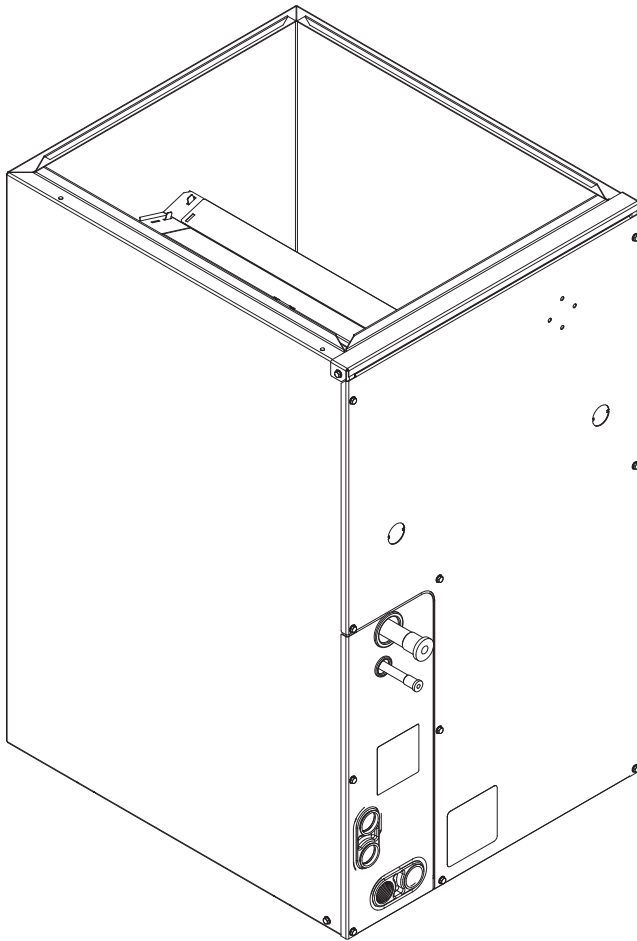




CAPMP EVAPORATOR COIL A COIL - CASED MULTIPOISE

Product Data



CAPMP

A06009

The CAPMP evaporator coil incorporates proven standards for reliable system operation and performance throughout the life of a quality Payne Air Conditioner or Heat Pump system. Evaporator coils manufactured by Payne and installed as part of a total comfort system provide AHRI-rated performance ratings and are additionally listed with UL and c-UL.

This coil is available for use in Puron® Refrigerant (R-410A) only. It is a cased A-coil that is housed in a durable, 24 gauge, pre-painted taupe metallic cabinet. The fully-insulated cabinet (foil faced with R-2.1 insulation properties) provides for quiet efficient operation of the evaporator coil. This multipoise coil offers the most in installation application flexibility, one coil for a variety of applications with fewer SKUs to stock.

DESIGN FEATURES

Performance — Designed with performance in mind, this new A-coil offers low pressure drops to enhance system performance and airflow characteristics.

Thermostatic Expansion Valves (TXV) — All Payne coils have refrigerant-specific, factory-installed TXVs.

Durable Condensate Pans (2) — The corrosion-resistant drain pans, one for vertical applications and one for horizontal, are designed in a “fiberglass reinforced thermoset polyester” material (FRTP) that offers unsurpassed pan strength. It is engineered with proper slope in both pans to help ensure water drainage, improved moisture removal, and home comfort.

Refrigerant Connections — This coil is provided with industry proven sweat connections for leak-free operation to maintain system reliability. The side mounting tubing to the coil slabs allows for easy cleaning/servicing of the coils, as well as easy access to the TXV.

Burst Pressure — This coil meets or exceeds burst pressure of 2100 psi, which is at least three to five times the pressure it will see in actual application.

UV Knockouts — The cased coil also comes with factory-installed UV knockouts for quick and easy installation of UV lights.

Serviceability — This coil comes with a “split delta plate” for easy, quick access to the coil for service and cleaning. Also, after the door is removed, the coil is removable from the front of the unit without use of any tools.

