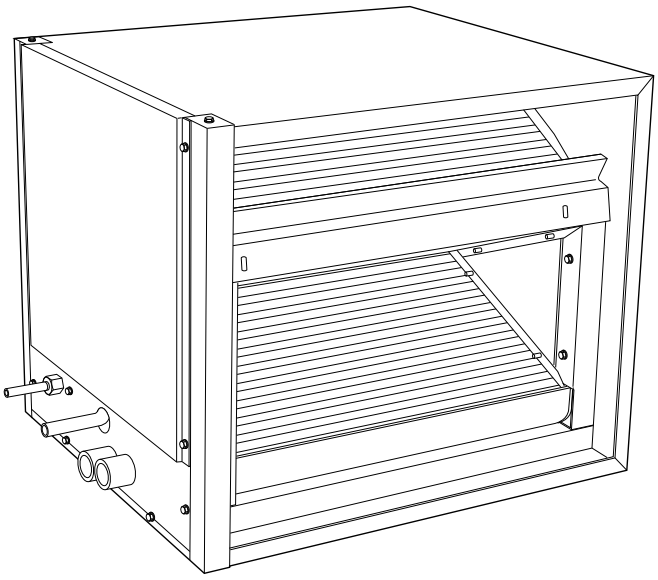
bryant
Heating & Cooling Systems

Cased Horizontal Furnace Coil

CK3B

Sizes A024 thru A060



This horizontal N-Coil is designed to provide the highest standard of reliability and durability. The CK3B coil casing is unpainted embossed galvanized steel. The cabinet is fully insulated to minimize energy loss.

The CK3B is designed for application with horizontal furnaces. The 2-directional airflow allows for either horizontal-right or horizontal-left furnace fit-up. This coil is ideally suited for either attic or crawl space installation.

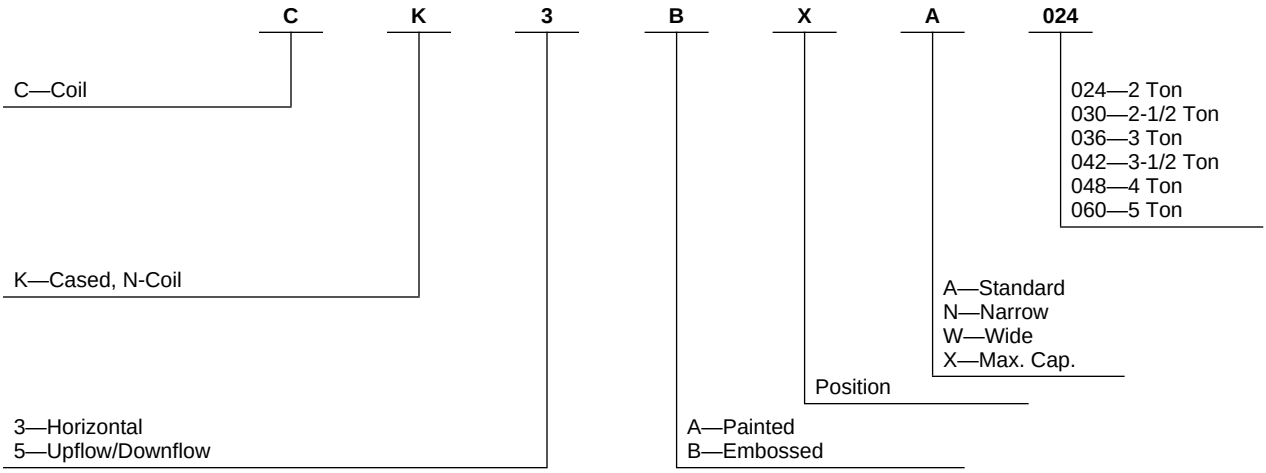
Our advanced manufacturing methods give a better bond of the fin and tube. Contaminants are not introduced into coil during manufacturing. Galvanic action is minimized. The coils are approved for air conditioning or heat pump application in the horizontal configuration.

