

MLC-SC Air-Cooled Scroll Chillers 100 – 285 Tons

OUR BUSINESS IS COOLING YOURS™

motivaircorp.com



When commercial grade isn't enough

Businesses functioning in today's advanced industrial manufacturing and mission critical environments rely on chiller systems to provide a reliable source of chilled water which can improve overall system uptime and efficiencies.

Every critical cooling application is unique in its own way which is why the Motivair[®] MLC-SC scroll chiller range has been designed to accommodate a wide range of operating points and customization based specifically on the needs of the customer. No other air-cooled chiller offers such a broad range of features and benefits that can be used in combination to create a chiller best suited for your business's needs.

OUR BUSINESS IS COOLING YOURS

motivaircorp.com

Designed for a Purpose...



SCROLL COMPRESSORS

Multiple high efficiency scroll compressors with R-410A refrigerant. Designed to operate at high efficiency across the entire operating range with lower sound and vibration than traditional compressors. Unique scroll compressor design allows for resistance to liquid slugging.



CONDENSER FAN & MOTORS

Each fan features Electronically Commutated (EC) variable speed motor technology, globally recognized as the most efficient axial fans available in today's HVAC market.

More efficient than VFD speed control, EC motors offer the highest efficiencies and added chiller redundancy. These exceptionally reliable motors feature a reversed stator and rotor, which eliminates the traditional fan motor shaft. The outer shell of the motor is the rotating body, to which the fan blades are bolted. This unique arrangement reduces torque stress on the blades, eliminates fan blade stress fractures, maximizes airflow and maintains efficiency over the entire fan performance curve.

_

CONDENSER & FREE COOLING OPTION

V-Coil profile constructed from seamless copper tubes expanded into aluminum fins creates a high efficiency design with minimal pressure drop. Coils are easily maintained with access through removable panels.

Optional Free-Cooling features exclusive integrated condenser/free-cooling coil with ultra-low pressure drop and inherent redundancy.

Modular design creates opportunities for custom coil configurations.



EVAPORATION

Shell and tube evaporator features two independent refrigeration circuits (optional 3 circuit design available). Low pressure drop design on both the water and refrigerant circuits creates maximum efficiency. Custom profile options allow for a wide operating range under various design conditions.

motivaircorp.com

Application Defined Options



OPTIONAL DUPLEX PUMPS

- Simplex (1) Pump Package
- Duplex (2) Pump Package
- Storage Tank
- 3x Refrigeration Circuits
- Low Noise Package
- Ultra Low Noise Package
- High Ambient Package

- Stainless Steel Cabinet Construction
- Condenser Coil Coating
- Security Guards for Open Areas
- Integrated Free-Cooling System



OPTIONAL STORAGE TANK

STANDARD FEATURES:

- R-410A Refrigerant
- Factory Installed Flow Switch
- Locking Disconnect Switch
- Phase and Power Monitoring
- Advanced PLC Control System
- Heavy Duty Galvanized Steel Frame with Baked Powder Epoxy Coat Finish
- Designed for Easy Service Access
- Electrical Panel Heating & Cooling System

OPTIONAL 3X REFRIGERATION CIRCUITS



Integrated Free-Cooling: The Ultimate Solution for Optimal Energy Savings

The Motivair[®] MLC-SC-FC chillers with integrated "Free-Cooling" are designed to provide the owner with optimal performance, year round, in varying ambient temperatures. This "Free-Cooling" option, available on all MLC-SC models and comes standard with Motivair's advanced PLC control package – a unique single package for year-round energy savings.

The high efficiency scroll compressor plant is designed to cool the designated heat load during summer months. When ambient temperatures fall overnight or during cooler seasonal weather, the integrated "Free-Cooling" system is automatically activated.

The system operates by directing the return chilled glycol through the "Free-Cooling" coil, before it enters the evaporator. This is achieved via an automatic motorized valve, controlled by the PLC, whenever the ambient falls below the return chilled glycol temperature set point. The glycol is either partially or completely cooled in the "Free-Cooling" coil for maximum energy savings.

As a result, less mechanical refrigeration is required to achieve the chilled glycol set point, and the scroll compressors are staged down and eventually turned off by the PLC, which continuously monitors the system. Energy savings in areas with cooler winter months are

substantial. The ability to allow the compressors to stage off in cooler weather further drives overall chiller efficiencies. Wear and tear on chiller components is dramatically reduced, due to fewer start-ups and running hours during winter months.

Automatic switching between mechanical cooling and "Free-Cooling" is seamless, which allows optimal performance year round. As a general rule of thumb, "Free-Cooling" savings more than pay for the initial investment in the first year of operation!

THE PIONEER OF FREE-COOLING CHILLERS

When Maximum Uptime And Lowest TCO Matter Most

- MLC-FC Chiller Range has been designed, built and tested specifically as packaged Free Cooling Chillers
- ETL-Tested and Listed to current UL & CSA standards

PLC Controls

WHEN MAXIMUM UPTIME AND LOWEST TCO MATTER MOST

The MLC-SC range features the PCO5 control system, which is an advanced Programmable Logic Controller, with a base-operating platform that can be easily modified to adapt to various applications.

