BASTRAMAT
Universal Cooking and Smoking Installations

Foreword

From the very outset, the founders of our company had the goal of developing need-oriented and value-retentive products for meat- and food-processing companies.

An objective that has constantly defined our entrepreneurial thinking and actions right up until this very day, and will continue to do so.

The rigorous implementation of this philosophy has helped put us in the position we are today as one of the highest-regarded manufacturers of sophisticated cooking and smoking installations, both at home and abroad.

In excess of 60,000 cooking and smoking installations sold worldwide for the production of meat and sausage goods as well as for fish and poultry products are testimony to our competence and wide acceptance in the market.

Innovative technologies have not only been used meaningfully to this end, but have also been further developed with all our strength and expertise to meet the specific needs of both the market and our customers. Numerous developments protected by patents and registered designs are evidence of our innovation potential.

In order to be able to provide the market with solutions that meet its specific needs, we offer our installations with a variety of design, feature and technology options.

High-quality standards underpin the development, production and assembly of our products and installations.

The importance we attach to quality is also demonstrated by our striving for environmental compatibility. The responsible usage of the available raw materials and resources is just as important to us as is our handling of the issue of waste disposal. Seen in connection with these aspects too, our technologies offer significant benefits. As, after all, we do all we can to ensure that high-quality products can be produced in not only an economically viable but also an environmentally friendly manner.

Economic viability, i.e. the perfect interaction between productivity and operating costs, is a key factor when investing in new production installations. Once the requirement profile has been established, we are then able to design our installations in such an individual way that they enable a tailor-made solution to be found for the production and operating processes concerned. These customised installations combined with the appropriate control units and accessories thus meet the key requirements needed to achieve optimum production results.

In order to be able to fully exploit the productivity of our installations, the smooth interaction between ‘man and machine’ must also be guaranteed. We attach the utmost importance to this aspect.

In addition to providing thorough instruction in the initial operation phase, we also offer our customers the opportunity of further improving and/or updating their know-how via regularly held technical seminars and intensive training sessions.

A pronounced customer focus is at the heart of the wide variety of services we offer. Our teams of advisors – lead by qualified process technicians – provide professional, co-operative support in the individual planning and implementation of cooking and smoking installations and reliable provision of stand-by support prior to, during and after production, installation and initial operation.

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BASTRAMAT Universal Cooking and Smoking Installations

The BASTRAMAT offers more or less unlimited application options in terms of modern cooking, smoking, cooling and heating technology.

Our programme ranges from the single-truck chamber for small-scale operations through to the multi-truck installation required for large plants.

Our installations are used throughout the world by sausage- and meat-processing companies as well as in the refining of poultry, fish, cheese and bakery products.

The key advantage BASTRAMAT technology offers is based on its capability of precise dosage of temperature, moisture, smoke density and air flow as well as on the incorporation of this into an appropriate control system.

The maxims being – environmentally friendly technology combined with optimum efficiency and quality. This applies both to the classic options of smoke production via smoulder smoke generators for sawdust or wood chips as well as for friction smoke and liquid smoke.

The wide variety of application areas such as hot smoking, warm smoking cold smoking, moist smoking, intensive smoking, fast smoking, reddening, drying, browning, blanching, steaming, simmering, cooking, hot-air simmering, semi-preserving, baking, roasting and thawing guarantee the universal usage of these installations.

The BASTRAMAT system offers you absolutely optimum perfection, maximum safety and the following equipment features supplied as standard:

- Fully automatic, electrically driven smoke- and air-valve operation
- Sensitive, electronic chamber and core temperature control
- Psychrometric moisture and automatic fresh-air control
- Wetting of compressed air for optimum moisture saturation for connection to customer's compressor
- Cleaning of compressed air
- Multi-phase air circulation via specially designed CNS high-performance ventilator fans and the even transmission of the smoke via optimised blow-out sprays.