The CK3B coil includes a refrigerant control metering device for improved serviceability over check valves and expansion devices used in conventional coils. Sweat-type connections are furnished for installation of the refrigerant tubes.

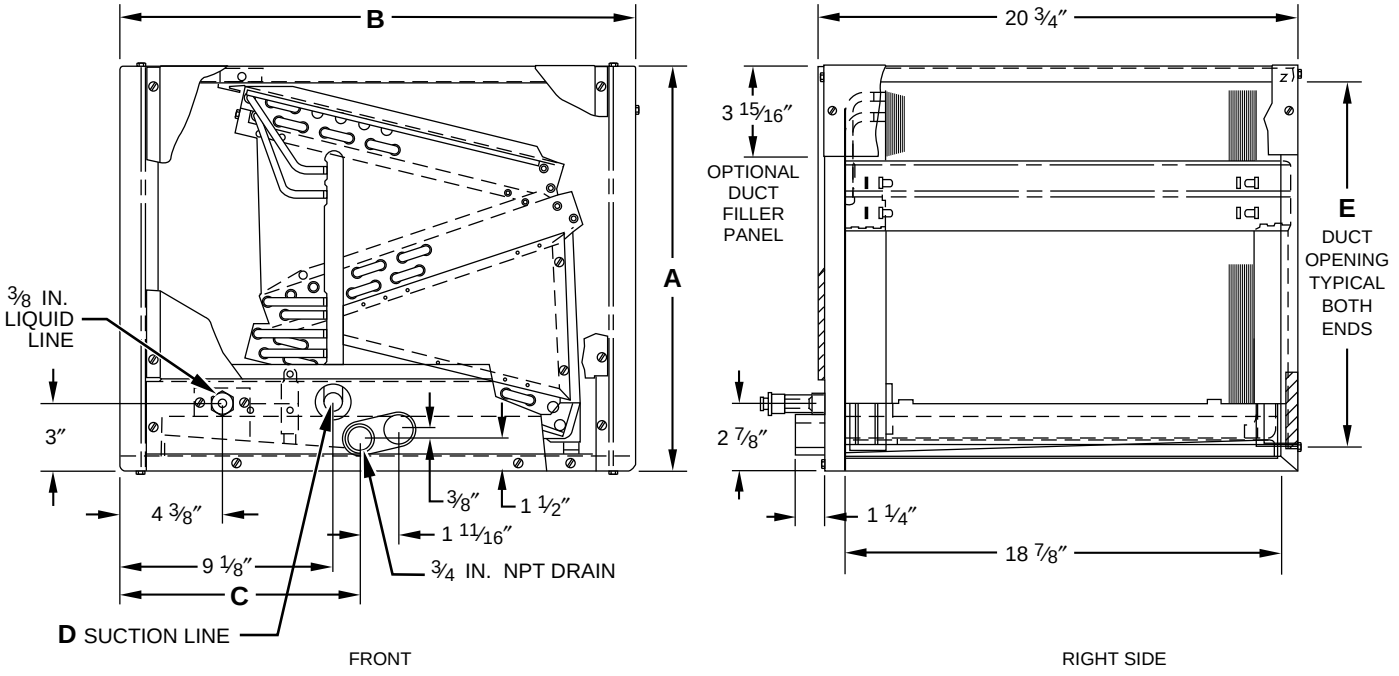
The coil is designed to provide improved condensate removal. The robust condensate pan has brass inserts in the primary and secondary drain connections and meets FHA requirements.

Form No. PDS CK3B.24.2

MODEL NUMBER NOMENCLATURE



CERTIFICATION APPLIES ONLY WHEN
USED WITH PROPER COMPONENTS
AS LISTED WITH ARI



A97521

DIMENSIONS (In.)

