

Quality Management System Approval

APPROVALS
ISO 9002
EN 29002
ANSI/ASQC Q92

FB4ASX

Nominal cooling capacity 8.2-17.6 kW

Nominal air flow 350-825 l/s

FB4ASX units are encased indoor fan coils, complete with direct expansion indoor coil, suitable for use in cooling only or heat pump systems. They are intended for ducted applications in small commercial or residential buildings and installations.

Features

- The units are designed for vertical (upflow or downflow) and horizontal installations. Downflow installations require an accessory adapter package.
- Size 070 is also available in modular arrangement, to facilitate installations in tight spaces.
- Indoor coils use internally grooved copper tubes with lanced sine wave aluminium fins.
- Fans are direct-drive centrifugal type, powered by permanent split capacitor motors with field-selectable three-speed operation.
- Control power transformer and cooling control relay are standard equipment.
- Permanent easy-access return air filter is standard.
- Unit enclosures with high-density insulation are fabricated of prepainted galvanized steel for maximum durability and resistance to corrosion.
- Refrigerant flow control is accomplished via bypass Accurater.
- Sweat-type coil connections are used for both vapour and liquid lines.
- Accessory electric heaters are available for supplementary heating.
- Reinforced plastic condensate pan with brass drain connection inserts.
- Secondary drain connection.

Physical data

FB4ASX		024	036	048	060	070
Nominal cooling capacity*	kW	8.2	12.3	17.3	17.6	17.6
Operating weight	kg	45	56	72	76	90
Refrigerant		R-22				
Refrigerant control		Bypass Accurater				
Unit arrangement		Upflow, downflow, horizontal (LH)				
Fan type		Centrifugal, direct drive				
Nominal air flow	l/s	350	550	750	825	825
Fan motor type		Permanent split capacitor				
Nominal motor power	kW	0.15	0.24	0.56	0.56	0.56
Motor speed (3-speed)	r/s	16.7/15.0/13.3				
Indoor coil		Copper tube/aluminium fin				
Face area	m ²	0.21	0.28	0.41	0.55	0.69
Arrangement		Slope	Slope	A	A	A
Rows		3	3	3	3	3
Fins/m		551	551	551	551	551
Filter		Permanent/25 mm thick				
Coil connections	in					
Vapour (ODS)		3/4	3/4	7/8	7/8	7/8
Liquid (ODS)		3/8	3/8	3/8	3/8	7/8

* Based on nominal air flow rates, 19.4°C entering wet bulb and 7.2°C saturated suction temperature.

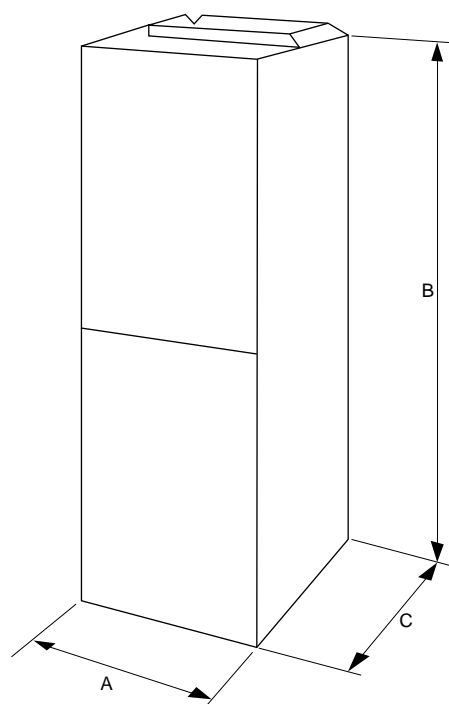
Electrical data

FB4ASX	V-ph-Hz	Operating voltage		Fan motor
		Max.	Min.	FLA
024	230-1-50	253	207	0.8
036	230-1-50	253	207	1.9
048	230-1-50	253	207	2.7
060	230-1-50	253	207	3.6
070	230-1-50	253	207	3.6

FLA - Full load amps

Dimensions, mm (vertical arrangement)

FB4ASX	024	036	048	060	070
A	364	448	536	536	612
B	1084	1260	1357	1357	1503
C	560	560	560	560	560



Allow a clearance of 610 mm in front of the unit for removal of the front panel.