A multi-character LCD display, and easy to follow directional prompts, gives the operator complete control over all chiller functions. Multiple digital and analog inputs as well as digital and PWM outputs offer unparalleled control possibilities.



CONTROL FEATURES:

- Highly visible LCD display
- Tactile push-buttons
- Adjustable alarm set points
- °F/°C selectable
- Compressor Lead/Lag control
- Anti-Compressor short cycle
- Compressor failure alarm
- Adjustable water set point
- Supply water temp. display
- Return water temp. display
- Low water temperature alarm
- Freeze alarm
- Low water/glycol flow alarm
- High water temperature alarm

- Low refrigeration pressure alarm
- High refrigeration pressure alarm
- Irregular voltage alarm
- General Alarm Relay
- Remote Start/Stop Relay
- Manual alarm reset
- RS 232/RS 485
- communication Ethernet Communication

PC05 Display PC05

 LON, BACNET, MODBUS communication (optional) MLC & MLC-FC CONTROLS





BOARD INTELLIGENT CHILLER RESPONSE

The latest generation of Motivair[®] software allows the chillers to respond to system changes in real time and to adjust performance accordingly. The proprietary control logic in the MLC-SC or MLC-SC-FC chillers provides:

- Automatic restart after a power outage
- Rapid restart of refrigeration compressors after a power outage, while affording maximum compressor protection
- Selective decision on which compressor(s) to start first based on run-time and fastest possible response to system load
- Liquid injection to the compressors under high ambient operation
- Seamless transition between refrigeration and optional Free Cooling mode based on system load, chilled water temperature, ambient temperatures and installation profile.

CENTURION MONITORING SYSTEM

This optional feature empowers the owner by providing a wide range of safeties and access to critical data from a remote location via cellular service, outside of the customer's firewall.

If the chiller is operating in an unsafe condition or in the unlikely event of an alarm, designated contacts are immediately notified by the chiller of its condition. The pending alarm can then be avoided or quickly corrected.

FEATURES:

- Data trending
- Password protected multi-level access
- Adjustable warning thresholds