MODEL NUMBER NOMENCLATURE

1 2 3 4 5 6 7 8 9 10 11 12
 C A P M P 3 6 1 4 A L A

Product
 C = Coil

Type
 A = A Coil

Refrigerant Type
 P = Puron® Refrigerant (R-410A) TXV

Coil Configuration
 M = Multipoise

Cabinet Finish
 P = Painted

Variations
 A = Basic

Tubing Design
 L = Aluminum

Revision Level
 A = 1st

Cabinet Width
 14 = 14-in (356 mm)
 17 = 17-in (432 mm)
 21 = 21-in (536 mm)
 24 = 24-in (610 mm)

Unit Capacity
 19 = 1 1/2 Ton
 24 = 2 Ton
 25 = 2 Ton
 30 = 2-1/2 Ton
 36 = 3 Ton
 37 = 3 Ton
 42 = 3-1/2 Ton
 43 = 3-1/2 Ton
 48 = 4 Ton
 60 = 5 Ton
 61 = 5 Ton

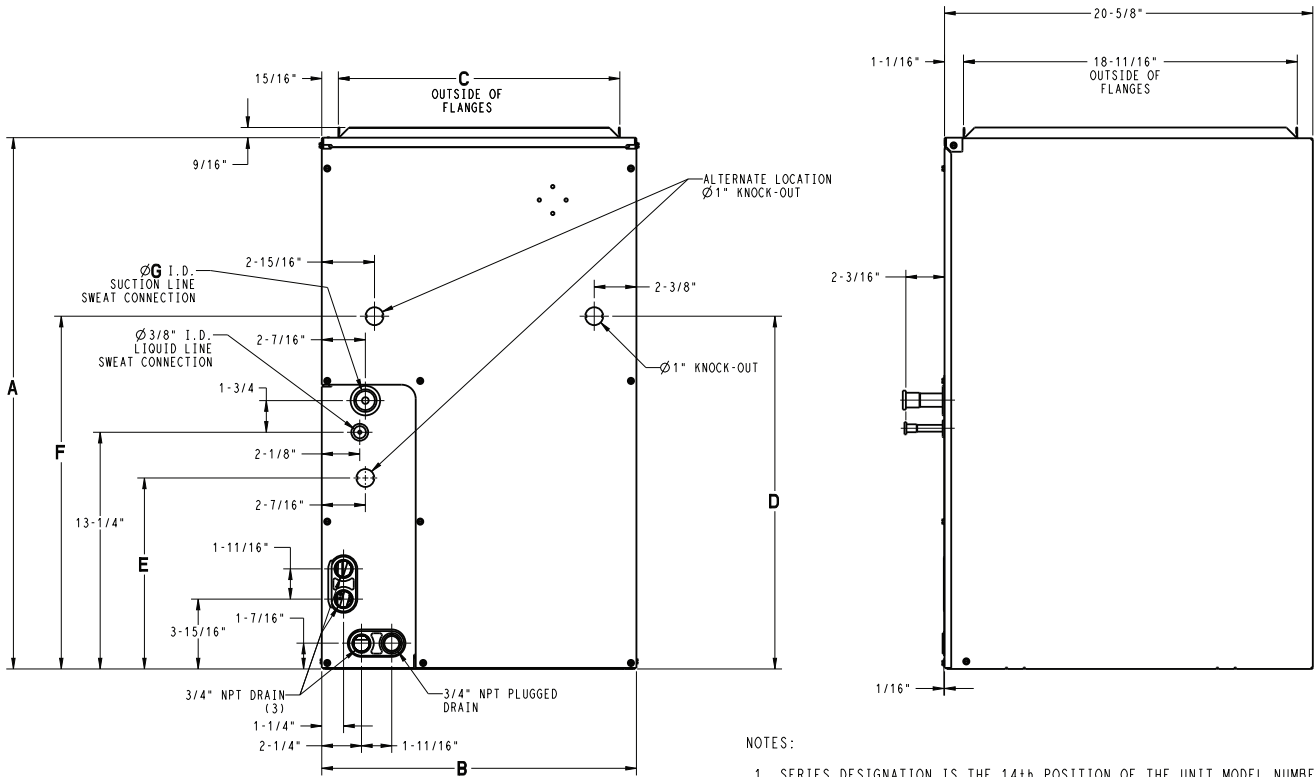


Use of the AHRI Certified TM Mark indicates a manufacturer's participation in the program. For verification of certification for individual products, go to www.ahridirectory.org.