Cooling capacities

FB4ASX		Air flow l/s BF		Saturated suction temperature °C																			
				2.0				4.0				6.0				8.0				10.0			
				Entering wet bulb temperature °C																			
				22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16	22	20	18	16
024	300	0.05	TC	11.4	10.1	8.8	7.5	10.8	9.4	8.0	6.6	9.9	8.5	7.1	5.8	9.0	7.5	6.2	5.0	7.9	6.4	5.2	4.2
			SHC	5.6	6.0	6.4	6.6	5.3	5.6	5.9	6.2	5.0	5.3	5.5	5.8	4.6	4.9	5.1	5.0	4.2	4.4	4.5	4.2
	350	0.06	TC	12.3	10.8	9.4	8.1	11.6	10.0	8.6	7.3	10.7	9.1	7.7	6.4	9.6	8.0	6.8	5.6	8.5	6.8	5.7	4.9
			SHC	6.0	6.4	6.9	7.4	5.8	6.1	6.5	6.9	5.4	5.8	6.1	6.4	5.0	5.4	5.6	5.6	4.5	4.8	5.0	4.9
	375	0.07	TC	12.8	11.3	9.8	8.4	12.0	10.4	9.0	7.6	11.1	9.5	8.0	6.7	10.0	8.4	7.1	5.8	8.9	7.2	6.1	5.2
			SHC	6.3	6.8	7.3	7.8	6.0	6.4	6.8	7.3	5.7	6.0	6.4	6.7	5.2	5.6	6.0	5.8	4.8	5.1	5.4	5.2
036	375	0.05	TC	15.1	13.0	11.2	9.5	13.9	11.9	10.1	8.2	12.6	10.6	8.7	7.0	11.3	9.2	7.5	5.8	9.8	7.9	6.3	4.8
			SHC	7.3	7.7	8.0	8.2	6.9	7.1	7.4	7.6	6.3	6.5	6.7	6.9	5.7	5.9	6.1	5.8	5.0	5.3	5.3	4.8
	550	0.08	TC	19.3	16.7	14.4	12.2	17.7	15.2	12.9	10.7	16.1	13.6	11.4	9.2	14.4	11.9	9.8	7.8	12.6	10.1	8.3	6.7
			SHC	9.4	10.1	10.7	11.2	8.8	9.4	9.9	10.3	8.2	8.7	9.1	9.2	7.5	8.0	8.3	7.8	6.9	7.4	7.4	7.2
	600	0.09	TC	20.2	17.5	15.1	12.8	18.6	16.0	13.6	11.4	16.9	14.4	12.0	9.7	15.1	12.6	10.4	8.3	13.3	10.7	8.8	7.2
			SHC	9.8	10.6	11.3	11.8	9.2	10.0	10.5	11.0	8.5	9.2	9.7	9.7	7.9	8.5	8.8	8.3	7.3	7.9	7.9	7.7
048	575	0.05	TC	23.5	20.5	17.8	15.2	21.8	18.8	16.0	13.3	19.9	16.9	14.2	11.6	18.0	15.0	12.4	10.0	16.1	12.9	10.6	8.7
			SHC	11.3	12.0	12.7	13.3	10.5	11.3	11.9	12.4	9.8	10.5	11.1	11.5	9.1	9.7	10.1	10.0	8.2	8.7	9.1	8.7
	750	0.07	TC	26.7	23.3	20.3	17.6	25.0	21.6	18.5	15.6	22.9	19.6	16.6	13.8	20.7	17.3	14.6	12.1	18.4	14.8	12.6	10.9
			SHC	13.0	14.0	15.0	16.0	12.3	13.4	14.2	14.9	11.5	12.5	13.3	13.8	10.7	11.5	12.3	12.1	9.8	10.7	11.2	10.9
	900	0.08	TC	27.6	24.4	21.2	18.1	25.9	22.5	19.5	16.5	23.8	20.4	17.3	14.5	21.6	18.0	15.2	12.8	19.3	15.5	13.2	11.5
			SHC	13.6	14.8	16.0	17.0	12.7	14.0	15.1	16.2	12.0	13.2	14.1	14.5	11.3	12.3	13.0	12.8	10.4	11.3	11.8	11.5
060	600	0.03	TC	25.7	22.1	19.0	16.1	23.6	20.2	17.2	14.2	21.6	18.2	15.1	12.2	19.5	16.0	13.0	10.1	17.0	13.7	10.8	8.1
			SHC	12.4	13.0	13.4	13.8	11.5	12.0	12.4	12.8	10.7	11.1	11.4	11.7	9.82	10.2	10.4	10.1	8.7	9.1	9.13	8.1
	750	0.05	TC	29.6	25.8	22.3	18.9	27.5	23.7	20.2	16.8	25.2	21.3	17.7	14.2	22.8	18.8	15.2	11.8	20.2	16.2	13.0	10.0
			SHC	14.4	15.3	16.0	16.6	13.4	14.2	14.9	15.6	12.5	13.2	13.7	14.1	11.6	12.2	12.4	11.8	10.5	11.1	11.2	10.0
	900	0.06	TC	32.6	28.5	24.7	21.0	30.3	26.2	22.3	18.6	27.8	23.7	19.8	16.0	25.2	21.0	17.2	13.7	22.4	18.0	14.6	11.8
			SHC	15.9	17.1	18.1	19.1	14.9	16.1	16.9	17.7	13.9	14.9	15.7	16.0	12.8	13.7	14.3	13.7	11.8	12.5	12.6	11.8
070	600	0.04	TC	26.8	23.5	20.2	16.9	24.5	21.3	18.2	15.1	22.2	19.2	16.2	13.3	19.9	17.1	14.3	11.5	17.6	15.0	12.3	9.7
			SHC	13.4	14.0	14.5	15.1	12.4	12.9	13.4	13.8	11.5	11.9	12.2	12.6	10.5	10.8	11.1	11.4	9.6	9.8	10.0	9.7
	750	0.05	TC	30.5	26.9	23.2	19.6	28.0	24.5	21.1	17.6	25.5	22.2	18.9	15.6	23.0	19.9	16.7	13.6	20.4	17.5	14.6	11.7
			SHC	15.4	16.2	17.1	18.0	14.3	15.1	15.8	16.6	13.3	13.9	14.6	15.2	12.3	12.8	13.3	13.6	11.3	11.6	12.0	11.7
	900	0.06	TC	34.2	30.3	26.4	22.4	31.5	27.8	24.1	20.3	28.8	25.3	21.8	18.2	26.1	22.8	19.4	16.1	23.4	20.3	17.1	14.0
			SHC	17.5	18.8	20.1	21.4	16.4	17.6	18.7	19.8	15.4	16.3	17.3	18.2	14.3	15.1	15.9	16.1	13.2	13.8	14.5	14.0

