



Balanced Port Thermostatic Expansion Valve Selection Chart for LARKIN COILS, INC.

Bulletin 500-10-L-BP
July 1991

DIVISION OF HEATCRAFT, INC.

All of the valves selected below are of the balanced port design with load conditions provided by Larkin Coils, Inc. The selections are based on 95°F condensing temperature and 10°F liquid subcooling. Externally equalized valves are used with coils having refrigerant distributors. The pressure drop across the coil and distributor is approximately 35 psi for R-22 and R-502. The balanced port design is recommended primarily for use on systems having one or more of the following operating conditions: (1) widely varying evaporator loads; (2) widely varying head pressures; and (3) fluctuating or extremely low liquid temperatures. However, if actual conditions differ from those listed above, valve selections should be made from Bulletins 10-10-2 and 20-10. For systems that do not utilize the design concepts listed above, select a standard thermostatic expansion valve by referring to Bulletin 500-10-L or Bulletin 10-10.

COMPAK HUMI-TEMP ACP-AIR DEFROST MEDIUM TEMPERATURE — For +35°F Room + 25°F Evaporating Temperature

COIL MODEL	COIL INLET CONN. INCHES	10°F TEMPERATURE DIFFERENCE		
		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502
ACP6-42	1/2 SAE Flare Nut	4,200	BFRE-AA-C	BFRE-AA-C
ACP8-45		4,500		
ACP6-51		5,100		
ACP8-54		5,400		
ACP6-60		6,000		
ACP8-64		6,400		
ACP4-83		8,300		
ACP6-84		8,400		
ACP8-90		9,000		
ACP4-93		9,300		
ACP6-102		10,200	BFRE-A-C	
ACP8-108		10,800		
ACP4-120		12,000		
ACP6-126		12,600		
ACP8-135		13,500		
ACP6-152		15,200	BFVE-A-C	
ACP8-160		16,000		
ACP4-160		16,000		
ACP6-170		17,000		
ACP8-180		18,000		
ACP6-190		19,000		
ACP8-200		20,000		
ACP4-200		20,000		
ACP6-210		21,000		
ACP8-225		22,500		
ACP4-240		24,000	BFRE-B-C	
ACP6-254		25,400		
ACP8-270		27,000		
ACP6-290		29,000		
ACP8-310		31,000		
			BFVE-B-C	BFRE-C-C

REACH-IN UNIT COOLERS For +35°F Box + 25°F Evaporating Temperature

COIL MODEL	COIL INLET CONN. INCHES	COIL CAPACITY BTU/HR	10°F TEMPERATURE DIFFERENCE	
			REFRIGERANT	
			22	502
WCW-7	1/2 SAE	650	BFV-AA-C	BFR-AA-C
WCW-8	Flare	800		
WCW-12	Nut	1,200		
WSF-13	1/2 SAE Flare Nut	1,300	BFV-AA-C	BFR-AA-C
WSF-17		1,700		
WSF-23		2,300		
WSF-30		3,000		
WSF-43		4,300		
WU-9	1/2 SAE	850	BFV-AA-C	BFR-AA-C
WU-12	Flare	1,150		
WU-15	Nut	1,500		
WRWA-13	1/2 SAE Flare Nut	1,300	BFV-AA-C	BFR-AA-C
WRWA-17		1,700		
WRWA-23		2,300		
WRWA-29		2,850		
WKM-13	1/2 SAE	1,250	BFV-AA-C	BFR-AA-C
WKM-17	Flare	1,650		
WKM-22	Nut	2,200		
WRI-10	1/2 SAE Flare Nut	1,000	BFV-AA-C	BFR-AA-C
WRI-13		1,300		
WRI-17		1,700		
WRI-23		2,300		
WRI-30		3,000		
WRI-41		4,100		

ELECTRIC DEFROST REACH-IN UNIT COOLERS For 0°F Box -10°F Evaporating Temperature

COIL MODEL	COIL INLET CONN. INCHES	COIL CAPACITY BTU/HR	10°F TEMPERATURE DIFFERENCE	
			REFRIGERANT	
			22	502
AP-35	1/2 SAE Flare Nut	3,500	BFVE-AA-C	BFRE-AA-C
AP-45		4,500		
AP-52		5,200		
AP-68		6,800		
AP-85		8,500		
AP-106		10,600		
				BFRE-A-C
WRIE-9	1/2 SAE Flare Nut	920	BFV-AA-Z	BFR-AA-Z
WRIE-12		1,200		
WRIE-16		1,600		
WRIE-21		2,100		
WRIE-29		2,900		
WRIE-35		3,500		
WRIE-52		5,200		