UNIT	A	B	C	D	E	SHIPPING WEIGHT
	In.	In.	In.	In.	In.	Lb
CK3BXA024	17-9/16	19-1/16	10-1/16	5/8	16	36.0
CK3BXA030	17-9/16	19-1/16	10-1/16	3/4	16	39.5
CK3BXA036	17-9/16	22-1/16	10-1/4	3/4	16	45.5
CK3BXA042	21-1/16	22-1/16	10-1/4	7/8	19-1/2	47.0
CK3BXA048	21-1/16	22-1/16	10-1/4	7/8	19-1/2	51.0
CK3BXA060	24-9/16	28-1/8	13-3/6	7/8	23	64.0

COOLING CAPACITIES (MBH)

UNIT SIZE	INDOOR COIL AIR		SATURATED TEMPERATURE LEAVING EVAPORATOR (°F)														
			30			35			40			45			50		
	CFM	EWB	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF	TC	SHC	BF
A024	600	72	38.7	17.9	0.00	35.4	16.4	0.00	32.0	15.0	0.13	28.1	13.3	0.08	23.7	11.6	0.07
		67	32.6	19.5	0.07	29.1	17.9	0.06	25.6	16.3	0.06	21.5	14.5	0.05	16.6	12.5	0.06
		62	27.0	20.9	0.05	23.4	19.2	0.05	19.8	17.4	0.05	16.2	15.5	0.08	13.3	13.3	0.18
	800	72	44.0	20.4	0.21	40.4	18.9	0.17	36.8	17.3	0.13	32.4	15.6	0.11	27.2	13.7	0.10
		67	37.4	22.8	0.10	33.5	21.1	0.10	29.5	19.4	0.09	25.0	17.5	0.08	19.7	15.4	0.09
		62	30.6	25.0	0.07	27.0	23.2	0.08	23.4	21.4	0.09	19.7	19.3	0.12	16.6	16.6	0.23
	1000	72	47.9	22.3	0.18	44.0	20.7	0.17	40.1	19.2	0.16	35.5	17.4	0.14	30.0	15.4	0.13
		67	40.7	25.5	0.13	36.6	23.8	0.13	32.4	22.0	0.12	27.3	20.0	0.11	21.9	17.9	0.12
		62	33.7	28.6	0.10	30.0	26.7	0.11	26.2	24.9	0.12	22.7	22.5	0.17	19.4	19.4	0.28
A030	750	72	54.4	25.3	0.00	48.7	22.7	0.00	43.1	20.1	0.00	36.6	17.3	0.07	29.3	14.5	0.06
		67	45.1	26.5	0.07	39.1	23.7	0.07	33.2	20.9	0.06	26.7	18.1	0.05	20.0	15.2	0.08
		62	36.0	27.3	0.05	30.5	24.5	0.06	25.0	21.8	0.07	19.7	19.0	0.09	16.1	16.1	0.21
	1000	72	64.1	29.5	0.00	57.7	26.7	0.00	51.2	23.9	0.19	43.9	20.9	0.12	35.2	17.6	0.10
		67	53.6	31.8	0.11	46.8	28.7	0.10	40.1	25.6	0.10	32.3	22.3	0.09	24.1	18.8	0.11
		62	43.4	33.4	0.10	36.9	30.3	0.10	30.4	27.2	0.10	24.3	24.0	0.12	20.1	20.1	0.26
	1250	72	72.1	33.0	0.00	64.7	29.9	0.00	57.3	26.8	0.20	49.4	23.7	0.15	40.1	20.3	0.14
		67	59.6	35.8	0.14	52.4	32.7	0.14	45.3	29.5	0.13	36.8	25.9	0.13	27.5	22.0	0.15
		62	49.0	38.4	0.14	42.0	35.2	0.13	35.0	32.1	0.13	28.6	28.4	0.16	23.7	23.7	0.30
A036	900	72	63.4	29.6	0.00	57.2	26.8	0.00	50.9	23.9	0.00	44.3	21.0	0.00	36.3	17.9	0.00
		67	52.1	31.0	0.00	46.0	28.1	0.00	39.8	25.1	0.00	32.8	22.1	0.00	24.9	18.8	0.01
		62	42.8	32.7	0.00	36.7	29.6	0.00	30.5	26.6	0.01	23.9	23.0	0.04	19.2	19.2	0.18
	1200	72	75.1	34.7	0.00	67.8	31.6	0.00	60.5	28.5	0.05	52.1	25.1	0.03	43.4	21.8	0.02
		67	61.6	37.2	0.02	54.5	34.0	0.02	47.5	30.8	0.02	39.3	27.3	0.02	30.2	23.4	0.04
		62	51.1	40.2	0.02	44.0	36.7	0.03	36.9	33.2	0.03	29.3	28.9	0.08	24.2	24.2	0.22
