

FS3QX
Slim Line Ducted Fan Coil With Plenum
Sizes 018 thru 060



Product Data

SLIM LINE DUCTED FAN COIL WITH PLENUM

Installation Ease

- Factory installed 24 volt transformer and relay
- High and low voltage terminal strips
- Factory installed refrigerant expansion device
- Integral mounting brackets
- PP models have pre-wired remote key pad control as standard

Service

- Controls conveniently mounted in exterior panel

Comfort

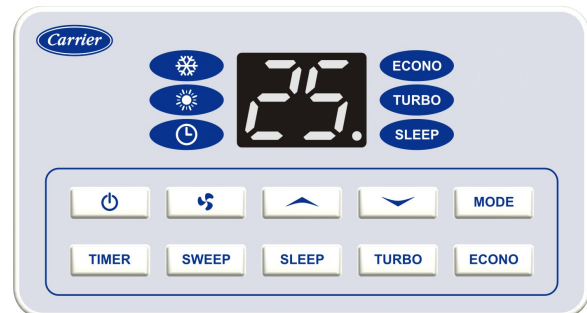
- Three speed blower motors
- PP models allow homeowner to select fan speed
- Low sound levels

Quality

- Designed in accordance with EIN standards
- All models have galvanized steel cabinets
- High density closed cell foam insulation
- PP models feature electrostatically applied paint



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STANDARD FEATURES

FS3QX***UP & FS3QX***PP

- Ducted fan coil
- Seven models
- Nominal capacity - 18,000 - 60,000
- Voltage - 220-1-50/60
- Voltage range - 180 - 264
- R-22 refrigerant and R-410A
- Integral expansion orifice
- AC/HP capable unit
- Return air plenum
- Washable return air filter - aluminum
- Plastic blower wheel
- High/Low volt terminal strip
- 24V transformer
- Three fan speeds
- Integral mounting brackets

FS3QX***PP

- Auto restart
- Three minute auto restart time delay
- 150Vac Low voltage lockout
- Sleep function
- Room temperature display (on wired remote pad)
- PPJ standard white paint color

MODEL NUMBER NOMENCLATURE

1
2
3
4
5
6
7
8
9
10
11
12
F
S
3
Q
X
0
1
8
U
P
0
0

Product

F = Fan Coil

Type

S = Slim Line Ducted

Position

3 = Horizontal

Electrical

Q = 220V-1-50/60

Sales

X = Export

Refrigerant

0 = R-22

4 = R-410A

Heating Size

00 = No Heat

Plenum

N = Without plenum

P = With plenum

Sales Code

U = Unpainted unit with fan relay

P = Unit with painted cabinet and electronic control board

Nominal Capacity

18 = 18,000 BTUH

24 = 24,000 BTUH

30 = 30,000 BTUH

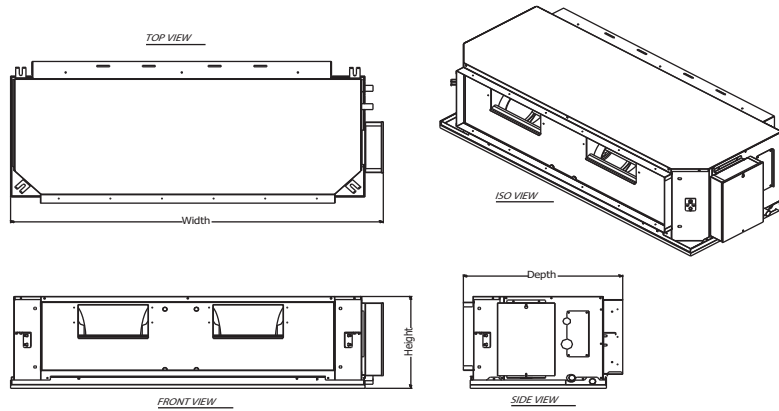
36 = 36,000 BTUH

42 = 42,000 BTUH

48 = 48,000 BTUH

60 = 60,000 BTUH

DIMENSIONS



<i>model</i>	<i>Width</i>	<i>height</i>	<i>depth</i>
18	899	300	564
24	1026	300	564
30	1152	300	564
36-42	1152	350	614
48	1152	400	614
60	1444	400	614

