

50FJX,FJY,FKX,FKY,FPX,FPY034-074 50JJX,JJY,JKX,JKY,JPX,JPY034-064 Single Package Electric Cooling Units with Extended Plenum

Installation Instructions Supplement

This book is a supplement to the 50FJ,FK,FP,JJ,JK,JP Installation, Start-Up and Service Instructions and is to be used with units with optional extended plenum. The following units are covered in this supplement: 50FJX,FJY,FKX,FKY,FPX,FPY034-074 and 50JJX, JJY, JKX, JKY, JPX, JPY034-064 units. Units with an X in the fifth position are extended plenum units. Units with a Y in the fifth position are extended plenum units with the unit disconnect option.

GENERAL

Units with the extended plenum option are a bottom supply, air arrangement design, intended for mounting on a roof curb. The unit supply fan is arranged to discharge horizontally into an outlet plenum. The supply air then exits the plenum through the basepan opening into the supply duct. The extended plenum option is available on standard length chassis units (units with a F in the third position) and extended length chassis units (units with a J in the third position).

The following information is included in this supplement and should be used for all extended plenum units:

- physical data tables (Table A)
- base unit dimensional drawings (Fig. A-F)
- roof curb dimensional drawings (Fig. G-N)
- rigging data (Fig. O)
- center of gravity and corner weights (Fig P)
- fan drive data (Table B)

Installation of these units follows all procedures described in the base unit installation instructions for curbmounted units.

Table A — Physical Data — Extended Plenum Units

BASE UNIT	50FJ,FK,FP 034	50JJ,JK,JP 034	50FJ,FK,FP 038	50JJ,JK,JP 038		
NOMINAL CAPACITY (tons)	3	0	3	35		
OPERATING WEIGHT (Ib)						
Base Unit With Economizer	5970 6270	6470 6770	6150 6450	6650 6950		
COMPRESSORS	0270		lermetic	0330		
QuantityType	2(06D		, 106E		
Capacity Steps (%)	50	400	10	400		
CV Units VAV Units		100 66, 83, 100		100 71, 86, 100		
Number of Refrigerant Circuits		2	, 20, 10,	2		
REFRIGERANT						
Operating Charge (Ib), Sys 1/Sys 2 Without Hot Gas Bypass	29.0	/29.0	31.0	/30.5		
With Hot Gas Bypass		/29.0		/30.5		
CONDENSER COILS			e Diameter			
Quantity RowsFins/in.	2	2		2		
Aluminum	3*	15.0	3	15.0		
Copper (Optional)		15.0 13.7	3	13.7		
Total Face Area (sq ft)	37	7.5	-	7.5		
EVAPORATOR COILS Quantity			e Diameter	1		
RowsFins/in.		15.0		15.0		
Total Face Area (sq ft)		2.1		2.1		
Refrigerant Feed DeviceNo. per Circuit	TX\		Iller Type			
CONDENSER FANS QuantityDiameter (in.)	2	.30				
Nominal Cfm	18,	600	18,600			
Motor HpRpm	1.0	.1140	1.01140			
EVAPORATOR FAN Nominal Cfm	10	Centrifugal 25 x 25 in. 10.500 12.250				
Maximum Allowable Cfm		000	15,000			
Maximum Allowable Rpm		00	900 1 ¹¹ /16			
Shaft Diameter at Pulley (in.) EVAPORATOR-FAN MOTOR AND DRIVE	1.	1/16		716		
Motor Hp	7.5	(Any motor avail 10.0	able on any unit) 15.0	20.0		
Motor Frame Size	213T	215T	254T	256T		
Efficiency at Full Load (%) High Efficiency	88.5	89.5	91.0	91.0		
Premium Efficiency*	91.7	91.7	93.0	93.6		
Fan Pulley Pitch Diameter (in.) Motor Pulley Pitch Diameter (in.)	13.6 3.4	13.7 4.3	13.7 4.9	13.7 5.5		
Resulting Fan Rpm	438	549	626	703		
Maximum Allowable Rpm	900	900	900	900		
Belts QuantityModel No. Center Distance Range (in.)	2BX60 17.7414.30	25VX630 17.7414.30	25VX630 17.6314.01	25VX630 17.6314.01		
OPTIONAL POWER EXHAUST		ifugal, 15 x 15 in. (Any				
QuantityMotor Hp	23.0	2	.5.0	27.5		
Motor Frame Size Efficiency at Full Load (%) High/Premium*	56HZ 81.0/88.5		4T /89.5	213T 88.5/91.7		
Fan Pulley Pitch Diameter (in.)	6.9	6	.9	6.9		
Motor Pulley Pitch Diameter (in.) Shaft Diameter at Pulley (in.)	3.35 1¾16		12 У16	5.0 1 ³ ⁄16		
Shaft Diameter at Pulley (In.) Resulting Fan Rpm	19/16 843		/16 140	13/16		
Maximum Allowable Rpm	1300	13	000	1300		
Belts QuantityNo.	23VX670	23	/X670	23VX710		
FILTERS Standard Efficiency Throwaway (Standard)	1220 ×	25 x 2	1220 >	(25 x 2		
QuantitySize (in.)	416 ×	: 20 × 2	416 >	< 20 × 2		
Medium Éfficiency (30%) Pleated (Optional)	1220 ×	: 25 × 2 : 20 × 2	1220 >	< 25 x 2 < 20 x 2		
QuantitySize (in.) High Efficiency (90%) Bag Filters with Prefilters (Optional)		: 20 × 2 : 24 × 22				
QuantitySize (in.)		20 × 22	620 × 24 × 22 620 × 20 × 22			

LEGEND

CV — Constant Volume **TXV** — Thermostatic Expansion Valve **VAV** — Variable Air Volume

*Premium efficiency motors are not available on 380-v and 575-v units.

