

Soldering Solder - Fume

Distelkamp - Electronic

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Solder fume and pollutant absorbers

**For the sake of your health.
Should not be missing at any workstation.**

By using our absorbers, poisonous and smelly gases, vapors, aerosols, and floating particles are vacuumed at the place of formation. Direct skin-and breath-contact as well as diffusion into the air is prevented. The exhaust air, cleaned through active carbon, is supplied back to the area again. Heat-loss and drafts are therefore eliminated. As opposed to installing absorbing stations, these absorbers have the following advantages:

- The workstation-formation remains flexible, because the appliances are not permanently installed.
- No maintenance costs originate, since cleaning of the vacuum hoses is eliminated.
- If one unit should fail, down-time of the entire installation does not occur.
- Lower energy-consumption.
- The units have proven themselves for years a thousandfold.

Our absorbers are recommended by the occupation-cooperative, the institute for labor safety of the Federal-institution of labor, the technical labor safety service for Federal employees, etc

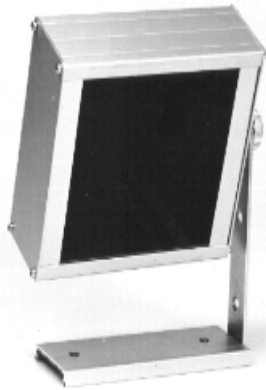
Due to equal production of pollutant and solder vapor absorbers for virtually all industry-branches we can produce these units inexpensively. That means low initial purchase cost and overhead.

Areas of Application:

- Chemical industry
- Drug industry
- Hospital, laboratory-doctor,
- Drugstores
- Dental laboratory
- Electronics industry
- Solders in metal-processing
- Plastic-processing
- Glues and solvent vapors
- Goldsmiths
- Restoration
- Schools and universities

- **Tiffany technique**

Solder Fume Absorber LDA 11



Useful appliance with adjustable inclination, that fully suffices average requirements with smaller soldering jobs. Based on the attractive price and the practical construction, this absorber is suitable for schools, home industry and training. The appliance comes with its own mount or stand.

Power requirements: 220/240V/18W, air throughput: 160m³/h, noise level: 40dBA, housing: anodized aluminum, dimensions: 150x140x55mm

Order-numbers:

- **LDA 11 Solder Fume Absorber: EUR 54,80**
- **LDF 1 pack replacement filters (6 pcs) EUR 12,22**
+Sales Tax.

Solder Fume Absorber LDA 1



A well proven unit, with robust aluminum-casing and pierced front-

plate, that cannot be inadvertently damaged by hot solder tips. The absorber can be used either as a table appliance or higher up with a tripod, to be ordered separately (with round base), with variable inclination angle. Power requirement: 220/240V/18W, air throughput: 170m³/h, noise level: 40dBA, housing: anodized aluminum, dimensions: 150x140x55mm

Order-numbers:

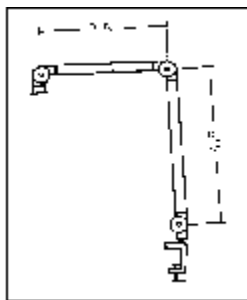
- LDA 1 Solder vapor absorbers EUR 63,66
- LDS 1 tripod with base EUR 30,00
- LDF 1 pack replacement filters (6 pcs.) EUR 12,22
+Sales Tax.

Solder Fume Absorber LDA 4



Power requirements: 220/240V 16W, air throughput: 320m³/h, noise level: 36dBA, housing: anodized aluminum, dimensions: 260x230x55mm. Through the use of 4 low noise fans, the noise level amounts to only 36 dBAs. Consequently, the LDA 4 is the quietest absorber on the market. The 4 fans cause an even air throughput over the entire surface of 260x220mm. Through a new technology, we have succeeded in reaching an air throughput of 320m³/h with an input of only 16W. The life expectancy of the filter is about 4-6 weeks with a run time of approximately 8 hours per day. Due to the high air throughput with minimal noise development, this unit is suitable for virtually any job.

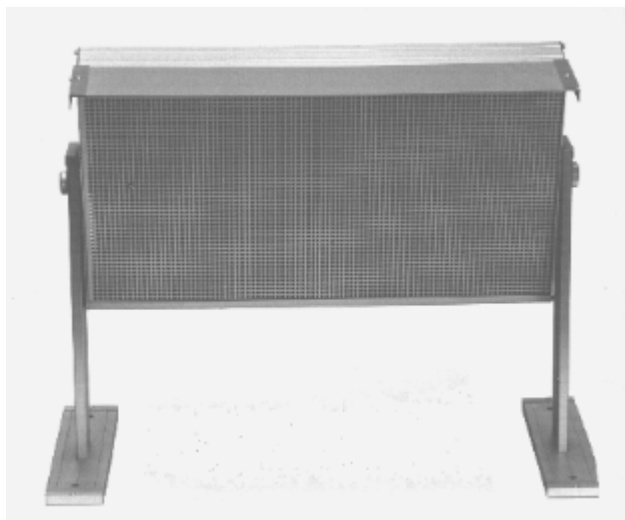
Tripod with Pivot Arm LDS 10



The tripod for highest demands. Through three stable joints, the tripod can be positioned very well. It is delivered complete with ball and socket joints and a clamp. The tripod with pivot arm is suitable for all absorbers.