MLC-SC/MLC-SC-FC Specifications

MLC-SC-A CHILLER RANGE WITH SCROLL COMPRESSORS	MLC-SC	200	270	340	390	460	490	510	560	600	660	690	820	930	1100	1150
Nominal Cooling Capacity*	BTU/HR	825,244	988,899	1,207,163	1,336,735	1,466,341	1,691,402	1,834,600	1,953,961	2,185,851	2,318,838			,	3,607,829	3,805,63
Nominal Cooling Capacity	TON	69	82	101	111	122	141	153	163	182	193	203	244	259	301	317
Type Of Refrigerant Number Of Refrigerating Circuits	TYPE	2	2	2	2	2	2	R-410a 2	2	2	2	2	3	3	3	3
Total Compressor Running Current	QTY A	112	149	160	186	217	232	260	288	301	332	365	431	482	477	521
Number Of Compressors	QTY	4	4	4	4	4	4	6	6	6	6	6	9	9	9	9
Capacity Steps	QTY	4	4	4	4	4	4	4	4	4	4	4	6	6	6	6
EVAPORATOR							S	ihell & Tube								
Nominal Flow Rate	GPM	183	219	267	296	325	375	407	433	484	514	540	650	689	799	843
Pressure Drops (Evaporator + Valves + Piping)	PSI	10	8	10	9	9	11	10	10	10	10	9	10	9	11	10
PUMP & TANK (OPTIONAL)	10.1.1	7.0	11	5	implex or D	uplex Pump	Options, Co	arbon Steel	or Stainle	ss Steel Tar	k Options			05		
Maximum Pump Absorbed Power Maximum Pump Absorbed Current	KW A	7.5	20.3	20.3	15 26.9	15 26.9	18.5 32.1	18.5 32.1	18.5 32.1	22 39.5	22 39.5	30 52	30 52	CF CF	CF CF	CF CF
Available External Pressure (Single)	PSI	32.2	36.9	35.0	40.3	36.7	33.6	31.8	33.2	42.7	43.5	38.6	31.3	CF	CF	CF
Tank Volume	GAL	79	100	100	132	132	132	132	132	159	159	159	159	159	159	159
FANS & CONDENSER					Axia	I EC Fans & C	Copper Tube	e with Alum	inum Fin C	ondenser						
Fan Electronic Fan Speed Control	TYPE							EC								
Fan Quantity	QTY	4	4	6	6	6	8	8	8	10	10	10	12	12	18	18
Fan Total Absorbed Power	kW	10.2	10.2	15.4	15.4	15.4	20.5	20.5	20.5	25.6	25.6	25.6	30.7	30.7	46.1	46.1
Fan Total Absorbed Current	A	15.6	15.6	23.4	23.4	23.4	31.2	31.2	31.2	39.0	39.0	39.0	46.8	46.8	70.2	70.2
Total Air Flow NOISE DATA	CFM	51,324	51,324	76,986	76,986	76,986	102,648	102,648	102,648	128,310	128,310	128,310	153,972	153,972	230,958	230,958
Sound Pressure Level	DB(A)	68.1	70.0	70.3	70.0	72.0	red in an op 73.7	71.7	71.5	73.4	er 74.4	75.3	73.3	74.8	76.4	77.2
ELECTRICAL DATA	DDIA	00.1	70.0	70.0	70.0		bes not inclu			70.4	/4.4	73.5	/ 0.0	74.0	70.4	11.2
Power Circuit	V/PH/HZ							460/3/60								
Full Load Current (FLA)	FLA	128	165	184	209	241	263	291	319	340	371	404	478	529	547	591
Minimum Circuit Ampacity (MCA)	MCA	135	174	194	221	254	277	302	331	353	385	419	490	542	560	606
Maximum Overcurrent Protection (MOP)	MOP	163	211	234	268	309	335	346	379	403	440	480	538	596	613	664
DIMENSIONS & WEIGHTS																
Length	IN	127	127	178	178	178	230	230	230	281	281	281	332	332	471	471
Width	IN	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96	87 96
Height Estimated. Shipping Weight	LBS.	5,732	5,732	7,341	7,341	7,341	90	90	90	12,236	12,236	12,236	15,939	15,939	22,024	22,024
Hydraulic Connections (Inlet/Outlet)	IN	5	5	5	6	6	6	6	6	6	6	8	8	8	8	8
MLC-SC-FC CHILLER RANGE		Ū	0	0	0		0	0	0	0	0	0	Ŭ	0	Ŭ	
WITH SCROLL COMPRESSORS	MLC-SC-FC	200	270	340	390	460	490	510	56	0	500	660	690	820	930	1100
Nominal Cooling Capacity*	BTU/HR	777,500	1,023,017	1,142,377	1,343,566	1,476,553	1,595,913	1,817,55	i8 1,933	,504 2,1	48,353 2	,274,509	2,485,943	3,024,722	3,222,495	3,413,471
Nominal Cooling Capacity	TON	65	85	95	112	123	133	151	16		179	190	207	252	269	284
100% Free Cooling Ambient Temperature	°F	29	33	30	33	31	29	32	30)	32	30	32	33	32	30
Type Of Refrigerant Gas	TYPE	0	0	0	0		0	R-410c			0	0	0	0	0	0
Number Of Refrigerating Circuits Total Compressor Running Current	QTY A	2	2	2	2	2	2	2	2		2 308	2 339	2 357	3 416	3 461	3
Number Of Compressors	QTY	4	4	4	4	4	4	6	6		6	6	6	9	9	9
Capacity Steps	QTY	4	4	4	4	4	4	4	4		4	4	4	6	6	6
EVAPORATOR													· · · · · · · · · · · · · · · · · · ·			-
Nominal Flow Rate	0.011															
	GPM	172	227	253	298	327	354	Shell & To 403	ube 42	8	476	504	551	670	714	756
Pressure Drops (Evaporator + Valves + Piping)	PSI	172 11	227 11	253 12	298 11	327 12	354 12				476 11	504 11	551 12			756 13
F.C. Pressure Drop (F.C. Coil + Evap + Valves + Piping)								403	42	2)	11 21			670	714	
F.C. Pressure Drop (F.C. Coil + Evap + Valves + Piping) PUMP & TANK (OPTIONAL)	PSI PSI	11 18	11 20	12 19	11 20 Simplex o	12 23 rr Duplex Pur	12 21 mp Options	403 12 22 , Carbon Ste	42 12 20 eel or Stai	2) nless Steel	11 21 Tank Optio	11 19 ns	12 22	670 13 22	714 13 23	13 21