  The ventilator fans are dynamically balanced. Vibrations and disruptive noise development are thus excluded. The dimensioning of the ventilator fans provides for an absolutely even and strong air circulation within the given chamber at low revs.
- Complete piping of additional and auxiliary facilities – cleaning and wetting via corrugated stainless steel hoses. Maintenance-friendly installation of valves on distribution systems.
- High-quality chrome-nickel steel smoke and exhaust pipes with special seals.
- Internal area of single- and double-truck chambers in steam-tight welded design with all-round full insulation. The special mineral insulation is characterised by its low conductivity and thus optimum heat insulation. This insulation plays a major role in reducing the amount of heating energy consumed.
- Chambers with a self-supporting design and made of high-quality stainless steel.
- Double-walled door with all-round silicon profile seal and heavy sealing elements made of chrome-nickel steel.
- The installations can be accessed at floor level for easy loading.
- Heating types:

  Model 850/851: electric

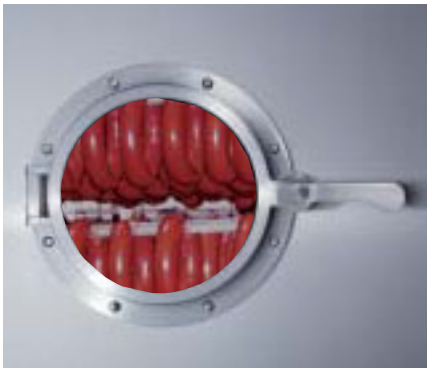
  Model 1200/1201/1500/1501: electric, gas, oil or LP steam

  Model 2000/2001 and multi-truck chambers are available in conjunction with a wide range of heating types. These installations can thus be
  supplied as standard with electric, gas, oil or HP or LP steam heating.

  BASTRAMAT installations with high-pressure steam heating are equipped with robust steam registers that are characterised by an extremely large heat-exchange area.
- High-tech microprocessors

These newest-generation programme controllers, which have been developed specially for our BASTRAMAT systems, stand out thanks to their ease of handling combined with optimum flexibility and robustness. The digital technology they incorporate guarantees maximum precision and the precise compliance with set values. Up to 99 highly varied programmes can be created and memorised. The automatic programme start facility with a preselect option assures round-the-clock operation.

Details of these newest-generation control units can be found in our special 'MC Controls' brochure.



Chrome-nickel steel viewing window

Blow-out sprays

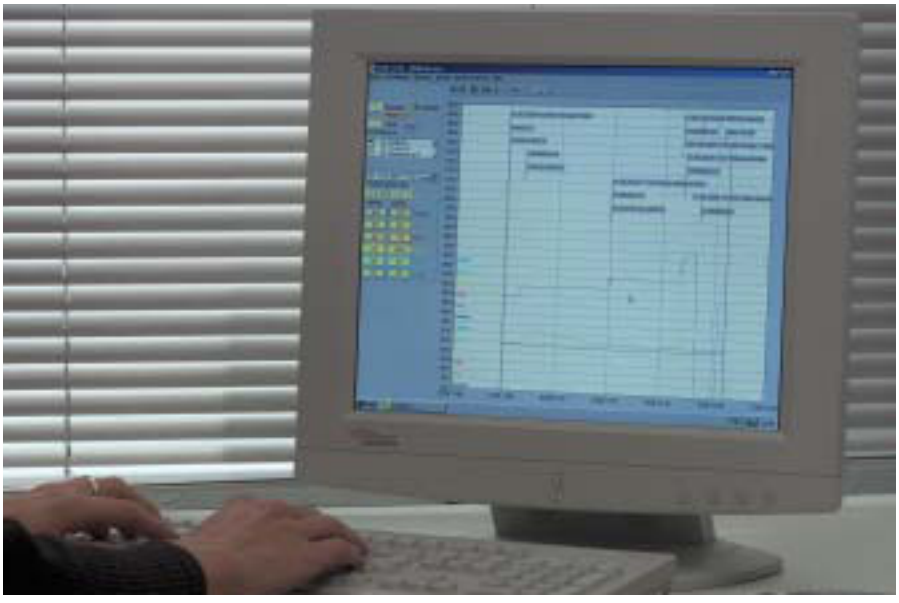
High-pressure steam register

Chrome-nickel steel hinge

Chrome-nickel steel seals

MC 500 microprocessor control unit

VIEW & CONTROL measurement data-logging software



TS 800 microprocessor control unit

Wood-chip smoke generation

SMOULDER SMOKE / SAWDUST

UF smoking technology

Sawdust smoke generation with adjacent smoulder smoke generator.

A part-flow of the smoke/air mix is withdrawn from the chamber and together with fresh air fed back to the smoke generator. The small quantity of residual smoke leaves the chamber via a throttled exhaust valve.