Order-numbers:

- LDA 4 pollutant absorber EUR 176,40
- LDS 6 table tripods EUR 49,00
- LDS 10 tripod with pivot arm EUR 107,50
- LDF 4 replacement filter EUR 8,70
- + Sales Tax.

Pollutant- and Solder Fume Absorber LDA 600

Through the use of 6 axial-fans, the air throughput is distributed evenly over the entire surface. The high vacuum performance makes this unit suitable for all jobs, even with large quantities of pollution and further distance to the source of the pollution. This absorber surpasses in its performance almost all permanently installed vacuuming equipment and workstation arrangements remain flexible. Power requirements: 220/240V 110W, air throughput: 650m³/h, noise level: 42dBA, housing: anodized aluminum, dimension: 445x260x55mm

Order-numbers:

- LDA 600 pollutant-absorbers complete with tripod EUR 253,10
- LDF 600 replacement filter EUR 17,39
- + Sales Tax.
- All prices are excluding Sales Tax
- Prices are from factory, incl. Package.
- Over EUR 250.--net free house
- Foreign country: over EUR 250.--net free German border
- Payable: 14 days 2% discounts, 30 days net
- On all units 2 year warranty.

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Biting Solder Fumes are a Thing of the Past

Vacuum units and filters are state of the art

Soldering techniques used in today's electronics industry are usually the hard solder, soft solder, as well as the flame soldering with solder paste, flux or solder wire filled with flux. These are alloys, that, in comparison to pure metal, clearly show lower boiling- and melting points, and therefore convert more quickly to the evaporation phase. With these alloys, the lasting bond of materials is guaranteed, without a change in the materials themselves. Solder contains aluminum, tin, lead, zinc, cadmium, silver and copper depending on the alloy-type and melting point. A typical soft solder consists of 60% pewter and 40% lead. A hard solder, on the other hand, contains 75% silver and 25% cadmium. The danger to one's health in hard and soft solder is mainly contributed to lead and cadmium. Lead is a heavy metal causing long-term damage. It impairs the formation of new red blood cells and damages the central nervous system. Therefore, the legislation has enacted strict laws in the contact with lead and has set a limit of a maximum concentration of 0,1mg per cubic meters of airspace at the work place. According to the dangerous material ordinance, contact with lead is prohibited for child bearing women, if the MAK-value or the biological working-material-value (BAT) cannot be maintained. For women up to 45 years of age, the BAT-value amounts to 30ug/100ml blood. This value lies only slightly above the blood-lead-value of the average German citizen. A value of 70ug/100ml blood applies to men. The edition of solder work with lead containing solder in the home industry is subject to strict regulations. Cadmium is already prohibited in Sweden. In the Federal republic, this metal is classified as a carcinogenic material of the group AT II. That means, in animal experiments cadmium has proven to be cancer-causing, in fact, under conditions, that correspond to the exposure at the job. The virulence of Cadmium became known through the Itai-Itai-Illness, a rachitis similar to bone-brittleness. A technical guideline does not exist for cadmium concentration. However, the minimization-rule is valid. Currently under discussion is a TRK-value of 0,02mg per cubic meter. Cadmium containing solder must be marked since 1990 according to the dangerous material ordinance. In order to guarantee that the solder joint remains durable, no disturbing oxide-layer may exist on the workpiece before soldering. Liquid chemicals ensure the removal of these oxide layers. Known such chemicals are talc, ammonium salt, borax, colophon, tin - and zinc-chloride, organic acids, (Amine and Hydrazin)???. The "Hydrazin" as well as the colophon are the most problematic. "Hydrazin" is similar to cadmium; the material is replaceable, however. colophon is a rosin containing liquid chemical, that contains "Abietinsäure" as a main component. Normal soldering temperatures can lead to the partial decomposition of the colophon, which, among other things, creates aldehydes. The best known of this organic chemical is formaldehyde, a material, that is under heavy public discussion. Formaldehyde is also examined for its carcinogenic effect at this time. The MAK-value lies at 0,5 ppm. This short overview shows which health-related dangers need to be taken into account when soldering. According to the current regulations (accident prevention regulation VBG 15), vacuum equipment is required for the respective work stations. The air may only be led back into the area, if it was filtered in accordance with this rule. The filters are to be renewed at regular intervals.

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