

QUENCHER™

Installation & Set-up

Installation:

Install the QUENCHER to allow 5 diameters of straight duct between the spark source and the inlet of the QUENCHER. Leave a recommended minimum of 5 diameters of straight duct (where possible) between the outlet of the QUENCHER and the nearest transition piece or dust collection/filter device. If 5 duct diameters are not available, then install at a location along the duct that allows 5 duct diameters at the inlet and leaves the maximum distance possible between the outlet of the QUENCHER and the next transition piece. Provide adequate structural support when installing and operating the QUENCHER. No specialty tools are required for installation or operation. Observing the directional flow arrow on the QUENCHER label, install the QUENCHER in-line with the duct. For flange mounting, supply gasket material between mating flanges to assure an air-tight seal. For slip-fit mounting, make sure the mating duct connection or mating flex hose connection is air-tight. The recommended installation is in a horizontal duct run. For vertical duct installation, consult with the factory about possible explosive conditions.

Companion Flanges (option):

If your QUENCHER was order with “companion flanges”, bolt the companion flanges (ring or angle) to the Quencher flanges, then raise to the ductwork’ slide onto the duct, and then weld the flange to the duct. This will ensure that the matching bolt patterns line up properly.

Operation:

Turn on your system fan and draw process air through the QUENCHER. The QUENCHER will cool sparks that pass through the unit. The basic QUENCHER is a static device with no moving or electrical parts. It will function automatically when the system fan is turned on. You must ensure gas flow of 1500-2500 FPM through the cell (stated as SCFM in the product specifications) is maintained for proper functioning. Otherwise, there may not be enough turbulent energy generated to extinguish sparks and prevent debris accumulation at the bottom of the cell. Refer to the QUENCHER guarantee and warranty for details on performance and limitations.

Maintenance:

There are no electronic controls and no water or chemical retardants, making the QUENCHER virtually maintenance-free. To avoid combustible dust accumulation, periodically check the inside of the QUENCHER and observe whether or not solids accumulate within. In applications where solids arrest against the internal blades of the QUENCHER and/or appreciably adhere to the inside surfaces, a regularly scheduled cleaning should be considered to prevent obstruction.

Warnings:

- 1) If the QUENCHER is provided with an access door, never open the doors when the system is operating. Also, never open access door when a duct fire is suspected.
- 2) Pressure drop readings, taken in the field, are difficult to rely on due to the extreme turbulence developed in the QUENCHER cell. We recommend at least 5 duct diameters of straight duct beyond the cell or outlet of the reducer section. It also requires an upstream reading where the flow is perfectly laminar in the duct. Dwyer Instruments Inc requires straight duct 8.5 duct diameters upstream and 1.5 straight duct diameters downstream from a flow measuring device.
- 3) If operating below 0.9 inches WG pressure drop, a CELL CLEANER / BOOSTER is needed to prevent dust accumulations before and after the QUENCHER.

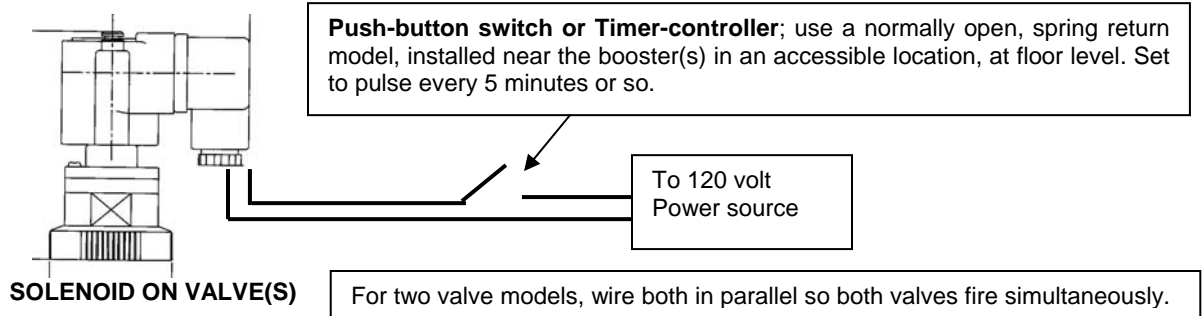
CELL CLEANER / BOOSTER Set-Up (for models supplied with a booster)

1. The BOOSTER assembly is supplied pre-installed in an extension of the inlet to the QUENCHER.
2. Mount the diaphragm valve (shipped in a box strapped inside the Quencher) on the pulse pipe protruding from the inlet extension. Ensure that the valve port labeled “IN” is connected to the air line and the port opposite the solenoid is on the pulse pipe.
3. Connect a compressed air line to the diaphragm valve. **85 PSI maximum air pressure** is required. A regulator is recommended to ensure proper pressure. A pulse length (on-time) of 100-150 milliseconds is required.