COMPAK HUMI-TEMP ECP-ELECTRIC DEFROST

COIL MODEL	COIL INLET CONNECTIONS INCHES	28°F TO 30°F ROOM & 20°F EVAP TEMP			0°F TO -10°F ROOM & -10°F TO -20°F EVAP TEMP		
		COIL CAPACITY BTU/HR	REFRIGERANT		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502		22	502
ECP6-39	1/2 SAE Flare Nut	4,200	BFVE-AA-C	BFRE-AA-C	BFVE-AA-Z	BFRE-AA-Z	
ECP6-46		5,100					
ECP6-55		6,000					
ECP6-78		8,400					
ECP4-77		8,300					
ECP4-88		9,300					
ECP6-93		10,200					
ECP4-110		12,000					
ECP6-120		12,600					
ECP6-140		15,200					
ECP4-150		16,000					
ECP6-160		17,000					
ECP6-175		19,000					
ECP4-181		20,000					
ECP6-200		21,000					
ECP4-220		24,000					
ECP6-240		25,000					
ECP6-270		29,000					
				BFVE-A-C	BFRE-A-C	BFVE-A-Z	BFRE-A-Z
				BFRE-B-C		BFVE-B-C	BFRE-B-Z

COMPAK HUMI-TEMP HCP-HOT GAS DEFROST

COIL MODEL	COIL INLET CONNECTIONS INCHES	28°F TO 30°F ROOM & 20°F EVAP TEMP		0°F TO -10°F ROOM & -10°F TO -20°F EVAP TEMP			
		COIL CAPACITY BTU/HR	REFRIGERANT		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502		22	502
HCP6-39	1/2 SAE Flare Nut	4,200	BFVE-AA-C	BFRE-AA-C	3,900	BFVE-AA-Z	BFRE-AA-Z
HCP6-46		5,100			4,600		
HCP6-55		6,000			5,500		
HCP6-78		8,400			7,800		
HCP4-77		8,300			7,700		
HCP4-88		9,300			8,800		
HCP6-93		10,200	BFRE-A-C	BFVE-A-Z	9,300		
HCP4-110		12,000			11,000		
HCP6-120		12,600			12,000		
HCP6-140		15,200			14,000		
HCP4-150		16,000			15,000		
HCP6-160		17,000			16,000		
HCP6-175		19,000	BFRE-B-C	BFVE-B-Z	17,500		
HCP4-181		20,000			18,100		
HCP6-200		21,000			20,000		
HCP4-220		24,000			22,000		
HCP6-240		25,400			24,000		
HCP6-270		29,000			27,000		

EP HUMI-TEMP — ELECTRIC DEFROST

EP-35	1/2 SAE Flare Nut	3,800	BFVE-AA-C	BFRE-AA-C	3,500	BFVE-AA-Z	BFRE-AA-Z
EP-45		5,000			4,500		
EP-52		5,800			5,300		
EP-68		7,400			6,800		
EP-85		9,000			8,500		
EP-106		11,600			10,600		

MT HUMI-TEMP

For +35°F Room and +25°F Evaporating Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE		COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE			
		COIL CAPACITY BTU/HR	REFRIGERANT			COIL CAPACITY BTU/HR	REFRIGERANT		
			22				502	22	502
AMT-6-96	1/2 SAE Flare Nut	9,600	BFVE-AA-C	BFRE-A-C	1/2 SAE Flare Nut	9,250	BFVE-AA-C	BFRE-A-C	
AMT-6-112		11,200				11,500			
AMT-6-140		14,000	BFVE-A-C	BFRE-B-C		13,500			
AMT-6-185		18,500				19,500			
AMT-6-245		24,500	BFVE-B-C	BFRE-C-C		24,000			
AMT-6-290		29,000				28,000			
AMT-6-345	7/8 ODF	34,500	EBFVE-B-C	EBFRE-C-C	33,500	EBFVE-B-C	EBFRE-C-C		
AMT-6-430		43,000						42,000	
AMT-6-561	(1) 1-1/8 ODF	56,100	EBFVE-C-C	EBSRE-D-C	(1) 1-1/8 ODF	EBFVE-C-C	EBSRE-D-C		
AMT-6-727		72,700						76,250	
AMT-6-842		84,225						85,000	
AMT-6-945		94,500						97,000	
AMT-6-1090	1-3/8 ODF	109,000	EBSVE-D-C	ORE-12-C	1-3/8 ODF	EBSVE-D-C	ORE-9-C		
AMT-6-1250		125,000						112,000	
AMT-6-1430		143,000						127,000	

