waterside pressure being 1.0Mpa. A-length will vary while the waterside pressure increases.

19XR/XR-C/XR-E Starter Dimensions (Free standing)

Voltage	Starter Type	Frame/Rated Current(A)	Width(mm)	Deepth(mm)	Height(mm)
380V	Y- Δ	19XR-3	1000	700	2000
		Y- Δ 611~1237A	800	800	2200
		Y- Δ ≥1238A	1200	800	2200
10kV	Across the Line		1000	1650	2400
	Primary Reactor		2000	1650	2400
	Auto-transformer		2400	1650	2400

Notes: The wiring of 380V starter enters from the top and exits from the bottom.
The wiring of 6.3/10/11kV starter enters from the top and exits from the top.

19XR-C/19XR-E/19XR-6/7 Chiller Dimensions



19XR-C Unit Dimensions

Evaporator Size	Condenser Size	A-Length for NIH Waterbox (2 Passes)	B-Width	C-Height		D-Tube Removal Space for Either End
				without Unit-mounted Starter	with Unit-mounted Y-Δ/Solid State Starter	
		mm	mm	mm	mm	mm
6P~64	60~64	4480	2139	2638	3132	3747
6X~69	65~69	5000	2139	2638	3132	4343
7P~74	70~74	5169	2515	2744	3161	4267
7X~79	75~79	5779	2515	2744	3161	4877

19XR-E/19XR-6/7 Unit Dimensions

Evaporator Size	Condenser Size	A-Length for NIH Waterbox (2 Passes)	B-Width	C-Height		D-Tube Removal Space for Either End
				without Unit-mounted Starter	with Unit-mounted Y-Δ/Solid State Starter 19XR-E	
		mm	mm	mm	mm	mm
7P~74	70~74	5169	2515	2902	3296	4267
7X~79	75~79	5779	2515	2902	3296	4877
8P~84	80~84	5205	2781	2950	3346	4267
8X~89	85~89	5817	2781	2950	3346	4877
A4A~A47	A4A~A47	5270	3051	3484		4267
A6A~A67	A6A~A67	5879	3051	3484		4877
A4A~A47	B4A~B47	5270	3185	3484		4267
A6A~A67	B6A~B67	5879	3185	3484		4877
B6A~B67	C6A~C67	6020	3658	3742		5182
C6A~C67	C6A~C67	6073	3797	3812		5182
C6A~C67	D6A~D67	6076	4013	3811		5182

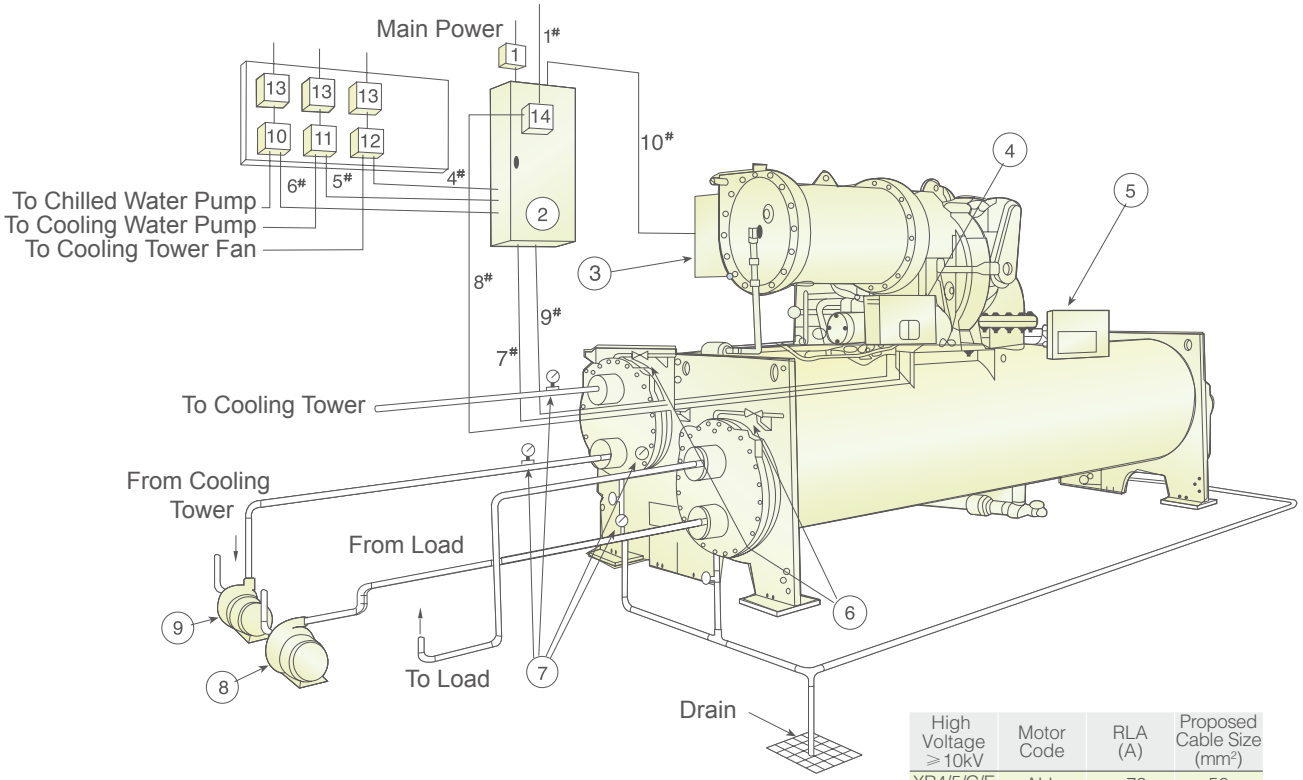
Notes: 1. A-length includes flanges with both cooler and condenser having two passes and nozzles being at the same end (drive end for standard units).
2. The above dimensions are based on the waterside pressure being 1.0Mpa. A-length will vary while the waterside pressure increases.

19XR-6/7 Starter Dimensions (Free standing)

Voltage	Starter Type	Width(mm)	Depth(mm)	Height(mm)
10/11kV	Across the Line	1000	1350	2500
	Primary Reactor	2000	1350	2600
	Auto-transformer	2700	1350	2600

Notes: The wiring of 10/11kV starter enters from the top and exits from the top. For other wiring requirements, please contact local agencies to get more support.

Typical Piping and Wiring (with Free-standing Starter)



High Voltage ⩾10kV	Motor Code	RLA (A)	Proposed Cable Size (mm^2)
XR4/5/C/E	ALL	<70	50
XR6	N	75	50
	P	82	50
	Q	88	50
	R	94	50
	S	100	70
	T	105	70
XR7	U	113	70
	V	119	70
	W	125	95
	X	131	95
	Y	138	95
	Z	145	95

