

# Empower the changing business needs with **SMART FORCE**

1/5 to 3 HP Indoor air cooled units

## Innovative, energy efficient and high performance



Smart Force condensing units are the recipe for premium foods and tough energy standards. Designed with OEM and end user concerns in mind, allow you to meet and exceed regulatory standards. Smart Force is a range of durable and compact units, with components and construction that ensure extended lifetime and reliability. A wider operating envelope delivers optimum performance even at higher ambient conditions. Manufactured in North America and local U.S. local warehousing allows for short lead times and fast time to market.

## Advance Features

### Superior heat transfer technology

- Large condenser for high ambient performance and improved efficiency
- Coated aluminum fin construction with a corrosion proof marine coating technology.
- Coil u-bend protection with a cut out from discharge tube protection.\*
- Condenser coil tubing design that enables additional coil rows

### Compressor

- Performance proven, quiet, reliable, efficient compressor technology to handle the of commercial refrigeration
- Dependable refrigerant cooled hermetic compressors that are factory mounted and wired

### Rigorous testing standards

- Every unit is fully tested and verified for hi-pot, power, sound, electrical, efficiency, airflow, and overall appearance resulting in fewer job site problems, fewer callbacks from the market and production line failures
- Our rigorous testing criteria meet and exceed UL standards.
- All components go through extensive testing before production and are certified by the manufactures
- Electrical current testing
- Factory nitrogen holding charge to improve reliability

### System protection

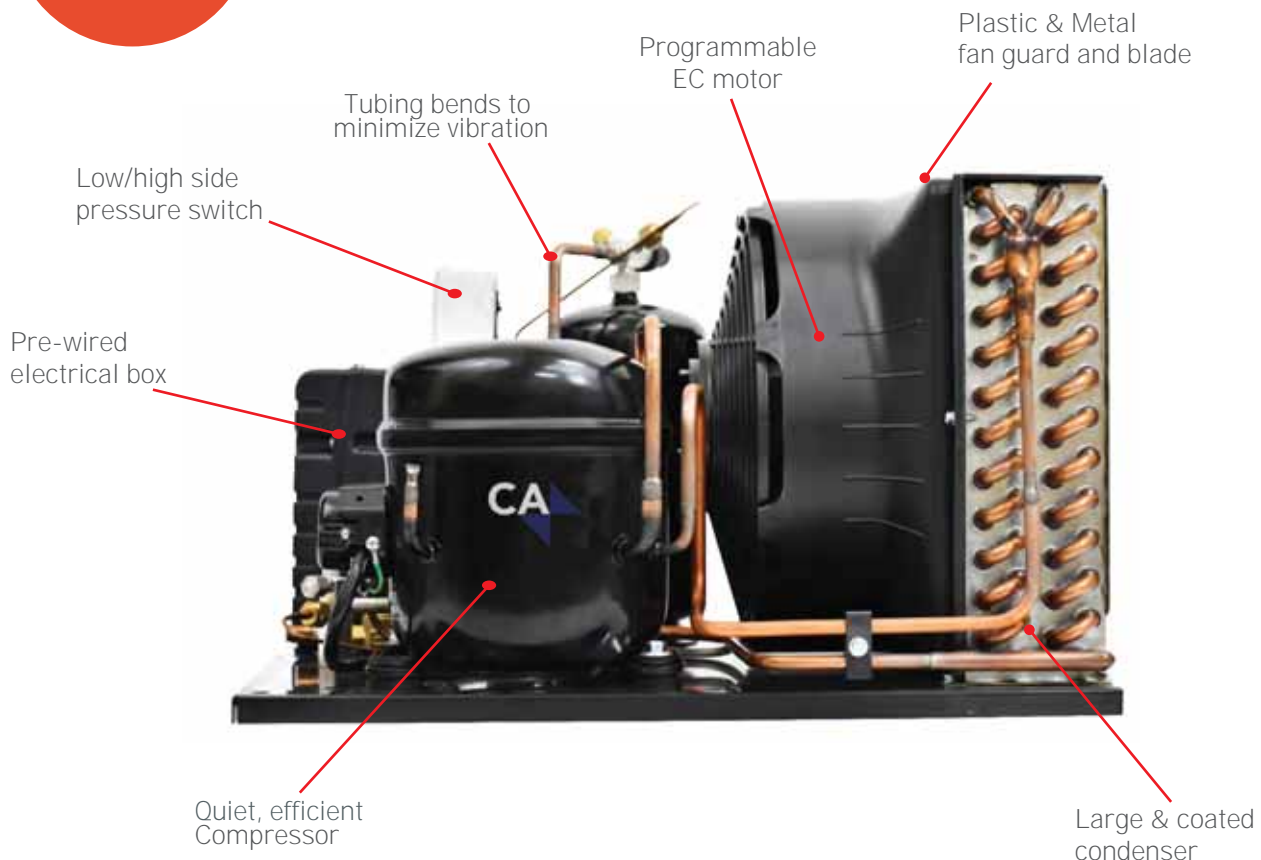
- Low and high pressure controllers with universal Auto/Manual reset provides higher system reliability
- Controls unit based on suction pressure
- Easy plugin feature