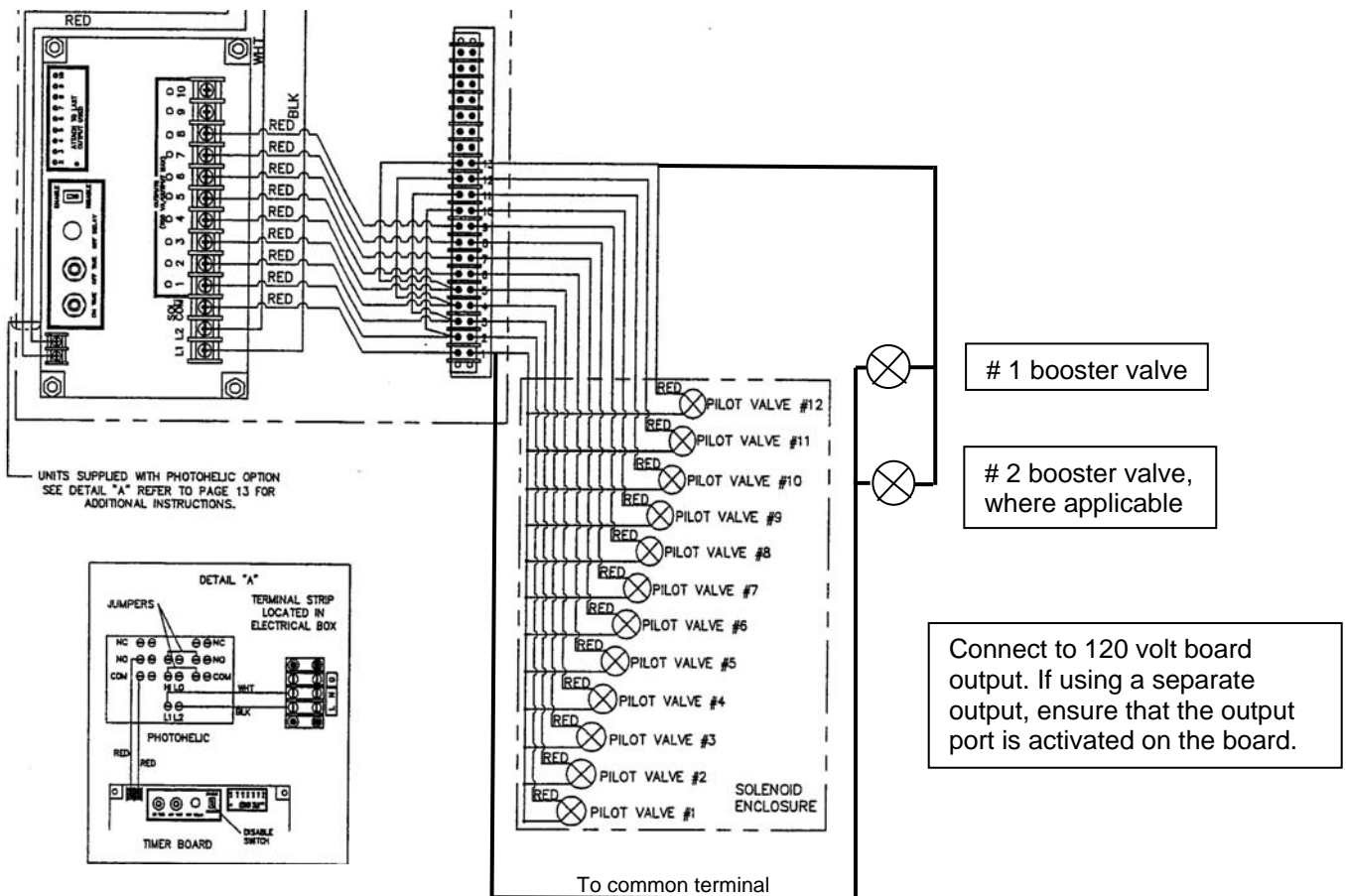
4. <u>Quencher Model</u>	<u>Compressed Air Line Connection Size</u>	<u>Air consumption (SCF/pulse)</u>
Q-08 to Q-24	3/4 inch directly to the valve inlet coupling	0.104 - 0.933
Q-30 & Q-38	1 inch directly to the valve inlet coupling	1.394 - 2.258
Q-48 & Q-60	1 1/2 inch directly to the valve inlet coupling	3.735 - 5.576
Q-72 & Q-84	1 1/2 inch directly to the two (2) valve inlet couplings (The main air line, branching to the (2) 1.5” valves, must be 2 inch)	8.400 – 11.793
Q-96	1 1/2 inch directly to the two (2) valve inlet couplings (The main air line, branching to the (2) 1.5” valves, must be 2 inch)	14.925
Q-108	2 inch directly to the two (2) NPT female valve inlets (The main air line, branching to the (2) 1.5” valves, must be 2 1/2 inch)	18.429

- Two possible electrical activation methods may be used; manual switch or automatic sequencing. *Whatever method of activation is selected, the hardware (switches, controllers) is either existing or must be supplied by the purchaser of the QUENCHER.*

MANUAL: Activate the cleaner by pushing the button and releasing immediately when pulse is activated. **DO NOT HOLD TOO LONG OR THE VALVE MAY NOT SHUT!**



AUTOMATIC PULSE: Activate the cleaner by using one of the existing dust collector sequencer outputs. Ensure that the "ON-TIME" setting is maximum 150 milliseconds or **the valve may not shut.**



TYPICAL PULSE-JET SEQUENCER, supplied with a dust collector