SMOULDER SMOKE / WOOD CHIPS

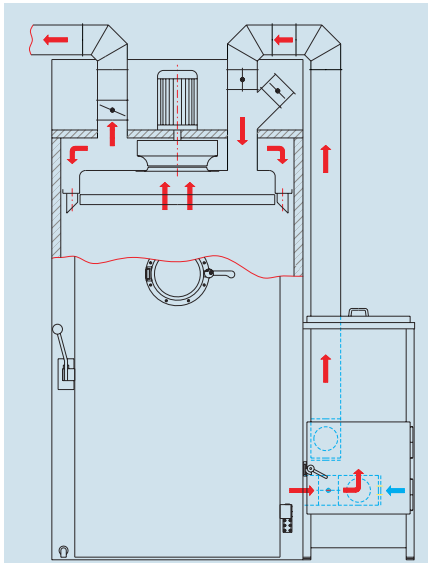
TF smoking technology

Wood chips' smoke generation in the door. Fresh air is fed into the smoulder zone with the result that the valuable, natural smoke aroma is preserved.

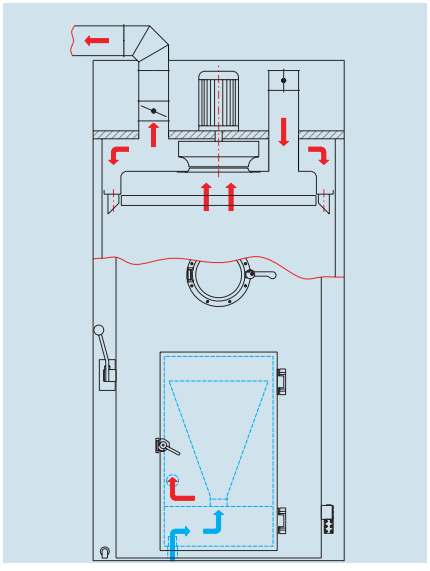
The smoke is sucked in by the BASTRAMAT installation and fed to the goods to be smoked via the air circulation system. The amount of fresh air that is precisely supplied to the smoke generator leaves the chamber via a throttled exhaust valve in the form of a small quantity of residual smoke.

For you, both BASTRA UF and TF smoking technologies enable you to carry out your production using an exhaust-reduced, through-flow installation with circulation/fresh air operation. The requirements laid down by the relevant VDI 2595 guidelines for emission reduction are undercut by this smoking technology.

UF system



TF system



Smoke generation in a closed system

SMOULDER SMOKE / SAWDUST

Sawdust smoke generator built into the door.

The BASTRAMAT installation works as a closed system or can be switched to UF-system operation.

As a closed system, the installation can be fully operated as such during the smoking phase. Only such oxygen as is located in the installation is used for smoke development purposes. The residual smoke that is in the installation is densified with water vapour during the subsequent ‘cooking’ phase or reduced to a small residual quantity during a later ‘consumption’ phase. As no notable emissions are produced during the smoking process, this installation can be operated in compliance with the currently valid environmental regulations without an exhaust cleaner.

The UF system offers the operator a process whereby a factory-preset quantity of fresh air is constantly fed to the smoke generator from outside. The installation then works as an ‘exhaust-reduced circulation plant with fresh air admixture’ during the smoking phase. It is classed as being environmentally friendly thanks to its very low level of emissions.

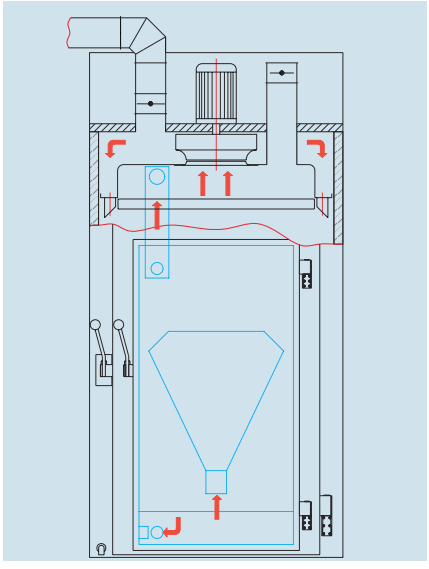
This BASTRAMAT unites the proven, traditional, sawdust smoulder smoke method with the environmental benefits and low cost operation a closed system offers.

Smoke generation using this technology in a closed system means that catalytic after-burning is no longer necessary. As certain officially required measurements and tests are not needed, this cuts not only operating costs but also investment expenditure because a catalyser does not have to be purchased.