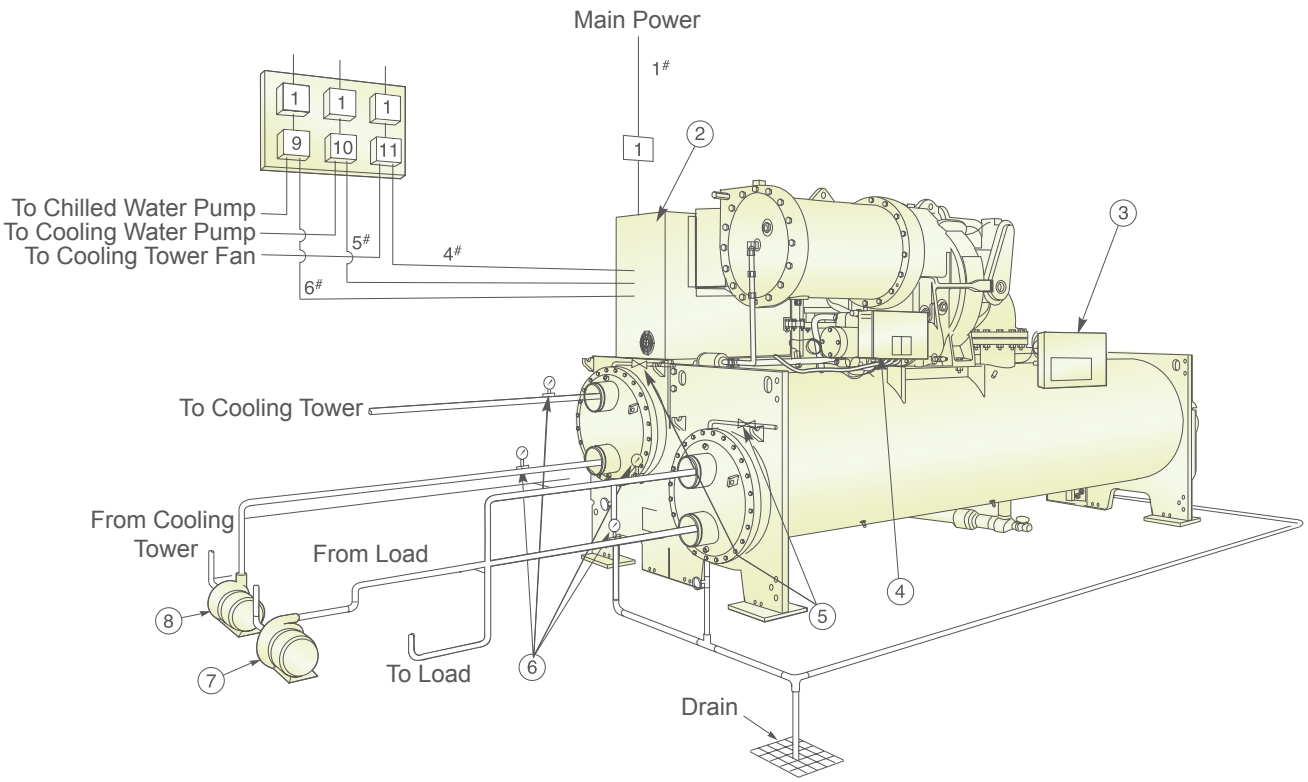
① Air Switch
② Freestanding Compressor Motor Starter
③ Compressor Motor Terminal Box
④ Oil Pump Controller
⑤ Control Panel
⑥ Vents
⑦ Pressure Gauges
⑧ Chilled Water Pump
⑨ Cooling Water Pump
⑩ Chilled Water Pump Starter
⑪ Cooling Water Pump Starter
⑫ Cooling Tower Fan Starter
⑬ Air Switch
⑭ Oil Pump Switch

Line	Purpose	Specification
1#	Main power to Starter:	380V AC: 3 phases, 1 neutral, and 1 grounding Or 6.3kV/10kV/11kV AC: 3 phases, 1 grounding (medium/high voltage)
4#	To Cooling Tower Fan Starter:	2 control lines (optional)
5#	To Cooling Tower Water Pump Starter:	2 control lines (optional)
6#	To Chilled Water Pump Starter:	2 control lines (optional)
7#	To Oil Heater Contactor:	115V AC: 2 power lines, 1 grounding
8#	To Oil Pump Contactor:	380V AC power line, 3 phases 5A(For 6.3kV/10kV/11kV chiller,customer supply 380V power line to oil pump contactor)
9#	To Lubrication System Power Panel:	8 control shielding lines, 600V, 80℃, grounding in starter
10#	To Motor:	380V AC: 6 leads (Minimum ampacity per conductor = 0.721 x RLA), 2 grounding Or 6.3kV/10kV/11kV AC: 3 leads, 1 grounding (medium/high voltage)

Piping and Wiring Requirements:

1. The installer must get all pipes and wires in place and mark the ends.
2. Filters must be installed in cooling water and chilled water pipes.
3. Thermometer (0-50℃) and pressure gauge (0~1MPa or 2MPa) must be installed at inlet and outlet of the pipes.
4. The installer must install the relief valve vent to outdoors with a steel pipe(outer diameter 42mm, thickness 4mm).
5. It is suggested that an oxygen content monitor be installed in the machine room for safety, which will give an alarm when the oxygen content is less than 19.5%.
6. Selected cable size range is from 50~120 square millimeter. If the customer select cable size is less than 50 square millimeter or more than 120 square millimeter, please contact YLC factory.
7. Communication cable between starter (ISM module) and control box (IOB module) shall apply Carrier specified one pair and half shielded twisted cable. The cable shall be installed as far away from high voltage cables and other strong jamming equipments as possible and keep the communication cable as shorter as possible to avoid noise. The communication cable must go through a metal conduit independently.

Typical Piping and Wiring (with VFD)



① Air Switch ② Unit-mounted Starter ③ Control Panel ④ Oil Pump Controller

⑤ Vents ⑥ Pressure Gauges ⑦ Chilled Water Pump ⑧ Cooling Water Pump

⑨ Chilled Water Pump Starter ⑩ Cooling Water Pump Starter

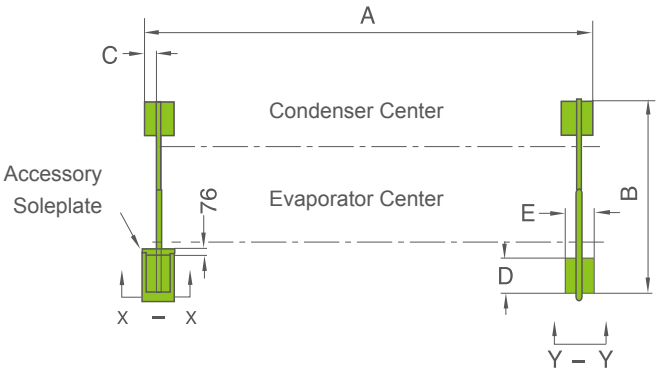
Line	Purpose	Specification
1#	Main power to Starter:	380V AC: 3 phases and 1 grounding
4#	To Cooling Tower Fan Starter:	2 control lines (optional)
5#	To Cooling Tower Water Pump Starter:	2 control lines (optional)
6#	To Chilled Water Pump Starter:	2 control lines (optional)

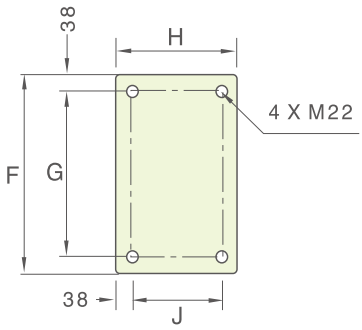
Piping and Wiring Requirements:

1. The installer must get all pipes and wires in place and mark the ends.
2. Filters must be installed in cooling water and chilled water pipes.
3. Thermometer (0-50˚C) and pressure gauge (0~1MPa or 2MPa) must be installed at inlet and outlet of the pipes.
4. The installer must install the relief valve vent to outdoors with a steel pipe(outer diameter 42mm, thickness 4mm).
5. It is suggested that an oxygen content monitor be installed in the machine room for safety, which will give an alarm when the oxygen content is less than 19.5%.