	1500	72	83.3	38.5	0.17	75.5	35.3	0.13	67.6	32.1	0.09	58.5	28.5	0.06	48.4	24.8	0.06
		67	69.4	42.5	0.06	61.3	38.9	0.06	53.1	35.4	0.05	44.4	31.7	0.05	34.5	27.5	0.07
		62	56.6	46.2	0.04	49.3	42.5	0.06	42.0	38.8	0.07	34.3	34.3	0.11	28.8	28.8	0.25
A042	1050	72	75.4	35.0	0.00	68.0	31.8	0.00	60.7	28.6	0.02	52.7	25.3	0.00	43.6	21.7	0.00
		67	62.1	37.3	0.00	55.0	34.0	0.00	47.8	30.7	0.00	39.3	26.9	0.01	30.2	23.1	0.03
		62	51.5	39.8	0.01	44.2	36.2	0.01	36.9	32.7	0.02	29.1	28.3	0.06	23.7	23.7	0.20
	1400	72	87.8	40.6	0.18	79.4	37.1	0.13	71.0	33.6	0.07	61.3	29.8	0.05	51.0	25.9	0.05
		67	72.9	44.4	0.05	64.4	40.7	0.04	55.9	36.9	0.04	46.7	33.0	0.04	36.1	28.5	0.06
		62	60.0	48.3	0.03	52.0	44.3	0.05	44.0	40.3	0.06	35.5	35.5	0.10	29.7	29.7	0.24
	1750	72	96.3	44.6	0.16	87.4	41.1	0.13	78.5	37.5	0.11	67.9	33.5	0.09	55.9	29.1	0.09
		67	80.8	50.1	0.08	71.5	46.1	0.08	62.2	42.2	0.08	51.9	37.9	0.08	40.9	33.4	0.10
		62	65.7	55.1	0.07	57.6	50.9	0.08	49.5	46.6	0.10	41.7	41.7	0.15	35.0	35.0	0.28
A048	1200	72	79.8	36.9	0.00	72.6	33.7	0.00	65.4	30.6	0.12	57.0	27.1	0.08	47.5	23.4	0.07
		67	66.6	39.8	0.07	59.1	36.4	0.06	51.7	33.0	0.06	43.2	29.3	0.05	33.3	25.2	0.07
		62	55.2	42.8	0.06	47.6	39.1	0.06	40.0	35.4	0.06	32.2	31.3	0.08	26.7	26.7	0.20
	1600	72	91.0	42.1	0.22	83.0	38.7	0.18	75.0	35.4	0.13	65.4	31.7	0.11	54.5	27.6	0.10
		67	76.7	46.9	0.10	68.1	43.1	0.10	59.5	39.4	0.09	50.1	35.4	0.09	39.4	31.0	0.11
		62	62.7	51.0	0.08	54.9	47.2	0.09	47.1	43.4	0.10	39.3	39.0	0.13	33.1	33.1	0.25
	2000	72	99.2	46.1	0.19	90.7	42.7	0.17	82.2	39.4	0.15	72.0	35.5	0.14	60.0	31.2	0.13
		67	84.0	52.6	0.13	74.8	48.8	0.13	65.7	44.9	0.12	55.1	40.5	0.12	44.0	36.0	0.13
		62	69.0	58.5	0.11	60.8	54.3	0.12	52.6	50.2	0.14	45.4	45.4	0.18	38.5	38.5	0.30
A060	1600	72	101.0	46.7	0.00	90.8	42.2	0.00	80.4	37.6	0.12	69.1	33.0	0.08	56.0	28.0	0.07
		67	83.8	49.9	0.07	73.5	45.2	0.07	63.1	40.5	0.06	51.1	35.3	0.06	38.0	29.8	0.08
		62	68.7	53.0	0.07	58.2	48.0	0.07	47.7	43.0	0.07	38.2	37.6	0.11	31.6	31.6	0.24
	2000	72	113.0	52.2	0.00	102.0	47.4	0.00	90.4	42.6	0.14	77.5	37.5	0.11	63.5	32.3	0.10
		67	94.0	56.8	0.10	82.6	51.8	0.10	71.2	46.8	0.09	58.5	41.3	0.10	43.7	35.2	0.11
		62	77.0	61.2	0.09	66.0	56.0	0.10	55.1	50.7	0.10	45.0	44.7	0.15	37.3	37.3	0.28
	2400	72	123.0	56.6	0.26	111.0	51.6	0.21	98.4	46.7	0.16	84.2	41.2	0.13	69.4	35.8	0.13
		67	103.0	62.8	0.13	89.9	57.4	0.13	77.3	52.0	0.12	64.3	46.5	0.12	48.3	40.0	0.14
		62	83.0	68.4	0.11	72.2	63.0	0.12	61.4	57.5	0.13	51.1	51.1	0.18	42.5	42.5	0.32