F.C. Pressure Drop (F.C. Coil + Evap + Volves + Piping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power	PSI PSI KW	11 18 7.5	11 20 11	12 19 11	11 20 Simplex o 15	12 23 or Duplex Pur 15	12 21 mp Options 18.5	403 12 22 , Carbon Ste 18.5	42 12 20 eel or Stai 18	2) nless Steel .5	11 21 Tank Optio 22	11 19 ns 22	12 22 30	670 13 22 30	714 13 23 CF	13 21 CF
F.C. Pressure Drop (F.C. Cal + Skap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current	PSI PSI KW A	11 18 7.5 13.2	11 20 11 20.3	12 19 11 20.3	11 20 Simplex o 15 26.9	12 23 Ir Duplex Pur 15 26.9	12 21 mp Options 18.5 32.1	403 12 22 , Carbon Str 18.5 32.1	42 12 20 eel or Stai 18 32	2) nless Steel .5 .1 :	11 21 Tank Optio 22 39.5	11 19 ns 22 39.5	12 22 30 52	670 13 22 30 52	714 13 23 CF CF	13 21 CF CF
PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single)	PSI PSI KW A PSI	11 18 7.5 13.2 32.2	11 20 11 20.3 36.9	12 19 11 20.3 35.0	11 20 Simplex o 15 26.9 40.3	12 23 ar Duplex Pur 15 26.9 36.7	12 21 mp Options 18.5 32.1 33.6	403 12 22 , Carbon St 18.5 32.1 31.8	42 12 20 eel or Stai 18 32 33	2) .1 .2 .2	11 21 Tank Optio 22 39.5 42.7	11 19 ns 22 39.5 43.5	12 22 30 52 38.6	670 13 22 30 52 31.3	714 13 23 CF CF CF CF	13 21 CF CF CF
F.C. Pressure Drop (F.C. Cal + Skap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume	PSI PSI KW A	11 18 7.5 13.2	11 20 11 20.3	12 19 11 20.3	11 20 Simplex o 15 26.9	12 23 Ir Duplex Pur 15 26.9	12 21 mp Options 18.5 32.1 33.6 132	403 12 22 , Carbon Ste 18.5 32.1 31.8 132	42 12 20 eel or Stai 18 32 33 13	2 nless Steel .1 .2 2	11 21 Tank Optio 22 39.5	11 19 ns 22 39.5	12 22 30 52	670 13 22 30 52	714 13 23 CF CF	13 21 CF CF
F.C. Pressure Drop (F.C. Cal + Skap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single)	PSI PSI KW A PSI	11 18 7.5 13.2 32.2	11 20 11 20.3 36.9	12 19 11 20.3 35.0	11 20 Simplex o 15 26.9 40.3	12 23 ar Duplex Pur 15 26.9 36.7	12 21 mp Options 18.5 32.1 33.6	403 12 22 , Carbon Ste 18.5 32.1 31.8 132	42 12 20 eel or Stai 18 32 33	2 nless Steel .1 .2 2	11 21 Tank Optio 22 39.5 42.7	11 19 ns 22 39.5 43.5	12 22 30 52 38.6	670 13 22 30 52 31.3	714 13 23 CF CF CF CF	13 21 CF CF CF
F.C. Pressure Drop (F.C. Cal + Svap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER	PSI PSI KW A PSI GAL	11 18 7.5 13.2 32.2	11 20 11 20.3 36.9	12 19 11 20.3 35.0	11 20 Simplex o 15 26.9 40.3	12 23 ar Duplex Pur 15 26.9 36.7	12 21 mp Options 18.5 32.1 33.6 132	403 12 22 , Carbon Sta 18.5 32.1 31.8 132 we with Alun	42 12 20 eel or Stai 18 32 33 13	2 D nless Steel 5 .1 .2 2 Condenser	11 21 Tank Optio 22 39.5 42.7	11 19 ns 22 39.5 43.5	12 22 30 52 38.6	670 13 22 30 52 31.3	714 13 23 CF CF CF CF	13 21 CF CF CF
F.C. Pressure Drop (F.C. Cal + Evap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity	PSI PSI KW A PSI GAL TYPE	11 18 7.5 13.2 32.2 79	11 20 11 20.3 36.9 100	12 19 11 20.3 35.0 100	11 20 Simplex o 15 26.9 40.3 132 Axi	12 23 ir Duplex Pur 15 26.9 36.7 132 al EC Fans &	12 21 18.5 32.1 33.6 132 Copper Tub	403 12 22 , Carbon St 18.5 32.1 31.8 132 re with Alun EC	42 12 eel or Stai 18 32 33 33 13 ninum Fin	2 nless Steel .5 .1 .2 Condenser .)	11 21 Tank Optio 22 39.5 42.7 159	11 19 ns 22 39.5 43.5 159	12 22 30 52 38.6 159	670 13 22 30 52 31.3 159	714 13 23 CF CF CF CF 159	13 21 CF CF CF 159
F.C. Pressure Drop (F.C. Cal + Evap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity	PSI PSI KW A PSI GAL TYPE QTY	11 18 7.5 13.2 32.2 79 4	11 20 11 20.3 36.9 100 6	12 19 11 20.3 35.0 100	11 20 Simplex o 15 26.9 40.3 132 Axi 8	12 23 ir Duplex Pur 15 26.9 36.7 132 al EC Fans & 8	12 21 18.5 32.1 33.6 132 Copper Tub 8	403 12 22 , Carbon Str 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0	422 12 20 20 20 20 20 20 20 20 20 20 20 20 20	2) nless Steel 5 .1 .2 2 Condenser) .6	11 21 Tank Optio 22 39.5 42.7 159 12	11 19 22 39.5 43.5 159 12	12 22 30 52 38.6 159 14	670 13 22 30 52 31.3 159 18	714 13 23 CF CF CF CF 159 18	13 21 CF CF CF 159 18
