



## CASV 450 Multi-System

Job Name: \_\_\_\_\_

Representative: \_\_\_\_\_

Job Location: \_\_\_\_\_

Job #: \_\_\_\_\_

Architect/Engineer: \_\_\_\_\_

Contractor: \_\_\_\_\_

EXHAUSTO Job File: \_\_\_\_\_

### Use

The CASV is a mechanical draft system used to control and maintain draft for multiple or modulating boilers, water heaters, and other Category I, II, III or IV heating appliances. There are no limitations on its use with these appliances and it can be used with any type of chimney or stack.

### Description

The CASV system consists of a single or multiple RSV, Chimney Fan(s) and the EBC30, Modulating Fan Control. The EBC30 maintains a perfect, constant draft for the heating appliances by modulating the speed of the chimney fan. A variable speed drive is also part of the system when Chimney Fans with 1HP or more are used.

The EBC30 can control a VFD, via a 0-10V signal. An add-on board is available for operating fans running at 120VAC.

The CASV system is supplied as a complete package with fan(s), control(s), pressure sensor, stack probe, adapters for mounting on a chimney or a wall, and balancing baffles.

### Operation

During installation the EBC30 automatically detects connections, setting requirements and any add-on devices. The planned draft setting must be entered manually via the control panel. After these steps have been taken, the control will keep the settings in memory. Many other functions can be programmed, but the control is shipped pre-programmed for each individual job.

Each appliance is interlocked with the control. A call for heat activates the chimney fan and releases the burner once an adequate, pre-set draft is established. The sequence is repeated every time a new heating appliance calls for heat. When an appliance shuts down, the chimney fan will slow down while still maintaining the draft setting. When the last appliance shuts down the chimney fan will operate in post-purge mode for a preset time period.

The integrated proven draft function will shut down the entire

system in case of a power failure to the chimney fan or the Variable Speed Drive (if installed) or mechanical failure. During a following call for heat, the Operating Priority function will detect if one or more appliances can be operated safely and with proper draft. If so, the appliance(s) will be able to operate without fan operation. After two (2) hours, fan operation is checked and if present, the control will go back to normal operation. Otherwise, it will continue to operate in Operating Priority mode. The self-check is repeated every two (2) hours infinitely. During a period without fan operation, the control is in alarm mode.

If the chimney fan has been out of commission for seven (7) days, the Bearing Cycle Activation function will operate the fan at a low speed for a short time. This is automatically repeated every seven (7) days, if the fan has not been operating.

Any errors detected during operation are either shown via the self-diagnostic panel or on the display.

### Sizes

The system is available in many sizes as shown on the following pages, and virtually handles any heating appliance(s) independent of input/HP.

### Listings

ETL-listed to UL378 for Draft Equipment as well as Canadian Standard CSA3-B255-M81 for Mechanical Flue Gas Exhausters.