BASE UNIT	50FJ,FK,FP 044	50JJ,JK,JP 044	50FJ,FK,FP 048	50JJ,JK,JP 048	
NOMINAL CAPACITY (tons)	4	10	45		
OPERATING WEIGHT (Ib)					
Base Unit With Economizer	6620 6920	7120 7420	6740 7040	7240 7540	
With Economizer	0920	-	lermetic	7540	
COMPRESSORS QuantityType	2	06E		06E	
Capacity Steps (%)					
CV Units		100		100	
VAV Units Number of Refrigerant Circuits		75, 100 2		63, 81, 100 2	
REFRIGERANT		_		_	
Operating Charge (lb), Sys 1/Sys 2				100.0	
Without Hot Gas Bypass		/40.0		/39.0	
With Hot Gas Bypass	42.0	/40.0		/39.0	
CONDENSER COILS Quantity		%-In. Tube 2	e Diameter I	2	
RowsFins/in.					
Aluminum Conner (Ontional)	3	15.0 13.7	3	15.0 13.7	
Copper (Optional) Total Face Area (sq ft)).0		0.0	
EVAPORATOR COILS			e Diameter		
Quantity		2		2	
RowsFins/in.	3*	15.0 5.5	4	15.0	
Total Face Area (sq ft) Refrigerant Feed DeviceNo. per Circuit		V2	45.5 TXV2		
CONDENSER FANS	Propeller Type				
QuantityDiameter (in.)	330 330				
Nominal Cfm Motor HpRpm		000	26,000 1.01140		
EVAPORATOR FAN	1.01140 1.01140 Centrifugal 25 × 25 in.				
Nominal Cfm	14.	.000		750	
Maximum Allowable Cfm	20,	000	20,000		
Maximum Allowable Rpm Shaft Diameter at Pulley (in.)		00 1⁄16	900 1 ¹¹ /16		
EVAPORATOR-FAN MOTOR AND DRIVE	· ·		able on any unit)	/10	
Motor Hp	7.5	` 10.0	15.0 ′	20.0	
Motor Frame Size	213T	215T	254T	256T	
Efficiency at Full Load (%) High Efficiency	88.5	89.5	91.0	91.0	
Premium Efficiency*	91.7	91.7	93.0	93.6	
Fan Pulley Pitch Diameter (in.) Motor Pulley Pitch Diameter (in.)	13.6	13.7	13.7 4.9	13.7	
Resulting Fan Rom	3.4 438	4.3 549	4.9 626	5.5 703	
Maximum Allowable Rpm	900	900	900	900	
Belts QuantityModel No. Center Distance Range (in.)	2BX60 17.7414.30	25VX630 17.7414.30	25VX630 17.6314.01	25VX630 17.6314.01	
OPTIONAL POWER EXHAUST		ifugal, 15 x 15 in. (Any			
QuantityMotor Hp	23.0		5.0	27.5	
Motor Frame Size	56HZ	18	4T	213T	
Efficiency at Full Load (%) High/Premium* Fan Pulley Pitch Diameter (in.)	81.0/88.5 6.9		/89.5	88.5/91.7 6.9	
Motor Pulley Pitch Diameter (in.)	3.35		6.9 6 4.12 5		
Shaft Diameter at Pulley (in.)	13/16		/16	13/16	
Resulting Fan Rpm Maximum Allowable Rpm	843 1300		40 00	1264 1300	
Belts QuantityNo.	23VX670		/X670	23VX710	
FILTERS		•		•	
Standard Efficiency Throwaway (Standard)	1220 >		1220 :		
QuantitySize (in.) Medium Efficiency (30%) Pleated (Optional)	416 × 1220 ×	< 20 × 2 < 25 × 2	416 3	< 20 × 2 < 25 × 2	
QuantitySize (in.)		< 20 × 2			
High Efficiency (90%) Bag Filters with Prefilters (Optional)		< 24 × 22	416 × 20 × 2 620 × 24 × 22 620 × 20 × 22		

Table A — Physical Data — Extended Plenum Units (cont)

LEGEND

CV — Constant Volume TXV — Thermostatic Expansion Valve VAV — Variable Air Volume

*Premium efficiency motors are not available on 380-v and 575-v units.

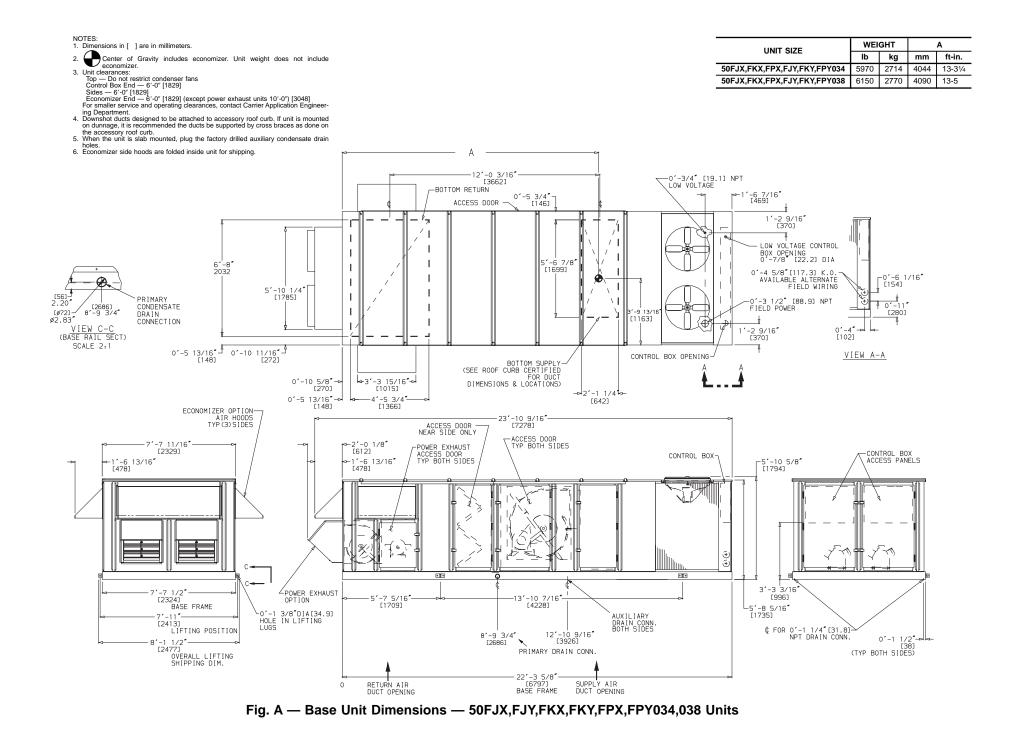
Table A — Physical Data — Extended Plenum Units (cont)