## Ease of insulation and service

- Wiring follows National Electrical Code (NEC)
- Save time and money with a fully pre-wired electrical box with standard sweat connections and electrical screw terminations makes installation fast and easy
- All units utilize a terminal block
- Standard market components
- Easy accessible service valves with access ports
- Receiver with liquid shut-off valve and core.
- Quick and easy detachment of fan motor/shroud for easy replacement and cleaning
- Enlarged printed color coded electrical diagram to ease serviceability inside electrical box.

## Efficient ec fan assembly

- Programmable 3 speed ec fan motor that are customizable to the core.
- 70% more efficient than traditional PCS motor.
- 3 dba less noise.
- Reverse on start technology upon each compressor start up to blow off excess dust from both interior and surface of the condensing coil.
  - Clean condensing coil can reduce energy Consumption by as much as 20%.
  - Reduce compressor run time leads to longer lifespan for both compressor and fan motor and the overall system. It also helps to maintain consistent coldest product temperature
- Unique fan blade design offers enhanced airflow, and virtually noiseless operation
- Molded fan shroud directs air-flow across entire coil surface, optimizing system performance



# SMART FORCE



Innovative, energy efficient and high performance solutions

## Your best choice in condensing units.

At Thermcraft we are a provider of integrated solutions to our customers' systems, focused on quality delivery combined with reduced environmental impact through an increasingly efficient, high-performance portfolio of units and with a state-of-the-art technology. We develop products for both natural [R290] and synthetic low-GWP [R448A/R449A] refrigerants that exceed present and future energy efficiency standards in order to assure the competitiveness of our products and expectations of our clients.

## Feature Packages

Smart Force line of light commercial condensing units is available with sizes ranging from 1/5 hp to 3 hp for low and medium/high temperature applications for R448A.

Available in 3 different configurations: bare, plus, and ultimate.

Please contact your representative for more information on our Integrated Custom Solution where we collaborate with you to design a unit specific to your conditions and applications.

Type	Bare	Plus	Ultimate
Suction Valve	X	X	X
Liquid Valve	X	X	X
Fan Guard	X	X	X
End Cover	X	X	X
Liquid Receiver		X	X
Sight Glass		X	X
Filter Drier		X	X
Pressure Controller			X
Power Cord (115V)	X	X	X
UL Recognized	X	X	X
Guard House			X