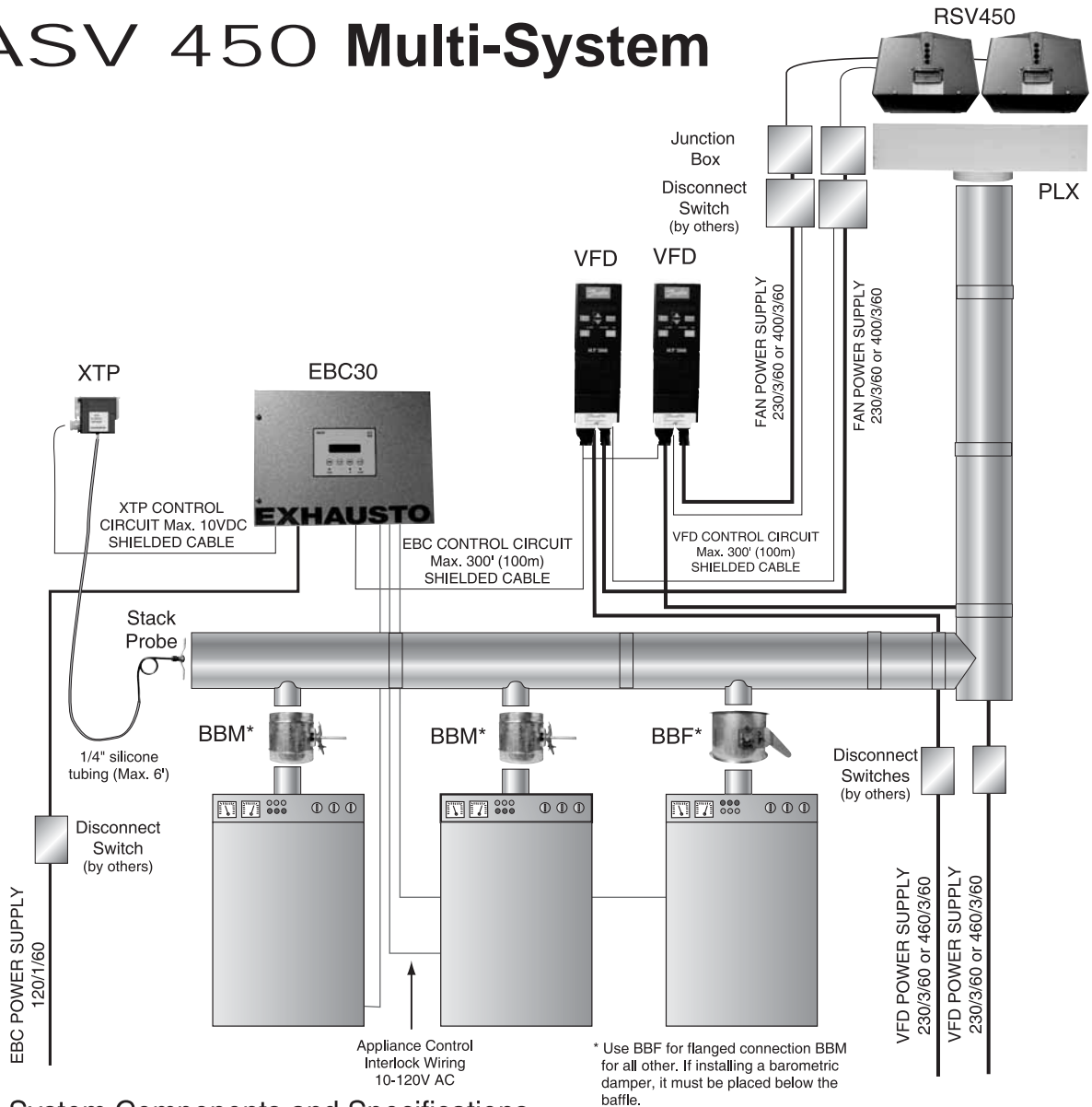
### CSI Specifications

CSI Model Specifications are available from EXHAUSTO and via the internet at [us.exhausto.com](http://us.exhausto.com).

The document number is: 3917011.



# CASV 450 Multi-System



\* Use BBF for flanged connection BBM for all other. If installing a barometric damper, it must be placed below the baffle.

## System Components and Specifications

Model	Fan	Control	Danfoss VFD	If 6+ appliances	Fan Mounting	Balancing Baffles	Power Supply VFD	Max. Input Amp to VFD	Power Supply Fan	Max. Input Current Per Fan	Max Output Fans HP	RPM
CASV450-2	2xRSV450	EBC30, incl. XTP and stack probe	2840	Add-on Relay Board	PLX	BBM/BBF	200-240/3/60	23.5	2x230/3/60	6.5	4.0	1740
CASV450-3	3xRSV450		2815+2840 (Alt. 2855)				380-480/3/60	9.8	2x400/3/60	3.8	4.0	1740
CASV450-4	4xRSV450		2x2840 (Alt. 2875)				200-240/3/60	12.2+23.5	3x230/3/60	6.5	6.0	1740
CASV450-5	5xRSV450		2815+2x2840 (Alt. 2875)				380-480/3/60	5.1+9.8	3x400/3/60	3.8	6.0	1740
							200-240/3/60	2x23.5	4x230/3/60	6.5	8.0	1740

Wiring	Wire Rating	Rating Amps	No. of leads	Max. Length	Min. Wire Gauge
EBC POWER SUPPLY	600V	6.3	3	**	14
XTP CONTROL CIRCUIT	-	<0.01	3	300'	24
FAN POWER SUPPLY (each fan)	600V	see above	3	**	14
APPLIANCE CONTROL CIRCUIT	**	**	4	**	**
EBC & VFD CONTROL CIRCUIT	-	<0.1	2	300'	24
VFD POWER SUPPLY (each VFD)	600V	see above	5	**	14

All wiring must comply with local codes, and in their absence, the National Electrical Code, NFPA 70.

\*\* Job specific - check local code