falma machines

options to HSL production line

montena
falma machines

montena philosophy

machinery components technology

Turning darkness into light

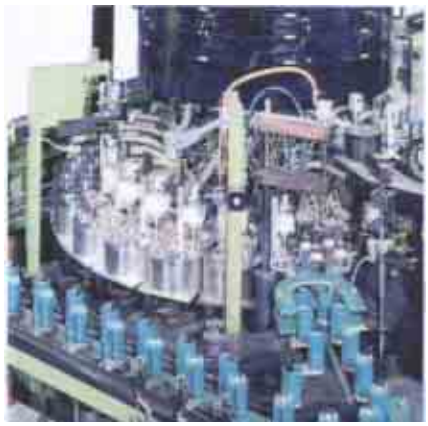
Montena machinery develops, builds and commissions machines and production lines for the manufacture of all kinds of light sources: incandescent or economical, traditional or the latest generation.

Working in close co-operation with montena automation and montena lighting, montena machinery has acquired complete mastery over all the phases of lamp production. This synergy effect brings high benefits: for example, it enables montena machinery to make an objective and well-informed assessment of production tool quality.

Montena's foremost aim is to give you comprehensive service, dedicated to your satisfaction and success. Our customer advice focuses on research, development and engineering; we also provide on-site after-sales service, maintenance and monitoring of installations.

Montena summarises its objectives in a single declaration of intent: we can do it!

We will be happy to give you further information. Just contact us!



options

Optional equipment for high speed and very high speed fully automatic lines producing different types of incandescent lamps

- Glass preparation equipment
- Quality control equipment
- Measuring equipment
- Coating machines for bulbs

1 optional machines

AM	aluminizing machine
EC	electrostatic coating machine
FOX	final oxygen control system
TL	flare machine
SSM	exhaust tube cutting machine
PG	exhaust tube fire polishing machine
PK	exhaust tube calibrating machine
GP	gas tester
HF	high frequency tester
PI	pirani gauge (Vacuum measuring)
LT	lamp testing apparatus
AP	photometer
LR	life testing rack

AM aluminizing machine

Description

The aluminizing machine has been designed for the internal coating of bulbs for reflector lamps, crown mirrored lamps and PAR reflector lamps by evaporation of an aluminum wire.

The machine can be used as a stand-alone unit or inline with an incandescent lamp production line.

EC electrostatic coating

Description

This "free standing" rotary indexing machine has been specially designed for the internal coating of glass bulbs. Any soft tone color, including white and frosted, can be applied.

Fox Control final oxygen control system

Description

The final control system Fox Control is used for testing the lamps directly after the production, eliminating the 24 hrs. delay time normally experienced.
It is designed to be added to the Falma HSL, (or any other incandescent production line).

Main features

- On line 100% production control. Through this you have immediate feed back if problems occur on the production line.
- Reduced handling of finished lamps means less breakage.
- The quality level is equal to a conventional test after 72 hours.
- Possibility to produce just in time, since delay time for quality control is eliminated.
- Possibility to make quality statis tics for different production shifts.

Technical data

Lamps types:
- incandescent lamps with a diameter in the range of 35 to 80mm (optional 95mm)
- •clear, frosted, softwhite and reflector types
- •coloured lamps or vacuum lamps are not possible

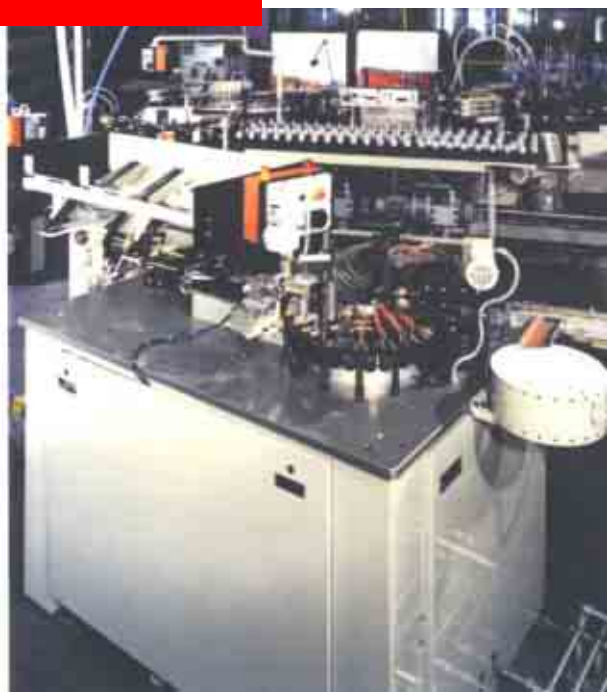
Cap types:
- •E14, E27, 1315, B22 (others on request)

Capacity:
- up to 5'000 lamps per hour

Adjustable parameter:
- oxygen reject tolerence

Performance:
- defective packed lamps less than 0.2% target 0.1

TL flare machine



Description

The TL machine is used for the production of flares for the manufacture of incandescent lamps. The machine consists of two parts, an automatic tube loading and cutting system and a horizontal flaring turret.