BASE UNIT	50FJ,FK,FP 054	50JJ,JK,JP 054	50FJ,FK,FP 064	50JJ,JK,JP 064		50FJ,FK,FP 074
NOMINAL CAPACITY (tons)	50		60			75
OPERATING WEIGHT (Ib) Base Unit With Economizer	8250 8780	8800 9330	8550 9080	9100 9630		8970 9500
COMPRESSORS QuantityType Capacity Steps (%)	20)6E	Semi-Hei 2t	rmetic 06E		206E
CV Units VAV Units Number of Refrigerant Circuits	60, 100 20, 40, 60, 80, 100 2		17, 33, 50,	50, 100 17, 33, 50, 66, 83, 100 2		43, 100 8, 43, 71, 85, 100 2
REFRIGERANT Operating Charge (Ib), Sys 1/Sys 2 Without Hot Gas Bypass With Hot Gas Bypass	59.0/ 62.0/		64.0			70.5/64.5 73.5/64.5
CONDENSER COILS Quantity RowsFins/in.	4		⅔-in. Tube l	Diameter 4		4
Aluminum Copper (Optional) Total Face Area (sq ft)	217.0, 215.7, 72			317.0 315.7 72.4		317.0 315.7 108.4
EVAPORATOR COILS			½-in. Tube I	Diameter	1	0
Quantity RowsFins/in. Total Face Area (sq ft) Refrigerant Feed Device	2 317.0 61.5		2 417.0 61.5		2 417.0 61.5	
No. per Circuit	TXV2		TXV2		TXV2	
CONDENSER FANS QuantityDiameter (in.) Nominal Cfm Motor HpRpm	430 40,000 1.01140		Propeller Type 430 40,000 1.01140		530 50,000 1.01140	
EVAPORATOR FAN	1.01140		Centrifugal 3	0 x 27 in.		
Nominal Cfm Maximum Allowable Cfm Maximum Allowable Rpm Cloth Diamatenat Parllen (in)	2	7,500 5,000 750	21,000 30,000 750 1 ¹¹ ⁄ ₁₆		24,500 30,000 750	
Shaft Diameter at Pulley (in.) EVAPORATOR-FAN MOTOR AND DRIVE		11/16	(Any motor availat			111/16
Motor Hp Motor Frame Size Efficiency at Full Load (%)	15.0 254T		0.0 25.0 284T			30.0 286T
High Efficiency Premium Efficiency* Fan Pulley Pitch Diameter (in.)	91.0 93.0 13.7	93	1.0 91.7 3.6 93.6 3.7 13.7			92.4 93.6 15.5
Motor Pulley Pitch Diameter (in.) Resulting Fan Rpm Maximum Allowable Rpm	4.5 575 750	67	5.1 5.5 551 703 750 750			5.9 711 750
Belts QuantityModel No. Center Distance Range (in.)	25VX1230 48.2544.00		/X1230 25VX12 44.00 48.5044			25VX1250 48.5044.25
OPTIONAL POWER EXHAUST QuantityMotor Hp Motor Frame Size	2	5.0		7.5	any unit)	210.0 215T
Efficiency at Full Load (%) High/Premium* Fan Pulley Pitch Diameter (in.) Motor Pulley Pitch Diameter (in.)	184T 87.5/89.5 10.6		213T 88.5/91.7 10.6			89.5/91.7 10.6 5.6
Shaft Diameter at Pulley (in.) Resulting Fan Rpm Maximum Allowable Rpm	4.5 17/ ₁₆ 740 925		5.0 17⁄46 820 925		5.0 17/16 920 925	
FILTERS Standard Efficiency Throwaway (Standard) QuantitySize (in.) Medium Efficiency (30%) Pleated (Optional)	1520 x 25 x 2 516 x 20 x 2 1520 x 25 x 2		1520 >	x 20 x 2 x 25 x 2	5	520 x 25 x 2 516 x 20 x 2 520 x 25 x 2
QuantitySize (in.) High Efficiency (90%) Bag Filters with Prefilters (Optional) QuantitySize (in.)	516 x 620 x		516 × 620 ×	x 20 x 2 x 24 x 22 x 24 x 22	516 x 20 x 2 620 x 24 x 22 624 x 24 x 22	

LEGEND

CV — Constant Volume TXV — Thermostatic Expansion Valve VAV — Variable Air Volume

*Premium efficiency motors are not available on 380-v and 575-v units.