F.C. Pressure Drop (F.C. Cal + Evap + Valves + Piping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Current Total Absorbed Current Total Air Flow	PSI PSI KW A PSI GAL TYPE QTY kW	11 18 7.5 13.2 32.2 79 4 4 10.2	11 20 11 20.3 36.9 100 6 15.4	12 19 11 20.3 35.0 100 6 6 15.4	11 20 Simplex o 15 26,9 40,3 132 Axi 8 20,5 31,2 90,406	12 23 r Duplex Pur 15 26.9 36.7 132 al EC Fans & 8 20.5 31.2 90,406	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406	403 12 22 , Carbon Str 18.5 32.1 31.8 132 ewith Alun EC 10 25.6 39.0 113,000	42 12 20 20 20 20 20 20 20 20 20 20 20 20 20	2) nless Steel .1 .2 Condenser .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	11 21 Tank Optio 22 39.5 42.7 159 12 12 30.7 46.8 5,608	11 19 ns 22 39.5 43.5 159 12 30.7	12 22 30 52 38.6 159 14 35.8	670 13 22 30 52 31.3 159 18 46.1	714 13 23 CF CF CF CF 159 18 18 46.1	13 21 CF CF CF 159 18 46.1
F.C. Pressure Drop [F.C. Cal + Evap + Valves + Piping] PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Power Fan Total Absorbed Current Total Air Flow NOISE DATA	PSI PSI KW A PSI GAL TYPE QTY kW A CFM	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804	11 20 Simplex o 15 26.9 40.3 132 Axi 8 20.5 31.2 90,406 D	12 23 r Duplex Pur 15 26.9 36.7 132 al EC Fans & 8 20.5 31.2 90,406 istonce measurement	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in on	403 12 22 , Carbon Str 18.5 32.1 31.8 132 re with Alun EC 10 25.6 39.0 113,002 open field of	42 12 22 23 23 23 23 23 23 23 23 2	2 nless Steel .5 .1 .2 Condenser .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	11 21 Tank Optio 22 39.5 42.7 159 12 30.7 46.8 5,608 nser	11 19 22 39.5 43.5 159 12 30.7 46.8 335,608	12 22 30 52 38.6 159 14 35.8 54.6 158,210	670 13 22 30 52 31.3 159 18 46.1 70.2 203,412	714 13 23 CF CF CF 159 18 46.1 70.2 203,412	13 21 CF CF CF 159 18 46.1 70.2 203,412
F.C. Pressure Drop [F.C. Cal + Evap + Valves + Piping] PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Valume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Current Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level	PSI PSI KW A PSI GAL TYPE QTY kW A	11 18 7.5 13.2 32.2 79 4 10.2 15.6	11 20 11 20.3 36.9 100 6 15.4 23.4	12 19 11 20.3 35.0 100 6 15.4 23.4	11 20 Simplex o 15 26,9 40,3 132 Axi 8 20,5 31,2 90,406	12 23 r Duplex Pur 15 26.9 36.7 132 al EC Fans & 8 20.5 31.2 90,406	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406	403 12 22 , Carbon Str 18.5 32.1 31.8 132 ewith Alun EC 10 25.6 39.0 113,000	42 12 20 20 20 20 20 20 20 20 20 20 20 20 20	2 nless Steel .5 .1 .2 Condenser .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	11 21 Tank Optio 22 39.5 42.7 159 12 12 30.7 46.8 5,608	11 19 ns 22 39,5 43,5 159 12 30,7 46,8	12 22 30 52 38.6 159 14 35.8 54.6	670 13 22 30 52 31.3 159 18 46.1 70.2	714 13 23 CF CF CF 159 18 46.1 70.2	13 21 CF CF CF 159 18 46.1 70.2
F.C. Pressure Drop (F.C. Cal + Evap + Valves + Piping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Power Fan Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804	11 20 Simplex o 15 26.9 40.3 132 Axi 8 20.5 31.2 90,406 D	12 23 r Duplex Pur 15 26.9 36.7 132 al EC Fans & 8 20.5 31.2 90,406 istonce measurement	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in on	403 12 22 , Carbon Str 18.5 32.1 31.8 132 :e with Alun EC 10 25.6 39.0 113,00% open field c 72.1	42 12 22 23 24 24 25 25 25 39 7 113,6 13 16 25 39 7 113,6 17 13 16 17 17 113,6 16 17 17 18 18 18 18 18 18 18 18 18 18	2 nless Steel .5 .1 .2 Condenser .0 .0 .0 .0 .0 .0 .0 .0 .0 .0	11 21 Tank Optio 22 39.5 42.7 159 12 30.7 46.8 5,608 nser	11 19 22 39.5 43.5 159 12 30.7 46.8 335,608	12 22 30 52 38.6 159 14 35.8 54.6 158,210	670 13 22 30 52 31.3 159 18 46.1 70.2 203,412	714 13 23 CF CF CF 159 18 46.1 70.2 203,412	13 21 CF CF CF 159 18 46.1 70.2 203,412
F.C. Pressure Drop [F.C. Cal + Evap + Valves + Piping] PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Valume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Current Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A)	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804 70.6	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3	11 20 Simplex o 15 26.9 40.3 132 Axi 8 8 20.5 31.2 90,406 D 70.5	12 23 r Duplax Pur 15 26.9 36.7 132 al EC Fans & 8 8 20.5 31.2 90,406 islance meas 72.4	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in an 73.7 Does not in	403 12 22 , Carbon Sti 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,000 000113,000 0000113,000 0000113,000 0000113,000 0000113,000 0000113,000 0000113,000 113,0000 113,0000 113,0000 113,0000000000	42 12 20 eel or Stai 18 32 33 33 33 13 13 13 13 13 13 13 13 13 13	2 0 nless Steel 5 1 2 2 Condenser 0 0 6.6 3 20 0 0 0 0 0 0 0 0 0 0 0 0 0	11 21 Tank Optio 22 39,5 42,7 159 12 30,7 46,8 5,608 nser 73,6	11 19 ns 22 39,5 43,5 159 12 30,7 46,8 335,608 74,7	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6	670 13 22 30 52 31.3 159 18 46.1 70.2 203,412 74.1	714 13 23 CF CF CF 159 18 46.1 70.2 203,412 75.4	13 21 CF CF 159 18 46.1 70.2 203,412 76.4