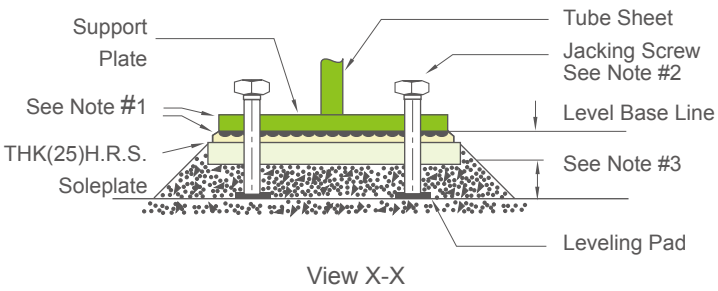
Types of Base Isolation

Location Of Isolator

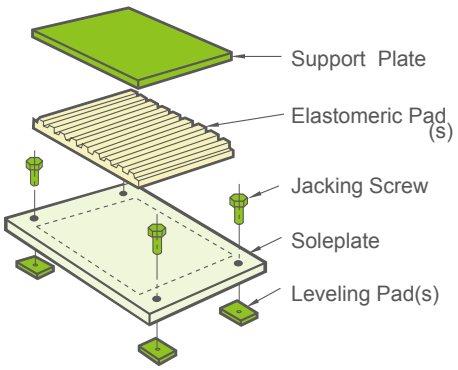




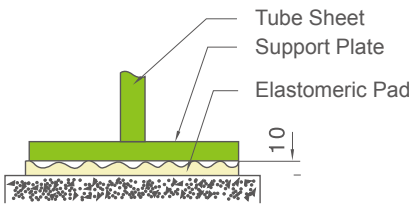
Standard Isolation



View X-X



Simplified Isolation



View Y-Y

Notes:

1. Accessory soleplate package includes 4 soleplates, 16 jacking screws, and 16 leveling pads.
2. Jacking Screws should be removed after the grout has set.
3. Thickness of grout varies, depending on the amount necessary to level chiller.

Evaporator/ Condenser model	A mm	B mm	C mm	D mm	E mm	F mm	G mm	H mm	J mm
3P-34/30-34	3931	1632	92	387	229	540	464	254	178
3X-39/35-39	4451	1632	92	387	229	540	464	254	178
4P-44/40-44	3931	1829	92	387	229	540	464	254	178
4X-49/45-49	4451	1829	92	387	229	540	464	254	178
5P-54/50-54	3931	1969	92	387	229	540	464	254	178
5X-59/55-59	4451	1969	92	387	229	540	464	254	178
6P-64/60-64	3931	2070	92	387	229	540	464	254	178
6X-69/65-69	4451	2070	92	387	229	540	464	254	178
7P-74/70-74	4620	2400	176	559	406	711	635	432	356
7X-79/75-79	5320	2400	176	559	406	711	635	432	356
8P-84/80-84	4620	2686	176	559	406	711	635	432	356
8X-89/85-89	5320	2686	176	559	406	711	635	432	356
A4A-A47/A4A-A47	4492	3051	164	559	406	711	635	432	356
A6A-A67/A6A-A67	5102	3051	164	559	406	711	635	432	356
A4A-A47/B4A-B47	4492	3185	164	559	406	711	635	432	356
A6A-A67/B6A-B67	5102	3185	164	559	406	711	635	432	356
B6A-B67/C6A-C67	5082	3632	164	559	406	711	635	432	356
C6A-C67/C6A-C67	5080	3772	164	559	406	711	635	432	356
C6A-C67/D6A-D67	5082	4013	168	559	406	711	635	432	356

Field Wiring Specification (with Free-standing Starter)

I. General

1.0 Starters shall be designed and manufactured in accordance with Carrier Engineering Requirement Z-415.

1.1 All field-supplied conductors, devices, and the field-installation wiring, termination of conductors and devices, must be in compliance with all applicable codes and job specifications.

1.2 The routing of field-installed conduit and conductors and the location of field-installed devices must not interfere with equipment access or the reading, adjusting, or servicing of any component.

1.3 Equipment installation and all starting and control devices, must comply with details in equipment submittal drawings and literature.

1.4 Contacts and switches are shown in the position they would with the circuit deenergized and the chiller shut down.

1.5 WARNING - Do not use aluminum conductors.

1.6 Installer is responsible for any damage caused by improper wiring between starter and machine.

II. Power Wiring to Starter

2.0 Circuit breaker is to be used to disconnect power to starter.

2.1 Lug adapters may be required if installation conditions dictate that conductors be sized beyond the minimum ampacity required.

2.2 Compressor motor and controls must be grounded by using equipment grounding lug provided inside starter enclosure.

III. Control Wiring

3.0 Field supplied control conductors should be at least 0.75mm^2 or larger.

3.1 Optional ice build start/remote lockout contacts, optional remote start/stop device contacts, optional fire alarm interlock and optional spare safety device contacts, must have 24 VAC rating. MAX current is 60 MA, nominal

current is 10 MA. Switches with gold plated bifurcated contacts are recommended. (Not apply to PIC5+ control products. For PIC5+ control products, shall wire from control panel.)

3.2 Remove jumper wire between J2-1 and J2-2 before connecting auxiliary safeties between these terminals. (Not apply to PIC5+ control products. For PIC5+ control products, shall wire from control panel.)

3.3 Each integrated contact(ISM) output can control loads(VA) for evaporator pump, condenser pump, tower fan low, tow fan high, and alarm annunciator devices rated 5 amps at 115VAC and up to 3 amps at 277VAC. Do not use starter control transformer as the power source for contactor coil loads. (For PIC5+ control products, these relay outputs can also wire from control panel but rated 1 amp at 24VAC.)

3.4 Do not route control wiring carrying 30V or less within a conduit which has wires carrying 50V or higher or along side wires carrying 50V or higher.

3.5 Control wiring between free-standing starter and control panel must be separate shielded cables with minimum rating of 600V, 80°C For communication must use shield twist pair wire.

3.6 If optional oil pump circuit breaker is not supplied within the starter enclosure as shown, it must be located within sight of the chiller with wiring routed to suit. (Not applicable for 19XR6/7)

IV. Power Wiring Between Free-standing Starter and Compressor Motor

4.0 Low voltage (600 v or less) compressor motors have (6) 5/8″ terminal studs (lead connectors not supplied by Carrier). Either 3 or 6 conductors must be run between compressor motor and starter, depending on the type of motor starter employed. If only 3 leads are utilized, jumper motor terminals as follows : 1 to 6, 2 to 4, and 3 to 5. Center to center distance between terminals is 8mm.Compressor motor starter must have nameplate stamped as to conform with Carrier Engineering Requirement Z-415.

4.1 Medium voltage [over 600 volts] compressor motors have (3) terminals. Connections are 9/16-threaded stud.Compressor motor starter must have nameplate stamped as to conform with Carrier Engineering requirement "Z-415."

4.2 Power conductor rating must meet minimum unit nameplate voltage and compressor motor RLA. When (3) conductors are used: Minimum ampacity per conductor = 1.25 x compressor RLA When (6) conductors are used: Minimum ampacity per conductor = 0.721 xcompressor RLA.

4.3 When more than one conduit is used to run conductors from starter to compressor motor terminal box, three leads from each phase (conductor) must be in each conduit to prevent excessive heating (e.g., conductors to motor terminals 1, 2, & 3 in one conduit, and those to 4, 5, & 6 in another).

4.4 Compressor motor power conductors may enter terminal box through top, bottom or right side using holes cut by contractor to suit conduit. Flexible conduit should be used for the last few feet to the terminal box for unit vibration isolation.

4.5 Compressor motor frame should be grounded in accordance with the National Electrical Code-us (NFPA-70) and applicable codes. Means for grounding compressor motor is a #4 AWG-500 MCM pressure connector, supplied and located in the lower left side corner of the compressor motor terminal box.

4.6 Do not allow motor terminals to support weight of wire cables. Use cable supports and strain relieves as required.

4.7 Use backup wrench when tightening lead connectors to motor terminal studs.

4.8 Motor terminals and wire connectors must be insulated with insulation putties and tapes attached to chillers to prevent moisture condensing and electrical arc.

Field Wiring Specification (with Unit-mounted VFD)

I. General

1.0 VFD starters shall be designed and manufactured in accordance with Carrier Engineering Requirement Z-420.

1.1 All field-supplied conductors, devices, and the field-installation wiring, termination of conductors and devices,must be in compliance with all applicable codes and job specifications.

1.2 The routing of field-installed conduit and conductors and the location of field-installed devices must not interfere with equipment access or the reading, adjusting, or servicing of any component.