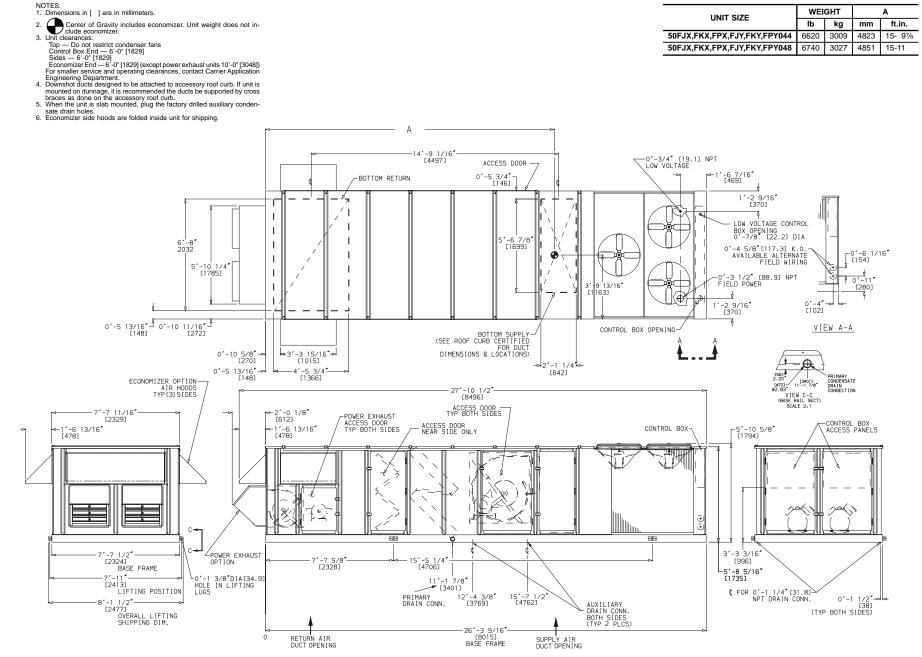


Fig. B — Base Unit Dimensions — 50FJX,FJY,FKX,FKY,FPX,FPY044,048 Units

UNIT SIZE	WEI	GHT		A	E	3		С		D	I	E		F
	lb	kg	mm	ft-in.	mm	ft-in.	mm	ft-in.	mm	ft-in.	mm	ft-in.	mm	ft-in.
50FJX,FJY,FKX,FKY,FPX,FPY054	8250	3750	2830	9-3¾	6427	21-1	6045	19-10	1163	3-9 ¹³ /16	11 140	36-6 %16	11 524	37-911/16
50FJX,FJY,FKX,FKY,FPX,FPY064	8550	3886	2830	9-3¾	6427	21-1	6045	19-10	1163	3-913/16	11 140	36-6 %16	11 524	37-911/16
50FJX,FJY,FKX,FKY,FPX,FPY074	8970	4077	3694	12-1¾	5563	18-3	6477	21-3	1163	3-9 ¹³ /16	12 049	39-63/8	12 433	40-91/2

NOTES:

1. Dimensions in [] are in millimeters.

2. Center of Gravity includes economizer. Unit weight does not include economizer.

- 3. Unit clearances: Top Do not restrict condenser fans Control Box End 6'-0" [1829]

Sides — 6'-0" [1829] Economizer End — 6'-0" [1829] (except power exhaust units 10'-0" [3048]) For smaller service and operating clearances, contact Carrier Application Engineering

- Department.
- Downshot ducts designed to be attached to accessory roof curb. If unit is mounted on dunnage, it is recommended the ducts be supported by cross braces as done on the accessory roof curb.
- When the unit is slab mounted, plug the factory drilled auxiliary condensate drain holes.
 Economizer side hoods are folded inside unit for shipping.

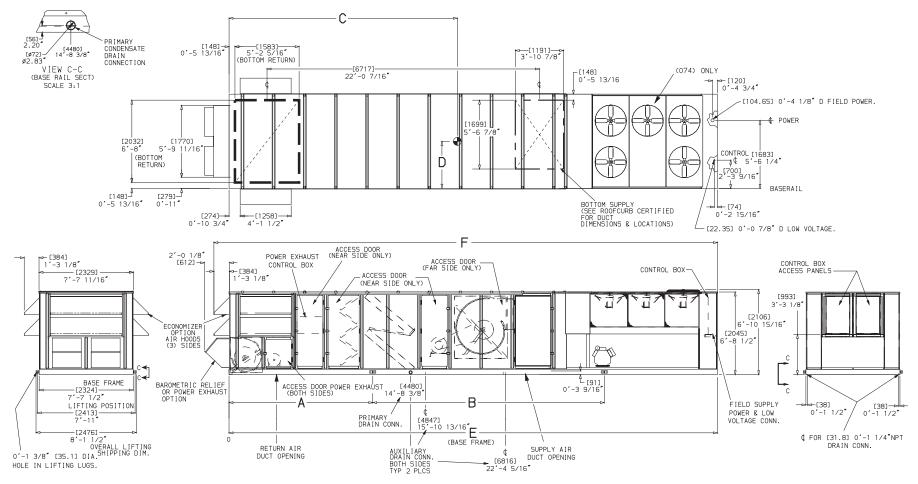


Fig. C — Base Unit Dimensions — 50FJX,FJY,FKX,FKY,FPX,FPY054-074 Units

NOTES:

1. Dimensions in [] are in millimeters.

Center of gravity includes economizer. Unit weight does not include econo-mizer or heating coil.
 Unit Clearances

Jnit Clearances Top — Do not restrict condenser fans Control Box End — 6'-0" [1829] Sides — 6-0° [1829] Economizer End — 6'-0° [1829] For smaller service and operational clearances, contact Carrier Application Engineer-

- holes.

UNIT SIZE WEIGHT Α ft-in. lb kg mm 50JJX,JKX,JPX,JJY,JKY,JPY034 6470 2934 4618 14-5¹⁵/16 50JJX,JKX,JPX,JJY,JKY,JPY038 6650 2991 4474 14-81/8