F.C. Pressure Drop (F.C. Cal + Brap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Total Absorbed Power Fan Total Absorbed Power Fan Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit Full Load Current (FLA)	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A) V/PH/HZ FLA	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1 135	11 20 11 20,3 36,9 100 6 15,4 23,4 67,804 70,6 167	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3 70.3	11 20 Simplex o 15 26.9 40.3 132 Axi 8 8 20.5 31.2 90,006 D 70.5	12 23 r Duplax Pur 15 26.9 367 132 al EC Fans & 8 8 20.5 31.2 90,406 istance meas 72.4 246	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in an 73.7 Does not in 280	403 12 22 , Carbon 5th 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,000 113,000 0 113,000 0 113,0000 113,0000 113,0000 113,0000 113,0000000000	42 12 20 20 20 20 20 21 20 25 39 7 113,0 25 39 7 7 113,0 12 25 39 7 7 113,0 12 13 3 9 7 7 113,0 13 16 17 11 20 25 39 7 7 11 20 20 20 20 20 20 20 20 20 20 20 20 20	2 0 nless Steel 5 2 2 Condenser 0 6.6 3 00 7 13 rom Conde 9 3 5 0 0 0 0 0 0 0 0 0 0 0 0 0	11 21 Tonk Optio 22 39,5 42,7 159 12 30,7 46,8 5,608 nser 73,6	11 19 ns 22 39.5 43.5 159 12 30.7 46.8 335,608 74.7 386	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6 412	670 13 22 30 52 31.3 159 18 46.1 70.2 203,412 74.1 486	714 13 23 CF CF CF 159 159 18 46.1 70.2 203,412 203,412 75.4	13 21 CF CF 159 18 46.1 70.2 203,412 76.4
F.C. Pressure Drop (F.C. Cal + Brap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Total Absorbed Power Fan Total Absorbed Power Fan Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit Full Load Current (FLA)	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A)	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804 70.6	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3	11 20 Simplex o 15 26.9 40.3 132 Axi 8 8 20.5 31.2 90,406 D 70.5	12 23 r Duplax Pur 15 26.9 36.7 132 al EC Fans & 8 8 20.5 31.2 90,406 islance meas 72.4	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in an 73.7 Does not in	403 12 22 , Carbon Sti 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,000 000113,000 0000113,000 0000113,000 0000113,000 0000113,000 0000113,000 0000113,000 113,0000 113,0000 113,0000 113,0000 113,0000000000	42 12 20 eel or Stai 18 32 33 33 33 13 13 13 13 13 13 13 13 13 13	2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	11 21 Tank Optio 22 39,5 42,7 159 12 30,7 46,8 5,608 nser 73,6	11 19 ns 22 39,5 43,5 159 12 30,7 46,8 335,608 74,7	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6	670 13 22 30 52 31.3 159 18 46.1 70.2 203,412 74.1	714 13 23 CF CF CF 159 18 46.1 70.2 203,412 75.4	13 21 CF CF 159 18 46.1 70.2 203,412 76.4
F.C. Pressure Drop (F.C. Cal + Skap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Power Fan Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit Full Load Current (FLA) Minimum Circuit Ampacity (MCA)	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A) V/PH/HZ FLA MCA	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1 135 143	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804 70.6 70.6	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3 70.3 70.3	11 20 Simplex o 15 26.9 40.3 132 Axi 8 8 20.5 31.2 90,00 D 70.5	12 23 r Duplax Pur 15 26.9 367 132 al EC Fans & 8 8 20.5 31.2 90,406 istance meas 72.4 246 260	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in an 73.7 Does not in 280 296	403 12 22 , Carbon 5k 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,000 open field a 7.2.1 clude optio 460/3/ 302 313	42 12 20 20 20 20 20 21 21 25 25 25 39 7 7 113, fer 7 113, fer 7 213, fer 7 213, fer 7 213, fer 25 39 7 7 113, fer 25 113, fer 25 1113, fer 25 113, fer 25, fer 25, fer 25, fer 25, fer 25, fer 25,	2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	11 21 Tonk Optio 22 39.5 42.7 159 12 30.7 46.8 5,608 mser 73.6 354 367	11 19 ns 22 39.5 43.5 159 12 30.7 46.8 335,608 74.7 386 400	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6 75.6	670 13 22 30 52 31.3 159 18 46.1 70.2 203,412 74.1 74.1 486 498	714 13 23 CF CF CF 159 159 8 46.1 70.2 203,412 75.4 75.4	13 21 CF CF 159 18 46.1 70.2 203,412 76.4 579 593