1.3 Equipment installation and all starting and control devices, must comply with details in equipment submittal drawings and literature.

1.4 Contacts and switches are shown in the position they would with the circuit deenergized and the chiller shut down.

1.5 WARNING - Do not use aluminum conductors.

II. Power Wiring to VFD Starter

2.0 Provide a means of disconnecting power to starter. Fused disconnect is required on VFD.

2.1 Incoming power wire must be protected with metal jacket.

2.2 Line side power conductor rating must meet VFD nameplate voltage and chiller full load amps (minimum circuit ampacity).

2.3 Compressor motor and controls must be grounded by using equipment grounding lugs provided inside unit mounted starter enclossure.

III. Control Wiring

3.0 Field supplied control conductors should be at least 0.75 mm^2 or larger.

3.1 Optional ice build start/terminate device contacts, optional remote start/stop device contacts and optional spare safety device contacts, must have 24 VAC rating. MAX current is 60 MA, nominal current is 10 MA. Switches with gold plated bifurcated contacts are recommended. (Not apply to PIC5+ control products. For PIC5+ control products, shall wire from control panel.)

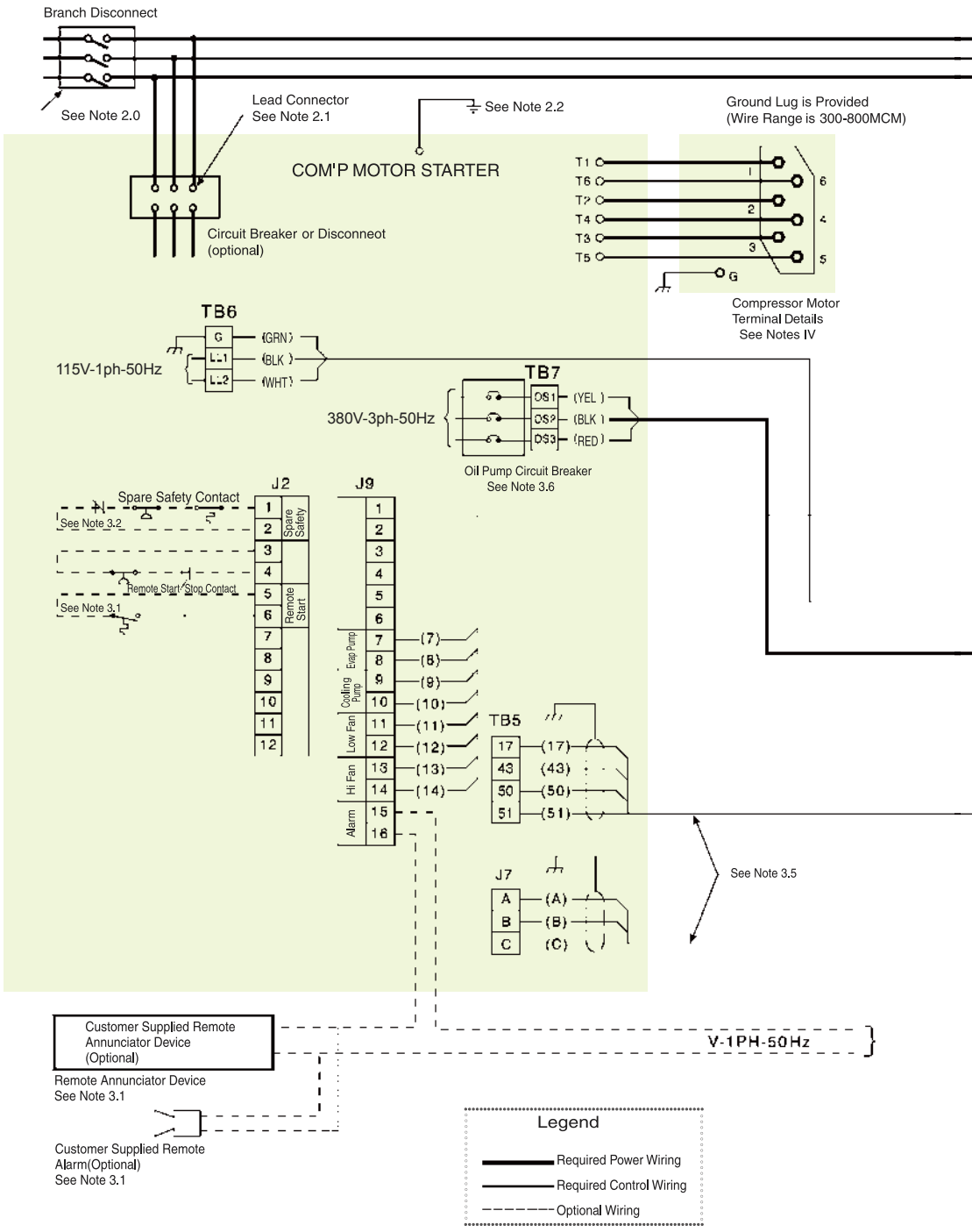
3.2 Remove jumper wire between TB1-19 and TB1-20 before connecting auxiliary safeties between these terminals. (Not apply to PIC5+ control products. For PIC5+ control products, shall wire from control panel.)

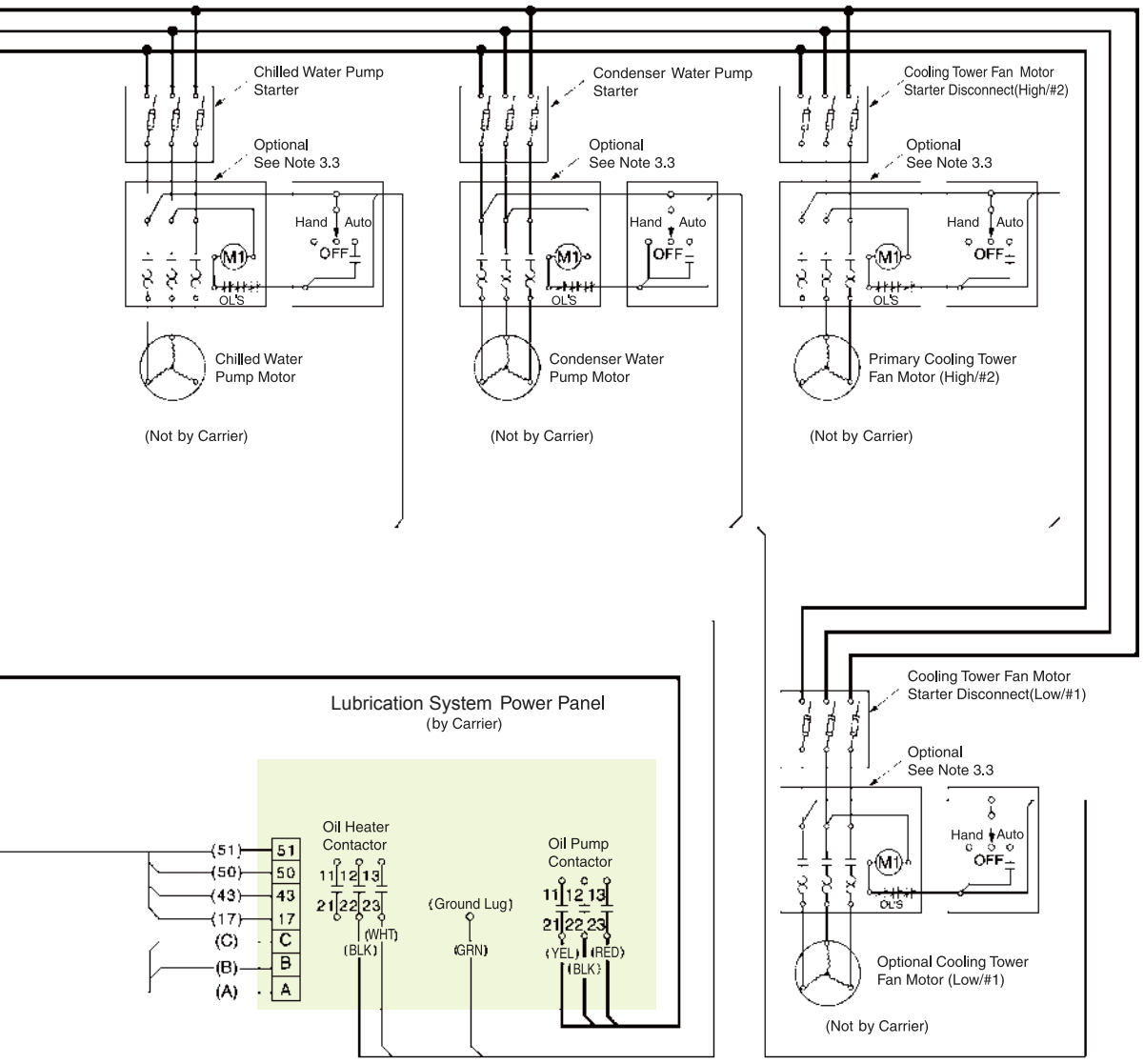
3.3 VFD contact outputs can control cooler and condenser pump and tower fan motor contactor coil loads (VA) rated 5 Amps at 115 VAC up to 3 Amps at 250 VAC. Do not use VFD starter control transformer as the power source for contactor coil loads. (For PIC5+ control products, these relay outputs can also wire from control panel but rated 1 amp at 24VAC.)