ELT HUMI-TEMP — ELECTRIC DEFROST

For +30°F Room and +20°F Evaporating Temperature

ELT-4-80	1/2 SAE Flare Nut	8,650	BFVE-AA-C	BFRE-A-C
ELT-4-100		10,800		
ELT-4-116		12,600		
ELT-4-165		17,800	BFVE-A-C	BFRE-B-C
ELT-4-210		22,700		
ELT-4-241		26,000		
ELT-4-290	7/8 ODF	31,300	EBFVE-B-C	EBFRE-C-C
ELT-4-365	(1) 1-1/8 ODF	39,500		

HLT HUMI-TEMP — HOT GAS DEFROST

For +30°F Room and +20°F Evaporating Temperature

HLT-4-80	1/2 SAE Flare Nut	8,650	BFVE-AA-C	BFRE-A-C
HLT-4-100		10,800		
HLT-4-116		12,600		
HLT-4-165		17,800	BFVE-A-C	BFRE-B-C
HLT-4-210		22,700		
HLT-4-241		26,000		
HLT-4-290	(1) 1-1/8 ODF	31,300	EBFVE-B-C	EBFRE-C-C
HLT-4-365		39,500		

(1) Maximum outlet connection for EBF valve is 7/8" ODF.

LT HUMI-TEMP ELECTRIC DEFROST

For -10°F Room and -20°F Suction Low Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE		
		COIL CAP BTU/HR	REFRIGERANT	
			22	502
ELT-4-80	1/2 SAE Flare Nut	8,000	BFVE-AA-Z	BFRE-A-Z
ELT-4-100		10,000	BFVE-A-Z	
ELT-4-116		11,600		BFRE-B-Z
ELT-4-165		16,500	BFVE-B-Z	
ELT-4-210		21,000		
ELT-4-241		24,100		
ELT-4-290	7/8 ODF	29,000	EBFVE-B-Z	EBFRE-C-Z
ELT-4-365	(1) 1-1/8 ODF	36,000	EBFVE-C-Z	EBSRE-D-Z

LT HUMI-TEMP ELECTRIC DEFROST

For -10°F Room and -20°F Suction Low Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE		
		COIL CAP BTU/HR	REFRIGERANT	
			22	502
ELT-6-85	1/2 SAE Flare Nut	8,500	BFVE-AA-Z	BFRE-A-Z
ELT-6-106		10,600	BFVE-A-Z	
ELT-6-125		12,500		BFRE-B-Z
ELT-6-180		18,000	BFVE-B-Z	
ELT-6-225		22,500		
ELT-6-260		26,000		
ELT-6-310	7/8 ODF	31,000	EBFVE-C-Z	EBFRE-C-Z
ELT-6-390	(1) 1-1/8 ODF	39,000	EBFVE-C-Z	EBSRE-D-Z

LT HUMI-TEMP HOT GAS DEFROST

For -10°F Room and -20°F Suction Low Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE		
		COIL CAP BTU/HR	REFRIGERANT	
			22	502
HLT-4-80	1/2 SAE Flare Nut	8,000	BFVE-AA-Z	BFRE-A-Z
HLT-4-100		10,000	BFVE-A-Z	
HLT-4-116		11,600		BFRE-B-Z
HLT-4-165		16,500	BFVE-B-Z	
HLT-4-210		21,000		
HLT-4-241		24,000		
HLT-4-290	(1) 1-1/8 ODF	29,000	EBFVE-B-Z	EBFRE-C-Z
HLT-4-365	(1) 1-1/8 ODF	36,500	EBFVE-C-Z	EBSRE-D-Z

LT-HUMI-TEMP HOT GAS DEFROST

For -10°F Room and -20°F Suction Low Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE		
		COIL CAP BTU/HR	REFRIGERANT	
			22	502
HLT-6-85	1/2 SAE Flare Nut	8,500	BFVE-AA-Z	BFRE-A-Z
HLT-6-106		10,600	BFVE-A-Z	
HLT-6-125		12,500		BFRE-B-Z
HLT-6-180		18,000	BFVE-B-Z	
HLT-6-225		22,500		
HLT-6-260		26,000		
HLT-6-310	(1) 1-1/8 ODF	31,000	EBFVE-C-Z	EBFRE-C-Z
HLT-6-390	(1) 1-1/8 ODF	39,000	EBFVE-C-Z	EBSRE-D-Z

(1) Maximum outlet connection for EBF valve is 7/8" ODF.