## R404A/R448A - Low Temperature

Model	Electrical			Tropical	Motor Type	Expansion	Displacement	RLA	LRA	HP	PERFORMANCE / EVAPORATING TEMPERATURE °F										Receiver Volume	Fan					Dimensions
											ASHRAE Ambient 90°F   Max. subcooling 37.4°F   Evaporator outlet and gas return 90°F / Condensing 131°F											Liter	Type	Motor	No. of Angle of the Blade	Fan Speed (Programmable 3 Speeds)	
	-40	-31	-22	-13	-10			-4	5	14	BTU/Hr	Watts	EER	BTU/Hr													
	Voltage	Phase	Hz	T	cm3	A	A	BTU/Hr	BTU/Hr	Watts	EER	BTU/Hr															
SHIF-8.1LZ1-25C	115-127	1	60	T	CSIR	C-V	8.1	5.2	34	1/4	536	751	1027	1364	1492	415	3.6	1761	2219	2738	1.1	ECM	15	5 / 28° / 250 mm	400-2300	1	
SHIF-9.1LZ1-25C	115	1	60	T	CSIR	C-V	9.1	4.1	36	1/4+	730	975	1305	1720	1881	394	4.77	2220	2806	3476	1.1	ECM	15	5 / 28° / 250 mm	400-2300	1	
SHIF-12.04LZ1-25C	115-127	1	60	T	CSIR	C-V	12.04	5.31	42	3/8	1032	1379	1825	2371	2579	535	4.63	3016	3760	4603	1.1	ECM	15	5 / 28° / 250 mm	400-2300	1	
SHIF-16.1LZ1-25C	115	1	60	T	CSR	C-V	16.1	7.74	53	1/2	1234	1727	2338	3066	3341	736	4.54	3913	4878	5960	1.1	ECM	25	5 / 28° / 250 mm	400-2300	1	
CHIA-24.2LZ-25C	220-230	1	50/60	T	CSR	C-V	24.2	4.3	32	1	1389	2048	2880	3885	4266	950	4.49	5062	6413	7936	1.1	ECM	25	5 / 28° / 250 mm	400-2300	1	
SHIF-34.42LZ2-30C	220	1	60	T	CSR	C-V	34.42	8.8	57	1 1/2	1250	2396	3847	5603	6269	1415	4.43	7663	10028	12698	2.3	ECM	25	5 / 28° / 300 mm	400-2300	1	
SHIF-34.42LZ2-30C	208-230	1	60	T	CSR	C	34.42	6.5	57	1 1/2	-	-	3750	5616	6244	1830	4.2	7544	9574	11758	2.3	ECM	30	5 / 28° / 300 mm	400-2300	1	
SHIF-43LZ2-50C	208-230	1	60	T	CSR	C	43.1	8	54	1 3/4	-	3798	4978	6189	6599	1934	4.46	7421	8666	9922	2.3	ECM	50	5 / 28° / 300 mm	400-2300	1	
SHIF-53.5LZ2-25C2	208-230	1	60	T	CSR	C	53.5	8.8	74	2 3/8	-	3047	5070	7503	8359	2450	4.64	10161	13068	16248	1.1	ECM	25-30	5 / 28° / 250 mm	400-2300	2	
SHIF-53.5LZ2-50C	208-230	1	60	T	CSR	C	53.5	8.8	74	2 3/8	-	3047	5070	7503	8359	2450	4.7	10161	13068	16248	2.3	ECM	50	5 / 28° / 300 mm	400-2300	1	
SHIF-71LZ2-50C	208-230	1	60	T	CSR	C	71	13.1	90	2 1/2	-	3071	5372	8871	10052	2946	3.58	12386	16207	20472	2.3	ECM	50	5 / 28° / 300 mm	400-2300	2	
SHIF-71LZ2-50C	220-240	1	50/60	T	CSR	C	71	14.2	90	3	-	-	-	12198	-	-	-	-	-	2.3	ECM	50	5 / 28° / 300 mm	400-2300	2		