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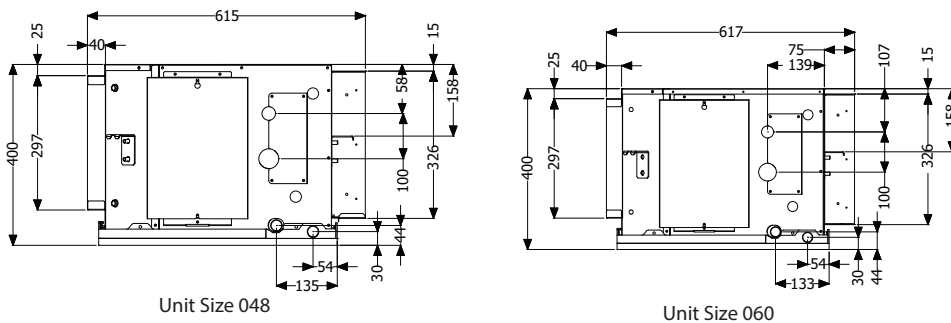
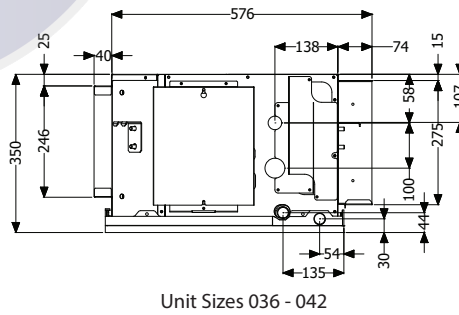
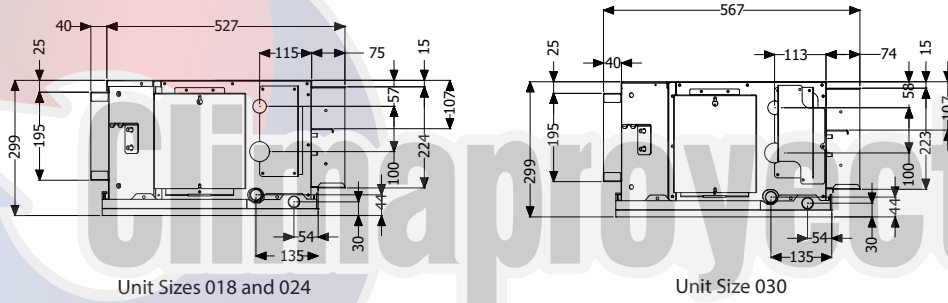


Fig. 1 - Expanded Side View with Piping and Drain Connections

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GENERAL DATA

			18	24	30	36	42	48	60	
Performance Data	Nominal cooling capacity	Btu/h	18000	24000	30000	36000	42000	48000	60000	
	Nominal air flow rate	cfm	600	800	1000	1200	1400	1600	2000	
Electrical Data	Power supply	V / Ph / Hz	220-240 / 1 / 50, 60							
Coil Data	Face area	m ²	0.16129	0.1935	0.2258	0.27	0.27	0.3161	0.4177	
	Number of rows	n	3	3	3	3	3	3	3	
	SIDE COIL DX		10X25X3	10X30X3	10X35X3	12X35X3	12X35X3	14X35X3	14X46.25X3	
	Pre-filter / Air filter	Type	Washable Aluminum							
	Fin type	Type	Corrugated							
	Fins per inch	n	13	13	13	13	16	13	13	
	Tube size	in	3/8							
Number of tubes	n	24	30	30	36	36	42	42		
Blower	Type	Type	Centrifugal Double Inlet							
	Diameter x Length plastic	in	6 X 7	6 X 8	6.5 X 8.5	7 x 7	7 x 7	8 x 8	9 x 9	
	Number used	n	2	2	2	2	2	2	2	
Blower motor	Motor	Type	Permanent split capacitor							
	Drive	Type	Direct							
	Power input (50/60Hz)	Watt Input	128/159	148/190	152/195	323/362	417/462	216/270	230/316	
	Power Output	HP	1/10	1/8	1/8	1/3	1/3	1/3	1/2	
	RPM	High		1250	1300	1400	1150	1250	950	950
		Medium		1100	1200	1300	1050	1150	850	850
		Low		950	1000	1200	1000	1050	750	750
No. of motors	n	1	1	1	1	1	1	1		
Piping Connections	Pipe connection	Type	Flare							
	Liquid line size	in	3/8"	3/8"	3/8"	3/8"	3/8"	3/8"	1/2"	
	Gas line size	in	5/8"	5/8"	5/8"	3/4"	3/4"	3/4"	3/4"	
	Drain connection size	in	1							
Expansion Devices	Expansion device type	Type	PISTON							
	Expansion device size R-22	in	0.050	0.056	0.059	0.069	0.075	0.080	0.090	
	Expansion device size R-410A	in	0.052	0.055	0.059	0.065	0.070	0.076	0.086	
Dimensions	Height unit	mm	300	300	300	350	350	400	400	
	Length unit	mm	899	1026	1152	1152	1152	1152	1444	
	Depth unit	mm	564	564	564	614	614	614	614	
Weight Approx.	Net	kg	28	31	33	35	35.5	43	48	

