



## CONTACT LENS PALLET BLOW-OFF

### Customer:

Major worldwide manufacturer of disposable contact lenses (Proprietary)

### Sonic Senior Project Engineer:

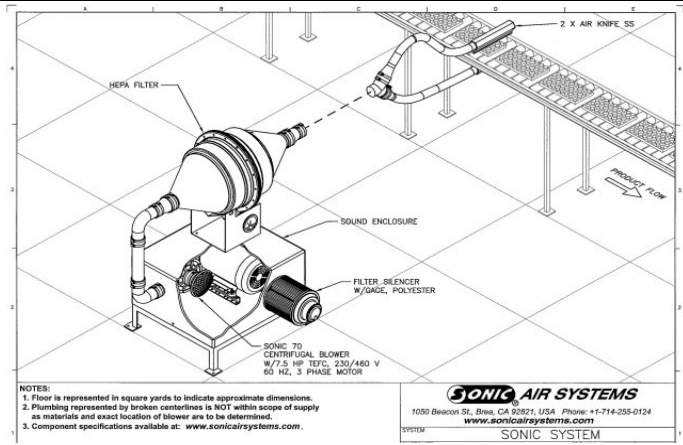
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### Application:

**Remove lens flashing and standing liquid from contact lens pallets.** The production of contact lenses involves many multiple pairs of 24 cavity pallets (half convex and half concave) which are 12" wide and traveling in a continuous closed loop process line where the lens resin is poured. Then it is formed between the two piece pallets before the finished lenses are removed and the pallets washed prior to the next cycle. The pallets must be free of all flashing from the preceding batch of lenses and all standing liquid is removed before new resin can be poured. As a critical cleaning application, the filtration of all air applied to the surface of the pallets must meet the high efficiencies consistent with any medical device blow-off application. Additionally, the total system sound level must be no more than 80 dbA.

### Previous methods and associated problems:

**Compressed air knives with HEPA filters.** The (12) contact lens production lines within this large manufacturing facility were all using compressed air knives with HEPA filters. Although the pallet blow-off need was being met, a compressed air audit showed that they were using approximately 20 brake horsepower for each pair of 13" long air knives totaling 240 BHP for all (12) lines. The plant routinely adds automation devices to production lines and other items which require more compressed air. They had reached the point where another compressor would need to be added to the trunk line in order to avoid the low pressure caused by demand spikes.



### The Sonic Engineered Solution:

**(12) SONIC 70 blower w/7.5 HP motor, enclosures, Sonic HEPA & (2) 13" "custom" Sonic XE air knives.** Following Sonic's shipment of this first system, the air knife performance which Sonic designed was the exact level of blow-off requested by the customer. The customer confirmed through contamination testing that the Sonic HEPA maintained the 0.3 micron rating they required. Then we assisted with further customization of the Sonic air knives to accommodate the existing air knife enclosure and to ensure repeatable air knife positioning as the angles and distances from the pallets were very critical for maximum effectiveness while keeping under the 80 dbA sound level threshold. The (11) final systems were supplied after three months of production running of the first system.