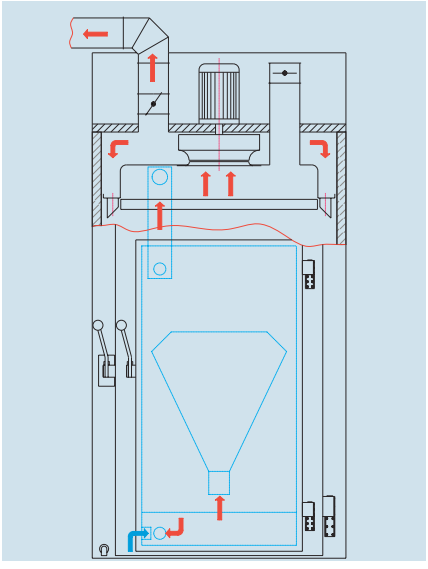
The installation with a sawdust smoke generator is only available as a purely UF system option.

851 C-GS model

GS system



UF system



Smoke generation in a closed system

FRICTION SMOKE

Friction smoke generator built into the door or with adjacent friction smoke generator

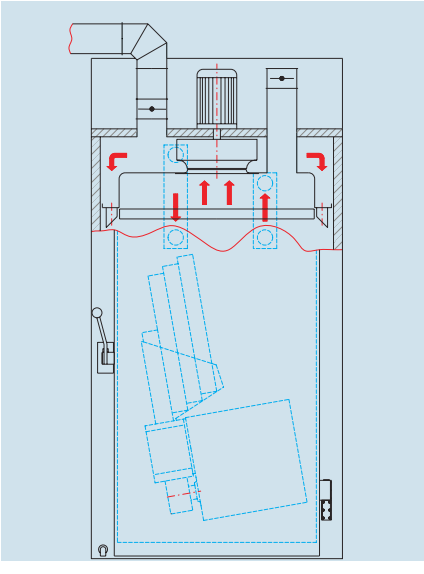
The installation works as a closed system and therefore produces no emissions during the smoking phase.

Any residual smoke is sprayed with water and washed away in the smoke generator after the smoking programme is finished.

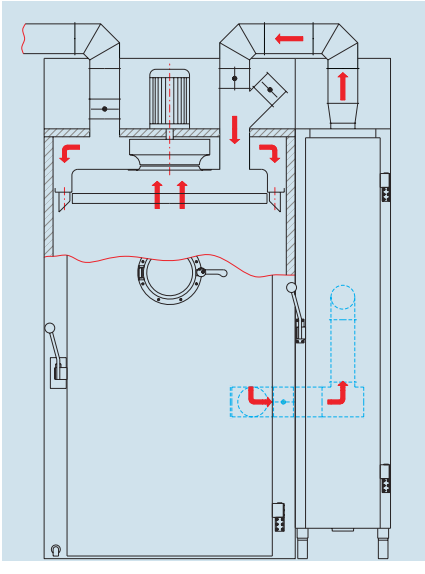
A special friction wheel provides for strong smoke density with low noise. An integrated magazine can store 4 beech logs. Other types of wood can also be used.

1201 C-RR model

Friction smoke generator in the door



Friction smoke production with adjacent smoke generator



Smoke generation in a closed system

LIQUID SMOKE

This well-proven environmental friendly method offers significant benefits vis-à-vis many conventional smoking methods and is characterised above all by the non-existence of the known pollutants in the smoke, which have already been filtered out during the production of the liquid smoke.

The key advantage of BASTRA liquid smoke technology is its precise dosage capability and incorporation into an appropriate control system. BASTRA currently offers the most sophisticated liquid-smoke system in the market and, with this, a technological edge vis-à-vis the competition.

This technology produces ideal results thanks to the optimised interaction between state-of-the-art micro-processor control, moisture regulation, even air circulation, temperature and smoke density. Precise, fine dosage provides for the stable and dry smoke needed for smoking.

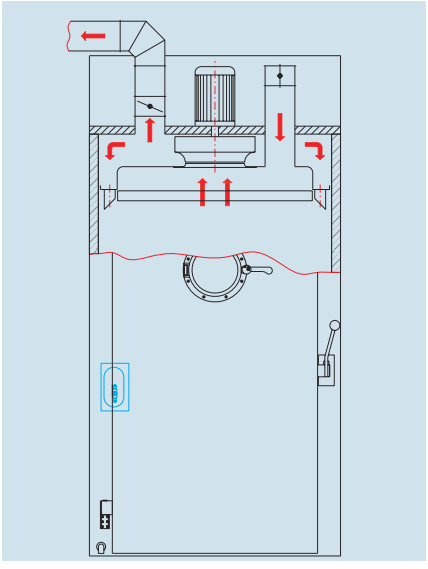
FR 50 liquid smoke generator

Two-component mix spray

The benefits at a glance

- Emission-free smoking without time- and cost-consuming permission procedures
- No costly after-burning
- No costly emission measurements
- Reduction in waste water contamination
- No disposal of tar residue and ash
- Improved hygiene and cleaner workplace
- Safer workplace due to elimination of risk of fire and explosion
- Low storage space requirements for smoking materials
- Maintenance-reduced smoking
- Constant results due to stable smoking colour and aroma
- Improved productivity
- Value-for-money smoking method