ISO 9001:2000



DIMENSIONS



NOTES:

1. SERIES DESIGNATION IS THE 14th POSITION OF THE UNIT MODEL NUMBER.
2. ALL DIMENSIONS ARE IN "INCHES" UNLESS NOTED.

UNIT	SERIES	A	B	C	D	E	F	G	SHIPPING WT (LBS)
CAPMP1814ALA	A	25 13/16"	14 3/16"	12 7/16"	17 3/16"	10 11/16"	—	5/8"	50.5
CAPMP2414ALA	A	25 13/16"	14 3/16"	12 7/16"	17 3/16"	10 11/16"	—	5/8"	52.5
CAPMP2417ALA	A	25 13/16"	17 1/2"	15 3/4"	10 11/16"	10 11/16"	—	5/8"	56.6
CAPMP3014ALA	A	25 13/16"	14 3/16"	12 7/16"	17 3/16"	—	19 3/4"	3/4"	58.0
CAPMP3017ALA	A	25 13/16"	17 1/2"	15 3/4"	17 3/16"	—	19 3/4"	3/4"	64.5
CAPMP3614ALA	A	29 3/4"	14 3/16"	12 7/16"	19 3/4"	—	19 3/4"	3/4"	65.0
CAPMP3617ALA	A	29 3/4"	17 1/2"	15 3/4"	19 3/4"	—	19 3/4"	3/4"	71.0
CAPMP4221ALA	A	29 3/4"	21"	19 1/4"	19 3/4"	—	19 3/4"	7/8"	78.0
CAPMP4821ALA	A	29 3/4"	21"	19 1/4"	19 3/4"	—	19 3/4"	7/8"	84.0
CAPMP6021ALA	A	35"	21"	19 1/4"	19 3/4"	—	19 3/4"	7/8"	96.0
CAPMP6121ALA	A	35"	21"	19 1/4"	19 3/4"	—	19 3/4"	7/8"	98.0
CAPMP6024ALA	A	35"	24 1/2"	22 3/4"	19 3/4"	—	19 3/4"	7/8"	101.0

A180052

PERFORMANCE DATA (cont.)