Legend:

- BF - Bypass factor
- TC - Gross total cooling capacity kW
- SHC - Gross sensible cooling capacity kW (based on an entering dry bulb temperature of 26.7°C)

Fan performance

Air flow l/s

FB4ASX	Motor speed	External static pressure Pa				
		25	50	75	100	125
024	High	373	345	303	238	-
	Medium	340	319	269	-	-
	Low	266	247	-	-	-
036	High	609	571	531	486	438
	Medium	529	499	468	432	394
	Low	458	437	414	381	-
048	High	812	765	716	661	595
	Medium	770	724	678	628	-
	Low	713	671	630	579	-
060	High	885	844	800	755	706
	Medium	803	767	731	690	-
	Low	671	647	624	-	-
070	High	1038	996	953	906	852
	Medium	937	908	875	838	793
	Low	781	767	748	724	-

Note: Ratings are based on wet coil with factory-supplied filter and no internal heaters.

Sound power levels

FB4ASX	Fan speed	Nom. air flow l/s	ESP	Estimated fan sound power dB							Effect of minor changes	
				Octave band centre frequency Hz							Air flow	Ext. static pressure
				63	125	250	500	1000	2000	4000		
024	High	354	42	76.0	72.0	68.0	67.0	63.0	61.0	57.0	0.3	0.7
036	High	566	110	80.0	76.0	72.0	69.0	69.0	65.0	61.0	0.2	0.6
048	High	755	55	83.0	79.0	75.0	72.0	72.0	68.0	64.0	0.1	0.4
060	Medium	755	90	77.0	73.0	69.0	68.0	63.0	61.0	57.0	0.1	0.4
070	High	944	92	75.0	71.0	67.0	64.0	62.0	60.0	56.0	0.1	0.4

Note:

The estimated fan power levels are based on the procedure described in the 1987 HVAC Systems and Applications Handbook (Chapter 52).

ESP - External static pressure, Pa