See notes on page 5.

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

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

Leaving db = 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. Direct interpolation is permissible. Do not extrapolate.
4. SHC is based on 80°F db temperature of air entering coil. Below 80°F db, subtract (Correction Factor x CFM) from SHC. Above 80°F db, add (Correction Factor x CFM) to SHC.
5. All data points are based on 10°F superheat leaving coil.
6. Bypass Factor = 0 indicates no psychometric solution. Use bypass factor of next lower EWB for approximation.

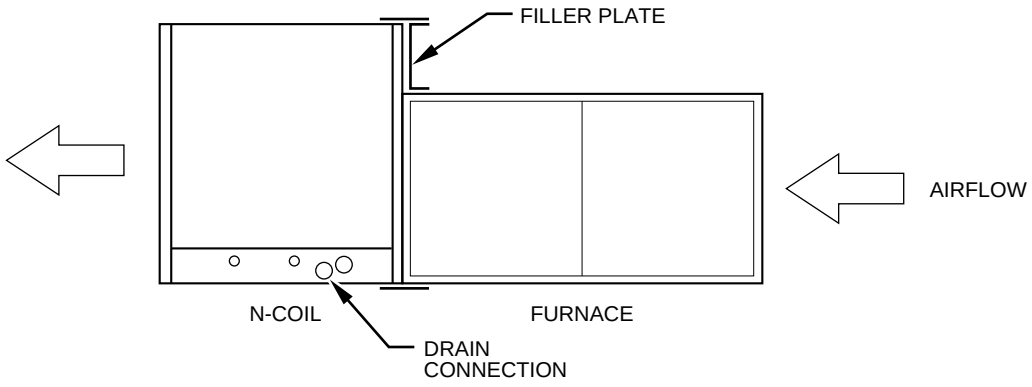
BYPASS FACTOR	ENTERING AIR DRY BULB TEMPERATURE (°F)					
	79	**78**	**77**	**76**	**75**	**Under 75**
	81	***82***	***83***	***84***	***84***	***Over 85***
	Correction Factor					
0.10	0.98	1.96	2.94	3.92	4.91	Use formula shown below
0.20	0.87	1.74	2.62	3.49	4.36	
0.30	0.76	1.53	2.29	3.05	3.82	