COOLING CAPACITIES (MBH) - PURON® REFRIGERANT

Unit Size CAPMP	Indoor Coil Air		Saturated Temperature Leaving Evaporator °F (°C)														
			30 (-1)			35 (2)			40 (4)			45 (7)			50 (10)		
	CFM	EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
4221	1050	72 (22)	75.00	36.40	0.00	69.30	33.70	0.00	62.60	30.60	0.01	55.10	27.40	0.02	46.90	24.00	0.03
		67 (19)	63.30	38.80	0.03	57.20	35.70	0.03	50.50	32.50	0.03	42.90	29.00	0.04	33.50	25.00	0.04
		62 (17)	52.60	40.80	0.04	46.40	37.60	0.04	39.50	34.10	0.04	32.00	30.40	0.05	26.40	26.40	0.14
	1400	72 (22)	87.10	42.50	0.00	80.60	39.50	0.03	73.00	36.20	0.04	64.20	32.50	0.01	54.40	28.60	0.06
		67 (19)	73.80	46.10	0.06	66.90	42.70	0.06	58.90	39.00	0.07	50.10	35.20	0.07	40.00	30.90	0.07
		62 (17)	61.40	49.30	0.07	54.40	45.70	0.07	46.90	42.10	0.07	39.00	38.10	0.09	33.00	33.00	0.19
	1750	72 (22)	96.50	47.40	0.05	89.50	44.30	0.07	81.30	40.80	0.07	71.70	36.90	0.08	60.50	32.60	0.09
		67 (19)	82.10	52.30	0.09	74.60	48.80	0.09	65.90	44.90	0.09	55.90	40.60	0.09	45.10	36.20	0.10
		62 (17)	68.60	56.80	0.10	61.00	53.10	0.10	52.90	49.10	0.10	44.90	44.90	0.12	38.70	38.70	0.24
4321	1050	72 (22)	95.75	47.32	0.00	89.15	43.98	0.00	81.55	40.30	0.00	72.72	36.27	0.00	62.64	31.95	0.00
		67 (19)	80.81	49.43	0.00	73.87	45.77	0.00	65.88	41.78	0.00	56.71	37.46	0.00	46.18	32.83	0.00
		62 (17)	67.16	51.17	0.00	59.87	47.21	0.00	51.54	42.93	0.00	42.14	38.37	0.00	33.49	33.49	0.00
	1400	72 (22)	114.53	56.27	0.00	106.97	52.67	0.00	98.10	48.62	0.00	87.81	44.12	0.00	75.84	39.17	0.00
		67 (19)	97.13	60.04	0.00	89.08	55.99	0.00	79.75	51.52	0.00	68.84	46.55	0.00	56.19	41.13	0.00
		62 (17)	81.09	63.28	0.00	72.60	58.83	0.00	62.86	53.96	0.00	51.93	48.71	0.00	42.81	42.81	0.00
	1750	72 (22)	128.85	63.40	0.00	120.65	59.68	0.00	111.06	55.46	0.00	99.69	50.67	0.00	86.32	45.29	0.00
		67 (19)	109.76	68.90	0.00	101.01	64.69	0.00	90.69	59.91	0.00	78.53	54.53	0.00	64.28	48.54	0.00
		62 (17)	92.05	73.79	0.00	82.77	69.09	0.00	72.04	63.83	0.00	60.16	58.07	0.00	51.02	51.02	0.00
4821	1200	72 (22)	83.40	40.60	0.00	76.70	37.20	0.00	69.30	33.60	0.00	60.90	29.80	0.01	51.70	25.80	0.02
		67 (19)	70.10	42.30	0.02	63.20	38.60	0.03	55.60	34.80	0.03	47.20	30.80	0.04	37.80	26.60	0.04
		62 (17)	57.90	43.50	0.04	50.90	39.70	0.04	43.20	35.70	0.04	34.90	31.70	0.04	27.70	27.70	0.08
	1600	72 (22)	100.80	48.90	0.00	92.80	45.10	0.00	83.80	40.90	0.01	73.80	36.40	0.04	62.50	31.70	0.05
		67 (19)	84.90	51.70	0.05	76.70	47.40	0.06	67.50	42.90	0.06	57.30	38.10	0.06	45.90	33.20	0.06
		62 (17)	70.40	53.90	0.06	62.00	49.30	0.06	52.60	44.60	0.07	42.80	39.90	0.07	35.00	35.00	0.01
	2000	72 (22)	114.70	55.70	0.00	105.70	51.60	0.00	95.60	47.00	0.05	84.20	42.00	0.07	71.40	36.70	0.08
		67 (19)	97.00	59.50	0.08	87.70	54.90	0.08	77.30	49.90	0.09	65.60	44.60	0.09	52.50	39.00	0.09
		62 (17)	80.60	62.80	0.09	71.00	57.70	0.09	60.50	52.50	0.09	49.60	47.20	0.10	41.30	41.30	0.18
6021 6024	1600	72 (22)	109.20	53.40	0.00	100.00	48.60	0.00	89.90	43.60	0.00	78.60	38.50	0.00	66.40	33.10	0.02
		67 (19)	91.50	55.10	0.02	82.10	50.00	0.03	71.90	44.80	0.03	60.70	39.40	0.03	48.40	34.00	0.03
		62 (17)	75.40	56.30	0.03	65.90	51.00	0.03	55.60	45.70	0.04	44.80	40.40	0.04	35.30	35.30	0.07
	2000	72 (22)	128.00	62.52	0.00	117.20	56.90	0.00	105.20	51.20	0.00	92.00	45.20	0.02	77.50	39.10	0.04
		67 (19)	107.40	64.90	0.04	96.40	59.10	0.04	84.30	53.00	0.05	71.10	46.80	0.05	56.60	40.50	0.05
		62 (17)	88.60	66.90	0.05	77.50	60.80	0.05	65.30	54.60	0.05	52.70	48.50	0.06	42.40	42.40	0.11
	2400	72 (22)	144.20	70.00	0.00	132.10	64.20	0.00	118.50	57.90	0.01	103.60	51.20	0.04	87.20	44.30	0.06
		67 (19)	121.20	73.60	0.06	108.80	67.20	0.06	95.10	60.40	0.07	80.10	53.50	0.07	63.70	46.40	0.07
		62 (17)	100.10	76.40	0.07	87.50	69.60	0.07	73.80	62.70	0.07	59.80	56.00	0.08	48.90	48.90	0.14
6121 6124	1600	72 (22)	133.10	65.29	0.00	124.38	61.09	0.00	114.12	56.35	0.00	102.04	51.04	0.00	87.92	45.18	0.00
		67 (19)	112.92	69.55	0.00	103.56	64.81	0.00	92.62	59.52	0.00	79.80	53.65	0.00	64.92	47.24	0.00
		62 (17)	94.29	73.16	0.00	84.32	67.90	0.00	72.85	62.14	0.00	59.93	55.91	0.00	48.98	48.98	0.00
	2000	72 (22)	150.19	73.70	0.00	140.73	69.39	0.00	129.45	64.43	0.00	116.13	58.76	0.00	100.38	52.39	0.00
		67 (19)	127.98	79.99	0.00	117.77	75.03	0.00	105.67	69.38	0.00	91.36	63.01	0.00	74.55	55.91	0.00
		62 (17)	107.36	85.50	0.00	96.47	79.93	0.00	83.81	73.69	0.00	69.74	66.88	0.00	58.70	58.70	0.00
	2400	72 (22)	163.45	80.69	0.00	153.55	76.31	0.00	141.65	71.22	0.00	127.40	65.35	0.00	110.42	58.64	0.00
		67 (19)	139.86	88.99	0.00	129.06	83.92	0.00	116.15	78.06	0.00	100.72	71.35	0.00	82.51	63.78	0.00
		62 (17)	117.85	96.47	0.00	106.33	90.72	0.00	92.96	84.20	0.00	78.33	76.91	0.00	67.38	67.38	0.00