SOUND DATA

Estimated Sound Pressure Level

Unit Size	Sound Pressure Level (dBA)												
	Speed	CFM	ESP	Octave Band Center Frequency (Hz)									
				31.5	63	125	250	500	1000	2000	4000	8000	AP
018	Low	360	0.2	10.0	24.3	35.5	42.4	44.2	42.9	35.6	30.9	23.6	48.5
	Medium	477	0.2	10.0	25.3	36.6	39.8	45.2	43.9	38.6	33.6	24.2	49.0
	High	579	0.2	10.0	24.6	34.5	39.9	45.8	45.2	40.1	34.4	24.4	49.8
024	Low	405	0.2	10.1	27.2	35.5	39.5	45.4	43.9	37.8	33.7	23.6	49.1
	Medium	556	0.2	10.0	26.2	36.2	41.7	45.3	44.1	39.7	34.2	24.6	49.5
	High	659	0.2	10.0	26.5	35.9	42.2	45.8	44.8	41.1	34.6	25.0	50.2
030	Low	734	0.2	15.6	29.0	38.6	44.0	47.5	47.0	44.2	38.3	28.6	52.3
	Medium	884	0.2	15.3	31.6	41.2	46.8	50.4	49.3	47.4	40.0	31.4	55.1
	High	1036	0.2	16.3	33.2	43.0	48.6	53.1	53.6	51.4	44.4	35.6	58.3
036	Low	1025	0.2	10.0	26.8	39.4	42.9	47.7	47.1	43.3	35.5	25.8	52.1
	Medium	1158	0.2	10.0	25.7	37.7	44.1	49.7	48.4	43.5	36.5	26.9	53.4
	High	1224	0.2	10.0	28.9	39.5	45.3	51.1	48.9	44.7	37.1	27.6	54.4
042	Low	1158	0.2	10.0	25.7	37.7	44.1	49.7	48.4	43.5	36.5	26.9	53.4
	Medium	1224	0.2	10.0	28.9	39.5	45.3	51.1	48.9	44.7	37.1	27.6	54.4
	High	1309	0.2	12.4	31.8	42.3	45.2	51.0	51.0	46.3	38.2	28.4	55.5
048	Low	1302	0.2	12.8	29.0	39.1	44.2	48.9	46.8	41.9	34.9	24.9	52.4
	Medium	1495	0.2	13.4	31.6	38.5	43.7	48.9	48.5	43.5	35.8	25.9	53.1
	High	1614	0.2	12.7	31.0	41.8	46.2	50.5	50.0	44.8	36.7	26.5	54.8
060	Low	1338	0.2	15.8	31.9	41.4	45.8	51.8	49.4	45.3	36.9	26.7	55.1
	Medium	1556	0.2	17.2	33.0	41.9	48.0	53.4	50.5	45.9	39.0	28.6	56.6
	High	2247	0.2	19.6	36.1	41.0	47.2	53.3	51.8	47.6	40.3	30.1	57.0

NOTE: AP = Measuring Frequency (All Pass)

*Sound power taken at 1m in a anechoic chamber.

PERFORMANCE DATA

Airflow Data at 220V-1-60hz

CFM vs STATIC PRESSURE (INCH)							
Model	Fan Speed	Static Pressure (inches)					
		0.1	0.2	0.3	0.4	0.5	0.6
FS3QX*18	High	667	579	499	376	–	–
	Medium	543	477	405	–	–	–
	Low	394	360	374	–	–	–
FS3QX*24	High	762	659	580	421	291	–
	Medium	620	556	452	324	–	–
	Low	446	405	309	–	–	–
FS3QX*30	High	1120	1036	940	823	703	599
	Medium	958	884	805	696	588	501
	Low	811	734	658	558	486	436
FS3QX*36	High	1278	1224	1168	1108	1023	936
	Medium	1204	1158	1102	1037	967	886
	Low	1061	1025	979	921	863	782
FS3QX*42	High	1430	1370	1308	1240	1145	1048
	Medium	1348	1296	1234	1160	1083	992
	Low	1188	1148	1096	1030	966	875
FS3QX*48	High	1690	1614	1555	1490	1395	1269
	Medium	1542	1495	1439	1386	1320	1244
	Low	1344	1302	1256	1158	1101	1026
FS3QX*60	High	2295	2247	2190	2108	2058	1971
	Medium	1628	1556	1547	1506	1464	1288
	Low	1394	1338	1319	1273	1218	1065