FR system



The BASTRAMAT in action

Cooking · Roasting · Cooling

COOKING AND ROASTING CHAMBERS

For temperatures up to 250° C we can offer you special high-temperature cooking and roasting chambers that are characterised by a high heating capacity and particularly efficient insulation.

These installations are classic, universal plants as they can be used for roasting, drying and cooking purposes.

They work in roasting mode with hot air that is fed past the goods requiring roasting at high speed to achieve an evenly intense simmering effect.

The chambers are operated with either horizontal or vertical air circulation. Your products are thus given gentle treatment with extremely low weight loss.

Electric and LP steam/electric are the available heating options.

An adjacent smoke generator enables the installations to also be used as BASTRAMATs.

INTENSIVE COOLING INSTALLATIONS

BASTRA intensive cooling installations are used in the fast cooling of meat and sausage goods produced in the BASTRAMAT or cooking chamber.

Immediately after production, the goods are cooled in the intensive cooling installation to a preset core temperature. They are then dried and forwarded for packaging without delay.

Control procedures are carried out via a microprocessor with all the facilities needed for regulating air circulation, cooling, interval shower, compressed-air wetting, core-temperature measuring, automatic fresh-air and exhaust valves.

The benefits of this installation

Fast cooling
Temperature range between +6° C and +8° C Core temperature

Goods are immediately ready for packaging

Extension of shelf-life

The size of the intensive cooling installation can be selected to suit the given BASTRAMAT installation

Cooling register

Climate maturing

CLIMATE MATURING SMOKE INSTALLATION

The ideal installation for maturing, drying and smoking raw sausage, raw ham and long-life products.

The particularly gentle treatment the products receive optimises the maturing process and correspondingly minimises the risk of maturing defects.

The values set on the microprocessor such as moisture, temperature and cooling are monitored and correspondingly regulated.

This is the only way of achieving rational and precise climatisation.

Temperature range
adjustable between +18° C and +35° C

Moisture
adjustable between 65% and
98% relative moisture

Generally speaking, the installations comprise of multi-truck chambers that can be supplied with or without smoke treatment in accordance with the customer's needs. Climate smoke installations are also available with the all the standard smoke generation options.

4-truck chamber maturing smoke installation

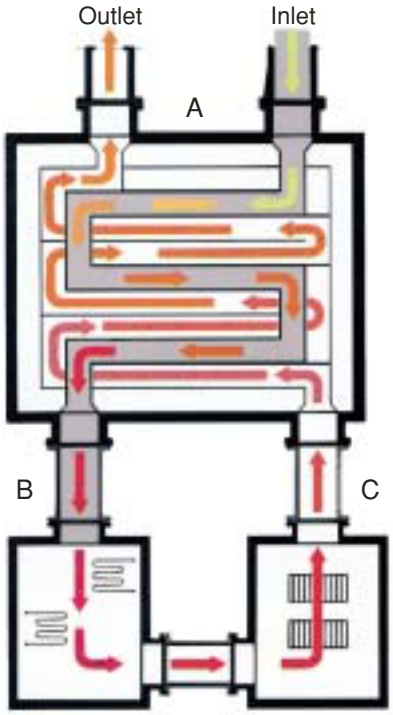
Machine part and friction smoke generator

Special equipment

- Cooling facility
  The targeted interaction between heating, exact temperature regulation and air circulation enables you to carry out any smoking process irrespective of the given ambient temperature. For connection to the customer's refrigeration equipment
- 3-phase air circulation
- Built-in cooling shower
- Rotary cooling shower made of stainless steel with optimum cooling effect and low water consumption, separate with its own interval shower control
- Control unit and smoke generator in an add-on column
- Automatic sawdust wetting facility built into smoke generator
- Automatic door opening via compressed air cylinder – compressed air to be supplied by customer
- Doors at front and back
- Horizontal alternating air circulation only for products that are laid down flat and processed on grills such as sides of salmon, roast beef, chicken etc.
  This type of air circulation enables the number of levels per truck to be increased, thereby significantly enhancing production capacity.
- Glass door with internal lighting – thus enabling you to view all the processes in the smoking chamber with 'your own eyes' and, depending on the location of the installation, to give your customers a 'live smoking' demonstration.