Legend:

CFM – Cubic Ft. per Minute **EWB** – Entering Wet Bulb (°F) **LWB** – Leaving Wet Bulb (°F) **TC** – Gross Cooling Capacity 1000 Btuh
SHC – Gross Sensible Capacity 1000 Btuh **BF** – Bypass Factor **MBH** – 1000 Btuh

See notes on page 7.

COIL STATIC PRESSURE DROP (in. w.c.) PURON® (R-410A)

Unit Size	STANDARD CFM																			
	400	500	600	700	800	900	1000	1100	1200	1300	1400	1500	1600	1700	1800	1900	2000	2100	2200	
1814	Dry																			
	0.079	0.111	0.145	0.186	0.232															
1917	Wet																			
	0.083	0.116	0.151	0.196	0.243															
2414	Dry																			
	0.077	0.099	0.124	0.152	0.182															
2417	Wet																			
	0.088	0.113	0.137	0.170	0.209															
2517	Dry																			
	0.065	0.091	0.120	0.154	0.194	0.237	0.284													
2517	Wet																			
	0.066	0.094	0.124	0.161	0.203	0.250	0.301													
3014	Dry																			
	0.056	0.076	0.097	0.123	0.151	0.182	0.215													
3014	Wet																			
	0.060	0.082	0.105	0.132	0.163	0.195	0.231													
3017	Dry																			
	0.069	0.090	0.111	0.136	0.165	0.193	0.227													
3017	Wet																			
	0.071	0.090	0.113	0.136	0.164	0.196	0.229													
3614	Dry																			
	0.054	0.077	0.102	0.133	0.167	0.206	0.248	0.296	0.347											
3614	Wet																			
	0.059	0.084	0.111	0.142	0.181	0.223	0.269	0.319	0.375											
3617	Dry																			
	0.043	0.059	0.077	0.096	0.119	0.144	0.171	0.201	0.232											
3617	Wet																			
	0.046	0.063	0.083	0.105	0.130	0.157	0.186	0.219	0.252											
3717	Dry																			
	0.047	0.069	0.093	0.119	0.151	0.187	0.227	0.270	0.317	0.362	0.418									
3717	Wet																			
	0.053	0.076	0.101	0.129	0.162	0.200	0.241	0.286	0.335	0.388	0.447									
4221	Dry																			
	0.023	0.036	0.052	0.069	0.089	0.110	0.135	0.160	0.189	0.219	0.251									
4221	Wet																			
	0.042	0.058	0.076	0.095	0.117	0.142	0.169	0.198	0.231	0.265	0.299									
4321	Dry																			
	0.077	0.099	0.124	0.152	0.182	0.216	0.253	0.294	0.338											
4321	Wet																			
	0.088	0.113	0.137	0.170	0.209	0.247	0.287	0.326	0.368											
4821	Dry																			
			0.059	0.073	0.090	0.111	0.135	0.162	0.191	0.222	0.254									
4821	Wet																			
			0.073	0.096	0.120	0.147	0.176	0.207	0.240	0.276	0.314									
6021	Dry																			
			0.044	0.056	0.068	0.082	0.099	0.119	0.138	0.161	0.183	0.205	0.233							
6021	Wet																			
			0.058	0.073	0.089	0.106	0.125	0.143	0.165	0.189	0.213	0.239	0.268							
6024	Dry																			
			0.059	0.073	0.090	0.111	0.135	0.162	0.191	0.222	0.254	0.288	0.323							
6024	Wet																			
			0.073	0.096	0.120	0.147	0.176	0.207	0.240	0.276	0.314	0.354	0.396							
6121	Dry																			
			0.055	0.072	0.089	0.107	0.128	0.150	0.175	0.199	0.228	0.257	0.288	0.321	0.356					
6121	Wet																			
			0.058	0.075	0.094	0.115	0.136	0.161	0.188	0.217	0.247	0.279	0.313	0.347	0.386					
6124	Dry																			
					0.075	0.093	0.112	0.133	0.157	0.181	0.206	0.234	0.264	0.294	0.326	0.360	0.396	0.432	0.478	
6124	Wet																			
					0.077	0.095	0.115	0.137	0.159	0.184	0.209	0.238	0.268	0.300	0.334	0.370	0.407	0.444	0.488	
6124	Dry																			
					0.073	0.083	0.095	0.107	0.120	0.136	0.152	0.169	0.184	0.203	0.217	0.238	0.260	0.283	0.307	
6124	Wet																			
					0.076	0.086	0.098	0.110	0.124	0.140	0.157	0.175	0.193	0.215	0.238	0.261	0.286	0.314	0.342	
6124	Dry																			
					0.111	0.133	0.153	0.163	0.204	0.234	0.262	0.293	0.326	0.366	0.392	0.437	0.480	0.520		
6124	Wet																			
					0.130	0.150	0.183	0.210	0.245	0.280	0.320	0.355	0.400	0.435	0.480	0.525	0.570	0.630		
6124	Dry																			
					0.099	0.113	0.127	0.144	0.162	0.182	0.203	0.227	0.252	0.279	0.307	0.337	0.369	0.403		
6124	Wet																			
					0.118	0.140	0.163	0.187	0.213	0.239	0.266	0.295	0.325	0.355	0.387	0.420	0.454	0.489		