## R404A/R448A - Medium/High Temperature

Model	Electrical			Tropical	Motor Type	Expansion	Displacement	RLA	LRA	HP	PERFORMANCE / EVAPORATING TEMPERATURE °F										Receiver Volume	Fan					Dimensions
											ASHRAE Ambient 90°F   Max. subcooling 37.4°F   Evaporator outlet and gas return 90°F / Condensing 131°F											Liter	Type	Motor	No. of Angle of the Blade	Fan Speed (Programmable 3 Speeds)	
	-4	5	14	23			32	41	45	50	BTU/Hr	Watts	EER	BTU/Hr													
	Voltage	Phase	Hz	cm3	A	A	BTU/Hr	BTU/Hr	Watts	EER	BTU/Hr																
SHIF-6DZ1-15C	115-127	1	60	T	CSR	C-V	5.98	4.85	29	1/4	1276	1620	2024	2487	424	5.86	3010	3593	3869	4236	1.1	ECM	15	5 / 28° / 250 mm	400-2300	1	
SHIF-8DZ1-15C	115-127	1	60	T	CSR	C-V	8.1	6.65	40	3/8	1478	1886	2382	2966	562	5.95	3638	4399	4762	5248	1.1	ECM	15	5 / 28° / 250 mm	400-2300	1	
SHIF-11DZ1-15C	115-127	1	60	T	CSR	C-V	10.7	8.93	51.6	1/2	2328	2918	3603	4384	758	5.78	5260	6232	6690	7300	1.1	ECM	15	5 / 28° / 250 mm	400-2300	1	
SHIF-11DZ2-15C	220-230	1	60	T	CSR	C-V	10.7	4.38	22.5	3/8	2210	3785	3472	4270	760	5.6	5180	6201	6686	7334	1.1	ECM	25	5 / 28° / 250 mm	400-2300	1	
SHIF-18DZ2-25C	220-230	1	60	T	CSR	C-V	18.4	6.6	30.5	7/8	3347	4,322	5478	8323	1233	5.47	10015	10817	11878	-	1.1	ECM	25	5 / 28° / 250 mm	400-2300	1	
SHIF-22DZ2-30C	220-230	1	60	T	CSR	C-V	22.37	7.7	39.5	1	3737	4801	6,071	7564	1382	6.25	9225	11109	12003	13198	2.3	ECM	30	5 / 28° / 300 mm	400-2300	1	
SHIF-26DZ2-30C	208-230	1	60	T	CSR	C	26.7	7.51	45	7/8	4838	6319	8018	9970	2922	5.88	12205	14760	-	16678	2.3	ECM	30-50	5 / 28° / 300 mm	400-2300	1	
SHIF-30DZ2-30C	208-230	1	60	T	CSR	C	30.5	8.7	45	1-3/8	4504	6483	8030	11000	3223	5.85	14808	-	18596	-	2.3	ECM	30-50	5 / 28° / 250 mm	400-2300	2	
SHIF-35DZ2-50C	208-230	1	60	T	CSR	C	34.5	10	45	1-1/2	6479	8680	10925	13283	4231	6.39	15828	18636	-	-	2.3	ECM	50	5 / 28° / 300 mm	400-2300	1	
SHIF-43DZ2-50C	208-230	1	60	T	CSR	C	43.1	9.9	62	1-3/4	5118	7711	10509	13556	3973	5.97	16651	19994	-	25119	2.3	ECM	50	5 / 28° / 300 mm	400-2300	2	
SHIF-53DZ2-50C	208-230	1	60	T	CSR	C	53.5	11.5	64.5	2	5459	9427	13307	17316	5,087	6.55	21298	25249	-	28886	2.3	ECM	50	5 / 28° / 300 mm	400-2300	2	
SHIF-71DZ2-50C	208-230	1	60	T	CSR	C	71	18.7	110	3	10236	14160	18425	23543	7,946	6.55	29343	36508	-	44701	2.3	ECM	50	5 / 28° / 300 mm	400-2300	2	