INSTALLATION INSTRUCTIONS

COMMERCIAL ROOM VENTILATORS WITH EXHAUST

MODELS:

QCRV-4

QCRV-P

FOR USE WITH BARD QTEC SERIES HEAT PUMPS

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DESCRIPTION

The QCRV ventilators are designed to be used with Bard QTEC Series Heat Pumps. They are electromechanical ventilation systems designed to provide fresh air to meet indoor air quality standards with built in exhaust provisions.

QCRV-4

The QCRV-4 has a spring return damper blade. If vent operation is no longer required or in the event of a power loss, the blade will spring return closed. Adjusting the thumb wheel control on the damper motor will set the maximum blade position. (See Figure 1.) Using the charts, set the blade position to deliver the proper CFM.

QCRV-P

The QCRV-P has a power return damper blade. If vent operation is no longer required, the blade will power closed. In the event of a power loss, the blade will remain in a fixed position until power is restored. A blade stop angle must be installed to limit the blade travel to the desired setting. (See Figure 2.) Using the charts, set the blade stop angle to the setting that will deliver the proper CFM.

BLADE ADJUSTMENT FOR DESIRED VENTILATOR AIR

The amount of ventilation air supplied by the commercial room ventilator is dependant on three factors.

1. Supply air duct static pressure drop
2. Indoor blower speed
3. Damper blade open position setting.

To determine the amount of fresh air that will be supplied to the structure, first determine the pressure drop of the supply air duct. For free blow applications with return air filter grille and supply grille, use the free blow column in the tables provided.

1. Determine the ventilation CFM required.
2. Choose the table following for your specific unit, mode of operation and static pressure.
3. Find the ventilation CFM required in the appropriate table. Read left to determine required blade position for the desired ventilation CFM.
4. Energize ventilator and adjust thumb wheel to open the blade to the position desired on the QCRV-4 (See Figure 1), or install blade angle stop at the position desired using prepunched holes on the QCRV-P (See Figure 2). Label on right side of QCRV indicates the A, B, C, D and E positions. Remove filter for better viewing.
5. Program thermostat, CS2000A or DDC control system to turn on ventilator during occupied periods only.

TABLE 1

QH242 VENTILATION MODE CFM				
Damper Position	Free Blow	Static Pressure		
		0.1	0.3	0.5
A	125	120	100	75
B	135	130	115	100
C	165	160	160	140
D	255	255	235	195
E	375	320	290	265

NOTE: Ventilation airflow will increase up to 50 CFM during backup or emergency heat operation due to increased total airflow.

TABLE 2

QH242 COOLING & HEATING MODE CFM				
Damper Position	Free Blow	Static Pressure		
		0.1	0.3	0.5
A	220	215	200	175
B	245	235	210	185
C	255	260	245	225
D	335	335	330	290
E	385	385	360	320

TABLE 3

QH302 Ventilation Mode CFM QH362 Ventilation Mode CFM QH422 Ventilation Mode CFM QH482 Ventilation Mode CFM				
Damper Position	Free Blow	Static Pressure		
		0.1	0.2	0.3
A	140	135	125	120
B	180	170	160	160
C	220	210	205	195
D	315	315	315	290
E	410	400	385	380

TABLE 4

QH302 COOLING & HEATING MODE CFM QH362 LOW SPEED COOLING & HEATING MODE CFM QH422 LOW SPEED COOLING & HEATING MODE CFM QH482 LOW APEED COOLING & HEATING MODE CFM				
Damper Position	Free Blow	Static Pressure		
		0.1	0.3	0.5
A	235	230	225	220
B	265	250	245	240
C	325	315	300	290
D	400	400	390	380
E	465	460	445	430

NOTE: Ventilation airflow will increase up to 50 CFM during backup or emergency heat operation due to increased total airflow.

TABLE 5

QH362 HIGH SPEED COOLING & HEATING MODE CFM QH422 HIGH SPEED COOLING & HEATING MODE CFM QH482 HIGH SPEED COOLING & HEATING MODE CFM				
Damper Position	Free Blow	Static Pressure		
		0.1	0.3	0.5
A	255	250	250	230
B	285	280	280	280
C	360	360	350	345
D	445	445	445	440
E	500	500	500	490

TABLE 6

QH602 VENTILATION MODE CFM				
Damper Position	Free Blow	Static Pressure		
		0.1	0.3	0.5
A	185	185	180	180
B	215	215	210	200
C	290	290	280	275
D	370	370	365	350
E	465	465	455	445

TABLE 7

QH602 COOLING & HEATING MODE CFM				
Damper Position	Free Blow	Static Pressure		
		0.1	0.3	0.5
A	235	230	230	215
B	265	260	255	255
C	350	350	345	340
D	470	470	455	450
E	580	570	565	560

NOTE: Ventilation airflow will increase up to 50 CFM during backup or emergency heat operation due to increased total airflow.