COOLING CAPACITIES NOTES:

1. Contact manufacturer for cooling capacities at conditions other than shown in table.
2. Formulas:

$$\text{Leaving db} = \text{entering db} - \frac{\text{sensible heat cap.}}{1.09 \times \text{CFM}}$$

Leaving wb = wb corresponding to enthalpy of air leaving coil (h_{LWB})

$$h_{LWB} = h_{EWB} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{CFM}}$$

Where h_{EWB} = enthalpy of air entering coil

3. SHC is based on 80°F db temperature of air entering the evaporator coil.
Below 80°F db, subtract (Correction Factor x CFM) from SHC.
Above 80°F db, add (Correction Factor x CFM) to SHC.
4. Direct interpolation is permissible. Do not extrapolate.
5. Fan motor heat has not been deducted.
6. All data points are based on 10°F superheat leaving coil and use of thermostatic expansion valve (TXV) device.
7. All units have sweat suction-tube connection and a liquid-tube connection. For 1-1/8-in. system suction tube, 3/4 x 1-1/8-in. suction tube connection adapter is available as accessory.
8. The CAPMP coils can be used in any properly designed system using Puron Refrigerant (R-410A).
9. Before using maximum cfm shown in table, check coil static pressure drop to ensure system blower can provide necessary static pressure needed for coil and duct systems.
10. Bypass Factor = 0 indicates no psychometric solution. Use bypass factor of next lower EWB for approximation.

BYPASS FACTOR	ENTERING AIR DRY BULB TEMPERATURE (°F)					
	79	78	77	76	75	Under 75
	81	82	83	84	84	Above 85
Correction Factor						
0.10	0.98	1.96	2.94	3.92	4.91	Use formula shown below
0.20	0.87	1.74	2.62	3.49	4.36	
0.30	0.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.

$$\text{Correction Factor} = 1.09 \times (1 - \text{BF}) \times (\text{db} - 80)$$