Rib-pipe cooling evaporator made of chrome-nickel steel

- Catalytic exhaust cleaner
  For installations requiring permits or subject to other stringent conditions, we offer a tailormade catalytic exhaust cleaner to suit the given installation .



A = heat exchanger
B = electric heating
C = catalyser

BASTRAMAT with glass door

Horizontal ventilation via perforated sheet side-walls and 2nd door in rear wall.

Control unit in an add-on column

Accessories

CHARGING TRUCK

High-quality, stackable charging trucks made of chrome-nickel steel

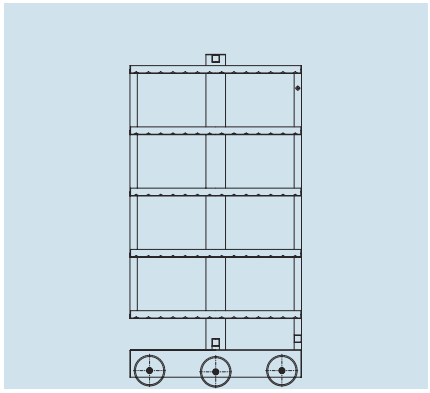
With supports for accommodating smoking sticks 80, 90 or 100 cm in length, perforated cooking trays, grills and fat collection trays.
Truck chassis with 6 plastic casters, arranged in such a way as to facilitate steering and turning.

Each level is fitted with supports to accommodate smoking sticks, cooking trays and grills.

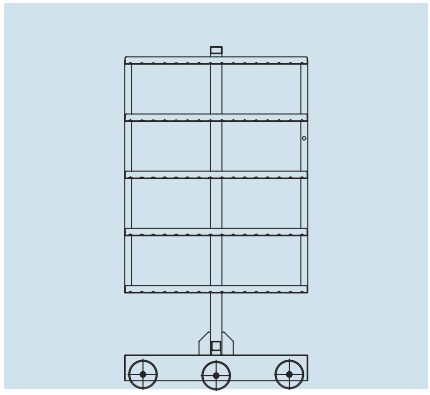
- Solid grills made of stainless steel
- Perforated cooking trays made of aluminium
- Fat collection tray made of chrome-nickel steel

Truck for BASTRAMAT 850/851
Smoking stick length: 80 cm
Supports: 5 / Support spacing: 25 cm
External dimensions: 83 x 70 x 136 cm
Floor clearance: 28 cm

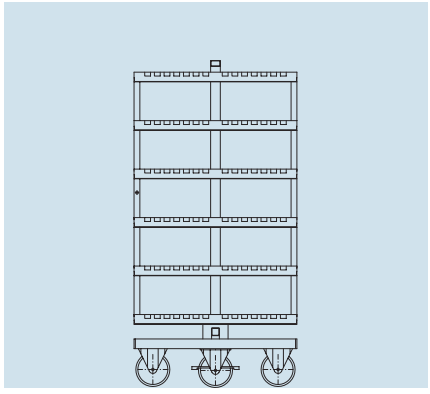
Truck for BASTRAMAT 1200/1201
Smoking stick length: 90 cm
Supports: 5 / Support spacing: 25 cm
External dimensions: 98 x 80 x 150 cm
Floor clearance: 42.5 cm

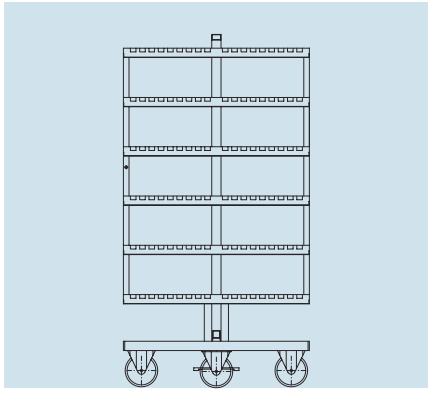


Truck for BASTRAMAT 1500/1501
Smoking stick lengths: 90/100 cm
Supports: 6 / Support spacing: 25 cm
External dimensions: 93/103 x 84 x 169 cm
Floor clearance: 32.5 cm



Truck for BASTRAMAT 2000/2001
Smoking stick length 100 cm
Supports: 6 / Support spacing: 26.5 cm
External dimensions: 103 x 100 x 190 cm
Floor clearance: 45 cm





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