FIGURE 1
ADJUST THUMBWHEEL TO DESIRED POSITION
ON QCRV-4

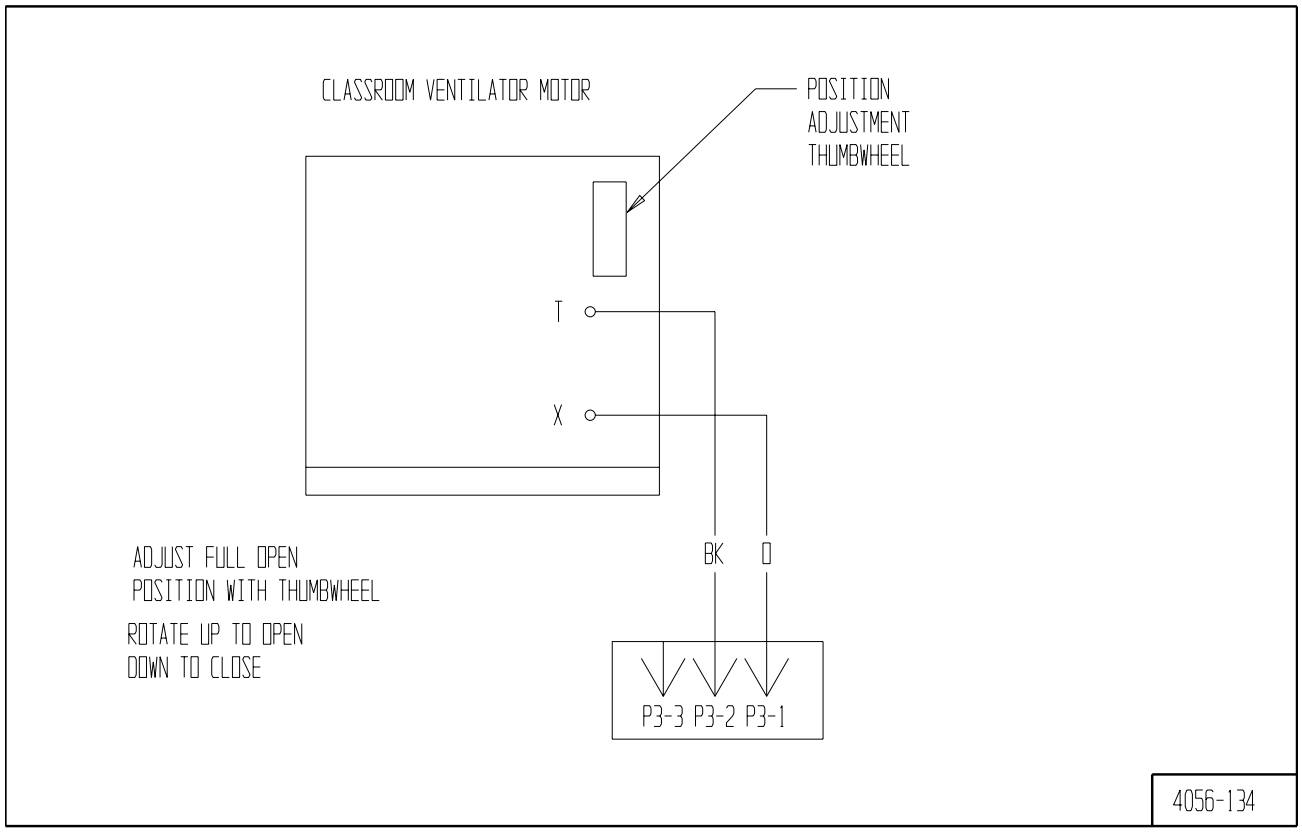
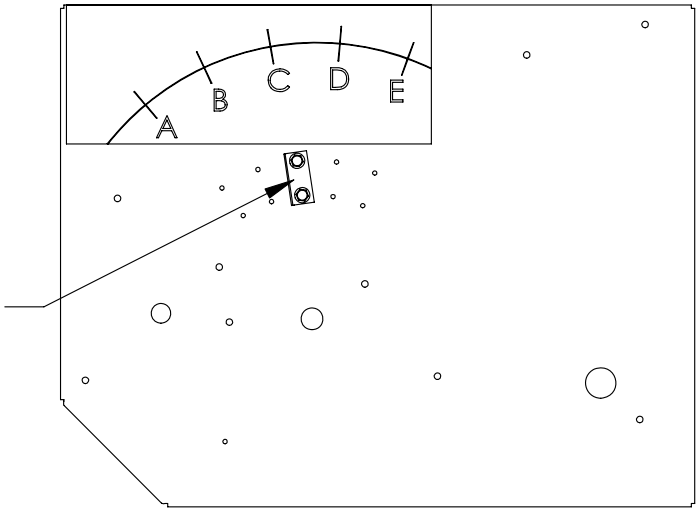


FIGURE 2
INSTALL BLADE ANGLE STOP TO
DESIRED POSITION ON QCRV-P



INSTALL BLADE STOP AT THE POSITION DESIRED. COMES FROM FACTORY SET AT POSITION C.

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