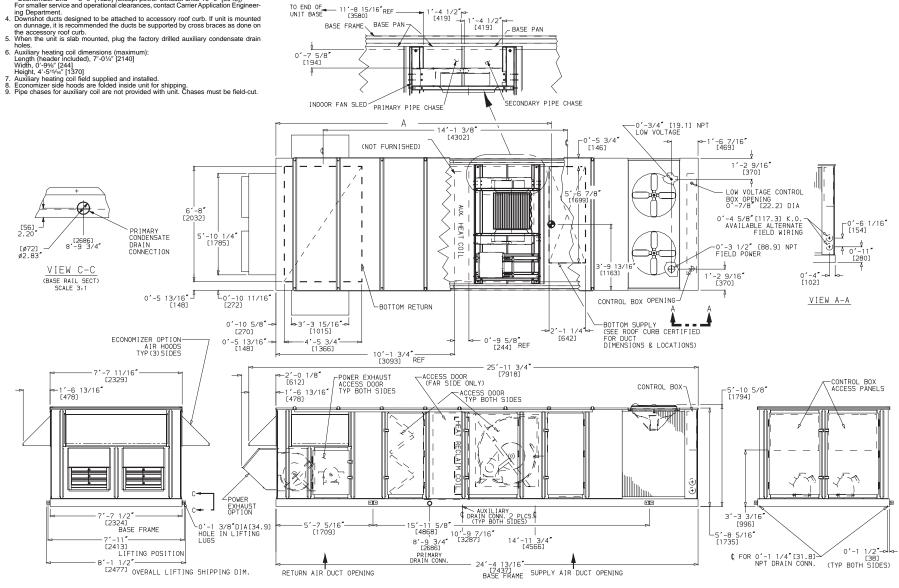


Fig. D — Base Unit Dimensions — 50JJX,JJY,JKX,JKY,JPX,JPY034,038 Units

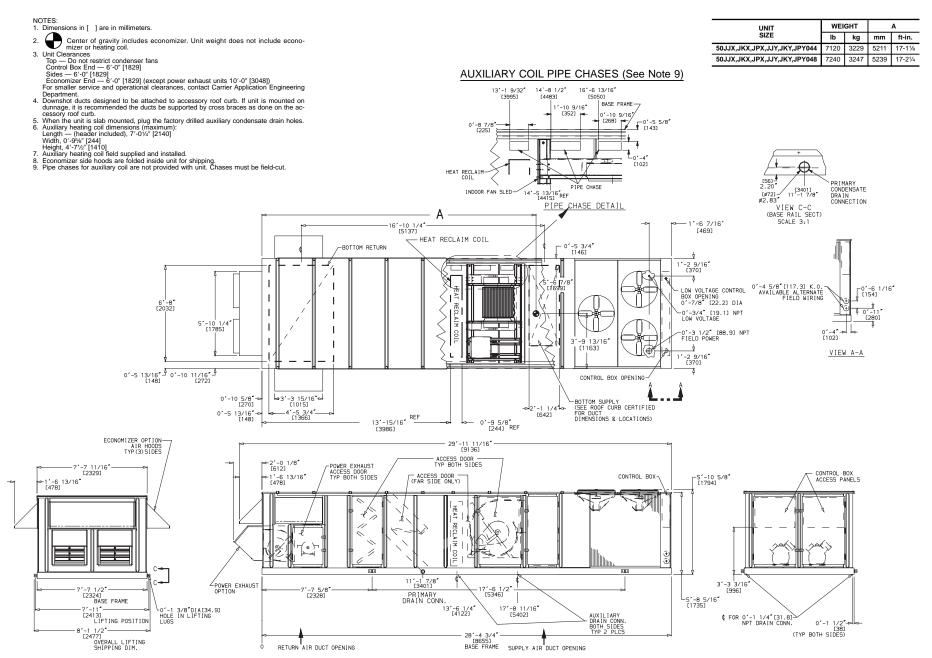


Fig. E — Base Unit Dimensions — 50JJX,JJY,JKX,JKY,JPX,JPY044,048 Units

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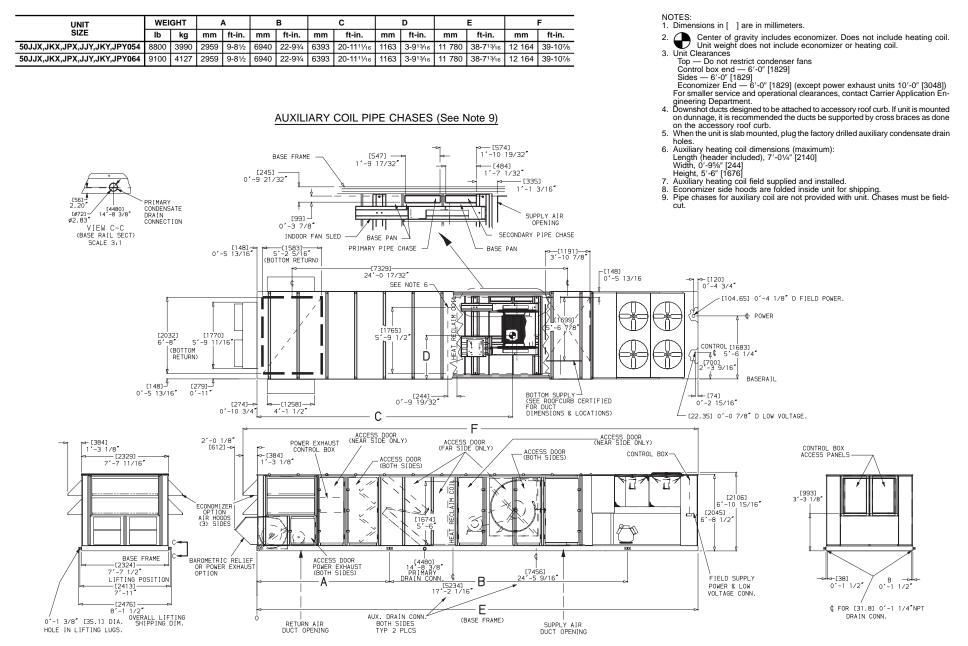


Fig. F — Base Unit Dimensions — 50JJX,JJY,JKX,JKY,JPX,JPY054,064 Units

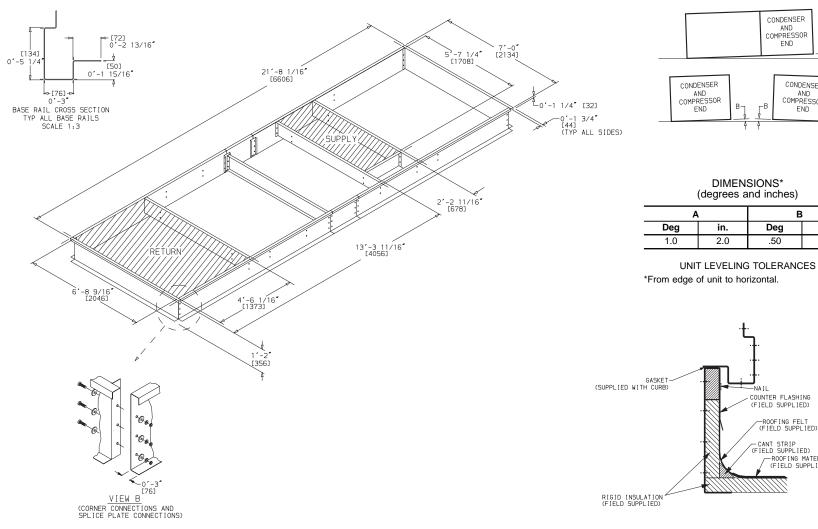
10



1. ROOF CURB IS SHIPPED DISASSEMBLED.

2. ROOF CURB: 14 GA. [VA03-56] STL.

3. DIMENSIONS IN [] ARE MILLIMETERS.



CONDENSER AND COMPRESSOR

END

⊢В

4 4

CONDENSER

AND

COMPRESSOR

END

в

in.