F.C. Pressure Drop (F.C. Cal + Svap + Valves + Piping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit Full Load Current (FLA) Minimum Circuit Ampacity (MCA) Maximum Overcurrent Protection (MOP) DIMENSIONS & WEIGHTS	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A) V/PH/HZ FLA MCA	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1 135 143	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804 70.6 70.6	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3 70.3 70.3	11 20 Simplex o 15 26.9 40.3 132 Axi 8 8 20.5 31.2 90,00 D 70.5	12 23 r Duplax Pur 15 26.9 367 132 al EC Fans & 8 8 20.5 31.2 90,406 istance meas 72.4 246 260	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in an 73.7 Does not in 280 296	403 12 22 , Carbon 5k 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,000 open field a 7.2.1 clude optio 460/3/ 302 313	42 12 20 20 20 20 20 21 21 25 25 39 7 7 113, 60 7 113, 60 23 34	2 2 1 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	11 21 Tonk Optio 22 39.5 42.7 159 12 30.7 46.8 5,608 mser 73.6 354 367	11 19 ns 22 39.5 43.5 159 12 30.7 46.8 335,608 74.7 386 400	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6 75.6	670 13 22 30 52 31.3 159 18 46.1 70.2 203,412 74.1 74.1 486 498	714 13 23 CF CF CF 159 159 8 46.1 70.2 203,412 75.4 75.4	13 21 CF CF 159 18 46.1 70.2 203,412 76.4 579 593
F.C. Pressure Drop [F.C. Cal + Skap + Valves + Piping] PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure [Single] Tank Volume FANS & CONDENSER Fan Tala Absorbed Power Fan Tala Absorbed Power Fan Tala Absorbed Power Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit Full Load Current [FLA] Minimum Circuit Ampacity (MCA) Maximum Overcurrent Protection (MOP) DIMENSIONS & WEIGHTS Length	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A) DB(A) V/PH/HZ FLA MCA MOP IN IN	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1 135 143 172 127 87	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804 70.6 167 176 212 178 87	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3 70.3 70.3 70.3 194 205 248 178 87	11 20 Simplex o 15 26.9 40.3 132 Axit 8 20.5 31.2 90,406 D 70.5 216 228 274 230 87	12 23 r Duplex Pur 15 26.9 36.7 132 al EC Fons & 8 8 20.5 31.2 90,406 istonce meas 72.4 246 260 314	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 20.5 31.2 90,406 sured in m 73.7 Does not in 280 296 358	403 12 22 , Carbon Str 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,002 open field of 72.1 clude option 460/3/ 302 313 357 281 87	42 12 20 20 20 20 20 20 20 20 20 20 20 20 20	2 2 2 1 1 2 2 2 2 2 2 2 2 2 2 2 2 2	11 21 Tonk Optio 22 39.5 42.7 159 12 30.7 46.8 5,608 nser 73.6 354 367 418 332 87	11 19 ns 22 39,5 43,5 159 12 30,7 46,8 135,608 74,7 386 400 457 332 87	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6 75.6 412 426 486 383 87	670 13 22 30 52 31.3 159 18 46.1 70.2 203.412 203.412 74.1 74.1 486 498 544 471 87	714 13 23 CF CF 159 18 46.1 70.2 203,412 203,412 75.4 531 531 544 596	13 21 CF CF 159 18 46.1 70.2 203,412 76.4 579 593 650 471 87
F.C. Pressure Drop (F.C. Cal + Skap + Valves + Pping) PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Set CONDENSER Fan Total Absorbed Power Fan Total Absorbed Power Fan Total Absorbed Current Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit Full Load Current (FLA) Minimum Circuit Ampacity (MCA) Maximum Overcurrent Protection (MOP) DIMENSIONS & WEIGHTS Length Width Height	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A) DB(A) V/PH/HZ FLA MCA MOP IN IN	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1 135 143 172 127 87 96	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804 70.6 167 176 212 178 87 96	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3 70.3 70.3 70.3 194 205 248 178 87 96	11 20 Simplex o 15 26.9 40.3 