3.4 Do not route control wiring carrying 30V or less within a conduit which has wires carrying 50V or higher or along side wires carrying 50V or higher.

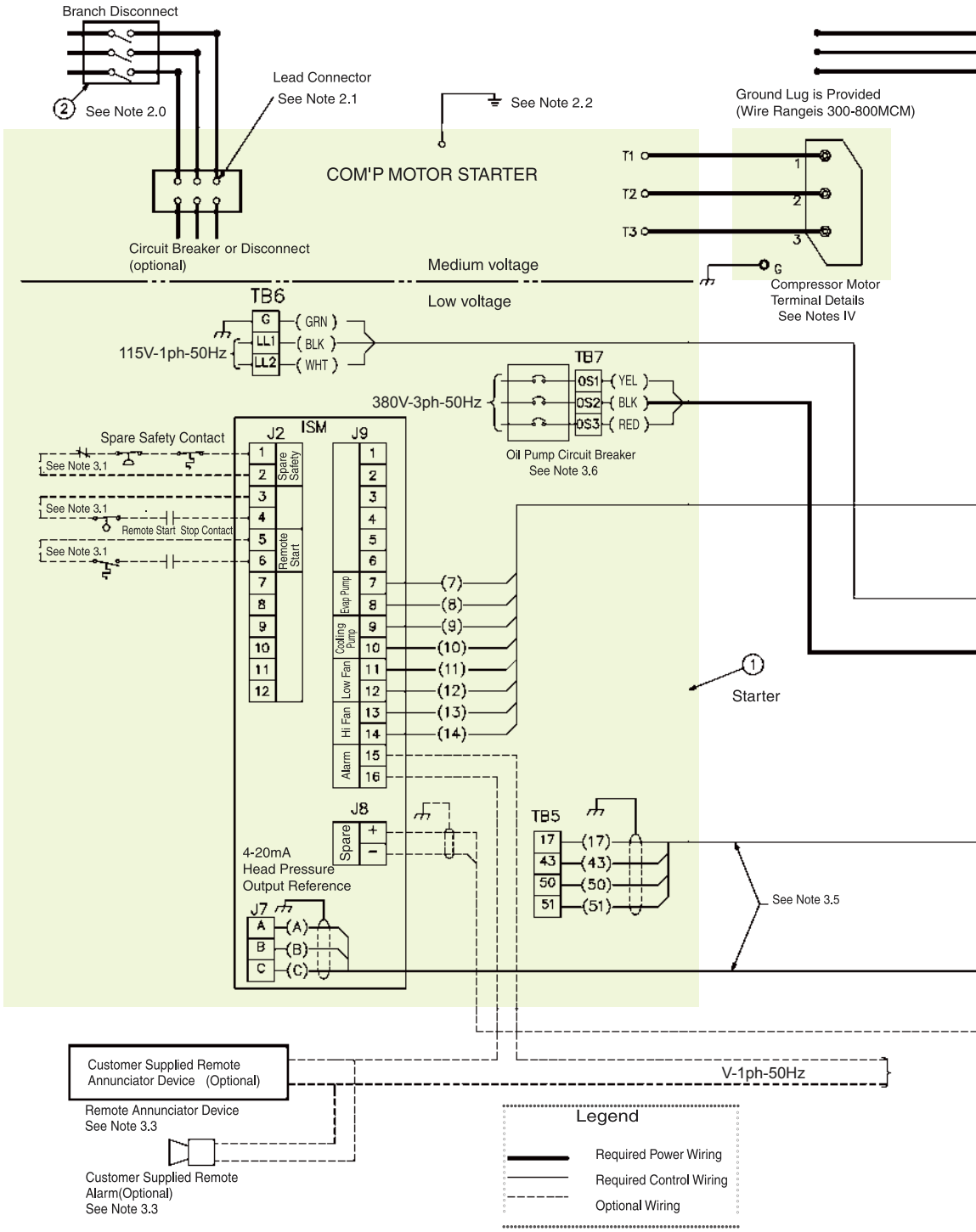
3.5 VFD provide spare output terminal for customer, Input sign must be 4~20mA, not grounded. Input resistance of terminal is soon. (Not apply to PIC5+ control products. For PIC5+ control products, shall wire from control panel.)

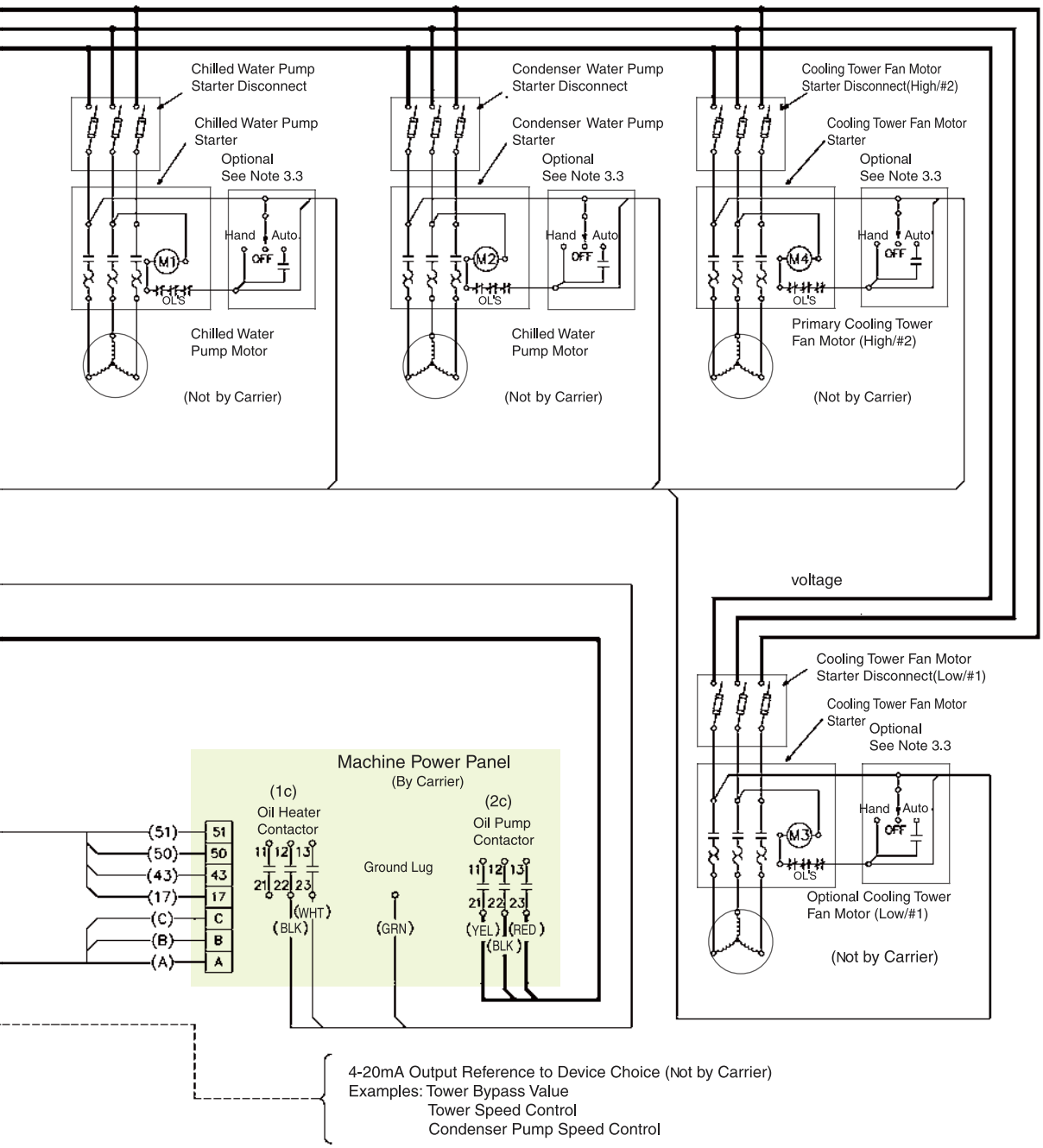
19XR/XR-C/XR-E Typical Field Wiring with Free-Standing Starter (Low Voltage)