.75

Deg

.50

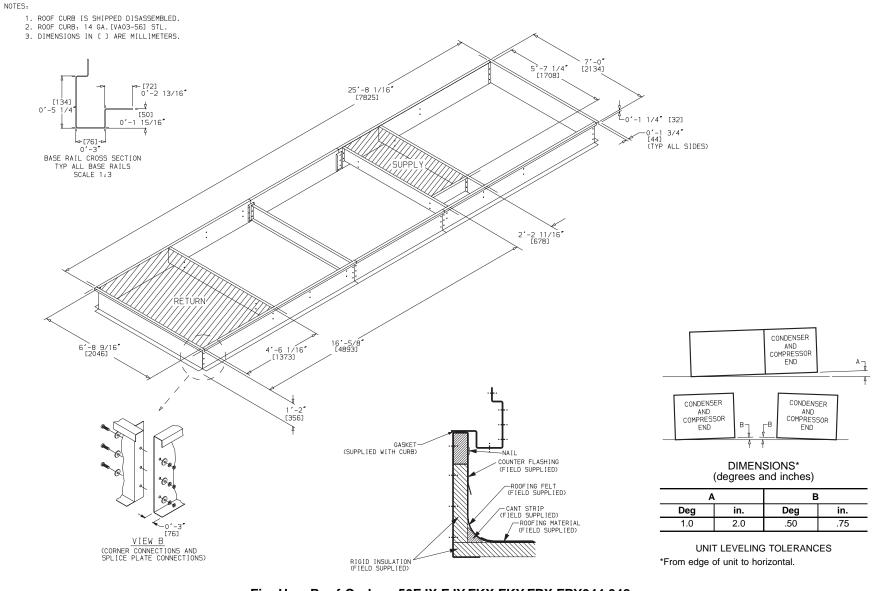
-NATI COUNTER FLASHING (FIELD SUPPLIED)

-ROOFING FELT (FIELD SUPPLIED)

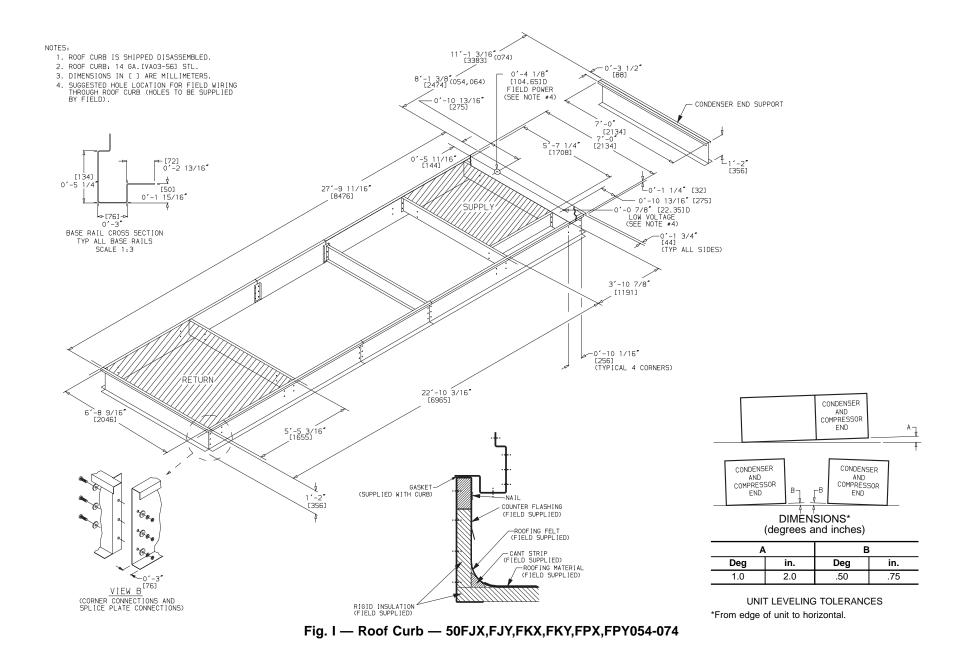
CANT STRIP (FIELD SUPPLIED) ROOFING MATERIAL (FIELD SUPPLIED)

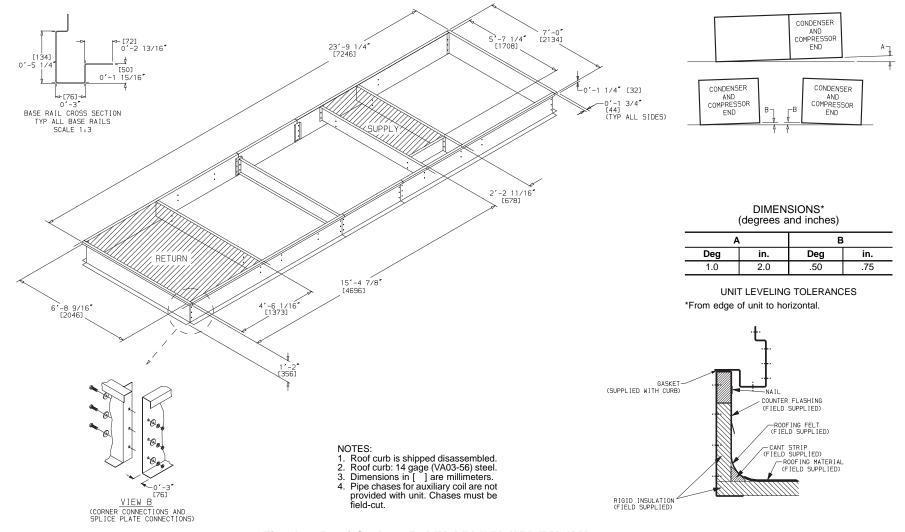
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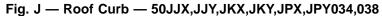
Fig. G — Roof Curb — 50FJX,FJY,FKX,FKY,FPX,FPY034,038