132 A xit 8 20.5 31.2 90,406 D 70.5 216 228 274 230 87 96	12 23 r Duplex Pur 15 26.9 36.7 132 al EC Fons & 8 20.5 31.2 90,406 islonce meas 72.4 246 260 314 230 87 96	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in on 73.7 Does not in 280 296 358 230 87 96	403 12 22 , Carbon Str 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,002 open field of 72.1 clude option 460/3/ 302 313 357 281 87 96	42 12 24 24 24 26 27 18 32 33 13 13 13 10 25 39 7 113,624 60 7 113,624 60 33 34 35 26 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9	2 2 2 1 1 5 5 2 2 Condenser 2 Condenser 0 6 6 1 2 Condenser 1 3 1 5 1 1 1 2 2 Condenser 1 3 1 1 1 1 1 1 1 1 1 1 1 1 1	11 21 Tonk Optio 22 39.5 42.7 159 12 30.7 46.8 5,608 nser 73.6 354 367 418 332 87 96	11 19 ns 22 39,5 43,5 159 12 30,7 46,8 135,608 74,7 386 400 457 332 87 96	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6 412 426 486 486 383 87 96	670 13 22 30 52 31.3 159 18 46.1 70.2 203.412 74.1 486 498 544 471 87 96	714 13 23 CF CF 159 18 46.1 70.2 203,412 203,412 75.4 531 531 544 596	13 21 CF CF 159 18 46.1 70.2 203,412 76.4 579 593 650 471 87 96
F.C. Pressure Drop [F.C. Col + Evap + Volves + Piping] PUMP & TANK (OPTIONAL) Maximum Pump Absorbed Power Maximum Pump Absorbed Current Available External Pressure (Single) Tank Volume FANS & CONDENSER Fan Electronic Fan Speed Control Fan Quantity Fan Total Absorbed Power Fan Total Absorbed Power Fan Total Absorbed Power Total Air Flow NOISE DATA Sound Pressure Level ELECTRICAL DATA Power Circuit Full Load Current [FLA] Minimum Circuit Ampacity (MCA] Maximum Overcurrent Protection (MOP)	PSI PSI KW A PSI GAL TYPE QTY kW A CFM CFM DB(A) DB(A) V/PH/HZ FLA MCA MOP IN IN	11 18 7.5 13.2 32.2 79 4 10.2 15.6 45,203 68.1 135 143 172 127 87	11 20 11 20.3 36.9 100 6 15.4 23.4 67,804 70.6 167 176 212 178 87	12 19 11 20.3 35.0 100 6 15.4 23.4 67,804 70.3 70.3 70.3 70.3 194 205 248 178 87	11 20 Simplex o 15 26.9 40.3 132 Axit 8 20.5 31.2 90,406 D 70.5 216 228 274 230 87	12 23 r Duplex Pur 15 26.9 36.7 132 al EC Fons & 8 20.5 31.2 90,406 islonce meas 72.4 246 260 314 230 87	12 21 mp Options 18.5 32.1 33.6 132 Copper Tub 8 8 20.5 31.2 90,406 sured in an 73.7 Does not in 280 296 358 230 87	403 12 22 , Carbon Str 18.5 32.1 31.8 132 e with Alun EC 10 25.6 39.0 113,002 open field of 72.1 clude option 460/3/ 302 313 357 281 87	42 12 24 24 24 26 27 18 32 33 13 13 13 10 25 39 7 113,624 60 7 113,624 60 33 34 35 26 8 8 9 9 9 9 9 9 9 9 9 9 9 9 9	2 2 2 1 1 5 5 2 2 Condenser 2 Condenser 0 6 3 10 10 10 10 10 10 10 10 10 10	11 21 Tonk Optio 22 39.5 42.7 159 12 30.7 46.8 5,608 nser 73.6 354 367 418 332 87	11 19 ns 22 39,5 43,5 159 12 30,7 46,8 135,608 74,7 386 400 457 332 87	12 22 30 52 38.6 159 14 35.8 54.6 158,210 75.6 75.6 412 426 486 383 87	670 13 22 30 52 31.3 159 18 46.1 70.2 203.412 203.412 74.1 74.1 486 498 544 471 87	714 13 23 CF CF 159 18 46.1 70.2 203,412 203,412 75.4 531 531 544 596	13 21 CF CF 159 18 46.1 70.2 203,412 76.4 579 593 650 471 87

*Performance rated at 44°F outlet water, 54°F Inlet Water, 95°F Ambient, 100% water. Chiller capacity changes with operating conditions, consult Motivair for assistance. Location and installation of equipment by others © 2019 Motivair Corporation. Motivair reserves the right to modify specifications without notice. Reproduction of this brochure in whole or in part is prohibited.

OUR BUSINESS IS COOLING YOURS™





MPC & MPC-FC

1/2-50 ton packaged air-cooled or water-cooled chillers for Industrial cooling, Medical cooling or custom HVAC applications. Includes integrated microprocessor, pump station, and storage reservoir.



MLC & MLC-FC

60-500 tons air-cooled, water-cooled & split system chillers for industrial or HVAC applications. Available Integrated Free-Cooling.



ChilledDoor[®]

Advanced server rack cooling system fits and standard or OEM computer rack. Removes up to 75 kW of server heat per door.



CDU

Coolant Distribution Unit from 20kW -1 MW heat removal for use with the ChilledDoor® or other computer cooling systems.



PTS

Pump/Tank Stations for chillers and cooling systems.



MFC

Closed loop dry-coolers for process cooling and remote "Free-Cooling" applications.

85 Woodridge Drive Amherst, NY 14228 Tel: 716-691-9222