Interpolation is permissible.
Correction Factor = 1.09 x (1 – BF) x (db – 80)

COIL STATIC PRESSURE DROP (In. WC)

UNIT SIZE	BULB	AIR QUANTITY (CFM)					
A024		**600**	**700**	**800**	**900**	**—**	**—**
	WET	0.08	0.10	0.13	0.16	—	—
	DRY	0.06	0.08	0.11	0.13	—	—
A030		**700**	**800**	**900**	**1000**	**1100**	**—**
	WET	0.08	0.12	0.15	0.19	0.23	—
	DRY	0.08	0.10	0.14	0.17	0.21	—
A036		**900**	**1000**	**1100**	**1200**	**1300**	**—**
	WET	0.16	0.19	0.23	0.27	0.32	—
	DRY	0.13	0.17	0.21	0.25	0.29	—
A042		**1000**	**1100**	**1200**	**1300**	**1400**	**—**
	WET	0.18	0.21	0.24	0.27	0.31	—
	DRY	0.14	0.17	0.20	0.23	0.26	—
A048		**1300**	**1400**	**1500**	**1600**	**1700**	**—**
	WET	0.19	0.22	0.25	0.28	0.31	—
	DRY	0.18	0.21	0.24	0.27	0.30	—
A060		**1600**	**1700**	**1800**	**1900**	**2000**	**2100**
	WET	0.19	0.22	0.24	0.26	0.28	0.30
	DRY	0.18	0.20	0.21	0.24	0.26	0.28

TYPICAL N-COIL HORIZONTAL INSTALLATIONS



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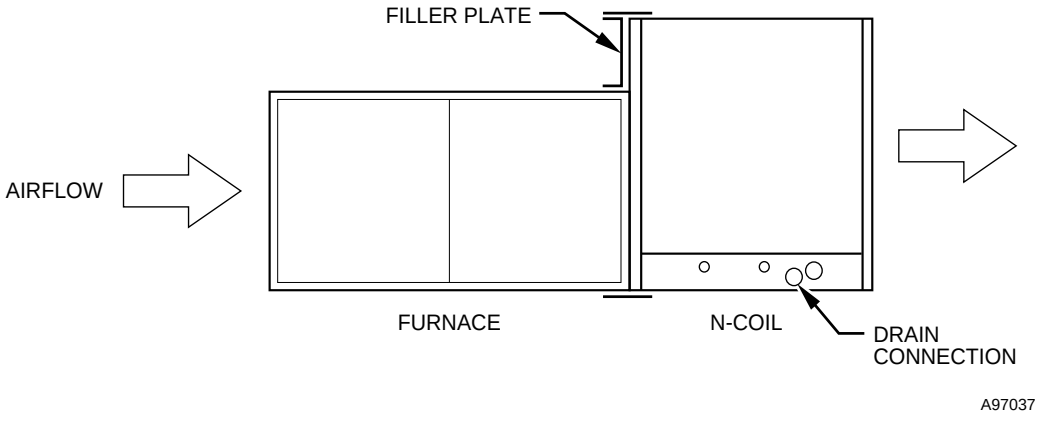

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SERVICE TRAINING

Packaged Service Training programs are an excellent way to increase your knowledge of the equipment discussed in this manual, including:

- Unit Familiarization
- Maintenance
- Installation Overview
- Operating Sequence

A large selection of product, theory, and skills programs is available, using popular video-based formats and materials. All include video and/or slides, plus companion book.

Classroom Service Training plus "hands-on" the products in our labs can mean increased confidence that really pays dividends in faster troubleshooting, fewer callbacks. Course descriptions and schedules are in our catalog.

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE WITH INSTALLATION INSTRUCTIONS

Cancels: PDS CK3B.24.1B

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