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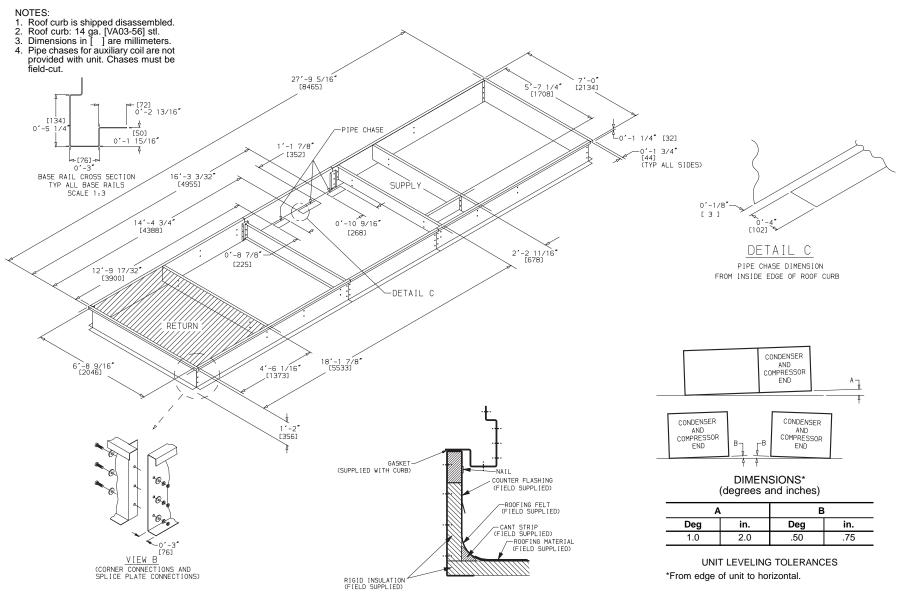


Fig. K — Roof Curb — 50JJX,JJY,JKX,JKY,JPX,JPY044,048

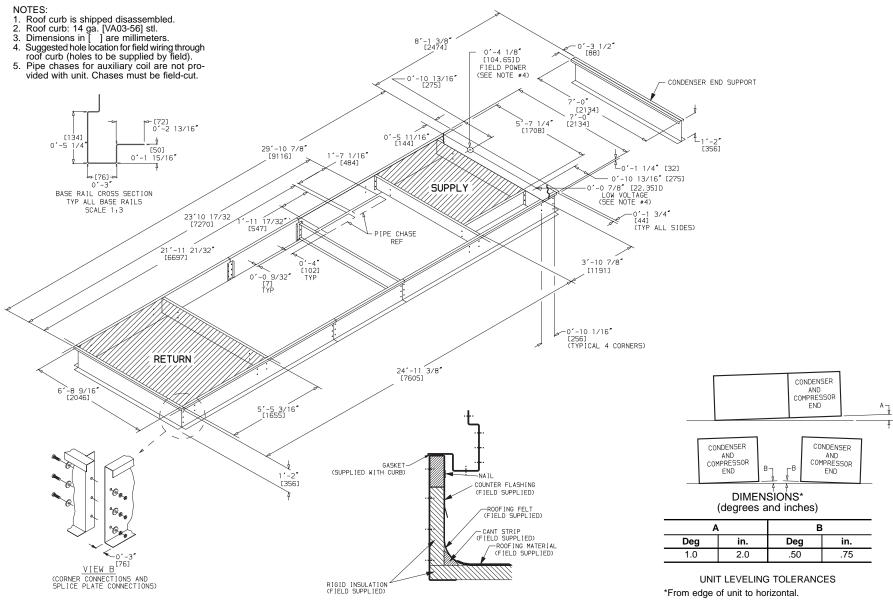


Fig. L — Roof Curb — 50JJX,JJY,JKX,JKY,JPX,JPY054,064

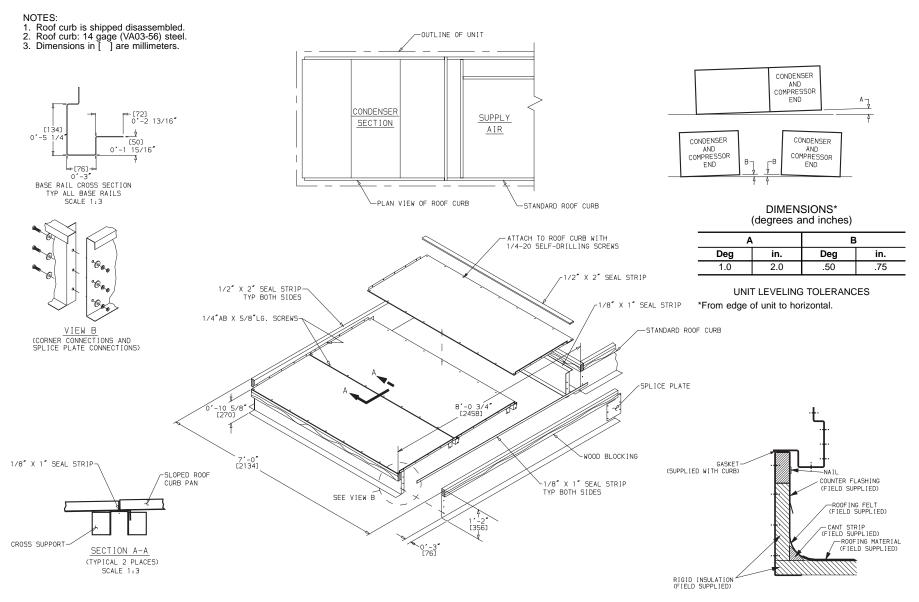


Fig. M — Condenser Section Roof Curb — 50FJX,FJY,FKX,FKY,FPX,FPY,JJX,JJY,JKX,JKY,JPX,JPY, Sizes 054 and 064

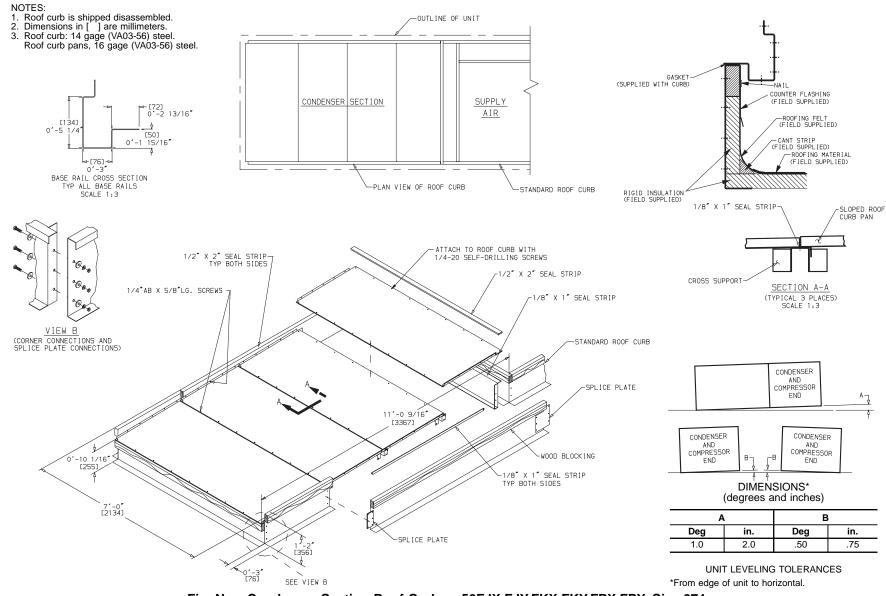
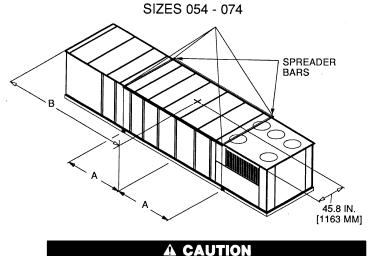