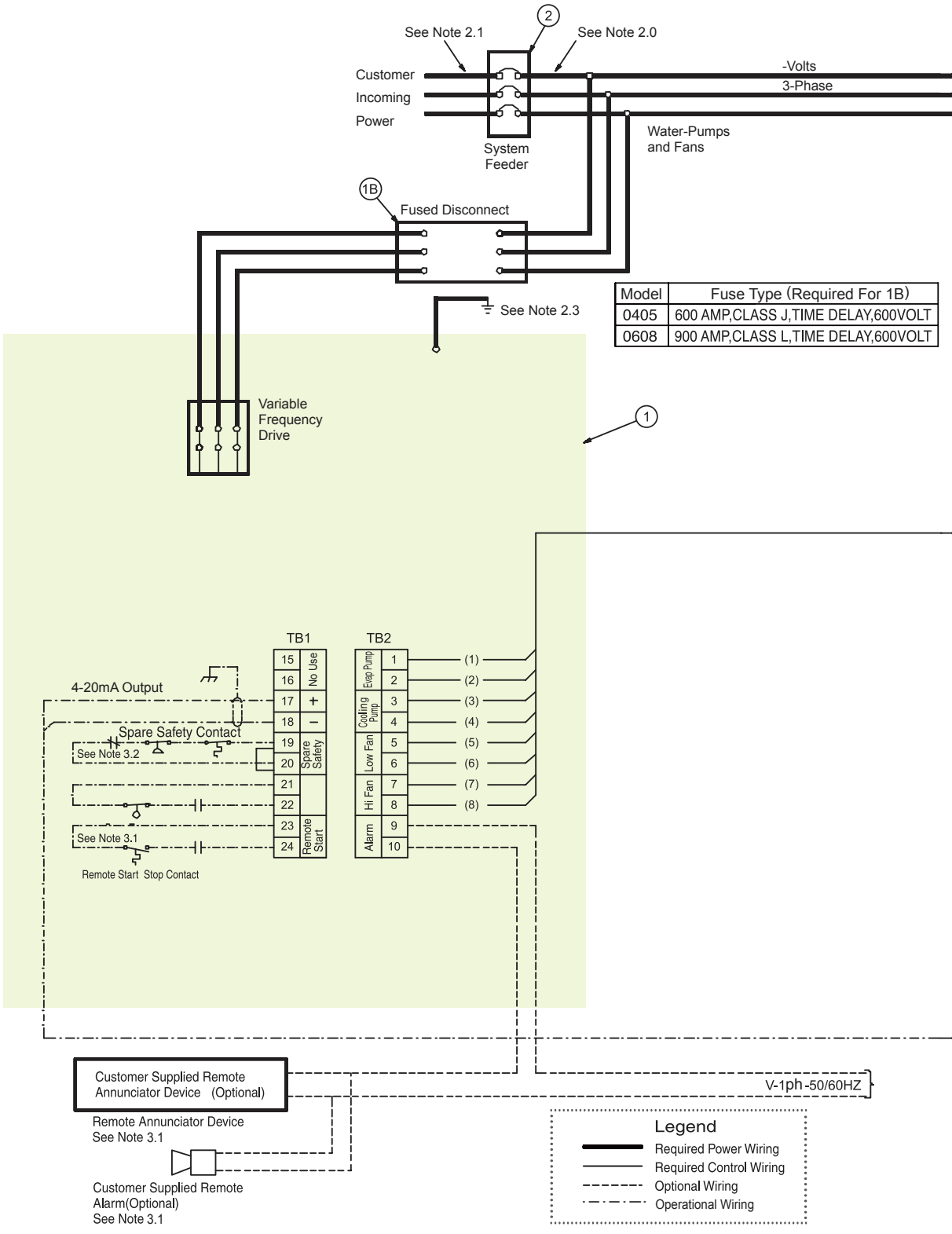

Chilled Water Pump Starter
Optional See Note 3.3
Hand
Auto
OFF
M1
OL'S
Chilled Water Pump Motor
(Not by Carrier)
Condenser Water Pump Starter
Optional See Note 3.3
Hand
Auto
OFF
M1
OL'S
Condenser Water Pump Motor
(Not by Carrier)
Cooling Tower Fan Motor Starter Disconnect(High/#2)
Optional See Note 3.3
Hand
Auto
OFF
M1
OL'S
Primary Cooling Tower Fan Motor (High/#2)
(Not by Carrier)
Lubrication System Power Panel
(by Carrier)
(51)
(50)
(43)
(17)
(C)
(B)
(A)
51
50
43
17
C
B
A
Oil Heater Contactor
11 12 13
21 22 23
(WHT)
(BLK)
(Ground Lug)
(GRN)
Oil Pump Contactor
11 12 13
21 22 23
(YEL)
(RED)
(BLK)
Cooling Tower Fan Motor Starter Disconnect(Low/#1)
Optional See Note 3.3
Hand
Auto
OFF
M1
OL'S
Optional Cooling Tower Fan Motor (Low/#1)
(Not by Carrier)

19XR/XR-C/XR-E Typical Field Wiring with Free-Standing Starter (Medium/High Voltage)