* - 0 = R-22 refrigerant, 4 = R-410A refrigerant

Airflow Data at 220V-1-50hz

CFM vs STATIC PRESSURE (INCH)							
Model	Fan Speed	Static Pressure (inches)					
		0.1	0.2	0.3	0.4	0.5	0.6
FS3QX*18	High	651	562	481	358	–	–
	Medium	529	468	385	–	–	–
	Low	370	350	358	–	–	–
FS3QX*24	High	754	651	552	408	270	–
	Medium	611	548	442	308	–	–
	Low	425	395	289	–	–	–
FS3QX*30	High	1054	937	809	634	500	431
	Medium	954	848	722	572	463	402
	Low	811	843	747	497	415	336
FS3QX*36	High	1160	1076	809	872	728	591
	Medium	949	888	809	709	582	433
	Low	833	784	713	614	500	382
FS3QX*42	High	1407	1309	1219	1088	1008	919
	Medium	1341	1277	1185	1079	978	957
	Low	1166	1126	1060	964	956	862
FS3QX*48	High	1634	1557	1480	1378	1238	1058
	Medium	1549	1477	1393	1293	1143	1024
	Low	1389	1326	1252	1080	1048	914
FS3QX*60	High	2065	2025	1965	1897	1850	1775
	Medium	1735	1629	1549	1444	1398	1139
	Low	1438	1389	1320	1218	1066	1035

* - 0 = R-22 refrigerant, 4 = R-410A refrigerant

CONVERSION FACTORS

METRIC TECH	X =	ENGLISH UNIT	X =	SI UNIT
Area				
cm			100	mm
cm	0.1550	in.	645.2	mm
m			1.0	m
m	10.76	ft	0.09290	m
Length				
µm			1.0	µm
µm	39.37	micro-in.	0.0254	µm
mm			1.0	mm
mm	0.03937	in.	25.4	mm
mm	0.003281	ft	304.8	mm
m			1.0	m
m	3.281	ft	0.3048	m
m	1.094	yd	0.9144	m
Mass				
g			1.0	g
g	0.03527	oz	28.35	g
kg			1.0	kg
kg	2.205	lb	0.4536	kg
tonne. Mg			1.0	tonne. Mg
tonne. Mg	1.102	U.S. ton (2000 lb)	0.9072	tonne. Mg
Power				
kcal/h			1.163	W
kcal/h	3.968	Btu/h	0.2931	W
HP metric			0.7355	kW
HP metric	0.9863	HP (550 $\frac{\text{ft}\cdot\text{lb}}{\text{s}}$)	0.7457	kW
Mcal/h			1.163	kW
Mcal/h	0.3307	Ton ref.	3.517	kW
Pressure				
mm w.g 4°C			9.806	Pa
mm w.g 4°C	0.03937	in H ₂ O 39.2°F	249.1	Pa
mm Hg 0°C			0.1333	kPa
mm Hg 0°C	0.03937	in Hg 32°F	3.386	kPa
kg/cm ²			98.07	kPa
kg/cm ²	14.22	psi	6.895	kPa
mH ₂ O	3.281	ft H ₂ O	2.989	kPa

METRIC TECH	X =	ENGLISH UNIT	X =	SI UNIT
Temperature				
Interval				
°C			1.0	K
°C	1.8	°F	0.5556	°C
Velocity				
m/s			1.0	m/s
m/s	3.281	ft/s	0.3048	m/s
m/s	196.9	ft/min	0.00508	m/s
Volume				
mm			1.0 x 10 ⁻⁶	L
mm	6.102x10 ³	in.	0.01639	L
L			1.0	L
L	0.03531	ft	28.32	L
m			1.0	m
m	1.308	yd	0.7646	m
L	0.2642	U.S. gal	3.785	L
L	2.113	U.S. pint	0.4732	L
mL .cm			1.0	mL
mL .cm	0.03381	U.S. oz	29.57	mL
Volume/Time				
m ³ /h			0.2778	L/s
m ³ /h	0.5886	ft ³ /min	0.4719	L/s
m ³ /h	4.403	U.S. gal/min	0.06309	L/s
L/h			2.778x10 ⁻⁴	L/s
L/h	4.303x10 ³	U.S. gal/min	0.06309	L/s
(m ³ /h)/ (1000 kcal/h)	1.780	cfm/ton	0.1342	L/s • kW
METRIC TECH	CONVERSION FACTOR	ENGLISH UNIT	CONVERSION FACTOR	SI UNIT
Temperature				
°C			°C + 273.15 K	
°C	(°Cx1.8) + 32	°F	(°F-32) + 1.8°C	

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