

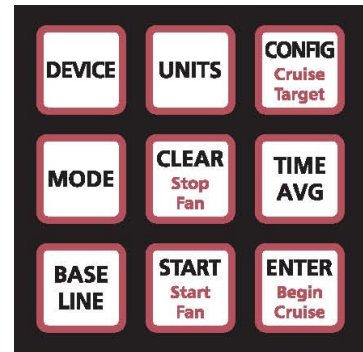
Cruise Control with the DG-700 Gauge

All new DG-700 gauges include a Cruise Control feature which allows you to automatically control Minneapolis Blower Door and Duct Blaster fans to maintain a constant building or duct pressure without having the gauge connected to a computer. Common applications of the Cruise Control feature include:

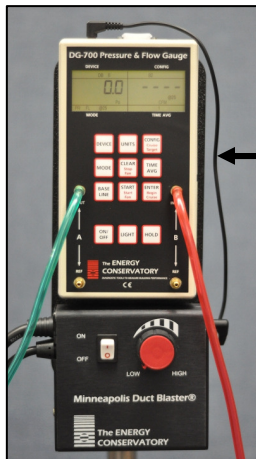
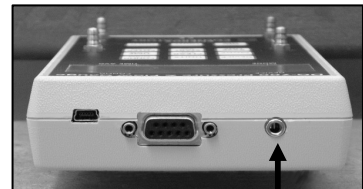
- Quickly measuring building airtightness using a “one-point” 50 Pa test.
- Quickly measuring duct airtightness using a “one-point” 25 Pa **total leakage** test.
- Simultaneously controlling both the Blower Door and Duct Blaster fans during a **leakage to outside** duct airtightness test. During this test, Cruise Control on the Blower Door’s DG-700 will maintain a constant 25 Pa building pressure while the DG-700 gauge connected to the Duct Blaster fan maintains a constant 0 Pa pressure in the duct system.
- Maintaining a constant building pressure while pressure pan testing, or locating and sealing building and duct system air leaks.
- Performing series leakage to quantify leakage rates between various zones within a building.

In order to use the Cruise Control feature you will need the following 3 items:

- A “Cruise compatible” DG-700 gauge. Your DG-700 is compatible with Cruise Control if the CONFIG, CLEAR, START, and ENTER keys have additional red lettering below the main black script.
- A Blower Door or Duct Blaster fan speed controller with a 3.5 mm communication jack on the side of the controller box.
- A fan control cable to connect the DG-700 fan control jack to the speed controller communication jack.



Fan control cable with Blower Door controller.



Fan control cable with Duct Blaster controller.



Fan control jacks.



Cruise Overview

Cruise Control uses the DG-700's fan control feature to continuously adjust the Blower Door or Duct Blaster fan to maintain a constant Cruise target pressure on **Channel A** of the gauge. Cruise Control can be used in the following gauge Modes to maintain the listed target pressures:

Gauge Mode	Cruise Target Pressures Available
PR/ FL @50	50 Pa
PR/ FL @25	25 Pa
PR/ FL	75 Pa, 50 Pa, 25 Pa, +0, -0
PR/ PR	75 Pa, 50 Pa, 25 Pa, +0, -0

Before starting Cruise, the Blower Door or Duct Blaster and DG-700 should be completely set-up (including tubing connections), the gauge should be in the Mode you wish to use, and the correct Device and Configuration settings should be entered. If you wish to Cruise with a baseline pressure adjustment applied to **Channel A**, simply use the Baseline feature first before beginning Cruise. You will also need to install the fan control cable and turn the fan speed controller to the "just on" position:

- Model 3 Blower Door "just on" - from the off position, turn the controller knob clockwise only until you feel the click and no farther - the fan will not be turning.
- Duct Blaster "just on" – turn the controller knob all the way down (counter-clockwise) and flip the on/off switch to "ON" – the fan will not be turning.

Begin Cruise button: When you are ready to begin Cruise, press **Begin Cruise** to enter Cruise setup. A Cruise target pressure will appear in the **Channel A** display and the Cruise icon will flash. The flashing Cruise icon indicates that the gauge is ready to begin Cruising but is not yet controlling the fan. If you are in the **PR/ FL** or **PR/ PR** modes, you may change the Cruise target pressure at this point by pressing the **Cruise Target** button. **Note:** You can not change the Cruise target pressure when in the **PR/ FL @50** and **PR/ FL @25** modes.

Start Fan button: Press **Start Fan** to instruct the DG-700 to begin ramping up the fan to achieve the target pressure on **Channel A**. The fan will slowly start increasing speed until the pressure reading on **Channel A** matches the Cruise target pressure. The fan will simply run at full speed if the target pressure can not be achieved. Whenever the DG-700 is calling for full fan speed, the gauge will emit a beeping sound.

Stop Fan button: Press **Stop Fan** to turn off the fan when you are done Cruising. When the fan is turned off by pressing **Stop Fan**, the DG-700 returns to the Cruise setup state (i.e. the Cruise icon is flashing and a Cruise target pressure is displayed on **Channel A**). You may re-start Cruise again by pressing **Start Fan**, or exit the Cruise feature altogether by pressing the **CLEAR** button.

The fan will also be stopped while Cruising under the following circumstances:

- If **Channel A** registers a pressure of 100 Pa or more, the fan will automatically be shut down and the gauge will revert back to the Cruise setup state.
- Pressing the **HOLD** button will shut down the fan and freeze the display. Pressing **Start Fan** from a display freeze will re-start Cruise. Pressing the **HOLD** button a second time from a display freeze will return the gauge to the Cruise setup state.
- The DG-700's auto-off feature will shut down the gauge and turn off the fan after 2 hours of run-time (if no buttons are pressed during that time).

Cruising Zero (+0 and -0)

Cruising Zero is designed for specialized testing and research applications. Cruising Zero is useful if you want to control the Blower Door fan to remove an existing pressure from a building, duct system or other enclosure. When using the fan to pressurize a space (that is currently depressurized) use +0 as your Cruise target pressure. When using the fan to depressurize a space (that is currently pressurized), use -0 as the Cruise target pressure. Refer to specific test procedures for more information on using Cruise Zero.