

Combustion Air Systems

Combustion Air Solutions for any Application

These models are designed to provide combustion air for appliances when direct connection to the burner is not possible (when the appliance is located in a confined space). According to NFPA 54 and NFPA 31, an engineered system such as a CAS-3, 4, 6, or 7 may be used to overcome the lack of air in a confined space. The CAS-3 is designed for use with oil appliances. The CAS-4 is for use with gas appliances with 24 VAC gas valve controls. The CAS-4MV is for use with 750mV power pile gas appliances. Each is designed for optimum safety and includes a proving device that won't allow the burner to engage without the Fan-in-a-Can® operating. Multiple units or additional controls are required for multiple appliance installations. Each is equipped with a two speed control for enhanced versatility.



CAS-3



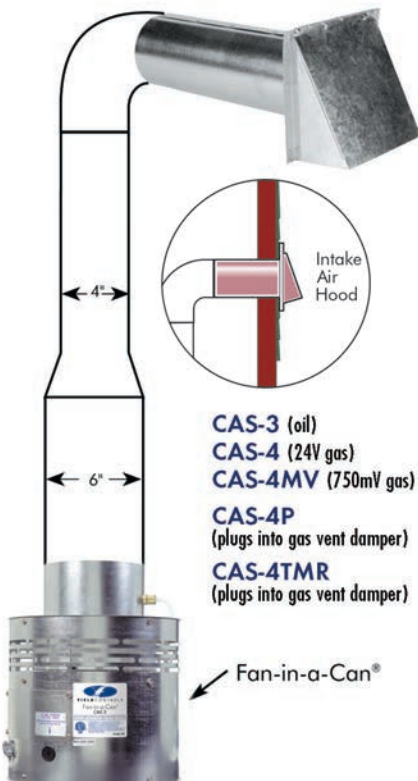
CAS-4Jr.™

The CAS-4TMR is designed for use with natural gas or LP gas fired boilers equipped with a 24 VAC vent damper control system. The CAS-4TMR mechanically draws air into a boiler room and disperses it near the boiler combustion air intake, and is interlocked with the boiler gas valve control by means of the boiler's vent damper control cable.

The Fan-in-a-Can, Jr. is designed for gas appliances up to 110,000 BTU/hr input. It may be used with a residential water heater with the addition of control kit CK-20 FV/FG.

How the CAS-3, CAS-4, and CAS-4TMR work

When the thermostat calls for heat, the CAS-3 and CAS-4 Fan-in-a-Can® engages and begins drawing air into the structure. When air flow is established, the pressure switch closes. The CAS sends a signal to the appliance, allowing the burner to fire. The Fan-in-a-Can® diffuses the outside air into the room near the burner to ensure adequate air for efficient combustion. The CAS-4TMR has a differential pressure switch that eliminates the need for a flow switch in areas that require air flow proving. The CAS-4TMR also includes an interval shut-off timer designed to reduce the risk of freeze-up in the event of boiler ignition failure, and a "plug-n-play" modular damper adapter for use with boilers having an automatic vent damper, greatly simplifying control wiring connections.



| Model | Fuel | Application | Appliance Input | Components |
|-----------|------|-----------------------------------|--------------------|---|
| CAS-3 | Oil | Any oil heating appliance 120V | See Specifications | 4" Intake Air Hood Fan-in-a-Can® 6" to 4" Reducer Restrictor Plate |
| CAS-4 | Gas | 24V Gas Appliance | See Specifications | 4" Intake Air Hood Fan-in-a-Can® 6" to 4" Reducer Restrictor Plate |
| CAS-4MV | Gas | 750mV Power Pile Gas Appliance | | |
| CAS-4P | Gas | Boiler with automatic vent damper | See Specifications | 4" Intake Air Hood Fan-in-a-Can® 6" to 4" Reducer Restrictor Plate ADA-1 |
| CAS-4Jr.™ | Gas | 24V Gas Appliance | See Specifications | 4" Intake Air Hood Fan-in-a-Can® |
| CAS-4TMR | Gas | 24V Gas Appliance | See Specifications | 4" Intake Air Hood 6" to 4" Reducer ADA-2 damper adapter (no restrictor plate) |

Combustion Air Systems

| Installation Specifications | | | | | | | |
|-----------------------------|--------------------------------------|--------------------------------------|-----|-------------------|-----|-------------------|-----|
| Total Input of Appliance(s) | | Max. Equivalent Feet of Installation | | | | | |
| CAS-3 OIL (gph) | CAS-4, 4mV, 4P, 4TMR GAS (BTU/hr) | 4" duct & hood w/ Restrictor | | 4" duct & 4" hood | | 6" duct & 6" hood | |
| | | HI | LOW | HI | LOW | HI | LOW |
| - | 50,000 | 300 | 300 | 300 | 300 | 300 | 300 |
| .50 | 75,000 | 300 | 300 | 300 | 300 | 300 | 300 |
| .75 | 100,000 | 300 | 300 | 300 | 300 | 300 | 300 |
| .90 | 125,000 | 300 | 220 | 300 | 220 | 300 | 300 |
| 1.00 | 150,000 | 174 | 108 | 232 | 118 | 300 | 300 |
| 1.25 | 175,000 | 99 | 48 | 152 | 63 | 300 | 300 |
| 1.35 | 200,000 | 52 | 14 | 102 | 32 | 300 | 300 |
| 1.55 | 225,000 | 20 | NA | 68 | 13 | 300 | 239 |
| 1.75 | 250,000 | NA | NA | 45 | NA | 300 | 150 |
| 2.00 | 300,000 | NA | NA | 16 | NA | 300 | 53 |
| 2.50 | 350,000 | NA | NA | NA | NA | 193 | 8 |
| 2.75 | 400,000 | NA | NA | NA | NA | 109 | NA |
| 3.25 | 450,000 | NA | NA | NA | NA | 56 | NA |

| Installation Specifications for CAS-4Jr.™ | | | |
|---|--------------------------------------|---------|---------|
| Total Input of Appliance(s) BTU/hr | Maximum Equivalent Feet of Duct Pipe | | |
| | 4" Pipe | 5" Pipe | 6" Pipe |
| 50,000 | 230 | 300 | 300 |
| 60,000 | 160 | 300 | 300 |
| 70,000 | 105 | 300 | 300 |
| 80,000 | 70 | 214 | 300 |
| 90,000 | 40 | 122 | 300 |
| 100,000 | 25 | 76 | 180 |
| 110,000 | 15 | 46 | 80 |



CAS-4Jr.™

For multiple appliances, the following additional controls should be used:

| Model | Description |
|---------|---|
| CK-20FV | Additional 30mV gas water heater control for use with CAS-4, CAS-4Jr., and CAS-4TMR |
| CAC-24 | Additional 24 Volt appliance for use with CAS-4, CAS-4Jr., CAS-4TMR, CAS-6, and CAS-7 |
| CAC-120 | Additional 120 Volt appliance for use with CAS-3, CAS-6, and CAS-7 |