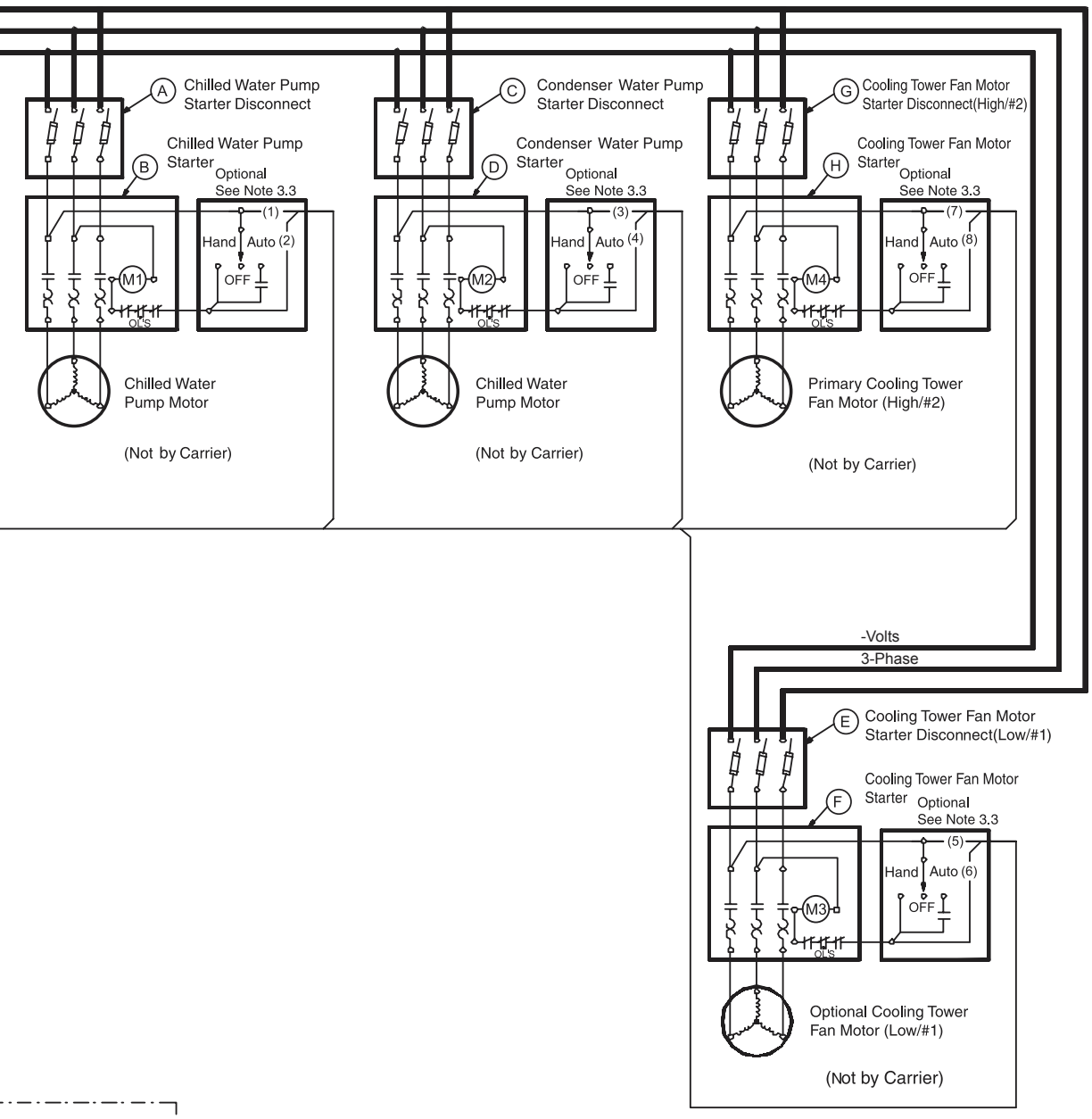



Chilled Water Pump
Starter Disconnect
Chilled Water Pump
Starter
Optional
See Note 3.3
Hand
Auto
OFF
M1
OL'S
Chilled Water
Pump Motor
(Not by Carrier)
Condenser Water Pump
Starter Disconnect
Condenser Water Pump
Starter
Optional
See Note 3.3
Hand
Auto
OFF
M2
OL'S
Chilled Water
Pump Motor
(Not by Carrier)
Cooling Tower Fan Motor
Starter Disconnect(High/#2)
Cooling Tower Fan Motor
Starter
Optional
See Note 3.3
Hand
Auto
OFF
M4
OL'S
Primary Cooling Tower
Fan Motor (High/#2)
(Not by Carrier)
voltage
Cooling Tower Fan Motor
Starter Disconnect(Low/#1)
Cooling Tower Fan Motor
Starter
Optional
See Note 3.3
Hand
Auto
OFF
M3
OL'S
Optional Cooling Tower
Fan Motor (Low/#1)
(Not by Carrier)
Machine Power Panel
(By Carrier)
(1c)
Oil Heater
Contactor
11 12 13
21 22 23
(WHT)
(BLK)
Ground Lug
(GRN)
(2c)
Oil Pump
Contactor
11 12 13
21 22 23
(YEL) (RED)
(BLK)
(51) 51
(50) 50
(43) 43
(17) 17
(C) C
(B) B
(A) A
4-20mA Output Reference to Device Choice (Not by Carrier)
Examples: Tower Bypass Value
Tower Speed Control
Condenser Pump Speed Control

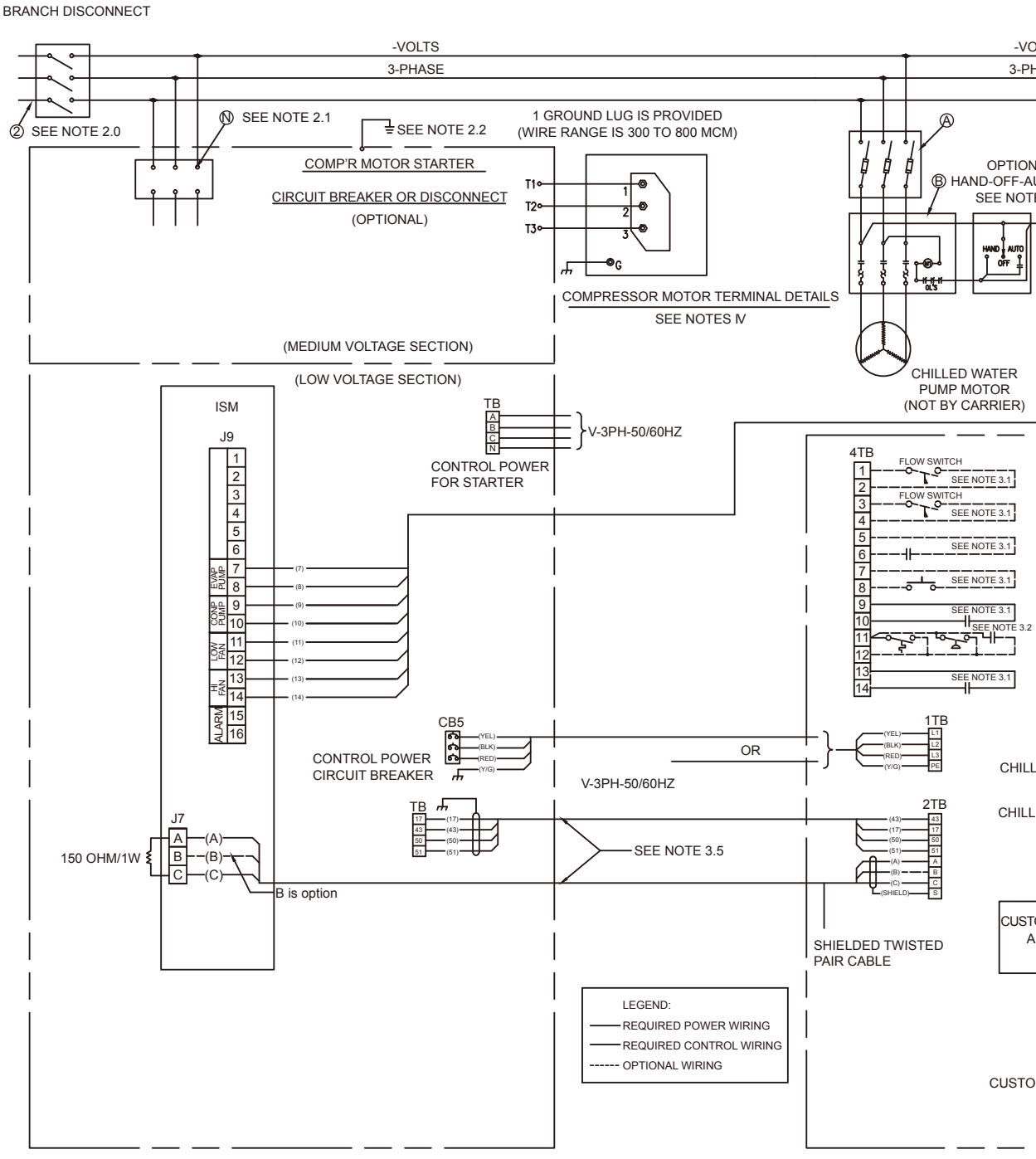
19XRV/XR(V)-C/XR(V)-E Typical Field Wiring with UM-VFD