Technical features

High material efficiency through cutting before flaring. The tube loading and cutting system is horizontal.

The height from the floor allows easy reloading.
The tube is cut by a rotating blade and thermal shock through a rotating burner. The cut tube is loaded onto the flaring turret where it is held from underneath by a new style of jaw construction for flaring. The cut edge is fire polished. Before flaring, S02 can be mixed into the burners, if required.

SSM exhaust tube cutting machine

Description

This machine is used for cutting yods and exhaust tubes for the production of incandescent lamps. Its design is simple and its production rate high.

Technical features

The machine has 36 positions. Cutting is done by means of a fixed hard metal blade and is thus completely dust free. The cutting length can be infinitely adjusted. Thanks to simple and well-designed construction only a minimum of maintenance is necessary. The machine is driven by a asynchronous motor protected by a thermal protection.

PG exhaust tube fire polishing machine

Description

This machine is used for fire polishing of cut exhaust tubes. It is proved that glazed exhaust tubes reduce the wear of the stem machine heads.

Technical features

The machine has a continuously running drum to which the exhaust tubes are automatically fed. The burners are mounted on an adjustable holder. The machine is delivered complete with pressure regulators, safety valves and piping, ready to be connected. The machine is driven by an asynchronous motor protected by a thermal

PK exhaust tube calibrating machine

Description

Machine to calibrate exhaust tubes with a tolerance of 1/- 0,1 mm. Capacity is up to 5 000 pcs/h.

GP gas tester

Description

The gas tester GP is a simple but nevertheless extremely sensitive control apparatus for testing the N2 and Ar/N2 gases used in incandescent lamp manufacture. Possible contaminants such as oxygen and moisture are indicated by the colour change of a filament heated to dull redness.

Technical features

The test lamp is equipped with two filaments which are operated by a switch. The filaments are easily exchanged after dismantling the test lamp. By means of a push button, the filament tension may be temporarily increased in order to evaporate oxides on the filament. The gases for testing are fed to the tester via a vacuum tube, by means of a time switch the test period can be pre-selected. The apparatus may be fixed in position (e.g. to a vacuum pump) or be used as a portable.

HF high frequency tester

Description

The tesla high frequency tester HF is a simple and practical apparatus for the testing of gas purity or vacuum in incandescent lamps.

Technical features

Quartz controlled oscillator, protection casing of the complete apparatus as well as a mains filter eliminate interference. The apparatus is manufactured entirely with semi-conductors and is therefore extremely reliable.

PI pirani gauge (vacuum measuring)

Description

This measuring instrument has been specially designed for use in the lamp industry. It is not a laboratory instrument, but is intended for continuous control of the vacuum pumps on sealex machines.

Technical features

The instrument can supervise up to 20 measuring probes. The fourth measuring position closes a contact if the pre-selected vacuum is not reached. This signal can be used to close down any of the pump positions. The fifteenth measuring position releases an alarm if the pre-selected vacuum value is not reached. The measuring resistances are small calibrated lamps which can be easily replaced. The measuring probes are connected to the vacuum pipes by standardised connectors.

LT lamp testing apparatus

Description

The lamp testing apparatus LT is a simple and convenient instrument for production control. It is positioned close to the Sealex machine. Lamps are taken directly from the Sealex, fixed into the two special contact jaws of the apparatus and an infinitely variable current applied by means of a time switch. The condition of the glass components, filaments, and support wires give a clear indication of the lamp quality.

Technical features

Infinitely variable voltage can be applied, readable on a built-in voltmeter. Burning time can be preselected by means of a time switch.

AP photometer

Description

This apparatus is used to determine the electrical and light properties of different types of light sources according to the recommendations of the IEC. It is designed as a laboratory quality control instrument, the measurements being made automatically and the results recorded. For each series, the following values are retained: volts, amps, watts, lumens, and lumens/watts. For each lamp, the percentage deviation of the power (W) and efficiency (Im/W) are recorded, and, for each series, the standard deviation of the above values are both recorded and printed out.

Technical features

The standard unit operates with a stabilised direct current source. The nominal voltage, wattage, Im/W are entered on the key board of the terminal.

The light measurement is performed by means of an Si measuring gauge, VX corrected. A series of up to 15 lamps can be measured, average values calculated and results printed out. The lamps are inserted into a rapid change socket, the lamp is automatically introduced into the sphere, measured and then presented for changing. The basic unit consists of:

- Ulbricht sphere dia 1 m
- Terminal
- Printer
- •DC source for incandescent lamps 25-100 W 100-250 V

Accessory

Ageing ramp

Option

The dimension of the Ulbricht sphere, the sockets, the power supply and eventual filters can be supplied according to the light sources which have to be measured.

LR life testing rack

Description

Life testing rack to control lamp life according to the recommendations of the IEC. In addition the LR allows a rapid test with over voltage for a quick check on current production quality.