LO-FLO HUMI-TEMP MODEL LFA

For +30°F Evaporating Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	55° F D.B., 55% RH, 30° F EVAP., 25° F T.D.		
		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502
LFA-70	1/2 SAE Flare Nut	19,600	BFVE-A-C	BFRE-B-C
LFA-87		25,275	BFVE-B-C	BFRE-C-C
LFA-120		34,750		
LFA-150		43,450	BFVE-C-C	BSRE-D-C
LFA-190		55,000		
LFA-270	7/8 ODF	78,275	EBFVE-C-C	EBSRE-D-C

COIL MODEL	COIL INLET CONNECTIONS INCHES	50° F D.B., 55% RH, 30° F EVAP., 20° F T.D.		
		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502
LFA-70	1/2 SAE Flare Nut	14,500	BFVE-A-C	BFRE-A-C
LFA-87		19,000	BFVE-B-C	BFRE-B-C
LFA-120		26,275		
LFA-150		32,900	BFVE-C-C	BFRE-C-C
LFA-190		41,675		
LFA-270	7/8 ODF	59,200	EBFVE-C-C	EBSRE-D-C

LO-FLOW HUMI-TEMP ELECTRIC DEFROST

For +20°F Evaporating Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10° F TEMPERATURE DIFFERENCE		
		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502
LFAE/LFAH-70	1/2 SAE Flare Nut	7,000	BFVE-AA-C	BFRE-AA-C
LFAE/LFAH-87		8,700	BFVE-A-C	BFRE-A-C
LFAE/LFAH-120		12,000		
LFAE/LFAH-150		15,000	BFVE-A-C	BFRE-B-C
LFAE/LFAH-190		19,000		
LFAE/LFAH-270	7/8 ODF	27,000	EBFVE-A-C	EBFRE-B-C

ELT HUMI-TEMP

For -10°F Room and -20°F Evaporating Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE		
		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502
ELT-4-80	1/2 SAE Flare Nut	8,000	BFVE-AA-Z	BFRE-A-Z
ELT-4-106		10,000	BFVE-A-Z	
ELT-4-125		11,750	BFVE-B-Z	BFRE-B-Z
ELT-4-180		17,000		
ELT-4-225		21,250	EBFVE-C-Z	EBFRE-C-Z
ELT-4-290	7/8 ODF	29,000	EBFVE-C-Z	EBSRE-D-Z
ELT-4-365	(1) 1-1/8 ODF	36,500		
ELT-4-446		44,600	EBSVE-D-Z	
ELT-4-569		56,900		ORE-9-Z
ELT-4-669		66,900		
ELT-4-746		74,600	OVE-15-Z	ORE-12-Z
ELT-4-853	1-3/8 ODF	85,300		
ELT-4-985		98,500		
ELT-4-1117		111,700		

(1) Maximum outlet connection for EBF valve is 7/8" ODF.

CENTER MOUNT SPACE SAVING MODELS ECM and ACM

ECM ELECTRIC DEFROST

For 0°F Room and -10°F Evaporating Temperature

COIL MODEL	COIL INLET CONNECTIONS INCHES	10°F TEMPERATURE DIFFERENCE		
		COIL CAPACITY BTU/HR	REFRIGERANT	
			22	502
ECM6-31	1/2 SAE Flare Nut	3,100	BFVE-AA-Z	BFRE-AA-Z
ECM6-59		5,900		
ECM6-87		8,700	BFVE-A-Z	BFRE-A-Z
ECM6-120		12,000		
ECM6-141		14,100		
ECM6-177		17,700		BFRE-B-Z
ECM6-218		21,800		

ACM AIR DEFROST

For +35°F Room and +25°F Evaporating Temperature

ACM-6-33	1/2 SAE Flare Nut	3,300	BFVE-AA-C	BFRE-AA-C
ACM-6-63		6,300		
ACM-6-92		9,200	BFVE-A-C	BFRE-A-C
ACM-6-126		12,600		
ACM-6-149		14,900		
ACM-6-187		18,700		BFRE-B-C
ACM-6-213		21,300		