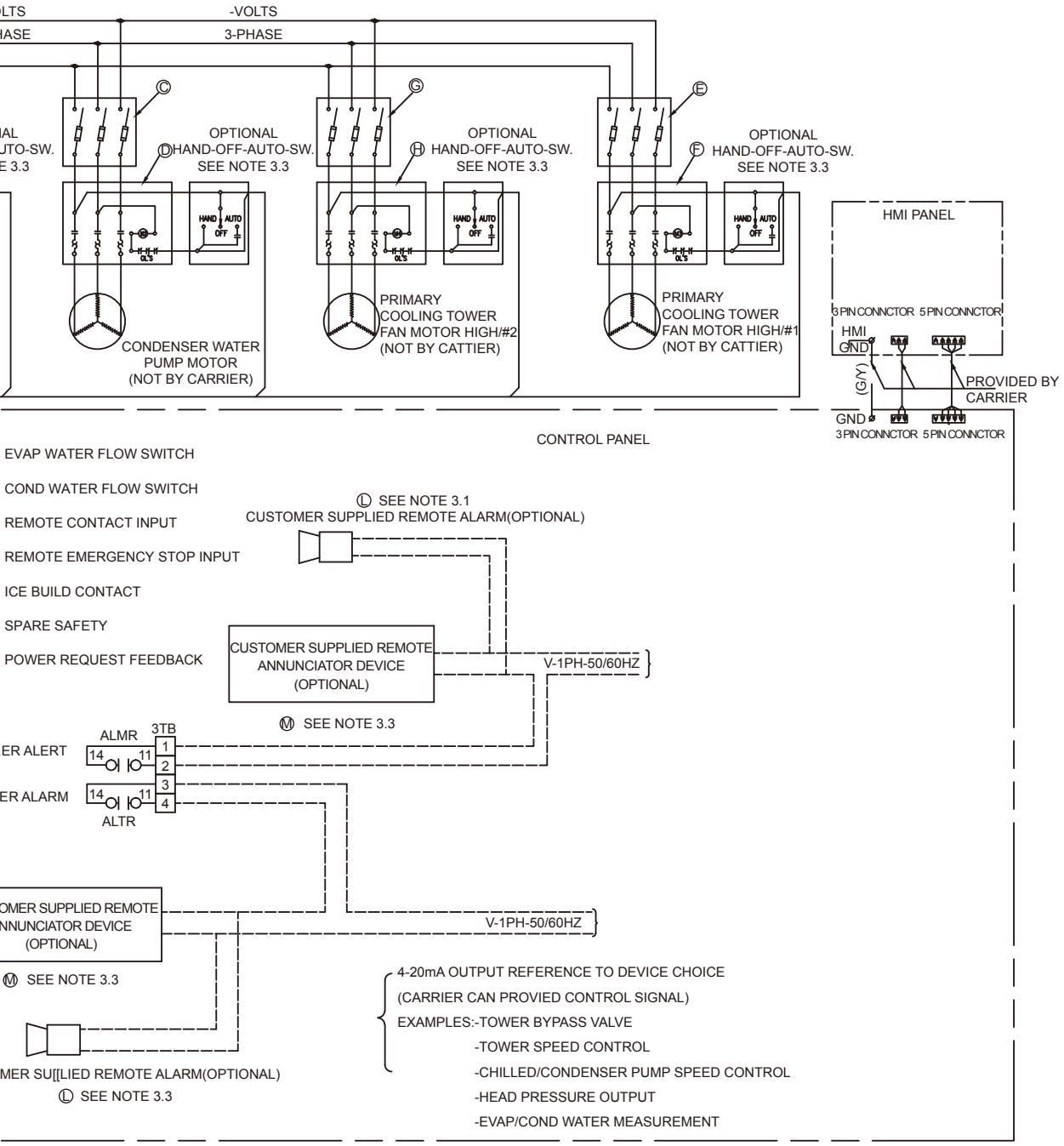


Model	Fuse Type (Required For 1B)
0405	600 AMP,CLASS J,TIME DELAY,600VOLT
0608	900 AMP,CLASS L,TIME DELAY,600VOLT


A
Chilled Water Pump
Starter Disconnect
B
Chilled Water Pump
Starter
Optional
See Note 3.3
(1)
Hand
Auto (2)
OFF
M1
OL's
Chilled Water
Pump Motor
(Not by Carrier)
C
Condenser Water Pump
Starter Disconnect
D
Condenser Water Pump
Starter
Optional
See Note 3.3
(3)
Hand
Auto (4)
OFF
M2
OL's
Chilled Water
Pump Motor
(Not by Carrier)
G
Cooling Tower Fan Motor
Starter Disconnect(High/#2)
H
Cooling Tower Fan Motor
Starter
Optional
See Note 3.3
(7)
Hand
Auto (8)
OFF
M4
OL's
Primary Cooling Tower
Fan Motor (High/#2)
(Not by Carrier)
-Volts
3-Phase
E
Cooling Tower Fan Motor
Starter Disconnect(Low/#1)
F
Cooling Tower Fan Motor
Starter
Optional
See Note 3.3
(5)
Hand
Auto (6)
OFF
M3
OL's
Optional Cooling Tower
Fan Motor (Low/#1)
(Not by Carrier)
4-20mA Output Reference to Device Choice (Not by Carrier)
Examples: Tower Bypass Value
Tower Speed Control
Condenser Pump Speed Control
See Note 3.5

19XR-6/7 Typical Field Wiring with Free-Standing Starter (Medium/High Voltage)




-VOLTS
3-PHASE
OPTIONAL
HAND-OFF-AUTO-SW.
SEE NOTE 3.3
CONDENSER WATER
PUMP MOTOR
(NOT BY CARRIER)
PRIMARY
COOLING TOWER
FAN MOTOR HIGH/#2
(NOT BY CATTIER)
PRIMARY
COOLING TOWER
FAN MOTOR HIGH/#1
(NOT BY CATTIER)
HMI PANEL
3 PIN CONNCTOR
5 PIN CONNCTOR
HMI
GND
(G/Y)
PROVIDED BY
CARRIER
CONTROL PANEL
EVAP WATER FLOW SWITCH
COND WATER FLOW SWITCH
REMOTE CONTACT INPUT
REMOTE EMERGENCY STOP INPUT
ICE BUILD CONTACT
SPARE SAFETY
POWER REQUEST FEEDBACK
SEE NOTE 3.1
CUSTOMER SUPPLIED REMOTE ALARM(OPTIONAL)
CUSTOMER SUPPLIED REMOTE
ANNUNCIATOR DEVICE
(OPTIONAL)
V-1PH-50/60HZ
SEE NOTE 3.3
ALMR
3TB
ALTR
4-20mA OUTPUT REFERENCE TO DEVICE CHOICE
(CARRIER CAN PROVIED CONTROL SIGNAL)
EXAMPLES:-TOWER BYPASS VALVE
-TOWER SPEED CONTROL
-CHILLED/CONDENSER PUMP SPEED CONTROL
-HEAD PRESSURE OUTPUT
-EVAP/COND WATER MEASUREMENT

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Supersede:	CAT-AQUAEDGE-19XR_E_1705_07
Effective Date:	December, 2017