Fig. N — Condenser Section Roof Curb — 50FJX,FJY,FKX,FKY,FPX,FPY, Size 074

SIZES 034-048

В SPREADER BARS 45.8 IN. [1163 MM]

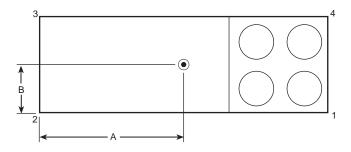
NOTES:
Sizes 034-048: Rig with 4 cables and spread with two 95 in. (2413 mm) and 2 'A + A' long spreader bars. Sizes 054-074: Rig with 4 cables and spread with two 95 in. (2413 mm) and 2 'A + A' long spreader bars.
Center of gravity includes economizer.



All panels must be in place when rigging.
 Unit is not designed for handling by forklift truck.

	RIGGING WEIGHTS AND DIMENSIONS										
MODEL NO.	WEI	GHT	Α		В		ECONOMIZER				
(EXTENDED CHASSIS UNITS)	Lb	Kg	in.	mm	in.	mm	Lb	Kg			
50FJX,FJY,FKX,FKY,FPX,FPY034	5970	2714	83.23	2114	159.21	4044	300	136			
50FJX,FJY,FKX,FKY,FPX,FPY038	6150	2790	83.23	2114	161.02	4090	300	136			
50FJX,FJY,FKX,FKY,FPX,FPY044	6620	3009	92.64	2353	189.88	4823	300	136			
50FJX,FJY,FKX,FKY,FPX,FPY048	6740	3057	92.64	2353	190.98	4851	300	136			
50FJX,FJY,FKX,FKY,FPX,FPY054	8250	3750	126.50	3213	238	6045	530	240.9			
50FJX,FJY,FKX,FKY,FPX,FPY064	8550	3886	126.50	3213	238	6045	530	240.9			
50FJX,FJY,FKX,FKY,FPX,FPY074	8970	4077	109.50	2782	255	6477	530	240.9			
50JJX,JJY,JKX,JKY,JPX,JPY034	6470	2934	95.83	2434	173.94	4418	300	136			
50JJX,JJY,JKX,JKY,JPX,JPY038	6650	3016	95.83	2434	176.14	4474	300	136			
50JJX,JJY,JKX,JKY,JPX,JPY044	7120	3229	105.24	2673	205.16	5211	300	136			
50JJX,JJY,JKX,JKY,JPX,JPY048	7240	3284	105.24	2673	206.26	5239	300	136			
50JJX,JJY,JKX,JKY,JPX,JPY054	8800	3990	136.61	3470	251.70	6393	530	240.9			
50JJX,JJY,JKX,JKY,JPX,JPY064	9100	4127	136.61	3470	251.70	6393	530	240.9			

Fig. O — Rigging Label



			UNIT CO		CENTER OF	GRAVITY		
UNIT		1	2	3	4	Total	A ft-in.	B ft-in.
	034	1864	1268	1271	1867	6270	13- 3¼	3-9 ¹³ /16
	038	1922	1287	1290	1951	6450	13- 5	3-9 ¹³ / ₁₆
50FJX.FJY	044	2070	1387	1389	2074	6920	15- 91/8	3-9 ¹³ / ₁₆
50FKX,FKY 50FPX,FPY	048	2115	1412	1414	2099	7040	15-11	3-9 ¹³ / ₁₆
	054	2381	2005	2009	2385	8780	19-10	3-9 ¹³ / ₁₆
	064	2461	2074	2078	2467	9080	19-10	3-9 ¹³ / ₁₆
	074	2551	2194	2199	2556	9500	21- 3	3-9 ¹³ / ₁₆
	034	1989	1393	1396	1992	6770	14- 5 ¹⁵ /16	3-9 ¹³ / ₁₆
	038	2043	1413	1417	2077	6950	14- 81/8	3-9 ¹³ / ₁₆
50JJX,JJY	044	2195	1512	1514	2199	7420	17- 11/8	3-9 ¹³ / ₁₆
50JKX,JKY 50JPX,JPY	048	2240	1537	1539	2224	7540	17- 21/4	3-9 ¹³ / ₁₆
	054	2518	2143	2146	2523	9330	20-11 ¹¹ /16	3-9 ¹³ / ₁₆
	064	2598	2212	2215	2605	9630	20-11 ¹¹ /16	3-9 ¹³ / ₁₆

NOTE: Weights include economizer.

Fig. P — Unit Cente	^r of Gravity and Corne	r Weights
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Table	В —	Supply	Fan	Drive	Data
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HP	SHAFT DIA.	SPEED (rpm)	MOTOR SHEAVE	MOTOR PITCH DIA.	WHEEL SHEAVE	WHEEL PITCH DIA.	QUANTITY BELT
Sizes 03	4-048						
7.5	13⁄8	438	2BK36	3.4	2B5V136	13.6	2BX60
10	13⁄8	549	2B5V42	4.3	2B5V136	13.7	25VX630
15	15⁄8	626	2B5V48	4.9	2B5V136	13.7	25VX630
20	15⁄8	703	2B5V54	5.5	2B5V136	13.7	25VX630
Sizes 05	4-074	•					
15	15⁄8	575	2B5V44	4.5	2B5V136	13.7	25VX1230
20	15⁄8	651	2B5V50	5.1	2B5V136	13.7	25VX1230
25	11⁄/8	703	2B5V54	5.5	2B5V136	13.7	25VX1230
30	11⁄8	711	2B5V62	5.9	2B5V154	15.5	25VX1250

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